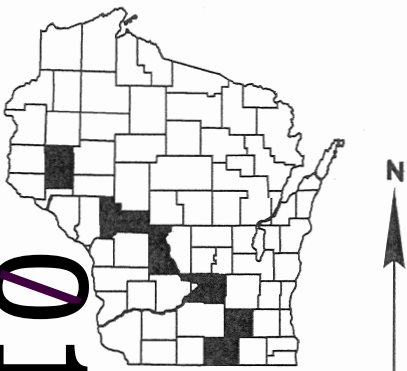


NOV 2017	
ORDER OF SHEETS	
Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 66



DESIGN DESIGNATION IH 39/IH 90/IH 94

A.A.D.T. (2016)	35,200
A.A.D.T. (FUTURE)	N/A
D.H.V.	N/A
D.D.	N/A
T.	N/A
DESIGN SPEED	N/A
ESALS	N/A

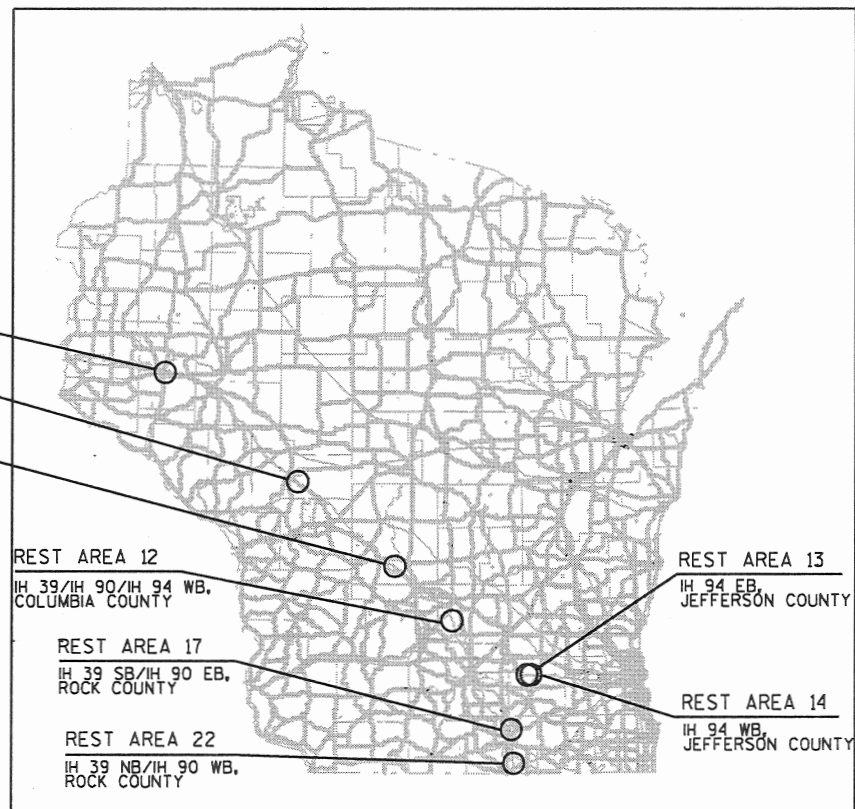
CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	////
PROPERTY LINE	PL + 58.1
LOT LINE	----
LIMITED HIGHWAY EASEMENT	----
EXISTING RIGHT OF WAY	----
PROPOSED OR NEW R/W LINE	----
PROPOSED JOINT 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	
COMMUNICATION OVERHEAD	OH
COMMUNICATION UNDERGROUND	C
ELECTRIC OVERHEAD	OH
ELECTRIC UNDERGROUND	E
GAS	G
SANITARY SEWER	SAN
STORM SEWER	SS
WATER	W
UTILITY PEDESTAL	----
POWER POLE	----
TELEPHONE POLE	----

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
WISCONSIN TRUCK PARKING
INFORMATION MANAGEMENT SYSTEM
VARIOUS HIGHWAYS
STATEWIDE

STATE PROJECT NUMBER
1000-99-68



LAYOUT
SCALE 0 .5 MI.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD 88 (1991).
COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WINNEBAGO COUNTY, NAD83 (1991).

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1000-99-68	KA-4235_10	1

ORIGINAL PLANS PREPARED BY

HNTB 11414 WEST PARK PLACE
MILWAUKEE, WI 53224
(414) 359-2300

MARIA J. DONNELLY
E-37908
MILWAUKEE
PROFESSIONAL ENGINEER

JUNE 30, 2017
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor HNTB CORP.
Designer HNTB CORP.
Project Manager RANDALL HOYT
Regional Examiner
Regional Supervisor
C.O. Examiner

APPROVED FOR THE DEPARTMENT
DATE: 8-8-2017 (Signature)

E

UTILITY CONTACTS

ATC

MR. JIM BRIGGS
N19 W23993 RIDGEVIEW PKWY. W.
PO BOX 47
WAUKESHA, WI 53187
PHONE: (414) 651-1830
jbriggs@atcllc.com

AT&T CORPORATION

MR. KEN NINE
JMC ENGINEERS & ASSOCIATES, INC.
110 NORTH MAIN STREET
CULVER, IN 46511
PHONE: (574) 842-8830
CELL: (574) 904-6336
kennethnine@att.net

AT&T WISCONSIN

MR. JAY BULANEK
7721 W. FOND DU LAC AVENUE
MILWAUKEE, WI 53218
PHONE: (414) 535-7407
jb5175@att.com

LEVEL 3 (TW TELECOM)

MR. BRAHIM GADDOUR
OSP ENGINEERING DEPT.
3235 INTERTECH DRIVE, SUITE 600
BROOKFIELD, WI 53045
PHONE: (414) 908-1027
CELL: (414) 704-1026
gaddour.brahim@level3.com
relo@level3.com

MIDWEST FIBER NETWORKS

MR. RICHARD TRGOVEC
6070 N. FLINT ROAD
GLENDALE, WI 53209
PHONE: (414) 459-3554
rtrgovec@midwestfibernetworks.com

SPRINT

MR. JIM BURTON
5600 N. RIVER ROAD, SUITE 200
ROSEMONT, IL 60018
PHONE: (708) 955-6659
james.m.burton@sprint.com

TCG

MRS. DEBBIE SADDLER
NORTHWIND TECHNICAL SERVICES, LLC
6070 N. FLINT ROAD
GLENDALE, WI 53209
PHONE: (414) 459-3572
CELL: (414) 651-0036
d.saddler@northwindtech.com

TIME WARNER CABLE

MR. STEVE CRAMER
1320 N. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
PHONE: (414) 277-4045
steve.cramer@twcable.com
wis.engineering@twcable.com

UNION PACIFIC RAILROAD COMPANY

MR. JOHN VENICE
101 N. WACKER DRIVE, SUITE 1920
CHICAGO, IL 60606
PHONE: (312) 777-2043
jivenice@up.com

WEST SHORE PIPELINE COMPANY

MR. ARIC AUFDERMAUER
PIPELINE TECHNICIAN
11115 W. COUNTY LINE ROAD
MILWAUKEE, WI 53224
CELL: (414) 391-8102
aaufdermauer@buckeye.com

WINDSTREAM

MR. JAMES KOSTUCH
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005
PHONE: (262) 792-7938
james.kostuch@windstream.com

WISDOT LIGHTING

MR. AHMET DEMIRBILEK
433 W ST. PAUL AVE, SUITE 300
MILWAUKEE, WI 53203
PHONE: (414) 220-6801
ahmet.demirbilek@dot.wi.gov

WISDOT STOC

MR. DEAN BEEKMAN
433 W ST. PAUL AVE, SUITE 300
MILWAUKEE, WI 53203
PHONE: (414) 227-2154
dean.beekman@dot.wi.gov

STANDARD ABBREVIATIONS

AEW
AGG
ASPH
BAD
BM
C&G
C/L
CMCP
CONC
CP
CPRC
CSD
CY
D
Δ
DISCH
EB
ENB
FE
FL
HMA
INV
L
LHF
LP
LT
MIN
M/L
NB
NC
PAVT
PC
PCC
PE
PI
PGL
PLE
PNB
PRC
PT
R
R/L
R/W
RC
RCAEW
REQD
RHF
RO
RRSP
RT
SALV
SAPBC
SB
SDD
SE
SF
SSPRC
STA
SY
T
TLE
VCL
VPC
VPI
VPT
WB

APRON END WALL
AGGREGATE
ASPHALTIC
BASE AGGREGATE DENSE
BENCH MARK
CURB AND GUTTER
CENTER OR CONSTRUCTION LINE
CULVERT PIPE CORRUGATED METAL
CONCRETE
CULVERT PIPE
CULVERT PIPE REINFORCED CONCRETE
CONCRETE SURFACE DRAIN
CUBIC YARD
DEGREE OF CURVE
DELTA
DISCHARGE
EASTBOUND
EXISTING NOISE BARRIER
FIELD ENTRANCE
FLOW LINE
HOT MIX ASPHALT
INVERT
LENGTH OF CURVE
LEFT HAND FORWARD
LOW POINT
LEFT
MINIMUM
MATCHLINE
NORTHBOUND
NORMAL CROWN
PAVEMENT
POINT OF CURVE
POINT OF COMPOUND CURVE
PRIVATE ENTRANCE
POINT OF INTERSECTION
PROFILE GRADE LINE
PERMANENT LIMITED EASEMENT
PROPOSED NOISE BARRIER
POINT OF REVERSE CURVE
POINT OF TANGENT
RADIUS OF CURVE
REFERENCE LINE
RIGHT OF WAY
REVERSE CROWN
APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
REQUIRED
RIGHT HAND FORWARD
RUN OFF LENGTH
RAILROAD SPIKE
RIGHT
SALVAGED
SALVAGED ASPHALTIC PAVEMENT BASE COARSE
SOUTHBOUND
STANDARD DETAIL DRAWING
SUPER ELEVATION
SQUARE FOOT
STORM SEWER PIPE REINFORCED CONCRETE
STATION
SQUARE YARD
TANGENT LENGTH
TEMPORARY LIMITED EASEMENT
VERTICAL CURVE LENGTH
POINT OF VERTICAL CURVE
POINT OF VERTICAL INTERSECTION
POINT OF VERTICAL TANGENT
WESTBOUND

STATE AGENCIES

WISCONSIN DEPARTMENT OF
NATURAL RESOURCES

MS. KRISTINA BETZOLD - ENVIRONMENTAL SPECIALIST
2300 N. MARTIN LUTHER KING JR. DRIVE
MILWAUKEE, WI 53212
CELL: (414) 507-4946
kristina.betzold@wisconsin.gov

WISCONSIN DEPARTMENT OF
TRANSPORTATION

MS. KARLA LEITHOFF - WETLAND ECOLOGIST
141 NW BARSTOW STREET
WAUKESHA, WI 53187-0798
PHONE: (262) 548-6709
karla.leithoff@dot.state.wi.us

WISCONSIN DEPARTMENT OF
TRANSPORTATION

MR. RANDALL HOYT- PROJECT MANAGER
433 W ST. PAUL AVE, SUITE 300
MILWAUKEE, WI 53203
PHONE: (414) 227-4671
Randall.hoyt@dot.wi.gov

GENERAL NOTES

NO TREES OR SHRUBS SHALL 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.

NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

RE-TOPSOIL OF GRADED AREAS, AS DESIGNATED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED WITHIN THOSE AREAS. TEMPORARY SEED, FERTILIZE AND EROSION MAT TOP-SOILED AREAS, AS DESIGNATED BY THE ENGINEER, WITHIN FIVE (5) CALENDAR DAYS AFTER PLACEMENT OF TOPSOIL.

STOCKPILE EXCESS MATERIAL OR SPOILS ON UPLAND AREAS AWAY FROM WETLANDS, FLOODPLAINS AND WATERWAYS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. REMOVE STOCKPILED MATERIAL WITHIN FIVE (5) CALENDAR DAYS.

VERIFY EXISTING SHOULDER ELEVATIONS AT ALL SIGN LOCATIONS PRIOR TO CONSTRUCTION. NOTIFY ENGINEER IF A DISCREPANCY IS FOUND BETWEEN PROPOSED SIGN SUPPORT LENGTHS AND EXISTING ELEVATIONS/SIGNING REQUIREMENTS.



















DESIGN, PLANS, SPECIFICATIONS AND QUANTITIES PROVIDED BY HNTB CORPORATION.

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.



FTMS CONVENTIONAL SYMBOLS

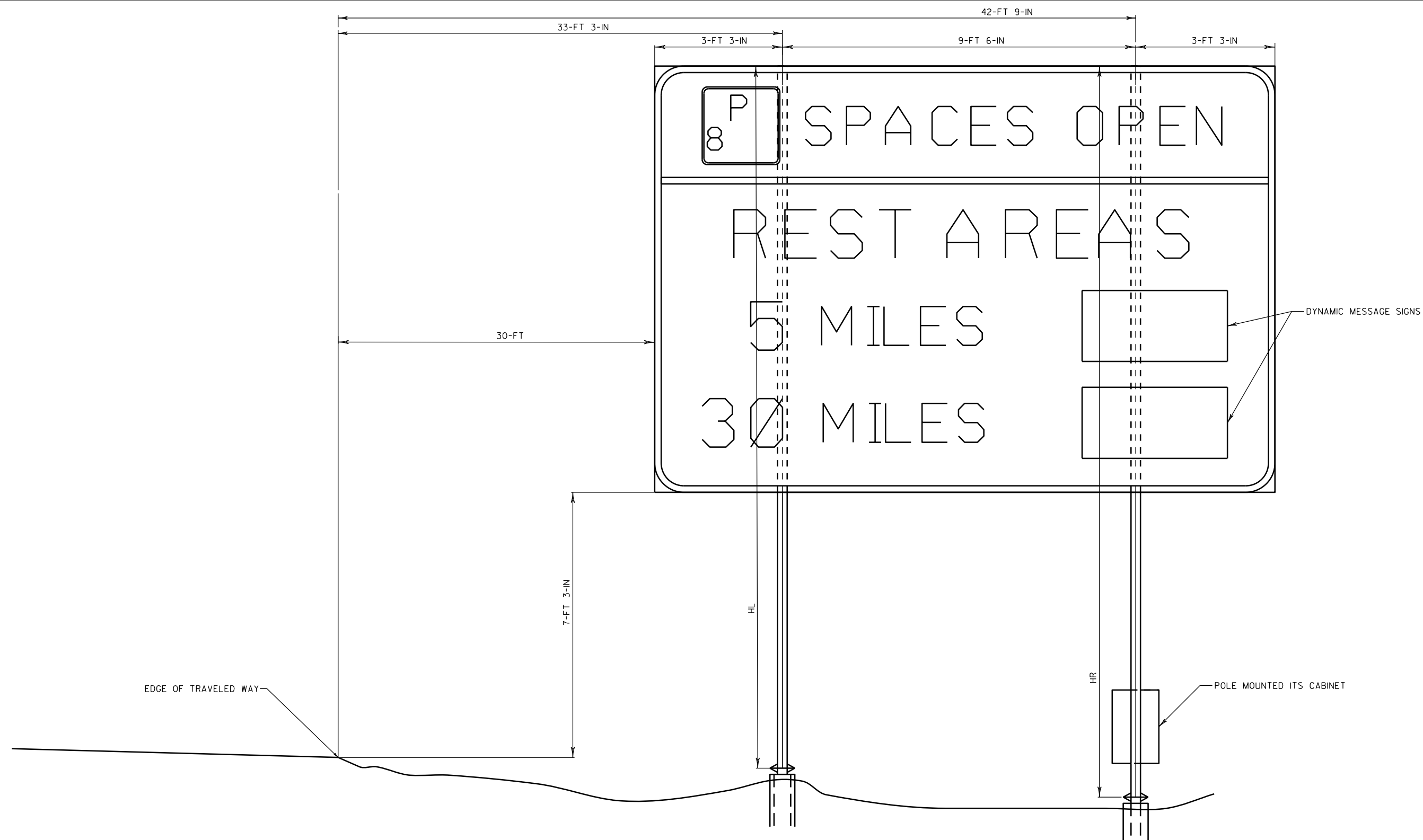
LEGEND	EXISTING	PROPOSED
JUNCTION BOX - - - - -		
CCTV CAMERA AND POLE - - - - -		
FTMS FIELD CABINET AND BASE - - - - -		
POLE MOUNTED CABINET - - - - -		
METER BREAKER PEDESTAL - - - - -		
STEEL PULL BOX - - - - -		
24X42-INCH NON-CONDUCTIVE PULL BOX - - - - -		
FTMS (ITS) CONDUIT - - - - -	- -	- -
BREAKER DISCONNECT BOX - - - - -		
COMMUNICATIONS VAULT, TYPE 1 - - - - -		
HYBRID DYNAMIC MESSAGE SIGN ASSEMBLY - - - - -		
WIRELESS TRAFFIC SENSOR - - - - -		
WIRELESS TRAFFIC SENSOR REPEATER - - - - - WITH LONG RANGE ANTENNA		
WIRELESS TRAFFIC SENSOR ACCESS POINT - - - - -		

FTMS STANDARD ABBREVIATIONS

CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION SITE
CV	COMMUNICATIONS VAULT
DMS	DYNAMIC MESSAGE SIGN
PB	PULL BOX
EX	EXISTING
D-F	DEPARTMENT-FURNISHED

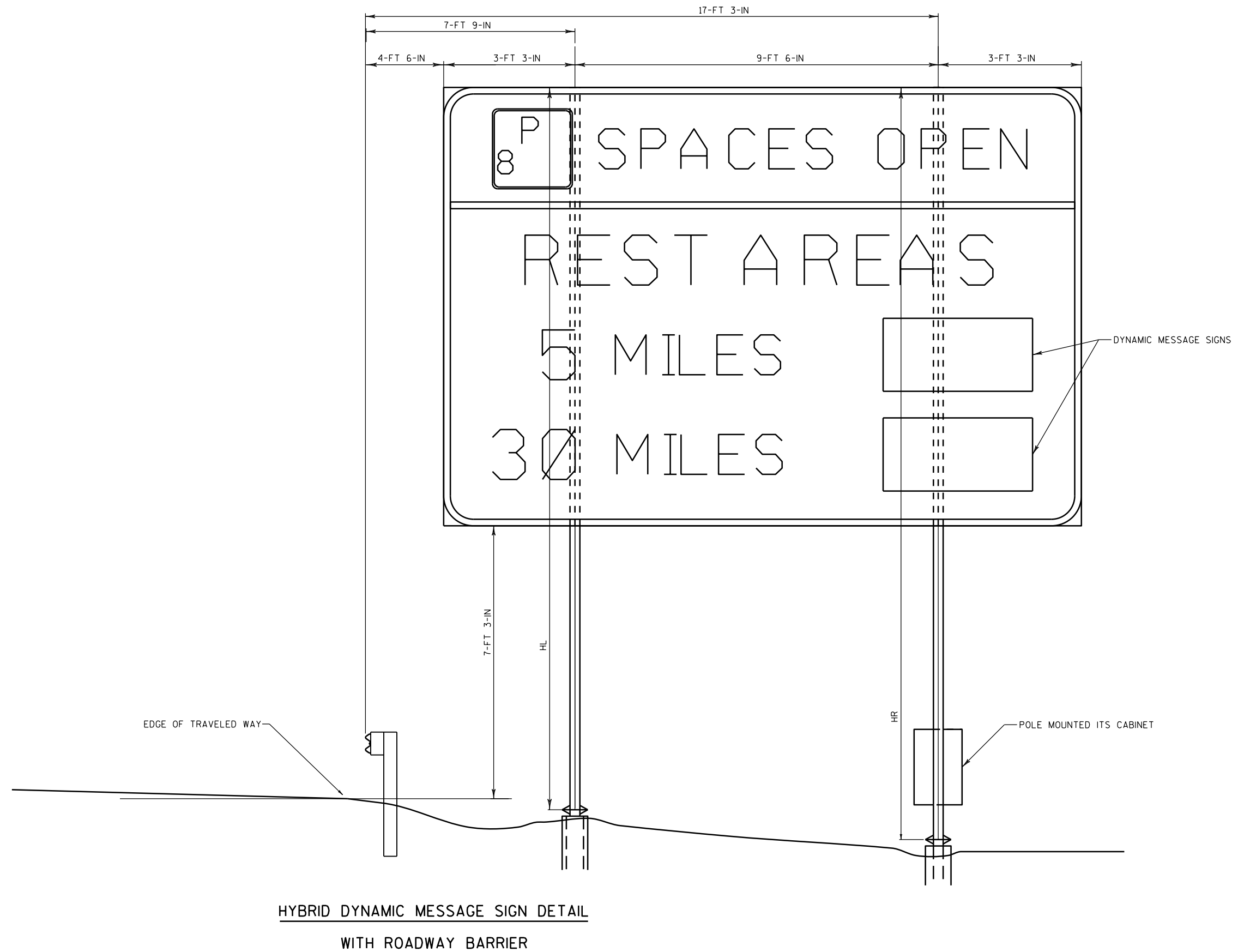
FTMS GENERAL NOTES

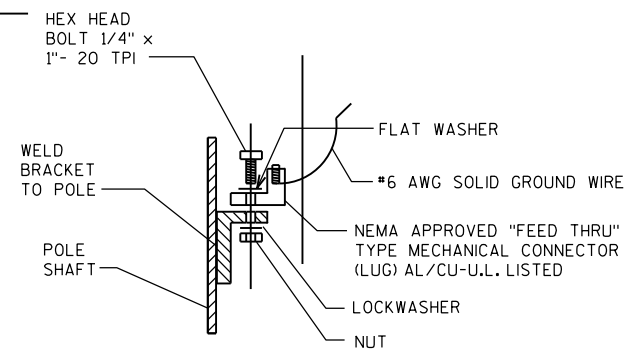
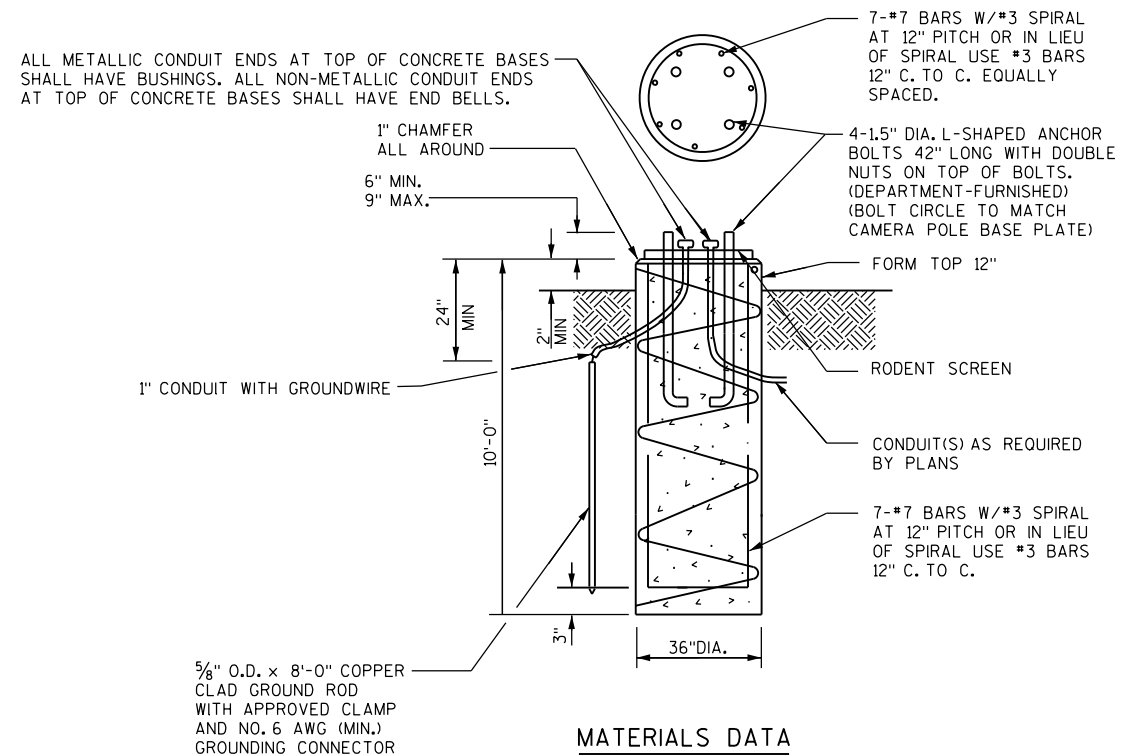
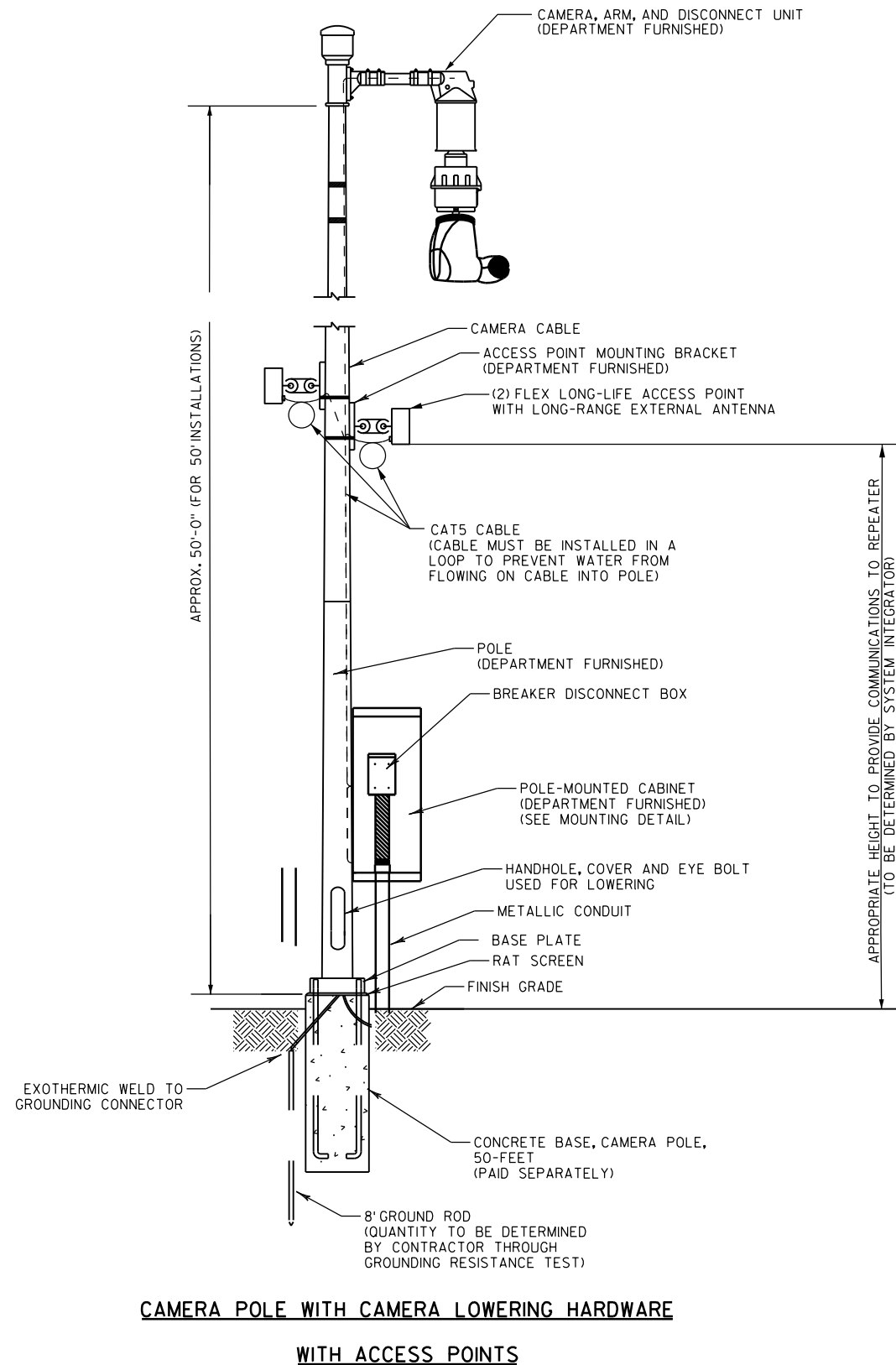
1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF 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.
2. 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.
3. 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.
4. 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.
5. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING LANE AND SHOULDER CLOSURES WITH OTHER CONTRACTS IN THE AREA.
6. THE CONTRACTOR SHALL 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.
7. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
8. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.
9. DEVICE LOCATIONS SHOWN ARE APPROXIMATE. COORDINATE WITH THE ENGINEER FOR DEVICE LOCATION APPROVAL.



HYBRID DYNAMIC MESSAGE SIGN DETAIL

NO ROADWAY BARRIER

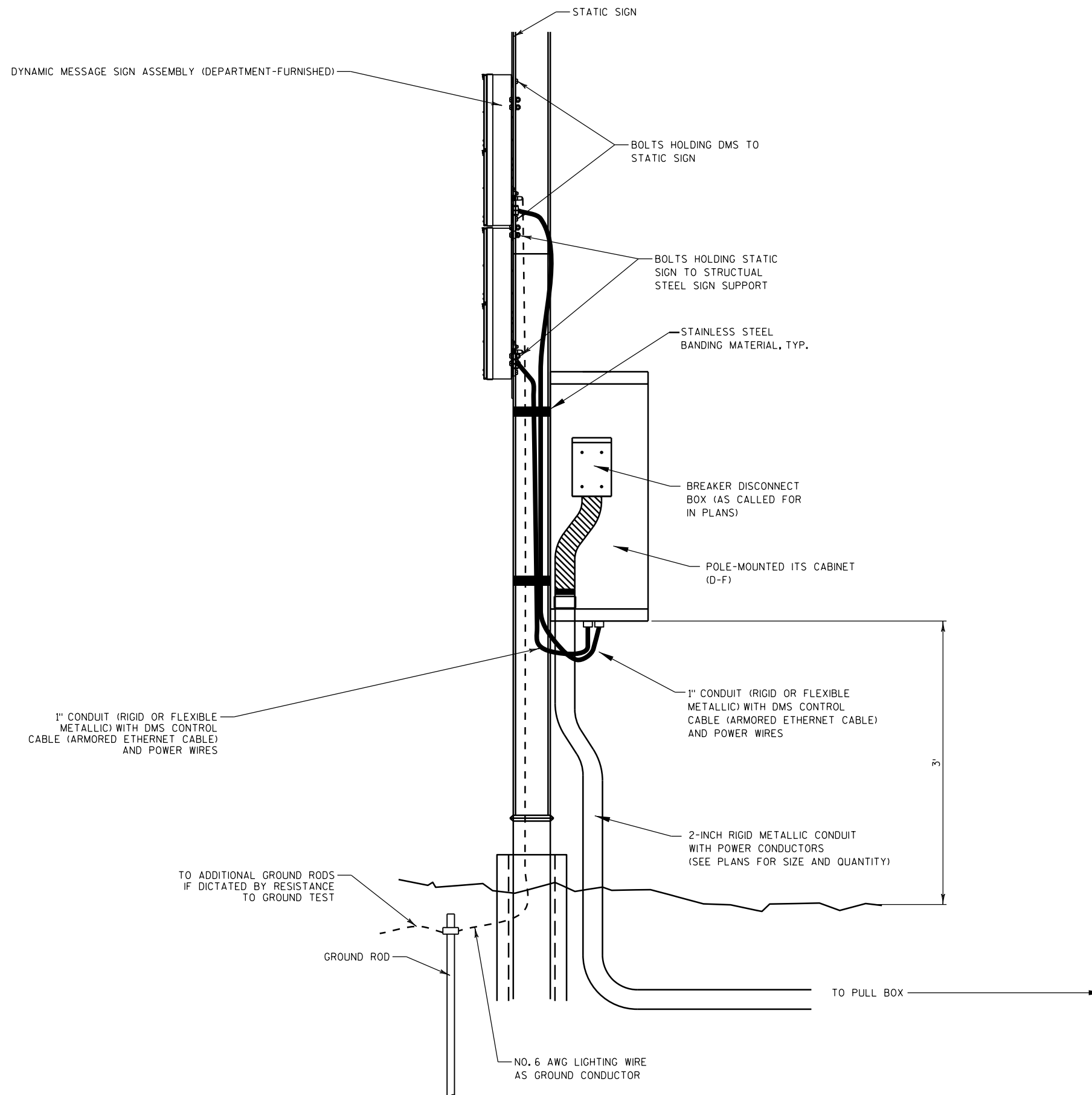




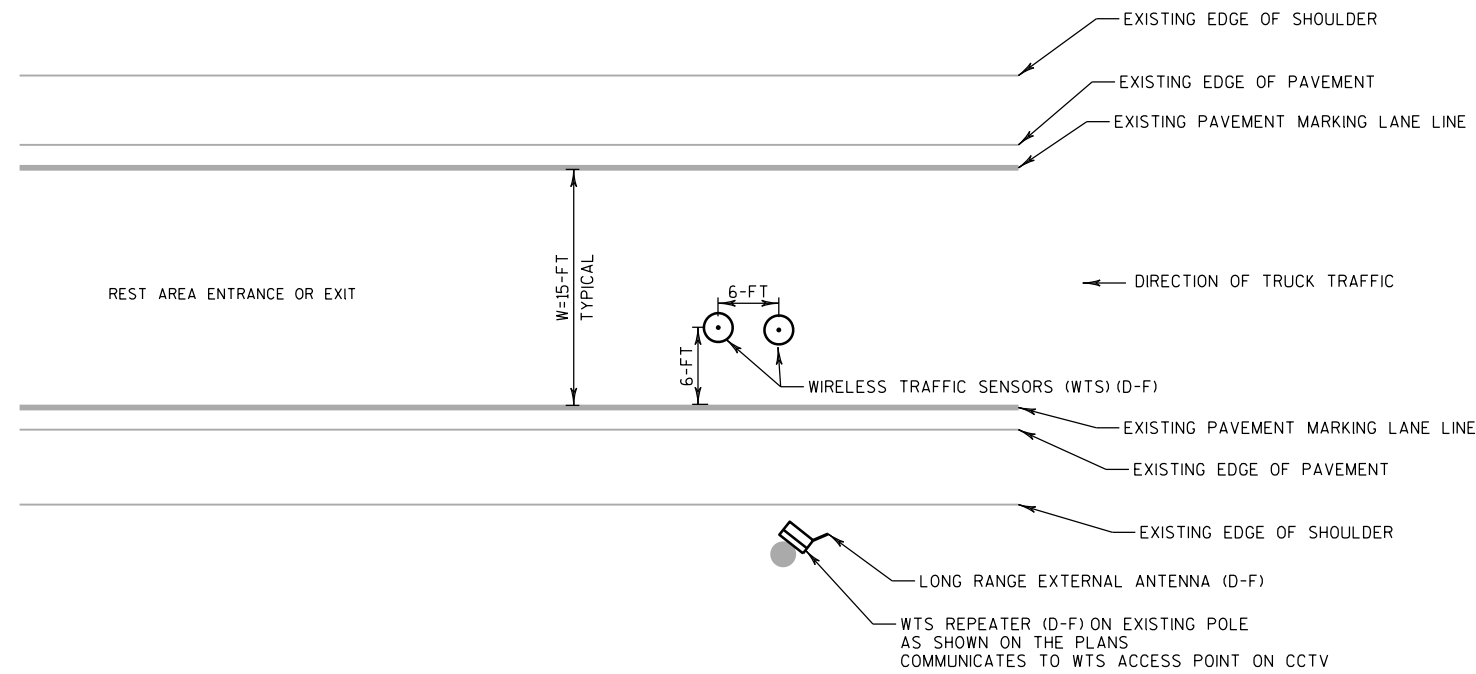
CAMERA POLES & FOUNDATIONS

NOTES

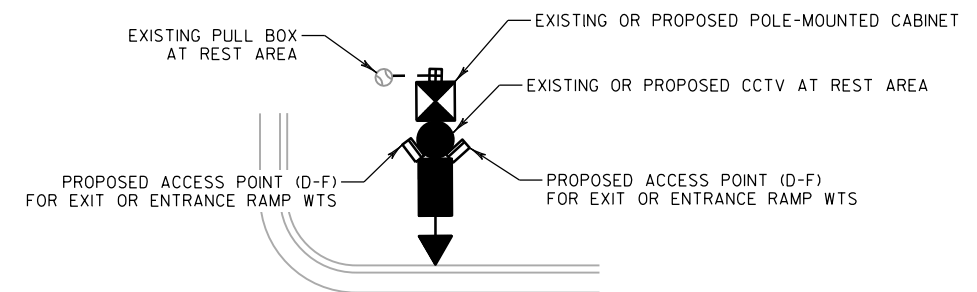
- 1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
- 2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE DEPARTMENT FURNISHED. BASE TO BE CONTRACTOR DESIGNED.
- 3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
- 4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN



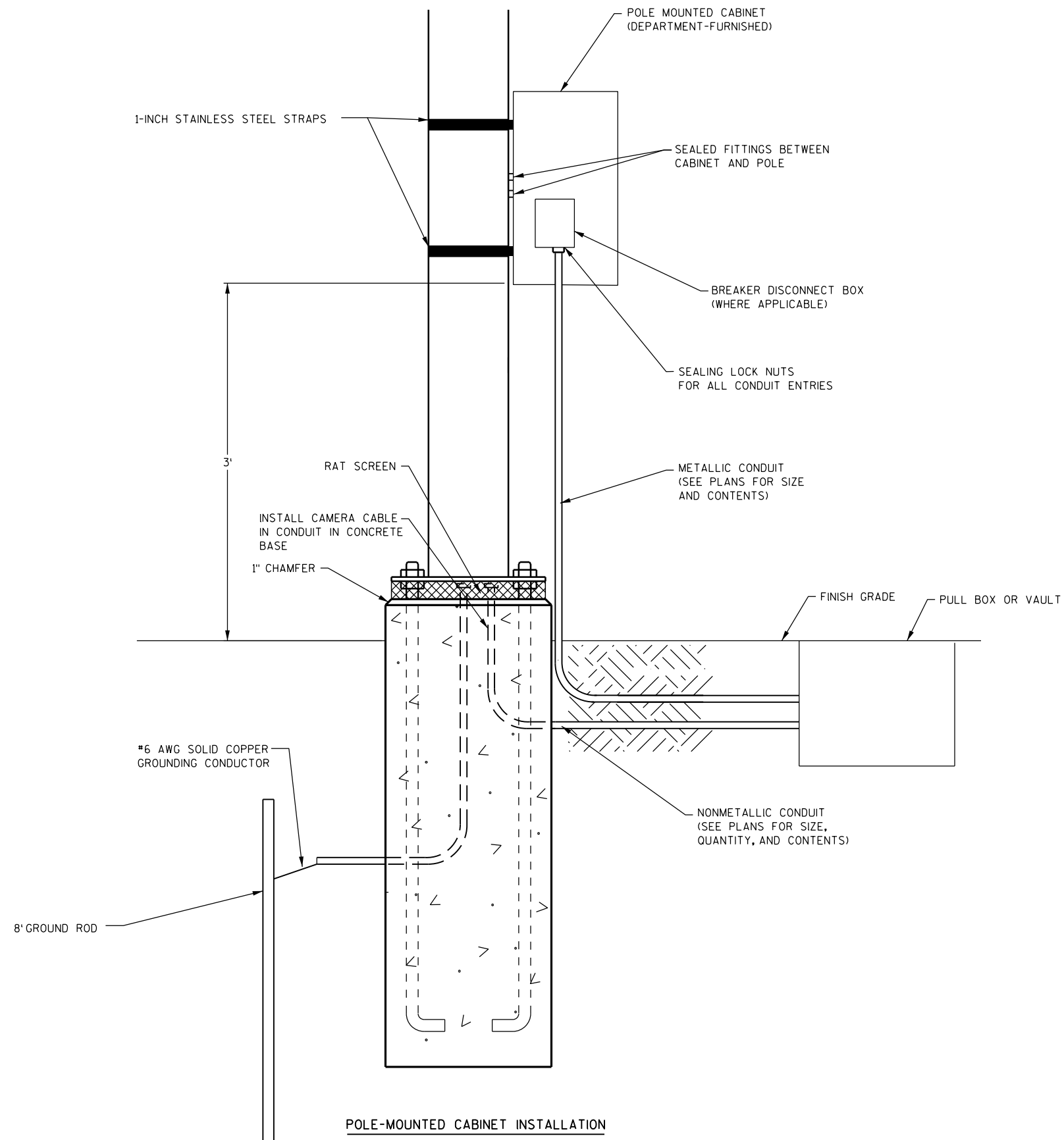
DYNAMIC MESSAGE SIGN COMPONENT INSTALLATION



WIRELESS TRAFFIC SENSOR AND REPEATER



WIRELESS TRAFFIC SENSOR ACCESS POINT





CCTV-17-0044
(1) BASE CAMERA POLE 50-FOOT
(1) INSTALL CAMERA POLE (D-F)
(1) INSTALL CAMERA ASSEMBLY (D-F)
(1) INSTALL POLE MOUNTED CABINET (D-F)
(1) ELECTRICAL SERVICE BREAKER DISCONNECT BOX
(1) INSTALL ETHERNET SWITCH (D-F)
(1) INSTALL CELLULAR MODEM (D-F)
(1) INSTALL WIRELESS TRAFFIC SENSOR CABINET EQUIPMENT (D-F)
(1) GROUND ROD

(1) 2-INCH METALLIC CONDUIT WITH
(3) NO. 6 AWG LIGHTING WIRES
(TRANSITION FROM NONMETALLIC TO
METALLIC UNDERGROUND SO THAT
ONLY METALLIC CONDUIT IS EXPOSED)

EXPB622
(1) INSTALL PROPOSED CONDUIT
INTO EXISTING PULL BOX

IN EXISTING CONDUIT
(3) NO. 6 AWG LIGHTING WIRES

EXPB621

REST AREA 62

IN EXISTING CONDUIT
(3) NO. 6 AWG LIGHTING WIRES
INSTALL WIRES IN EXISTING CONDUIT INTO BUILDING
CONNECT POWER WIRES IN BREAKER PANEL IN BUILDING











2

REST AREA 54

IH 94 WB

IH 94 EB

HUNTER HAVEN RD.

EXISTING BILLBOARD

MB54WB

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

PB541

DMS-27-0035
(SEE MISCELLANEOUS QUANTITIES FOR QUANTITIES)
(1) INSTALL HYBRID DYNAMIC MESSAGE SIGN (DMS ARE D-F)
(1) INSTALL POLE MOUNTED CABINET (D-F)
(1) ELECTRICAL SERVICE BREAKER DISCONNECT BOX
(1) INSTALL CELLULAR MODEM (D-F)
SIGN IS LOCATED APPROXIMATELY 1.8 MILES
FROM CTH O ENTRANCE RAMP TO IH 94 WB

130'

7.5°

30'

N

2





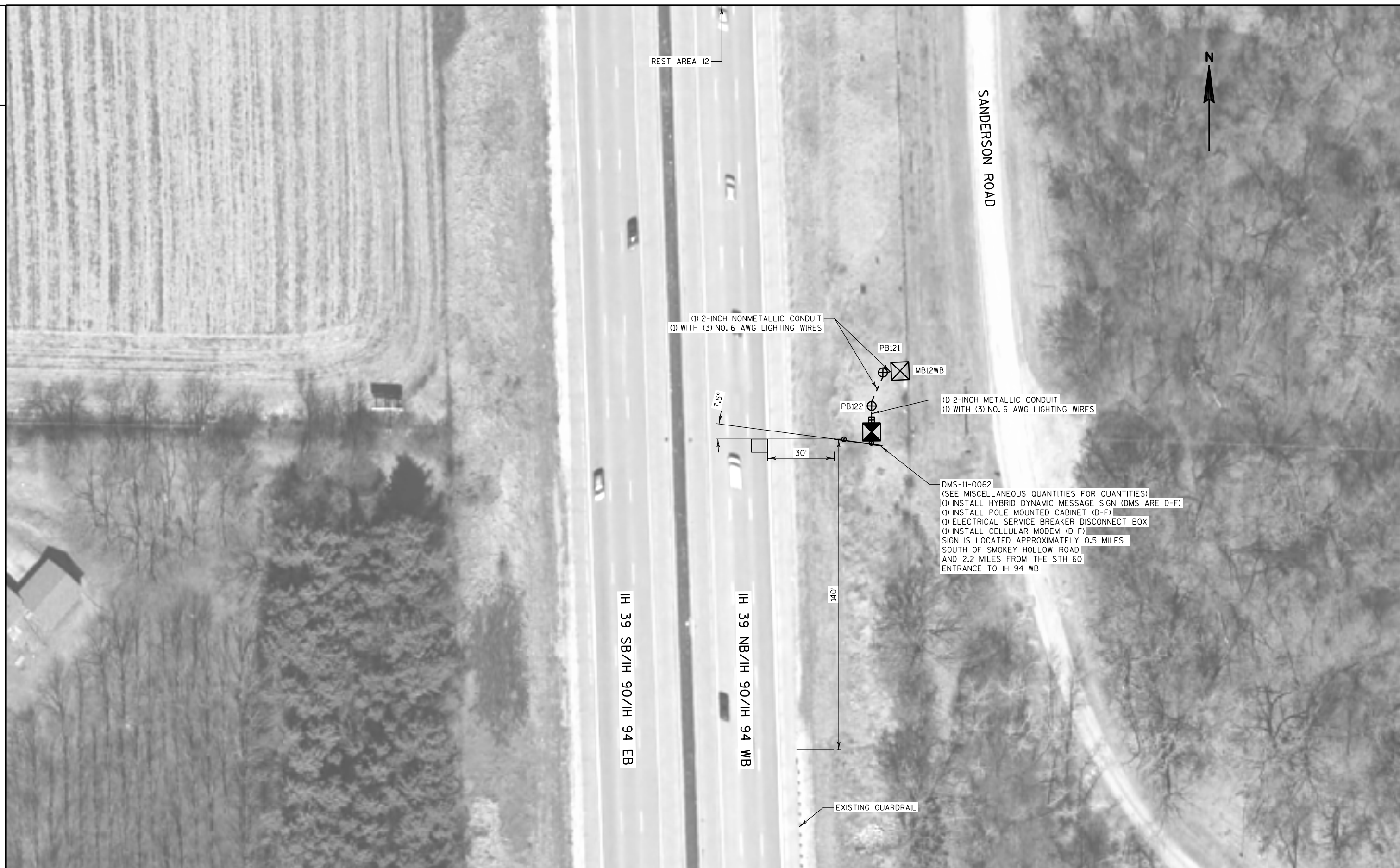






















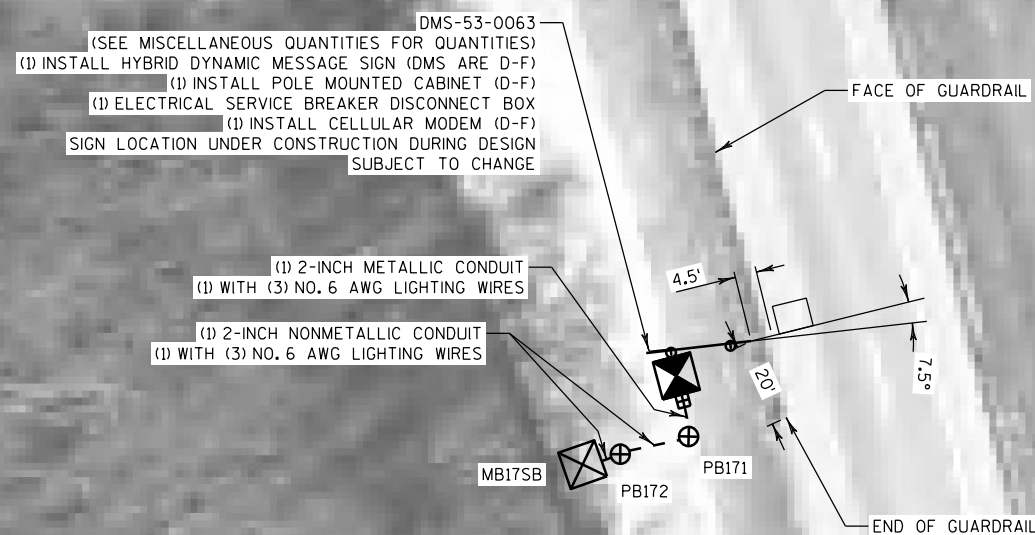


EXIT RAMP TO REST AREA 14

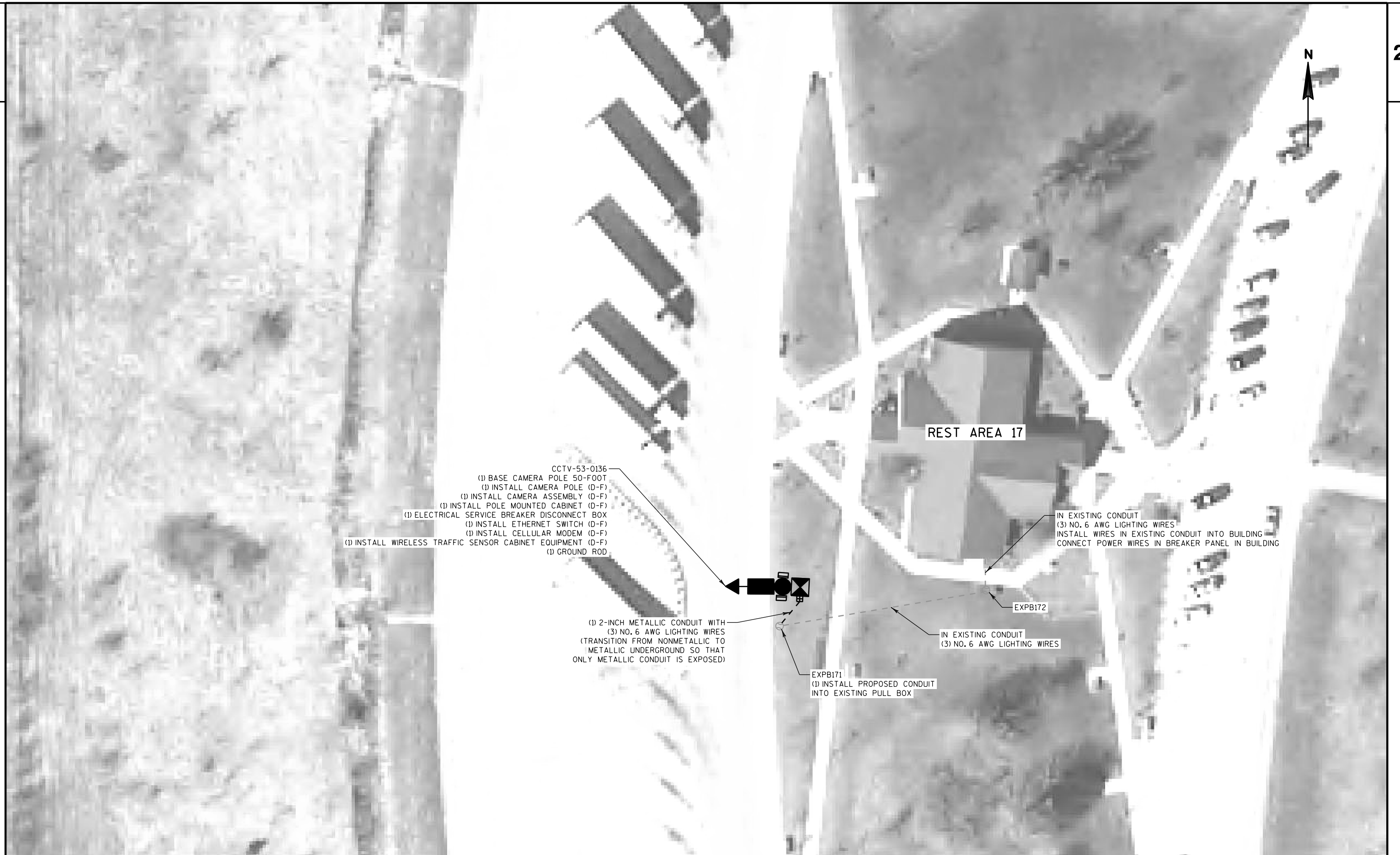
SDS-28-0170
(2) INSTALL WIRELESS TRAFFIC SENSORS (D-F)
(SEE INSTALLATION CONSTRUCTION DETAIL)
PROVIDE TRAFFIC CONTROL AS DESCRIBED IN SPECIAL PROVISIONS
TRAFFIC SECTION DURING INSTALLATION (INCIDENTAL)

ON EXISTING LIGHT POLE
(1) INSTALL WIRELESS TRAFFIC
SENSOR REPEATER (D-F)

















Estimate Of Quantities

1000-99-68					
Line	Item	Item Description	Unit	Total	Qty
0002	201.0120	Clearing	ID	21.000	21.000
0004	201.0220	Grubbing	ID	21.000	21.000
0006	213.0100	Finishing Roadway (project) 001. 1000-99-68	EACH	1.000	1.000
0008	619.1000	Mobilization	EACH	1.000	1.000
0010	625.0100	Topsoil	SY	448.900	448.900
0012	628.2002	Erosion Mat Class I Type A	SY	448.900	448.900
0014	629.0210	Fertilizer Type B	CWT	0.480	0.480
0016	630.0200	Seeding Temporary	LB	12.100	12.100
0018	635.0200	Sign Supports Structural Steel HS	LB	6,782.000	6,782.000
0020	636.0100	Sign Supports Concrete Masonry	CY	11.200	11.200
0022	636.0500	Sign Supports Steel Reinforcement	LB	686.000	686.000
0024	637.1220	Signs Type I Reflective SH	SF	1,120.000	1,120.000
0026	643.0100	Traffic Control (project) 001. 1000-99-68	EACH	1.000	1.000
0028	643.0300	Traffic Control Drums	DAY	1,470.000	1,470.000
0030	643.0420	Traffic Control Barricades Type III	DAY	70.000	70.000
0032	643.0705	Traffic Control Warning Lights Type A	DAY	70.000	70.000
0034	643.0715	Traffic Control Warning Lights Type C	DAY	654.000	654.000
0036	643.0800	Traffic Control Arrow Boards	DAY	80.000	80.000
0038	643.0900	Traffic Control Signs	DAY	475.000	475.000
0040	643.1050	Traffic Control Signs PCMS	DAY	185.000	185.000
0042	652.0125	Conduit Rigid Metallic 2-Inch	LF	140.000	140.000
0044	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	815.000	815.000
0046	652.0605	Conduit Special 2-Inch	LF	20.000	20.000
0048	652.0700.S	Install Conduit into Existing Item	EACH	7.000	7.000
0050	655.0510	Electrical Wire Traffic Signals 12 AWG	LF	25.000	25.000
0052	655.0525	Electrical Wire Traffic Signals 6 AWG	LF	6,700.000	6,700.000
0054	655.0535	Electrical Wire Traffic Signals 2 AWG	LF	300.000	300.000
0056	656.0200	Electrical Service Meter Breaker Pedestal (location) 001. DMS-17-0034	LS	1.000	1.000
0058	656.0200	Electrical Service Meter Breaker Pedestal (location) 002. DMS-27-0035	LS	1.000	1.000
0060	656.0200	Electrical Service Meter Breaker Pedestal (location) 003. DMS-29-0061	LS	1.000	1.000
0062	656.0200	Electrical Service Meter Breaker Pedestal (location) 004. DMS-11-0062	LS	1.000	1.000
0064	656.0200	Electrical Service Meter Breaker Pedestal (location) 005. DMS-28-0065	LS	1.000	1.000
0066	656.0200	Electrical Service Meter Breaker Pedestal (location) 006. DMS-28-0064	LS	1.000	1.000
0068	656.0200	Electrical Service Meter Breaker Pedestal (location) 007. DMS-53-0063	LS	1.000	1.000

Estimate Of Quantities

1000-99-68					
Line	Item	Item Description	Unit	Total	Qty
0070	656.0500	Electrical Service Breaker Disconnect Box (location) 001. DMS-17-0034	LS	1.000	1.000
0072	656.0500	Electrical Service Breaker Disconnect Box (location) 002. DMS-27-0035	LS	1.000	1.000
0074	656.0500	Electrical Service Breaker Disconnect Box (location) 003. DMS-29-0061	LS	1.000	1.000
0076	656.0500	Electrical Service Breaker Disconnect Box (location) 004. DMS-11-0062	LS	1.000	1.000
0078	656.0500	Electrical Service Breaker Disconnect Box (location) 005. DMS-28-0065	LS	1.000	1.000
0080	656.0500	Electrical Service Breaker Disconnect Box (location) 006. DMS-28-0064	LS	1.000	1.000
0082	656.0500	Electrical Service Breaker Disconnect Box (location) 007. DMS-53-0063	LS	1.000	1.000
0084	656.0500	Electrical Service Breaker Disconnect Box (location) 008. CCTV-17-0044	LS	1.000	1.000
0086	656.0500	Electrical Service Breaker Disconnect Box (location) 009. CCTV-27-0045	LS	1.000	1.000
0088	656.0500	Electrical Service Breaker Disconnect Box (location) 010. CCTV-11-0135	LS	1.000	1.000
0090	656.0500	Electrical Service Breaker Disconnect Box (location) 011. CCTV-28-0139	LS	1.000	1.000
0092	656.0500	Electrical Service Breaker Disconnect Box (location) 012. CCTV-28-0138	LS	1.000	1.000
0094	656.0500	Electrical Service Breaker Disconnect Box (location) 013. CCTV-53-0136	LS	1.000	1.000
0096	656.0500	Electrical Service Breaker Disconnect Box (location) 014. CCTV-53-0137	LS	1.000	1.000
0098	670.0100	Field System Integrator 001. 1000-99-68	LS	1.000	1.000
0100	670.0200	ITS Documentation 001. 1000-99-68	LS	1.000	1.000
0102	672.0250	Base Camera Pole 50-FT	EACH	7.000	7.000
0104	673.0225.S	Install Pole Mounted Cabinet	EACH	14.000	14.000
0106	675.0400.S	Install Ethernet Switch	EACH	7.000	7.000
0108	677.0150	Install Camera Pole 50-FT	EACH	7.000	7.000
0110	677.0200	Install Camera Assembly	EACH	8.000	8.000
0112	SPV.0060	Special 001 Install Hybrid Dynamic Message Sign	EACH	7.000	7.000
0114	SPV.0060	Special 002 Install Cellular Modem	EACH	14.000	14.000
0116	SPV.0060	Special 003. Install Wireless Traffic Sensor	EACH	32.000	32.000
0118	SPV.0060	Special 004. Install Wireless Traffic Sensor Repeater	EACH	16.000	16.000
0120	SPV.0060	Special 005. Install Wireless Traffic Sensor Cabinet Equipment	EACH	8.000	8.000
0122	SPV.0060	Special 006. Ground Rod	EACH	14.000	14.000

Estimate Of Quantities

1000-99-68					
Line	Item	Item Description	Unit	Total	Qty
0124	SPV.0060	Special 007. Non-Conductive Pull Boxes 24x42	EACH	14.000	14.000
0126	SPV.0105	Special 001. Pavement Cleanup	LS	1.000	1.000
0128	SPV.0105	Special 002. Acceptance Testing	LS	1.000	1.000

DMS AND CCTV SITE UNDERGROUND QUANTITIES

ITEM I.D.	LOCATION	652.0125	652.0225	652.0605	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH	655.0510	655.0525	655.0535	SPV.0060.006 GROUND ROD EACH	SPV.0060.007 NON-CONDUCTIVE PULL BOXES 24 x 42 EACH
		CONDUIT RIGID METALLIC 2-INCH LF	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	CONDUIT SPECIAL 2-INCH LF		ELECTRICAL WIRE LIGHTING 12 AWG LF	ELECTRICAL WIRE LIGHTING 6 AWG LF	ELECTRICAL WIRE LIGHTING 2 AWG LF		
DMS-17-0034	IH 94 WB AT CTH E (DUNN COUNTY)	10	70	--	--	--	240	--	1	2
CCTV-17-0044	REST AREA 62	10	25	--	1	--	615	--	1	--
DMS-27-0035	IH 94 WB AT HUNTER HAVEN RD. (JACKSON COUNTY)	10	45	--	--	--	165	--	1	2
CCTV-27-0045	REST AREA 54	10	50	--	1	--	855	--	1	--
DMS-29-0061	IH 90/94 WB AT DEES RD. (JUNEAU COUNTY)	10	60	--	--	--	210	--	1	2
DMS-11-0062	IH 39/90/94 WB AT MCGOWAN RD. (COLUMBIA COUNTY)	10	45	--	--	--	165	--	1	2
CCTV-11-0135	REST AREA 12	10	30	--	1	--	720	--	1	--
DMS-28-0065	IH 94 EB AT CTH O (JEFFERSON COUNTY)	10	140	--	--	--	450	--	1	2
CCTV-28-0139	REST AREA 13	10	25	--	1	--	465	--	1	--
DMS-28-0064	IH 94 WB AT CTH D (JEFFERSON COUNTY)	10	100	--	--	--	330	--	1	2
CCTV-28-0138	REST AREA 14	10	140	--	1	--	990	--	1	--
DMS-53-0063	IH 39/90 SB AT ROCK RIVER (ROCK COUNTY)	10	45	--	--	--	165	--	1	2
CCTV-53-0136	REST AREA 17	10	20	--	1	--	480	--	1	--
CCTV-53-0137	REST AREA 22	10	20	--	1	--	525	--	1	--
--	UNDISTRIBUTED	--	--	20	--	25	325	300	--	--
TOTAL		140	815	20	7	25	6,700	300	14	14

CCTV EQUIPMENT

ITEM I.D.	LOCATION	INFO ONLY	672.0250	673.0225.S*	675.0400.S	677.0150	677.0200	SPV.0060.002*
		PLAQUES	BASE	INSTALL	INSTALL	INSTALL	INSTALL	INSTALL
		SEQUENCE	CAMERA POLE	POLE MOUNTED	ETHERNET	CAMERA POLE	CAMERA	CELLULAR
		IDENTIFICATION	50-FT	CABINET	SWITCH	50-FT	ASSEMBLY	MODEM
		EACH	EACH	EACH	EACH	EACH	EACH	EACH
CCTV-17-0044	REST AREA 62 (DUNN COUNTY)	1	1	1	1	1	1	1
CCTV-27-0045	REST AREA 54 (JACKSON COUNTY)	1	1	1	1	1	1	1
CCTV-11-0135	REST AREA 10 (JUNEAU COUNTY)	--	--	--	--	--	1	--
CCTV-11-0135	REST AREA 12 (COLUMBIA COUNTY)	1	1	1	1	1	1	1
CCTV-28-0139	REST AREA 13 (JEFFERSON COUNTY)	1	1	1	1	1	1	1
CCTV-28-0138	REST AREA 14 (JEFFERSON COUNTY)	1	1	1	1	1	1	1
CCTV-53-0136	REST AREA 17 (ROCK COUNTY)	1	1	1	1	1	1	1
CCTV-53-0137	REST AREA 22 (ROCK COUNTY)	1	1	1	1	1	1	1
TOTAL		7	7	7	7	7	8	7

*ADDITIONAL QUANTITIES SHOWN IN DMS EQUIPMENT TABLE

DMS EQUIPMENT

ITEM I.D.	LOCATION	STEEL POST TYPE	INFO-ONLY	635.0200	636.0100	636.0500	673.0225.S*	SPV.0060.001	SPV.0060.002*	INFO ONLY - POST LENGTHS TO BE VERIFIED BY CONTRACTOR		
			PLAQUES	SIGN SUPPORTS	SIGN SUPPORTS	SIGN SUPPORTS	INSTALL	INSTALL HYBRID	INSTALL	POST	POST	SIGN
			SEQUENCE	STRUCTURAL	CONCRETE	STEEL	POLE MOUNTED	DYNAMIC	CELLULAR	NO. 1	NO. 2	OFFSET
			IDENTIFICATION	STEEL HS	MASONRY	REINFORCEMENT	CABINET	MESSAGE SIGN	MODEM	LENGTH	LENGTH	DISTANCE
			EACH	LB	CY	LB	EACH	EACH	EACH	FT	FT	FT
DMS-17-0034	IH 94 WB AT CTH E (DUNN COUNTY)	B	1	976.0	1.6	98	1	1	1	20.35	22.34	4.5**
DMS-27-0035	IH 94 WB AT HUNTER HAVEN RD. (JACKSON COUNTY)	B	1	1040.2	1.6	98	1	1	1	22.75	23.95	30
DMS-29-0061	IH 90/94 WB AT DEES RD. (JUNEAU COUNTY)	B	1	942.6	1.6	98	1	1	1	19.85	20.75	4.5**
DMS-11-0062	IH 39/90/94 WB AT MCGOWAN RD. (COLUMBIA COUNTY)	B	1	975.6	1.6	98	1	1	1	22.53	20.13	30
DMS-28-0065	IH 94 EB AT CTH O (JEFFERSON COUNTY)	B	1	871.2	1.6	98	1	1	1	18.07	18.07	4.5**
DMS-28-0064	IH 94 WB AT CTH D (JEFFERSON COUNTY)	B	1	947.4	1.6	98	1	1	1	20.13	20.77	4.5**
DMS-53-0063	IH 39/90 SB AT ROCK RIVER (ROCK COUNTY)	B	1	1029.0	1.6	98	1	1	1	22.00	24.00	4.5**
(SIGN LOCATION UNDER CONSTRUCTION AT TIME OF DESIGN)												
TOTAL			7	6,782.0	11.2	686	7	7	7			

*ADDITIONAL QUANTITIES SHOWN IN CCTV EQUIPMENT TABLE

**OFFSET FROM FACE OF GUARDRAIL

WIRELESS TRAFFIC SENSOR EQUIPMENT

		SPV.0060.003	SPV.0060.004	SPV.0060.005
		INSTALL	INSTALL	INSTALL
		WIRELESS	WIRELESS	WIRELESS TRAFFIC
		TRAFFIC	TRAFFIC	SENSOR
		SENSOR	SENSOR REPEATER	CABINET EQUIPMENT
LOCATION	ITEM I.D.	EACH	EACH	EACH
ENTRANCE RAMP FROM REST AREA 62	SDS-17-0009	2	1	--
REST AREA 62	CCTV-17-0044	--	--	1
EXIT RAMP TO REST AREA 62	SDS-17-0009	2	1	--
ENTRANCE RAMP FROM REST AREA 54	SDS-27-0010	2	1	--
REST AREA 54	CCTV-27-0045	--	--	1
EXIT RAMP TO REST AREA 54	SDS-27-0010	2	1	--
ENTRANCE RAMP FROM REST AREA 10	SDS-29-0165	2	1	--
REST AREA 10	EXCCTV-29-0110	--	--	1
EXIT RAMP TO REST AREA 10	SDS-29-0165	2	1	--
ENTRANCE RAMP FROM REST AREA 12	SDS-11-0166	2	1	--
REST AREA 12	CCTV-11-0135	--	--	1
EXIT RAMP TO REST AREA 12	SDS-11-0166	2	1	--
EXIT RAMP TO REST AREA 13	SDS-28-0171	2	1	--
REST AREA 13	CCTV-28-0139	--	--	1
ENTRANCE RAMP FROM REST AREA 13	SDS-28-0171	2	1	--
ENTRANCE RAMP FROM REST AREA 14	SDS-28-0170	2	1	--
REST AREA 14	CCTV-28-0138	--	--	1
EXIT RAMP TO REST AREA 14	SDS-28-0170	2	1	--
EXIT RAMP TO REST AREA 17	SDS-53-0167	2	1	--
REST AREA 17	CCTV-53-0136	--	--	1
ENTRANCE RAMP FROM REST AREA 17	SDS-53-0167	2	1	--
ENTRANCE RAMP FROM REST AREA 22	SDS-53-0168	2	1	--
REST AREA 22	CCTV-53-0137	--	--	1
EXIT RAMP TO REST AREA 22	SDS-53-0168	2	1	--
TOTALS		32	16	8

LUMP SUM ITEMS

LOCATION	670.0100.001	670.0200.001	SPV.0105.002
	FIELD SYSTEM	ITS	ACCEPTANCE
	INTEGRATOR	DOCUMENTATION	TESTING
PROJECT	1	1	1
TOTALS	1	1	1

METER BREAKERS

ITEM I.D.	LOCATION	MB I.D.	656.0200.001	656.0200.002	656.0200.003	656.0200.004	656.0200.005	656.0200.006	656.0200.007
			ELECTRICAL SERVICE METER BREAKER PEDESTAL (DMS-17-0034)	ELECTRICAL SERVICE METER BREAKER PEDESTAL (DMS-27-0035)	ELECTRICAL SERVICE METER BREAKER PEDESTAL (DMS-29-0061)	ELECTRICAL SERVICE METER BREAKER PEDESTAL (DMS-11-0062)	ELECTRICAL SERVICE METER BREAKER PEDESTAL (DMS-28-0065)	ELECTRICAL SERVICE METER BREAKER PEDESTAL (DMS-28-0064)	ELECTRICAL SERVICE METER BREAKER PEDESTAL (DMS-53-0063)
			LS	LS	LS	LS	LS	LS	LS
DMS-17-0034	IH 94 WB AT CTH E (DUNN COUNTY)	MB62WB	1	--	--	--	--	--	--
DMS-27-0035	IH 94 WB AT HUNTER HAVEN RD. (JACKSON COUNTY)	MB54WB	--	1	--	--	--	--	--
DMS-29-0061	IH 90/94 WB AT DEES RD. (JUNEAU COUNTY)	MB10WB	--	--	1	--	--	--	--
DMS-11-0062	IH 39/90/94 WB AT MCGOWAN RD. (COLUMBIA COUNTY)	MB12WB	--	--	--	1	--	--	--
DMS-28-0065	IH 94 EB AT CTH O (JEFFERSON COUNTY)	MB13EB	--	--	--	--	1	--	--
DMS-28-0064	IH 94 WB AT CTH D (JEFFERSON COUNTY)	MB14WB	--	--	--	--	--	1	--
DMS-53-0063	IH 39/90 SB AT ROCK RIVER (ROCK COUNTY)	MB17SB	--	--	--	--	--	--	1
TOTAL			1	1	1	1	1	1	1

BREAKER DISCONNECT BOX - DMS

ITEM I.D.	LOCATION	656.0500.001	656.0500.002	656.0500.003	656.0500.004	656.0500.005	656.0500.006	656.0500.007
		ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS-17-0034)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS-27-0035)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS-29-0061)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS-11-0062)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS-28-0065)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS-28-0064)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (DMS-53-0063)
		LS	LS	LS	LS	LS	LS	LS
DMS-17-0034	IH 94 WB AT CTH E (DUNN COUNTY)	1	--	--	--	--	--	--
DMS-27-0035	IH 94 WB AT HUNTER HAVEN RD. (JACKSON COUNTY)	--	1	--	--	--	--	--
DMS-29-0061	IH 90/94 WB AT DEES RD. (JUNEAU COUNTY)	--	--	1	--	--	--	--
DMS-11-0062	IH 39/90/94 WB AT MCGOWAN RD. (COLUMBIA COUNTY)	--	--	--	1	--	--	--
DMS-28-0065	IH 94 EB AT CTH O (JEFFERSON COUNTY)	--	--	--	--	1	--	--
DMS-28-0064	IH 94 WB AT CTH D (JEFFERSON COUNTY)	--	--	--	--	--	1	--
DMS-53-0063	IH 39/90 SB AT ROCK RIVER (ROCK COUNTY)	--	--	--	--	--	--	1
		1	1	1	1	1	1	1

BREAKER DISCONNECT BOX - CCTV

ITEM I.D.	LOCATION	656.0500.008	656.0500.009	656.0500.010	656.0500.011	656.0500.012	656.0500.013	656.0500.014
		ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV-17-0044)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV-27-0045)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV-11-0135)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV-28-0139)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV-28-0138)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV-53-0136)	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CCTV-53-0137)
		LS	LS	LS	LS	LS	LS	LS
CCTV-17-0044	REST AREA 62 (DUNN COUNTY)	1	--	--	--	--	--	--
CCTV-27-0045	REST AREA 54 (JACKSON COUNTY)	--	1	--	--	--	--	--
CCTV-11-0135	REST AREA 12 (COLUMBIA COUNTY)	--	--	1	--	--	--	--
CCTV-28-0139	REST AREA 13 (JEFFERSON COUNTY)	--	--	--	1	--	--	--
CCTV-28-0138	REST AREA 14 (JEFFERSON COUNTY)	--	--	--	--	1	--	--
CCTV-53-0136	REST AREA 17 (ROCK COUNTY)	--	--	--	--	--	1	--
CCTV-53-0137	REST AREA 22 (ROCK COUNTY)	--	--	--	--	--	--	1
		1	1	1	1	1	1	1

PERMANENT SIGNING

					637.1220
					SIGNS
					TYPE I
					REFLECTIVE SH
LOCATION	SIGN NO.	SIGN SIZE		W X H	SF
		(IN X IN)			
JUNEAU COUNTY	TP10	192	X	120	160.00
COLUMBIA COUNTY	TP12	192	X	120	160.00
JEFFERSON COUNTY	TP13	192	X	120	160.00
JEFFERSON COUNTY	TP14	192	X	120	160.00
ROCK COUNTY	TP17	192	X	120	160.00
JACKSON COUNTY	TP54	192	X	120	160.00
DUNN COUNTY	TP62	192	X	120	160.00
PROJECT 1000-99-68 TOTAL					1,120.00

MISCELLANEOUS ITEMS

LOCATION	201.0120		201.0220		213.0100		619.1000		SPV.0105.001	
	CLEARING		GRUBBING		FINISHING		MOBILIZATION		PAVEMENT	
	ID	ID	ID	ID	ROADWAY EACH	ROADWAY EACH	MOBILIZATION EACH	MOBILIZATION EACH	CLEANUP LS	CLEANUP LS
PROJECT 1000-99-68	21	21	21	21	1	1	1	1	1	1
TOTALS	21	21	21	21	1	1	1	1	1	1

TRAFFIC CONTROL

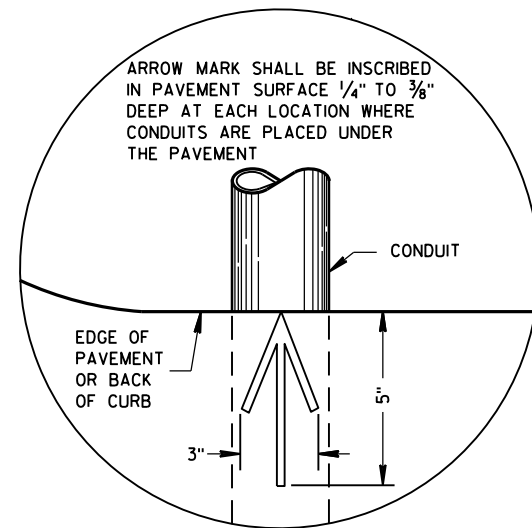
LOCATION	DURATION DAYS	643.0100	643.0300		643.0420		643.0705		643.0715		643.0800		643.0900		643.1050	
		TRAFFIC			TRAFFIC	TRAFFIC	CONTROL	CONTROL	TRAFFIC			TRAFFIC			TRAFFIC	
		CONTROL			CONTROL	CONTROL	WARNING	WARNING	CONTROL			CONTROL			CONTROL	
		PROJECT			BARRICADES		LIGHTS	LIGHTS	ARROW			SIGNS			SIGNS	
		(0072-41-00)	DRUMS	TYPE III	TYPE A	TYPE C	BOARDS	SIGNS	PCMS							
EACH	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY	EACH*	DAY
STAGE CONSTRUCTION																
REST AREA #10	5	--	40	200	--	--	--	--	18	89	2	10	12	60	2	24
REST AREA #12	5	--	40	200	--	--	--	--	18	89	2	10	12	60	2	24
REST AREA #13	5	--	40	200	--	--	--	--	18	89	2	10	12	60	2	24
REST AREA #14	5	--	40	200	--	--	--	--	18	89	2	10	12	60	2	24
REST AREA #17	5	--	40	200	--	--	--	--	18	89	2	10	12	60	2	24
REST AREA #54	5	--	40	200	--	--	--	--	18	89	2	10	12	60	2	24
REST AREA #62	5	--	40	200	--	--	--	--	18	89	2	10	12	60	2	24
<u>UNDISTRIBUTED</u>		1	--	70	--	70	--	70	--	31	--	10	--	55	--	17
PROJECT 0072-41-00 TOTAL		1	1,470		70		70		654		80		475		185	
* FOR INFORMATION ONLY																

RESTORATION ITEMS

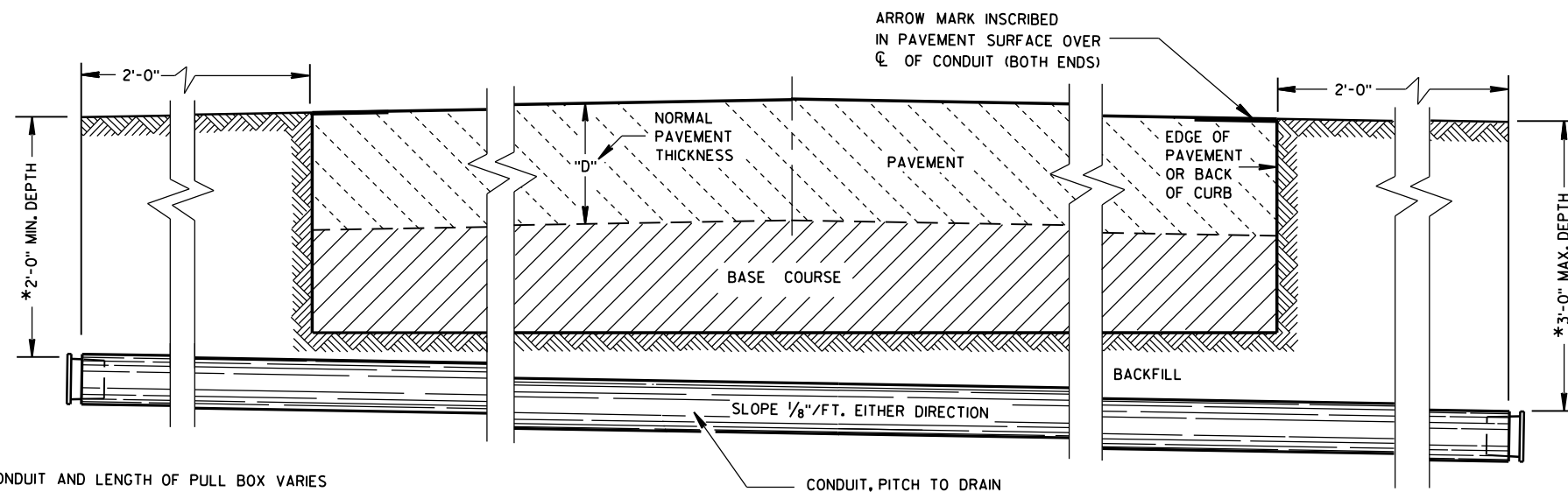
ITEM I.D.	LOCATION	625.0100	628.2002	629.0210	630.0200
		EROSION MAT			
		CLASS I	FERTILIZER	SEEDING	
		TOPSOIL	TYPE A	TYPE B	TEMPORARY
		SY	SY	CWT	LB
DMS-17-0034	IH 94 WB AT CTH E (DUNN COUNTY)	33.3	33.3	0.02	0.9
CCTV-17-0044	REST AREA 62	25.0	25.0	0.02	0.7
DMS-27-0035	IH 94 WB AT HUNTER HAVEN RD. (JACKSON COUNTY)	33.3	33.3	0.02	0.9
CCTV-27-0045	REST AREA 54	25.0	25.0	0.02	0.7
DMS-29-0061	IH 90/94 WB AT DEES RD. (JUNEAU COUNTY)	33.3	33.3	0.02	0.9
DMS-11-0062	IH 39/90/94 WB AT MCGOWAN RD. (COLUMBIA COUNTY)	33.3	33.3	0.02	0.9
CCTV-11-0135	REST AREA 12	25.0	25.0	0.02	0.7
DMS-28-0065	IH 94 EB AT CTH O (JEFFERSON COUNTY)	33.3	33.3	0.02	0.9
CCTV-28-0139	REST AREA 13	25.0	25.0	0.02	0.7
DMS-28-0064	IH 94 WB AT CTH D (JEFFERSON COUNTY)	33.3	33.3	0.02	0.9
CCTV-28-0138	REST AREA 14	25.0	25.0	0.02	0.7
DMS-53-0063	IH 39/90 SB AT ROCK RIVER (ROCK COUNTY)	33.3	33.3	0.02	0.9
CCTV-53-0136	REST AREA 17	25.0	25.0	0.02	0.7
CCTV-53-0137	REST AREA 22	25.0	25.0	0.02	0.7
--	UNDISTRIBUTED	40.8	40.8	0.22	1.1
TOTAL		448.9	448.9	0.48	12.1

Standard Detail Drawing List

09B02-10	CONDUIT
09B04-11	PULL BOX
09H03-01	2 CIRCUIT METER BREAKER PEDESTAL
09H05-01	CABINET BREAKER DISCONNECT BOX INSTALLATION
09H11-01	IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE



PLAN VIEW
ARROW MARK



SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES
WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

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.

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.

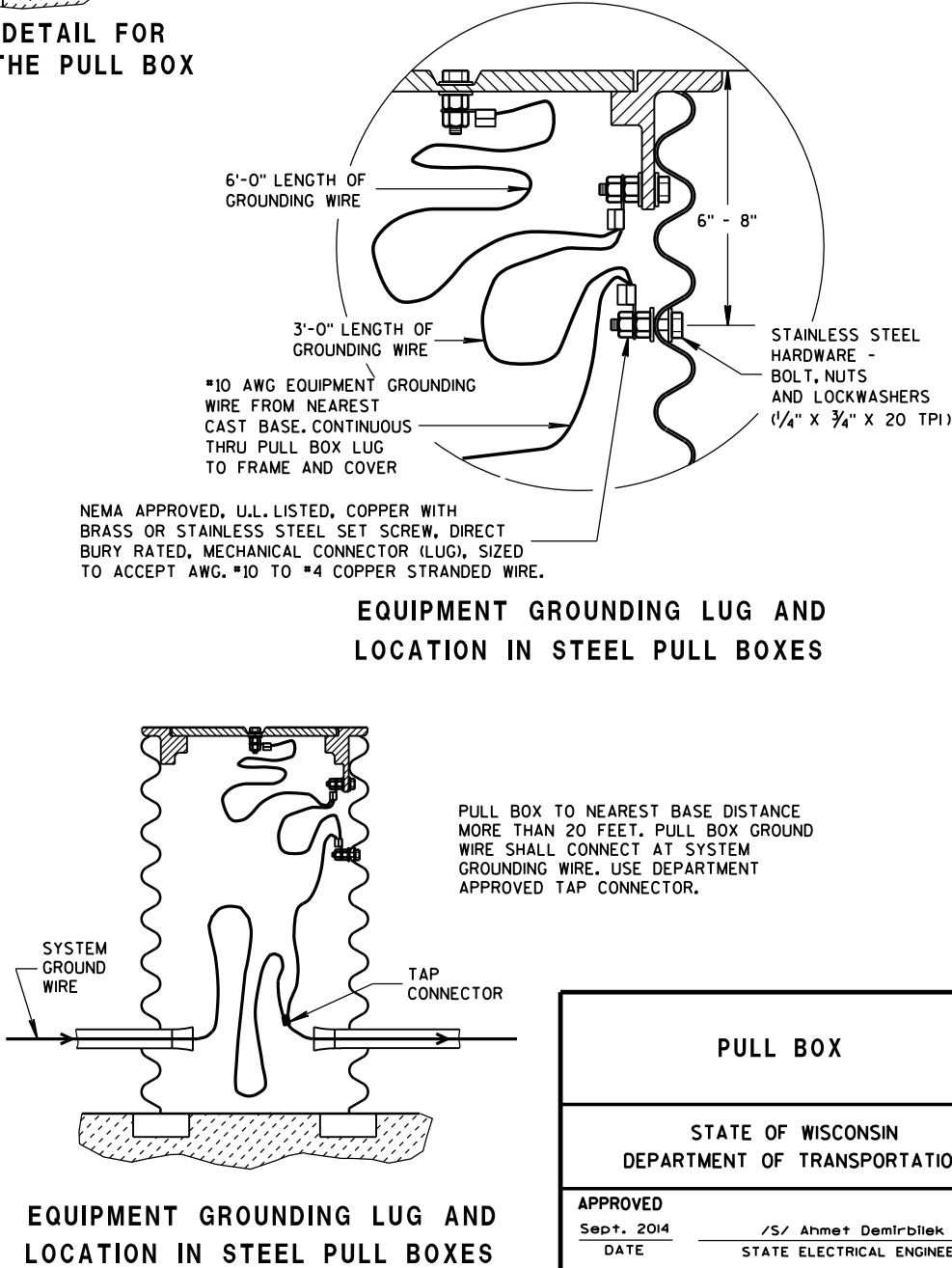
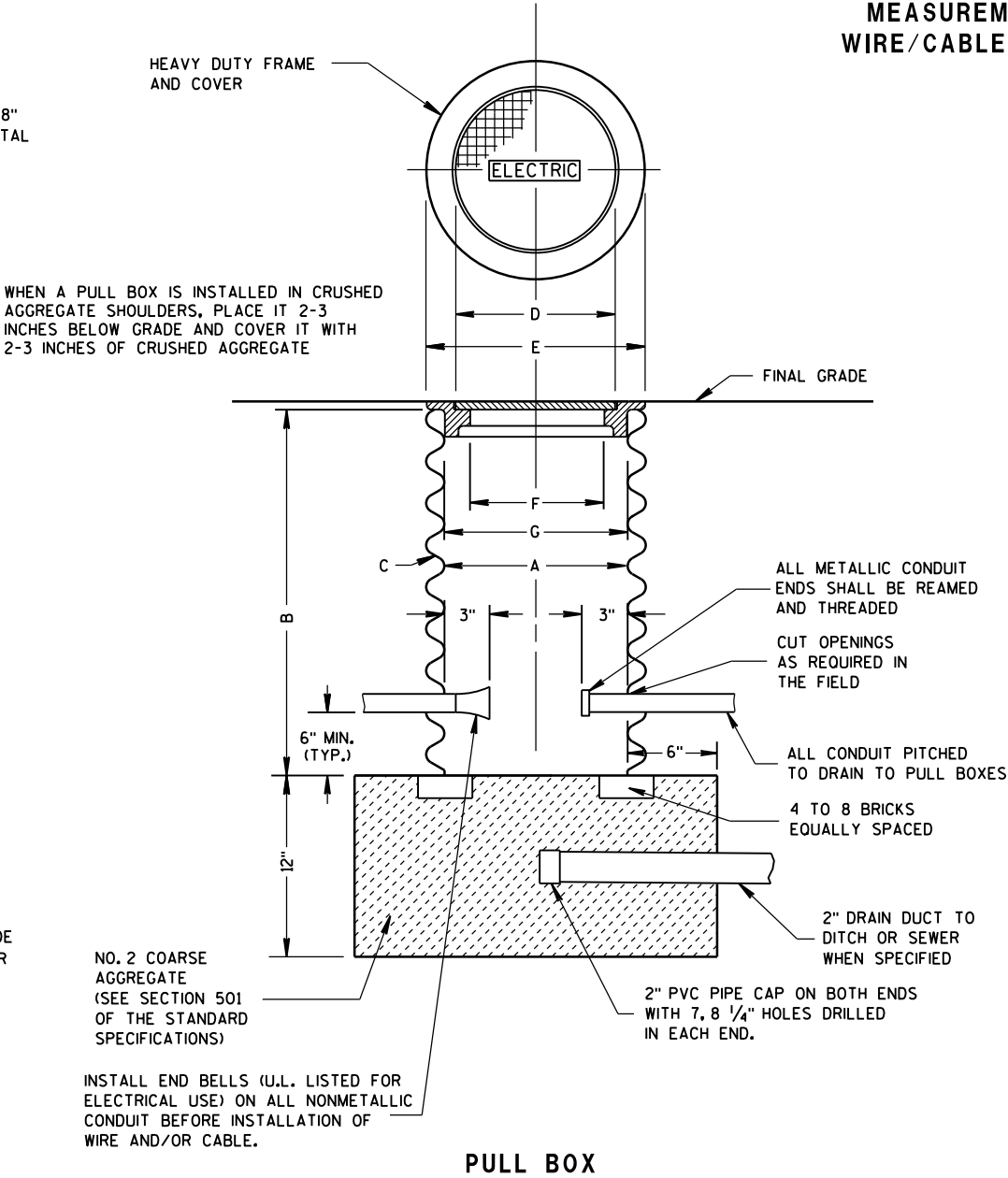
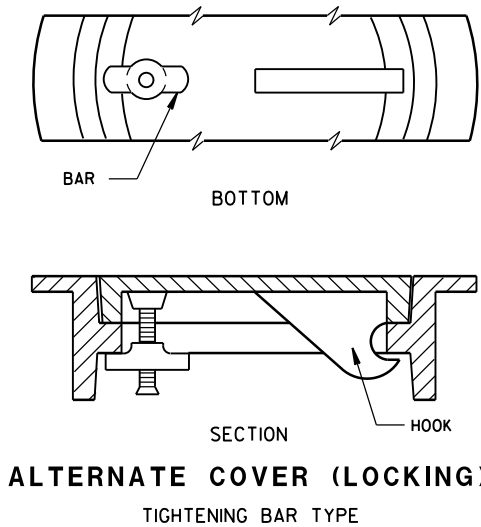
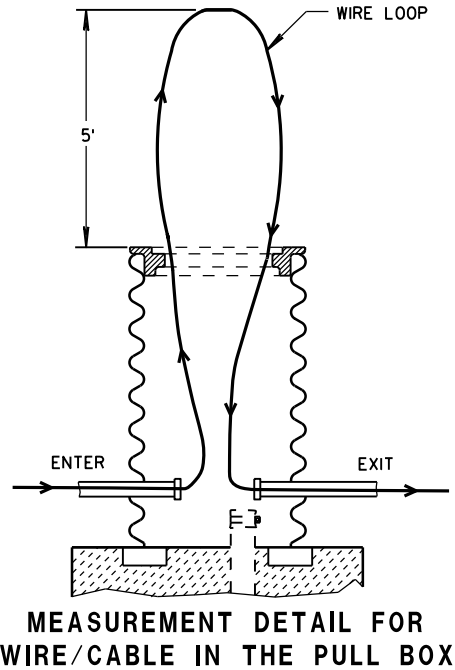
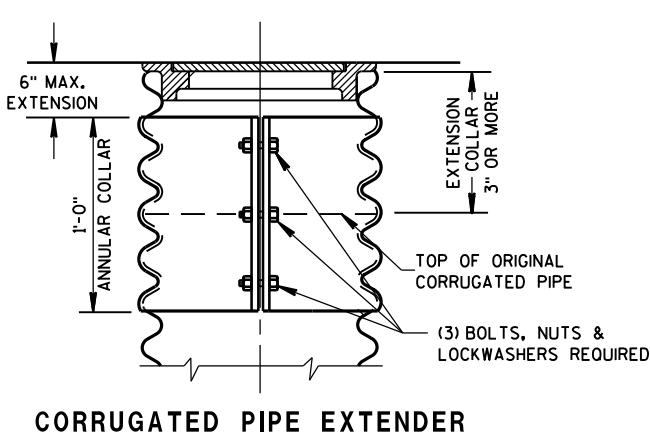
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

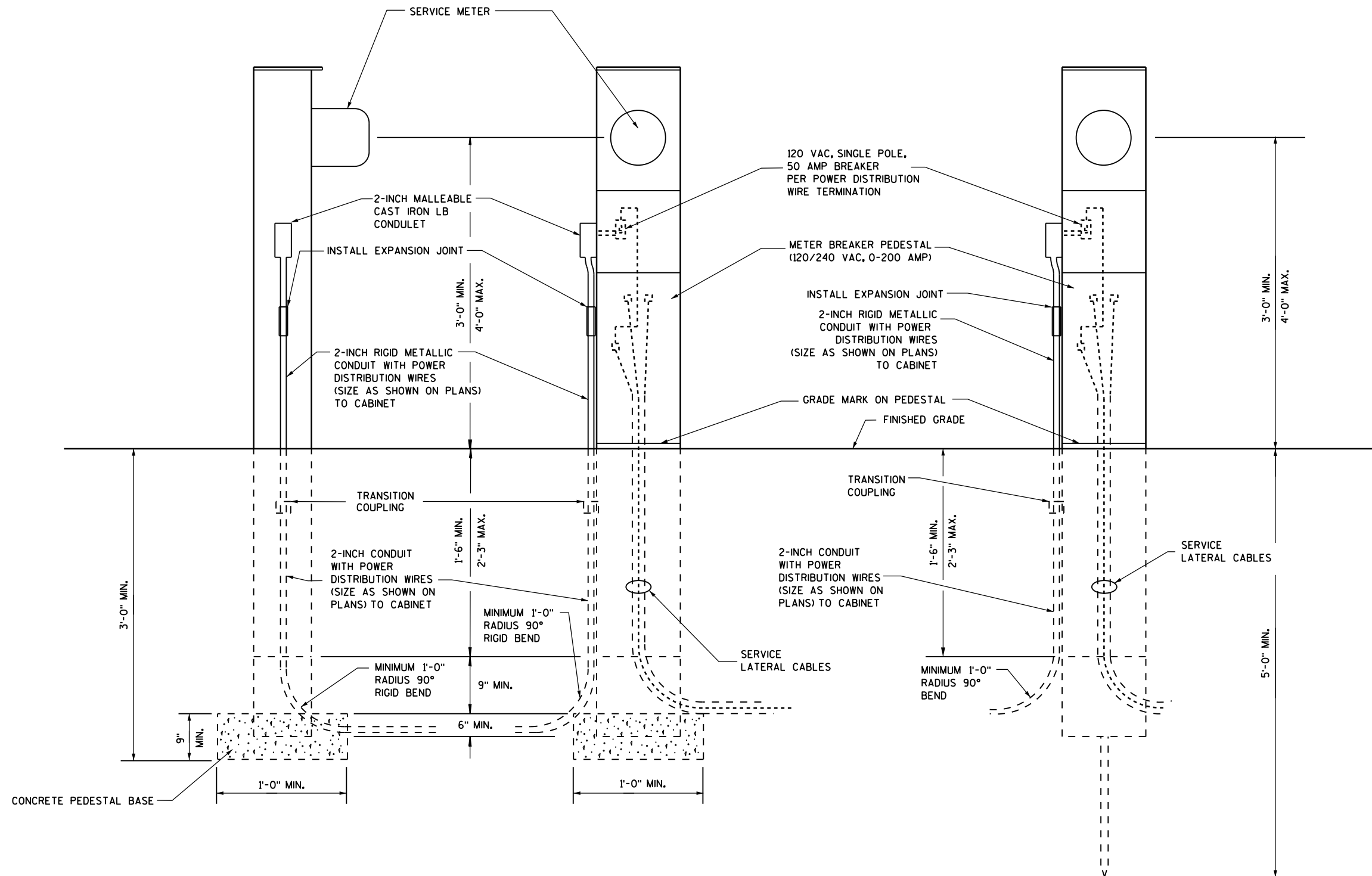
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

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.

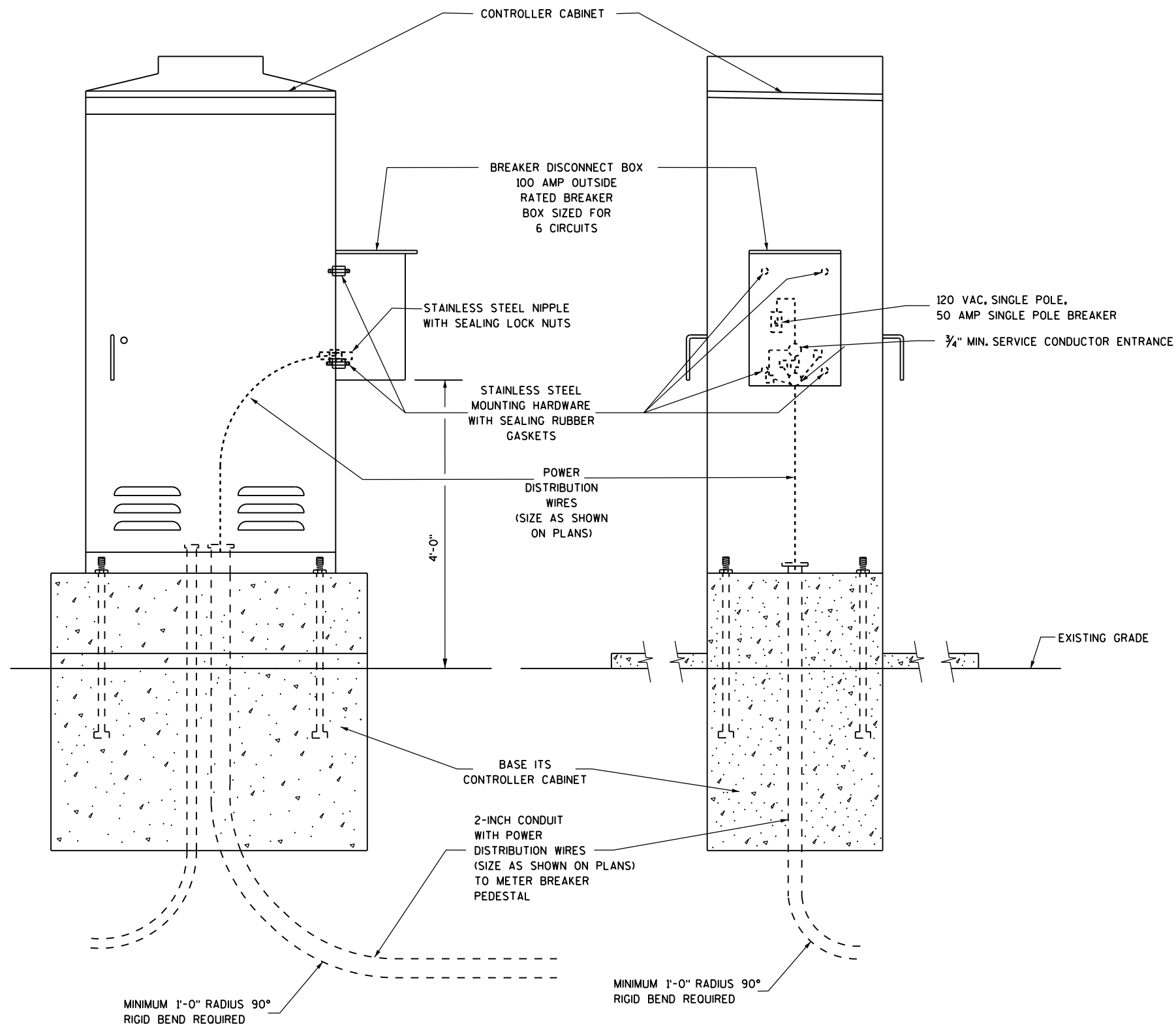


PULL BOX	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED Sept. 2014 DATE	/S/ Ahmet Demirbilek STATE ELECTRICAL ENGINEER
FHWA	



2 CIRCUIT METER BREAKER PEDESTAL

ALTERNATE SUPPORTING STAKE
(IF APPROVED BY UTILITY)2 CIRCUIT
METER BREAKER PEDESTALSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
Sept. 2014
DATE
FHWA/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER



GENERAL NOTES

MINIMUM REQUIREMENT SHOWN. ADDITIONAL BREAKERS MAY BE REQUIRED.

UP TO THREE BREAKERS WILL BE CONSIDERED INCIDENTAL TO THE ITEM BREAKER DISCONNECT BOX.

CABINET BREAKER DISCONNECT BOX INSTALLATION

CABINET BREAKER DISCONNECT BOX INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

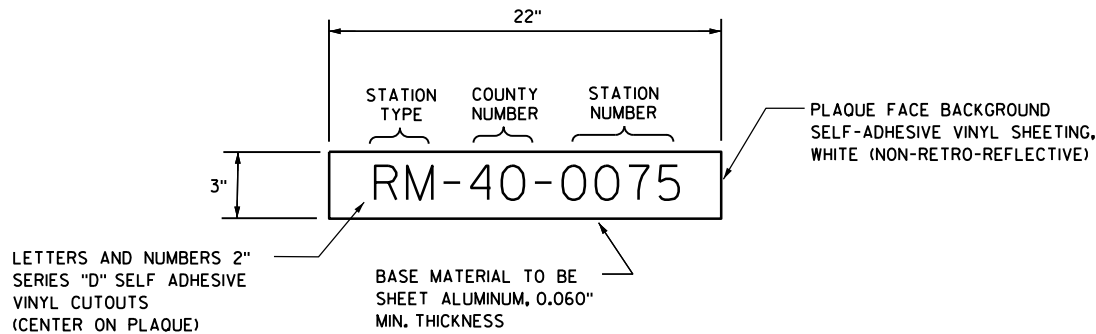
Sept. 2014

DATE

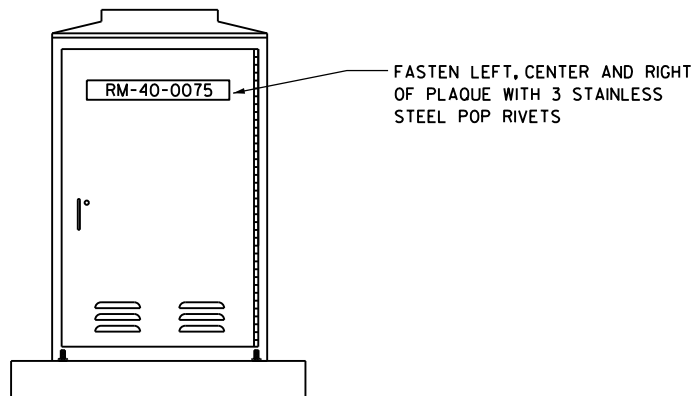
FHWA

/S/ Ahmet Demirbilek

STATE ELECTRICAL ENGINEER

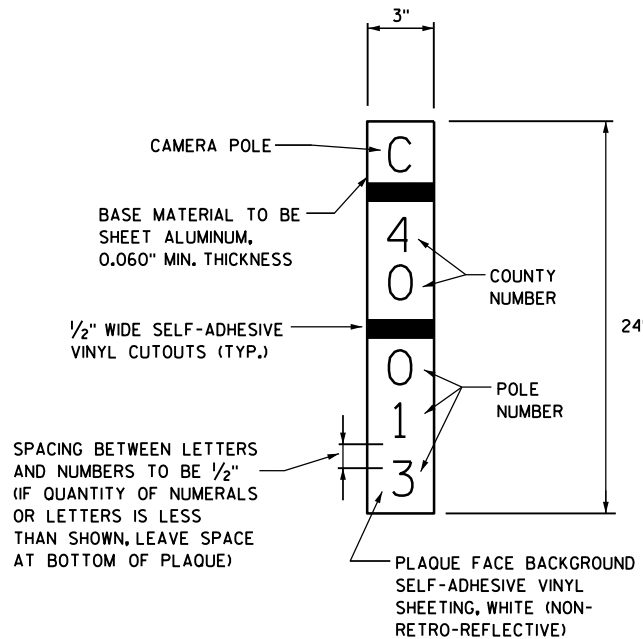


CONTROL CABINET
IDENTIFICATION PLAQUE DETAIL

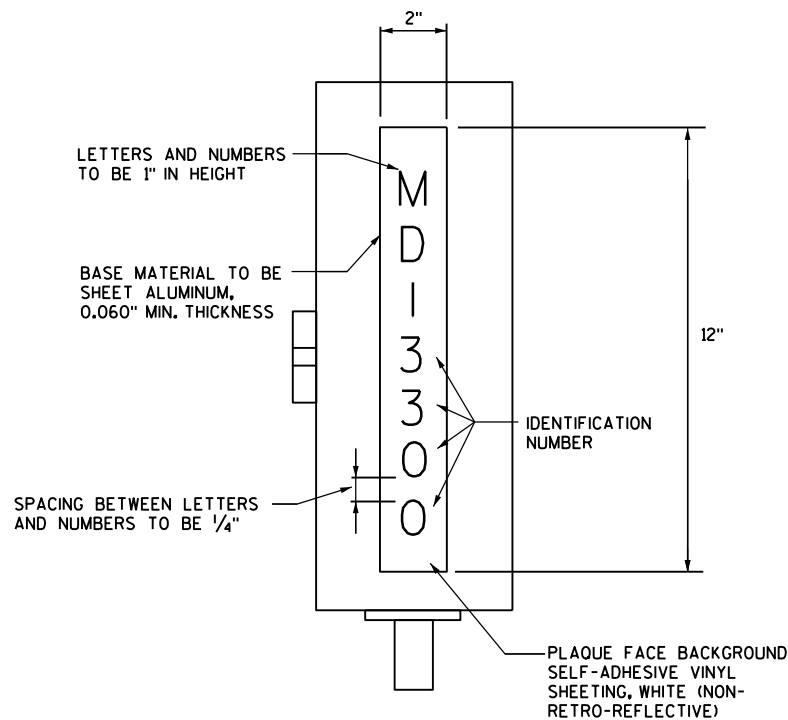


CONTROL CABINET IDENTIFICATION
PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)



POLE IDENTIFICATION
PLAQUE DETAIL



MICROWAVE DETECTOR FIELD
CABINET IDENTIFICATION PLAQUE DETAIL

GENERAL NOTES

- ① TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
- ② FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
- ③ FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE ②, FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
- ④ COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

LEGEND STATION TYPE

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

IDENTIFICATION PLAQUE
REQUIREMENTS AND PLACEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: Sept. 2014 /S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER
FHWA

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

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

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

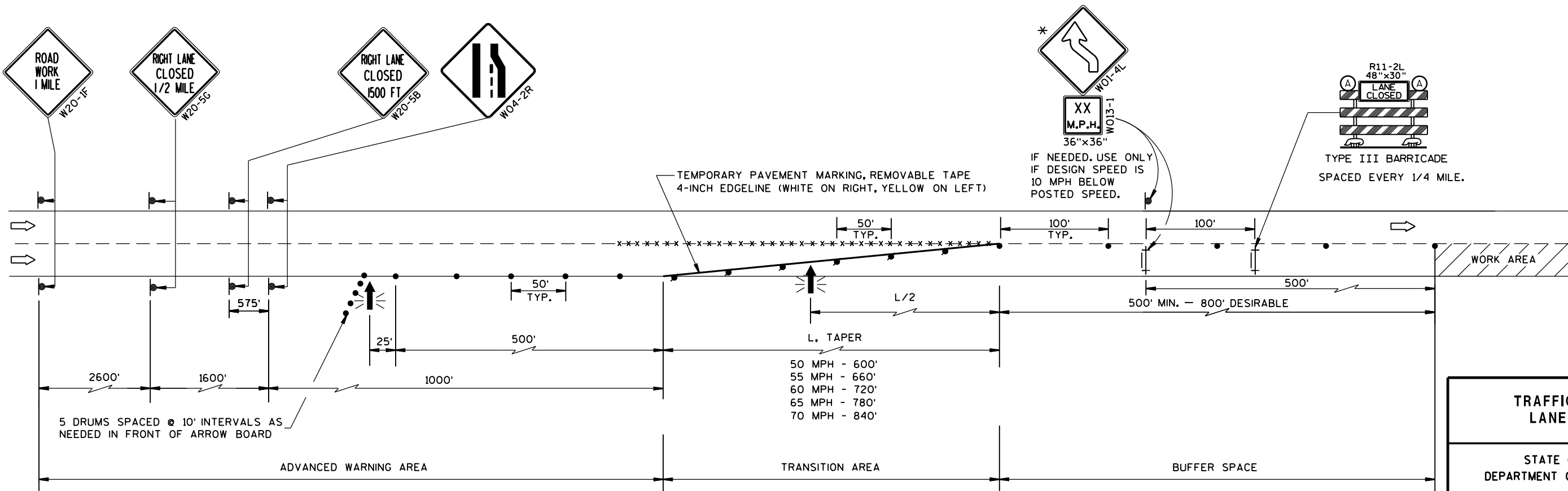
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

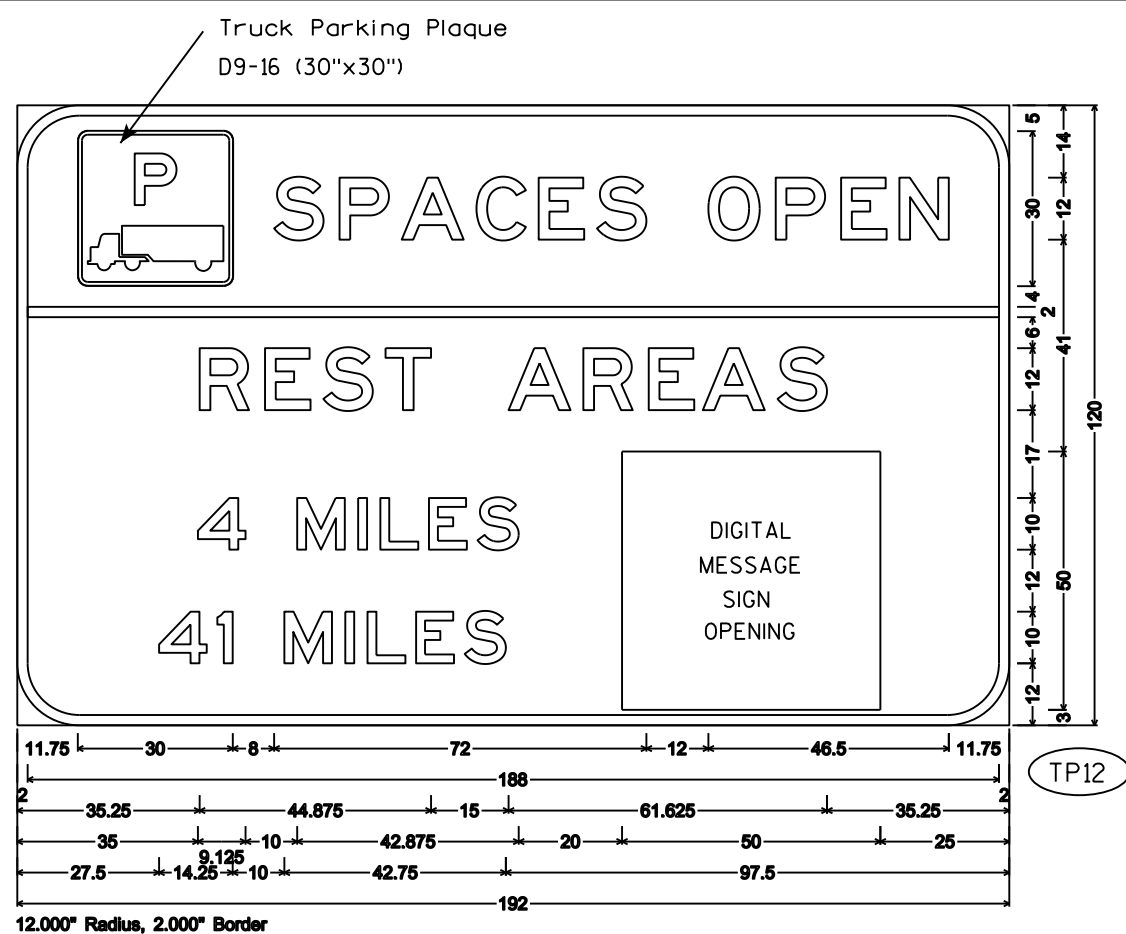
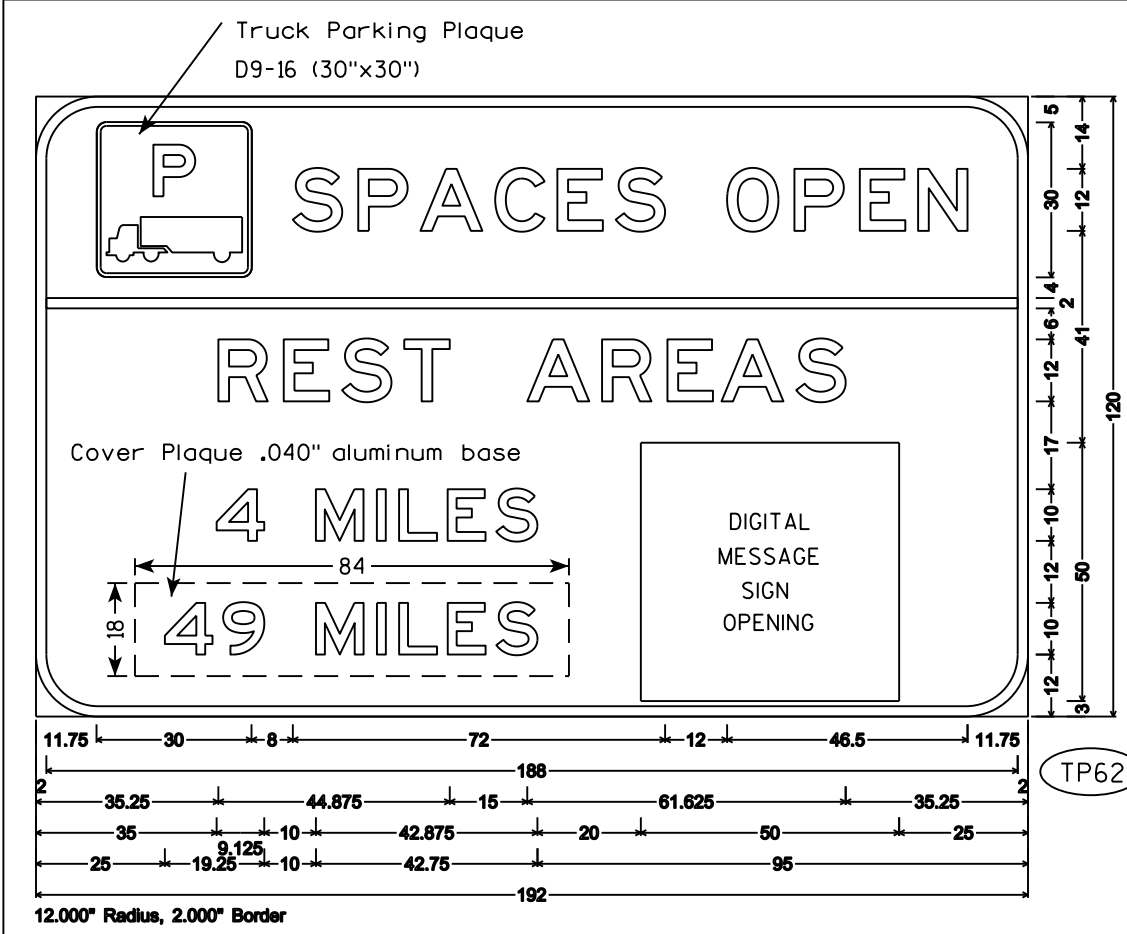
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

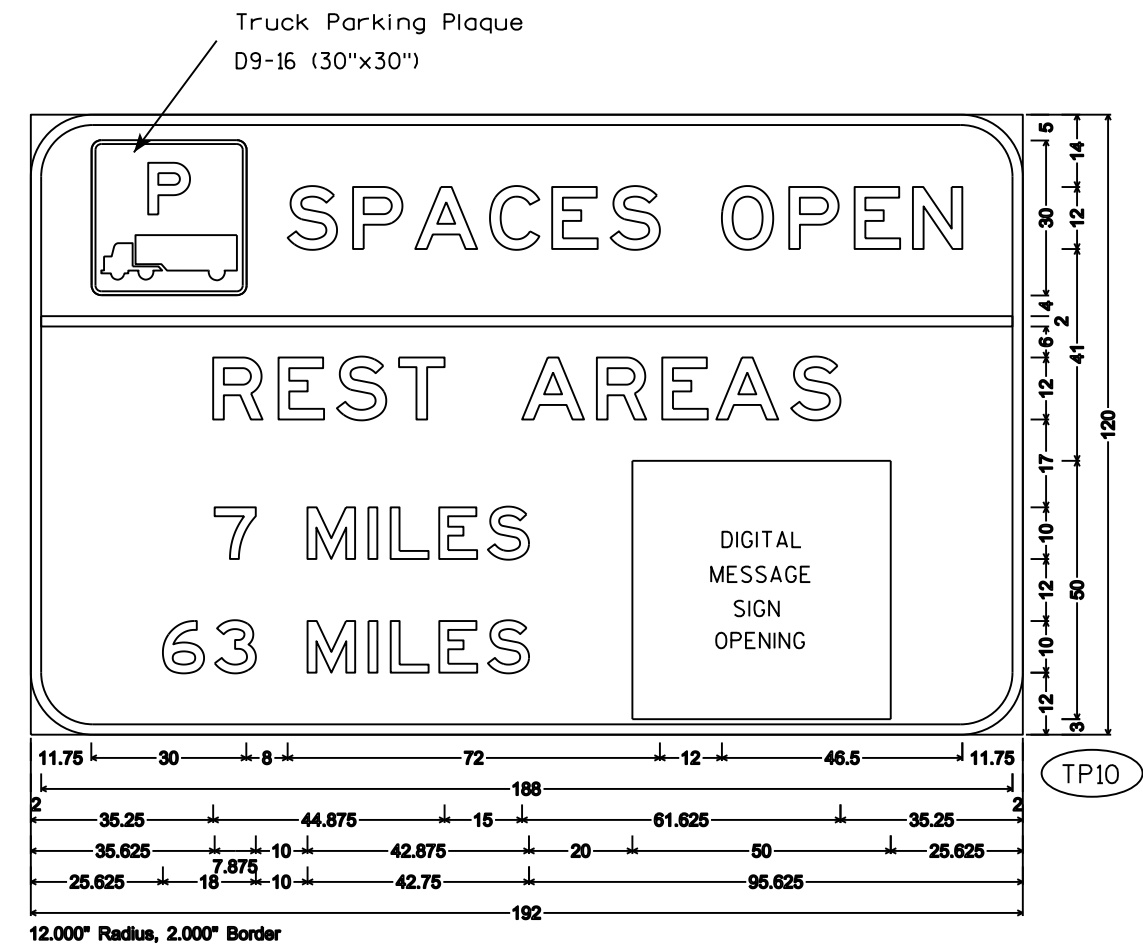
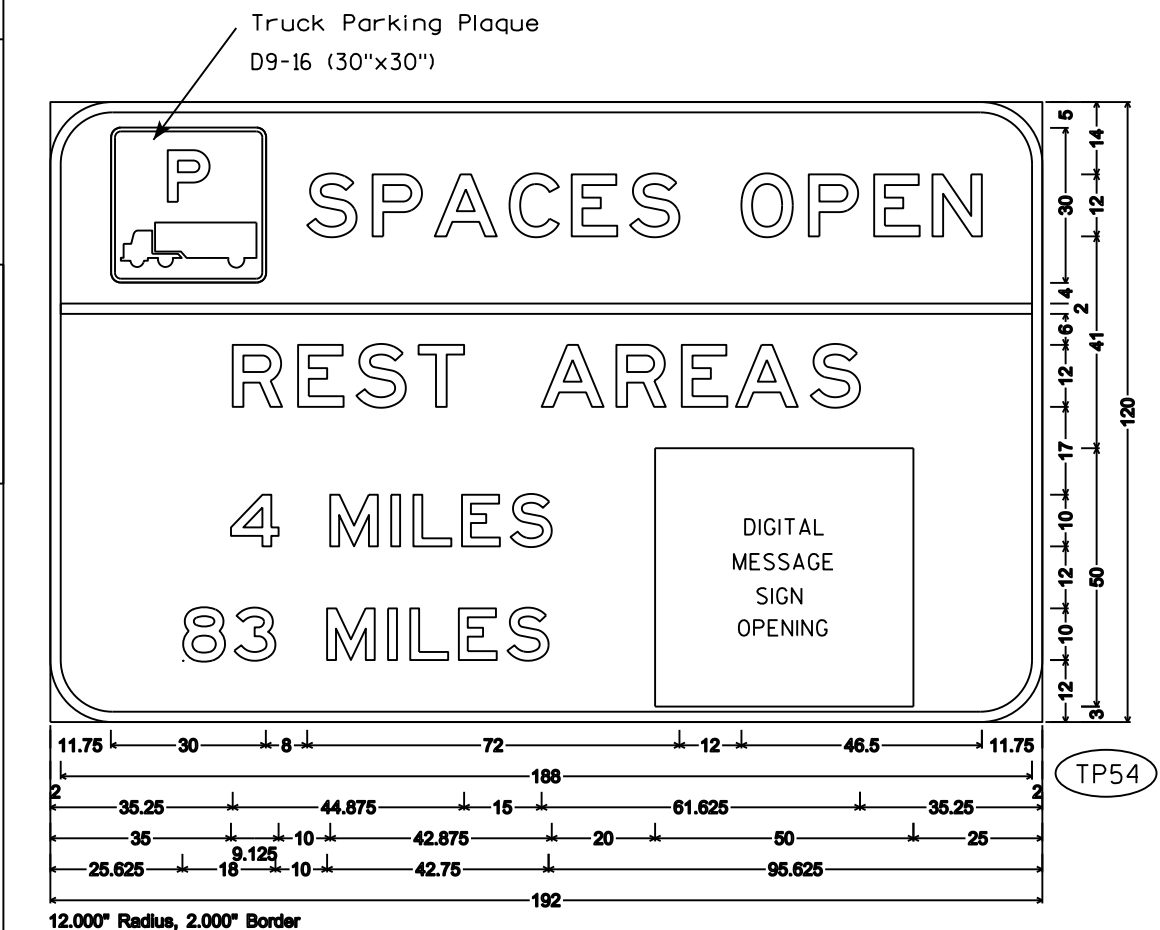
* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



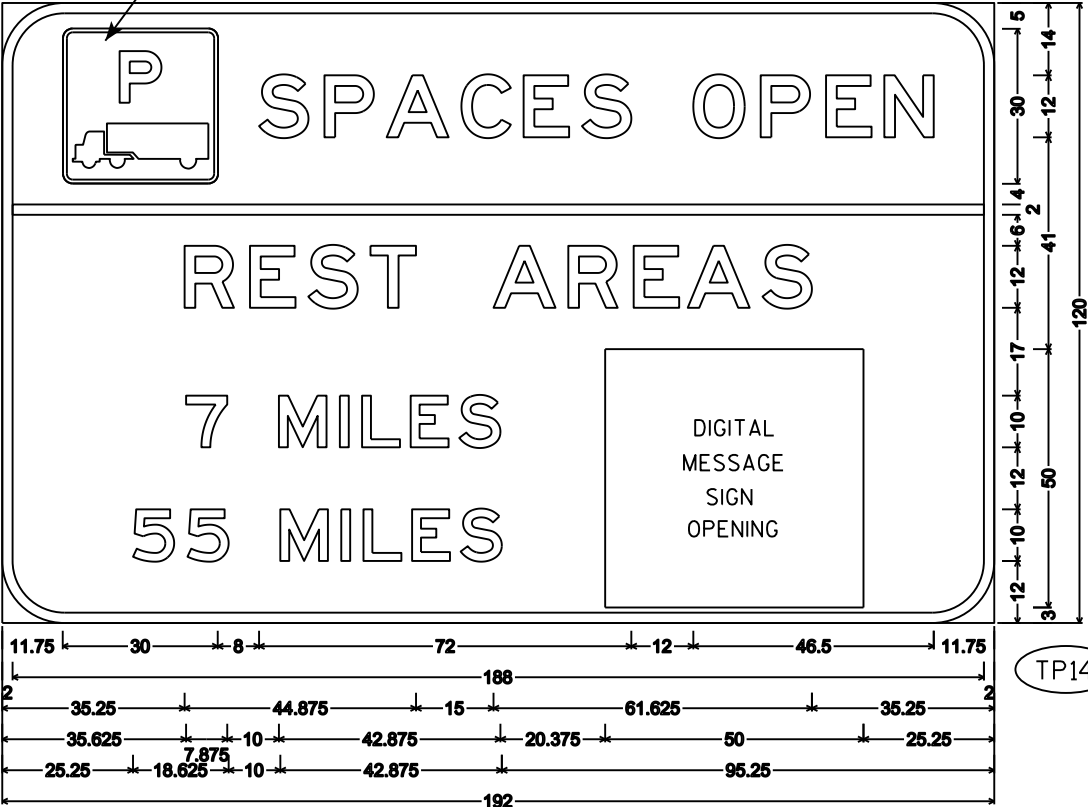
TRAFFIC CONTROL, LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2016 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



- NOTES
1. Signs are Type I - Type SH Reflective
 2. Color:
Background - Blue
Message - White
 3. Message Series - E

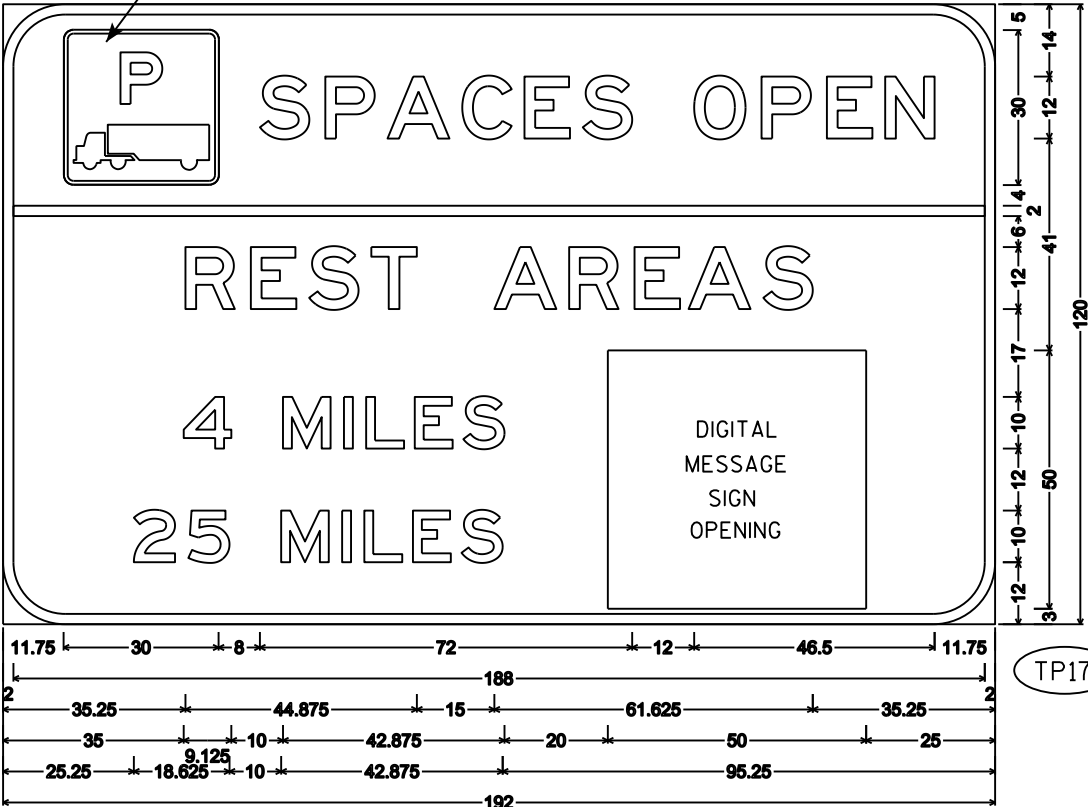


Truck Parking Plaque
D9-16 (30"x30")



12.000" Radius, 2.000" Border

Truck Parking Plaque
D9-16 (30"x30")

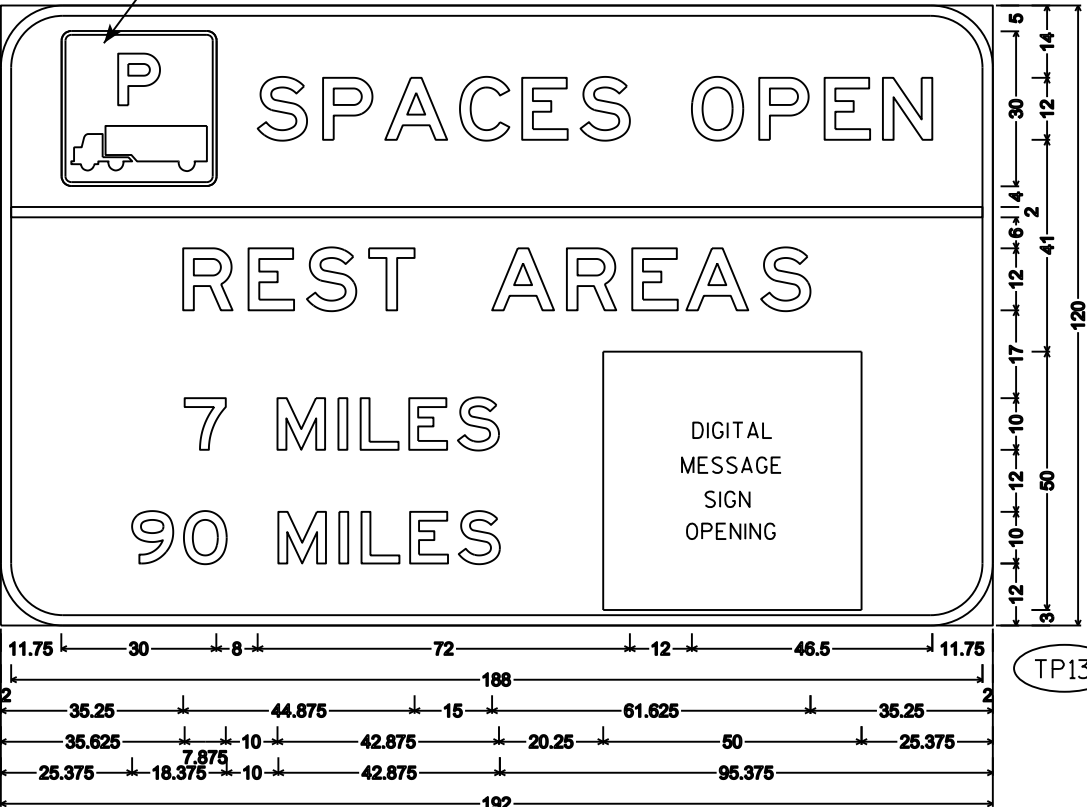


12.000" Radius, 2.000" Border

NOTES

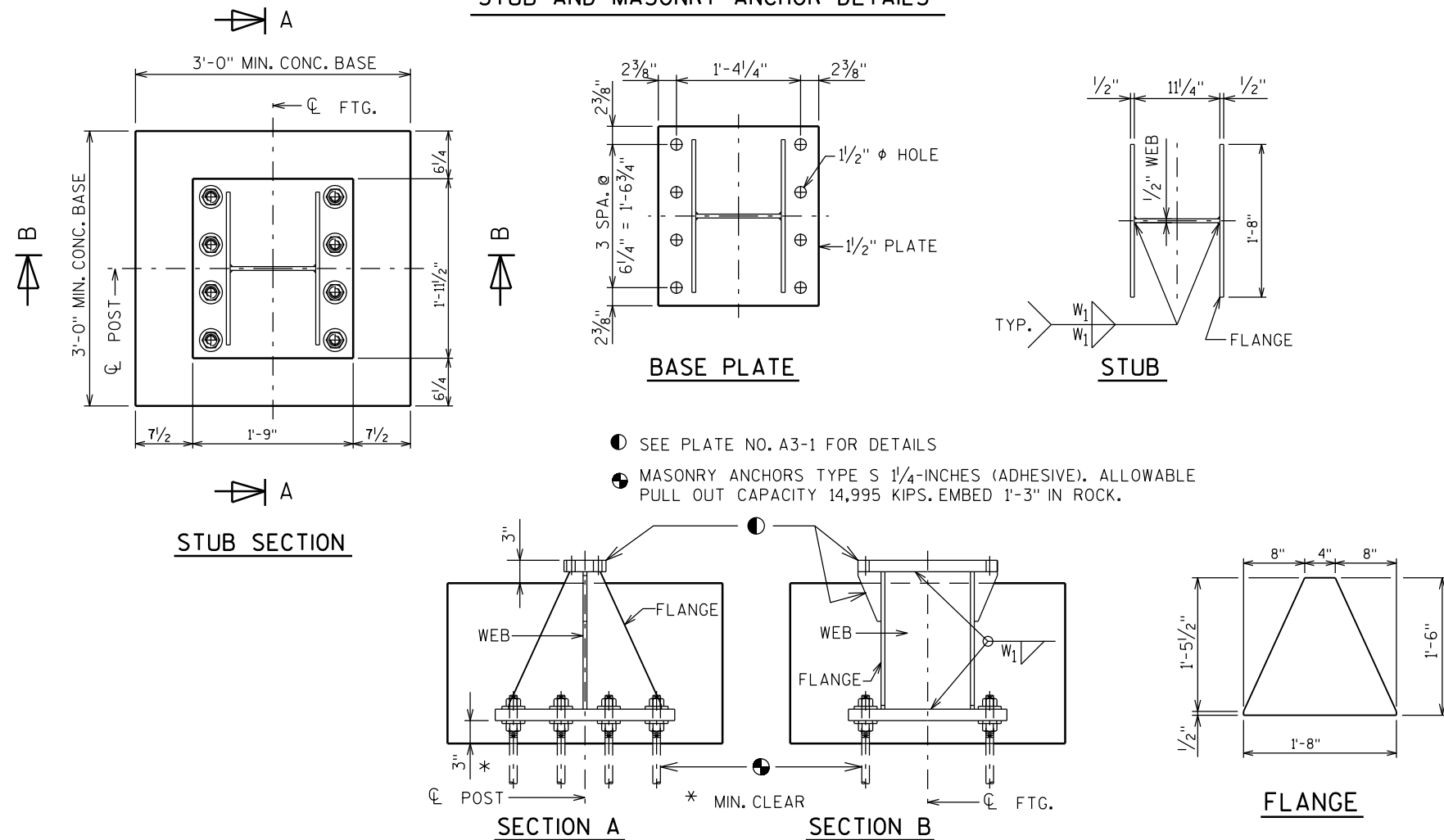
1. Signs are Type I - Type SH Reflective
2. Color:
Background - Blue
Message - White
3. Message Series - E

Truck Parking Plaque
D9-16 (30"x30")



12.000" Radius, 2.000" Border

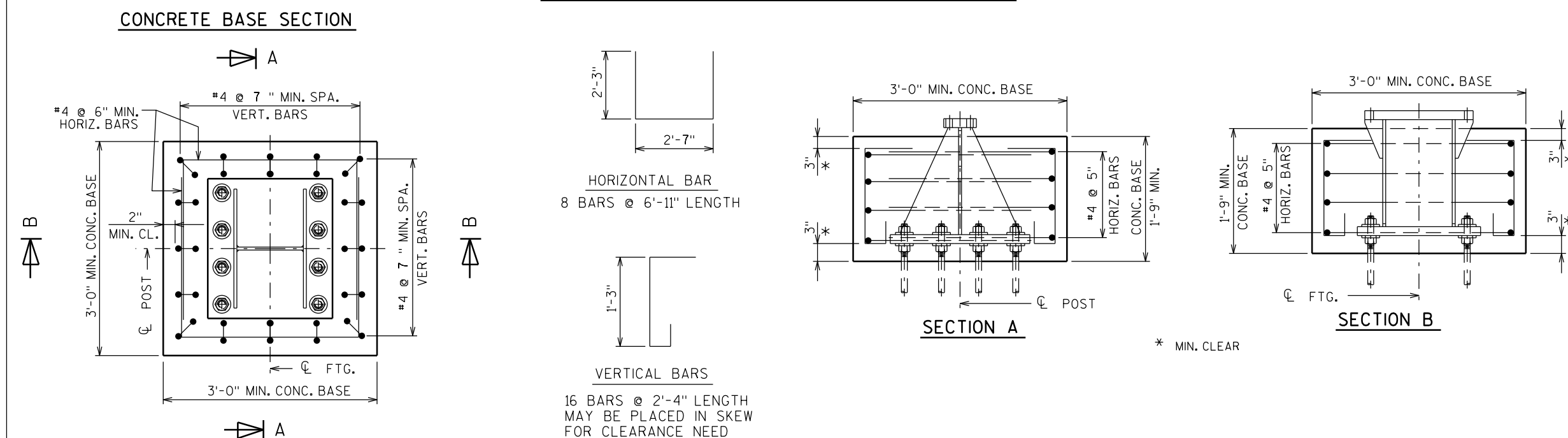
STUB AND MASONRY ANCHOR DETAILS



GENERAL NOTES

- Quantities per Base:
 - REINFORCING BAR STEEL = 62 LBS
 - CONCRETE = 0.6 C.Y.
 - STEEL WEIGHT = 335 LBS
- All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
- If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS



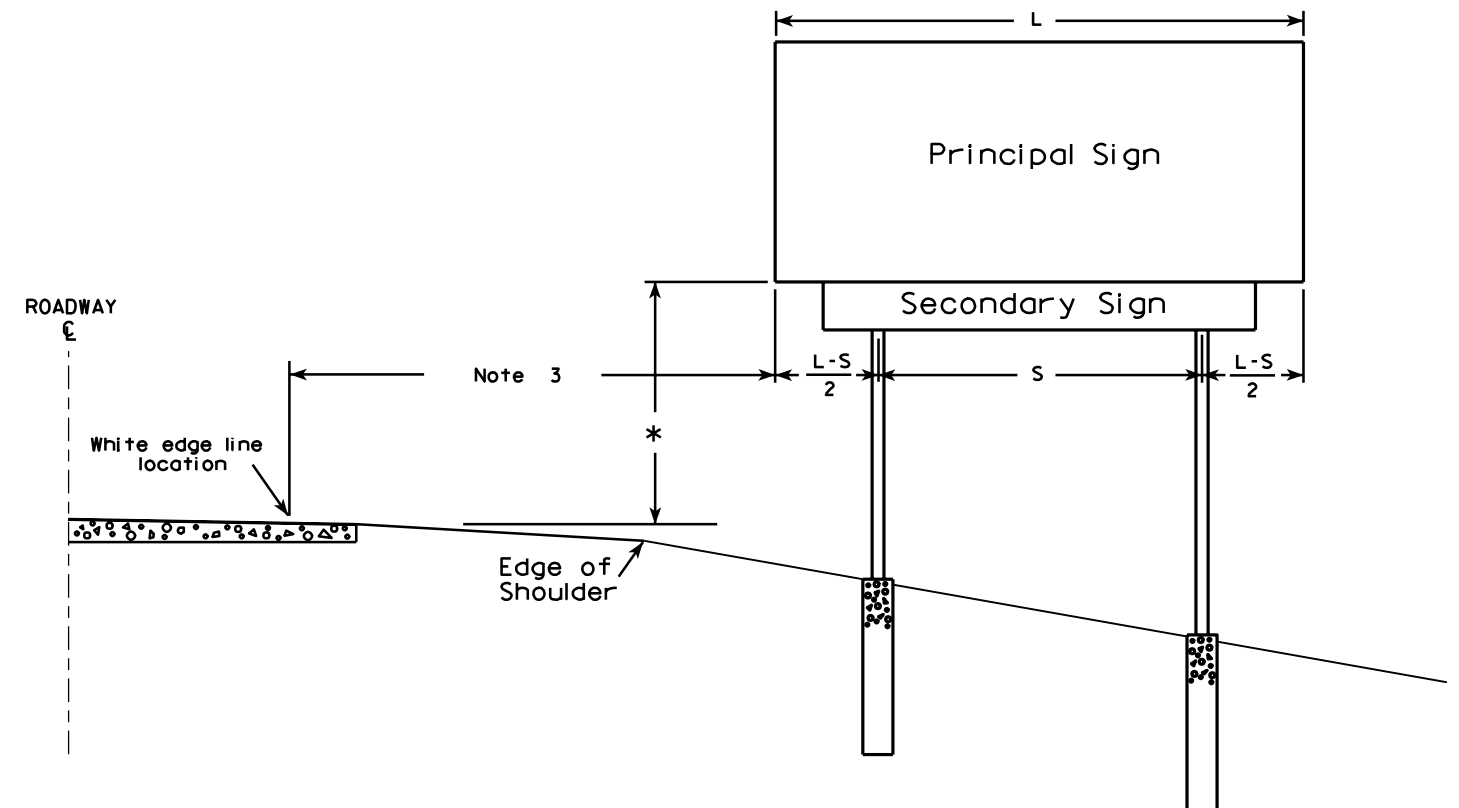
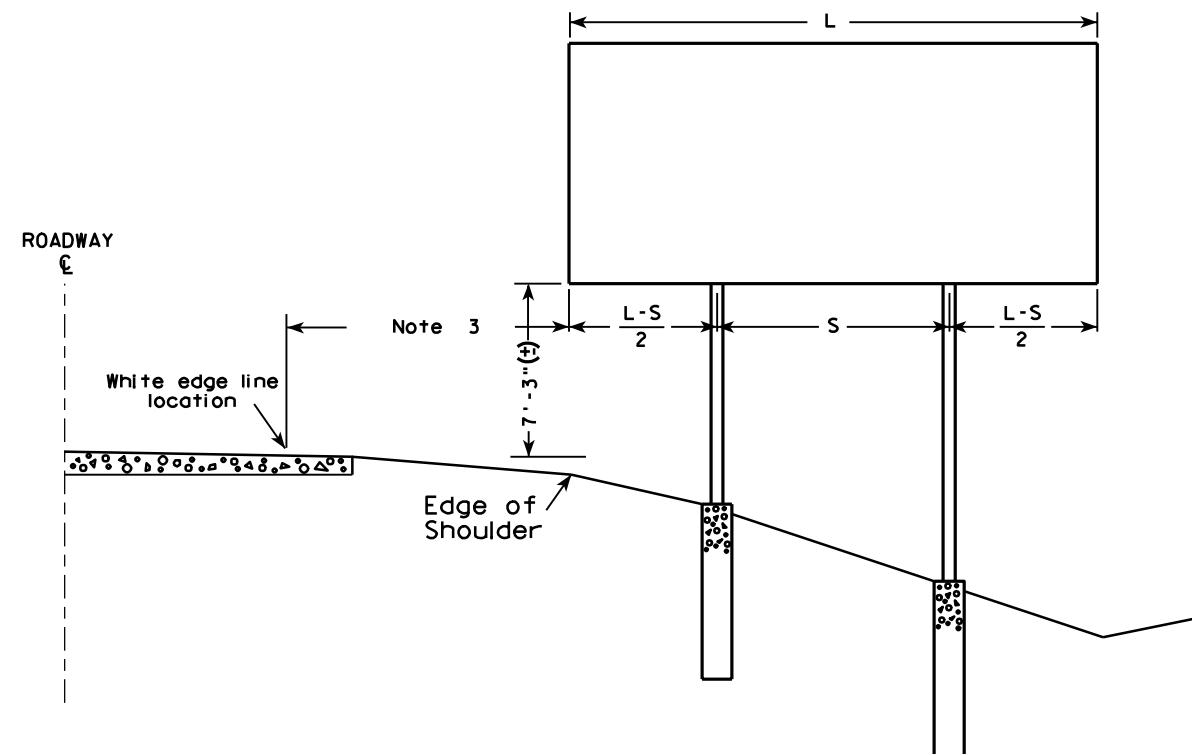
ALTERNATE BREAK-AWAY
BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 2/06/2014 PLATE NO. A3-1M.1



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" (±).

TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

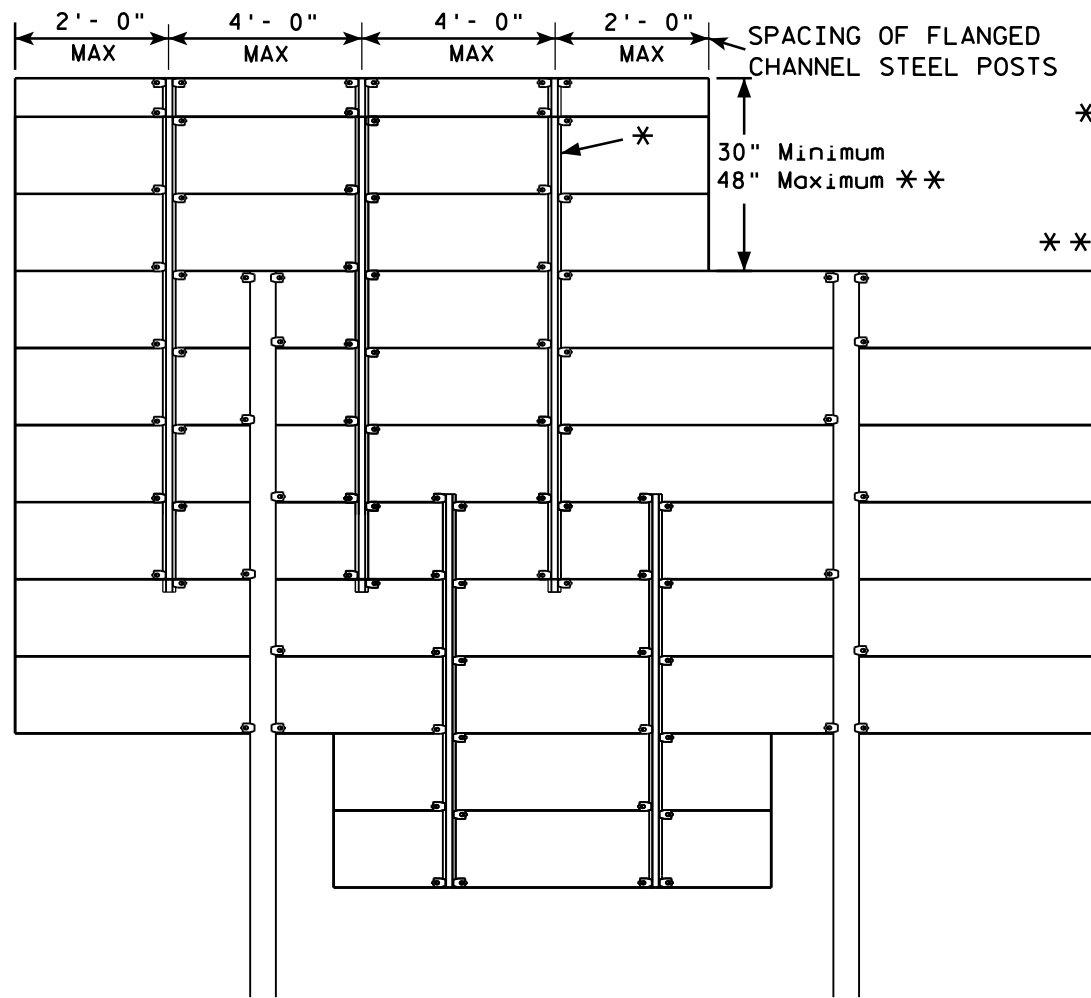
DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:

SHEET NO:

E

GROUND MOUNTED SIGN

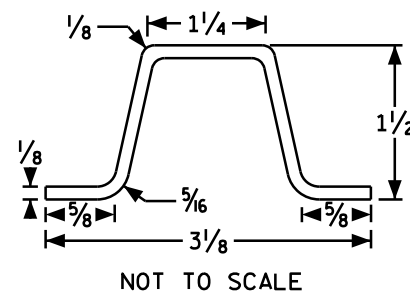


* = 2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

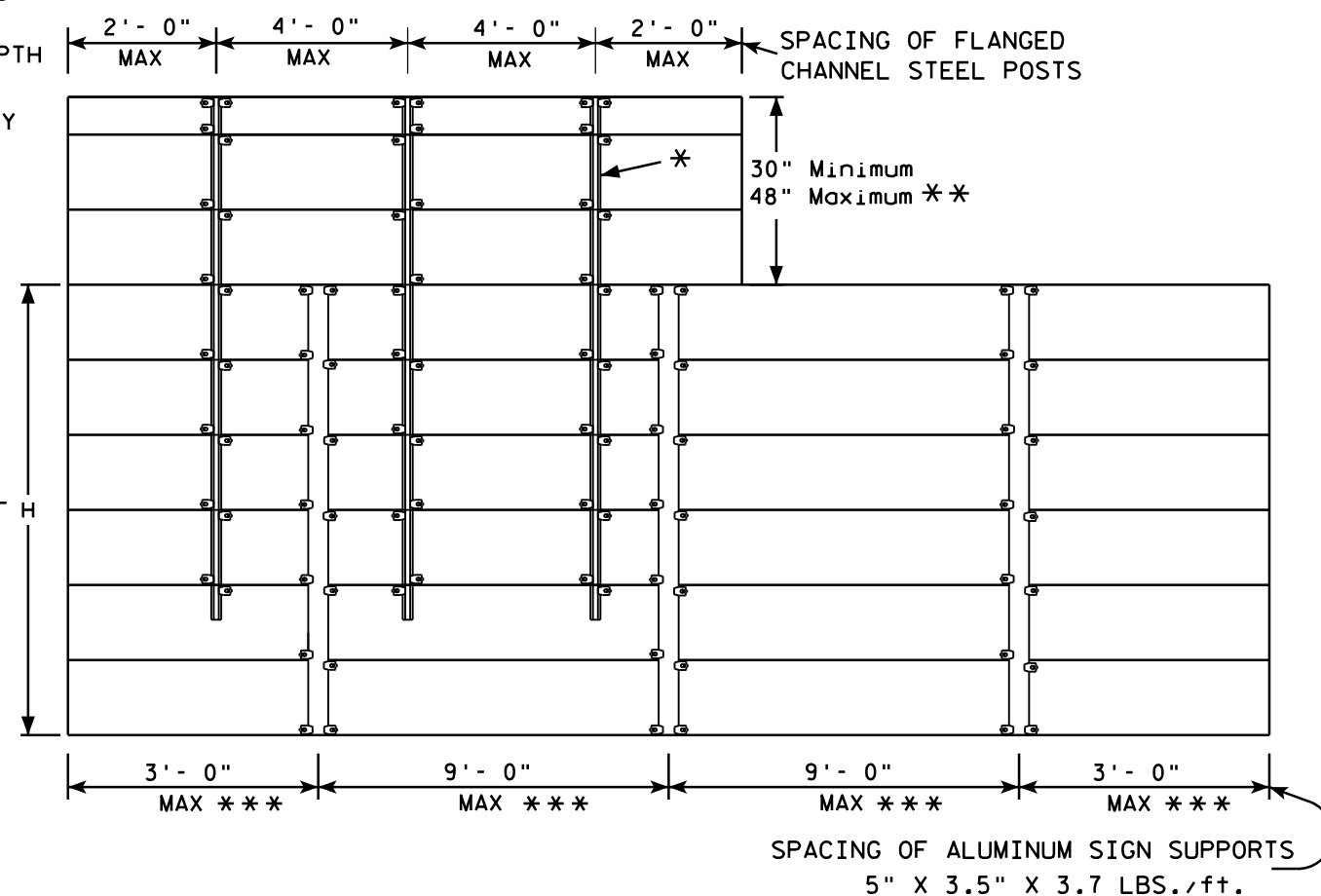
** = FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



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)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/05/13 PLATE NO. A4-6.12

7

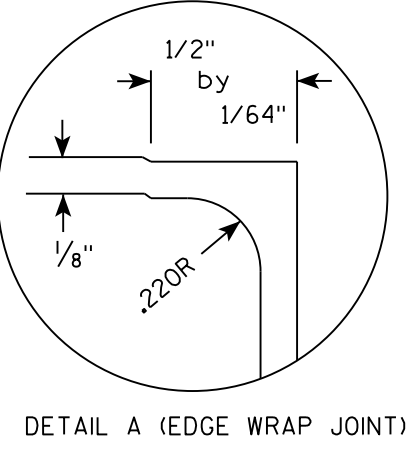


Punch 7/16" x 7/8" ovalholes beginning 6" in from end
of extrusion 12" CC on both edges of 6" and 12" panels.

Diagram illustrating Detail A (Edge Wrap Joint). The joint is defined by dimensions: $1/2"$ by $1/64"$ and $1/8"$. The fillet radius is specified as $.220R$.

Diagram illustrating Detail A (Edge Wrap Joint). The joint is defined by dimensions: $1/2"$ by $1/64"$ and $1/8"$. The fillet radius is specified as $.220R$.

Diagram illustrating Detail A (Edge Wrap Joint). The joint is defined by dimensions: $1/2"$ by $1/64"$ and $1/8"$. The fillet radius is specified as $.220R$.



POST CLIP, POST CLIP BOLT, WASHER & NUT

POST CLIP, POST CLIP BOLT, WASHER & NUT



1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.
4. Edge wrapping of sign sheeting required on all extrusions joints shown in Detail A.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R. Rauch</u> for State Traffic Engineer
DATE <u>11/30/16</u>	PLATE NO. <u>A5-2.10</u>

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>