EAU

NOVEMBER 2023

PROJECT ID: 1022-04-76

WITH: 1022-04-86

COUNTY: DUNN

34

ORDER OF SHEETS

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

TOTAL SHEETS = 542

N

DESIGN DESIGNATION 1022-04-06

A.A.D.T.	2024	=	37,800
A.A.D.T.	2044	=	41,800
D.H.V.		=	5842
D.D.		=	50/50
T.		=	16.2
DESIGN SPEED		=	75 MPH
ESALS		=	49,000,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MENOMONIE - EAU CLAIRE

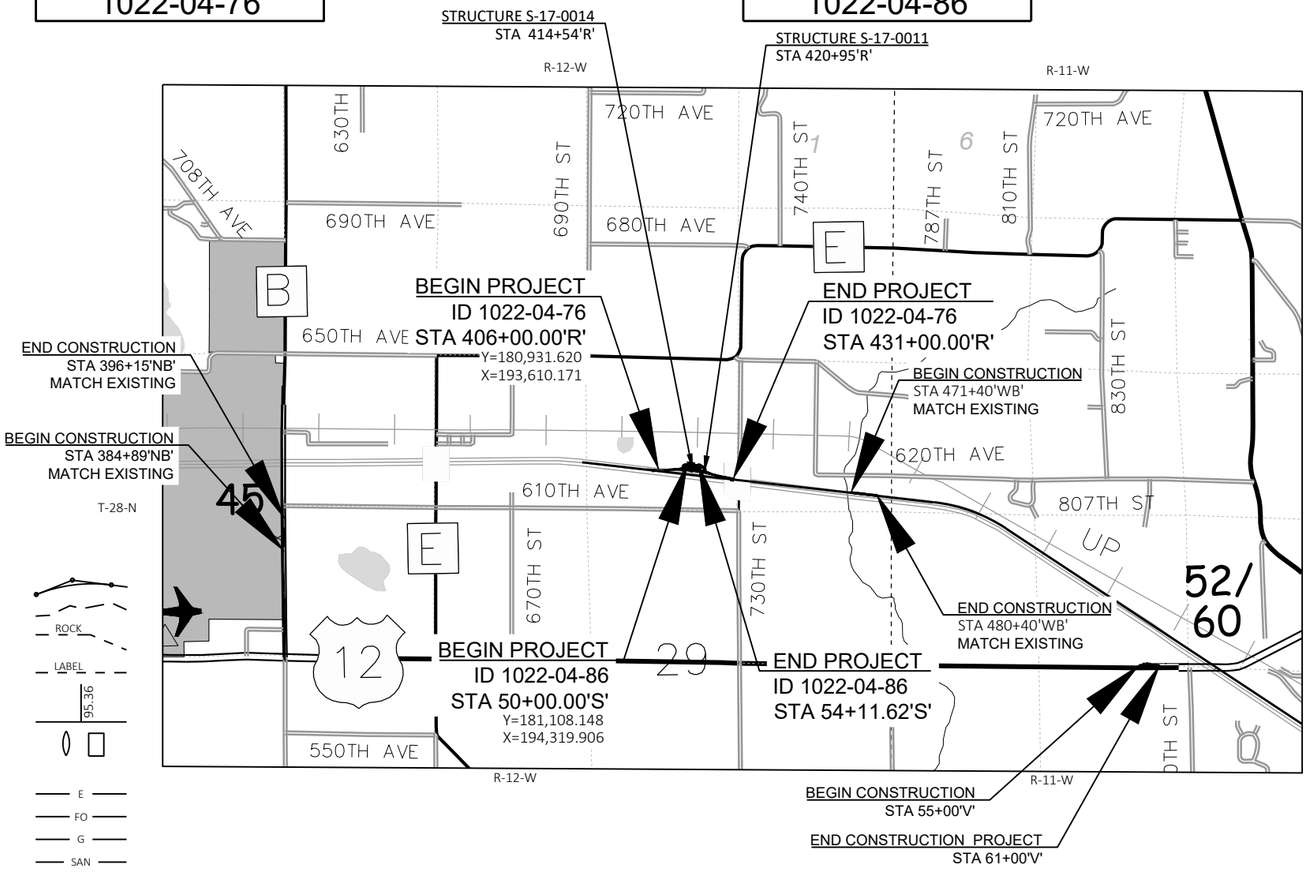
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1022-04-76	WISC 2024045	1
1022-04-86	————	——

IH 94 SWEF 63 MENOMONIE
IH 94
DUNN COUNTY

STATE PROJECT NUMBER: 1022-04-76

IH 94 SALT STORAGE FACILITY
IH 94
DUNN COUNTY

STATE PROJECT NUMBER: 1022-04-86



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.473 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), DUNN 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 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ORIGINAL PLANS PREPARED BY

KL Engineering [A] Better Experience

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT/KL ENGINEERING
Designer	KL ENGINEERING
Project Manager	JOHN SPIELMACHER
Regional Examiner	
Regional Supervisor	

APPROVED FOR THE DEPARTMENT

DATE: 7/20/2023 (Signature)

E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 6/22/2023 9:48 AM PLOT BY : JON BLOMQUIST PLOT NAME :

ABBREVIATIONS

ADJ	ADJUST
AEW	APRON ENDWALL
ASPH	ASPHALT
AUX	AUXILLARY
AVG	AVERAGE
BAD	BASE AGGREGATE DENSE
BLDG	BUILDING
BM	BENCH MARK
C&G	CURB AND GUTTER
CONC	CONCRETE
COOP	COOPERATIVE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSCP	CULVERT PIPE CORRUGATED STEEL
D	DEGREE OF CURVE
EAT	ENERGY ABSORBING TERMINAL
ELECT.	ELECTIRC
EMAT	EROSION MAT
EXIST	EXISTING
HMA	HOT MIX ASPHALT
INCR.	INCREMENTAL
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LT	LEFT
M/L	MATCHLINE
MAX	MAXIMUM
MGRS	MIDWEST GUARD RAIL SYSTEM
MIN	MINIMUM
NC	NORMAL CROWN
NOR	NORMAL
OH	OVERHEAD
PAVT	PAVEMENT
PC	POINT OF CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PNT	POINT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SDD	STANDARD DETAIL DRAWINGS
SE	SUPER ELEVATION
SHLD	SHOULDER
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SWEF	SAFETY WEIGHT ENFORCEMENT FACILITY
T	TANGENT LENGTH
TYP	TYPICAL
UG	UNDERGROUND
VAR.	VARIABLE
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
Δ	DELTA

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

ORDER OF DETAILS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
WIM PLAN
CURB RAMP DETAILS
EARTHWORK MATCHLINES
EROSION CONTROL
STORM SEWER PLAN
UTILITY PLAN
LANDSCAPING
PERMANENT SIGNING & MARKING
LIGHTING REMOVAL
LIGHTING PLAN
TRAFFIC CONTROL
ALIGNMENT DIAGRAM
CONTROL & BENCHMARKS
SOIL BORINGS
COMMUNICATION TOWER
WATER SCHEMATIC
SALT/STORAGE SHED
SWEF BUILDING

GENERAL NOTES

ALL RADII DIMENSIONS WITH OR WITHOUT CURB AND GUTTER ARE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

ALL GRADES PROVIDED ALONG RADII ARE ALONG EDGE OF PAVEMENT.

EXPANSION JOINTS TO BE CONSTRUCTED AT ALL RADII POINTS IN THE CURB AND GUTTER.

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

RIGHT OF WAY LINES SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE.

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

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

PROTECT INLETS WITH PROPER INLET PROTECTION AT LOCATIONS EXHIBITING RISK OF BEING IMPACTED BY CONSTRUCTION OPERATIONS AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THE OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

PLACE SALVAGED TOPSOIL IN ALL GRADED AREAS AS DESIGNATED BY THE ENGINEER IMMEDIATELY AFTER GRADING HAS BEEN COMPLETED. SEED, MULCH, AND FERTILIZE ALL AREAS WITHIN 5 DAYS AFTER PLACEMENT OF SALVAGED TOPSOIL.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY, OR FLOODPLAIN OF ANY WATERWAY.

THE EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.

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

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM "TRAFFIC CONTROL COVERING SIGNS TYPE 2".

5 FOOT WIDE SIDEWALK REQUIRES TRANSVERSE JOINTS SPACED AT 5 FEET AND 6 FOOT WIDE SIDEWALK REQUIRES TRANSVERSE JOINTS SPACED AT 6 FEET.

HMA PAVEMENT, WHEN INDICATED ON THE PLANS, SHALL CONSIST OF COURSES AS FOLLOWS UNLESS OTHERWISE NOTED ON THE PLANS.

ROADWAY	TOTAL PAVEMENT THICKNESS	LOWER LAYER THICKNESS & TYPE	UPPER LAYER THICKNESS & TYPE
EMPLOYEE PARKING	3.5 INCHES	1.75" 4 LT 58-34 S	1.75" 4 LT 58-34 S
SHOULDERS	5 INCHES	3" 3 MT 58-28 S	2" 4 MT 58-34 S
SALT SHED LOT CTH B PULLOFF SITE	6 INCHES	4" 3 LT 58-28 S	2" 4 LT 58-34 H

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RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 14.0 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 4.1 ACRES

2

2

690TH ST.

COUNTY E

COUNTY E

640TH AVE

830TH ST.

SEE MENOMONIE SWEF
SITE #63 OVERVIEW

STA 459+69'WB' - STA 462+69'WB'
REMOVE EXISTING WEIGH-IN-MOTION SYSTEM

STA 471+40'WB' - STA 480+40'WB'
CONSTRUCT NEW WEIGH-IN-MOTION SYSTEM

40

620TH AVE

610TH AVE

INTERSTATE 94

STA 402+00'WB' RT
CONSTRUCT MAINTENANCE CROSSOVER
SEE CONSTRUCTION DETAIL

COUNTY E

STA 386+62.07'NB' - STA 392+45.41'NB' RIGHT
CONSTRUCT PULLOFF SITE
SEE CTH B PULLOFF SITE DETAIL

730TH ST.

MUDDY CREEK

COUNTY B

12 29

CONSTRUCT NEW VIRTUAL
WEIGH STATION SYSTEM
STA 55+00'V' - STA 61+00'V'

PROJECT NO: 1022-04-76, 1022-04-86	HWY: IH 94	COUNTY: DUNN	PROJECT OVERVIEW	SHEET 4	E

NOTES:
NEW WELL TO BE LOCATED GREATER THAN 250' FROM SALT STORAGE. SEE WATER SCHEMATIC DETAIL

N

48-INCH WOVEN WIRE FENCE
NEW CULVERT
FENCE WOVEN WIRE 4-FT
R/W
FENCE CHAIN LINK 6-FT
DRAINAGE SWALE
60'X68' SALT SHED
'S' R/L
51+00'S'
52+00'S'
53+00'S'
54+00'S'
21' CANTILEVER GATE
CULVERT TO REMAIN
21' CANTILEVER GATE
EXISTING A/C TO REMAIN
CMV PARKING
'L'-R/L
CULVERT TO REMAIN
PREVIOUS PRIVY HOLDING TANK LOCATION
NEW GENERATOR
TRUCK APRON (COLORING CONCRETE WISDOT RED)
SEE COMMUNICATION TOWER PLANS
16'L'
NEW 2X1,000 GAL UG LIQUID PROPANE TANK
TRUCK APRON (COLORING CONCRETE WISDOT RED)
EXISTING LIGHTING TO REMAIN
18'L'
PREVIOUS UG FUEL TANK LOCATION
STA 414+54'R' OH SIGN STRUCTURE S-17-0014 SEE STRUCTURE PLANS
STA 420+95'R' LEFT OH SIGN STRUCTURE S-17-011 SEE STRUCTURE PLANS
CULVERT TO REMAIN
SWEF REMODEL SEE PLANS
REMOVE STORAGE SHEDS
EXISTING SEPTIC HOLDING TANK TO REMAIN (APPROX SIZE SHOWN)
12'L'
20'L'
22'L'
MATCH LINE STA 409+00'R'
MATCH LINE STA 423+00'R'
EXISTING STATIC SCALE TO REMAIN
410'R'
412'R'
414'R'
416'R'
418'R'
420'R'
422'R'
NEW PUBLIC ADDRESS SYSTEM WITH BUILDING
8' FLUSH CONCRETE MEDIAN COLORING CONCRETE WISDOT RED
OLD SEPTIC TANK LOCATION PREVIOUSLY REMOVED
PURSUIT VEHICLE AREA (3 STALLS)
NEW STORMSEWER FROM OIL/WATER SEPARATOR
EXTEND EXISTING 24-INCH CULVERT
OIL/WATER SEPARATOR

N

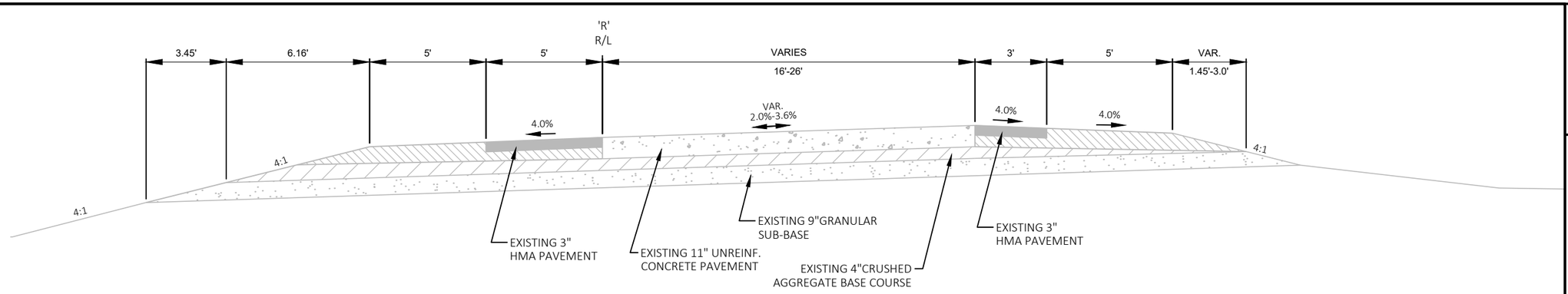
BEGIN CONSTRUCTION
STA 406+00'R'
MATCH EXISTING
SAW CUT REQ'D
404'R'
406'R'
408'R'
MATCH LINE STA 409+00'R'
CONSTRUCT MAINTENANCE CROSSOVER, SEE CONSTRUCTION DETAIL

N

END CONSTRUCTION
STA 431+00'R'
MATCH EXISTING
SAW CUT REQ'D
MATCH LINE STA 423+00'R'
424'R'
426'R'
428'R'
430'R'
ADD PAVED TAPER TO EB MAINTENANCE CROSSOVER

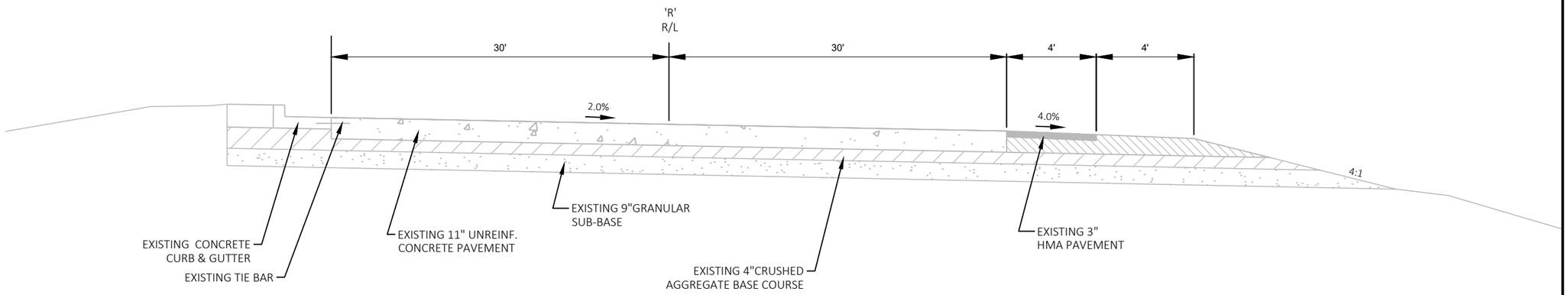
PROJECT NO: 1022-04-76, 1022-04-86	HWY: IH 94	COUNTY: DUNN	SITE OVERVIEW: MENOMONIE SWEF #63	SHEET 5	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\020201_PO.DWG
LAYOUT NAME - 02
PLOT DATE : 7/28/2023 11:55 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42



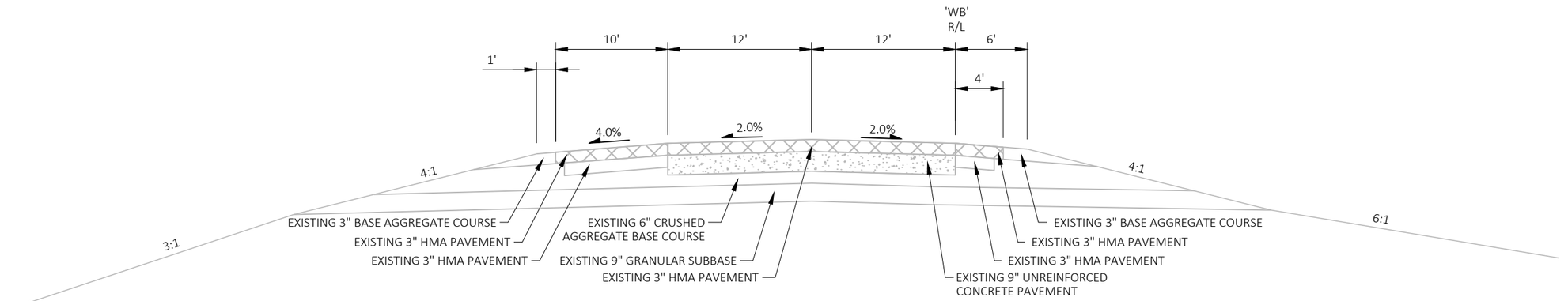
EXISTING TYPICAL SECTION, IH 94 RAMP

STA 405+29.88'R' - STA 412+05.00'R'
STA 420+20.00'R' - STA 424+08.00'R'



EXISTING TYPICAL SECTION, IH 94 RAMP

STA 412+05.00'R' - STA 420+20.00'R'

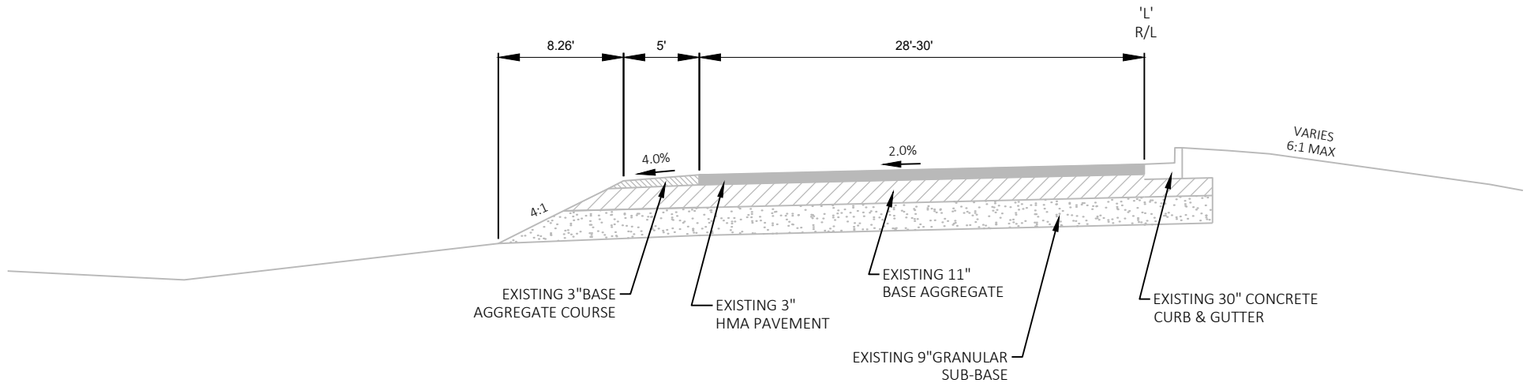


EXISTING TYPICAL SECTION, WB IH 94

STA 471+40'WB' - STA 480+40'WB'

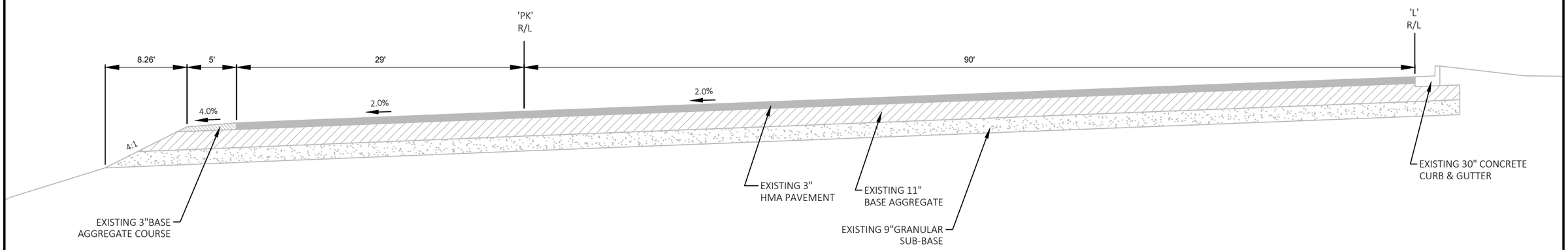
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	EXISTING TYPICAL SECTION	SHEET 6	E

2



EXISTING TYPICAL SECTION, LOOP RAMPS

STA 11+75'L' - STA 12+50 'L'
STA 20+00'L' - STA 21+55'L'

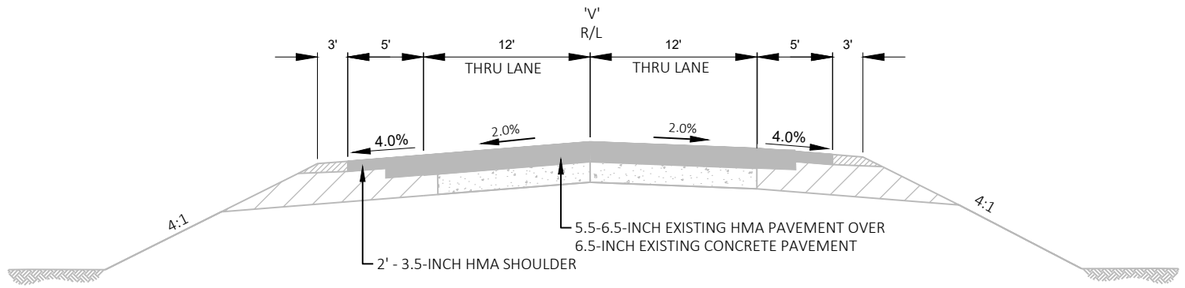


EXISTING TYPICAL SECTION, CMV PARKING AREA

STA 50+00.00'PK' - STA 52+97'PK'

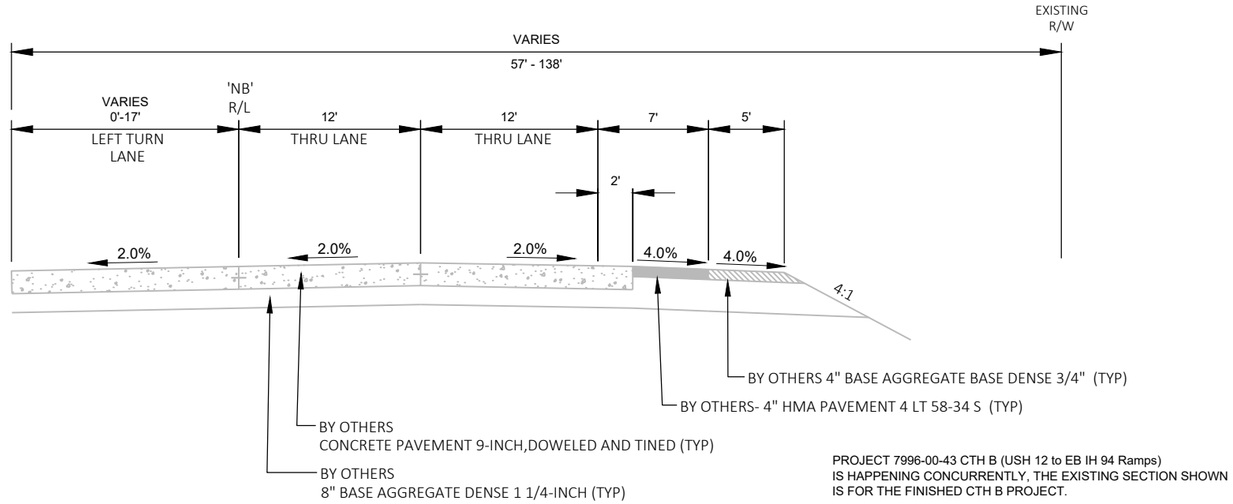
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	EXISTING TYPICAL SECTION	SHEET 7	E

2



EXISTING TYPICAL SECTION USH 12/STH 29 VIRTUAL WEIGH STATION

STA 54+00'V' - STA 61+00'V'

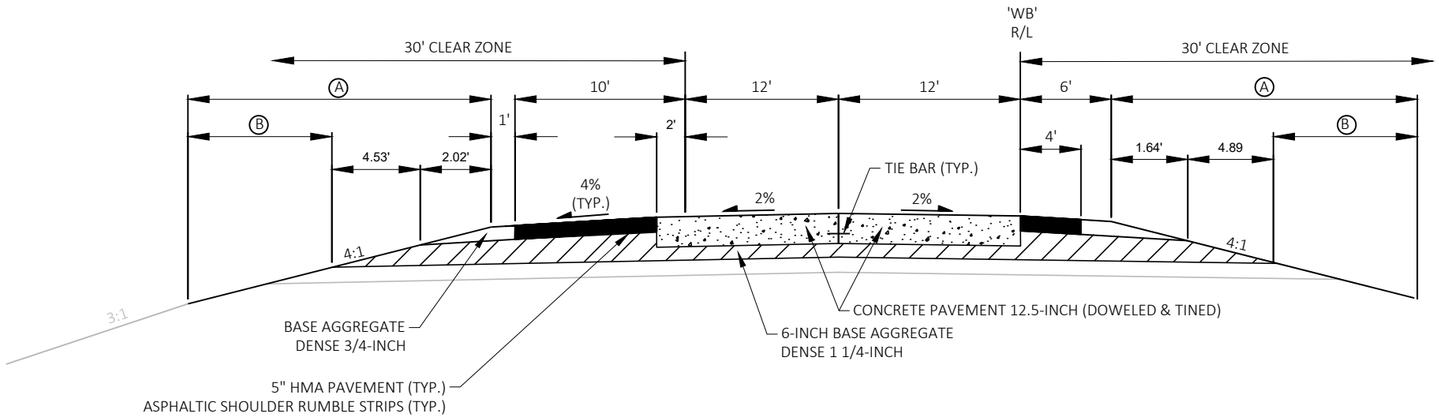


PROJECT 7996-00-43 CTH B (USH 12 to EB IH 94 Ramps)
IS HAPPENING CONCURRENTLY, THE EXISTING SECTION SHOWN
IS FOR THE FINISHED CTH B PROJECT.

EXISTING TYPICAL SECTION CTH B PULL-OFF SITE

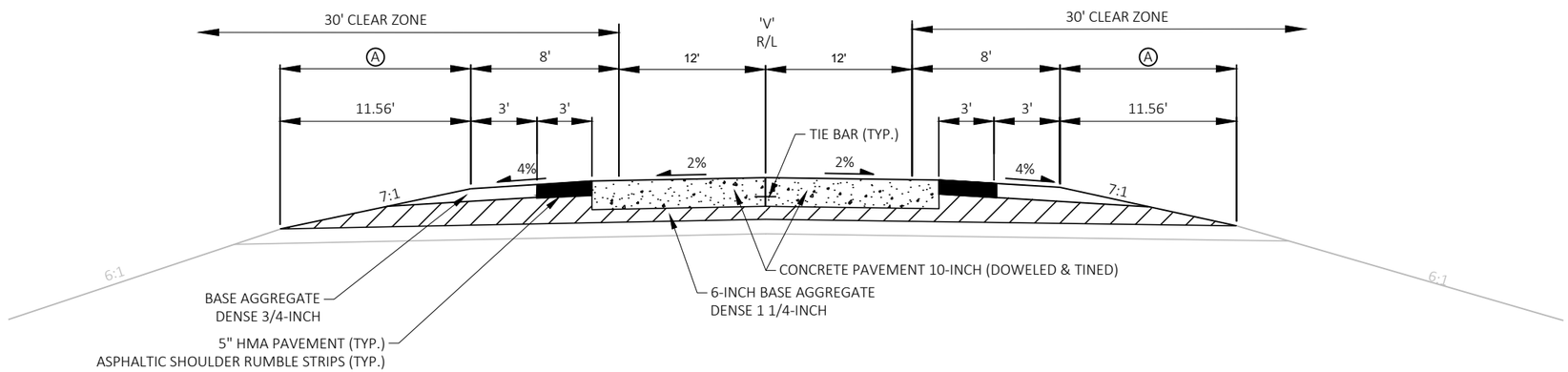
STA 386+15'NB' - STA 392+54.3'NB'

2



FINISHED TYPICAL SECTION, WB IH 94

STA 471+40'WB' - STA 480+40'WB'



FINISHED TYPICAL SECTION, USH 12/STH 29 VIRTUAL WEIGH STATION

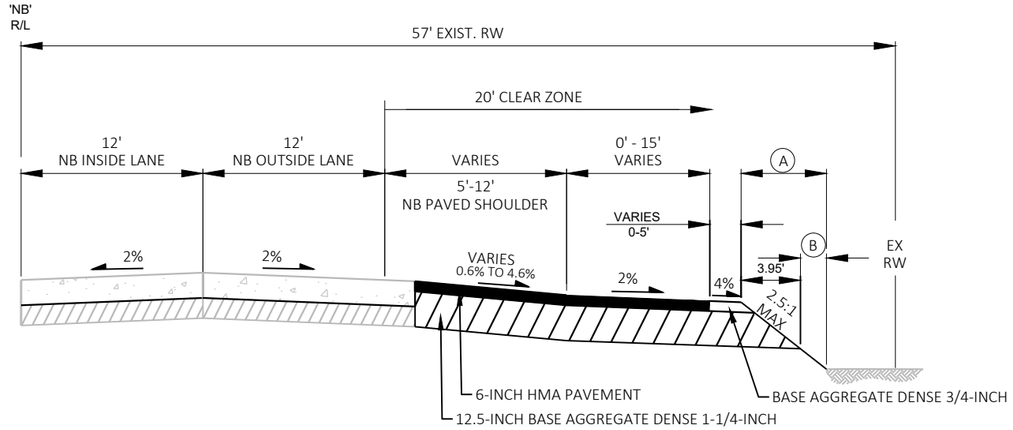
STA 55+00'V' - STA 61+00'V'

LEGEND

- (A) SEEDING NO 30 & FERTILIZER TYPE B
- (B) MULCH OR EROSION MAT URBAN CLASS I TYPE B AND & SALVAGED TOPSOIL

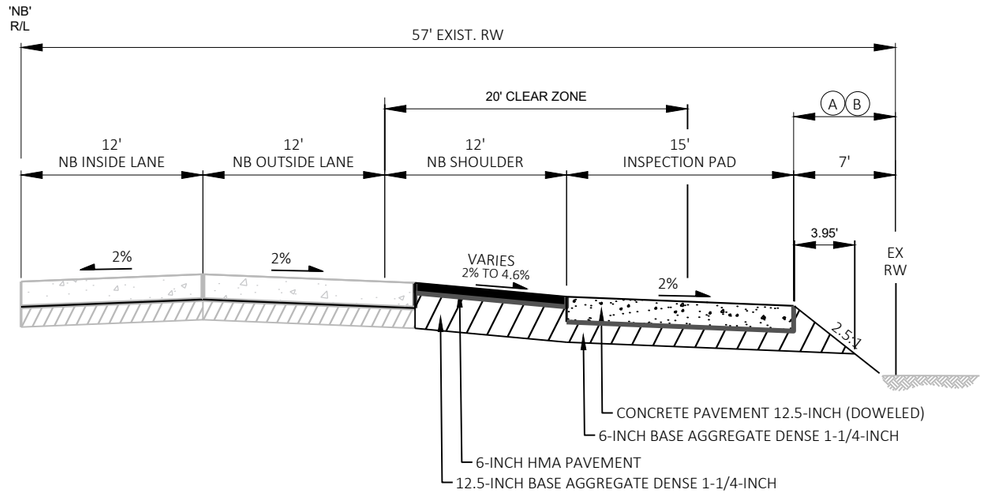
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	FINISHED TYPICAL SECTIONS	SHEET 9	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\020302_TS.DWG
LAYOUT NAME - 0
PLOT DATE : 7/31/2023 12:39 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : NTS
WISDOT/CADDS SHEET 42



FINISHED TYPICAL SECTION, CTH B PULL-OFF SITE

STA 387+11'NB' - STA 389+25'NB'
STA 390+55'NB' - STA 391+00'NB'



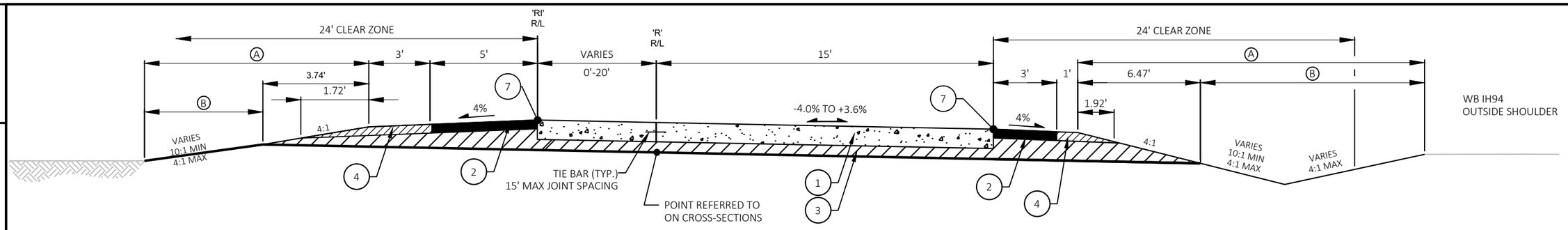
FINISHED TYPICAL SECTION, CTH B PULL-OFF SITE

STA 389+25'NB' - STA 390+55'NB'

LEGEND

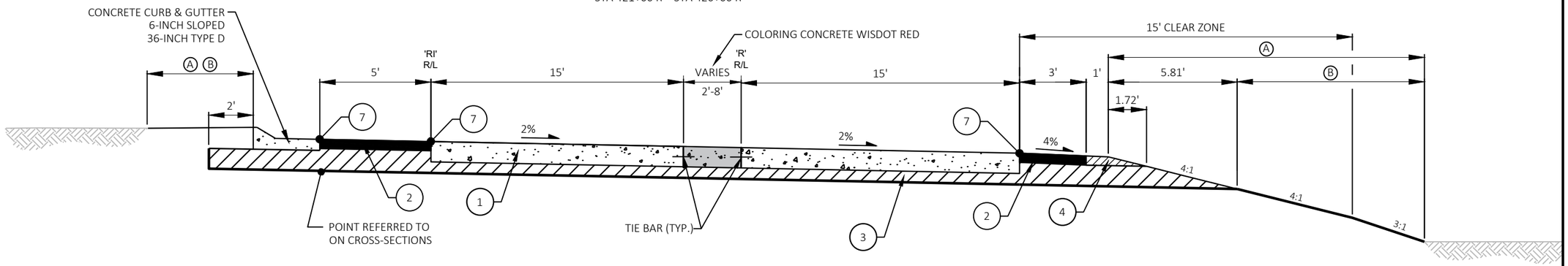
- (A) SEEDING NO 30 & FERTILIZER TYPE B
- (B) MULCH OR EROSION MAT URBAN CLASS I TYPE BAND & SALVAGED TOPSOIL

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	FINISHED TYPICAL SECTIONS	SHEET 10	E



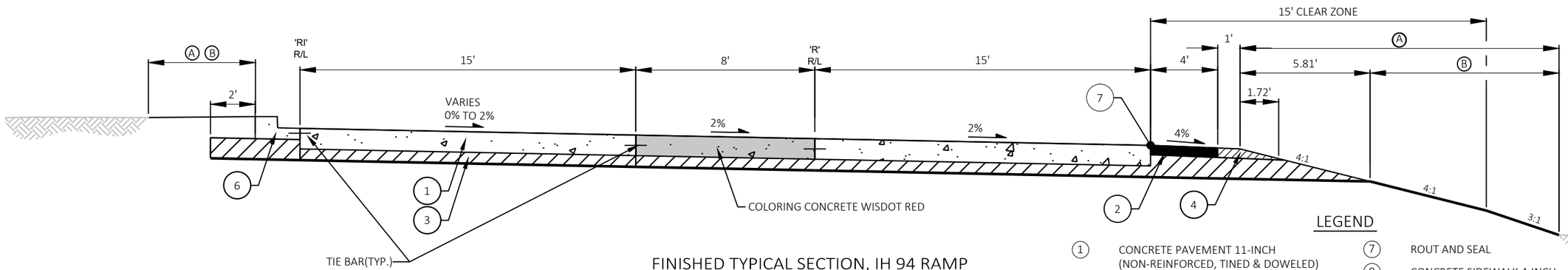
FINISHED TYPICAL SECTION, IH 94 RAMP

STA 406+00'R' - STA 409+25'R'
STA 421+00'R' - STA 426+00'R'



FINISHED TYPICAL SECTION, IH 94 RAMP

STA 411+50'R' - STA 412+50'R'
STA 420+20'R' - STA 421+00'R'



FINISHED TYPICAL SECTION, IH 94 RAMP

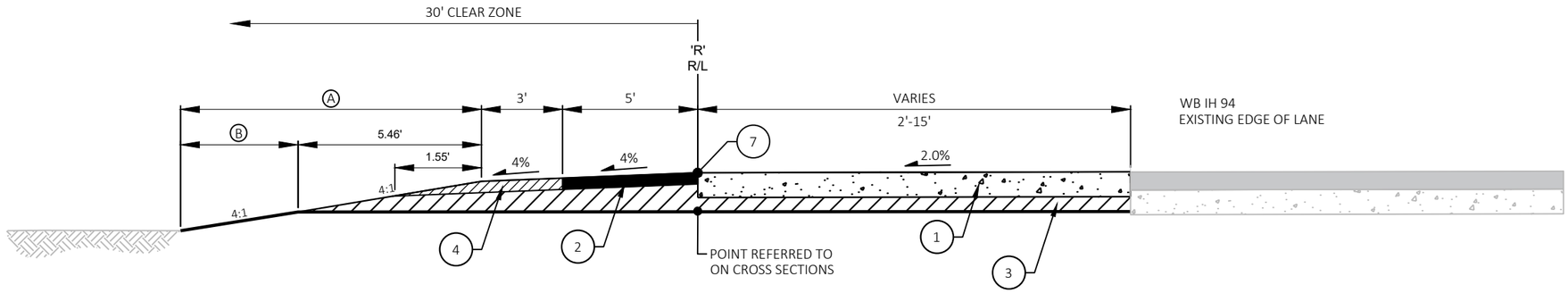
STA 412+50'R' - STA 420+20'R'

LEGEND

1	CONCRETE PAVEMENT 11-INCH (NON-REINFORCED, TINED & DOWELED)
2	5-INCH HMA PAVEMENT
3	6-INCH BASE AGGREGATE DENSE 1 1/4-INCH
4	5-INCH BASE AGGREGATE DENSE 3/4-INCH
5	CONCRETE PAVEMENT 10-INCH (NON-REINFORCED, DOWELED)
6	24-INCH CURB & GUTTER TYPE A SPECIAL
7	ROUT AND SEAL
8	CONCRETE SIDEWALK 4-INCH
9	12-INCH BASE AGGREGATE 1 1/4-INCH
10	24-INCH CURB & GUTTER TYPE D SPECIAL
11	CONCRETE PAVEMENT JOINT FILLING
A	SEEDING NO 30 & FERTILIZER TYPE B
B	EROSION MAT URBAN CLASS I TYPE B OR MULCH AND SALVAGED TOPSOIL

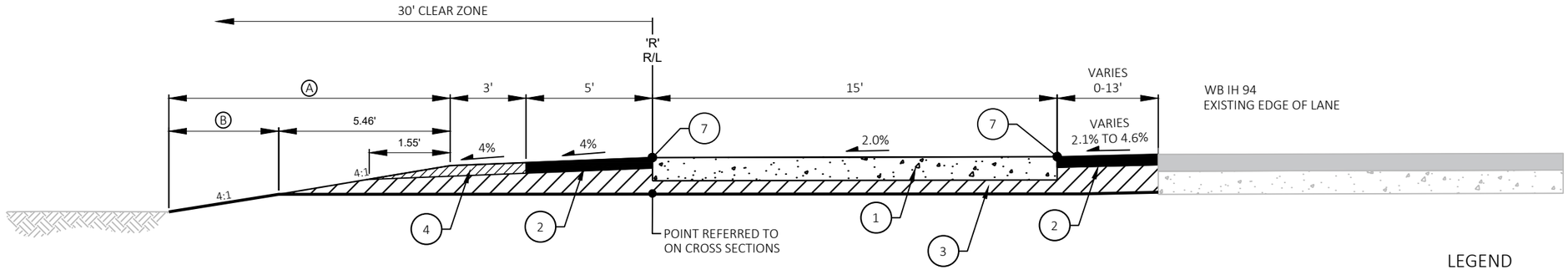
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	FINISHED TYPICAL SECTIONS	SHEET 11	E

2



FINISHED TYPICAL SECTION, IH 94 RAMP

STA 428+40'R' - STA 431+00'R'

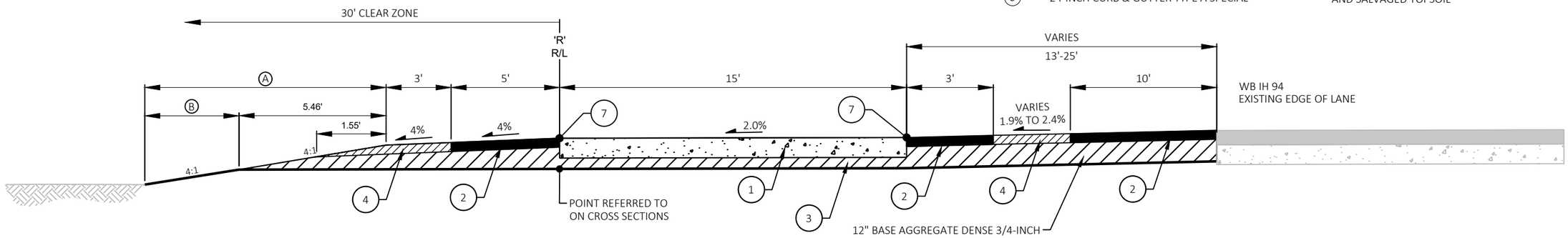


FINISHED TYPICAL SECTION, IH 94 RAMP

STA 427+00'R' - STA 428+40'R'

LEGEND

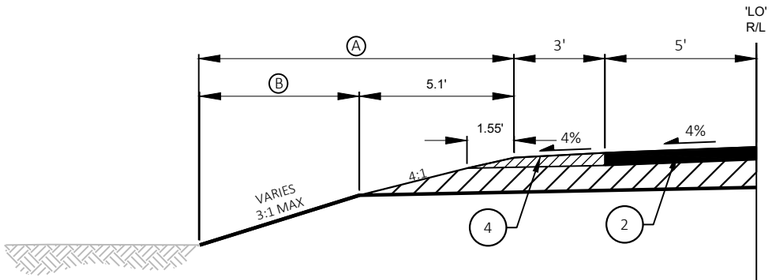
(1)	CONCRETE PAVEMENT 11-INCH (NON-REINFORCED, TINED & DOWELED)	(7)	ROUT AND SEAL
(2)	5-INCH HMA PAVEMENT	(8)	CONCRETE SIDEWALK 4-INCH
(3)	6-INCH BASE AGGREGATE DENSE 1 1/4-INCH	(9)	12-INCH BASE AGGREGATE 1 1/4-INCH
(4)	5-INCH BASE AGGREGATE DENSE 3/4-INCH	(10)	24-INCH CURB & GUTTER TYPE D SPECIAL
(5)	CONCRETE PAVEMENT 10-INCH (NON-REINFORCED, DOWELED)	(11)	CONCRETE PAVEMENT JOINT FILLING
(6)	24-INCH CURB & GUTTER TYPE A SPECIAL	(A)	SEEDING NO 30 & FERTILIZER TYPE B
		(B)	EROSION MAT URBAN CLASS I TYPE B OR MULCH AND SALVAGED TOPSOIL



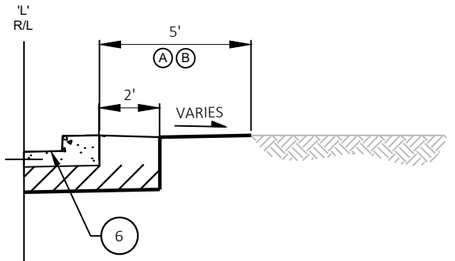
FINISHED TYPICAL SECTION, IH 94 RAMP

STA 426+00'R' - STA 427+00'R'

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	FINISHED TYPICAL SECTIONS	SHEET 12	E

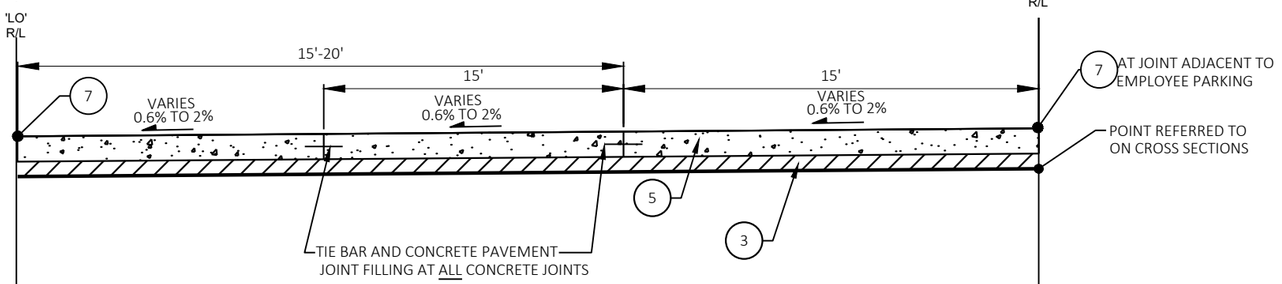


STA 50+65'LO' - STA 52+07''LO'
STA 53+05'LO' - STA 55+15'LO'
STA 57+76'LO' - STA 59+87''LO'



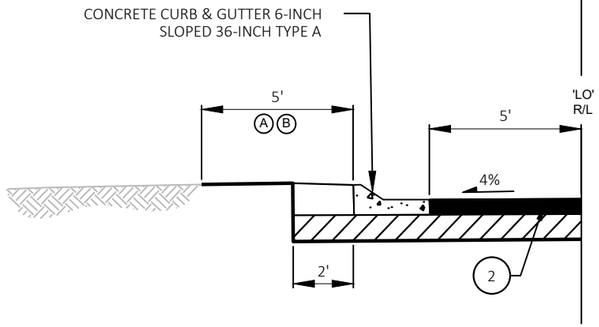
STA 13+58'L' - STA 15+20'L'

MATCH SALT SHED
TYPICAL SECTION
STA 50+81'S' - STA 51+30'S'
STA 53+29'S' - STA 53+75'S'

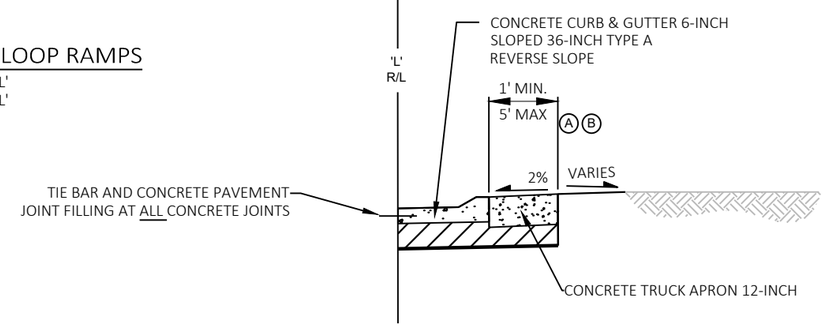


FINISHED TYPICAL SECTION, LOOP RAMPS

STA 12+00'L' - STA 15+90'L'
STA 18+50'L' - STA 20+50'L'



STA 50+20'LO' - STA 50+65'LO'
STA 59+87'LO' - STA 60+58'LO'



TRUCK APRON

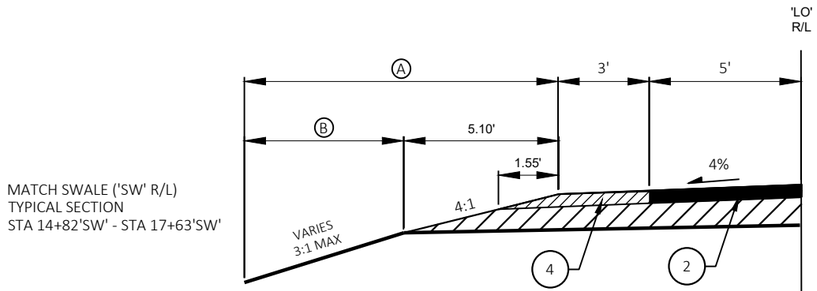
STA 11+62'L' - STA 13+48'L'
STA 19+70'L' - STA 21+27'L'

LEGEND

1	CONCRETE PAVEMENT 11-INCH (NON-REINFORCED, TINED & DOWELED)	7	ROUT AND SEAL
2	5-INCH HMA PAVEMENT	8	CONCRETE SIDEWALK 4-INCH
3	6-INCH BASE AGGREGATE DENSE 1 1/4-INCH	9	12-INCH BASE AGGREGATE 1 1/4-INCH
4	5-INCH BASE AGGREGATE DENSE 3/4-INCH	10	24-INCH CURB & GUTTER TYPE D SPECIAL
5	CONCRETE PAVEMENT 10-INCH (NON-REINFORCED, DOWELED)	11	CONCRETE PAVEMENT JOINT FILLING
6	24-INCH CURB & GUTTER TYPE A SPECIAL	A	SEEDING NO 30 & FERTILIZER TYPE B
		B	EROSION MAT URBAN CLASS I TYPE B OR MULCH AND SALVAGED TOPSOIL

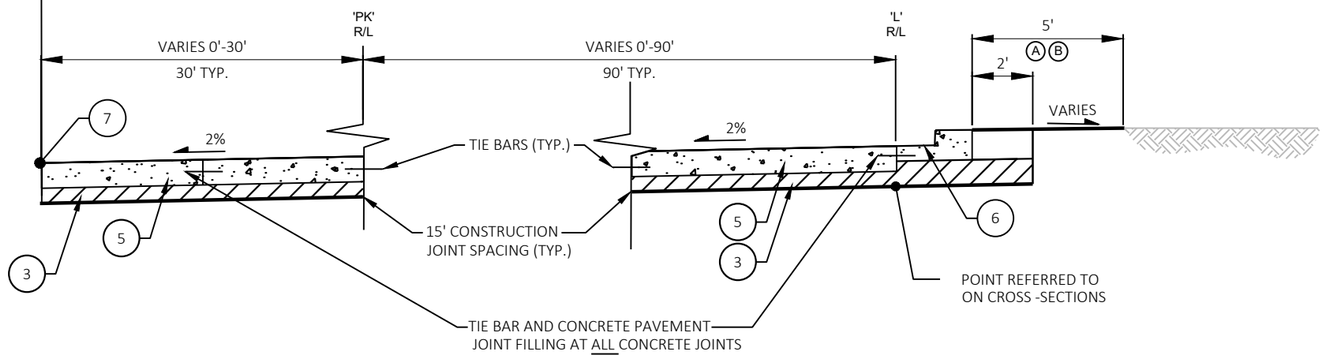
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	FINISHED TYPICAL SECTIONS	SHEET 13	E

2



MATCH SWALE ('SW' R/L)
TYPICAL SECTION
STA 14+82'SW' - STA 17+63'SW'

STA 50+00'PK' - STA 50+50'PK'
STA 51+62'PK' - STA 52+00'PK'



STA 50+50'PK' - STA 51+62'PK'
MATCH SALT SHED ('S' R/L)
TYPICAL SECTION
STA 50+00'S' - STA 51+30'S'
STA 53+29'S' - STA 54+27'S'

FINISHED TYPICAL SECTION, CMV PARKING

STA 50+00'PK' - STA 52+97'PK'

LEGEND

1	CONCRETE PAVEMENT 11-INCH (NON-REINFORCED, TINED & DOWELED)	7	ROUT AND SEAL
2	5-INCH HMA PAVEMENT	8	CONCRETE SIDEWALK 4-INCH
3	6-INCH BASE AGGREGATE DENSE 1 1/4-INCH	9	12-INCH BASE AGGREGATE 1 1/4-INCH
4	5-INCH BASE AGGREGATE DENSE 3/4-INCH	10	24-INCH CURB & GUTTER TYPE D SPECIAL
5	CONCRETE PAVEMENT 10-INCH (NON-REINFORCED, DOWELED)	11	CONCRETE PAVEMENT JOINT FILLING
6	24-INCH CURB & GUTTER TYPE A SPECIAL	A	SEEDING NO 30 & FERTILIZER TYPE B
		B	EROSION MAT URBAN CLASS I TYPE B OR MULCH AND SALVAGED TOPSOIL

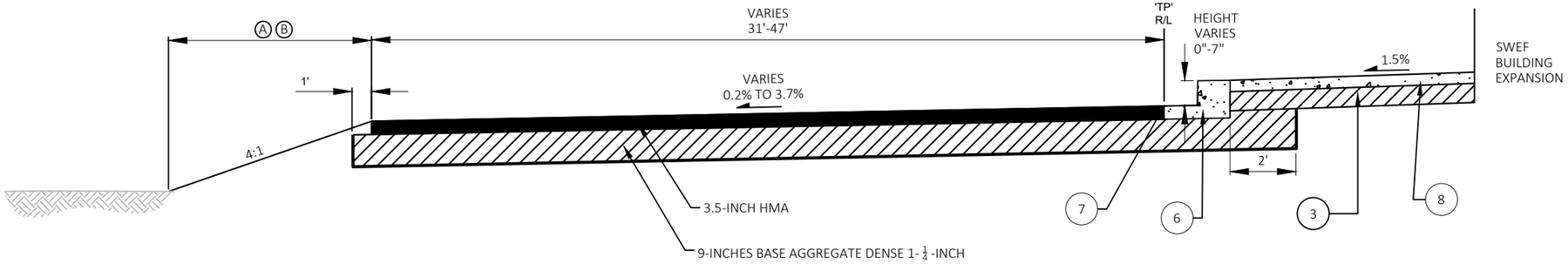
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	FINISHED TYPICAL SECTIONS	SHEET 14	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\020302_TS.DWG
LAYOUT NAME - 04
PLOT DATE : 7/31/2023 12:39 PM
PLOT BY : JON BLOMQUIST
PLOT NAME :
PLOT SCALE : NTS

2

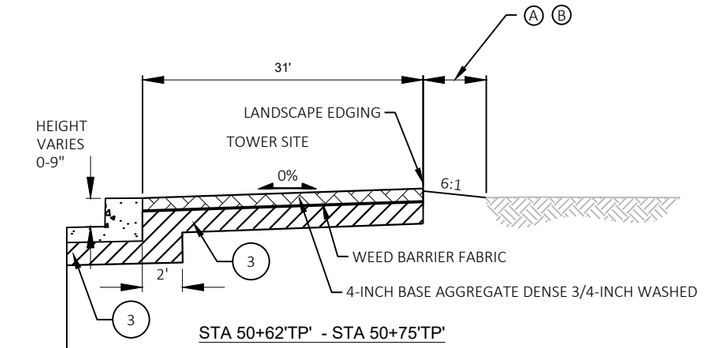
LEGEND

1. CONCRETE PAVEMENT 11-INCH (NON-REINFORCED, TINED & DOWELED)
2. 5-INCH HMA PAVEMENT
3. 6-INCH BASE AGGREGATE DENSE 1 1/4-INCH
4. 5-INCH BASE AGGREGATE DENSE 3/4-INCH
5. CONCRETE PAVEMENT 10-INCH (NON-REINFORCED, DOWELED)
6. 24-INCH CURB & GUTTER TYPE A SPECIAL
7. ROUT AND SEAL
8. CONCRETE SIDEWALK 4-INCH
9. 12-INCH BASE AGGREGATE 1 1/4-INCH
10. 24-INCH CURB & GUTTER TYPE D SPECIAL
11. CONCRETE PAVEMENT JOINT FILLING
- A. SEEDING NO 30 & FERTILIZER TYPE B
- B. EROSION MAT URBAN CLASS I TYPE B OR MULCH AND SALVAGED TOPSOIL

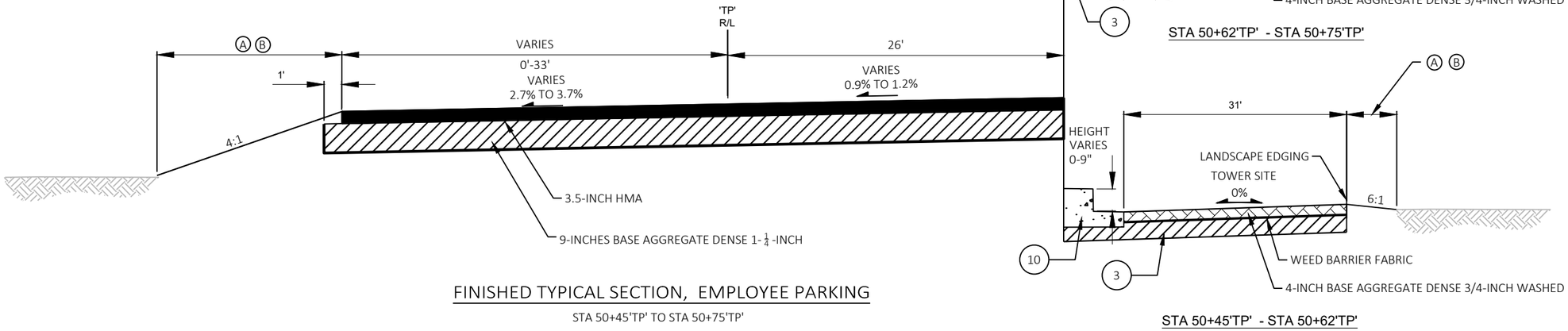


FINISHED TYPICAL SECTION, EMPLOYEE PARKING

STA 50+01'TP' TO STA 50+45'TP'



STA 50+62'TP' - STA 50+75'TP'



FINISHED TYPICAL SECTION, EMPLOYEE PARKING

STA 50+45'TP' TO STA 50+75'TP'

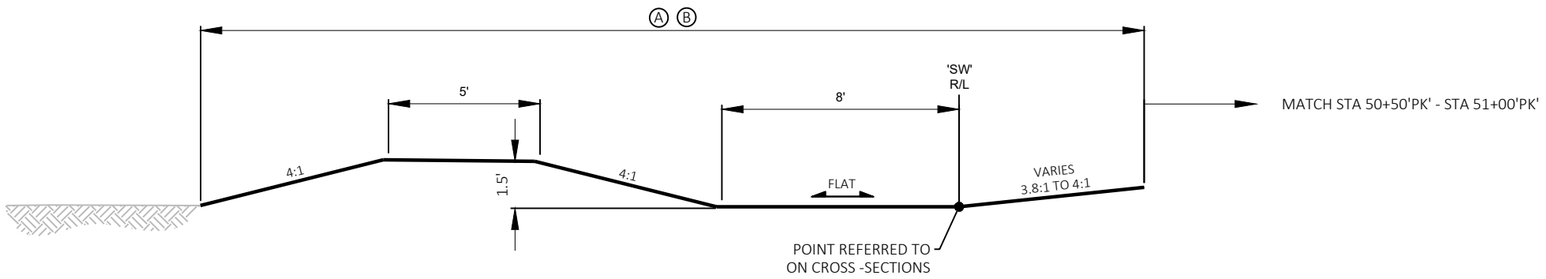
STA 50+45'TP' - STA 50+62'TP'

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	FINISHED TYPICAL SECTIONS	SHEET 15	E

2

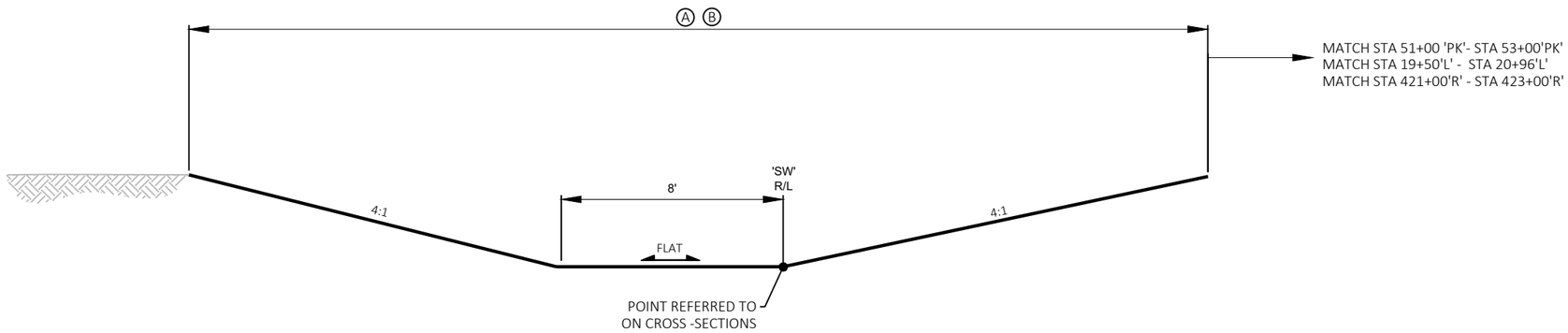
LEGEND

1. CONCRETE PAVEMENT 11-INCH (NON-REINFORCED, TINED & DOWELED)
2. 5-INCH HMA PAVEMENT
3. 6-INCH BASE AGGREGATE DENSE 1 1/4-INCH
4. 5-INCH BASE AGGREGATE DENSE 3/4-INCH
5. CONCRETE PAVEMENT 10-INCH (NON-REINFORCED, DOWELED)
6. 24-INCH CURB & GUTTER TYPE A SPECIAL
7. ROUT AND SEAL
8. CONCRETE SIDEWALK 4-INCH
9. 12-INCH BASE AGGREGATE 1 1/4-INCH
10. 24-INCH CURB & GUTTER TYPE D SPECIAL
11. CONCRETE PAVEMENT JOINT FILLING
- A. SEEDING NO 30 & FERTILIZER TYPE B
- B. EROSION MAT URBAN CLASS I TYPE B OR MULCH AND SALVAGED TOPSOIL



FINISHED TYPICAL SECTION, SWALE

STA 10+08'SW' TO STA 14+82'SW'



FINISHED TYPICAL SECTION, SWALE

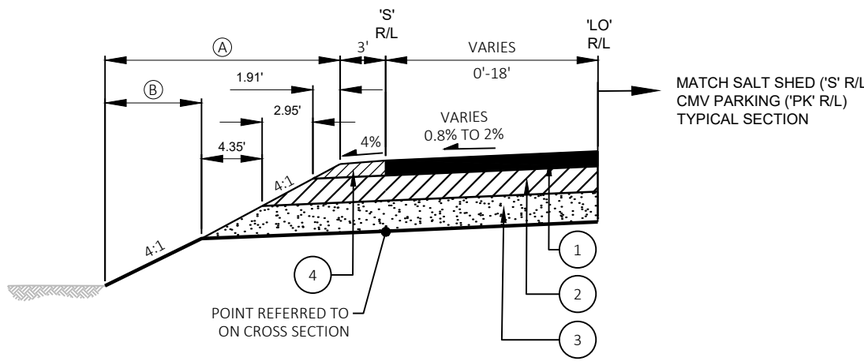
STA 14+82'SW' TO STA 17+63'SW'

2

LEGEND

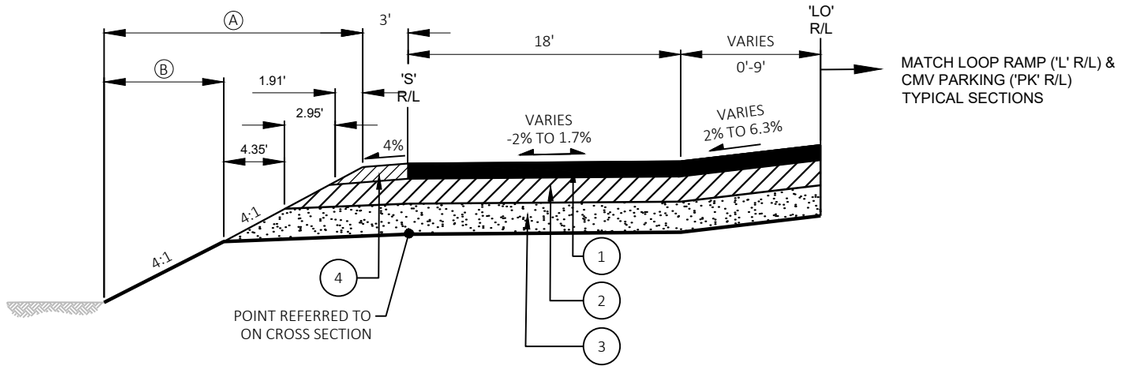
1. 6-INCH HMA PAVEMENT
2. 8-INCH BASE AGGREGATE DENSE 1 1/4-INCH
3. 12-INCH SUBBASE
4. 6-INCH BASE AGGREGATE DENSE 3/4-INCH

A. SEEDING NO 30 & FERTILIZER TYPE B
B. EROSION MAT URBAN CLASS I TYPE B OR MULCH AND SALVAGED TOPSOIL



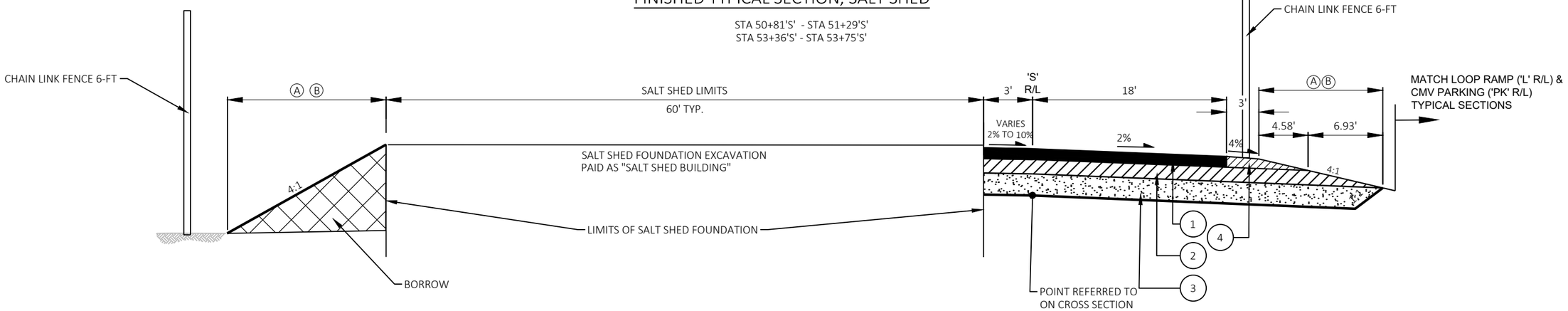
FINISHED TYPICAL SECTION, SALT SHED

STA 50+00'S' - STA 50+81'S'
STA 53+75'S' - STA 54+32'S'



FINISHED TYPICAL SECTION, SALT SHED

STA 50+81'S' - STA 51+29'S'
STA 53+36'S' - STA 53+75'S'

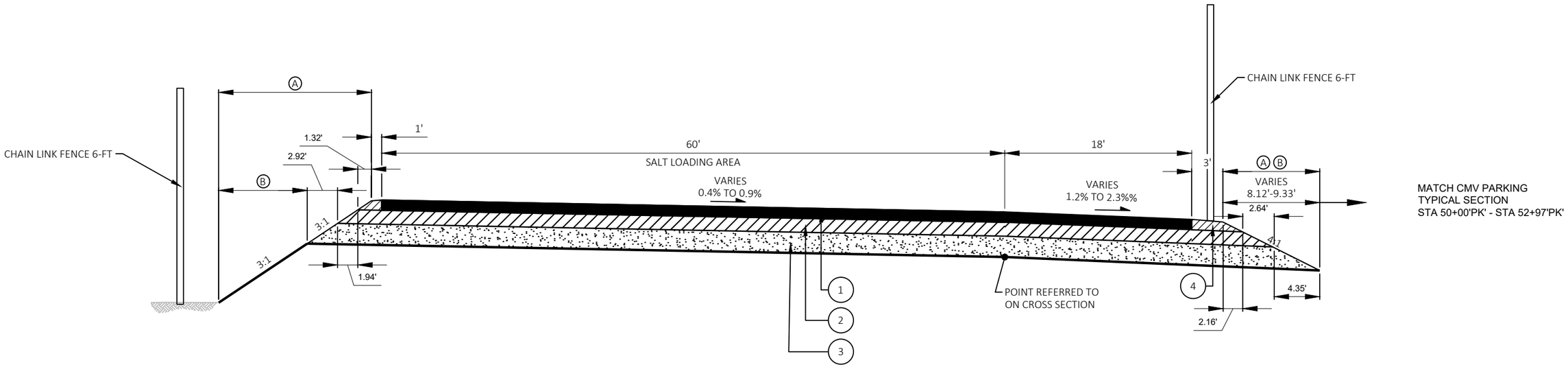


FINISHED TYPICAL SECTION, SALT SHED

STA 51+29'S'- STA 51+98'S'

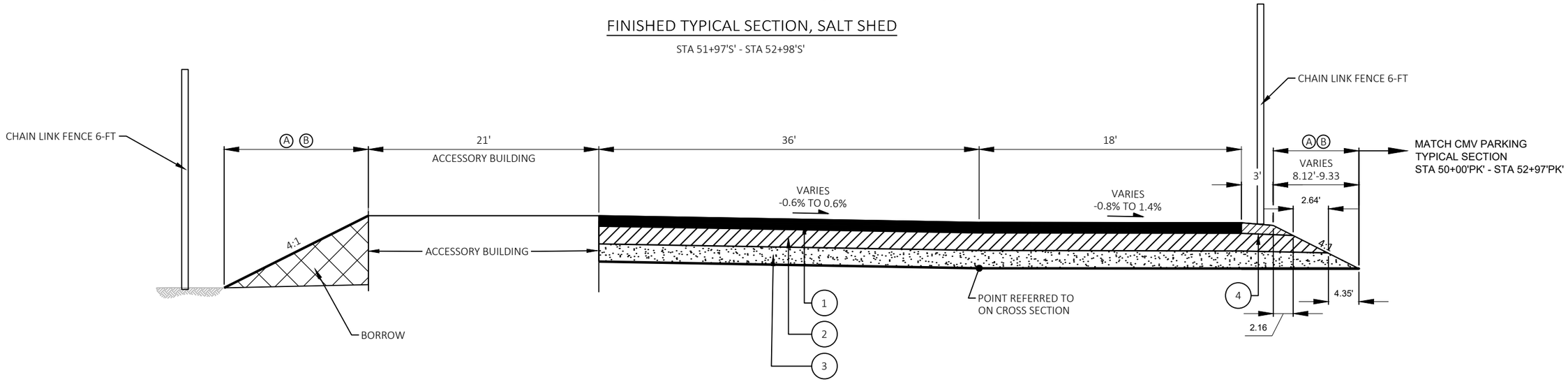
PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	FINISHED TYPICAL SECTIONS	SHEET 17	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\020302_TS.DWG
LAYOUT NAME - 07
PLOT DATE : 7/31/2023 12:40 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : NTS
WISDOT/CADDS SHEET 42



FINISHED TYPICAL SECTION, SALT SHED

STA 51+97'S' - STA 52+98'S'



FINISHED TYPICAL SECTION, SALT SHED

STA 52+98'S' - STA 53+36'S'

LEGEND

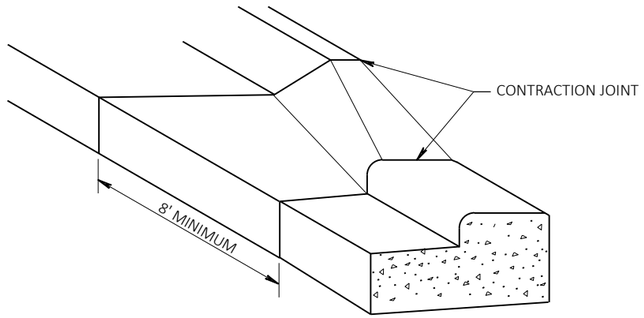
1. 6-INCH HMA PAVEMENT
2. 8-INCH BASE AGGREGATE DENSE 1 1/4-INCH
3. 12-INCH SUBBASE
4. 6-INCH BASE AGGREGATE DENSE 3/4-INCH

A. SEEDING NO 30 & FERTILIZER TYPE B

B. EROSION MAT URBAN CLASS I TYPE B OR MULCH AND SALVAGED TOPSOIL

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	FINISHED TYPICAL SECTIONS	SHEET 18	E

2



DETAIL OF 24-INCH TO 36-INCH TRANSITION

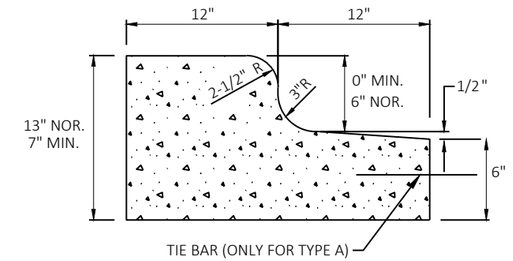
GENERAL NOTES

FOR DETAILS NOT SHOWN, SEE S.D.D. "CONCRETE CURB & GUTTER"

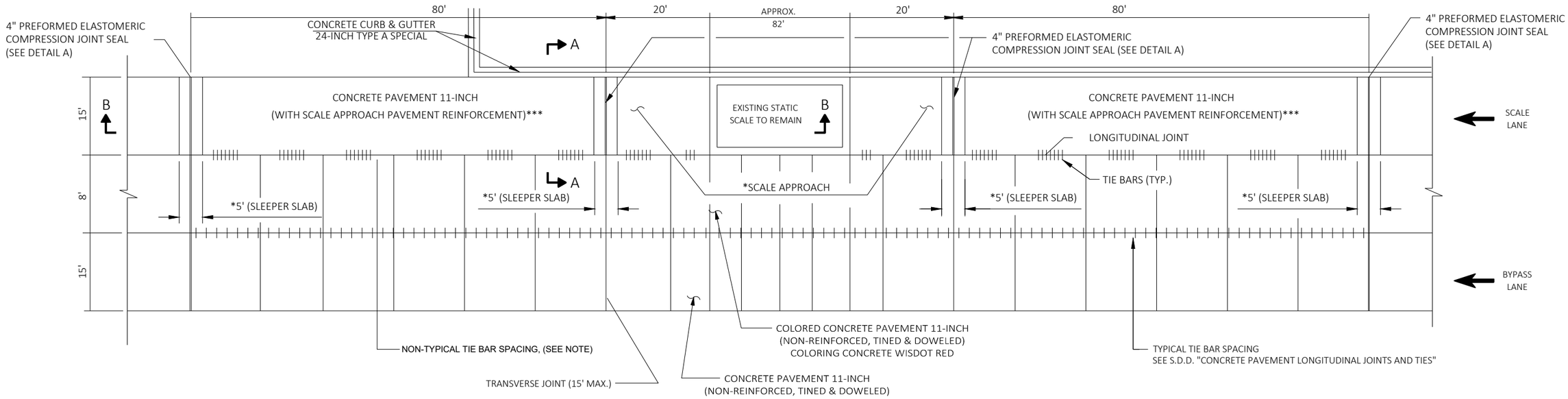
LATERAL CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 15' NOR LESS THAN 6' IN LENGTH. THE JOINTS SHALL BE A MINIMUM OF 3" IN DEPTH.

EXPANSION JOINTS SHALL BE PLACED TRANSVERSELY AT RADIUS POINTS ON CURVES OF RADIUS 200' OR LESS, AND AT ANGLE POINTS, OR AS DIRECTED BY THE ENGINEER. THE EXPANSION JOINT SHALL BE A ONE PIECE ASPHALTIC MATERIAL HAVING THE SAME DIMENSIONS AS CURB & GUTTER AT THAT STATION AND BE 1/2" THICK.

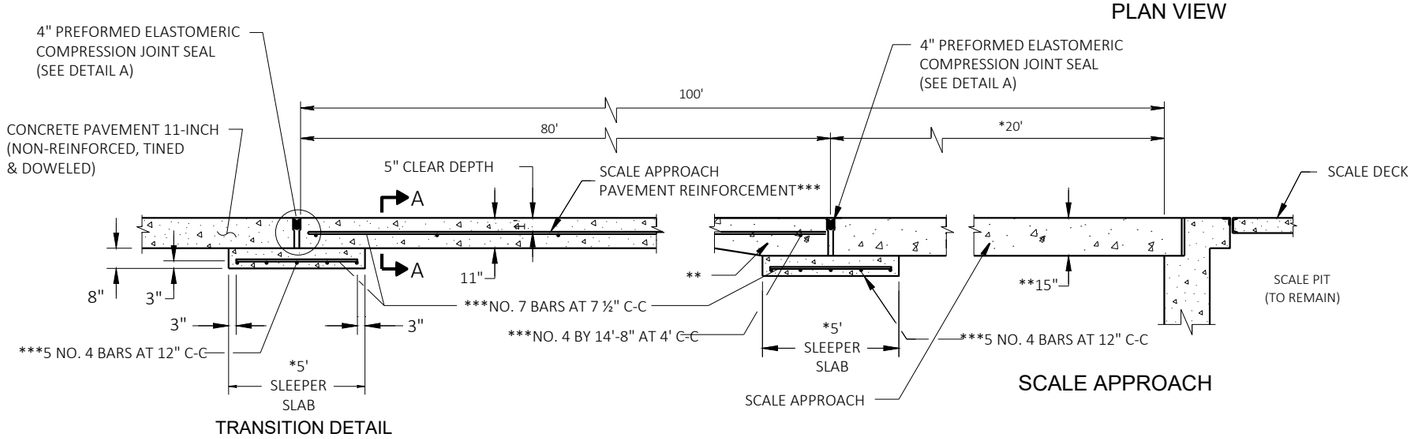
IN ALL CASES, CONCRETE CURB & GUTTER SHALL BE PLACED ON THOROUGHLY COMPACTED BASE AGGREGATE DENSE



CONCRETE CURB & GUTTER 24-INCH TYPE A/D SPECIAL DETAIL



PLAN VIEW



TRANSITION DETAIL

SCALE APPROACH

GENERAL NOTES

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

JOINT FILLER

EXPANSION JOINT FILLER BETWEEN APPROACH SLAB AND ROADWAY PAVEMENT AT THE SLEEPER SLAB IS A 4 INCH PREFORMED ELASTOMERIC COMPRESSION SEAL.

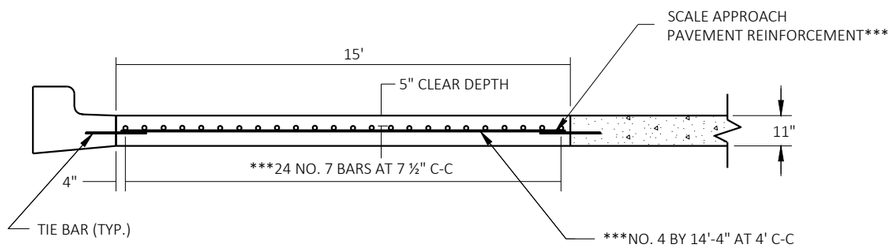
STEEL REINFORCEMENT

SPLICING OF NO. 7 BARS IN THE APPROACH SLAB IS PERMITTED. SPLICES SHALL BE STAGGERED, WITH A MAXIMUM OF ONE SPLICE PER BAR. LAPS SHALL CONFORM TO THE STANDARD SPECIFICATIONS. REINFORCEMENT BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

TIE BARS

TIE BARS BETWEEN THE CRCP AND THE NON-REINFORCED DOWELED CONCRETE PAVEMENT LONGITUDINAL JOINT SHOULD ONLY BE PLACED WITHIN THE MIDDLE THIRD OF THE SLAB (15 FOOT MAX. LENGTH) BETWEEN THE TRANSVERSE JOINTS. THE SAME NUMBER OF TIE BARS THAT WOULD TYPICALLY BE USED ALONG THE LONGITUDINAL JOINTS PER S.D.D. SHOULD BE USED.

SECTION B-B



SECTION A-A

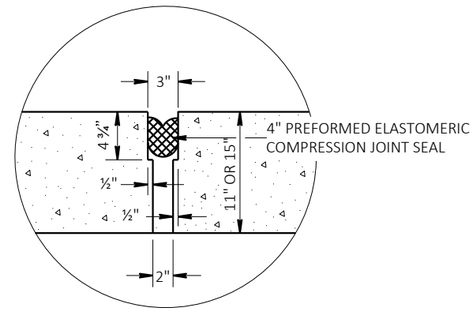
CONTINUOUS REINFORCED CONCRETE PAVEMENT (CRCP) APPROACH

* COSTS INCIDENTAL TO CONCRETE PAVEMENT 11-INCH

** ADDITIONAL DEPTH IS INCIDENTAL TO CONCRETE PAVEMENT 11-INCH

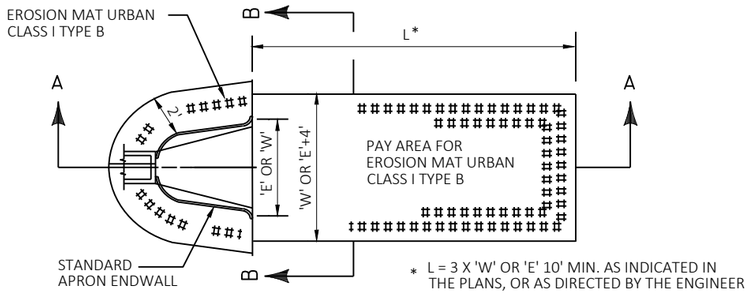
*** SCALE APPROACH PAVEMENT REINFORCEMENT PAID FOR UNDER SEPARATE BID ITEM FROM CONCRETE PAVEMENT 11-INCH

SCALE APPROACH PAVEMENT DETAIL



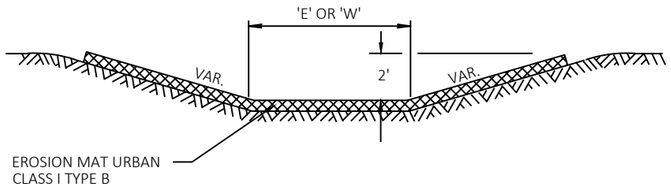
DETAIL A

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CONSTRUCTION DETAILS	SHEET 20	E



NOTES: REFER TO S.D.D.
FOR 'E' OR 'W'
DIMENSIONS

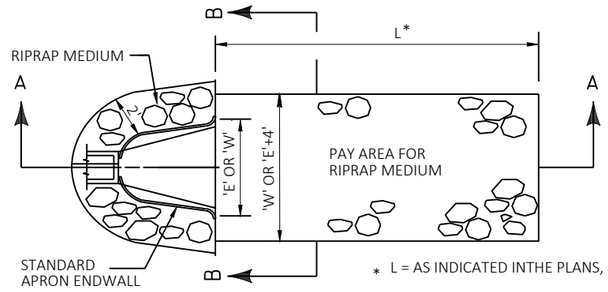
SECTION A-A

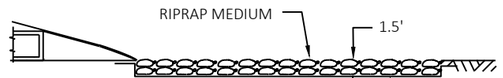


SECTION B-B

EROSION MAT TREATMENT AT PIPE ENDWALL DETAIL

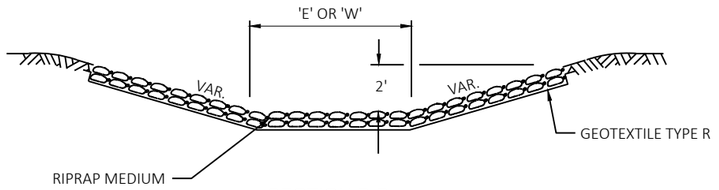
SEE EROSION CONTROL PLAN FOR LOCATIONS





NOTES: REFER TO S.D.D.
FOR 'E' OR 'W'
DIMENSIONS

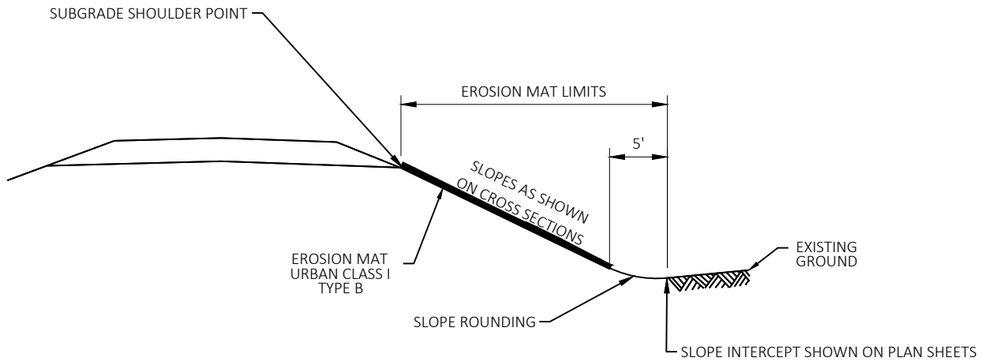
SECTION A-A



SECTION B-B

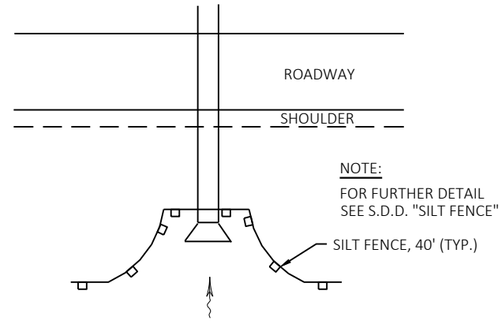
RIPRAP TREATMENT AT PIPE ENDWALL DETAIL

SEE EROSION CONTROL PLAN FOR LOCATIONS



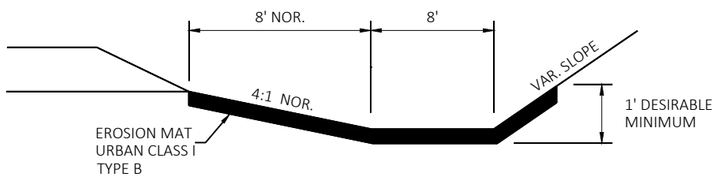
SLOPE GRADING DETAIL

SEE EROSION CONTROL PLAN FOR LOCATIONS
NOT TO SCALE



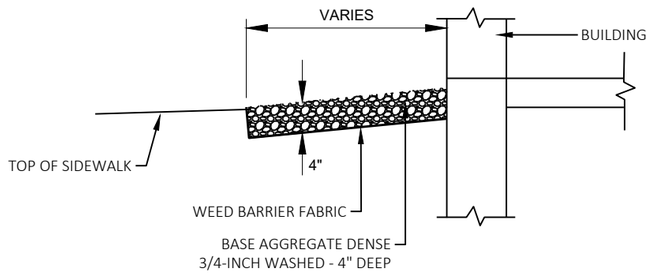
SILT FENCE AT PIPE INLET

SEE EROSION CONTROL PLAN FOR LOCATIONS

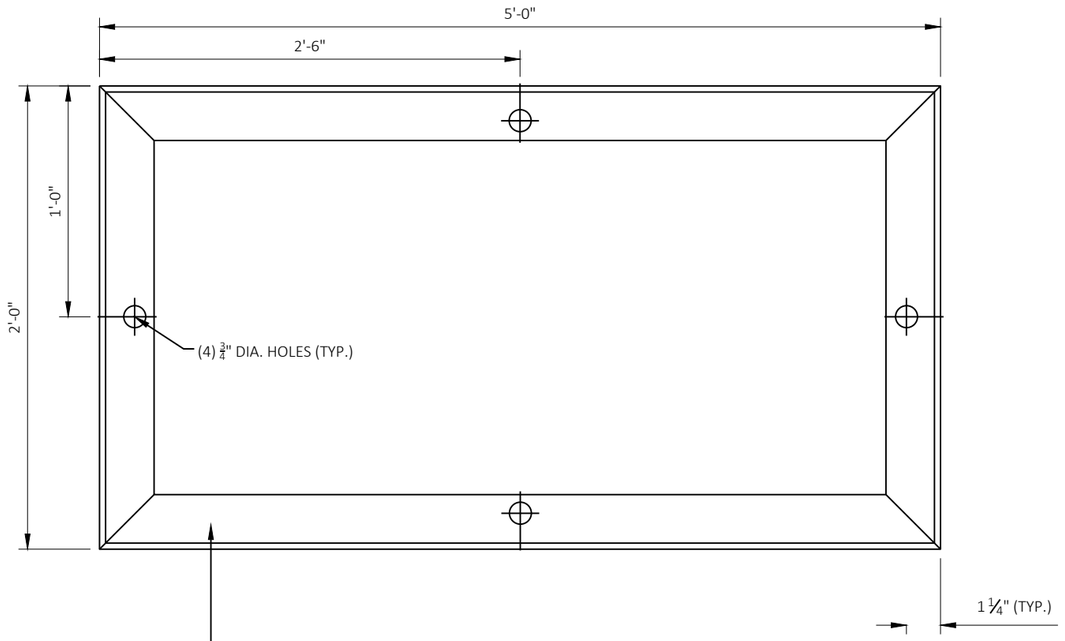


EROSION MAT DETAIL FOR DITCHES

(REQ'D. IN ALL DITCHES)



PLANTING BED DETAIL

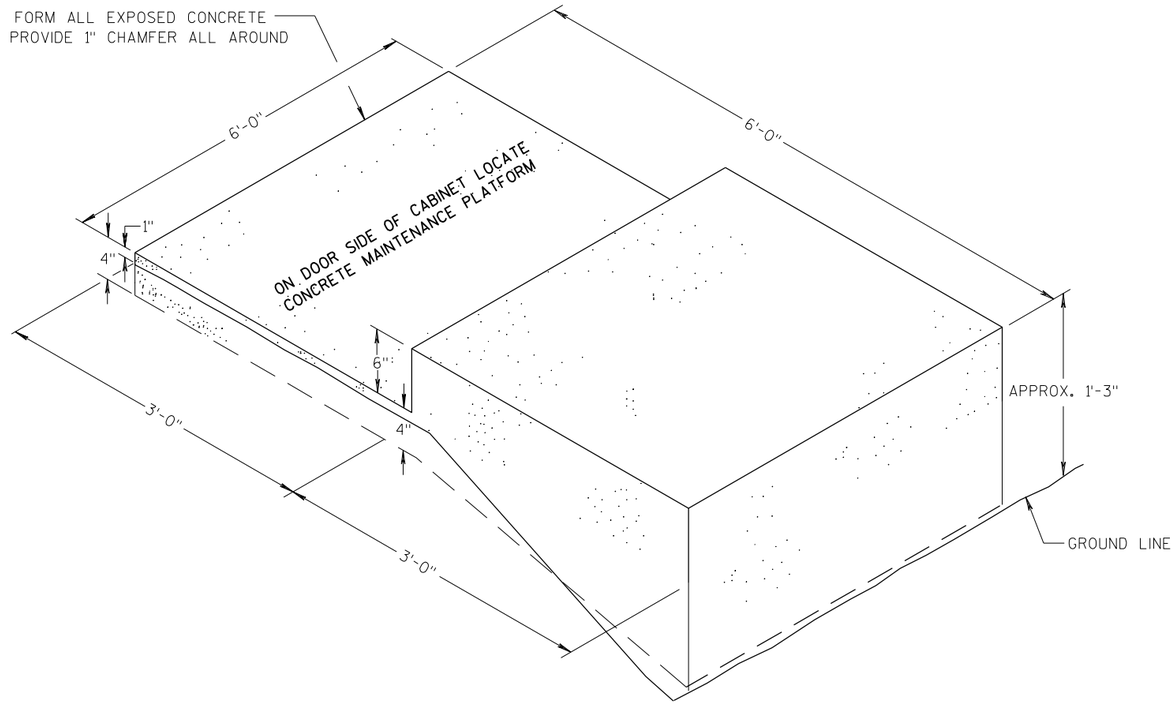


MOUNTING BASE

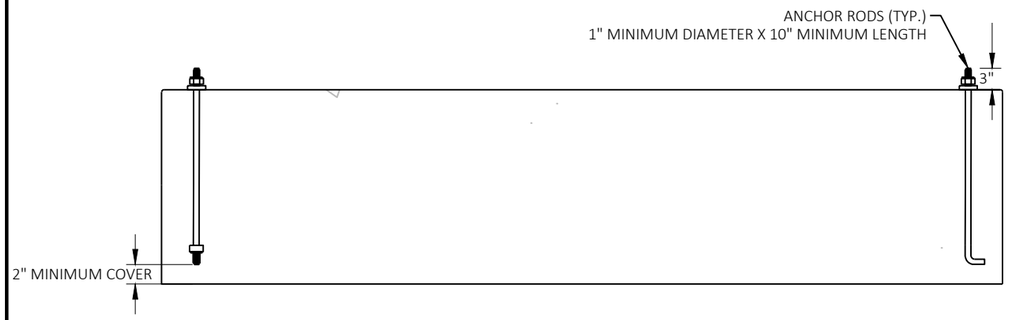
L 2" X 2" X ¼"

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

ALL SHEET METAL PARTS SHALL BE 1/4-INCH THICK ALUMINUM (TYPE 5052-H32) WITH ALL SEAMS CONTINUOUSLY WELDED. FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL. FINISH INTERIOR SURFACES WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.



ISOMETRIC VIEW OF MOUNTING BASE



CONNECTION DETAIL

GENERAL NOTES:

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

INSTALL FOUR (4) 1-INCH MINIMUM DIAMETER X 10-INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE STORAGE CABINET TO THE CONCRETE BASE. ANCHOR RODS TO BE IN ACCORDANCE WITH 654.2 OF THE STANDARD SPECIFICATIONS. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE STORAGE CABINET TO THE BASE.

STORAGE CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND LEVEL.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6 INCHES MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

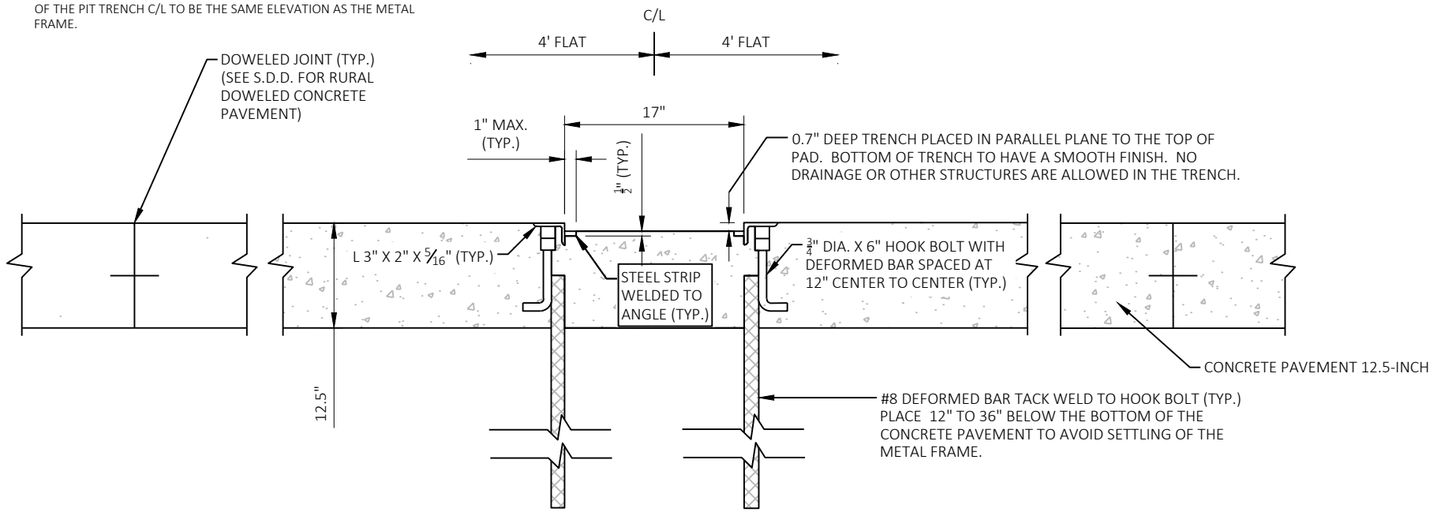
INSPECTION SITE APPURTENANCES

CONCRETE PAD FOR STORAGE CABINET DETAIL

STA 389+30'NB', RT

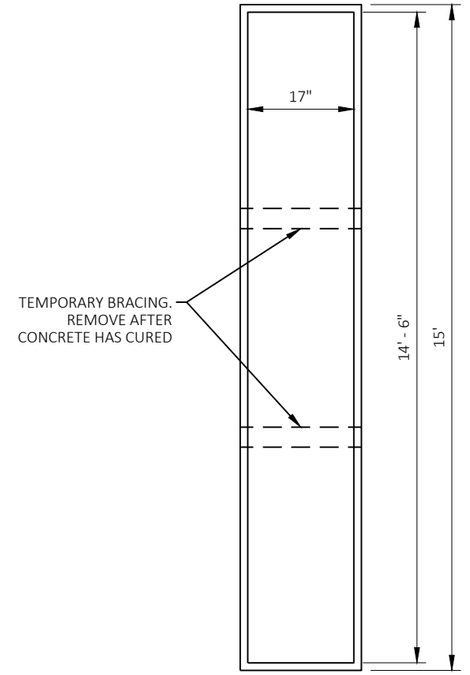
NOTE:

ELEVATION ON THE CONCRETE FOR A DISTANCE 4' FROM EACH SIDE OF THE PIT TRENCH C/L TO BE THE SAME ELEVATION AS THE METAL FRAME.



LONGITUDINAL SECTION

(PIT TRENCH METAL FRAME DETAIL)



PREFABRICATED PIT TRENCH CHANNEL DETAIL

NOTES:

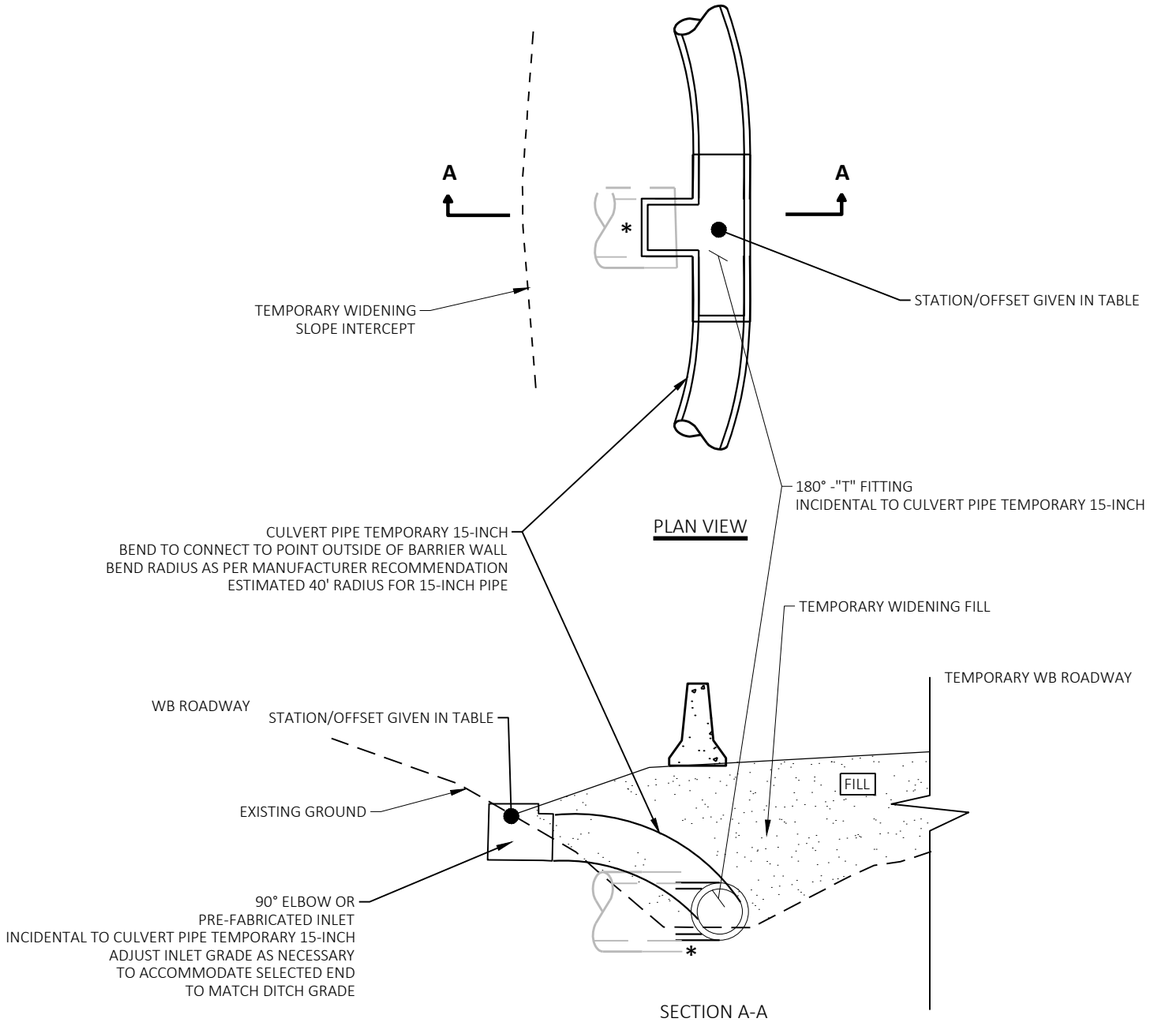
1. SMOOTH FINISH CONCRETE IS REQUIRED INSIDE THE METAL FRAME.
2. PAID AS PART OF "INSPECTION PAD APPURTENANCES"

INSPECTION SITE APPURTENANCE

PREFABRICATED PIT TRENCH

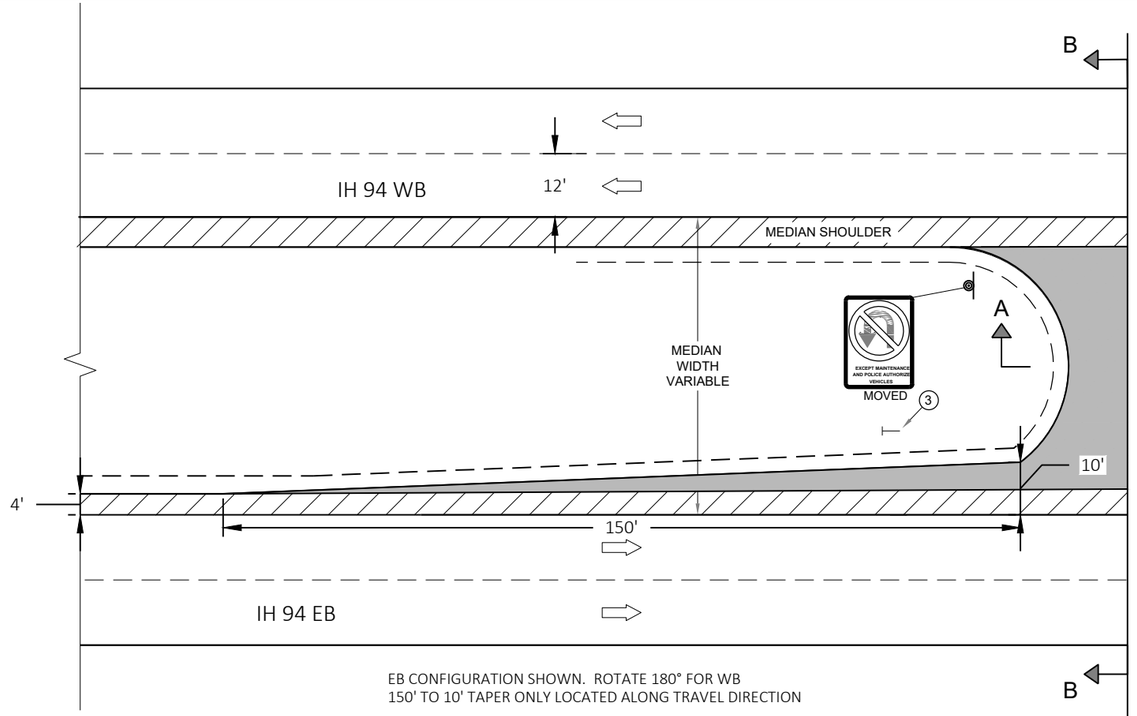
STA 389+60'NB' RIGHT

2



* CONNECT TO EXISTING CULVERT USING ENGINEER APPROVED METHOD
CONNECT THE EXISTING PIPE IN SUCH A WAY THAT IT WILL BE REMOVABLE WITHOUT CAUSING DAMAGE TO THE EXISTING PIPE AND PREVENTS SEDIMENT FROM ENTERING JOINT

CULVERT PIPE TEMPORARY 15-INCH



EB CONFIGURATION SHOWN. ROTATE 180° FOR WB
150' TO 10' TAPER ONLY LOCATED ALONG TRAVEL DIRECTION

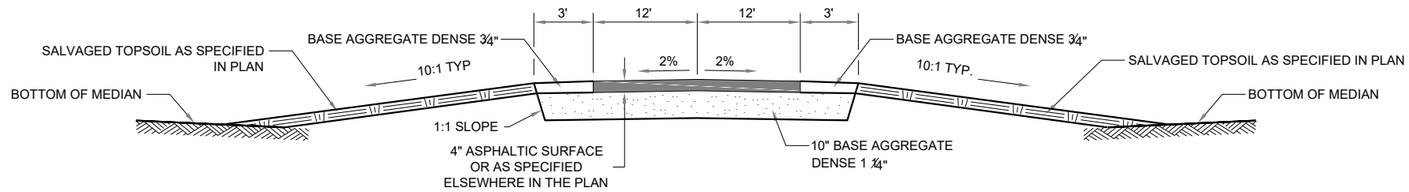
A

GENERAL NOTES

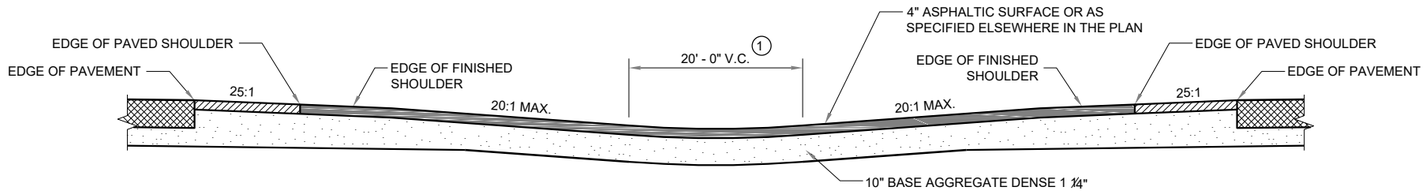
1. ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.
2. SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.
3. INSTALL DELINEATOR. SEE STANDARD DETAIL DRAWING 15A4.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DELINEATOR
- DIRECTION OF TRAFFIC



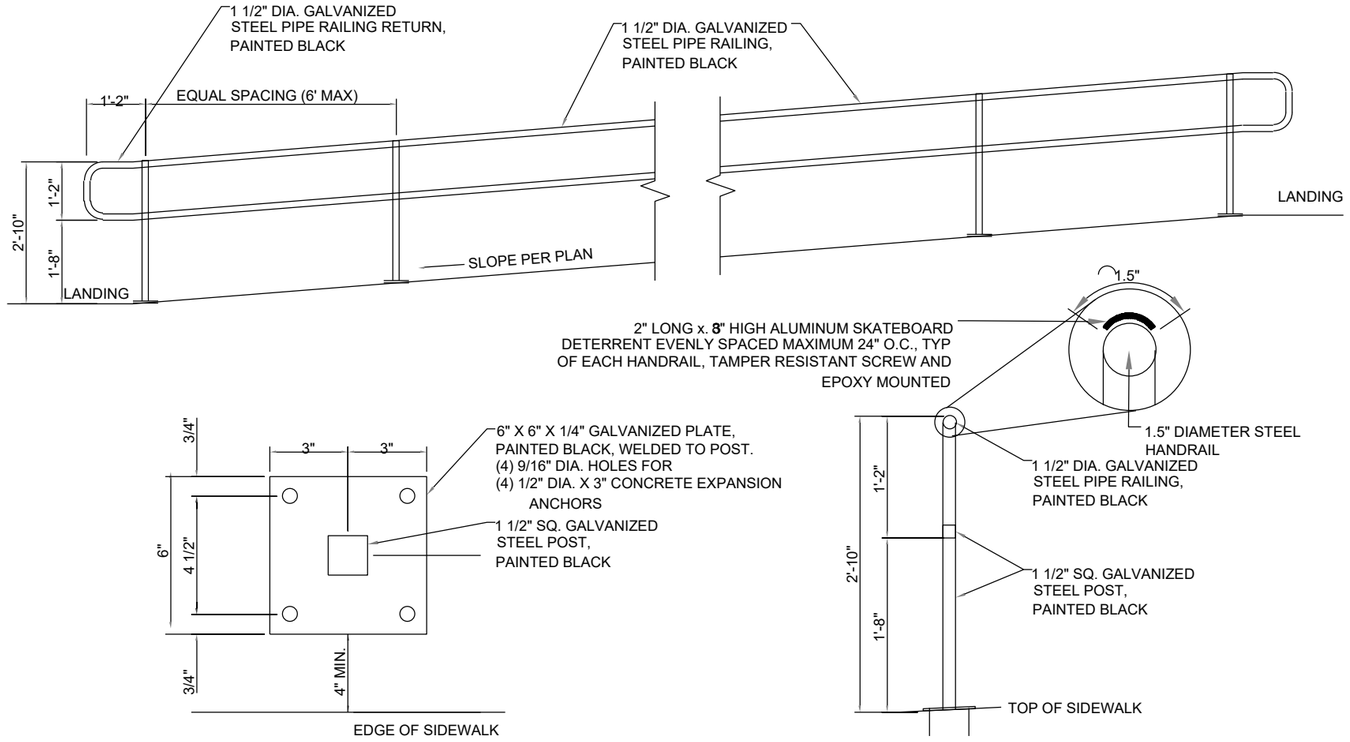
SECTION A-A



SECTION B-B

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CONSTRUCTION DETAIL	SHEET 26	E

2



PLAN

RAIL SECTION

PEDESTRIAN RAILING

NOT TO SCALE

2

N

1"=200'

NOTES: FOR ADDITIONAL ITEMS REQUIRED TO BE REMOVED NOT SHOWN ON THIS SHEET, SEE SIGNING PLAN, LIGHTING REMOVAL PLAN, WIM DETAIL AND NEXT SHEET

STA 51+70'S' - 54+70'S' LT
300 LF REMOVING FENCING

STA 51+50'S' - STA 52+50'S'
GRUBBING REQUIRED

CLEARING & GRUBBING LIMITS

CLEARING & GRUBBING LIMITS

REMOVING CONCRETE PAVEMENT

WETLAND BOUNDARY

STA 412+53'R' - STA 412+63'R' LEFT
REMOVING CURB & GUTTER

STA 406+00'R' - STA 429+50'R'
REMOVING CONCRETE PAVEMENT

STA 406+00'R'
MATCH EXISITNG
SAWING ASPHALT &
SAWING CONCRETE REQUIRED

STA 10+00'L' - STA21+00'L' RT
STA 414+26'R' - STA 419+28'R' LT
REMOVING CURB AND GUTTER

SEE NEXT SHEET

12'SW'
10'SW'
14'SW'
52'S'
54'S'
14'L'
16'L'
18'L'
20'L'
17'L'
15'R'
22'L'
16'SW'
405'R'
410'R'
420'R'
425'R'
430'R'
405'WB'
410'WB'
415'WB'
420'WB'
425'WB'
430'WB'
IH 94
94

STA 423+70'WB' LT
BEGIN SAWING ASPHALT

STA 430+51'WB' LT
END SAWING ASPHALT

MATCH LINE STA 431+50'WB'
STA 431+50'WB' TO STA 455+00'WB'
SEE WIM SYSTEM DETAILS

MATCH LINE STA 455+00'WB'

460'WB'
465'WB'
470'WB'
475'WB'
480'WB'
485'

REMOVING GUARDRAIL
STA 471+72'WB'- STA 472+22'WB'

STA 471+40'WB' - STA 480+40'WB'
REMOVING CONCRETE PAVEMENT

N

1"=200'

PROJECT NO: 1022-04-76, 1022-04-86	HWY: IH 94	COUNTY: DUNN	REMOVAL PLAN	SHEET 28	E

2

REMOVE UNDERGROUND LIQUID PROPANE TANK
PAID AS PART OF BUILDING DEMOLITION

ABANDONING WELLS REQ'D

REMOVE EXISTING TOWER
PAID AS PART OF SITE
CLEARANCE

EXISTING SWEF
BUILDING

REMOVING INLETS

REMOVING STORMSEWER

REMOVE LANDSCAPE TIMBERS
BUSHES, LANDSCAPE ROCK, FLAGPOLE
PAID AS PART OF SITE CLEARANCE

EXISTING SEPTIC
HOLDING TANK
TO REMAIN

REMOVING CONCRETE
SIDEWALK

EXISTING STATIC SCALE TO REMAIN

NOTES: FOR ADDITIONAL ITEMS REQUIRED TO BE REMOVED NOT SHOWN ON THIS SHEET, SEE BUILDING DEMO, SIGNING PLAN, LIGHTING REMOVAL PLAN, WIM DETAIL AND PREVIOUS SHEET

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	REMOVAL PLAN	SHEET 29	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\021200-REM.DWG
LAYOUT NAME - 02
PLOT DATE : 7/28/2023 11:59 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2

LEGEND

- HMA# — HMA PAVEMENT (#- THICKNESS IN INCHES)
- BAD — BASE AGGREGATE DENSE 3/4-INCH, 6-INCH (SHOULDERS)
- CG24* — CONCRETE CURB & GUTTER 24-INCH TYPE [*=A or D] SPECIAL
- CG36* — CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE [*=A OR D]
- CP# — CONCRETE PAVEMENT (# - THICKNESS IN INCHES)
- SW# — CONCRETE SIDEWALK (# - THICKNESS IN INCHES)
- XX — LAYOUT POINT NUMBER
- ANTICIPATED LONG. CONCRETE JOINTING
- DETECTABLE WARNING FIELD YELLOW
- SLOPE INTERCEPT
- WISDOT COLORING CONCRETE RED
- SAWING ASPHALT
- SAWING CONCRETE
- 8##.## — FINISHED PAVEMENT ELEVATION (25' INTERVALS)
- MGS GUARDRAIL

SEE SHEET 5 FOR POINT TABLES

N

NOTES: FOR SIDEWALK LAYOUT, SEE CURB RAMP DETAILS SHEET
SEE CONSTRUCTION DETAIL FOR SCALE APPROACH PAVEMENT REINF.
CURB HEIGHT ALONG SIDEWALK IS DETERMINED BY DIFFERENCE BETWEEN PAVEMENT AND SIDEWALK GRADES.

FENCE WOVEN WIRE(4-FT)
FENCE CHAIN LINE 6-FT
SALT SHED (SEE DETAILS)
STORAGE SHED (SEE DETAILS)
CONCRETE TRUCK APRON 12-INCH WISDOT COLORING CONCRETE RED
DUMPSTER ENCLOSURE SEE BUILDING PLANS SHEET G204
FORM CURB AND GUTTER TO ACCOMMODATE THE END OF UNDERDRAIN PIPE SEE STORMSEWER PLANS
EXISTING STATIC SCALE
CG24D VARIABLE HEIGHT
'LO' R/L
'L' R/L
'R' R/L
'S' R/L
'SW' R/L
'PK' R/L
MATCH LINE SWEF SHEET 3
MATCH LINE SWEF SHEET 2

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN SHEET: SWEF SHEET 1	SHEET 30 E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 01
PLOT DATE : 9/20/2023 9:35 AM
PLOT BY : JON BLOMQUIST
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

SE SHEET 5 FOR POINT TABLES

N

LEGEND

- HMA# — HMA PAVEMENT (#- THICKNESS IN INCHES)
- BAD — BASE AGGREGATE DENSE 3/4-INCH, 6-INCH (SHOULDERS)
- CG24* — CONCRETE CURB & GUTTER 24-INCH TYPE [*=A or D] SPECIAL
- CG36* — CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE [*=A OR D]
- CP# — CONCRETE PAVEMENT (# - THICKNESS IN INCHES)
- SW# — CONCRETE SIDEWALK (# - THICKNESS IN INCHES)
- XX — LAYOUT POINT NUMBER
- ANTICIPATED LONG. CONCRETE JOINTING
- DETECTABLE WARNING FIELD YELLOW
- SLOPE INTERCEPT
- WISDOT COLORING CONCRETE RED
- XXXXXXXX SAWING ASPHALT
- SAWING CONCRETE
- 8##.## FINISHED PAVEMENT ELEVATION (25' INTERVALS)
- MGS GUARDRAIL

MATCH LINE SWEF SHEET 1

MATCH LINE SWEF SHEET 3

420+94.6'R', -27.6' LT

CONCRETE TRUCK APRON 12-INCH

© WELL

2

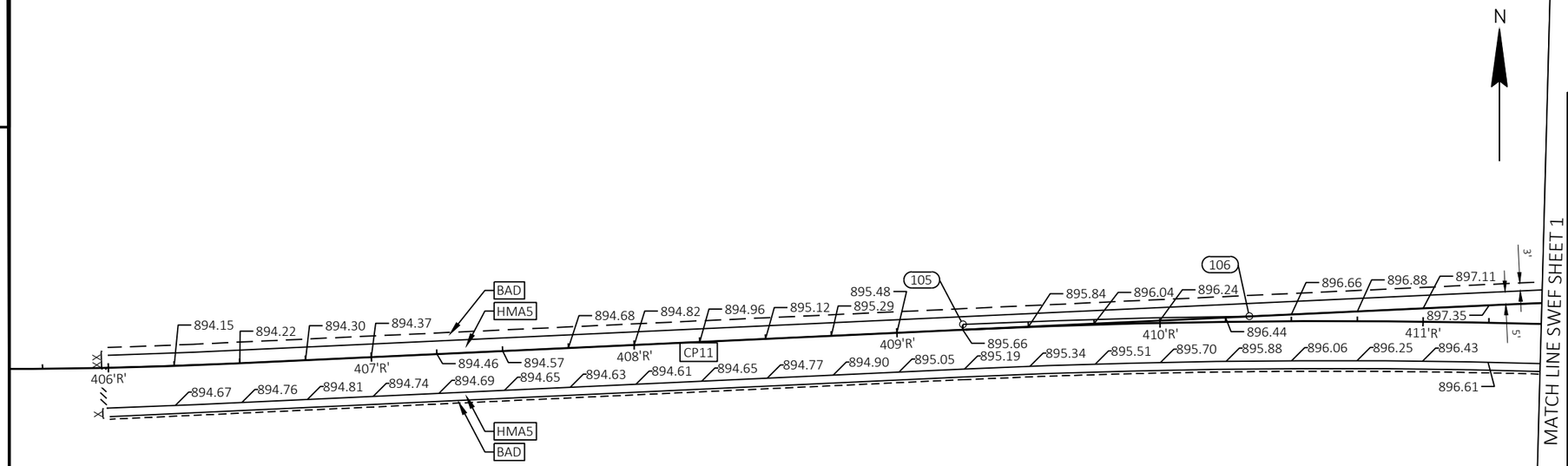
N

SE SHEET 5 FOR POINT TABLES

MATCH LINE SWEF SHEET 1

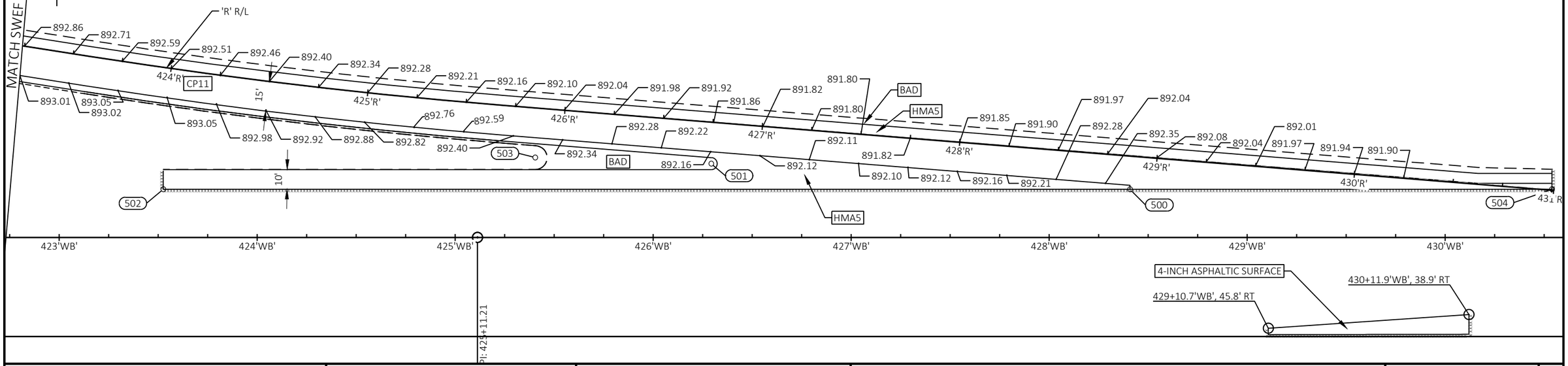
LEGEND

- HMA# — HMA PAVEMENT (#- THICKNESS IN INCHES)
- BAD — BASE AGGREGATE DENSE 3/4-INCH, 6-INCH (SHOULDERS)
- CG24* — CONCRETE CURB & GUTTER 24-INCH TYPE [*=A or D] SPECIAL
- CG36* — CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE [*=A OR D]
- CP# — CONCRETE PAVEMENT (# - THICKNESS IN INCHES)
- SW# — CONCRETE SIDEWALK (# - THICKNESS IN INCHES)
- XX — LAYOUT POINT NUMBER
- ANTICIPATED LONG. CONCRETE JOINTING
- DETECTABLE WARNING FIELD YELLOW
- SLOPE INTERCEPT
- WISDOT COLORING CONCRETE RED
- XXXXXXXX. SAWING ASPHALT
- SAWING CONCRETE
- 8###.## FINISHED PAVEMENT ELEVATION (25' INTERVALS)
- MGS GUARDRAIL



N

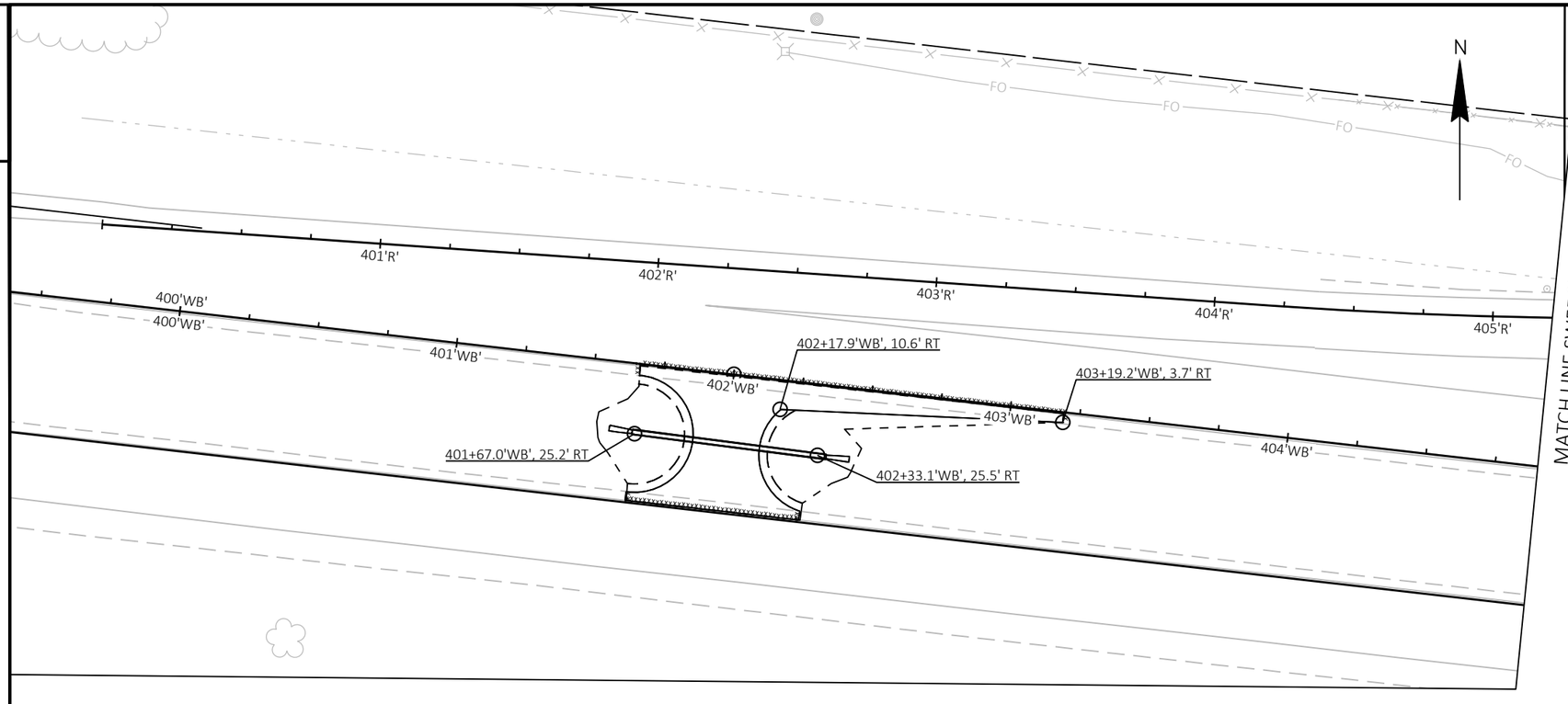
MATCH SWEF SHEET 2



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN DETAIL: SWEF SHEET 3	SHEET 32	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\021201-PD.DWG
LAYOUT NAME - 03
PLOT DATE : 7/28/2023 12:01 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

2



SE SHEET 5 FOR POINT TABLES

LEGEND

HMA#	HMA PAVEMENT (#- THICKNESS IN INCHES)
BAD	BASE AGGREGATE DENSE 3/4-INCH, 6-INCH (SHOULDERS)
CG24*	CONCRETE CURB & GUTTER 24-INCH TYPE [*=A or D] SPECIAL
CG36*	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE [*=A OR D]
CP#	CONCRETE PAVEMENT (# - THICKNESS IN INCHES)
SW#	CONCRETE SIDEWALK (# - THICKNESS IN INCHES)
XX	LAYOUT POINT NUMBER
	ANTICIPATED LONG. CONCRETE JOINTING
	DETECTABLE WARNING FIELD YELLOW
	SLOPE INTERCEPT
	WISDOT COLORING CONCRETE RED
XXXXXXXX	SAWING ASPHALT
	SAWING CONCRETE
8##.##	FINISHED PAVEMENT ELEVATION (25' INTERVALS)
	MGS GUARDRAIL

'L' R/L LAYOUT POINTS			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
1	10+00.00'L'	0.00'	C&G FOLLOWS 'L'-REF. LINE
2	10+90.47'L'	0.01' LT	END TAPER
3	11+44.06'L'	0.00'	PC INSIDE EDGE, BEGIN CG36A
4	11+61.72'L'	4.00' RT	BEGIN TRUCK APRON, 1' KICKER
5	13+47.92'L'	4.00' RT	END TRUCK APRON, 1' KICKER
6	13+58.06'L'	0.00'	PT INSIDE EDGE
7	14+37.82'L'	0.00'	PC INSIDE EDGE
8	15+70.45'L'	169.90' LT	140' RAD. OUTSIDE, 171' RAD. INSIDE EDGE
9	15+70.35'L'	0.00'	PT INSIDE EDGE
10	15+78.06'L'	0.00'	PC INSIDE EDGE
11	16+27.61'L'	0.00'	PT INSIDE EDGE
12	16+99.08'L'	0.00'	PC INSIDE EDGE
13	16+99.08'L'	60.00' LT	60' RAD. INSIDE EDGE
14	17+48.65'L'	0.00'	PT INSIDE EDGE
15	19+44.51'L'	0.00'	PC INSIDE EDGE
16	21+60.14'L'	58.82' RT	CENTER OF 57.9' R, TRUCK APRON
17	21+55.60'L'	0.02' LT	2' KICKER
18	21+26.48'L'	4.00' RT	59' RAD. TRUCK APRON
19	11+41.04'L'	58.91' RT	CENTER OF 56.25' R, TRUCK APRON
21	19+70.54'L'	4.00' RT	TRUCK APRON 1' KICKER

'TP' R/L LAYOUT POINTS			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
400	50+74.07'TP'	28.02' RT	FENCE CORNER
401	50+44.64'TP'	28.07' RT	FENCE CORNER
402	50+44.63'TP'	57.14' RT	FENCE CORNER
403	50+74.17'TP'	57.06' RT	FENCE CORNER
404	50+75.30'TP'	24.70' RT	EDGE OF DRIVEWAY
405	50+63.18'TP'	38.46' LT	5' RADIUS
406	50+15.25'TP'	51.57' LT	15'RADIUS
407	50+43.94'TP'	2.00' RT	SIDEWALK
408	50+33.94'TP'	0.00'	SIDEWALK
409	50+28.94'TP'	0.00' LT	SIDEWALK
410	50+00.51'TP'	2.06' RT	SIDEWALK
411	50+06.91'TP'	9.01' RT	SIDEWALK
412	50+28.56'TP'	32.76' LT	SIDEWALK
413	50+33.52'TP'	33.09' LT	SIDEWALK

'LO' R/L LAYOUT POINTS			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
201	50+21.29'LO'	13.00' LT	10' RADIUS, CONC MEDIAN NOSE TYPE 1
202	50+21.29'LO'	5.00' LT	PT SHOULDER
203	50+64.51'LO'	5.00' LT	END C&G
204	51+16.83'LO'	5.00' LT	PCC SHOULDER
205	51+80.42'LO'	5.00' LT	PT SHOULDER, BEGN 6" HMA
206	51+88.46'LO'	5.00' LT	PC
207	52+04.04'LO'	4.97' LT	TAPER FOR
210	53+44.03'LO'	4.84' LT	PC
211	54+43.98'LO'	4.99' LT	BEGIN SHLDR TAPER
212	54+58.82'LO'	5.01' LT	END SHOULDER TAPER
214	56+19.99'LO'	4.98' LT	CORNER
215	56+89.34'LO'	4.99' LT	PC
216	55+43.79'LO'	94.76' RT	SIDEWALK
217	57+83.37'LO'	5.00' LT	PT SHOULDER
218	58+98.48'LO'	5.00' LT	PC SHOULDER
219	59+87.33'LO'	5.00' LT	BEGIN 36-INCH C&G
220	60+57.61'LO'	5.00' LT	PC
221	60+57.61'LO'	13.00' LT	8' RADIUS
223	60+77.56'LO'	0.00'	2' KICKER

'WB' R/L LAYOUT POINTS			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
500	428+40.81'WB'	24.31' LT	MATCH RAMP, 2' KICKER
501	426+29.32'WB'	37.20' LT	3' HMA RADIUS
502	423+52.56'WB'	24.28' LT	MATCH EXISTING SHOULDER
503	425+40.41'WB'	40.29' LT	6' BAD RADIUS
504	430+53.91'WB'	24.32' LT	MATCH EXISTING SHOULDER

'R' R/L LAYOUT POINTS			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
100	411+49.16'R'	13.37' LT	BEGIN 36-INCH C&G
101	412+69.67'R'	17.43' LT	2' KICKER
102	419+31.76'R'	22.67' LT	2' KICKER
103	421+00.95'R'	19.71' LT	END C&G
104	412+46.70'R'	19.20' LT	PC SHOULDER
105	409+25.16'R'	2.00' LT	2' KICKER
106	410+33.97'R'	1.97' LT	2' KICKER
107	413+00.52'R'	1.97' LT	2' KICKER
108	414+08.31'R'	6.57' LT	BEGIN 8' MEDIAN WIDTH
109	422+57.49'R'	2.00' LT	2' KICKER
110	422+82.16'R'	2.00' LT	2' KICKER
111	420+71.89'R'	0.00'	2' KICKER
112	418+82.48'R'	8.00' LT	END 8' MEDIAN WIDTH
113	420+71.89'R'	2.00' LT	2' KICKER
114	419+92.42'R'	21.14' LT	2' KICKER
115	420+13.48'R'	25.31' LT	PT SHOULDER

'S' R/L LAYOUT POINTS			
POINT NUMBER	STATION	OFFSET	DESCRIPTION
300	50+71.68'S'	0.00'	EDGE OF PAVEMENT
301	51+29.71'S'	0.00'	EDGE OF PAVEMENT
302	51+31.12'S'	4.50' LT	SW CORNER SALT SHED
303	51+99.12'S'	4.40' LT	SE CORNER SALT SHED
304	51+99.21'S'	60.00' LT	PAVEMENT CORNER
305	52+97.80'S'	60.00' LT	PAVEMENT CORNER
306	52+97.69'S'	36.79' LT	PAVEMENT CORNER
307	53+06.64'S'	36.80' LT	PAVEMENT CORNER
308	53+06.68'S'	25.80' LT	PAVEMENT CORNER
309	53+28.68'S'	25.71' LT	PAVEMENT CORNER
310	53+28.71'S'	0.00'	PAVEMENT CORNER
314	51+14.33'S'	23.00' RT	5' RADIUS CENTER
320	53+14.64'S'	27.00' RT	6' RADIUS CENTER
321	53+37.68'S'	23.00' RT	5' RADIUS
346	51+17.85'S'	19.80' RT	FENCE CORNER
347	51+17.96'S'	83.04' LT	FENCE CORNER
348	53+37.98'S'	77.11' LT	FENCE CORNER
349	53+37.70'S'	56.83' LT	NE ACCESSORY BUILDING CORNER
350	53+37.73'S'	36.83' LT	SE ACCESSORY BUILDING CORNER
351	53+37.79'S'	19.84' RT	FENCE CORNER

2

SUPERELEVATION REPORT FOR 'R'-REF. LINE					
STATION	DESCRIPTION	LEFT SHOULDER	LEFT LANE	RIGHT SHOULDER	RIGHT LANE
406+50.00	Match Existing	-4.00%	-3.60%	-4.00%	3.60%
406+60.00	Begin Full Super	-4.00%	-4.00%	-4.00%	4.00%
408+17.30	Reverse Crown	-4.00%	2.00%	-4.00%	-2.00%
409+52.30	Begin Full Super	-4.00%	3.40%	-4.00%	-3.40%
411+49.00	End Full Super	2.00%	3.40%	-4.00%	-3.40%
412+00.00	Begin Normal Crown	2.00%	2.00%	-4.00%	-2.00%
415+46.36	Begin Normal Shoulder	2.00%	2.00%	-4.00%	-2.00%
415+97.00	Match Scale	2.00%	0.00%	-4.00%	-2.00%
416+82.92	Match Scale	2.00%	0.00%	-4.00%	-2.00%
417+33.94	Normal Crown	2.00%	2.00%	-4.00%	-2.00%
421+00.00	End 2% Shoulder	2.00%	2.00%	-4.00%	-2.00%
421+51.76	Begin Normal Shoulder	-4.00%	2.00%	-4.00%	-2.00%
422+53.32	End Normal Shoulder	-4.00%	2.00%	-4.00%	-2.00%
423+01.10	Level Crown	-4.00%	0.00%	-4.00%	0.00%
423+87.10	Begin Full Super	-4.00%	-3.60%	-4.00%	3.60%
425+38.56	End Full Super	-4.00%	-3.60%	-4.00%	3.60%
425+64.56	Reverse Crown	-4.00%	-2.00%	-4.00%	2.00%
426+72.34	Begin Normal Shoulder	-4.00%	-2.00%	-4.00%	2.00%

2

N

CTH B SB

387'NB' 388'NB' 389'NB' 390'NB' 391'NB' 392'NB'

CTH B NB

386+62.1'NB', 31.0' RT

BAD

386+61.7'NB', 36.0' RT

EXISTING R/W

HMA6

388+55.1'NB', 51.0' RT

389+32.2'NB', 55.9' RT

HMA6

15' X 125' CONCRETE INSPECTION PAD
PAID AS 12.5-INCH CONCRETE PAVEMENT

CP12.5

INSPECTION SITE APPURTENANCES
GROOVE FOR PREFABRICATED PIT TRENCH
SEE CONSTRUCTION DETAIL

389+62.1'NB', 50.9' RT

INSPECTION SITE APPURTENANCES
CONCRETE PAD AND STORAGE CABINET
SEE CONSTRUCTION DETAIL AND SPECIAL PROVISIONS

HMA6

390+55.0'NB', 51.0' RT

EDGE OF NORMAL 5' HMA SHOULDER
EDGE OF NORMAL BAD SHOULDER

EDGE OF CONCRETE

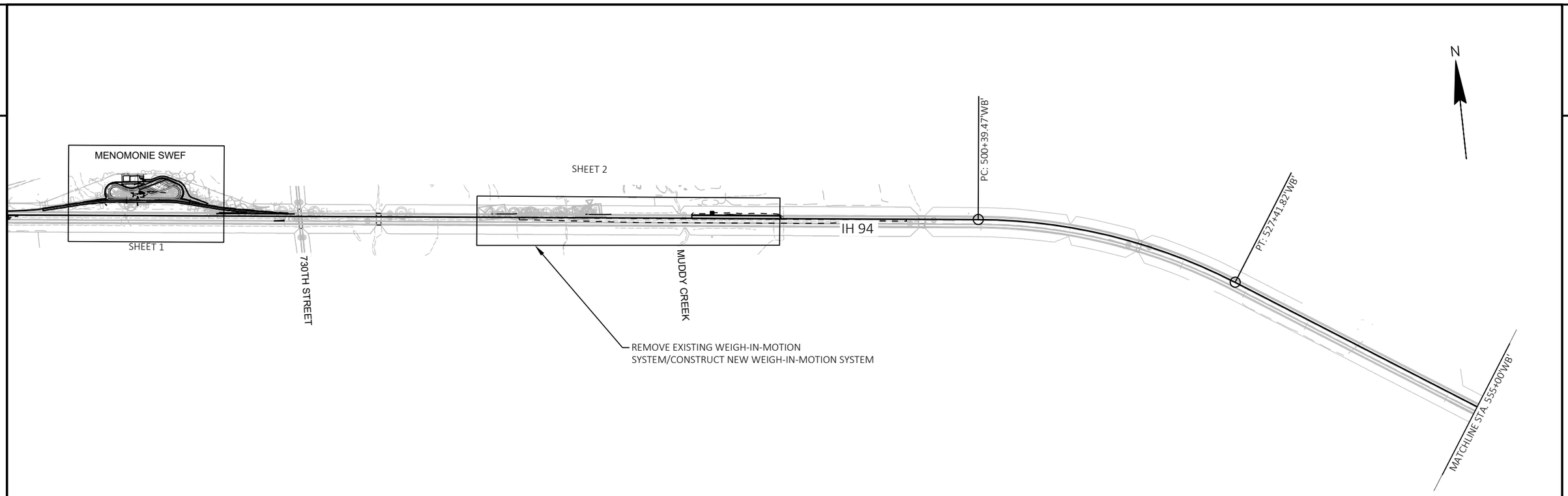
392+45.4'NB', 31.0' RT

392+27.9'NB', 36.0' RT

EXISTING R/W

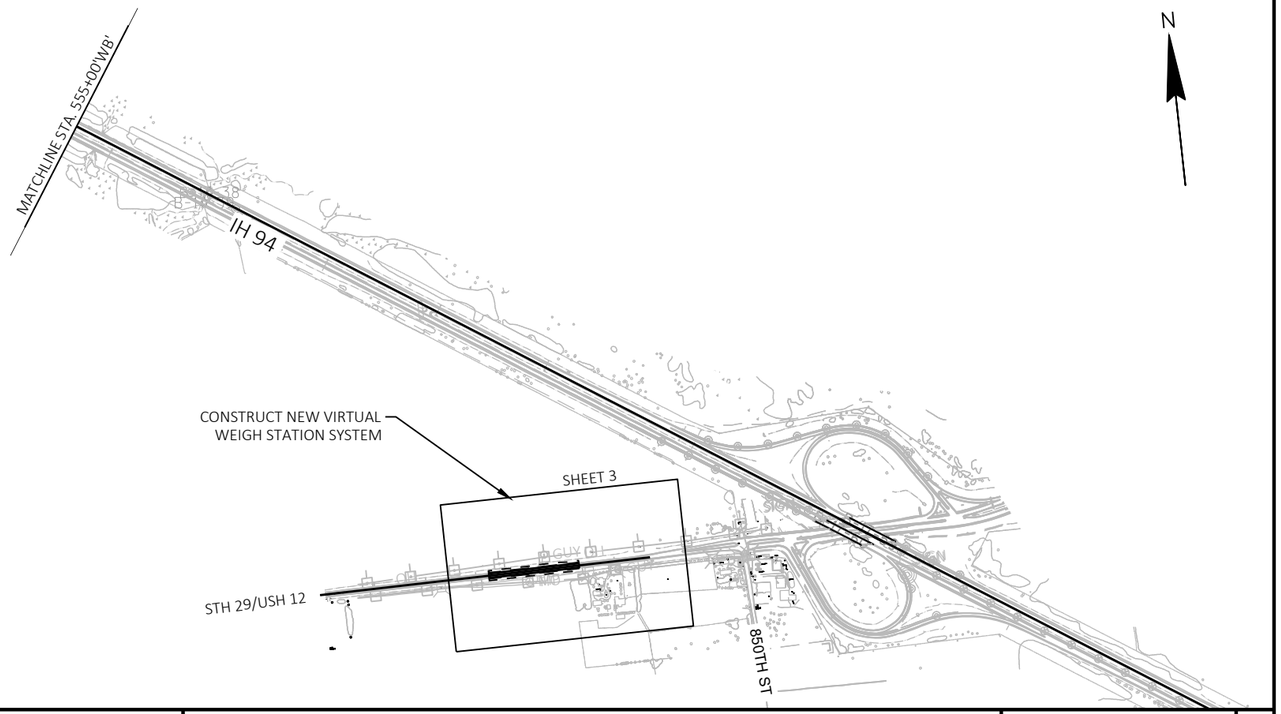
LEGEND

HMA#	HMA PAVEMENT (#- THICKNESS IN INCHES)
BAD	BASE AGGREGATE DENSE 3/4-INCH, 6-INCH (SHOULDERS)
CG24*	CONCRETE CURB & GUTTER 24-INCH TYPE [*=A or D] SPECIAL
CG36*	CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE [*=A OR D]
CP#	CONCRETE PAVEMENT (# - THICKNESS IN INCHES)
SW#	CONCRETE SIDEWALK (# - THICKNESS IN INCHES)
XX	LAYOUT POINT NUMBER
	ANTICIPATED LONG. CONCRETE JOINTING
	DETECTABLE WARNING FIELD YELLOW
	SLOPE INTERCEPT
	WISDOT COLORING CONCRETE RED
XXXXXXXX	SAWING ASPHALT
	SAWING CONCRETE
###.##	FINISHED PAVEMENT ELEVATION (25' INTERVALS)
	MGS GUARDRAIL



GENERAL NOTES:

- ALL CONNECTIONS BETWEEN SENSORS AND LEAD CABLES SHALL BE DONE IN PULL BOX AND ARE SOLDERED THEN SEALED FOR WATERPROOFING. NUMBER AND PLACEMENT OF PULL BOXES NOT SHOWN.
- POWER CABLES SHALL BE RUN IN SEPARATE CONDUITS/PULL BOXES FROM SIGNAL CABLES.
- ACTUAL SENSOR SPACING SHALL BE ALTERED TO SUIT SITE CONDITIONS BY SELECTED VENDOR.
- ROAD SURFACE SHALL MEET SPECIFICATIONS FOR PAVEMENT CONDITIONS TO ACHIEVE OPTIMAL SYSTEM PERFORMANCE.
- SENSORS SHALL BE A MINIMUM OF 6' AWAY FROM CRACKS, JOINTS, OR SAWCUTS WHEN POSSIBLE.
- ADDITIONAL DRAINAGE MAY BE REQUIRED DEPENDING ON SLOPE OF ROADWAY. DRAINAGE CONSISTS OF 1 ½" ABS PIPE SLOPED TO RIP RAP DRAINAGE PIT IN DITCH.
- PULL BOXES SHALL BE NO FURTHER THAN 250' APART. PULL BOXES SHALL BE USED WHERE NEW CONDUIT WILL BE CONNECTING WITH EXISTING CONDUIT. THE PULL BOXES TO BE USED ARE PULL BOX NON-CONDUCTIVE 24"X42".
- EXACT ROUTING OF CONDUIT TO BE DETERMINED ON SITE



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	WEIGH-IN-MOTION SYSTEM OVERVIEW	SHEET 37	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\021202-PD (WIM).DWG
LAYOUT NAME - 00
PLOT DATE : 7/28/2023 12:03 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:1000 FT
WISDOT/CADDS SHEET 42

2

2

N

REMOVE SIGNS, POSTS, BEACON, BASE, SPEAKER & SIGNAL LIGHT AND ASSOCIATED CONDUIT & WIRING

52'S'

54'S'

52PK

15'SW'

REMOVE & REPLACE SCALE SCOREBOARD DISPLAY

RAMP WIM & QUEUE WARNING SYSTEM

S-17-11

410'R'

412'R'

414'R'

416'R'

418'R'

420'R'

422'R'

424'R'

REMOVE EXISTING LANE CONTROL SIGNS, POSTS & BASES

NEW OVERHEAD SIGN STRUCTURE S-17-14 PAID SEPARATELY
WIM INCLUDES VARIABLE MESSAGE BOARD FOR LANE CONTROL
SEE CONSTRUCTION DETAIL

WISDOT (E)

EXISTING STATIC SCALE TO REMAIN

NEW OVERHEAD LANE CONTROL SIGNALS
STRUCTURE S-17-11 TO REMAIN
PAINTING EPOXY SYSTEM (S-17-11) PAID SEPARATELY

REMOVE EXISTING RAMP QUEUE WARNING SYSTEM

REMOVE EXISTING SPEAKER SYSTEM
2 - NEW SPEAKERS INCLUDED IN BUILDING SYSTEM
POST FOR EXISTING SPEAKER TO REMAIN FOR NEW SPEAKER INSTALLATION
WB IH 94

410'WB'

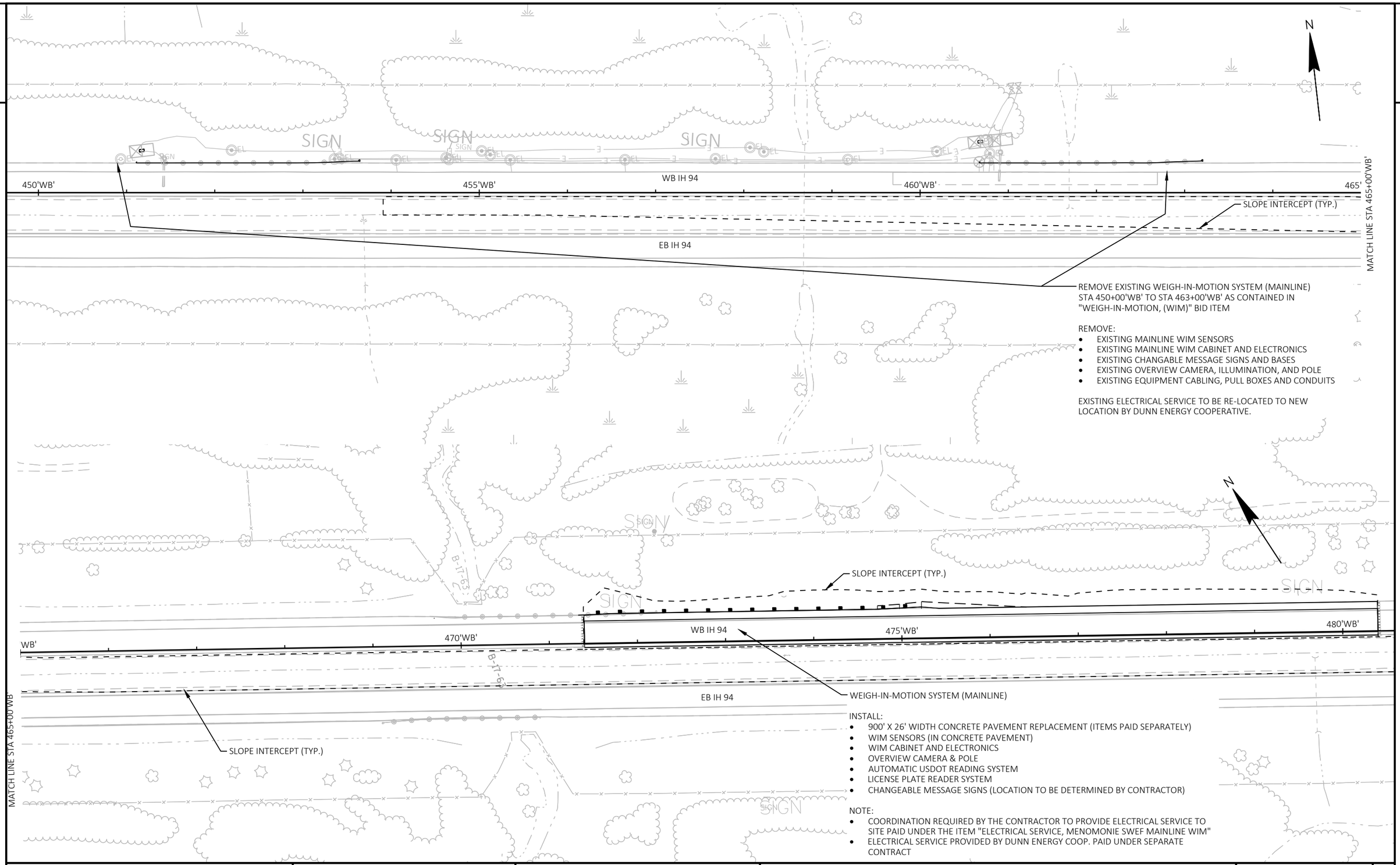
415'WB'

420'WB'

EB IH 94

PROJECT NO: 1022-04-76, 1022-04-86	HWY: IH 94	COUNTY: DUNN	WEIGH-IN-MOTION SYSTEM DETAILS (SHEET 1)	SHEET 38	E

2



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	WEIGH-IN-MOTION SYSTEM DETAILS (SHEET 2)	SHEET 39	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\021202-PD (WIM).DWG
LAYOUT NAME - 02
PLOT DATE : 7/28/2023 12:04 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

2

N

VIRTUAL WEIGH STATION

INSTALL:
- 600 LF X 24 LF WIDTH CONCRETE PAVEMENT REPLACEMENT (PAID SEPARATELY)
- WIM SENSORS (CONCRETE PAVEMENT)
- WIM CABINET AND ELECTRONICS
- OVERVIEW CAMERA & POLE

NOTE:
- COORDINATION REQUIRED BY THE CONTRACTOR TO PROVIDE ELECTRICAL SERVICE TO SITE PAID UNDER THE ITEM "ELECTRICAL SERVICE, STH 29 VIRTUAL WEIGH STATION". ELECTRICAL SERVICE TO BE PROVIDED BY DUNN ENERGY COOP. PAID UNDER SEPARATE CONTRACT.
- COORDINATION REQUIRED BY THE CONTRACTOR TO PROVIDE INTERNET SERVICE TO THIS SITE PAID UNDER ITEM "INTERNET SERVICE, STH 29 VIRTUAL WEIGH STATION". 24-7 TELECOM WILL PROVIDE SERVICE TO SITE AND BE PAID UNDER SEPARATE CONTRACT.

XCEL ELECTRICAL TRANSMISSION

SLOPE INTERCEPT (TYP.)

55'V'

60'V'

65'V'

STH 29/USH 12

24-7 WEST WISCONSIN TELECOM

DUNN ENERGIY COOP

LUMEN

ANT.

SEPTIC

SIGN

GUY

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	WEIGH-IN-MOTION SYSTEM DETAILS (SHEET 3)	SHEET 40	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\021202-PD (WIM).DWG
LAYOUT NAME - 03

PLOT DATE : 7/28/2023 12:05 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

2

'TP' R/L

50+50 'TP'

'L' R/L

'R' R/L

OMV PARKING LOT

PARKING LOT

PARKING LOT

SWEF BUILDING

WINDOW 1

WINDOW 2

WINDOW 3

WINDOW 4

WINDOW 5

STA 50+33.5'TP', -32.89' LT
899.95

STA 50+28.6'TP', -32.76' LT
900.04

CONCRETE
SIDEWALK
4-INCH

1.9%

2.6%

2.3%

0.5%

7.6%

7.7%

7.9%

8.0%

1.6%

6.5%

57
900.59

BP: 50+00.00 'TP'

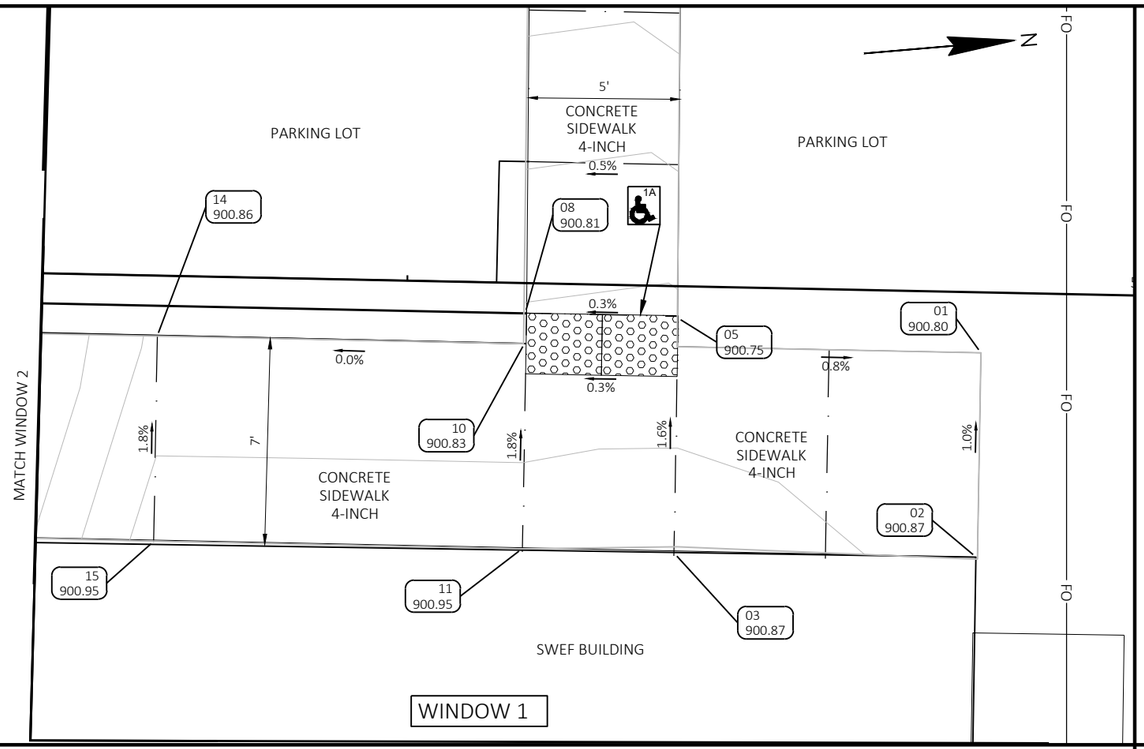
899.89

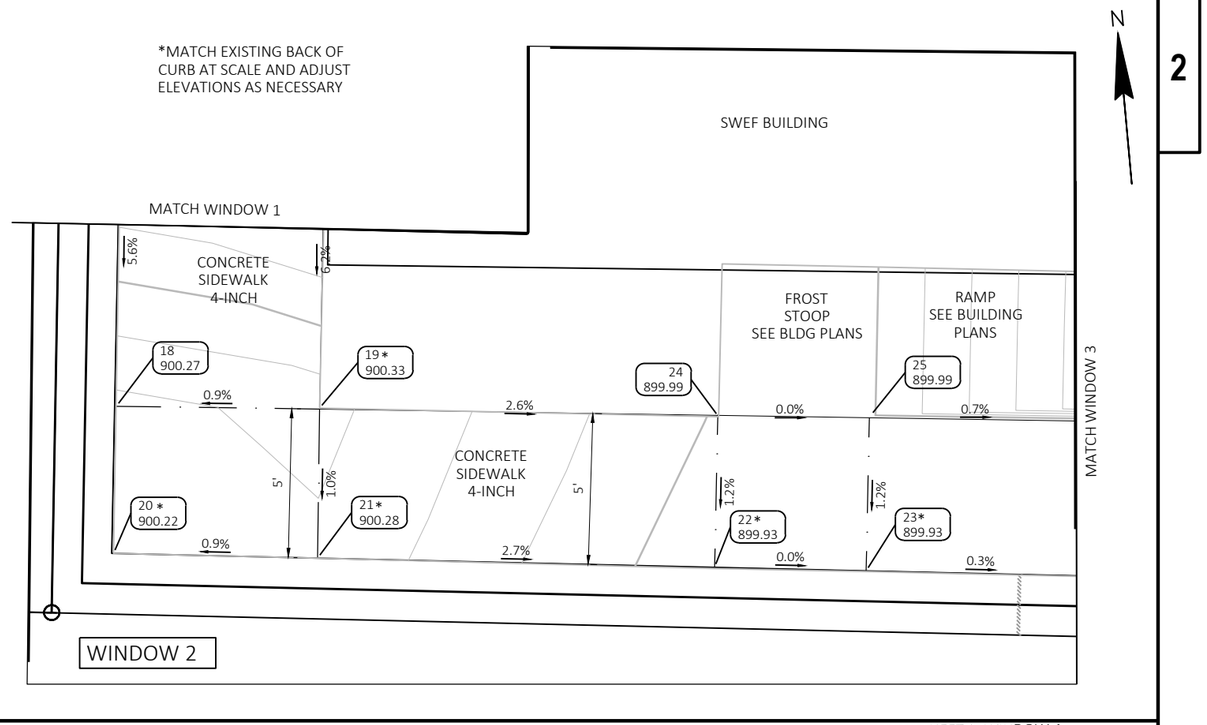
SCALE

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CURB RAMP DETAILS OVERVIEW	SHEET 41	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\021301-CR.DWG
LAYOUT NAME - 00

PLOT DATE : 7/21/2023 11:32 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT





WINDOW 1					
POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING
01	50+43.97Ali-'TP'	2.00' RT	900.80	180979.60	194572.58
02	50+43.94Ali-'TP'	8.74' RT	900.87	180978.84	194579.27
03	50+33.99Ali-'TP'	8.81' RT	900.87	180968.94	194578.26
05	50+33.94Ali-'TP'	1.04' RT	900.75	180969.73	194570.53
08	50+28.90Ali-'TP'	1.01' RT	900.81	180964.73	194569.95
10	50+28.91Ali-'TP'	1.98' RT	900.83	180964.64	194570.92
11	50+28.97Ali-'TP'	8.76' RT	900.95	180963.95	194577.67
14	50+16.78Ali-'TP'	2.00' RT	900.86	180952.57	194569.62
15	50+16.81Ali-'TP'	8.76' RT	900.95	180951.87	194576.34

WINDOW 2					
POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING
* 18	415+57.03'R'	29.86' LT	900.27	180942.70	194568.54
* 19	415+63.73'R'	29.95' LT	900.33	180942.03	194575.21
* 20	415+57.05'R'	25.00' LT	900.22	180937.87	194568.01
* 21	415+63.78'R'	25.00' LT	900.28	180937.11	194574.70
* 22	415+76.88'R'	25.00' LT	899.93	180935.61	194587.71
* 23	415+81.88'R'	25.00' LT	899.93	180935.04	194592.68
24	415+76.90'R'	29.97' LT	899.99	180940.55	194588.30
25	415+81.91'R'	30.13' LT	899.99	180940.13	194593.30

LEGEND

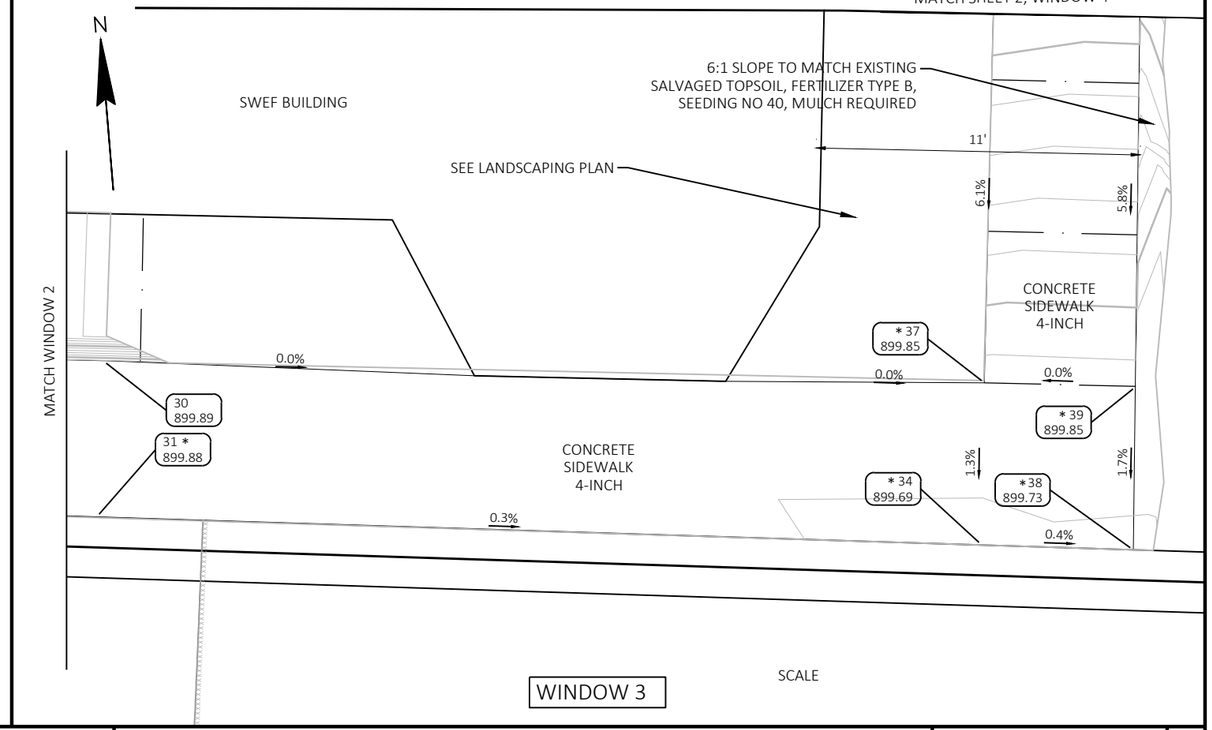
XX — CURB RAMP TYPE XX

XX YYY.YY — POINT NUMBER & ELEVATION

NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATED JOINT LOCATIONS.
4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
5. ALL STATION AND OFFSET INFORMATION REFERENCE 'TP' R/L.

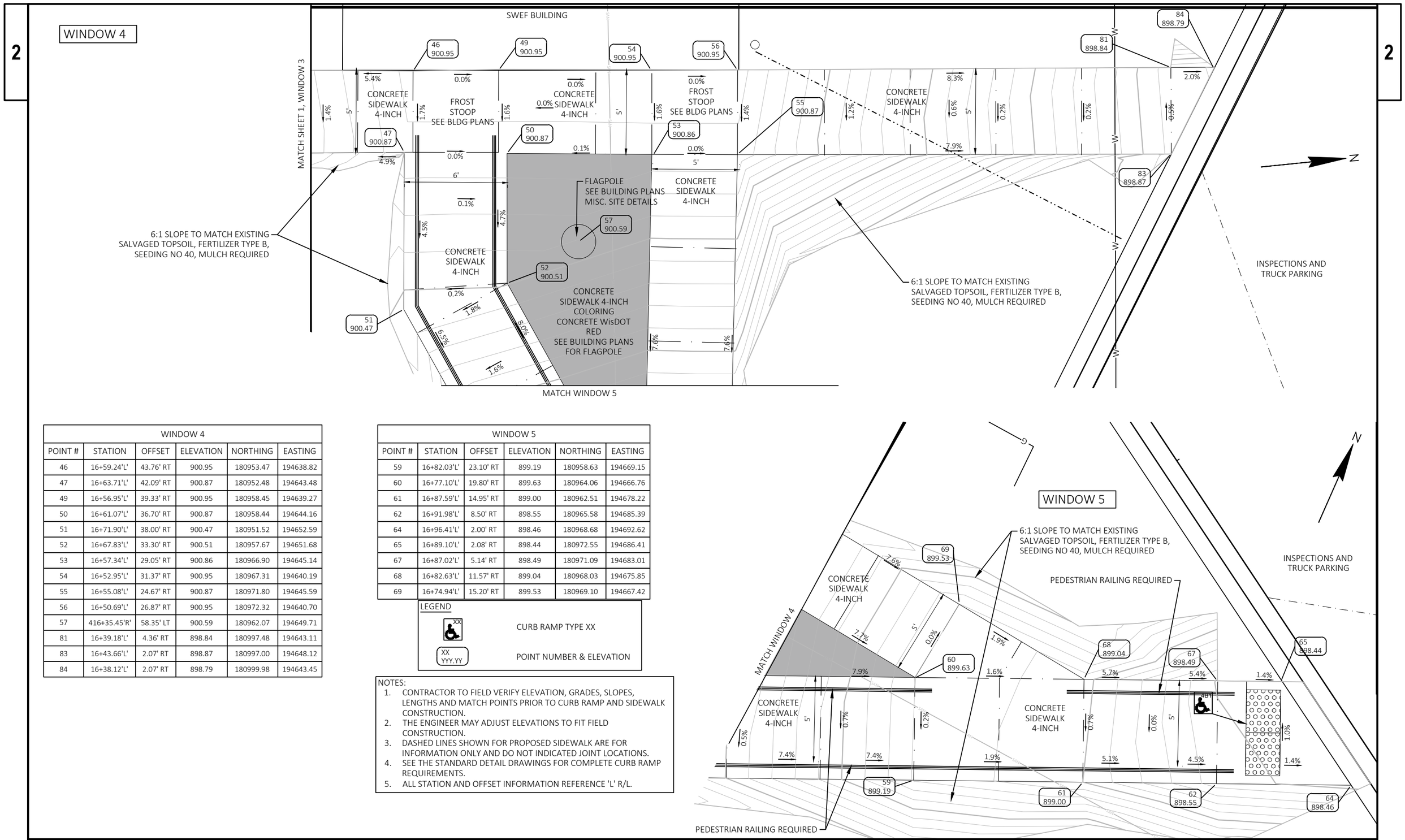
WINDOW 3					
POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING
* 30	415+96.65'R'	30.16' LT	899.89	180938.49	194607.94
* 31	415+96.60'R'	25.00' LT	899.88	180933.37	194607.30
* 34	416+25.82'R'	25.00' LT	899.69	180930.04	194636.33
* 37	416+25.73'R'	30.35' LT	899.85	180935.36	194636.86
* 38	416+30.82'R'	25.00' LT	899.73	180929.47	194641.30
* 39	416+30.73'R'	30.39' LT	899.85	180934.83	194641.83

*MATCH EXISTING BACK OF CURB AT SCALE AND ADJUST ELEVATIONS AS NECESSARY



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CURB RAMP DETAILS	SHEET 42	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\021301-CR.DWG
LAYOUT NAME - 01
PLOT DATE : 7/21/2023 11:32 AM
PLOT BY : JON BLOMQUIST
PLOT NAME :
PLOT SCALE : 1 IN:5 FT
WISDOT/CADDS SHEET 44



WINDOW 4					
POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING
46	16+59.24'L'	43.76' RT	900.95	180953.47	194638.82
47	16+63.71'L'	42.09' RT	900.87	180952.48	194643.48
49	16+56.95'L'	39.33' RT	900.95	180958.45	194639.27
50	16+61.07'L'	36.70' RT	900.87	180958.44	194644.16
51	16+71.90'L'	38.00' RT	900.47	180951.52	194652.59
52	16+67.83'L'	33.30' RT	900.51	180957.67	194651.68
53	16+57.34'L'	29.05' RT	900.86	180966.90	194645.14
54	16+52.95'L'	31.37' RT	900.95	180967.31	194640.19
55	16+55.08'L'	24.67' RT	900.87	180971.80	194645.59
56	16+50.69'L'	26.87' RT	900.95	180972.32	194640.70
57	416+35.45'R'	58.35' LT	900.59	180962.07	194649.71
81	16+39.18'L'	4.36' RT	898.84	180997.48	194643.11
83	16+43.66'L'	2.07' RT	898.87	180997.00	194648.12
84	16+38.12'L'	2.07' RT	898.79	180999.98	194643.45

WINDOW 5					
POINT #	STATION	OFFSET	ELEVATION	NORTHING	EASTING
59	16+82.03'L'	23.10' RT	899.19	180958.63	194669.15
60	16+77.10'L'	19.80' RT	899.63	180964.06	194666.76
61	16+87.59'L'	14.95' RT	899.00	180962.51	194678.22
62	16+91.98'L'	8.50' RT	898.55	180965.58	194685.39
64	16+96.41'L'	2.00' RT	898.46	180968.68	194692.62
65	16+89.10'L'	2.08' RT	898.44	180972.55	194686.41
67	16+87.02'L'	5.14' RT	898.49	180971.09	194683.01
68	16+82.63'L'	11.57' RT	899.04	180968.03	194675.85
69	16+74.94'L'	15.20' RT	899.53	180969.10	194667.42

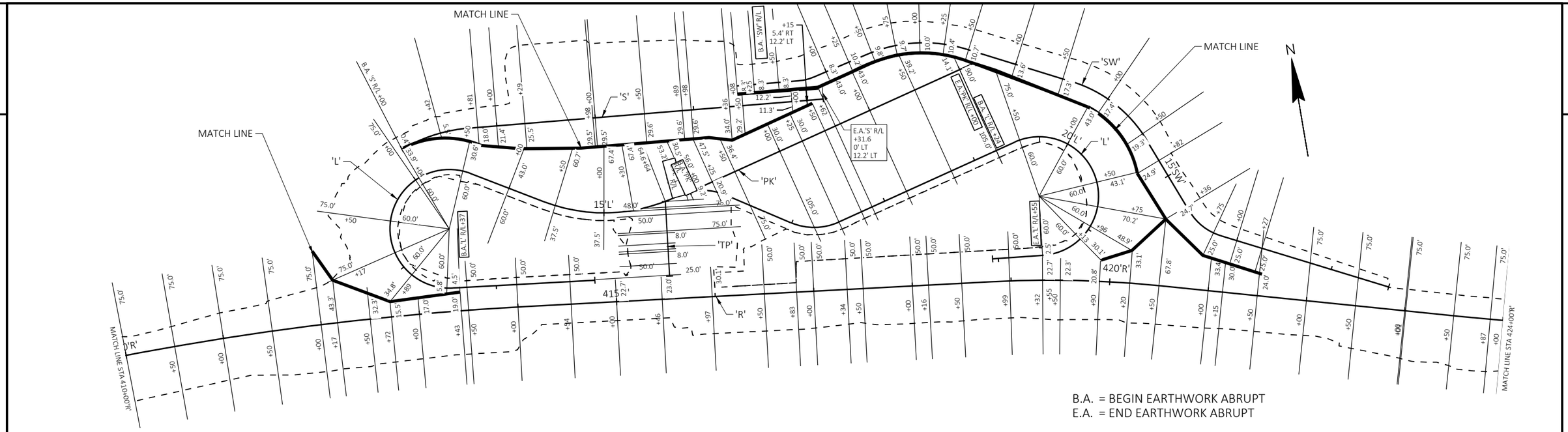
LEGEND

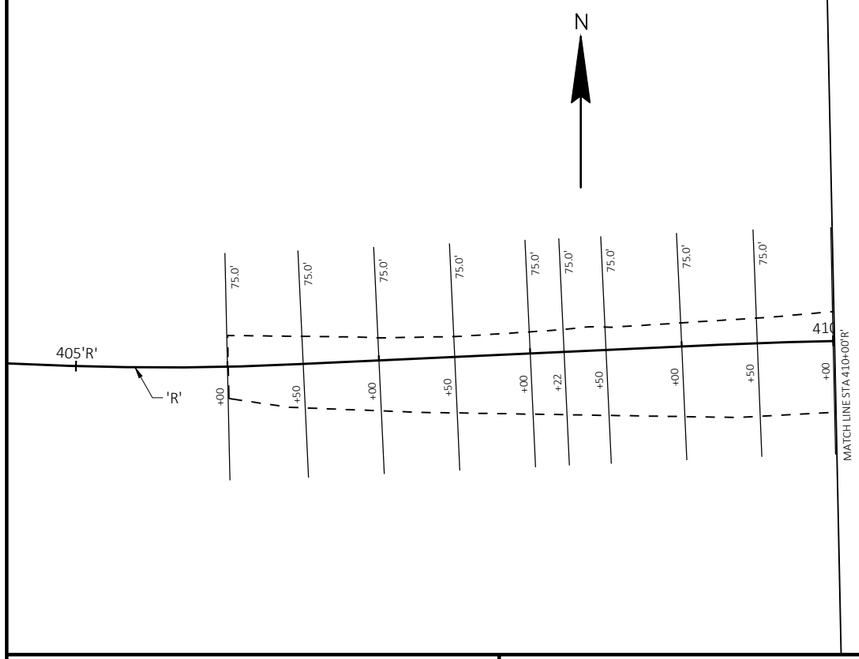
XX — CURB RAMP TYPE XX

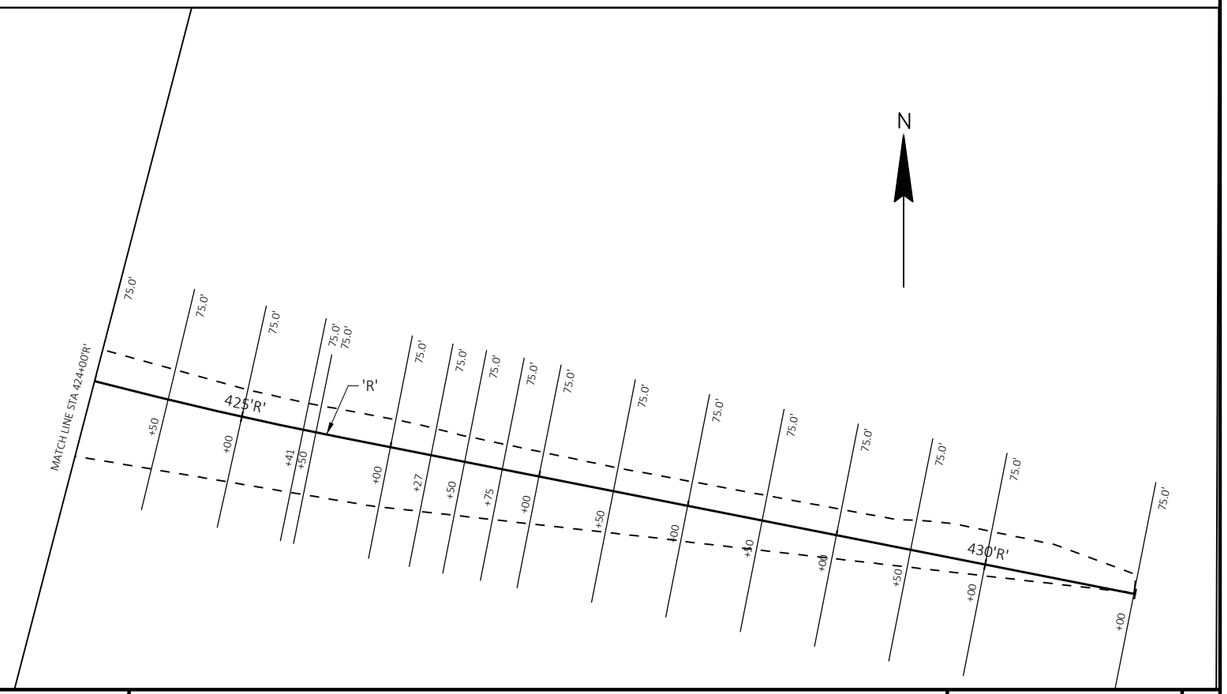
XX YYY.YY — POINT NUMBER & ELEVATION

NOTES:
1. CONTRACTOR TO FIELD VERIFY ELEVATION, GRADES, SLOPES, LENGTHS AND MATCH POINTS PRIOR TO CURB RAMP AND SIDEWALK CONSTRUCTION.
2. THE ENGINEER MAY ADJUST ELEVATIONS TO FIT FIELD CONSTRUCTION.
3. DASHED LINES SHOWN FOR PROPOSED SIDEWALK ARE FOR INFORMATION ONLY AND DO NOT INDICATED JOINT LOCATIONS.
4. SEE THE STANDARD DETAIL DRAWINGS FOR COMPLETE CURB RAMP REQUIREMENTS.
5. ALL STATION AND OFFSET INFORMATION REFERENCE 'L' R/L.

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CURB RAMP DETAILS	SHEET 43	E







PROJECT NO: 1022-04-76, 1022-04-86	HWY: IH 94	COUNTY: DUNN	CROSS SECTION MATCH LINES	SHEET 44	E

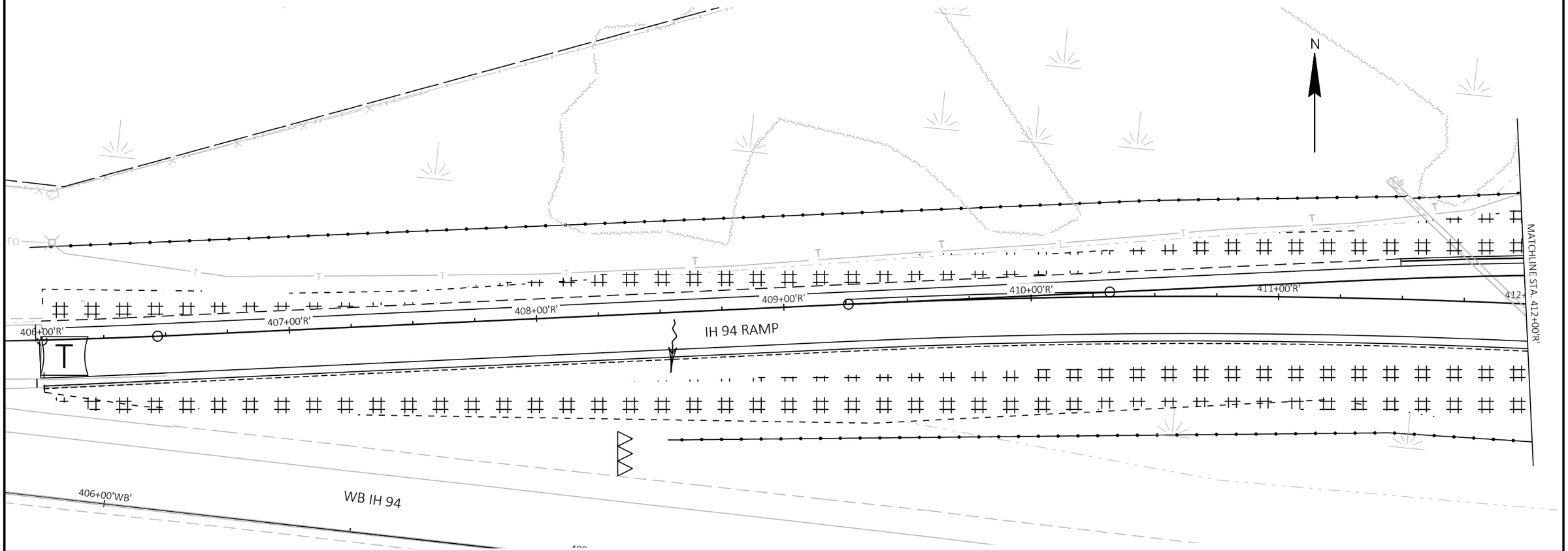
2

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- RIPRAP MEDIUM
- INTERCEPTING EMBANKMENT
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE A & D)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- TRACKING PAD
- SURFACE WATER FLOW

NOTE: AREAS DISTURBED BUT NOT PAVED OR COVERED IN GRAVEL RECEIVE SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING NO. 30 UNLESS OTHERWISE NOTED.



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	EROSION CONTROL	SHEET 45	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 01

PLOT DATE : 7/28/2023 12:12 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

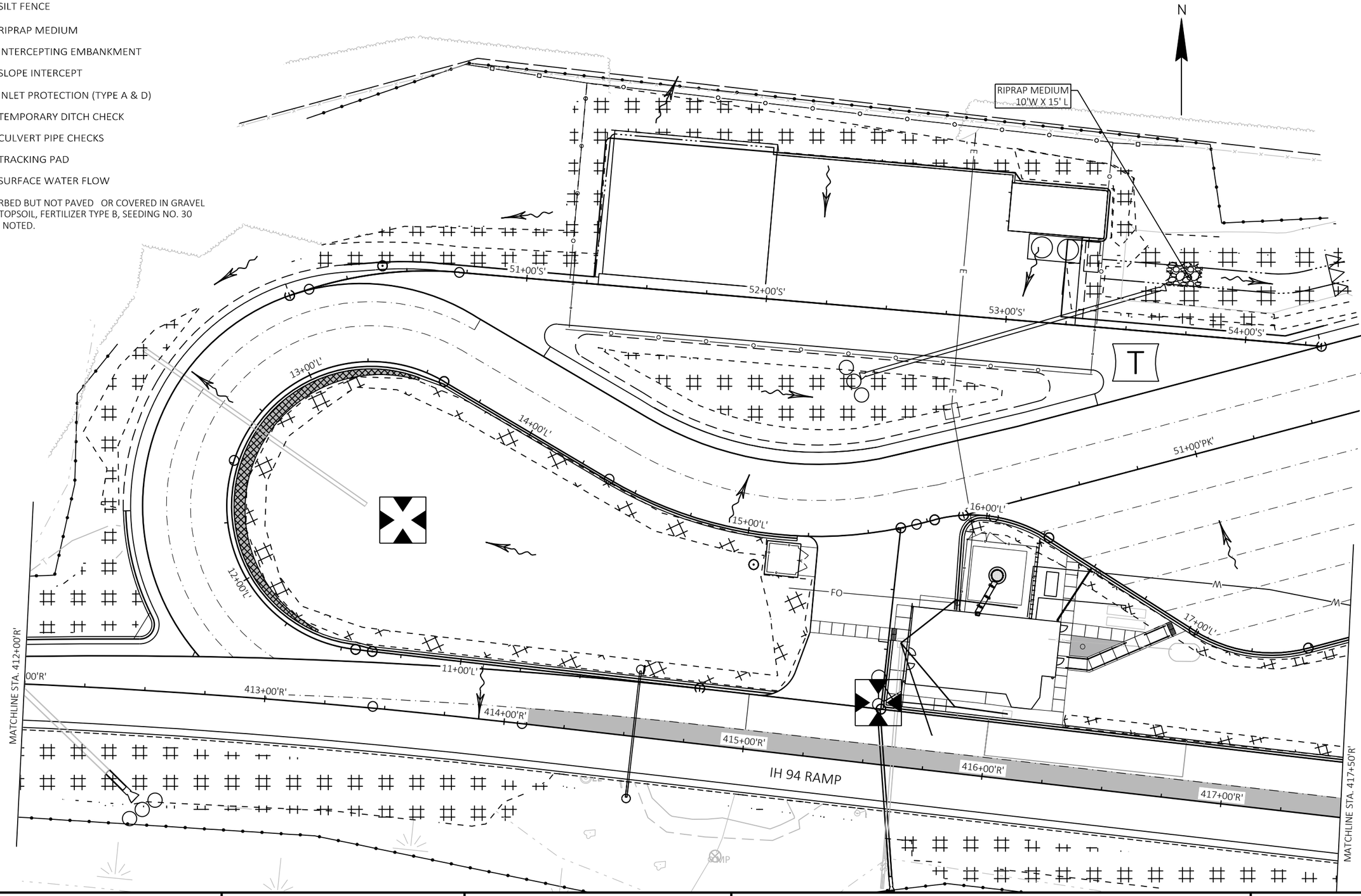
2

2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- RIPRAP MEDIUM
- INTERCEPTING EMBANKMENT
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE A & D)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- TRACKING PAD
- SURFACE WATER FLOW

NOTE: AREAS DISTURBED BUT NOT PAVED OR COVERED IN GRAVEL RECEIVE SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING NO. 30 UNLESS OTHERWISE NOTED.



PROJECT NO: 1022-04-76, 1022-04-86	HWY: IH 94	COUNTY: DUNN	EROSION CONTROL	SHEET 46	E

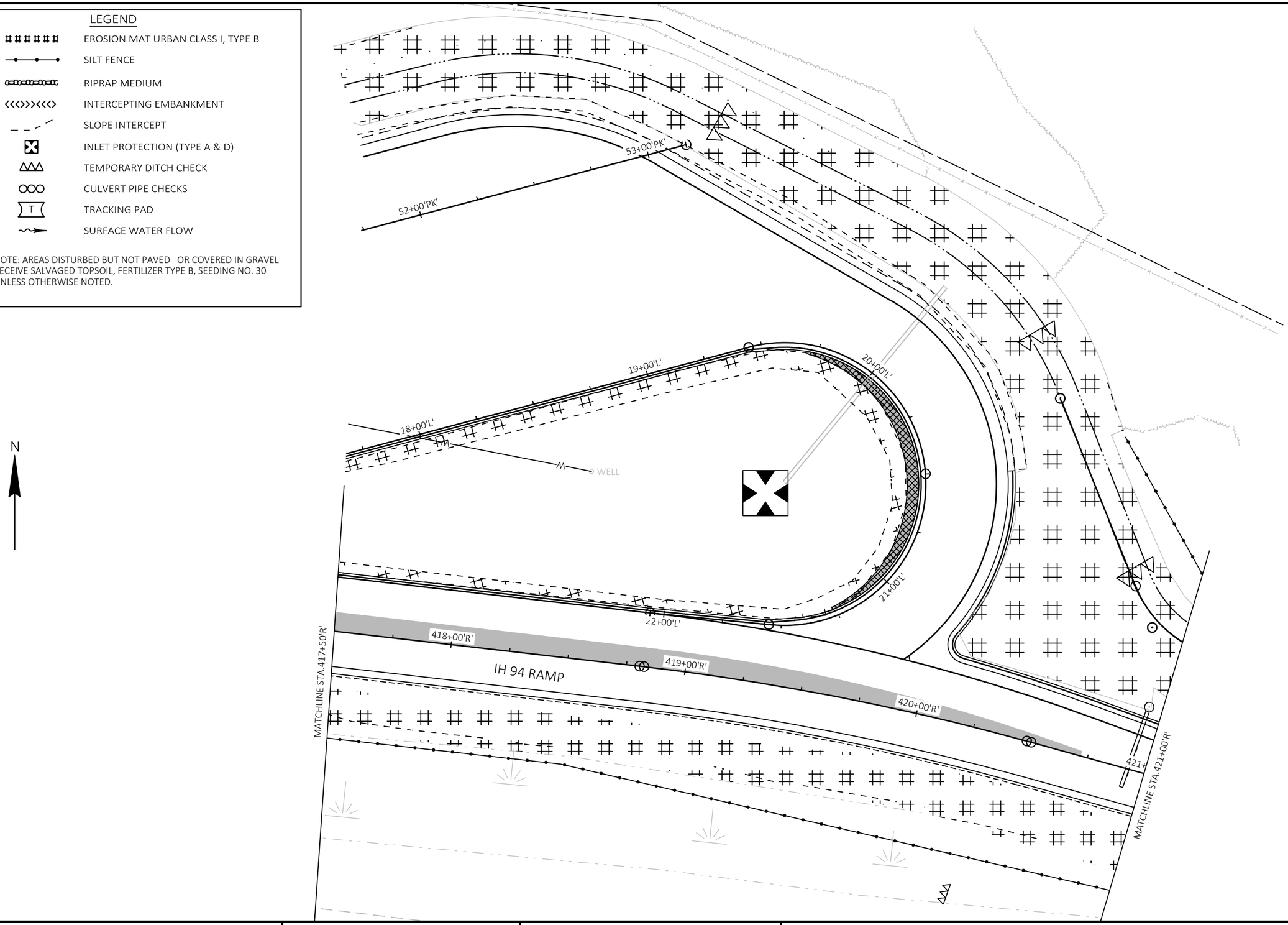
FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 02

PLOT DATE : 7/28/2023 12:13 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- RIPRAP MEDIUM
- INTERCEPTING EMBANKMENT
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE A & D)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- TRACKING PAD
- SURFACE WATER FLOW

NOTE: AREAS DISTURBED BUT NOT PAVED OR COVERED IN GRAVEL RECEIVE SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING NO. 30 UNLESS OTHERWISE NOTED.

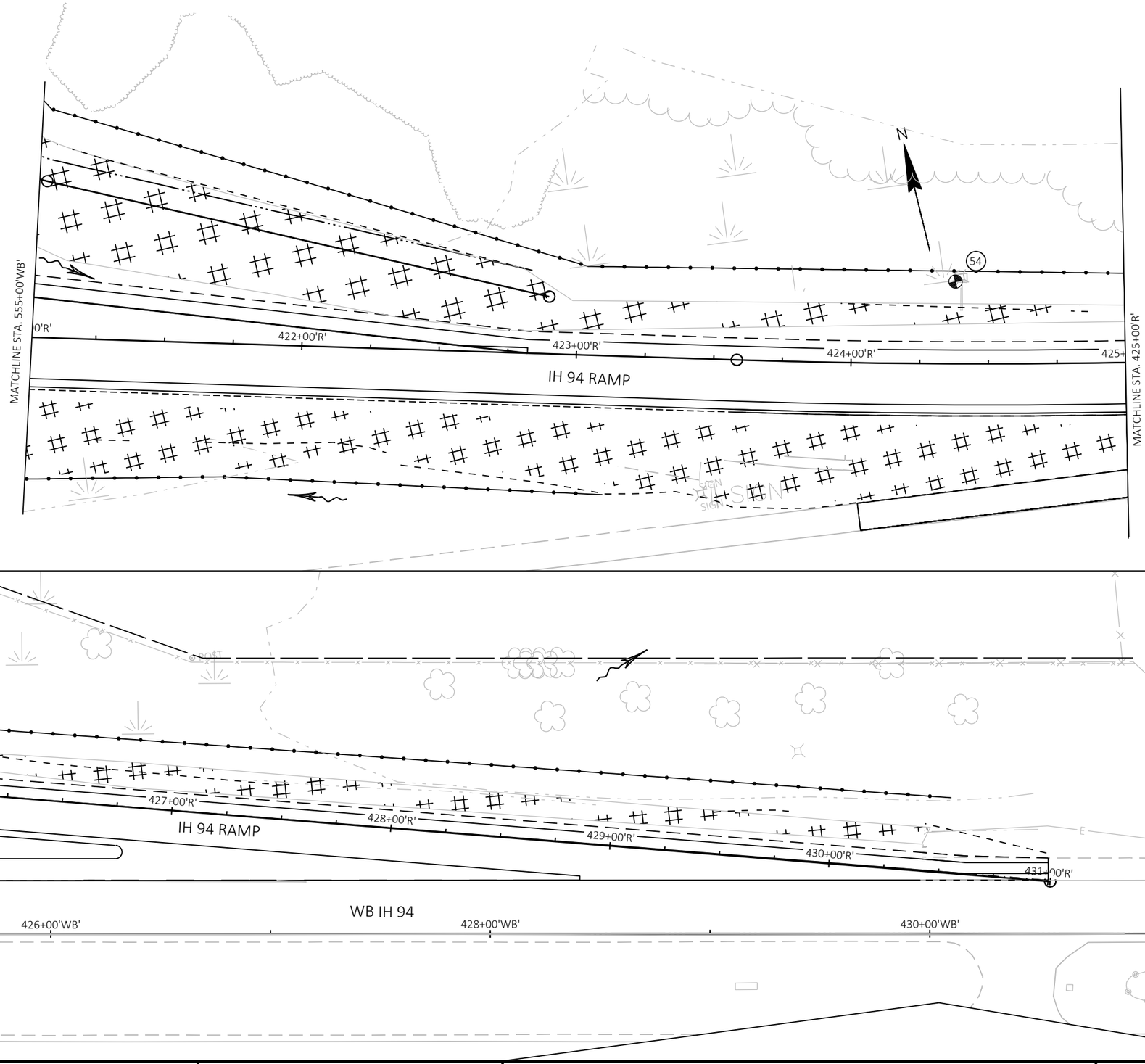


2

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- RIPRAP MEDIUM
- INTERCEPTING EMBANKMENT
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE A & D)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- TRACKING PAD
- SURFACE WATER FLOW

NOTE: AREAS DISTURBED BUT NOT PAVED OR COVERED IN GRAVEL RECEIVE SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING NO. 30 AND MULCH UNLESS OTHERWISE NOTED.



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	EROSION CONTROL	SHEET 48	E

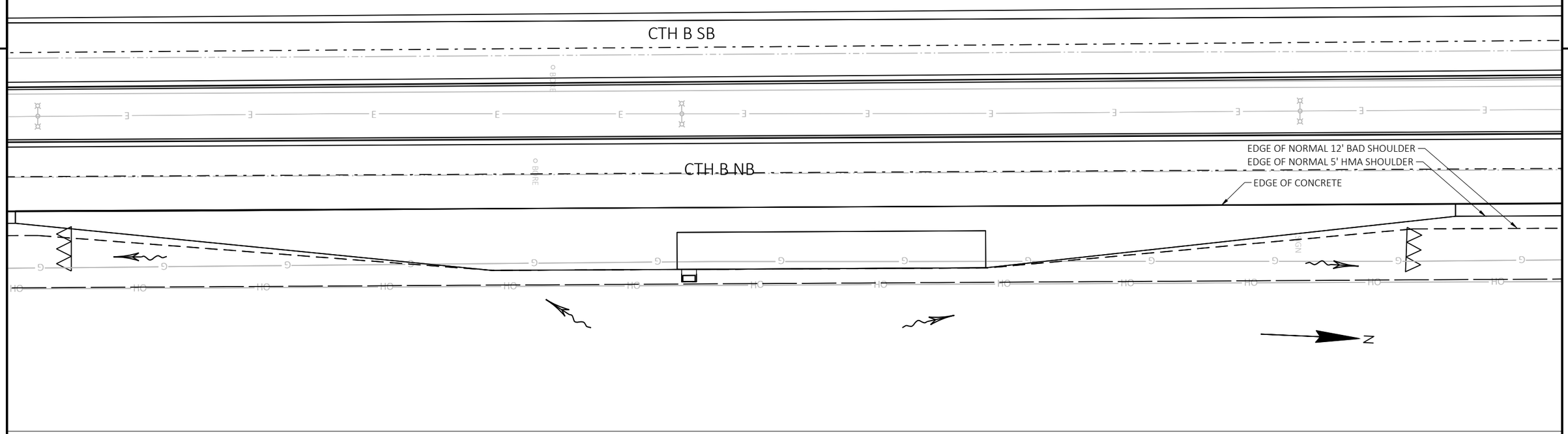
FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 04

PLOT DATE : 7/28/2023 12:14 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

2



LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- RIPRAP MEDIUM
- INTERCEPTING EMBANKMENT
- SLOPE INTERCEPT
- INLET PROTECTION (TYPE A & D)
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECKS
- TRACKING PAD (T)
- SURFACE WATER FLOW

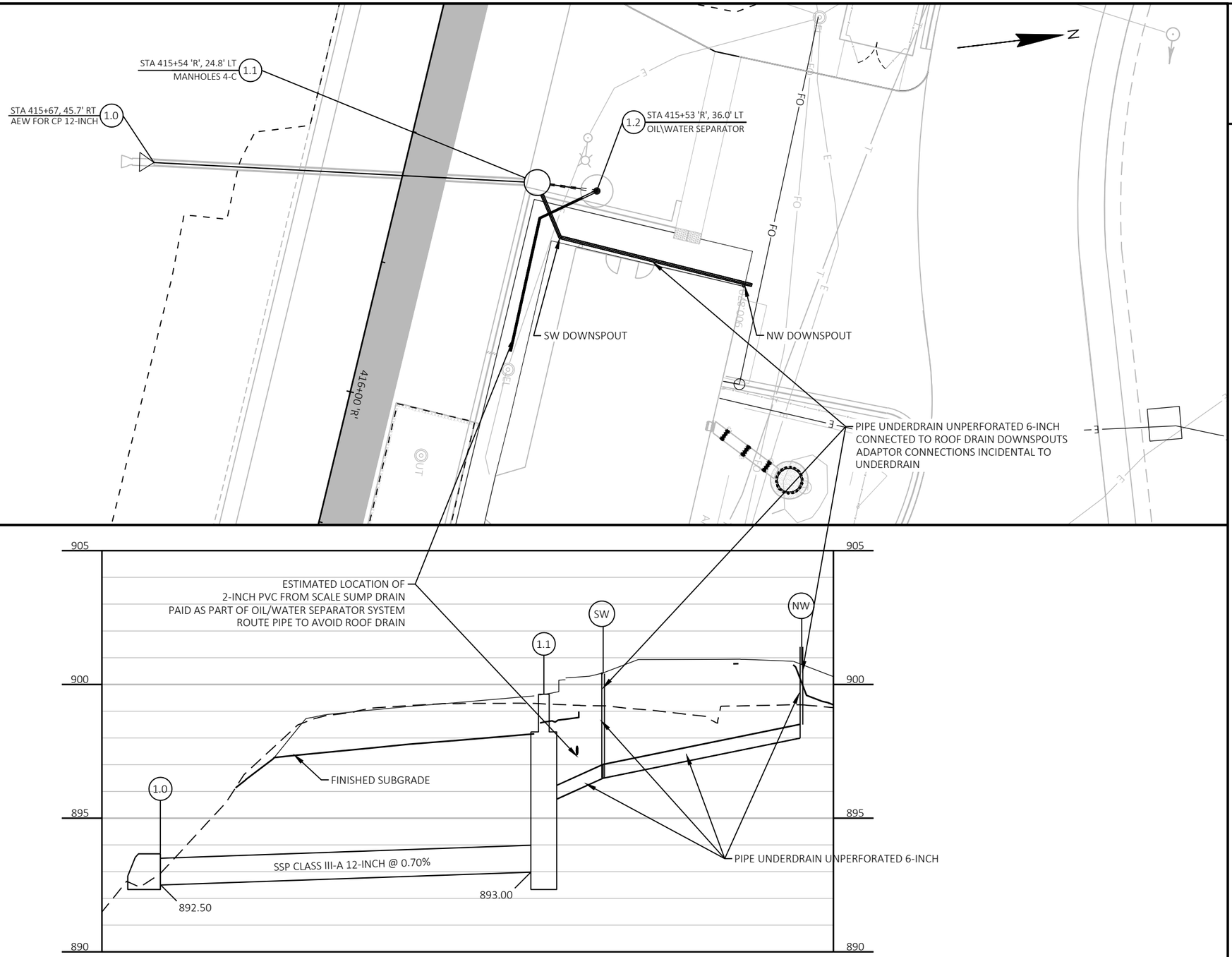
NOTE: AREAS DISTURBED BUT NOT PAVED OR COVERED IN GRAVEL RECEIVE SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING NO. 30 AND MULCH UNLESS OTHERWISE NOTED.

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	EROSION CONTROL PLAN: CTH B PULL OFF SITE	SHEET 49	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 05

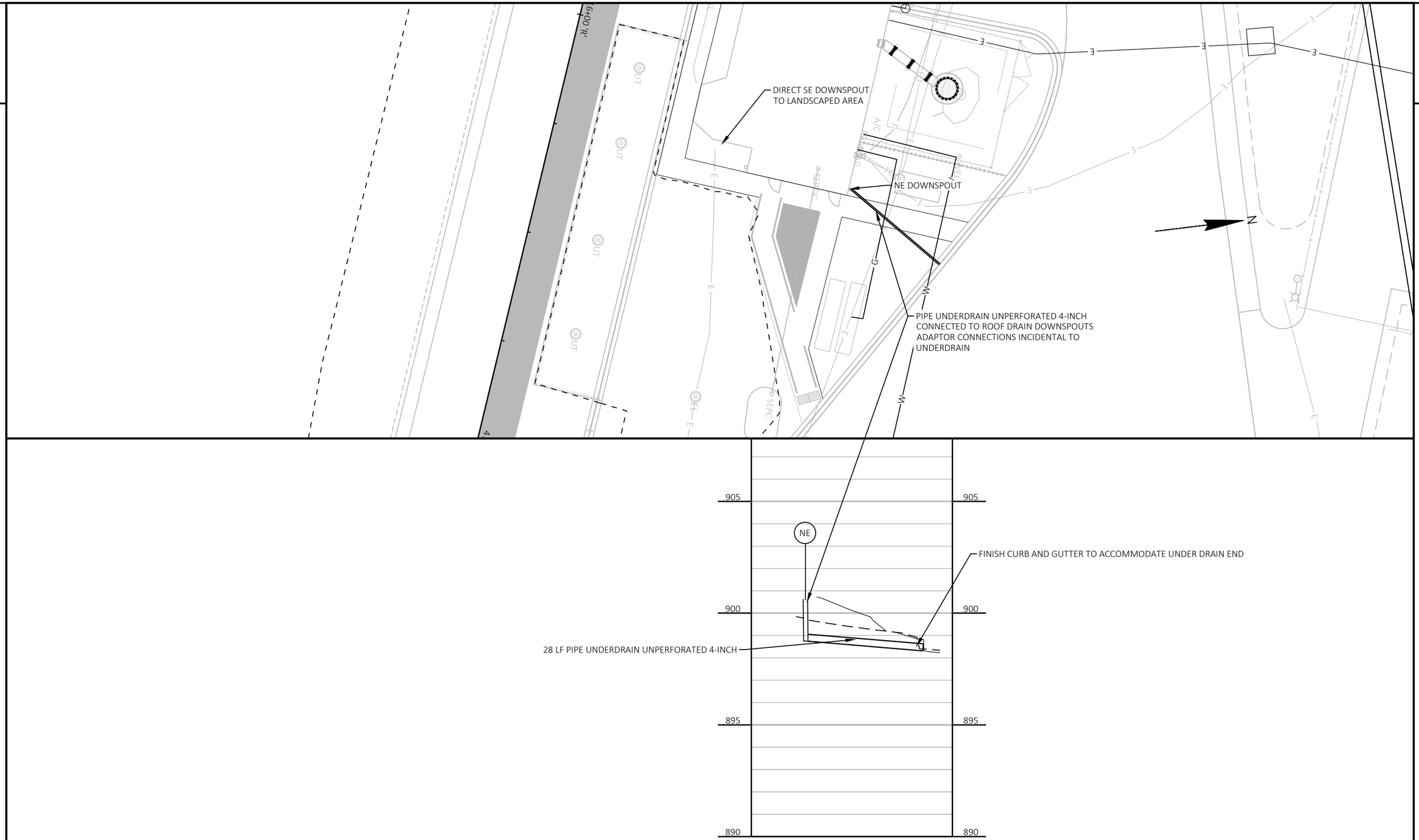
PLOT DATE : 7/28/2023 12:15 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : ############

2



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	STORMSEWER	SHEET 50	E

2


6400 R
OUT
OUT
OUT
E
E
E

PULL EXISTING 4-PAIR FIBER BACK TO VAULT IF NECESSARY FOR CONSTRUCTION OPERATIONS.

DUMPSTER ENCLOSURE SEE BUILDING PLANS SHEET G204

EXPB 102

FOR EXISTING WISDOT FIBER
100 LF REMOVE CABLE
EXPB102-EXPB103 - BUILDING
STORE AND PROTECT CABLE UNTIL NEW CONDUIT IS IN PLACE

80 LF (1)-CONDUIT RIGID NON-METALLIC SCHEDULE 40 2-INCH
80 LF ELECTRICAL WIRE LIGHTING 12 AWG(TRACER WIRE)
80 LF REINSTALL CABLE
1 FIBER OPTIC TERMINATION TO CONNECT TO BUILDING

IH 94 RAMP

SEE STORMSEWER PLANS

REMOVE EXISTING, SIGNS, BEACONS, BASES, SPEAKER EQUIPMENT, WIRE & CONDUIT. PAID AS PART OF WEIGH-IN-MOTION SYSTEM (WIM)

PULL EXISTING 4-PAIR FIBER BACK TO PULLBOX (EXPB 102) IF NECESSARY FOR CONSTRUCTION OPERATIONS, PULL BACK TO VAULT ALONG SOUTH SIDE OF IH 94 RAMP.

AT&T WISCONSIN

LIGHTING CONDUIT SEE LIGHTING PLAN

'TP' R/L

FOPB1
STA 50+47.2'TP', 26.8' RT
1- PULL BOXES NON-CONDUCTIVE
24X36-INCH REQUIRED

SWEF BUILDING

SEE COMMUNICATIONS TOWER DETAILS

FENCE

LIGHTING CONDUIT SEE LIGHTING PLAN

EMERGENCY GENERATOR
APPROXIMATE LOCATION
ADJUST LOCATION AS NECESSARY
PER MANUFACTURER'S INSTRUCTIONS

UNDERDRAIN FROM DOWNSPOUT SEE STORMSEWER PLANS

PROPANE SERVICE FROM UG STORAGE TANKS SEE BUILDING PLANS SHEET M201

PROPOSED WATER LINE FROM WELL SEE CONSTRUCTION DETAIL - WATER SCHEMATIC

2X 1000 GALLON UG STORAGE TANKS, SEE BUILDING PLANS SHEET M201

WISDOT UG ELECT.

STATIC SCALE

SALT SHED

N

NOTES: COORDINATE TEMPORARY POWER LOCATION WITH DUNN ENERGY COOP
COORDINATE ELECTRIC SERVICE "ELECTRICAL SERVICE, MENOMONIE SWEF"

SEE SALT SHED PLANS FOR ELECTRICAL SERVICE TO SALT SHED AND STORAGE SHED

COORDINATE FIBER OPTIC EQUIPMENT INSTALLATION WITH WISDOT STATE PATROL

EDGE OF BAD SHLDR

EDGE OF HMA

EXISTING ELECTRICAL SERVICE TO BE ABANDONED UPON COMPLETION OF NEW SERVICE

APPROXIMATE DUNN ENERGY COOP ELECTRIC TRANSFORMER LOCATION

LIGHTING CONDUIT SEE LIGHTING PLAN

DUNN ENERGY COOP NEW SERVICE LINE

NEW 15-INCH CULVERT

STORAGE SHED

WISDOT UG ELECT.

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	UTILITY SERVICE PLAN	SHEET 52	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\023001-UP.DWG
LAYOUT NAME - 01

PLOT DATE : 7/28/2023 12:17 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

1"=40"

N

APPROXIMATE "SWEF BUILDING, GENERATOR" LOCATION
PLACE PER MANUFACTURER'S RECOMMENDATION

BASE AGGREGATE DENSE 3/4-INCH WASHED OVER
WEED BARRIER FABRIC

LANDSCAPE EDGING

PIPE UNDERDRAIN UNPERFORATED 6-INCH
DRAIN TO CURB LINE

LP UNDERGROUND TANK

LP UNDERGROUND TANK

LANDSCAPE EDGING LOCATED
1' OUTSIDE OF FENCE

DIVERT ROOF DRAIN
TO STORMSEWER
SEE STORM SEWER PLAN

FLAGPOLE,
SEE MISC. SITE DETAILS G202

COLORING CONCRETE WISCONSIN RED

BASE AGGREGATE DENSE 3/4-INCH WASHED
OVER WEED BARRIER, SEE CONSTRUCTION DETAIL

SHRUBS (POTENTILLA FRUTICOAS, CG, #2, ABBOTSWOOD POTENTILLA)

BASE AGGREGATE DENSE 3/4-INCH WASHED
OVER WEED BARRIER FABRIC, SEE CONSTRUCTION DETAIL

NOTE: SEE CURB RAMP DETAIL FOR
ADDITIONAL SIDEWALK INFORMATION

OIL/WATER SEPARATOR
NOT TO SCALE

RE-ROUTE EXISTING SCALE PIT SUMP
TO OIL/WATER SEPARATOR, PIPING AND
CONNECTIONS PAID AS PART OF
OIL/WATER SEPARATOR

STATIC SCALE TO REMAIN

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	BUILDING SITE/LANDSCAPING PLAN	SHEET 53	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\023101-PL.DWG
LAYOUT NAME - 01
PLOT DATE : 7/28/2023 12:18 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

2

CTH B SB

CTH B NB

N

LEGEND

1. MARKING LINE EPOXY 6-INCH (YELLOW)
2. MARKING LINE EPOXY 6-INCH (WHITE)
3. MARKING YIELD LINE EPOXY 18-INCH (WHITE)
4. MARKING PARKING STALL EPOXY (YELLOW)
5. MARKING DIAGONAL EPOXY 6-INCH (YELLOW)
6. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
7. MARKING STOP LINE EPOXY 18-INCH (WHITE)
8. MARKING LINE EPOXY 10-INCH (WHITE)
9. MARKING CHEVRON EPOXY 24-INCH (WHITE)

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON STEEL SUPPORT(S)

X-X DENOTES SIGN NUMBER

XR-X DENOTES SIGN NUMBER TO BE REMOVED

XM-X DENOTES SIGN NUMBER TO BE MOVED

ESTR EXISTING SIGN TO REMAIN

(X) INDICATES SIGN SIZE

SINGLE/DOUBLE DELINEATOR

I-05

NO PARKING ANY TIME

R7-1D
18"X24"

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

R3-4A
36"X12"

I-06

WHITE DOUBLE DELINEATOR @ 100' SPACING (TYP.) MATCH EXIST

YELLOW SINGLE DELINEATOR @ 100' SPACING (TYP.) MATCH EXIST

I-01

IR-01

I-02

IR-02

I-03

IR-03

I-04

IR-04

BUCKLE UP IT'S THE LAW

R5-53A
18"X24"

3' LINE/9' GAP

406+00'R'

407+00'R'

408+00'R'

409+00'R'

410+00'R'

411+00'R'

412+

MATCH LINE STA 412+00'R'

IH 94 RAMP

RE-MARK RAMP CONNECTION, SEE PAVEMENT MARKING FOR ENTRANCE RAMP ON S.D.D. "PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP"

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PERMANENT SIGNING AND MARKING	SHEET 54	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\023201-PSM.DWG
LAYOUT NAME - 01

PLOT DATE : 7/28/2023 12:19 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

LEGEND

1. MARKING LINE EPOXY 6-INCH (YELLOW)
2. MARKING LINE EPOXY 6-INCH (WHITE)
3. MARKING YIELD LINE EPOXY 18-INCH (WHITE)
4. MARKING PARKING STALL EPOXY (YELLOW)
5. MARKING DIAGONAL EPOXY 6-INCH (YELLOW)
6. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
7. MARKING STOP LINE EPOXY 18-INCH (WHITE)
8. MARKING LINE EPOXY 10-INCH (WHITE)
9. MARKING CHEVRON EPOXY 24-INCH (WHITE)

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON STEEL SUPPORT(S)

X-X DENOTES SIGN NUMBER

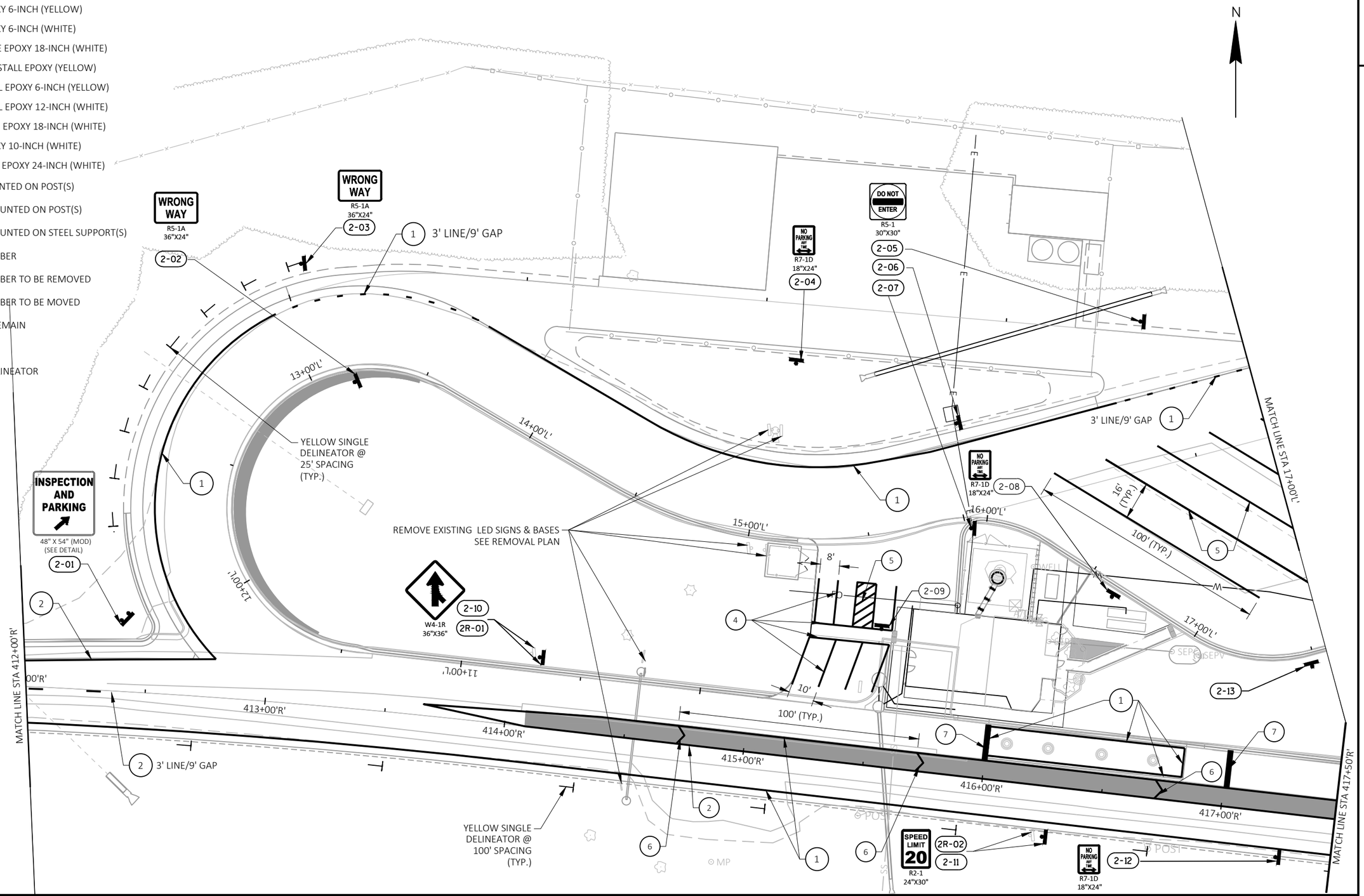
XR-X DENOTES SIGN NUMBER TO BE REMOVED

XM-X DENOTES SIGN NUMBER TO BE MOVED

ESTR EXISTING SIGN TO REMAIN

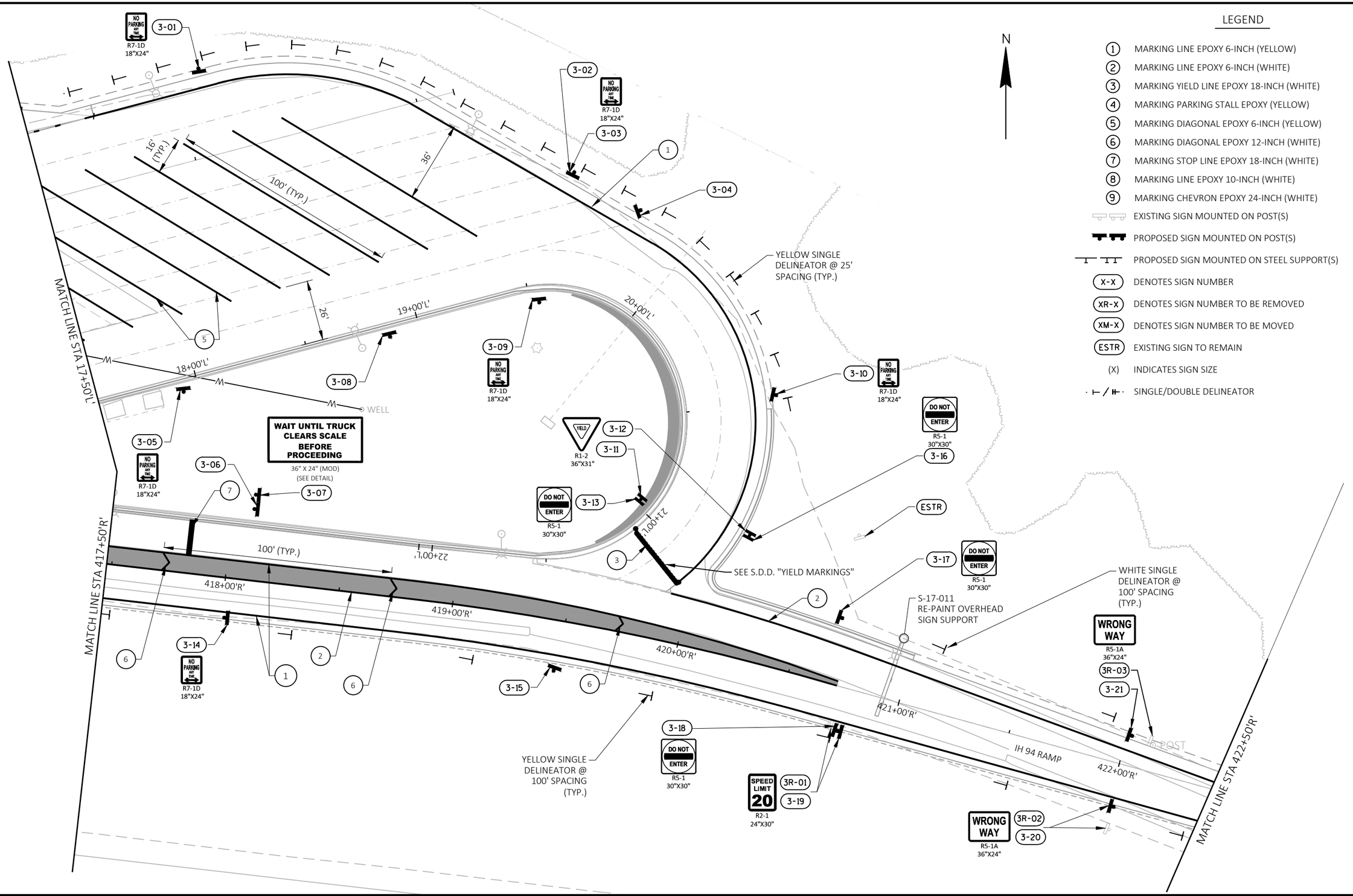
(X) INDICATES SIGN SIZE

SINGLE/DOUBLE DELINEATOR



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PERMANENT SIGNING AND MARKING	SHEET 55	E

2



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PERMANENT SIGNING AND MARKING	SHEET 56	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\023201-PSM.DWG
LAYOUT NAME - 03
PLOT DATE : 7/28/2023 12:19 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

WEIGH STATION

4R-01

WHITE SINGLE DELINEATOR @ 100' SPACING (TYP.)

WHITE DOUBLE DELINEATOR @ 100' SPACING (TYP.)

4-01

WEIGH STATION

E5-58
90"X72"

MATCH LINE STA 422+50'R'

730 TH STREET

4R-02

WEIGH STATION

4R-03 OPEN/CLOSED

REMOVAL PAID AS PART OF WIM

RE-USE EXISTING SUPPORTS

4-02

WEIGH STATION

E5-57
144"X42"

4-03

CMS

PAID AS PART OF WIM

4-10

WEIGH STATION RIGHT LANE

E5-57E
144"X60"

CMS

PAID AS PART OF WIM

RE-USE EXISTING SUPPORTS

4-04

TRUCKS OVER 5 TONS STOP AT WEIGH STA.

R13-1
(144" x 66")

4R-04

TRUCKS OVER 5 TONS STOP AT WEIGH STA.

WHITE SINGLE DELINEATOR @ 400' SPACING (TYP.) MATCH EXIST

425'WB' 430'WB' 435'WB' 440'WB' 445'WB' 450'WB' 455'WB' 460'WB' 465'WB' 470'WB' 475'WB' 480'WB' 485'WB'

94

MATCH LINE STA 486+50'WB'

TO MENOMONIE

TO EAU CLAIRE

3' LINE\9' GAP

YELLOW SINGLE DELINEATOR @ 400' SPACING (TYP.) MATCH EXIST

4-05

WEIGH STATION 1 MILE

4-05A E5-56A 144"X72"

4R-05

WEIGH STATION 1 MILE

TRUCKS OVER 5 TONS USE RIGHT LANE

R13-1 (MOD)
144"X48"

LEGEND

- (1) MARKING LINE EPOXY 6-INCH (YELLOW)
- (2) MARKING LINE EPOXY 6-INCH (WHITE)
- (3) MARKING YIELD LINE EPOXY 18-INCH (WHITE)
- (4) MARKING PARKING STALL EPOXY (YELLOW)
- (5) MARKING DIAGONAL EPOXY 6-INCH (YELLOW)
- (6) MARKING DIAGONAL EPOXY 12-INCH (WHITE)
- (7) MARKING STOP LINE EPOXY 18-INCH (WHITE)
- (8) MARKING LINE EPOXY 10-INCH (WHITE)
- (9) MARKING CHEVRON EPOXY 24-INCH (WHITE)
- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON STEEL SUPPORT(S)
- X-X DENOTES SIGN NUMBER
- XR-X DENOTES SIGN NUMBER TO BE REMOVED
- XM-X DENOTES SIGN NUMBER TO BE MOVED
- ESTR EXISTING SIGN TO REMAIN
- (X) INDICATES SIGN SIZE
- SINGLE/DOUBLE DELINEATOR

REPLACE EXISTING MARKINGS ON HMA PAVEMENT WITH STANDARD EPOXY
STA 471+40'WB' - STA 480+40'WB' NEW CONCRETE PAVEMENT ON IH 94 TO USE THE FOLLOWING:

- LANE LINES ON NEW CONCRETE ARE "GROOVED PERMANENT TAPE 6-INCH" WITH "MARKING LINE GROOVED BLACK EPOXY6-INCH"
- EDGE LINE ON NEW CONCRETE IS GROOVED WET REFLECTIVE EPOXY, MEDIAN LANE IS YELLOW, OUTSIDE IS WHITE

SEE SDD "PERMANENT LONGITUDINAL PAVEMENT MARKINGS"

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PERMANENT SIGNING AND MARKING	SHEET 57	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\023201-PSM.DWG
LAYOUT NAME - 04
PLOT DATE : 7/28/2023 12:19 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:500 FT
WISDOT/CADDS SHEET 42

2

24-HR TRUCK PARKING AVAILABLE IN WEIGH STA

E5-65
144"X72"

5-01

505'WB' 500'WB' 495'WB' 490'WB' 510'WB' 515'WB' 520'WB' 525'WB' 530'WB' 535'WB' 540'WB' 545'WB' 550'WB' 555'WB' 560'WB'

94

TO MENOMONIE

MATCH LINE STA 486+50'WB'

1

SEE SDD "PERMANENT LONGITUDINAL PAVEMENT MARKINGS"

5R-01

WEIGH STATION 2 MILES

5-02

WEIGH STATION 2 MILES

E5-56A
144"X72"

TRUCKS OVER 5 TONS USE RIGHT LANE

5-02A

MATCH LINE STA 562+00'WB'

LEGEND

1. MARKING LINE EPOXY 6-INCH (YELLOW)
2. MARKING LINE EPOXY 6-INCH (WHITE)
3. MARKING YIELD LINE EPOXY 18-INCH (WHITE)
4. MARKING PARKING STALL EPOXY (YELLOW)
5. MARKING DIAGONAL EPOXY 6-INCH (YELLOW)
6. MARKING DIAGONAL EPOXY 12-INCH (WHITE)
7. MARKING STOP LINE EPOXY 18-INCH (WHITE)
8. MARKING LINE EPOXY 10-INCH (WHITE)
9. MARKING CHEVRON EPOXY 24-INCH (WHITE)

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON STEEL SUPPORT(S)

X-X DENOTES SIGN NUMBER

XR-X DENOTES SIGN NUMBER TO BE REMOVED

XM-X DENOTES SIGN NUMBER TO BE MOVED

ESTR EXISTING SIGN TO REMAIN

(X) INDICATES SIGN SIZE

SINGLE/DOUBLE DELINEATOR

565'WB' 570'WB' 575'WB' 580'WB' 585'WB' 590'WB' 595'WB' 600'WB' 605'WB' 610'WB' 615'WB' 620'WB' 625'WB' 630'WB' 635'WB'

94

MATCH LINE STA 562+00'WB'

TO EAU CLAIRE

ESTR

Menomonie 7

ESTR

2

1

DOUBLE

1

WB: 12.5' LINE 37.5' GAP
EB: SOLID

STH 29/USH 12

ESTR

12 94 94

EAST WEST EAST

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PERMANENT SIGNING AND MARKING	SHEET 58	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\023201-PSM.DWG
LAYOUT NAME - 05

PLOT DATE : 7/28/2023 12:19 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:500 FT

WISDOT/CADDS SHEET 42

LEGEND

- LIGHTPOLE
- EXISTING PULL BOX
- EXISTING CONDUIT 2" PVC
- EXISTING CONDUIT 1½" PVC
- EXISTING CONDUIT 1" PVC
- EXISTING COMMUNICATION EQUIPMENT
- EXISTING MESSAGE BOARD
- EXISTING TRAFFIC SIGNAL
- EXISTING SPEAKER WIRE INTERIOR JUNCTION BOX

NOTE: BOLD INDICATES ITEMS TO BE REMOVED OR ABANDONED

* = ITEM TO BE REMOVED BY OTHERS

CONDUCTOR REMOVALS

A =

EXCB	EX	2"
LTG	2 #8	1 #8

B =

EXCB	EX	2"
LTG	2 #8	1 #8
COM	2 #12	1 #12
NEU	1 #12	-- --

C =

EXCB	EX	2"
LTG	4 #8	1 #8

D =

EXCB	EX	2"
GND	-- --	1 #8
SIG	1 12-2 UF	

E =

EXCB	EX	2"
GND	-- --	1 #8

F =

EXCB	EX	2"
SIG	1 12-2 UF	
FIB	1 6	SME
COM	1 #12	1 #12
NEU	1 #12	-- --

G =

EXCB	EX	2" HDPE
FIB	1 6	SME
PWO	-- --	1 #12

H =

EXCB	EX	2"
SGN	2 #8	1 #8
NEU	1 #8	-- --
SGN	3 #10	-- --

I =

EXCB	EX	2"
SGN	4 #8	2 #8
NEU	2 #8	-- --
SGN	6 #10	-- --

J =

EXCB	EX	2"
PWO	-- --	1 #12

K =

EXCB	EX	1"
PWO	-- --	1 #12

L =

EXCB	EX	1"
SPK	2 #14	-- --

M =

EXCB	EX	2"
SPK	2 #14	-- --

KEYED NOTES:

① REMOVE EXISTING CONCRETE BASE, LIGHT POLE, MAST ARM, AND LUMINAIRE. SALVAGE POLE AND MAST ARM, DISPOSE OF CONCRETE BASE AND LUMINAIRE.

② REMOVE AND SALVAGE ALL CAMERAS, ELECTRONIC MESSAGE BOARDS AND SPEAKERS ATTACHED TO EXISTING POLE.

N

EXSL106

① EXSL105

EXCB	EX	2" HDPE	
LTG	2	#8	1 #8
NEU	1	#8	-- --

EXSIG 101*

EXPB 100

EXPB 101

EXPB 102

EXPB 103

EXPB 104

EXPB 105

EXSIG 100*

EXSGN 100*

EXSGN 101*

① EXSL103

EXSL102 ①②

EXSL104

EXSL101

WELL

SEPTIC

POST

CONSTRUCTION NOTES:

1. COORDINATE ALL DEMOLITION WITH OTHER DISCIPLINES IN FIELD.
2. ALL REMOVED ELECTRICAL EQUIPMENT (CONDUCTORS, HPS BULBS, BALLASTS, ETC.) SHALL BE REMOVED FROM JOB SITE AND DISPOSED OF PROPERLY.
3. ALL CONDUIT IS PVC UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL CONFIRM WITH USER AGENCY IF ANY ITEMS ARE DESIRED TO BE TURNED OVER TO USER AGENCY MAINTENANCE STAFF. USER AGENCY RETAINS THE RIGHTS TO KEEP ANY DEMOLISHED EQUIPMENT OR MATERIALS.
5. ALL LOCATIONS OF EQUIPMENT, POLE BASES AND CONDUIT ROUTES BASED ON SURVEY AND AS-BUILT PLANS ONLY, AND SHOULD BE VERIFIED IN THE FIELD.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATES OF ALL EXISTING UTILITIES AND MAPPING. ANY MAPPING PROVIDED BY DFD STAFF MUST BE VERIFIED BY CONTRACTOR.

HIGHWAY LIGHTING

IH 94

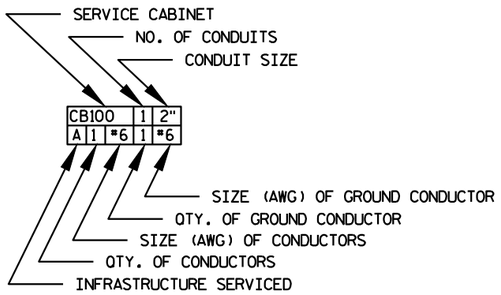
SWEF #63 DUNN COUNTY

LIGHTING NO. SWEF17-0063

REGION CONTACT: NW REGION

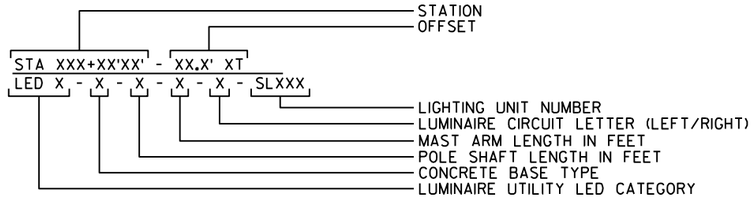
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	LIGHTING REMOVAL PLAN	SHEET 59	E

CONDUIT/CONDUCTOR LEGEND:



PWO = PULL WIRE ONLY

NEU = NEUTRAL



GENERAL STREET LIGHTING NOTES:

1) THE ENGINEER SHALL APPROVE THE FINAL LOCATION FOR ALL CONCRETE BASES IN THE FIELD PRIOR TO CONSTRUCTION.

2) PITCH ALL CONDUITS TOWARD PULLBOXES. INSTALL A 2" DRAIN DUCT TO DITCH OR STORM SEWER AS REQUIRED FOR DRAINAGE. THIS 2" DRAIN DUCT IS INCIDENTAL TO THE PULL BOX BID ITEM. DRAIN DUCT IS NOT SHOWN. DO NOT SPLICE IN PULLBOXES.

3) THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

HIGHWAY LIGHTING

IH 94

SWEF #63 DUNN COUNTY

LIGHTING NO. SWEF17-0063

REGION CONTACT: NW REGION

A =	EXCB	1	2"
	LTG	2 #8	1 #8

B =	EXCB	1	2"
	LTG	4 #8	2 #8

A_{EX} =	EXCB	EXISTING
	LTG	2 #8	1 #8

B_{EX} =	EXCB	EXISTING
	LTG	4 #8	2 #8

KEYED NOTES:

① REINSTALL SALVAGED LIGHT POLE, MAST ARM, AND LED LUMINAIRE ON NEW CONCRETE BASE.

② INSTALL NEWLY FURNISHED LIGHT POLE, MAST ARM, LED LUMINAIRE, AND CONCRETE BASE.

LEGEND:

- NEW LIGHTING UNIT
- EXISTING LIGHTING UNIT
- PULLBOX 24" X 42"
- ELECTRICAL CONDUIT 3" PVC
- ELECTRICAL CONDUIT 2" PVC
- ELECTRICAL CONDUIT 1-1/2" PVC
- ELECTRICAL CONDUIT 1-1/4" PVC
- ELECTRICAL CONDUIT 1" PVC

NOTE: BOLD INDICATES PROPOSED INFRASTRUCTURE

N

STA 52+49'S', 64.0' LT
LED C - 5 - 30' - 10' - X - SL107 ②

STA 52+52'S', 62.8' LT
LPB107

STA 51+15'S', 6.0' LT
LPB109

② STA 51+18'S' - 4.8' LT
LED C - 5 - 30' - 10' - X - SL108

SALT SHED

ACCESSORY BUILDING

STA 51+27'S', 25.8' RT
LPB108

EXSL106

EXCB	1	3"
LTG	6 #8	3 #8

STA 52+91'S', 31.7' RT
LPB106

STA 53+06'S', 34.5' RT
EX - 5 - EX - EX - X - SL105 ①

PWO 1-2"

STA 12+05'L', 13.2' RT
LPB100

EXPB101

EXPB102

PWO EX-2"

STA 415+04'R' - 5.0' LT
EX - 5 - EX - EX - X - SL102 ①

PWO 1-1"

COMM. TOWER

SWEF ADDITION

EXISTING SWEF

STA 16+41'L', 24.7' RT
LPB103

EXSL104

EXPB104

EXPB105

EXSL101

STA 412+45'R', 15.7' LT
LPB110

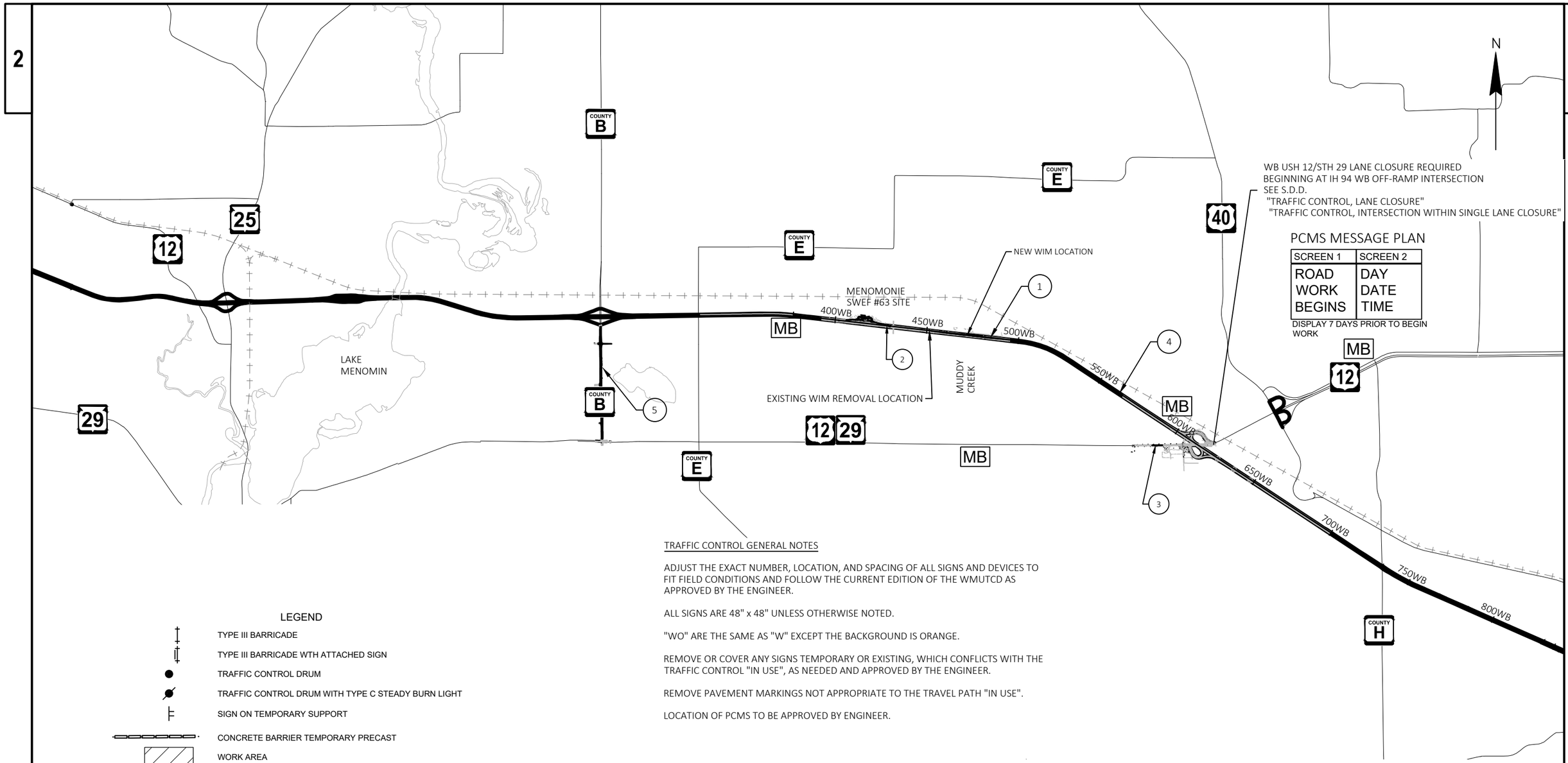
STA 412+43'R', 9.7' LT
EX - 5 - EX - EX - X - SL103 ①

CONSTRUCTION NOTES:

1. INTERCEPT EXISTING CONDUIT EXITING THE SWEF WITH LPB103. NEW LIGHTING CONDUCTORS SHALL BE REINSTALLED UTILIZING EXISTING RACEWAYS FROM LPB103 TO THE EXISTING LIGHTING CONTROL TERMINATIONS.

HIGHWAY LIGHTING
IH 94
SWEF #63 DUNN COUNTY
LIGHTING NO. SWEF17-0063
REGION CONTACT: NW REGION

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	LIGHTING PLAN	SHEET 61	E



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (ONE WAY REFLECTOR)
- DELINEATORS TEMPORARY
- DIRECTION OF TRAFFIC
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- ASPHALTIC SURFACE TEMPORARY

TRAFFIC CONTROL GENERAL NOTES

ADJUST THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AND FOLLOW THE CURRENT EDITION OF THE WMUTCD AS APPROVED BY THE ENGINEER.

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

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

REMOVE OR COVER ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICTS WITH THE TRAFFIC CONTROL "IN USE", AS NEEDED AND APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS NOT APPROPRIATE TO THE TRAVEL PATH "IN USE".

LOCATION OF PCMS TO BE APPROVED BY ENGINEER.

LEGEND

1. SEE TRAFFIC CONTROL DETAIL SHEETS
2. SEE S.D.D "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H"
3. SEE S.D.D. "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS " AND TRAFFIC CONTROL DETAIL SHEETS
4. SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM" DURING LANE CLOSURES
5. COMPLETED DURING CTH B CLOSURE FOR PROJECT 7996-00-43

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL OVERVIEW	SHEET 62	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\025100-TC.DWG
LAYOUT NAME - 0V
PLOT DATE : 7/28/2023 12:21 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:1 MI

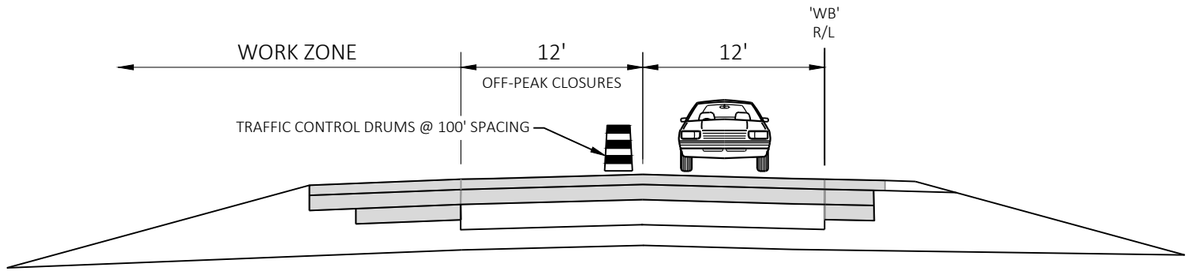
IH 94 - STAGE 1A

TRAFFIC OPERATIONS

- CLOSE IH 94 WB OUTSIDE LANE DURING OFF-PEAK HOURS AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.

CONSTRUCTION OPERATIONS

- FILL OUTSIDE SHOULDER RUMBLE STRIPS
- REMOVE EXISTING WIM EQUIPMENT INSIDE CLEAR ZONE



STAGE 1A IH 94 WB TYPICAL SECTION
STA 449+50'WB' - STA 494+40'WB'

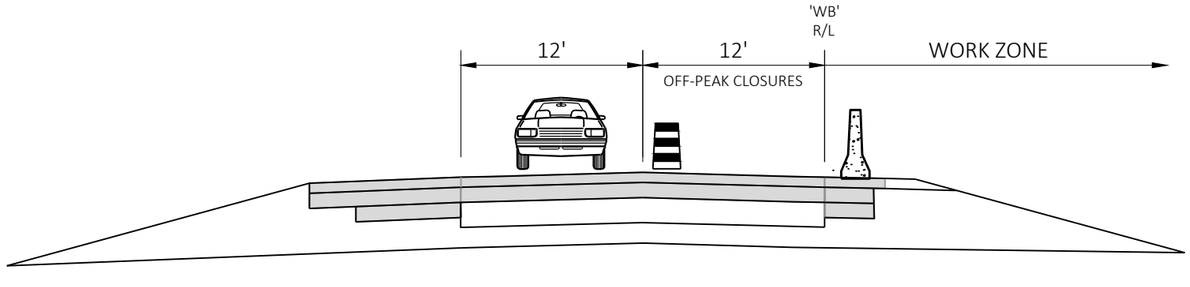
IH 94 - STAGE 1B

TRAFFIC OPERATIONS

- CLOSE IH 94 WB & EB INSIDE LANE DURING SHORT TERM OFF-PEAK HOURS AS SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.

CONSTRUCTION OPERATIONS

- PLACE CONCRETE BARRIER TEMPORARY PRECAST IN IH 94 EB & WB MEDIAN
- CONSTRUCT TEMPORARY BYPASS ROADWAY



STAGE 1B IH 94 WB TYPICAL SECTION
STA 454+00'WB' - STA 494+40'WB'

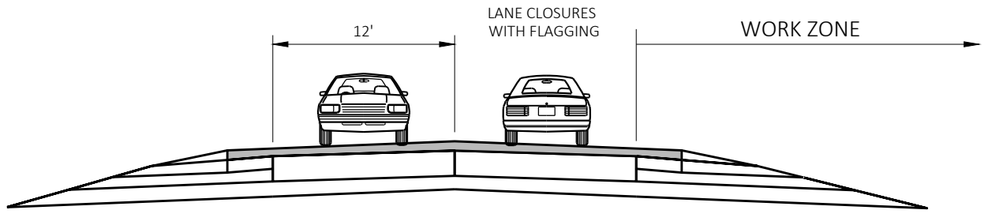
USH 12/STH 29 STAGE 1A

TRAFFIC OPERATIONS

- OPEN TO TRAFFIC WITH FLAGGING.

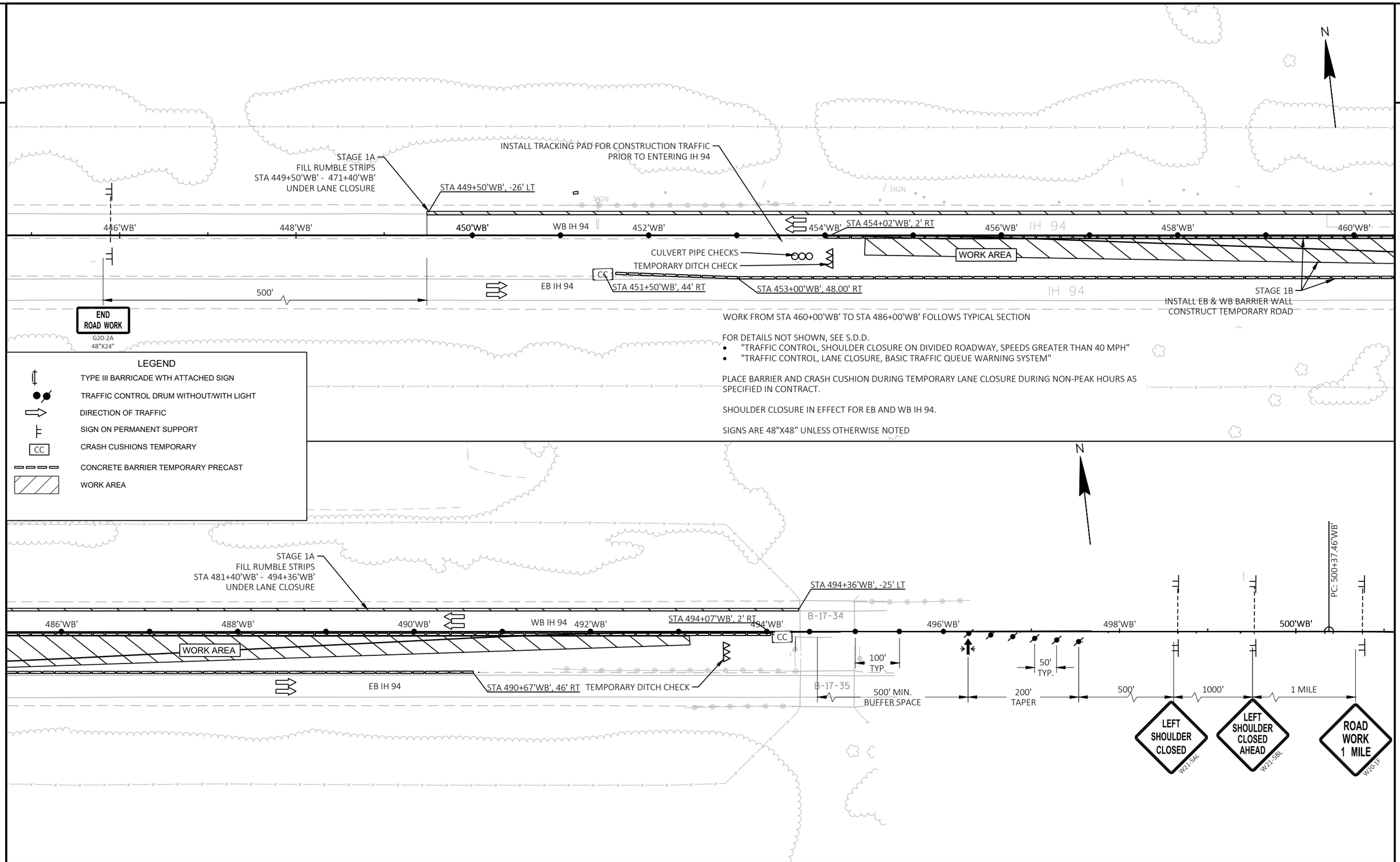
CONSTRUCTION OPERATIONS

- WIDEN OUTSIDE EB SHOULDER
  - -SAWING ASPHALT
  - -REMOVING 5' EXISTING HMA SHOULDER
  - -PREPARE FOUNDATION FOR ASPHALTIC PAVING
  - -PAVE 8' TEMPORARY ASPHALT
  - -SHAPING SHOULDERS



STAGE 1 USH 12/STH 29 TYPICAL SECTION
STA 48+25'V' - STA 63+25'V'

2



WORK FROM STA 460+00'WB' TO STA 486+00'WB' FOLLOWS TYPICAL SECTION

FOR DETAILS NOT SHOWN, SEE S.D.D.

- "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH"
- "TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM"

PLACE BARRIER AND CRASH CUSHION DURING TEMPORARY LANE CLOSURE DURING NON-PEAK HOURS AS SPECIFIED IN CONTRACT.

SHOULDER CLOSURE IN EFFECT FOR EB AND WB IH 94.

SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: STAGE 1	SHEET 64	E

2

STA 48+50'V' - STA 55+25'V' LT
SAWING ASPHALT
REMOVING ASPHALTIC SURFACE (5' SHOULDER)
PREPARE SURFACE FOR ASPHALTIC SHOULDERS (7' WIDTH)
7' WIDTH 3-INCH 3MT 58-28 S & 2-INCH 4 MT 58-34 S
SHAPING SHOULDERS

STA 48+25'V' - STA 63+25'V' RT
SAWING ASPHALT
REMOVING ASPHALTIC SURFACE (5' SHOULDER)
PREPARE SURFACE FOR ASPHALTIC SHOULDERS (8' WIDTH)
8' WIDTH 3-INCH 3MT 58-28 S & 2-INCH 4 MT 58-34 S
SHAPING SHOULDERS

N

MATCH LINE STA 59+00'V'

46'V' 48'V' 50'V' 52'V' 54'V' 56'V' 58'V' 60'V'

USH 12/STH 29

FOR DETAILS NOT SHOWN, SEE S.D.D.
- "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"
- TRAFFIC CONTROL ADVANCED WARNING SIGNS 45 MPH OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC

LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM WITHOUT/WITH LIGHT
- DIRECTION OF TRAFFIC
- SIGN ON PERMANENT SUPPORT
- CC CRASH CUSHIONS TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA

STA 61+00'V' - STA 63+12'V' LT
SAWING ASPHALT
REMOVING ASPHALTIC SURFACE (5' SHOULDER)
PREPARE SURFACE FOR ASPHALTIC SHOULDERS (7' WIDTH)
7' WIDTH 3-INCH 3MT 58-28 S & 2-INCH 4 MT 58-34 S
SHAPING SHOULDERS

MATCH LINE STA 59+00'V'

62'V 64'V

USH 12/STH 29

IH 94

SIGN

INL

SEPTIC

CANOPY

MH

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: USH 12/STH 29 STAGE 1	SHEET 65	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\025101-TC.DWG
LAYOUT NAME - 03
PLOT DATE : 7/28/2023 12:22 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

LEGEND

(1) TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)

(2) TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW)

(A) SALVAGED TOPSOIL, TEMPORARY SEEDING, EROSION MAT URBAN CLASS I TYPE B

NOTE: PAVEMENT MARKING AT LANE LINE SOLID THRU CURVE AND TRANSITION TO TANGENT

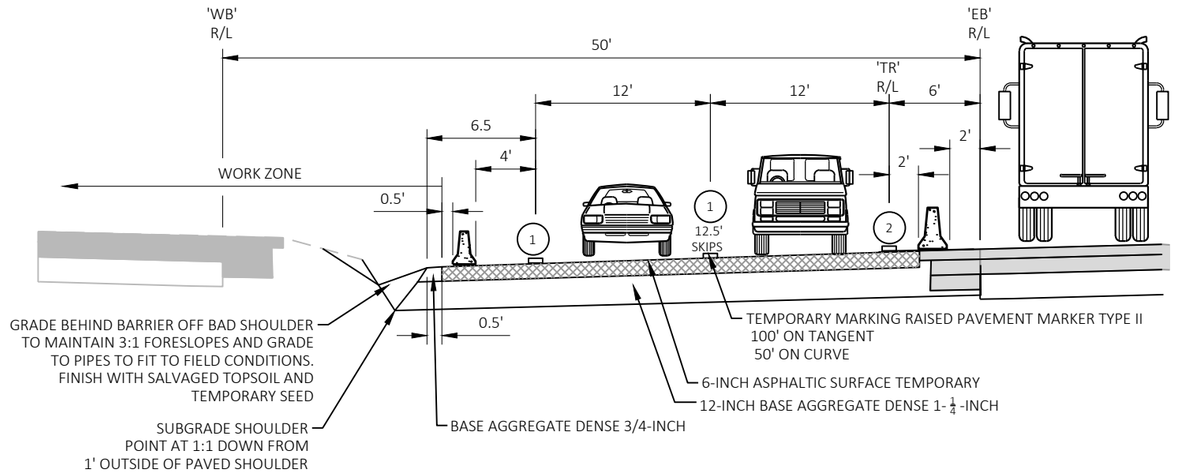
IH 94 - STAGE 2

TRAFFIC OPERATIONS

- WB IH 94 TRAFFIC ON TEMPORARY BYPASS
- EB IH 94 TRAFFIC ON EXISTING PAVEMENT

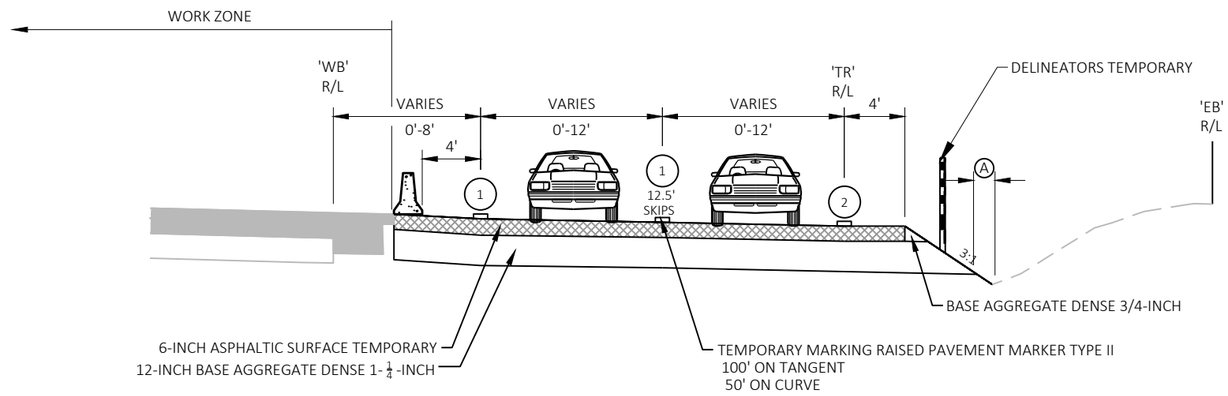
CONSTRUCTION OPERATIONS

- REMOVE & REPLACE WB CONCRETE PAVEMENT, OUTSIDE SHOULDER AND INSTALL WIM EQUIPMENT



TEMPORARY BYPASS TYPICAL SECTION

STA 73+00'TR' - STA 93+00'TR'



TEMPORARY BYPASS TYPICAL SECTION

STA 61+25'TR' - STA 73+00'TR'
STA 93+00'TR' - STA 100+38'TR'

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: STAGE 2	SHEET 66	E

LEGEND

(1) TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)

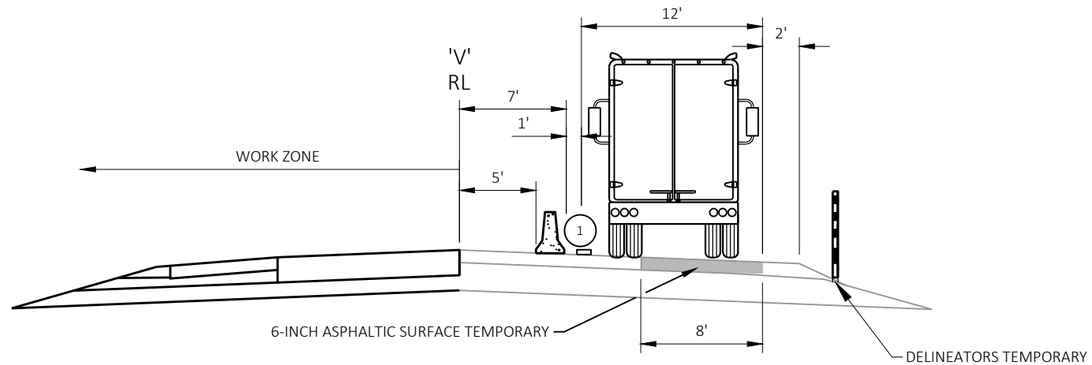
USH 12/STH 29 - STAGE 2

TRAFFIC OPERATIONS

USH 12/STH 29 TRAFFIC BI-DIRECTIONAL WITH TEMPORARY SIGNALS

CONSTRUCTION OPERATIONS

- REMOVE & REPLACE WB CONCRETE PAVEMENT, OUTSIDE SHOULDER AND INSTALL WIM EQUIPMENT

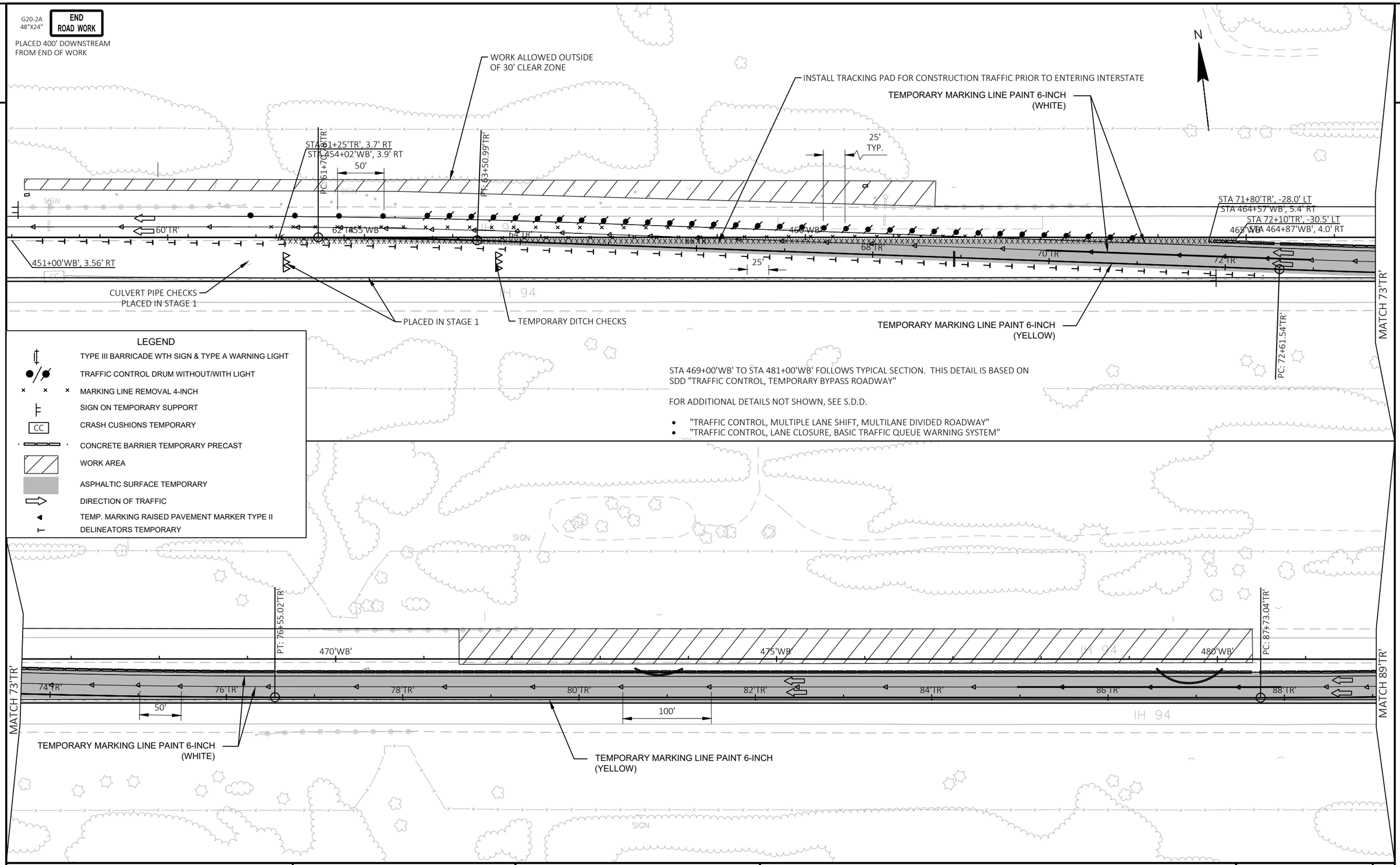


STAGE 2 USH 12/STH 29 TYPICAL SECTION

STA 50+00'V' - STA 61+50'V'

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: STAGE 2	SHEET 67	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\025102-TC.DWG
LAYOUT NAME - 01 (2)
PLOT DATE : 7/28/2023 12:22 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ############
WISDOT/CADDS SHEET 42



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: STAGE 2	SHEET 68	E

2

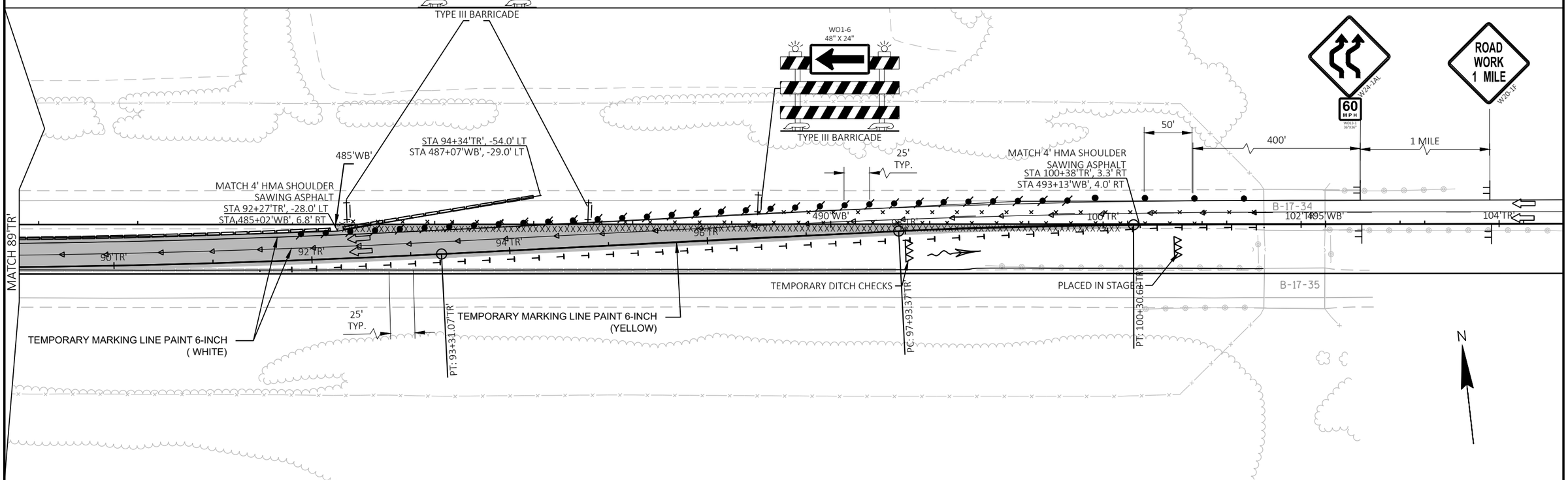
LEGEND

- TYPE III BARRICADE WTH SIGN & TYPE A WARNING LIGHT
- TRAFFIC CONTROL DRUM WITHOUT/WITH LIGHT
- MARKING LINE REMOVAL 4-INCH
- SIGN ON TEMPORARY SUPPORT
- CRASH CUSHIONS TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- DIRECTION OF TRAFFIC
- TEMP. MARKING RAISED PAVEMENT MARKER TYPE II
- DELINEATORS TEMPORARY

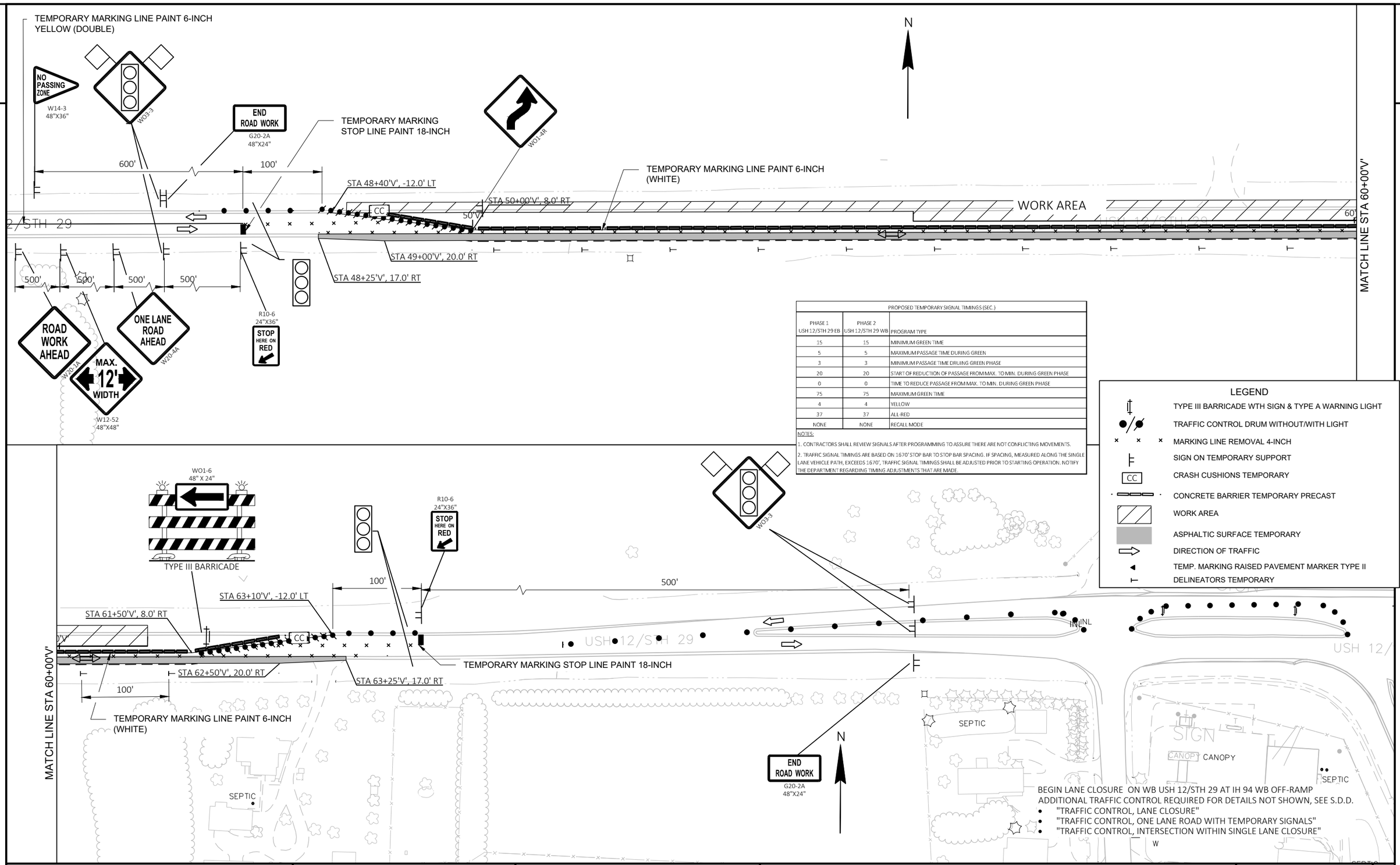
STA 469+00'WB' TO STA 481+00'WB' FOLLOWS TYPICAL SECTION. THIS DETAIL IS BASED ON SDD "TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY"

FOR ADDITIONAL DETAILS NOT SHOWN, SEE S.D.D.

- "TRAFFIC CONTROL, MULTIPLE LANE SHIFT, MULTILANE DIVIDED ROADWAY"
- "TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM"



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: STAGE 2	SHEET 69	E



PROPOSED TEMPORARY SIGNAL TIMINGS (SEC.)		
PHASE 1 USH 12/STH 29 EB	PHASE 2 USH 12/STH 29 WB	PROGRAM TYPE
15	15	MINIMUM GREEN TIME
5	5	MAXIMUM PASSAGE TIME DURING GREEN
3	3	MINIMUM PASSAGE TIME DRUING GREEN PHASE
20	20	START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
0	0	TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
75	75	MAXIMUM GREEN TIME
4	4	YELLOW
37	37	ALL-RED
NONE	NONE	RECALL MODE

NOTES:

1. CONTRACTORS SHALL REVIEW SIGNALS AFTER PROGRAMMING TO ASSURE THERE ARE NOT CONFLICTING MOVEMENTS.
2. TRAFFIC SIGNAL TIMINGS ARE BASED ON 1670' STOP BAR TO STOP BAR SPACING. IF SPACING, MEASURED ALONG THE SINGLE LANE VEHICLE PATH, EXCEEDS 1670', TRAFFIC SIGNAL TIMINGS SHALL BE ADJUSTED PRIOR TO STARTING OPERATION. NOTIFY THE DEPARTMENT REGARDING TIMING ADJUSTMENTS THAT ARE MADE.

LEGEND

- TYPE III BARRICADE WTH SIGN & TYPE A WARNING LIGHT
- TRAFFIC CONTROL DRUM WITHOUT/WITH LIGHT
- MARKING LINE REMOVAL 4-INCH
- SIGN ON TEMPORARY SUPPORT
- CC — CRASH CUSHIONS TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- DIRECTION OF TRAFFIC
- TEMP. MARKING RAISED PAVEMENT MARKER TYPE II
- DELINEATORS TEMPORARY

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: USH 12/STH 29 STAGE 2	SHEET 70	E

2

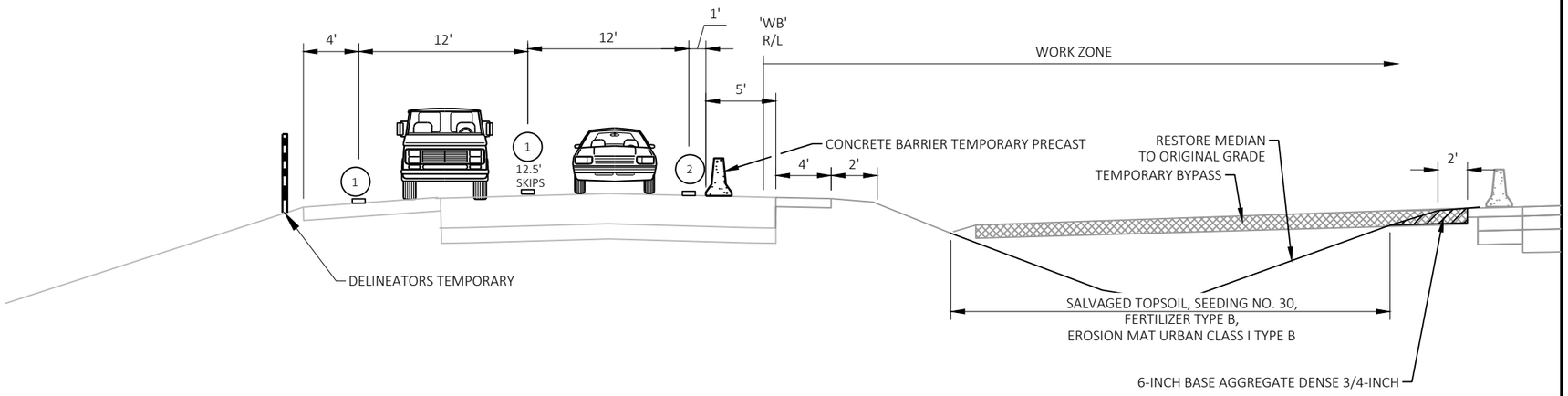
IH 94 - STAGE 3A

TRAFFIC OPERATIONS

- IH 94 WB ON NEW CONCRETE PAVEMENT AND OUTSIDE SHOULDER
- IH 94 EB ON EXISTING PAVEMENT

CONSTRUCTION OPERATIONS

- REMOVE TEMPORARY BYPASS ROADWAY
- RECONSTRUCT EB & WB MEDIAN SHOULDER



STAGE 3A IH 94 WB TYPICAL SECTION

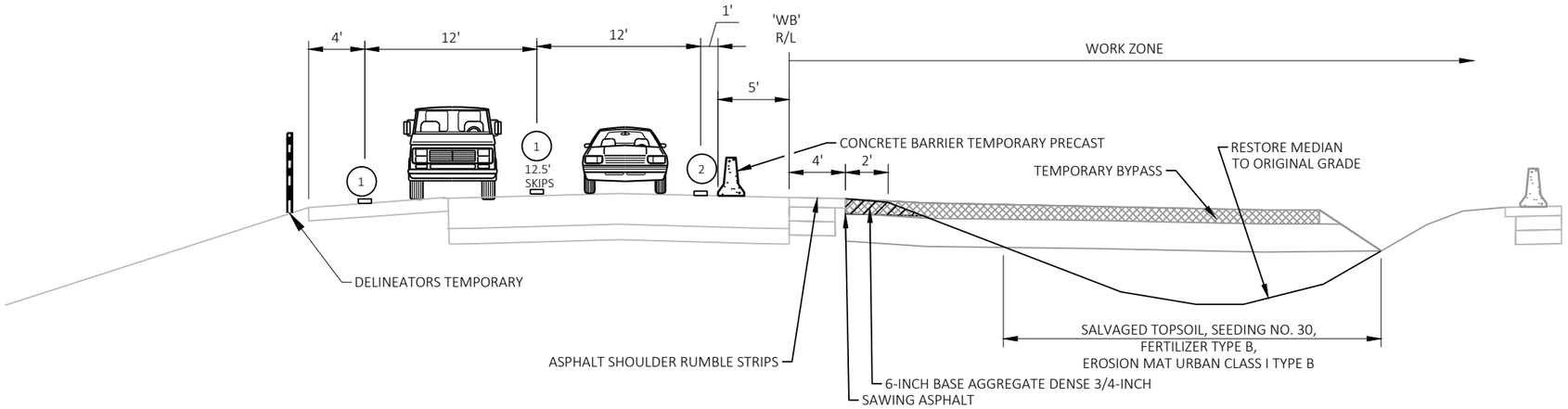
STA 464+87'WB' - STA 471+40'WB'
STA 480+40'WB' - STA 485+09'WB'

LEGEND

(1) TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)

(2) TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW)

NOTE: PAVEMENT MARKING AT LANE LINE SOLID THRU CURVE AND TRANSITION TO TANGENT



STAGE 3A IH 94 WB TYPICAL SECTION

STA 451+00'WB' - STA 464+87'WB'
STA 485+09'WB' - STA 493+13'WB'

2

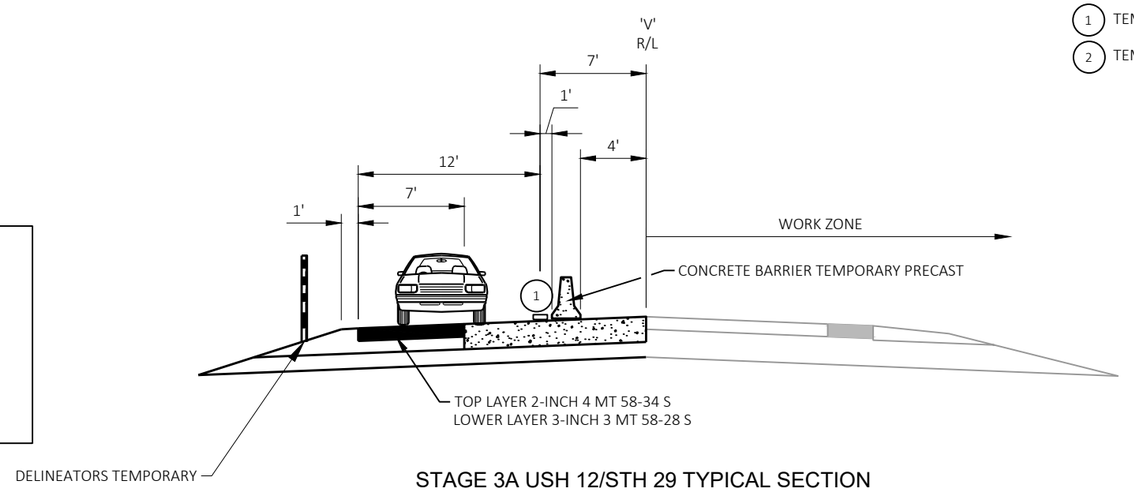
USH 12/STH 29 - STAGE 3A

TRAFFIC OPERATIONS

USH 12/STH 29 TRAFFIC BI-DIRECTIONAL WITH TEMPORARY SIGNALS

CONSTRUCTION OPERATIONS

- REMOVE & REPLACE EB PAVEMENT, OUTSIDE SHOULDER



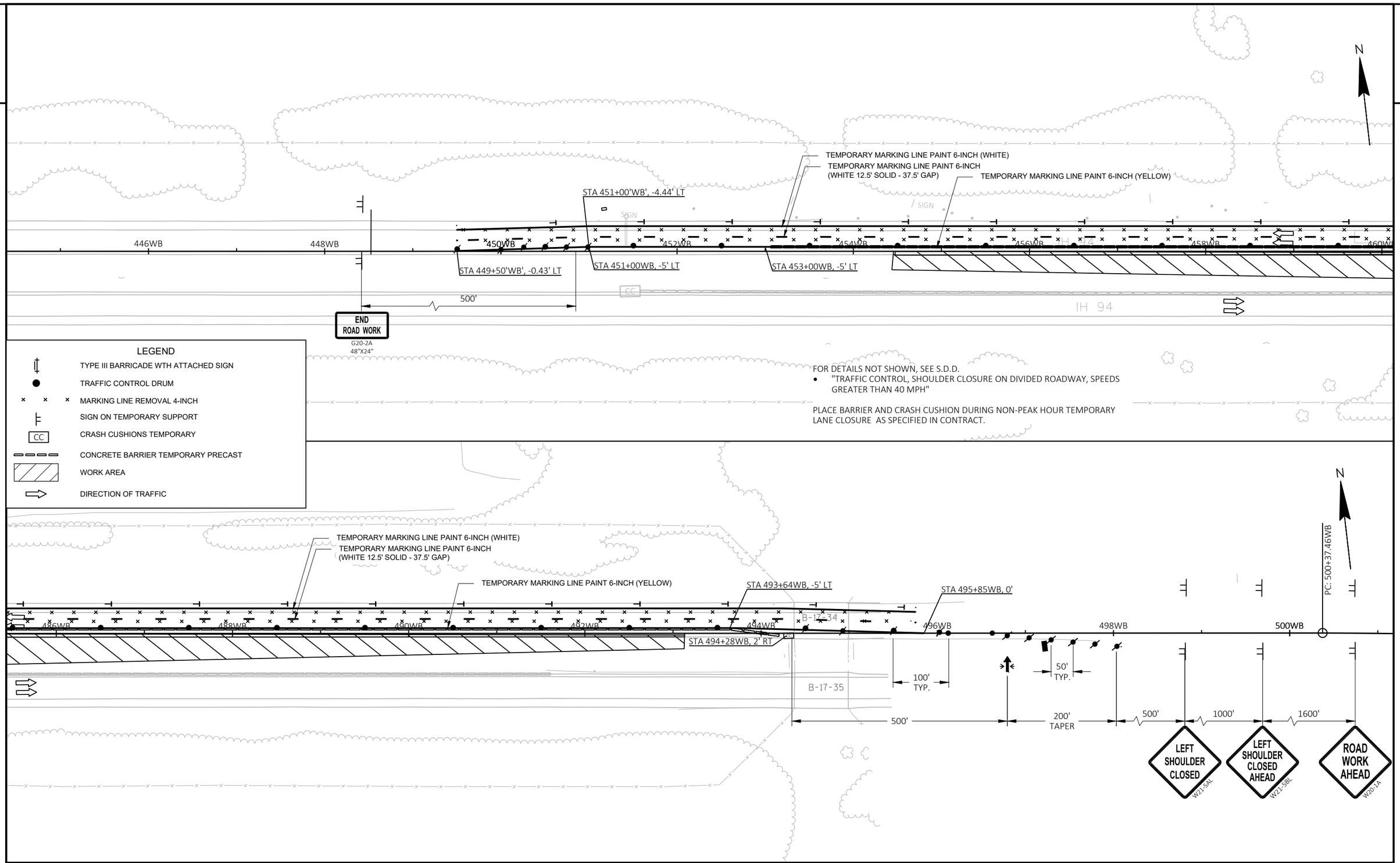
STAGE 3A USH 12/STH 29 TYPICAL SECTION

STA 50+00'V' - STA 61+50'V'

LEGEND

1. TEMPORARY MARKING LINE PAINT 6-INCH (WHITE)
2. TEMPORARY MARKING LINE PAINT 6-INCH (YELLOW)

2



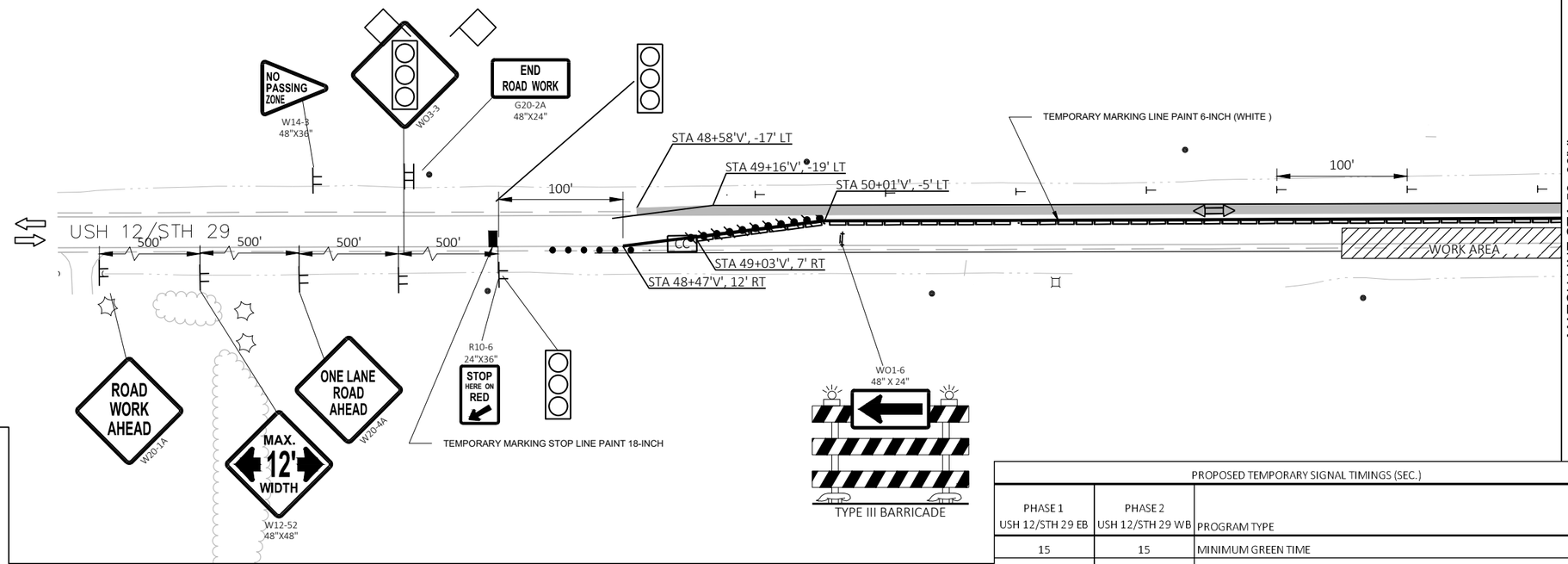
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: STAGE 3A	SHEET 73	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\025103-TC.DWG
LAYOUT NAME - 02

PLOT DATE : 7/28/2023 12:24 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 42

2



LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- MARKING LINE REMOVAL 4-INCH
- SIGN ON TEMPORARY SUPPORT
- CC — CRASH CUSHIONS TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC

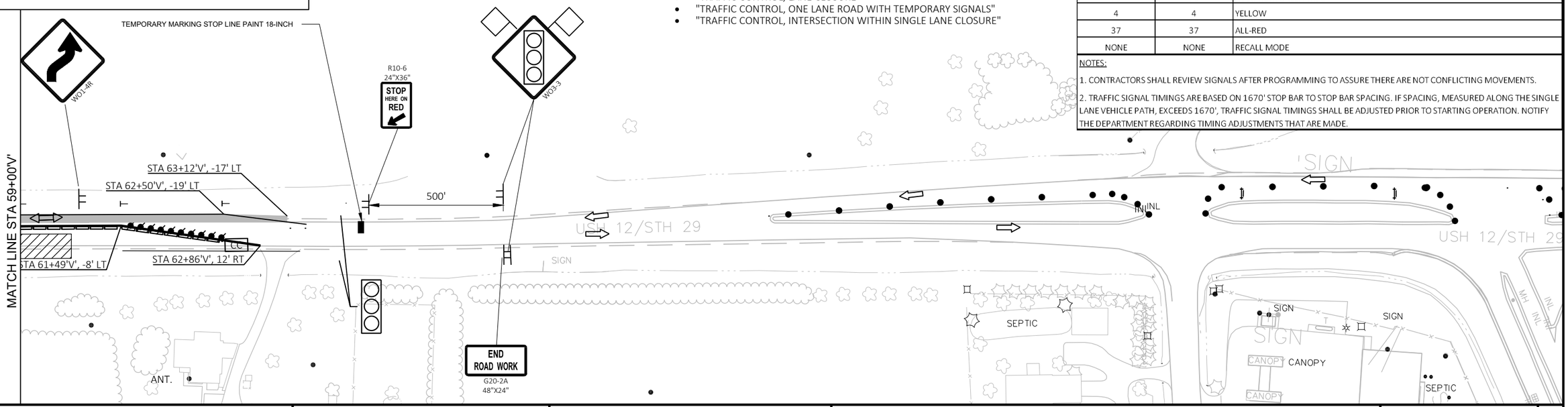
PROPOSED TEMPORARY SIGNAL TIMINGS (SEC.)		
PHASE 1 USH 12/STH 29 EB	PHASE 2 USH 12/STH 29 WB	PROGRAM TYPE
15	15	MINIMUM GREEN TIME
5	5	MAXIMUM PASSAGE TIME DURING GREEN
3	3	MINIMUM PASSAGE TIME DRUING GREEN PHASE
20	20	START OF REDUCTION OF PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
0	0	TIME TO REDUCE PASSAGE FROM MAX. TO MIN. DURING GREEN PHASE
75	75	MAXIMUM GREEN TIME
4	4	YELLOW
37	37	ALL-RED
NONE	NONE	RECALL MODE

NOTES:

1. CONTRACTORS SHALL REVIEW SIGNALS AFTER PROGRAMMING TO ASSURE THERE ARE NOT CONFLICTING MOVEMENTS.
2. TRAFFIC SIGNAL TIMINGS ARE BASED ON 1670' STOP BAR TO STOP BAR SPACING. IF SPACING, MEASURED ALONG THE SINGLE LANE VEHICLE PATH, EXCEEDS 1670', TRAFFIC SIGNAL TIMINGS SHALL BE ADJUSTED PRIOR TO STARTING OPERATION. NOTIFY THE DEPARTMENT REGARDING TIMING ADJUSTMENTS THAT ARE MADE.

BEGIN LANE CLOSURE ON WB USH 12/STH 29 AT IH 94 WB OFF-RAMP
ADDITIONAL TRAFFIC CONTROL REQUIRED FOR DETAILS NOT SHOWN, SEE S.D.D.

- "TRAFFIC CONTROL, LANE CLOSURE"
- "TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS"
- "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE"



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: USH 12/STH 29 STAGE 3A	SHEET 74	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\025103-TC.DWG
LAYOUT NAME - 03
PLOT DATE : 7/28/2023 12:24 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

2

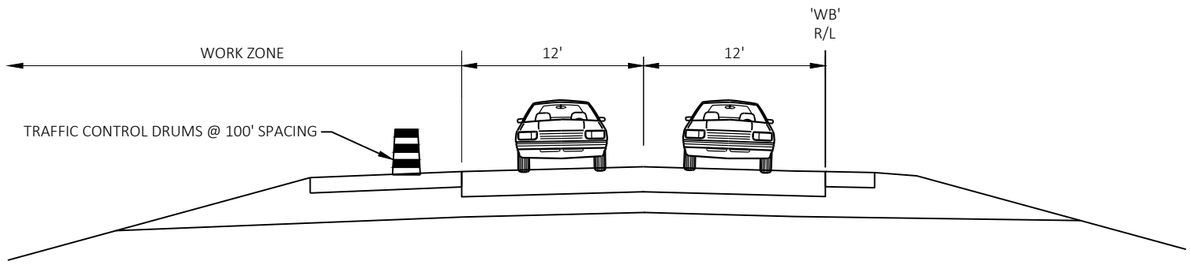
IH 94 - STAGE 3B

TRAFFIC OPERATIONS

- IH 94 WB ON NEW CONCRETE PAVEMENT WITH SHORT TERM, OFF-PEAK LANE CLOSURES
- IH 94 EB ON EXISTING PAVEMENT

CONSTRUCTION OPERATIONS

- ASPHALT SHOULDER RUMBLE STRIPS
- PAVEMENT MARKING
- FINISH WIM EQUIPMENT OFF OF IH 94 ROADWAY, OUTSIDE OF CLEAR ZONE



STAGE 3B IH 94 WB TYPICAL SECTION

STA 450+00'WB' - STA 497+00'WB'

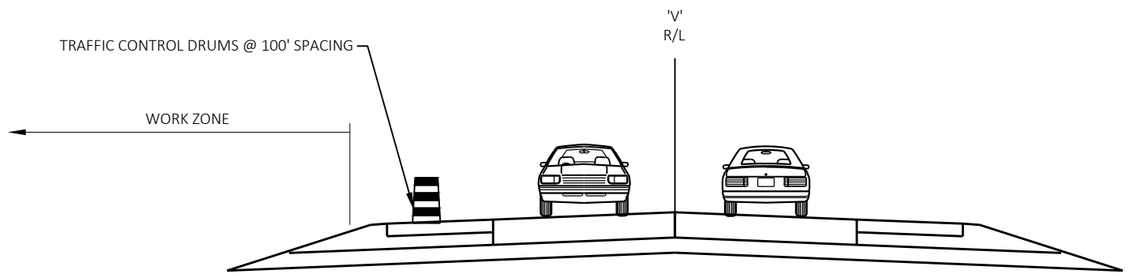
USH 12/STH 29 STAGE 3B

TRAFFIC OPERATIONS

- OPEN TO TRAFFIC WITH FLAGGING.

CONSTRUCTION OPERATIONS

- FINISH WB SHOULDER
  - -REMOVE 2' ASPHALT SHOULDER TO BRING IT TO A 5' PAVED, 3' BASE SHOULDER
  - -SAWING ASPHALT
  - -REMOVING ASPHALTIC SURFACE
  - -BASE AGGREGATE DENSE $\frac{3}{4}$ INCH

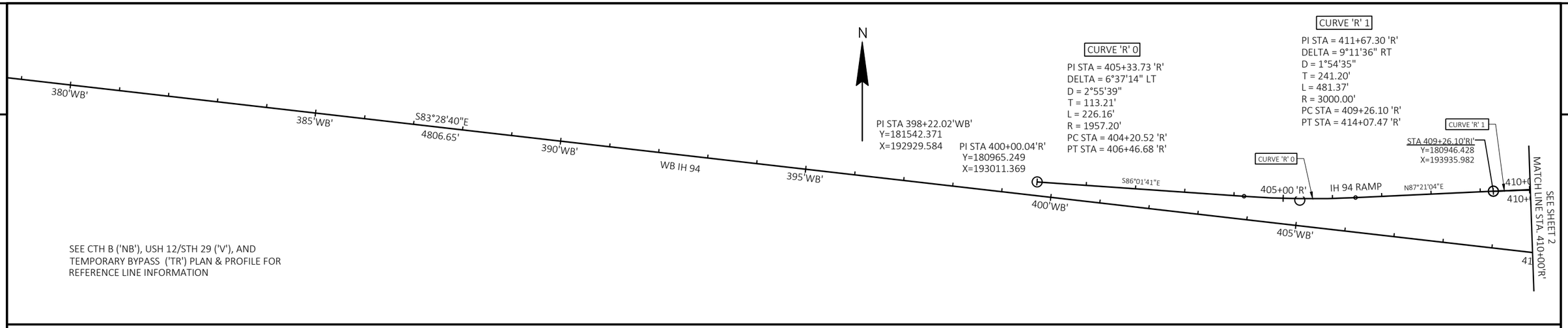


STAGE 3B USH 12/STH 29 TYPICAL SECTION

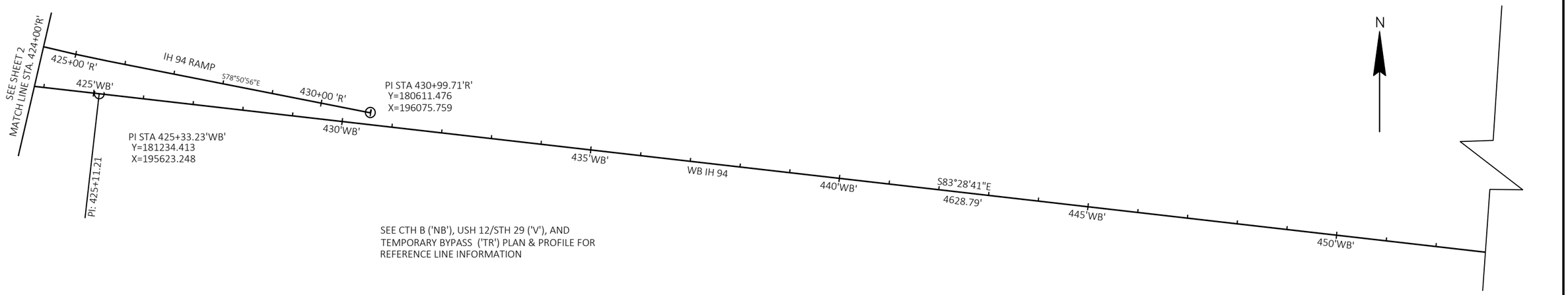
STA 50+00'V' - STA 61+50'V'

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	TRAFFIC CONTROL PLAN: STAGE 3B	SHEET 75	E

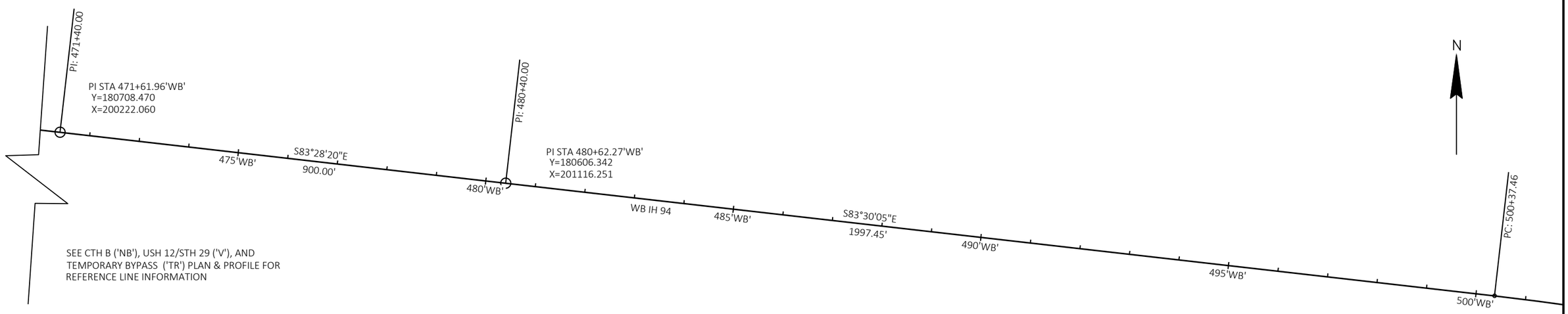
2



SEE CTH B ('NB'), USH 12/STH 29 ('V'), AND
TEMPORARY BYPASS ('TR') PLAN & PROFILE FOR
REFERENCE LINE INFORMATION



SEE CTH B ('NB'), USH 12/STH 29 ('V'), AND
TEMPORARY BYPASS ('TR') PLAN & PROFILE FOR
REFERENCE LINE INFORMATION



SEE CTH B ('NB'), USH 12/STH 29 ('V'), AND
TEMPORARY BYPASS ('TR') PLAN & PROFILE FOR
REFERENCE LINE INFORMATION

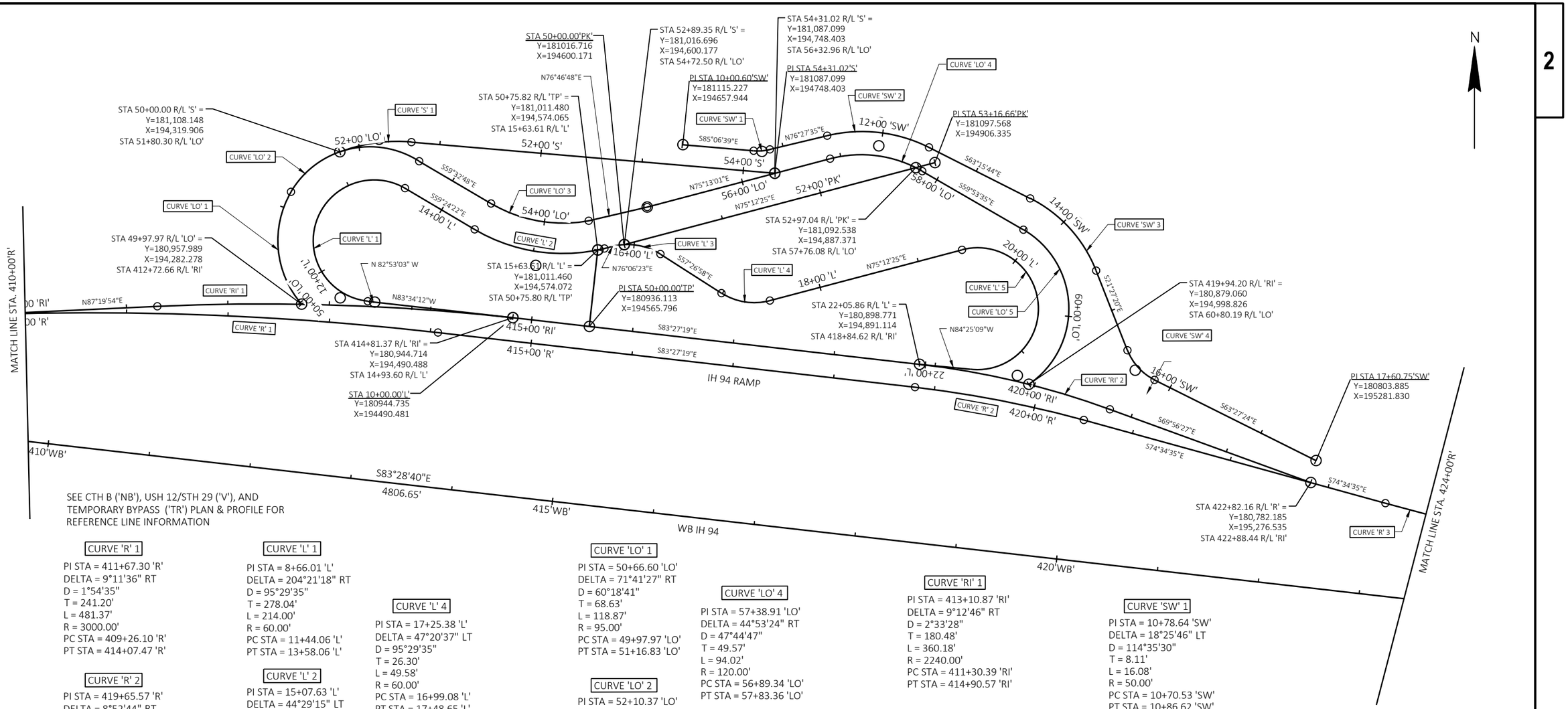
PROJECT NO: 1022-04-76/86	HWY: IH 94	COUNTY: DUNN	ALIGNMENT DIAGRAM	SHEET 76	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 01

PLOT DATE : 7/28/2023 12:24 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

2



SEE CTH B ('NB'), USH 12/STH 29 ('V'), AND TEMPORARY BYPASS ('TR') PLAN & PROFILE FOR REFERENCE LINE INFORMATION

CURVE 'R' 1
PI STA = 411+67.30 'R'
DELTA = 9°11'36" RT
D = 1°54'35"
T = 241.20'
L = 481.37'
R = 3000.00'
PC STA = 409+26.10 'R'
PT STA = 414+07.47 'R'

CURVE 'R' 2
PI STA = 419+65.57 'R'
DELTA = 8°52'44" RT
D = 5°13'57"
T = 85.01'
L = 169.69'
R = 1095.00'
PC STA = 418+80.55 'R'
PT STA = 420+50.24 'R'

CURVE 'R' 3
PI STA = 424+62.83 'R'
DELTA = 4°16'21" LT
D = 2°02'47"
T = 104.44'
L = 208.79'
R = 2800.00'
PC STA = 423+58.39 'R'
PT STA = 425+67.18 'R'

CURVE 'L' 1
PI STA = 8+66.01 'L'
DELTA = 204°21'18" RT
D = 95°29'35"
T = 278.04'
L = 214.00'
R = 60.00'
PC STA = 11+44.06 'L'
PT STA = 13+58.06 'L'

CURVE 'L' 2
PI STA = 15+07.63 'L'
DELTA = 44°29'15" LT
D = 33°34'06"
T = 69.81'
L = 132.53'
R = 170.68'
PC STA = 14+37.82 'L'
PT STA = 15+70.35 'L'

CURVE 'L' 3
PI STA = 16+04.35 'L'
DELTA = 47°19'23" RT
D = 95°29'35"
T = 26.29'
L = 49.56'
R = 60.00'
PC STA = 15+78.06 'L'
PT STA = 16+27.61 'L'

CURVE 'L' 4
PI STA = 17+25.38 'L'
DELTA = 47°20'37" LT
D = 95°29'35"
T = 26.30'
L = 49.58'
R = 60.00'
PC STA = 16+99.08 'L'
PT STA = 17+48.65 'L'

CURVE 'L' 5
PI STA = 16+24.82 'L'
DELTA = 201°15'35" RT
D = 95°29'35"
T = 319.68'
L = 210.76'
R = 60.00'
PC STA = 19+44.51 'L'
PT STA = 21+55.27 'L'

CURVE 'LO' 1
PI STA = 50+66.60 'LO'
DELTA = 71°41'27" RT
D = 60°18'41"
T = 68.63'
L = 118.87'
R = 95.00'
PC STA = 49+97.97 'LO'
PT STA = 51+16.83 'LO'

CURVE 'LO' 2
PI STA = 52+10.37 'LO'
DELTA = 92°08'13" RT
D = 63°35'04"
T = 93.54'
L = 144.91'
R = 90.11'
PC STA = 51+16.83 'LO'
PT STA = 52+61.74 'LO'

CURVE 'LO' 3
PI STA = 53+96.10 'LO'
DELTA = 40°48'12" LT
D = 40°55'32"
T = 52.07'
L = 99.70'
R = 140.00'
PC STA = 53+44.03 'LO'
PT STA = 54+43.73 'LO'

CURVE 'LO' 4
PI STA = 57+38.91 'LO'
DELTA = 44°53'24" RT
D = 47°44'47"
T = 49.57'
L = 94.02'
R = 120.00'
PC STA = 56+89.34 'LO'
PT STA = 57+83.36 'LO'

CURVE 'LO' 5
PI STA = 60+41.63 'LO'
DELTA = 115°41'02" RT
D = 63°39'43"
T = 143.15'
L = 181.72'
R = 90.00'
PC STA = 58+98.48 'LO'
PT STA = 60+80.19 'LO'

CURVE 'RI' 1
PI STA = 413+10.87 'RI'
DELTA = 9°12'46" RT
D = 2°33'28"
T = 180.48'
L = 360.18'
R = 2240.00'
PC STA = 411+30.39 'RI'
PT STA = 414+90.57 'RI'

CURVE 'RI' 2
PI STA = 419+81.59 'RI'
DELTA = 13°30'52" RT
D = 7°00'00"
T = 96.98'
L = 193.06'
R = 818.51'
PC STA = 418+84.61 'RI'
PT STA = 420+77.67 'RI'

CURVE 'S' 1
PI STA = 50+40.55 'S'
DELTA = 22°39'51" RT
D = 35°48'36"
T = 32.06'
L = 63.29'
R = 160.00'
PC STA = 50+08.49 'S'
PT STA = 50+71.78 'S'

CURVE 'SW' 1
PI STA = 10+78.64 'SW'
DELTA = 18°25'46" LT
D = 114°35'30"
T = 8.11'
L = 16.08'
R = 50.00'
PC STA = 10+70.53 'SW'
PT STA = 10+86.62 'SW'

CURVE 'SW' 2
PI STA = 11+98.51 'SW'
DELTA = 40°16'42" RT
D = 39°02'07"
T = 53.83'
L = 103.18'
R = 146.78'
PC STA = 11+44.69 'SW'
PT STA = 12+47.87 'SW'

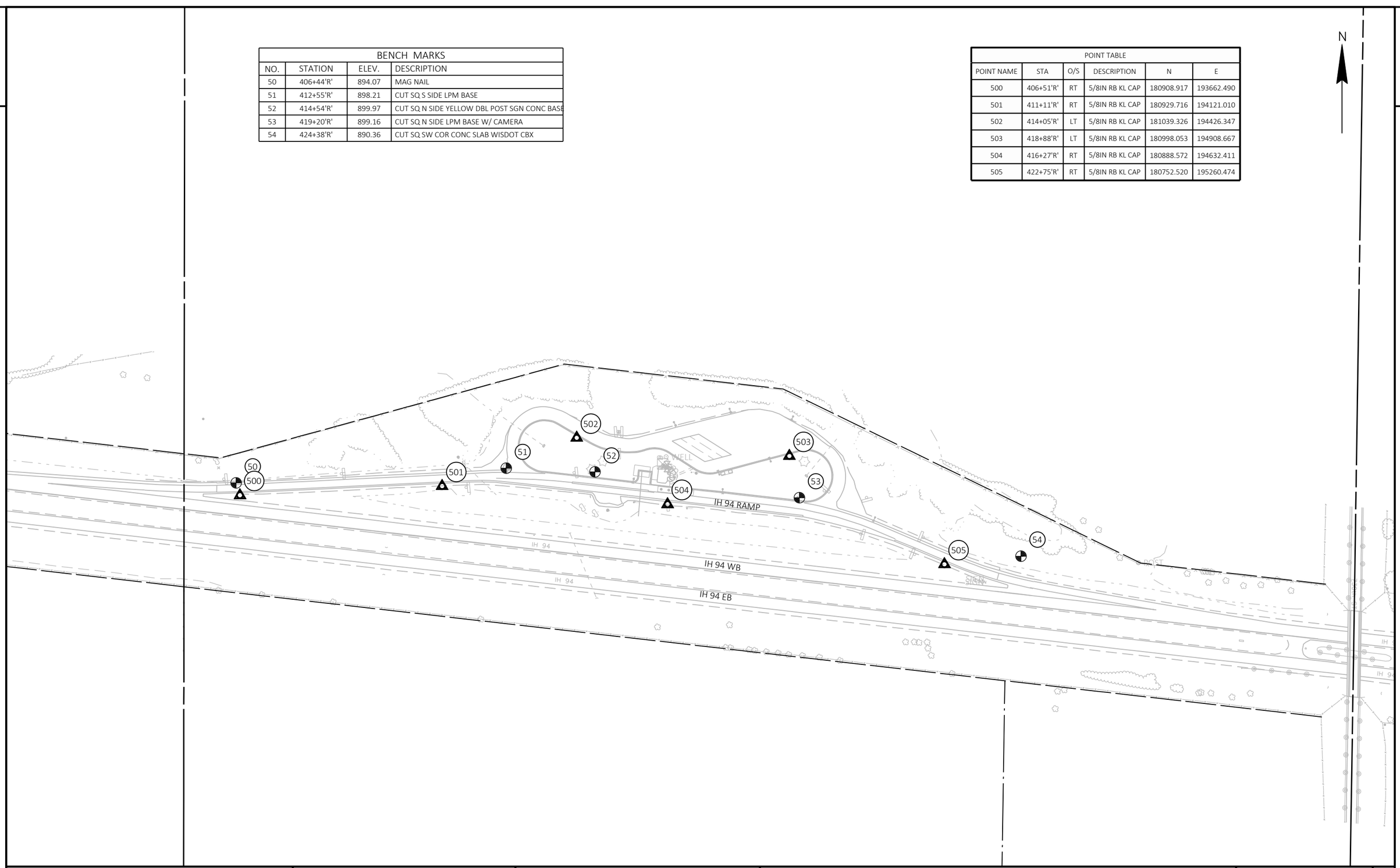
CURVE 'SW' 3
PI STA = 14+11.08 'SW'
DELTA = 41°48'24" RT
D = 42°26'29"
T = 51.56'
L = 98.50'
R = 135.00'
PC STA = 13+59.52 'SW'
PT STA = 14+58.03 'SW'

CURVE 'SW' 4
PI STA = 15+63.48 'SW'
DELTA = 42°00'04" LT
D = 104°10'27"
T = 21.11'
L = 40.32'
R = 55.00'
PC STA = 15+42.37 'SW'
PT STA = 15+82.68 'SW'

PROJECT NO: 1022-04-76/86	HWY: IH 94	COUNTY: DUNN	ALIGNMENT DIAGRAM	SHEET 77	E

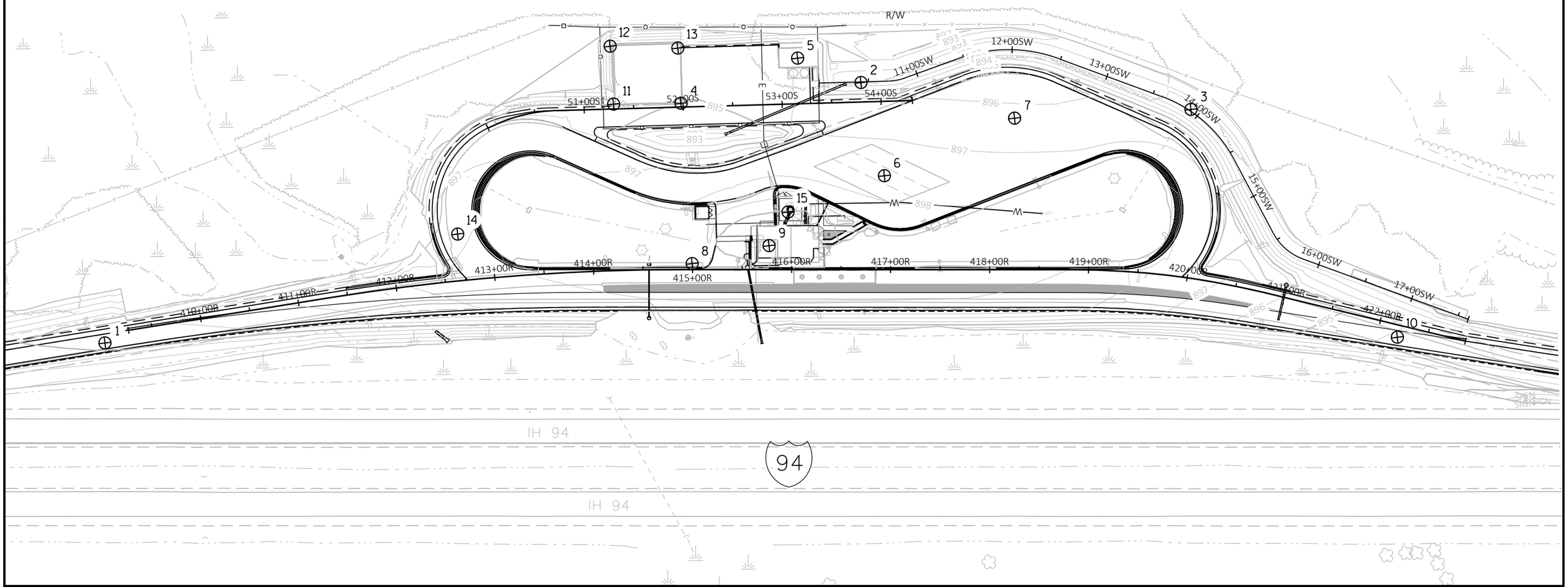
BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	406+44'R'	894.07	MAG NAIL
51	412+55'R'	898.21	CUT SQ S SIDE LPM BASE
52	414+54'R'	899.97	CUT SQ N SIDE YELLOW DBL POST SGN CONC BASE
53	419+20'R'	899.16	CUT SQ N SIDE LPM BASE W/ CAMERA
54	424+38'R'	890.36	CUT SQ SW COR CONC SLAB WISDOT CBX

POINT TABLE					
POINT NAME	STA	O/S	DESCRIPTION	N	E
500	406+51'R'	RT	5/8IN RB KL CAP	180908.917	193662.490
501	411+11'R'	RT	5/8IN RB KL CAP	180929.716	194121.010
502	414+05'R'	LT	5/8IN RB KL CAP	181039.326	194426.347
503	418+88'R'	LT	5/8IN RB KL CAP	180998.053	194908.667
504	416+27'R'	RT	5/8IN RB KL CAP	180888.572	194632.411
505	422+75'R'	RT	5/8IN RB KL CAP	180752.520	195260.474



PROJECT NO: 1022-04-76/86	HWY: IH 94	COUNTY: DUNN	CONTROL POINTS	SHEET 78	E

BORING LOCATION TABLE								
POINT	'R' R/L STATION	'R' R/L OFFSET	'S' R/L STATION	'S' R/L OFFSET	Y COORDS	X COORDS	ELEVATION	DESC.
1	409+00.59'R'	9.00 RT	---	---	180936.278	193910.870	895.63	RAMP 10' DEPTH
2	412+27.42'R'	111.87 LT	---	---	181111.018	194699.426	893.58	DRAINAGE SWALE 10' DEPTH
3	413+39.44'R'	182.63 LT	50+42.34'S'	23.27 LT	181046.271	195027.497	891.41	DRAINAGE SWALE 10' DEPTH
4	414+88.44'R'	167.94 LT	51+97.77'S'	3.83 LT	181110.832	194516.333	890.72	SALT SHED 41.5' DEPTH
5	416+06.35'R'	213.71 LT	53+16.95'S'	46.19 LT	181142.864	194638.696	893.57	SALT SHED ACCESSORY 40' DEPTH
6	416+94.00'R'	94.89 LT	54+01.16'S'	75.10 RT	181014.828	194712.232	897.73	PARKING LOT 10' DEPTH
7	418+25.50'R'	153.08 LT	---	---	181057.653	194849.501	896.37	PARKING LOT 10' DEPTH
8	414+99.86'R'	5.92 LT	52+04.54'S'	158.46 RT	180948.560	194509.211	899.63	30' DEPTH
9	415+77.57'R'	24.24 LT	52+82.75'S'	142.38 RT	180957.906	194588.510	898.98	BLD EXPANS. 40' DEPTH
10	422+21.28'R'	6.42 RT	---	---	180793.829	195208.467	893.93	RAMP 10' DEPTH
11	414+20.94'R'	167.14 LT	51+29.72'S'	4.97 LT	181117.781	194448.631	890.72	SALT SHED 40' DEPTH
12	414+18.11'R'	225.63 LT	51+27.94'S'	63.52 LT	181176.272	194451.849	890.72	SALT SHED 40' DEPTH
13	414+85.30'R'	223.77 LT	51+96.24'S'	59.72 LT	181166.657	194519.578	890.72	SALT SHED 40' DEPTH
14	412+67.66'R'	44.75 LT	---	---	181005.208	194277.356	896.37	LOOP RAMP 10' DEPTH
15	412+67.66'R'	44.75 LT	---	---	180989.462	194611.294	896.37	COMM. TWR 51.5' DEPTH



PROJECT NO: 1022-04-76/86	HWY: IH 94	COUNTY: DUNN	SOIL BORINGS	SHEET 79	E

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-01 (p. 1 of 1)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **895.6** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
		13.0 inches of concrete	CONCRETE									
1	894.5	FILL (about 12.5 inches), gravelly sand with silt, fine to medium grained, brown, moist (SP-SM)	FILL		M	DS						
2	893.6	FILL, sand, fine to medium grained, brown, moist (SP)		23	M	SS	12					
3												
4	891.1	FILL, silty sand, fine grained, very dark brown to gray, moist to waterbearing, with lenses of lean clay (SM)		23	M/W	SS	18					
5	889.6	FILL, sand, fine to medium grained, a little gravel, brown, waterbearing (SP)										
6	888.6	FILL, sand with silt, fine to medium grained, brown, waterbearing (SP-SM)										
7	888.1	LEAN CLAY, a little gravel, gray with brown mottling, soft, with lenses of silty sand (CL)	FINE ALLUVIUM	4	W	SS	14	26	0.25			
8	887.1	SAND, fine to medium grained, grayish brown, waterbearing, medium dense (SP)	COARSE ALLUVIUM	14	W	SS	14					
9	885.6	*End of boring at 10.0 feet*										
10												

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-2.0' 6" FA							
2.0-8.5' 3.25" HSA	**5/26/22**	**1015**	**10.0**	**8.5**	**8.4**	**None**	**7.5**
	5/26/22	**1025**	**10.0**	**8.5**	**7.8**	**None**	**5.6**
BORING COMPLETED: **5/26/22**	**5/26/22**	**1035**	**10.0**	**8.5**	**7.8**	**None**	**5.6**
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-02 (p. 1 of 1)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **896.0** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
	895.8	FILL, sandy silt with organics, very dark brown, moist (OL)	TOPSOIL / FILL									
1	895.5	FILL (about 4 inches), silty sand with gravel, fine to medium grained, dark brown, moist (SM)	FILL	10	M	SS	18					
2												
3		FILL, sand, fine to medium grained, brown, moist, with lenses of lean clay (SP)		9	M	SS	12					
4	892.0											
5	890.8	FILL, silt, very dark gray to gray, moist, with trace organics (ML)		3	M	SS	22	17				
6	890.0	FILL, clayey sand, fine to medium grained, brown with reddish brown mottling, moist, with trace roots (SC)										
7	888.3	FILL, sandy lean clay, brown, with rubber debris (CL)		2	M/W	SS	14	17	0.5			
8	888.0	LEAN CLAY, grayish brown, soft (CL)	FINE ALLUVIUM					26	0.75			
9	886.5	CLAYEY SAND, fine to medium grained, brown and gray, waterbearing, medium dense (SC)	MIXED ALLUVIUM	18	W	SS	20					
10	886.0	SAND, fine to medium grained, brown, waterbearing, medium dense (SP)	COARSE ALLUVIUM									
		End of boring at 10.0 feet - Moved 10 feet south of planned location due to proximity to underground utilities										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-8.0' 3.25" HSA							
	5/23/22	**0820**	**10.0**	**8.0**	**8.8**	**None**	**8.2**
	5/23/22	**0830**	**10.0**	**8.0**	**8.6**	**None**	**7.8**
BORING COMPLETED: **5/23/22**							
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-03 (p. 1 of 1)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

Surface Elevation **891.4**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	889.9	SILTY SAND with organics, fine to medium grained, very dark brown, moist (SM)	TOPSOIL	4	M	SS	12					
2	889.4	SILTY SAND, fine to medium grained, brown, moist, very loose (SM)	COARSE ALLUVIUM									
3	888.2	CLAYEY SAND, fine to medium grained, brown to grayish brown, moist to waterbearing, very loose (SC)	MIXED ALLUVIUM	3	M▼W	SS	12					
4	887.4	LEAN CLAY with sand, gray with brown mottling, soft (CL)	FINE ALLUVIUM					23	0.25			
5		Sandy LEAN CLAY, gray with brown mottling, soft, with lenses of sand (CL)	MIXED ALLUVIUM	4	W	SS	14	18				
6	885.4	SAND WITH SILT, fine grained, grayish brown, waterbearing, medium dense (SP-SM)	COARSE ALLUVIUM									
7	883.9			12	W	SS	16					
8		SAND, fine to medium grained, brown, waterbearing, loose to medium dense, with lenses of sandy lean clay from 7.5 to 8 feet (SP)										
9				5	W	SS	22					
10	881.4	*End of boring at 10.0 feet*										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
0-8.0' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
	5/25/22	**1555**	**10.0**	**8.0**	**7.2**	**None**	**4.4**
	5/26/22	**0725**	**10.0**	**8.0**	**6.7**	**None**	**3.1**
BORING COMPLETED: **5/26/22**							
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-04 (p. 1 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **890.7** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	889.2	Sandy SILT with organics, very dark brown, moist (OL)	TOPSOIL	3	M	SS	18					
2		CLAYEY SAND with organics and wood pieces from 1.5 to 2 feet, fine to medium grained, gray, moist to waterbearing, very loose (SC)	MIXED ALLUVIUM									
3	887.7			WH	M/W	SS	16					
4		SAND WITH SILT, fine to medium grained, gray, waterbearing, very loose to loose, with lenses of sandy lean clay from 3 to 4 feet and lenses of silty sand from 4.5 to 6.5 feet (SP-SM)	COARSE ALLUVIUM									
5				9	W	SS	14					
6												
7	883.7											
8	882.2	SAND, fine to medium grained, dark grayish brown, waterbearing, medium dense, with lenses of silty sand (SP)		14	W	SS	22					
9		SAND with gravel, fine to medium grained, brown, waterbearing, medium dense (SP)										
10				11	W	SS	16					
11												
12	878.7											
13		SAND, fine to medium grained, dark grayish brown, waterbearing, medium dense (SP)		20	W	SS	12					
14												
15				13	W	SS	10					
16												
17	872.7											
18		SAND, fine to medium grained, a little gravel, dark grayish brown, waterbearing, medium dense (SP)										
19												
20				11	W	SS	12					
21												

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA							
9.5-39.5' RD w/DM	**5/24/22**	**0810**	**11.5**	**9.5**	**7.8**	**None**	**4.2**
	5/24/22	**0825**	**11.5**	**9.5**	**6.8**	**None**	**2.9**
BORING COMPLETED: **5/24/22**	**5/24/22**	**0835**	**11.5**	**9.5**	**6.7**	**None**	**2.8**
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-04 (p. 2 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, a little gravel, dark grayish brown, waterbearing, medium dense (SP) *(continued)*										
24												
25				13	W	SS	10					
26												
27												
28												
29												
30				14	W	SS	12					
31												
32												
33	857.7											
34		SAND, fine to medium grained, dark grayish brown, waterbearing, loose to medium dense (SP)										
35				9	W	SS	12					
36												
37												
38												
39												
40				17	W	SS	14					
41	849.2											
		End of boring at 41.5 feet										

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-05 (p. 1 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **893.6** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	892.6	Sandy SILT with organics, dark brown, moist (OL)	TOPSOIL									
2	891.6	CLAYEY SAND, fine grained, brown, moist, very loose, with trace roots (SC)	MIXED ALLUVIUM	1	M	SS	14	11				28
3		SAND WITH SILT, fine grained, brown, moist, very loose, with lenses of clayey sand (SP-SM)	COARSE ALLUVIUM	3	M	SS	16					
4	889.1											
5		SAND, fine grained, grayish brown, moist, medium dense, with lenses of silty sand (SP)		14	M	SS	16					
6												
7	886.6											
8		SAND, fine to medium grained, brown, waterbearing, medium dense (SP)		13	W	SS	14					
9	884.1											
10		SAND, fine grained, brown, waterbearing, medium dense (SP)		12	W	SS	16					
11	882.6											
12	881.6	SAND, fine to medium grained, a little gravel, brown, waterbearing, medium dense (SP)										
13		SAND, fine to medium grained, brown to dark grayish brown, waterbearing, loose to medium dense (SP)		10	W	SS	12					
14												
15				20	W	SS	10					
16												
17												
18												
19												
20				8	W	SS	8					
21												

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA							
9.5-39.5' RD w/DM	**5/25/22**	**0825**	**11.5**	**9.5**	**9.9**	**None**	**8.8**
	5/25/22	**0840**	**11.5**	**9.5**	**9.5**	**None**	**7.4**
BORING COMPLETED: **5/25/22**	**5/25/22**	**0845**	**11.5**	**9.5**	**9.0**	**None**	**6.9**
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-05 (p. 2 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, brown to dark grayish brown, waterbearing, loose to medium dense (SP) *(continued)*										
24												
25												
26				12	W	SS	10					
27												
28	865.6											
29		SAND, fine grained, dark grayish brown, waterbearing, medium dense (SP)										
30												
31				13	W	SS	8					
32												
33	860.6											
34		SAND, fine to medium grained, dark grayish brown, waterbearing, medium dense (SP)										
35												
36				12	W	SS	10					
37												
38												
39												
40				18	W	SS	12					
41	852.1											
		End of boring at 41.5 feet										

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-06 (p. 1 of 1)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **897.7** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	896.6	13.25 inches of concrete	CONCRETE			DS						
	896.0	FILL (about 6.75 inches), silty sand with gravel, fine to medium grained, brown, moist (SM)	FILL									
2												
3		FILL, sand, fine to medium grained, a little gravel, brown, moist, with lenses of silt (SP)		16	M	SS	10					
4	893.2											
5		FILL, sand, fine to medium grained, brown, moist, with lenses of silty sand and lean clay (SP)		12	M	SS	16					
6	891.5											
7	890.7	Sandy SILT, dark gray, moist (ML)	FINE ALLUVIUM					15				
	890.2	SAND WITH SILT, fine to medium grained, brown, moist, loose (SP-SM)	COARSE ALLUVIUM	8	M	SS	10	19	1.75			
8	889.2	LEAN CLAY with sand, brown, firm (CL)	FINE ALLUVIUM									
9	888.0	CLAYEY SAND, fine grained, brown to gray, moist, loose (SC)	MIXED ALLUVIUM	10	M	SS	10					
10	887.7	SAND, fine to medium grained, brown, moist, loose (SP)	COARSE ALLUVIUM									
		End of boring at 10.0 feet										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-8.5' 3.25" HSA	**5/20/22**	**1650**	**10.0**	**8.5**	**9.7**	**None**	**None**
BORING COMPLETED: **5/20/22**							
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-07 (p. 1 of 1)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **896.4** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
	896.0	4.5 inches of concrete	PAVEMENT									
1		FILL (about 14.5 inches), gravelly silty sand, fine to medium grained, dark brown, moist (SM)	FILL	23	M	SS	16					
	894.8											
2	894.4	FILL, sand, fine to medium grained, brown, moist (SP)										
3				11	M	SS	16	10				29
	892.9	FILL, clayey sand, fine to medium grained, dark brown, moist (SC)										
4												
5		FILL, sand, fine to medium grained, brown, moist, with lenses of silty sand from 3.5 to 6.5 feet and lenses of sandy lean clay from 4.5 to 6.5 feet (SP)		12	M	SS	14					
6												
	889.4											
7	888.4	CLAYEY SAND, fine to medium grained, brown, moist, loose (SC)	MIXED ALLUVIUM	9	M	SS	10					
8	887.4	LEAN CLAY, gray with brown mottling, stiff (CL)	FINE ALLUVIUM					24	0.75			
9	886.4	SAND, fine to medium grained, brown, moist, medium dense (SP)	COARSE ALLUVIUM	14	M	SS	14	24	1.5			
10		*End of boring at 10.0 feet*										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-8.5' 3.25" HSA	**5/20/22**	**1500**	**10.0**	**8.5**	**9.7**	**None**	**None**
BORING COMPLETED: **5/20/22**							
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-08 (p. 1 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

Surface Elevation **899.6**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	899.2	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	FILL / TOPSOIL	3	M	SS	16					
2	897.6	FILL, sand, fine to medium grained, brown, moist, with lenses of sandy lean clay (SP)	FILL									
3		FILL, sand with silt, fine to medium grained, a little gravel, brown, moist (SP-SM)		16	M	SS	14					
4	895.1											
5		FILL, sand, fine to medium grained, brown, moist, with lenses of lean clay (SP)		13	M	SS	20					
6												
7												
8				21	M	SS	16					
9	890.1											
10		Sandy LEAN CLAY, gray, firm, with lenses of clayey sand (CL)	MIXED ALLUVIUM	7	M	SS	14	16				
11					▼							
12	887.6	SAND, fine to medium grained, gray to dark grayish brown, waterbearing, loose to medium dense (SP)	COARSE ALLUVIUM	10	W	SS	14					
13												
14												
15				11	W	SS	14					
16												
17												
18												
19												
20												
21				15	W	SS	12					

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-14.5' 3.25" HSA							
14.5-29.5' RD w/DM	**5/23/22**	**1600**	**16.5**	**14.5**	**14.5**	**None**	**11.9**
	5/23/22	**1610**	**16.5**	**14.5**	**13.2**	**None**	**11.8**
BORING COMPLETED: **5/23/22**							
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-08 (p. 2 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, gray to dark grayish brown, waterbearing, loose to medium dense (SP) *(continued)*	COARSE ALLUVIUM *(continued)*									
24												
25												
26				11	W	SS	10					
27												
28	871.6	SAND, fine to medium grained, a little gravel, grayish brown, waterbearing, medium dense (SP)										
29												
30				13	W	SS	4					
31	868.1	*End of boring at 31.5 feet*										

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-09 (p. 1 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **899.0** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	898.7	3.5 inches of bituminous pavement	PAVEMENT									
		FILL, silty sand with gravel, fine to medium grained, brown, moist (SM)	FILL	24	M	SS	12					
3	895.8			20	M	SS	16					
		FILL, sand, fine to medium grained, a little gravel, brown, moist, with lenses of sandy lean clay from 3.25 to 4 feet (SP)										
5				11	M	SS	16	14				4
6	892.8											
7	892.0	FILL, sand, fine to medium grained, brown, moist, with lenses of clayey sand and lean clay (SP)										
		SAND, fine to medium grained, brown, moist to waterbearing, loose to medium dense, with lenses and laminations of lean clay, possible fill (SP)	COARSE ALLUVIUM	16	M/W ▼	SS	18					
10	888.3			10	W	SS	14					
11	887.0	SILTY SAND, fine to medium grained, gray, waterbearing, loose (SM)										
		SAND, fine to medium grained, a little gravel, grayish brown to dark grayish brown, waterbearing, medium dense to dense (SP)		17	W	SS	12					
15				27	W	SS	8					
20				31	W	SS	8					

DEPTH:	DRILLING METHOD	WATER LEVEL MEASUREMENTS						
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-14.5'	**3.25" HSA**	**5/23/22**	**1245**	**11.5**	**9.5**	**9.0**	**None**	**8.9**
14.5-39.5'	**RD w/DM**	**5/23/22**	**1305**	**11.5**	**9.5**	**9.0**	**None**	**8.9**
BORING COMPLETED:	**5/23/22**							
DR: **TT**	LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-09 (p. 2 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, a little gravel, grayish brown to dark grayish brown, waterbearing, medium dense to dense (SP) *(continued)*										
25				21	W	SS	10					
28	871.0											
		SAND, fine to medium grained, grayish brown, waterbearing, loose to medium dense (SP)										
30				9	W	SS	10					
35				15	W	SS	10					
40				11	W	SS	10					
41	857.5	*End of boring at 41.5 feet*										

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

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PROJECT NO: 1022-04-76/86	HWY: IH 94	COUNTY: DUNN	SOIL BORINGS	SHEET 86	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\027301-BOR.DWG
LAYOUT NAME - 09

PLOT DATE : 7/28/2023 12:26 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ########## WISDOT/CADDS SHEET 42

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-10 (p. 1 of 1)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **893.9** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	892.9	12.0 inches of concrete	CONCRETE									
2	891.6	FILL (about 16 inches), sand with silt and gravel, fine to medium grained, brown, moist (SP-SM)	FILL		M	DS						
3	890.4	FILL, silty sand, fine to medium grained, brown, moist, with lenses of sandy lean clay (SM)	FILL	9	M	SS	16					
4	889.4	Sandy SILT, brown to very dark brown, moist, loose, with trace organics (ML)	FINE ALLUVIUM					14				
5	888.2	CLAYEY SAND, fine to medium grained, brown and dark brown, moist, loose (SC)	MIXED ALLUVIUM	10	M	SS	20					
6												
7	886.7	CLAYEY SAND, fine to medium grained, gray with brown mottling to dark brown, moist, loose, with laminations of lean clay from 7 to 7.25 feet (SC)	FINE ALLUVIUM	7	M	SS	16	25	0.5			
8												
9	884.4	LEAN CLAY, gray, firm to stiff, with lenses of clayey sand (CL)		10	M/W	SS	12	26	<0.25			
10	883.9	CLAYEY SAND, fine to medium grained, grayish brown, moist to waterbearing, loose (SC) *End of boring at 10.0 feet*	MIXED ALLUVIUM									

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-1.0' 6" FA							
1.0-8.5' 3.25" HSA	**5/26/22**	**0910**	**10.0**	**8.5**	**9.8**	**None**	**9.8**
	5/26/22	**0920**	**10.0**	**8.5**	**9.8**	**None**	**9.8**
BORING COMPLETED: **5/26/22**							
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-11 (p. 1 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **890.7** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	889.2	SILT with sand and organics, very dark brown, moist (OL)	TOPSOIL	3	M	SS	18					
2	888.7	Sandy SILT, dark gray, moist, very loose, with roots (ML)	FINE ALLUVIUM					17				
3	888.2	CLAYEY SAND, fine to medium grained, gray to dark brown, moist, very loose, with trace roots (SC)	MIXED ALLUVIUM	WH	M/W	SS	18	23				57
4	886.2	Sandy LEAN CLAY, gray, very soft, with trace roots (CL)										
5		SAND, fine to medium grained, gray, waterbearing, medium dense (SP)	COARSE ALLUVIUM	12	W	SS	18					
7	883.7	SAND, fine to coarse grained, a little gravel, dark grayish brown, waterbearing, medium dense (SP)		12	W	SS	18					
9	881.2											
10		SAND, fine to medium grained, grayish brown to dark grayish brown, waterbearing, loose to medium dense (SP)		11	W	SS	16					
13				21	W	SS	10					
15				12	W	SS	10					
20				6	W	SS	10					

DEPTH: DRILLING METHOD	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA							
9.5-39.5' RD w/DM	**5/25/22**	**1100**	**11.5**	**9.5**	**8.7**	**None**	**4.8**
	5/25/22	**1145**	**11.5**	**9.5**	**6.8**	**None**	**2.6**
BORING COMPLETED: **5/25/22**							
DR: **TT** LG: **RH** Rig: **67**							

WATER LEVEL MEASUREMENTS

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-11 (p. 2 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, grayish brown to dark grayish brown, waterbearing, loose to medium dense (SP) *(continued)*										
25				8	W	SS	12					
30				12	W	SS	12					
35				16	W	SS	10					
40				15	W	SS	10					
41	849.2	*End of boring at 41.5 feet*										

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

PROJECT NO: 1022-04-76/86 | HWY: IH 94 | COUNTY: DUNN | SOIL BORINGS | SHEET 88 | E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\027301-BOR.DWG
LAYOUT NAME - 11

PLOT DATE : 7/28/2023 12:26 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ############

WISDOT/CADDS SHEET 42

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-12 (p. 1 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **890.7** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	889.7	SILT with organics, very dark brown, moist (OL)	TOPSOIL									
2		SILT with sand, very dark brown, moist, very loose, with trace roots (ML)	FINE ALLUVIUM	WH	M	SS	18					
3	887.2			WH	M/W	SS	16	24				
4	886.2	Sandy LEAN CLAY, gray with brown mottling, very soft (CL)	MIXED ALLUVIUM					19	<0.25			
5	885.0	CLAYEY SAND, fine to medium grained, a little gravel, gray, waterbearing, loose (SC)		8	W	SS	14					
6	883.7	SAND WITH CLAY, fine to medium grained, a little gravel, gray, waterbearing, loose (SP-SC)	COARSE ALLUVIUM									
8	881.2	SAND, fine to medium grained, a little gravel, grayish brown, waterbearing, loose (SP)		10	W	SS	16					
10	878.7	SAND, fine to coarse grained, a little gravel, grayish brown, waterbearing, medium dense (SP)		11	W	SS	16					
13	876.2	SAND, fine to medium grained, grayish brown, waterbearing, medium dense (SP)		20	W	SS	12					
16	872.7	SAND, fine to medium grained, a little gravel, grayish brown, waterbearing, loose (SP)		8	W	SS	6					
20		SAND, fine to medium grained, grayish brown, waterbearing, loose to medium dense (SP)		9	W	SS	12					

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA							
9.5-39.5' RD w/DM	**5/24/22**	**1500**	**11.5**	**9.5**	**6.0**	**None**	**4.3**
	5/24/22	**1515**	**11.5**	**9.5**	**6.0**	**None**	**3.8**
BORING COMPLETED: **5/24/22**	**5/24/22**	**1520**	**11.5**	**9.5**	**5.9**	**None**	**3.5**
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-12 (p. 2 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, grayish brown, waterbearing, loose to medium dense (SP) *(continued)*										
25				9	W	SS	12					
30				20	W	SS	10					
35				14	W	SS	14					
40				18	W	SS	14					
41	849.2	*End of boring at 41.5 feet*										

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-13 (p. 1 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **890.7** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	889.7	SILT with sand and organics, very dark brown, moist (OL)	TOPSOIL									
2	888.7	Sandy SILT, dark gray, moist, very loose, with trace roots (ML)	FINE ALLUVIUM	1	M	SS	20	20				
3		Sandy LEAN CLAY, gray, very soft, with wood pieces and lenses of clayey sand (CL)	MIXED ALLUVIUM	WH	M/W	SS	14	22	<0.25			
4	886.2											
5	885.2	SILTY SAND, fine to medium grained, a little gravel, gray, waterbearing, medium dense, with lenses of sandy lean clay (SM)	COARSE ALLUVIUM	19	W	SS	18					
7		SAND, fine to medium grained, grayish brown, waterbearing, very loose to medium dense, with lenses of silty sand from 7 to 9 feet (SP)		12	W	SS	18					
10				4	W	SS	24					
12	878.7	SAND, fine to coarse grained, a little gravel, dark grayish brown, waterbearing, loose (SP)		7	W	SS	10					
14	876.2	GRAVEL with sand, dark brown, waterbearing, medium dense (GP) *Poor recovery from 14.5 to 16.5 feet*		9	W	SS	1					
17	873.7	SAND, fine to medium grained, dark grayish brown, waterbearing, loose to medium dense (SP)		5	W	SS	10					
20				13	W	SS	12					

DEPTH: DRILLING METHOD	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-9.5' 3.25" HSA	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
9.5-39.5' RD w/DM	**5/24/22**	**1114**	**11.5**	**9.5**	**7.2**	**None**	**5.5**
	5/24/22	**1145**	**11.5**	**9.5**	**6.7**	**None**	**3.6**
BORING COMPLETED: **5/24/22**							
DR: **TT** LG: **RH** Rig: **67**							

WATER LEVEL MEASUREMENTS

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-13 (p. 2 of 2)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23		SAND, fine to medium grained, dark grayish brown, waterbearing, loose to medium dense (SP) *(continued)*										
25				16	W	SS	18					
30				26	W	SS	10					
35				13	W	SS	10					
40				15	W	SS	12					
41	849.2	*End of boring at 41.5 feet*										

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-14 (p. 1 of 1)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **896.4** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
	896.2	3.0 inches of bituminous pavement	PAVEMENT									
1	895.0	FILL (about 14 inches), sand with silt and gravel, fine to medium grained, brown, moist (SP-SM)	FILL	33	M	SS	14					
2	894.4	FILL, sand, fine to medium grained, brown, moist (SP)										
3		FILL, sand with gravel, fine to medium grained, brown, moist (SP)		24	M	SS	16	8				5
4	891.9											
5		FILL, clayey sand, fine to medium grained, brown, moist, with lenses of lean clay from 7 to 8.5 feet (SC)		9	M	SS	18					
7												
8	887.9			8	M	SS	12					
9		Sandy SILT, very dark brown, moist, medium dense (ML)	FINE ALLUVIUM	11	M	SS	16	17				
10	886.4	*End of boring at 10.0 feet*										

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS						
	DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-8.5' 3.25" HSA	**5/24/22**	**1450**	**10.0**	**8.5**	**10.0**	**None**	**None**
BORING COMPLETED: **5/24/22**							
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-15 (p. 1 of 3)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	Surface Elevation **896.4** MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
1	895.9	FILL, silty sand with organics, fine to medium grained, dark brown, moist (SM)	TOPSOIL / FILL	9	M	SS	16					
2	894.4	FILL, silty sand with gravel, fine to medium grained, brown, moist (SM)	FILL									
3	893.4	FILL, sand with silt, fine to medium grained, a little gravel, brown, moist (SP-SM)		10	M	SS	18	7				4
4	891.9	FILL, sand with gravel, fine to medium grained, brown, moist (SP)										
5		FILL, sand, fine to medium grained, brown, moist, with lenses of sandy lean clay and clayey sand (SP)		17	M	SS	16					
6												
7	889.4											
8		FILL, sand, fine to medium grained, a little gravel, brown, moist, with lenses of silty sand (SP)		27	M	SS	16					
9	887.7											
10	886.9	SILTY SAND, fine grained, gray and dark gray, moist (SM)	COARSE ALLUVIUM									
11	886.4	Sandy LEAN CLAY, gray with brown mottling, stiff (CL)	MIXED ALLUVIUM	9	M	SS	20	18	0.75			
12	884.4	CLAYEY SAND, fine to medium grained, brown and gray, moist, loose, with lenses of sandy lean clay (SC)										
13	883.4	CLAYEY SAND, fine to medium grained, brown, waterbearing, loose (SC)		10	W	SS	221					
14		SAND, fine to medium grained, grayish brown to dark grayish brown, waterbearing, loose to medium dense (SP)	COARSE ALLUVIUM									
15				14	W	SS	20					
16												
17												
18												
19												
20												
21				21	W	SS	16					

DEPTH: DRILLING METHOD	WATER LEVEL MEASUREMENTS DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL
0-14.5' 3.25" HSA							
14.5-49.5' RD w/DM	**5/23/22**	**0925**	**16.5**	**14.5**	**15.0**	**None**	**12.3**
	5/23/22	**0940**	**16.5**	**14.5**	**14.1**	**None**	**11.6**
BORING COMPLETED: **5/23/22**							
DR: **TT** LG: **RH** Rig: **67**							

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

2

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-15 (p. 2 of 3)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
23	873.4		COARSE ALLUVIUM *(continued)*									
24		SAND, fine to medium grained, a little gravel, dark grayish brown, waterbearing, medium dense (SP)										
25				15	W	SS	8					
26												
27												
28	868.4											
29		SAND, fine to medium grained, dark grayish brown, waterbearing, medium dense (SP)										
30				11	W	SS	18					
31												
32												
33												
34												
35				13	W	SS	10					
36												
37												
38												
39												
40				11	W	SS	10					
41												
42												
43												
44												
45				11	W	SS	10					
46												
47												

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

PROJECT NO: 1022-04-76/86	HWY: IH 94	COUNTY: DUNN	SOIL BORINGS	SHEET 92	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\027301-BOR.DWG
LAYOUT NAME - 15

PLOT DATE : 7/28/2023 12:26 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ########## WISDOT/CADDS SHEET 42

2

SUBSURFACE BORING LOG

AET No: **P-0013262** Log of Boring No. **B-15 (p. 3 of 3)**

Project: **Project ID 1022-04-76; Menomonie Safety & Weight Enforcement Facility; IH 94; Dunn County**

DEPTH IN FEET	ELEV. FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS WC	qp	LL	PL	%-#200
49 50 51	844.9	SAND, fine to medium grained, dark grayish brown, waterbearing, medium dense (SP) *(continued)* *No recovery from 49.5 to 51.5 feet*		15	W	SS	0					
		End of boring at 51.5 feet										

AET_CORP W-ELEV P-0013262 - MENOMONIE SWEF.GPJ AET+CPT+WELL.GDT 6/14/22

03/2011 01-DHR-060

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT

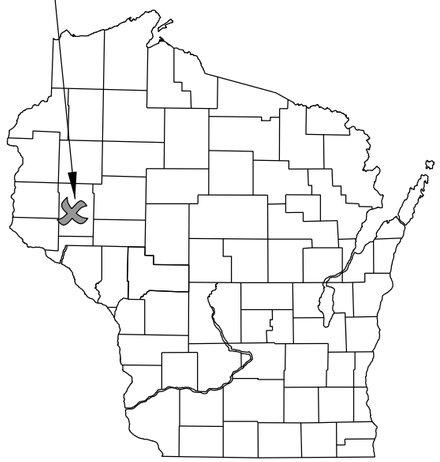
MENOMONIE SAFETY & WEIGHT FACILITY
NO. 63
DUNN COUNTY, WISCONSIN

STATE PROJECT NUMBER
1022-04-76

SHEET INDEX

NO.:	SHEET TITLE
G-001	TITLE SHEET
C-101	SITE PLAN
C-102	TOWER SITE PLAN
C-501	FENCE DETAILS
T-201	TOWER LOADING / ELEVATION
T-301	TOWER SECTION
T-501	TRANSMISSION LINE INSTALLATION DETAILS
T-502	ICE BRIDGE DETAILS
T-503	ANTENNA INSTALLATION DETAILS
E-101	GROUNDING PLAN
E-501	GROUNDING DETAILS
E-502	GROUNDING DETAILS
E-503	GROUNDING DETAILS

SITE LOCATION



ENGINEER:
EDGE CONSULTING ENGINEERS, INC.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
CONTACT: ARLEN OSTRENG, PE
PHONE: (608) 644-1449

TOWER COORDINATES (PER 1-A CERTIFICATION):
LAT (NAD83/2011): 44°-54'-16.95" N (44.904708)
LONG (NAD83/2011): 91°-47'-58.03" W (-91.799453)
GROUND ELEVATION (NAVD 88): 899.1'
ASR NUMBER: 1323968

MENOMONIE SWEF #63
Communications Tower
Dunn County

State of Wisconsin
Dept. of Transportation

Issued / Revised

ISSUED FOR: PS&E

Drawing Title:

TITLE SHEET

Plans prepared by:
Edge Consulting
Engineers, Inc.

Sheet No.
G-001

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 94	E

FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\G-001.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.

KEYNOTES: (THIS SHEET)

A. 180' MONOPOLE

B. TOWER COMPOUND FENCE

GENERAL NOTES: (THIS SHEET)

1. NORTH ARROW SHOWN AS APPROXIMATE.
2. AERIAL IMAGERY PER BING MAPS.
3. LINEWORK FOR PROPOSED SWEF PROVIDED BY KL ENGINEERING, DATED 03/14/2023.

30' 0 30' 60'

SCALE: 11" x 17" - 1" = 60'
22" x 34" - 1" = 30'

MENOMONIE SWEF #63
Communications Tower
Dunn County

State of Wisconsin
Dept. of Transportation

Issued / Revised

ISSUED FOR: PS&E

Drawing Title:

SITE PLAN

Plans prepared by:
Edge Consulting Engineers, Inc.

Sheet No.

C-101

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 95	E

FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\C-101.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.

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(#) KEYNOTES: (THIS SHEET)

A. 180' MONOPOLE TOWER;
4'-6" DIA BASE SHOWN
SEE T-201 FOR DETAILS

B. TOWER FOUNDATION
(7'-0" DIAMETER PIER & 22'-6" x 22'-6" PAD SHOWN);
ACTUAL SIZE TBD BY TOWER MANUFACTURER

C. 24" WIDE ICE BRIDGE;
SEE T-502 FOR DETAILS

D. TOWER COMPOUND FENCE
8' TALL FENCE (7' FABRIC W/ 1' BARB WIRE)
SEE C-502 FOR DETAILS

E. 16' WIDE VEHICLE ACCESS GATE W/ SNOW GATE AND
(1) MULTI-USER LOCK SYSTEM
(2) PADLOCKS REQUIRED (BY CONTRACTOR)

F. RF SIGNAGE:
- (3) RF NOTICE SIGNS;
  INSTALL ON EACH SIDE OF FENCE
- (1) RF CAUTION SIGN;
  INSTALL NEAR TOWER CLIMB

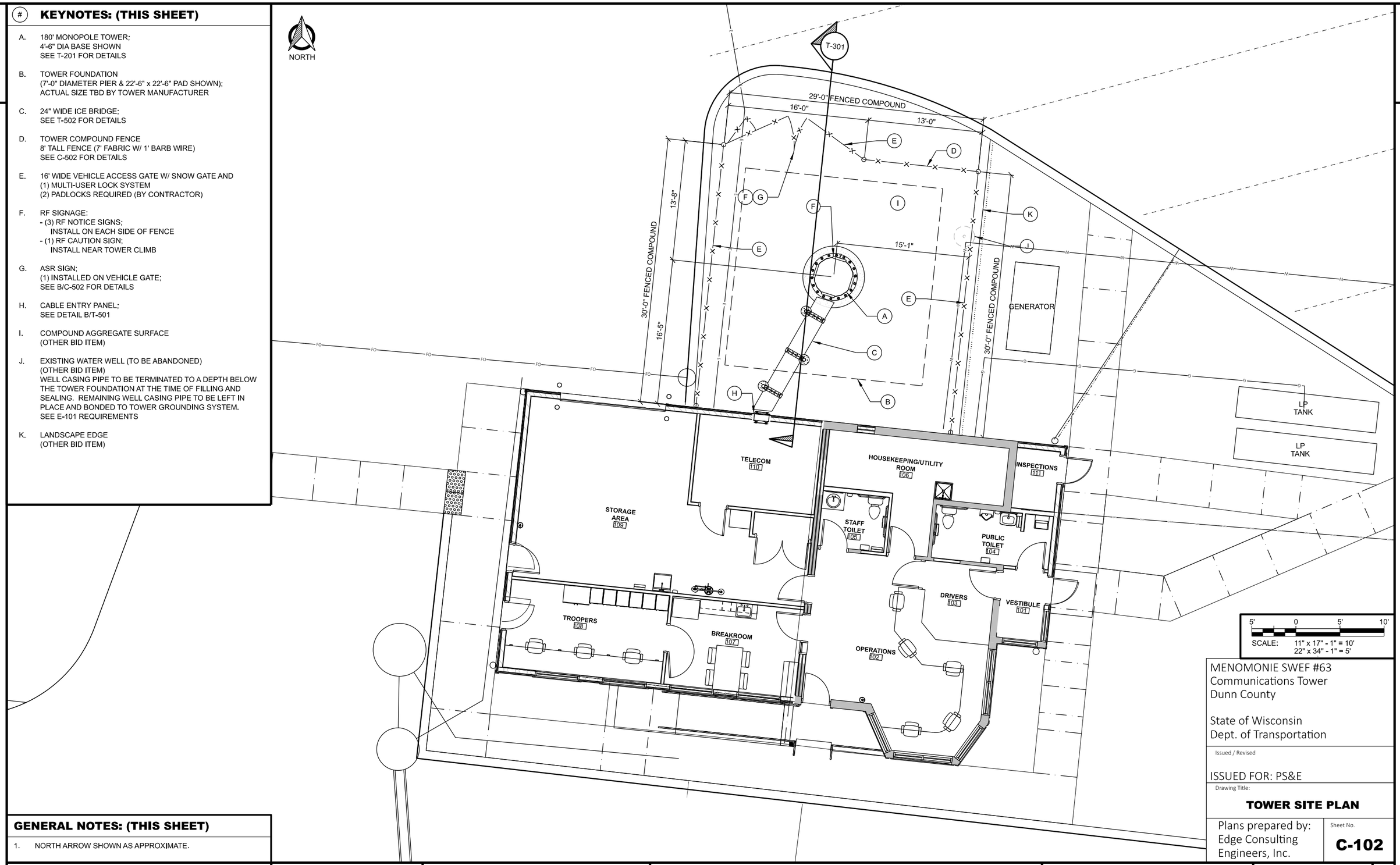
G. ASR SIGN;
(1) INSTALLED ON VEHICLE GATE;
SEE B/C-502 FOR DETAILS

H. CABLE ENTRY PANEL;
SEE DETAIL B/T-501

I. COMPOUND AGGREGATE SURFACE
(OTHER BID ITEM)

J. EXISTING WATER WELL (TO BE ABANDONED)
(OTHER BID ITEM)
WELL CASING PIPE TO BE TERMINATED TO A DEPTH BELOW THE TOWER FOUNDATION AT THE TIME OF FILLING AND SEALING. REMAINING WELL CASING PIPE TO BE LEFT IN PLACE AND BONDED TO TOWER GROUNDING SYSTEM.
SEE E-101 REQUIREMENTS

K. LANDSCAPE EDGE
(OTHER BID ITEM)



GENERAL NOTES: (THIS SHEET)

1. NORTH ARROW SHOWN AS APPROXIMATE.

MENOMONIE SWEF #63
Communications Tower
Dunn County

State of Wisconsin
Dept. of Transportation

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ISSUED FOR: PS&E

Drawing Title:

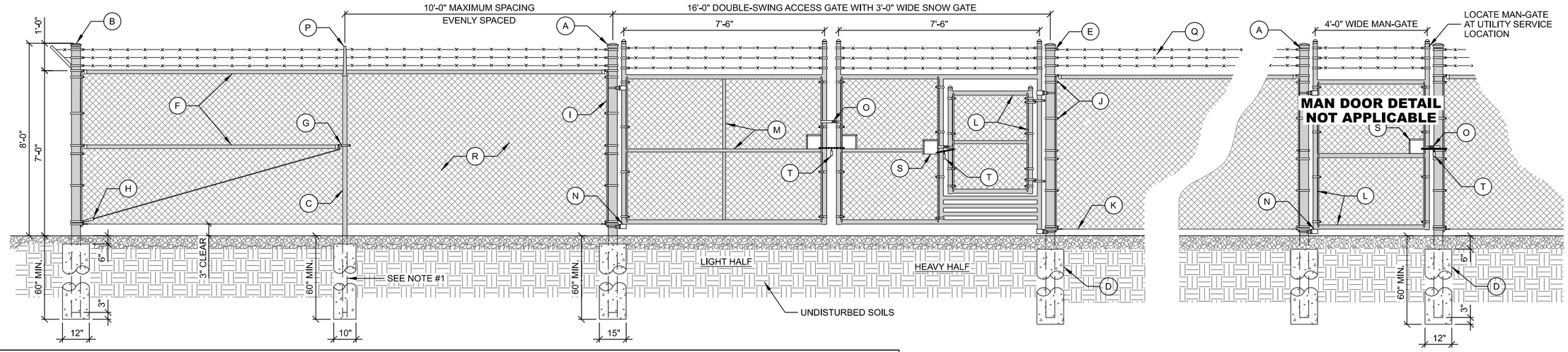
TOWER SITE PLAN

Plans prepared by:
Edge Consulting
Engineers, Inc.

Sheet No.
C-102

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 96	E

FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\C-102.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.



(#) KEY NOTES: (THIS DETAIL)

A. 3-1/2" (4" O.D.) SCH. 40 GALV. STEEL GATE POST

B. 2-1/2" (2-7/8" O.D.) SCH. 40 GALV. STEEL CORNER POST

C. 2" (2-3/8" O.D.) SCH. 40 GALV. STEEL LINE POSTS; LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 10'-0" O.C; SEE NOTE #1

D. CONCRETE POST FOUNDATION; 12" DIA. AT GATE & CORNER POSTS, 10" DIA. AT LINE POSTS SEE DETAIL BELOW

E. FENCE POST CAP (SIZE VARIES)

F. 1-1/2" (1.9" O.D.) TOP RAIL & MID BRACE RAIL PIPE

G. OFFSET BRACE RAIL ENDS FOR MID BRACE RAIL

H. 5/16" O.D. TRUSS ROD WITH TRUSS TIGHTENER ASSEMBLY

I. 3/16" x 3/4" STRETCHER BAR; TO EXTEND FULL HEIGHT OF FENCE FABRIC

J. 3/4" TENSION BAND (TYP.).

K. TENSION WIRE (7 GAUGE)

L. 1-1/2" (1.9" O.D.) SCH. 40 GALV. STEEL FENCE GATE FRAME

M. 1-1/4" (1.66" O.D.) SCH. 40 GALV. STEEL HORIZONTAL AND VERTICAL GATE BRACES

N. MALLEABLE BUTT HINGES (TYP.)

O. GATE LATCH; VERIFY REQUIREMENTS WITH FENCE MANUFACTURER

P. 45° BARB ARM FENCE POST CAP

Q. (3) STRANDS OF 4 PT. GALV. BARB WIRE

R. FENCE FABRIC; #9 GAUGE GALV. COATED, 2" DIAMOND PATTERN CHAIN LINK; TWISTED TOP SELVAGE AND KNUCKELD BOTTOM SELVAGE

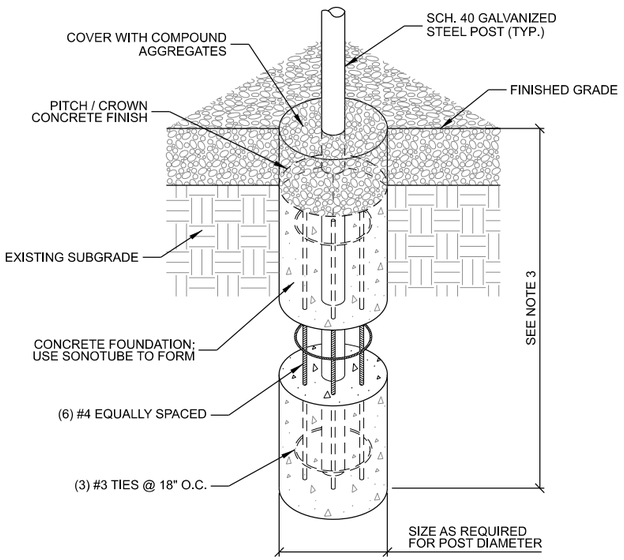
S. 6" x 6" HANDHOLE FOR CHAIN LOCK

T. GATE LOCK

NOTES:

1. ALL LINE POSTS MAY BE EITHER DRIVEN OR SET IN CONCRETE AT CONTRACTORS OPTION. SEE DETAIL FOR DEPTH AND FOOTING REQUIREMENTS. IF DRIVEN, DRIVE LINE POSTS TO 60" DEPTH MINIMUM.
2. ALL FENCE POSTS AND FRAMING TO BE SCH. 40 GALVANIZED STEEL. SEE DETAIL FOR SIZES.

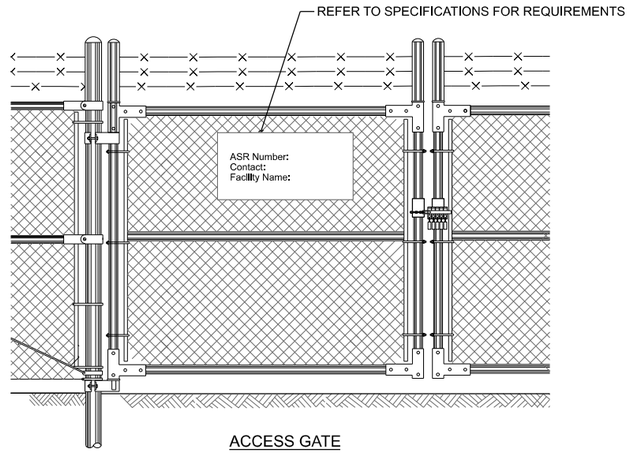
A TOWER COMPOUND FENCE



NOTES:

1. MAINTAIN 3" MINIMUM REBAR COVER WITH CONCRETE IN ALL DIRECTIONS.
2. CONCRETE MIX TO BE 4,000 PSI @ 28 DAYS.
3. FOUNDATION DEPTH TO EXCEED LOCAL FROST DEPTH, OR 48" MINIMUM.

B FENCE POST PIER FOUNDATION



ACCESS GATE

GENERAL NOTES:

1. THE ANTENNA STRUCTURE REGISTRATION NUMBER SHALL BE DISPLAYED PER 47 CFR 17.4 (g).
2. THE ASR NUMBER SHALL BE POSTED ON THE PERIMETER FENCE OR ACCESS GATE SO THAT IT IS CONSPICUOUSLY VISIBLE AND LEGIBLE FROM THE PUBLICLY ACCESSIBLE AREA NEAREST THE BASE OF THE ANTENNA STRUCTURE ALONG A PUBLICLY ACCESSIBLE ROADWAY OR PATH.
3. MATERIALS USED TO DISPLAY THE ANTENNA STRUCTURE REGISTRATION NUMBER MUST BE WEATHER-RESISTANT AND OF SUFFICIENT SIZE TO BE EASILY SEEN WHERE POSTED.

C ANTENNA STRUCTURE REGISTRATION (ASR) SIGNAGE

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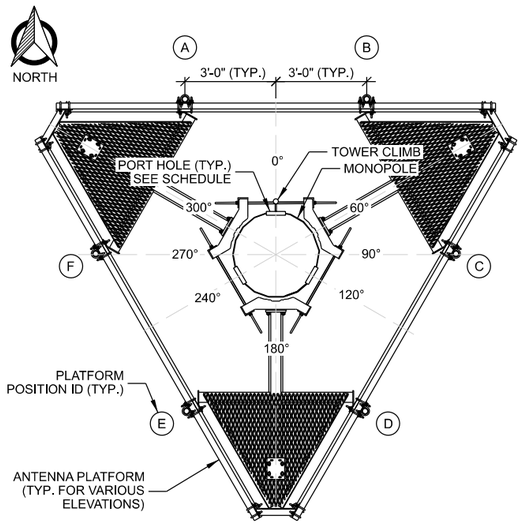
FENCE DETAILS

Plans prepared by:
Edge Consulting Engineers, Inc.

Sheet No.
C-501

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 97	E



A TOWER ORIENTATION

NOTES:

1. TOWER TO BE ANALYZED FOR FULL CAPACITY LOADING (PROPOSED AND FUTURE).
2. REFER TO ANTENNA MOUNTING DETAILS FOR ADDITIONAL INFO ON MOUNT DESIGN AND MOUNTING REQUIREMENTS.
3. ALL OMNI & DIPOLE ANTENNAS BELOW TOP LAYER TO INCLUDE TOP BRACING WHEN RECOMMENDED BY THE MANUFACTURER.
4. TOWER ANCHOR BOLTS SHALL BE DESIGNED SUCH THAT GROUT IS NOT REQUIRED BELOW TOWER BASE PLATES AND AROUND ANCHOR BOLTS.
5. TOWER TO BE DESIGNED AS STRUCTURE CLASS III. REFER TO SPECS FOR OTHER REQUIREMENTS.
6. TOWER & TOWER FOUNDATION - CONTRACTOR IS RESPONSIBLE FOR STRUCTURAL DESIGN OF BOTH ITEMS.
7. ALL PROPOSED ANTENNAS, COAX AND WAVEGUIDES WILL BE PROVIDED BY OWNER. CONTRACTOR TO INSTALL ALL ITEMS. FUTURE ANTENNAS, COAX AND WAVEGUIDES WILL NOT BE INSTALLED AS PART OF THIS PROJECT.
8. ALL ANTENNA AND DISH MOUNTS AND ICE SHIELDS (PROPOSED AND FUTURE) SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR.
9. INSTALLATION AND ALIGNMENT OF REMOTE DISH REQUIRED. SEE SPECIFICATIONS SECTION 33 83 00 FOR REQUIREMENTS.
10. LISTED PORTHOLE ELEVATIONS ARE MEASURED FROM GRADE LEVEL. TOP OF TOWER BASE PLATE IS ASSUMED TO BE 1'-0" ABOVE FINISHED GRADE LEVEL.

PORT HOLE SCHEDULE:

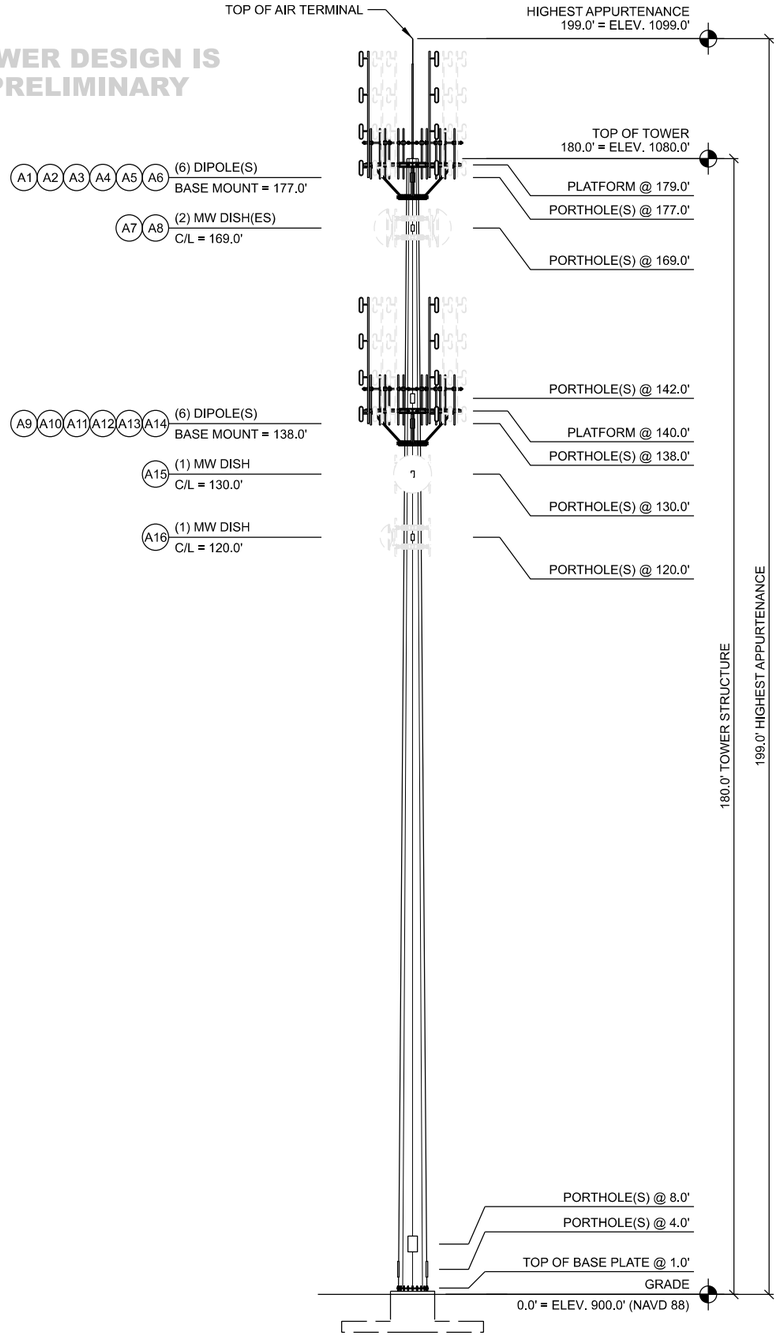
Elevation (ft)	Qty.	Size (in.)	Azimuth (deg.)
177	3	6 x 18	60, 180, 300
169	3	6 x 12	100, 220, 340
142	3	6 x 18	0, 120, 240
138	3	6 x 18	60, 180, 300
130	3	6 x 12	0, 120, 240
120	3	6 x 12	0, 120, 240
8	2	18 x 30	18, 198
4	2	18 x 30	108, 288

TOWER LOADING

ANTENNA ID	ANTENNA TYPE	(QTY.) ANTENNA MODEL SIZE & WEIGHT	PLATFORM POSITION	ANTENNA MOUNT SIZE & WEIGHT	MOUNT HEIGHT (T.O.C.)	C/L HEIGHT (T.O.C.)	C/L ELEV. (NAVD 88)	ANTENNA AZIMUTH	TILT (+/-)	Tx LINE (QTY.) SIZE	FREQUENCY (MHz)	OWNER USE	NOTES
A1	Dipole	(1) Comprod 874F-70 246" Long 67lbs	A	Same as A3	177.0'	187.0'	1087.0'			(1) 7/8"		WDOT	Future
A2	Dipole	(1) Comprod 874F-70 246" Long 67lbs	B	Same as A3	177.0'	187.0'	1087.0'			(1) 7/8"		WDOT	Future
A3	Dipole	(1) Comprod 874F-70 246" Long 67lbs	C	14' Low Profile Platform (6) 2-7/8" Mast Pipes 3000lbs	177.0'	187.0'	1087.0'			(1) 7/8"		WDOT	
A4	Dipole	(1) Comprod 874F-70 246" Long 67lbs	D	Same as A3	177.0'	187.0'	1087.0'			(1) 7/8"		WDOT	Future
A5	Dipole	(1) Comprod 874F-70 246" Long 67lbs	E	Same as A3	177.0'	187.0'	1087.0'			(1) 7/8"		WDOT	Future
A6	Dipole	(1) Comprod 874F-70 246" Long 67lbs	F	Same as A3	177.0'	187.0'	1087.0'			(1) 7/8"		WDOT	
A7	MW Dish	(1) MW Dish 6' Dia. 200lbs	-	(2) Tri-Collar Brackets w/ Stand-Offs (3) 3-1/2" Mast Pipes 950lbs	169.0'	169.0'	1069.0'	342.42°	0.08°	(1) EW63	6700	WDOT Path to Wheeler	Future
A8	MW Dish	(1) MW Dish 6' Dia. 200lbs	-	Same as A7	169.0'	169.0'	1069.0'			(1) EW63		WDOT	Future
A9	Dipole	(1) Comprod 874F-70 246" Long 67lbs	A	Same as A11	138.0'	148.0'	1048.0'			(1) 7/8"		WDOT	Future
A10	Dipole	(1) Comprod 874F-70 246" Long 67lbs	B	Same as A11	138.0'	148.0'	1048.0'			(1) 7/8"		WDOT	Future
A11	Dipole	(1) Comprod 874F-70 246" Long 67lbs	C	14' Low Profile Platform w/ Rail Kit (6) 2-7/8" Mast Pipes 3000lbs	138.0'	148.0'	1048.0'			(1) 7/8"		WDOT	
A12	Dipole	(1) Comprod 874F-70 246" Long 67lbs	D	Same as A11	138.0'	148.0'	1048.0'			(1) 7/8"		WDOT	Future
A13	Dipole	(1) Comprod 874F-70 246" Long 67lbs	E	Same as A11	138.0'	148.0'	1048.0'			(1) 7/8"		WDOT	Future
A14	Dipole	(1) Comprod 874F-70 246" Long 67lbs	F	Same as A11	138.0'	148.0'	1048.0'			(1) 7/8"		WDOT	
A15	MW Dish	(1) MW Dish 6' Dia. 200lbs	-	(2) Tri-Collar Brackets w/ Stand-Offs (3) 3-1/2" Mast Pipes 950lbs	130.0'	130.0'	1030.0'			(1) EW63		WDOT	Future
A16	MW Dish	(1) MW Dish 4' Dia. 200lbs	-	(2) Tri-Collar Brackets w/ Stand-Offs (3) 3-1/2" Mast Pipes 950lbs	120.0'	120.0'	1020.0'			(1) EW63		WDOT	Future

B TOWER LOADING SUMMARY

TOWER DESIGN IS PRELIMINARY



C TOWER PROFILE (ELEVATION)

MENOMONIE SWEF #63
Communications Tower
Dunn County

State of Wisconsin
Dept. of Transportation

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ISSUED FOR: PS&E

Drawing Title:

TOWER LOADING/ELEVATION

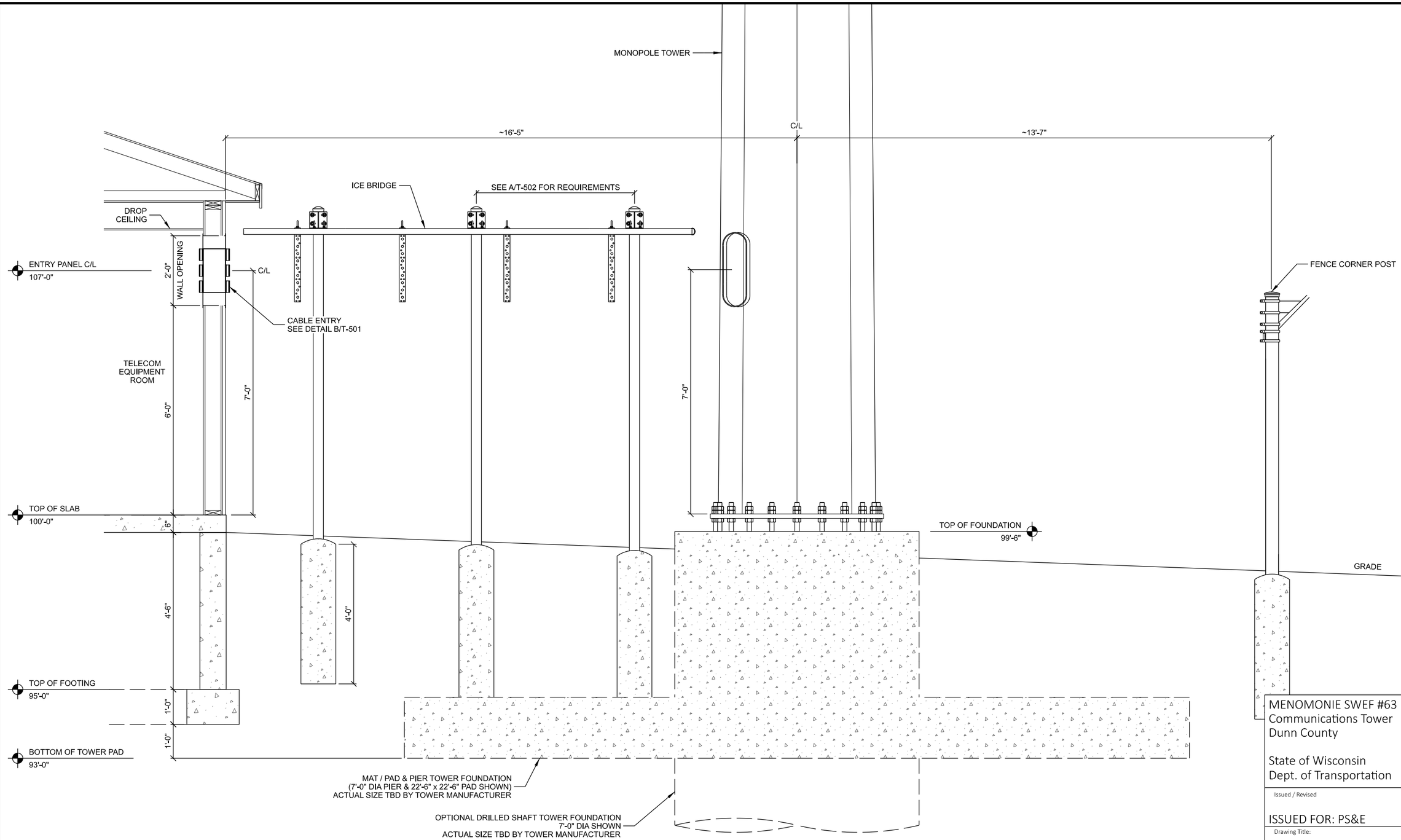
Plans prepared by:
Edge Consulting
Engineers, Inc.

Sheet No.

T-201

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 98	E

FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\T-201.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.



A **TOWER SECTION**

SCALE: 11" x 17" - 3/8" = 1'-0"
22" x 34" - 3/4" = 1'-0"

MENOMONIE SWEF #63
Communications Tower
Dunn County

State of Wisconsin
Dept. of Transportation

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ISSUED FOR: PS&E

Drawing Title:

TOWER SECTION

Plans prepared by:
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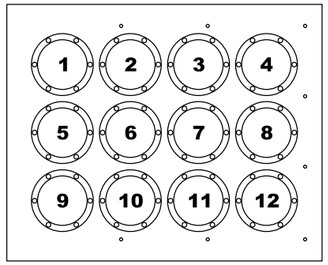
Engineers, Inc.

Sheet No.

T-301

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 99	E

FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\T-301.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.



ENTRY PANEL 1
(AS VIEWED FROM INSIDE EQUIPMENT BUILDING)

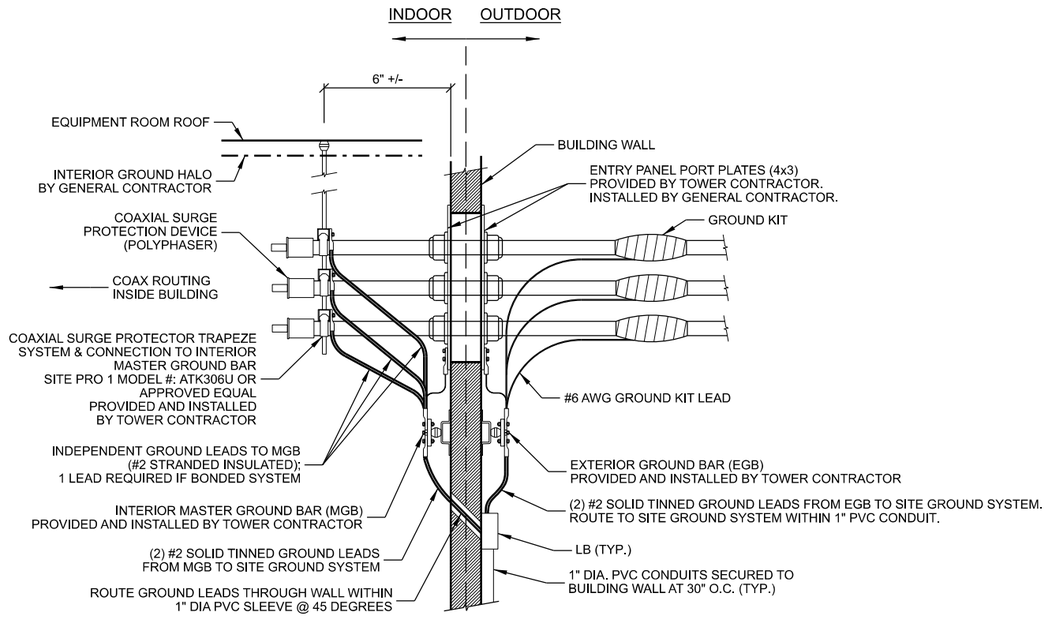
ENTRY PANEL PORT ASSIGNMENT			
PORT #	ANTENNA ID	ANTENNA SYSTEM	(QTY.) CABLE SIZE
1			
2			
3			
4			
5			
6			
7	**TO BE DETERMINED**		
8			
9			
10			
11			
12			

NOTES:

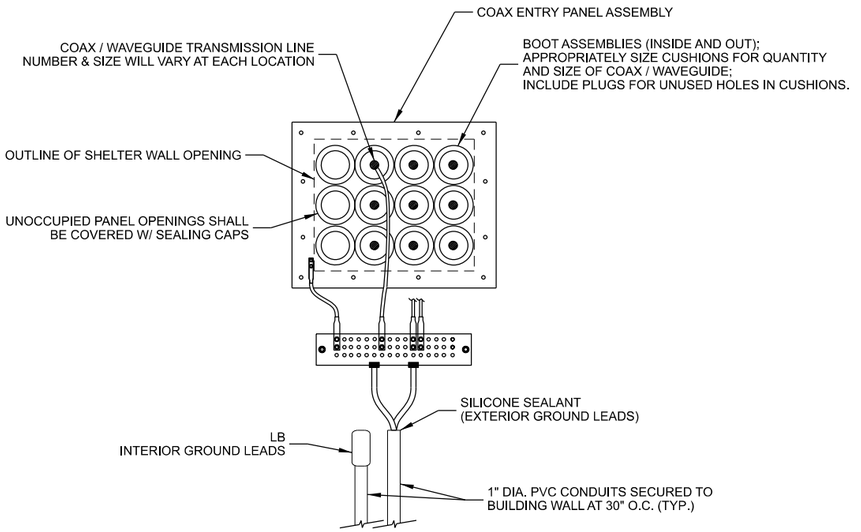
1. REFER TO SHEET T-201 FOR ANTENNA ID REFERENCE
2. PORT OPENINGS ARE 4" DIA UNLESS OTHERWISE NOTED.
3. PROVIDE AND INSTALL PROPERLY SIZED BOOTS, CUSHIONS AND PLUGS FOR EACH PORT OPENING INSIDE AND OUTSIDE OF SHELTER.
4. ALL UNUSED PORTS ON ALL ENTRY PANELS TO BE CAPPED & SECURED IN PLACE W/ BLACK CABLE TIE.

A ENTRY PANEL COAX ROUTING

THIS SPACE INTENTIONALLY LEFT BLANK



SECTION VIEW



PROFILE VIEW

B CABLE ENTRY

MENOMONIE SWEF #63
Communications Tower
Dunn County

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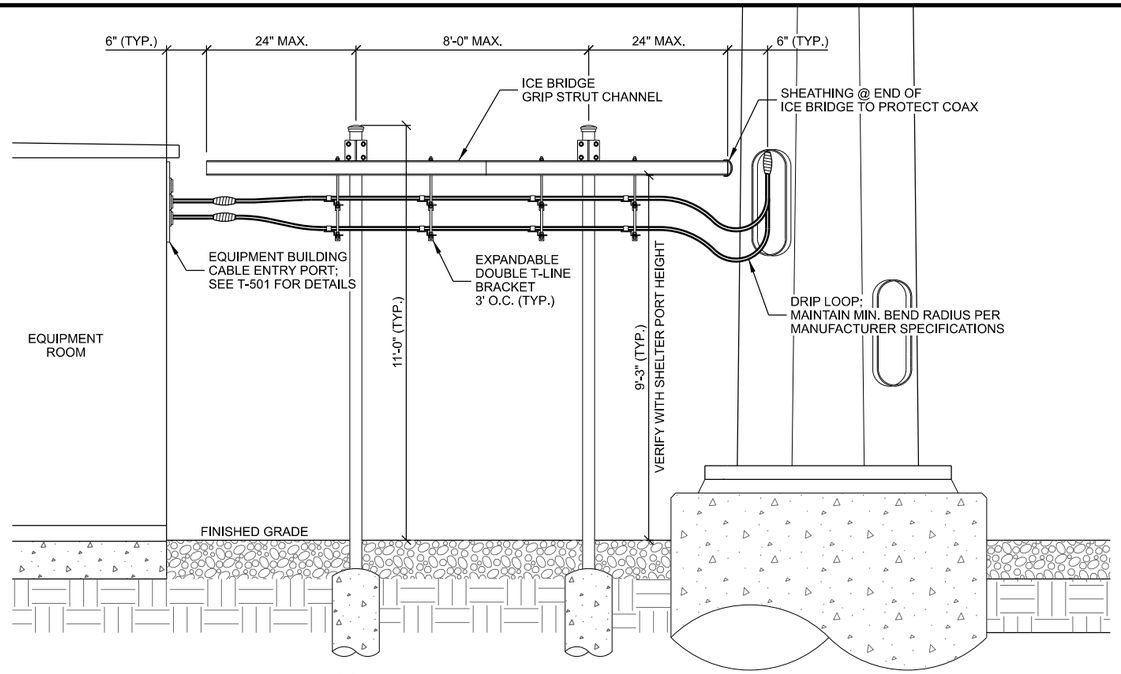
Drawing Title:
TRANSMISSION LINE INSTALLATION DETAILS

Plans prepared by:
Edge Consulting
Engineers, Inc.

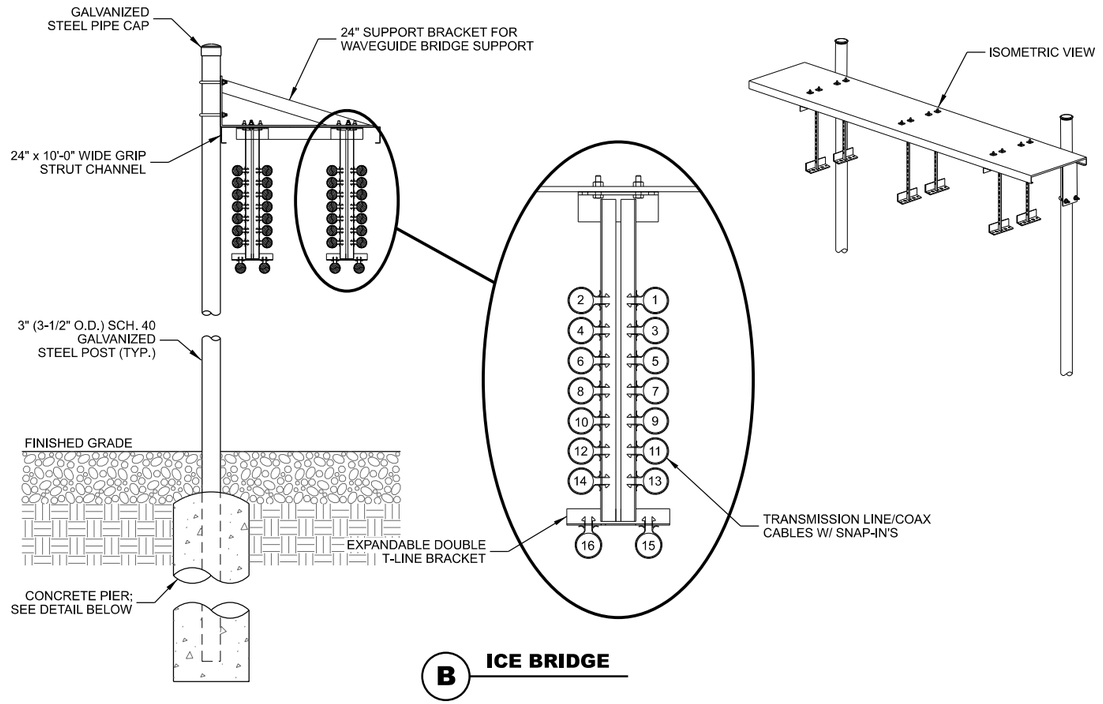
Sheet No.
T-501

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 100	E

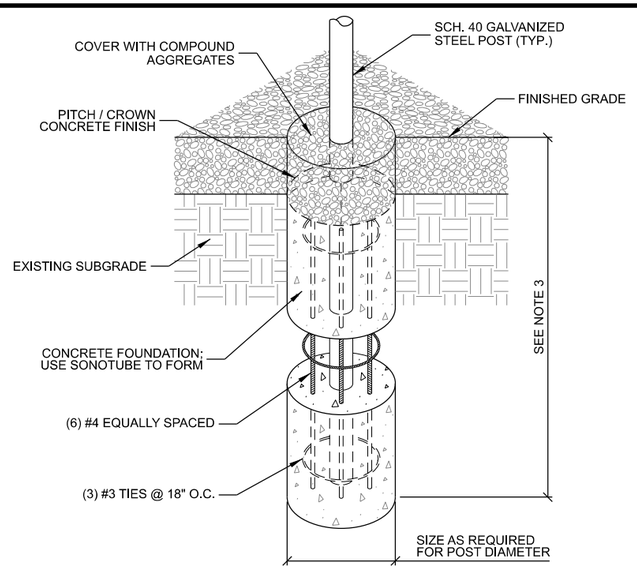
FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\T-501.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.



A **ICE BRIDGE INSTALLATION**



B **ICE BRIDGE**



NOTES:

1. MAINTAIN 3" MINIMUM REBAR COVER WITH CONCRETE IN ALL DIRECTIONS.
2. CONCRETE MIX TO BE 4,000 PSI @ 28 DAYS.
3. FOUNDATION DEPTH TO EXCEED LOCAL FROST DEPTH, OR 48" MINIMUM.

C **ICE BRIDGE POST FOUNDATION**

ICE BRIDGE NOTES : (THIS SHEET)

1. FOR COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 8' FOR A 10' SECTION.
2. SPLICES IN SECTIONS OF BRIDGE CHANNEL SHALL BE INSTALLED AT SUPPORTS, WHERE POSSIBLE, OR AT MOST 2' FROM A SUPPORT.
3. FREE ENDS OF ICE BRIDGE CHANNELS SHALL NOT EXCEED A CANTILEVER DISTANCE OF 2' FROM A SUPPORT.
4. CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH COLD GALVANIZING SPRAY.
5. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH MANUFACTURER'S AND ENGINEER'S APPROVAL.
6. DEVIATIONS FROM ICE BRIDGE FOUNDATIONS SHOWN ON SITE SPECIFIC DRAWINGS OR STANDARD DETAILS REQUIRE ENGINEERING APPROVAL.
7. INSTALL PROTECTIVE SHEATHING AT TOWER END OF ICE BRIDGE TO PROTECT CABLING.

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Drawing Title:

ICE BRIDGE DETAILS

Plans prepared by:
Edge Consulting Engineers, Inc.

Sheet No.

T-502

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 101	E

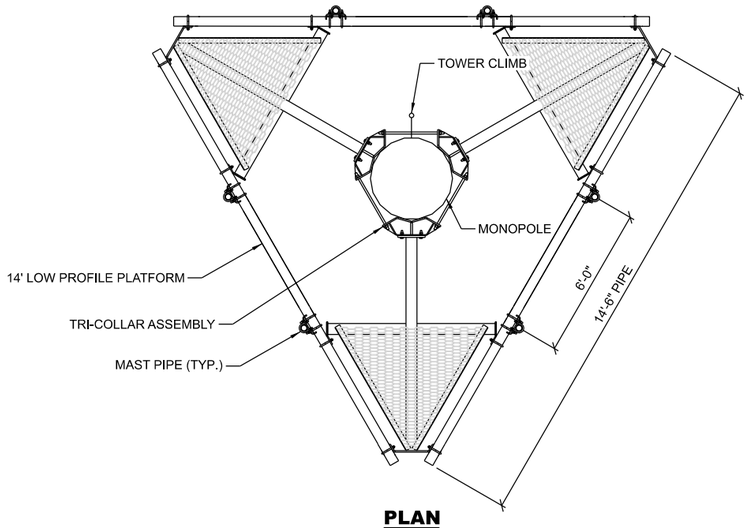
FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\T-502.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.

2

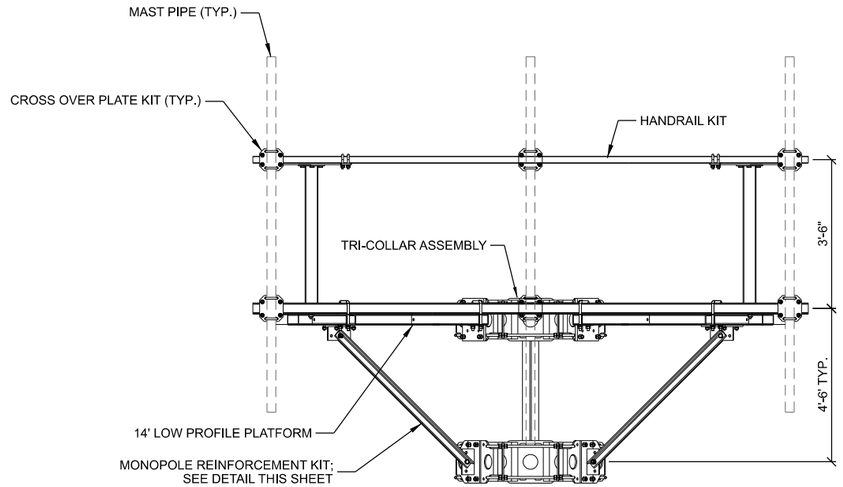
MANUFACTURER: SABRE
14' PLATFORM

PROVIDE MOUNTING PIPES AS NOTED IN TOWER LOADING LEGEND (DETAIL B/T-201)

NORTH



PLAN



PROFILE

NOTES:

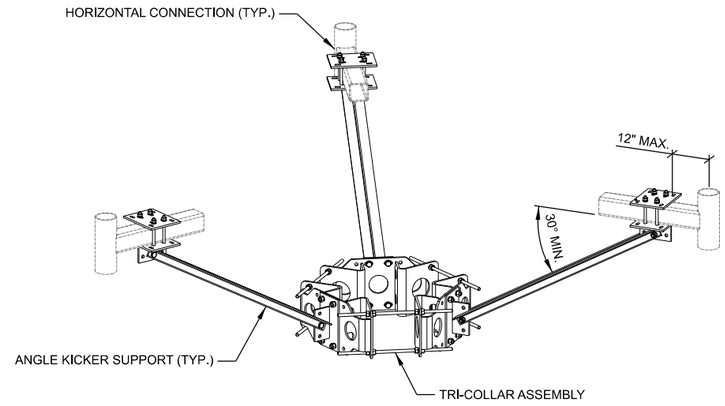
1. REFER TO SHEET T-201 FOR ANTENNA ID REFERENCE AND LADDER INSTALLATION LOCATION.
2. DOUBLE STACKING OF 1-5/8" AND TRIPLE STAKING OF 7/8" COAX IS ALLOWED.
3. DOUBLE STACKING OF WAVEGUIDE IS ALLOWED WHEN USING CUSHION TYPE SNAP IN HANGERS.
4. GROUP LINES WITHIN LADDERS FOR SIMILAR TERMINATION LEVEL. SEPARATE WAVEGUIDE FROM COAX.
5. PROVIDE & INSTALL PROPERLY SIZED SNAP-INS FOR EACH COAX.

A **14' LOW PROFILE PLATFORM FOR (6) ANTENNAS**

MANUFACTURER: SABRE
MODEL: C10-851-201DP (FITS 10"-40" POLE DIA.)
C10-851-202DP (FITS 10"-40" POLE DIA. LONG)

MONOPOLE REINFORCEMENT KIT FOR PLATFORMS OR T ARMS

INCLUDES RING MOUNT AND SUPPORT ARMS



NOTE:

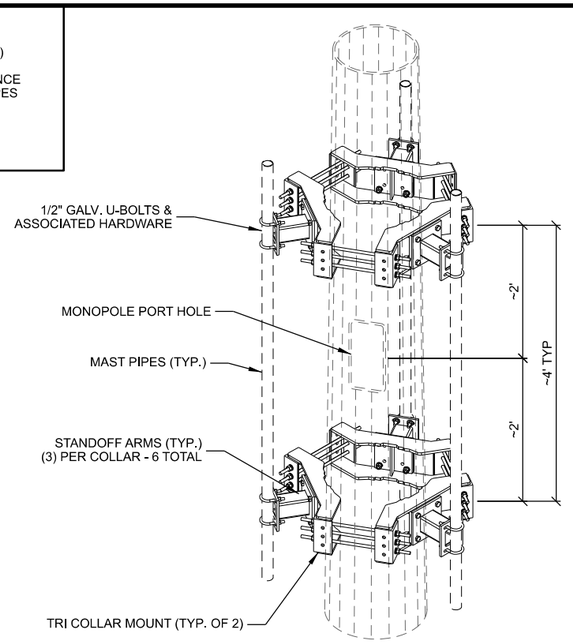
1. CONTRACTOR TO VERIFY POLE DIAMETER AND SUITABILITY OF PROPOSED MOUNT FOR SITUATION. IF AN ALTERNATIVE SOLUTION IS PROPOSED, NOTIFY ENGINEER AND OWNER PRIOR TO PROCEEDING.

B **MONOPOLE REINFORCEMENT KIT**

MANUFACTURER: SITE PRO 1
(COLLAR): LWRM (POLE DIAMETER 12" TO 45")
RM-ADK (45" TO 60" LARGE POLE ADAPTER KIT)

(STANDOFFS): 6", 24" OR 36" STANDOFF DISTANCE
ACCEPTS 2-3/8", 2-7/8", OR 3-1/2" O.D. MAST PIPES

PURCHASE MAST PIPES SEPARATELY



C **TRI-COLLAR BRACKET WITH DISH MOUNT**

MENOMONIE SWEF #63
Communications Tower
Dunn County

State of Wisconsin
Dept. of Transportation

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ISSUED FOR: PS&E

Drawing Title:
ANTENNA INSTALLATION DETAILS

Plans prepared by:
Edge Consulting
Engineers, Inc.

Sheet No.
T-503

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 102	E

FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\T-503.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.

2

GROUNDING LEGEND: (THIS SHEET)

- GROUND TEST WELL, SEE E-502 FOR DETAILS
- COPPER CLAD GROUND ROD, (5/8" DIA. x 10' LONG) SPACE @ GOUND ROD LENGTH (10' O.C. MAX., 6' MIN.)
- COPPER PLATE, (18" x 18" x 0.032" THK) SPACE @ GOUND ROD LENGTH (10' O.C. MAX., 6' MIN.)
- EXOTHERMIC CONNECTION (CADWELD OR APPROVED EQUAL)
- MECHANICAL CONNECTION (BURNDY 2-HOLE LUG OR APPROVED EQUAL)
- #2 AWG BARE SOLID TINNED COPPER CONDUCTOR IN STANDARD GROUND TRENCH, SEE E-502 FOR DETAILS
- #2 AWG BARE SOLID TINNED COPPER CONDUCTOR IN ENHANCED GROUND TRENCH, SEE E-502 FOR DETAILS

(#) KEYNOTES: (THIS SHEET)

A. TOWER GROUND RING, MAINTAIN 2' SEPARATION FROM TOWER FOUNDATION

B. TOWER GROUND BAR, (2) LEADS TO TOWER GROUND RING & (1) TO TOWER STEEL; SEE DETAIL D/E-501

C. EXTERIOR GROUND BAR, (2) LEADS TO TOWER GROUND RING; SEE DETAILS F/E-502 & B/T-501

D. INTERIOR GROUND BAR (MGB), (2) LEADS TO TOWER GROUND RING; SEE DETAILS F/E-502 & B/T-501

E. TOWER STEEL GROUND, (3) REQ'D. EXOTHERMIC WELD TO LEG GROUND TAB; SEE E-501 FOR DETAILS

F. TOWER FOUNDATION GROUND; SEE E-502 FOR DETAILS

G. FENCE CORNER POST GROUND; SEE E-502 FOR DETAILS

H. FENCE GATE GROUND; SEE E-502 FOR DETAILS

I. FENCE FABRIC & DETERRENT WIRING BONDING; SEE E-502 FOR DETAILS

J. ICE BRIDGE/UTILITY POST GROUND; SEE E-501 FOR DETAILS

K. GROUND TEST WELL; SEE DETAIL C/E-502 FOR DETAILS

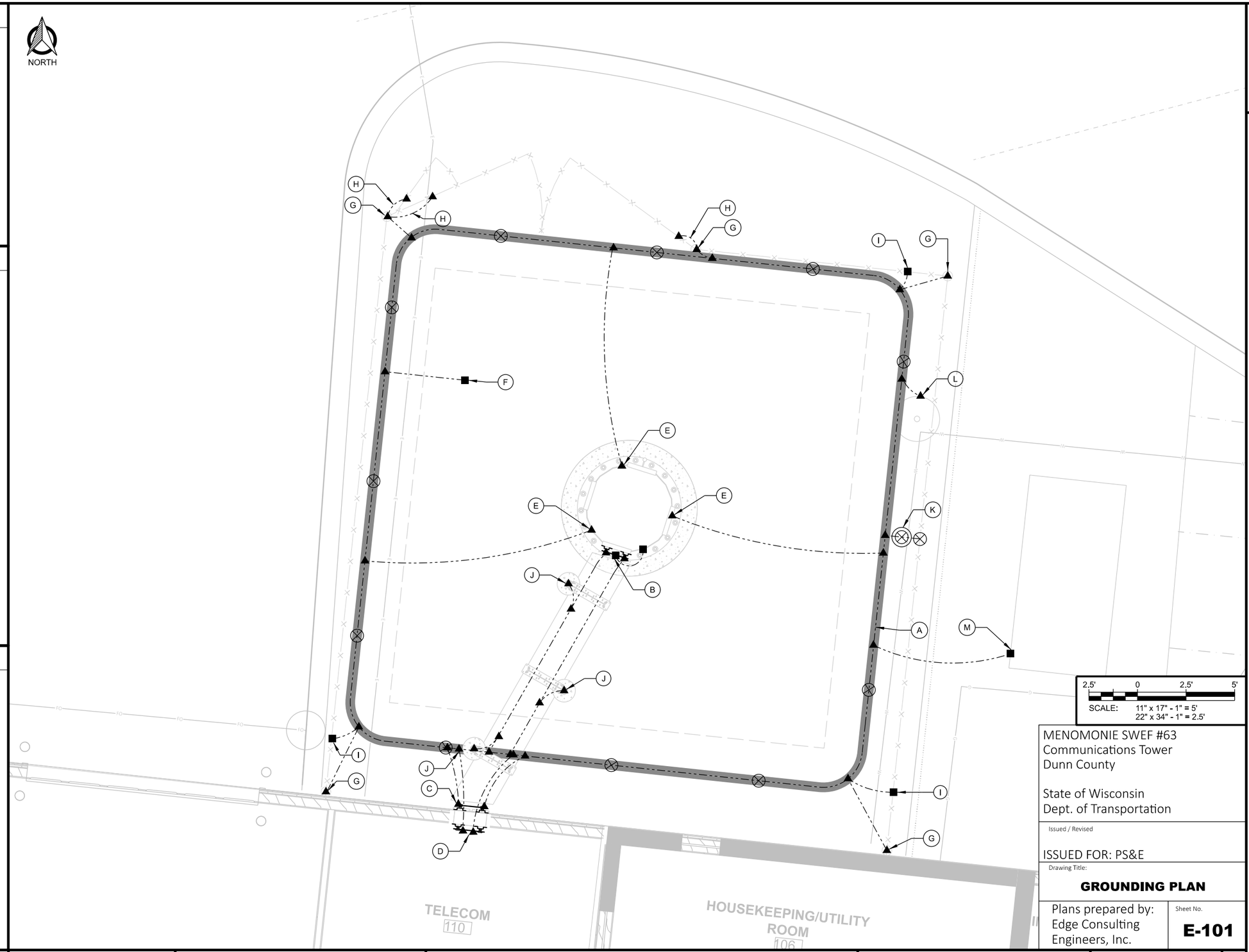
L. REMAINING WELL CASING PIPE GROUND TO TOWER SITE GROUND SYSTEM

M. GENERATOR ENCLOSURE GROUND, (1) LEAD

GENERAL NOTES: (THIS SHEET)

1. THE GROUNDING SYSTEM & CONDUCTORS SHALL BE TESTED BY CONTRACTOR PRIOR TO BACKFILLING. SYSTEM SHALL PROVIDE 3 OHM OR LESS RESISTANCE UPON COMPLETION.
2. ALL NON-INSULATED GROUND LEADS EXTENDING ABOVE GROUND LEVEL SHALL BE ENCASED IN 1/2" PVC & SEALED WITH SILICONE.
3. GROUND RINGS & TOP OF RODS SHALL BE INSTALLED AT 30" BELOW FINISHED GRADE. (SEE DETAIL A/E-501)
4. INSTALL 18"X18" COPPER PLATES IN LIEU OF GROUND RODS WHEN INSTALLING OVER TOWER FOUNDATION OR WHERE DRIVING GROUND RODS IS NOT FEASIBLE. REFER TO GEOTECH REPORT FOR SOIL CONDITIONS.
5. ALL MECHANICAL GROUND CONNECTIONS TO UTILIZE 2-HOLE LUGS AND STAINLESS-STEEL HARDWARE. PROVIDE ANTI-OXIDANT COMPOUND BETWEEN LUG & CONNECTION POINT. USE COPPER ANTI-OXIDANT FOR COPPER-TO-COPPER CONNECTIONS. SELF-TAPPING SCREWS ARE NOT ALLOWED.
6. ALL ABOVE GRADE CADWELD CONNECTIONS (TO GALVANIZED ITEMS) SHALL BE SPRAYED WITH COLD GALVANIZING COMPOUND TO PREVENT CORROSION.

NORTH



2

2.5' 0 2.5' 5'

SCALE: 11" x 17" - 1" = 5'
22" x 34" - 1" = 2.5'

MENOMONIE SWEF #63
Communications Tower
Dunn County

State of Wisconsin
Dept. of Transportation

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ISSUED FOR: PS&E

Drawing Title:

GROUNDING PLAN

Plans prepared by:
Edge Consulting Engineers, Inc.

Sheet No.

E-101

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 103	E

FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\E-101.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.

(#) KEYNOTES: (THIS SHEET)

A. AIR TERMINAL;
EXTEND 2' ABOVE HIGHEST ANTENNA MIN. ON MAST PIPE
MECHANICALLY FASTEN AIR TERMINAL TO MAST PIPE MAST
PIPE TO BE MECHANICALLY CONNECTED TO TOWER STEEL

B. COAX / WAVEGUIDE TRANSMISSION LINE GROUND KIT;
SEE DETAIL THIS SHEET

C. GROUND KIT JUMPER;
CONNECT TO GROUND BAR WITH 2 HOLE LONG BARREL LUG

D. ANTENNA GROUND BAR (TINNED);
FOR CONNECTION OF MULTIPLE GROUND KITS AT ONE
LEVEL MOUNT TO TOWER STEEL;
INSTALL #2 STRANDED LEAD FROM GROUND BAR TO TOWER
STEEL

E. FOR SINGLE ANTENNAS AT ONE LEVEL OMIT ANTENNA
GROUND BAR CONNECT GROUND KIT JUMPER DIRECTLY TO
TOWER STEEL WITH UL LISTED BONDING CLAMP

F. UL LISTED BONDING CLAMP;
- HARGER BGC41.25-2 PIPE CLAMPS FOR
1-1/4" TO 2" DIA. ROUND MEMBERS
OR
- HARGER #223T HEAVY DUTY TINNED FLANGE
BONDING PLATE
- USE EXTERNAL ANTI-OXIDATION COMPOUND.
- PAINT WITH COLD GALV. COMPOUND AFTER BONDING.

G. TOWER GROUND BAR (TGB) (TINNED)
INSTALL ON TOWER W/ INSULATORS

H. TGB GROUNDS;
(2) #2 BARE SOLID TINNED ENCASED IN CARFLEX CONDUIT
FROM TGB TO TOWER GROUND RING AND (1) REQ'D FROM
TGB TO TOWER STEEL;
CONDUIT TO BE SUPPORTED EVERY +/- 30-INCHES TO
GRADE. SUPPORT ALONG TRANSMISSION LADDER WITH
COAX SNAP-IN HANGERS OR ANGLE ADAPTERS CONNECTED
TO TOWER STEEL.

I. TOWER STEEL GROUNDS;
#2 BARE SOLID TINNED ENCASED IN CARFLEX CONDUIT
FROM TOWER STEEL TO TOWER GROUND RING (3) REQ'D.

J. TOWER FOUNDATION GROUND, (1 REQ'D);
SEE E-502 FOR DETAILS

K. EXTERIOR GROUND BAR (EGB) (TINNED);
SEE DETAILS F/E-502 & B/T-501

L. EGB GROUNDS;
#2 BARE SOLID TINNED
SEE DETAIL THIS SHEET & F/E-502.
ENCASE IN CONDUIT FROM EGB
TO SITE GROUND SYSTEM (2) REQ'D.
CONDUIT TO BE SUPPORTED EVERY
+/- 30-INCHES TO GRADE.

M. COAXIAL SURGE PROTECTION DEVICE (SPD) / POLYPHASER

N. INTERIOR GROUND BAR / MASTER GROUND BAR (MGB);
SEE DETAILS F/E-502 & B/T-501.

O. #2 BARE SOLID TINNED, ENCASE IN CONDUIT FROM MGB TO
TOWER GROUND SYSTEM (2) REQ'D.;
SEE DETAIL THIS SHEET

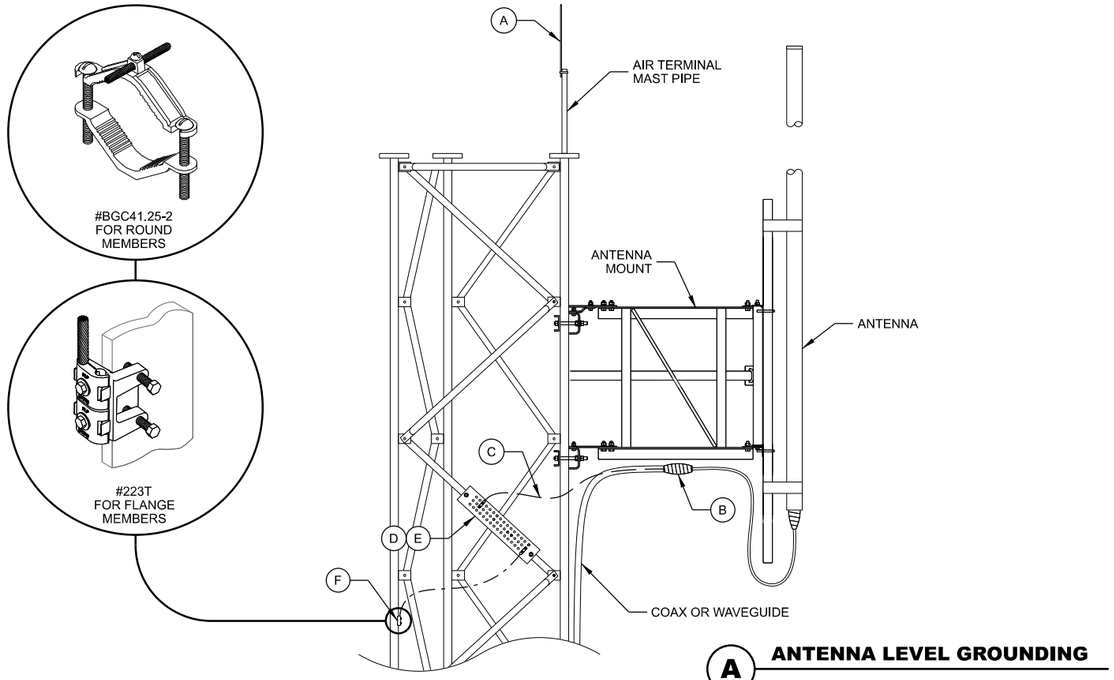
P. ICE BRIDGE POST GROUNDS;
#2 BARE SOLID TINNED ENCASE IN CARFLEX CONDUIT TO 24"
BELOW GRADE;
SEE E-502 FOR DETAILS

Q. ICE BRIDGE SECTION GROUNDS;
#6 STRANDED INSULATED
2 HOLE LONG BARREL ON EACH END (TYP.)

R. ICE BRIDGE SECTION TO POST GROUNDS;
#6 STRANDED INSULATED
2 HOLE LONG BARREL ON SECTION & CADWELD TO POST
ORIENT LEAD WITH HIGH SIDE TOWARDS TOWER

S. ENTRY PANEL GROUND;
#6 STRANDED INSULTATED
2 HOLE LONG BARREL ON EACH END (TYP.)

T. COAXIAL SURGE PROTECTOR TRAPEZE;
SEE DETAIL B/T-501



A ANTENNA LEVEL GROUNDING

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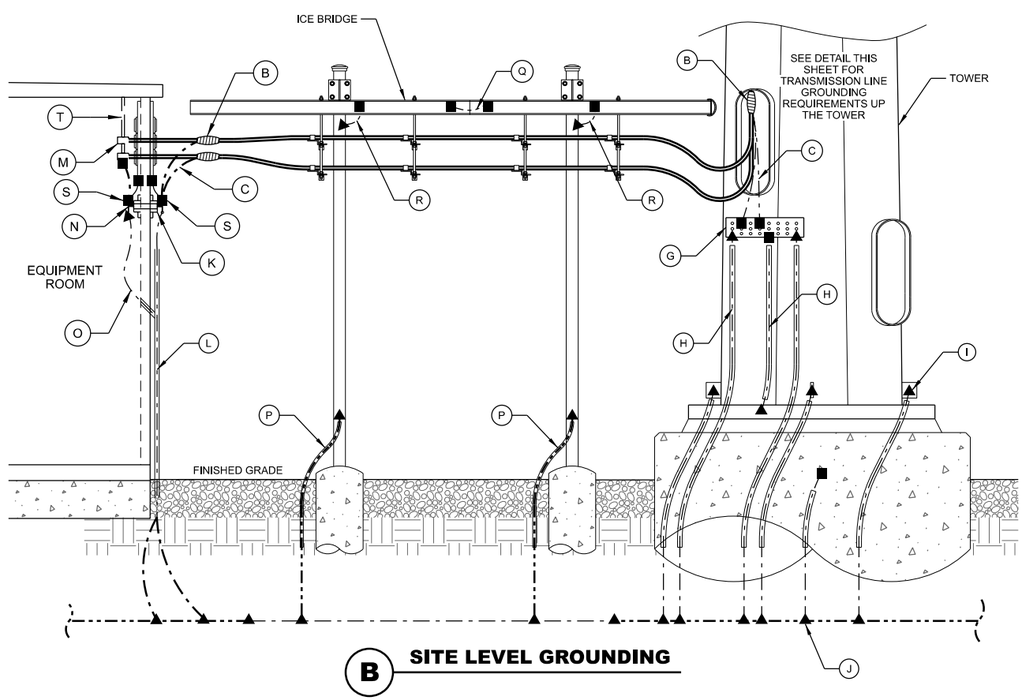

B SITE LEVEL GROUNDING

MENOMONIE SWEF #63
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Dunn County

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GROUNDING DETAILS

Plans prepared by:
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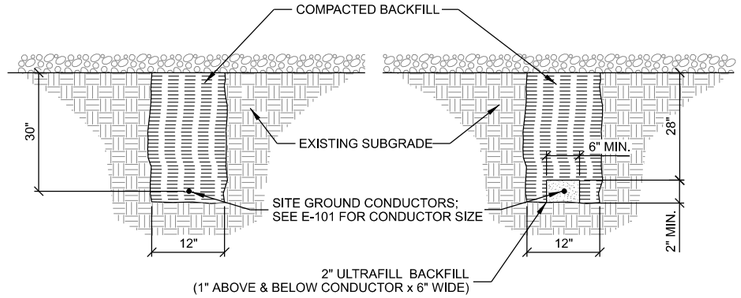
Sheet No.
E-501

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 104	E

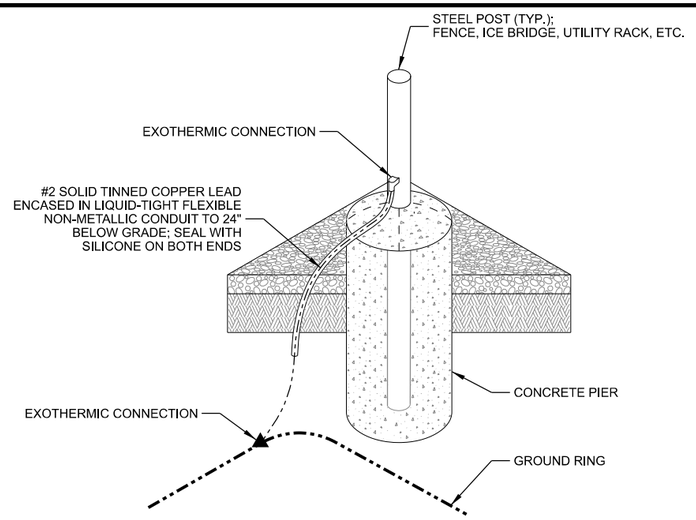
FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\E-501.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.



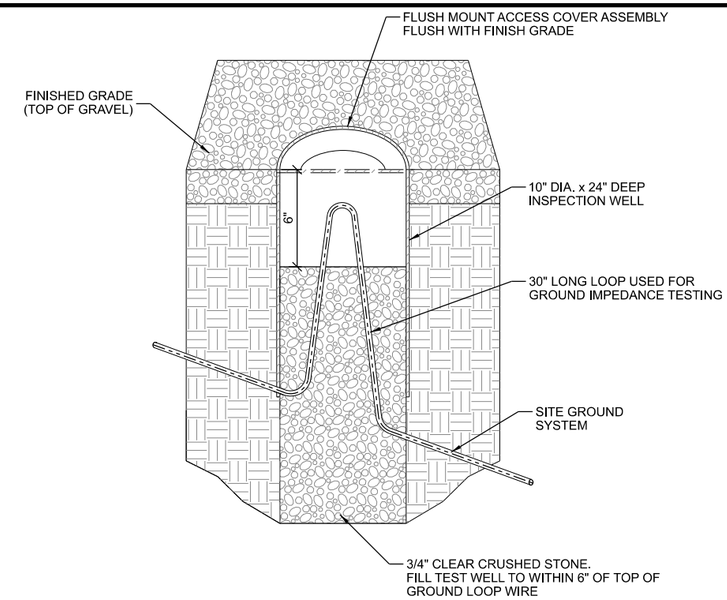
STANDARD GROUND TRENCH ENHANCED GROUND TRENCH

NOTES:
1. GROUNDING TRENCHES TO BE BACK FILLED WITH NATIVE EARTH BACKFILL. 2. COMPACT BACK FILL TO 95% MODIFIED PROCTOR.

A GROUNDING TRENCH

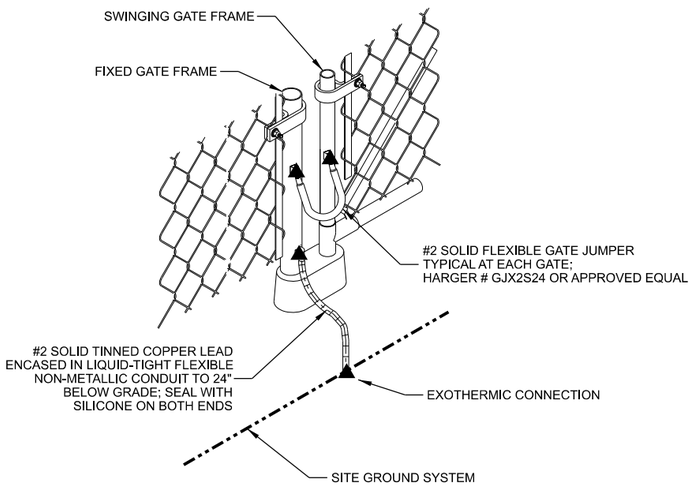


B STEEL POST GROUNDING

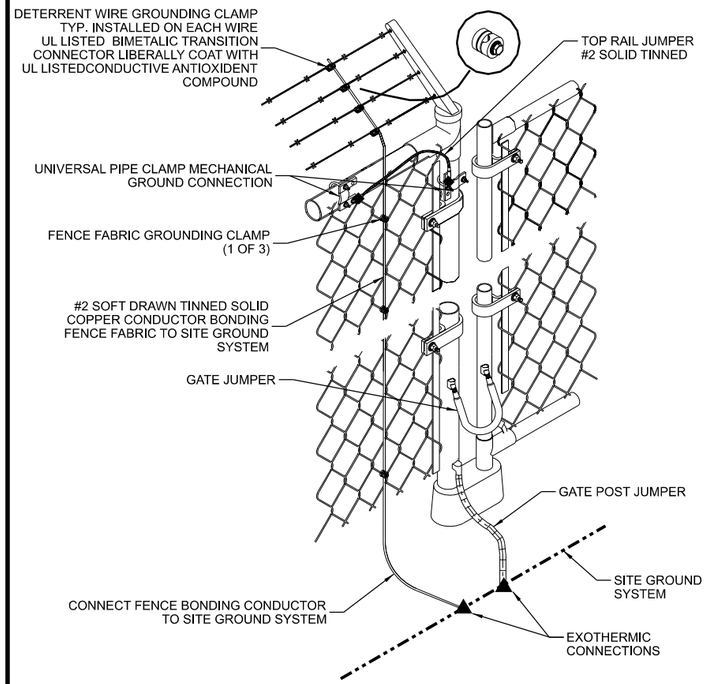


C GROUND TEST WELL

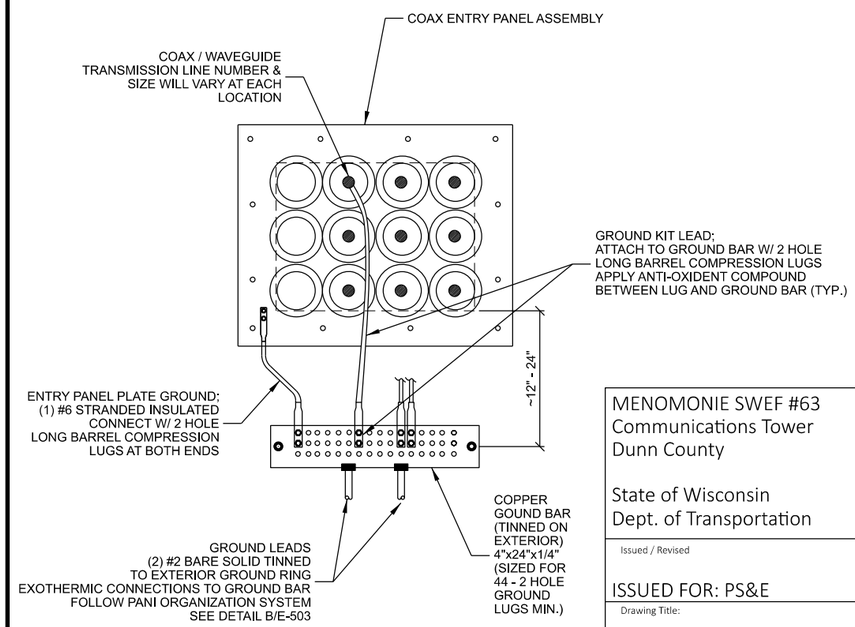
2



D FENCE GATE GROUNDING



E FENCE FABRIC AND DETERRENT WIRING BONDING



F INTERIOR / EXTERIOR SHELTER GROUND BARS

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Communications Tower
Dunn County

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GROUNDING DETAILS

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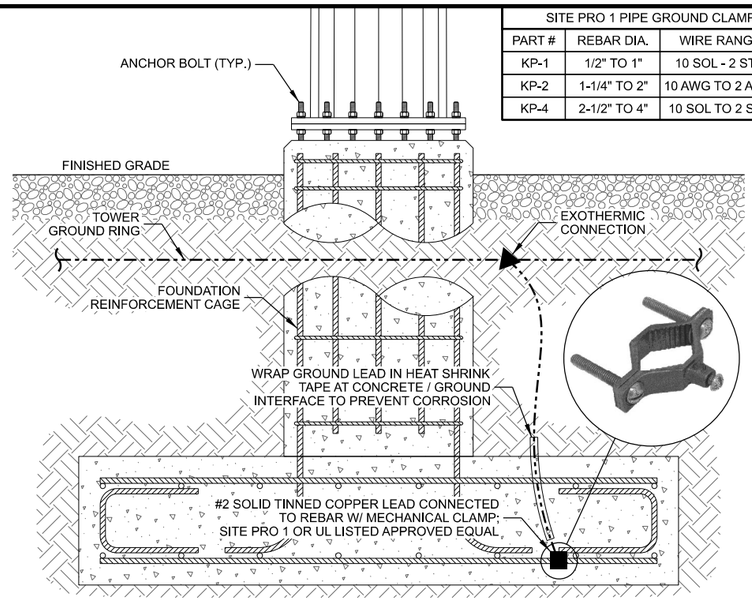
Sheet No.
E-502

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 105	E

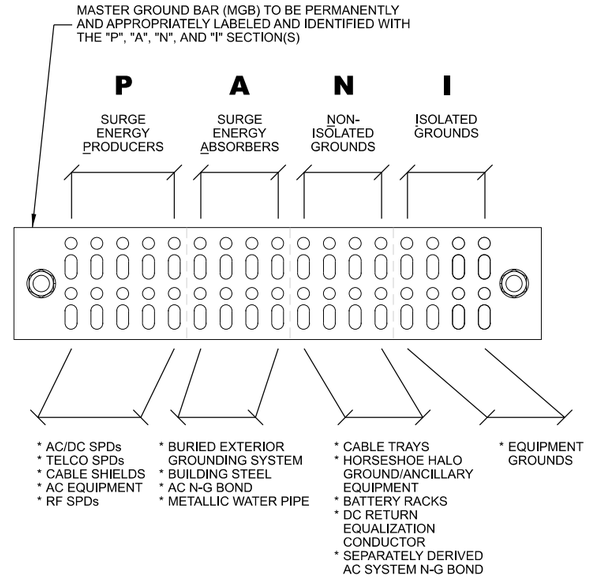
SITE PRO 1 PIPE GROUND CLAMPS		
PART #	REBAR DIA.	WIRE RANGE
KP-1	1/2" TO 1"	10 SOL - 2 STR
KP-2	1-1/4" TO 2"	10 AWG TO 2 AWG
KP-4	2-1/2" TO 4"	10 SOL TO 2 STR



NOTES:

1. FOUNDATION SHOWN IS TYPICAL. SEE TOWER FOUNDATION PLANS FOR REINFORCEMENT DETAILS.
2. FOUNDATION GROUNDING PER NEC 250.52(3)(A). GROUNDING CONNECTIONS TO BE COVERED BY A MINIMUM OF 3" CONCRETE AND BE MADE TO A MIN, 20' CONTINUOUS REBAR.

A TOWER FOUNDATION GROUNDING



B P.A.N.I. SYSTEM ORGANIZATION

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MENOMONIE SWEF #63
Communications Tower
Dunn County

State of Wisconsin
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GROUNDING DETAILS

Plans prepared by:
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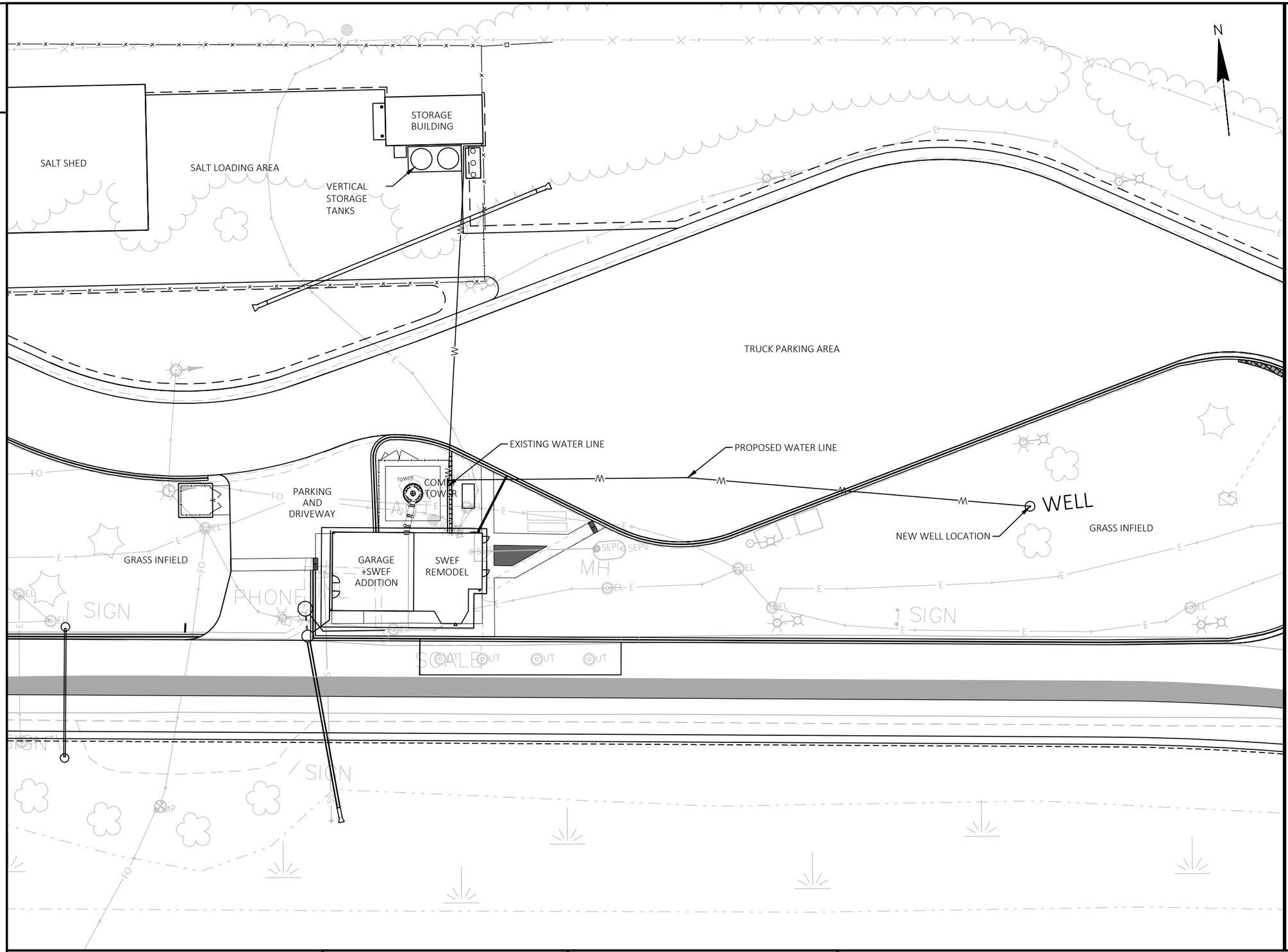
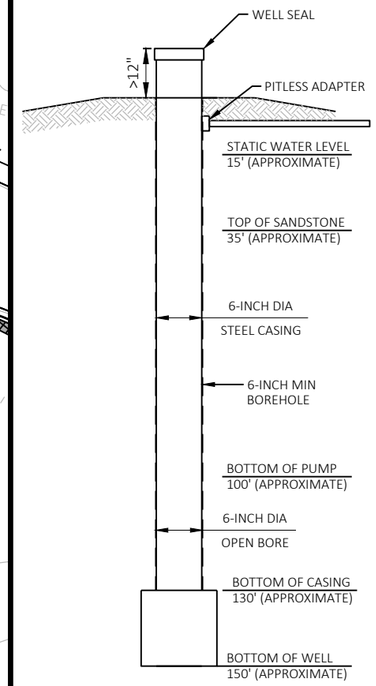
Sheet No.

E-503

PROJECT NO: 1022-04-76	HWY: IH-94	COUNTY: DUNN	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET 106	E

FILE NAME : I:\30800\30810\Design\CAD\PS&E\Plot\E-503.dgn PLOT DATE : 7/10/2023 PLOT BY : EDGE CONSULTING ENGINEERS, INC.

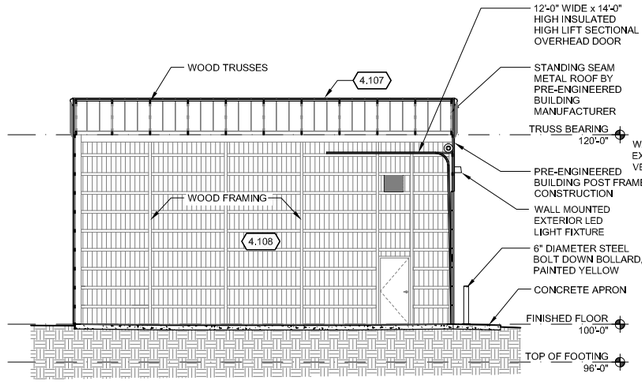




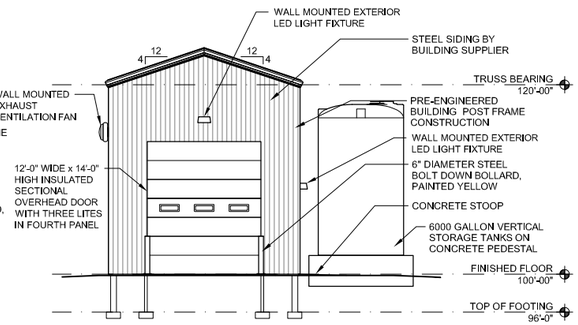
WELL SCHEMATIC
NOT TO SCALE

2

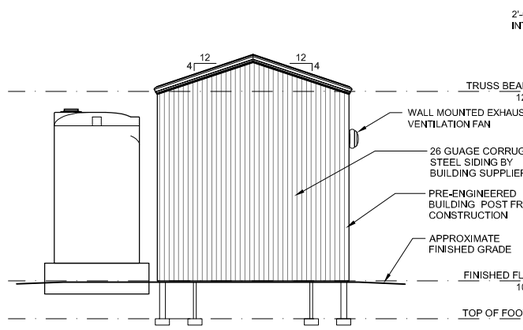
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CONSTRUCTION DETAIL - WATER SCHEMATIC	SHEET 107	E



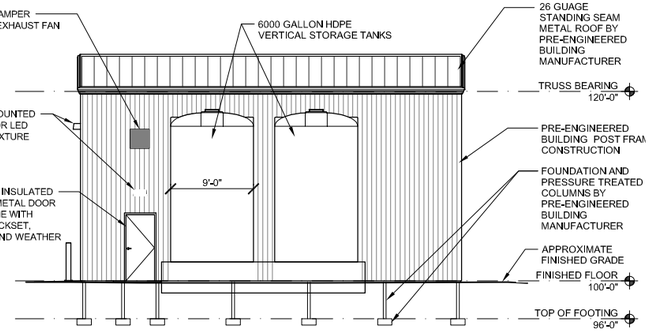
2 BUILDING SECTION
1/16" = 1'-0"



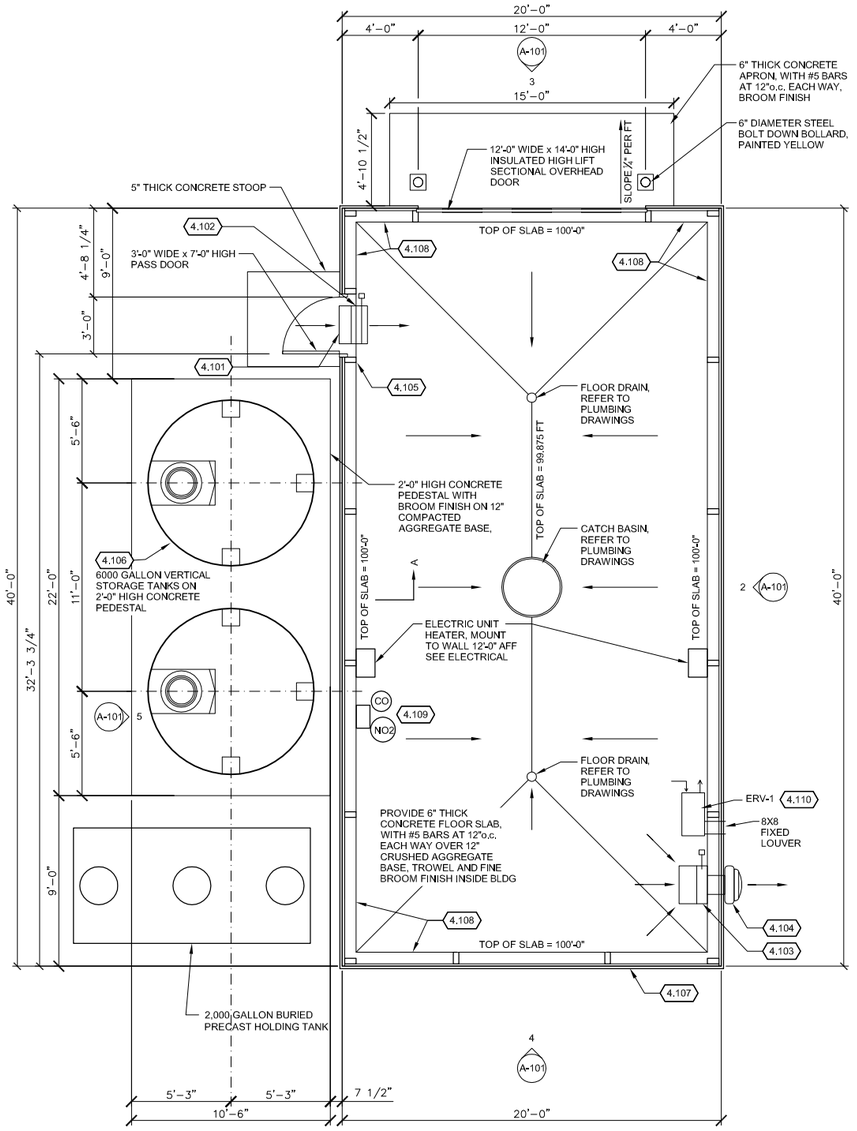
3 EAST ELEVATION
1/16" = 1'-0"



4 WEST ELEVATION
1/16" = 1'-0"



5 NORTH ELEVATION
1/16" = 1'-0"



PLAN NORTH

1 FLOOR PLAN
1/4" = 1'-0"

0 2' 4' 8'

X.XXX FLOOR PLAN KEYED NOTES:

LISTED PRODUCTS ARE BASIS OF DESIGN FOR BIDDING. SIMILAR PRODUCTS BY OTHER MANUFACTURERS WHICH MEET THE SPECIFICATIONS AND INTENT OF DESIGN MAY BE SUBSTITUTED.

- 4.101 L-1, LOUVER, GREENHECK ESJ-603 OR EQUAL, 24 X 24 WALL COLLAR, MOUNT AT 14'-0" AFF.
- 4.102 MOD-1, DAMPER, RUSKIN CD-60 OR EQUAL, 24X24, 120VAC
- 4.103 MOD-2, DAMPER, RUSKIN CD-60 OR EQUAL, 14X14, 120VAC, 14/12 STAINLESS STEEL DUCT DOWN TO 18" AFF
- 4.104 EF-1, EXHAUST FAN, GREENHECK CW-121 OR EQUAL, 1000 CFM@0.5 ESP, ½ HP, 120 VAC
- 4.105 CONTROL SWITCH, AUTOMATED TIMER SWITCH TO OPEN/CLOSE MOD-1 AND MOD-2, INTERLOCK WITH ON/OFF FOR EF-1
- 4.106 6,000 GALLON BRINE STORAGE TANK: BASIS OF DESIGN PRODUCT: ASSMAN MODEL ICT 6500 POLYETHYLENE VERTICAL STORAGE TANK; NATURAL COLOR; 105 INCHES DIAMETER x 193 INCHES HIGH; 24" MANWAY WITH HINGED COVER
- 4.107 BUILDING SHALL BE INSULATED AND HEATED TO MAINTAIN MINIMUM TEMPERATURE OF 40 DEGREES. PROVIDE REQUIRED INSULATION ACCORDING TO THE WISCONSIN ENERGY CODE.
- 4.108 PROVIDE 28 GAUGE CORRUGATED METAL LINER PANELS ON INSIDE OF BUILDING FROM FLOOR TO HEIGHT OF 14'-0", PROVIDE LAPPED AND SEALED JOINTS AND SEALED CLOSURE TRIM TO PROTECT INSULATION AGAINST WASHDOWN OPERATIONS.
- 4.109 PROVIDE GAS DETECTION SYSTEM WITH ELECTRICAL CONNECTION TO EXHAUST FAN. INSTALL CO AND NO2 GAS SENSORS AT MINIMUM 30-INCH ABOVE FLOOR PER THE MANUFACTURER'S GUIDELINES. PACKAGED CONTROL SYSTEM SHALL CONSIST OF MICRO-CONTROLLER, AND SENSOR CONTROLLED RELAY IN NEMA 4 ENCLOSURE. COORDINATE WITH ELECTRICAL CONTRACTOR.
- 4.110 PROVIDE ENERGY RECOVERY VENTILATOR (ERV) CARRIER MODEL HRVXX SH1130 OR EQUAL WITH MINIMUM AIRFLOW OF 40 CFM

FLOOR PLAN GENERAL NOTES

1. SITE DATUM OF FINISHED FIRST FLOOR 895'-6" = ELEVATION 100'-0" ON ARCHITECTURAL DRAWINGS.
2. FIELD VERIFY ALL DIMENSIONS, BRING ANY DISCREPANCIES TO THE ATTENTION OF THE ARCHITECT/ENGINEER FOR FINAL DECISION.

FOUNDATION NOTES

COORDINATE EXCAVATION AND BACKFILL WITH THE PROJECT GEOTECHNICAL REPORT DATED JUNE 13, 2022, BY AMERICAN ENGINEERING AND TESTING. ENGAGE THE SERVICES OF A GEOTECHNICAL ENGINEER TO OBSERVE EXCAVATION AND DETERMINE SUBCUT DEPTHS. UNDERNEATH THE LOADER STORAGE BUILDING AND ESTIMATED SUBCUT DEPTH OF APRROX. 1'-0" FT BELOW EXISTING GRADE IS REQUIRED.

M&H NO.: 3230200-141856.02

A101

2

FIRE PROTECTION AND LIFE SAFETY ANALYSIS

Project Name and Location:

Wisconsin Department of Transportation
IH-94 WESTBOUND
Loader Storage Building
DUNN COUNTY, WISCONSIN

Applicable Codes:

Wisconsin Commercial Building Codes
Building Code: International Building Code (IBC 2015)
Plumbing Code: Wisconsin Administrative Code, Chapters SPS 381 - SPS 384 - SPS 387
Mechanical Code: International Mechanical Code (IMC 2015)
Electrical Code: Wisconsin Administrative Code Chapter 316 and NFPA 70 National Electrical Code
Energy Code: International Energy Conservation Code, (IEEC 2015)

Building Occupancy Classifications:

Section 311.3	Group S-2, Low Hazard Storage

Motor Vehicle Related Occupancies

IBC Section 406.6 Enclosed Parking Garages	406.6.2 Ventilation A mechanical Ventilation system shall be provided in accordance with the international Mechanical Code
406.6.3 Automatic sprinkler system. An enclosed parking garage shall be equiped with an automatic sprinkler system in accordance with Section 903.2.10. 903.2.10.1 Commercial Parking Garages. An automatic sprinkler system shall be provided throughout buildings used for storage of commercial vehicles where the fire area exceeds 5,000 square feet.	903.2.10 Group S-2 enclosed parking garages. An automatic sprinkler system shall be provided throughout building classified as enclosed parking garages in accordance with Section 406.6 where either of the following conditions exists: 1) Where the fire area of the enclosed parking garage exceeds 12,000 square feet. 2) Where the enclosed parking garage is located beneath other groups

ACTUAL AREA 800 SQUARE FEET, THEREFORE AN AUTOMATIC SPRINKLER SYSTEM IS NOT REQUIRED.

Allowable Height and Area:

IBC Section 503, 504, 506	
Allowable Height:	2 stories or 40 ft
Actual Height:	24 ft
Allowable Area:	13,500 sq. ft.
Actual Area:	800 sq ft
IBC Section 507	The area of a group S-2 building no more than one story in height shall not be limited when the building is surrounded and adjoined by public ways or yards not less than 60 feet in width.

Construction Types:

IBC Table 601	Type V-B: Wood Framing with metal siding and roofing Building is Not Sprinkled

Fire Resistive Requirements for Building Elements:

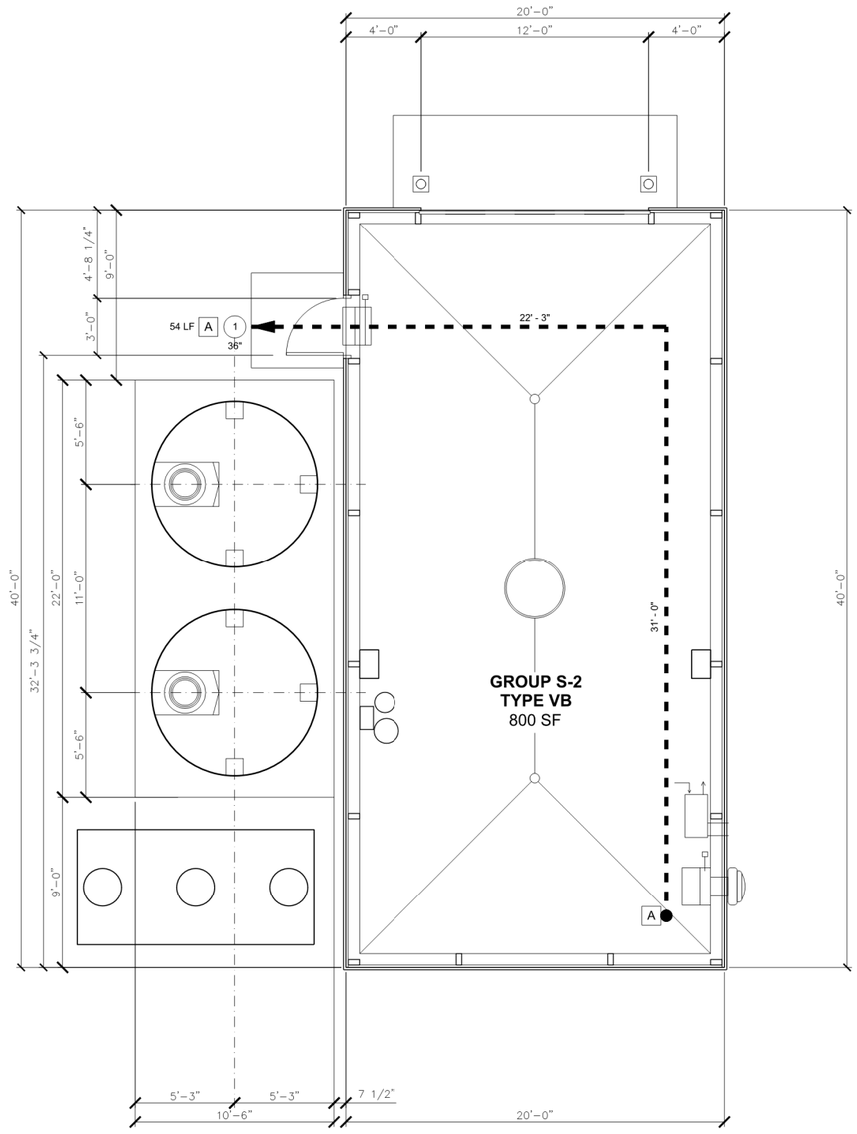
IBC Table 601	
Primary Structural Frame:	0 hrs
Exterior Non-Bearing Walls:	0 hrs
Floor Construction and secondary members:	0 hrs
Roof construction and secondary framing:	0 hrs

Fire Resistive Requirements for Exterior Walls Based on Separation Distance:

IBC Table 602	>30 ft separation = 0 hrs

Means of Egress Requirements:

IBC Section 1003.4	Walking Surfaces of the Means of Egress shall have a slip resistant surface and be securely attached.
IBC Table 1004.1.2, Max. Floor Area Allowances per Occupant	200 sq. ft. gross (Accessory storage areas, mechanical equipment rooms) Required Occupant Load = 800/200 = 4
IBC Section 1005.3.2, Minimum required Egress Width	=0.2x=0.8 inches, 0.2 x 4 = 0.8", Not Applicable
IBC Section 1008 Means of Egress Illumination	1) Means of Egress shall be illuminated and illumination level shall not be less than 1 foot-candle at the walking surface.
IBC Section 1008 Means of Egress Illumination	2) Emergency power shall be provided for Means of Egress Illumination for a duration of not less than 90 minutes
IBC Section 1010 Doors, Gates and Turnstiles	Means of Egress doors shall meet the requirements of this section. Minimum clear width of open door shall be 32 inches. Width provided = 36 inches
IBC Section 1013. Exit Signs	Illuminated exit signs shall be provided
IBC Table 1006.2.1 Spaces with one exit or exit access doorway	Shall not exceed 100 ft
IBC Section 1006 Number of exits and exit access doorways	
Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in TABLE 1006.2.1 SPACES WITH ONE EXIST OR EXIT ACCESS DOORWAY	
	Maximum Occupant Load = 29, Second exit is not required
	Maximum Common Path of Travel Distance = 100 feet, actual travel distance = 55 feet, therefore a second exit is not required



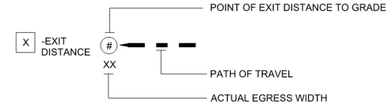
PLAN NORTH

1 **GENERAL CODE ANALYSIS AND LIFE SAFETY PLAN**

1/4" = 1'-0"

0 2' 4' 8'

LIFE SAFETY PLAN LEGEND



M&H NO: 3230200-141856.02

G101

SALT STORAGE BUILDING SPECIFICATIONS

THE WORK UNDER THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A COMPLETE SALT STORAGE BUILDING INCLUDING THE CONCRETE FOUNDATIONS.

THE BUILDING SHALL BE WEATHER TIGHT, AND SUITABLE FOR THE STORAGE OF SALT. THE DESIGN OF THE FOUNDATIONS OF THE BUILDING SHALL BE PROVIDED AS PART OF THE MANUFACTURER'S BUILDING DESIGN, BASED ON INFORMATION OBTAINED BY MEANS OF A SUBSURFACE INVESTIGATION AND GEOTECHNICAL REPORT PROVIDED BY THE OWNER.

BUILDING SHALL BE RECTANGULAR WITH WALLS SUPPORTED BY EXTERNAL BRACING TO WITHSTAND LATERAL LOAD OF INTERNAL MATERIAL PILE. THE BUILDING SHALL HAVE A GABLE ROOF. BASIS OF DESIGN BUILDING BY WHEELER, MINNEAPOLIS, MN

ALL TIMBER SHALL BE DOUGLAS FIR, GRADED IN ACCORDANCE WITH WCLIB OR WWPA RULES. ALL TIMBER SHALL COMPLY WITH THE ANSI/AF&PA NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION. ALL TIMBER SHALL BE PRESSURE TREATED WITH COPPER NAPHTHENATE.

TIMBER SPECIFICATIONS

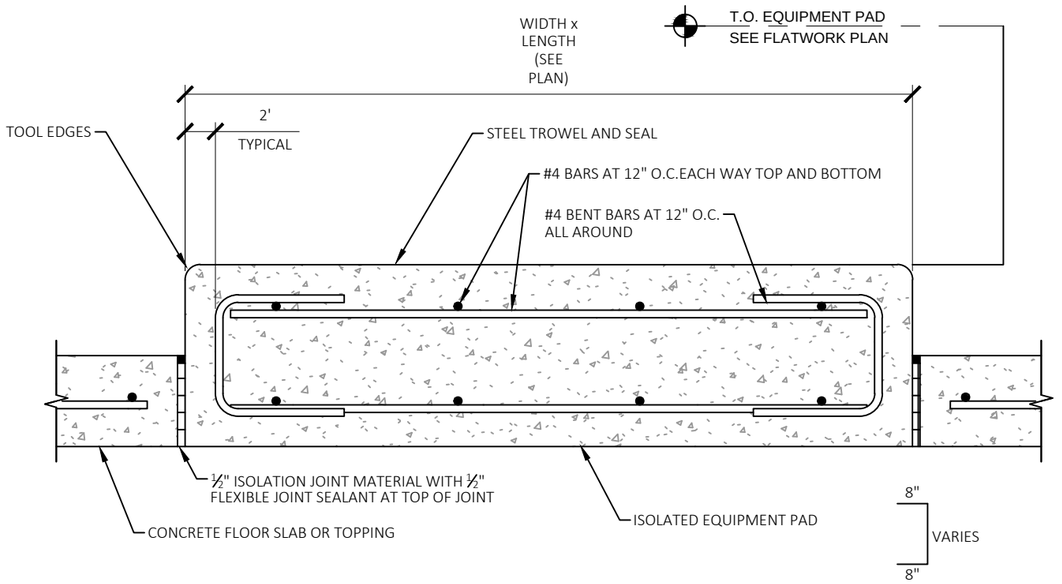
ALL TIMBER CUT IN THE FIELD SHALL BE TREATED WITH (3) COATS OF AN APPROVED TREATING PRESERVATIVE.

ALL HARDWARE TO MEET ASTM A307 GALVANIZED TO A153. ALL HIGH STRENGTH HARDWARE TO MEET ASTM A325 OR A449 GALVANIZED TO A153. ALL STRUCTURAL STEEL TO MEET ASTM A36 GALVANIZED TO A123.

ALL METAL GUSSET PLATES ON TRUSS AND TRUSS TY-DOWNS SHALL BE PAINTED WITH ASPHALT PAINT.

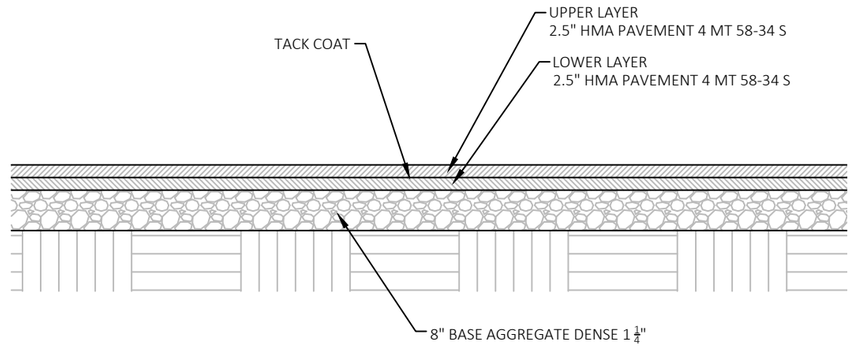
FOUNDATION NOTES

COORDINATE EXCAVATION AND BACKFILL WITH THE PROJECT GEOTECHNICAL REPORT DATED JUNE 13, 2022, BY AMERICAN ENGINEERING AND TESTING. ENGAGE THE SERVICES OF A GEOTECHNICAL ENGINEER TO OBSERVE EXCAVATION AND DETERMINE SUBCUT DEPTHS. UNDERNEATH THE SALT SHED BUILDING AND ESTIMATED SUBCUT DEPTH OF APRROX. 5'-0" FT BELOW EXISTING GRADE IS REQUIRED.



ISOLATED EQUIPMENT FOOTING

SECTION A-A



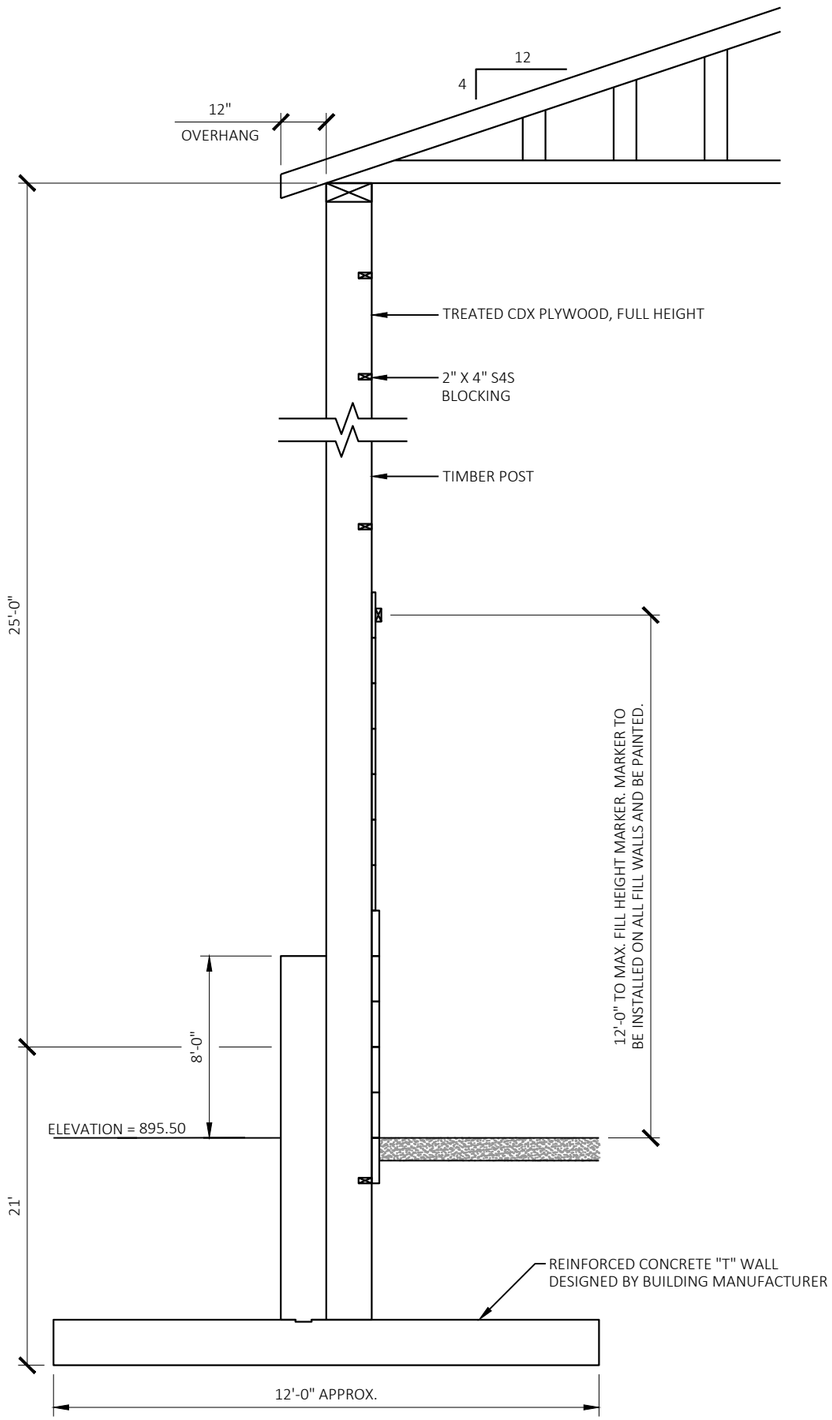
SALT SHED BUILDING FLOOR DETAIL

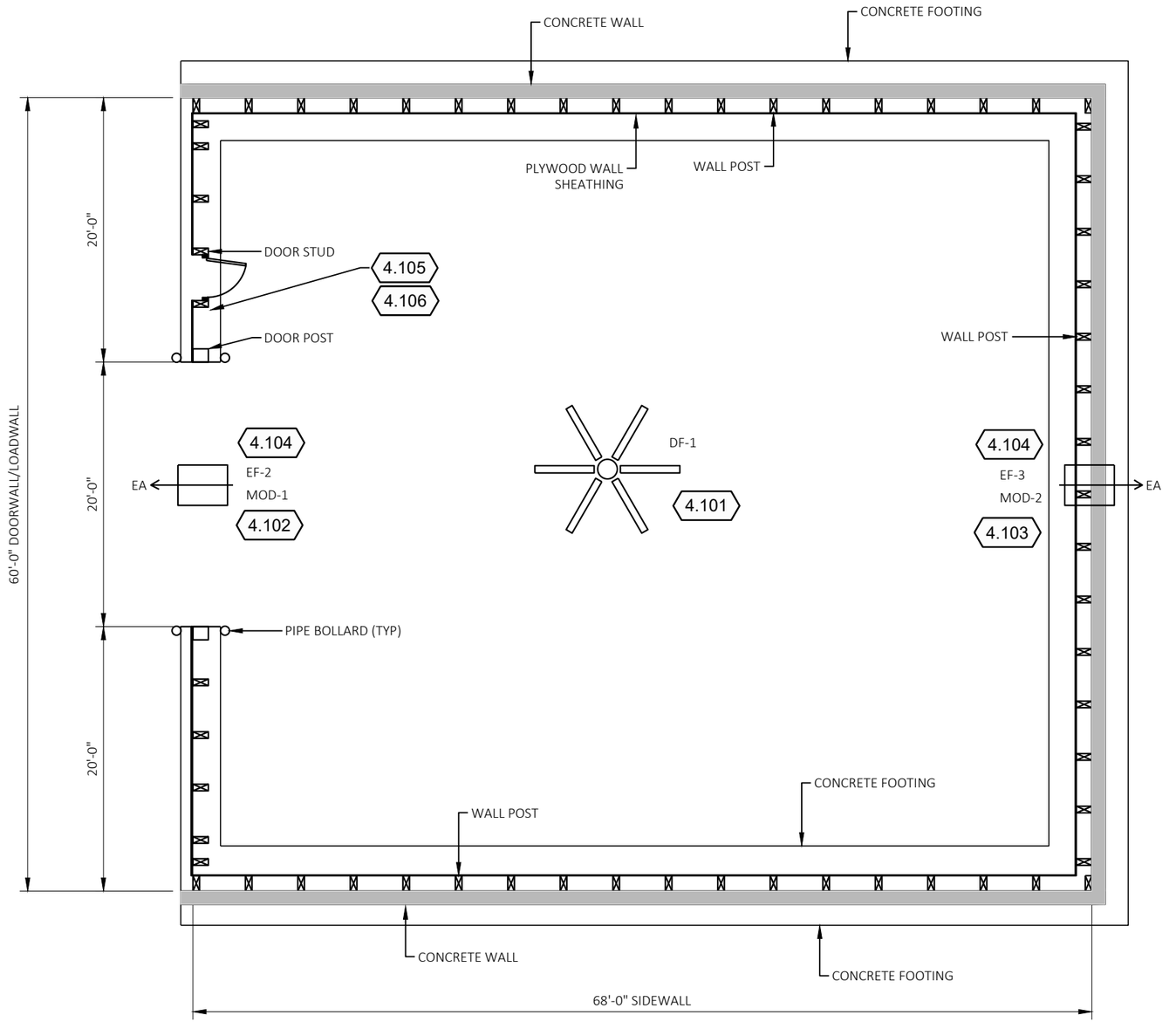
2

FLOOR PLAN KEYED NOTES:

X.XXX

4.101	14 FT DIAMETER DESTRATIFICATION FAN, GREENHECK MODEL DC-5-14-13LV OR EQUAL
4.102	MOD-1, DAMPER, RUSKIN CD-60 OR EQUAL, 30X30 120 VAC
4.103	MOD-2, DAMPER, RUSKIN CD-60 OR EQUAL, 30X30 120 VAC
4.104	EXHAUST FAN, GREENHECK AER MODEL 30-03-3000-VG, 2500 CFM@0.25 ESP, $\frac{1}{4}$ HP, 120 VAC OR EQUAL. ECM MOTOR.
4.105	CONTROL SWITCH, INTERMATIC TIMER SWITCH, OPEN/CLOSE MOD-1 AND MOD-2, INTERLOCK WITH ON/OFF FOR EF-2 AND EF-3
4.106	CONTROL SWITCH, INTERMATIC SWITCH ON/OFF, INTERLOCK WITH ON/OFF FOR DF-1





PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	SALT SHED	SHEET 111 E

FILE NAME : X:\3230200\141856.02\TECH\CAD\XXXXXXXX\SHEETSPLAN\SALT SHED.DWG
LAYOUT NAME - 2

PLOT DATE : 4/25/2023 2:14 PM PLOT BY : BRIAN VEIT PLOT NAME : PLOT SCALE : 1 IN:10 FT

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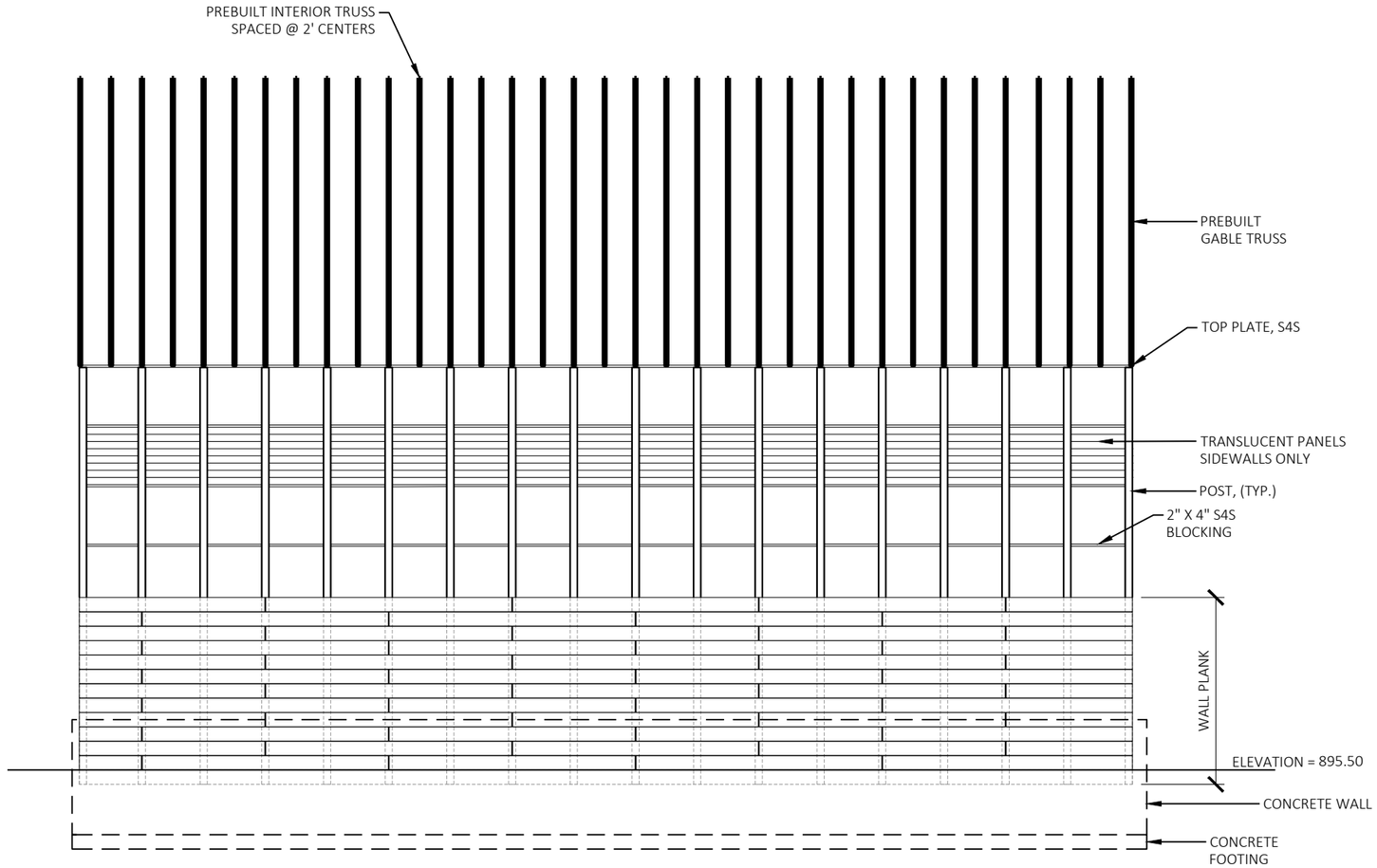
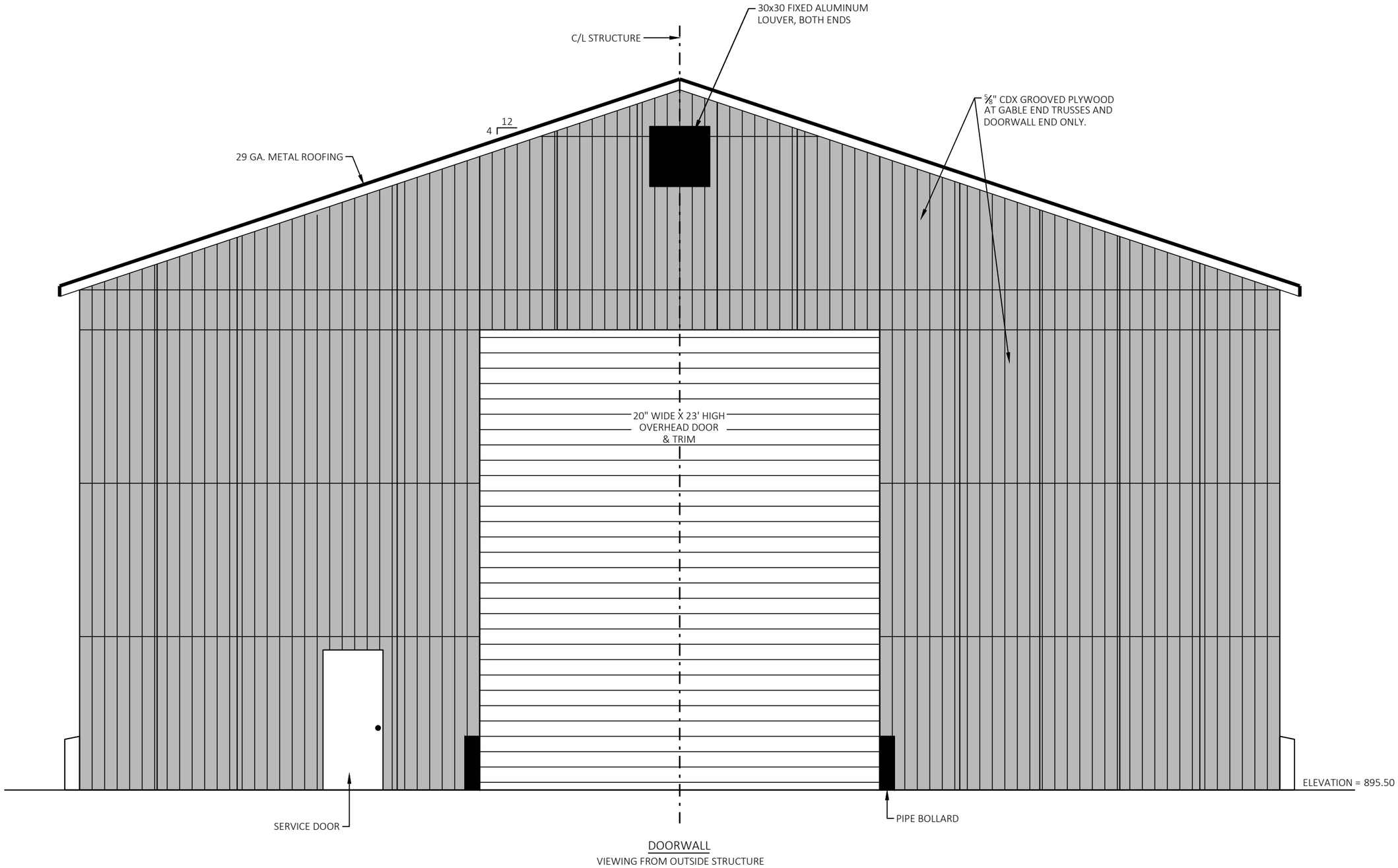


SIDEWALL FRAMING
VIEWING FROM INSIDE STRUCTURE

2



DOORWALL
VIEWING FROM OUTSIDE STRUCTURE

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	SALT SHED	SHEET 113	E

PLUMBING ABBREVIATIONS:

A	AMPS
ABI	ALTERNATE BID ITEM
AFF	ABOVE FINISHED FLOOR
AGD	ABOVE GROUND
AHJ	AUTHORITY HAVING JURISDICTION
ALUM	ALUMINUM
ANG	AIR NATIONAL GUARD
APPROX	APROXIMATELY
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASL	ABOVE SEA LEVEL
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSE	AMERICAN SOCIETY OF SANITARY ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BFF	BELOW FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
BHF	BUTT HEAT FUSION
BLDG	BUILDING
BO	BID OPTION
BPD	BACKFLOW PREVENTION DEVICE
BR	BRAZE
BRS	BRASS
BRZ	BRONZE
BS	BLACK (MILD) STEEL
BTU	BRITISH THERMAL UNIT
BW	BUTT WELD
BZ	BRONZE
CI	CAST IRON
CISPI	CAST IRON SOIL PIPE INSTITUTE
CL	CENTERLINE
COMP	COMPRESSOR
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CRA	CONCRETE REACTION ANCHOR
CS	CARBON STEEL
CTCLG	CLOSE TO CEILING
CTCLM	CLOSE TO COLUMN
CTW	CLOSE TO WALL
CU	COPPER OR CUBIC
DBA	DECIBELS, BAND A
DCVA	DOUBLE CHECK VALVE ASSEMBLY BPD
DEG	DEGREE
DEMO	DEMOLISH OR DEMOLITION
DFD	DEPARTMENT OF DEFENSE
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DISCH	DISCHARGE
DN	DOWN
DWG	DRAWING
DWV	DRAIN, WASTE AND VENT
E	EXISTING
EEW	EMERGENCY EYE/FACE WASH
EFF	EFFICIENCY
EL	ELEVATION
ELEC	ELECTRIC
EQPT	EQUIPMENT
ESEW	EMERGENCY SHOWER/EYE WASH
ET	EXPANSION TANK
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
F	FAHRENHEIT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FLA	FULL LOAD AMPS
FLOW	FLOW OR FLOWRATE
FPM	FEET PER MINUTE
FS	FLOOR SINK
FT	FEET
FTWC	FEET WATER COLUMN PRESSURE
GAL	GALLON OR GAUGE
GBS	GASKETED BELL AND SPIGOT
GPM	GALLONS PER MINUTE
GR	GROOVED
GS	GALVANIZED STEEL
H	HEIGHT
HC	HOSE CONNECTION
HDB	HYDROSTATIC DESIGN BASIS
HOA	HAND-OFF-AUTO
HP	HORSE POWER
HX	HEAT EXCHANGER
HZ	HERTZ
IAW	IN ACCORDANCE WITH
IBNLT	INCLUDED BUT NOT LIMITED TO
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INHG	INCHES MERCURY PRESSURE
INWC	INCHES WATER COLUMN PRESSURE
IPC	INTERNATIONAL PLUMBING CODE
L	LENGTH OR LAVATORY
LB	POUNDS
LCO	LINE CLEAN OUT
LIN	LINEAR
LPG	LIQUIFIED PETROLEUM GAS
MADP	MAXIMUM ALLOWABLE DIFFERENTIAL PRESSURE
MAWP	MAXIMUM ALLOWABLE WORKING PRESSURE
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MC	MECHANICAL COUPLING
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MMBH	MILLION BTU PER HOUR
MOCP	MINIMUM OVER CURRENT PROTECTION
MSS	MANUFACTURERS STANDARDIZATION SOCIETY
MTL	MATERIAL
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NG	NATURAL GAS
NH	NO-HUB
NHC	NO-HUB COUPLING
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NOM	NOMINAL
NPSH	NET POSITIVE SUCTION HEAD
NPSHA	NPSH AVAILABLE
NPSHR	NPSH REQUIRED
OD	OUTSIDE DIAMETER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
P	PRESSURE
PCN	PLANT CONTROL NETWORK
PD	PRESSURE DROP/DIFFERENTIAL
PDI	PLUMBING DEVELOPMENT INSTITUTE
PE	POLYETHYLENE
PH	PHASE
PL	PLACES
PP	POLYPROPYLENE
PPH	POUND PER HOUR
PREDV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSID	PSI DIFFERENTIAL
PSIG	PSI GAGE
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RCP	REINFORCED CONCRETE PIPE
REF	REFERENCE
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE BPD
SCH	SCHEDULE
SCO	STACK CLEANOUT
SD	SOLDER
SDR	STANDARD DIMENSION RATIO
SH	SHOWER
SHR	SOCKET HEAT FUSION
SHT	SHEET
SMLS	SEAMLESS
SOV	SHUT-OFF VALVE
SOV	SHUT-OFF VALVE
SP	STATIC PRESSURE
SPEC	SPECIFICATIONS
SQ	SQUARE
SRV	SAFETY RELIEF VALVE
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
SV	SOLVENT WELD
SW	SOCKET WELD
TDH	TOTAL DEVELOPED HEAD
TDS	TOTAL DISSOLVED SOLIDS
TEMP	TEMPERATURE
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TH	THREADED
TYP	TYPICAL
UFC	UNIFIED FACILITIES CRITERIA
UGD	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UR	URINAL
UV	ULTRAVIOLET
V	VOLTS OR VENT
VFD	VARIABLE FREQUENCY DRIVE
VLV	VALVE
VTR	VENT THROUGH ROOF
W	WATTS OR WIDTH
WC	WATER CLOSET
WCO	WALL CLEANOUT
YCO	YARD CLEANOUT

M&H NO.: 3230200-141856.02

P-001

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	NOTES, SYMBOLS AND ABBREVIATIONS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

2

PIPING SYMBOLS:

- PIPE TURNED TOWARD
- PIPE TURNED AWAY
- PIPE TURNED AWAY
- PIPE TURNED TOWARD
- FLEXIBLE CONNECTOR
- UNION
- FLANGES
- REDUCER (CONCENTRIC)
- REDUCER (ECCENTRIC)
- PIPE CAP
- PIPE PLUG
- FLUID FLOW DIRECTION
- PG — PIPE GUIDE
- PA — PIPE ANCHOR
- PITCH — PIPE PITCH DIRECTION
- NEW CONNECTION TO EXISTING
- EXISTING TO REMAIN
- EXISTING TO BE REMOVED
- NEW TO BE INSTALLED
- PRESSURE GAUGE
- TEMPERATURE GAUGE
- WATER HAMMER ARRESTOR
- AV — AIR VENT (AUTO)
- MV — AIR VENT (MANUAL)
- AUTOMATIC CONTROL VALVE (2-WAY)
- AUTOMATIC CONTROL VALVE (3-WAY)
- BALL VALVE
- BALANCING VALVE
- BUTTERFLY VALVE
- BACKFLOW PREVENTION VALVE
- CHECK VALVE
- FILTER
- FLOW MEASUREMENT STATION
- GATE VALVE
- GAUGE CONNECTION
- GLOBE ANGLE VALVE
- GLOBE VALVE
- ISOLATION/SHUT-OFF/ MANUAL VALVE
- PLUG VALVE
- PRESSURE REDUCING VALVE
- PRESSURE REGULATING VALVE
- RELIEF VALVE
- S — SOLENOID VALVE ONE-WAY (ELECTRIC)
- STRAINER
- THROTTLING VALVE
- VACUUM BREAKER
- FS — FLOW SENSOR
- LS — LEVEL SENSOR
- PS — PRESSURE SENSOR
- TS — TEMPERATURE SENSOR

PLUMBING PIPING:

A	COMPRESSOR AIR
CD	CONDENSATE
CW	DOMESTIC COLD WATER
SCW	DOMESTIC SOFT COLD WATER
HW	DOMESTIC HOT WATER
SHW	DOMESTIC SOFT HOT WATER
HWR	DOMESTIC HOT WATER RETURN
SHWR	DOMESTIC SOFT HOT WATER RETURN
MW	DOMESTIC MIXED WATER
G	NATURAL GAS
SAN	SANITARY DRAIN
V	VENT FOR SANITARY DRAIN
ST	STORM DRAIN

M&H NO.: 3230200-141856.02

P-002

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	NOTES, SYMBOLS AND ABBREVIATIONS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

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GENERAL NOTES:

1. ABBREVIATIONS INDICATED HERE AND NOT USED IN THE CONTRACT DOCUMENTS DO NOT APPLY TO THIS PROJECT. ADDITIONAL ABBREVIATIONS MAY BE INDICATED IN THE CONTRACT DOCUMENTS.

2. THESE DRAWINGS ARE DESIGN DRAWINGS AND ARE DIAGRAMMATIC, THEY MAY NOT SHOW ALL PHYSICAL ARRANGEMENTS, OFFSETS, BENDS, OR ELBOWS WHICH MAY BE REQUIRED FOR PROPER INSTALLATION OF VARIOUS MATERIALS, EQUIPMENT, AND PIPING SYSTEMS IN ALLOTTED SPACES. EXAMINE THESE AND OTHER AVAILABLE DRAWINGS TO DETERMINE SPACE LIMITATIONS AND INTERFERENCES. MAKE ANY MINOR CHANGES IN LOCATIONS OF EQUIPMENT, AND PIPING FROM THAT SHOWN ON DRAWINGS AND FOR ALL PHYSICAL DETAILS REQUIRED FOR INSTALLATION. COST FOR ADAPTING WORK TO JOB SITE CONDITIONS SHALL NOT BE CONSIDERED AS BASIS OF AN EXTRA COST TO CONTRACT.

3. ELEVATION OF PIPING INDICATED ON THESE DRAWINGS ARE TO BE USED AS GUIDELINES TO ASSIST WITH INSTALLATIONS. MINOR CHANGES TO THESE ELEVATIONS MAY BE NECESSARY TO ELIMINATE UNFORESEEN INTERFERENCES. ANY CHANGE IN ELEVATION SHALL BE APPROVED PRIOR TO CHANGE.

4. ANY AND ALL INFORMATION SHOWN ON THESE DRAWINGS WITH RESPECT TO EXISTING STRUCTURES, UTILITIES, AND MECHANICAL SYSTEMS, IS AS EXACT AS COULD BE SECURED. THE INFORMATION IS NOT WARRANTED NOR GUARANTEED ACCURATE, FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO PROCEEDING WITH WORK.

5. ACCURATE AND LEGIBLE RECORD (AS-BUILT) DRAWINGS SHALL BE MAINTAINED AT THE JOB SITE, AND BE SUBMITTED PRIOR TO FINAL PAYMENT.

6. ALL NEW AND EXISTING ROOFING SYSTEMS SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION ACTIVITIES.

7. TEMPORARILY PATCH ALL ROOF OPENINGS WATERTIGHT UNTIL FINAL CLOSURE CAN BE MADE.

8. SEQUENCE OF WORK AND/OR PLACE OF COMMENCEMENT OF WORK SHALL BE APPROVED PRIOR TO WORK BEING STARTED. SCHEDULED SHUTDOWNS SHALL BE CLOSELY COORDINATED WITH EXISTING OPERATIONS.

9. NOMINAL FINISHED FLOOR ELEVATION = 100.0 FT

10. GENERAL NOTES APPLY UNLESS NOTED OTHERWISE

11 THE PLUMBING CONTRACTOR SHALL EXAMINE ALL CONTRACT DOCUMENTS AND IS REQUIRED TO DO ALL WORK WHICH IS SHOWN ON THE DRAWINGS, STATED IN THE SPECIFICATIONS, OR REASONABLY IMPLIED AS NECESSARY TO COMPLETE THEIR DIVISION OF WORK FOR THIS PROJECT REGARDLESS OF WHERE IN THE CONTRACT DOCUMENTS THE WORK IS REPRESENTED. PLUMBING CONTRACTOR TO COORDINATE WORK WITH ALL OTHER TRADES. ALL OTHER TRADE DOCUMENTS ARE TO BE CONSIDERED PART OF THIS CONTRACTORS DOCUMENTS WITH RESPECT TO COORDINATION OF WORK BETWEEN TRADES OF WORK.

M&H NO.: 3230200-141856.02

P-003

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	NOTES, SYMBOLS AND ABBREVIATIONS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

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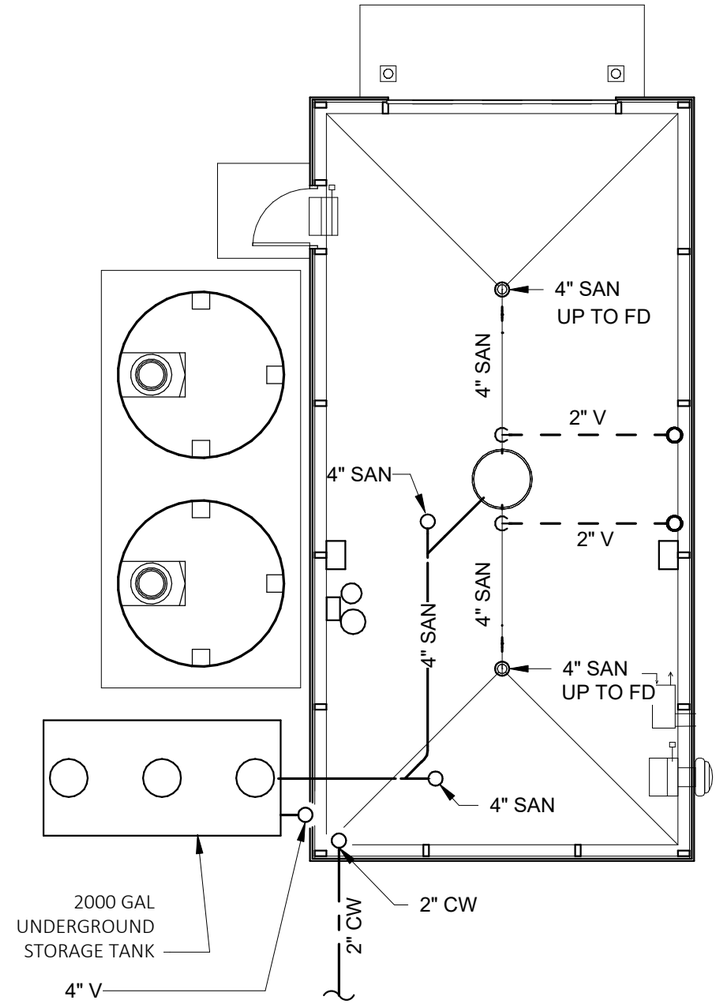

1 UNDERGOUND DRAIN AND VENT PLAN

1/8" = 1'-0"

M&H NO.: 3230200-141856.02

P-101

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	DRAIN AND VENT PLANS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

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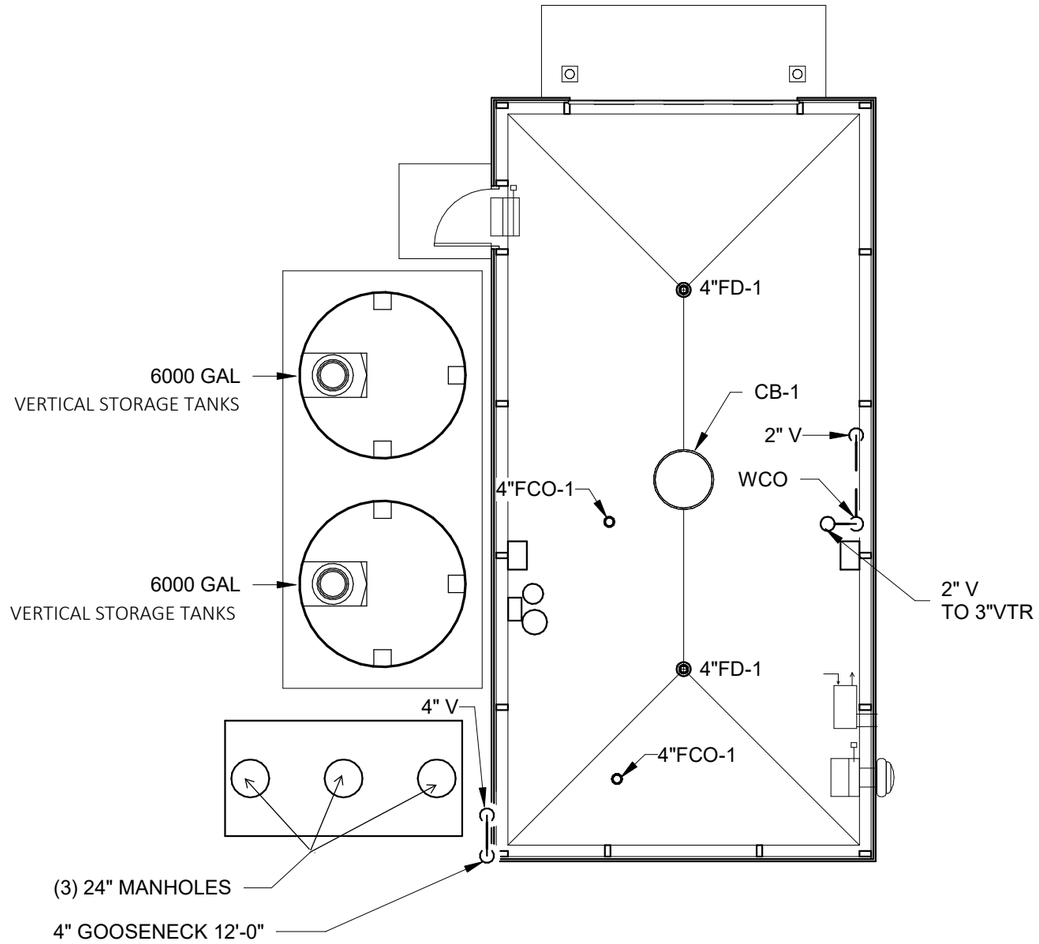

1 ABOVEGROUND DRAIN AND VENT PLAN

1/8" = 1'-0"

M&H NO.: 3230200-141856.02

P-102

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	DRAIN AND VENT PLANS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

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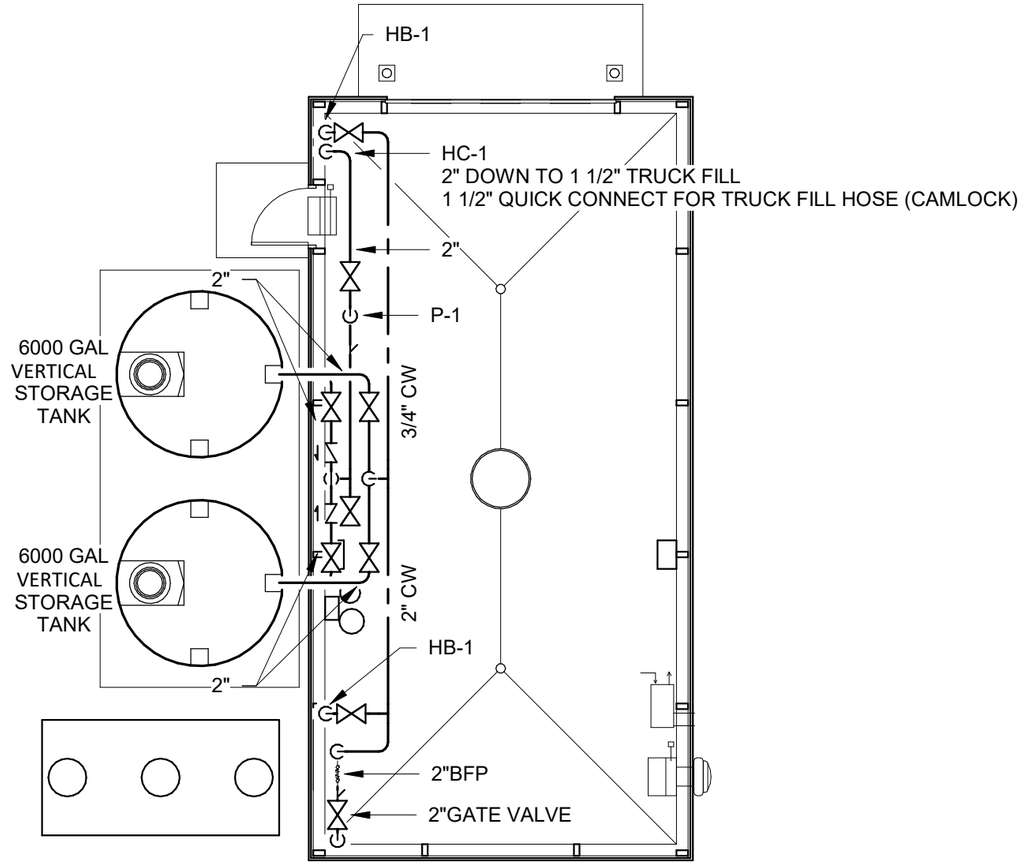

1 FIRST FLOOR SUPPLY PLUMBING

1/8" = 1'-0"

M&H NO.: 3230200-141856.02

P-131

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	FIRST FLOOR SUPPLY PLAN	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

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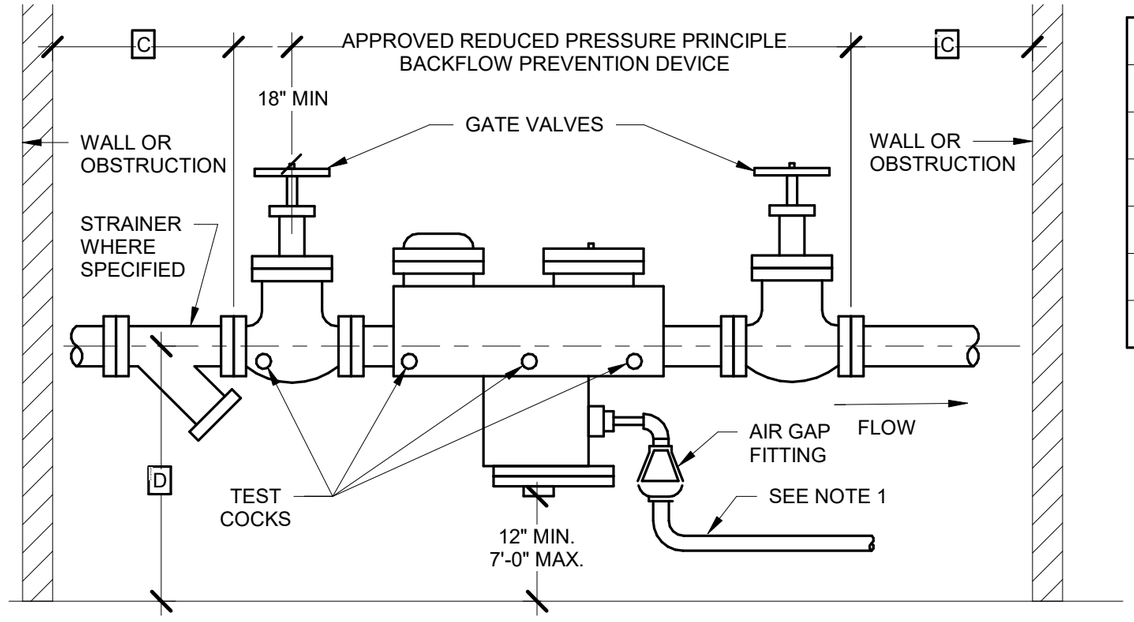
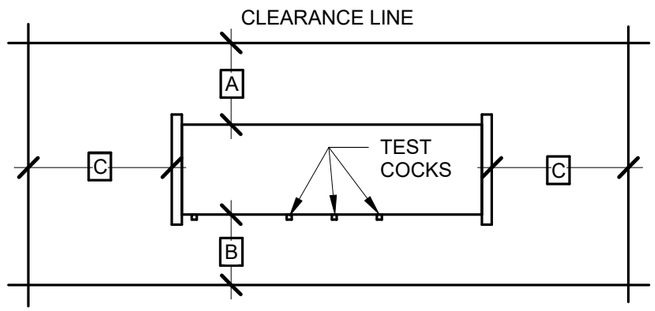


OPEN-SITE DRAIN	
UNIT	**DRAIN SIZE**
1/2" - 3/4"-1"	1-1/2"
1-1/4" - 1-1/2"	2"
2" - 2-1/2"	3"
3"	3"
4" - 10"	4"

NOTES:

1. OPEN SITE DRAIN, SIZE AS INDICATED IN SCHEDULE, PITCH AT 1/8" PER FOOT TO NEAREST FLOOR OR HUB DRAIN.



MINIMUM CLEARANCE				
SIZE	A	B	C	D
ALL	4"	24"	4"	24"

1 REDUCED PRESSURE BACKFLOW PREVENTER(RPBA) INSTALLATION

NO SCALE

M&H NO.: 3230200-141856.02

P-501

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	DETAILS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

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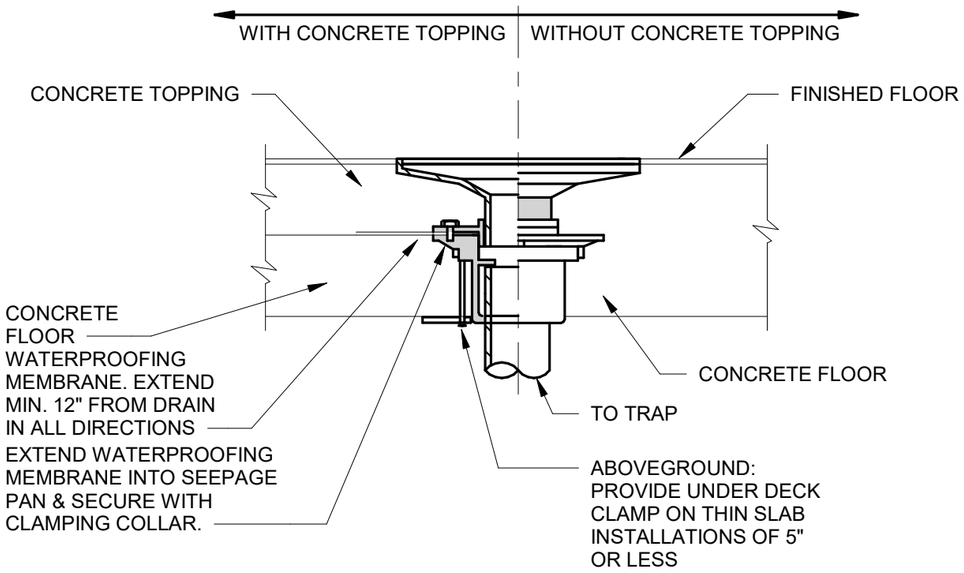
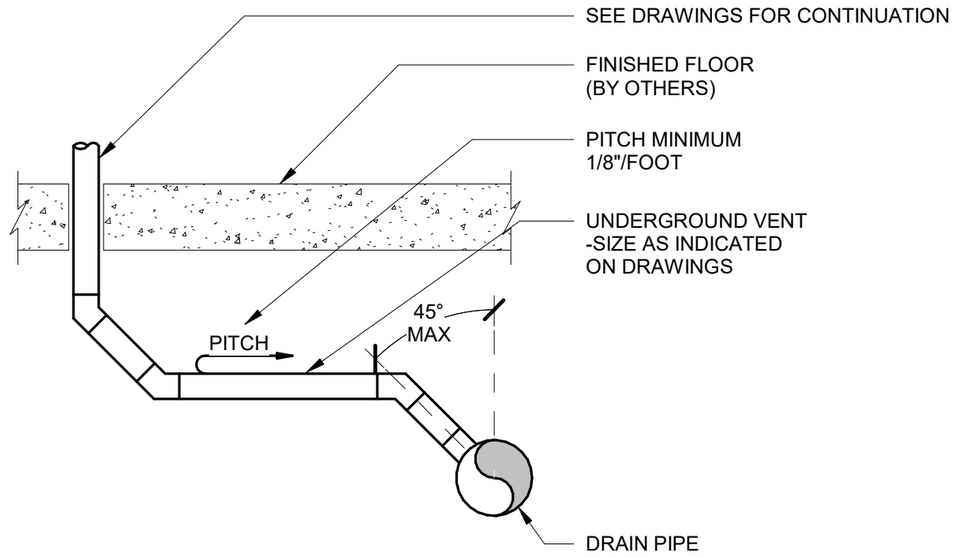


2 FLOOR DRAIN - CAST IN PLACE

NO SCALE



1 UNDERGROUND VENT SECTION

NO SCALE

M&H NO.: 3230200-141856.02

P-502

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	DETAILS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

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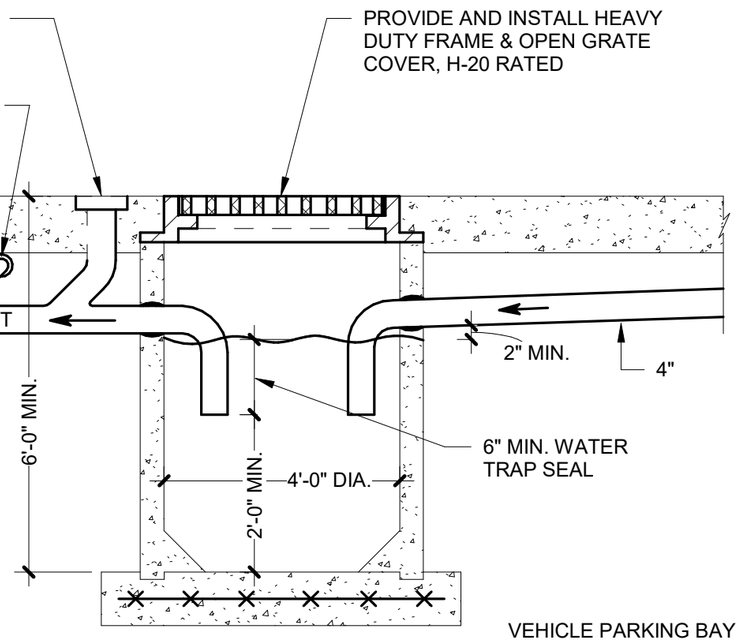

1 GARAGE CATCH BASIN (VEHICLE PARKING BAY)

NO SCALE

M&H NO.: 3230200-141856.02

P-503

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	DETAILS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

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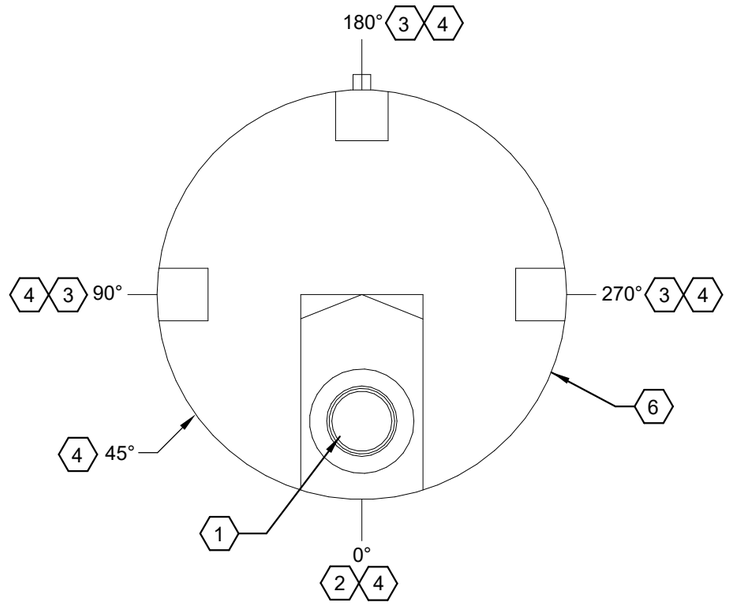
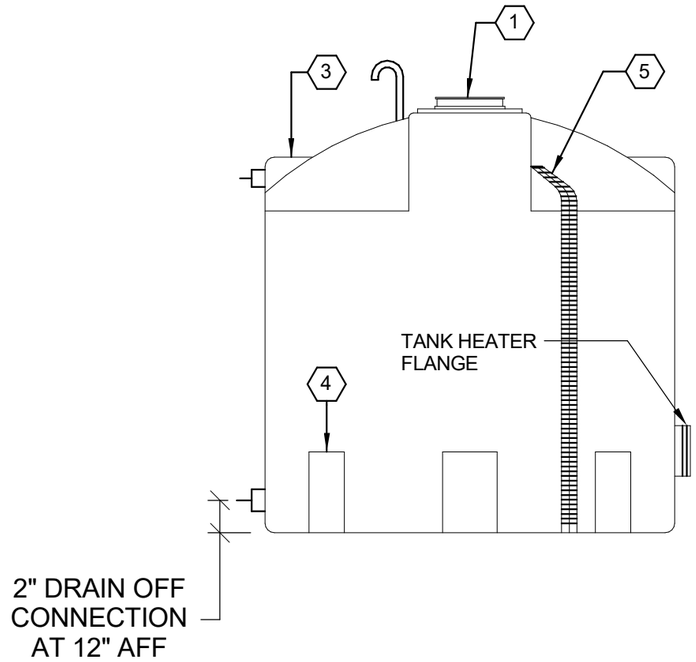




NOTES:

1. 16" MANWAY W/ LEVER LOCK COVER
2. 28" x 43" MANWAY FLAT
3. 11" x 11" DOME FLAT (TYP. 3 PLACES)
4. 11" x 14" LOWER FLAT (TYP. 6 PLACES)
5. MOLDED IN VOLUME MARKER (25 GAL. INCREMENTS)
6. ACA ASSMANN, POLY ETHYLENE TANK, MODEL ACT 6000 GALLON. WITH OPENING FOR A 2" FILL LINE, 2" DRAIN OFF CONNECTION @ 12" AFF, AND FLANGE FOR TANK HEATER.

1 VERTICAL STORAGE TANK

NO SCALE

M&H NO.: 3230200-141856.02

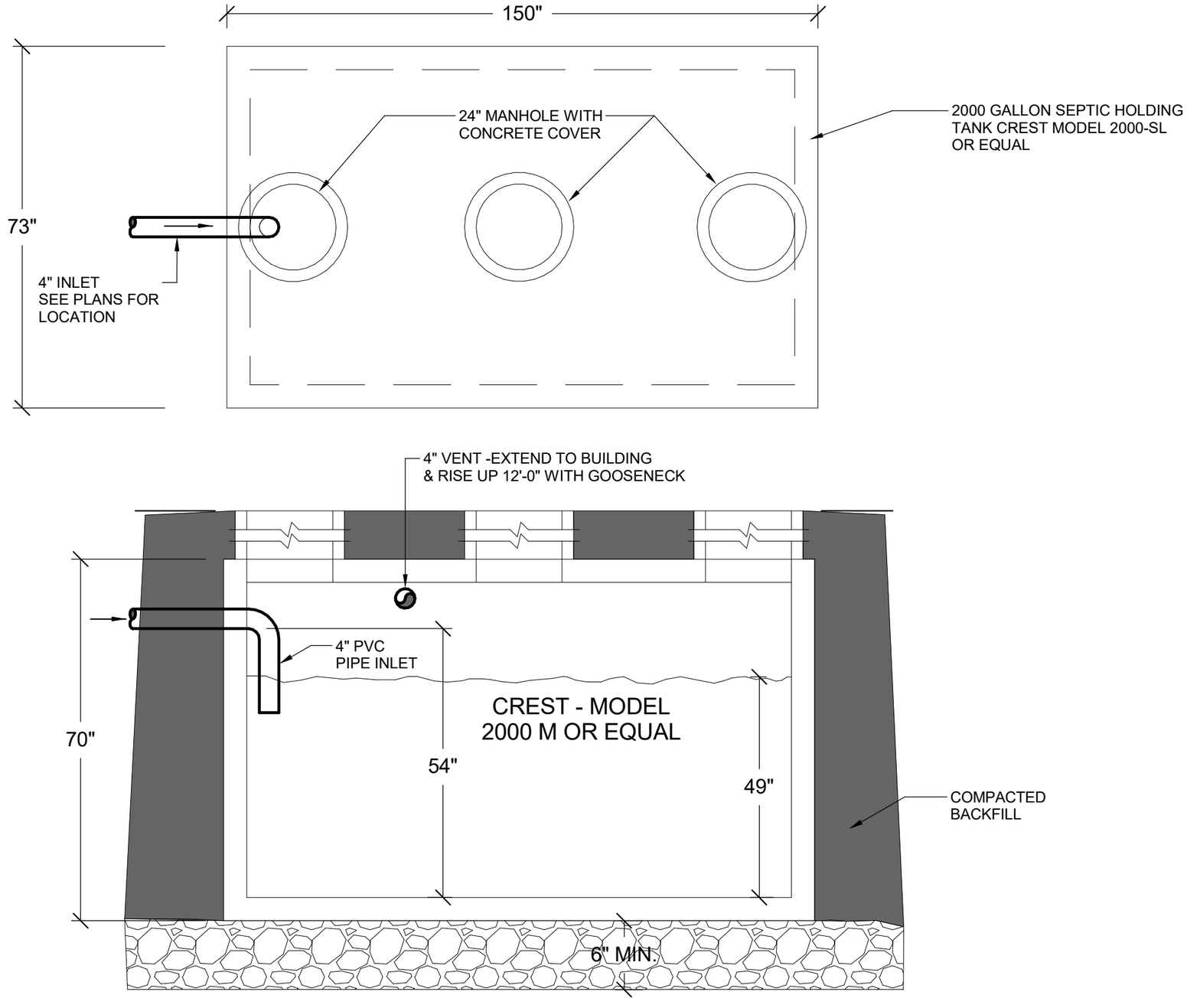
P-504

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	DETAILS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

2



1 UNDERGROUND STORAGE TANK

NO SCALE

M&H NO.: 3230200-141856.02

P-505

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	DETAILS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:29 AM PLOT BY : PLOT NAME : PLOT SCALE :

2

PLUMBING EQUIPMENT SCHEDULE

MARK	EQUIPMENT TYPE	MANUFACTURER, MODEL NUMBER	DESCRIPTION SUMMARY (SEE SPECIFICATIONS)	ELECTRICAL				REMARKS
				VOLTS/PHASE	AMPS	HP	WATTS	
FD-1	FLOOR DRAIN	ZURN Z-508-VP	CAST IRON BODY, 9" DIAMETER TOP DRAIN, COMBINATION MEMBRANE FLASHING CLAMP AND FRAME FOR HEAVY DUTY CAST IRON DEEP FLANGE SLOTTED GRATE WITH SEDIMENT BUCKET.					
HC-1	HOSE CONNECTION		1 1/2" NPT THREADED HOSE CONNECTION					
HB-1	HOSE BIB	WOODFORD MODEL 46-VB	STANDARD CHROME FINISH WITH ASSE 1011 VACUUM BREAKER					

REMARKS

(1) SEE GENERAL SCHEDULE NOTES
(2) DISCONNECT INCLUDED
(3) EXTERNAL DISCONNECT REQUIRED (BY ELECTRICAL CONTRACTOR)
(4) RECEPTACLE REQUIRED (BY ELECTRICAL CONTRACTOR)

WATER HAMMER ARRESTOR SCHEDULE

PIPE SIZE	FIXTURE UNIT	CROSS REFERENCE (PDI)
1/2"	1-11	A
3/4"	12-32	B
1"	33-60	C
1 1/4"	60-113	D
1 1/2"	114-154	E
2"	155-330	F
2 1/2"	331-554	G

NOTES:

PROVIDE WATER HAMMER ARRESTORS AT ALL AUTO/SELF CLOSING FIXTURES. (WATERCLOSETS, URINALS, CLOTHES WASHERS, DISHWASHERS, ETC)

M&H NO.: 3230200-141856.02

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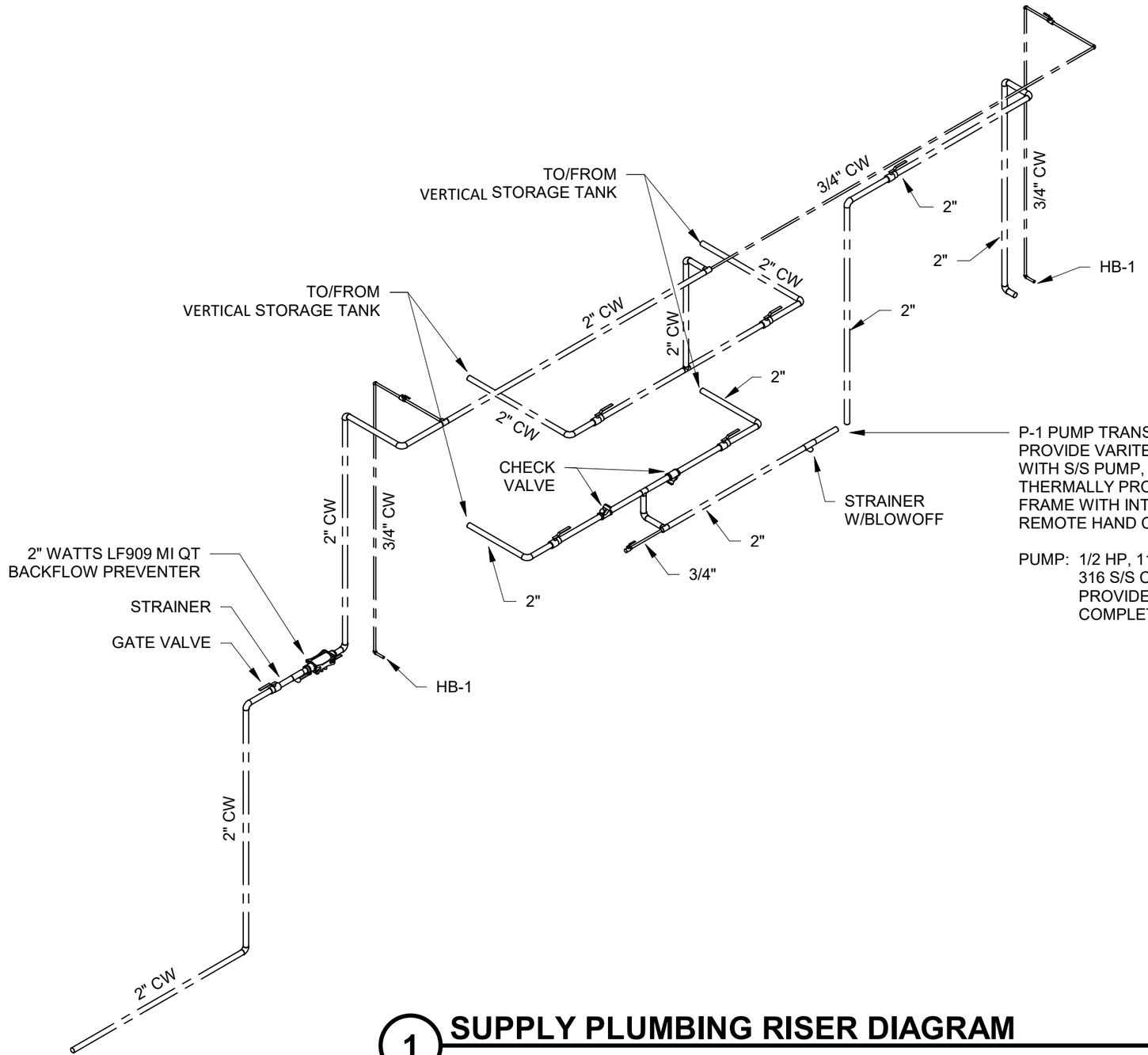


P-1 PUMP TRANSFER STATION:
PROVIDE VARITECH IND. OR EQUAL LIQUID TRANSFER PUMP STATION WITH S/S PUMP, 316 S/S HEAVY DUTY PUMP SHAFT, (TEFC) MOTOR, THERMALLY PROTECTED. INCLUDE GALVANIZED STEEL MOUNTING FRAME WITH INTEGRAL HOSE RACK. SYSTEM TO BE PRE WIRED WITH REMOTE HAND CARRIED PUMP START/STOP CONTROL.

PUMP: 1/2 HP, 115 VOL, 1 PHASE, 1750 RPM.
316 S/S CONSTRUCTION.
PROVIDE MOUNTING BRACKET AND ALL COMPONENTS FOR COMPLETE OPERATION.

1 SUPPLY PLUMBING RISER DIAGRAM

M&H NO.: 3230200-141856.02

P-901

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	SUPPLY ISOMETRICS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-P-R21_bill.blackA9RFX.rvt PLOT DATE : 1/17/2023 9:19:30 AM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

LUMINAIRE SYMBOLS

PENDANT LINEAR/INDUSTRIAL LUMINAIRE

WALL SURFACE LUMINAIRE

WALL MOUNTED EXIT SIGN

WALL MOUNTED COMBINATION EXIT SIGN/EBU

ARROW DENOTES EXIT SIGN CHEVRON

EMERGENCY BATTERY UNIT

LUMINAIRE CIRCUITRY & CONTROL KEY:

SE A1 1R#a

LUMINAIRE TYPE

LOWER CASE LETTER INDICATES SWITCHLEG CONTROL
(R#) INDICATES CENTRALIZED LOW VOLTAGE RELAY NUMBER
(Z#) INDICATES DISTRIBUTED LOW VOLTAGE RELAY NUMBER
REFER TO LIGHTING CONTROL PANEL SCHEDULES

NUMBER INDICATES BRANCH PANEL CIRCUIT NUMBER

SE: DENOTES LUMINAIRE IS SWITCHED/CONTROLLED DURING
NORMAL OPERATION AND OPERATES FROM EMERGENCY BATTERY AND/OR EMERGENCY CIRCUIT UPON LOSS OF POWER.
NL: DENOTES LUMINAIRE IS UNSWITCHED FOR NIGHT LIGHT.

LUMINAIRE CONTROL SYMBOLS

TC — ELECTRONIC TIME CLOCK

S — SINGLE POLE SWITCH

SWITCH NOTATIONS:

3	DENOTES 3-WAY SWITCH
D	DENOTES WALL BOX DIMMER SWITCH
K	DENOTES KEY SWITCH
OSX	DENOTES OCCUPANCY SENSOR (X REPRESENTS SCHEDULE DESIGNATION)
T	DENOTES TIMER SWITCH

MOTOR CONTROL & PROTECTIVE DEVICE SYMBOLS

ELECTRICAL CONNECTION TO EQUIPMENT AND MOTORS, SIZED PER NEC. COORDINATE REQUIREMENTS WITH CONTRACTOR FURNISHING MOTOR OR EQUIPMENT. REFER TO SPECIFICATIONS AND EQUIPMENT WIRING SCHEDULE FOR ADDITIONAL WORK ASSOCIATED WITH MOTOR OR EQUIPMENT.

COMBINATION/STARTER DISCONNECT SWITCH

FUSIBLE DISCONNECT SWITCH

RACEWAY SYMBOLS

SURFACE MOUNTED CONDUIT

CONCEALED CONDUIT IN CEILING OR WALL

J — JUNCTION BOX - CEILING MOUNTED

J — JUNCTION BOX - WALL MOUNTED

PANEL DESIGNATION KEY

2 L N L 1

- 1: SEQUENCE NUMBER OR LETTER
- 2: NUMBER OR LETTER IN SEQUENCE I.E. 1,2,3 OR A,B,C
- L: SYSTEM/SOURCE
- N: VOLTAGE
- L: TYPE
- 1: FLOOR

L - 208Y/120V
H - 480Y/277V

N - NORMAL BRANCH
U - UNINTERRUPTIBLE SOURCE
E - EMERGENCY BRANCH (NEC 700)
X - LEGALLY REQUIRED STANDBY BRANCH (NEC 701)
O - OPTIONAL STANDBY BRANCH (NEC 702)

L - LIGHTING PANELBOARD
D - DISTRIBUTION PANELBOARD
P - POWER/EQUIPMENT PANELBOARD
R - RECEPTACLE PANELBOARD
MSB - MAIN SWITCHBOARD
MCC - MOTOR CONTROL CENTER

G - GROUND FLOOR
B - BASEMENT FLOOR
1 - FIRST FLOOR
P - PENTHOUSE
M - MEZZANINE

WIRING DEVICE SYMBOLS

DUPLEX RECEPTACLE

RECEPTACLE NOTATIONS:

GFCI	DENOTES GROUND FAULT INTERRUPTER OUTLETS
WP	DENOTES WEATHER PROOF OUTLETS

DEVICE KEY:

PNL-1 / 48" / EWC GFCI

- PNL-1: INDICATES BRANCH PANEL & CIRCUIT NUMBER
- 48": INDICATES MOUNTING HEIGHT
- EWC GFCI: INDICATES DEVICE NOTATION OR EQUIPMENT NAME/DESCRIPTION

SLASH MAY BE USED TO SEPARATE INFORMATION . EX: 48"/GFCI

SERVICE & DISTRIBUTION SYMBOLS

PANELBOARD

GENERAL SYMBOLS

#/E-###	DETAIL NUMBER / SHEET NUMBER
9.###	KEYED NOTE, USED TO DESCRIBE ADDITIONAL INFORMATION OF WORK REQUIRED, SPECIFIC TO THE SHEET AND/OR DETAIL IT IS SHOWN WITH.

LINE TYPE KEY

———	NEW WORK BY THIS CONTRACTOR (DARK SOLID LINE)
– – – – –	EXISTING TO BE REMOVED BY THIS CONTRACTOR (DARK DASHED LINE)
———	EXISTING TO REMAIN WORK (THIN SOLID LINE)
——— ———	NEW WORK UNDER FLOOR BY THIS CONTRACTOR
——— – ———	ONE-LINE EQUIPMENT ENCLOSURE
——— • ———	PANEL DIVISION LINES
——— CON ———	SITE UNDERGROUND CONDUIT
——— //CON// ———	SITE REMOVED UNDERGROUND CONDUIT
——— E ———	SITE UNDERGROUND ELECTRIC
——— OHE ———	SITE OVERHEAD ELECTRIC
——— //OHE// ———	SITE REMOVED OVERHEAD ELECTRIC
——— //E// ———	SITE REMOVED UNDERGROUND ELECTRIC

ELECTRICAL ABBREVIATIONS

3R	NEMA 3R RATING
4X	NEMA 4X RATING
A	AMPERES
A/E	ARCHITECT / ENGINEER
ATS	AUTOMATIC TRANSFER SWITCH
BLDG	BUILDING
BRKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CUH	CABINET UNIT HEATER
DISC	DISCONNECT
DWG	DRAWING
EC	ELECTRICAL CONTRACTOR
EF	EXHAUST FAN
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
EWH	ELECTRICAL WATER HEATER
F	FUSED
FA	FIRE ALARM
FCU	FAN COIL UNIT
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
HP	HORSEPOWER
HVAC	HEATING, VENTILATION, AIR CONDITIONING
IMC	INTERMEDIATE METALLIC CONDUIT
J-BOX	JUNCTION BOX
LFS	LIGHTING FIXTURE SCHEDULE
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MC	MECHANICAL CONTRACTOR
MIN.	MINIMUM
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
PH	PHASE
PNL	PANEL
PVC	POLYVINYL CHLORIDE
RECPT	RECEPTACLE
RF	RETURN FAN
SW	SWITCH
SWBK	SWITCH BANK
TBR	TO BE REMOVED
TCP	TEMPERATURE CONTROL PANEL
TYP	TYPICAL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UV	UNIT VENTILATER
V	VOLTS
VFD	VARIABLE FREQUENCY DRIVE
VS	VERSUS
W	WATTS
WH	WATER HEATER
WL	WET LOCATION LISTED
WP	WEATHERPROOF
XFMR	TRANSFORMER

2

M&H NO.: 3230200-141856.02

E-001

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	STORAGE SHED / SALT SHED - ELECTRICAL SYMBOLS & ABBREVIATIONS	SHEET OF	E

2

GENERAL NOTES:

1. REFER TO THE G SERIES DRAWINGS FOR CODE ANALYSIS PLANS, INFORMATION AND NOTES.
2. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE DETAILS OF WORK, VERIFY DIMENSIONS IN THE FIELD, AND ADVISE THE ARCHITECT/ENGINEER OF ANY DISCREPANCY BEFORE PERFORMING ANY WORK.
3. THE COMPLETE INSTALLATION SHALL BE IN ACCORDANCE WITH THE ADAAG (AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES) AND ABA (ARCHITECTURAL BARRIERS ACT).
4. FLUSH-MOUNT ALL LIGHTING CONTROL DEVICES IN STORAGE BUILDING AT 42" FROM FINISHED FLOOR TO CENTERLINE OF DEVICE, EXCEPT WHERE OTHERWISE NOTED.
5. FLUSH-MOUNT ALL RECEPTACLES IN STORAGE BUILDING AT 48" FROM FINISHED FLOOR TO CENTERLINE OF DEVICE, EXCEPT WHERE OTHERWISE NOTED.
6. CIRCUIT NUMBERS ARE SHOWN FOR CIRCUIT IDENTIFICATION. CIRCUITING SHALL AGREE WITH NUMBERING ON THE PANEL SCHEDULES PROVIDED. BALANCE THE LOAD ON PANELS AS EVENLY AS POSSIBLE BETWEEN EACH PHASE. COMMON NEUTRALS MAY NOT BE USED FOR BRANCH CIRCUITS.
7. A #12 GREEN INSULATED GROUND CONDUCTOR SHALL BE INSTALLED WITH CIRCUIT CONDUCTORS TO ALL RECEPTACLES.
8. CONCEAL ALL CONDUIT IN WALLS, PARTITIONS, ABOVE CEILING, ETC. UNLESS OTHERWISE INDICATED ON THE PLANS OR IN THE SPECIFICATIONS. CONDUIT IN MECHANICAL ROOMS, AND STORAGE ROOMS WITHOUT CEILINGS MAY BE EXPOSED ON BUILDING STRUCTURE.
9. BOXES LOCATED ON OPPOSITE SIDES OF NON-RATED WALLS SHALL BE OFFSET A MINIMUM OF 6" HORIZONTALLY. "THRU-THE-WALL" BOXES SHALL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.
10. CONTRACTOR TO PROVIDE SUITABLE MECHANICAL PROTECTION AROUND ALL CONDUITS STUBBED OUT FROM FLOORS, WALLS OR CEILINGS DURING CONSTRUCTION TO PREVENT BENDING OR DAMAGING OF STUB OUTS DUE TO CARELESSNESS WITH CONSTRUCTION EQUIPMENT.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OPENINGS REQUIRED IN WALLS. ALL OPENINGS SHALL BE REPAIRED TO MATCH EXISTING BY A QUALIFIED CONTRACTOR AT THE EXPENSE OF THIS CONTRACTOR. ALL CONDUITS THROUGH WALLS SHALL BE GROUTED OR SEALED INTO OPENINGS.
12. SCCR RATINGS LISTED FOR EQUIPMENT ARE MINIMUM REQUIREMENTS FOR BUS BRACING AND DEVICE RATING. ALL EQUIPMENT SHALL BE FULLY RATED UNLESS SPECIFICALLY NOTED AS SERIES RATED.

2

M&H NO. - 3230200-141856.02

E-002

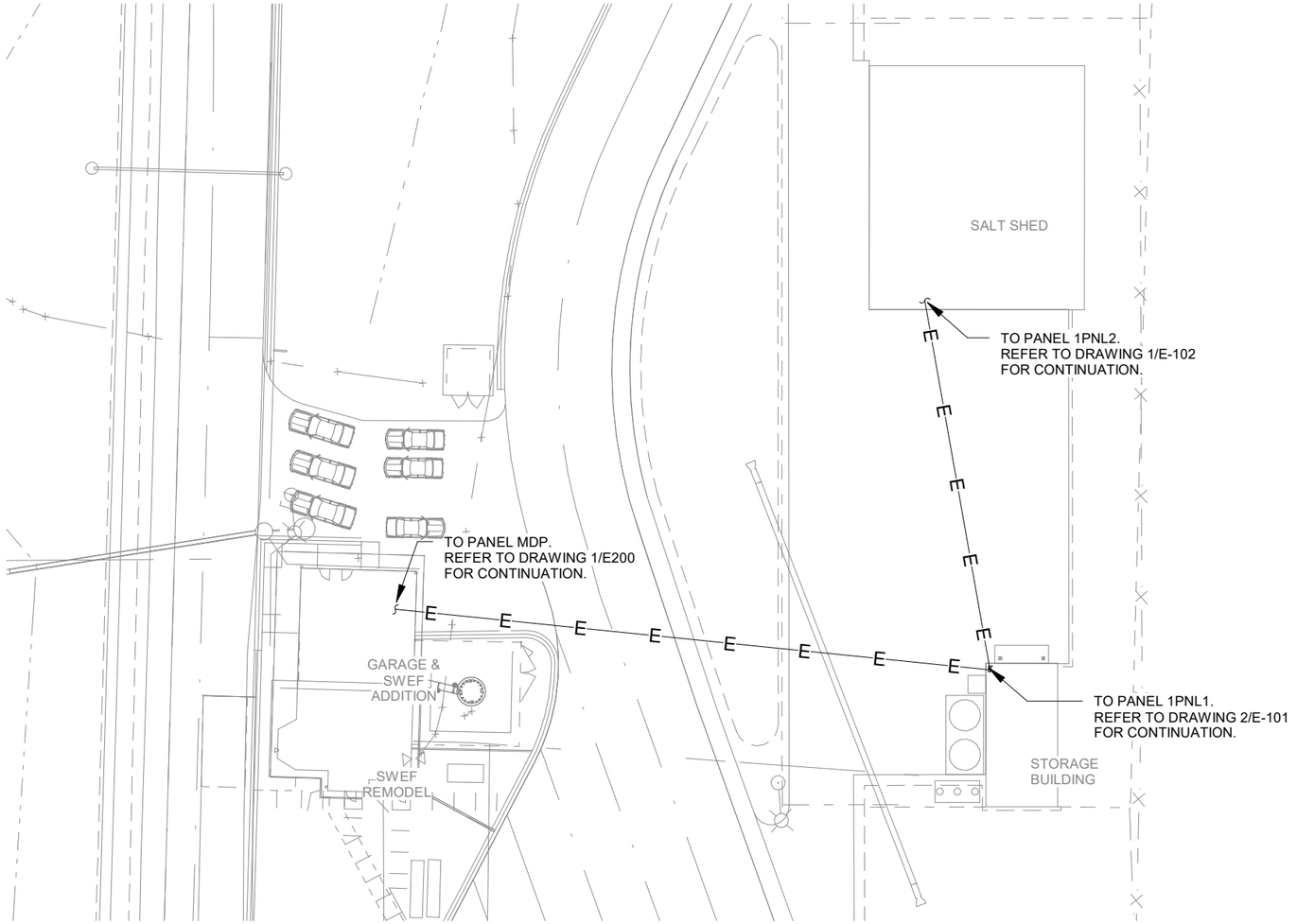
PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	STORAGE SHED / SALT SHED - ELECTRICAL NOTES	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-E-R21_deb.haas.rvt PLOT DATE : 7/17/2023 3:17:14 PM PLOT BY : PLOT NAME : PLOT SCALE :
WISDOT/CADDS SHEET 42

2

POWER GENERAL NOTES:

1. SEE SHEET E001 FOR SYMBOLS AND ABBREVIATIONS.
   SEE SHEET E002 FOR GENERAL NOTES.



N 1 ELECTRICAL SITE PLAN

1" = 40'-0"

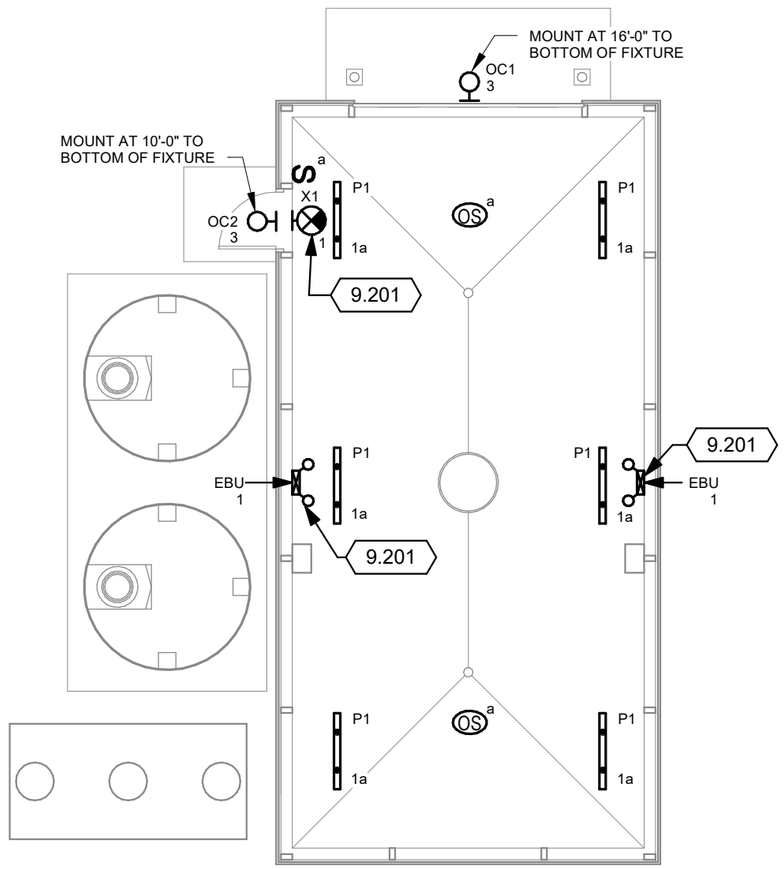
M&H NO.: 3230200-141856.02

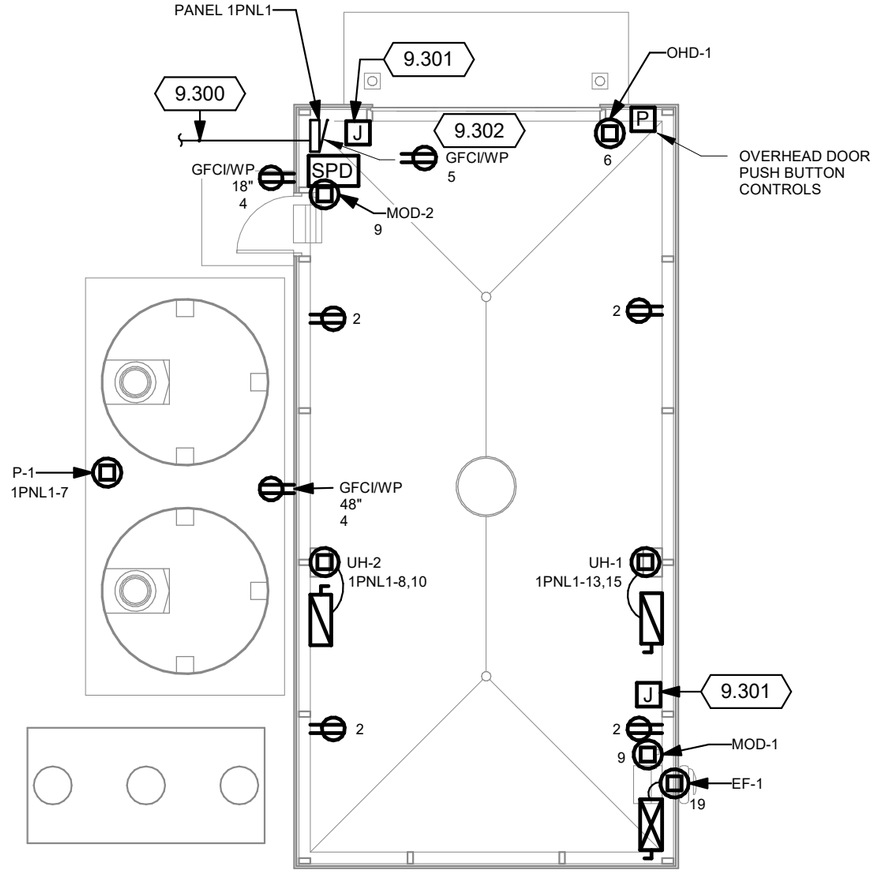
E-011

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	ELECTRICAL SITE PLAN	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-E-R21_deb.haas.rvt PLOT DATE : 7/17/2023 3:17:15 PM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42





GENERAL NOTES:

1. SEE SHEET E001 FOR SYMBOLS AND ABBREVIATIONS. SEE SHEET E002 FOR GENERAL NOTES.
2. ALL RECEPTACLES ON THIS DRAWING SHALL BE GFCI/WP AND MOUNTED AT 48"AFF UNLESS NOTED OTHERWISE.

KEYED NOTES

9.201	CONNECT UNSWITCHED LEG OF NORMAL LIGHTING BRANCH CIRCUIT SERVING NORMAL LIGHTING.
9.300	PROVIDE 3#3/0 & 1#6 GND IN 2 1/2"C UNDERGROUND. REFER TO SITE PLAN SHEET E-011 FOR CONTINUATION.
9.301	EC TO PROVIDE FLUSH MOUNTED 4" SQUARE BACKBOX WITH SINGLE GANG TRIM RING AND WEATHER -PROOF COVER PLATE FOR FUTURE ENGINE BLOCK HEATER. FROM BACKBOX EXTEND EMPTY 3/4"C TO PANEL 1PNL1. MOUNT BACKBOX 48"AFF.
9.302	MOUNT RECEPTACLE DIRECTLY TO BOTTOM OF PANELBOARD.

2 FIRST FLOOR LIGHTING PLAN

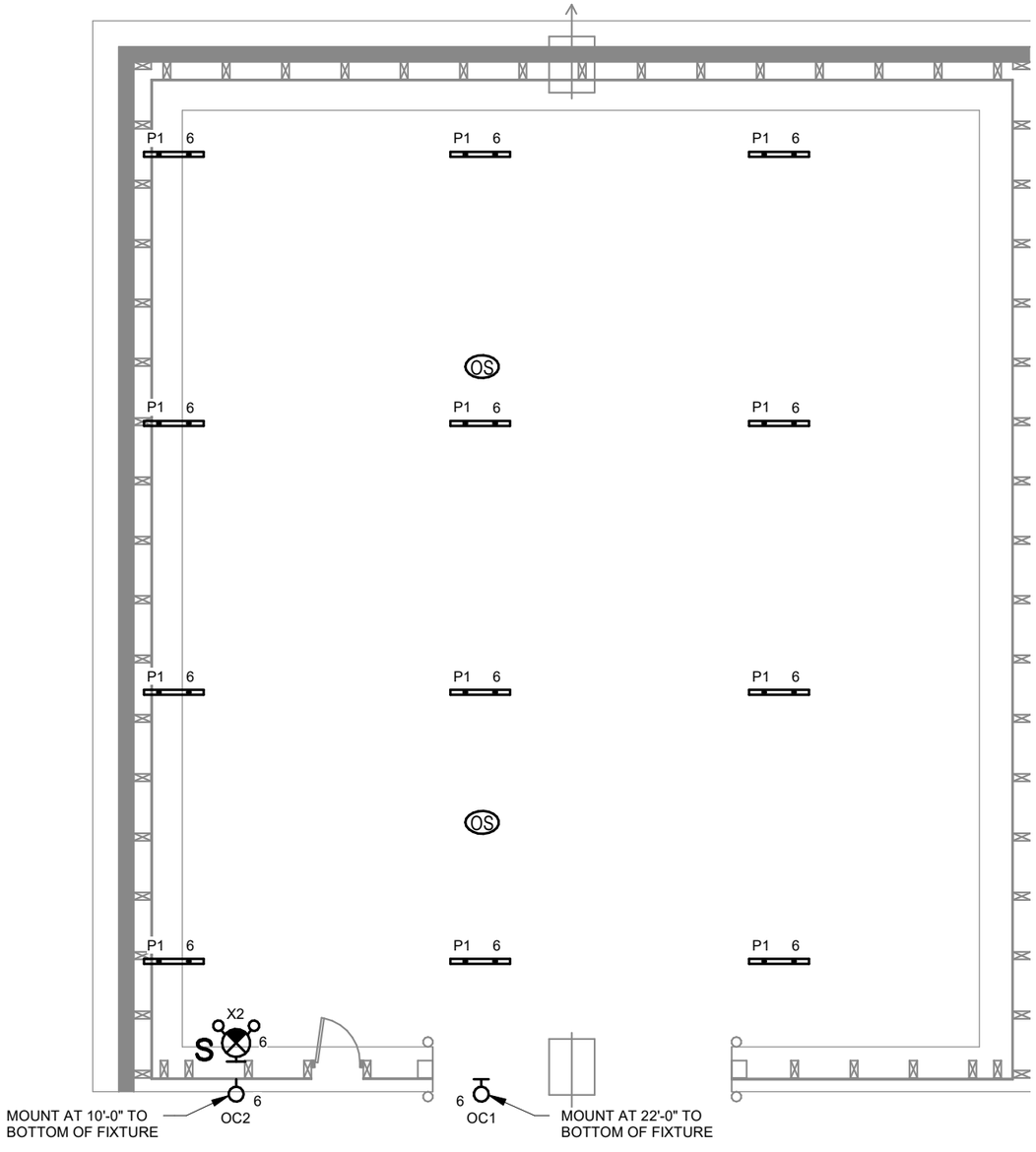
1/8" = 1'-0"

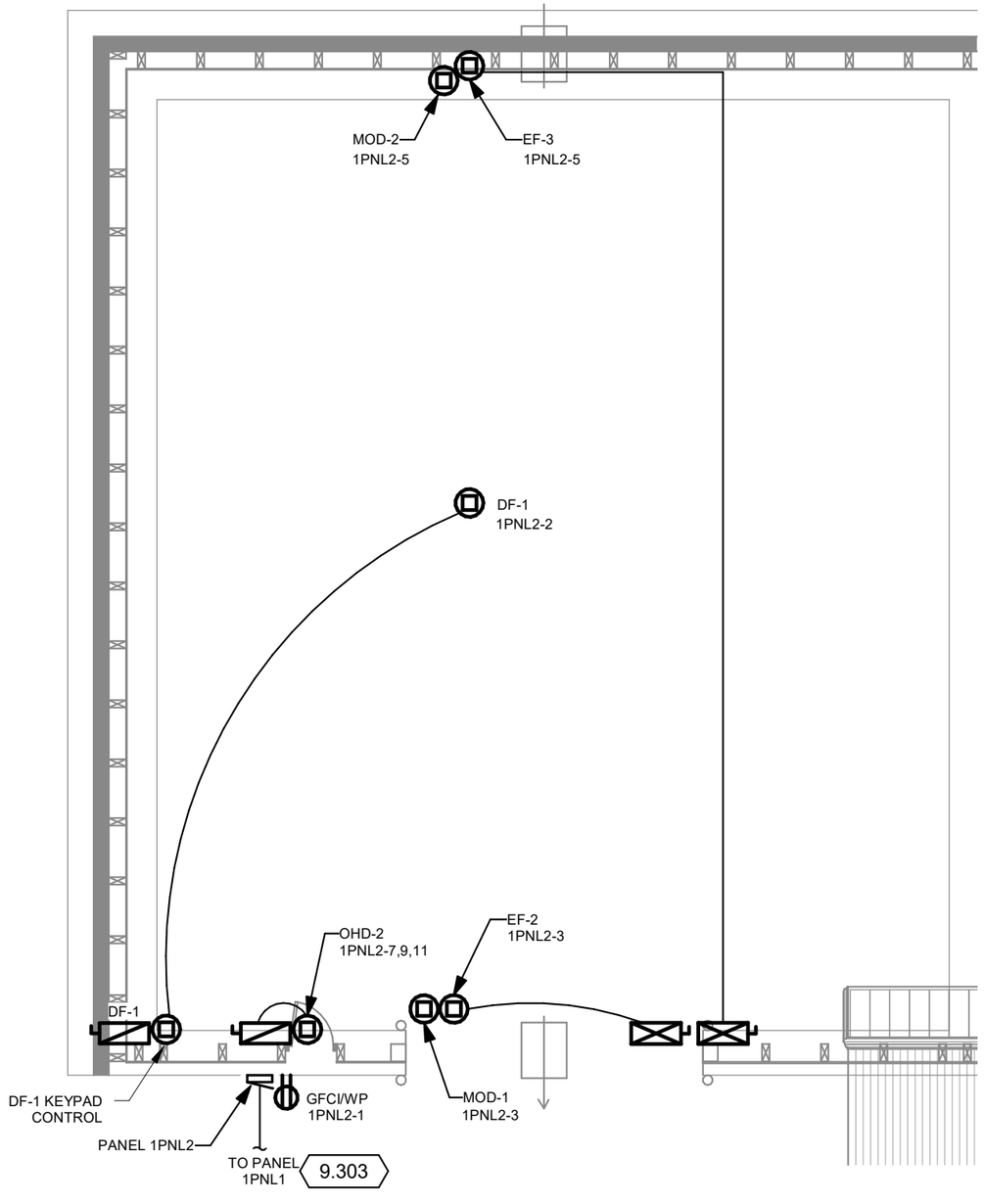
1. ALL LIGHTING THIS PLAN SHALL BE SERVED FROM PANEL 1PNL1.
2. MOUNTING HEIGHT FOR TYPE P1 FIXTURES IS 22'-0" TO BOTTOM OF FIXTURE, TYPICAL.
3. REFER TO DETAIL 4/E-501 FOR EXIT SIGN MOUNTING INFORMATION.

1 FIRST FLOOR POWER PLAN

1/8" = 1'-0"

1. ALL 120V RECEPTACLES AND 240V UTILIZATION EQUIPMENT SHALL BE SERVED FROM PANEL 1PNL1.





N 1 FIRST FLOOR LIGHTING PLAN

1" = 10'-0"

1. ALL LIGHTING THIS PLAN SHALL BE SERVED FROM PANEL 1PNL2.
2. MOUNTING HEIGHT FOR TYPE P1 FIXTURES IS 22'-0" TO BOTTOM OF FIXTURE, TYPICAL.
3. REFER TO DETAIL 4/E-501 FOR EXIT SIGN MOUNTING INFORMATION.

N 2 FIRST FLOOR POWER PLAN

1" = 10'-0"

GENERAL NOTES:

1. SEE SHEET E001 FOR SYMBOLS AND ABBREVIATIONS. SEE SHEET E002 FOR GENERAL NOTES.
2. ALL CONDUIT AND J-BOXES FROM FINISHED FLOOR TO 12'-0" SHALL BE PVC COATED RMC. CONDUIT ABOVE 12'-0" SHALL BE PVC SCH40 AND PVC J-BOXES.

KEYED NOTES

9.303 PROVIDE 3#6 & 1# 10 GND. IN 1" C UNDERGROUND. REFER TO SITE PLAN SHEET E-011 FOR CONTINUATION. CONDUCTORS SIZED FOR VOLTAGE DROP.

M&H NO.: 3230200-141856.02

E-102

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	SALT SHED - FIRST FLOOR POWER AND LIGHTING PLANS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-E-R21_deb.haas.rvt PLOT DATE : 7/17/2023 3:17:15 PM PLOT BY : PLOT NAME : PLOT SCALE :

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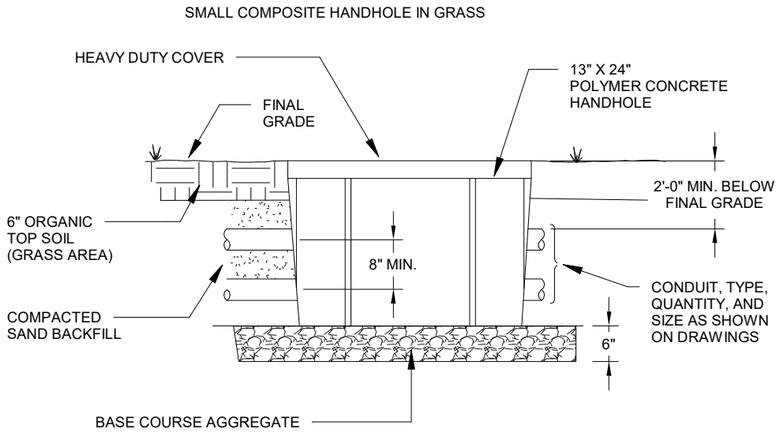
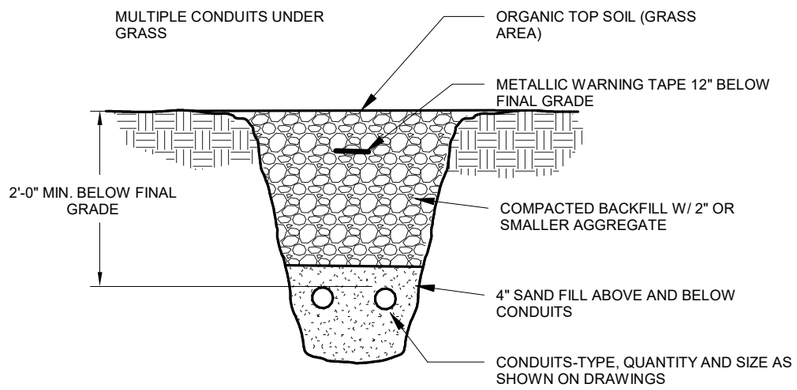


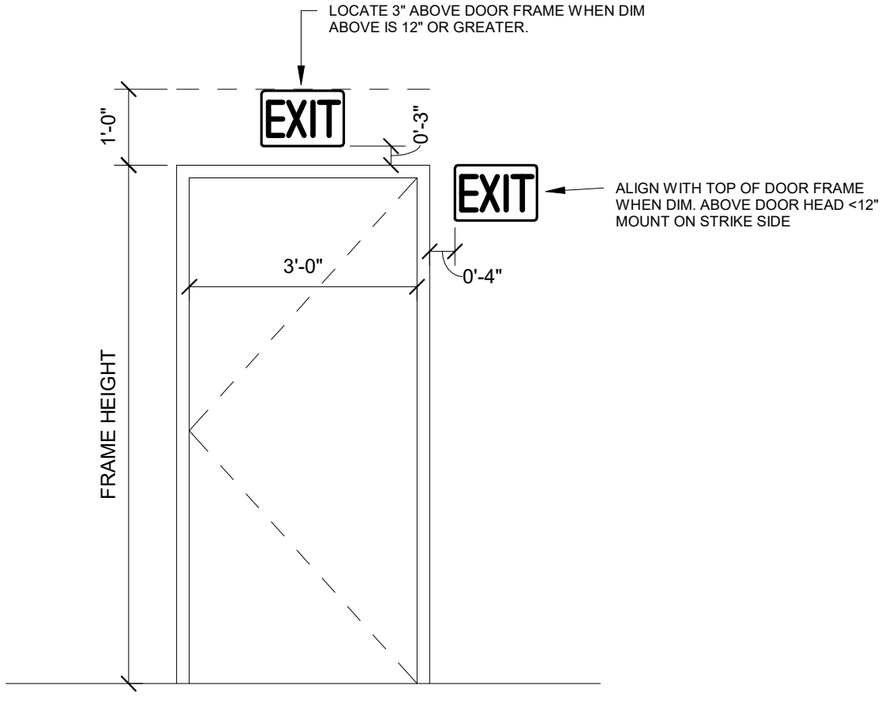
3 HANDHOLE

NO SCALE



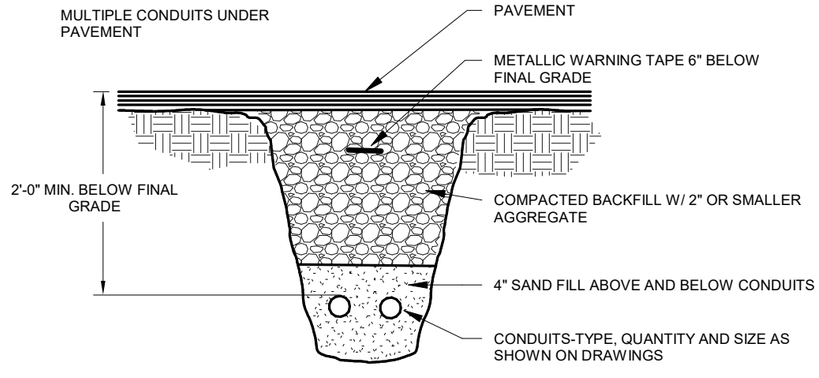
1 UNDERGROUND CONDUIT DETAIL-GRASS

NO SCALE



4 EXIT SIGN WALL MOUNTING AT DOOR

NO SCALE



2 UNDERGROUND CONDUIT DETAIL-PAVEMENT

NO SCALE

M&H NO.: 3230200-141856.02

E-501

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	DETAILS	SHEET OF	E

FILE NAME : C:\Revit Local\141856.02-E-R21_deb.haas.rvt PLOT DATE : 7/17/2023 3:17:15 PM PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

ELECTRICAL EQUIPMENT WIRING SCHEDULE

STARTER/TYPE:	DISCONNECT TYPE	ACCESSORIES:	
MS - MANUAL MOTOR STARTER (W/OVERLOAD RELAYS)	F-FUSED	SA-STANDARD ACCESSORIES (INCLUDES **ITEMS)	PF-PHASE FAILURE RELAY
RVS - REDUCED VOLTAGE (MAGNETIC)	NF- NON-FUSED	**CT-CONTROL TRANSFORMER FUSED 120V	TO-THERMAL OVERLOAD RELAYS
YD - WYE- DELTA	ECB-ENCLOSED CIRCUIT BREAKER	**EO-ELECTRONIC OVERLOADS (SOLID-STATE)	GFP-CLASS II GROUND FAULT PROTECTION
FV - FULL VOLTAGE	EFD-ELEVATOR FUSED DISCONNECT(SEE Specification)	**HA-HAND-OFF-AUTO SWITCH IN DOOR	DC-DIGITAL COMMUNICATION MODULE
SS - REDUCED VOLTAGE, SOLID STATE	MX - MANUAL MOTOR SWITCH	**PL-PILOT LIGHT(RED) IN DOOR	TS- 2-SPEED SELECTOR SWITCH IN DOOR
2SP - 2 SPEED, 2 WINDING		**AUX--TWO CONVERTIBLE AUXILIARY CONTACTS	EI-ELECTRICAL INTERLOCK (2) N.O. & (2) N.C
SW - 2 SPEED, 1 WINDING			SS-START-STOP PUSHBUTTON IN DOOR
CS - COMBINATION MAGNETIC MOTOR CONTROLLER			SN-SOLID NEUTRAL
RE - REVERSING			ST- SHUNT TRIP
VFD - VARIABLE FREQUENCY DRIVE			GP- GREEN (OFF) PILOT LIGHT IN DOOR
			ISG- ISOLATED GROUND KIT

EQUIPMENT	EQUIPMENT DESCRIPTION	LOCATION	LOAD							BRANCH WIRING				STARTER				DISCONNECT TYPE AND...			NEMA ENCLOSURE	KEYED NOTE(S)
			KW	HP	FLA (AMPS)	MCA (AMPS)	MOCP (AMPS)	VOLTS	PHASE	NO.	SIZE	GND.	C	TYPE	NEMA SIZE	FURNISHED/ INSTALLED BY	ACCESSORIES	TYPE	RATING / FUSE	FURNISHED/ INSTALLED...		
DF-1	DESTRATIFICATION FAN	SALT SHED	0.5	-	5.0	-	-	120	1	3	12	12	1/2	-	-	MFR		F	30/7	4X	EC/EC	4
EF-1	EXHAUST FAN	STORAGE BLDG		1/4	5.8			120	1	2	12	12	1/2	CS/FV	0	EC/EC	SA,SS	F	30/8	3R	EC/EC	-
EF-2	EXHAUST FAN	SALT SHED		1/3	7.2			120	1	2	12	12	1/2	CS/FV	0	EC/EC	SA,SS	F	30/8	4X	EC/EC	-
EF-3	EXHAUST FAN	SALT SHED		1/3	7.2			120	1	2	12	12	1/2	CS/FV	0	EC/EC	SA,SS	F	30/8	4X	EC/EC	-
MOD-1	MOTORIZED DAMPER	STORAGE BLDG			1.0			120	1	2	12	12	1/2	-	-	-	-	-	-	-	-	1
MOD-2	MOTORIZED DAMPER	STORAGE BLDG			1.0			120	1	2	12	12	1/2	-	-	-	-	-	-	-	-	1
OHD-1	OVERHEAD DOOR...	STORAGE BLDG		1/3	7.2			120	1	2	12	12	1/2	-	-	-	-	F	30/8	3R	EC/EC	2
OHD-2	OVERHEAD DOOR...	SALT SHED		1				240	1	3	12	12	1/2	-	-	-	-	F	30/6	4X	EC/EC	2
P-1	TRANSFER PUMP STATION	SITE		1/2				120	1	2	12	12	1/2	-	-	-	-	-	-	-	MFR/MFR	3
UH-1	UNIT HEATER	STORAGE BLDG	10.0		41.6			240	1	3	6	10	3/4	-	-	-	-	F	60/60	3R	EC/EC	-
UH-2	UNIT HEATER	STORAGE BLDG	10.0		41.6			240	1	3	6	10	3/4	-	-	-	-	F	60/60	3R	EC/EC	-

EQUIPMENT SCHEDULE GENERAL NOTES:

1. ALL WORK BY THIS CONTRACTOR TO COMPLY WITH ALL LOCAL, STATE AND NATIONAL ELECTRICAL CODES.
2. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH OTHER TRADES TO AVOID CONFLICTS AND TO VERIFY ALL EQUIPMENT CONNECTIONS FOR COMPLETE INSTALLATION.
3. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A COMPLETE ELECTRICAL SYSTEM PER CONTRACT DRAWINGS AND ENSURING THAT THE SYSTEM IS OPERATIONAL UPON JOB COMPLETION.
4. PROVIDE ALL POWER WIRING INCLUDING ALL CIRCUITRY CARRYING ELECTRICAL ENERGY FROM PANELBOARD OR OTHER SOURCE THROUGH STARTERS AND DISCONNECTS TO MOTORS, PACKAGED EQUIPMENT OR PACKAGED CONTROL PANELS. PROVIDE ALL WIRING BETWEEN CONTROL PANELS AND MOTORS. INCLUDE STARTERS, DISCONNECTS AND OVERLOAD PROTECTION IF NOT INCLUDED HVAC SPECIFICATION. COORDINATE WITH HVAC SPECIFICATIONS.
5. THIS CONTRACTOR SHALL VERIFY WITH MECHANICAL CONTRACTOR, ELECTRICAL REQUIREMENTS INCLUDING VOLTAGES, HORSE POWER, DISCONNECTING MEANS, STARTERS FOR MOTORS AND EQUIPMENT PRIOR TO ORDERING CIRCUIT BREAKERS, FUSIBLE SWITCHES AND STARTERS.

EQUIPMENT SCHEDULE KEYED NOTES:

1. EC TO WIRE MOD-1 AND MOD-2 THROUGH EF-1 COMBINATION STARTER DISCONNECT SO THE MOTORIZED DAMPERS OPEN UPON EF-1 OPERATION.
2. COORDINATE DISCONNECT LOCATION PRIOR TO ROUGH-IN WITH DOOR INSTALLER. DOOR OPERATION STATIONS, SWITCHES, SENSORS, ETC. ARE INSTALLED BY DOOR INSTALLER.
3. PROVIDE SINGLE-POINT CONNECTION TO PROVIDED DISCONNECT SWITCH. COORDINATE LOCATION AND ROUGH-IN REQUIREMETS WITH PLUMBING CONTRACTOR PRIOR TO INSTALLATION OF TANK CONCRETE PAD INSTALLATION. PUMP CONTROLLED VIA PRE-WIRED "ON/OFF" CONTROL.
4. EC TO INSTALL AND WIRE KEY PAD AND CAT-5e CABLE PROVIDED BY MC. PROVIDE BACKBOX AND CONDUIT PER MANUFACTURERS REQUIMENTS. MOUNT KEY PAD 48"AFF.

2

Panelboard: Panel 1PNL1

Bus Ampacity	225	Volts	240/120	Panel Source:	SWEF
Branch Brkr Space	42 Poles	Phase	1	Feed-Thru Lugs	None
Main Type	MCB	Wires	3		
MCB Amps	225	Delta/Wye	-	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 4X	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	107 A		
Comments:				SPD	
				Iso Grd	No

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Right Side A	Right Side B	Brkr A/P	Cct No	Load Description	Key Note
	6-TYPE P1, 2-EBU, X1	1	15/1	320		600		20/1	2	4-RECEPT	
	2-OC1	3	15/1		66		400	20/1	4	2-RECEPT	
	1-RECEPT	5	20/1	200		830		20/1	6	OHD-1	
	P-1	7	20/1		1,130		4,326	60/2	8	UN-2	
	MOD-1 & MOD-2	9	20/1	200		4,326		|	10	|	
	SPARE	11	20/1		0		0		12	SPACE	
	UH-1	13	60/2	4,326		0		20/1	14	SPARE	
	|	15	|		4,326		0	20/1	16	SPARE	
	SPACE	17		0		0		20/1	18	SPARE	
	EF-1	19	20/1		670		0		20	SPACE	
	SPARE	21	20/1	0		0			22	SPACE	
	SPARE	23	20/1		0		0		24	SPACE	
	SPACE	25		0		0			26	SPACE	
	SPACE	27			0		0		28	SPACE	
	SPACE	29		0		0			30	SPACE	
	SPACE	31			0		200	30/2	32	SPD	
	SPACE	33		0		200		|	34	|	
	SPACE	35			0		0		36	SPACE	
	SPACE	37		0		1,395		60/2	38	PANEL 1PNL2	
	SPACE	39			0		1,750	|	40	|	
	SPACE	41		0		0			42		

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GRD S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING E=EXISTING

M&H NO.: 3230200-141856.02

2

Panelboard: Panel 1PNL2

Bus Ampacity	100	Volts	240/120	Panel Source:	1PNL1
Branch Brkr Space	18 Poles	Phase	1	Feed-Thru Lugs	None
Main Type	MCB	Wires	3		
MCB Amps	60	Delta/Wye	-	Sub-Feed Lugs	None
		Mounting	Surface		
		Enclosure	NEMA 4X	Sub-Feed Brkr #1	None
		SCCR	10 kA		
		SE Rated		Sub-Feed Brkr #2	None
		Pnl MCA	25 A		
Comments:				SPD	
				Iso Grd	No

Key Note	Load Description	Cct No	Brkr A/P	Left Side A	Left Side B	Right Side A	Right Side B	Brkr A/P	Cct No	Load Description	Key Note
	RECEPT	1	20/1	400		75		20/1	2	DF-1	
	EF-2	3	20/1		830		0	20/1	4	SPARE	
	EF-3	5	20/1	830		1,124		20/1	6	12 Type P1, 1-OC-1 and 1-OC-2	
	OHD-2	7	20/2		920		0		8	SPACE	
	|	9	|	920		0			10	SPACE	
	SPACE	11			0		0		12	SPACE	
	SPARE	13	20/1	0		0			14	SPACE	
	SPARE	15	20/1		0		0		16	SPACE	
	SPARE	17	20/1	0		0			18	SPACE	

Key Notes:A=HACR G=GFI H=HANDLE LOCK C=THRU CONTACTOR I=ISOLATED GRD S=SHUNT TRIP P=PADLOCK HASP D=HID LIGHTING E=EXISTING

M&H NO.: 3230200-141856.02

LUMINAIRE SCHEDULE

DES	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	LED DATA	VOLTAGE	MOUNTING	DRIVER TYPE	FIXTURE DEPTH	INPUT LOAD	LUMENS	ACCEPTABLE MANUFACTURERS	KEYED NOTES
EBU	LITHONIA	ELMRE SP640L T	LED THERMOPLASTIC EMERGENCY REMOTE	W/ UNIT	120 V	W			5 VA	640		
OC1	LUMARK	WPMLED25S	WALL MOUNT EXTERIOR LED W/DUSK-TO-DAWN PHOTO CONTROL	LED, 4000K	120 V	W			100 VA	12,000		
OC2	LUMARK	WPMLED15S	WALL MOUNT EXTERIOR LED W/DUSK-TO-DAWN PHOTO CONTROL	LED, 4000K	120 V	W			40 VA	4,800		
P1	METALUX	4VT2-LD5-4-DR-W-UNV-L840-CD1-U, VT2-CHAIN/SET-U, VT2-SS	4' LED VAPORTITE PENDANT LINEAR	LED, 3500K	120 V	P		5 7/8"	82 VA	11,000		
X1	LITHONIA	LQM S W 3 R MVOLT EL N	LED THERMOPLASTIC EXIT SIGN	W/ UNIT	120 V	W			5 VA	-		
X2	LITHONIA	LHQM LED R HO	LED THERMOPLASTIC EXIT COMBO	W/ UNIT	120 V	W						

MOUNTING (MTG):

CV = COVE
ES = EXPOSED STRUCTURE
O = OTHER
P = PENDANT
PL = POLE
R = RECESSED
S = SURFACE
SP = SUSPENDED
UC = UNDERCOUNTER
V = VARIES
W = WALL MOUNTED

BALLAST/DRIVER: (SEE SPECIFICATIONS)

A LED DIMMABLE DRIVER (0-10V) - 10% DIM

B LED DIMMABLE DRIVER (0-10V) - 1% DIM

C LED DIMMABLE DRIVER (ELV)

D LED NON-DIMMABLE DRIVER

E EMERGENCY **(BATTERY) (DRIVER)**

F LED STEP-DIMMING DRIVER

G DALI DIMMING DRIVER

H LED DMX DRIVER

J MULTI-VOLTAGE DRIVER

LUMINAIRE SCHEDULE GENERAL NOTES:

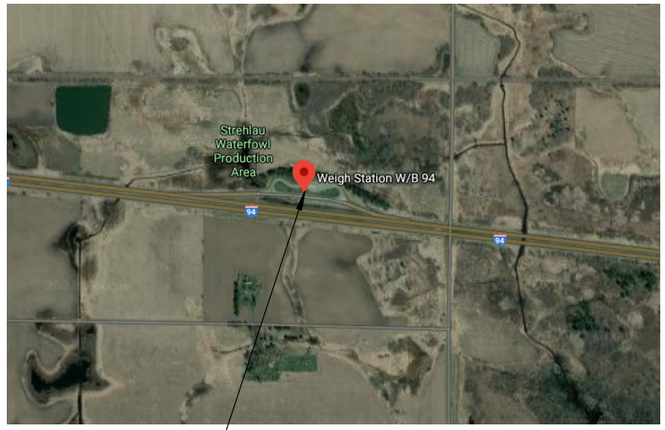
1. REFER TO DIVISION 26 SPECIFICATION FOR ADDITIONAL INFORMATION BEFORE ORDERING.
2. ALL LED LUMINAIRES MUST COMPLY WITH LM-79 AND LM-80 TESTING STANDARDS. L70 LIFE SHALL HAVE A MINIMUM OF 50,000 HOURS.
3. ANY PROPOSED SUBSTITUTIONS MUST BE SUBMITTED WITH PHOTOMETRIC CALCULATIONS AND CATALOG SHEETS WITH DATA TO PROVE EQUAL CHARACTERISTICS. PROVIDE PHYSICAL SAMPLES OF PROPOSED SUBSTITUTIONS UPON REQUEST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

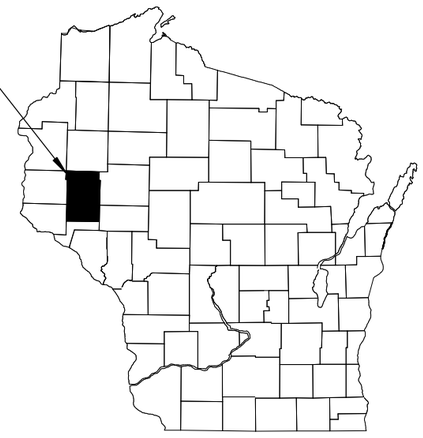
MENOMONIE SAFETY & WEIGHT
FACILITY NO. 63
IH 94
DUNN COUNTY

STATE PROJECT NUMBER
1022-04-76



PROJECT LOCATION

SAFETY & WEIGHT FACILITY NO. 63
WEST BOUND ON IH 94
NEAR MENOMONIE, WI



STATE OF WISCONSIN - COUNTY MAP

Typical Abbreviations List

AD	AREA DRAIN
AFF	ABOVE FINISHED FLOOR
ACT	ACOUSTICAL CEILING TILE
ADJ	ADJUSTABLE
ALT	ALTERNATE
ALUM	ALUMINUM
@	AT
BRG	BEARING
BIT	BITUMINOUS
BLK'G	BLOCKING
BR	BRICK
BLDG	BUILDING
CAB	CABINET
CPT	CARPET
CLG	CEILING
CT	CERAMIC TILE
COL	COLUMN
CONC	CONCRETE
CB	CONCRETE BLOCK
CMU	CONCRETE MASONRY UNIT
CONT	CONTINUOUS
CONTR	CONTRACTOR
CJ	CONTROL JOINT
COORD	COORDINATE
DIA	DIAMETER
DRS	DOORS
DS	DOWNSPOUT
EWC	ELECTRIC WATER CHILLER
ELECT	ELECTRICAL
EL	ELEVATION
ELEV	ELEVATOR
EP	EPOXY PAINT
EQUIP	EQUIPMENT
EXIST	EXISTING
EPS	EXPANDED POLYSTYRENE
EXP	EXPOSED
EXT	EXTERIOR
EIFS	EXTERIOR INSULATION FINISH SYSTEM
FV	FIELD VERIFY
FIN	FINISH
FE	FIRE EXTINGUISHER
FL	FLOOR
FD	FLOOR DRAIN
FTG	FOOTING
FDN	FOUNDATION
GEN	GENERAL
GC	GENERAL CONTRACTOR
GL	GLASS OR GLAZING
GLCMU	GLAZED CMU
GFCMU	GROUND FACE CMU
GYP BD	GYPSUM BOARD
H&V	HEATING & VENTILATION
HC	HOLLOW CORE
HM	HOLLOW METAL
HO	HOLD OPEN ARM
HORIZ	HORIZONTAL
HR	HOURS
HYD	HYDRANT
INSUL	INSULATION
INT	INTERIOR
JT	JOINT
JST	JOIST
MBD	MARKER BOARD
MAS	MASONRY
MO	MASONRY OPENING
MAX	MAXIMUM
MECH	MECHANICAL
MTL	METAL
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
PNT	PAINT
PLAS	PLASTER
PLAM	PLASTIC LAMINATE
PL	PLATE
PLBG	PLUMBING
PLYWD	PLYWOOD
PCT	PORCELAIN CERAMIC TILE
P/C	PRECAST
P/C TERR	PRECAST TERRAZZO
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PT	PRESSURE TREATED
QT	QUARRY TILE
REINF	REINFORCING OR REINFORCEMENT
REQ'D	REQUIRED
R	RISERS
RD	ROOF DRAIN
RFG	ROOFING
RFS	ROOM FINISH SCHEDULE
RM	ROOM
SCHED	SCHEDULE
S	SEALED
SIM	SIMILAR
SC	SOLID CORE
S.SURF	SOLID SURFACE
SPEC	SPECIFICATION
ST	STAIN
SS	STAINLESS STEEL
STRUCT	STRUCTURE OR STRUCTURAL
TBD	TACKBOARD
TS	TACK SURFACE
TEMP	TEMPERED
TERR T	TERRAZZO TILE
T&G	TONGUE & GROOVE
T/	TOP OF
TP	TOILET PARTITION
TR	TREADS
TYP	TYPICAL
UNFIN	UNFINISHED
VB	VAPOR BARRIER
VERT	VERTICALLY
VCT	VINYL COMPOSITION TILE
VWC	VINYL WALL COVERING
VB	VINYL BASE
WWF	WELDED WIRE FABRIC
WDW	WINDOW
W/	WITH
WD	WOOD

Material Symbols

- EARTH
- CONCRETE
- CONCRETE MASONRY UNIT
- FACE BRICK
- STONE
- STRUCTURAL STEEL
- BATT INSULATION
- ROUGH LUMBER
- RIGID INSULATION
- GYPSUM BOARD
- PLYWOOD

Graphic Symbols

- Room name 101 — ROOM TAG
- 101 — DOOR NUMBER
- SIM / 1 / A101 — SECTION CALLOUT
- CW- — CURTAIN WALL TYPE
- A1 — WALL TYPE
- 1 / A101 / 1 / 1 — ELEVATION CALLOUT
- VERTICAL WORKING POINT ELEVATION
- 1 — REVISION INDICATOR
- SIM / 1 / A101 — DETAIL CALLOUT
- 0 — GRID MARKER

Architect

Vantage Architects, Inc.
750 N. 3rd Street Ste F.
La Crosse, WI 54601
Phone: (608) 784-2729

Consultants

STRUCTURAL

Ambrose Engineering
W66 N215 Commerce Ct. Suite 100
Cedarburg, WI 54012
Phone: (262) 377-7602

PLUMBING, MECHANICAL & ELECTRICAL

Galileo Consulting Group
2920 East Ave. S., Suite 102
La Crosse, WI 54601
Phone: (608) 787-9106

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			COVER SHEET		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: G000	

SHEET INDEX

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A004	STANDARD MOUNTING HEIGHTS
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A504	INTERIOR ELEVATIONS
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A602	ARCHITECTURAL MILLWORK
A603	ARCHITECTURAL MILLWORK
A604	ARCHITECTURAL MILLWORK
A605	ARCHITECTURAL MILLWORK
A606	ARCHITECTURAL MILLWORK
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A706	DOOR DETAILS
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STRUCTURAL

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S504	FOUNDATION SECTIONS & DETAILS
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S509	FRAMING SECTIONS & DETAILS

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E004	ELECTRICAL REMOVAL PHOTOGRAPHS
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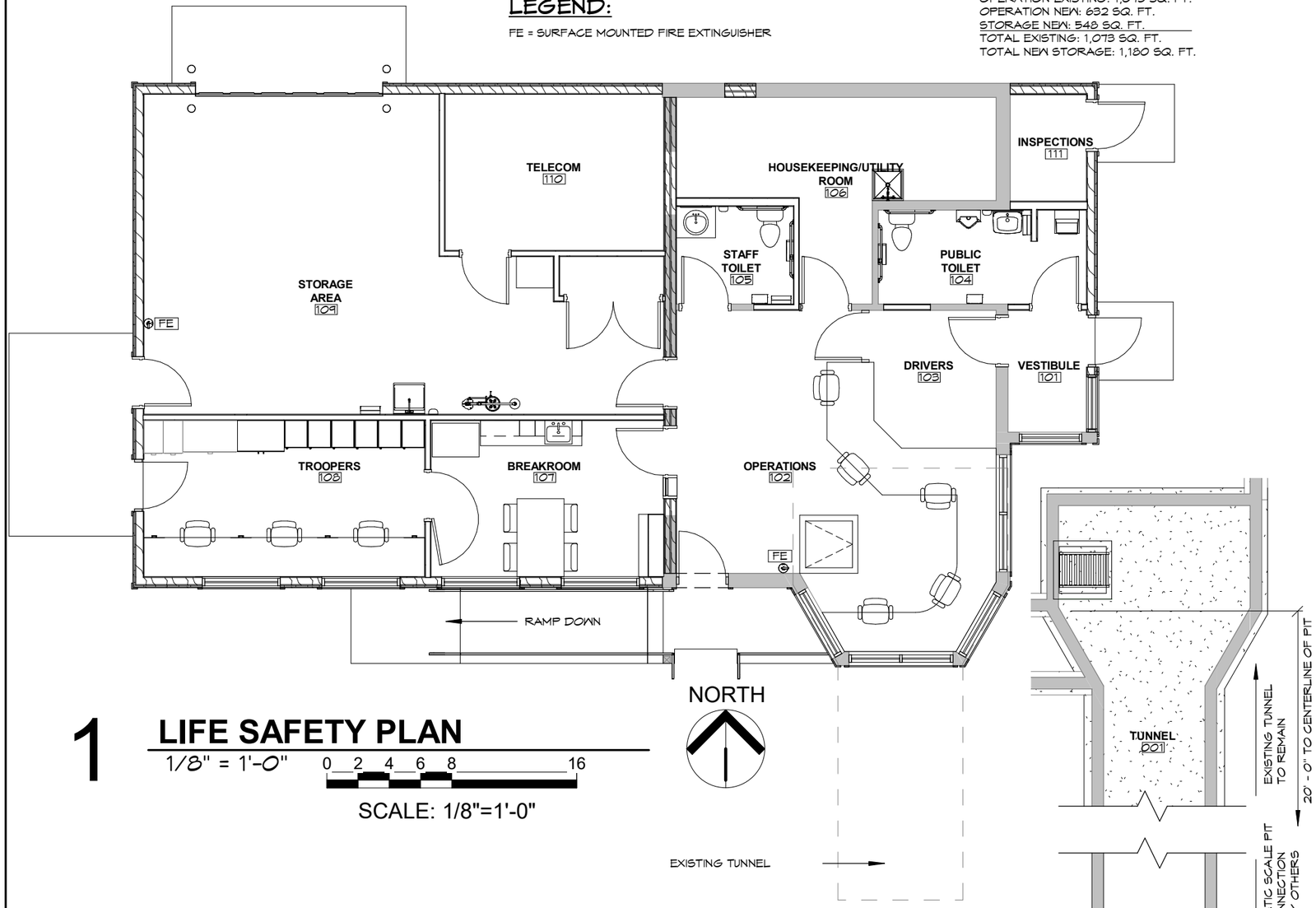
E503	PANEL BOARD SCHEDULES

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			SHEET INDEX		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: G001	

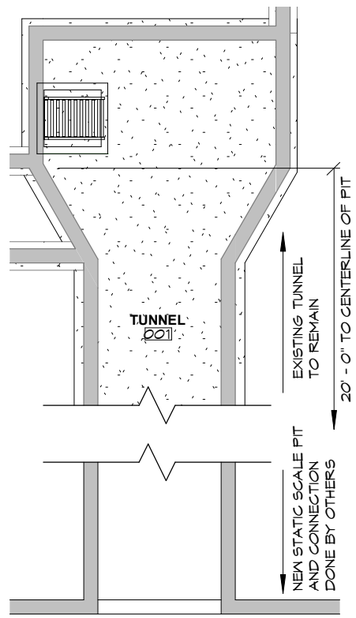
LEGEND:

FE = SURFACE MOUNTED FIRE EXTINGUISHER

BUILDING AREA TABULATION:
OPERATION EXISTING: 1,073 SQ. FT.
OPERATION NEW: 632 SQ. FT.
STORAGE NEW: 548 SQ. FT.
TOTAL EXISTING: 1,073 SQ. FT.
TOTAL NEW STORAGE: 1,180 SQ. FT.



1 **LIFE SAFETY PLAN**
1/8" = 1'-0" 0 2 4 6 8 16
SCALE: 1/8"=1'-0"



2 **LOWER LEVEL PLAN**
1/8" = 1'-0" 0 2 4 6 8 16
SCALE: 1/8"=1'-0"

BUILDING CODE INFORMATION

BUILDING OCCUPANCY:
CLASSIFICATION: OPERATIONS-BUSINESS, GROUP B
STORAGE AREA-STORAGE, GROUP S-1

BUILDING AREAS: OPERATIONS FIRST FLOOR: 1,705 SQ. FT. (9,000 ALLOWABLE).
STORAGE AREA: 548 SQ. FT. (9,000 ALLOWABLE)
TOTAL BUILDING AREA = 2,253 SQ. FT.

NUMBER OF STORIES: ONE

TYPE OF CONSTRUCTION:
OPERATIONS: TYPE 5B, COMBUSTIBLE: NON-SPRINKLERED
STORAGE AREA: TYPE 5B, COMBUSTIBLE: NON-SPRINKLERED

INTERIOR FINISH: TABLE 803.11

GROUP:	CORRIDORS/EXITS:	ROOM:
B-BUSINESS	B	C
S1-STORAGE	B	C

SPRINKLER REQUIREMENTS: PER 903.2 NOT REQUIRED
PER 903.2.9 GROUP S1- AN AUTOMATIC SPRINKLER SYSTEM SHALL BE PROVIDED FOR FIRE AREAS GREATER THAT 12,000 SQ. FT.

FIRE ALARM: PER 907.2.2 GROUP B - MANUAL FIRE ALARM BOXES ARE NOT REQUIRED IN A GROUP B OCCUPANCY HAVING AN OCCUPANT LOAD LESS THAN 500 PERSONS

AREA MODIFICATIONS: N. A.

BUILDING SEPARATIONS: NO SEPARATION IS REQUIRED PER IBC TABLE 508.4

OCCUPANT LOAD:

PER TABLE 1004.1.1 SPACE
BUSINESS @ 100 SQ. FT. 1,705 SQ. FT./100 SQ. FT. = 18 PERSONS

STORAGE AREA @ 300 SQ. FT. 548 SQ. FT./300 SQ. FT. = 2 PERSONS
TOTAL OCCUPANT LOAD= 20 PERSONS

EXIT REQUIREMENTS:
TABLE 1006.3.2(2) WHERRE OCCUPANT LOAD DOESN'T EXCEED 29 PERSONS FOR STORAGE OCCUPANCY
TABLE 1006.3.2(2) COMMON PATH: COMMON PATH OF TRAVEL SHALL NOT EXCEED 75 FT.
1010.1.8 DOOR ARRANGEMENT - SPACE BETWEEN TWO DOOR SHALL BE 48"
1010.1.10 PANIC HARDWARE - DOORS SERVING AN OCCUPANT LOAD OF 50 PERSONS OR MORE SHALL HAVE PANIC HARDWARE - PANIC HARDWARE NOT REQUIRED
1014.2.4 ISLE WIDTH MIN.: WIDTH OF ISLES SHALL NOT BE LESS THAN 36"
20 OCCUPANT X 0.20 = 4.0 INCHES REQUIRED
1016.2 EGRESS THROUGH INTERVENING SPACES - SHALL BE ALLOWED WHERE ROOMS OF AREAS ARE ACCESSORY TO EACH OTHER
TABLE 1017.2 TRAVEL DISTANCE: 200 FT. NON-SPRINKLERED
1020.4 DEAD ENDS: DEAD END CORRIDORS SHALL NOT EXCEED 20 FT.

ADA ACCESSIBILITY: CHAPTER 11

THE PROJECT WILL PROVIDE ACCESS TO ALL FIRST FLOOR AREAS OF THE FACILITY. ALL FIRST FLOOR SPACES IN THE PROJECT WILL COMPLY WITH ADA REQUIREMENTS.

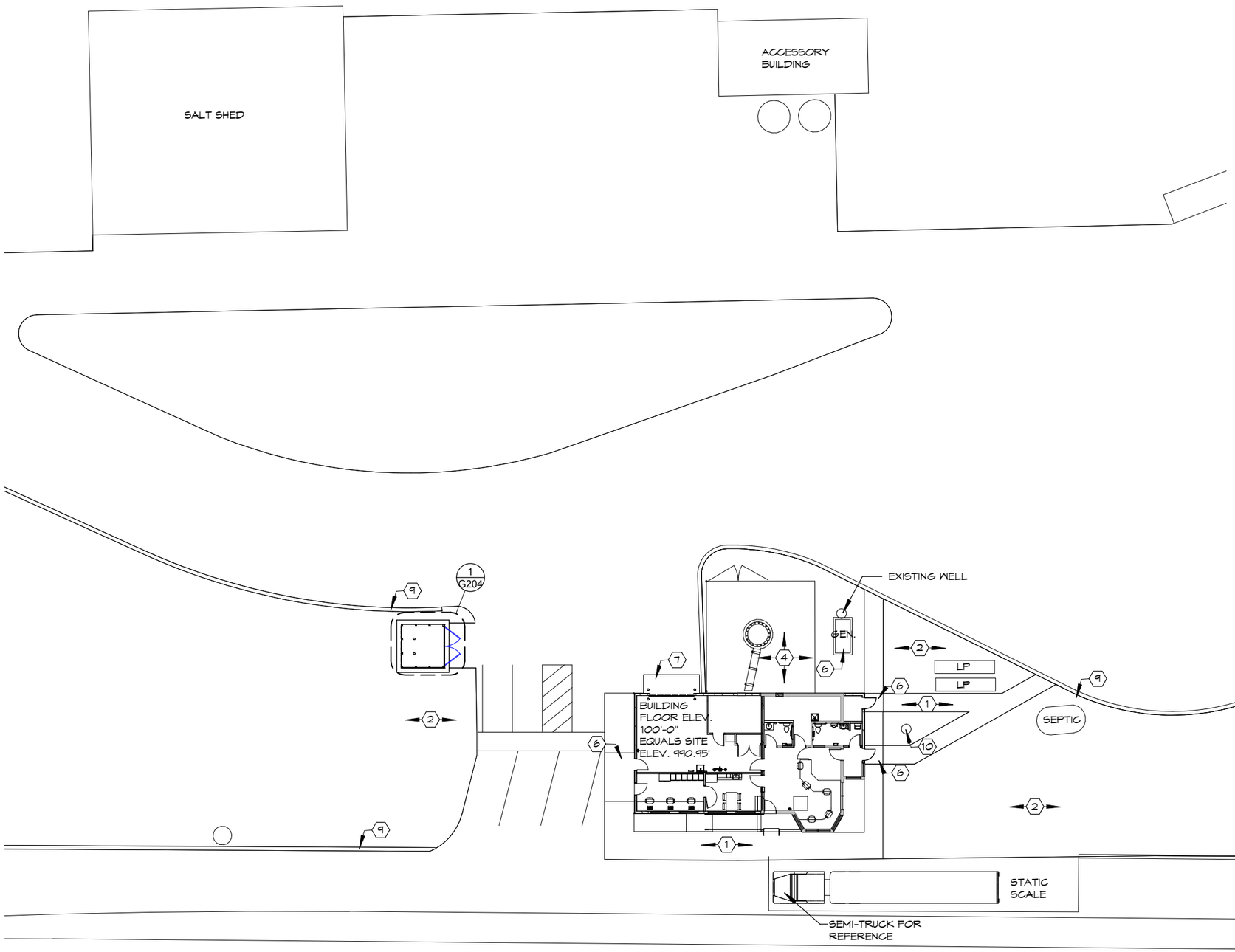
SANITARY FIXTURES:

PER TABLE 2902.1 GROUP B-BUSINESS AND S-1 STORAGE

AREA	WC/UR	LAV	SHOWERS	D.F.	OTHER
OPERATIONS	.72	.45	---	.18	1 SERVICE SINK
STORAGE AREA	.02	.02	---	.02	
REQUIRED	.74	.47	---	.20	1 SERVICE SINK
PROVIDED	3	2	---	1	1 SERVICE SINK

FIRE EXTINGUISHERS: 906.1 PER NFPA 10 – SEE FLOOR PLANS FOR DESIGNATED LOCATIONS.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			LIFE SAFETY PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: G101	



SITE PLAN KEY NOTES

MARK	DESCRIPTION
1	CONCRETE SIDEWALKS BY ROADWAY CONTRACTOR
2	ALL EXCAVATION, AND GRADING, AROUND BUILDING PERIMETER SHALL BE THE RESPONSIBILITY OF THE ROADWAY CONTRACTOR.
3	ELECTRICAL CONTRACTOR TO PROVIDE 5" THICK CONCRETE PAD WITH 12" THICK PERIMETER EDGE FOR TRANSFORMER. REINFORCE W45 @ 12" O.C. EA. WAY. VERIFY EXACT DIMENSIONS W/ UTILITY CO.
4	COMMUNICATIONS (TOWER BY OTHERS).
5	ELECTRICAL CONTRACTOR TO PROVIDE 5" THICK CONCRETE PAD WITH 12" THICK PERIMETER EDGE FOR EMERGENCY GENERATOR. REINFORCE W/ #45 @ 12" O.C. EA. WAY. VERIFY EXACT DIMENSIONS W/ UTILITY CO.
6	CONCRETE FROST STOOP. SEE DETAIL
7	CONCRETE FROST STOOP BY GENERAL BUILDING CONTRACTOR. SEE DETAIL
8	CONCRETE PAVING BY GENERAL BUILDING CONTRACTOR.
9	CONCRETE CURB & GUTTER BY ROADWAY CONTRACTOR.
10	FLAG POLE. SEE DETAIL 1/G202

1 SITE PLAN

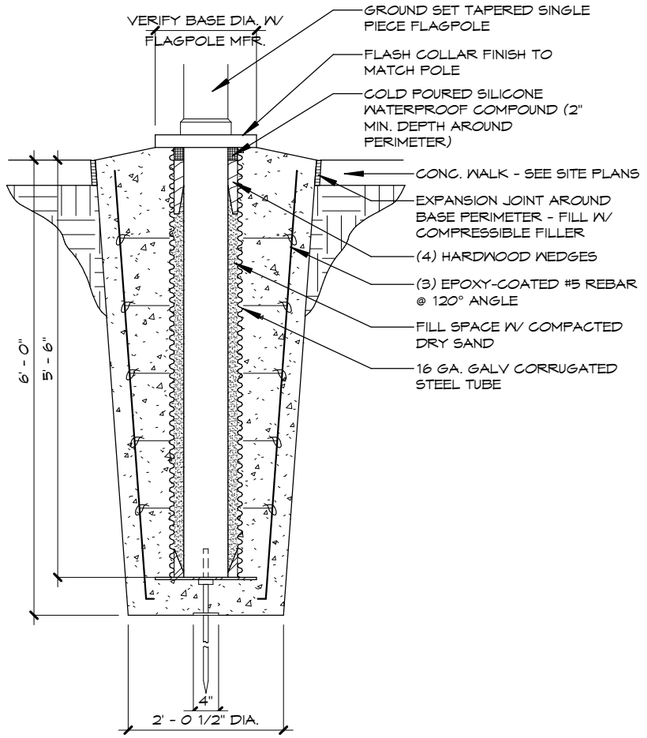
1" = 30'-0"

NORTH

0 30 60 120

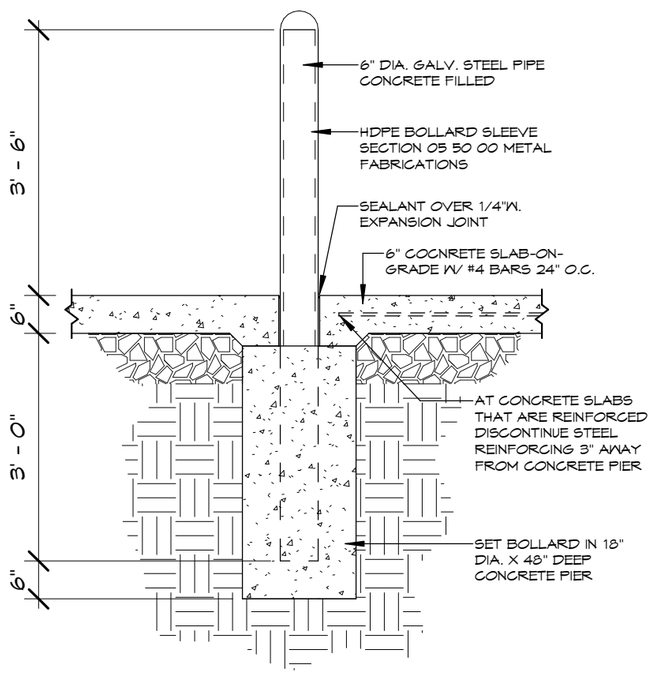
SCALE: 1"= 30'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			SITE PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: G102	140



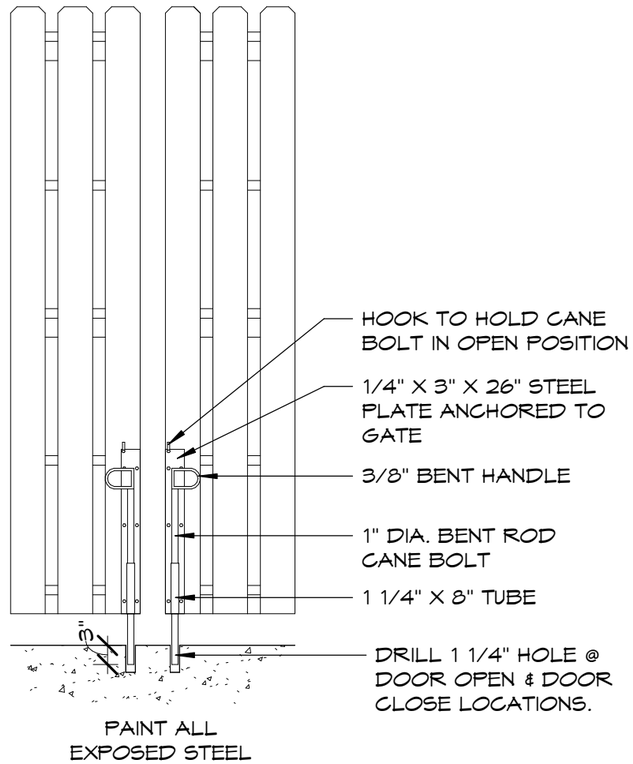
1 EXTERIOR FLAG POLE BASE DETAIL

1/2" = 1'-0"



2 BOLLARD DETAIL

1/2" = 1'-0"

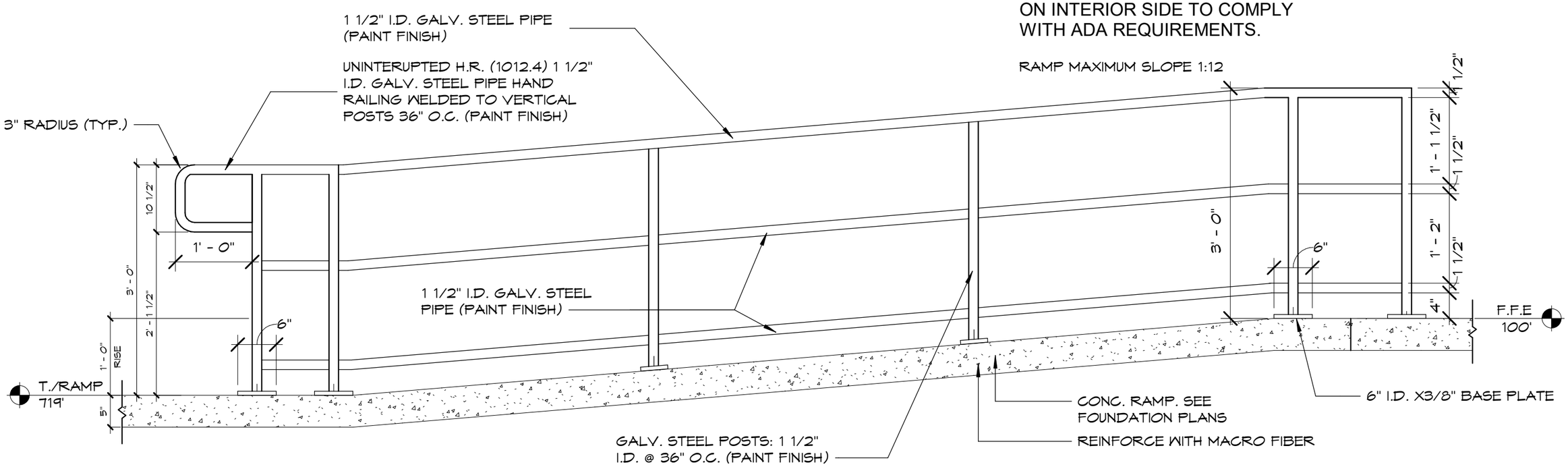


3 CANE BOLT DETAIL

1/2" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			MISCELLANEOUS SITE DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: G202	

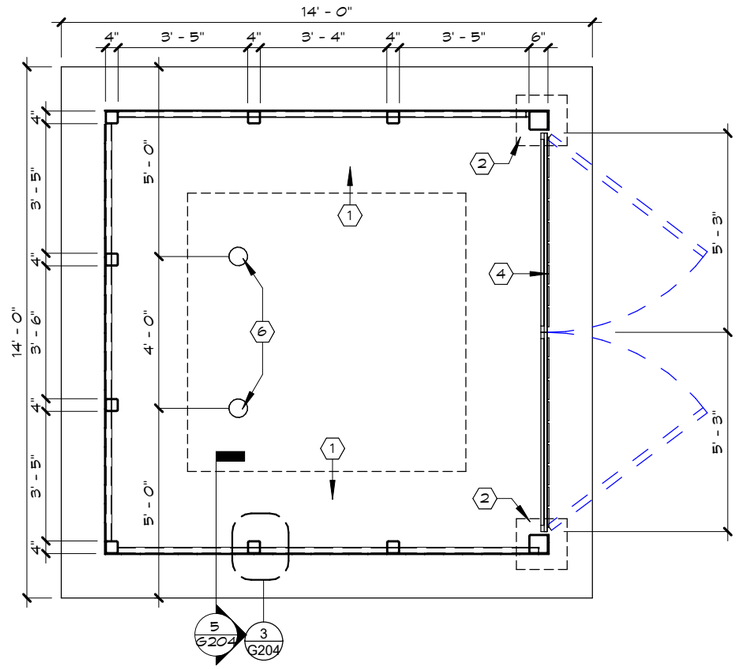
NOTE:
HANDRAIL SHALL BE PROVIDED ON INTERIOR SIDE TO COMPLY WITH ADA REQUIREMENTS.



1 RAMP RAILING DETAIL

3/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: G203	

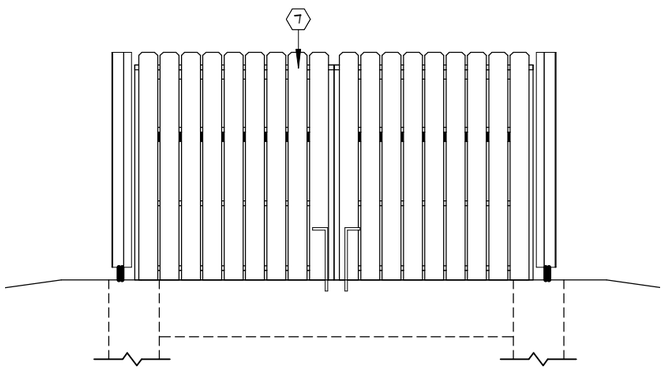


1 DUMPSTER ENCLOSURE

1/4" = 1'-0"

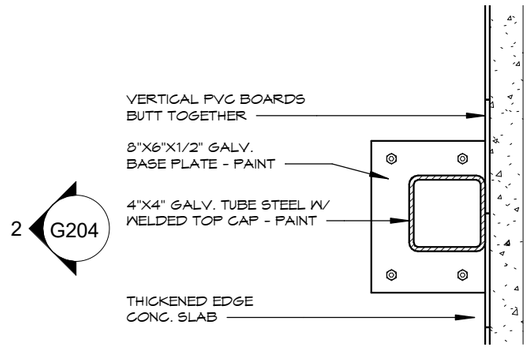
0 2 4 8

SCALE: 1/4"=1'-0"



2 FRONT ELEVATION

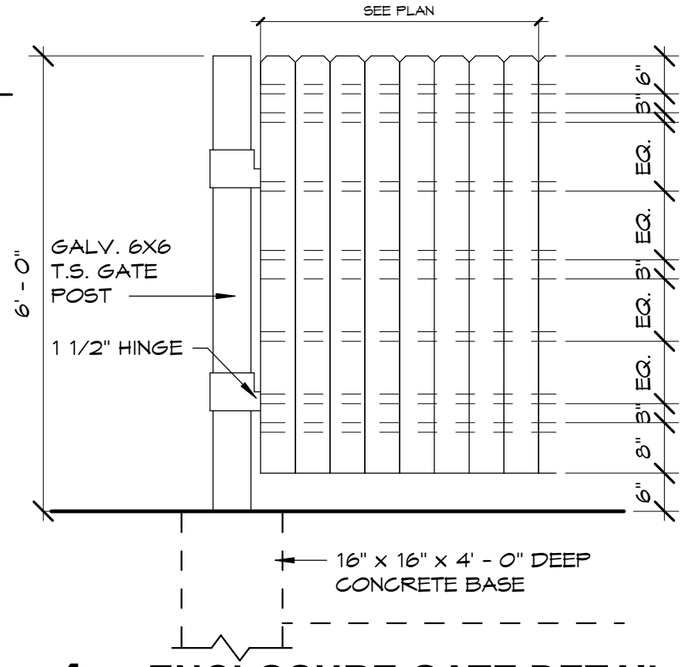
1/4" = 1'-0"



3 TUBE STEEL COLUMN DETAIL

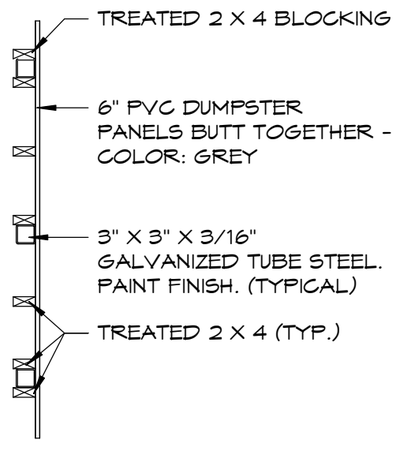
1 1/2" = 1'-0"

DUMPSTER ENCLOSURE KEY NOTES	
MARK	DESCRIPTION
1	CAST-IN-PLACE CONCRETE FOOTING & FOUNDATION. SEE DETAIL 5/G204
2	GALV. STEEL GATE POST. WITH 16" x 16" x 4' - 0" DEEP CONCRETE PIER.
3	GALV. GATE HINGES.
4	GALVANIZED 2"X2" TUBE STEEL GATE FRAME.
5	GATE LATCH. SEE DETAIL 3/G202
6	GALVANIZED PIPE BOLLARD. SEE DETAIL 2/G202
7	6" PVC DUMPSTER PANELS BUTT TOGETHER - COLOR: GREY

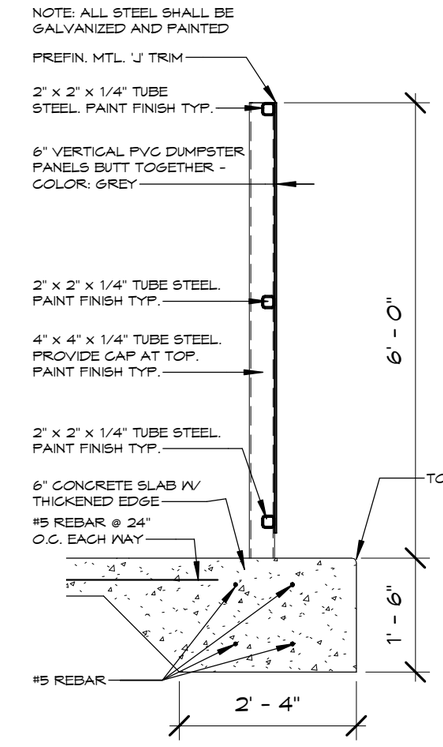


4 ENCLOSURE GATE DETAIL

1/2" = 1'-0"



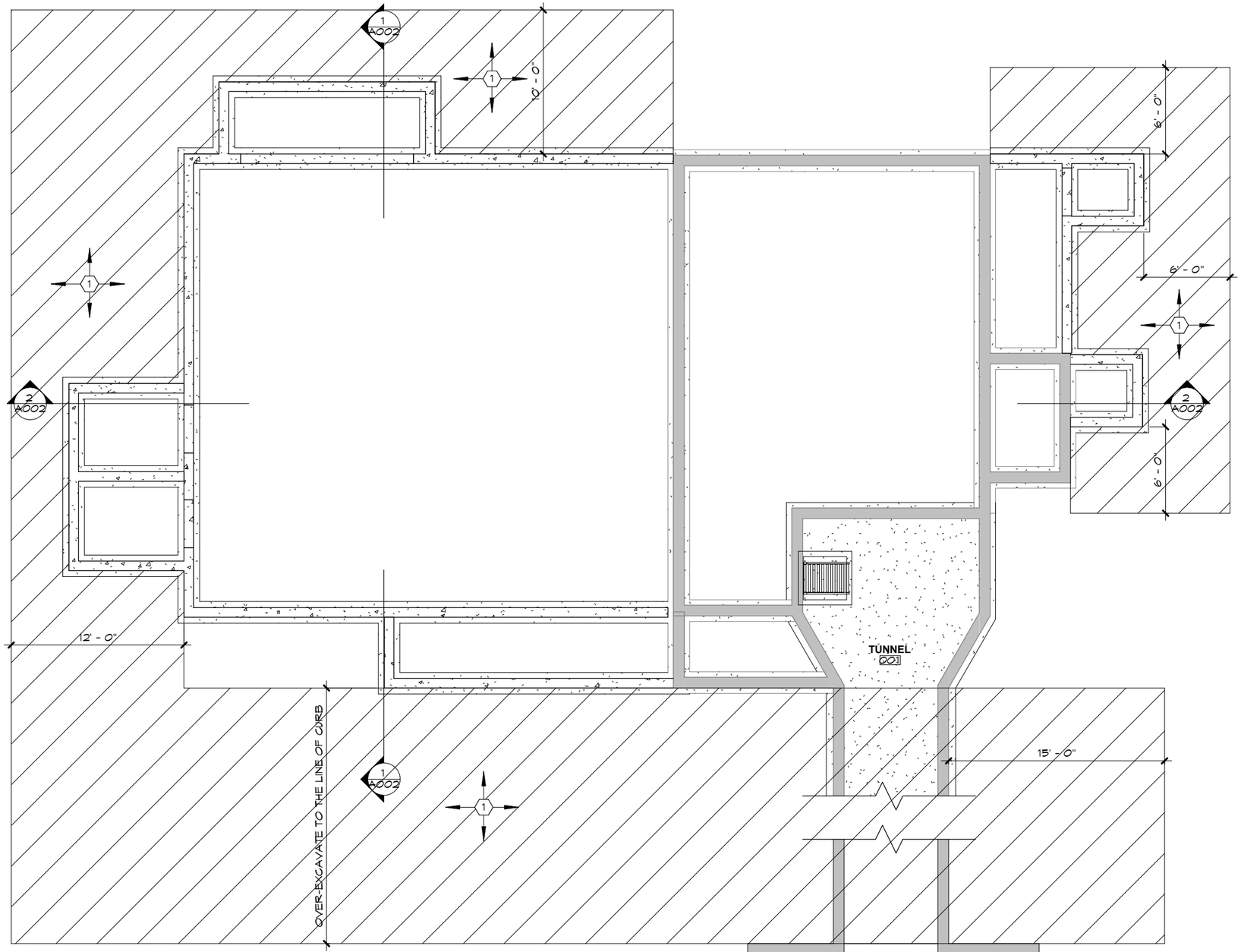
GATE SECTION



5 DUMPSTER ENCLOSURE SECTION

1/2" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DUMPSTER ENCLOSURE PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: G204	



OVER-EXCAVATION KEYNOTES

MARK	DESCRIPTION
1	OVER-EXCAVATION SEE GEOTECHNICAL REPORT

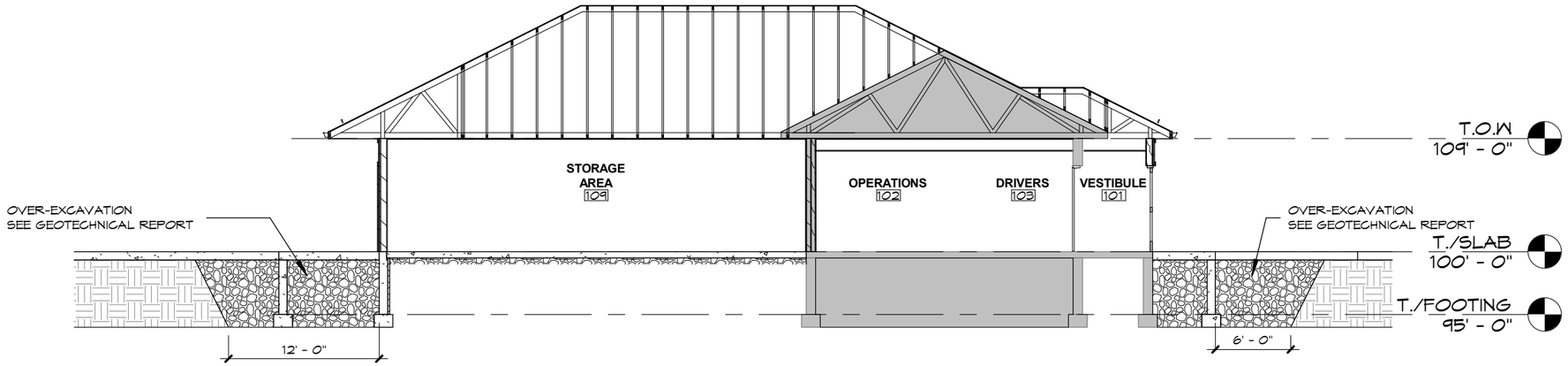
NORTH

1 **OVER-EXCAVATION PLAN**

1/8" = 1'-0" 0 2 4 6 8 16

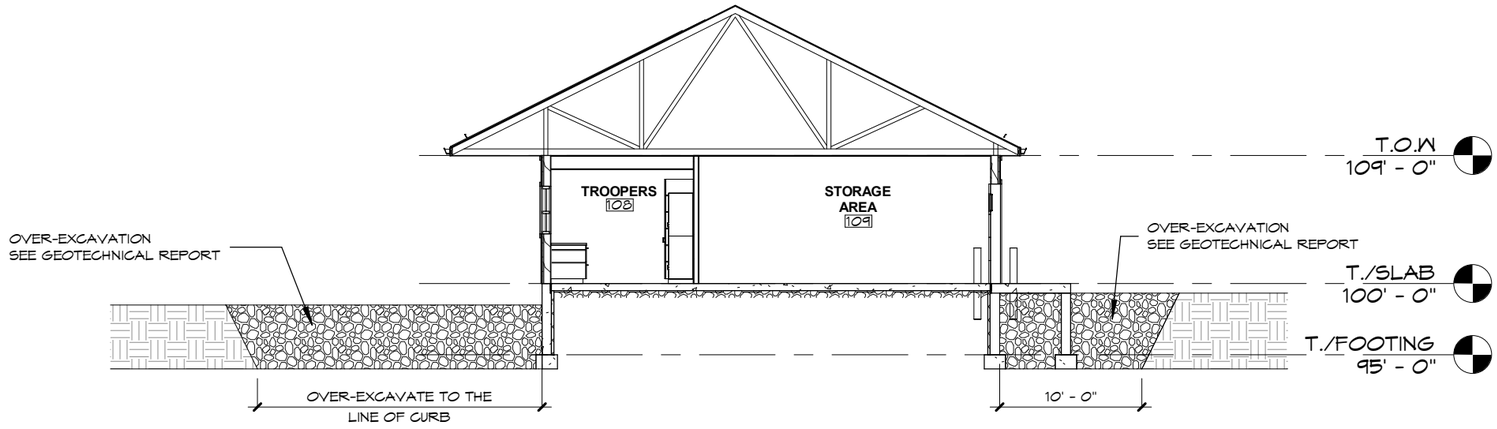
SCALE: 1/8"=1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			OVER-EXCAVATION PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A001	



2 OVER-EXCAVATION BUILDING SECTION A

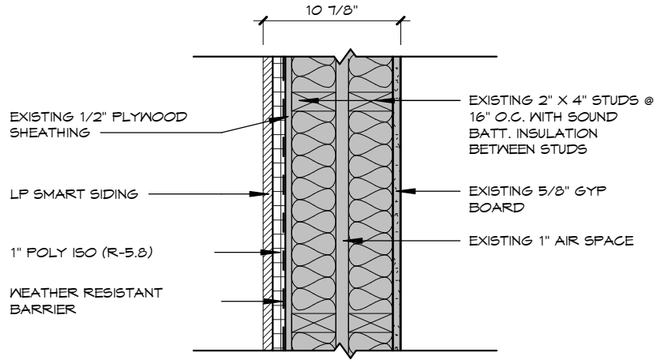
3/32" = 1'-0"



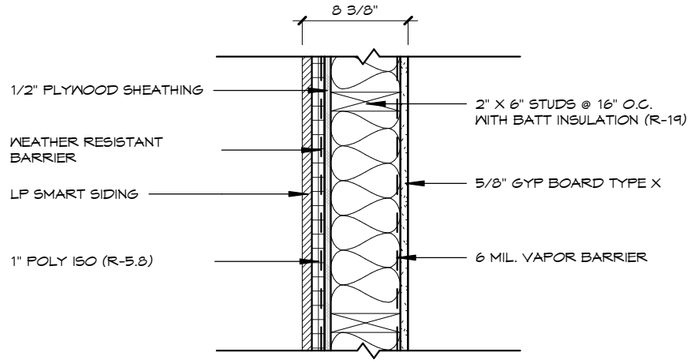
1 OVER-EXCAVATION BUILDING SECTION B

3/32" = 1'-0"

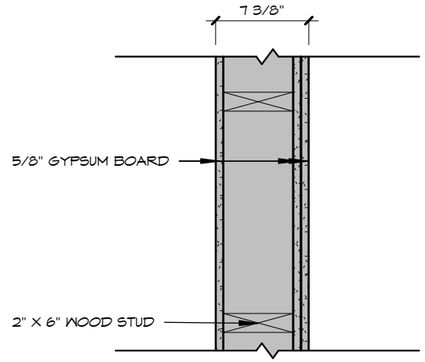
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			OVER EXCAVATION–SECTIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A002	



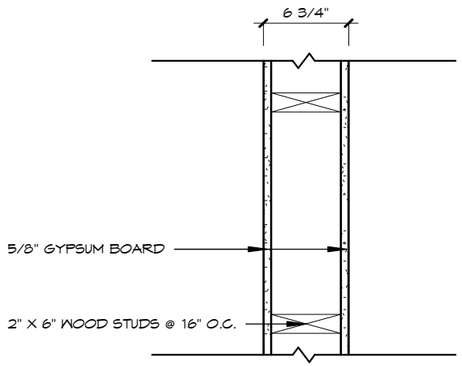
A WALL TYPE
EXISTING - EXTERIOR WALL



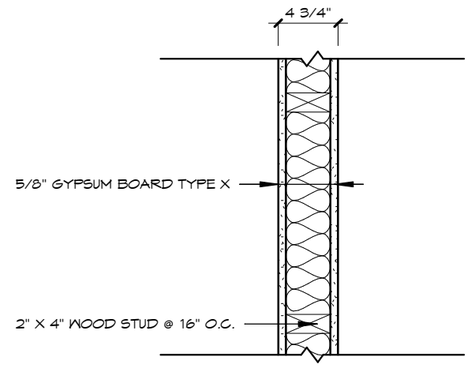
B WALL TYPE
NEW - EXTERIOR WALL



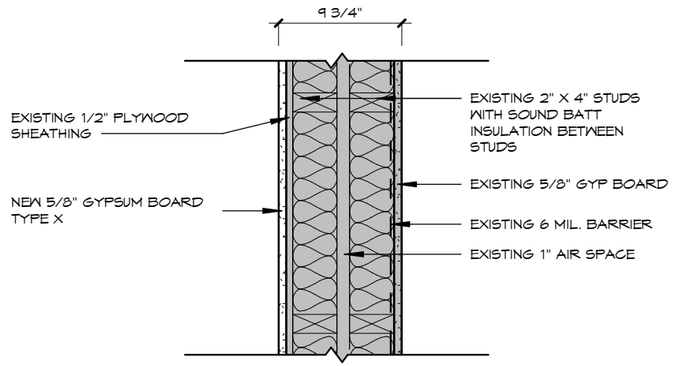
C WALL TYPE
EXISTING - INTERIOR PLUMBING WALL



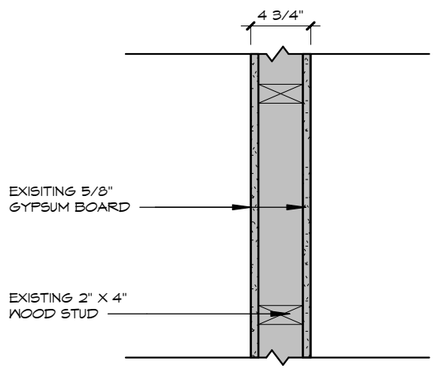
D WALL TYPE
NEW - INTERIOR PLUMBING WALL



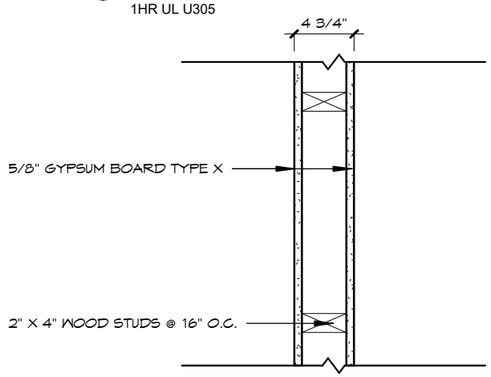
E WALL TYPE
INT. WALL -
1HR UL U305



F WALL TYPE
EXISTING - INT. BEARING WALL

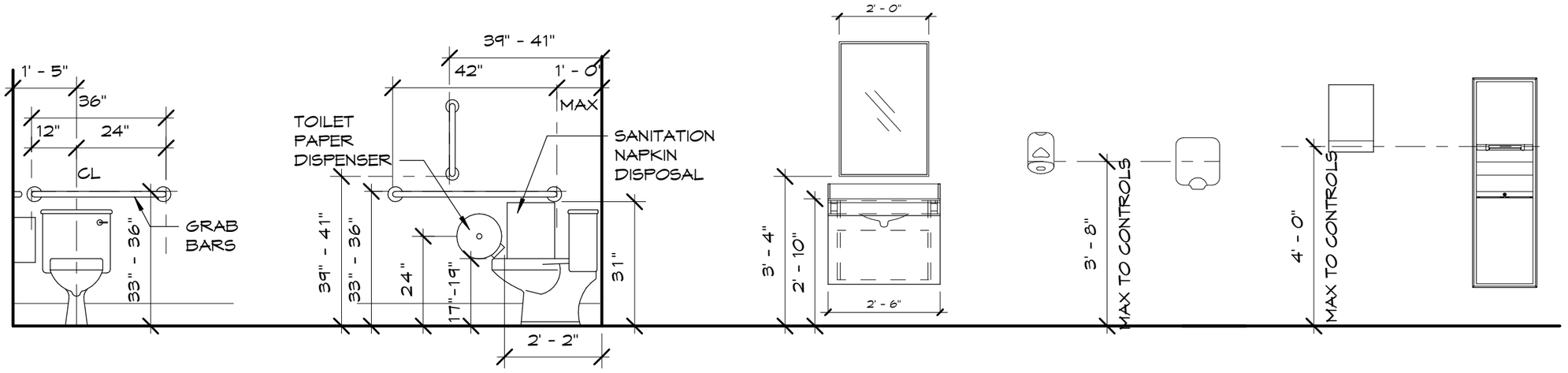


G WALL TYPE
EXISTING - INTERIOR WALL



H WALL TYPE
INT. WALL

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WALL TYPES		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A003	



ACCESSIBLE WATER CLOSET

ACCESSIBLE WATER CLOSET

ACCESSIBLE LAVATORY

SURFACE MTD. SOAP DISP.

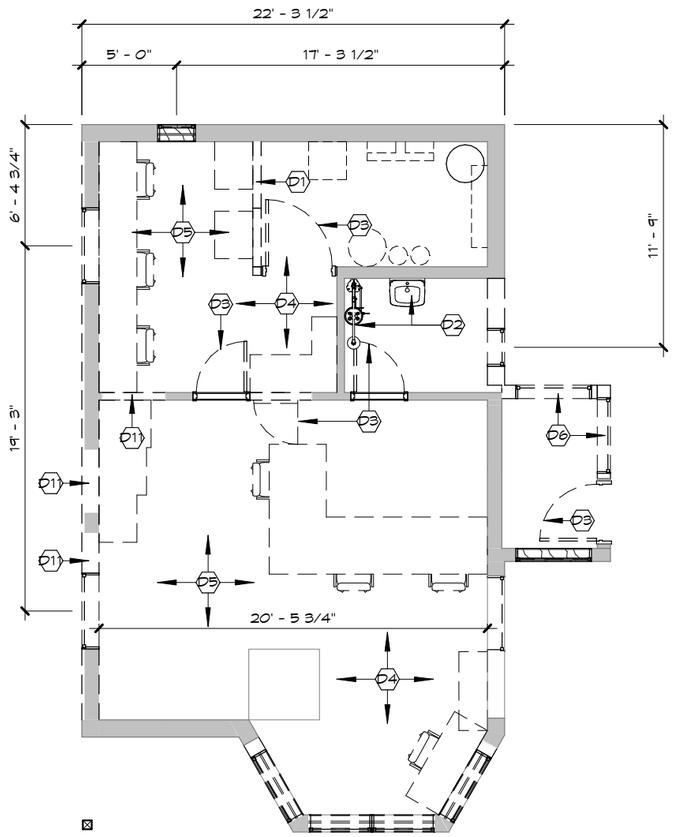
ELEC. HAND DRYER

PAPER TOWEL DISPENSER

1 STANDARD MOUNTING HEIGHTS

3/8" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			STANDARD MOUNTING HEIGHTS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A004	



1 **1ST FLOOR DEMO PLAN**

1/8" = 1'-0" 0 2 4 6 8 16

SCALE: 1/8"=1'-0"

NORTH

DEMOLITION KEY NOTES

MARK	DESCRIPTION
D1	DEMO EXISTING WALLS. PATCH ADJOINING WALL FOR NEW FINISH. PREP EXISTING FLOOR FOR INSTALLATION OF NEW WALLS AND FLOORING.
D2	REMOVE EXISTING PLUMBING FIXTURE, REFER TO PLUMBING PLANS.
D3	REMOVE EXISTING DOOR, FRAME AND HARDWARE.
D4	REMOVE EXISTING FLOORING, BASE, AND ADHESIVES DOWN TO EXISTING SLAB. PREP FLOOR FOR NEW FLOORING PER MFR. SPECIFICATIONS.
D5	REMOVE EXISTING CASEWORK, SHELVES, ETC, AND DISPOSED OF.
D6	REMOVE EXISTING WOOD FRAMING & GLASS
D7	REMOVE EXISTING FLOORING THIS AREA AND DEMO STAIRS AS REQ. FOR NEW RAMP.
D8	EXISTING BOOT CURB TO REMAIN.
D9	EXISTING DOORS TO BE REMOVED AND SALVAGED TO OWNER PRIOR TO CONSTRUCTION
D10	EXISTING VINYL ASBESTOS FLOORING TO REMAIN. FLOORING CONTRACTOR TO PROVIDE LEVELING COMPOUND PER SPECS. PREP FOR NEW RBR FLOORING.
D11	DEMO PORTION OF EXIST. WALL AS REQUIRED FOR NEW DOOR OPENING.

DEMOLITION NOTES:

A. THIS DEMOLITION PLAN DOES NOT PURPORT TO SHOW EVERY EXISTING CONDITION OR ITEM THAT WILL BE NECESSARY AS PART OF THE DEMOLITION WORK. THE CONTRACTOR SHALL EXAMINE ALL DRAWINGS TO DETERMINE SCOPE OF DEMOLITION WORK REQUIRED TO COMPLETE THE REMODELING WORK INDICATED ON THE DRAWINGS.

B.ALL LOOSE FURNISHINGS (CHAIRS, TABLES, COUNTERS, ETC.) SHALL BE REMOVED AND REPLACED WITH NEW

C.ALL SAW CUTTING OF EXISTING CONCRETE FLOOR SLAB REQUIRED FOR UNDERGROUND WORK SHALL BE PERFORMED BY THAT TRADE CONTRACTOR.

D.ALL CORING THRU EXISTING FLOORS, WALLS & CEILINGS SHALL BE PERFORMED BY THE CONTRACTOR REQUIRING THE SAME.

E.ALL ADJACENT SURFACES DAMAGED BY DEMOLITION WORK SHALL BE RESTORED TO EXISTING CONDITION.

F.ALL ROOF PENETRATIONS SHALL BE PERFORMED BY THE TRADE REQUIRING THE SAME. PATCHING AND FLASHING ROOF SHALL BE PERFORMED BY THE ROOFING CONTRACTOR.

G.VERIFY WITH OWNER FOR ITEMS TO BE SALVAGED BEFORE STARTING DEMOLITION WORK.

H.COORDINATE DEMOLITION OF LOAD BEARING WALLS WITH STRUCTURAL PLANS.

J.CONSTRUCT DUST PROOF PARTITIONS TO SEPARATE AREAS OF CONSTRUCTION FROM ADJACENT OCCUPIED AREAS OUTSIDE SCOPE OF CONSTRUCTION.

K. EXISTING FINISHES TO BE REMOVED SHALL HAVE THE ORIGINAL SUBSTRATE PREPARED OR REPLACE TO RECEIVE NEW FINISHES.

L. PRIOR TO BIDDING CONTRACTOR SHALL VISIT THE SITE TO VERIFY EXISTING CONDITIONS, DIMENSIONS, PRODUCTS TO BE USED AND QUANTITIES REQUIRED.

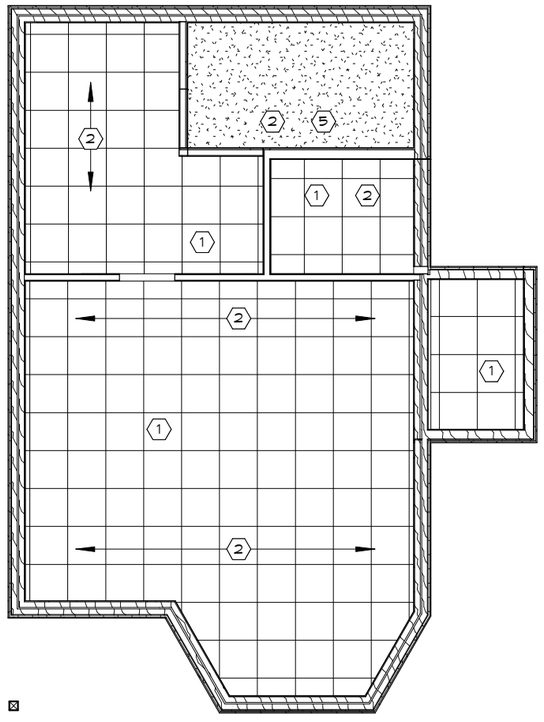
M. PATCH AND REPAIR FLOOR IN PREPARATION FOR NEW FLOORING WHERE WALLS HAVE BEEN REMOVED.

O. REMOVAL OF EXISTING CABINETS AND CASEWORK AND REPLACE WITH NEW

P. COORDINATE REMOVAL OF EXISTING DOORS, FRAMES AND HARDWARE WITH OWNER. SALVAGE OR REMOVE AS DIRECTED.

Q. WHERE WALLS OR PARTITIONS ARE INDICATED TO BE REMOVED, REMOVE ENTIRE WALL OR PARTITION AS WELL AS DUCTS, PIPING, CONDUITS AND OTHER ELEMENTS IN OR ON THEM WHICH MAY OR MAY NOT BE SPECIFICALLY IDENTIFIED, UNLESS NOTED OTHERWISE. COORDINATE WITH OWNER ALL EQUIPMENT TO BE SALVAGED.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DEMOLITION FLOOR PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A005	



REFLECTED CEILING PLAN SYMBOLS LEGEND

- EXISTING RECESSED 2x2 LIGHT FIXTURE
- SURFACE MT. LIGHT FIXTURE
- RECESSED CAN LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- SURFACE MT. LIGHT FIXTURE
- SUSPENDED TILE CEILING
- EXISTING PLASTER CLG.

DEMOLITION RCP KEY NOTES

Mark	Description
1	REMOVE EXISTING SUSPENDED CEILING TILE, T-GRID, WALL ANGLES AND HANGER WIRE.
2	ALL EXISTING LIGHT FIXTURES TO BE DE-ENERGIZED AND REMOVED BY ELECTRICAL CONTRACTOR. ALL FIXTURES AND LAMPS TO BE DISPOSED OF OFF SITE.
3	REFER TO HVAC DEMOLITION PLAN FOR REMOVING OF DIFFUSERS AND GRILLES. TYPICAL ALL ROOMS U.N.O.
4	REFER TO ELECTRICAL DEMOLITION PLAN FOR REMOVAL OF CEILING MOUNTED ELECTRICAL AND/OR FIRE DETECTION DEVICES. TYPICAL ALL ROOMS. U.N.O.
5	EXISTING CEILING TO REMAIN.

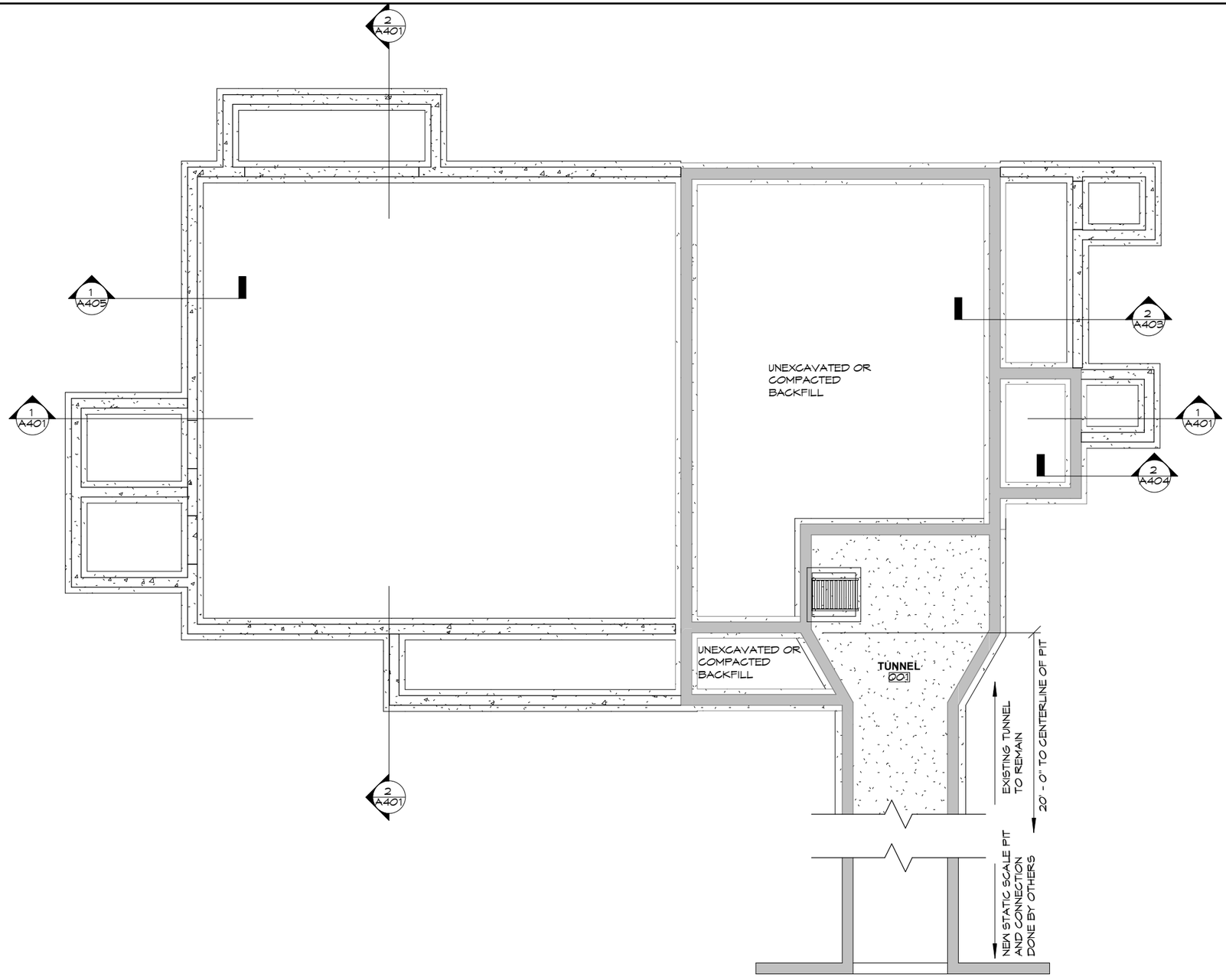
NORTH

1 **DEMO REFLECTED CEILING PLAN**

1/8" = 1'-0" 0 2 4 6 8 16

SCALE: 1/8"=1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			REFLECTED CEILING DEMO PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A006	



FLOOR PLAN KEY NOTES

MARK	DESCRIPTION
1.	EMERGENCY EYEWASH/SHOWER
2.	METAL LOCKERS. SEE DETAIL 1/A605
3.	PIPE BOLLARD. SEE DETAIL 2/G202
4.	CONCRETE FROST STOOP APRON BY GENERAL BUILDING CONTRACTOR.
5.	LARGE SCREEN TV W/ QUICK CONNECT PANEL.
6.	FLOOR DRAIN REFER TO PLUMBING PLANS
7.	EXISTING TUNNEL HATCH ENTRANCE
8.	MOP BASIN. REFER TO PLUMBING PLANS.
9.	REFRIGERATOR SEE SPEC.
10.	SOLID SURFACE COUNTERTOP SEE DETAILS
11.	GUARD RAIL STANCHION SOCKET
12	3X4 METAL DOWNSPOUT DISCHARGE INTO STORM PIPE
13	HOSE BIB. SEE PLUMBING PLANS
14	CABLE ENTRY PORT REFER TO ELECTRICAL FOR EXACT LOCATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS

1 LOWER LEVEL PLAN

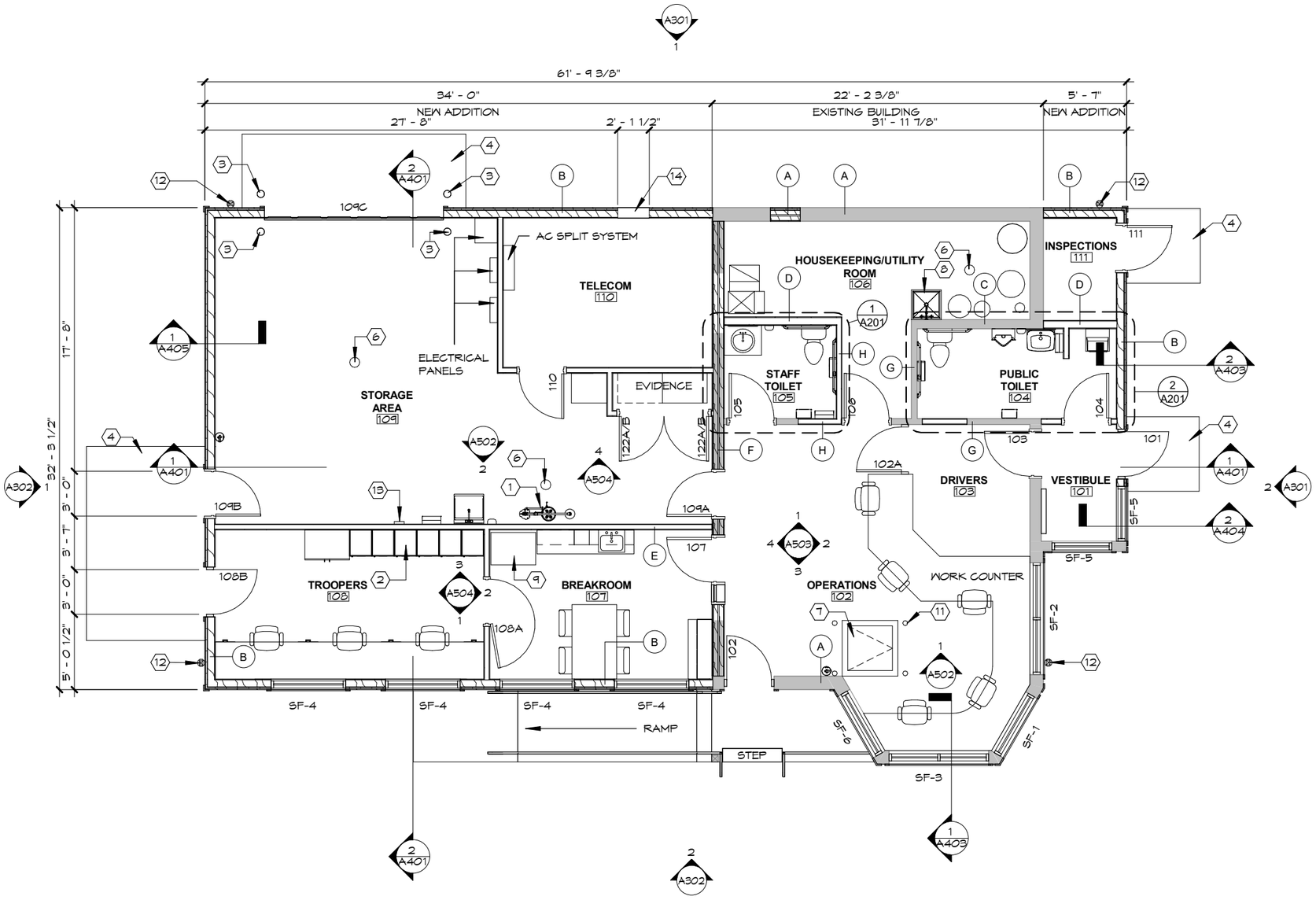
1/8" = 1'-0"

0 2 4 6 8 16

SCALE: 1/8"=1'-0"

NORTH

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			LOWER LEVEL FLOOR PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A101	



1 1ST FLOOR PLAN

1/8" = 1'-0"

0 2 4 6 8 16

SCALE: 1/8"=1'-0"

NORTH

FLOOR PLAN KEY NOTES

MARK	DESCRIPTION
1.	EMERGENCY EYEWASH/SHOWER
2.	METAL LOCKERS. SEE DETAIL 1/A605
3.	PIPE BOLLARD. SEE DETAIL 2/G202
4.	CONCRETE FROST STOOP APRON BY GENERAL BUILDING CONTRACTOR.
5.	LARGE SCREEN TV W/ QUICK CONNECT PANEL.
6.	FLOOR DRAIN REFER TO PLUMBING PLANS
7.	EXISTING TUNNEL HATCH ENTRANCE
8.	MOP BASIN. REFER TO PLUMBING PLANS.
9.	REFRIGERATOR SEE SPEC.
10.	SOLID SURFACE COUNTERTOP SEE DETAILS
11.	GUARD RAIL STANCHION SOCKET
12	3X4 METAL DOWNSPOUT DISCHARGE INTO STORM PIPE
13	HOSE BIB. SEE PLUMBING PLANS
14	CABLE ENTRY PORT REFER TO ELECTRICAL FOR EXACT LOCATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			1ST FLOOR PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A102	

ROOF NOTES

A. FIELD VERIFY EXACT QUANTITY, SIZE AND LOCATIONS OF ROOF HOODS, VENTS, DRAINS, EQUIMENT, ETC.

B. ALL VENT-THRU PIPES SHALL BE EXTENDED, AS NECESSARY, TO PROTECT MINIMUM OF 12" ABOVE FINISHED ELEVATION OF ROOFING. FLASH ALL VENTS WITH PREMOLDED PIPE BOOTS WITH STAINLESS STEEL CLAMPING RING. ROUTE TO BACK SIDE OF RIDGE - EAST SIDE.

C. ALL ROOF TOP CURBS TO BE SADDLES WITH MINIMUM 1/2" PER FOOT PITCH

ROOF VENTILATION

OVERALL ATTIC AREA = 2, 611 SQ. FT.

2,611 SQ. FT. /300 = 8.7 SQ. FT. OF VENTING REQUIRED

SOFFITS VENTING = 5.2 SQ. FT. REQUIRED

RIDGE VENTING = 3.5 SQ. FT. REQUIRED

NOTE: MAINTAIN RATIO OF 60% SOFFIT VENTING AND 40% RIDGE VENTING

DISTRIBUTE VENTING EQUALLY AROUND PERIMETER OF SOFFIT

DOWNSPOUT CALCULATIONS

ROOF AREA 2,611 SQ. FT.

ACCORDING TO WISCONSIN CODE:

2,611 SQ FT. / 26 SQ. PER GALLON OF STORMWATER = 101 GPM

101 GPM REQUIRES MINIMUM 6" DIAMETER PIPE

ACCORDING TO ARCHITECTURAL STANDARDS:

2,611 SQ FT. / 200 = 13.06 IN. SQ. REQUIRED

DOWNSPOUTS TO MEET REQUIREMENTS: (4) 3"X4" = 48 IN. SQ.

ROOF NOTES

A. FIELD VERIFY EXACT QUANTITY, SIZE AND LOCATIONS OF ROOF HOODS, VENTS, DRAINS, EQUIMENT, ETC.

B. ALL VENT-THRU PIPES SHALL BE EXTENDED, AS NECESSARY, TO PROTECT MINIMUM OF 12" ABOVE FINISHED ELEVATION OF ROOFING. FLASH ALL VENTS WITH PREMOLDED PIPE BOOTS WITH STAINLESS STEEL CLAMPING RING.

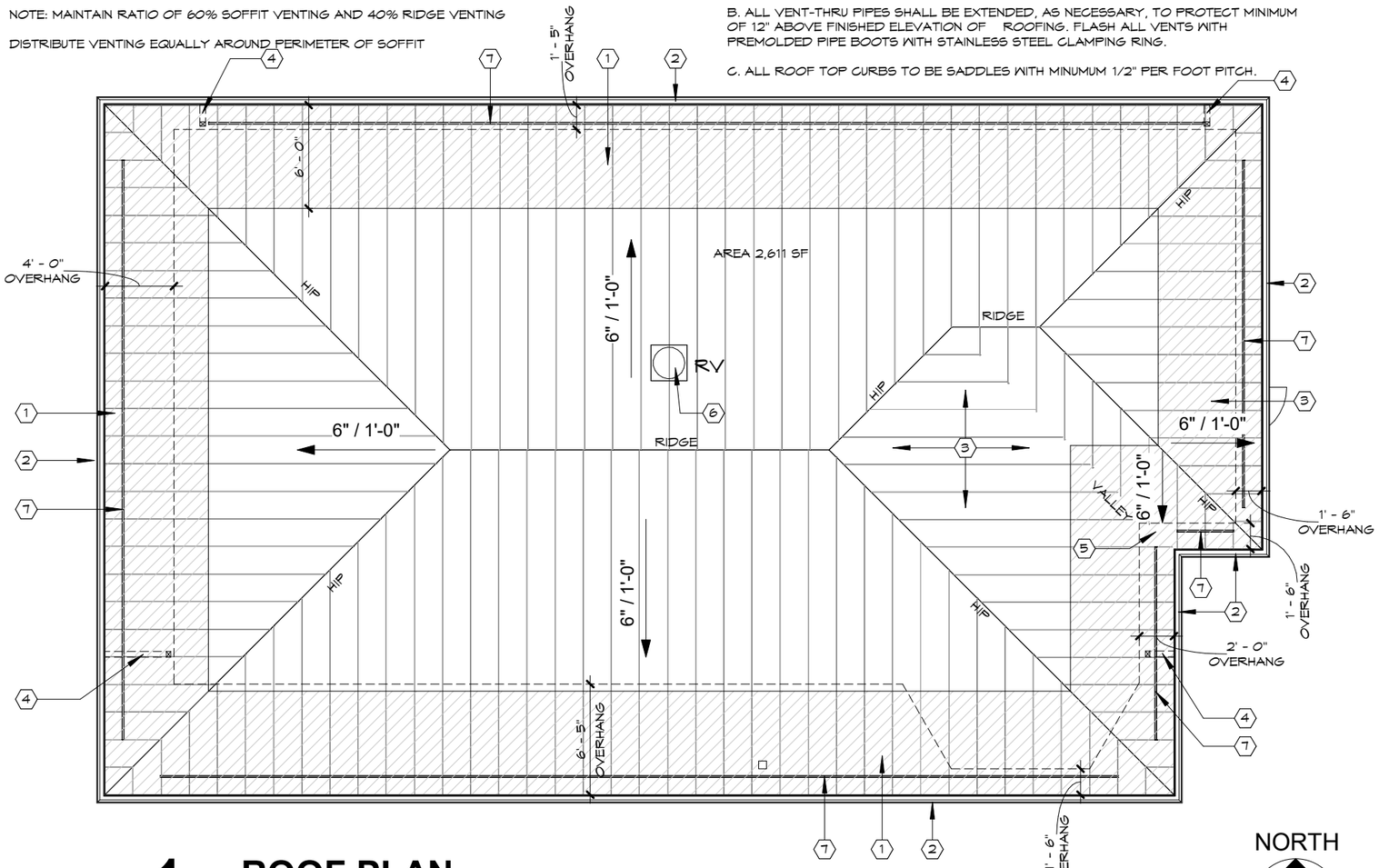
C. ALL ROOF TOP CURBS TO BE SADDLES WITH MINUMUM 1/2" PER FOOT PITCH.

ROOF SYMBOLS LEGEND

RD	INDICATES ROOF DRAIN. REFER TO PLUMBING PLANS & DETAIL.
RD(O)	INDICATES OVERFLOW ROOF DRAIN. REFER TO PLUMBING PLANS
VTR	VENT THRU ROOF
EF	EXHAUST FAN
BE	BOILER EXHAUST
RH	ROOF HOOD
	INDIACTES SLOPE DIRECTION OF ROOF AND TAPPERED INSULATION
	NEW ROOFING
	EXISTING ROOF

ROOF PLAN KEY NOTES

MARK	DESCRIPTION
1	PROVIDE 3 COURSES OF ICE & WATER SHIELD UNDERLAYMENT AT PERIMETER (TYPICAL)
2	PREFINISHED ALUMINUM GUTTER & FASCIA SEE DETAIL
3	ARCHITECTURAL ASPHALT SHINGLES OVER SYNTHETIC UNDERLAYMENT OVER 5/8" OSB SHEATHING
4	DOWNSPOUT LOCATION
5	VALLEY FLASHING + ICE & WATER SHIELD SEE DETAIL 2/A407
6	ROOF VENTS
7	SNOW RETENTION BAR. SEE 1/A407



1 **ROOF PLAN**

1/8" = 1'-0"

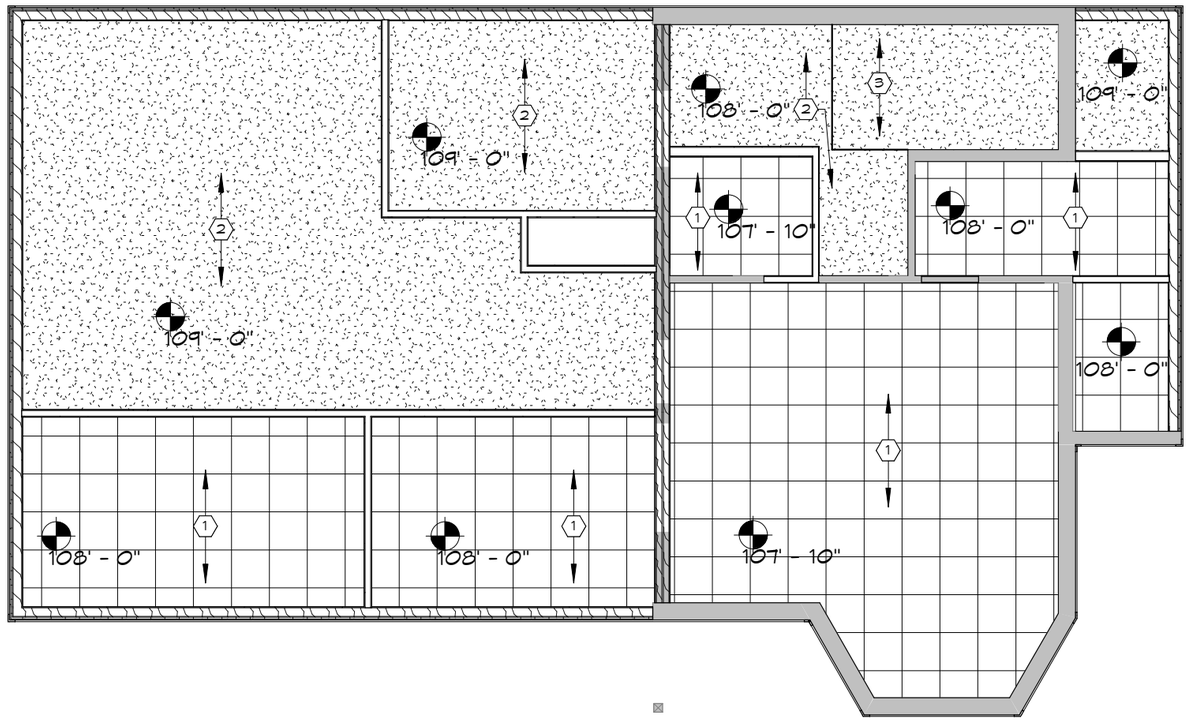
0 2 4 6 8 16

SCALE: 1/8"=1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ROOF PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A103	152

REFLECTED CEILING PLAN KEY NOTES

MARK	DESCRIPTION
1	NEW 2X2 ACT CEILING
2	NEW GYP. BOARD CEILING - PAINT
3	EXISTING CEILING TO REMAIN



CEILING NOTES

A. COORDINATE WITH MECHANICAL, PLUMBING, FIRE PROTECTION AND ELECTRICAL THE EXACT LOCATIONS OF CEILING FIXTURES, DIFFUSERS, SPRINKLER HEADS, ETC.

B. SPRINKLER HEADS, RECESSED LIGHT FIXTURES, SPEAKERS, EXIT LIGHTS, SMOKE DETECTORS, ETC. TO BE LOCATED IN THE EXACT CENTER OF 2X2 CEILING TILE.

C. REFER TO HVAC DRAWINGS FOR THE LOCATION OF ANY AND ALL PLENUM CEILING SPACES. ALL WALLS AND SOFFITS CREATING THE PLENUM SHALL EXTEND TO THE UNDERSIDE OF THE STRUCTURE AND SEALED.

REFLECTED CEILING PLAN SYMBOLS LEGEND

- RECESSED LIGHT FIXTURE
- SUSPENDED LINEAR LIGHT FIXTURE
- RECESSED CAN LIGHT FIXTURE
- SURFACE MOUNTED LIGHT FIXTURE
- PENDANT LIGHT FIXTURE
- WALL MOUNT SCONCE LIGHT FIXTURE
- EXIT SIGN
- OCCUPANCY SENSOR
- HEIGHT MARKER BASED ON T./ SLAB (100'-0")
- SUPPLY AIR DIFFUSER
- RETURN AIR GRILL

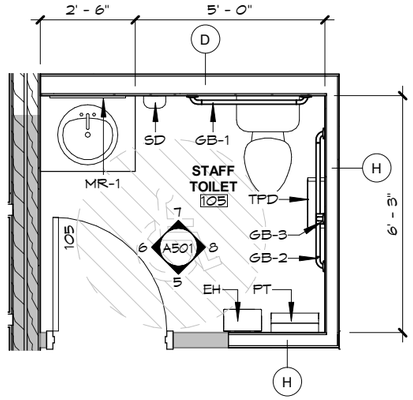
NORTH

1 1ST FLOOR CEILING PLAN

1/8" = 1'-0" 0 2 4 6 8 16

SCALE: 1/8"=1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			REFLECTED CEILING PLAN		DATE: 10/3/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A104	

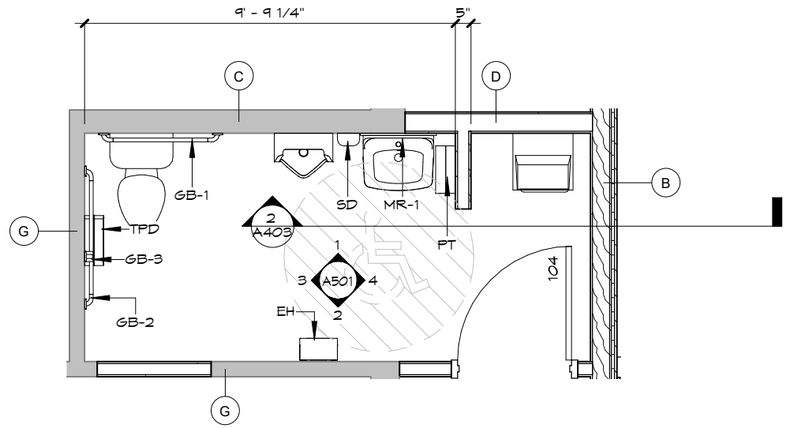


1 ENLARGED TOILET ROOM 105

1/4" = 1'-0"

0 2 4 8

SCALE: 1/4"=1'-0"



2 ENLARGED TOILET ROOM 104

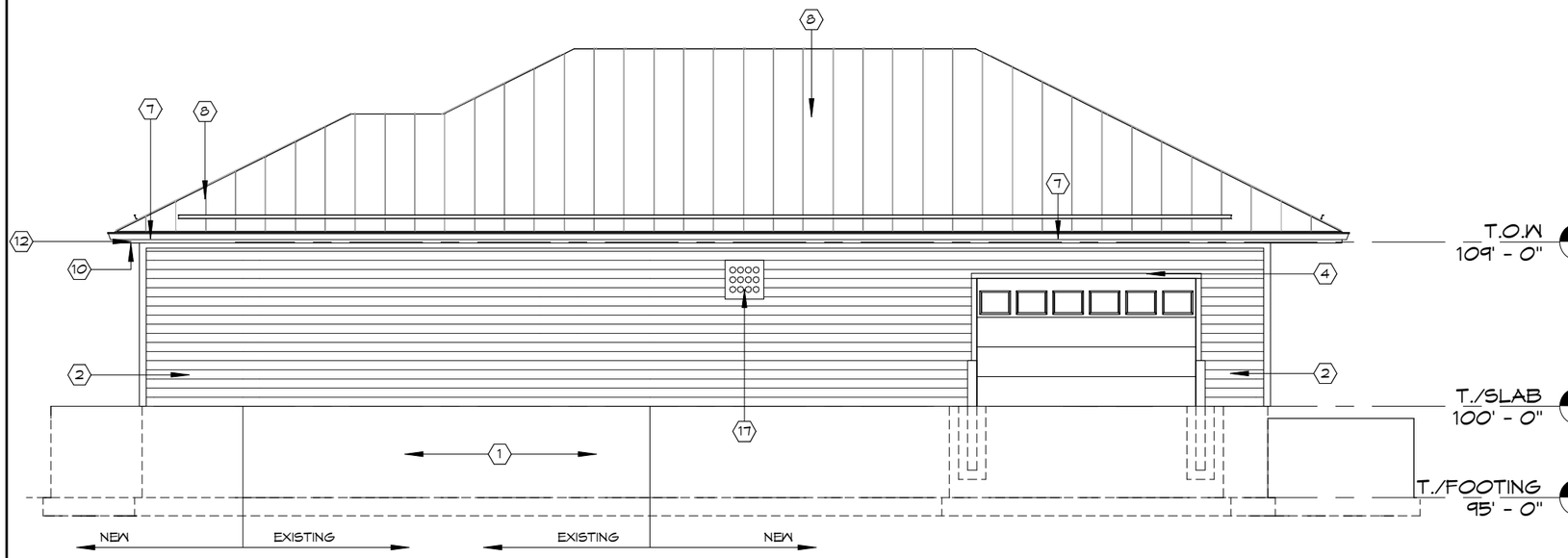
1/4" = 1'-0"

0 2 4 8

SCALE: 1/4"=1'-0"

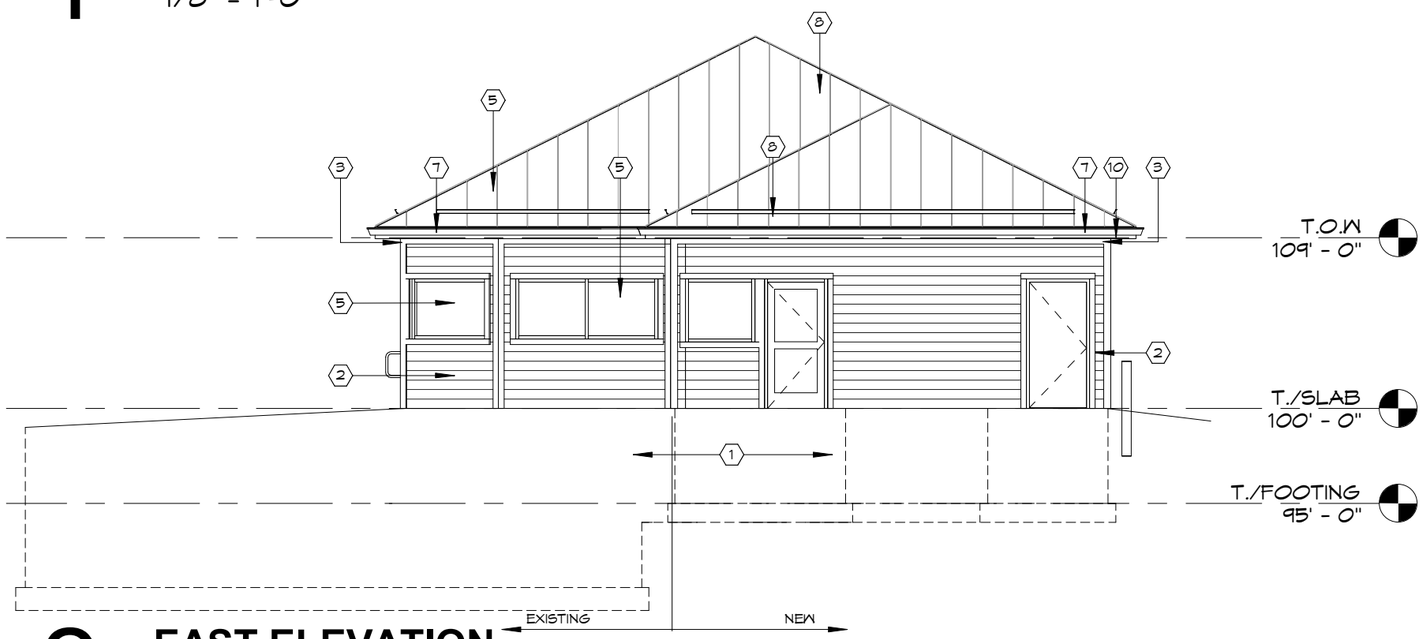
TOILET ROOM ACCESSORY SCHEDULE

ACCESSORY		MOUNTING REMARKS	FURNISHED & INSTALLED
MARK	NAME		
	WASTE RECEPTACLE	NONE.	OWNER FURNISHED, OWNER INSTALLED
EH	ELECTRIC HAND DRYER	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
GB-1	36" GRAB BAR	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
GB-2	42" GRAB BAR	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
GB-3	VERTICAL GRAB BAR (18" MIN)	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
MR-1	24" X 36" FRAMED MIRROR	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
PT	PAPER TOWEL DISPENSER - SURFACE MOUNT	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	OWNER FURNISHED, OWNER INSTALLED
SD	LIQUID SOAP DISPENSER - SURFACE MOUNT	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	OWNER FURNISHED, OWNER INSTALLED
TPD	TOILET PAPER DISPENSER	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED



1 NORTH ELEVATION

1/8" = 1'-0"



2 EAST ELEVATION

1/8" = 1'-0"

EXTERIOR ELEVATION KEY NOTES

MARK	DESCRIPTION
1	CAST-IN-PLACE CONCRETE FOUNDATION. SEE STRUCTURAL PLANS.
2	LP SMART LAP SIDING
3	LP SMART SIDE SMOOTH FASCIA
4	LP SMART SIDE TRIM BOARD. NOTE: CUT TO FIT.
5	ALUMINUM WINDOW W/ INSULATED GLAZING
6	ALUMINUM STOREFRONT ENTRANCE W/ INSULATED GLAZING.
7	PREFINISHED METAL GUTTER/DOWNSPOUT.
8	STANDING SEAM METAL ROOFING
9	HIGH CAPACITY DOME ROOF VENTS, SEE ROOF PLAN.
10	PRE. FIN. METAL SOFFIT
11	CONTINUOUS STRIPS OF SNOW GUARDS
12	PRE. FIN. METAL FASCIA
13	REFER TO STRUCTURAL FOR RAMP AND STAIRS
14	STEEL INSULATED GARAGE DOOR W/ REMOTE
15	RAILING. SEE DETAIL 1/G203
16	BOLLARD. SEE DETAIL 2/G202
17	CABLE ENTRY PORT REFER TO ELECTRICAL FOR EXACT LOCATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS

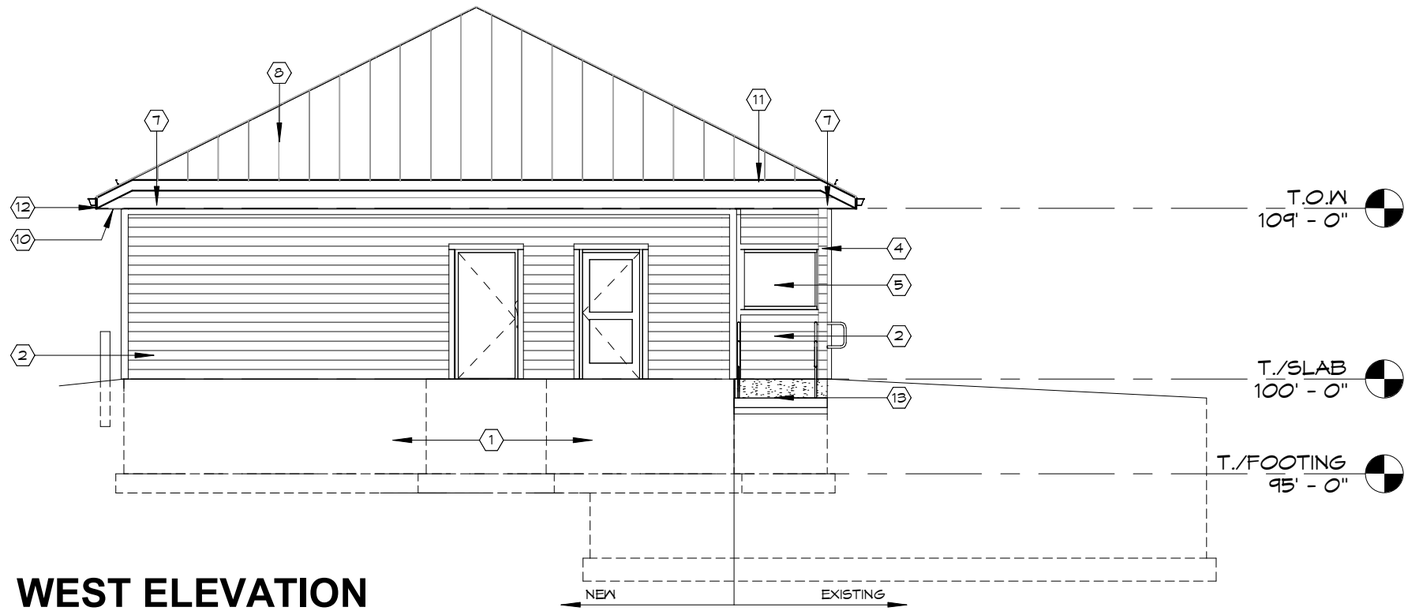
EXTERIOR ELEVATION NOTES

A. FOUNDATION WALLS AND FOOTINGS SHOWN DASHED ARE INDICATED FOR REFERENCE ONLY. SEE STRUCTURAL PLANS FOR DEPTH AND SIZE OF FOOTINGS AND LOCATIONS WHERE FOOTINGS AND FOUNDATIONS STEP.

B. SEE FLOOR PLAN FOR WINDOW TYPE KEYS.

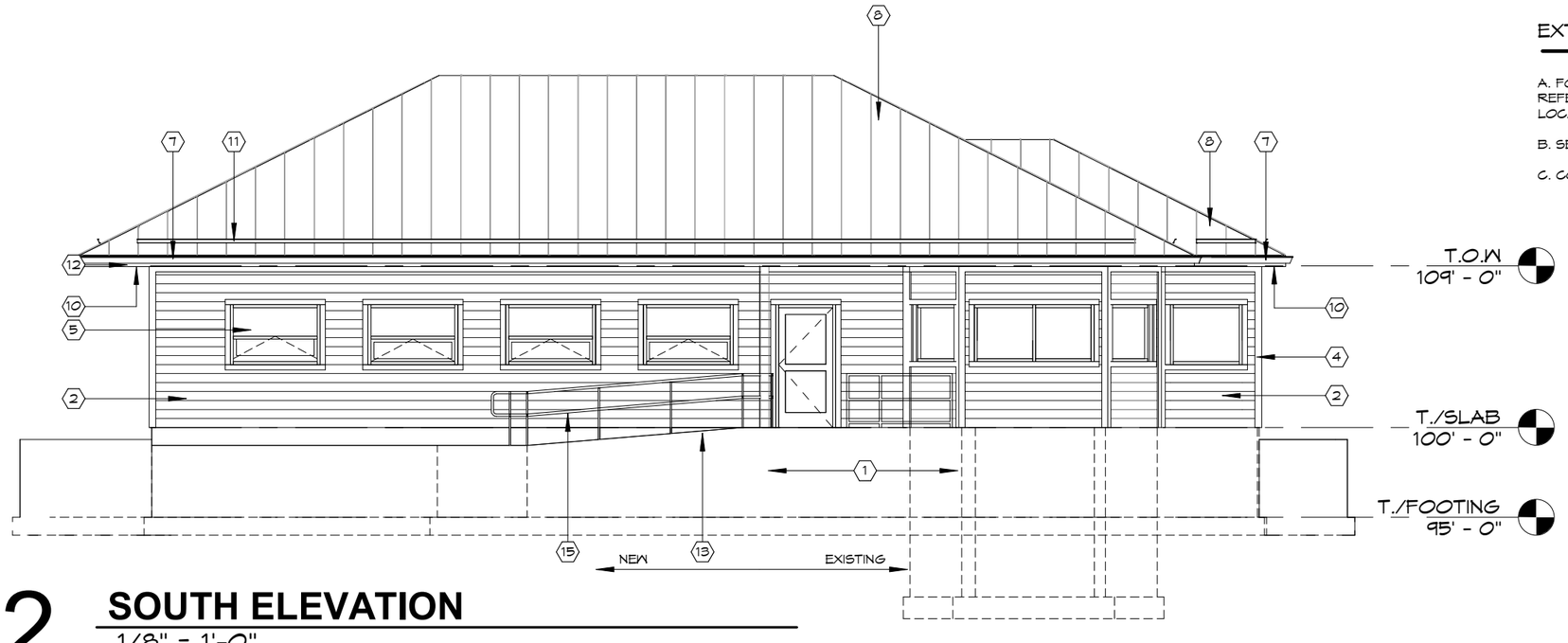
C. CONTROL JOINT SEALANT TO MACH VENEER COLOR.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			EXTERIOR ELEVATIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A301	155



1 WEST ELEVATION

1/8" = 1'-0"



2 SOUTH ELEVATION

1/8" = 1'-0"

EXTERIOR ELEVATION KEY NOTES

MARK	DESCRIPTION
1	CAST-IN-PLACE CONCRETE FOUNDATION. SEE STRUCTURAL PLANS.
2	LP SMART LAP SIDING
3	LP SMART SIDE SMOOTH FASCIA
4	LP SMART SIDE TRIM BOARD. NOTE: CUT TO FIT.
5	ALUMINUM WINDOW W/ INSULATED GLAZING
6	ALUMINUM STOREFRONT ENTRANCE W/ INSULATED GLAZING.
7	PREFINISHED METAL GUTTER/DOWNSPOUT.
8	STANDING SEAM METAL ROOFING
9	HIGH CAPACITY DOME ROOF VENTS, SEE ROOF PLAN.
10	PRE. FIN. METAL SOFFIT
11	CONTINUOUS STRIPS OF SNOW GUARDS
12	PRE. FIN. METAL FASCIA
13	REFER TO STRUCTURAL FOR RAMP AND STAIRS
14	STEEL INSULATED GARAGE DOOR W/ REMOTE
15	RAILING. SEE DETAIL 1/G203
16	BOLLARD. SEE DETAIL 2/G202
17	CABLE ENTRY PORT REFER TO ELECTRICAL FOR EXACT LOCATION. INSTALL PER MANUFACTURER'S RECOMMENDATIONS

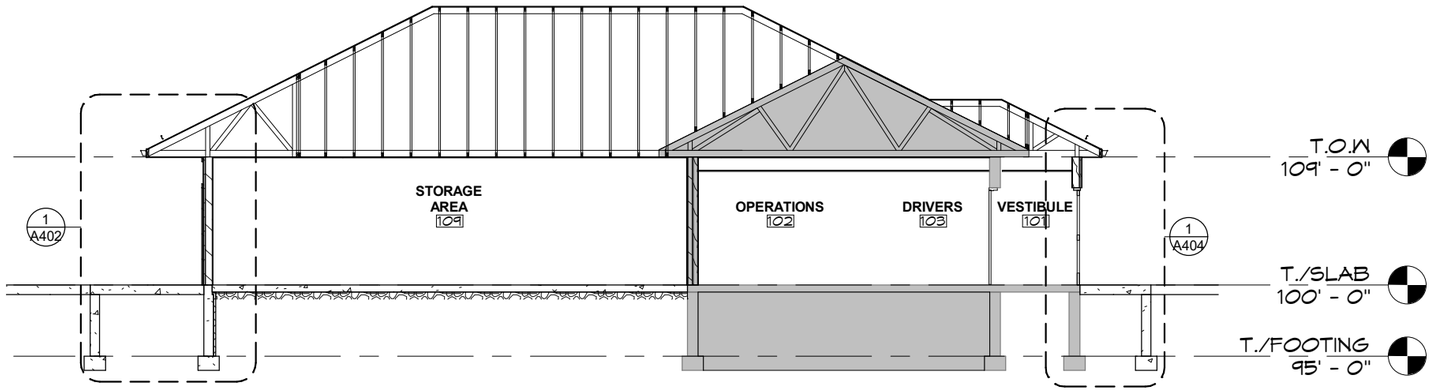
EXTERIOR ELEVATION NOTES

A. FOUNDATION WALLS AND FOOTINGS SHOWN DASHED ARE INDICATED FOR REFERENCE ONLY. SEE STRUCTURAL PLANS FOR DEPTH AND SIZE OF FOOTINGS AND LOCATIONS WHERE FOOTINGS AND FOUNDATIONS STEP.

B. SEE FLOOR PLAN FOR WINDOW TYPE KEYS.

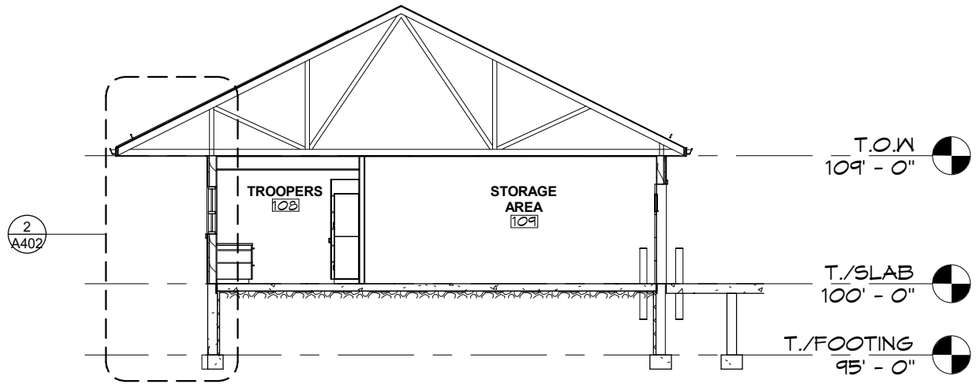
C. CONTROL JOINT SEALANT TO MACH VENEER COLOR.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			EXTERIOR ELEVATIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A302	



1 BUILDING SECTION A

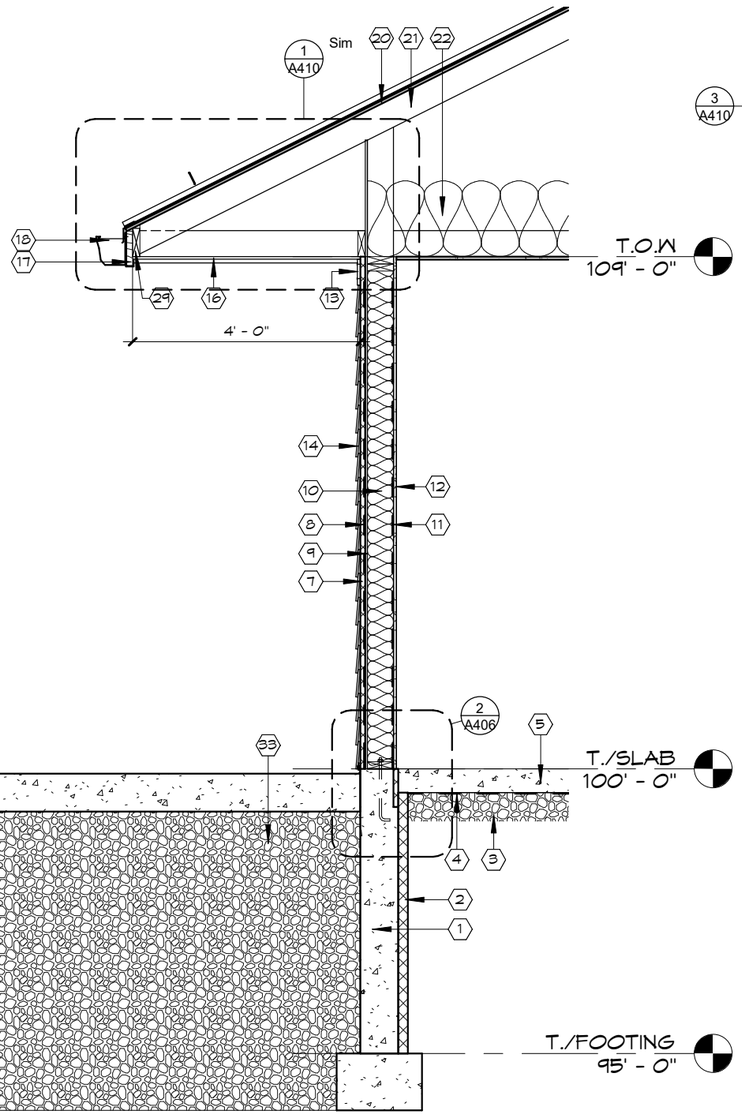
3/32" = 1'-0"



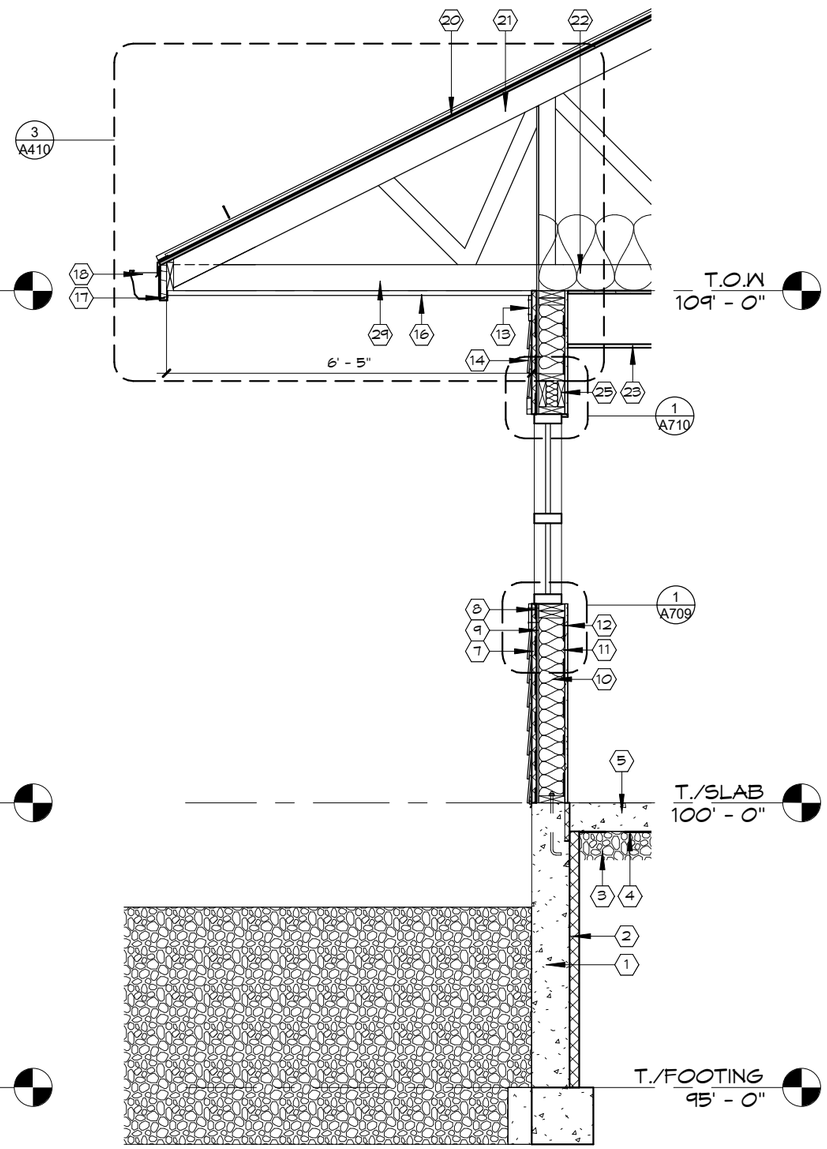
2 BUILDING SECTION B

3/32" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			BUILDING SECTIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A401	



1 **WALL SECTION**
3/8" = 1'-0"

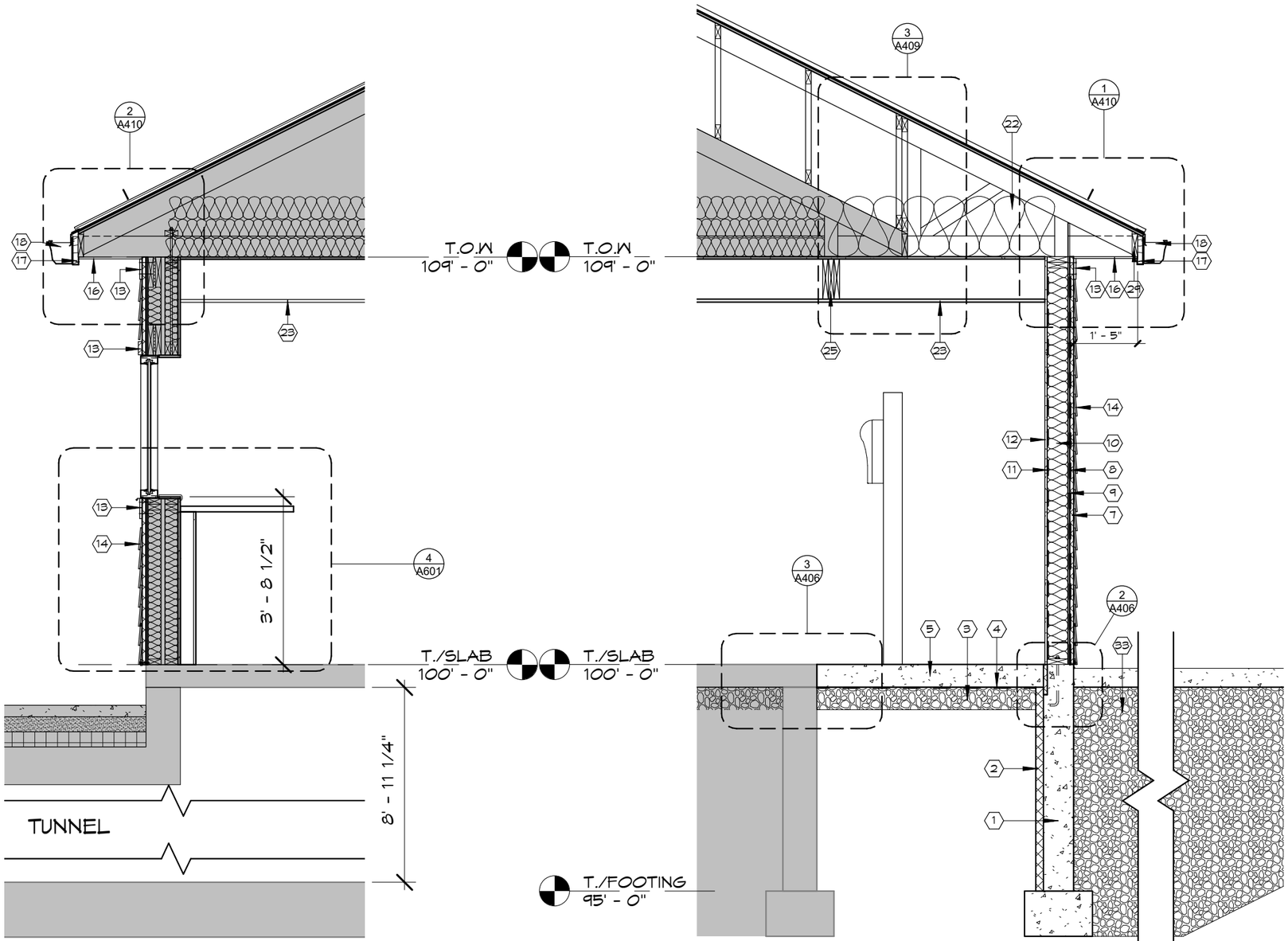


2 **WALL SECTION**
3/8" = 1'-0"

WALL SECTION KEY NOTES

MARK	DESCRIPTION
1	POURED CONC. FOOTING AND FOUNDATION. REFER TO STRUCTURAL PLANS FOR REINFORCEMENT AND SIZE.
2	2" EXTRUDED POLYSTYRENE. (R-10)
3	6" COMPACTED AGGREGATE BASE. REFER TO SPEC FOR GEOTECHNICAL REPORT.
4	15 MIL VAPOR BARRIER UNDER SLAB
5	CONC. SLAB ON GRADE. REFER TO STRUCTURAL PLANS.
6	FINISHED GRADE. REFER TO CIVIL PLANS. FIELD VERIFY GRADE @ PERIMETER OF BUILDING.
7	1" POLY ISO (R-5.8)
8	AIR BARRIER MEMBRANE
9	1/2" PLYWOOD SHEATHING
10	2x6 WOOD STUDS @ 16" O.C. FILL CAVITY WITH (R-19) FIBERGLASS BATT INSULATION
11	6 MIL VAPOR BARRIER
12	5/8" GYP. BOARD. REFER TO ROOM FINISH SCHEDULE FOR FINISH.
13	LP SMART SIDE TRIM BOARD.
14	LP SMART SIDE LAP SIDING.
15	ALUMINUM STOREFRONT. W/ INSULATED GLAZING.
16	VENTED METAL SOFFIT PANEL.
17	LP SMART SIDE FASCIA.
18	PREFINISHED METAL GUTTER
19	INSULATION BAFFELS BETWEEN EVERY OTHER TRUSS
20	ROOFING UNDERLAYMENT. PROVIDE ICE & WATER SHIELD MINIMUM 3'-0" UP CONDITIONED SPACE.
21	PRE-FABRICATED WOOD TRUSSES @ 24" O.C. SEE STRUCTURAL PLANS.
22	R-49 FIBERGLASS BLOWN INSULATION. PROVIDE DEPTH MARKERS @ TRUSSES.
23	LAY-IN ACOUSTICAL TILE CEILING
24	POURED CONC. FROST STOOP. SEE STRUCTURAL PLANS.
25	HEADER - REFER TO STRUCTURAL.
26	2X SOFFIT FRAMING @ 24" O.C. TO MATCH COMMON TRUSS
27	BLOCKING BETWEEN TRUSSES @ BRACING LOCATIONS.
28	REFER TO STRUCTURAL FOR FRAMING CONNECTORS & BLOCKING.
29	2X SUB FASCIA.
30	2X4 SOFFIT FRAMING @ 24" O.C. ALIGN BOTTOM OF FRAMING WITH UNDER FRAMING @ OVERHANGS. REFER TO 4/A410.
31	CONC. RAMP REFER TO STRUCTURAL PLANS
32	EXPANSION JOINT
33	OVER-EXCAVATION SEE SHEETS A001 AND A002 AND GEOTECHNICAL REPORT

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WALL SECTIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A402	158



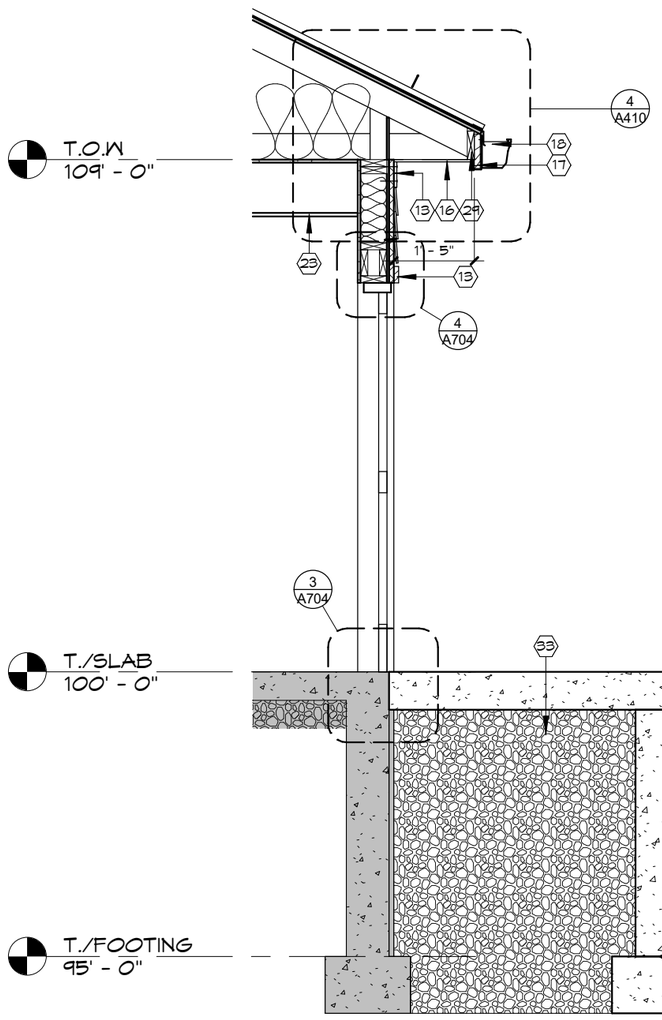
1 **WALL SECTION @ TUNNEL**
3/8" = 1'-0"

2 **WALL SECTION**
3/8" = 1'-0"

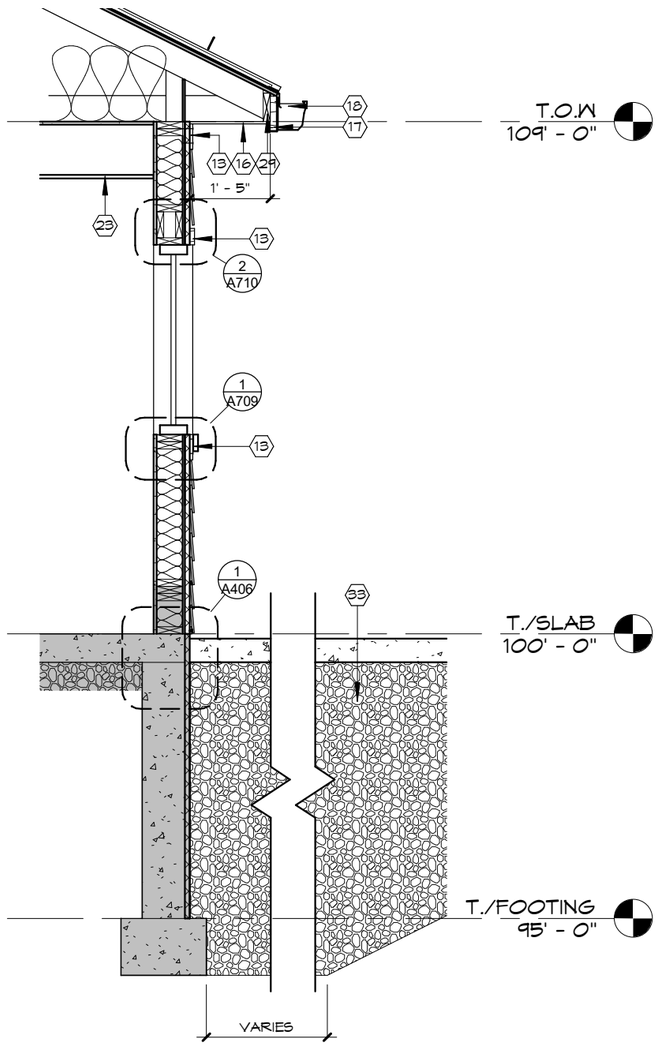
WALL SECTION KEY NOTES

MARK	DESCRIPTION
1	POURED CONC. FOOTING AND FOUNDATION. REFER TO STRUCTURAL PLANS FOR REINFORCEMENT AND SIZE.
2	2" EXTRUDED POLYSTYRENE. (R-10)
3	6" COMPACTED AGGREGATE BASE. REFER TO SPEC FOR GEOTECHNICAL REPORT.
4	15 MIL VAPOR BARRIER UNDER SLAB
5	CONC. SLAB ON GRADE. REFER TO STRUCTURAL PLANS.
6	FINISHED GRADE. REFER TO CIVIL PLANS. FIELD VERIFY GRADE @ PERIMETER OF BUILDING.
7	1" POLY ISO (R-5.8)
8	AIR BARRIER MEMBRANE
9	1/2" PLYWOOD SHEATHING
10	2x6 WOOD STUDS @ 16" O.C. FILL CAVITY WITH (R-19) FIBERGLASS BATT INSULATION
11	6 MIL VAPOR BARRIER
12	5/8" GYP. BOARD. REFER TO ROOM FINISH SCHEDULE FOR FINISH.
13	LP SMART SIDE TRIM BOARD.
14	LP SMART SIDE LAP SIDING.
15	ALUMINUM STOREFRONT. W/ INSULATED GLAZING.
16	VENTED METAL SOFFIT PANEL.
17	LP SMART SIDE FASCIA.
18	PREFINISHED METAL GUTTER
19	INSULATION BAFFELS BETWEEN EVERY OTHER TRUSS
20	ROOFING UNDERLAYMENT. PROVIDE ICE & WATER SHIELD MINIMUM 3'-0" UP CONDITIONED SPACE.
21	PRE-FABRICATED WOOD TRUSSES @ 24" O.C. SEE STRUCTURAL PLANS.
22	R-49 FIBERGLASS BLOWN INSULATION. PROVIDE DEPTH MARKERS @ TRUSSES.
23	LAY-IN ACOUSTICAL TILE CEILING
24	POURED CONC. FROST STOOP. SEE STRUCTURAL PLANS.
25	HEADER - REFER TO STRUCTURAL.
26	2X SOFFIT FRAMING @ 24" O.C. TO MATCH COMMON TRUSS
27	BLOCKING BETWEEN TRUSSES @ BRACING LOCATIONS.
28	REFER TO STRUCTURAL FOR FRAMING CONNECTORS & BLOCKING.
29	2X SUB FASCIA.
30	2X4 SOFFIT FRAMING @ 24" O.C. ALIGN BOTTOM OF FRAMING WITH UNDER FRAMING @ OVERHANGS. REFER TO 4/A410.
31	CONC. RAMP REFER TO STRUCTURAL PLANS
32	EXPANSION JOINT
33	OVER-EXCAVATION SEE SHEETS A001 AND A002 AND GEOTECHNICAL REPORT

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WALL SECTIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A403	159



1 **WALL SECTION**
3/8" = 1'-0"

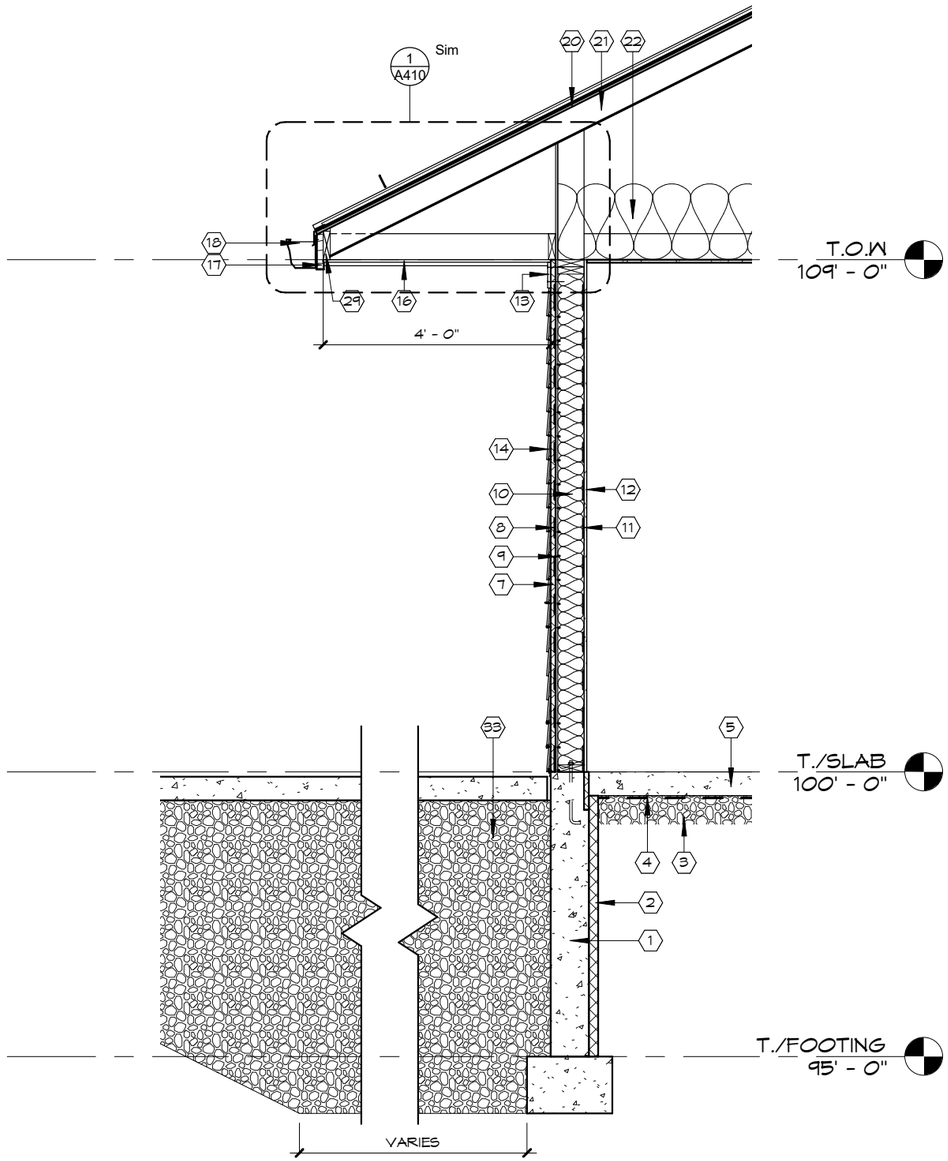


2 **WALL SECTION**
3/8" = 1'-0"

WALL SECTION KEY NOTES

MARK	DESCRIPTION
1	POURED CONC. FOOTING AND FOUNDATION. REFER TO STRUCTURAL PLANS FOR REINFORCEMENT AND SIZE.
2	2" EXTRUDED POLYSTYRENE. (R-10)
3	6" COMPACTED AGGREGATE BASE. REFER TO SPEC FOR GEOTECHNICAL REPORT.
4	15 MIL VAPOR BARRIER UNDER SLAB
5	CONC. SLAB ON GRADE. REFER TO STRUCTURAL PLANS.
6	FINISHED GRADE. REFER TO CIVIL PLANS. FIELD VERIFY GRADE @ PERIMETER OF BUILDING.
7	1" POLY ISO (R-5.8)
8	AIR BARRIER MEMBRANE
9	1/2" PLYWOOD SHEATHING
10	2x6 WOOD STUDS @ 16" O.C. FILL CAVITY WITH (R-19) FIBERGLASS BATT INSULATION
11	6 MIL VAPOR BARRIER
12	5/8" GYP. BOARD. REFER TO ROOM FINISH SCHEDULE FOR FINISH.
13	LP SMART SIDE TRIM BOARD.
14	LP SMART SIDE LAP SIDING.
15	ALUMINUM STOREFRONT. W/ INSULATED GLAZING.
16	VENTED METAL SOFFIT PANEL.
17	LP SMART SIDE FASCIA.
18	PREFINISHED METAL GUTTER
19	INSULATION BAFFELS BETWEEN EVERY OTHER TRUSS
20	ROOFING UNDERLAYMENT. PROVIDE ICE & WATER SHIELD MINIMUM 3'-0" UP CONDITIONED SPACE.
21	PRE-FABRICATED WOOD TRUSSES @ 24" O.C. SEE STRUCTURAL PLANS.
22	R-49 FIBERGLASS BLOWN INSULATION. PROVIDE DEPTH MARKERS @ TRUSSES.
23	LAY-IN ACOUSTICAL TILE CEILING
24	POURED CONC. FROST STOOP. SEE STRUCTURAL PLANS.
25	HEADER - REFER TO STRUCTURAL.
26	2X SOFFIT FRAMING @ 24" O.C. TO MATCH COMMON TRUSS
27	BLOCKING BETWEEN TRUSSES @ BRACING LOCATIONS.
28	REFER TO STRUCTURAL FOR FRAMING CONNECTORS & BLOCKING.
29	2X SUB FASCIA.
30	2X4 SOFFIT FRAMING @ 24" O.C. ALIGN BOTTOM OF FRAMING WITH UNDER FRAMING @ OVERHANGS. REFER TO 4/A410.
31	CONC. RAMP REFER TO STRUCTURAL PLANS
32	EXPANSION JOINT
33	OVER-EXCAVATION SEE SHEETS A001 AND A002 AND GEOTECHNICAL REPORT

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WALL SECTIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A404	160



1 **WALL SECTION**

3/8" = 1'-0"

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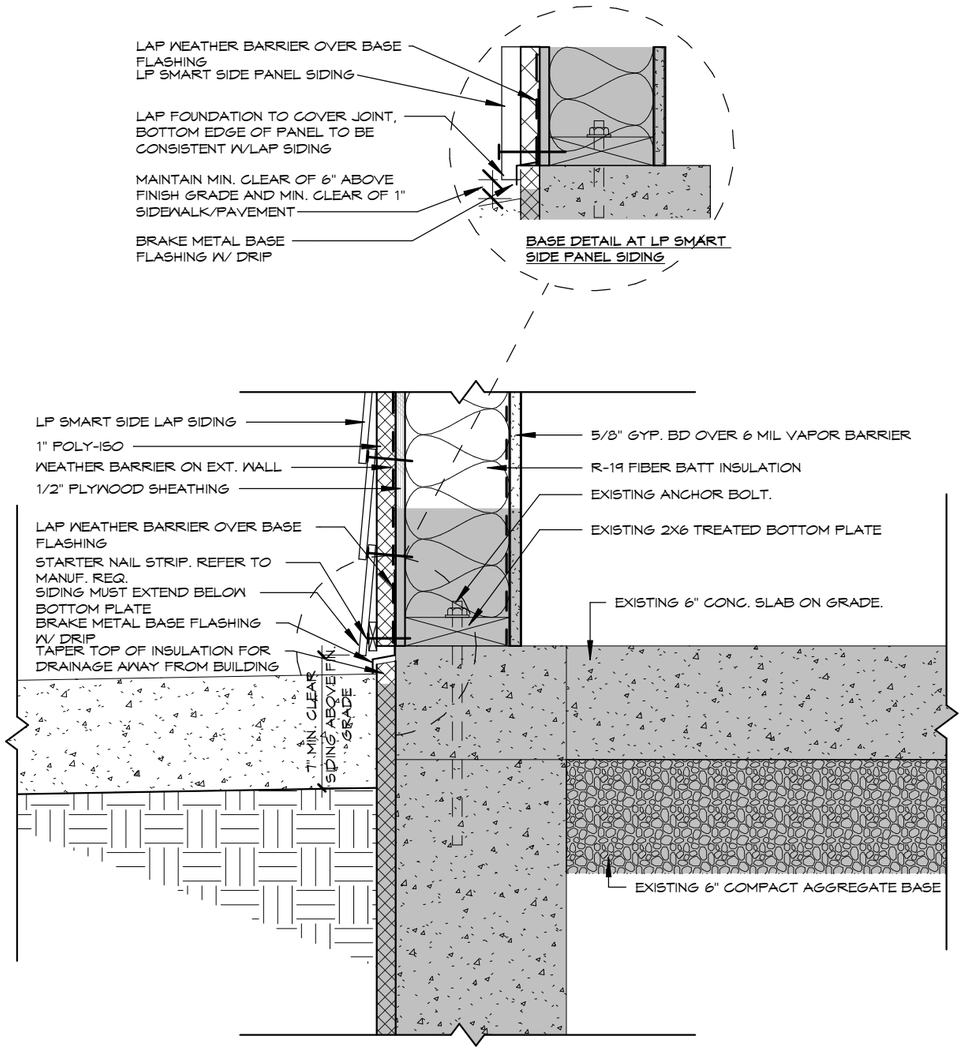
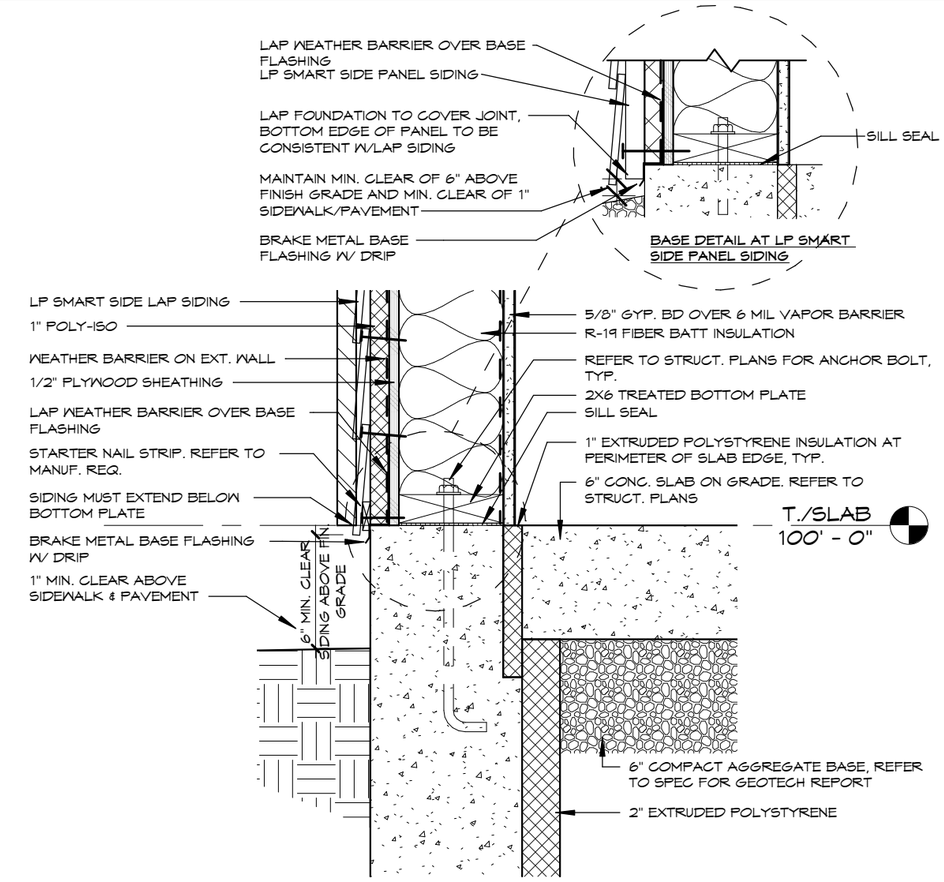
33	OVER-EXCAVATION SEE SHEETS A001 AND A002 AND GEOTECHNICAL REPORT

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WALL SECTIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A405	



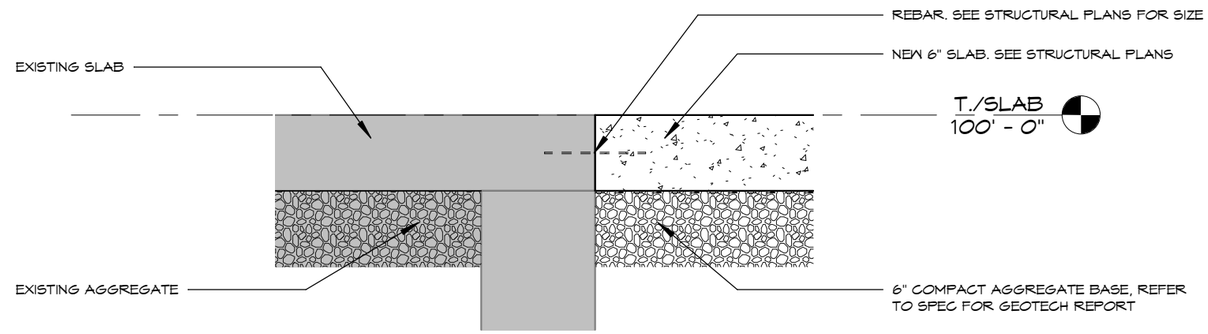
1 TYP. BASE DETAIL AT EXISTING WALL

1 1/2" = 1'-0"



2 TYP. BASE FLASHING DETAIL

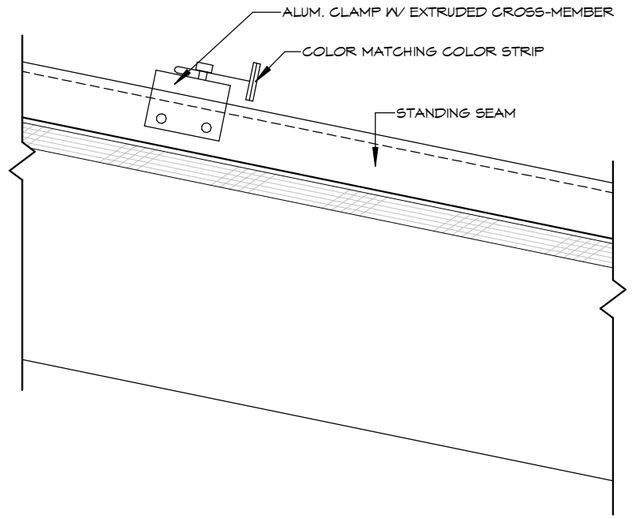
1 1/2" = 1'-0"



3 EXISTING SLAB TO NEW SLAB CONNECTION

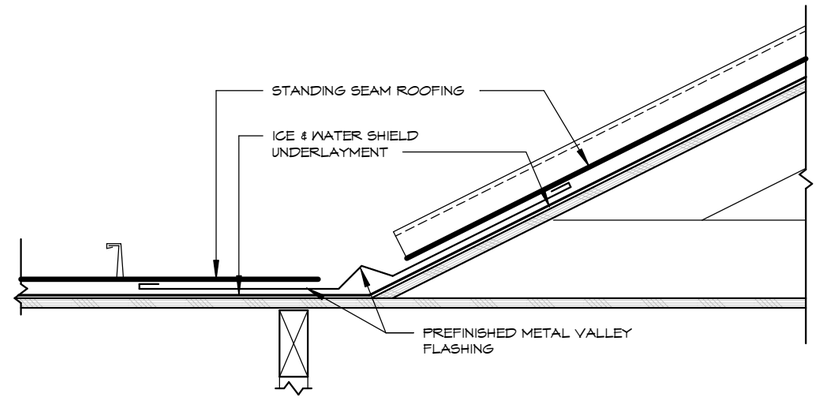
1" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A406	



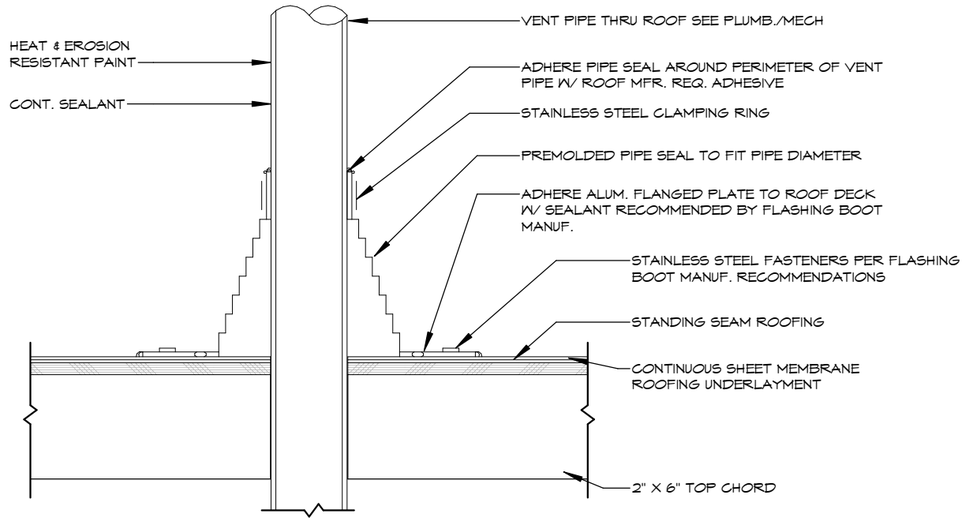
1 SNOW GUARD DETAIL

3" = 1'-0"



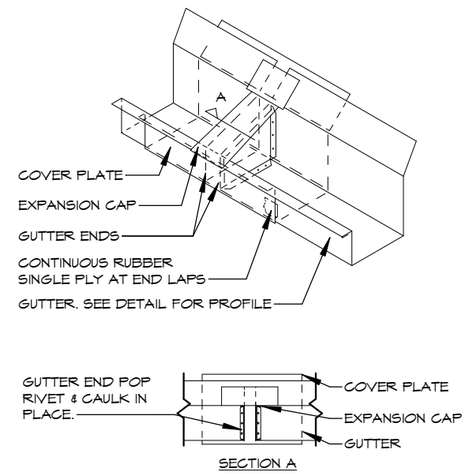
2 VALLEY FLASHING DETAIL

1 1/2" = 1'-0"



3 VENT PIPE FLASHING DETAIL

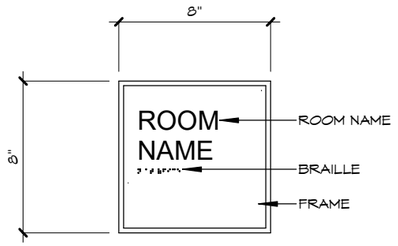
1 1/2" = 1'-0"



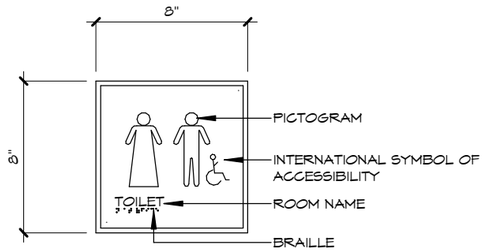
4 GUTTER EXPANSION JOINT DET.

1/2" = 1'-0"

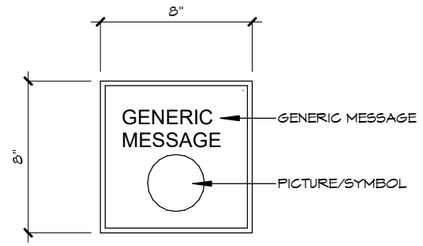
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ROOF DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A407	



SIGN TYPE (A) - QTY (6)
STD. ROOM SIGN w/o CUTOUT



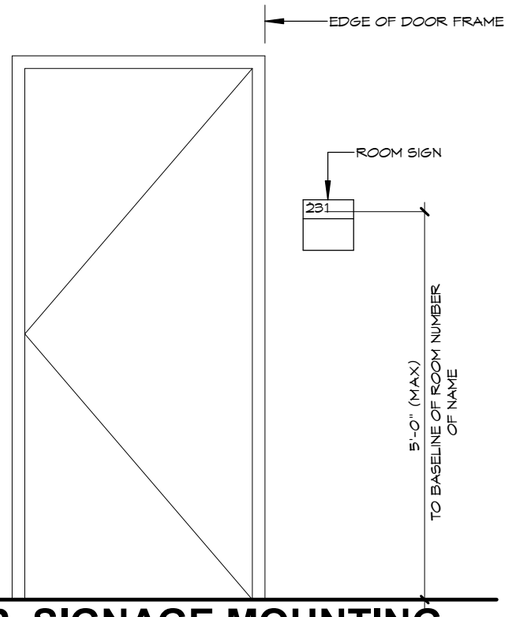
SIGN TYPE (B) - QTY (2)
SPECIALTY SIGN



SIGN TYPE (C) - QTY (12)
GENERIC SIGN

1 INTERIOR SIGNAGE

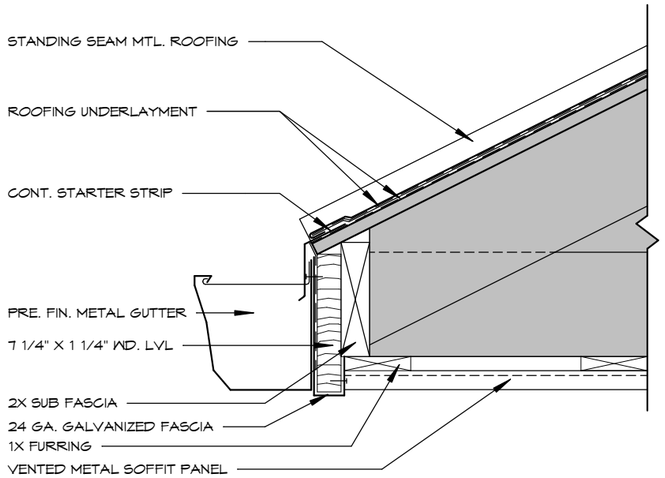
1 1/2" = 1'-0"



2 TYP. SIGNAGE MOUNTING

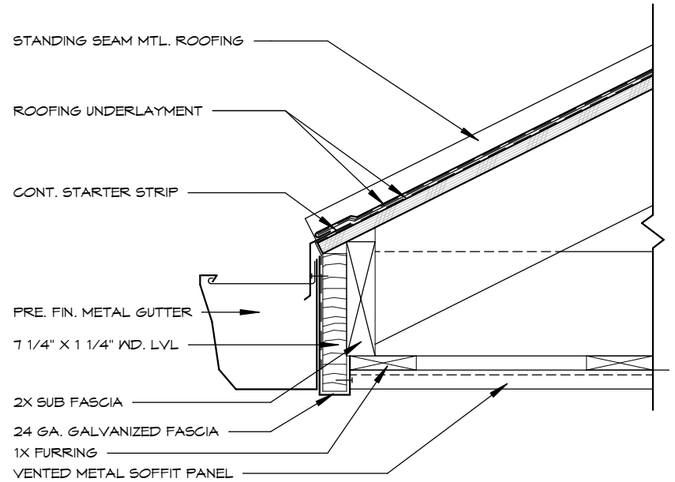
1/2" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A408	



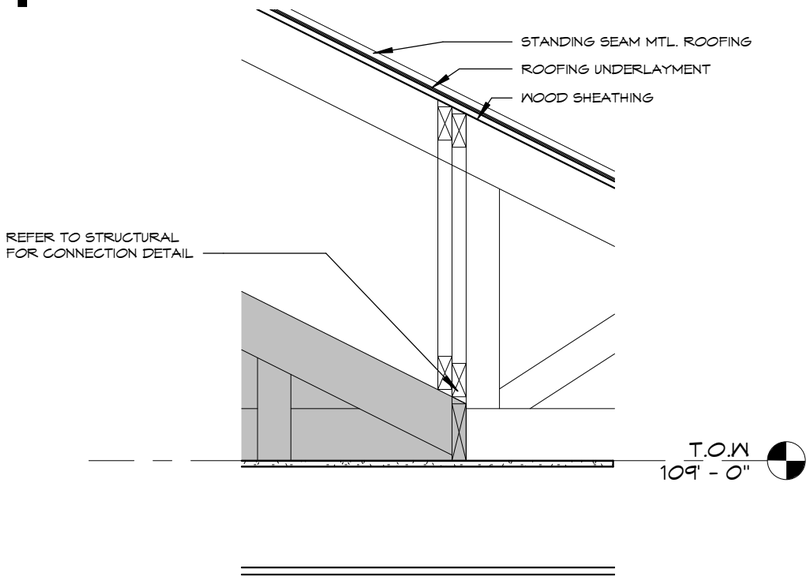
1 FACIA DETAIL

1 1/2" = 1'-0"



2 FACIA DETAIL

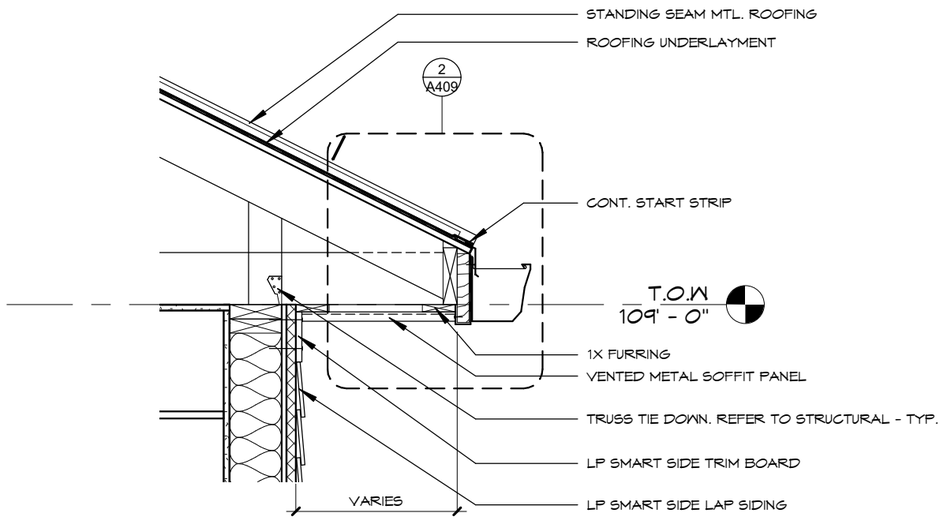
1 1/2" = 1'-0"



3 TRUSS OVERFRAMING

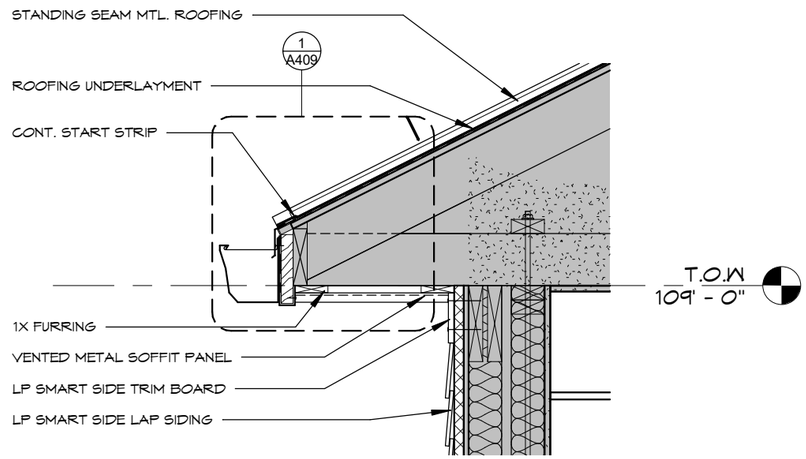
3/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A409	



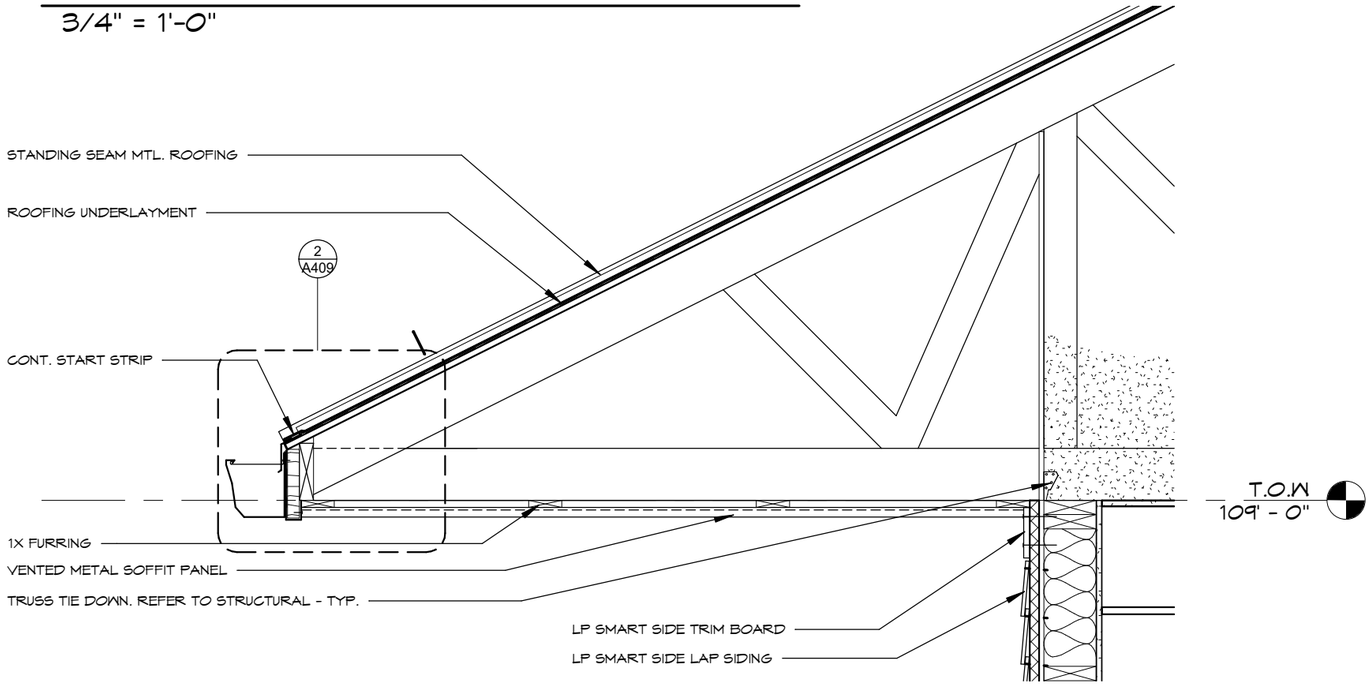
1 TYP. EAVE OVERHANG DETAIL

3/4" = 1'-0"



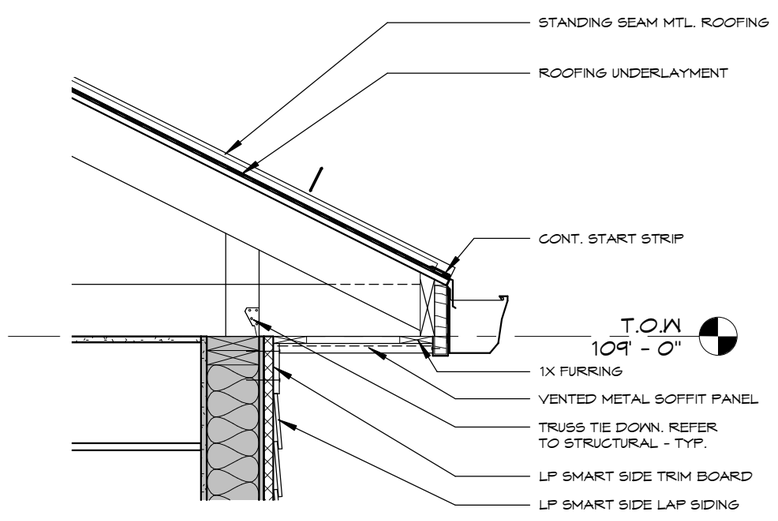
2 EXISTING EAVE OVERHANG DETAIL

3/4" = 1'-0"



3 EAVE OVERHANG DETAIL

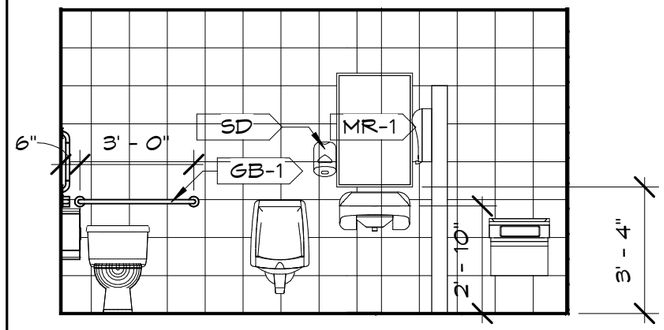
3/4" = 1'-0"



4 EAVE OVERHANG DETAIL

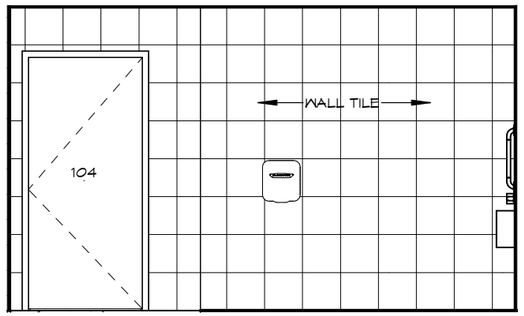
3/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A410	



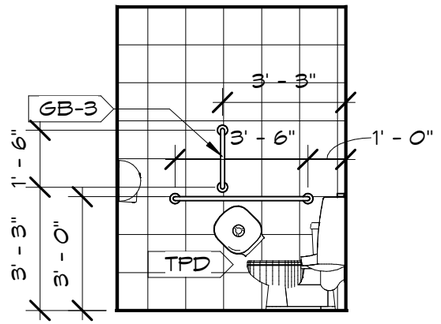
1 T.R. #104 NORTH ELEV.

1/4" = 1'-0"



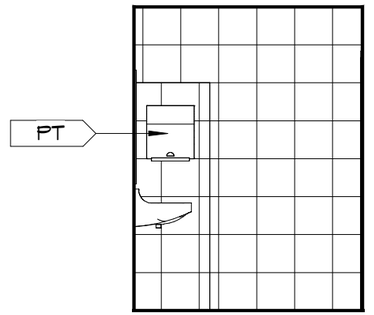
2 T.R. #104 SOUTH ELEV.

1/4" = 1'-0"



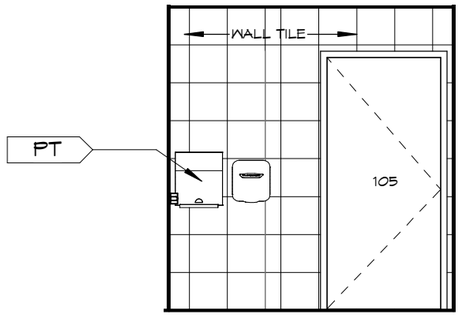
3 T.R. #104 WEST ELEV.

1/4" = 1'-0"



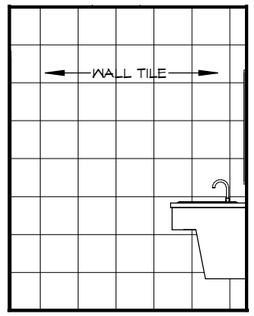
4 T.R. #104 EAST ELEV.

1/4" = 1'-0"



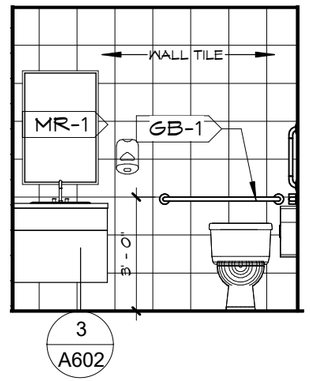
5 T.R. #105 SOUTH ELEV.

1/4" = 1'-0"



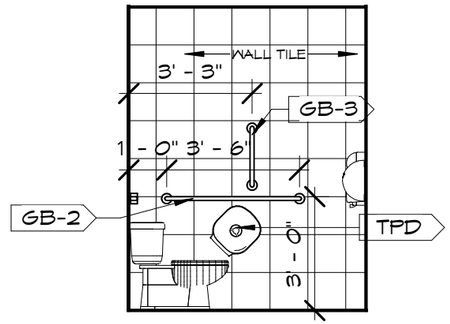
6 T.R. #105 WEST ELEV.

1/4" = 1'-0"



7 T.R. #105 NORTH ELEV.

1/4" = 1'-0"



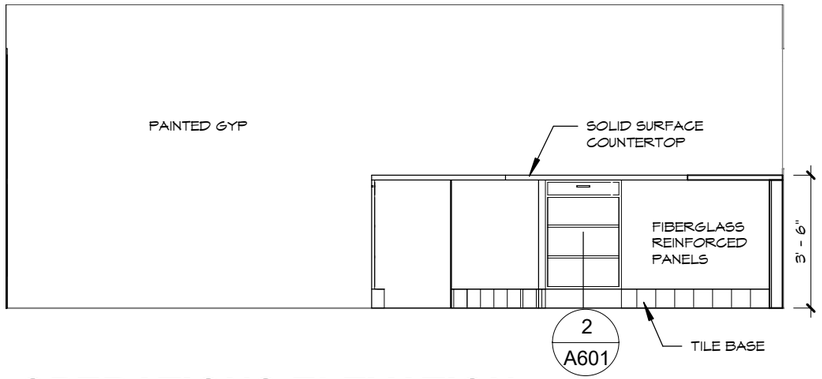
8 T.R. #105 EAST ELEV.

1/4" = 1'-0"

TOILET ROOM ACCESSORY SCHEDULE

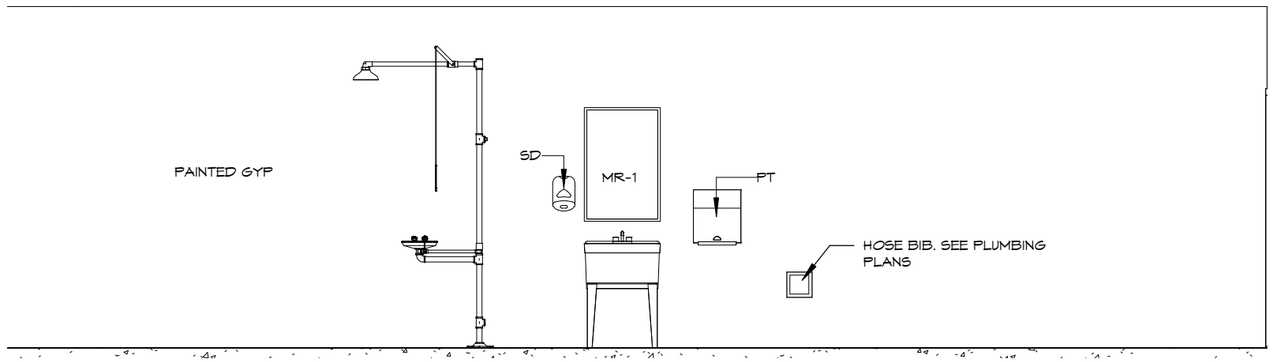
ACCESSORY MARK	ACCESSORY NAME	MOUNTING REMARKS	FURNISHED & INSTALLED
	WASTE RECEPTACLE	NONE.	OWNER FURNISHED, OWNER INSTALLED
EH	ELECTRIC HAND DRYER	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
GB-1	36" GRAB BAR	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
GB-2	42" GRAB BAR	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
GB-3	VERTICAL GRAB BAR (18" MIN)	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
MR-1	24" X 36" FRAMED MIRROR	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
PT	PAPER TOWEL DISPENSER - SURFACE MOUNT	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	OWNER FURNISHED, OWNER INSTALLED
SD	LIQUID SOAP DISPENSER - SURFACE MOUNT	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	OWNER FURNISHED, OWNER INSTALLED
TPD	TOILET PAPER DISPENSER	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A501	167



1 OPERATIONS ELEVATION

1/4" = 1'-0"



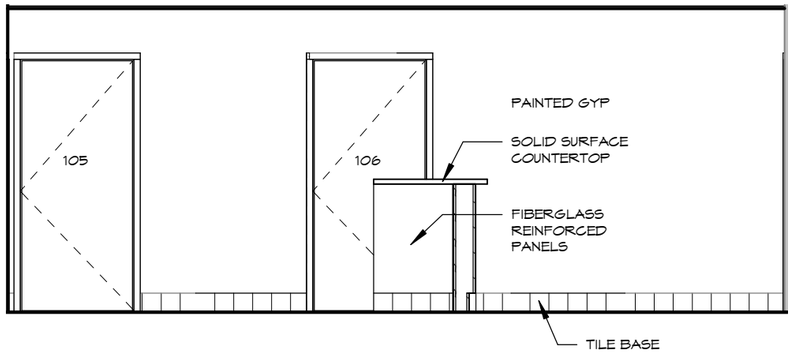
2 STORAGE AREA ELEVATION

1/4" = 1'-0"

ACCESSORY SCHEDULE

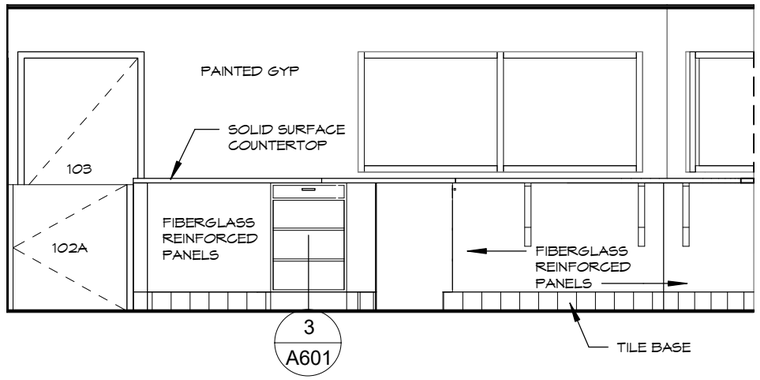
MARK	NAME	MOUNTING REMARKS	FURNISHED & INSTALLED
MR-1	24" X 36" FRAMED MIRROR	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
PT	PAPER TOWEL DISPENSER - SURFACE MOUNT	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	OWNER FURNISHED, OWNER INSTALLED
SD	LIQUID SOAP DISPENSER - SURFACE MOUNT	WALL MOUNTED, PROVIDE BLOCKING AS REQ. REFER TO A004 FOR MOUNTING HEIGHTS.	OWNER FURNISHED, OWNER INSTALLED

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A502	



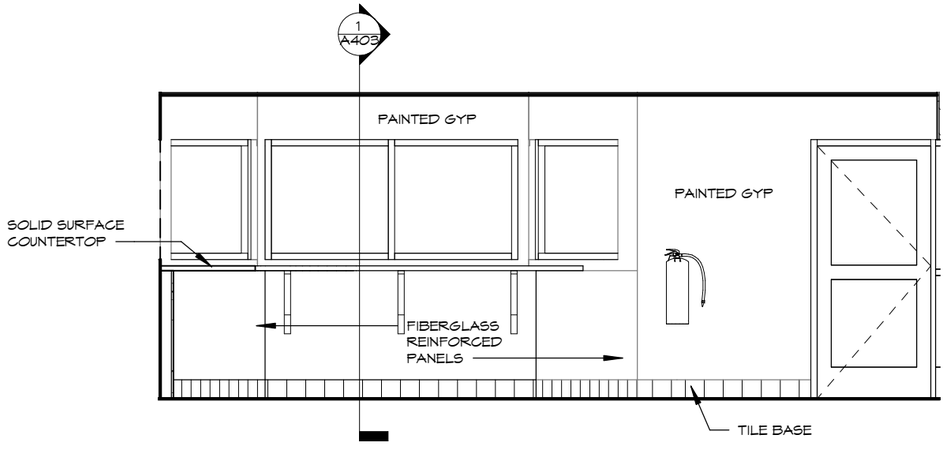
1 OPERATIONS NORTH ELEV.

1/4" = 1'-0"



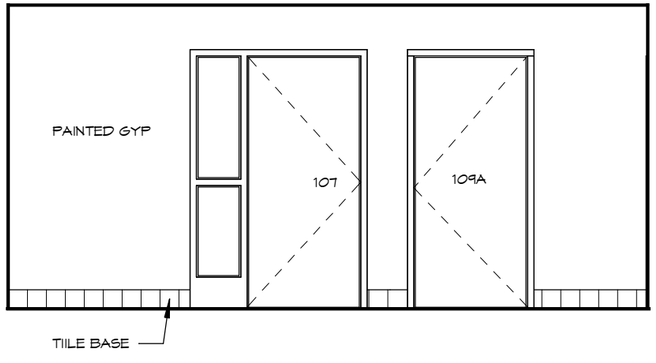
2 OPERATIONS EAST ELEV.

1/4" = 1'-0"



3 OPERTATIONS SOUTH ELEV.

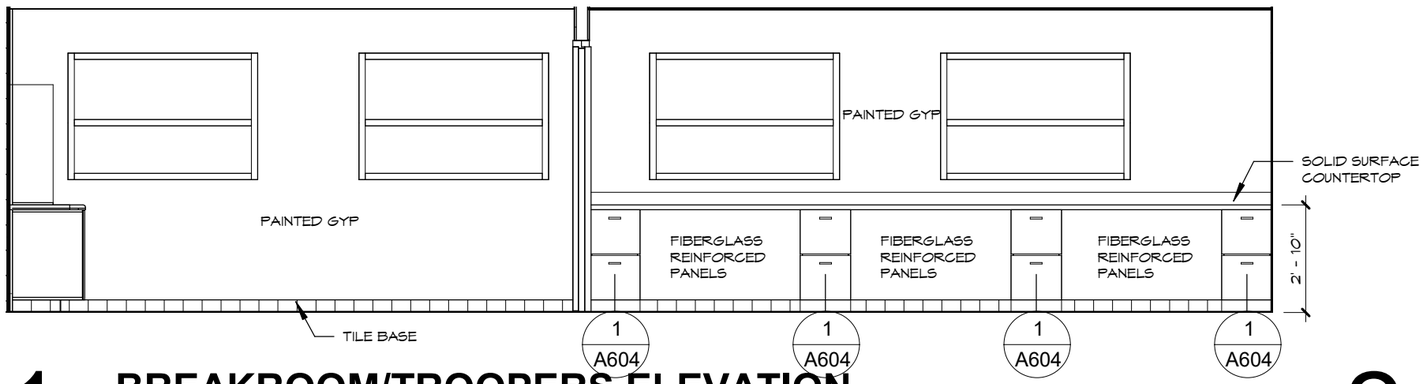
1/4" = 1'-0"



4 OPERATIONS WEST ELEV.

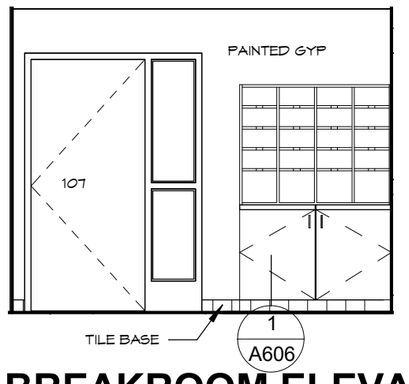
1/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A503	



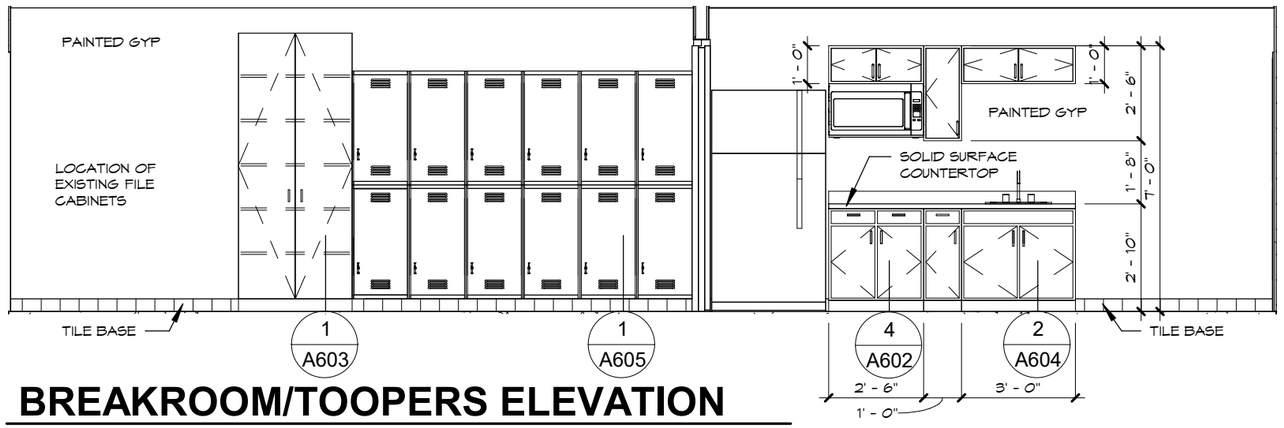
1 BREAKROOM/TROOPERS ELEVATION

1/4" = 1'-0"



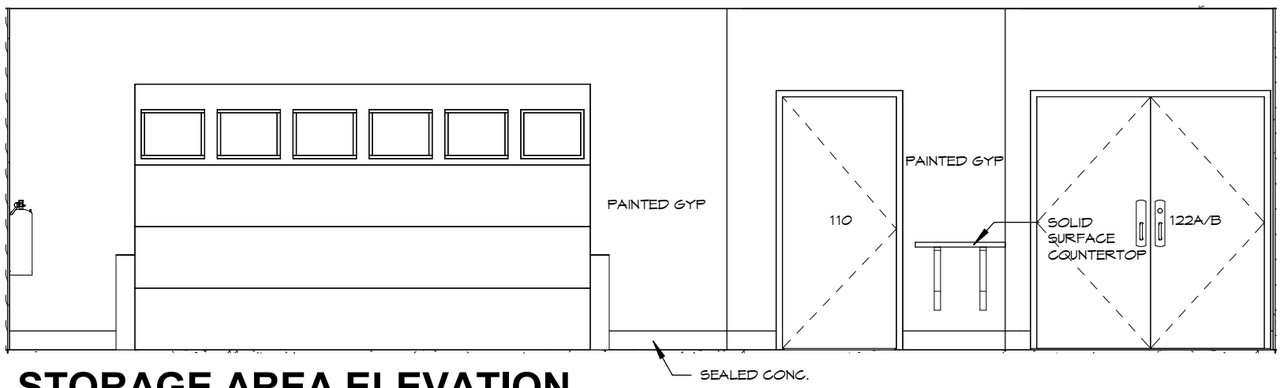
2 BREAKROOM ELEVATION

1/4" = 1'-0"



3 BREAKROOM/TOOPERS ELEVATION

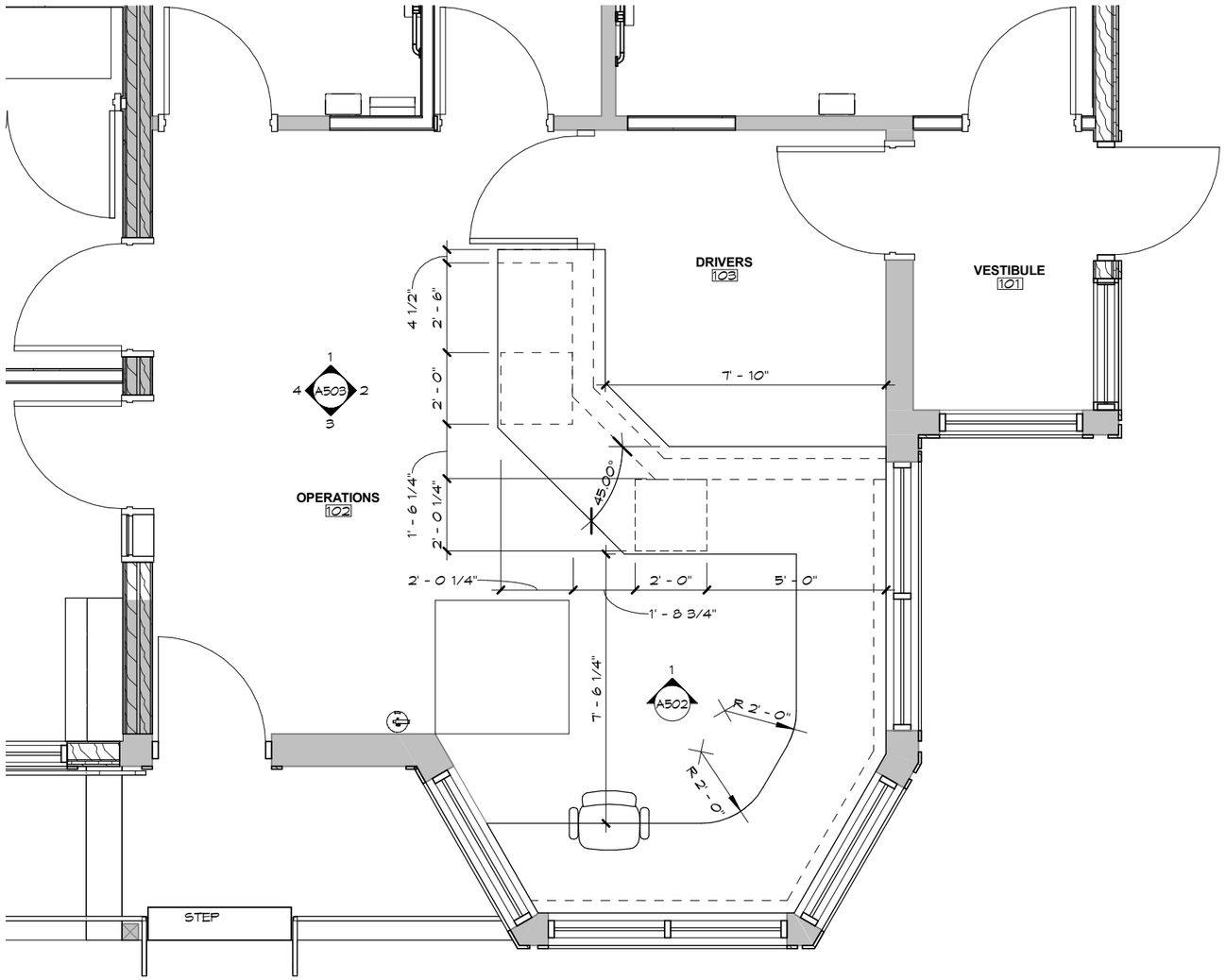
1/4" = 1'-0"



4 STORAGE AREA ELEVATION

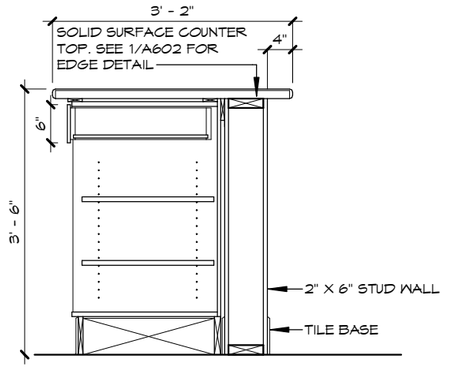
1/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A504	



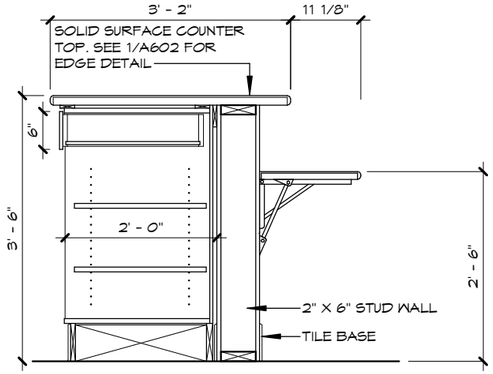
1 1ST FLOOR PLAN

1/4" = 1'-0"



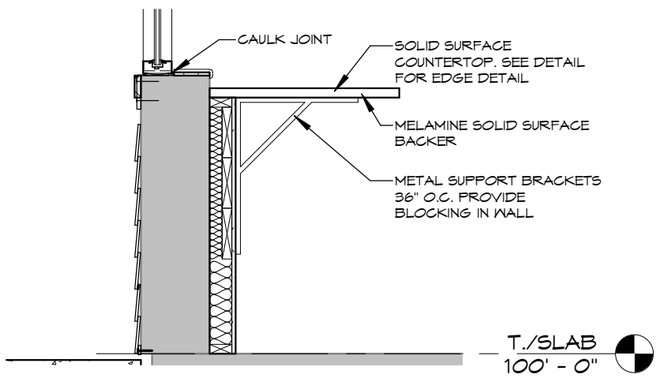
2 SECTION @ TYPICAL COUNTER

1/2" = 1'-0"



3 SECTION @ ADA COUNTER

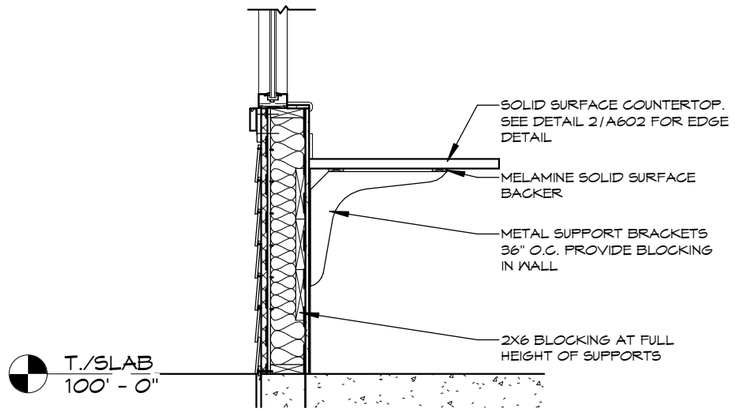
1/2" = 1'-0"



4 COUNTER SECTION @ 102

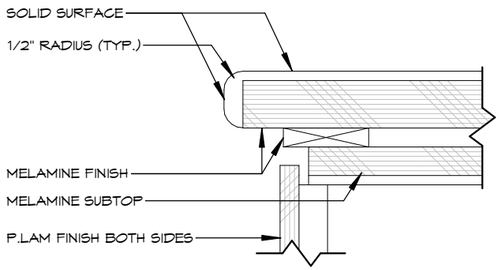
1/2" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ARCHITECTURAL MILLWORK		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A601	



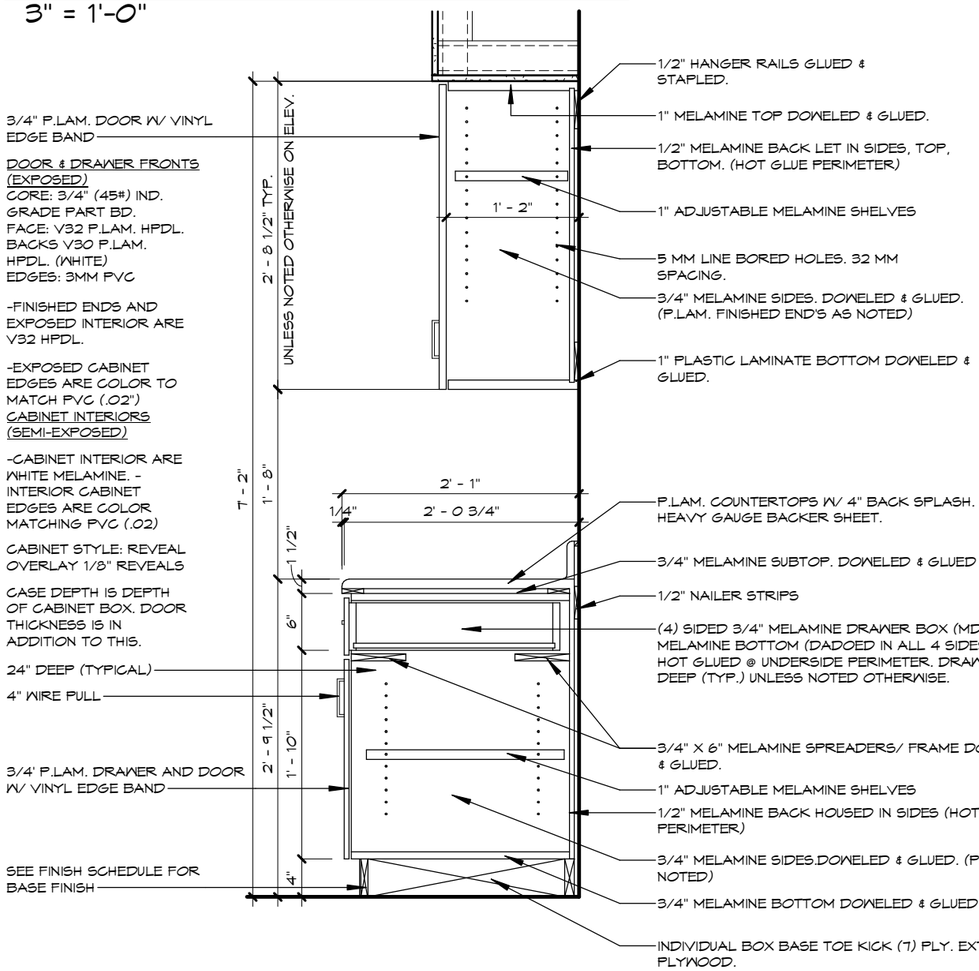
1 COUNTER SECTION @ 108

1/2" = 1'-0"



2 SOLID SURFACE EDGE DETAIL

3" = 1'-0"



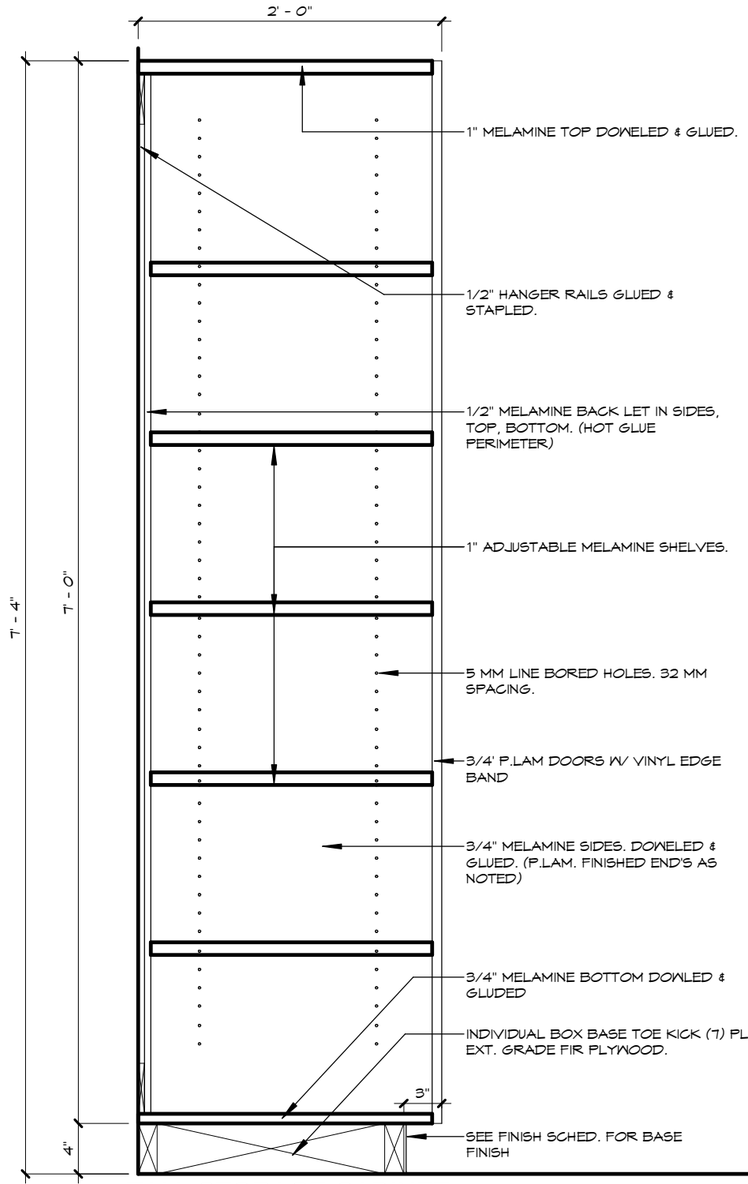
3 VANITY DETAIL

1" = 1'-0"

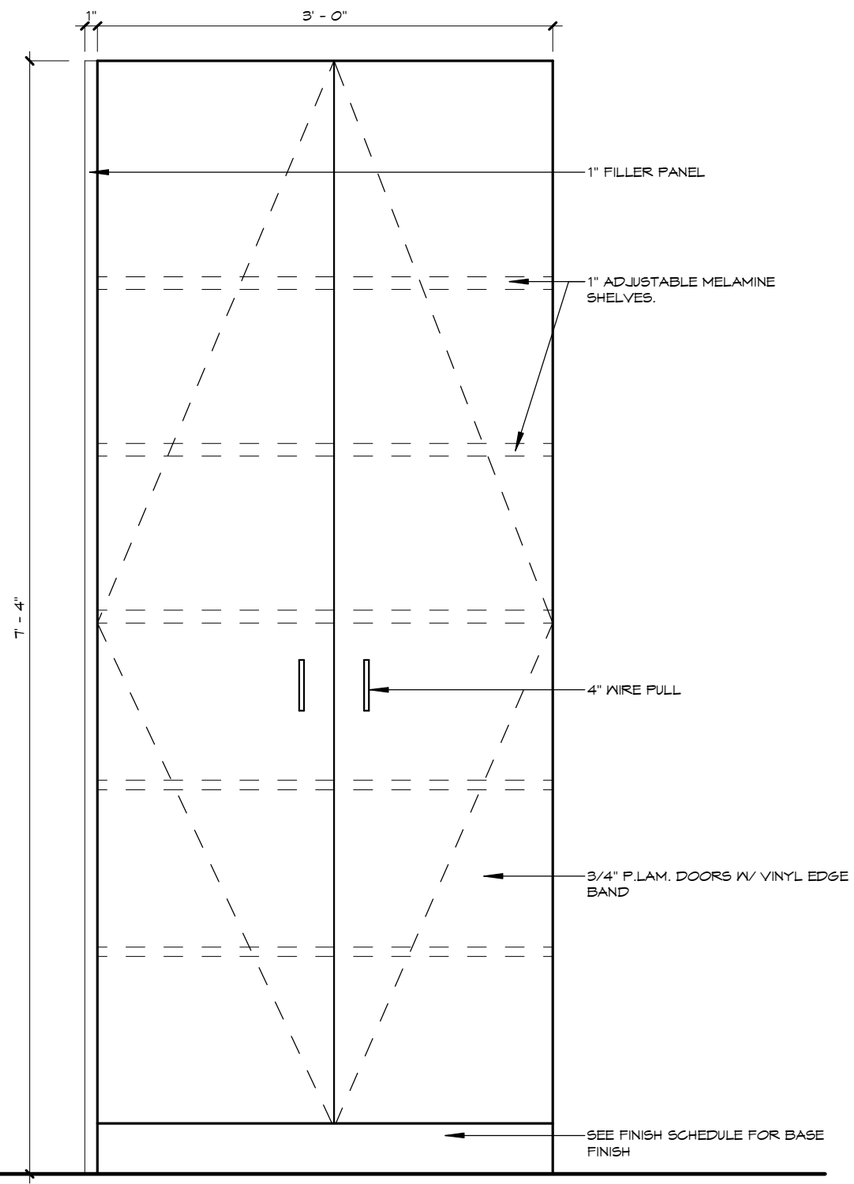
4 TYPICAL SECTION THRU BASE & WALL CABINETS

3/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ARCHITECTURAL MILLWORK		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A602	



TALL STORAGE CABINET

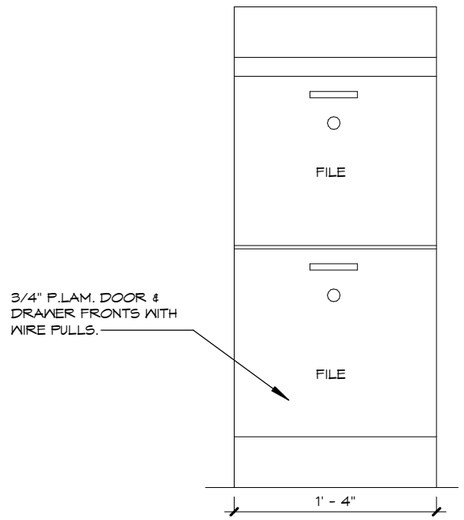


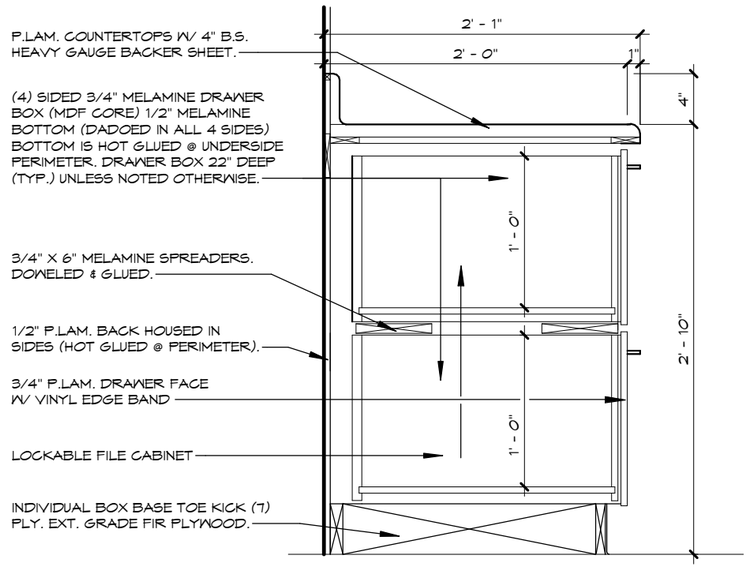
TALL STORAGE CABINET
ELEVATION

1 TALL STORAGE CABINET

1" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ARCHITECTURAL MILLWORK		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A603	

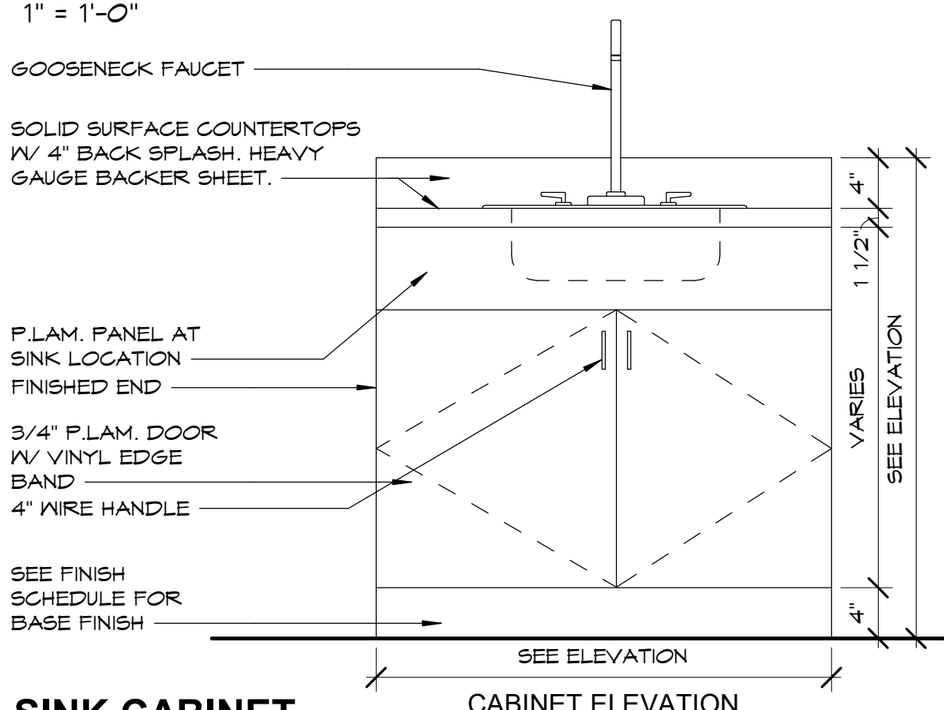




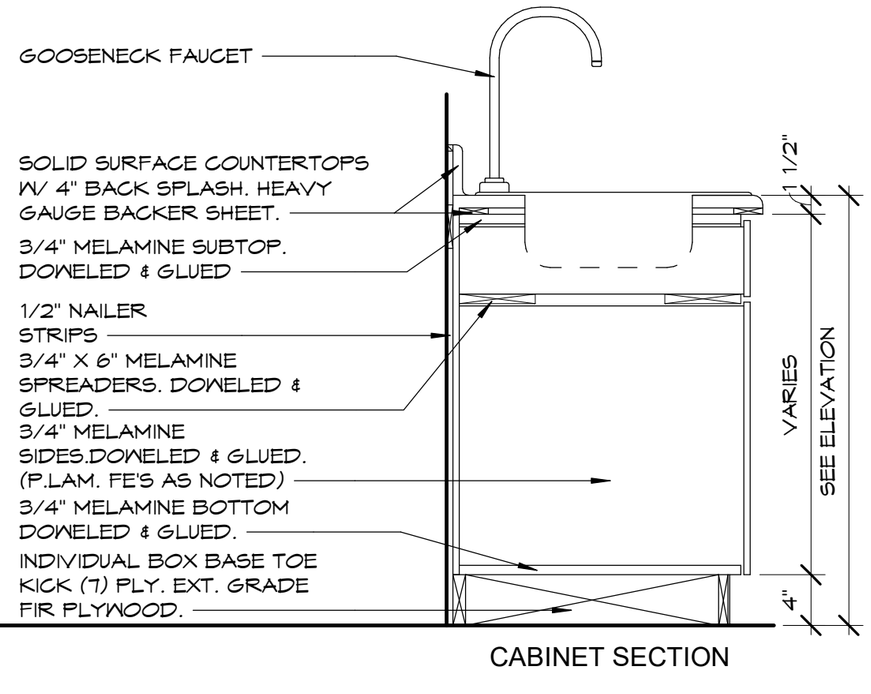
SECTION @ FILE DRAWERS

1 FILE CABINET

1" = 1'-0"



CABINET ELEVATION

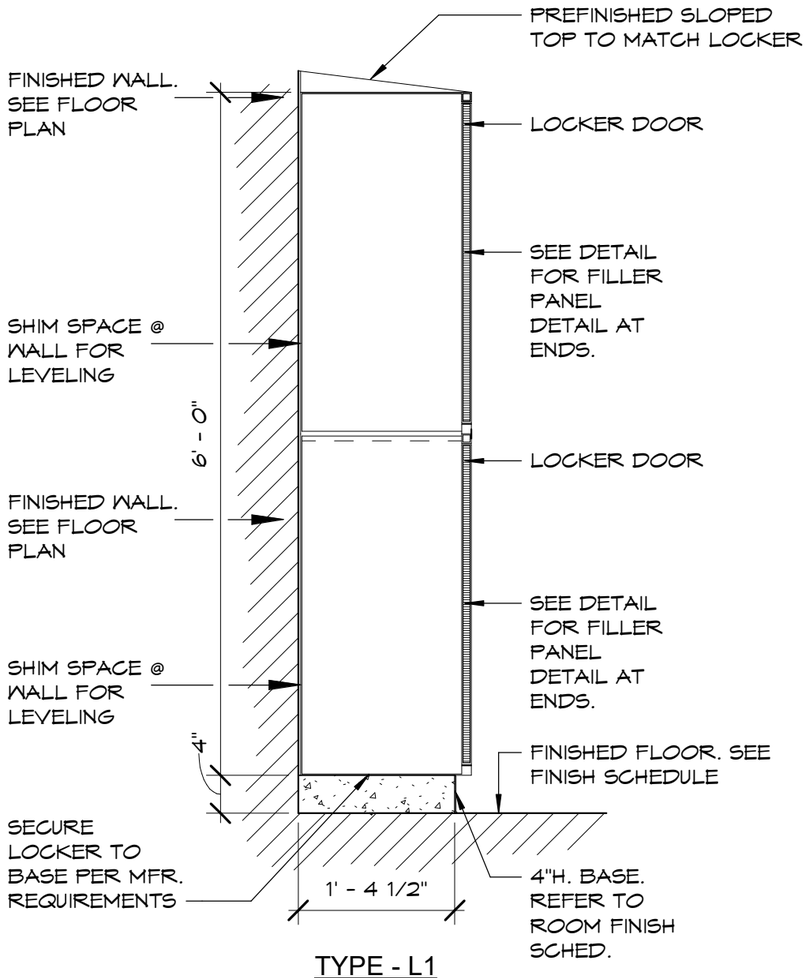


CABINET SECTION

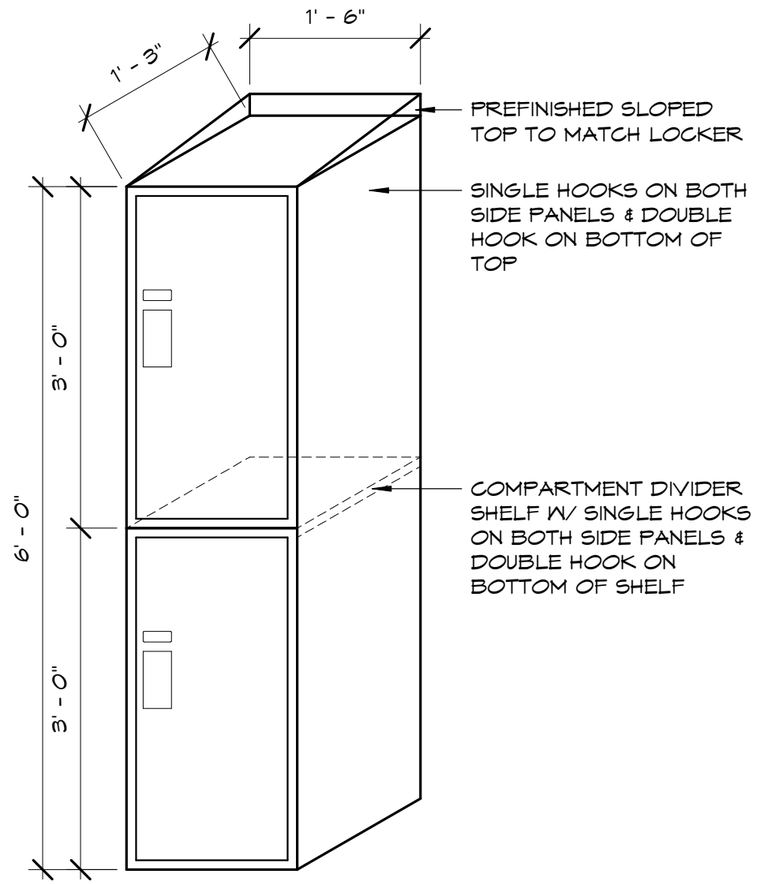
2 SINK CABINET

1" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ARCHITECTURAL MILLWORK		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A604	



TYPE - L1
SECTION

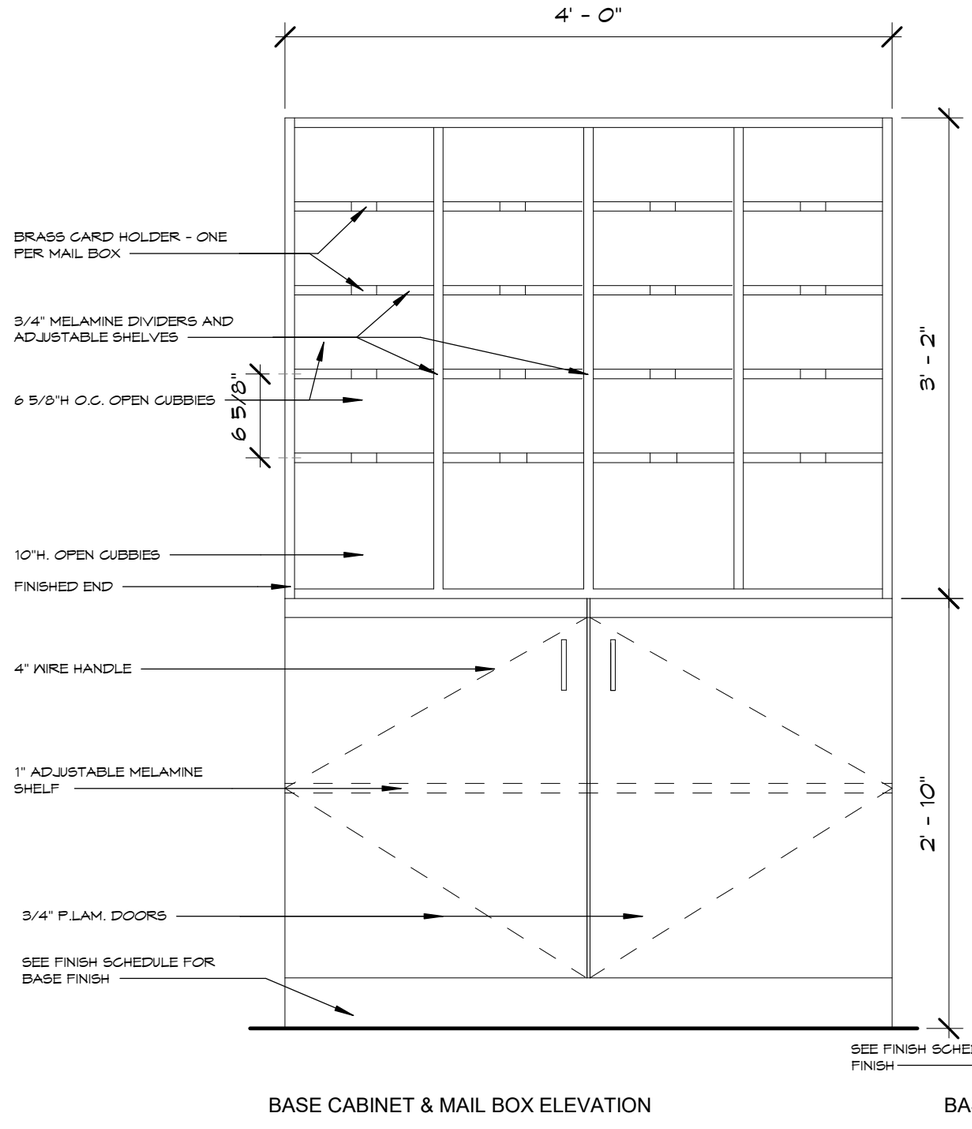


TYPE - L1
ELEVATION

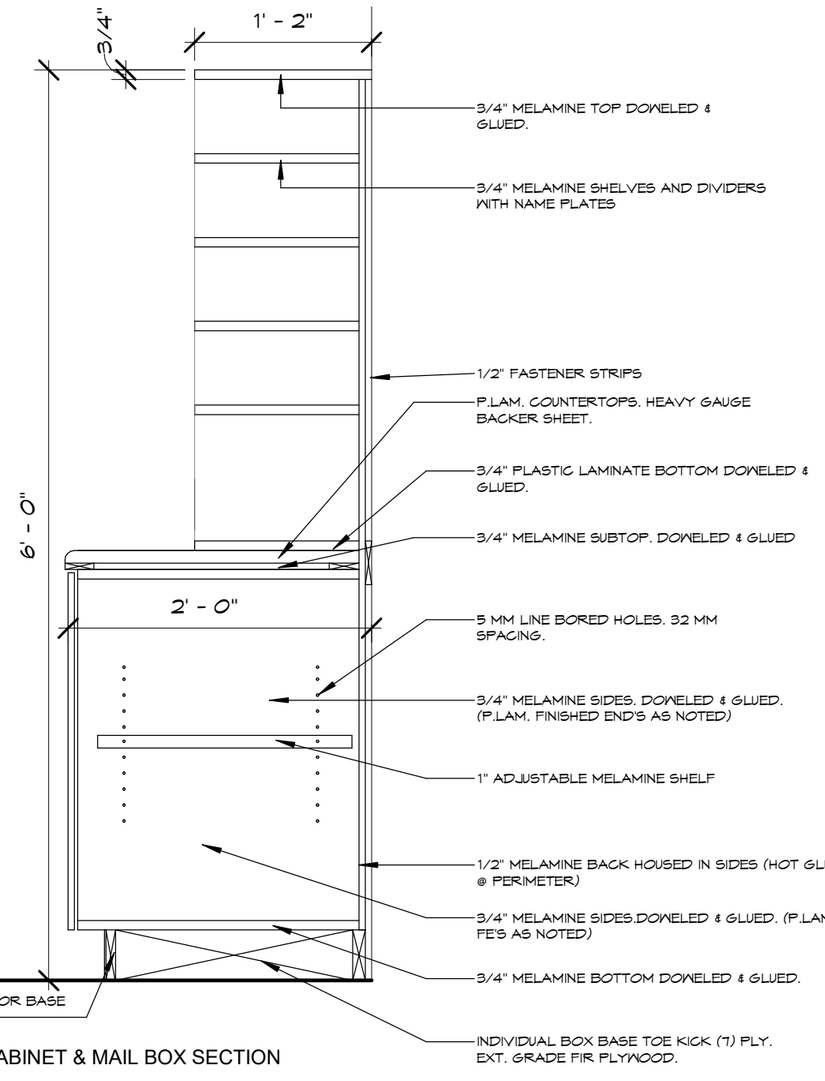
1 LOCKER DETAIL

3/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ARCHITECTURAL MILLWORK		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A605	



BASE CABINET & MAIL BOX ELEVATION



BASE CABINET & MAIL BOX SECTION

1 MAIL BOX

1" = 1'-0"

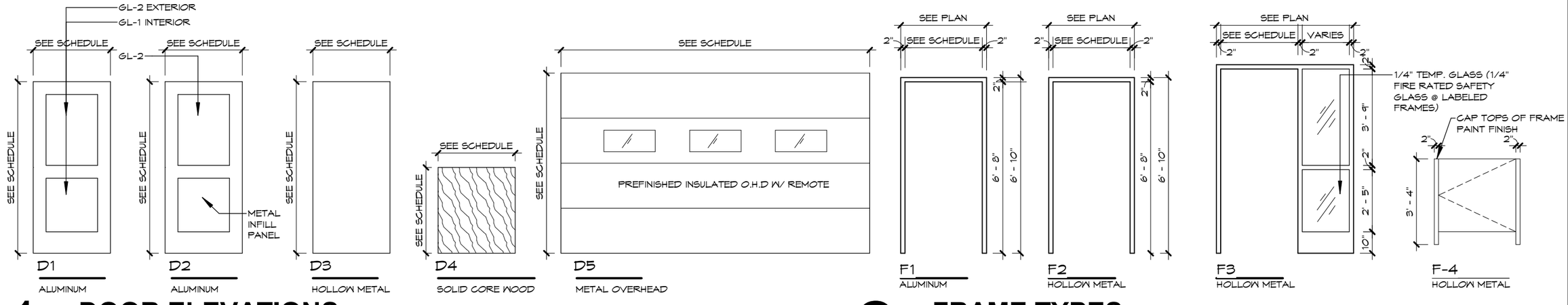
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ARCHITECTURAL MILLWORK		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A606	

DOOR SCHEDULE

DV	DOOR SIZE	DOOR MATERIAL	DOOR ELEVATION	FRAME MATERIAL	FRAME ELEVATION	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	LABEL	Door Hardware	REMARKS
101	3'-0" X 6'-8"	ALUM	D1	ALUM	F1	4/A704	2/A704	3/A704		1	
102	3'-0" X 6'-8"	ALUM	D2	ALUM	F1	3/A705	4/A705			2	
102A	3'-0" X 3'-4"	WOOD	D4	HM	F4		4/A703			8	
103	3'-0" x 6'-8"	ALUM	D1	ALUM	F1	1/A704	2/A704			7	
104	3'-0" x 6'-8"	HM	D3	HM	F3	3/A706	4/A706			3	
105	3'-0" x 6'-8"	HM	D3	HM	F2	3/A703	4/A703			3	
106	3'-0" x 6'-8"	HM	D3	HM	F2	3/A703	4/A703			4	
107	3'-0" x 6'-8"	HM	D3	HM	F3	2/A706	1/A707			5	
108A	3'-0" x 6'-8"	HM	D3	HM	F2	3/A706	4/A706			5	
108B	3'-0" X 6'-8"	ALUM	D2	ALUM	F1	4/A704	4/A704	2/A708		2	
109A	3'-0" x 6'-8"	HM	D3	HM	F2	2/A706	1/A706		60 MIN.	9	
109B	3'-0" x 6'-8"	HM	D3	HM	F2	1/A703	2/A703			6	
109C	12'-0" X 7'-0"	METAL	D5	-	-	1/A705	1/A705	2/A705			
110	3'-0" x 6'-8"	HM	D3	HM	F2	3/A706	4/A706			4	
111	3'-0" x 6'-8"	HM	D3	HM	F2	1/A703	2/A703			10	
122A/B	6'-0" x 6'-8"	HM	D3	HM	F2	3/A706	4/A706			11	

GLASS TYPES: - SEE SPEC SECTION 08 80 00 GLASS AND GLAZING

GL-1 1/4" PLATE TEMPERED
GL-2 1" INSULATED TEMPERED



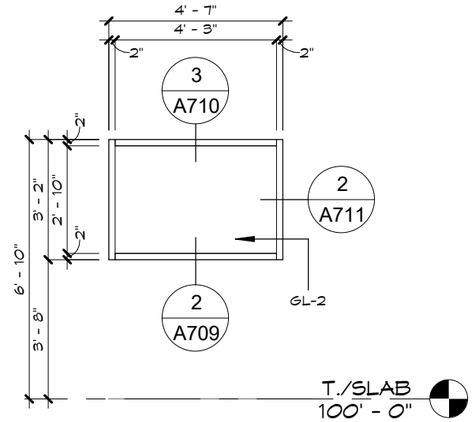
1 DOOR ELEVATIONS

1/4" = 1'-0"

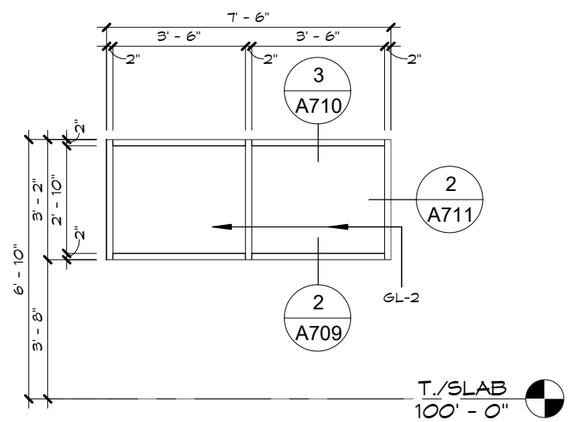
2 FRAME TYPES

1/4" = 1'-0"

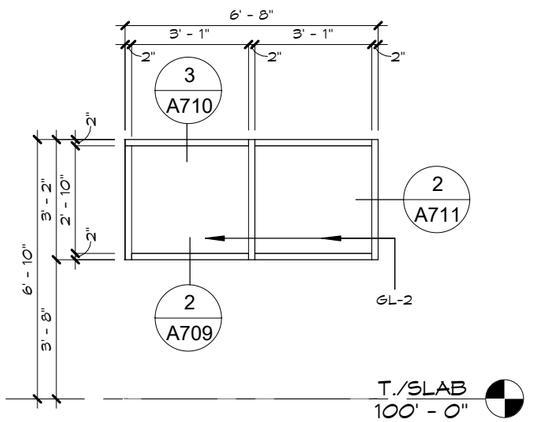
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR SCHEDULE & DOOR TYPES		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A701	177



SF-1



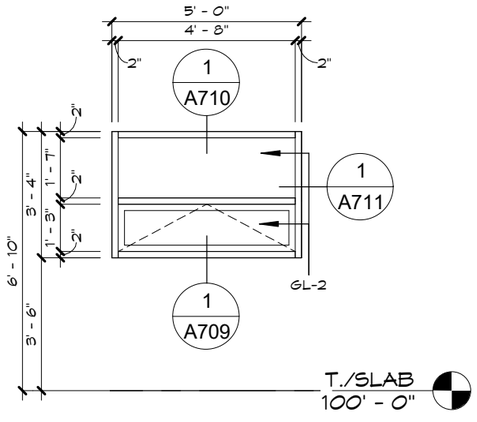
SF-2



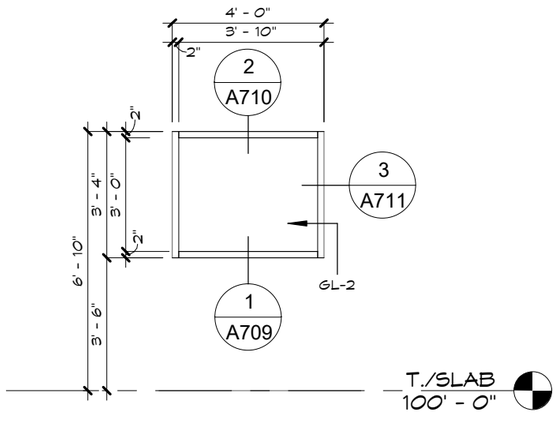
SF-3

GLASS TYPES: - SEE SPEC SECTION 08 80 00 GLASS AND GLAZING

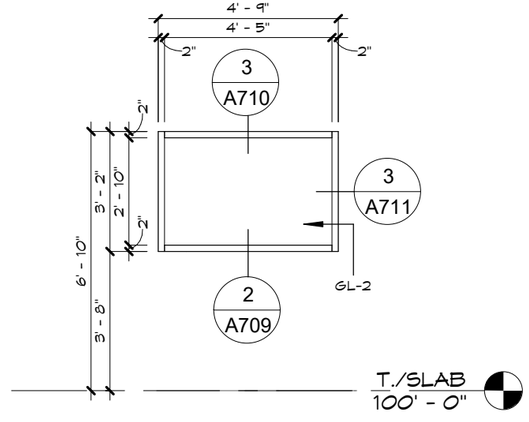
GL-1 1/4" PLATE TEMPERED
GL-2 1" INSULATED TEMPERED



SF-4



SF-5

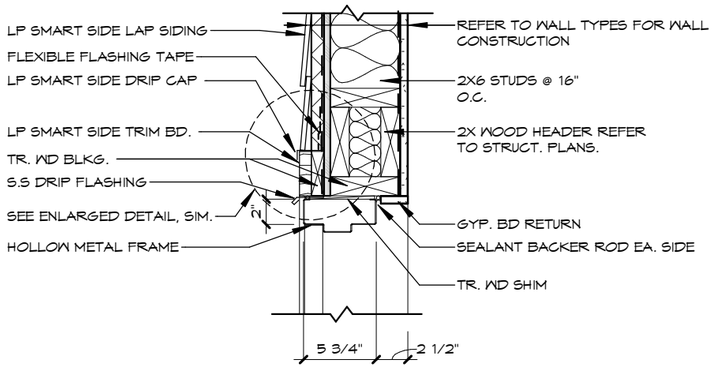


SF-6

1 WINDOW ELEVATIONS

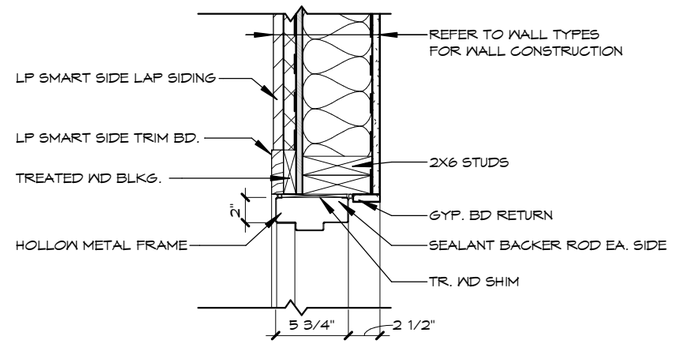
1/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WINDOW ELEVATIONS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A702	



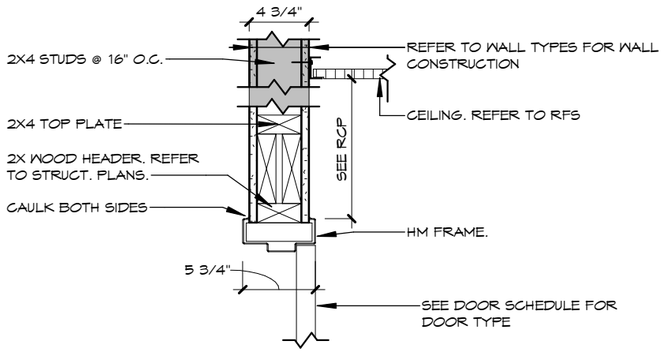
1 HM ENTRY HEAD DETAIL

1" = 1'-0"



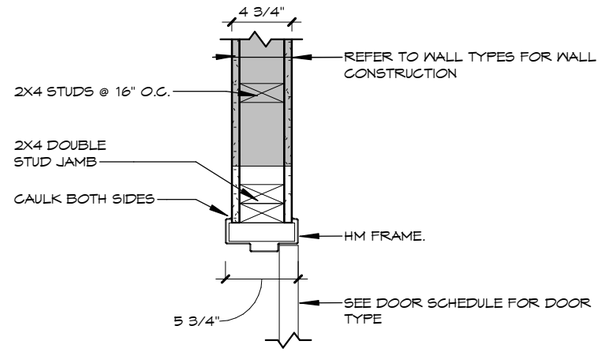
2 HM ENTRY JAMB DETAIL

1" = 1'-0"



3 INT. HM HEAD DETAIL

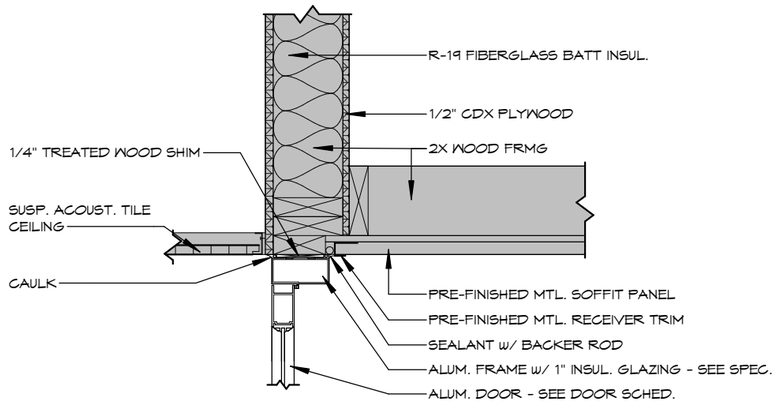
1" = 1'-0"



4 INT. HM JAMB DETAIL

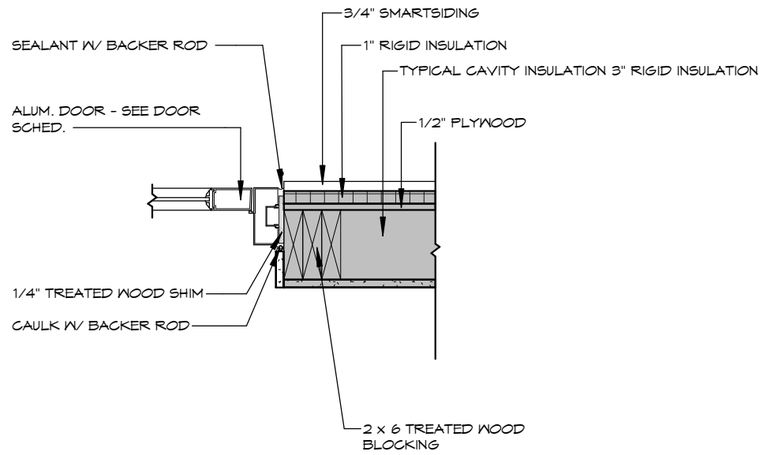
1" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A703	



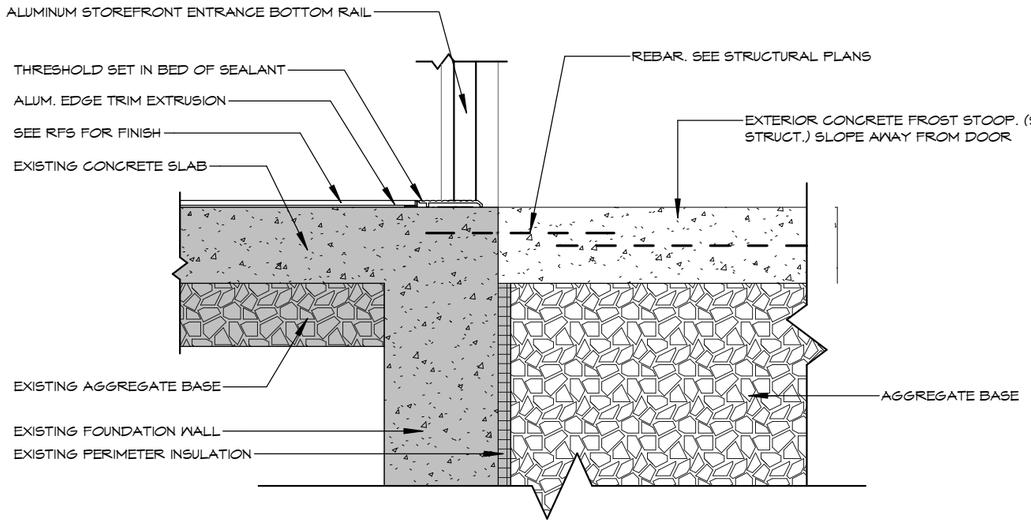
1 ALUMINUM DOOR HEAD DETAIL

1" = 1'-0"



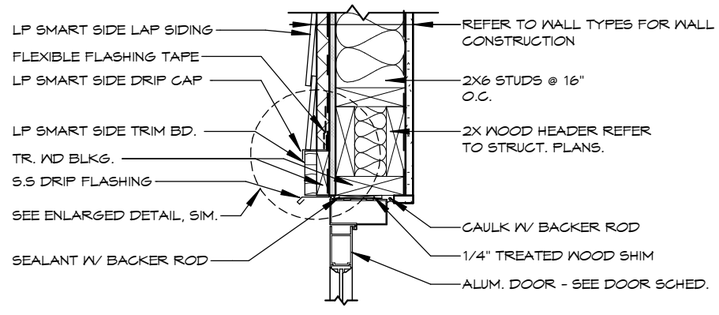
2 ALUMINUM DOOR JAMB DETAIL

1" = 1'-0"



3 VESTIBULE DOOR THRESHOLD

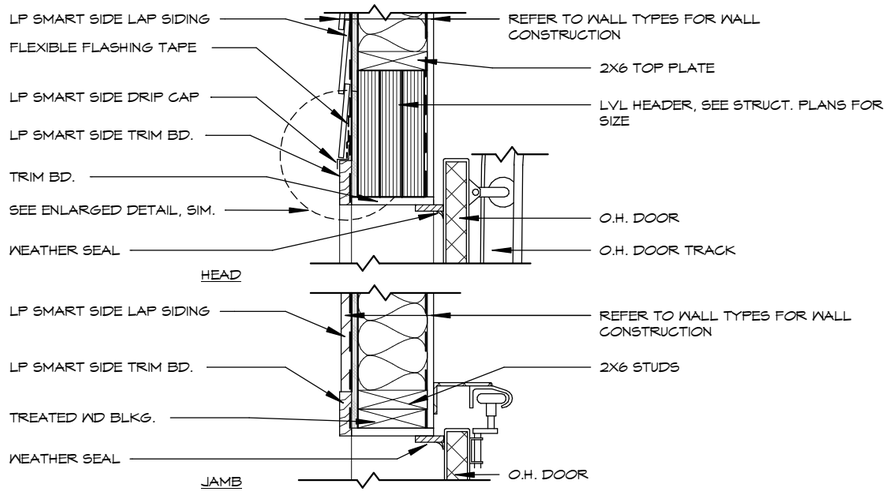
1" = 1'-0"



4 ALUMINUM DOOR HEAD DETAIL

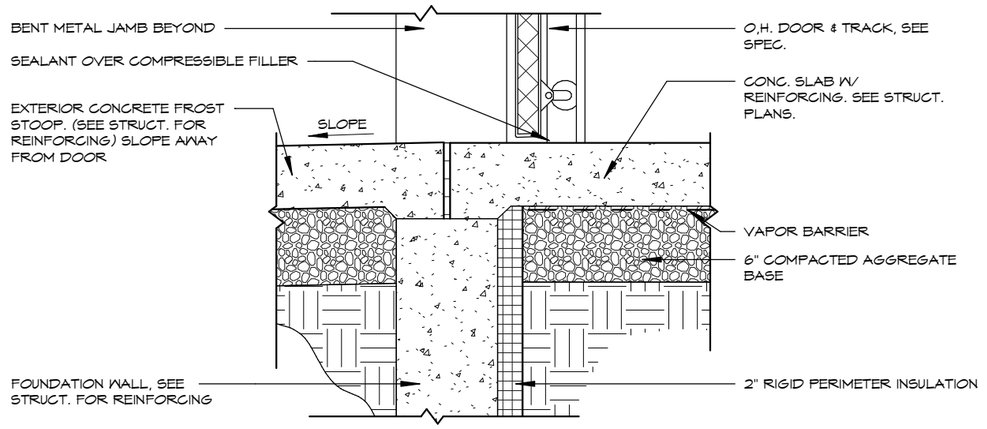
1" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A704	



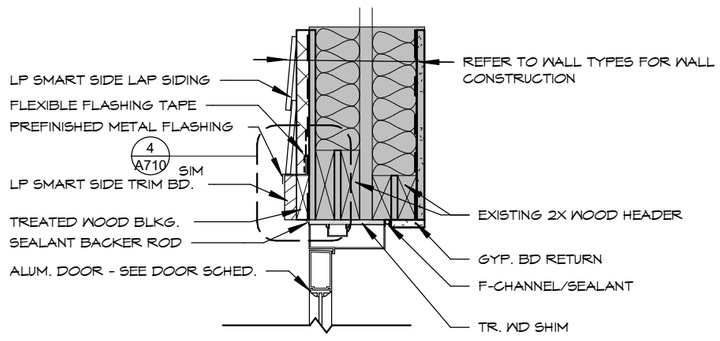
1 O.H. HEAD AND JAMB DETAIL

1" = 1'-0"



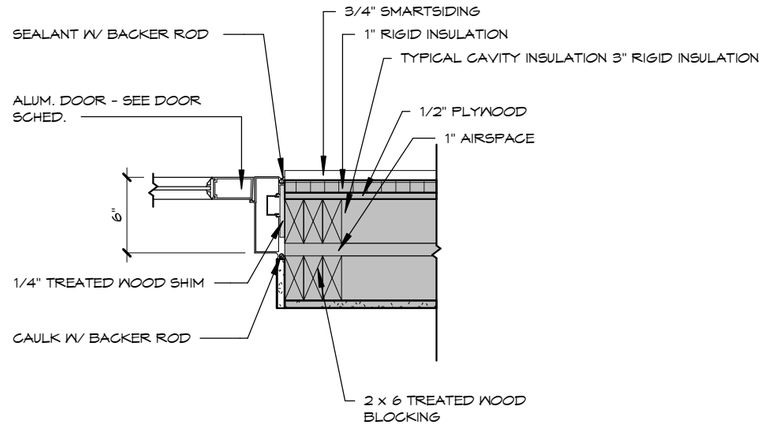
2 O.H. DOOR THRESHOLD DETAIL

1" = 1'-0"



3 ALUMINUM DOOR HEAD DETAIL

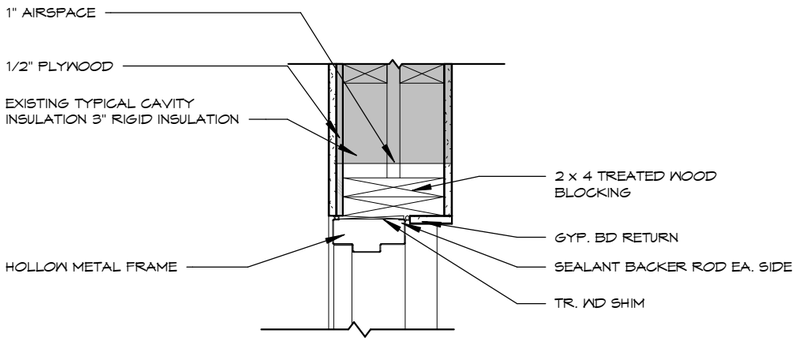
1" = 1'-0"



4 ALUMINUM DOOR JAMB DETAIL

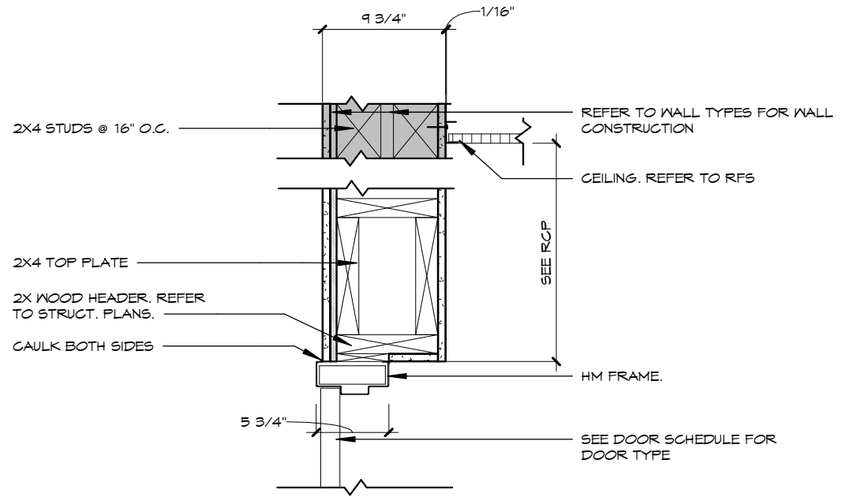
1" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			OVERHEAD DOOR DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A705	



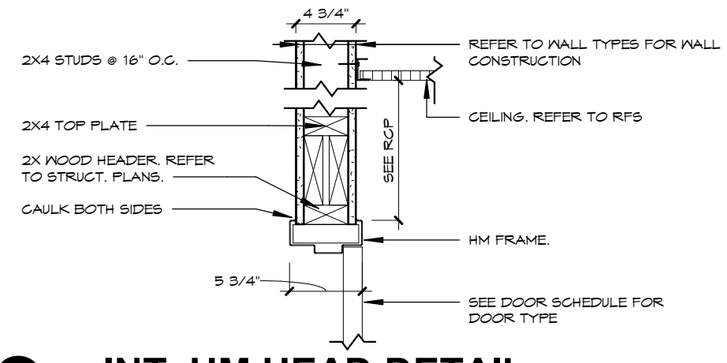
1 HM ENTRY JAMB IN EXISTING WALL

1" = 1'-0"



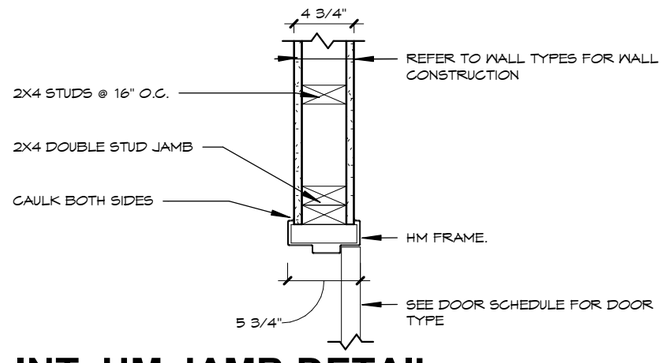
2 HM HEAD ENTRY IN EXISTING

1" = 1'-0"



3 INT. HM HEAD DETAIL

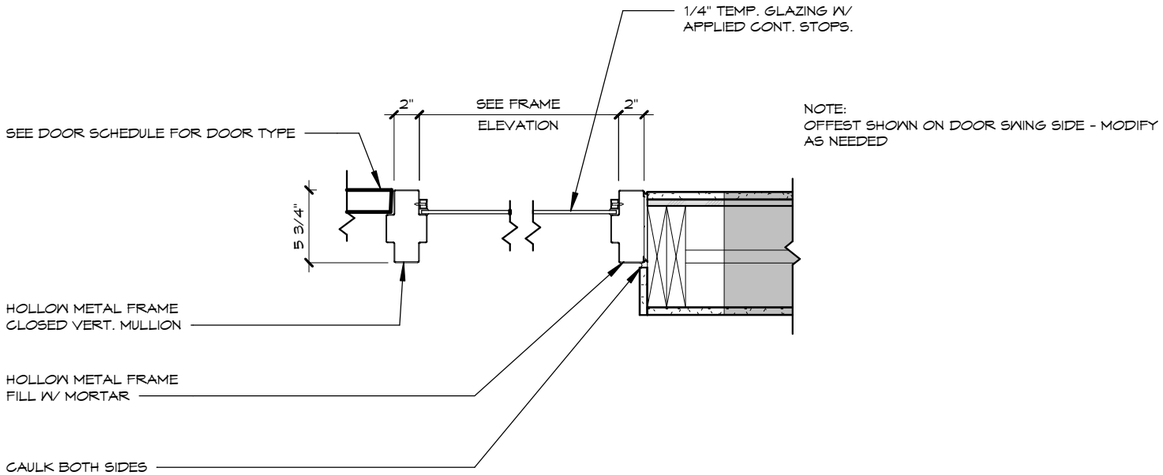
1" = 1'-0"



4 INT. HM JAMB DETAIL

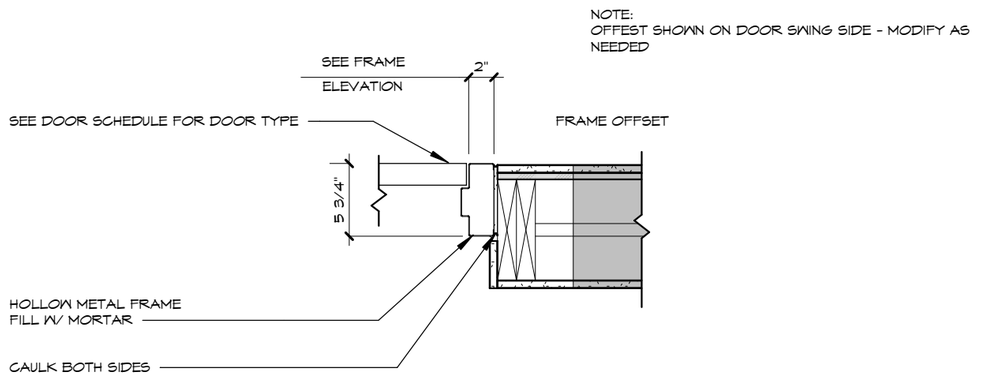
1" = 1'-0"

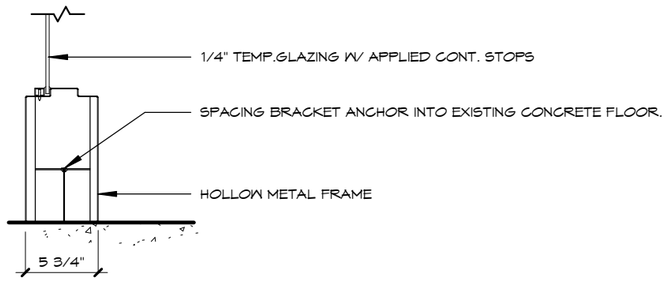
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A706	



1 HM DOOR WITH SIDELITE

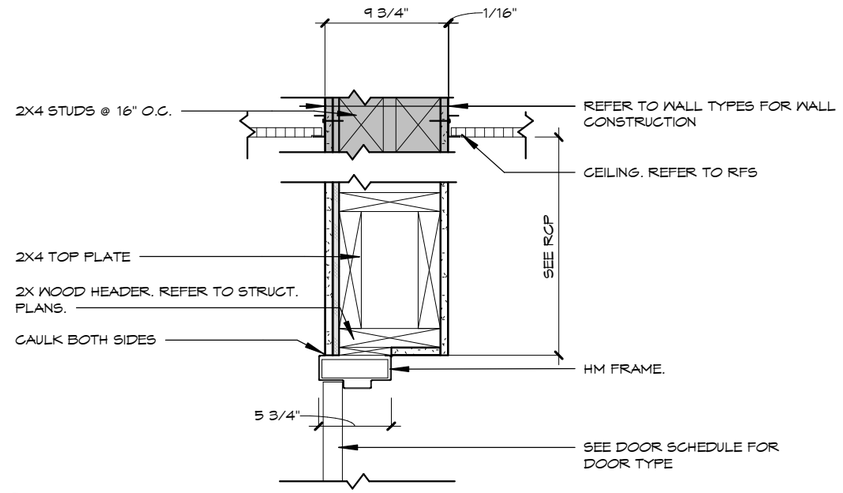
1" = 1'-0"





2 HM SILL DETAILS

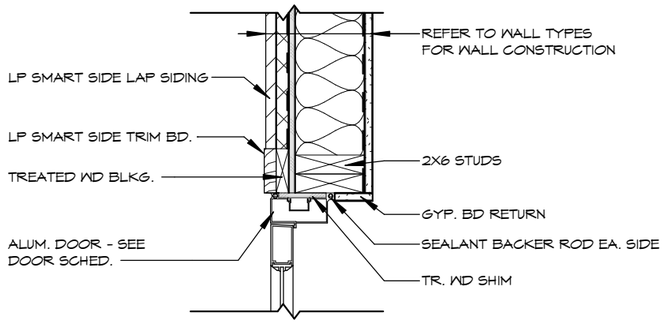
1" = 1'-0"



3 HM HEAD DETAILS

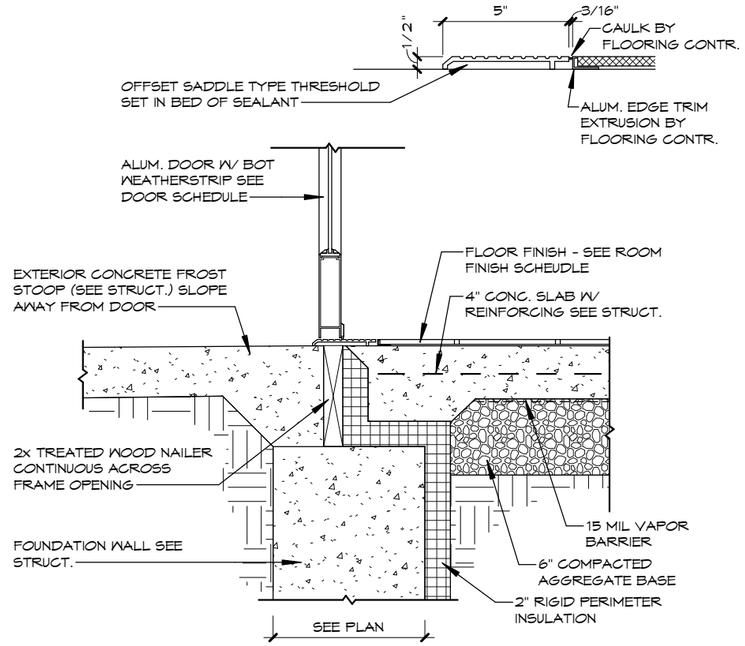
1" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A707	



1 ALUMINUM DOOR JAMB DETAIL

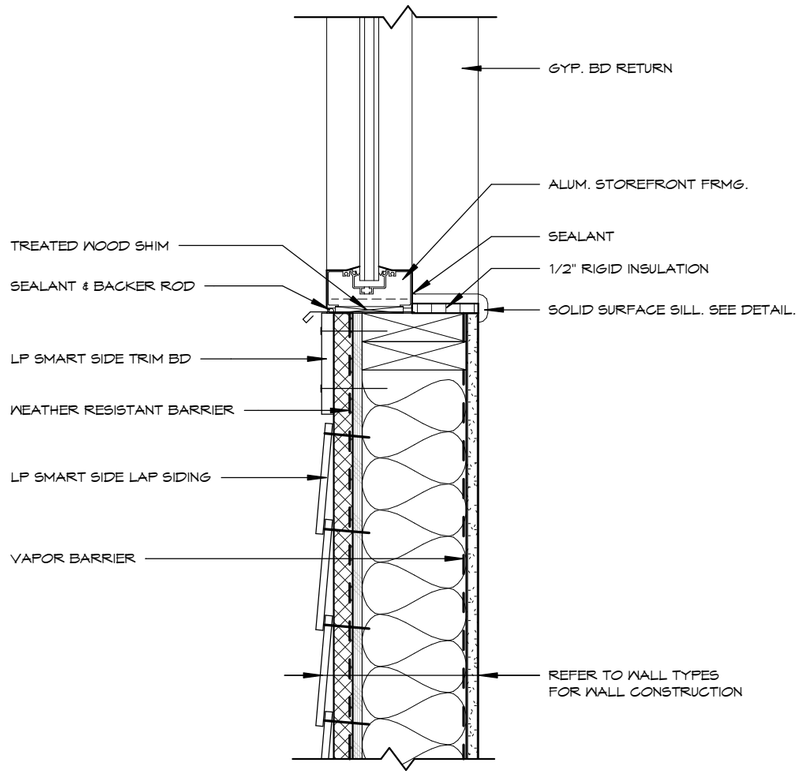
1" = 1'-0"



2 ALUMINUM DOOR THRESHOLD DETAIL

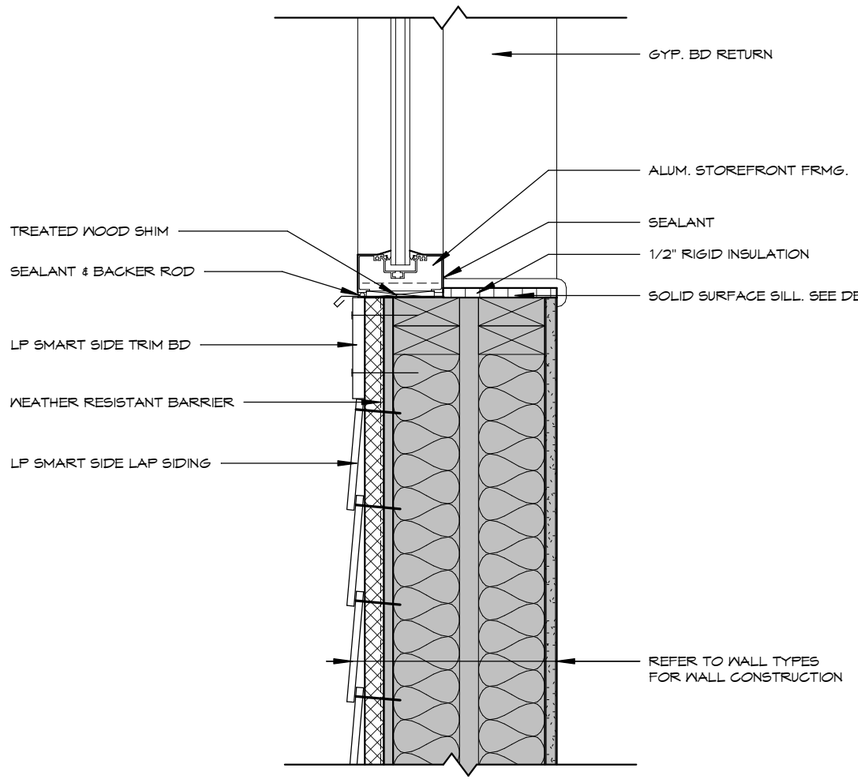
1" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A708	



1 **SILL DETAIL**

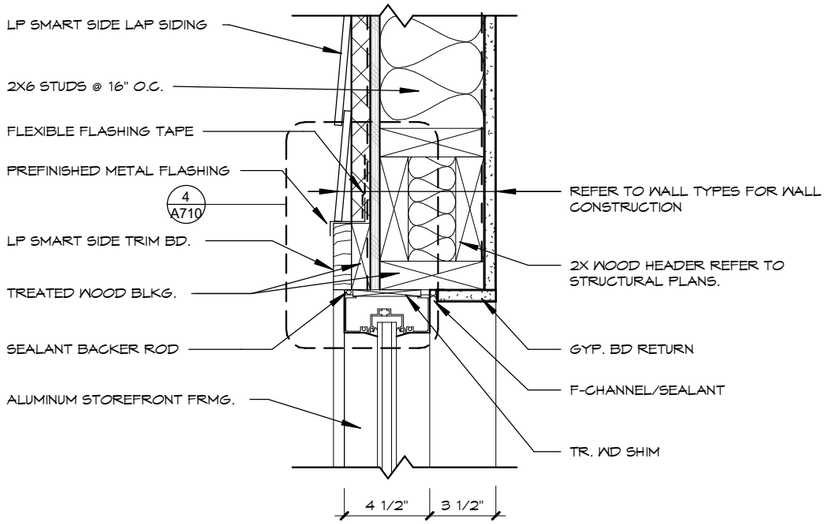
1 1/2" = 1'-0"



2 **SILL DETAIL**

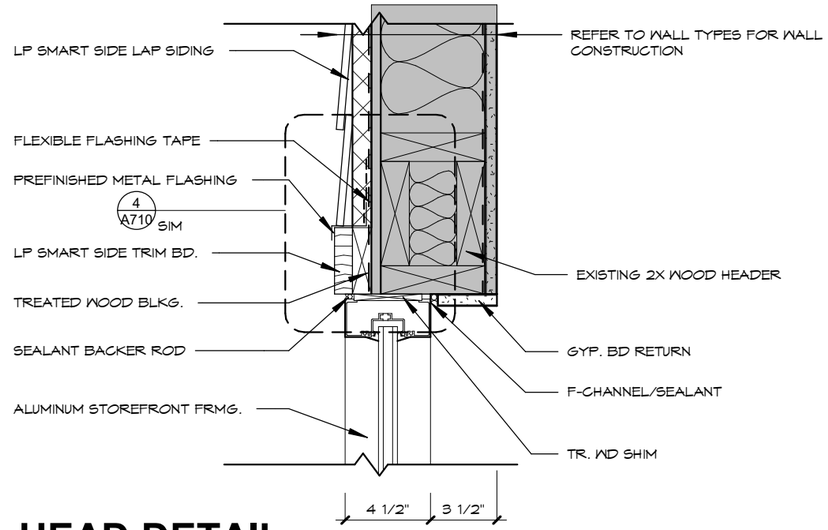
1 1/2" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A709	



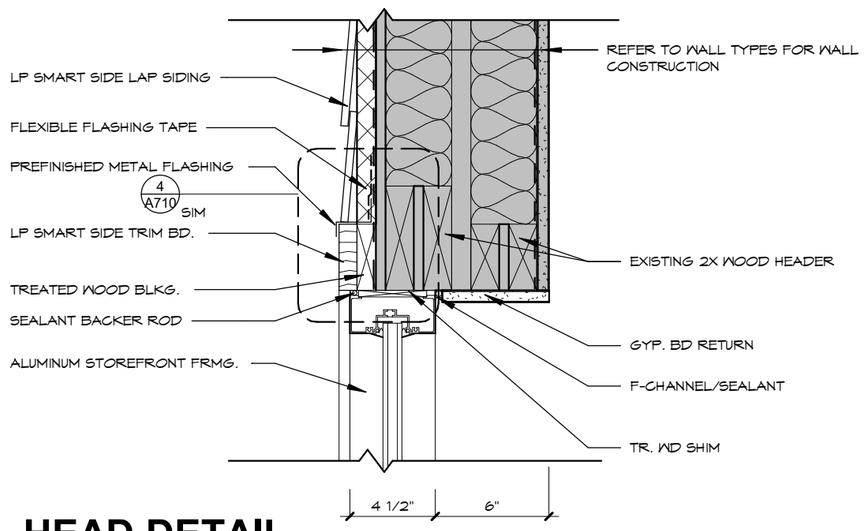
1 **HEAD DETAIL**

1 1/2" = 1'-0"



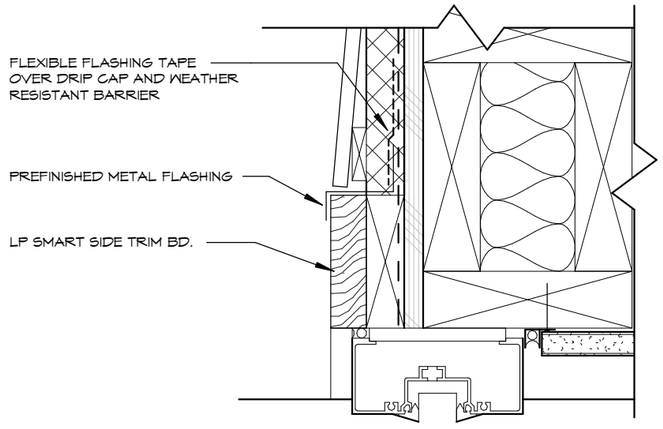
2 **HEAD DETAIL**

1 1/2" = 1'-0"



3 **HEAD DETAIL**

1 1/2" = 1'-0"

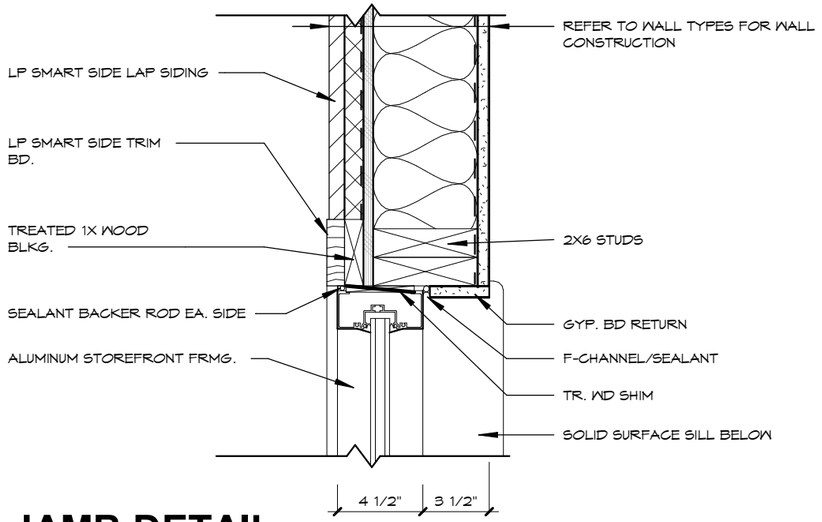


TYPICAL FOR ALL HEAD DETAILS

4 **HEAD DETAIL FLASHING**

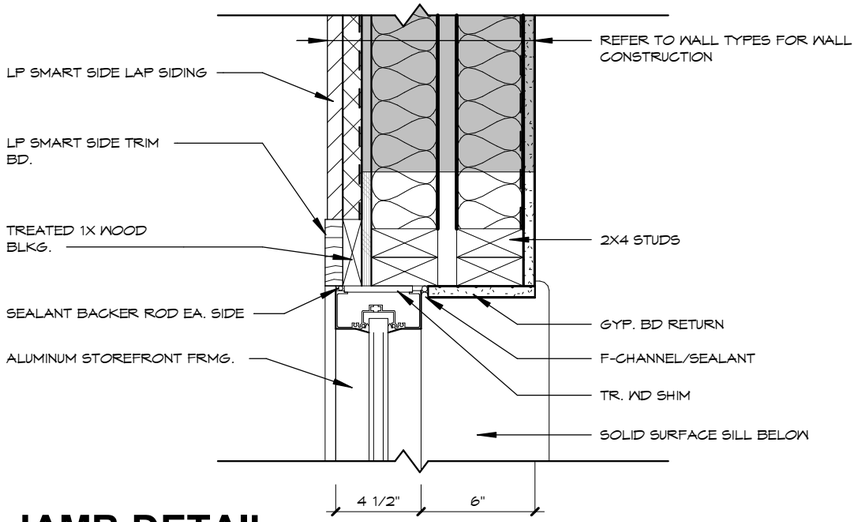
3" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A710	



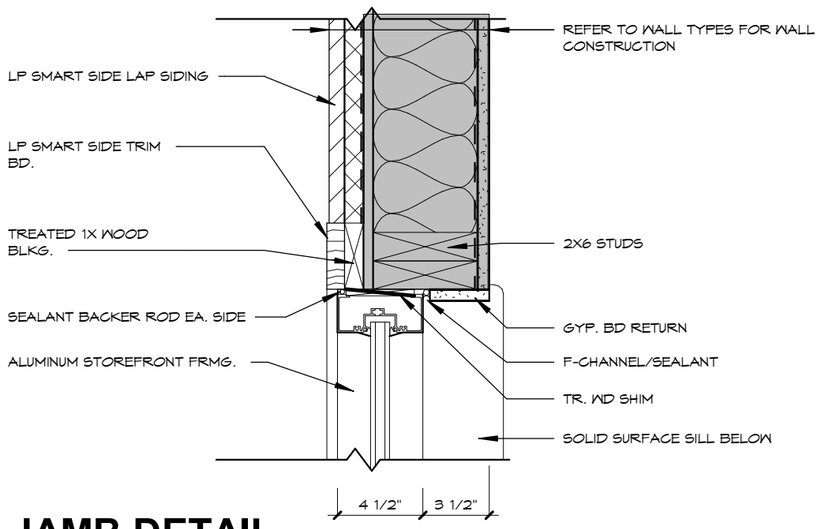
1 JAMB DETAIL

1 1/2" = 1'-0"



2 JAMB DETAIL

1 1/2" = 1'-0"



3 JAMB DETAIL

1 1/2" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A711	

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOORING			WALLS				CEILING		DOORS & FRAMES		CASEWORK	CASEWORK	MISC EQUIP	REMARKS
		SUBSTRATE	FINISH COLOR	BASE TYPE/COLOR	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING	CEILING HT.	FRAMES	DOORS	COUNTERTOPS	CASEWORK FACE	WINDOW STOOLS	
001	TUNNEL	(none)	--	--	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING							
101	VESTIBULE	CONC	QT	QT	GYP BD	GYP BD	GYP BD	GYP BD	ACT-1							
102	OPERATIONS	CONC	QT	QT	GYP BD	GYP BD	GYP BD	GYP BD	ACT-1							
103	DRIVERS	CONC	QT	QT	GYP BD	GYP BD	GYP BD	GYP BD	ACT-1							
104	PUBLIC TOILET	CONC	QT	QT	WCT	WCT	WCT	WCT	ACT-2							
105	STAFF TOILET	CONC	QT	QT	WCT	WCT	WCT	WCT	ACT-2							
106	HOUSEKEEPING/UTILITY ROOM	CONC	QT	QT	GYP BD	GYP BD	GYP BD	GYP BD	GYP BD							
107	BREAKROOM	CONC	QT	QT	GYP BD	GYP BD	GYP BD	GYP BD	ACT-1							
108	TROOPERS	CONC	QT	QT	GYP BD	GYP BD	GYP BD	GYP BD	ACT-1							
109	STORAGE AREA	CONC	S	EP	GYP BD	GYP BD	GYP BD	GYP BD	GYP BD							
110	TELECOM	CONC	QT	QT	GYP BD	GYP BD	GYP BD	GYP BD	GYP BD							
111	INSPECTIONS	CONC	QT	QT	GYP BD	GYP BD	GYP BD	GYP BD	GYP BD							

ABBREVIATIONS

ALUM	ALUMINUM
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CPT	CARPET TILE
EP	EPOXY PAINT
FG	FLOOR GRILLE
GFCMU	GROUND FACE CONCRETE MASONRY UNIT
HM	HOLLOW METAL
HTCS	HIGH TRAFFIC COATING SYSTEM
GYP BD	GYPSUM BOARD
MTL	METAL
MW	MILLWORK
P	PAINT
PLAM	PLASTIC LAMINATE
QT	QUARRY TILE
S	SEALED
SSF	SOLID SURFACE
WCT	WALL CERAMIC TILE
WD	WOOD

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ROOM FINISH SCHEDULE	DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A901

COLOR SCHEDULE				
DIVISION	LABEL	MANUFACTURER	SIZE	COLLECTION/COLOR/PATTERN
06 40 00 - ARCHITECTURAL WOODWORK	P.LAM.-1	FORMICA OR EQUAL		JAMOCHA GRANITE (7734-58)
	P.LAM.-2	FORMICA OR EQUAL		KONA (9288-58)
	S.SURF.-1	MEGANITE OR EQUAL		DELTA GRANITE (661)
	S.SURF.-2	MEGANITE OR EQUAL		SANIBEL (691)
07 46 43 - COMPOSITE SIDING	LP	LP BUILDING (SIDING)	SEE SPEC	QUARRY GRAY
	LP	LP BUILDING (TRIM)	SEE SPEC	TUNDRA GRAY
	LP	LP BUILDING (TRIM)	SEE SPEC	TUNDRA GRAY
08 14 16 - FLUSH WOOD DOORS	WD-1	MASONITE OR EQUAL		RED OAK - ESPRESSO
09 31 00 - TILING	PCT-1	DALTILE OR EQUAL	12" x 12"	UNITY - GRIGIO (P402) - MATTE
	PCT-2	DALTILE OR EQUAL	12" x 12"	AFFINITY - GRAY (AF03) - MATTE
	PCT-3	DALTILE OR EQUAL	6" x 12"	COVE BASE (S36C9) - UNITY - GRIGIO (P402) - MATTE
09 51 00 - ACOUSTICAL CEILING	ACT-1	ARMSTRONG OR EQUAL	2' x 2'	FINE FISSURED (1732) WHITE
09 65 00 - RESILIENT FLOORING	SV-1	POLYFLOR OR EQUAL		2000-PUR - STONEWALL (8230)
	VB-1	ARMSTRONG OR EQUAL	4" H.	FLAGSTONE (R48FS)
09 68 00 - CARPET	CPT-1	INTERFACE OR EQUAL	19" SQ.	KAMALA II - SAKE (101857)
09 77 00 - FIBERGLASS REINFORCED PANELS	FRP-1	CRANE COMPOSITES OR EQUAL		VARIETEX - PEPPER DUST (8044) - SATIN SANDSTONE
09 96 00 - HIGH PERFORMANCE COATING	HPC	KEY RESIN COMPANY		MEDIUM GREY
09 90 00 - PAINTING	PT-1	SHERWIN WILLIAMS OR EQ.		EXTRA WHITE (SW 7006)
	PT-2	SHERWIN WILLIAMS OR EQ.		FIREWEED (SW 6328)
	PT-3	SHERWIN WILLIAMS OR EQ.		CUSTOM COLOR MATCH (METAL FASCIA & ROOF)
10 51 00 - METAL LOCKERS	LO-1	DEBOURGH OR EQ.		CARDINAL RED
12 20 00 - WINDOW TREATMENT	WT-1	HUNTER DOUGLAS OR EQ.		ALUMINUM 1" - WOODLAND DUSK
	WT-2	MECHOSHADE		MECHO/5 - GREY (2113)
	WT-3	MECHOSHADE		MECHO/5 - SMOKE/SILVER-SMOKE (0606)
12 48 16 - FLOOR GRIDS	F.GRID	BALCO OR EQUAL	SEE PLAN	EPOXY W/GRIT - NICKEL GRAY
	AF.MAT	MATS INC. OR EQUAL	SEE SPEC	BLACK

ABBREVIATIONS

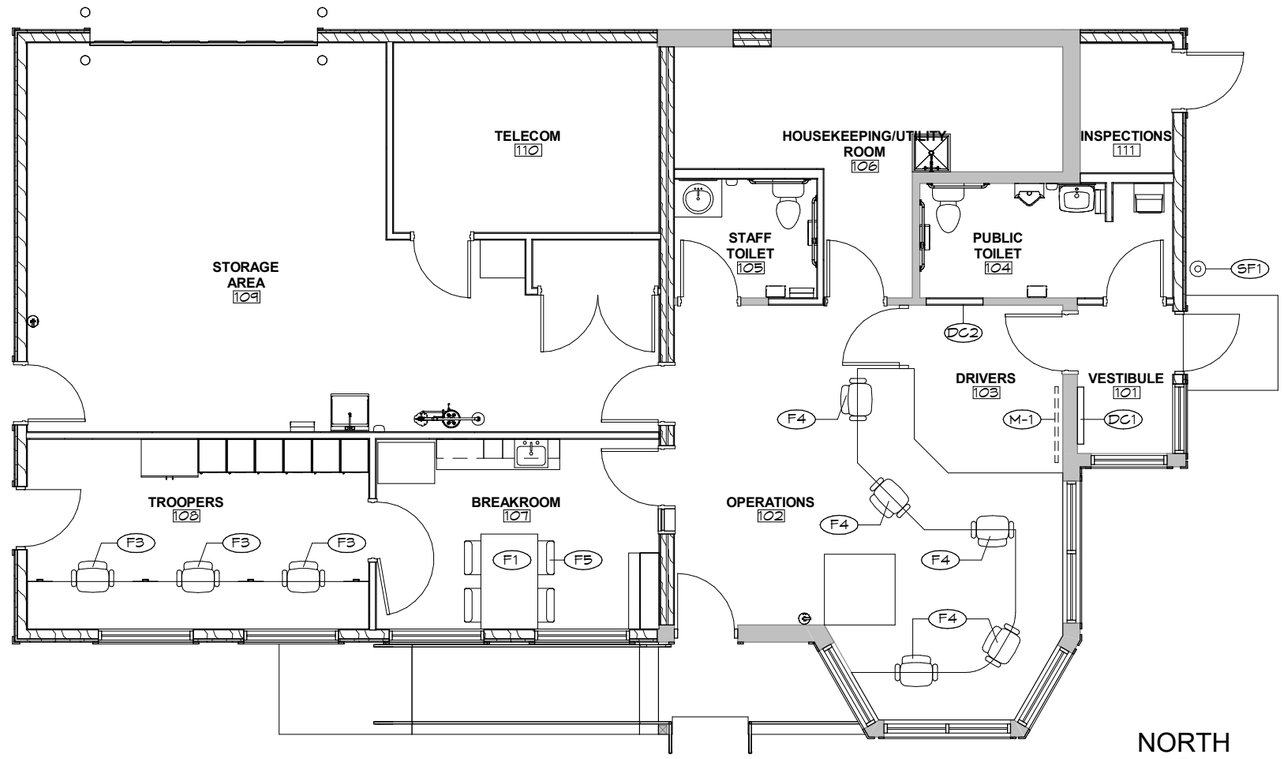
ACT	ACOUSTICAL CEILING TILE
AL	ALUMINUM
BLIND	ALUMINUM BLINDS
CMU	CONCRETE MASONRY UNIT
CONC.	CONCRETE
CPT	CARPET
F. GRID	FLOOR WALK OFF GRID
FRP	FIBERGLASS REINFORCED PANELS
GFCMU	GROUND FACE CONCRETE MASONRY UNIT
GYP BD	GYPSUM BOARD
HM	HOLLOW METAL
HPC	HIGH PERFORMANCE COATING
PT	PAINT
PF	PREFINISHED
P.LAM.	PLASTIC LAMINATE
PCT	PORCELAIN TILE
SEAL	SEALED
S.SURF.	SOLID SURFACE
STRUCT	STRUCTURE
SV.	SHEET VINYL
VB	VINYL BASE
WD	WOOD
WT	WINDOW TREATMENT

GENERAL NOTES

1. FIELD-APPLIED SEAL COAT PER SPEC. SECTION 12 50 00
2. PT-3 TO MATCH CUSTOM METAL FASCIA AND ROOF COLORS. PAINT ALL EXTERIOR GUARD RAILINGS PT-3.
3. FLOOR TILE OVERFULL MORTAR BED. SEE A106 FOR RECESSED SLABS.
4. EXTERIOR H.M. DOORS SHALL BE PAINTED PT-2.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			MATERIAL SCHEDULE		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A902	

FURNITURE SCHEDULE					
LOCATION	SPEC#	LABEL	QTY	DESCRIPTION2	PROVIDED BY
OUTDOOR	12 93 00	SF-1	1	CIGARETTE RECEPTACLE SNUFFER	CONTRACTOR
VESTIBULE 101	10 12 00	DC-1	1	INTERIOR ENCLOSED MAP CASE 36" X 44" MOUNT AT 44" A.F.F	CONTRACTOR
	10 12 00	DC-2	1	WALL MOUNTED BROCHURE DISPLAY MOUNT AT 38" ABOVE A.F.F.	CONTRACTOR
	12 46 13	WC-1	1	WASTE CAN - 16 GALLON	CONTRACTOR
	12 46 13	RC-1	1	RECYCLE CAN - 16 GALLON	CONTRACTOR
OPERATIONS 102	12 50 00	F-4	5	TASK CHAIR - HIGH COUNTER HEIGHT	CONTRACTOR
	12 50 00	F-3	4	FILE PEDESTALS F/F	CONTRACTOR
	12 48 16	MAT	4	ANTI-FATIGUE FLOOR MAT	CONTRACTOR
	12 48 16	F. GRID	2	FLOOR GRID	CONTRACTOR
	12 41 13	PS-1	1	PAPER SHREDDER - 16 GALLON	CONTRACTOR
	11 52 00	M-1	2	24" WEATHER MONITOR	CONTRACTOR
	11 52 00	M2	2	32" TRAFFIC/SECURITY MONITOR	CONTRACTOR
	12 46 13	WC-1	1	WASTE CAN - 16 GALLON	CONTRACTOR
	12 46 13	RC-1	1	RECYCLE CAN - 16 GALLON	CONTRACTOR
	11 72 53	DF	1	DEFIBULATOR	CONTRACTOR
DRIVERS ROOM 103	11 52 00	AV-1	1	BRACKET FOR WEATHER MONITOR	CONTRACTOR
HOUSEKEEPING/ UTILITY ROOM 106					
BREAKROOM 107	12 50 00	F-5	4	GUEST CHAIR - STANDARD HEIGHT	CONTRACTOR
	12 50 00	F-1	1	TRAINING TABLES 5' X 2' - 6"	CONTRACTOR
	11 31 13		1	MICROWAVE OVEN	CONTRACTOR
	11 31 13		1	REFRIGERATOR	CONTRACTOR
	10 28 00	D-1	1	PAPER TOWEL DISPENSER	CONTRACTOR
	12 46 13	WC-1	1	WASTE CAN - 16 GALLON	CONTRACTOR
	12 46 13	RC-1	1	RECYCLE CAN - 16 GALLON	CONTRACTOR
TROOPERS 108	12 50 00	F-3	3	TASK CHAIR - STANDARD HEIGHT	CONTRACTOR
	12 46 13	WC-1	1	WASTE CAN - 16 GALLON	CONTRACTOR
	12 46 13	RC-1	1	RECYCLE CAN - 16 GALLON	CONTRACTOR
STORAGE AREA 109	12 46 13	WC-3	1	WASTE CAN - 44 GALLON	CONTRACTOR
	10 28 00	D-1	1	PAPER TOWEL DISPENSER	CONTRACTOR
	12 50 00	SC-1	2	STEEL CART	CONTRACTOR
	10 51 13	LO-2	1	EVIDENCE LOCKERS	CONTRACTOR



1 **FURNITURE PLAN**

1/8" = 1'-0"

0 2 4 6 8 16

SCALE: 1/8"=1'-0"

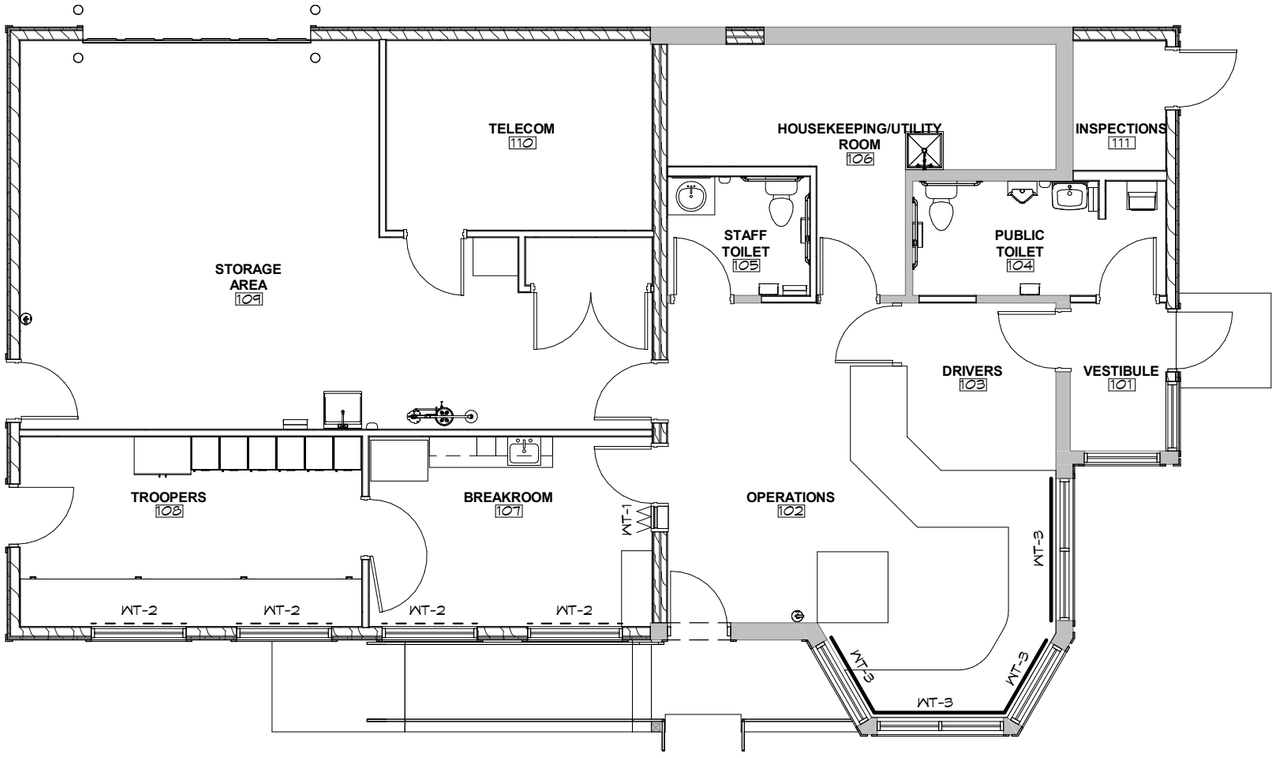
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			FURNITURE PLAN & SPECIALTIES		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A903	190

WINDOW TREATMENT SYMBOLS LEGEND

WT-1 ROLLING TINTED FILM SOLAR SHADE

WT-2 ROLLING FABRIC SOLAR SHADES

WT-3 ROLLING TINTED FILM SOLAR SHADE



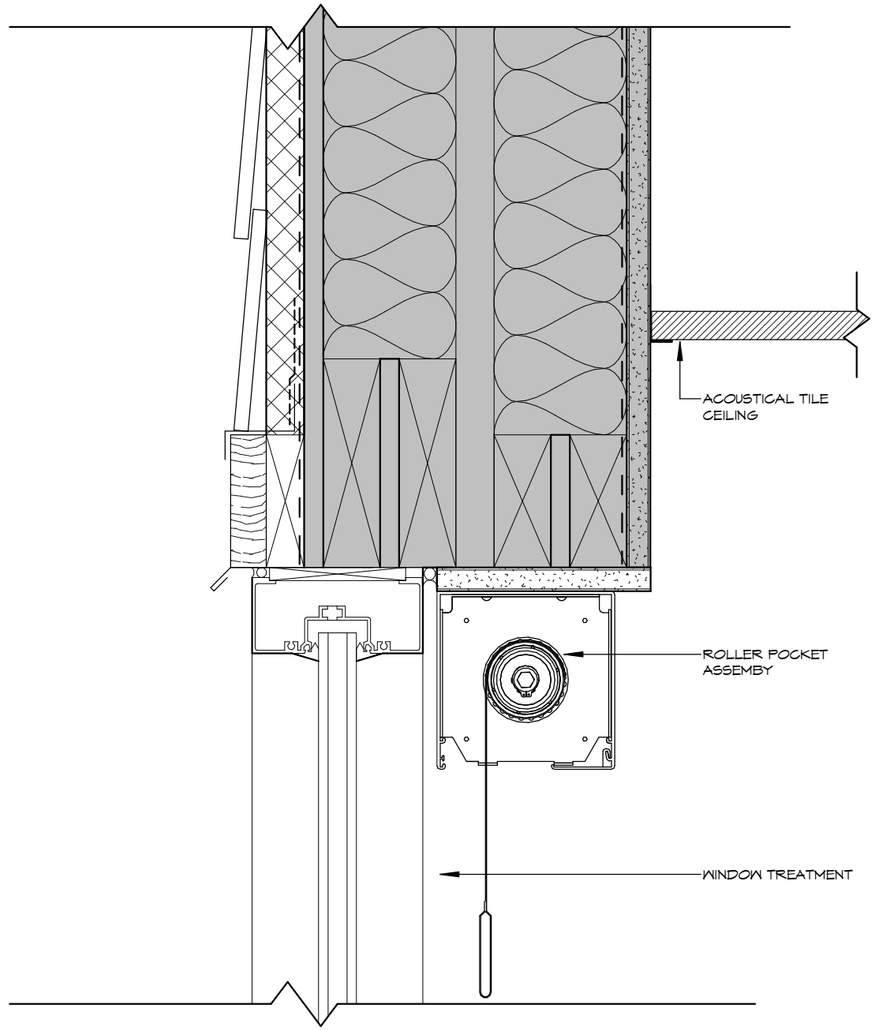
1 WINDOW TREATMENT PLAN

1/8" = 1'-0"

0 2 4 6 8 16

SCALE: 1/8"=1'-0"

NORTH



2 SOLAR SHADE POCKET MOUNT

3" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WINDOW TREATMENT PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: A904	

G E N E R A L N O T E S

1.1 GENERAL:

1.1.1 SCOPE: THE FOLLOWING GENERAL AND SPECIFIC NOTES SHALL APPLY EQUALLY TO ALL CONTRACTORS AND SUPPLIERS ENGAGED IN EXECUTION OF THE WORK SHOWN ON THE CONTRACT DOCUMENTS. THESE NOTES SUPPLEMENT AND ARE MADE A PART OF THE PLANS AND SPECIFICATIONS.

1.1.2 REFERENCES: ALL CONSTRUCTION SHALL BE EXECUTED IN CONFORMANCE WITH THE FOLLOWING:
- PLANS AND SPECIFICATIONS
- GOVERNING LOCAL AND MUNICIPAL CODES
- 2018 WISCONSIN COMMERCIAL BUILDING CODE
- 2015 INTERNATIONAL BUILDING CODE (IBC)
- ASCE 7-10
- ASTM INTERNATIONAL (ASTM)
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

CONCRETE CONSTRUCTION:
- AMERICAN CONCRETE INSTITUTE (ACI)
- CONCRETE REINFORCING STEEL INSTITUTE (CRSI)
- PRECAST/PRESTRESSED CONCRETE INSTITUTE (PCI)

WOOD CONSTRUCTION & TRUSSES:
- NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION
- AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)
- APA - THE ENGINEERED WOOD ASSOCIATION (APA)
- TRUSS PLATE INSTITUTE (TPI)

CONTRACTOR SHALL ENSURE FAMILIARITY OF THE ABOVE ITEMS. INSPECTIONS AND OBSERVATIONS WILL BE IN CONFORMANCE WITH THE ABOVE.

1.1.3 DESIGN DATA:

RISK CATEGORY	CATEGORY II
ROOF DEAD LOADS (D):	
WOOD FRAMED ROOF	20 PSF
FLOOR LIVE LOADS (L):	
OFFICE BUILDINGS	
LOBBIES AND FIRST FLOOR CORRIDORS	100 PSF
OFFICES	50 PSF
SIDEWALKS, VEHICULAR DRIVEWAYS AND YARDS, SUBJECT TO TRUCKING	250 PSF
ROOF LIVE LOADS (L_r):	
ORDINARY PITCHED ROOF	20 PSF
SNOW LOADS (S):	
GROUND SNOW LOAD, P_g	50 PSF
EXPOSURE FACTOR, C_e	1.0
THERMAL FACTOR, C_t	1.1
IMPORTANCE FACTOR, I_s	1.0
FLAT ROOF SNOW LOAD, P_f	38.5 PSF + DRIFT
ROOF SLOPE FACTOR, C_s	1.0
DESIGN ROOF SNOW LOAD, P_s	38.5 PSF + DRIFT

WIND LOADS (W) (ASCE 7-10 MWFRS DIRECTIONAL PROCEDURE, PART 1, ALL H):

BASIC WIND SPEED, V_{ULT}	115 MPH
EXPOSURE CATEGORY	C
ENCLOSURE CLASSIFICATION	ENCLOSED
INTERNAL PRESSURE COEFFICIENT, G_{cpi}	+/- 0.18

COMPONENTS AND CLADDING DESIGN PRESSURES: (ASCE 7-10 CHAPTER 30)

	EFFECTIVE WIND AREAS* (ULTIMATE LOADS)		
ROOF ZONES*	10 SF	50 SF	100 SF
NEG. ZONE 1 (FIELD)	-36.2 PSF	-32.7 PSF	-31.3 PSF
NEG. ZONE 2 (PERIMETER)	-43.5 PSF	-36.6 PSF	-33.7 PSF
NEG. ZONE 3 (CORNER)	-75.2 PSF	-59.9 PSF	-53.3 PSF
POS. ZONE 1	16.0 PSF	16.0 PSF	16.0 PSF
POS. ZONE 2 & 3	16.0 PSF	16.0 PSF	16.0 PSF
WALL ZONES*	10 SF	100 SF	500 SF
NEG. ZONE 4 (INTERIOR ZONE)	-31.3 PSF	-27.0 PSF	-23.9 PSF
NEG. ZONE 5 (CORNER ZONE)	-38.6 PSF	-30.0 PSF	-23.9 PSF
POS. ZONE 4 & 5	28.8 PSF	24.5 PSF	21.5 PSF

*NOTES:
- REFER TO ASCE 7-10, FOR ZONE DIAGRAMS.
- PLUS AND MINUS SIGNS INDICATE PRESSURES ACTING TOWARD OR AWAY FROM BUILDING SURFACES RESPECTIVELY.
- PRESSURES MAY BE INTERPOLATED BETWEEN THE EFFECTIVE WIND AREAS.
- SEE DRAWINGS FOR NET UPLIFT ON JOISTS AND JOIST GIRDERS.
- "a" = 3'-6"

SEISMIC (E):

IMPORTANCE FACTOR, I_e	1.0
0.2$_s$ MAPPED SPECTRAL RESPONSE ACCELERATION, S_s	4.60%g
1.0$_s$ MAPPED SPECTRAL RESPONSE ACCELERATION, S_1	2.90%g
SITE CLASS	D (DEFAULT)
0.2$_s$ SPECTRAL RESPONSE COEFFICIENT, S_{DS}	0.049
1.0$_s$ SPECTRAL RESPONSE COEFFICIENT, S_{D1}	0.046
SEISMIC DESIGN CATEGORY	A
STRUCTURAL SYSTEM	BEARING WALL SYSTEM
SEISMIC RESISTING SYSTEM	LIGHT FRAME WOOD WALLS w/ STRUCTURAL WOOD SHEAR PANELS
ANALYSIS PROCEDURE	INDEX FORCE ANALYSIS

1.1.4 DESIGN CRITERIA:

SOIL BEARING CAPACITY	1500 PSF (ASSUMED)
CONCRETE (NORMAL WEIGHT UNO):	
FOOTINGS	f'_c = 3000 PSI
CIP WALLS	f'_c = 4000 PSI
INTERIOR SLAB ON GRADE	f'_c = 4000 PSI
EXTERIOR SLABS	f'_c = 3500 PSI
REINFORCEMENT STEEL:	
#3 BARS & LARGER, ASTM A615 GRADE 60	F_y = 60000 PSI
WOOD CONSTRUCTION: (MINIMUM STRESSES)	
WALL STUDS, PLATES, HEADERS - SPRUCE-PINE-FIR (NO. 2 OR BETTER)	F_b = 875 PSI
	F_t = 450 PSI
	F_c = 1150 PSI
	F_v = 135 PSI
	E = 1,400,000 PSI
POSTS (5x5 AND LARGER) - DOUGLAS FIR-LARCH (NO.1)	F_b = 1200 PSI
	F_t = 825 PSI
	F_c = 1000 PSI
	F_v = 170 PSI
	E = 1,600,000 PSI
WOOD TRUSSES - MACHINE STRESS RATED (G = .42 MIN)	F_b = 1650 PSI
	F_t = 1020 PSI
	F_c = 1700 PSI
	E = 1,500,000 PSI
LVL (MICROLLAM OR EQUAL)	F_b = 2600 PSI
	F_v = 285 PSI
	E = 1,900,000 PSI
PSL (PARALLAM OR EQUAL) - BEAMS	F_b = 2900 PSI
	F_v = 290 PSI
	E = 2,000,000 PSI
PSL (PARALLAM OR EQUAL) - COLUMNS/POSTS	F_b = 2400 PSI
	F_t = 1755 PSI
	F_c = 2500 PSI
	F_v = 190 PSI
	E = 1,800,000 PSI

FASTENERS:

THREADED ROD, ASTM A307	F_y = 36000 PSI
NUTS, ASTM A563 GRADE C	
WASHERS, A36	F_y = 36000 PSI
EXPANSION ANCHORS (CARBON STEEL)	KWIK-BOLT 1 BY HILTI, INC.
EXPANSION ANCHORS (GALVANIZED, STAINLESS STEEL)	KWIK-BOLT 3 BY HILTI, INC.
CONCRETE EPOXY ANCHORS	HIT HY-200 BY HILTI, INC.
SCREW ANCHORS (3/16"-1/4")	KWIK-CON II BY HILTI, INC.
SCREW ANCHORS (3/8"-3/4")	KH-EZ BY HILTI, INC.
SELF-DRILLING SCREWS	TEKS BY ITW BUILDEX
WOOD SCREWS	SDS BY SIMPSON, INC.

1.1.5 EXECUTION: CONTRACTOR TO CROSS CHECK DIMENSIONS, ELEVATIONS, SECTIONS AND DETAILS BETWEEN ARCHITECTURAL, MECHANICAL AND STRUCTURAL PLANS. AMBROSE ENGINEERING IS TO BE NOTIFIED OF ANY VARIANCE THAT WILL AFFECT THE STRUCTURAL FRAMING BEFORE CONTRACTOR BEGINS WORK. ALL EQUIPMENT SUPPORTS AND ANCHORAGES TO BE CROSS CHECKED WITH MANUFACTURER'S DRAWINGS. CONTRACTORS SHALL VERIFY ALL PROFILES, HEIGHTS AND DIMENSIONS AT PROJECT SITE PRIOR TO FABRICATION OF ANY MATERIAL AND INFORM THE ENGINEER OF ANY DISCREPANCIES OR FRAMING INTERFERENCES.

1.1.6 PROJECT CONDITIONS: ALL EXISTING BUILDING DIMENSIONS AND CONDITIONS MUST BE FIELD VERIFIED PRIOR TO FABRICATION. AMBROSE ENGINEERING SHALL NOT BE RESPONSIBLE FOR ANY EXISTING INFORMATION SUPPLIED BY THE OWNER/ARCHITECT NOR BE LIABLE FOR THOSE EXISTING CONDITIONS THAT VARY FROM THE PREVIOUSLY GIVEN INFORMATION.

1.1.7 SHOP DRAWINGS/SUBMITTALS: SHALL BE SUBMITTED BY THE GENERAL CONTRACTOR TO THE ARCHITECT/ENGINEER FOR APPROVAL BEFORE FABRICATION MAY PROCEED. SHOP DRAWINGS/SUBMITTALS SHALL BE PROVIDED FOR THE FOLLOWING COMPONENTS: CONCRETE DESIGN MIXES, REINFORCING STEEL, AND PRE-ENGINEERED WOOD TRUSSES. SEE SPECIFIC MATERIALS SECTIONS FOR ADDITIONAL INFORMATION.

NOTES:
- GENERAL CONTRACTOR SHALL REVIEW AND STAMP SHOP DRAWINGS BEFORE SUBMITTAL TO ARCHITECT/ENGINEER.
- SUBMIT (2) COPIES TO ARCHITECT/ENGINEER FOR REVIEW. (1) REVIEWED COPY WILL BE RETURNED. ANY ADDITIONAL SHOP DRAWING COPIES WILL NOT BE RETURNED.
- ALL SHOP DRAWINGS SHALL CONTAIN THE ISSUE DATE INDICATED ON THE CONSTRUCTION DOCUMENTS, ALONG WITH ANY ADDENDUMS OR REVISION DATES.
- COPIES OF THE STRUCTURAL DRAWINGS SUBMITTED AS SHOP DRAWINGS WILL BE REJECTED.
- ANY DEVIATIONS FROM THE CONTRACT DOCUMENTS SHALL BE NOTED (CLOUD, NOTE, ETC.) ON THE SHOP DRAWINGS SUBMITTED FOR APPROVAL.
- ANY CHANGES ON RESUBMITTED SHOP DRAWINGS SHALL BE CLOUDED.

1.1.8 DEFERRED COMPONENT SUBMITTALS: SHALL BE SUBMITTED BY THE GENERAL CONTRACTOR TO THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION. DEFERRED SUBMITTALS SHALL BE PROVIDED FOR WOOD TRUSSES.

NOTES:
- GENERAL CONTRACTOR SHALL REVIEW AND STAMP THE DEFERRED SUBMITTALS BEFORE SUBMITTAL TO ARCHITECT/ENGINEER.
- SUBMIT (4) COPIES OF DRAWINGS AND CALCULATIONS TO ENGINEER. (3) COPIES WILL BE RETURNED WITH ENGINEER'S APPROVAL STAMP.
- ALL COMPONENT SUBMITTALS SHALL BEAR AN ORIGINAL SEAL AND SIGNATURE OF THE COMPONENT DESIGNER.
- ALL SUBMITTED COPIES MUST BE THE FINAL "FIELD USE" SETS WHICH INCLUDES ALL CORRECTIONS MADE DUE TO SHOP DRAWING REVIEW COMMENTS.

1.1.9 SPECIAL INSPECTIONS: AN INSPECTION & TESTING COMPANY SHALL BE RETAINED IN ACCORDANCE WITH THE IBC FOR THE FOLLOWING:

- SOILS AND EARTHWORK SUPPORTING FOUNDATIONS AND SLABS.
- CONCRETE TEST CYLINDERS AND STRENGTH TESTING.
- CONCRETE REINFORCEMENT.
- POST INSTALLED EXPANSION AND EPOXY ANCHORS.

1.1.10 CONSTRUCTION LOADS: PLACEMENT OF CONSTRUCTION EQUIPMENT, MATERIALS, AND PERSONNEL SHALL NOT EXCEED THE DESIGN LIVE LOAD OF THE STRUCTURE. CONCRETE SHALL CURE A MINIMUM OF 7 DAYS BEFORE THE APPLICATION OF CONSTRUCTION LOADS. IN ADDITION, EQUIPMENT PLACED ON FLOORS SHALL ALSO COMPLY WITH THE FOLLOWING:

FORKLIFT SPACING BETWEEN WHEELS ON AXLE IS NOT LESS THAN 38" c/c OR SCISSOR LIFT SPACING BETWEEN WHEELS ON AXLE IS NOT LESS THAN 25" c/c.

SLAB-ON-GRADE: SLAB DEPTH	ALLOWABLE EQUIPMENT AXLE LOADS FORKLIFT	SCISSOR/PLATFORM LIFTS
4"	NONE	5,400 LBS
5"	8,600 LBS	6,800 LBS
>=6"	11,400 LBS	9,200 LBS
MODULUS OF SUBGRADE, k (MINIMUM)		100 PCI

WHEN AXLE LOADS EXCEED THE VALUES LISTED ABOVE, OR WHEN WHEEL SPACING IS LESS THAN c/c SPACING, CONTACT ENGINEER PRIOR TO OPERATING UNAUTHORIZED EQUIPMENT.

1.1.11 FIELD MODIFICATIONS: MODIFICATIONS OF STRUCTURAL MEMBERS DUE TO MISLOCATION, MISFIT, MECHANICAL INTERFERENCE, OR ANY OTHER CONSTRUCTION ISSUE SHALL NOT BE MADE WITHOUT THE PRIOR APPROVAL OF ENGINEER. NO OPENING SHALL BE PLACED IN ANY STRUCTURAL MEMBER UNLESS SHOWN ON THE CONTRACT STRUCTURAL DRAWINGS OR THE APPROVED SHOP DRAWINGS.

1.1.12 PERMANENT EQUIPMENT: SHALL BE LOCATED ONLY ON THE STRUCTURAL MEMBERS INTENDED TO SUPPORT THIS EQUIPMENT AS SHOWN ON THE CONTRACT DRAWINGS OR THE APPROVED SHOP DRAWINGS. IF STRUCTURAL SUPPORT IS NOT CLEAR, OR A QUESTION ARISES, CONTACT ENGINEER PRIOR TO EQUIPMENT INSTALLATION.

2.1 EARTHWORK:

2.1.1 GEOTECHNICAL REPORT: REFER TO GEOTECHNICAL REPORT INDICATED IN DESIGN CRITERIA FOR SITE CONDITIONS, SUITABLE BEARING MATERIALS, STRUCTURAL FILL, BACKFILL MATERIALS, COMPACTION REQUIREMENTS AND PROJECT SPECIFICATIONS FOR EARTHWORK NOT SPECIFIED HEREIN.

2.1.2 EXCAVATIONS: ALL UNSUITABLE EXISTING FILL AND TOPSOIL SHALL BE EXCAVATED BELOW FOOTING BEARING AND REPLACED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS. IF EXCAVATIONS SHOULD INDICATE A SAFE SOIL BEARING CAPACITY LESS THAN THE DESIGN CRITERIA SOIL BEARING CAPACITY THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND FOUNDATION REVISED TO MEET THIS CONDITION.

2.1.3 SITE PREPARATION: ALL UNSUITABLE EXISTING FILL AND TOPSOIL SHALL BE EXCAVATED WITHIN THE BUILDING FOOTPRINT AND REPLACED TO FINISHED PAD ELEVATION IN ACCORDANCE WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS. PROVIDE COMPACTED AGGREGATE SUB-BASE AND VAPOR RETARDER ABOVE PAD AND BELOW SLAB PER SPECIFICATIONS AND GEOTECHNICAL REPORT RECOMMENDATIONS.

2.1.4 BACKFILLING: BACKFILL EACH SIDE OF FOUNDATION WALLS IN EQUAL LIFTS. WHERE FINAL GRADES CREATE AN UNBALANCED CONDITION BACKFILL AS FOLLOWS: AT FOUNDATIONS WALLS STRUCTURALLY CONNECTED TO SLABS (SUCH AS DOCK WALLS), BRACE TOP OF WALL UNTIL SLAB IS IN PLACE AND CURED 7 DAYS MINIMUM. WHERE WALLS ARE NOT STRUCTURALLY CONNECTED AT THE TOP (SUCH AS RETAINING WALLS) BRACING IS NOT REQUIRED.

3.1 CONCRETE:

3.1.1 REFERENCES: CONCRETE CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING STANDARDS AND AS MODIFIED HEREIN:

ACI 117	"SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS"
ACI 301	"SPECIFICATIONS FOR STRUCTURAL CONCRETE"
ACI SP-66	"ACI DETAILING MANUAL"
ACI 318	"BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
ACI 347	"GUIDE TO FORMWORK FOR CONCRETE"
ACI 360	"GUIDE TO DESIGN OF SLABS-ON-GROUND"
CRSI	"MANUAL OF STANDARD PRACTICE"
CRSI	"PLACING REINFORCING BARS"

3.1.2 MATERIALS: PROPORTION CONCRETE MATERIALS TO ATTAIN 28 DAY CONCRETE MIX DESIGN STRENGTHS INDICATED IN THE DESIGN CRITERIA. SEE SPECIFICATIONS FOR ADDITIONAL MATERIAL REQUIREMENTS.

3.1.3 SHOP DRAWINGS/SUBMITTALS: SUBMIT CONCRETE MIX DESIGNS, COMPRESSIVE STRENGTH TEST HISTORY, CEMENT, FLY ASH, AGGREGATE TEST REPORTS, ADMIXTURES, FIBER REINFORCING, REBAR PLACEMENT AND FABRICATION PLANS, LAP LENGTHS, REBAR BENDING DIAGRAMS, AND ALL DETAILS AS REQUIRED TO COMPLETE INSTALLATION.

3.1.4 ACCESSORIES: ALL CONCRETE ACCESSORIES SUCH AS CHAIRS, TIES, ETC., THAT COME IN CONTACT WITH FORMWORK ON EXPOSED CONCRETE SHALL BE GALVANIZED OR PLASTIC COATED. CONCRETE BLOCK OR CLAY MASONRY SHALL NOT BE USED AS CHAIRS FOR SUPPORT OF SLAB-ON-GRADE REINFORCEMENT.

3.1.5 WELDED WIRE REINFORCEMENT: PROVIDE WELDED WIRE REINFORCEMENT IN ACCORDANCE WITH THE DESIGN CRITERIA. WELDED WIRE REINFORCEMENT SHALL BE FLAT SHEETS ONLY, LAPPED 6" MINIMUM AND POSITIONED AT MID-HEIGHT OF THE SLAB THICKNESS, UNO.

3.1.6 SYNTHETIC FIBER REINFORCEMENT: PROVIDE SYNTHETIC FIBER REINFORCEMENT IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AT THE DOSAGE RATE INDICATED ON THE PLANS.

3.1.7 BAR REINFORCEMENT: PROVIDE BAR REINFORCEMENT IN ACCORDANCE WITH THE DESIGN CRITERIA. WHEN BAR REINFORCEMENT IS CALLED FOR IN A CERTAIN PORTION OF THE BUILDING, IT SHALL BE DUPLICATED IN SIMILAR PORTIONS OF THE BUILDING, UNO.

3.1.8 MINIMUM COVER: INSTALL BAR REINFORCEMENT WITH THE FOLLOWING MINIMUM COVER UNLESS A GREATER COVER IS REQUIRED DUE TO FIRE PROTECTION:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH AND WEATHER:	
#5 BAR AND SMALLER	1 1/2"
#6 BAR AND LARGER	2"
CONCRETE NOT EXPOSED TO EARTH AND WEATHER OR IN CONTACT WITH GROUND:	
SLABS, WALLS, AND JOISTS:	
#11 BAR AND SMALLER	3/4"
BEAMS AND COLUMNS:	
#11 BAR AND SMALLER	1 1/2"

3.1.9 DEVELOPMENT: THE MINIMUM DEVELOPMENT LENGTH OF NON-CONTINUOUS BAR REINFORCEMENT IS SHOWN BELOW. TERMINATE WITH A STANDARD HOOK IN ACCORDANCE WITH ACI IF REQUIRED DEVELOPMENT LENGTH CANNOT BE OBTAINED. THE LAP SPLICE LENGTH OF CONTINUOUS BAR REINFORCEMENT IS SHOWN BELOW. IN GROUPS OF PARALLEL BARS, LAP SPLICES SHALL BE STAGGERED.

	DEVELOPMENT LENGTH	LAP SPLICE LENGTH
f'_c = 3000 PSI, GRADE 60, UNCOATED:		
ALL BARS (EXCEPT TOP HORIZ. BARS):		
#6 BAR AND SMALLER	44 BAR DIAMETERS	57 BAR DIAMETERS
#7 BAR AND LARGER	55 BAR DIAMETERS	71 BAR DIAMETERS
TOP HORIZONTAL BARS:		
#6 BAR AND SMALLER	57 BAR DIAMETERS	74 BAR DIAMETERS
#7 BAR AND LARGER	71 BAR DIAMETERS	93 BAR DIAMETERS
f'_c = 4000 PSI, GRADE 60, UNCOATED:		
ALL BARS (EXCEPT TOP HORIZ. BARS):		
#6 BAR AND SMALLER	38 BAR DIAMETERS	50 BAR DIAMETERS
#7 BAR AND LARGER	47 BAR DIAMETERS	62 BAR DIAMETERS
TOP HORIZONTAL BARS:		
#6 BAR AND SMALLER	50 BAR DIAMETERS	64 BAR DIAMETERS
#7 BAR AND LARGER	62 BAR DIAMETERS	80 BAR DIAMETERS

3.1.10 HOT WEATHER CONCRETING: FOLLOW ACI 305 "HOT WEATHER CONCRETING" WHEN MAXIMUM DAILY TEMPERATURE EXCEEDS 85°F, OR RAPID DRYING CONDITIONS EXIST; EVAPORATION RATE > .15 LB/SF/HR PER FIGURE 2.1.5.

3.1.11 COLD WEATHER CONCRETING: FOLLOW ACI 306 "COLD WEATHER CONCRETING" WHEN FREEZING CONDITIONS OR MEAN DAILY TEMPERATURE FALLS BELOW 40°F.

3.1.12 SLABS: MAY BE POURED AS A CONTINUOUS SCREEDED POUR WITH SAW CUT CONTROL JOINTS IN BOTH DIRECTIONS. SAW CUTS TO BE MADE WITHIN 8 HOURS OF POUR AND SPACED AS INDICATED IN THE DRAWINGS.

3.1.13 WALLS: MAXIMUM POUR LENGTH 100 FT BETWEEN FORMED CONSTRUCTION JOINTS. FOR WALLS EXPOSED TO VIEW PROVIDE INTERMEDIATE CONTROL JOINTS NO GREATER THAN 30 FT ON CENTER. JOINTS SHOULD ALIGN WITH BUILDING CONTROL JOINTS WHEN PRESENT AND COORDINATED WITH ARCHITECTURAL DRAWINGS.

3.1.14 OPENINGS: CONTRACTOR TO PROVIDE AND COORDINATE WITH ALL OTHER TRADES FOR SIZE AND LOCATIONS OF ANY AND ALL OPENINGS, SLEEVES, ETC. OCCURRING IN WALLS, FOOTINGS, AND FLOORS. SLEEVE LAYOUTS SHALL BE SUBMITTED FOR APPROVAL PRIOR TO CONSTRUCTION.

3.1.15 BOND BREAKER: PROVIDE BOND BREAKER MATERIAL WHERE SLABS ABUT WALLS, COLUMNS AND OTHER VERTICAL SURFACES.

6.1 WOOD CONSTRUCTION:

6.1.1 REFERENCES: ALL WOOD CONSTRUCTION SHALL BE EXECUTED IN CONFORMANCE WITH THE REQUIREMENTS OF THE FOLLOWING STANDARDS AND AS MODIFIED HEREIN:

SAWN LUMBER, GLUE-LAMINATED TIMBER, WOOD I JOIST, COMPOSITE LUMBER, METAL PLATE CONNECTED WOOD TRUSSES AND PRE-ENGINEERED METAL CONNECTORS:

ALLOWABLE STRESS DESIGN (ADS) MANUAL FOR ENGINEERED WOOD CONSTRUCTION
NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION
NDS COMMENTARY
NDS SUPPLEMENTS
NDS GUIDELINES

PLYWOOD AND ORIENTATED STRAND BOARD:
AMERICAN PLYWOOD ASSOCIATION

6.1.2 MATERIALS: CONTRACTOR SHALL SELECT LUMBER SPECIES AND GRADE CONFORMING WITH THE STRENGTH REQUIREMENTS SPECIFIED UNDER THE GENERAL DESIGN CRITERIA.

6.1.3 ALL WOOD IN DIRECT CONTACT WITH EARTH OR CONCRETE SHALL BE PRESSURE TREATED.

6.1.4 BEARING AND SHEAR WALLS TO HAVE DOUBLE TOP PLATE, LAPPED AT WALL AND PARTITION INTERSECTION WITH 3 - 16d NAILS. STAGGER SPLICES OF UPPER AND LOWER TOP PLATES.

6.1.5 HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT PLUS 1/16".

6.1.6 HOLES FOR LAG SCREWS SHALL BE FIRST BORED TO THE SAME NOMINAL DIAMETER AND DEPTH AS THE SHANK AND THE REST NO LARGER THAN THE ROOT OF THE THREAD.

6.1.7 LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. SOAP MAY BE USED TO LUBRICATE SCREWS.

6.1.8 ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD. (APPLIES ALSO TO INSERTED EXPANDING FASTENERS, RED HEAD, ETC.)

BOLT DIAMETER	MACHINE WASHER	STEEL PLATE WASHER
5/8"	2-3/4" DIA x 5/16"	2-1/2" x 2-1/2" x 1/4"
3/4"	3" DIA x 7/16"	3" x 3" x 5/16"
7/8"	3-1/2" DIA x 7/16"	3-1/2" x 3-1/2" x 3/8"
1"	4" DIA x 1/2"	3-3/4" x 3-3/4" x 3/8"

6.1.9 LAY ALL STRUCTURAL PLYWOOD ON ROOF AND FLOORS WITH FACE GRAIN PERPENDICULAR TO SUPPORTS UNLESS NOTED OTHERWISE. STAGGER INTERIOR PANEL EDGE JOINTS.

6.1.10 CONNECTOR HARDWARE MODEL NUMBERS ARE THOSE FOR THE SIMPSON STRONG-TIE COMPANY. EQUIVALENT CONNECTORS WITH INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO) ACCEPTANCE MAY BE SUBSTITUTED.

6.1.11 ALL FASTENERS FOR PRESERVATIVE-TREATED AND FIRE-RETARDANT-TREATED WOOD SHALL BE OF HOT-DIPPED ZINC-COATED GALVANIZED STEEL OR STAINLESS STEEL.

6.1.12 ALL NAILS FOR STRUCTURAL WORK SHALL BE COMMON WIRE NAILS CONFORMING TO THE FOLLOWING MINIMUM SIZES:

8d . . . . . 0.131" DIAMETER x 2-1/2"
10d . . . . . 0.148" DIAMETER x 3"
10d SHORTS . . . . . 0.148" DIAMETER x 1-5/8" PLUS THICKNESS OF SPLICE
16d . . . . . 0.162" DIAMETER x 3-1/2"
20d . . . . . 0.192" DIAMETER x 4"

6.1.13 CONNECTIONS: WHERE SPECIAL NAILING IS NOT INDICATED ON DRAWINGS, MEMBERS SHALL BE CONNECTED IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

1. STUDS TO BEARINGS
   2x4 STUDS -- TN EACH SIDE. . . . . 2 - 10d
   IN PLACE OF TN . . . . . 2 - 16d
   2x6 & 2x8 STUDS -- TN EACH SIDE. . . . . 3 - 10d
   IN PLACE OF TN . . . . . 3 - 16d

2. BLOCKING
   BETWEEN JOISTS, TN EACH SIDE EACH END. . . . . 2 - 10d
   RAFTERS, OR STUDS -- IN PLACE OF TN . . . . . 2 - 16d
   BETWEEN JOIST OR RAFTER BRGS (PLATES) -- TN EACH SIDE. . , 3 - 10d

3. DOUBLE TOP PLATES
   LOWER PLATE TO 2x4 STUD. . . . . 2 - 16d
   LOWER PLATE TO 2x6 OR 2x8 STUD . . . . . 3 - 16d

4. SILL PLATES
   TO PARALLEL FRAMING. . . . . 20d @ 12" OC
   TO PERPENDICULAR FRAMING - EACH CONTACT. . . . . 2 - 20d
   TO CONCRETE FOUNDATION WALLS . . . . «" DIAMETER ANCH. @ 4' OC MIN
   TO MASONRY FOUNDATION WALLS . . . . «" DIAMETER ANCH. @ 4' OC MIN

5. MULTIPLE STUDS
   STAGGER FOR WIDTHS MORE THAN 4". . . . . 16d @ 12" OC

6. BUILT UP BEAMS
   10" OR LESS IN DEPTH EACH SIDE STAGGERED . . . . . 16d @ 12" OC
   MORE THAN 10" IN DEPTH . . . . . 1/2" DIAMETER BOLTS AT 24" OC STAGGERED

7. STRUCTURAL PLYWOOD
   AT SUPPORTED EDGES . . . . . .8d @ 6" OC
   AT INTERIOR BEARINGS . . . . . 8d @ 12" OC

8. RAFTERS OR WOOD TRUSSES - SIMPSON MODEL H1 ANCHOR
   TO ALL BEARING . . . . . 4 - 8d
   TO RAFTER. . . . . .6 - 8d x 1-1/2

6.2 PRE-ENGINEERED WOOD TRUSSES:

6.2.1 SUBMITTALS: THE FOLLOWING ITEMS SHALL BE SUBMITTED AND APPROVED PRIOR TO FABRICATION OF TRUSSES.

1. SHOP DRAWINGS: INDICATE TRUSS LOCATIONS, MARKS, PROFILES, DIMENSIONS BEARING REQUIREMENTS AND CONNECTION DETAILS. PROVIDE WEB MEMBER BRACING REQUIREMENTS AND LOADS.
2. PRODUCT DATA: INDICATE SPECIES, GRADE AND STRENGTH OF MEMBERS.
3. DESIGN DATA: PROVIDE SUPERIMPOSED DEAD LOADS LIVE LOADS AND WIND LOADS. FURNISH STRUCTURAL ANALYSIS CALCULATIONS INDICATING MEMBER STRESS REACTIONS AND DEFLECTIONS.
4. CERTIFICATION: SHOP DRAWINGS AND CALCULATIONS SHALL BE SIGNED AND STAMPED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE TRUSSES ARE INSTALLED.

6.2.2 MATERIALS: LUMBER SPECIES, GRADE, SPECIFIC GRAVITY AND STRENGTH SHALL BE SELECTED BY THE TRUSS MANUFACTURE, AS REQUIRED, TO COMPLY WITH THE DESIGN DATA, DESIGN CRITERIA AND DEFLECTION CRITERIA STATED HEREIN.

6.2.3 TEMPORARY BRACING: THE TRUSS MANUFACTURER SHALL ATTACH RECOMMENDATIONS FOR TEMPORARY BRACING TO THE SHOP DRAWINGS. WHERE NECESSARY, GROUND BRACING SHALL BE PROVIDED TO STABILIZE THE FIRST SET OF TRUSSES UNTIL TEMPORARY BRACING IS REPLACED BY ROOF SHEATHING AND PERMANENT BRACING.

6.2.4 PERMANENT BRACING: TRUSS TOP CHORDS ARE BRACED BY ROOF SHEATHING. BOTTOM CHORDS ARE BRACED BY DIRECT APPLIED CEILING SYSTEM. WEB MEMBERS ARE BRACED BY A SWAY BRACING SYSTEM INDICATED ON DRAWINGS. SWAY BRACING SHALL BE INSTALLED AT LOCATIONS SPECIFIED BY TRUSS MANUFACTURER, BUT NOT LESS THAN THE NUMBER OF ROWS INDICATED ON THE DESIGN DRAWINGS.

6.2.5 GIRDER TRUSSES: MANUFACTURER SHALL DESIGN FOR ALL UNIFORM AND CONCENTRATED LOADS APPLIED BY OTHER TRUSSES OR SECONDARY MEMBERS. PROVIDE ALL HANGERS OR SECONDARY HARDWARE TO COMPLETE ALL TRUSS TO TRUSS CONNECTIONS. FURNISH DETAILS FOR CONNECTION OF INDIVIDUAL TRUSS PLIES.

6.2.6 INSTALLATION: COMPLY WITH HIB-91 RECOMMENDATIONS FOR HANDLING,STORAGE AND ERECTION OF WOOD TRUSS.

7.1 ANCHORAGE:

7.1.1 ALL FIELD INSTALLED EXPANSION AND EPOXY ANCHORS SHALL BE APPROVED FOR THE TYPE AND INSTALLATION, FOR ITS APPLICATION, AND MATERIALS.

7.1.2 MINIMUM ANCHOR EMBEDMENT, EDGE DISTANCE AND MINIMUM SPACING ARE AS FOLLOWS UNO:

EXPANSION ANCHORS:

BOLT DIAMETER (d)	1/4"	3/8"	1/2"	5/8"	3/4"	1"
EMBEDMENT	2"	2.5"	3.5"	4"	4.75"	6"
MIN. EDGE DISTANCE	3.25"	3.75"	5.5"	6"	7"	9"
MIN. SPACING	4.5"	5"	7"	8"	10"	12"

EPOXY ANCHORS:

BOLT DIAMETER (d)	3/8"	1/2"	5/8"	3/4"	1"
EMBEDMENT	3.5"	4.25"	5"	6.62"	8.25"
MIN. EDGE DISTANCE	6"	6.5"	7.5"	10"	12.5"
MIN. SPACING	5.25"	6.5"	7.5"	10"	12.5"

A B B R E V I A T I O N S

AB	Anchor Bolt
ADDM	Addendum
ADDL	Additional
ADJ	Adjacent
ADJ	Adjustable
AFF	Above Finished Floor
AGGR	Aggregate
ALUM	Aluminum
ALT	Alternate, Alternating
APPROX	Approximate
ANCH	Anchor
ARCH	Architectural
BB	Bond Beam
BC	Bottom Chord
BCX	Bott Chord Extension
BD	Board
BL	Brick Ledge
BLDG	Building
BLK	Block
BLKG	Blocking
BM	Beam
BO	Bottom of
BOF	Bottom of Footing
BOL	Bottom of Lintel
BOS	Bottom of Steel
BOT	Bottom
BOW	Bottom of Wall
BP	Bearing Plate
BRDG	Bridging, Bridge
BRG	Bearing
BRK	Brick
BSMT	Basement
BT	Bent
BTWN	Between
C	Camber
C	Standard Channel
CANT	Cantilever (ed)
CB	Castellated Beam
CB	Catch Basin
CFMU	Conc Form Masonry Unit
CHD	Chord
CIP	Cast-in-Place
CJ	Composite Joist
CJ	Control Joint
CL	Centerline
CLG	Ceiling
CLR	Clear (ance)
CMU	Conc Masonry Unit
CO	Clean out
COL	Column
CONC	Concrete
CONN	Connection
CONSTR	Construction
CONT	Continuous
CONTR	Contractor
COORD	Coordinate
COV	Cover
CP	Center Point
CRS	Course
CTR	Center
CU FT	Cubic Feet
CU YD	Cubic Yards
D	Depth
DBL	Double
DEPR	Depression
DF	Douglas Fir
DIA	Diameter
DIAG	Diagonal
DIM	Dimension
DK	Deck
DL	Dead Load
DLH	Deep Longspan Joist
DN	Down
DO	Ditto
DR	Door
DTL	Detail
DWG	Drawing
DWL	Dowel
(E)	Epoxy Coated Rebar
E	Elasticity Modulus
EA	Each
EB	Expansion Bolt
EE	Extended End
EF	Each Face
EIFS	Ext Insul Fin System
EJ	Expansion Joint
EL	Elevation
ELEC	Electrical
ELEV	Elevator
EMBED	Embedment
EP	Embed Plate
EPS	Expanded Polystyrene
EQ	Equal
EQUIP	Equipment
ES	Each Side
EW	Each Way
EX	Existing
EXIST	Existing
EXP	Expansion
EXT	Exterior
F_b	Flexural Bending Stress
F_c	Compressive Stress
F'_c	Comp Stress @ 28 days
F_t	Tensile Stress
F_v	Shear Stress
F_y	Yield Stress
FD	Floor Drain
FDN	Foundation
FFE	Fin Floor Elevation
FH	Full Height
FIN	Finish (ed)
FLR	Floor
FLG	Flange
FOC	Face of Concrete
FOM	Face of Masonry
FOS	Face of Studs
FOW	Face of Wall
FP	Fire Protection, Fireproof
FR	Frame (ed)
FRMG	Framing
FT	Feet, Foot
FTG	Footing
FUT	Future
FV	Field Verify
FW	Fire Wall
G	Girder
GA	Gage
GALV	Galvanized
GB	Grade Beam
GC	General Contractor
GEN	General
GIR	Girder
GL	Glu lam
GLULAM	Glued Laminated Wood
GR BM	Grade Beam
GYP	Gypsum
H	Horizontal, Height
HDR	Header
HGR	Hanger
HI	High
HM	Hollow Metal
HORIZ	Horizontal
HR	Hour
HS	Headed Stud
HSS	Hollow Struct Section
HT	Height
HVAC	Heat/Vent/Air Cond
ICF	Insulating Conc Form
ID	Inside Diameter
IE	Invert Elevation
IF	Inside Face
IN	Inches
INCL	Include (ed) (ing)
INSUL	Insulate (ed) (ion)
INT	Interior
JB	Joist Bearing
JG	Joist Girder
JS	Joist Substitute
JST	Joist
JT	Joint
K	Kips
K	K-Series Steel Joist
KCS	K-Joist Constant Shear
KLF	Kips per Lineal Foot
KO	Knock Out
KSI	Kips per Square Inch
L	Angle
LAM	Laminated
LG	Long, Length
LH	Longspan Steel Joist
LL	Live Load
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
LO	Low
LONG	Longitudinal
LSL	Lam Strand Lumber
LT	Light
LVL	Lam Veneer Lumber
M	Misc Beam
MAS	Masonry
MAX	Maximum
MBR	Member
MC	Misc Channel
MECH	Mechanical
MED	Medium
MEZZ	Mezzanine
MFR	Manufacturer
MH	Manhole
MIN	Minimum
MISC	Miscellaneous
ML	Masonry Lintel
MO	Masonry Opening
MTL	Metal
N	Girder Joist Spaces
NIC	Not in Contract
NOM	Nominal
NTS	Not to Scale
OA	Overall
OAD	Overall Dimension
OC	On Center
OD	Outside Diameter
OF	Outside Face
OH	Opposite Hand
OH	Overhead
OPNG	Opening
OPP	Opposite
OSB	Oriented Strand Board
PAF	Powder Actuated Fastener
PC	Piece
PC	Precast
PCI	Pounds per Cubic Inch
PERIM	Perimeter
PL	Plate
PLBG	Plumbing
PLF	Pounds per Lineal Foot
PLK	Plank
PLYWD	Plywood
PNL	Panel
PR	Pair
PSF	Pounds per Sq Foot
PSI	Pounds per Sq Inch
PSL	Parallel Strand Lumber
PT	Pressure Treated
R	Riser, Radius
RAD	Radius
RD	Roof Drain
REINF	Reinforcing
REQ	Required, Requirement(s)
REV	Revision
RO	Rough Opening
RTU	Roof Top Unit
RW	Retaining Wall
S	Standard Beam
SCHED	Schedule
SD	Side
SDS	Self Drilling Screw
SECT	Section
SF	Square Feet
SHT	Sheet
SHTG	Sheathing
SI	Slotted Insert
SIM	Similar
SL	Slab
SL	Superimposed Load
SLH	Super Longspan Joist
SOG	Slab on Grade
SP	Spaces
SP	Special (for joists)
SPCL	Special
SPEC	Specification
SPF	Spruce, Pine, Fir
SQ	Square
SS	Stainless Steel
STD	Standard
STIF	Stiffener
STL	Steel
STRUCT	Structural
SUB	Substitute
SUSP	Suspended
T	Tread
T&B	Top and Bottom
T&G	Tongue and Groove
TB	Truss Bearing
TC	Top Chord
TCX	Top Chord Extension
TEMP	Temperature
THK	Thickened, Thick
TL	Total Load
TO	Top of
TOC	Top of Concrete
TOD	Top of Deck
TOF	Top of Footing
TO GB	Top of Grade Beam
TOM	Top of Masonry
TOP	Top of Panel
TOP	Top of Pier
TOPP	Topping
TOS	Top of Steel
TOSL	Top of Slab
TOW	Top of Wall
TRANS	Transverse
TYP	Typical
UL	Underwriters Lab
UNEXC	Unexcavated
UNO	Unless Noted Otherwise
UR	Urinal
V	Vertical
VERT	Vertical
VLD	Vertical Leg Down
VLU	Vertical Leg Up
W	Width, Wide
W	Wide Flange Beam
w/	with
w/o	without
WD	Wood
WHS	Welded Headed Stud
WP	Working Point
WT	Wide Flange Tee
WWM	Welded Wire Mesh

Symbols

ø	Diameter
d	Penny
#	Rebar Number
#	Pounds
±	Plus or Minus

SLAB ON GRADE NOTES

1. FINISHED FLOOR - EL 100'-0"
   (unless noted otherwise)
   FIN FLR IS FOR REFERENCE ONLY - SEE CIVIL DWGS FOR DATUM INFORMATION
2. SEE ARCHITECTURAL DRAWINGS FOR UNDER SLAB INSULATION REQUIREMENTS
3. SEE DETAIL 1/S504 FOR SLAB JOINT DETAILS.
4. STOOP SLABS
   5" SLAB w/ #3 @ 12" OC EACH WAY

FOOTING SCHEDULE

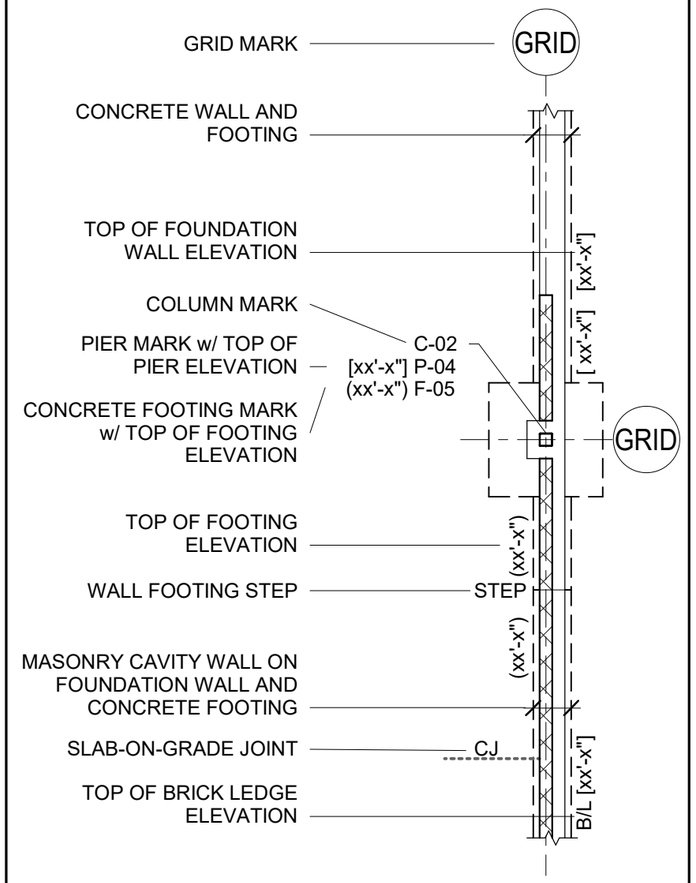
MARK	SIZE	REINFORCING EACH WAY

- SOIL CAPACITY = 1500 PSF (ASSUMED).

CONCRETE FOUNDATION NOTES

1. FINISHED FLOOR - EL 100'-0"
   (unless noted otherwise)
2. (xx'-x") INDICATES TOP OF FOOTING ELEVATION
   TOF - EL 94'-6"
   (unless noted otherwise)
3. [xx'-x"] INDICATES TOP OF FOUNDATION WALL ELEVATIONS.
   TOW - EL 100'-0"
   (unless noted otherwise)
4. WALL FOOTINGS
   EXTERIOR - 1'-6" x 12" NO REINF
   (unless noted otherwise)
   STOOPS - 1'-4" x 8" NO REINF
   (unless noted otherwise)
5. CONCRETE FOUNDATION WALL REINFORCING
   (2) #5 CONT TOP AND BOTTOM
   (unless noted otherwise)
6. SEE ARCH PLANS FOR LOCATION OF NON-BEARING WALLS.
7. COORDINATE ALL FLOOR DRAINS AND PITCHED SLABS WITH ARCHITECTURAL AND PLUMBING DRAWINGS.
8. SEE DETAIL 1/S501 AND 2/S501 FOR TYPICAL CONCRETE FOUNDATION DETAILS.
9. SEE DETAIL 1/S502 FOR TYPICAL PENETRATIONS THROUGH FOUNDATIONS.

FOUNDATION SYMBOL LEGEND



PLANS PREPARED BY: Designer			FOUNDATION NOTES & SCHEDULE		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S005	

WOOD LINTEL SCHEDULE

MARK	SIZE	SHOULDER / KING STUDS EA END	COMMENTS

- SEE SHEET --- FOR TYP LINTEL SECTIONS AND DETAILS

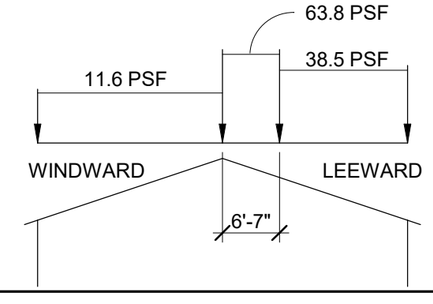
EXISTING CONDITIONS NOTE

1. ALL EXISTING CONDITIONS TO BE FIELD MEASURED AND FIELD VERIFIED PRIOR TO FABRICATION OR CONSTRUCTION. IN CASE OF DISCREPANCY BETWEEN PLANS & FIELD CONDITIONS NOTIFY ARCHITECT. DO NOT PROCEED UNTIL THE CONDITIONS ARE RESOLVED.
2. SEE ARCHITECTURAL DRAWINGS FOR DEMOLITION INFORMATION NOT SHOWN ON THIS DRAWING.
3. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN ON THIS DRAWING.
4. CONTRACTORS ARE RESPONSIBLE FOR CORRECT AND COMPLETE USE OF INFORMATION PROVIDED IN CONSTRUCTION DOCUMENTS. IN CASE OF MISSING INFORMATION OR DISCREPANCY NOTIFY ARCHITECT OR ENGINEER. DO NOT PROCEED UNTIL THE CONDITIONS ARE RESOLVED.

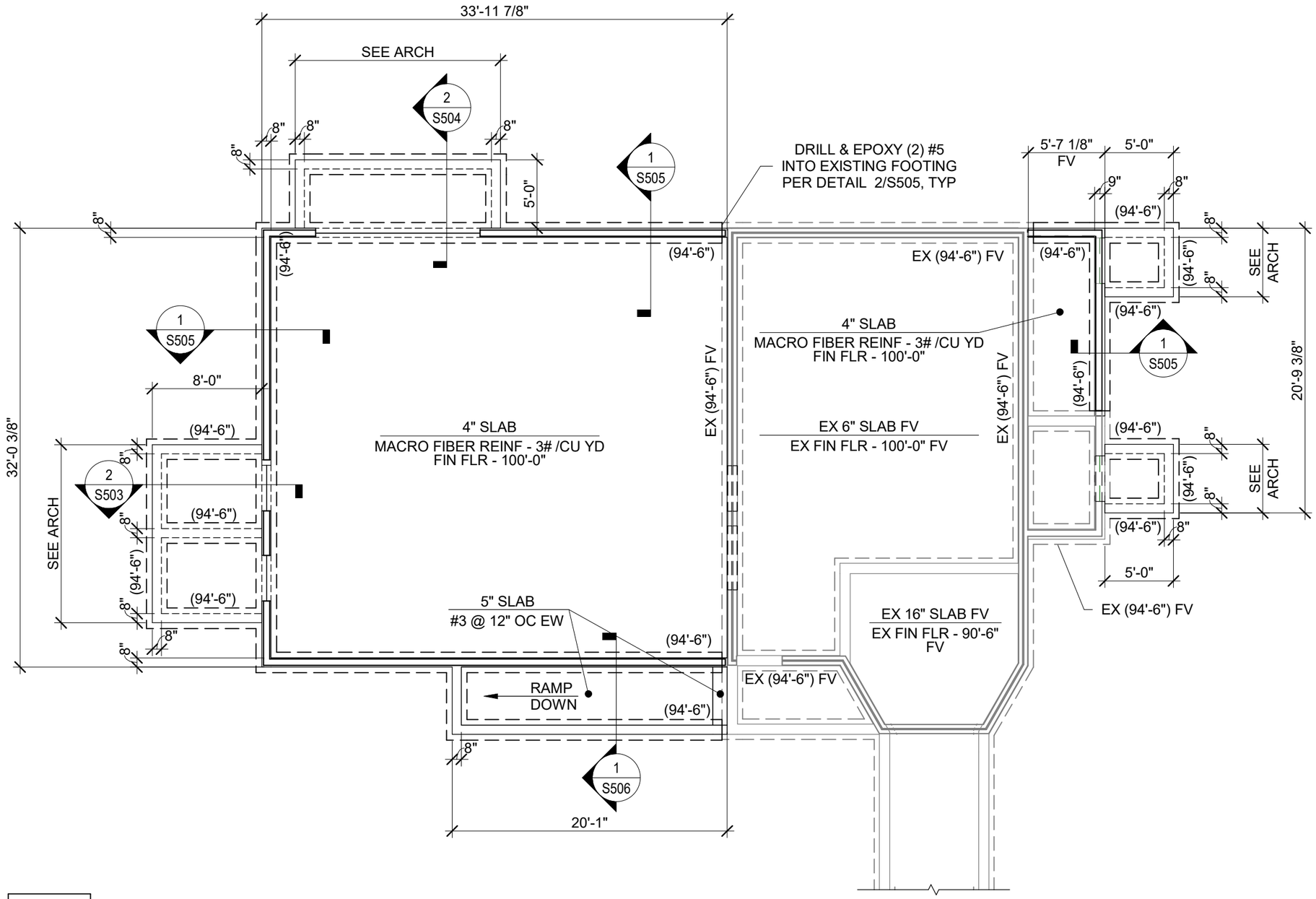
WOOD TRUSS FRAMING NOTES

1. ROOF SHEATHING: 5/8" PLYWOOD ROOF SHEATHING
2. ROOF SHEATHING NAILING:
   PANEL EDGE - 8d @ 6" OC
   PANEL INTERIOR - 8d @ 12" OC
   DIAPHRAGM BOUNDARY - 8d @ 6" OC
   SHEATHING EDGES TO BE UNBLOCKED
3. TB xxx'-x" INDICATES TRUSS BEARING ELEVATIONS
4. FRAME ALL HVAC ROOF OPENINGS w/ 2x4
5. TRUSSES SHALL BE DESIGNED FOR THE LOADS INDICATED IN GENERAL NOTE 1.1.3 AND ANY ADDITIONAL LOADS, INCLUDING DRIFTING SNOW LOADS, SHOWN ON THIS PLAN.
6. TEMPORARY TRUSS BRACING: SHALL BE PROVIDED BY THE GENERAL CONTRACTOR TO RESIST WIND AND ERECTION LOADS, UNTIL PERMANENT BRACING IS INSTALLED.
7. TEMPORARY BRACING: SHALL BE SELECTED BY OTHERS BUT SHALL NOT BE LESS THAN 2x4 @ 6'-0" OC AT TOP CHORDS, 8'-0" OC AT BOTTOM CHORDS AND 20'-0" OC AT WEB MEMBERS.
8. IN ADDITION TO ROOF SHEATHING AND OTHER PERMANENT BRACING AS INDICATED ON DRAWINGS, PROVIDE HORIZONTAL/DIAGONAL WEB MEMBER BRACING AS SPECIFIED BY THE TRUSS DESIGNER.
9. TRUSSES SUPPORTING PIGGYBACK TRUSSES OR OTHER OVER FRAMING SHALL HAVE THE TOP CHORDS BRACED WITH 2x4 @ 24" o/c UNO. PROVIDE ADDITIONAL TOP CHORD BRACING AS SPECIFIED BY THE TRUSS DESIGNER. CONNECT BRACING TO THE ROOF SHEATHING OR END WALLS.
10. ROOF TRUSS DESIGN LOADS

TOP CHORD DL	10 PSF
BOTTOM CHORD DL	10 PSF
BALANCED SNOW LOAD	38.5 PSF
UNBALANCED SNOW LOAD	



PLANS PREPARED BY: Designer			FRAMING NOTES		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S006	

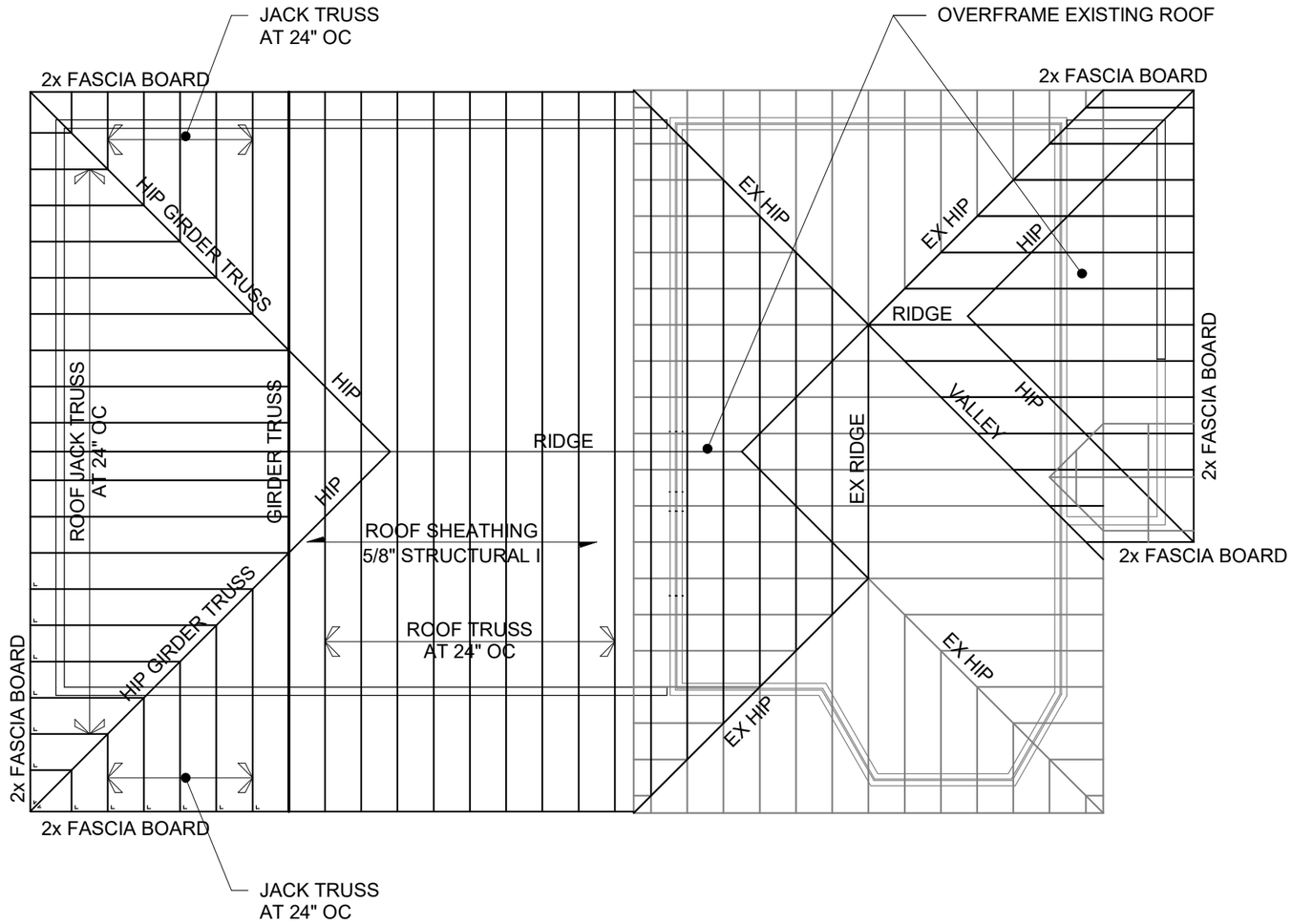


1 FOUNDATION PLAN

S101

SCALE: 1/8" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 020-317)			FOUNDATION PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S101	

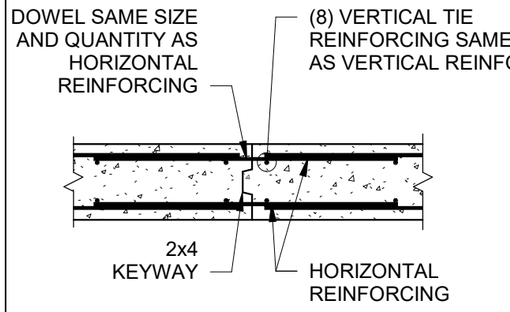


1 Roof Framing Plan

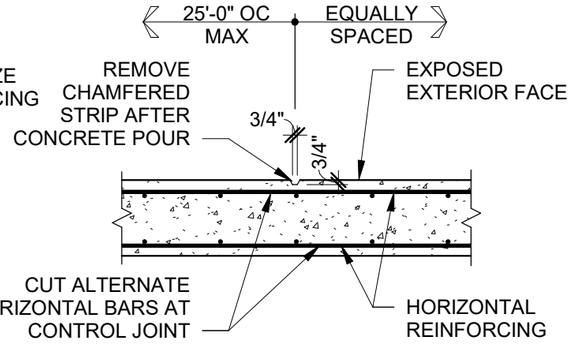
S102

SCALE: 1/8" = 1'-0"

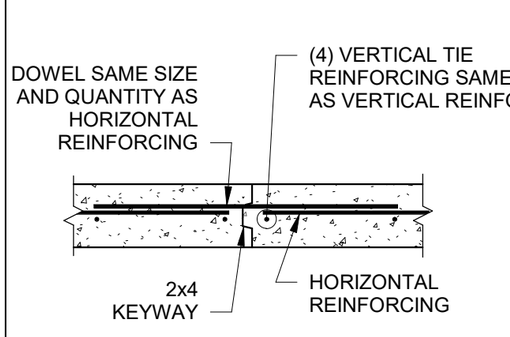
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 020-317)			ROOF FRAMING PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S102	



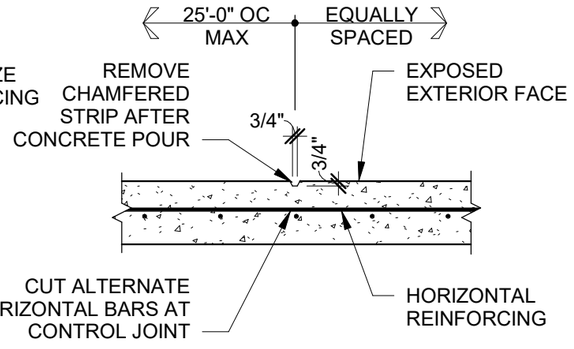
TYPICAL VERTICAL CONSTRUCTION JOINT - DOUBLE LAYER — D



TYPICAL VERTICAL CONTROL JOINT - DOUBLE LAYER — C



TYPICAL VERTICAL CONSTRUCTION JOINT - SINGLE LAYER — B

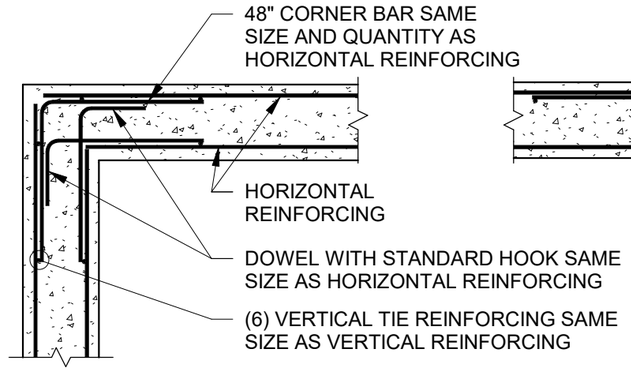


TYPICAL VERTICAL CONTROL JOINT - SINGLE LAYER — A

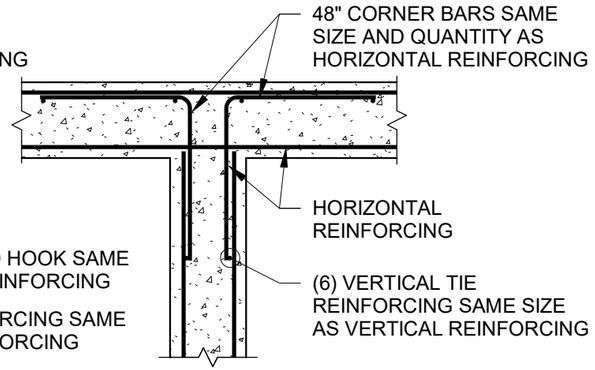
2 TYPICAL CONCRETE WALL JOINTS

S501

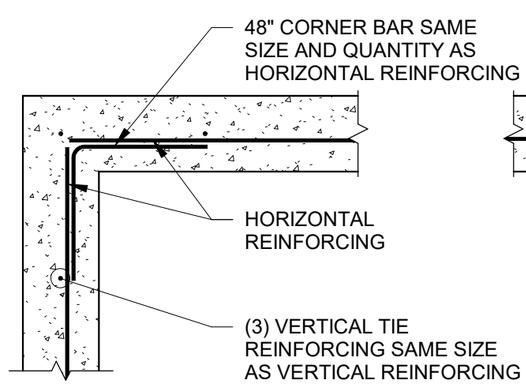
SCALE: 1/2" = 1'-0"



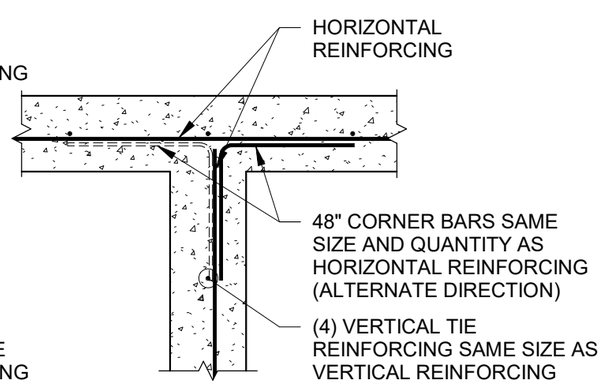
TYPICAL CORNER REINFORCING - DOUBLE LAYER — D



TYPICAL TEE INTERSECTION REINFORCING - DOUBLE LAYER — C



TYPICAL CORNER REINFORCING - SINGLE LAYER — B



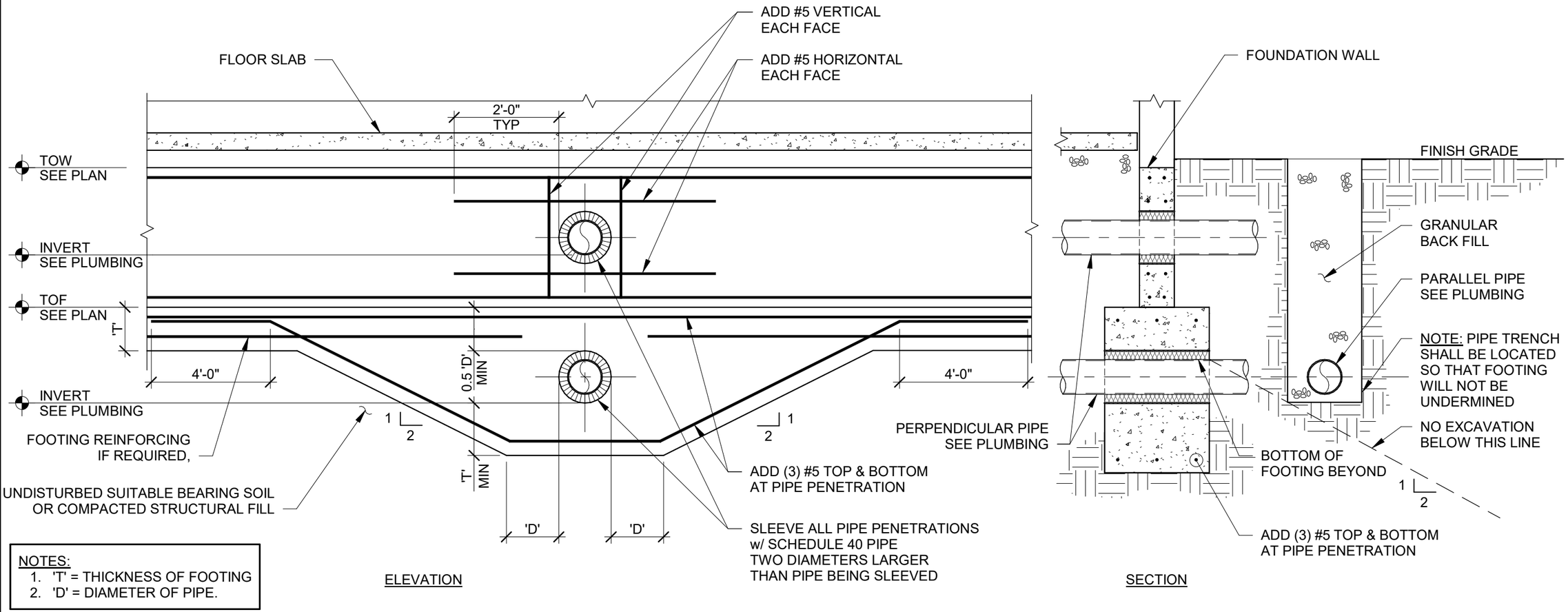
TYPICAL TEE INTERSECTION REINFORCING - SINGLE LAYER — A

1 TYPICAL CONCRETE FOUNDATION WALL REINFORCING

S501

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 020-317)			FOUNDATION SECTIONS & DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S501	200



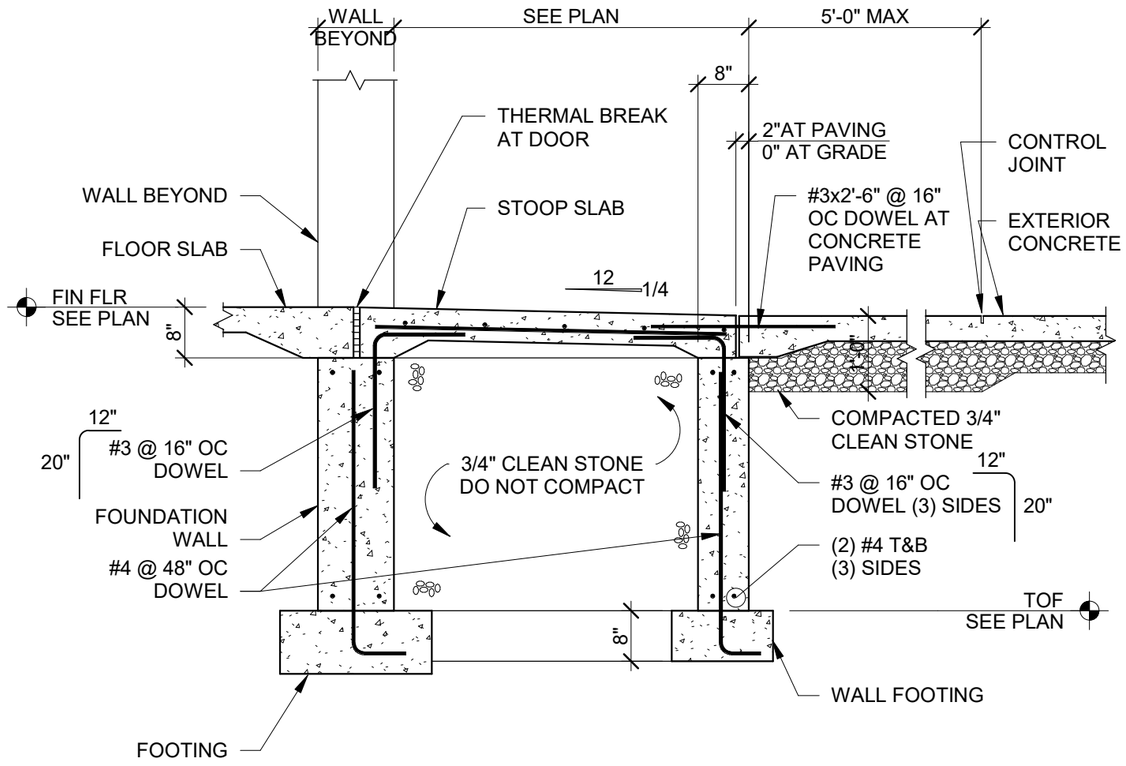
NOTES:
1. 'T' = THICKNESS OF FOOTING
2. 'D' = DIAMETER OF PIPE.

1 TYPICAL PENETRATION THROUGH CONCRETE WALL AND FOOTING

S502

SCALE: 1/2" = 1'-0"

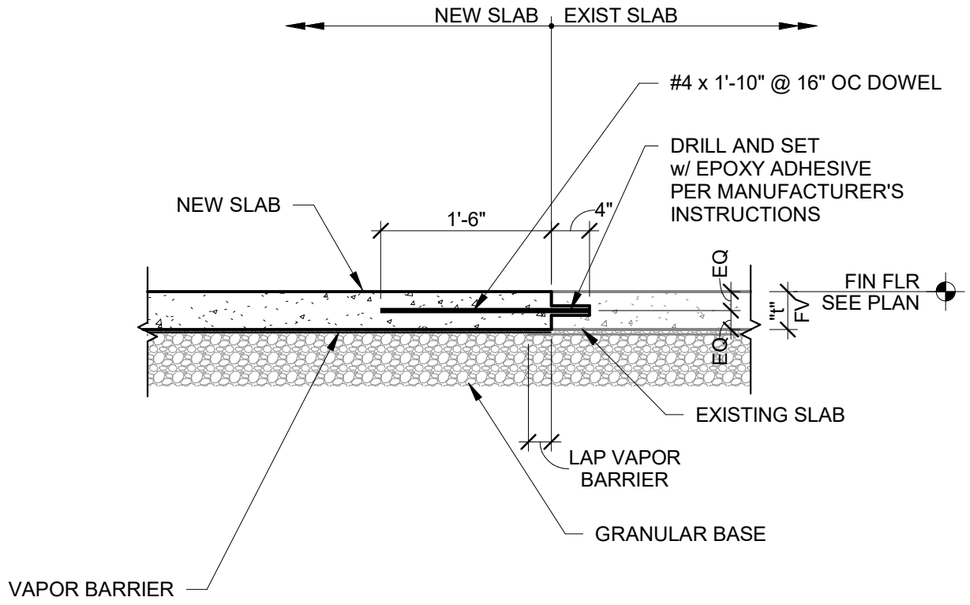
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 020-317)			FOUNDATION SECTIONS & DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S502	201



2 TYPICAL STOOP SLAB AT DOOR

S503

SCALE: 1/2" = 1'-0"

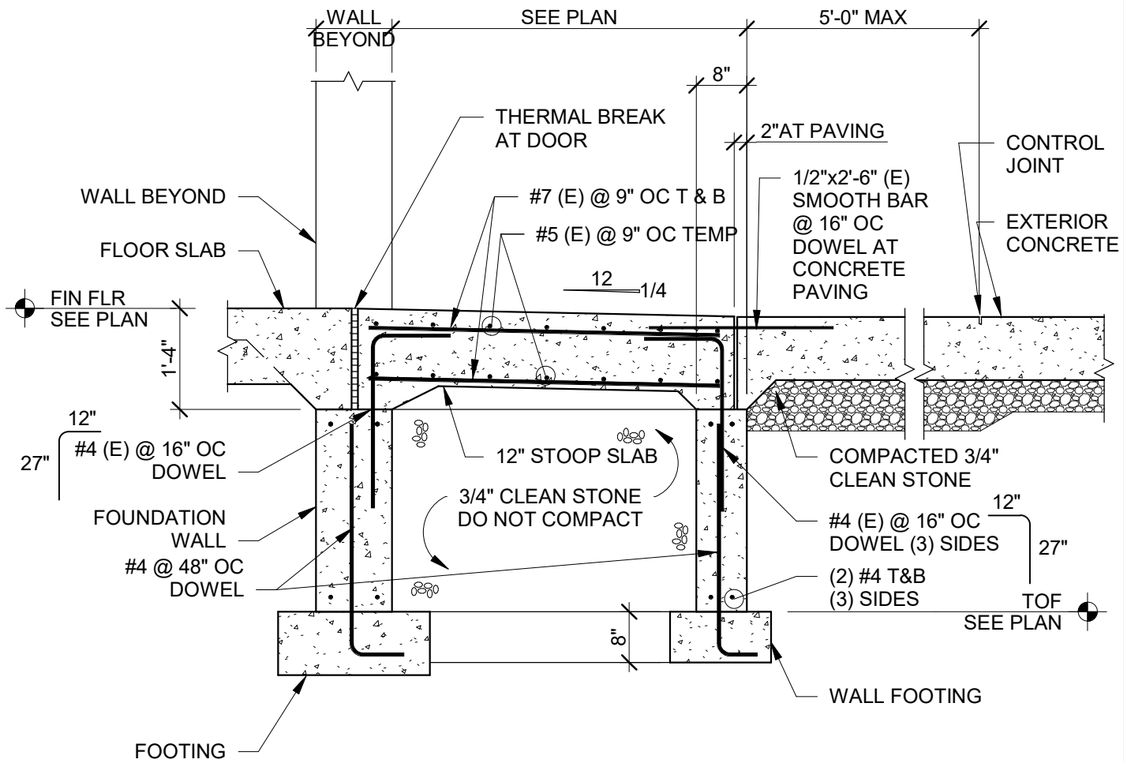


1 TYPICAL NEW TO EXISTING SLAB JOINT

S503

SCALE: 3/4" = 1'-0"

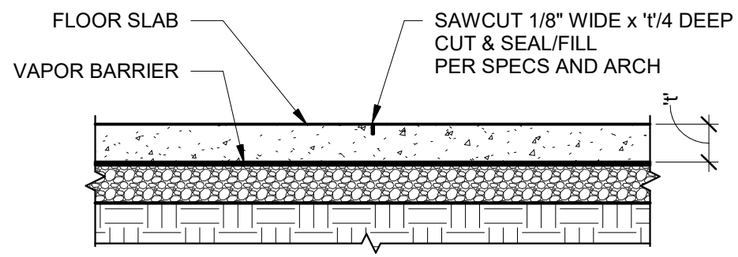
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 020-317)			FOUNDATION SECTIONS & DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S503	

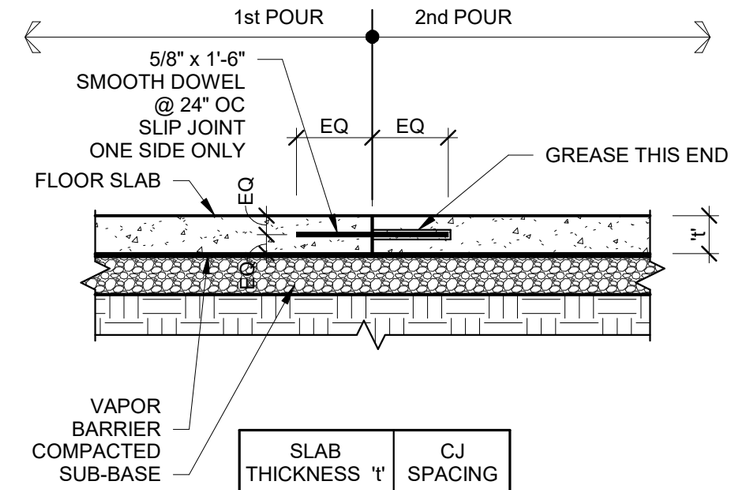


2 TYPICAL APRON SLAB AT DOOR

S504

SCALE: 1/2" = 1'-0"





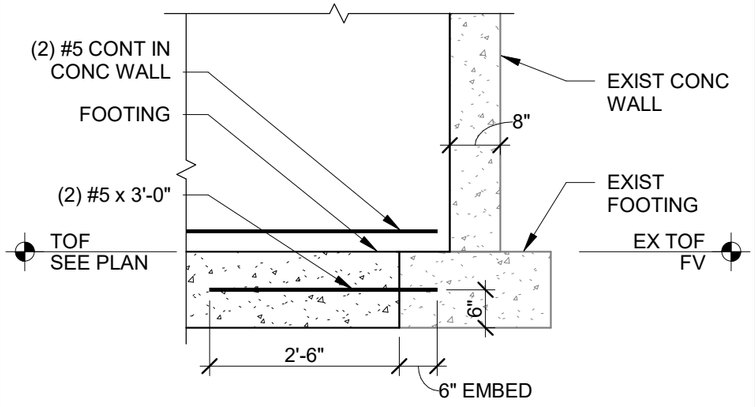
SLAB THICKNESS 't'	CJ SPACING
4"	12'-0" MAX
5"	13'-0" MAX
7"	18'-0" MAX
12"	25'-0" MAX

1 TYPICAL SLAB JOINTS

S504

SCALE: 3/4" = 1'-0"

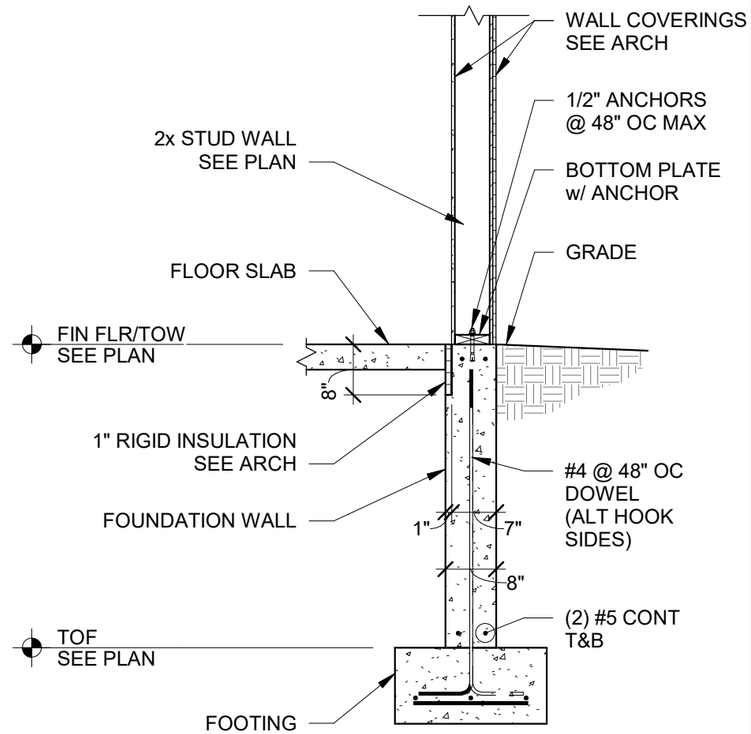
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 020-317)			FOUNDATION SECTIONS & DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S504	



2 S505

FOUNDATION SECTION

SCALE: 1/2" = 1'-0"

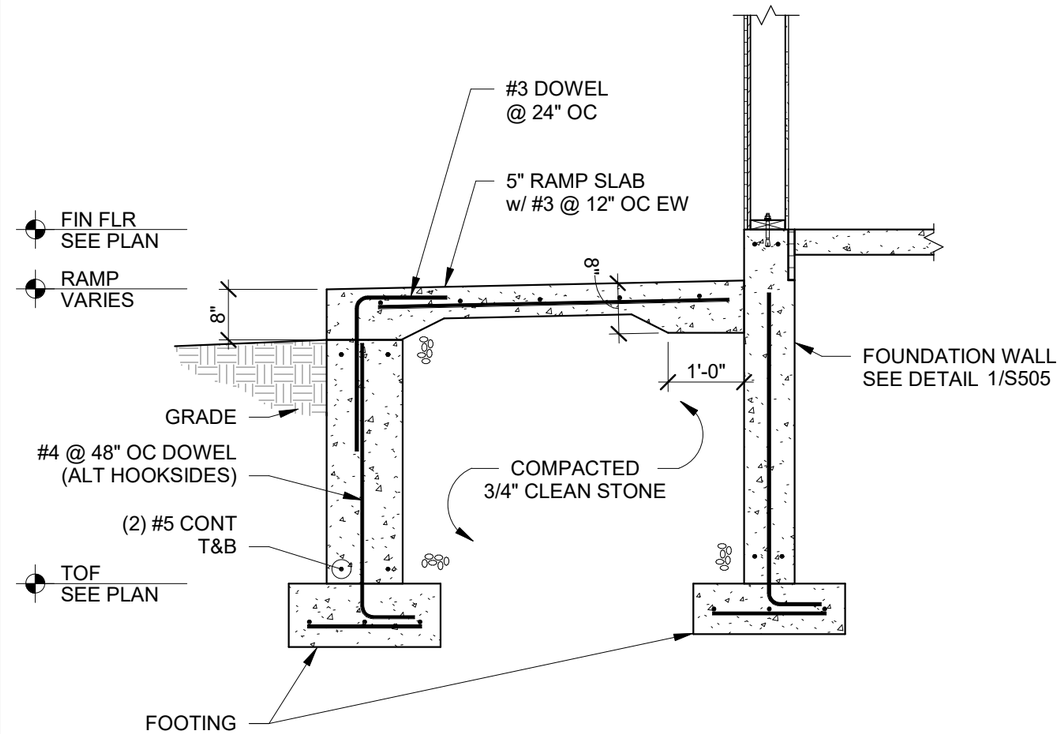


1 S505

FOUNDATION SECTION

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: Designer			FOUNDATION SECTIONS & DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S505	204



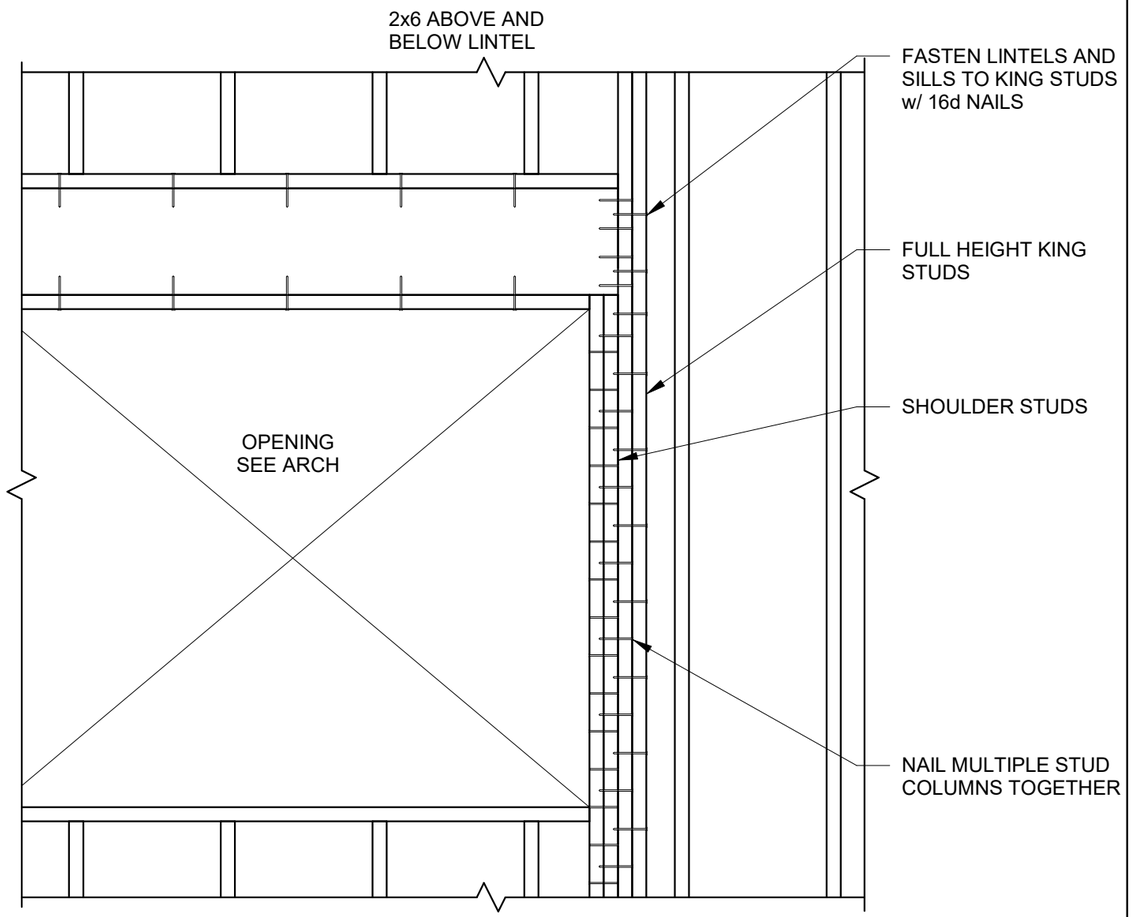
1

S506

RAMP SECTION

SCALE: 1/2" = 1'-0"

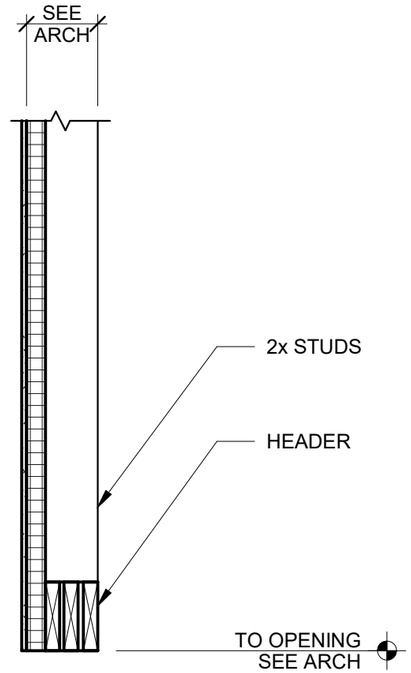
PLANS PREPARED BY: Designer			FOUNDATION SECTIONS & DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S506	205



2 TYP WOOD LINTEL ELEVATION

S507

SCALE: 3/4" = 1'-0"

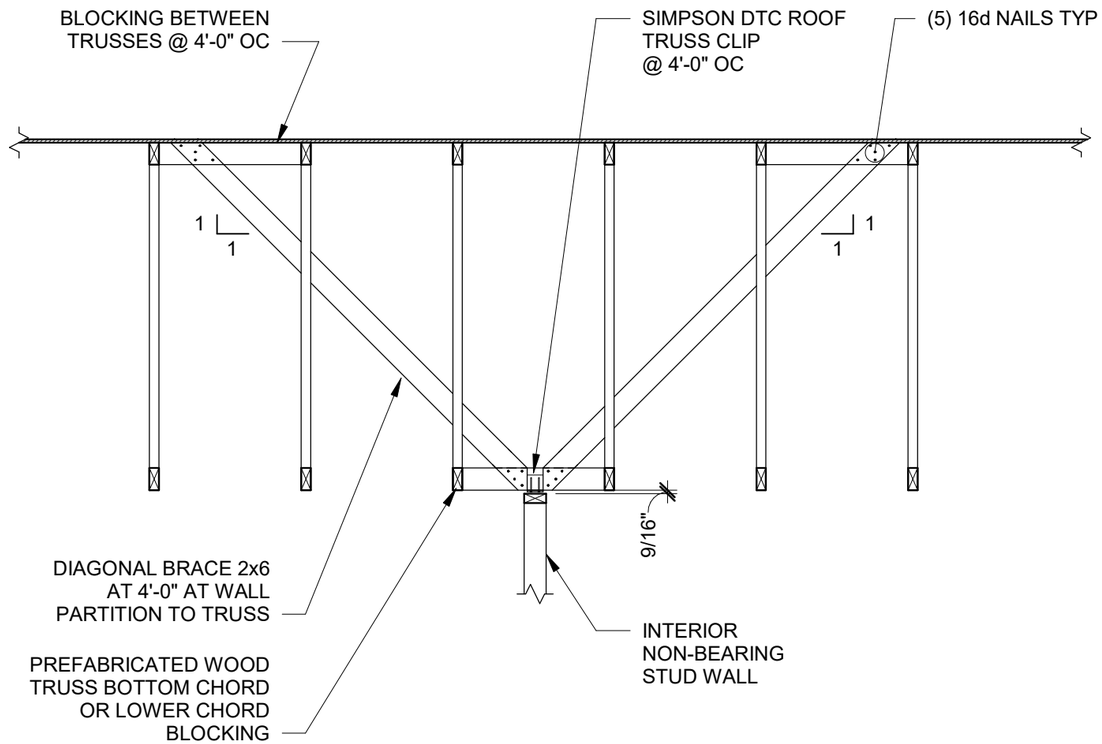


1 LINTEL TYPE H

S507

SCALE: 3/4" = 1'-0"

PLANS PREPARED BY: Designer			FRAMING SECTIONS & DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S507	206

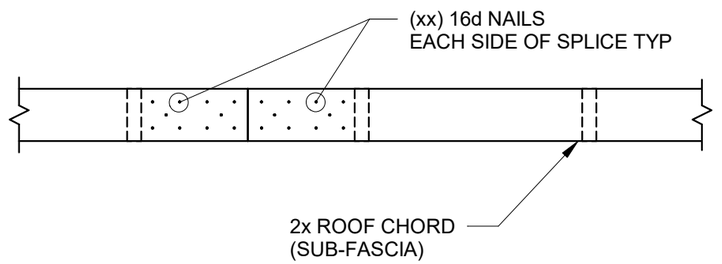


2 NON-BEARING WALL TO TRUSS BOTTOM CHORD

S508

SCALE: 1/2" = 1'-0"

PLAN VIEW



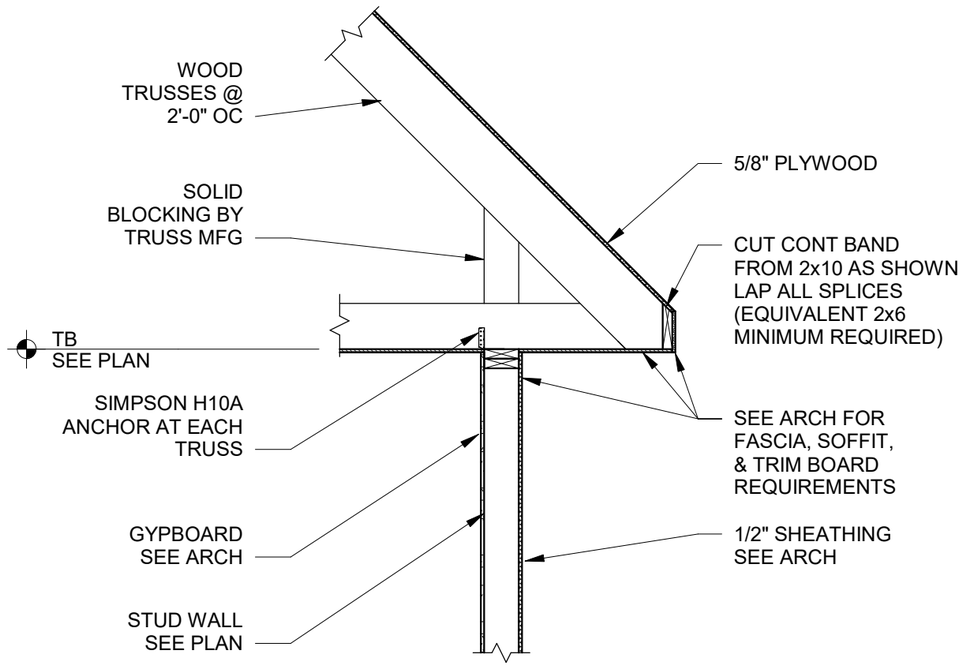
ELEVATION

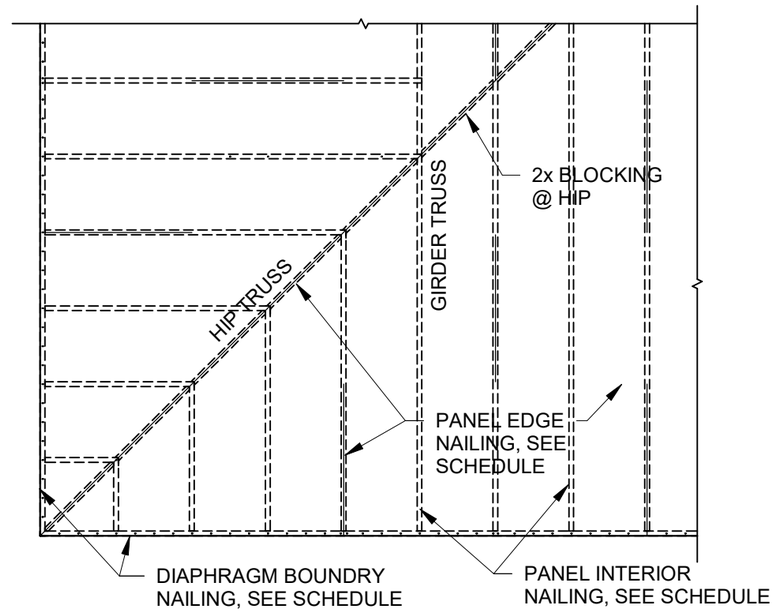
1 ROOF CHORD SPLICE - NAILED

S508

SCALE: 3/4" = 1'-0"

PLANS PREPARED BY: Designer			FRAMING SECTIONS & DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S508	





PLAN VIEW:
FLAT OR GABLE END ROOF
AND FLOOR SHEATHING
ORIENTATION / NAILING

2 S509 — ROOF SECTION AT EAVE
SCALE: 1/2" = 1'-0"

1 S509 — HIP ROOF BLOCKED DIAPHRAGM NAILING
SCALE: 1/4" = 1'-0"

PLANS PREPARED BY: Designer			FRAMING SECTIONS & DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-06	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: S509	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
MENOMONIE SAFETY AND WEIGHT FACILITY #63
I.H. 94
DUNN COUNTY

DRAWING LIST

P000 PLUMBING COVER SHEET
P001 PLUMBING SYMBOLS AND SERVICE CALCULATIONS
P002 WATER SIZING CALCULATIONS
PD001 DEMOLITION PLAN VIEWS
P100 UNDERFLOOR/CRAWL SPACE FLOOR PLAN
P101 FLOOR PLAN - NEW WORK - DRAIN & VENT
P102 ROOF PLAN - NEW WORK
P200 FLOOR PLAN - NEW WORK - WATER DISTRIBUTION
P300 WASTE AND VENT ISOMETRIC
P301 DOMESTIC WATER ISOMETRIC
P400 PLUMBING DETAILS
P500 PLUMBING SCHEDULES
P501 PLUMBING SCHEDULES
P502 PLUMBING SCHEDULES
P503 WATER FILTRATION SYSTEM

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			PLUMBING COVERSHEET		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P000	

Wisconsin Domestic Water Service Calculations - TOTAL FOR BUILDING

NO. OF FIXTURES	FIXTURE DESCRIPTION	WATER SUPPLY FIXTURES UNITS (WFSU) HOT PER FIXTURE	TOTAL HOT	COLD PER FIXTURE	TOTAL COLD	COMMON PER FIXTURE	COMMON TOTAL	REMARKS
PUBLIC FIXTURES								
	Automatic Clothes Washer, Individual	1		1		1.5		
	Automatic Clothes Washer, Large Capacity							
	Bathtub, With or Without Shower Head	2.0		2.0		3.0		
	Coffeemaker			0.5		0.5		
	Dishwasher, Commercial							
	Drink Dispenser			0.5		0.5		
1	Drinking Fountain			0.25	0.3	0.25	0.3	
	Glass Filler			0.5		0.5		
	Hose Bibb:							
	1/2" diameter			3.0		3.0		
3	3/4" diameter			4.0	12.0	4.0	12.0	
	Icemaker			0.5		0.5		
2	Lavoratory	0.5	1.0	0.5	1.0	1.0	2.0	
	Shower, Per Head	2.0		2.0		3.0		
	Sinks:							
1	Bar and Fountain	1.5	1.5	1.5	1.5	2.0	2.0	
	Barber and Shampoo	1.5		1.5		2.0		
	Cup			0.5		0.5		
	Flushing Rim			7.0		7		
	Kitchen and Food Preparation per Faucet	2.0		2.0		3.0		
	Laboratory	1.0		1.0		1.5		
	Medical Exam and Treatment	1.0		1.0		1.5		
1	Service	2.0	2.0	2.0	2.0	3.0	3.0	
	Surgeon Washup							
	Urinal:							
	Syphon Jet			4.0		4.0		
1	Washdown			2.0	2.0	2.0	2.0	
	Wall Hydrant, Hot and Cold Mix:							
	1/2" diameter	2.0		2.0		3.0		
	3/4" diameter	3.0		3.0		4.0		
	Wash Fountain:							
	Semicircular	1.5		1.5		2.0		
	Circular							
	Water Closet:							
	Flushometer			7.0		7.0		
2	Gravity Type Flush Tank			3.0	6.0	3.0	6.0	
1	Laundry Tub	1.5	1.5	1.5	1.5	2	2.0	
PUBLIC TOTALS			**6.0**		**26.3**		**29.3**	
Grand Totals			**6.0**		**26.3**		**29.3**	

REMARKS:

Peak Water Usage:
6.0 WSFU Hot (predominantly flush tank) = 4.5 GPM
26.3 WSFU Cold (predominantly flush tank) = 17.6 GPM
29.3 WSFU Total (predominantly flush tank) = 19.4 GPM

GENERAL PIPING

- DIRECTION OF FLOW / PIPE DESIGNATION
- R — PIPE PITCH,RISE(R) DROP(D)
- PIPE CONNECTION
- PIPE TURNED UP
- PIPE TURNED DOWN
- OFF TOP OF PIPE
- OFF BOTTOM OF PIPE
- REDUCER (ECCENTRIC)
- PRESSURE GAUGE
- CONNECT TO EXISTING
- REDUCER (CONC.)
- CAP
- BLIND FLANGE
- FLANGE
- COUPLING
- BUSHING
- UNION
- STRAINER
- INLINE PUMP
- THERMOMETER

PLUMBING

- W — CITY WATER ON SITE PLAN
- CW — COLD WATER
- HCW — HARD COLD WATER
- HWR — HOT WATER RETURN
- SCW — SOFT COLD WATER
- SHW — SOFT HOT WATER
- TW — TEMPERED WATER
- TWR — TEMPERED WATER RETURN
- 180 — 180 DEG. WATER

PLUMBING (cont.)

- AW — ACID WASTE
- AV — ACID VENT
- CLEANOUT,FLOOR(FCO) WALL(WCO)
- FD — FLOOR DRAIN
- HD — HUB DRAIN
- WATER HAMMER SUPPRESS.
- WH — WALL HYDRANT FREEZE–PROOF (FWH)
- SAN — SANITARY BELOW GRADE
- SAN — SANITARY ABOVE GRADE
- S — STORM BELOW GRADE
- S — STORM ABOVE GRADE
- RC — RAIN CONDUCTOR
- OD — OVERFLOW DRAIN
- V — VENT
- D — DRAIN
- VTR — VENT THRU ROOF
- A — COMPRESSED AIR
- NG — NATURAL GAS
- 1/4"/FT — PIPE PITCH
- RD — ROOF DRAIN

VALVES

- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- CHECK VALVE,SWING(S) LIFT(L),BALL(B)
- BALANCING VALVE
- GENERAL,NON–DESIGNATED
- PRESSURE REDUCING VALVE
- S — SAFETY(S),RELIEF(R)
- HOSE BIBB DRAIN
- REDUCED PRESSURE ZONE BACKFLOW PREVENTER

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			PLUMBING SYMBOLS AND SERVICE CALCULATIONS	DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P001

Water Calc. Worksheet MENOMONIE SAFETY AND WEIGHT FACILITY #63
Name of Project

INFORMATION REQUIRED TO SIZE WATER SERVICE AND WATER DISTRIBUTION:

1-	Demand of building in water supply fixture units (WSFU);	(WSFU)	29.3
1.a.	Demand of building in WSFU converted to Gallons Per Minute: (Table 82.40-3)	(GPM)	19.4
2-	Elevation difference from main or external pressure tank to building control valve; (feet)		
3-	Size of water meter (when required) 5/8"____ 3/4" ____ 1" ____ other ____		
4-	Developed length from main or external pressure tank to building control valve;	(feet)	
5-	Low pressure at main in street or external pressure tank.	(psi)	50

CALCULATE WATER SERVICE PRESSURE LOSS
(unnecessary for internal pressure tanks)

6- Low pressure at main in street or external pressure tank. (value of # 5 above) 50

7- Determine pressure loss due to friction in _____ inch diameter water service.
Water service piping material is _____
Pressure loss per 100 ft. = _____ X _____ (decimal equivalent of
service length, i.e. 65 ft = 0.65) **Subtract value of "7"** 0
Subtotal 50

8- Determine pressure loss or gain due to elevation, (multiply the value of # 2 above by .434) **Subtract value of "8"** 0
Subtotal 50

9- Available pressure after the bldg. control valve.

CALCULATE THE PRESSURE AVAILABLE FOR UNIFORM LOSS (VALUE OF "A")

B. Available pressure after the bldg. control valve. (from "9" above) Value of "B" 50

C. Pressure loss of water meter (when meter is required) **Subtract value of "C"** 0.0
Subtotal 50

D. Pressure at controlling fixture*.
(Controlling fixture is: Urinal). **Subtract value of "D"** 15
(*Contolling fixture is the fixture with the most demanding pressure to operate properly which includes the following when determining fixture performance; loss due to instantaneous water heaters, water treatment devices, and backflow preventers which serve the controlling fixture.) Subtotal 35

E. Difference in elevation between building control valve
and the controlling fixture in feet; 4 X .434 psi/ft. **Subtract value of "E"** 1.736
Subtotal 33.264

SBD -6479 (R4/09) (page 1 of 2)

Water Calc Worksheet MENOMONIE SAFETY AND WEIGHT FACILITY #63
Name of Project

F. Pressure loss due to water treatment devices and backflow preventers which serve the controlling fixture. (Water softeners, filters, etc.)

(Pressure loss due to; Water softener).

F1. WSFU Downstream of Water Treatment Device; 29.3

F2. Convert wsfu to GPM using **Table 82.40-3**: 19.4
or
F3. Convert wsfu to GPM using **Table 82.40-3e*** _____
(For individual dwellings only)

F4. Refer to manuf. graph to obtain pressure loss: 25
(If no water treatment device enter "0")
Subtract value of F4 25
Subtotal 8.264

G. Pressure loss through tankless water heaters, combination boiler / hot water heaters, heat exchangers which serve the controlling fixture;

Hot water WSFU's; _____ convert to; GPM = _____ (Table 82.40-3)
Refer to manufacturer's pressure loss graph to determine loss at the required GPM;
_____ pressure loss. **Subtract value of "G"** 0
Subtotal 8.264

H. Developed length from building control valve to controlling fixture in feet 41.5 X 1.5 **Divide by value "H"** 62.25
Subtotal 0.1328
Multiply by: 100

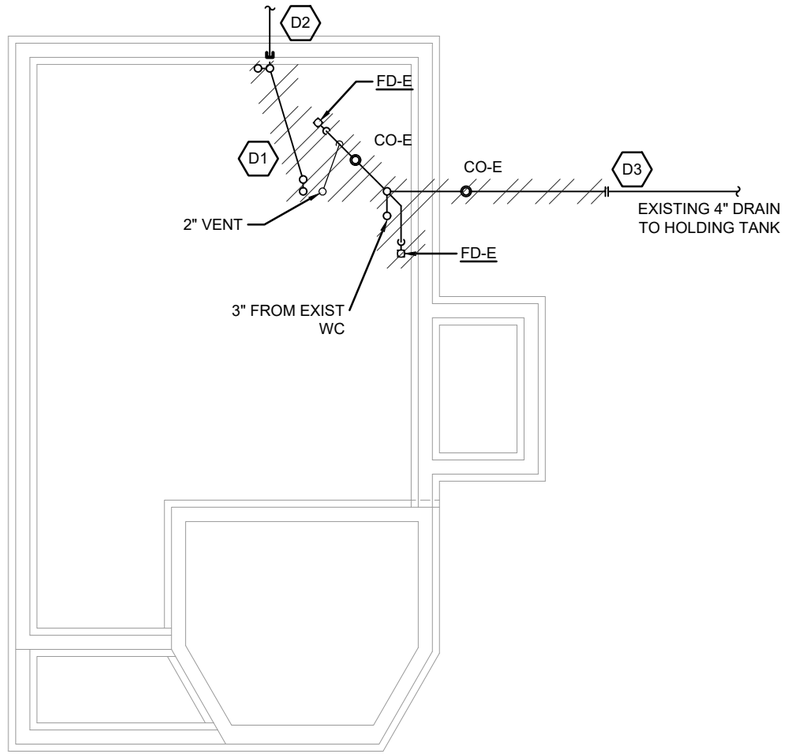
A. Pressure available for uniform loss **"A" =** 13.28

Water distribution piping is: PEX Tubing

*Note: The "A" value obtained by using Table 82.40-3e can only be used for an individual dwelling when sizing the water treatment device (water softeners, etc) and no hose bibbs, hydrants, or high flow fixtures are being served by the water treatment device.

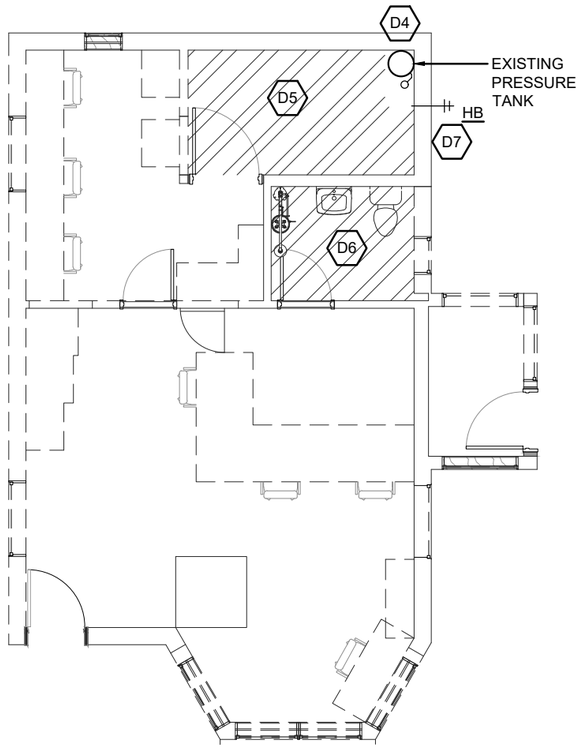
Note: High flow fixtures are defined as fixtures that exceed a flow rate of 4 gpm @ 80 psi, and water velocity not exceeding 8 ft. per second.

SBD -6479 (R4/09) (page 2 of 2)



1 CRAWL SPACE – DEMOLITION
1/8" = 1'–0"

NORTH



2 1ST FLOOR PLAN – DEMOLITION
1/8" = 1'–0"

NORTH

SCALE: 1/8" = 1'-0"

0 8' 16' 32'

"KEYED" DEMOLITION NOTES:

D1 Remove waste, vent and condensate piping in the crawl space as indicated, including insulation, hangers, supports, etc. and discard.

D2 Cap condensate piping as close to wall as possible.

D3 Remove drain piping to holding tank to be outside of new foundation with room for new 4" C.O. in frost sleeve.

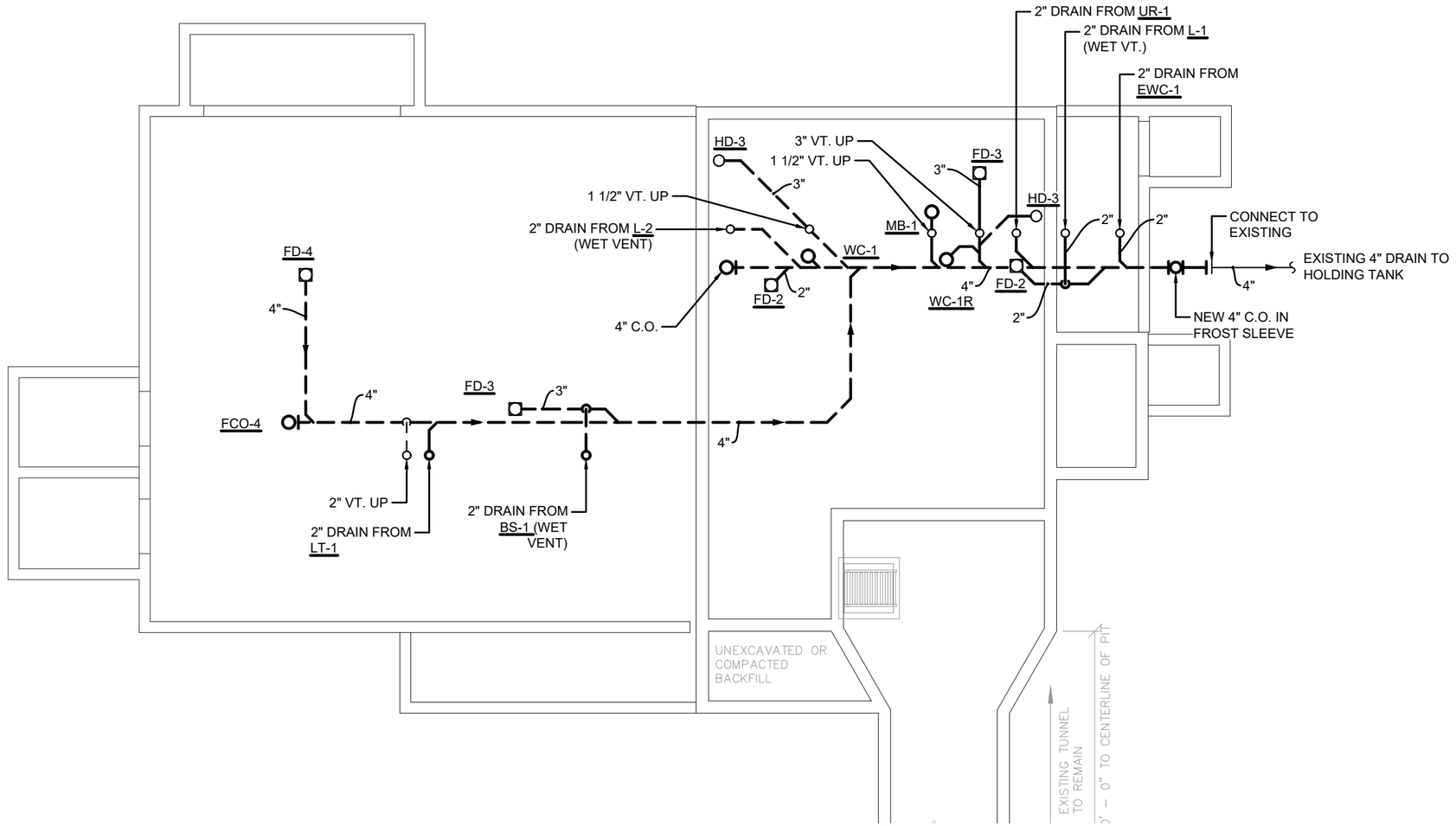
D4 Existing pressure tank to remain. Disconnect CW piping just pass the isolation valve to pressure tank.

D5 Remove water softener, water heater, condensate, waste, vent and domestic water in this area, including insulation, hangers, supports, etc. and discard.

D6 Remove water closet, lavatory, emergency shower/eye wash, waste, vent and domestic water in this area, including insulation, hangers, supports, etc. and discard.

D7 Hose bib and associated piping to be removed and discarded.

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			DEMOLITION PLAN VIEWS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: PD001	212

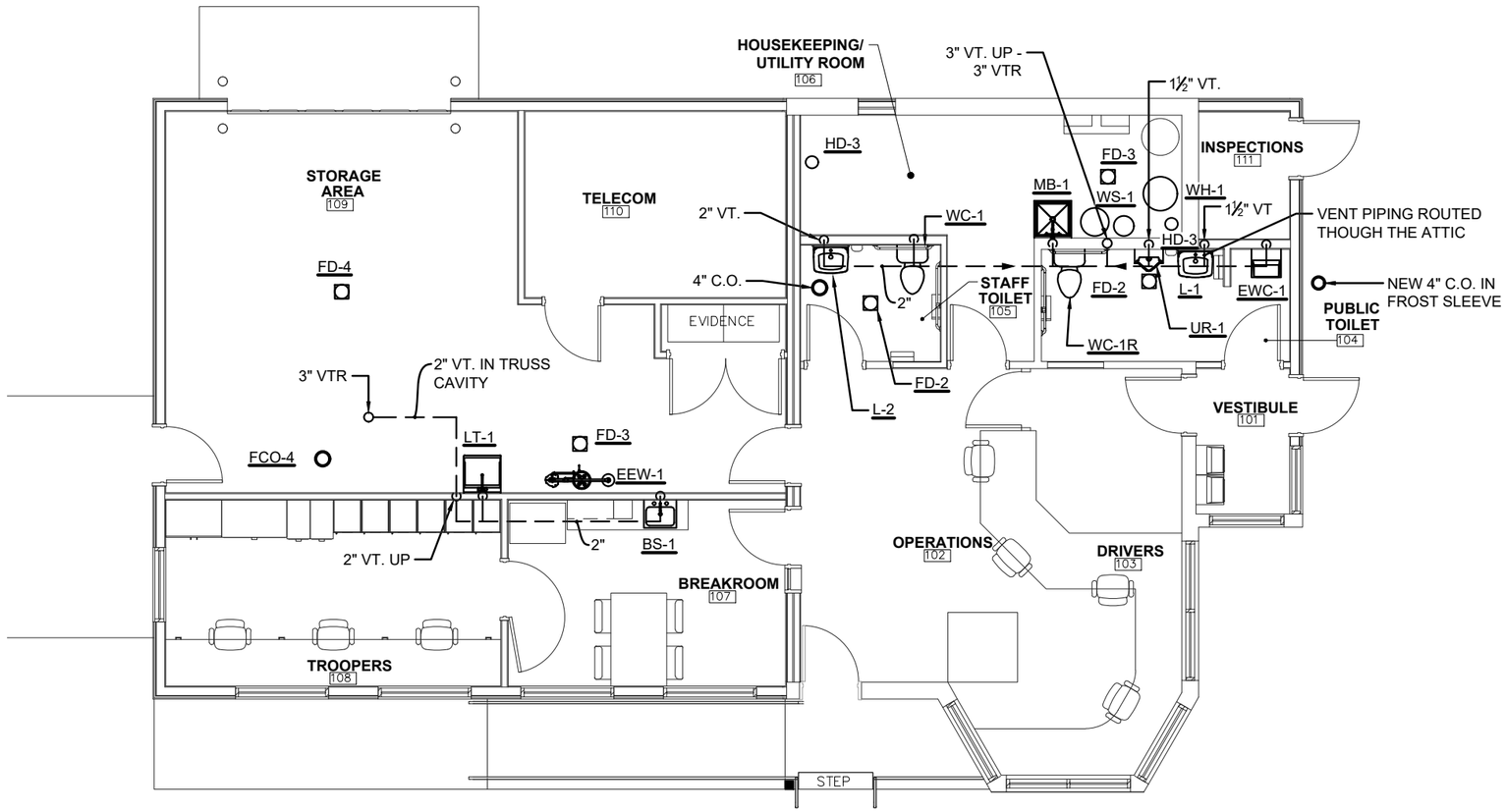


1 UNDERFLOOR/CRAWL SPACE FLOOR PLAN
1/8" = 1'-0"

SCALE: 1/8" = 1'-0"

0 8' 16' 32'

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			UNDERFLOOR/CRAWL SPACE FLOOR PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P100	213



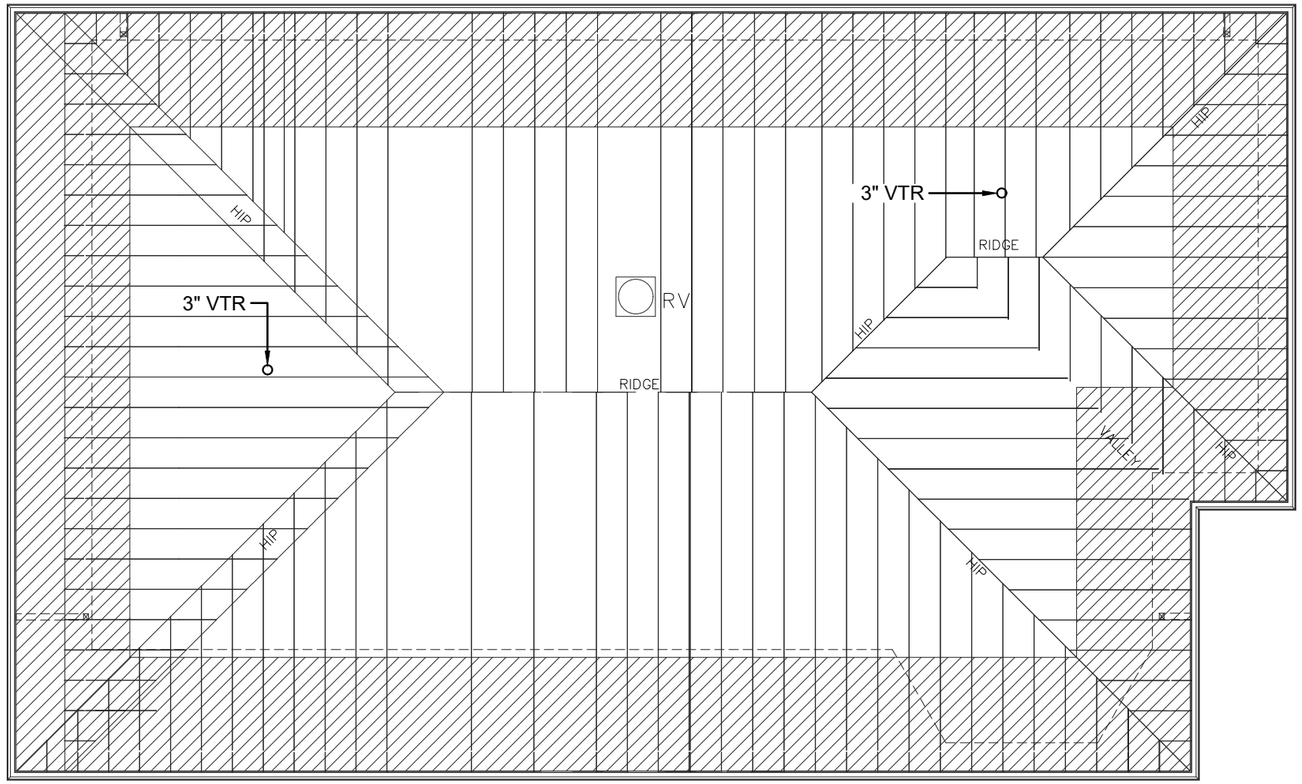
NORTH

1 FIRST FLOOR PLAN – DRAIN & VENT
1/8" = 1'–0"

SCALE: 1/8" = 1'-0"

0 8' 16' 32'

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			FLOOR PLAN – NEW WORK – DRAIN & VENT		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P101	214



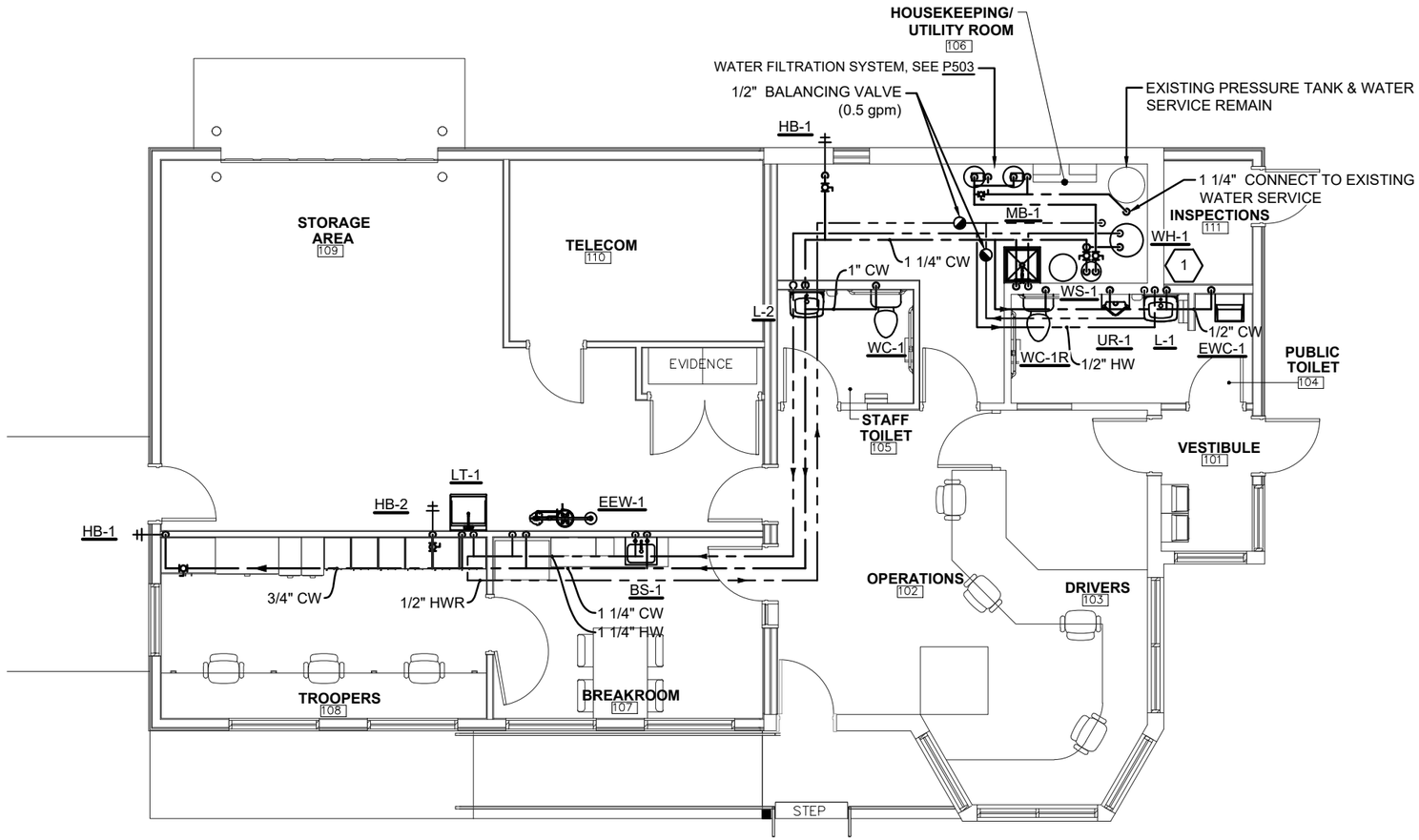
NORTH

1 ROOF PLAN
1/8" = 1'-0"

SCALE: 1/8" = 1'-0"

0 8' 16' 32'

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			ROOF PLAN – NEW WORK		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P102	



"KEYED" NEW CONSTRUCTION - PIPING PLAN NOTES:

1 Vent the water heater through the existing wall openings from the removed furnace. Vent and combustion air piping to meet the water heater manufacturer's specifications.

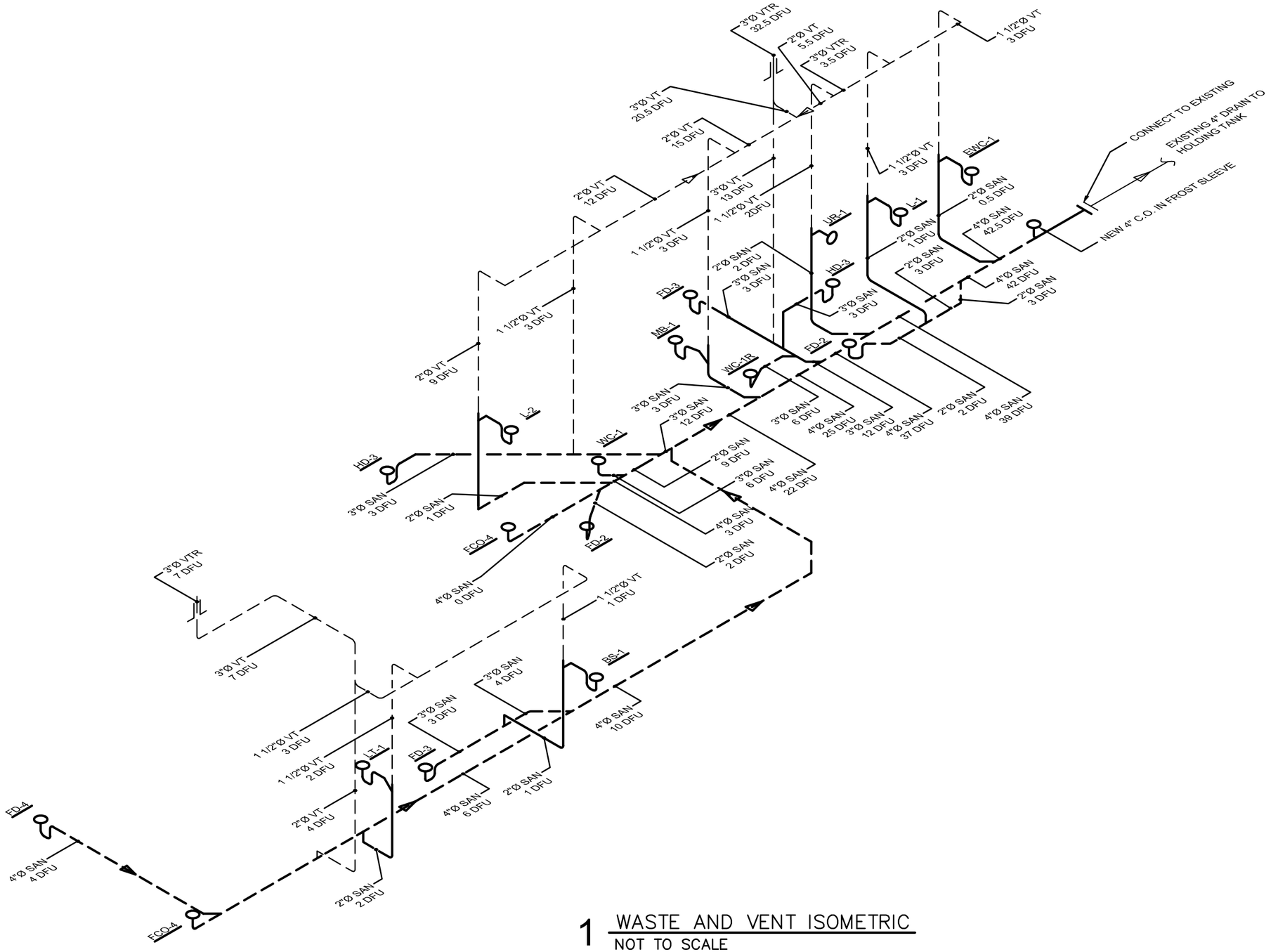
1 FIRST FLOOR PLAN – WATER DISTRIBUTION
1/8" = 1'-0"

NORTH

SCALE: 1/8" = 1'-0"

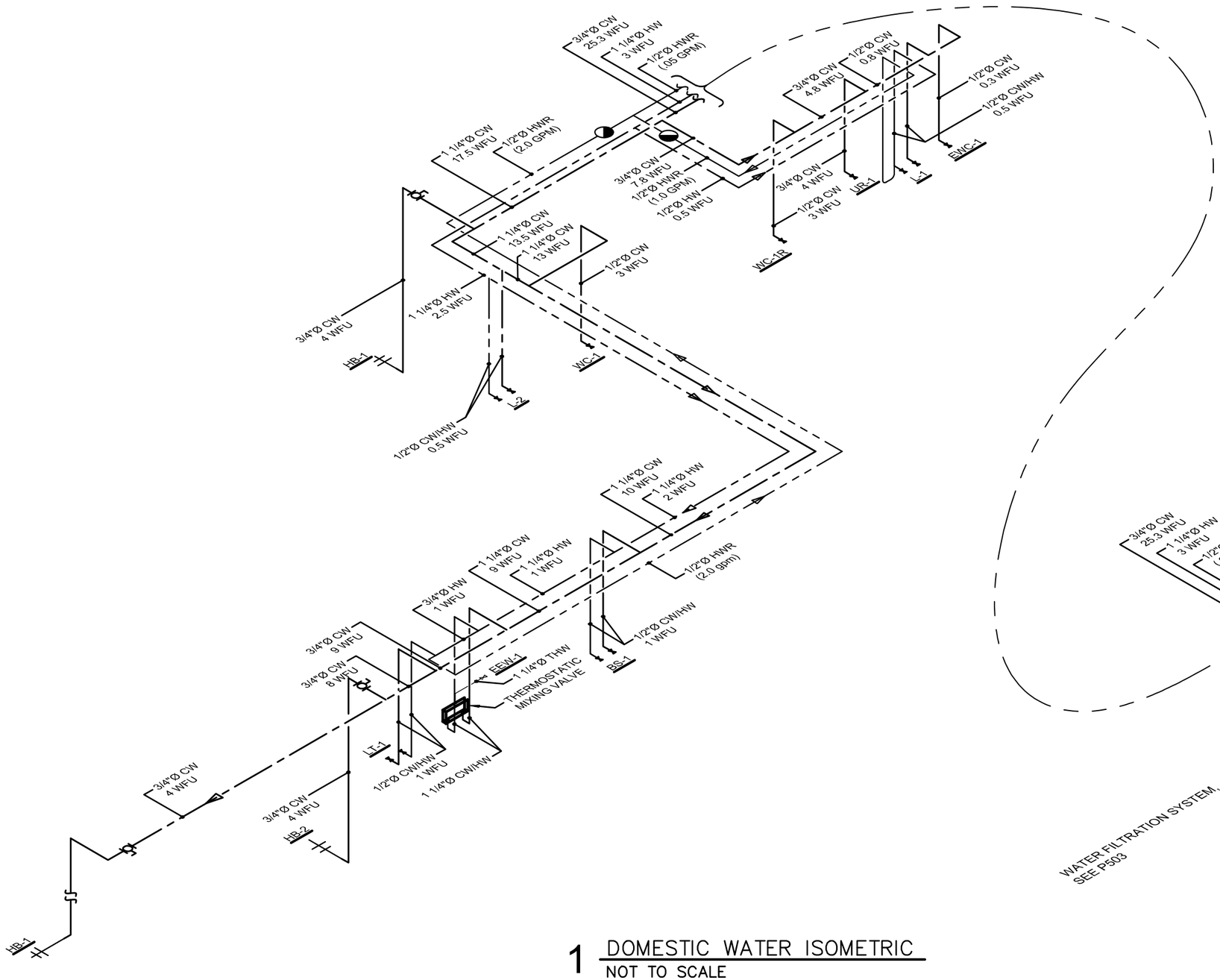
0 8' 16' 32'

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			FLOOR PLAN – NEW WORK – WATER DISTRIBUTION		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P200	



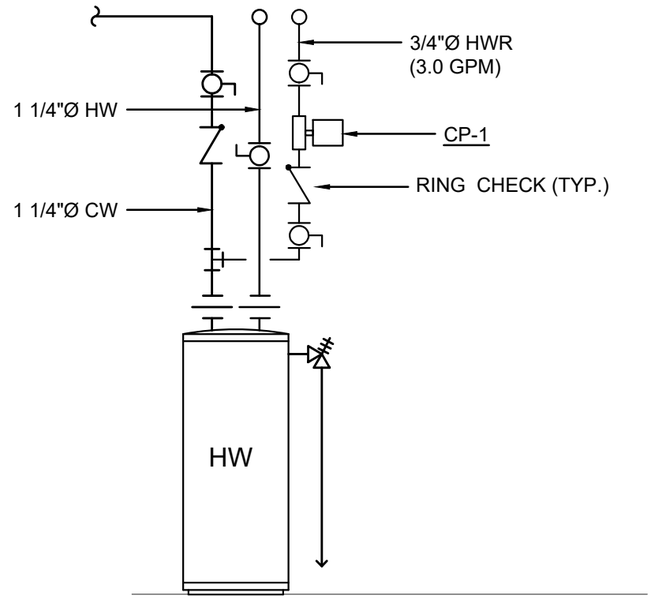
1 WASTE AND VENT ISOMETRIC
NOT TO SCALE

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			WASTE AND VENT ISOMETRIC		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P300	

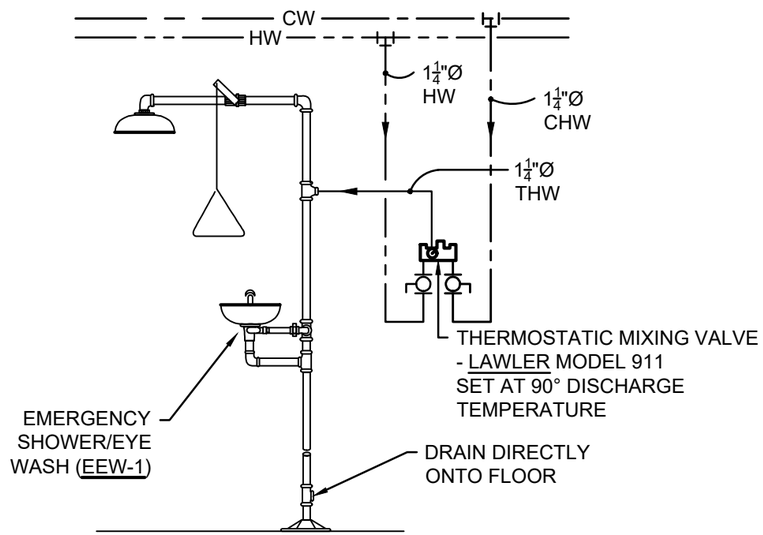


1 DOMESTIC WATER ISOMETRIC
NOT TO SCALE

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			DOMESTIC WATER ISOMETRIC		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P301	218



1 WATER HEATER PIPING SCHEMATIC
NOT TO SCALE



2 EMERGENCY SHOWER/EYE WASH PIPING SCHEMATIC
NOT TO SCALE

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			PLUMBING DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P400	219

DRAINS SCHEDULE

MARK	GENERAL DISCRIPTION	FIXTURE	STRAINER FINISH	TRAP	SEDIMENT BUCKET	ACCESSORIES	REMARKS
FD-2	FLOOR DRAIN (Wood Floors)	**Sioux Chief** 822-M2PNRV PVC floor drain body with stainless steel mounting flange for use over existing wood floors. Provide with optional clamping collar kit. Adjustable after rough-in. For solvent-weld to PVC pipe.	5.5" diameter strainer in nickel bronze finish with matching nickel bronze ring	2" PVC "P" Trap (Field-Fabricated)			
FD-3	FLOOR DRAIN (Concrete Floors)	**Sioux Chief** #832-36PNR PVC floor drain body with adjustable round strainer in a grey-color PVC ring.	6.5" diameter round strainer in nickel bronze finish	3" PVC "P" Trap (Field-Fabricated)			
FD-4	FLOOR DRAIN (Concrete Floors)	**Sioux Chief** #860-4P Large body PVC drain body, fixed strainer height, with removable strainer and for glue-weld connection to PVC pipe.	8.5" diameter PVC strainer	4" PVC "P" Trap (Field-Fabricated)		**Sioux Chief** #860-W Stainless steel debris bucket	
HD-3	3 Inch Hub Drain	Construct hub drain by extending 3" drain pipe 3" above finished floor. Solvent weld a 4"x3" reducing fitting inverted to drain pipe.		3" PVC "P" Trap (Field-Fabricated)			

WATER SOFTENER

		WATER				SOFTENER										
MARK	MODEL No.	APPROX. GRAINS	MAXIMUM USE		TOTAL Grains/day	TYPE	CAPACITY MED GRAINS	FLOW GPM **		TANKS (Dia x Height)				SALT LBS	ACCESSORIES	REMARKS
			GPM	GPD				CONTINUOUS	PEAK	# TANKS	MINERAL	# TANKS	BRINE			
WS-1	H125-64	TBD	25	TBD	TBD	Simplex	56,000	25	34	1	13" x 54"	1	18" x 40"	340	1	A, B

Based on products by Hellenbrand. Equal products will be acceptable.

** @ 15 PSI Continuous and 25 PSI Peak

ACCESSORIES:

1. Full Flow Bypass Valve

REMARKS:

A. Provide with 1-1/2" metering valve.

B. Include full fill of salt at Substantial Completion.

DOMESTIC WATER HEATING EQUIPMENT - TANK TYPE - L.P. GAS

DOMESTIC WATER HEATER															HOT WATER CIRCULATING PUMP								
MARK	MODEL No.	FUEL	INPUT	GPH * Recovery	SIZE		STORAGE CAPACITY	ELECTRICAL CHARACTERISTICS	GAS VENTING		COMBUSTION AIR		HEATER ACCESSORIES	HEATER REMARKS	MARK	MODEL No.	FLUID		MOTOR		TYPE	PUMP ACCESSORIES	PUMP REMARKS
					Diameter	Height			SIZE	MATERIAL	SIZE	MATERIAL					GPM	FT HD	WATTS	VOLT/PH			
WH-1	BTXL-100	L.P. Gas	100 MBH	129	22 Inches	66.5 Inches	75 Gal.	120/1/60	3"	Solid Wall PVC	3"	Solid Wall PVC	A, B	1, 2	CP-1	UP15-10SU7P TLC	3	2.8	25	120/1	Stainless Steel Body	C, D	1

Based on products by A.O. Smith. Equal products are acceptable. * 90 Deg F Temperature Rise

Based on products by Grundfos. Equal products are acceptable.

HEATER ACCESSORIES:
A. P&T Relief Valve
B. Drain Valve

HEATER REMARKS:
1. Set Heater to maintain 120 degrees tank temperature.
2. Provide one 2 gallon (nominal) diaphragm-style expansion tank for this system.

PUMP ACCESSORIES:
A. Variable Speed Selector Switch
B. Adjustable Temperature Sensor
C. Plug and Cord Electrical Connection
D. Unit-mounted Timer

PUMP REMARKS:
1. Program pump to operate continuously during occupied periods.

FITTINGS AND SPECIALTIES

MARK	GENERAL DESCRIPTION	FIXTURE	VALVE / FAUCET	FINISH	CONNECTIONS	ACCESSORIES	REMARKS
EEW-1	DRENCH SHOWER AND EYEWASH UNIT WITH DUST COVER	**BRADLEY** S-19-310SC			1-1/4" NPT Tempered Water from Mixing Valve	**Lawler** Model 911	
		Combination emergency shower and eyewash, stainless steel eyewash bowl with hinged stainless steel cover, floor-mounted with floor-mounting flange, single top water supply.		Galvanized steel construction with painted yellow safety coating.		Thermostatic mixing valve for emergency showers Unit No. 8334	
HB-1	AUTOMATIC DRAINING, FREEZE PROOF WALL FAUCET WITH BACKFLOW PROTECTION		**Woodford** Model 30		3/4" CW	**Nidel** 37HF	
		N/A	Rough brass, freezeless automatic drianing with anti-siphon vacuum breaker and optional loose key operator.	Chrome-plated rough brass		Non-removable, hose thread backflow preventer in standard brass finish	
HB-2	INTERIOR WALL FAUCET WITH BACKFLOW PROTECTION		**Woodford** Model 26		3/4" CW	**Nidel** 37HF	
		N/A	Bronze wall faucet with angled valve stem and standard polycarbonate operating handle, NDEL Model 37HF backflow preventer and standard 3/4" threaded outlet for hose connection.	Standard rough brass		Non-removable, hose thread backflow preventer in standard brass finish	

PLUMBING FIXTURES AND TRIM

MARK	GENERAL DISCRIPTION	FIXTURE	VALVE / FAUCET	SUPPORT	SUPPLIES	HOT WATER SUPPLY SIZE	COLD WATER SUPPLY SIZE	DRAIN	DRAINAGE CONNECTION	ACCESSORIES	REMARKS
EWC-1	ADA-compliant ELECTRIC WATER COOLER	**Elkay** Model LZS8WSVRSK			**Brass Craft** #SCR14 C		1/2"	**Dearborn Brass** (Verify Models)	1-1/2"		A
		Wall-mounted ADA-complaint electric water cooler, integral refrigeration for surface-mounting, manual push button control. "GreenSpec Listed"	(Integral to Fixture)	Provided with unit	Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.			1-1/4" PVC P-Trap and required offset fittings.			
L-1	ADA-compliant WALL-HUNG LAVATORY	**Kohler** #K-2005	**Sloan** Solis Model EAF-275		**Brass Craft** #SCR14 C	1/2"	1/2"	**McGuire #155WC** & #B8902	1-1/2"		C
		20" x 17.5" vitreous china oval lavatory with back-set drain connection for ADA-compliance, strandard white color, single hole for faucet, front overflow.	Automatic faucet with solarpowered sensing and operation. Single hole mounting. Hot and cold water supplies with mixing lever (removable).	Not Required	Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.			1-1/4" chrome plated brass offset grid strainer and P-trap			
L-2	ADA-compliant DROP IN LAVATORY	**Kohler** #K-2196	**Sloan** Solis Model EAF-275		**Brass Craft** #SCR14 C	1/2"	1/2"	**McGuire #155WC** & #B8902	1-1/2"		C
		20" x 17.5" vitreous china oval lavatory with back-set drain connection for ADA-compliance, strandard white color, single hole for faucet, front overflow.	Automatic faucet with solarpowered sensing and operation. Single hole mounting. Hot and cold water supplies with mixing lever (removable).	Not Required	Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.			1-1/4" chrome plated brass offset grid strainer and P-trap			
LT-1	WALL-HUNG LAUNDRY TUBB WITH WALL-MOUNTED BRACKETS	**MUSTEE** 17F	**DELTA** 2123		**Brass Craft** #SCR14 C	1/2"	1/2"	**Any**	1-1/2"		
		24"x24"x16" molded one-piece tub, single-compartment.	Deck-mount faucet, chromeplated with 6" swing gooseneck, stardard aerator, and lever handles.	N/A	Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.			1-1/2" P-trap in PVC plastic construction. Strainer part of laundry tub.			
MB-1	FLOOR-MOUNTED MOP BASIN	**Mustee** #63M	**Chicago** #540-LD897-SWXFCP			1/2"	1/2"	**Mustee** #65.311	3"	1, 2, 3, 4	D
		24"x24"x10" molded stone one-piece, 10" sides with a chrome plated cast brass drain body.	Wall-mount faucet, chrome-plated, with rigid spout, pal hook, wall support bracket and integral vacuum breaker. 3/4" male hose threaded outlet.	None Required	N/A			PVC drain body with S.S flat strainer			
BS-1	SINGLE COMPARTMENT DROP-IN SINK	**Just** SL-1921-A-GR	**Symmons** Symmetrix #S-23-W-10-1.5		**Brass Craft** #SCR14 C	1/2"	1/2"	**McGuire** #151M	2"		
		21"x19"x7.5" stainless steel sink, 18 gauge stainless with full undercoating, standard 3.5 inch drain connections, standard finish. Drilling for 3-hole, 8 inch centers.	Single-handle kitchen faucet, with 10" swing spout, 1.5 GPM aerator, 3-hole - 8" mounting.	Not Required	Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.			Chrome-plated basket strainer with brass tallpiece. PVC traps and crossover piping.			
UR-1	ADA-Compliant WALL-HUNG FLUSH VALVE WASHDOWN URINAL	**Kohler** K-4960-ET	**Sloan** Solis Model 8186	**Wade** #400	(Part of Flush Valve)		3/4"	Integral to Fixture	2"		A
		Top supply, vitreous china with with intergral flush spreeder, sloped front and 3/4" inlet spud. Suitable for 0.5 GPF. White color.	0.5 GPF flush valve, top spud connection, automatic operation with solar-pwered control head and flushing capacitor. Chrome-plated.	"Universal" floor-mounted carrier with mounting plate to match urinal							
WC-1	ADA-Compliant FLOOR-MOUNT, TANK-TYPE WATER CLOSET (HET Fixture)	**Kohler** "Highline" #K-3519-T			**Brass Craft** #SCR14 C		1/2"	Integral to Fixture	3" or 4"		
		Vitreous china, 16.5 inch rim height, 1.28 gal flush, elongated bowl, siphon jet flushing. Provide with tank locks.	(Not Required)	Not Required	Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.						
		OLSONITE #95 open front seat, less cover									
WC-1R	ADA-Compliant FLOOR-MOUNT, TANK-TYPE WATER CLOSET (HET Fixture)	**Kohler** "Kingston" #K-5481-**RA**			**Brass Craft** #SCR14 C		1/2"	Integral to Fixture	3" or 4"		E
		Vitreous china, 16.5 inch rim height, 1.28 gal flush, elongated bowl, siphon jet flushing. Provide with tank locks and trip lever on correct side for ADA compliance.	(Not Required)	Not Required	Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.						
		OLSONITE #95 open front seat, less cover									

ACCESSORIES:
1. Mop Basin Hose and Hose Holder
2. Mop Basin Mop Hanger
3. Mop Basin Corner Bumper Guards
4. Mop Basin Corner Wall Guards

REMARKS:
A. Verify mounting height requirements with the Architectural Drawings.
B. Verify closet carrier for each application.
C. Provide McGuire "Pro-Wrap" insulated pipe coverings for water supplies and drainage fittings.
D. Provide a Watts Model 8A non-removable vacuum breaker.
E. This water closet requires a right hand trip lever.

NOTES:

(1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.

(2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.

(3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.

(4) THE USE OF DISSIMILAR METALS IN A PIPING SYSTEM IS NOT RECOMMENDED. WHERE DISSIMILAR METALS MUST BE CONNECTED IN A WATER SYSTEM. THE USE OF NONCONDUCTIVE (DIELECTRIC) FITTINGS MAY REDUCE GALVANIC CORROSION.

(5) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN FIVE FEET OF THE EQUIPMENT LOCATION.

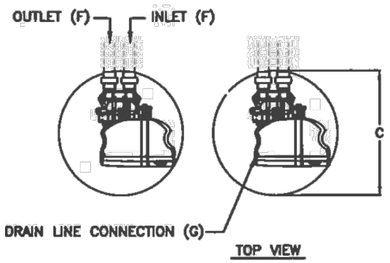
(6) ALLOW A MINIMUM OF 24 INCHES ABOVE FILTER FOR FILLING.

(7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.

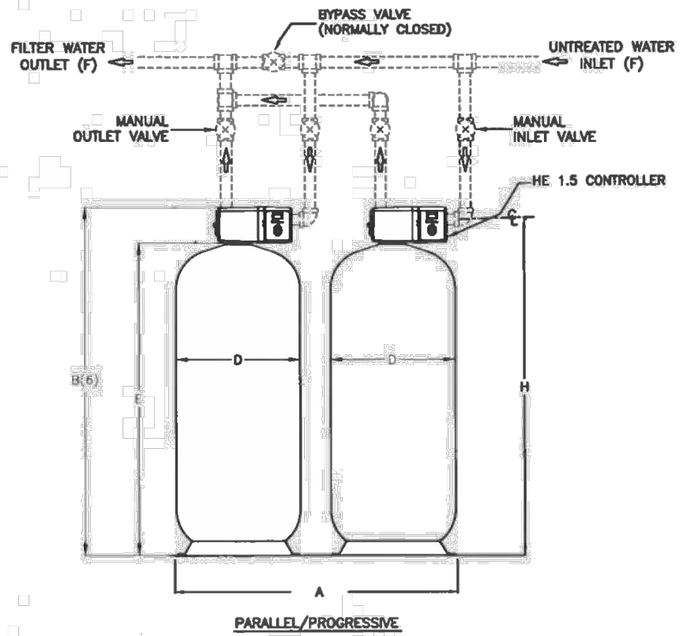
(8) SYSTEM USES FRP TANKS WHICH MUST NOT BE SUBJECTED TO VACUUM. INSTALL SIPHON BREAK ON DRAIN LINE. INSTALL VACUUM BREAKER ON INLET

(9) FOR MAXIMUM PROTECTION OF THE CONTROLLER, IT IS RECOMMENDED THAT A DEDICATED 120 VOLT CIRCUIT IS PROVIDED.

	DIMENSIONS (INCHES)								UNIT DATA PER TANK						
MODEL	WIDTH A	HEIGHT B(6)	DEPTH C	TANK DIA. D	TANK HEIGHT E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	RESIN VOLUME ft^3	NORMAL FLOW gpm @ psi drop	PEAK FLOW gpm @ psi drop	BACKWASH DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	SIMPLEX OPER. WT. lbs.	SIMPLEX SHIP. WT. lbs.
HE DF-14	40	53	15	14	48	1.5	0.75	50	2.4	11 @ 3	16 @ 6	15	0.75	1030	630



TOP VIEW



PARALLEL/PROGRESSIVE

DO NOT SCALE DRAWING TOLERANCES: ±1/8" UNLESS OTHERWISE NOTED				
Let.	Change	By	App	Date

Culligan® ENGINEERED SYSTEMS
ROSEMONT, ILLINOIS

PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.

NAME: HE 1.5" AUTOMATIC DEPTH FILTER DUPLEX TECHNICAL DATA SHEET

DETAILED BY:	APP. BY:	SHEET
BBV 09/20/11		1 OF 1
REF. NO.	PART NO.	
	HEDF-2	

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			WATER FILTRATION SYSTEM	DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: P503

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
MENOMONIE SAFETY AND WEIGHT FACILITY #63
I.H. 94
DUNN COUNTY

DRAWING LIST

M000 HVAC COVER SHEET
M001 HVAC SYMBOLS
MD001 DEMOLITION PLAN VIEWS
MD002 SITE PLAN - DEMOLITION
M101 FLOOR PLAN - NEW WORK - DUCTWORK
M102 ROOF PLAN - NEW WORK
M201 SITE PLAN - NEW WORK - PIPING
M202 FLOOR PLAN - NEW WORK - PIPING
M301 FLOOR PLAN - ELECTRIC HEAT
M400 MECHANICAL ELEVATIONS AND DETAILS
M401 L.P. GAS STORAGE TANK DETAILS
M402 GAS PIPING SCHEMATIC DIAGRAM
M500 MECHANICAL SCHEDULES
M501 MECHANICAL SCHEDULES
M502 MECHANICAL SCHEDULES
M503 MECHANICAL SCHEDULES
M504 MECHANICAL SCHEDULES
M505 PROPANE STORAGE TANK

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			HVAC COVER SHEET		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M000	

FUEL PIPING

- NG — NATURAL GAS
- PG — PROPANE GAS
- LP — LIQUID PROPANE
- PA — PROPANE/AIR MIX
- FOS — FUEL OIL SUPPLY
- FOR — FUEL OIL RETURN
- GAS COCK

DUCTWORK

- 24X12 — RECTANGULAR DUCT 24"WIDE X 12"DEEP CLEAR INSIDE DIMENSION
- 12"ø — ROUND RIGID DUCT 12"DIA.
- ROUND FLEXIBLE DUCT
- DUCT TURNED UP
- DUCT TURNED DOWN
- SUPPLY / FRESH AIR
- RETURN AIR
- EXHAUST AIR
- TRANSITION, 30° MAX.
- RECTANGULAR TO ROUND TRANSITION
- 45 DEG. ENTRY TAP
- AIR EXTRACTOR
- 90 DEG. ELBOW W/ TURNING VANES
- OPPOSED BLADE DAMPER
- PARALLEL BLADE DAMPER
- BUTTERFLY DAMPER
- DUCT COVERING THERMAL INSULATION
- DUCT LINER ACOUSTICAL INSULATION
- AP — ACCESS PANEL (AP) ACCESS DOOR (AD)
- HORIZONTAL FIRE DAMPER (IN VERTICAL DUCT)
- VERTICAL FIRE DAMPER (IN HORIZONTAL DUCT)
- CD-1 / 200 — DIFFUSER TYPE ,CFM
- UNDERCUT DOOR
- DG 18X12 — DOOR GRILLE 18"WX12"H
- T — THERMOSTAT
- H — HUMIDISTAT
- T_S — TEMPERATURE SENSOR
- AIRFLOW INDICATOR
- M — MOTOR OPERATOR
- A — PNEUMATIC OPERATOR
- STEAM DISTRIBUTION TUBE HUMIDIFIER
- CENTRIFUGAL ROOF EXHAUSTER
- ROOF FRESH AIR INTAKE

EQUIPMENT

RTU # — EQUIPMENT MARK SYMBOL

- ACH – Air Cooled Chiller
- ACU – Air Cooled Condensing Unit
- AFM – Air Flow Measuring Station
- AHU – Air Handling Unit
- AP – Access Panel
- ATU – Air Terminal Unit
- BC – Blower Coil
- BLR – Boiler
- BV – Brick Vent
- CC – Cooling Coil
- CD – Control Damper
- CF – Combustion Air Fan
- CH – Cabinet Heater
- CP – Condensate Pump
- CT – Cooling Tower
- CU – Condensing Unit
- CV – Convectors
- DC – Duct Coil
- DG – Door Grille
- DLC – Dry Liquid Coolers
- EBB – Electric Base Board
- EDH – Electric Duct Heater
- EF – Exhaust Fan
- EG – Exhaust Grille
- EH – Exhaust Hood
- ELC – Evaporative Liquid Coolers
- ER – Exhaust Register
- ETS – Expansion Tank System
- EUH – Electric Unit Heater
- EWH – Electric Wall Heat
- EWH – Electric Wall Heater
- F – Fan
- FC – Fan Coil Unit
- FG – Floor Grille
- FH – Filter Housing
- FTR – Fin Tube Radiation
- HC – Heating Coil
- HCC – Heat Cool Coils
- HP – Heat Pump
- HUM – Humidifier
- HX – Heat Exchanger
- IH – Intake Hood
- IL – Intake Louver
- IPH – Infrared Panel Heater
- ITH – Infrared Tube Heater
- L – Louver
- LG – Linear Grille
- LS – Linear Slot
- MUA – Make-Up Air Unit
- P – Pump
- PAC – Packaged Air Conditioners
- RG – Return Grille
- RH – Relief Hood
- RP – Return Panel
- RR – Return Register
- RTU – Rooftop Unit
- SD – Supply Diffuser
- SF – Supply Fan
- SG – Supply Grille
- TG – Transfer Grille
- UH – Unit Heater
- VAC – Unit Air Conditioner
- VAV – Variable Air Volume Box
- WCH – Water Cooled Chiller

ABBREVIATIONS

- AFF – Above Finish Floor
- BD – Back Draft Damper
- BOF – Bottom Of Footing
- CLG – Ceiling
- C/C – Center To Center
- CW – Cold Water
- COMP – Compressor
- CR – Condenser Return
- CS – Condenser Supply
- CONN – Connection
- DIFF – Diffuser
- DF – Drinking Fountain
- DTR – Dual – Temp Return
- DTS – Dual – Temp Supply
- DF – Duct Furnace
- DH – Duct Heater
- EWC – Electrical Water Cooler
- EWH – Electrical Water Heater
- E.C. – Electrical Contractor
- EXH – Exhaust
- EF – Exhaust Fan
- EG – Exhaust Grille
- FD – Fire Damper
- FLD – Floor Drain
- FS – Flow Switch
- G.C. – General Contractor
- HP – Horse Power
- HT – Hot Water
- I.E. – Invert Elevation
- MAV – Manual Air Vent
- M.C. – Mechanical Contractor
- MOD – Motor Operated Damper
- OA – Outside Air
- P.C. – Plumbing Contractor
- RA – Return Air
- RD – Roof Drain
- SA – Supply Air
- SAN – Sanitary
- SM – Sheet Metal
- SMD – Smoke Damper
- T'STAT – Thermostat
- UR – Urinal
- V – Vent
- VTR – Vent Thru Roof
- WH – Wall Hydrant
- WTR – Water
- WC – Water Closet
- WP – Water Proof

HYDRONIC PIPING

- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- RHG — REFRIGERANT HOT GAS
- CHWS — CHILLED WATER SUPPLY
- CHWR — CHILLED WATER RETURN
- GS — GEOFIELD WATER SUPPLY
- GR — GEOFIELD WATER RETURN
- HPS — HEAT PUMP LOOP SUPPLY
- HPR — HEAT PUMP LOOP RETURN
- HS — HEATING WATER SUPPLY
- HR — HEATING WATER RETURN
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- BALANCING VALVE
- FLOW INDICATOR
- BASEBOARD RADIATION (SHOWING ACTIVE LENGTH)
- STM — STEAM
- CR — CONDENSATE RETURN
- S-60 — STEAM 60 PSIG
- HPCR — HIGH PRESSURE CONDENSATE RETURN
- LPCR — LOW PRESSURE CONDENSATE RETURN
- BFW — BOILER FEED WATER
- BBD — BOILER BLOW DOWN
- INVERTED BUCKET TRAP
- FLOAT & THERMOSTATIC TRAP
- BLOWDOWN SEPARATOR
- EXPANSION LOOP
- EJ — EXPANSION JOINT
- PIPE ANCHOR
- ALIGNMENT GUIDE
- COMBINATION TEMPERATURE/ PRESSURE GAGE

VALVES

- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- CHECK VALVE,SWING(S) LIFT(L),BALL(B),DISC(D)
- SQUARE HEAD VALVE
- GENERAL,NON-DESIGNATED
- PRESSURE REDUCING VALVE
- S — SAFETY(S),RELIEF(R)
- HOSE BIBB DRAIN
- REDUCED PRESSURE ZONE BACKFLOW PREVENTER

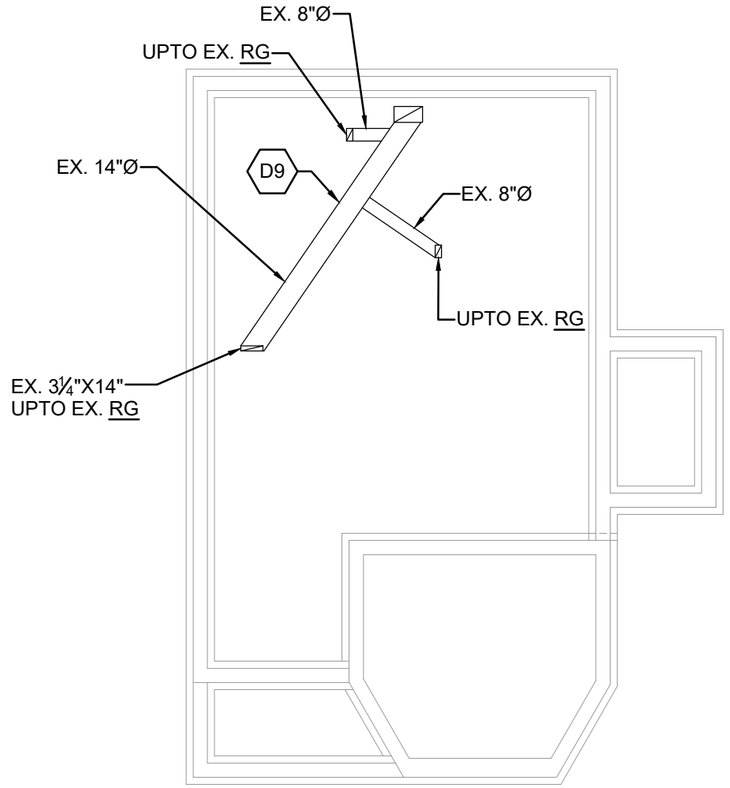
GENERAL PIPING

- DIRECTION OF FLOW / PIPE DESIGNATION
- R — PIPE PITCH,RISE(R) DROP(D)
- PIPE CONNECTION
- PIPE TURNED UP
- PIPE TURNED DOWN
- OFF TOP OF PIPE
- OFF BOTTOM OF PIPE
- REDUCER (ECCENTRIC)
- REDUCER (CONCENTRIC)
- CAP
- BLIND FLANGE
- FLANGE
- COUPLING
- BUSHING
- UNION
- STRAINER
- INLINE PUMP
- THERMOMETER
- PRESSURE GAUGE
- CONNECT TO EXISTING

SPECIALTY PIPING

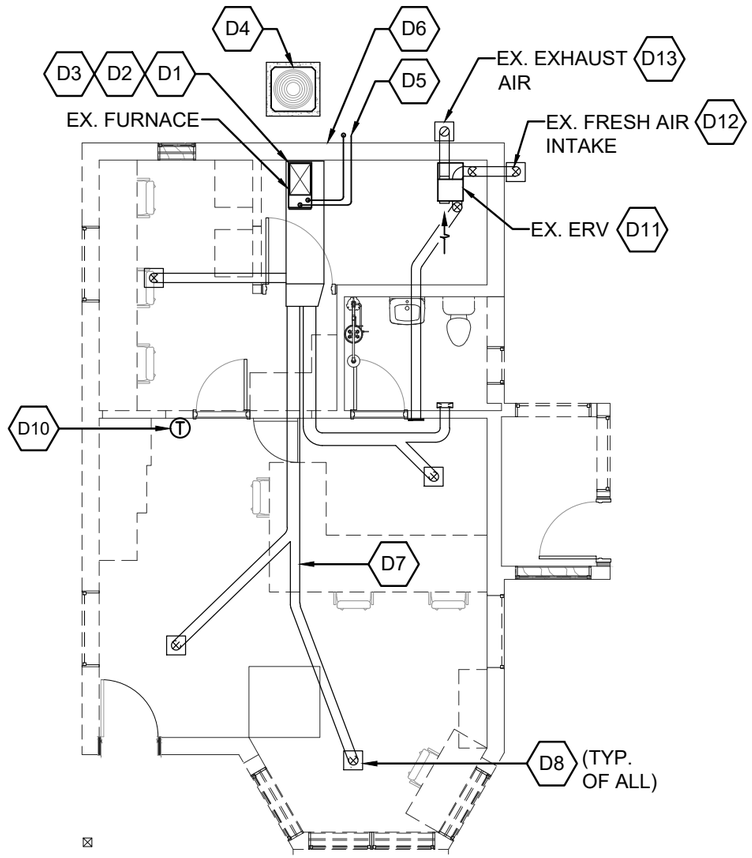
- VAC — VACUUM
- O — OXYGEN
- N — NITROGEN
- NO — NITROUS OXIDE
- MA — MEDICAL AIR
- SPECIAL (ABBREVIATION)

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			HVAC SYMBOLS	DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M001



2 CRAWL SPACE – DEMOLITION
1/8" = 1'–0"

NORTH



1 1ST FLOOR PLAN – DEMOLITION
1/8" = 1'–0"

NORTH

SCALE: 1/8" = 1'-0"

0 8' 16' 32'

"KEYED" DEMOLITION NOTES:

D1 Remove furnace and discard, including evaporator coil.

D2 Disconnect and discard LP gas supply to furnace.

D3 Disconnect PVC gas venting and combustion air piping. Salvage as best possible for new domestic water heater.

D4 Remove compressor-condensing unit and discard. Evacuate refrigerant in a legal manner prior to any demolition work. Remove refrigerant piping complete back to evaporator coil and discard.

D5 Salvage wall penetrations and PVC gas venting and combustion air piping as best possible for new domestic water haeter.

D6 Salvage LP gas exterior wall penetration for re-use.

D7 Remove all supply air ductwork complete, including duct insulation, hangers, supports, etc. and discard.

D8 Remove all supply diffusers, return grilles, exhaust grilles, and similar complete and discard.

D9 Remove all return air ductwork in the crawl space complete, including duct insulation, hangers, supports, etc. and discard.

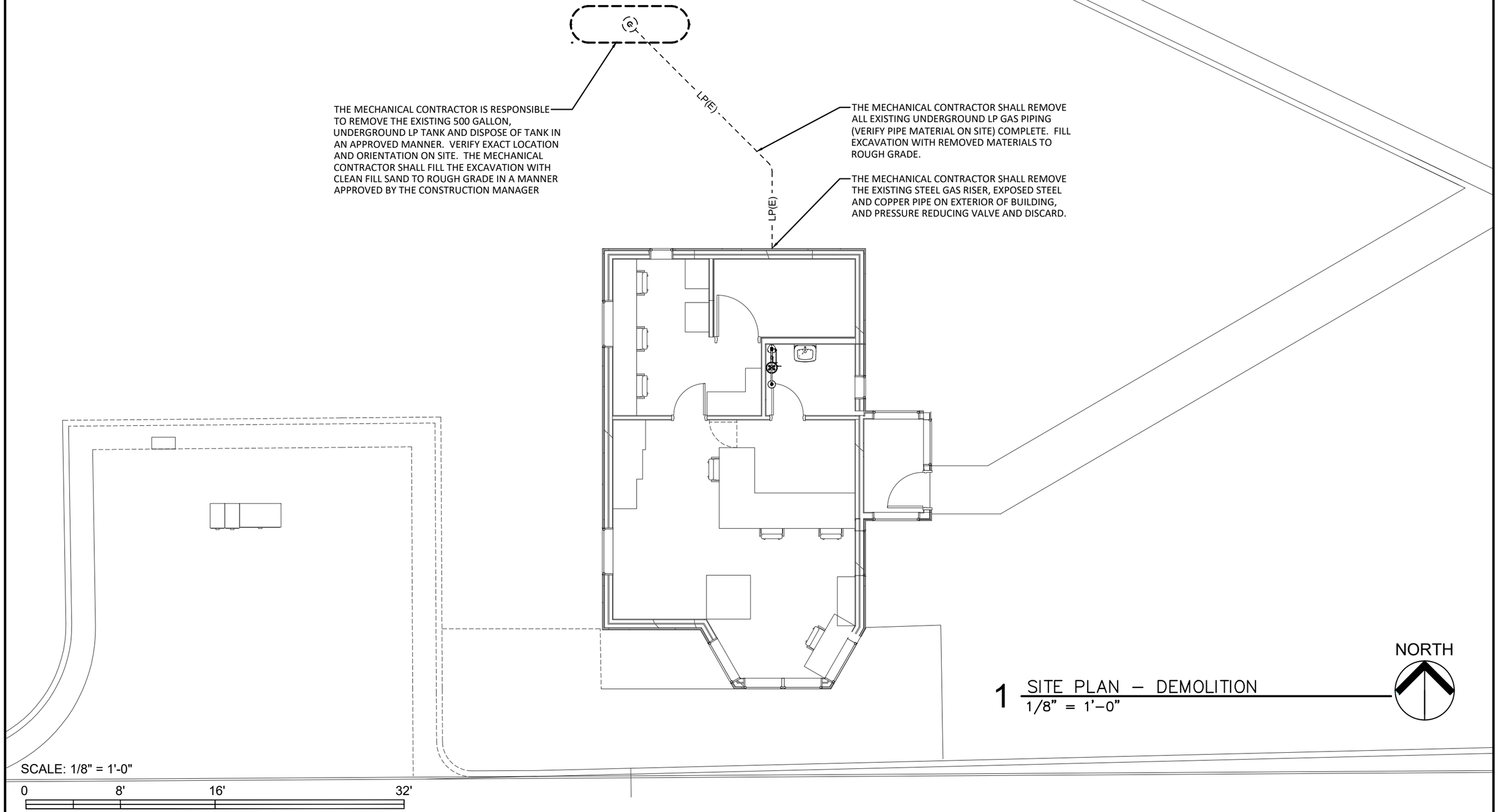
D10 Remove thermostat and vandal guard and return to Owner. Pull low voltage control wiring back to furnace complete.

D11 Remove energy recovery unit and electric heating coil complete and discard. Remove all supports, hangers, etc. Remove any control wiring complete.

D12 Remove all outside air ductwork connected to the ERV complete to the exterior wall. The soffit grille will be abandoned in place. Any ductwork in the attic cavity or soffit may be abandoned in place. Cap ductwork flush with the interior wall surface.

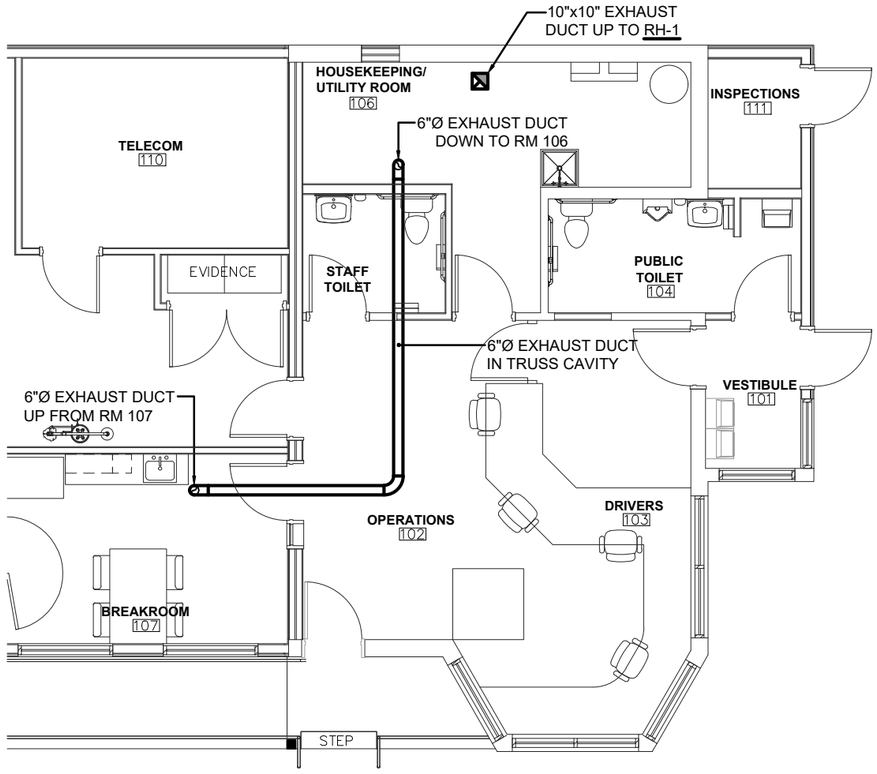
D13 Remove all exhaust air ductwork connected to the ERV complete to the exterior wall. The soffit grille will be abandoned in place. Any ductwork in the attic cavity or soffit may be abandoned in place. Cap ductwork flush with the interior wall surface.

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			DEMOLITION PLAN VIEWS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: MD001	



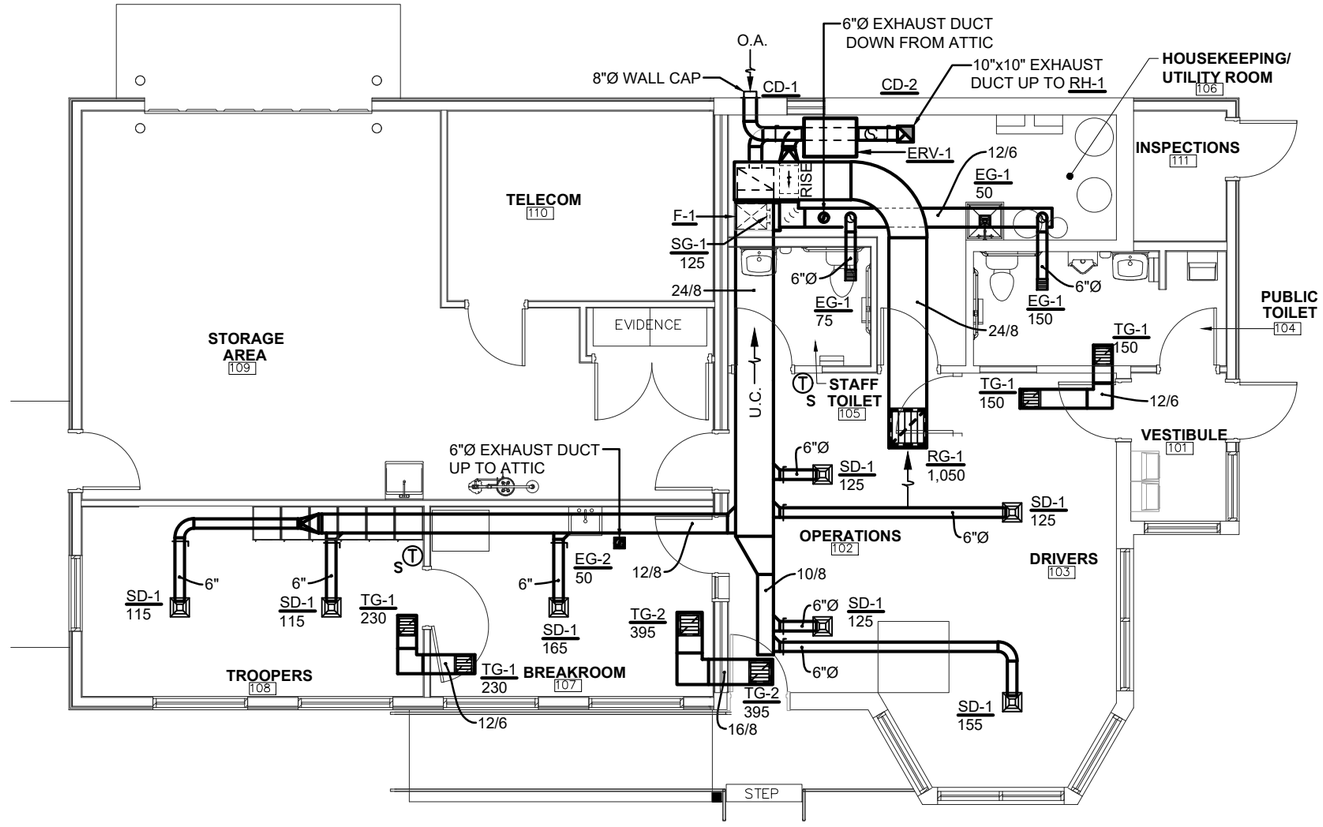
1 SITE PLAN – DEMOLITION
1/8" = 1'–0"

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			SITE PLAN – DEMOLITION		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: MD002	227



2 PARTIAL ATTIC PLAN – DUCTWORK
1/8" = 1'–0"

NORTH



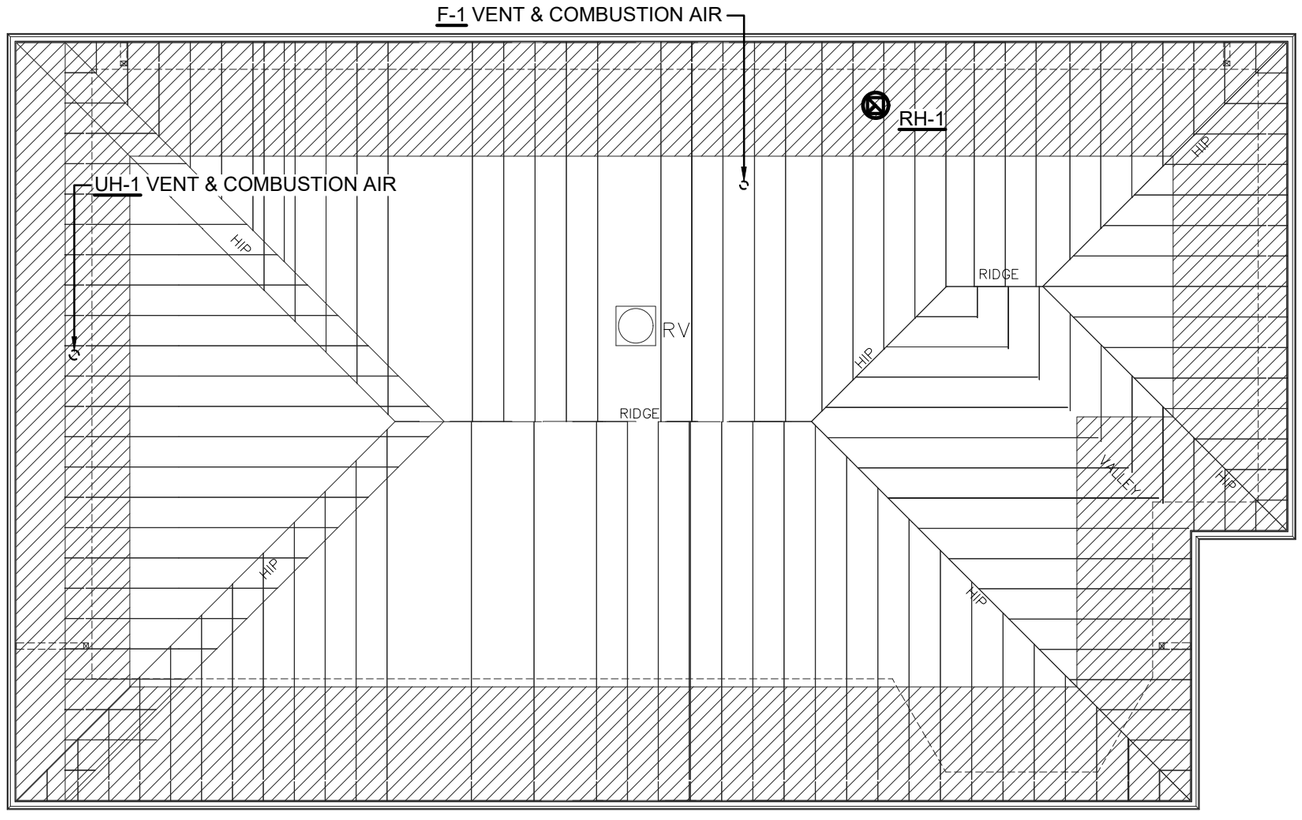
1 FIRST FLOOR PLAN – DUCTWORK
1/8" = 1'–0"

NORTH

SCALE: 1/8" = 1'-0"

0 8' 16' 32'

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			FLOOR PLAN – NEW WORK – DUCTWORK		DATE: 10/3/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M101	228



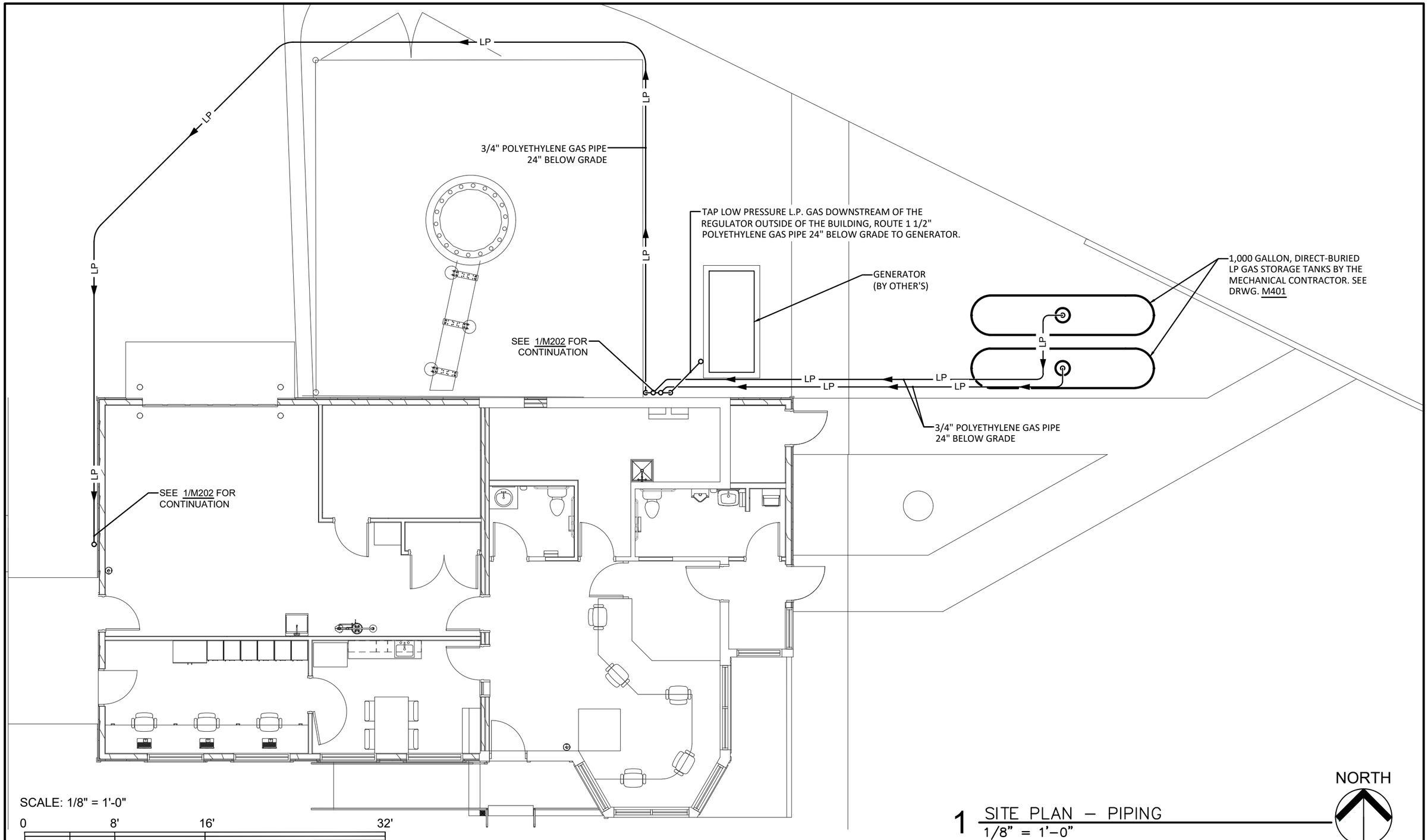
NORTH

1 ROOF PLAN
1/8" = 1'–0"

SCALE: 1/8" = 1'-0"

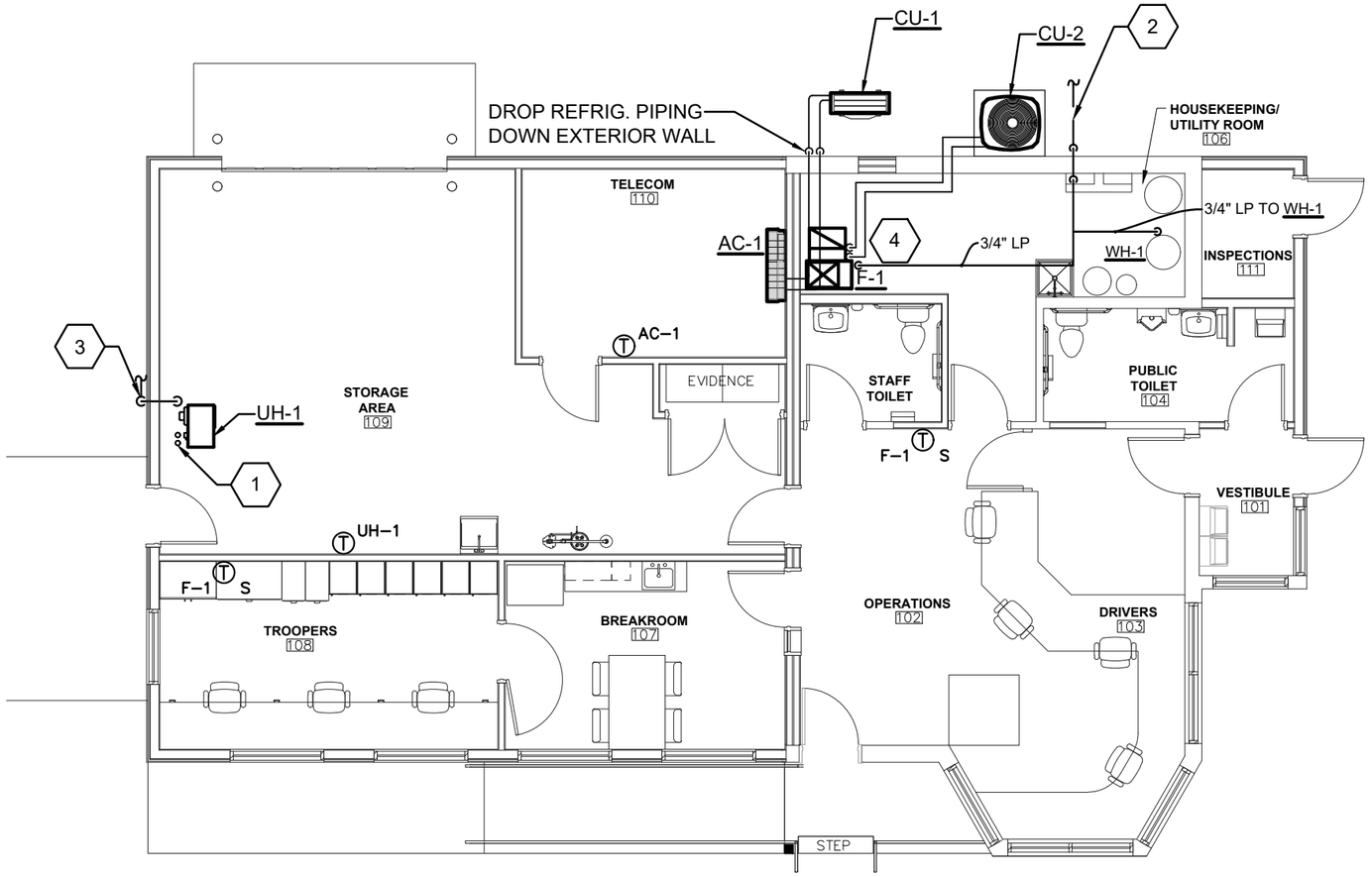
0 8' 16' 32'

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			ROOF PLAN – NEW WORK		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M102	



1 SITE PLAN – PIPING
1/8" = 1'-0"

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			SITE PLAN – NEW WORK – PIPING		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M201	230



1 FIRST FLOOR PLAN – PIPING
1/8" = 1'–0"

NORTH

SCALE: 1/8" = 1'-0"

0 8' 16' 32'

"KEYED" NEW CONSTRUCTION - PIPING PLAN NOTES:

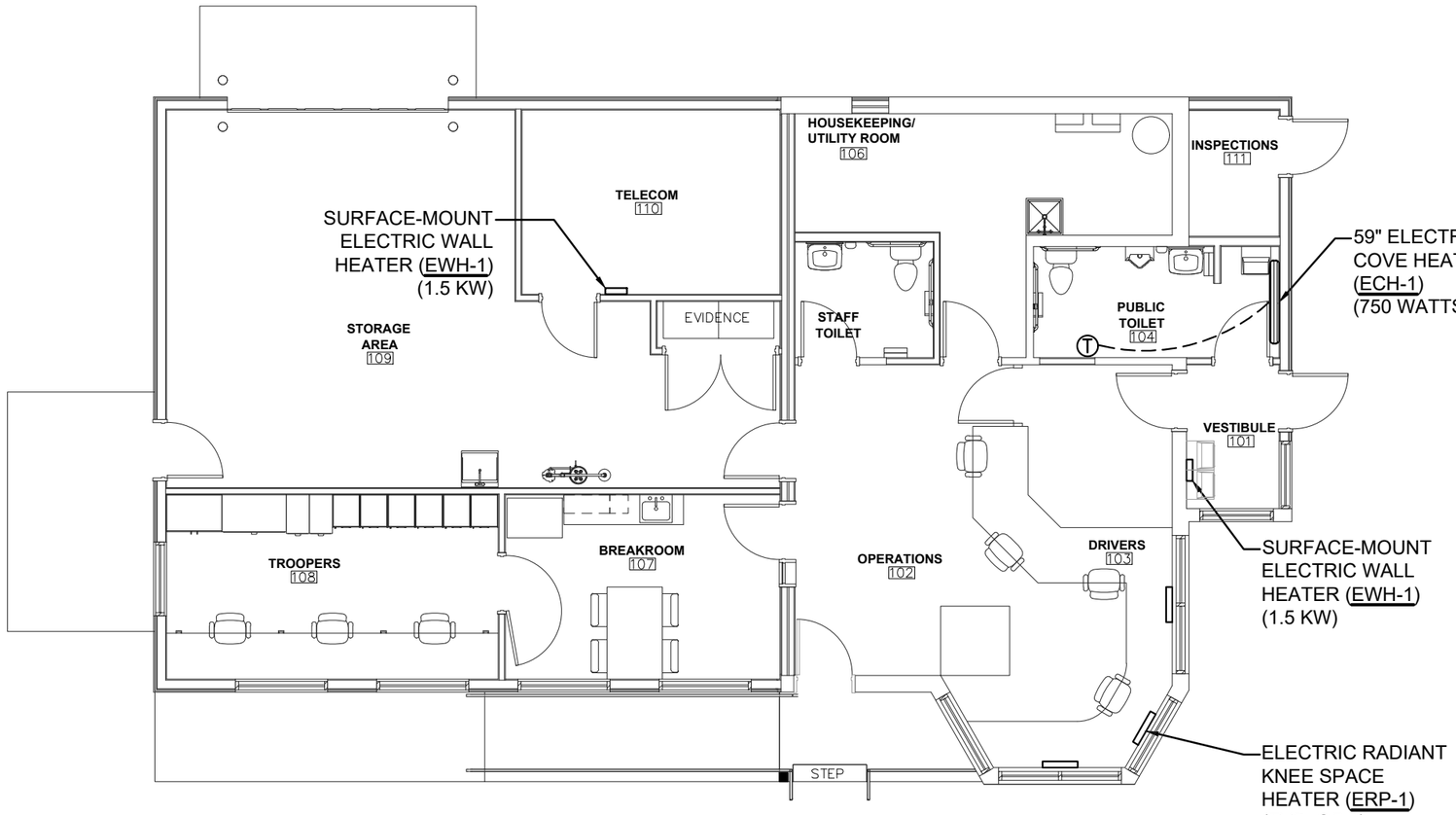
1 Vent the unit heater up through the roof per the manufacturer's direction.

2 Tap low pressure L.P. gas downstream of the regulator outside of the building. Refer to the "Gas Piping Schematic Diagram".

3 Rise gas above grade with steel riser pipe. Penetrate building wall at 24 inches A.F.F. Extend black steel piping to unit heater with isolation valve and stainless steel flexible appliance connector.

4 Vent the furnace through the roof with concentric roof termination, see detail 1/M400.

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			FLOOR PLAN – NEW WORK – PIPING		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M202	



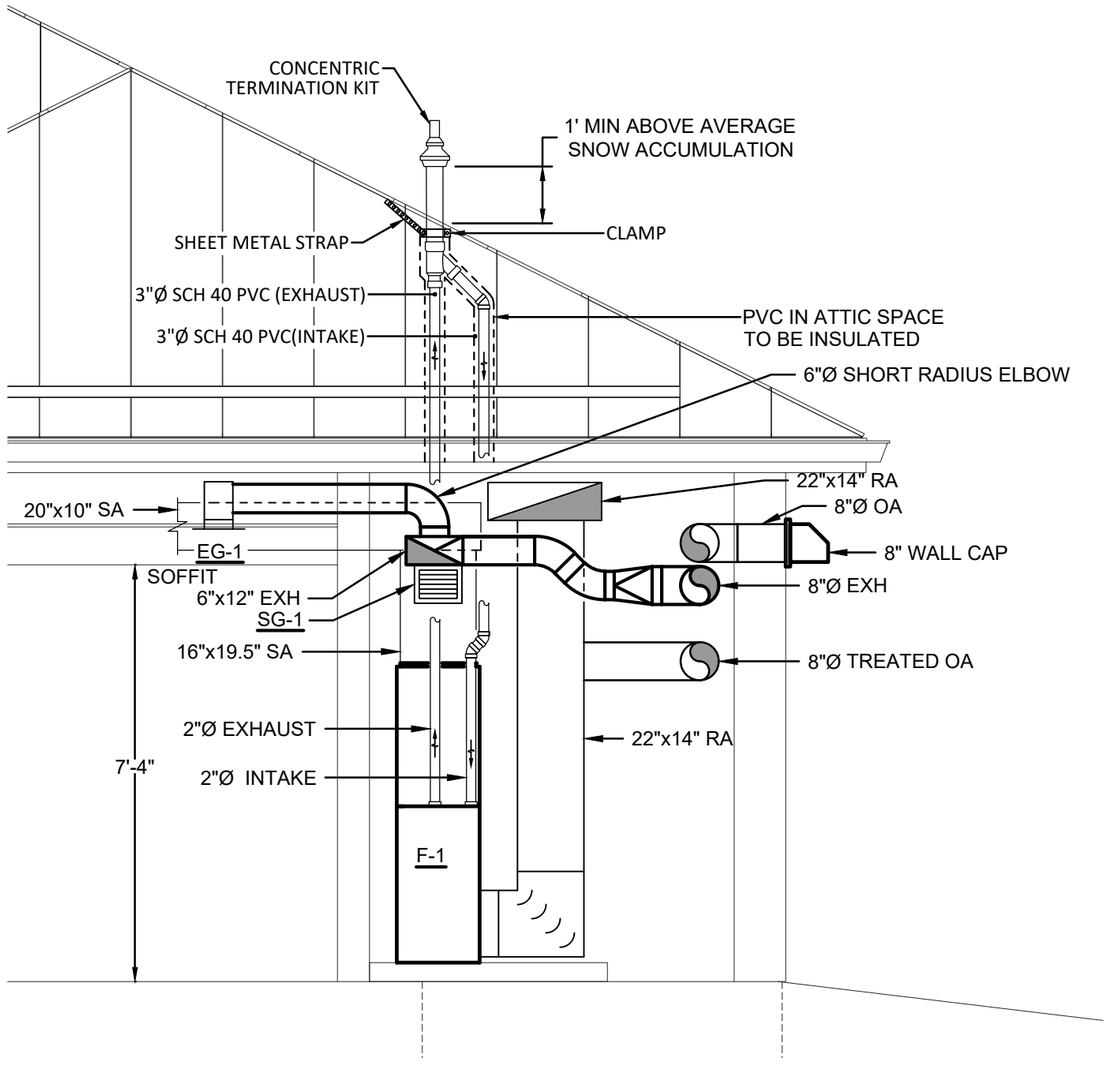
NORTH

1 FIRST FLOOR PLAN – ELECTRIC HEAT
1/8" = 1'–0"

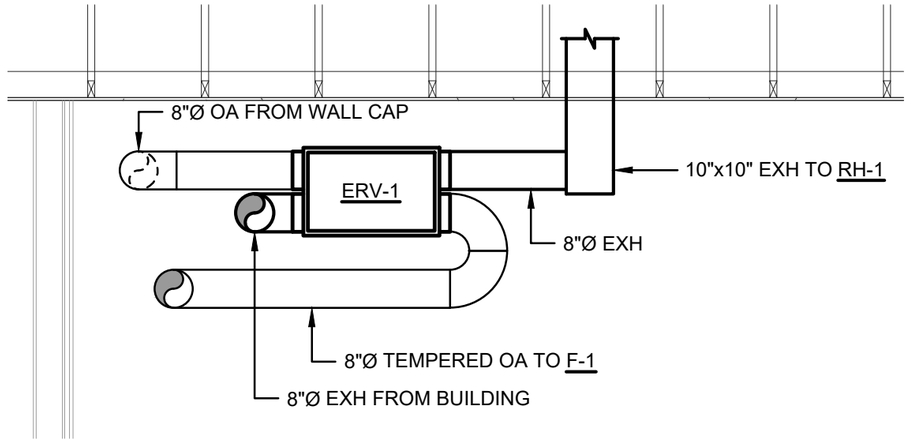
SCALE: 1/8" = 1'-0"

0 8' 16' 32'

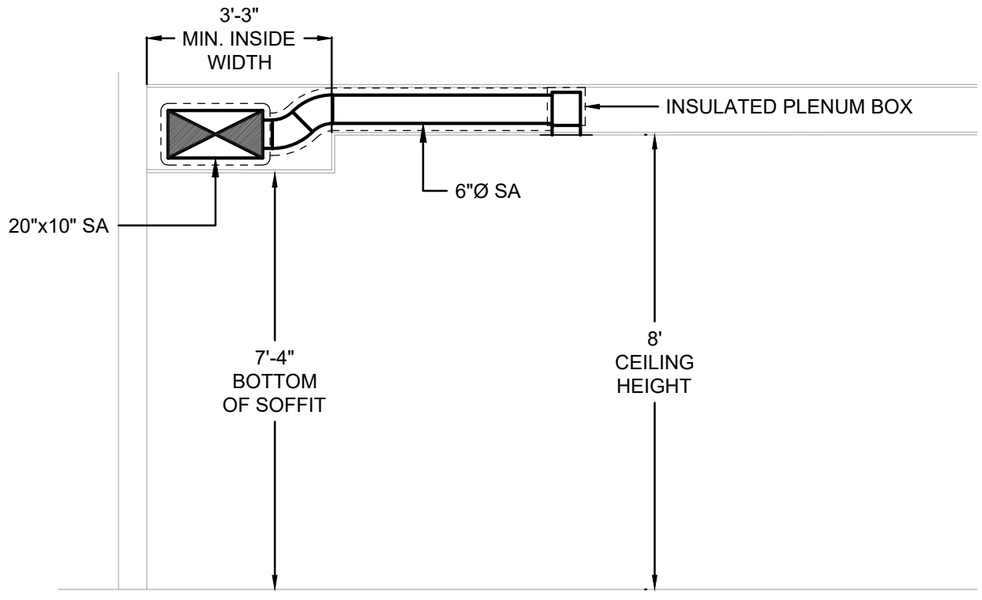
PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			FLOOR PLAN – ELECTRIC HEAT		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M301	232



1 FURNACE (F-1) ELEVATION
NOT TO SCALE

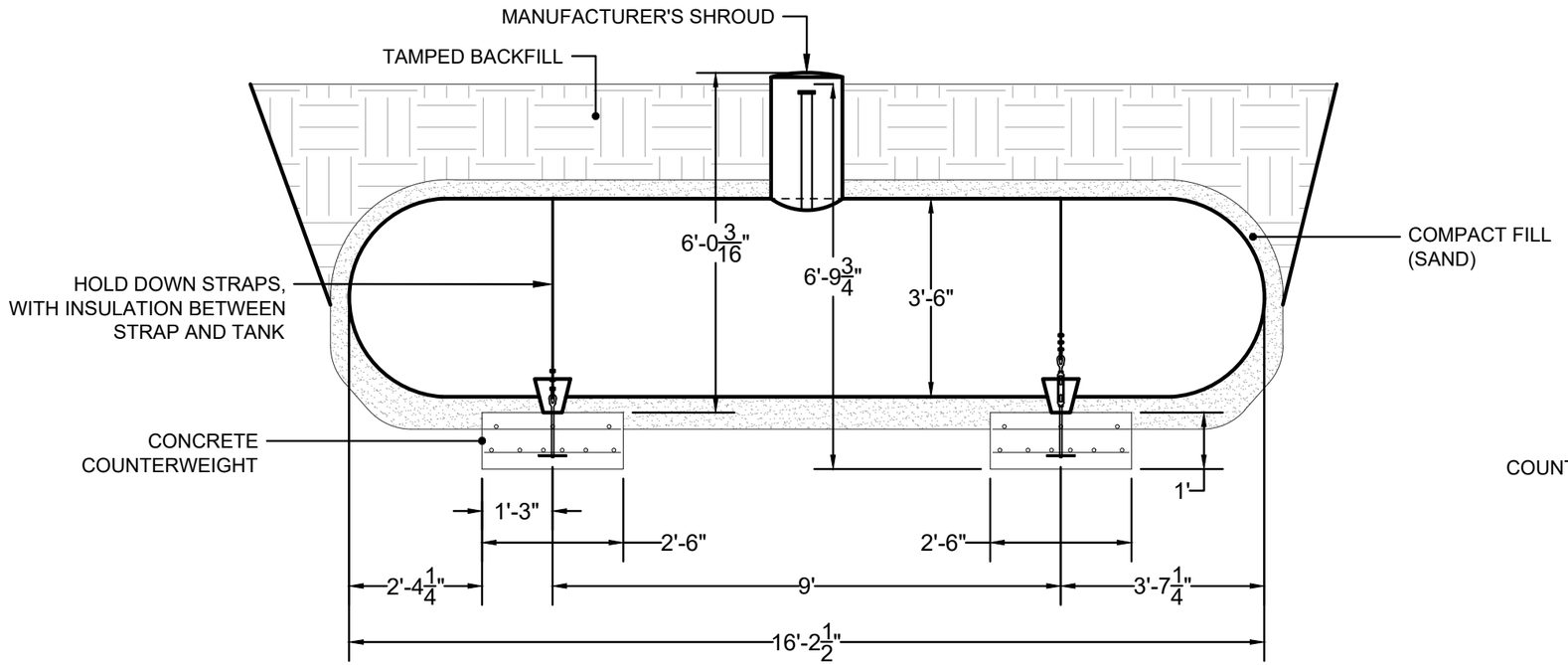


2 ENERGY RECOVERY UNIT ELEVATION
NOT TO SCALE

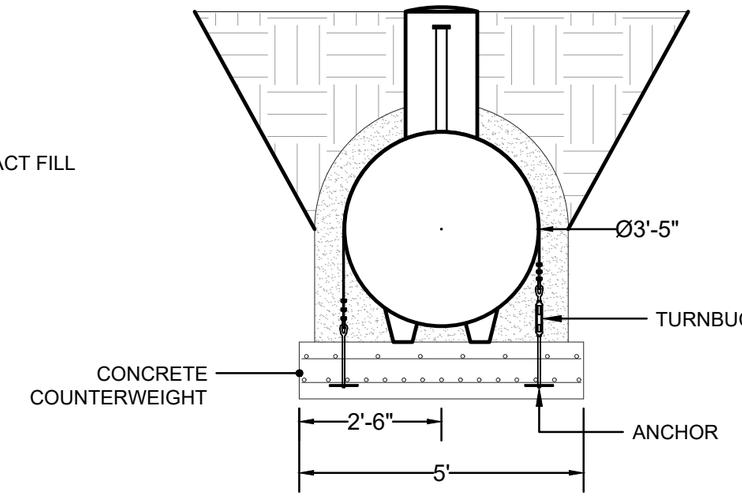


3 TYPICAL SUPPLY DUCT RUN-OUT DETAIL
NOT TO SCALE

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			MECHANICAL ELEVATIONS AND DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M400	233



1000 USWG HORIZONTAL PROPANE STORAGE TANK.

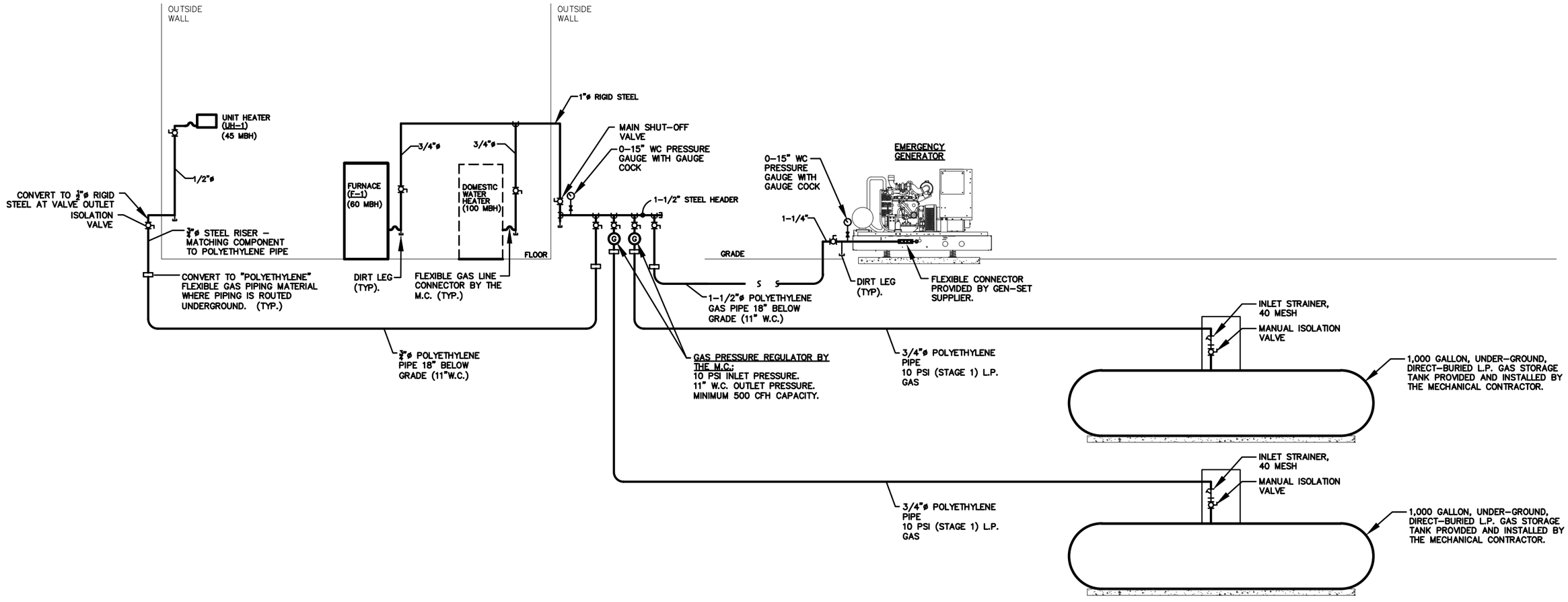


NOTES:

1) LOCATE TURNBUCKLES ON OPPOSITE CORNERS
2) SAND BACKFILL AROUND TANK
3) COAT ALL TIE DOWN MATERIALS WITH HEAVY COAT OF BITUMASTIC CEMENT

1 LP TANK DETAIL
NOT TO SCALE

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			L.P. GAS STORAGE TANK DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M401	234



1 GAS PIPING SCHEMATIC DIAGRAM
NOT TO SCALE

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			GAS PIPING SCHEMATIC DIAGRAM		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M402	235

GRILLES, REGISTERS, AND DIFFUSERS

MARK	MANUFACTURER'S MODEL NO.	Service	Size		Performance		Throw		Type	Construction	Color	Volume Damper	Access. Options	REMARKS
			DUCT	FACE	PD"	NC	FT **	Direction						
SD-1	5SH4-F23	Supply	8" x 8"	12" x 12"	<.05"	<20	8	4-Way	Square Louvered Face	Aluminum	White	No	1	A
SG-1	S-585-22	Supply	8" x 6"	10" x 8"	<.05"	<20	17	---	1/2" Single Deflection - 0 Degree	Aluminum	White	Yes		
EG-1	EGC-15-F23	Exhaust	6" x 6"	8" x 8"	<.05"	<20	---	---	1/2"x1/2"x1" Eggcrate	Aluminum	White	Yes	1	B
EG-2	EGC-15-F22	Exhaust	6" x 6"	8" x 8"	<.05"	<20	---	---	1/2"x1/2"x1" Eggcrate	Aluminum	White	Yes	2	C
RG-1	EGC-15-F23	Return	22" x 22"	24" x 24"	<.05"	<20	---	---	1/2"x1/2"x1" Eggcrate	Aluminum	White	No		
TG-1	EGC-15-F23	Transfer	10" x 10"	12" x 12"	<.05"	<20	---	---	1/2"x1/2"x1" Eggcrate	Aluminum	White	No		
TG-2	EGC-15-F23	Transfer	12" x 12"	14" x 14"	<.05"	<20	---	---	1/2"x1/2"x1" Eggcrate	Aluminum	White	No		

** Distance in FT at 100 FPM with direction pattern indicated.

Based on products by Kreuger. Equal products will be acceptable.

ACCESSORIES/OPTIONS:

1. Square Plenum Box for Lateral Duct Connection.
2. Square-to-round Adapter.
3. Infill Panel for 24"x24" Grid System.
4. Infill Panel for 24"x48" Grid System.
5. 1-hour Radiation Damper.
6. Beveled Drop Face.
7. Channel Frame for 2'x2' Grid System

REMARKS:

A. Provide 8"L X 8"W 7"H insulated plenum box
B. Provide 8"L X 8"W 8"H plenum box
C. Provide a square-to-round adaptor to 6" round duct.
D. Provide a square-to-round adaptor to 10" round duct.

"SPUN ALUMINUM" ROUND ROOF HOODS

MARK	MANUFACTURER'S MODEL NO.	SERVING	CURB THROAT	HOOD SIZE		APPLICATION	CFM	VELOCITY		MAX P.D. "	CONSTRUCTION	ACCESSORIES/ OPTIONS	REMARKS
				SIZE	HEIGHT			HOOD	THROAT				
RH-1	GRSR-10	ERV-1	10" x 10"	29" Diameter	7.75"	Exhaust	325	<200	<500	<.10"	Aluminum	1, 2, 4	A, B

Based on products by Greenheck. Equal products will be acceptable.

ACCESSORIES/OPTIONS:

1. Insect Screen
2. Bird Screen
3. Roof Curb for Flat Roofs
4. Roof Curb for Pitched Roofs
5. Gravity Backdraft Damper
6. Motorized Backdraft Damper

REMARKS:

A. Provide hood factory-painted with baked enamel paint - color choice by Architect from manufacturer's standard options.
B. Verify roof pitch with the architectural Drawings.

AIR COOLED COMPRESSOR-CONDENSING UNITS

MARK	MANUFACTURER	MODEL NUMBER	SERVING SYSTEM	NOMINAL TONAGE	SYSTEM BTU/HR.	MAX. SST	O.A.T. TEMP.	STAGES	NO. COMP	REFRIG TYPE	MIN. SEER	REFRIG. LINE SIZE		REFRIGERANT CONTROL	ELECTRICAL			ACCESSORIES/ OPTIONS	REMARKS
												LIQUID	SUCTION		MCA	MOP	VOLT/PH		
CU-2	(Any)	(Any)	F-1	2.5	30.0	40	95	1	1	R-410	18.0	3/8"	7/8"	TXV	17.0	25.0	208-240/1/60	2, 4, 5, 8	B, C

Products by Bryant, Carrier, Goodman, Lennox, RUUD, Trane or York will be acceptable. * AT 95 deg. F O.A.T.

ACCESSORIES/OPTIONS:

1. Compressor Start Assist Kit.
2. Crankcase Heater
3. Cycle Protector
4. Unit-mounted Filter-drier
5. Low ambient Lock-out Thermostat
6. Time-Delay Relay
7. Winter Start Kit
8. Thermostatic expansion valve kit

REMARKS:

A. Provide accessories as necessary for unit to operate, without damage, to 50 degrees O.A.T.
B. Provide accessories as necessary for unit to operate, without damage, to 30 degrees O.A.T.
C. Provide a pre-cast concrete or non-metallic pad for this unit - suitable for ground mounting.

DUCT-LESS SPLIT SYSTEM AIR CONDITIONING UNITS (LOW AMBIENT HEAT PUMP OPERATION)

INDOOR SECTION												OUTDOOR SECTION								
MARK	ROOM	MANUFACTURER MODEL NO.	UNIT TYPE	COOLING MBH	HEATING MBH	FAN CFM	FAN Max. dba	ELECTRICAL VOLT/PH	ELECTRICAL MCA	O.A. CFM	REMARKS	MARK	MANUFACTURER MODEL NO.	REFRG.	MIN. SEER	ELECTRICAL VOLT/PH	ELECTRICAL FLA	ELECTRICAL MCA	ELECTRICAL MOP	ACCESS.	REMARKS
AC-1	Telcom	PCA-A30KA7	Surface mount below	30.0	25.6	600	38	208/230/1	<1.0	0	A, B, C, D, E	CU-1	PUZ-HA30NKA	R410A	17.9	208/230/1		24.0	40.0	3, 4	A, B, C, D, E
			finished ceiling																		

Based on products by Mitsubishi. Equal products are acceptable. (Heating MBH at -13 Degrees F)

ACCESSORIES/OPTIONS:

1. Power Ventilation Kit
2. Fresh Air Intake Kit
3. Condensate Pump
4. Wall-mount Bracket for Condensing Unit
5. Low Ambient Kit

REMARKS:

A. Provide with digital, wireless remote control for each interior unit.
B. Provide matching refrigeration line sets - size as recommended by the manufacturer.
C. Refrigerant suction piping shall be insulated for entire length between indoor and outdoor sections.
D. Refrigerant liquid line shall be insulated when accessible to non-maintenance personnel for burn protection.
E. Provide condensate drainage pump for each indoor unit and pipe condensate to a suitable location.

CONSTANT VOLUME, TWO-STAGE "RESIDENTIAL" FURNACES

MARK	MANUFACTURER	MODEL NO.	Configuration	FAN			COOLING				HEATING				O.A.	CFM	VOLT	ACCESS./	REMARKS
				CFM	E.S.P.	HP	Type	Refrig.	Max. P.D.	Coil size	Fuel	IN	OUT	EFF.	"Normal"	"High"	/PH	OPTIONS	
F-1	(Any)	(Any)	Vertical	1,050	0.375"	1/2	DX	410A	0.25"	3-Ton	L.P. Gas	60.0/42.0	57.6/40.3	96%	31%	N/A	120/1	1, 2	A, B, C, E

Products by Bryant, Carrier, Goodman, Lennox, RUUD, Trane or York will be acceptable.

ACCESSORIES/OPTIONS:

1. External-access Side Filter Kit
2. Cased evaporator coil
3. Un-cased evaporator coil
4. Electronic air cleaner
5. Humidifier
6. Concentric termination kit

REMARKS:

A. Provide a matching cased evaporator coil to mate with this furnace.
B. Pipe all gas venting and combustion air out sidewall and terminate as directed by the manufacterer.
C. Construct a condensate trap of Schedule 40 PVC piping for the evaporator coil drain and pipe to nearest floor drain.
D. Provide a condensate pump to collect the furnace and evap. Coil condensate and pump to the nearest site drain.
E. This furnace has a two-stage gas valve. Equal products shall be two-stage firing.

DUCTWORK INSULATION

AIR SYSTEM	DUCT SYSTEM	DUCT WRAP			DUCT BOARD				DUCT LINER				No Insulation Required	REMARKS
		1 1/2"	3"	DENSITY	1"	1 1/2"	2"	DENSITY	1/2"	1"	1 1/2"	DENSITY		
Furnace Systems	Rectangular Supply Air Ductwork inside Building Envelope	X		.75 PCF										
	Rectangular Supply Air Ductwork in Attic Cavity		X	.75 PCF										
	Round Supply Air Ductwork inside Building Envelope	X		.75 PCF										
	Round Supply Air Ductwork in Attic Cavity		X	.75 PCF										
	Rectangular Return Air Ductwork inside Building Envelope												X	
	Rectangular Return Air Ductwork in Attic Cavity		X	.75 PCF										
	Round Return Air Ductwork inside Building Envelope												X	
	Round Return Air Ductwork in Attic Cavity		X	.75 PCF										
Energy Recovery Units	Outside Air Ductwork inside Building Envelope		X	.75 PCF										
	Outside Air Ductwork in Attic Cavity												X	
	Suction side Exhaust Air Ductwork inside Building Envelope												X	
	suction side Exhaust Air Ductwork in Attic Cavity	X		.75 PCF										
	Tempered Outside Air Ductwork inside Building Envelope	X		.75 PCF									X	
	Tempered Outside Air Ductwork in Attic Cavity		X	.75 PCF										
	Discharge side Exhaust Air Ductwork inside Building Envelope	X		.75 PCF										
Miscellaneous Systems	Transfer Air Ductwork								X			3.0 PCF		

DUCTWORK CONSTRUCTION STANDARDS

SYSTEM	DUCTWORK INVOLVED	MINIMUM DUCT PRESSURE CLASS									SEAL CLASS	REMARKS
		+4"	+3"	+2"	+1"	+1/2"	-1/2"	-1"	-2"	-3"		
Furnace Systems	Outside Air Ductwork					X					A	
	Supply Air Ductwork				X						A	
	Return Air Ductwork						X				C	
Energy Recovery Unit	Outside Air Ductwork						X				A	
	Tempered Outside Air Ductwork					X					A	
	Exhaust Air Ductwork					X					A	
	Return Air Ductwork						X				C	
Misc. Systems	Transfer Air Ductwork					X	X				C	

REMARKS:

1. Ductwork pressure class may be higher than required to stiffen ductwork for sound control.

FAN POWERED AIR TO AIR HEAT EXCHANGERS - TOTAL ENERGY TRANSFER TYPE

MARK	MANUFACTURER MODEL NO.	SERVING/ LOCATION	SUPPLY FAN					EXHAUST FAN					UNIT EFFICIENCY		LEAVING AIR CONDITIONS		ELECTRICAL			ACCESSORIES/ OPTIONS	REMARKS
			CFM	E.S.P.	MOTOR HP	OUTSIDE AIR CONDITIONS		CFM	E.S.P.	MOTOR HP	RETURN AIR CONDITIONS						VOLT/PH	MCA	MOP		
						SUMMER	WINTER				SUMMER	WINTER	TOTAL EFF (%)	SENSIBLE EFF (%)	SUMMER	WINTER					
ERV-1	EV450IN	Sanitary Exhaust	325	0.25"	1/4	89/73	-20	325	0.375"	1/4	75/ 50%	68/35%	62% (W)/52.6%(S)	69%	83/70	34	120/1	9.5	15.0	1, 2	A, B, C, D

Based on products by Renewaire

ACCESSORIES/OPTIONS:
1. Factory-installed Disconnect Switch
2. Control Circuit Transformer
3. Digital Time Clock
4. Carbon Dioxide (CO2) Sensor/Control
5. Backdraft dampers

REMARKS:
A. Verify the preferred unit configuration prior to ordering unit. Unit can be ordered in "Right Hand" or "Left Hand" versions.
B. Control power shall be 24 VAC.
C. Provide (2) sets of pleated media air filters (MERV 8).
D. Provide unit with ECM Motors.

CONTROL DAMPERS

MARK	SERVICE	RECOMMENDED MODEL NO.	DESIGN AIR VOLUME	MAX. PSI DROP	DAMPER ORIENTATION	DAMPER DIMENSIONS			BLADE SEALS	EDGE SEALS	INSULATED BLADES?	DAMPER ACTUATOR			CONSTRUCTION	ACCESSORIES/ OPTIONS	REMARKS
						WIDTH	HEIGHT	ROUND				OPERATION	VOLTAGE/PHASE	CONTROL BY			
CD-1	Outside Air to ERV-1	ARD-25	325	.05"	Vertical			8"	Yes	Yes	No	Two-Position	24 VAC	M.C.	Aluminum	1	A
CD-2	Exhaust Air from ERV-1	ARD-25	325	.05"	Vertical			8"	Yes	Yes	No	Two-Position	24 VAC	M.C.	Aluminum	1	A

Based on products by Ruskin. Equal products will be acceptable.

ACCESSORIES/OPTIONS:
1. Single End Switch in Damper Actuator
2. Two End Switches in Damper Actuator

REMARKS:
A. These dampers shall fully open whenever their respective ERV is indexed "on".

GAS-FIRED UNIT HEATERS - SEPARATED COMBUSTION

MARK	MANUFACTURER MODEL NO.	AIR-SIDE					HEATING			PERFORMANCE AT DESIGN CONDITIONS				FUEL		%	ELECTRICAL		GAS	COMBUSTION	ACCESSORIES/	REMARKS
		AIRFLOW	QTY. FANS	HP PER FAN	FAN TYPE	FAN RPM	INPUT	OUTPUT	Eff.	O.A.T.	R.A.T.	M.A.T.	D.A.T.	TYPE	PRESS.	O.A.	FLA	VOLT/PH	VENT	AIR	OPTIONS	
UH-1	UDZ-045	629 CFM	1	1/30	PROPELLER	1,050	45 MBH	37.4 MBH	83%	(N/A)	65	65	120	L.P. Gas	11" w.c.	0.0%	2.4	120/1	4 Inch	4 Inch	2, 6, 8	A

Based on products by Reznor. Equal products will be acceptable.

ACCESSORIES/OPTIONS:
1. Stainless Steel Heat Exchanger
2. Stainless Steel Burners
3. Ignition Controls for L.P. Gas
4. Two-stage Gas Valve
5. Electronic Modulation
6. Vertical (and horizontal) Louvers
7. Vertical Combination Vent Terminal
8. Horizontal Combination Vent Terminal

REMARKS:
A. Provide a heavy duty, line voltage, snap-acting room thermostat (single temperature) with adjustable setpoint for each unit heater. (Honeywell T4051A or similar product).

REFRIGERANT PIPE SIZING

SYSTEM		NOMINAL TONNAGE	REFRIGERANT			LIQUID LINE				SUCTION LINE				HOT GAS LINE				REMARKS
EVAP. COIL	COND. UNIT		TYPE	COND. TEMP.	EVAP. TEMP.	MAXIMUM * Equivalent Length	P.D.	PIPE SIZE	Accessories	MAXIMUM * Equivalent Length	P.D.	PIPE SIZE	Accessories	MAXIMUM * Equivalent Length	P.D.	PIPE SIZE	Accessories	
F-1	CU-2	2.5	R-410	115	40	20 Ft.	4.0	3/8"	1, 2, 3, 4	15 Ft.	4.0	7/8"	3	---	---	---	---	A, B, C

* Equivalent length in feet and pressure drop in PSI.

ACCESSORIES:
1. Sight Glass.
2. Canister type filter drier.
3. Ball valves for servicing accessories.
4. Thermostatic expansion valve.
5. Solenoid valve.

REMARKS:
A. Pre-insulated Refrigerant Line Sets will be Acceptable.
B. Filter drier may be provided with condensing unit.
C. Size TXV for specific evaporator coil supplied.

ELECTRIC HEATING EQUIPMENT

EQUIP NO.	MANUFACTURER	MODEL NO.	EQUIPMENT DESCRIPTION	EQUIPMENT LOCATION	UNIT CONSTRUCTION	ELECTRICAL CHARACTERISTICS				PROVIDED BY		INSTALLED BY		WIRING				ACCESSORIES	REMARKS
						WATTS	AMPS	VOLT	PH.	MC	EC	MC	EC	N.C.	SIZE	CONDUIT	GRND		
ECH-1	Qmark	RCC7508C	Electric Cove Heater	Public Toilet 104	Wall-mounted Electric Cove Heater	750	3.6	208	1	X			X	2	12	1/2"	12	C	3
ERP-1	Qmark	202SLB	Knee Space Radiant Heating Panel	Drivers 103 (Total of 3 Heaters)	Wall-mounted Radiant Panel with Cord and Plug	170	1.4	120	1	X			X	2	12	1/2"	12		1, 2, 3
EWH-1	Qmark	AHW4404F	Surface-mount Electric Wall Heater	Multiple Locations (Total of 2)	Surface-mount Electric Wall Heater	1,500	7.2	208	1	X			X	2	12	1/2"	12	F	4

ACCESSORIES:

A. Unit-mounted Disconnect Switch
B. Unit-mounted Thermostat
C. Wall-mounted Thermostat
D. Wall-mounting Bracket
E. Ceiling-mounting Bracket
F. Surface-mounting Kit

REMARKS:

1. Provide one radiant panel for each of (2) knee spaces in the new Reception Desk.
2. Mount panels approximately 6" above finished floor.
3. Provide matching line voltage thermostat (single temperature) and heavy duty cast metal vandal guard to fit thermostat size and orientation.
4. Provide optional surface-mounting frame for this electric wall heater.

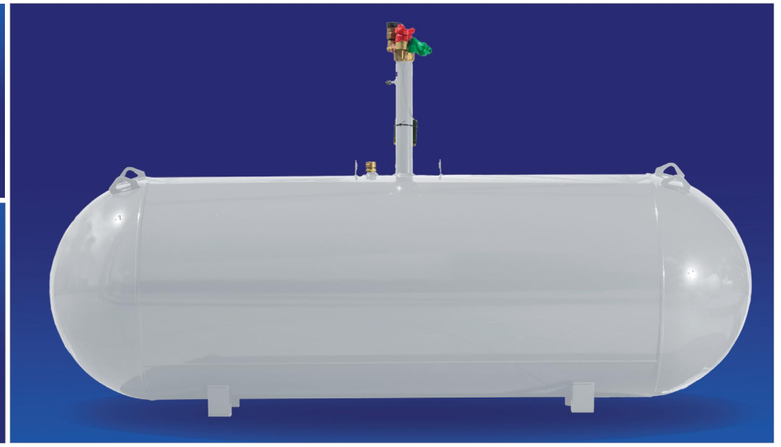
MANCHESTER TANK

UNDERGROUND PROPANE STORAGE TANKS

120 - 1000 Gallons

SHROUD
For 500 & 1,000 gallon tanks

SHROUD
For 120, 250 & 320 gallon tanks



PRESSURE VESSEL CODES & REGISTRATION

- Designed and constructed in accordance with the ASME Section VIII, Division 1 Code
- Registered with the National Board of Boiler & Pressure Vessels Inspectors
- Complies with NFPA 58
- Conforms to specifications set forth by the Railroad Commission of Texas

PAINT SPECIFICATIONS

- Epoxy powder paint for maximum rust protection
- Tanks painted gray
- Ready to bury durable epoxy powder coating†

SHROUD FEATURES (500 & 1,000 gallon)

- Durable construction
- Large opening for easy filling and maintenance
- Recessed markers to indicate proper burial depth
- Permanent hole for mounting location flag
- Access on sides for flexible riser connection
- New shroud available for 500 gallon and 1,000 gallon UG tanks, shroud dimensions:
  - * Shroud for long riser 32 3/16" X 26 5/16"
  - * Shroud for short riser 19 3/8" X 26 5/16"

VESSEL FEATURES

- Tanks fully fitted with RegO valves and Rochester liquid level gauges
- Container pressure rated at 250 PSI @ 400°F
- Vacuum purged
- Duplicate data plate is zip tied on the riser pipe below the anode bolt connection for convenience
- Product is offered with 14" short or 28" tall risers
- Anode bolt connection located under the dome
- Short or tall plastic shroud assemblies (w/lid) supplied accordingly
- #54 liquid level outage valve orifice

PROCESS CONTROL

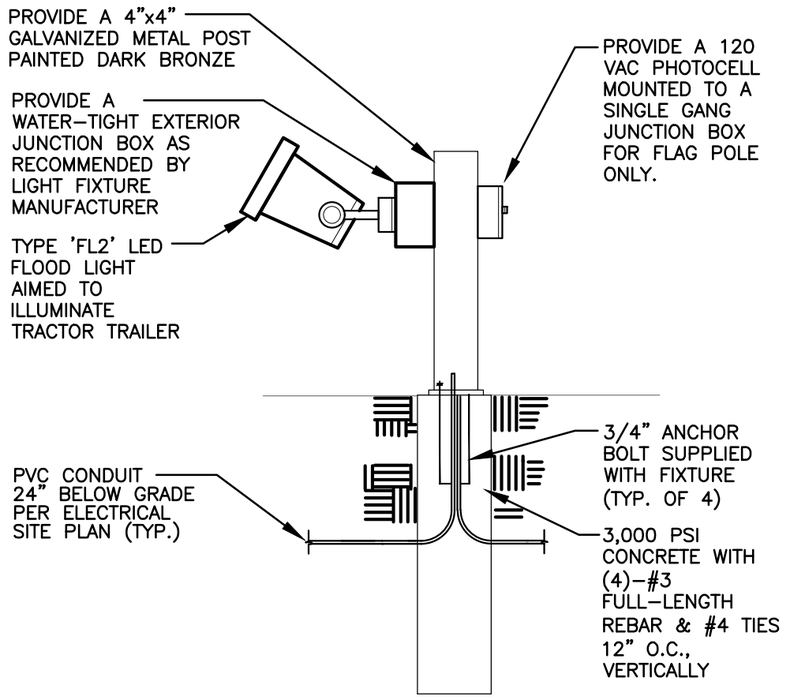
All welded products are x-rayed and pressure tested @ 325 PSI per ASME Sec VIII, Div 1 requirements, followed by rigorous leak test inspections, both pre and post valving

STORAGE & DISTRIBUTION

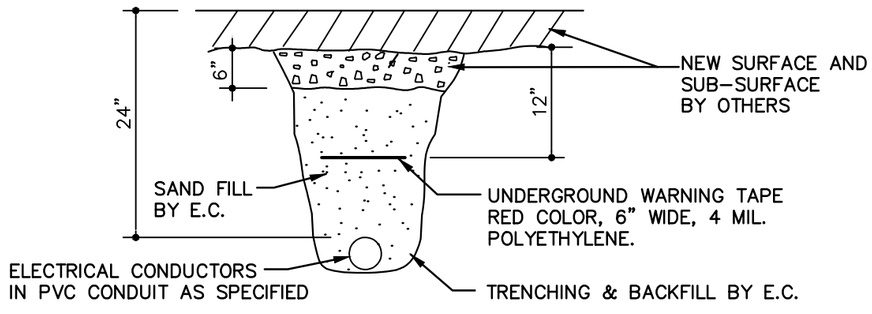
Contact Propane Education & Research Council for additional resources and information at **propane.com**

Made With Pride — Made In the U.S.A.

PLANS PREPARED BY: GALILEO GROUP, LLC, LA CROSSE, WI			PROPANE STORAGE TANK		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE: AS NOTED	SHEET NO: M505	



1 FLOOD LIGHT DETAIL
NTS



2 TYPICAL CONDUIT TRENCH
NTS

LIGHTING

- RECESSED FLUORESCENT FIXTURE. SEE LIGHTING FIXTURE SCHEDULE. 'A' INDICATES FIXTURE TYPE. 'b' INDICATES SWITCH CONTROL
- SURFACE FLUORESCENT FIXTURE SEE LIGHTING FIXTURE SCHEDULE. 'A' INDICATES FIXTURE TYPE. 'b' INDICATES SWITCH CONTROL
- WALL BRACKET LIGHTING FIXTURE SEE LIGHTING FIXTURE SCHEDULE 'A' INDICATES FIXTURE TYPE
- SURFACE–MOUNTED FIXTURE–SEE LIGHTING FIXTURE SCHEDULE FOR DECRIPTION AND MANUFACTURER 'A' INDICATES FIXTURE TYPE
- PENDANT–MOUNTED LIGHTING FIXTURE 'A' INDICATES FIXTURE TYPE
- RECESS–MOUNTED DOWNLIGHT–SEE LIGHTING FIXTURE SCHEDULE FOR DECRIPTION AND MANUFACTURER 'A' INDICATES FIXTURE TYPE
- RECESSED WALL–WASH OR SPOTLIGHTING FIXTURE, DIRECTION AS INDICATED BY ARROW 'A' INDICATES FIXTURE TYPE
- WALL MOUNTED FIXTURE–SEE FIXTURE SCHEDULE 'A' INDICATES FIXTURE TYPE
- POLE MOUNTED LIGHT FIXTURE
- FLUORESCENT STRIP FIXTURE 'A' INDICATES FIXTURE TYPE
- TRACK LIGHTING FIXTURE WITH NUMBER OF FIXTURES INDICATED.
- LIGHTING FIXTURES ON EMERGENCY POWER SOURCE 'A' INDICATES FIXTURE TYPE. 'NL' INDICATES IF FIXTURE IS TO BE ON AT ALL TIMES
- EMERGENCY LIGHTING UNIT WITH SELF–CONTAINED BATTERY AND HEADS AS INDICATED WG = WIRE GUARD PROTECTED
- EXIT LIGHT FIXTURE, NUMBER OF FACES AND DIRECTIONAL ARROWS AS INDICATED WG = WIRE GUARD PROTECTED

RACEWAY

- NEUTRAL CONDUCTOR (TYP.)
- POWER CONDUCTOR (TYP.)
- BRANCH CIRCUIT CARRYING SWITCHED CONDUCTORS
- BRANCH CIRCUIT WITHOUT SWITCHED CONDUCTORS
- LOW VOLTAGE CIRCUIT
- GROUND OR NEUTRAL CONNECTION AS INDICATED
- JUNCTION BOX
- L2, LCP–1, R1 — HOME RUN TO PANEL 'L' CIRCUIT #2 VIA RELAY #1 IN LIGHTING CONTROL PANEL LCP–1. SEE PANELBOARD & LIGHTING CONTROL RELAY SCHEDULES
- L2 — HOME RUN DIRECTLY TO PANEL 'L' CIRCUIT #2
- CONDUIT ROUTED ABOVE GROUND SIZE AND TYPE AS INDICATED
- CONDUIT ROUTED BELOW GROUND OR FLOOR SLAB SIZE AND TYPE AS INDICATED

NOTE: ALL BRANCH CIRCUITS TO CARRY SEPARATE GROUNDING CONDUCTOR REGARDLESS OF CONDUIT MATERIAL

MISCELLANEOUS

- EQUIPMENT CONNECTION POINT: SEE MOTOR & EQUIPMENT SCHEDULE

MOTORS AND EQUIPMENT

- MAGNETIC MOTOR STARTER
- COMBINATION DISCONNECT SWITCH AND STARTER
- MANUAL MOTOR SWITCH, 3–PHASE WITH OVERLOADS AND PILOT LIGHT
- MOTOR SEE POWER AND EQUIPMENT SCHEDULE.
- EQUIPMENT CONNECTION POINT. SEE POWER AND EQUIPMENT SCHEDULE.

CONTROL DEVICES

- CP — CONTROL PANEL
- TCP — TEMPERATURE CONTROL PANEL
- TC — TIME CLOCK
- P — PHOTOCELL
- T — THERMOSTAT
- R — RELAY
- DOOR BELL
- BUZZER
- PUSH BUTTON REMOTE CONTROL STATION

RECEPTACLES

- DUPLEX RECEPTACLE WITH 3 WIRE GROUNDING
- XX — SPECIAL PURPOSE DUPLEX RECEPTACLE LETTERS INDICATE FUNCTION – CIRCUIT RECEPT. AS INDICATED
  - AC = ABOVE COUNTER MOUNTING HEIGHT
  - GFCI = RECEPTACLE WITH GROUND FAULT INTERRUPTION (GFI) PROTECTION
  - WP = WEATHERPROOF
- FOUR–PLEX (DOUBLE DUPLEX) RECEPTACLE
- SINGLE RECEPTACLE
- SPECIAL PURPOSE OUTLET, TYPE AS INDICATED
- SURFACE–MOUNTED "PLUG MOLD"; TYPE, MOUNTING HEIGHT & RECEPT. LOCATIONS AS INDICATED

SWITCHES

- $x — WALL SWITCH, SINGLE POLE SINGLE THROW (SPST) LETTER INDICATES SPECIAL FEATURE
  - 3 = 3–WAY SWITCH
  - 4 = 4–WAY SWITCH
  - D = DIMMER
  - OS = OCCUPANCY SENSING
  - P = PILOT LIGHT
  - WP = WEATHER PROOF

  NOTE: LOWER CASE LETTERS INDICATE MULTIPLE LEVELS OF LIGHT CONTROL OF FIXTURES WITH CORRESPONDING LETTERS INDICATED ON FIXTURES
- OS — CEILING MOUNTED OCCUPANCY SENSOR
- PP — OCCUPANCY SENSOR POWER PACK

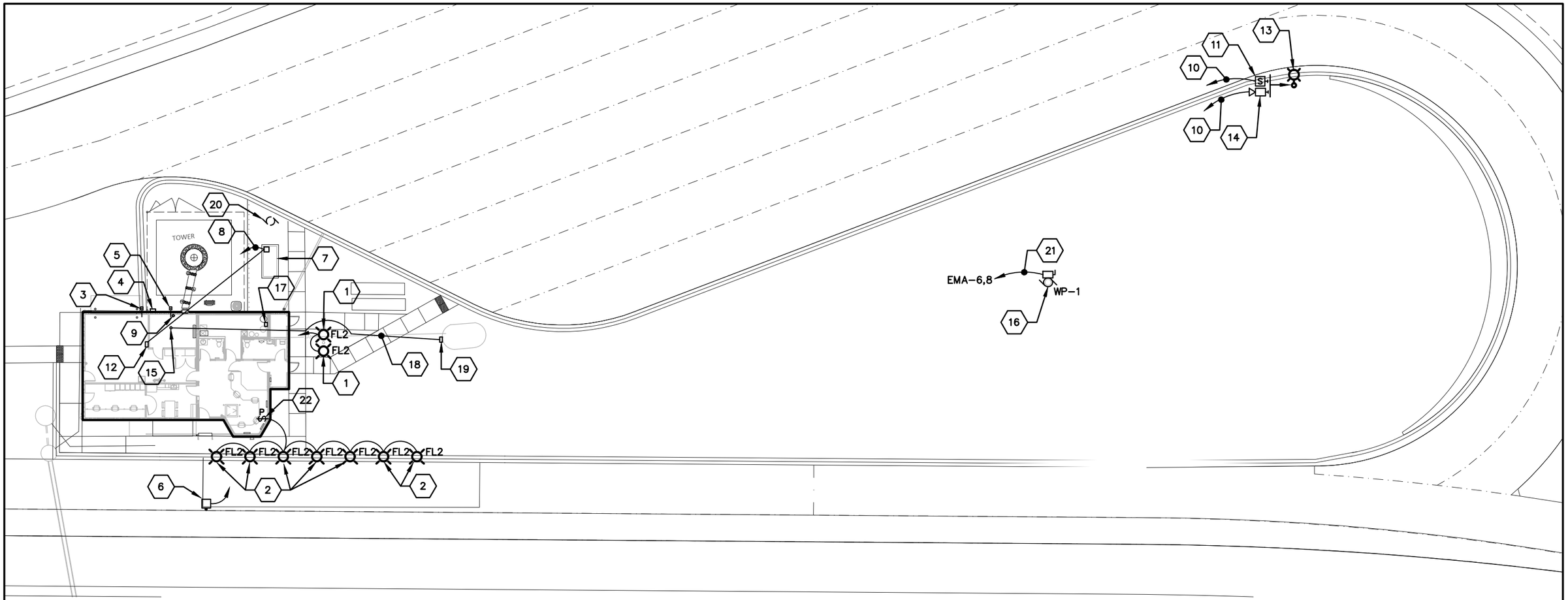
DISTRIBUTION EQUIPMENT

- POWER DISTRIBUTION PANEL.
- BRANCH CIRCUIT PANELBOARD
- ELECTRICAL METER SOCKET
- T — TRANSFORMER. SIZE AS INDICATED
- DISCONNECT SWITCH, NON–FUSED
- DISCONNECT SWITCH, FUSED

DATA AND COMMUNICATION EQUIPMENT

- TTB 4'x8' — DATA/COMMUNICATION BOARD (TTB) 3/4" THICK, GRADE AC PLYWOOD. HEIGHT AND WIDTH AS INDICATED.
- 2 — TELECOMMUNICATIONS OUTLET NUMBER INDICATES 1–DATA JACK, 1–PHONE JACK
- TTC — TELEPHONE TERMINAL CABINET
- TELEVISION OUTLET

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL SYMBOLS AND SITE DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E000	242



1 ELECTRICAL SITE PLAN

1" = 30'-0"

SEE SHEET E002 FOR KEYED NOTES

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL SITE PLAN		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E001	

KEYED SITE PLAN NOTES 1/E100:

1. PROVIDE TWO (2) TYPE 'FL2' LIGHT FIXTURES MOUNTED 180 DEGREES FROM ONE ANOTHER, ONE ON EACH SIDE OF FLAG POLE. FIELD VERIFY EXACT LOCATION FOR BEST ILLUMINATION OF FLAG POLE. CONNECT LIGHT FIXTURES TO PHOTO CELL. REFER TO MOUNTING DETAIL **1/E000**.
2. PROVIDE TYPE 'FL2' LED FLOOD LIGHT TO ILLUMINATE SIDE OF SEMI TRUCK AND TRAILER. VERIFY LOCATION WITH WISCONSIN DOT DEPARTMENT. REFER TO TYPE 'FL2' MOUNTING DETAIL **1/E000**.
3. PROVIDE AN EMPTY 3" SCHEDULE 40 PVC CONDUIT BETWEEN PANELBOARD 'MDF' AND STUB OUT 3'-0" BEYOND EXTERIOR WALL FOR 'SALT SHED' FEEDER.
4. LOCATION OF 600 AMP., 120/240 VAC, 1-PHASE, 3-WIRE WALL-MOUNTED CURRENT TRANSFORMER (C/T) CABINET. ELECTRICAL CONTRACTOR SHALL PROVIDE A C/T CABINET APPROVED BY LOCAL ELECTRIC UTILITY COMPANY.
5. APPROXIMATE LOCATION OF TELEPHONE SERVICE ENTRANCE CABLE. COORDINATE WITH UTILITY AND MEDIA PROVIDER(S). REFER TO DETAIL **1/E401**.
6. PROVIDE AND INSTALL EXTERIOR PUBLIC ADDRESS SYSTEM SPEAKER AND INSTALL ON EXTERIOR SIGNAL POLE IN LOCATION AS DIRECETED BY OWNER. CONNECT TO HEAD-END EQUIPMENT LOCATED IN TELECOM ROOM #110. FIELD COORDINATE CONDUIT INSTALLATION AND MOUNTING REQUIREMENTS.
7. LOCATION OF 75 KW, 120/240 VAC, 1-PHASE, 3-WIRE, LP GAS EMERGENCY GENERATOR. ELECTRICAL CONTRACTOR SHALL COORDINATE THOROUGHLY WITH GENERATOR MANUFACTURER. ELECTRICAL CONTRACTOR SHALL PROVIDE A CONCRETE PAD SIZED AS RECOMMENDED BY GENERATOR MANUFACTURER. PLEASE NOTE GENERATOR SHALL INCLUDE REMOTE MONITORING AND START/STOP STATION LOCATED INSIDE STORAGE ROOM #109. ALSO PROVIDE AN EMERGENCY 'SHUT-OFF' SWITCH LOCATED ON EXTERIOR WALL OF BUILDING ADJACENT TO EMERGENCY GENERATOR.
8. PROVIDE FEEDER, BRANCH-CIRCUIT AND START/STOP CONDUITS TO AUTOMATIC TRANSFER SWITCHES LOCATED IN TELECOM #110. REFER TO ELECTRIC RISER DIAGRAM **1/E400**.
9. STUB-UP A 2" PVC CONDUIT IN TELECOMM ROOM #110 FOR INSTALLING EXTERIOR CAMERA AND PUBLIC ADDRESS SYSTEM CABLING TO EXISTING LIGHT POLE. REFER TO DETAIL **1/E404**.
10. PROVIDE A 2" SCHEDULE 40 PVC CONDUIT FOR EXTERIOR CAMERA AND PUBLIC ADDRESS SPEAKER CABLING LOCATED AT EXISTING PARKING LOT LIGHT POLE. CONDUITS ROUTED BELOW CONCRETE DRIVES SHALL BE SCHEDULE 80. INSTALL CONDUIT BETWEEN EXISTING LIGHT POLE AND TELECOM ROOM #110.
11. PROVIDE AN EXTERIOR PUBLIC ADDRESS SPEAKER AND MOUNT ON HIGH RISE LIGHT POLE AT 8'-0" ABOVE GRADE, CONNECT TO HEAD-END EQUIPMENT LOCATED IN TELECOMM ROOM #110. INSTALL CONDUIT ABOVE GRADE ON EXTERIOR OF POLE WITH RIGID GALVANIZED CONDUIT. THE LOCATION IS 'STATION POINT 18 + 75L'.
12. APPROXIMATE LOCATION OF GENERATOR REMOTE MONITORING AND START/STOP STATION.
13. LOCATION OF EXISTING PARKING LOT LIGHT POLE AT 'STATION POINT 18 + 75L'.
14. PROVIDE AND INSTALL AN EXTERIOR CAMERA AT APPROXIMATELY 15'-0" ABOVE GRADE. COORDINATE WITH MANUFACTURER PRIOR TO SUBMITTING BID, PROVIDE HEATED ENCLOSURE WITH BLOWER AS REQUIRED. PROVIDE POWER AS REQUIRED FOR PAN-ZOOM-TILT CAMERA.
15. INSTALL 1" PVC CONDUIT BETWEEN EQUIPMENT RACKS AND HOLDING TANK FOR MONITORING CABLES.
16. MAKE FINAL CONNECTION TO 7.5 HP, 240VAC, 1-PHASE WELL PUMP MOTOR. PROVIDE A 100 AMP., 2-POLE, NON-FUSED, NEMA 3R DISCONNECT. MOUNT DISCONNECT TO 4"X4"X7'-0" TREATED POST. COORDINATE WITH WELL INSTALLER.
17. MAKE FINAL CONNECTION TO HOLDING TANK ALARM. COORDINATE EXACT LOCATION AND ELECTRICAL REQUIREMENTS WITH HOLDING TANK INSTALLER.
18. PROVIDE 3-#12 XHHW-2 CONDUCTORS AND 1- LOW VOLTAGE CABLE AS RECOMMENDED BY SEPTIC SYSTEM INSTALLER IN 1" SCHEDULE 40 PVC FOR LOW VOLTAGE WIRING TO HOLDING TANK ALARM SWITCH.
19. MAKE FINAL CONNECTION TO HOLDING TANK ALARM SWITCH. COORDINATE WITH HOLDING TANK INSTALLER.
20. DISCONNECT EXISTING WELL PUMP TO BE REMOVED, COORDINATE WITH WELL CONTRACTOR.
21. PROVIDE ONE (1) 1-1/4" SCHEDULE 40 PVC CONDUIT WITH 2-#4 XHHW-2 AND 1-#8 XHHW-2 (GRD) TO PANELBOARD 'EMA' LOCATED IN STORAGE/UTILITY ROOM #109. CONDUIT AND CONDUCTORS PURPOSELY OVERSIZED FOR VOLTAGE DROP.
22. PROVIDE A 20 AMP., 120VAC, SINGLE POLE LIGHT SWITCH WITH RED PILOT LIGHT.

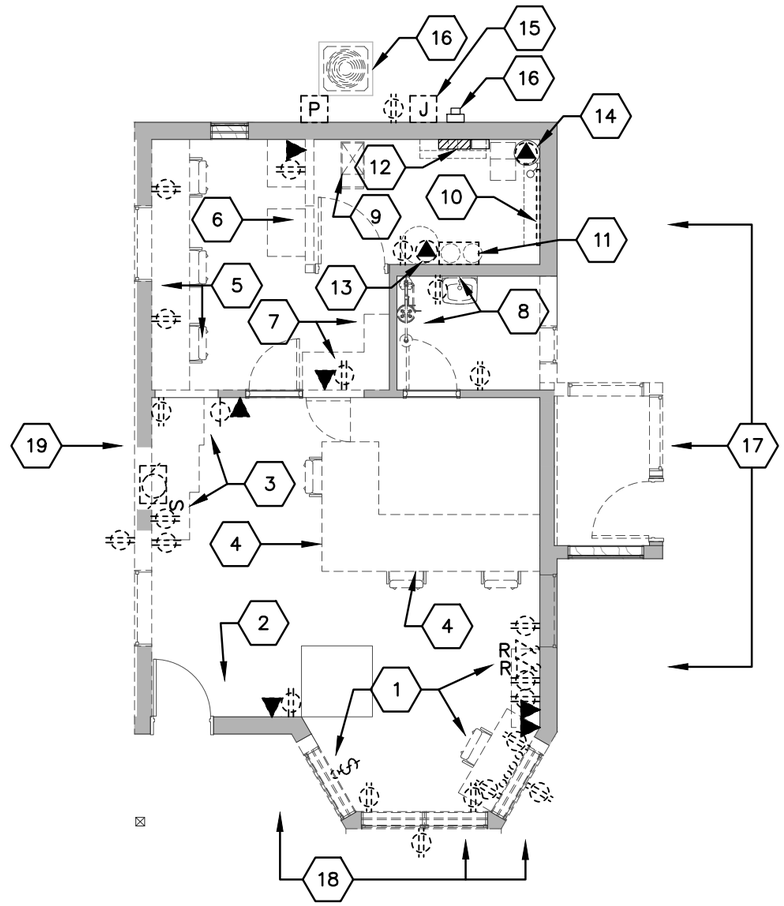
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			**ELECTRICAL SITE PLAN NOTES**		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E001.1	244

GENERAL ELECTRICAL REMOVAL NOTES:

a. In general **ALL** existing electrical Service Panelboards, branch-circuit wiring, Low Voltage System, Telecommunications wiring, conduit, junction boxes, wiring devices, lighting fixtures, support fittings, ETC. shall be demolished and removed from the construction site. Do not abandon existing wiring in place, remove back to source. The intent is to remove and dispose **all** existing electrical wiring systems and install **NEW**. Field verify with General Contractor, Mechanical HVAC AND Plumbing Contractors prior to disconnecting existing equipment for removal. Salvage any electrical equipment which may have value to Wisconsin DOT department. A few specific items will remain as noted on drawings.

KEYED ELECTRICAL REMOVAL PLAN NOTES POWER AND LOW VOLTAGE - E002: ⬡

1. For this area, refer to photos #1/E003, #2/E003, #3/E004, #4/E004, #5/E004 and #7/E004 for electrical items to be removed.
2. For this area, refer to photo #6/E004 for electrical items to be removed.
3. For this area, refer to photo #10/E004 for electrical items to be removed.
4. Disconnect, remove and dispose of all existing surface mounted line voltage and low voltage wiring from counter to be demolished. Refer to photos #8/E004, #9/E004, #11/E004 & #14/E005 for removal of electrical items.
5. For this area, refer to photos #19/E005 and #20/E005 for electrical items to be removed.
6. For this area, refer to photo #17/E005 for electrical items to be removed.
7. For this area, refer to photo #18/E005 for electrical items to be removed.
8. For this area, refer to photos #15/E005 and #16/E005 for electrical items to be removed.
9. Disconnect existing furnace for removal by others, refer to photo #25/E006.
10. Disconnect, remove and dispose of existing Telephone jacks, telephone cable and head-end equipment on this wall. Refer to photo #31/E006 for electrical items to be removed. Remove all associated wiring between telephone terminal blocks and telephone jacks, do not abandon in place. In addition disconnect all existing mechanical equipment for removal and wiring devices on this wall as required, refer to photo #26/E006.
11. Disconnect and remove existing IT equipment rack, associated cable, etc. Refer to photos #22/E005 and #23/E006 for reference. Remove all associated wiring between IT equipment rack and data jacks. Do not abandon wiring in place.
12. Disconnect, remove and dispose of existing 200 amp., 120/240VAC, Single-Phase electric service panelboards 'A' and 'B'. Remove all associated branch-circuit wiring connected to electric service and lighting control equipment. Refer to photos #28/E006, #29/E006 and #30/E006. Please note, existing Site Lighting Controller shall remain as is and is required to be reconnected from new electric service to match original installation. Existing site lighting pole lights to remain and shall be reconnected to match existing installation. Coordinate with Site Lighting Contractor.
13. Disconnect existing electric water heater for removal by others, refer to photo #24/E006.
14. Disconnect existing electric duct heater for removal by others, refer to photo #27/E006. In addition disconnect, remove and dispose of existing smoke detector.
15. Electrical Contractor shall be allowed to reuse all existing exterior LB's and underground conduit to the extent possible for remodel work. Refer to photo #34/E007. Disconnect and remove existing electric meter socket.
16. For this wall refer to photos #32/E006 and #33/E007 for electrical removal items. Disconnect existing condenser for removal by others.
17. For this wall refer to photos #35/E007, #36/E007 and #37/E007 for electrical removal items.
18. For this wall refer to photos #38/E007 and #39/E007 for electrical removal items.
19. For this wall refer to photos #47/E008 and #48/E008 for electrical removal items.



1 ELECTRICAL REMOVAL PLAN: POWER & LOW VOLTAGE
1/8" = 1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL REMOVAL PLAN: POWER & LOW VOLTAGE		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E002	245

PHOTO #1
7206

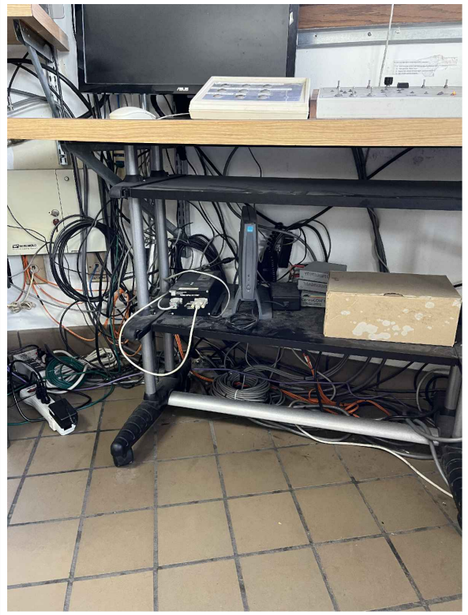
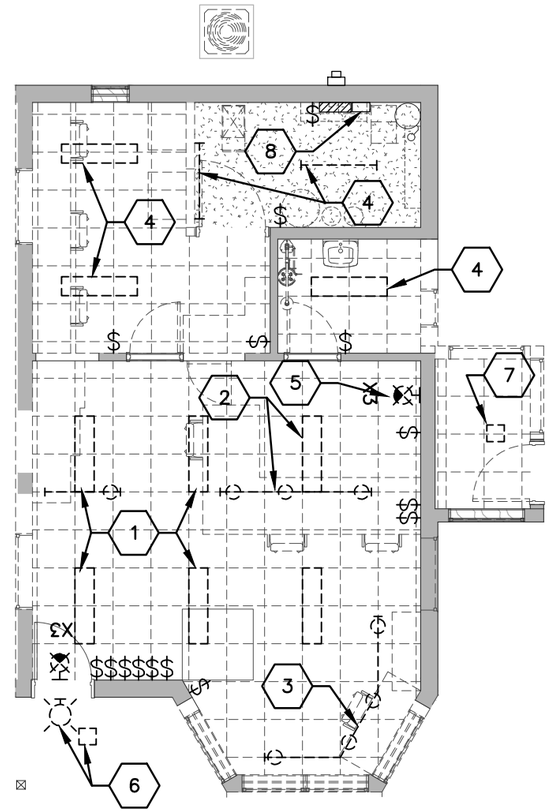


PHOTO #2
7209

KEYED ELECTRICAL REMOVAL PLAN NOTES LIGHTING E003:

1. Disconnect, remove and dispose of existing fluorescent lay-in/surface lighting fixture. Refer to photos #6/E004 and #12/E004 for reference.
2. Disconnect, remove and dispose of existing fluorescent lay-in/surface lighting fixture and surface track lighting. Refer to photo #14/E005 for reference.
3. Disconnect, remove and dispose of existing surface track lighting. Refer to photo #13/E005 for reference.
4. Disconnect, remove and dispose of existing fluorescent lay-in/surface lighting fixture.
5. Disconnect, remove and dispose of existing exit lighting fixture. Refer to photo #21/E005.
6. Disconnect, remove and dispose of existing exterior surface fixture and emergency egress lighting fixture. Refer to photo #38/E007.
7. Disconnect, remove and dispose of existing surface fixture.
8. Existing Site Lighting Controller to remain as is. Please note it will be required to refeed controller to match original installation from new electric service panels. Refer to photo **#30/E006**.



1 ELECTRICAL REMOVAL PLAN: LIGHTING
1/8" = 1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL REMOVAL PLAN: LIGHTING		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E003	246

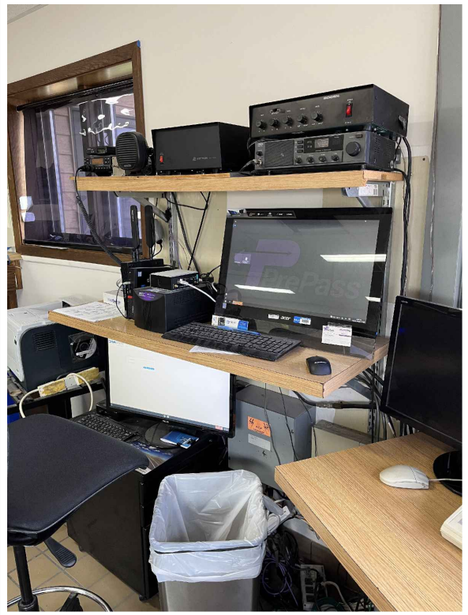


PHOTO #3
7212

PHOTO #4
7264

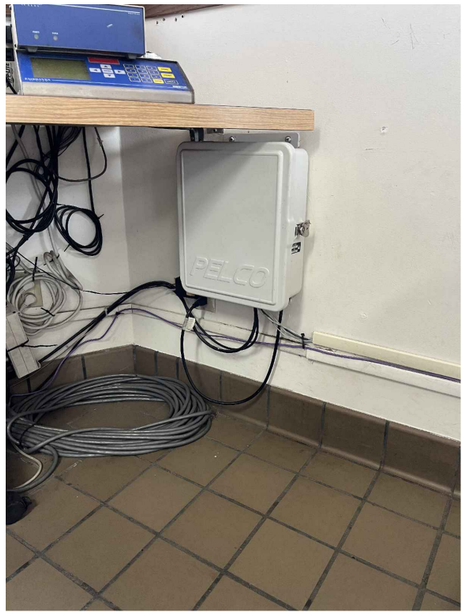
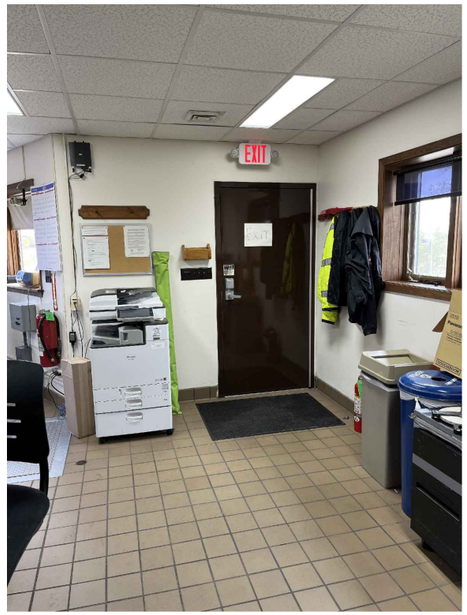


PHOTO #5
7208



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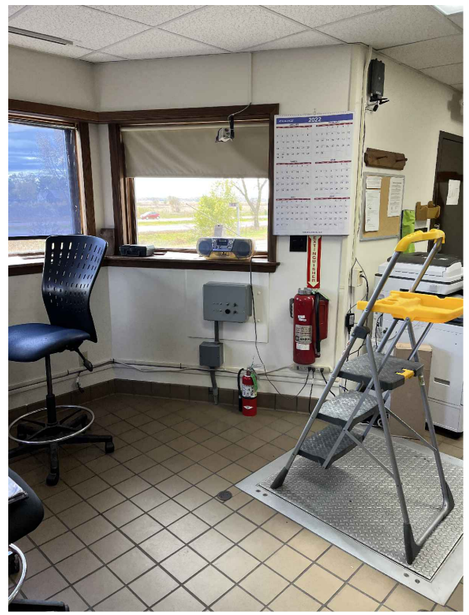

PHOTO #7
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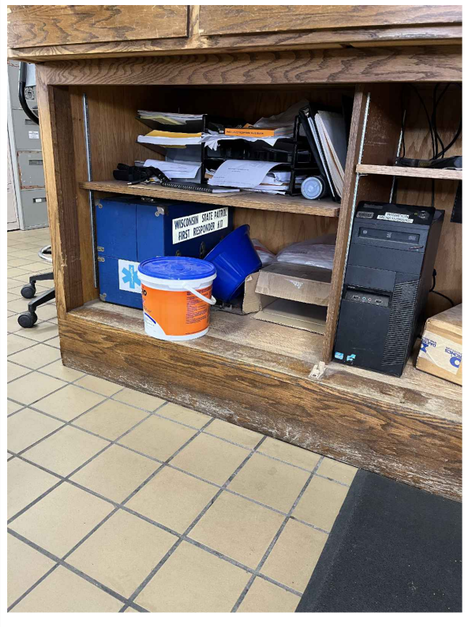


PHOTO #8
7218

PHOTO #9
7215

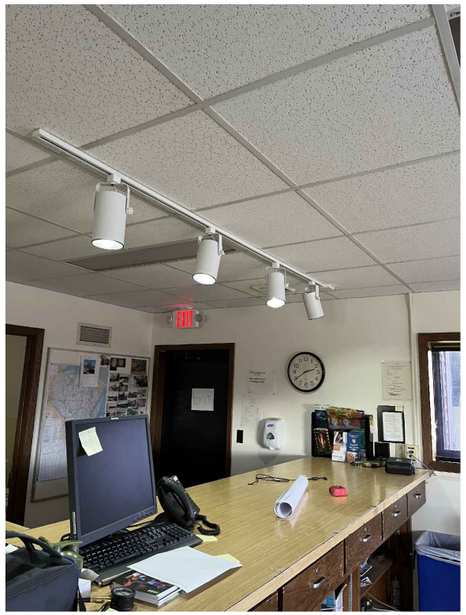
PHOTO #10
7201

PHOTO #11
7260

PHOTO #12
7262

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			**ELECTRICAL REMOVAL PHOTOGRAPHS**		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E004	

PHOTO #13
7263



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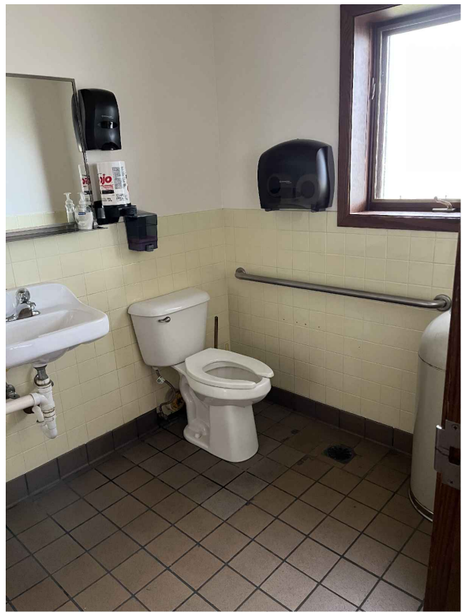

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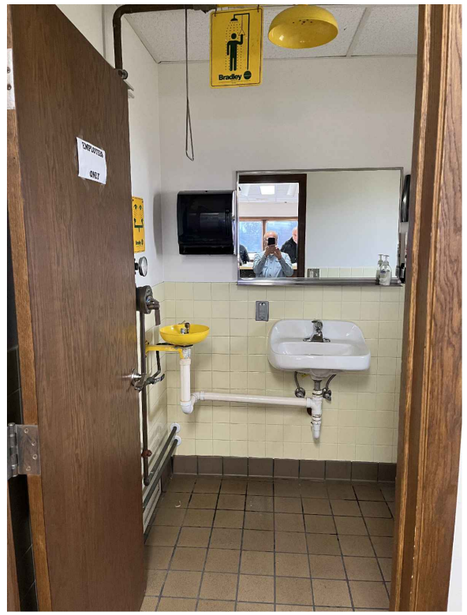

PHOTO #16
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PHOTO #17
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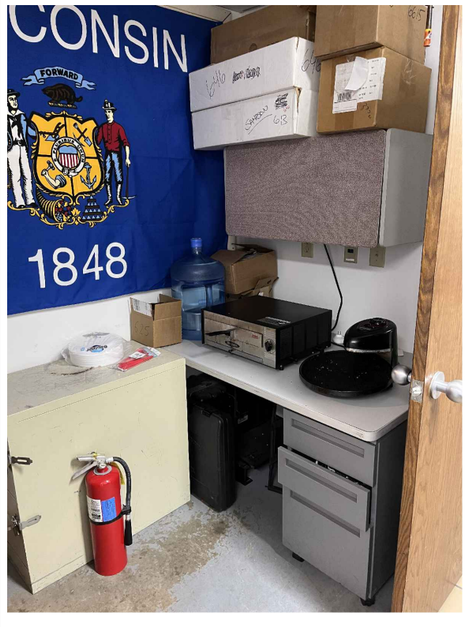

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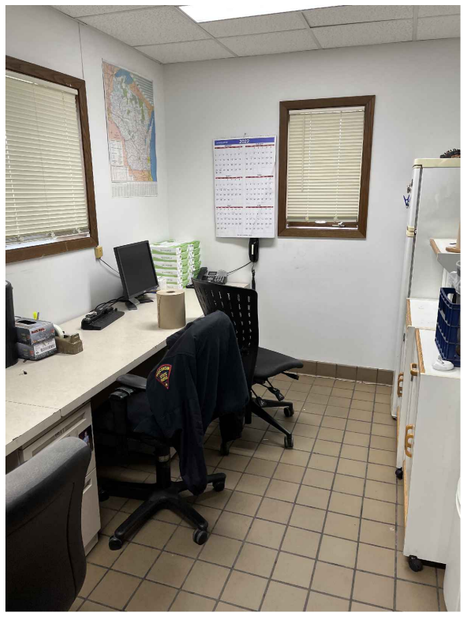

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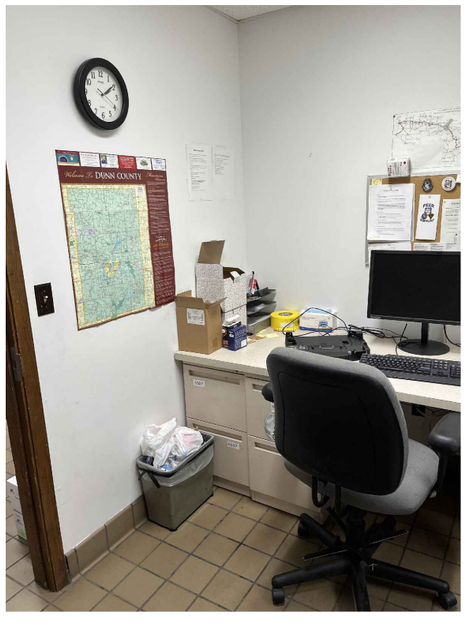

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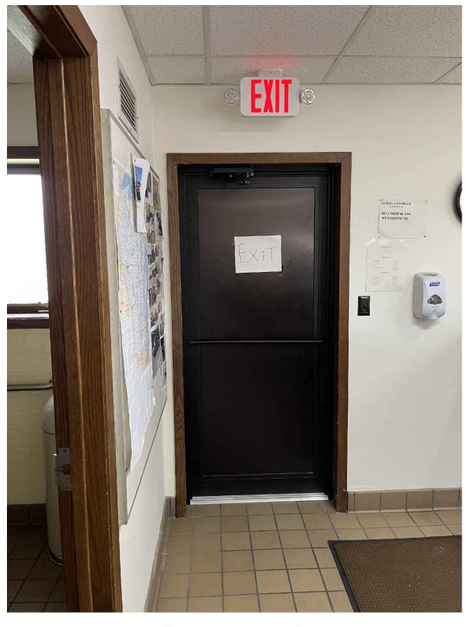


PHOTO #21
7220

PHOTO #22
7179

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL REMOVAL PHOTOGRAPHS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E005	

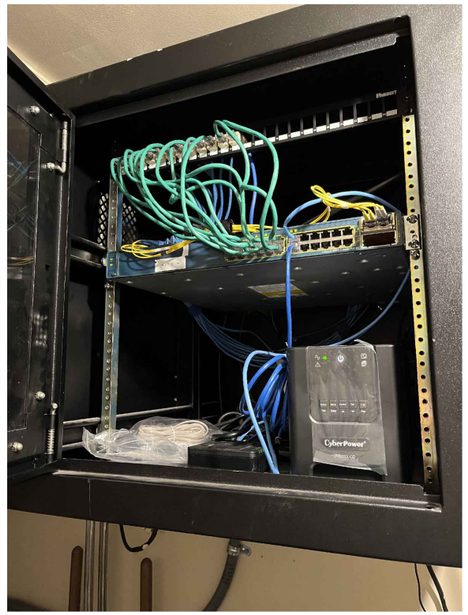
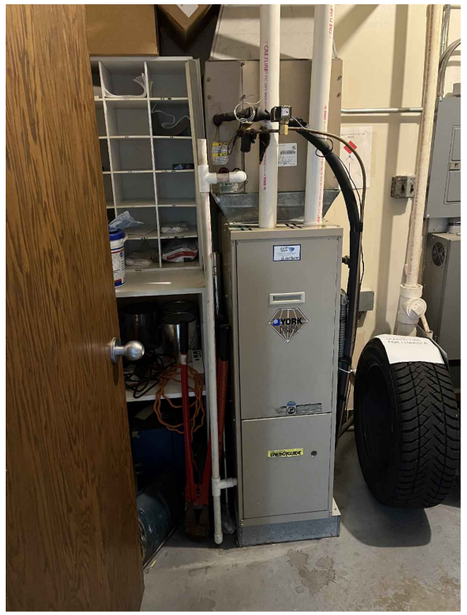


PHOTO #23
7252

PHOTO #24
7182



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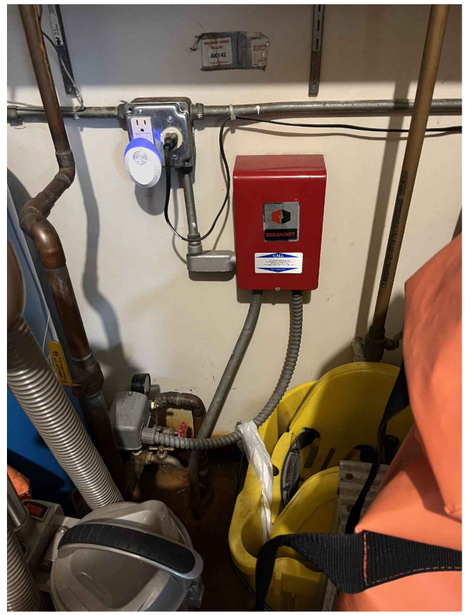

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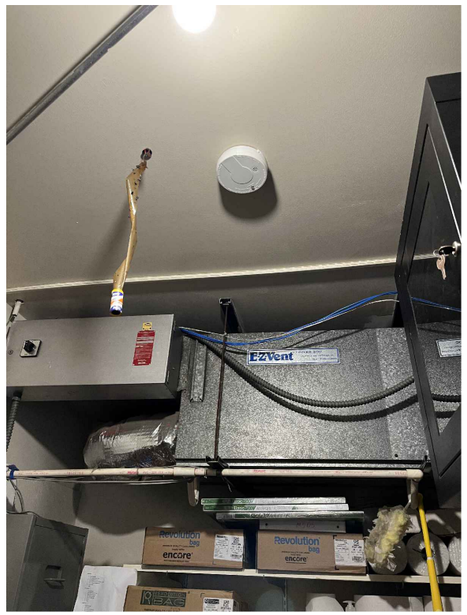

PHOTO #27
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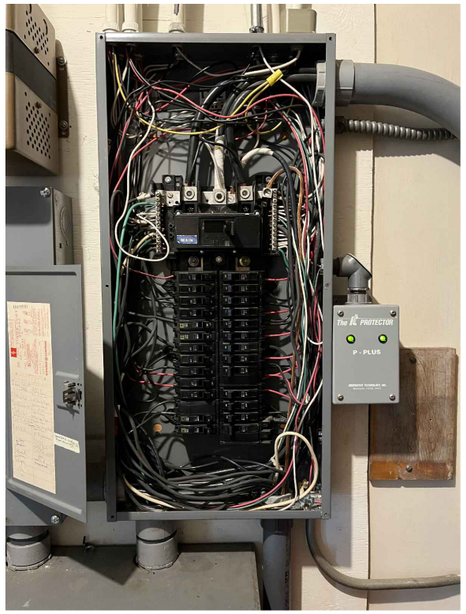
PHOTO #28
7166



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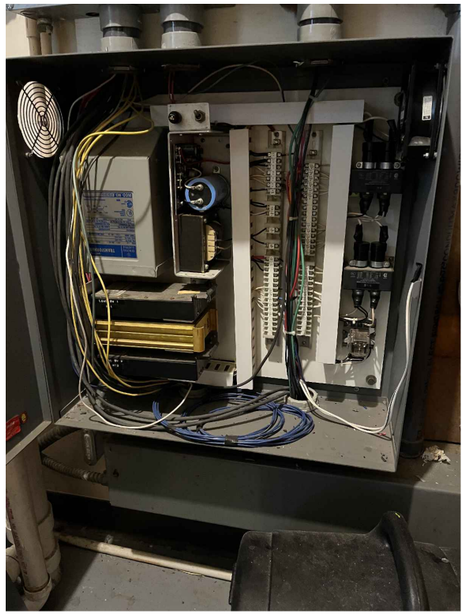

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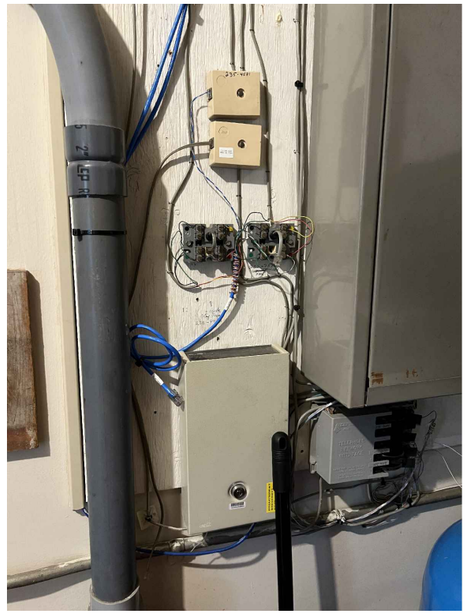

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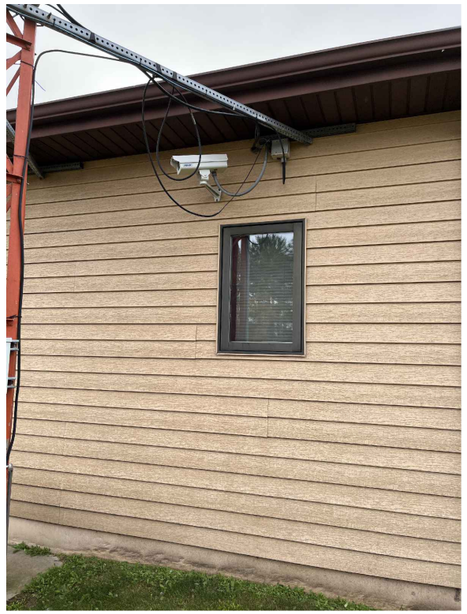

PHOTO #32
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PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL REMOVAL PHOTOGRAPHS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E006	249

PHOTO #33
7237

PHOTO #34
7238

PHOTO #35
7232

PHOTO #36
7233

PHOTO #37
7235

PHOTO #38
7227

PHOTO #39
7231

PHOTO #40
7241

PHOTO #41
7248

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL REMOVAL PHOTOGRAPHS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E007	

PHOTO #42
5533

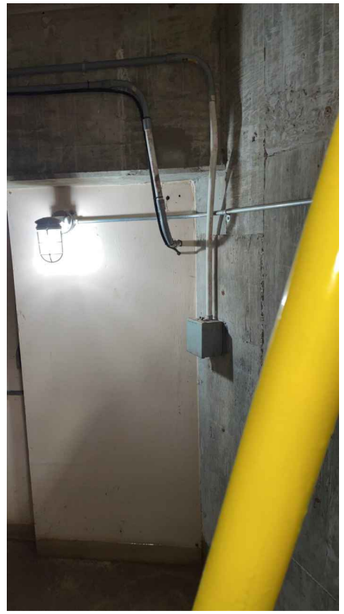

PHOTO #43
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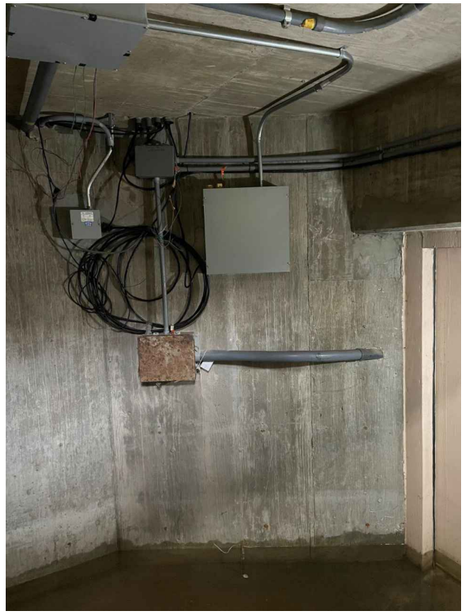

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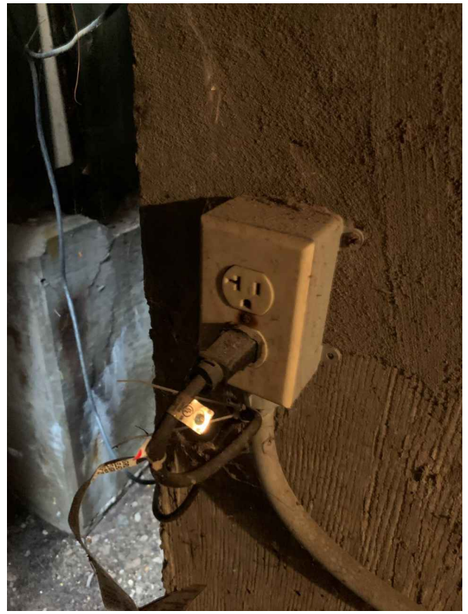

PHOTO #45
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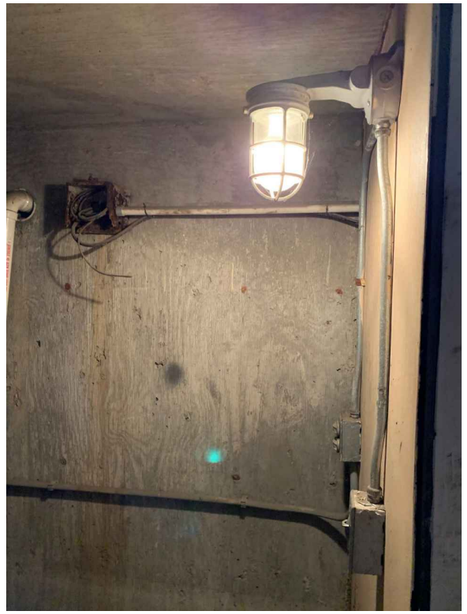


PHOTO #46
1788

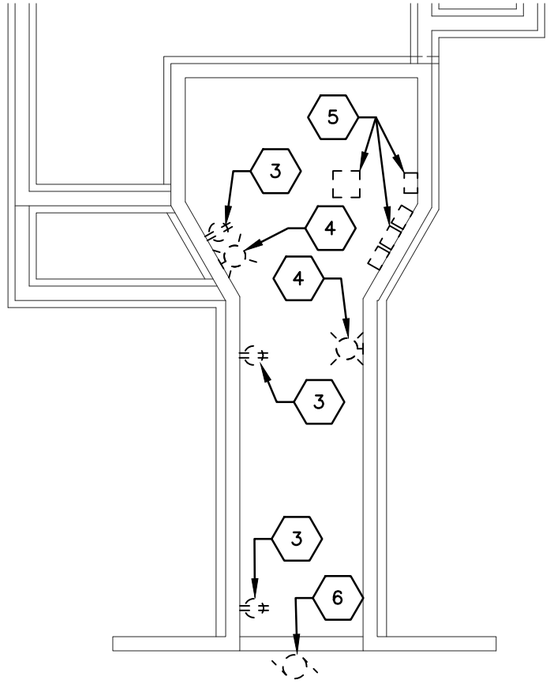
PHOTO #47
7245

PHOTO #48
7246

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			**ELECTRICAL REMOVAL PHOTOGRAPHS**		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E008	251

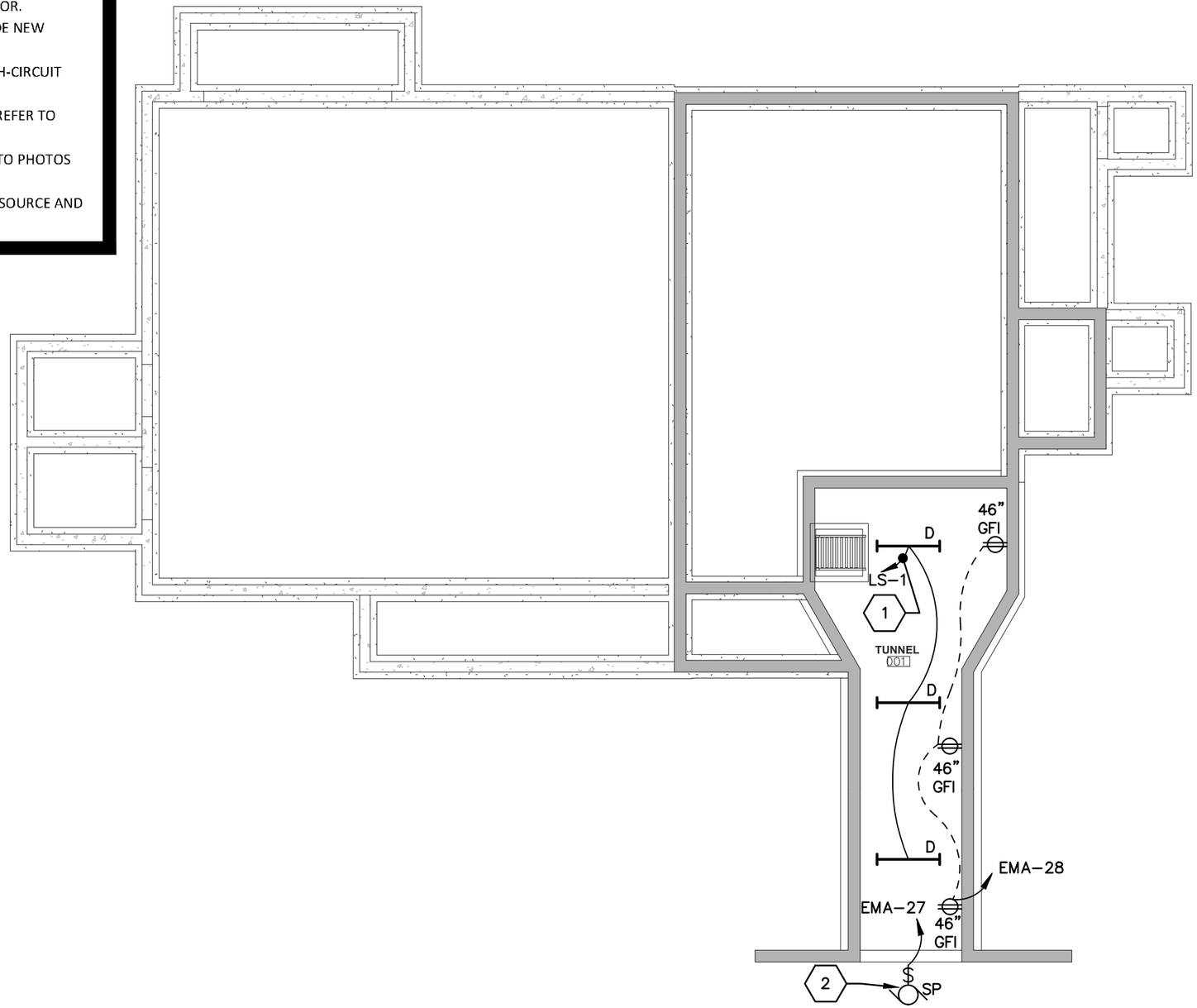
KEYED ELECTRICAL LOWER LEVEL PLAN NOTES E100:

1. CONNECT LIGHTING FIXTURES TO SINGLE-POLE LIGHT SWITCH LOCATED ABOVE FLOOR HATCH DOOR.
2. RECONNECT EXISTING SUMP PUMP TO REMAIN TO NEW ELECTRIC SERVICE PANELBOARD, PROVIDE NEW BRANCH-CIRCUIT WIRING, ETC TO MATCH ORIGINAL INSTALLATION.
3. DISCONNECT, REMOVE AND DISPOSE OF EXISTING DUPLEX RECEPTACLE AND ASSOCIATED BRANCH-CIRCUIT WIRING. REFER TO PHOTO #45/E008.
4. DISCONNECT, REMOVE AND DISPOSE OF EXISTING LIGHTING FIXTURE AND ASSOCIATED WIRING. REFER TO PHOTOS #43/E008 AND #46/E008.
5. DISCONNECT, REMOVE AND DISPOSE EXISTING JUNCTION BOXES, CONDUIT, WIRING, ETC. REFER TO PHOTOS #42/E008 AND #44/E008.
6. DISCONNECT EXISTING SUMP PUMP AND REMOVE ALL EXISTING CONDUIT AND WIRING BACK TO SOURCE AND REPLACE WITH NEW.



1 ELECTRICAL REMOVAL PLAN: LOWER LEVEL

1/8" = 1'-0"



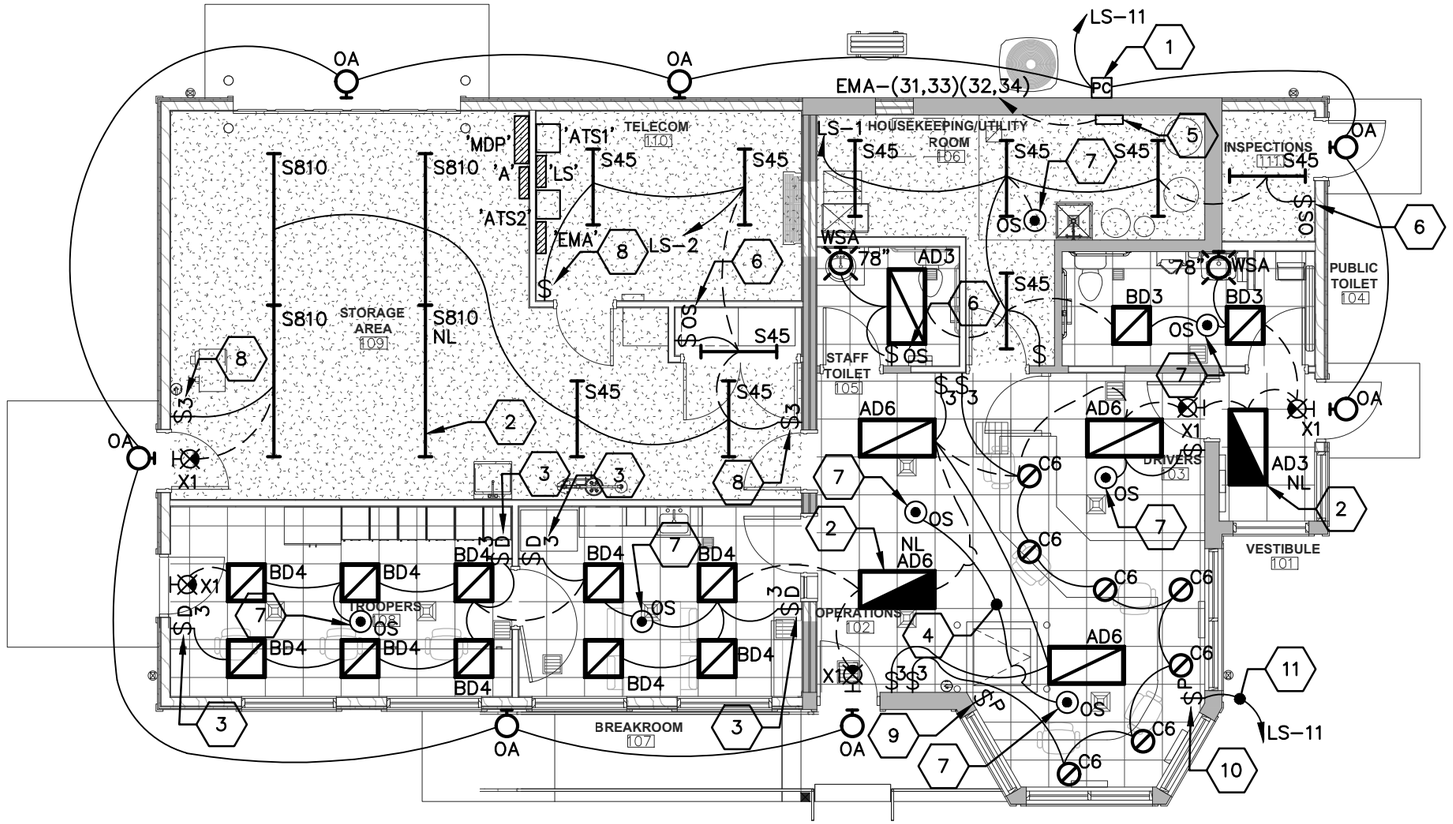
2 ELECTRICAL LIGHTING, POWER & LOW VOLTAGE PLAN: LOWER LEVEL

1/8" = 1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL REMOVAL, LIGHTING, POWER & LOW VOLTAGE PLANS: LOWER LEVEL		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E100	252

KEYED LIGHTING PLAN NOTES 1/E101:

1. APPROXIMATE LOCATION OF EXTERIOR LINE VOLTAGE PHOTOCELL, LIGHTING FIXTURES SHALL OPERATE FROM DUSK TO DAWN.
2. LIGHTING FIXTURE SHALL BE CONTIUOUSLY ILLUMINATED AND SHALL SERVE AS A NIGHT LIGHT. (TYP.)
3. PROVIDE SINGLE POLE/3-WAY LINE VOLTAGE DIMMER SWITCH TO CONTROL LED LIGHTING FIXTURES, PROVIDE LOW-VOLTAGE 0-10VOLT CONTROL WIRING (IF REQUIRED) TO EACH LIGHT FIXTURE. TYPICAL
4. INTERCONNECT OCCUPANCY SENSORS WITH LOW-VOLTAGE WIRING AS RECOMMENDED BY OCCUPANCY SENSOR MANUFACTURER.
5. REFEED EXISTING SITE LIGHTING CONTROLLER TO MATCH ORIGINAL INSTALLATION. EXISTING CONTROLLER WAS PREVIOUSLY DISCONNECTED DURING DEMOLITION PHASE OF CONSTRUCTION AND REQUIRES TO BE RECONNECTED TO NEW ELECTRIC SERVICE.
6. PROVIDE INFRARED SINGLE RELAY WALL-MOUNTED LINE VOLTAGE OCCUPANCY SENSOR.
7. PROVIDE A DUAL TECHNOLOGY CEILING-MOUNTED LINE VOLTAGE OCCUPANCY SENSOR FOR AUTOMATIC CONTROL OF LIGHTING FIXTURES IN THIS ROOM.
8. PROVIDE A 20 AMP., SINGLE-POLE/3-WAY LIGHT SWITCH IN THIS ROOM. NEC DOES NOT ALLOW OCCUPANCY SENSORS IN AREAS WHERE PANELBOARDS ARE INSTALLED.
9. PROVIDE A SINGLE POLE LIGHT SWITCH WITH RED PILOT LIGHT TO CONTROL LIGHTING FIXTURES IN LOWER LEVEL.
10. PROVIDE A SINGLE POLE LIGHT SWITCH WITH RED PILOT LIGHT TO CONTROL EXTERIOR FLOOD LIGHTS TO ILLUMINATE SIDE OF SEMI TRUCK AND TRAILER.
11. PROVIDE SWITCH-LEG WIRING TO TYPE 'FL2' FLOOD LIGHTING FIXTURES. REFER TO SITE PLAN 1/E001 FOR LOCATION.



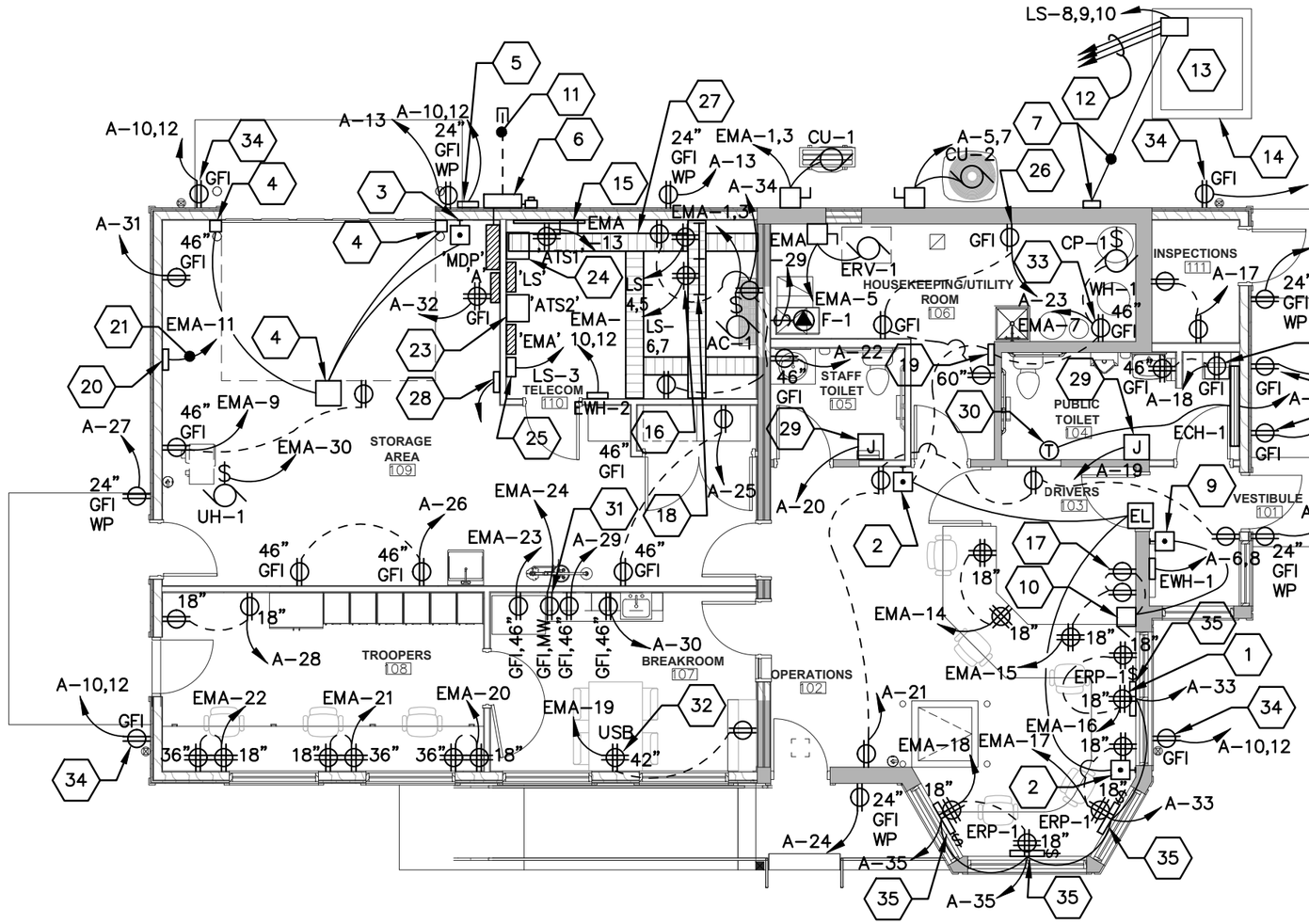
1 ELECTRICAL LIGHTING PLAN: FIRST FLOOR

1/8" = 1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL LIGHTING PLAN: FIRST FLOOR		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E101	253

KEYED POWER PLAN NOTES 1E/200:

1. LOCATION OF 'WEIGH-IN-MOTION' INSPECTION CCTV MONITOR.
2. PROVIDE AND INSTALL A PUSH BUTTON FOR ELECTRIC DOOR STRIKE LOCATED IN DOOR TO DRIVERS ROOM 103. PUSHBUTTON SHALL UNLOCK DOOR WHEN ENERGIZED. FIELD VERIFY EXA LOCATION WITH OWNER.
3. MAKE FINAL CONNECTION TO PUSH-BUTTON DOOR OPERATOR FOR OVERHEAD DOOR.
4. PROVIDE LOW-VOLTAGE WIRING BETWEEN OVERHEAD DOOR PUSH-BUTTON OPERATOR & SAFETY SWITCHES AND OVERHEAD DOOR MOTOR CONTROLLER AS RECOMMENDED BY OVERHEAD DOOR MANUFACTURER. INSTALL CONCEALED WITHIN WALL. DO NOT INSTALL 'FRE AIR' EXPOSED ON THE SURFACE.
5. PROVIDE AND INSTALL A HEAT TAPE CONTROL PANEL AS SPECIFIED. ELECTRICAL CONTRACTO IS RESPONSIBLE FOR PROVIDING HEAT TAPE CABLE FOR ALL GUTTERS AND DOWNSPOUTS ON THE BUILDING. REFER TOARCHITECTURAL DRAWINGS AND DETAILS FOR ESTIMATING LENGTH REFER TO DETAIL **2/E403**.
6. LOCATION OF 600 AMP., 120/240VAC, SINGLE-PHASE, 3-WIRE, C/T CABINET. REFER TO ELECTRIC RISER DIAGRAM **1/E400**.
7. LOCATION OF EMERGENCY GENERATOR EXTERIOR REMOTE SHUT-OFF SWITCH FOR GENERATO LOCATED ON BUILDING EXTERIOR WALL ADJACENT TO GENERATOR. PROVIDE LOW VOLTAGE WIRING AS RECOMMENDED BY MANUFACTURER BETWEEN REMOTE STATION AND EMERGENCY GENERATOR CONTROL PANEL.
8. PROVIDE AN ACCESSIBLE GFI DUPLEX RECEPTACLE FOR ELECTRIC WATER COOLER, COORDINA WITH PLUMBING CONTRACTOR.
9. PROVIDE AND INSTALL PUSH BUTTON FOR DOOR BELL LOCATED IN VESTIBULE ROOM 101.
10. PROVIDE AND INSTALL A DOOR CHIME IN THIS APPROXIMATE LOCATION. FIELD VERIFY EXACT LOCATION WITH OWNER. PROVIDE THE FOLLOWING: PUSHBUTTON: NUTONE #PB69BL (BLACK COLOR), DOOR CHIME: NUTONE LA11WH (WHITE COLOR), TRANSFORMER: NUTONE C905 (FOR SINGLE CHIME). OR APPROVED EQUAL.
11. NEW UNDERGROUND SECONDARY ELECTIC SERVICE. REFER TO ELECTRIC RISER DIAGRAM **1/E4**
12. APPROXIMATE LOCATION OF UNDERGROUND EMERGENCY GENERATOR FEEDERS, BRANCH-CIRCUIT, AND START/STOP CONDUITS FROM EMERGENCY GENERATOR TO AUTOMATIC TRANSF SWITCHES 'ATS1' AND 'ATS2'. REFER TO ELECTRIC RISER DIAGRAM **1/E400**.
13. APPROXIMATE LOCATION OF NEW EMERGENCY GENERATOR PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO ELECTRIC RISER DIAGRAM **1/E400**.
14. ELECTRICAL CONTRACTOR SHALL PROVIDE A CONCRETE PAD FOR EMERGENCY GENERATOR SIZED AS RECOMMENDED BY GENERATOR MANUFACTURER.
15. ELECTRICAL CONTRACTOR TO PROVIDE 48" X 48" X ¾" PLYWOOD BACKBOARD WITH FIRE-PROO PAINT FOR LOW VOLTAGE EQUIPMENT FOR TELEPHONE, DATA, RF AND SECURITY PROVIDED A INSTALLED BY OTHERS.
16. CLOSED CIRCUIT TELEVISION (CCTV) AND PUBLIC ADDRESS SYSTEM HEAD-END EQUIPMENT INSTALLED IN EQUIPMENT RACK LOCATED HERE.
17. WEATHER MONITOR SYSTEM. ROUTE RG6 CABLE FROM SATELLITE DISH TO CONVERTER BOX LOCATED IN TELECOM ROOM, THEN EXTEND RG6 CABLE TO MONITOR IN DRIVERS ROOM.
18. PROVIDE AND INSTALL TWO (2) EQUIPMENT RACK(S) FOR BUILDING DATA/VOICE, WEIGH-IN-MOTION AND PREPASS ELECTRONIC EQUIPMENT. REFER TO DETAIL **1/E403**.
19. MAKE FINAL CONNECTION TO HOLDING TANK ALARM, PROVIDE LOW VOLTAGE WIRING BETWEEN HOLDING TANK ALARM AND HOLDING TANK CONTROL SWITCH.
20. MAKE FINAL CONNECTION TO INTERIOR SANITARY SUMP CONTROLLER PANEL.
21. PROVIDE ONE ¾" EMT CONDUIT WITH 2-#12 THWN-2 CONDUCTORS TO SUMP PUMP LOCATED IN LOWER LEVEL TUNNEL #001. ALSO PROVIDE ONE (1) EMPTY EMT CONDUIT TO SUMP PUMP FOR LOW VOLTAGE CONTROL WIRING PROVIDED AND INSTALLED BY OTHERS.
22. PROVIDE TWO (2) GFCI PROTECTED DUPLEX RECEPTACLES FOR VENDING MACHINE OUTLETS. LOCATE RECEPTACLES SO THEY ARE READILY ACCESSABLE OR FEED WITH GFCI CIRCUIT BREAKER.
23. LOCATION OF 200 AMP., 120/240VAC, 2-POLE, FUSED 'SERVICE ENTRANCE RATED' AUTOMATIC TRANSFER SWITCH 'ATS2'. REFER TO ELECTRIC RISER DIAGRAM **1/E400**.
24. LOCATION OF 100 AMP., 120/240VAC, 2-POLE, FUSED 'SERVICE ENTRANCE RATED' AUTOMATIC TRANSFER SWITCH 'ATS1'. REFER TO ELECTRIC RISER DIAGRAM 1/E400.
25. LOCATION OF DOOR ACCESS CONTROL PANEL PROVIDED AND INSTALLED BY OTHERS. ELECTRICAL CONTRACTOR SHALL MAKE LINE VOLTAGE CONNECTION.
26. LOCATE RECEPTACLE FOR WATER FILTRATION SYSTEM WITH CORD AND PLUG DISCONNECT. COORDINATE WITH PLUMBING CONTRACTOR.
27. NOT USED.
28. LOCATION OF EMERGENCY GENERATOR REMOTE START/STOP STATION TO CONTROL GENERATOR. PROVIDE LOW VOLTAGE WIRING AS RECOMMENDED BY MANUFACTURER BETWE REMOTE STATION AND EMERGENCY GENERATOR CONTROL PANEL.
29. PROVIDE A JUNCTION BOX SIZED AS REQUIRED FOR ELECTRICAL CONNECTION TO ELECTRIC HAND DRYER. COORDINATE WITH GENERAL CONTRACTOR.
30. ELECTRICAL CONTRACTOR SHALL INSTALL LINE VOLTAGE THERMOSTAT PROVIDED BY HVAC CONTRACTOR.
31. PROVIDE A GFCI DUPLEX RECEPTACLE FOR MICRO WAVE OVEN, INSTALL RECEPTACLE IN UPP CABINET ABOVE MICROWAVE OVEN.
32. PROVIDE A DUPLEX RECEPTACLE WITH 'USB' DEVICE FOR CHARGING SMART PHONES, ETC.
33. PROVIDE GFCI DUPLEX RECEPTACLE FOR GAS WATER HEATER CORD AND PLUG CONNECTION AND WATER SOFTNER CORD AND PLUG CONNECTION.
34. PROVIDE A GFCI DUPLEX RECEPTACLE FOR DOWN SPOUT HEAT TAPE. PROVIDE A CORD AND PLUG CONNECTION OR MAKE DIRECT CONNECTION TO JUNCTION BOX AS REQUIRED. REFER T DETAIL **2/E403**.
35. PROVIDE A SINGLE-POLE, 20AMP., 120VAC, SWITCH TO CONTROL KNEE SPACE ELECTRIC RADIA PANEL. LOCATE SWITCH IN AN ACCESSIBLE SPACE TO OPERATE. IN ADDITION PROVIDE A 20 AMP., 120VAC SINGLE RECEPTACLE TO MATCH CORD AND PLUG INCLUDED WITH ELECTRIC RADIANT PANEL.



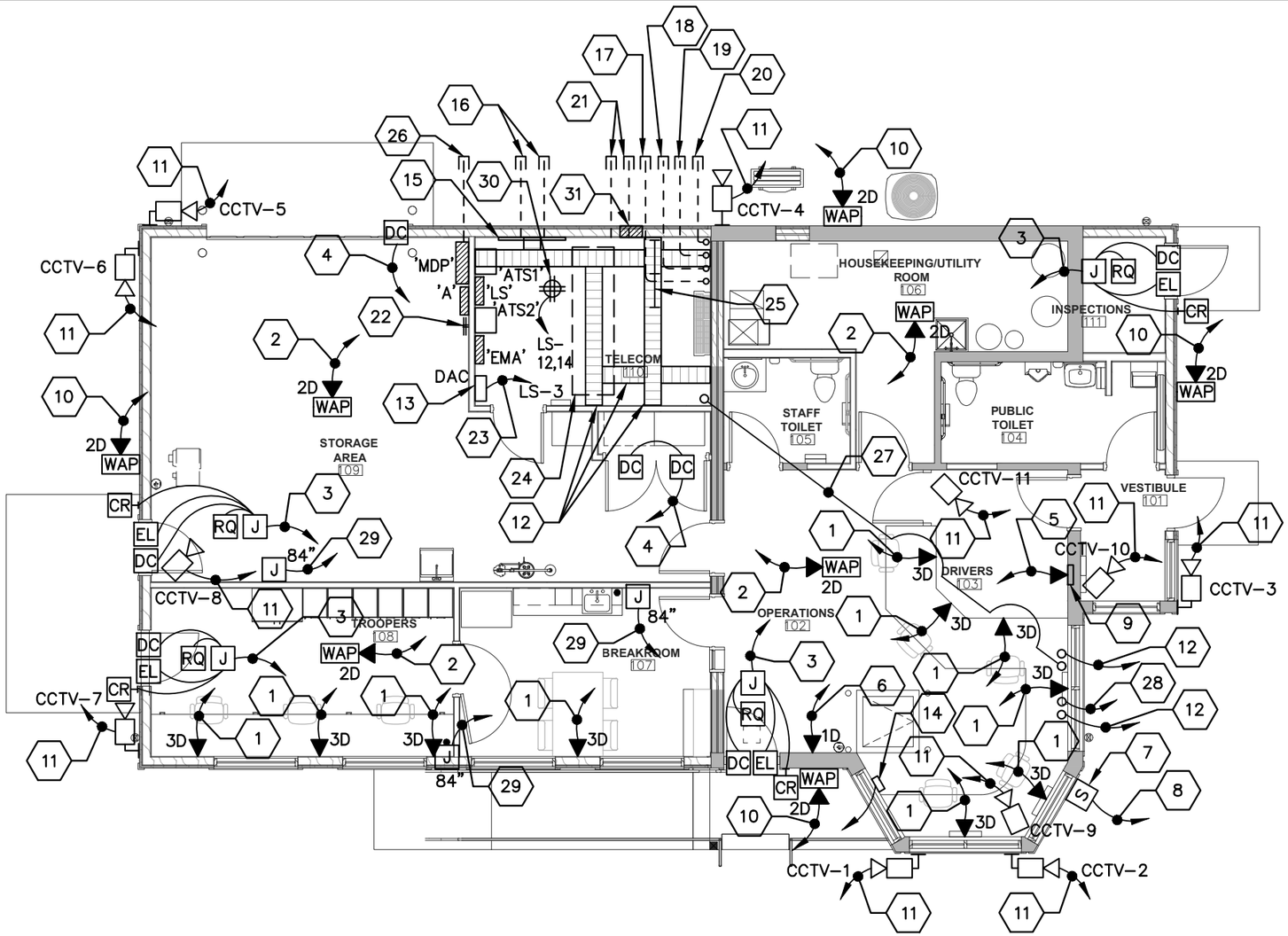
1 ELECTRICAL POWER PLAN: FIRST FLOOR

1/8" = 1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL POWER PLAN: FIRST FLOOR		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E200	254

KEYED LOW VOLTAGE PLAN NOTES 1/E300:

1. PROVIDE THREE (3) CAT 6A DATA CABLES TO EQUIPMENT RACK PATCH PANEL LOCATED IN TELECOM ROOM 110 AND TERMINATE BOTH ENDS. REFER TO DETAIL **2/E401**.
2. LOCATION OF WIRELESS ACCESS ROUTER. PROVIDE TWO (2) CAT6A CABLE TO TELECOM ROOM #110. PROVIDE A 15'-0" SERVICE LOOP ON BOTH ENDS OF CABLE. PROVIDE A 'BISCUIT' TYPE DATA JACK AS DIRECTED BY WISCONSIN D.O.T. IT DEPARTMENT.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE LOW VOLTAGE WIRING AND CONDUIT RACEWAY SYSTEM FOR ELECTRONIC DOOR ACCESS CONTROL. REFER TO DETAIL **1/E405**.
4. PROVIDE AN #18/2 OVER-ALL-SHIELDED LOW VOLTAGE CABLE TO ELECTRONIC DOOR ACCESS CONTROL PANEL LOCATED IN TLECOM ROOM #110 FOR DOOR CONTACT. FINAL TERMINATION BY WISCONSIN D.O.T. VENDOR.
5. TELEVISION MONITOR DEDICATED TO WEATHER MONITORING SYSTEM. PROVIDE A 1" CONDUIT WITH ONE (1) RG6 COAX AND ONE (1) CAT6e CABLE TO TELECOM ROOM 110. COORDINATE WITH WEATHER MONITORING SYSTEM INSTALLER.
6. PROVIDE ONE (1) CAT 6A DATA CABLE TO EQUIPMENT RACK PATCH PANEL LOCATED IN TELECOM ROOM 110 FOR COPY MACHINE AND TERMINATE BOTH ENDS. REFER TO DETAIL **2/E401.**
7. PROVIDE AND INSTALL A WEATHER PROOF PUBLIC ADDRESS LOUD-SPEAKER AS SPECIFIED. REFER TO DETAIL **1/E404**.
8. PROVIDE A #14/2 OVER-ALL-SHIELDED (O.A.S.) CABLE TO PUBLIC ADDRESS SOUND SYSTEM AMPLIFIER LOCATED IN EQUIPMENT RACK IN TELECOM ROOM 110. REFER TO DETAIL **1/E404.**
9. PROVIDE A '**CHIEF PAC525**' JUNCTION BOX FOR WALL-MOUNTED LARGE SCREEN MONITOR. STUB TWO (2) 1" EMT CONDUITS ABOVE SUSPENDED CEILING FOR A/V CABLES. FIELD VERIFY MOUNTING HEIGHT.
10. LOCATION OF EXTERIOR WIRELESS ACCESS ROUTER. PROVIDE ONE (1) CAT6A CABLE TO TELECOM ROOM #110. PROVIDE A 15'-0" SERVICE LOOP ON BOTH ENDS OF CABLE. PROVIDE A 'BISCUIT' TYPE DATA JACK AS DIRECTED BY WISCONSIN D.O.T. IT DEPARTMENT. PROVIDE A RIGID METALLIC MOUNTING PIPE SIMILAR TO WHAT IS INDICATED IN PHOTOS **#1/E301** & **#2/E301**.
11. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL IP CAMERA AS SPECIFIED. PROVIDE, INSTALL & TERMINATE ON BOTH ENDS ONE (1) CAT6A CABLE BETWEEN EACH IP CAMERA AND PATCH-PANEL/POINT-OVER-ETHERNET SWITCH LOCATED IN TELECOM ROOM 110. REFER TO DETAIL **1/E302.**
12. PROVIDE LADDER RACK INSIDE TELECOM ROOM #110, ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION WITH OTHER TRADES PRIOR TO INSTALLING. PROVIDE A 'WATERFALL' TO TRANSITION FROM LADDER RACK TO EQUIPMENT RACKS.
13. LOCATION OF ELECTRONIC DOOR ACCESS CONTROL PANEL PROVIDED AND INSTALLED BY WISCONSIN D.O.T. LOW VOLTAGE VENDOR. LOW VOLTAGE CABLE 'ROUGHED-IN' BY ELECTRICAL CONTRACTOR.
14. MAKE LOW VOLTAGE CONNECTION TO 'STOC' SYSTEM MONITOR SCREEN. PROVIDE ONE (1) RG6 AND ONE (1) CAT 6A CABLE TO PATCH PANEL LOCATED IN EQUIPMENT RACKS LOCATED IN TELECOMM ROOM #110 AND TERMINATE BOTH ENDS OF CABLES.
15. PROVIDE A 4' X 8' X ¾" FIREPROOF PLYWOOD BACKBOARD FOR LOW VOLTAGE EQUIPMENT REQUIRED FOR TELEPHONE, DATA, RF, AND SECURITY PROVIDED AND INSTALLED BY OTHERS. REFER TO DETAIL **1/E401**.
16. PROVIDE TWO (2) 3" SCHEDULE 40 PVC CONDUITS FOR TELEPHONE/MEDIA/FIBER OPTIC SERVICE ENTRANCE CABLES. REFER TO DETAIL **1/E401**.
17. STUB OUT AN EMPTY 2" SCHEDULE 40 PVC CONDUIT FOR POWER WIRING TO 'WEIGH-IN-MOTION' SYSTEM.
18. STUB OUT AN EMPTY 2" SCHEDULE 40 PVC CONDUIT FOR FIBER OPTIC WIRING TO 'WEIGH-IN-MOTION' SYSTEM.
19. STUB OUT AN EMPTY 2" SCHEDULE 40 PVC CONDUIT FOR WIRING TO 'PRE-PASS' SYSTEM.
20. STUB OUT AN EMPTY 2" SCHEDULE 40 PVC CONDUIT FOR FIBER OPTIC WIRING TO RAMP 'WEIGH-IN-MOTION' SYSTEM.
21. STUB OUT TWO (2) EMPTY 2" SCHEDULE 40 PVC CONDUITS FOR 'COMMUNICATION'S TOWER' SYSTEM.
22. LOCATION OF MAIN GROUNDING BAR (MGB). REFER TO DETAILS **1/E402** & **2/E402**.
23. MAKE LINE-VOLTAGE CONNECTION TO ELECTRONIC DOOR ACCESS CONTROL PANEL PROVIDED AND INSTALLED BY STATE OF WISCONSIN D.O.T. SUBCONTRACTOR.
24. OPEN SPACE FOR SPECIALIZED RADIO TOWER EQUIPMENT PROVIDED AND INSTALLED BY OTHERS.
25. PROVIDE TWO (2) EQUIPMENT RACKS FOR DATA, WEIGH-IN-MOTION, PUBLIC ADDRESS, AND PRE-PASS ELECTRONIC EQUIPMENT. REFER TO DETAIL **1/E403**.
26. STUB OUT AN EMPTY 2" SCHEDULE 40 PVC CONDUIT FOR FUTURE ELECTRIC VEHICLE CHARGING STATION.
27. PROVIDE AN EMPTY 3" CONDUIT FROM THE FLOOR IN TELECOM ROOM #110 TO BELOW THE COUNTER IN OPERATIONS AREA #02. COORIDINATE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION. RUN CONDUIT OVERHEAD.
28. PROVIDE THREE (3) #16/4 PLENUM RATED, SHIELDED, LOW VOLTAGE CABLE FROM BELOW OPERATIONS COUNTER AND ROUTE ONE (1) TO BREAKROOM #107, ONE (1) TO STORAGE AREA #109 AND ONE (1) TO TROOPERS #108. PROVIDE 8'-0" SERVICE LOOP BELOW COUNTER.
29. AT THIS LOCATION PROVIDE TWO (2) JUNCTION BOXES, ONE (1) MOUNTED AT 54" FOR WALL-MOUNTED VOLUME CONTROL SWITCH AND THE SECOND MOUNTED AT 7'-0" FOR SPEAKER. VOLUME CONTROL SWITCH AND SPEAKER PROVIDED AND INSTALLED BY D.O.T. TECHNICIANS. PROVIDE AND INSTALL ONE (1) #16/4 PLENUM RATED, SHIELDED LOW VOLTAGE CABLE TO BELOW COUNTER AT OPERATIONS #02. COORDINATE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION. LEAVE 2'-0" SERVICE LOOP.
30. PROVIDE SEVEN (7) DOUBLE DUPLEX RECEPTACLES SURFACE MOUNTED IN CEILING IN THIS ROOM. COORDINATE EXACT LOCATIONS WITH WISCONSIN D.O.T.
31. LOCATION OF TWELVE (12) HOLE FEED-THRU CABLE ENTRY PANEL. PROVIDE TWO (2) GROUNDING BARS, LOCATE ONE BELOW FEED THRU CABLE ENTRY PANEL ON THE INTERIOR WALL AND LOCATE THE SECOND ONE BELOW CABLE ENTRY PANEL ON THE EXTERIOR WALL REFER TO DETAILS 1/E402 & 2/E402. COORDINATE EXACT LOCATIONS WITH WISCONSIN DEPARTMENT OF TRANSPORTATION.



1 ELECTRICAL LOW VOLTAGE PLAN: FIRST FLOOR

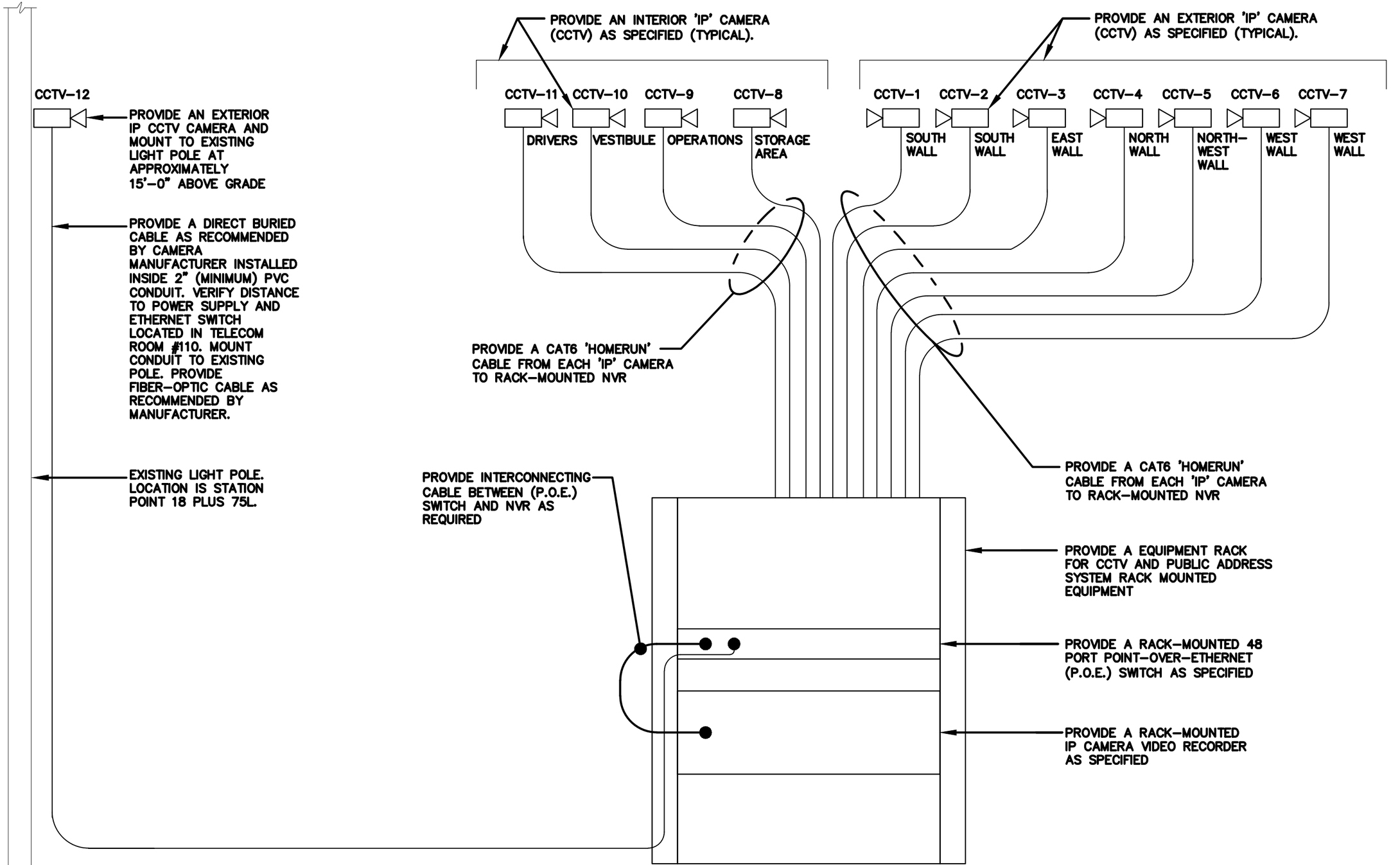
1/8" = 1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL LOW VOLTAGE PLAN: FIRST FLOOR	DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E300

1 PHOTO #1
NO SCALE

2 PHOTO #2
NO SCALE

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			**ELECTRICAL LOW VOLTAGE DETAILS**		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E301	256



1 CLOSED CIRCUIT TELEVISION (CCTV) WIRING DETAIL
NTS

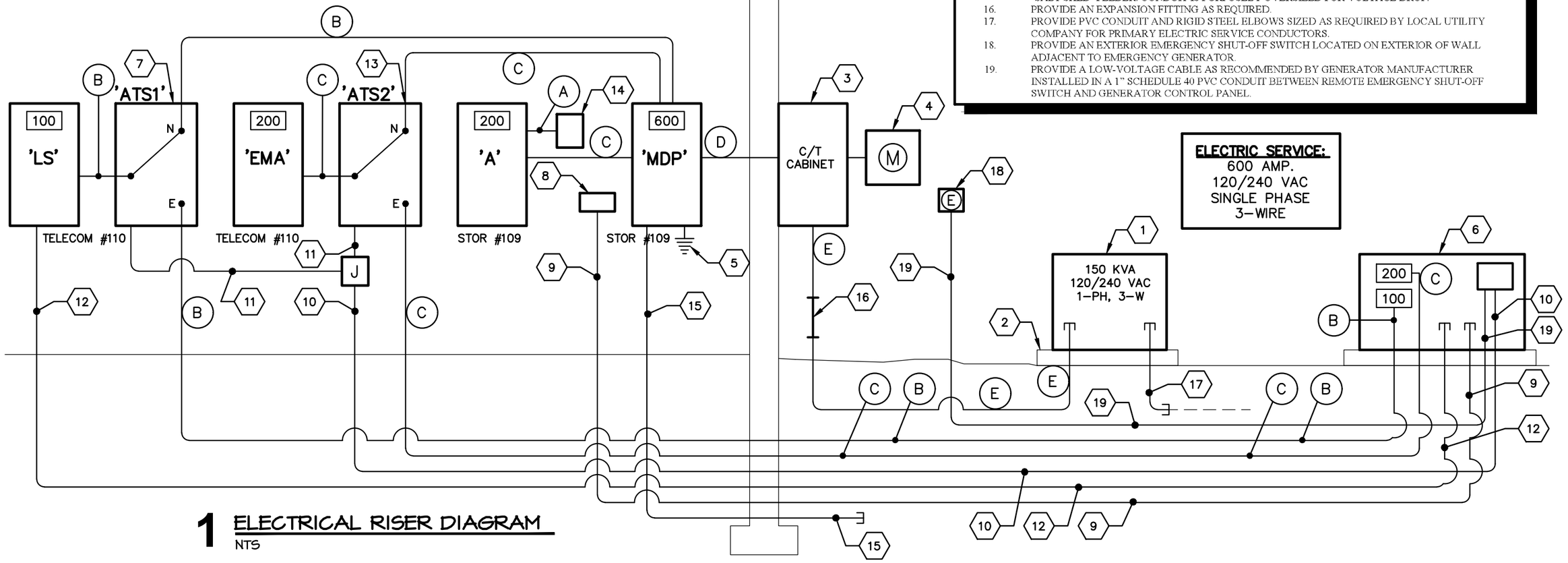
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E302	257

FEEDER SCHEDULE

SYMBOL	AMPS	CONDUCTOR SIZE	NUMBER OF CONDUCTORS	GROUND SIZE	CONDUIT SIZE	REMARKS
(A)	30	10	4	10	3/4"	'SPD'
(B)	100	3	3	8	1–1/4"	ATS1/PANELBOARD 'LS'
(C)	200	3/0	3	6	2"	PANEL BOARD 'A' ATS2/PANEL BOARD 'EMA'
(D)	600	350	3	1	2–1/2"	2 – PARALLEL RUNS
(E)	600	350	3	–	2–1/2"	2 – PARALLEL RUNS SERVICE ENTRANCE

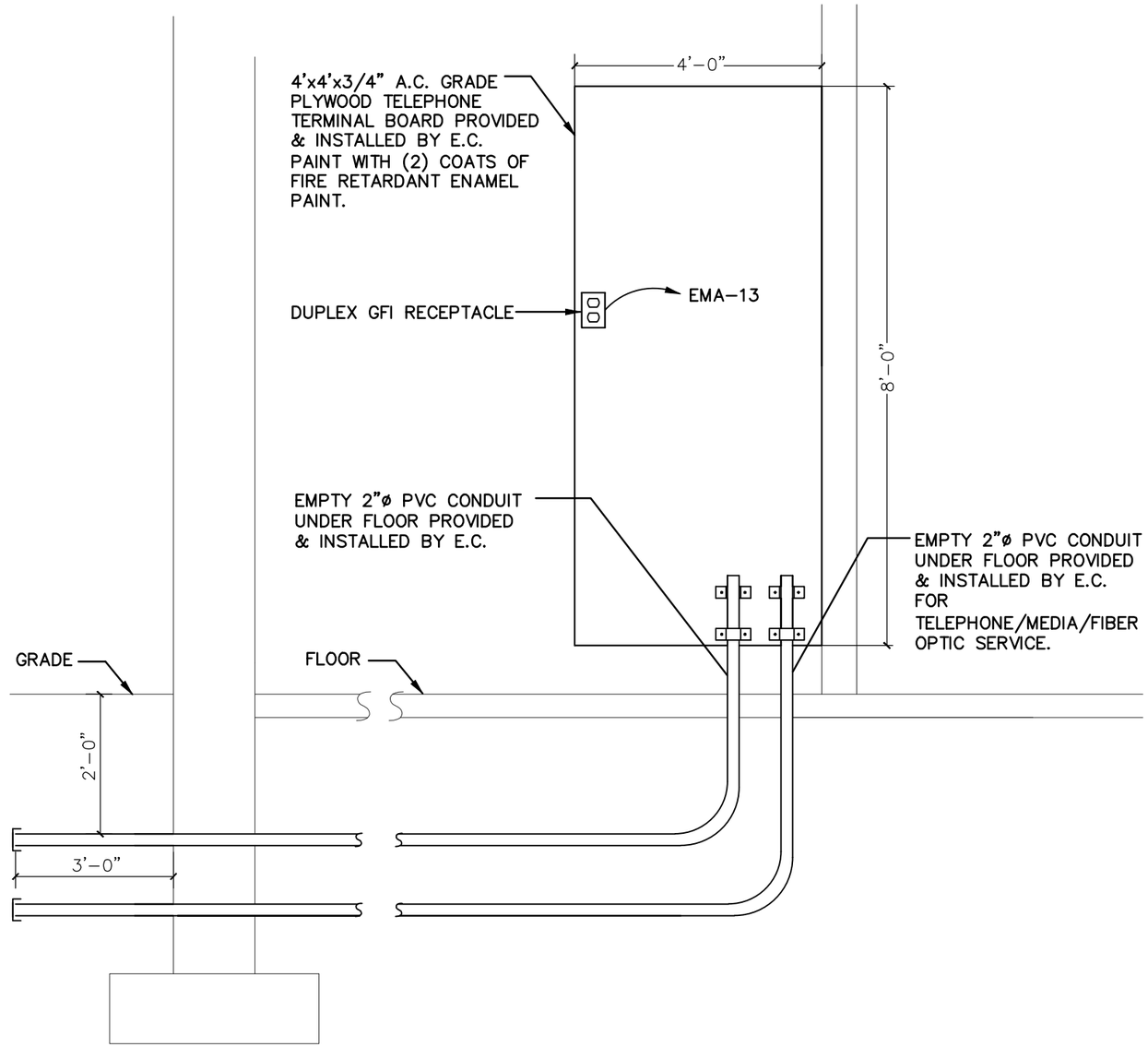
KEYED ELECTRIC RISER DIAGRAM NOTES 1/E400:

1. UTILITY PAD-MOUNTED TRANSFORMER INSTALLED BY LOCAL ELECTRIC UTILITY COMPANY.
2. PROVIDE A CONCRETE PAD FOR PAD-MOUNTED TRANSFORMER. REFER TO DETAIL 3/E405.
3. PROVIDE A WALL-MOUNTED 600 AMP., 120/240VAC, SINGLE-PHASE, 3-WIRE CURRENT TRANSFORMER (C/T) CABINET APPROVED BY LOCAL ELECTRIC UTILTY COMPANY.
4. PROVIDE AND/OR INSTALL METER SOCKET PROVIDED BY LOCAL ELECTRIC UTILITY COMPANY. COORDINATE WITH METER DEPARTMENT.
5. PROVIDE GROUNDING AND BONDING PER NEC CODE RULES, REFER TO DETAIL 1/E402.
6. PROVIDE A 75 KW/94KVA 120/240 VAC, SINGLE-PHASE, 3-WIRE LP (PROPANE) EMERGENCY GENERATOR. COORDINATE THOROUGHLY WITH GENERATOR MANUFACTURER.
7. PROVIDE A 100 AMP., 120/240VAC, 1-PHASE, 3-WIRE 'SERVICE ENTRANCE RATED' AUTOMATIC TRANSFER SWITCH (ATS1) FOR 'LIFE-SAFETY' BRANCH. THIS BRANCH SHALL BE SELECTIVELY COORDINATED. PROVIDE SURGE PROTECTION. ALL CONTROL WIRING SHALL BE SEPARATE.
8. PROVIDE A REMOTE INTERIOR EMERGENCY GENERATOR ANNUNCIATOR AND START/STOP STATION.
9. PROVIDE A LOW-VOLTAGE CABLE AS RECOMMENDED BY GENERATOR MANUFACTURER INSTALLED IN A 1" SCHEDULE 40 PVC CONDUIT BETWEEN REMOTE ANNUNCIATOR PANEL AND GENERATOR CONTROL PANEL.
10. PROVIDE 4-#14 THWN AND 1-#14 THWN (GRD) IN 1" SCHEDULE 40 PVC CONDUIT FOR START/STOP CONTROL WIRES.
11. PROVIDE 2-#14 THWN AND 1-#14 THWN (GRD) IN 1" SCHEDULE 40 PVC CONDUIT FOR START/STOP CONTROL WIRES.
12. PROVIDE A ¾" SCHEDULE 40 PVC CONDUIT WITH 6-#12 THWN AND 1-#12 THWN (GRD) FOR THE FOLLOWING BRANCH-CIRCUITS:
    LS-10 (BATTERY CHARGER), LS-9 (BLOCK HEATER), LS-8 (RECEPTACLE), ETC.
13. PROVIDE A 200 AMP., 120/240 VAC, SINGLE-PHASE, 3-WIRE 'SERVICE ENTRANCE RATED' AUTOMATIC TRANSFER SWITCH (ATS2).
14. PROVIDE A SURGE PROTECTIVE DEVICE (SPD).
15. PROVIDE A EMPTY 3" SCHEDULE 40 PVC CONDUIT STUBBED 3'-0" BEYOND EXTERIOR WALL FOR 'SALT SHED' FEEDER. CONDUIT IS PURPOSELY OVERSIZED FOR VOLTAGE DROP.
16. PROVIDE AN EXPANSION FITTING AS REQUIRED.
17. PROVIDE PVC CONDUIT AND RIGID STEEL ELBOWS SIZED AS REQUIRED BY LOCAL UTILITY COMPANY FOR PRIMARY ELECTRIC SERVICE CONDUCTORS.
18. PROVIDE AN EXTERIOR EMERGENCY SHUT-OFF SWITCH LOCATED ON EXTERIOR OF WALL ADJACENT TO EMERGENCY GENERATOR.
19. PROVIDE A LOW-VOLTAGE CABLE AS RECOMMENDED BY GENERATOR MANUFACTURER INSTALLED IN A 1" SCHEDULE 40 PVC CONDUIT BETWEEN REMOTE EMERGENCY SHUT-OFF SWITCH AND GENERATOR CONTROL PANEL.

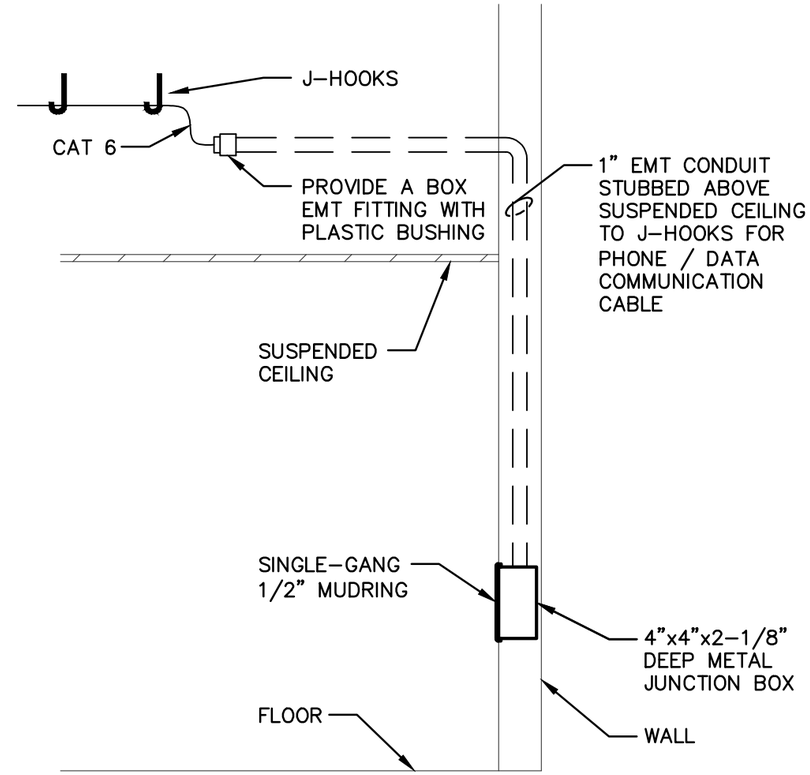


1 ELECTRICAL RISER DIAGRAM
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL RISER DIAGRAM	DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E400

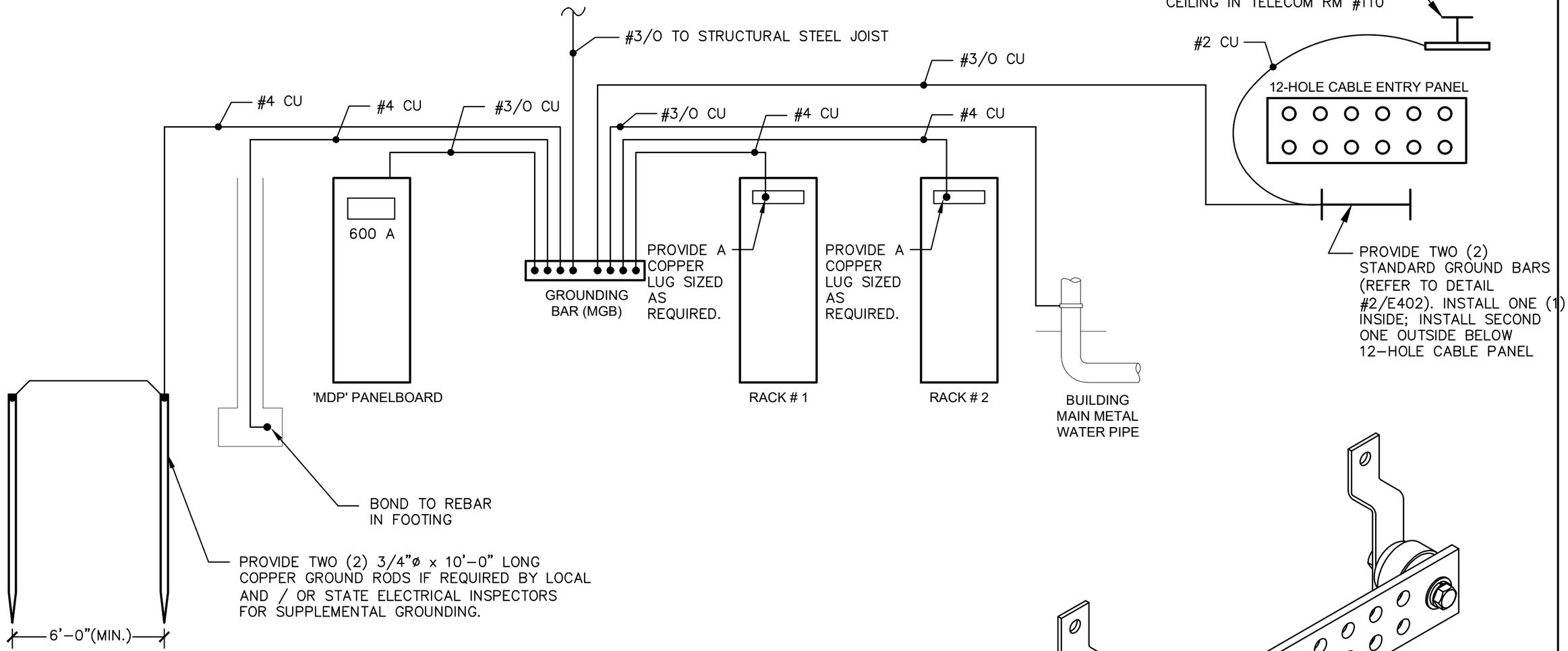


1 ELEVATION AT TELEPHONE TERMINAL BOARD
NTS



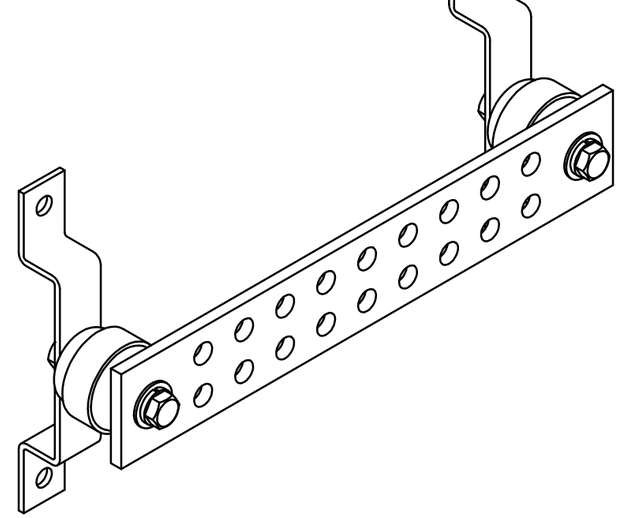
2 TELECOM JUNCTION BOX DETAIL
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E401	259



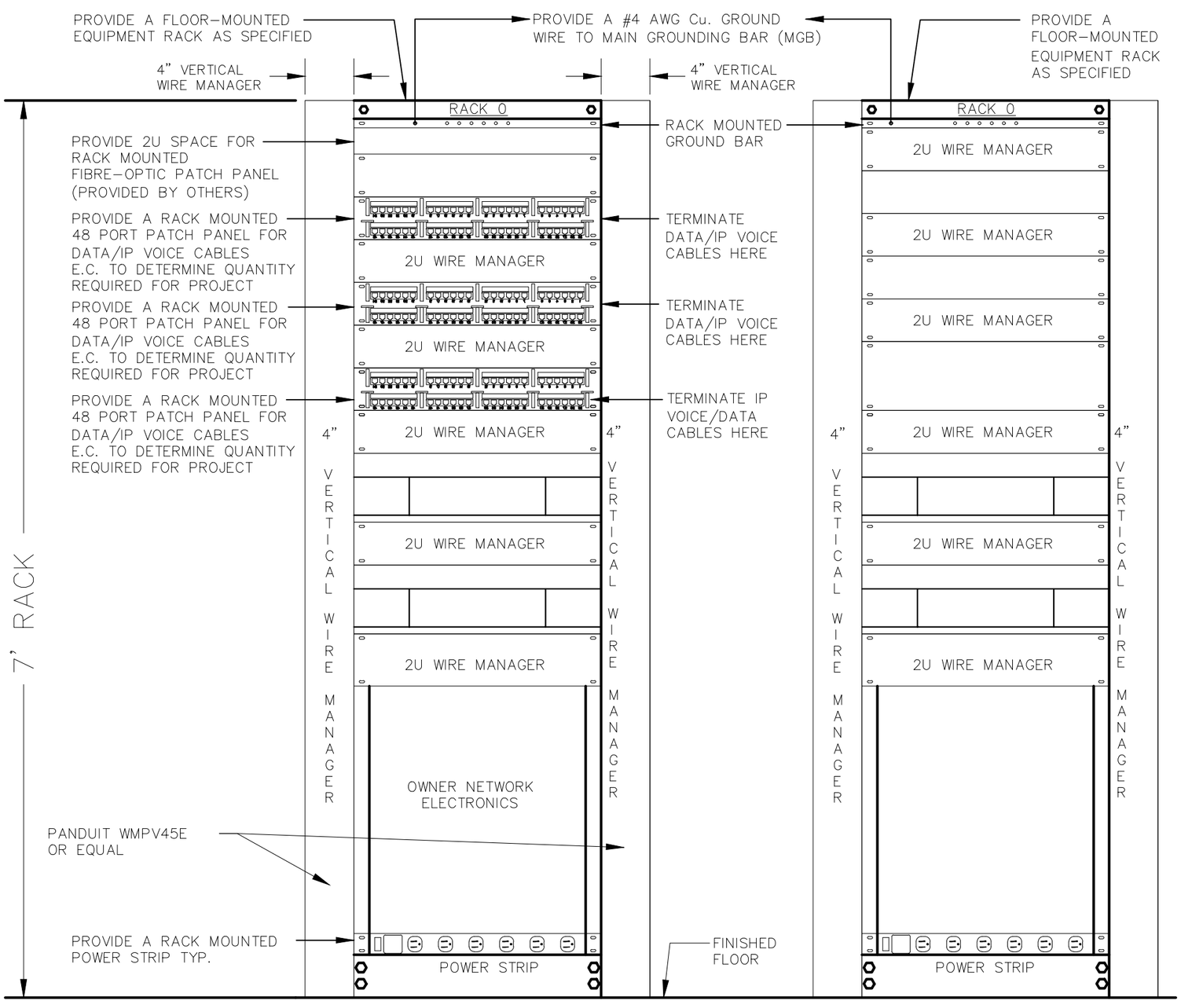
1 GROUNDING DETAIL
NTS

1. Grounding Lug Attachment to Grounding Bar Requires two (2) Bolts per Lug.



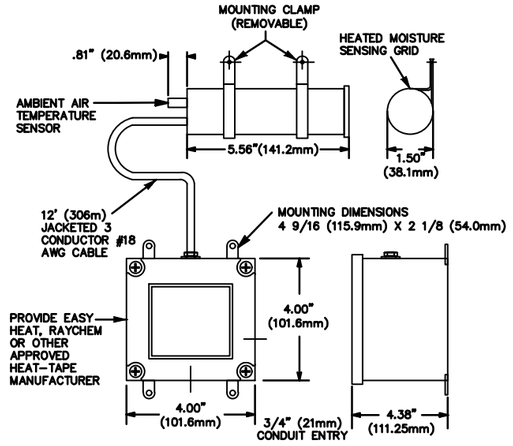
2 STANDARD GROUND BAR DETAIL (MGB)
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E402	260



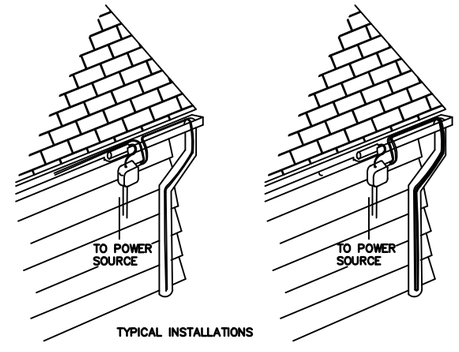
1 IT EQUIPMENT RACK DETAIL (2-EQUIPMENT RACKS)

NTS

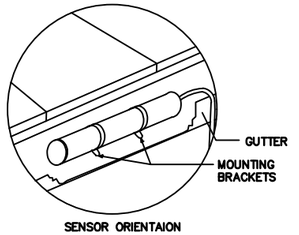


SIMPLIFIED DRAWING OF INSTALLATIONS USING BOTH CONSTANT WATTAGE AND SELF-LIMITING HEATING CABLES FOLLOW. THESE SHOW TYPICAL HEATING CABLE PLACEMENT ALONG WITH A SENSOR AND CONTROL ENCLOSURE LOCATIONS. REFER TO INSTALLATION DATA PROVIDED BY HEATING CABLE MANUFACTURE AND THE INSTRUCTION MANUAL FOR MORE DETAILED INFORMATION.

INSTALLATIONS MUST MEET THE REQUIREMENT OF BOTH THE LOCAL AND NATIONAL ELECTRICAL CODES.



TYPICAL INSTALLATIONS

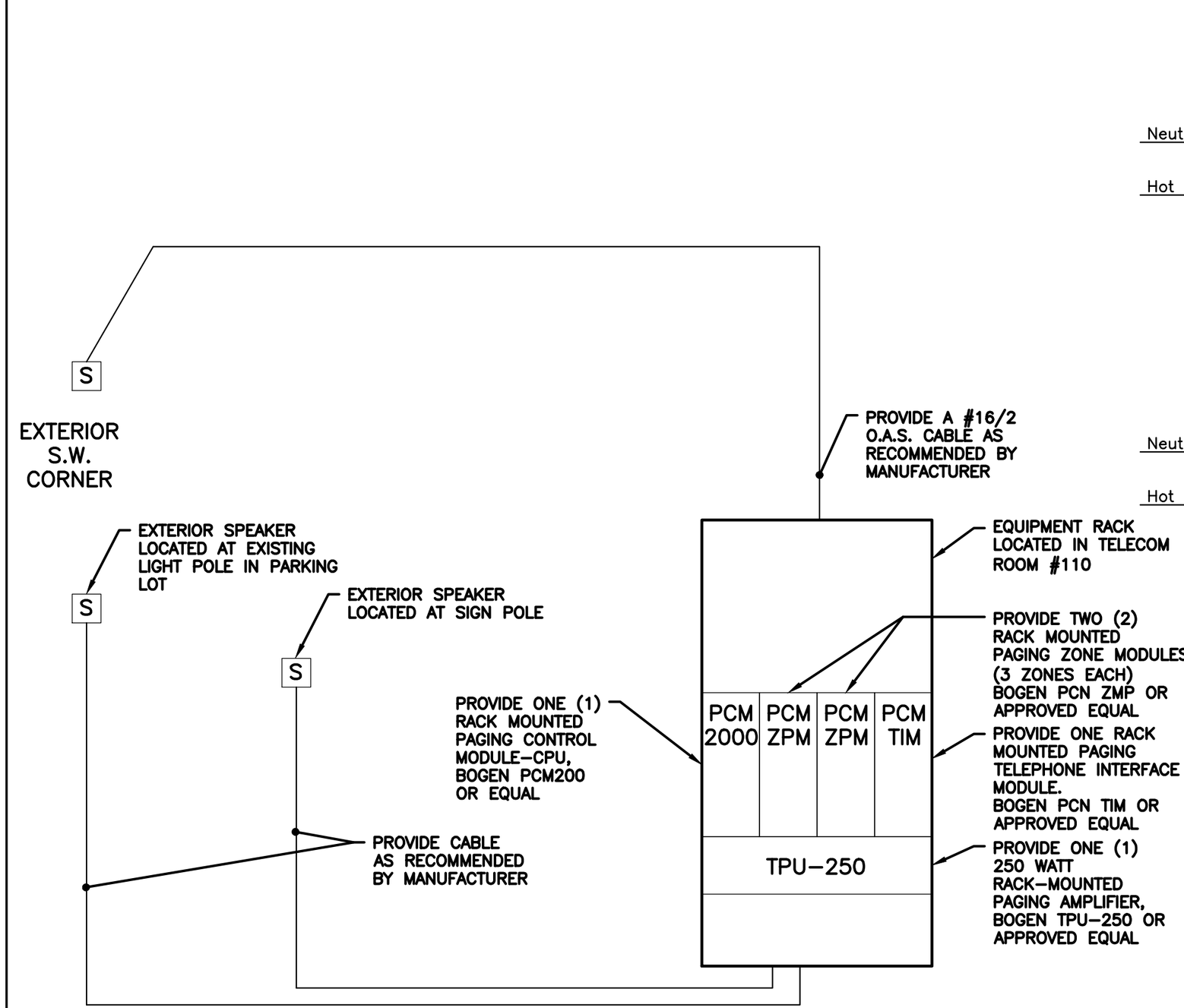


SENSOR ORIENTAION

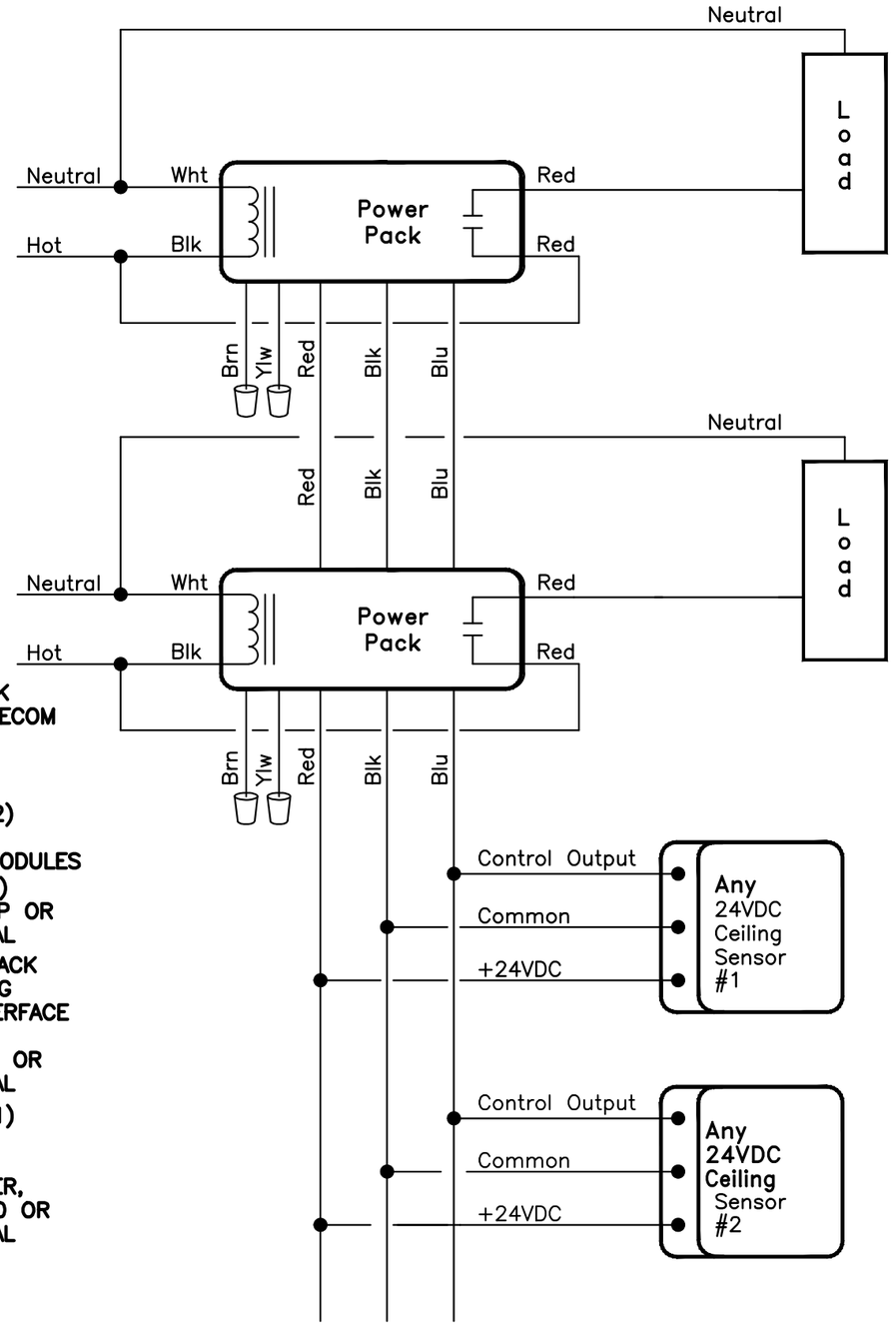
2 HEAT TAPE DETAIL

NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E403	

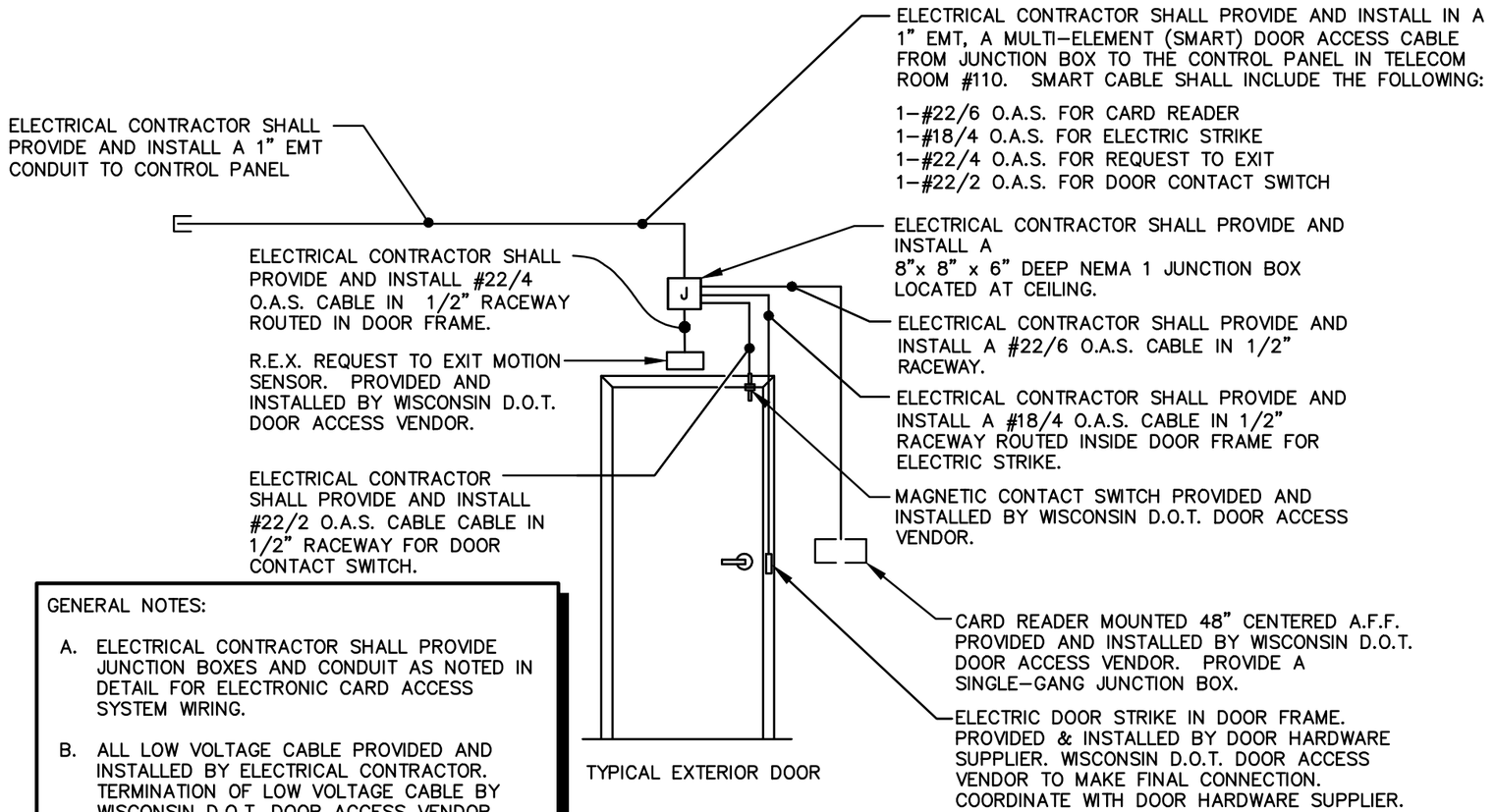


1 PUBLIC ADDRESS SYSTEM DETAIL
NTS



2 HEAT TAPE DETAIL
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022–04–76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E404	262



GENERAL NOTES:

A. ELECTRICAL CONTRACTOR SHALL PROVIDE JUNCTION BOXES AND CONDUIT AS NOTED IN DETAIL FOR ELECTRONIC CARD ACCESS SYSTEM WIRING.

B. ALL LOW VOLTAGE CABLE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. TERMINATION OF LOW VOLTAGE CABLE BY WISCONSIN D.O.T. DOOR ACCESS VENDOR.

1 ELECTRONIC DOOR ACCESS CONTROL DETAIL

NTS

MOTOR & EQUIPMENT SCHEDULE

EQUIPMENT REFERENCE I.D.	EQUIPMENT DESCRIPTION	EQUIPMENT LOCATION			MOTOR OR EQUIPMENT REQUIREMENTS AND CHARACTERISTICS							MOTOR STARTERS				DISCONNECT SWITCHES						CONTROL WIRING BY		Branch Circuit or Feeder				REMARKS
		Room No.	Room Name	Elevation	Motor HP	Equipment Watts	VOLT	PH.	FLA	MCA	MOP	Starter Type	Provided By	Installed By	Starter Size	Disconnect Type	Provided By	Installed By	NEMA Enclo.	Fuse Size	Lockable?	MC	EC	N.C.	Conductor Size	Conduit Min. Size	Ground Size	
AC-1	Ductless Interior Air Conditioner	110	Telecom	Wall		83	240	1	.4	15.0	20.0	NA	NA	NA	NA	Manual Toggle	EC	EC	1	N/A	No		X	2	12	3/4"	12	5
CP-1	Domestic Hot Water Circulation Pump	106	Utility	Ceiling		25	120	1	1.0	15.0	20.0	NA	NA	NA	NA	Cord & Plug	MC	MC	N/A	N/A	No			2	12	3/4"	12	7
CU-1	Ductless Exterior Condensing Unit	Exter.	Exterior	Grade		4,992	240	1	20.8	30.0	40.0	NA	NA	NA	NA	Non-Fusible	EC	EC	3R	N/A	Yes		X	2	8	3/4"	10	1
CU-2	Central System Exterior Condensing Unit	Exter.	Exterior	Grade		3,536	240	1	14.7	20.0	25.0	NA	NA	NA	NA	Non-Fusible	EC	EC	3R	N/A	Yes	X		2	10	3/4"	10	4
ECH-1	Electric Cove Heater	104	Toilet	84"		750	240	1	3.6	15.0	15.0	NA	NA	NA	NA	None	Incl.	Incl.	N/A	N/A	No		X	2	12	3/4"	12	9
EWH-1	Electric Wall Heater	101	Vestibule	18"		1,500	240	1	7.2	15.0	20.0	NA	NA	NA	NA	Unit-mounted	Incl.	Incl.	N/A	N/A	No	Incl.		2	12	3/4"	12	6
EWH-2	Electric Wall Heater	110	Telecom	18"		1,500	240	1	7.2	15.0	20.0	NA	NA	NA	NA	Unit-mounted	Incl.	Incl.	N/A	N/A	No	Incl.		2	12	3/4"	12	6
ERP-1	Knee Space Electric Radiant Panel	102	Drivers	6"		510	120	1	4.25	15.0	20.0	NA	NA	NA	NA	Plug and Cord	Incl.	Incl.	N/A	N/A	No		X	2	12	3/4"	12	10,11
ERV-1	Energy Recovery Unit	106	Utility	Ceiling		1,140	120	1	9.5	15.0	20.0	NA	NA	NA	NA	Manual Toggle	EC	EC	1	N/A	No	X		2	12	3/4"	12	2, 3
F-1	Gas Residential Furnace	106	Utility	Floor		1,656	120	1	13.8	20.0	20.0	NA	NA	NA	NA	Manual Toggle	EC	EC	1	N/A	No	X		2	12	3/4"	12	2, 3
UH-1	Gas Unit Heater	109	Storage	Ceiling		288	120	1	2.4	15.0	20.0	NA	NA	NA	NA	Manual Toggle	EC	EC	1	N/A	No	X		2	12	3/4"	12	2, 3
WF-1	Water Filter Unit	106	Utility	Floor		50	120	1	1.0	15.0	20.0	NA	NA	NA	NA	Cord & Plug	MC	MC	N/A	N/A	No			2	12	3/4"	12	7
WH-1	Gas Water Heater	106	Utility	Floor		240	120	1	2.0	15.0	20.0	NA	NA	NA	NA	Manual Toggle	EC	EC	N/A	N/A	No			2	12	3/4"	12	7
WP-1	Well Pump	Exter.	None	grade		9,600	240	1	40	60	80	TBD	Plbg	EC	TBD	Non-Fusible	EC	EC	3R	N/A	Yes		X	2	4	1-1/4"	8	8
WS-1	Water Softener	106	Utility	Floor		50	120	1	1.0	15.0	20.0	NA	NA	NA	NA	Cord & Plug	MC	MC	N/A	N/A	No			2	12	3/4"	12	7

REMARKS:

1. Provide a 60 amp, 250VAC, 2-pole, Nema 3R, non-fusible disconnect switch with equipment ground kit for this unit.
2. Make final connection to motor/equipment with short length of flexible metal conduit for vibration isolation. Liquid-tight, flexible metal conduit for exterior application or wet locations.
3. Provide a 20 amp., 120VAC, 1-Pole, Non-Fused, Nema 1, motor rated Disconnect Switch.
4. Provide and install a 30 amp, 250 Volt, 2-pole, Nema 3R, non-fusible disconnect switch with equipment grounding kit for this unit.
5. Provide and install a 20 amp., DPST, "Motor-rated" Non-Fused toggle switch mounted in surface mounted junciton box adjacent to equipment.
6. Electric Wall Heater includes an integral thermostat and disconnect switch. Make final connection to heater only.
7. Provide a duplex receptacle for cord and plug disconnect included with unit.
8. Provide a 100 amp., 2-pole, Non-Fused, Nema 3R disconnect. Mount disconnect to 4"x4"x7'-0" treated post adjacent to well head. Make final connection to Well pump controller, coordinate with Well installer prior to submitting bid.
9. Install and wire line voltage wall thermostat provided by the M.C. Instal thermostat at 48" A.F.F. Install vandal guard supplied by the M.C.
10. The E.C. shall provide and install a 20 AMP SPST switch (Light Switch) for each Knee Space Heater. Mount switch on wall directly above heater (and above countertop) for manual control of heater.
11. The E.C. shall provide and install a 20 AMP simplex receptacle in the knee space below the heater for connection of the Electric Radiant Panels. Verify best location with the heater instructions. Wire power to this receptacle from wall switch directly above.

FUSES:

1. All fuses - both size and type - shall be verified with the equipment being supplied.
2. For Bidding purposes, assume maximum fuse size based on disconnect size.
3. For Bidding purposes, assume Type RK1 fuses for all applications.

LIGHTING FIXTURE SCHEDULE

TYPE	QTY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLT	MOUNT			LAMPS			WATTS/ FIXTURE	REMARKS
						F	S	*	NO.	WATT	TYPE		
AD3		LITHONIA	2BLT4-30L-ADP-MVOLT-GZ10-LP840	2x4 lay-in volumetric troffer, 4000K, 48w, 3000 lumens 0-10V Dimming	MV	X			-	-	LED	48	1
AD6		LITHONIA	2BLT4-60L-ADP-MVOLT-GZ10-LP840	2x4 lay-in volumetric troffer, 4000K, 48w, 6000 lumens 0-10V Dimming	MV	X			-	-	LED	48	1
BD3		LITHONIA	2BLT2-30L-ADP-MVOLT-GZ10-LP840	2x2 lay-in volumetric troffer, 4000K, 35w, 3000 lumens 0-10V Dimming	MV	X			-	-	LED	35	1
BD4		LITHONIA	2BLT2-40L-ADP-MVOLT-GZ10-LP840	2x2 lay-in volumetric troffer, 4000K, 35w, 4000 lumens 0-10V Dimming	MV	X			-	-	LED	35	1
C6		GOTHAM	EV06-40/20-AR-MWD-LSS MVOLT-GZ10	6" LED downlight, 15W, 4000K, 2000 nominal lumens (DIMMABLE) semi-specular, medium wide, clear reflector	MV	X			-	-	LED	15	1
D		LITHONIA	FEM-L48-600LM-IMAFL-WD-MVOLT-GZ10-40K-80CRI	Fiberglass body, gasketed and enclosed, 4ft LED 6000 Lumen Output, 4000K, Ribbed Frosted Acrylic	MV		X		-	-	LED	50	1
FL2		LITHONIA	TFX1-LED-40K-MVOLT-YK-DDBXD	54w, Wide Flood, yoke mount, LED, Flood Light 1/2" NPT adaptor, bronze finish	MV		X		-	-	LED	54	1, 3
OA		LITHONIA	WDGE1-LED-P2-40K-80CRI-VF-MVOLT-SRM-DDBCXD	15 watt, LED Architectural Wedge Wallpack,	MV		X		-	-	LED	15	1
S45		LITHONIA	CLX-L48-5000LM SEF-RDL-MVOLT-GZ10 40K-80CRI	4'-0" LED Strip light, 4000K, 5000Lumens Round Lens, 0-10V dimming, 80CRI	MV		X		-	-	LED	45	1
S810		LITHONIA	CLX-L96-10,000LM SEF-RDL-MVOLT-GZ10 40K-80CRI	8'-0" LED Strip light, 4000K, 10,000Lumens Round Lens, 0-10V dimming, 80CRI	MV		X		-	-	LED	90	1
WSA		LITHONIA	FMVCSL-24IN-MVOLT-40K-90CRI-BN	24 Inch, LED, Above Mirror, 40K, Brush Nickel Finish 1300 lumens,	MV		X		-	-	LED	18	1
X1		LITHONIA	LQM-S-W-3-R-120/277	LED EXIT LIGHT FIXTURE	120		**X**		_	_	LED	3	1

REMARKS:

1 SUBSTITUTIONS BY OTHER MANUFACTURERS WILL BE CONSIDERED. SUBMIT SUBSTITUTION REQUEST IN REGARDS TO EQUAL PRODUCTS AS FOLLOWS:
- A. PRODUCT SUBSTITUTIONS WILL ONLY BE CONSIDERED DURING BIDDING.
- B. SUBSTITUTIONS WILL ONLY BE ALLOWED WITH THE PRIOR APPROVAL OF ENGINEER MADE DURING BIDDING.

2 Not used.

3 THIS FIXTURE MUST BE WET LOCATION RATED.

Panel- 'A', 200 AMP., 120/240 VAC, 3-Wire, MLO, 24K

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	SPACE	20/1				20/1	SPACE	2
3	SPACE	20/1				20/1	SPACE	4
5	MOTOR (CU-2)	30/2	2.10		0.75	15/2	ELECTRIC WALL HTR - 1	6
7	"	30/2	2.10		0.75	15/2	"	8
9	ELECTRIC COVE HEATER - 1	20/1	0.40		1.00	20/2	ELECTRIC HEAT TAPE	10
11	"	20/1	0.40		1.00	20/2	"	12
13	EXTERIOR RECEPTACLE	20/1	0.36		0.36	20/1	EXTERIOR RECEPTACLE	14
15	EXTERIOR VENDING RECPT.	20/1	1.00		1.00	20/1	EXTERIOR VENDING RECPT.	16
17	RECEPTACLE	20/1	0.36		0.36	20/1	RECEPTACLE	18
19	ELECTRIC HAND DRYER	20/1	1.50		1.50	20/1	ELECTRIC HAND DRYER	20
21	RECEPTACLE	20/1	0.72		0.18	20/1	RECEPTACLE	22
23	RECEPTACLE	20/1	0.54		0.18	20/1	EXTERIOR RECEPTACLE	24
25	RECEPTACLE	20/1	0.36		0.36	20/1	RECEPTACLE	26
27	EXTERIOR RECEPTACLE	20/1	0.18		0.36	20/1	RECEPTACLE	28
29	RECEPTACLE	20/1	0.18		0.18	20/1	RECEPTACLE	30
31	RECEPTACLE	20/1	0.18		0.18	20/1	RECEPTACLE	32
33	ELECT. RADIANT PANEL	20/1	1.00			20/1	SPARE	34
35	ELECT. RADIANT PANEL	20/1	1.00			20/1	SPARE	36
37	SPARE	20/1				20/1	SPARE	38
39	SPARE	20/1				20/1	SPARE	40
41	SPARE	20/1				20/1	SPARE	42
43	SPARE	20/1				20/1	SPARE	44
45	SPARE	20/1				20/1	SPARE	46
47	SPARE	20/1				20/1	SPARE	48
49	SPARE	20/1				20/1	SPARE	50
51	SPARE	20/1				20/1	SPARE	52
53	SPARE	20/1				20/1	SPARE	54

RECEPTACLES (KVA):	7.1
MOTOR/EQUIPMENT (KVA):	11.5
TOTAL (KVA):	**18.6**

TOTAL AMP. :	**78**
(DIVERSI TOTAL (KVA):	**98**

Notes:
1 Provide a 54 space Panelboard.

Panel- 'EMA', 200 AMP., 120/240 VAC, MAIN BREAKER, 24K

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	MOTOR (CU-1, AC-1)	40/2	3.00					2
3	"	40/2	3.00					4
5	MOTOR (ERV-1)	20/1	1.20		4.80	80/2	WELL PUMP (WP-1)	6
7	WATER HEATER RECEPTACLE	20/1	0.50		4.80	80/2	"	8
9	MOTOR (OH DOOR OUTLET)	20/1	0.50		0.75	20/2	Elect. Wall Htr. (EWH-2)	10
11	MOTOR (SUMP PUMP)	20/1	1.50		0.75	20/2	"	12
13	TELEPHONE BOARD RECPT.	20/1	0.50		0.72	20/1	OPERATIONS RECEPTACLE	14
15	OPERATIONS RECEPTACLE	20/1	0.54		0.72	20/1	OPERATIONS RECEPTACLE	16
17	OPERATIONS RECEPTACLE	20/1	0.72		0.72	20/1	OPERATIONS RECEPTACLE	18
19	BREAKROOM RECEPTACLE	20/1	0.36		0.72	20/1	TROOPERS RECEPTACLE	20
21	.TROOPERS RECEPTACLE	20/1	0.72		0.72	20/1	TROOPERS RECEPTACLE	22
23	BREAKROOM REFIG. RECEPT.	20/1	1.00		1.50	20/1	BREAKROOM MICROWAVE	24
25	TELECOM RECEPTACLES	20/1	0.72		0.30	20/1	MOTOR (CP-1)	26
27	MOTOR (SUMP PUMP)	20/1	1.50		0.54	20/1	TUNNELL RECEPTACLES	28
29	MOTOR (F-1)	20/1	1.50		0.50	20/1	MOTOR (UH-1)	30
31	EXSTG PARKING LOT LIGHTS	20/2	1.50		1.50	20/2	EXSTG PARKING LOT LIGHTS	32
33	"	20/2	1.50		1.50	20/2	"	34
35	SPARE	20/1				20/1	SPARE	36
37	SPARE	20/1				20/1	SPARE	38
39	SPARE	20/1				20/1	SPARE	40
41	SPARE	20/1				20/1	SPARE	42
43	SPARE	20/1				20/1	SPARE	44
45	SPARE	20/1				20/1	SPARE	46
47	SPARE	20/1				20/1	SPARE	48
49	SPARE	20/1				20/1	SPARE	50
51	SPARE	20/1				20/1	SPARE	52
53	SPARE	20/1				20/1	SPARE	54

LIGHTING (KVA):	6
RECEPTACLES (KVA):	11.2
MOTOR/EQUIPMENT (KVA):	22.1
TOTAL (KVA):	**39.3**

TOTAL AMP. :	**164**
(DIVERSI TOTAL (KVA):	**205**

Notes:
1 Provide a 54 space Panelboard with main breaker.

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			PANEL BOARD SCHEDULES	DATE: 8/1/2023	FINAL
STATE PROJECT NUMBER: 1022-04-76	HWY: IH 94	COUNTY: DUNN	MENOMONIE SWEF NO. 63	SCALE:	SHEET NO: E502

Panel- 'LS', 100 AMP., 120/240 VAC, 1- PHASE, 3-WIRE, M-BRK., 24K

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	LIGHTING	20/1	1.30		1.15	20/1	LIGHTING	2
3	DOOR ACCESS CONTROL PNL	20/1	0.75		1.50	20/1	IT EQPMT RACK RECEPTACLE	4
5	IT EQPMT RACK RECEPTACLE	20/1	1.50		1.50	20/1	IT EQPMT RACK RECEPTACLE	6
7	IT EQPMT RACK RECEPTACLE	20/1	1.50		0.20	20/1	EMRG. GEN RECEPTACLE	8
9	EMRG. GEN. BLOCK HEATER	20/1	1.50		1.20	20/1	EMRG. GEN BATT. CHARGER	10
11	EXTERIOR LIGHTING	20/1	0.30		1.40	20/1	RECEPTACLES	12
13	SPARE	20/1			1.40	20/1	RECEPTACLES	14
15	SPARE	20/1				20/1	SPARE	16
17	SPARE	20/1				20/1	SPARE	18
19	SPARE	20/1				20/1	SPARE	20
21	SPARE	20/1				20/1	SPARE	22
23	SPARE	20/1				20/1	SPARE	24
25	SPARE	20/1				20/1	SPARE	26
27	SPARE	20/1				20/1	SPARE	28
29	SPARE	20/1				20/1	SPARE	30

	LIGHTING (KVA):	2.65		
	RECEPTACLES (KVA):	8.9		
	MOTOR/EQUIPMENT (KVA):	0.75		
			TOTAL AMP. :	**54**
	TOTAL (KVA):	**13.05**	**(DIVERSI** TOTAL (KVA):	**68**

Notes:

1 Provide a 30 space panelboard with MAIN BREAKER.

Panel- 'MDP', 600 AMP., 120/240 VAC, 1- PHASE, 3-WIRE, M-BRK., 65K

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	SUB-PANEL 'A'	200/2	9.30		6.50	100/2	SUB-PANEL 'LS/ATS 1'	2
3	"	200/2	9.30		6.50	100/2	"	4
5	SUB-PANEL 'EMA'/ATS 2	200/2	19.70		12.00	200/2	SALT STORAGE BUILDING	6
7	"	200/2	19.70		12.00	200/2	"	8
9								10
11								12
13								14
15								16
17								18
19								20
21								22
23								24
25								26
27								28
29								30

	SUB-PANEL 'A'	18.6		
	SUB-PANEL 'EMA/ATS 2'	39.4		
	SUB-PANEL 'LS/ATS 1'	13		
	SALT STORAGE BLDG	24		
			TOTAL AMP. :	**396**
	TOTAL (KVA):	**95**	**(DIVERSI** TOTAL (KVA):	**495**

Notes:

1 Provide a I-LINE TYPE Distribution Panelboard with MAIN BREAKER.

					1022-04-76	1022-04-86
Line	Item	Item Description	Unit	Total	Qty	Qty
0002	201.0205	Grubbing	STA	8.000	6.000	2.000
0004	203.0216.S	Abatement of Asbestos Containing Material (project) 001. 1022-04-76	EACH	1.000	1.000	
0006	204.0100	Removing Concrete Pavement	SY	9,250.000	9,250.000	
0008	204.0110	Removing Asphaltic Surface	SY	1,325.000	1,325.000	
0010	204.0150	Removing Curb & Gutter	LF	1,211.000	1,211.000	
0012	204.0155	Removing Concrete Sidewalk	SY	87.000	87.000	
0014	204.0165	Removing Guardrail	LF	87.500	87.500	
0016	204.0170	Removing Fence	LF	350.000		350.000
0018	204.0180	Removing Delineators and Markers	EACH	10.000	10.000	
0020	204.0195	Removing Concrete Bases	EACH	5.000	5.000	
0022	204.0220	Removing Inlets	EACH	1.000	1.000	
0024	204.0241	Site Clearance (parcel) 001. SWEF	EACH	1.000	1.000	
0026	204.0245	Removing Storm Sewer (size) 001. 12-Inch	LF	86.000	86.000	
0028	204.0265	Abandoning Wells	EACH	1.000	1.000	
0030	204.9090.S	Removing (item description) 051. Removing Electrical Conductors from Existing Conduit	LF	1,175.000	1,175.000	
0032	204.9090.S	Removing (item description) 052. Removing or Abandoning Existing Conduit	LF	470.000	470.000	
0034	205.0100	Excavation Common	CY	23,200.000	23,000.000	200.000
0036	208.0100	Borrow	CY	4,298.000	3,300.000	998.000
0038	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	25.000	25.000	
0040	213.0100	Finishing Roadway (project) 001. 1022-04-76	EACH	1.000	1.000	
0042	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,795.000	1,700.000	95.000
0044	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	27,881.000	27,000.000	881.000
0046	305.0500	Shaping Shoulders	STA	78.000	78.000	
0048	350.0104	Subbase	TON	1,260.000		1,260.000
0050	405.0100	Coloring Concrete WisDOT Red	CY	217.000	217.000	
0052	415.0100	Concrete Pavement 10-Inch	SY	8,217.000	8,217.000	
0054	415.0110	Concrete Pavement 11-Inch	SY	6,460.000	6,460.000	
0056	415.0125	Concrete Pavement 12 1/2-Inch	SY	2,817.000	2,817.000	
0058	415.2010	Concrete Truck Apron 12-inch	SY	125.000	125.000	
0060	415.4100	Concrete Pavement Joint Filling	SY	6,371.000	6,371.000	
0062	415.6000.S	Rout and Seal	LF	8,435.000	8,435.000	
0064	416.0610	Drilled Tie Bars	EACH	72.000	72.000	
0066	416.0620	Drilled Dowel Bars	EACH	28.000	28.000	
0068	455.0605	Tack Coat	GAL	1,106.000	861.000	245.000
0070	460.2000	Incentive Density HMA Pavement	DOL	1,550.000	1,210.000	340.000
0072	460.5223	HMA Pavement 3 LT 58-28 S	TON	568.000	213.000	355.000
0074	460.5244	HMA Pavement 4 LT 58-34 S	TON	78.000	78.000	
0076	460.5444	HMA Pavement 4 LT 58-34 H	TON	285.000	107.000	178.000
0078	460.6223	HMA Pavement 3 MT 58-28 S	TON	891.000	891.000	
0080	460.6244	HMA Pavement 4 MT 58-34 S	TON	721.000	594.000	127.000
0082	465.0105	Asphaltic Surface	TON	80.000	80.000	
0084	465.0125	Asphaltic Surface Temporary	TON	4,300.000	4,300.000	
0086	465.0510	Asphaltic Rumble Strips, Shoulder Divided Roadway	LF	6,600.000	6,600.000	
0088	465.0520	Asphaltic Rumble Strips, Shoulder	LF	2,900.000	2,900.000	
0090	517.0601	Painting Epoxy System (structure) 001. S-17-11	EACH	1.000	1.000	
0092	520.1012	Apron Endwalls for Culvert Pipe 12-Inch	EACH	1.000	1.000	
0094	520.2015	Culvert Pipe Temporary 15-Inch	LF	157.000	157.000	
0096	521.1618	Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 18-Inch 10 to 1	EACH	2.000	2.000	
0098	522.0118	Culvert Pipe Reinforced Concrete Class III 18-Inch	LF	70.000	70.000	

Line	Item	Item Description	Unit	Total	1022-04-76 Qty	1022-04-86 Qty
0100	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	10.000	10.000	
0102	522.0415	Culvert Pipe Reinforced Concrete Class IV 15-Inch	LF	120.000		120.000
0104	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	2.000		2.000
0106	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	1.000	1.000	
0108	531.1100	Concrete Masonry Ancillary Structures Type NS	CY	7.200	7.200	
0110	531.1140	Steel Reinforcement HS Ancillary Structures Type NS	LB	724.000	724.000	
0112	531.2030	Drilling Shaft 30-Inch	LF	26.000	26.000	
0114	531.5220	Foundation Single-Shaft Type MF-II (structure) 001. S-17-14	EACH	2.000	2.000	
0116	532.5220	Monotube Full Span Type II (structure) 001. S-17-14	EACH	1.000	1.000	
0118	601.0555	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	LF	618.000	618.000	
0120	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	334.000	334.000	
0122	602.0405	Concrete Sidewalk 4-Inch	SF	1,540.000	1,540.000	
0124	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	20.000	20.000	
0126	603.8000	Concrete Barrier Temporary Precast Delivered	LF	11,150.000	11,150.000	
0128	603.8125	Concrete Barrier Temporary Precast Installed	LF	17,000.000	17,000.000	
0130	606.0200	Riprap Medium	CY	10.000	10.000	
0132	608.3012	Storm Sewer Pipe Class III-A 12-Inch	LF	72.000	72.000	
0134	611.0612	Inlet Covers Type C	EACH	1.000	1.000	
0136	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000	
0138	612.0204	Pipe Underdrain Unperforated 4-Inch	LF	28.000	28.000	
0140	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	52.000	52.000	
0142	614.0905	Crash Cushions Temporary	EACH	7.000	7.000	
0144	614.2300	MGS Guardrail 3	LF	337.500	337.500	
0146	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000	
0148	616.0100	Fence Woven Wire (height) 001. 4-FT	LF	82.000		82.000
0150	616.0206	Fence Chain Link 6-FT	LF	580.000		580.000
0152	618.0100	Maintenance And Repair of Haul Roads (project) 001. 1022-04-76	EACH	1.000	1.000	
0154	619.1000	Mobilization	EACH	1.000	0.900	0.100
0156	620.0300	Concrete Median Sloped Nose	SF	50.000	50.000	
0158	623.0200	Dust Control Surface Treatment	SY	23,615.000	20,045.000	3,570.000
0160	624.0100	Water	MGAL	518.000	480.000	38.000
0162	625.0500	Salvaged Topsoil	SY	26,000.000	25,500.000	500.000
0164	627.0200	Mulching	SY	8,715.000	8,500.000	215.000
0166	628.1504	Silt Fence	LF	5,475.000	5,000.000	475.000
0168	628.1520	Silt Fence Maintenance	LF	27,350.000	25,000.000	2,350.000
0170	628.1905	Mobilizations Erosion Control	EACH	8.000	6.000	2.000
0172	628.1910	Mobilizations Emergency Erosion Control	EACH	8.000	6.000	2.000
0174	628.2008	Erosion Mat Urban Class I Type B	SY	26,500.000	26,000.000	500.000
0176	628.7005	Inlet Protection Type A	EACH	7.000	7.000	
0178	628.7020	Inlet Protection Type D	EACH	3.000	3.000	
0180	628.7504	Temporary Ditch Checks	LF	510.000	500.000	10.000
0182	628.7555	Culvert Pipe Checks	EACH	27.000	25.000	2.000
0184	628.7560	Tracking Pads	EACH	3.000	2.000	1.000
0186	629.0210	Fertilizer Type B	CWT	22.500	22.000	0.500
0188	630.0130	Seeding Mixture No. 30	LB	614.000	600.000	14.000
0190	630.0140	Seeding Mixture No. 40	LB	20.000	20.000	
0192	630.0200	Seeding Temporary	LB	550.000	500.000	50.000
0194	630.0500	Seed Water	MGAL	672.000	662.000	10.000
0196	632.0201	Shrubs (species, root, size) 001. Potenilla Fruticoas, CG, #2, Abbotswood Potenilla	EACH	4.000	4.000	

Line	Item	Item Description	Unit	Total	1022-04-76 Qty	1022-04-86 Qty
0198	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	6.000	6.000	
0200	633.0100	Delineator Posts Steel	EACH	80.000	80.000	
0202	633.0500	Delineator Reflectors	EACH	95.000	95.000	
0204	633.1100	Delineators Temporary	EACH	172.000	172.000	
0206	633.5200	Markers Culvert End	EACH	4.000	2.000	2.000
0208	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	30.000	30.000	
0210	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	6.000	6.000	
0212	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	2.000	2.000	
0214	635.0200	Sign Supports Structural Steel HS	LB	3,554.000	3,554.000	
0216	637.1220	Signs Type I Reflective SH	SF	480.000	480.000	
0218	637.2210	Signs Type II Reflective H	SF	227.190	227.190	
0220	637.2230	Signs Type II Reflective F	SF	9.000	9.000	
0222	638.2102	Moving Signs Type II	EACH	2.000	2.000	
0224	638.2601	Removing Signs Type I	EACH	5.000	5.000	
0226	638.2602	Removing Signs Type II	EACH	9.000	9.000	
0228	638.3000	Removing Small Sign Supports	EACH	9.000	9.000	
0230	638.3100	Removing Structural Steel Sign Supports	EACH	2.000	2.000	
0232	638.4000	Moving Small Sign Supports	EACH	1.000	1.000	
0234	642.5001	Field Office Type B	EACH	1.000	1.000	
0236	643.0300	Traffic Control Drums	DAY	22,600.000	22,600.000	
0238	643.0420	Traffic Control Barricades Type III	DAY	1,700.000	1,700.000	
0240	643.0705	Traffic Control Warning Lights Type A	DAY	1,750.000	1,750.000	
0242	643.0715	Traffic Control Warning Lights Type C	DAY	7,280.000	7,280.000	
0244	643.0800	Traffic Control Arrow Boards	DAY	485.000	485.000	
0246	643.0900	Traffic Control Signs	DAY	5,000.000	5,000.000	
0248	643.0910	Traffic Control Covering Signs Type I	EACH	4.000	4.000	
0250	643.1050	Traffic Control Signs PCMS	DAY	35.000	35.000	
0252	643.1205.S	Basic Traffic Queue Warning System	DAY	136.000	136.000	
0254	643.3165	Temporary Marking Line Paint 6-Inch	LF	29,800.000	29,800.000	
0256	643.3770	Temporary Marking Raised Pavement Marker Type II	EACH	80.000	80.000	
0258	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	48.000	48.000	
0260	643.4100	Traffic Control Interim Lane Closure	EACH	136.000	136.000	
0262	643.5000	Traffic Control	EACH	1.000	1.000	
0264	645.0130	Geotextile Type R	SY	25.000	25.000	
0266	646.2020	Marking Line Epoxy 6-Inch	LF	22,705.000	22,705.000	
0268	646.2025	Marking Line Grooved Black Epoxy 6-Inch	LF	225.000	225.000	
0270	646.2040	Marking Line Grooved Wet Ref Epoxy 6-Inch	LF	225.000	225.000	
0272	646.2050	Marking Line Grooved Permanent Tape 6-Inch	LF	1,800.000	1,800.000	
0274	646.4020	Marking Line Epoxy 10-Inch	LF	478.000	478.000	
0276	646.6120	Marking Stop Line Epoxy 18-Inch	LF	45.000	45.000	
0278	646.6220	Marking Yield Line Epoxy 18-Inch	EACH	15.000	15.000	
0280	646.7020	Marking Diagonal Epoxy 6-Inch	LF	50.000	50.000	
0282	646.7120	Marking Diagonal Epoxy 12-Inch	LF	57.000	57.000	
0284	646.7220	Marking Chevron Epoxy 24-Inch	LF	93.000	93.000	
0286	646.8320	Marking Parking Stall Epoxy	LF	254.000	254.000	
0288	646.9000	Marking Removal Line 4-Inch	LF	7,530.000	7,530.000	
0290	650.4000	Construction Staking Storm Sewer	EACH	3.000	3.000	
0292	650.4500	Construction Staking Subgrade	LF	14,099.000	13,708.000	391.000
0294	650.5000	Construction Staking Base	LF	7,773.000	7,382.000	391.000

Line	Item	Item Description	Unit	Total	1022-04-76 Qty	1022-04-86 Qty
0296	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,116.000	2,116.000	
0298	650.6000	Construction Staking Pipe Culverts	EACH	3.000	2.000	1.000
0300	650.6501	Construction Staking Structure Layout (structure) 001. S-17-14	EACH	1.000	1.000	
0302	650.7000	Construction Staking Concrete Pavement	LF	5,575.000	5,575.000	
0304	650.8501	Construction Staking Electrical Installations (project) 001. 1022-04-76	EACH	1.000	1.000	
0306	650.9000	Construction Staking Curb Ramps	EACH	2.000	2.000	
0308	650.9500	Construction Staking Sidewalk (project) 001. 1022-04-76	EACH	1.000	1.000	
0310	650.9911	Construction Staking Supplemental Control (project) 001. 1022-04-76	EACH	1.000	1.000	
0312	650.9920	Construction Staking Slope Stakes	LF	14,099.000	13,708.000	391.000
0314	652.0210	Conduit Rigid Nonmetallic Schedule 40 1-Inch	LF	45.000	45.000	
0316	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1,030.000	1,030.000	
0318	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	15.000	15.000	
0320	653.0154	Pull Boxes Non-Conductive 24x36-Inch	EACH	1.000	1.000	
0322	653.0164	Pull Boxes Non-Conductive 24x42-Inch	EACH	7.000	7.000	
0324	653.0905	Removing Pull Boxes	EACH	2.000	2.000	
0326	654.0105	Concrete Bases Type 5	EACH	5.000	5.000	
0328	655.0610	Electrical Wire Lighting 12 AWG	LF	1,548.000	1,548.000	
0330	655.0620	Electrical Wire Lighting 8 AWG	LF	6,312.000	6,312.000	
0332	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	2.000	2.000	
0334	657.0322	Poles Type 5-Aluminum	EACH	2.000	2.000	
0336	657.0705	Luminaire Arms Truss Type 4 1/2-Inch Clamp 10-FT	EACH	2.000	2.000	
0338	659.1125	Luminaires Utility LED C	EACH	2.000	2.000	
0340	661.0101	Temporary Traffic Signals for Bridges (structure) 001. VWS	EACH	1.000	1.000	
0342	674.0300	Remove Cable	LF	100.000	100.000	
0344	674.0400	Reinstall Cable	LF	100.000	100.000	
0346	678.0400	Fiber Optic Termination	EACH	1.000	1.000	
0348	690.0150	Sawing Asphalt	LF	12,235.000	12,235.000	
0350	690.0250	Sawing Concrete	LF	230.000	230.000	
0352	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	5,280.000	5,280.000	
0354	740.0440	Incentive IRI Ride	DOL	900.000	900.000	
0356	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	2,400.000	2,400.000	
0358	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	2,500.000	2,500.000	
0360	SPV.0035	Special 001. Base Aggregate Dense 3/4-Inch Washed	CY	40.000	40.000	
0362	SPV.0060	Special 001. 6' Chain link 21' Cantilever Gate	EACH	2.000		2.000
0364	SPV.0060	Special 002. Inspection Site Appurtenances	EACH	1.000	1.000	
0366	SPV.0060	Special 003. Electrical Service, Menomonie SWEF	EACH	1.000	1.000	
0368	SPV.0060	Special 004. Electrical Service, Menomonie SWEF Mainline WIM	EACH	1.000	1.000	
0370	SPV.0060	Special 005. Electrical Service, Menomonie SWEF Virtual Weigh Station	EACH	1.000	1.000	
0372	SPV.0060	Special 006. Internet Service, Menomonie SWEF Virtual Weigh Station	EACH	1.000	1.000	
0374	SPV.0060	Special 007. Oil/Water Separator System	EACH	1.000	1.000	
0376	SPV.0060	Special 008. Trash Receptacles	EACH	2.000	2.000	
0378	SPV.0060	Special 009. Construction Staking Supplemental	EACH	2.000	1.000	1.000
0380	SPV.0060	Special 010. ID Plaque	EACH	2.000	2.000	
0382	SPV.0060	Special 020. Weigh-In-Motion System (WIM)	EACH	1.000	1.000	
0384	SPV.0060	Special 021. Virtual Weigh Station (VWS) System	EACH	1.000	1.000	
0386	SPV.0060	Special 022. Weigh-In-Motion System Warranty Maintenance	EACH	1.000	1.000	
0388	SPV.0060	Special 023. Virtual Weigh Station System Warranty Maintenance	EACH	1.000	1.000	
0390	SPV.0060	Special 050. Remove, Salvage and Reinstall Street Light Assembly	EACH	3.000	3.000	
0392	SPV.0060	Special 100. SWEF Building, General Construction	EACH	1.000	1.000	

Line	Item	Item Description	Unit	Total	1022-04-76 Qty	1022-04-86 Qty
0394	SPV.0060	Special 101. SWEF Building, Plumbing	EACH	1.000	1.000	
0396	SPV.0060	Special 102. SWEF Building Heating and Ventilation	EACH	1.000	1.000	
0398	SPV.0060	Special 103. SWEF Building, Electrical	EACH	1.000	1.000	
0400	SPV.0060	Special 104. SWEF Building, Generator	EACH	1.000	1.000	
0402	SPV.0060	Special 105. SWEF Building, Lightning Protection and Grounding System	EACH	1.000	1.000	
0404	SPV.0060	Special 200. Communications Tower	EACH	1.000	1.000	
0406	SPV.0060	Special 300. Well Pump and Equipment	EACH	1.000	1.000	
0408	SPV.0060	Special 301. Iron Removal System	EACH	1.000	1.000	
0410	SPV.0060	Special 302. Salt Storage Building	EACH	1.000		1.000
0412	SPV.0060	Special 303. Loader Storage Building	EACH	1.000		1.000
0414	SPV.0060	Special 304. Vertical Storage Tanks	EACH	2.000		2.000
0416	SPV.0060	Special 305. Underground Storage Tank	EACH	1.000		1.000
0418	SPV.0090	Special 001. Concrete Curb and Gutter 24-Inch Type A Special	LF	1,062.000	1,062.000	
0420	SPV.0090	Special 002. Concrete Curb and Gutter 24-Inch Type D Special	LF	102.000	102.000	
0422	SPV.0090	Special 003. Construction Staking Fence	LF	704.000		704.000
0424	SPV.0090	Special 004. Landscape Edging	LF	35.000	35.000	
0426	SPV.0090	Special 005. Fill Existing Rumble Strips	LF	3,600.000	3,600.000	
0428	SPV.0090	Special 006. Pedestrian Railing	LF	85.000	85.000	
0430	SPV.0090	Special 300. Water Service	LF	395.000	395.000	
0432	SPV.0180	Special 001. Scale Approach Pavement Reinforcement	SY	167.000	167.000	
0434	SPV.0180	Special 002. Weed Barrier Fabric	SY	150.000	150.000	

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CLEARING AND GRUBBING

PROJECT	CATEGORY	LOCATION	STATION - STATION	201.020500 GRUBBING (STA)
1022-04-76				
	0010	SWALE	10+00'SW' - 15+00'SW'	5
	0010	SALT SHED	52+50'S' - 53+50'S'	1
PROJECT 1022-04-76 TOTAL				6
1022-04-86				
	0010	SALT SHED	50+50'S' - 52+50'S'	2
PROJECT 1022-04-86 TOTAL				2

REMOVING PAVEMENT

PROJECT	CATEGORY	LOCATION	STATION - STATION	204.0100 REMOVING CONCRETE PAVEMENT (SY)	204.0150 REMOVING CURB & GUTTER (LF)	204.0155 REMOVING CONCRETE SIDEWALK (SY)	204.0110 REMOVING ASPHALTIC SURFACE (SY)
1022-04-76							
	0010	IH 94 RAMP	405+29.88'R' - 424+08'R'	5,180	105	-	-
		LOOP/PARKING	11+37'L' - 21+55'L' / 50+01.5'PK' - 52+89.0'PK'	460	1,106	87	-
		IH 94 WB	533+00'WB' - 541+00'WB'	2,140	-	-	-
		USH 12/29	48+25'V' - 63+25'V'	735	-	-	850
		USH 12/29	48+25'V' - 63+25'V'	735	-	-	475
			PROJECT 1022-04-76 TOTAL	**9,250**	**1,211**	**87**	**1,325**

REMOVING FENCE

PROJECT	CATEGORY	LOCATION	STATION - STATION	204.0170 REMOVING FENCE (LF)
1022-04-86				
	0010	SALT SHED	50+66'S' - 53+66'S'	350
PROJECT 1022-04-86 TOTAL				350

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LIGHTING REMOVALS

1022-04-76		204.9090.S.051 REMOVING ELECTRICAL CONDUCTORS FROM EXISTING CONDUIT	204.9090.S.052 REMOVING OR ABANDONING EXISTING CONDUIT
FROM -	TO	LF	LF
CATEGORY 0010			
EXPB100 -	EXSL103	50	50
EXPB100 -	EXSL103	50	50
EXPB100 -	EXPB101	120	10
EXPB100 -	EXPB101	120	10
EXPB101 -	EXPB102	115	--
EXPB101 -	EXPB102	115	--
EXPB102 -	EXSL102	50	50
EXPB 102 -	EXSL102	50	50
EXPB 102 -	EXPB103	110	110
EXPB 103 -	EXISTNG CONTROLS	100	--
EXPB 103 -	EXPB104	115	10
EXPB 104 -	EXSL104	15	--
EXPB 104 -	EXPB105	25	--
EXPB 105 -	EXSL101	10	--
EXSL 105 -	EXSL106	130	130
1022-04-76 PROJECT TOTAL		**1175**	**470**

LIGHTING REMOVALS

1022-04-76		*204.0195 REMOVING CONCRETE BASES	653.0905 REMOVING PULL BOXES
ITEM		EACH	EACH
CATEGORY 0010			
EXSL	102	1	--
EXSL	103	1	--
EXSL	105	1	--
EXPB	100	--	1
EXPB	103	--	1
PROJECT 1022-04-76 TOTAL		**3**	**2**

* ADDITIONAL QUANTITIES FOUND IN "SIGNING REMOVALS"

REMOVING INLETS

PROJECT	CATEGORY	LOCATION	STATION	204.0220 REMOVING INLETS (EACH)	204.0245.001 REMOVING STORM SEWER (12-INCH) (LF)
1022-04-76					
	0010	IH 94 RAMP	415+63'R', RT	1	86
PROJECT 1022-04-76 TOTAL				1	86

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PROJECT ID 1022-04-76

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6) FACTOR 1.25	MASS ORDINATE +/- (7)	WASTE	208.0100 BORROW
1	61+25.00'TR' to 100+38.00'TR'	TEMPORARY BYPASS	1,494	300	--	1,494	3,496	4,370	-2,876	--	2,876
DIVISION 1 SUBTOTAL			1,494	300	--	1,494	3,496	4,370	-2,876	--	2,876
2	454+00.00'WB' to 493+13.00'WB'	IH 94 WB	10,498	--	5,270	5,228	99	124	5,104	5,104	--
	406+00.00'R' to 431+00.00'R'	I-94 RAMP	4,751	--	1,646	3,105	2,028	2,535	570	570	--
	395+90.00'WB' - 397+15'WB'	REMOVE MAINT XOVER	180	--	90	90	--	--	90	90	--
	401+53.1'WB' - 403+19.2'WB'	MAINT XOVER	12	--	--	12	160	200	-188	--	188
	11+37.10'L' to 21+55.06'L'	EAST & WEST LOOP	1,490	--	500	990	10	13	978	978	--
	50+00.00'PK' to 53+00.00'PK'	CMV PARKING	1,733	--	287	1,446	--	--	1,446	1,446	--
	10+07.65'SW' to 16+26.69'SW'	SWALE	564	--	--	564	141	176	388	388	--
	50+00.97'TP' to 50+75.81'TP'	EMPLOYEE PARKING	57	--	--	57	22	28	30	30	--
	55+00.00'V' to 61+00.00'V'	USH12/29	1,470	--	672	798	--	--	798	798	--
	386+62.07'NB' to 392+45.41'NB'	CTH B NB	427	--	144	283	--	--	283	283	--
DIVISION 2 SUBTOTAL			21,182	--	8,609	12,573	2,460	3,075	9,498	9,686	28
UNDISTRIBUTED				24							396
PROJECT 1022-04-76 SUB TOTAL			22,676	324	8,609	14,067	5,956	7,445	6,622	9,686	3,300
1022-04-76 TOTAL			23,000								3,300

PROJECT ID 1022-04-86

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6) FACTOR 1.25	MASS ORDINATE +/- (7)	WASTE	208.0100 BORROW
1	50+00.00'S' to 54+14.99'S'	SALT SHED	152	48	--	152	920	1,150	-998	--	998
1022-04-86 TOTAL			200								998

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.25
EXPANDED FILL = (UNEXPANDED FILL - REDUCED EBS) * FILL FACTOR
(7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

BASE AGGREGATE DENSE

PROJECT	CATEGORY	LOCATION	STATION - STATION	305.0110 3/4-INCH (TON)	305.0120 1 1/4-INCH (TON)	350.0104 SUBBASE (TON)	SPV.0035.001 3/4-INCH WASHED (CY)	624.0100 WATER (MGAL)
1022-04-76								
	0010	TEMP. BYPASS	62+71.0'TR' - 101+00.0'TR'	487	8,360	-	-	149
		IH 94 WB	455+48.0'WB' - 494+00.0'WB'	452	5,982	-	-	108
		IH 94 EB	455+48.0'WB' - 494+00.0'WB'	130	-	-	-	15
		MAINT XOVER	401+50.00'WB' - 402+50'WB'	10	140	-	-	1
		CTH B NB	387+00.0'NB' - 391+10.6'NB'	8	690	-	-	12
		IH 94 RAMP	406+00.0'R' - 430+42.0'R'	285	5,200	-	-	83
		EAST & WEST LOOPS	11+37.0'L' - 21+55.0'L'	84	3,042	-	-	53
		CMV PARKING	50+01.5'PK' - 52+89.0'PK'	38	1,332	-	-	23
		EMPLOYEE PKG	50+01.0'TP' - 50+75.0'TP'	17	260	-	35	5
		USH 12/29	55+00.0'V' - 61+00.0'V'	142	1,631	-	-	31
			UNDISTRIBUTED	47	363	-	5	1
			PROJECT 1022-04-76 TOTAL	1,700	27,000	-	40	480
1022-04-86								
		SALT SHED	50+00'S' - 54+27.52'S'	95	780	1,260	-	36
		SALT SHED BUILDING		-	101	-	-	2
			PROJECT 1022-04-86 TOTAL	95	881	1,260	0	38

CONCRETE ITEMS

PROJECT	CATEGORY	LOCATION	STATION - STATION	405.0100 * CONCRETE WISDOT RED (CY)	415.0100 CONCRETE PAVEMENT 10-INCH (SY)	415.0110 CONCRETE PAVEMENT 11-INCH (SY)	415.0125 CONCRETE PAVEMENT 12 1/2-INCH (SY)	415.2010 CONCRETE TRUCK APRON 12-INCH (SY)	415.4100 JOINT FILLING (SY)	416.0620 DRILLED DOWEL BARS (EACH)	416.0610 DRILLED TIE BARS (LF)	SPV.0180.001 SCALE APPROACH PAVEMENT REINF. (SY)
1022-04-76												
	0010	IH 94 WB	471+40'WB' - 480+40'WB'	-	-	-	2,600	-	-	22	-	-
		USH 12/29	54+00'V' - 61+00'V'	-	2,180	-	-	-	-	-	-	-
		CTH B NB	389+25'NB' - 390+55'NB'	-	-	-	217	-	217	-	-	-
		IH 94 RAMP	406+00'R' - 431+00'R'	168	-	6,460	-	-	-	6	72	167
		WEST LOOP	412+50'R'/11+00'L' - 16+00'L'	30	1,690	-	-	68	1,796	-	-	-
		CMV PARKING	50+00 - 53+00'PK'	-	3,740	-	-	-	3,740	-	-	-
		EAST LOOP	19+75'L' - 21+00'L'/420+20'R'	17	607	-	-	57	619	-	-	-
PROJECT 1022-04-76 TOTAL				215	8,217	6,460	2,817	125	6,371	28	72	167

* ADDITIONAL QUANTITIES FOUND IN "CONCRETE SIDEWALK" TABLE

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HMA PAVEMENT

PROJECT	CATEGORY	LOCATION	STATION - STATION	455.060500 TACK COAT (GAL)	460.5223 3 LT 58-28 S (TON)	460.5244 4 LT 58-34 S (TON)	460.5444 4 LT 58-34 H (TON)	460.6223 3 MT 58-28 S (TON)	460.6244 4 MT 58-34 S (TON)	465.0125 ASPHALTIC SURFACE TEMPORARY (TON)	415.6000.S ROUT AND SEAL (LF)
1022-04-76											
	0010	IH 94 WB	470+40'WB' - 480+40'WB'	196	-	-	-	235	157	-	2,000
		USH 12/29	53+62'V' - 62+20'V'	125	-	-	-	241	161	475	1,200
		CTH B NB	387+12'NB' - 392+00'NB'	134	213	-	107	-	-	-	-
		TEMP. BYPASS	61+21'TR' - 100+16'TR'	-	-	-	-	-	-	3,825	-
		I-94 RAMP	406+00'R' - 431+00'R'	272	-	-	-	325	217	-	4075
		WEST LOOP	11+00'L' - 16+00'L'	39	-	-	-	45	30	-	545
		CMV SHOULDER	50+00'PK' - 53+00'PK'	22	-	-	-	26	17		310
		EMPLOYEE PARKING	50+01.0'TP' - 50+75.0'TP'	57	-	78	-	-	-	-	-
		EAST LOOP	19+75'L' - 21+00'L'	16	-	-	-	19	12	-	305
			PROJECT 1022-04-76 TOTAL	861	213	78	107	891	594	4,300	8,435
1022-04-86											
	0010	SALT SHED	50+00'S' - 54+27.52'S'	222	355	-	178	-	-	-	-
		SALT SHED	BUILDING	23	-	-	-	-	127	-	-
			PROJECT 1022-04-86 TOTAL	245	355	0	178	0	127	0	0

MISCELLANEOUS ITEMS

PROJECT	CATEGORY	LOCATION	STATION - STATION	211.0400 PREPARE SURFACE FOR ASPHALTIC SHOULDERS (STA)	305.0500 SHAPING SHOULDERS (STA)	465.0105 ASPHALTIC SURFACE (TON)	465.0510 ASPH. RUMBLE STRIPS, SHOULDER DIVIDED HIGHWAY (LF)	465.0520 ASPH. RUMBLE STRIPS, SHOULDER (LF)	SPV.0090.005 FILL EXISTING RUMBLE STRIPS (LF)	COMMENTS
1022-04-76										
	0010									
		IH 94 WB	402+00'WB MAINT XOVER	-	-	60	-	-	-	
		IH 94 WB	449+50'WB' - 471+40'WB'	-	-	-	2,200	-	2,200	
		IH 94 WB	454+00'WB' - 471+40'WB'	-	18	-	-	-	-	INSIDE STAGE 3A
		IH 94 WB	471+40'WB' - 480+40'WB'	-	-	-	2,000	-	-	
		IH 94 WB	480+40'WB' - 493+35'WB'	-	14	-	1,400	-	1,400	INSIDE STAGE 3A
		IH 94 WB	485+00'WB' - 494+00'WB'	-	-	-	1,000	-	-	
		IH 94 EB	465+00'WB' - 486+00'WB'	-	21	-	-	-	-	EB INSIDE
		IH 94 WB	430+20'WB' MAINT XOVER	1	1	20	-	-	-	EB TAPER
		USH 12/29	48+25'V' - 63+25'V'	24	24	-	-	2,900	-	STAGE 1/3
			PROJECT 1022-04-76 TOTAL	25	78	80	6,600	2,900	3,600	

3

CULVERT PIPE TEMPORARY

520.2015

PROJECT	CATEGORY	FROM STA	FROM O/S	TO STA	TO O/S	INLET ELEV	OUTLET ELEV	SLOPE FT/FT	15-INCH LF
1022-04-76									
	0010	69+82'TR'	10.0'RT	68+92'TR'	7.0'LT	886.97	886.90	0.0041	17
		80+63'TR'	33.0'LT	80+92'TR'	25.0'LT	*890.40	888.80	0.0552	29
		81+18'TR'	32.5'LT	80+92'TR'	25.0'LT	*890.50	888.80	0.0630	27
		86+55'TR'	33.0'LT	86+92'TR'	16.6'LT	*890.00	888.80	0.0286	42
		87+30'TR'	32.9'LT	86+92'TR'	16.6'LT	*890.00	888.80	0.0286	42
	PROJECT 1022-04-76 TOTAL								157

*ADJUST INLET GRADE TO FIT FIELD CONDITIONS

CULVERT PIPES

PROJECT	CATEGORY	FROM STRUCT.		TO STRUCT.	INLET ELEV	OUTLET ELEV	SLOPE FT/FT	521.1618 AEW FOR CP SLOPED SIDE DRAINS STEEL 18-INCH 10 TO 1 EACH	522.0118 CULVERT PIPE REINF. CONCRETE CLASS III 18-INCH LF	522.0124 CULVERT PIPE REINF. CONCRETE CLASS III 24-INCH LF	522.0415 CULVERT PIPE REINF. CONCRETE CLASS IV 15-INCH LF	522.1015 APRON ENDWALL 15-INCH EACH	522.1024 REINF. CONC. APRON ENDWALL 24-INCH EACH	633.5200 *MARKERS CULVERT END EACH	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH
1022-04-76	0010														
		1R	-	EXIST	889.68	888.37	0.1310	-	-	10	-	-	1	1	1
		M1	-	M2	891.70	891.70	0.0029	2	70	-	-	-	-	-	1
						PROJECT 1022-04-76 TOTAL		**2**	**70**	**10**	**--**	**--**	**1**	**1**	**2**
1022-04-86	0010														
		5.1	-	5.0	892.50	892.25	0.0021	--	--	--	120	2	--	2	1
						PROJECT 1022-04-86 TOTAL		**--**	**--**	**--**	**120**	**2**	**--**	**2**	**1**

* SEE ADDITIONAL QUANTITIES IN "STORM SEWER STRUCTURES" TABLE

CONCRETE CURB & GUTTER

PROJECT	CATEGORY	LOCATION	STATION - STATION	SPV.0090.001 24-INCH TYPE A SPECIAL (LF)	SPV.0090.002 24-INCH TYPE D SPECIAL (LF)	601.0555 6-INCH SLOPED 36-INCH TYPE A (LF)	601.0557 6-INCH SLOPED 36-INCH TYPE D (LF)	620.0300 CONCRETE MEDIAN SLOPED NOSE (SF)	650.5500 CONSTRUCTION STAKING CURB & GUTTER (LF)
1022-04-76									
	0010	WEST LOOP	11+75'L' - 15+25'L'	163	-	207	157	50	527
		IH 94 RAMP	413+40'R' - 419+30'R'	552	-	207	-	-	759
		CMV PARKING	16+00'L' - 19+50'L'	347	-	-	-	-	347
		EAST LOOP	19+50'L' - 21+55'L'	-	-	204	177	-	381
		EMPLOYEE PARKING	50+00'TP' - 50+75'TP'	-	102	-	-	-	102
PROJECT 1022-04-76 TOTAL				1,062	102	618	334	50	2,116

CONCRETE SIDEWALK

PROJECT	CATEGORY	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH (SF)	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW (SF)	405.0100 * CONCRETE WISDOT RED (CY)	650.9500 CONSTRUCTION STAKING SIDEWALK (1022-04-76) (EACH)	SPV.0060.008 TRASH RECEPTACLES (EACH)	SPV.0090.006 PEDESTRIAN RAILING (LF)
1022-04-76								
	0010	SWEF BUILDING	1,540	20	2	1	2	85
PROJECT 1022-04-76 TOTAL			1,540	20	2	1	2	85

* ADDITIONAL QUANTITIES FOUND IN "CONCRETE ITEMS" TABLE

STORM SEWER SYSTEM PIPE

PROJECT	CATEGORY	FROM STRUCT.	-	TO STRUCT.	INLET ELEV	OUTLET ELEV	SLOPE FT/FT	608.3012 STORM SEWER PIPE CLASS III-A 12-INCH LF	612.0204 PIPE UNDERDRAIN UNPERFORATED 4-INCH LF	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF
1022-04-76										
	0010	1.1	-	1.0	893.00	892.50	0.0070	72	-	-
		NW	-	SW	898.00	896.50	0.0375	-	-	40
		SW	-	1.1	896.50	895.50	0.0833	-	-	12
		NE	-	CURB	898.75	898.30	#VALUE!	-	28	-
	PROJECT 1022-04-76 TOTAL							**72**	**28**	**52**

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STORM SEWER SYSTEM STRUCTURES

PROJECT	CATEGORY	STRUCTURE NO.	STATION	OFFSET*	LOCATION	STRUCTURE ELEVATIONS TOP ELEV	STRUCTURE ELEVATIONS BOTTOM INVERT**	DEPTH*** (FT)	611.2004 MANHOLES 4-FT DIAMETER EACH	611.0612 INLET COVERS TYPE C EACH	520.101200 APRON ENDWALLS FOR CULVERT PIPE 12-INCH EACH	SPV.0060.007 OIL/WATER SEPARATOR SYSTEM EACH	633.5200 +MARKERS CULVERT END EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
1022-04-76														
	0010	1.0	415+67.00	45.75' RT	'R'	--	892.50	-	-	-	1	-	1	1
		1.1	415+53.81	24.78' LT	'R'	899.64	892.83	5.56	1	1	-	-	-	1
		1.2	415+52.70	36.00' LT	'R'	900.11	-	-	-	-	-	1	-	1
PROJECT 1022-04-76 TOTAL									1	1	1	1	1	3

+ SEE ADDITIONAL QUANTITIES IN "CULVERT PIPE" TABLE
* STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE
** THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE
*** DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6 -INCH ADJUSTMENT RING HEIGHT + PIPE THICKNESS

MGS GUARDRAIL

PROJECT	CATEGORY	LOCATION	STATION - STATION	204.0165 REMOVING GUARDRAIL (LF)	614.2300 MGS GUARDRAIL 3 (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
1022-04-76						
	0010	IH 94 WB	471+38'WB' - 474+70'WB'	87.5	337.5	1
PROJECT 1022-04-76 TOTAL				**87.5**	337.5	1

PROJECT	CATEGORY	LOCATION	STATION - STATION	FENCING 616.0206 FENCE CHAIN LINK 6-FT (LF)	616.0100 FENCE WOVEN WIRE (4-FT) (LF)	SPV.0060.001 CANTILEVER GATE CHAIN LINK 21-FT (EACH)	SPV.0090.003 CONSTRUCTION STAKING FENCE (LF)
1022-04-86							
	0010	SALT SHED	50+00'S' - 54+27.52'S'	580	82	2	704
PROJECT 1022-04-86 TOTAL				580	82	2	704

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DUST CONTROL

PROJECT	CATEGORY	LOCATION	STATION - STATION	623.0200 DUST CONTROL SURFACE TREATMENT (SY)
1022-04-76				
	0010	IH 94 WB	471+40'WB' - 480+40'WB'	4,165
		USH 12/29	54+00'V' - 61+00'V'	3,235
		CTH B NB	387+12'NB' - 392+00'NB'	1,135
		IH 94 RAMP	406+00'R' - 431+00'R'	6,790
		WEST LOOP	412+50'R'/11+00'L' - 16+00'L'	1,365
		CMV PARKING	16+00'L' - 19+75'L'	2,260
		EAST LOOP	19+75'L' - 21+00'L'/420+20'R'	615
		EMPLOYEE PARKING	50+00'TP' TO 50+75'TP'	480
PROJECT 1022-04-76 TOTAL				20,045
1022-04-86				
	0010	SALT SHED	50+00'S' - 54+27.52'S'	3,570
PROJECT 1022-04-86 TOTAL				3,570

FINISHING ITEMS

PROJECT	CATEGORY	LOCATION	STATION - STATION	625.0500 SALVAGED TOPSOIL (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0130 SEEDING MIXTURE NO. 30 (LB)	630.0140 SEEDING MIXTURE NO. 40 (LB)	630.0200 SEEDING TEMPORARY (LB)	630.0500 SEED WATER (MGAL)
1022-04-76									
	0010	CTH B NB	387+12'NB' - 392+00'NB'	-	0.19	5	-	-	7
		IH 94 WB	455+50'WB' - 494+00'WB'	14,045	10.27	293	-	-	366
		TEMP. BYPASS	62+71'TR' - 101+00'TR'	1,325	2.00	-	-	85	-
		IH 94 RAMP	406+00'R' - 425+70'R'	5,055	4.79	137	-	-	171
		CMV PARKING	50+00'PK' - 53+00'PK'	400	0.25	-	5	-	9
		EAST & WEST LOOP	11+37'L' - 21+55'L'	695	0.70	20	5	-	25
		SWALE	10+00'SW' - 17+60'SW'	3,755	2.37	68	-	-	84
		MAIN XOVERS	395+80'WB' - 403+20'WB'	50	0.59	17	-	-	-
		UNDISTRIBUTED		225	0.85	60	10	415	-
PROJECT 1022-04-76 TOTAL				25,550	22.00	600	20	500	662
1022-04-86									
	0010	SALT SHED	50+00'S' - 54+31'S'	500	0.50	14	-	50	10
PROJECT 1022-04-86 TOTAL				500	0.50	14	0	50	10

MOBILIZATIONS

PROJECT	CATEGORY	LOCATION	628.1905 EROSION CONTROL (EACH)	628.1910 EMERGENCY EROSION CONTROL (EACH)
1022-04-76				
	0010	PROJECT 1022-04-76	6	6
PROJECT 1022-04-76 TOTAL			6	6
1022-04-86				
	0010	PROJECT 1022-04-86	2	2
PROJECT 1022-04-86 TOTAL			2	2

EROSION CONTROL

PROJECT	CATEGORY	LOCATION	STATION - STATION	645.0130 GEOTEXTILE TYPE R (SY)	606.0200 RIPRAP MEDIUM (CY)	628.150400 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	627.0200 MULCHING (SY)	628.200800 EROSION MAT URBAN CLASS I TYPE B (SY)	628.700500 INLET PROTECTION TYPE A (EACH)	628.7020 INLET PROTECTION TYPE D (EACH)	628.750400 TEMPORARY DITCH CHECKS (LF)	628.755500 CULVERT PIPE CHECKS (EACH)	628.7560 TRACKING PADS (EACH)
PROJECT 1022-04-76														
	0010	CTH B NB	387+12'NB' - 392+00'NB'	-	-	-	-	-	35	-	-	20	-	-
		IH 94 WB	455+50'WB' - 494+00'WB'	-	-	950	4,750	-	14,045	-	-	120	8	-
		TEMP. BYPASS	62+71'TR' - 101+00'TR'	-	-	-	-	-	1,325	4	-	50	-	1
		IH 94 RAMP	406+00'R' - 425+70'R'	-	-	3,075	15,375	-	5,055	-	-	80	3	1
		CMV PARKING	50+00'PK' - 53+00'PK'	-	-	-	-	-	400	-	-	-	-	-
		EAST & WEST LOOP	11+37'L' - 21+55'L'	-	-	200	1,000	-	695	2	2	-	-	-
		SWALE	10+00'SW' - 17+60'SW'	20	8	-	-	-	3,755	-	-	120	-	-
		UNDISTRIBUTED		5	2	775	3,875	8,500	690	1	1	110	14	-
			PROJECT 1022-04-76 TOTAL	25	10	5,000	25,000	8,500	26,000	7	3	500	25	2
PROJECT 1022-04-86														
		SALT SHED	50+00'L' - 54+31.62'L'	-	-	475	2,350	215	500	-	-	10	2	1
			PROJECT 1022-04-86 TOTAL	0	0	475	2,350	215	500	0	0	10	2	1

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PLANTINGS

PROJECT	CATEGORY	LOCATION	STATION - STATION	632.0201.001 SHRUBS POTENTILLA FRUICOAS CG #2 ABBOTSWOOD POTENTILLA (EACH)	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES (EACH)	SPV.0090.004 LANDSCAPING EDGING (LF)	SPV.0180.002 WEED BARRIER (SY)
1022-04-76							
	0010	EMPLOYEE PARKING	50+00'TP' - 50+75'TP	4	6	35	150
PROJECT 1022-04-76 TOTAL				4	6	35	150

PERMANENT SIGNING TYPE I

PROJECT	CATEGORY	SIGN #	SIGN CODE	SIGN SIZE WIDTH IN	X	SIGN SIZE HEIGHT IN	STEEL POST SHAPE	NUMBER OF REQUIRED POSTS	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS LB	531.1100 CONCRETE MASONRY ANCILLARY STRUCTURES TYPE NS CY	531.1140 STEEL REINFORCEMENT HS ANCILLARY STRUCTURES TYPE NS LBS	637.1220 SIGNS TYPE I REFLECTIVE SH SF	NOTES	REMARKS
1022-04-76														
	0010	4-02	E5-57	144	X	42	---	---	---	---	---	42.00	RE-USE EXIST SUPPORTS	WEIGH STATION
		4-04	R13-1	144	X	66	---	---	---	---	---	66.00	RE-USE EXIST SUPPORTS	TRUCKS OVER 5 TONS STOP AT WEIGH STA.
		4-05	E5-56A	144	X	72	W8X21	2	1172	2.0	220	72.00		WEIGH STATION 1 MILE
		4-05A	R13-1 (MOD)	144	X	48	---	---	---	---	---	48.00	USE SAME SUPPORT AS 4-05	TRUCKS RT LA
		4-10	E5-57E	144	X	60	W6X15	2	626	1.6	142	60.00	---	WEIGH STATION RIGHT LANE
		5-01	E5-65	144	X	72	W6X15	2	626	1.6	142	72.00	---	24-HOUR TRUCK PARKING AVAILABLE IN WEIGH STA
		5-02	E5-56A	144	X	72	W8X21	2	1130	2.0	220	72.00		WEIGH STATION 2 MILES
		5-02A	R13-1 (MOD)	144	X	48	---	---	---	---	---	48.00	USE SAME SUPPORT AS 5-02	STATION 2 MILES
PROJECT 1022-04-76 TOTAL									**3554**	**7.2**	**724**	**480**		

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PERMANENT SIGNING TYPE II

PROJECT	CATEGORY	SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE WXH IN	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0614 POSTS WOOD 4X6 - INCH X 14 FT EACH	634.0616 POSTS WOOD 4X6 - INCH X 16 FT EACH	634.0620 POSTS WOOD 4X6 - INCH X 20 FT EACH	SIGN MOUNTED ON/SAME POST AS	REMARKS
1022-04-76												
	0010	1-01	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		1-02	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		1-03	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		1-04	R5-53A	Custom	18X24	3	-	1	-	-	-	BUCKLE UP IT'S THE LAW
		1-05	R7-1D	2S	18X24	3	-	1	-	-	1-06	NO PARKING ANY TIME (DOUBLE ARROW)
		1-06	R3-4A	2M	36X12	3	-	-	-	-	1-05	EXCEPT MAINTENANCE & POLICE AUTHORIZED VEHICLES
		2-01	PARK	Custom	48X54	18	-	-	1	-	-	INSPECTION AND PARKING RIGHT TILT ARROW
		2-02	R5-1A	2S	36X24	6	-	1	-	-	-	WRONG WAY
		2-03	R5-1A	2S	36X24	6	-	1	-	-	-	WRONG WAY
		2-04	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		2-05	R5-1	2S	30X30	6.25	-	1	-	-	-	DO NOT ENTER
		2-06	R5-1	2S	30X30	6.25	-	1	-	-	-	DO NOT ENTER
		2-07	R5-1	2S	30X30	6.25	-	1	-	-	-	DO NOT ENTER
		2-08	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		2-09	R7-8L	2S	12X18	1.5	-	1	-	-	-	RESERVED PARKING HANDICAP (LEFT ARROW)
		2-10	W4-1R	2S	36X36	---	9	-	2	-	-	MERGING TRAFFIC SYMBOL (RIGHT)
		2-11	R2-1	2S	24X30	5	-	1	-	-	-	SPEED LIMIT 20 MPH
		2-12	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		2-13	D52-54	2S	24X24	4	-	1	-	-	-	EXIT WITH DOWN ARROW (LEFT)
		3-01	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		3-02	R6-2L	2S	24X30	5	-	-	1	-	3-03	ONE WAY LEFT ARROW
		3-03	R7-1D	2S	18X24	3	-	-	-	-	3-02	NO PARKING ANY TIME (DOUBLE ARROW)
		3-04	D52-54	2S	24X24	4	-	1	-	-	-	EXIT WITH DOWN ARROW (RIGHT)
		3-05	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		3-06	R1-1	2S	30X30	5.18	-	1	-	-	-	STOP SIGN
		3-07	SCALE	Custom	36X24	6	-	1	-	-	-	WAIT UNTIL TRUCK CLEARS SCALE BEFORE PROCEEDING
		3-08	D52-54	2S	24X24	4	-	1	-	-	-	EXIT WITH DOWN ARROW (LEFT)
		3-09	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		3-10	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		3-11	R1-2	2S	36X31	3.88	-	-	1	-	3-13	YIELD
		3-12	R1-2	2S	36X31	3.88	-	-	1	-	3-16	YIELD
		3-13	R5-1	2S	30X30	6.25	-	-	-	-	3-11	DO NOT ENTER
		3-14	R7-1D	2S	18X24	3	-	1	-	-	-	NO PARKING ANY TIME (DOUBLE ARROW)
		3-15	R3-2	2S	24X24	4	-	1	-	-	-	NO LEFT TURN SYMBOL
		3-16	R5-1	2S	30X30	6.25	-	-	-	-	3-12	DO NOT ENTER
		3-17	R5-1	2S	30X30	6.25	-	1	-	-	-	DO NOT ENTER
		3-18	R5-1	2S	30X30	6.25	-	1	-	-	3-19	DO NOT ENTER
		3-19	R2-1	2S	24X30	5	-	-	-	-	3-18	SPEED LIMIT 20 MPH
		3-20	R5-1A	2S	36X24	6	-	1	-	-	-	WRONG WAY
		3-21	R5-1A	2S	36X24	6	-	1	-	-	-	WRONG WAY
		4-01	E5-58R	5	90X72	45	-	-	-	2	-	WEIGH STATION W/ ARROW (RIGHT)
		4-03	CMS	---	---	---	-	-	-	-	-	CMS - SIGN PAID AS PART OF WIM
PROJECT 1022-04-76 TOTAL						**227.19**	**9.00**	**30**	**6**	**2**		

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DELINEATORS

PROJECT	CATEGORY	LOCATION	STATION - STATION	204.0180 REMOVING DELINEATORS AND MARKERS (EACH)	633.0100 DELINEATOR POSTS STEEL (EACH)	633.0500 DELINEATOR REFLECTORS (EACH)
1022-04-76						
	0010	IH 94 RAMP	404+00 'R' - 412+00 'R'	4	16	25
		IH 94 RAMP	412+00 'R' - 420+00 'R'	-	10	10
		IH 94 RAMP	420+00 'R' - 431+00 'R'	-	20	26
		EAST & WEST LOOP	11+50 'L' - 20+50 'L'	-	28	28
		IH 94 WB	475+00 'WB' - 485+00 'WB'	6	6	6
			PROJECT 1022-04-76 TOTAL	10	80	95

CRASH CUSHION

PROJECT 1022-04-76 CAT	STAGE	LOCATION	614.0905 CRASH CUSHIONS TEMPORARY (EACH)	BACK WIDTH FT	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS
0010	IH 94 - STAGE 1	494+07'WB', 2'RT	1	4	OM-3L;(WO5-58L)	TL-3	WB	RT	TEMP. CONCR. BARRIER
	IH 94 - STAGE 1	451+50'WB' 44'RT	1	4	OM-3L;(WO5-58L)	TL-3	EB	RT	TEMP. CONCR. BARRIER
	IH 94 - STAGE 3A	494+28'WB', 2'RT	1	4	OM-3L;(WO5-58L)	TL-3	WB	RT	TEMP. CONCR. BARRIER
	US 12 - STAGE 2	49+00'V' 12' LT	1	4	OM-3L;(WO5-58L)	TL-3	EB	RT	TEMP. CONCR. BARRIER
	US 12 - STAGE 2	62+50'V' 12' LT	1	4	OM-3L;(WO5-58L)	TL-3	WB	RT	TEMP. CONCR. BARRIER
	US 12 - STAGE 3A	49+00'V' 12' RT	1	4	OM-3R;(WO5-58R)	TL-3	EB	LT	TEMP. CONCR. BARRIER
	US 12 - STAGE 3A	62+50'V' 12' RT	1	4	OM-3R;(WO5-58R)	TL-3	WB	LT	TEMP. CONCR. BARRIER
		PROJECT 1022-04-76 TOTAL	7						

3

TRAFFIC CONTROL

PROJECT CAT	LOCATION	LENGTH OF STAGE	633.1100 DELINEATORS TEMPORARY (EACH)	643.0300 DRUMS (DAY)	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0715 WARNING LIGHTS TYPE C (DAY)	643.0800 ARROW BOARDS (DAY)	643.0900 SIGNS (DAY)	643.0910 + COVERING SIGNS TYPE I (EACH)	643.1050 SIGNS PCMS (DAY)	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED (LF)	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED (LF)	643.1205.S BASIC TRAFFIC QUEUE WARNING SYSTEM (DAY)	643.4100 INTERIM LANE CLOSURE (EACH)	661.0101.001 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (VWS) (EACH)
1022-04-76																
0010	IH 94 - STAGE 1	30	-	1,650	-	-	180	30	240	-	7	7,925	7,925	30	30	-
	WB MEDIAN BARRIER PLACEMENT	3	-	165	9	6	51	6	54	-	-	-	-	3	3	-
	EB MEDIAN BARRIER PLACEMENT	3	-	165	9	6	51	6	27	-	7	-	-	3	3	-
	IH 94 - STAGE 2	45	100	1,575	135	270	1,485	-	405	-	-	-	2,250	45	45	-
	IH 94 - STAGE 3A	30	46	1,650	-	-	180	30	150	-	-	1,875	4,125	30	30	-
	IH 94 - STAGE 3B	5	-	275	-	-	15	5	25	-	-	-	-	5	5	-
	US 12 - STAGE 1	5	-	-	-	-	-	-	50	-	-	-	-	-	-	-
	US 12 - STAGE 2	30	13	2,400	90	180	1,890	60	750	-	-	1,350	1,350	-	-	1
	US 12 - STAGE 3A/B	21	13	1,680	63	126	1,323	42	525	-	-	-	1,350	-	-	-
	WB IH 94 MAINTENACE XOVER (402/430)	10	-	1,100	20	40	340	20	180	-	-	-	-	10	10	-
	WB IH 94 WIM OUTSIDE SHOULDER CLOSURE	10	-	550	30	20	170	20	180	-	-	-	-	10	10	-
	OFF-RAMP CLOSURE	266	-	10,640	1,330	1,064	1,595	266	2,128	4	7	-	-	-	-	-
	UNDISTRIBUTED		-	750	14	38	-	-	286	-	14	-	-	-	-	-
PROJECT 1022-04-76 TOTAL			172	22,600	1,700	1,750	7,280	485	5,000	4	35	11,150	17,000	136	136	1

+ SINGLE CYCLE

3

SIGNING REMOVALS

PROJECT	CATEGORY	SIGN #	SIGN CODE	638.2102 MOVING SMALL SIGNS TYPE II EACH	638.2601 REMOVING SIGNS TYPE I EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	*204.0195 REMOVING CONCRETE BASES EACH	SIGN MOUNTED ON/SAME POST AS	REMARKS
1022-04-76												
	0010	1R-01	R7-1D	--	--	1	1	--	--	--	--	NO PARKING ANY TIME (DOUBLE ARROW)
		1R-02	R7-1D	--	--	1	1	--	--	--	--	NO PARKING ANY TIME (DOUBLE ARROW)
		1R-03	R7-1D	--	--	1	1	--	--	--	--	NO PARKING ANY TIME (DOUBLE ARROW)
		1R-04	R5-53A	--	--	1	1	--	--	--	--	BUCKLE UP IT'S THE LAW
		2R-01	W4-1R	--	--	1	1	--	--	--	--	MERGING TRAFFIC SYMBOL (RIGHT)
		2R-02	R2-1	--	--	1	1	--	--	--	--	SPEED LIMIT 20 MPH
		3R-01	R2-1	--	--	1	1	--	--	--	--	SPEED LIMIT 20 MPH
		3R-02	R5-1A	--	--	1	1	--	--	--	--	WRONG WAY
		3R-03	R5-1A	--	--	1	1	--	--	--	--	WRONG WAY
		4R-01	E5-58	--	1	--	--	2	--	2	--	WEIGH STATION W/ ARROW
		4R-02	E5-57	--	1	--	--	--	--	--	4R-03	WEIGH STATION - REMOVAL PAID AS PART OF WIM
		4R-03	CMS	--	--	--	--	--	--	--	4R-02	CMS - REMOVAL PAID AS PART OF WIM
		4R-04	R13-1	--	1	--	--	--	--	--	--	TRUCKS OVER 5 TONS STOP AT WEIGHT STATION
		4R-05	E5-56A	--	1	--	--	--	--	--	--	WEIGH STATION 1 MILE - RE-USING EXIST SUPPORTS/BASES
		5R-01	E5-56A	--	1	--	--	--	--	--	--	WEIGH STATION 2 MILES - RE-USING EXIST SUPPORTS/BASES
		N/A	R3-4A	2	--	--	--	--	1	--		MOVE NO U-TURN TO NEW LOCATION
PROJECT 1022-04-76 TOTALS				**2**	**5**	**9**	**9**	**2**	**1**	**2**		

* ADDITIONAL QUANTITIES ELSEWHERE IN THE "LIGHTING REMOVAL"

TRAFFIC CONTROL TEMPORARY MARKING

PROJECT	CATEGORY	LOCATION	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH WHITE (LF)	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH YELLOW (LF)	643.3805 STOP LINE 18-INCH WHITE (LF)	643.3770 RAISED PAVEMENT MARKER TYPE II (EACH)	646.9000 MARKING REMOVAL LINE 4-INCH (LF)
1022-04-76							
	0010	IH 94 - STAGE 1	-	-	-	-	-
		IH 94 - STAGE 2	11,000	5,500	-	80	2,000
		IH 94 - STAGE 3	5,780	4,625	-	-	3,130
		US 12 - STAGE 1	-	-	-	-	-
		US 12 - STAGE 2	1,475	-	24	-	2,400
		US 12 - STAGE 3	1,420	-	24	-	-
	PROJECT 1022-04-76 TOTAL		19,675	10,125	48	80	7,530
			29,800				

MARKING LINE

PROJECT	CATEGORY	LOCATION	STATION - STATION	646.2020 EPOXY 6-INCH (YELLOW) SOLID (LF)	646.2020 EPOXY 6-INCH (YELLOW) 3' SEG, 9' GAP (LF)	646.2020 EPOXY 6-INCH 12.5' SEG, 37.5' GAP (LF)	646.2020 EPOXY 6-INCH (WHITE) SOLID (LF)	646.2020 EPOXY 6-INCH (WHITE) 3' SEG, 9' GAP (LF)	646.2025 BLACK EPOXY 6-INCH (LF)	646.2040 GROOVED WET REFL. EPOXY 6-INCH (WHITE) (LF)	646.2050 PERMANENT TAPE 6-INCH (WHITE) (LF)	646.2050 PERMANENT TAPE 6-INCH (YELLOW) (LF)	646.4020 EPOXY 10-INCH (LF)	646.6120 STOP LINE EPOXY 18-INCH (LF)	646.6220 YIELD LINE EPOXY 18-INCH (EA)	646.7020 DIAGONAL EPOXY 6-INCH (LF)	646.7120 DIAGONAL EPOXY 12-INCH (LF)	646.7220 CHEVRON EPOXY 24-INCH (LF)	646.8320 PARKING STALL EPOXY (YELLOW) (LF)
1022-04-76																			
	0010	IH 94 RAMP	406+00'R' - 431+00'R'	2,940	-	-	2,460	140	-	-	-	-	478	45	-	-	57	93	-
		EAST & WEST LOOP	11+50'L' - 21+50'L'	900	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		CMV PARKING	50+00'PK' - 53+00'PK'	1,000	-	-	-	-	-	-	-	-	-	-	15	0	-	-	-
		EMPLOYEE PARKING	50+00'TP' - 50+68'TP'	0	-	-	-	-	-	-	-	-	-	-	-	50	-	-	254
		IH 94 WB	469+00'WB' - 781+00'WB'	3,725	-	940	3,725	-	225	225	900	900	-	-	-	-	-	-	-
		USH 12/29	55+00'V' - 61+00'V'	3,300	-	415	3,115	-	-	-	-	-	-	-	-	-	-	-	-
			PROJECT 1022-04-76 TOTAL	11,865	45	1,355	9,300	140	225	225	900	900	478	45	15	50	57	93	254
						22,705					1,800								

CONSTRUCTION STAKING

PROJECT	CATEGORY	LOCATION	STATION - STATION	650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	650.7000 CONCRETE PAVEMENT (LF)	650.9000 CURB RAMPS (EACH)	650.9920 SLOPE STAKES (LF)
1022-04-76								
	0010	TEMP. BYPASS	62+71.0'TR' - 101+00.0'TR'	3,829	3,829	-	-	3,829
		REMOVE MAINT XOVER	395+90.0'WB' - 397+15.0'WB'	125	-	-	-	125
		MAINT XOVER	401+53.1'WB' - 403+19.2'WB'	166	166	-	-	166
		IH 94 WB	455+48.0'WB' - 494+00.0'WB'	3,852	2,952	900	-	3,852
		CTH B NB	387+00.0'NB' - 391+10.6'NB'	511	361	150	-	511
		IH 94 RAMP	406+00.0'R' - 431+00.0'R'	2,500	-	2,619	-	2,500
		EAST & WEST LOOPS	11+37.0'L' - 21+55.0'L'	1,018	-	1,018	-	1,018
		CMV PARKING	50+01.5'PK' - 52+89.0'PK'	288	-	288	-	288
		EMPLOYEE PKG	50+01.0'TP' - 50+75.0'TP'	75	75	-	2	75
		SWALE	10+12.5'SW' - 17+57.6'SW'	745	-	-	-	745
		USH 12/29	55+00.0'V' - 61+00.0'V'	600	-	600	-	600
PROJECT 1022-04-76 TOTAL				13,708	7,382	5,575	2	13,708
1022-04-86								
	0010	SALT SHED	50+29.8'S' - 54+20.6'S'	391	391	-	-	391
PROJECT 1022-04-86 TOTAL				391	391	0	0	391

LIGHTING PULLBOXES

PROJECT	PULLBOX NUMBER	STATION	OFFSET	SIDE	653.0154 PULL BOXES NON-CONDUCTIVE 24X36-INCH EACH	653.0164 PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH
1022-04-76						
CATEGORY 0010						
	LPB100	12+05'L'	13.2'	RT	-	1
	LPB103	16+41'L'	24.7'	RT	-	1
	LPB106	52+91'S'	31.7'	RT	-	1
	LPB107	52+52'S'	62.8'	LT	-	1
	LPB108	51+27'S'	25.8'	RT	-	1
	LPB109	51+15'S'	6.0'	LT	-	1
	LPB110	412+45'R'	15.7'	LT	-	1
	FOPB1	50+47.2'TP'	26.8'	RT	1	-
PROJECT 1022-04-76 TOTAL					**1**	**7**

INTERCONNECT FIBER OPTIC INSTALLATION

1022-04-76 FROM	- TO	674.0300 REMOVE CABLE LF	674.0400 REINSTALL CABLE LF	678.0400 FIBER OPTIC TERMINATION EACH
CATEGORY 0010				
EXPB102 -	FOPB1	100	100	1
PROJECT 1022-04-76 TOTAL		100	100	1

STREET LIGHTS

1022-04-76					654.0105 CONCRETE BASES TYPE 5	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	657.0322 POLES TYPE 5 ALUMINUM	657.0705 LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 10-FT	659.1125 LUMINAIRES UTILITY LED C	SPV.0060.050 REMOVE, SALVAGE AND REINSTALL STREET LIGHT ASSEMBLY	655.0610 * ELECTRICAL WIRE LIGHTING 12AWG
	LIGHT NUMBER	STATION	OFFSET	SIDE	EACH	EACH	EACH	EACH	EACH	EACH	LF
CATEGORY 0010											
SL	102	415+04'R'	5.0'	LT	1	--	--	--	--	1	174
SL	103	412+43'R'	9.7'	LT	1	--	--	--	--	1	174
SL	105	53+06'S'	34.5'	RT	1	--	--	--	--	1	174
SL	107	52+49'S'	64.0'	LT	1	1	1	1	1	--	174
SL	108	51+18'S'	4.8'	LT	1	1	1	1	1	--	174
1022-04-76 PROJECT TOTAL					5	2	2	2	2	3	870

*ADDITIONAL QUANTITIES FOUND IN "LIGHTING CONDUIT AND WIRE"

3

LIGHTING CONDUIT AND WIRE

1022-04-76			652.0210	652.0225	652.0235	655.0620	655.0610 *	
			CONDUIT RIGID NONMETALLIC SCHEDULE 40			ELECTRICAL WIRE LIGHTING		
			1-INCH	2-INCH	3-INCH	8 AWG	12 AWG	
FROM	-	TO	LF	LF	LF	LF	LF	REMARKS
CATEGORY 0010								
EXISTING CONTROLS	-	LPB103	--	--	--	1,356	--	EXISTING CONDUIT
LPB103	-	EXPB104	--	15	--	786	--	EXISTING CONDUIT
EXPB104	-	EXSL104	--	--	--	69	--	EXISTING CONDUIT
EXPB104	-	EXPB105	--	--	--	108	--	EXISTING CONDUIT
EXPB105	-	EXSL101	--	--	--	54	--	EXISTING CONDUIT
LPB103	-	LPB106	--	105	--	726	--	--
LPB103	-	LPB106	--	105	--	--	121	PULL WIRE ONLY
LPB106	-	SL105	--	--	15	252	--	--
LPB106	-	LPB107	--	105	--	363	--	--
LPB107	-	SL107	--	5	--	54	--	--
LPB106	-	LPB108	--	165	--	543	--	--
LPB108	-	LPB109	--	35	--	153	--	--
LPB109	-	SL108	--	5	--	54	--	--
LPB106	-	EXPB102	--	115	--	393	--	--
LPB106	-	EXPB102	--	115	--	--	131	PULL WIRE ONLY
EXPB102	-	SL102	--	45	--	348	--	--
EXPB102	-	SL102	45	--	--	--	13	PULL WIRE ONLY
EXPB102	-	EXPB101	--	--	--	378	--	EXISTING CONDUIT
EXPB102	-	EXPB101	--	-	--	--	126	EXISTING CONDUIT/PULL WIRE ONLY
EXPB101	-	LPB100	--	--	--	378	--	EXISTING CONDUIT
EXPB101	-	LPB100	--	--	--	--	126	EXISTING CONDUIT/PULL WIRE ONLY
LPB100	-	LPB110	--	65	--	243	--	--
LPB100	-	LPB110	--	65	--	--	81	PULL WIRE ONLY
LPB110	-	SL103	--	5	--	54	--	--
EXPB102	-	FOPB1	--	80	--	--	80	FIBER
		PROJECT 1022-04-76 TOTAL	**45**	**1030**	**15**	**6312**	**678**	

* ADDITIONAL QUANTITY FOUND IN "STREET LIGHTS"

MISCELLANEOUS SPV.0060 ITEMS

PROJECT	CATEGORY	LOCATION	.200 COMMUNICATIONS TOWER (EACH)	.302 SALT STORAGE BUILDING (EACH)	.303 LOADER STORAGE BUILDING (EACH)	.304 VERTICAL STORAGE TANKS (EACH)	.305 UNDERGROUND STORAGE TANKS (EACH)
1022-04-86	0010	SALT SHED	-	1	1	2	1
	PROJECT 1022-04-86 TOTAL		-	1	1	2	1
1022-04-76	0010	TOWER	1	-	-	-	-
	PROJECT 1022-04-76 TOTAL		1	-	-	-	-

MISCELLANEOUS SPV.0060 ITEMS

PROJECT	CATEGORY	LOCATION	STATION - STATION	.002 INSPECTION SITE APPURTENANCES (EACH)	.003 ELECTRICAL SERVICE, MENOMONIE SWEF (EACH)	.004 ELECTRICAL SERVICE, MENOMONIE SWEF MAINLINE WIM (EACH)	.005 ELECTRICAL SERVICE, MENOMONIE SWEF VIRTUAL WEIGH STATION (EACH)	.006 INTERNET SERVICE, MENOMONIE SWEF VIRTUAL WEIGH STATION (EACH)	.020 WEIGH-IN-MOTION SYSTEM (WIM) (EACH)	.021 VIRTUAL WEIGH STATION (VWS) SYSTEM (EACH)	.022 WEIGH-IN-MOTION SYSTEM WARRANTY MAINTENANCE (EACH)	.023 VIRTUAL WEIGH STATION SYSTEM WARRANTY MAINTENANCE (EACH)	SWEF BUILDING .100 GENERAL CONSTRUCTION (EACH)	.101 PLUMBING (EACH)	.102 HEATING AND VENTILATION (EACH)	.103 ELECTRICAL (EACH)	.104 GENERATOR (EACH)	.105 LIGHTNING PROTECTION AND GROUNDING SYSTEM (EACH)
1022-04-76																		
	0010	SWEF BUILDING		-	1	-	-	1	-	-	-	-	1	1	1	1	1	1
	0010	CTH B	387+00.0'NB' - 391+10.6'NB'	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0010	IH 94 WB	455+48.0'WB' - 494+00.0'WB'	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-
	0010	USH 12	55+00.0'V' - 61+00.0'V'	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-
		PROJECT 1022-04-76 TOTAL		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

WATER SERVICE AND WELL

PROJECT		LOCATION	204.0265 ABANDONING WELLS (EACH)	SPV.0060.301 IRON REMOVAL SYSTEM (EACH)	SPV.0090.300 WATER SERVICE (LF)	SPV.0060.300 WELL PUMP AND EQUIPMENT (LS)
1022-04-76						
CATEGORY	0010	SWEF BUILDING	1	1	395	1
PROJECT 1022-04-76 TOTAL			1	1	395	1

3

3

SAWING

PROJECT	CATEGORY	LOCATION	STAGE	690.0150 ASPHALT (LF)	690.0250 CONCRETE (LF)
1022-04-76					
	0010	USH 12/29	USH 12 STAGE 1	2,400	-
		USH 12/29	USH 12 STAGE 2	620	24
		USH 12/29	USH 12 STAGE 3A	910	24
		USH 12/29	USH 12 STAGE 3B	1,500	-
		I-94 WB	STAGE 2	2,000	-
		I-94 WB	STAGE 3A	1,900	26
		I-94 WB	STAGE 3B	1,825	26
		I-94 WB	MAINTENANCE XOVERS	345	-
		OFF-RAMP	ALL	725	-
		ON-RAMP	ALL	10	15
		SCALE	416+80'R'	-	115
PROJECT 1022-04-76 TOTAL				12,235	230

CURVE 1
PI STA = 62+60.90 'TR'
Y = 180304.919
X = 198541.016
DELTA = 2°03'54" RT
D = 1°08'45"
T = 90.12'
L = 180.21'
R = 5000.00'
PC STA = 61+70.78 'TR'
PT STA = 63+50.99 'TR'

CURVE 2
PI STA = 74+58.30 'TR'
Y = 180126.053
X = 199725.009
DELTA = 2°02'58" LT
D = 0°31'15"
T = 196.76'
L = 393.48'
R = 11000.00'
PC STA = 72+61.54 'TR'
PT STA = 76+55.02 'TR'

SUPERELEVATION REPORT FOR 'ALI-TR'			
TRANSITION EVENT POINTS		RATE (FT/FT)	
		LEFT OF CROWNLINE	
LOCATION	STATION	LEFT SHOULDER	LEFT LANE
WEST TRANSITION			
EndNormalCrown	73+00'TR'	0.02	0.02
LevelCrown	73+50'TR'	0	0
BeginFullSuper	74+00'TR'	-0.02	-0.02
EAST TRANSITION			
EndFullSuper	90+50'TR'	-0.02	-0.02
LevelCrown	91+00'TR'	0	0
BeginNormalCrown	91+50'TR'	0.02	0.02

N

MATCH LINE STA 90+00'TR'

PC: 61+70.78 'TR'
PT: 63+50.99 'TR'
PC: 72+61.54 'TR'
PT: 76+55.02 'TR'
PC: 87+73.04 'TR'

60'TR' 65'TR' 70'TR' 75'TR' 80'TR' 85'TR' 90

WB IH 94

SLOPE INTERCEPT (TYP.)

STA 61+25'TR'
MATCH EXISTING

CULVERT PIPE TEMPORARY 15-INCH REQUIRED
SEE MISCELLANEOUS QUANTITIES TABLE

PROFILE FROM 61+25'TR' TO STA 72+10'TR'
ADJUST AS NECESSARY TO MATCH EXISTING WB, SLOPE DOWN AT 2% TO 'TR'-RL

SEE CONSTRUCTION DETAIL
TEMPORARY CULVERT PIPE 15-INCH REQD.

STA 61+25.00 'TR'
EL 891.50
STA 64+81.03 'TR'
EL 891.54
STA 65+85.51 'TR'
EL 891.55
STA 72+10.00 'TR'
EL 892.18
VPC STA 75+21.78 'TR'
VPC EL 893.04
VPI STA 76+21.78 'TR'
VPI EL 893.31
VPT STA 77+21.78 'TR'
VPT EL 893.31
VPC STA 88+89.02 'TR'
VPC EL 893.32
VPI STA 89+89.02 'TR'
VPI EL 893.32
HP STA 88+89.41
HP EL 893.32

0.01% 0.01% 0.10% 0.28% 0.00%

VCL = 200.00
K = 728.14

VCL = 200.00
K = 747.03

920 910 900 890 880 870 860 850

| | | |

MATCH LINE STA 90+00'TR'

PT: 93+31.07 'TR'

PC: 97+93.37 'TR'

PT: 100+30.63 'TR'

EP: 104+93.13 'TR'

CURVE 4
PI STA = 99+12.02 'TR'
Y = 179889.965
X = 202166.783
DELTA = 2°43'07" RT
D = 1°08'45"
T = 118.65'
L = 237.25'
R = 5000.00'
PC STA = 97+93.37 'TR'
PT STA = 100+30.63 'TR'

95'TR'

100'TR

B-17-34

B-17-35

SLOPE INTERCEPT (TYP.)

CURVE 3
PI STA = 90+52.11 'TR'
Y = 179944.484
X = 201308.485
DELTA = 2°54'24" LT
D = 0°31'15"
T = 279.08'
L = 558.03'
R = 11000.00'
PC STA = 87+73.04 'TR'
PT STA = 93+31.07 'TR'

PROFILE FROM STA 92+34'TR' TO END
ADJUST AS NECESSARY TO MATCH EXISTING WB, SLOPE DOWN AT 2% TO 'TR'-RL

STA 100+38.00'TR'
MATCH EXISTING

N

5

5

920
910
900
890
880
870
860
850

VPT STA 90+89.02
VPT EL 893.05

STA 92+34.00
EL 892.67

STA 96+92.20
EL 891.94

STA 97+53.72
EL 891.79

STA 98+08.72
EL 891.80

STA 98+61.40
EL 891.69

STA 99+23.02
EL 891.39

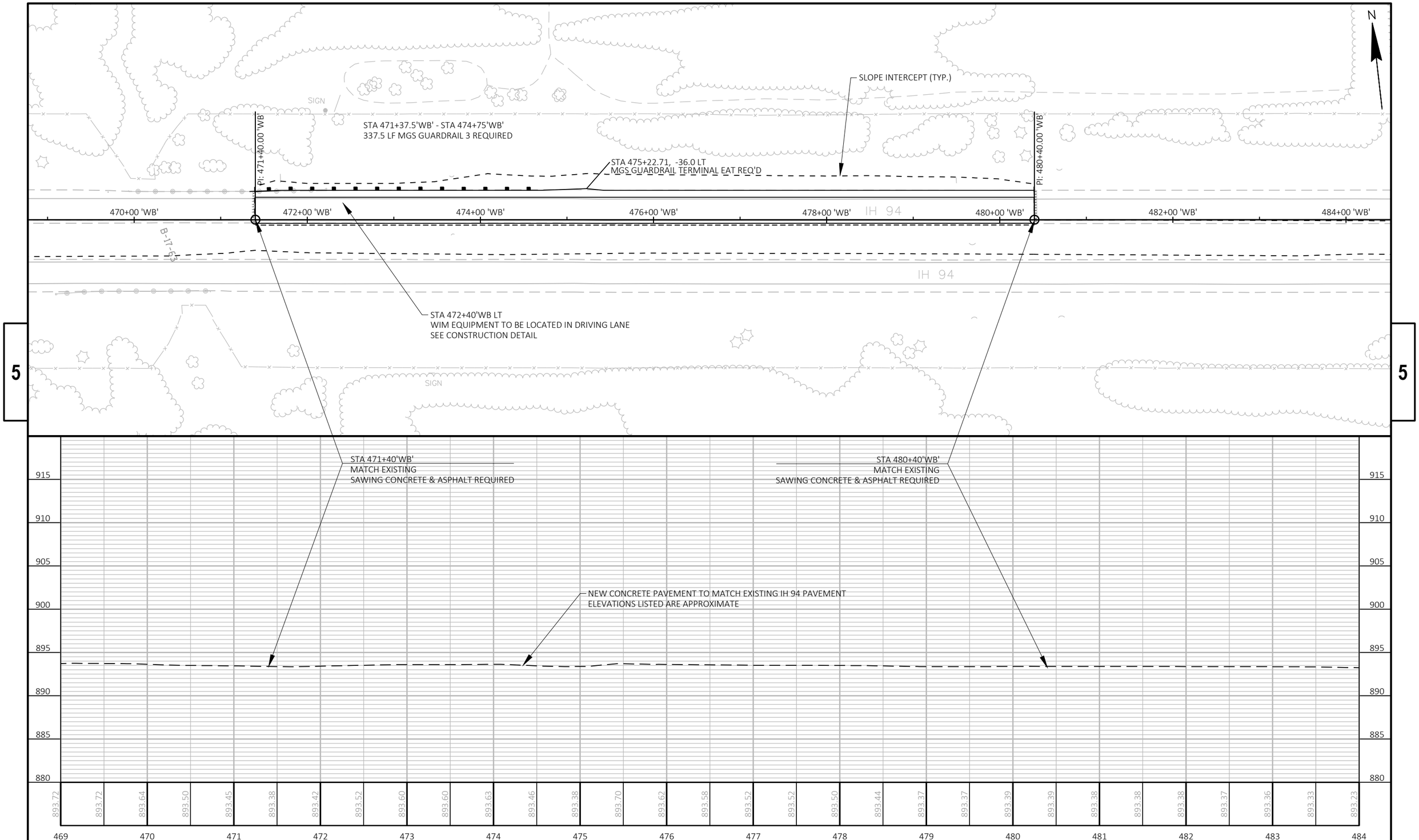
STA 100+38.00
EL 891.06

STA 99+73.20
EL 891.22

-0.27%
-0.16%
-0.25%
0.02%
0.20%
0.48%
0.35%
0.24%

VCL = 200.00
K = 747.03

| | | |



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: WB IH 94 ('WB' R/L)	SHEET 294	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\050100-PP_WB94.DWG
LAYOUT NAME - 01
PLOT DATE : 7/31/2023 1:11 PM
PLOT BY : JON BLOMQUIST
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	406+44'R'	894.07	MAG NAIL
51	412+55'R'	898.21	CUT SQ S SIDE LPM BASE
52	414+54'R'	899.97	CUT SQ N SIDE YELLOW DBL POST SGN CONC BASE

N

EXISTING R/W

'S' R/L

'L'-R/L

AT&T WISCONSIN

US FISH & WILDLIFE OFFICE

SLOPE INTERCEPT (TYP.)

14+00'L'

51+00'PK'

16+00'L'

12+00'L'

404+00'R'

406+00'R'

408+00'R'

410+00'R'

412+00'R'

414+00'R'

416+00'R'

IH 94 RAMP

'R' R/L

WETLAND BOUNDARY (TYP.)

IH 94 WB

IH 94 EB

1R STA 412+44'R', 41.3' RT
APRON ENDWALLS FOR CPRC 24-INCH

STA 414+54'R'
OH SIGN STRUCTURE
S-17-0014
SEE STRUCTURE PLANS

STA 415+53 'R'
STORMSEWER REQUIRED
SEE STORMSEWER PLAN

MATCH LINE STA 417+50.00'R'

CONSTRUCT MAINTENANCE CROSSOVER
SEE CONSTRUCTION DETAIL

BEGIN PROJECT
STA 406+00.00'R'
MATCH EXISTING
SAWING ASPHALT REQ'D

915 910 905 900 895 890 885 880

VCL = 200.00
K = 449.06

STA 406+00.00
EL 894.08

VPC STA 406+78.09
VPC EL 894.31

VPI STA 407+78.09
VPI EL 894.59

VPT STA 408+78.09
VPT EL 895.32

0.29%

0.73%

VPI STA 414+04.33
VPI EL 899.17

VPT STA 415+04.33
VPT EL 899.18

STA 416+00.00
EL 899.18

STA 416+81.81
EL 899.16

0.01%

-0.03%

-0.04%

STA 415+63
REMOVING STORM SEWER (12-INCH)

STA 415+56.81'R'
84 LF X SSPRC CLASS III 12-INCH @ 3.57%

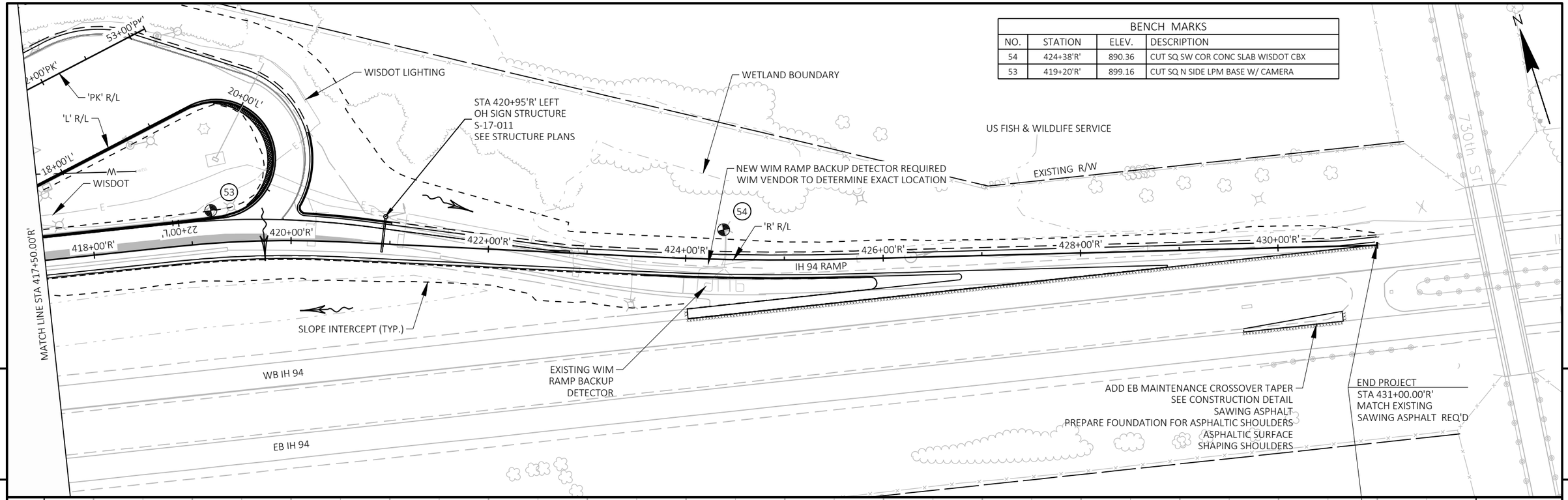
STA 411+97'R' RIGHT
EXTEND 24-INCH CPRC
10 LF CPRC 24-INCH REQUIRED
1 AEW FOR CPRC 24-INCH
1 MARKERS CULVERT END

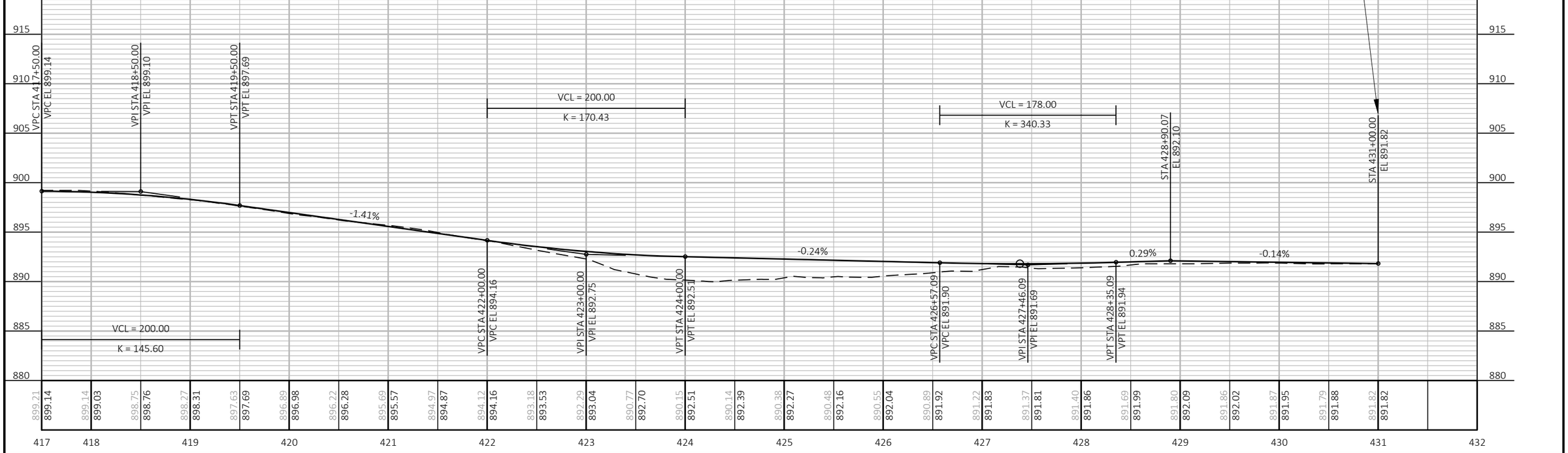
VCL = 200.00
K = 276.79

EXISTING R/L PROFILE

| | | |

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
54	424+38'R'	890.36	CUT SQ SW COR CONC SLAB WISDOT CBX
53	419+20'R'	899.16	CUT SQ N SIDE LPM BASE W/ CAMERA



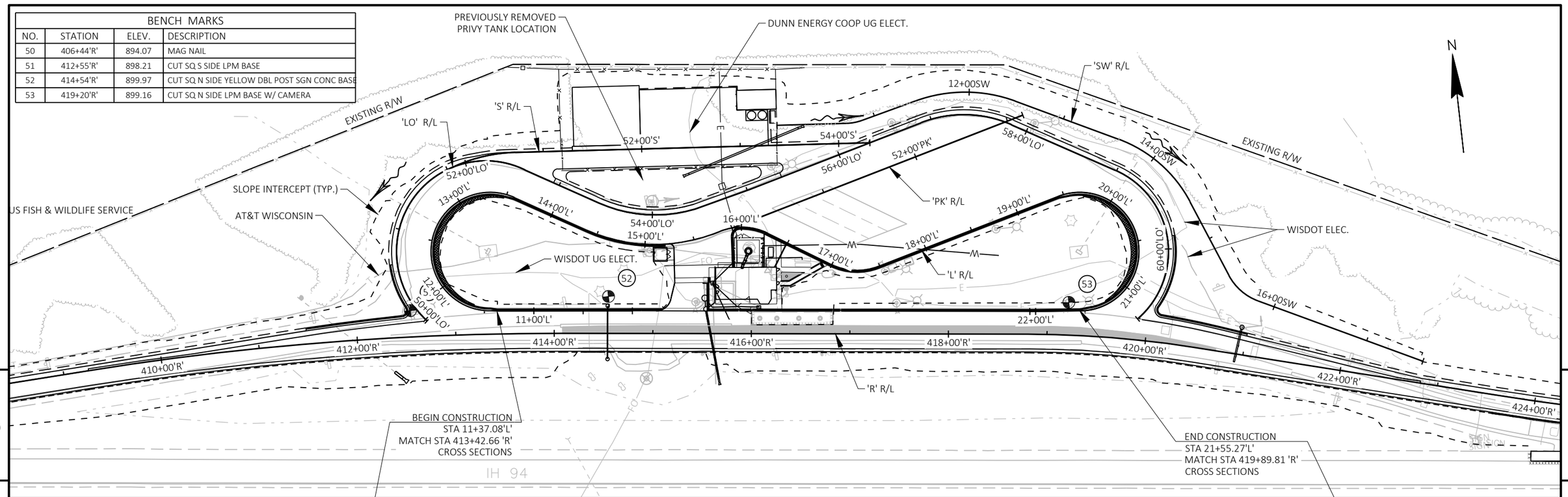


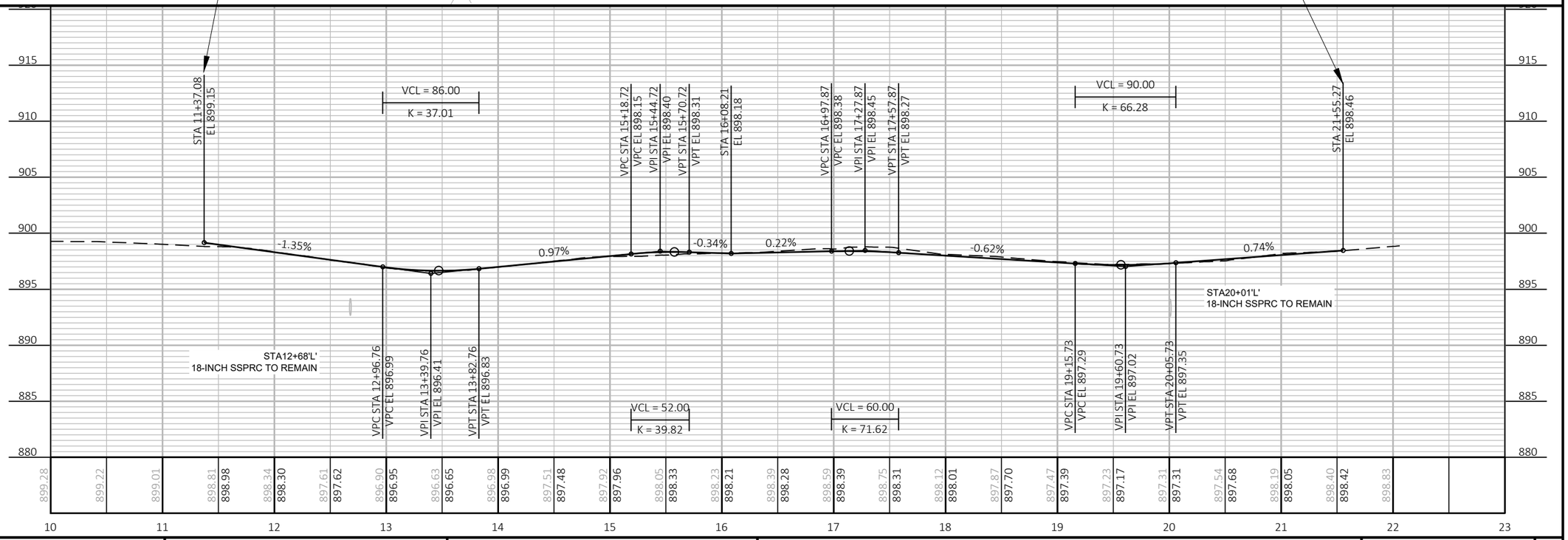
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: IH 94 RAMP ('R' R/L)	SHEET 296	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\050101-PP_RAMP.DWG
LAYOUT NAME - R419

PLOT DATE : 7/31/2023 1:12 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	406+44'R'	894.07	MAG NAIL
51	412+55'R'	898.21	CUT SQ S SIDE LPM BASE
52	414+54'R'	899.97	CUT SQ N SIDE YELLOW DBL POST SGN CONC BASE
53	419+20'R'	899.16	CUT SQ N SIDE LPM BASE W/ CAMERA





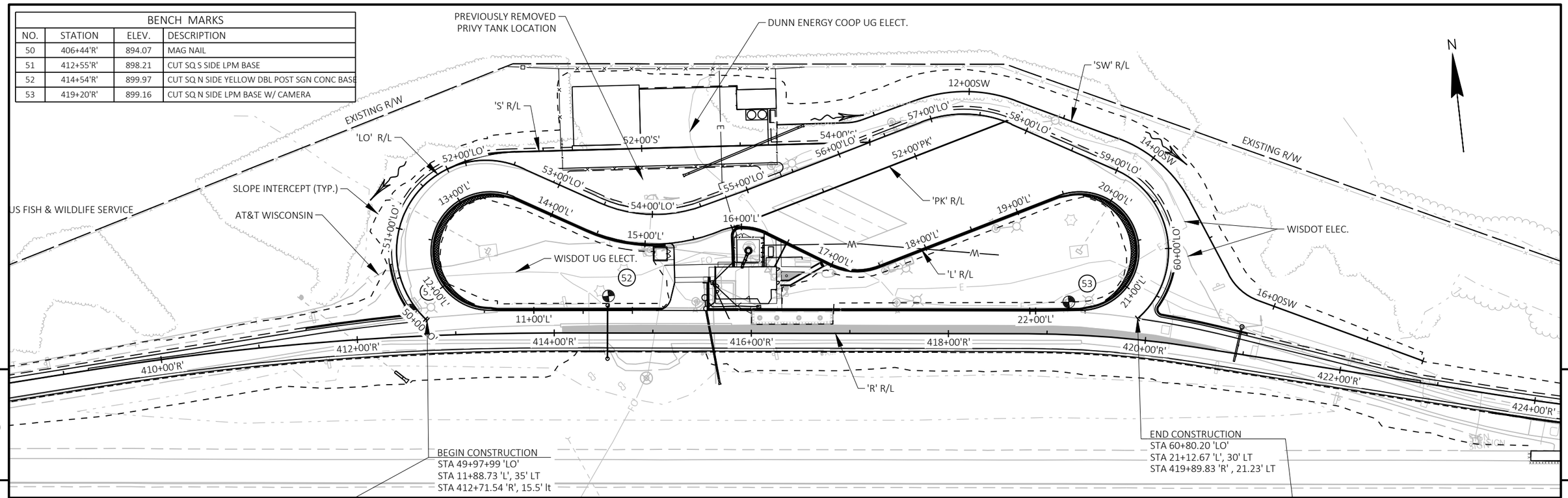
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: LOOP RAMPS ('L' R/L)	SHEET 297 E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOMONIE SWEF)\C3D_MENOMONIE\SHEETSPLAN\050102-PP_LOOP.DWG
LAYOUT NAME - L10+00.00

PLOT DATE : 7/31/2023 1:12 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	406+44'R'	894.07	MAG NAIL
51	412+55'R'	898.21	CUT SQ S SIDE LPM BASE
52	414+54'R'	899.97	CUT SQ N SIDE YELLOW DBL POST SGN CONC BASE
53	419+20'R'	899.16	CUT SQ N SIDE LPM BASE W/ CAMERA

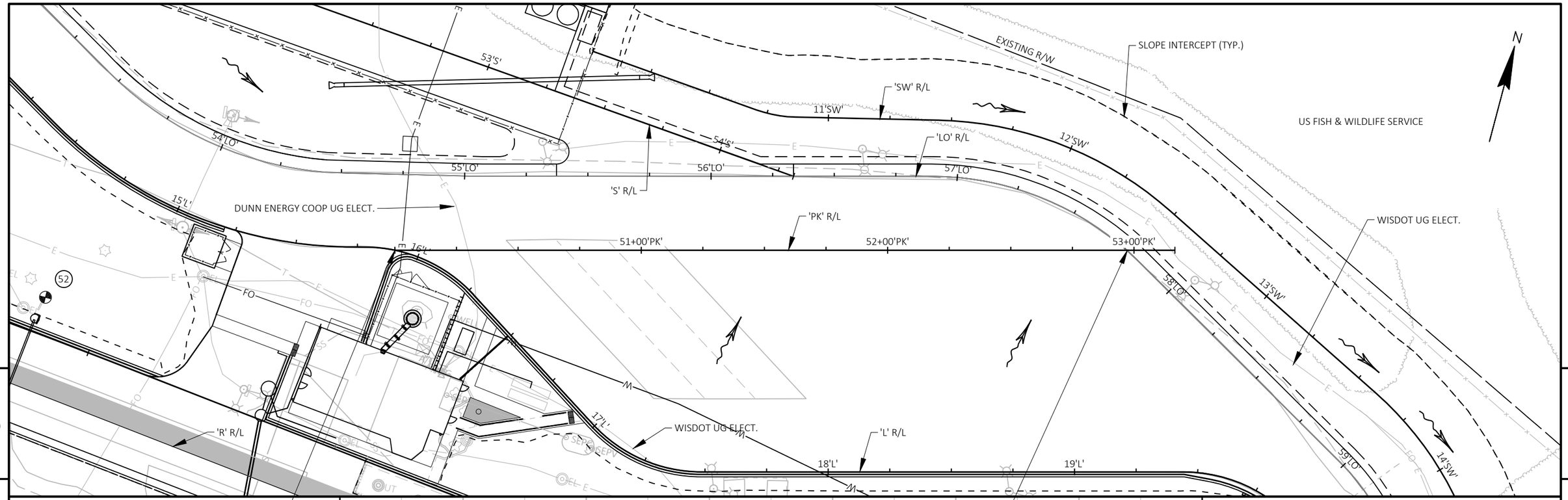


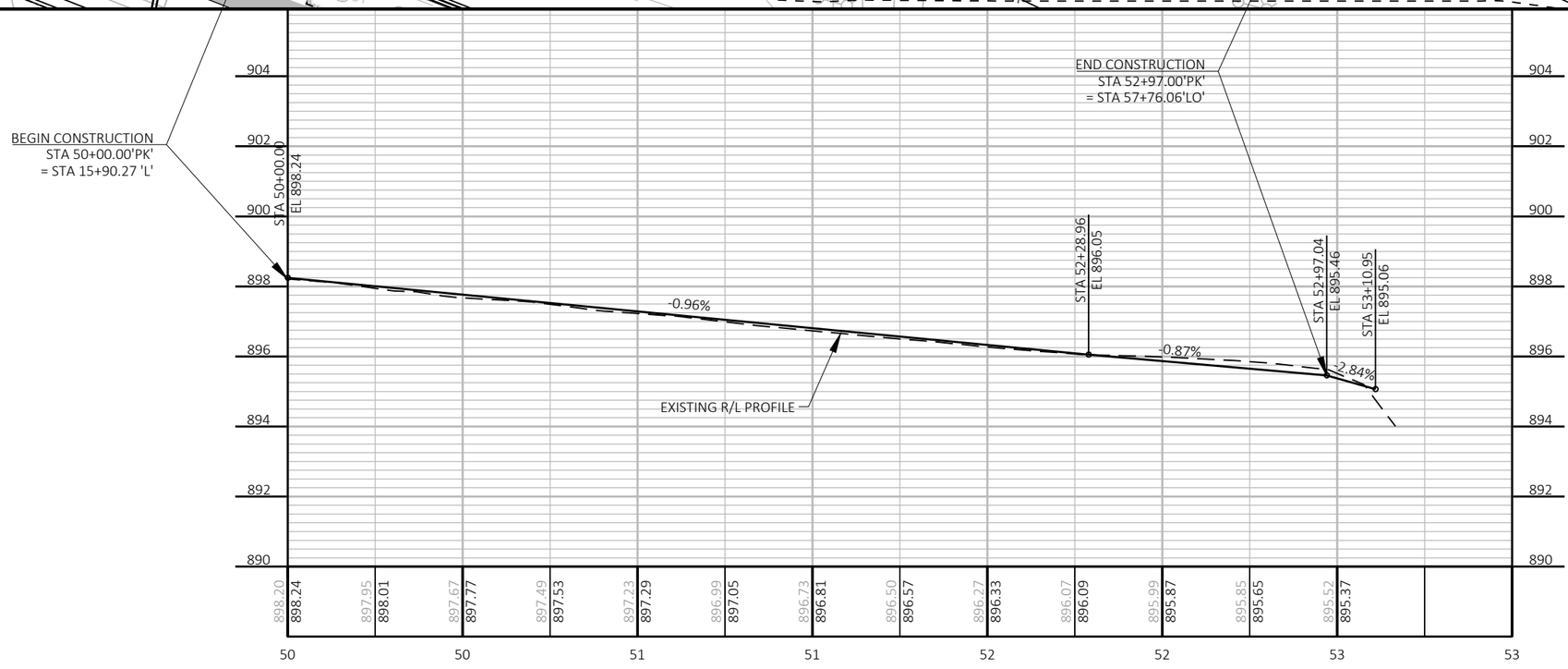
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: LOOP OUTSIDE EDGE OF PAVEMENT ('LO' R/L)	SHEET 298	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\050102A-PP_LO.DWG
LAYOUT NAME - L10+00.00

PLOT DATE : 7/31/2023 1:13 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44





PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: CMV PARKING ('PK' R/L)	SHEET 299	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\050103-PP_PK.DWG
LAYOUT NAME - 'PK'50

PLOT DATE : 7/31/2023 1:14 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

SLOPE INTERCEPT (TYP.)

US FISH & WILDLIFE SERVICE

SWALE BOTTOM

'SW' R/L

WETLAND BOUNDARY

EXISTING R/W

11+00'SW'

12+00'SW'

13+00'SW'

14+00'SW'

15+00'SW'

16+00'SW'

17+00'SW'

53+00'PK'

'PK' R/L

52+00'PK'

51+00'PK'

54+00'S'

53+00'S'

20+00'L'

19+00'L'

18+00'L'

'L' R/L

WISDOT UG ELECT.

21+00'L'

WELL

423+00'R'

422+00'R'

421+00'R'

IH 94 RAMP

EXISTING R/W

5

5

BEGIN CONSTRUCTION
STA 10+07.65'SW'

END CONSTRUCTION
STA 17+60.68'SW'

STA 10+25.00
EL 892.25

STA 10+07.65
EL 893.49

STA 17+60.68
EL 889.56

EXISTING R/L PROFILE

PROPOSED R/L PROFILE

-7.12%

-0.37%

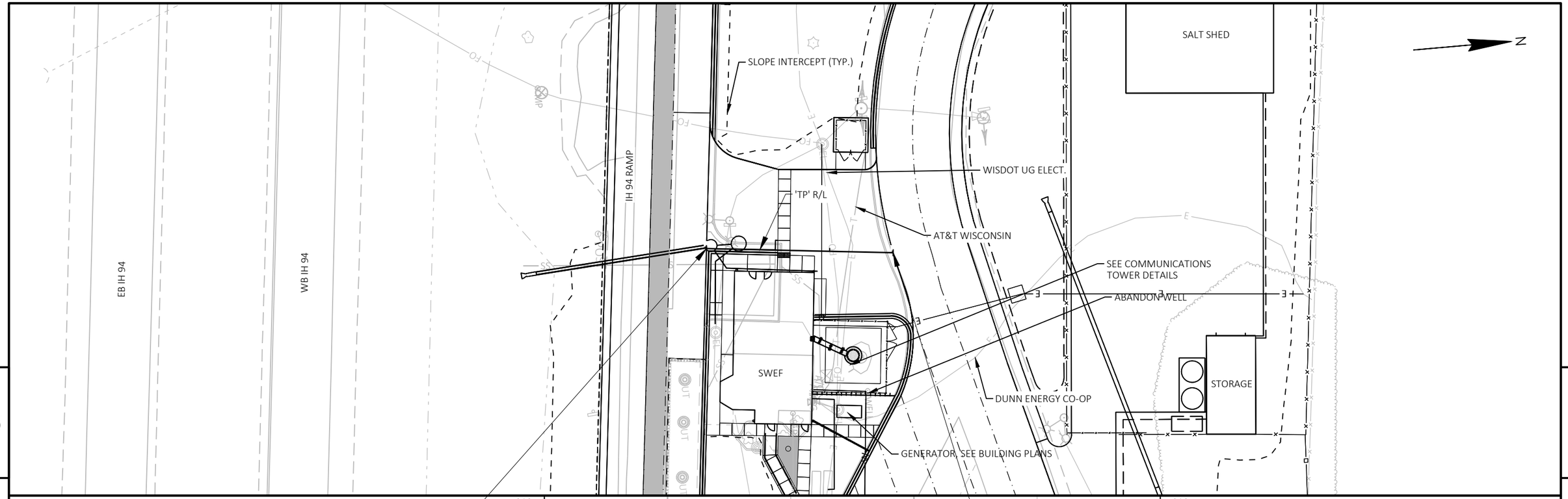
900
895
890
885

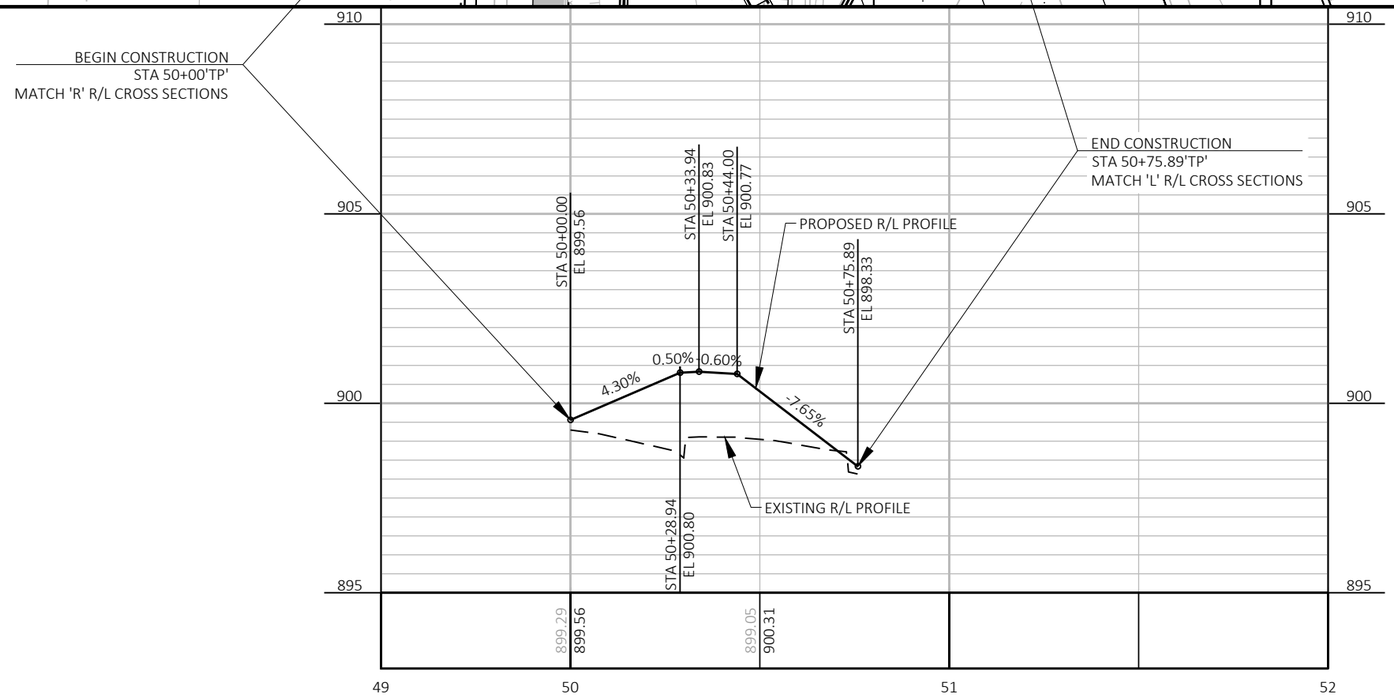
10	11	12	13	14	15	16	17
893.61	892.85 892.16	893.10 891.98	892.95 891.79	892.84 891.61	892.67 891.43	892.81 891.25	892.34 891.06	892.25 890.88	892.61 890.70	892.99 890.51	893.15 890.33	891.82 890.15	890.94 889.97	890.24 889.78	889.65 889.60

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: SWALE ('SW' R/L)	SHEET 300	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\050105-PP_SW_50SC.DWG
LAYOUT NAME - 'SW'50

PLOT DATE : 7/31/2023 1:15 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:50 FT





PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: EMPLOYEE PARKING ('TP' R/L)	SHEET 301	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\050105-PP_TP.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2023 1:16 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

R/L DATA
PI STA: 51+50.00'V' N: 174116.517 E: 209866.586
PI STA: 65+70.84'V' N: 174125.685 E: 211287.400

XCEL TRANSMISSION

GUY

STA 58+85'V' LEFT
MATCH BAD FIELD ENTRANCE

'V' R/L

54+00 'V' 55+00 'V' 56+00 'V' 57+00 'V' 58+00 'V' 59+00 'V' 60+00 'V' 61+00 'V'

USH 12/STH 29

SLOPE INTERCEPT (TYP.)

LUMEN
24-7 TELECOM
DUNN ENERGY CO-OP

BEGIN CONSTRUCTION
STA 55+00'V'
MATCH EXISTING
SAWING ASPHALT REQUIRED

END CONSTRUCTION
STA 61+00'V'
MATCH EXISTING
SAWING ASPHALT REQUIRED

945
940
935
930

STA 55+00.00
EL 931.95

VPC STA 55+86.25
VPC EL 933.22

VPI STA 58+34.07
VPI EL 936.88

PROPOSED R/L PROFILE

HP STA 59+46.32
HP EL 935.88

VPT STA 60+81.89
VPT EL 935.50

STA 61+00.00
EL 935.40

1.48%

-0.56%

EXISTING R/L PROFILE

VCL = 495.64
K = 244.08

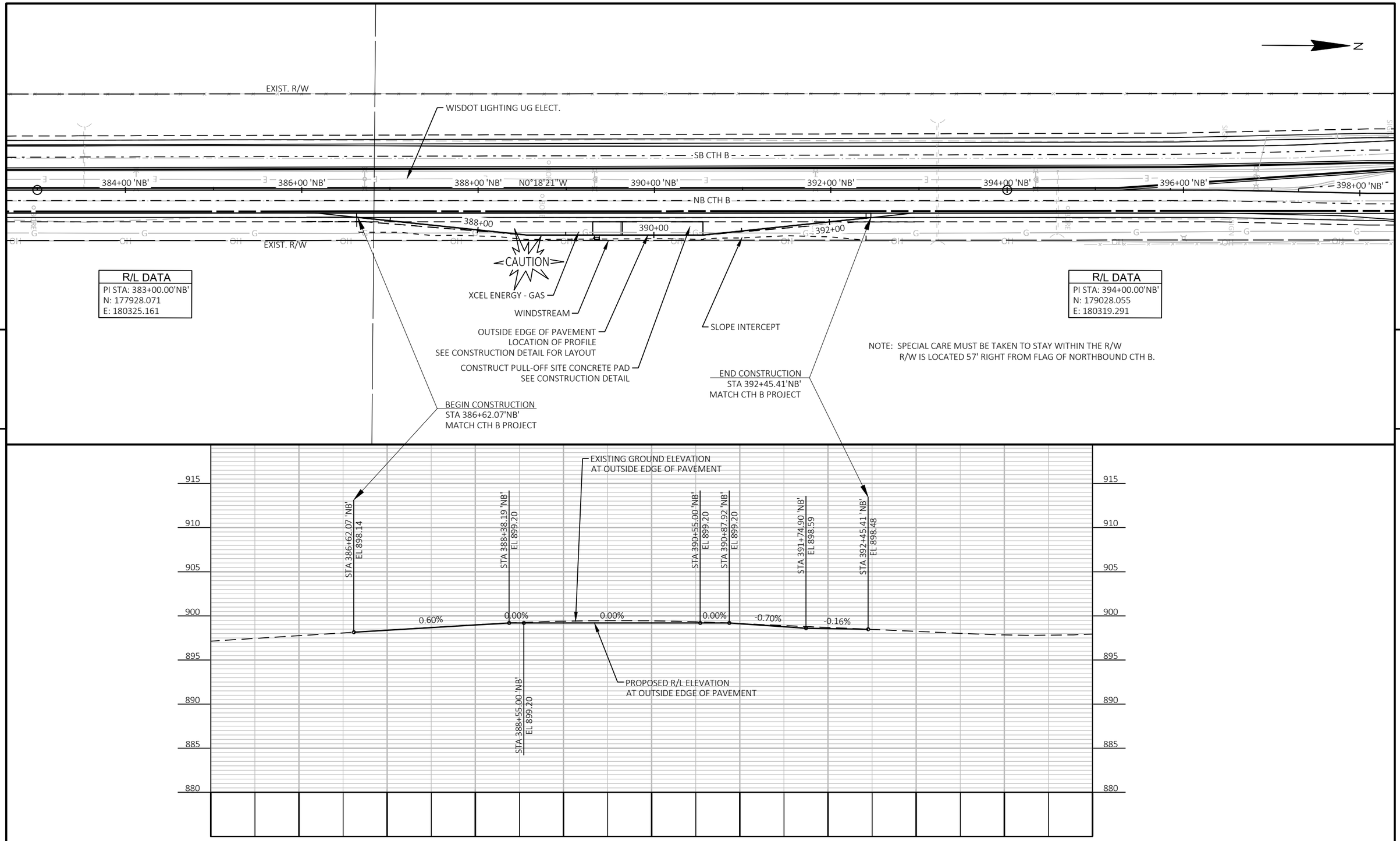
930.05	931.04	931.95	931.95	932.74	932.69	933.48	933.42	934.13	934.08	934.70	934.63	935.15	935.09	935.39	935.44	935.57	935.69	935.77	935.83	935.96	935.88	936.06	935.82	935.73	935.66	935.40	935.40	934.95
54			55		56				57						58				59				60				61	61

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: USH 12/STH 29 VIRTUAL WEIGH STATION ('V'-R/L)	SHEET 302	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\050105-PP_US12.DWG
LAYOUT NAME - 01

PLOT DATE : 7/31/2023 1:17 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: COUNTY RD. B PULL-OFF SITE ('NB'-R/L)	SHEET 303	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\050105-PP_US12.DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2023 1:17 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:100 FT

FENCE WOVEN WIRE (48-INCH)

US FISH & WILDLIFE SERVICE

NOTE: SEE BUILDING PLANS FOR ADDITIONAL INFORMATION

N

DUNN ENERGY COOP UG ELECT.

SLOPE INTERCEPT (TYP.)

FENCE WOVEN WIRE (48-INCH)

FENCE CHAIN LINK 6-FT
SEE PLAN DETAIL FOR LOCATION

EXISTING R/W

TERMINATE FENCE CHAIN LINK 6-FT
AT BUILDING CORNER

6' CHAIN LINK 21' CANTILEVER GATE

SALT SHED

STORAGE SHED

BEGIN FENCE CHAIN LINK 6-FT
AT BUILDING CORNER

'SW' R/L

12+00'SW'

STA 53+59 'S', 16.7' LT
APRON ENDWALLS FOR CPRC 15-INCH
5.0

11+00'SW'

51+00'S'

52+00'S'

'S' R/L

VERTICAL STORAGE TANKS
UNDERGROUND STORAGE TANK

53+00'S'

STA 52+47 'S', 26.5' RT
APRON ENDWALLS FOR CPRC 15-INCH
5.1

54+00'S'

WISDOT UG ELECT.

13+00'L'

'L' R/L

14+00'L'

6' CHAIN LINK 21' CANTILEVER GATE

52+00'PK'

'PK' R/L

PREVIOUSLY REMOVED
PRIVY TANK LOCATION

BP: 56+00.00 TOPX

51+00'PK'

5

5

BEGIN CONSTRUCTION
STA 50+00.00'S'
MATCH STA 13+04.05 'L' CROSS SECTION

END CONSTRUCTION
STA 54+31.62'S'
= STA 56+33.52'LO'
MATCH STA 51+60.85 'PK' R/L CROSS SECTION

STA 50+00.00 EL 896.22

STA 50+30.98 EL 895.99

VPC STA 50+67.46 VPC EL 895.91

VPI STA 50+86.94 VPI EL 895.87

VPT STA 51+06.41 VPT EL 895.68

VCL = 100.00

K = 43.09

VPC STA 53+25.00 VPC EL 896.16

VPI STA 53+50.00 VPI EL 896.50

VPT STA 53+75.00 VPT EL 896.38

STA 54+31.62 EL 896.11

PROPOSED R/L PROFILE

-0.77%

-0.21%

-0.95%

1.37%

-0.47%

VCL = 38.95

K = 52.59

EXISTING R/L PROFILE

SPECIAL DITCH RIGHT

VPC STA 51+65.05 VPC EL 895.13

VPI STA 52+15.05 VPI EL 894.65

VPT STA 52+65.05 VPT EL 895.34

VCL = 50.00

K = 27.12

STA 53+15.92'S'
68.9 LHF
120 LF X CPRC CLASS IV 15-INCH @ 0.21%

904 902 900 898 896 894 892 890

896.42	896.22	895.89	896.03	895.20	895.95	893.81	895.89	892.05	895.74	891.33	895.51	891.11	895.27	890.97	895.04	891.09	894.94	891.53	894.97	892.28	895.16	893.07	895.47	893.71	895.81	893.54	896.16	893.52	896.38	894.70	896.38	895.69	896.26	895.85	896.15
49	50		50		51		51		52		52		53		53		54		54		55		55													

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	PLAN AND PROFILE: SALT SHED ('S' R/L)	SHEET 304	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\050104-PP_SALT.DWG
LAYOUT NAME - 'S'50

PLOT DATE : 8/1/2023 10:04 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

Standard Detail Drawing List

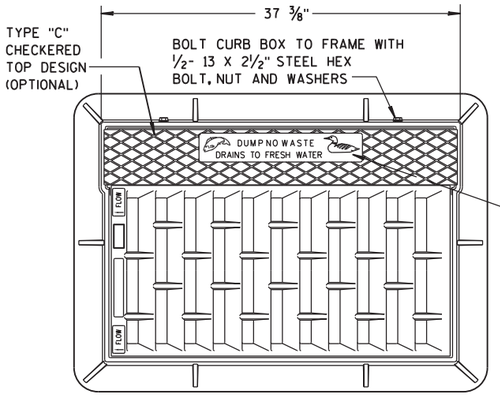
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08B09-03	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B16-02	PULL BOX NON-CONDUCTIVE
09C02-09	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-15D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-15G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E03-06	NON-FREEWAY LIGHTING UNIT POLE WIRING
09G02-05A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-05C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09H11-01	IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS
10A18-05B	LUMINAIRE ARMS, TRUSS TYPE 6-INCH CLAMP
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-06A	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A05-06B	SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY
13A10-03E	EDGE LINE RUMBLE STRIPS - ASPHALT
13A10-03G	SHOULDER AND EDGE LINE RUMBLE STRIPS - CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS
13A10-03H	SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C18-08A	CONCRETE PAVEMENT JOINTING
13C18-08B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-08C	CONCRETE PAVEMENT JOINT TYPES
13C18-08D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14B07-16A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16J	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16K	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16L	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16M	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-16N	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

6

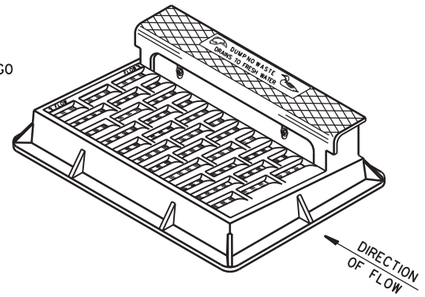
Standard Detail Drawing List

14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-05A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05D	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05E	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05F	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-05G	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-07C	DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09E	OFF RAMP LANE CLOSURE
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-23B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C31-05A	PAVEMENT MARKING EXIT RAMP AND PARALLEL EXIT RAMP
15C31-05C	PAVEMENT MARKING ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C34-04	STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKER, TYPE 2
15C36-01	PARKING STALL MARKING
15D12-11A	TRAFFIC CONTROL, LANE CLOSURE
15D12-11B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D12-11D	TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM
15D16-06	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-07A	TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY
15D21-07A	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D21-07B	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-06	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D31-05	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY
15D33-09	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS
15D41-03	TRAFFIC CONTROL, MULTIPLE LANE SHIFT, MULTILANE DIVIDED ROAD
15D43-02	TRAFFIC CONTROL, SHORT DURATION MOBILE OPERATIONS
15D47-03A	TRAFFIC CONTROL, INGRESS/EGRESS WITH BARRIER
15D47-03B	TRAFFIC CONTROL, INGRESS/EGRESS WITHOUT BARRIER
15D50-03B	TRAFFIC CONTROL, ADDED LANE CLOSURE WITH LANE SHIFT
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

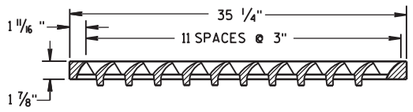
6

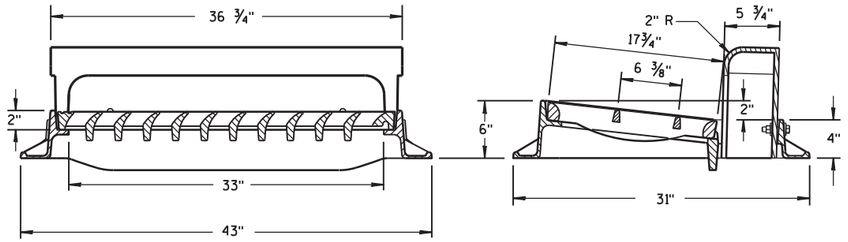


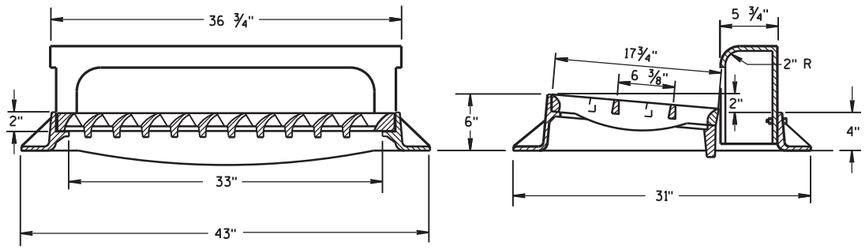
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

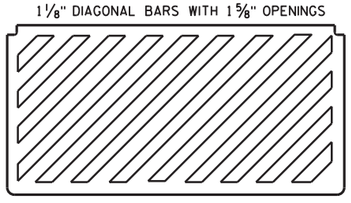






TYPE "H"

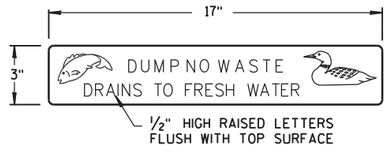
NOTE: EITHER CASTING IS ACCEPTABLE



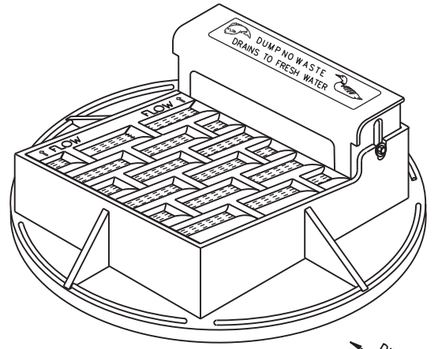
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

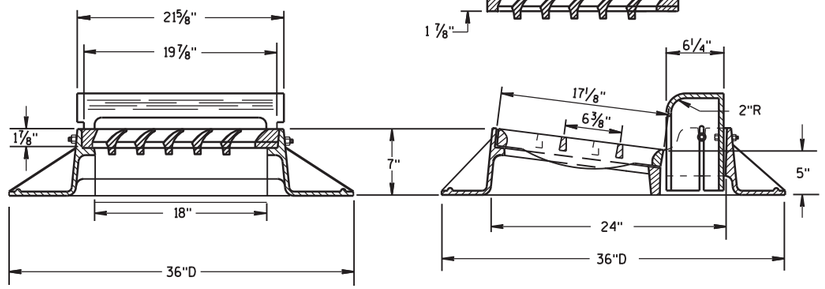


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



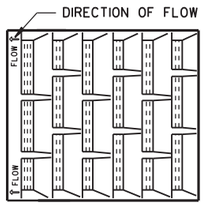
TYPE "A"

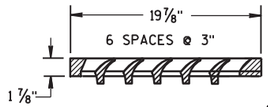
GENERAL NOTES

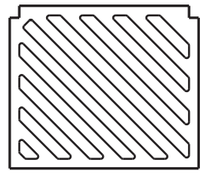
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

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



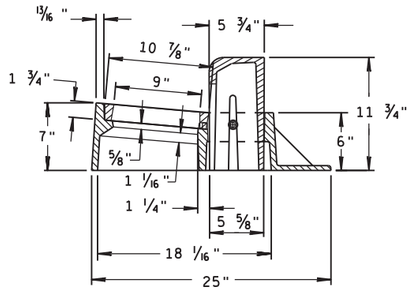


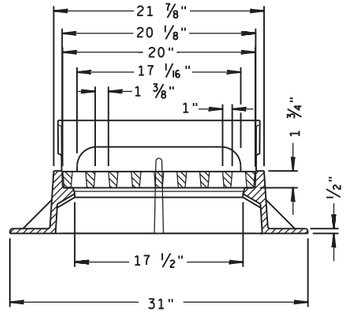


SPECIAL GRATE FOR TYPE "A" COVER

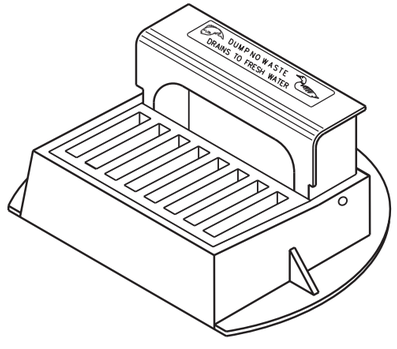
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"

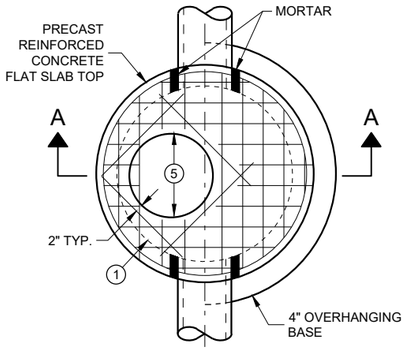


INLET COVERS TYPE A, H, A-S, H-S & Z

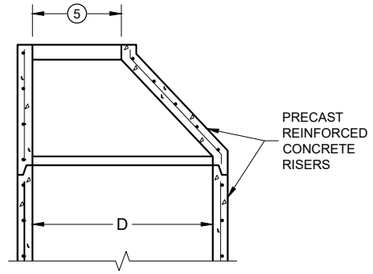
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

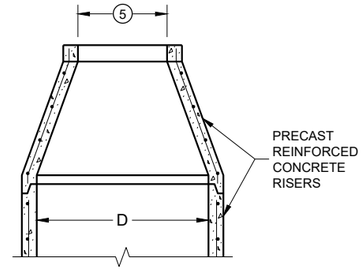
S.D.D. 8 A 5-19a



PLAN VIEW
CIRCULAR OPENING



OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

MANHOLE COVER OPENING MATRIX

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

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42*	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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

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

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

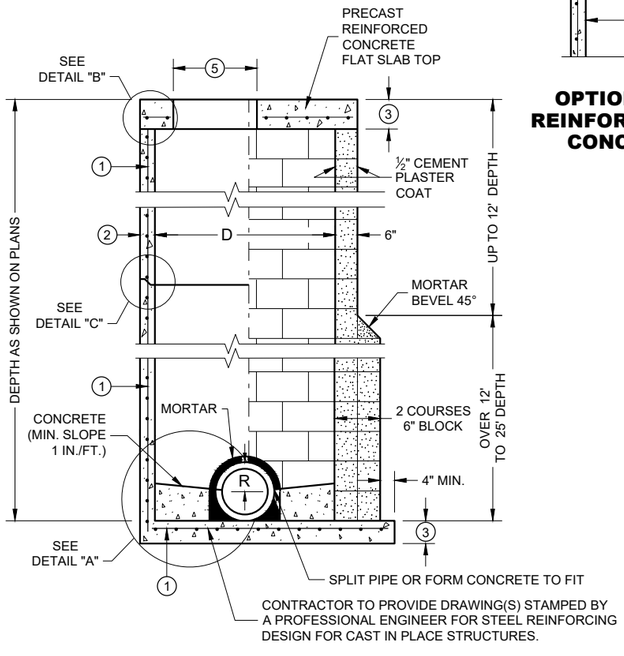
(1) FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

(4) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.).

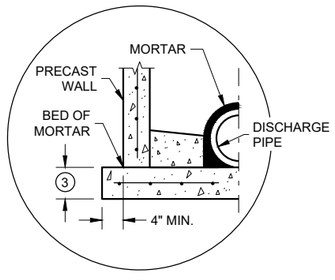
(5) SEE MANHOLE COVER OPENING MATRIX.



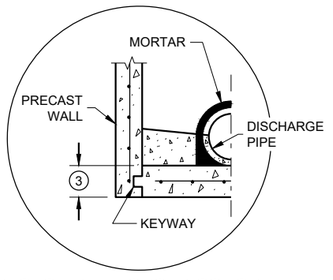
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

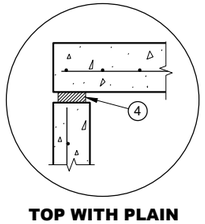


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

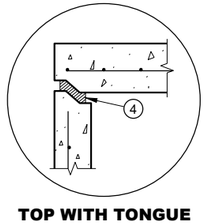


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

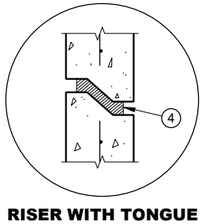
DETAIL "A"



TOP WITH PLAIN END JOINT

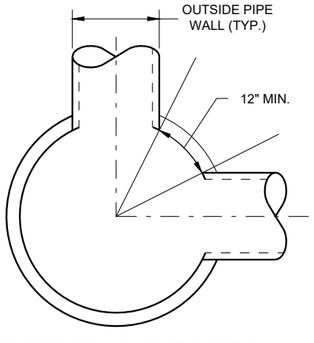


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B" **DETAIL "C"**



MINIMUM HORIZONTAL PIPE SEPARATION

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

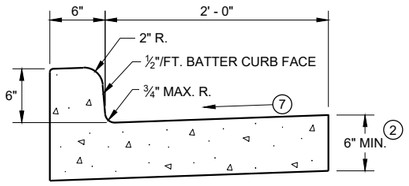
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

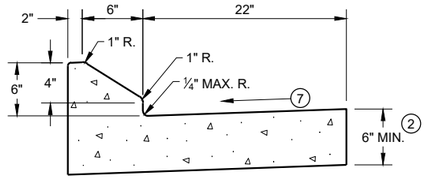
FHWA

SDD 08B09 - 03

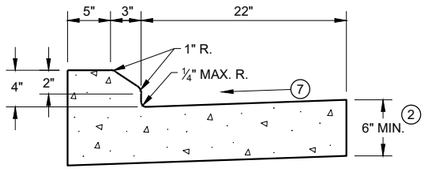
6
SDD 08B09 - 03



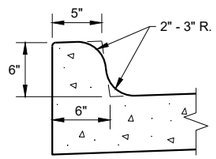
TYPES A (1) & D



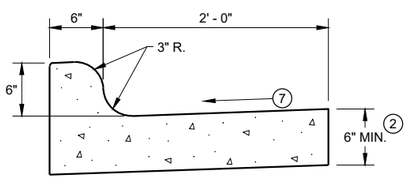
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

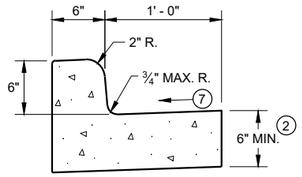


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



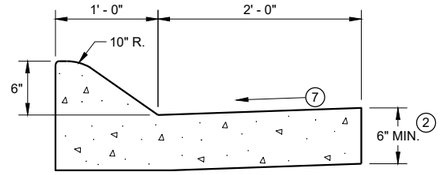
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

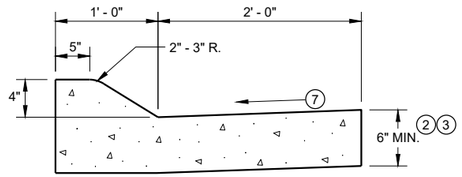


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

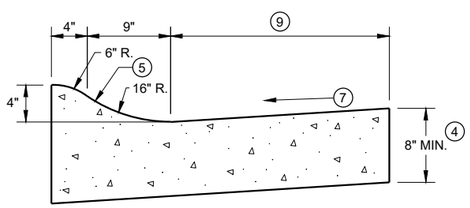


6" SLOPED CURB TYPES A (1) & D



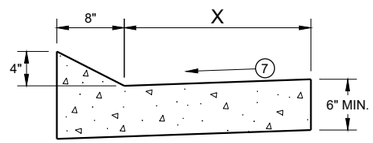
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

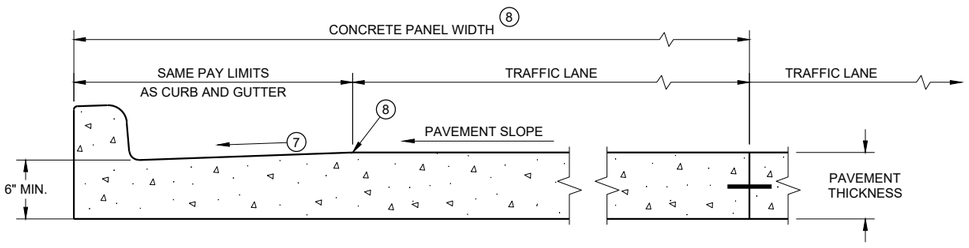


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

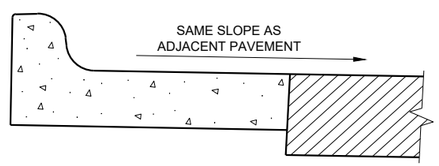
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

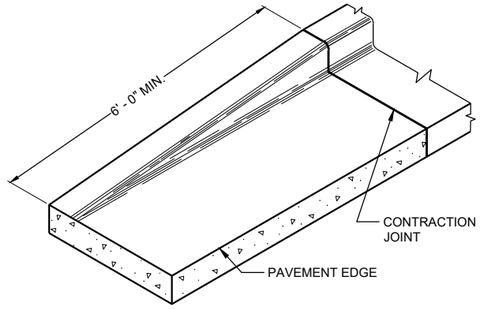
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

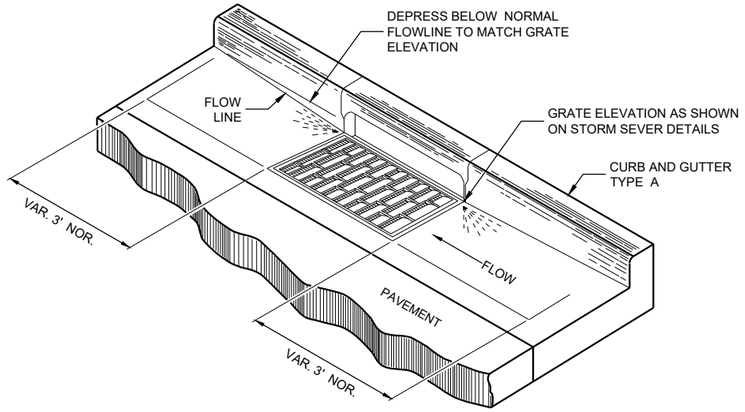
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 08D01 - 23a



END SECTIONCURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

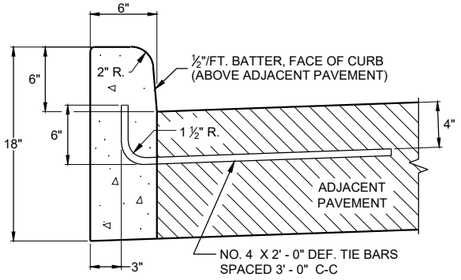
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

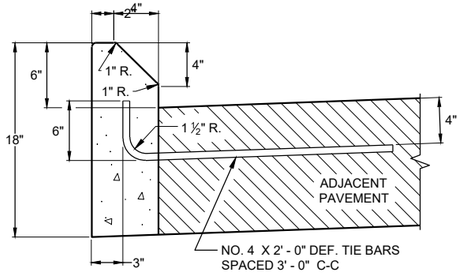
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

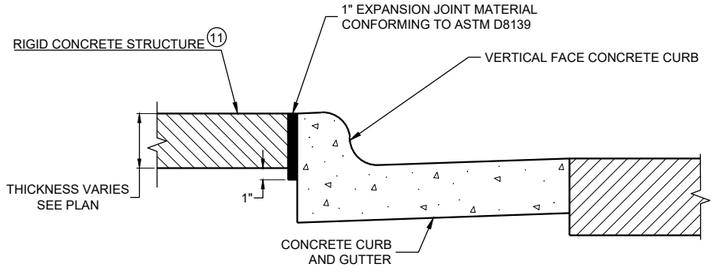


TYPES A (1) & D

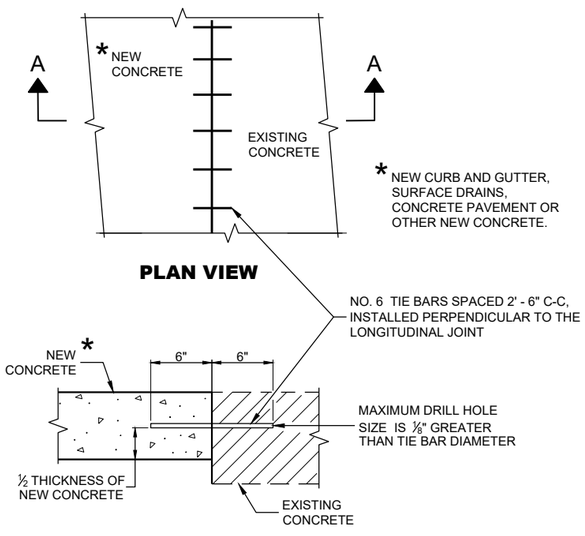


TYPES G (1) & J

CONCRETE CURB



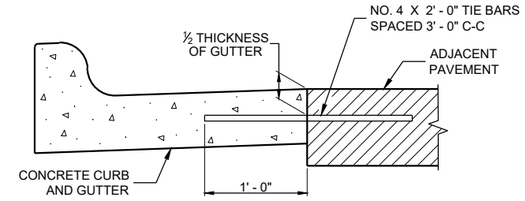
EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)



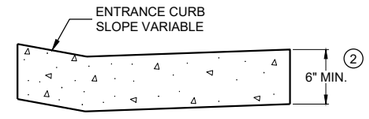
PLAN VIEW

SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

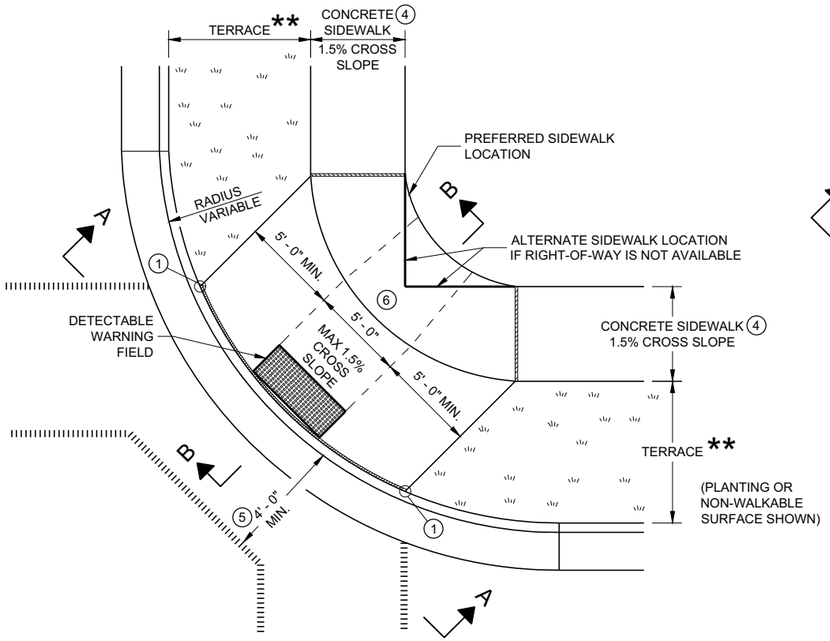
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

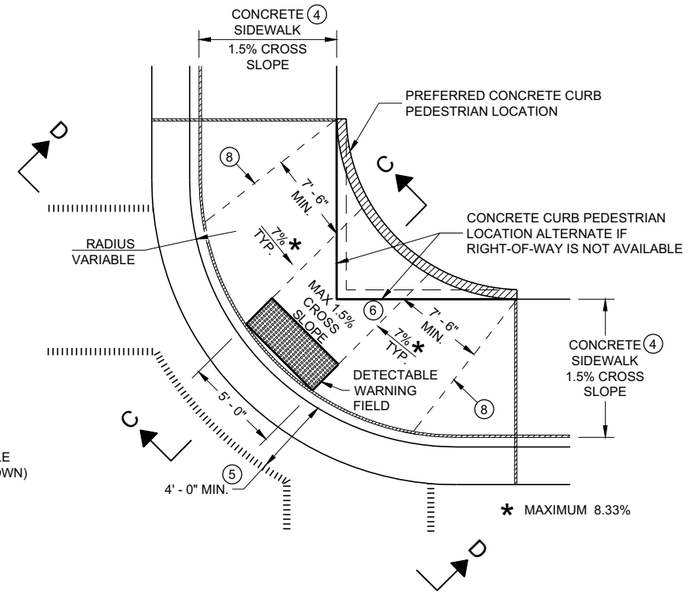
SDD08D01 - 23b



PLAN VIEW

CURB RAMP TYPE 1

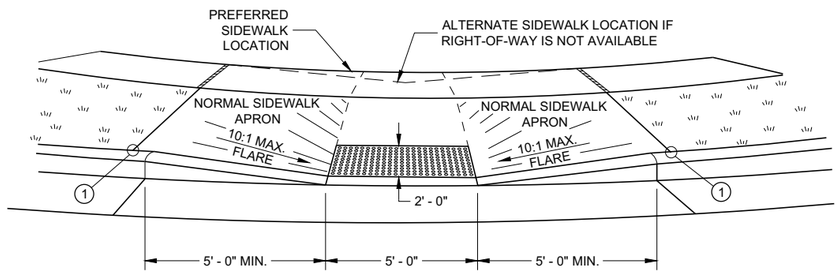
(CENTER OF CORNER RADIUS)



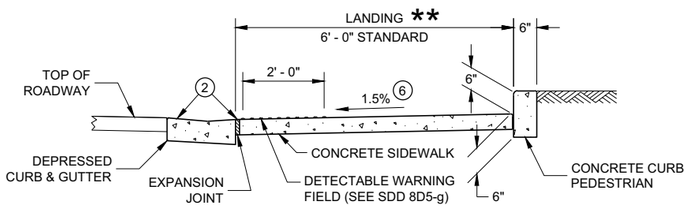
PLAN VIEW

CURB RAMP TYPE 1 - A

(NO TERRACE)

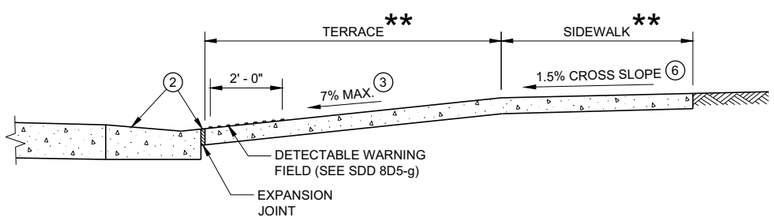


VIEW A - A FOR TYPE 1

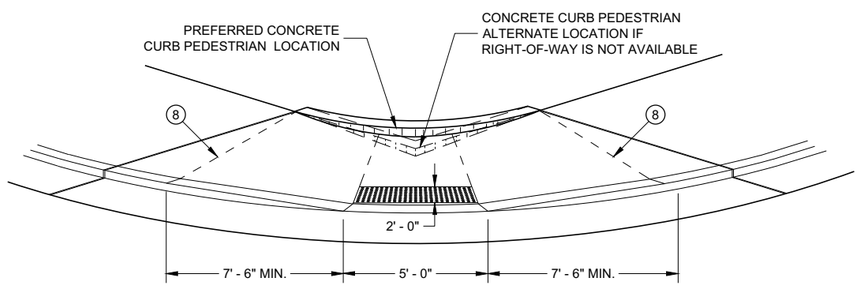


SECTION C - C FOR TYPE 1 - A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B - B FOR TYPE 1



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FILED SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

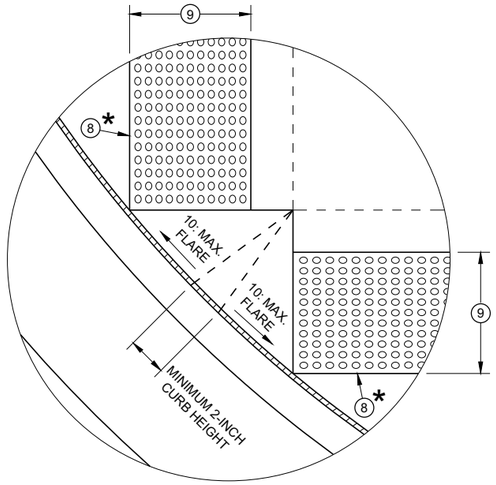
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 1 AND 1-A

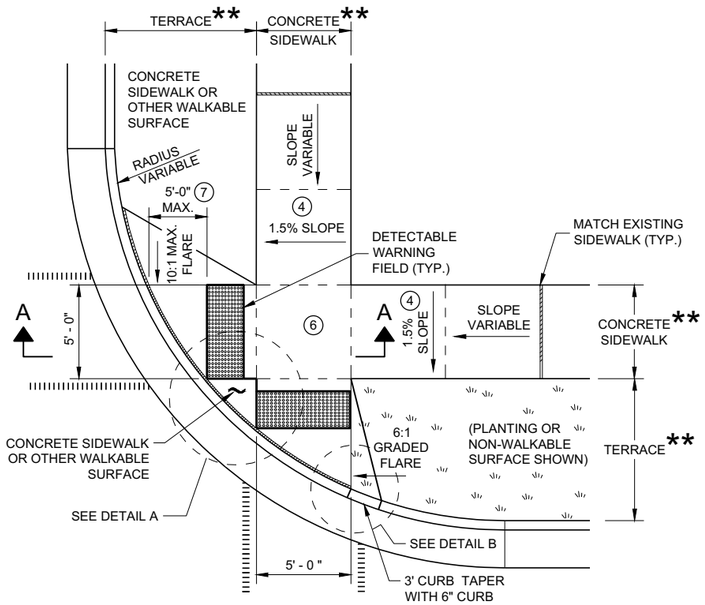
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20a



DETAIL A



PLAN VIEW
CURB RAMP TYPE 2
(CENTER OF CORNER RADIUS)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.

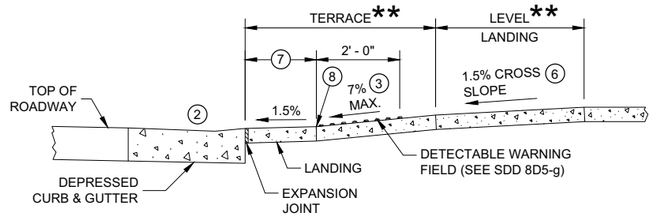
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.

(7) WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

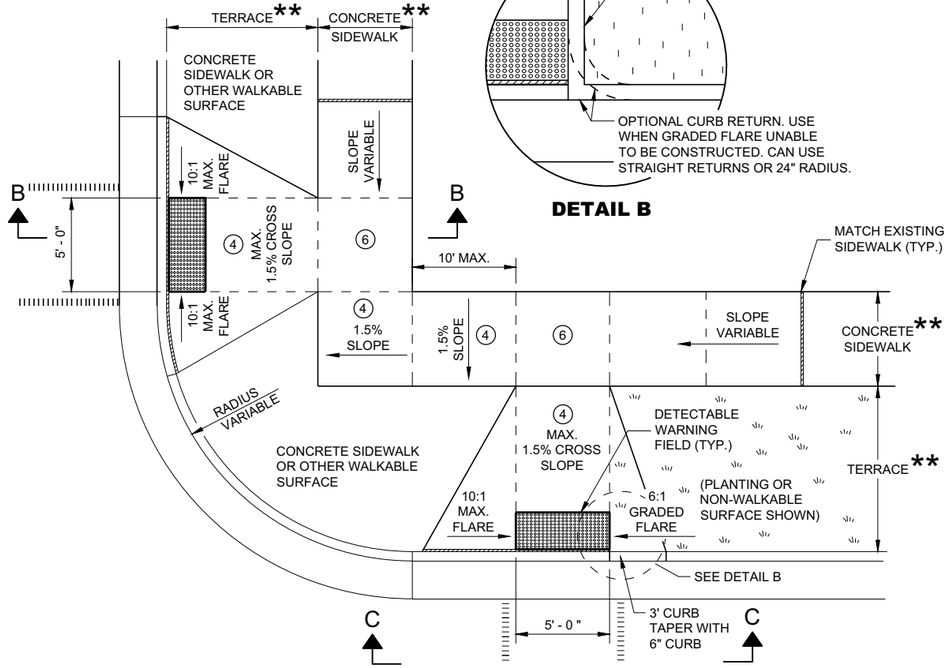
(9) WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.



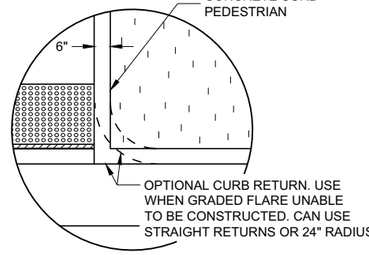
SECTION A - A FOR TYPE 2

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

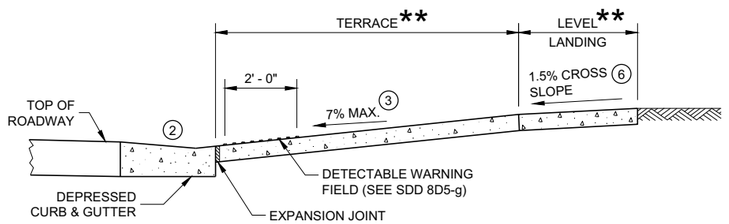
** WIDTH SHOWN ELSEWHERE IN THE PLANS



PLAN VIEW
CURB RAMP TYPE 3
(OUTSIDE OF CROSSWALK AREA)



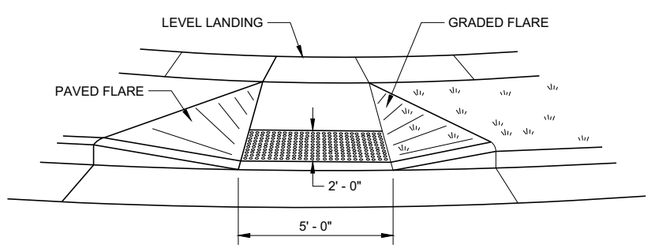
DETAIL B



SECTION B - B FOR TYPE 3

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



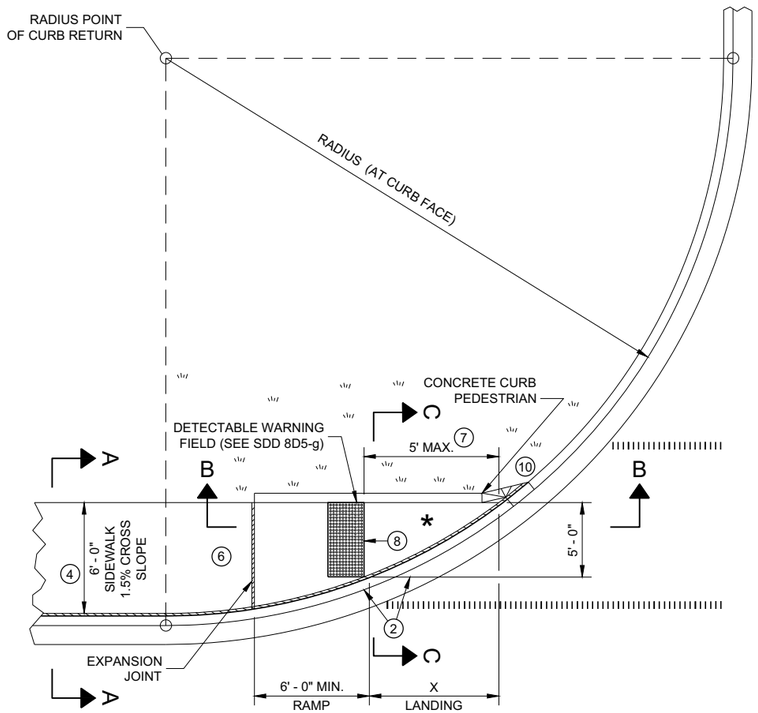
VIEW C - C FOR TYPE 3

CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20b

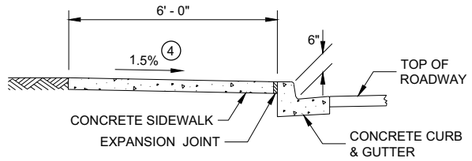


PLAN VIEW

CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

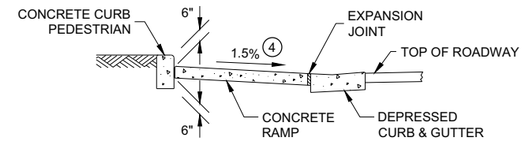
(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

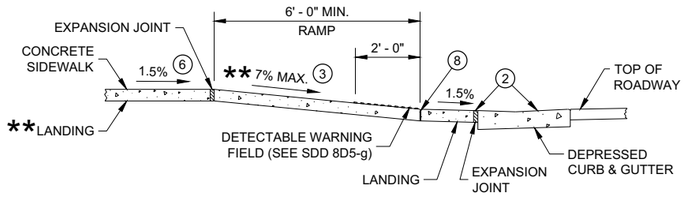
½" EXPANSION JOINT SIDEWALK

CONTRACTION JOINT SIDEWALK

PAVEMENT MARKING CROSSWALK (WHITE)



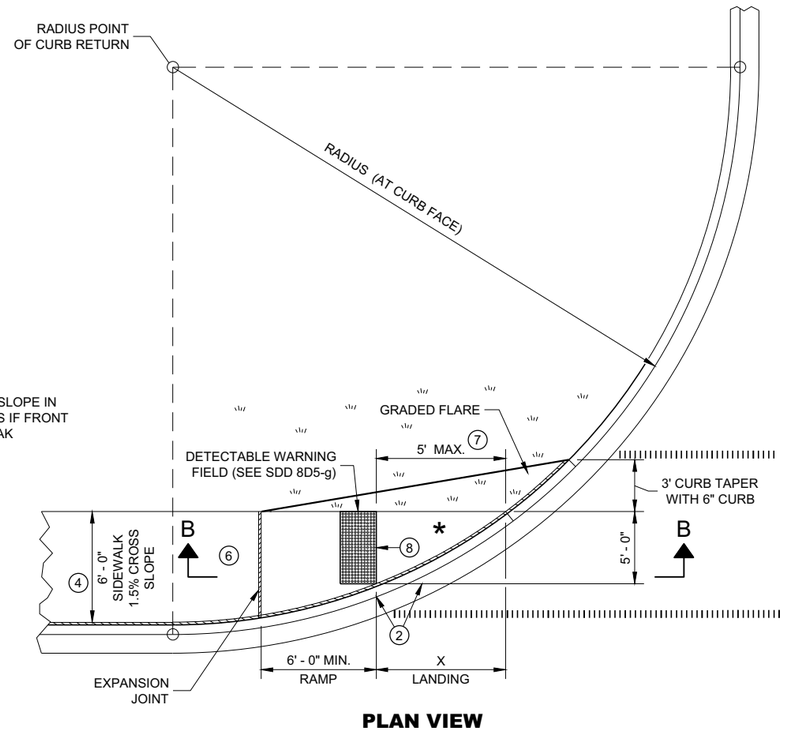
SECTION C - C FOR TYPE 4A



SECTION B - B FOR TYPE 4A AND TYPE 4A1

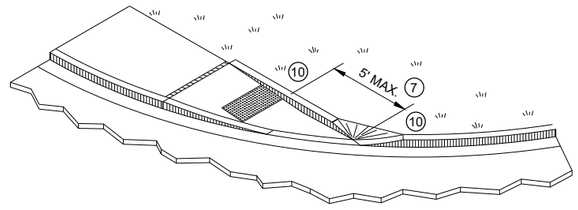
** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

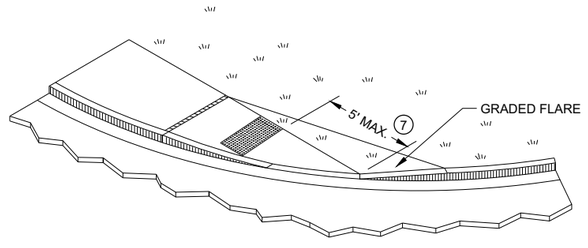


PLAN VIEW

CURB RAMP TYPE 4A1



ISOMETRIC VIEW FOR TYPE 4A



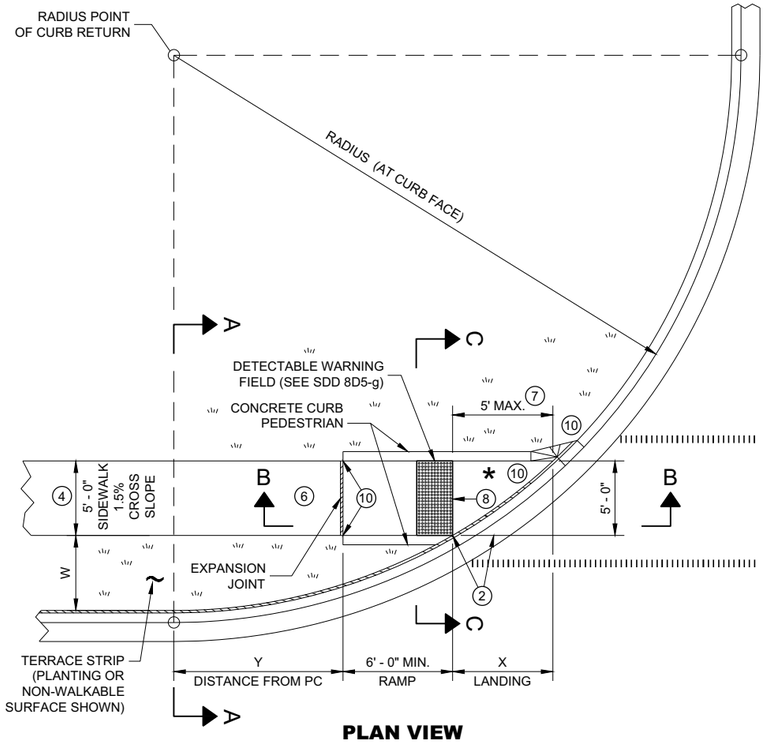
ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D05 - 20c

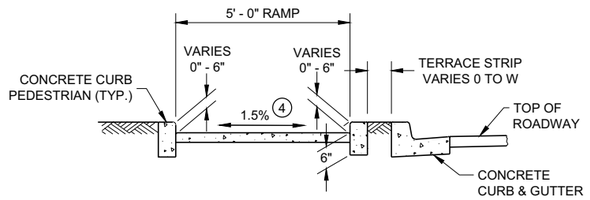


PLAN VIEW

CURB RAMP TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 ¼"	0' - 5"	2' - 1"	1' - 4 ½"	1' - 5"	2' - 1"	0' - 10"	2' - 7 ½"	0' - 3 ¼"	3' - 0 ¼"						
15 FEET	4' - 6 ¾"	2' - 1 ¾"	3' - 9"	3' - 5 ¾"	3' - 1 ¼"	4' - 6"	2' - 6 ¾"	5' - 4 ½"	2' - 1"	6' - 1"	1' - 8"	6' - 8 ½"	1' - 3 ¼"	7' - 2 ½"	0' - 10 ¾"	7' - 7 ¼"
20 FEET	5' - 9 ¾"	3' - 6 ½"	4' - 11 ½"	5' - 1 ¾"	4' - 3 ¼"	6' - 5 ½"	3' - 8 ¾"	7' - 7"	3' - 3"	8' - 6 ½"	2' - 10"	9' - 4 ½"	2' - 5 ½"	10' - 1 ¼"	2' - 1 ¼"	10' - 9"
30 FEET			6' - 9 ¼"	7' - 11 ¼"	6' - 0 ¼"	9' - 8"	5' - 5"	11' - 1 ¾"	4' - 10 ¾"	12' - 5 ¾"	4' - 5 ½"	13' - 7 ¾"	4' - 0 ¾"	14' - 8 ½"	3' - 8 ½"	15' - 8 ¼"
40 FEET									6' - 1 ¾"	15' - 8 ½"	5' - 8"	17' - 2"	5' - 3"	18' - 5 ¾"	4' - 10 ¾"	19' - 8 ¼"
50 FEET															5' - 10 ¼"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



SECTION C - C FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

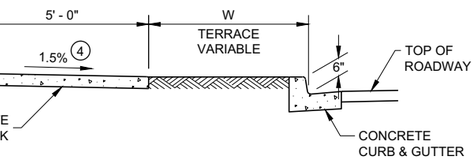
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

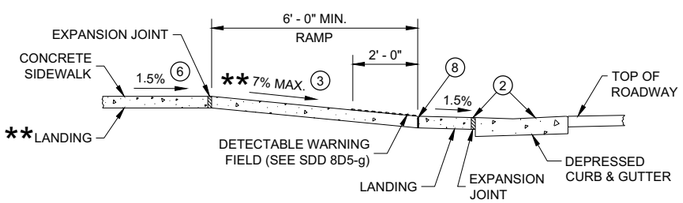
(7) WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



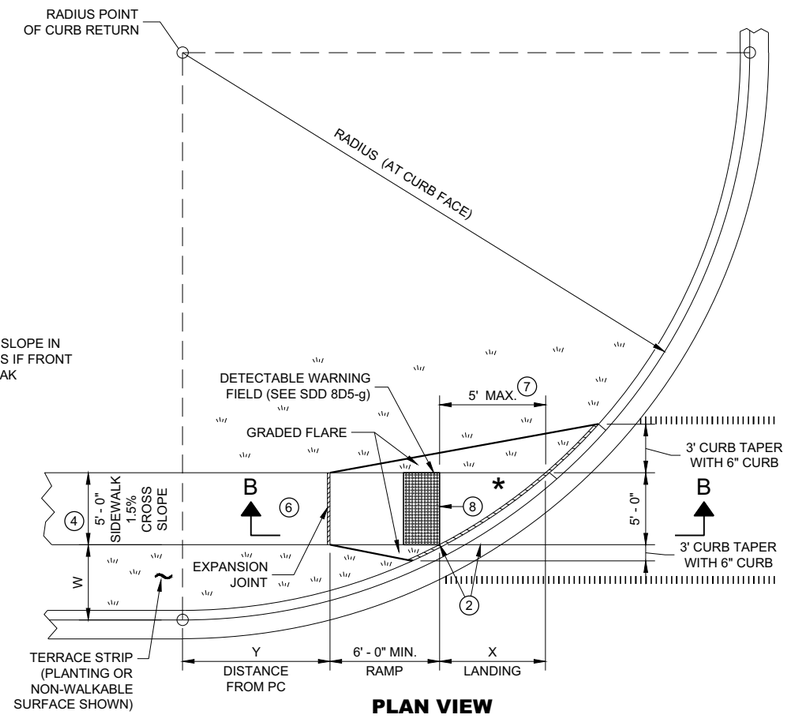
SECTION A - A FOR TYPE 4B



** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

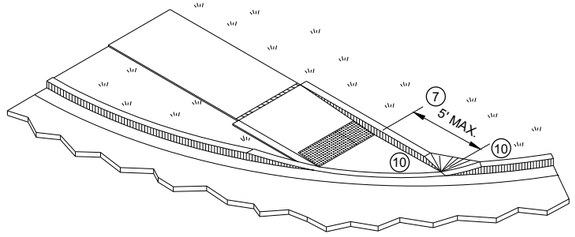
SECTION B - B FOR TYPE 4B AND TYPE 4B1

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

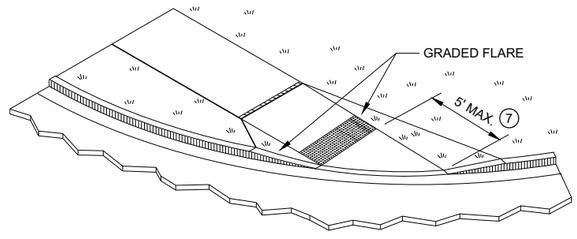


PLAN VIEW

CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



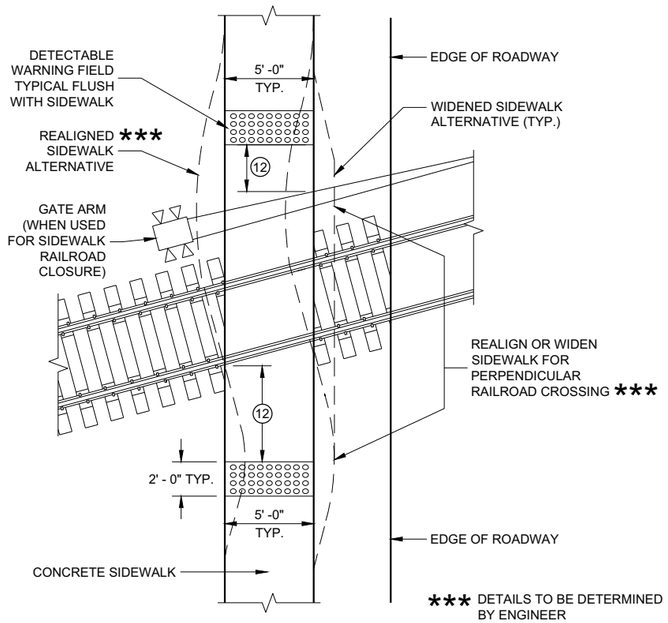
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

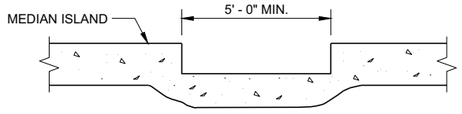
6

SDD 08D05 - 20d

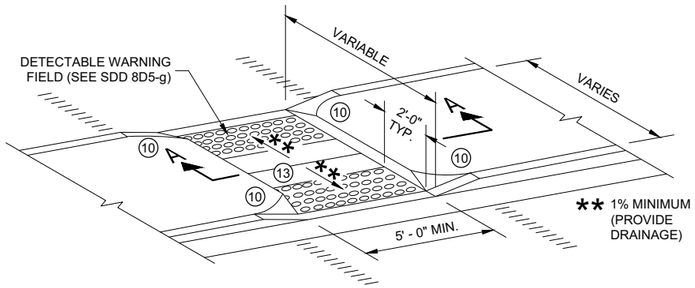


CURB RAMP TYPE 8

DETECTABLE WARNINGS AT RAILROAD CROSSING



SECTION A - A FOR TYPE 5



CURB RAMP TYPE 5

MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.

(10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

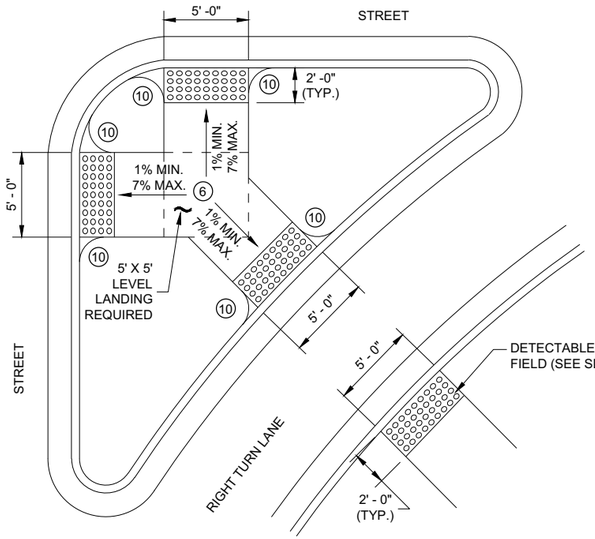
(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

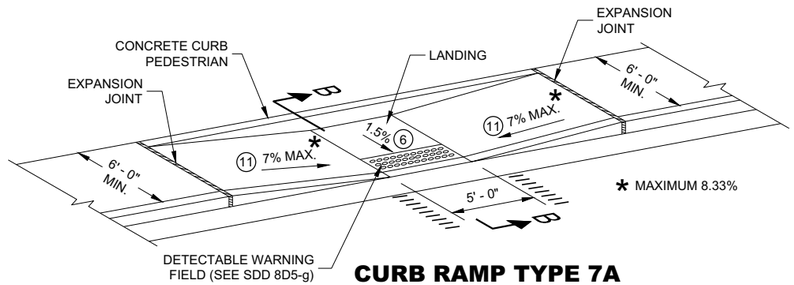
- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



CURB RAMP TYPE 6

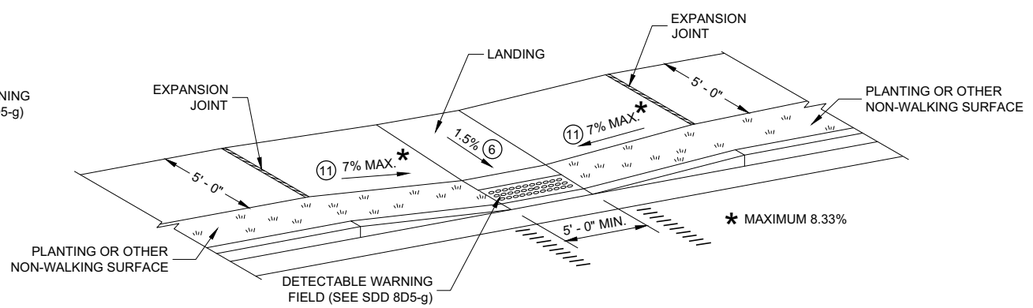
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



CURB RAMP TYPE 7A

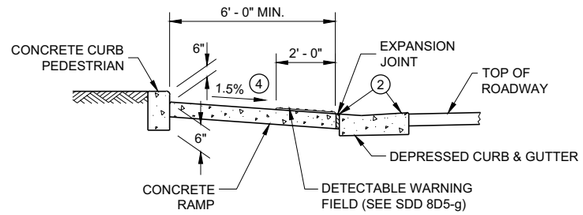
MID BLOCK CROSSING



CURB RAMP TYPE 7B

MID BLOCK CROSSING

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.



SECTION B - B FOR TYPE 7A

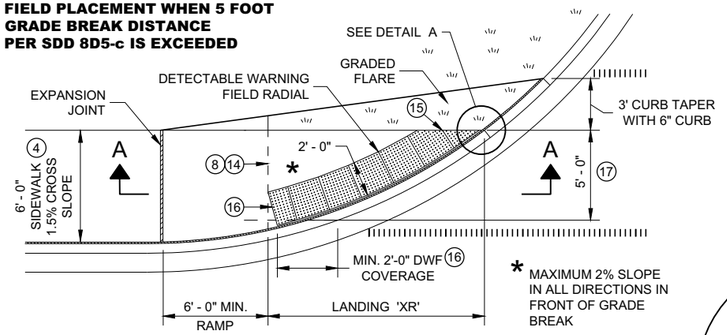
CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D05 - 20e

SDD 08D05 - 20e

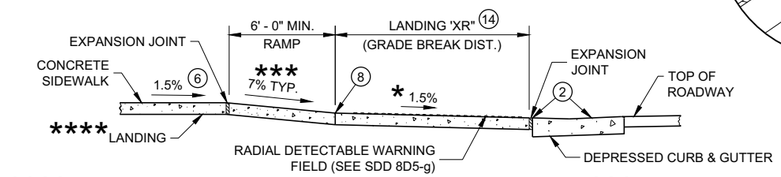
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED



PLAN VIEW

CURB RAMP TYPE 4A1

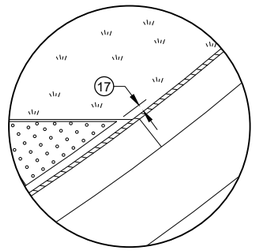
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION A - A FOR TYPE 4A1



DETAIL A

LEGEND

- ½" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AD ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.

(3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

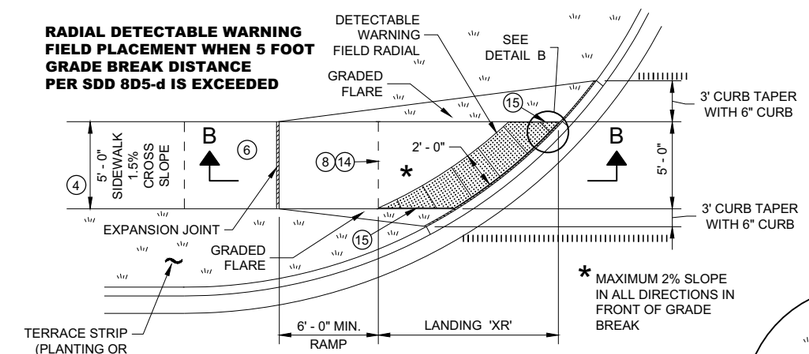
(14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

(16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.

(17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

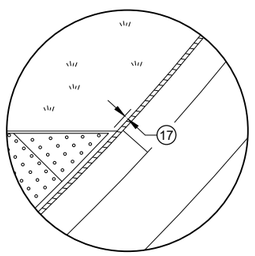
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-d IS EXCEEDED



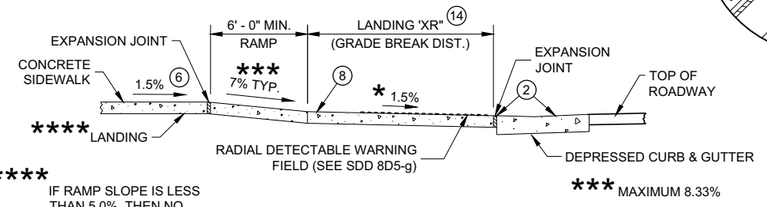
PLAN VIEW

CURB RAMP TYPE 4B1

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



DETAIL B

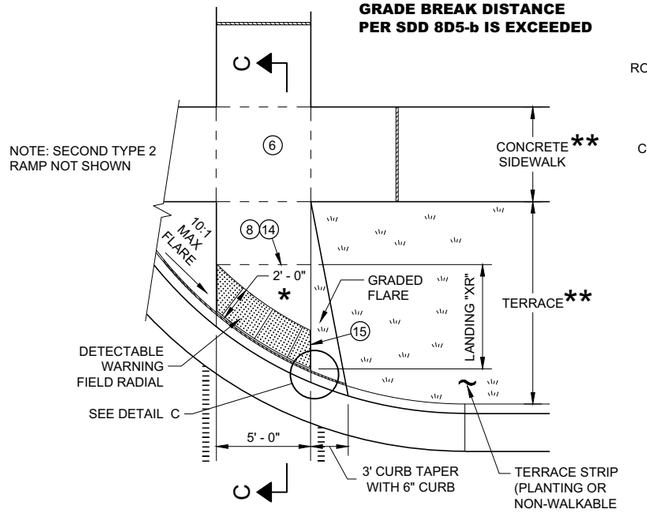


**** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

*** MAXIMUM 8.33%

SECTION B - B FOR TYPE 4B1

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

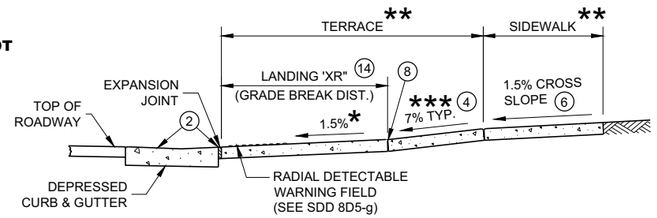


PLAN VIEW

CURB RAMP TYPE 2

(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

(ON LINE WITH SIDEWALK)

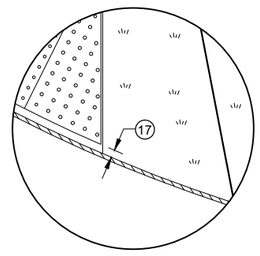


SECTION C - C FOR TYPE 2

* MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

** WIDTH SHOWN ELSEWHERE IN THE PLANS

*** MAXIMUM 8.33%



DETAIL C

CURB RAMPS
RADIAL DETECTABLE WARNING FIELD APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

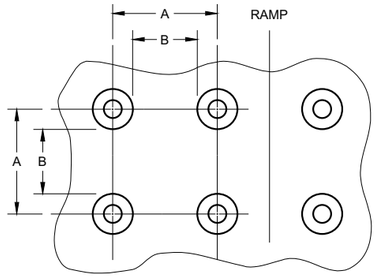
SDD 08D05 - 20f

6

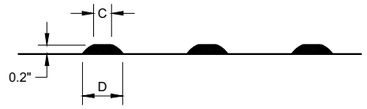
SDD 08D05 - 20f

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

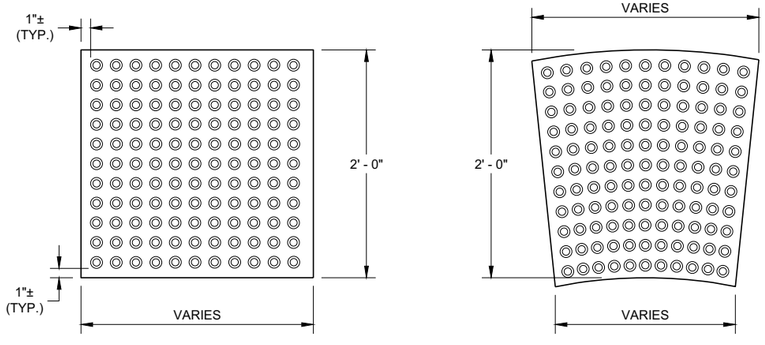


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES

RADIAL PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

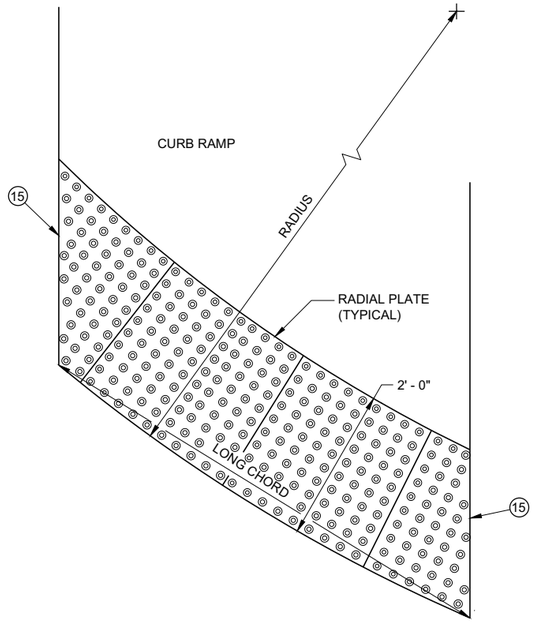
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

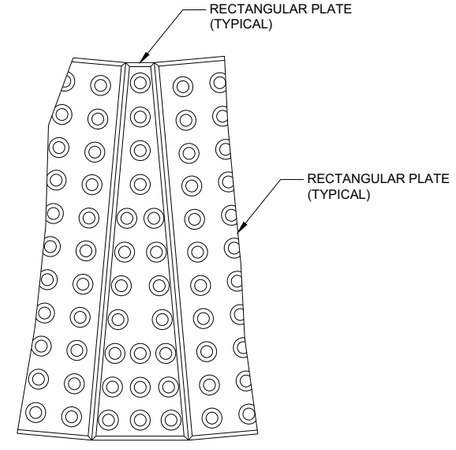
REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN ⅛" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW
RADIAL DETECTABLE WARNING FIELD ATTRIBUTES



PLAN VIEW
RADIAL WEDGE PLATE CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

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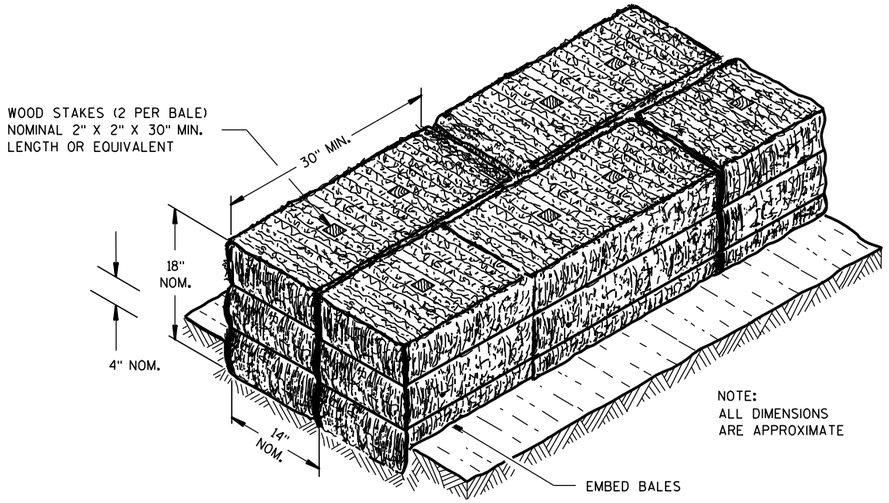
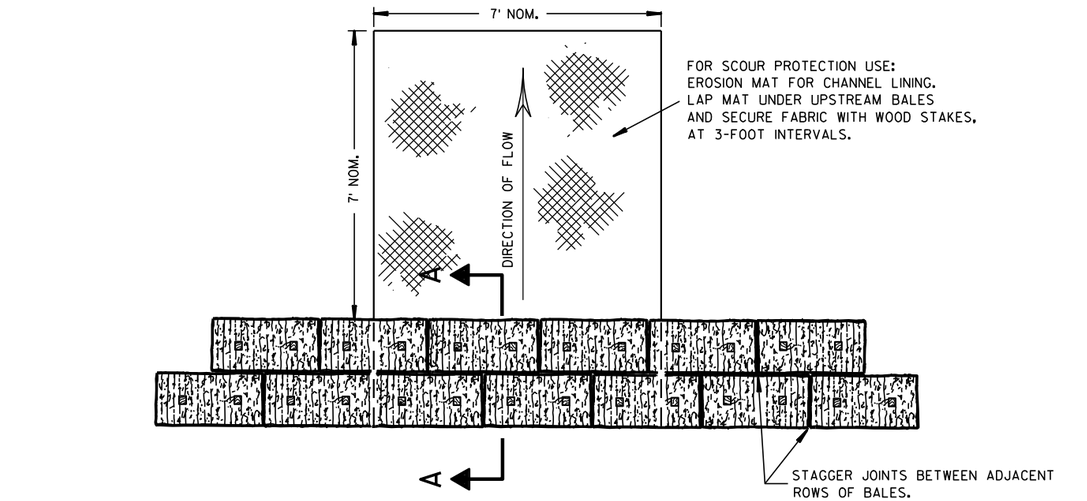
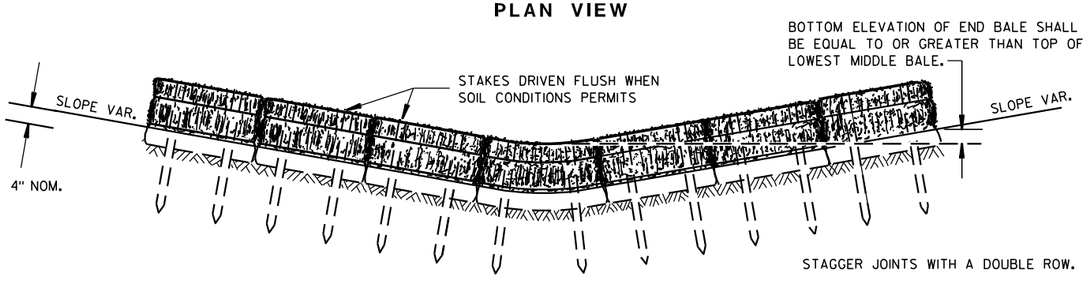
SDD 08D05 - 20g



SECTION A-A



PLAN VIEW



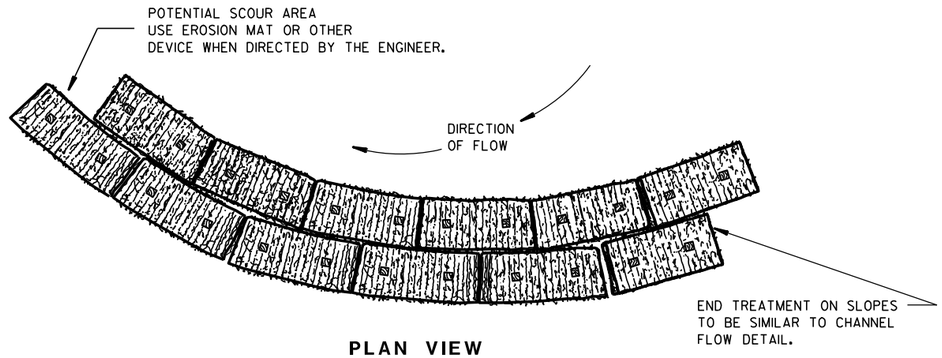
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

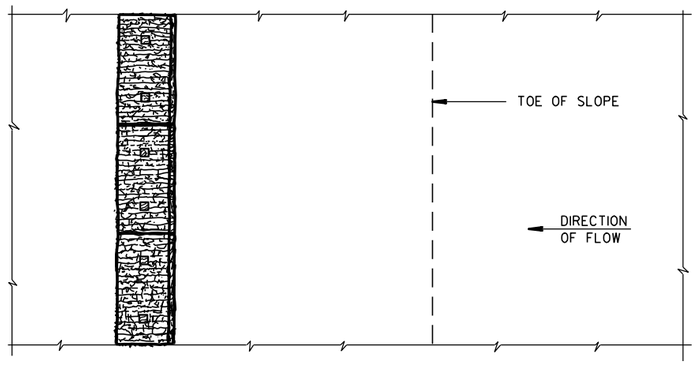
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

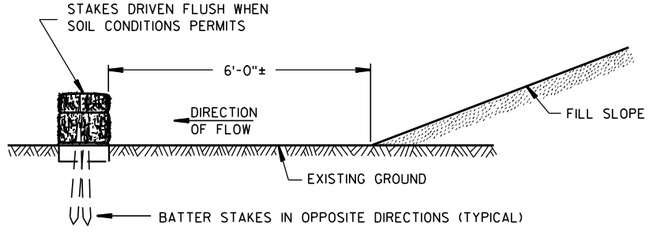


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

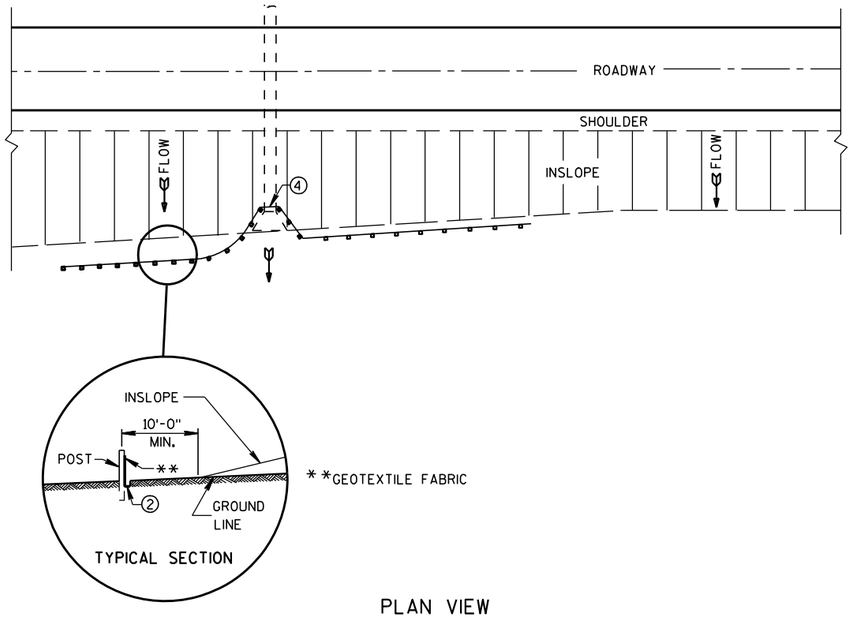
FHWA

6

S.D.D. 8 E 8-3

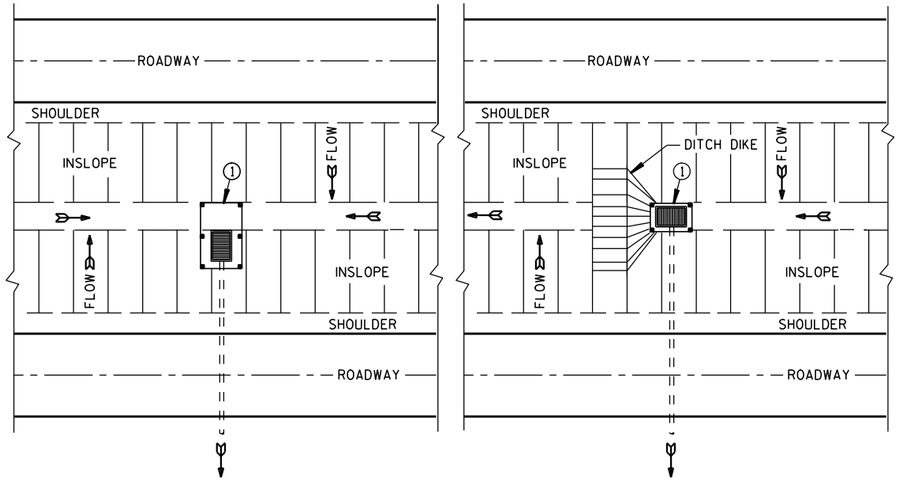
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

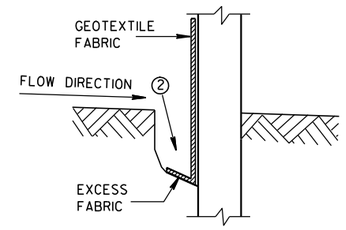
(1) HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

(2) FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

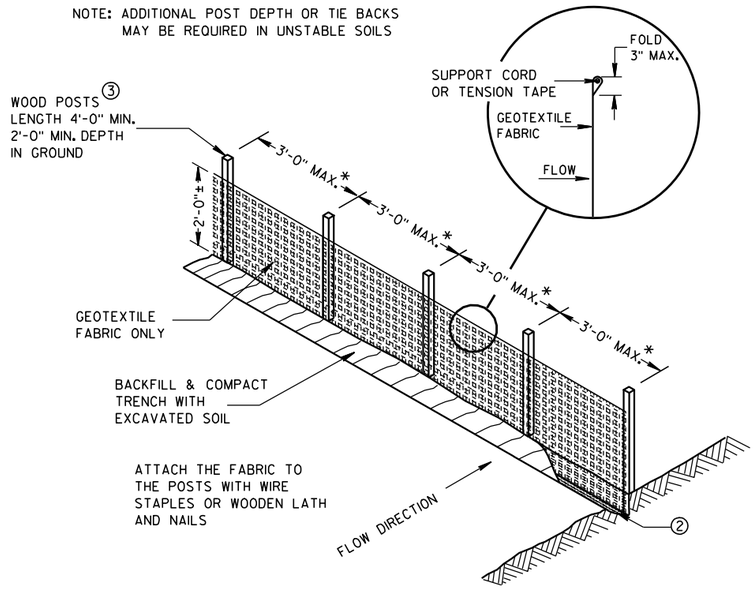
(3) WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

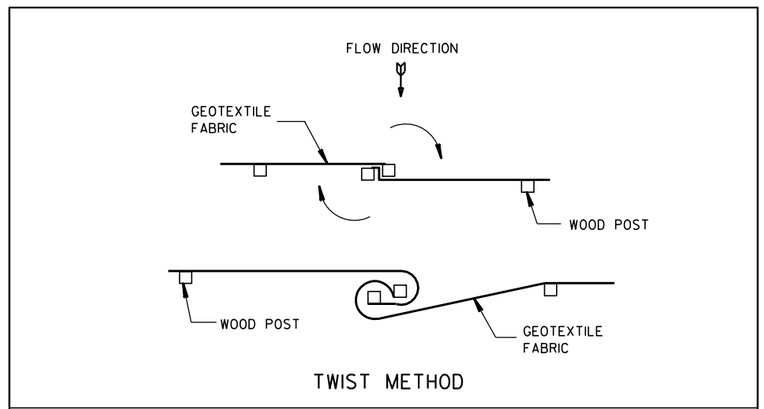
(5) CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



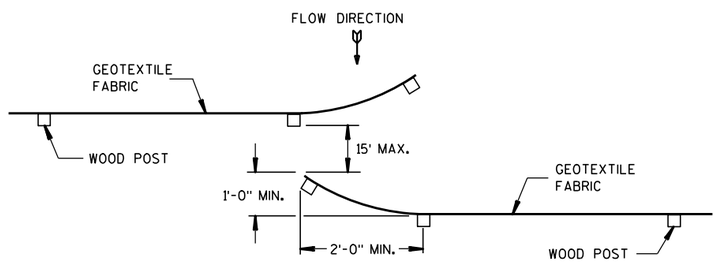
TRENCH DETAIL



SILT FENCE

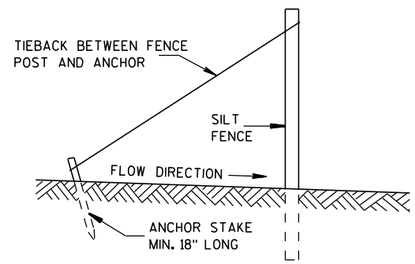


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE (5)



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

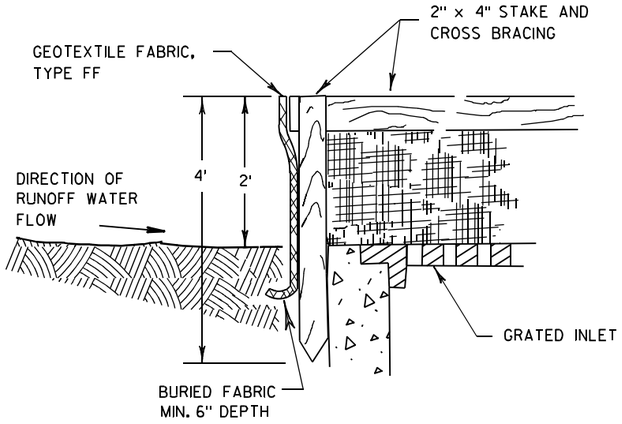
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

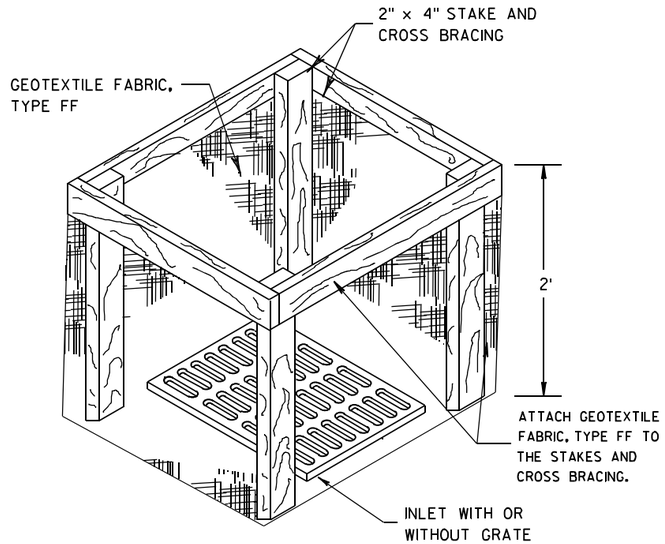
6

S.D.D. 8 E 9-6

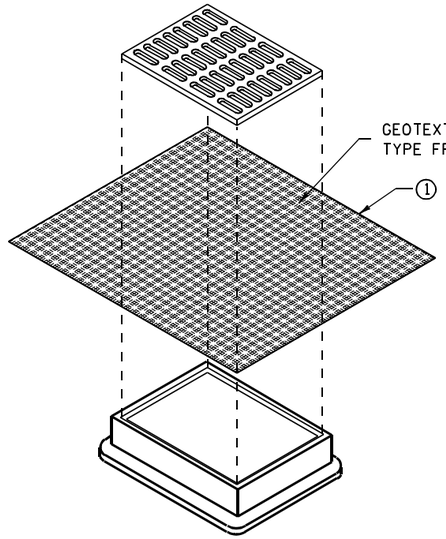
6

S.D.D. 8 E 9-6



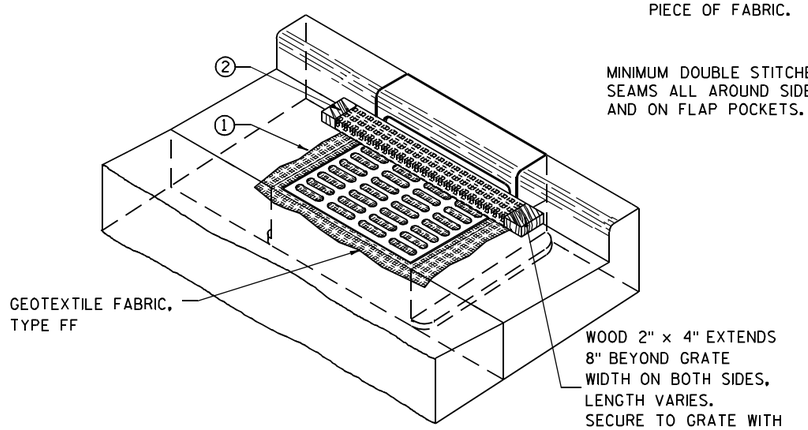


INLET PROTECTION, TYPE A

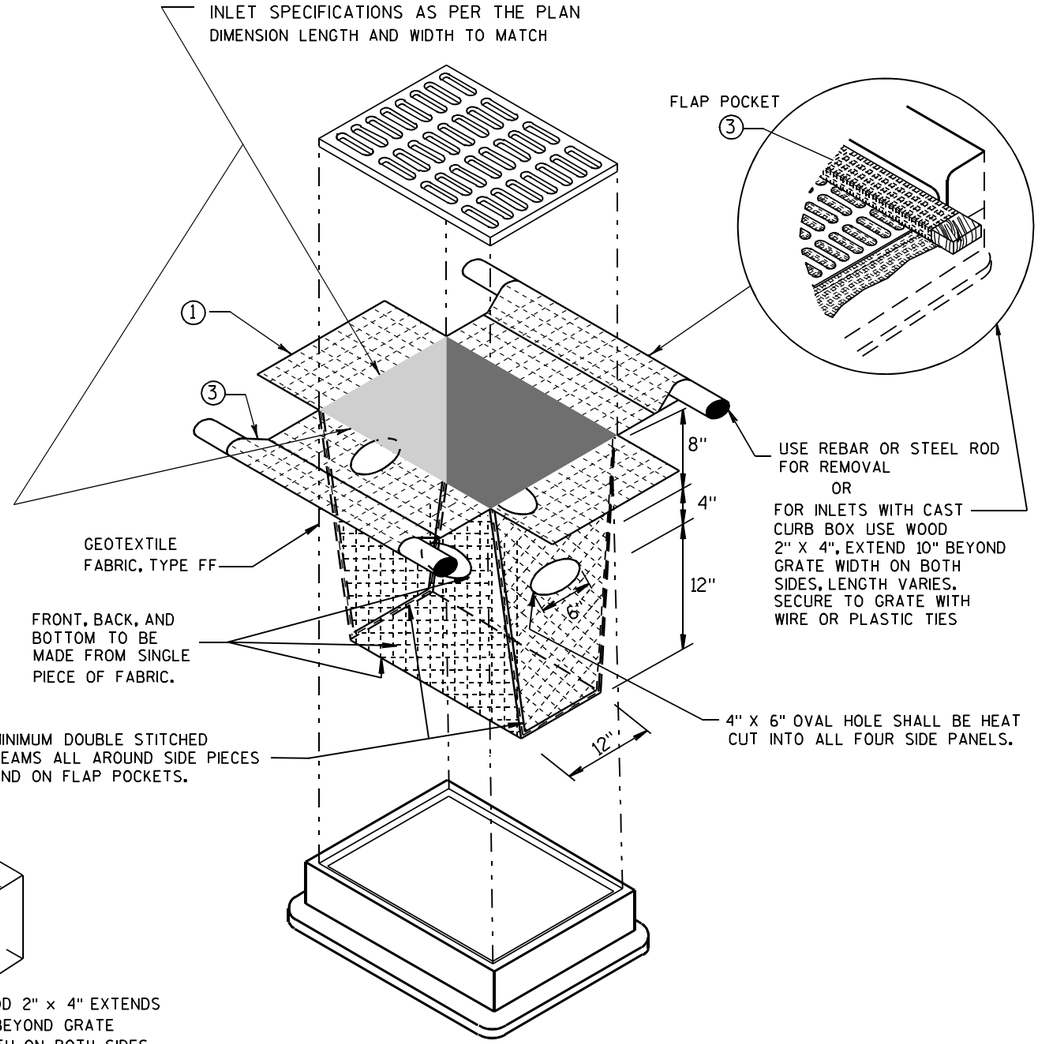


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

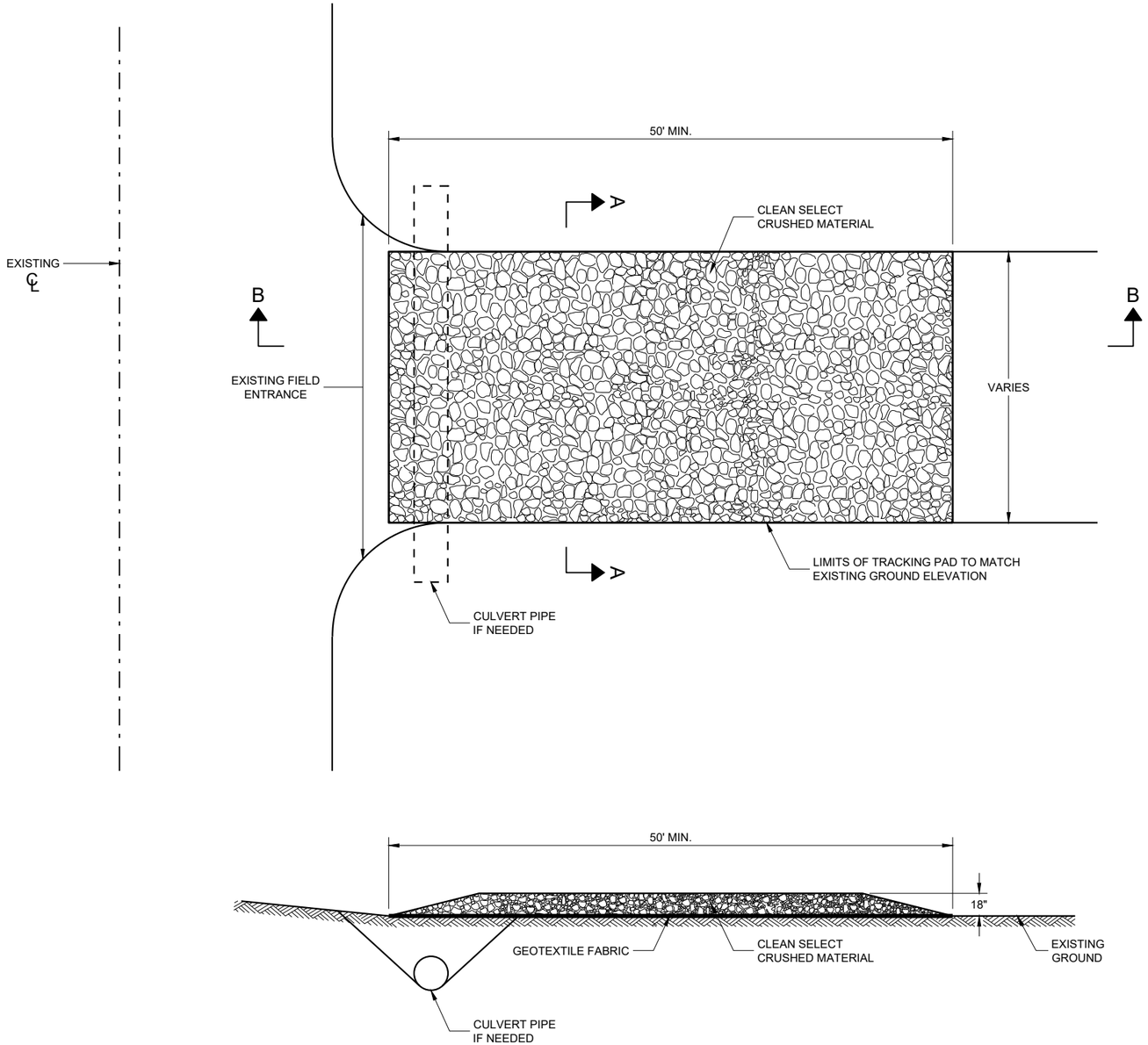
FHWA

6

S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2



SECTION B - B

GENERAL NOTES

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

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

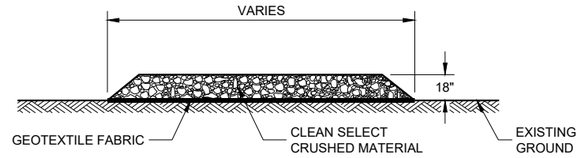
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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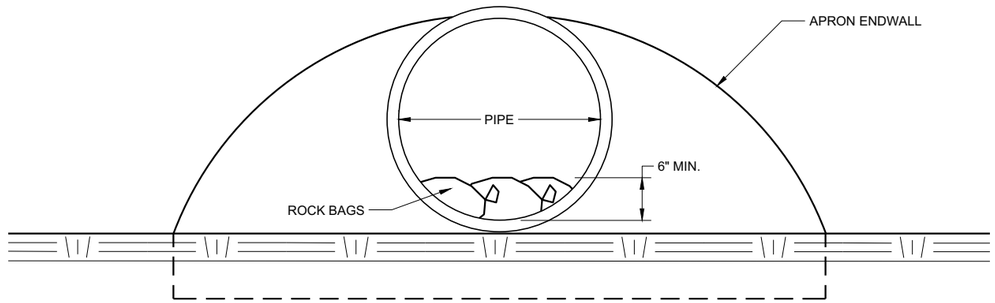
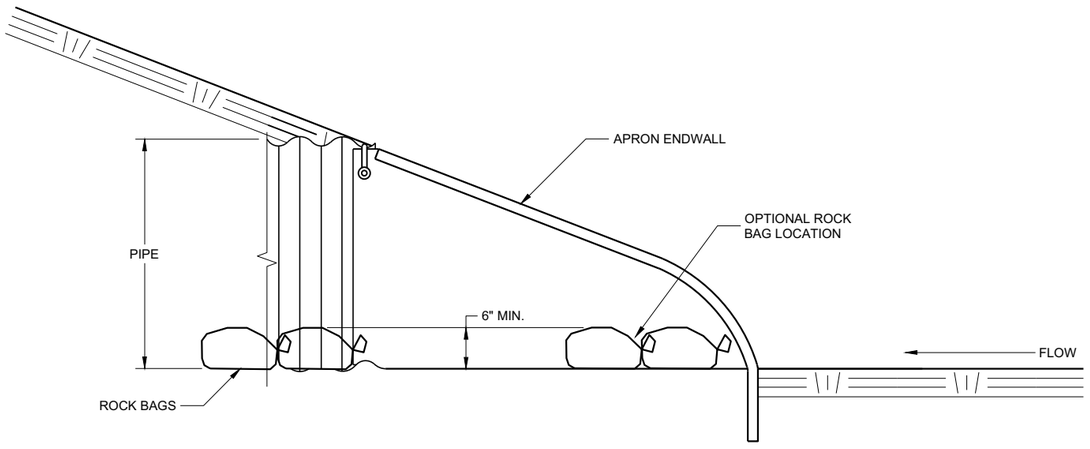
SDD 08E14 - 01



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

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SDD 08E15 - 01

METAL APRON ENDWALLS

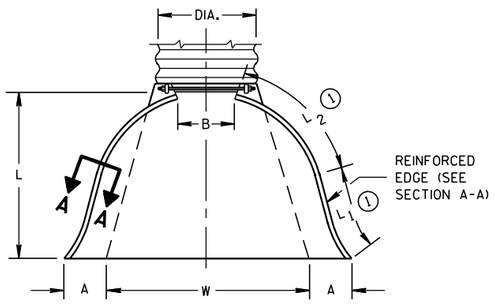
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

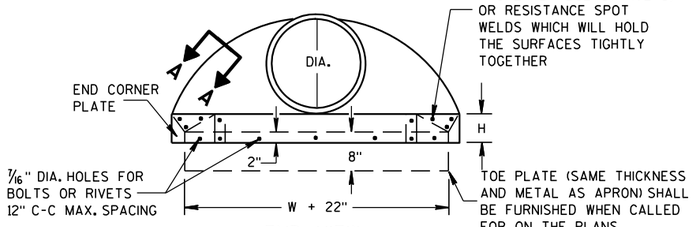
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

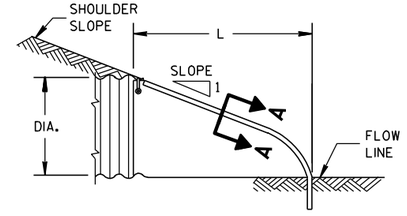
*MINIMUM
**MAXIMUM



PLAN VIEW

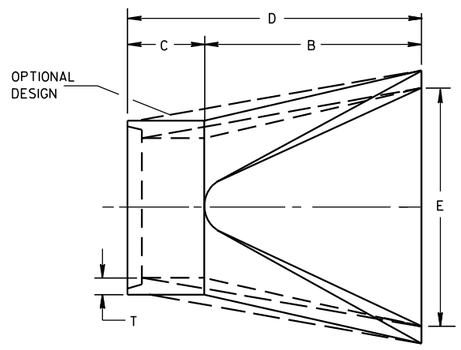


END VIEW

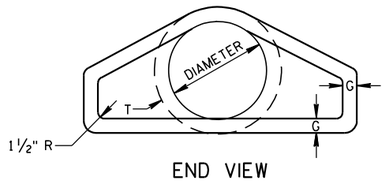


SIDE ELEVATION

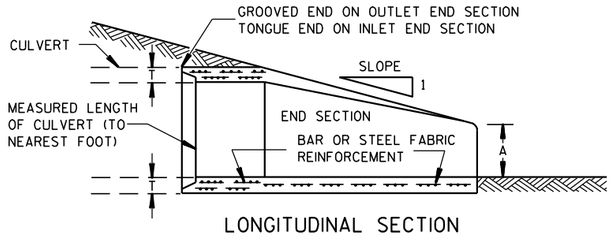
METAL ENDWALLS



PLAN

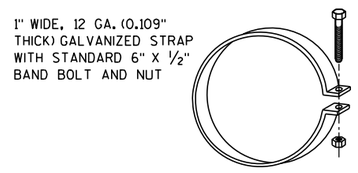


END VIEW



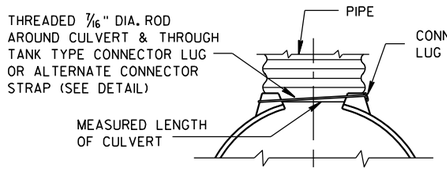
LONGITUDINAL SECTION

CONCRETE ENDWALLS

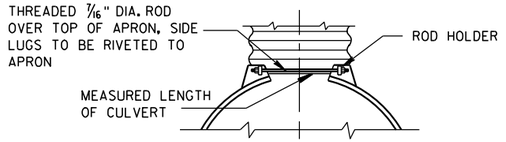


ALTERNATE FOR TYPE 1 CONNECTION

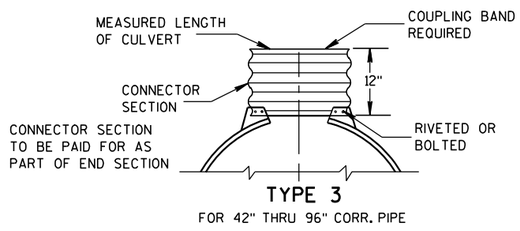
END SECTION CONNECTOR STRAP



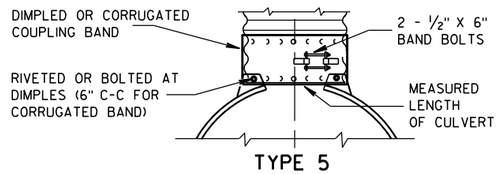
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

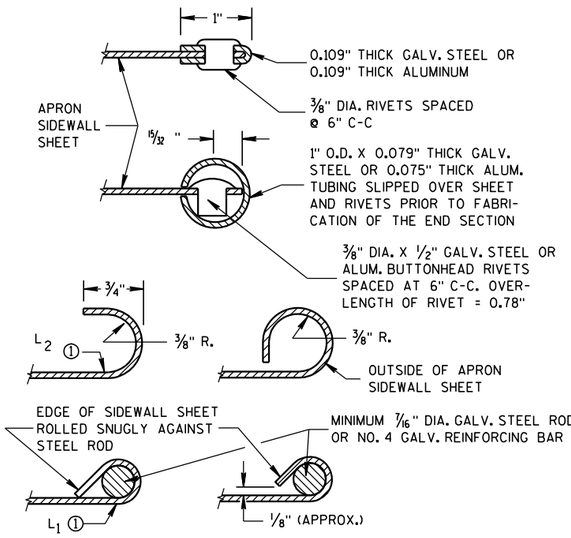
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

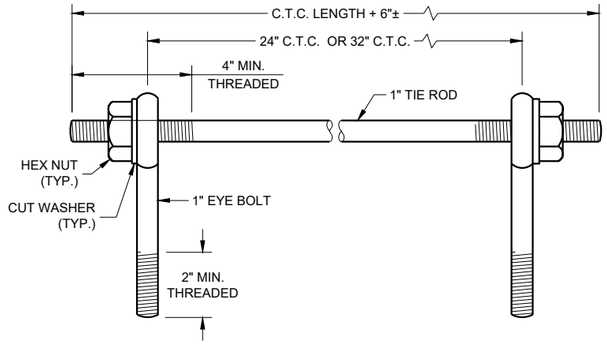
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

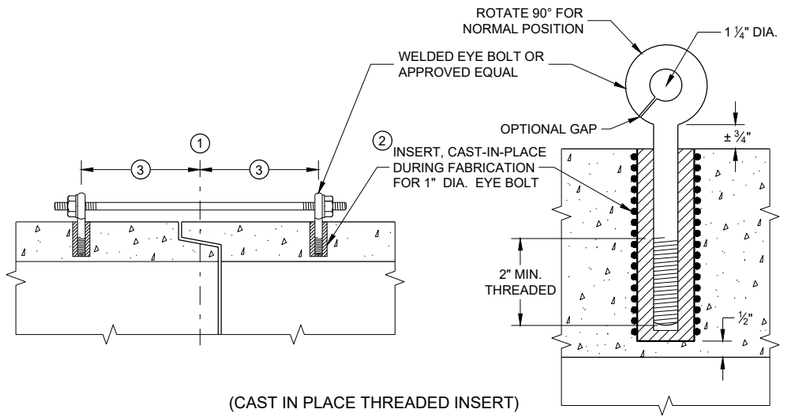
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

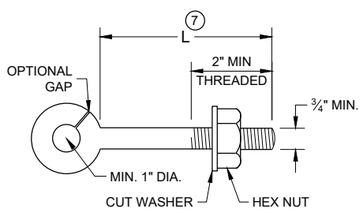
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

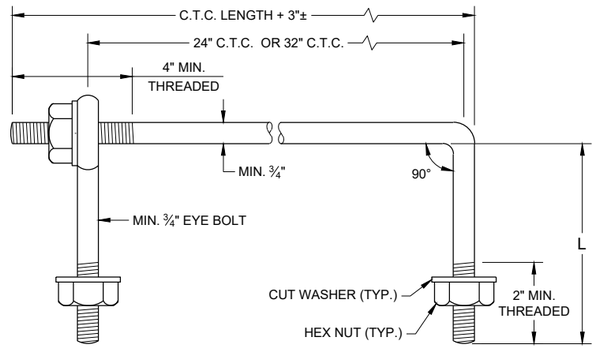
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

1. CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
2. THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
3. HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
4. BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
5. OPENING TO BE ROD DIAMETER PLUS 1 INCH.
6. LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.
7. EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

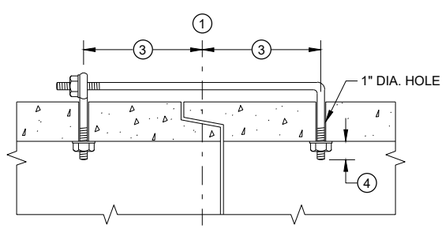


EYE BOLT 7

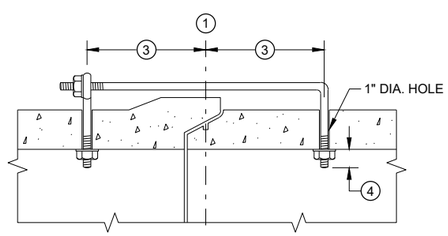
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

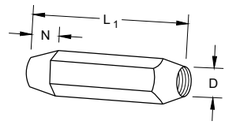
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



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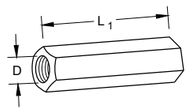
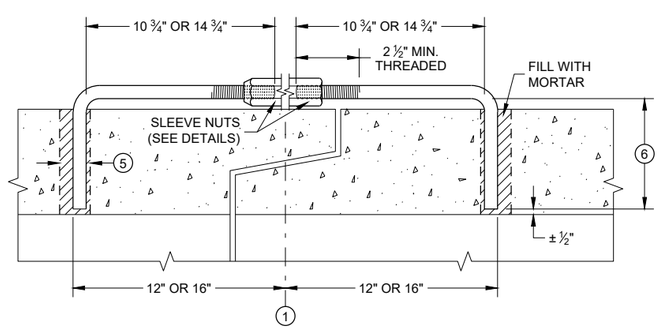


PLAIN

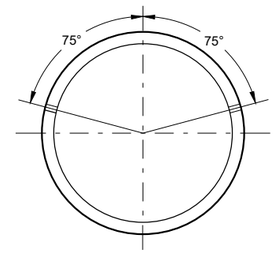
RIGHT AND LEFT THREADS

SLEEVE NUTS



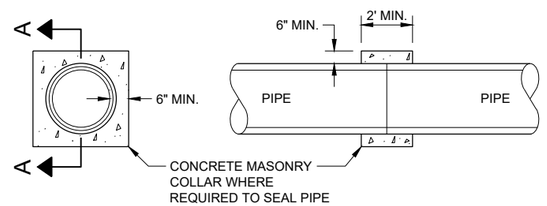
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



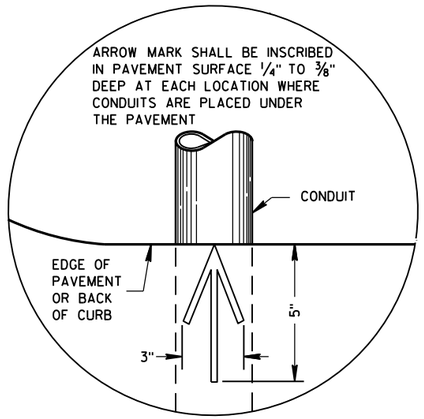
SECTION A - A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

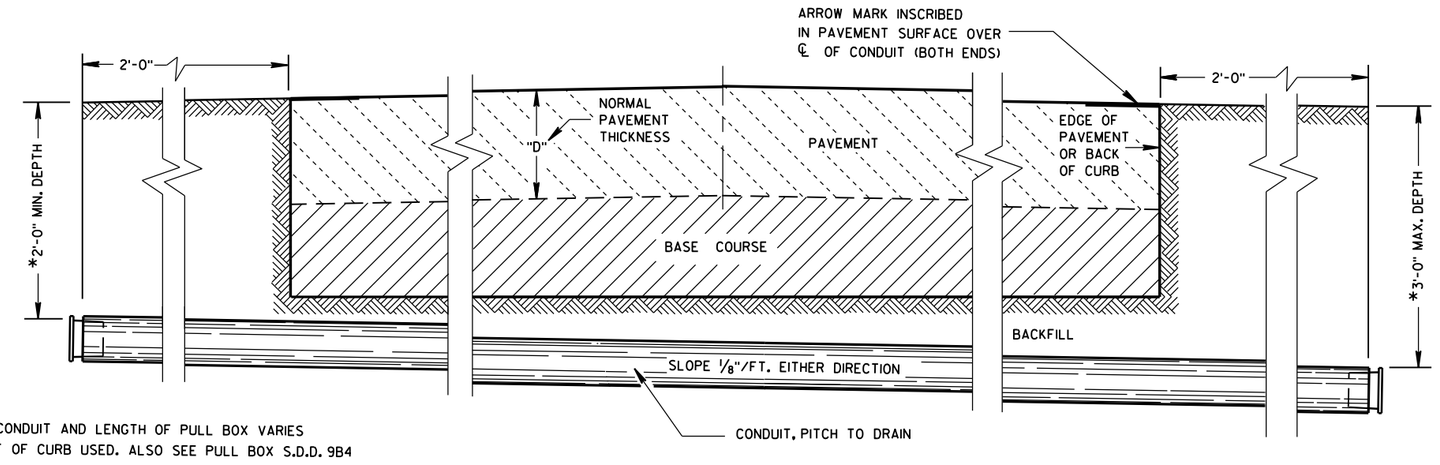
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 325
FHWA

6

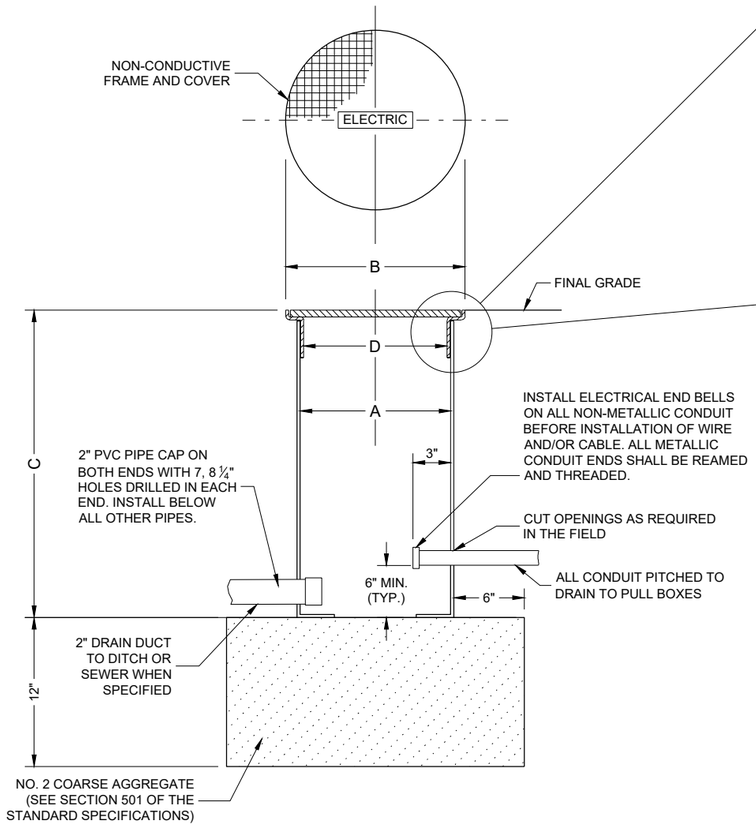
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

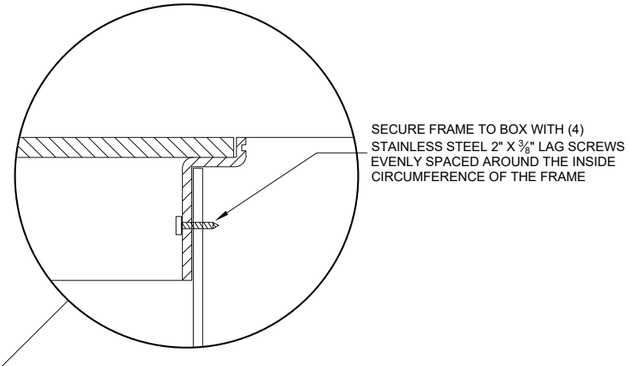
DIMENSION IN INCHES		NON- CONDUCTIVE PULL BOX	
BOX DIAMETER ** (INSIDE)	A	24	24
BOX OVERALL OUTSIDE DIAMETER	B	27	27
BOX LENGTH	C	36	42
FRAME OPENING	D	22 ½	22 ½
WEIGHT IN POUNDS *			
COVER		50	50
BOX ONLY		75	85

* THE ACTUAL WEIGHT OF THE COVER OR BOX ONLY MAY VARY NOT TO EXCEED 100 LBS INDIVIDUALLY.

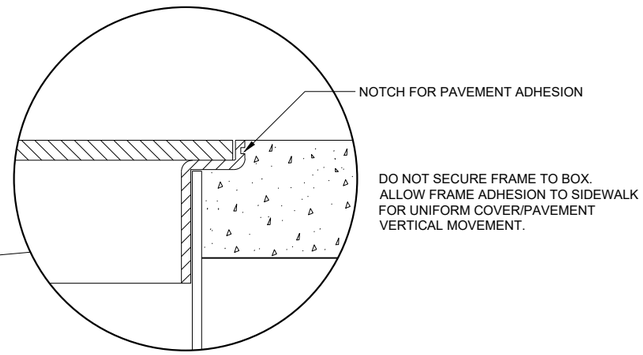
** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE.



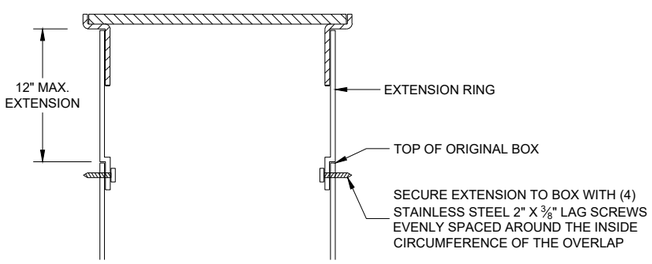
NON-CONDUCTIVE PULL BOX



INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK



BOX EXTENSION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN ½" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DICONTINUITIES LESS THAN ¼".

COVER SHALL BE MAGNETICALLY LOCATABLE.

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN ¼".

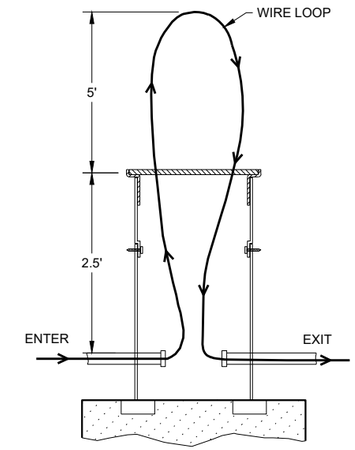
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS AND MAGNETIC LOCATABLE DEVICE.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL AND LIGHTING SYSTEMS, "WISDOT ITS" FOR COMMUNICATIONS AND ITS EQUIPMENT SYSTEMS.



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

PULL BOXES NON-CONDUCTIVE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

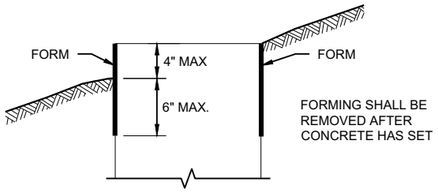
APPROVED
May 2022
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 326

FHWA

6
SDD 09B16 - 02

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWINGSHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN A THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FRO FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

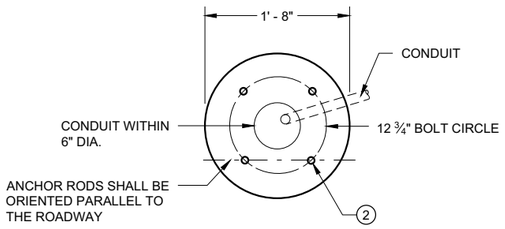
WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

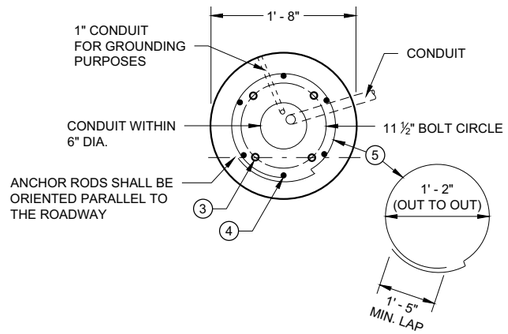
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH"L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

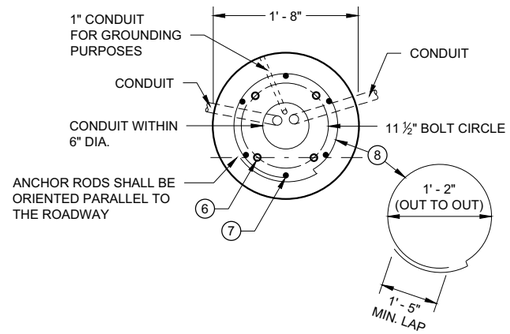
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).







1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.

2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.

4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.

6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.

7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5' - 1" BAR STELL REINFORCEMENT @ 1' - 0" C -C.

9 EXOTHERMIC CONNECTION TO EUIPMENT GROUNDING CONDUCTOR

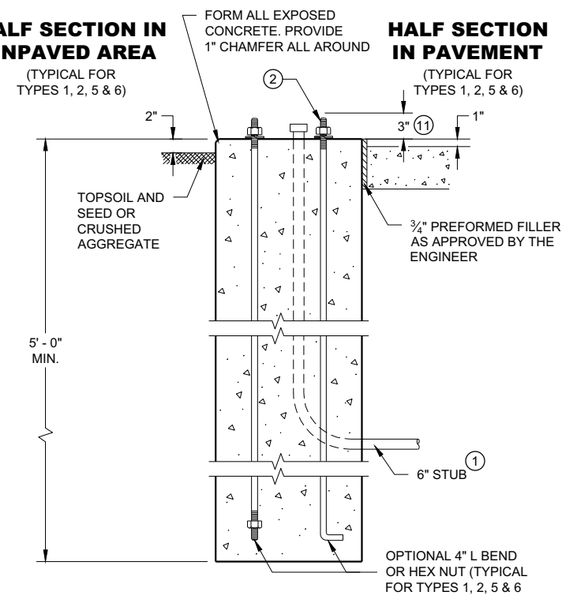
10 ⅝" DIA. X 8' -0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED

11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 ¾" OR LONGER THAN 3 ¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

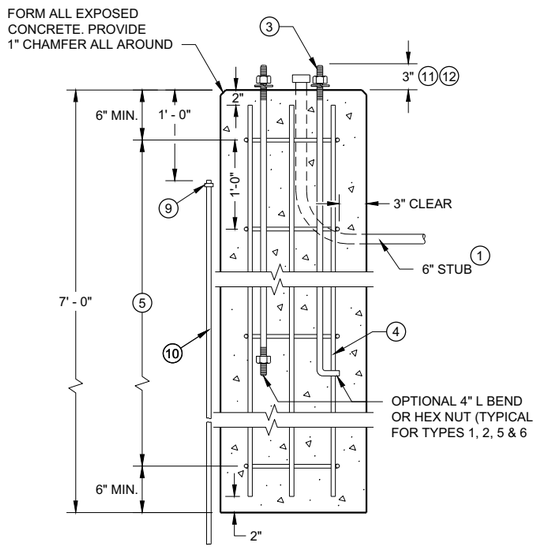
12 FOR NON - BREAKAWAY INSTALLATIONS, 4 ½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5 & 6)

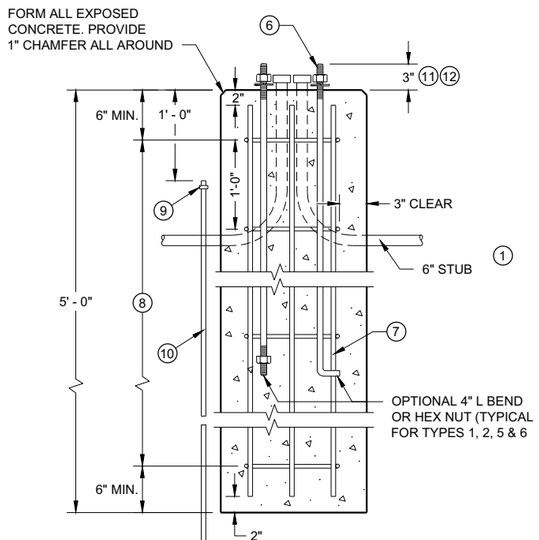
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5 & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

CONCRETE BASES
TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 327

FHWA

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

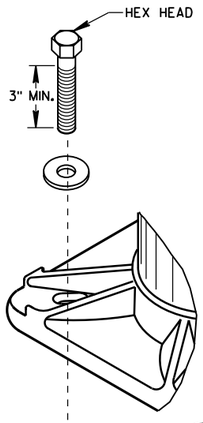
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

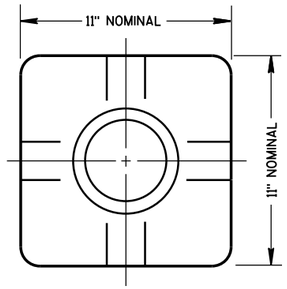
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

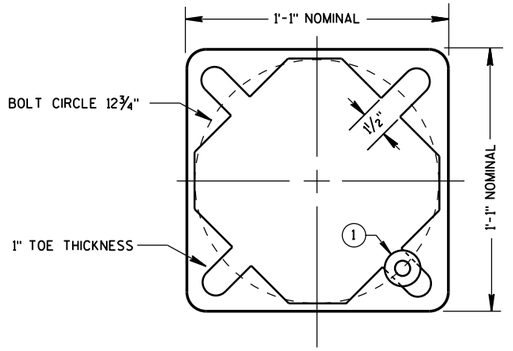
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

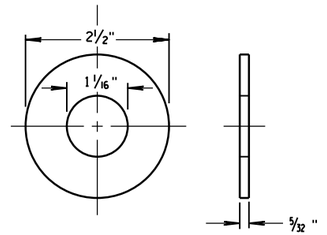




TOP VIEW
(PEDESTAL BASE)

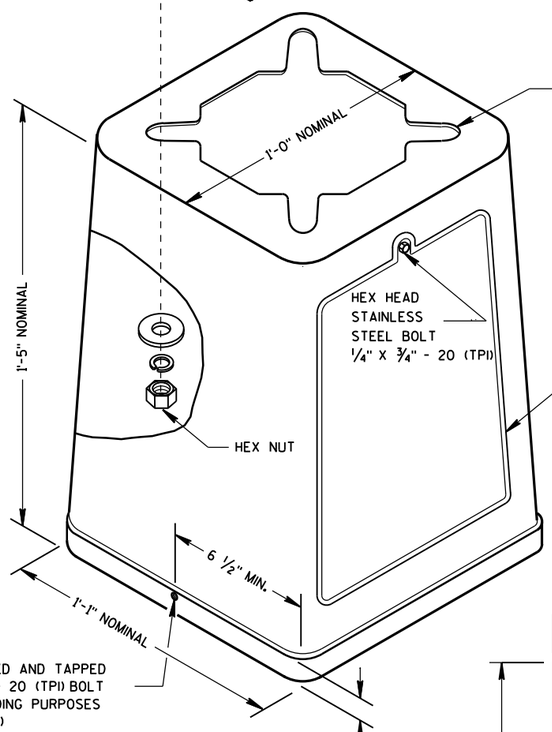


BOTTOM VIEW
(PEDESTAL BASE)

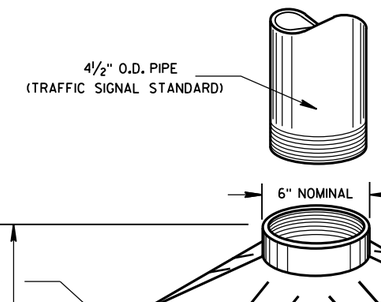


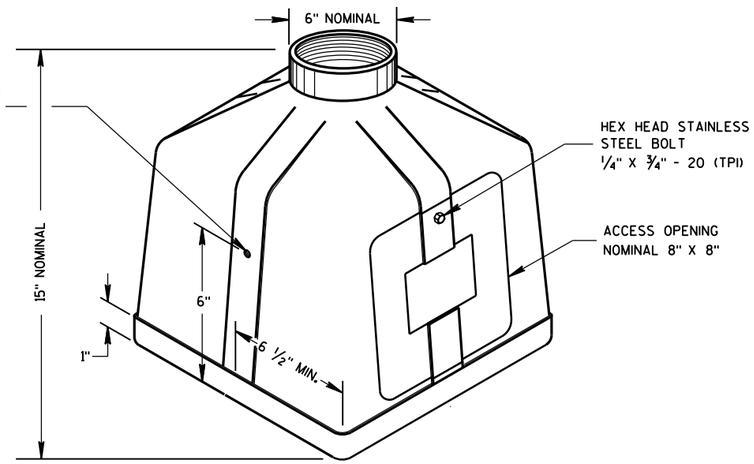
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



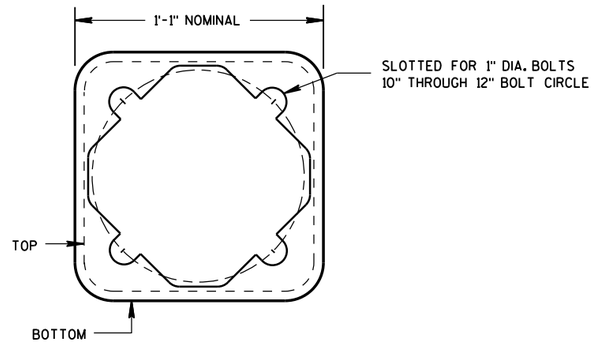
ISOMETRIC VIEW



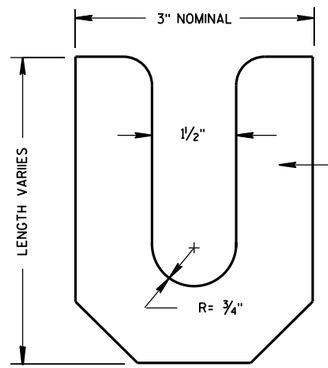


ISOMETRIC VIEW

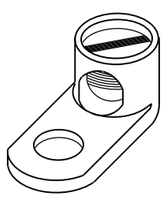
PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)



LEVELING SHIM



TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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S.D.D. 9 C 3-4

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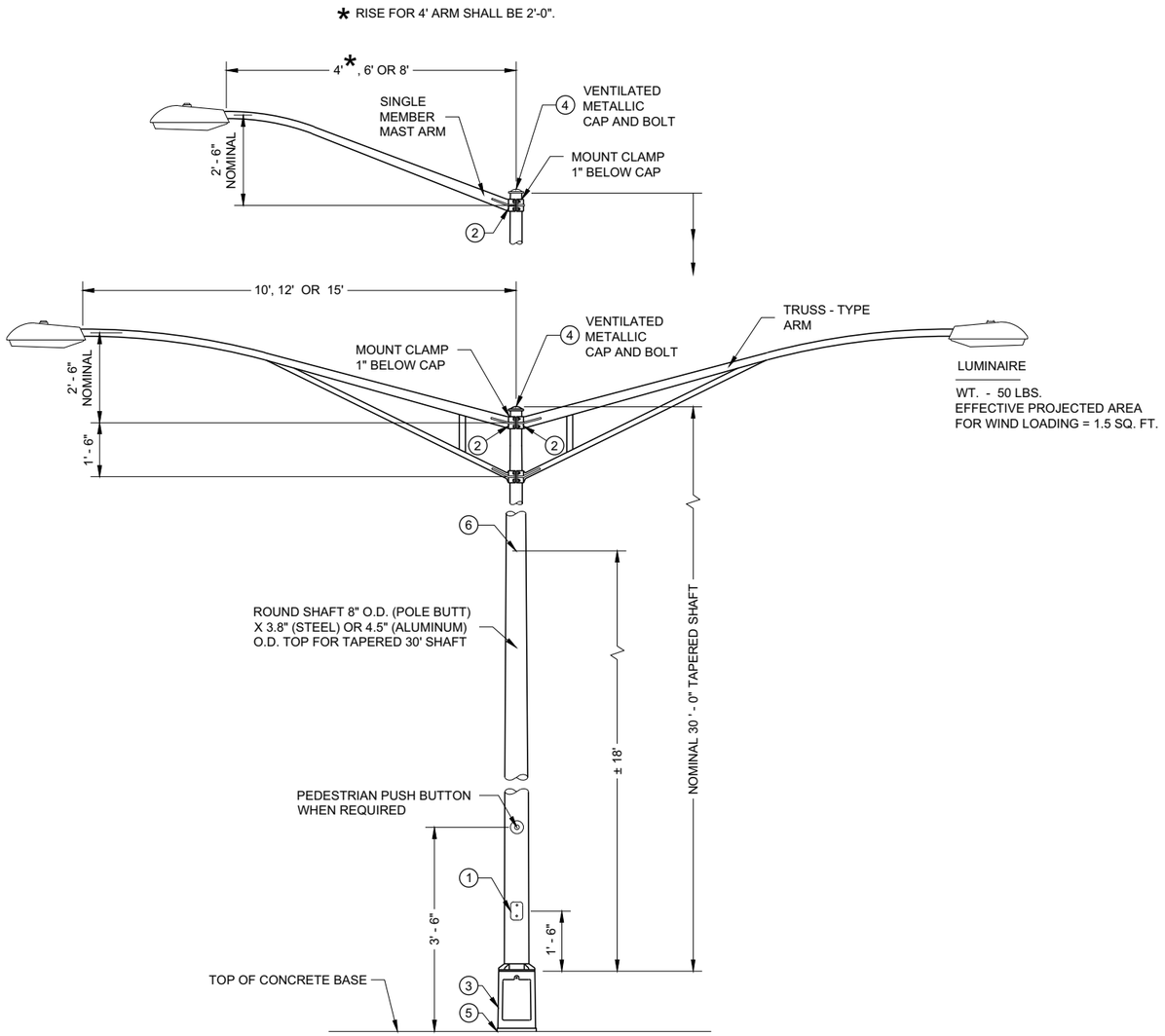
S.D.D. 9 C 3-4



TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.1888".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 ⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) ¼" X ¾" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.

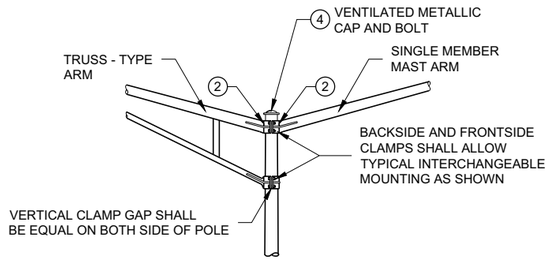
(2) GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 ⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.

(6) INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.

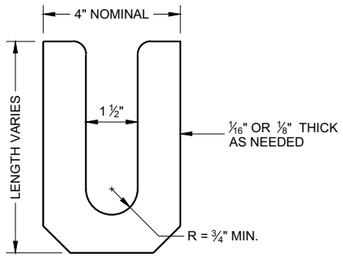


INTERCHANGEABLE MOUNTING DETAIL

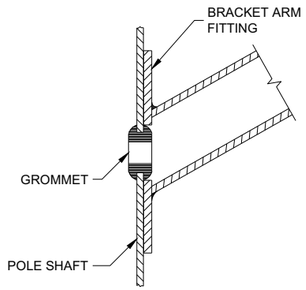
POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

6

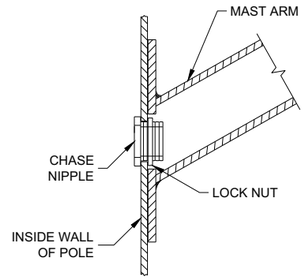
SDD 09E01 - 15d



LEVELING SHIM (1)
SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

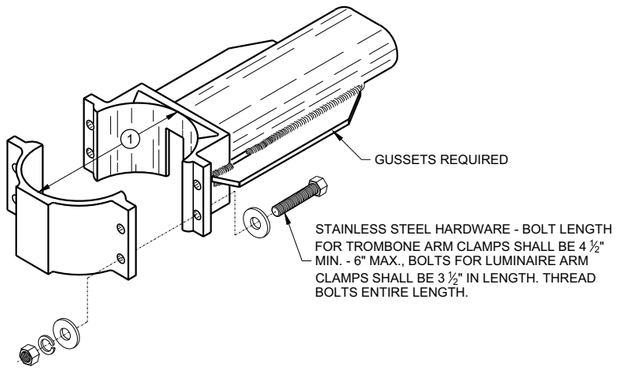
(1) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(2) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

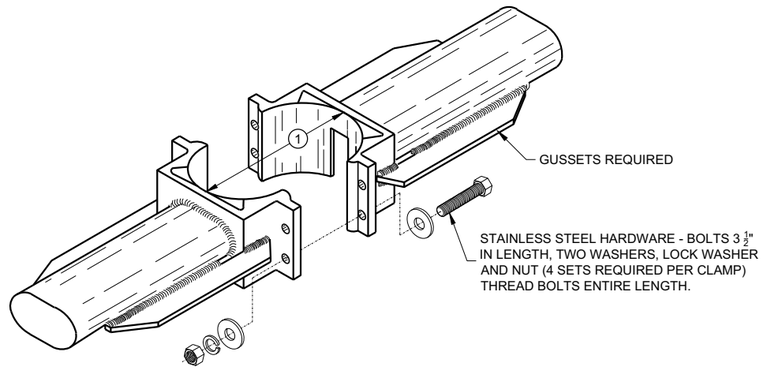
(3) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(4) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

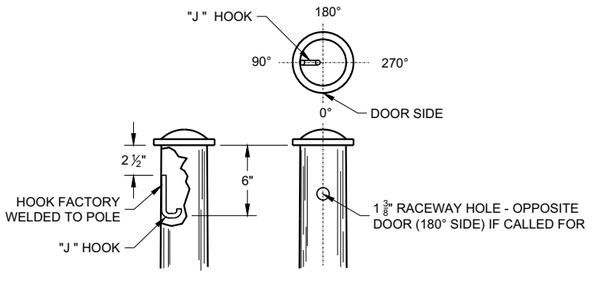
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



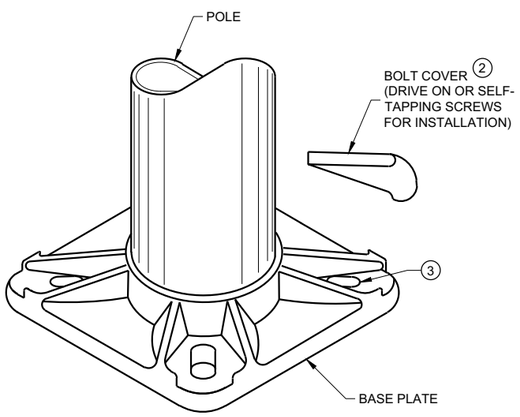
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



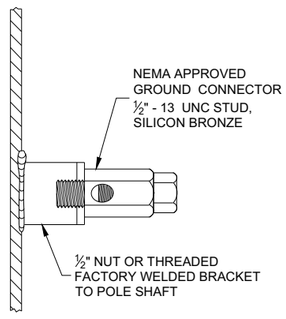
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

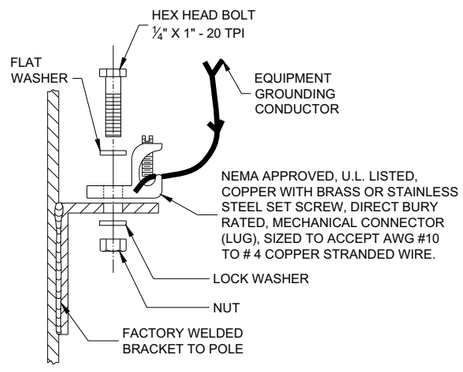


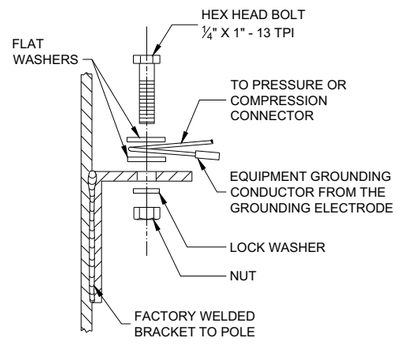
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 330

FHWA

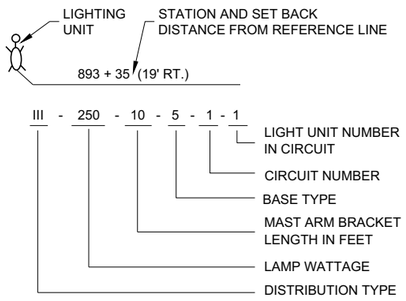
6
SDD 09E01 - 15g

GENERAL NOTES

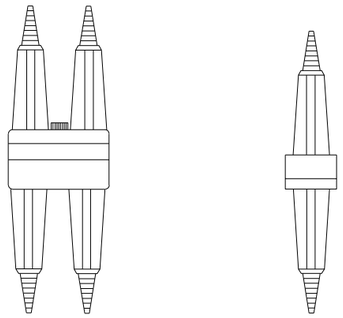
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

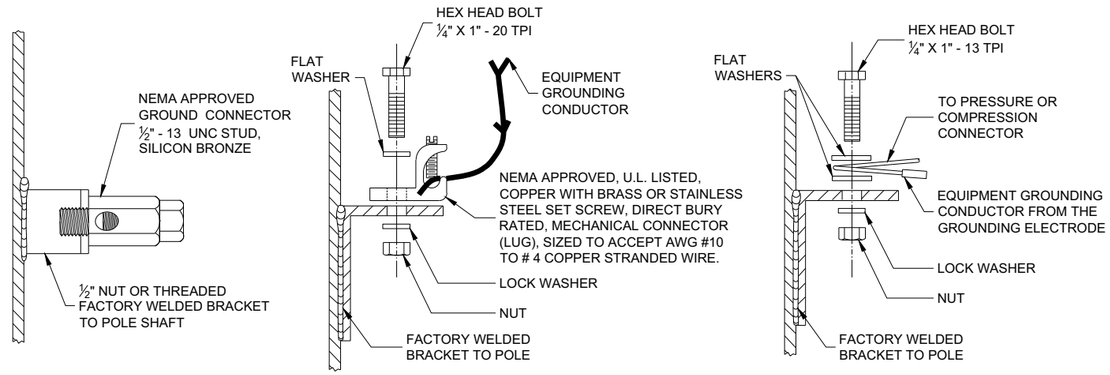


LIGHTING UNIT CODE
(TYPICAL)

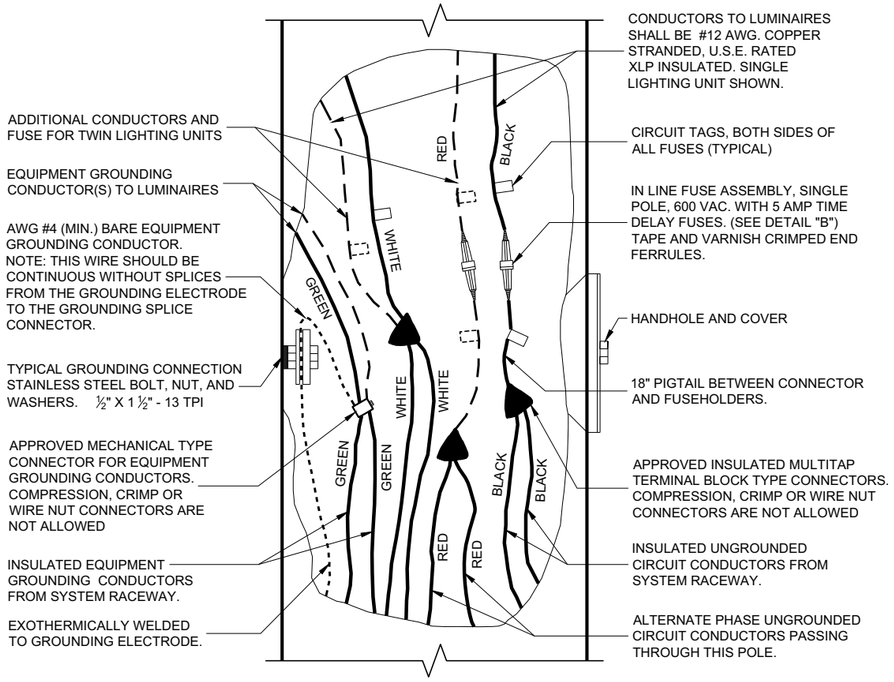


DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT

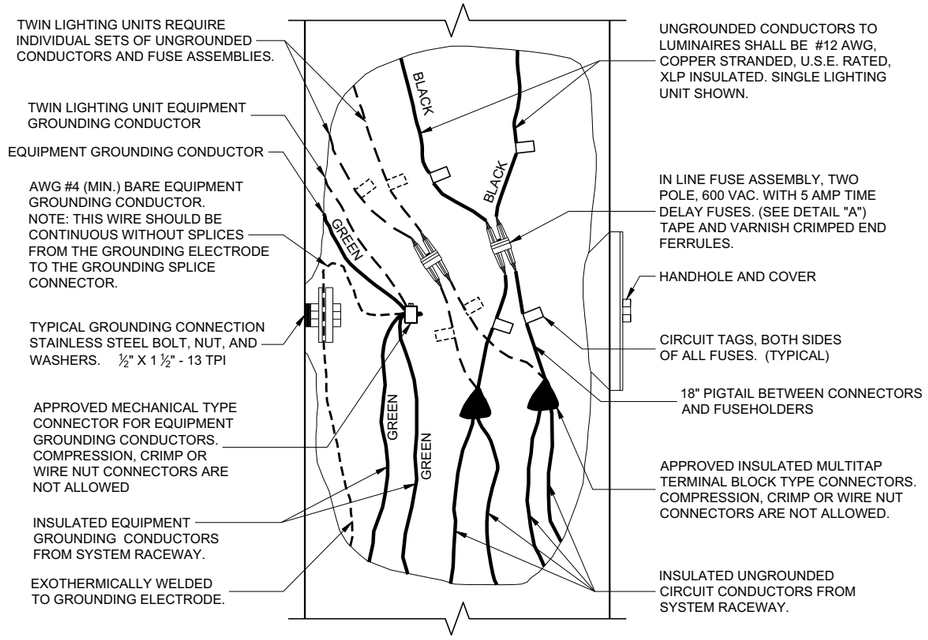
DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT



TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH GROUNDING CONDUCTOR AND EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 331

FHWA

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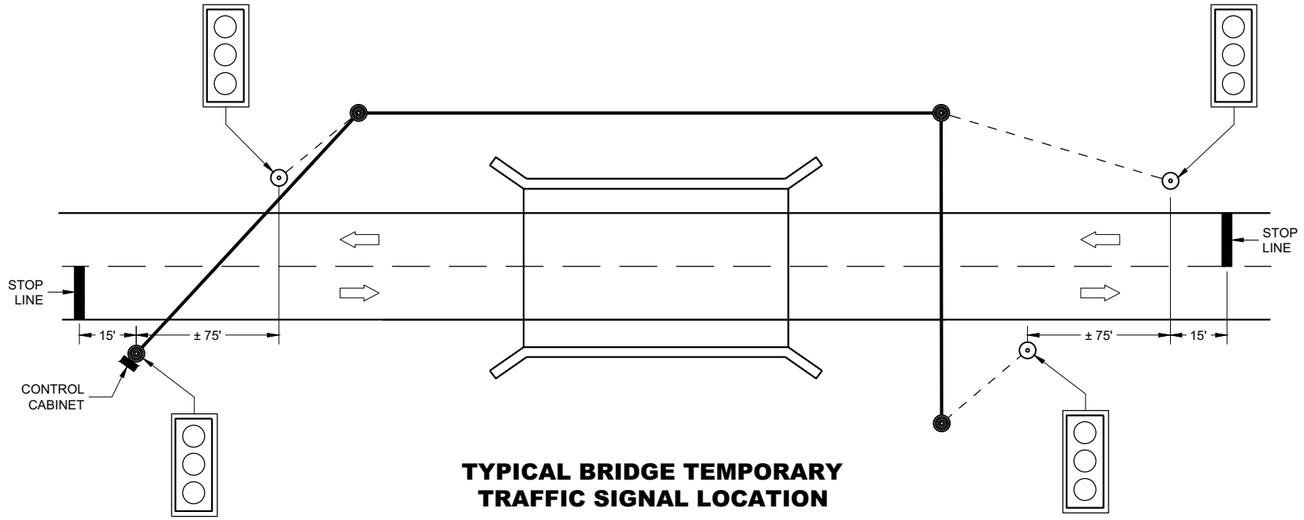


TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NON-BREAKAWAY)
- WOOD POST (BREADAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- DIRECTION OF TRAFFIC
- LED TRAFFIC SIGNAL WITH BACKPLATE (3-12")

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAY BE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY POLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

WOOD POLES (NON-BREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAM GUARD, ETC.).

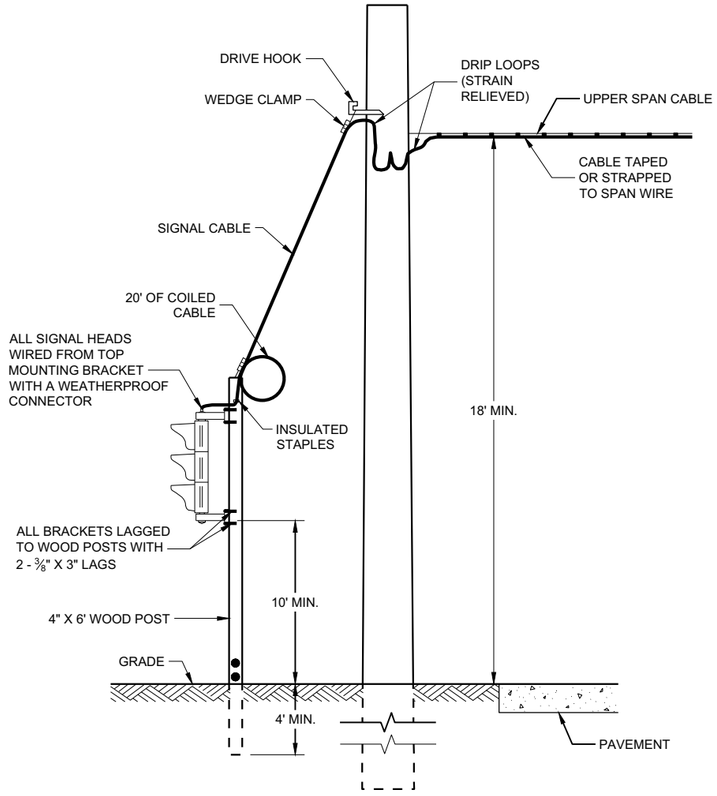
WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

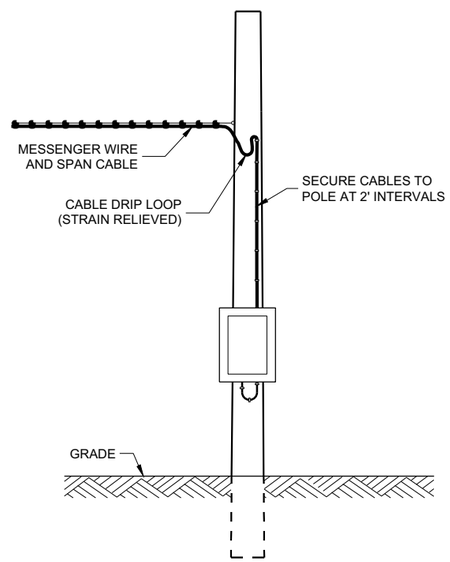
TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

EACH TRAFFIC SIGNAL SHALL HAVE A BACKPLATE.

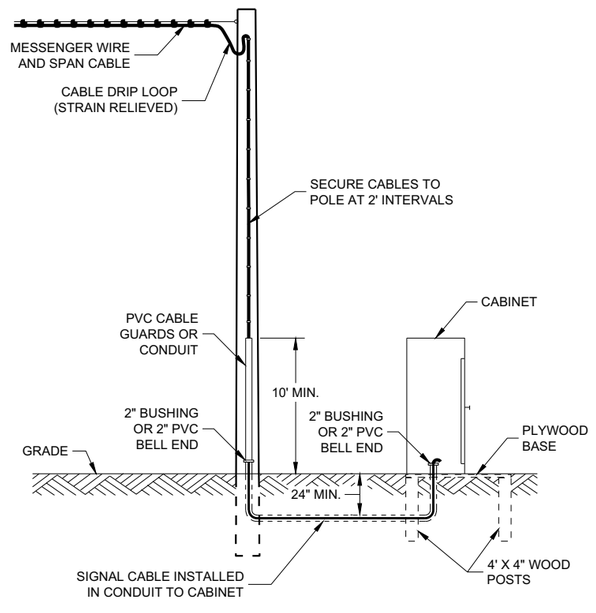
SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION



GROUND MOUNT CABINET INSTALLATION

MINIMUM POLE LENGTHS	CLASS	POLE BURIAL DEPTHS
25'	V	5'
30'	V	6'
35'	IV	7'
40'	IV	8'
45'	IV	9'

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE*
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/CURBS	2 FT

* NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Ahmet Demirbilek — ROADWAY STANDARDS DEVE ENGINEER

FHWA

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SDD09G02 - 05a

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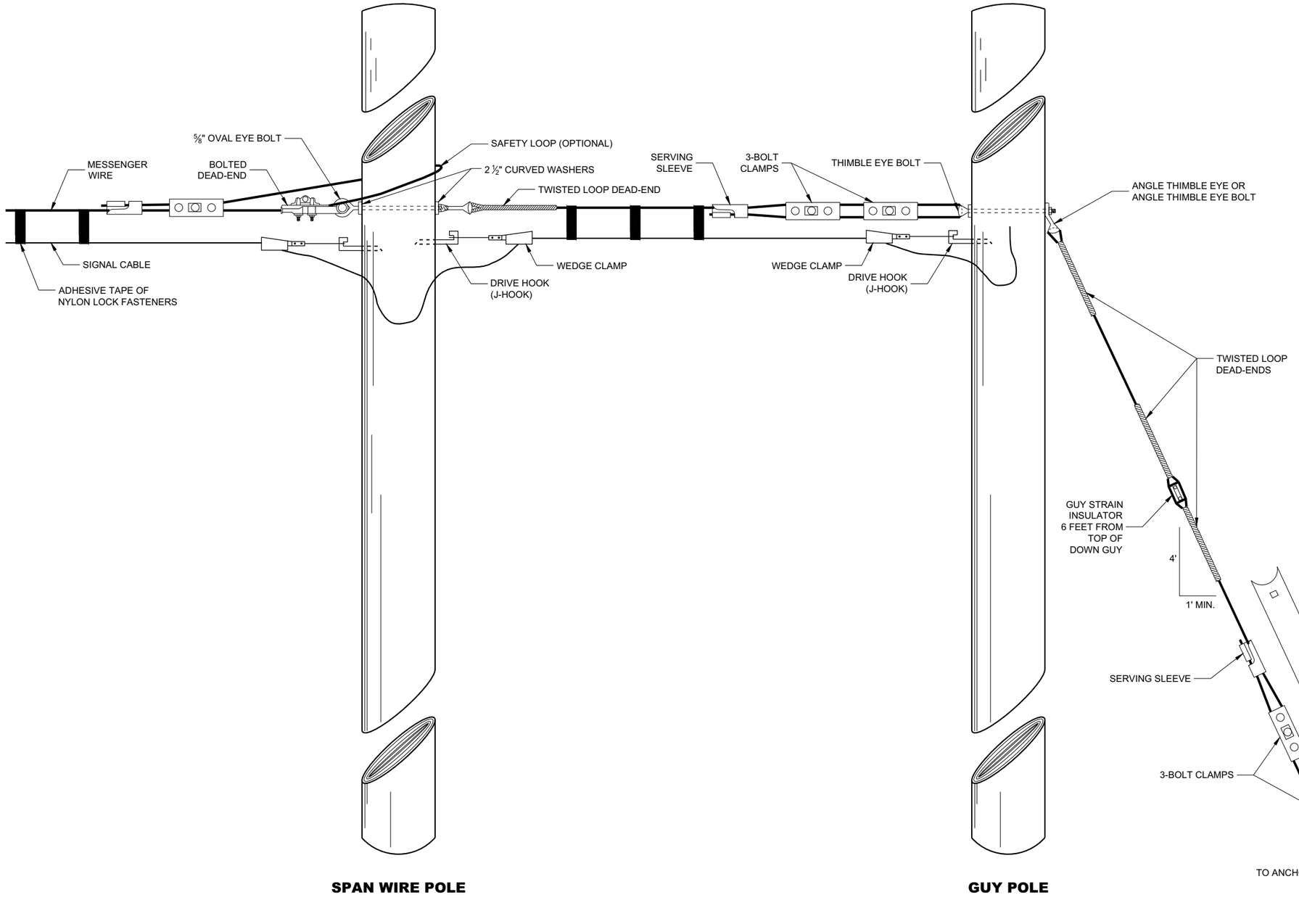
SDD09G02 - 05a

GENERAL NOTES

USE ¾" DRILL IN WOOD POLE TO PROVIDE FOR ⅝" BOLTS.



SPAN WIRE POLE

GUY POLE

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2015 — DATE
/S/ Ahmet Demerbilek — ROADWAY STANDARDS DEVE ENGINEER

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SDD09G02 - 05b

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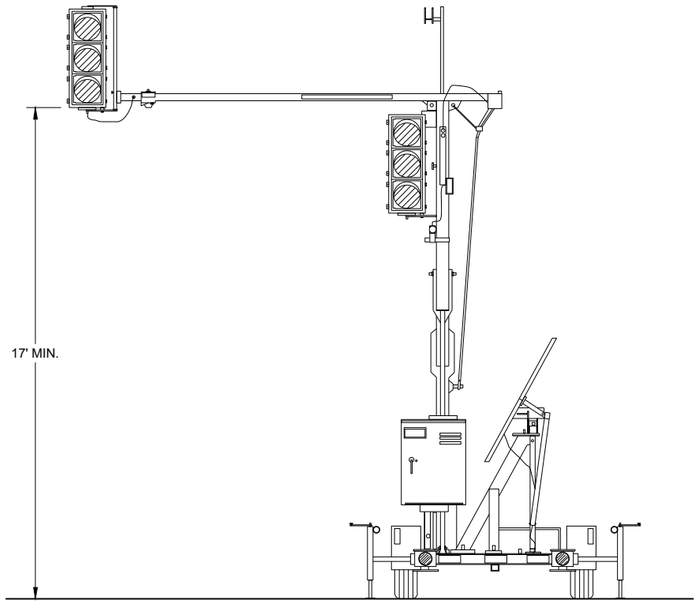
SDD09G02 - 05b

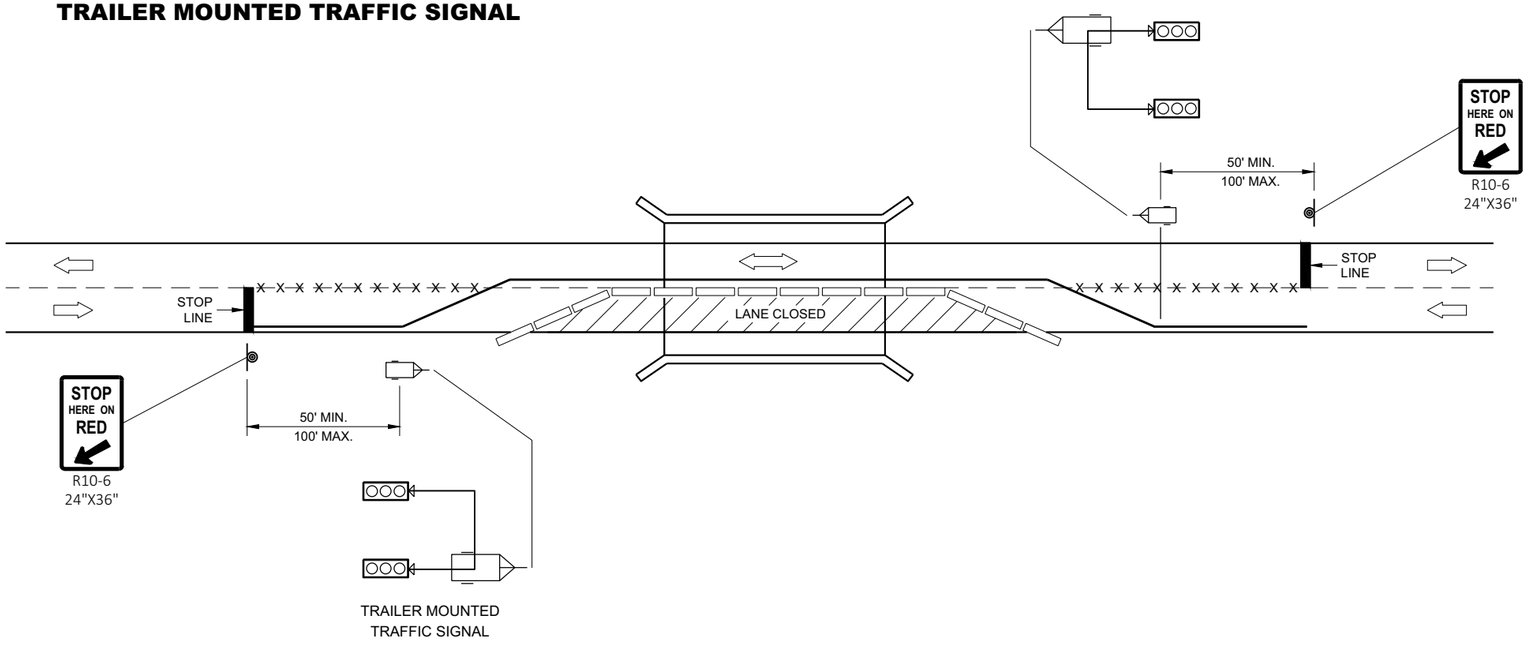


TRAILER MOUNTED TRAFFIC SIGNAL

GENERAL NOTES

DETAIL OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15D33.



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

LEGEND

- POST MOUNTED SIGN
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- REMOVE PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2015
DATE

/S/ Ahmet Demerbilek
ROADWAY STANDARDS DEVE ENGINEER

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SDD09G02 - 05c

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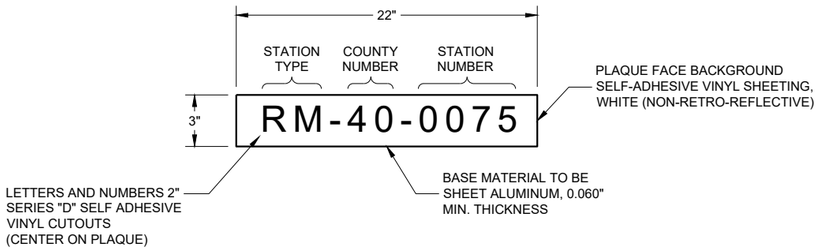
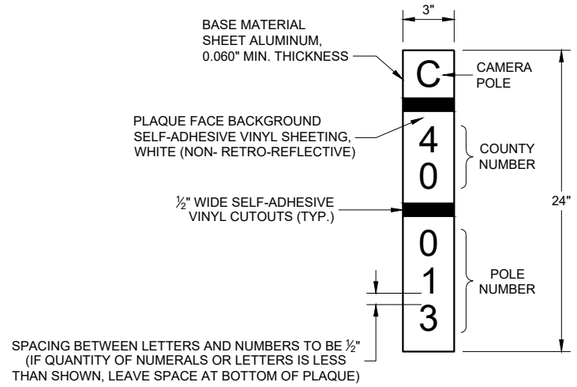
SDD09G02 - 05c



CONTROL CABINET IDENTIFICATION PLAQUE DETAIL



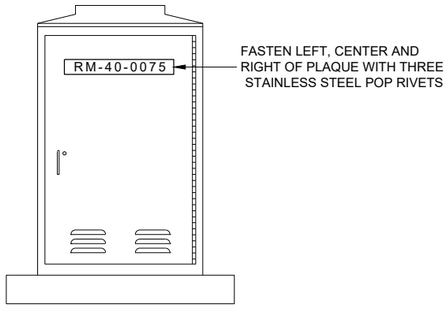
POLE IDENTIFICATION PLAQUE DETAIL

GENERAL NOTES

1. TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2. FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3. FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE 2 , FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4. COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

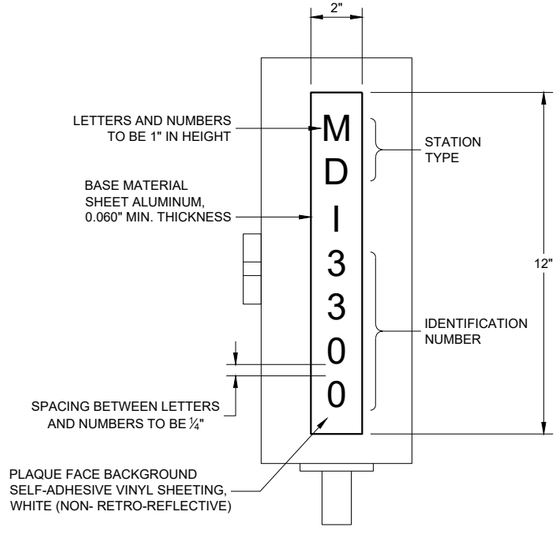
LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR



CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)



MICROWAVE DETECTOR FIELD CABINET IDENTIFICATION PLAQUE DETAIL

IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGI 335
FHWA

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SDD 09H11 - 01

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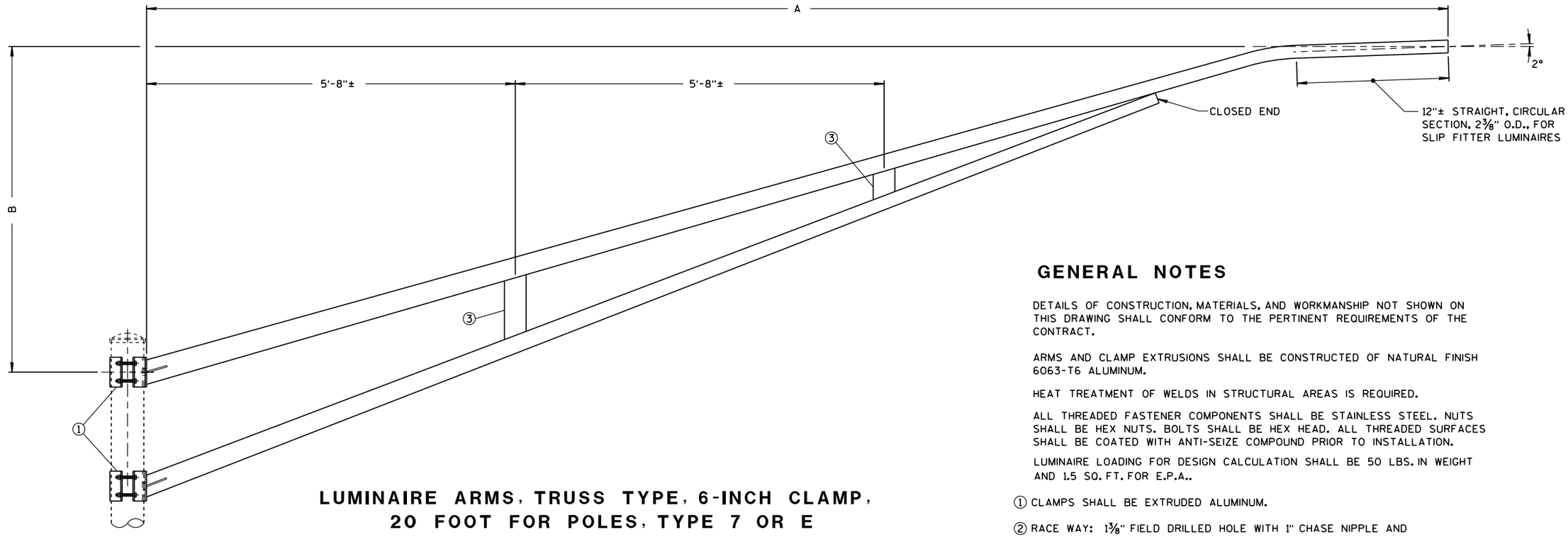

LUMINAIRE ARMS, TRUSS TYPE, 6-INCH CLAMP, 20 FOOT FOR POLES, TYPE 7 OR E

UPPER AND LOWER TRUSS CHORD CLAMPS SIMILIAR

TYPE	DIM. A NOMINAL ARM LENGTH (FT)	DIM. B APPROX. RISE (FT)
TRUSS TYPE	20.0	5.0

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

ARMS AND CLAMP EXTRUSIONS SHALL BE CONSTRUCTED OF NATURAL FINISH 6063-T6 ALUMINUM.

HEAT TREATMENT OF WELDS IN STRUCTURAL AREAS IS REQUIRED.

ALL THREADED FASTENER COMPONENTS SHALL BE STAINLESS STEEL. NUTS SHALL BE HEX NUTS. BOLTS SHALL BE HEX HEAD. ALL THREADED SURFACES SHALL BE COATED WITH ANTI-SEIZE COMPOUND PRIOR TO INSTALLATION.

LUMINAIRE LOADING FOR DESIGN CALCULATION SHALL BE 50 LBS. IN WEIGHT AND 1.5 SQ. FT. FOR E.P.A..

① CLAMPS SHALL BE EXTRUDED ALUMINUM.

② RACE WAY: 1⅜" FIELD DRILLED HOLE WITH 1" CHASE NIPPLE AND NUT (OR NEOPRENE GROMMET) PER EACH REQUIRED LUMINAIRE ARM. PROVIDE 1½" HOLE IN CLAMP EXTRUSION TO CONTINUE RACEWAY. NOTE: NO RACEWAY ON LOWER TRUSS CORD CLAMP. FOR INFORMATION ONLY.

③ STIFFENER.

④ GUSSETS REQUIRED.

⑤ CLAMP BOLT ASSEMBLY (BOLT - ½"-13 UNC, 2 EACH - FLAT WASHER, LOCK WASHER, NUT) - 4 EACH PER CLAMP.

LUMINAIRE ARMS, TRUSS TYPE 6-INCH CLAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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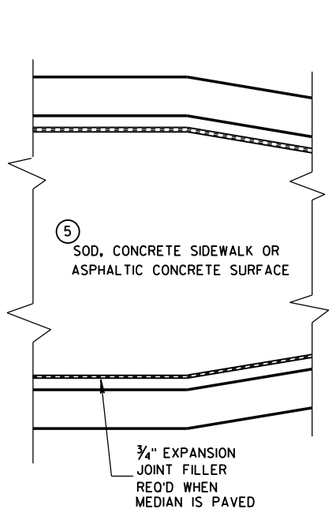
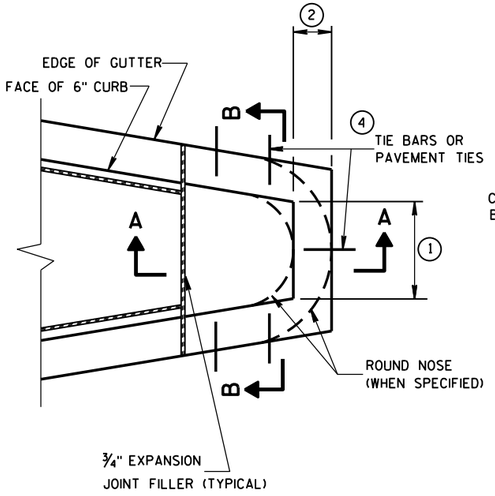
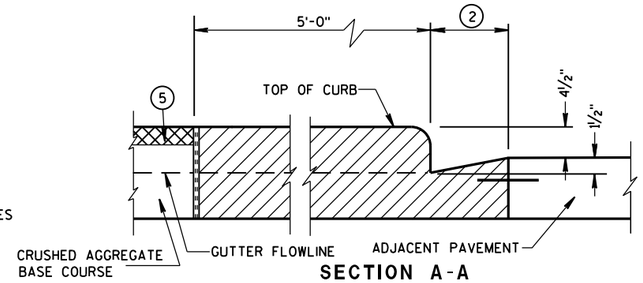
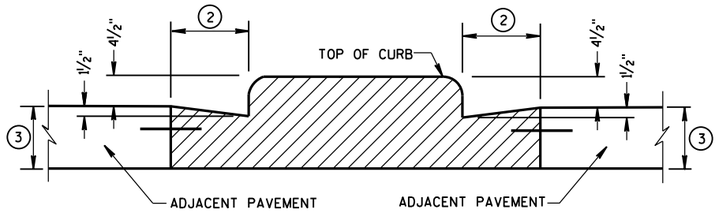
S.D.D. 10 A 18-5b







SECTION A-A



SECTION B-B

CONCRETE MEDIAN BLUNT NOSE DETAIL

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) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

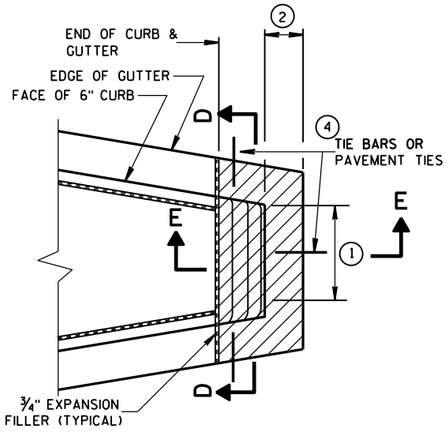
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

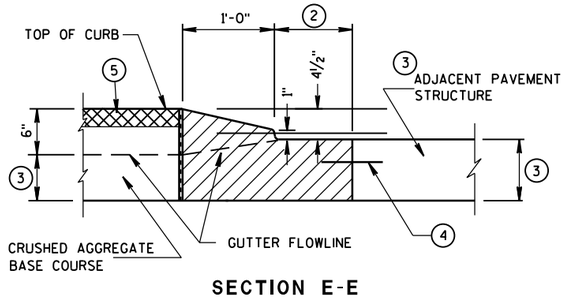
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

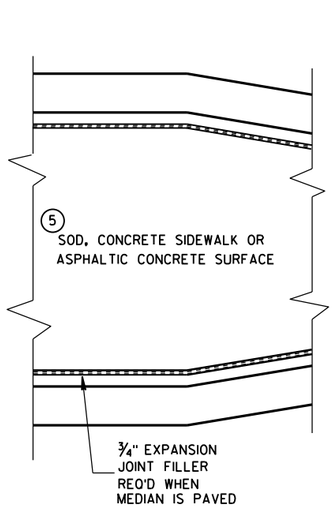
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

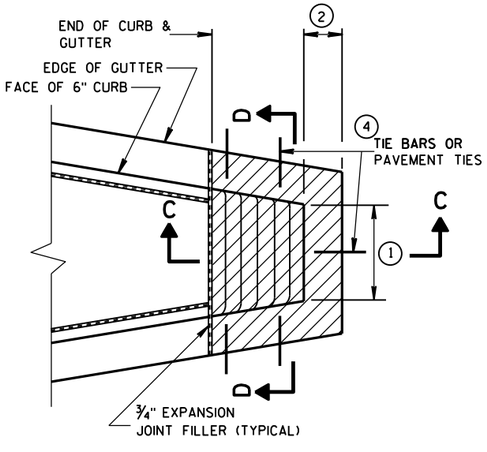


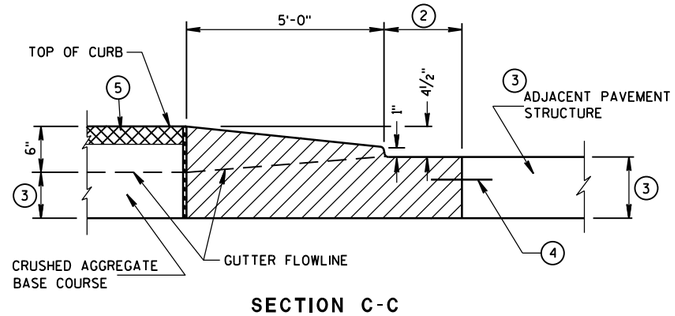


SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

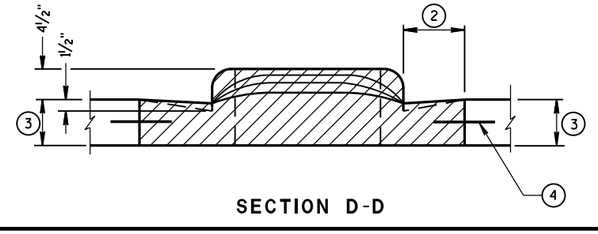






SECTION C-C

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

337

FHWA

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S.D.D. 11 B 2-2

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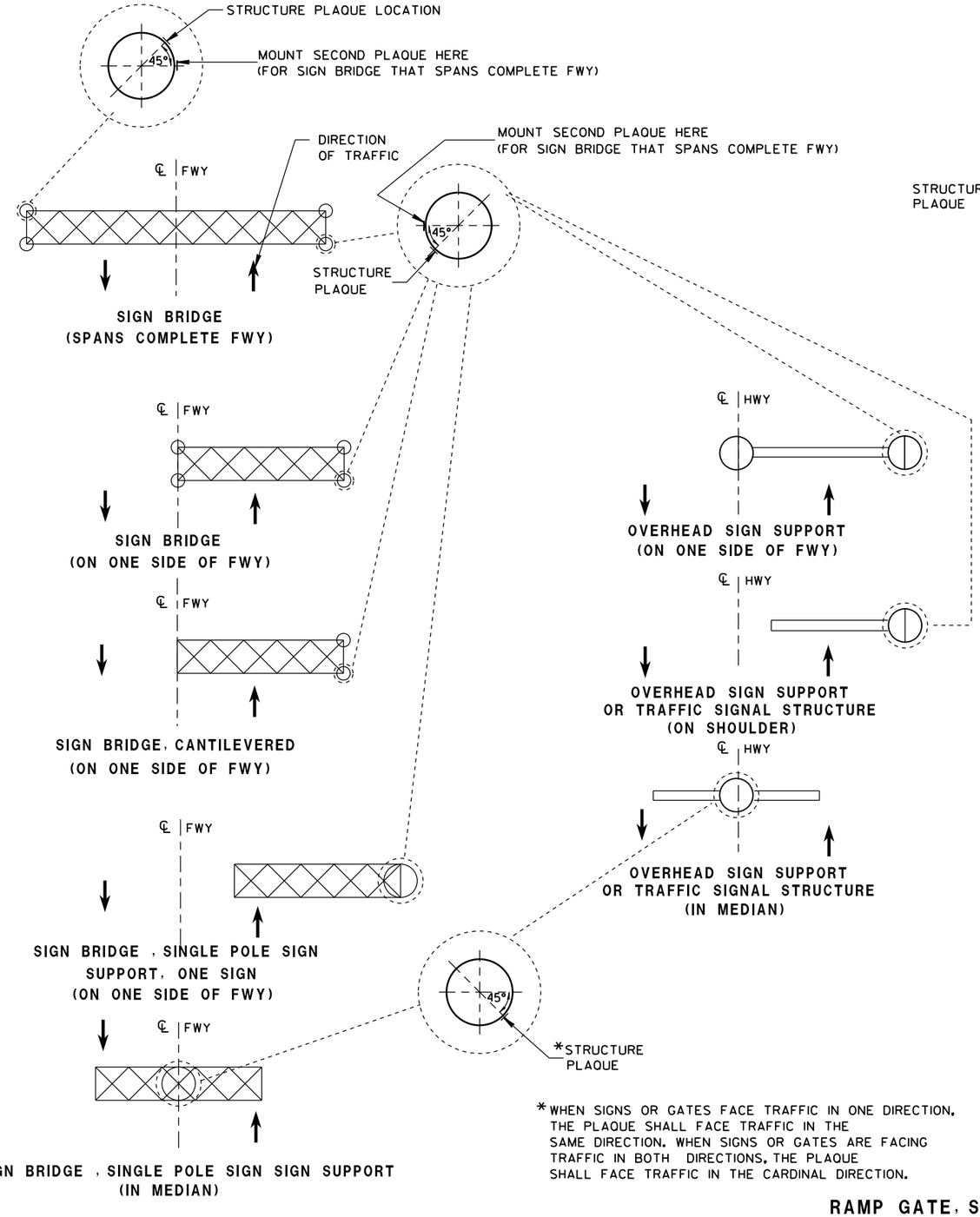
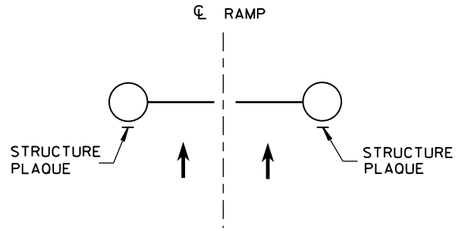
S.D.D. 11 B 2-2

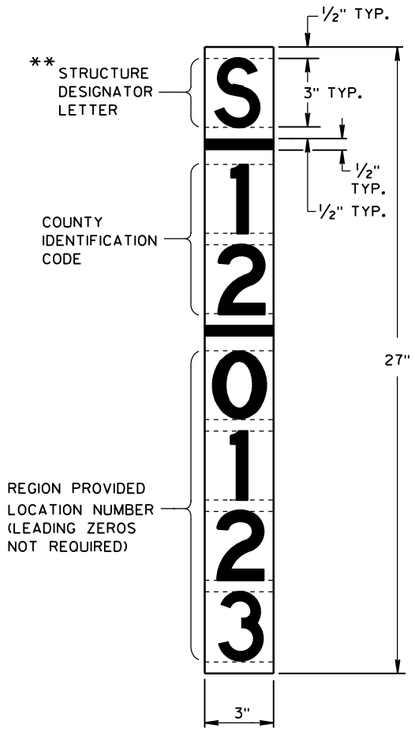


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



**RAMP GATE
(ACROSS FWY ON-RAMP)**



RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

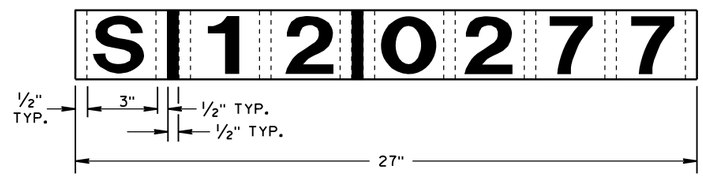
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

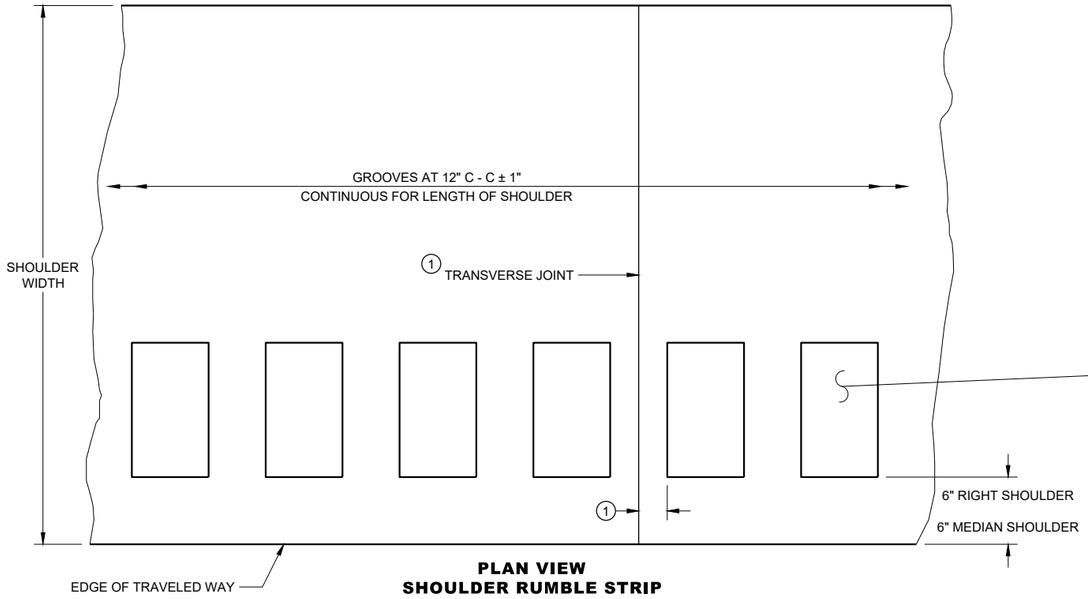
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

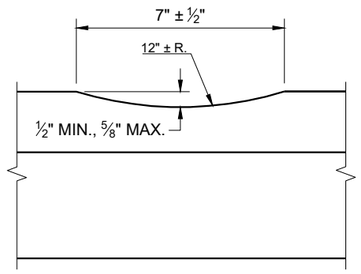
S.D.D. 12 A 4-3

6

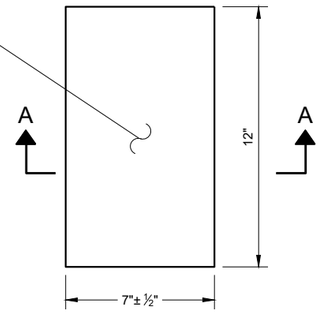
S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER RUMBLE STRIP



SECTION A - A



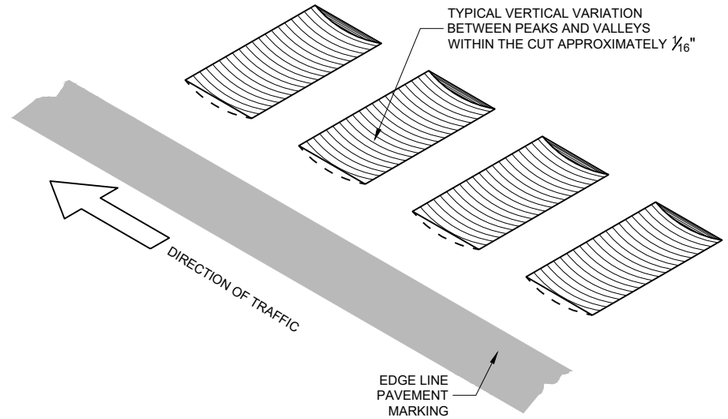
PLAN VIEW
(SINGLE GROOVE)

GENERAL NOTES

SDD 13A5, SHEET "b" SHOWS THE LOCATION OF THE RUMBLE STRIPS AT RAMP AND GORE LOCATIONS.

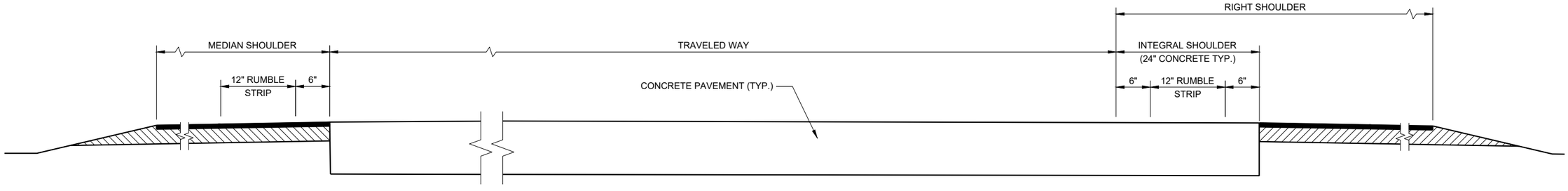
RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL AND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6 INCHES AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC

PLACEMENT DETAIL FOR RUMBLE STRIP



SECTION VIEW

TYPICAL SHOULDER RUMBLE STRIPS
(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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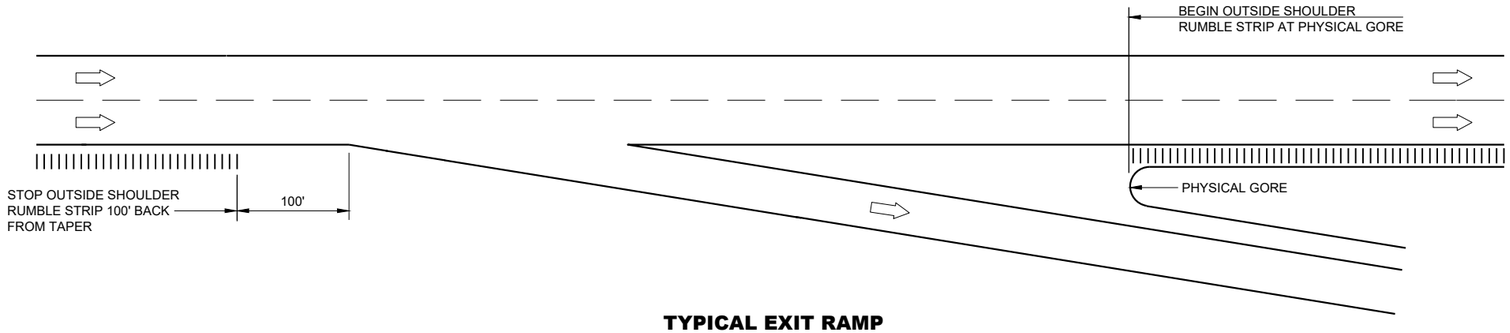
SDD 13A05-06a



TYPICAL EXIT RAMP

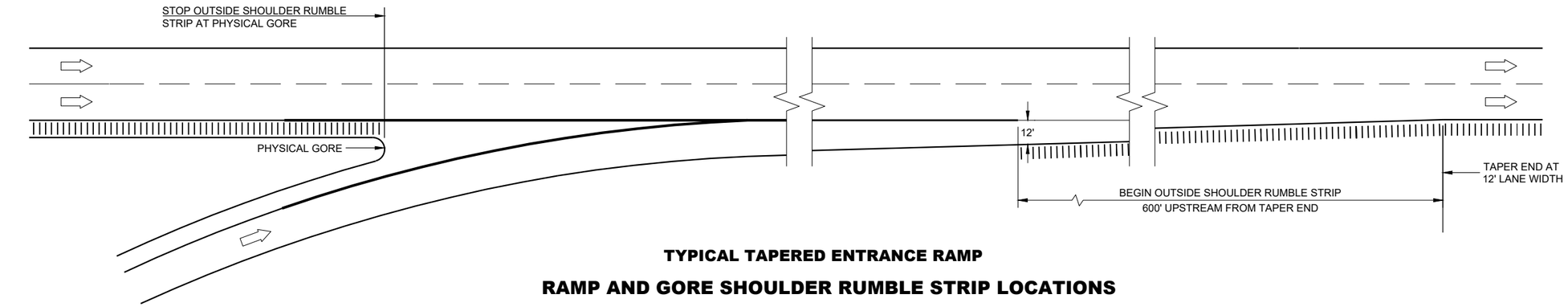
GENERAL NOTES

NO RUMBLE STRIP ON EXIT, DIRECTIONAL OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

RUMBLE STRIPS ON EXPRESSWAYS:
DO NOT INSTALL SHOULDER RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIALAND PRIVATE DRIVEWAYS, ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, 25' IN ADVANCE OF BRIDGE DECKS, 25' IN ADVANCE OF BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSINGS.

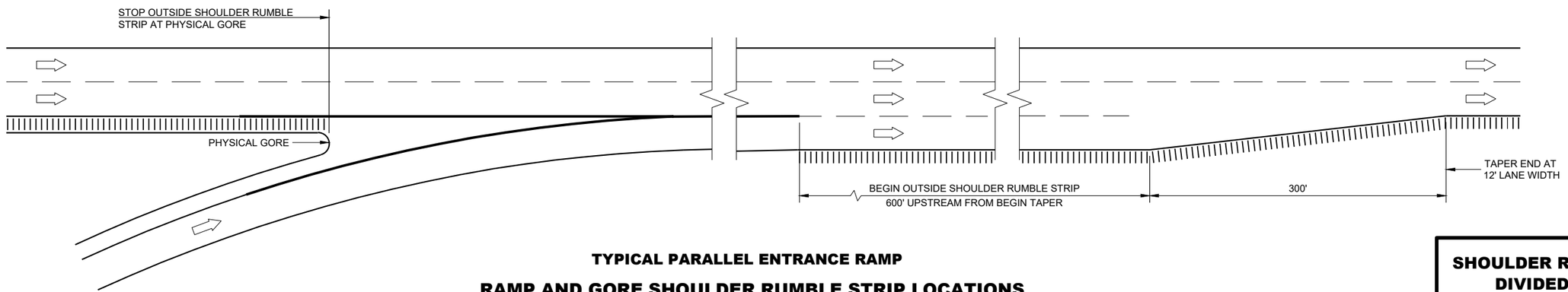
LEGEND

DIRECTION OF TRAFFIC



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE SHOULDER RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIPS, DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Rodney Taylor
ROADWAY DESIGN STANDARDS
UNIT SUPERVISOR

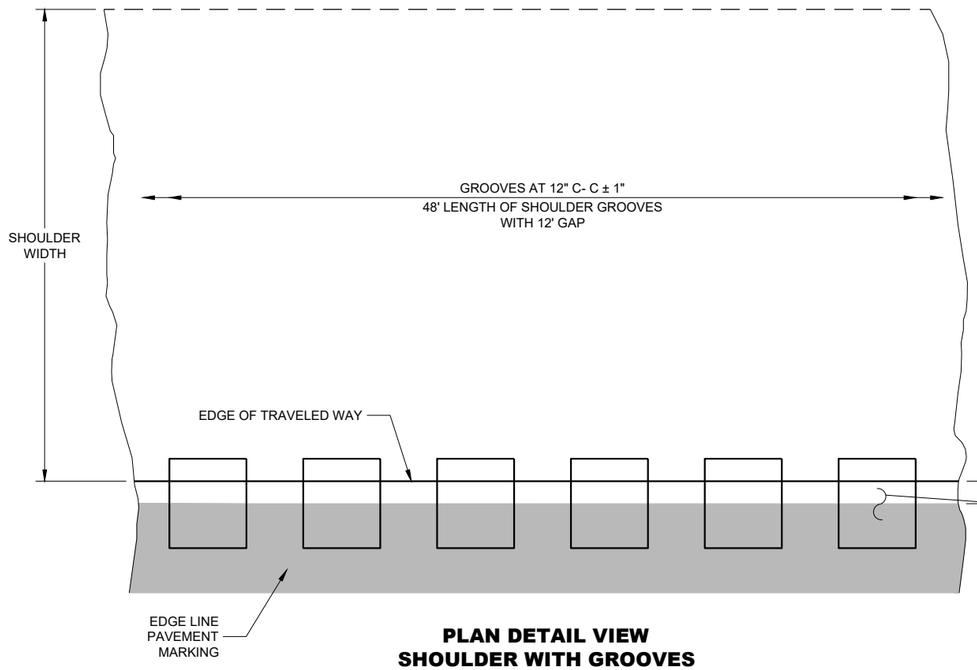
FHWA

6
SDD 13A05-06b

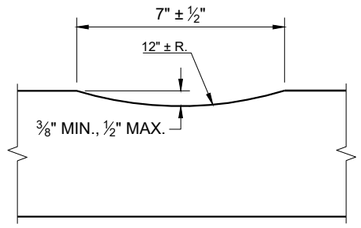
GENERAL NOTES

DO NOT MILL SHOULDER GROOVES THROUGH INTERSECTIONS, MARKED CROSSWALKS, NON-MOTORIZED PATH CROSSINGS, ETC. REFER TO SDD 13A10 SHEETS "g" AND "h".

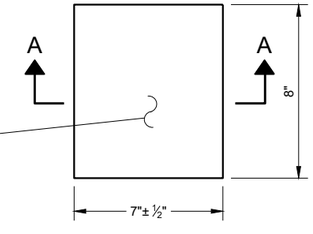
SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS WHEN DIRECTED BY THE ENGINEER.



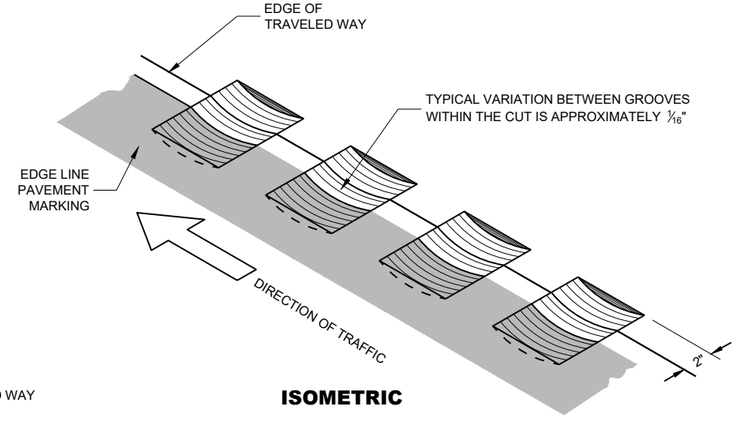
PLAN DETAIL VIEW
SHOULDER WITH GROOVES



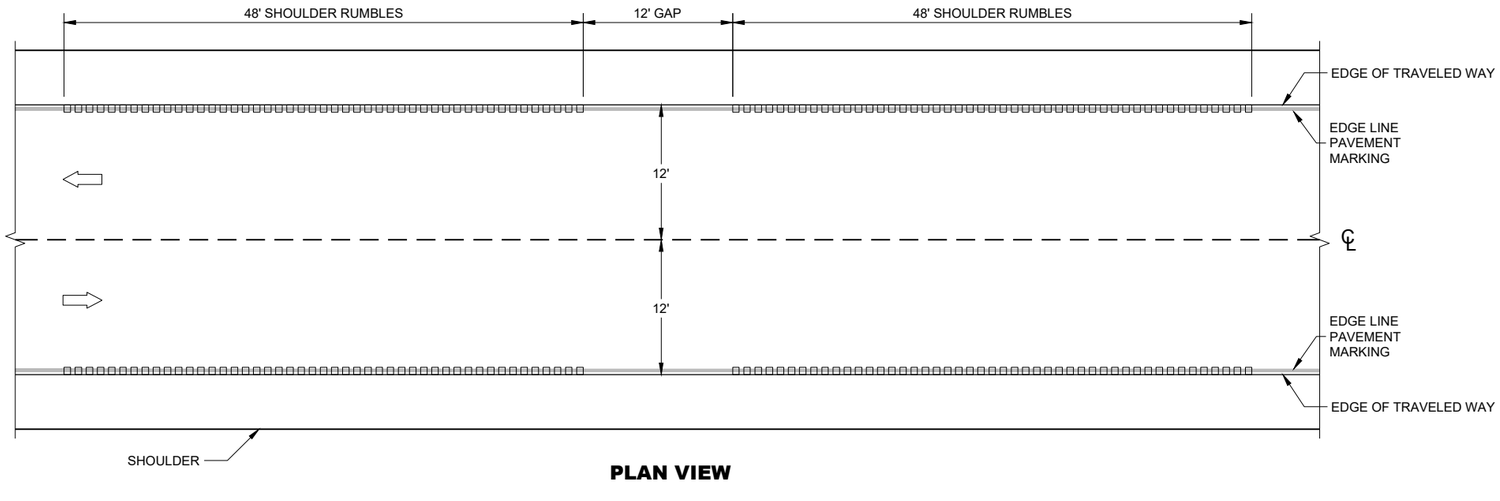
SECTION A - A



PLAN VIEW
(SINGLE GROOVE)



ISOMETRIC



PLAN VIEW

EDGE LINE RUMBLE STRIPS - ASPHALT

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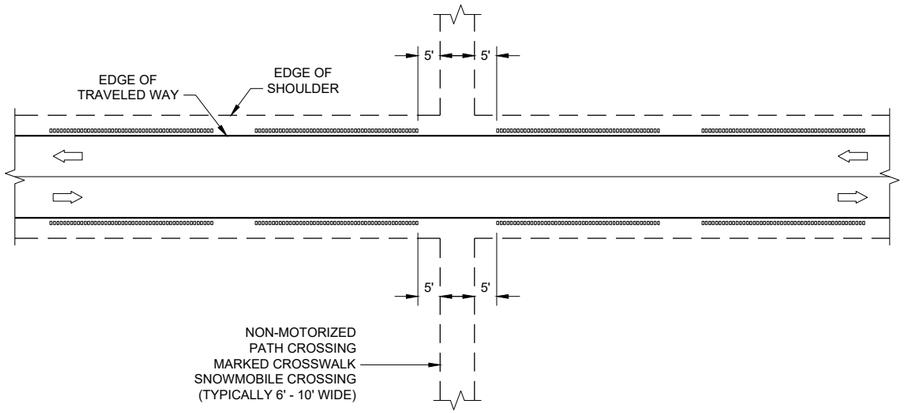
SDD 13A10 - 03e

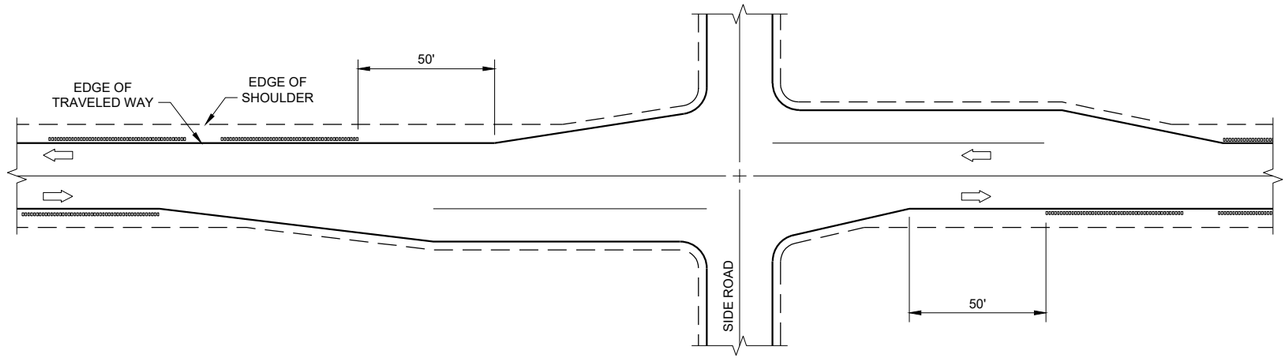
6

SDD13A10 - 03e

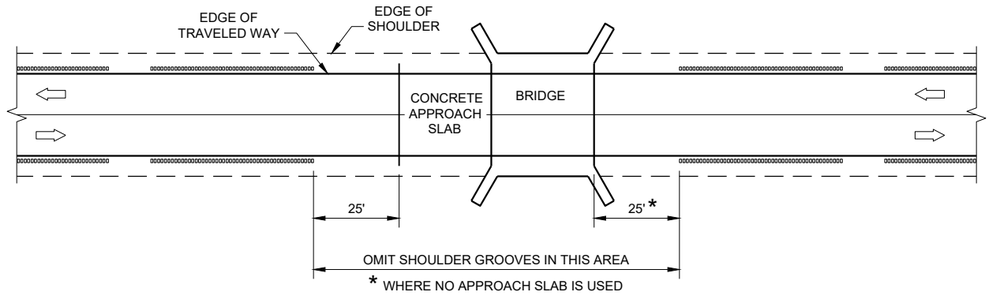
EDGE LINE RUMBLE STRIPS - ASPHALT



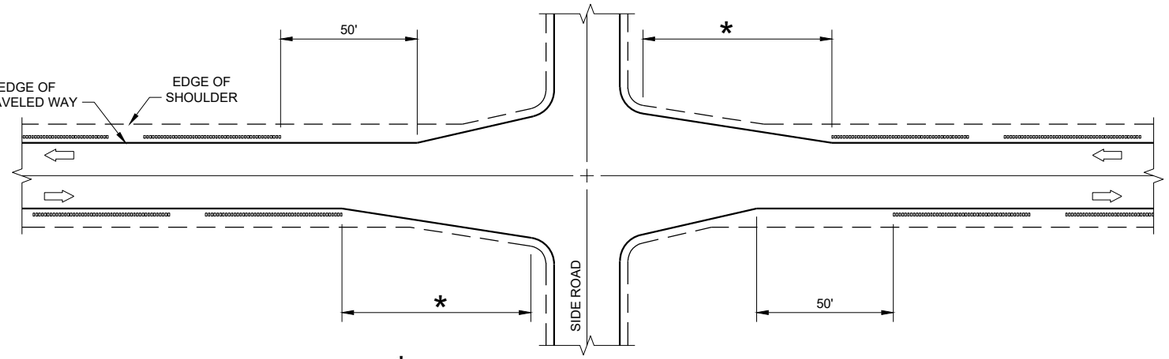
GROOVES AT MISCELLANEOUS CROSSINGS



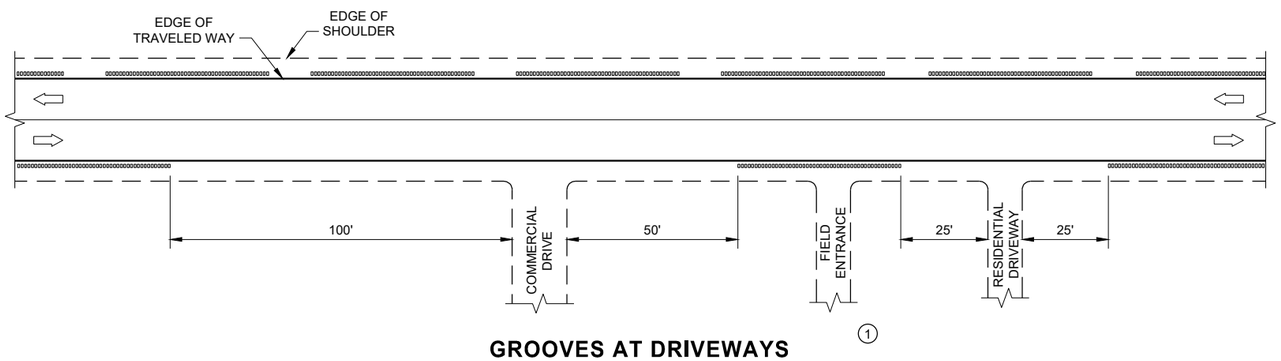
GROOVES AT RIGHT TURN LANE



GROOVES AT BRIDGES



GROOVES AT INTERSECTIONS WITH APPROACH TAPER



GROOVES AT DRIVEWAYS ①

GENERAL NOTES

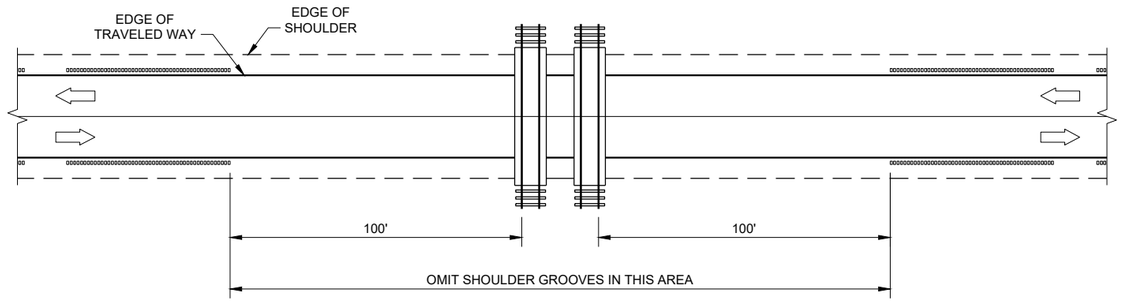
① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

SHOULDER AND EDGE LINE RUMBLE STRIPS CROSSINGS, INTERSECTIONS, BRIDGES, DRIVEWAYS

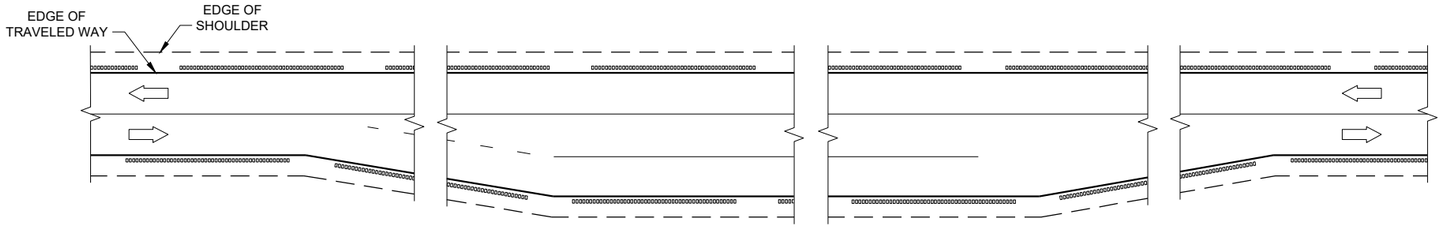
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

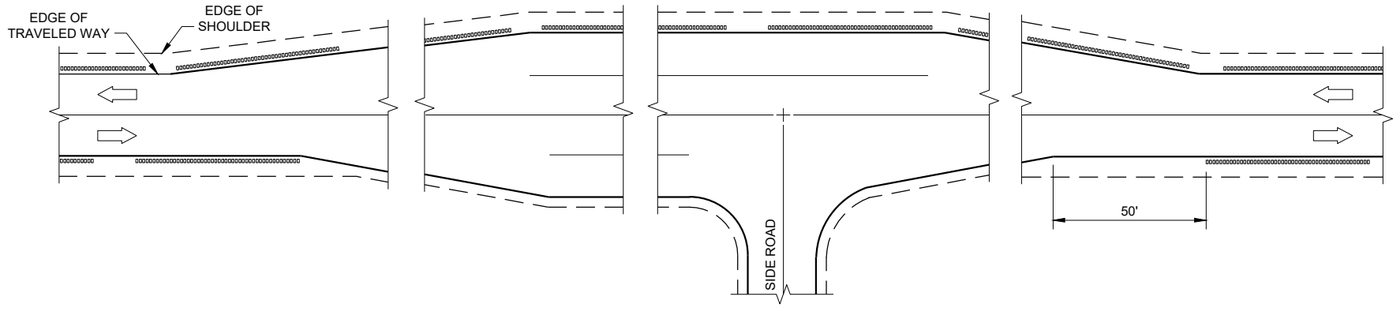
SDD 13A10 - 03g



GROOVES AT RAILROADS



GROOVES AT PASSING AND CLIMBING LANES



GROOVES AT BYPASS LANES

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SDD 13A10 - 03h

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SDD13A10 - 03h

SHOULDER AND EDGE LINE RUMBLE STRIPS - RAILROAD, PASSING, CLIMBING AND BYPASS LANES

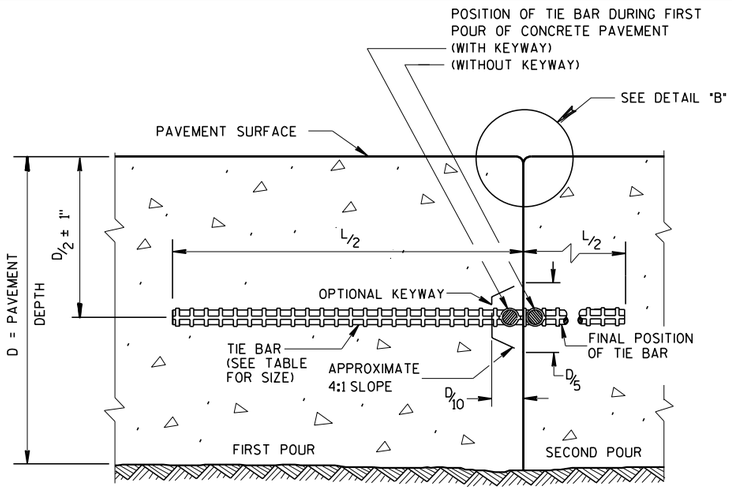
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

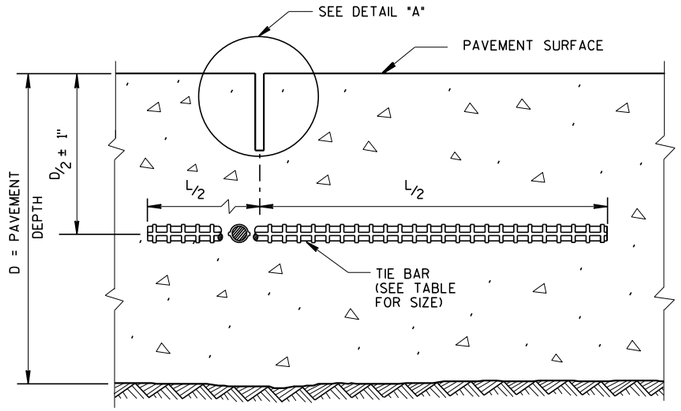
May 2023
DATE

/S/ John Jenkins
ROADWAY STANDARDS DEVE ENGINEER

FHWA



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 — DATE
/S/ Peter Kemp PE — PAVEMENT SUPE
FHWA

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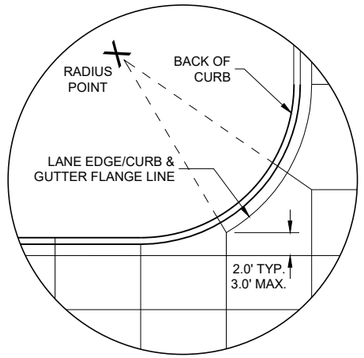
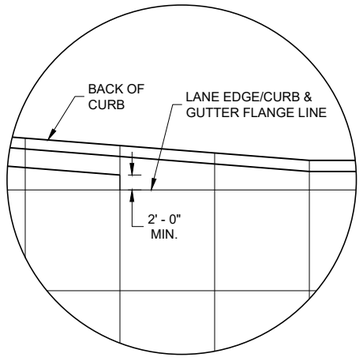
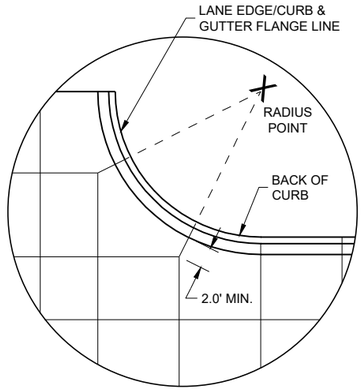
S.D.D. 13 C 1-19



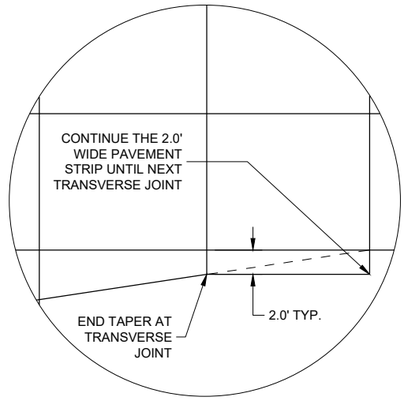
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

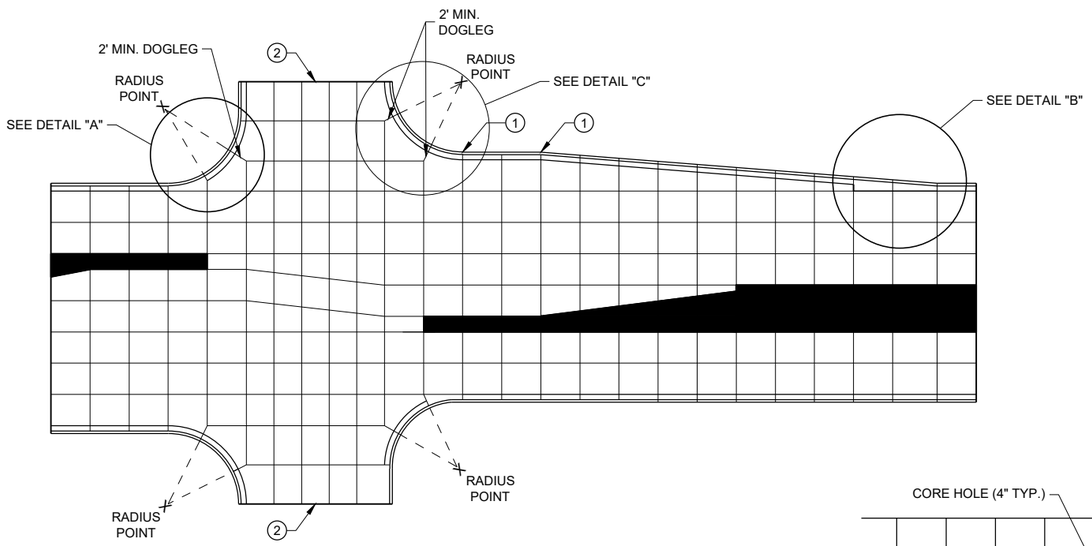
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.

(2) CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.

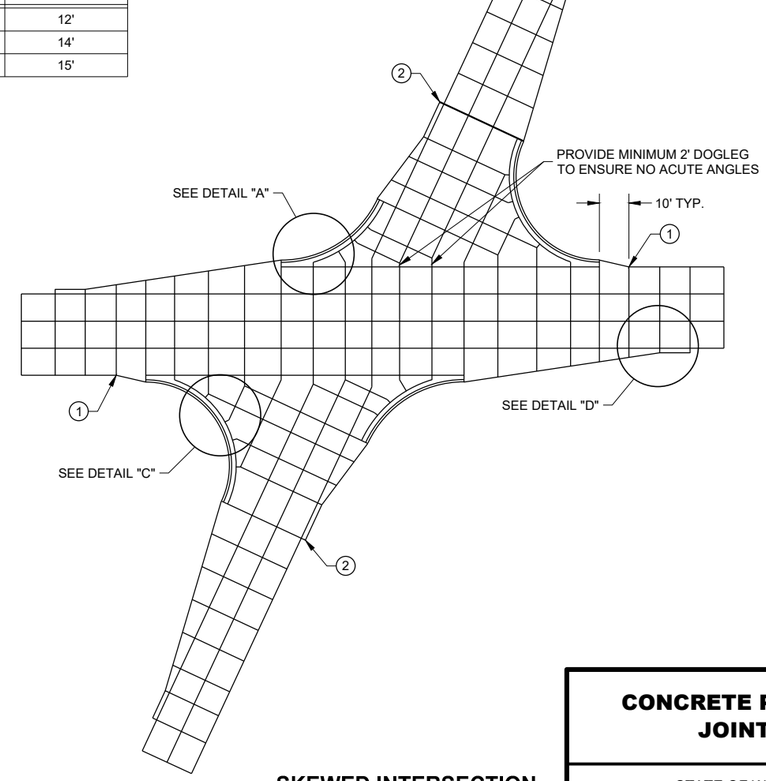
(3) THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



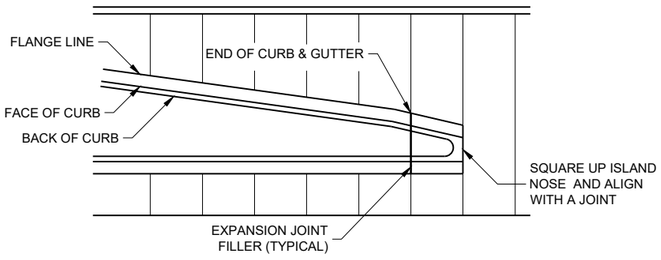
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

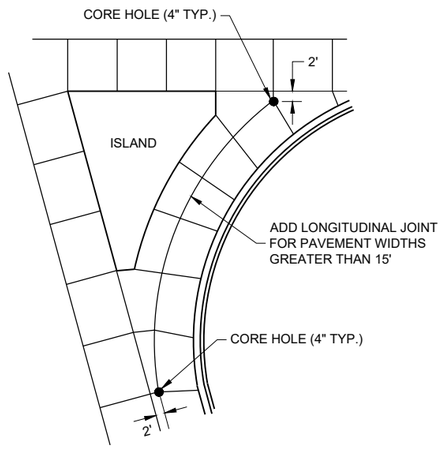
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 ½"	12'
7", 7 ½"	14'
8" & ABOVE	15'



SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 08a

6

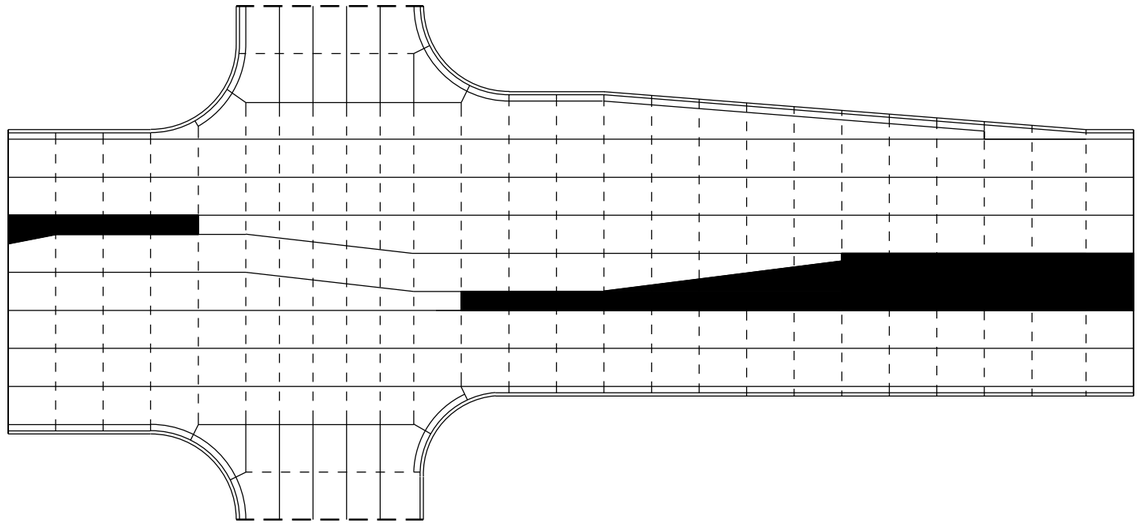
SDD 13C18 - 08a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

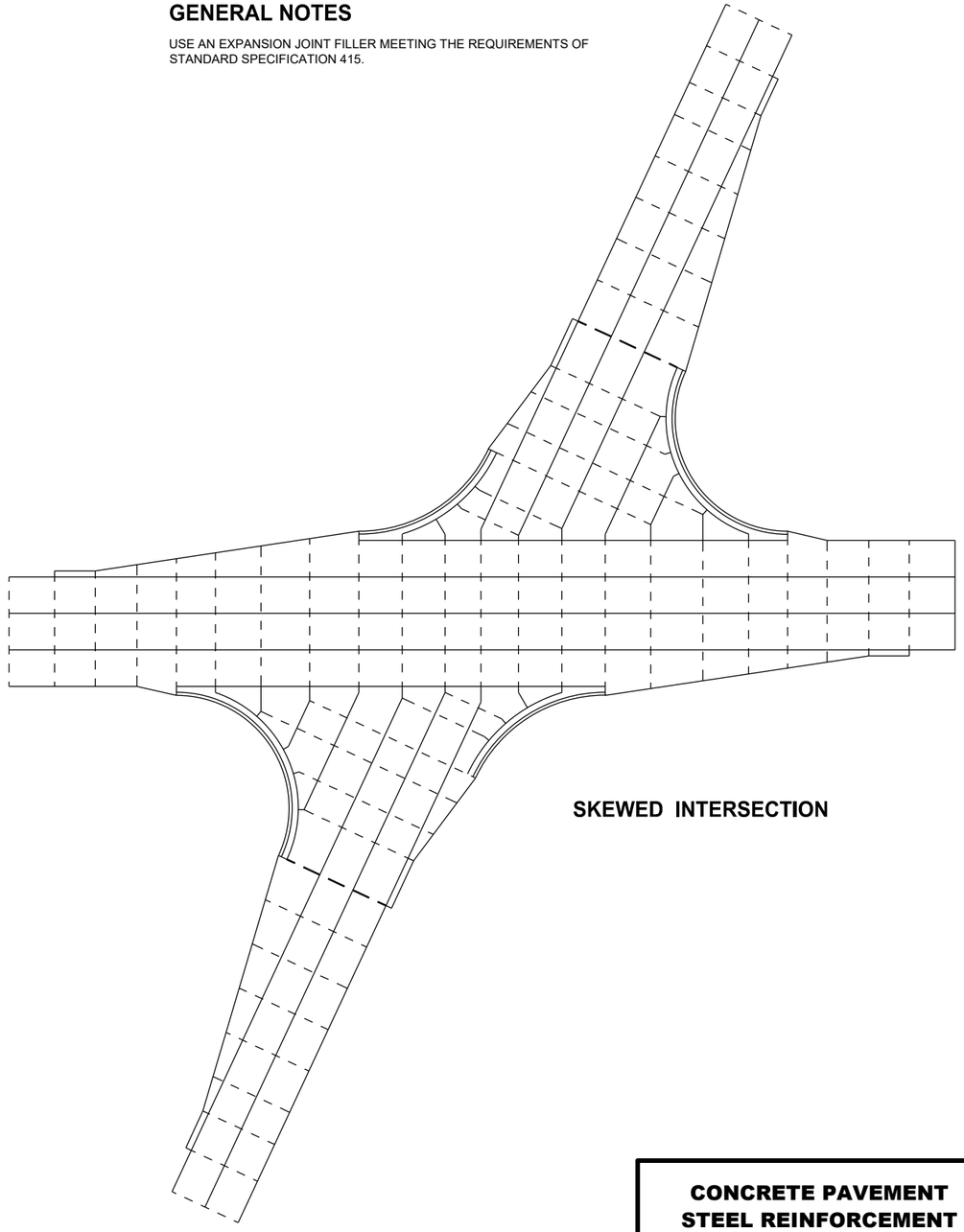
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

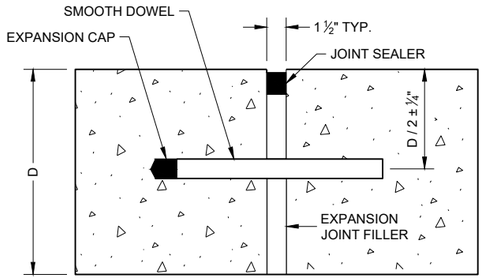
SDD 13C18 - 08b

CONCRETE PAVEMENT STEEL REINFORCEMENT

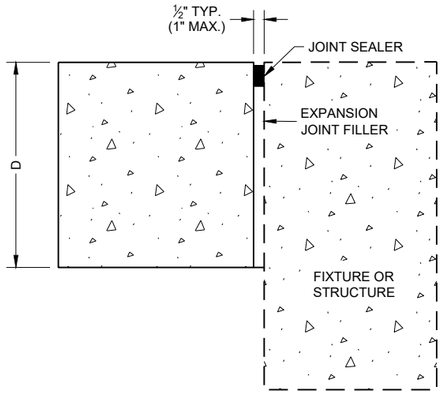
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 13C18 - 08b



DOWELED TRANSVERSE (1)



UNTIED - LONGITUDINAL

EXPANSION JOINTS

TIE BAR TABLE

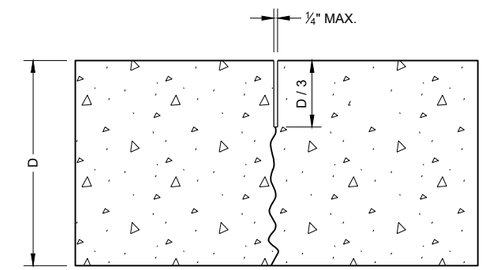
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

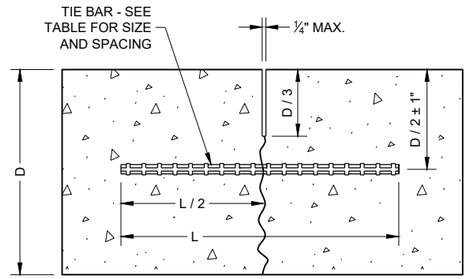
** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

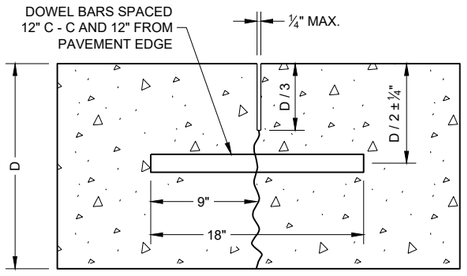
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATETHE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A ¼" RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



UNDOWELED TRANSVERSE

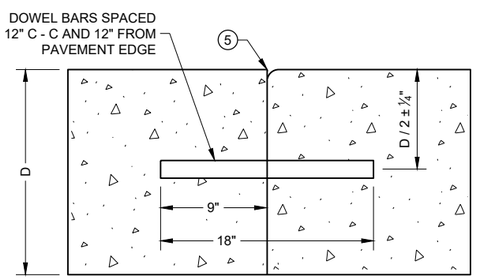


TIED LONGITUDINAL

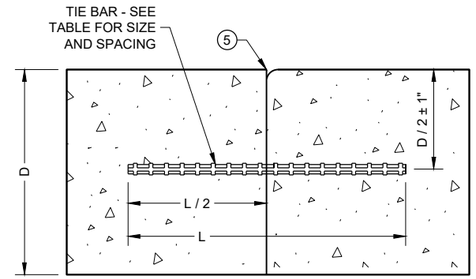


DOWELED TRANSVERSE

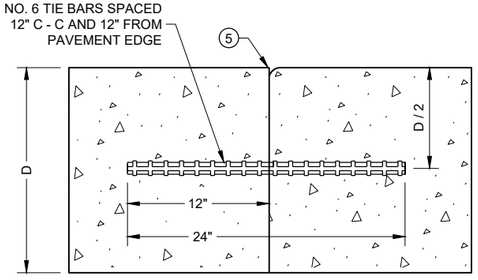
CONTRACTION JOINTS (2)



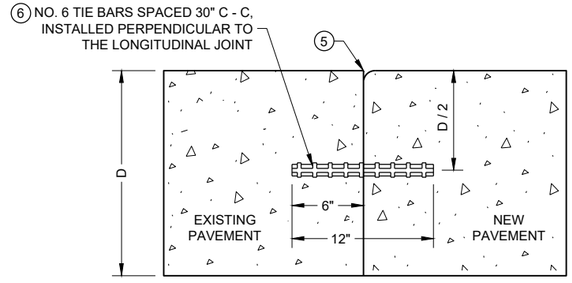
DOWELED TRANSVERSE (3)



TIED LONGITUDINAL



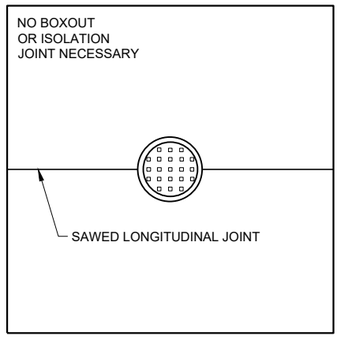
TIED TRANSVERSE (3)
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



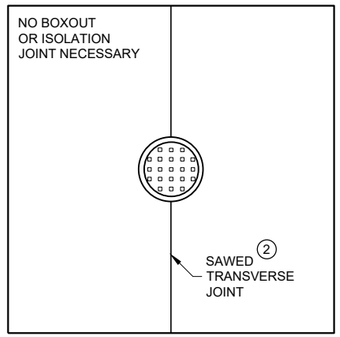
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS (4)

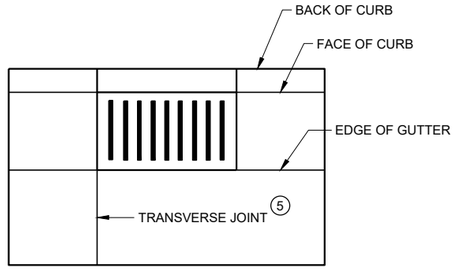
CONCRETE PAVEMENT JOINT TYPES



MANHOLE WITH LONGITUDINAL JOINT



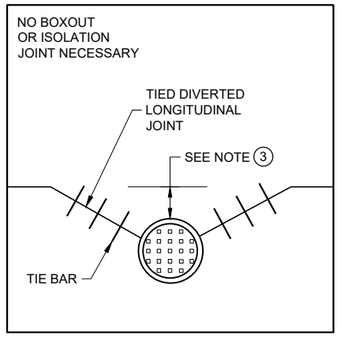
MANHOLE WITH TRANSVERSE JOINT



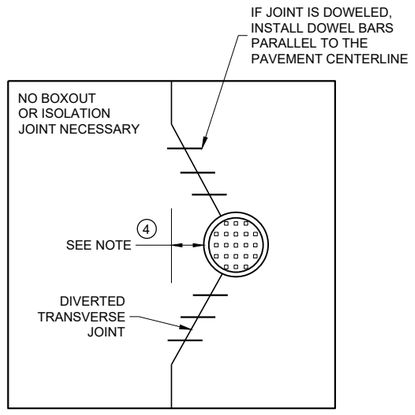
INLET WITH TRANSVERSE JOINT

GENERAL NOTES

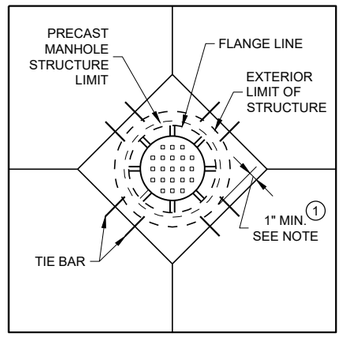
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
4. IF THE DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS LESS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REINFORCEMENT REBAR AROUND THE MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT



DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

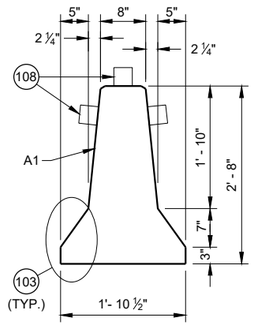
APPROVED
May 2023
DATE

/S/ Peter Kemp P.E.
PAVEMENT SUPERVIS

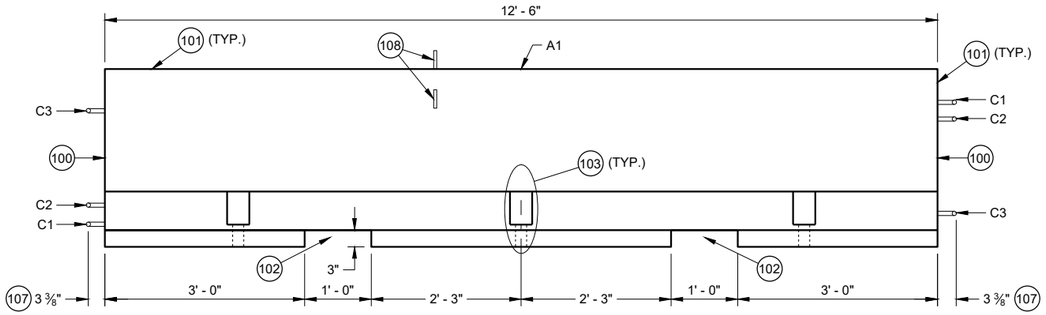
FHWA

6

SDD13C18 - 08d
SDD13C18 - 08d



CROSS SECTION



PROFILE VIEW

GENERAL NOTES

PLACE BARRIER ON PAVED SURFACE. BEFORE PLACEMENT OF TEMPORARY BARRIER, REMOVE ALL LOOSE MATERIAL FROM PAVED SURFACE.

LOOP BARS C1, C2 AND C3 ARE NOT FOR PLACEMENT OR MOVEMENT OF BARRIER.

(100) PERMANENTLY FORM INTO ONE END OF BARRIER THE FOLLOWING INFORMATION:
- A. TYPE OF BARRIER: WI-CBTP
- B. MANUFACTURER
- C. DATE OF MANUFACTURE (MONTH AND YEAR)

(101) 1" OPTIONAL CHAMFER

(102) SEE LIFTING SLOT DETAIL

(103) SEE ANCHOR BLOCK DETAIL

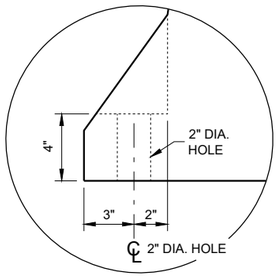
(104) 1 ¾" MIN. CLEAR COVER

(105) 2" MIN. CLEAR COVER

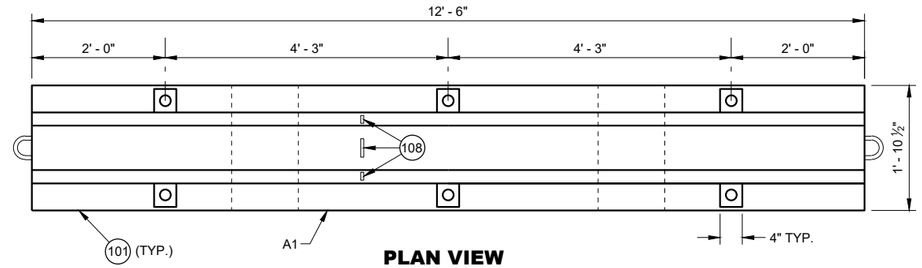
(106) 1" MIN. CLEAR COVER

(107) ± ⅛" MEASURED FROM FACE OF CONCRETE BARRIER TO OUTSIDE OF LOOP BAR (TYP.)

(108) USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURERS INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED LEFT OF TRAFFIC AND WHITE WHEN BARRIER IS LOCATED RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART, PROVIDE TO MOUNTED DELINEATORS IN ADDITION TO SIDE MOUNTED DELINEATORS ON BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAT 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

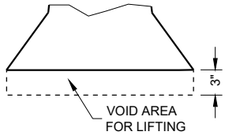


ANCHOR BLOCK DETAIL

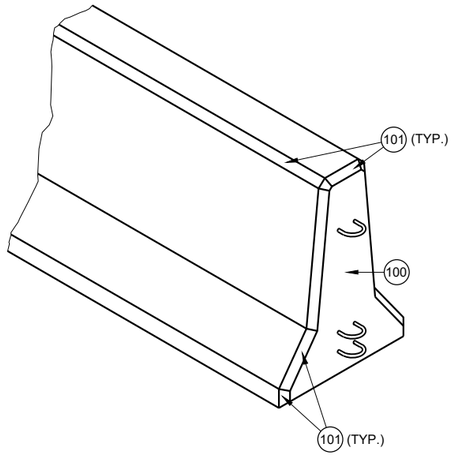


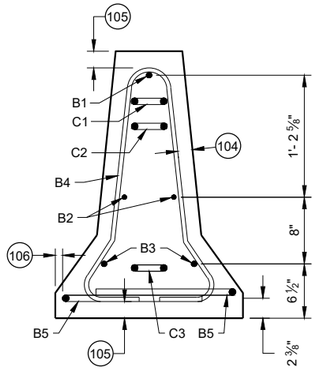
PLAN VIEW

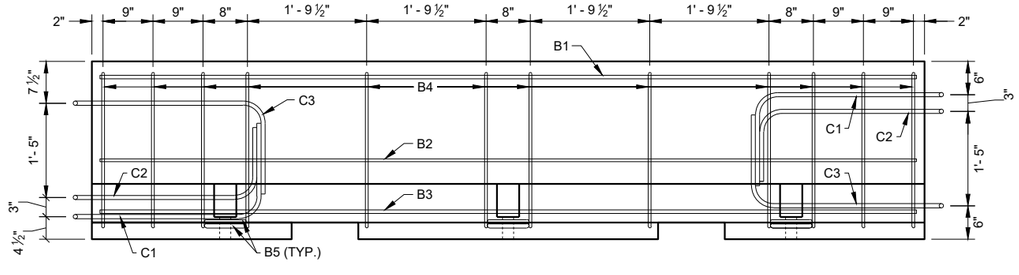
TEMPORARY BARRIER



LIFTING SLOT DETAIL (TYP.)



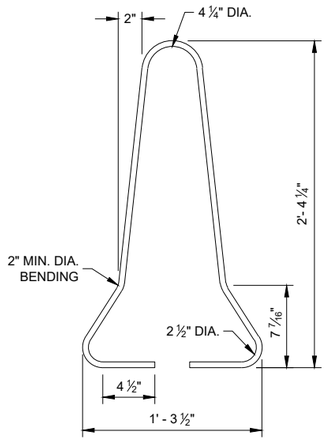




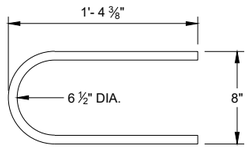
PROFILE VIEW

TEMPORARY BARRIER REINFORCEMENT

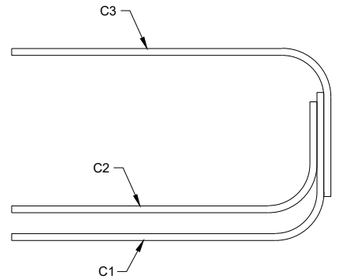
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"



B4 BAR DETAIL

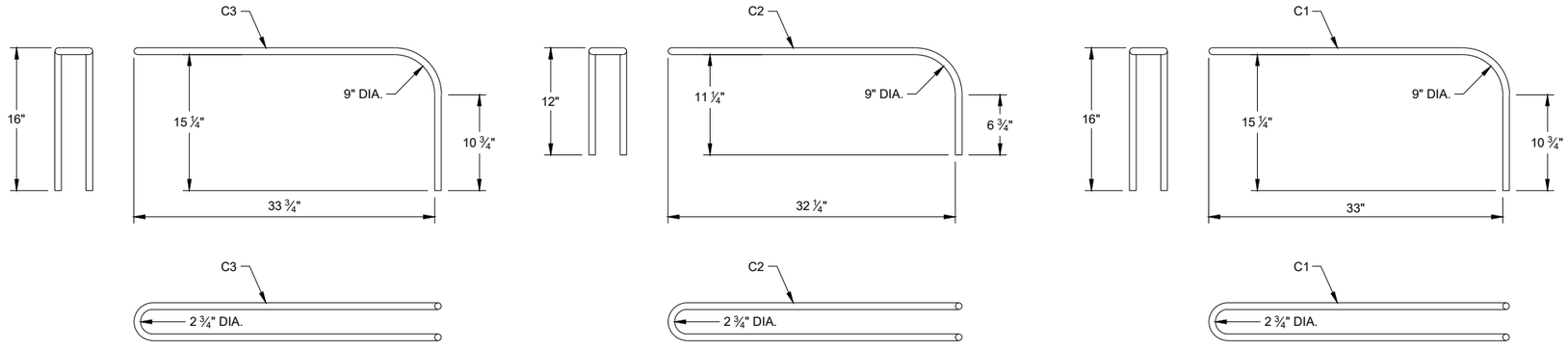


B5 BAR DETAIL



PROFILE VIEW

LOOP BAR ASSEMBLY

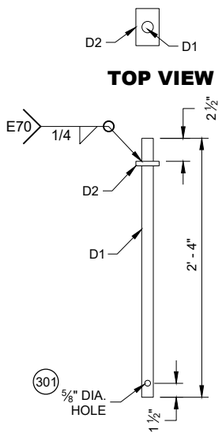


C BAR DETAILS

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

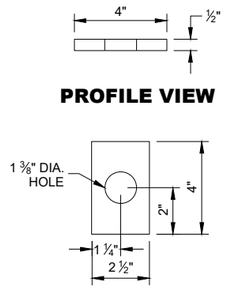
6
SDD 14B07-16b



TOP VIEW

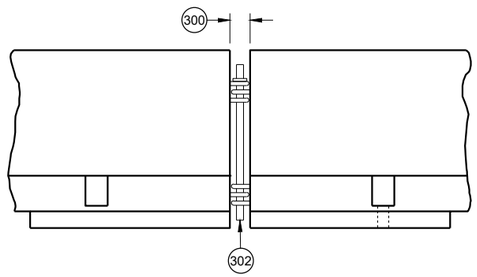
PROFILE VIEW

CONNECTOR PIN ASSEMBLY



PROFILE VIEW

TOP VIEW D2



CONNECTING TEMPORARY BARRIER SECTIONS

GENERAL NOTES

300 SET WITH 3 ⅝" WOOD BLOCK.

301 HOLE IS OPTIONAL.

302 CONNECTOR PIN ASSEMBLY.

303 CONCRETE PAVEMENT, APPROACH SLAB, OR DECK.

304 CONCRETE DECK.

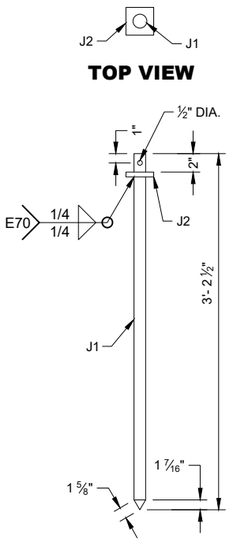
305 DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY OR CONCRETE PAVEMENT WITH ASPHALT OVERLAY.

306 MINIMUM OF 2" OF ASPHALT.

307 ASPHALT ANCHOR PIN ASSEMBLY

308 IF DRILLING A PILOT HOLE, THE MAX, DIA. OF THE HOLE IS 3/4"

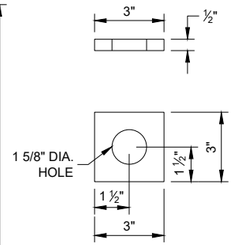
309 WHEN THERE IS ASPHALT OVERLAYING CONCRETE PAVEMENT, A 1 5/8" DIA. PILOT HOLE CAN BE DRILLED INTO THE OVERLAY AND CONCRETE. IF NEEDED DRILL A 3/4" PILOT HOLE IN BASE COURSE.



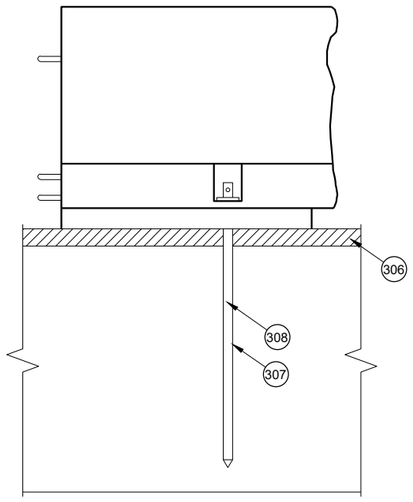
TOP VIEW

PROFILE VIEW

ASPHALT ANCHOR PIN ASSEMBLY

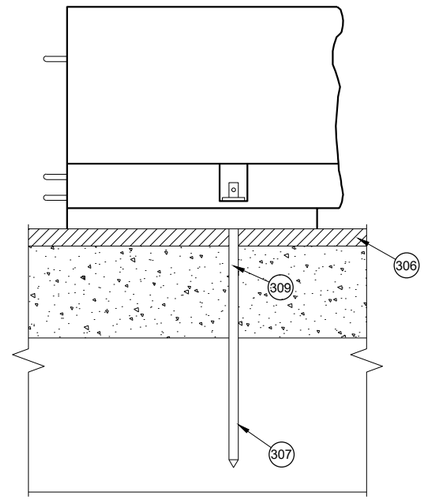


TOP VIEW J2



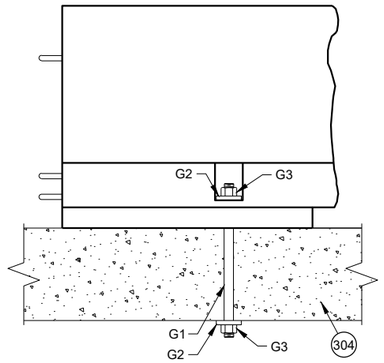
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT PAVEMENT



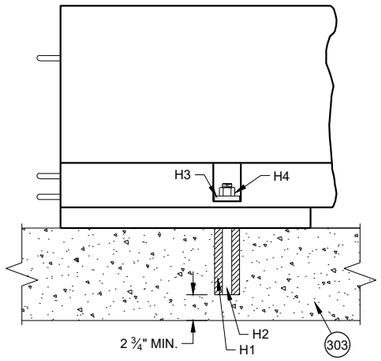
SIDE VIEW

ASPHALT ANCHOR INSTALLATION THROUGH ASPHALT OVERLAY ON TOP OF CONCRETE PAVEMENT



SIDE VIEW

THROUGH BOLT ANCHOR INSTALLATION 305



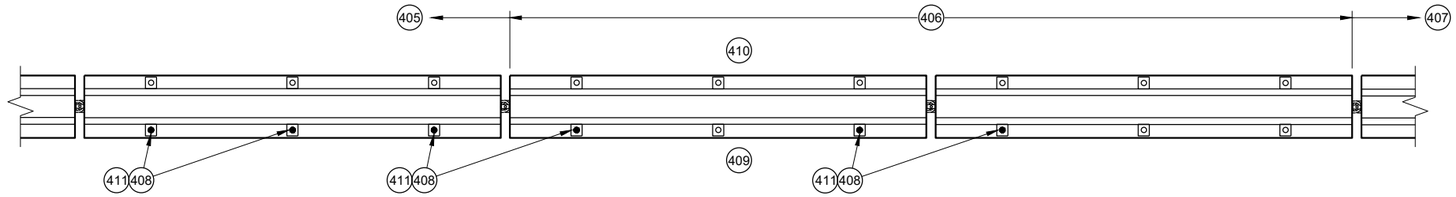
SIDE VIEW

ADHESIVE ANCHOR INSTALLATION 305

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

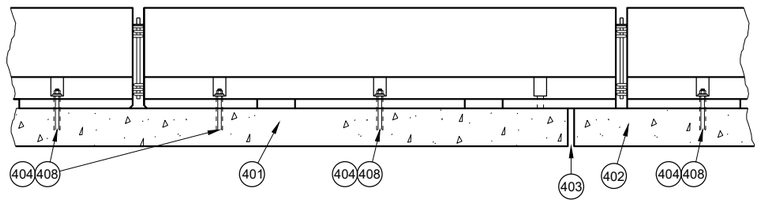
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16c



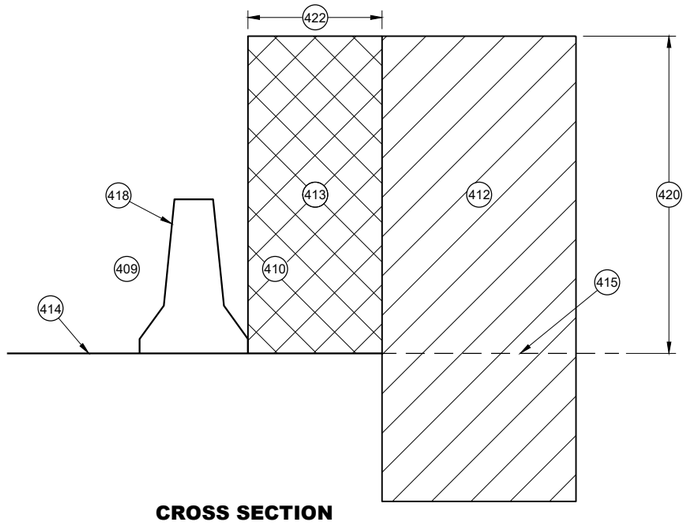
PLAN VIEW

TRANSITION FROM FREE STANDING TO ANCHORED BARRIER



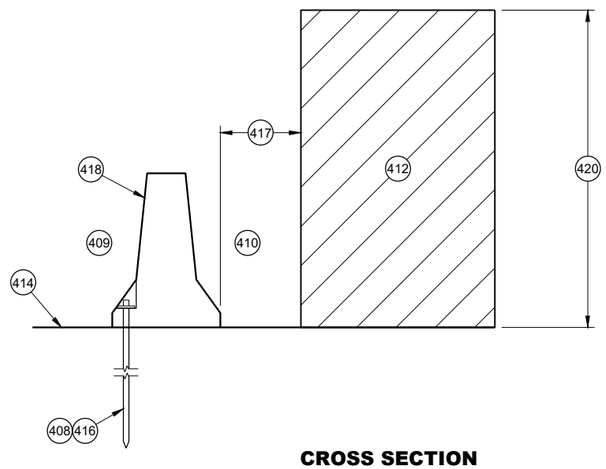
PROFILE VIEW

ANCHORED BARRIER NEAR EXPANSION JOINT (400)



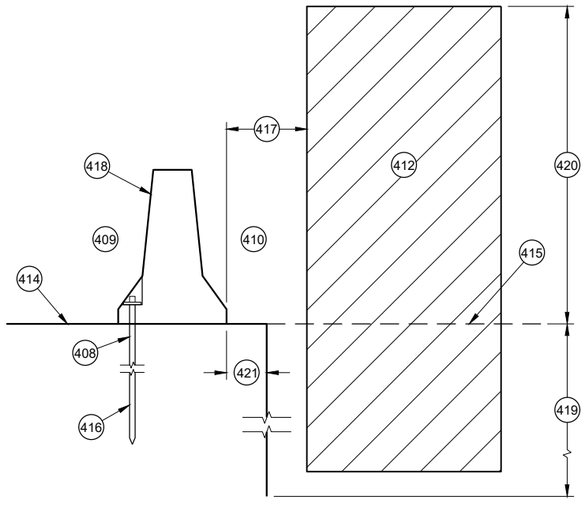
CROSS SECTION

FREE STANDING BARRIER



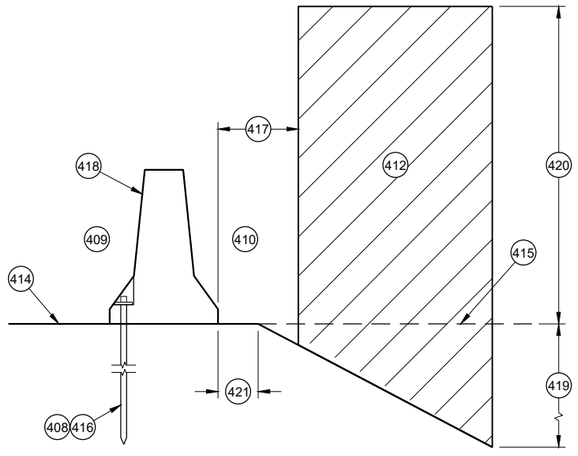
CROSS SECTION

ANCHORED BARRIER FOR OBJECTS ABOVE THE GRADE LINE AND NEAR THE BARRIER



CROSS SECTION

ANCHORED BARRIER NEAR VERTICAL DROP OFF



CROSS SECTION

ANCHORED BARRIER NEAR A SLOPE

GENERAL NOTES

(400) NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.

(401) CONCRETE DECK

(402) CONCRETE DECK OR APPROACH SLAB.

(403) EXPANSION JOINT

(404) ADHESIVE ANCHOR SHOWN. SEE ANCHOR DETAILS.

(405) ANCHORED TEMPORARY BARRIER

(406) TRANSITION FROM ANCHORED TEMPORARY BARRIER TO FREE STANDING

(407) FREE STANDING BARRIER

(408) REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

(409) TRAFFIC SIDE

(410) NON-TRAFFIC SIDE

(411) ANCHOR LOCATION. SEE ANCHORING DETAILS.

(412) WORK AREA

(413) AREA FREE OF OBJECTS AND WORKERS

(414) GRADE LINE

(415) EXTENDED GRADE LINE

(416) ANCHORED TEMPORARY BARRIER. SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR AN ASPHALT ANCHOR ROD DETAILS FOR MORE INFORMATION. ASPHALT ANCHOR ROD SHOWN.

(417) WHEN OBJECTS EXTEND ABOVE THE GRADE. A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT.

(418) OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR ALLOWED TO LEAN AGAINST THE BARRIER WITHOUT WRITTEN PERMISSION OF THE PROJECT ENGINEER.

(419) DEPTHS OF 3 FEET OR MORE.

(420) Y = 6.5'

(421) OFFSET FROM BACK OF BARRIER EDGE:

CONCRETE PAVEMENT	0.5'
ASPHALT	0.5'

(422) POSTED SPEED (MPH):

45 OR GREATER	4.0'
40 OR LOWER	2.0'

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16d

GENERAL NOTES

500 EXISTING RIGID BARRIERS (VARIES)

501 TEMPORARY BARRIER

502 SEE OTHER DETAIL ON HOW TO ANCHOR TEMPORARY BARRIER (BARRIER ASPHALT ANCHOR SHOWN).

503 ANCHORS ARE REQUIRED ON BOTH SIDE OF THE TEMPORARY BARRIER.

504 NESTED RAILS ARE REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS.

505 TRAFFIC TRAVELS FROM PERMANENT BARRIER TO TEMPORARY BARRIER.

506 TRAFFIC TRAVELS FROM TEMPORARY BARRIER TO PERMANENT BARRIER.

507 VERTICAL BARRIER

508 SAFETY SHAPE BARRIER

509 SINGLE SLOPE BARRIER

510 CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF RIGID BARRIER.

511 BENT THRIE BEAM TO FIT.

512 THRIE BEAM PIECES ARE OFFSET 15 ¼" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.

513 TWO (2) P1, P2 AND P3 ARE REQUIRED

514 FIVE (5) N1, N2 AND N3 ARE REQUIRED

515 TWO (2) R1, R2 AND R3 ARE REQUIRED

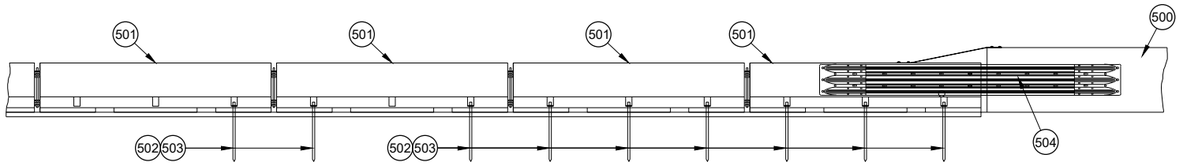
516 CUT WOOD BLOCK TO FIT.

517 SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL ASSEMBLY.

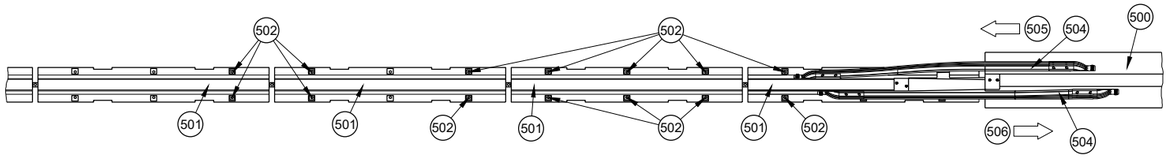
518 CAP ASSEMBLY

519 4" MAX. GAP BETWEEN TEMPORARY BARRIER AND RIGID BARRIER.

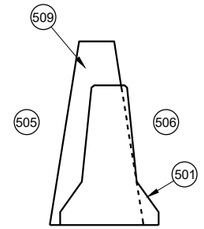
520 ALL TWELVE SPLICE HOLES REQUIRE M1 AND M2



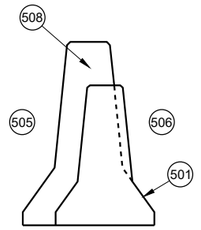
PROFILE VIEW



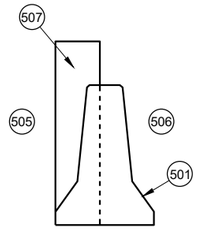
PLAN VIEW



CROSS SECTION TEMPORARY BARRIER PLACEMENT SINGLE SLOPE

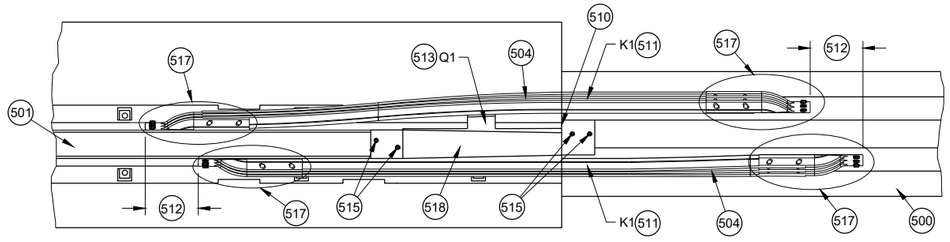


CROSS SECTION TEMPORARY BARRIER PLACEMENT SAFETY SHAPE

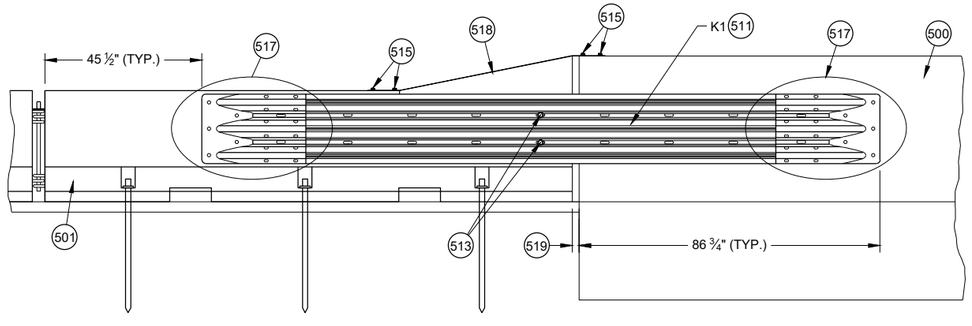


CROSS SECTION TEMPORARY BARRIER PLACEMENT VERTICAL

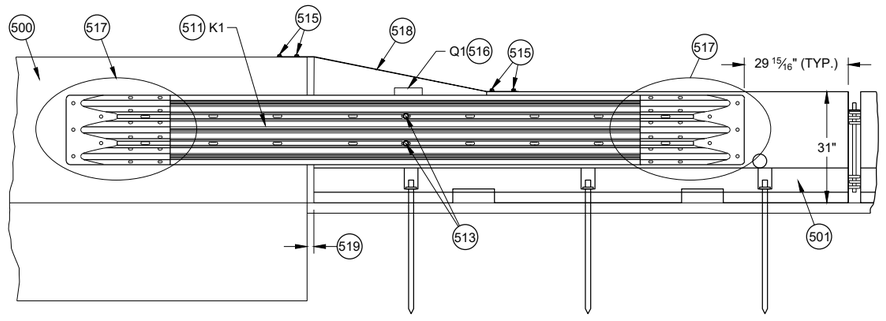
PLAN VIEW
TRANSITION TO RIGID BARRIER



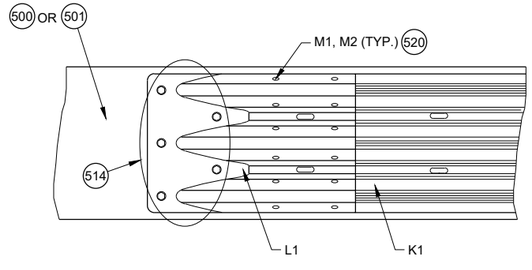
PLAN DETAIL VIEW
TRANSITION TO RIGID BARRIER



FRONT DETAIL VIEW
TRANSITION TO RIGID BARRIER



BACK DETAIL VIEW
TRANSITION TO RIGID BARRIER

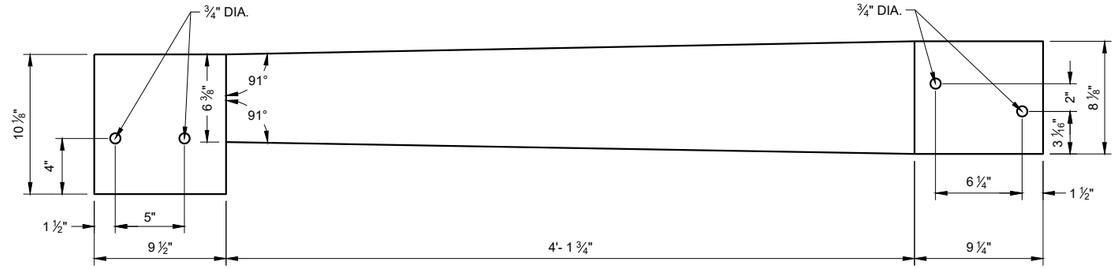


517 DETAIL PLAN VIEW
THRIE BEAM RAIL TERMINAL CONNECTOR ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

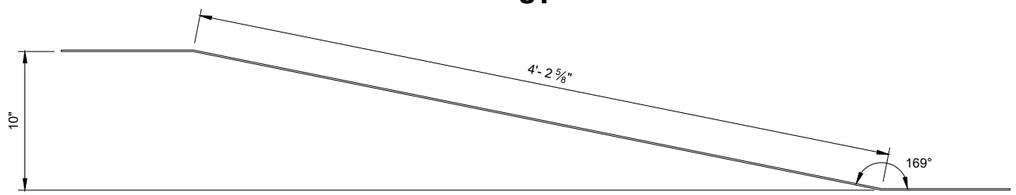
6

SDD 14B07-16e



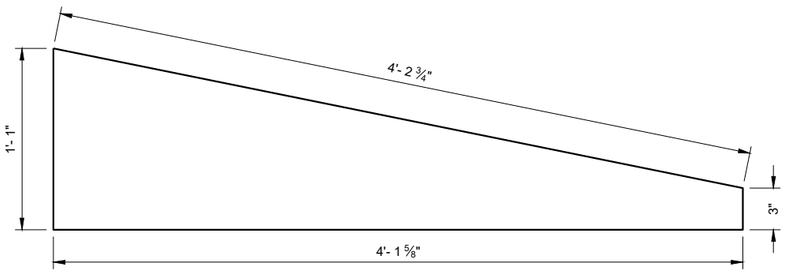
TOP VIEW

S1



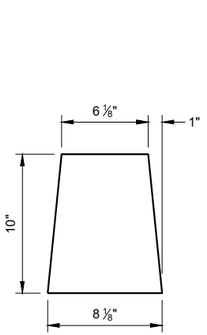
ELEVATION VIEW

S1



SIDE VIEW

S3



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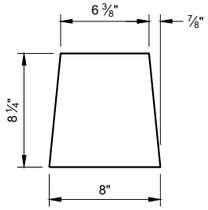

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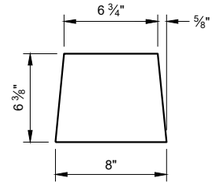

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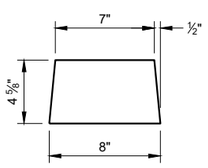

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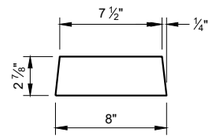

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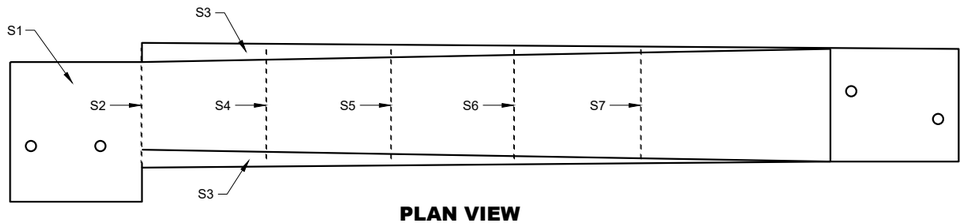
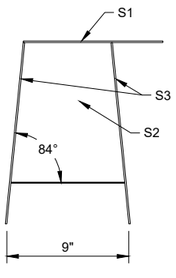
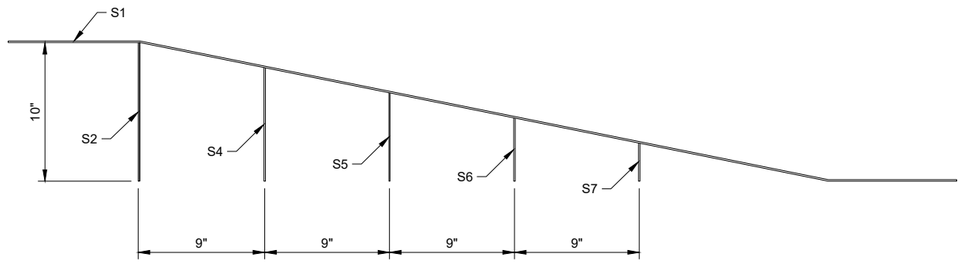


PLAN VIEW



BACK VIEW



SIDE VIEW (600)

42" TOP CAP ASSEMBLY

GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THREE SIDES

STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

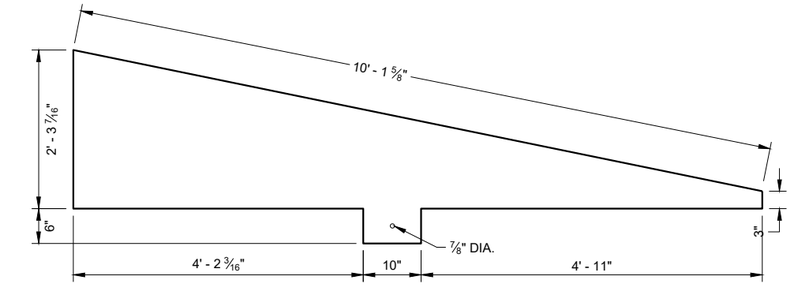
(600) SIDE PLATES (S3) NOT SHOWN FOR CLARITY.

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

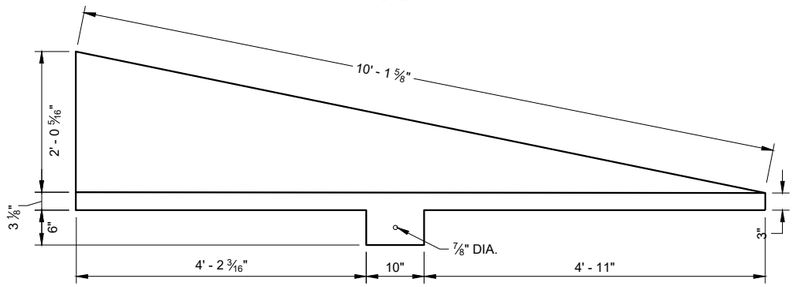
6

SDD 14B07-16f



SIDE VIEW
T4

END VIEW



SIDE VIEW
T3

END VIEW

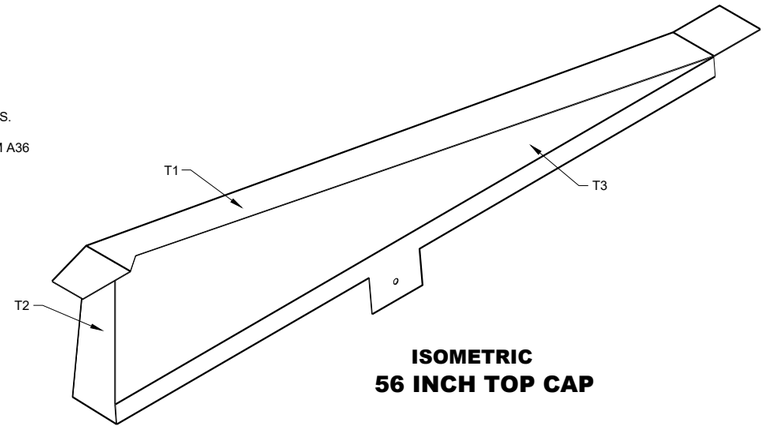
GENERAL NOTES

STITCH WELD GUSSET PLATES AND END PLATES ON THRIE SIDES

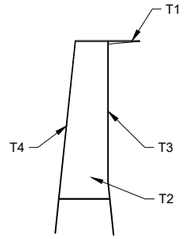
STITCH WELD TWO SIDE PLATES TO TOP PLATE, END PLATE AND GUSSETS.

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

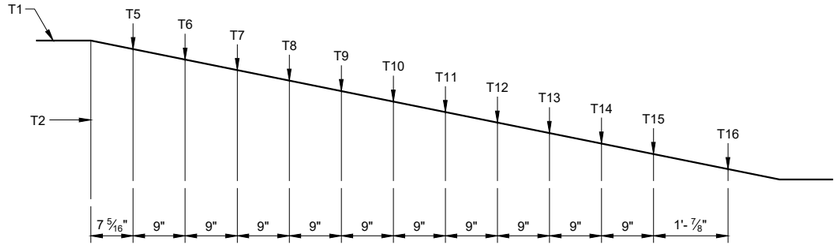
(700) SIDE PLATES (T3 AND T4) NOT SHOWN FOR CLARITY.



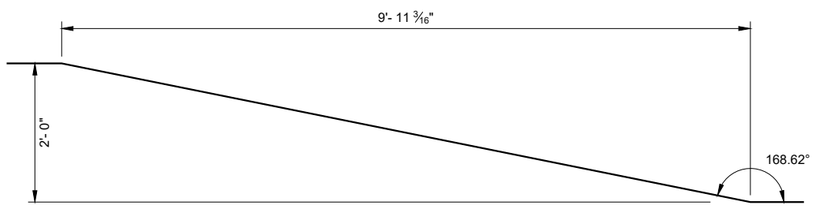
ISOMETRIC
56 INCH TOP CAP



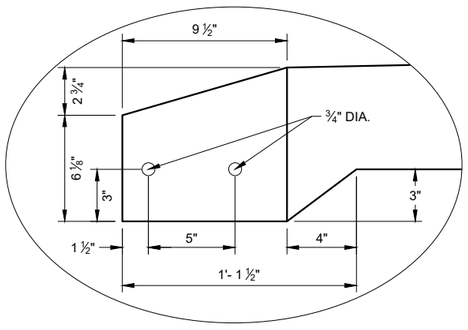
END VIEW
56 INCH TOP CAP



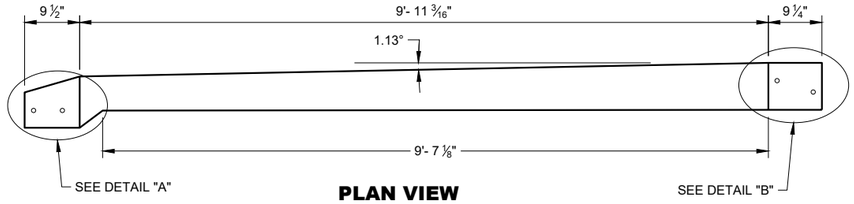
SIDE VIEW (700)
56 INCH TOP CAP



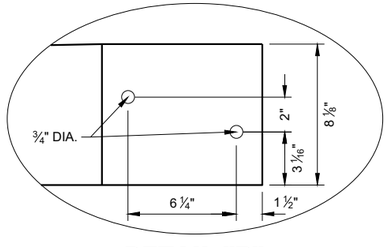
SIDE VIEW
TOP PLATE T1



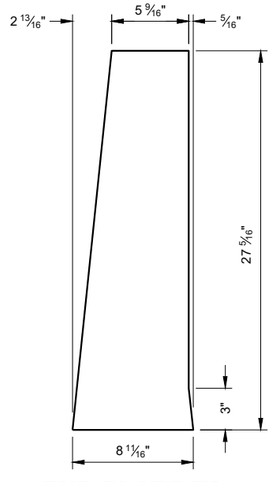
DETAIL "A"



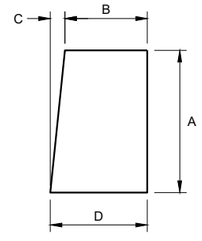
PLAN VIEW
TOP PLATE T1



DETAIL "B"



END PLATE T2



GUSSET PLATES
T5 - T16

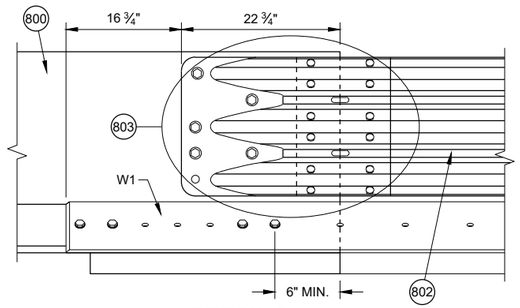
GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
T5	22 13/16"	5 1/16"	2 5/16"	8 1/16"
T6	21"	5 7/8"	2 3/16"	8 1/16"
T7	19 3/16"	6 1/16"	1 15/16"	8 1/16"
T8	17 3/8"	6 1/4"	1 13/16"	8 1/16"
T9	15 5/16"	6 7/16"	1 9/16"	8 1/16"
T10	13 3/4"	6 5/8"	1 7/16"	8 1/16"
T11	11 15/16"	6 13/16"	1 1/4"	8 1/16"
T12	10 1/8"	7"	1 1/16"	8 1/16"
T13	8 5/16"	7 3/16"	7/8"	8 1/16"
T14	6 1/2"	7 3/8"	1 1/16"	8 1/16"
T15	4 11/16"	7 9/16"	1/2"	8"
T16	2 7/8"	7 3/4"	1/4"	8"

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

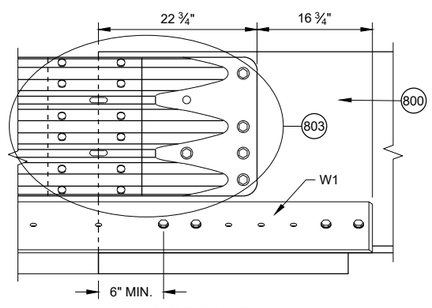
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

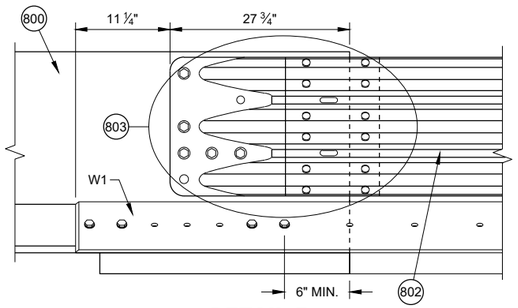
SDD 14B07-16g



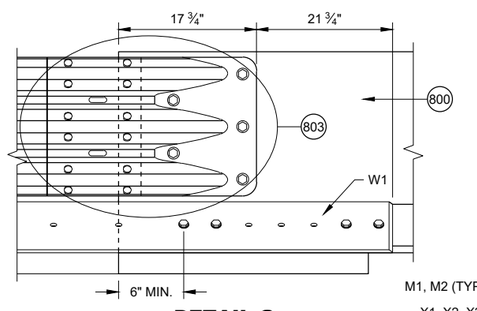
DETAIL D



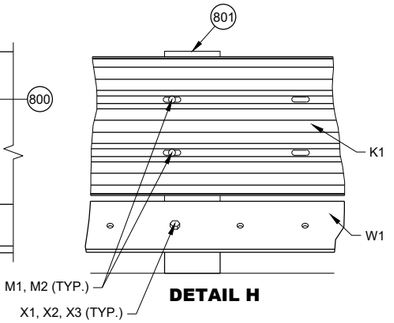
DETAIL E



DETAIL F



DETAIL G



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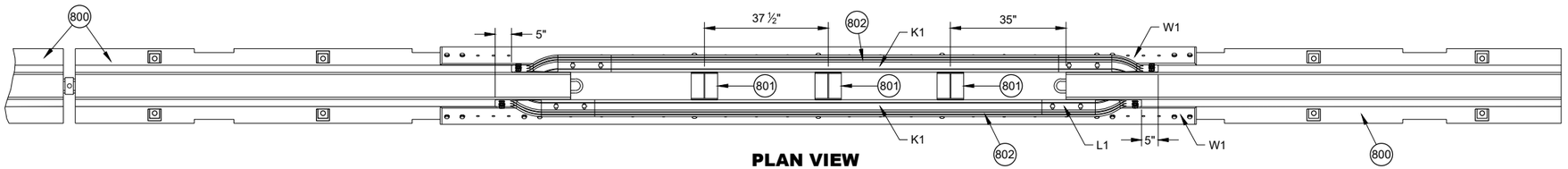


PLAN VIEW

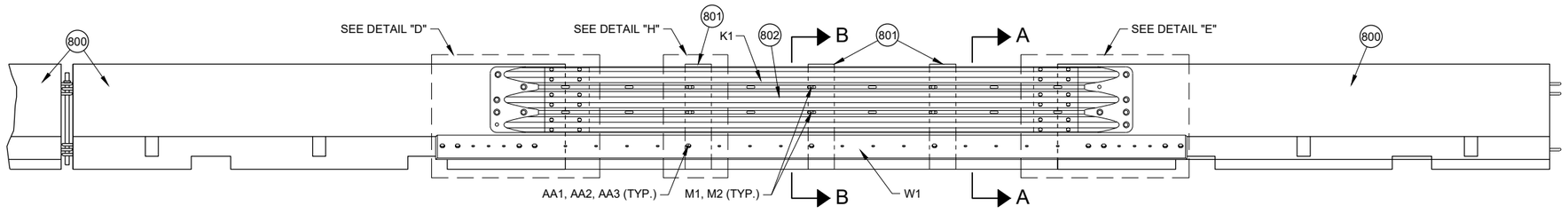
GENERAL NOTES

(800) FREE STANDING TEMPORARY BARRIER

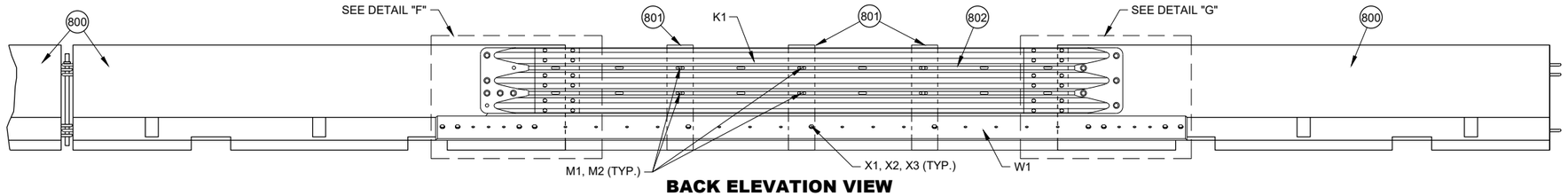
(801) GAP STIFFENER ASSEMBLY

(802) THRIE BEAMS ARE NESTED ON BOTH SIDES OF THE TEMPORARY BARRIER.

(803) SEE THRIE BEAM RAIL TERMINAL CONNECTOR DETAIL



FRONT ELEVATION VIEW



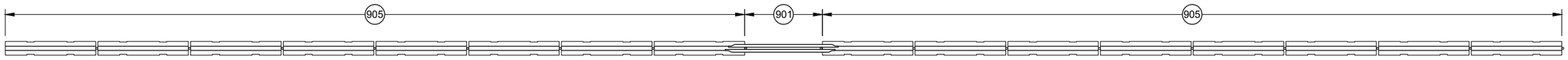
BACK ELEVATION VIEW

PORTABLE CONCRETE BARRIER GAP THRIE BEAM COVER

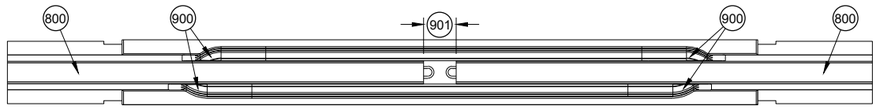
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16h



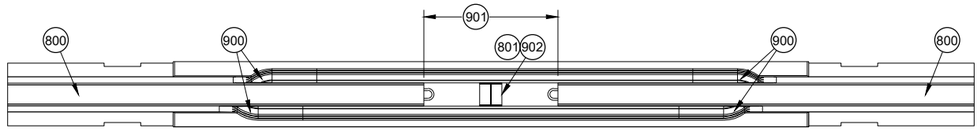
PLAN VIEW
GAP WITHIN SPACING



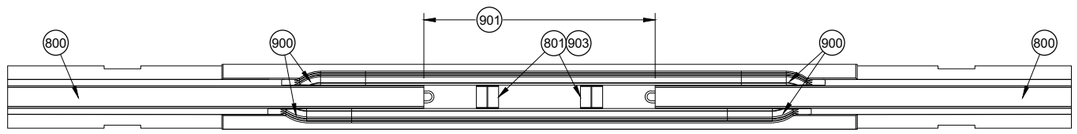
PLAN VIEW
TEMPORARY BARRIER GAP OVER 4" TO 1' MAX. (904)

GENERAL NOTES

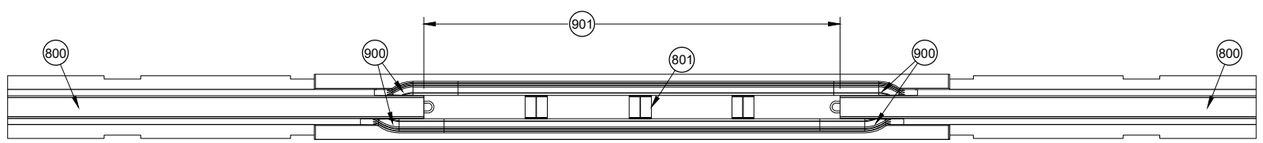
(900) SEE OTHER DETAILS FOR TEMPORARY GAP HARDWARE (TYP.)
(901) TEMPORARY BARRIER GAP
(902) GAP STIFFENER ASSEMBLY CENTERED IN THE GAP.
(903) GAP STIFFENER ASSEMBLY IS OFFSET 18 ¾" FROM CENTER
(904) MINIMUM NUMBER OF GAP STIFFENERS SHOWN FOR THE GAP RANGE SHOWN.
(905) MINIMUM OF 8 CONTINUOUS FREE STANDING TEMPORARY BARRIERS



PLAN VIEW
TEMPORARY BARRIER GAP OVER 1' TO 4' MAX. (904)



PLAN VIEW
TEMPORARY BARRIER GAP OVER 4' TO 7' MAX. (904)



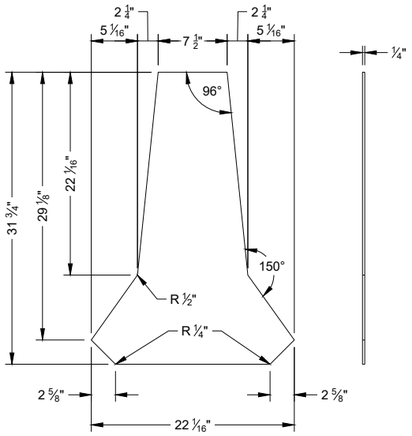
PLAN VIEW
TEMPORARY BARRIER GAP OVER 7' TO 12.5' MAX. (904)

6

SDD 14B07-16i

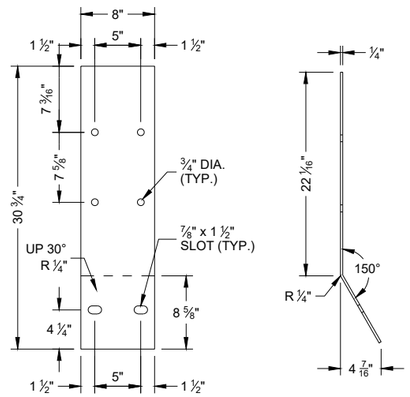
CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

6
SDD 14B07-16i



PROFILE VIEW SIDE VIEW

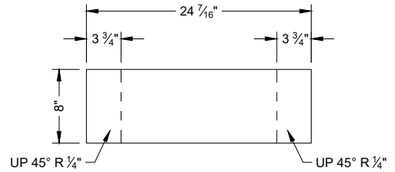
STIFFENER ASSEMBLY CENTER PANEL U1



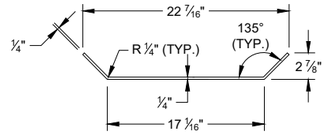
FLAT PATTERN

SIDE VIEW

STIFFENER ASSEMBLY SIDE PANEL U2

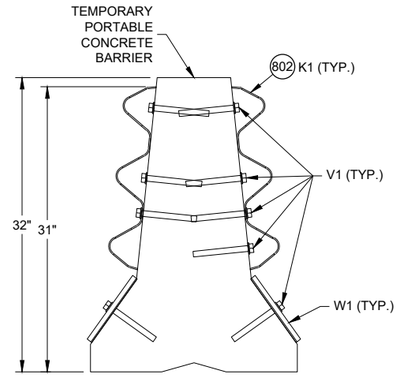


FLAT PATTERN

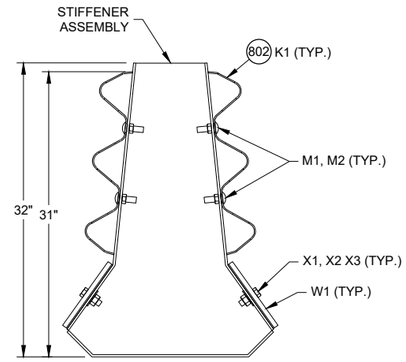


PROFILE VIEW

STIFFENER ASSEMBLY BOTTOM PANEL U3

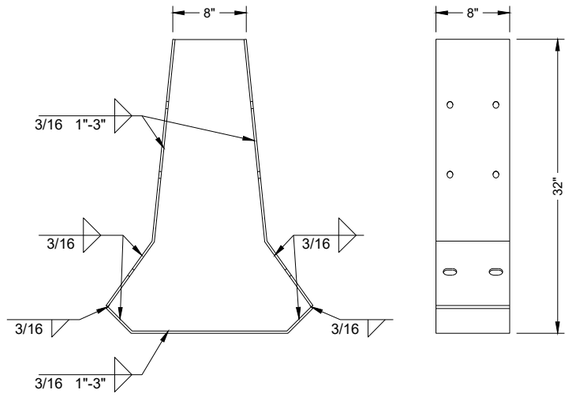


SECTION A - A



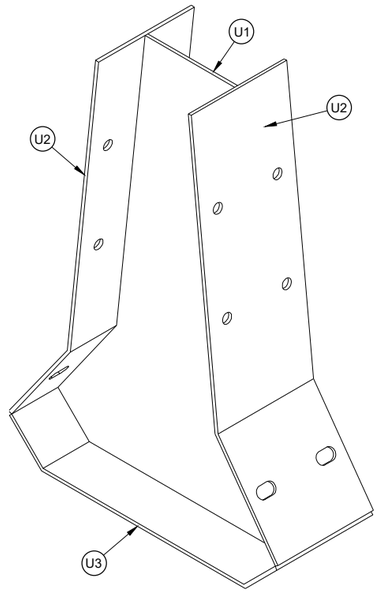
SECTION B - B

PLAN VIEW



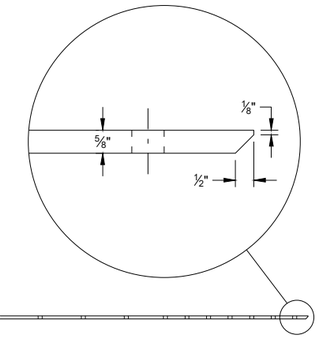
PROFILE VIEW

SIDE VIEW

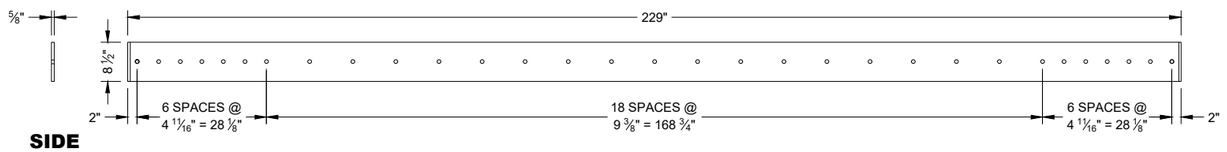


ISOMETRIC

GAP STIFFENER ASSEMBLY



PLAN VIEW



SIDE VIEW

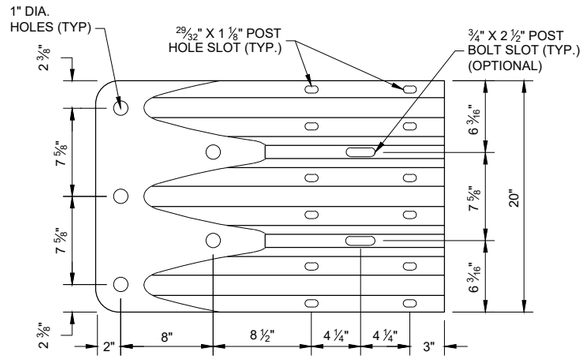
ELEVATION VIEW

W1 TOE PLATE

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

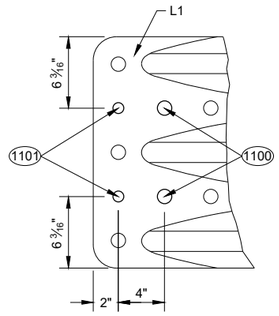
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B07-16j



ELEVATION VIEW

THRIE BEAM TERMINAL CONNECTOR



ELEVATION VIEW

ADDITIONAL THRIE BEAM (1102) TERMINAL CONNECTOR HOLE DETAIL

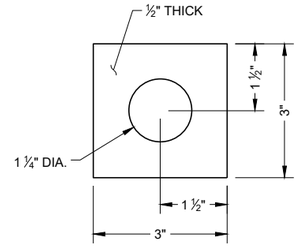


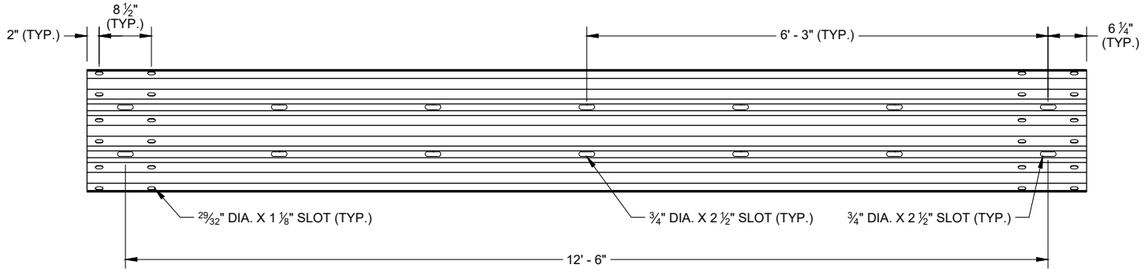
PLATE WASHER DETAIL G2, H3

GENERAL NOTES

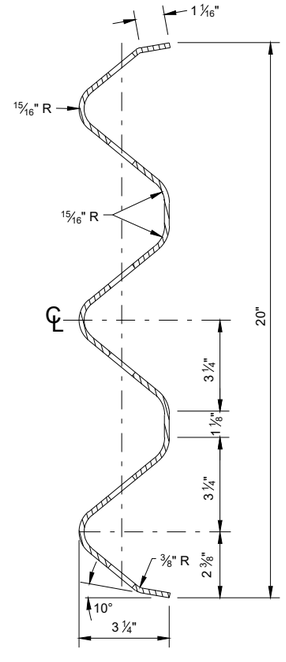
(1100) 1" DIA. HOLE

(1101) 3/4" DIA. HOLE

(1102) PROVIDE HOLES IN THRIE BEAM TERMINAL CONNECTOR TO LIMIT STEEL REINFORCEMENT OR LOOP BAR CONFLICT. CONTRACTOR MAY FIELD DRILL ADDITIONAL HOLE OR PROVIDE THRIE BEAM TERMINAL CONNECTOR WITH ADDITIONAL HOLES FROM SUPPLIER.



SLOTTED THRIE BEAM RAIL K1



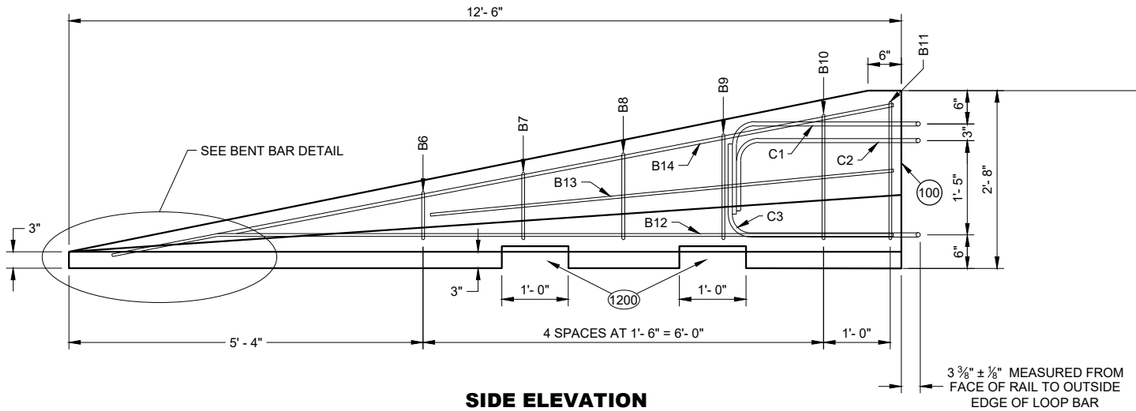
SECTION THROUGH BEAM K1

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

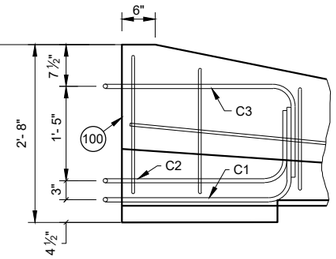
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B07-16k



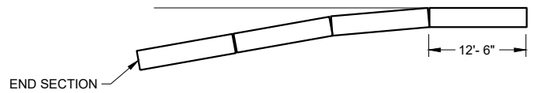
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED FOR OPPOSITE END
(FOR CONNECTION TO RIGHT END OF BARRIER)

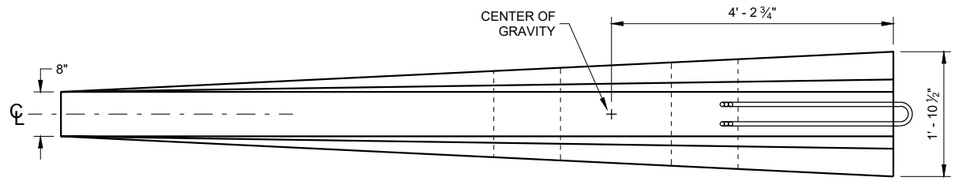
GENERAL NOTES

(1200) SEE LIFTING SLOT DETAIL. LOCATION OF LIFTING SLOTS DETERMINED BY CONTRACTOR.

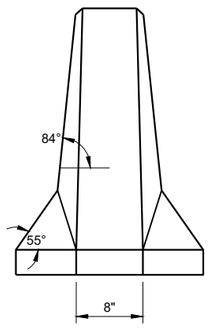


FLARE AT BARRIER END

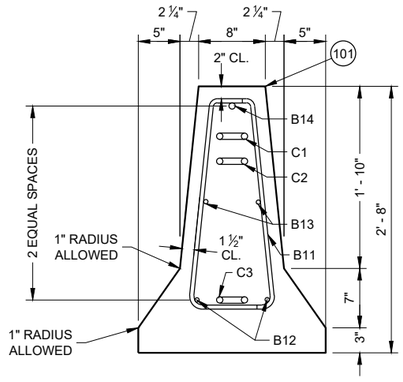
POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1



PLAN VIEW

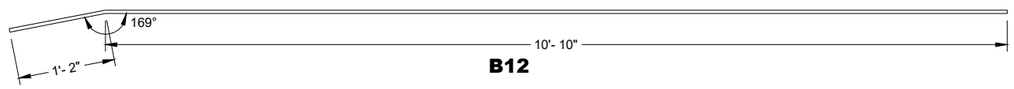


FRONT ELEVATION

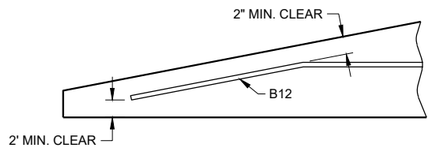


END SECTION

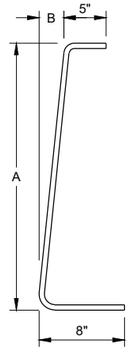
DETAILS OF BARRIER TAPER SECTION



B12



BENT BAR DETAIL



BAR	A	B
B6	10"	1"
B7	1'- 1"	1 ¼"
B8	1'- 5"	1 ⅝"
B9	1'- 8"	1 ⅞"
B10	2'- 0 ½"	2 ⅜"
B11	2'- 3"	2 ¾"

B BARS

2 OF EACH SIZE REQUIRED FOR STIRRUP ASSEMBLY

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16I

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	PRECAST TEMPORARY BARRIER - CONCRETE	MIN. = f'c 5000 PSI	
B1	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B2	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-2"
B3	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 12'-2"
B4	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 6'-0"
B5	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#6 REBAR, LENGTH 2'-11"
B6	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 1'-11"
B7	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-2"
B8	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-6"
B9	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 2'-9"
B10	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-2"
B11	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 3'-4"
B12	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 12'-0"
B13	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#4 REBAR, LENGTH 7'-9"
B14	REBAR	STANDARD SPEC. 505.2 GRADE 60 UNCOATED REBAR	#5 REBAR, LENGTH 11'-9"
C1	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C2	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
C3	LOOP BAR	ASTM A709 GRADE 70 SMOOTH BAR OR ASTM A706 GRADE 60 REBAR UNCOATED	¾" DIA.
D1	CONNECTION PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ¼" DIA.
D2	CONNECTION PIN - TOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G1	BOLT THROUGH ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A OR SAE J429 GRADE 2 UNC	1 ⅛" DIA.
G2	BOLT THROUGH ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
G3	BOLT THROUGH ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
H1	ADHESIVE ANCHOR - ADHESIVE	ICC-ES-AC308 5 ¼" EMBEDMENT WITH A MIN. BOND STRENGTH OF 1,650 PSI. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
H2	ADHESIVE ANCHOR - THREADED ROD	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 A307 GRADE A / SAE J429 GRADE 2 UNC	1 ⅛" DIA.
H3	ADHESIVE ANCHOR - WASHER, SQUARE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
H4	ADHESIVE ANCHOR - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
J1	ASPHALT ANCHOR PIN - ROD	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	1 ½" DIA.
J2	ASPHALT ANCHOR PIN - STOP PLATE	ASTM A36 MIN. STRENGTH 36 KSI / ASTM A529 MAX. STRENGTH 50 KSI / ASTM A572 MAX STRENGTH 50 KSI / ASTM A709 MAX STRENGTH 50 KSI / ASTM A992 MAX STRENGTH 50 KSI	
K1	THRIE BEAM RAIL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE
L1	THRIE BEAM RAIL - TERMINAL	AASHTO M180 CLASS A TYPE 2 APPROVED PRODUCER	12 GAUGE

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
M1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	⅝" DIA.
M2	SPLICE BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
N1	THRIE BEAM RAIL TERMINAL - MECHANICAL ANCHOR	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA. LENGTH 6"
N2	THRIE BEAM RAIL TERMINAL - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
N3	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
P1	THRIE BEAM RAIL CONNECTION 1-BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	¾" DIA.
P2	THRIE BEAM RAIL CONNECTION 1-WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
P3	THRIE BEAM RAIL CONNETION 1- MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	
Q1	BLOCK WOOD	SEE STANDARD SPEC. 614	
R1	CAP - BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	⅝" DIA.
R2	CAP- BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1	
R3	CAP - BOLT - MECHANICAL ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	12 GAUGE
S1	CAP 42-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S2	CAP 42-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S3	CAP 42-INCH SIDE PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S4	CAP 42-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S5	CAP 42-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S6	CAP 42-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
S7	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE

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SDD 14B07-16m

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B07-16m

BILL OF MATERIALS - CONCRETE BARRIER PRECAST

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
T1	CAP 56-INCH TOP PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T2	CAP 56-INCH END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T3	CAP 56-INCH SIDE PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T4	CAP 56-INCH SIDE PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T5	CAP 56-INCH GUSSET 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T6	CAP 56-INCH GUSSET 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T7	CAP 56-INCH GUSSET 3	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T8	CAP 42-INCH GUSSET 4	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T9	CAP 42-INCH GUSSET 5	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T10	CAP 42-INCH GUSSET 6	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T11	CAP 42-INCH GUSSET 7	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T12	CAP 42-INCH GUSSET 8	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T13	CAP 42-INCH GUSSET 9	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T14	CAP 42-INCH GUSSET 10	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T15	CAP 42-INCH GUSSET 11	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
T16	CAP 42-INCH GUSSET 12	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	12 GAUGE
U1	GAP STIFFENER	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U2	GAP STIFFENER - CONNECTOR PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
U3	GAP STIFFENER - CONNECTOR PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
V1	THRIE BEAM RAIL TERMINAL MECHANICAL OR ADHESIVE ANCHOR	MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS ULTIMATE TENSILE LOAD 24.0 KIPS AND ULTIMATE SHEAR LOAD 21.5 KIPS. SEE 603.2 AND 603.3.1.2 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.	¾" DIA.
V2	GAP STIFFENER - BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C O R MECHANICAL GALVANIZE TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
W1	TOE PLATE	AASHTO M111/ASTM A123 ASTM A36 MIN STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX. STRENGTH 50 KSI, OR ASTM A709 MAX. STRENGTH 50 KSI, OR ASTM A992 MAX. STRENGTH 50 KSI	
X1	TOE PLATE - CONNECTION BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 UNC HEAVY HEX HEAD OR AASTHO M180 HEAD, ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED. PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	¾" DIA.
X2	TOE PLATE - CONNECTION BOLT - WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 TYPE 2 F436 TYPE 1 (HARDEN WASHER ONLY)	
X3	TOE PLATE - CONNECTION BOLT - NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GALVANIZE TO AASHTO M298 CLASS 55 TYPE 2 / ASTM B695 CLASS 55 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	

6

SDD 14B07-16n

CONCRETE BARRIER TEMPORARY PRECAST, 12' - 6"

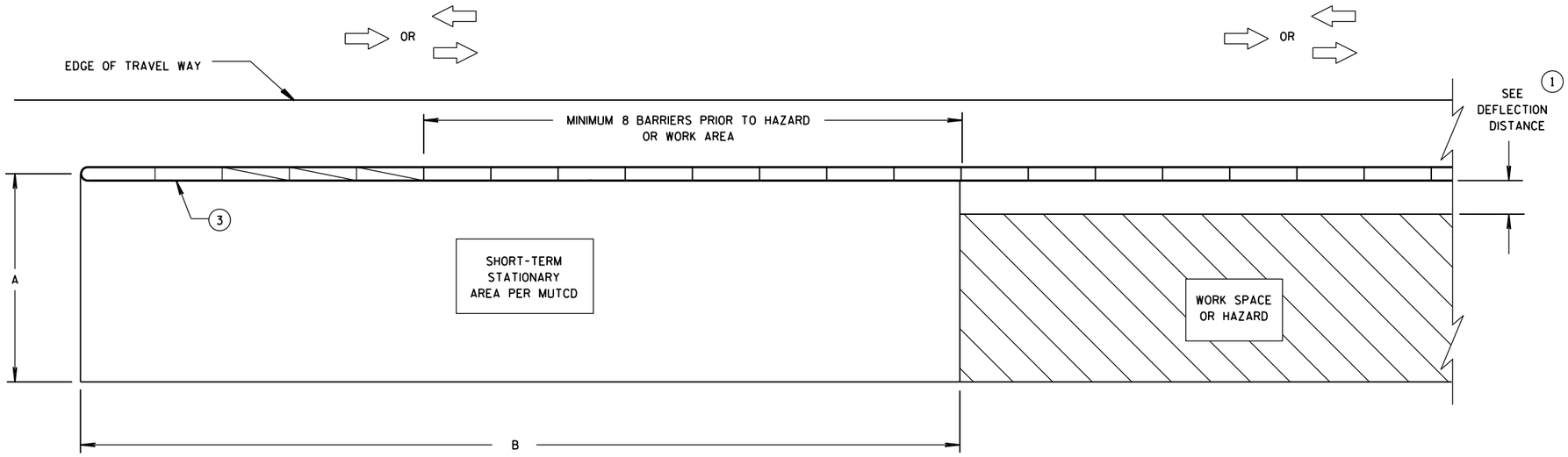
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 14B07-16n



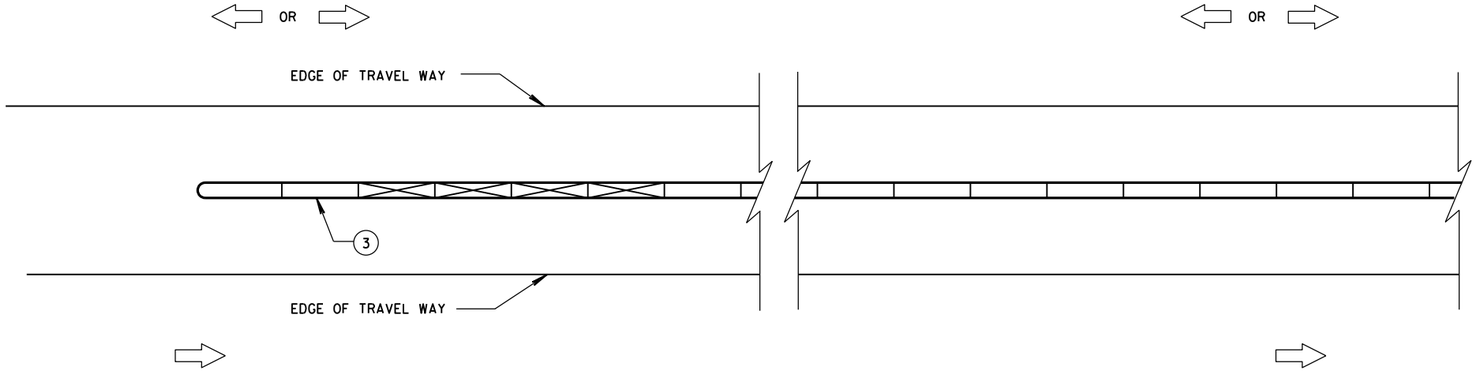
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

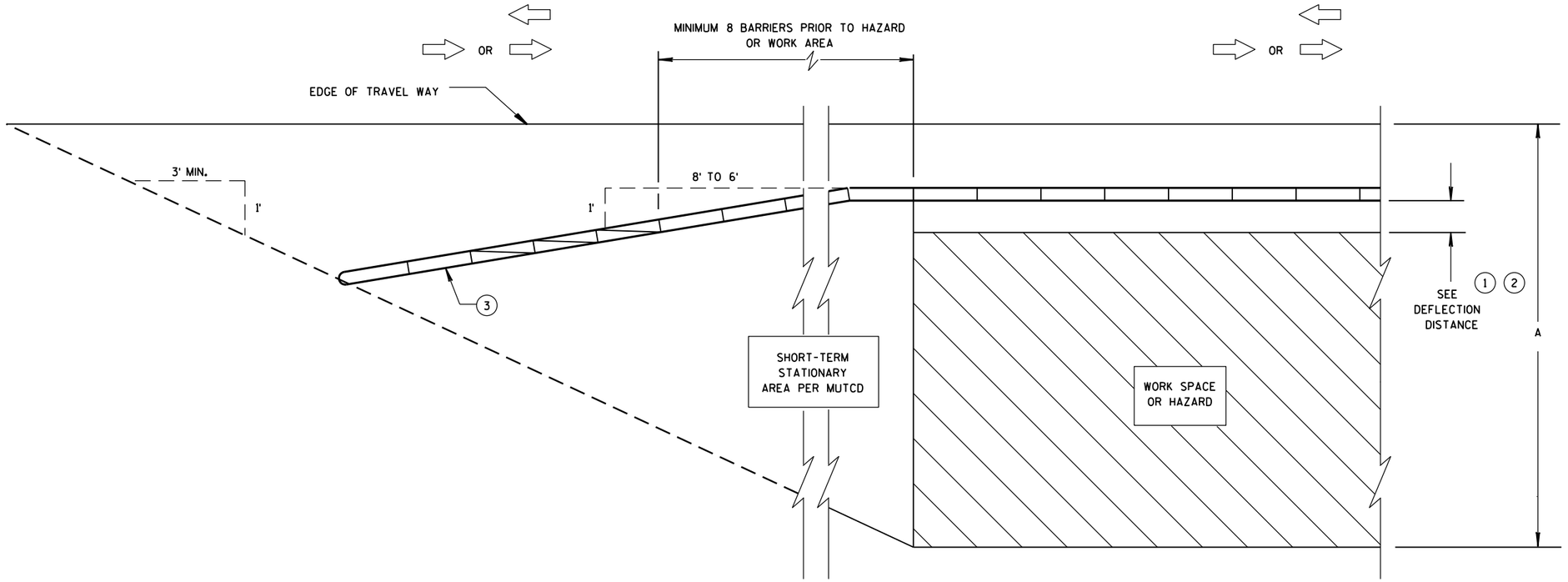
(3) ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

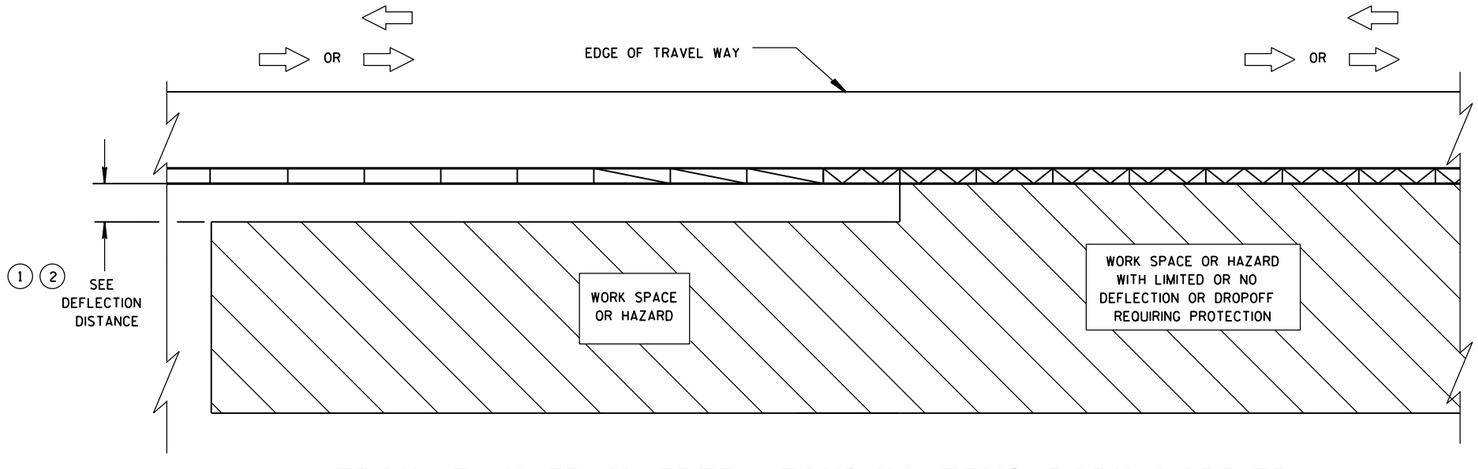
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2a
S.D.D. 14 B 8-2a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 14 B 8-2b

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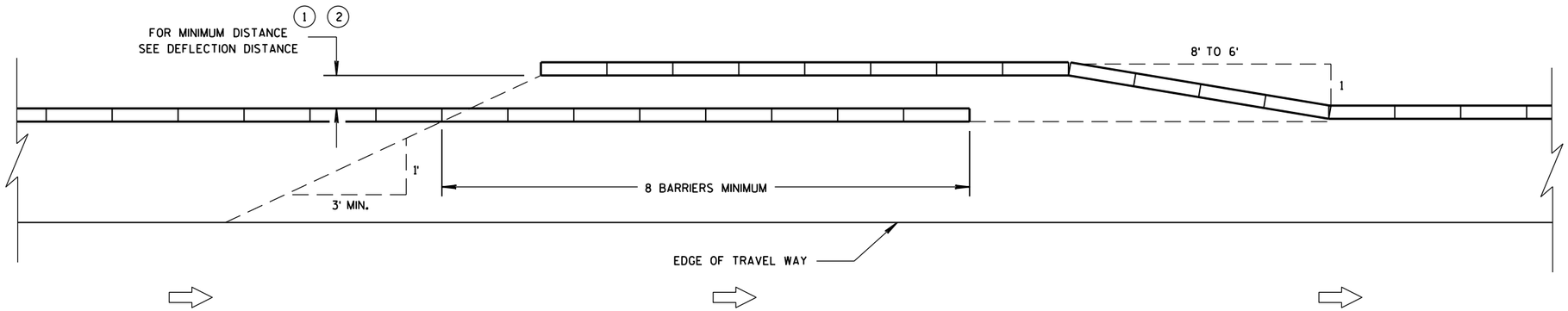
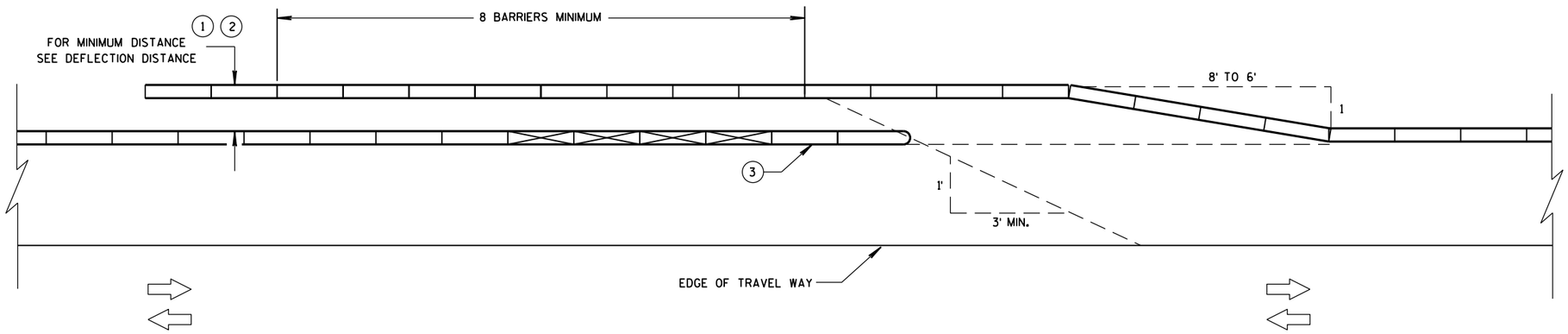
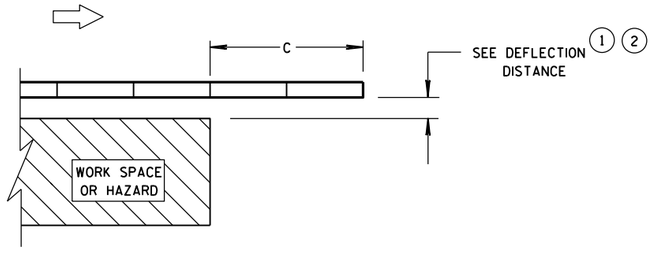
S.D.D. 14 B 8-2b



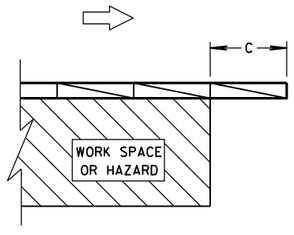
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

LEGEND

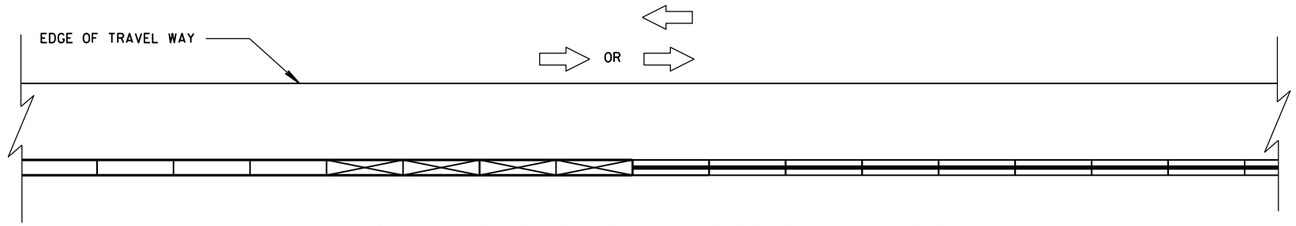
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

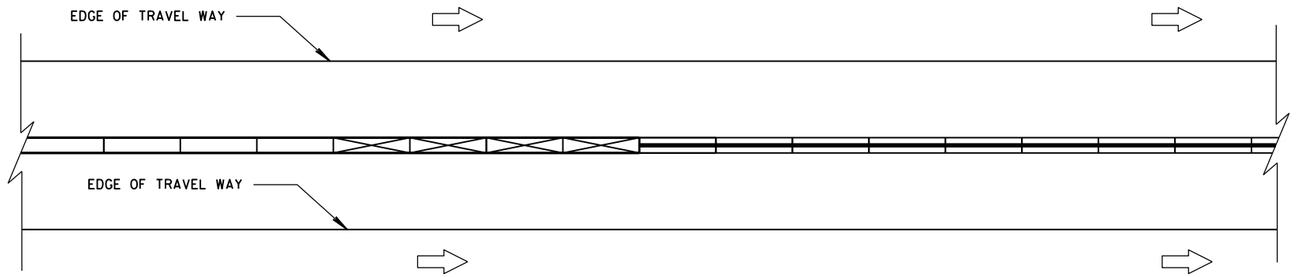
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 8-2c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

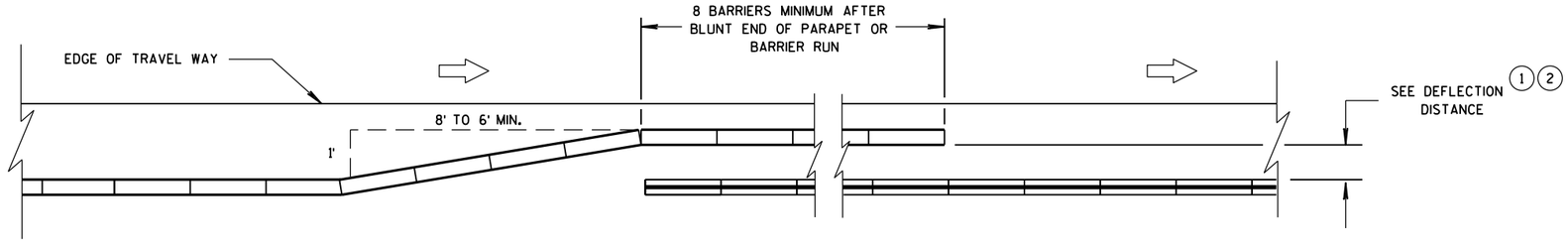
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

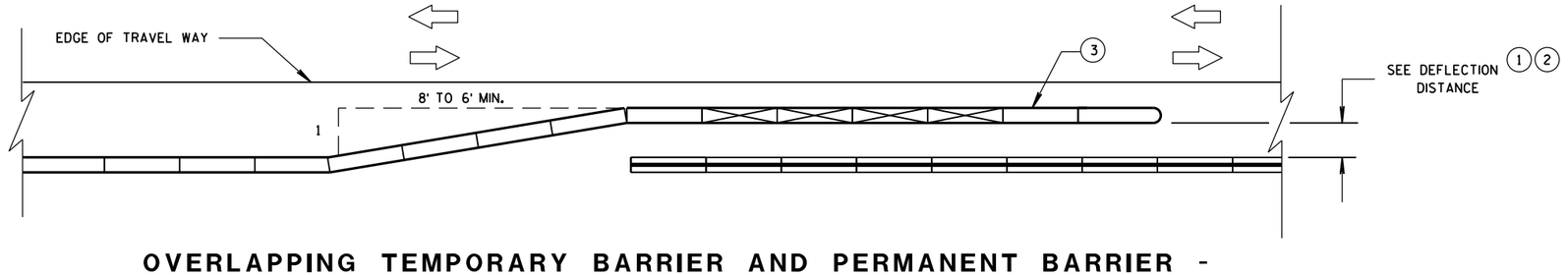
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 8-2d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

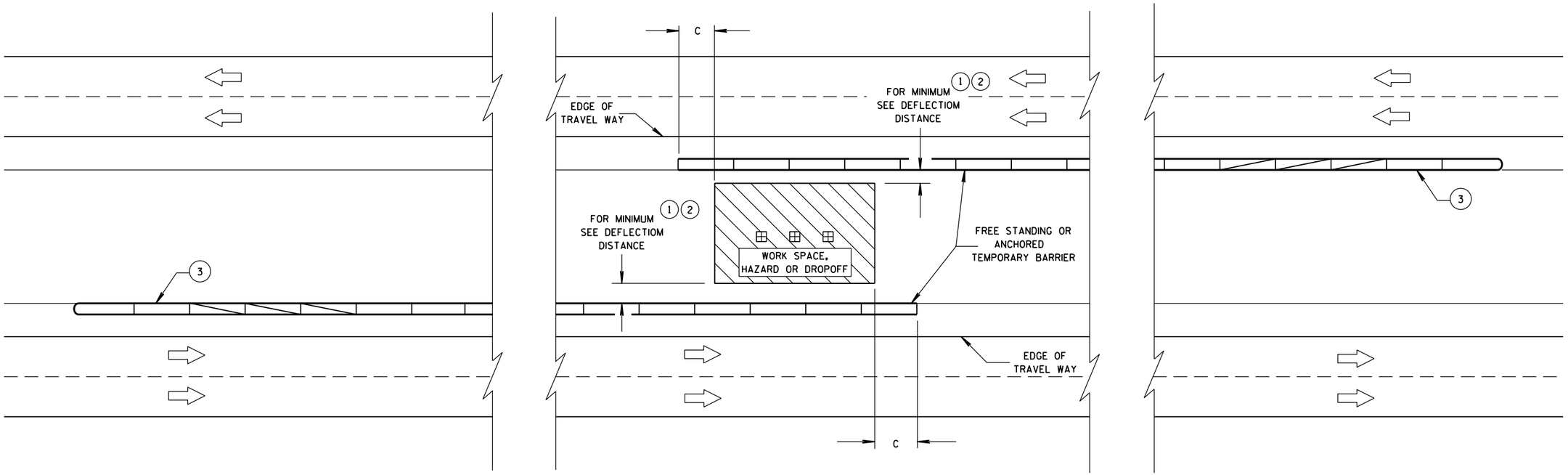
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER
FHWA

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S.D.D. 14 B 8-2e

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

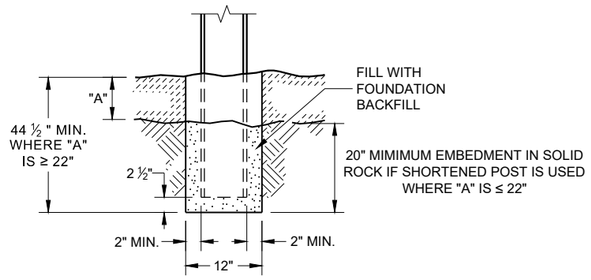
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

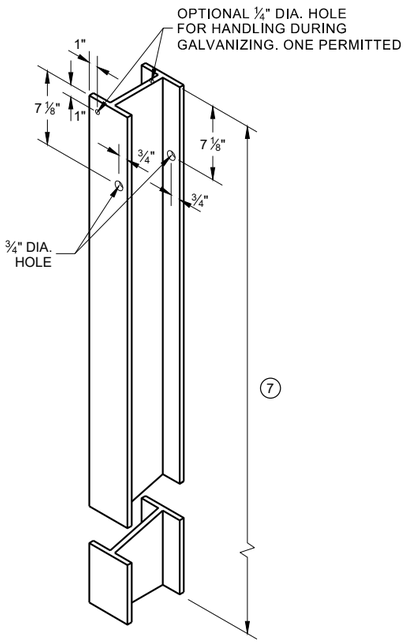
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

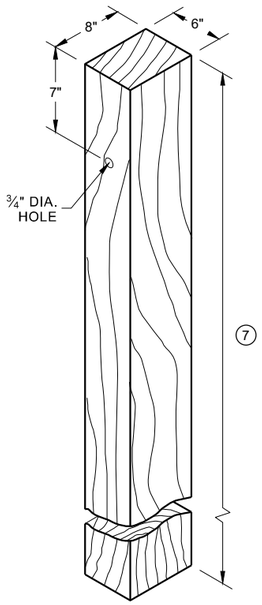
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



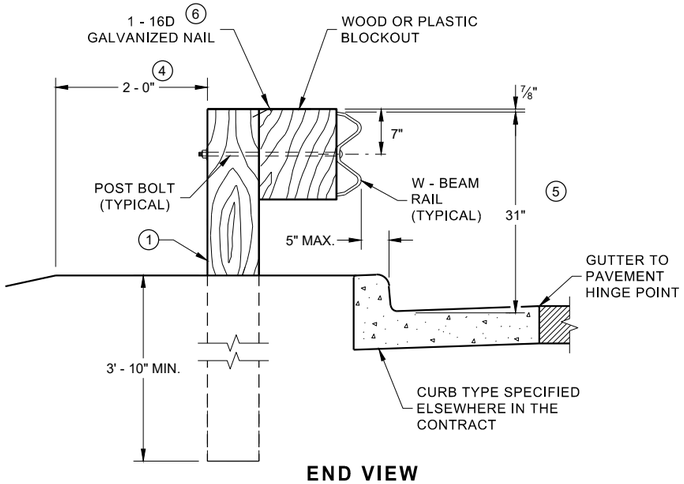
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



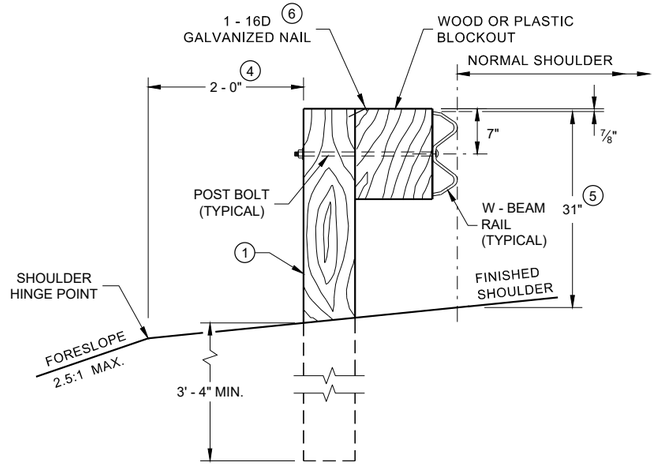
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



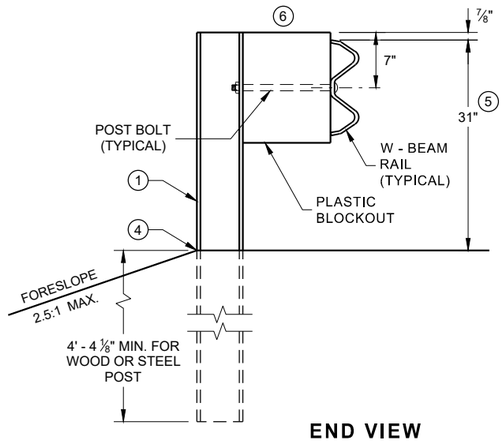
WOOD POST (6" X 8") NOMINAL (1)



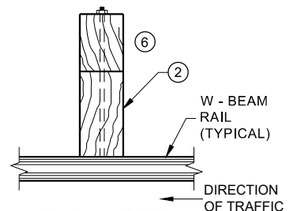
END VIEW
LOCATED ALONG A CURBED ROADWAY



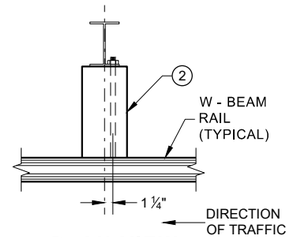
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



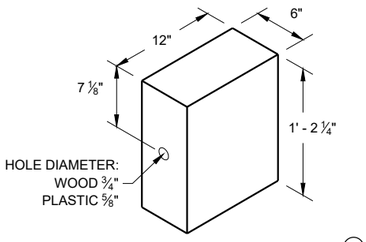
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

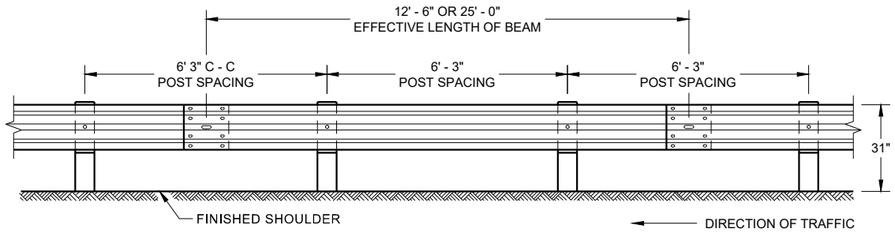
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

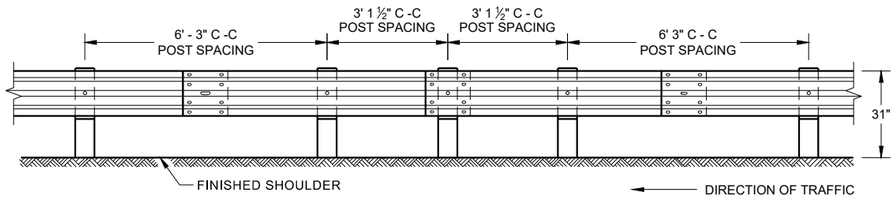
SDD 14B42 - 07a

6

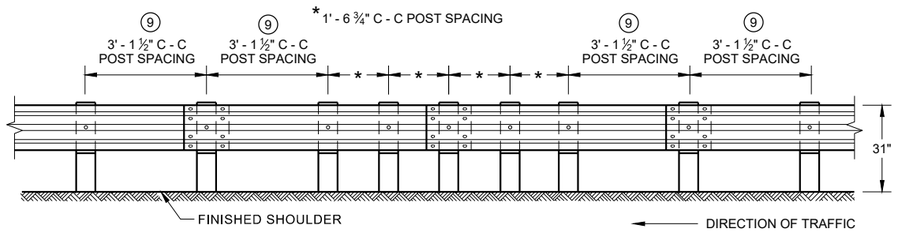
SDD 14B42 - 07a



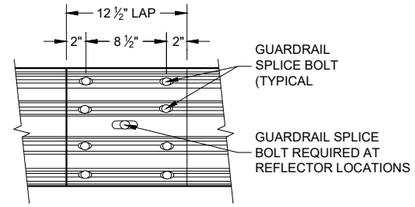
FRONT VIEW
POST SPACING STANDARD INSTALLATION



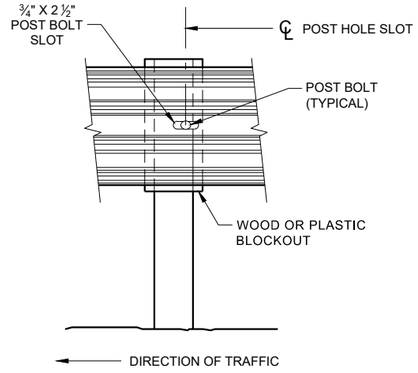
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



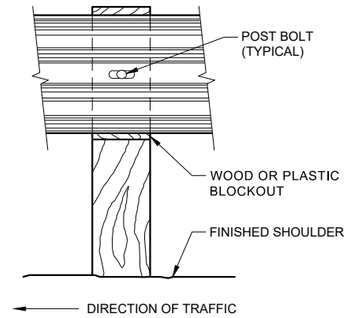
FRONT VIEW
QUARTER POST SPACING (QS)



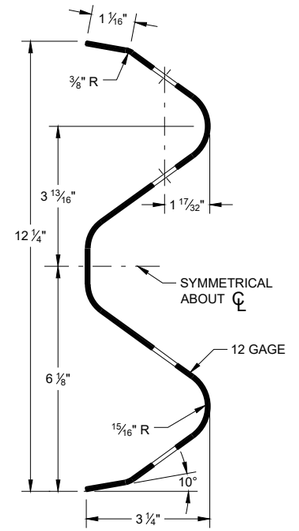
FRONT VIEW
MID-SPAN BEAM SPLICE



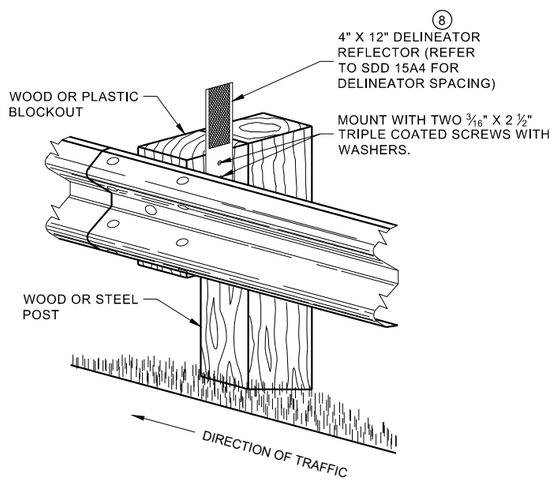
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

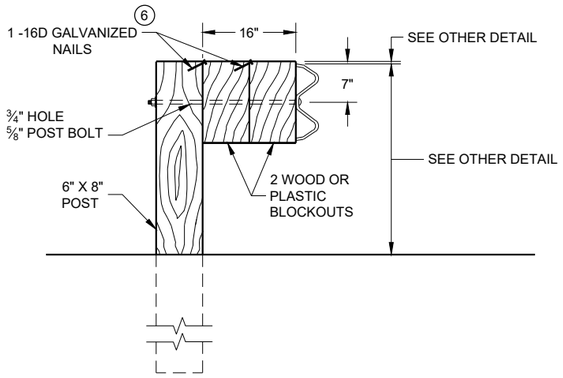
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

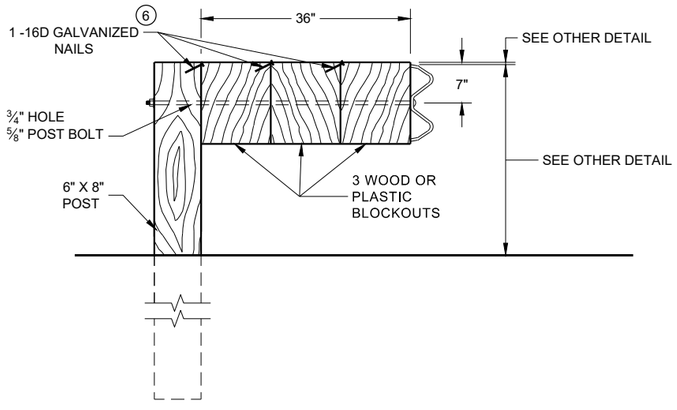
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 07b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



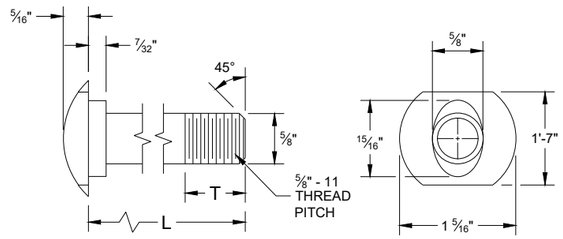
DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

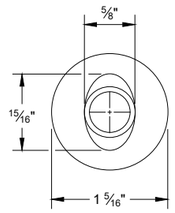
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

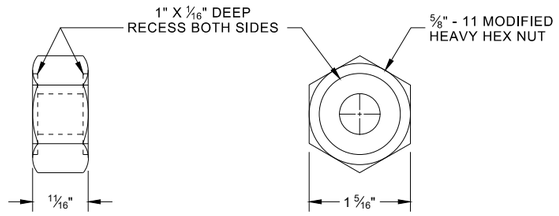


POST BOLT TABLE

L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"

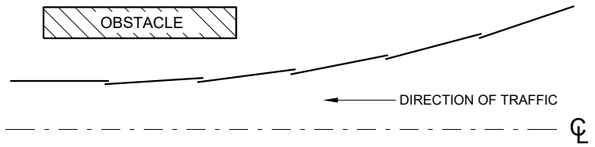


ALTERNATE BOLT HEAD

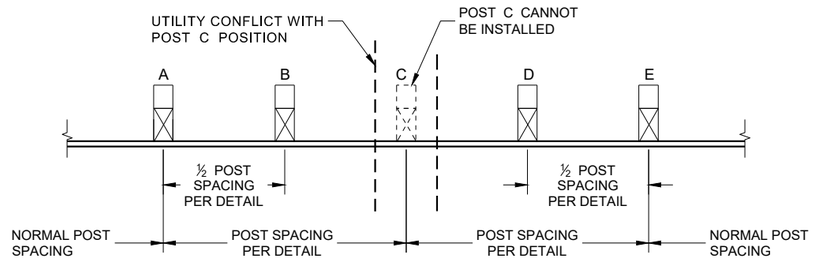


POST BOLT, SPLICE BOLT AND RECESS NUT

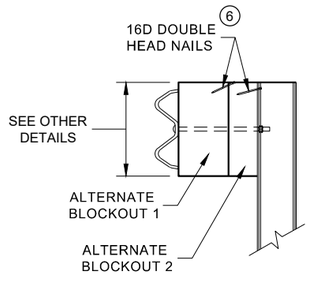
(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



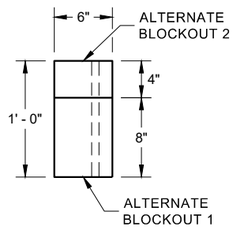
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



PLAN VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

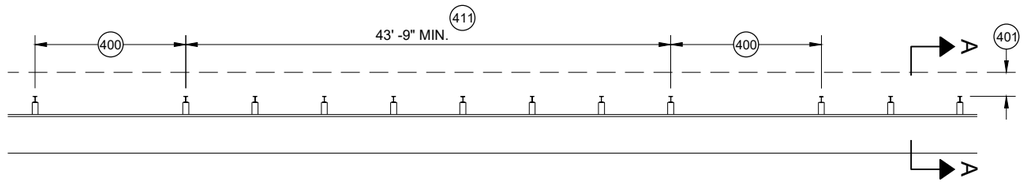
6

SDD 14B42 - 07c

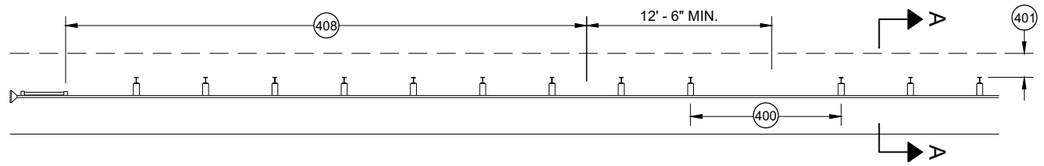
6

SDD 14B42 - 07c

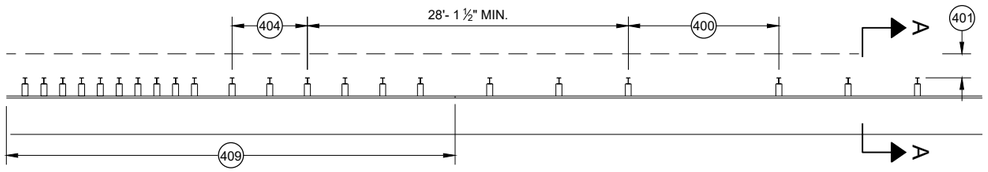
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



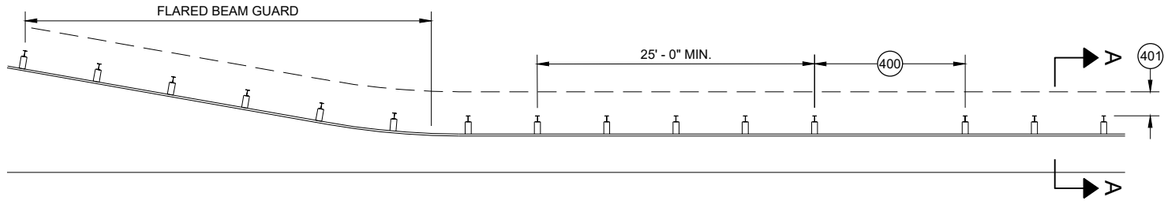
MISSING POST IN MGS GUARDRAIL



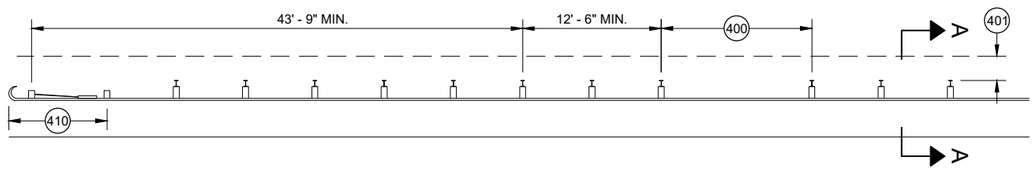
MISSING POST IN MGS GUARDRAIL NEAR EAT



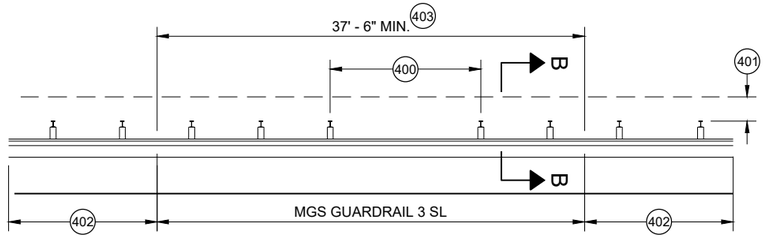
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

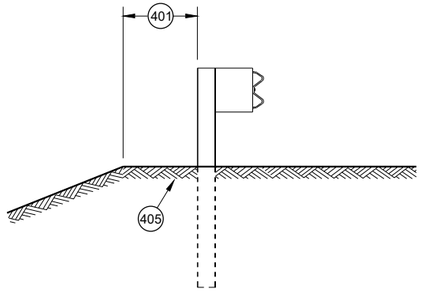


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

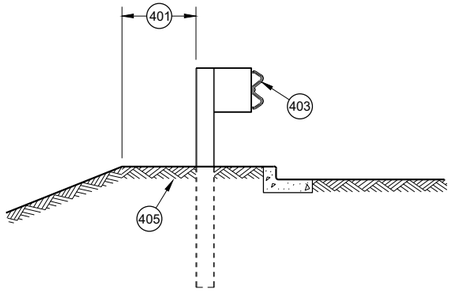


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

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

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

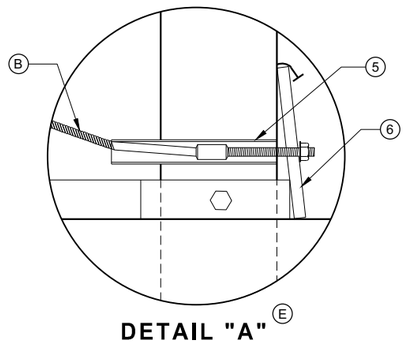
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

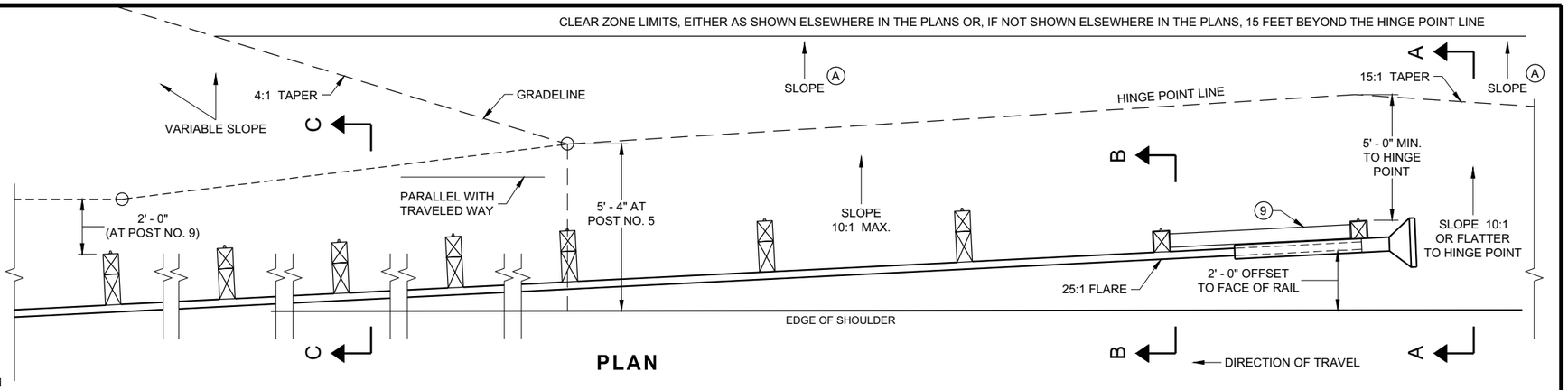
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

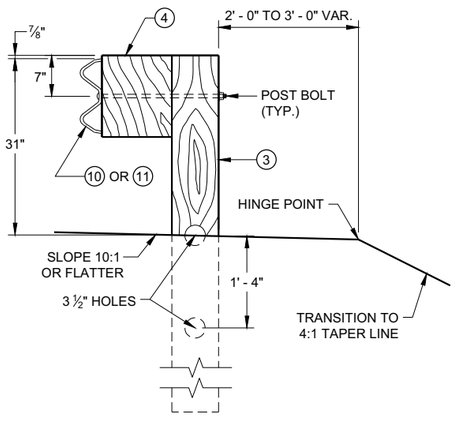
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

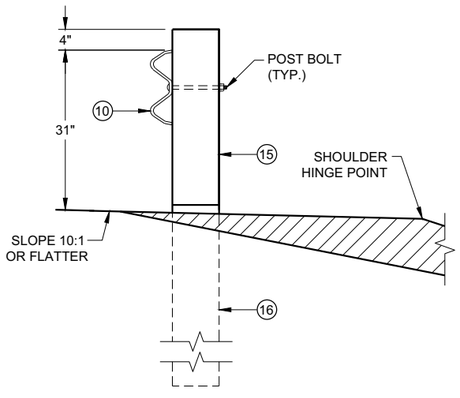


DETAIL "A" (E)

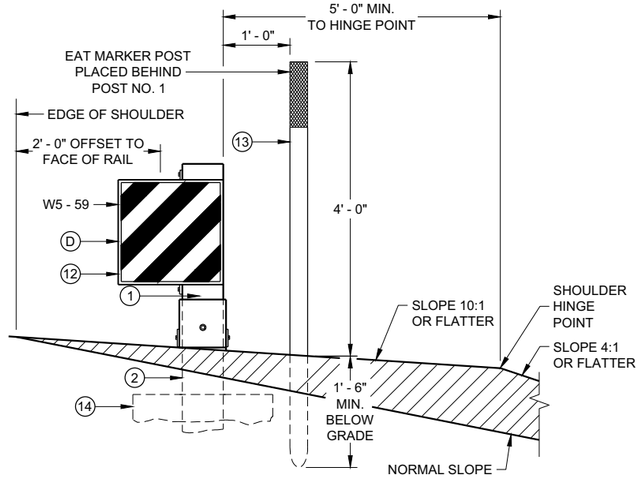




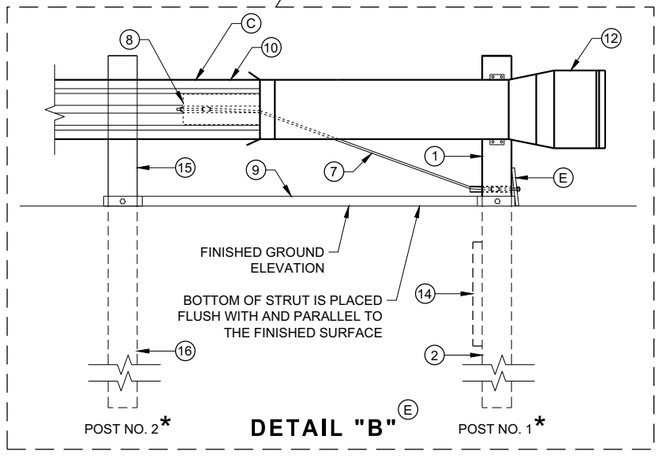
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



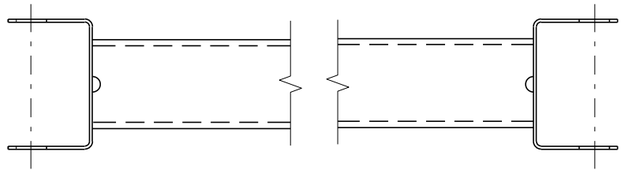
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

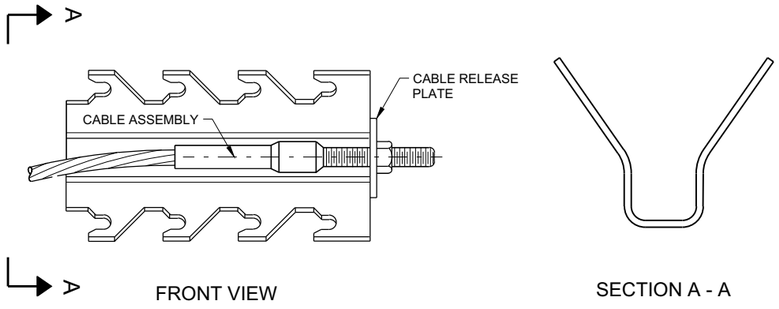
SDD 14B44 - 04a



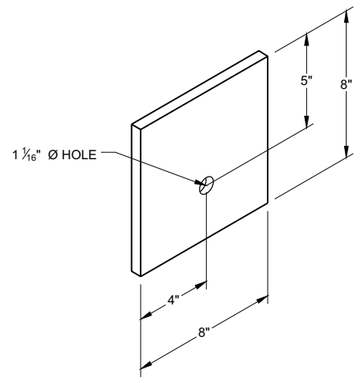
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

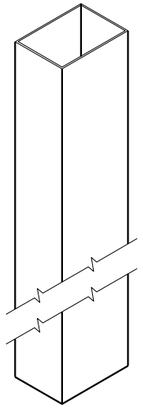
6

SDD 14B44 - 04b

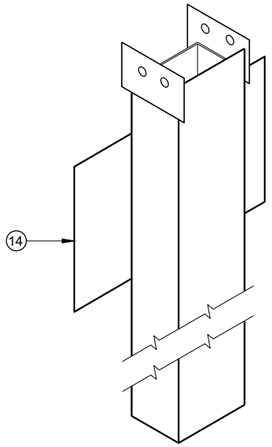
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

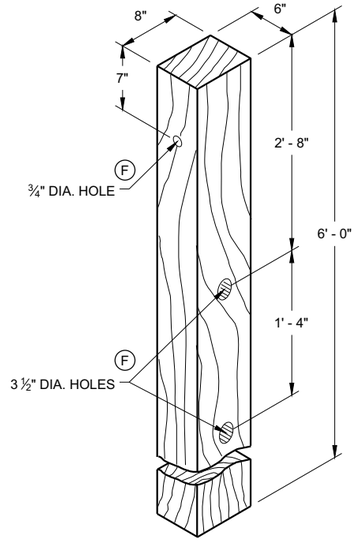
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



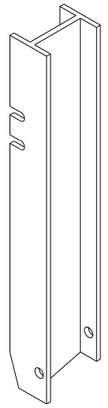
UPPER POST NO. 1 (1) (E)



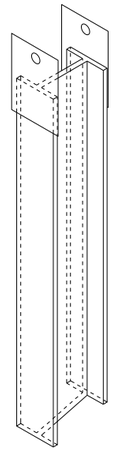
LOWER POST NO. 1 (2) (E)



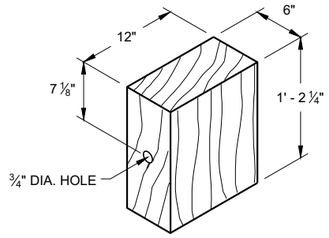
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



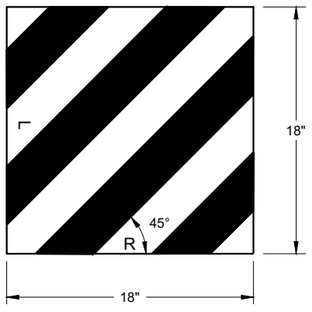
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

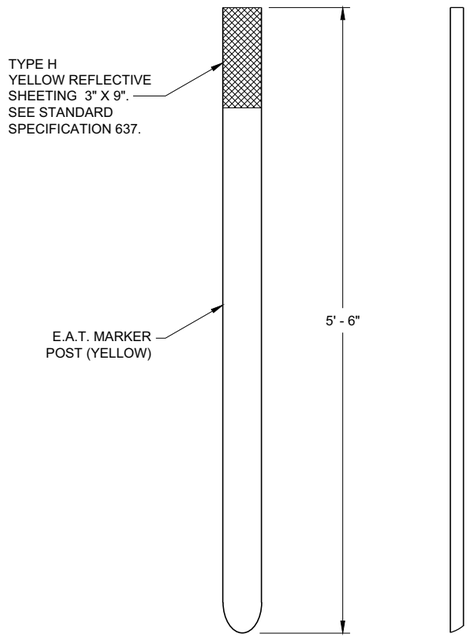


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



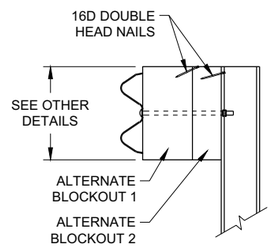
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

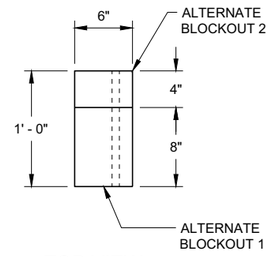


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

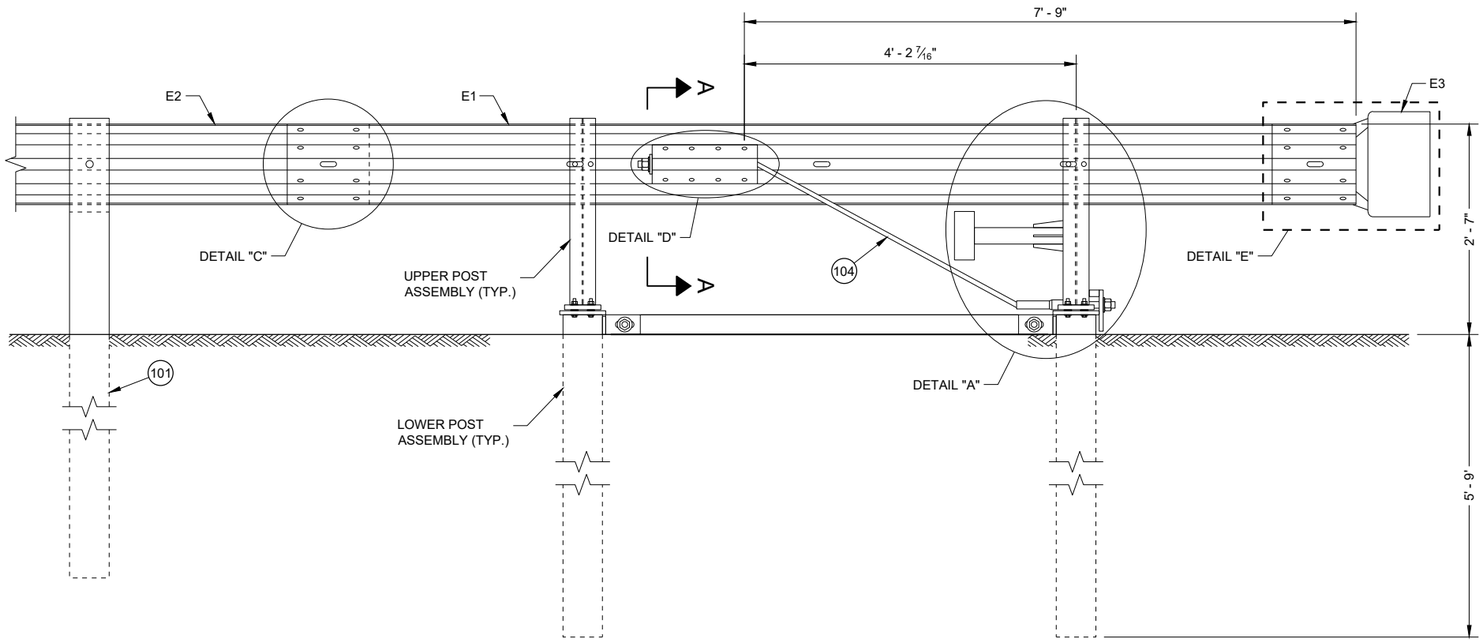
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

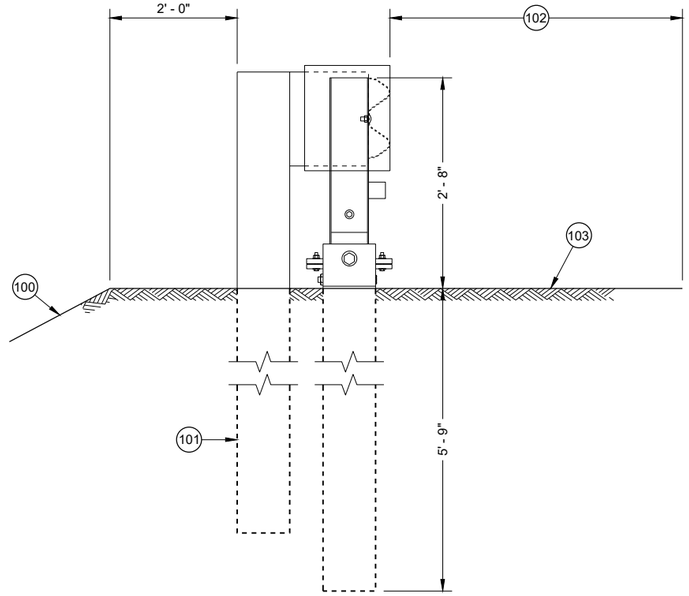
FHWA

6

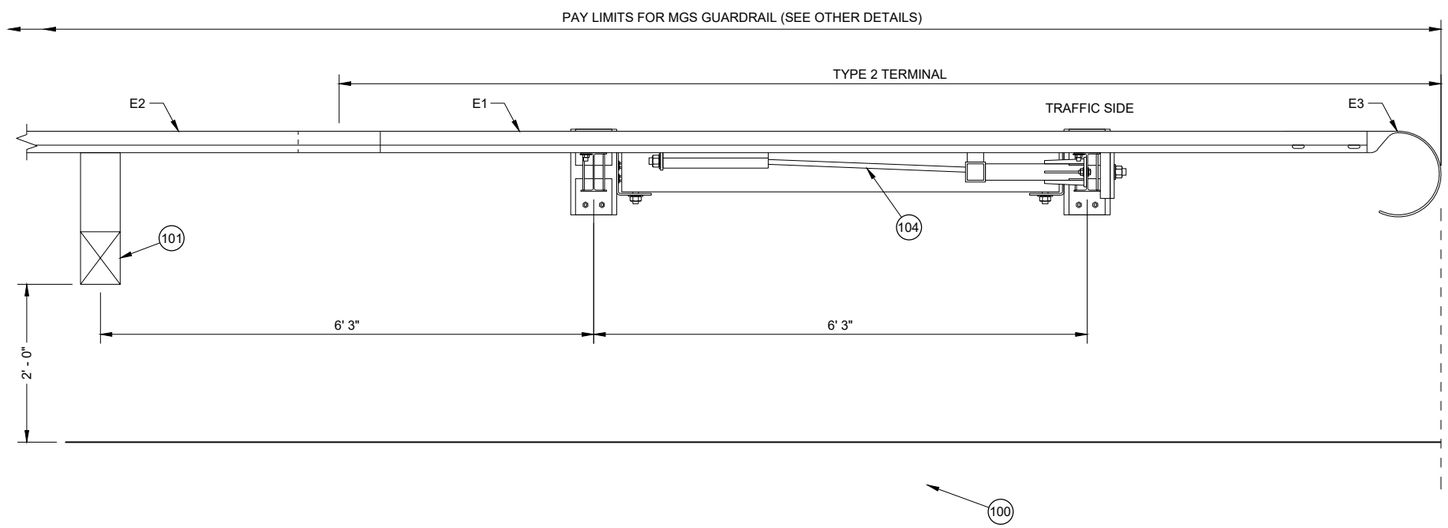
SDD 14B44 - 04c



BACK VIEW
TYPE 2 TERMINAL



SIDE VIEW
TYPE 2 TERMINAL



TOP VIEW
TYPE 2 TERMINAL

GENERAL NOTES

(100) MAXIMUM SLOPE IS 2.5:1.

(101) SEE SDD 14B42 FOR MORE INFORMATION.

(102) SHOULDER

(103) MAXIMUM SLOPE IS 10:1.

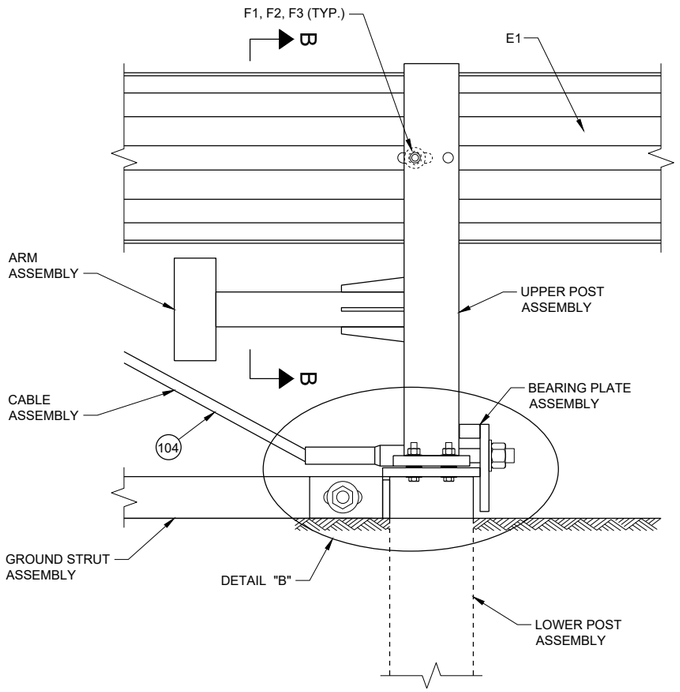
(104) AFTER ASSEMBLY, CABLE IS TO BE TIGHTENED WITHOUT TWISTING THE CABLE.

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

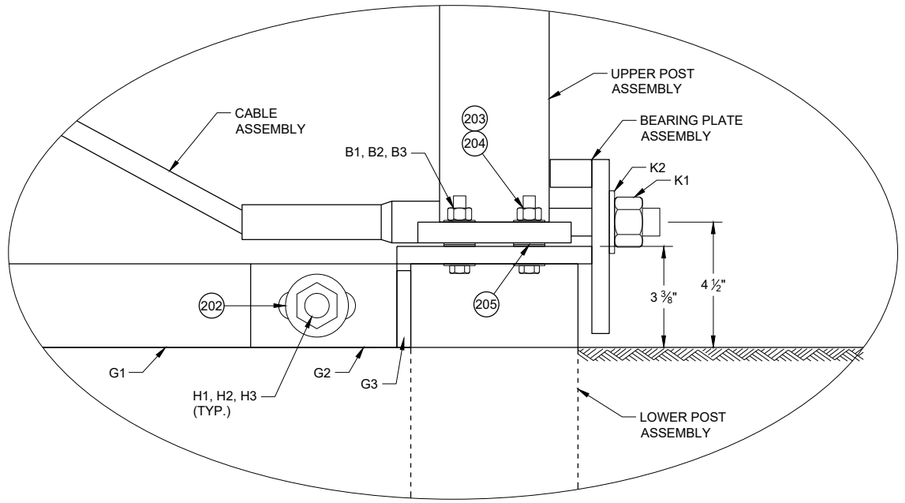
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

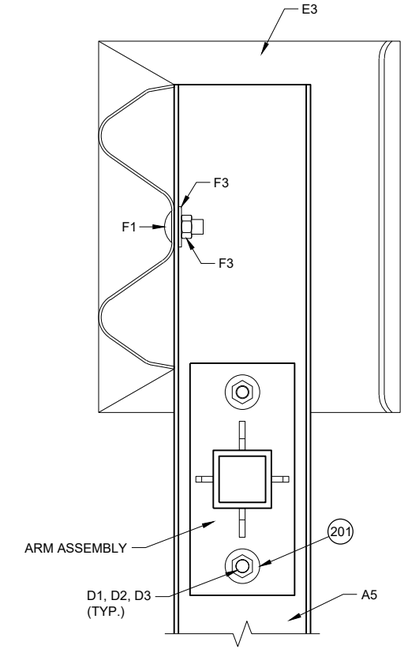
SDD 14B47 - 05a



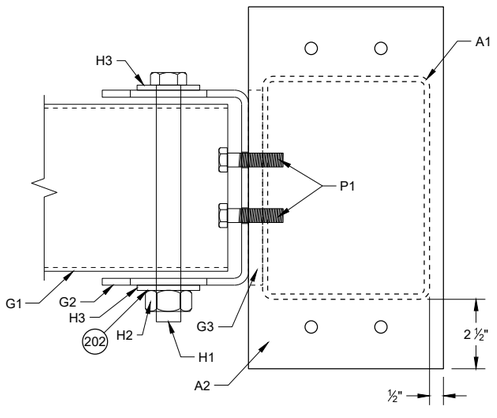
DETAIL "A"



DETAIL "B"

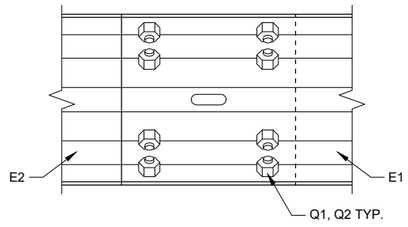


SECTION B - B



TOP VIEW

GROUND STRUT CONNECTION DETAIL



DETAIL "C"

GENERAL NOTES

200 INSTALL ONE WASHER UNDER BOLT HEAD AND RAIL AND ON WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.

201 INSTALL ONE WASHER UNDER BOLT HEAD AND UPPER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND ARM PLATE.

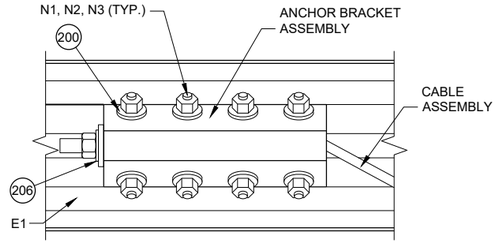
202 INSTALL ONE WASHER UNDER BOLT HEAD AND GROUND STRUT CONNECTOR AND ONE WASHER BETWEEN NUT AND GROUND STRUT CONNECTOR.

203 INSTALL ONE WASHER UNDER BOLT HEAD AND LOWER POST ASSEMBLY AND ONE WASHER BETWEEN NUT AND UPPER POST ASSEMBLY.

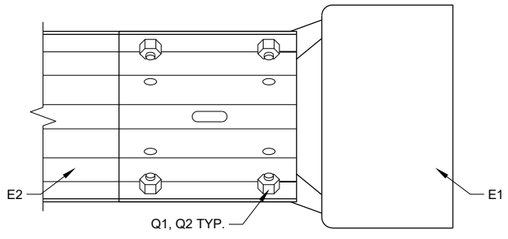
204 TORQUE VALUE IS BETWEEN 60 - 75 FT-LB.

205 TWO WASHERS BETWEEN UPPER AND LOWER POST ASSEMBLY.

206 INSTALL ONE WASHER BETWEEN NUT AND ANCHOR BRACKET ASSEMBLY.



DETAIL "D"



DETAIL "E"

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

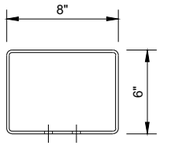
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

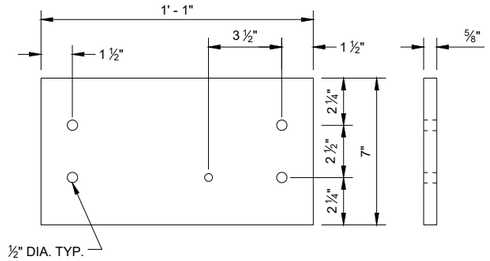
SDD 14B47 - 05b

GENERAL NOTES

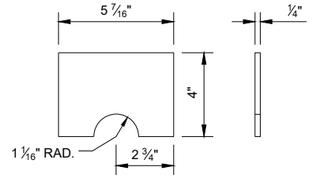
(300) TAP FOR 1/2" AFTER GALVANIZATION



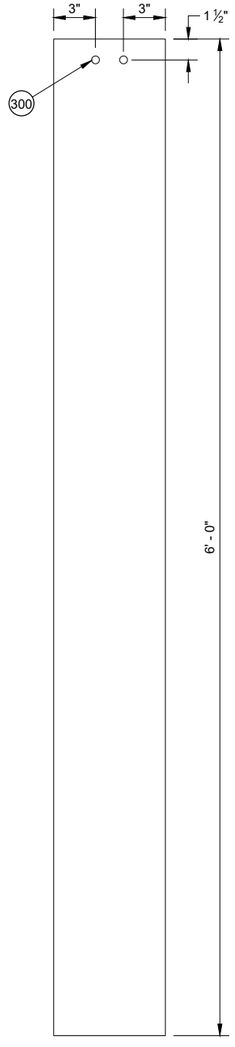
TOP VIEW



LOWER PLATE (A2)

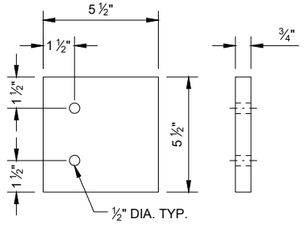


POST GUSSET (A3)

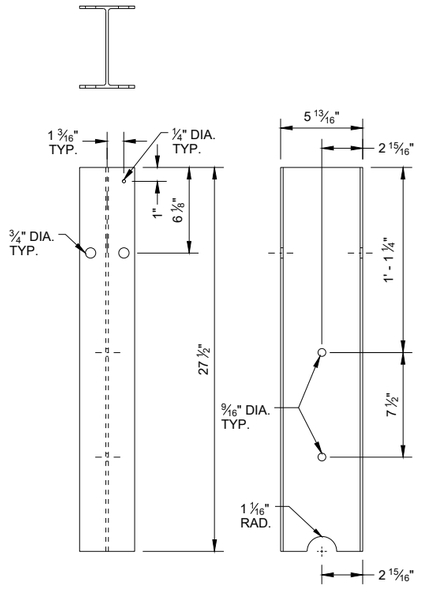


SIDE VIEW

FOUNDATION TUBE (A1)

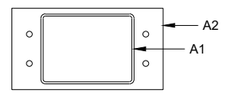


UPPER PLATE (A4)

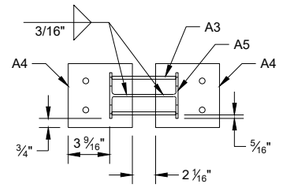


FRONT VIEW SIDE VIEW

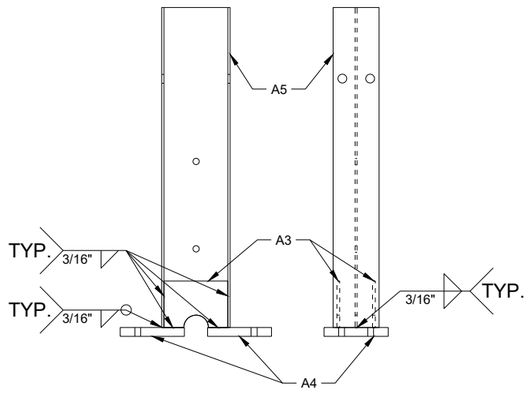
TYPE 2 POST (A5)



PLAN VIEW

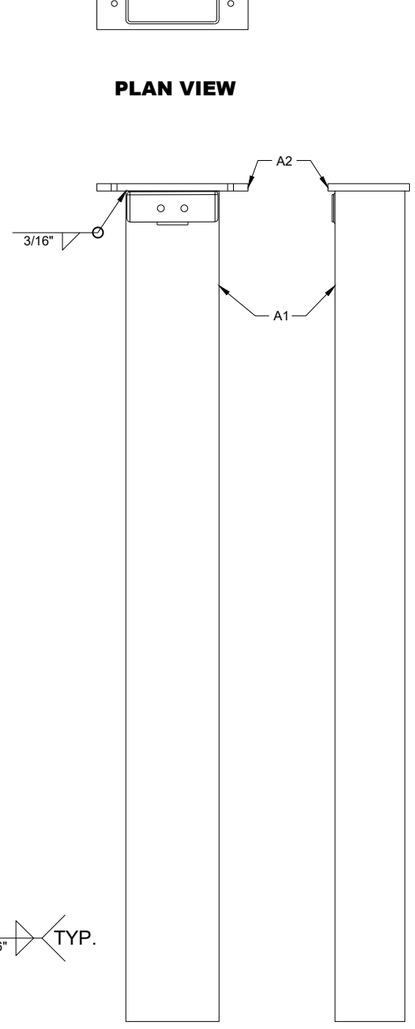


PLAN VIEW



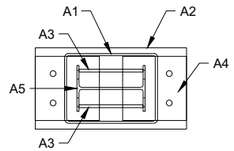
SIDE VIEW FRONT VIEW

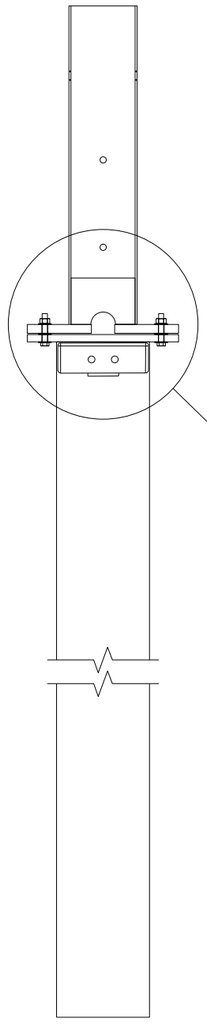
UPPER POST ASSEMBLY



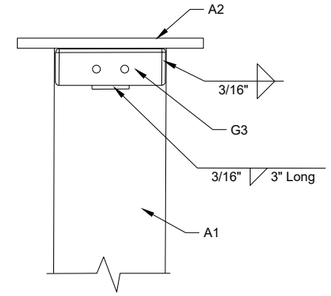
FRONT VIEW SIDE VIEW

LOWER POST ASSEMBLY

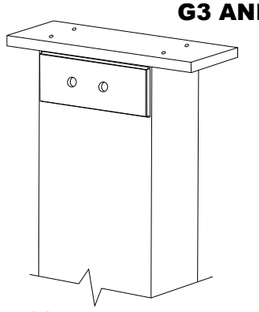




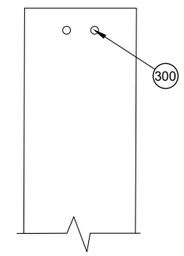
ASSEMBLED POST



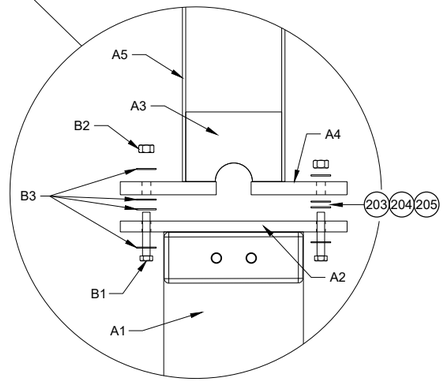
WELDING DETAIL G3 AND A1



ASSEMBLY DETAIL ISOMETRIC



A1



POST CONNECTION DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

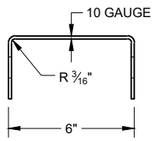
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

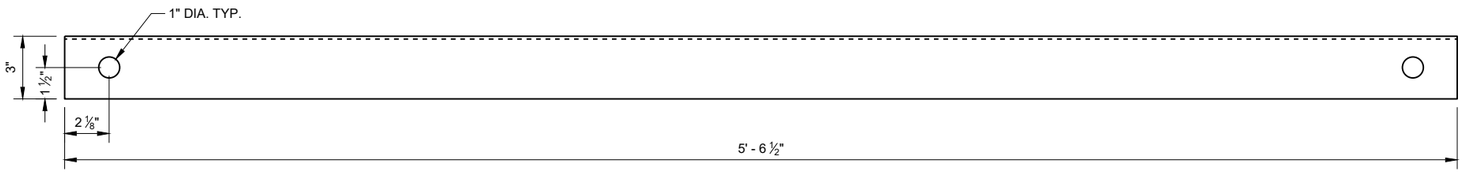
SDD14B47 - 05c

6

SDD14B47 - 05c

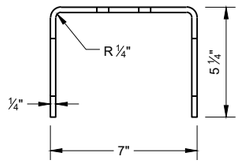


SIDE VIEW

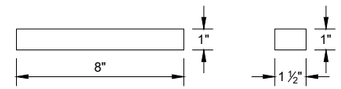


FRONT VIEW

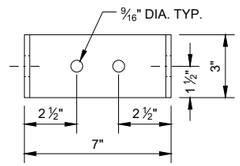
GROUND STRUT CHANNEL (G1)



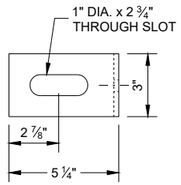
TOP VIEW



BEARING PLATE FLANGE (L2)

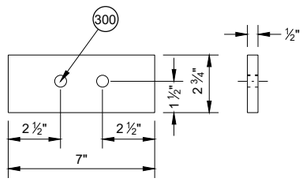


FRONT VIEW

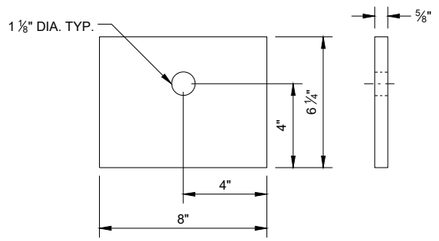


SIDE VIEW

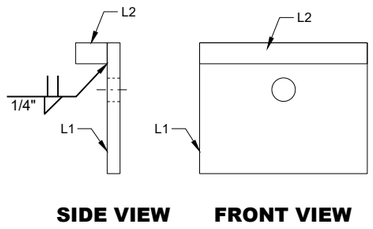
GROUND STRUT CONNECTOR (G2)



GROUND STRUT PLATE (G3)

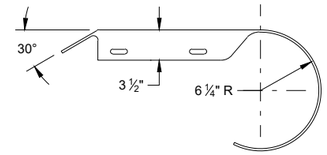


BEARING PLATE (L1)

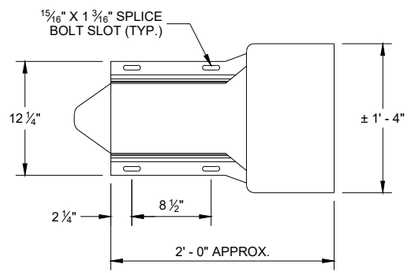


SIDE VIEW FRONT VIEW

BEARING PLATE ASSEMBLY

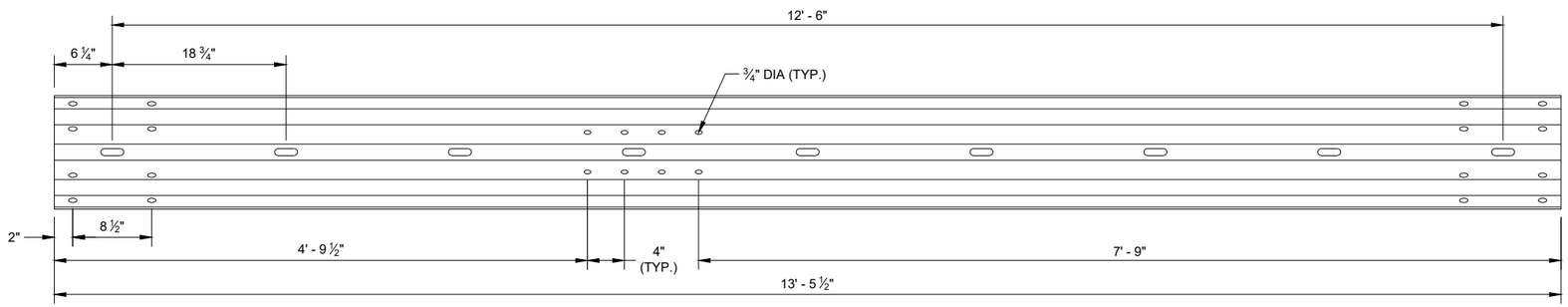


PLAN VIEW

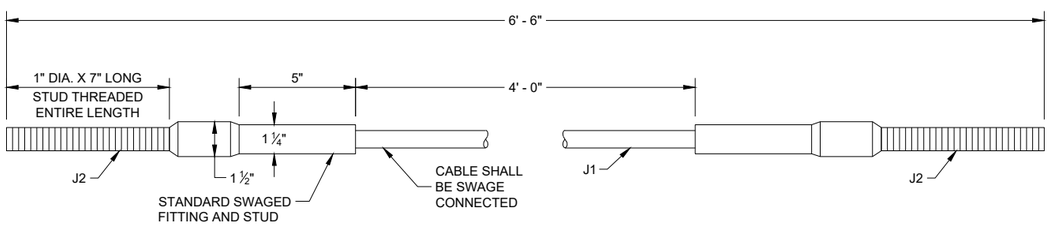


ELEVATION VIEW

ROUNDED BUFFER END (E3)



TYPE 2 GUARDRAIL (E1)

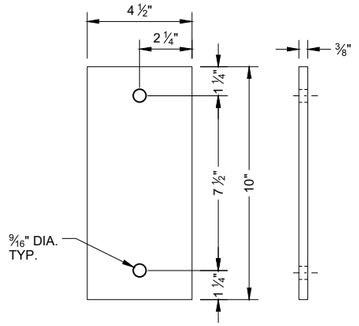


CABLE ASSEMBLY

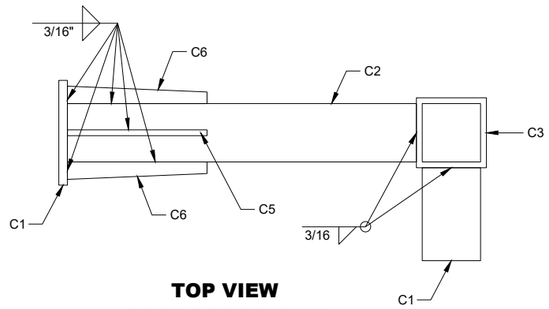
6
SDD 14B47 - 05d

MIDWEST GUARDRAIL SYSTEM (MGS)
TYPE 2 TERMINAL

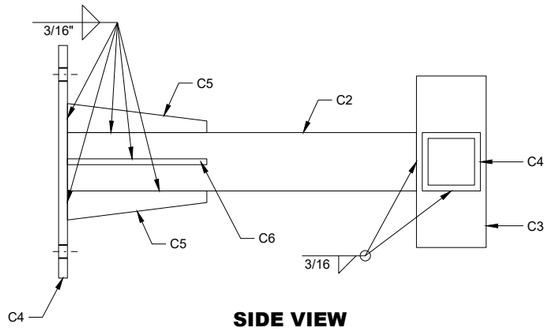
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



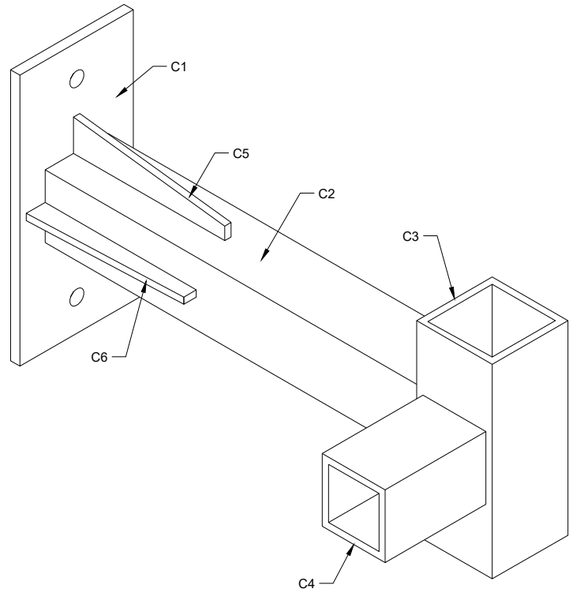
ARM PLATE (C1)



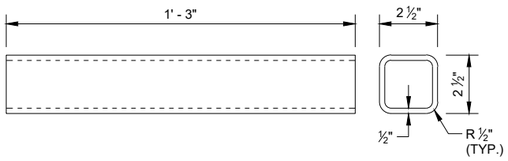
TOP VIEW
ARM ASSEMBLY



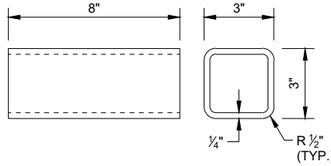
SIDE VIEW
ARM ASSEMBLY



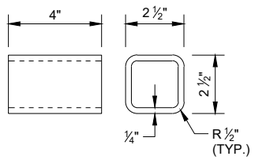
ISOMETRIC VIEW
ARM ASSEMBLY



ARM TUBE 1 (C2)



ARM TUBE 2 (C3)



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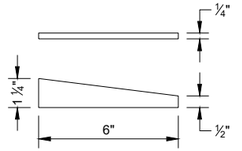
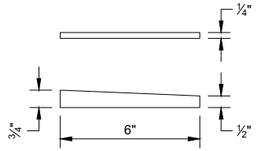
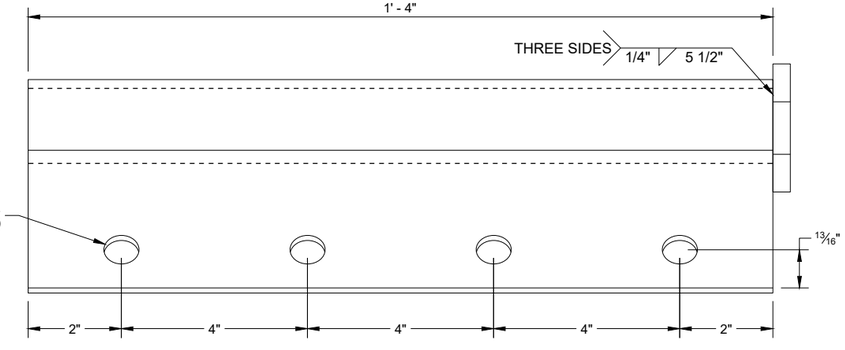
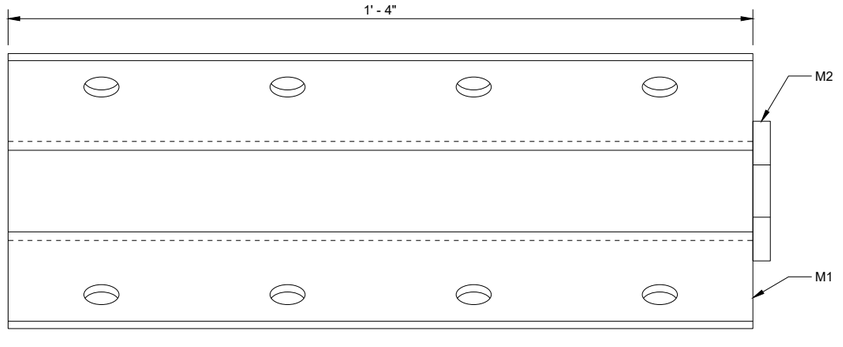


ARM GUSSET PLATE 1 (C5)

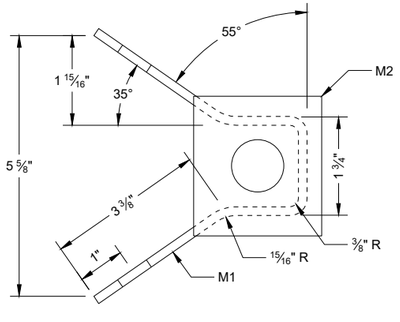


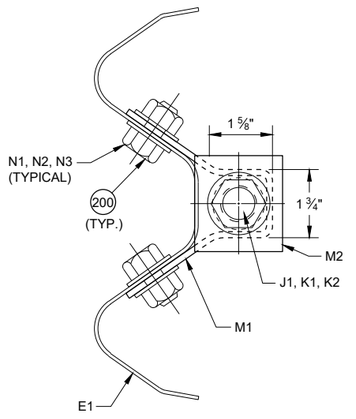
ARM GUSSET PLATE 2 (C6)

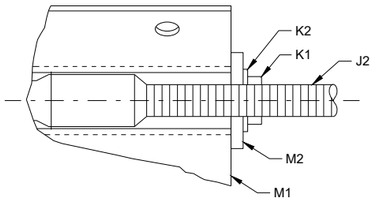




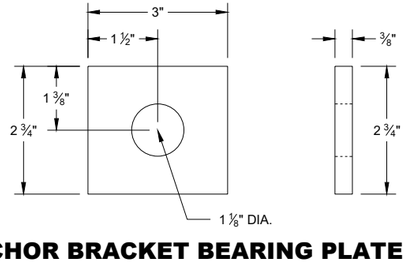
ANCHOR BRACKET (M1, M2)







SECTION A - A



ANCHOR BRACKET BEARING PLATE (M2)

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B47 - 05e

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
A1	TYPE 2 FOUNDATION TUBE	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
A2	LOWER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
A3	POST GUSSET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
A4	UPPER PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/4" THICKNESS
A5	TYPE 2 POST	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI, w6x9 or w6x8.5	
B1	BREAKAWAY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM F3125 GRADE A325 TYPE 1 HEAVY HEX HEAD OR SAE J429 GRADE 5 HEAVY HEX HEAD / ASTM A449 TYPE 1 HEAVY HEX HEAD. BOLTS MAY BE FULLY THREADED . PROVIDE ENOUGH THREADING FOR PROPER TIGHTENING OF BOLT.	7/16" DIA.
B2	BREAKAWAY BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/16" DIA.
B3	BREAKAWAY BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
C1	ARM ASSEMBLY PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
C2	ARM ASSEMBLY TUBE 1	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 8" x 6" x 3/16"
C3	ARM ASSEMBLY TUBE 2	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 3" x 3" x 1/4"
C4	ARM ASSEMBLY TUBE 3	AASHTO M111 / ASTM A123 ASTM A500 GRADE B OR ASTM A-501	TS 2 1/2" x 2 1/2" X 1/4"
C5	ARM ASSEMBLY GUSSET PLATE 1	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
C6	ARM ASSEMBLY GUSSET PLATE 2	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
D1	ARM ASSEMBLY BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	1/2" DIA.
D2	ARM ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	1/2" DIA.
D3	ARM ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
E1	TYPE 2 GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E2	BEAM GUARD RAIL	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
E3	BEAM GUARD ROUNDED BUFFER END	AASHTO M180 CLASS A TYPE 2 12 GAUGE APPROVED PRODUCER	
F1	POST BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
F2	POST BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
F3	POST BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291/ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
G1	GROUND STRUT CHANNEL	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" x 11 3/4" x 10 GAUGE
G2	GROUND STRUT CONNECTOR	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/4" THICKNESS
G3	GROUND STRUT PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1/2" THICKNESS

BILL OF MATERIALS - TYPE 2 TERMINAL (MGS)

PART	DESCRIPTION	MATERIALS SPECIFICATIONS	NOTES
H1	GROUND STRUT BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	7/8" DIA.
H2	GROUND STRUT BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	7/8" DIA.
H3	GROUND STRUT BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC HEAVY HEX HEAD 5/8" ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
J1	BCT CABLE	AASHTO M30 / ASTM A741 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS), 6 x 19 INDEPENDENT WIRE CORE (IWRC) IMPROVED PLOW STEEL (IPS) TYPE II OR IIC, CLASS C ZINC COATED MIN. BREAKING STRENGTH OF 42.7 KIPS	**3/4" DIA.**
J2	BCT CABLE	UNC 1" ASTM A576 GRADE 1035 SWAGE FITTINGS ARE TO BE FACTORY SWEDGED. MIN BREAKING STRENGTH OF 42.7 KIPS ASME B30.26 "FORGED, CAST, OR DIE STAMPED WITH THE FOLLOWING IN TO CONNECTION: NAME OF MANUFACTURE OR TRADEMARK OF CONNECTION'S MANUFACTURER, SIZE OR RATED LOAD, GRADE FOR ALLOY EYEBOLTS."	
K1	CABLE ASSEMBLY NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1" DIA.
K2	CABLE ASSEMBLY WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1	1" DIA.
L1	BEARING PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	5/8" THICKNESS
L2	BEARING PLATE FLANGE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	1" THICKNESS
M1	BEAM GUARD ANCHOR BRACKET	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	
M2	BEAM GUARD ANCHOR END PLATE	AASHTO M111 / ASTM A123 ASTM A36 MIN. STRENGTH 36 KSI, OR ASTM A529 MAX. STRENGTH 50 KSI, OR ASTM A572 MAX STRENGTH 50 KSI, OR ASTM A709 MAX STRENGTH 50 KSI, OR ASTM A992 MAX STRENGTH 50 KSI	3/8" THICKNESS
N1	ANCHOR BRACKET BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	5/8" DIA.
N2	ANCHOR BRACKET BOLT WASHER	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 F436 TYPE 1 (HARDEN WASHER ONLY)	5/8" DIA.
N3	ANCHOR BRACKET BOLT NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 /ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	
P1	FOUNDATION TUBE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1/ ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	1/2" DIA.
Q1	SPLICE BOLT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC AASHTO M180 HEAD ASTM A307 GRADE B OR SAE J429 GRADE 2 OR ASTM F1554 GRADE 36	
Q2	SPLICE NUT	HOT DIP AASHTO M232 CLASS / ASTM A153 CLASS C / ASTM F2329 C OR MECHANICAL GAL. TO AASHTO M298 CLASS 50 TYPE 1 / ASTM B695 CLASS 50 TYPE 1 UNC OVER TAP NUTS AS SPECIFIED IN AASHTO 291 / ASTM A 563 AASHTO M180 RECESSED HEAVY HEX HEAD ASTM A563DH OR SAE J995 GRADE 5	5/8" DIA.

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SDD 14B47 - 05g

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE ENGINEER

FHWA

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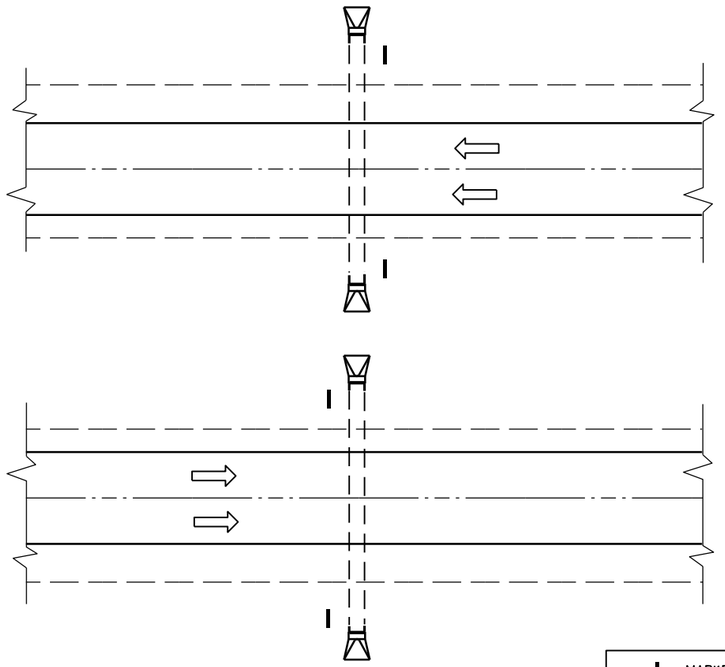
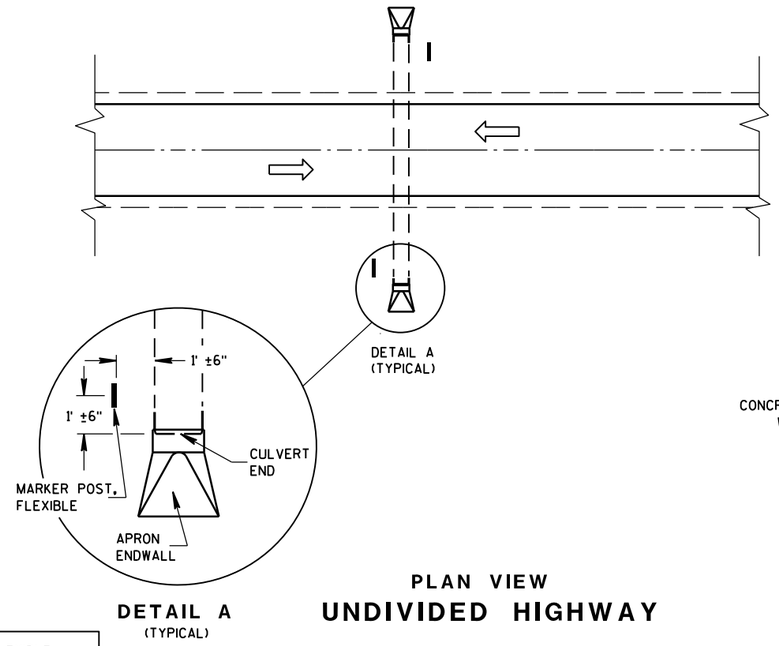
SDD 14B47 - 05g



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

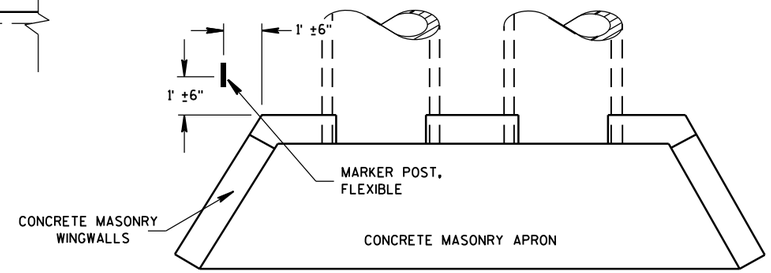
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

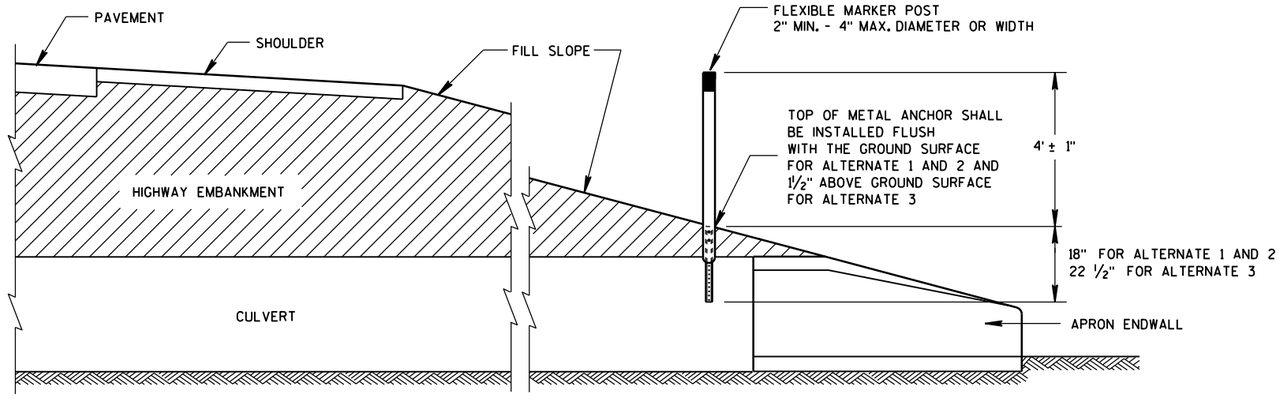
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 A 3-2a

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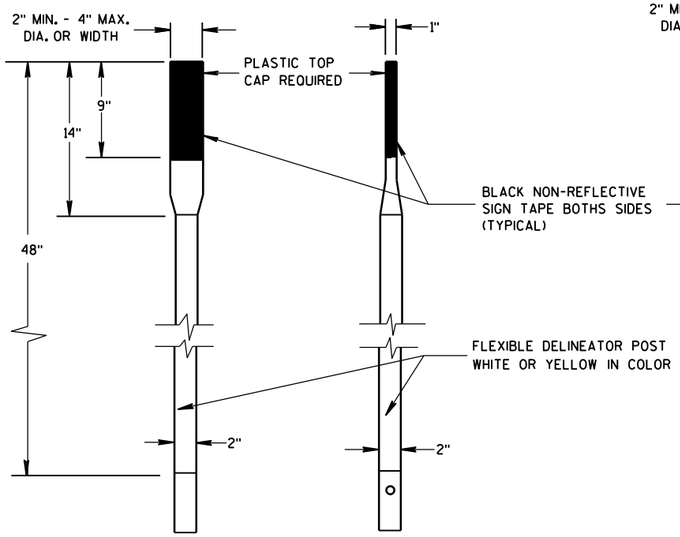
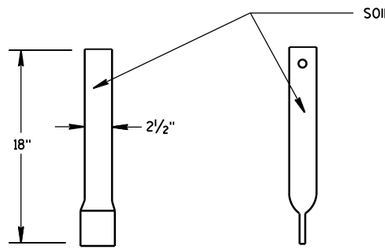
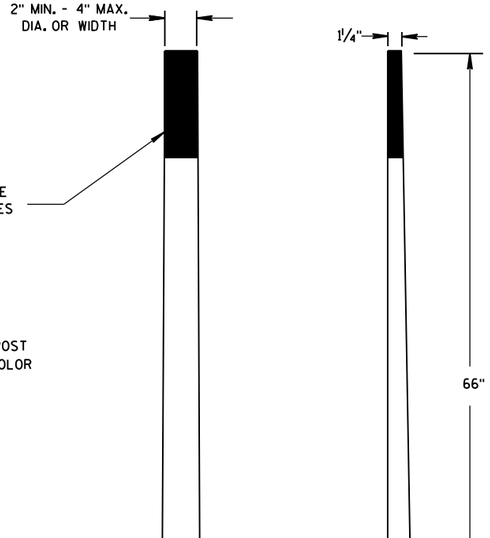
S.D.D. 15 A 3-2a





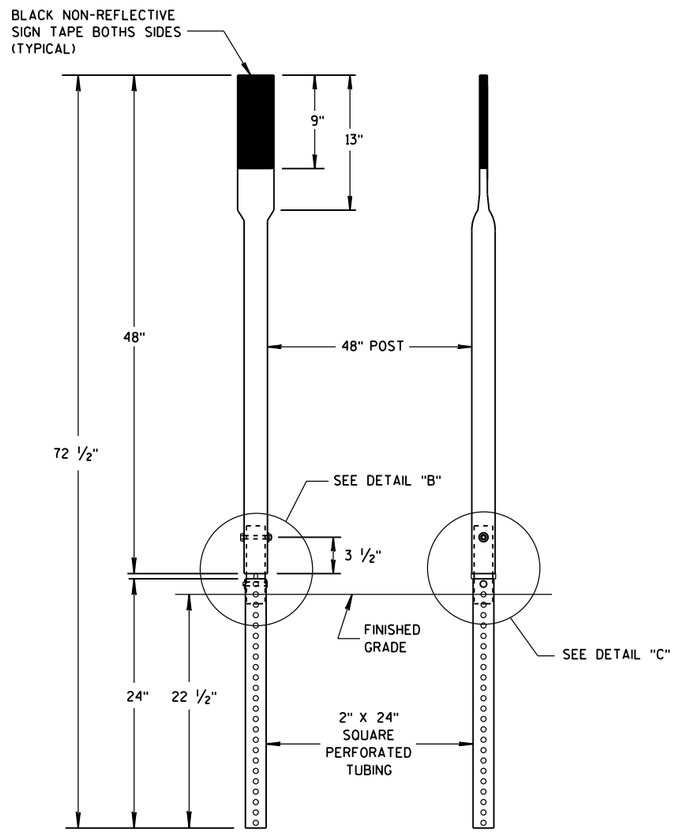
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

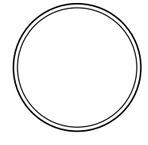
ALTERNATE 2



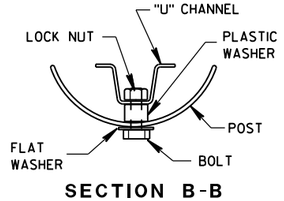
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS



SECTION A-A



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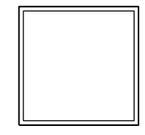
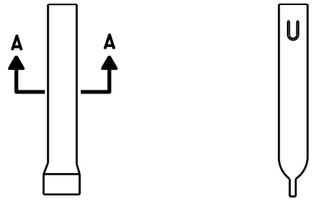
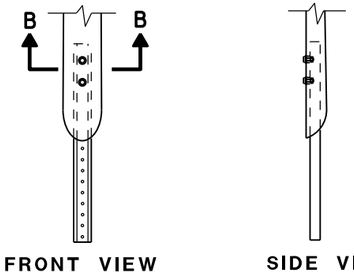


SECTION C-C



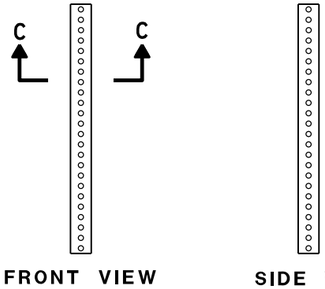
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

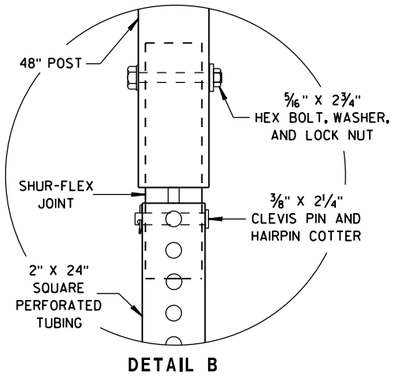
ALTERNATE 2



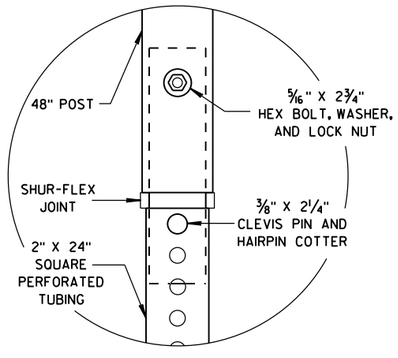
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

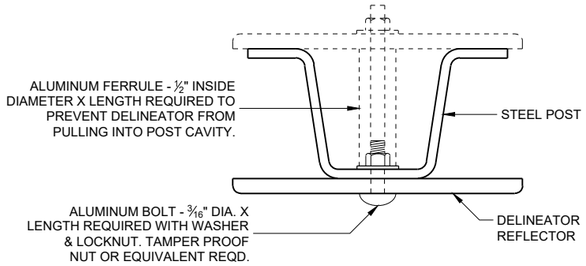
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

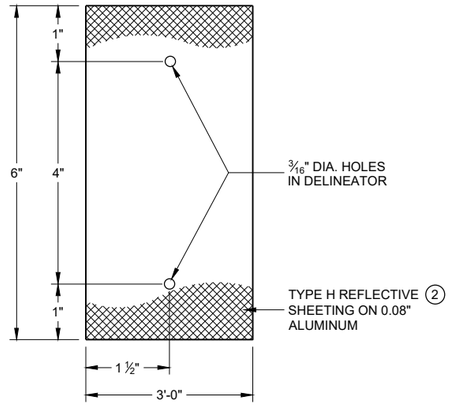
S.D.D. 15 A 3-2b

6

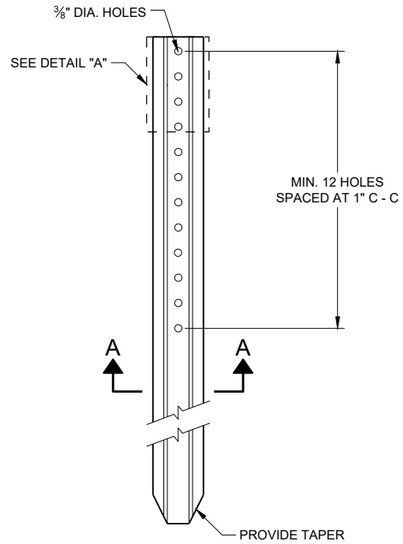
S.D.D. 15 A 3-2b



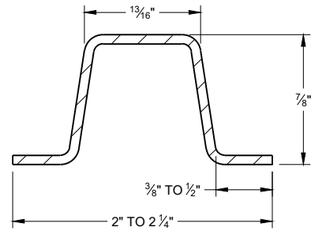
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



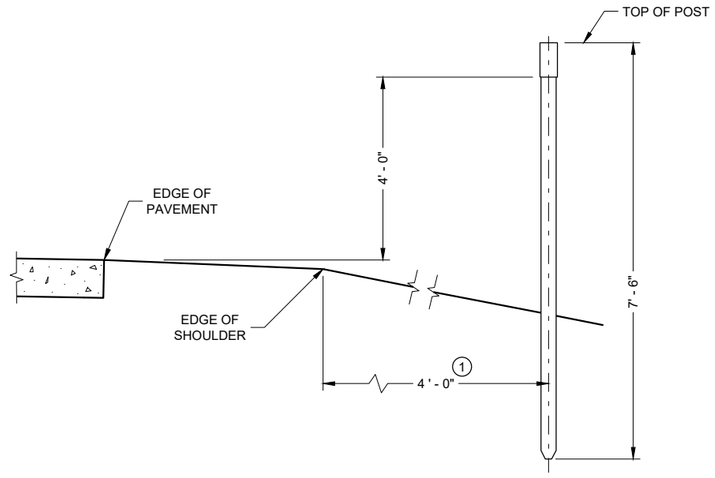
SECTION A - A

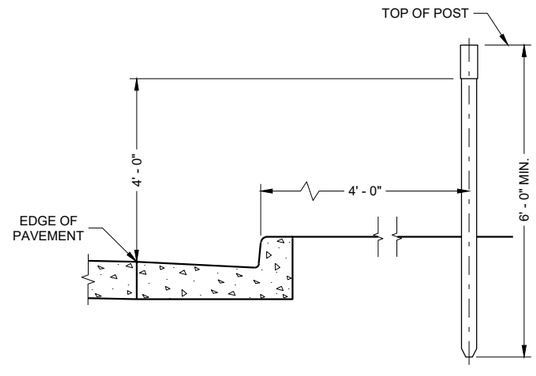
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

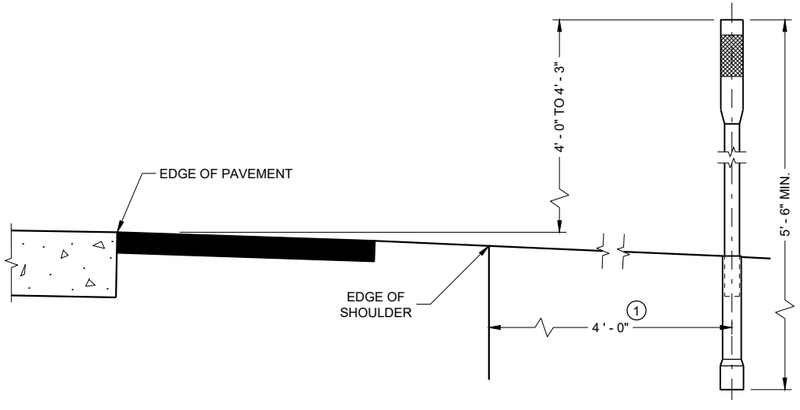
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

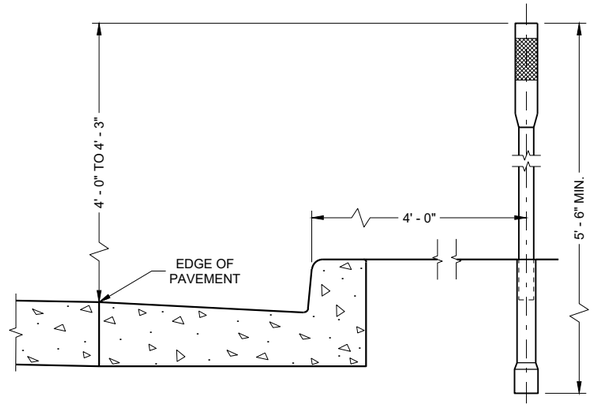
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER





TYPICAL INSTALLATIONS OF DELINEATOR POSTS





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

GENERAL NOTES

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

(1) DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.

(2) FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.

DELINEATOR POST WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

6

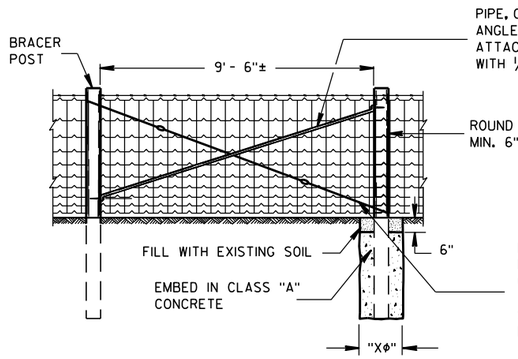
SDD 15A04 - 07c

6

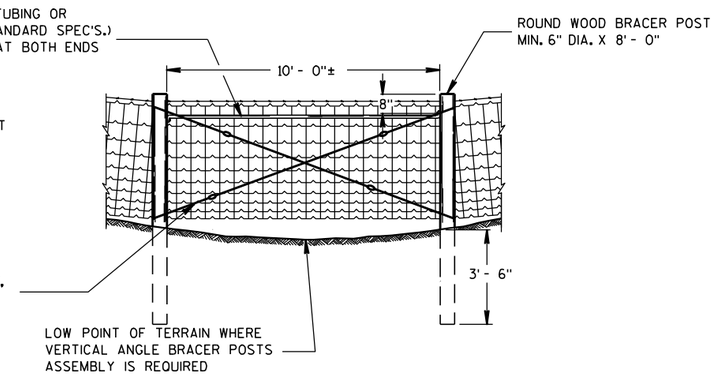
SDD 15A04 - 07c

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

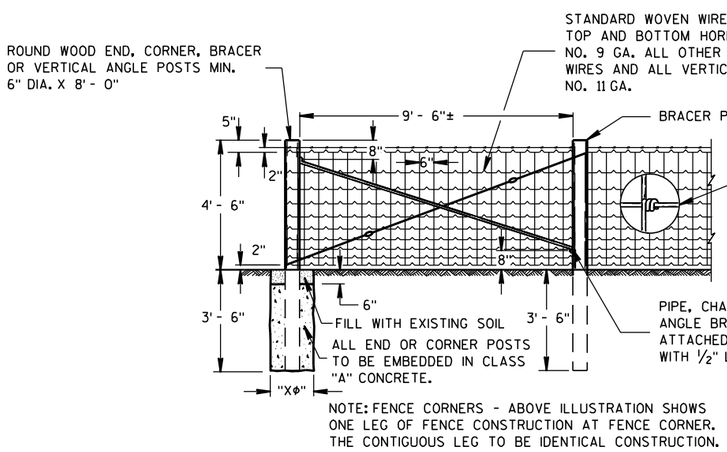
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

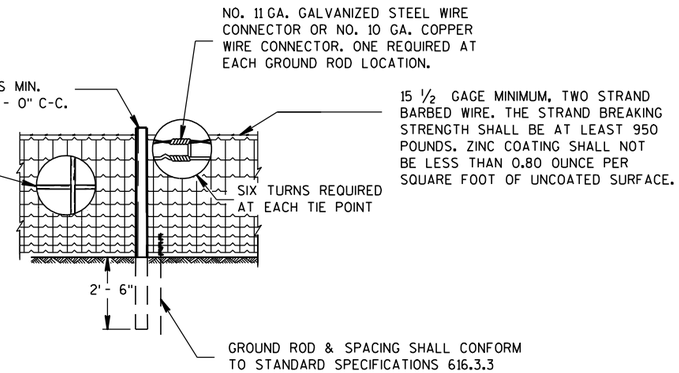
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

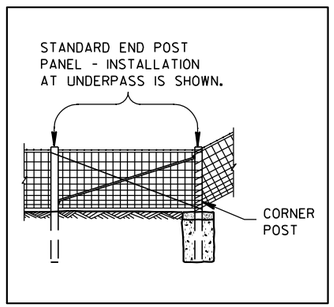
END OR CORNER POSTS ASSEMBLY



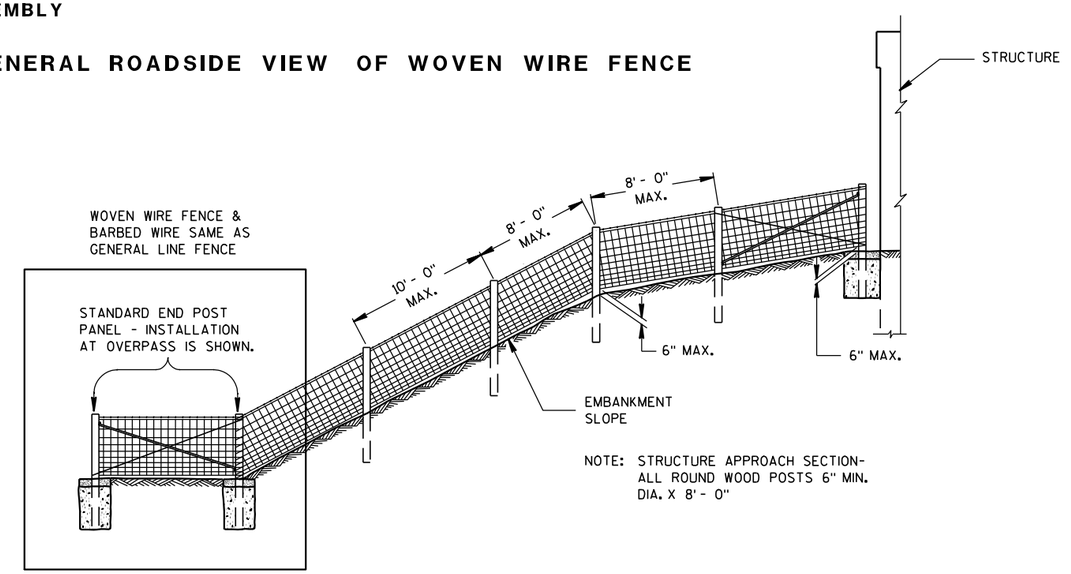
ALTERNATE METHODS OF SECURING VERTICAL STAY WIRES TO HORIZONTAL WIRES - SECURELY WELDED OR TWISTED.

LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

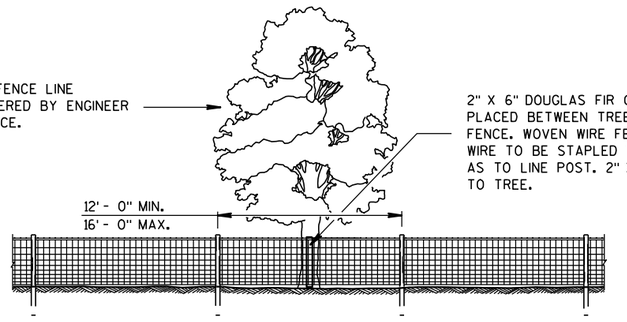
S.D.D. 15 B 1-8a

6

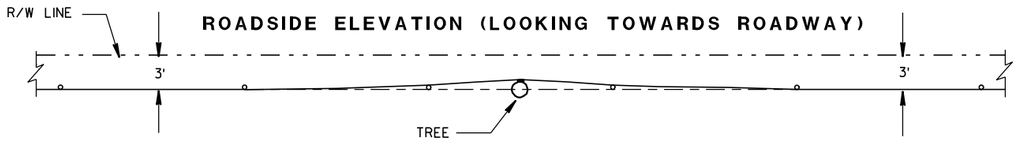
S.D.D. 15 B 1-8a

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.

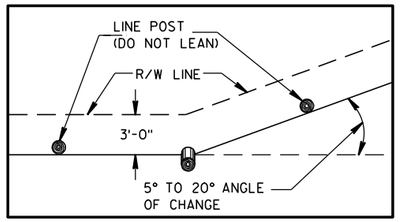


ROADSIDE ELEVATION (LOOKING TOWARDS ROADWAY)

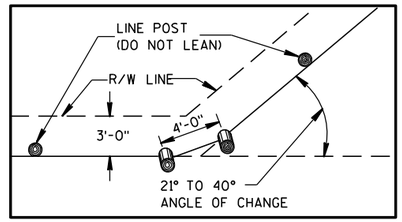


PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



PLAN VIEW
SINGLE POST CORNER

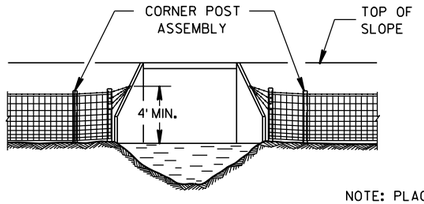


PLAN VIEW
DOUBLE POST CORNER

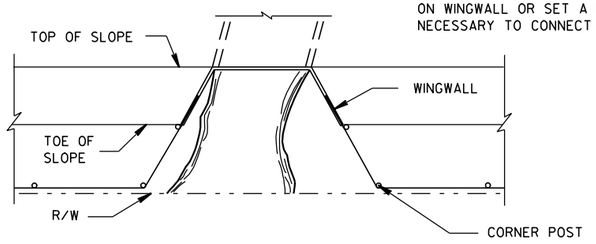
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

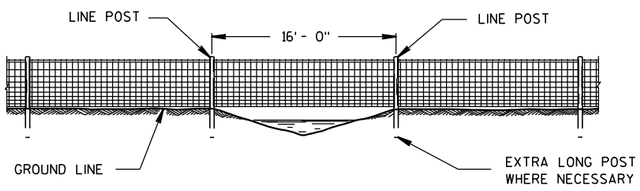
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



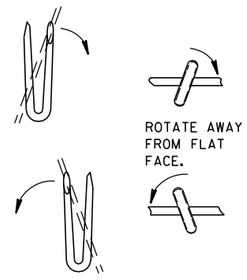
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

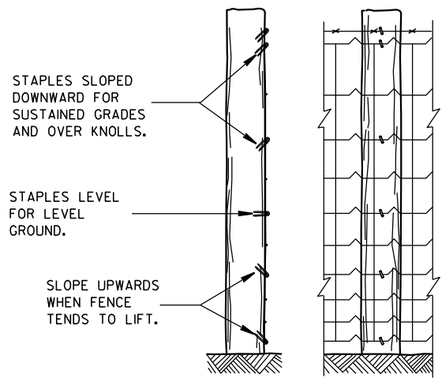


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



LINE POST

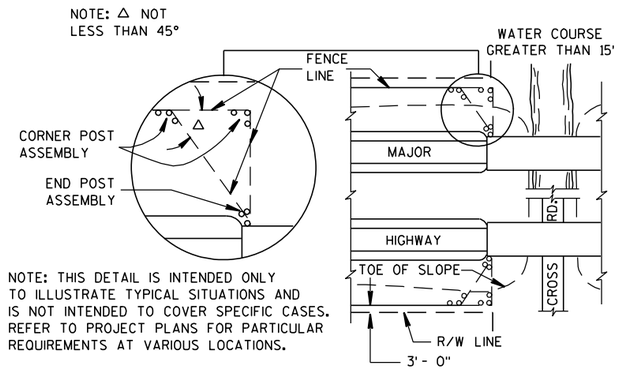
NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION — FARM SIDE ELEVATION

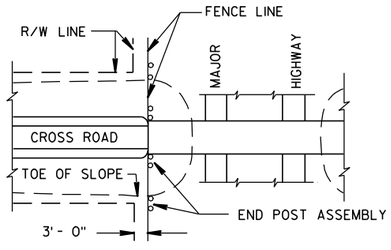
FENCE MOUNTING DETAIL

NOTE: △ NOT LESS THAN 45°



NOTE: THIS DETAIL IS INTENDED ONLY TO ILLUSTRATE TYPICAL SITUATIONS AND IS NOT INTENDED TO COVER SPECIFIC CASES. REFER TO PROJECT PLANS FOR PARTICULAR REQUIREMENTS AT VARIOUS LOCATIONS.

PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW
MAJOR HIGHWAY UNDERPASS

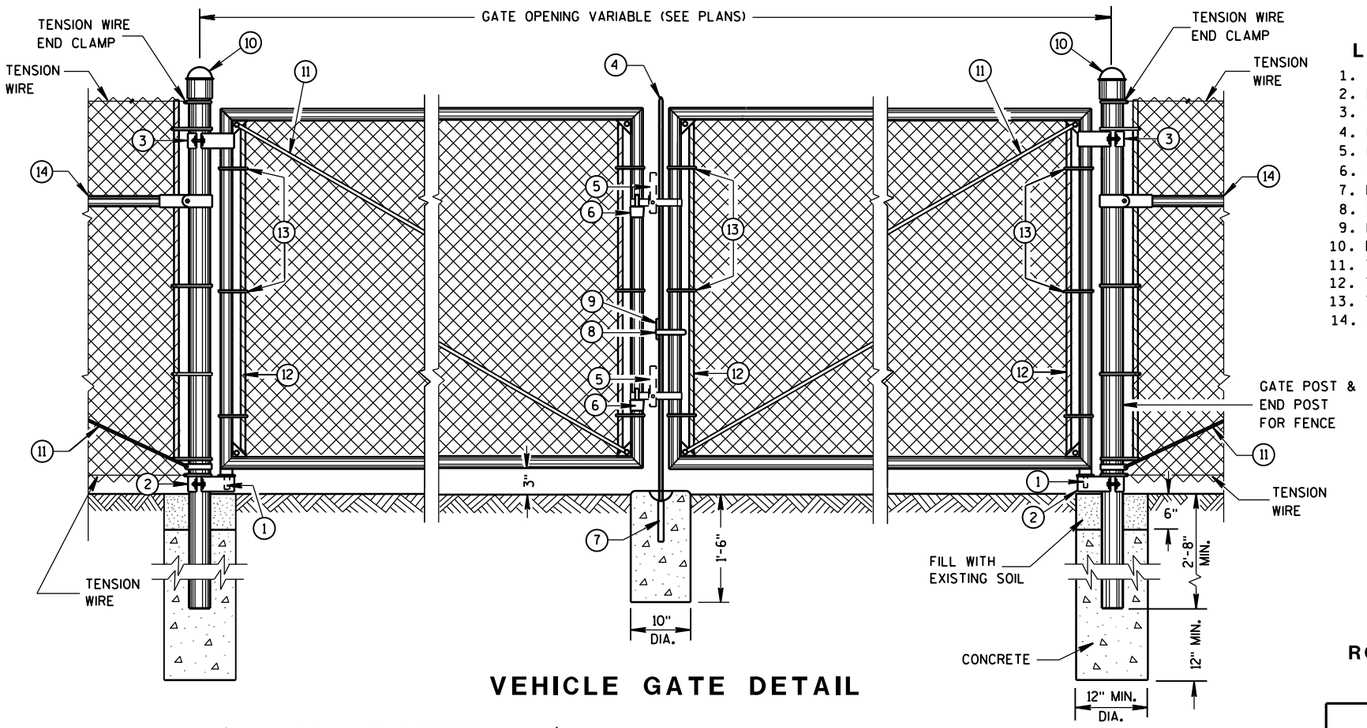
FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

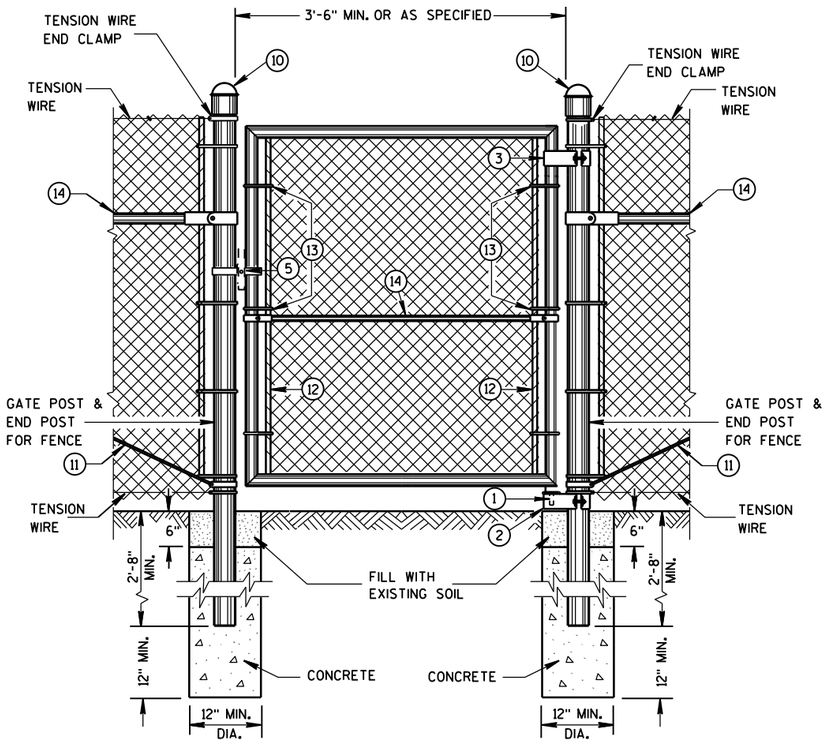
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. Zinn
ROADWAY STANDARDS ENGINEER
386
FHWA

6
S.D.D. 15 B 1-8b



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

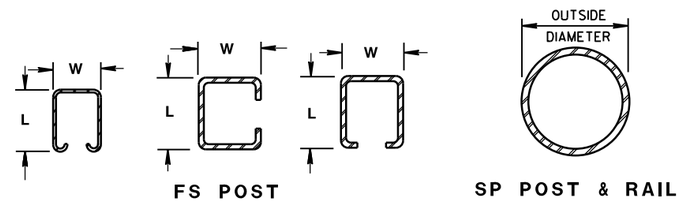
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

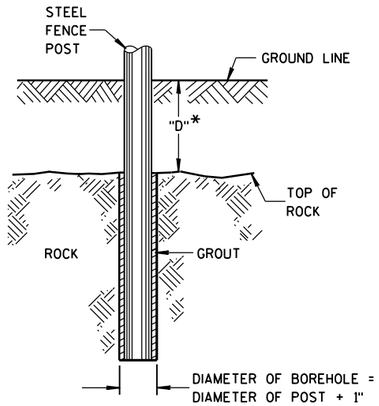
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

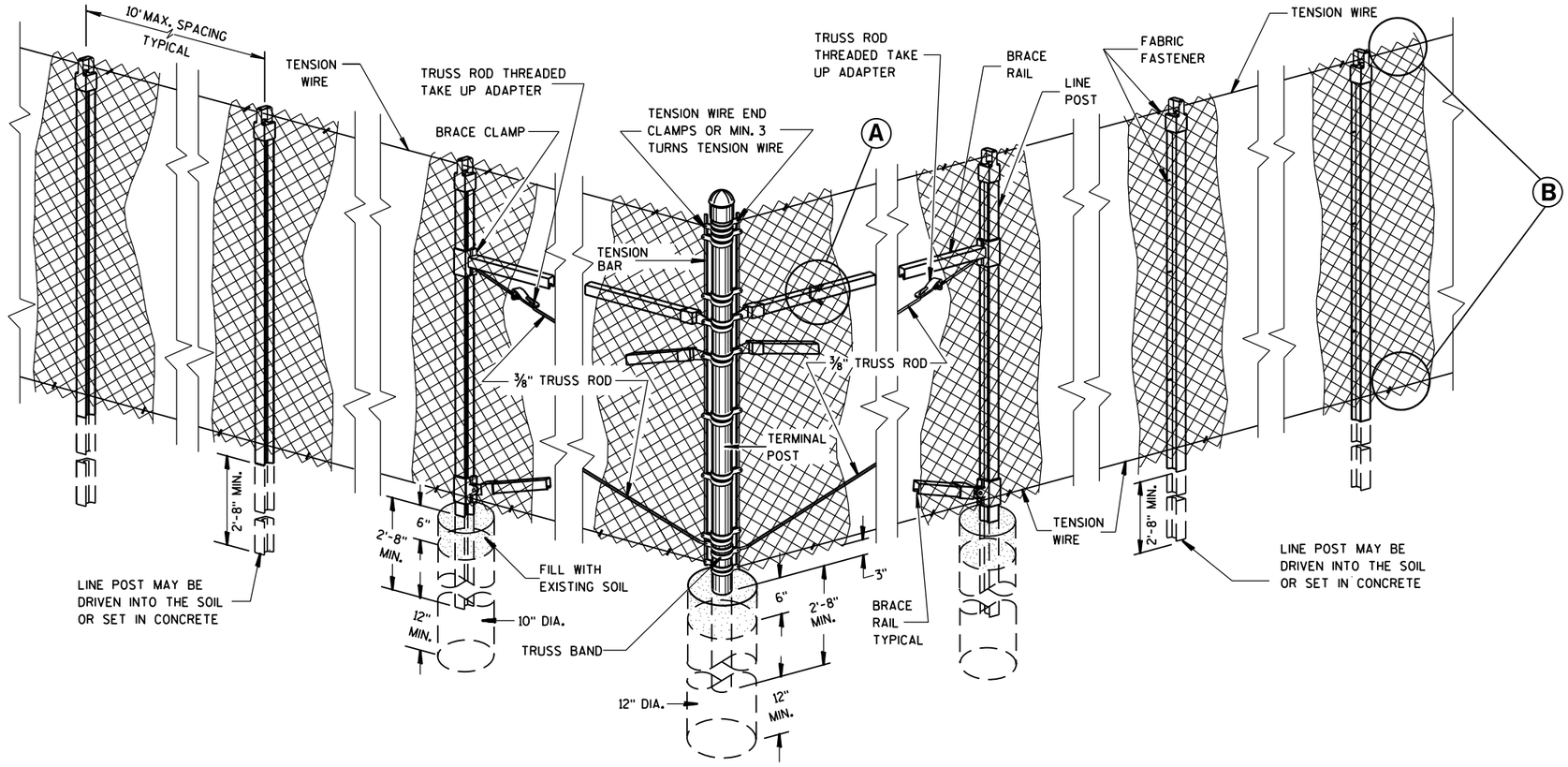
6

S.D.D. 15 B 3-15a

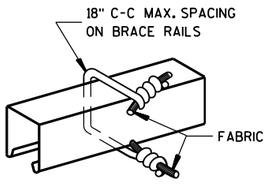


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



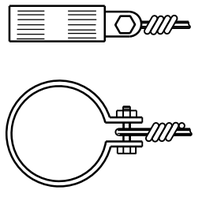
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



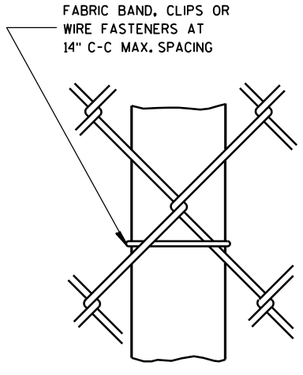
BRACE RAIL

FABRIC FASTENER

Ⓐ



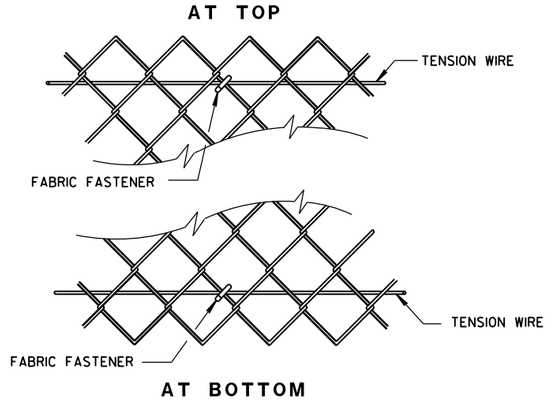
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

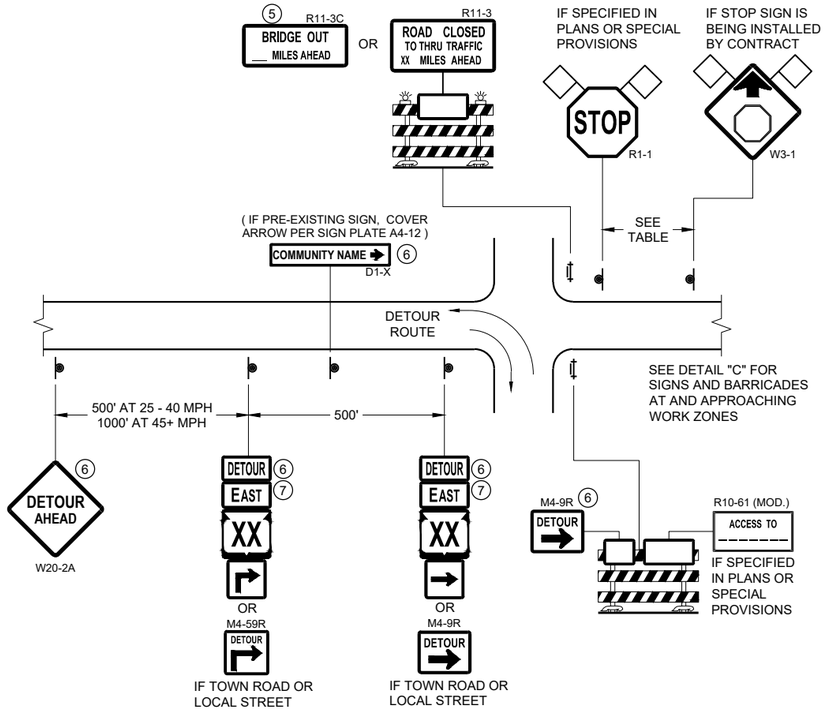
APPROVED
FEB. 2015 DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

388

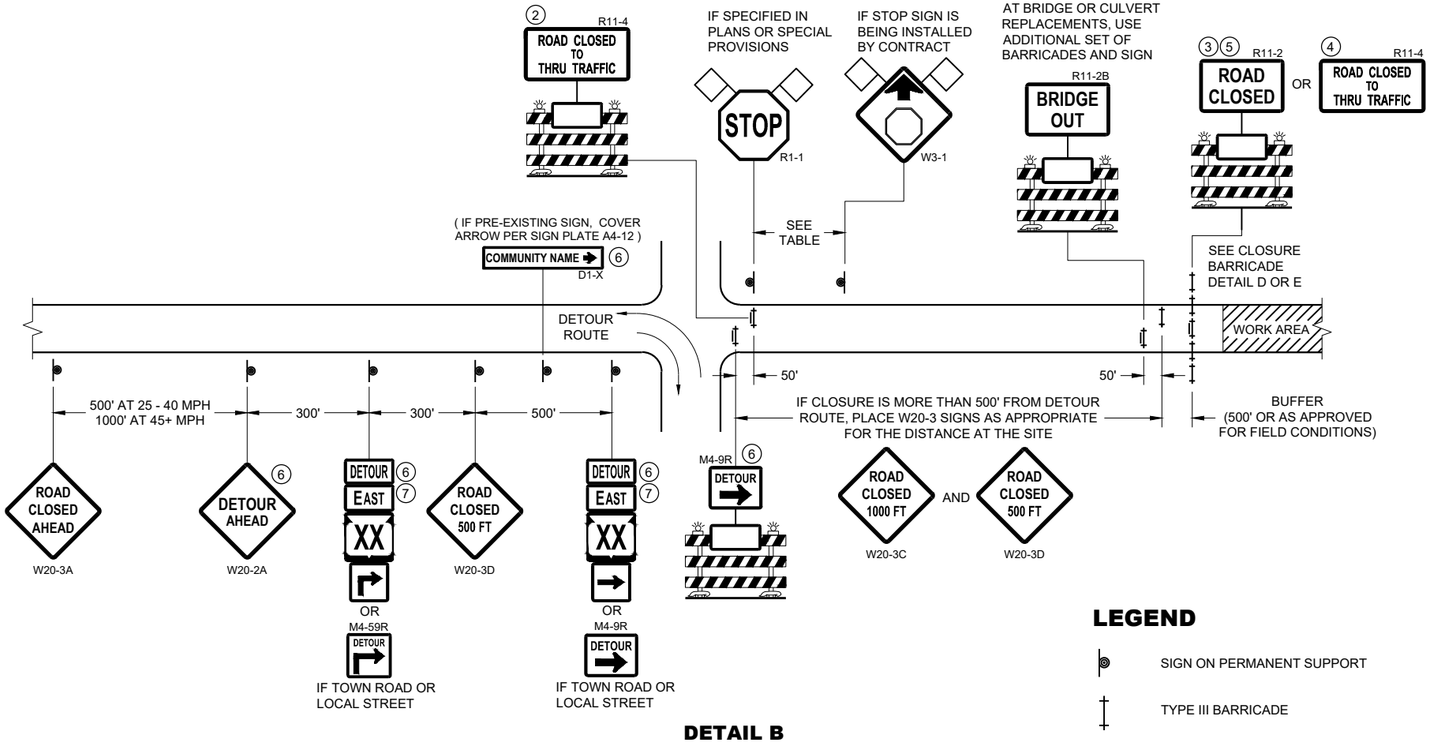
6

S.D.D. 15 B 3-15b



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



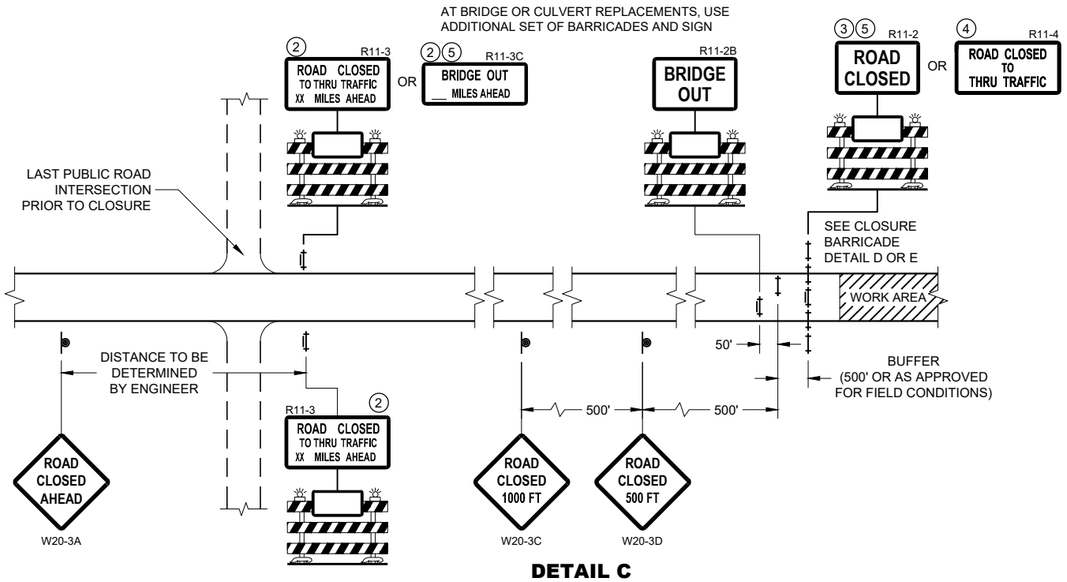
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

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)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 15C02 - 09a

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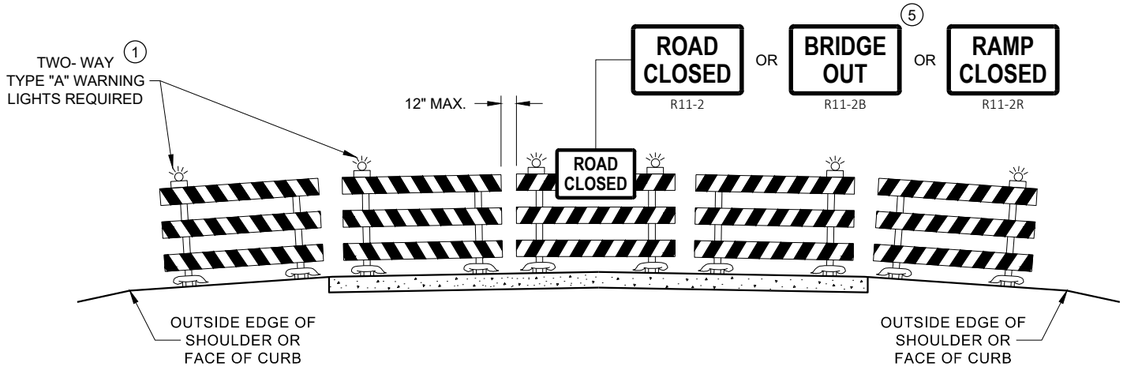
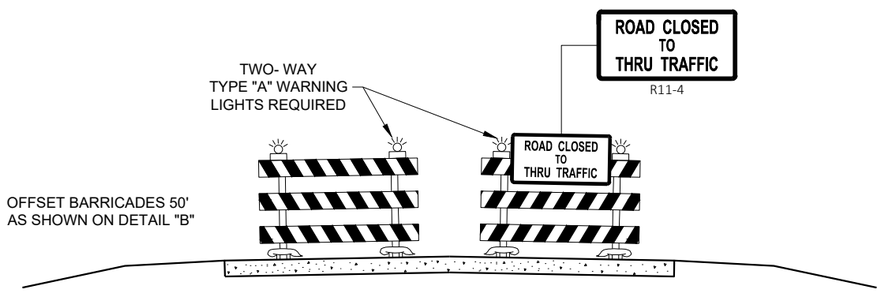


DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



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
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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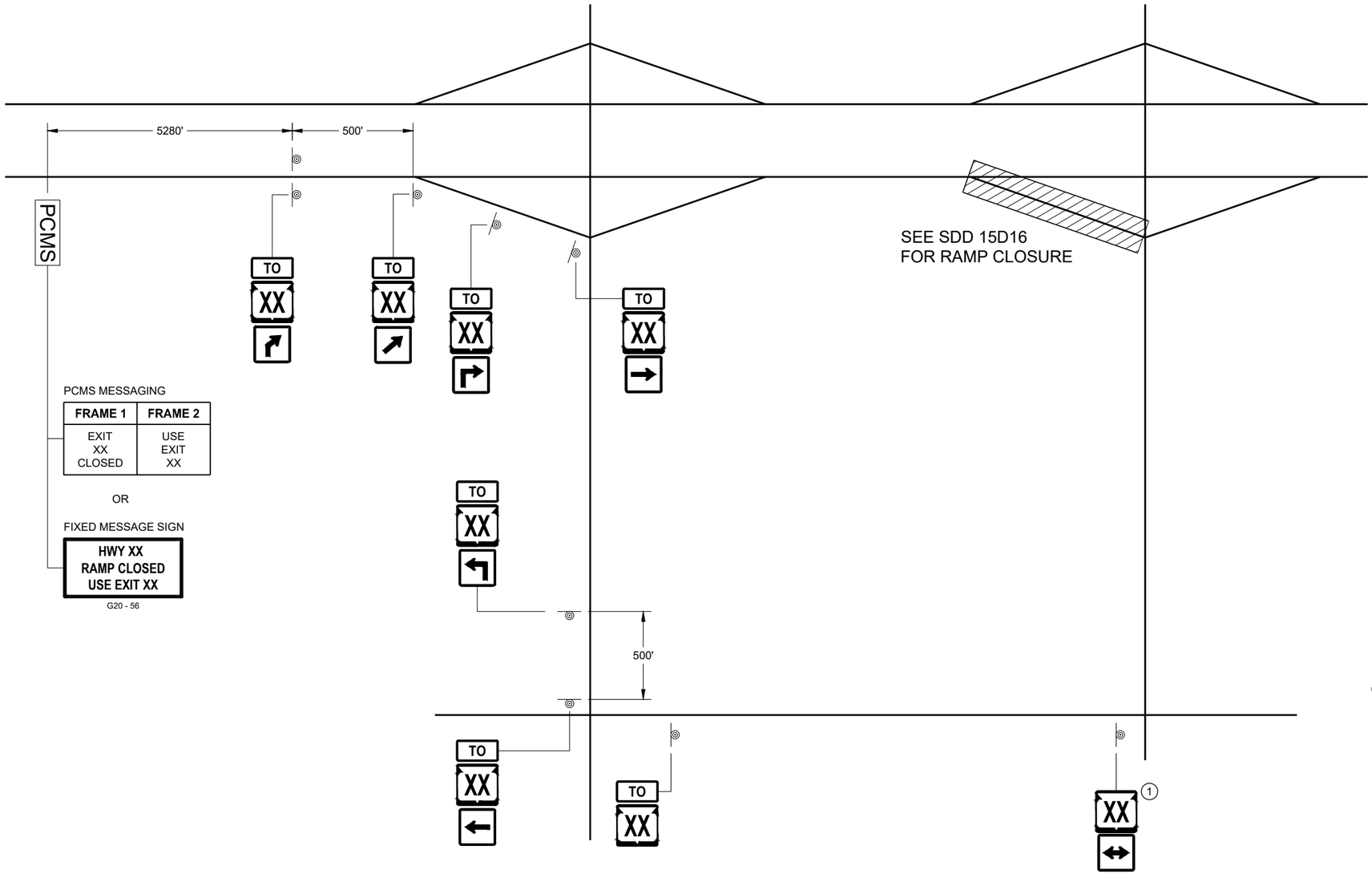
SDD 15C02 - 09b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL "TO" MO-4 SIGN LAYOUT AND SPACING. SEE PROJECT TO SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.



PCMS MESSAGING

FRAME 1	FRAME 2
EXIT XX CLOSED	USE EXIT XX

OR

FIXED MESSAGE SIGN

HWY XX
RAMP CLOSED
USE EXIT XX

G20 - 56

LEGEND

SIGN ON PERMANENT SUPPORT

PCMS PORTABLE CHANGEABLE MESSAGE SIGN

TO MO4 - 5

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M05 - 2 OR M06 - 1 OR M06 - 2 OR M06 - 4

GENERAL NOTES

SEE SDD 15D16 "TRAFFIC CONTROL, EXIT RAMP CLOSURE" DETAIL FOR TRAFFIC CONTROL AT EXIT RAMP CLOSURE.

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

IF THERE ARE ANY ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE "TO" MO-4 ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT TO SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND "TO" MO-4 SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.

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

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOW:
- MO4 - 5 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, MO5 - 2, AND MO6 - 1, SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS).

(1) ONLY ADD IF THERE ARE NO EXISTING ROUTE MARKERS FOR THE INTERSECTING ROADWAY.

OFF RAMP
LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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SDD 15C02 - 09e

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SDD 15C02 - 09e

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

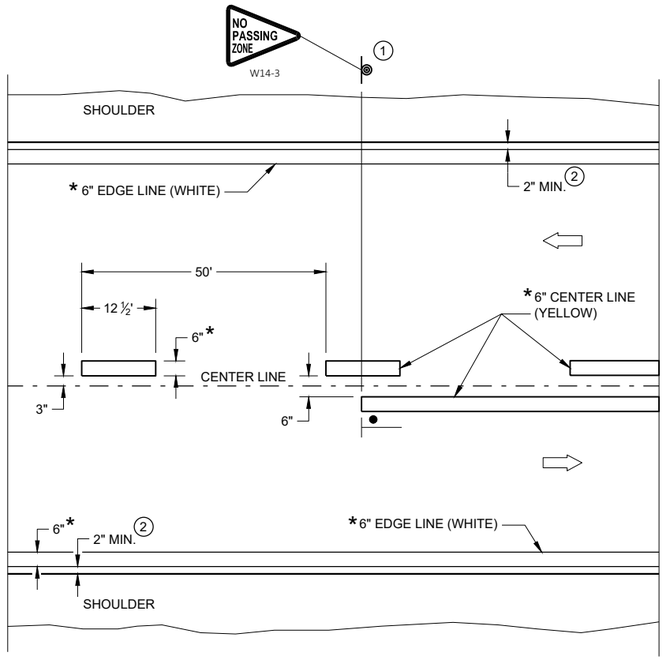
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

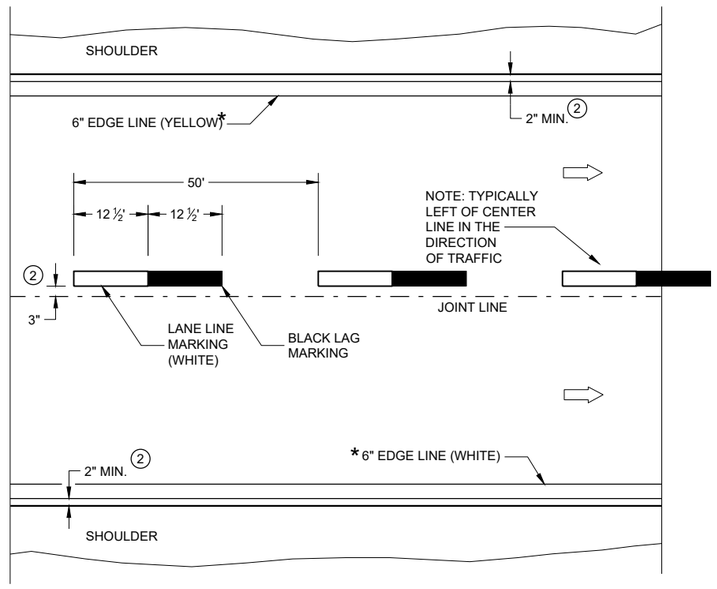
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2023
DATE

/S/ Jeannie Silver
STATEWIDE SIGNING AND M
ENGINEER

FHWA

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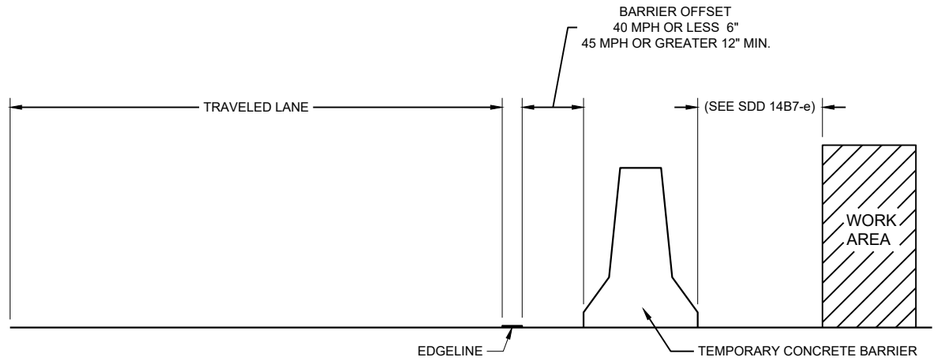
SDD 15C08-23a

SDD 15C08-23a



TEMPORARY BARRIER OFFSET FROM EDGELINE

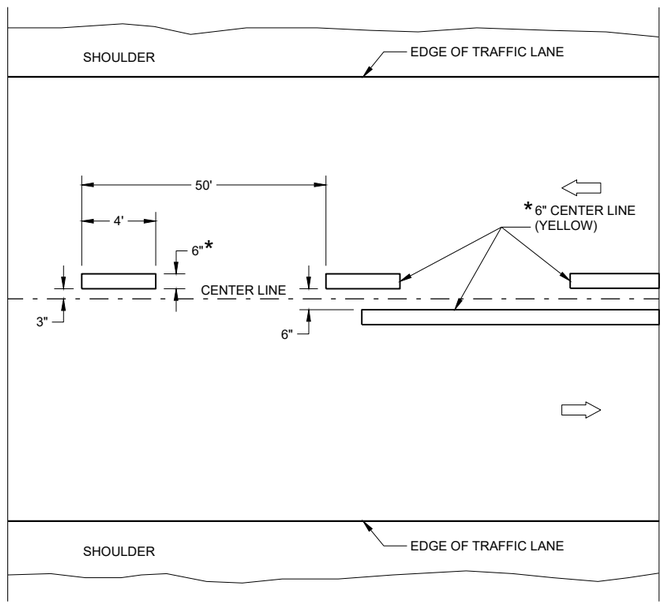
GENERAL NOTES

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

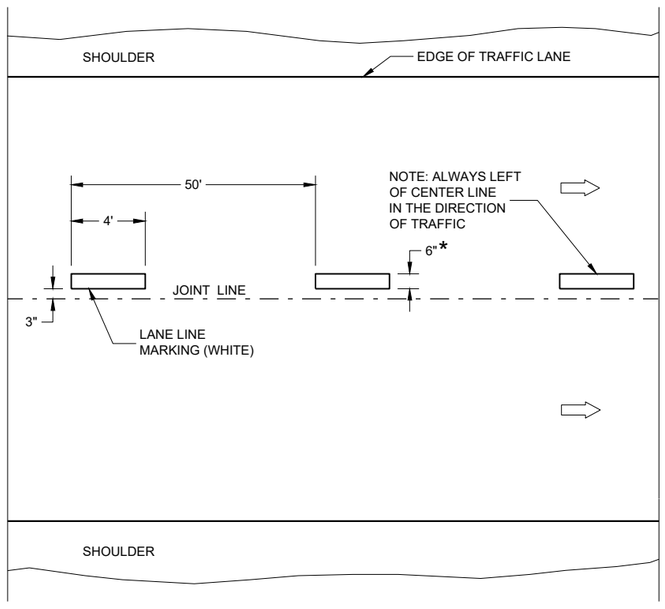
LEGEND

⇨ DIRECTION OF TRAFFIC

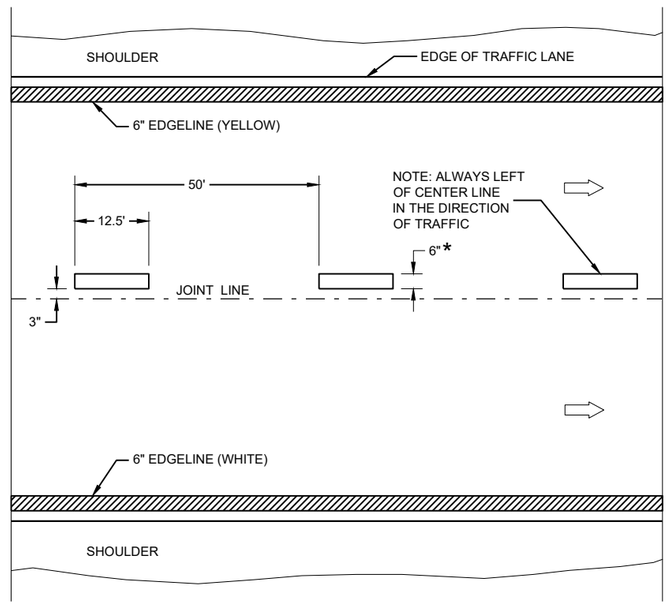
* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

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SDD 15C08-23b

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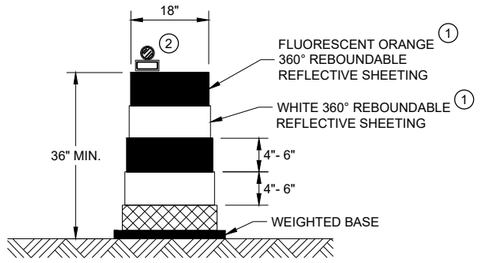
SDD 15C08-23b

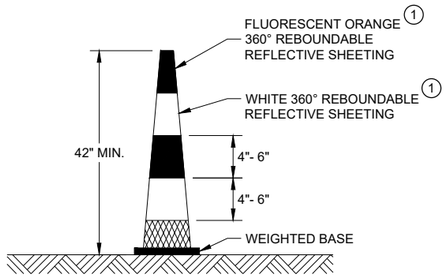
GENERAL NOTES

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.



DRUM

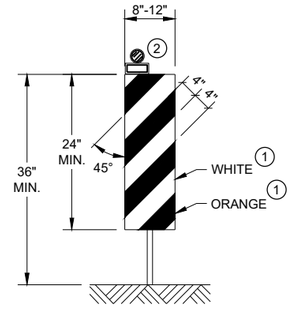
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

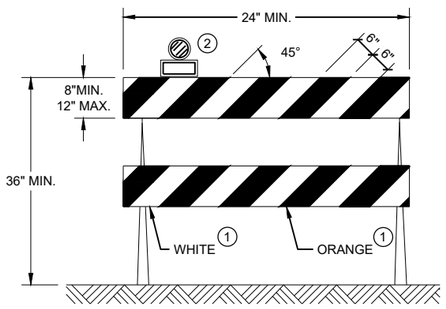
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



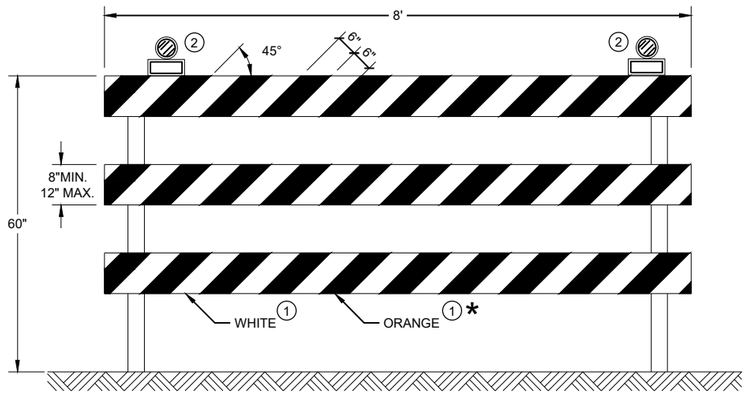
VERTICAL PANEL

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



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
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C11 - 10b

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SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

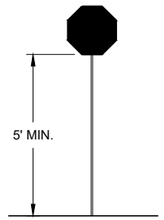
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



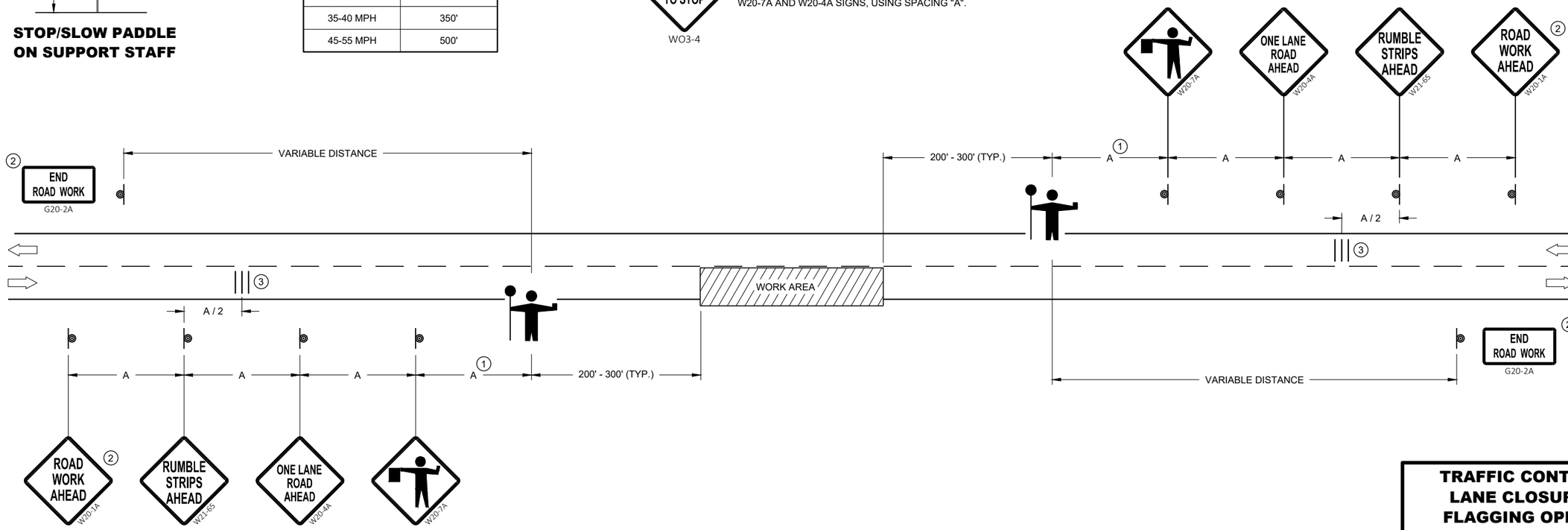
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C12 - 09a

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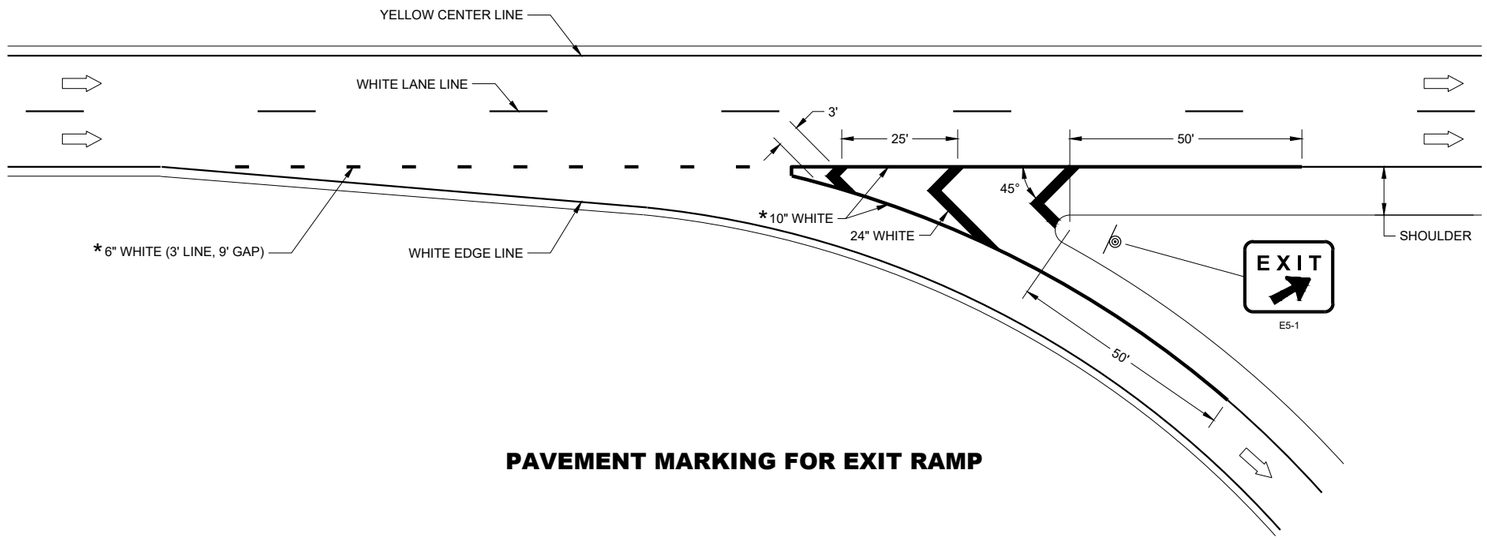
SDD 15C12 - 09a



PAVEMENT MARKING FOR EXIT RAMP

GENERAL NOTES

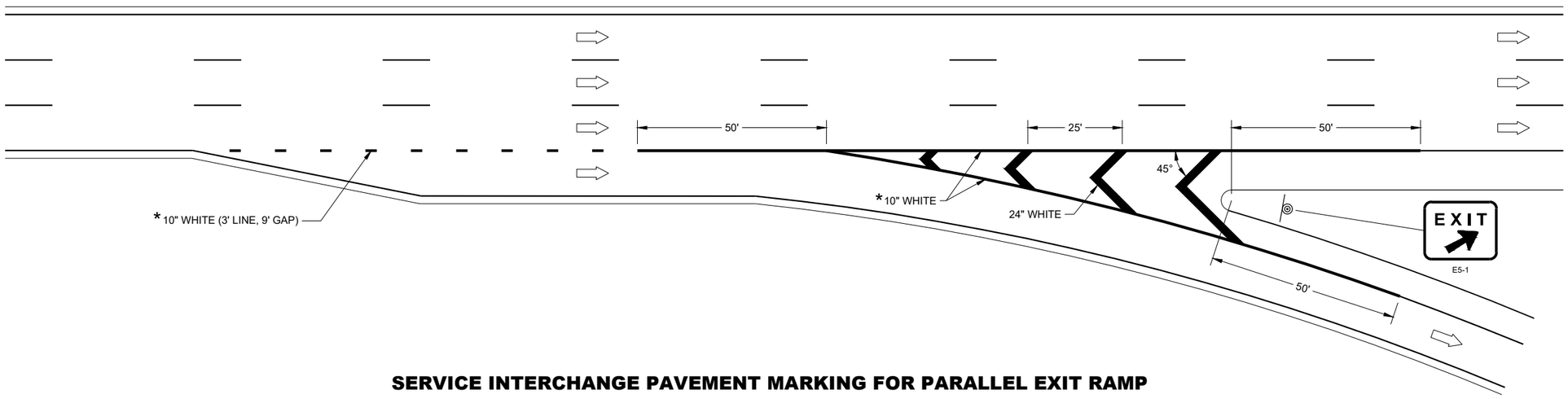
PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT RAMP

6

SDD 15C31-05a

PAVEMENT MARKING, EXIT RAMP AND PARALLEL EXIT RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

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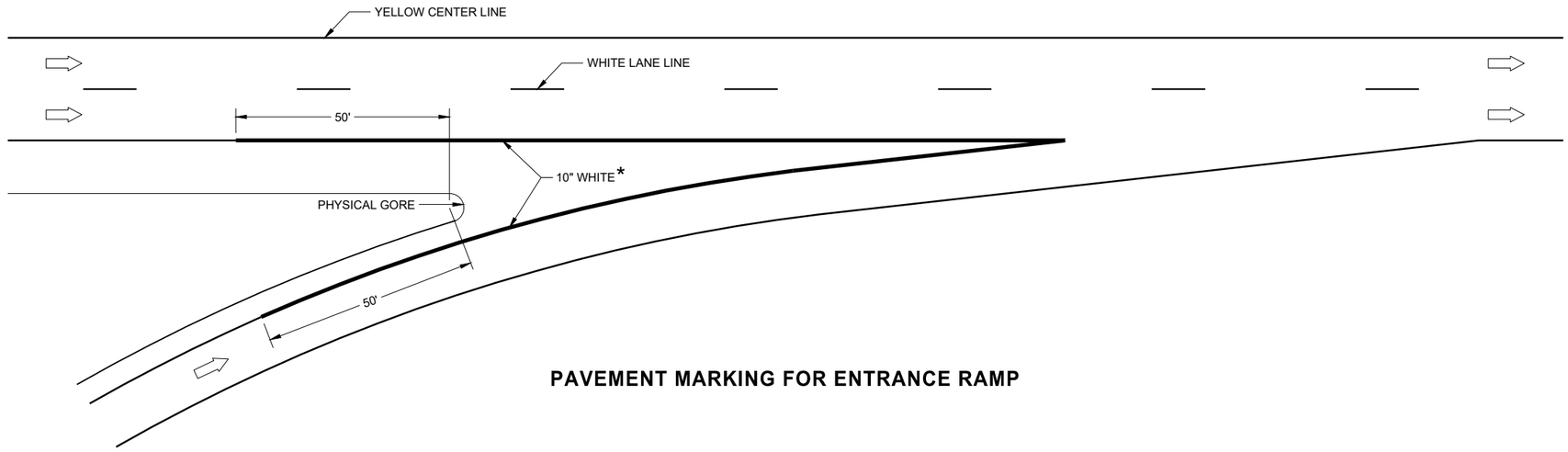
SDD 15C31-05a



PAVEMENT MARKING FOR ENTRANCE RAMP

GENERAL NOTES

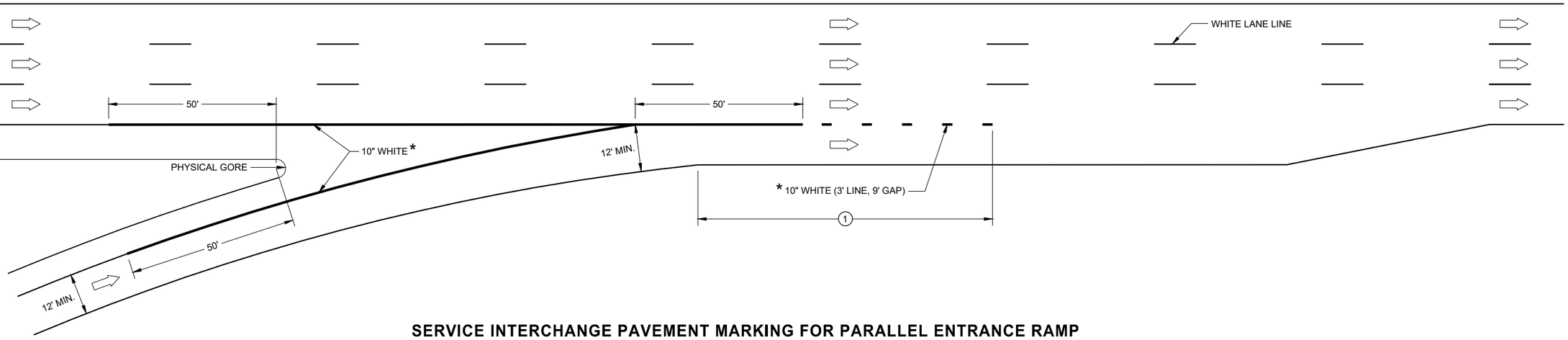
PLACE GROOVE 3 INCHES LEFT OF JOINT.

(1) ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

LEGEND

DIRECTION OF TRAVEL

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE RAMP

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SDD 15C31-05c

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SDD 15C31-05c

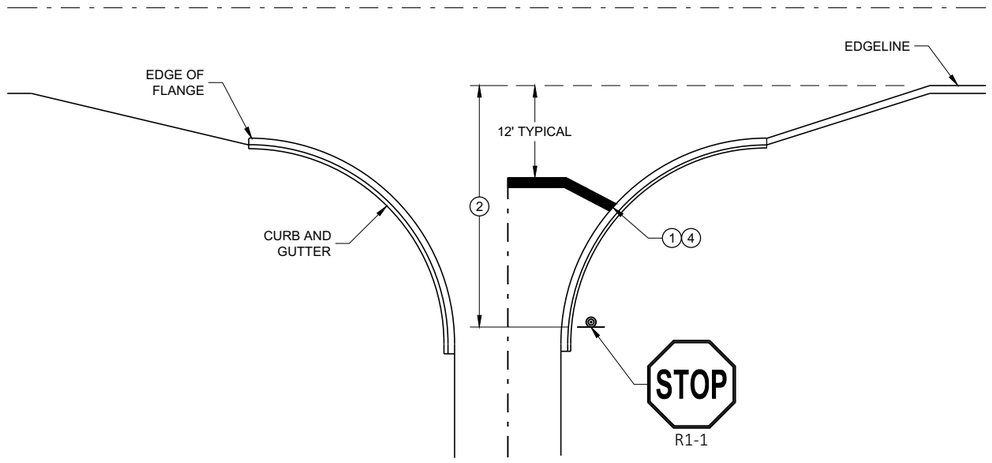
PAVEMENT MARKING, ENTRANCE RAMP AND PARALLEL ENTRANCE RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTA

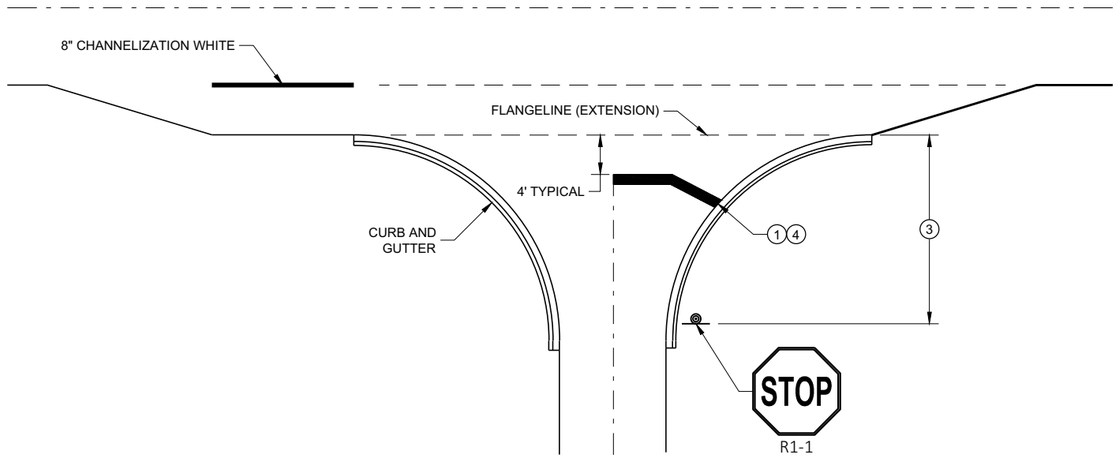
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

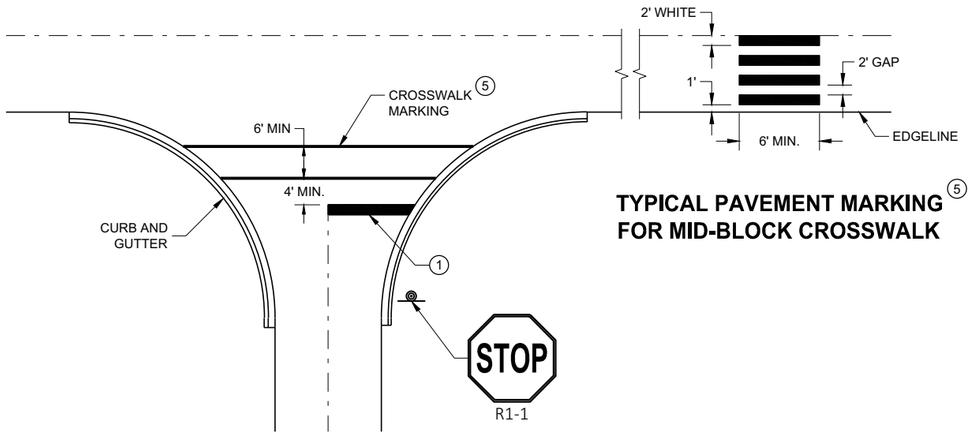
1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
3. NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
4. MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
5. LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER

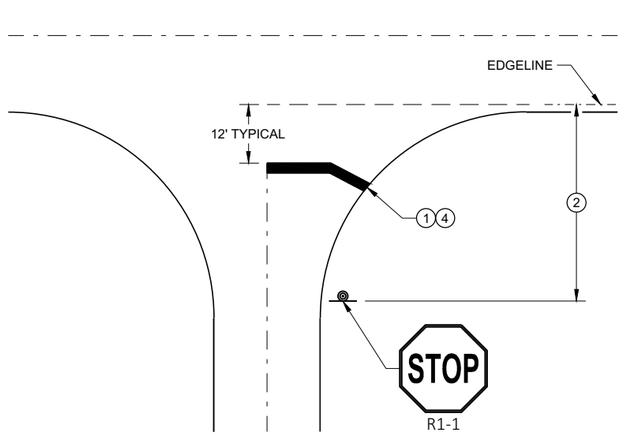


TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING

TYPICAL PAVEMENT MARKING FOR MID-BLOCK CROSSWALK 5



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

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SDD 15C33 - 04

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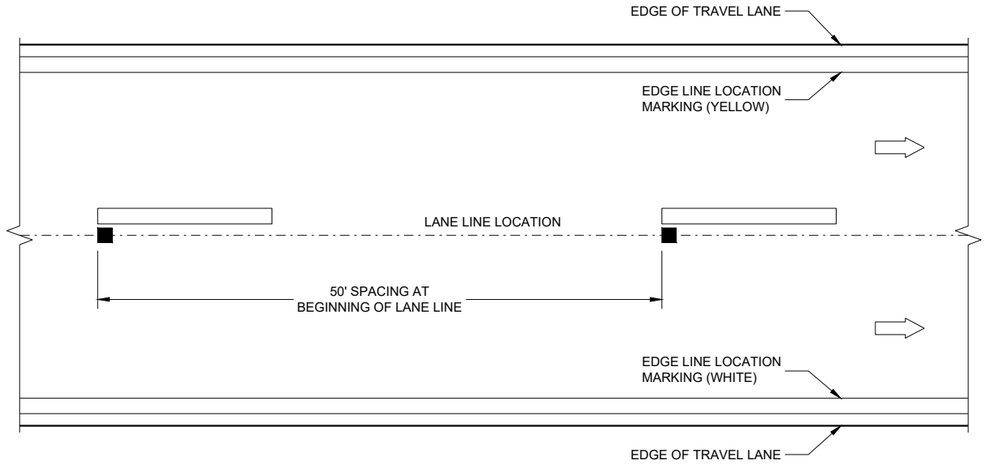
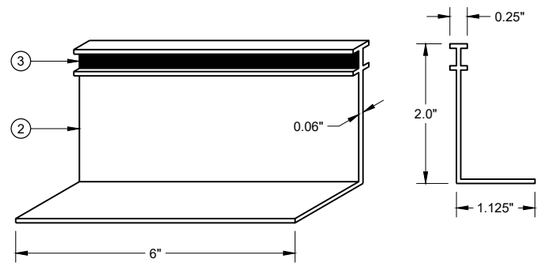
SDD 15C33 - 04



LONGITUDINAL PLACEMENT 6 - INCH LANE LINE



ISOMETRIC VIEW **SIDE VIEW**

TEMPORARY RAISED PAVEMENT MARKER, TYPE II

GENERAL NOTES

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

COLOR OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II, SHALL MATCH THE COLOR OF THE MARKING THEY SUPPLEMENT.

PLACEMENT OF TEMPORARY RAISED PAVEMENT MARKERS ON EDGE LINES IS OPTIONAL. IF PLACED ON EDGE LINES, MAXIMUM SPACING SHALL BE 50 FEET.

PROVIDE SINGLE OR MULTI-COVER TEMPORARY RAISED PAVEMENT MARKERS AS SHOWN ON PLAN.

MARK "T"s ON PAVEMENT FOR REESTABLISHING NO PASSING ZONES.

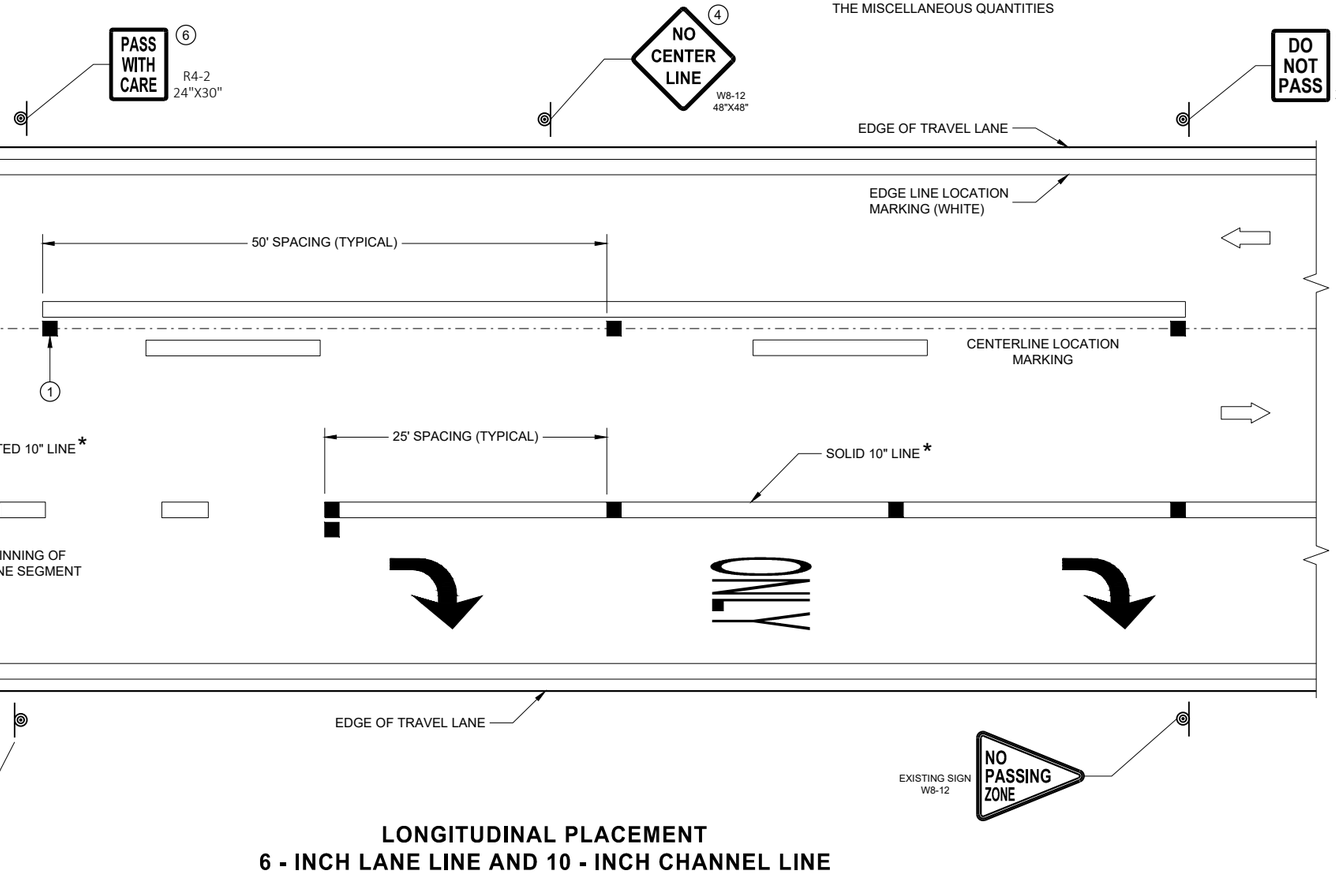
SAME DAY TEMPORARY PAVEMENT MARKING MAY BE USED IN LIEU OF TEMPORARY RAISED PAVEMENT MARKERS, TYPE II.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF TEMPORARY SAME DAY PAVEMENT MARKING IS USED, ENSURE PROPOSED PAVEMENT MARKING ARE PLACED IN THE EXACT LOCATIONS AS THE EXISTING MARKINGS, USING A MINIMAL AMOUNT OF TEMPORARY RAISED MARKERS, TYPE II OR OTHER METHODS AS APPROVED BY THE ENGINEER.

IF ROADWAY IS DETOURED DURING CONSTRUCTION, THE "DO NOT PASS, "PASS WITH CARE" AND "NO CENTERLINE" SIGNS MAY BE OMITTED, PROVIDING A LIQUID MARKING IS INSTALLED BEFORE THE ROADWAY IS REOPENED TO TRAFFIC.

* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



LONGITUDINAL PLACEMENT
6 - INCH LANE LINE AND 10 - INCH CHANNEL LINE

1. FOR DOUBLE SOLID YELLOW, PLACE THE MARKERS BETWEEN THE LINES.
2. MARKERS SHALL BE OF POLYURETHANE MATERIAL.
3. MARKERS SHALL HAVE A MINIMUM SIZE REFLECTIVE SURFACE OF 6-INCH WIDTH X 0.25 INCH HEIGHT.
4. "NO CENTER LINE" SIGNS SHALL BE PLACED AT THE BEGINNING OF PROJECT, AT TWO MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS.
5. "DO NOT PASS" SIGNS SHALL BE INSTALLED AT THE BEGINNING OF NO PASSING ZONES. ADDITIONAL "DO NOT PASS" SIGNS SHALL BE INSTALLED AT ONE MILE INTERVALS AND AFTER STATE AND COUNTY HIGHWAY INTERSECTIONS WITHIN THE NO PASSING ZONE.
6. "PASS WITH CARE" SIGNS SHALL BE PLACED AT THE DOWNSTREAM END OF NO PASSING ZONES.

LEGEND

- TEMPORARY RAISED PAVEMENT MARKER, TYPE II
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC.

STANDARD APPLICATION FOR TEMPORARY RAISED PAVEMENT MARKERS, TYPE II

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MAF ENGINEER

FHWA

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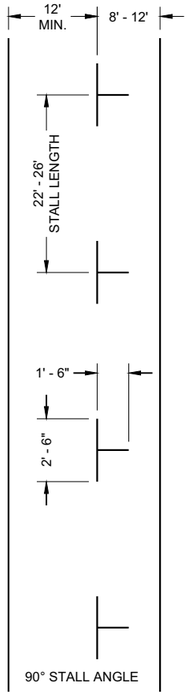
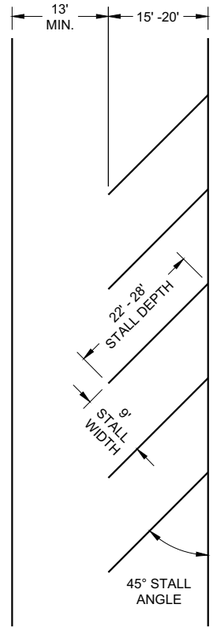
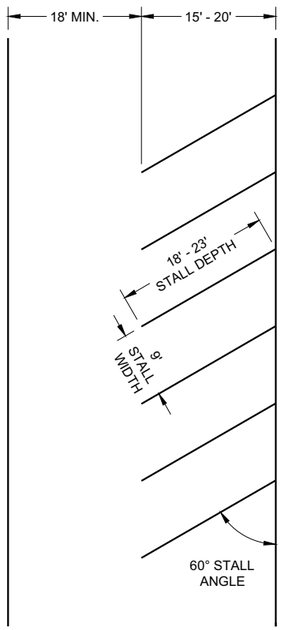
SDD 15C34-04



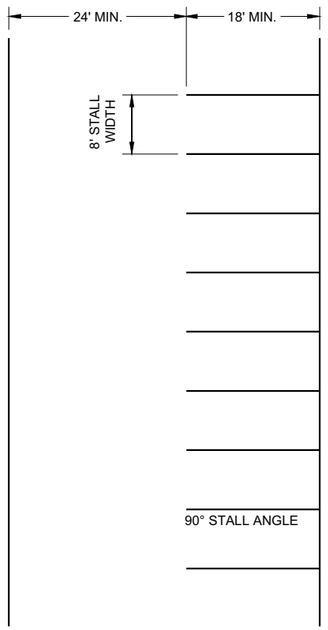
PARALLEL PARKING





ANGLED PARKING

(ANGLED PARKING IS NOT ALLOWED ON STATE HIGHWAYS UNLESS A DESIGN JUSTIFICATION HAS BEEN COMPLETED.)



PARKING LOTS

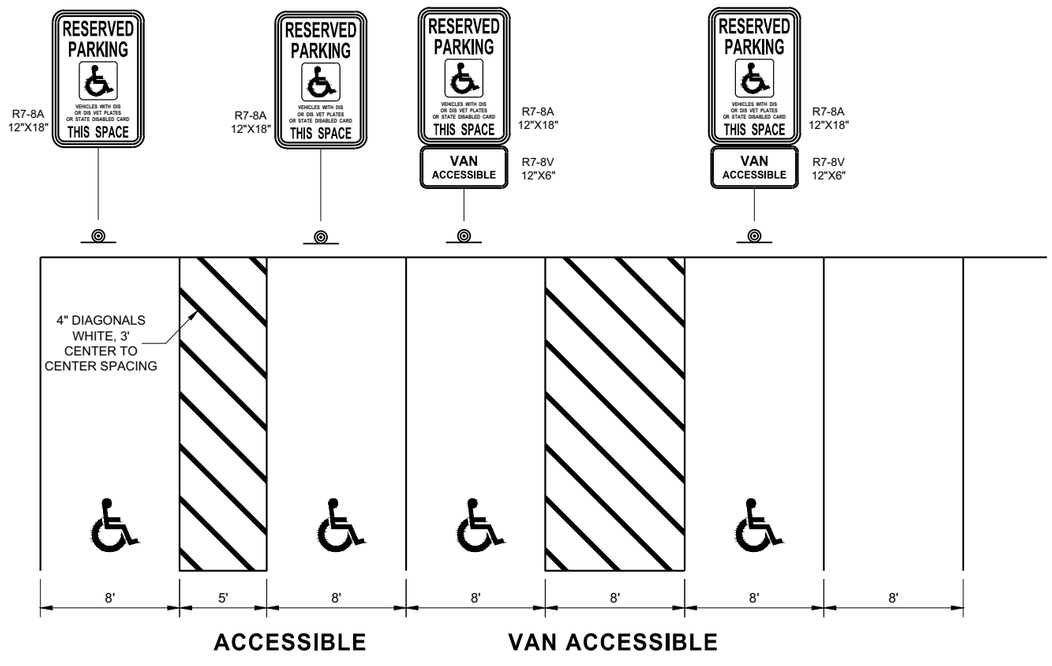
GENERAL NOTES

ALL LINES 4" WHITE (UNLESS OTHERWISE NOTED)

LAST PARKING STALL IS A MINIMUM OF 15' FROM THE CROSSWALK.

LEGEND

SIGN ON PERMANENT SUPPORT



ACCESSIBLE

VAN ACCESSIBLE

PARKING STALL MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019
DATE

/S/ Matthew Rauch
STATE SIGNING AND MAF ENGINEER

FHWA

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SDD 15C36 - 01

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SDD 15C36 - 01

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

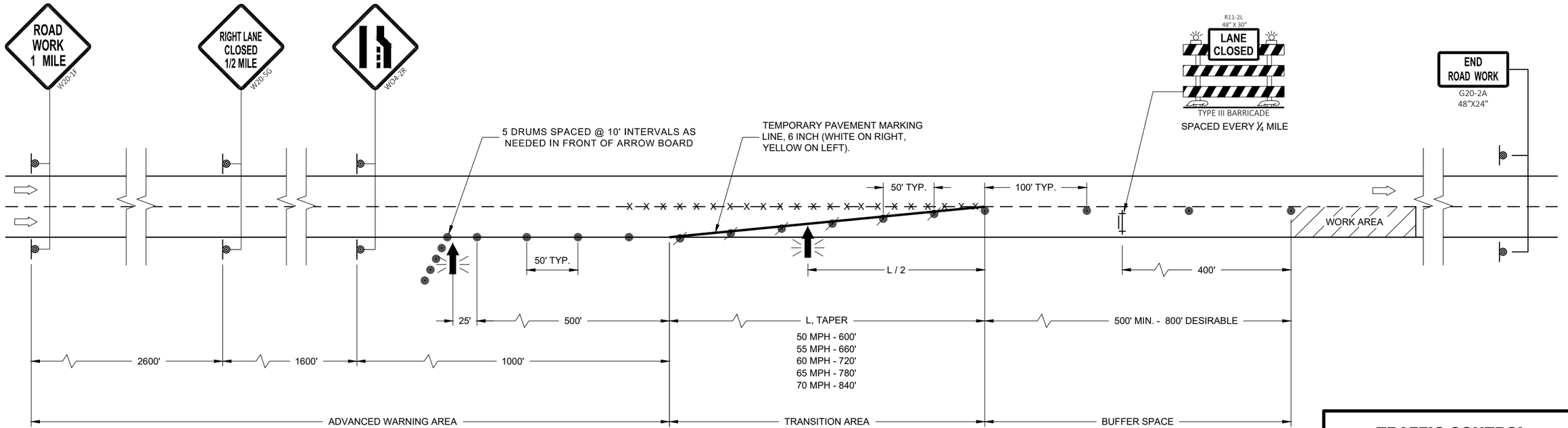
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15D12 - 11a

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SDD 15D12 - 11a

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

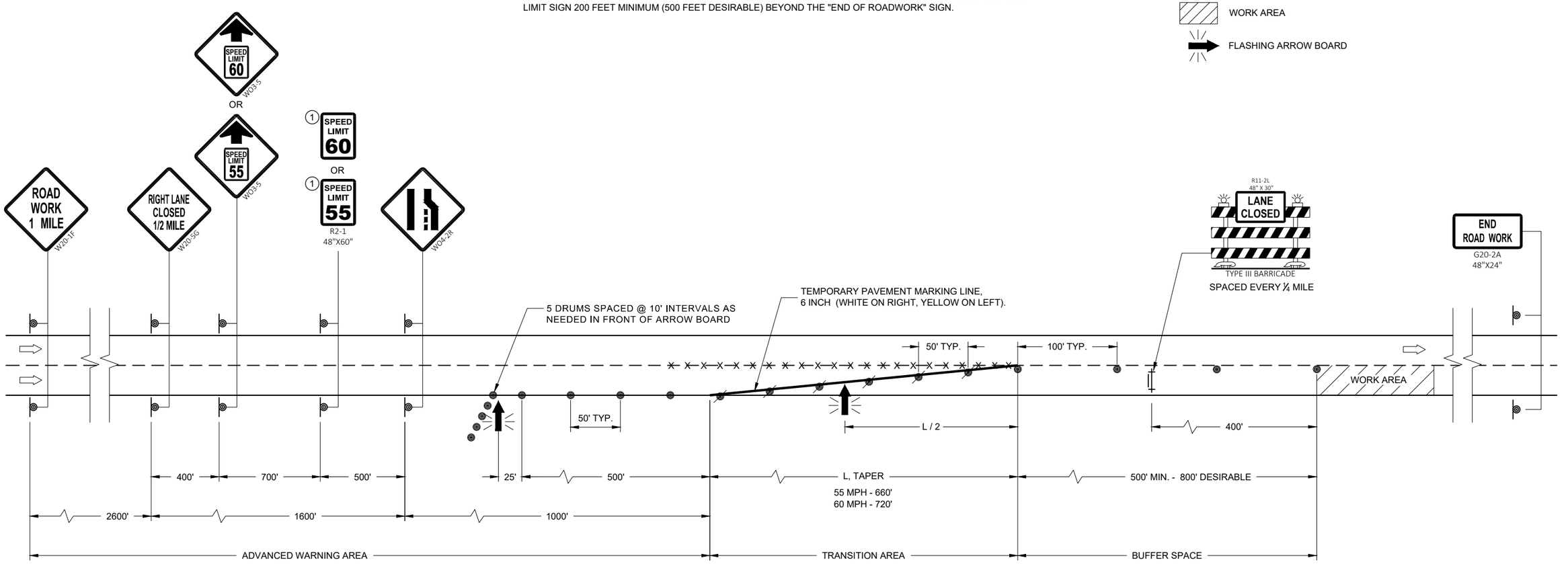
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

(1) A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
402

FHWA

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SDD 15D12 - 11b

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SDD 15D12 - 11b

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD
- (S) PORTABLE TRAFFIC SENSOR (PTS)
- FBS FLASHING BEACON SIGN

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

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

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

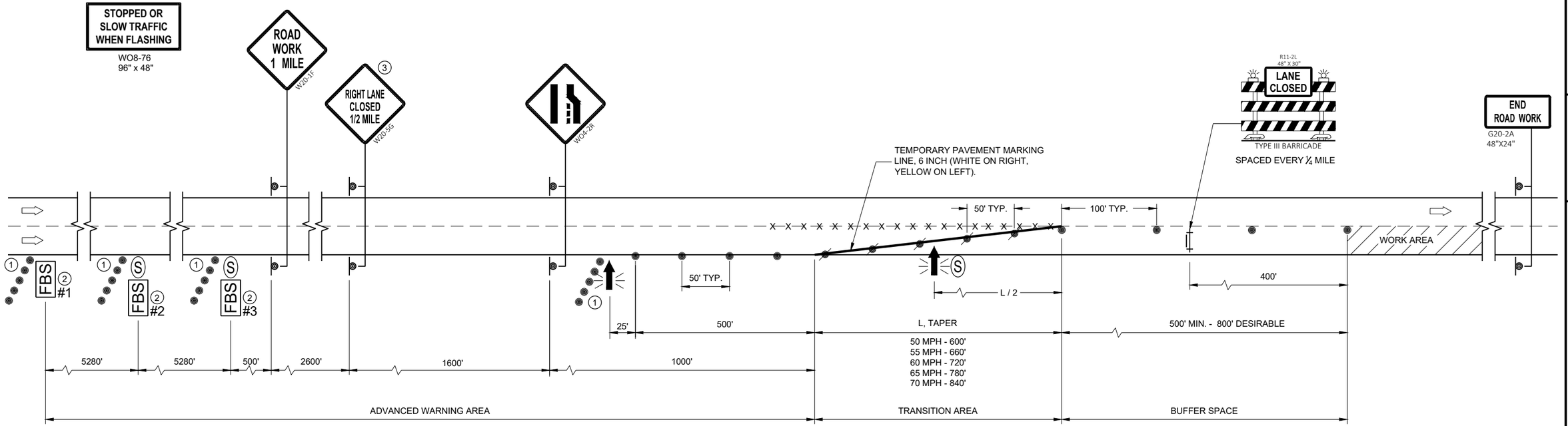
CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

PORTABLE TRAFFIC SENSOR (PTS) MAY BE MOUNTED ON THE FBS, ARROW BOARD OR OTHER TRAILER DEVICES.

① 5 DRUMS SPACED AT 10 FOOT INTERVALS AS NEEDED.

② IF THERE ARE MORE THAN TWO LANES OR IF SPECIFIED IN THE PLANS, PLACE FBS ON BOTH SIDES OF THE ROADWAY.

③ IF THERE IS AN APPROVED TEMPORARY SPEED DECLARATION, ADD WO-3-5 SIGNS 400 FEET AFTER THE W20-5G SIGNS AND ADD R2-1 SIGNS (48"x60") 700 FEET AFTER THE WO3-5 SIGNS. A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A "RESUME SPEED LIMIT" SIGN 200 FEET MINIMUM (800 FEET DESIRABLE) BEYOND THE G30-3A "END ROAD WORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, BASIC TRAFFIC QUEUE WARNING SYSTEM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Erin Schwark
WORK ZONE ENGINEE

FHWA

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SDD 15D12 - 11d

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SDD 15D12 - 11d

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

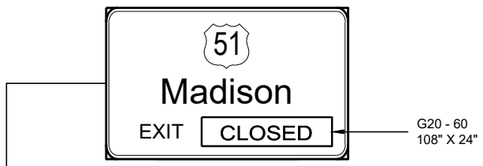
PLACE TEMPORARY PAVEMENT MARKING LINE IF RAMP CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROP OFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12 - HOUR DURATION.

(1) W20 - 1A AND G20 - 2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

(2) PLACE "RAMP CLOSED BEGINNING" SIGN OR PCMS 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



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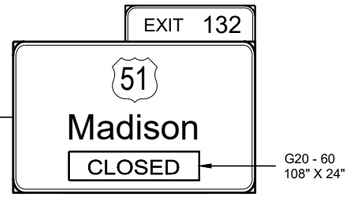
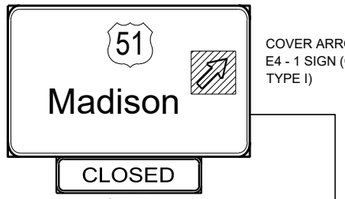
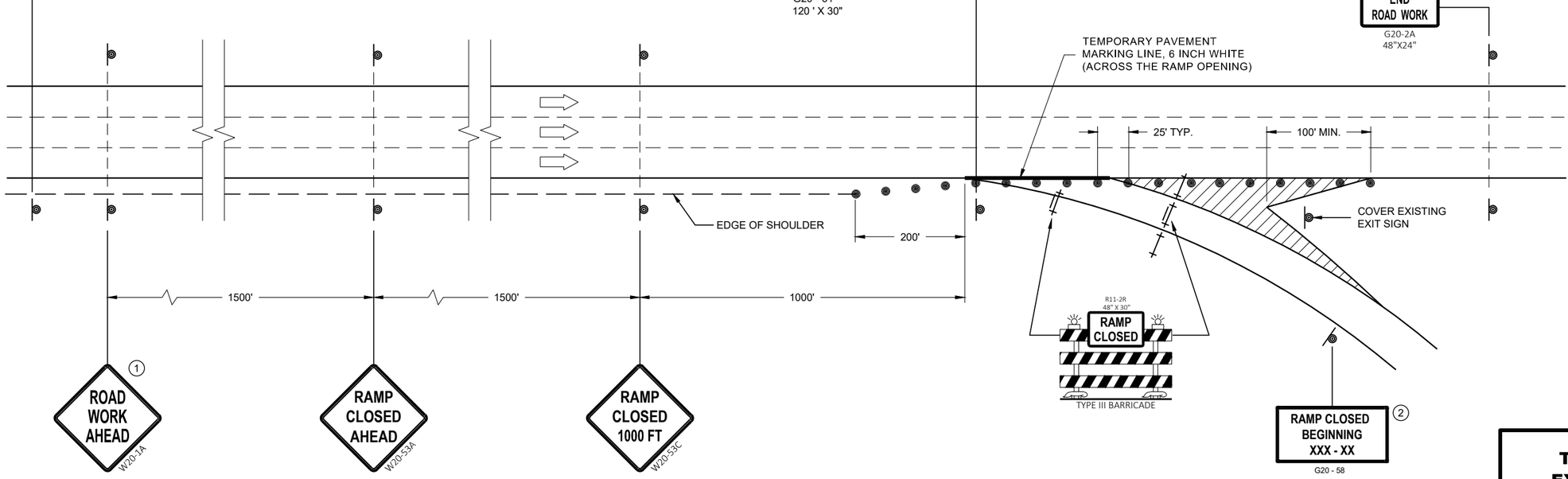


PLACE SIGN G20 - 60 OVER MILEAGE ON EXISTING E1 - 1A SIGN



G20 - 61
120 ' X 30"

COVER ARROW ON EXISTING E4 - 1 SIGN (COVERING SIGNS TYPE I)



OR

PCMS MESSAGING

FRAME 1	FRAME 2
RAMP TO CLOSE	XXXDAY XX XX XX

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 15D16-06

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKING (SEE GENERAL NOTES)
- WORK AREA

GENERAL NOTES

FOR WORK ON ROADWAYS WITH SPEEDS GREATER THAN 45MPH, USE SDD 15D12.

THIS LANE CLOSURE DETAIL IS TYPICAL FOR CLOSING THE LEFT LANE. FOR A RIGHT LANE CLOSURE, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR ROADWAYS WITH EITHER TWO OR THREE LANES IN EACH DIRECTION.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"X 36" SIGNS MAY BE USED IF APPROVED BY REGIONAL TRAFFIC UNIT.

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

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

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON TEMPORARY SUPPORTS.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

W20-1A, G20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE LANE CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE APPROACHING DRIVER HAS A CLEAR VIEW OF THE ARROW BOARDS AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

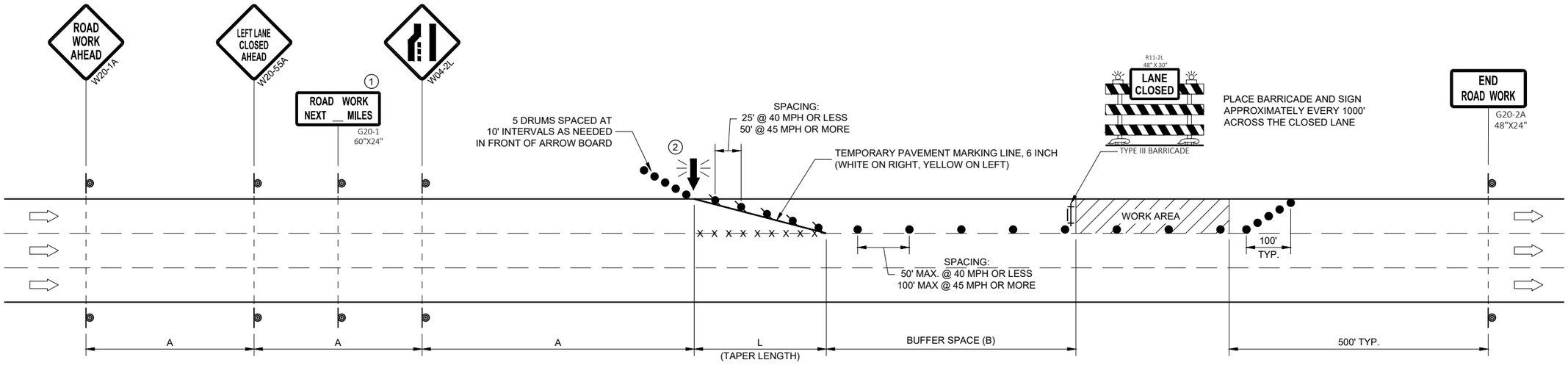
BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

(1) OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

(2) WHERE THE SHOULDER OR TERRACE HAS INSUFFICIENT SPACE TO PLACE THE ARROW BOARD AS SHOWN, PLACE THE ARROW BOARD AT THE END OF THE TAPER.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	TAPER LENGTH (12 FT. LANE) (L) FEET	BUFFER SPACE (B) FEET
25	200'	125'	55'
30	200'	180'	85'
35	350'	245'	120'
40	350'	320'	170'
45	500'	540'	220'

TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

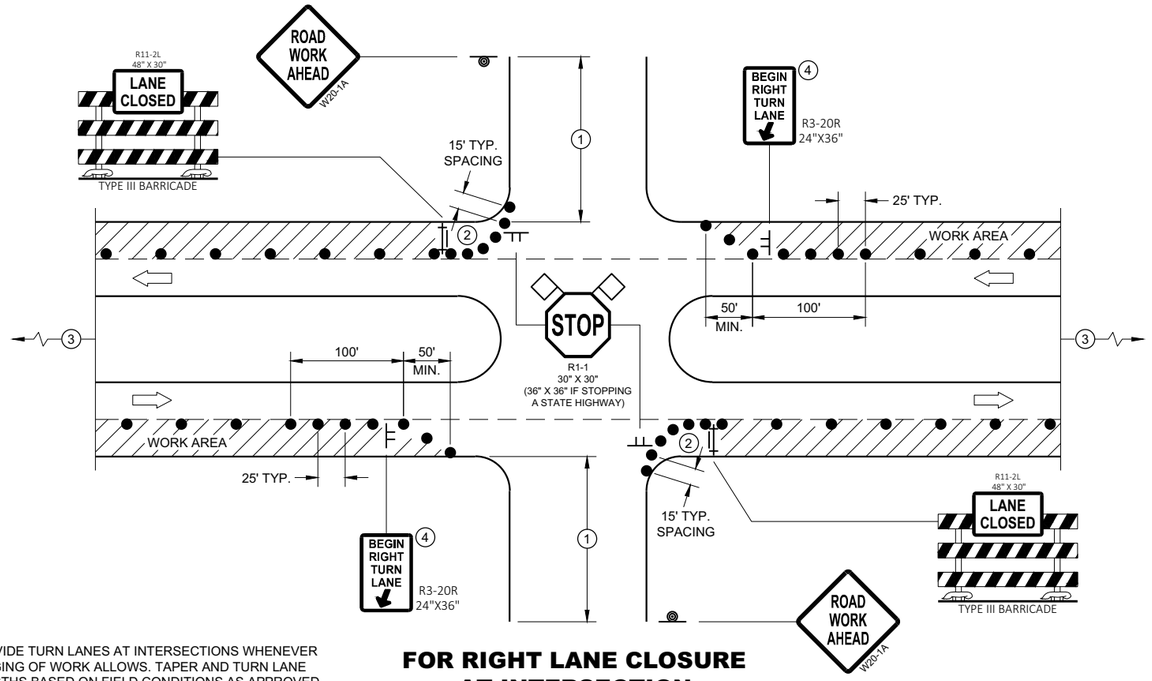
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

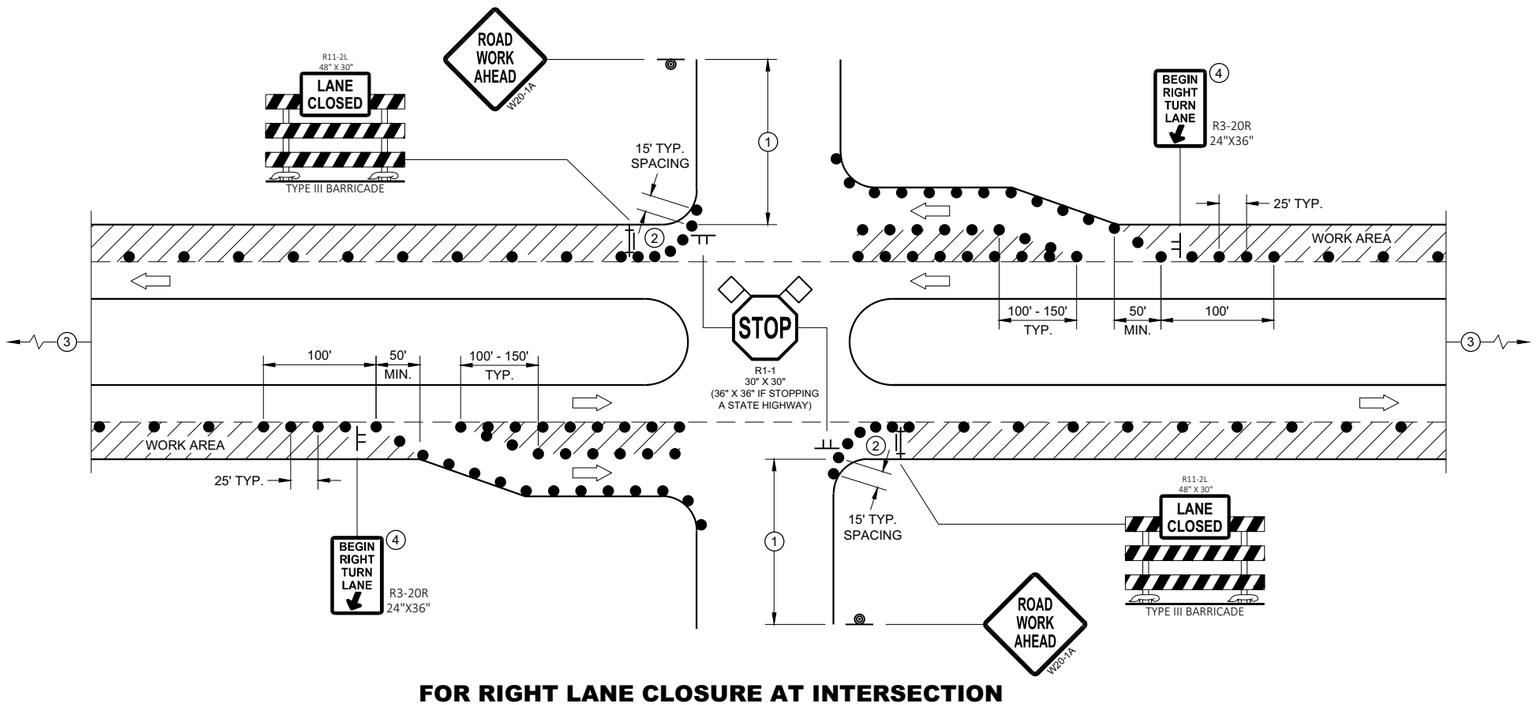
6

SDD 15D20-07a



FOR RIGHT LANE CLOSURE AT INTERSECTION

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE RIGHT LANE CLOSURE

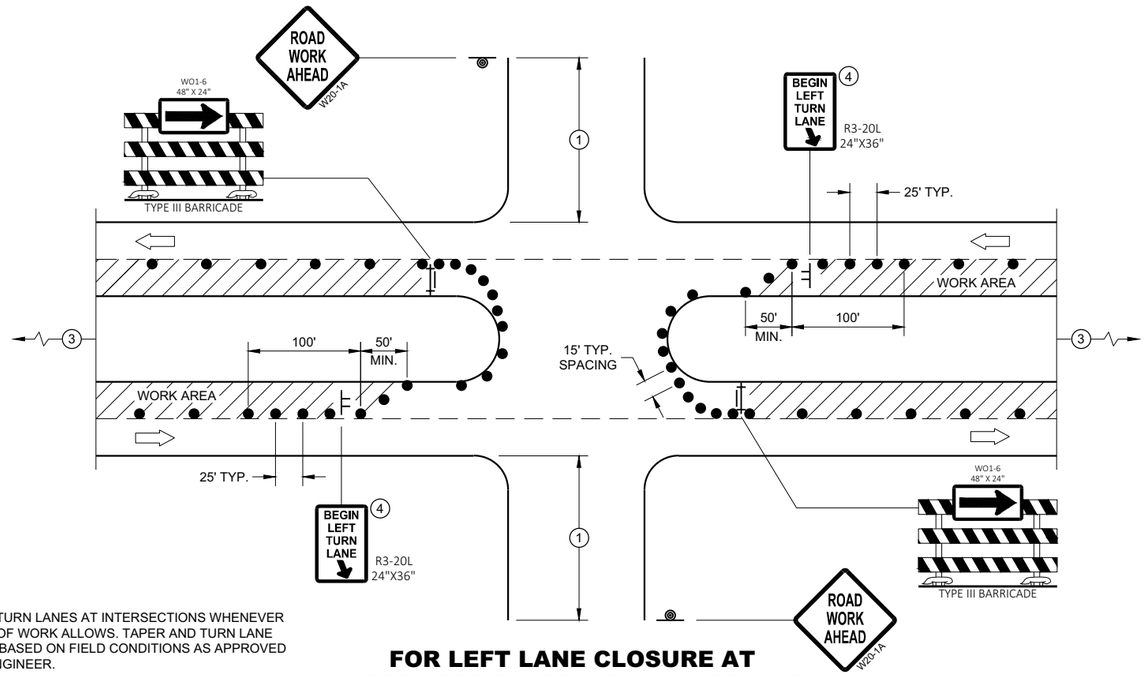
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 15D21 - 07a

6

SDD 15D21 - 07a



PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" MAY BE USED IF APPROVED BY THE DISTRICT TRAFFIC UNIT.

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

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500' DESIRABLE) DISTANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

SIGNS THAT WILL REMAIN IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS OR THAT WILL BE PLACED IN A CLOSED LANE MAY BE MOUNTED ON PORTABLE SUPPORTS.

BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

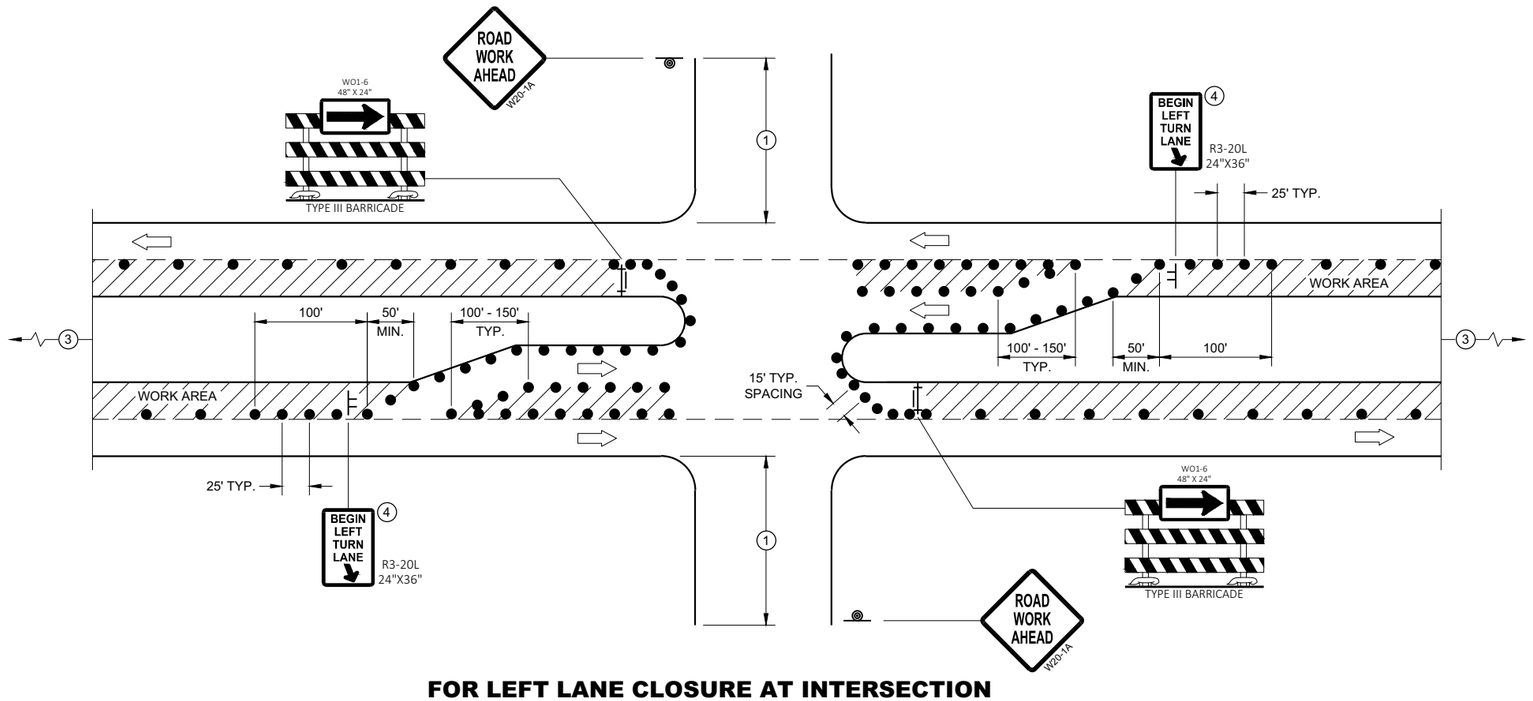
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

(1) 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35 - 40 MPH.
200' IF 25 - 30 MPH.

(2) ALSO USE BARRICADE AND 15 FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS

(3) SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.

(4) MINIMUM MOUNTING HEIGHT OF 5 FEET FROM EDGE OF PAVEMENT (AT EDGE LINE LOCATION) TO BOTTOM OF SIGN.



FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., ORANGE
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LEFT LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15D21 - 07b

6

SDD 15D21 - 07b

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

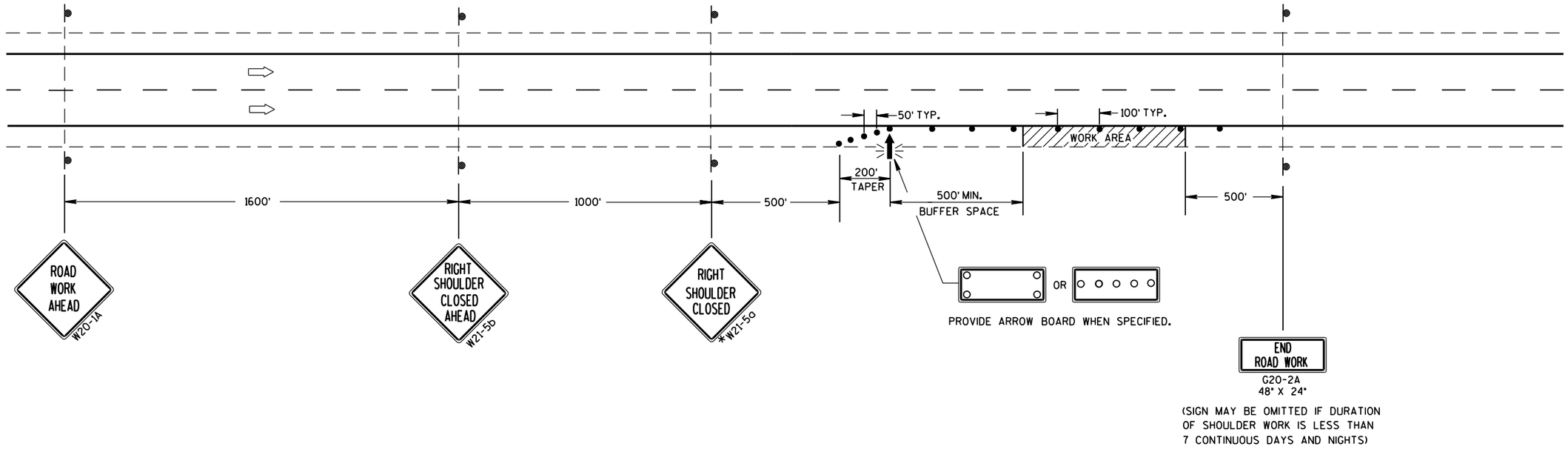
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI

FHWA

6

S.D.D. 15 D 27-3

6

S.D.D. 15 D 27-3

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- DIRECTION OF TRAFFIC
- WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

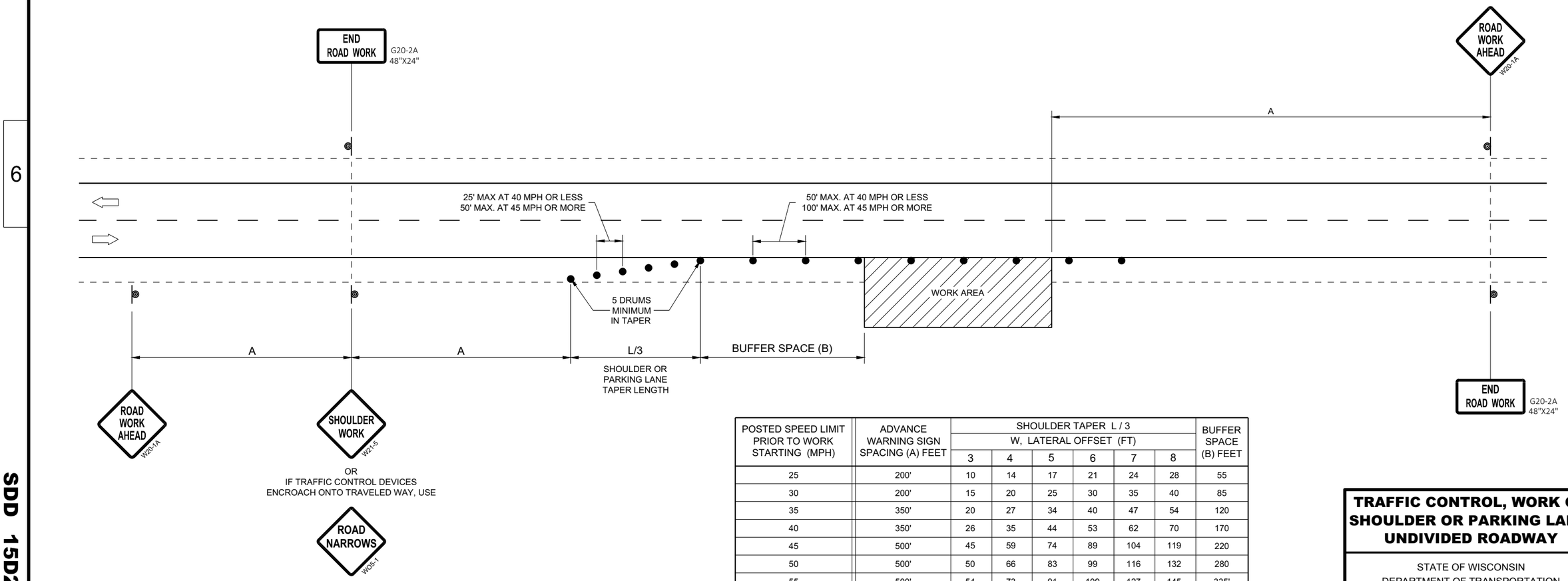
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

6

SDD 15D28 - 04

LEGEND

- SIGN ON TEMPORARY SUPPORT
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET
0-30	200'
35-40	350'
45-55	500'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

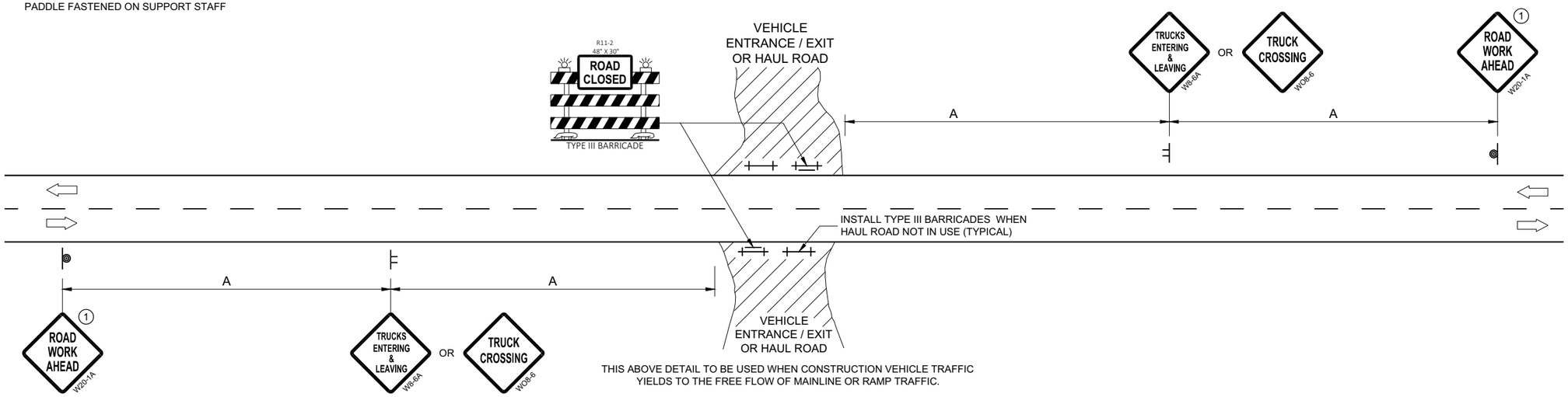
WARNING SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

WHEN ACTIVITY REFLECTED BY THE SIGN IS NOT CURRENTLY TAKING PLACE, THE HIGHWAY SHALL BE RESTORED TO NORMAL CONDITION AND THE SIGNS SHALL BE REMOVED, COVERED OR TURNED AWAY FROM TRAFFIC.

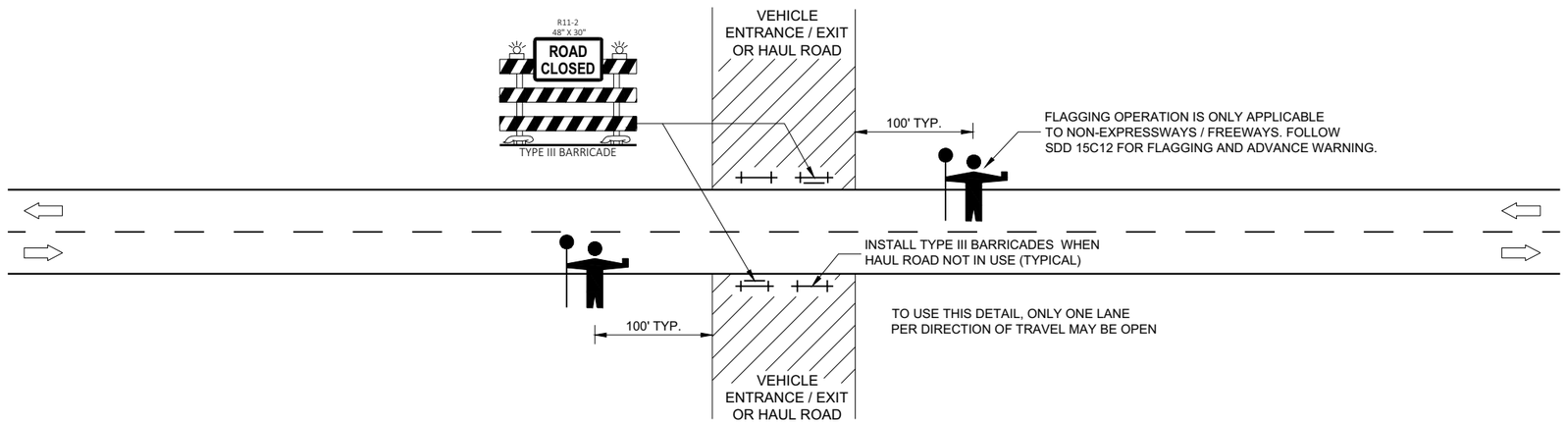
WHEN A SIDE ROAD OR RAMP INTERSECTS WITHIN THE ADVANCE SIGNING AREA, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND / OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

PLACE SIGNS ON BOTH SIDES IF USED ON DIVIDED HIGHWAY.

(1) THESE SIGNS ARE TO BE USED ONLY WHEN VEHICLE ENTRANCE / EXIT CONDITIONS ARE SEPARATED BY MORE THAN TWO MILES FROM PREVIOUS WORK AREA OR SIGNING OR AS DIRECTED BY THE ENGINEER.



THIS ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP TRAFFIC.



TO USE THIS DETAIL, ONLY ONE LANE PER DIRECTION OF TRAVEL MAY BE OPEN

THIS DETAIL TO BE USED WHEN CONSTRUCTION WORK INCLUDING TRUCKING ACTIVITY REQUIRES MAINLINE TRAFFIC TO BE TEMPORARILY STOPPED IN ONE OR BOTH DIRECTIONS. DELAY TO HIGHWAY TRAFFIC SHALL BE MINIMIZED.

TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

410

FHWA

6
SDD 15D29 - 06

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TEMPORARY DELINEATOR (WHITE, SINGLE DELINEATOR)
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY RAISED PAVEMENT MARKERS (TWO WAY YELLOW)
- TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKINGS
- WORK AREA

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL ON STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

EQUIPMENT, VEHICLES, OR MATERIAL SHOULD NOT BE STORED IN BUFFER SPACE.

(1) IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE WO1-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE WO1-3 SIGN.

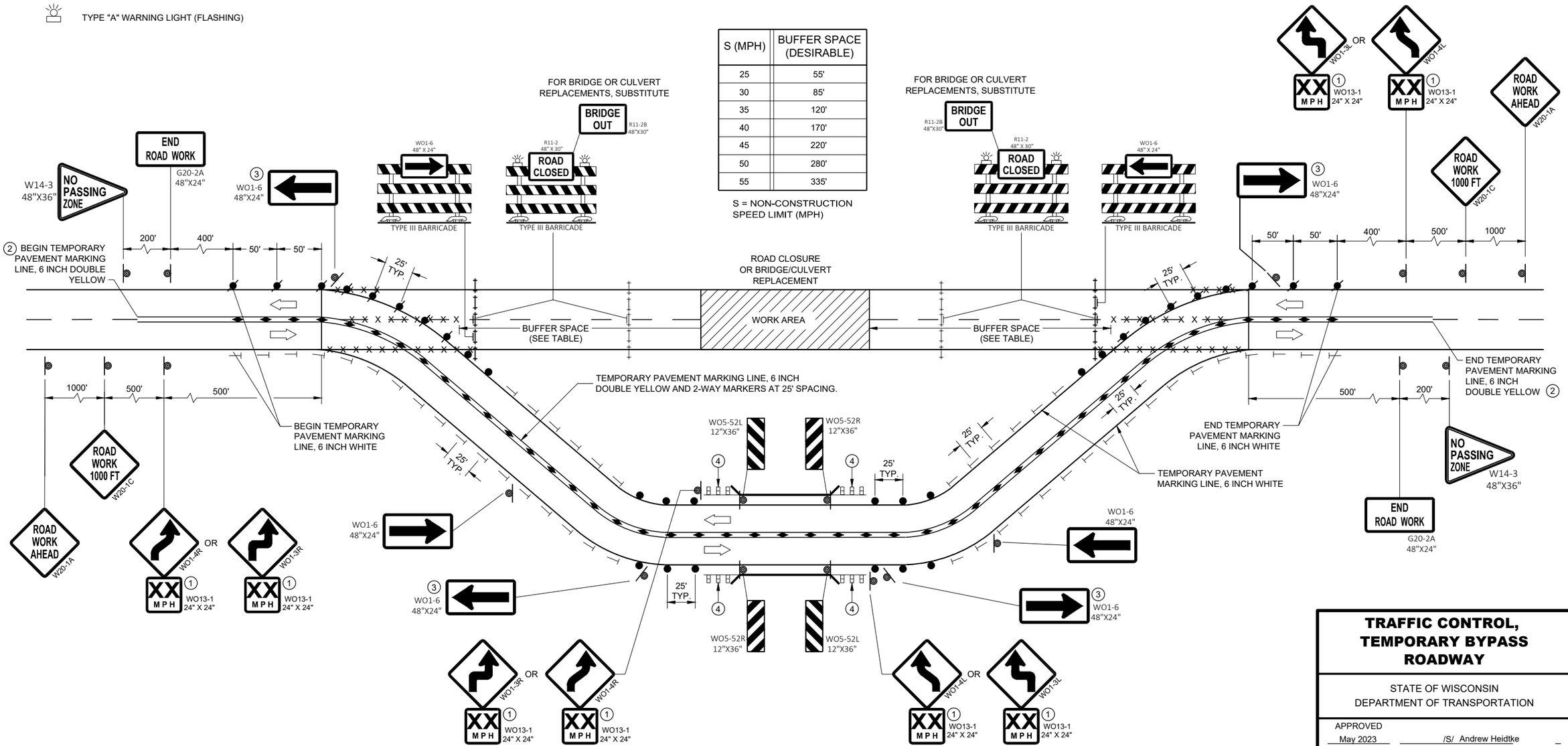
(2) WHEN THE DISTANCE TO / FROM THE NEXT CLOSEST NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

(3) OMIT THESE W01-6 SIGNS IF THE ADVISORY SPEED OF THE CURVE IS GREATER THAN 30 MPH.

(4) TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT WHEN INCLUDED IN THE CONTRACT. FOR LAYOUT, SEE DETAILS ELSEWHERE IN THE PLAN.

S (MPH)	BUFFER SPACE (DESIRABLE)
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'

S = NON-CONSTRUCTION SPEED LIMIT (MPH)



TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

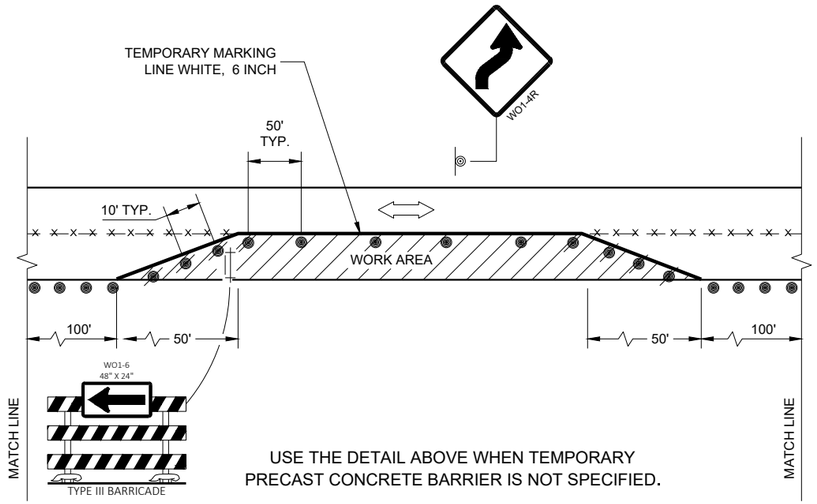
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6 SDD 15D31-05

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLAGS, 16" X 16" MIN. (ORANGE)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- ASPHALTIC PAVEMENT WIDENING
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SIGNAL. SEE SDD 09G02 FOR EXACT PLACEMENT



USE THE DETAIL ABOVE WHEN TEMPORARY PRECAST CONCRETE BARRIER IS NOT SPECIFIED.

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE..

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

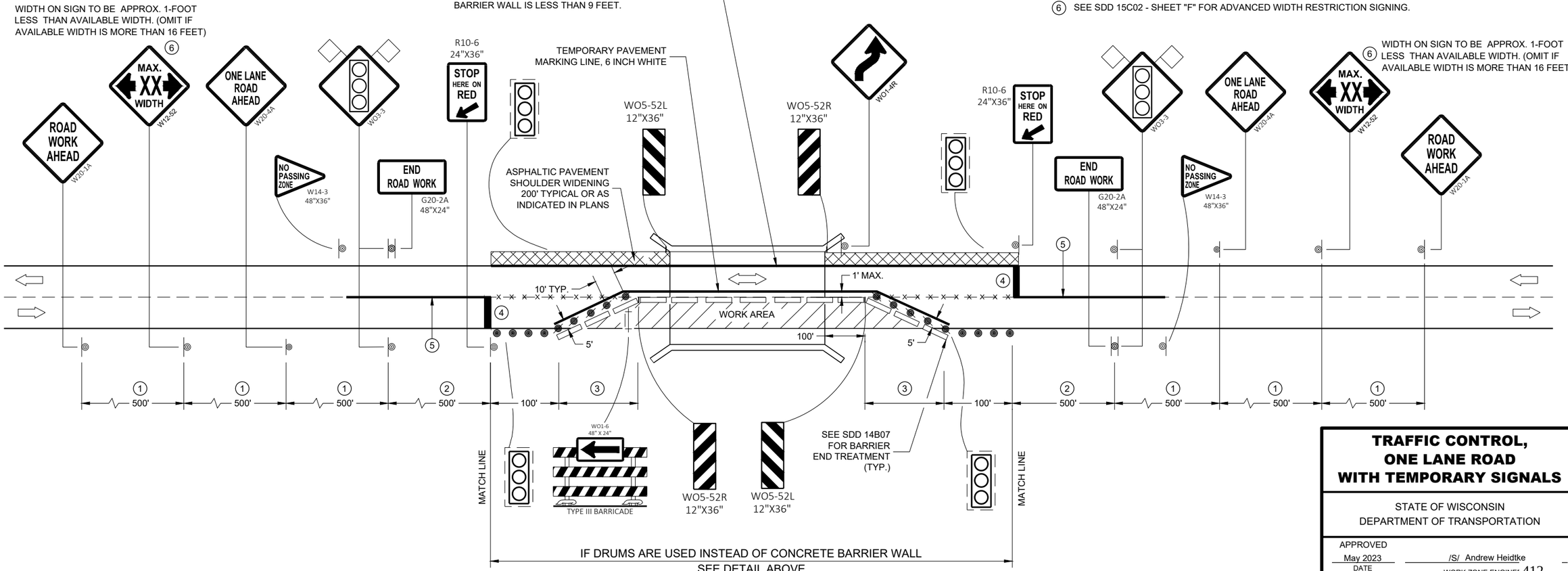
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED OR AS APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT MARKING LINES IF THE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

INSTALL OVERHEAD TEMPORARY SIGNAL HEADS ABOVE THE MIDDLE OF THE TRAVEL LANE THEY ARE CONTROLLING.

1. 500 FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35 - 40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25 - 30 MPH, USE 200 FOOT TYPICAL SPACING.
2. USE 300 FOOT SPACING IF THE PRE - CONSTRUCTION REGULATORY SPEED IS 35 MPH OR LESS.
3. DIMENSION DETERMINED BY CBTP TAPER FROM EDGE LINE TO TANGENT SECTION OF THE ROAD.
4. TEMPORARY PAVEMENT MARKING LINE, 18 INCH WHITE STOP LINE.
5. 700 FOOT TEMPORARY PAVEMENT MARKING LINE, 6 INCH DOUBLE YELLOW . WHEN THE DISTANCE FOR THE PRECEDING NO - PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.
6. SEE SDD 15C02 - SHEET "F" FOR ADVANCED WIDTH RESTRICTION SIGNING.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE 412

FHWA

6

SDD 15D33-09

6

SDD 15D33-09

LEGEND

TYPE III BARRICADE WITH ATTACHED SIGN

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

CONCRETE BARRIER TEMPORARY PRECAST

TYPE "A" WARNING LIGHT (FLASHING)

WORK AREA

L, TAPER LENGTH (MPH)							
SPEED (MPH)	W, LATERAL OFFSET (FT)						
	10	11	12	13	14	15	16
45	450	495	540	585	630	675	720
50	500	550	600	650	700	750	800
55	550	605	660	715	770	825	880
60	600	660	720	780	840	900	960
65	650	715	780	845	910	975	1040
70	700	770	840	910	980	1050	1120

OR

LOCATED 3000 FEET BEYOND THE "ROAD WORK 1 MILE" (W20-1F) SIGN

R2-1
48"X60"

OR

R2-1
48"X60"

(BLACK AND WHITE) LOCATED 700 FEET BEYOND THE W03-5 SIGN

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 3 MILES.

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR LANE SHIFT RIGHT - REVERSE FOR SHIFTING LEFT.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

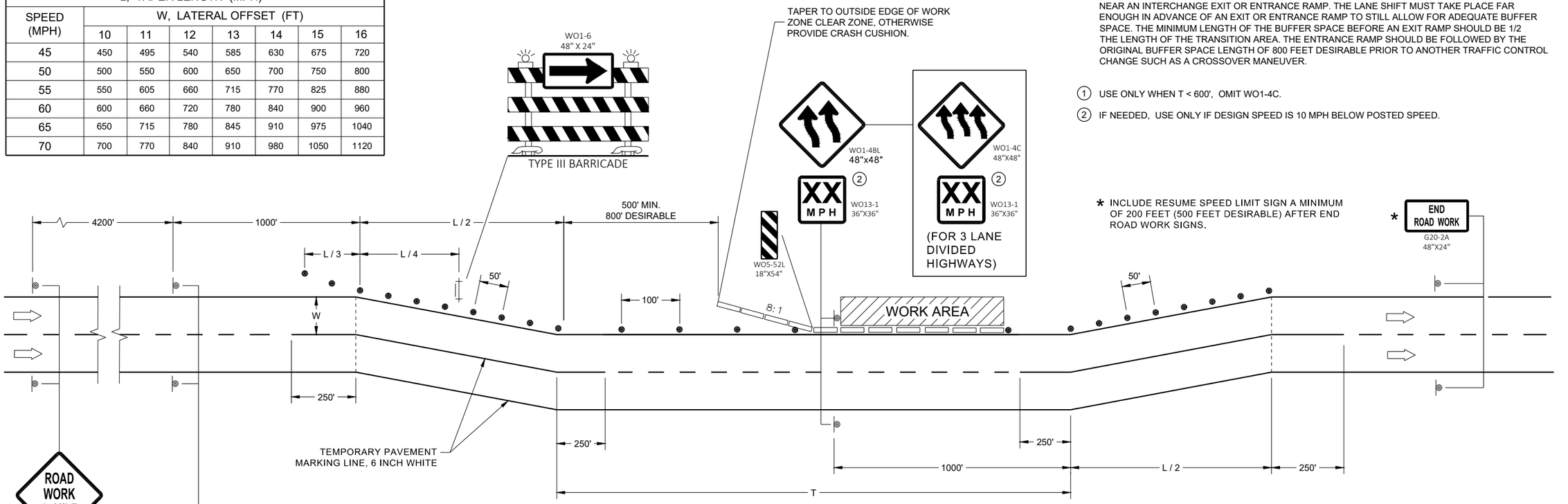
REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINES IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE SHIFT OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE SHIFT MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

(1) USE ONLY WHEN T < 600', OMIT WO1-4C.

(2) IF NEEDED, USE ONLY IF DESIGN SPEED IS 10 MPH BELOW POSTED SPEED.



TRAFFIC CONTROL MULTIPLE LANE SHIFT MULTILANE DIVIDED ROAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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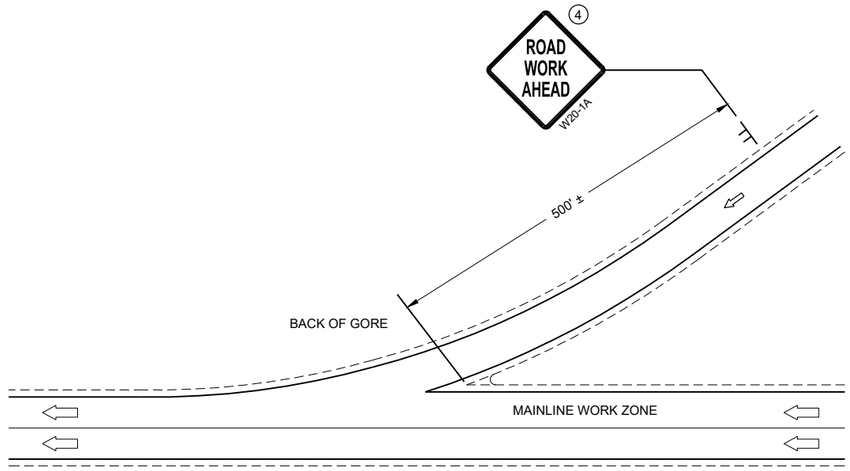
SDD 15D41-03

LEGEND

- V1 SHADOW VEHICLE 1
- V2 SHADOW VEHICLE 2
- V3 ADVANCE WARNING TRUCK
- ● TRAFFIC CONTROL DRUM
- TRUCK MOUNTED ATTENUATOR (TMA)
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW PANEL (MERGE)
- FLASHING ARROW PANEL (CAUTION)
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN
- WORK AREA



GENERAL NOTES

SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR.

MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY.

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

WHEN WORK ACTIVITY BLOCKS THE RIGHT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC

(1) DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) DRUMS ARE TO BE USED FOR BRIDGE DECK SEALING AND OTHER PROJECTS THAT REQUIRE DELINEATION.

(3) WITHIN 5 MILES, RELOCATE SIGNS AS WORK PROGRESSES AND NECESSARY OR AS DIRECTED BY THE ENGINEER.

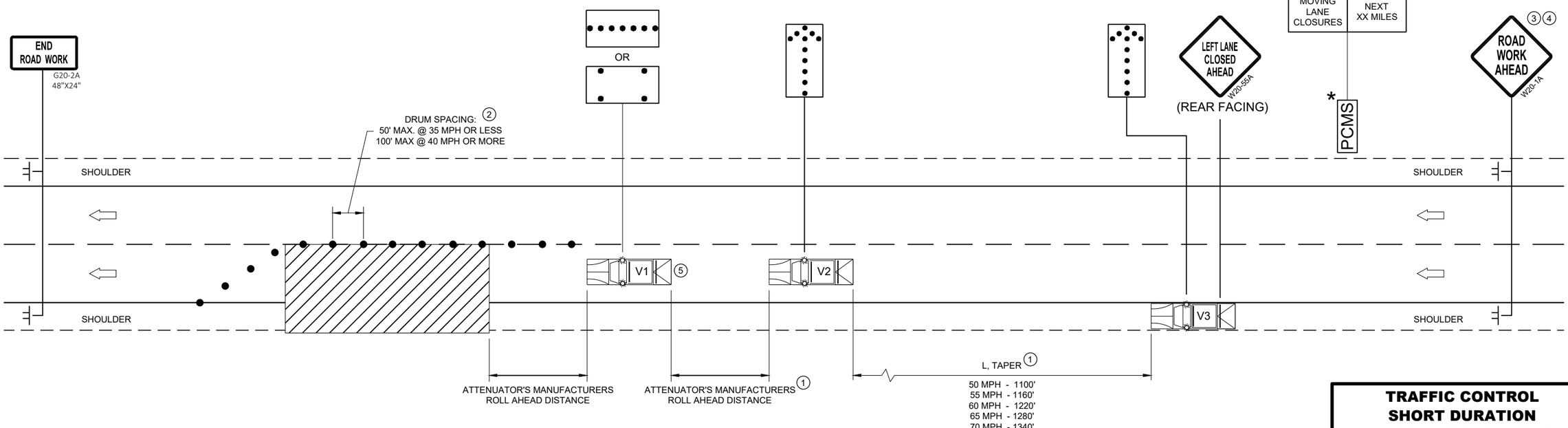
(4) SIGN NOT REQUIRED IF MOVING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(5) SHADOW VEHICLE 1 (V1) IS OPTIONAL

* PCMS OPTIONAL

PCMS MESSAGING

FRAME 1	FRAME 2
MOVING LANE CLOSURES	NEXT XX MILES



TRAFFIC CONTROL SHORT DURATION MOBILE OPERATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D43 - 02

6

SDD 15D43 - 02

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- DELINEATOR, FLEXIBLE TUBULAR MARKER
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA
- CC — CRASH CUSHION TEMPORARY
- EXISTING CONCRETE BARRIER TEMPORARY PRECAST

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

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

WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.

THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

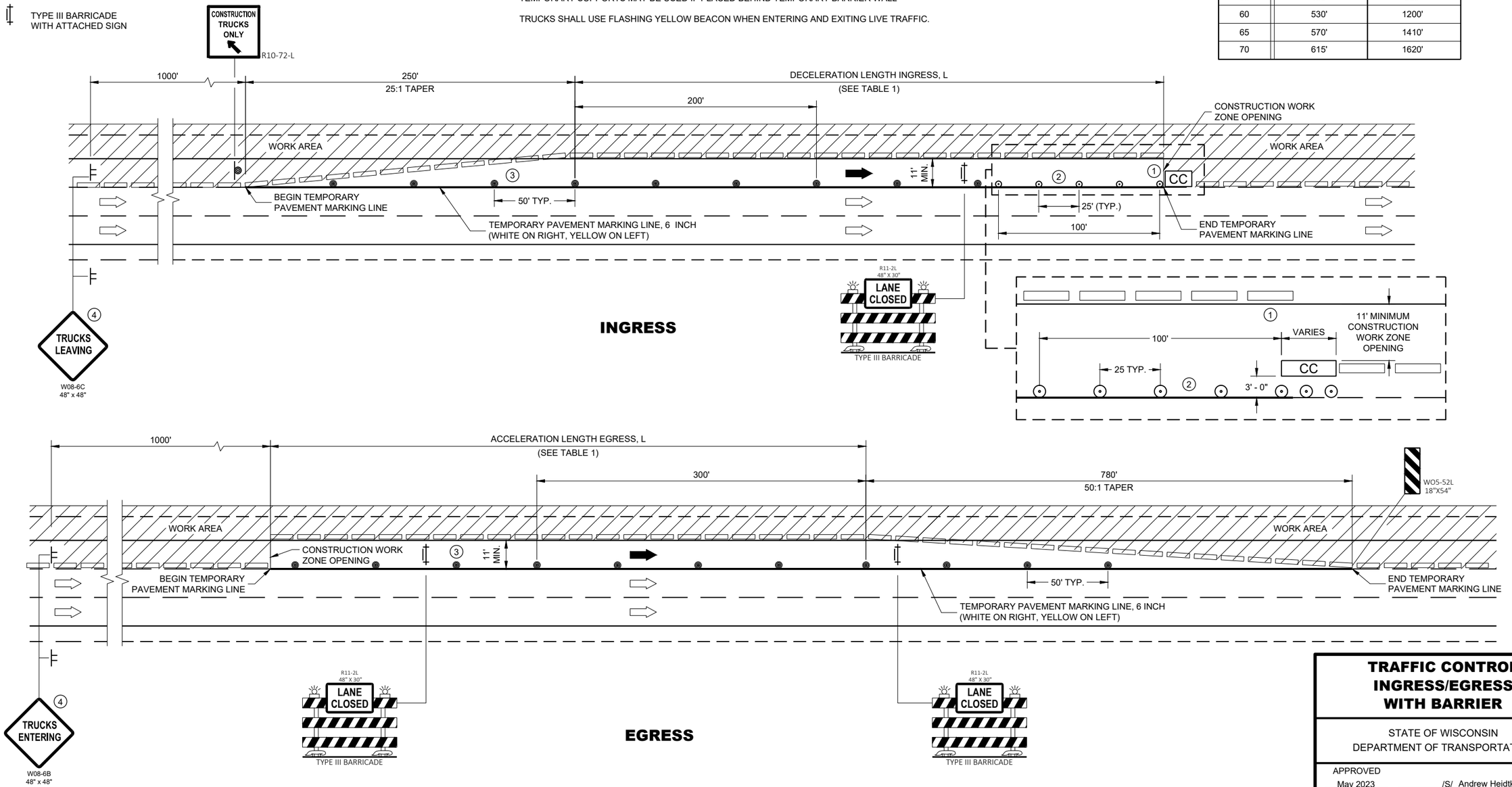
TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

1. WIDEN BARRIER AS NECESSARY TO ACCOMMODATE CRASH CUSHION WIDTH.
2. USE TUBULAR MARKERS TO HELP DELINEATE TEMPORARY CRASH CUSHION.
3. REMOVE DRUMS / BARRICADES WHEN INGRESS / EGRESS ARE IN USE.
4. REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'



TRAFFIC CONTROL INGRESS/EGRESS WITH BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

415

FHWA

6

SDD 15D47-03a

6

SDD 15D47-03a

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- DIRECTION OF TRAFFIC
- CONSTRUCTION TRAFFIC
- WORK AREA

TABLE 1

S (MPH)	INGRESS, L	EGRESS, L
50	435'	720'
55	480'	960'
60	530'	1200'
65	570'	1410'
70	615'	1620'

LEGEND

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

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

WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.

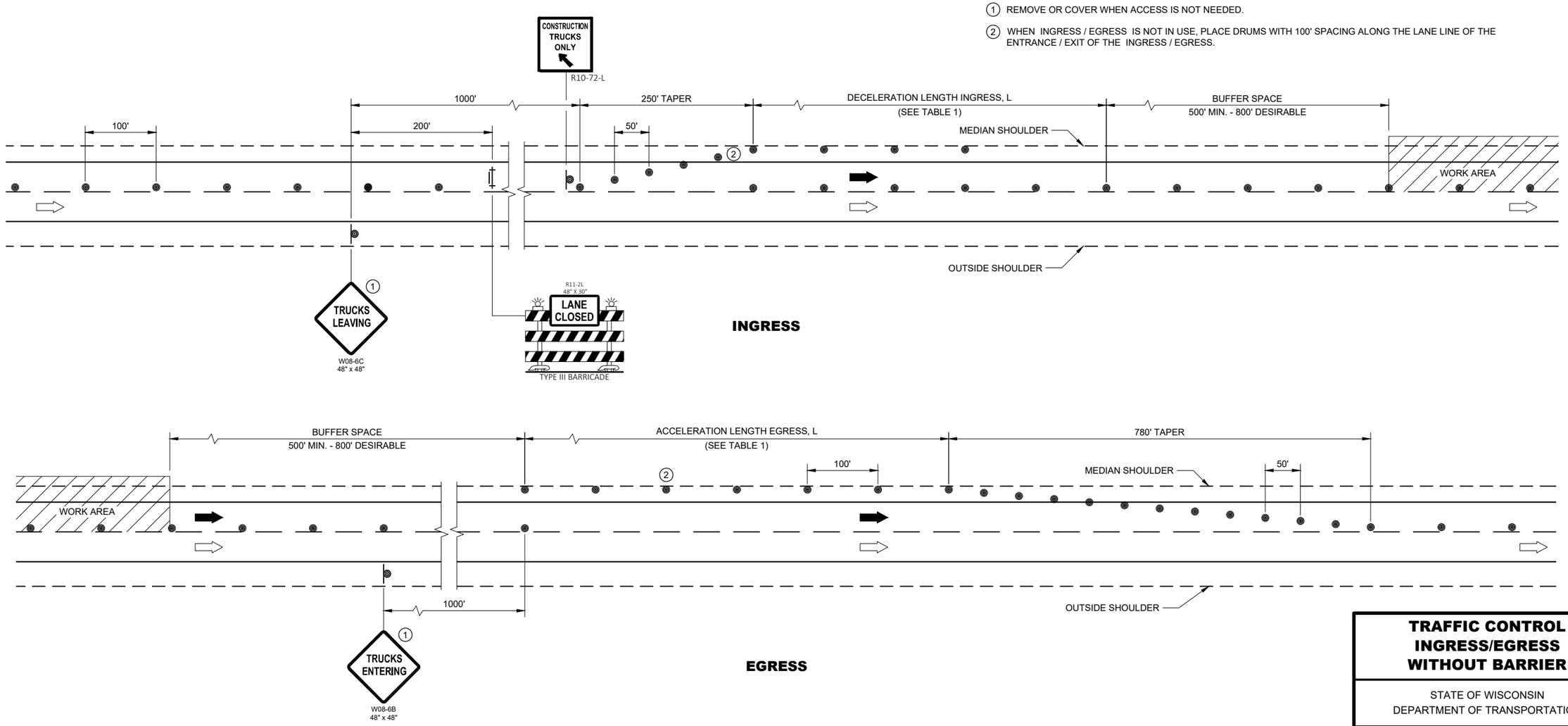
THIS ACCESS DETAIL IS TYPICAL FOR LEFT LANE ACCESS, FOR RIGHT LANE ACCESS, REVERSE THE TRAFFIC CONTROL

TEMPORARY SUPPORTS MAY BE USED IF PLACED BEHIND TEMPORARY BARRIER WALL

TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING AND EXITING LIVE TRAFFIC.

(1) REMOVE OR COVER WHEN ACCESS IS NOT NEEDED.

(2) WHEN INGRESS / EGRESS IS NOT IN USE, PLACE DRUMS WITH 100' SPACING ALONG THE LANE LINE OF THE ENTRANCE / EXIT OF THE INGRESS / EGRESS.



TRAFFIC CONTROL INGRESS/EGRESS WITHOUT BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 15D47-03b

6

SDD 15D47-03b

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA

POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHIFTING TAPER (L/2) FEET
25	200	60
30	200	90
35	350	120
40	350	160
45	500	270
50	500	300
55	500	330

GENERAL NOTES

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

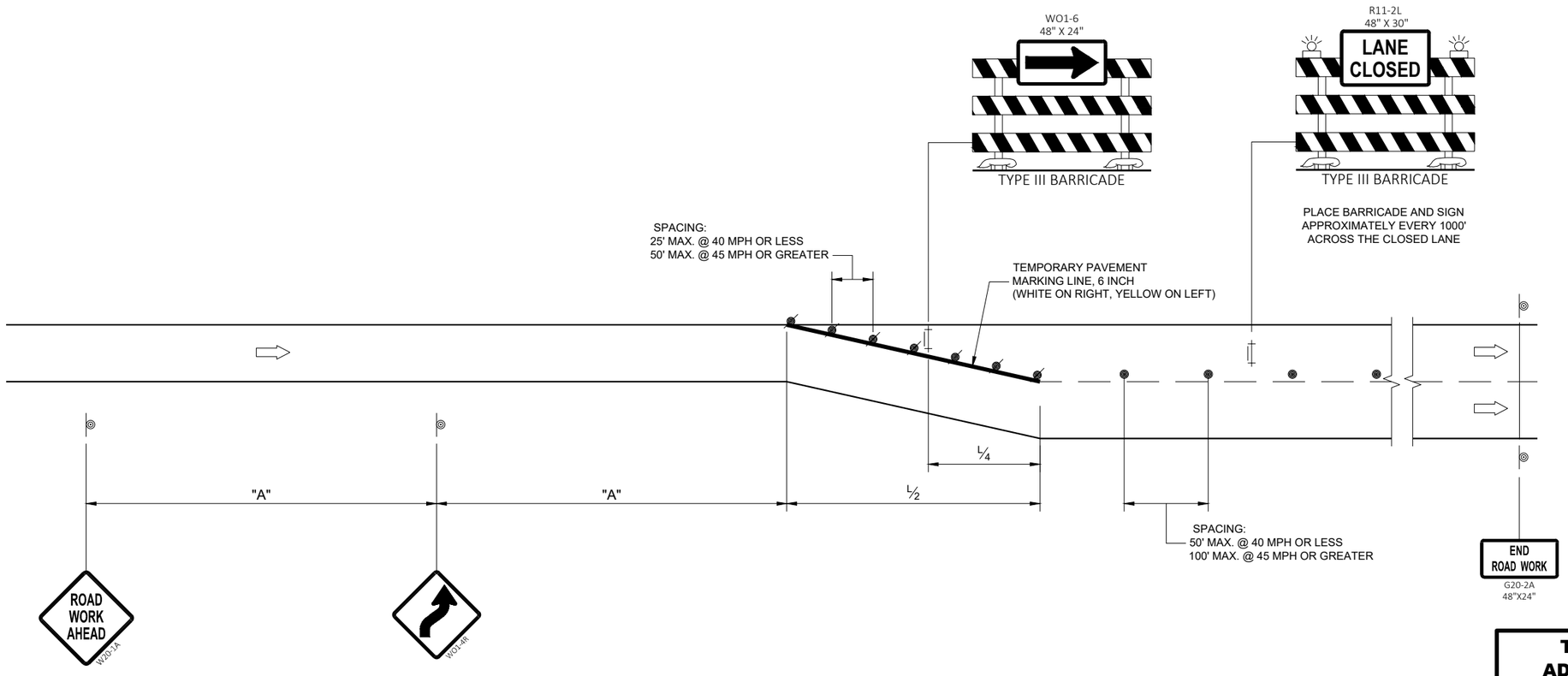
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.

PLACE TEMPORARY PAVEMENT MARKING AND PLACE TEMPORARY PAVEMENT LINE IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.



TRAFFIC CONTROL, ADDED LANE CLOSURE WITH LANE SHIFT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15D50-03b

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

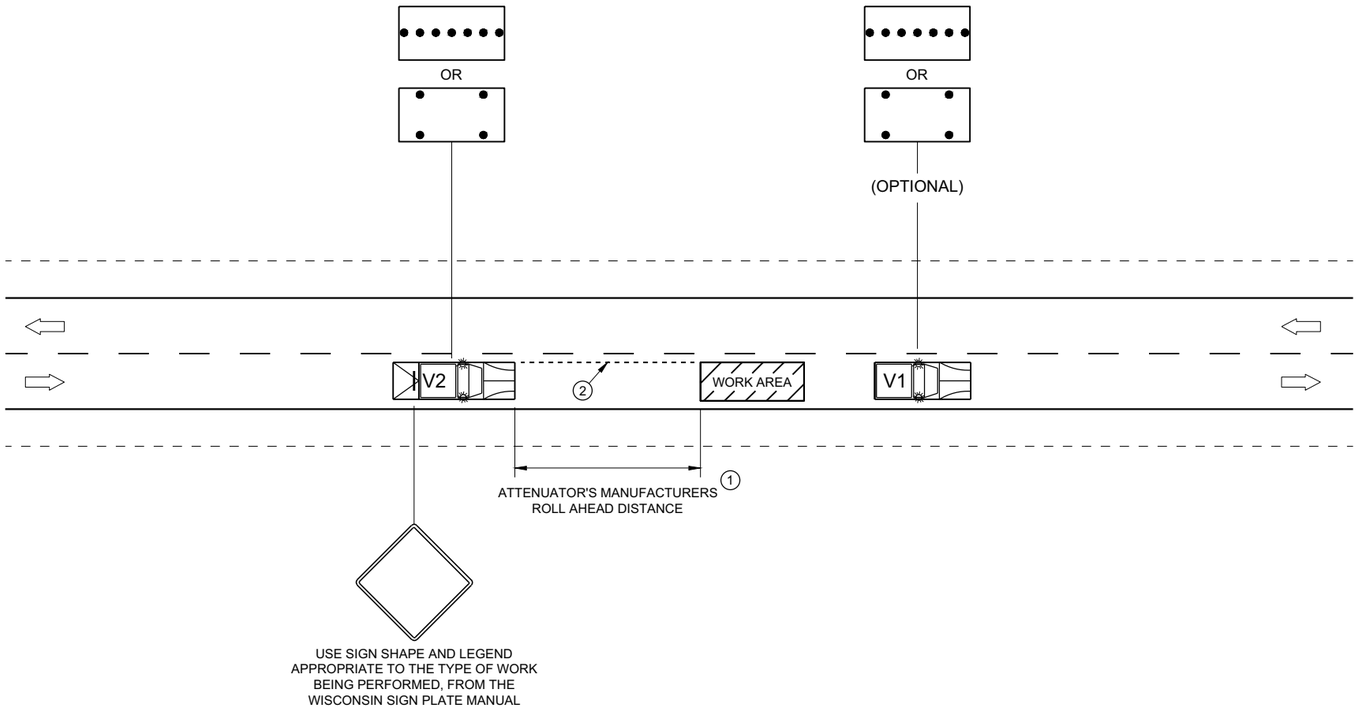
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.

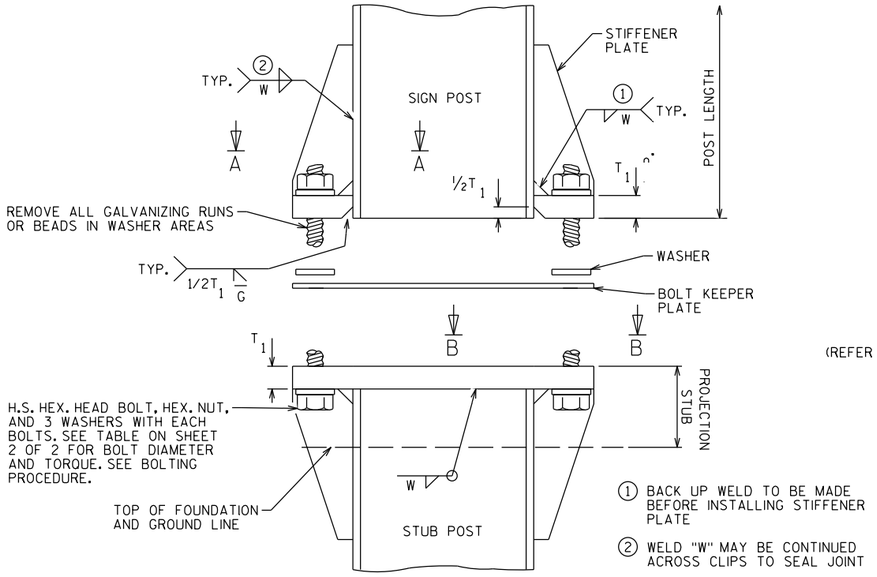


TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

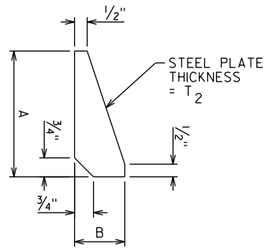
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER
FHWA

6
SDD 15D51 - 01

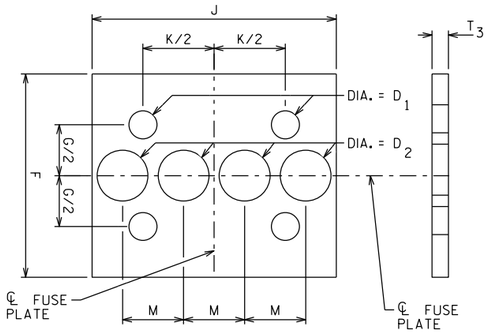


SIGN POST & STUB POST ELEVATION



STIFFENER PLATE DETAIL

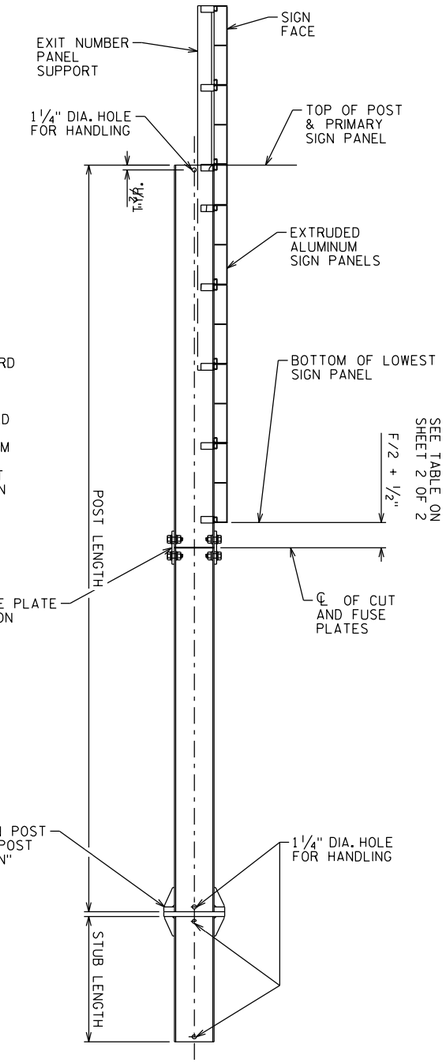
(REFER TO TABLE ON SHEET 2 OF 2 FOR DIMENSIONS)



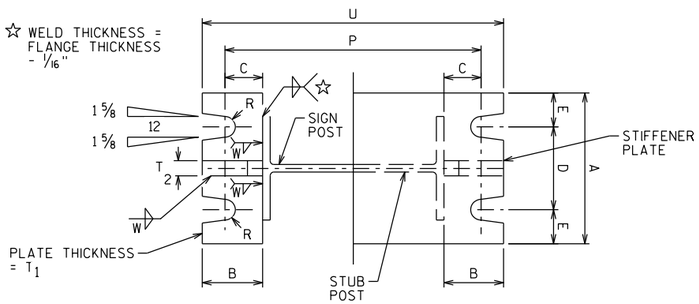
PERFORMED FUSE PLATE DETAIL

USE H.S. HEX HEAD BOLTS, HEX HEAD NUT AND FLAT WASHER UNDER NUT. INSTALL BOLTS PER THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION SECTION 506.3.12.3.

ALL HOLES SHALL BE DRILLED, SUB-PUNCHED AND REAMED. ALL PLATE CUTS SHALL PREFERABLY BE SAW CUTS. HOWEVER, FLAME CUTTING WILL BE PERMITTED PROVIDED ALL EDGES ARE GROUND. METAL PROJECTING BEYOND THE PLANE OF THE PLATE FACE WILL NOT BE PERMITTED. STEEL FUSE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36. ASTM A572 GRADE 50 OR ASTM A588 MAY BE SUBSTITUTED FOR A36 AT THE OPTION OF THE FABRICATOR. MILL TEST REPORTS SHALL BE SUBMITTED FOR FUSE PLATES. STEEL USED SHALL HAVE AN ULTIMATE TENSILE STRENGTH NOT TO EXCEED 80 KSI.

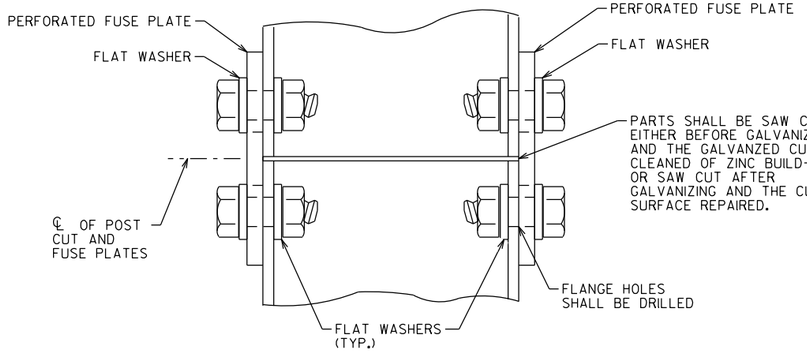


POST DETAIL

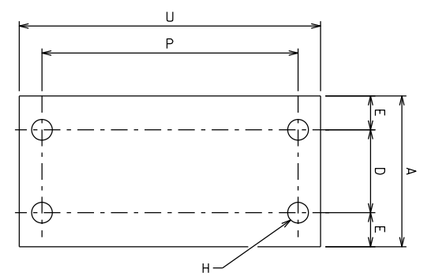


SECTION A-A

SECTION B-B



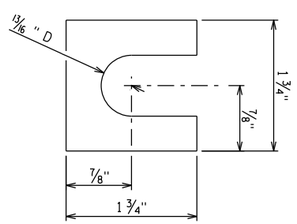
FUSE PLATE CONNECTION DETAIL



H = BOLT DIA. + 1/8"

BOLT KEEPER PLATE DETAIL

30 GA GALVANIZED SHEET STEEL



SHIM DETAIL

FURNISH TWO .012"± THICK AND TWO .032"± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO ASTM B36.

BOLTING PROCEDURE FOR BASE CONNECTION

1. ASSEMBLE SIGN POST, BOLT KEEPER PLATE, AND STUB POST WITH BOLTS AND THREE FLAT WASHERS PER BOLT AS SHOWN.
2. SHIM AS REQUIRED TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING, LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH A 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS.
5. LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PERSCRIBED TORQUE. (SEE TABLE FOR PERSCRIBED TORQUE). DO NOT OVER-TIGHTEN.
6. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY | PLANS CK'D.

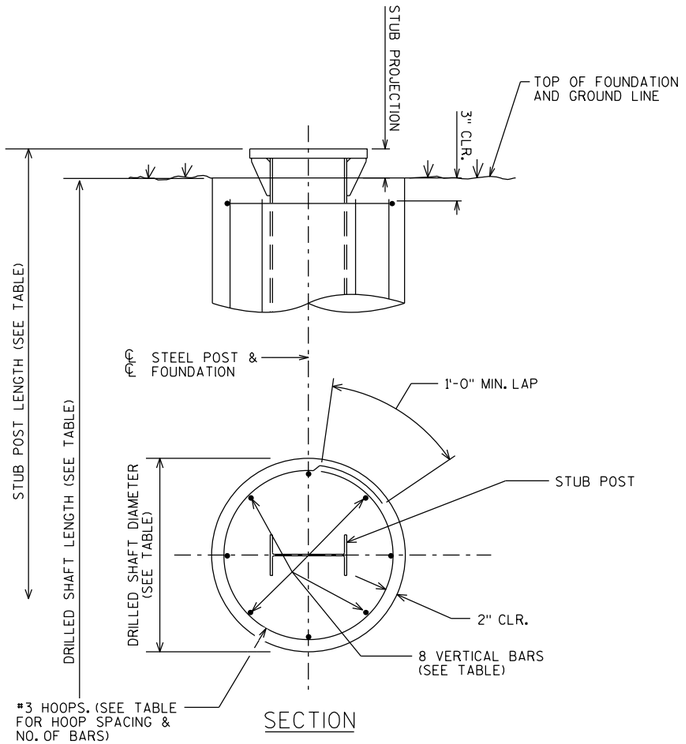
CONNECTION & FOUNDATION DETAILS 1 OF 2

SHEET A3-1.20

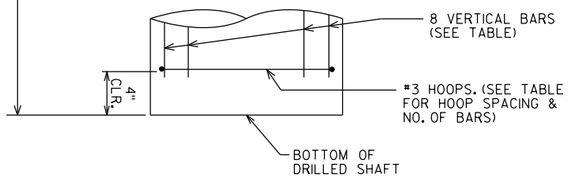
419

7

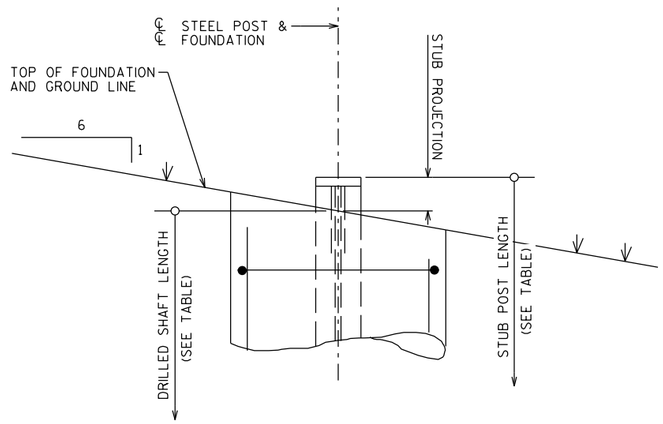
7



SECTION



FOUNDATION DETAIL



SHAFT PLACEMENT

FOUNDATION DATA TABLE

POST SHAPE	STUB LENGTH	STUB PROJECTION	DRILLED SHAFT DIAMETER	DRILLED SHAFT LENGTH	VERTICAL BARS		HOOPS		CONCRETE VOLUME ◆	TOTAL REINF. WEIGHT ◆
					SIZE	LENGTH	MAX SPA.	NO.		
W6X15	2'-6"	3"	24"	6'-6"	#5	5'-11"	10"	9	0.8 CY	71 LB
W8X18	2'-6"	3"	24"	7'-6"	#6	6'-11"	12"	8	0.9 CY	102 LB
W8X21	3'-0"	2½"	24"	8'-0"	#6	7'-5"	12"	9	1.0 CY	110 LB
W10X22	3'-0"	2½"	24"	8'-6"	#7	7'-11"	12"	9	1.0 CY	151 LB
W12X26	3'-0"	2½"	24"	10'-0"	#7	9'-5"	12"	11	1.2 CY	180 LB

◆ QUANTITIES SHOWN ARE FOR ONE DRILLED SHAFT

BASE CONNECTION & FUSE PLATE DATA TABLE

POST SHAPE	WEIGHT PER FOOT	BASE CONNECTION DATA: BOLT SIZE & TORQUE	A	B	C	D	E	T1	T2	W	R	BOLT KEEPER PLATE DATA: P	U	PERFORATED FUSE PLATE DATA: F	G	J	K	M	D1	D2	T3	BOLT DIA.	WGT. EA. LBS	BOLT LENGTH	V ◪
W6X15	15 LB	⅝" DIA. X 4" 36 TO 38 FT-LB	5"	2"	1¼"	2¾"	1⅛"	1¼"	½"	¼"	11/32"	8½"	10"	5"	2½"	6"	3½"	1½"	11/16"	1¼"	⅜"	⅝"	2.4	2	73.0 LB
W8X18	18 LB											10⅝"	12⅛"	5"	2½"	5¼"	2¾"	1¼"	11/16"	1 1/16"	⅜"	⅝"	2.0	2	83.0 LB
W8X21	21 LB	¾" DIA. X 4¾" 62 TO 63 FT-LB	6"	2¼"	1⅜"	3½"	1¼"	1½"	¾"	5/16"	13/32"	11"	12¾"	5½"	2½"	5¼"	2¾"	1¼"	13/16"	1"	½"	¾"	3.1	2¼"	124.0 LB
W10X22	22 LB											12⅞"	14⅝"	6"	3"	5¾"	2¾"	1⅜"	13/16"	1⅛"	½"	¾"	3.9	2¼"	134.0 LB
W12X26	26 LB											15"	16¾"	6"	3"	6½"	3½"	1⅝"	13/16"	1 5/16"	½"	¾"	4.5	2¼"	152.0 LB

◪ TOTAL STRUCTURAL CARBON STEEL WEIGHT FOR ONE POST = V + (POST LENGTH X POST WEIGHT PER FOOT)

"V" INCLUDES STUB POST, BASE PLATES, STIFFENER PLATES, PERFORATED FUSE PLATES, BOLTS, NUTS, AND WASHERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

MATERIALS SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506, UNLESS NOTED OTHERWISE.

FABRICATION SHALL CONFORM TO THE WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 506.

ALL POST, POST STUBS & ATTACHMENTS SHALL BE ASTM A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123.

THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST, FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.

H.S. BOLTS, WASHERS, & NUTS SHALL BE A325 GALVANIZED.

FOUNDATION MATERIAL PROPERTIES

CONCRETE MASONRY	F'C = 3,500 P.S.I.
BAR STEEL REINFORCEMENT (UNCOATED), GRADE 60	FY = 60,000 P.S.I.

DESIGN DATA

DESIGN CONFORMS TO AASHTO LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS 1ST EDITION 2015 (WITH 2017 & 2018 INTERIM REVISIONS).

DEAD LOADS (DL):

- STEEL POST SELF WEIGHT
- SIGN PANEL WEIGHT = 3 PSF

WIND LOADS (WL):

WIND LOADS WERE APPLIED TO THE PROJECTED AREAS OF THE SIGN PANELS AND THE STEEL SIGN POSTS.

- BASIC WIND SPEED = 76 MPH
- MEAN RECURRANCE INTERVAL (MRI) = 10 YEARS
- HEIGHT & EXPOSURE FACTOR = 1.00
- DIRECTIONALITY FACTOR = 0.85
- GUST EFFECT FACTOR = 1.14

WIND LOAD CASES:

- WL CASE 1: 1.0 X NORMAL WIND
- WL CASE 2: 1.0 X TRANSVERSE WIND
- WL CASE 3: 0.75 X NORMAL WIND + 0.75 X TRANSVERSE WIND

LOAD COMBINATIONS:

LOAD COMBINATION	TYPE	DL FACTOR	WL FACTOR
STRENGTH I	GRAVITY	1.25	-
EXTREME I	WIND	1.10	1.0
		0.9	1.0
SERVICE I	DEFLECTION	1.0	1.0

FOUNDATION DESIGN DATA

THE FOUNDATION DESIGN ASSUMED COHESIONLESS SOILS (LOOSE SAND) ABOVE THE WATER TABLE WITH THE FOLLOWING PROPERTIES:

- SOIL UNIT WEIGHT = 115 PCF
- ANGLE OF INTERNAL FRICTION = 24 DEGREES
- SOIL MODULUS PARAMETER = 25 LB/IN3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

DRAWN BY | PLANS CK'D.

CONNECTION & FOUNDATION DETAILS 2 OF 2

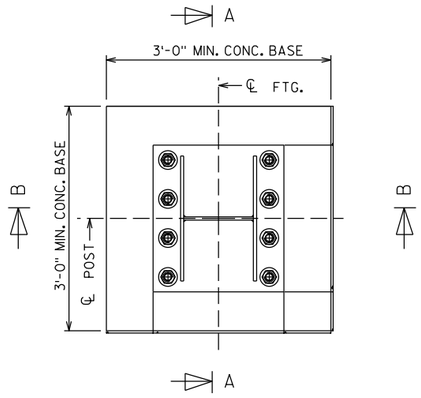
SHEET A3-1.20

420

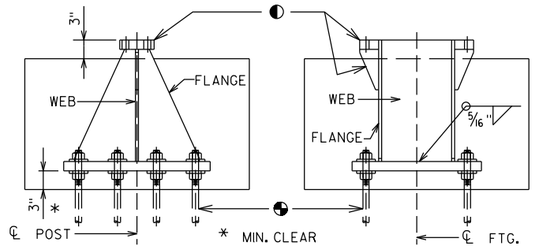
7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A31.DGN
PLOT DATE : 3-MAR-2020
PLOT BY : dotc4c

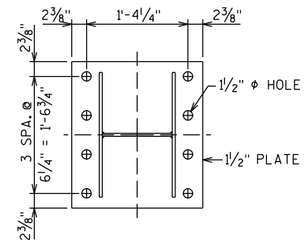
STUB AND ADHESIVE ANCHOR DETAILS



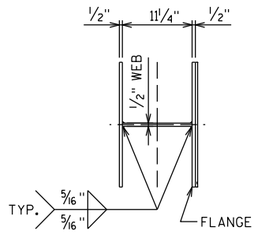
STUB SECTION



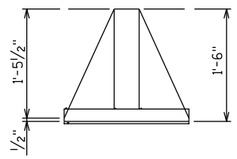
SECTION A-A SECTION B-B



BASE PLATE



STUB



FLANGE

◐ SEE BASE CONNECTION DETAILS ON "CONNECTIONS & FOUNDATION DETAILS" SHEETS.

◔ ADHESIVE ANCHORS 1¼-INCHES. ALLOWABLE PULL OUT CAPACITY = 15 KIPS. EMBED 1'-3" INTO ROCK.

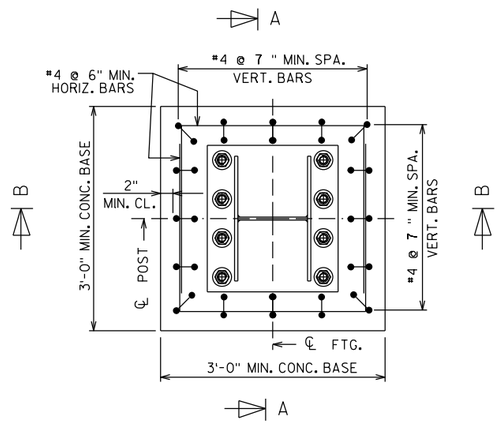
GENERAL NOTES:

QUANTITIES PER BASE:
REINFORCING STEEL = 62 LB
CONCRETE = 0.6 CY
STRUCTURAL STEEL = 335 LB

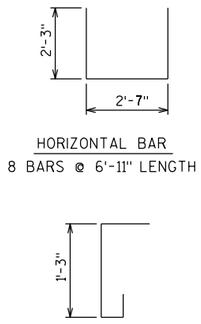
ALL MATERIALS, EXCEPT FOR ANCHOR ROD, NUTS, AND WASHERS, SHALL BE ASTM A709 GRADE 50. ALL MATERIALS TO BE GALVANIZED AFTER FABRICATION.

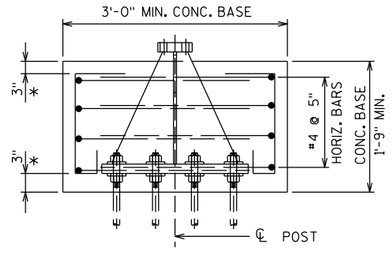
IF ROCK IS ENCOUNTERED PRIOR TO REACHING THE MINIMUM DRILLED SHAFT EMBEDMENT DEPTH DEFINED ON THE FOUNDATION DATA TABLE OF THE "CONNECTIONS & FOUNDATION DETAILS 2 OF 2" SHEET, THE CONTRACTOR SHALL INSTALL A TEST ADHESIVE ANCHOR AND DETERMINE THE PULL-OUT CAPACITY. IF THE FIELD TEST RESULTS IN A PULL-OUT CAPACITY GREATER THAN OR EQUAL TO 15 KIPS, THE CONTRACTOR MAY INSTALL THE ALTERNATE CONCRETE BASE AND BREAK-WAY STUB PER THE DETAILS ON THIS SHEET.

CONCRETE BASE DETAILS

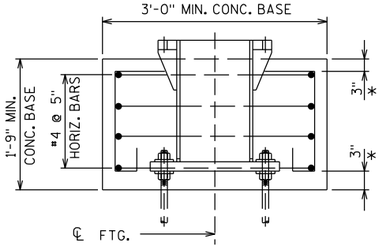


CONCRETE BASE PLAN





SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

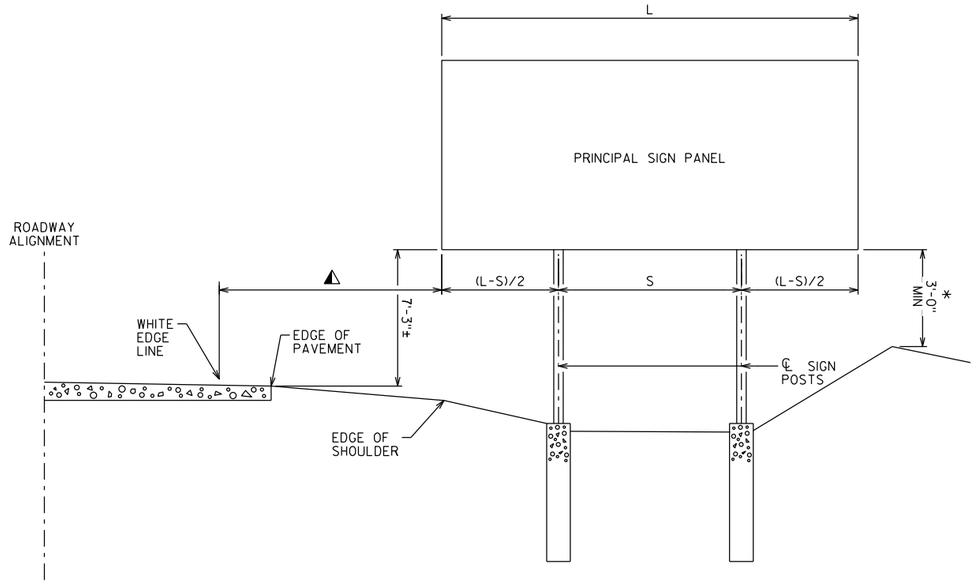
STRUCTURE BTO TYPE I SIGNS

DRAWN BY	PLANS CK'D.

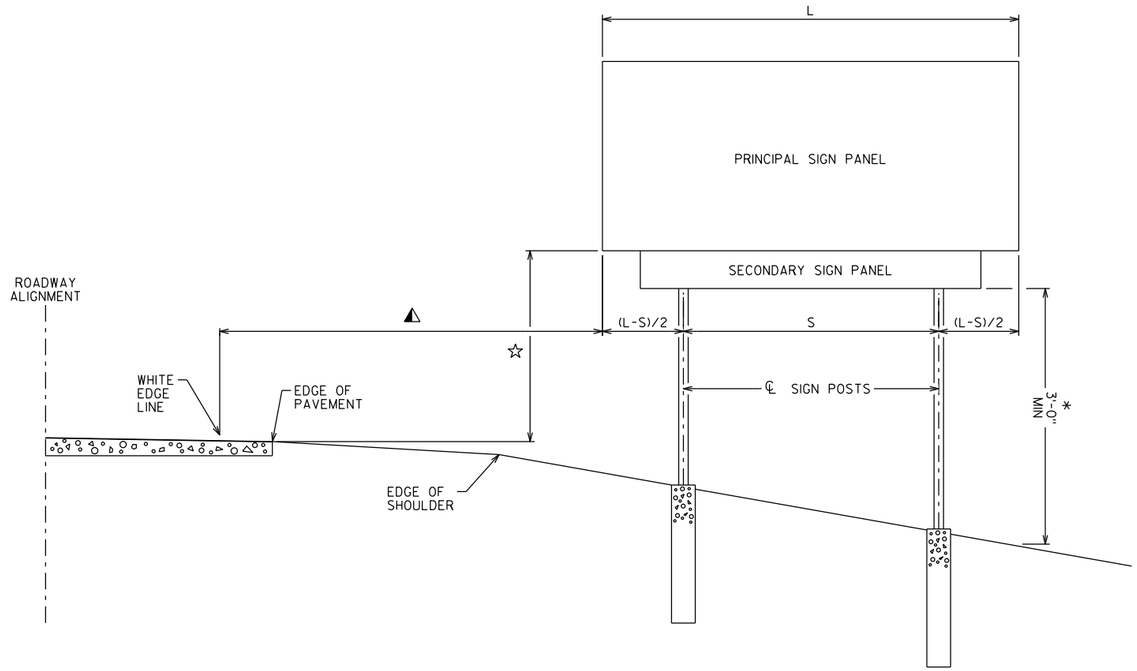
ALTERNATE BREAK-AWAY BASE ON ROCK

SHEET A3-1M.2

421



INSTALLATION WITHOUT SECONDARY SIGN



INSTALLATION WITH SECONDARY SIGN

TYPE 1 SIGN INSTALLATION NOTES:

FOR A 2-POST INSTALLATION, "S" EQUALS 3L/5, BUT SHALL NOT BE LESS THAN 6'-0".

FOR A 3-POST INSTALLATION, "S" EQUALS 5L/7, BUT SHALL NOT BE LESS THAN 12'-0". THE SPACING BETWEEN ANY TWO POSTS SHALL NOT BE LESS THAN 6'-0".

◭ UNLESS NOTED IN THE PLANS, THE SIGN OFFSET DISTANCE SHALL BE A MINIMUM OF 17'-6" FROM THE WHITE EDGE LINE, DESIRABLE 30'-0".

THE ± TOLERANCE SHOWN ON THIS SHEETS IS 3".

THE VERTICAL SIGN HEIGHT CLEARANCES SHOWN ON THIS SHEET ARE MEASURED FROM THE BOTTOM OF THE SIGN PANEL TO THE NEAR EDGE OF PAVEMENT.

☆ THE VERTICAL CLEARANCE SHALL BE 8'-3"± WHEN THE SECONDARY SIGN HEIGHT IS 3'-0" OR LESS. FOR SECONDARY SIGN HEIGHTS LARGER THAN 3'-0", THE VERTICAL CLEARANCE TO THE BOTTOM OF THE SECONDARY SIGN PANEL SHALL BE 5'-3"±.

* THE VERTICAL SIGN GROUND CLEARANCE ON RIGHT END OF SIGN SHALL BE A MINIMUM OF 3'-0"±.

POST LENGTHS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE ESTIMATED LENGTHS. THE CONTRACTOR SHALL VERIFY POST LENGTHS AT THE TIME OF FINAL GRADING.

REFER TO THE TRAFFIC ENGINEERING OPERATIONS AND SAFETY MANUAL FOR FURTHER GUIDANCE ON MINIMUM VERTICAL CLEARANCE REQUIREMENTS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE BTO TYPE I SIGNS

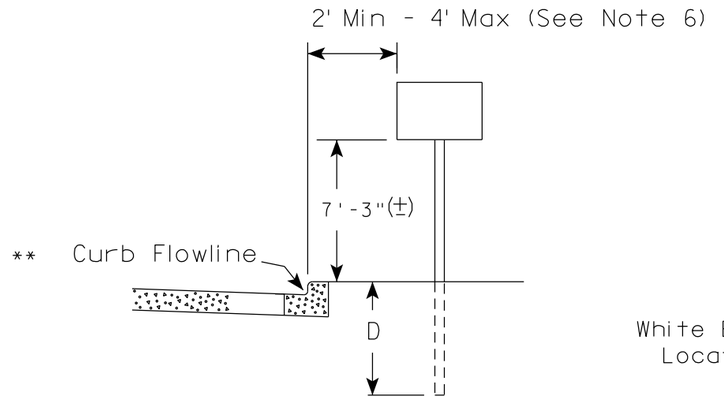
DRAWN BY | PLANS CK'D.

TYPICAL TYPE I SIGN INSTALLATION

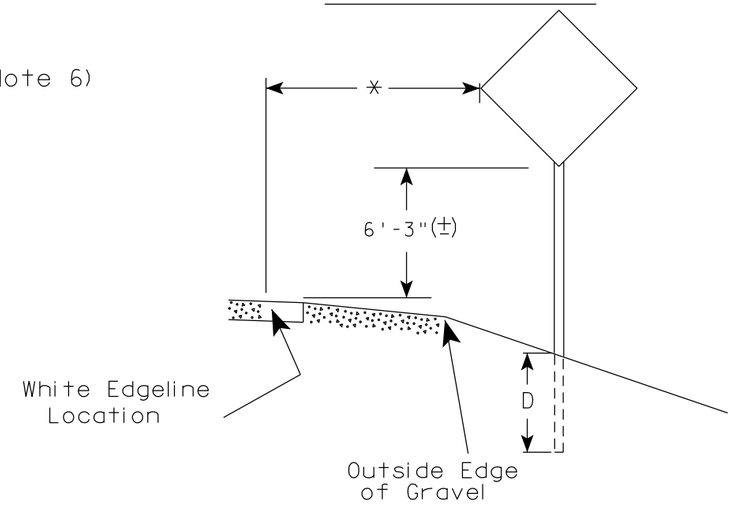
SHEET A4-1.10

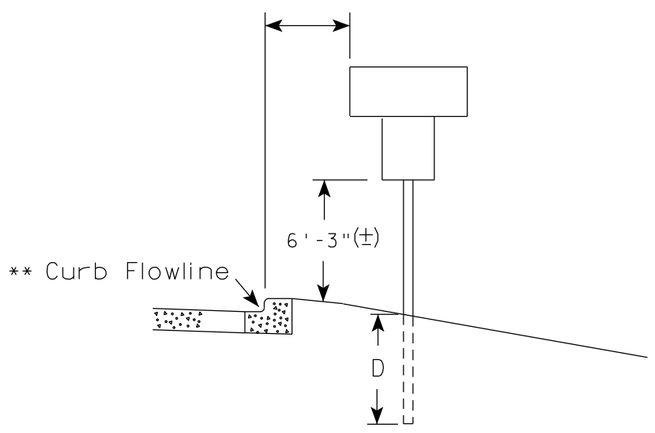
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 422 | E

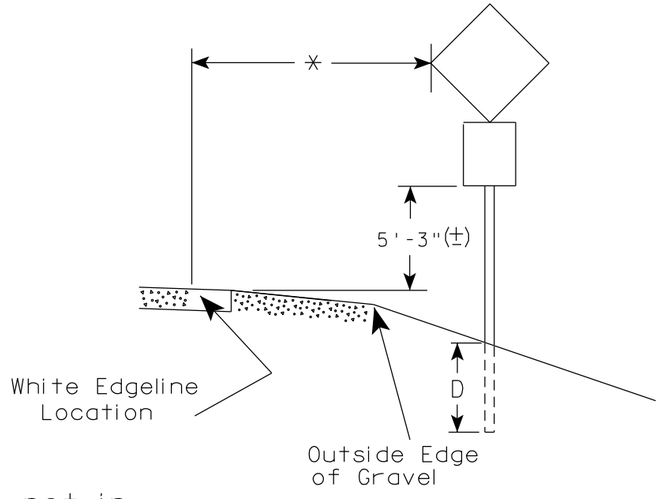
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

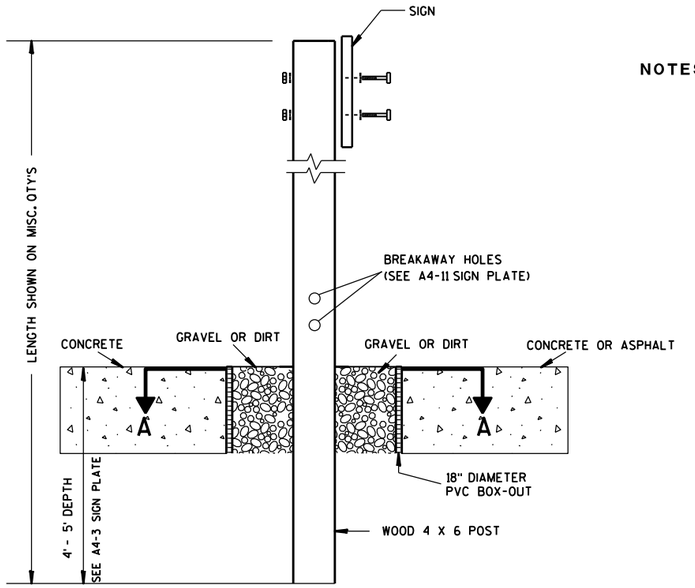
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

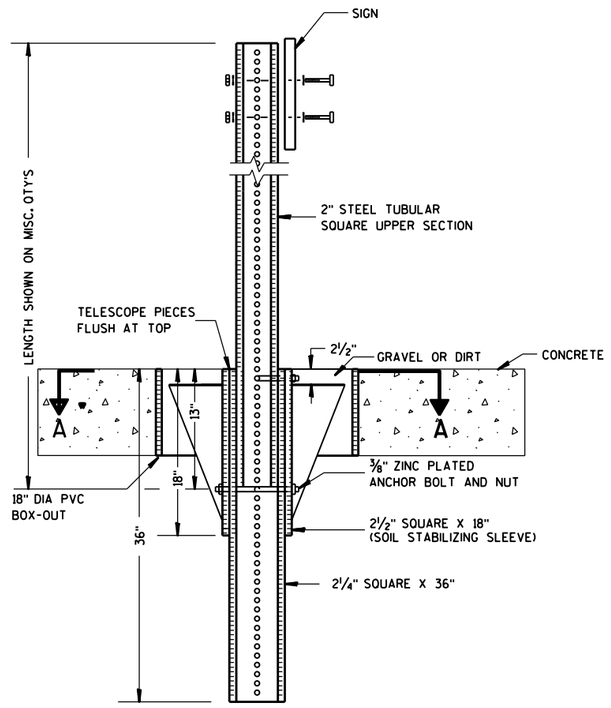
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 423	E



ELEVATION VIEW

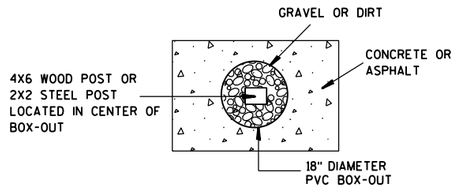
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

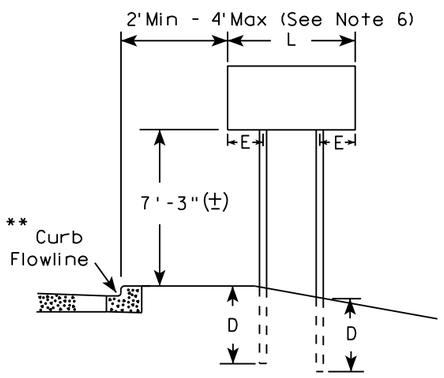
APPROVED Matthew R Rauch
for State Traffic Engineer

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

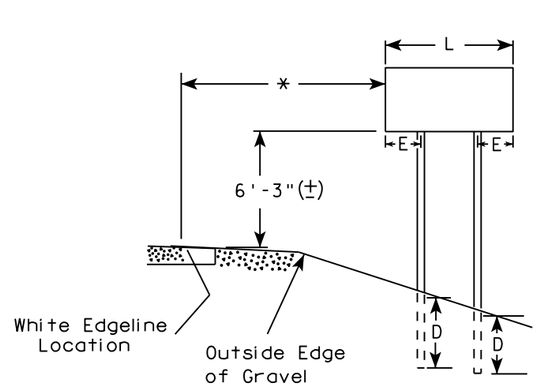
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

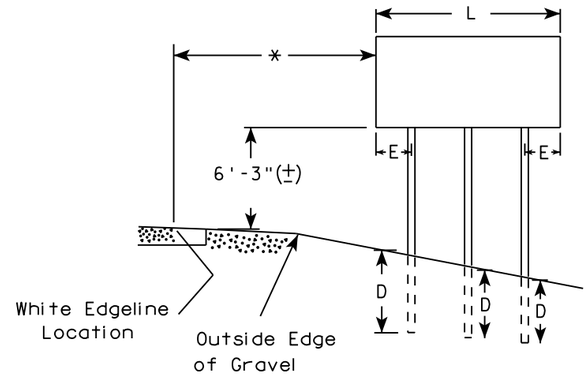
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

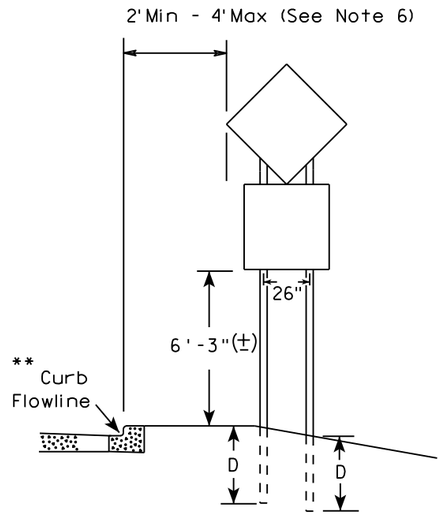
URBAN AREA



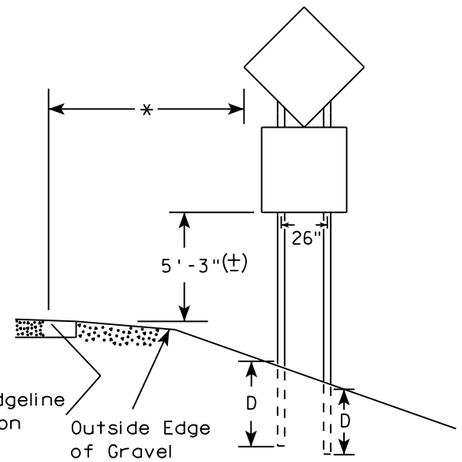
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

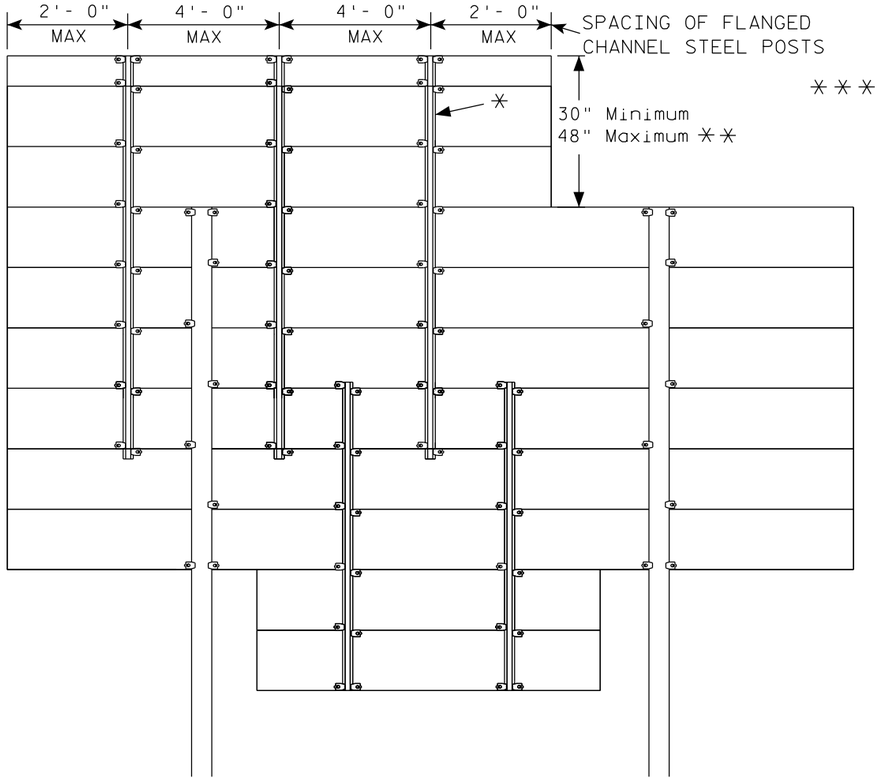
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 425	E

GROUND MOUNTED SIGN



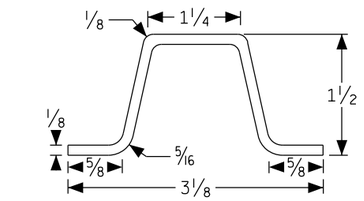
✳=2.00 lb/ft AND 4.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

✳✳=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

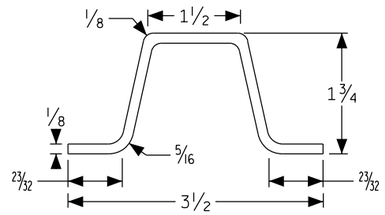
✳✳✳ THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 15 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 15 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAILS

NOT TO SCALE

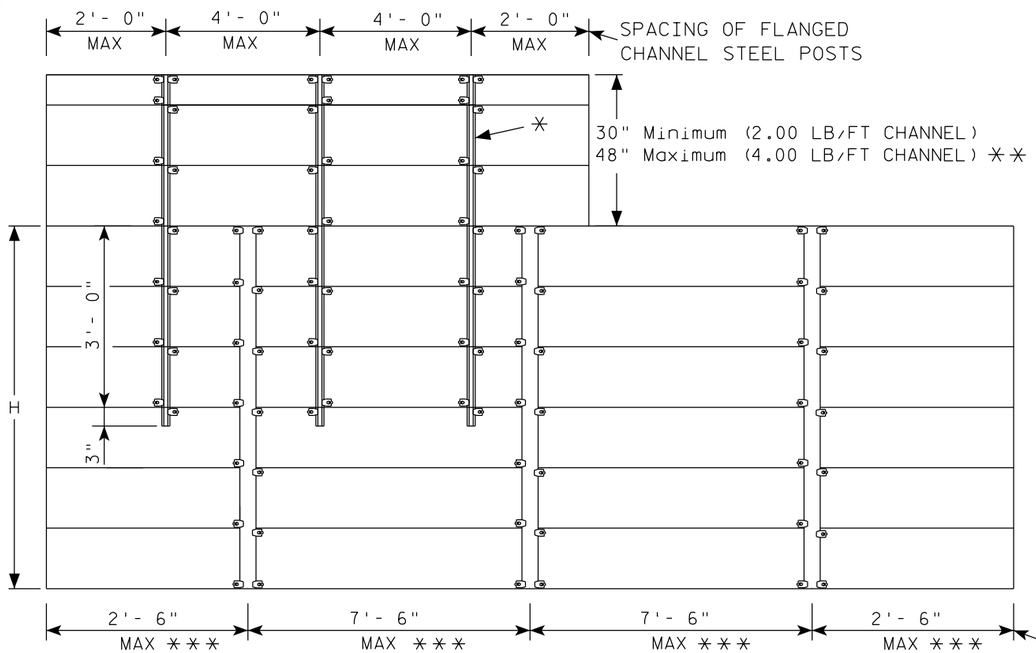


2.00 LB/FT CHANNEL



4.00 LB/FT CHANNEL

SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS 5" X 3.5" X 3.7 LBS./ft.

GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

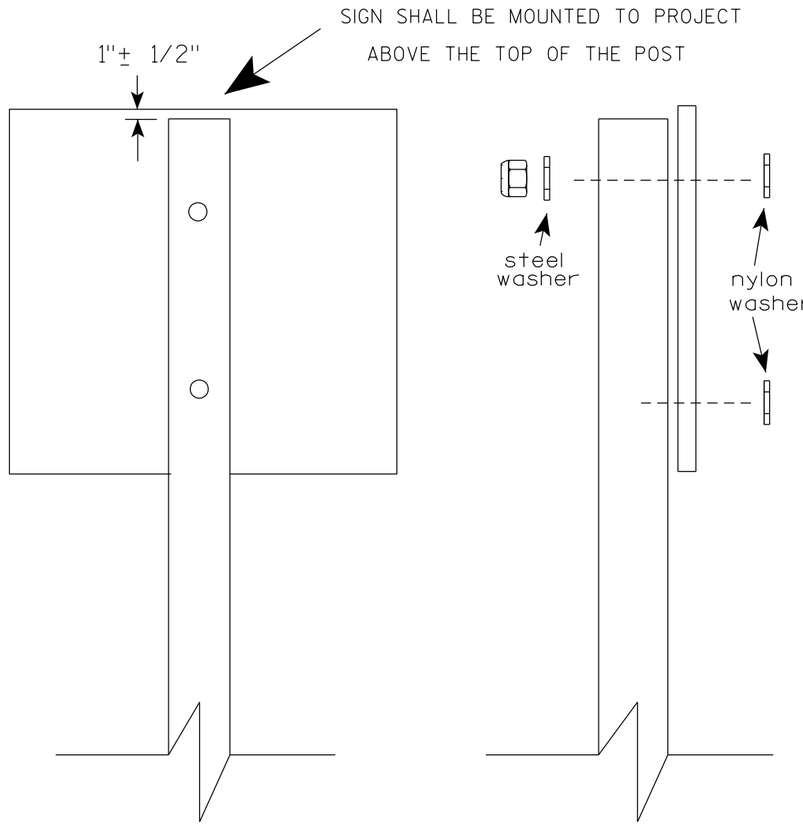
   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

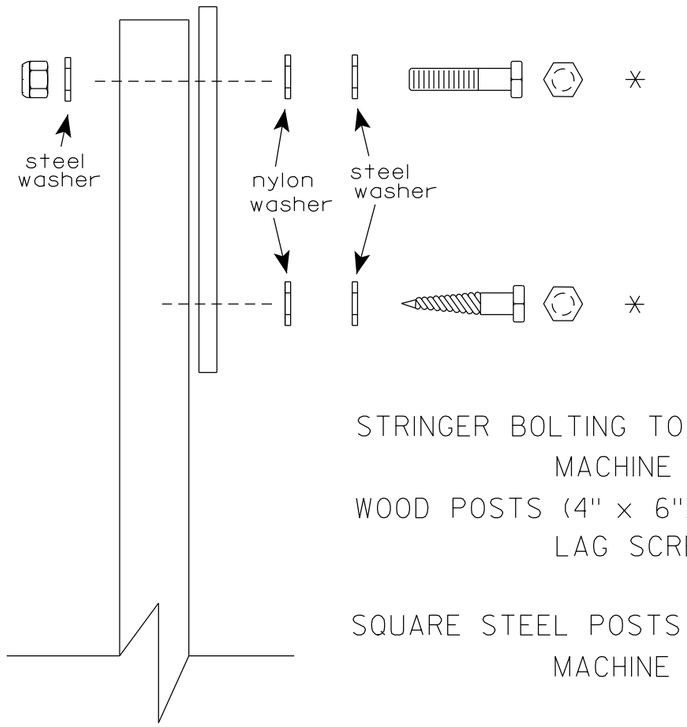
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/07/20 PLATE NO. A4-6.12





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

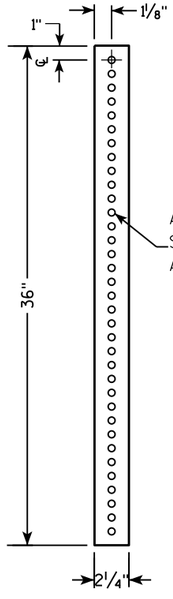
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

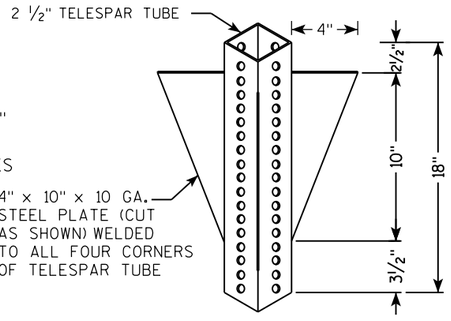
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

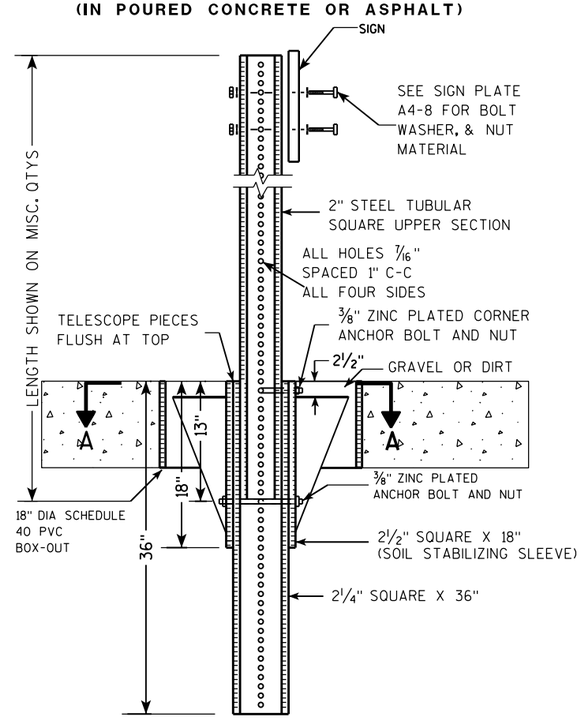
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



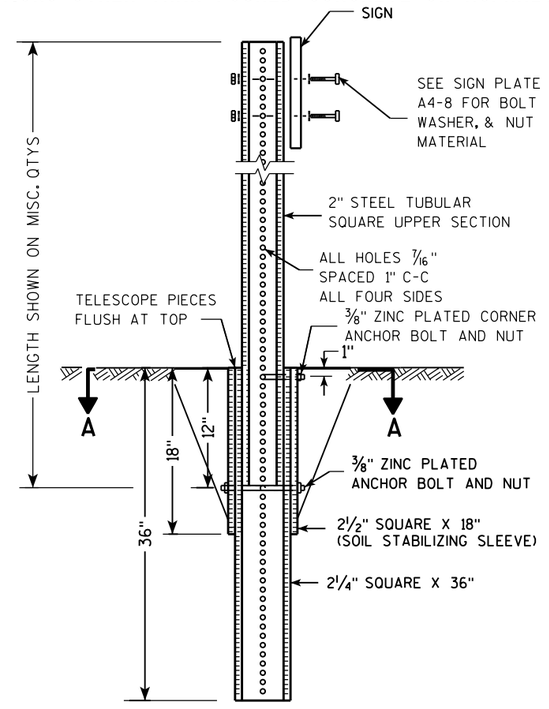
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

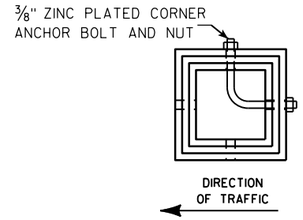


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

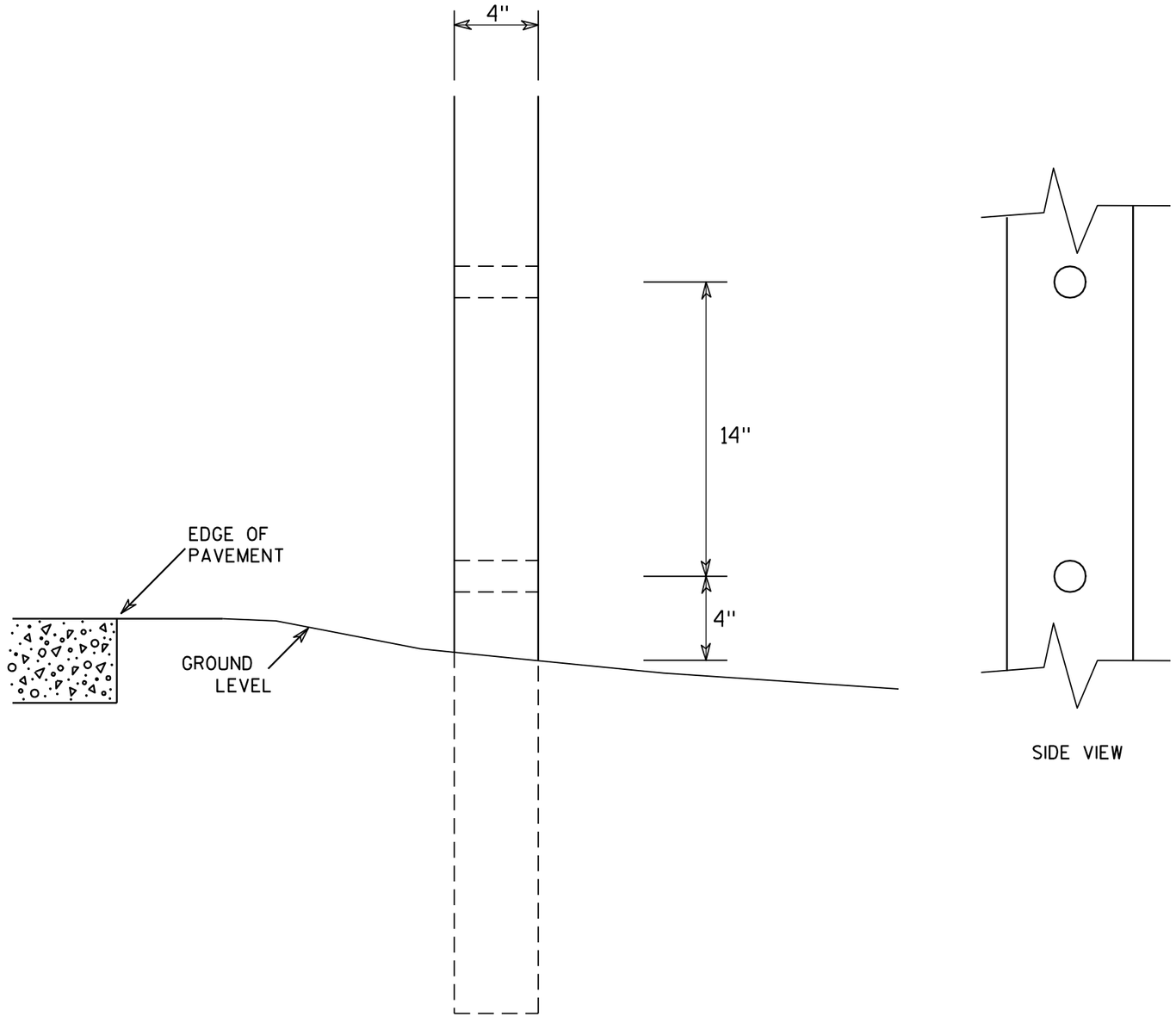
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 428 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

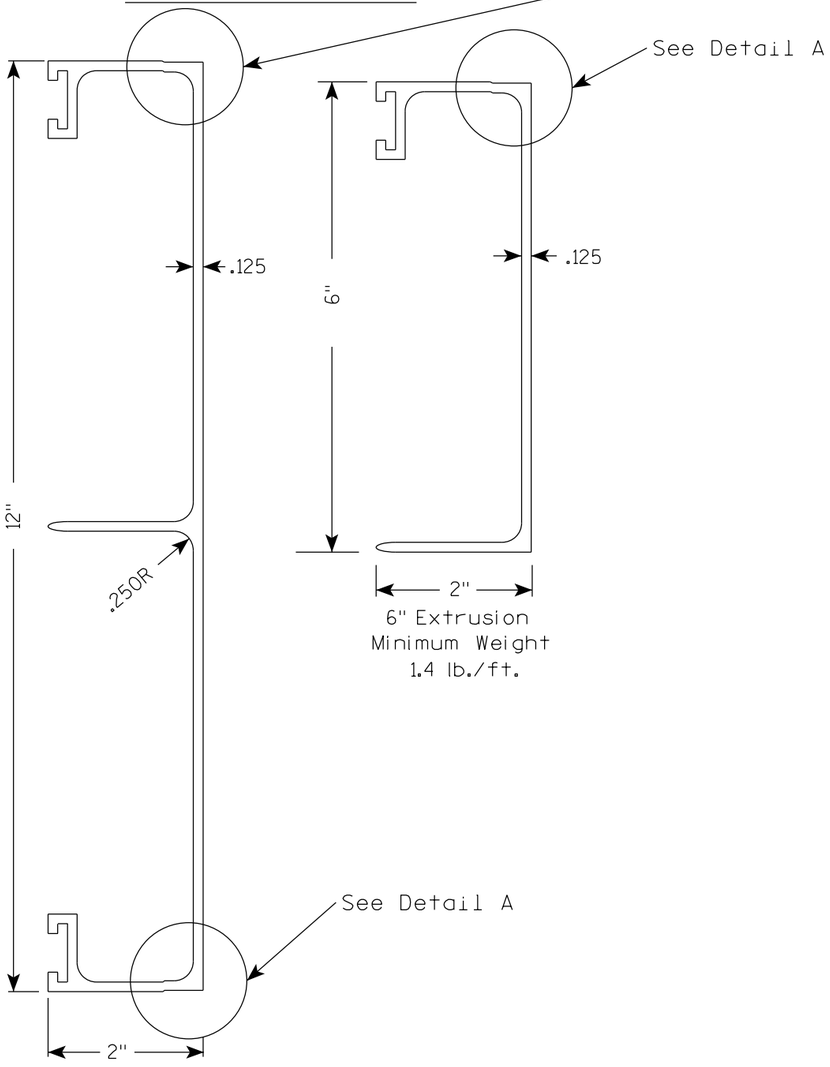
WISCONSIN DEPT OF TRANSPORTATION

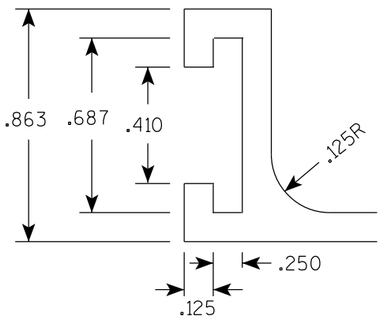
APPROVED Chester J Spang for State Traffic Engineer

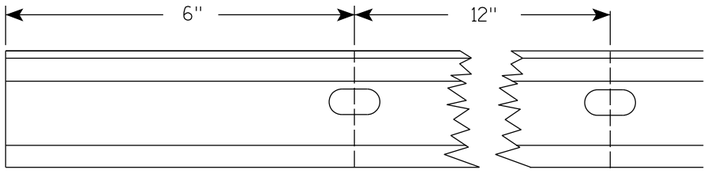
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 429	E

Extruded Shape







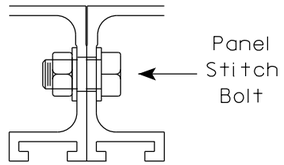
Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

Hardware

STITCH BOLT, WASHER & NUT

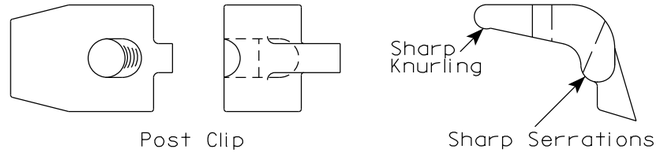
The hardware includes:

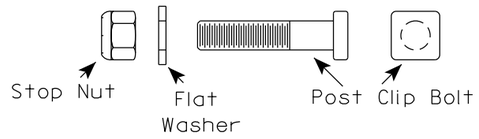
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

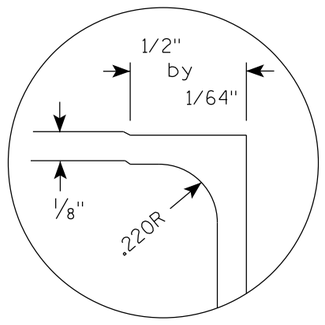
Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.



DETAIL A (EDGE WRAP JOINT)

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

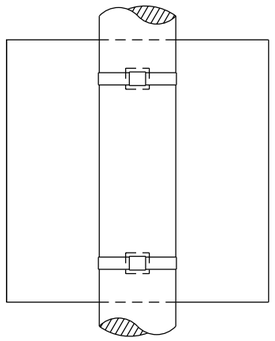
DATE 1/07/20 PLATE NO. A5-2.10

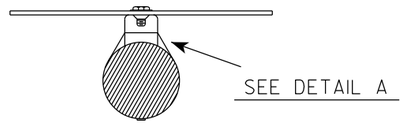
PROJECT NO:

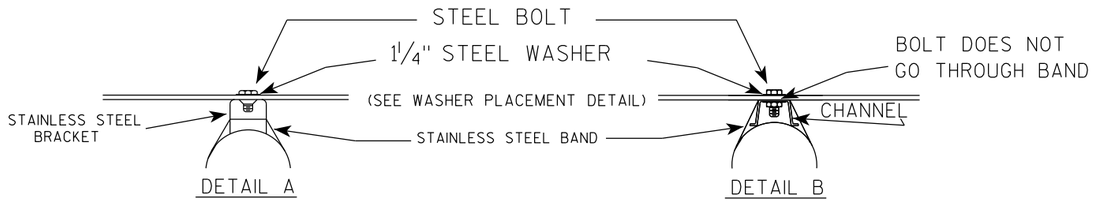
SHEET NO: 430 E

BANDING

SINGLE SIGN



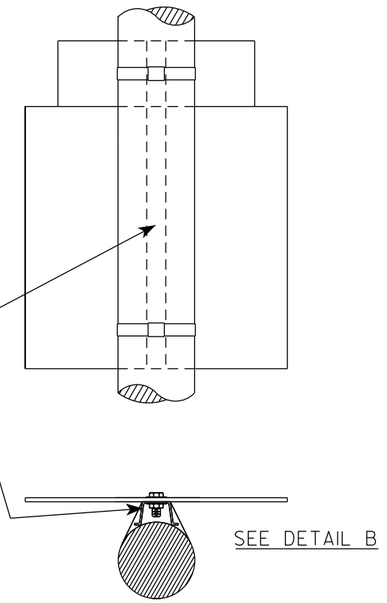




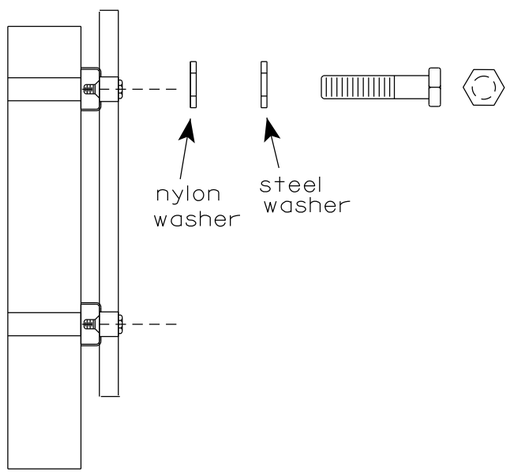
GENERAL NOTES

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 ¾" 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



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

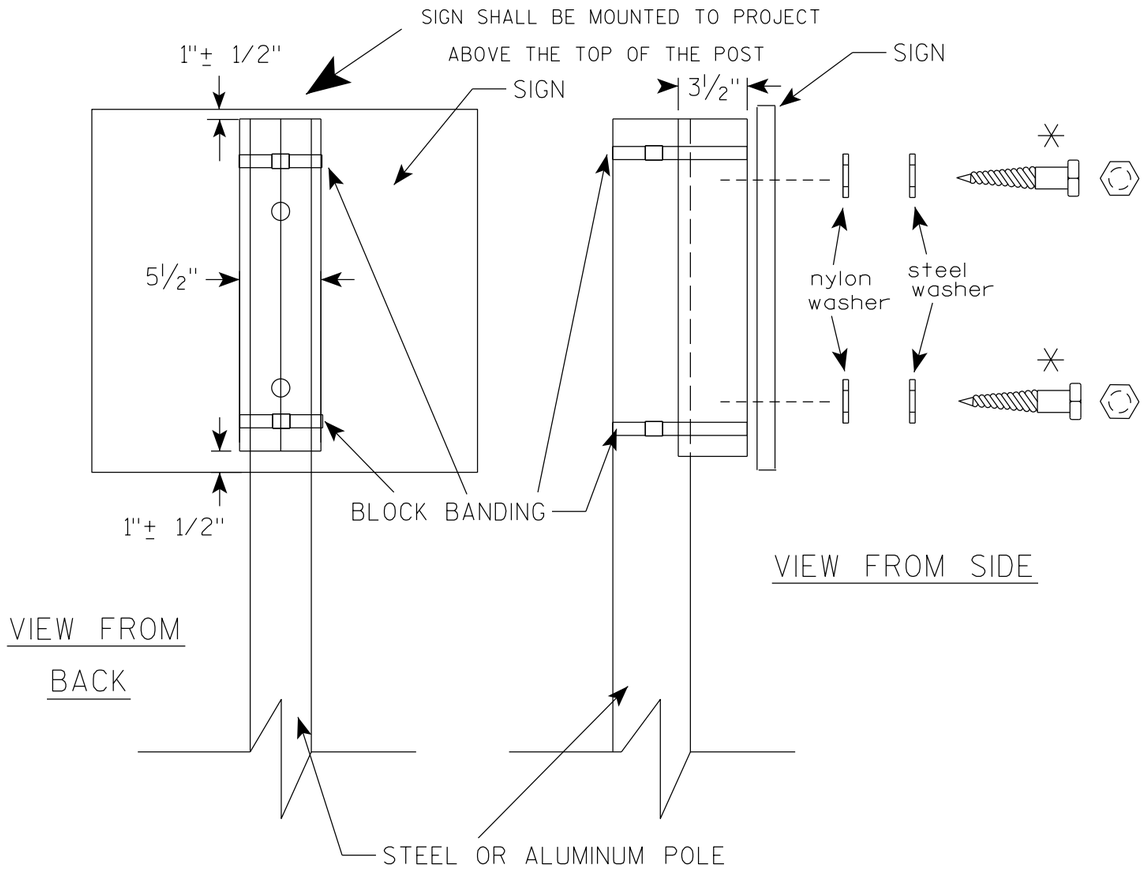
WISCONSIN DEPT OF TRANSPORTATION

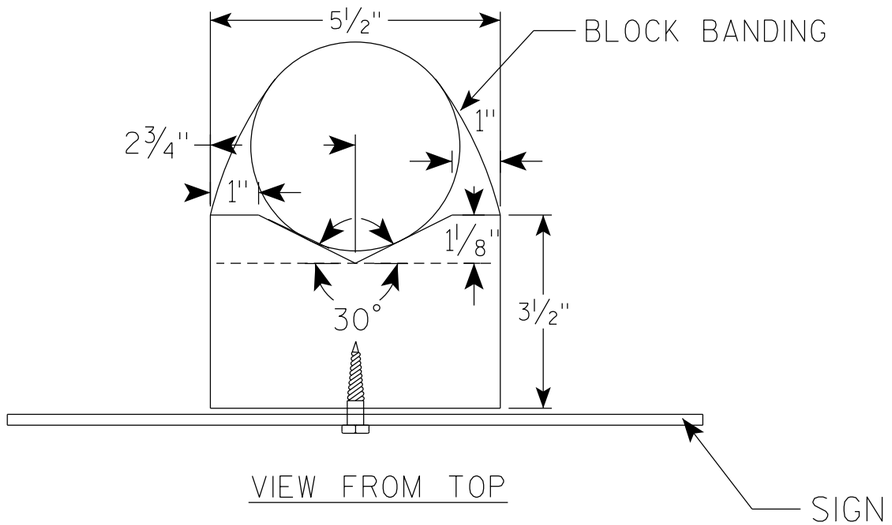
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 431	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   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 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

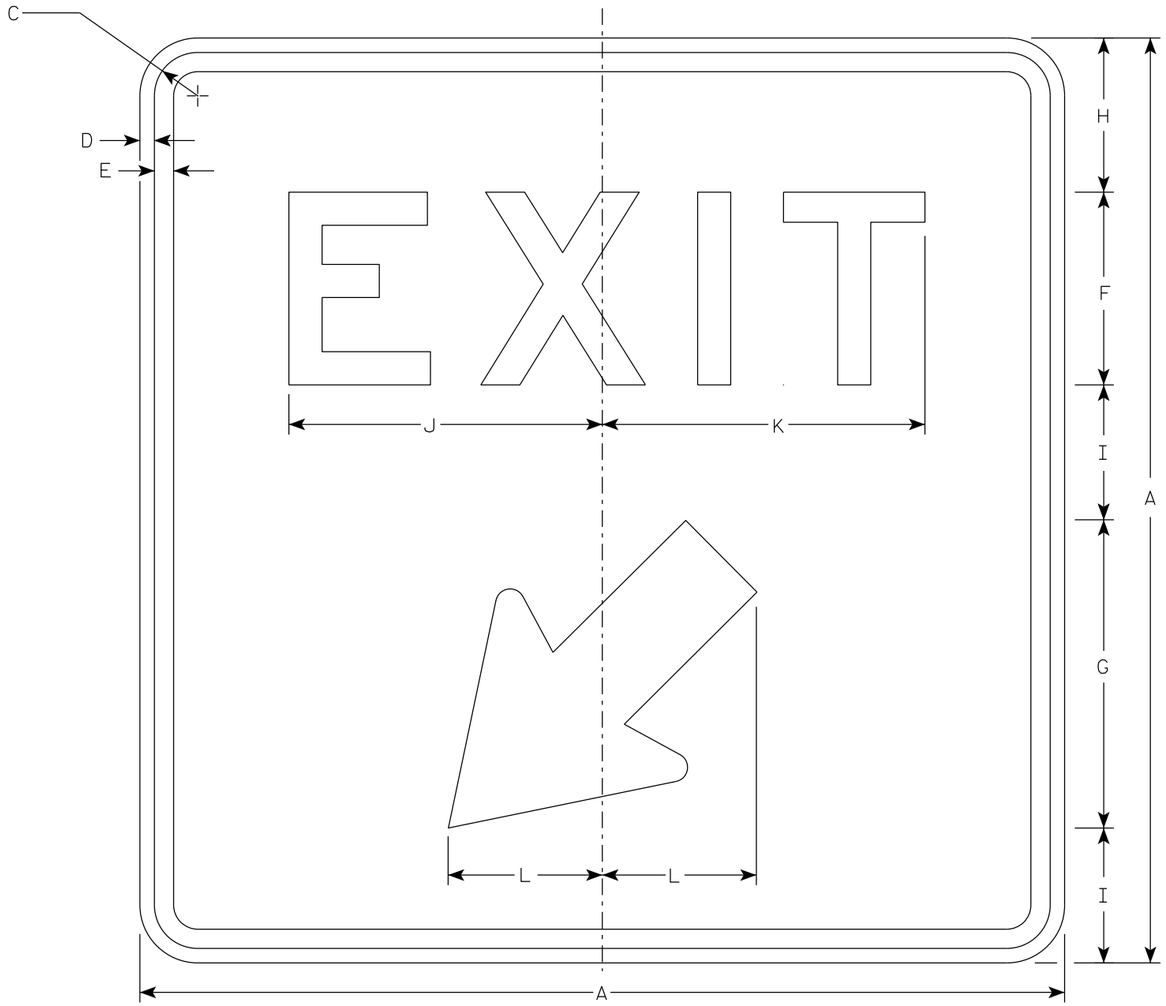
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

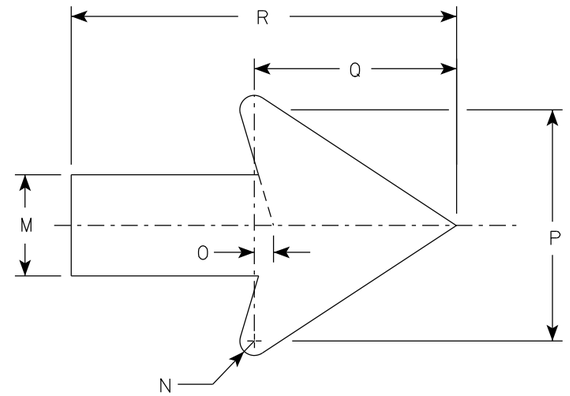
SHEET NO: 432 E



D52-54L

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. D52-54R is the same as D52-54L except that the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	5	8	4	3 1/2	8 1/8	8 3/8	4	2 5/8	3/8	1/2	6	5 1/4	10									4.0
2S	24		1 1/8	3/8	1/2	5	8	4	3 1/2	8 1/8	8 3/8	4	2 5/8	3/8	1/2	6	5 1/4	10									4.0
2M	24		1 1/8	3/8	1/2	5	8	4	3 1/2	8 1/8	8 3/8	4	2 5/8	3/8	1/2	6	5 1/4	10									4.0
3																											
4																											
5																											

STANDARD SIGN
D52-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

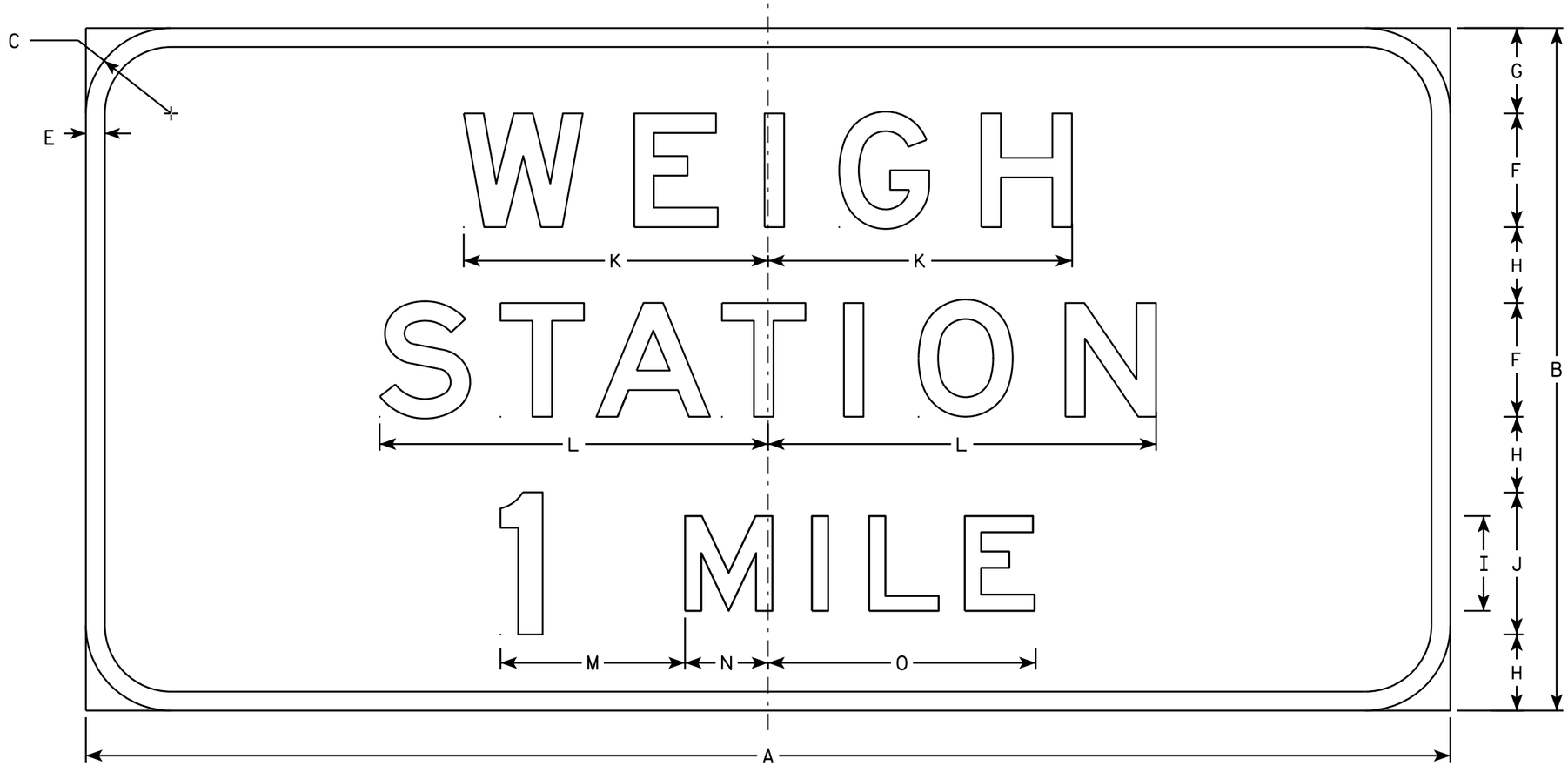
DATE 4/20/21 PLATE NO. D52-54.8

PROJECT NO:

SHEET NO: 433 E

NOTES

1. Sign is Type I- Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



E5-56A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	72	9		2	12	9	8	10	15	32 1/8	41	19 1/2	8 3/4	28 1/4												72.0
5	144	72	9		2	12	9	8	10	15	32 1/8	41	19 1/2	8 3/4	28 1/4												72.0

STANDARD SIGN
E5-56A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

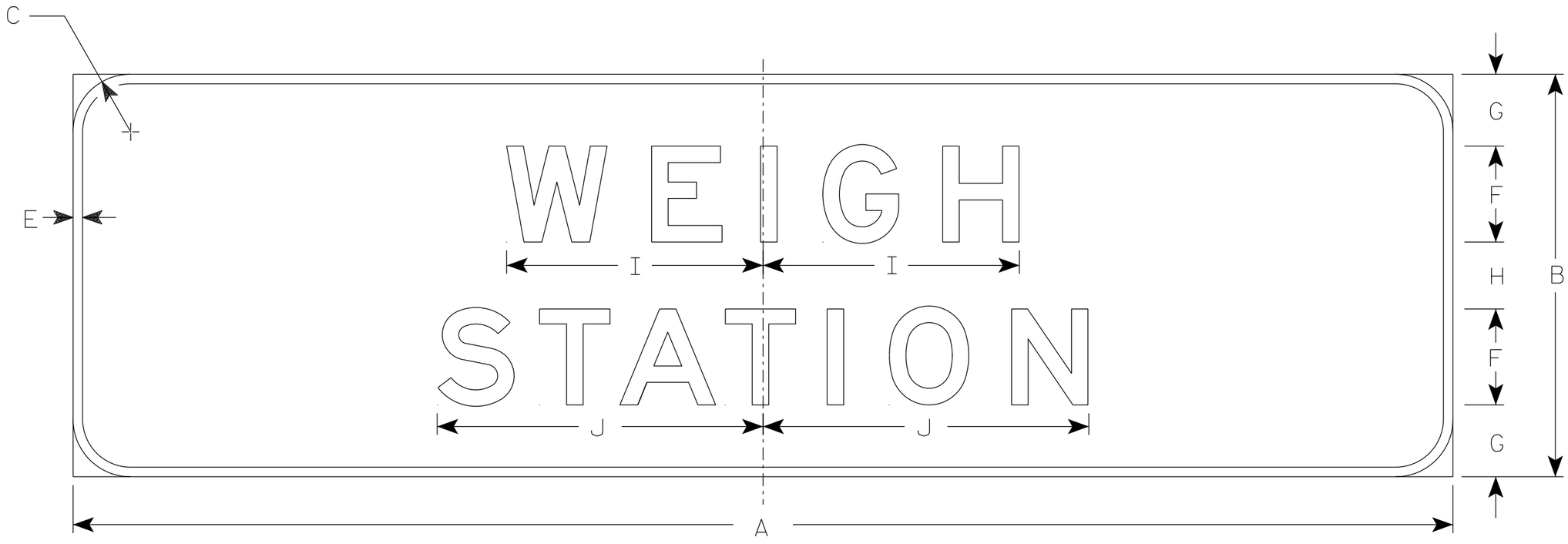
DATE 4/29/14 PLATE NO. F5-56A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\E556A.DGN PLOT DATE : 30-APR-2014 11:55 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.912768:1.000000

NOTES

1. Sign is Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



E5-57

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	42	6		1	10	7 1/2	7	26 3/4	34																	42.0
5	144	42	6		1	10	7 1/2	7	26 3/4	34																	42.0

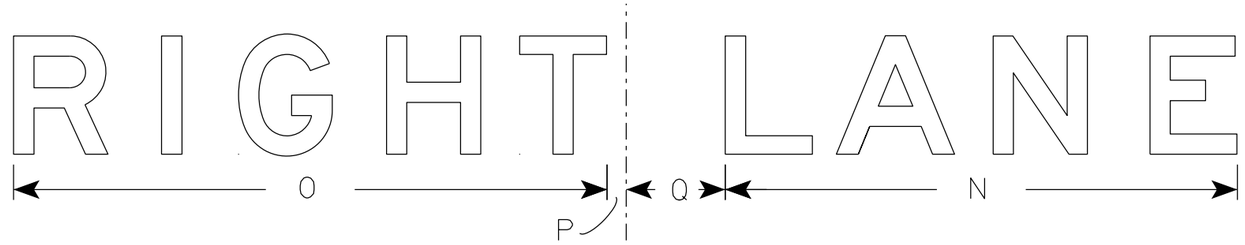
STANDARD SIGN
E5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/28/2022 PLATE NO. E5-57.4

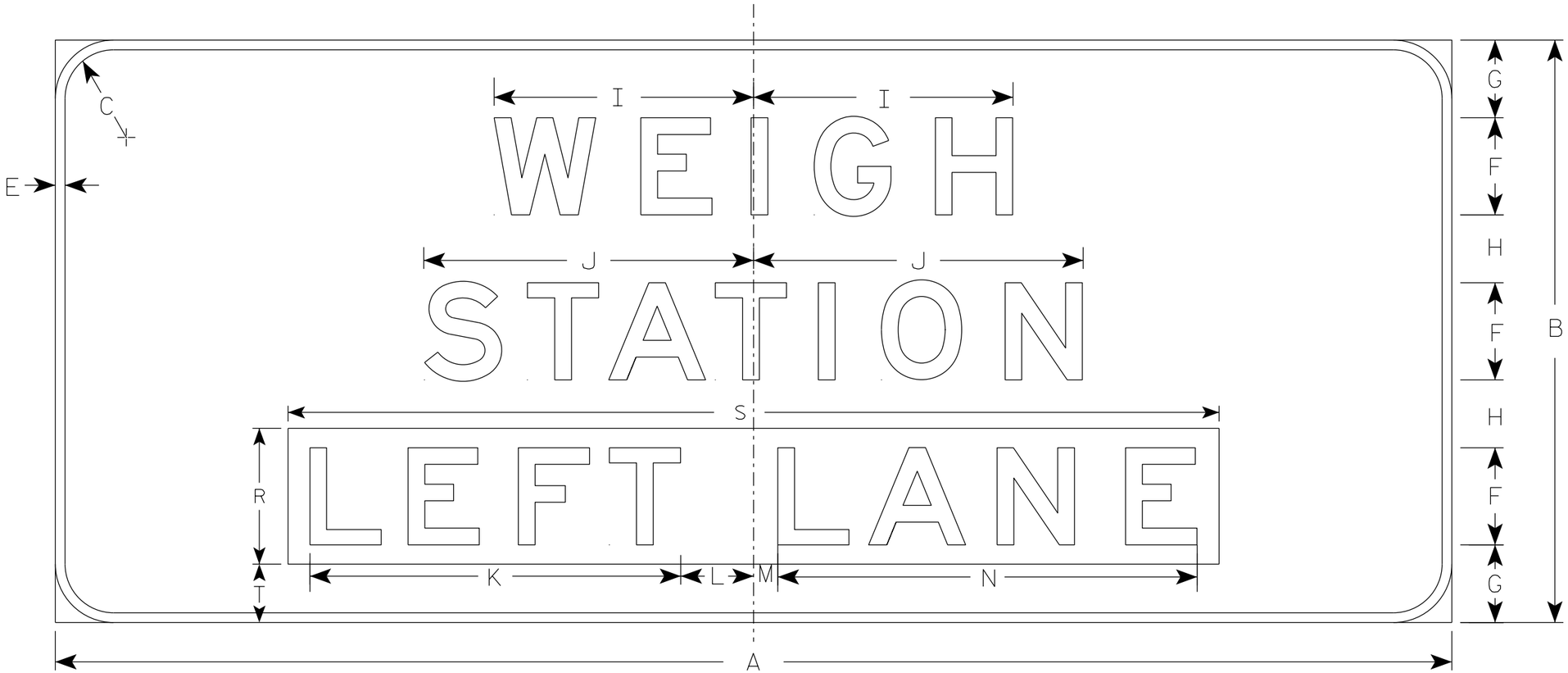
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 435 | E



E5-57E

NOTES

1. Sign is Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E
4. LEFT LANE PLAQUE COLOR:
   Background - Yellow - Type F Reflective
   Message - Black
5. RIGHT LANE is on Green Background with White Message



E5-57D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	60	6		1	10	8	7	26 3/4	34	38 1/4	7 1/2	2 1/2	43 1/4	50 1/8	1 5/8	8 3/8	14	96	6							60.0
5	144	60	6		1	10	8	7	26 3/4	34	38 1/4	7 1/2	2 1/2	43 1/4	50 1/8	1 5/8	8 3/8	14	96	6							60.0

STANDARD SIGN
E5-57D & E

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

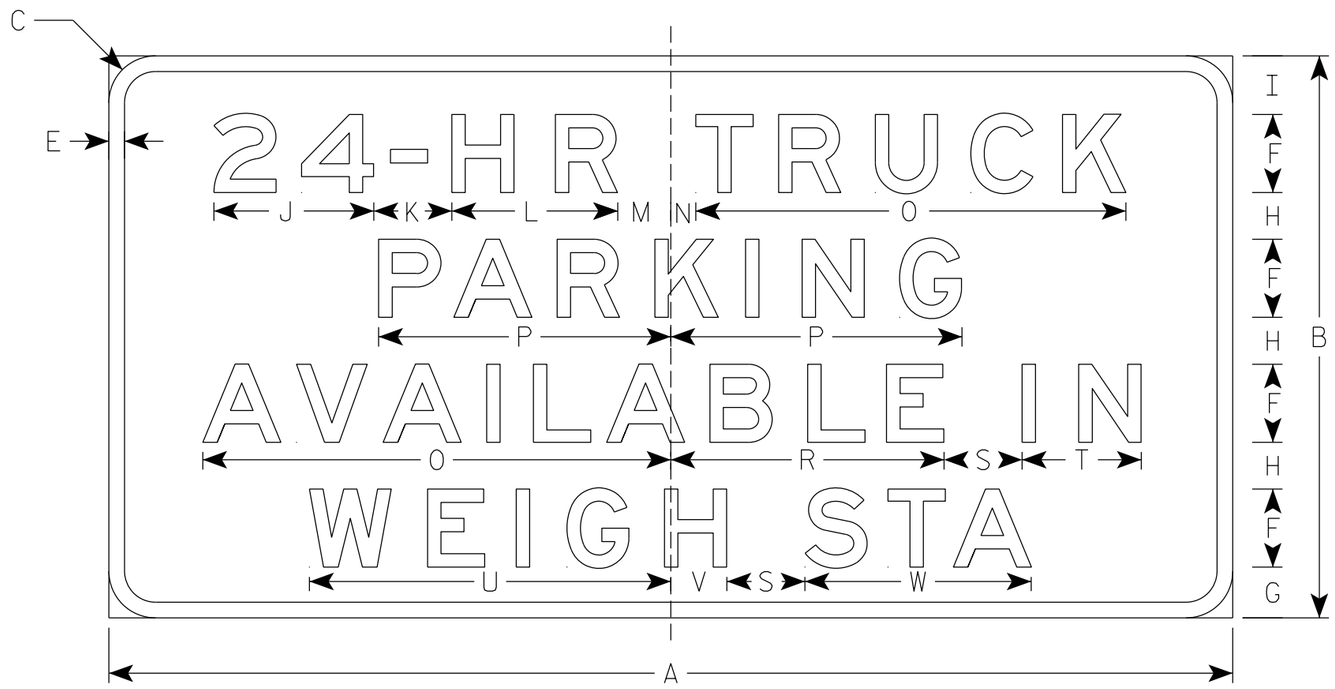
DATE 3/7/2022 PLATE NO. E5-57D.6

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 436 | E

7

NOTES

1. All Signs are Type I - Type SH Reflective
2. Color:
   Background - Blue
   Message - White
3. Message Series - E



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	72	6		2	10	6 ½	6	7 ½	20 ½	10	21 ¼	6 ¾	3 ¼	55 ⅛	37 ⅜	60	35	10	15 ¼	46 ¼	7 ¼	29				72.0
5																											

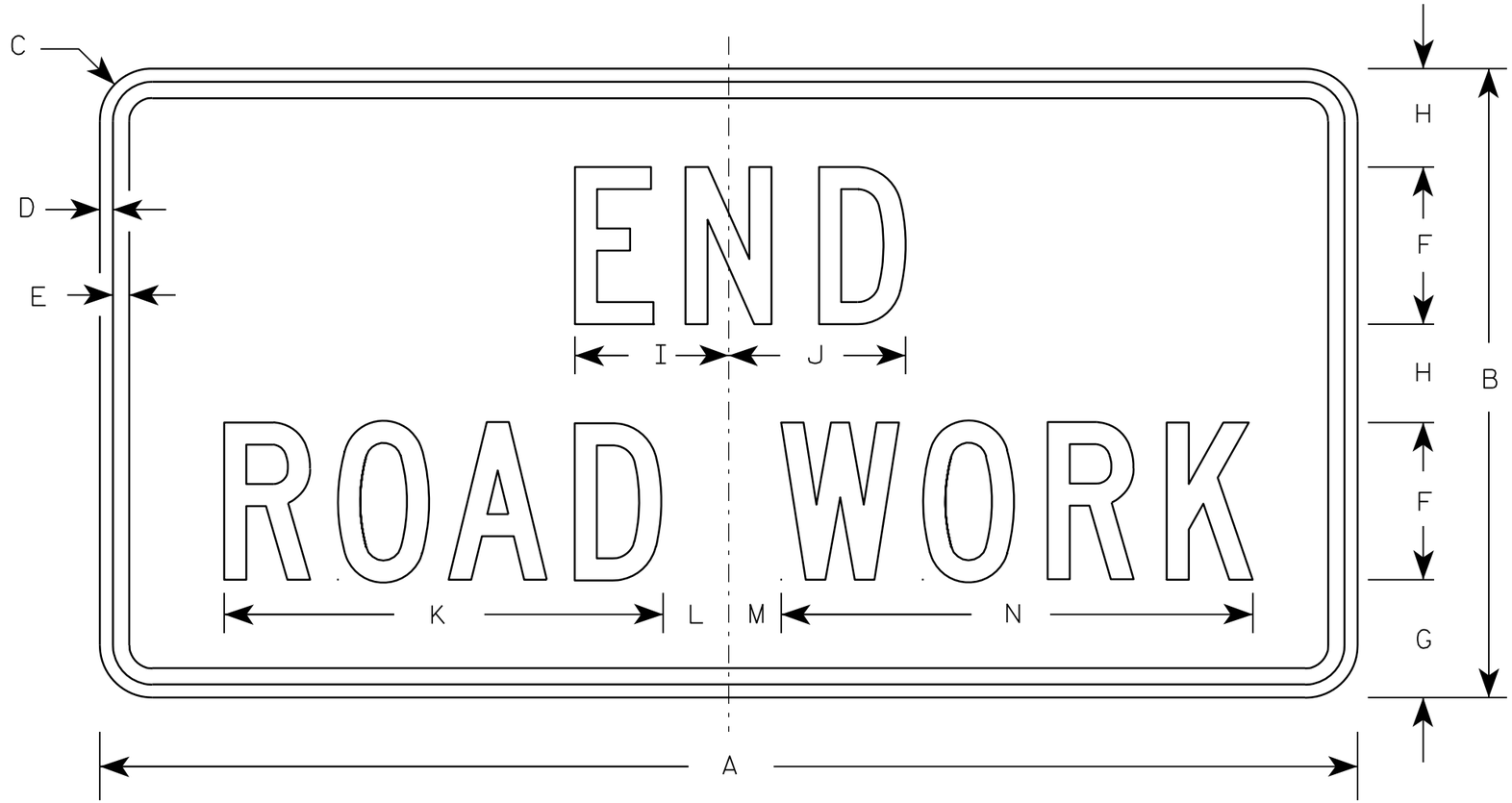
STANDARD SIGN
E5-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 3/7/19 PLATE NO. E5-65.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 437 | E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

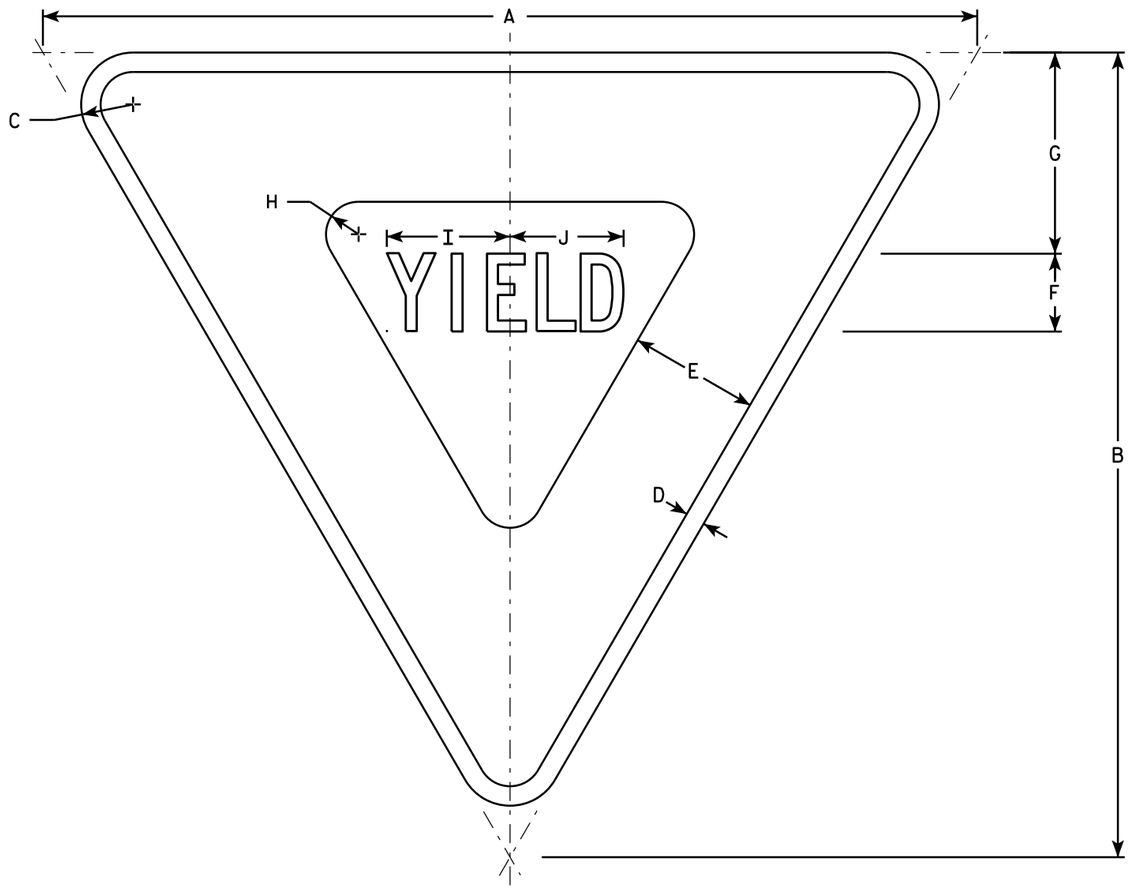
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 438	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\G202A.DGN PLOT DATE : 30-SEP-2009 09:31 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 5.561773:1.000000

WISDOT/CADDS SHEET 42

7

7



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

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	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

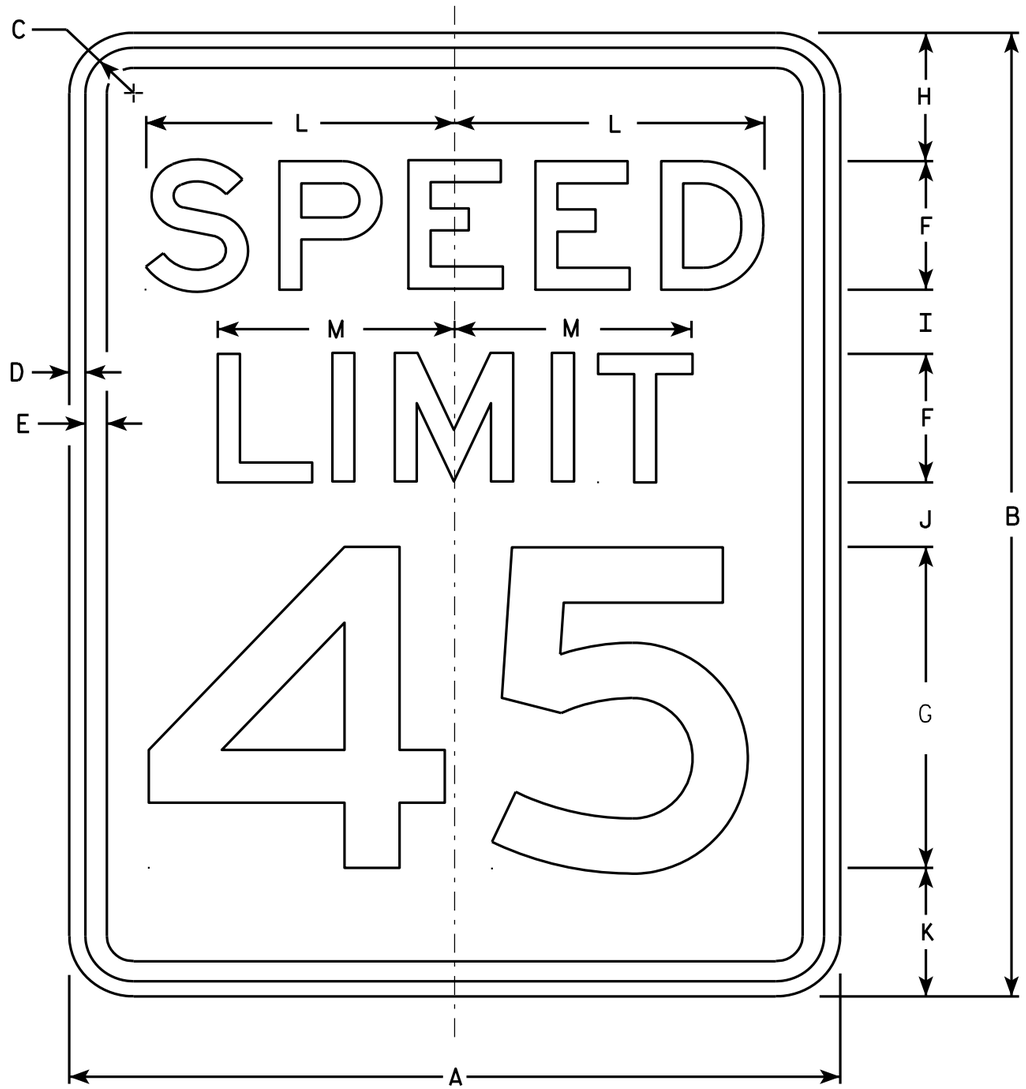
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

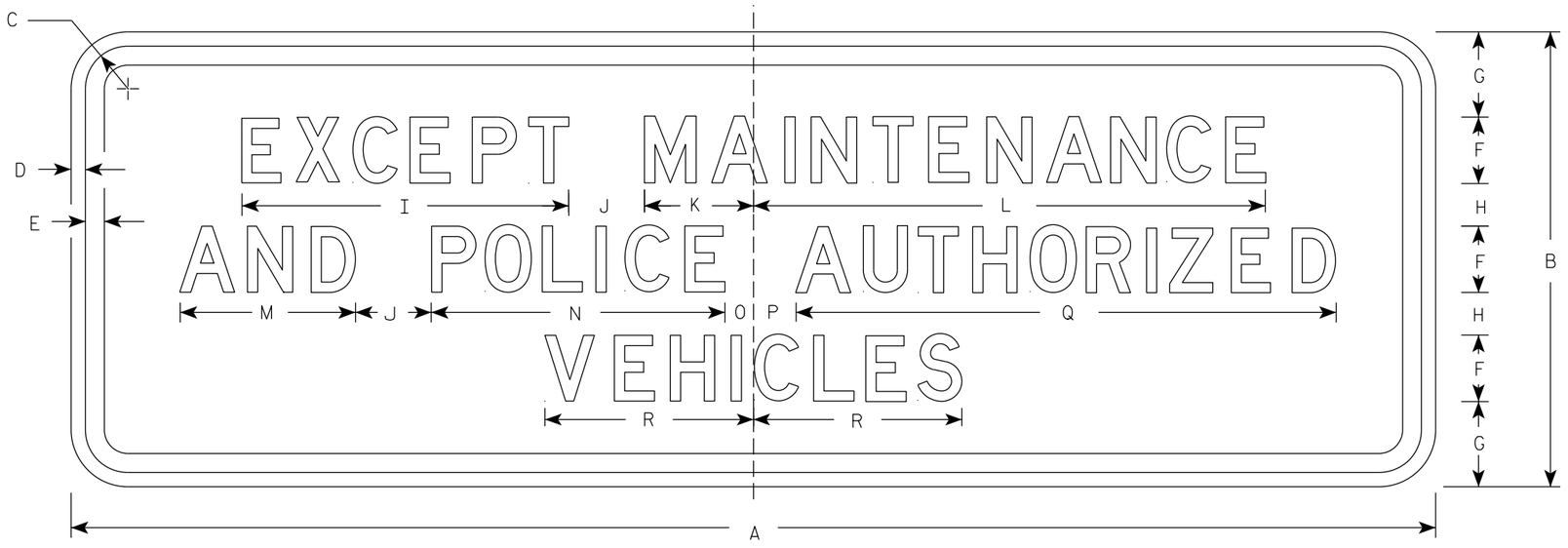
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 440	E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D



R3-4A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M	36	12	1 3/8	1/2	3/8	1 3/4	2 1/4	1 1/8	8 5/8	2	2 7/8	13 1/2	4 5/8	7 3/4	3/4	1 1/8	14 1/4	5 1/2									3.0
3	36	12	1 3/8	1/2	3/8	1 3/4	2 1/4	1 1/8	8 5/8	2	2 7/8	13 1/2	4 5/8	7 3/4	3/4	1 1/8	14 1/4	5 1/2									3.0
4	36	12	1 3/8	1/2	3/8	1 3/4	2 1/4	1 1/8	8 5/8	2	2 7/8	13 1/2	4 5/8	7 3/4	3/4	1 1/8	14 1/4	5 1/2									3.0
5	36	12	1 3/8	1/2	3/8	1 3/4	2 1/4	1 1/8	8 5/8	2	2 7/8	13 1/2	4 5/8	7 3/4	3/4	1 1/8	14 1/4	5 1/2									3.0

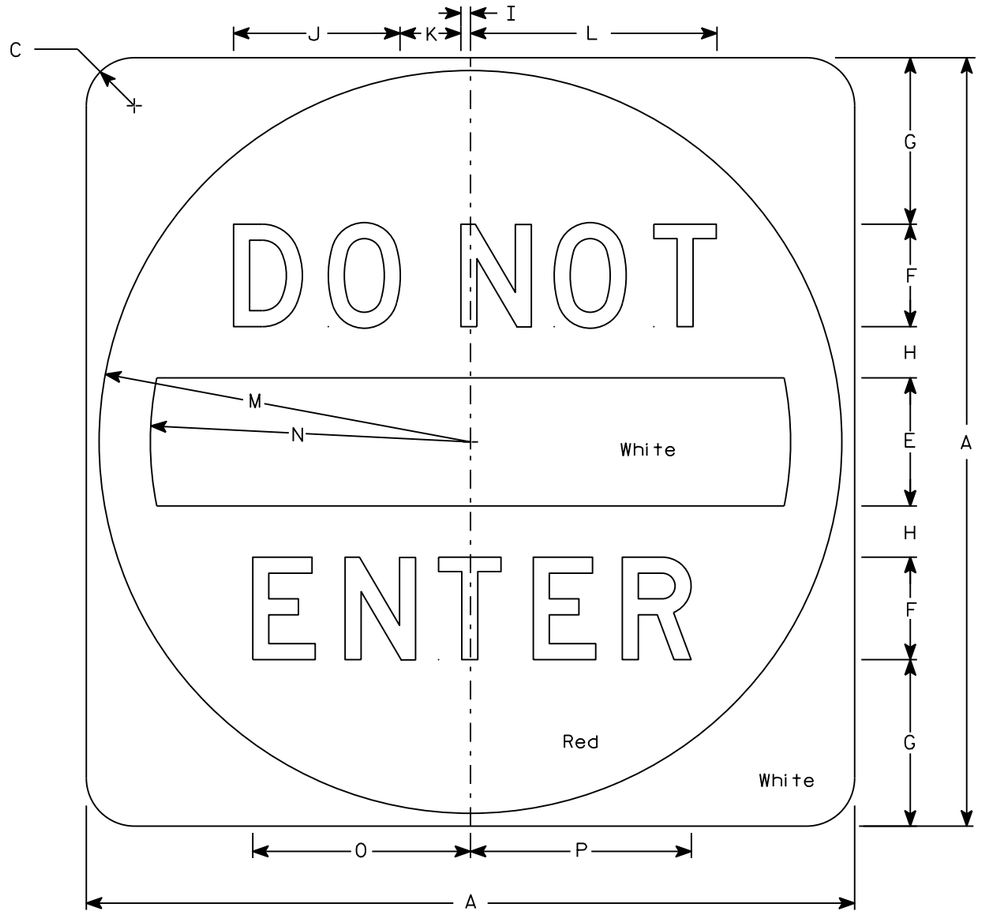
STANDARD SIGN
R3-4A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/18/19 PLATE NO. R3-4A.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 441	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See detail
   Message - White
3. Message Series - D

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	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.25
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

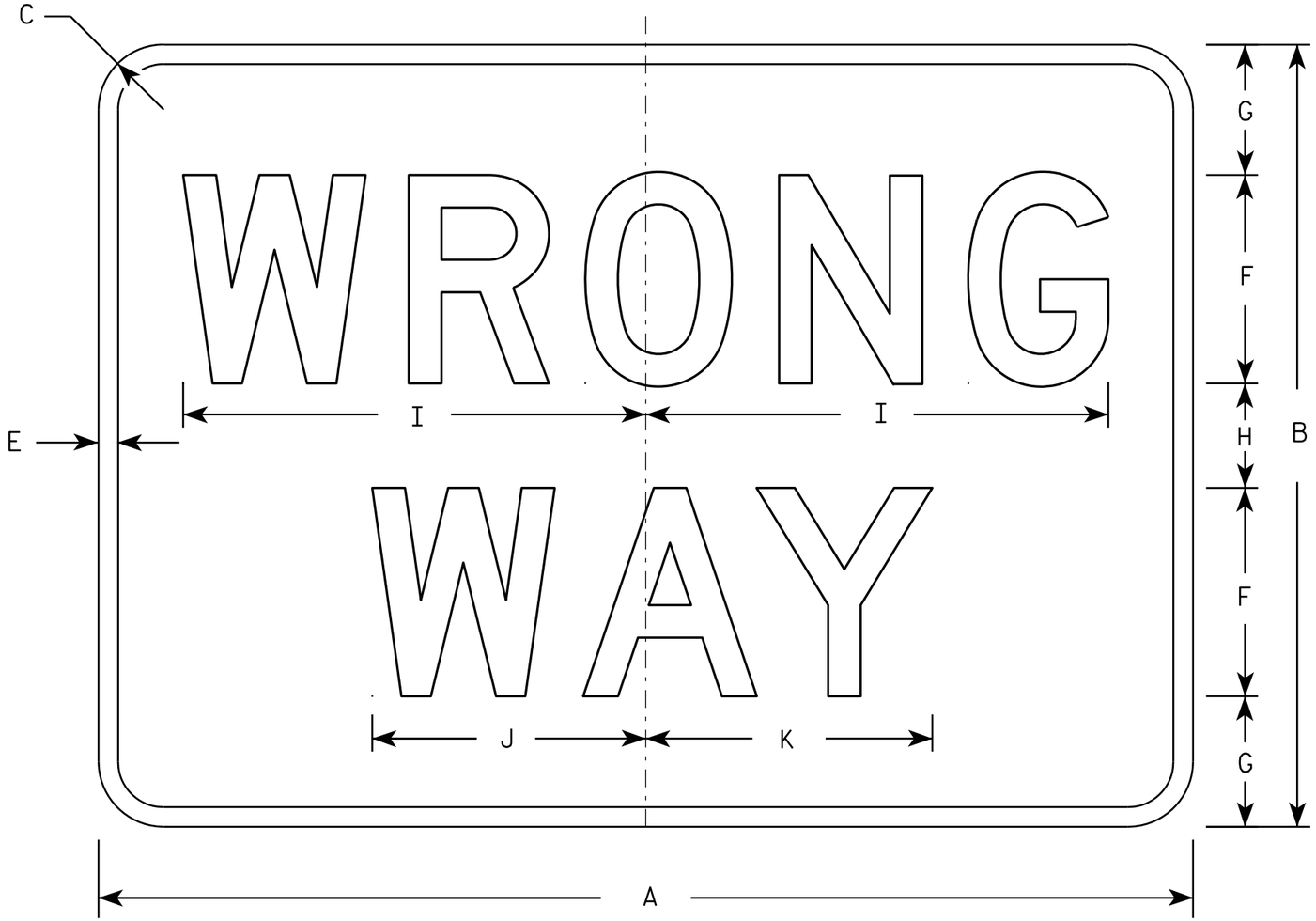
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 442 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 443 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R51A.DGN PLOT DATE : 17-DEC-2010 12:42 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.462457:1.000000

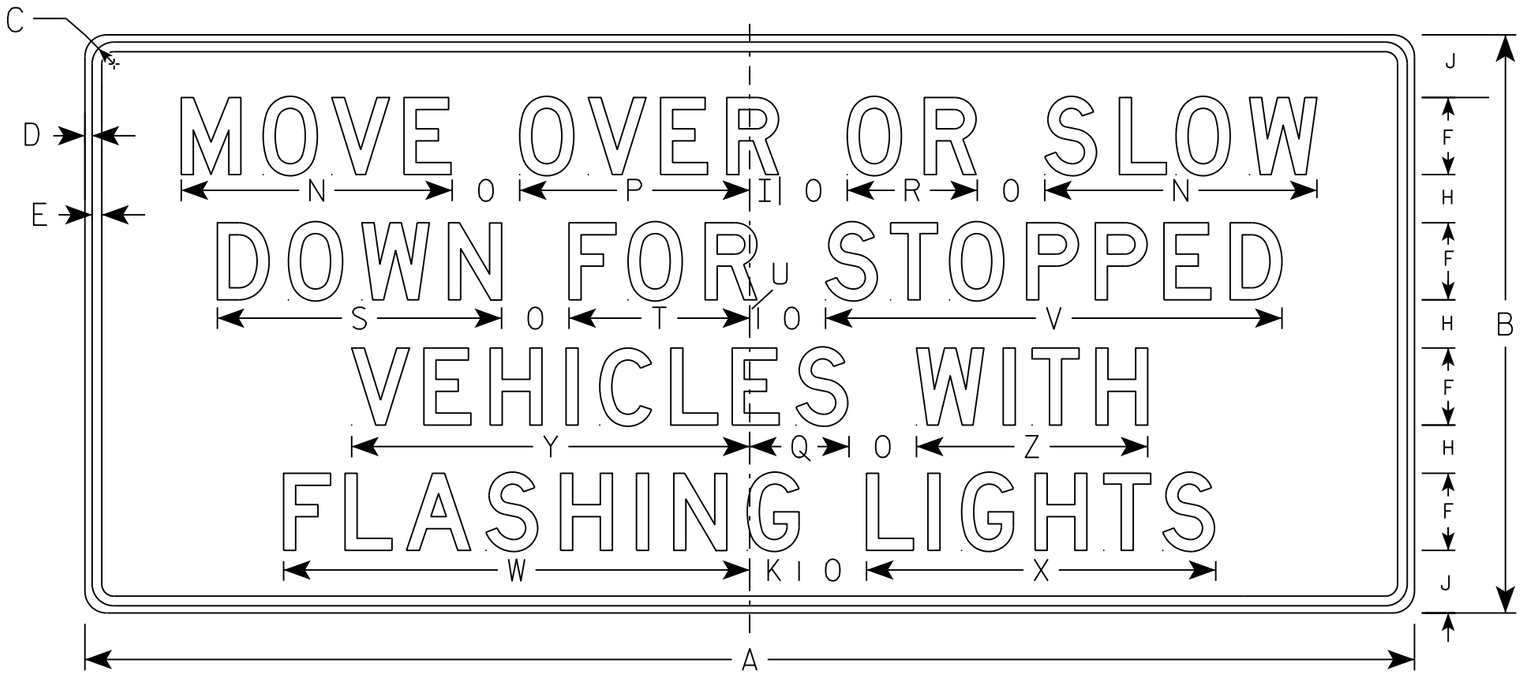
WISDOT/CADDS SHEET 42

7

7

NOTES

1. Sign is Type II - Type H Reflective
2. Color: Background - White
   Message - Black
3. Message Series - D



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 1/8	3/8	3/8	3		2 1/4	1 1/4	2 5/8	1 3/4			10 1/4	2 1/2	8 5/8	3 3/4	4 7/8	10 5/8	6 7/8	1/4	17 1/4	17 1/2	13 1/4	15 1/8	8 7/8	8.0
2M	48	24	1 1/8	3/8	3/8	3		2 1/4	1 1/4	2 5/8	1 3/4			10 1/4	2 1/2	8 5/8	3 3/4	4 7/8	10 5/8	6 7/8	1/4	17 1/4	17 1/2	13 1/4	15 1/8	8 7/8	8.0
3																											
4	138	60	2 1/4	3/4	1	8		5	3 1/8	6 1/2	5			28 1/4	7	23 7/8	10 3/8	13 1/2	29 1/2	18 3/4	7/8	47 3/8	48 3/8	36 1/4	41 3/8	24	57.5
5	138	60	2 1/4	3/4	1	8		5	3 1/8	6 1/2	5			28 1/4	7	23 7/8	10 3/8	13 1/2	29 1/2	18 3/4	7/8	47 3/8	48 3/8	36 1/4	41 3/8	24	57.5

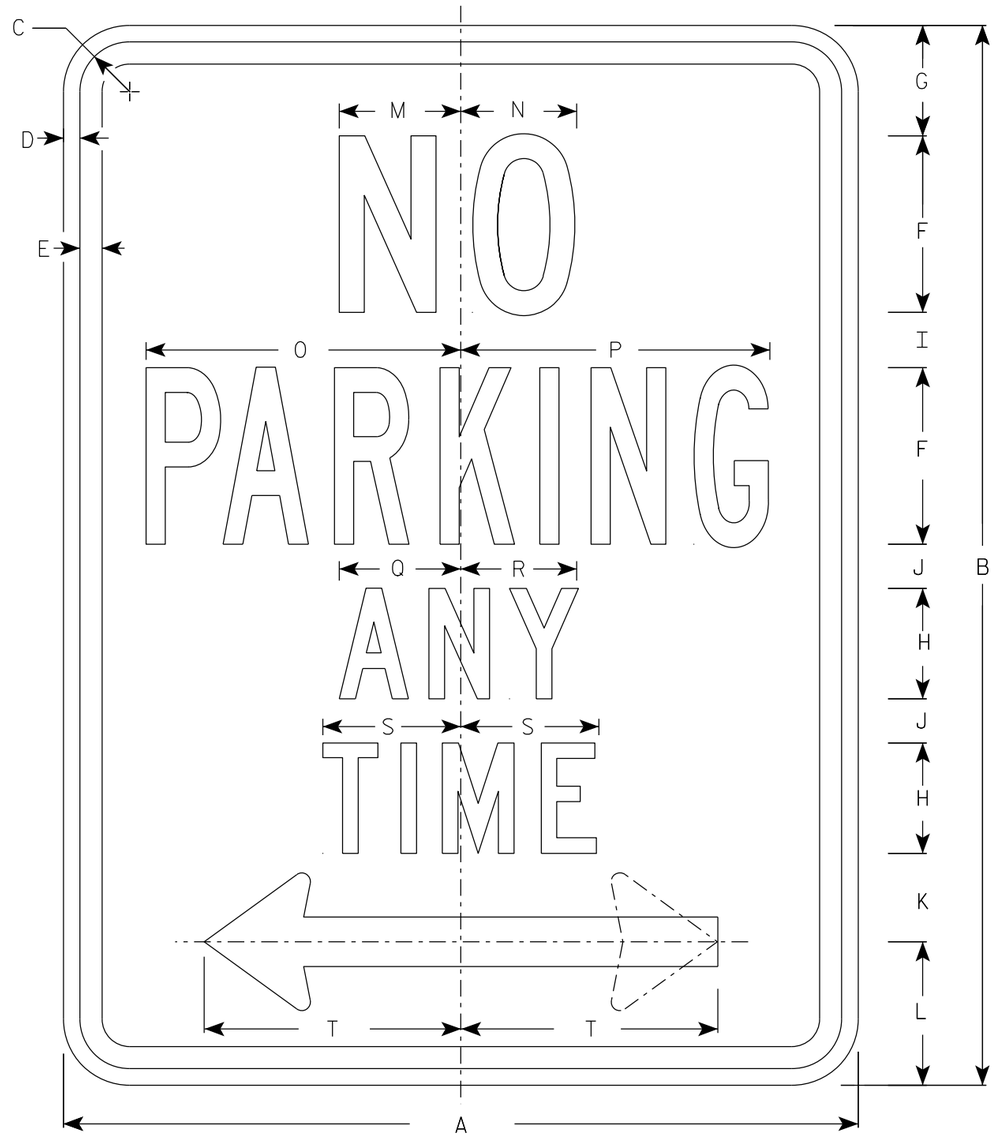
STANDARD SIGN
R5-60

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/15/18 PLATE NO. R5-60.4

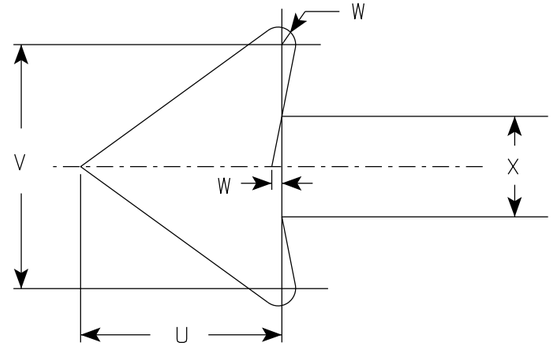
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 444	E



R7-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Lines 1, 3 and 4 are series C, line 2 is series B.
5. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



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	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

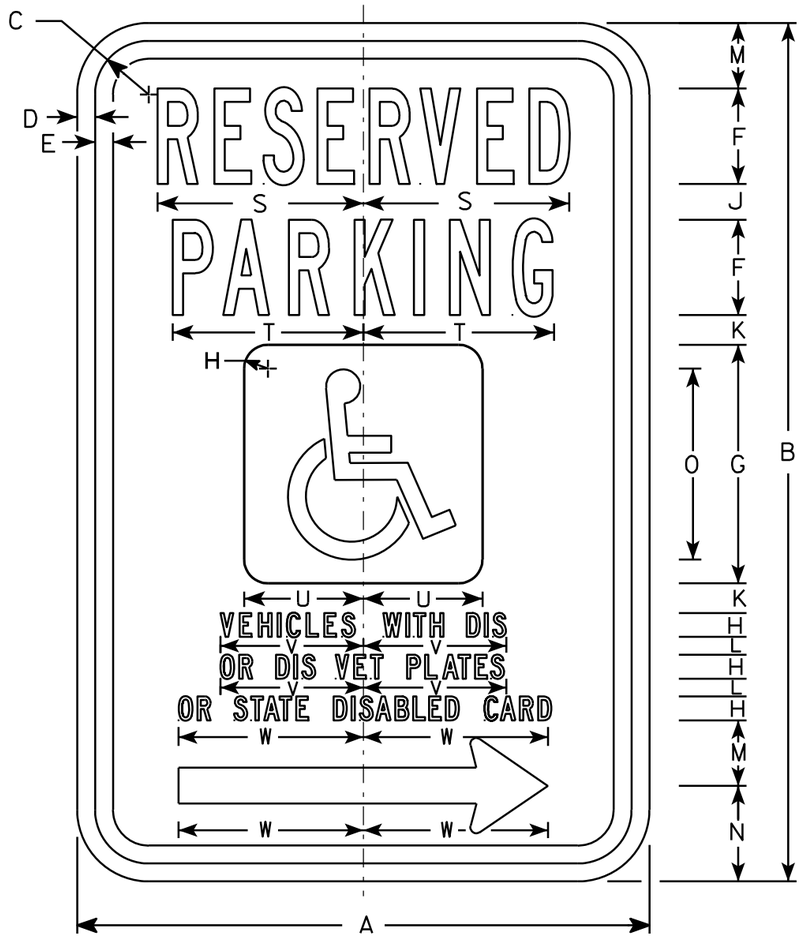
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2021 PLATE NO. R7-1.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 445 E

7

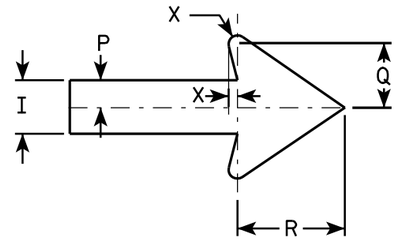
7



R7-8R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Sign is white Type H Reflective; paraplegic background is blue.
   Message - Legend and border are green; paraplegic symbol is white
3. Message Series - Lines 1 & 2 are Series B
   Lines 3, 4, 5 & 6 are Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R7-8R (RIGHT ARROW)
   R7-8L (LEFT ARROW)



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	18	1 1/8	3/8	3/8	2	5	1/2	3/4	3/4	5/8	3/8	1 3/8	2	4	3/8	7/8	1 1/2	4 3/8	4	2 1/2	3	3 7/8	3/16			1.5
2M	18	24	1 1/8	3/8	1/2	3	6	3/4	1 1/8	7/8	5/8	1/2	1 7/8	2 7/8	5	5/8	1 3/8	2 1/4	6 1/2	5 3/8	3	4 1/2	5 7/8	1/8			3.0
3	18	24	1 1/8	3/8	1/2	3	6	3/4	1 1/8	7/8	5/8	1/2	1 7/8	2 7/8	5	5/8	1 3/8	2 1/4	6 1/2	5 3/8	3	4 1/2	5 7/8	1/8			3.0
4																											
5																											

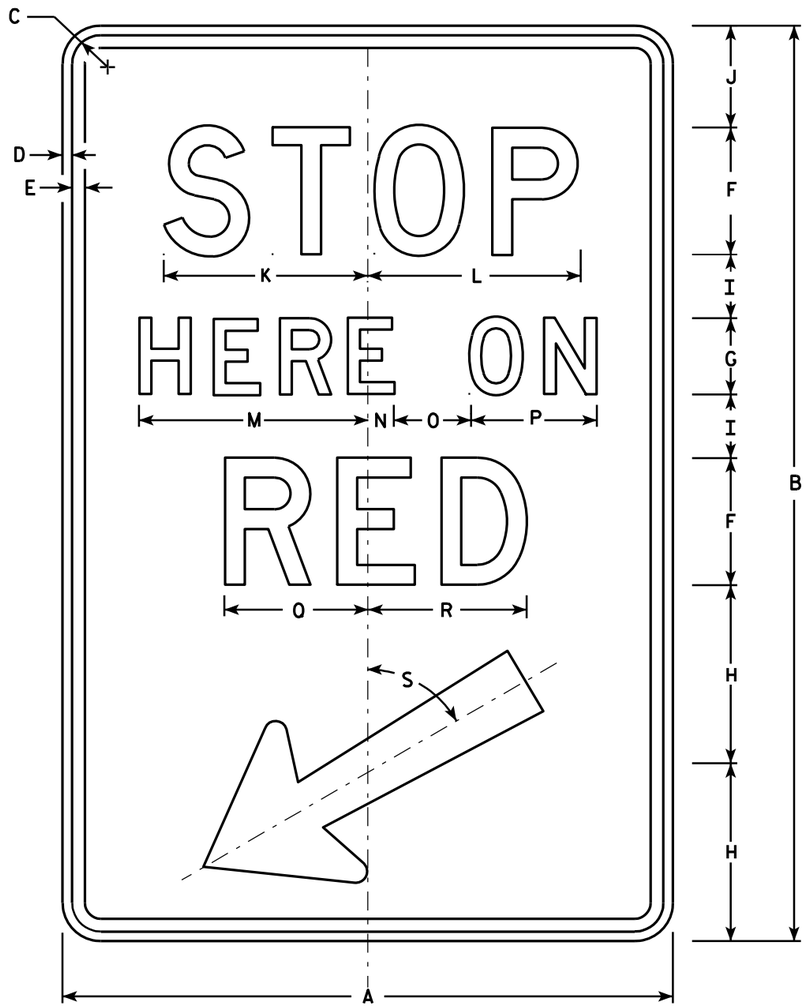
STANDARD SIGN
R7-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-8.6

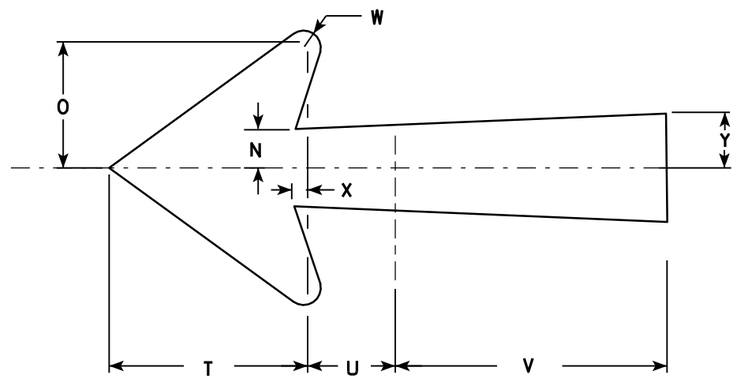
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 446	E



R10-6

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
2M	24	36	1 1/8	3/8	1/2	5	3	7	2 1/2	4	8	8 3/8	9	1	3	5	5 5/8	6 1/4	60°	5 1/4	2 1/4	7 1/8	1/2	3/8	1 3/8		6.0
3																											
4																											
5																											

STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

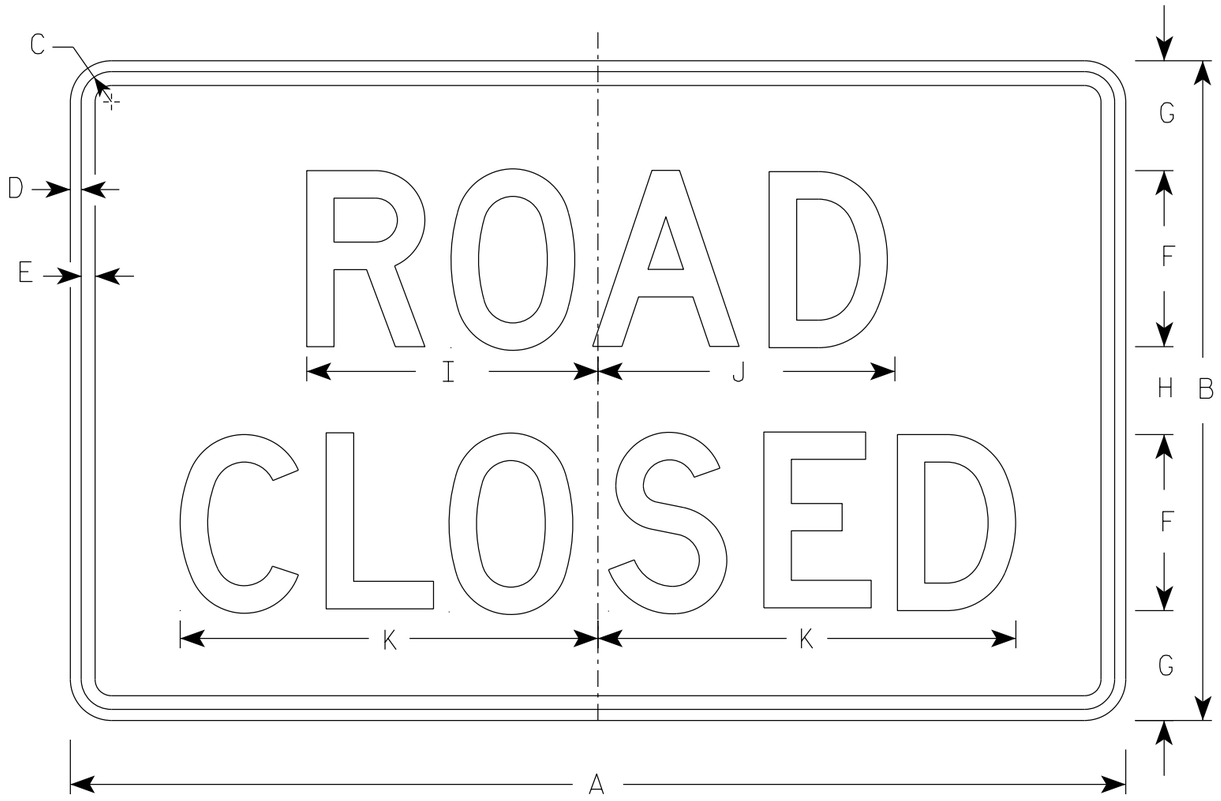
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 447	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R106.DGN PLOT DATE : 05-APR-2011 09:50 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

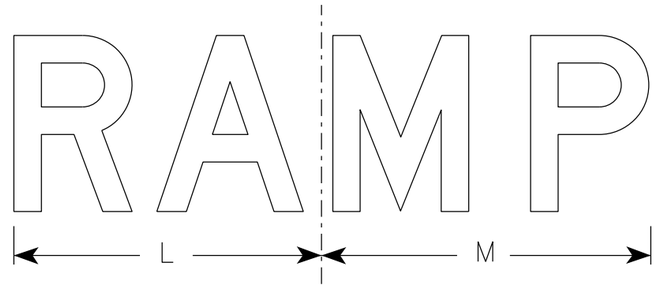
7



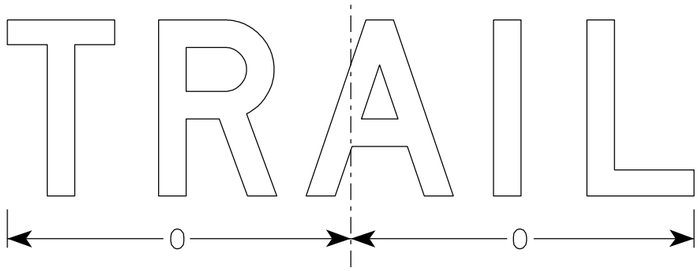
R11-2

NOTES

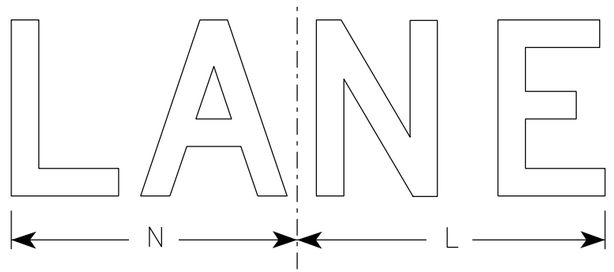
1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2T



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13	15 5/8												10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

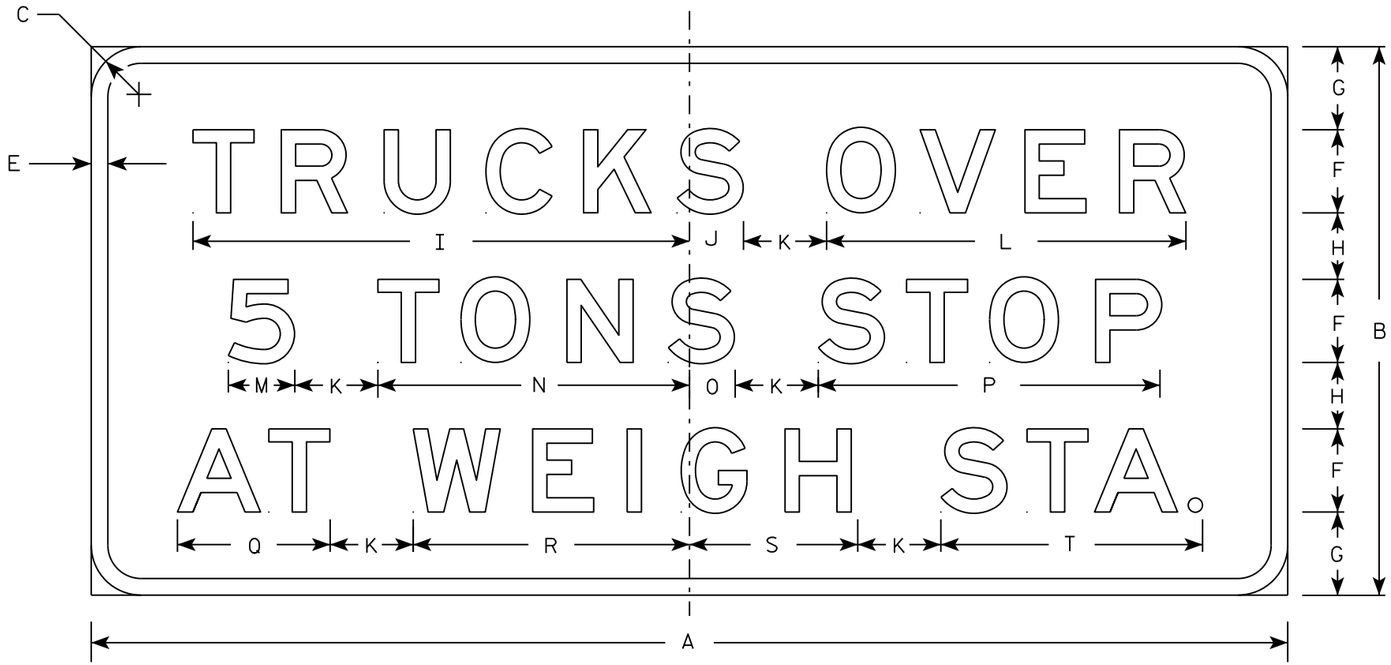
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2021 PLATE NO. R11-2.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 448 E

NOTES

1. Sign is Type I or Type II - See Note 5
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded but borders shall be rounded when sign is Type II.
5. Code sizes 2 & 4 are Type II, Type H Reflective, Code size 5 is Type I Type SH Reflective.
6. Base material for Type II signs shall be 0.125 inch aluminum.



R13-1

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	90	36	3		1	6	5	4	36	3 7/8	6	26 1/8	4 3/4	22 3/4	3 1/4	25	11 1/8	19 7/8	12 1/4	19 1/2							22.5
2M	90	36	3		1	6	5	4	36	3 7/8	6	26 1/8	4 3/4	22 3/4	3 1/4	25	11 1/8	19 7/8	12 1/4	19 1/2							22.5
3																											
4	120	48	6		1	8	7	5	47 7/8	5 1/8	8	34 3/4	6 3/8	30 1/8	4 3/8	33 1/8	14 7/8	26 3/8	17 1/8	26 1/8							40.0
5	144	66	6		2	10	10	8	59 3/4	6 1/2	10	43 1/4	8	37 1/2	5 1/2	36 7/8	17 3/4	33 1/4	20 1/4	31 1/2							66.0

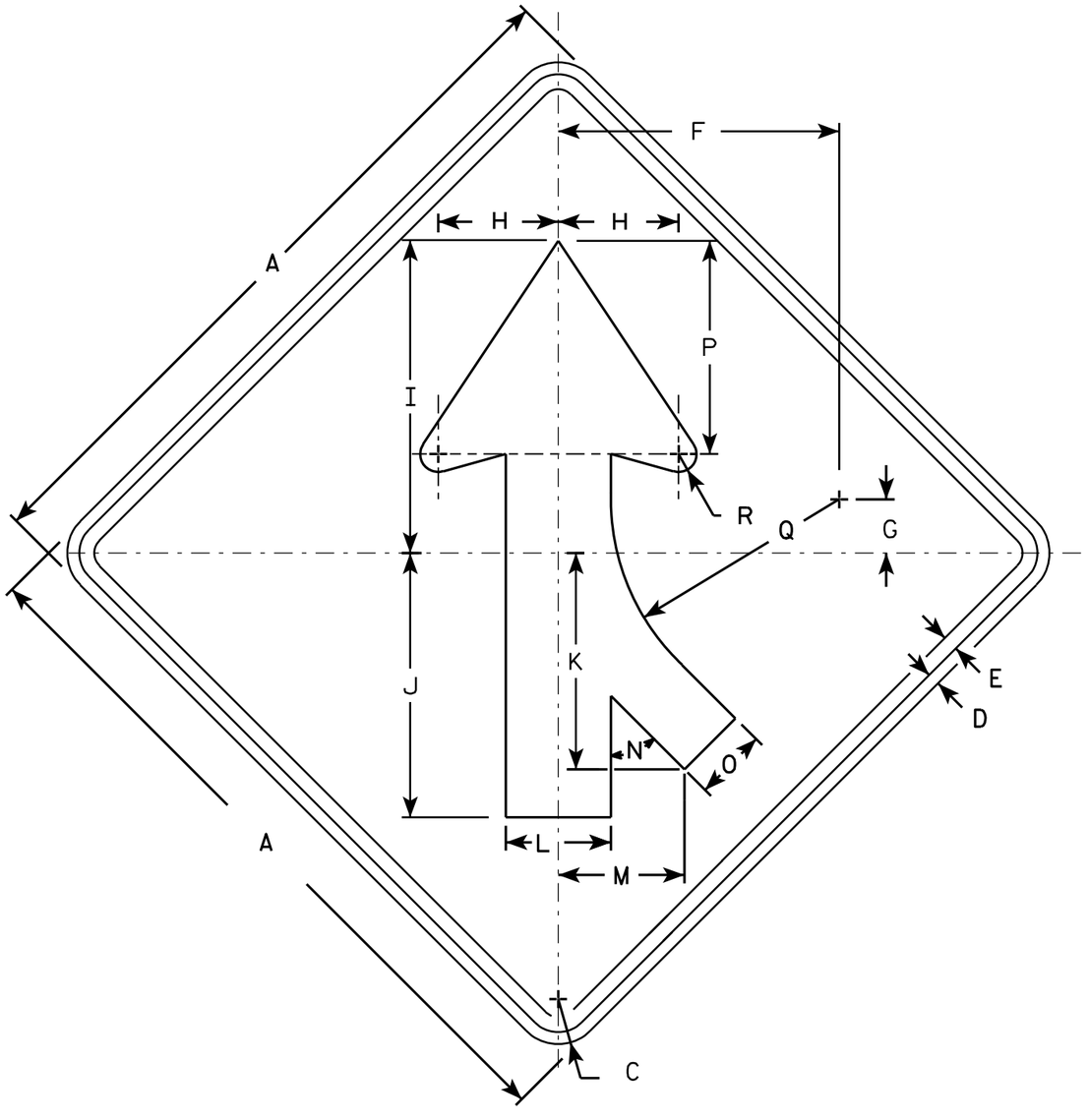
STANDARD SIGN
R13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/29/16 PLATE NO. R13-1.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 449	E



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

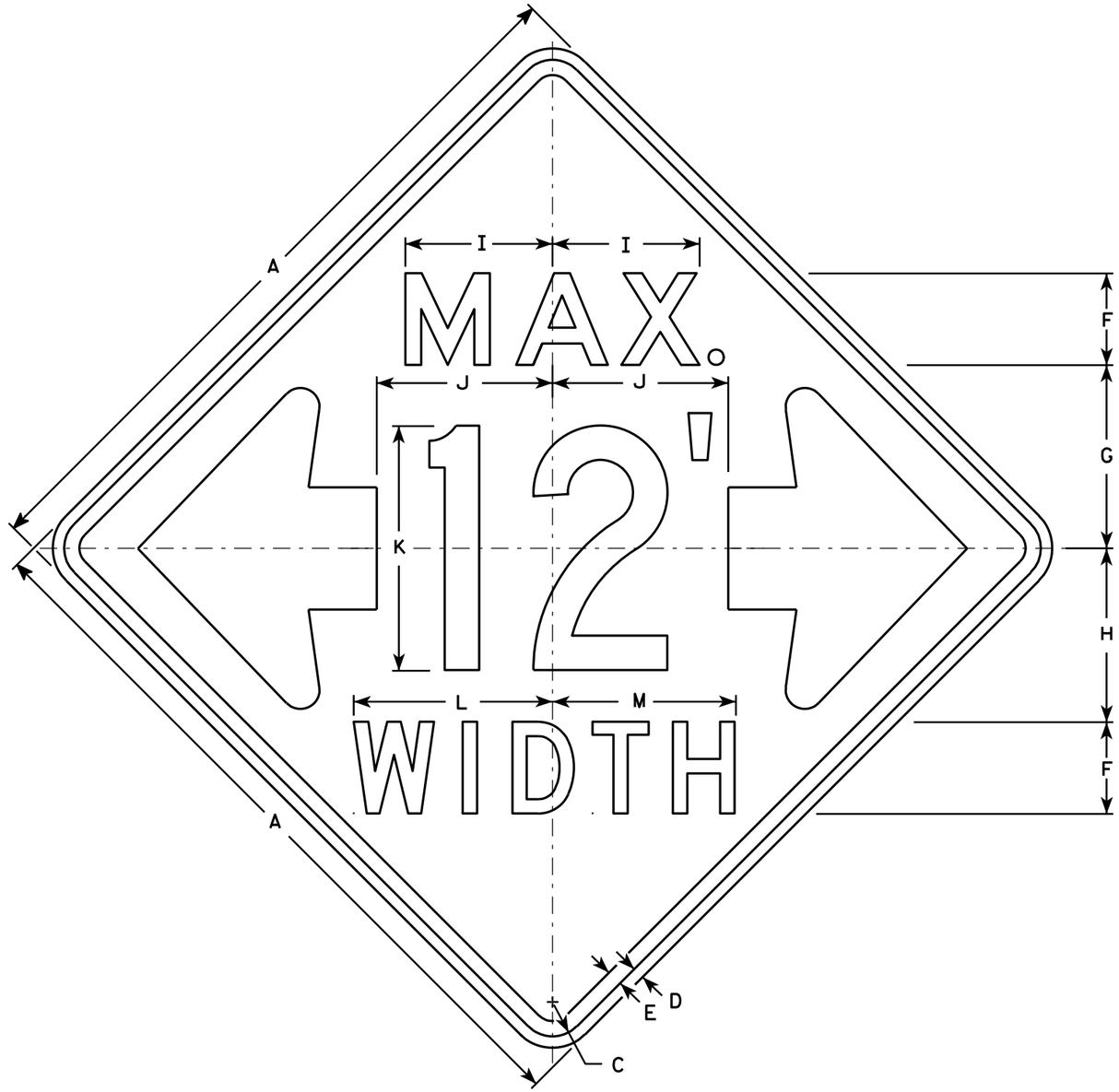
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

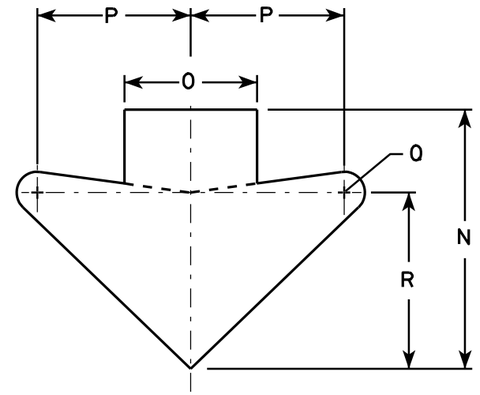
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 450 | E



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

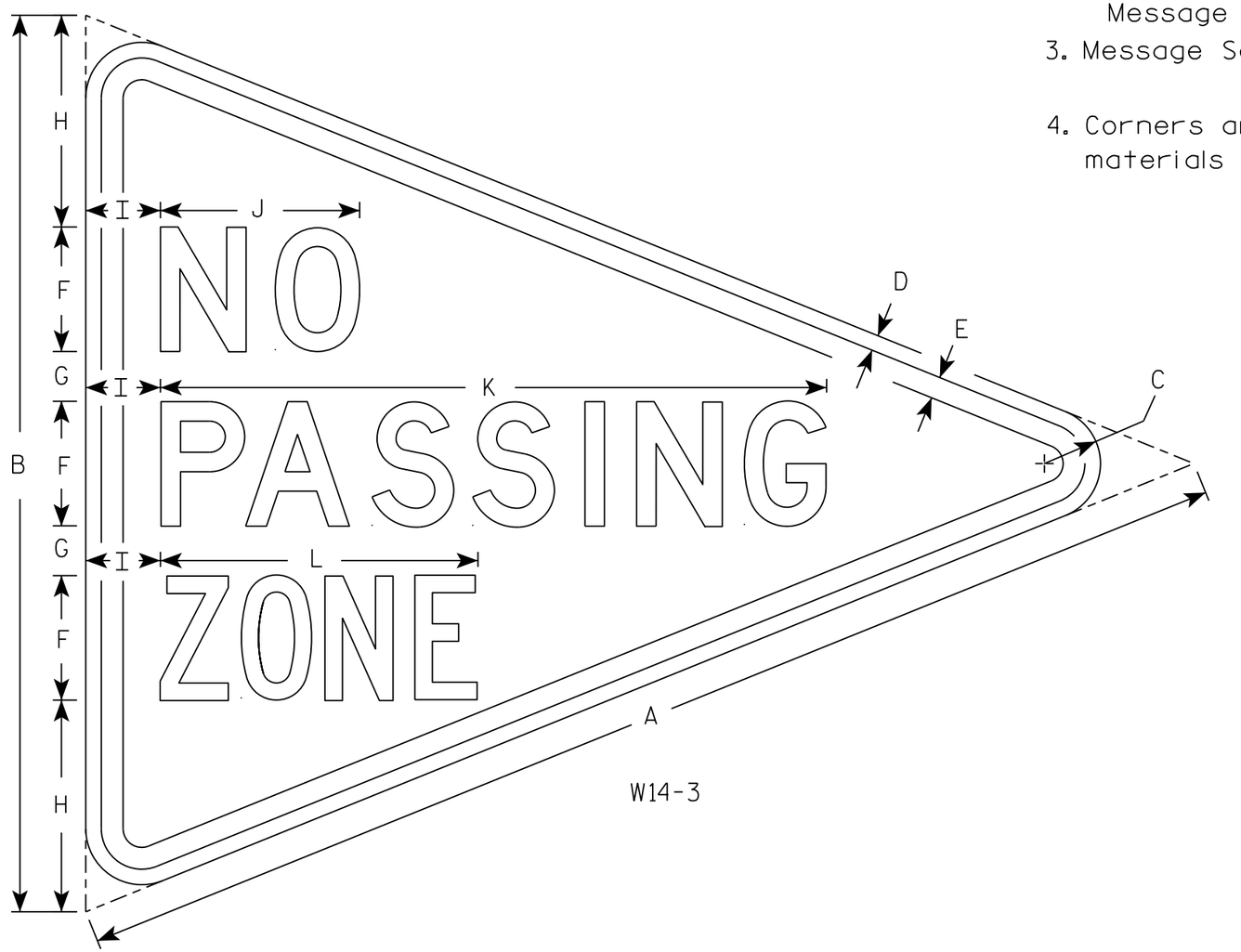
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 451	E

NOTES

1. Sign is Type II- Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - Lines 1 and 2 are Series D.
   Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



W14-3

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

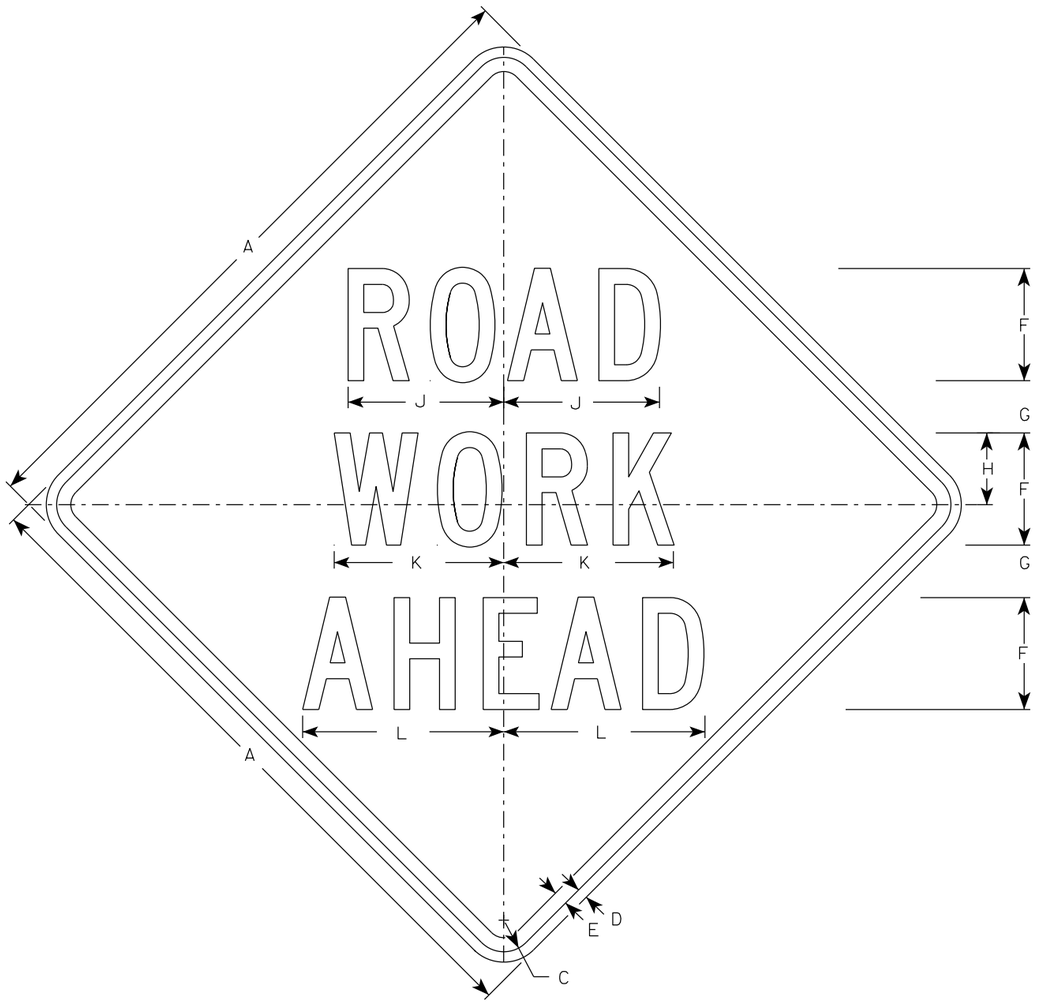
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 452 | E

7

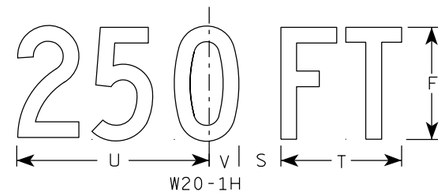
7

NOTES

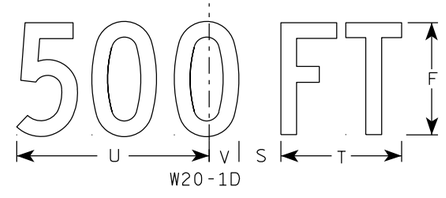
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



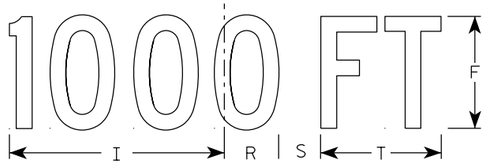
W20-1A



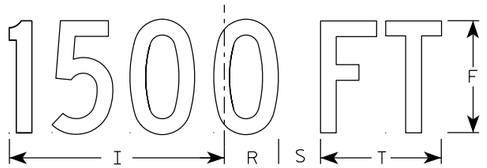
W20-1H



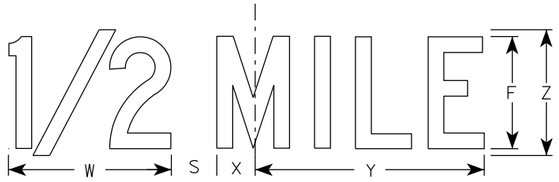
W20-1D



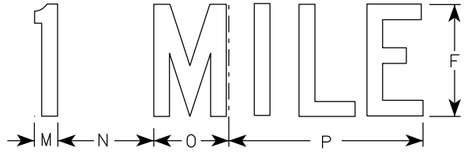
W20-1C



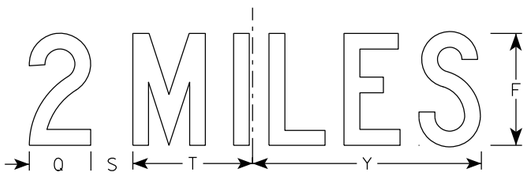
W20-1B



W20-1G



W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11

PROJECT NO:

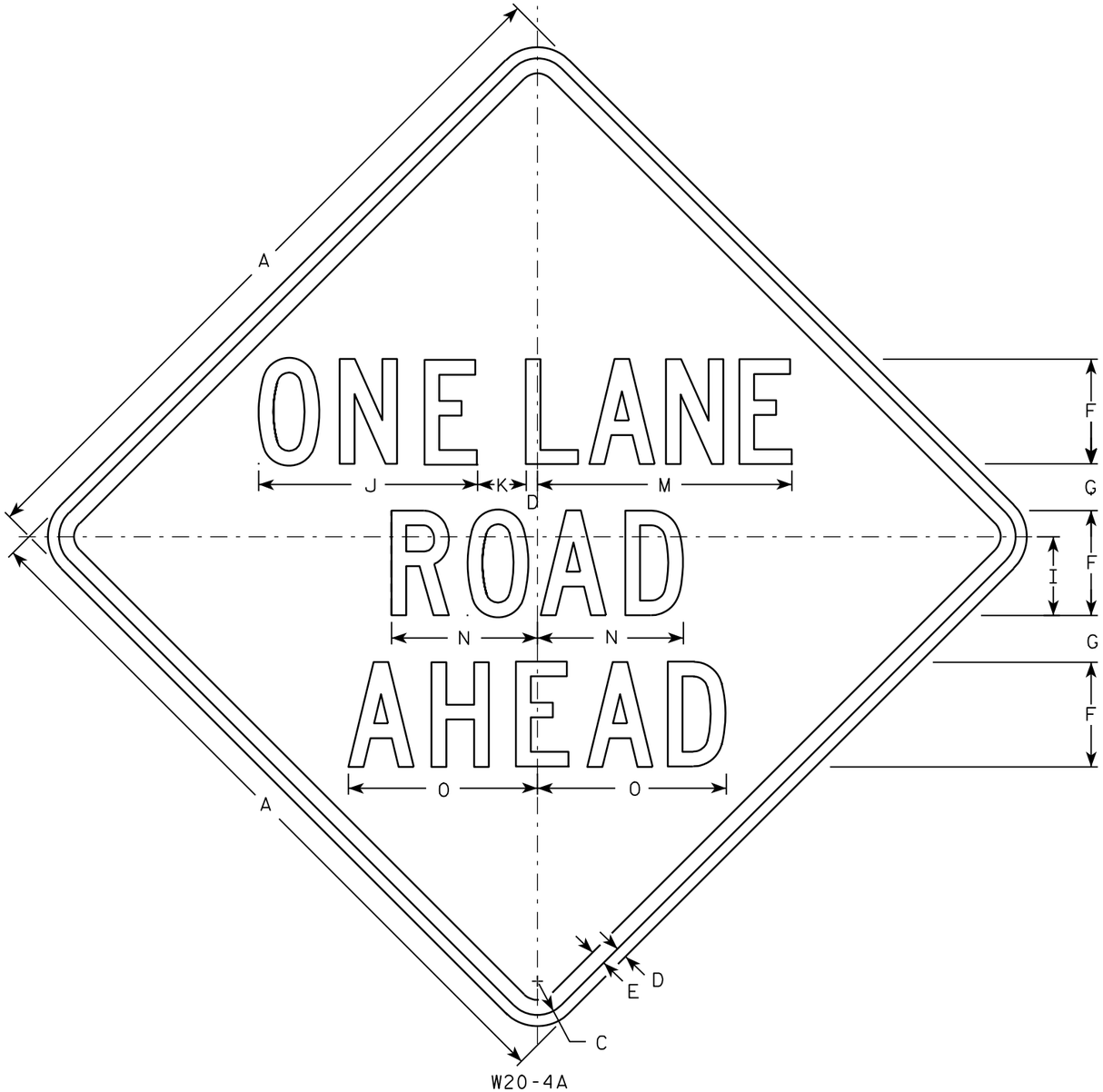
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 25-MARCH-2020 PLOT BY : dotc4c

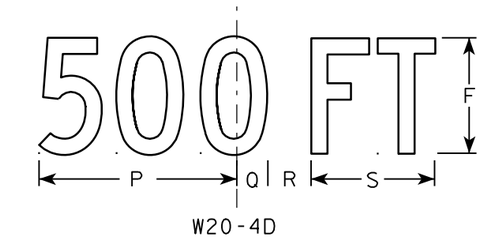
WISDOT/CADDS SHEET 42

7

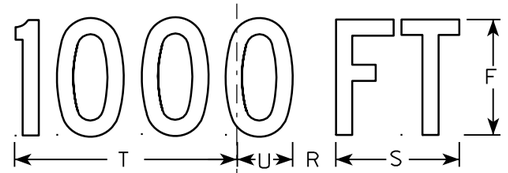
7



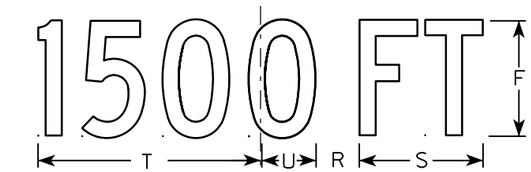
W20-4A



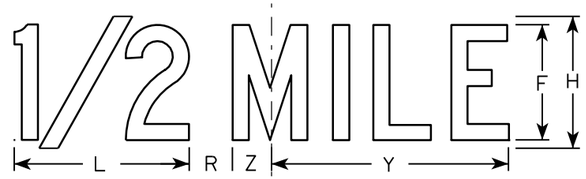
W20-4D



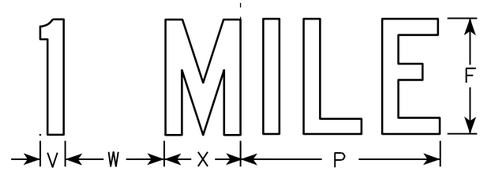
W20-4C



W20-4B



W20-4G



W20-4F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 3/8	6	3 3/4	10 3/8	2 3/8	8	13 1/2	7	8 7/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	3 1/8	8	5 1/4	14 5/8	3 1/4	10 5/8	17 3/4	9 3/4	12 5/8	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-4A, B, C, D, F & G

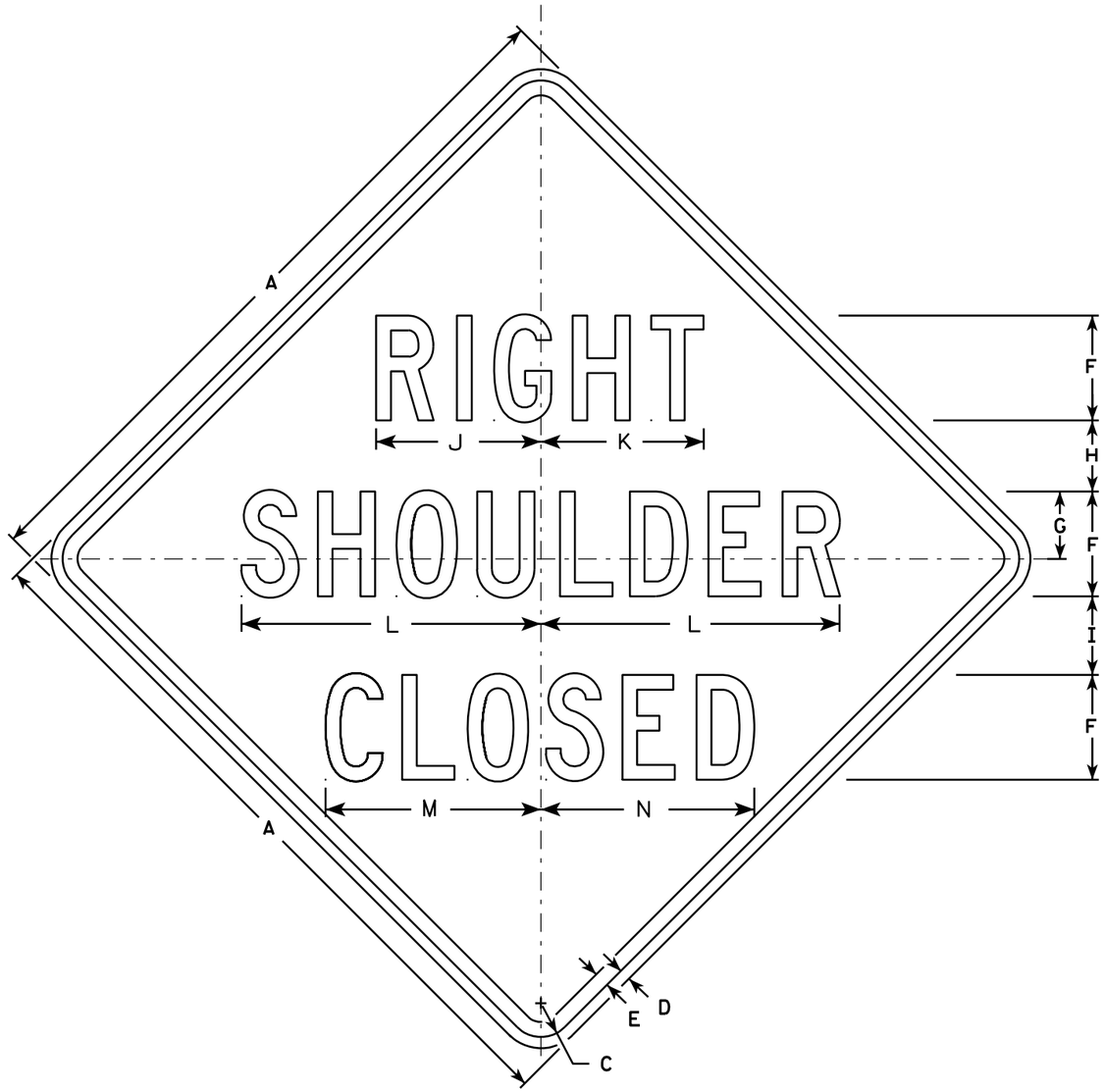
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-4.9

PROJECT NO:

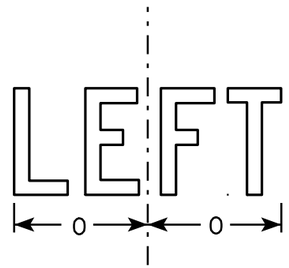
SHEET NO: 454 E



W21-5A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W21-5AL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	4	7 7/8	7 3/4	14 1/4	10 1/4	10 1/8	6 1/4												9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	5 1/4	11	10 7/8	20	14 3/8	14 1/4	8 3/4												16.0

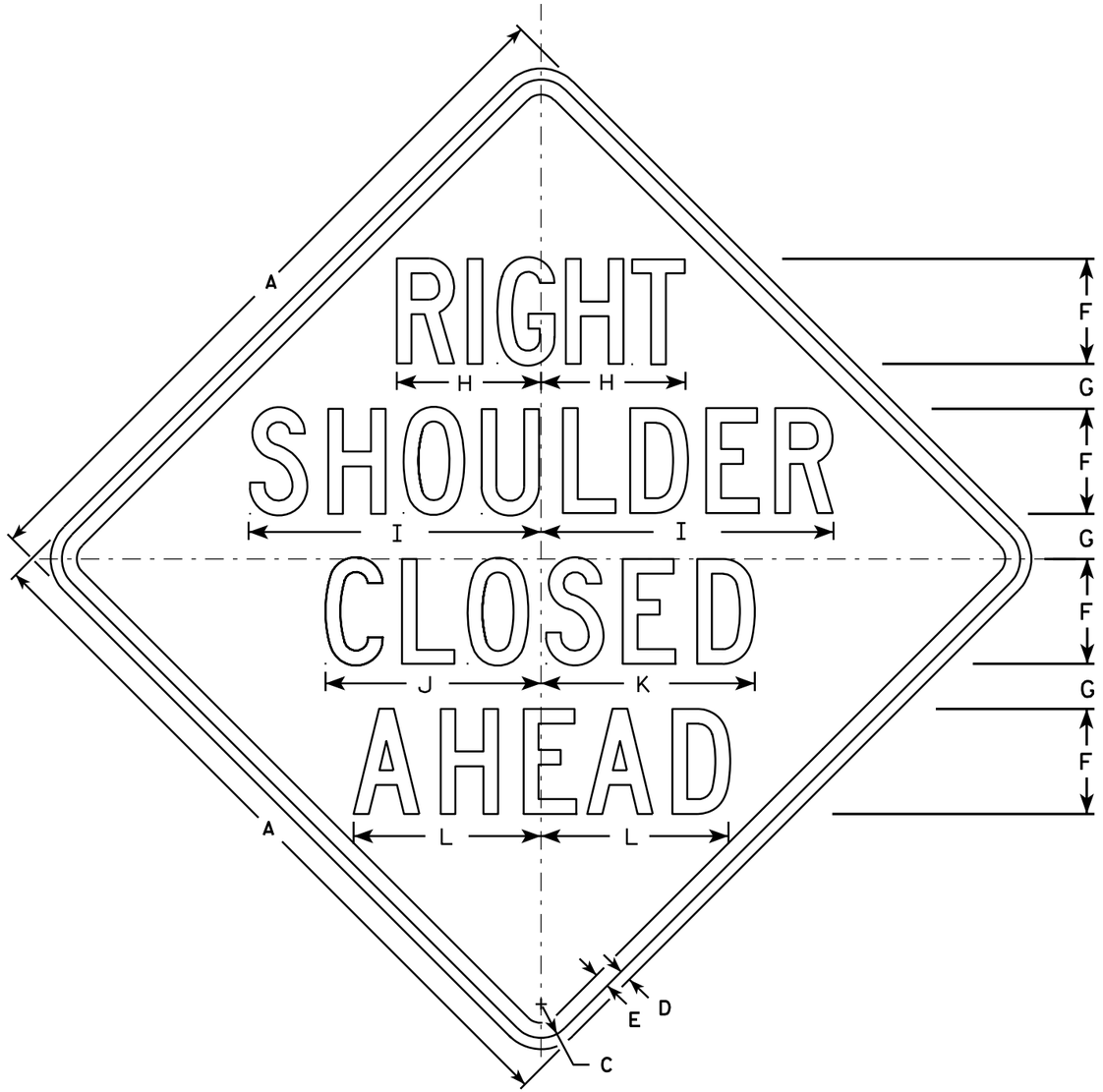
STANDARD SIGN
W21-5A

WISCONSIN DEPT OF TRANSPORTATION

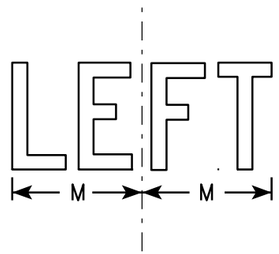
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5A.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 455	E



W21-5B



W21-5BL

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 1/4	7 3/8	14 1/4	10 1/4	10 1/8	8 7/8	6 1/4														9.0
2S	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
2M	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
3	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
4	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0
5	48		2 1/4	3/4	1	7	3	9 5/8	19 1/2	14 3/8	14 1/4	12 1/2	8 1/2														16.0

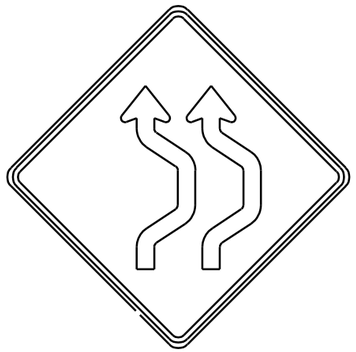
STANDARD SIGN
W21-5B

WISCONSIN DEPT OF TRANSPORTATION

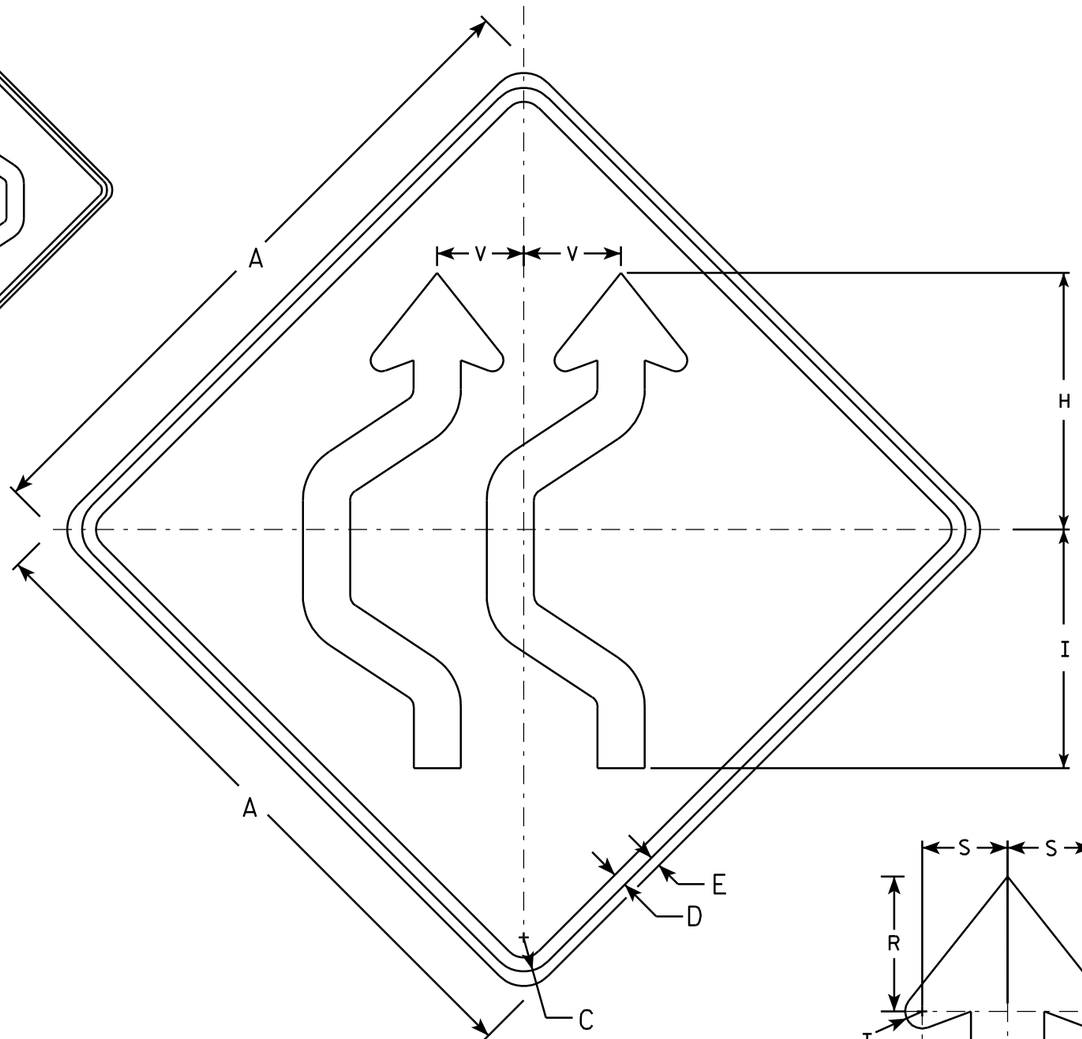
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-5B.3

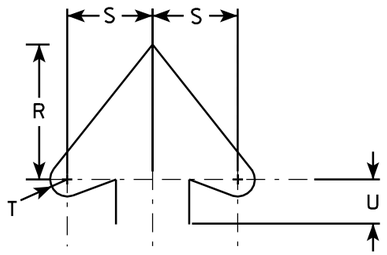
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 456	E



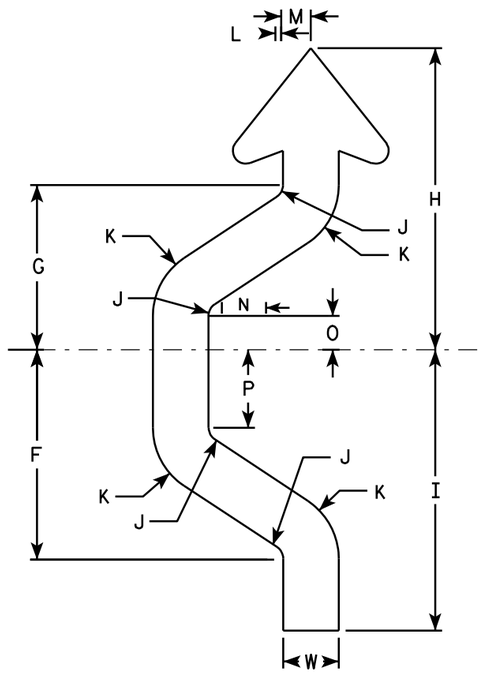
W24-1AR



W24-1AL



Arrowhead Detail



Arrow Detail

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W24-1R is the same as W24-1L except reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	5/8	1/2	9 1/2	7 1/2	13 3/4	12 3/4	5/8	3 1/8	3/8	1 5/8	2 3/8	1 1/2	3 1/2		4 5/8	3	5/8	1 1/2	4 3/4	2 1/2				9
2S	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16
2M	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16
3	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16
4	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16
5	48		2 1/4	1	3/4	12 7/8	10 1/8	18 1/2	17 1/4	7/8	4 1/4	3/8	2 1/8	3 1/4	2	4 3/4		6 1/4	4	3/4	2 1/8	6 1/4	3 3/8				16

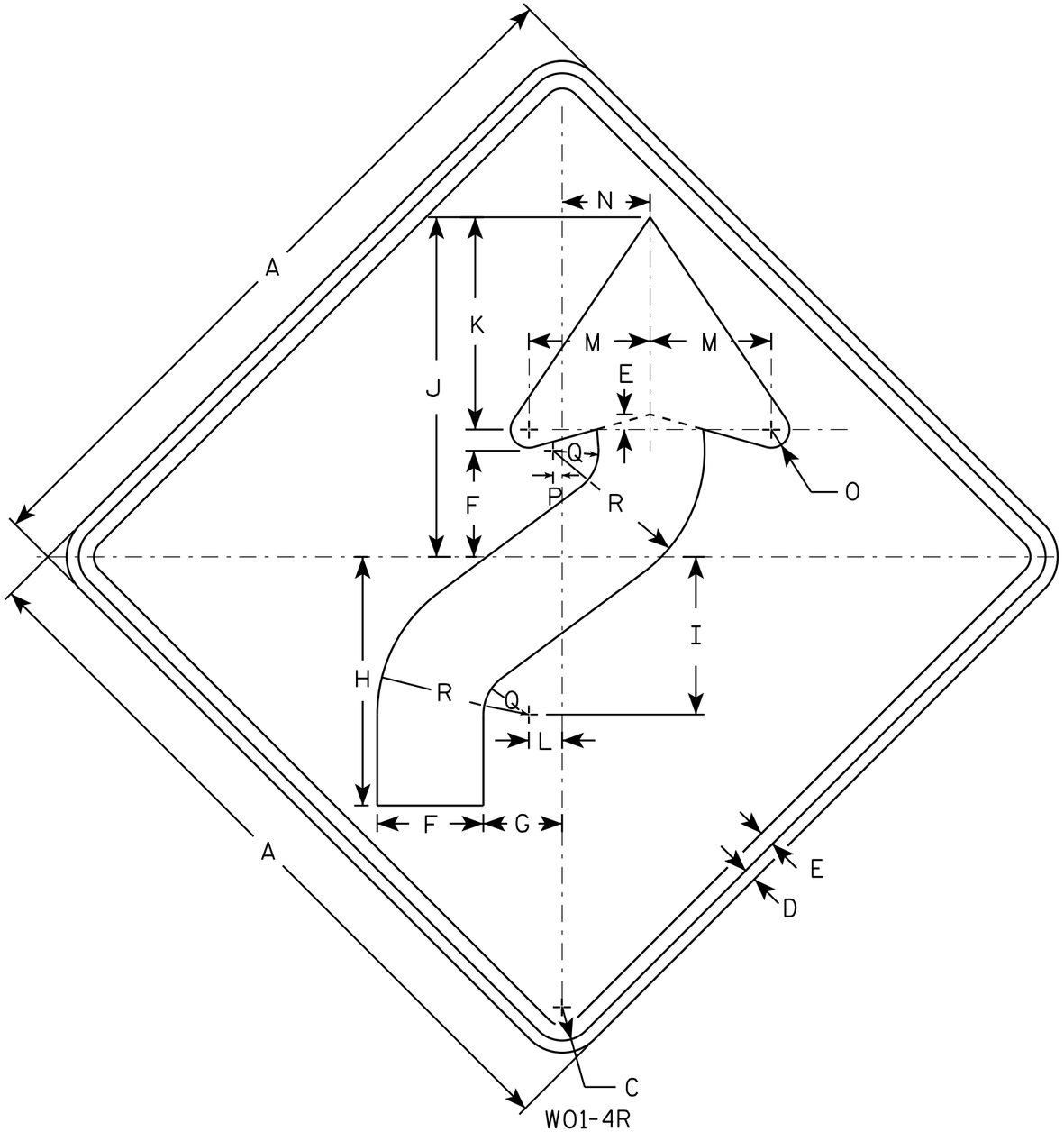
STANDARD SIGN
W24-1AL

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W24-1AL.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 457 | E



W01-4R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4L is the same as W01-4R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4	12 3/8	7 7/8	16 7/8	10 1/2	1 5/8	6	4 1/2	1	1/2	2 1/4	7 1/2									9.0
2S	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
2M	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
3	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
4	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0
5	48		2 1/4	3/4	1	7	5 1/4	16 1/2	10 1/2	22 1/2	14	2 1/4	8	6	1 1/4	5/8	3	10									16.0

STANDARD SIGN
W01-4

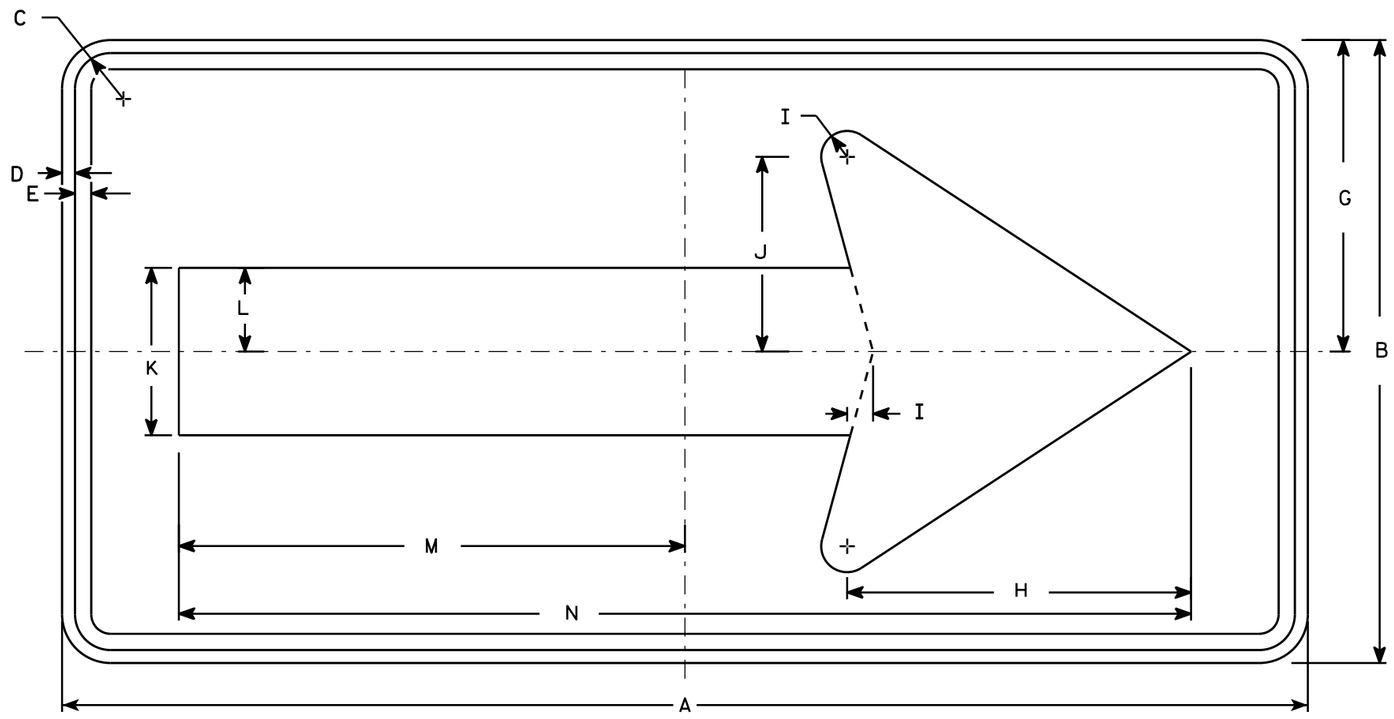
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014.DGN PLOT DATE : 28-FEB-2014 11:35 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 6.755110:1.000000
WISDOT/CADDS SHEET 42



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

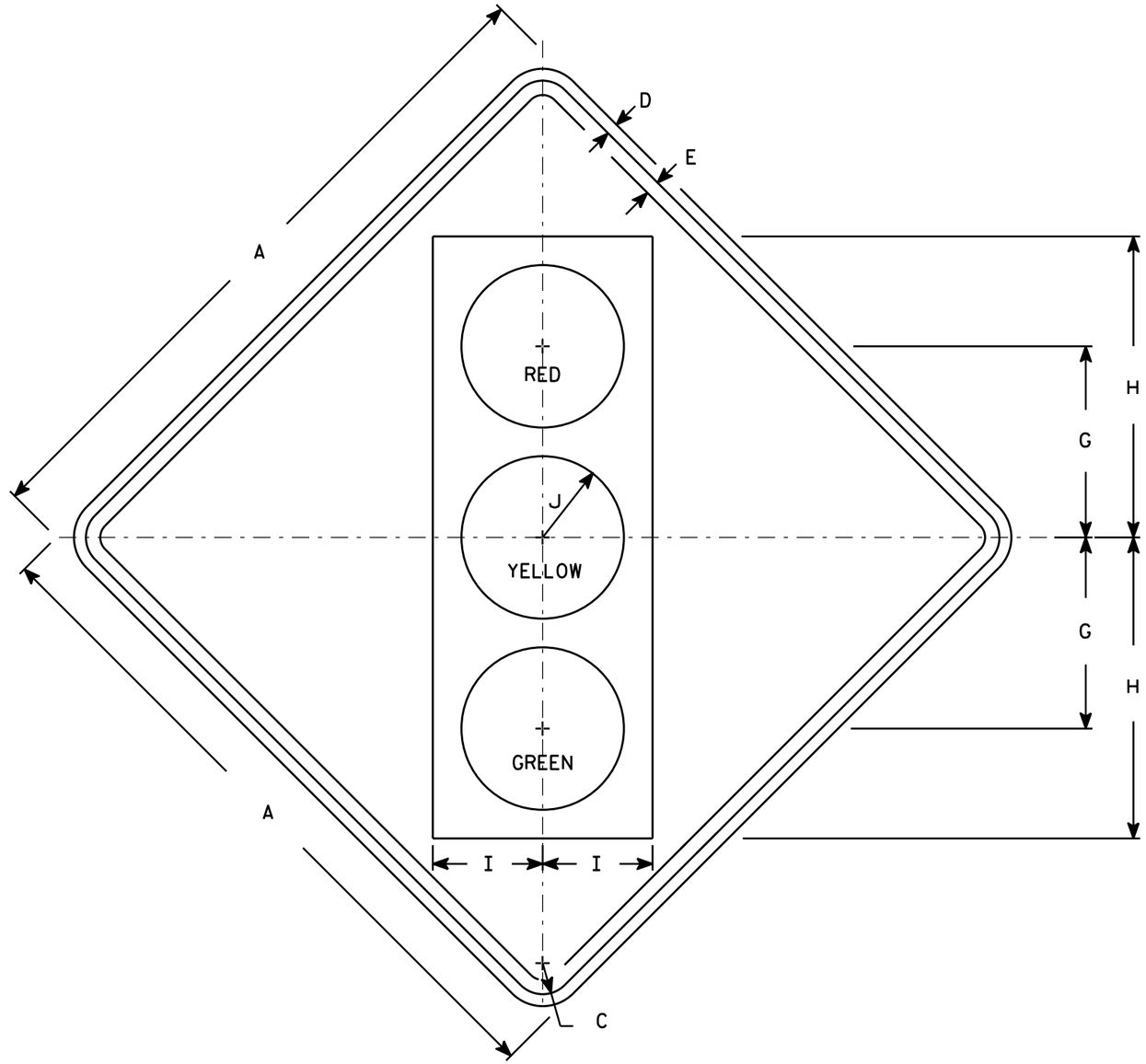
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE W01-6.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W03-3

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Symbol and border are non-reflective black.
   Top circle - Type H Reflectorized Red
   Center circle - Same as background
   Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2S	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
2M	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
3	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN
W03-3

WISCONSIN DEPT OF TRANSPORTATION

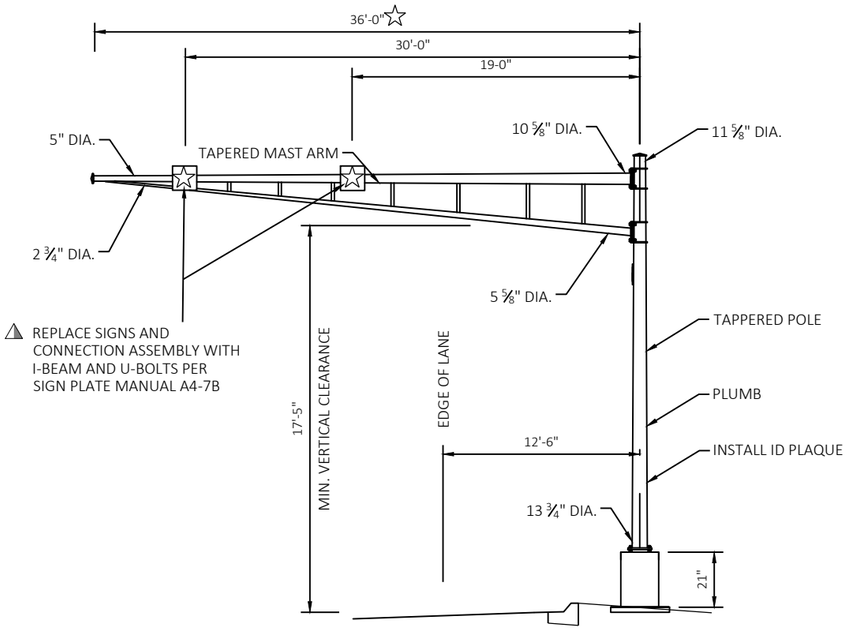
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 460 W03-3.1

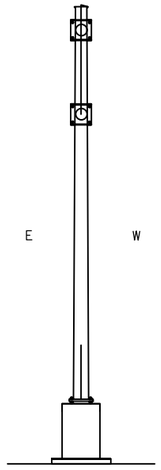
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

STATE PROJECT NUMBER

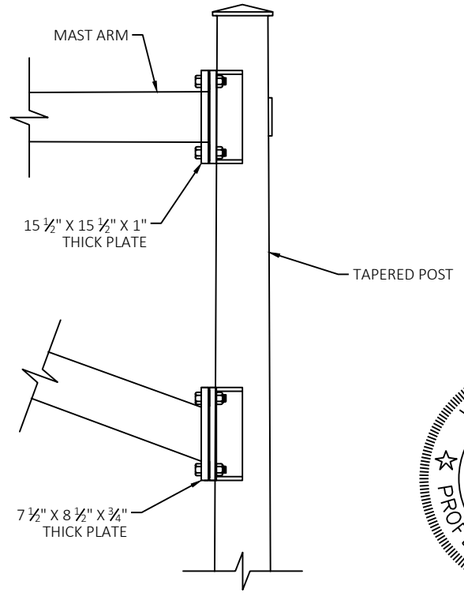
1022-04-76



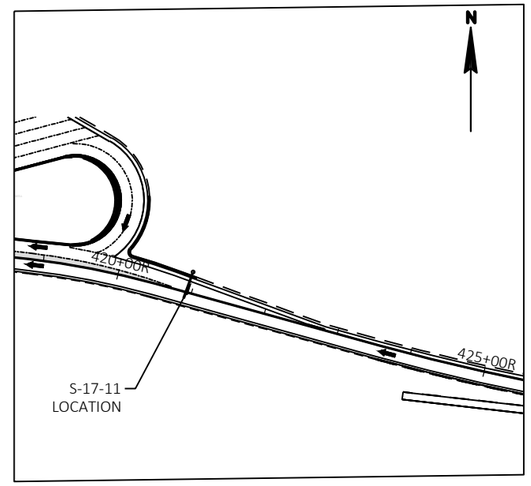
ELEVATION
(LOOKING WEST)



ELEVATION
(LOOKING SOUTH)



MAST ARM
CONNECTION DETAIL



LOCATION MAP

WISCONSIN
CHAD D. HALVERSON
E-34364
MADISON, WI
PROFESSIONAL ENGINEER

August 23, 2023

STRUCTURE DESIGN CONTACTS:

AARON BONK	(608) 261-0261
CHAD HALVERSON	(608) 663-1218

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S-17-11
517.0601.001	PAINTING EPOXY SYSTEM S-17-11	EA	1
SPV.0060.010	ID PLAQUE	EA	1

NOTES

CLEAN AND PAINT EXISTING SIGN STRUCTURE IN ACCORDANCE WITH BID ITEM "PAINTING EPOXY SYSTEM S-17-11." PAINT COLOR SHALL BE AMS STANDARD 595A COLOR NO. #26293 (LIGHT GRAY).

SUPPLY A NEW ID PLAQUE IN ACCORDANCE WITH SECTION 532 OF THE STANDARD SPECIFICATIONS, THE STANDARD DETAIL DRAWING AND BID ITEM "ID PLAQUE".

LEGEND

⚠ REPLACEMENT SIGNS AND MOUNTING HARDWARE ARE INCLUDED WITH BID ITEM "WEIGH-IN-MOTION SYSTEM". SEE ROADWAY DETAILS.

☆ SIGN DIMENSIONS ASSUMED. VERIFY WITH WEIGH-IN-MOTION SYSTEM MANUFACTURER.

NO.	DATE	REVISION	BY

KL Engineering [A] Better Experience

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/23/23
CHIEF STRUCTURES DESIGN ENGINEER DATE

ANCILLARY STRUCT REHAB

COUNTY	TOWN
DUNN	RED CEDAR

DESIGN SPEC. REHABILATION N/A

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
CDH	CAH	JPB	CAH

GENERAL NOTES & DESIGN DATA

SHEET 1 OF 1
461

SCALE =SCALE

8

8

DESIGN DATA

CONTRACTOR DESIGNED OVERHEAD SIGN STRUCTURES SHALL BE DESIGNED ACCORDING TO THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1ST EDITION AND INTERIM SPECIFICATIONS, AND THE WISDOT BRIDGE MANUAL.

STANDARD FOUNDATIONS DESIGNED ACCORDING TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

DEAD LOAD: WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD: 3 PSF TO ONE FACE OF SIGN & SURFACE OF MEMBERS.
WIND PRESSURE: 115 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS. (700 YEAR MEAN RECURRENCE INTERVAL)

WIND COMPONENTS	NORMAL	TRANSVERSE
LOAD CASE 1:	1.00	0.00
LOAD CASE 2:	0.00	1.00
LOAD CASE 3:	0.75	0.75

LOAD COMBINATIONS

STRENGTH I:	1.25 DC + 1.6 LL
EXTREME I (MAX DC):	1.1 DC + 1.0 W + 1.0 ICE
EXTERME I (MIN DC):	0.9 DC + 1.0 W
SERVICE I:	1.0 DC + 1.0 W
FATIGUE I:	1.0 NWG (NATURAL WIND GUST VIBRATION) 1.0 TRG (TRUCK INDUCED GUST VIBRATION) 1.0 GVW (GALLOPING - CANTILEVER ONLY)

MATERIAL PROPERTIES

CONCRETE MASONRY ..... f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60 ..... fy = 60,000 psi

HIGH STRENGTH BOLTS - A325 ..... fy = 92,000 psi

ANCHOR RODS - ASTM F1554 GRADE 55 ..... fy = 55,000 psi

HEAVY HEX NUTS FOR ANCHOR RODS - ASTM A563A

WASHERS FOR ANCHOR RODS - ASTM F436

FOUNDATION DATA

SIGN STRUCTURE FOUNDATIONS ARE SUPPORTED ON DRILLED SHAFTS THAT HAVE BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 24° (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 750 PSF (COHESIVE SOILS) AND A UNIT WEIGHT OF 125 PCF. THE GROUND WATER TABLE FOR DESIGN IS ASSUMED TO BE AT A DEPTH OF 10'-0" BELOW THE GROUND SURFACE, ACTUAL WATER LEVEL AT SITE MAY VARY. THE REGION GEOTECHNICAL ENGINEER SHALL VISUALLY INSPECT THE SUBSURFACE SOILS DURING DRILLING OF THE SHAFT HOLE TO CONFIRM THESE PROPERTIES PRIOR TO PLACEMENT OF THE DRILLED SHAFT CONCRETE.

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S-17-14
531.2030	DRILLING SHAFT 30-INCH	LF	26
531.5220.001	FOUNDATION SINGLE-SHAFT TYPE MF-II S-17-14	EA	2
532.5220.001	MONOTUBE FULL SPAN TYPE II S-17-14	EA	1

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DUNN COUNTY ZONE, NAD 83 (2011). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2012).

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE truss or monotube BID ITEMs FOR EACH APPLICABLE SIGN STRUCTURE IN THE PLAN SET. LOCATE THE ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1.

SEE SIGN PLATE NO. a4-6, A4-7A & A4-7B OF THE SIGN PLATE MANUAL FOR INSTRUCTIONS ON CENTERING SIGNS VERTICALLY ON THE TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF THE CANTILEVER SPAN, 2'-0" DEEPER THAN THE C/L TO C/L OF CHORDS, AND SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED ON THE PLANS.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS PRIOR TO FABRICATION OF THE STRUCTURE. CONTRACTOR SHALL SHOW SIGNS ON THE SHOP DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE DRILLED SHAFTS. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. PERMANENT CASING MADE FROM STEEL OR CORRUGATED METAL PIPE MAY BE USED IN LIEU OF TEMPORARY CASING. TEMPORARY/PERMANENT CASING, IF USED, SHALL BE INCIDENTAL TO THE BID ITEM "DRILLING shaft (dia.)".

STRUCTURE DATA

SIGN STR	ACTUAL SIGN AREA	ACTUAL SIGN DEPTH	STANDARD TYPE
S-17-14	17.38 SF	1'-7"	MF-II

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. GENERAL LAYOUT S-17-14

LIST OF OSS STANDARD DESIGN DRAWINGS

3. I. MONOTUBE & 2-CHORD TRUSS DETAILS 1
4. II. MONOTUBE & 2-CHORD TRUSS DETAILS 2
5. III. 2-CHORD TRUSS STANDARD ELECTRICAL DETAILS
6. IV. MONOTUBE & 2-CHORD TRUSS FOUNDATION DETAILS

STATE PROJECT NUMBER

1022-04-76

STRUCTURE DESIGN CONTACTS:
AARON BONK (608) 261-0261
CHAD HALVERSON (608) 663-1218

NO.	DATE	REVISION	BY

THESE ARE STANDARD DESIGN PLANS, DEVELOPED AND MAINTAINED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION. THE DESIGNER CERTIFIES THAT THE DESIGN AND PLAN DETAILS CHOSEN ARE CONSISTENT WITH THE GUIDANCE PROVIDED IN THE CURRENT WISCONSIN BRIDGE MANUAL CHAPTER 39.

WISCONSIN PROFESSIONAL ENGINEER
CHAD D. HALVERSON
E-34364
MADISON, WI

August 23, 2023

KL Engineering (A) Better Experience

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/23/23
CHIEF STRUCTURES DESIGN ENGINEER DATE

MONOTUBE AND 2-CHORD TRUSS PLANS

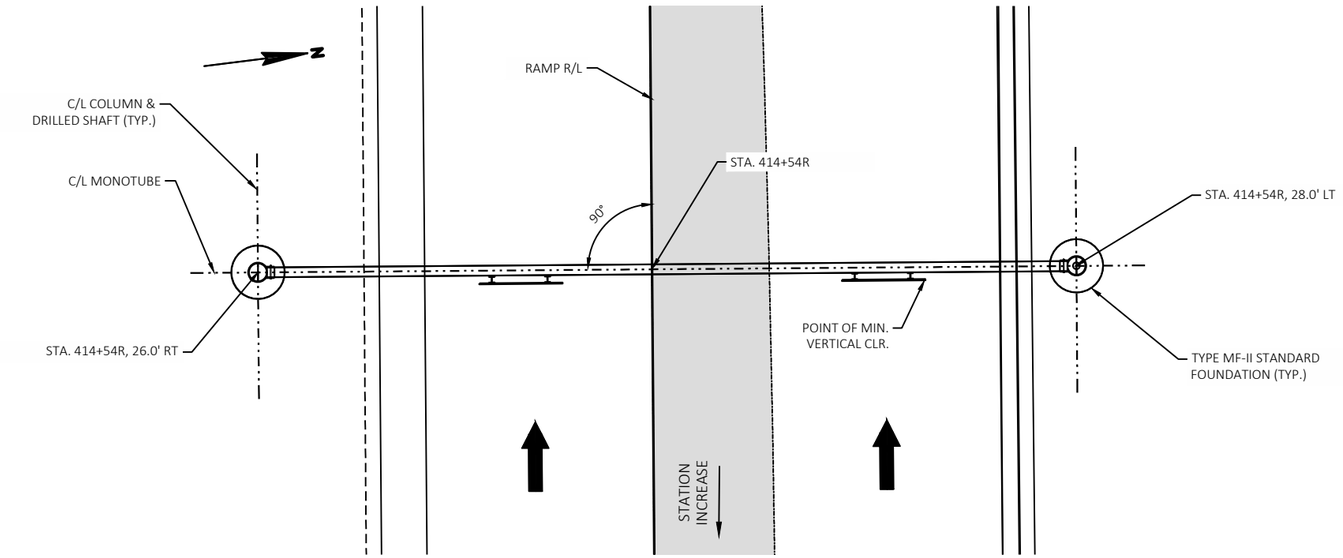
COUNTY: DUNN	TOWN: RED CEDAR
DESIGN SPEC.: AASHTO LRFDLTS-1 W/INTERIMS	

DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BOS	BOS	STD	BOS

GENERAL NOTES & DESIGN DATA

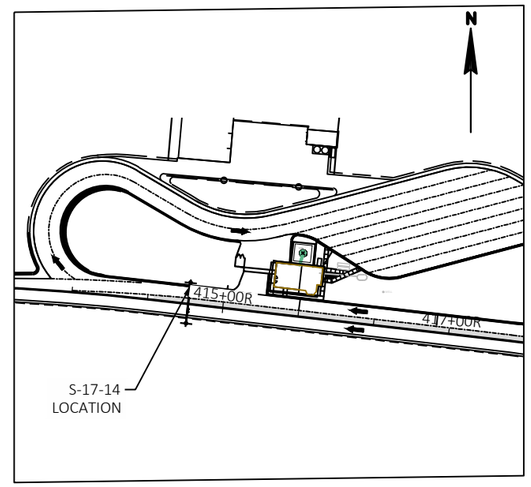
SHEET 1 OF 6
462

STATE PROJECT NUMBER
1022-04-76



PLAN

FULL SPAN MONOTUBE OVERHEAD SIGN STRUCTURE



LOCATION MAP

NOTES

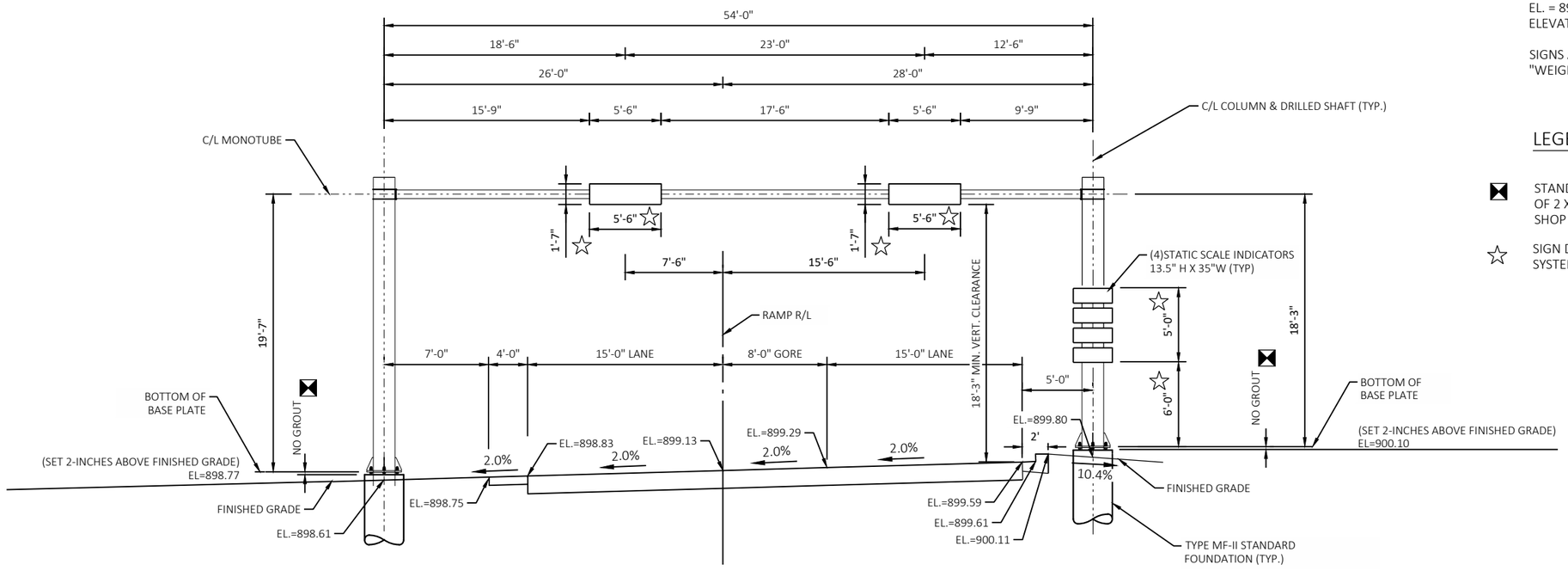
POINT OF MIN. VERTICAL CLEARANCE
STA. 414+54R, 18.25' RT
EL. = 899.50
ELEVATIONS ARE GIVEN ALONG C/L MONOTUBE.

SIGNS AND MOUNTING HARDWARE ARE INCLUDED WITH BID ITEM "WEIGH-IN-MOTION SYSTEM". SEE ROADWAY DETAILS.

LEGEND

⧓ STANDOFF DIMENSION IS ASSUMED TO BE 2 ½", BUT IS A MAXIMUM OF 2 X ANCHOR DIMENSION. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

☆ SIGN DIMENSIONS ASSUMED. VERIFY WITH WEIGH-IN-MOTION SYSTEM MANUFACTURER.



ELEVATION

STA. 414+54R
LOOKING DOWNSTATION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-17-14

DRAWN BY JPB | PLANS CK'D CDH

GENERAL LAYOUT

SHEET 2 OF 6
463

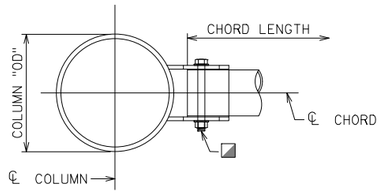
SCALE =

8

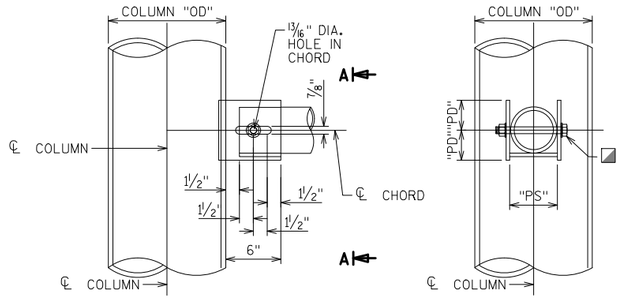
8

STATE PROJECT NUMBER

STANDARD



PLAN



ELEVATION SECTION A-A

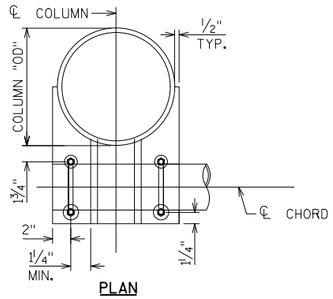
FULL SPAN SADDLE CONNECTION

PREFERRED

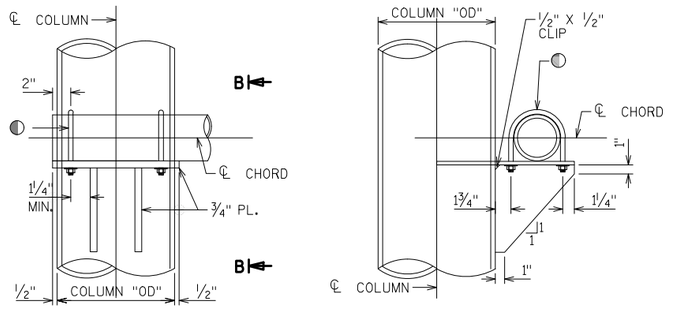
¾" GALVANIZED A325 OR A449 HEAVY HEX BOLT, NUT, WASHER

"PD" = (CHORD "OD")/2 + ¾"

"PS" = CHORD "OD" + 3/16"



PLAN

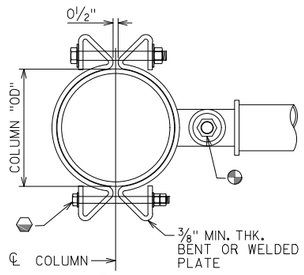


ELEVATION SECTION B-B

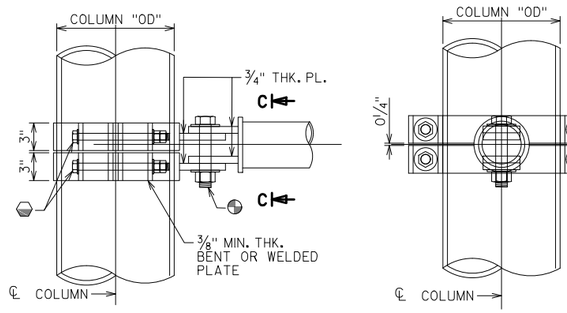
FULL SPAN STIFFENED BEARING CONNECTION

ALTERNATE 1

◐ (2) - ½" MIN. GALVANIZED U-BOLT, NUT, WASHER AND LOCK WASHER



PLAN



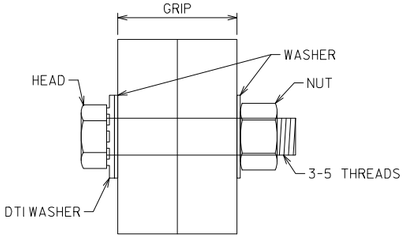
ELEVATION SECTION C-C

FULL SPAN CLAMP CONNECTION

ALTERNATE 2 - TAPERED COLUMNS ONLY

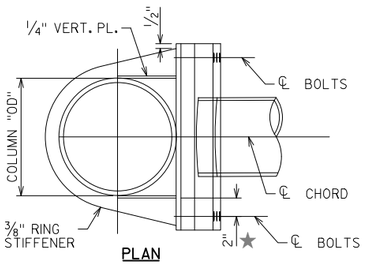
⬮ 1¼" GALVANIZED A325 HEAVY HEX BOLT, NUT AND WASHER

⬣ 1" GALVANIZED A449 HEAVY HEX BOLT, NUT AND WASHER

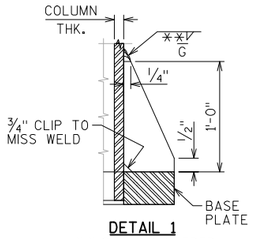


RECOMMENDED BOLT DETAIL WITH DTI

NUT IS THE TURNED ELEMENT

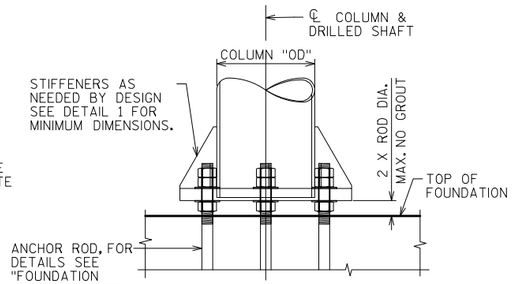


PLAN



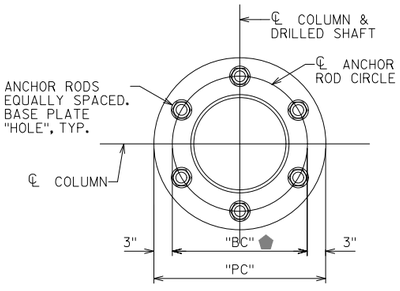
DETAIL 1

** SIZE AS NEEDED



BASE PLATE & COLUMN DETAIL

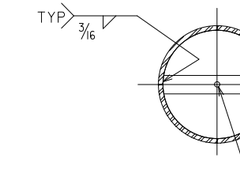
LOOKING AT FRONT FACE OF STRUCTURE

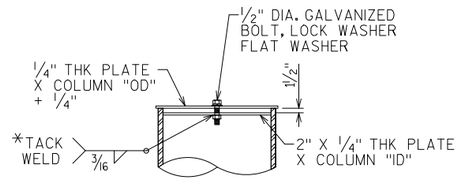


BASE PLATE

PLAN

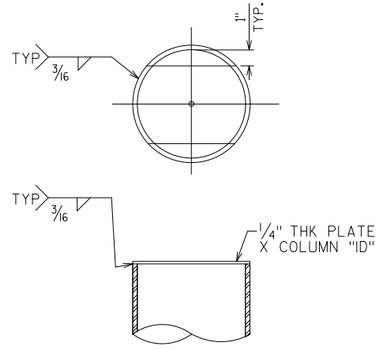
⬟ "BC" = POLE OD + 6"



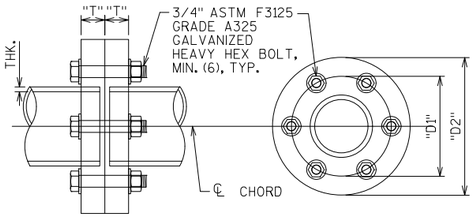


COLUMN/CHORD CAP DETAIL

* PLACE TACK EVERY OTHER FLAT TO SECURE NUT OR USE ½" THICK PLATE AND TAP HOLE FOR BOLT THREADS



CHORD CAP DETAIL

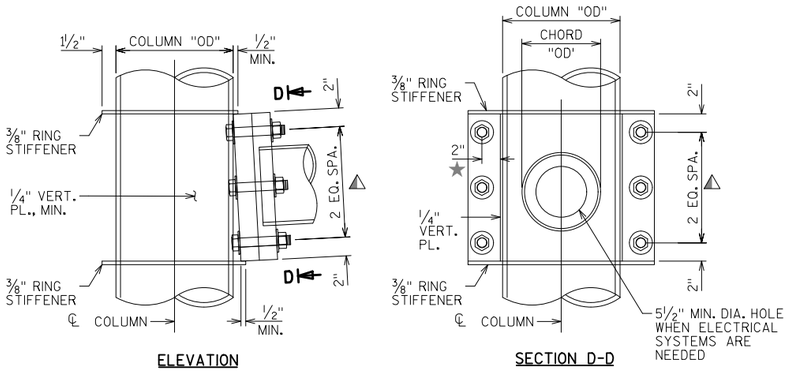


CHORD SPLICE DETAIL

"D1" = CHORD "OD" + 3"

"D2" = CHORD "OD" + 6"

"T" = BY DESIGN



ELEVATION SECTION D-D

CANTILEVER POST TO CHORD CONNECTION

⚠ MIN. CONNECTION = (6) - 1" GALVANIZED F3125 GRADE A325 BOLTS, NUT, WASHER AND DTI

★ MIN. DIMENSION MEASURED FROM EXT. FACE OF VERT. PLATE

NOTES:

MINIMUM VALUES SHOWN

ALL CONNETIONS ARE TO BE DESIGNED FOR ACTUAL STRUCTURE LOADS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS DETAILS 1

SHEET 1 OF IV

464

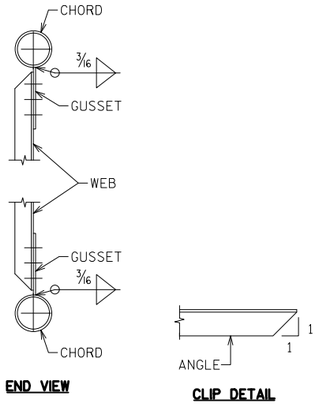
SCALE = 1.00

8

8

STATE PROJECT NUMBER

STANDARD

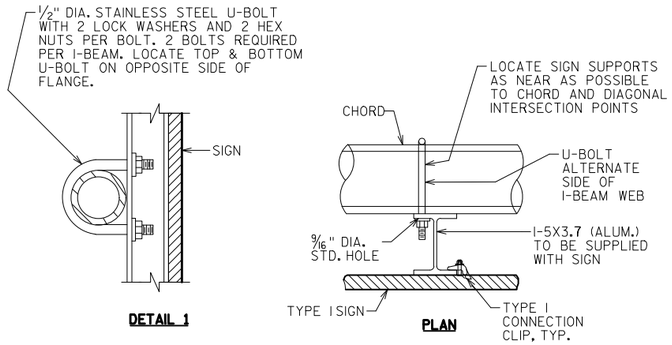


END VIEW

CLIP DETAIL

TRUSS CONNECTION DETAILS

BOLTED CONNECTIONS SHOWN, NUMBER OF BOLTS BY DESIGN
WELDED CONNECTIONS SIMILAR



DETAIL 1

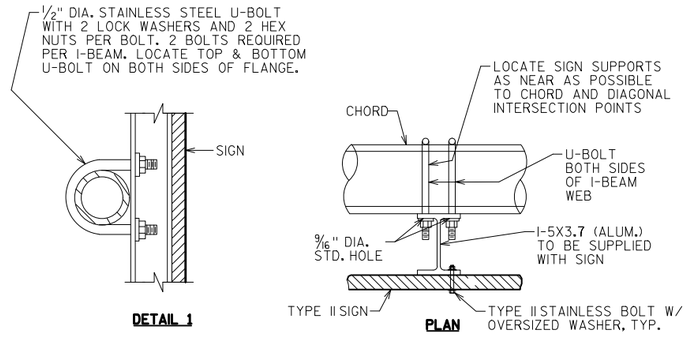
PLAN

2-CHORD TRUSS SIGN CONNECTION

SEE SIGN PLATE MANUAL A4-7A FOR DETAILS

ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH THE SIGN PANEL

HARDWARE TO BE SUPPLIED BY THE CONTRACTOR



DETAIL 1

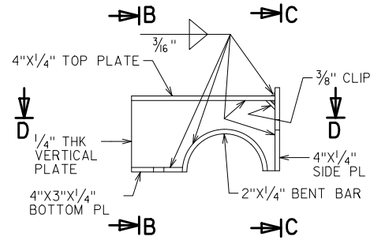
PLAN

MONOTUBE SIGN CONNECTION

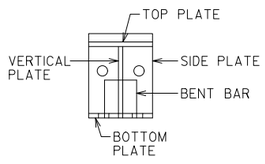
SEE SIGN PLATE MANUAL A4-7B FOR DETAILS

ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH THE SIGN PANEL

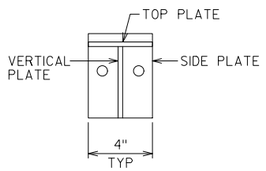
HARDWARE TO BE SUPPLIED BY THE CONTRACTOR



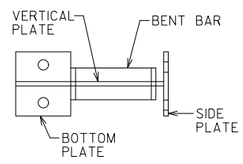
ELEVATION



SECTION B-B



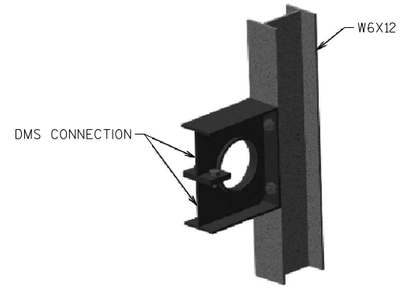
SECTION C-C



SECTION D-D

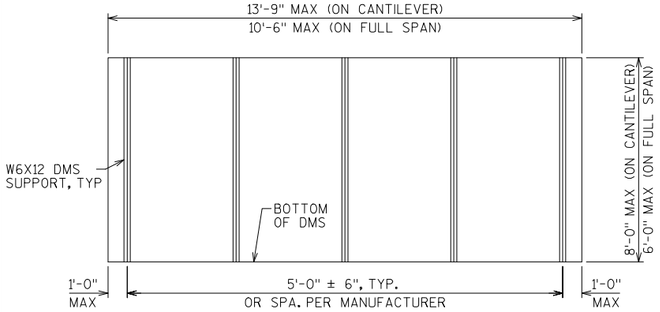
DMS WELDED PLATE CONNECTION DETAILS

TOP PLATE CLAMP SHOWN
BOTTOM PLATE CLAMP SIMILAR



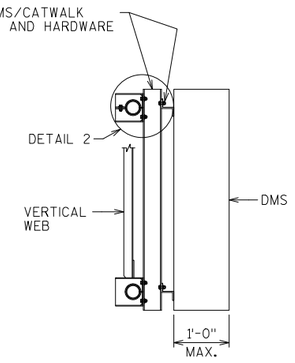
3-D VIEW DMS CONNECTION

CHORD NOT SHOWN FOR CLARITY



DMS MOUNTING POST SPACING DETAIL

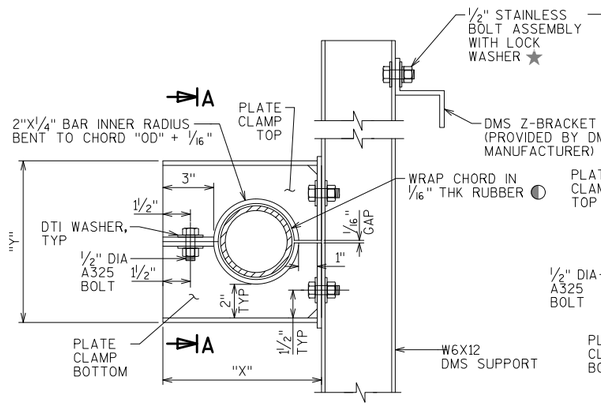
POST SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS IS ENCOUNTERED.



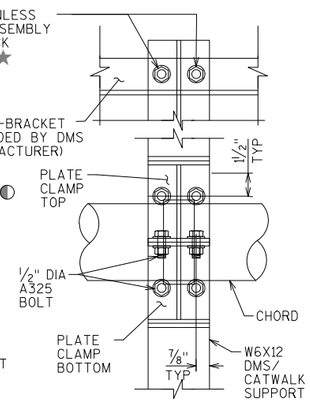
SECTION THRU TRUSS

FOR DMS/CATWALK CONNECTION

★ W6X12 SUPPORTS AND HARDWARE ARE TO BE SUPPLIED BY THE CONTRACTOR. 1/2" STAINLESS BOLT, NUT, WASHER AND LOCK WASHER REQUIRED, 4 PER W6X12.



DETAIL 2



SECTION A-A

CHORD OUTER DIA	"X"	"Y"
"OD"	"OD"+4 13/16"	"OD"+5 1/16"

TYPICAL DMS CONNECTION

◐ NEOPRENE, GRADE 45±5, OTHERWISE MEETING THE REQUIREMENTS OF STD SPEC 506.2.6.1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: APRIL 2021

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS DETAILS 2

SHEET II OF IV

465

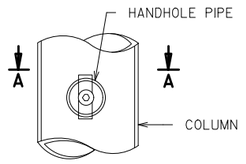
SCALE = 2.00

8

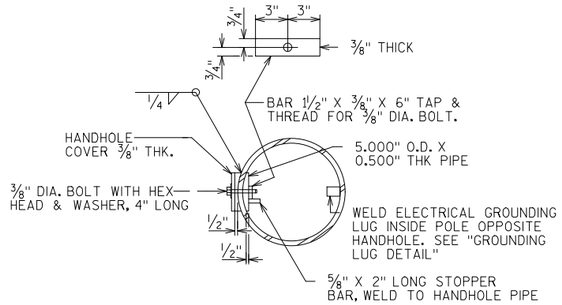
8

STATE PROJECT NUMBER

STANDARD



HANDHOLE DETAILS

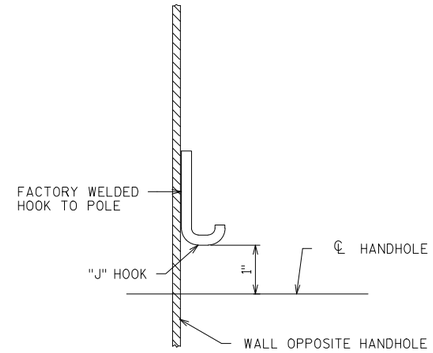


SECTION A-A

HANDHOLE NOTES

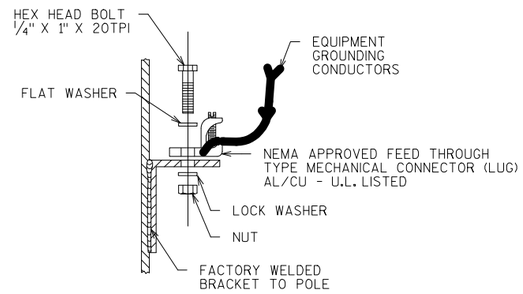
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL PLAN DETAIL SHEETS.

UNLESS NOTED OTHERWISE, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER THE WISDOT STANDARD SPECIFICATIONS.



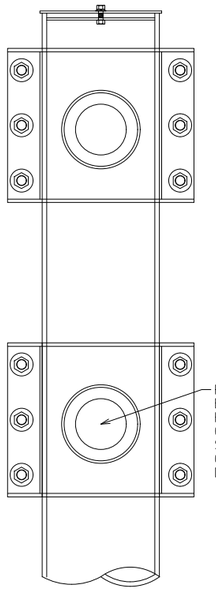
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.

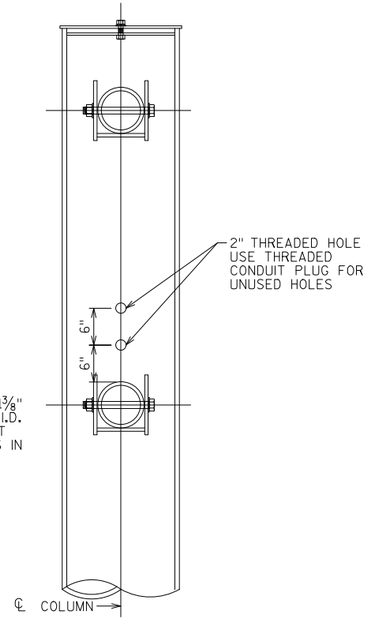


GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



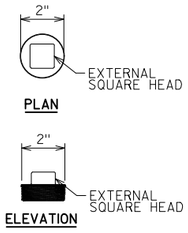
2-CHORD CANTILEVER



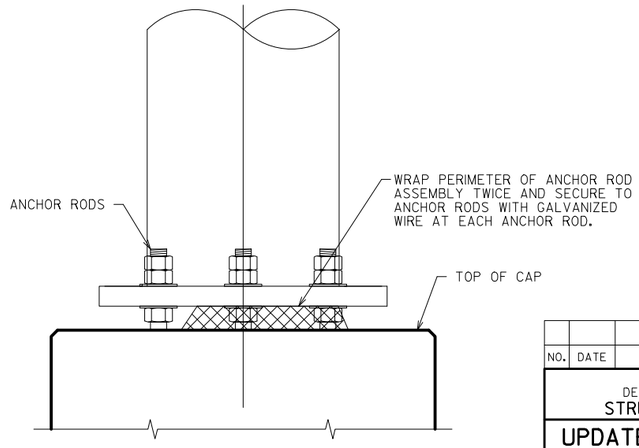
2-CHORD FULL SPAN

SADDLE CONNECTIONS SHOWN, BEARING AND CLAMP CONNECTIONS SIMILAR

CONDUIT HOLE LOCATIONS



CONDUIT PLUG DETAILS



RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS

SHEET III OF IV

466

SCALE = 1.00

8

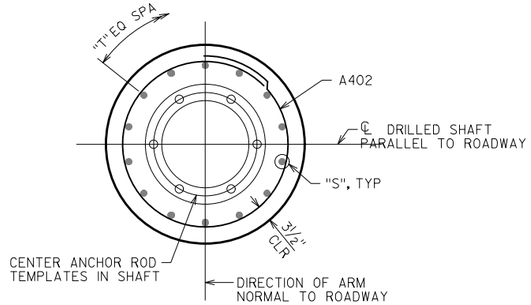
8

STATE PROJECT NUMBER

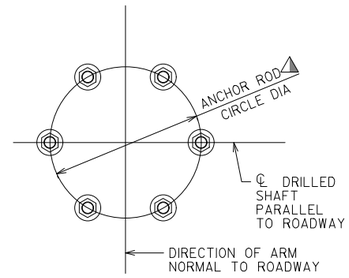
STANDARD

FOUNDATION & REINFORCING DATA

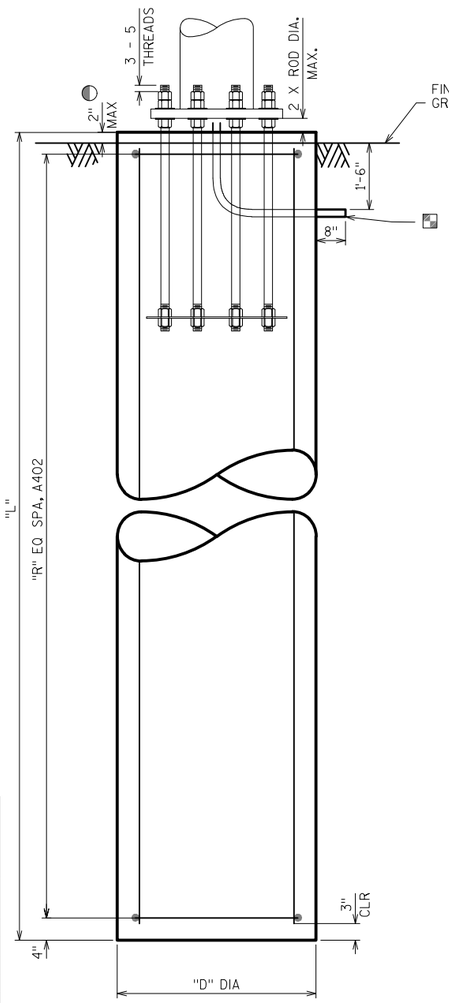
STANDARD FOUNDATION TYPE	SHAFT VARIABLES					
	"D"	"L"	"R"	"S"	"T"	"BC" MAX
MFI	2'-0"	12'-0"	12	A801	6	12"
MFII	2'-6"	13'-0"	13	A801	10	17"
MCI/MCII/TFI	2'-6"	17'-0"	17	A801	10	17"
TCI	3'-0"	18'-0"	18	A801	14	22"
TFII	3'-0"	20'-0"	20	A801	14	22"
MCIII/TCII/TFIII	3'-6"	18'-0"	18	A901	14	28"
MCIV/TFIV	3'-6"	23'-0"	23	A901	14	28"
TCIII	4'-0"	23'-0"	23	A1001	14	34"
TCIV	4'-0"	28'-0"	28	A1001	14	34"



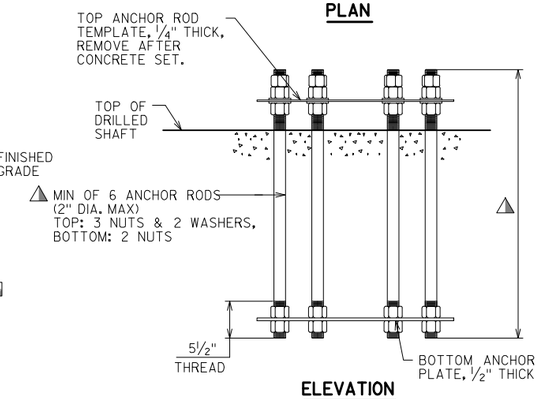
PLAN



PLAN



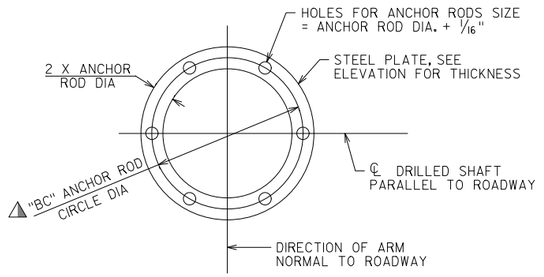
ELEVATION



ELEVATION

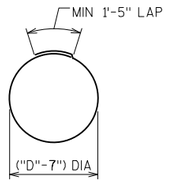
ANCHOR ROD ASSEMBLY DETAILS

⚠ ANCHOR ROD NUMBER, DIAMETER, LENGTH & ORIENTATION AS SHOWN ON FABRICATION DRAWING.



ANCHOR PLATE/TOP TEMPLATE

PLAN



A402

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

BILL OF BARS - STANDARD FOUNDATIONS

STANDARD FOUNDATION MFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		6	11'-7"			DRILLED SHAFT - VERTICAL
A402		13	5'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	12'-7"			DRILLED SHAFT - VERTICAL
A402		14	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCI/MCII/TFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	16'-7"			DRILLED SHAFT - VERTICAL
A402		18	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	19'-7"			DRILLED SHAFT - VERTICAL
A402		21	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIII/TCII/TFIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIV/TFIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	12'-2"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	27'-7"			DRILLED SHAFT - VERTICAL
A402		29	12'-2"	X		DRILLED SHAFT - HORIZONTAL

ESTIMATED QUANTITIES - FOUNDATIONS

STANDARD FOUNDATION TYPE	CONCRETE MASONRY (CY)	STEEL REINFORCEMENT HS (LBS)	FOUNDATION DRILLING (LF)				
			24" DIA.	30" DIA.	36" DIA.	42" DIA.	48" DIA.
MFI	2	240	12				
MFII	3	410		13			
MCI/MCII/TFI	4	540		17			
TCI	5	780			18		
TFII	6	860			20		
MCIII/TCII/TFIII	7	970				18	
MCIV/TFIV	9	1,250				23	
TCIII	11	1,560					23
TCIV	13	1,900					28

✳✳ QUANTITIES ARE FOR INFORMATION ONLY AND ARE BASED ON STANDARD STRUCTURE DIMENSIONS

NOTES

CENTER ANCHOR ROD ASSEMBLY ON DRILLED SHAFT AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHOR RODS.

◐ FOR OVERHEAD SIGN STRUCTURES THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE SHAFT SHALL BE POURED FLUSH WITH THE FINISHED GRADE.

▩ 2" DIA NONMETALLIC CONDUITS, INSTALL ONLY WITH DMS. EXTEND CONDUITS AS SHOWN AND CAP OR SEAL EACH END WITH A SUITABLE REMOVABLE PLUG. PLACE CONDUITS UNDER COLUMN ADJACENT TO THE DMS. CONDUITS INCIDENTAL TO THE FOUNDATION BID ITEMS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

SHEET IV OF IV

467

SCALE = 1.67

8

8

PROJECT ID 1022-04-76

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6) FACTOR 1.25	MASS ORDINATE +/- (7)	WASTE	208.0100 BORROW
1	61+25.00'TR' to 100+38.00'TR'	TEMPORARY BYPASS	1,494	300	--	1,494	3,496	4,370	-2,876	--	2,876
DIVISION 1 SUBTOTAL			1,494	300	--	1,494	3,496	4,370	-2,876	--	2,876
2	454+00.00'WB' to 493+13.00'WB'	IH 94 WB	10,498	--	5,270	5,228	99	124	5,104	5,104	--
	406+00.00'R' to 431+00.00'R'	I-94 RAMP	4,751	--	1,646	3,105	2,028	2,535	570	570	--
	395+90.00'WB' - 397+15'WB'	REMOVE MAINT XOVER	180	--	90	90	--	--	90	90	--
	401+53.1'WB' - 403+19.2'WB'	MAINT XOVER	12	--	--	12	160	200	-188	--	188
	11+37.10'L' to 21+55.06'L'	EAST & WEST LOOP	1,490	--	500	990	10	13	978	978	--
	50+00.00'PK' to 53+00.00'PK'	CMV PARKING	1,733	--	287	1,446	--	--	1,446	1,446	--
	10+07.65'SW' to 16+26.69'SW'	SWALE	564	--	--	564	141	176	388	388	--
	50+00.97'TP' to 50+75.81'TP'	EMPLOYEE PARKING	57	--	--	57	22	28	30	30	--
	55+00.00'V' to 61+00.00'V'	USH12/29	1,470	--	672	798	--	--	798	798	--
	386+62.07'NB' to 392+45.41'NB'	CTH B NB	427	--	144	283	--	--	283	283	--
DIVISION 2 SUBTOTAL			21,182	--	8,609	12,573	2,460	3,075	9,498	9,686	28
UNDISTRIBUTED				24							396
PROJECT 1022-04-76 SUB TOTAL			22,676	324	8,609	14,067	5,956	7,445	6,622	9,686	3,300
1022-04-76 TOTAL			23,000								3,300

PROJECT ID 1022-04-86

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	205.0100 COMMON EXCAVATION (1) EBS EXCAVATION (3)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (6) FACTOR 1.25	MASS ORDINATE +/- (7)	WASTE	208.0100 BORROW
1	50+00.00'S' to 54+14.99'S'	SALT SHED	152	48	--	152	920	1,150	-998	--	998
1022-04-86 TOTAL			200								998

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(3) EBS EXCAVATION TO BE BACKFILLED WITH SELECT BORROW MATERIAL.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(6) EXPANDED FILL FACTOR = 1.25
EXPANDED FILL = (UNEXPANDED FILL - REDUCED EBS) * FILL FACTOR
(7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

DIVISION 1 - TEMPORARY BYPASS ROADWAY ('TR'-REFERENCE LINE)										
STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
61+25.00	0.00	--	--	--	--	--	--	--	--	--
62+00.00	75.00	11.3	--	4.1	16	--	6	16	8	9
63+00.00	100.00	10.6	--	6.9	40	--	20	56	33	24
64+00.00	100.00	10.9	--	14.7	40	--	40	96	83	14
64+41.45	41.45	10.8	--	17.1	17	--	24	113	113	1
65+00.00	58.55	10.9	--	20.7	24	--	41	137	164	-27
66+00.00	100.00	10.9	--	22.6	40	--	80	177	264	-87
67+00.00	100.00	10.8	--	29.1	40	--	96	217	384	-167
68+00.00	100.00	10.9	--	35.0	40	--	119	257	533	-276
68+92.41	92.41	11.8	--	45.3	39	--	137	296	704	-408
70+00.00	107.59	6.7	--	38.2	37	--	166	333	911	-578
71+00.00	100.00	8.1	--	37.6	27	--	140	360	1,086	-726
71+73.18	73.18	12.6	--	36.6	28	--	100	388	1,211	-823
72+00.00	26.82	13.0	--	35.9	13	--	36	401	1,256	-855
72+26.18	26.18	9.2	--	37.4	11	--	36	412	1,301	-889
72+79.18	53.00	6.8	--	40.0	16	--	76	428	1,396	-968
73+00.00	20.82	6.4	--	41.1	5	--	31	433	1,435	-1,002
74+00.00	100.00	11.6	--	29.0	33	--	130	466	1,598	-1,132
75+00.00	100.00	10.0	--	26.8	40	--	103	506	1,726	-1,220
76+00.00	100.00	8.1	--	28.0	33	--	102	539	1,854	-1,315
77+00.00	100.00	8.7	--	22.0	31	--	93	570	1,970	-1,400
78+00.00	100.00	9.5	--	17.4	34	--	73	604	2,061	-1,457
79+00.00	100.00	9.1	--	25.6	34	--	80	638	2,161	-1,523
80+00.00	100.00	8.3	--	32.4	32	--	108	670	2,296	-1,626
81+00.00	100.00	8.6	--	33.0	31	--	121	701	2,448	-1,747
82+00.00	100.00	8.3	--	31.3	31	--	119	732	2,596	-1,864
83+00.00	100.00	9.8	--	24.8	34	--	104	766	2,726	-1,960
84+00.00	100.00	9.1	--	27.2	35	--	96	801	2,846	-2,045
85+00.00	100.00	8.7	--	29.7	33	--	106	834	2,979	-2,145
86+00.00	100.00	7.9	--	32.5	31	--	115	865	3,123	-2,258
86+92.39	92.39	7.3	--	38.5	26	--	122	891	3,275	-2,384
88+00.00	107.61	8.0	--	32.8	31	--	142	922	3,453	-2,531
89+00.00	100.00	8.3	--	31.3	30	--	119	952	3,601	-2,649
90+00.00	100.00	13.9	--	19.5	41	--	94	993	3,719	-2,726
91+00.00	100.00	13.3	--	16.8	50	--	67	1,043	3,803	-2,760
92+00.00	100.00	12.1	--	17.1	47	--	63	1,090	3,881	-2,791
93+00.00	100.00	12.3	--	15.0	45	--	59	1,135	3,955	-2,820
93+19.95	19.95	17.1	--	16.7	11	--	12	1,146	3,970	-2,824
93+72.95	53.00	14.2	--	20.4	31	--	36	1,177	4,015	-2,838
94+00.00	27.05	12.9	--	21.5	14	--	21	1,191	4,041	-2,850
94+25.95	25.95	12.8	--	21.8	12	--	21	1,203	4,068	-2,865
95+00.00	74.05	12.9	--	22.3	35	--	60	1,238	4,143	-2,905
96+00.00	100.00	13	--	19	48	--	77	1,286	4,239	-2,953
96+52.34	52.34	13	--	16	26	--	34	1,312	4,281	-2,969
97+00.00	47.66	13	--	10	23	--	23	1,335	4,310	-2,975
98+00.00	100.00	13	--	5	48	--	27	1,383	4,344	-2,961
99+00.00	100.00	14	--	3	49	--	13	1,432	4,360	-2,928
100+00.00	100.00	15	--	1	52	--	7	1,484	4,369	-2,885
100+38.00	38.00	--	--	--	10	--	1	1,494	4,370	-2,876
					1,494	0	3,496			

NOTES:
(1) COMMON EXCAVATION INCLUDES UNUSABLE PAVEMENT MATERIAL
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS ESTIMATED FROM TYPICAL SECTION AND IS INCLUDED IN CUT.
(3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) MASS ORDINATE = (CUT - SALVAGED PAVT) - (FILL* FILL FACTOR)]

9

9

PROJECT NO: 1022-04-76 | HWY: IH 94 | COUNTY: DUNN | EARTHWORK DATA | SHEET 469 | E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090101-EW.DWG
LAYOUT NAME - 02

PLOT DATE : 7/31/2023 1:18 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1" = 1'

DIVISION 3 - IH 94 WESTBOUND ('WB'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
454+00.00	0.00	--	--	--	--	--	--	--	--	--
455+00.00	0.00	--	5.0	--	--	--	--	--	--	--
456+00.00	100.00	8.9	5.0	--	16	19	--	16	--	-3
457+00.00	100.00	21.7	5.0	--	57	19	--	73	--	35
459+00.00	200.00	42.1	14.0	--	236	70	--	309	--	201
460+00.00	100.00	57.2	14.0	--	184	52	--	493	--	333
461+00.00	100.00	65.7	14.0	--	228	52	--	721	--	509
462+00.00	100.00	80.5	14.0	--	271	52	--	992	--	728
463+00.00	100.00	77.5	14.0	0.3	293	52	1	1,285	1	968
464+00.00	100.00	81.2	14.0	2.2	294	52	5	1,579	8	1,204
465+00.00	100.00	84.6	14.0	--	307	52	4	1,886	13	1,454
466+00.00	100.00	86.7	14.0	--	317	52	--	2,203	13	1,719
467+00.00	100.00	75.2	14.0	--	300	52	--	2,503	13	1,967
468+00.00	100.00	71.0	14.0	--	271	52	--	2,774	13	2,186
469+00.00	100.00	74.1	14.0	--	269	52	--	3,043	13	2,403
470+00.00	100.00	63.8	14.0	--	256	52	--	3,299	13	2,607
471+00.00	100.00	122.3	18.3	--	345	60	--	3,644	13	2,892
471+40.00	40.00	123.3	18.3	--	182	27	--	3,826	13	3,047
472+00.00	60.00	123.3	18.3	--	274	41	--	4,100	13	3,280
473+00.00	100.00	141.3	18.3	2.3	490	68	4	4,590	18	3,697
474+00.00	100.00	137.5	18.3	8.3	516	68	3	5,106	21	4,141
474+72.75	72.75	137.5	18.3	9.1	370	49	3	5,476	25	4,458
474+97.73	24.98	137.5	18.3	11.3	127	17	3	5,603	29	4,564
475+22.71	24.98	131.7	18.3	14.1	124	17	12	5,727	44	4,656
476+43.06	120.35	125.9	18.3	0.6	574	82	33	6,301	85	5,107
477+00.00	56.94	126.3	18.3	0.7	266	39	1	6,567	86	5,333
478+00.00	100.00	132.6	18.3	2.8	479	68	7	7,046	95	5,735
479+00.00	100.00	135.4	18.3	1.0	496	68	7	7,542	104	6,154
480+00.00	100.00	138.4	18.3	1.0	507	68	4	8,049	109	6,588
480+40.00	40.00	129.4	18.3	1.0	198	27	1	8,247	110	6,758
481+00.00	60.00	80.6	18.3	--	233	41	1	8,480	111	6,949
482+00.00	100.00	73.6	18.3	--	286	68	--	8,766	111	7,167
483+00.00	100.00	58.3	18.3	0.1	244	68	--	9,010	111	7,343
484+00.00	100.00	62.7	18.3	0.3	224	68	1	9,234	113	7,498
485+00.00	100.00	60.0	18.3	0.4	227	68	1	9,461	114	7,655
486+00.00	100.00	59.8	18.3	1.0	222	68	3	9,683	118	7,806
487+00.00	100.00	60.1	18.3	--	222	68	2	9,905	120	7,957
488+00.00	100.00	50.9	18.3	--	205	68	--	10,110	120	8,094
489+00.00	100.00	38.9	15.0	--	166	62	--	10,276	120	8,198
490+00.00	100.00	22.7	12.0	--	114	50	--	10,390	120	8,262
491+00.00	100.00	12.7	11.0	--	66	43	--	10,456	120	8,285
492+00.00	100.00	4.6	9.0	--	32	37	--	10,488	120	8,280
493+00.00	100.00	0.9	7.0	1.3	10	30	2	10,498	123	8,258
493+13.00	13.00	.1	6.0	2	--	3	1	10,498	124	8,253
					10,498	5,270	99			

NOTES:
(1) COMMON EXCAVATION INCLUDES UNUSABLE PAVEMENT MATERIAL
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS ESTIMATED FROM TYPICAL SECTION AND IS INCLUDED IN CUT.
(3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) MASS ORDINATE = (CUT - SALVAGED PAVT) - (FILL* FILL FACTOR)]

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PROJECT NO: 1022-04-76 | HWY: IH 94 | COUNTY: DUNN | EARTHWORK DATA | SHEET 470 | E

DIVISION 2 - SWEF RAMP ('R'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
406+00.00	0.00	--	18.3	--	--	--	--	--	--	--
406+50.00	50.00	57.6	18.3	--	53	34	--	53	--	19
407+00.00	50.00	67.0	18.3	--	115	34	--	168	--	100
407+50.00	50.00	76.0	18.3	--	132	34	--	300	--	198
408+00.00	50.00	81.6	18.3	--	146	34	--	446	--	310
408+22.30	22.30	82.7	18.3	--	68	15	--	514	--	363
408+50.00	27.70	84.5	18.3	--	86	19	--	600	--	430
409+00.00	50.00	87.0	18.3	--	159	34	--	759	--	555
409+50.00	50.00	88.5	18.3	--	162	34	--	921	--	683
410+00.00	50.00	87.0	18.3	--	163	34	--	1,084	--	812
410+50.00	50.00	75.1	18.3	0.4	150	34	--	1,234	--	928
411+00.00	50.00	65.6	18.3	1.1	130	34	1	1,364	1	1,023
411+50.00	50.00	46.4	18.3	20.6	104	34	20	1,468	26	1,068
412+00.00	50.00	41.2	18.3	60.4	81	34	75	1,549	120	1,021
412+50.00	50.00	38.5	18.3	66.4	74	34	117	1,623	266	915
412+73.27	23.27	36.3	18.3	52.8	32	16	51	1,655	330	867
413+00.00	26.73	41.5	18.3	46.3	38	18	49	1,693	391	826
413+42.67	42.67	48.4	18.3	36.7	71	29	66	1,764	474	785
413+50.00	7.33	58.5	18.3	34.1	15	5	10	1,779	486	783
414+00.00	50.00	61.9	18.3	5.7	111	34	37	1,890	533	814
414+54.00	54.00	62.0	18.3	0.3	124	37	6	2,014	540	893
415+00.00	46.00	56.0	18.3	--	100	31	--	2,114	540	962
415+46.36	46.36	57.3	18.3	--	97	31	--	2,211	540	1,028
415+97.00	50.64	71.2	18.3	4.6	121	34	4	2,332	545	1,110
416+50.00	53.00	44.6	18.3	2.6	114	36	7	2,446	554	1,179
416+82.60	32.60	44.4	18.3	2.4	54	22	3	2,500	558	1,208
417+00.00	17.40	69.8	18.3	2.2	37	12	1	2,537	559	1,231
417+33.94	33.94	67.3	18.3	1.7	86	23	2	2,623	561	1,292
417+50.00	16.06	67.0	18.3	1.7	40	11	1	2,663	563	1,320
418+00.00	50.00	68.3	18.3	4.8	125	34	6	2,788	570	1,403
418+16.25	16.25	66.0	18.3	5.9	40	11	3	2,828	574	1,428
418+50.00	33.75	62.9	18.3	7.8	81	23	9	2,909	585	1,475
418+98.54	48.54	61.3	18.3	11.5	112	33	17	3,021	606	1,533
419+31.95	33.41	53.8	18.3	16.9	71	23	18	3,092	629	1,558
419+50.00	18.05	53.1	18.3	19.2	36	12	12	3,128	644	1,567
419+89.62	39.62	51.3	18.3	16.0	77	27	26	3,205	676	1,585
420+20.12	30.50	63.8	18.3	23.1	65	21	22	3,270	704	1,601
420+50.00	29.88	61.5	18.3	31.6	69	20	30	3,339	741	1,613
421+00.00	50.00	65.5	18.3	16.9	118	34	45	3,457	798	1,641
421+14.64	14.64	65.4	18.3	11.7	35	10	8	3,492	808	1,656
421+50.00	35.36	60.9	18.3	5.3	83	24	11	3,575	821	1,701
422+00.00	50.00	66.0	18.3	9.1	117	34	13	3,692	838	1,768

CONTINUED ON NEXT SHEET

NOTES:
(1) COMMON EXCAVATION INCLUDES UNUSABLE PAVEMENT MATERIAL
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS ESTIMATED FROM TYPICAL SECTION AND IS INCLUDED IN CUT.
(3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) MASS ORDINATE = (CUT - SALVAGED PAVT) - (FILL* FILL FACTOR)]

CONTINUED FROM PREVIOUS SHEET

DIVISION 2 - SWEF RAMP ('R'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
					CONTINUED					
422+50.00	50.00	62.8	18.3	18.3	119	34	25	3,811	869	1,821
423+00.00	50.00	39.4	18.3	25.9	95	34	41	3,906	920	1,831
423+01.12	1.12	38.6	18.3	26.4	2	1	1	3,908	921	1,831
423+50.00	48.88	15.8	18.3	49.2	49	33	68	3,957	1,006	1,762
423+87.12	37.12	5.8	18.3	14.8	15	15	44	3,972	1,061	1,707
424+00.00	12.88	19.1	18.3	5.9	6	6	5	3,978	1,068	1,701
424+50.00	50.00	39.1	18.3	53.9	54	34	55	4,032	1,136	1,652
425+00.00	50.00	37.4	18.3	70.8	71	34	115	4,103	1,280	1,545
425+41.44	41.44	37.7	18.3	57.6	58	28	99	4,161	1,404	1,451
425+50.00	8.56	39.5	18.3	12.2	12	6	11	4,173	1,418	1,444
426+00.00	50.00	37.7	18.3	71.5	71	34	77	4,244	1,514	1,384
426+27.44	27.44	40.0	18.3	39.5	39	19	56	4,283	1,584	1,334
426+50.00	22.56	40.4	18.3	33.6	34	15	31	4,317	1,623	1,315
426+75.22	25.22	40.2	18.3	37.6	38	17	33	4,355	1,664	1,294
427+00.00	24.78	38.5	18.3	36.1	36	17	34	4,391	1,706	1,271
427+50.00	50.00	37.9	18.3	70.8	71	34	99	4,462	1,830	1,184
428+00.00	50.00	32.2	18.3	65.0	65	34	126	4,527	1,988	1,058
428+50.00	50.00	29.7	18.3	57.3	57	34	113	4,584	2,129	939
429+00.00	50.00	25.3	18.3	50.9	51	34	100	4,635	2,254	831
429+50.00	50.00	24.3	18.3	46.0	46	34	90	4,681	2,366	731
430+00.00	50.00	20.9	18.3	41.9	42	34	81	4,723	2,468	638
431+00.00	50.00	--	18.3	--	28	28	54	4,751	2,535	570
					4,751	1,646	2,028			

DIVISION 2 - LOOP RAMPS ('L'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
11+37.10	0.00	10.3	--	--	--	--	--	--	--	--
11+50.00	12.90	13.9	20.0	0.3	6	5	--	6	--	1
11+88.73	38.73	51.6	20.0	0.0	47	29	--	53	--	19
12+17.06	28.33	74.0	20.0	--	66	21	--	119	--	64
12+50.00	32.94	70.4	20.0	0.0	88	24	--	207	--	128
13+00.00	50.00	74.8	20.0	5.6	134	37	5	341	6	219
13+04.05	4.05	60.9	20.0	0.0	10	3	--	351	6	226
13+50.00	45.95	48.4	20.0	0.0	93	34	--	444	6	285
14+00.00	50.00	56.0	20.0	--	97	37	--	541	6	345
14+50.00	50.00	64.2	20.0	--	111	37	--	652	6	419
15+00.00	50.00	63.5	20.0	0.6	118	37	1	770	8	499
15+30.00	30.00	52.4	20.0	0.1	64	22	--	834	842	541
15+63.59	33.59	48.1	20.0	0.1	63	25	--	897	842	579
15+86.12	22.53	45.0	20.0	2.4	39	17	1	936	843	599
19+24.13	0.00	131.9	20.0	--	--	--	--	936	843	599
19+50.00	25.87	96.6	20.0	--	109	19	--	1,045	843	689
20+00.00	50.00	52.5	20.0	--	138	37	--	1,183	843	790
20+50.00	50.00	58.7	20.0	1.0	103	37	1	1,286	844	855
20+75.00	25.00	62.6	20.0	1.0	56	19	1	1,342	845	891
20+96.02	21.02	71.4	20.0	1.0	52	16	1	1,394	847	926
21+12.51	16.49	60.7	20.0	0.1	40	12	--	1,434	847	954
21+55.06	42.55	10.1	20.0	--	56	32	--	1,490	847	978
					1,490	500	10			

NOTES:
(1) COMMON EXCAVATION INCLUDES UNUSABLE PAVEMENT MATERIAL
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS ESTIMATED FROM TYPICAL SECTION AND IS INCLUDED IN CUT.
(3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) MASS ORDINATE = (CUT - SALVAGED PAVT) - (FILL* FILL FACTOR)]

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PROJECT NO: 1022-04-76 | HWY: IH 94 | COUNTY: DUNN | EARTHWORK DATA | SHEET 472 | E

DIVISION 2 - CMV PARKING ('PK'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCR. VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
50+00.00	0.00	59.2	20.0	0.4	0	0	0	0	0	0
50+25.00	25.00	70.1	20.0	0.1	60	19	0	60	0	41
50+50.00	25.00	105.4	30.0	--	81	23	0	141	0	99
51+00.00	50.00	172.8	50.0	--	258	74	0	399	0	283
51+25.00	25.00	182.5	30.0	--	164	37	0	563	0	410
51+50.00	25.00	177.0	20.0	0.4	166	23	0	729	0	553
51+61.85	11.85	188.1	20.0	0.2	80	9	0	809	0	624
52+00.00	38.15	188.7	20.0	--	266	28	0	1,075	0	862
52+50.00	50.00	188.1	20.0	--	349	37	0	1,424	0	1,174
53+00.00	50.00	145.8	20.0	--	309	37	0	1,733	0	1,446
					1,733	287	0			

DIVISION 2 - DRAINAGE SWALE ('SW'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCR. VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
10+07.65	0.00	--	--	2.6	--	--	--	--	--	--
10+25.00	17.35	12.9	--	3.7	4	--	2	4	3	2
10+50.00	25.00	8.4	--	6.6	10	--	5	14	9	5
11+00.00	50.00	15.0	--	11.6	22	--	17	36	30	6
11+25.00	25.00	14.5	--	10.4	14	--	10	50	43	8
11+50.00	25.00	11.1	--	13.2	12	--	11	62	56	6
11+75.00	25.00	10.6	--	8.6	10	--	10	72	69	3
12+00.00	25.00	15.5	--	5.2	12	--	6	84	76	8
12+25.00	25.00	21.0	--	2.7	17	--	4	101	81	20
12+50.00	25.00	16.0	--	4.3	17	--	3	118	85	33
13+00.00	50.00	20.6	--	4.8	34	--	8	152	95	57
13+50.00	50.00	17.0	--	8.3	35	--	12	187	110	77
14+00.00	50.00	17.3	--	15.5	32	--	22	219	138	82
14+50.00	50.00	28.7	--	7.5	43	--	21	262	164	98
14+91.96	41.96	52.9	--	--	63	--	6	325	171	154
15+50.00	58.04	73.6	--	2.3	136	--	3	461	175	286
15+75.00	25.00	43.9	--	0.0	54	--	1	515	176	339
16+00.00	25.00	22.3	--	--	31	--	--	546	176	370
16+26.69	26.69	15.1	--	0.0	18	--	--	564	176	388
					564	0	141			

NOTES:
(1) COMMON EXCAVATION INCLUDES UNUSABLE PAVEMENT MATERIAL
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS ESTIMATED FROM TYPICAL SECTION AND IS INCLUDED IN CUT.
(3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) MASS ORDINATE = (CUT - SALVAGED PAVT) - (FILL* FILL FACTOR)]

DIVISION 2 - EMPLOYEE PARKING ('TP'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
50+00.97	0.00	--	--	--	--	--	--	--	--	--
50+07.38	6.41	33.6	--	2.4	4	--	--	4	--	4
50+25.00	17.62	1.2	--	8.1	11	--	3	15	4	11
50+27.40	2.40	--	--	12.9	--	--	1	15	5	10
50+33.33	5.93	--	--	17.8	--	--	3	15	9	6
50+43.97	10.64	5.4	--	9.6	1	--	5	16	15	1
50+45.96	1.99	8.0	--	34.5	--	--	2	16	18	-2
50+57.38	11.41	26.2	--	1.2	7	--	8	23	28	-5
50+67.77	10.40	69.0	--	--	18	--	--	41	28	14
50+73.35	5.58	48.2	--	--	12	--	--	53	28	26
50+75.81	2.46	33.1	--	2.4	4	--	--	57	28	30
					57	0	22			

DIVISION 2 - USH 12/STH 29 VIRTUAL WEIGH STATION ('V'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
55+00.00	0.00	60.6	30.0	--	--	--	--	--	--	--
55+50.00	50.00	66.6	30.0	0.1	118	56	--	118	--	62
56+00.00	50.00	67.6	30.0	0.0	124	56	--	242	--	130
56+50.00	50.00	69.3	30.0	--	127	56	--	369	--	201
57+00.00	50.00	69.0	30.0	--	128	56	--	497	--	273
57+50.00	50.00	68.3	30.0	--	127	56	--	624	--	344
58+00.00	50.00	61.9	30.0	--	121	56	--	745	--	409
58+50.00	50.00	58.0	30.0	0.1	111	56	--	856	--	464
59+00.00	50.00	61.1	30.0	--	110	56	--	966	--	518
59+50.00	50.00	67.6	30.0	--	119	56	--	1,085	--	581
60+00.00	50.00	71.5	30.0	--	129	56	--	1,214	--	654
60+50.00	50.00	69.2	30.0	0.0	130	56	--	1,344	--	728
61+00.00	50.00	66.4	30.0	0.1	126	56	--	1,470	--	798
					1,470	672	0			

DIVISION 2 - NB CTH B PULL-OFF SITE ('NB'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
386+62.07	0.00	--	--	--	--	--	--	--	--	--
386+71.15	9.08	25.4	6.7	--	4	1	--	4	--	3
387+00.00	28.85	25.0	6.7	--	27	7	--	31	--	23
388+00.00	100.00	25.0	6.7	--	93	25	--	124	--	91
388+55.14	55.14	21.5	6.7	--	47	14	--	171	--	124
389+00.00	44.86	20.1	6.7	--	35	11	--	206	--	148
390+00.00	100.00	17.5	6.7	--	70	25	--	276	--	193
390+55.00	55.00	15.1	6.7	--	33	14	--	309	--	212
391+00.00	45.00	18.5	6.7	--	28	11	--	337	--	229
392+00.00	100.00	17.3	6.7	--	66	25	--	403	--	270
392+27.97	27.96	17.6	6.7	--	18	7	--	421	--	281
392+45.41	17.45	--	6.7	--	6	4	--	427	--	283
					427	144	0			

NOTES:
(1) COMMON EXCAVATION INCLUDES UNUSABLE PAVEMENT MATERIAL
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS ESTIMATED FROM TYPICAL SECTION AND IS INCLUDED IN CUT.
(3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) MASS ORDINATE = (CUT - SALVAGED PAVT) - (FILL* FILL FACTOR)]

9

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PROJECT NO: 1022-04-76 | HWY: IH 94 | COUNTY: DUNN | EARTHWORK DATA | SHEET 474 | E

DIVISION 1 - SALT SHED ACCESS ROAD ('S'-REFERENCE LINE)

STATION	DISTANCE	AREA (SF)			INCR. VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00	EXPANDED FILL 1.25	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
50+00.00	0.00	--	--	--	--	--	--	--	--	--
50+42.36	42.36	6.2	--	6.9	5	--	5	5	6	-1
50+80.69	38.33	10.5	--	24.1	12	--	22	17	34	-17
51+00.00	19.31	12.4	--	39.2	8	--	23	25	63	-38
51+28.57	28.57	5.4	--	151.6	9	--	101	34	189	-155
51+97.73	69.16	--	--	73.8	7	--	289	41	550	-509
52+00.00	2.27	--	--	205.2	--	--	12	41	565	-524
52+50.00	50.00	2.2	--	111.1	2	--	293	43	931	-888
52+88.56	38.56	13.2	--	42.2	11	--	109	54	1,068	-1,014
52+97.69	9.13	16.8	--	15.6	5	--	10	59	1,080	-1,021
53+36.43	38.74	19.6	--	33.3	26	--	35	85	1,124	-1,039
53+50.00	13.57	22.8	--	11.1	11	--	11	96	1,138	-1,042
54+00.00	50.00	23.4	--	0.2	43	--	10	139	1,150	-1,011
54+14.99	14.99	24.2	--	--	13	--	--	152	1,150	-998
					152	0	920			

NOTES:
(1) COMMON EXCAVATION INCLUDES UNUSABLE PAVEMENT MATERIAL
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS ESTIMATED FROM TYPICAL SECTION AND IS INCLUDED IN CUT.
(3) DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
(4) MASS ORDINATE = (CUT - SALVAGED PAVT) - (FILL* FILL FACTOR)]

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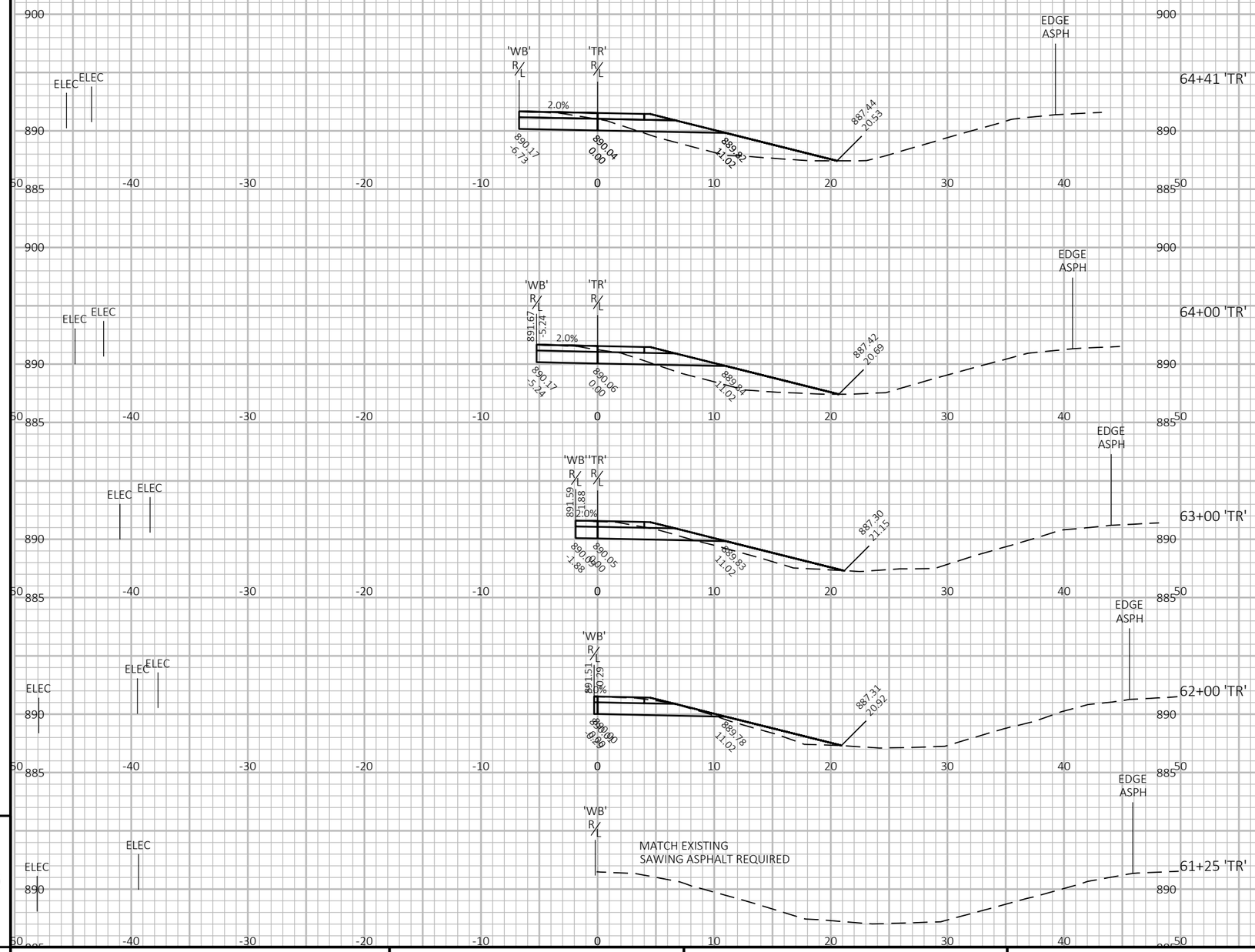
PROJECT NO: 1022-04-86 | HWY: IH 94 | COUNTY: DUNN | EARTHWORK DATA | SHEET 475 | E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090101-EW.DWG
LAYOUT NAME - 08
PLOT DATE : 7/31/2023 1:19 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1" = 1'
WISDOT/CADDS SHEET 49



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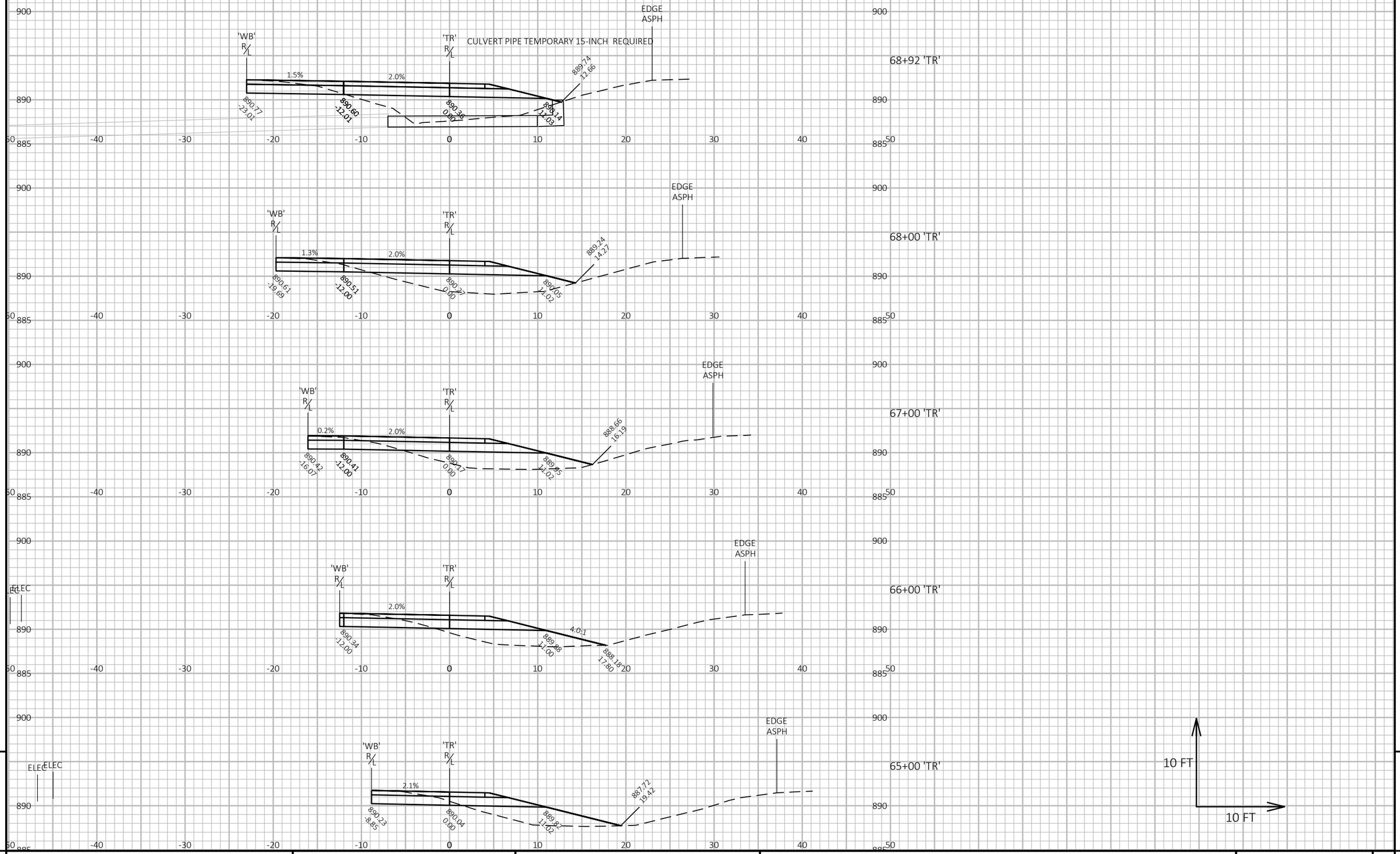
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 476	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 00TR

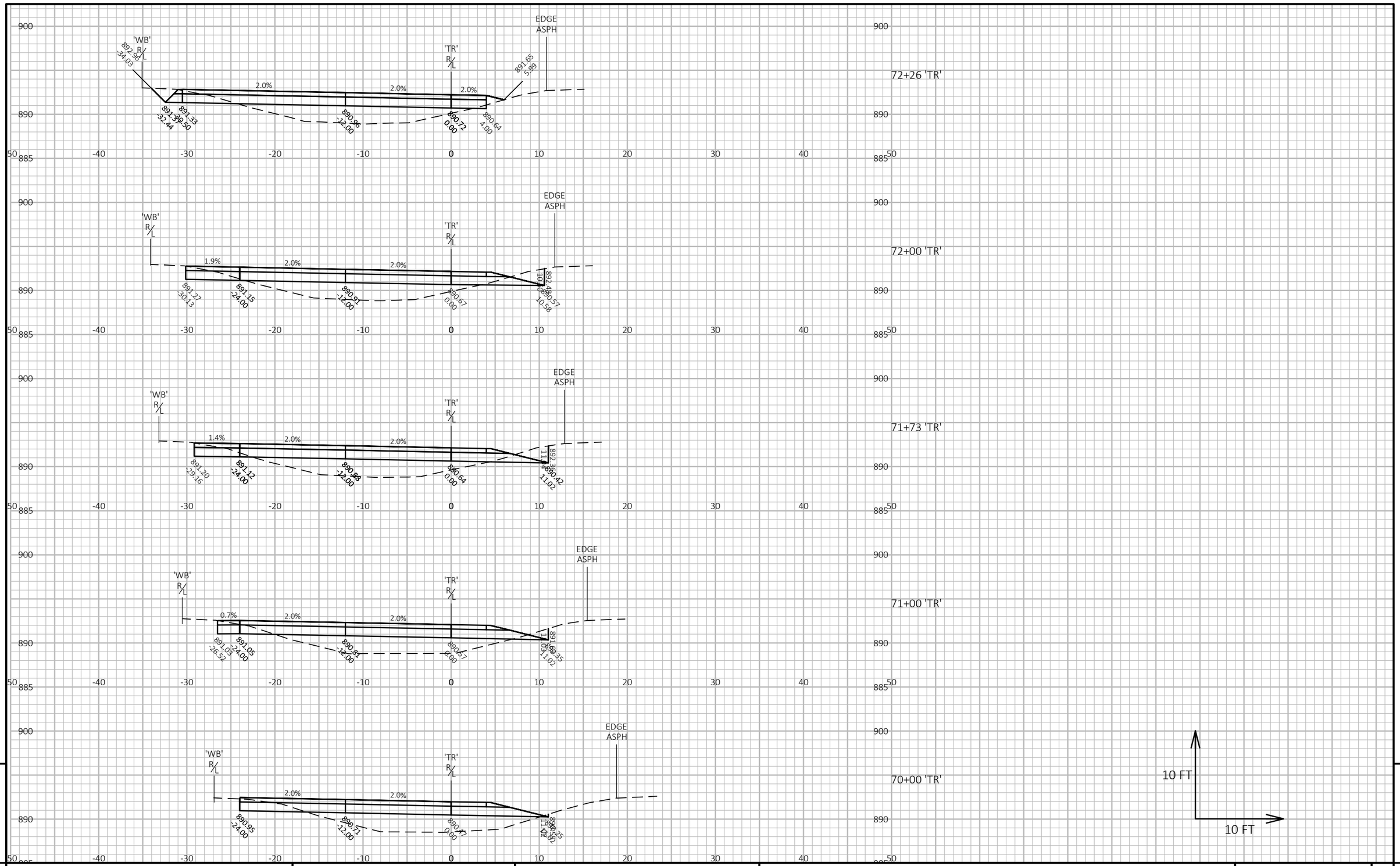
PLOT DATE : 8/1/2023 10:48 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

CULVERT PIPE TEMPORARY 15-INCH REQUIRED



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 477	E



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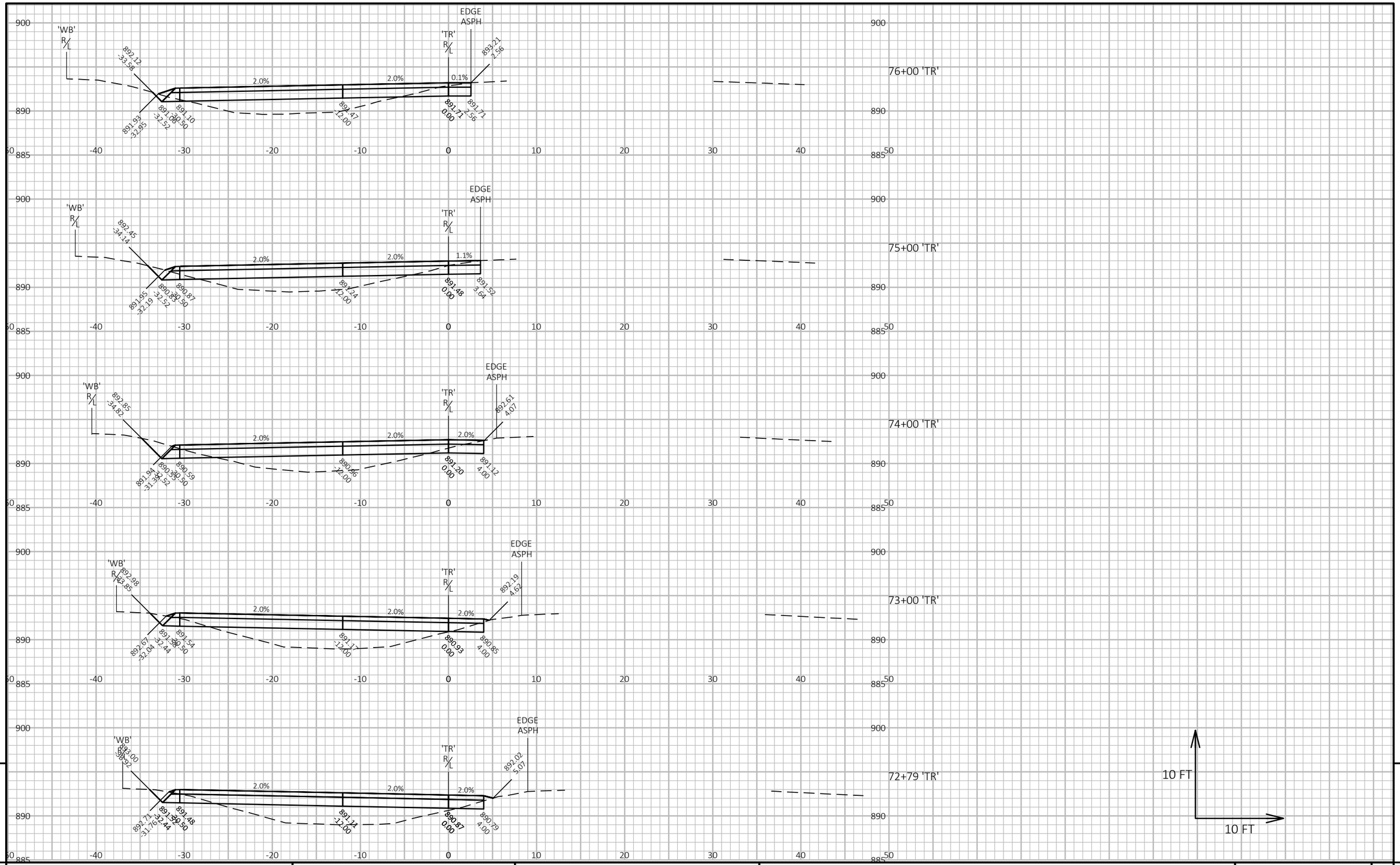
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 478	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 02TR

PLOT DATE : 8/1/2023 10:48 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

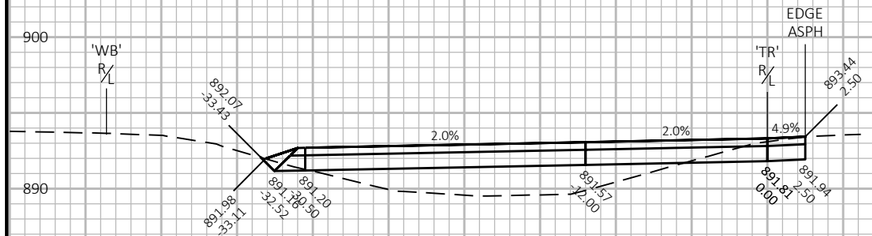


PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 479	E

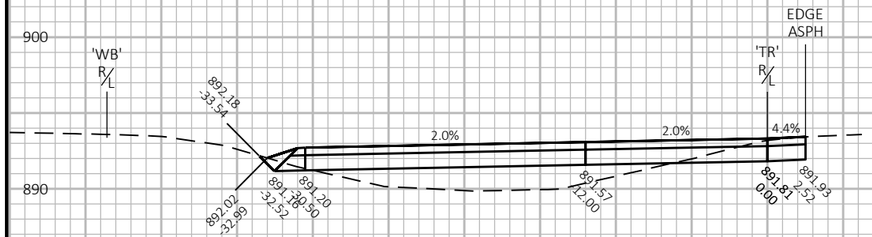
FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 03TR

PLOT DATE : 8/1/2023 10:49 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

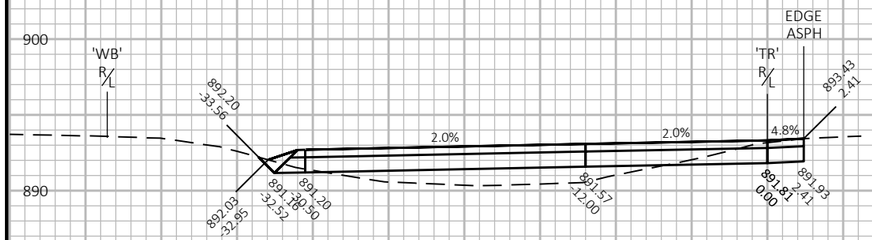
WISDOT/CADDS SHEET 49



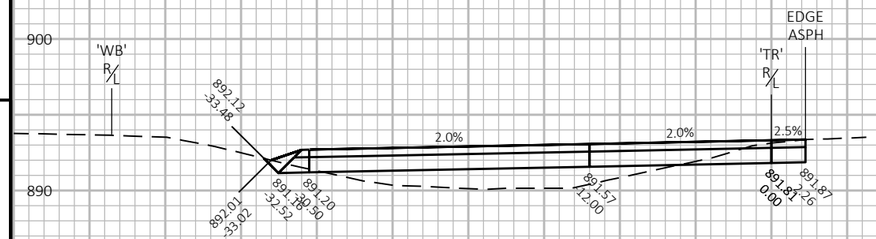
80+00 'TR'



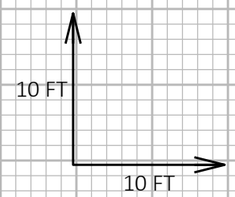
79+00 'TR'



78+00 'TR'



77+00 'TR'



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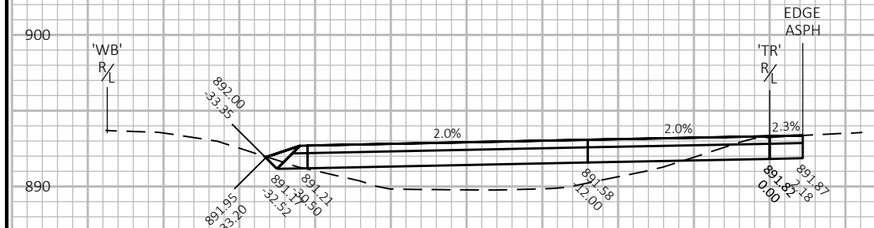
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 480	E

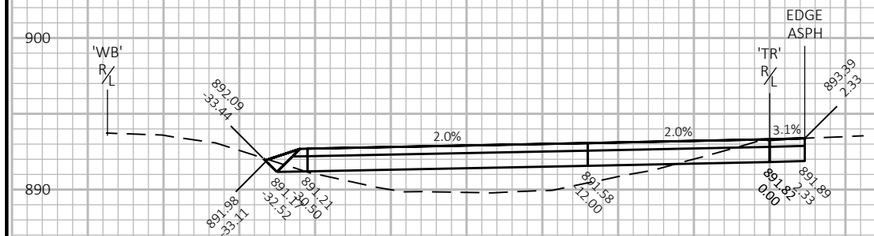
FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 04TR

PLOT DATE : 8/1/2023 10:49 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

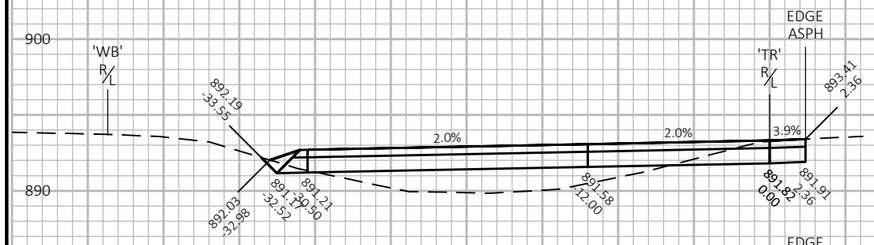
WISDOT/CADDS SHEET 49



85+00 'TR'

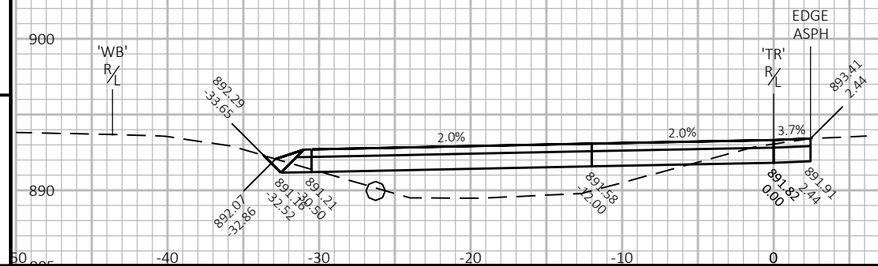


84+00 'TR'

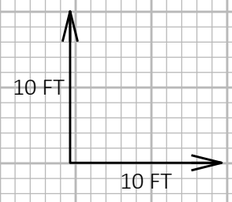


83+00 'TR'

82+00 'TR'



81+00 'TR'



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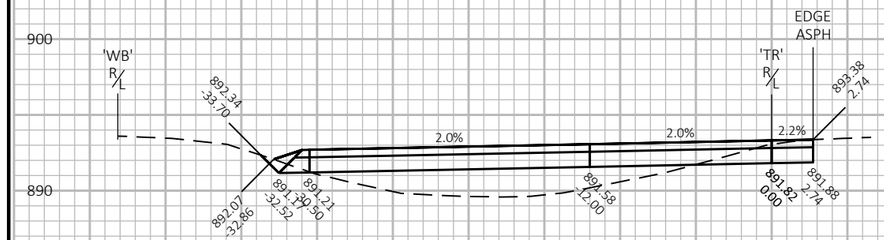
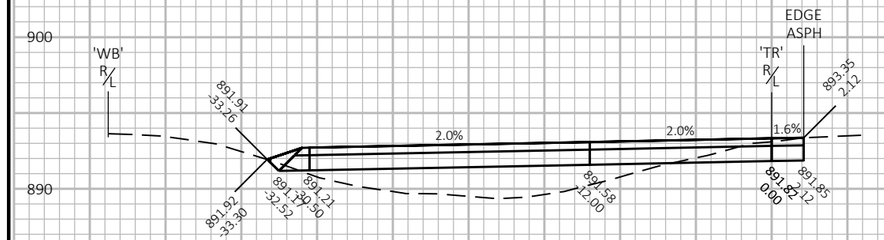
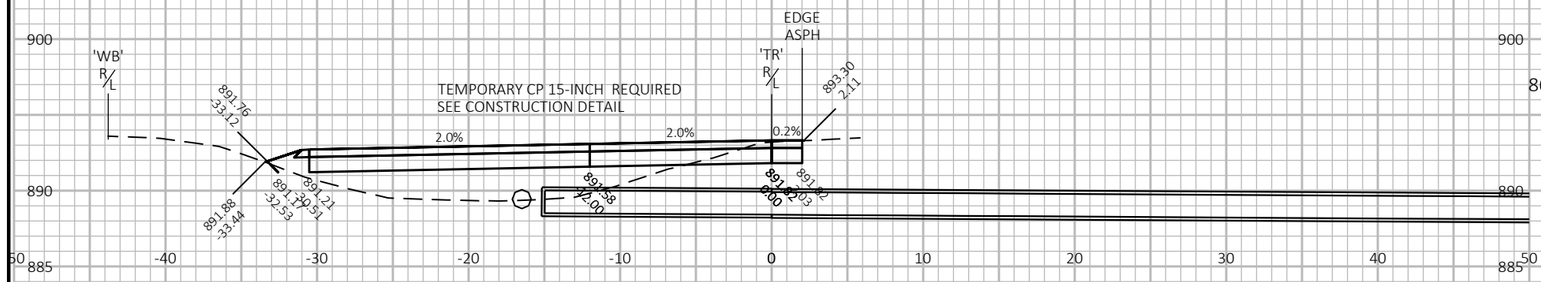
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 481	E



89+00 'TR'

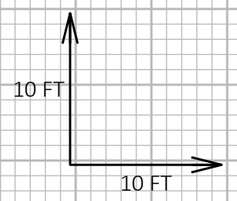


88+00 'TR'



86+92 'TR'

86+00 'TR'



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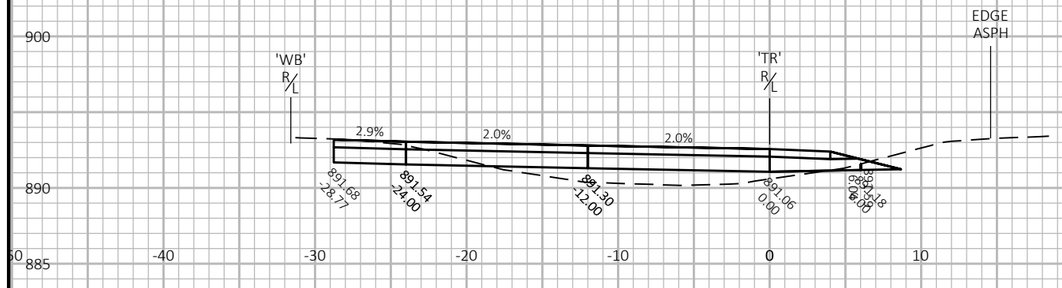
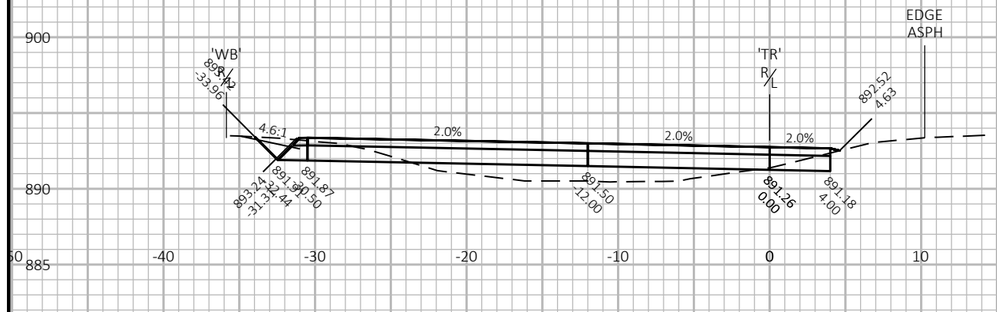
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 482	E

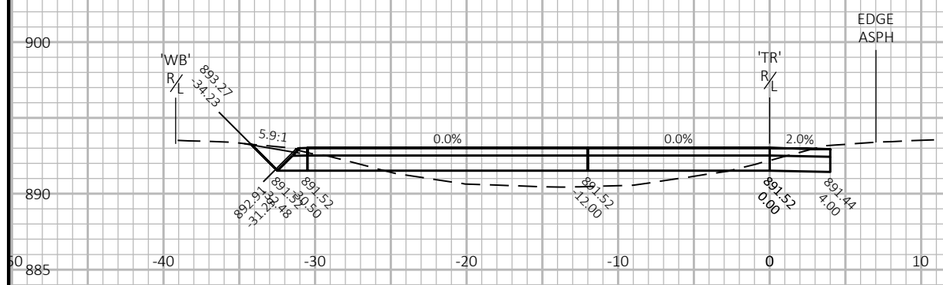
FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 06TR
PLOT DATE : 8/1/2023 10:49 AM
PLOT BY : JON BLOMQUIST
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



93+00 'TR'

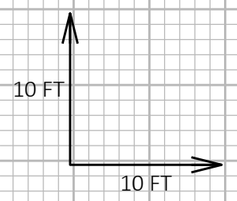


92+00 'TR'



91+00 'TR'

90+00 'TR'



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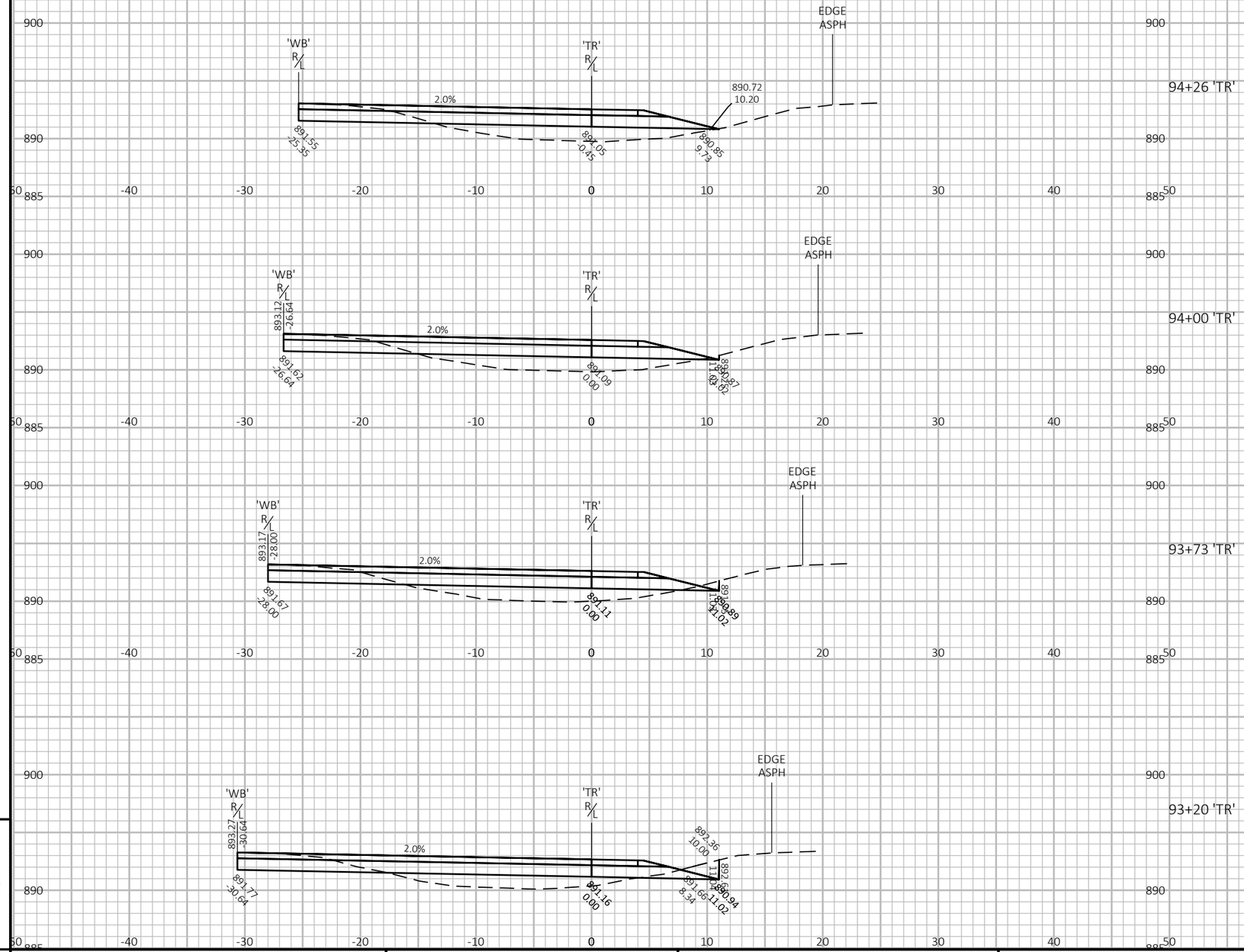
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 483	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 07TR

PLOT DATE : 8/1/2023 10:50 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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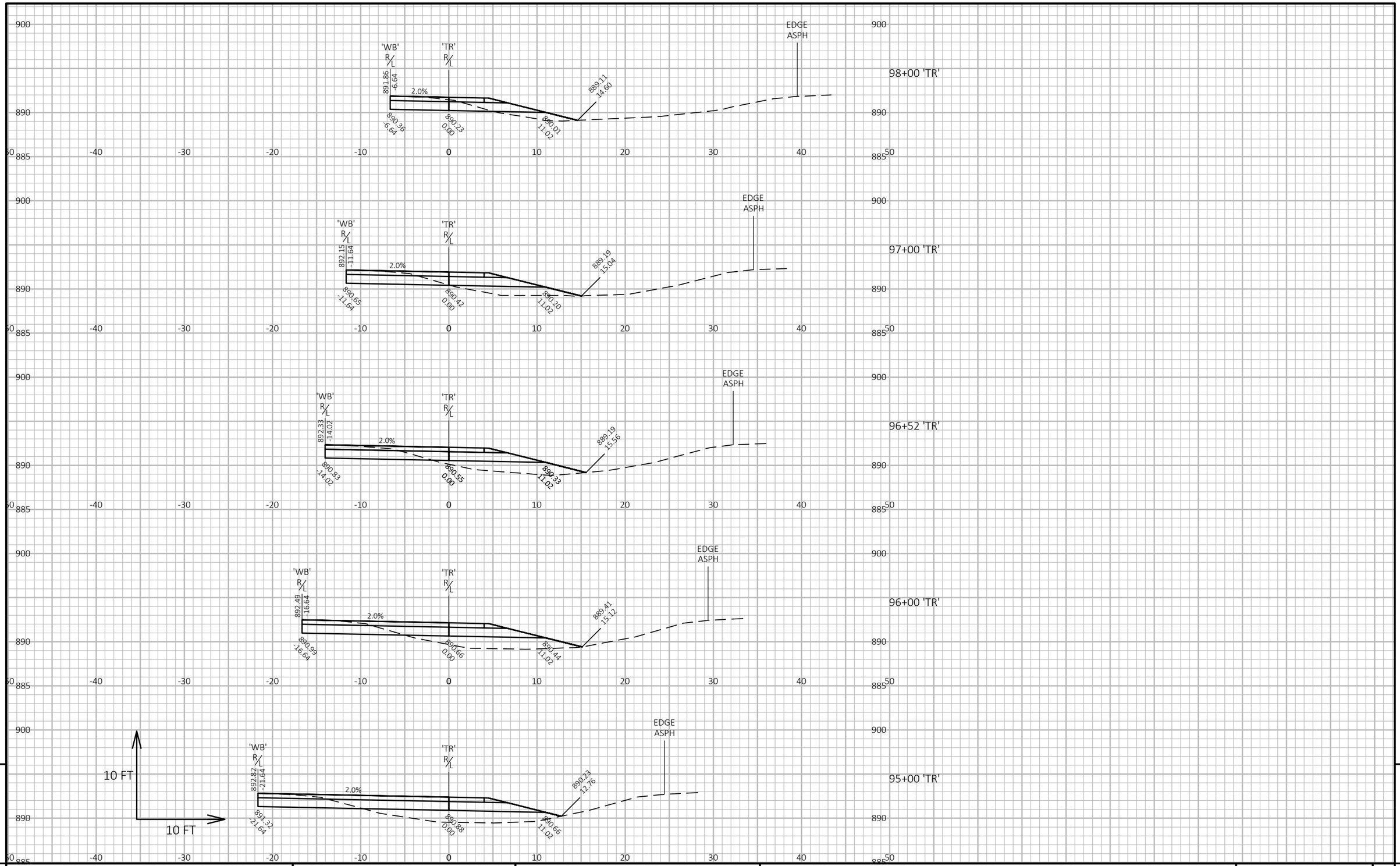
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 484	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 08TR

PLOT DATE : 8/1/2023 10:50 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

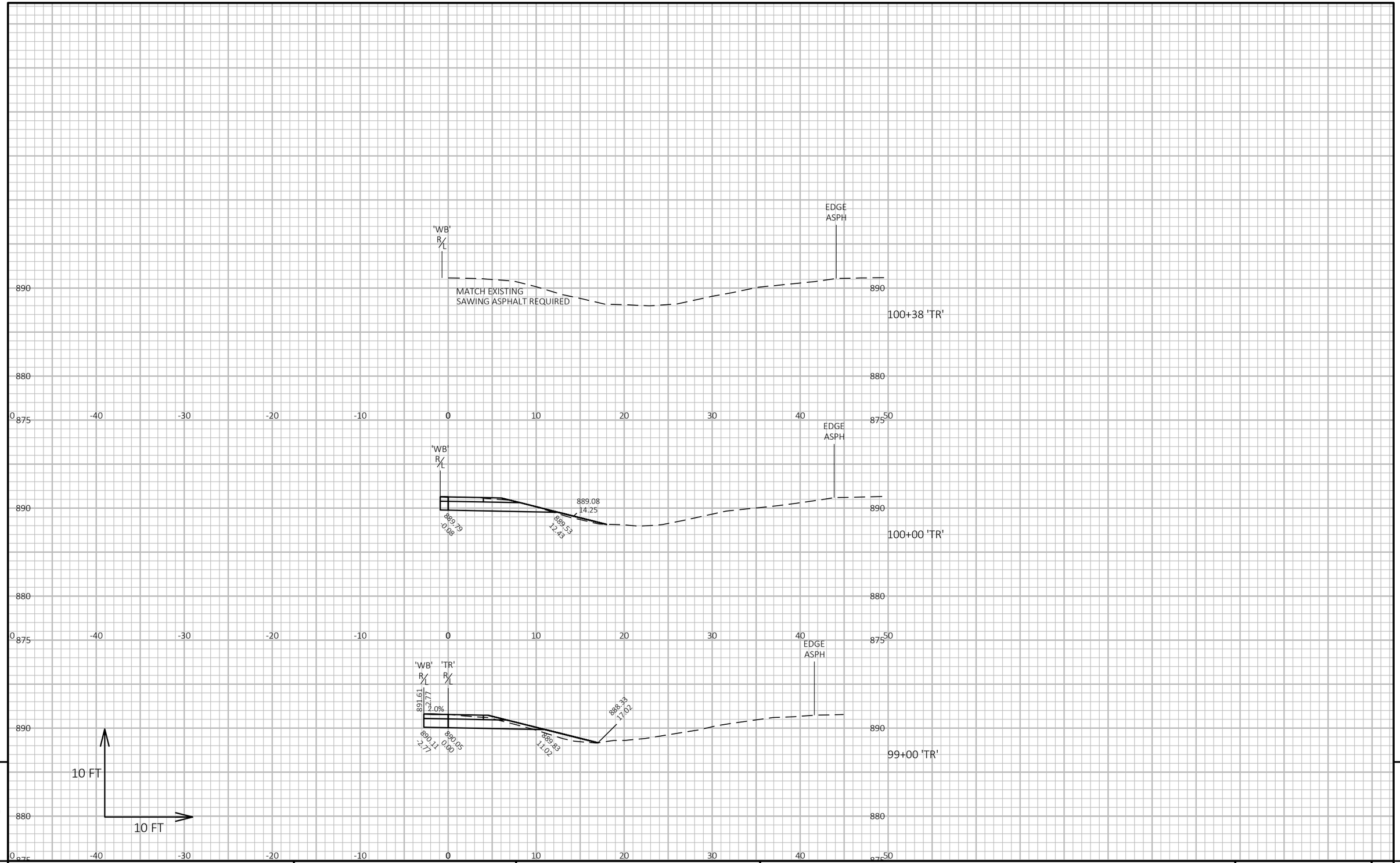


PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 485 E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 09TR

PLOT DATE : 8/1/2023 10:50 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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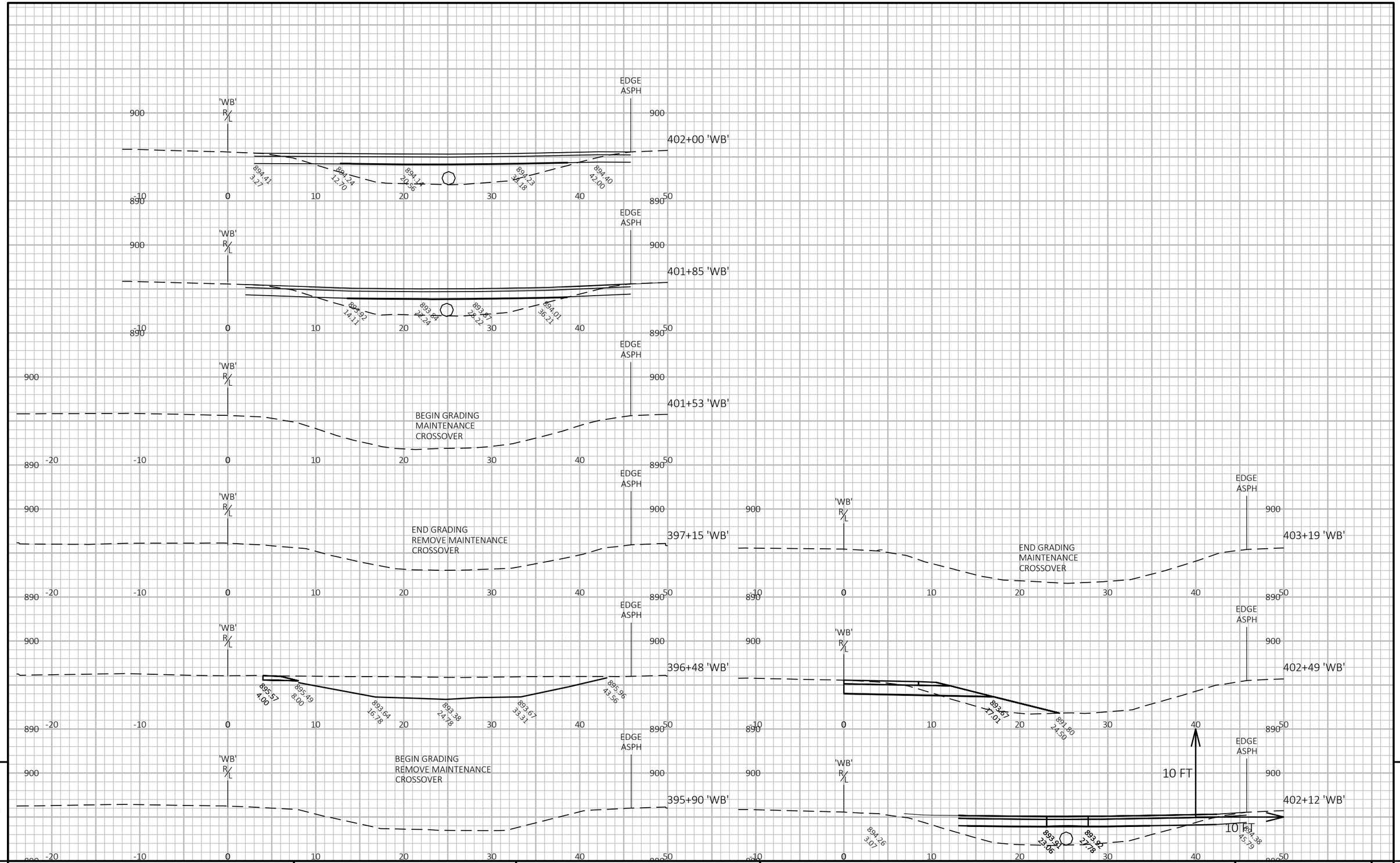
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 TEMPORARY BYPASS	SHEET 486	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 10TR

PLOT DATE : 8/1/2023 10:50 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

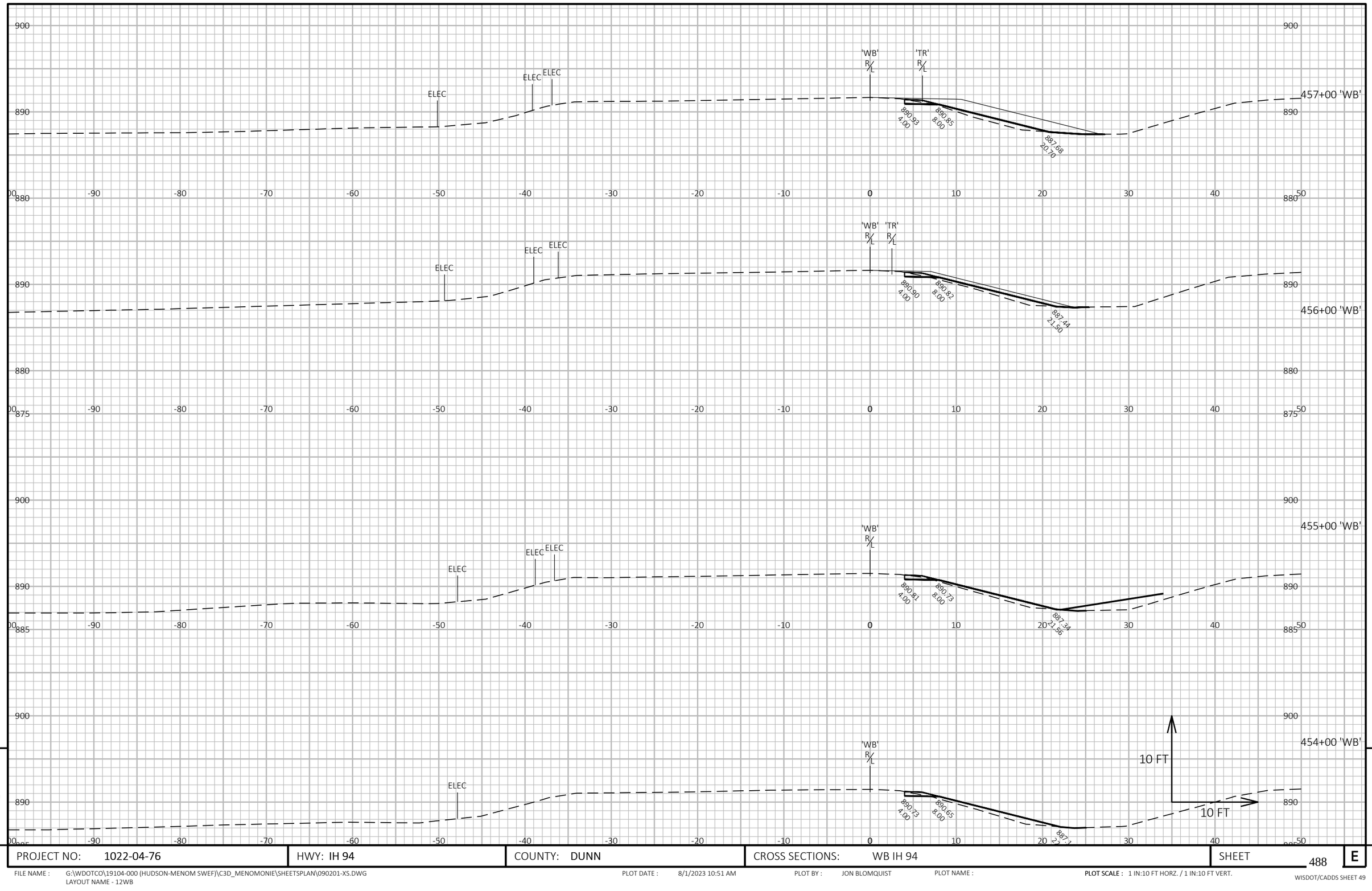


PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 487	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS_RECOVER.DWG
LAYOUT NAME - 11WB

PLOT DATE : 8/1/2023 11:41 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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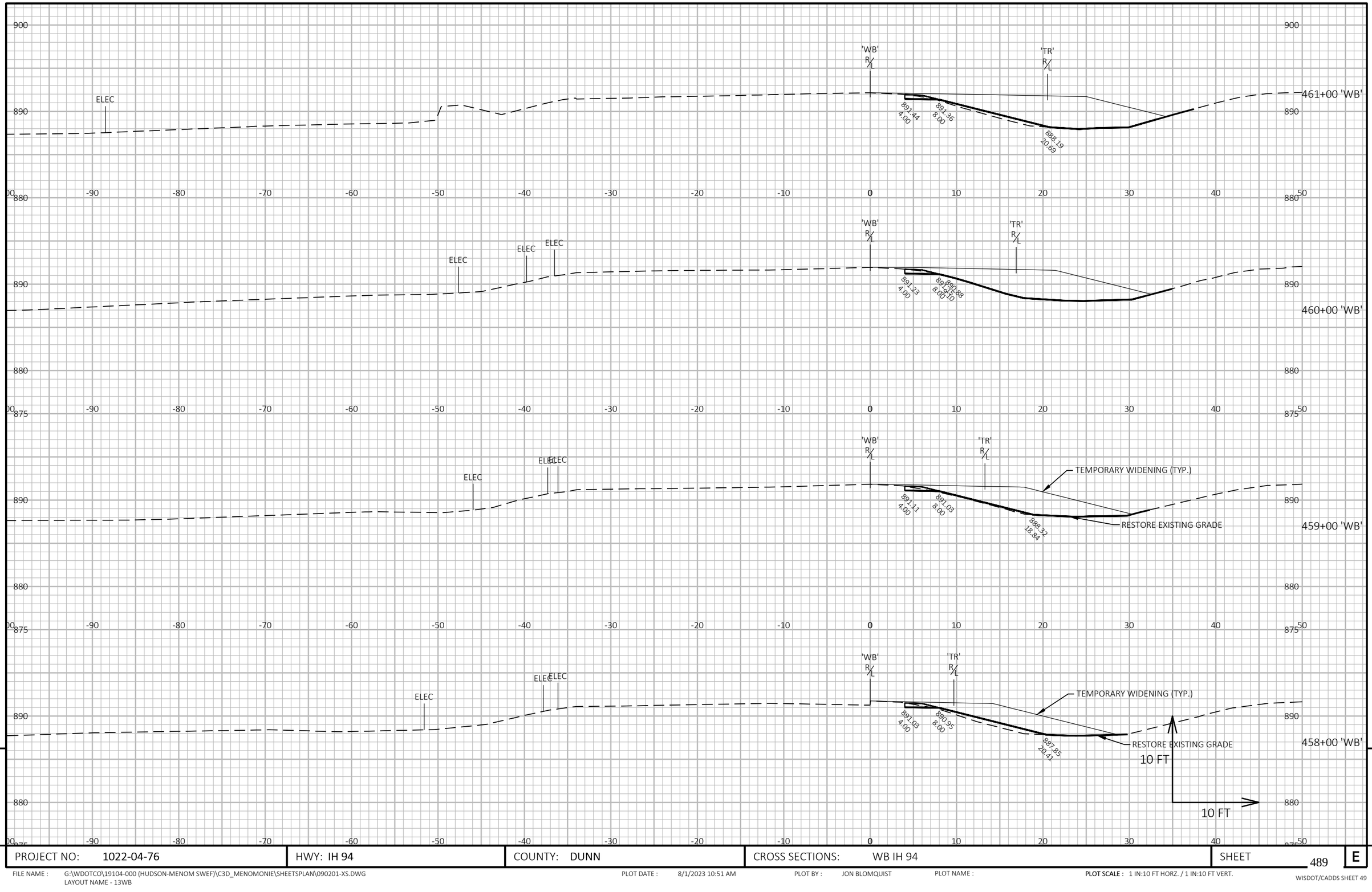
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 488	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 12WB

PLOT DATE : 8/1/2023 10:51 AM PLOT BY : JON BLOMQUIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

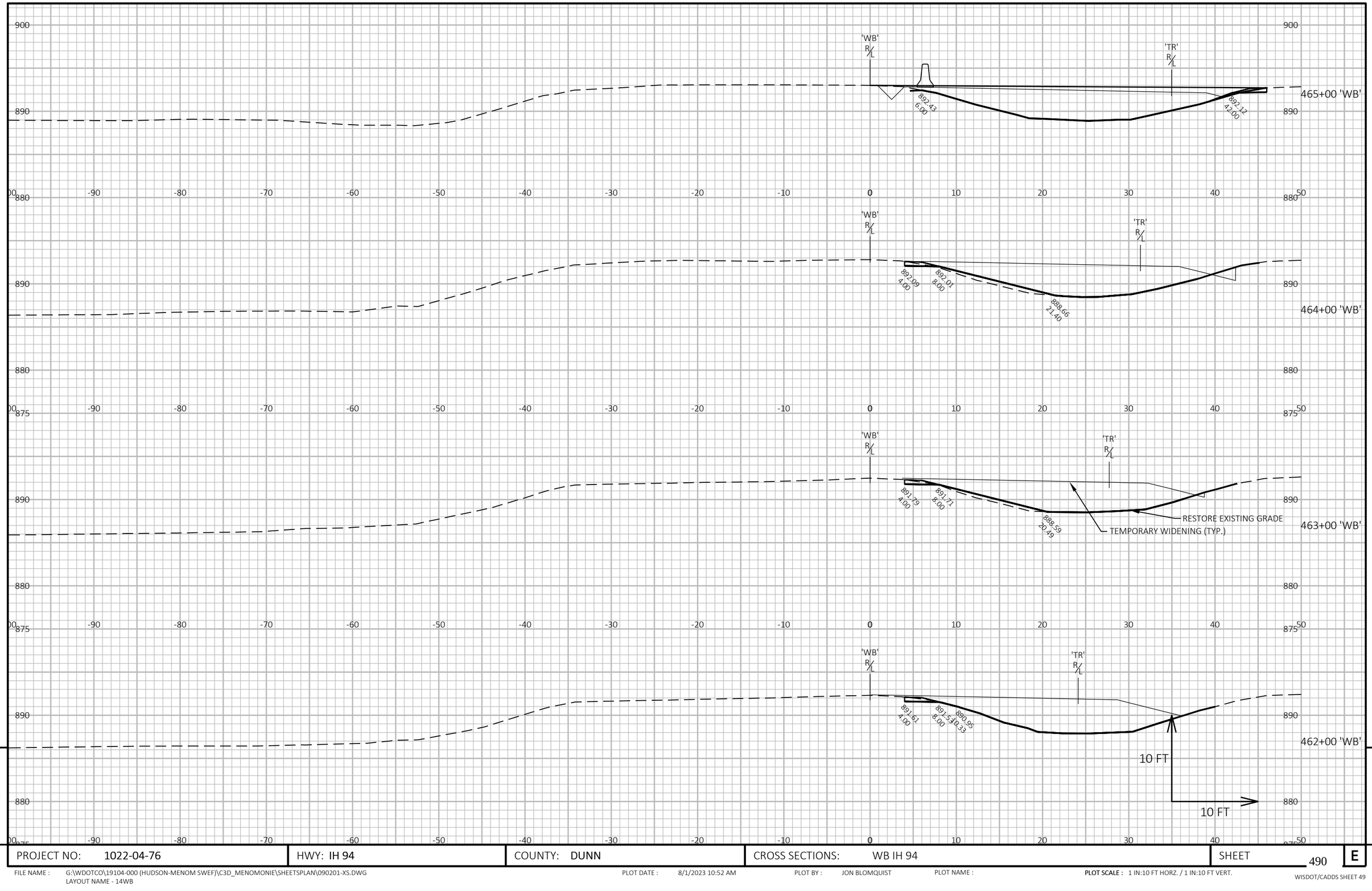


PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 489	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 13WB

PLOT DATE : 8/1/2023 10:51 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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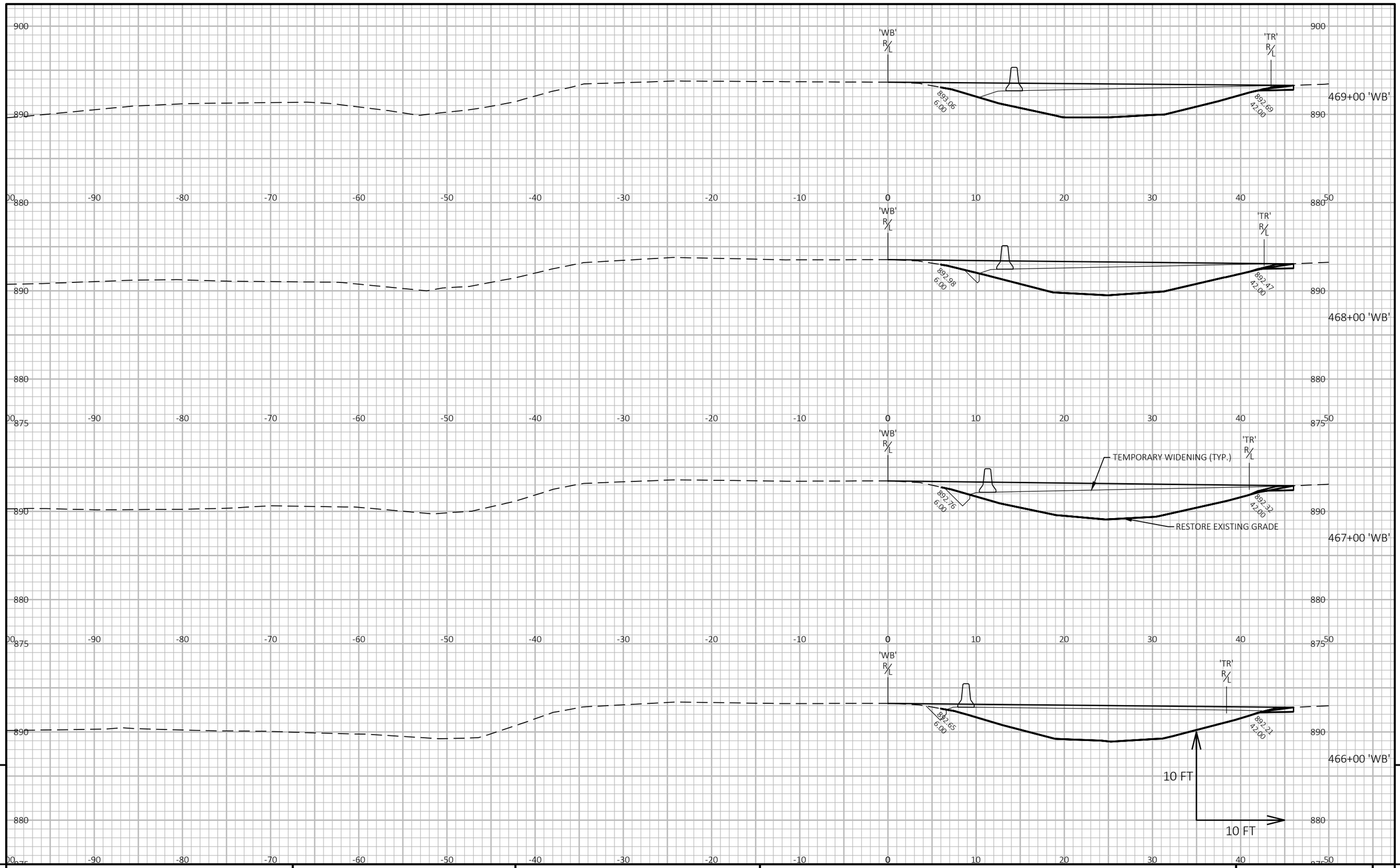
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 490	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 14WB

PLOT DATE : 8/1/2023 10:52 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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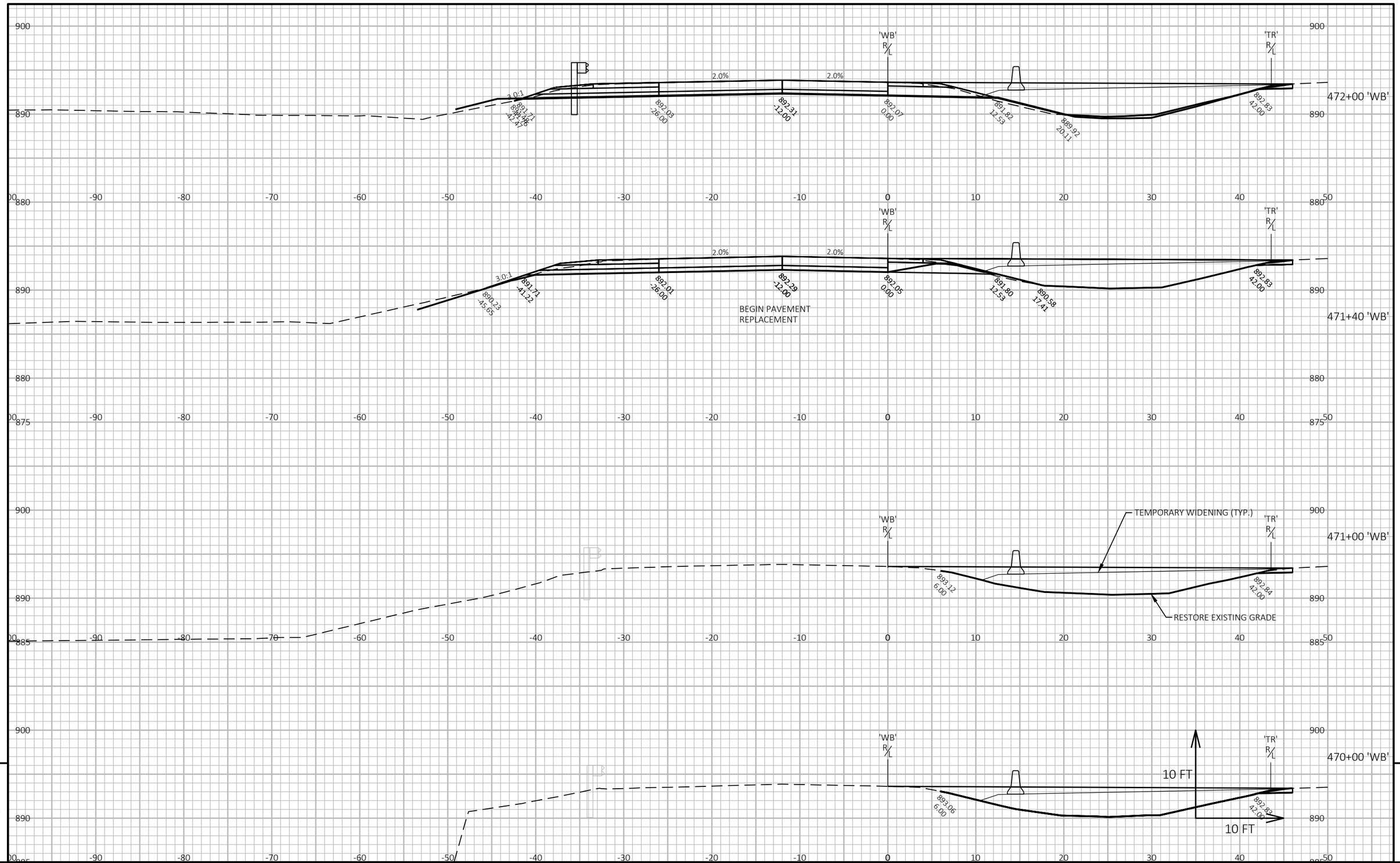
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 491	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 15WB

PLOT DATE : 8/1/2023 10:52 AM PLOT BY : JON BLOMQUIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

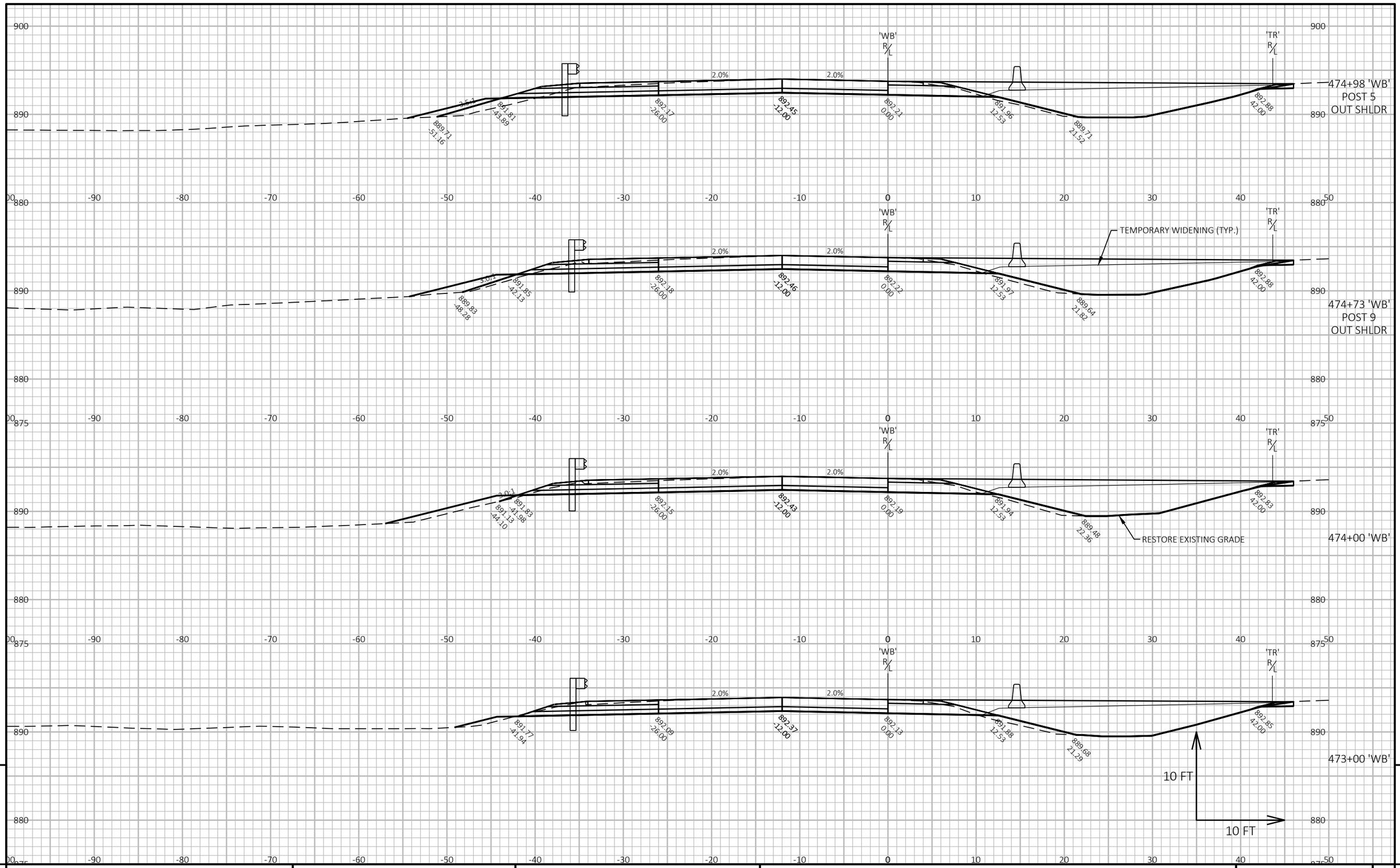


PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 492	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 16WB

PLOT DATE : 8/1/2023 10:52 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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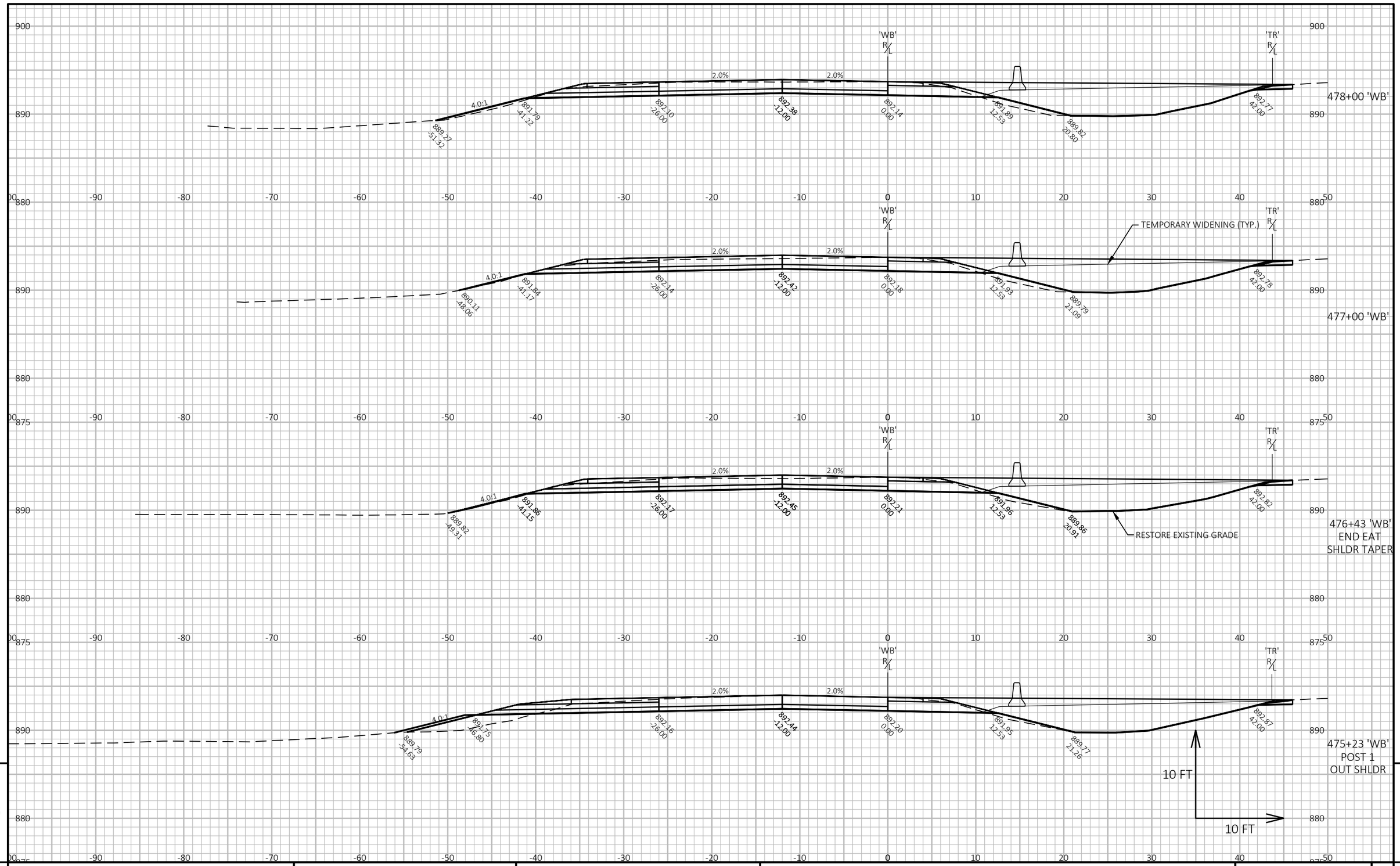
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 493	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 17WB

PLOT DATE : 8/1/2023 10:52 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 494	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 18WB

PLOT DATE : 8/1/2023 10:53 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 495	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 19WB

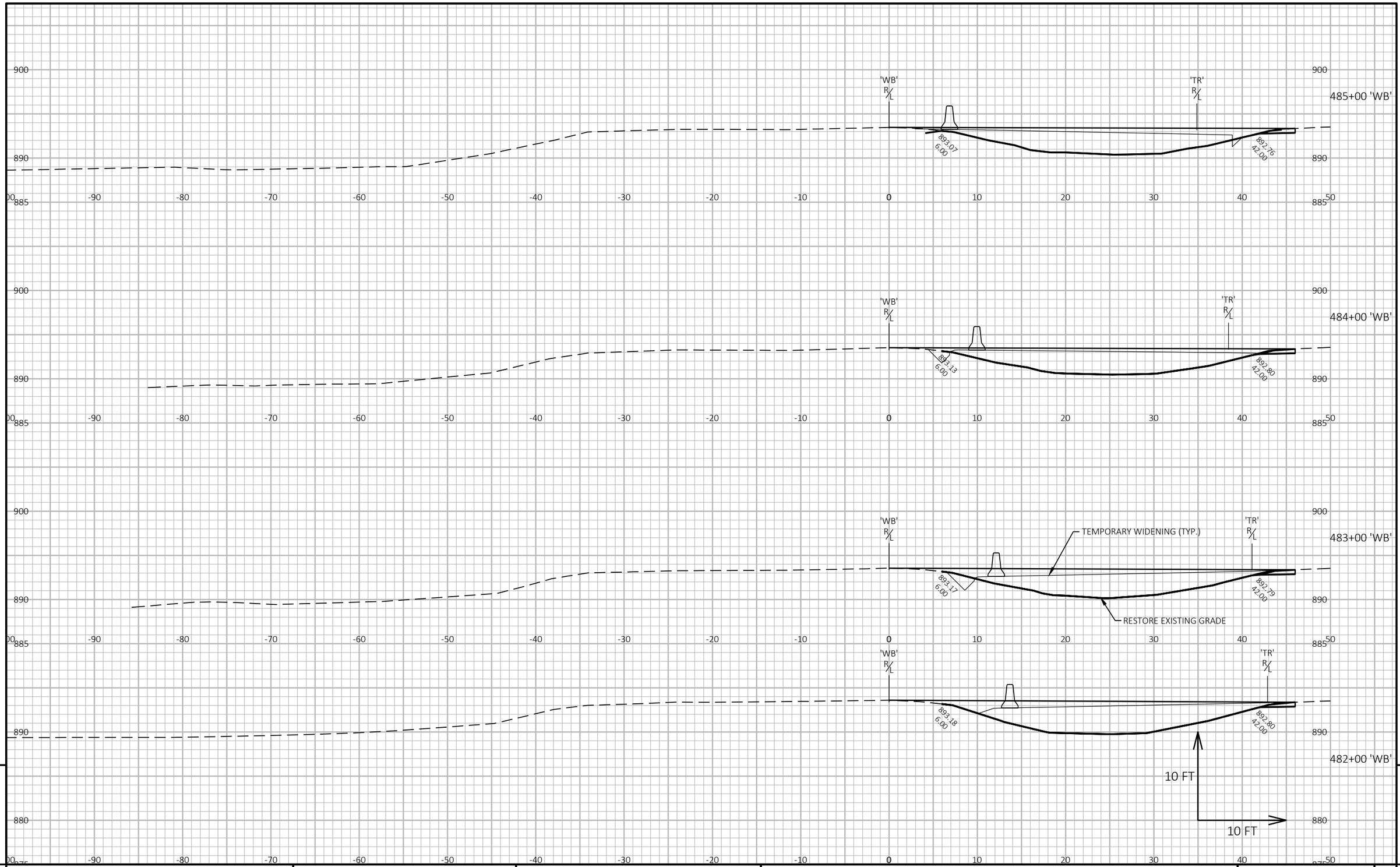
PLOT DATE : 8/1/2023 10:53 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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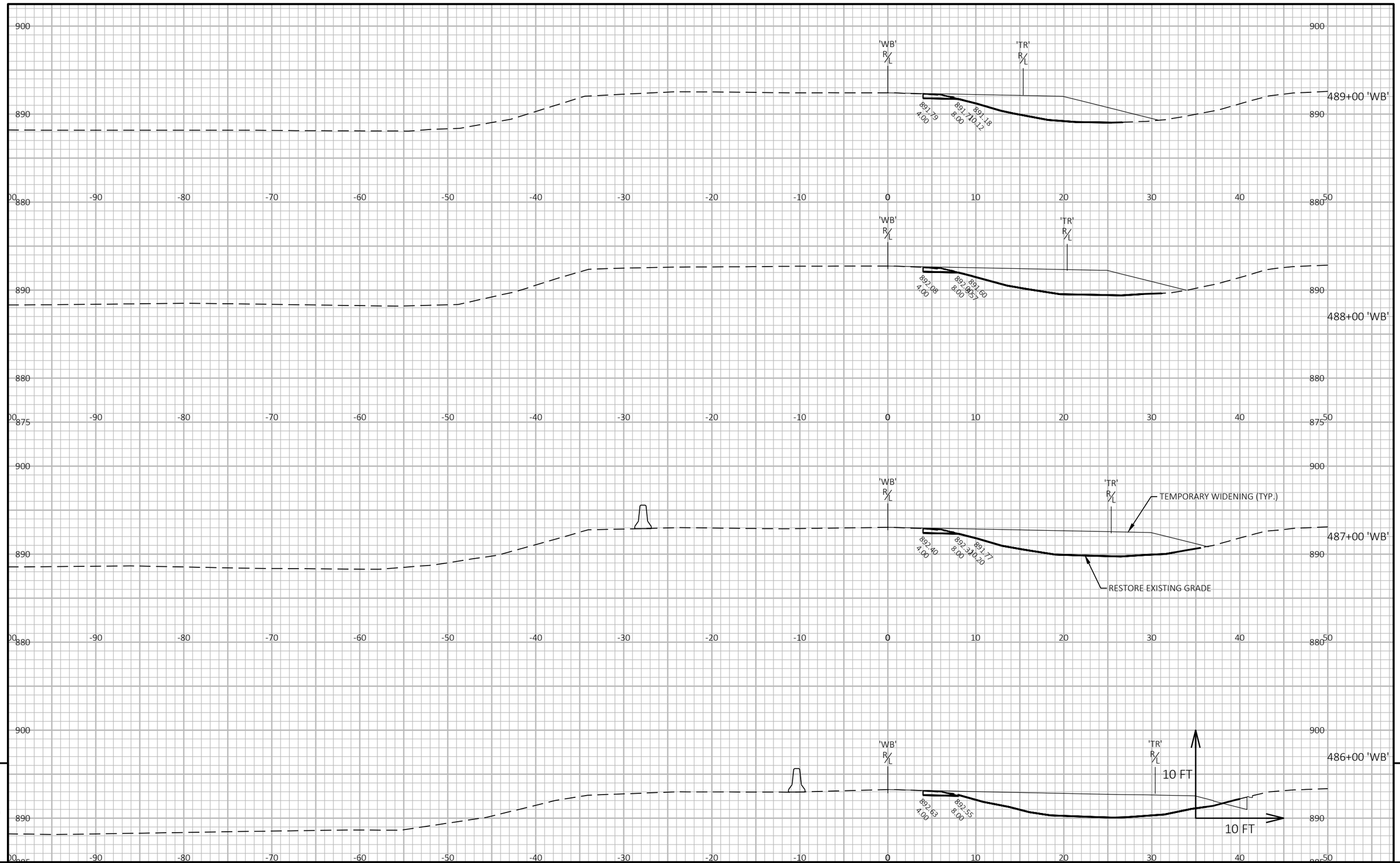
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 496	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 20WB

PLOT DATE : 8/1/2023 10:53 AM PLOT BY : JON BLOMQUIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 497	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 21WB

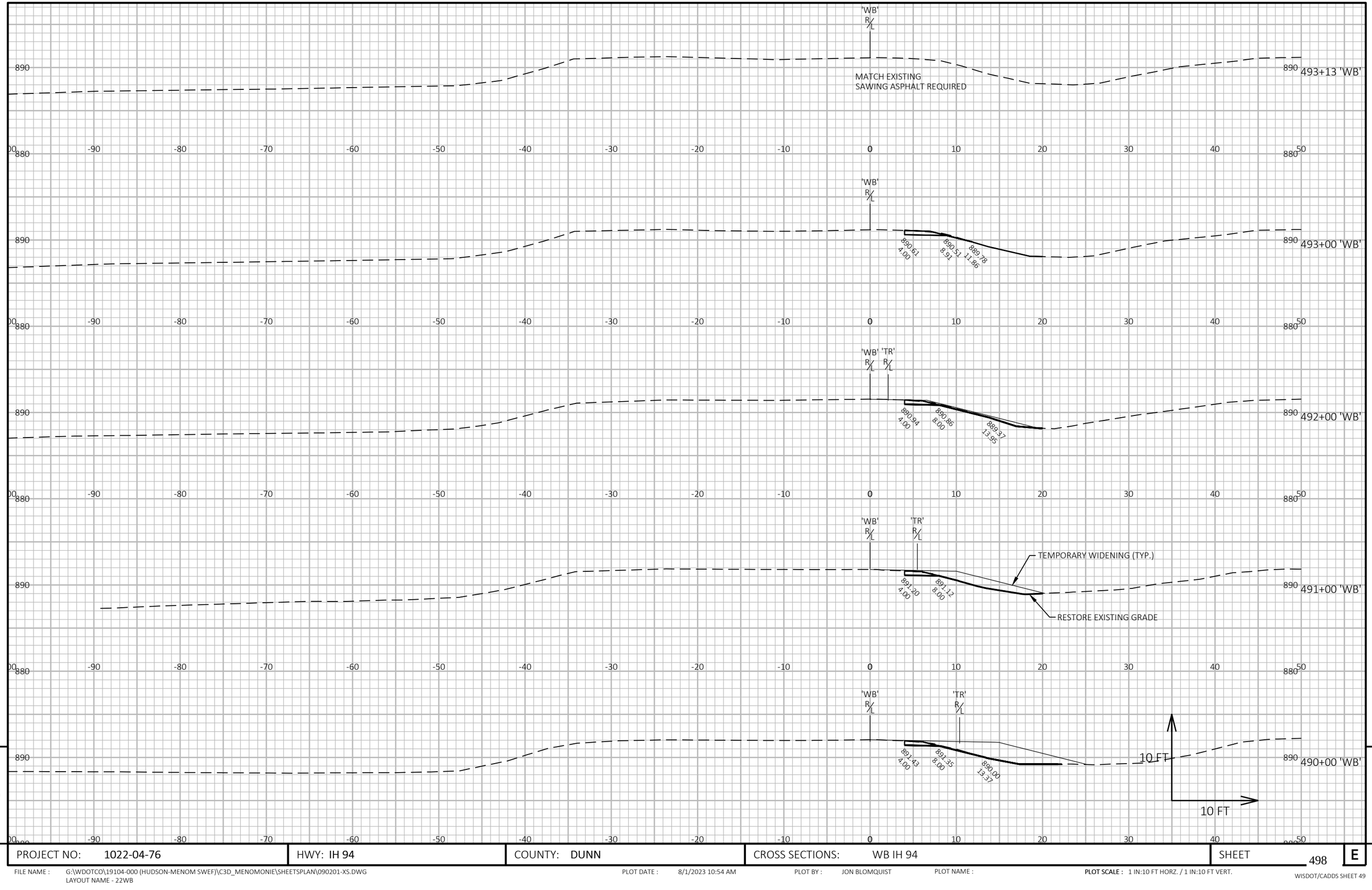
PLOT DATE : 8/1/2023 10:53 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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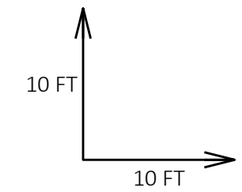
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 498	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 22WB

PLOT DATE : 8/1/2023 10:54 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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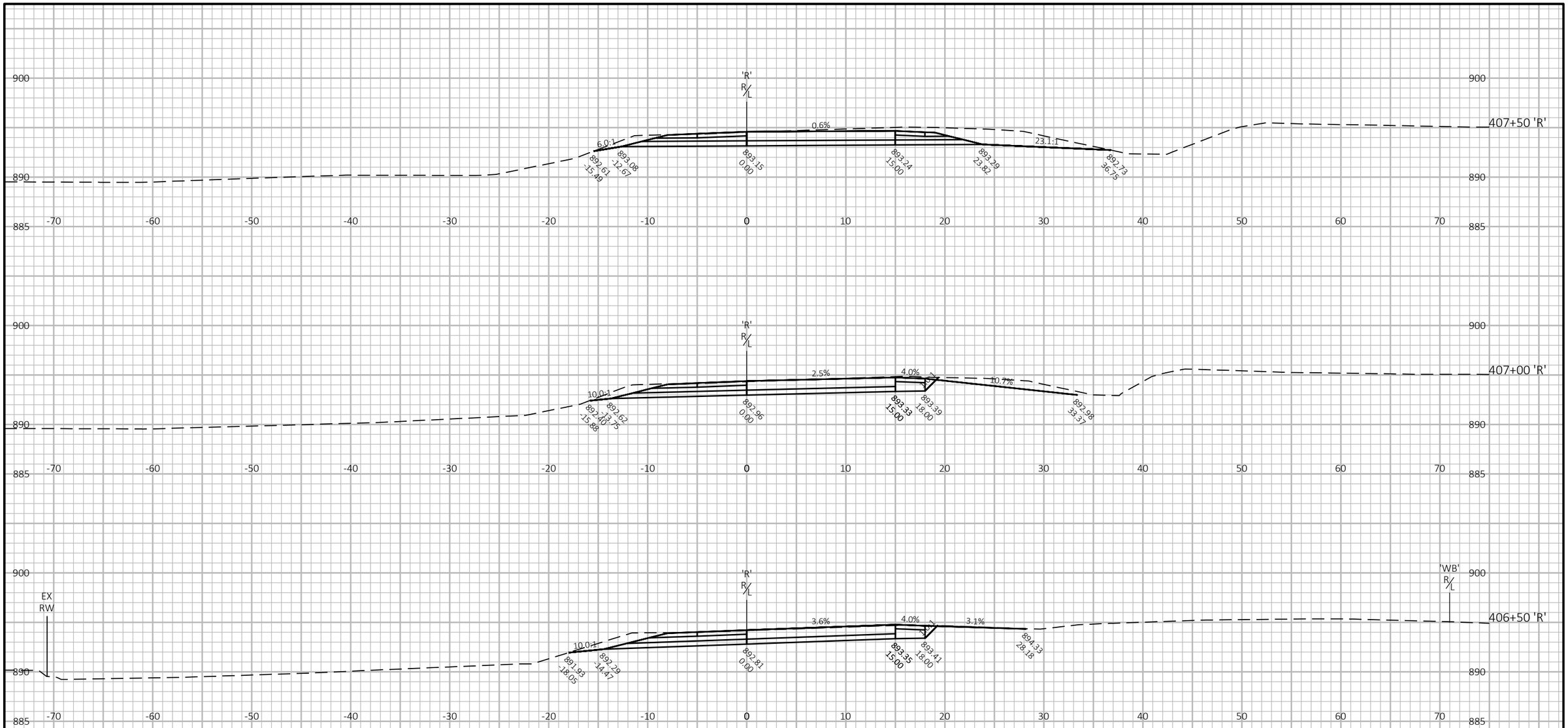
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 499	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 23WB

PLOT DATE : 8/1/2023 10:54 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



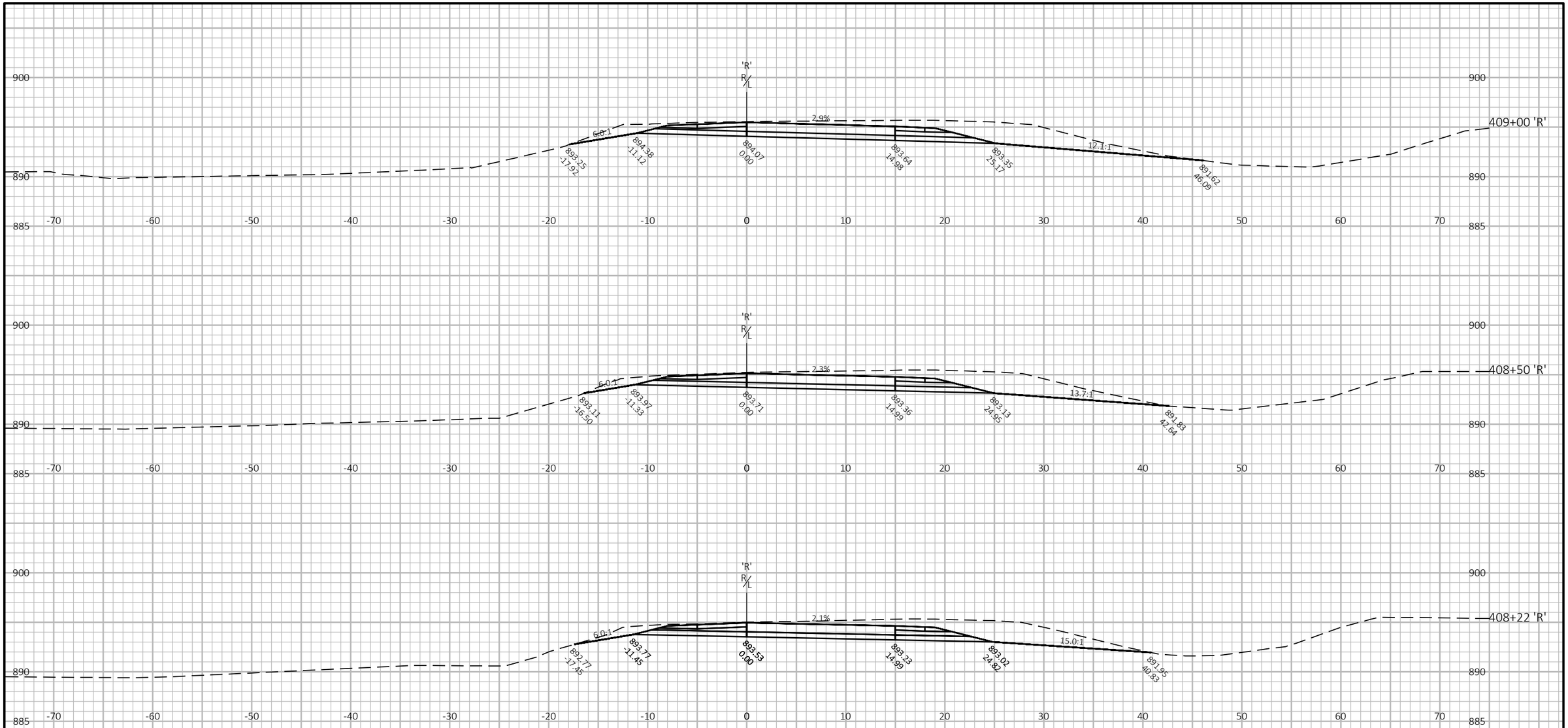
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 500	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 24R

PLOT DATE : 8/1/2023 10:54 AM PLOT BY : JON BLOMQUIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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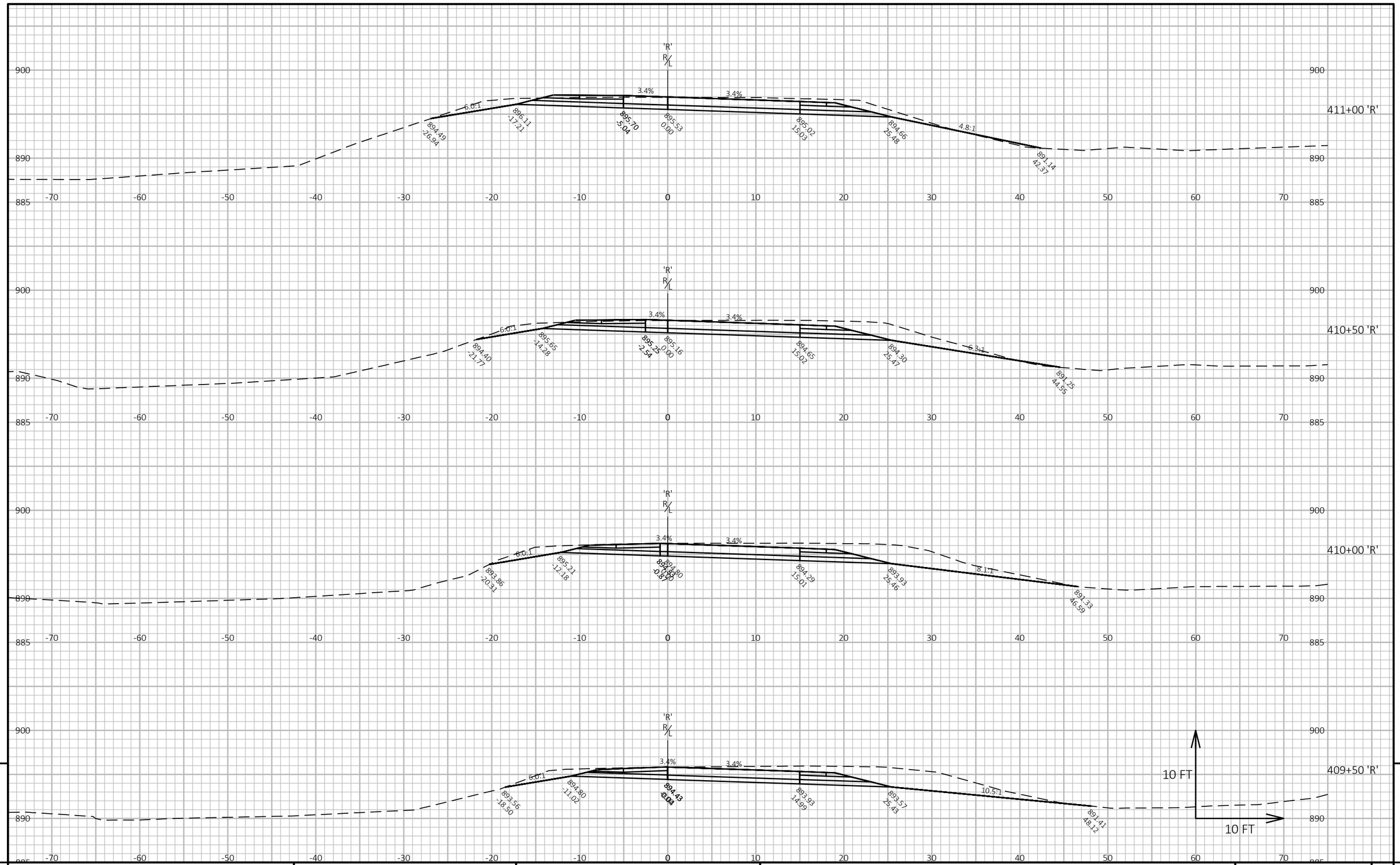
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 501	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 25R

PLOT DATE : 8/1/2023 10:54 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 502	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 26R

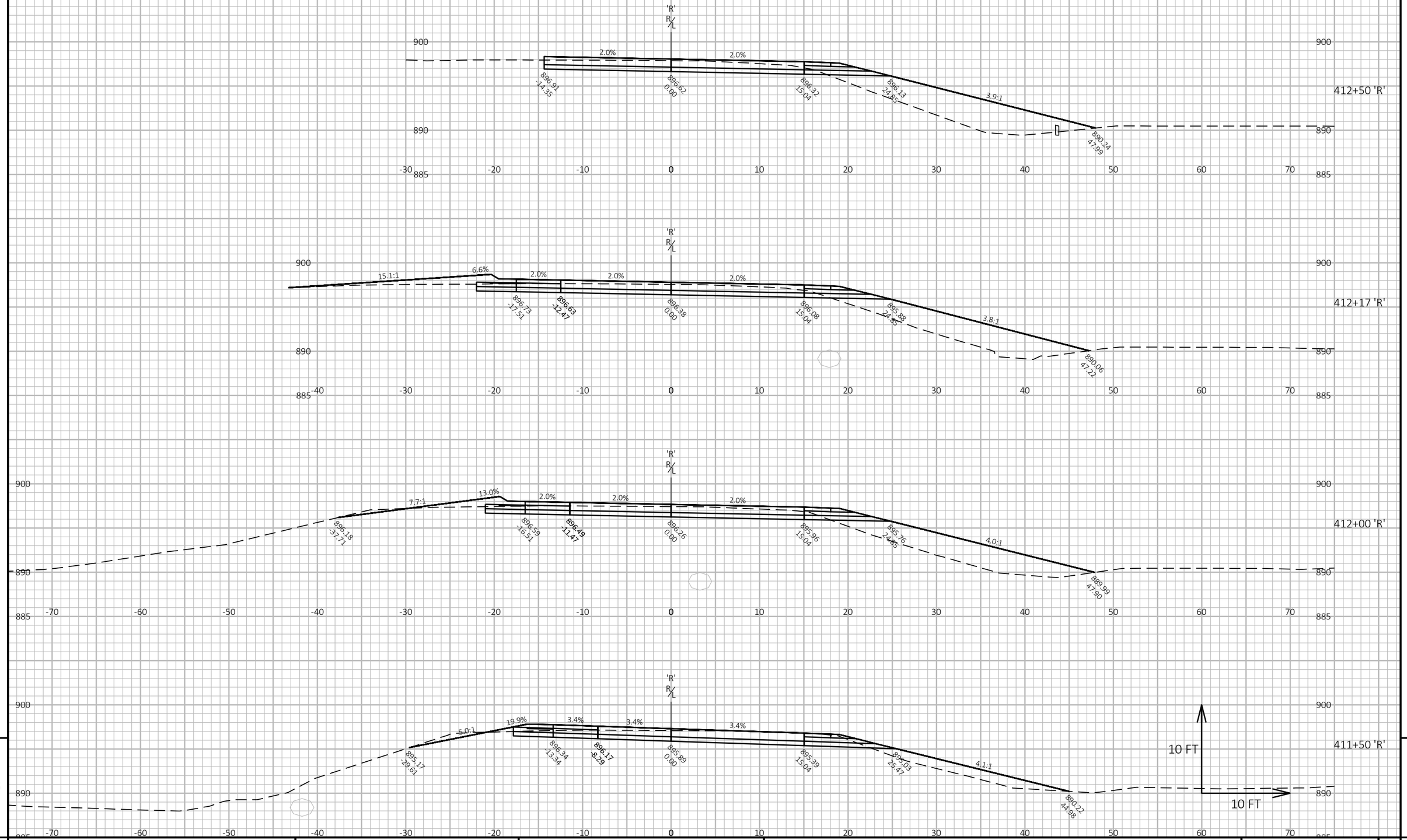
PLOT DATE : 8/1/2023 10:55 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 503	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 27R

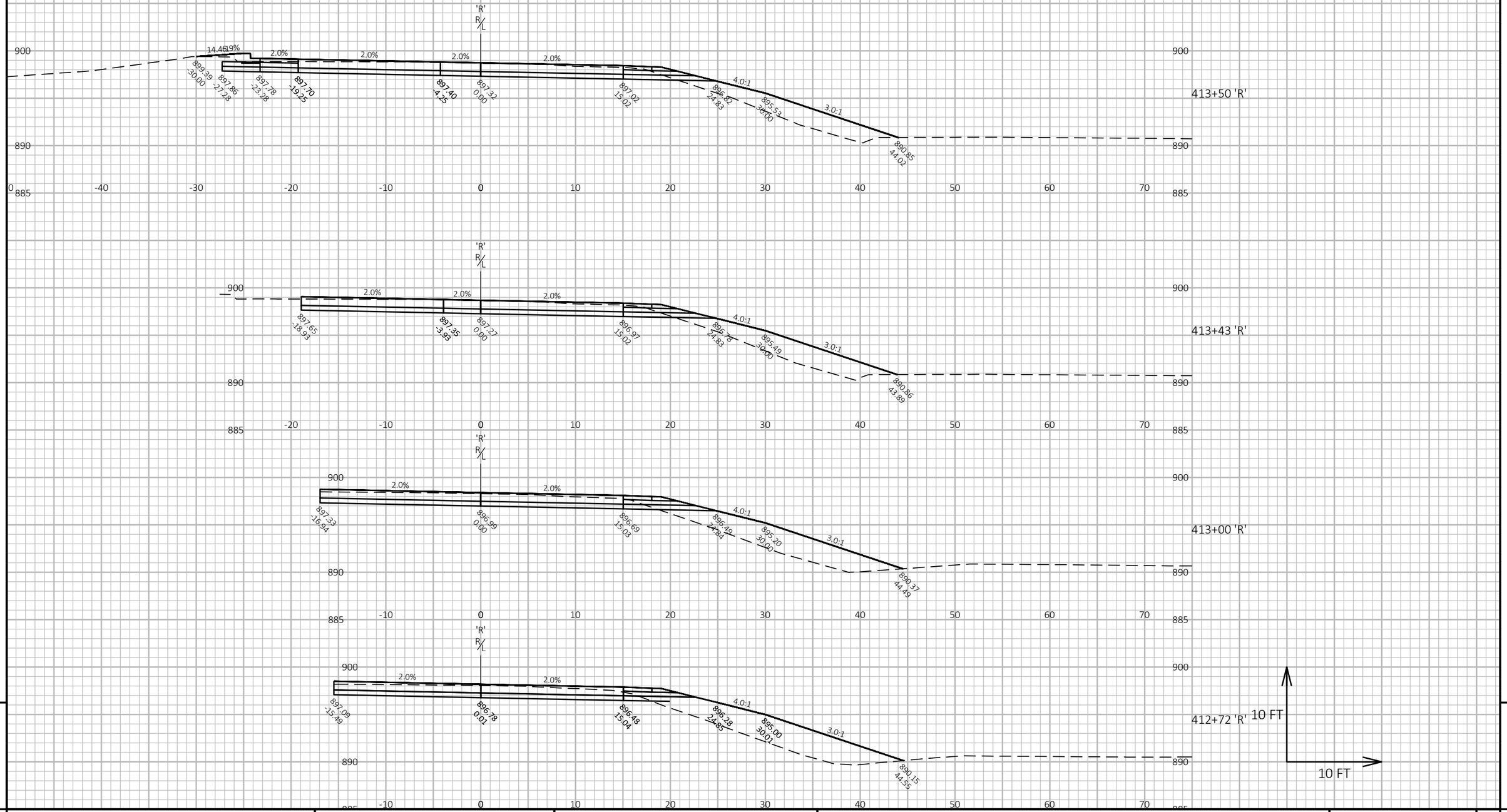
PLOT DATE : 8/1/2023 10:55 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

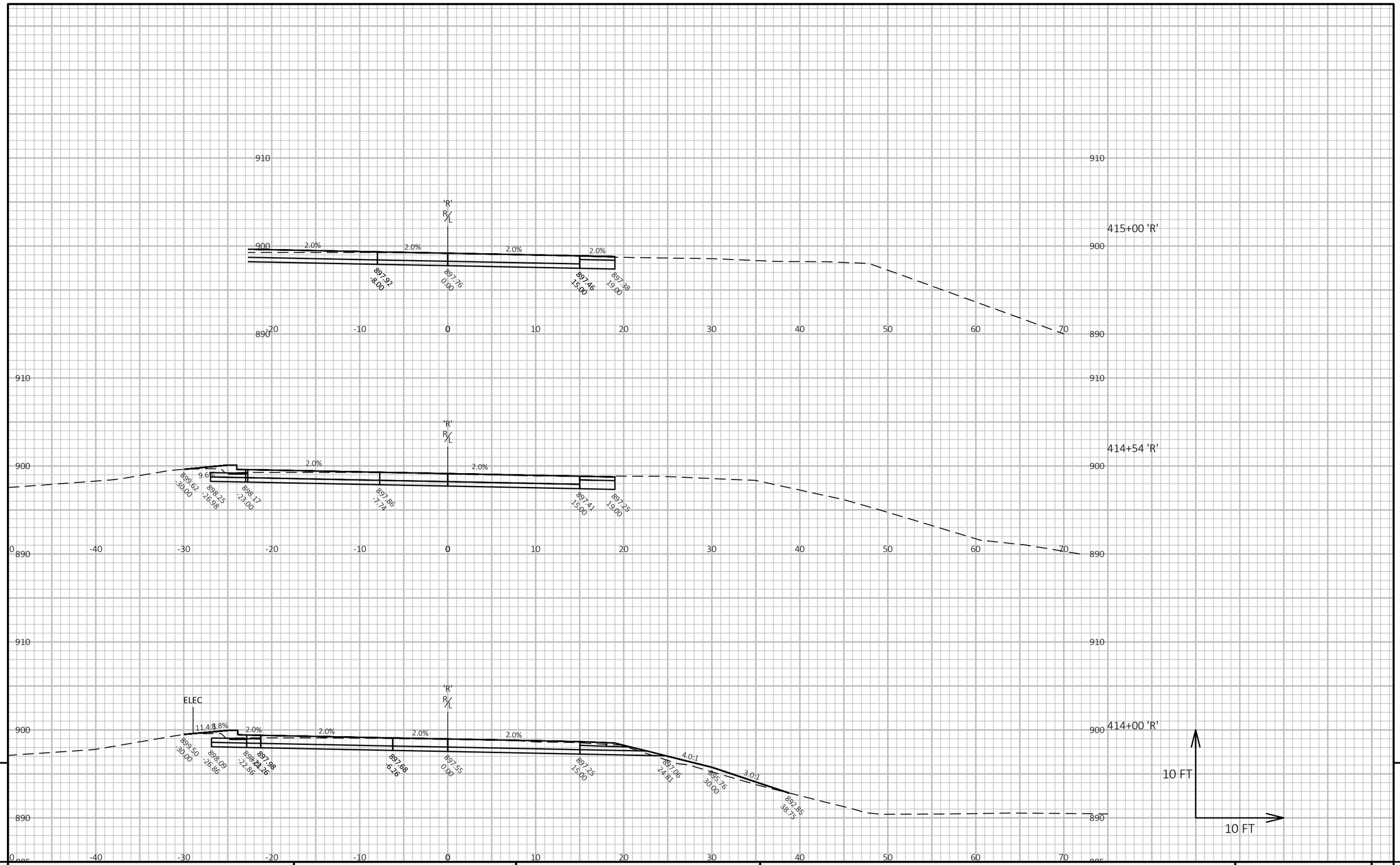


PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 504 E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 28R

PLOT DATE : 8/1/2023 10:55 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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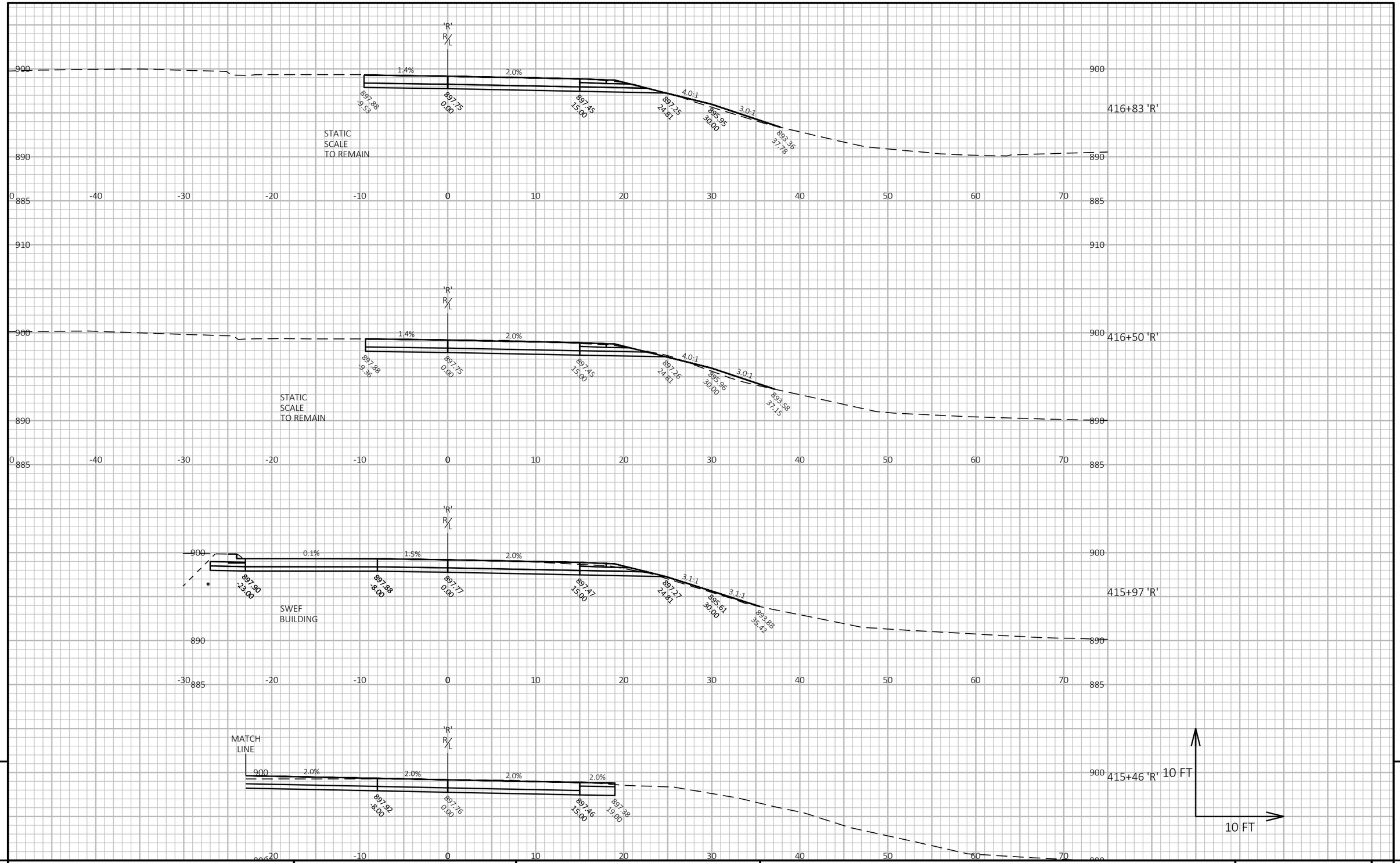
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 505	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 29R

PLOT DATE : 8/1/2023 10:55 AM PLOT BY : JON BLOMQUIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 506	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 30R

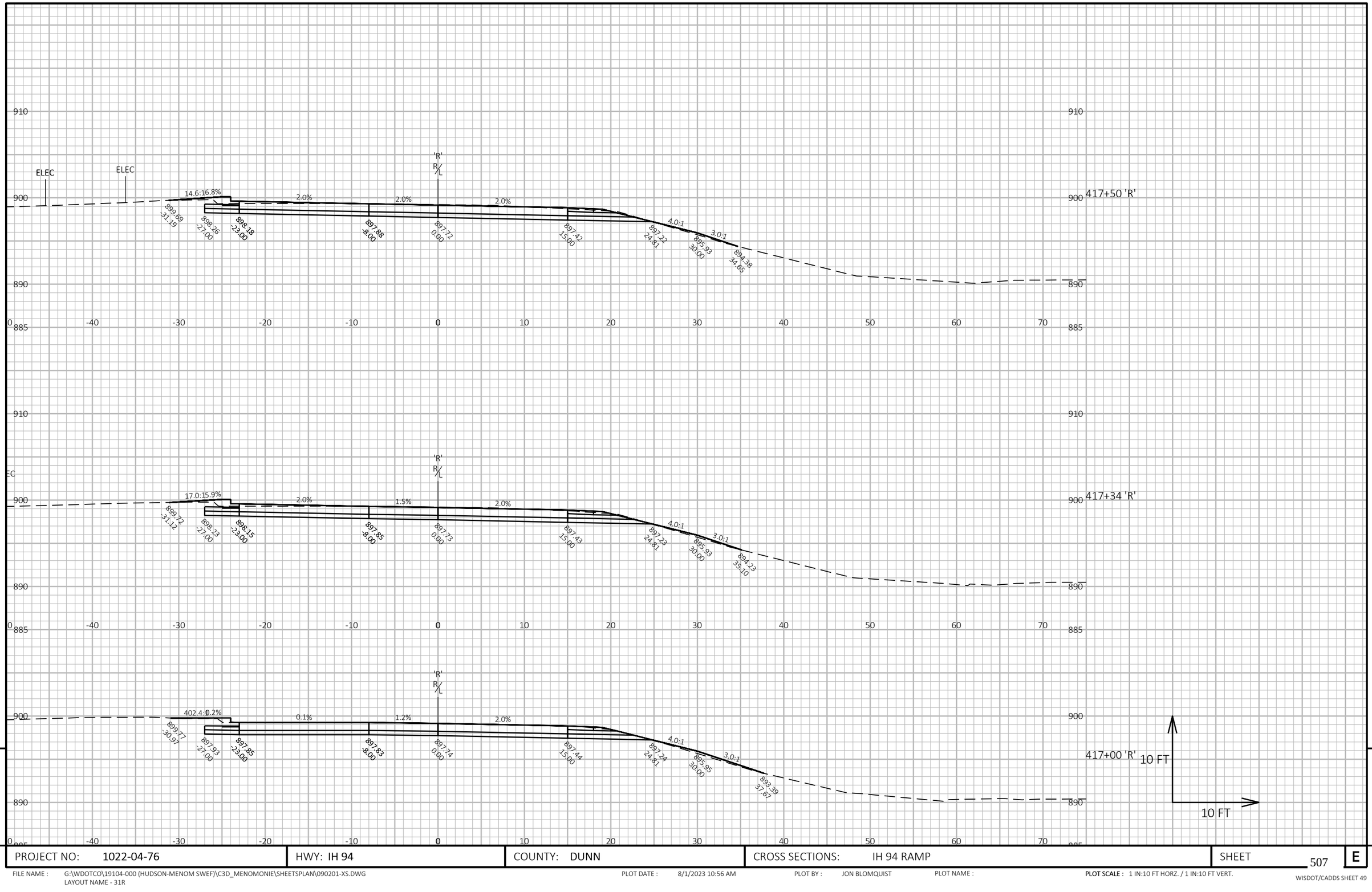
PLOT DATE : 8/1/2023 10:56 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 507 E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 31R

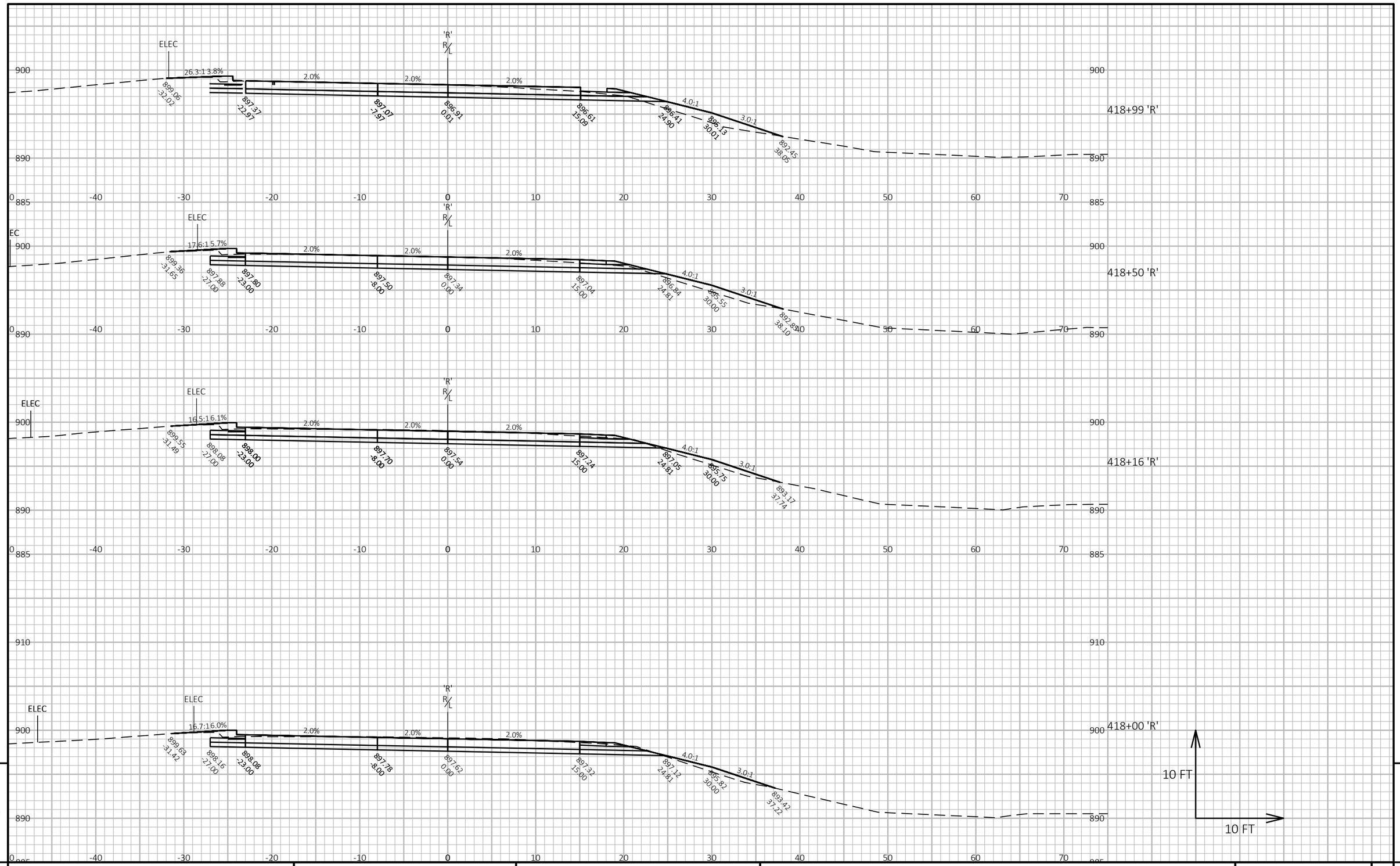
PLOT DATE : 8/1/2023 10:56 AM

PLOT BY : JON BLOMQUIST

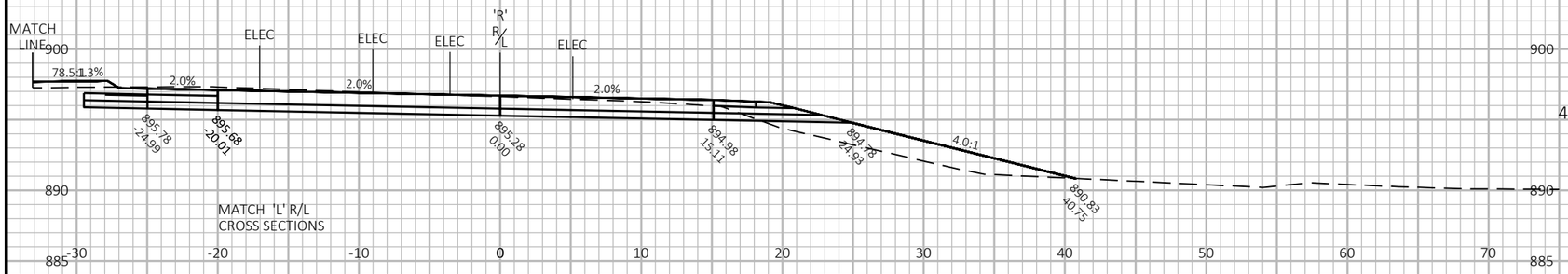
PLOT NAME :

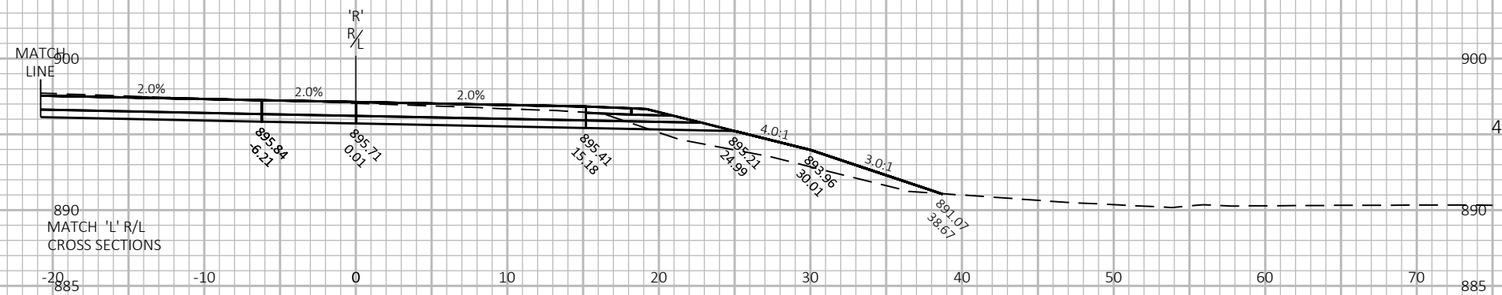
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

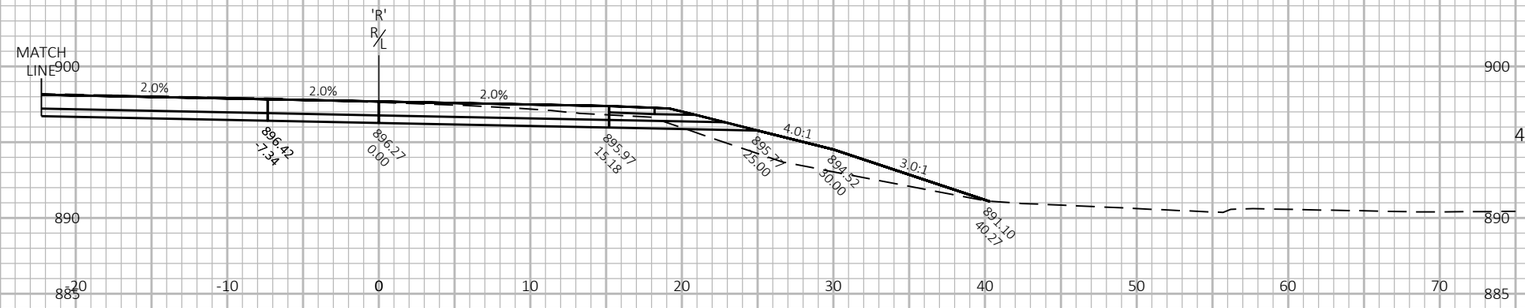
WISDOT/CADDS SHEET 49

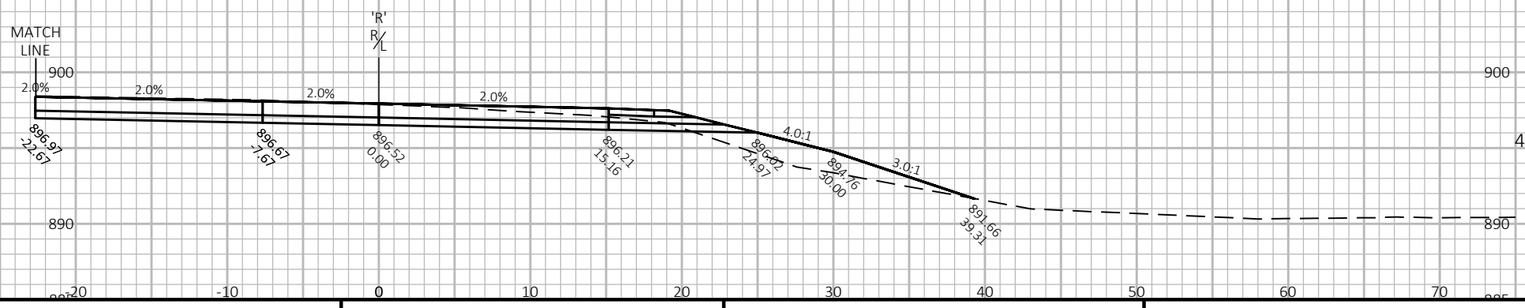


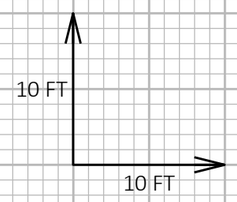
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 508	E











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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 509	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 33R

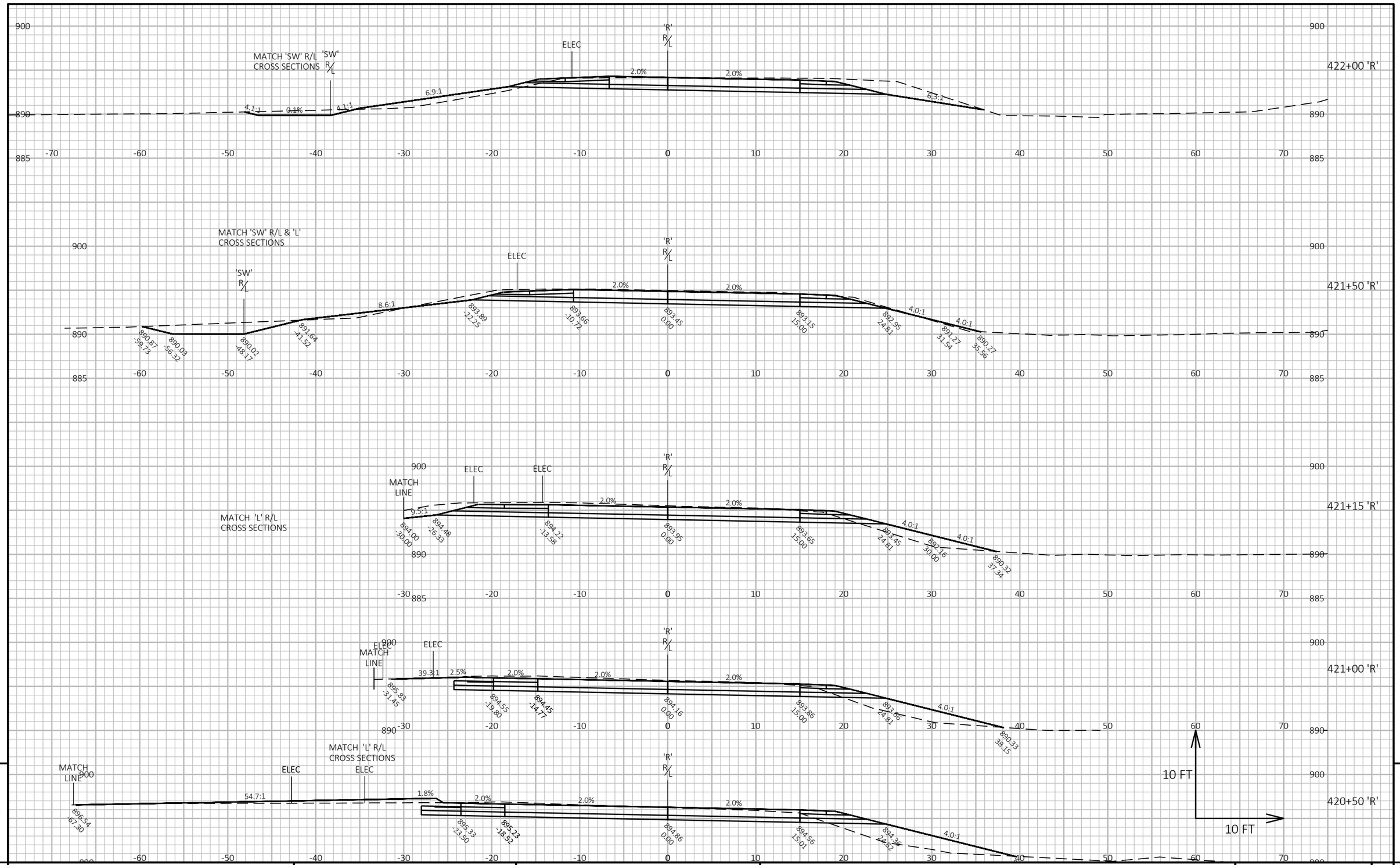
PLOT DATE : 8/1/2023 10:56 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 510	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 34R

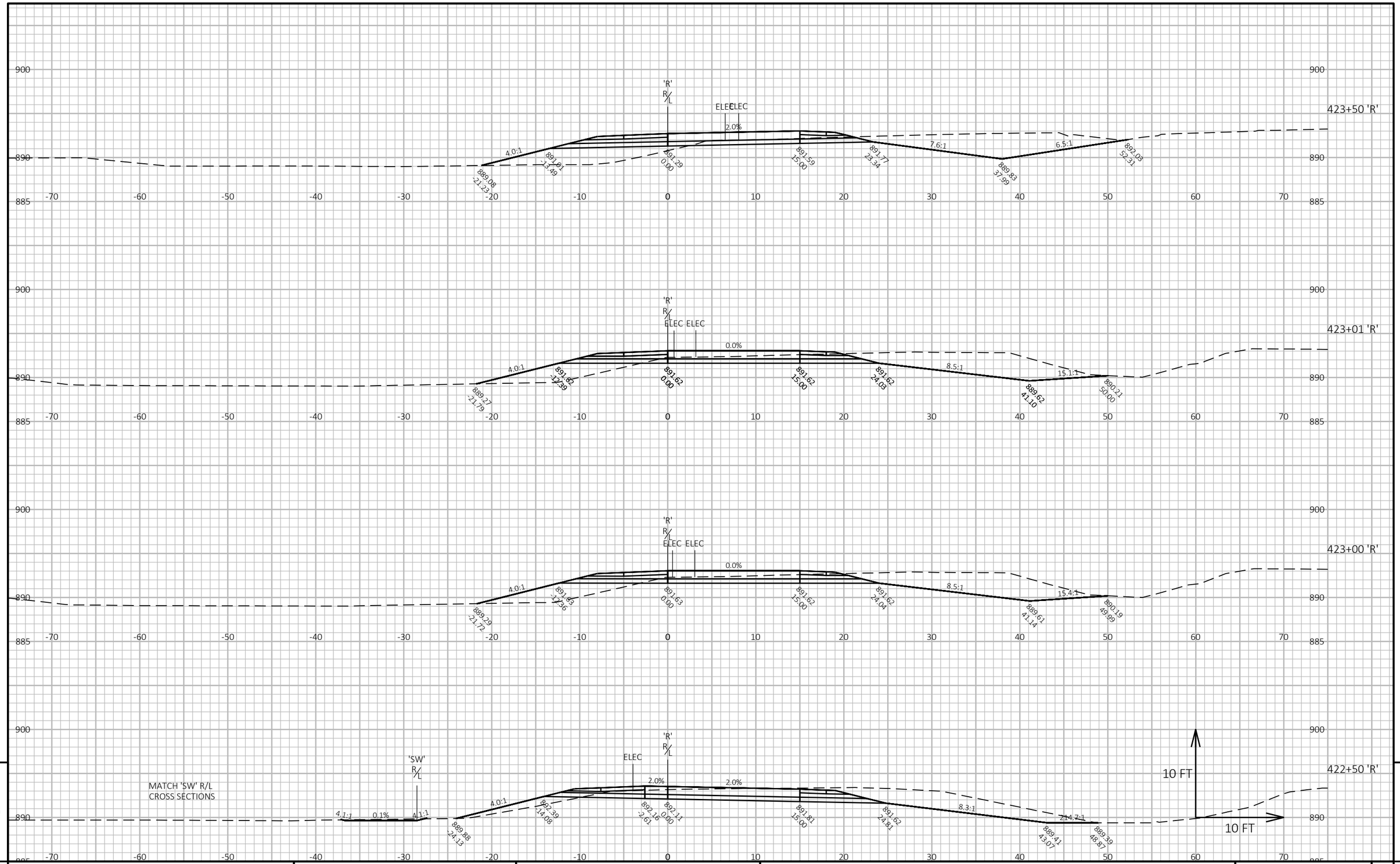
PLOT DATE : 8/1/2023 10:57 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 511	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 35R

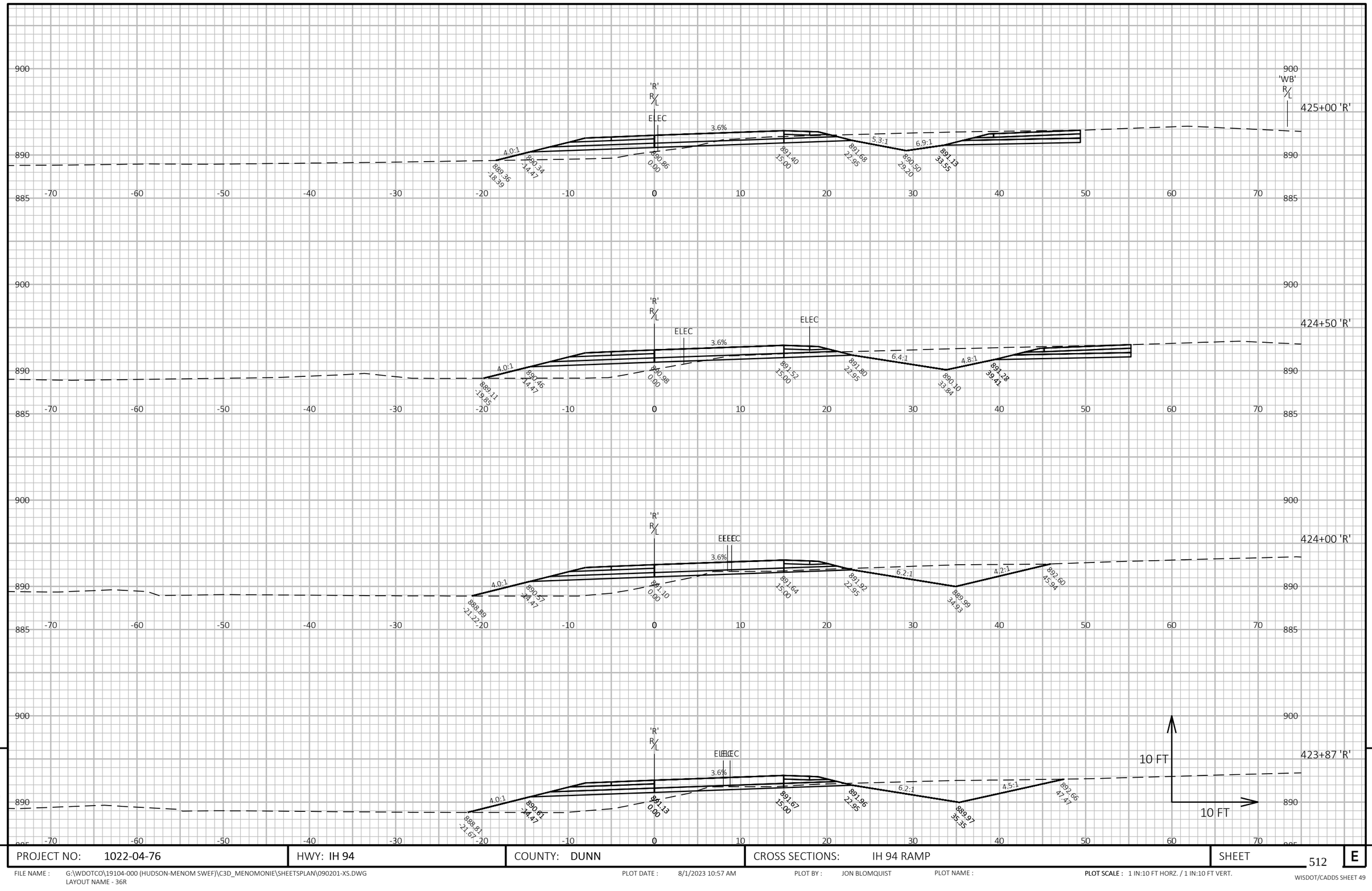
PLOT DATE : 8/1/2023 10:57 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 512	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 36R

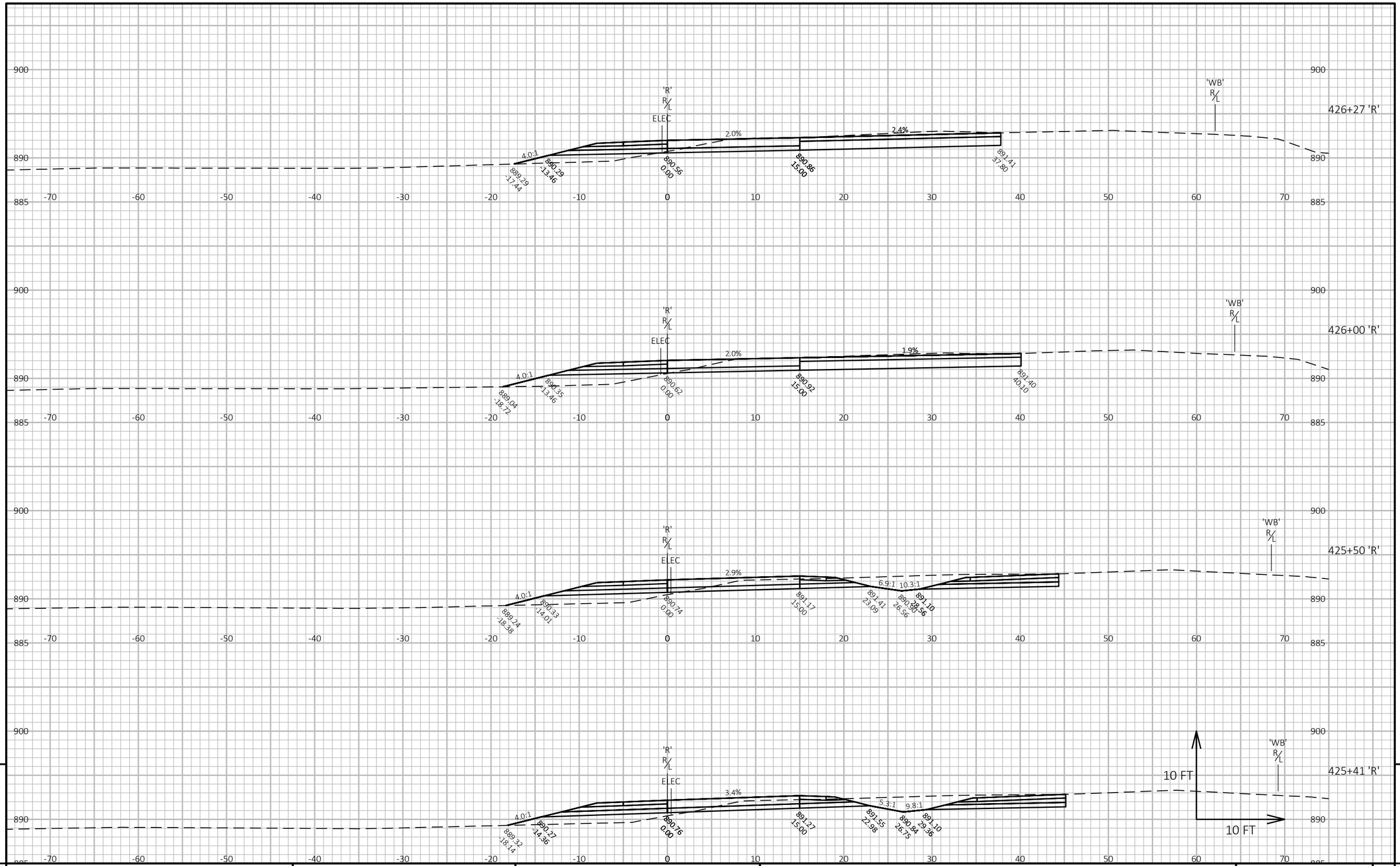
PLOT DATE : 8/1/2023 10:57 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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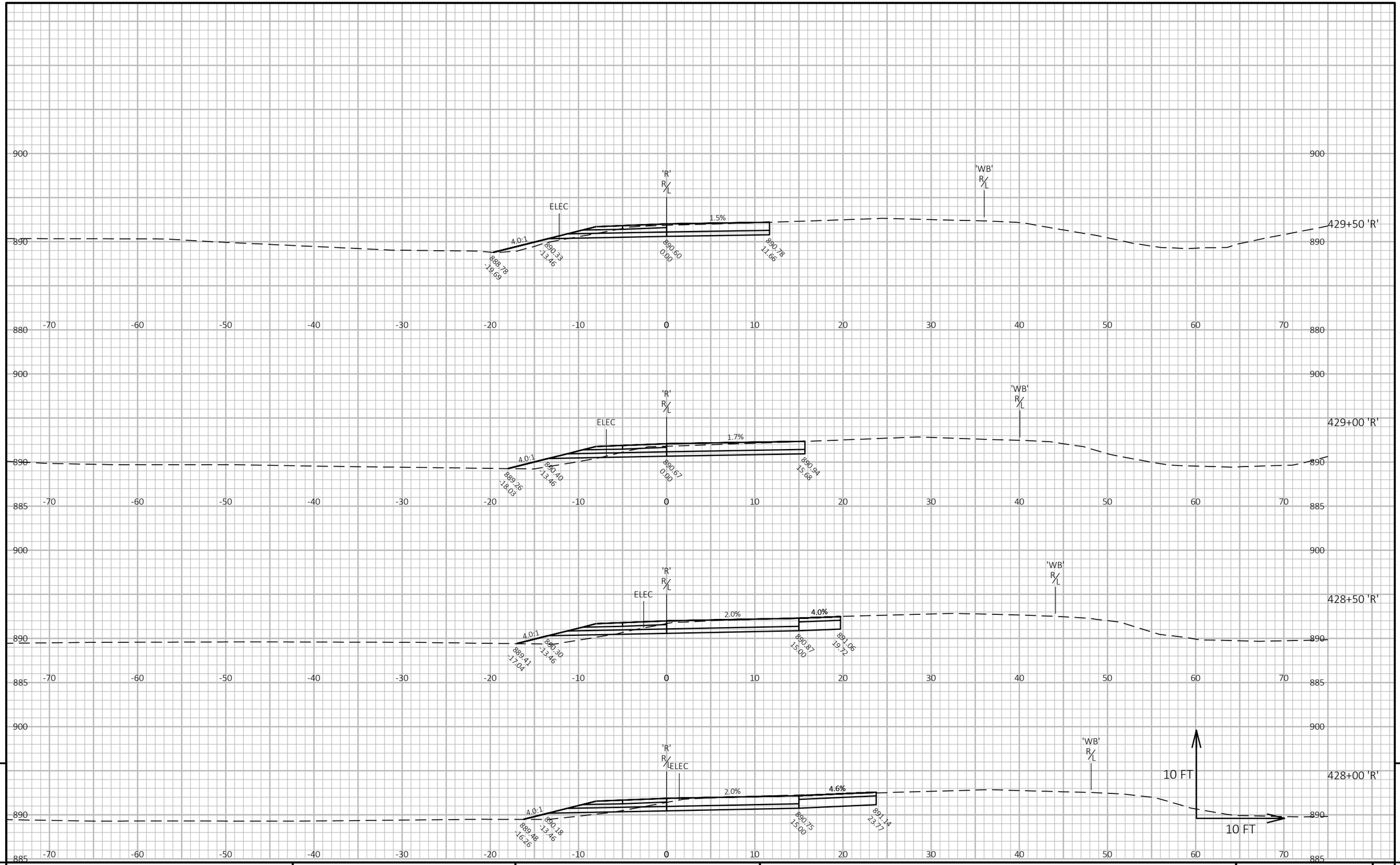
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 513	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 37R

PLOT DATE : 8/1/2023 10:57 AM PLOT BY : JON BLOMQUIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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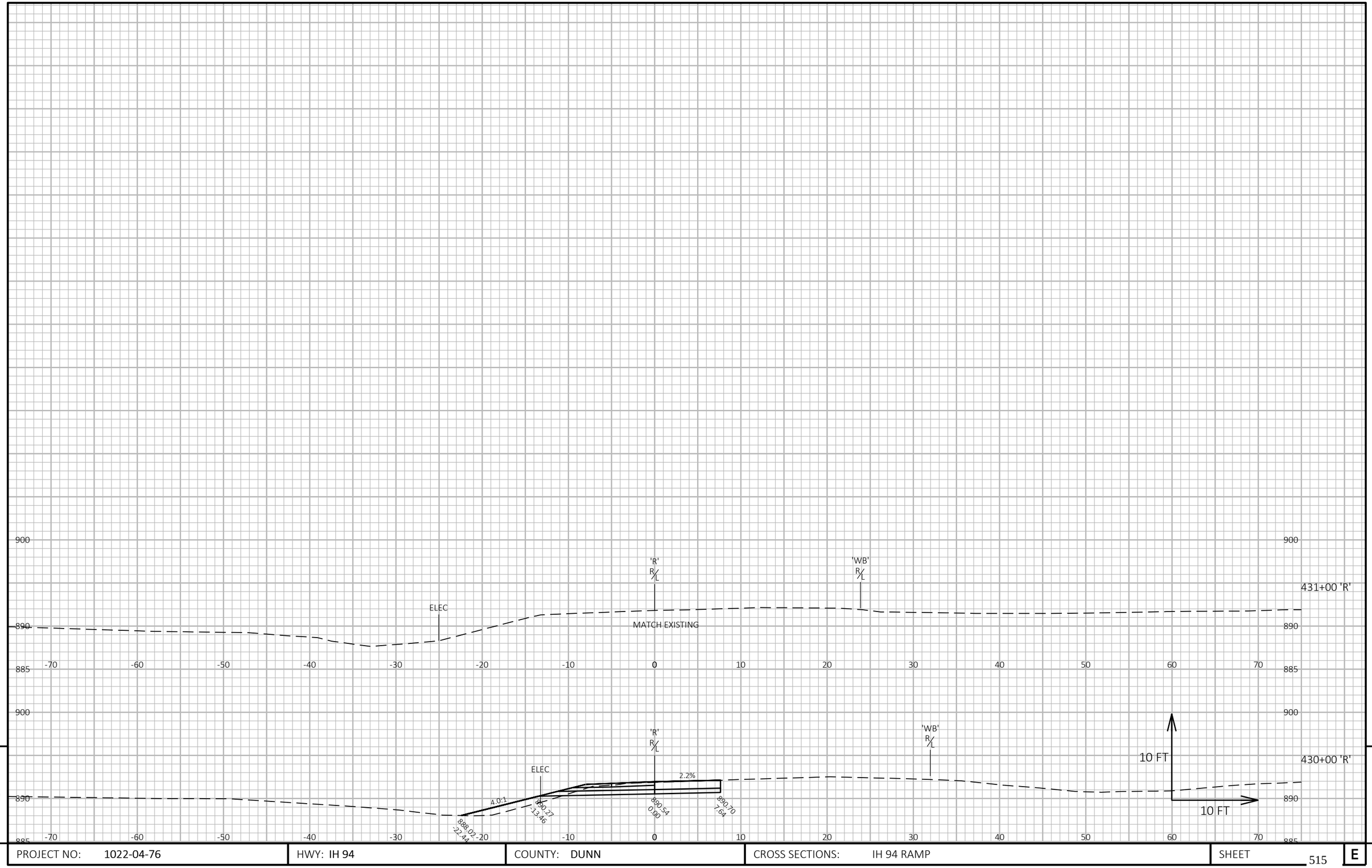
9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 514	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 38AR

PLOT DATE : 8/1/2023 10:58 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

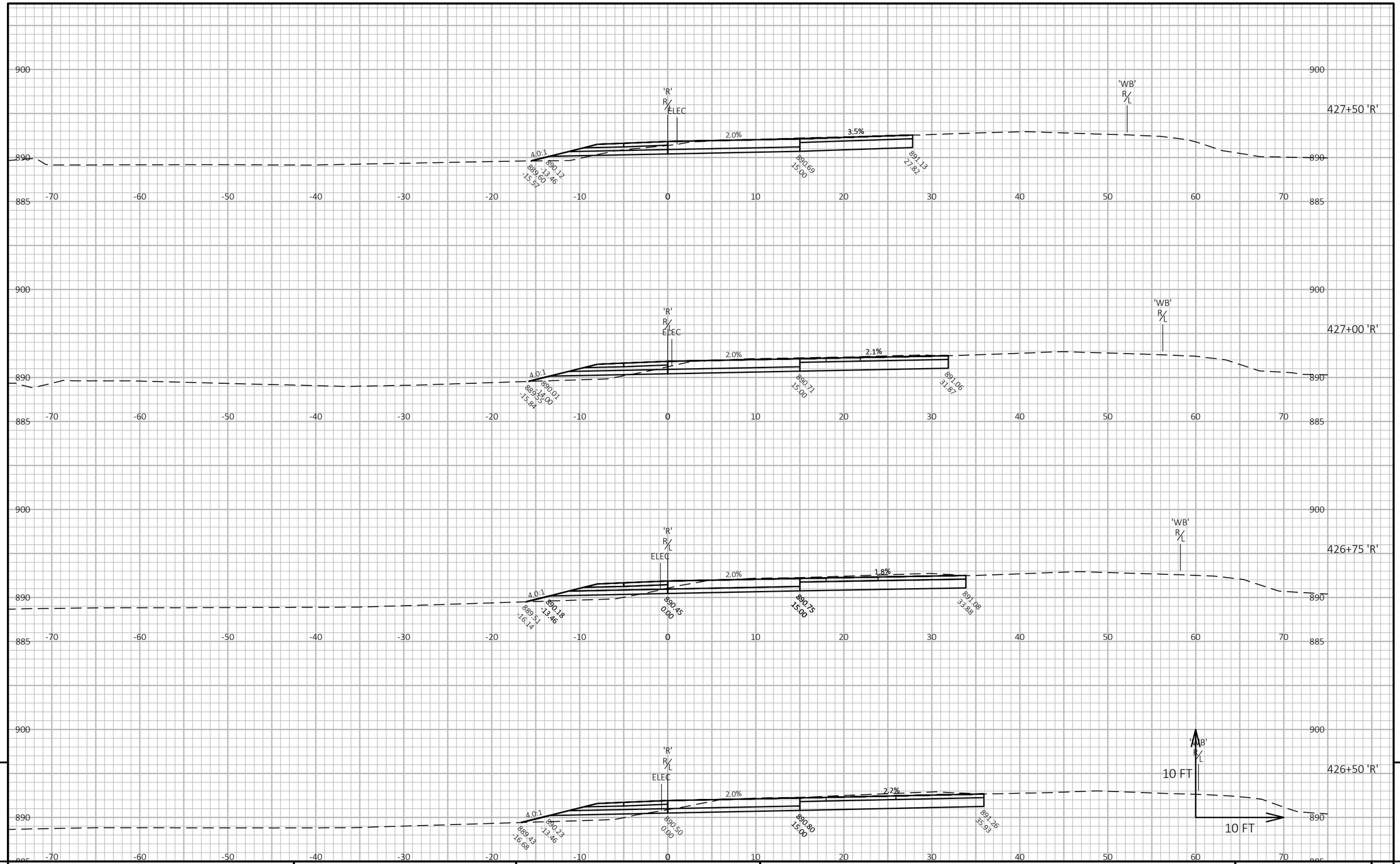
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 515	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 38BR

PLOT DATE : 8/1/2023 10:58 AM PLOT BY : JON BLOMQUIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: IH 94 RAMP	SHEET 516	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 38R

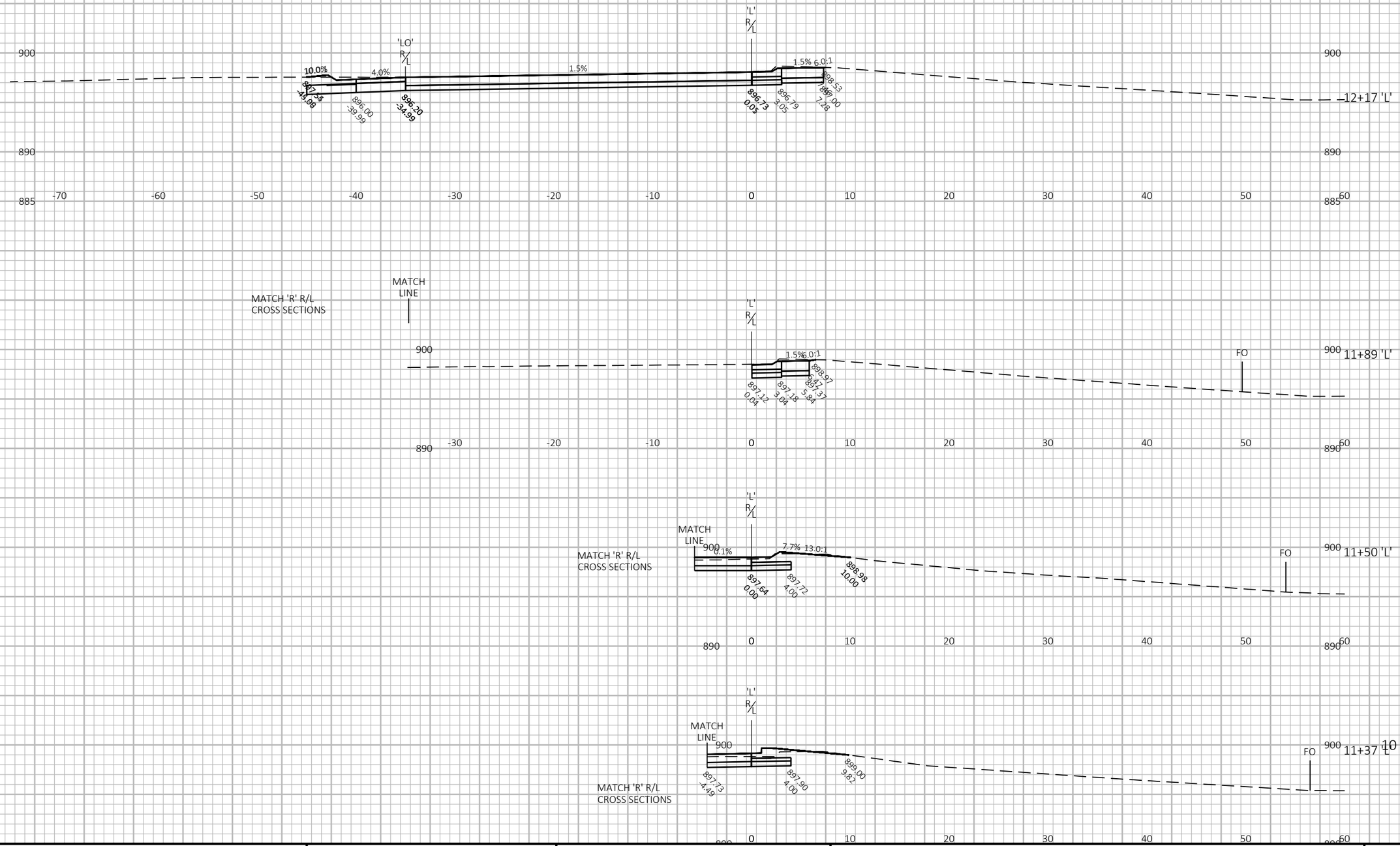
PLOT DATE : 8/1/2023 10:58 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

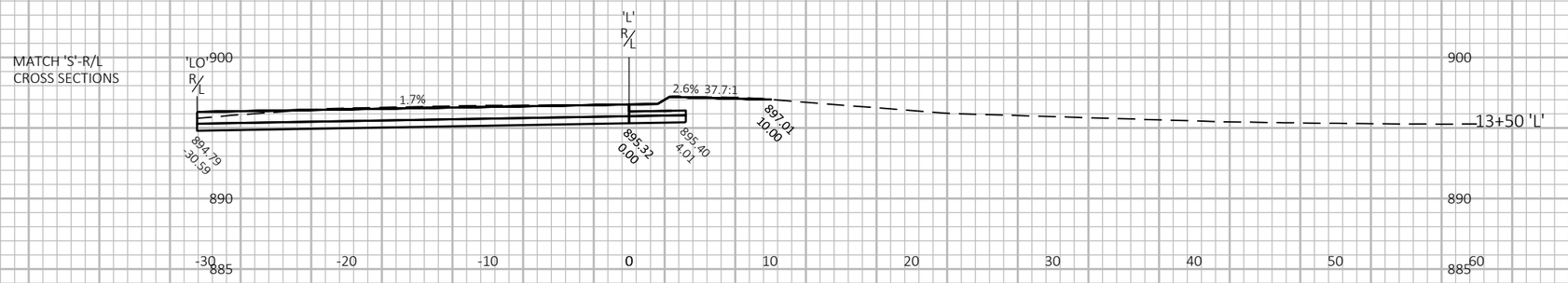


9

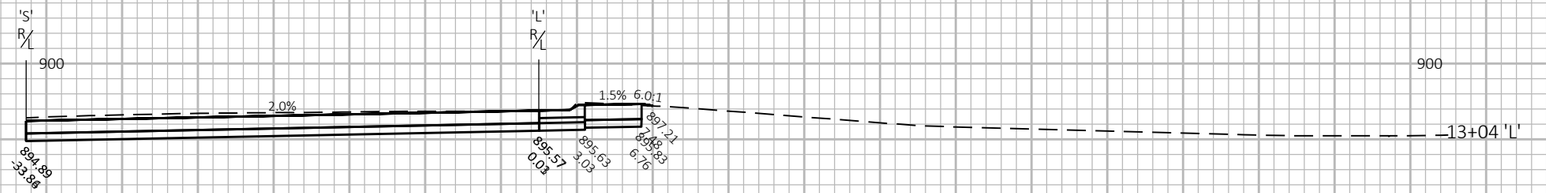
9

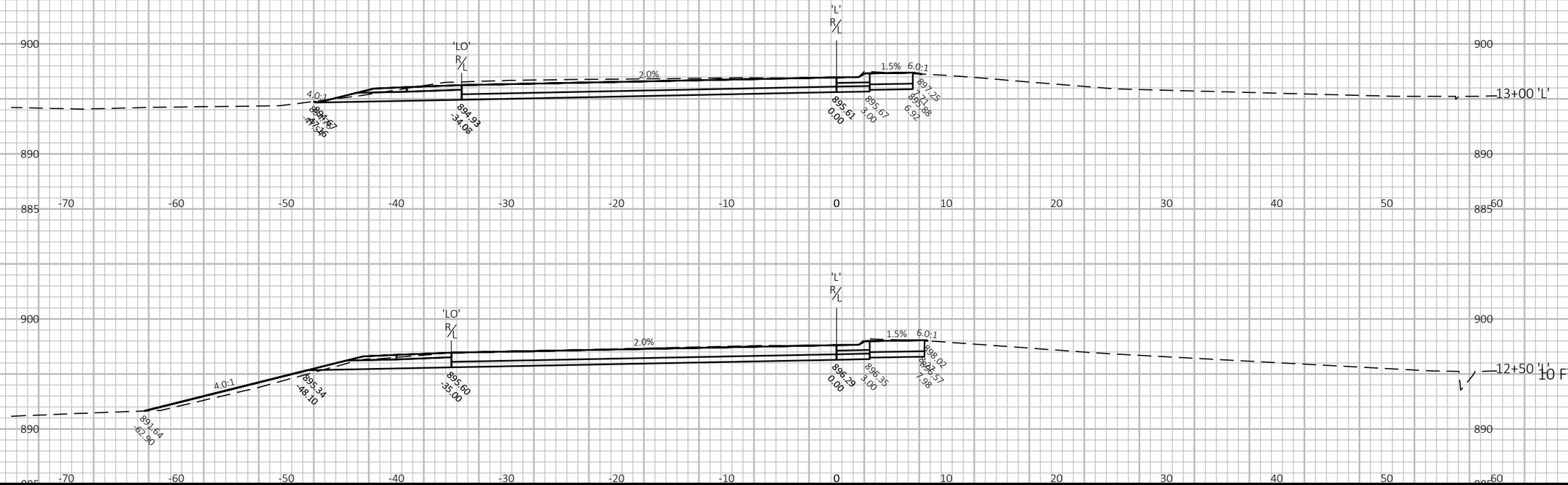
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: LOOP RAMPS	SHEET 517	E

MATCH 'S'-R/L
CROSS SECTIONS



MATCH 'S'-R/L
CROSS SECTIONS





9

9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: LOOP RAMPS	SHEET 518	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 40L

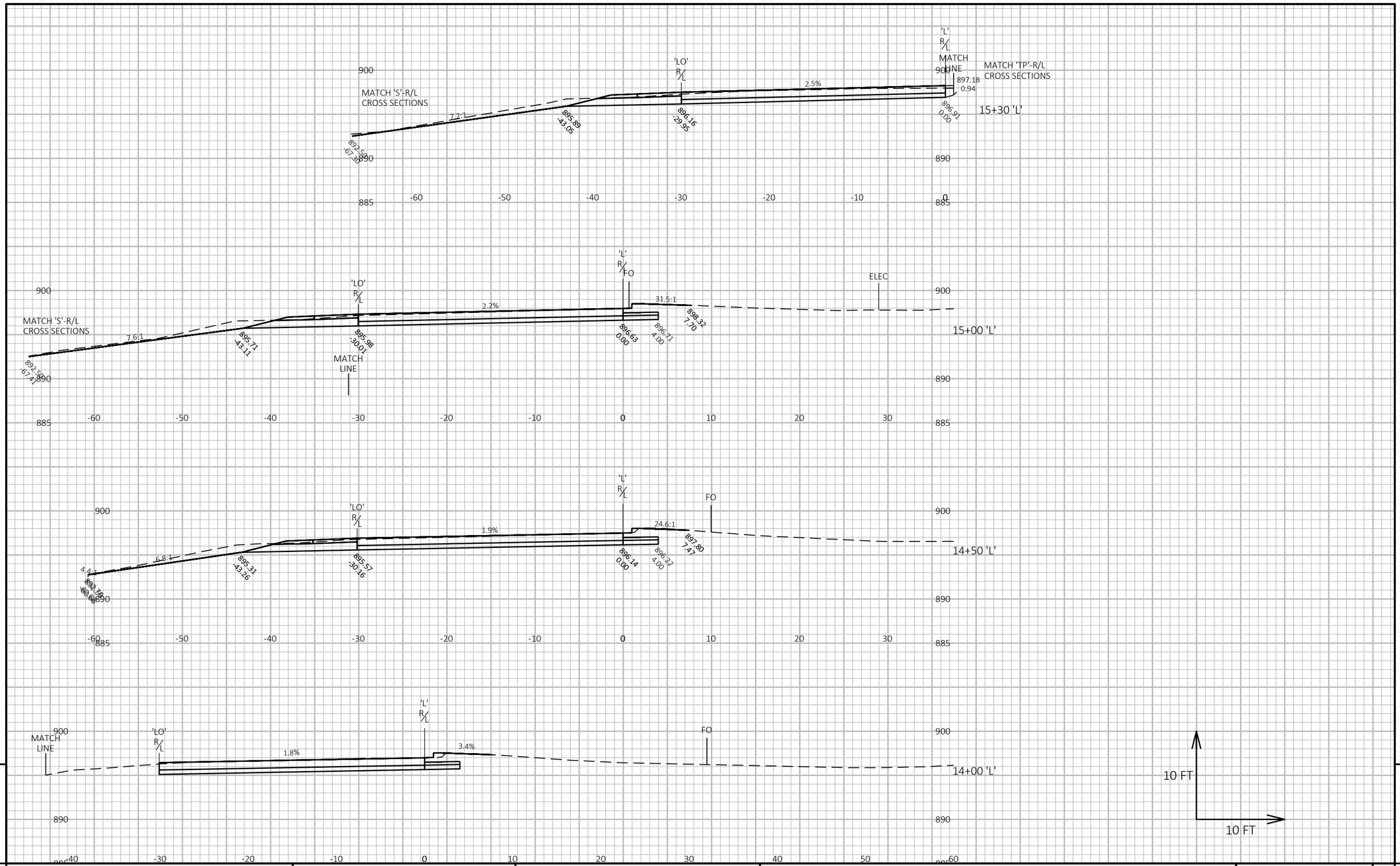
PLOT DATE : 8/1/2023 10:59 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: LOOP RAMPS	SHEET 519	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 41L

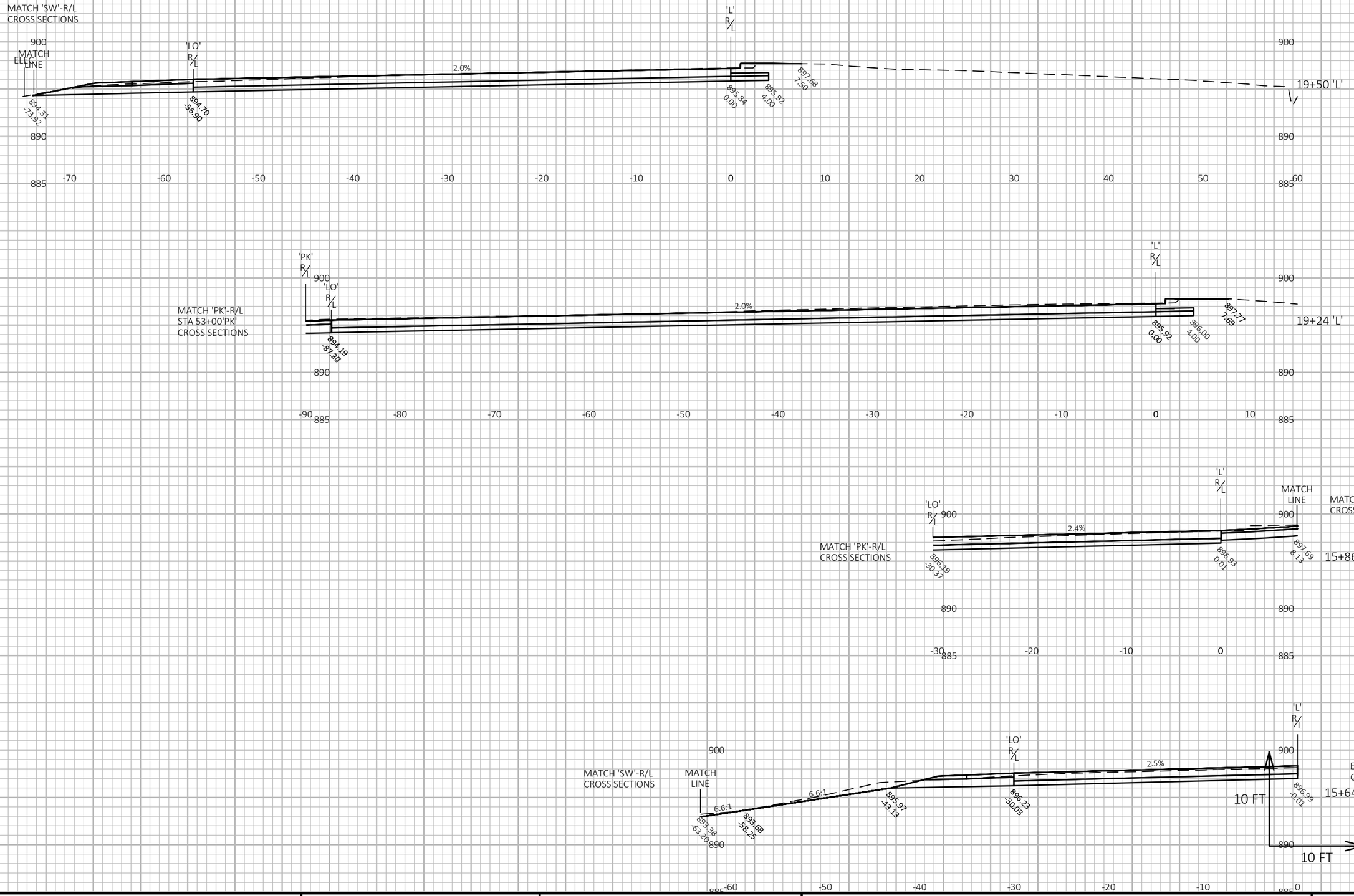
PLOT DATE : 8/1/2023 10:59 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



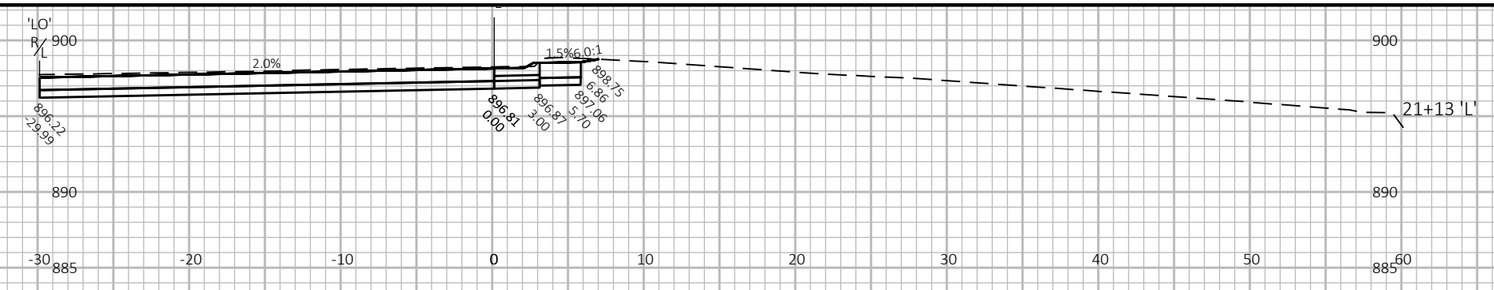
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: LOOP RAMPS	SHEET 520	E

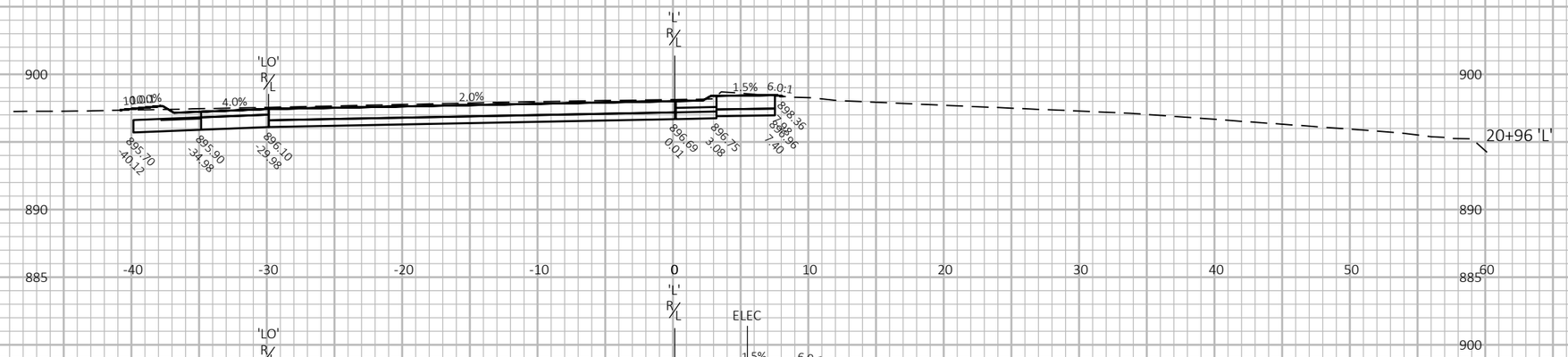
FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 42L

PLOT DATE : 9/22/2023 2:24 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MATCH 'R'-R/L
CROSS SECTIONS

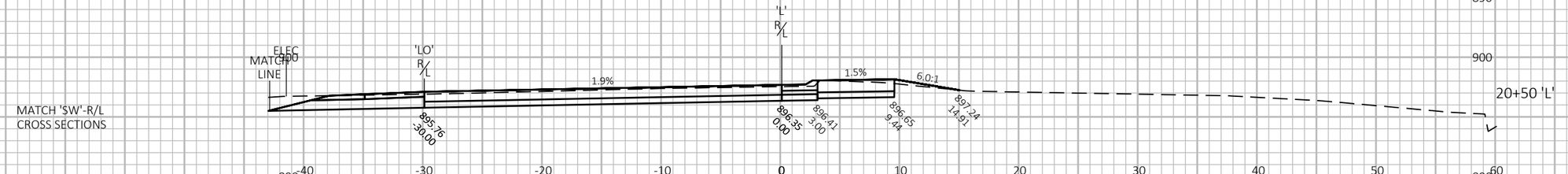




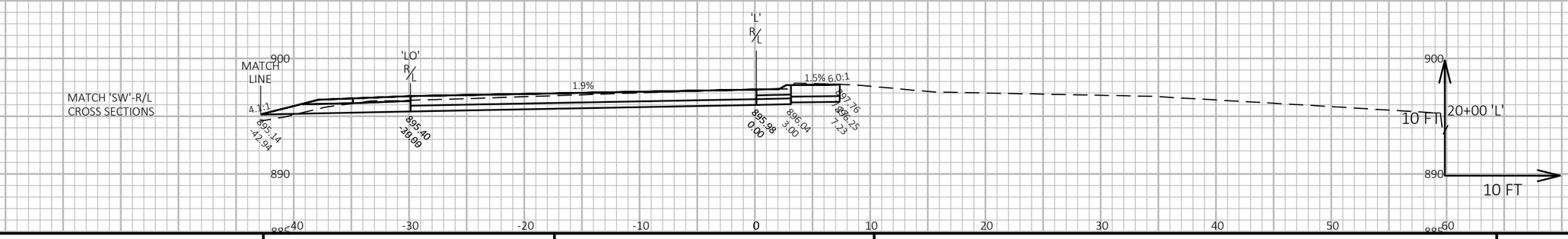
MATCH
LINE

MATCH 'SW'-R/L
CROSS SECTIONS

MATCH 'SW'-R/L
CROSS SECTIONS



MATCH 'SW'-R/L
CROSS SECTIONS



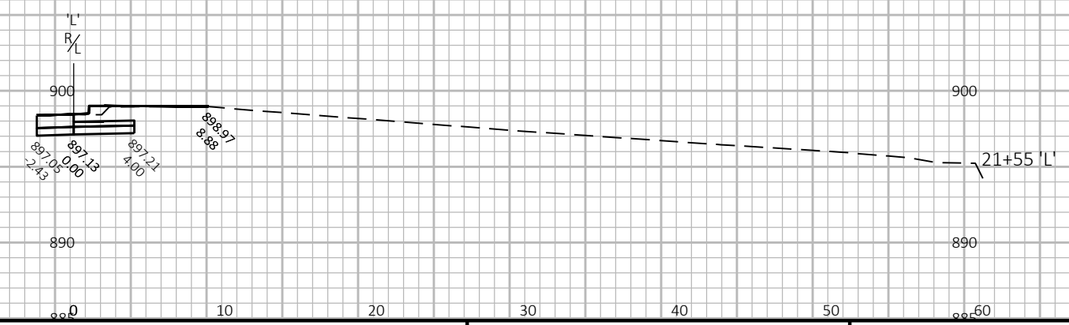
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: LOOP RAMPS	SHEET 521	E

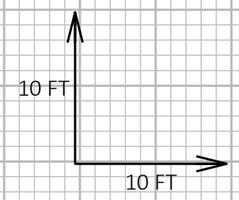
FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 43L

PLOT DATE : 9/22/2023 2:24 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

MATCH 'R'-R/L
CROSS SECTIONS



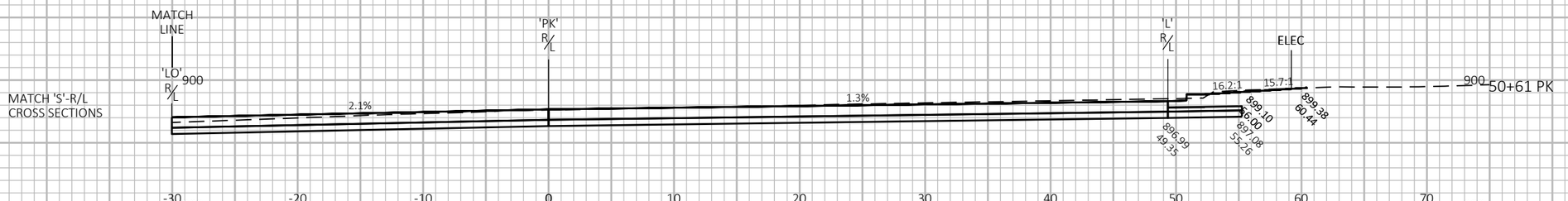


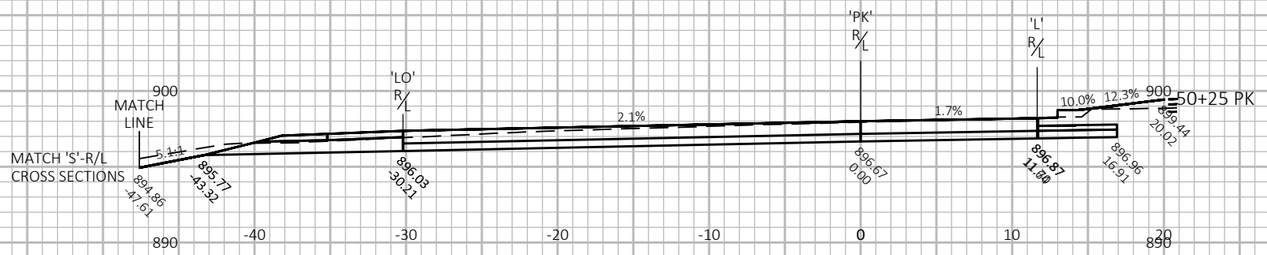
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: LOOP RAMPS	SHEET 522	E

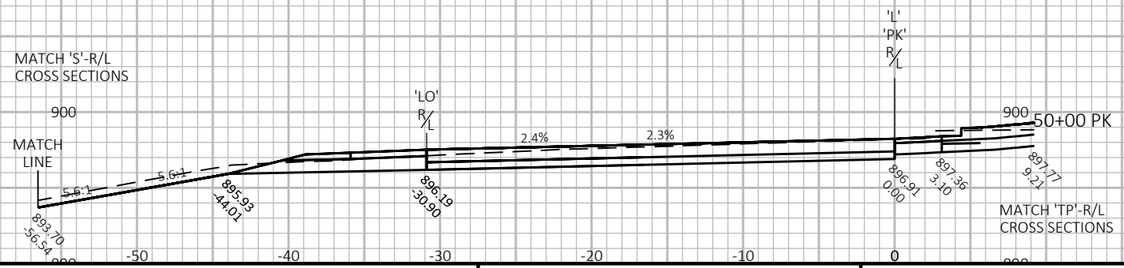
FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 44I

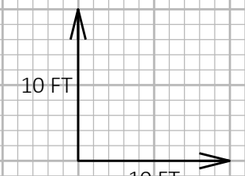
PLOT DATE : 9/22/2023 2:25 PM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49









9

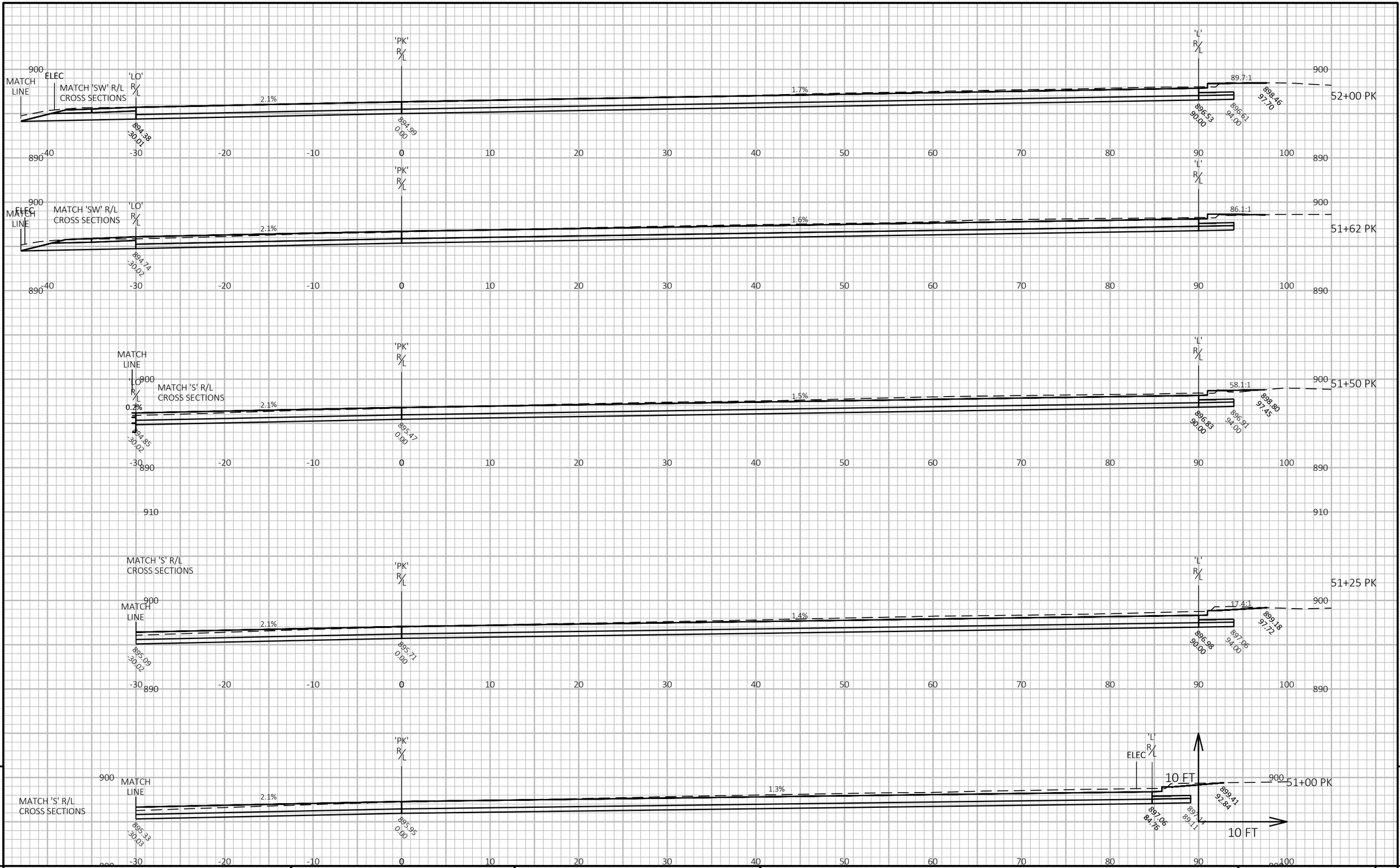
9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: CMV PARKING	SHEET 523	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 42PK

PLOT DATE : 8/1/2023 10:59 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

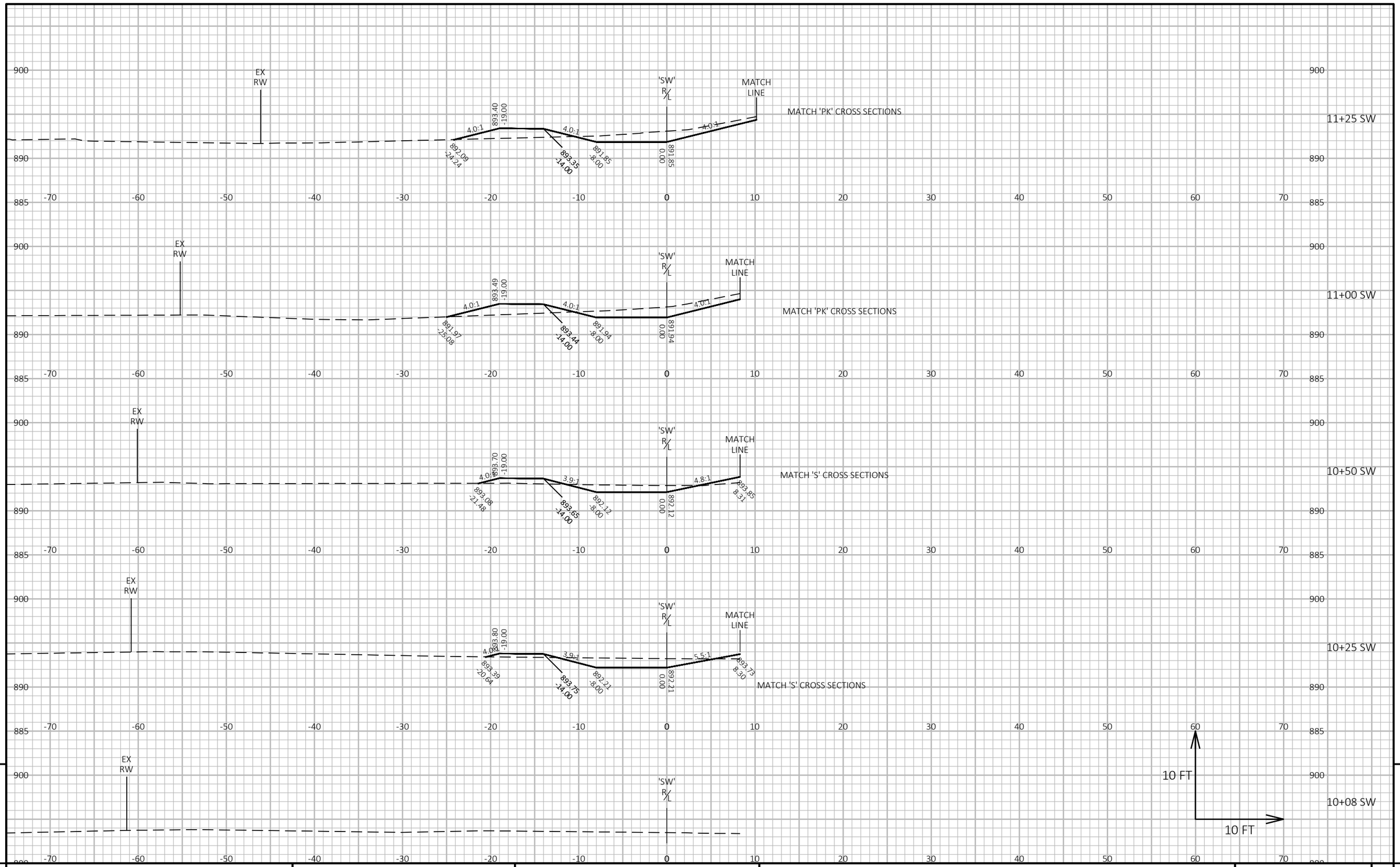
9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: CMV PARKING	SHEET 524	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 43PK

PLOT DATE : 8/1/2023 10:59 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: SWALE	SHEET 525	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 44SW

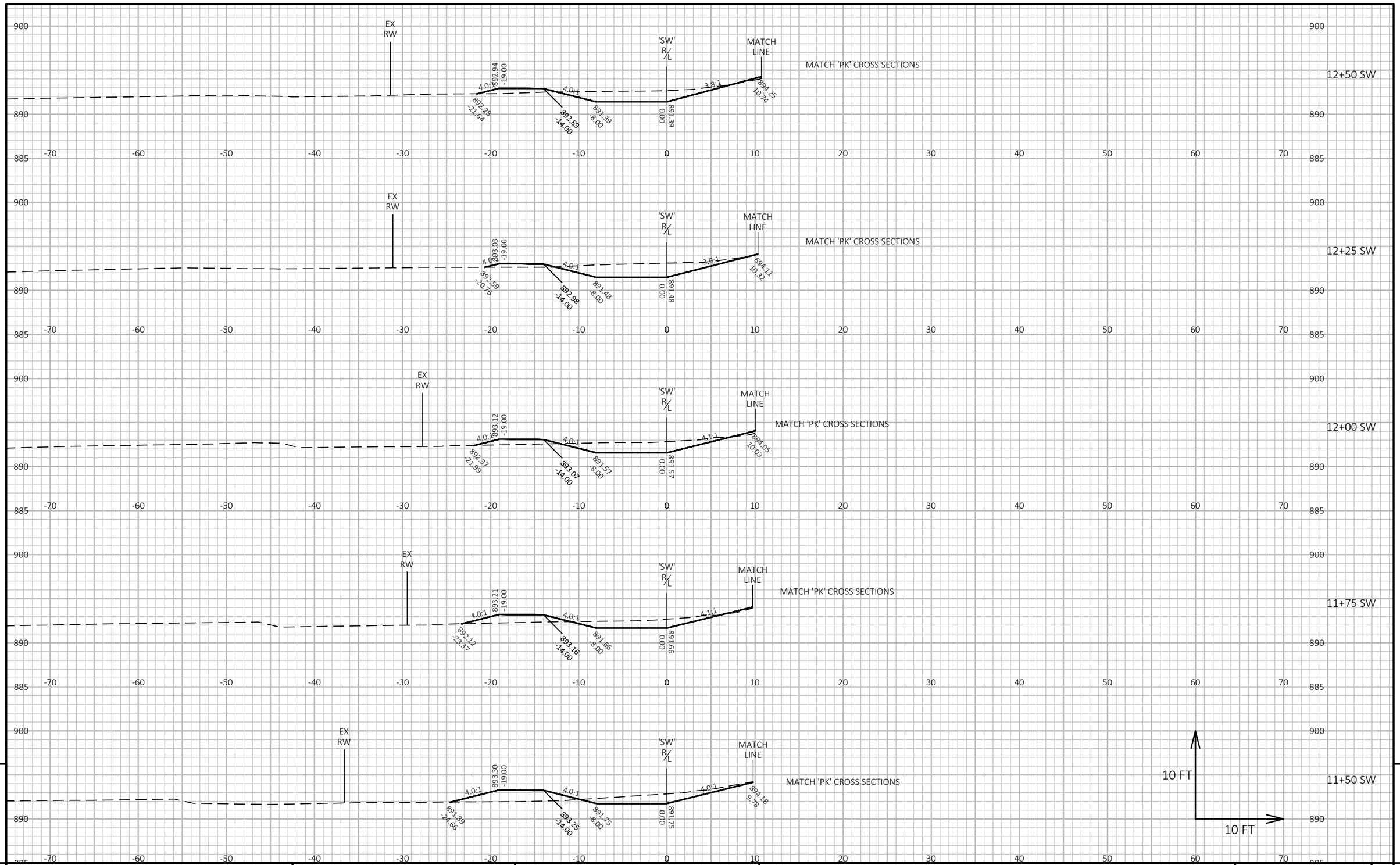
PLOT DATE : 8/1/2023 11:00 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: SWALE	SHEET 526	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 45SW

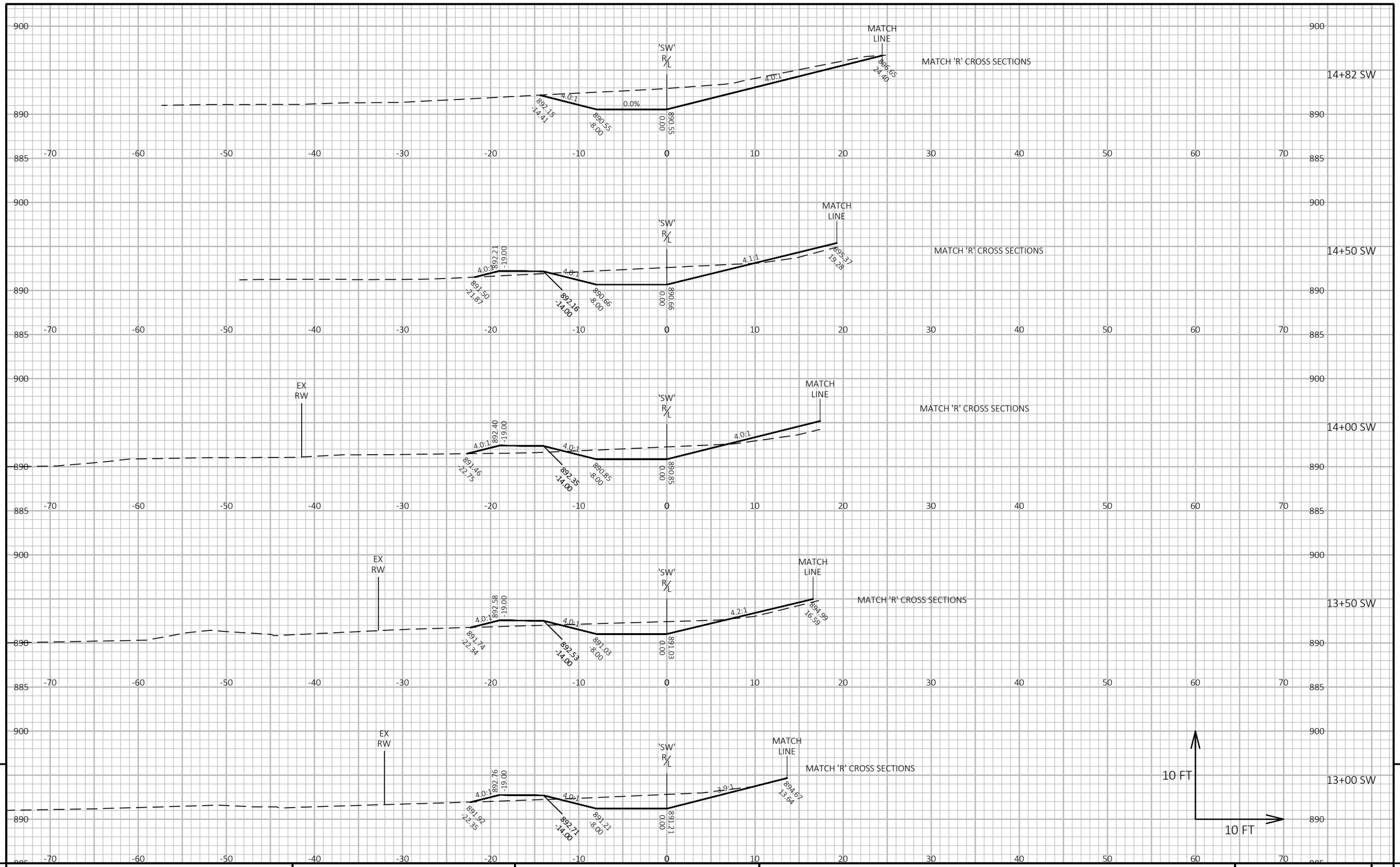
PLOT DATE : 8/1/2023 11:00 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: SWALE	SHEET 527	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 46SW

PLOT DATE : 8/1/2023 11:00 AM

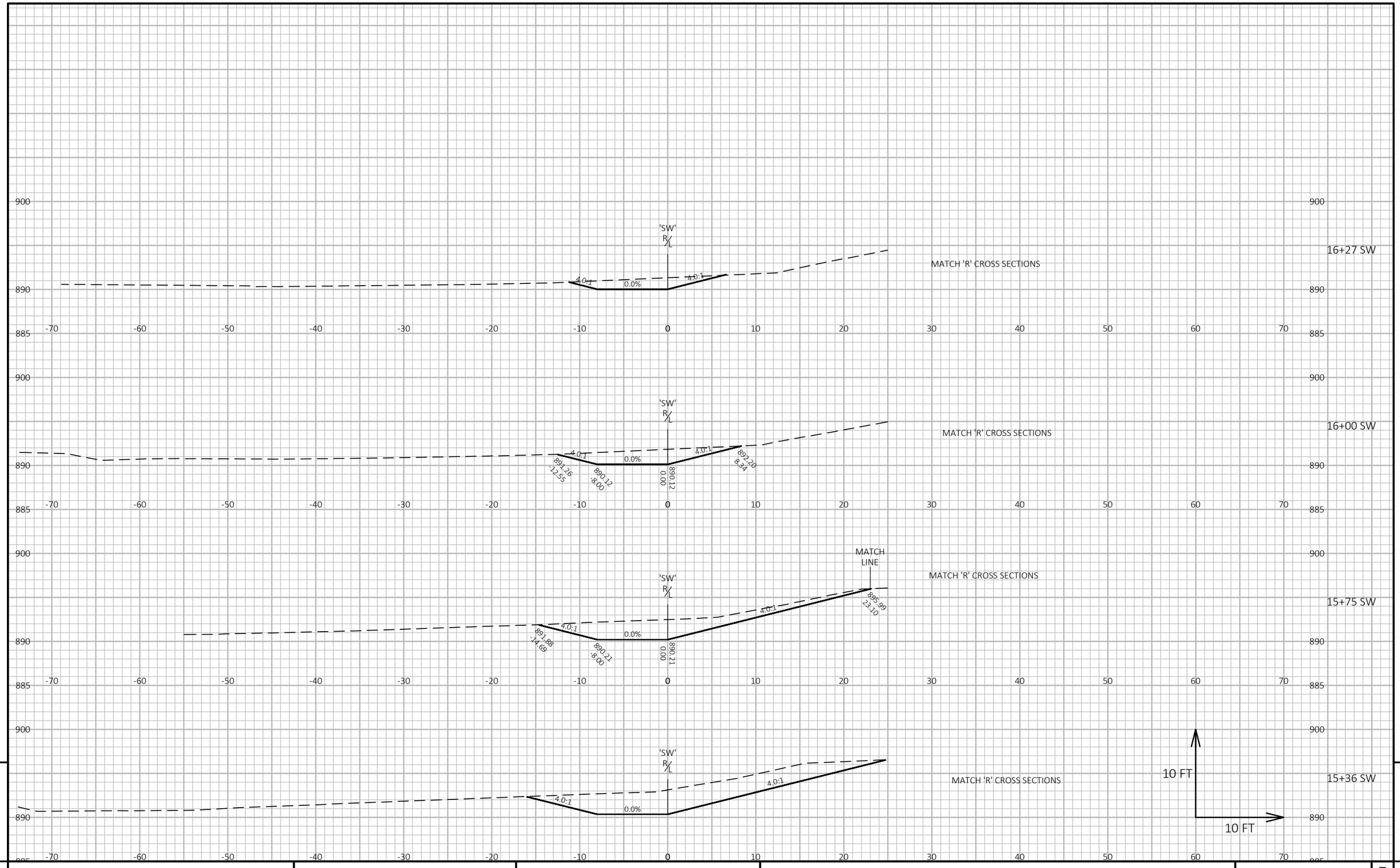
PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9



9

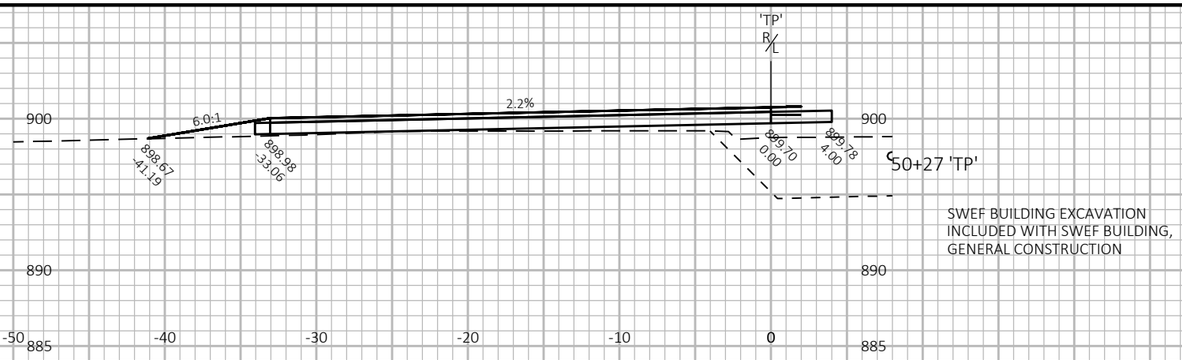
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: SWALE	SHEET 528	E

9

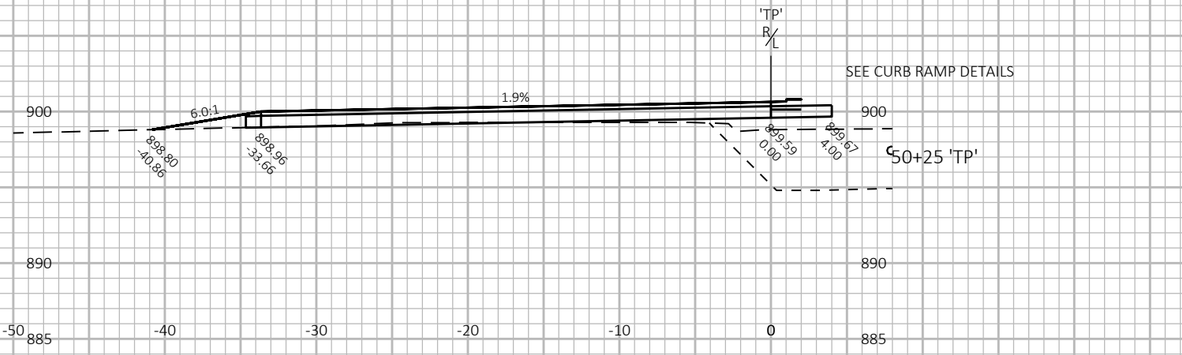
FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 47SW

PLOT DATE : 8/1/2023 11:00 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

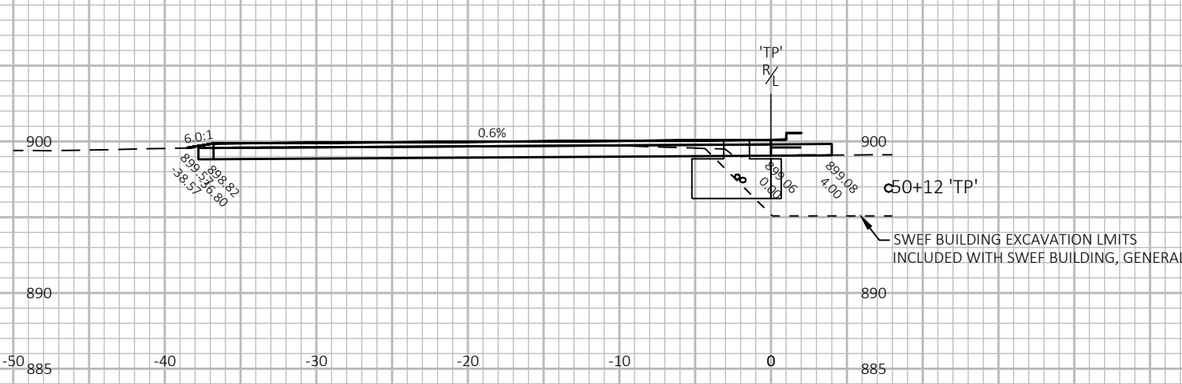


SWEF BUILDING EXCAVATION
INCLUDED WITH SWEF BUILDING,
GENERAL CONSTRUCTION

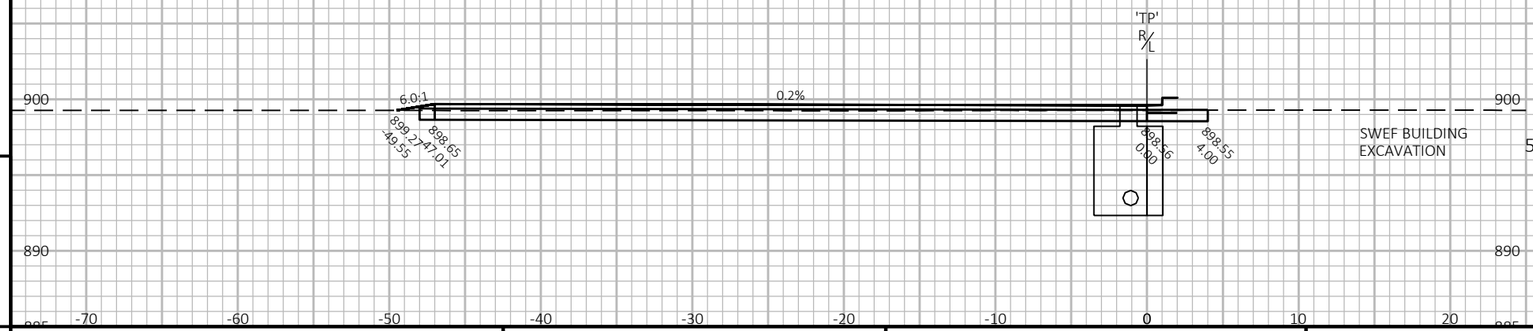


SEE CURB RAMP DETAILS

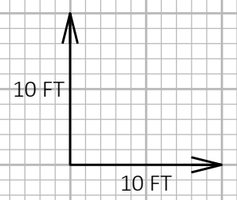
STA 50+00'TP' - STA 50+44.5'TP'
SEE CURB RAMP DETAIL
FOR SIDEWALK GRADES
EXCAVATION FOR SIDEWALK
INCIDENTAL TO SIDEWALK



SWEF BUILDING EXCAVATION LMITS
INCLUDED WITH SWEF BUILDING, GENERAL CONSTRUCTION (TYP.)



SWEF BUILDING
EXCAVATION



9

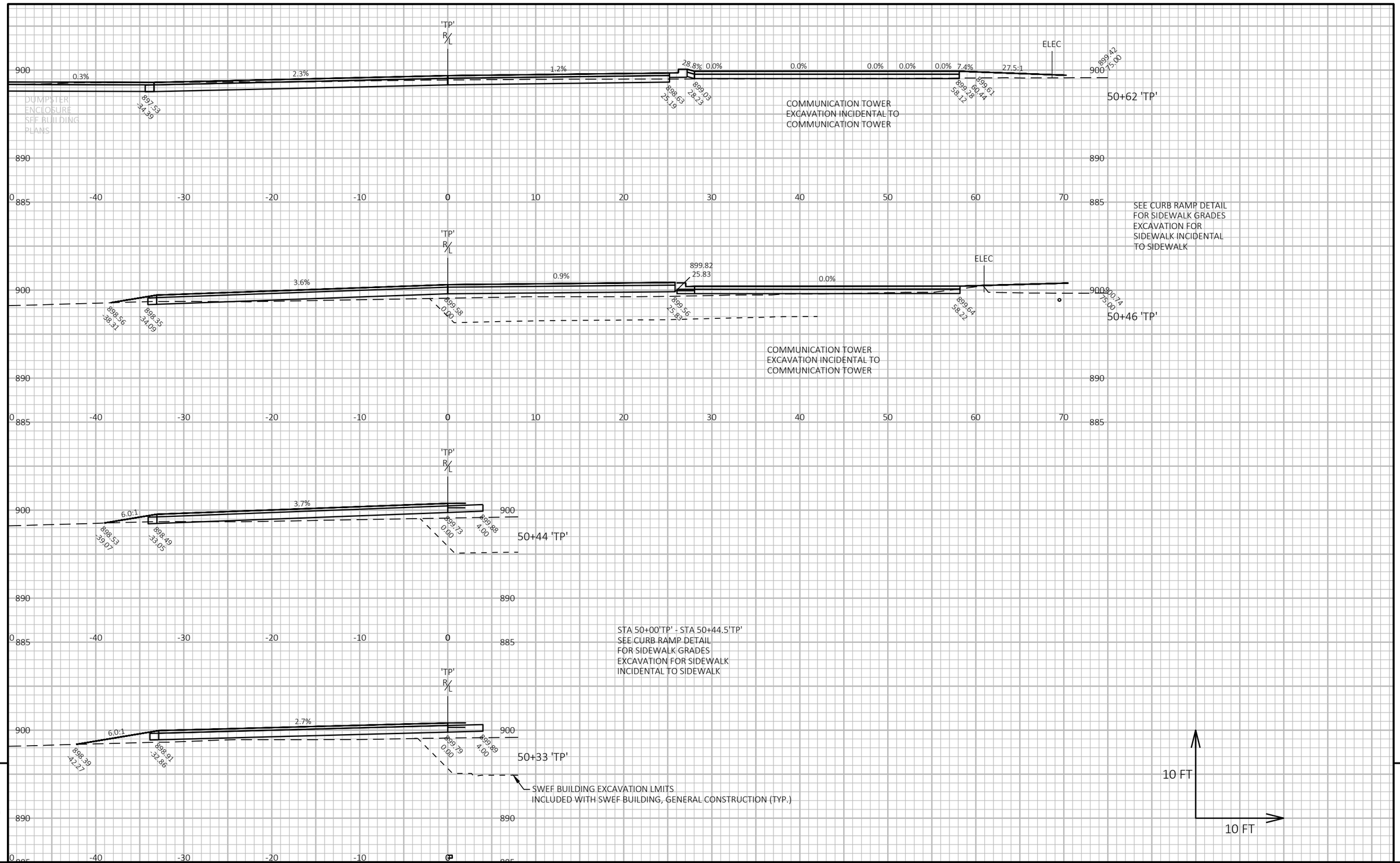
9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: EMPLOYEE PARKING	SHEET 529	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 48TP

PLOT DATE : 8/1/2023 11:01 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

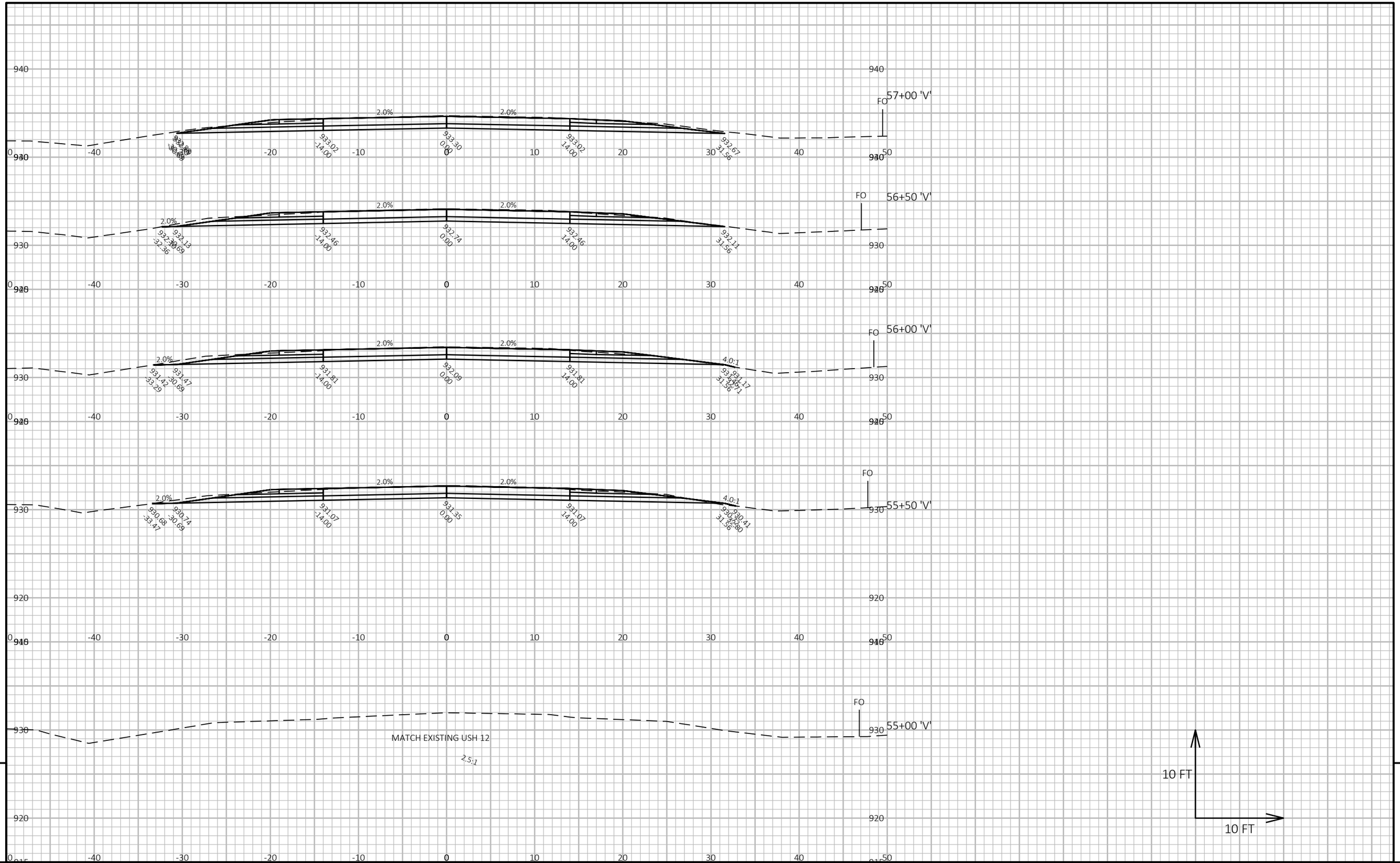
9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: EMPLOYEE PARKING	SHEET 530	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 49TP

PLOT DATE : 8/1/2023 11:01 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: USH 12/STH 29 VIRTUAL WEIGH STATION	SHEET 531 E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 50V

PLOT DATE : 8/1/2023 11:01 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

60+00 'V'

59+50 'V'

59+00 'V'

REPLACE FIELD ENTRANCE
IN-KIND

58+50 'V'

58+00 'V'

57+50 'V'

10 FT

10 FT

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: USH 12/STH 29 VIRTUAL WEIGH STATION	SHEET 532	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 51V

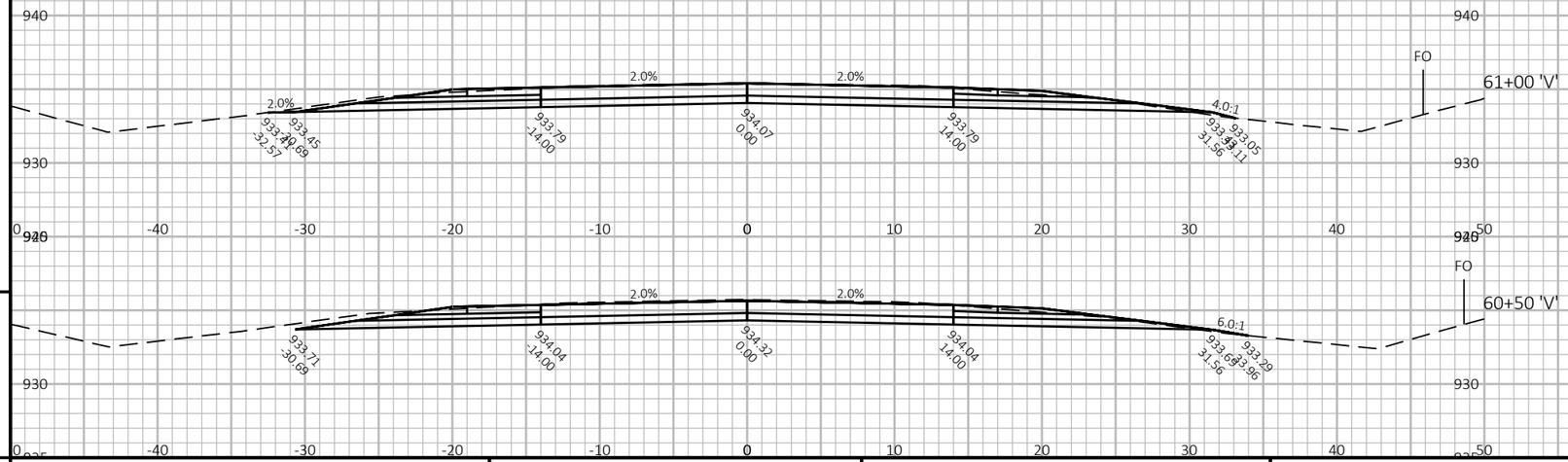
PLOT DATE : 9/22/2023 2:37 PM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

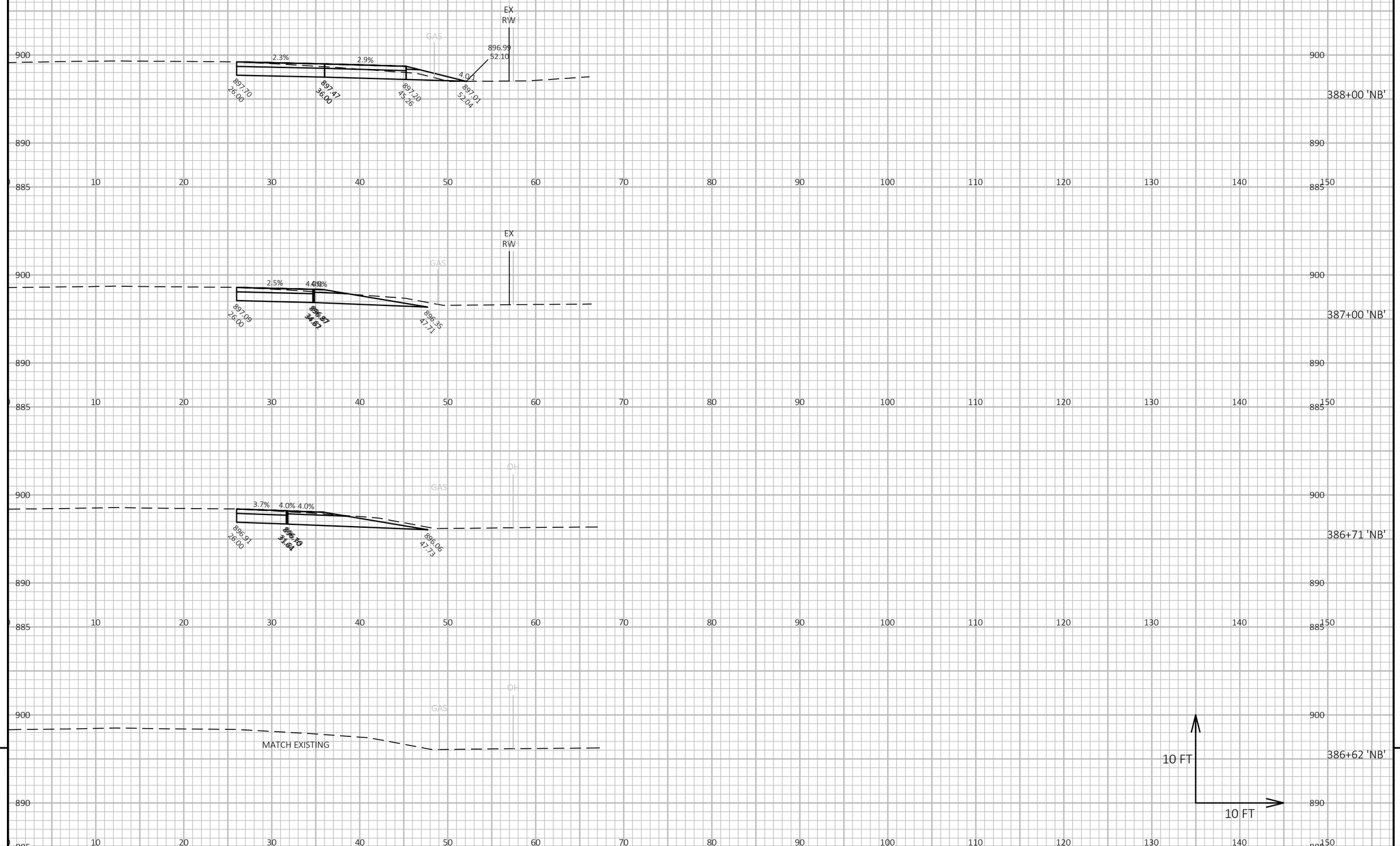
9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: USH 12/STH 29 VIRTUAL WEIGH STATION	SHEET 533	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 52V

PLOT DATE : 8/1/2023 11:02 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

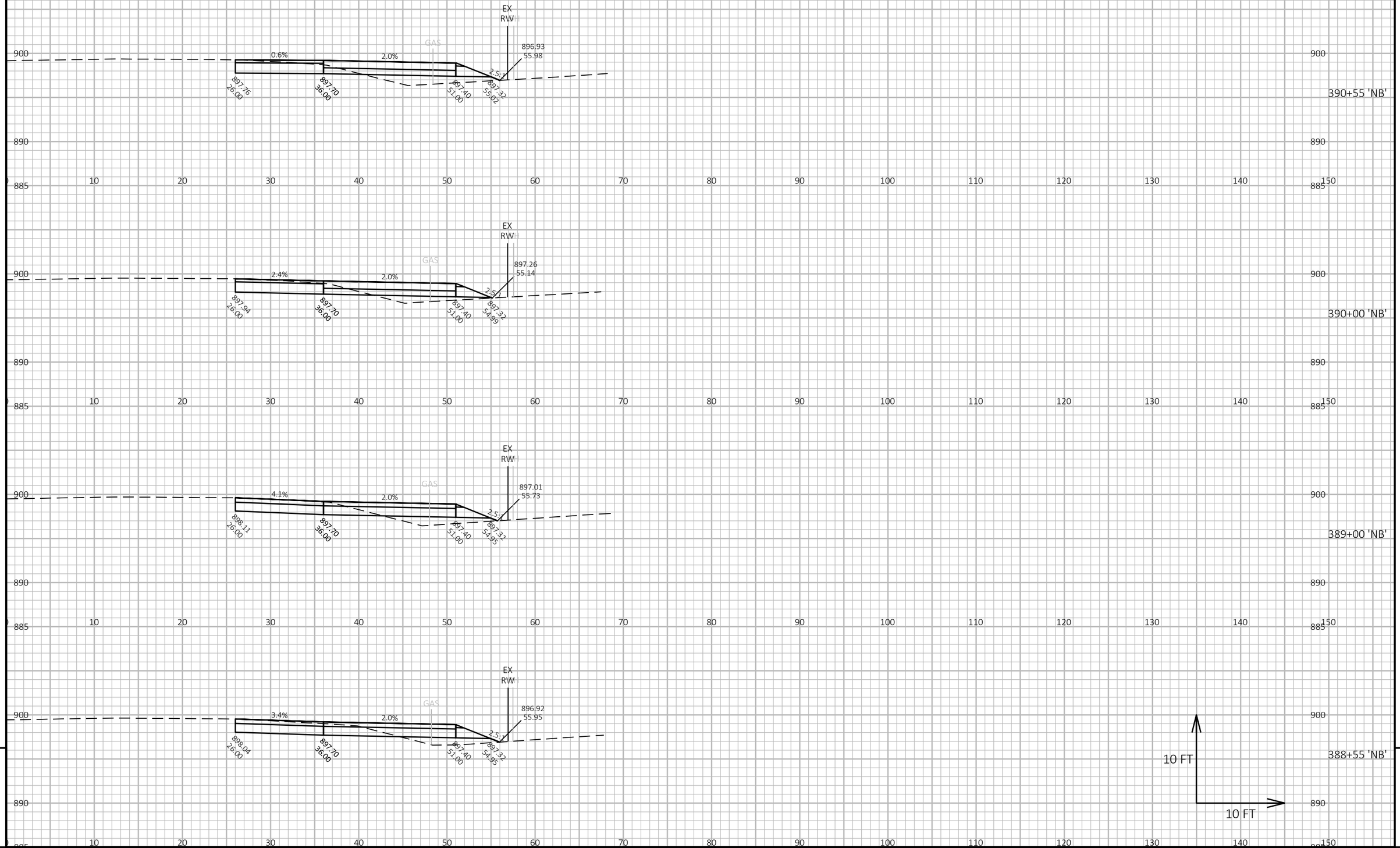
PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: CTH B PULL-OFF SITE	SHEET 534	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 55NB

PLOT DATE : 8/1/2023 11:02 AM PLOT BY : JON BLOMQUIST PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: CTH B PULL-OFF SITE	SHEET 535	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 56NB

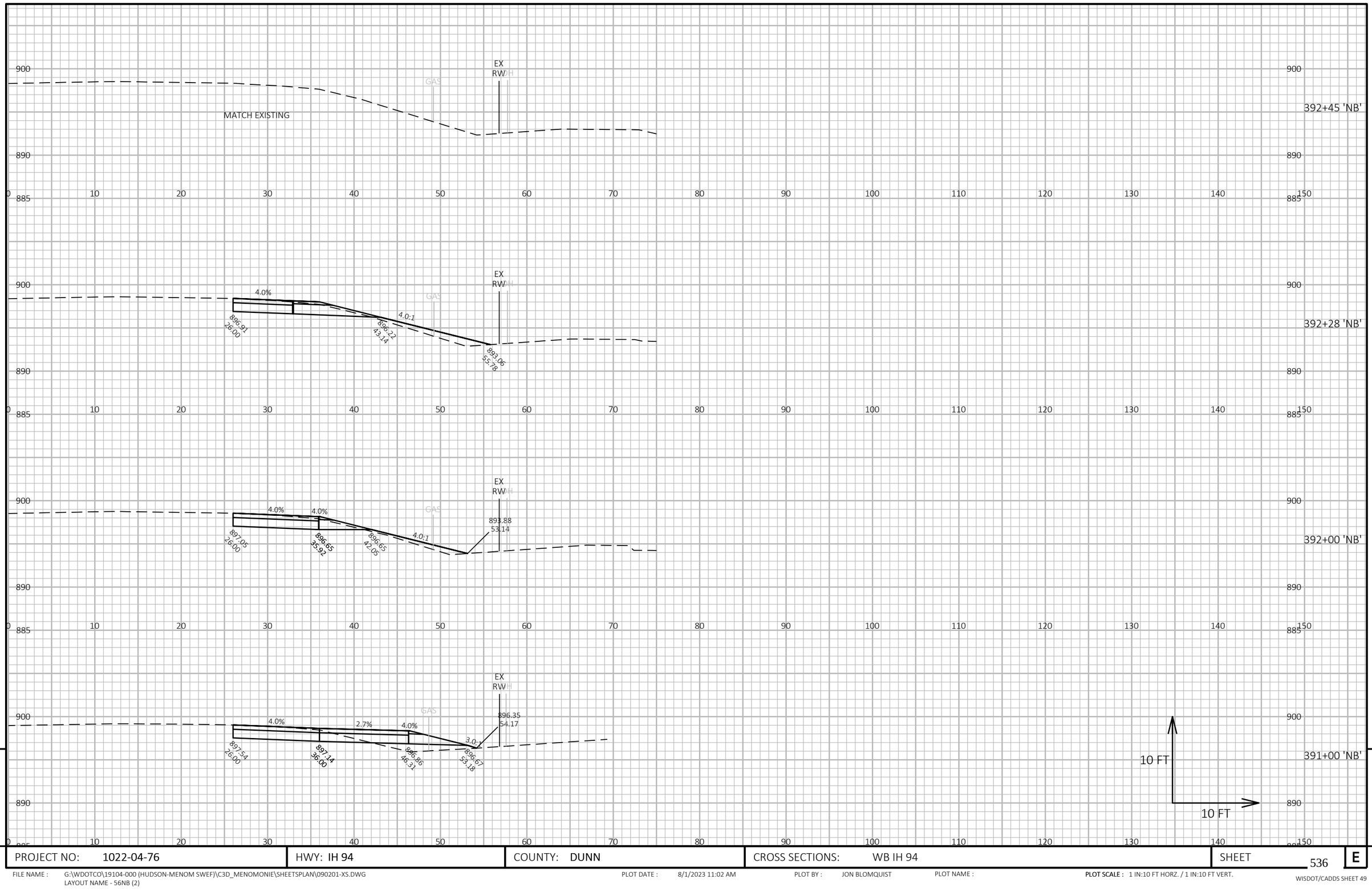
PLOT DATE : 8/1/2023 11:02 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1022-04-76	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: WB IH 94	SHEET 536	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 56NB (2)

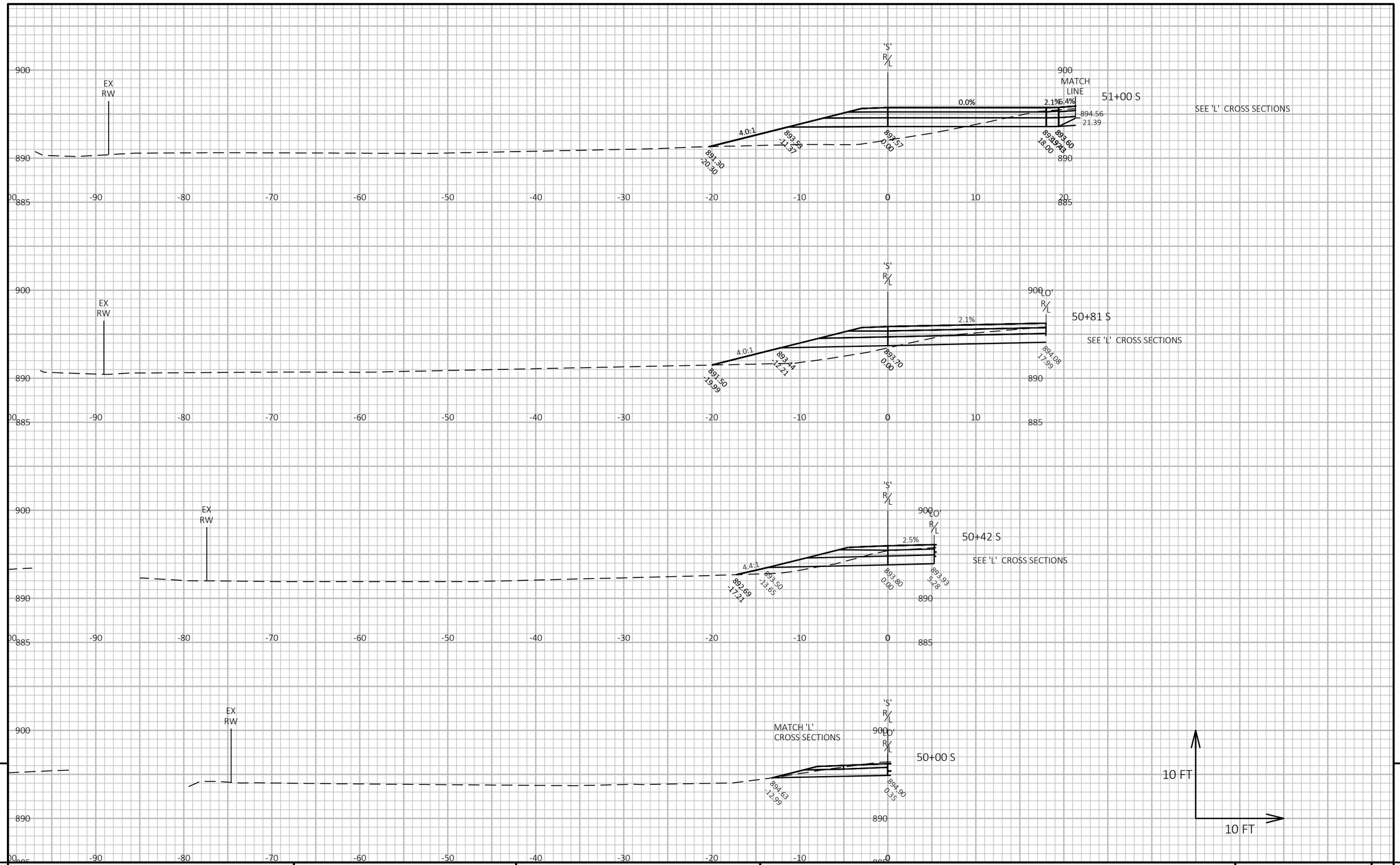
PLOT DATE : 8/1/2023 11:02 AM

PLOT BY : JON BLOMQUIST

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

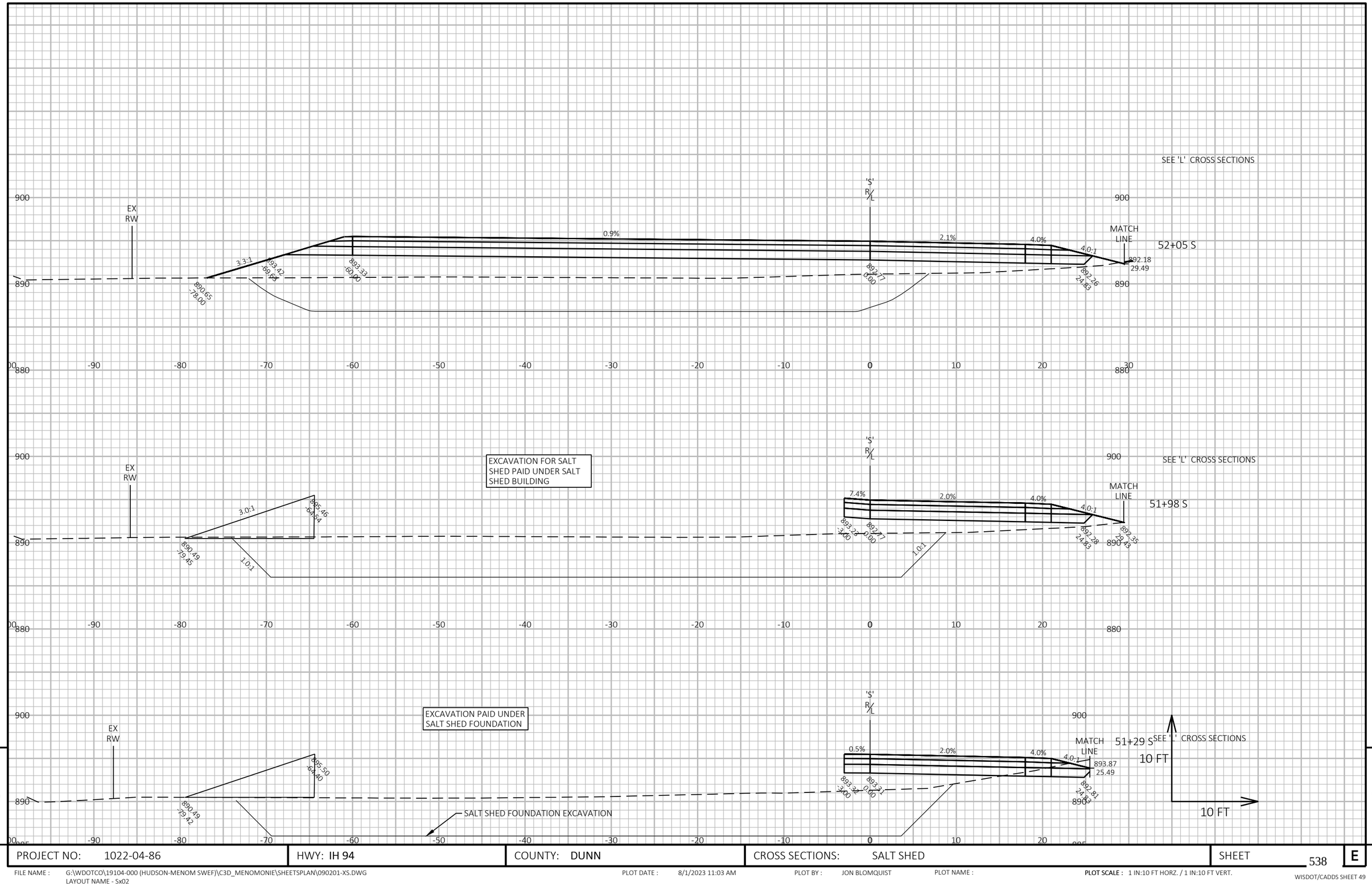


PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: SALT SHED	SHEET 537	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Sx01

PLOT DATE : 8/1/2023 11:03 AM PLOT BY : JON BLOMQUIST PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

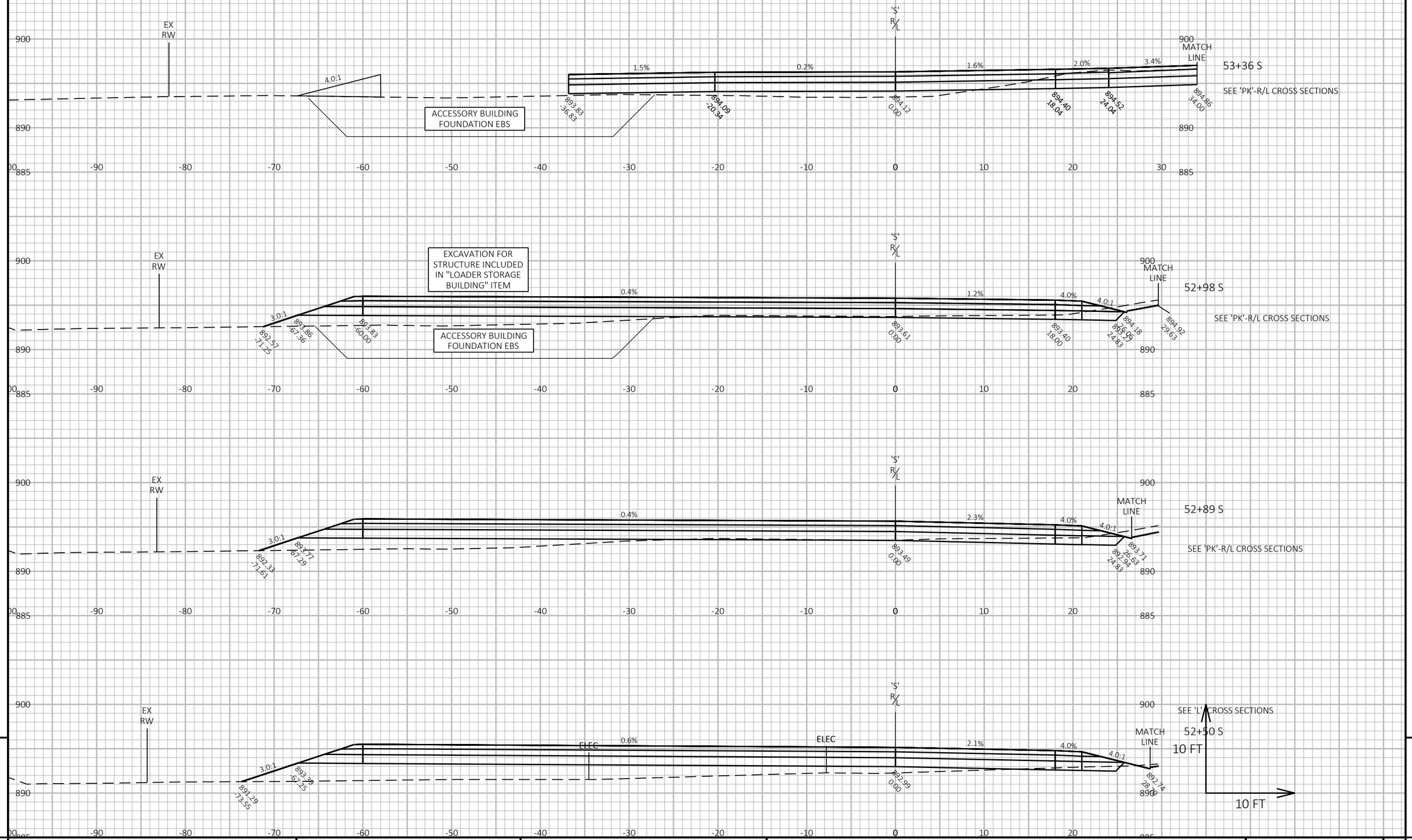


PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: SALT SHED	SHEET 538	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Sx02

PLOT DATE : 8/1/2023 11:03 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: SALT SHED	SHEET 539	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Sx03

PLOT DATE : 8/1/2023 11:03 AM

PLOT BY : JON BLOMQUIST

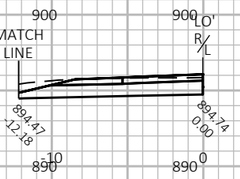
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

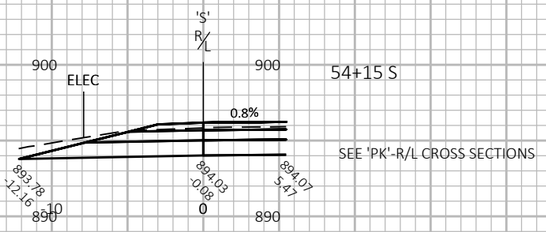
WISDOT/CADDS SHEET 49

MATCH 'PK' CROSS SECTIONS
STA 51+61.85'PK'

MATCH LINE



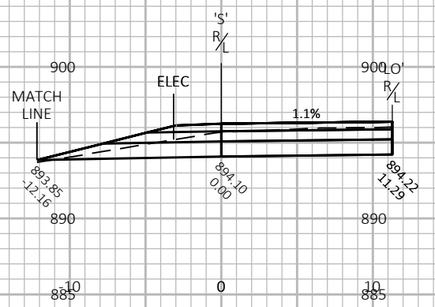
54+32 S



54+15 S

MATCH 'SW'
CROSS SECTIONS

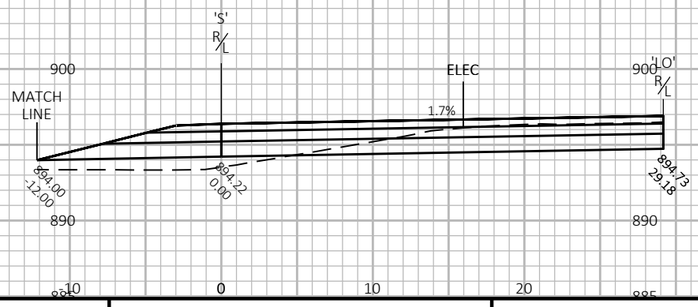
SEE 'PK'-R/L CROSS SECTIONS



54+00 S

SEE 'SW' CROSS SECTIONS

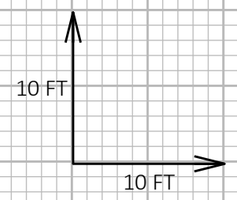
SEE 'PK'-R/L CROSS SECTIONS



53+50 S

SEE 'SW' CROSS SECTIONS

SEE 'PK'-R/L CROSS SECTIONS



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9

PROJECT NO: 1022-04-86	HWY: IH 94	COUNTY: DUNN	CROSS SECTIONS: SALT SHED	SHEET 540	E

FILE NAME : G:\WDOTCO\19104-000 (HUDSON-MENOM SWEF)\C3D_MENOMONIE\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - Sx04

PLOT DATE : 8/1/2023 11:03 AM PLOT BY : JON BLOMQUIST PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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