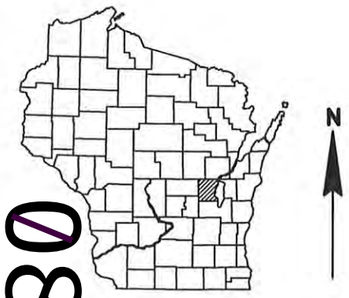
GRE JAN 2014

PROJECT ID: 1120-10-70

COUNTY: WINNEBAGO

ORDER OF SHEETS

TOTAL SHEETS = 70



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

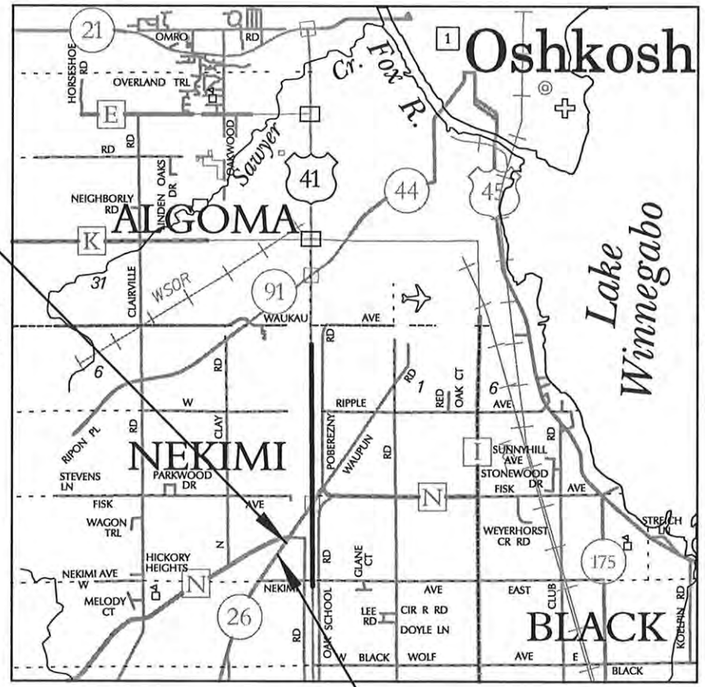
STH 26 - BREEZEWOOD LANE

STH 26 - STH 21

OFF SYSTEM
WINNEBAGO COUNTY
SALT STORAGE FACILITY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1120-10-70	———	———

STATE PROJECT NUMBER
1120-10-70



END PROJECT 1120-10-70
STA. 16+21.21
Y = 445,480.695
X = 778,634.753

BEGIN PROJECT 1120-10-70
STA. 11+22.81
Y = 445,972.869
X = 778,791.740

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

DESIGN DESIGNATION

A.A.D.T. (2007)	=	N/A
A.A.D.T. (2035)	=	N/A
D.H.V. (2035)	=	N/A
D.	=	N/A
T.	=	N/A
DESIGN SPEED	=	N/A
ESALS	=	N/A

CONVENTIONAL SYMBOLS

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

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

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

Coordinates on this plan are referenced to the Wisconsin County Coordinate System (WCCS), Winnebago County, Horizontal Datum NAD 83 (91).

Elevations shown on this plan are referenced to vertical datum National Geodetic Vertical Datum 1929 Adjustment (NGVD 29).

ORIGINAL PLANS PREPARED BY:

STRAND ASSOCIATES®
910 WEST WINGRA DRIVE
MADISON, WISCONSIN 53715
(608) 251-4843

WISCONSIN
SARA J. GRIMME
E-36643
VERONA
PROFESSIONAL ENGINEER
11-5-13

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	STRAND ASSOCIATES, INC.
Project Manager	ERIC SIKORSKI
Regional Examiner	
Regional Supervisor	CHAD DEGRAVE

APPROVED FOR THE DEPARTMENT
DATE: 11-7-13 (Signature)

E

2

GENERAL NOTES

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

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

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

SILT FENCE SHALL BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.

EXISTING PIPE CULVERT SIZES SHOWN ARE APPROXIMATE AND THE CONTRACTOR WILL BASE IT'S BID ON THE ACTUAL FIELD SIZES.

BEARINGS ON THIS PLAN ARE SHOWN TO THE NEAREST SECOND.

CURVE DATA BASED ON ARC DEFINITION.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS.

A UNIT WEIGHT OF 110 POUNDS PER SQUARE YARD PER INCH OF THICKNESS WAS USED TO ESTIMATE ASPHALT QUANTITIES.

ABBREVIATIONS

ABUT.	ABUTMENT
A.E.C.P.R.C.	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
A.D.T.	AVERAGE DAILY TRAFFIC
B.F.	BACK FACE
B.M.	BENCH MARK
B.O.C.	BACK OF CURB
C.P.R.C.	CULVERT PIPE REINFORCED CONCRETE
CTR.	CENTER
C.L.	CENTERLINE
D.	LANE DISTRIBUTION
D.H.V.	DESIGN HOURLY VOLUME
DIA.	DIAMETER
DIM.	DIMENSION
EL. OR ELEV.	ELEVATION
EXC.	EXCAVATION
EXIST.	EXISTING
F.E.	FIELD ENTRANCE
F.F.	FRONT FACE
LT.	LEFT
MAX.	MAXIMUM
MIN.	MINIMUM
M/L	MATCH LINE
NORM.	NORMAL
O.H.	OVERHEAD POWER LINE
P.L.	PROPERTY LINE
P.O.L.	POINT ON LINE
REQ'D.	REQUIRED
RDWY.	ROADWAY
R.H.F.	RIGHT HAND FORWARD
R/L	REFERENCE LINE
RT.	RIGHT
R/W	RIGHT OF WAY
S.E.	SUPERELEVATION
SPA.	SPACE
STA.	STATION
SYM.	SYMMETRICAL
T.	PERCENT TRUCKS
TYP.	TYPICAL
V.	DESIGN SPEED

UTILITIES

UTILITY OR MUNICIPALITY	ADDRESS	CONTACT	UTILITY TYPE
WISCONSIN PUBLIC SERVICE	3300 N MAIN STREET PO BOX 420 OSHKOSH, WI 54903-0420 PHONE: 920-236-5910 PHONE: 920-680-2036 DTPETERSEN@WISCONSINPUBLICSERVICE.COM	DAVE PETERSEN	ELECTRIC - DISTRIBUTION

DIGGERS HOTLINE

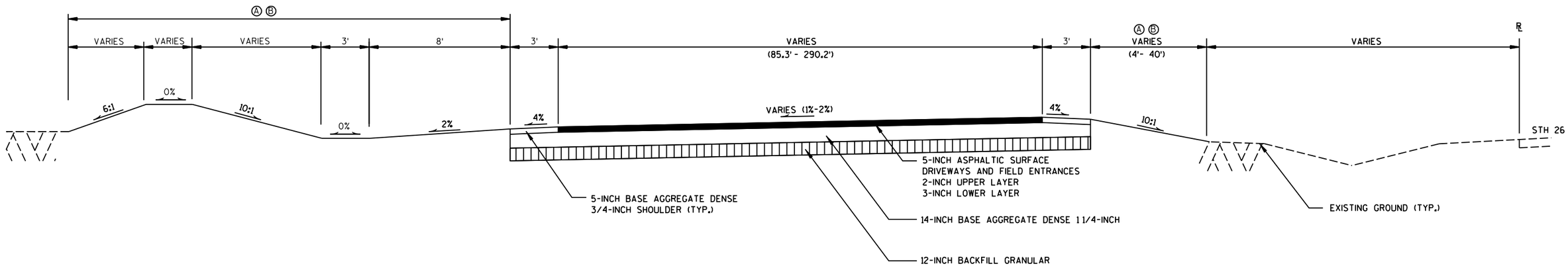
Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511
Hearing Impaired TTY (800) 542-2289
www.DiggersHotline.com

DESIGN CONTACT

SARA GRIMME
STRAND ASSOCIATES
910 W. WINGRA DRIVE
MADISON, WI 53715
PH: (608) 251-4843
SARA.GRIMME@STRAND.COM

WISDNR CONTACT

BOBBI JO FISCHER
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
WAUTOMA SERVICE CENTER
427 EAST TOWER DRIVE, SUITE 100
WAUTOMA, WI 54982
PH: (920) 787-3015
BOBBI.FISCHER@WISCONSIN.GOV



PROPOSED TYPICAL SECTION
STA. 11+22.81 - STA. 16+21.21

Ⓐ FERTILIZER TYPE B; SEEDING
MIXTURE NO. 30; SEEDING TEMPORARY

Ⓑ SALVAGED TOPSOIL; MULCHING;

NOTE: PROPOSED TYPICAL SECTION TO BE
USED AS FLOOR OF SALT SHED BUILDING.

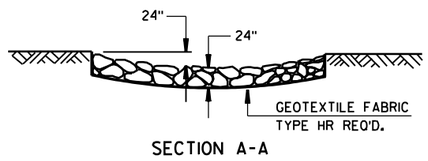
2

PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	TYPICAL SECTIONS	SHEET 3	E

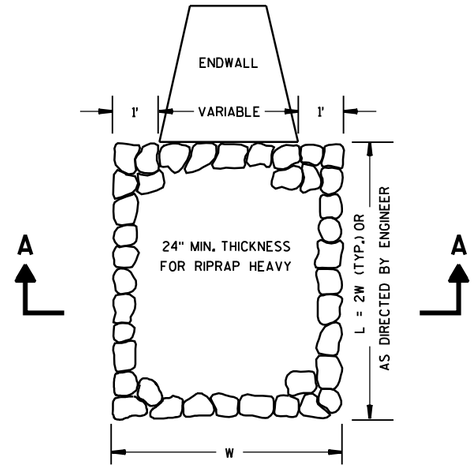
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .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 = 7.56 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 5.33 ACRES

RUNOFF COEFFICIENT TABLE



SECTION A-A



RIPRAP HEAVY TREATMENT AT CULVERTS

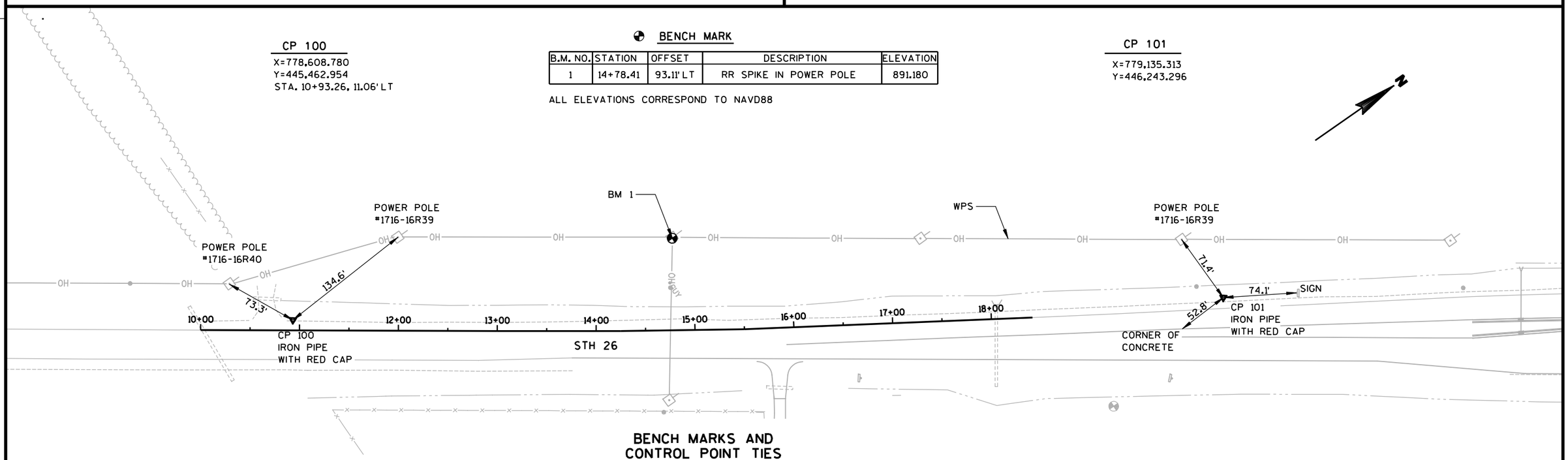
CP 100
X=778,608.780
Y=445,462.954
STA. 10+93.26, 11.06' LT

BENCH MARK

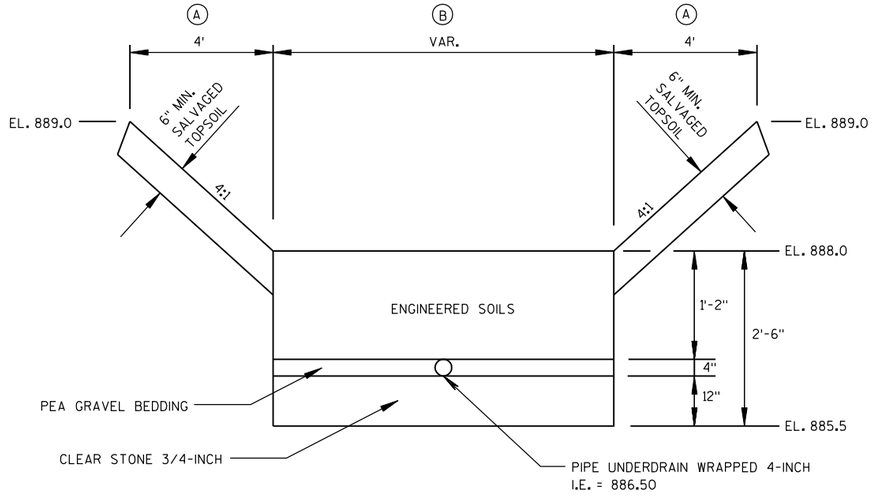
B.M. NO.	STATION	OFFSET	DESCRIPTION	ELEVATION
1	14+78.41	93.11' LT	RR SPIKE IN POWER POLE	891.180

ALL ELEVATIONS CORRESPOND TO NAVD88

CP 101
X=779,135.313
Y=446,243.296



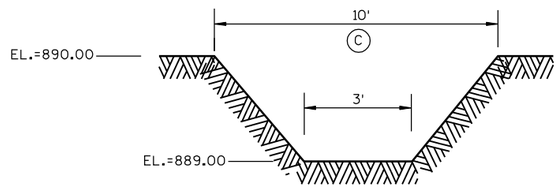
BENCH MARKS AND CONTROL POINT TIES



(A) TALL FESCUE SEED AND EROSION MAT CLASS ITYPE A

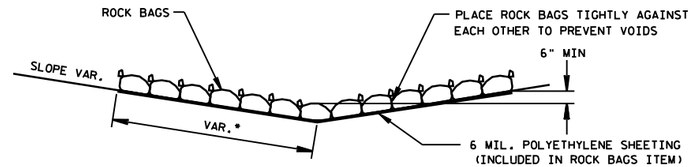
(B) SEEDING MIXTURE NO. 70 AND EROSION MAT CLASS ITYPE A

BIORETENTION BASIN DETAIL

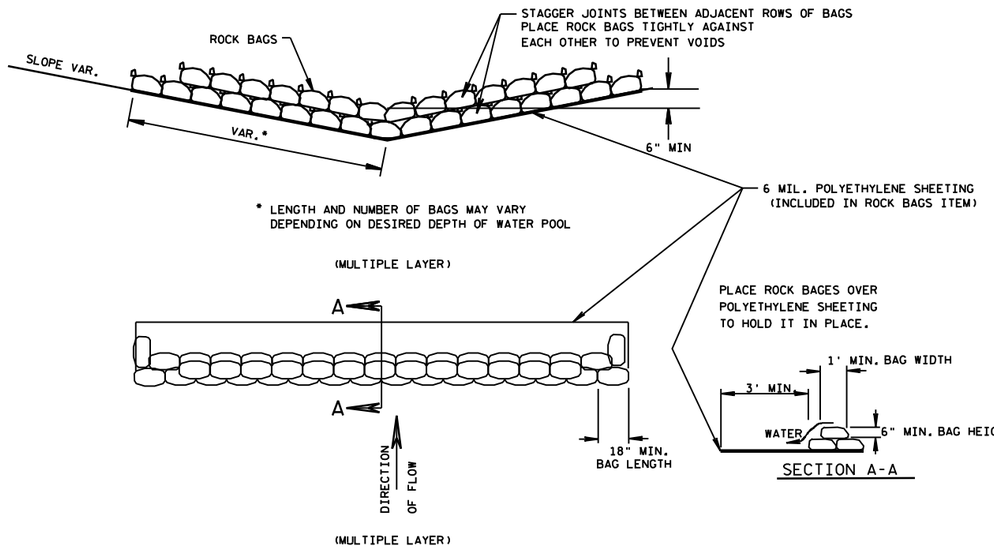


(C) TALL FESCUE SEED AND EROSION MAT CLASS ITYPE A

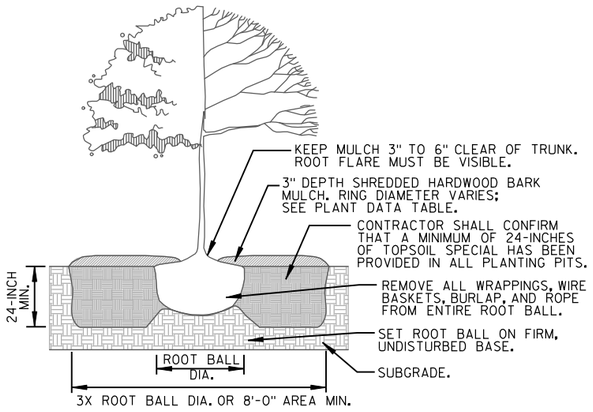
BIORETENTION BASIN WEIR OVERFLOW DETAIL



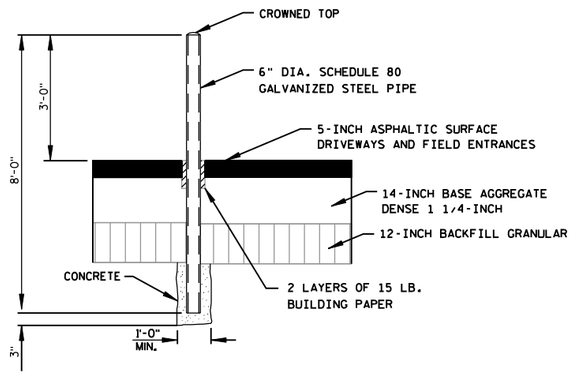
(SINGLE LAYER)



ROCK BAGS (DITCH CHECK)



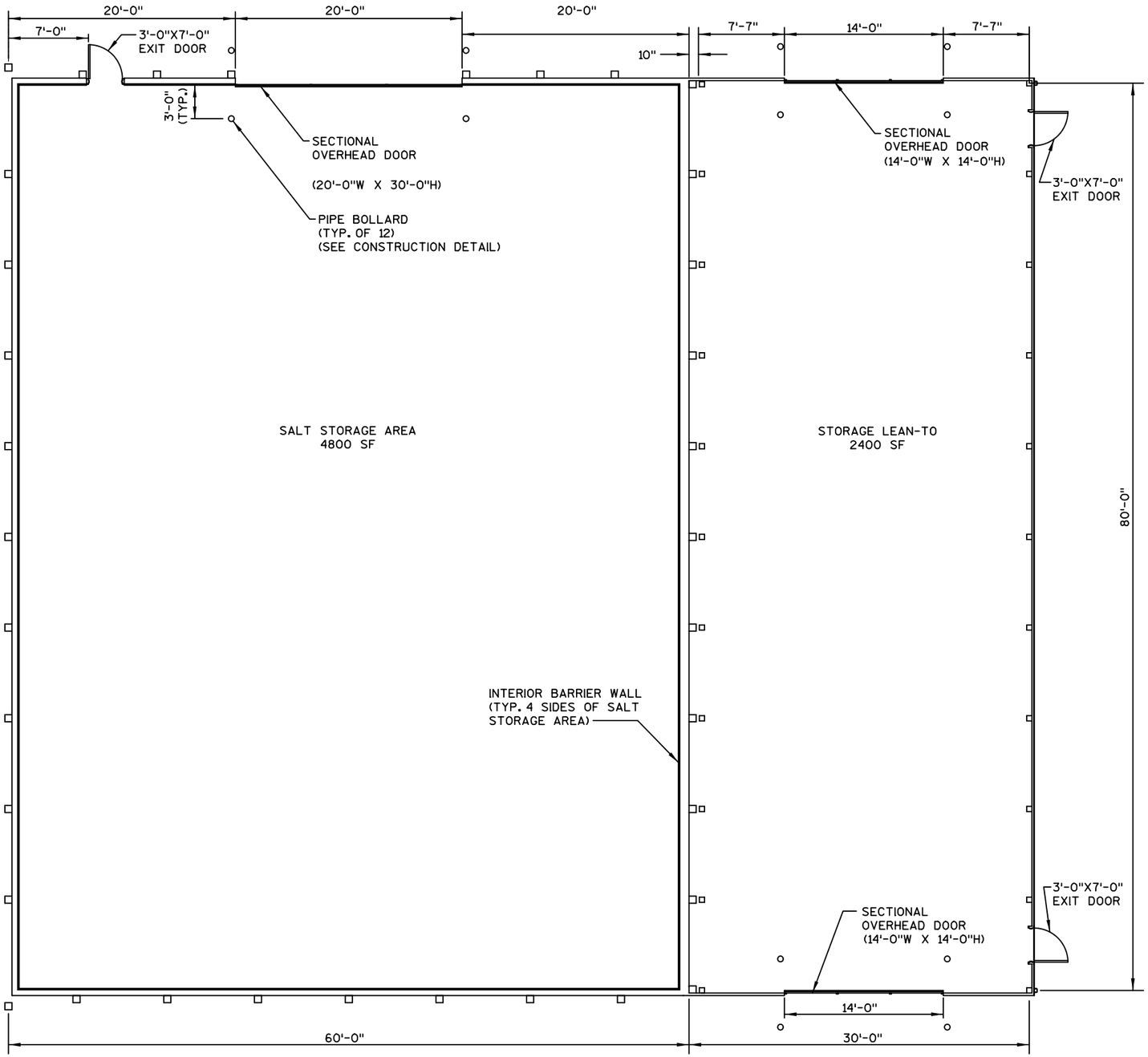
NON-BED TREE PLANTING DETAIL



PIPE BOLLARD DETAIL

INCLUDED WITH BID ITEM
'SALT STORAGE FACILITY'

2

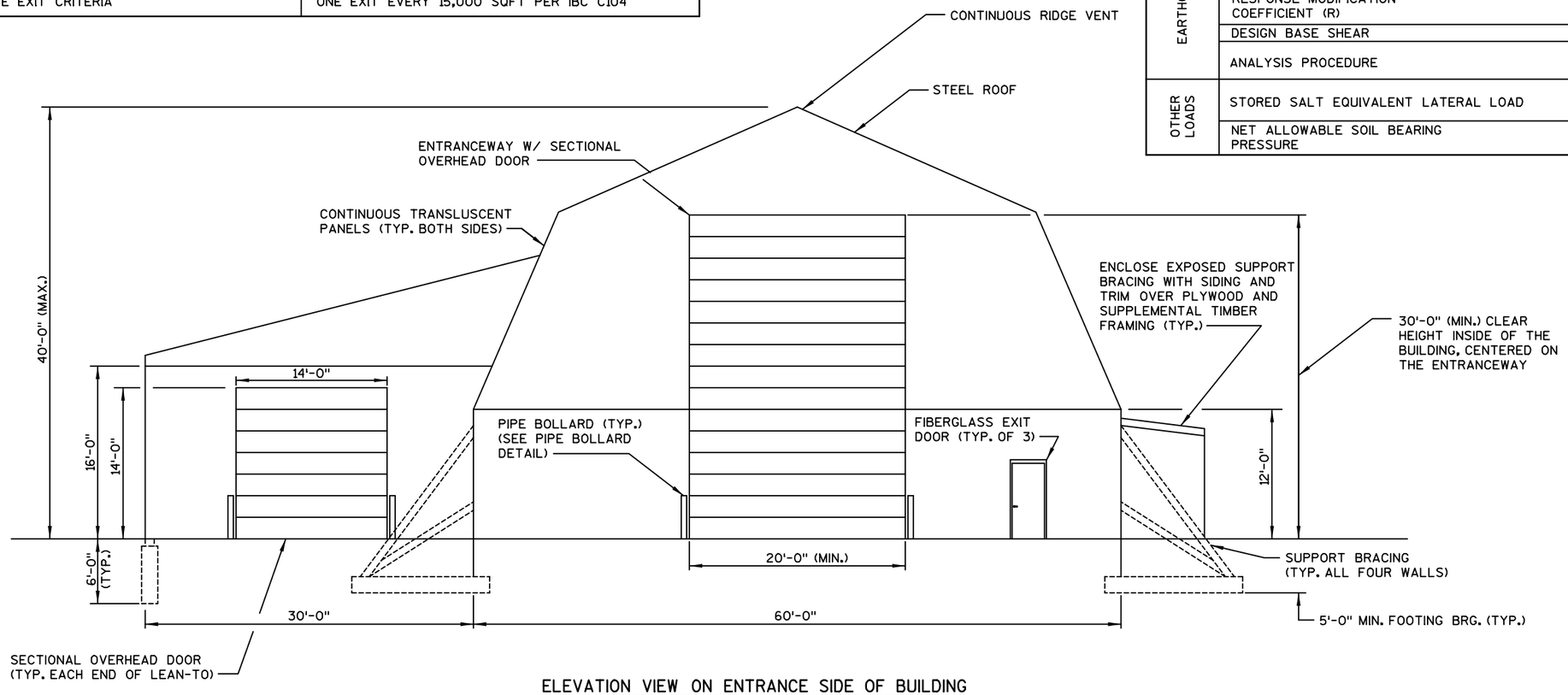


OVERALL FLOOR PLAN

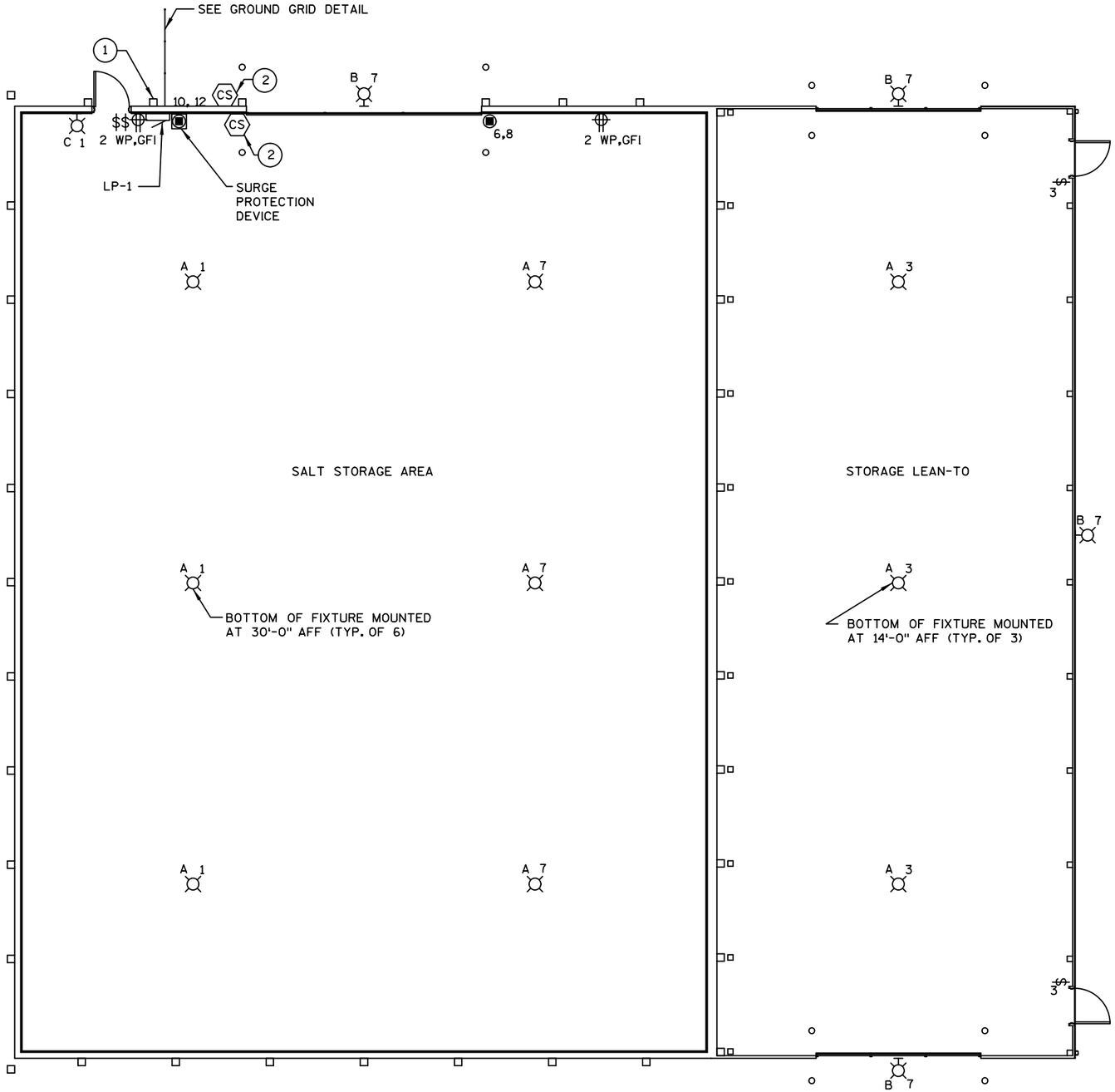
PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	BUILDING DETAIL	SHEET 7	E

BUILDING CODE INFORMATION		
BUILDING CODE	2009 INTERNATIONAL BUILDING CODE AS AMENDED	
OCCUPANCY TYPE	U- UTILITY (BARN PER APP. C OF IBC)	
CONSTRUCTION TYPE	TYPE VB	
	ALLOWABLE	**ACTUAL**
NO. OF STORIES	1 STORY	1 STORY
ALLOWABLE HEIGHT	40 FEET	40 FEET
PUBLIC WAYS OR YARDS	ACCESSIBLE FROM 4 SIDES, MIN. 30-FOOT ACCESS WIDTH	
FOOTPRINT AREA	7,200 S.F.	
TABULATED ALLOWABLE AREA	5,500 S.F.	
FRONTAGE INCREASE	4,125 S.F.	
TOTAL ALLOWABLE AREA	9,625 S.F.	
BUILDING VOLUME	GREATER THAN 50,000 C.F.	
EXIT ACCESS TRAVEL DISTANCE PERMITTED	300 FEET	
ACTUAL MAXIMUM EXIT DISTANCE	130 FEET	
SINGLE EXIT CRITERIA	ONE EXIT EVERY 15,000 SQFT PER IBC C104	

STRUCTURAL DESIGN CRITERIA			
DESIGN CODES	BUILDING CODE		IBC 2009
	CONCRETE DESIGN CODE		ACI 318-08
	OCCUPANCY CATEGORY		II
ROOF SNOW LOAD	GROUND SNOW LOAD (Pg) (PSF)		40
	SNOW EXPOSURE FACTOR (Ce)		1.0
	SNOW LOAD IMPORTANCE FACTOR (Is)		1.0
	THERMAL FACTOR (Ct) -		1.2
	DRIFT LOADS		PER IBC CODE
WIND LOAD	BASIC 3-SECOND GUST WIND SPEED (MPH)		90
	WIND IMPORTANCE FACTOR (Iw)		1.0
	WIND EXPOSURE		C
	COMPONENTS AND CLADDING DESIGN WIND PRESSURE (PSF)		PER IBC CODE
EARTHQUAKE DESIGN DATA	SEISMIC IMPORTANCE FACTOR (IE)		1.0
	SITE CLASS		D
	SPECTRAL RESPONSE COEFFICIENTS	SDS	0.056
		SD1	0.054
	SEISMIC DESIGN CATEGORY		A
	BASIC SEISMIC FORCE RESISTING SYSTEM		LIGHT FRAMED WALLS WITH SHEAR PANELS OF OTHER MATERIALS
	RESPONSE MODIFICATION COEFFICIENT (R)		2.5
	DESIGN BASE SHEAR		0.01 W
	ANALYSIS PROCEDURE		SIMPLIFIED
OTHER LOADS	STORED SALT EQUIVALENT LATERAL LOAD		72 PCF
	NET ALLOWABLE SOIL BEARING PRESSURE		1500 PSF



ELEVATION VIEW ON ENTRANCE SIDE OF BUILDING



OVERALL FLOOR PLAN

N

GENERAL NOTES:

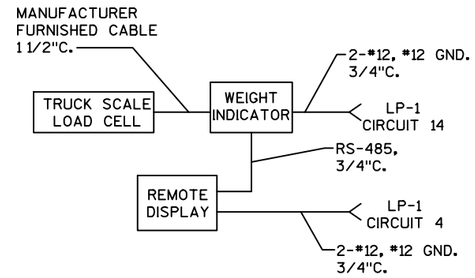
1. THE UTILITY COMPANY IS WISCONSIN PUBLIC SERVICE CORPORATION. THE SECONDARY SERVICE SHALL BE 120/240V. 3-WIRE, SINGLE PHASE.

2.COORDINATE THE NEW ELECTRICAL SERVICE WITH THE UTILITY AND ALL UTILITY COSTS SHALL BE INCLUDED WITH BID ITEM "SALT STORAGE FACILITY".

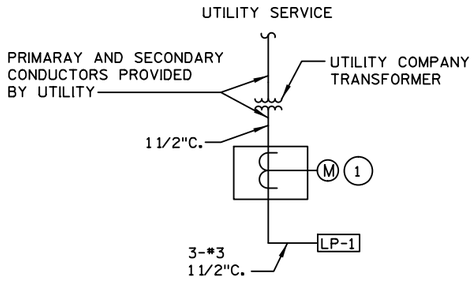
KEY NOTES:

(1) METER SOCKET PROVIDED BY ELECTRICAL CONTRACTOR, METER PROVIDED BY UTILITY COMPANY.

(2) OVERHEAD GARAGE DOOR CONTROLS FURNISHED AS SPECIFIED AND INSATLLED BY THIS CONTRACTOR. MOTOR DISCONNECT SHALL BE MOUNTED ADJACENT TO OPERATOR.



SCALE RISER DIAGRAM
NO SCALE



ONE-LINE DIAGRAM
NO SCALE

PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	BUILDING DETAIL - ELECTRICAL	SHEET 9	E

2

ELECTRICAL SYMBOLS

LIGHTING

- FIXTURE SYMBOL (TYPICAL) A-INDICATES FIXTURE TYPE 2-INDICATES CIRCUIT NUMBER b-INDICATES SWITCHING SOLID CIRCLE INDICATES ALWAYS ON
- INCANDESCENT, HID, SURFACE OR PENDANT
- INCANDESCENT, HID, WALL
- 1X4 FLUORESCENT, SURFACE OR PENDANT
- 1X8 FLUORESCENT, SURFACE OR PENDANT
- FLUORESCENT, WALL
- 1X4 FLUORESCENT, RECESSED
- 2X2 FLUORESCENT, RECESSED
- 2X4 FLUORESCENT, RECESSED
- CAN, FLUORESCENT OR HID
- EXIT, SURFACE, PENDANT OR RECESSED
- EXIT, WALL
- EMERGENCY LIGHTING

SWITCHES

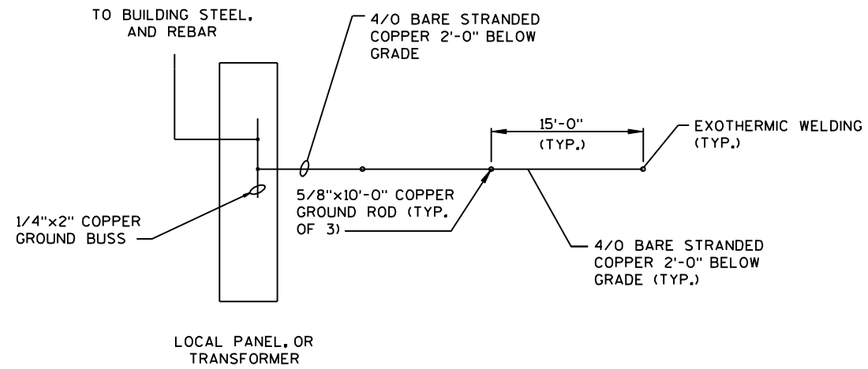
- $ SINGLE POLE
- $2 TWO POLE
- $3 THREE WAY
- $4 FOUR WAY
- $K KEYED
- $D DIMMER
- $M MANUAL MOTOR SWITCH (3 PHASE)
- $WP WEATHER PROOF
- $P SWITCH WITH PILOT LIGHT
- LC LIGHTING CONTROL STATION
- R3 LOCKOUT STOP SWITCH
- DP DOOR POSITION SWITCH
- PC PHOTOCELL
- CS CONTROL STATION

POWER SYMBOLS

- E — UNDERGROUND ELECTRIC
- OH — OVERHEAD ELECTRIC
- 2(X) — CIRCUIT NUMBER (TYPICAL); OTHERWISE SHOWN PANEL DESIGNATION (TYP.)
- DUPLEX, 125 VOLT, WP INDICATES WEATHERPROOF
- DUPLEX, 125 VOLT, ABOVE FURNITURE
- DOUBLE DUPLEX, 125 VOLT, ABOVE FURNITURE
- DOUBLE DUPLEX, 125 VOLT
- EWC — SINGLE CONVENIENCE, 125 VOLT FOR ELECTRIC WATER COOLER
- EXPLOSION-PROOF, ABOVE FURNITURE
- EXPLOSION-PROOF
- FIXED EQUIPMENT CONNECTION
- POWER OUTLET, VOLTAGE & AMPERAGE AS INDICATED
- AUTOMATIC TRANSFER SWITCH (ONE-LINE DIAGRAM)
- CIRCUIT BREAKER (ONE-LINE DIAGRAM)
- METER (ONE-LINE DIAGRAM)
- PANELBOARD

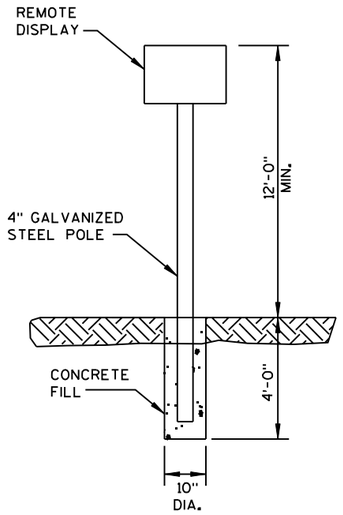
EQUIPMENT AND WIRING

- GROUND ROD 10'-5/8" DIA. COPPER CLAD
- TRANSFORMER
- F — DISCONNECT, F=FUSED, B=CIRCUIT BREAKER, BLANK=NON-FUSED
- MOTOR STARTER MAGNETIC
- CIRCUIT BREAKER COMBINATION STARTER
- J — JUNCTION BOX
- T — LINE VOLTAGE THERMOSTAT
- T — LINE VOLTAGE THERMOSTAT W/REMOTE BULB
- P-01-01 — 480V LOAD, REFER TO MCC SCHEDULE FOR EQUIPMENT NUMBER
- VFD — VARIABLE FREQUENCY DRIVE



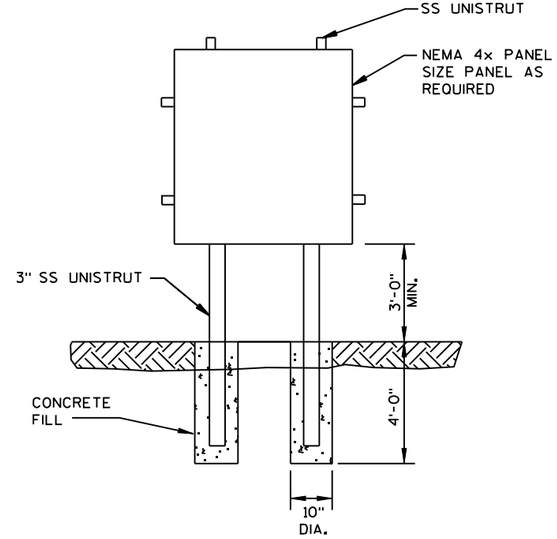
GROUND GRID DETAIL

NO SCALE



REMOTE DISPLAY MOUNTING DETAIL

NO SCALE



WEIGHT INDICATOR MOUNTING DETAIL

NO SCALE

PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	BUILDING DETAIL - ELECTRICAL	SHEET 10	E

2

LIGHTING PANEL LP-1

SERVICE: 120/240V, 1ϕ, 3W — ENCLOSURE: NEMA 3R — MOUNTING: SURFACE
MAIN BREAKER: 100A M.C.B. — MAIN BUS: COPPER
LOCATION: SALT STORAGE ROOM — SCIC: 14 kAIC

ROOM NUMBER/DESCRIPTION	AMPS	POLES	CCT. #	PHASE A	PHASE B	PHASE C	PHASE A	PHASE B	PHASE C	CCT. #	POLES	AMPS	ROOM NUMBER/DESCRIPTION
SALT STORAGE AREA LIGHTING	20	1	1	1350			360			2	1	20	SALT STORAGE ROOM RECEPTACLES
SALT STORAGE LEAN-TO LIGHTING	20	1	3		1300			500		4	1	20	REMOTE SCALE DISPLAY
SALT STORAGE AREA LIGHTING	20	1	5			1200			960	6	2	20	OVERHEAD DOOR
EXTERIOR LIGHTING	20	1	7	400			960			8			
	20	1	9		0			0		10	2	20	SPD
	20	1	11			0			0	12			
	20	1	13	0			180			14	1	20	WEIGHT INDICATOR
	20	1	15		0			0		16	1	20	
	20	1	17			0			0	18	1	20	
	20	1	19	0			0			20	1	20	
	20	1	21		0			0		22	1	20	
	20	1	23			0			0	24	1	20	
	20	1	25	0			0			26	1	20	
	20	1	27		0			0		28	1	20	
	20	1	29			0			0	30	1	20	
TOTAL LOAD PER PHASE PER SIDE (VA)				1750	1300	1200	1500	500	960				

TOTAL LOAD PHASE A (VA)	3250	VA	TOTAL CONNECTED LOAD (A)	34	A
TOTAL LOAD PHASE B (VA)	1800	VA	TOTAL CONNECTED LOAD + 25%	42	A
TOTAL LOAD PHASE C (VA)	2160	VA	SPARE 25%	11	A
TOTAL CONNECTED LOAD (VA)	7210	VA	FEEDER LOAD	53	A

FTMS STANDARD ABBREVIATIONS

CCTV	CLOSED CIRCUIT TELEVISION SITE
CB	CONTROLLER CABINET
PB	PULL BOX
V	COMMUNICATIONS VAULT
F.O.C.	FIBER OPTIC CABLE
S-F	STATE-FURNISHED
DMS	DYNAMIC MESSAGE SIGN
MB	METER BREAKER
EX	EXISTING

LEGEND

	PROPOSED	EXISTING
CANTILEVER SIGN STRUCTURE AND DMS		
METER BREAKER PEDESTAL		
24"X36" STEEL PULL BOX		
ITS CONDUIT		
YAGI ANTENNA		
POLE-MOUNTED CABINET		
BREAKER DISCONNECT BOX		
COMMUNICATIONS VAULT		V

FTMS GENERAL NOTES

THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.

BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.

BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.

NO TREES (AND/OR SHRUBS) ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER AND SEED, AND MULCH. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION WILL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS. NO PAYMENT WILL BE MADE FOR RESTORING AREAS DISTURBED FOR FTMS CONSTRUCTION OPERATIONS.

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

BE ADVISED THAT DUE TO RAMP, LANE, AND SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.

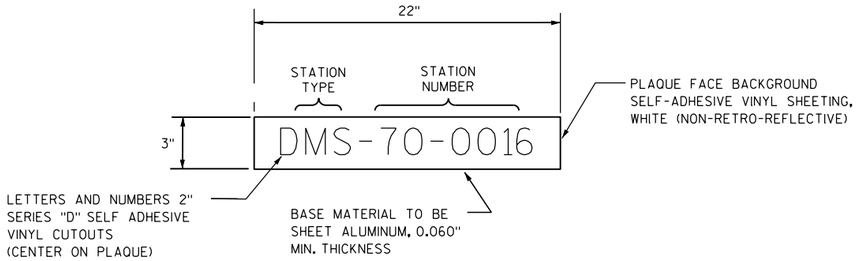
THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.

CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.

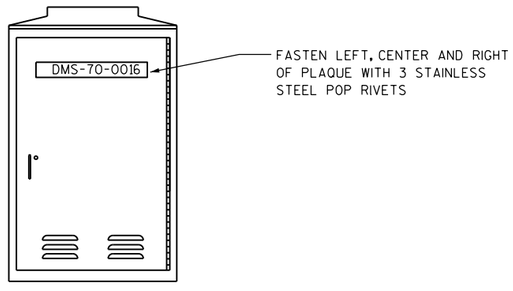
HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.

VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

2



ITS FIELD CABINET IDENTIFICATION PLAQUE DETAIL



ITS FIELD CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)

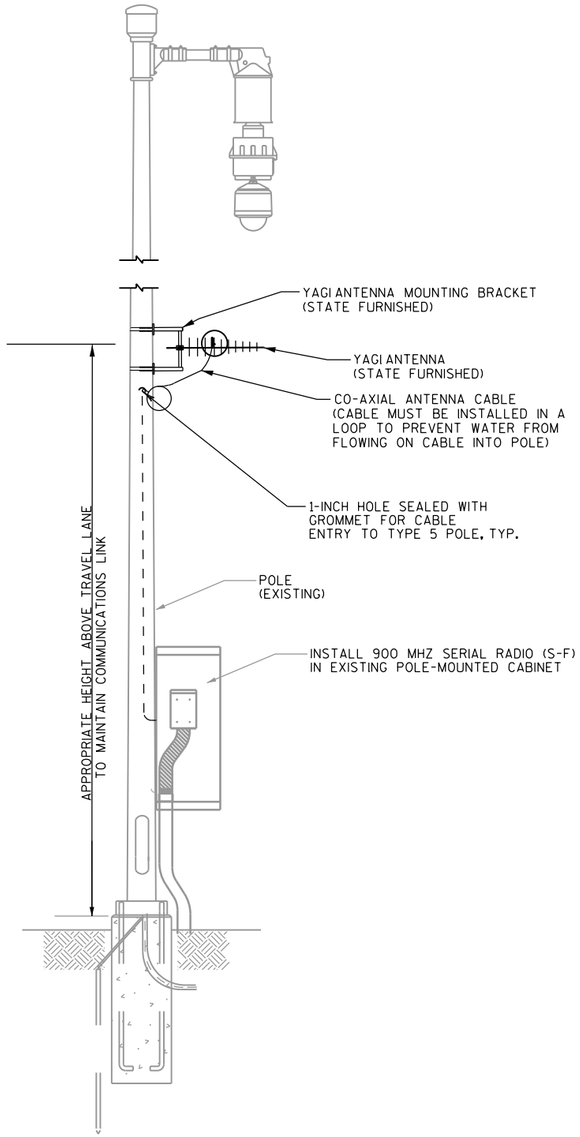
LEGEND STATION TYPE

RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

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.

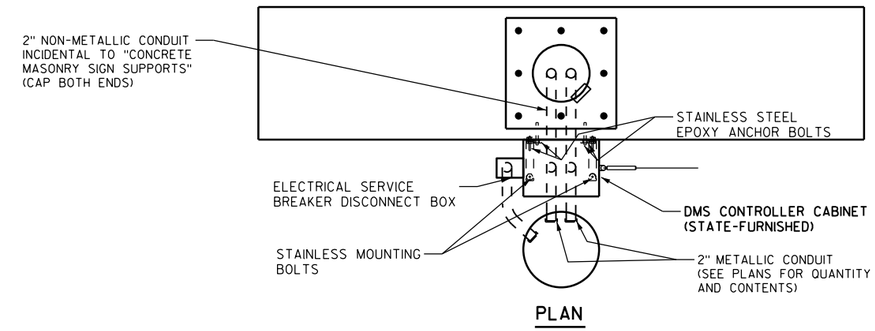
2



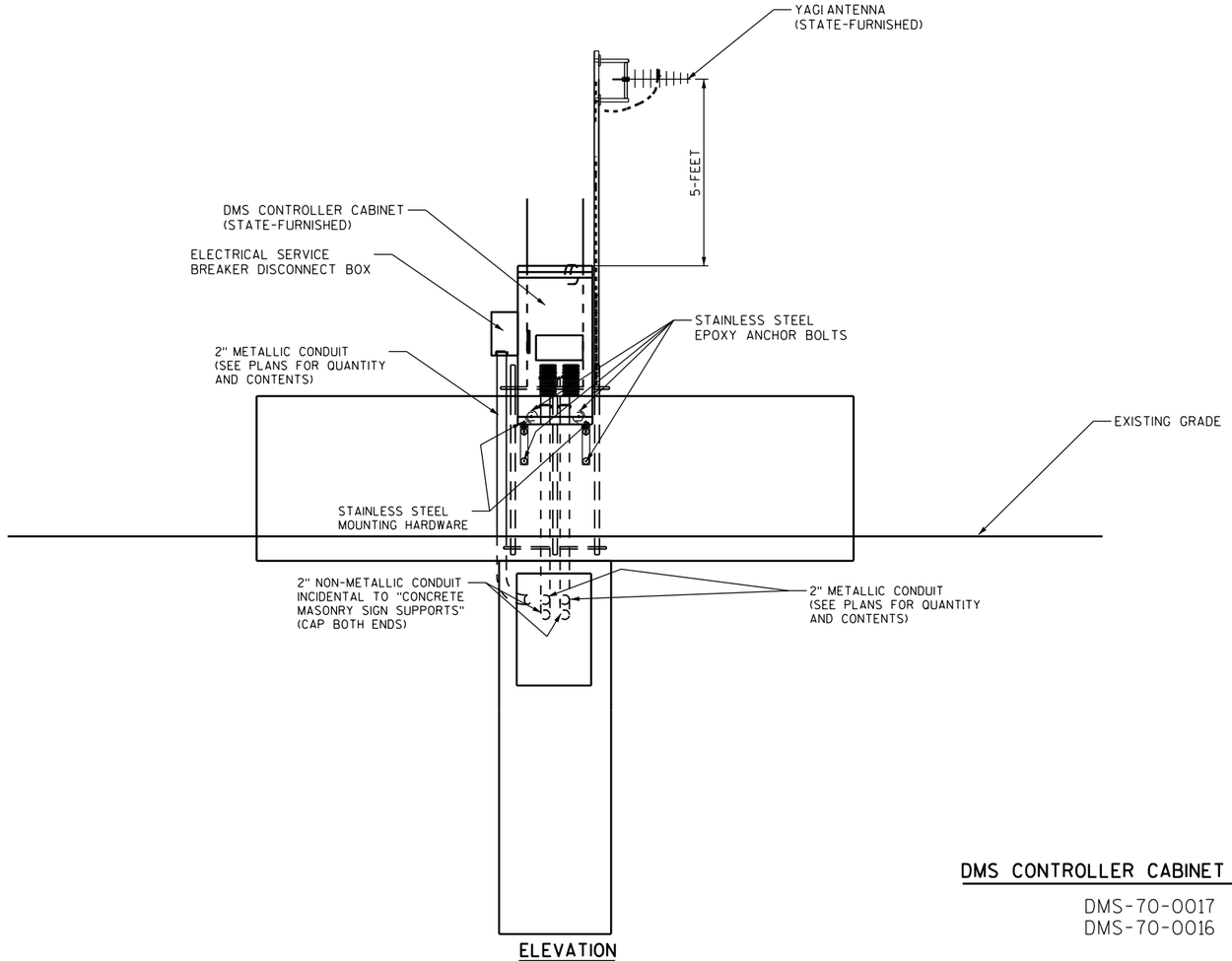
900 MHZ SERIAL RADIO AND YAGI ANTENNA INSTALLATION ON EXISTING CAMERA POLE

EX-CCTV-70-0064 (US 41 AND STH 21)
EX-CCTV-70-0066 (US 41 AND STH 76)

2

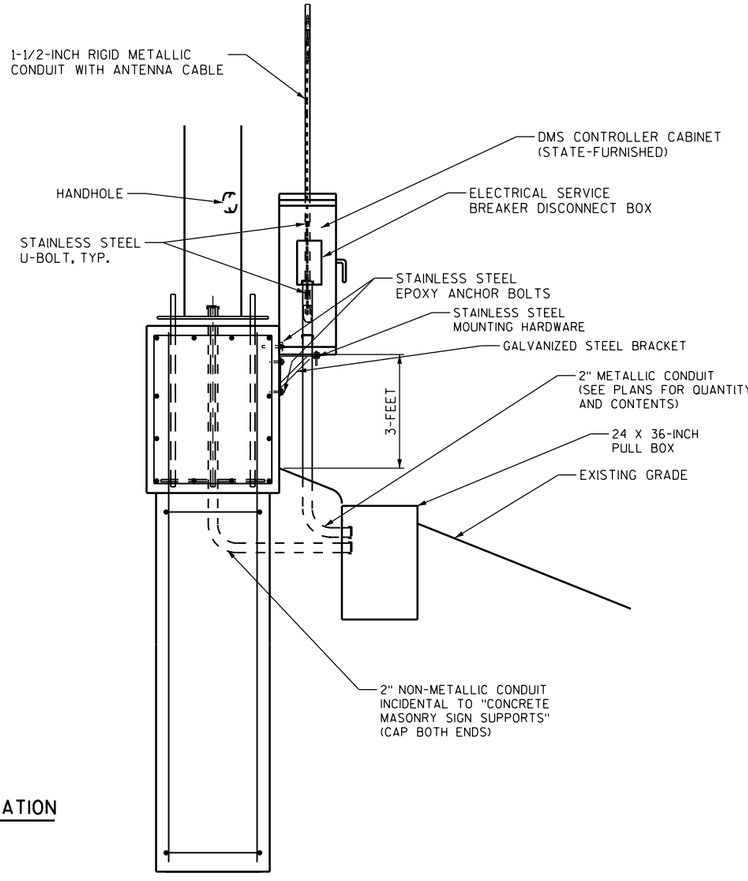


PLAN



ELEVATION

LOOKING EAST (DMS-70-0017)
LOOKING WEST (DMS-70-0016)



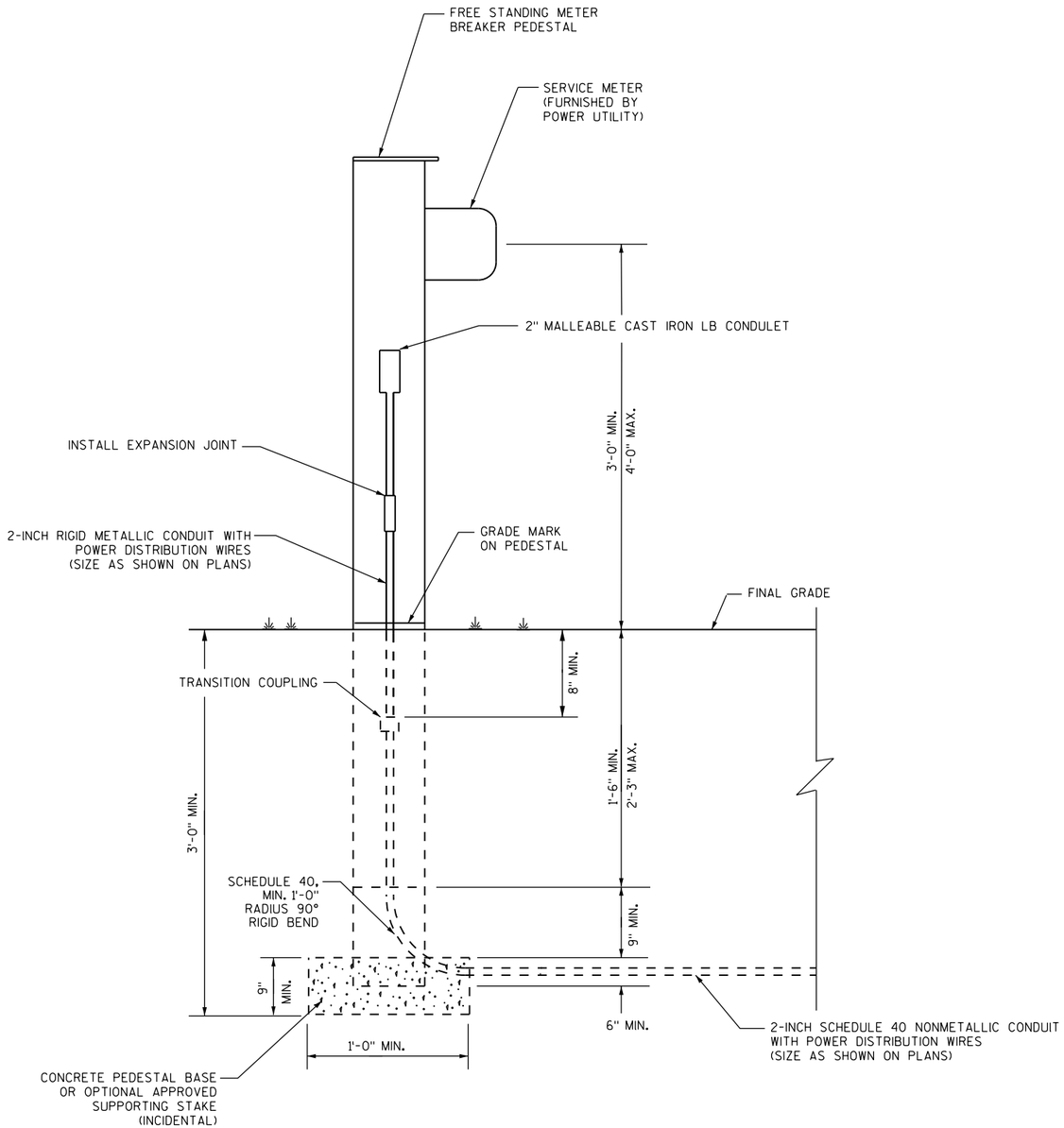
SIDE VIEW

LOOKING SOUTH (DMS-70-0017)
LOOKING NORTH (DMS-70-0016)

DMS CONTROLLER CABINET INSTALLATION

DMS-70-0017
DMS-70-0016

2



ELECTRICAL SERVICE METER BREAKER PEDESTAL

NOTES

1) MINIMUM REQUIREMENT SHOWN. ADDITIONAL BREAKERS MAY BE REQUIRED.

2

2

USH 41 SB

USH 41 NB

508'S0A' 510'S0A' 512'S0A' 514'S0A' 516'S0A' 518'S0A' 520'S0A' 522'S0A'

508+00 509+00 510+00 511+00 512+00 513+00 514+00 515+00 516+00 517+00 518+00 519+00 520+00 521+00 522+00 523+00

508'N0A' 510'N0A' 512'N0A' 514'N0A' 518'N0A' 520'N0A' 522'N0A'

18'WAN' 20'WAN' 22'WAN' 24'WAN' 26'WAN' 28'WAN' 30'WAN' 32'WAN'

18'KON' 20'K 22'KON' 24'KON' 28'KON' 30'KON' 32'KON'

PB1

DMS-70-0016

(2) 2-INCH NONMETALLIC CONDUITS (FOR FUTURE USE)

S-70-0187 (SEE STRUCTURE PLANS)

PB1

MB1

PLACE METER BREAKER PEDESTAL AGAINST EAST SIDE OF R/W FENCE.

(1) POLE-MOUNT CABINET (S-F)
(1) BREAKER DISCONNECT BOX
(1) 900 MHZ YAGI ANTENNA (S-F)
(1) 900 MHZ SERIAL COMMUNICATIONS RADIO (S-F)
(1) ETHERNET SWITCH W/TERMINAL SERVER (S-F)
(NOTE: 900 MHZ SERIAL RADIO TO BE LINKED TO A 900 MHZ SERIAL RADIO AND YAGI ANTENNA THAT WILL BE INSTALLED AT CCTV-70-0064 AT THE USH 41 / WIS 21 INTERCHANGE)

(1) 2-INCH METALLIC CONDUIT WITH (3) NO. 6 AWG LIGHTING WIRES

(1) 2-INCH NONMETALLIC CONDUIT WITH (3) NO. 6 AWG LIGHTING WIRES

EXISTING FIBER OPTIC LINE

BUILDING

CONCRETE SIDEWALK

ASPHALT PARKING LOT

DETENTION POND

OFFICE BUILDING

N

PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	ITS PLANS	SHEET 17 E

2

2

N

W. SUNNYVIEW RD.

SIGN

C UC

OH

PLACE METER METER AGAINST WEST SIDE OF R/W FENCE

(1) 2-INCH METALLIC CONDUIT
(1) WITH (3) NO. 6 AWG LIGHTING WIRES

(1) POLE-MOUNT CABINET (S-F)
(1) BREAKER DISCONNECT BOX
(1) 900 MHZ YAGI ANTENNA (S-F)
(1) 900 MHZ SERIAL COMMUNICATIONS RADIO (S-F)
(1) ETHERNET SWITCH W/TERMINAL SERVER (S-F)
(NOTE: 900 MHZ SERIAL RADIO TO BE LINKED TO A 900 MHZ SERIAL RADIO AND YAGI ANTENNA THAT WILL BE INSTALLED AT CCTV-70-0066 AT THE USH 41 / WIS 76 INTERCHANGE)

MB2

PB2

(1) 2-INCH NONMETALLIC CONDUIT
(1) WITH (3) NO. 6 AWG LIGHTING WIRES

(2) 2-INCH NONMETALLIC CONDUITS
(FOR FUTURE USE)

746'SAB' 748'SAB' 750'SAB' 752'SAB' 754'SAB' 756'SAB' 758'SAB' 760'SAB'

746'NAB' 748'NAB' 750'NAB' 752'NAB' 754'NAB' 756'NAB' 758'NAB' 760'NAB'

USH 41 SB

USH 41 NB

4°

S-70-0188
(SEE STRUCTURE PLANS)

DMS-70-0017

EXISTING FIBER OPTIC LINE

PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	ITS PLANS	SHEET 18	E

FILE NAME : \\mlww400\ingrproj\59271\11200971_oshkosh_dms\cds\oshkosh_dms_fm10.dgn PLOT DATE : 11/7/2013 PLOT BY : pkutz PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

PT	STATION	OFFSET	LT/RT	NORTHING	EASTING	ELEV	RADIUS
10	11+22.73	0.00	RT	445480.4762	778634.9239	0.00	
11	11+22.73	50.00	LT	445509.5763	778594.2645	891.49	50
12	11+72.73	49.93	LT	445550.1948	778623.4217	893.24	
13	11+73.01	247.96	LT	445665.6742	778462.5492	893.21	
14	14+71.68	451.21	LT	446020.6002	778465.0921	891.05	
15	16+31.48	446.29	LT	446141.4054	778551.8101	891.11	
16	16+18.35	156.39	LT	445972.1809	778787.5537	892.43	
17	12+96.55	162.50	LT	445716.4044	778603.9490	893.00	
18	12+96.46	92.50	LT	445675.5843	778660.8148	0.00	70
19	12+26.46	92.60	LT	445618.7185	778619.9947	893.29	
20	12+26.40	50.07	LT	445593.9189	778654.5426	893.22	
21	12+76.40	50.00	LT	445634.5373	778683.6999	890.59	50
22	12+76.37	0.00	RT	445605.3101	778724.4987	892.74	
23	12+49.02	271.32	LT	445741.0835	778487.7907	894.50	
24	13+43.39	336.85	LT	445855.0806	778488.6074	894.50	
25	14+68.41	364.69	LT	445968.8991	778534.5425	893.00	
26	15+26.12	420.09	LT	446047.8413	778521.5757	893.00	
27	15+97.28	354.10	LT	446062.4290	778610.3856	893.00	
28	15+30.74	299.77	LT	445983.4868	778623.3524	893.00	
29	16+82.35	489.44	LT	446207.5764	778543.4152	888.99	
30	16+82.72	484.45	LT	446205.1646	778547.7995	887.99	
31	16+70.65	408.50	LT	446153.5975	778604.8461	888.99	
32	16+76.61	407.52	LT	446158.0610	778608.9254	887.63	
33	18+03.90	413.29	LT	446267.8658	778673.5605	889.00	
34	18+02.96	417.70	LT	446269.4911	778669.3570	888.10	
35	17+83.07	492.36	LT	446293.5708	778595.9356	889.00	
36	17+78.77	490.73	LT	446289.0832	778594.9568	888.00	
37	18+30.58	442.84	LT	446306.3476	778663.3651	887.69	
38	13+17.17	318.51	LT	445823.0814	778488.3781	895.70	
39	13+08.97	312.77	LT	445813.0817	778488.3065	895.70	
40	12+83.35	295.52	LT	445783.0824	778488.0916	895.70	
41	12+75.17	289.76	LT	445773.0827	778488.0199	895.70	

(1) REFER TO "SCALE RISER DIAGRAM" FOR CONDUIT AND WIRE REQUIREMENTS ASSOCIATED WITH TRUCK SCALE EQUIPMENT.

P.L.

R/W

CTH N

N

BIORETENTION BASIN (SEE DETAIL)

STORAGE LEAN-TO

SALT SHED BUILDING

WETLAND BOUNDARY

3'(TYP.)

(1) WEIGHT INDICATOR (SEE WEIGHT INDICATOR MOUNTING DETAIL)

(1) REMOTE DISPLAY (SEE REMOTE DISPLAY MOUNTING DETAIL)

CIRCUIT 14

CIRCUIT 4

TRUCK SCALE

5-INCH ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

5.30%

2.20%

2.10%

1.70%

2.30%

1.30%

2.20%

2.0%

2.0%

R 70'

R 50'

R 50'

54'

30'

80'

60'

BEGIN PROJECT
STA. 11+22.81
Y=445,972.869
X=778,791.740

END PROJECT
STA. 16+21.21

WPS

WETLAND BOUNDARY

STH 26

R/W

OHWM

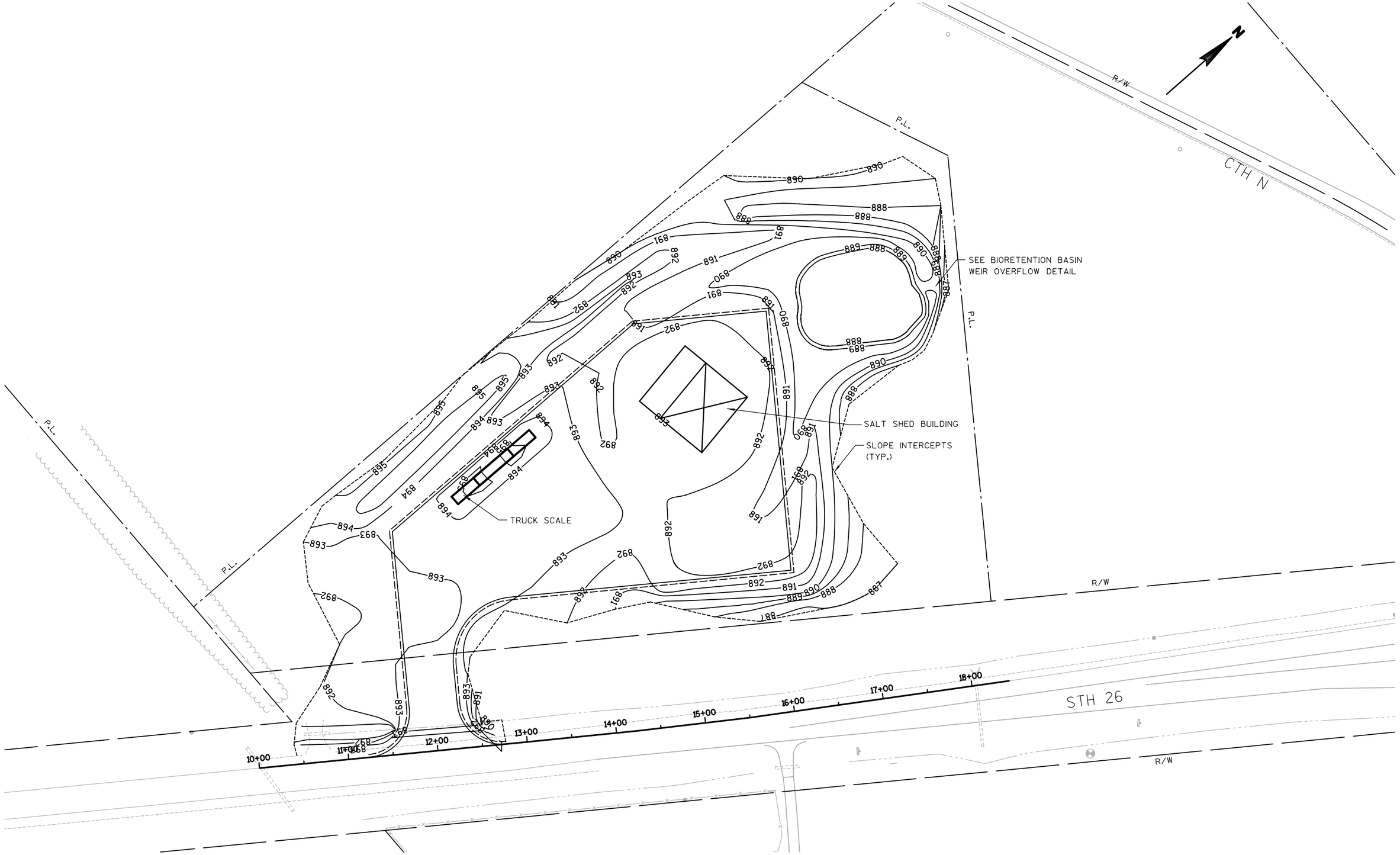
10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00

STA. 10+67 LT
F.E. TO BE REMOVED

STA. 12+00 LT
CONSTRUCT C.E.

PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	PLAN DETAIL	SHEET 19	E

2



PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	CONTOUR MAP	SHEET	E

FILE NAME : S:\MAD\1000--1099\1089\297\Micros\Plan\021601_cm.dgn PLOT DATE : 7/25/2013 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

2

LEGEND

- SILT FENCE
- RIPRAP HEAVY
- TOPSOIL SPECIAL (8' DIAMETER) (SEE NON-BED TREE PLANTING DETAIL)
- EROSION MAT CLASS ITYPE A
- ROCK BAGS (DITCH CHECK)
- SLOPE INTERCEPT

N

R/W

CTH N

P.L.

TALL FESCUE SEED AND EROSION MAT CLASS ITYPE A (POND EL.=888.00 TO EL.=889.00

SEEDING MIXTURE NO. 70 AND EROSION MAT CLASS ITYPE A (POND EL.=888.00)

PIPE UNDERDRAIN WRAPPED 4-INCH

APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 4-INCH

RIPRAP HEAVY (SEE ENDWALL TREATMENT DETAIL)

PIPE UNDERDRAIN UNPERFORATED 4-INCH

WETLAND BOUNDARY

SALT SHED BUILDING

TRUCK SCALE

REMOVING SMALL PIPE CULVERTS REQ'D.

WPS

OH

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00

RIPRAP HEAVY

STH 26

STA. 12+00
1-18"X 88' CP
CLASS III REQ'D.
2-18" AECP REQ'D.

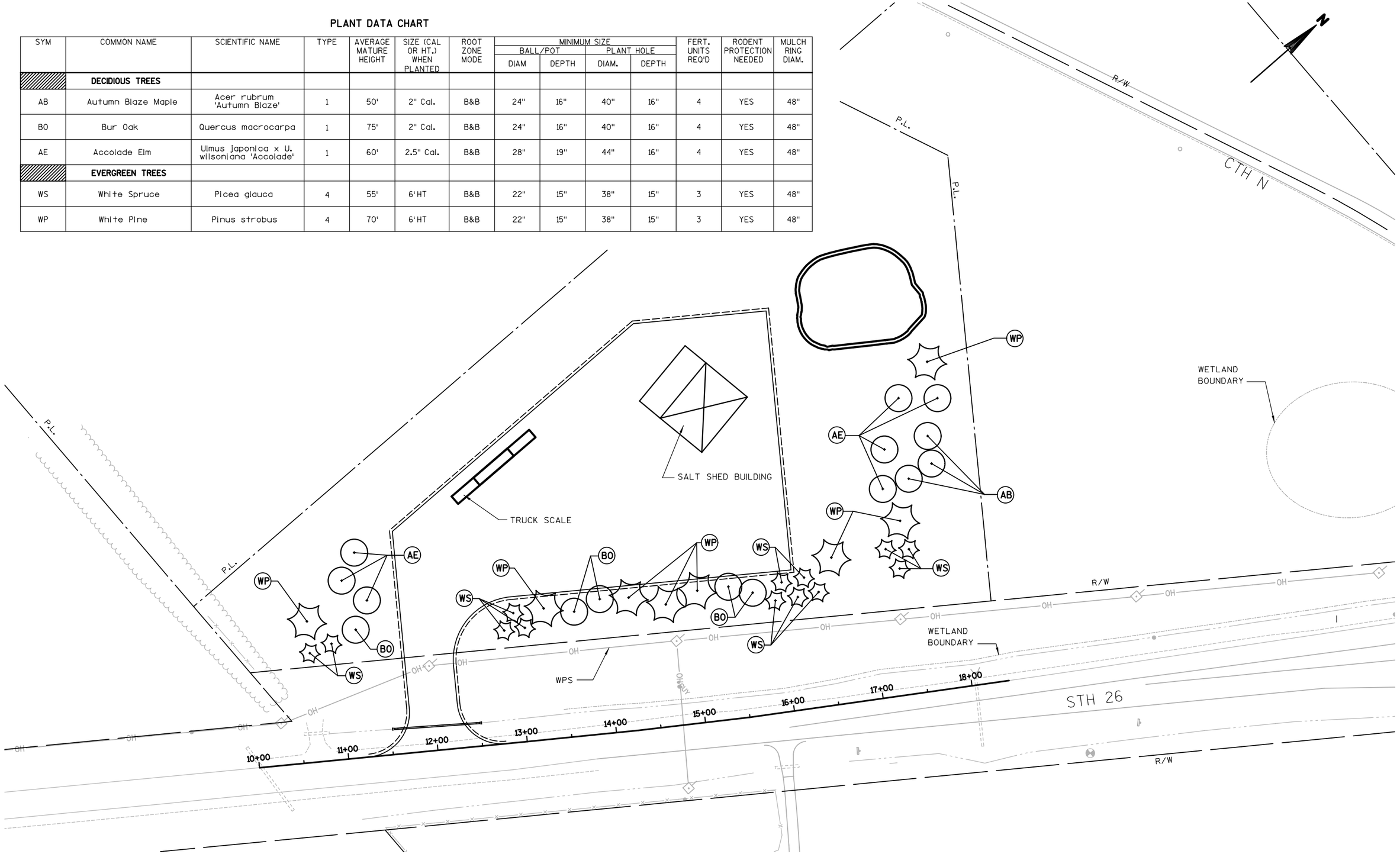
PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	EROSION CONTROL DETAIL	SHEET	E

FILE NAME : S:\MAD\1000--1099\1089\297\Micros\Plan\022001_ec.dgn PLOT DATE : 11/5/2013 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

PLANT DATA CHART

SYM	COMMON NAME	SCIENTIFIC NAME	TYPE	AVERAGE MATURE HEIGHT	SIZE (CAL OR HT.) WHEN PLANTED	ROOT ZONE MODE	MINIMUM SIZE BALL/POT DIAM	MINIMUM SIZE BALL/POT DEPTH	MINIMUM SIZE PLANT HOLE DIAM.	MINIMUM SIZE PLANT HOLE DEPTH	FERT. UNITS REQ'D	RODENT PROTECTION NEEDED	MULCH RING DIAM.
	DECIDIOUS TREES												
AB	Autumn Blaze Maple	Acer rubrum 'Autumn Blaze'	1	50'	2" Cal.	B&B	24"	16"	40"	16"	4	YES	48"
BO	Bur Oak	Quercus macrocarpa	1	75'	2" Cal.	B&B	24"	16"	40"	16"	4	YES	48"
AE	Accolade Elm	Ulmus japonica x U. wilsoniana 'Accolade'	1	60'	2.5" Cal.	B&B	28"	19"	44"	16"	4	YES	48"
	EVERGREEN TREES												
WS	White Spruce	Picea glauca	4	55'	6'HT	B&B	22"	15"	38"	15"	3	YES	48"
WP	White Pine	Pinus strobus	4	70'	6'HT	B&B	22"	15"	38"	15"	3	YES	48"



PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	LANDSCAPING DETAIL	SHEET 22	E

2

2

LEGEND

- SIGN-MOVE EXISTING
- BUTTERFLY
- CANTILEVER
- SIGN BRIDGE
- STEEL POSTS

N

SIGNING NOTES

DO NOT MOVE OR REMOVE ANY SPECIFIC INFORMATION SIGNS (BLUE GAS, FOOD, LODGING, CAMPING OR ATTRACTION SIGNS) OR THEIR ASSOCIATED POSTS. A SEPARATE CONTRACTOR, DERSE, INC., MAINTAINS THESE SIGNS. CONTACT MARK ROGNSVOOG OF THE DERSE COMPANY AT (800) 345-5772 A MINIMUM OF 14 CALENDAR DAYS IN ADVANCE TO COORDINATE MOVING, REMOVING OR RE-INSTALLATION OF THESE SIGNS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.

CTH E
WITZEL AVE.

SIGN LOCATION
TO REMAIN

9th Ave	1/2
Hwy 44	2
Hwy 26	4 1/2

E8-1
192" X 90"

STA. 519'N0A'+00

WASHBURN STREET

USH 41

USH 41 SOUTHBOUND
USH 41 NORTHBOUND

KOELLER ROAD

STH 21

SIGN LOCATION
TO REMAIN

UW Oshkosh
Titan Stadium
EXIT 119

E6-51
168" X 84"

CANTILEVER SIGN
STRUCTURE - DMS
S-70-187
STA. 514+28.55

SIGN LOCATION
TO REMAIN

Hwy 21	1/2
Hwy 45	2 1/4
Hwy 76	5 1/4

E8-1
192" X 90"

1

Omro
EXIT 119

E3-1
132" X 60"

STA. 527+83

SIS

SIGN LOCATION
TO REMAIN

E1-5
108" X 30"

EXIT 119
21
Omro Rd
Oshkosh Ave
3/4 MILE

E6-51
192" X 144"

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	PERMANENT SIGNING-TYPE I	SHEET 23	E

FILE NAME : N:\spo\traffic\SIGNING\Projects\General Signing\023201_ps.dgn PLOT DATE : 07-NOV-2013 09:23 PLOT BY : dotjlf PLOT NAME : PLOT SCALE : 400:1

WISDOT/CADDS SHEET 42

2

STA. 17+07
687.0' LT

P.L.

5-FT

STA. 18+42
578.0' LT

R/W

CTH N

FENCE WOVEN WIRE 5-FT (TYP.)

5-FT

P.L.

5-FT

P.L.

SALT SHED BUILDING

TRUCK SCALE

P.L.

STA. 18+30
95.9' LT

R/W

STA. 11+65
111.3' LT

STA. 9+51
184.8' LT

5-FT

5-FT

STA. 12+37
111.2' LT

WPS

5-FT

STA. 10+03
111.4' LT

OH

10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00 18+00

STH 26

R/W

STA. 10+00 - STA. 10+05, LT
REMOVING FENCE REQ'D

PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	FENCING DETAIL	SHEET	E

FILE NAME : S:\MAD\1000--1099\1089\297\Micros\Plan\027101_fn.dgn PLOT DATE : 7/25/2013 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

2

PI = 10+00.00
Y = 445,380.675
X = 778,563.496

PI = 13+00.06
Y = 445,624.684
X = 778,738.134

PI = 14+24.88
Y = 445,726.435
X = 778,810.415

PI = 15+49.84
Y = 445,829.418
X = 778,881.205

PI = 18+41.71
Y = 446,073.978
X = 779,040.502

L & M REAL
ESTATE INC

R/W

CTH N

N

P.L.

P.L.

MARY LOU JONES

WISCONSIN DEPARTMENT
OF TRANSPORTATION

MARY LOU JONES

WETLAND
BOUNDARY

P.L.

P.L.

SALT SHED BUILDING

TRUCK SCALE

FOREST F JOHNSON

WPS

OH

R/W

WETLAND
BOUNDARY

STH 26

10+00
11+00
12+00
13+00
14+00
15+00
16+00
17+00
18+00

N 35° 35' 30" E
N 35° 23' 20" E
N 34° 30' 16" E
N 33° 04' 43" E

R/W

PI 10+00.00
PI 13+00.06
PI 14+24.88
PI 15+49.84
PI 18+41.71

BARR REAL ESTATE
DEVELOP/T & B

GENE SCHULTZ

2

PROJECT NO: 1120-10-70	HWY: USH 41	COUNTY: WINNEBAGO	ALIGNMENT DETAIL	SHEET 25	E

FILE NAME : S:\MAD\1000--1099\1089\297\Micros\Plan\027201_ad.dgn PLOT DATE : 7/25/2013 PLOT BY : _username_ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

DATE 15NOV13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1120-10-70 QUANTITY
0010	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	1.000	1.000
0020	204.0170	REMOVING FENCE **P**	LF	80.000	80.000
0030	205.0100	EXCAVATION COMMON **P**	CY	5,750.000	5,750.000
0040	208.0100	BORROW	CY	6,300.000	6,300.000
0050	209.0100	BACKFILL GRANULAR	CY	4,475.000	4,475.000
0060	213.0100	FINISHING ROADWAY (PROJECT) 01. 1120-10-70	EACH	1.000	1.000
0070	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	150.000	150.000
0080	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	8,400.000	8,400.000
0090	455.0605	TACK COAT	GAL	600.000	600.000
0100	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	3,430.000	3,430.000
0110	520.0118	CULVERT PIPE CLASS III 18-INCH	LF	88.000	88.000
0120	520.1018	APRON ENDWALLS FOR CULVERT PIPE 18-INCH	EACH	2.000	2.000
0130	606.0300	RIPRAP HEAVY	CY	9.000	9.000
0140	612.0204	PIPE UNDERDRAIN UNPERFORATED 4-INCH	LF	29.000	29.000
0150	612.0404	PIPE UNDERDRAIN WRAPPED 4-INCH	LF	120.000	120.000
0160	612.0804	APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 4-INCH	EACH	1.000	1.000
0170	616.0100	FENCE WOVEN WIRE (HEIGHT) 01. 5-FT	LF	2,395.000	2,395.000
0180	619.1000	MOBILIZATION	EACH	1.000	1.000
0190	625.0500	SALVAGED TOPSOIL	SY	11,960.000	11,960.000
0200	627.0200	MULCHING	SY	12,100.000	12,100.000
0210	628.1504	SILT FENCE	LF	2,865.000	2,865.000
0220	628.1520	SILT FENCE MAINTENANCE	LF	2,865.000	2,865.000
0230	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	2.000	2.000
0240	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	2.000	2.000
0250	628.2002	EROSION MAT CLASS I TYPE A	SY	1,515.000	1,515.000
0260	628.7560	TRACKING PADS	EACH	1.000	1.000
0270	628.7570	ROCK BAGS	EACH	7.000	7.000
0280	629.0210	FERTILIZER TYPE B	CWT	9.000	9.000
0290	630.0130	SEEDING MIXTURE NO. 30	LB	265.000	265.000
0300	630.0170	SEEDING MIXTURE NO. 70	LB	4.000	4.000
0310	630.0200	SEEDING TEMPORARY	LB	400.000	400.000
0320	630.0300	SEEDING BORROW PIT	LB	120.000	120.000
0330	632.0101	TREES (SPECIES, ROOT, SIZE) 01. AUTUMN BLAZE MAPLE, B & B, 2-INCH CAL	EACH	3.000	3.000
0340	632.0101	TREES (SPECIES, ROOT, SIZE) 02. BUR OAK, B & B, 2-INCH CAL	EACH	5.000	5.000
0350	632.0101	TREES (SPECIES, ROOT, SIZE) 03. ACCOLADE ELM, B & B, 2.5-INCH CAL	EACH	7.000	7.000
0360	632.0101	TREES (SPECIES, ROOT, SIZE) 04. WHITE SPRUCE, B & B, 6-FOOT HT	EACH	13.000	13.000
0370	632.0101	TREES (SPECIES, ROOT, SIZE) 05. WHITE PINE, B & B, 6-FOOT HT	EACH	8.000	8.000
0380	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	13.000	13.000
0390	633.5200	MARKERS CULVERT END	EACH	2.000	2.000
0400	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	29.200	29.200
0410	636.0500	SIGN SUPPORTS STEEL REINFORCEMENT	LB	68.000	68.000
0420	636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	5,980.000	5,980.000
0430	638.2101	MOVING SIGNS TYPE I	EACH	1.000	1.000
0440	638.4100	MOVING STRUCTURAL STEEL SIGN SUPPORTS	EACH	2.000	2.000
0450	641.1200	SIGN BRIDGE CANTILEVERED (STRUCTURE) 01. S-70-0187	LS	1.000	1.000

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DATE 15NOV13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1120-10-70 QUANTITY
0460	641.1200	SIGN BRIDGE CANTILEVERED (STRUCTURE) 02. S-70-0188	LS	1.000	1.000
0470	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1120-10-70	EACH	1.000	1.000
0480	643.0300	TRAFFIC CONTROL DRUMS	DAY	1,545.000	1,545.000
0490	643.0900	TRAFFIC CONTROL SIGNS	DAY	515.000	515.000
0500	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	24.000	24.000
0510	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	160.000	160.000
0520	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	50.000	50.000
0530	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	2.000	2.000
0540	655.0625	ELECTRICAL WIRE LIGHTING 6 AWG	LF	240.000	240.000
0550	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. DMS-70-0016	LS	1.000	1.000
0560	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. DMS-70-0017	LS	1.000	1.000
0570	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 01. DMS-70-0016	LS	1.000	1.000
0580	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 02. DMS-70-0017	LS	1.000	1.000
0590	659.0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	2.000	2.000
0600	670.0100	FIELD SYSTEM INTEGRATOR	LS	1.000	1.000
0610	670.0200	ITS DOCUMENTATION	LS	1.000	1.000
0620	675.0400.S	INSTALL ETHERNET SWITCH	EACH	2.000	2.000
0630	SPV.0035	SPECIAL 01. TOPSOIL SPECIAL	CY	144.000	144.000
0640	SPV.0035	SPECIAL 02. CLEAR STONE 3/4 INCH	CY	300.000	300.000
0650	SPV.0035	SPECIAL 03. PEA GRAVEL BEDDING	CY	100.000	100.000
0660	SPV.0035	SPECIAL 04. ENGINEERED SOILS	CY	360.000	360.000
0670	SPV.0060	SPECIAL 01. INSTALL DMS CONTROLLER CABINET	EACH	2.000	2.000
0680	SPV.0060	SPECIAL 02. INSTALL SPREAD SPECTRUM RADIO	EACH	4.000	4.000
0690	SPV.0060	SPECIAL 03. INSTALL CABINET MOUNT YAGI ANTENNA	EACH	2.000	2.000
0700	SPV.0060	SPECIAL 04. INSTALL POLE MOUNT YAGI ANTENNA	EACH	2.000	2.000
0710	SPV.0060	SPECIAL 05. INSTALL DYNAMIC MESSAGE SIGN	EACH	2.000	2.000
0720	SPV.0085	SPECIAL 01. TALL FESCUE SEED	LB	15.000	15.000
0730	SPV.0105	SPECIAL 01. SALT STORAGE FACILITY	LS	1.000	1.000
0740	SPV.0105	SPECIAL 02. SURVEY PROJECT I.D. 1120-10-70	LS	1.000	1.000
0750	SPV.0105	SPECIAL 03. TRUCK SCALE	LS	1.000	1.000

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REMOVING SMALL PIPE CULVERTS

CATEGORY	STATION	LOCATION	203.0100 EACH	REMARKS
0010	10+67	30' LT	1	18"X28' CMCP

REMOVING FENCE

CATEGORY	STATION - STATION	LOCATION	204.0170 LF
0010	10+00 - 10+05	LT	80

FINISHING ROADWAY

CATEGORY	PROJECT I.D.	213.0100 EACH
0010	1120-10-70	1

EARTHWORK SUMMARY

CATEGORY	STATION - STATION	LOCATION	(1) EXCAVATION COMMON	(2) SALVAGED/ UNUSABLE PAVEMENT MATERIAL REMOVAL	(3) AVAILABLE MATERIAL	(4) EBS EXCAVATION 5% OF AVAILABLE MATERIAL	* 209.0100 BACKFILL GRANULAR	(5) 205.0100 TOTAL EXCAVATION COMMON	(6) EBS EXCAVATION REDUCED FACTOR 0.8	(1) SITE UNEXPANDED FILL	(8) EXPANDED FILL FACTOR 1.30	(9) MASS ORDINATE	(10) 208.0100 -BORROW	(10) +WASTE
			CY	CY	CY	CY	CY	CY	CY	CY	CY		CY	CY
0010	11+22.81 - 16+21.21	LT & RT	5,490	0	5,490	275	275	5,765	220	9,273	11,769	-6,279	-6,279	
	TOTALS		5,490	0	5,490	275	275	5,765	220	9,273	11,769	-6,279	-6,279	0
	PAY QUANTITIES		-	-	-		275	5,750		-	-	-	6,300	-

1) QUANTITIES BASED ON PROPOSED CONTOURS
2) SALVAGED/UNUSABLE MATERIALS ARE INCLUDED IN EXCAVATION COMMON COLUMN
3) AVAILABLE MATERIAL = EXCAVATION COMMON - SALVAGED MATERIALS
4) EBS EXCAVATION TO BE BACKFILLED WITH BACKFILL GRANULAR
5) TOTAL EXCAVATION COMMON = EXCAVATION COMMON + EBS EXCAVATION
6) REDUCED EBS IN FILL: EXCAVATED EBS MATERIAL IS USEABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.8
7) BUILDING FILL TO BE FILLED WITH BACKFILL GRANULAR
8) (EXPANDED FILL FACTOR = (UNEXPANDED FILL - EBS EXCAVATION REDUCED)*1.30
9) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE CATEGORY
   PLUS QTY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY,
   MINUS QTY INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY
10) WASTE = POSITIVE MASS ORDINATE, BORROW = NEGATIVE MASS ORDINATE
11) BACKFILL GRANULAR = EBS EXCAVATION + BUILDING FILL

* ADDITIONAL QUANTITIES LISTED ELSEWHERE.

BASE AGGREGATE SUMMARY

CATEGORY	STATION - STATION	LOCATION	* 209.0100 BACKFILL GRANULAR CY	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
0010	11+22.81 - 16+21.21	LT	4200	150	8,400

* ADDITIONAL QUANTITIES LISTED ELSEWHERE.

ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES

CATEGORY	STATION - STATION	LOCATION	465.0120 TON	455.0605 TACK COAT GAL
0010	11+22.81 - 16+21.21	LT	3,430	600

3

CULVERT PIPE SUMMARY - MINOR SIDE ROAD, PRIVATE ENTRANCE, AND SLOPE DRAINS

CATEGORY	STATION	LOCATION	520.0118 CULVERT PIPE CLASS III 18-INCH LF	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	633.5200 MARKERS CULVERT END EACH	THICKNESS (INCHES) STEEL	THICKNESS (INCHES) ALUMINUM
0010	12+00	CE 26' LT	88	2	2	0.064	0.060

PIPE UNDERDRAIN SUMMARY

CATEGORY	STATION - STATION	LOCATION	612.0204 UNPERFORATED 4-INCH LF	612.0404 WRAPPED 4-INCH LF	612.0804 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONRETE 4-INCH EACH
0010	16+83 - 18+00	POND LT	---	120	---
	18+00 - 18+29	POND LT	29	---	1
		TOTALS	29	120	1

RIPRAP SUMMARY

CATEGORY	STATION	LOCATION	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
0010	18+29	443' LT	1	4
	11+52	28' LT	4	10
	12+51	26' LT	4	10
		TOTALS	9	24

FENCE WOVEN WIRE 5-FT

CATEGORY	STATION - STATION	LOCATION	616.0100 LF
0010	10+00 - 18+30	LT	2,395

FINISHING ITEMS

CATEGORY	STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0170 SEEDING MIXTURE NO. 70 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	SPV.0085.01 TALL FESCUE SEED LB	REMARKS
0010	11+22.81 - 16+21.21	LT	11,800	11,800	7	210	---	320	---	---	
	16+50	POND LT	160	---	---	---	---	---	---	10	INSTALL AT POND EL.=888.00 TO EL.=889.00
	16+50	POND LT	---	---	---	---	3	---	---	---	INSTALL AT POND EL.=888.00
	18+00	OVERFLOW WEIR	---	---	---	---	---	---	---	2	
	BORROW PIT	---	---	---	---	---	---	---	95	---	
	UNDISTRIBUTED		0	300	2	55	1	80	25	3	
		TOTALS	11,960	12,100	9	265	4	400	120	15	

MOBILIZATION

CATEGORY	PROJECT I.D.	619.1000 EACH
0010	1120-10-70	1

SILT FENCE

CATEGORY	STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SLIT FENCE MAINTENANCE LF
0010	10+50 - 18+42	LT	2,290	2,290
	UNDISTRIBUTED	LT	575	575
		TOTALS	2,865	2,865

MOBILIZATIONS EROSION CONTROL

CATEGORY	628.1905 EACH
0010	2

MOBILIZATIONS EMERGENCY EROSION CONTROL

CATEGORY	628.1910 EACH
0010	2

EROSION MAT

CATEGORY	STATION - STATION	LOCATION	628.2002 CLASS I TYPE A SY	REMARKS
0010	11+54 - 14+54	LT	100	
	16+50	POND LT	160	INSTALL AT POND EL.=888.00 TO EL.=889.00
	16+50	POND LT	920	INSTALL AT POND EL.=888.00
	18+00	OVERFLOW WEIR	35	
	UNDISTRIBUTED		300	
		TOTAL	1,515	

3

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MOVING OF PERMANENT SIGNING, TYPE I AND SIGN SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	638.2101 MOVING SIGNS, TYPE I W	X	H	EACH	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT LB	TYPE/SIZE OF STEEL	638.4100 MOVING STRUCT. STEEL SIGN SUPPORTS EACH	INFO ONLY - POST LENGTH TO BE VERIFIED BY CONTRACTOR POST NO. 1 LENGTH FT	POST NO. 2 LENGTH FT	OFFSET DISTANCE FT	DISTANCE BETWEEN POSTS (S) FT	REMARKS
1	USH 41, N. OF WITZEL AVE	E3-1	132"	X	60"	1	1.2	68	2-TYPE A	2	12.7	13.7	17.5	6.6	SEE SIGN PLAN SHEET, MOVE TO STA. 527+83
	PROJECT TOTALS					**1**	**1.2**	**68**		**2**					

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

3

TRACKING PADS

CATEGORY	628.7560 EACH
0010	1

ROCK BAGS

CATEGORY	STATION	LOCATION	628.7570 EACH
0010	12+96	LT	7

TREES

CATEGORY	BID ITEM NUMBER	SYMBOL	COMMON NAME	SIZE WHEN PLANTED	ROOT ZONE MODE	TOTAL QUANTITY EACH
0010	632.0101.01	AB	AUTUMN BLAZE MAPLE	2" CAL.	B&B	3
	632.0101.02	BO	BUR OAK	2" CAL.	B&B	5
	632.0101.03	AE	ACCOLADE ELM	2.5" CAL.	B&B	7
	632.0101.04	WS	WHITE SPRUCE	6' HT	B&B	13
	632.0101.05	WP	WHITE PINE	6' HT	B&B	8

LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES

CATEGORY	MONTH	632.9101 EACH
0010	JUNE 2014	2
	JULY 2014	2
	AUGUST 2014	2
	SEPTEMBER 2014	2
	OCTOBER 2014	2
	APRILL 2015	1
	MAY 2015	2
	TOTAL	13

TRAFFIC CONTROL

	643.0100 TRAFFIC CONTROL (1120-10-70)	643.0300		643.0900	
		DRUMS		SIGNS	
CATEGORY	EACH	EACH	DAYS	EACH	DAYS
0010	1	15	1,545	5	515

TOPSOIL SPECIAL

CATEGORY	STATION	LOCATION	SPV.0035.01 CY
0010	10+68	121.7' LT	4
	10+69	157.2' LT	4
	10+93	129.8' LT	4
	11+11	198.7' LT	4
	11+22	142.8' LT	4
	11+29	228.5' LT	4
	11+37	174.1' LT	4
	12+87	125.7' LT	4
	12+98	144.2' LT	4
	13+10	124.5' LT	4
	13+33	145.9' LT	4
	13+67	138.9' LT	4
	13+97	150.0' LT	4
	14+31	148.3' LT	4
	14+71	135.9' LT	4
	15+08	147.2' LT	4
	15+43	147.5' LT	4
	15+73	137.2' LT	4
	15+96	124.9' LT	4
	16+06	144.2' LT	4
	16+22	125.3' LT	4
	16+32	145.7' LT	4
	16+45	127.6' LT	4
	16+65	163.6' LT	4
	17+26	164.5' LT	4
	17+32	231.3' LT	4
	17+39	140.8' LT	4
	17+40	274.7' LT	4
	17+47	193.5' LT	4
	17+52	160.8' LT	4
	17+63	238.6' LT	4
	17+64	329.2' LT	4
	17+90	251.8' LT	4
	17+90	282.8' LT	4
	18+01	364.8' LT	4
	18+07	323.1' LT	4
			144

BIORETENTION BASIN SUMMARY

CATEGORY	STATION	LOCATION	SPV.0035.02 CLEAR STONE 3/4-INCH CY	SPV.0035.03 PEA GRAVEL BEDDING CY	SPV.0035.04 ENGINEERED SOILS CY
0010	16+50	LT	300	100	360

SALT STORAGE FACILITY

CATEGORY	STATION	LOCATION	SPV.0105.01 LS
0010	15+00	300' LT	1

SURVEY PROJECT

CATEGORY	PROJECT ID	SPV.0105.02 LS
0010	1120-10-70	1

TRUCK SCALE

CATEGORY	STATION	LOCATION	SPV.0105.03 LS
0010	12+85	295' LT	1

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ITS PULL BOXES

LOCATION	ITEM ID	653.0135 PULL BOXES STEEL 24 X 36 EACH
US 41 @ DMS-70-0016	PB01	1
US 41 @ DMS-70-0017	PB02	1
		2

ITS CONDUIT

LOCATION	LINEAR DISTANCE	652.0125 CONDUIT RIGID METALLIC 2-INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF
MB01 to PB01	15	--	15
PB01 to DMS-70-0016	5	10	10
MB02 to PB02	15	--	15
PB02 to DMS-70-0017	5	10	10
	TOTAL	20	50

ITS CABINETS AND CONTENTS

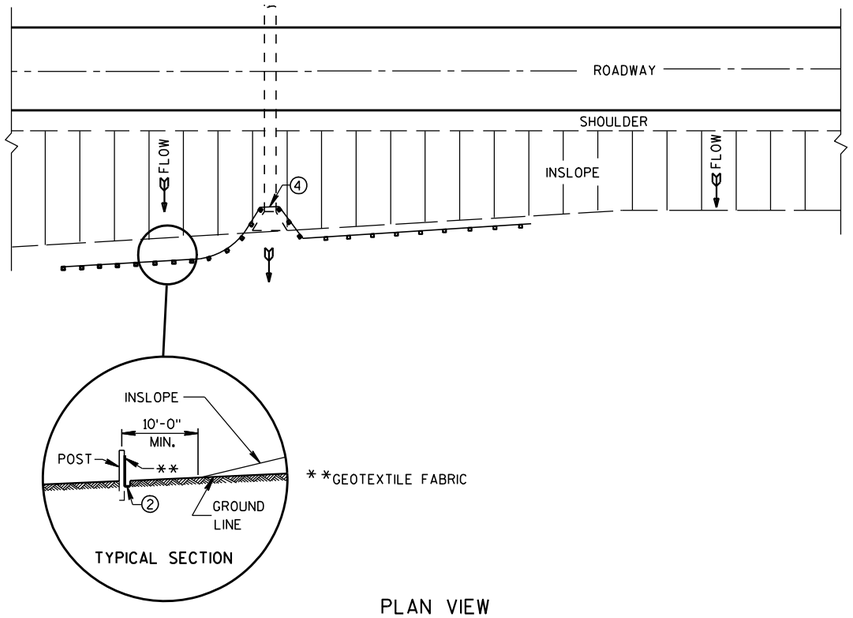
LOCATION	ITEM I.D.	659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	675.0400.S INSTALL ETHERNET SWITCH EACH	SPV.0060.01 INSTALL DMS CONTROLLER CABINET EACH	SPV.0060.02 INSTALL SPREAD SPECTRUM RADIO EACH	SPV.0060.03 INSTALL CABINET MOUNT YAGI ANTENNA EACH	SPV.0060.04 INSTALL POLE MOUNT YAGI ANTENNA EACH	SPV.0060.05 INSTALL DYNAMIC MESSAGE SIGN EACH
S-70-0187 (US 41 NB @ south of STH 21	DMS-70-0016	1	1	1	1	1	--	1
US 41 @ STH 21	EX-CCTV-70-0064	--	--	--	1	--	1	--
S-70-0188 (US 41 SB @ W. Sunnyview Rd.	DMS-70-0017	1	1	1	1	1	--	1
US 41 @ STH 76	EX-CCTV-70-0066	--	--	--	1	--	1	--
	TOTAL	2	2	2	4	2	2	2

ITS ELECTRICAL SERVICES

LOCATION	ITEM I.D.	MB I.D.	NUMBER OF WIRES	WIRE LINEAR DISTANCE FROM CABINET TO METER BREAKER	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	656.0200.01 ELECTRICAL SERVICE METER BREAKER PEDESTAL (DMS-70-0016) LS	656.0200.02 ELECTRICAL SERVICE METER BREAKER PEDESTAL (DMS-70-0017) LS	656.0500.01 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS-70-0016) LS	656.0500.02 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS-70-0017) LS
US 41 @ South of STH 21	DMS-70-0016	MB1	3	20	120	1	--	1	--
US 41 @ W. Sunnyview Rd.	DMS-70-0017	MB2	3	20	120	--	1	--	1
				TOTAL	240	1	1	1	1

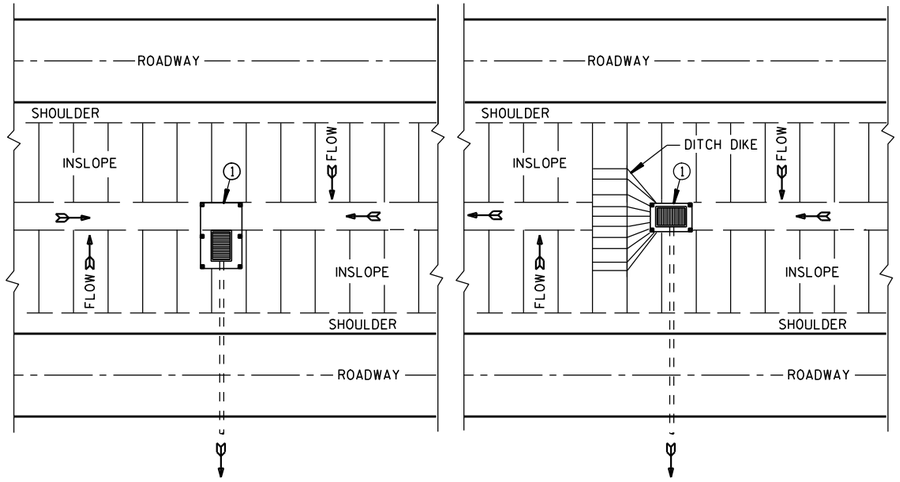
Standard Detail Drawing List

08E09-06	SILT FENCE
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
09B04-10	PULL BOX
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
14A02-01	TREE PLANTING DETAIL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15D28-01	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY



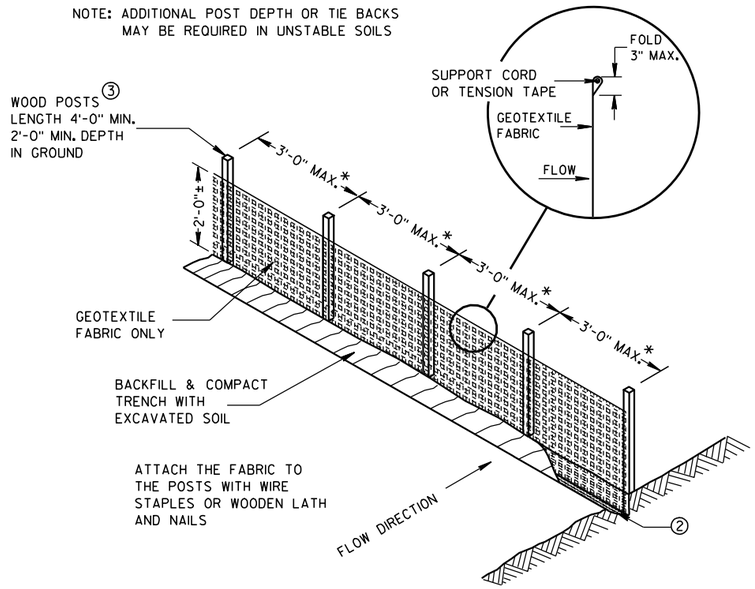
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



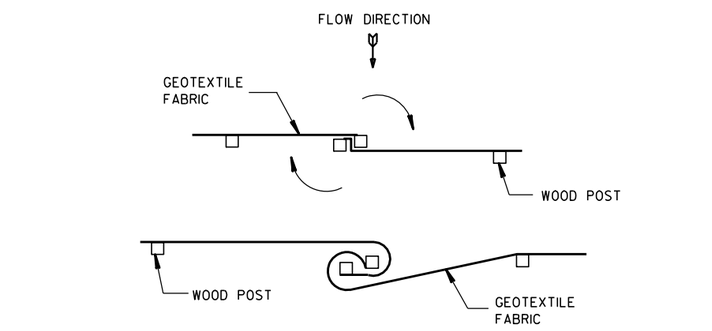
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

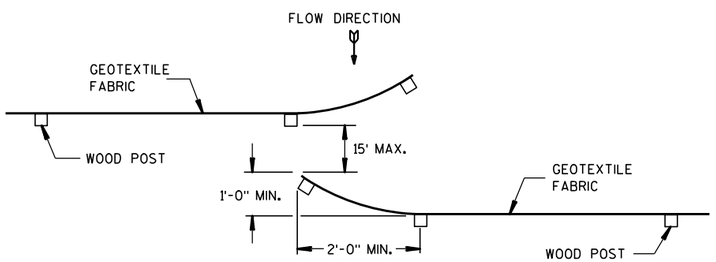


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



TWIST METHOD



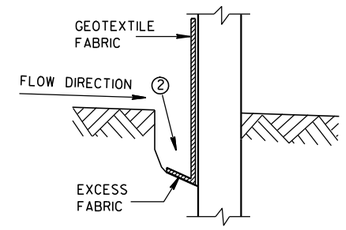
HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5

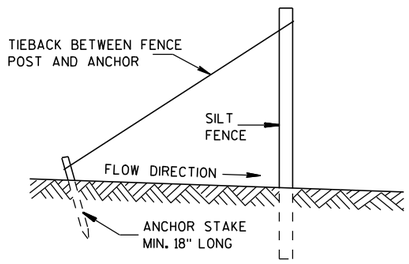
GENERAL NOTES

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 TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

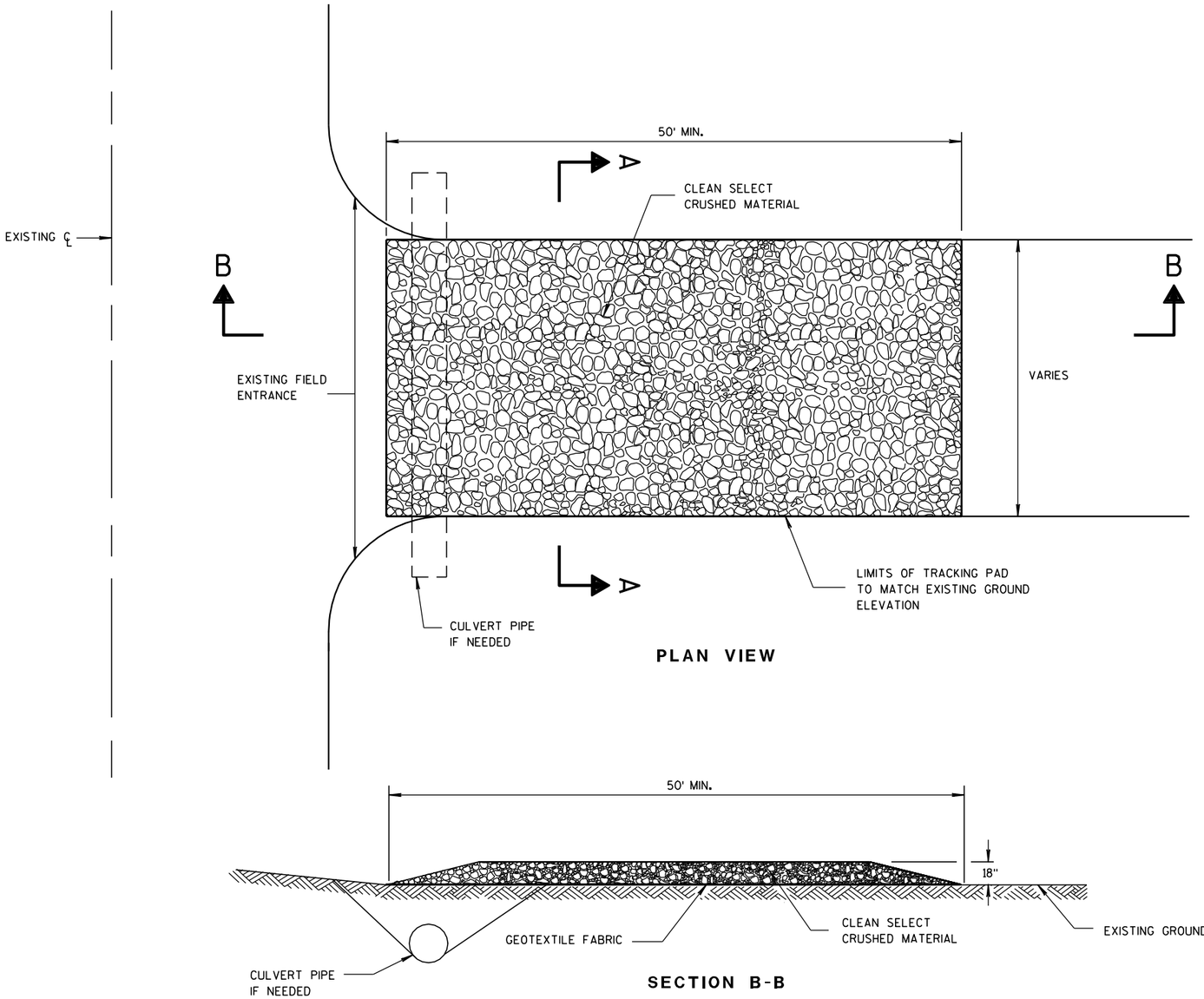
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



PLAN VIEW

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.

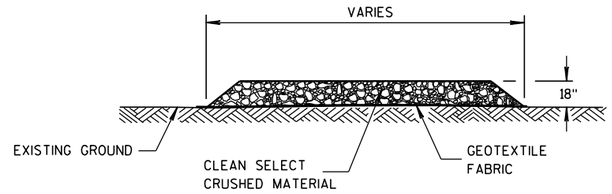
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

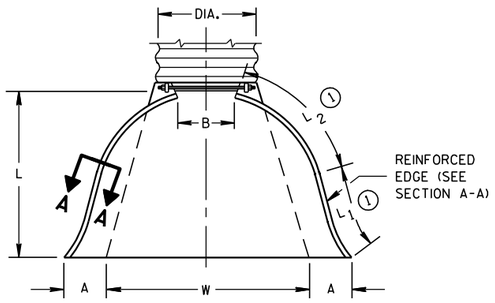
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

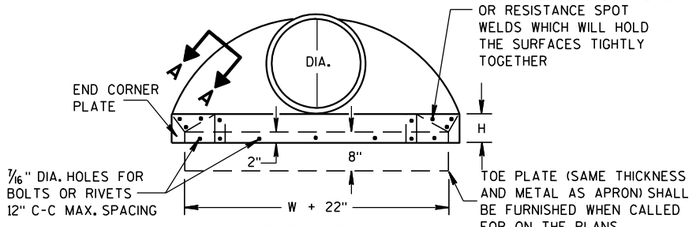
REINFORCED CONCRETE APRON ENDWALLS

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

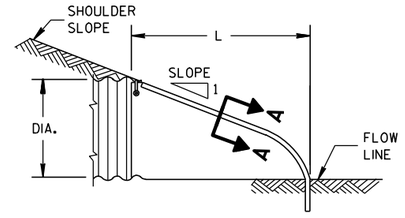
*MINIMUM
**MAXIMUM



PLAN VIEW

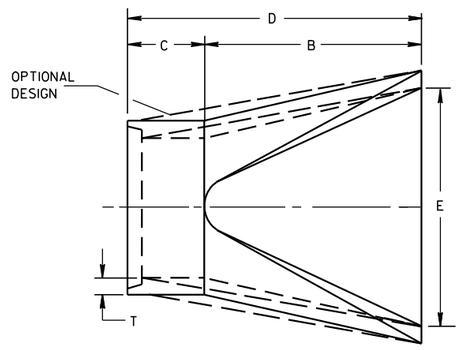


END VIEW

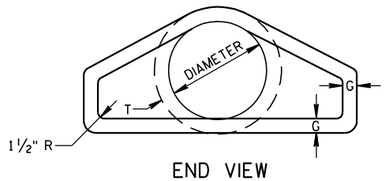


SIDE ELEVATION

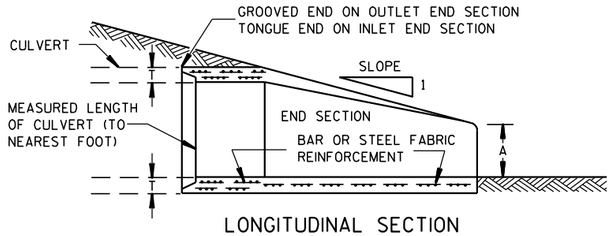
METAL ENDWALLS



PLAN

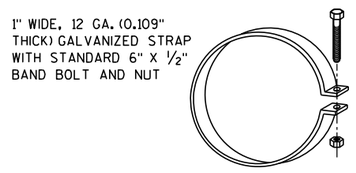


END VIEW



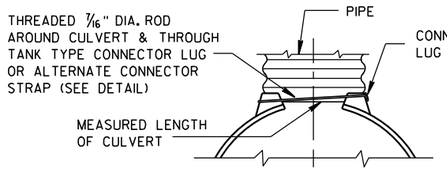
LONGITUDINAL SECTION

CONCRETE ENDWALLS

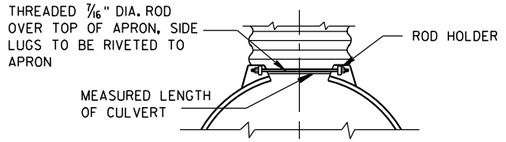


ALTERNATE FOR TYPE 1 CONNECTION

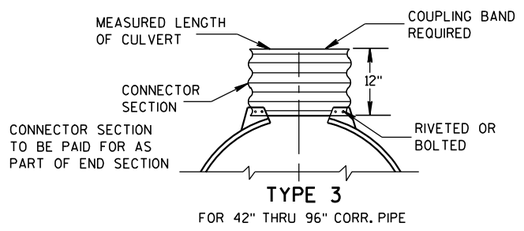
END SECTION CONNECTOR STRAP



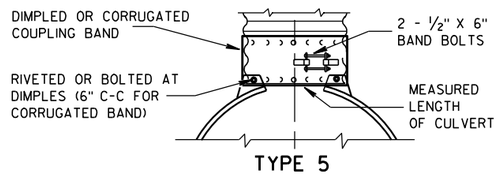
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

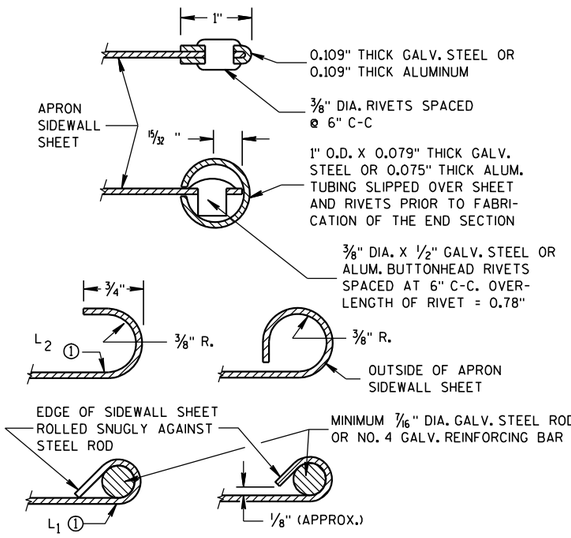
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

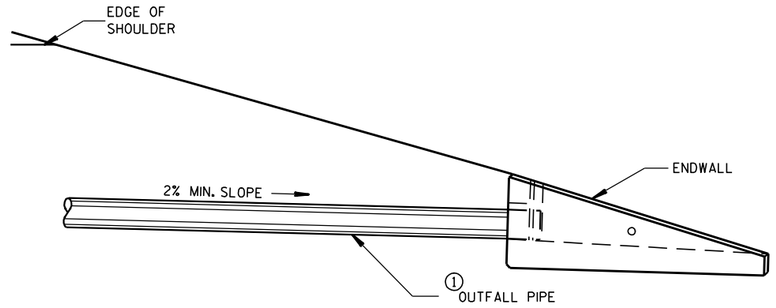
S.D.D. 8 F 1-11

6

S.D.D. 8 F 1-11

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

**APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION 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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

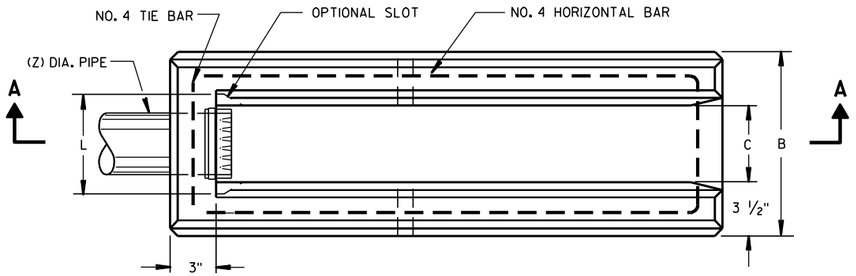
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

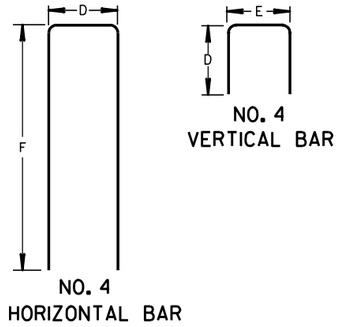
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

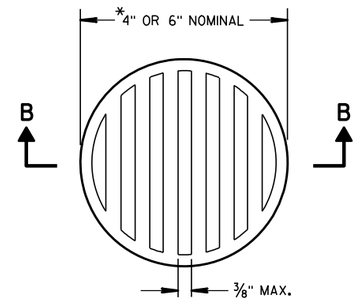
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

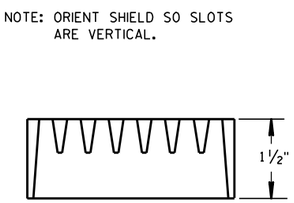


PLAN VIEW



BAR STEEL REINFORCEMENT DETAILS

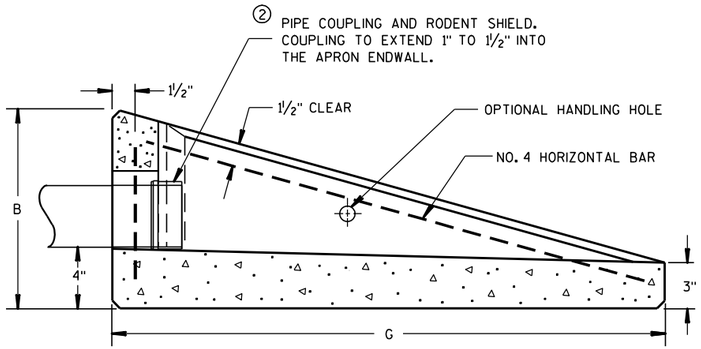




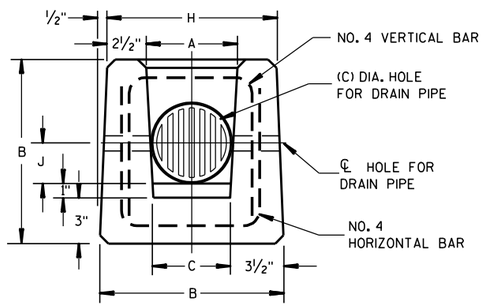
SECTION B-B

② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A



END VIEW

CONCRETE APRON ENDWALL FOR UNDERDRAIN

REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/10/98 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

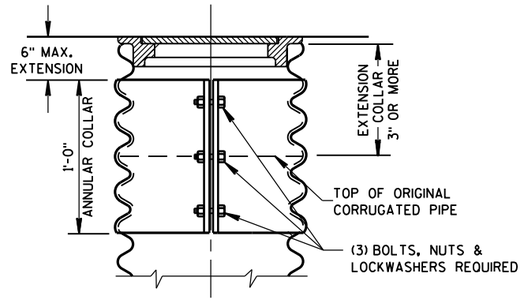
S.D.D. 8 F 6-4

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

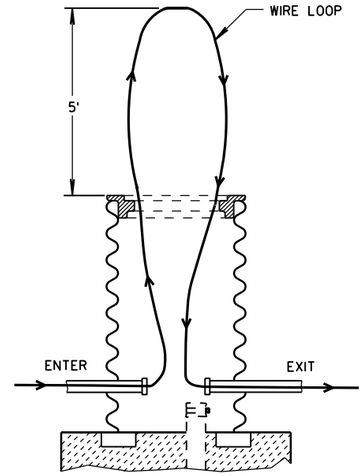
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

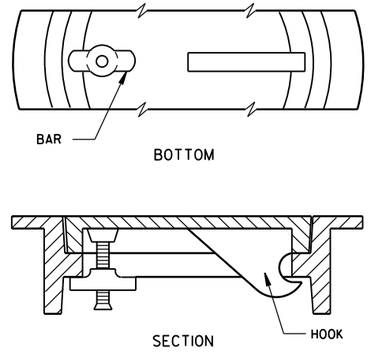
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

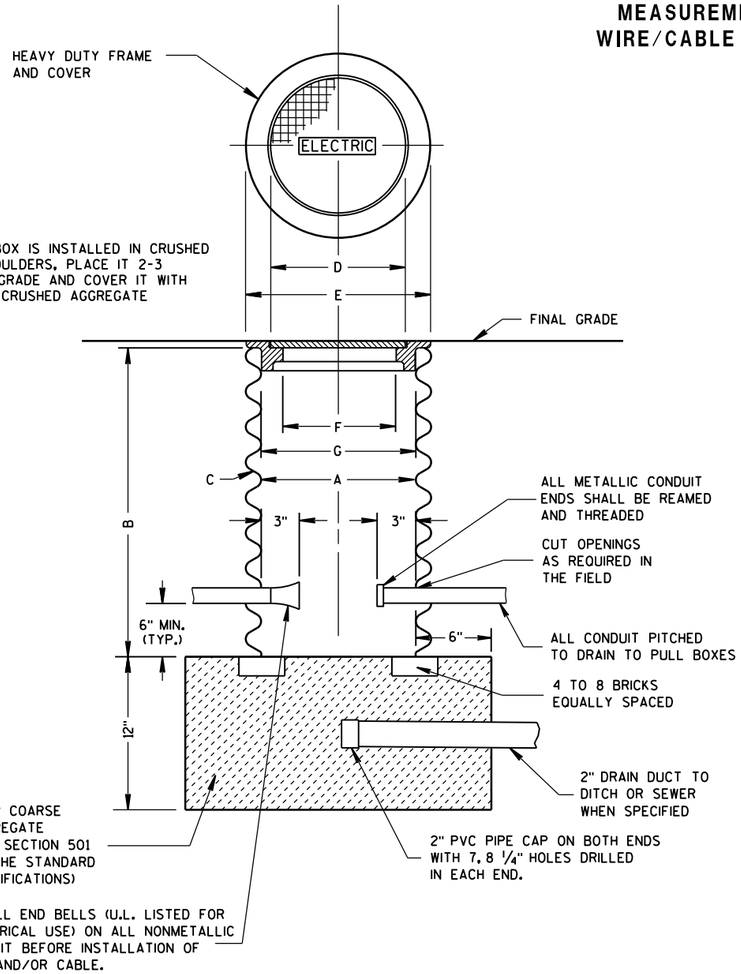


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



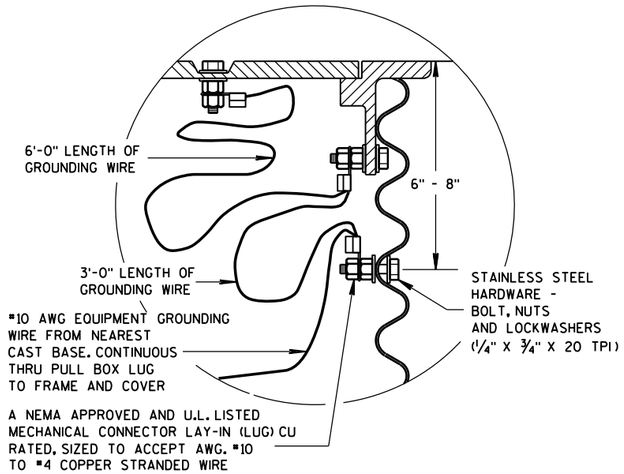
ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE

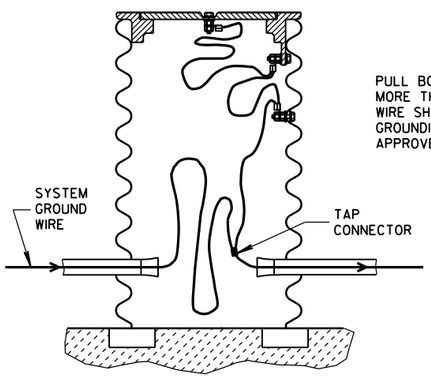


WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

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 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.

PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
2-7-2013 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL
FHWA	

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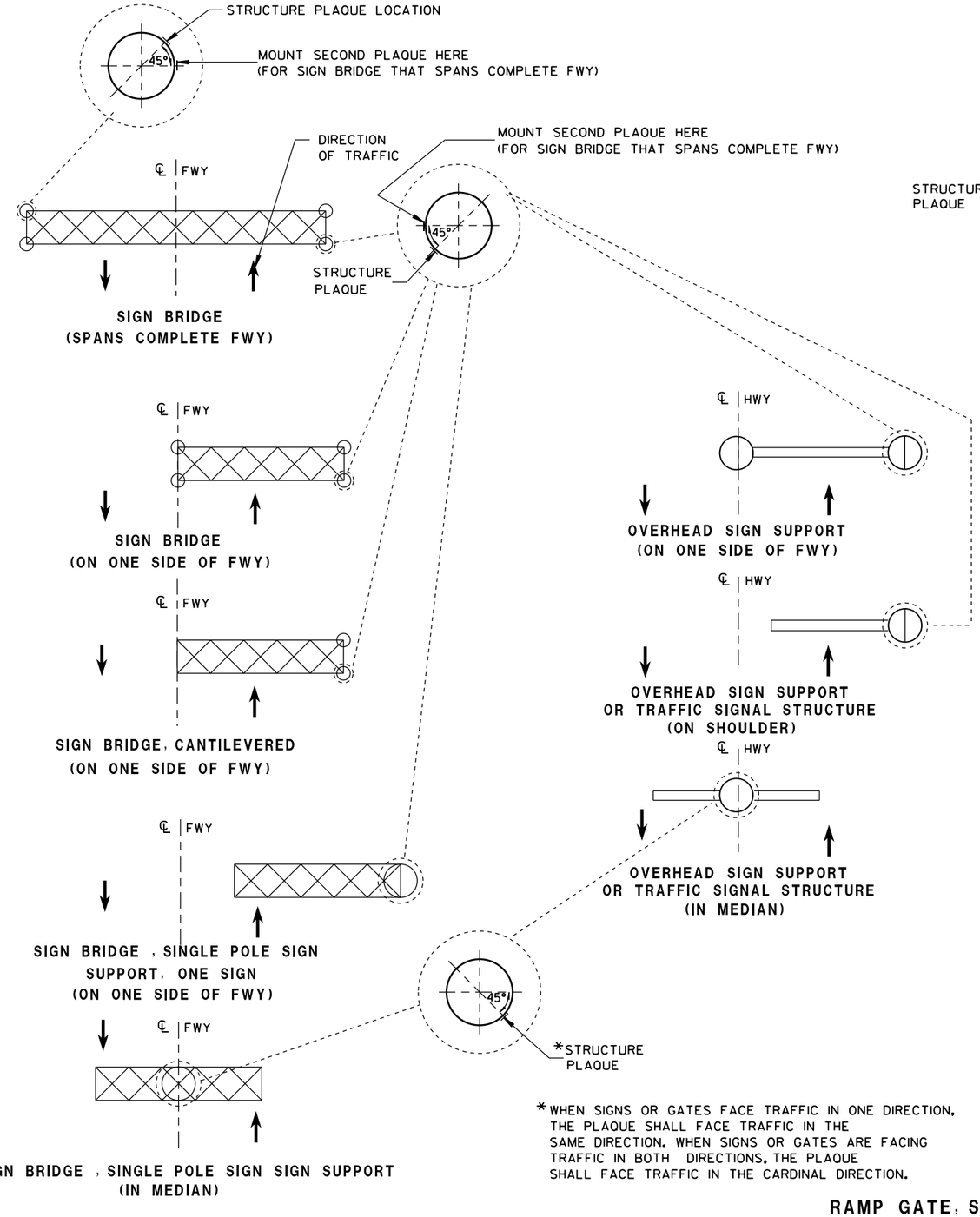
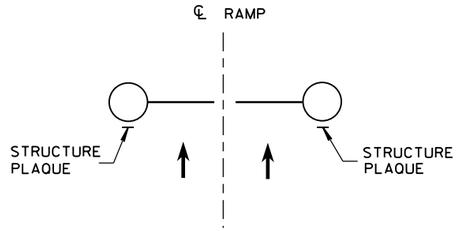
S.D.D. 9 B 4-10

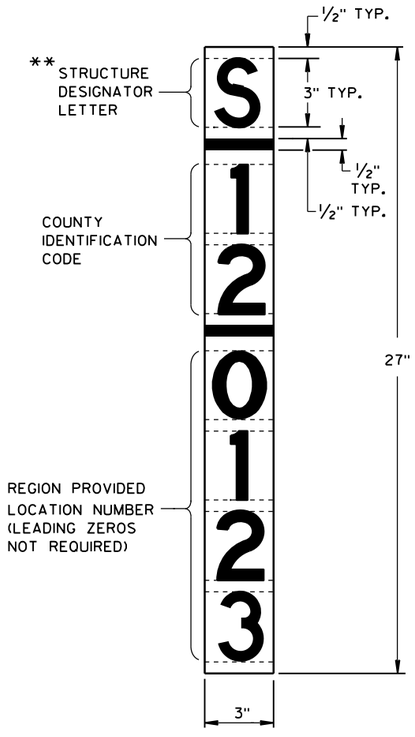


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

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.

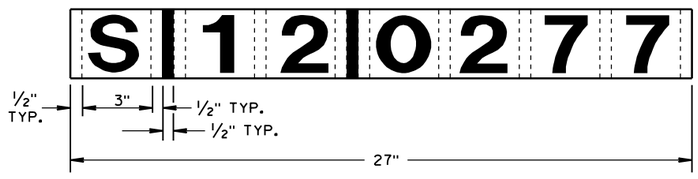
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

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

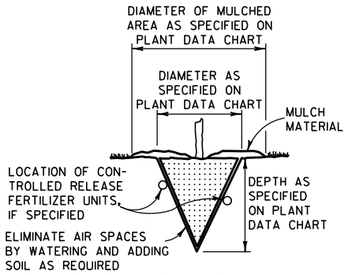
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

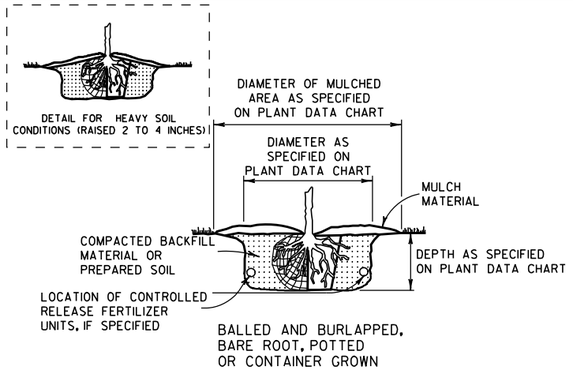
S.D.D. 12 A 4-3

6

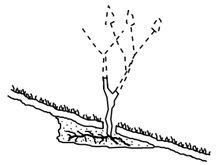
S.D.D. 12 A 4-3



MACHINE MOVED

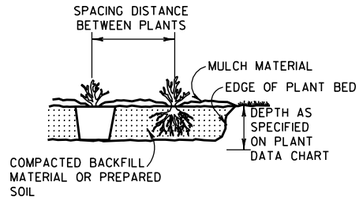


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



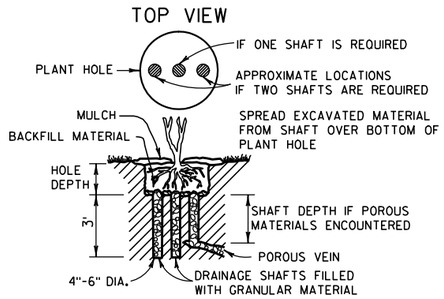
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



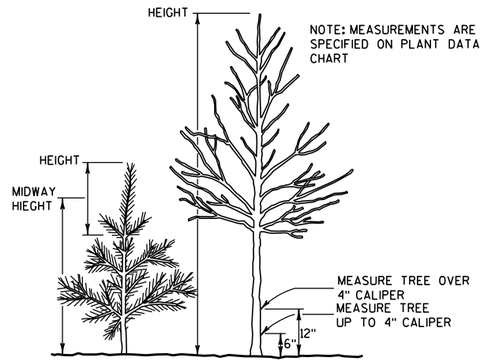
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

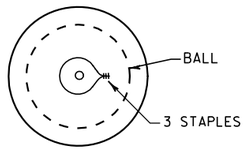


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

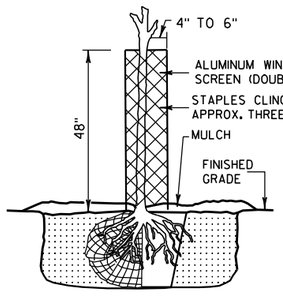
DRAINING



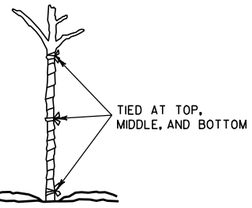
MEASURING



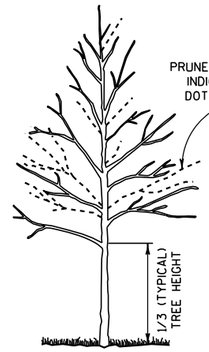
TOP VIEW



RODENT PROTECTION



WRAPPING



TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

SINGLE STEMMED LOW DECIDUOUS TREES (CRABS AND OTHER SINGLE STEM TYPE)

MULTI-STEMMED LOW DECIDUOUS TREES OR LARGE SHRUBS (HAWTHORN, SERVICEBERRY)

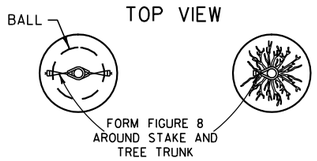
NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

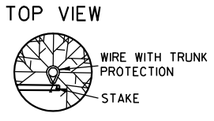
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

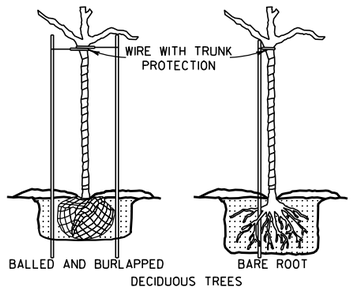
SUMAC

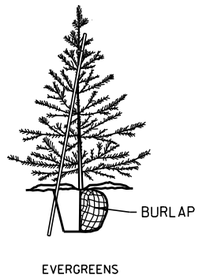
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



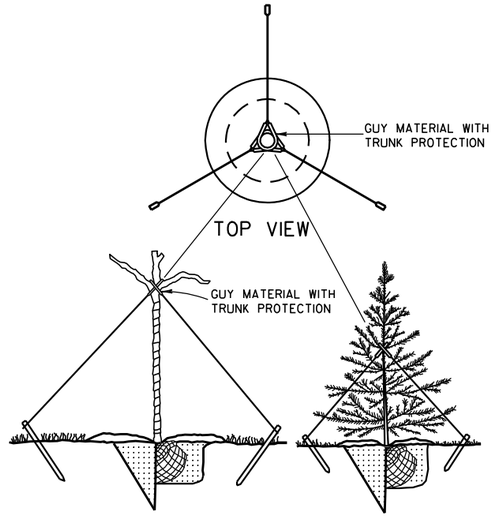






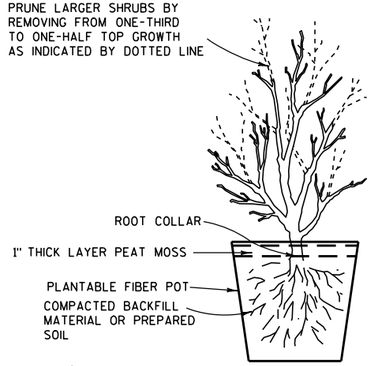
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING

PRUNE LARGER SHRUBS BY REMOVING FROM ONE-THIRD TO ONE-HALF TOP GROWTH AS INDICATED BY DOTTED LINE



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

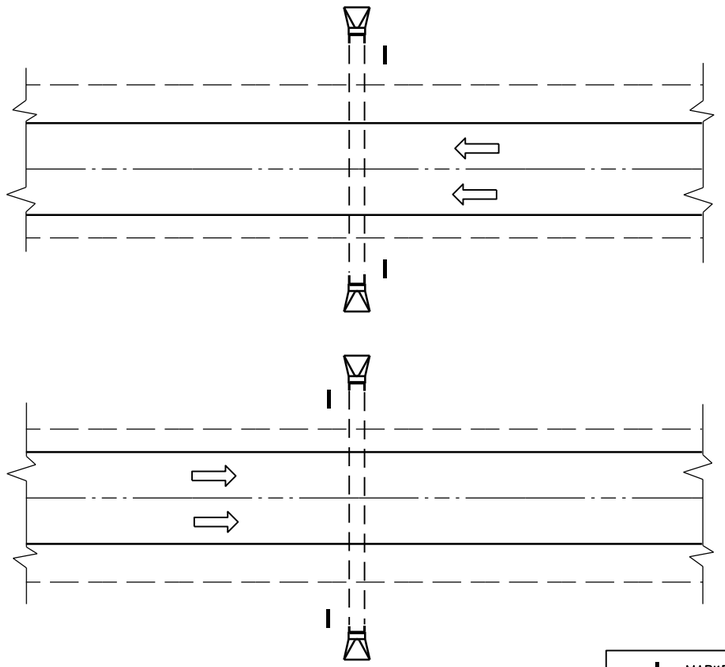
TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/11/94 — DATE
/S/ Rory L. Rhinesmith — CHIEF METHODS DEVELOPMENT ENGINEER
FHWA

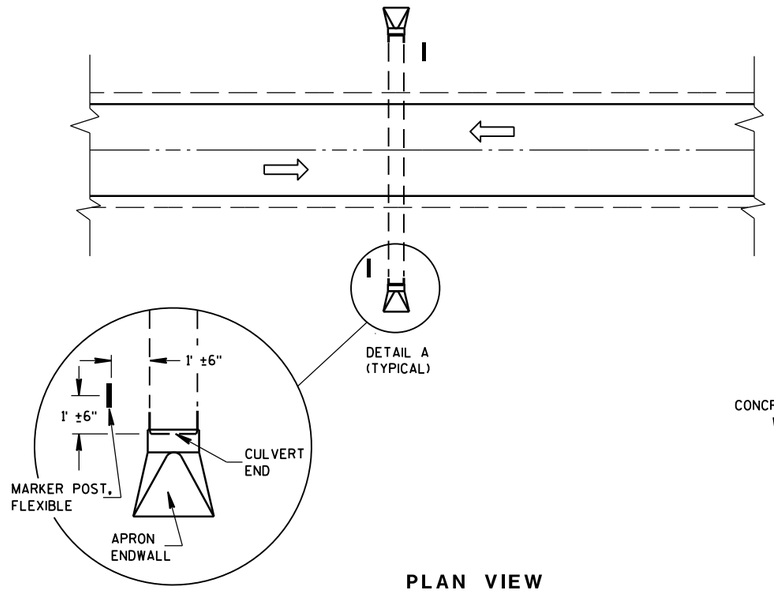
6

S.D.D. 14 A 2-1



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

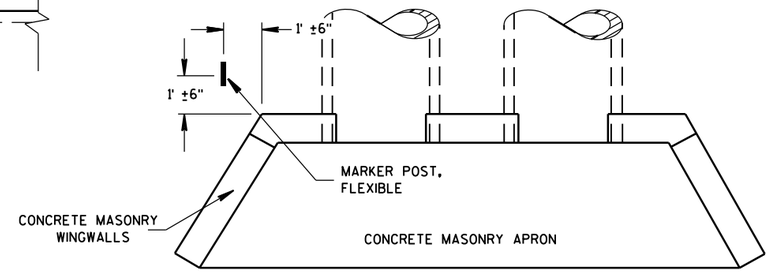
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

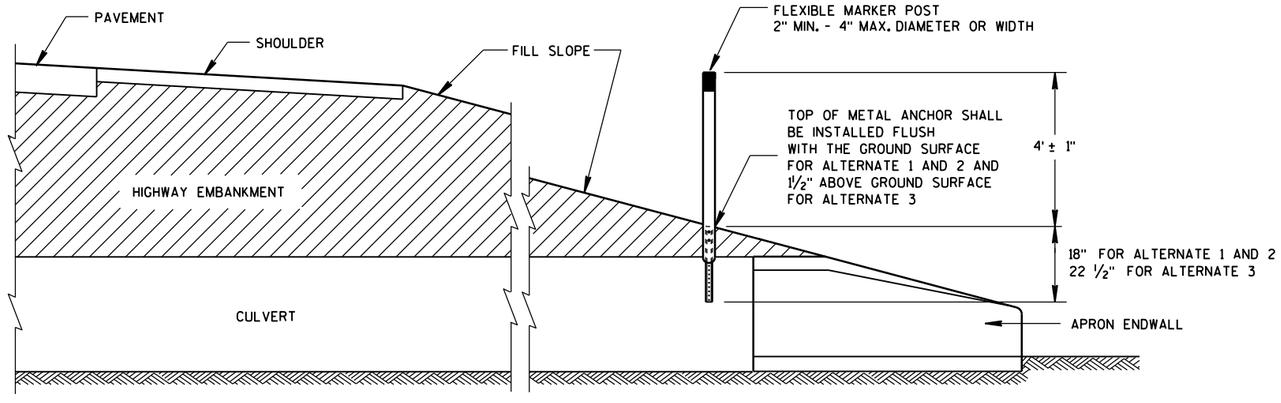
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

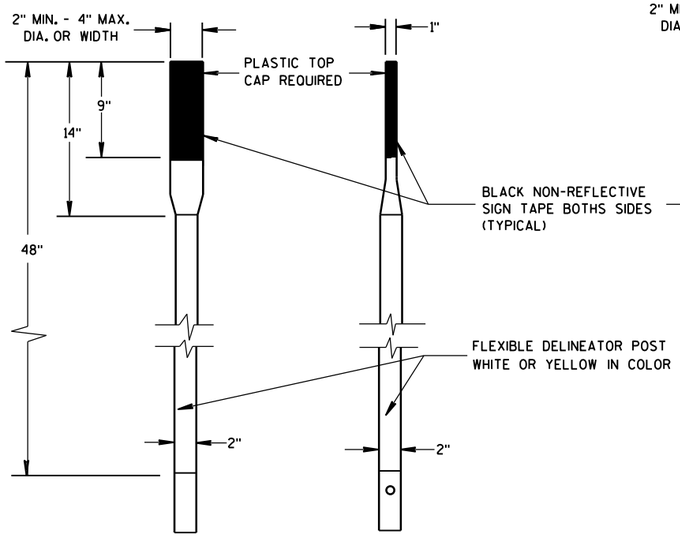
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

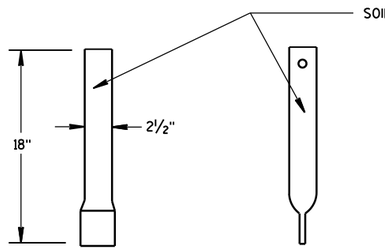
6

S.D.D. 15 A 3-2a

6

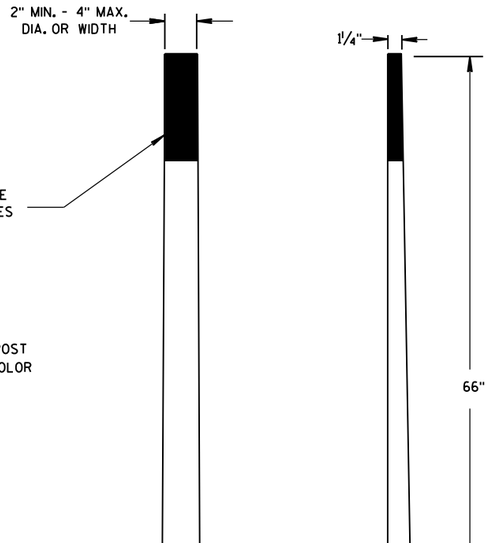
S.D.D. 15 A 3-2a





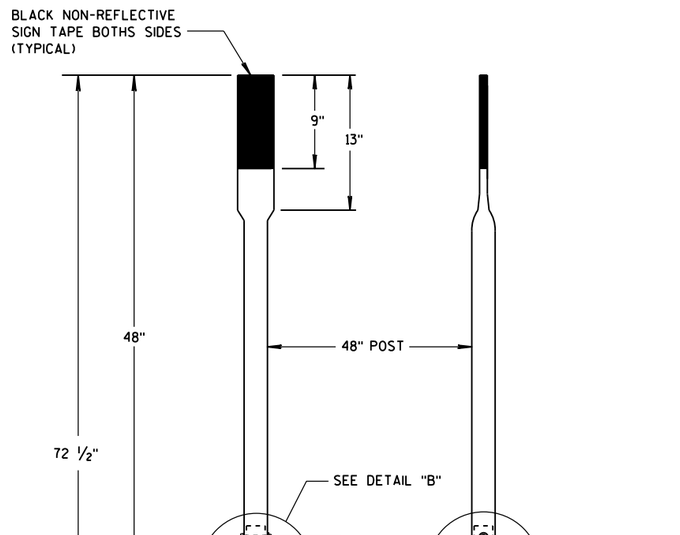
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

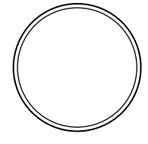
ALTERNATE 2



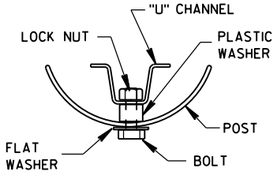
FRONT VIEW SIDE VIEW

ALTERNATE 3

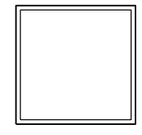
FLEXIBLE MARKER POSTS



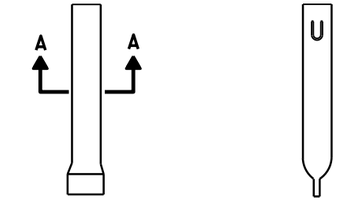
SECTION A-A



SECTION B-B

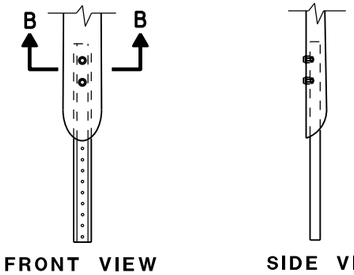


SECTION C-C



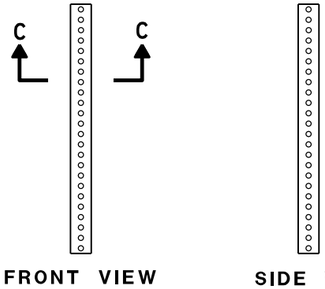
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

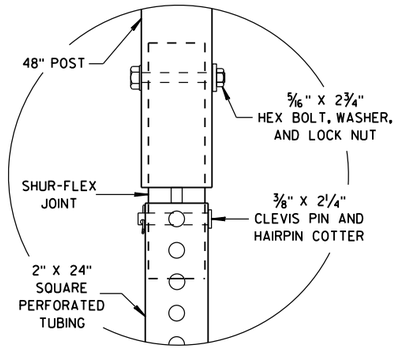
ALTERNATE 2



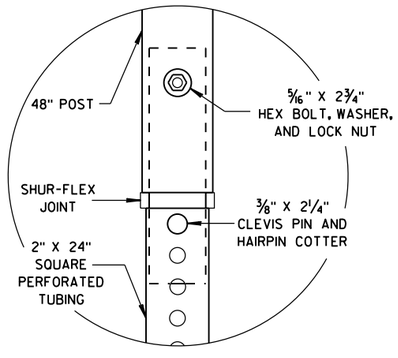
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

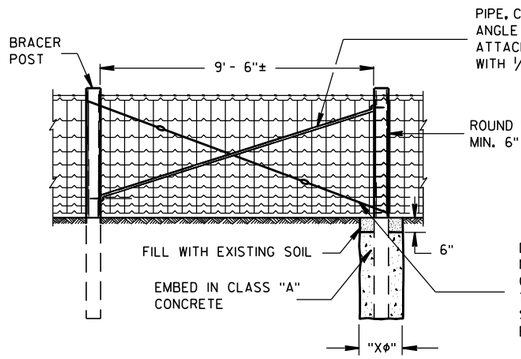
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
IGN
FHWA

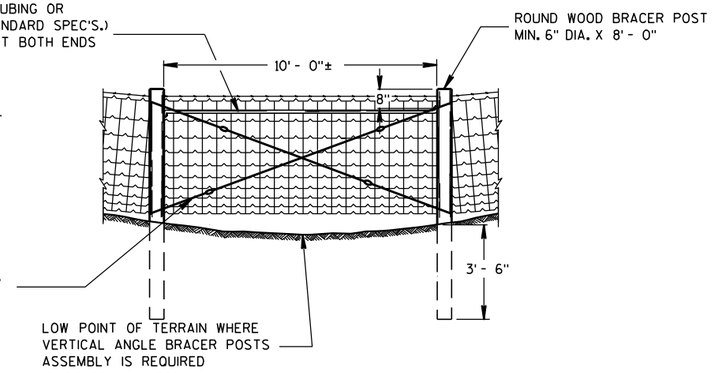
6
S.D.D. 15 A 3-2b

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

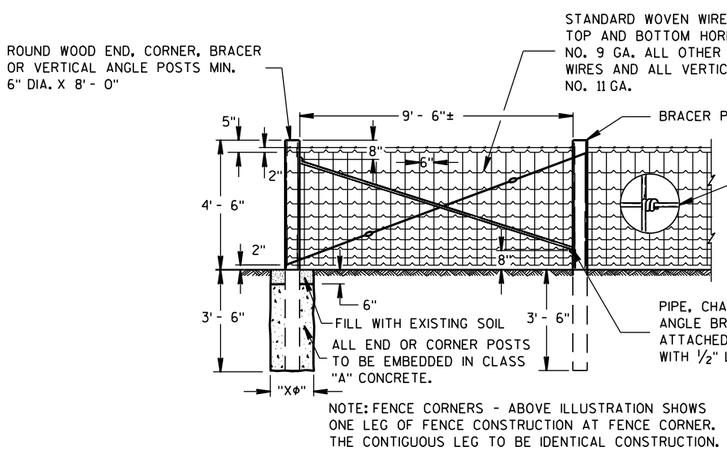
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

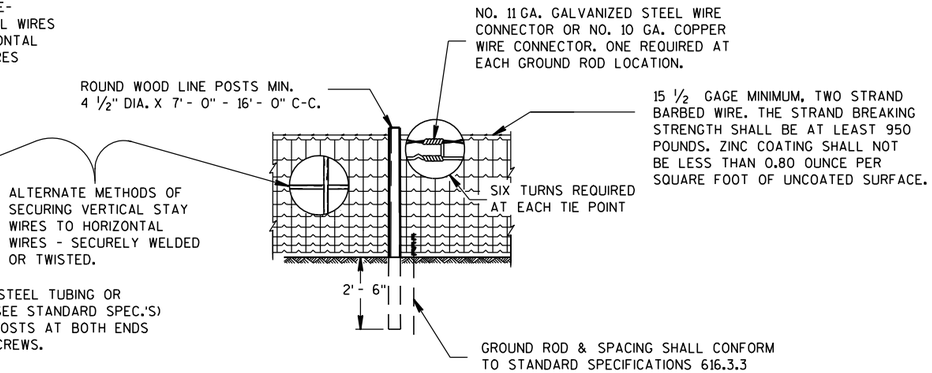
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



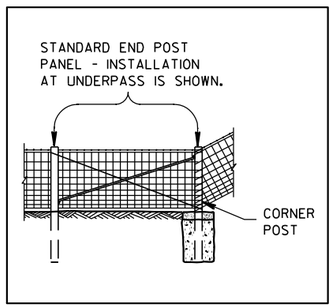
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

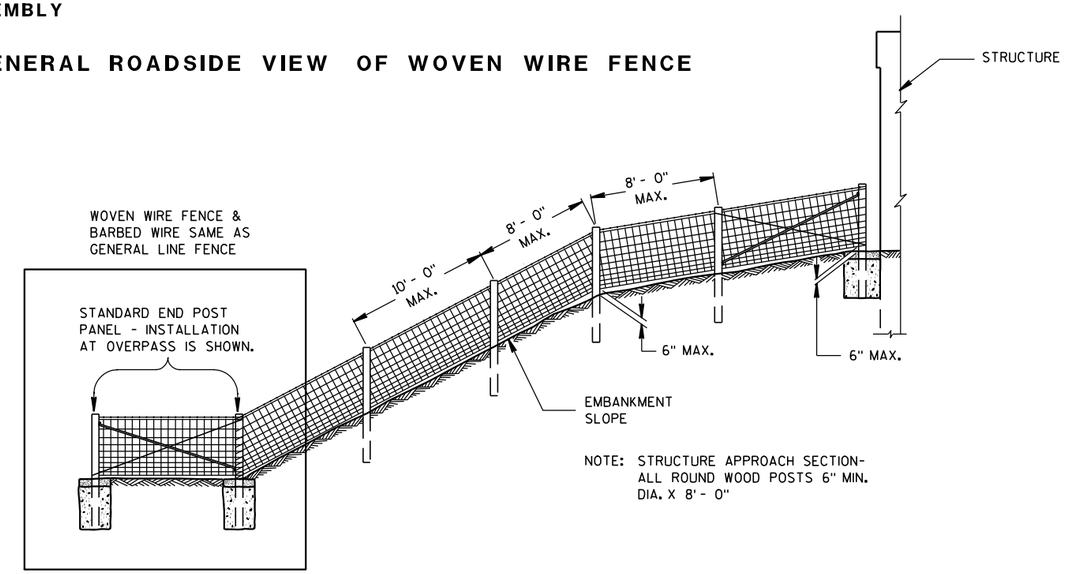


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



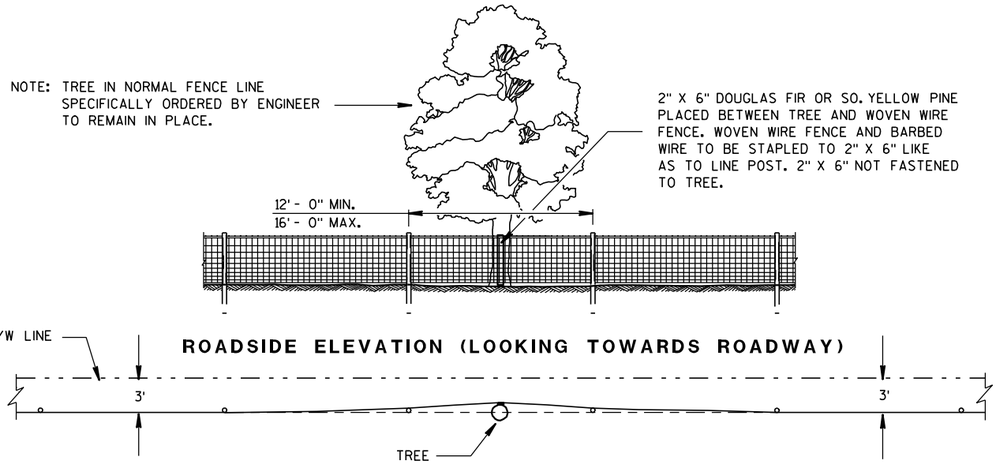
FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

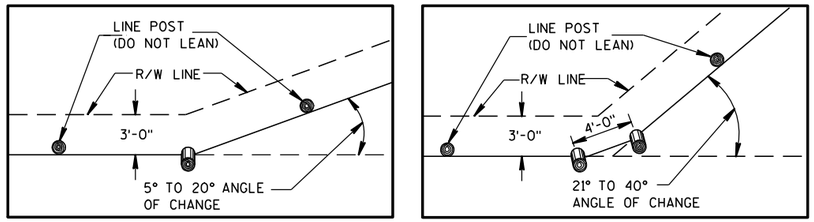
6

S.D.D. 15 B 1-8a



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



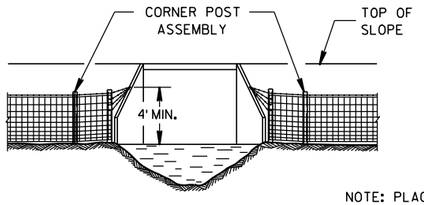
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

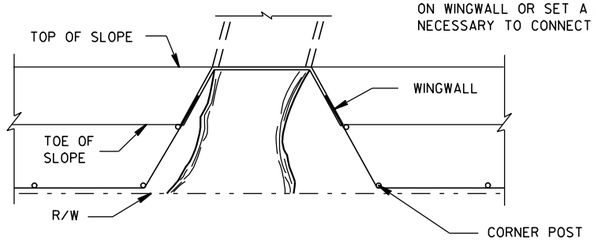
RIGHT OF WAY LINE CHANGE 40° AND LESS

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.

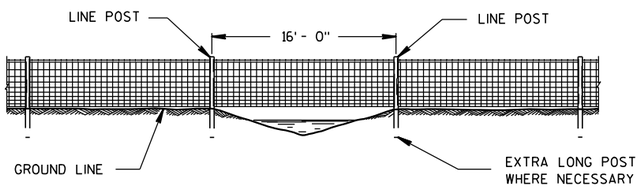
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



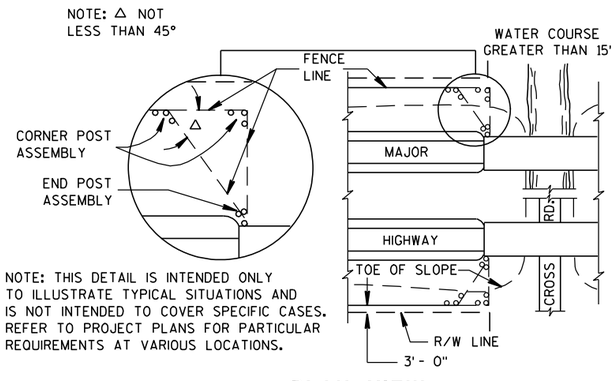
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

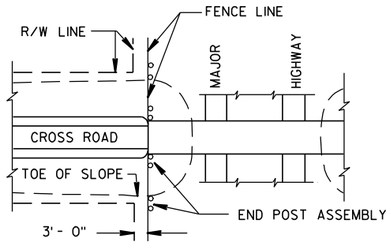


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



PLAN VIEW

MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH

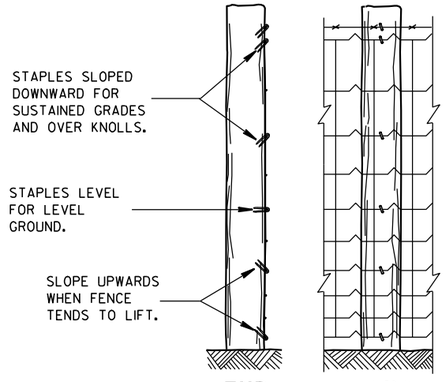


PLAN VIEW

MAJOR HIGHWAY UNDERPASS

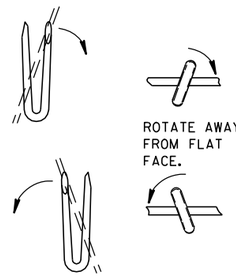
FENCE LOCATION AT STRUCTURES

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION **FARM SIDE ELEVATION**

FENCE MOUNTING DETAIL



LINE POST

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. ---
ROADWAY STANDARDS [44
ENGINEER
FHWA

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

W20-1 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 OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

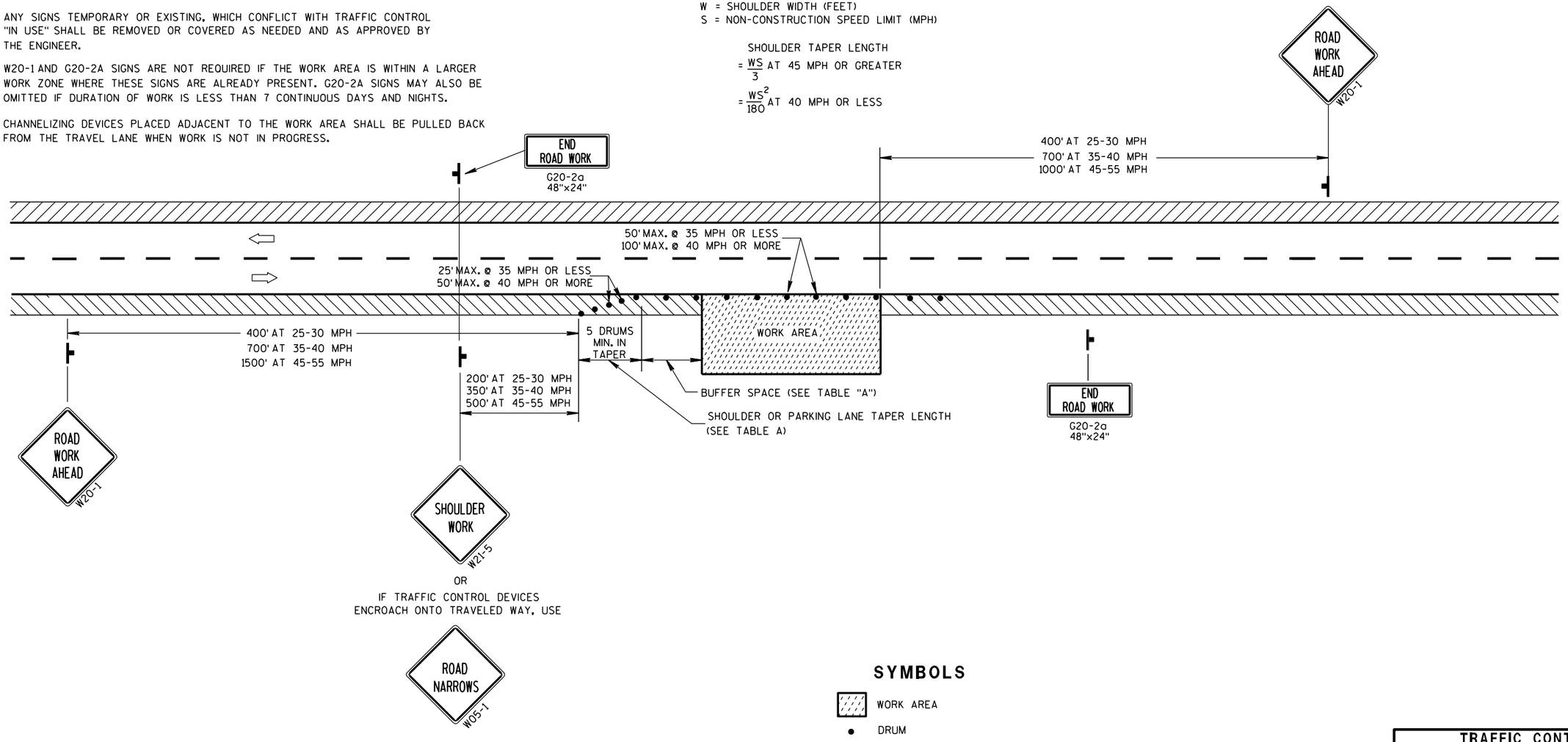
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

SHOULDER TAPER LENGTH
$= \frac{WS}{3}$ AT 45 MPH OR GREATER
$= \frac{WS^2}{180}$ AT 40 MPH OR LESS



SYMBOLS

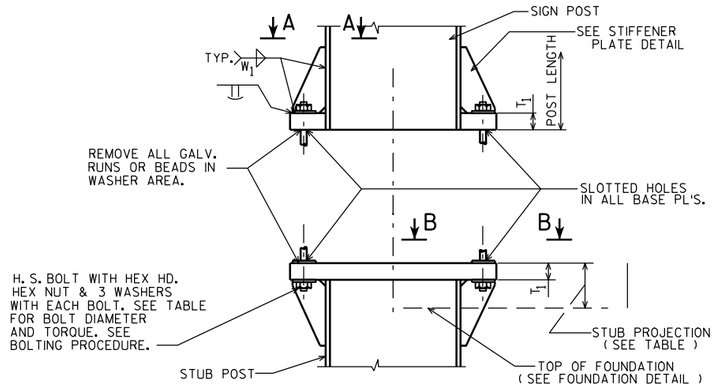
- WORK AREA
- DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

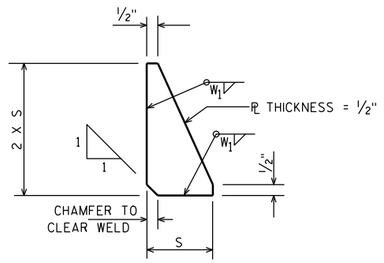
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible] ENGINEER
FHWA

6
S.D.D. 15 D 28-1

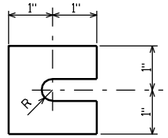


SIGN POST AND STUB POST ELEVATION



STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



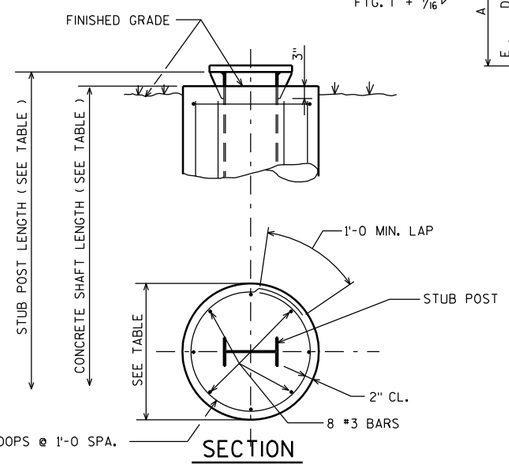
FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

SHIM DETAIL

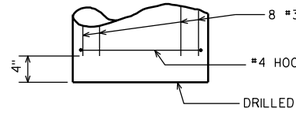
POST DETAIL

	QUANTITIES FOR 1 FOOTING	
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
⑦ E	1.0	62

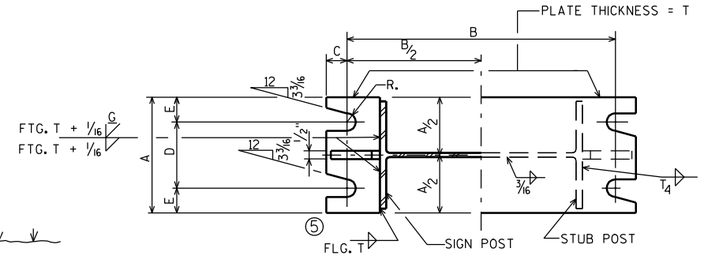
REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
⑦	E	8 @ 7'-11	9 @ 6'-3



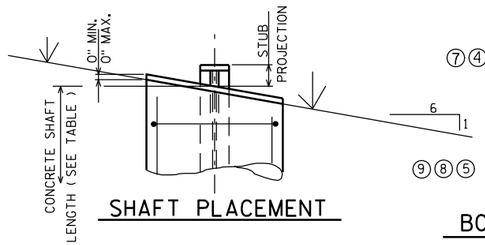
SECTION



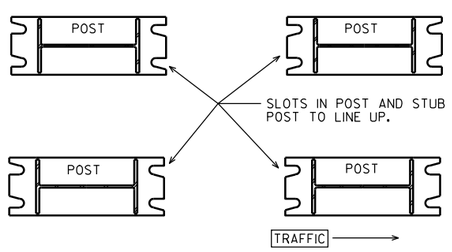
FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT



POST SLOT ORIENTATION ⑦

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND△	140 △25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
⑨ 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 WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
4. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

	TYPE	DIMENSION: POST SIZE	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	FOUNDATION DATA: STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	② K
④	A	W10"X12.0 #/FT.	3/4" ℄ @ 75#-FT.	5 1/4"	1'-0 3/8	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32 "	2 1/8"	3'-6	3"	2'-0 ℄	5'-0	76.0# ④
④	B	W12"X16.0 #/FT.	7/8" ℄ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	15/32 "	3"	5'-6	3"	2'-0 ℄	7'-0	146.5# ④
	C	W12"X19.0 #/FT.	7/8" ℄ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	15/32 "	3"	6'-0	3"	2'-0 ℄	7'-6	182.1#
	D	W12"X22.0 #/FT.	7/8" ℄ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	3/8"	5/16"	15/32 "	3"	6'-6	3"	2'-0 ℄	8'-0	210.5#
③	E	W12"X26.0 #/FT.	1" ℄ @ 90#-FT.	7"	1'-4 1/4	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	17/32 "	3"	7'-0	3"	2'-0 ℄	8'-6	293.0# ③

① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer
DATE 4/26/11 PLATE NO. A3-1.13

NO.	DATE	REVISION
⑨	4-26-11	REMOVE NON-GALVANIZED
⑧	10-30-96	NOT GALVANIZED/GALVANIZED
⑦	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
⑥	8-24-87	BASE CONN. WELD
⑤	10-13-81	BASE CONN. WELD & FUSE ℄ WASHERS
④	10-19-79	POST A & B, A572 GR. 50, & K
②	11-28-78	"K" ③ 4-23-79 TYPE "E"
①	5-4-78	T_1 , T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC. 2011	DRAWN BY JPH	PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

SHEET

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

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A31.DGN PLOT DATE : 26-APR-2011 14:07 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 87399.319456:1.000000 WISDOT/CADDS SHEET 42

VERITCAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
10 ft.	25 Sq. Ft	30 Sq. Ft	35 Sq. Ft	40 Sq. Ft	45 Sq. Ft	50 Sq. Ft	55 Sq. Ft	60 Sq. Ft	65 Sq. Ft	70 Sq. Ft	75 Sq. Ft	80 Sq. Ft	85 Sq. Ft	90 Sq. Ft	95 Sq. Ft	100 Sq. Ft	105 Sq. Ft	110 Sq. Ft	115 Sq. Ft	120 Sq. Ft	125 Sq. Ft	130 Sq. Ft	135 Sq. Ft	140 Sq. Ft	145 Sq. Ft	150 Sq. Ft	155 Sq. Ft	160 Sq. Ft
11 ft.	27.5 Sq. Ft	33 Sq. Ft	38.5 Sq. Ft	44 Sq. Ft	49.5 Sq. Ft	55 Sq. Ft	60.5 Sq. Ft	66 Sq. Ft	71.5 Sq. Ft	77 Sq. Ft	82.5 Sq. Ft	88 Sq. Ft	93.5 Sq. Ft	99 Sq. Ft	104.5 Sq. Ft	110 Sq. Ft	115.5 Sq. Ft	121 Sq. Ft	126.5 Sq. Ft	132 Sq. Ft	137.5 Sq. Ft	143 Sq. Ft	148.5 Sq. Ft	154 Sq. Ft	159.5 Sq. Ft	165 Sq. Ft	170.5 Sq. Ft	176 Sq. Ft
12 ft.	30 Sq. Ft	36 Sq. Ft	42 Sq. Ft	48 Sq. Ft	54 Sq. Ft	60 Sq. Ft	66 Sq. Ft	72 Sq. Ft	78 Sq. Ft	84 Sq. Ft	90 Sq. Ft	96 Sq. Ft	102 Sq. Ft	108 Sq. Ft	114 Sq. Ft	120 Sq. Ft	126 Sq. Ft	132 Sq. Ft	138 Sq. Ft	144 Sq. Ft	150 Sq. Ft	156 Sq. Ft	162 Sq. Ft	168 Sq. Ft	174 Sq. Ft	180 Sq. Ft	186 Sq. Ft	192 Sq. Ft
13 ft.	32.5 Sq. Ft	39 Sq. Ft	45.5 Sq. Ft	52 Sq. Ft	58.5 Sq. Ft	65 Sq. Ft	71.5 Sq. Ft	78 Sq. Ft	84.5 Sq. Ft	91 Sq. Ft	97.5 Sq. Ft	104 Sq. Ft	110.5 Sq. Ft	117 Sq. Ft	123.5 Sq. Ft	130 Sq. Ft	136.5 Sq. Ft	143 Sq. Ft	149.5 Sq. Ft	156 Sq. Ft	162.5 Sq. Ft	169 Sq. Ft	175.5 Sq. Ft	182 Sq. Ft	188.5 Sq. Ft	195 Sq. Ft	201.5 Sq. Ft	208 Sq. Ft
14 ft.	35 Sq. Ft	42 Sq. Ft	49 Sq. Ft	56 Sq. Ft	63 Sq. Ft	70 Sq. Ft	77 Sq. Ft	84 Sq. Ft	91 Sq. Ft	98 Sq. Ft	105 Sq. Ft	112 Sq. Ft	119 Sq. Ft	126 Sq. Ft	133 Sq. Ft	140 Sq. Ft	147 Sq. Ft	154 Sq. Ft	161 Sq. Ft	168 Sq. Ft	175 Sq. Ft	182 Sq. Ft	189 Sq. Ft	196 Sq. Ft	203 Sq. Ft	210 Sq. Ft	217 Sq. Ft	224 Sq. Ft
15 ft.	37.5 Sq. Ft	45 Sq. Ft	52.5 Sq. Ft	60 Sq. Ft	67.5 Sq. Ft	75 Sq. Ft	82.5 Sq. Ft	90 Sq. Ft	97.5 Sq. Ft	105 Sq. Ft	112.5 Sq. Ft	120 Sq. Ft	127.5 Sq. Ft	135 Sq. Ft	142.5 Sq. Ft	150 Sq. Ft	157.5 Sq. Ft	165 Sq. Ft	172.5 Sq. Ft	180 Sq. Ft	187.5 Sq. Ft	195 Sq. Ft	202.5 Sq. Ft	210 Sq. Ft	217.5 Sq. Ft	225 Sq. Ft	232.5 Sq. Ft	240 Sq. Ft
16 ft.	40 Sq. Ft	48 Sq. Ft	56 Sq. Ft	64 Sq. Ft	72 Sq. Ft	80 Sq. Ft	88 Sq. Ft	96 Sq. Ft	104 Sq. Ft	112 Sq. Ft	120 Sq. Ft	128 Sq. Ft	136 Sq. Ft	144 Sq. Ft	152 Sq. Ft	160 Sq. Ft	168 Sq. Ft	176 Sq. Ft	184 Sq. Ft	192 Sq. Ft	200 Sq. Ft	208 Sq. Ft	216 Sq. Ft	224 Sq. Ft	232 Sq. Ft	240 Sq. Ft	248 Sq. Ft	256 Sq. Ft
17 ft.	42.5 Sq. Ft	51 Sq. Ft	59.5 Sq. Ft	68 Sq. Ft	76.5 Sq. Ft	85 Sq. Ft	93.5 Sq. Ft	102 Sq. Ft	110.5 Sq. Ft	119 Sq. Ft	127.5 Sq. Ft	136 Sq. Ft	144.5 Sq. Ft	153 Sq. Ft	161.5 Sq. Ft	170 Sq. Ft	178.5 Sq. Ft	187 Sq. Ft	195.5 Sq. Ft	204 Sq. Ft	212.5 Sq. Ft	221 Sq. Ft	229.5 Sq. Ft	238 Sq. Ft	246.5 Sq. Ft	255 Sq. Ft	263.5 Sq. Ft	272 Sq. Ft
18 ft.	45 Sq. Ft	54 Sq. Ft	63 Sq. Ft	72 Sq. Ft	81 Sq. Ft	90 Sq. Ft	99 Sq. Ft	108 Sq. Ft	117 Sq. Ft	126 Sq. Ft	135 Sq. Ft	144 Sq. Ft	153 Sq. Ft	162 Sq. Ft	171 Sq. Ft	180 Sq. Ft	189 Sq. Ft	198 Sq. Ft	207 Sq. Ft	216 Sq. Ft	225 Sq. Ft	234 Sq. Ft	243 Sq. Ft	252 Sq. Ft	261 Sq. Ft	270 Sq. Ft	279 Sq. Ft	288 Sq. Ft
19 ft.	47.5 Sq. Ft	57 Sq. Ft	66.5 Sq. Ft	76 Sq. Ft	85.5 Sq. Ft	95 Sq. Ft	104.5 Sq. Ft	114 Sq. Ft	123.5 Sq. Ft	133 Sq. Ft	142.5 Sq. Ft	152 Sq. Ft	161.5 Sq. Ft	171 Sq. Ft	180.5 Sq. Ft	190 Sq. Ft	199.5 Sq. Ft	209 Sq. Ft	218.5 Sq. Ft	228 Sq. Ft	237.5 Sq. Ft	247 Sq. Ft	256.5 Sq. Ft	266 Sq. Ft	275.5 Sq. Ft	285 Sq. Ft	294.5 Sq. Ft	304 Sq. Ft
20 ft.	50 Sq. Ft	60 Sq. Ft	70 Sq. Ft	80 Sq. Ft	90 Sq. Ft	100 Sq. Ft	110 Sq. Ft	120 Sq. Ft	130 Sq. Ft	140 Sq. Ft	150 Sq. Ft	160 Sq. Ft	170 Sq. Ft	180 Sq. Ft	190 Sq. Ft	200 Sq. Ft	210 Sq. Ft	220 Sq. Ft	230 Sq. Ft	240 Sq. Ft	250 Sq. Ft	260 Sq. Ft	270 Sq. Ft	280 Sq. Ft	290 Sq. Ft	300 Sq. Ft	310 Sq. Ft	320 Sq. Ft
21 ft.	52.5 Sq. Ft	63 Sq. Ft	73.5 Sq. Ft	84 Sq. Ft	94.5 Sq. Ft	105 Sq. Ft	115.5 Sq. Ft	126 Sq. Ft	136.5 Sq. Ft	147 Sq. Ft	157.5 Sq. Ft	168 Sq. Ft	178.5 Sq. Ft	189 Sq. Ft	199.5 Sq. Ft	210 Sq. Ft	220.5 Sq. Ft	231 Sq. Ft	241.5 Sq. Ft	252 Sq. Ft	262.5 Sq. Ft	273 Sq. Ft	283.5 Sq. Ft	294 Sq. Ft	304.5 Sq. Ft	315 Sq. Ft	325.5 Sq. Ft	336 Sq. Ft

Type "A" (2 Posts)
1.2 CY Conc.
68 LBs Bar Steel

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

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DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/03/10 PLATE NO. A3-2.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A32.DGN PLOT DATE : 05-MAR-2010 10:10 PLOT BY : ditjph

VERTICAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

Type "A" (2 Posts) 1.2 CY Conc. 68 LBs Bar Steel

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
22 ft.	55 Sq. Ft	66 Sq. Ft	77 Sq. Ft	88 Sq. Ft	99 Sq. Ft	110 Sq. Ft	121 Sq. Ft	132 Sq. Ft	143 Sq. Ft	154 Sq. Ft	165 Sq. Ft	176 Sq. Ft	187 Sq. Ft	198 Sq. Ft	209 Sq. Ft	220 Sq. Ft	231 Sq. Ft	242 Sq. Ft	253 Sq. Ft	264 Sq. Ft	275 Sq. Ft	286 Sq. Ft	297 Sq. Ft	308 Sq. Ft	319 Sq. Ft	330 Sq. Ft	341 Sq. Ft	352 Sq. Ft
23 ft.	57.5 Sq. Ft	69 Sq. Ft	80.5 Sq. Ft	92 Sq. Ft	103.5 Sq. Ft	115 Sq. Ft	126.5 Sq. Ft	138 Sq. Ft	149.5 Sq. Ft	161 Sq. Ft	172.5 Sq. Ft	184 Sq. Ft	195.5 Sq. Ft	207 Sq. Ft	218.5 Sq. Ft	230 Sq. Ft	241.5 Sq. Ft	253 Sq. Ft	264.5 Sq. Ft	276 Sq. Ft	287.5 Sq. Ft	299 Sq. Ft	310.5 Sq. Ft	322 Sq. Ft	333.5 Sq. Ft	345 Sq. Ft	356.5 Sq. Ft	368 Sq. Ft
24 ft.	60 Sq. Ft	72 Sq. Ft	84 Sq. Ft	96 Sq. Ft	108 Sq. Ft	120 Sq. Ft	132 Sq. Ft	144 Sq. Ft	156 Sq. Ft	168 Sq. Ft	180 Sq. Ft	192 Sq. Ft	204 Sq. Ft	216 Sq. Ft	228 Sq. Ft	240 Sq. Ft	252 Sq. Ft	264 Sq. Ft	276 Sq. Ft	288 Sq. Ft	300 Sq. Ft	312 Sq. Ft	324 Sq. Ft	336 Sq. Ft	348 Sq. Ft	360 Sq. Ft	372 Sq. Ft	384 Sq. Ft
25 ft.	62.5 Sq. Ft	75 Sq. Ft	87.5 Sq. Ft	100 Sq. Ft	112.5 Sq. Ft	125 Sq. Ft	137.5 Sq. Ft	150 Sq. Ft	162.5 Sq. Ft	175 Sq. Ft	187.5 Sq. Ft	200 Sq. Ft	212.5 Sq. Ft	225 Sq. Ft	237.5 Sq. Ft	250 Sq. Ft	262.5 Sq. Ft	275 Sq. Ft	287.5 Sq. Ft	300 Sq. Ft	312.5 Sq. Ft	325 Sq. Ft	337.5 Sq. Ft	350 Sq. Ft	362.5 Sq. Ft	375 Sq. Ft	387.5 Sq. Ft	400 Sq. Ft
26 ft.	65 Sq. Ft	78 Sq. Ft	91 Sq. Ft	104 Sq. Ft	117 Sq. Ft	130 Sq. Ft	143 Sq. Ft	156 Sq. Ft	169 Sq. Ft	182 Sq. Ft	195 Sq. Ft	208 Sq. Ft	221 Sq. Ft	234 Sq. Ft	247 Sq. Ft	260 Sq. Ft	273 Sq. Ft	286 Sq. Ft	299 Sq. Ft	312 Sq. Ft	325 Sq. Ft	338 Sq. Ft	351 Sq. Ft	364 Sq. Ft	377 Sq. Ft	390 Sq. Ft	403 Sq. Ft	416 Sq. Ft
27 ft.	67.5 Sq. Ft	81 Sq. Ft	94.5 Sq. Ft	108 Sq. Ft	121.5 Sq. Ft	135 Sq. Ft	148.5 Sq. Ft	162 Sq. Ft	175.5 Sq. Ft	189 Sq. Ft	202.5 Sq. Ft	216 Sq. Ft	229.5 Sq. Ft	243 Sq. Ft	256.5 Sq. Ft	270 Sq. Ft	283.5 Sq. Ft	297 Sq. Ft	310.5 Sq. Ft	324 Sq. Ft	337.5 Sq. Ft	351 Sq. Ft	364.5 Sq. Ft	378 Sq. Ft	391.5 Sq. Ft	405 Sq. Ft	418.5 Sq. Ft	432 Sq. Ft
28 ft.	70 Sq. Ft	84 Sq. Ft	98 Sq. Ft	112 Sq. Ft	126 Sq. Ft	140 Sq. Ft	154 Sq. Ft	168 Sq. Ft	182 Sq. Ft	196 Sq. Ft	210 Sq. Ft	224 Sq. Ft	238 Sq. Ft	252 Sq. Ft	266 Sq. Ft	280 Sq. Ft	294 Sq. Ft	308 Sq. Ft	322 Sq. Ft	336 Sq. Ft	350 Sq. Ft	364 Sq. Ft	378 Sq. Ft	392 Sq. Ft	406 Sq. Ft	420 Sq. Ft	434 Sq. Ft	448 Sq. Ft
29 ft.	72.5 Sq. Ft	87 Sq. Ft	101.5 Sq. Ft	116 Sq. Ft	130.5 Sq. Ft	145 Sq. Ft	159.5 Sq. Ft	174 Sq. Ft	188.5 Sq. Ft	203 Sq. Ft	217.5 Sq. Ft	232 Sq. Ft	246.5 Sq. Ft	261 Sq. Ft	275.5 Sq. Ft	290 Sq. Ft	304.5 Sq. Ft	319 Sq. Ft	333.5 Sq. Ft	348 Sq. Ft	362.5 Sq. Ft	377 Sq. Ft	391.5 Sq. Ft	406 Sq. Ft	420.5 Sq. Ft	435 Sq. Ft	449.5 Sq. Ft	464 Sq. Ft
30 ft.	75 Sq. Ft	90 Sq. Ft	105 Sq. Ft	120 Sq. Ft	135 Sq. Ft	150 Sq. Ft	165 Sq. Ft	180 Sq. Ft	195 Sq. Ft	210 Sq. Ft	225 Sq. Ft	240 Sq. Ft	255 Sq. Ft	270 Sq. Ft	285 Sq. Ft	300 Sq. Ft	315 Sq. Ft	330 Sq. Ft	345 Sq. Ft	360 Sq. Ft	375 Sq. Ft	390 Sq. Ft	405 Sq. Ft	420 Sq. Ft	435 Sq. Ft	450 Sq. Ft	465 Sq. Ft	480 Sq. Ft
31 ft.	77.5 Sq. Ft	93 Sq. Ft	108.5 Sq. Ft	124 Sq. Ft	139.5 Sq. Ft	155 Sq. Ft	170.5 Sq. Ft	186 Sq. Ft	201.5 Sq. Ft	217 Sq. Ft	232.5 Sq. Ft	248 Sq. Ft	263.5 Sq. Ft	279 Sq. Ft	294.5 Sq. Ft	310 Sq. Ft	325.5 Sq. Ft	341 Sq. Ft	356.5 Sq. Ft	372 Sq. Ft	387.5 Sq. Ft	403 Sq. Ft	418.5 Sq. Ft	434 Sq. Ft	449.5 Sq. Ft	465 Sq. Ft	480.5 Sq. Ft	496 Sq. Ft
32 ft.	80 Sq. Ft	96 Sq. Ft	112 Sq. Ft	128 Sq. Ft	144 Sq. Ft	160 Sq. Ft	176 Sq. Ft	192 Sq. Ft	208 Sq. Ft	224 Sq. Ft	240 Sq. Ft	256 Sq. Ft	272 Sq. Ft	288 Sq. Ft	304 Sq. Ft	320 Sq. Ft	336 Sq. Ft	352 Sq. Ft	368 Sq. Ft	384 Sq. Ft	400 Sq. Ft	416 Sq. Ft	432 Sq. Ft	448 Sq. Ft	464 Sq. Ft	480 Sq. Ft	496 Sq. Ft	512 Sq. Ft
33 ft.	82.5 Sq. Ft	99 Sq. Ft	115.5 Sq. Ft	132 Sq. Ft	148.5 Sq. Ft	165 Sq. Ft	181.5 Sq. Ft	198 Sq. Ft	214.5 Sq. Ft	231 Sq. Ft	247.5 Sq. Ft	264 Sq. Ft	280.5 Sq. Ft	297 Sq. Ft	313.5 Sq. Ft	330 Sq. Ft	346.5 Sq. Ft	363 Sq. Ft	379.5 Sq. Ft	396 Sq. Ft	412.5 Sq. Ft	429 Sq. Ft	445.5 Sq. Ft	462 Sq. Ft	478.5 Sq. Ft	495 Sq. Ft	511.5 Sq. Ft	528 Sq. Ft
34 ft.	85 Sq. Ft	102 Sq. Ft	119 Sq. Ft	136 Sq. Ft	153 Sq. Ft	170 Sq. Ft	187 Sq. Ft	204 Sq. Ft	221 Sq. Ft	238 Sq. Ft	255 Sq. Ft	272 Sq. Ft	289 Sq. Ft	306 Sq. Ft	323 Sq. Ft	340 Sq. Ft	357 Sq. Ft	374 Sq. Ft	391 Sq. Ft	408 Sq. Ft	425 Sq. Ft	442 Sq. Ft	459 Sq. Ft	476 Sq. Ft	493 Sq. Ft	510 Sq. Ft	527 Sq. Ft	544 Sq. Ft
35 ft.	87.5 Sq. Ft	105 Sq. Ft	122.5 Sq. Ft	140 Sq. Ft	157.5 Sq. Ft	175 Sq. Ft	192.5 Sq. Ft	210 Sq. Ft	227.5 Sq. Ft	245 Sq. Ft	262.5 Sq. Ft	280 Sq. Ft	297.5 Sq. Ft	315 Sq. Ft	332.5 Sq. Ft	350 Sq. Ft	367.5 Sq. Ft	385 Sq. Ft	402.5 Sq. Ft	420 Sq. Ft	437.5 Sq. Ft	455 Sq. Ft	472.5 Sq. Ft	490 Sq. Ft	507.5 Sq. Ft	525 Sq. Ft	542.5 Sq. Ft	560 Sq. Ft
36 ft.	90 Sq. Ft	108 Sq. Ft	126 Sq. Ft	144 Sq. Ft	162 Sq. Ft	180 Sq. Ft	198 Sq. Ft	216 Sq. Ft	234 Sq. Ft	252 Sq. Ft	270 Sq. Ft	288 Sq. Ft	306 Sq. Ft	324 Sq. Ft	342 Sq. Ft	360 Sq. Ft	378 Sq. Ft	396 Sq. Ft	414 Sq. Ft	432 Sq. Ft	450 Sq. Ft	468 Sq. Ft	486 Sq. Ft	504 Sq. Ft	522 Sq. Ft	540 Sq. Ft	558 Sq. Ft	576 Sq. Ft

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

Type "D" (3 Posts)
2.7 CY Conc.
168 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/5/10 PLATE NO. A3-3.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A33.DGN PLOT DATE : 05-MAR-2010 10:07 PLOT BY : ditjph

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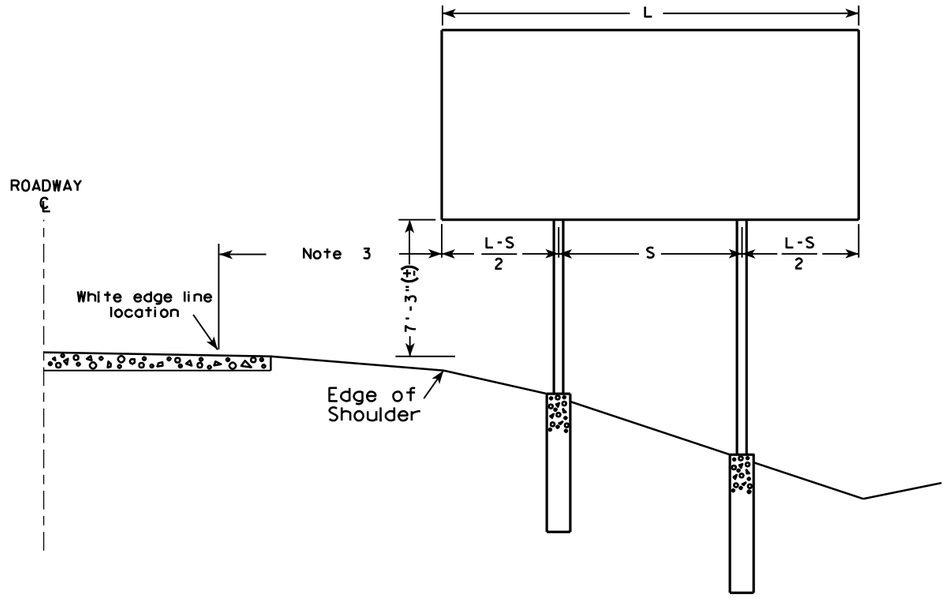

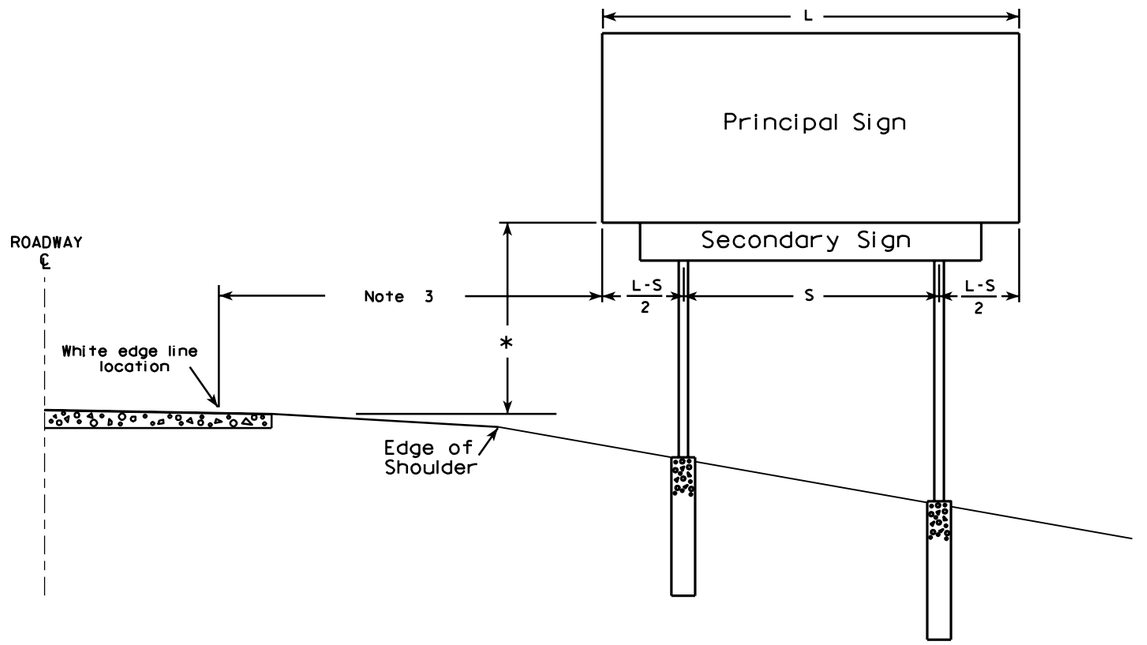

GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

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TYPICAL INSTALLATION
OF TYPE I SIGNS

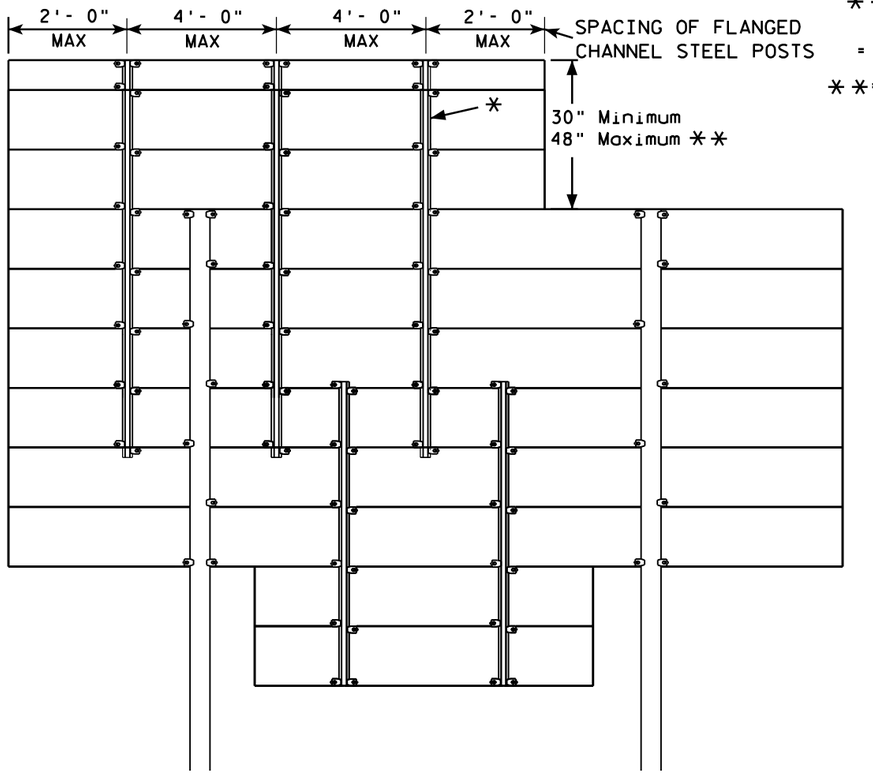
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 49	E

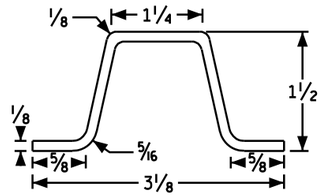
GROUND MOUNTED SIGN



*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

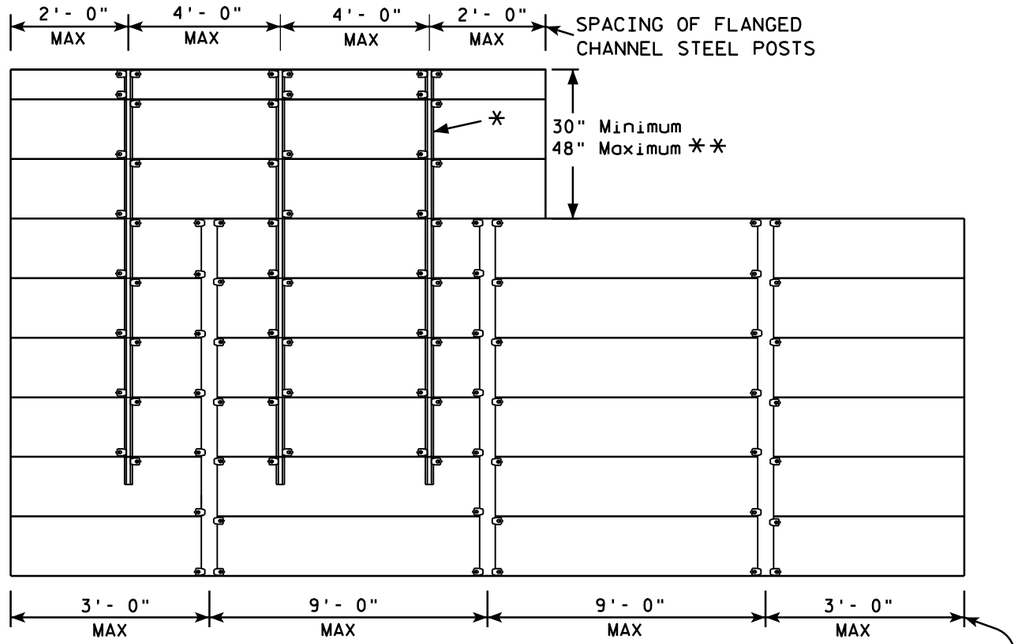
**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



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)

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ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

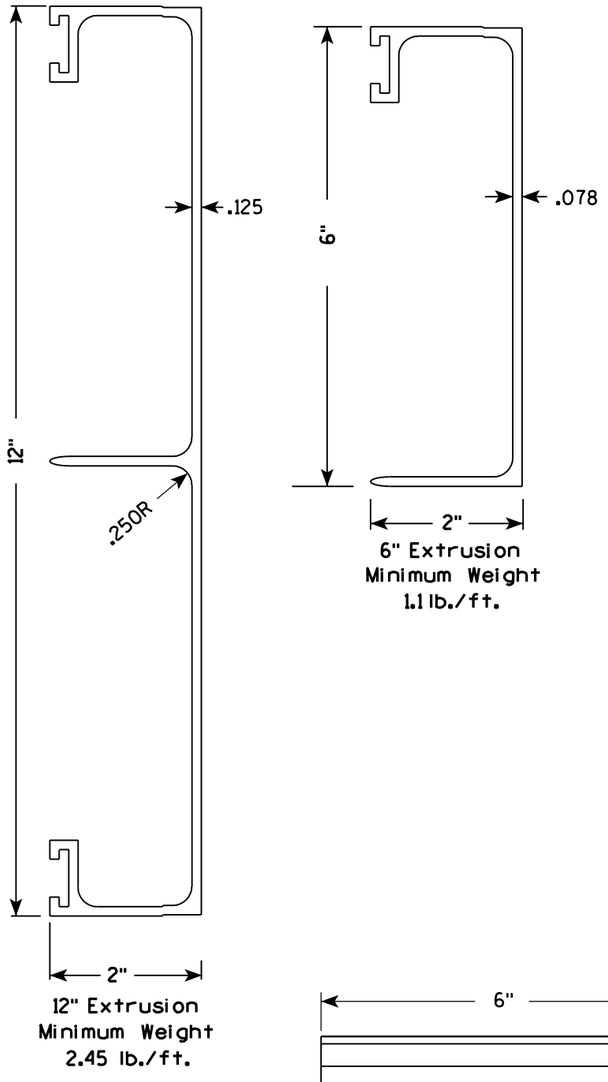
WISCONSIN DEPT OF TRANSPORTATION

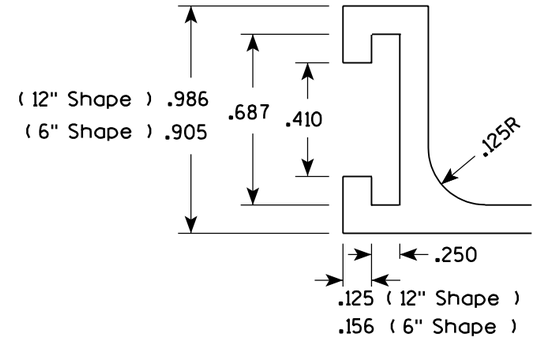
APPROVED Matthew R Rauch for State Traffic Engineer

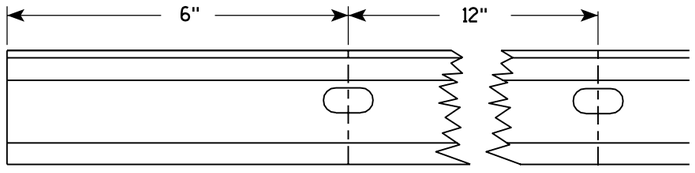
DATE 6/7/10 PLATE NO. A4-6.11

PROJECT NO:				SHEET NO: 50	E

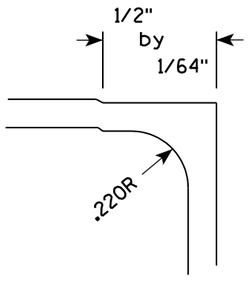
Extruded Shape







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.

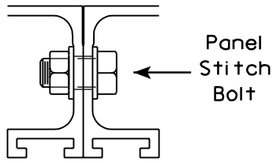


Hardware

STITCH BOLT, WASHER & NUT

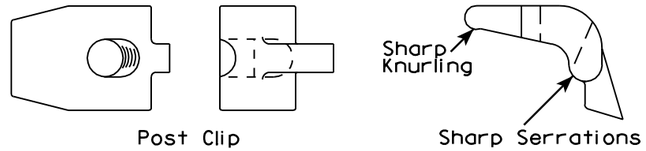
The hardware includes:

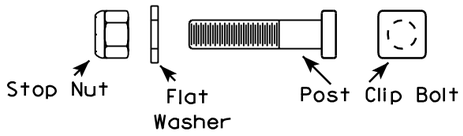
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



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.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

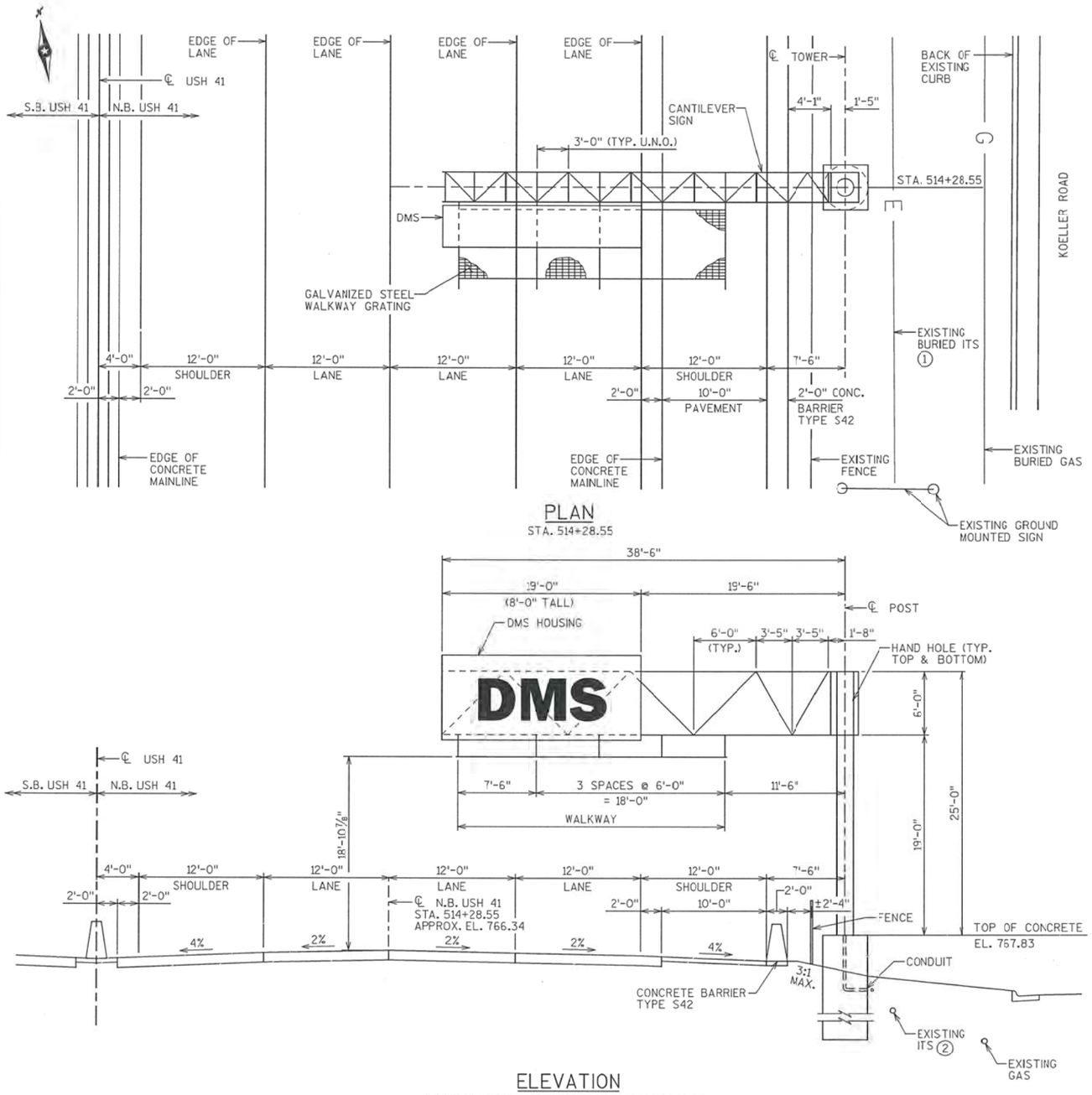
APPROVED Chester J Spang
for State Traffic Engineer

DATE 11/18/99 PLATE NO. A5-2.9

PROJECT NO:

SHEET NO: 51 E

STATE PROJECT NUMBER
1120-10-70



PLAN
STA. 514+28.55

ELEVATION
(LOOKING NORTH AT FRONT FACE OF DMS SIGN)

DESIGN DATA:

DEAD LOAD - WEIGHT OF DMS, SUPPORTING STRUCTURE, WALKWAY AND RAILINGS.
LIVE LOAD - SINGLE LINE LOAD OF 500 LBS. DISTRIBUTED OVER 2'-0" OF WALKWAY.
ICE LOAD - 3 PSF TO ALL FACES OF DMS SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND*)	133

*MIN. VALUE OF 25 PSF FOR GROUP III

LIST OF DRAWINGS:

1. PLAN & ELEVATION
2. DESIGN AND GENERAL NOTES
3. FOUNDATION DETAILS
4. CANTILEVER SIGN DETAILS
5. CANTILEVER SIGN DETAILS
6. WALKWAY DETAILS
7. SAFETY CABLE DETAILS
8. MOUNTING DETAILS
9. SUBSURFACE EXPLORATION

GENERAL NOTES:

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

USE 3" CLEAR CONCRETE COVER FOR ALL REINFORCEMENT UNLESS OTHERWISE NOTED.

CANTILEVER SIGN IS TO BE LOCATED NORMAL TO REFERENCE LINES.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. UTILITY SERVICES ARE NOT SHOWN. CONTRACTOR TO LOCATE ALL UTILITIES.

THE SIGN BRIDGE ID PLAQUES ARE INCIDENTAL TO "SIGN BRIDGE CANTILEVERED (S-70-0187)".

PROVIDE A ¾" CHAMFER OR 1" RADIUS ON ALL EXPOSED CONCRETE EDGES.

PROVIDE 2 HANDHOLES AND 2 CONDUIT FLANGES ON THE TOWER POST.

SUPPLYING AND INSTALLING THE SIGN MOUNTING POSTS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "CANTILEVER SIGN S-70-0187".

U.N.O. DENOTES UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL VERIFY LOCATIONS OF ELECTRICAL FEEDS PRIOR TO FABRICATION OF SIGN BRIDGE MEMBERS.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE TRUSS AT THE TIME OF ERECTION. BLANKS SHALL BE ¼" THE LENGTH OF THE CANTILEVER, 2'-0" DEEPER THAN CENTER TO CENTER OF CHORDS & AND SHALL BE CENTERED ON THE TRUSS.

① THE CONTRACTOR SHALL VERIFY THE LOCATION PRIOR TO PLACING FOUNDATIONS BY POT HOLING THE UTILITY.

DMS UNIT NOTES:

THE CONTRACTOR SHALL VERIFY THAT THE FOLLOWING DESIGN PARAMETERS ARE NOT EXCEEDED:
DMS UNIT DIMENSIONS = 19'-0" WIDE, 8'-0" TALL, AND 1'-0" DEEP
DMS UNIT WEIGHT = 1,500 POUNDS
DMS HANGER ATTACHMENT WEIGHT = 1,000 POUNDS

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	14
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	2990
641.1200	SIGN BRIDGE CANTILEVERED (S-70-0187)	LS	1
652.0125	CONDUIT RIGID METALLIC 2 - INCH	LF	70

WISCONSIN PROFESSIONAL ENGINEER
CASEY E. BLACK
E-43114
MINNEAPOLIS, MN
11/12/13

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CASEY BLACK
(763)-475-0010

NO.	DATE	REVISION	BY

SRF CONSULTING GROUP, INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/14/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-70-0187

USH 41

COUNTY WINNEBAGO | TOWN/CITY/VILLAGE OSHKOSH

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	CEB	DESIGN CK'D.	JMB	DRAWN BY	JEH	PLANS CK'D.	JMB

PLAN & ELEVATION

SHEET 1 OF 9

8

8

STATE PROJECT NUMBER
1120-10-70

CANTILEVER SIGN NOTES:

1. SIGN STRUCTURE MATERIALS SHALL BE AS FOLLOWS:
   POST (STEEL PIPE) ..... ASTM A106, GRADE B

   CHORDS, WEBS AND SPLICES (STEEL ANGLES) ..... ASTM A709 GRADE 36
   (STEEL PLATES) ..... ASTM A709 GRADE 36
   (WELD METAL) E70XX

   WALKWAY SUPPORT BRACKET & PANEL MOUNTING POSTS.. ASTM A709 GRADE 50

   BOLTS, NUTS AND WASHERS (EXCEPT ANCHOR BOLTS) ..... ASTM A325
   RAILING CONNECTORS, RODS, (WASHERS AND NUTS) ..... ASTM A307
   ALUMINUM RAILING ..... ASTM B221 ALLOY 6061-T6 OR 6351-T5
   STAINLESS STEEL ROD ..... ASTM A276 TYPE 304

2. STEEL ANCHOR BOLTS SHALL BE AASHTO M 314-90 GRADE 55. NUTS FOR ANCHOR BOLTS SHALL BE ASTM A563 GRADE 'A' HEAVY HEX. ANCHOR BOLTS SHALL HAVE DOUBLE NUTS.

3. ALL STEEL ITEMS SHALL BE GALVANIZED AS FOLLOWS:
   STRUCTURAL SHAPES AND PLATES ..... ASTM A123
   ALL NUTS, BOLTS AND WASHERS ..... ASTM A153 CLASS C

   BEARING SURFACES MUST BE SMOOTH. THE UPPER 18" OF ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

4. ALL HIGH STRENGTH BOLTS, NUTS, AND WASHERS, EXCEPT ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATIONS 506.2.5 AND BE INSTALLED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 506.3.12.

5. CONCRETE SHALL CONFORM TO WISDOT 636 GRADE 'A' WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH (F'C) OF 3500 PSI FOR ALL ENVIRONMENTAL CLASSIFICATIONS.

6. REINFORCING STEEL SHALL CONFORM TO AASHTO M31 GRADE 60.

7. DO NOT GROUT THE SPACE BETWEEN TOP OF CONCRETE FOUNDATION AND BOTTOM OF BASE PLATE.

8. SHOP DRAWINGS FOR THE STRUCTURE ARE REQUIRED AND FABRICATION SHALL NOT BEGIN UNTIL THESE SHOP DRAWINGS ARE APPROVED.

9. THE STRUCTURE MUST BE ASSEMBLED AFTER GALVANIZING AND PRIOR TO SHIPMENT TO THE SITE TO ASSURE FIT UP. IT MAY BE DISASSEMBLED FOR SHIPPING.

10. INSPECTION BEFORE AND AFTER GALVANIZING SHALL BE PER WISDOT 105.9.

11. PROVIDE A CAMBER WITH THE UPWARD DEFLECTION AS CALLED FOR IN THE CAMBER TABLE. INDICATE ON THE SHOP DRAWINGS THE METHOD TO BE USED TO PROVIDE THE REQUIRED CAMBER.

12. EXCEPT FOR ANCHOR BOLTS, ALL BOLT HOLE DIAMETERS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/16", PRIOR TO GALVANIZING. HOLE DIAMETERS FOR ANCHOR BOLTS SHALL NOT EXCEED THE BOLT DIAMETER PLUS 1/2".

13. ANCHOR BOLTS SHALL BE PROVIDED WITH TEMPLATES TOP AND BOTTOM TO MAINTAIN VERTICAL ALIGNMENT AND SPACING DURING CONCRETE PLACEMENT. TEMPLATES SHALL NOT BE WELDED TO THE ANCHOR BOLTS.

14. TEST WELDS PER AWS D1.1.

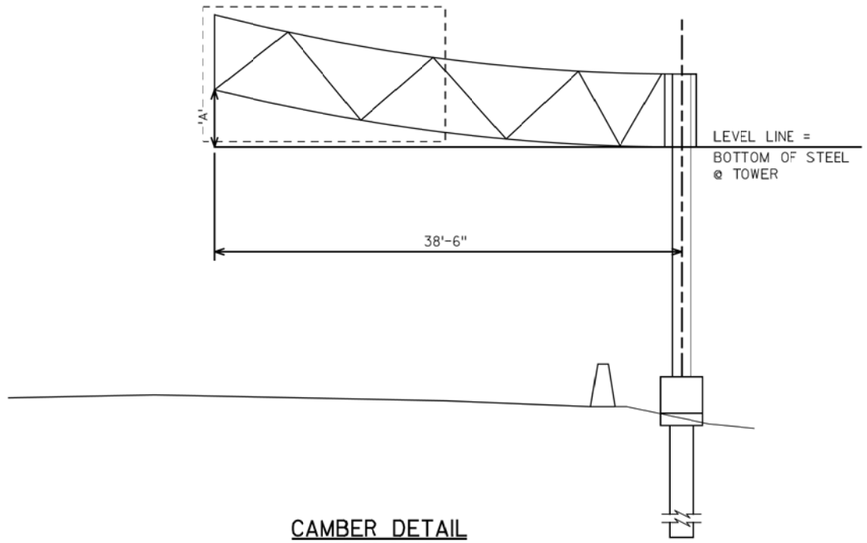
15. FABRICATION OF STRUCTURAL METALS SHALL BE IN ACCORDANCE WTIH WISDOT 506, 635 AND 641 EXCEPT AS MODIFIED IN THESE PLANS. ALL WELDING TO BE CONTINUCUS. ALL CONTACT SURFACES MUST BE COMPLETELY SEALED.

16. THE L 6" X 6" X 1/2" MAIN CHORD ANGLES SHALL MEET A CHARPY V-NOTCH IMPACT STRENGTH REQUIREMENT OF 15 FT-LBS @ 40°F.

17. CAMBER AND DEFLECTIONS SHOWN ARE SHOWN AT END OF CANTILEVER.

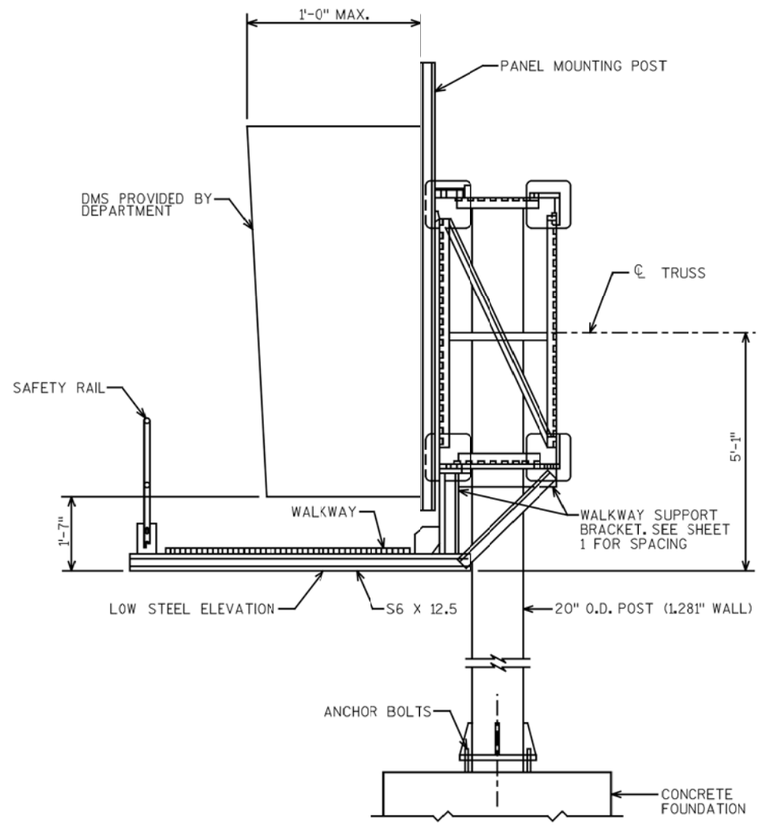
18. WHEN ERECTING CANTILEVER TRUSSES, THE POSTS SHALL BE SET 1/8" PER FOOT OUT OF PLUMB TO COMPENSATE FOR THE BENDING OF THE POSTS.

19. CONCRETE SHALL CONFORM TO WISDOT 636 GRADE 'A' WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH (F'C) OF 3500 PSIFOR ALL ENVIRONMENTAL CLASSIFICATIONS.



CAMBER DETAIL
NOT TO SCALE

CAMBER TABLE	
POINT	A
TOTAL CAMBER	1"
DL DEFLECTION	1/2"
RESIDUAL CAMBER	1/2"



TYPICAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0187

DRAWN BY JEH | PLANS CK'D. JMB

DESIGN & GENERAL NOTES

SHEET 2 OF 9
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SRF CONSULTING GROUP, INC.

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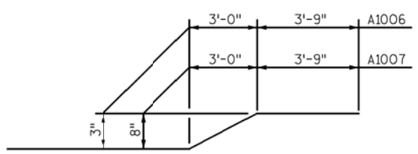
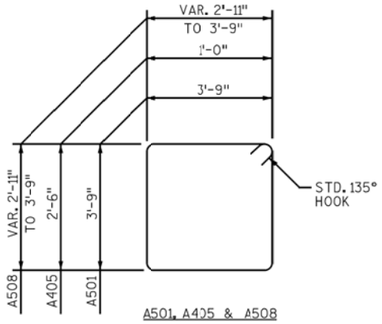
STATE PROJECT NUMBER
1120-10-70



A1006 & A1007



A501, A405 & A508

BAR SERIES

BAR MARK	NO. REQ'D	LENGTH
A508	1 SERIES OF 6	12'-7" TO 15'-11"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	8	15'-11"	X		HORIZONTAL TIE
A1002	X	12	20'-6"			LONGITUDINAL
A403		1	12'-6"			SPIRAL TIE
A704	X	12	15'-9"			FOOTING - WINGS
A405	X	10	7'-11"	X		FOOTING - WINGS
A1006	X	8	20'-6"	X		LONGITUDINAL
A1007	X	4	20'-6"	X		LONGITUDINAL
A508	X	6	14'-3"	X	X	HORIZONTAL TIE

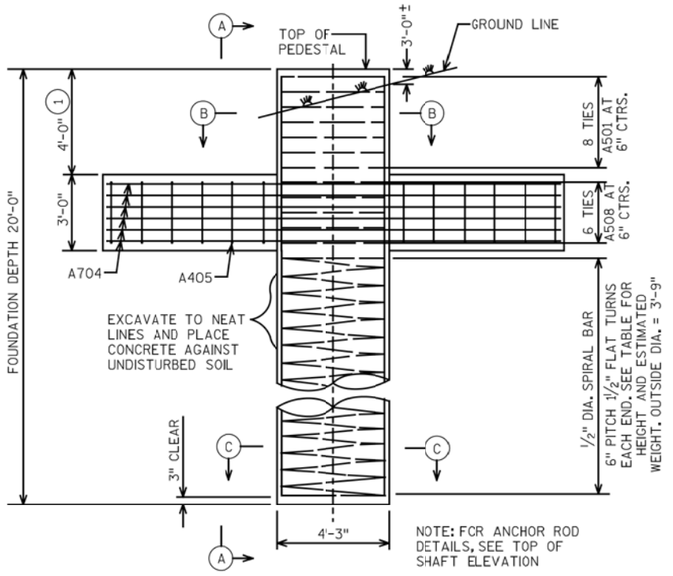
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

LENGTH SHOWN FOR SERIES BARS IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

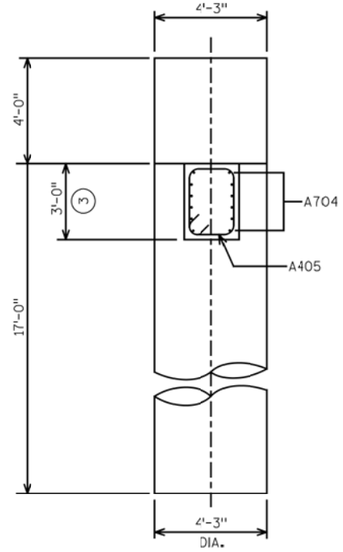
NOTE (1): MUST BE FORMED A MINIMUM OF 6" BELOW THE GROUND SURFACE. THE EXCAVATED AREA FOR FORMING SHALL BE BACKFILLED AND TAMPED WITH EQUIVALENT TO SURROUNDING MATERIAL.

A1002 ARE STRAIGHT BARS

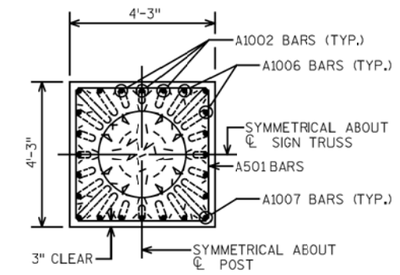
BAR BENDING DIAGRAMS



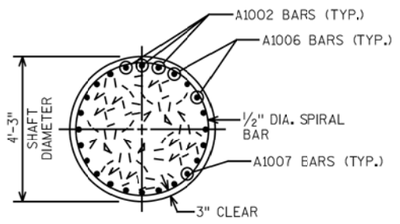
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

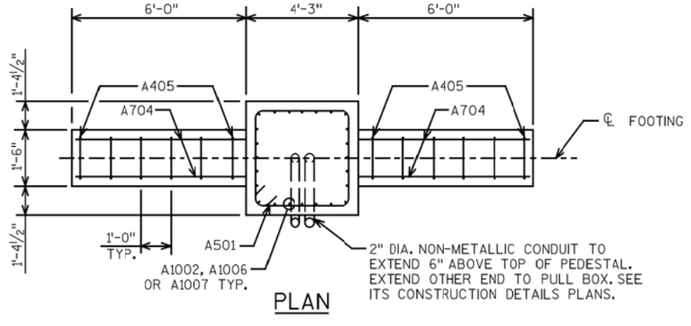
SPECIFIC NOTES:

1. MUST BE FORMED A MIN. OF 6" BELOW THE GROUND SURFACE. THE SOIL EXCAVATED FOR FORMING SHALL BE BACKFILLED AND TAMPED TO EQUIVALENT COMPACTION AS SURROUNDING MATERIAL.
2. 1/2" DIAMETER SPIRAL BAR WITH 6" PITCH 1 1/2" FLAT TURNS EACH END. LENGTH SHOWN IN TABLE IS HEIGHT OF SPIRAL. ESTIMATED WEIGHT IS 210 POUNDS.
3. TRANSITION FROM DIAMETER SHAFT TO SQUARE SHAFT.

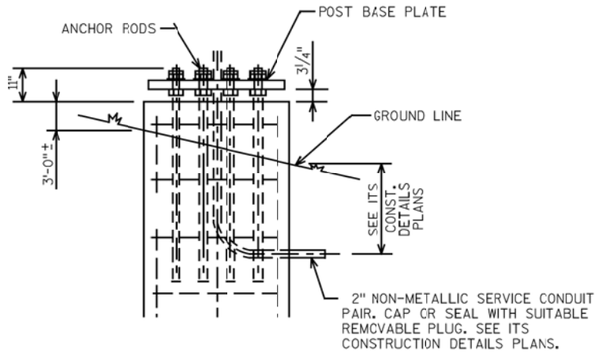
GENERAL NOTES:

1. ALL BAR DIMENSIONS ARE OUT TO OUT OF BARS.
2. THE DRILLED SHAFT HAS AN ALLOWABLE DESIGN LATERAL BEARING PRESSURE OF 250 LBS. PER SQ. FT. PER FOOT OF DEPTH, AND AN ALLOWABLE VERTICAL BEARING PRESSURE OF 2 TONS PER SQ. FT.
3. UNLESS OTHERWISE NOTED, ALL REINFORCEMENT BARS SHALL BE EPOXY COATED. SPIRAL BARS NEED NOT BE EPOXY COATED.
4. THE FOLLOWING TORQUE VALUES SHALL BE USED WHEN INSTALLING ALL ANCHOR NUTS FOR OVERHEAD SIGN STRUCTURES:

ANCHOR BOLT DIAMETER	TORQUE (FT./LBS.)
2 1/2"	450



PLAN



TOP OF SHAFT ELEVATION

TOTAL ESTIMATED QUANTITIES (1 FTG.)

SIGN SUPPORTS CONCRETE MASONRY	14 CY
SIGN SUPPORTS STEEL REINFORCEMENT HS	2990 LB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0187

DRAWN BY JEH | PLANS CK'D. JMB

FOUNDATION DETAILS

SHEET 3 OF 9
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SRF CONSULTING GROUP, INC.

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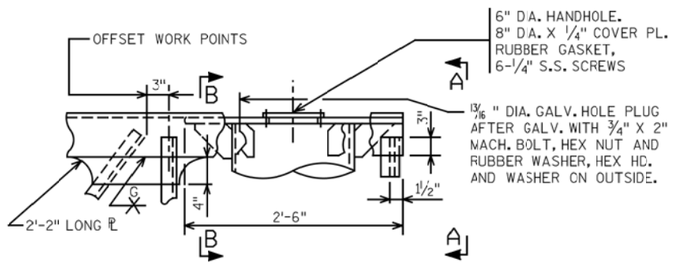
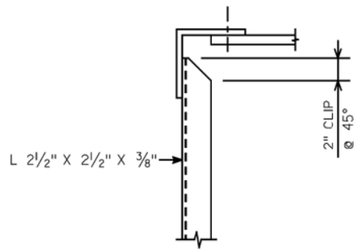
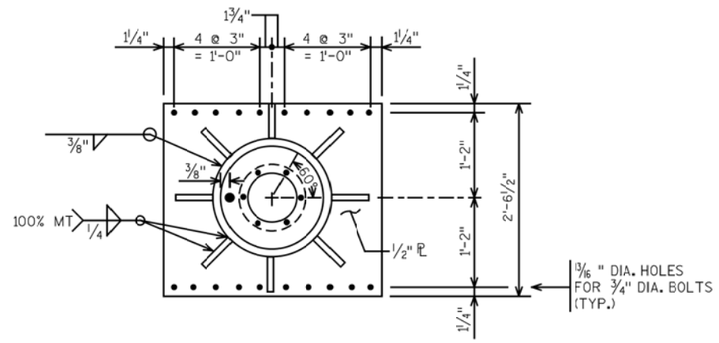
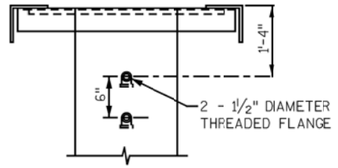




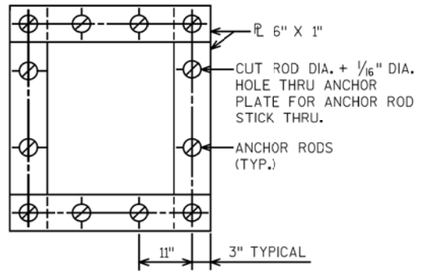
VIEW A-A



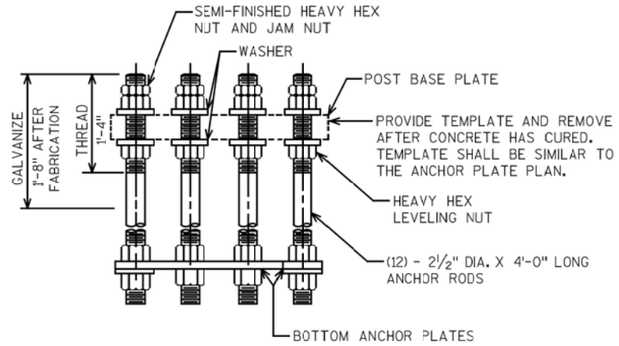
UPPER JUNCTION PLAN & ELEVATION



VIEW B-B

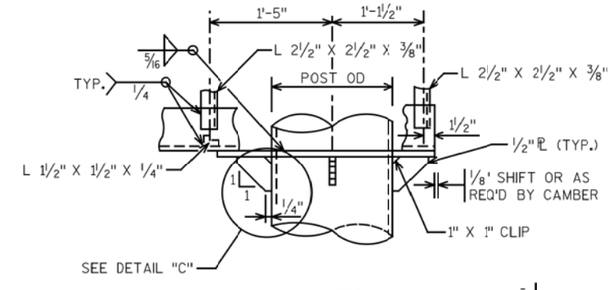


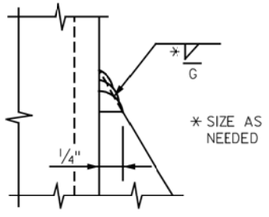
ANCHOR PLATE PLAN



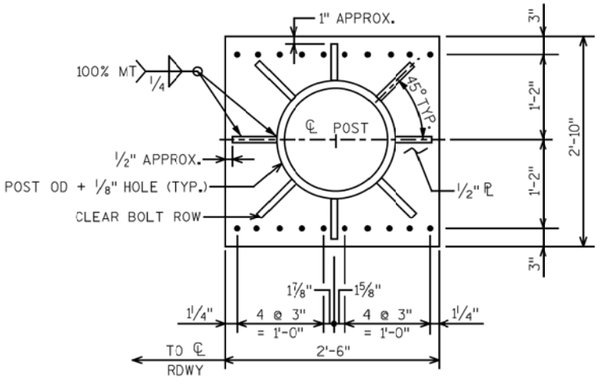
ELEVATION

ANCHOR ROD DETAILS

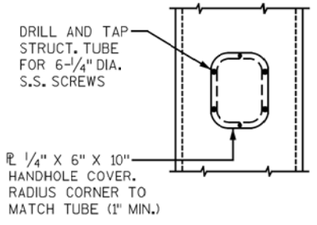




DETAIL "C"



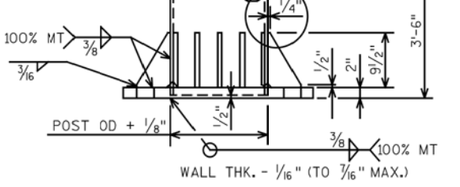
LOWER JUNCTION PLAN & ELEVATION

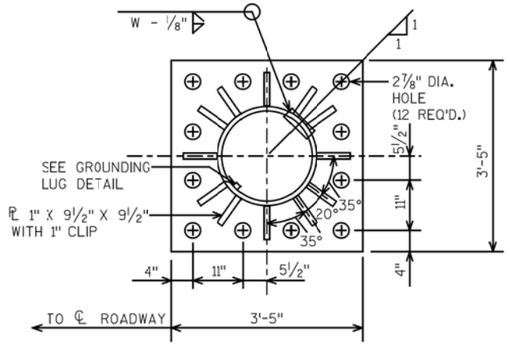


HANDHOLE & COVER PLATE DETAIL

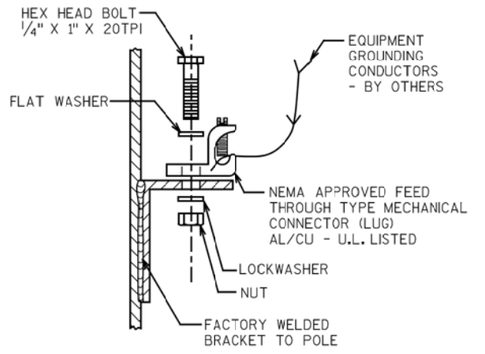
△ = LOCATE 45° AWAY FROM TRAFFIC. 10" X 6" X 1/2" X 0'-2" STRUCTURAL TUBE OR EQUAL W/ 1/4" RUBBER GASKET.

NOTE:
HANDHOLE COVERS SHALL BE GALVANIZED SEPARATELY.

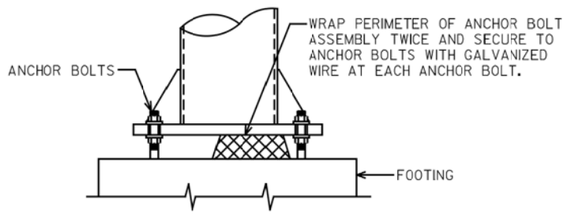




BASEPLATE PLAN & ELEVATION



GROUNDING LUG DETAIL
(NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL)



RODENT SCREEN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0187

DRAWN BY	JEH	PLANS CK'D.	JMB

CANTILEVER SIGN DETAILS

SHEET 4 OF 9
55

SRF CONSULTING GROUP, INC.

8

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STATE PROJECT NUMBER

1120-10-70

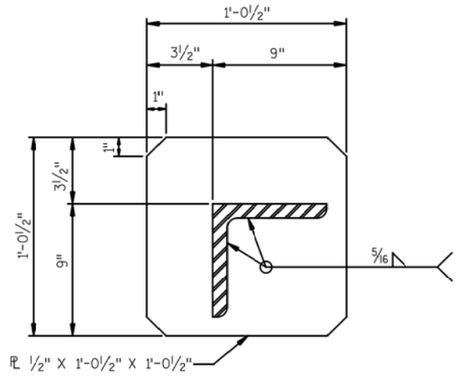
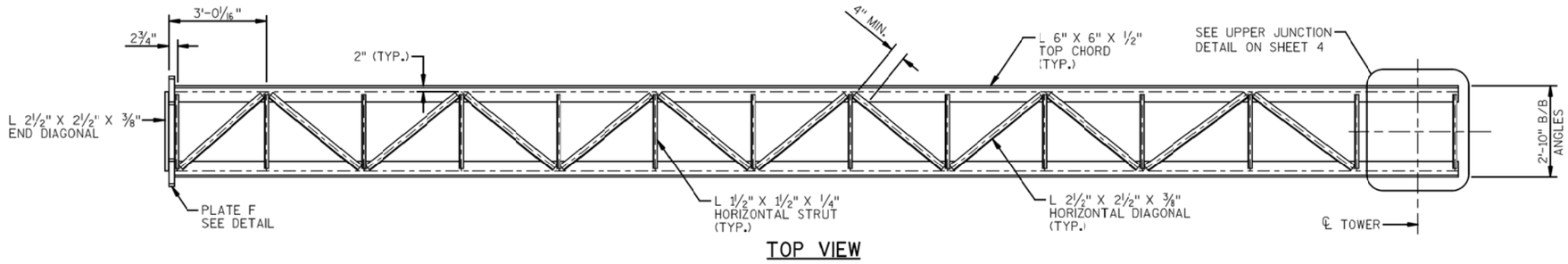
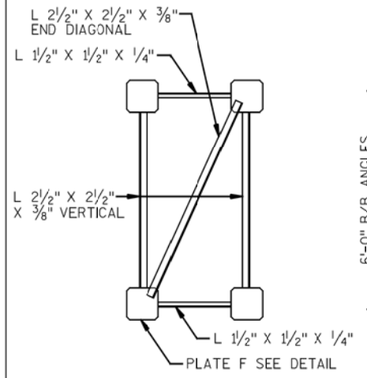


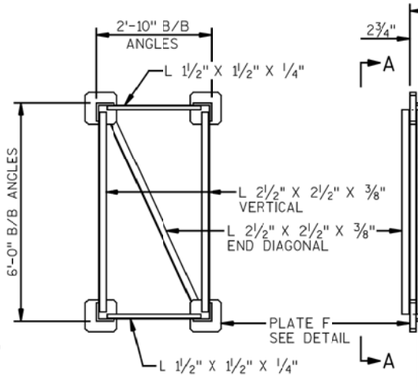
PLATE F



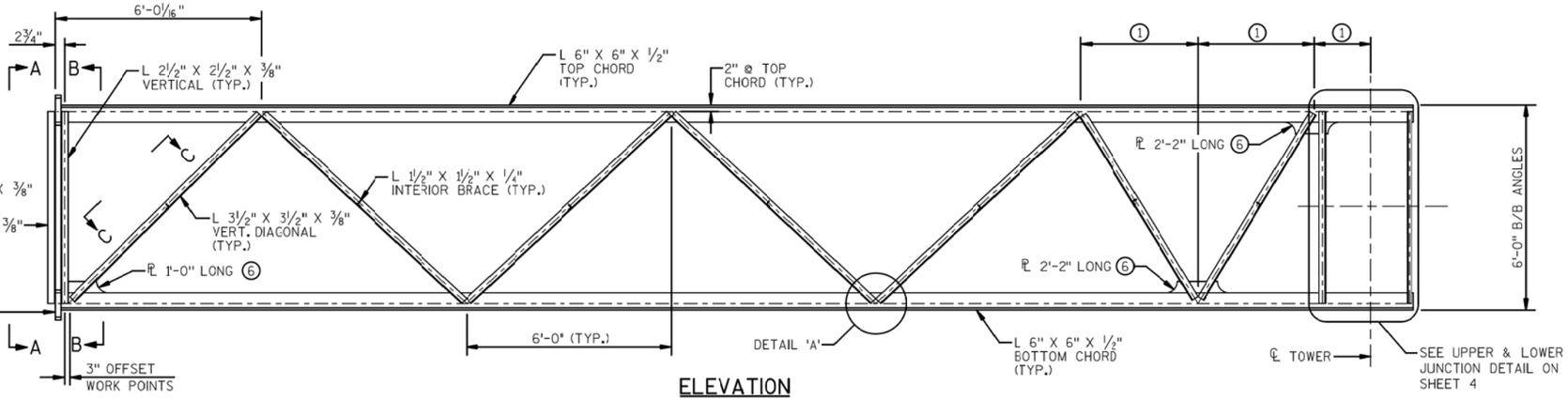
TOP VIEW



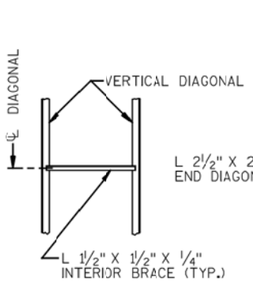
SECTION A-A



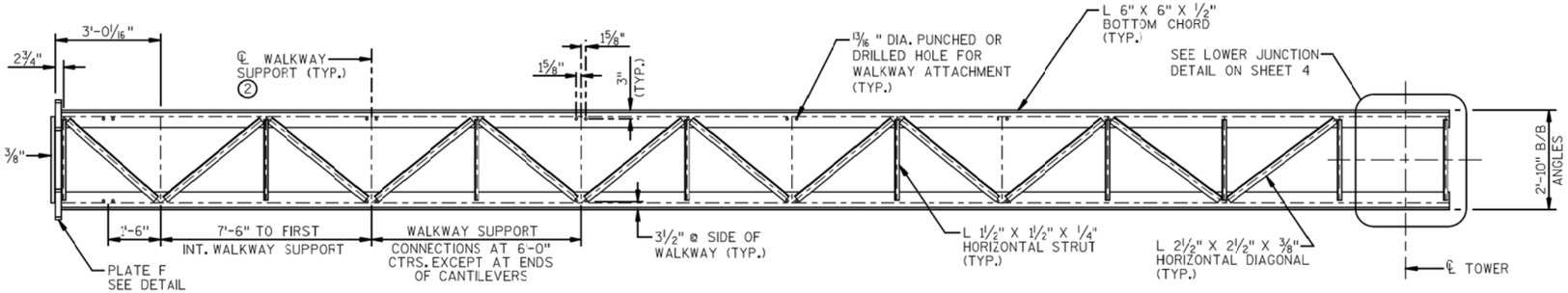
SECTION B-B



ELEVATION



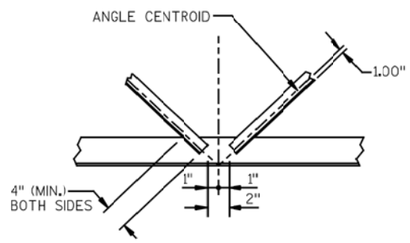
SECTION C-C



BOTTOM VIEW

GENERAL NOTES:

1. SEE SHEET 1 FOR SPACING.
2. PROVIDE A L 1½" X 1½" X ¼" HORIZONTAL STRUT WHERE WALKWAY CONNECTION IS OMITTED.
3. CANTILEVER TRUSS SHALL BE SUPPLIED AS A SINGLE UNIT.
4. UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.
5. ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.
6. PLATE TO MATCH CHORD ANGLE. SEE UPPER JUNCTION DETAILS ON SHEET 4.



DETAIL "A"
(TYP. ALL VERTICAL DIAGONAL MEMBERS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0187

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CANTILEVER SIGN DETAILS

SHEET 5 OF 9

SRF CONSULTING GROUP, INC.

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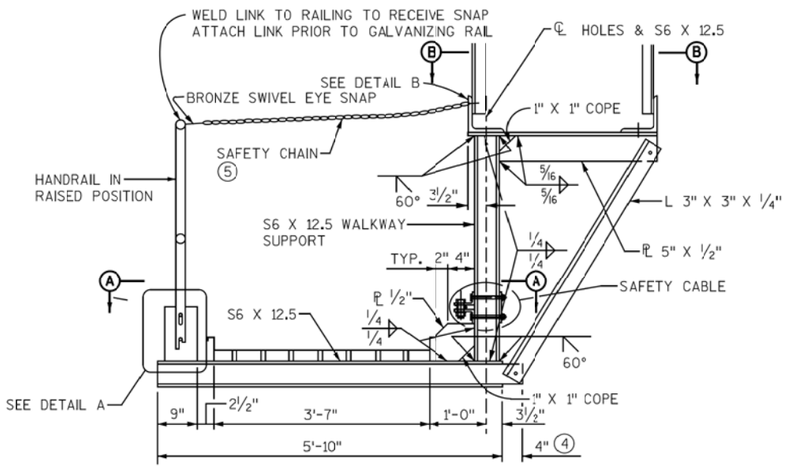
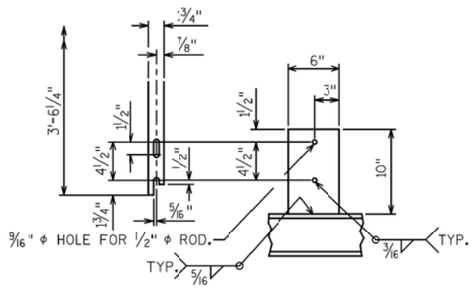
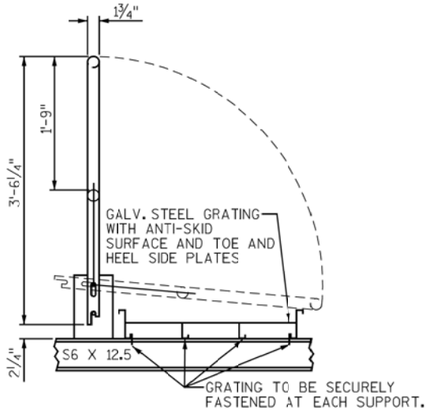


TYPICAL WALKWAY DETAILS



DETAIL "A"



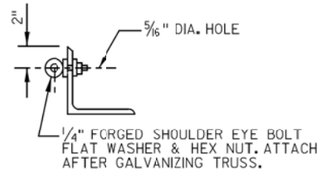
RAIL POST DETAIL

GENERAL NOTES:

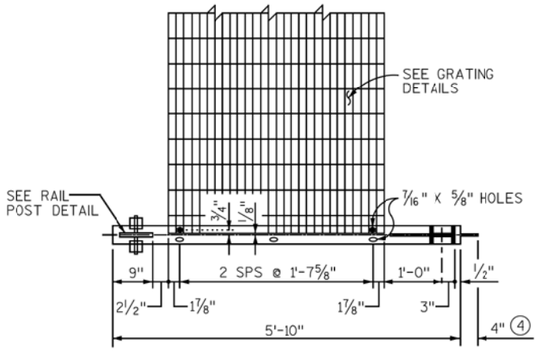
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LENGTH OF GRATING AND HANDRAIL PANELS REQUIRED WHERE THE SPECIFIED LENGTH DOES NOT AGREE WITH THE DETAILS.
2. PROVIDE ADEQUATE WEEP HOLES FOR HOT-DIP GALVANIZING.
3. GRATING SHALL BE GALVANIZED.

④ EXTEND S6 X 12.5 BY 4" AND COPE FLANGES.

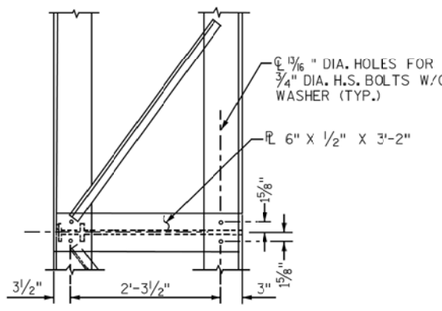
⑤ THE SAFETY CHAIN SHALL BE ATTACHED AT EACH END OF THE HANDRAIL. THE CHAIN SHALL BE 3/16" STAINLESS STEEL STRAIGHT LENGTH CHAIN WITH APPROXIMATELY 12 LINKS PER FOOT. THE CHAIN AND ITS CONNECTIONS SHALL HAVE A MINIMUM RATED WORK LOAD OF 700 LBS.



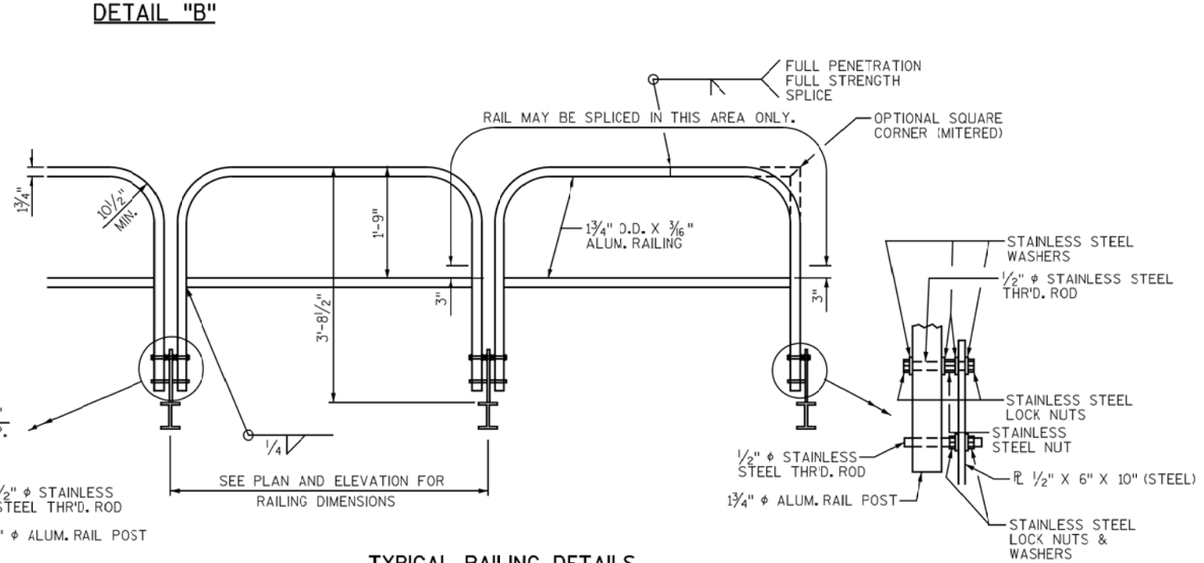
DETAIL "B"



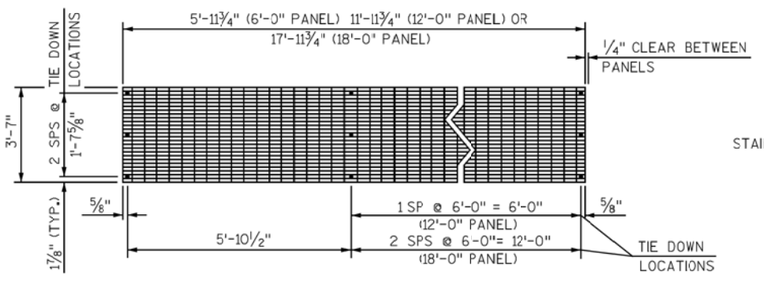
VIEW A-A



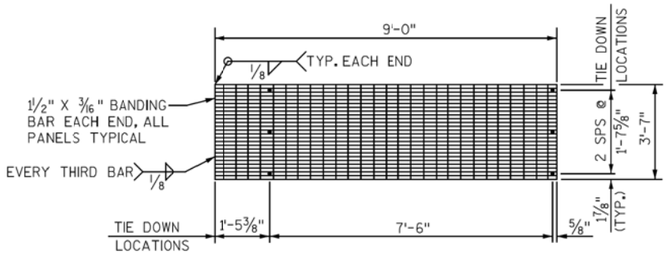
VIEW B-B



TYPICAL RAILING DETAILS

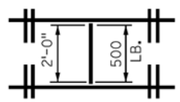


GRATING PLAN - 6'-0", 12'-0" OR 18'-0" PANELS



GRATING PLAN - CANTILEVER END

NOTE:
ALL GRATING SHALL BE 6'-7" WIDE AND SHALL BE 1½"X ⅜" SERRATED BEARING BARS AT 1⅜" CENTERS WITH CROSS BARS AT 4" CENTERS. ATTACH GRATING AT EACH TIE DOWN LOCATION WITH A STAINLESS STEEL SADDLE ANCHOR DESIGNED FOR THIS SPECIFIC USE.
CATWALK SHALL MEET AASHTO "SPECIFICATIONS FOR THE DESIGN & CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS" 1985. (500 LB. DISTRIBUTED OVER 2'-0" TRANSVERSELY WITH THE BASIC ALLOWABLE UNIT STRESS - AASHTO HIGHWAY BRIDGES 1985 (INCREASED 25%). MAX. SPAN IS 8'-0". CATWALK SHALL ALSO MEET OSHA 1970 STD'S. FOR WALKING-WORKING SURFACES.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0187

DRAWN BY JEH | PLANS CK'D. JMB

WALKWAY DETAILS

SHEET 6 OF 9
57

SRF CONSULTING GROUP, INC.

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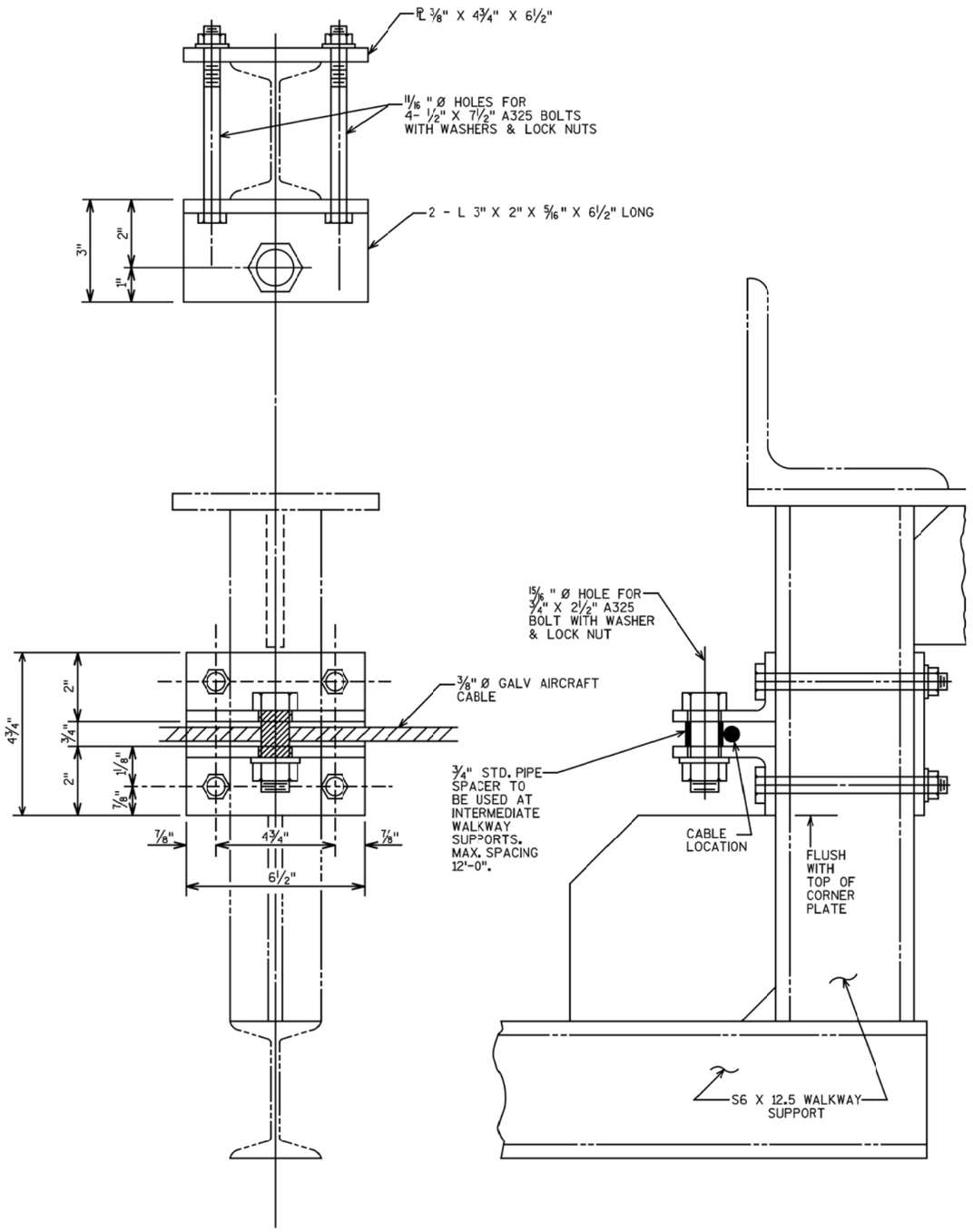
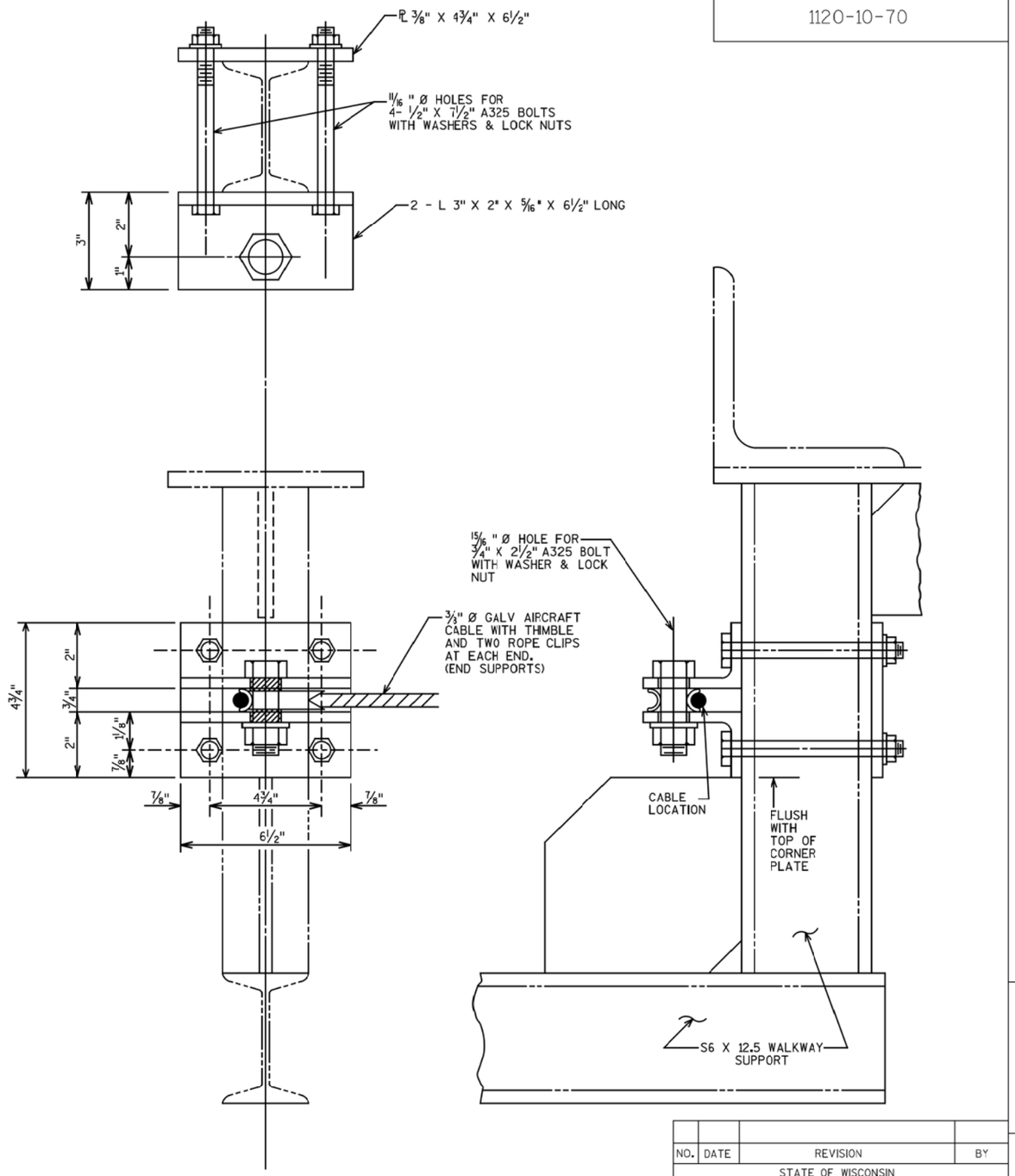


MIDDLE CONNECTION



END CONNECTION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

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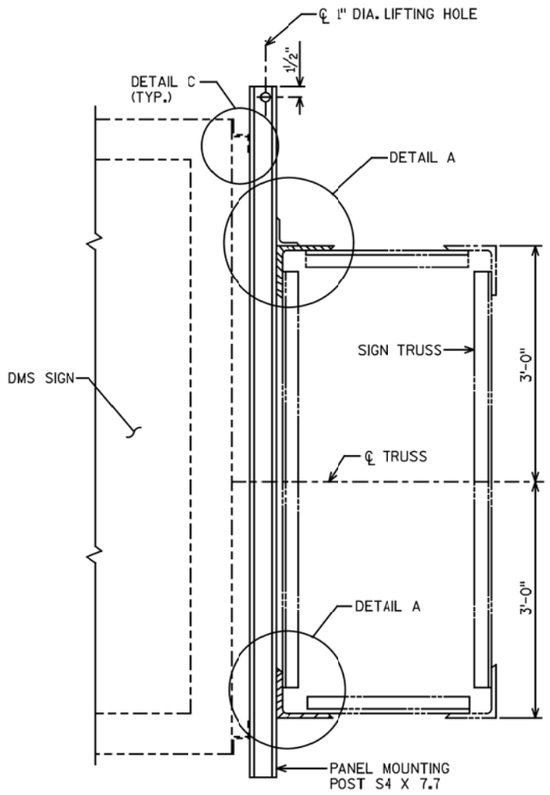
SRF CONSULTING GROUP, INC.

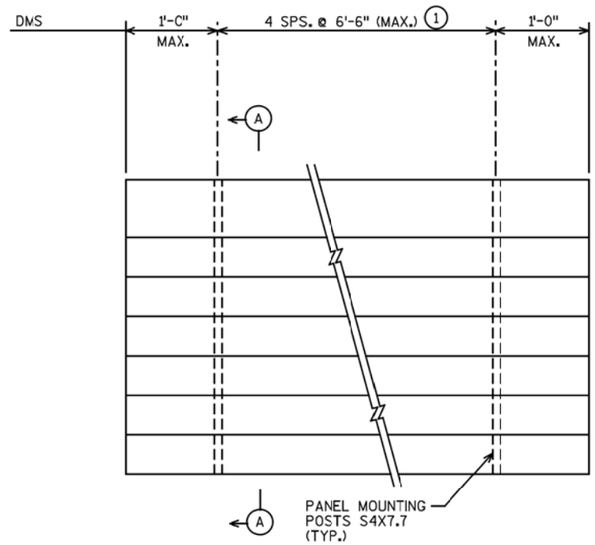
SAFETY CABLE DETAILS

SHEET 7 OF 9

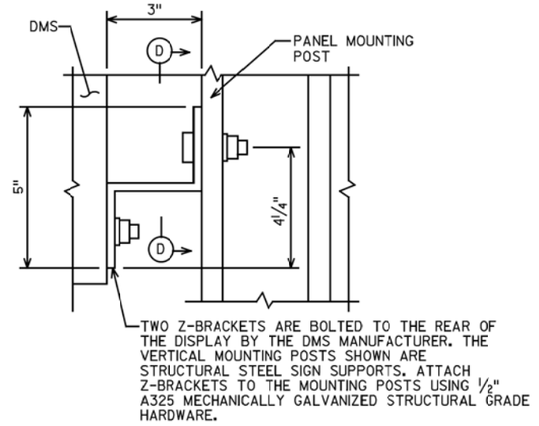
STATE PROJECT NUMBER
1120-10-70



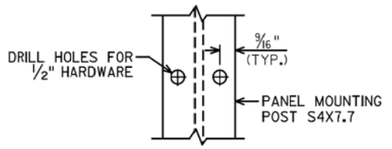
SECTION A-A
(@ DMS)



SIGN PANEL ELEVATION



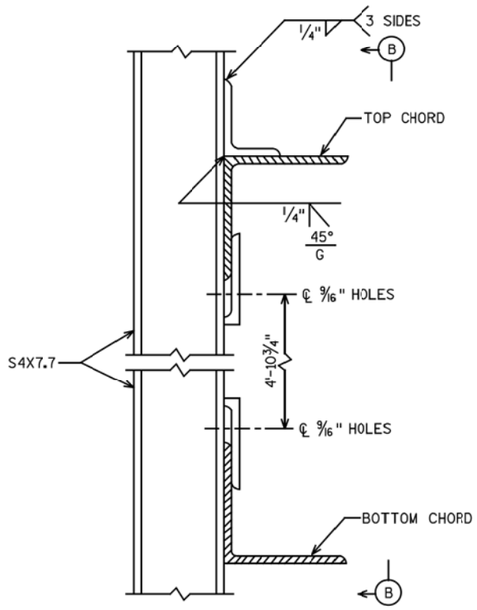
DETAIL C
(DMS SIGN ATTACHMENT)



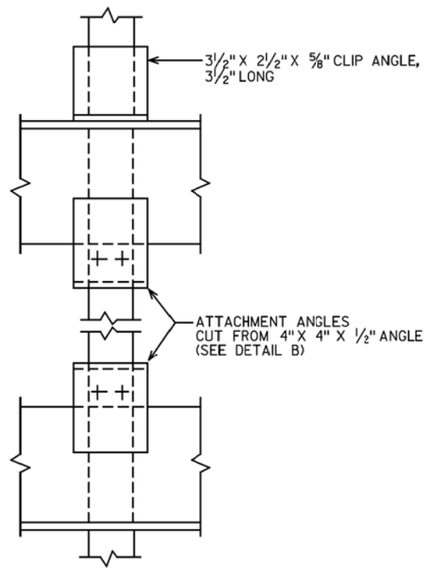
VIEW D-D

NOTES:

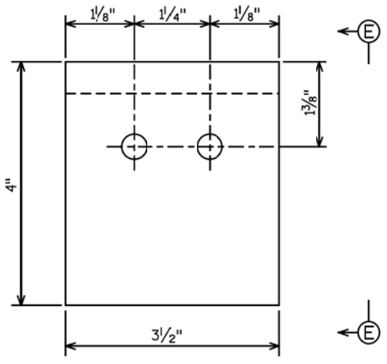
(1) DIMENSIONS MAY VARY SLIGHTLY TO AVOID INTERFERENCE WITH TRUSS MEMBERS.



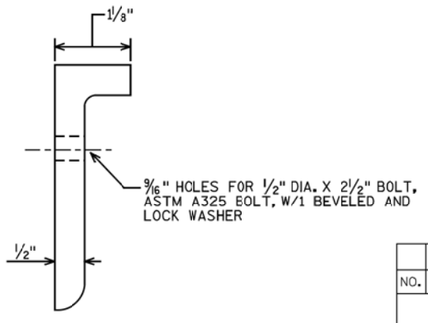
DETAIL A



VIEW B-B



DETAIL B



VIEW E-E

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0187

DRAWN BY	JEH	PLANS CK'D.	JMB

MOUNTING DETAILS

SHEET 8 OF 9

SRF CONSULTING GROUP, INC.

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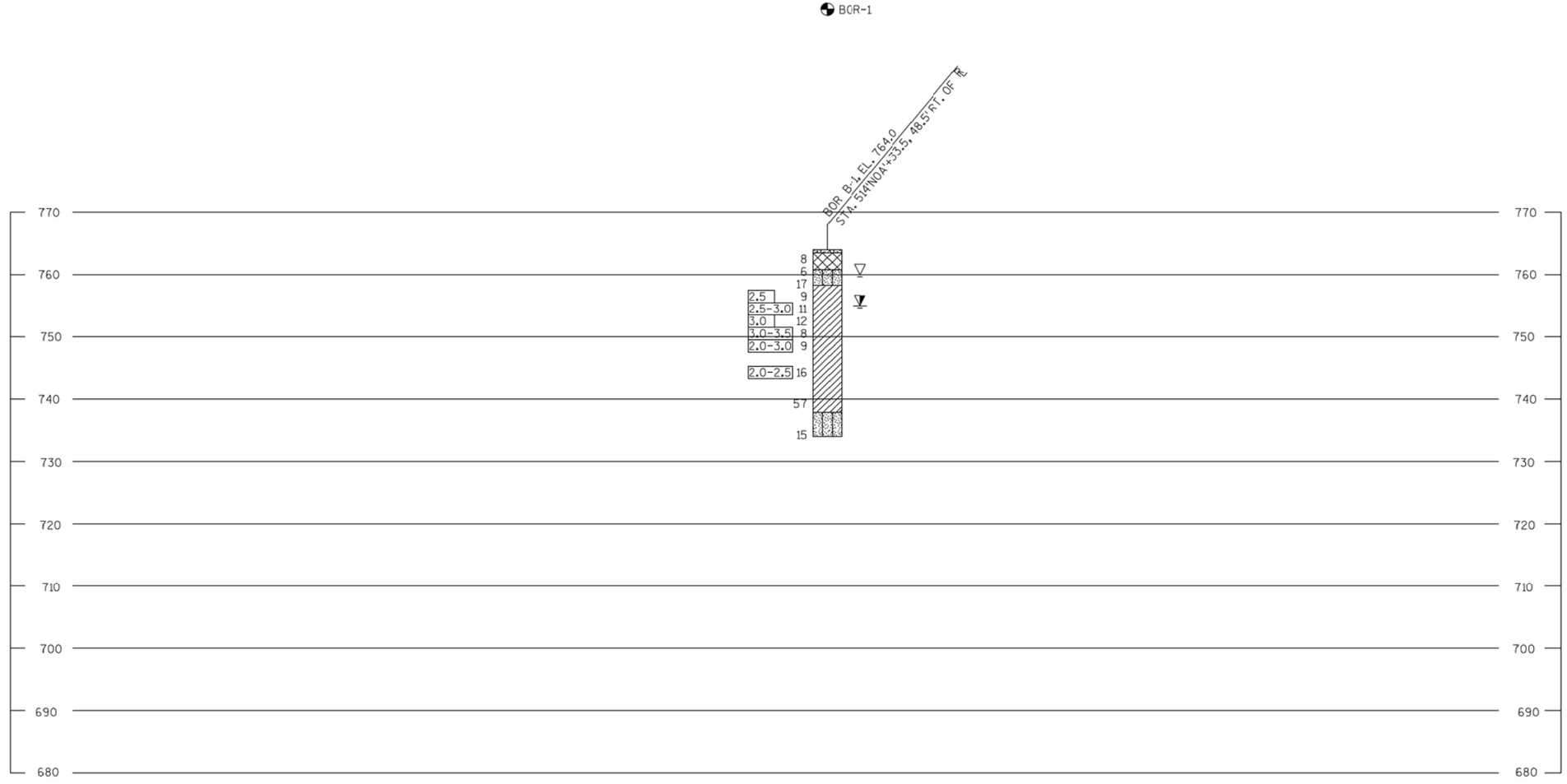
STH 26 - BREEZEWOOD LANE

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	6/10/2013	474682.4246	781518.9351
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) WINNEBAGO COUNTY			



STATE PROJECT NUMBER

1120-10-70

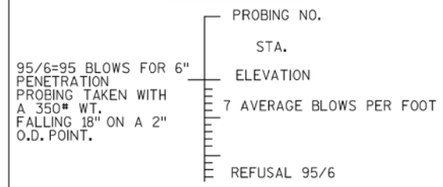
ABBREVIATIONS

F— FINE M— MEDIUM C— COARSE
WS— WEATHERED SO — SOUND

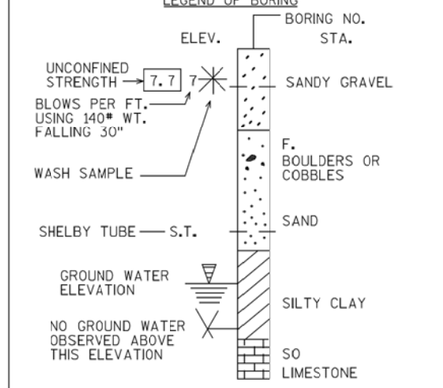
MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE S-70-0187

DRAWN BY JEH PLANS CK'D. JMB

SUBSURFACE EXPLORATION

SHEET 9 OF 9

FILE=
SCALE =

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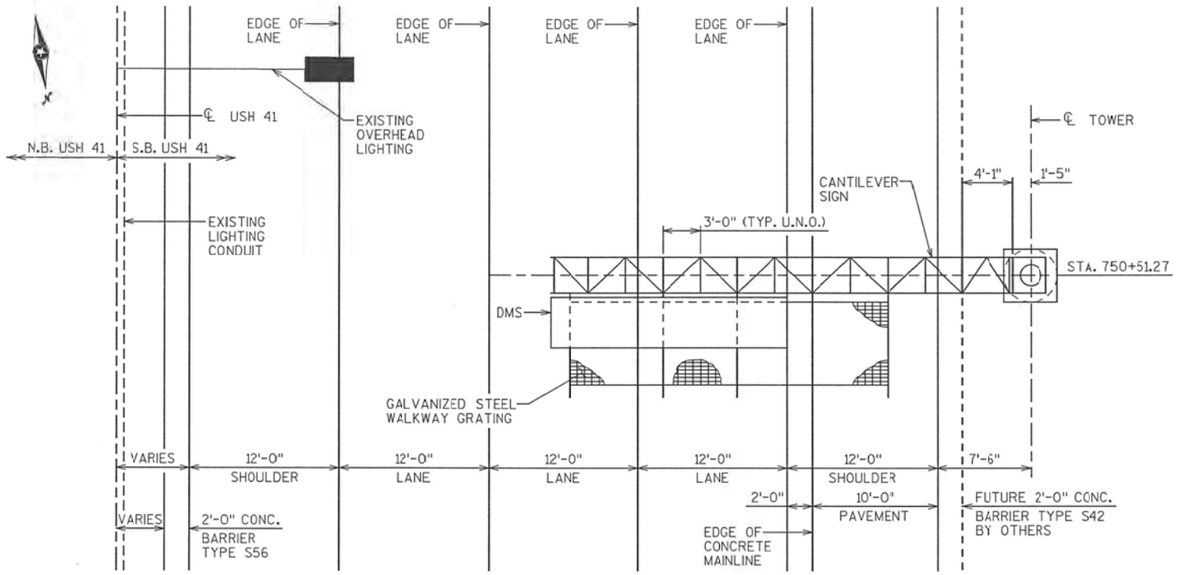
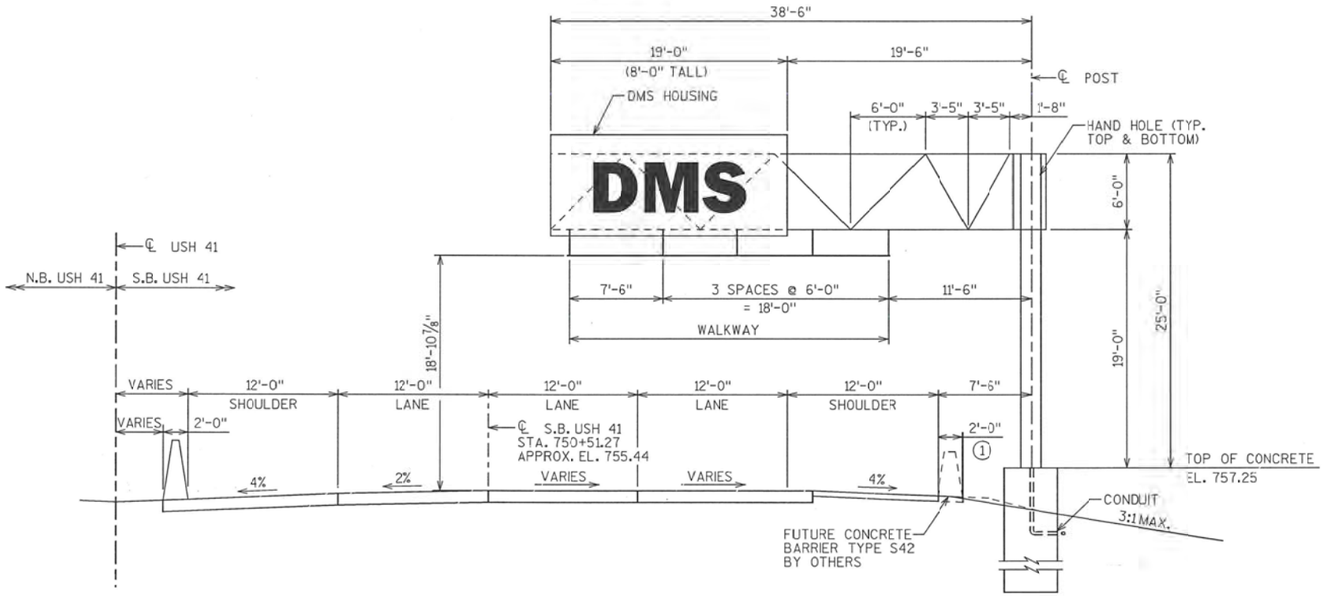
1120-10-70



PLAN
STA. 750+51.27



ELEVATION
(LOOKING SOUTH AT FRONT FACE OF DMS SIGN)

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	14
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	2990
641.1200	SIGN BRIDGE CANTILEVERED (S-70-0188)	LS	1
652.0125	CONDUIT RIGID METALLIC 2 - INCH	LF	70

DESIGN DATA:

DEAD LOAD - WEIGHT OF DMS, SUPPORTING STRUCTURE, WALKWAY AND RAILINGS.
LIVE LOAD - SINGLE LINE LOAD OF 500 LBS. DISTRIBUTED OVER 2'-0" OF WALKWAY.
ICE LOAD - 3 PSF TO ALL FACES OF DMS SIGN & AROUND SURFACE OF MEMBERS.
WIND PRESSURE - 90 MPH (3-SECOND GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS.

WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

GROUP LOADS	% OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD + WIND	133
3. DEAD + ICE + ½ (WIND*)	133

*MIN. VALUE OF 25 PSF FOR GROUP III

LIST OF DRAWINGS:

1. PLAN & ELEVATION
2. DESIGN AND GENERAL NOTES
3. FOUNDATION DETAILS
4. CANTILEVER SIGN DETAILS
5. CANTILEVER SIGN DETAILS
6. WALKWAY DETAILS
7. SAFETY CABLE DETAILS
8. MOUNTING DETAILS
9. SUBSURFACE EXPLORATION

GENERAL NOTES:

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

USE 3" CLEAR CONCRETE COVER FOR ALL REINFORCEMENT UNLESS OTHERWISE NOTED.

CANTILEVER SIGN IS TO BE LOCATED NORMAL TO REFERENCE LINES.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. UTILITY SERVICES ARE NOT SHOWN. CONTRACTOR TO LOCATE ALL UTILITIES.

THE SIGN BRIDGE ID PLAQUES ARE INCIDENTAL TO "SIGN BRIDGE CANTILEVERED (S-70-0188)".

PROVIDE A ¾" CHAMFER OR 1" RADIUS ON ALL EXPOSED CONCRETE EDGES.

PROVIDE 2 HANDHOLES AND 2 CONDUIT FLANGES ON THE TOWER POST.

SUPPLYING AND INSTALLING THE SIGN MOUNTING POSTS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "CANTILEVER SIGN S-70-0188".

U.N.O. DENOTES UNLESS NOTED OTHERWISE.

THE CONTRACTOR SHALL VERIFY LOCATIONS OF ELECTRICAL FEEDS PRIOR TO FABRICATION OF SIGN BRIDGE MEMBERS.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE TRUSS AT THE TIME OF ERECTION. BLANKS SHALL BE ¼" THE LENGTH OF THE CANTILEVER, 2'-0" DEEPER THAN CENTER TO CENTER OF CHORDS & AND SHALL BE CENTERED ON THE TRUSS.

① THE CONTRACTOR SHALL VERIFY THE LOCATION PRIOR TO PLACING FOUNDATIONS.

DMS UNIT NOTES:

THE CONTRACTOR SHALL VERIFY THAT THE FOLLOWING DESIGN PARAMETERS ARE NOT EXCEEDED:
DMS UNIT DIMENSIONS = 19'-0" WIDE, 8'-0" TALL, AND 1'-0" DEEP
DMS UNIT WEIGHT = 1,500 POUNDS
DMS HANGER ATTACHMENT WEIGHT = 1,000 POUNDS

WISCONSIN PROFESSIONAL ENGINEER
CASEY E. BLACK
E-43114
MINNEAPOLIS, MN
11/12/13

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CASEY BLACK
(763)-475-0010

NO.	DATE	REVISION	BY

SRF CONSULTING GROUP, INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 11/12/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-70-0188

USH 41

COUNTY	TOWN/CITY/VILLAGE
WINNEBAGO	OSHKOSH

DESIGN SPEC.
AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	CEB	DESIGN CK'D.	JMB	DRAWN BY	JEH	PLANS CK'D.	JMB

PLAN & ELEVATION

SHEET 1 OF 9

STATE PROJECT NUMBER
1120-10-70

CANTILEVER SIGN NOTES:

1. SIGN STRUCTURE MATERIALS SHALL BE AS FOLLOWS:
   POST (STEEL PIPE) ..... ASTM A106, GRADE B

   CHORDS, WEBS AND SPLICES (STEEL ANGLES) ..... ASTM A709 GRADE 36
   (STEEL PLATES) ..... ASTM A709 GRADE 36
   (WELD METAL) E70XX

   WALKWAY SUPPORT BRACKET & PANEL MOUNTING POSTS.. ASTM A709 GRADE 50

   BOLTS, NUTS AND WASHERS (EXCEPT ANCHOR BOLTS) ..... ASTM A325
   RAILING CONNECTORS, RODS, (WASHERS AND NUTS) ..... ASTM A307
   ALUMINUM RAILING ..... ASTM B221 ALLOY 6061-T6 OR 6351-T5
   STAINLESS STEEL ROD ..... ASTM A276 TYPE 304

2. STEEL ANCHOR BOLTS SHALL BE AASHTO M 314-90 GRADE 55. NUTS FOR ANCHOR BOLTS SHALL BE ASTM A563 GRADE 'A' HEAVY HEX. ANCHOR BOLTS SHALL HAVE DOUBLE NUTS.

3. ALL STEEL ITEMS SHALL BE GALVANIZED AS FOLLOWS:
   STRUCTURAL SHAPES AND PLATES ..... ASTM A123
   ALL NUTS, BOLTS AND WASHERS ..... ASTM A153 CLASS C

   BEARING SURFACES MUST BE SMOOTH. THE UPPER 18" OF ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE AASHTO SPECIFICATION AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

4. ALL HIGH STRENGTH BOLTS, NUTS, AND WASHERS, EXCEPT ANCHOR BOLTS SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATIONS 506.2.5 AND BE INSTALLED IN ACCORDANCE WITH STANDARD SPECIFICATIONS 506.3.12.

5. CONCRETE SHALL CONFORM TO WISDOT 636 GRADE 'A' WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH (F'C) OF 3500 PSI FOR ALL ENVIRONMENTAL CLASSIFICATIONS.

6. REINFORCING STEEL SHALL CONFORM TO AASHTO M31 GRADE 60.

7. DO NOT GROUT THE SPACE BETWEEN TOP OF CONCRETE FOUNDATION AND BOTTOM OF BASE PLATE.

8. SHOP DRAWINGS FOR THE STRUCTURE ARE REQUIRED AND FABRICATION SHALL NOT BEGIN UNTIL THESE SHOP DRAWINGS ARE APPROVED.

9. THE STRUCTURE MUST BE ASSEMBLED AFTER GALVANIZING AND PRIOR TO SHIPMENT TO THE SITE TO ASSURE FIT UP. IT MAY BE DISASSEMBLED FOR SHIPPING.

10. INSPECTION BEFORE AND AFTER GALVANIZING SHALL BE PER WISDOT 105.9.

11. PROVIDE A CAMBER WITH THE UPWARD DEFLECTION AS CALLED FOR IN THE CAMBER TABLE. INDICATE ON THE SHOP DRAWINGS THE METHOD TO BE USED TO PROVIDE THE REQUIRED CAMBER.

12. EXCEPT FOR ANCHOR BOLTS, ALL BOLT HOLE DIAMETERS SHALL BE EQUAL TO THE BOLT DIAMETER PLUS 1/16", PRIOR TO GALVANIZING. HOLE DIAMETERS FOR ANCHOR BOLTS SHALL NOT EXCEED THE BOLT DIAMETER PLUS 1/2".

13. ANCHOR BOLTS SHALL BE PROVIDED WITH TEMPLATES TOP AND BOTTOM TO MAINTAIN VERTICAL ALIGNMENT AND SPACING DURING CONCRETE PLACEMENT. TEMPLATES SHALL NOT BE WELDED TO THE ANCHOR BOLTS.

14. TEST WELDS PER AWS D1.1.

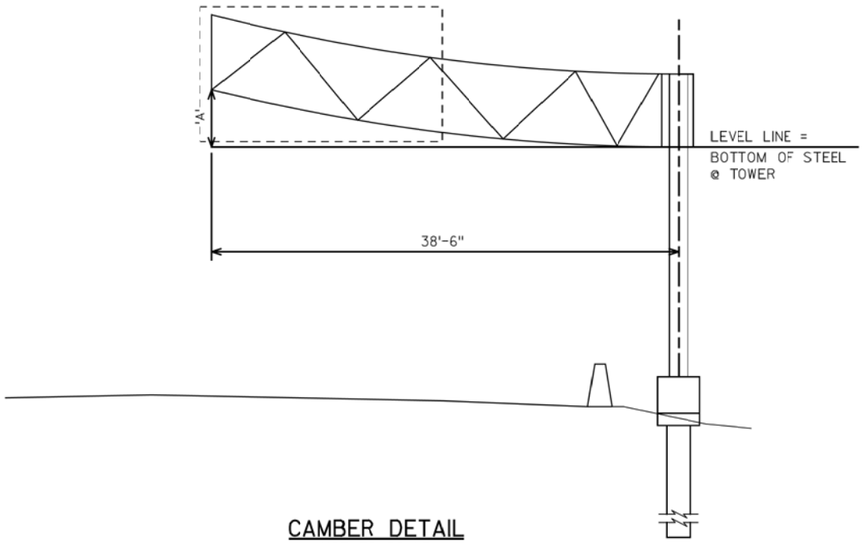
15. FABRICATION OF STRUCTURAL METALS SHALL BE IN ACCORDANCE WTIH WISDOT 506, 635 AND 641 EXCEPT AS MODIFIED IN THESE PLANS. ALL WELDING TO BE CONTINUCUS. ALL CONTACT SURFACES MUST BE COMPLETELY SEALED.

16. THE L 6" X 6" X 1/2" MAIN CHORD ANGLES SHALL MEET A CHARPY V-NOTCH IMPACT STRENGTH REQUIREMENT OF 15 FT-LBS @ 40°F.

17. CAMBER AND DEFLECTIONS SHOWN ARE SHOWN AT END OF CANTILEVER.

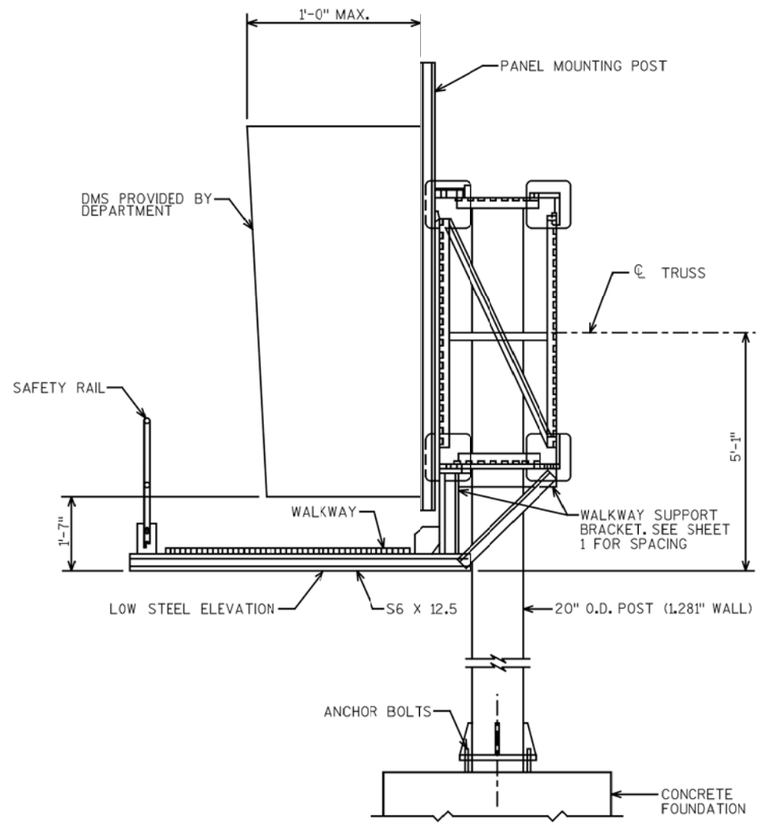
18. WHEN ERECTING CANTILEVER TRUSSES, THE POSTS SHALL BE SET 1/8" PER FOOT OUT OF PLUMB TO COMPENSATE FOR THE BENDING OF THE POSTS.

19. CONCRETE SHALL CONFORM TO WISDOT 636 GRADE 'A' WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH (F'C) OF 3500 PSIFOR ALL ENVIRONMENTAL CLASSIFICATIONS.



CAMBER DETAIL
NOT TO SCALE

CAMBER TABLE	
POINT	A
TOTAL CAMBER	1"
DL DEFLECTION	1/2"
RESIDUAL CAMBER	1/2"



TYPICAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0188

DRAWN BY JEH | PLANS CK'D. JMB

DESIGN & GENERAL NOTES

SHEET 2 OF 9
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SRF CONSULTING GROUP, INC.

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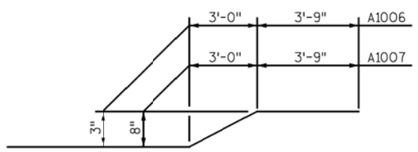
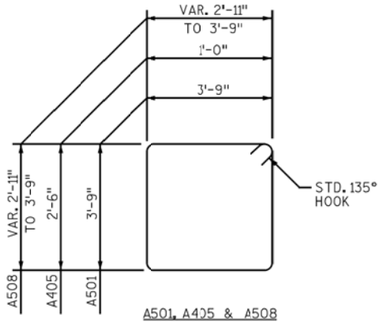


A1006 & A1007



A501, A405 & A508

BAR SERIES

BAR MARK	NO. REQ'D	LENGTH
A508	1 SERIES OF 6	12'-7" TO 15'-11"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	8	15'-11"	X		HORIZONTAL TIE
A1002	X	12	20'-6"			LONGITUDINAL
A403		1	12'-6"			SPIRAL TIE
A704	X	12	15'-9"			FOOTING - WINGS
A405	X	10	7'-11"	X		FOOTING - WINGS
A1006	X	8	20'-6"	X		LONGITUDINAL
A1007	X	4	20'-6"	X		LONGITUDINAL
A508	X	6	14'-3"	X	X	HORIZONTAL TIE

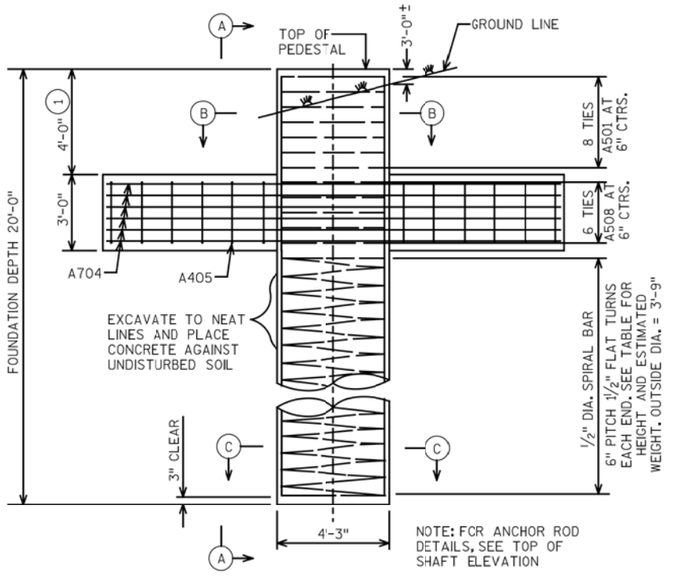
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

LENGTH SHOWN FOR SERIES BARS IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

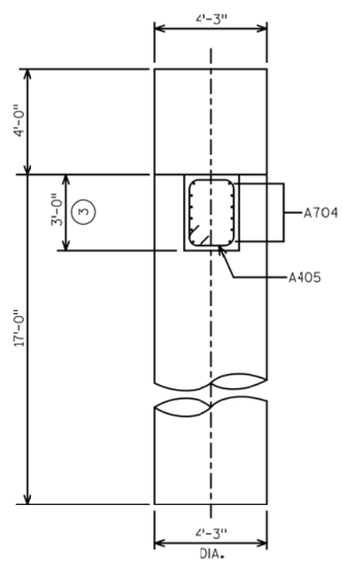
NOTE (1): MUST BE FORMED A MINIMUM OF 6" BELOW THE GROUND SURFACE. THE EXCAVATED AREA FOR FORMING SHALL BE BACKFILLED AND TAMPED WITH EQUIVALENT TO SURROUNDING MATERIAL.

A1002 ARE STRAIGHT BARS

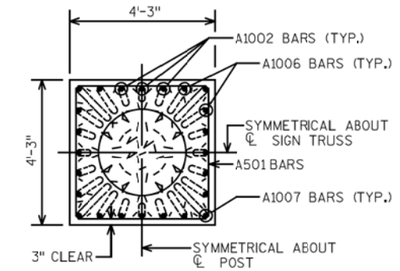
BAR BENDING DIAGRAMS



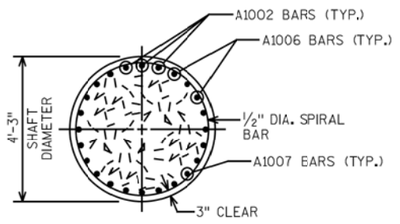
ELEVATION



SECTION A-A



SECTION B-B



SECTION C-C

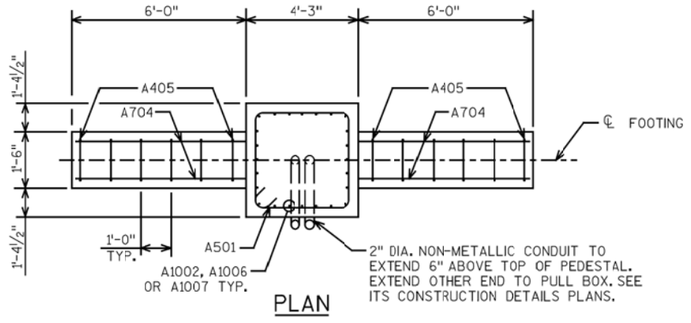
SPECIFIC NOTES:

1. MUST BE FORMED A MIN. OF 6" BELOW THE GROUND SURFACE. THE SOIL EXCAVATED FOR FORMING SHALL BE BACKFILLED AND TAMPED TO EQUIVALENT COMPACTION AS SURROUNDING MATERIAL.
2. ½" DIAMETER SPIRAL BAR WITH 6" PITCH 1½" FLAT TURNS EACH END. LENGTH SHOWN IN TABLE IS HEIGHT OF SPIRAL. ESTIMATED WEIGHT IS 210 POUNDS.
3. TRANSITION FROM DIAMETER SHAFT TO SQUARE SHAFT.

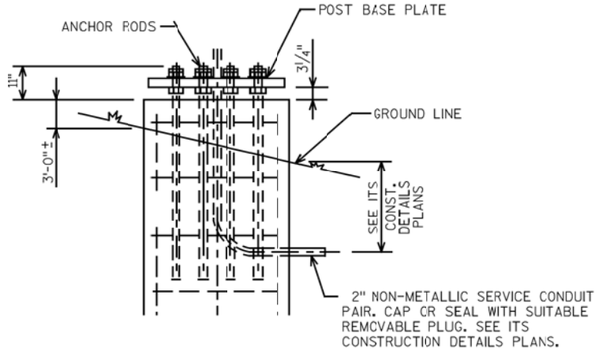
GENERAL NOTES:

1. ALL BAR DIMENSIONS ARE OUT TO OUT OF BARS.
2. THE DRILLED SHAFT HAS AN ALLOWABLE DESIGN LATERAL BEARING PRESSURE OF 250 LBS. PER SQ. FT. PER FOOT OF DEPTH, AND AN ALLOWABLE VERTICAL BEARING PRESSURE OF 2 TONS PER SQ. FT.
3. UNLESS OTHERWISE NOTED, ALL REINFORCEMENT BARS SHALL BE EPOXY COATED. SPIRAL BARS NEED NOT BE EPOXY COATED.
4. THE FOLLOWING TORQUE VALUES SHALL BE USED WHEN INSTALLING ALL ANCHOR NUTS FOR OVERHEAD SIGN STRUCTURES:

ANCHOR BOLT DIAMETER	TORQUE (FT./LBS.)
2½"	450



PLAN



TOP OF SHAFT ELEVATION

TOTAL ESTIMATED QUANTITIES (1 FTG.)

SIGN SUPPORTS CONCRETE MASONRY	14 CY
SIGN SUPPORTS STEEL REINFORCEMENT HS	2990 LB

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0188

DRAWN BY JEH | PLANS CK'D. JMB

FOUNDATION DETAILS

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SRF CONSULTING GROUP, INC.

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STATE PROJECT NUMBER

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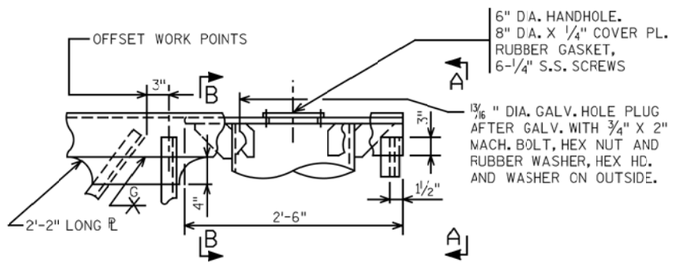
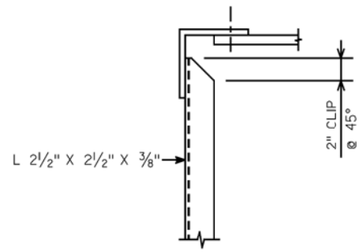
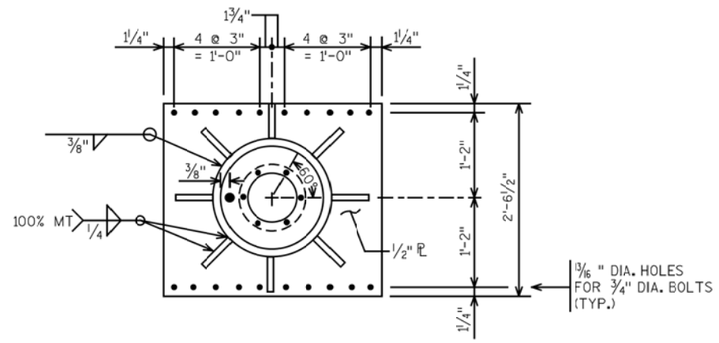
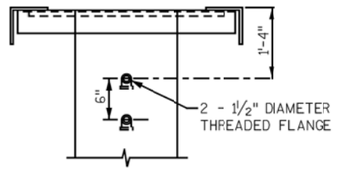




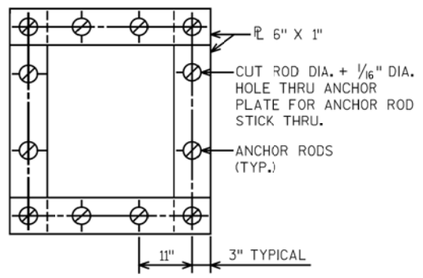
VIEW A-A



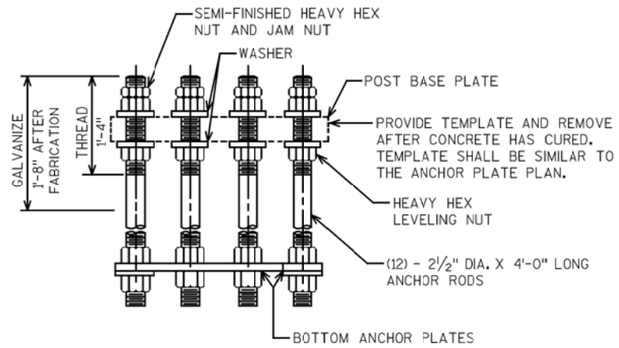
UPPER JUNCTION PLAN & ELEVATION



VIEW B-B

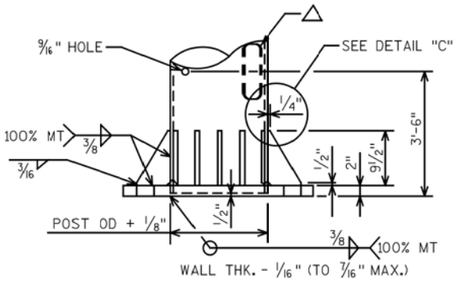


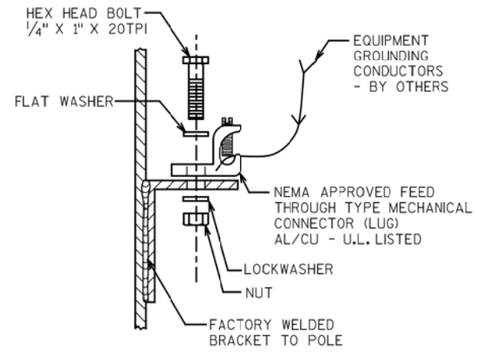
ANCHOR PLATE PLAN



ELEVATION

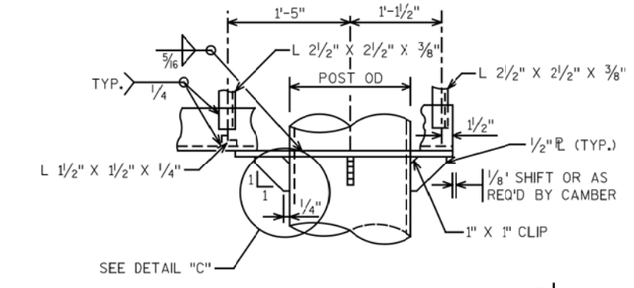
ANCHOR ROD DETAILS

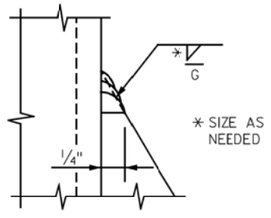




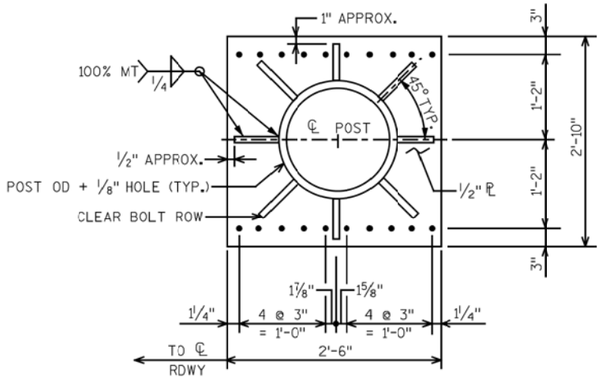
GROUNDING LUG DETAIL

(NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL)

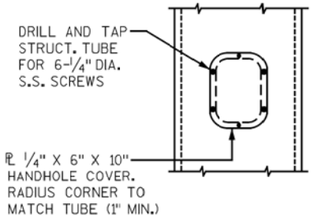




DETAIL "C"



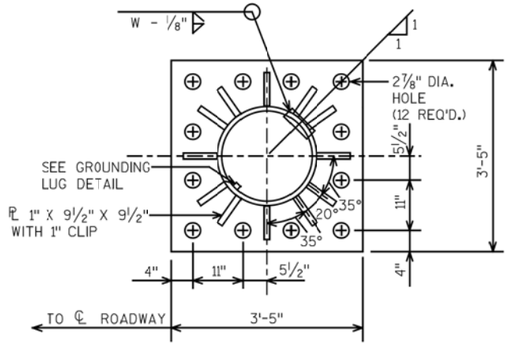
LOWER JUNCTION PLAN & ELEVATION



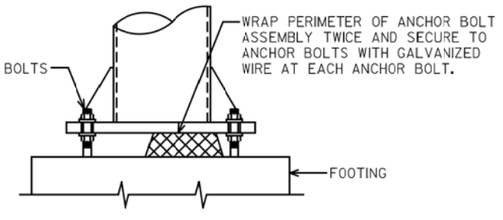
HANDHOLE & COVER PLATE DETAIL

△ = LOCATE 45° AWAY FROM TRAFFIC. 10" X 6" X 1/2" X 0'-2" STRUCTURAL TUBE OR EQUAL W/1/4" RUBBER GASKET.

NOTE:
HANDHOLE COVERS SHALL BE GALVANIZED SEPARATELY.



BASEPLATE PLAN & ELEVATION



RODENT SCREEN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0188

DRAWN BY	JEH	PLANS CK'D.	JMB

CANTILEVER SIGN DETAILS

SHEET 4 OF 9

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SRF CONSULTING GROUP, INC.

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1120-10-70

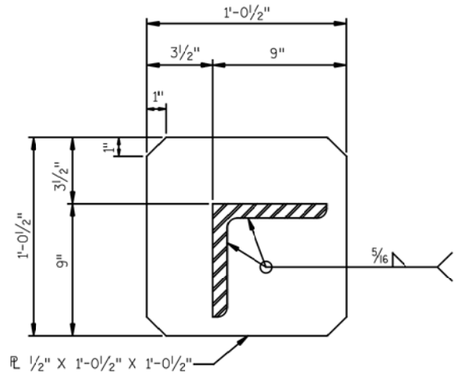
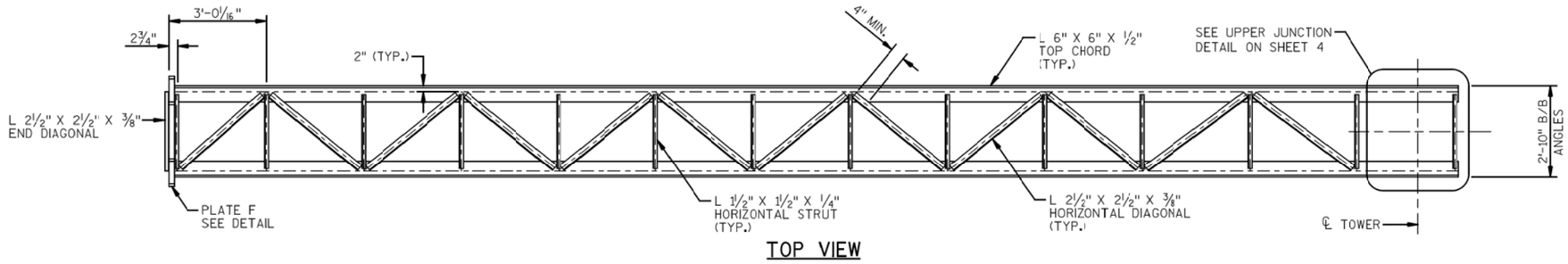
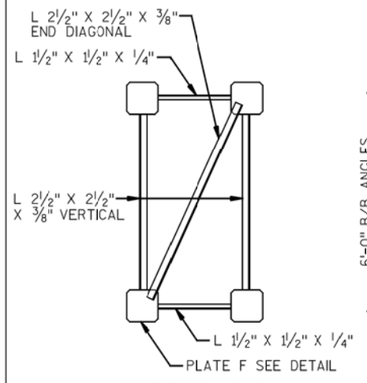


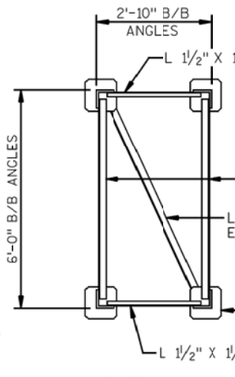
PLATE F



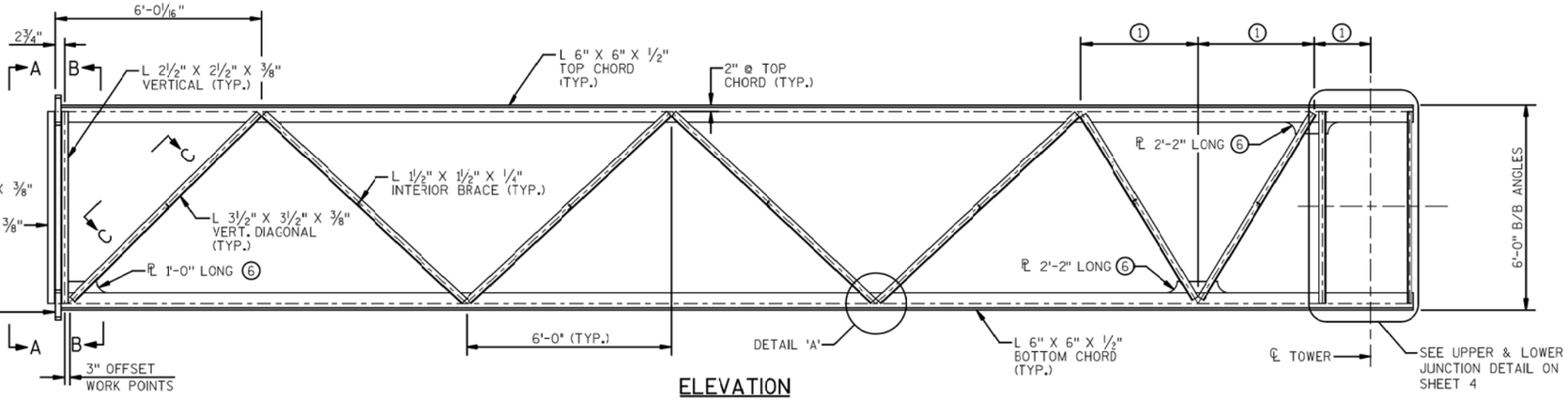
TOP VIEW



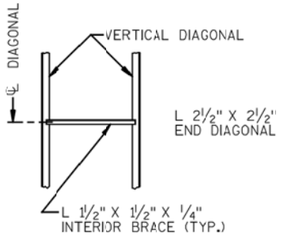
SECTION A-A



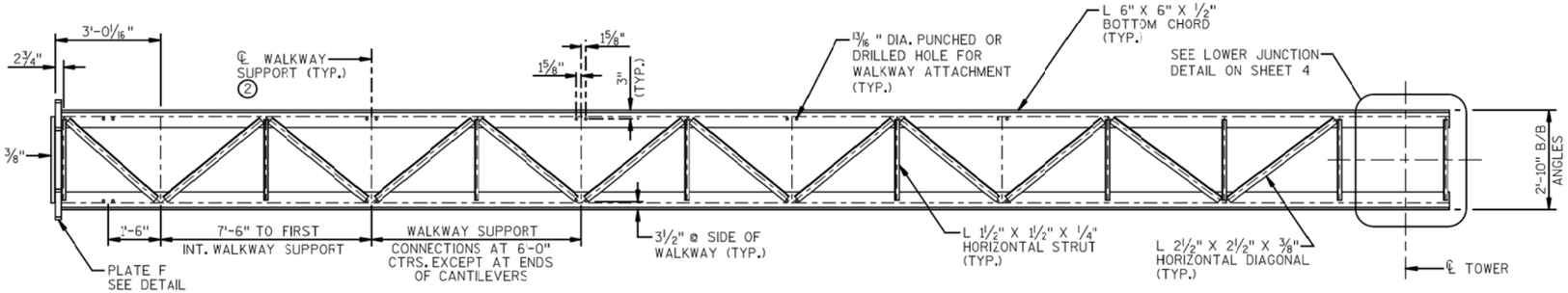
SECTION B-B



ELEVATION



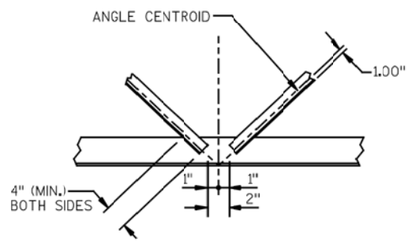
SECTION C-C



BOTTOM VIEW

GENERAL NOTES:

1. SEE SHEET 1 FOR SPACING.
2. PROVIDE A L 1½" X 1½" X ¼" HORIZONTAL STRJT WHERE WALKWAY CONNECTION IS OMITTED.
3. CANTILEVER TRUSS SHALL BE SUPPLIED AS A SINGLE UNIT.
4. UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.
5. ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.
6. PLATE TO MATCH CHORD ANGLE. SEE UPPER JUNCTION DETAILS ON SHEET 4.



DETAIL "A"
(TYP. ALL VERTICAL DIAGONAL MEMBERS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURES DESIGN SECTION

STRUCTURE S-70-0188

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CANTILEVER SIGN DETAILS

SHEET 5 OF 9
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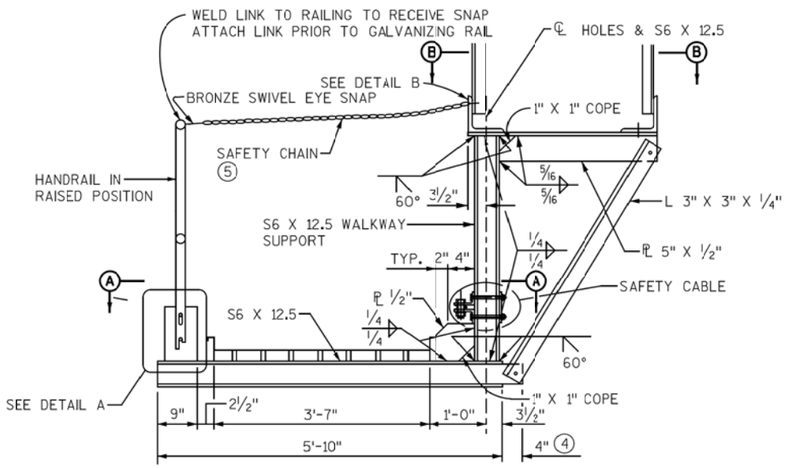
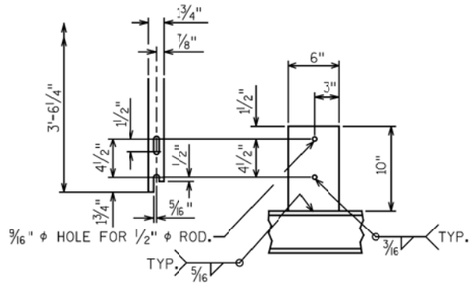
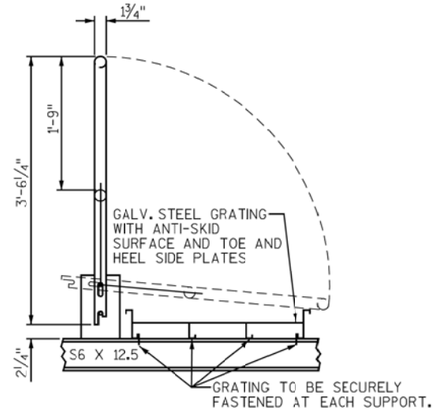


TYPICAL WALKWAY DETAILS



DETAIL "A"



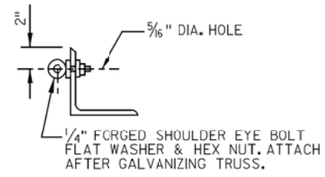
RAIL POST DETAIL

GENERAL NOTES:

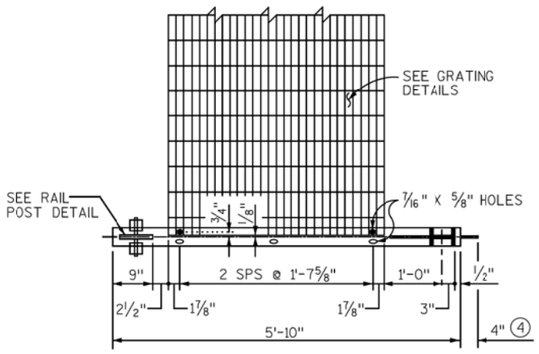
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LENGTH OF GRATING AND HANDRAIL PANELS REQUIRED WHERE THE SPECIFIED LENGTH DOES NOT AGREE WITH THE DETAILS.
2. PROVIDE ADEQUATE WEEP HOLES FOR HOT-DIP GALVANIZING.
3. GRATING SHALL BE GALVANIZED.

④ EXTEND S6 X 12.5 BY 4" AND COPE FLANGES.

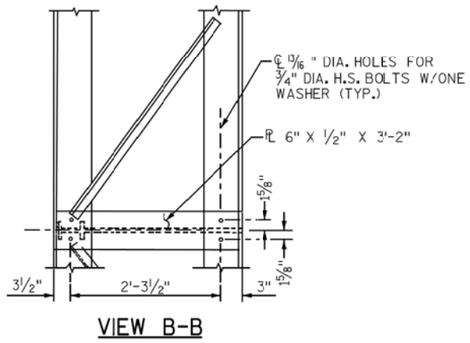
⑤ THE SAFETY CHAIN SHALL BE ATTACHED AT EACH END OF THE HANDRAIL. THE CHAIN SHALL BE 3/16" STAINLESS STEEL STRAIGHT LENGTH CHAIN WITH APPROXIMATELY 12 LINKS PER FOOT. THE CHAIN AND ITS CONNECTIONS SHALL HAVE A MINIMUM RATED WORK LOAD OF 700 LBS.



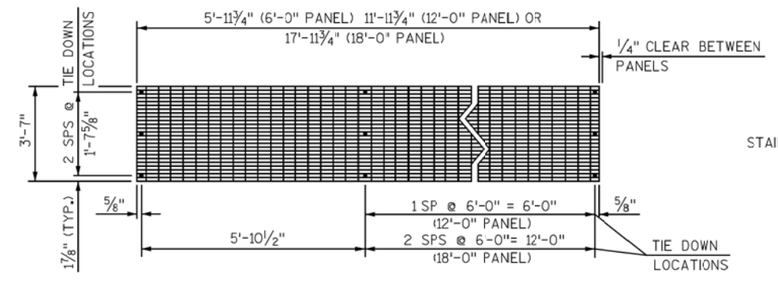
DETAIL "B"



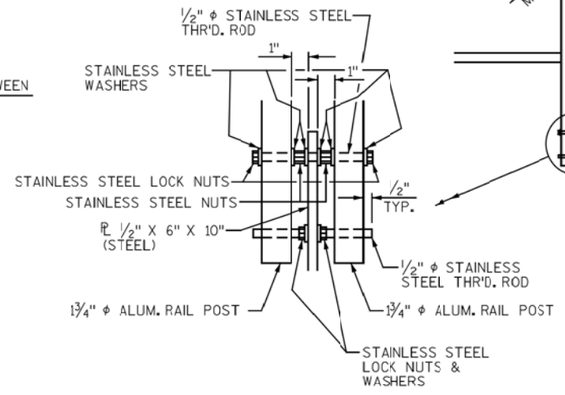
VIEW A-A

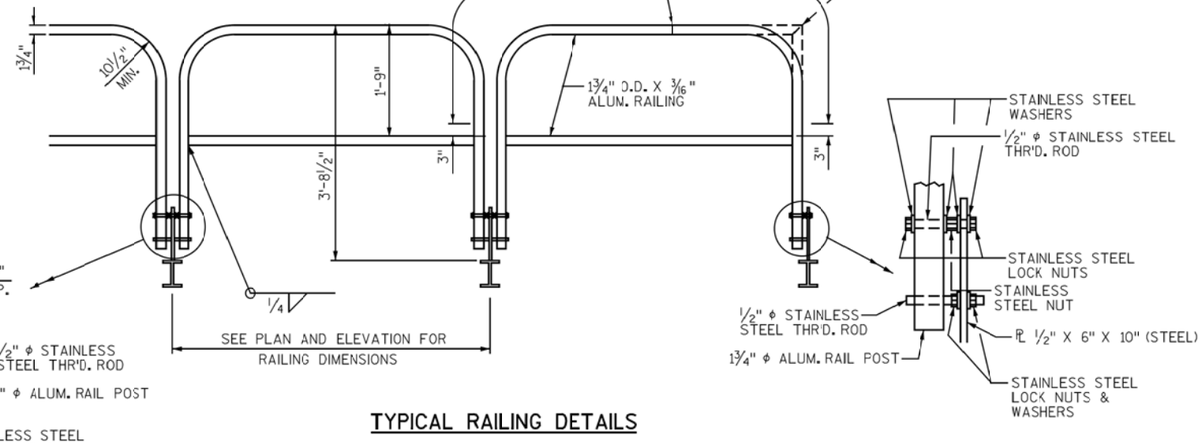


VIEW B-B

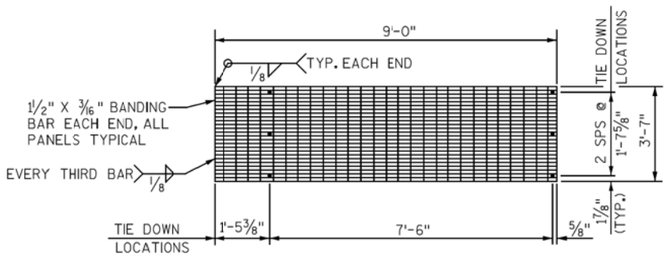


GRATING PLAN - 6'-0", 12'-0" OR 18'-0" PANELS



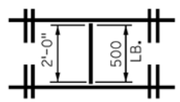


TYPICAL RAILING DETAILS



GRATING PLAN - CANTILEVER END

NOTE:
ALL GRATING SHALL BE 6'-7" WIDE AND SHALL BE 1½"X 3/16" SERRATED BEARING BARS AT 1⅜" CENTERS WITH CROSS BARS AT 4" CENTERS. ATTACH GRATING AT EACH TIE DOWN LOCATION WITH A STAINLESS STEEL SADDLE ANCHOR DESIGNED FOR THIS SPECIFIC USE.
CATWALK SHALL MEET AASHTO "SPECIFICATIONS FOR THE DESIGN & CONSTRUCTION OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS" 1985. (500 LB. DISTRIBUTED OVER 2'-0" TRANSVERSELY WITH THE BASIC ALLOWABLE UNIT STRESS - AASHTO HIGHWAY BRIDGES 1985 (INCREASED 25%). MAX. SPAN IS 8'-0". CATWALK SHALL ALSO MEET OSHA 1970 STD'S. FOR WALKING-WORKING SURFACES.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0188

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WALKWAY DETAILS

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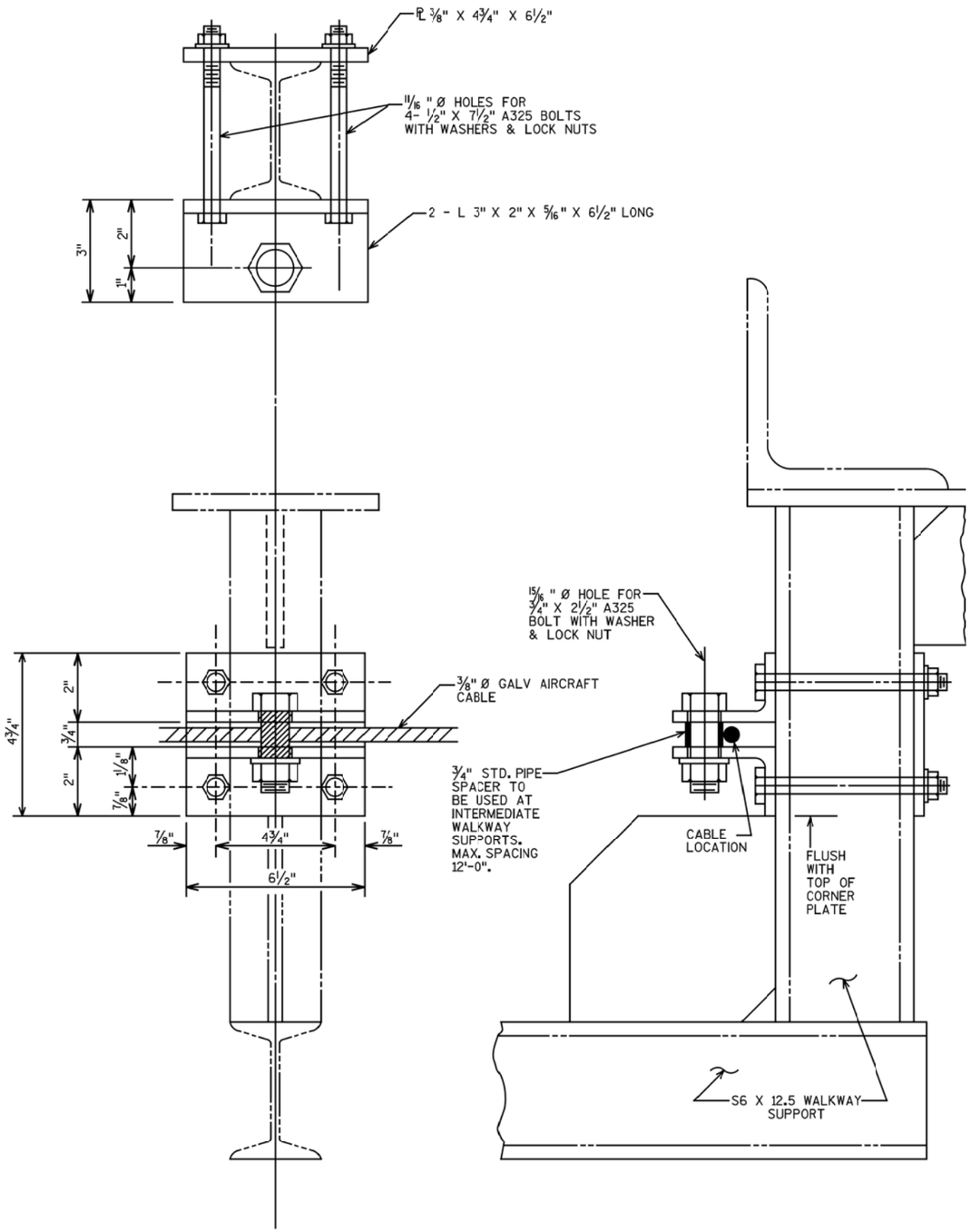
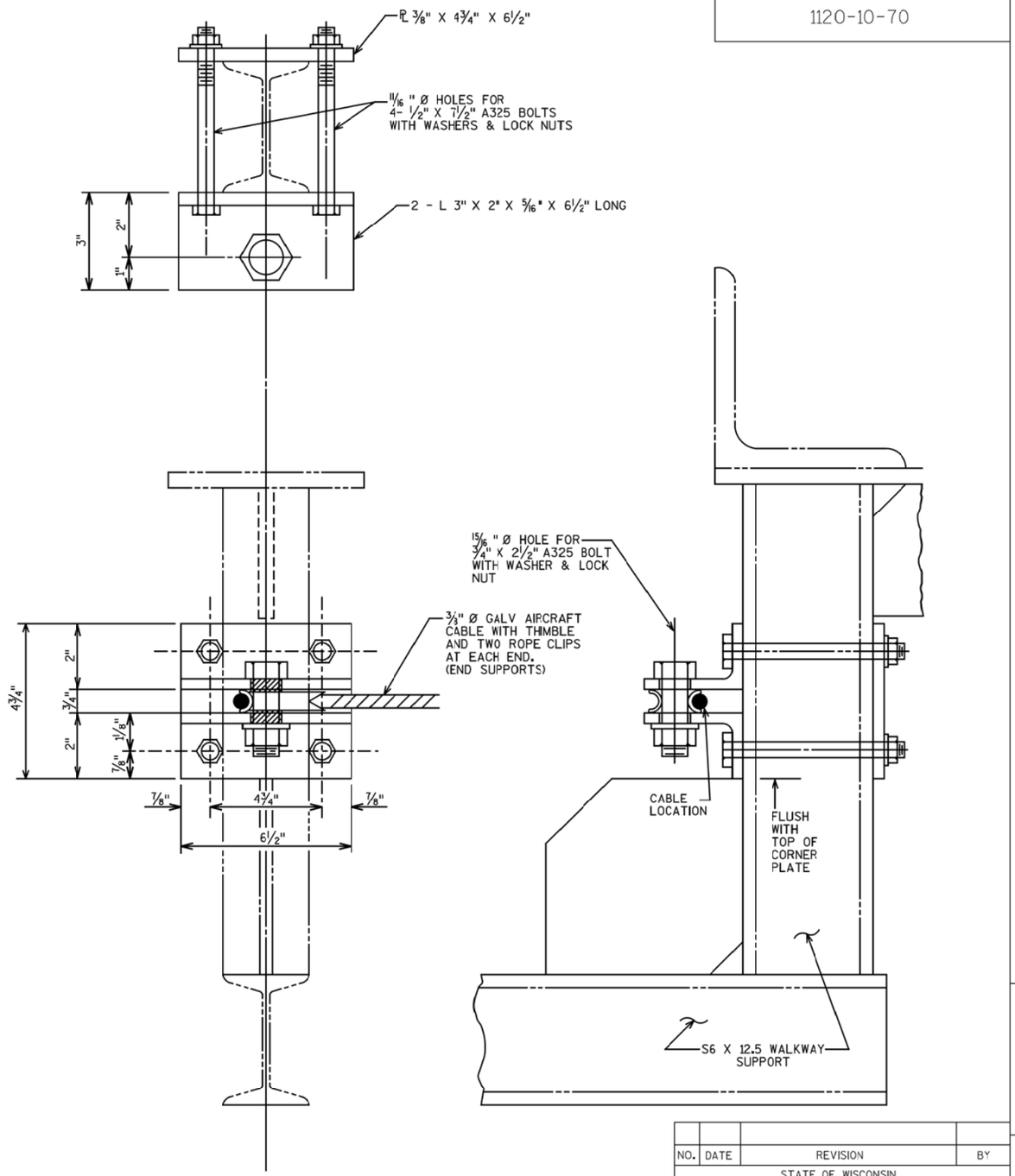


MIDDLE CONNECTION



END CONNECTION

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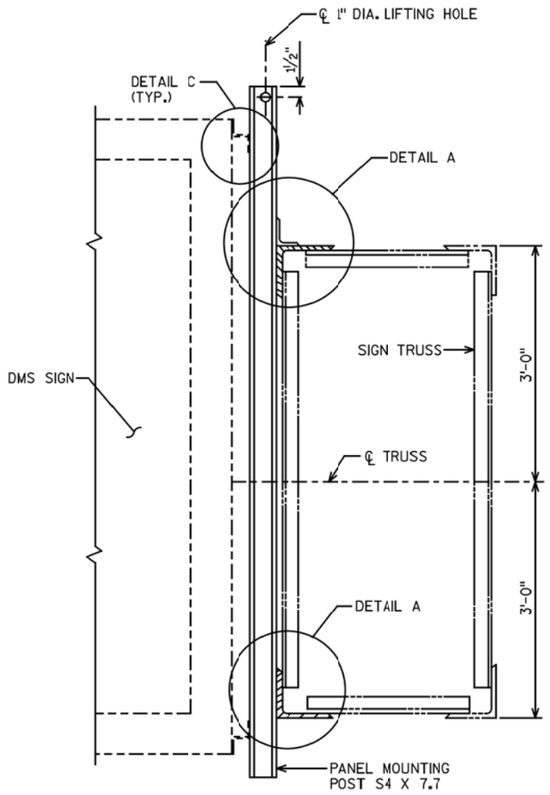
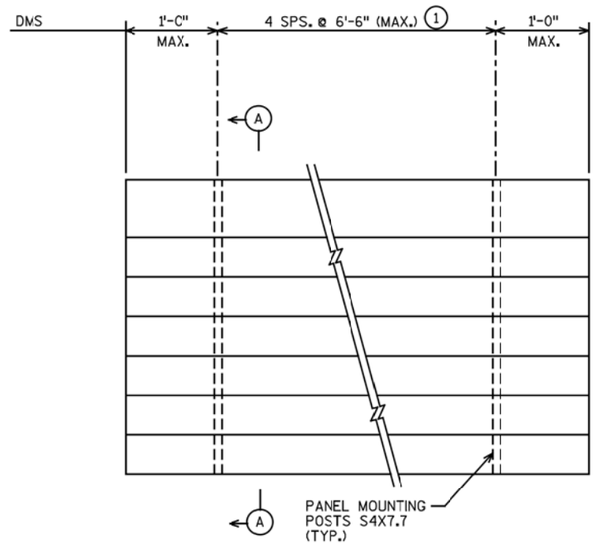
SAFETY CABLE DETAILS

SHEET 7 OF 9

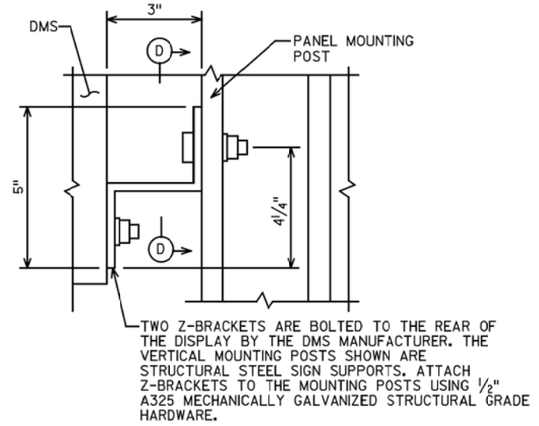
STATE PROJECT NUMBER
1120-10-70



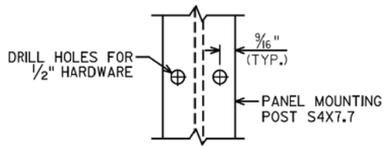
SECTION A-A
(@ DMS)



SIGN PANEL ELEVATION



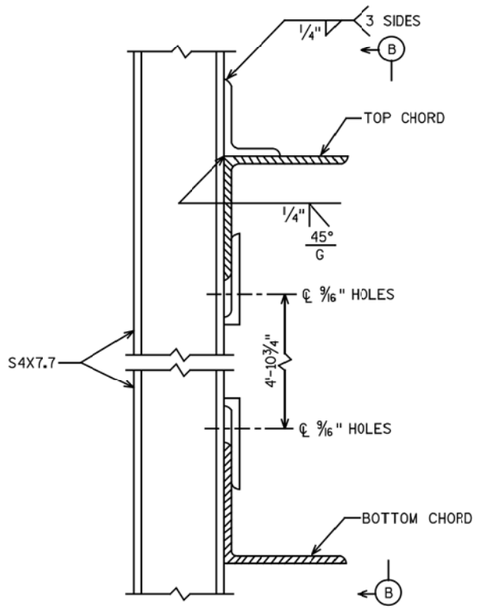
DETAIL C
(DMS SIGN ATTACHMENT)



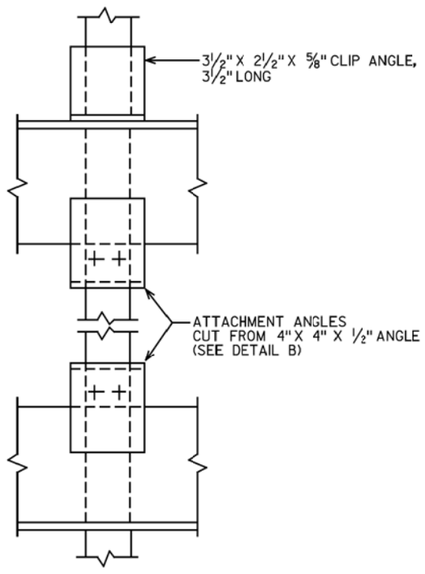
VIEW D-D

NOTES:

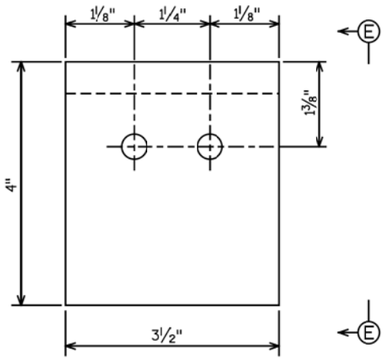
(1) DIMENSIONS MAY VARY SLIGHTLY TO AVOID INTERFERENCE WITH TRUSS MEMBERS.



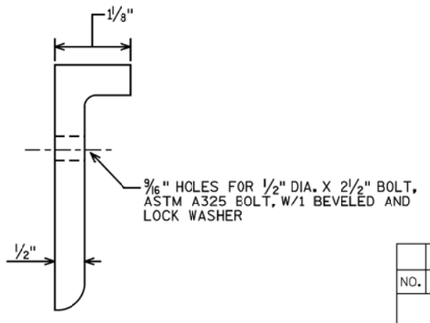
DETAIL A



VIEW B-B



DETAIL B



VIEW E-E

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STRUCTURES DESIGN SECTION

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MOUNTING DETAILS

SHEET 8 OF 9

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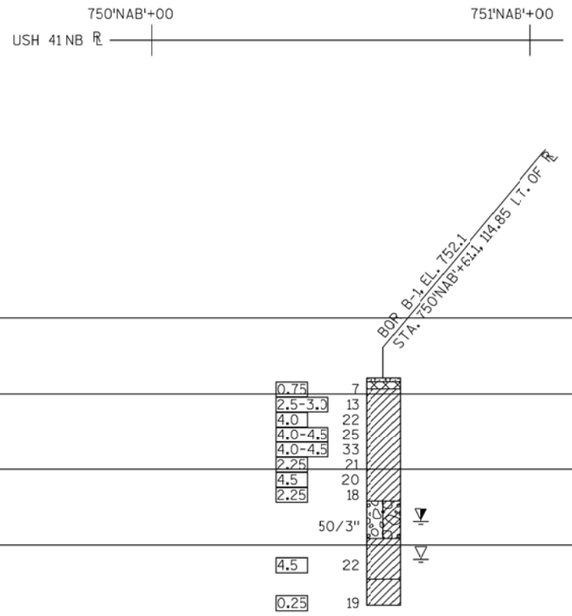
STH 26 - BREEZEWOOD LANE

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	6/10/2013	497137.8892	787025.4608
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: WISDOT			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) WINNEBAGO COUNTY			

BOR-1



STATE PROJECT NUMBER

1120-10-70

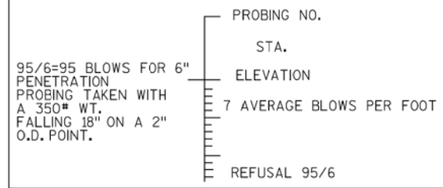
ABBREVIATIONS

F— FINE M— MEDIUM C— COARSE
WS— WEATHERED SO — SOUND

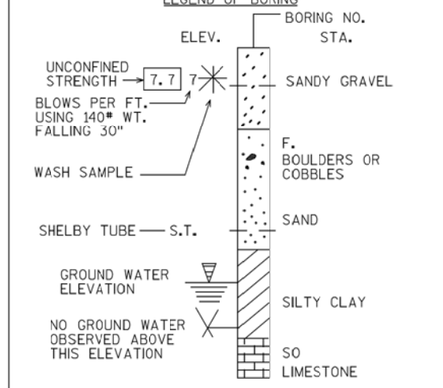
MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE S-70-0188

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SUBSURFACE EXPLORATION

SHEET 9 OF 9

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FILE=
SCALE =

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