MAD

PROJECT ID: 1003/1005/1007-10-70

COUNTY: ROCK & DANE

MAY 2013

ORDER OF SHEETS

TOTAL SHEETS = 264

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ILLINOIS STATE LINE - MADISON

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1003-10-70		
1005-10-70		
1007-10-70		

STATELINE ROAD TO CTH O
IH 39
ROCK COUNTY

STATE PROJECT NUMBER
1003-10-70

CTH O TO NORTH ROCK COUNTY LINE
IH 39
ROCK COUNTY

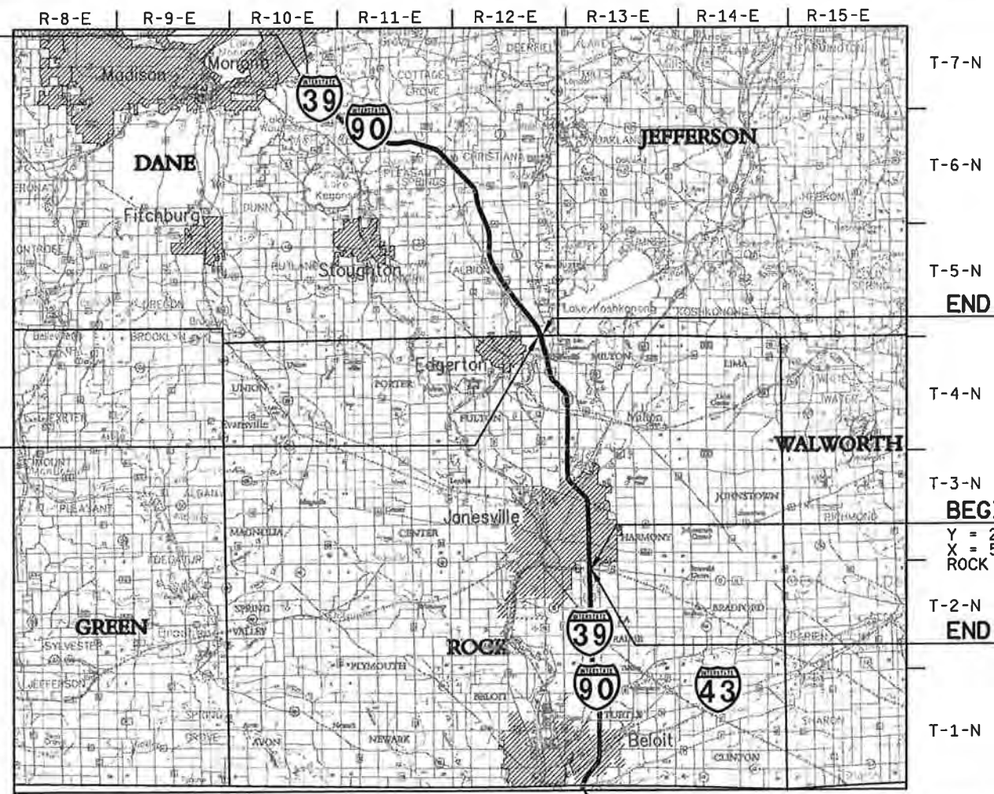
STATE PROJECT NUMBER
1005-10-70

SOUTH DANE COUNTY LINE TO USH 12/18
IH 39
DANE COUNTY

STATE PROJECT NUMBER
1007-10-70

02

END PROJECT 1007-10-70



END PROJECT 1005-10-70

BEGIN PROJECT 1005-10-70
Y = 262,941.65
X = 503,884.91
ROCK COUNTY COORDINATES

END PROJECT 1003-10-70

BEGIN PROJECT 1003-10-70
Y = 200,977.16
X = 501,413.04
ROCK COUNTY COORDINATES

LAYOUT
SCALE 0 4.00 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.00 MI

"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ROCK COUNTY AND DANE COUNTY."

DESIGN DESIGNATION

		1003-10-70	1005-10-70	1007-10-70
A.A.D.T. 2010	=	46,800	47,700	45,100
A.A.D.T. 2040	=	81,600	79,300	68,800
D.H.V.	=	7,800	8,400	7,300
D.D.	=	58/42	58/42	58/42
T	=	35.1%	37.8%	29.1%
DESIGN SPEED	=	75 MPH	75 MPH	75 MPH
ESALS	=	NA	NA	NA

BEGIN PROJECT 1007-10-70
Y = 400,289.24
X = 915,656.60
DANE COUNTY
COORDINATES

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 — 95.35
- CULVERT (Profile View)

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

ORIGINAL PLANS PREPARED BY
AECOM

WISCONSIN
WILLIAM E. POSTON, JR.
E-19030
MADISON
WI
PROFESSIONAL ENGINEER

January 30, 2013
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
- Surveyor: AECOM
- Designer: AECOM
- Project Manager: STEVE MARSHALL
- Regional Examiner:
- Regional Supervisor: KIMBERLY SCHAUDER
- C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 1.30.2013 (Signature)

E

FILE NAME : L:\WORK\PROJECTS\60242867\000_CAD\001_DRAWINGS\010101_TI_ITS.DWG PLOT DATE : 9/17/2012 11:27 AM PLOT BY : ARBUCKLE, ADRIAN PLOT NAME :

WISDOT/CADDS SHEET 10

2

GENERAL NOTES

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

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.

SOIL BORINGS FOR PROPOSED STRUCTURES ARE INCLUDED IN THE STRUCTURE PLANS.
BE AWARE THAT OTHER THAN AT STRUCTURES, NO TEST BORINGS WERE MADE WHERE CONDUITS, PULL BOXES, COMMUNICATIONS VAULTS, POLES, FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS AT ALL LOCATIONS BEFORE SUBMITTING BID PROPOSALS.

ADJUST TRAFFIC CONTROL DEVICE LOCATIONS TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

LOCATE ELECTRICAL SERVICE METER BREAKER PEDESTALS AND WOOD POLES WITH METER SOCKETS ON INTERSTATE RIGHT-OF-WAY AND OUTSIDE OF FENCE, OR AS DIRECTED BY ENGINEER.

THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER. FINAL TREE AND SHRUBS CLEARING LOCATIONS WILL BE DETERMINED BASED ON INSTALLED CAMERA VIEWSHEDS AS DETERMINED BY ENGINEER IN FILED AFTER CAMERAS ARE INSTALLED.

EROSION CONTROL ITEMS SHOWN IN THE MISCELLANEOUS QUANTITIES ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS TO FIT FIELD CONDITIONS.

DISTURBED AREAS SHALL HAVE GRADING WORK COMPLETED AND FINISHING ITEMS APPLIED WITHIN 7 CALENDAR DAYS AFTER INSTALLATION OF THE UNDERGROUND ITS ITEM.

WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.

NOTIFY THE REGIONAL TRAFFIC UNIT GRAHAM HEITZ (608)246-5362 A MINIMUM OF TWO (2) WEEKS PRIOR TO STAKING ANY DEVICES.

NOTIFY THE SOUTHWEST REGION TO HAVE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING CABLE INTO SYSTEM. CONTACT WAYNE CHASE TO MAKE ARRANGEMENTS. (608)246-3859/ (608)516-3828 CELL

ROADWAY MILEAGES ON THESE ITS PLANS ARE REFERENCED TO MILEAGE ON THE EXISTING REFERENCE LOCATION (MILEPOST) SIGNS. MILEAGE IS ORDERED NORTH TO SOUTH (OR WEST TO EAST) ON IH 39/90 AND MILEAGE ON IH 43 IS ORDERED SOUTH TO NORTH, TO MATCH EXISTING MILEAGE SIGNS INSTALLED ON THE ROADWAYS.

COORDINATES FOR ITS FACILITIES ARE LOCATED AS FOLLOWS:
GROUND MOUNT DMS: CENTER OF POLE NEAREST ROADWAY
ALL OTHER FACILITIES: CENTER OF POLE

INSTALL RING AND COVER GROUNDING ON EXISTING PULL BOXES AS LISTED IN MISCELLANEOUS QUANTITIES.

INSTALL CULVERT END MARKERS AT EACH NEW UNDERGROUND ITS FACILITY THAT EXTENDS LESS THAN 5 FEET ABOVE THE GROUND, INCLUDING, BUT NOT LIMITED TO, PULL BOXES, VAULTS, AND ELECTRICAL SERVICE METER BREAKER PEDESTALS.

ITS LEGEND

DESCRIPTION	SYMBOL
CCTV CAMERA	
BLUETOOTH SENSOR	B
ITS FIELD CABINET GROUND MOUNTED	
ITS FIELD CABINET POLE MOUNTED	
AUTOMATIC TRAFFIC RECORDER	ATR
MICROWAVE DETECTOR	
RADIO WEATHER INFORMATION SYSTEM	
DYNAMIC MESSAGE SIGN, ROADSIDE	
DYNAMIC MESSAGE SIGN, BUTTERFLY	
DYNAMIC MESSAGE SIGN, CANTILEVER	
DYNAMIC MESSAGE SIGN, OVERHEAD	
WIRELESS MESH NODE	W
RAMP GATE	
POLE	
PORTABLE CHANGEABLE MESSAGE SIGN	PCMS
ENHANCED REFERENCE LOCATION SIGN	XXX.XX
ITS CONDUIT RIGID NONMETALLIC 2-INCH SCHEDULE 40, OTHERWISE NOTED.	
PULL BOX 24X36	
PULL BOX 24X42	
IP RADIO ANTENNA	
METER BREAKER PEDESTAL	
COMMUNICATIONS VAULT	V
ELECTRICAL SERVICE METER SOCKET	
ELECTRICAL SERVICE BREAKER DISCONNECT BOX	
WOODEN POWER POLE	

NOTE: EXISTING COMPONENTS SHOWN IN GRAY SHADE

ORDER OF DETAIL SHEETS

ITS FACILITY LABELING

AAA-XX-XXXX-A	ITS DEVICE-NUMBER-IH 39 SEGMENT CODE
_____	ITS DEVICE AND/OR SUPPORT NAMES
MP XXX.XX	ROADWAY MILEAGE (MILEPOST)
Y,X	COUNTY COORDINATES

CLEAR ZONES FOR ALTERNATE ROUTE LOCATIONS *
(DISTANCE FROM EDGE OF TRAVEL LANE)

HIGHWAY	DESIGN SPEED	DESIGN ADT (2-WAY)	ESTIMATED FORESLOPES	CLEAR ZONE
I-39 EXISTING/ CONSTRUCTION	70	-	-	34'
I-39 PROPOSED	80	-	-	44'
USH 12 AT DANE CTH N	60	38900	6:1	30'-32'
USH 51 AT USH 14	60	6000	10:1	26'-30'
USH 51 AT M-H T/L RD.	60	6000	4:1	32'-40'
STH 140 AT USH 14	60	1800	4:1	32'-40'
GATEWAY BLVD. AT MILL.	45	-	10:1	16'-18'
I-43	70	-	-	34'
STH 30 EB AT FAIR OAKS	60	40950	10:1	30'-32'

* NO FIXED OBJECT CAN BE PLACED IN THE CLEAR ZONE

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

ABBREVIATIONS

AP	ACCESS POINT/ DRIVEWAY CONNECTION
AR	ACCESS RIGHTS
AC.	ACRES
ET.AL.	AND OTHERS
℄ OR C/L	CENTERLINE
CMCP	CORRUGATED METAL CULVERT PIPE
CSM	CERTIFIED SURVEY MAP
COR.	CORNER
D	DEGREE OF CURVE
D.D.	DIRECTION DISTRIBUTION
D.H.V.	DESIGN HOUR VOLUME
DOC.	DOCUMENT
E.	EAST
EASE.	EASEMENT
EL OR ELEV	ELEVATION
E.S.A.L.	EQUIVALENT SINGLE AXLE LOAD
EXIST.	EXISTING
H.E.	HIGHWAY EASEMENT
HMA	HOT MIX ASPHALT
IP OR I.P.	IRON PIN
L	LENGTH OF CURVE
LN	LANE
LT. OR LT	LEFT
MAX.	MAXIMUM
MIN.	MINIMUM
MON.	MONUMENT
MP	ROADWAY MILEAGE
N.	NORTH
P.	PAGE
PLE	PERMANENT LIMITED EASEMENT
PL	PROPERTY LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RD.	ROAD
(100')	RECORDED AS
R	RADIUS
℞ OR R/L	REFERENCE LINE
ROR	RELEASE OF RIGHTS
REM.	REMAINING
RT OR RT.	RIGHT
R/W	RIGHT-OF-WAY
S.	SOUTH
S.E.	SUPEREVELVATION
SEC.	SECTION
SF	SQUARE FEET
STA.	STATION
T	TANGENT
TLE	TEMPORARY LIMITED EASEMENT
T. %	TRUCK (PERCENT OF)
V.	VOLUME
W.	WEST

ITS STANDARD ABBREVIATIONS

AF(A)	ADVANCED FLASHER (ASSEMBLY)
AP	ANTENNA POLE
ATR	AUTOMATIC TRAFFIC RECORDER
BT or B	BLUETOOTH SENSOR
CB	CONTROLLER CABINET
CCTV	CLOSED CIRCUIT TELEVISION
CP	CAMERA POLE
CS	COUNT STATION
CT	COUNT
CV	COMMUNICATIONS VAULT
DMS	DYNAMIC MESSAGE SIGN
DP	DETECTOR POLE
DS	DRAINAGE STRUCTURE
EP	ELECTRICAL SERVICE METER BREAKER PEDESTAL
FO	FIBER OPTIC
IP	INTERNET PROTOCOL
ITS	INTELLIGENT TRANSPORTATION SYSTEM
M	MESH NODE
MD	MICROWAVE DETECTOR
MH	MANHOLE
MM	MULTIMODE
MS	METER SOCKET
PB	PULL BOX
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN
PF	POLE FOUNDATION
RM	RAMP METER
RWIS	ROAD WEATHER INFORMATION SYSTEM
S	OVERHEAD SIGNAL SUPPORT
SB	SIGNAL BASE
SDS	SYSTEM DETECTOR STATION
STOC	STATE TRAFFIC OPERATIONS CENTER
SWEF	SAFETY AND WEIGHT ENFORCEMENT FACILITY
TAR	TRAVELER ADVISORY RADIO
VDC	VIDEO DETECTION CAMERA
VDCS	VEHICLE DETECTION CLASSIFICATION SENSOR
W, WMN	WIRELESS MESH NODE
WDS	WIRELESS DETECTION SENSOR
WIM	WEIGH IN MOTION

WISDNR

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
(SOUTH CENTRAL REGION)
ROCK COUNTY:
AMANDA CUSHMAN
3911 FISH HATCHERY RD
FITHBURG, WI 53711-5397
608)275-3485
amanda.cushman@wisconsin.gov

DANE COUNTY:
ERIC HEGGELUND
(608)275-3301
eric.heggelund@wisconsin.gov

WISDOT

WisDOT RWIS PROJECT MANAGER
MIKE ADAMS
ROOM 501
P.O. BOX 79986
MADISON, WI 53707-7986
(608)265-5004
michael.adams@dot.wi.gov

WisDOT ITS COORDINATOR - SW REGION
GRAHAM HEITZ
2101 WRIGHT ST
MADISON, WI 53704
(608)246-5362
graham.heitz@dot.wi.gov

WisDOT STATEWIDE TRAFFIC OPERATIONS CENTER
433 W. ST. PAUL AVE, SUITE 300
MILWAUKEE, WI 53203
DON SCHELL
donald.schell@dot.wi.gov
(414)227-2148
DEAN BEEKMAN
(414)227-2154
dean.beekman@dot.wi.gov

WI STATE PATROL - BUREAU OF COMMUNICATIONS
JEFF OHNSTAD
ROOM 551
4802 SHEBOYGAN AVE
MADISON, WI 53707
(608)266-2286
jeffrey.ohnstad@dot.wi.gov

IH 39 CORRIDOR MANAGEMENT TEAM
ITS MANAGEMENT ENGINEER
BRIAN SCOTT
(763)249-6764
bscott@srfconsulting.com

WisDOT UTILITY PERMITTING, SW REGION
MARK GOGGIN
2101 WRIGHT ST
MADISON, WI 53704
(608)789-5955
mark.goggin@dot.wi.gov

WisDOT ROADSIDE MANAGEMENT
BOB SPOERL
ROOM 501
4802 SHEBOYGAN AVE.
MADISON, WI 53707
(608)266-8665
robert.spoerl@dot.wi.gov

RAILROADS

CANADIAN PACIFIC RAILROAD
JAMES KRIEGER
ENGINEER PUBLIC WORKS
120 S. 6TH ST
MINNEAPOLIS, MN 55402
(612)904-5994
jim_krieger@cpr.ca

UNION PACIFIC RAILROAD
JOHN VENICE
101 N. WACKER DR
CHICAGO, IL 60606
(312)777-2043
jnvenice@up.com

WISCONSIN & SOUTHERN RAILROAD
BEN MEIGHAN
SUPERINTENDENT OF MAINTENANCE OF WAY
1890 E. JOHNSON ST
MADISON, WI 53704
(608)620-2037
bmeighan@wsorrailroad.com

UTILITIES

ANR PIPELINE COMPANY - GAS/PETROLEUM
LAWRENCE HUBNER
23925 PIPELINE LN
EDEN, WI 53019
(920)477-2235
lawrence.hubner@transcanada.com

ALLIANT ENERGY - GAS/PETROLEUM
JASON HOGAN
SUITE 1000
4902 N BILTMORE LN
MADISON, WI 53511
jasonhogan@alliantenergy.com

ALLIANT ENERGY - ELECTRICITY
JASON HOGAN
SUITE 1000
4902 N BILTMORE LN
MADISON, WI 53511
jasonhogan@alliantenergy.com

BELOIT AIRPORT - AIRPORT FACILITY
STEVE STAUBER
4046 STATE HWY 67
BELOIT, WI 53511
(608)365-1971

CITY OF BELOIT - ROAD FACILITY
MICHAEL FLESCH
100 STATE ST
BELOIT, WI 53511
(608)364-6696
FleschM@ci.beloit.wi.us

CITY OF BELOIT - WATER
MICHAEL FLESCH
100 STATE ST
BELOIT, WI 53511
(608)364-6696
FleschM@ci.beloit.wi.us

CITY OF BELOIT - SEWER
MICHAEL FLESCH
100 STATE ST
BELOIT, WI 53511
(608)364-6696
FleschM@ci.beloit.wi.us

CITY OF JANESVILLE - SEWER
DENNIS RYAN
18 N JACKSON ST
P.O. BOX 5005
JANESVILLE, WI 53545-5005
(608)755-3171
ryand@ci.janesville.wi.us

CITY OF JANESVILLE - STREET LIGHTING
DENNIS RYAN
18 N JACKSON ST
P.O. BOX 5005
JANESVILLE, WI 53545-5005
(608)755-3171
ryand@ci.janesville.wi.us

CITY OF JANESVILLE - WATER
DENNIS RYAN
18 N JACKSON ST
P.O. BOX 5005
JANESVILLE, WI 53545-5005
(608)755-3171
ryand@ci.janesville.wi.us

UTILITIES CONT.

CITY OF JANESVILLE - WISCONSIN SIGNAL
DENNIS RYAN
18 N JACKSON ST
P.O. BOX 5005
JANESVILLE, WI 53545-5005
(608)755-3171
ryand@ci.janesville.wi.us

ATC MANAGEMENT, INC. - ELECTRICITY
MIKE OLSEN
801 O'KEEFE RD
P.O. BOX 6113
DE PERE, WI 54115-6113
(920)338-6582
molsen@atcllc.com

CHARTER COMMUNICATIONS - COMMUNICATION LINE
BRANDON STORM
2701 DANIELS ST
MADISON, WI 53718
(608)274-3822
brandon.storm@chartercom.com

AT&T WISCONSIN - COMMUNICATION LINE
CAROL ANASON
316 W WASHINGTON AVE
MADISON, WI
(608)252-2385
ca2624@att.com

AT&T WISCONSIN - COMMUNICATION LINE
SHANE LEVAKE
301 E MILWAUKEE ST
JANESVILLE, WI
(608)755-5586
sl3184@att.com

MCLEOD USA TELECOMMUNICATION SERVICES, INC. - COMMUNICATION LINE
JOHN LOUIS
13935 BISHOPS DR
BROOKFIELD, WI 53005
(414)305-0332
john.louis@windstream.com

CENTURYLINK - COMMUNICATION LINE
DENNIS HAAG
144 N PEARL ST
P.O. BOX 70
BERLIN, WI 54923
(920)361-0040
dennis.haag@centurytel.com

WE ENERGIES - GAS/PETROLEUM
DAN SANDE
333 W. EVERETT ST, A279
MILWAUKEE, WI 53203
PHONE: (414)221-4578
dan.sande@we-energies.com

NORTHERN NATURAL GAS CO. - GAS/PETROLEUM
JIM CARLSON
8101 BIRCHWOOD CT, STE F
JOHNSTON, IA 50131
(515)226-2016
Jim.Carlson@nngco.com

ROCK ENERGY COOPERATIVE - ELECTRICITY
LYNN MAIER
P.O. BOX 1758
JANESVILLE, WI 53547-1758
(608)752-6620
lynnm@rock.coop

UTILITIES CONT.

CITY OF EDGERTON - WATER
TOM PFEFFERKORN
12 ALBION ST
EDGERTON, WI 53534
(608)884-3341

CONSOLIDATED KOSHKONONG SANITARY DISTRICT - SEWER
JERRY MILES
328 E. ELLENDALE RD
EDGERTON, WI 53534
(608)868-7191
jmcksd@centurytel.net

ALBION SANITARY DISTRICT 2 - SEWER
JOANNE BROUGHTON
624 ALBION RD
EDGERTON, WI 53534
(608)884-8974

JANA AIRPORT - AIRPORT FACILITY
DON BECKER
406 HWY ST
EDGERTON, WI 53534
(608)884-3403

KEGONSA SANITARY DISTRICT - SEWER
WILLIAM SKINNER
2240 USH 51
P.O. BOX 486
STOUGHTON, WI 53589
(608)873-0230
ksd@chorus.net

PLEASANT SPRINGS SANITARY DISTRICT - SEWER
LANE QUALE
2083 WILLIAMS DR
STOUGHTON, WI 53589
(608)873-3074

CITY OF STOUGTON UTILITIES - ELECTRICTY
SEAN GRADY
600 S. 4TH ST
P.O. BOX 383
STOUGHTON, WI 53589-0383

DUNN - SANITARY DISTRICT #3 - SEWER
ROSALIND GAUSMAN
P.O. BOX 104
MCFARLAND, WI 53558-0104
(608)835-5311
townhall@town.dunn.wi.us

VILLAGE OF MCFARLAND - WATER
ALLAN COVILLE
5915 MILWAUKEE ST
P.O. BOX 110
MCFARLAND, WI 53558-0110
(608)838-7287

CITY OF MADISON ENGINEERING - COMMUNICATION LINE
DAVID DRYER
215 MARTIN LUTHER KING JR BLVD
P.O. BOX 2986
MADISON, WI 53701-2986
(608)266-6546

CITY OF MADISON ENGINEERING - STREET LIGHTING
DAVID DRYER
215 MARTIN LUTHER KING JR BLVD
P.O. BOX 2986
MADISON, WI 53701-2986
(608)266-6546

UTILITIES CONT.

CITY OF MADISON ENGINEERING - SEWER
ROB PHILLIPS
210 MARTIN LUTHER KING JR BLVD, RM 115
MADISON, WI 53703
(608)266-4751

DUNN SANITARY DISTRICT *1 - SEWER
DAN PALTZ
3022 WAUBESA AVE
MADISON, WI 53711
dpaltz@sbcglobal.net

DUNN SANITARY DISTRICT *4 - SEWER
JOHN ONG
4725 NORA LN
MADISON, WI 53711

FRONTIER COMMUNICATIONS OF WI, LLC - COMMUNICATION LINE
ROBERT CHURCH
118 DIVISION ST
PLYMOUTH, WI 53073
(608)837-1881
robert.church@ftr.com

MADISON GAS AND ELECTRIC COMPANY - ELECTRICITY
TIM STATZ
P.O. BOX 1231
MADISON, WI 53701-1231
(608)252-4727
tstatz@mge.com

MADISON GAS AND ELECTRIC COMPANY - GAS/PETROLEUM
TIM STATZ
P.O. BOX 1231
MADISON, WI 53701-1231
(608)252-4727
tstatz@mge.com

MADISON METROPOLITAN SEWERAGE DISTRICT - SEWER
ERIC HJELLEN
1610 MOORLAND RD
MADISON, WI 53713
(608)222-1202
erich@madsewer.org

KOCH PIPELINE COMPANY L.P. - GAS/PETROLEUM
JULIE MAHER
P.O. BOX 64596
ST. PAUL, MN 55164-0596
(651)438-1563
julie.maher@kochpipeline.com

MADISON WATER UTILITY - WATER
DENNIS CAWLEY
119 E. OLIN AVE
MADISON, WI 53713-1431
(608)266-4651
dcawley@cityofmadison.com

BUCKEYE PARTNERS - L.P. (WEST SHORE PIPELINE)
MICHAEL NORRIS
12920 S. BELL RD.
LEMONT, IL 60439
(219)313-5321
mrnorris@buckeye.com

WAUNONA SANITARY DISTRIC #2 - SEWER
3325 THURBER AVE
MADISON, WI 53714-1631

2

2

SOURCE OF POWER SUMMARY

DEVICE	MP	HIGHWAY	COUNTY	TEMP/PERM	TYPE	MAIN BREAKER AMPS	LOCATION	SHEET	COMPANY	CONTACT NAME	CONTACT NUMBER	EMAIL
DMS-13-0004-N	-	STH 30	DANE	PERMANENT	DMS-Cantilever	100	STH 30 at Fair Oaks Ave - EB	39	MG&E	Butch Frosch/ Marty Jacobi	608.252.7112/ 608.252.4785	Gfrosch@mge.com/ mjacobi@mge.com
SDS-13-0060-N	-	STH 30	DANE	EXISTING	SDS	-	STH 30 at Thompson Dr - WB	41	MG&E	-	-	-
DMS-13-0043-N	139.89	I-39/90	DANE	PERMANENT	DMS-Butterfly	100	I-39/90 at 0.3 miles south of Cottage Grove Rd (CTH BB) - NB/SB	1	MG&E	Butch Frosch/ Marty Jacobi	608.252.7112/ 608.252.4785	Gfrosch@mge.com/ mjacobi@mge.com
CCTV-13-0100-N	147.42	I-39/90	DANE	TEMPORARY	CCTV	100	I-39/90 at CTH N	4	Alliant Energy	Mark Schoen	608.877.1648	MarkSchoen@alliantenergy.com
DMS-13-0039-N	149.71	I-39/90	DANE	TEMPORARY	DMS-Roadside	100	I-39/90 at Church St - NB	5	Alliant Energy	Mark Schoen	608.877.1648	MarkSchoen@alliantenergy.com
CCTV-13-0101-N	153.62	I-39/90	DANE	TEMPORARY	CCTV	100	I-39/90 at CTH B	8	Alliant Energy	Mark Schoen	608.877.1648	MarkSchoen@alliantenergy.com
CCTV-13-0102-N	156.56	I-39/90	DANE	TEMPORARY	CCTV	100	I-39/90 at USH 51 N Jct	10	Alliant Energy	Mark Schoen	608.877.1648	MarkSchoen@alliantenergy.com
CCTV-13-0103-N	160.31	I-39/90	DANE	TEMPORARY	CCTV	100	I-39/90 at USH 51 S Jct/STH 73	13	Rock Energy Cooperative	Lynn Maier	608.752.4550	LynnM@rock.coop
DMS-13-0040-N	161.89	I-39/90	DANE	TEMPORARY	DMS-Roadside	100	I-39/90 at Lake Drive Rd - SB	14	Rock Energy Cooperative	Lynn Maier	608.752.4550	LynnM@rock.coop
DMS-13-0041-N	161.99	I-39/90	DANE	TEMPORARY	DMS-Roadside	100	I-39/90 at Lake Drive Rd - NB	14	Rock Energy Cooperative	Lynn Maier	608.752.4550	LynnM@rock.coop
CCTV-53-0104-C	163.25	I-39/90	ROCK	TEMPORARY	CCTV	100	I-39/90 at STH 59	15	Alliant Energy	Eugene Silbaugh	608.757.7516	EugeneSilbaugh@alliantenergy.com
DMS-53-0045-C	167.12	I-39/90	ROCK	PERMANENT	DMS-Butterfly	200	I-39/90 at 0.2 miles south of CTH M - NB/SB	17	Rock Energy Cooperative	Lynn Maier	608.752.4550	LynnM@rock.coop
WMN-0061-C	168.00	I-39/90	ROCK	EXISTING	WMN	-	Manogue Rd State Patrol Tower	18	Rock Energy Cooperative	-	-	-
CCTV-53-0106-C	168.84	I-39/90	ROCK	TEMPORARY	CCTV	100	I-39/90 at M-H Townline Rd	19	Rock Energy Cooperative	Lynn Maier	608.752.4550	LynnM@rock.coop
CCTV-53-0108-C	-	USH 51	ROCK	EXISTING	CCTV	-	USH 51 at USH 14	44	Alliant Energy	-	-	-
WMN-0062-C	171.50	I-39/90	ROCK	EXISTING	WMN	-	I-39/90 at STH 26	21	Alliant Energy	-	-	-
WMN-0063-C	172.26	I-39/90	ROCK	EXISTING	WMN	-	I-39/90 at USH 14	23	Alliant Energy	-	-	-
CCTV-53-0107-C	173.69	I-39/90	ROCK	TEMPORARY	CCTV	100	I-39/90 at Milwaukee St	24	Alliant Energy	Eugene Silbaugh	608.757.7516	EugeneSilbaugh@alliantenergy.com
WMN-0065-C	175.49	I-39/90	ROCK	EXISTING	WMN	-	I-39/90 at STH 11 Racine St	25	Alliant Energy	-	-	-
WMN-0066-S	177.98	I-39/90	ROCK	EXISTING	WMN	-	I-39/90 at STH 11 Avalon Rd	28	Alliant Energy	-	-	-
DMS-53-0047-S	179.66	I-39/90	ROCK	PERMANENT	DMS-Butterfly	100	I-39/90 at 0.2 miles south of Woodman Rd - NB/SB	29	Rock Energy Cooperative	Lynn Maier	608.752.4550	LynnM@rock.coop
CCTV-53-0045-S	180.61	I-39/90	ROCK	PERMANENT	CCTV	100	I-39/90 at NB Beloit SWEF	30	WisDOT/ Rock Energy	Bob Spoerl/ Lynn Maier	608.266.8665/ 608.752.4550	Robert.Spoerl@dot.wi.gov / LynnM@rock.coop
WMN-0068-S	182.52	I-39/90	ROCK	TEMPORARY	WIRELESS MESH NODE	100	I-39/90 at Creek Rd	32	Rock Energy Cooperative	Lynn Maier	608.752.4550	LynnM@rock.coop
DMS-53-0038-S	-	I-43	ROCK	PERMANENT	DMS-Roadside	100	I-43 at Carvers Rock Rd - SB	46	Alliant Energy	Dean Copp	608.364.6431	DeanCopp@alliantenergy.com
CCTV-53-0046-S	-	I-43	ROCK	EXISTING	CCTV	-	I-43 at Hart Rd	48	Alliant Energy	-	-	-
CCTV-53-0047-S	-	I-43	ROCK	METER ONLY	CCTV	100	I-43 at STH 140	47	Alliant Energy	Dean Copp	608.364.6431	DeanCopp@alliantenergy.com
WMN-0069-S	183.18	I-39/90	ROCK	TEMPORARY	WIRELESS MESH NODE	100	I-39/90 at CTH S	33	Alliant Energy	Dean Copp	608.364.6431	DeanCopp@alliantenergy.com
DMS-53-0042-S	184.14	I-39/90	ROCK	TEMPORARY	DMS-Roadside	100	I-39/90 at Hart Rd - NB	34	Alliant Energy	Dean Copp	608.364.6431	DeanCopp@alliantenergy.com
WMN-0071-S	185.45	I-39/90	ROCK	EXISTING	WMN	-	I-39/90 at STH 81	35	Alliant Energy	-	-	-
WMN-0072-S	186.34	I-39/90	ROCK	TEMPORARY	WIRELESS MESH NODE	100	I-39/90 at Cranston Rd	36	Alliant Energy	Dean Copp	608.364.6431	DeanCopp@alliantenergy.com
CCTV-53-0048-S	187.83	I-39/90	ROCK	EXISTING	CCTV	100	I-39/90 at State Line Rd	37	Alliant Energy	-	-	-

2

2

INTERSTATE 94

COUNTY BB

COUNTY N

COUNTY AB

COUNTY W

COUNTY B

COUNTY MN

73

18

12

51

106

INTERSTATE 39 90

138

COTTAGE GROVE

MADISON

MC FARLAND

STOUGHTON

EDGERTON

JEFFERSON COUNTY
DANE COUNTY

DANE COUNTY
ROCK COUNTY

MP 138.27

MP 142.28

MP 147.46

MP 153.17

MP 156.58

MP 160.33

S-13-408

S-13-190

SDS-13-0060-N
SDS-13-0061-N

DMS-13-0043-N
DMS-13-0044-N
WDS-0001-N

WDS-0002-N

CCTV-13-0100-N

DMS-13-0039-N
WDS-0004-N

WDS-0005-N

WDS-0006-N

CCTV-13-0101-N

WDS-0007-N

CCTV-13-0102-N

DMS-13-0040-N
DMS-13-0041-N
WDS-0010-N
WDS-0011-N

WDS-0003-N

WDS-0008-N

WDS-0009-N

CCTV-13-0103-N

DMS-13-0004-N
SDS-13-0062A-N
SDS-13-0062B-N

WDS-0028-N

01 02 03 04 05 06 07 08 09 10 11 12 13 14

39 40 41 42

30

N

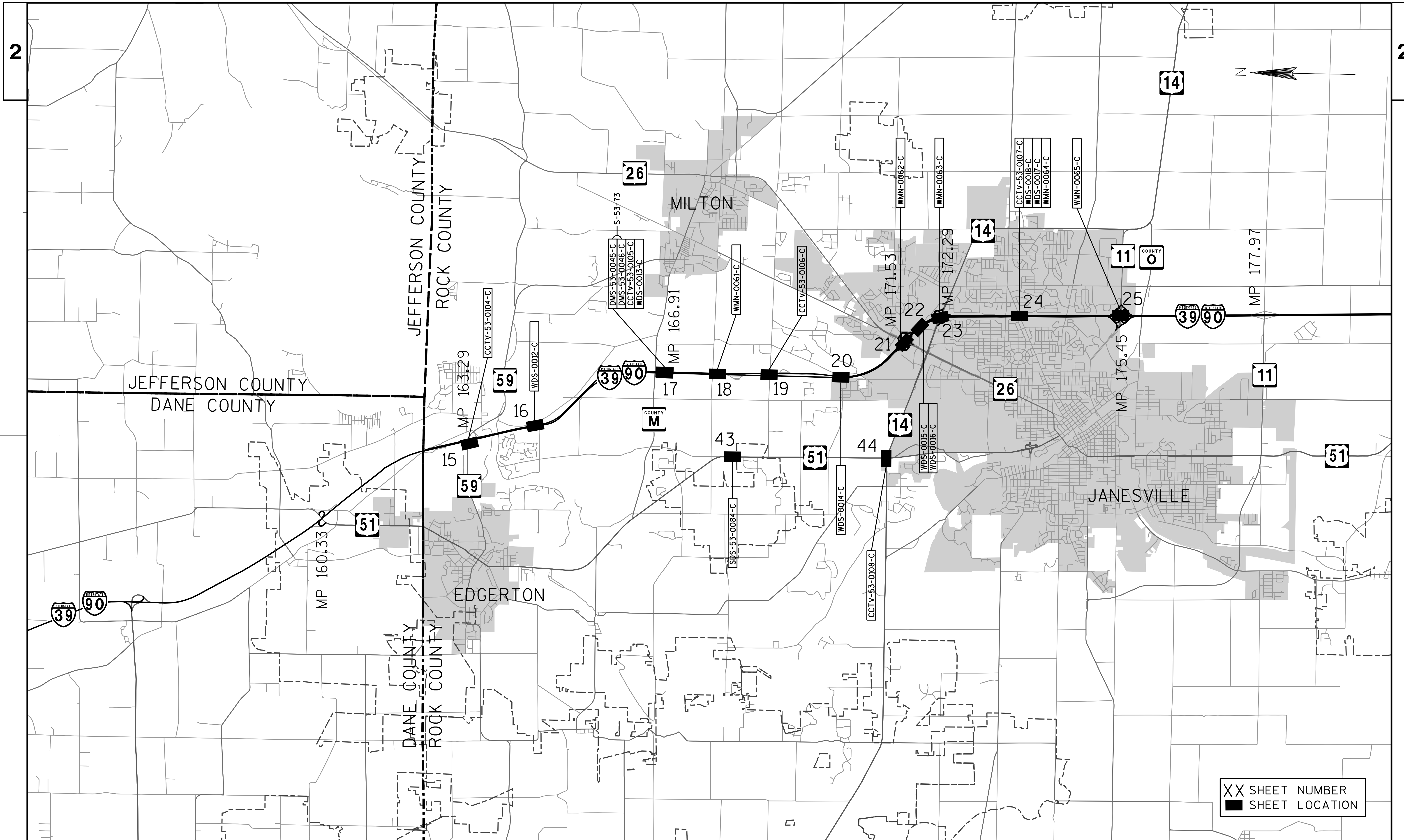
WISCONSIN
MANFRED R. GEBURE
E-23445
MADISON, WI
PROFESSIONAL ENGINEER

XX SHEET NUMBER
SHEET LOCATION

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS OVERVIEW - MADISON TO S. DANE COUNTY LINE	0 4000 8000	SHEET 6	E

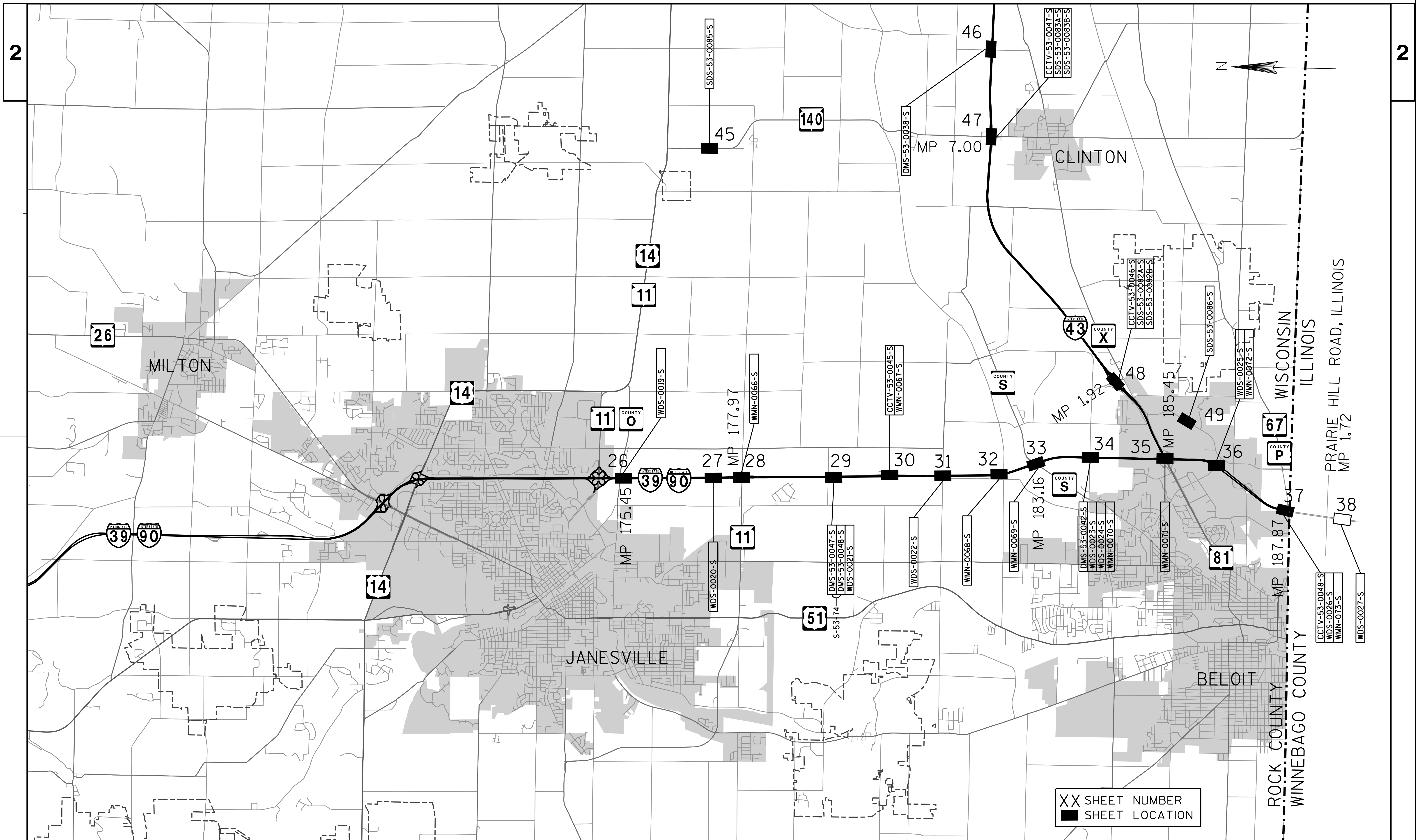
FILE NAME : ...\CADD\Sheets\OverView01.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 8000.00 ' / in.

WISDOT/CADDS SHEET 42


2
2
N
JEFFERSON COUNTY
ROCK COUNTY
JEFFERSON COUNTY
DANE COUNTY
DANE COUNTY
ROCK COUNTY
MILTON
EDGERTON
JANESVILLE
MP 160.33
MP 163.29
MP 166.91
MP 171.53
MP 172.29
MP 175.45
MP 177.97
15
16
17
18
19
20
21
22
23
24
25
43
44
39
90
14
26
59
51
11
COUNTY M
COUNTY O
S-53-73
DMS-53-0045-C
DMS-53-0046-C
CCTV-53-0105-C
WDS-0013-C
CCTV-53-0104-C
WDS-0012-C
WMN-0061-C
CCTV-53-0106-C
WMN-0062-C
WMN-0063-C
CCTV-53-0107-C
WDS-0018-C
WDS-0017-C
WMN-0064-C
WMN-0065-C
SDS-53-0084-C
WDS-0014-C
CCTV-53-0108-C
WDS-0015-C
WDS-0016-C
XX SHEET NUMBER
SHEET LOCATION

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS OVERVIEW - N. ROCK COUNTY LINE TO JANESVILLE	0 4000 8000	SHEET 7	E

FILE NAME : ...\CADD\Sheets\OverView02.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 8000.00 ' / in. WISDOT/CADDS SHEET 42



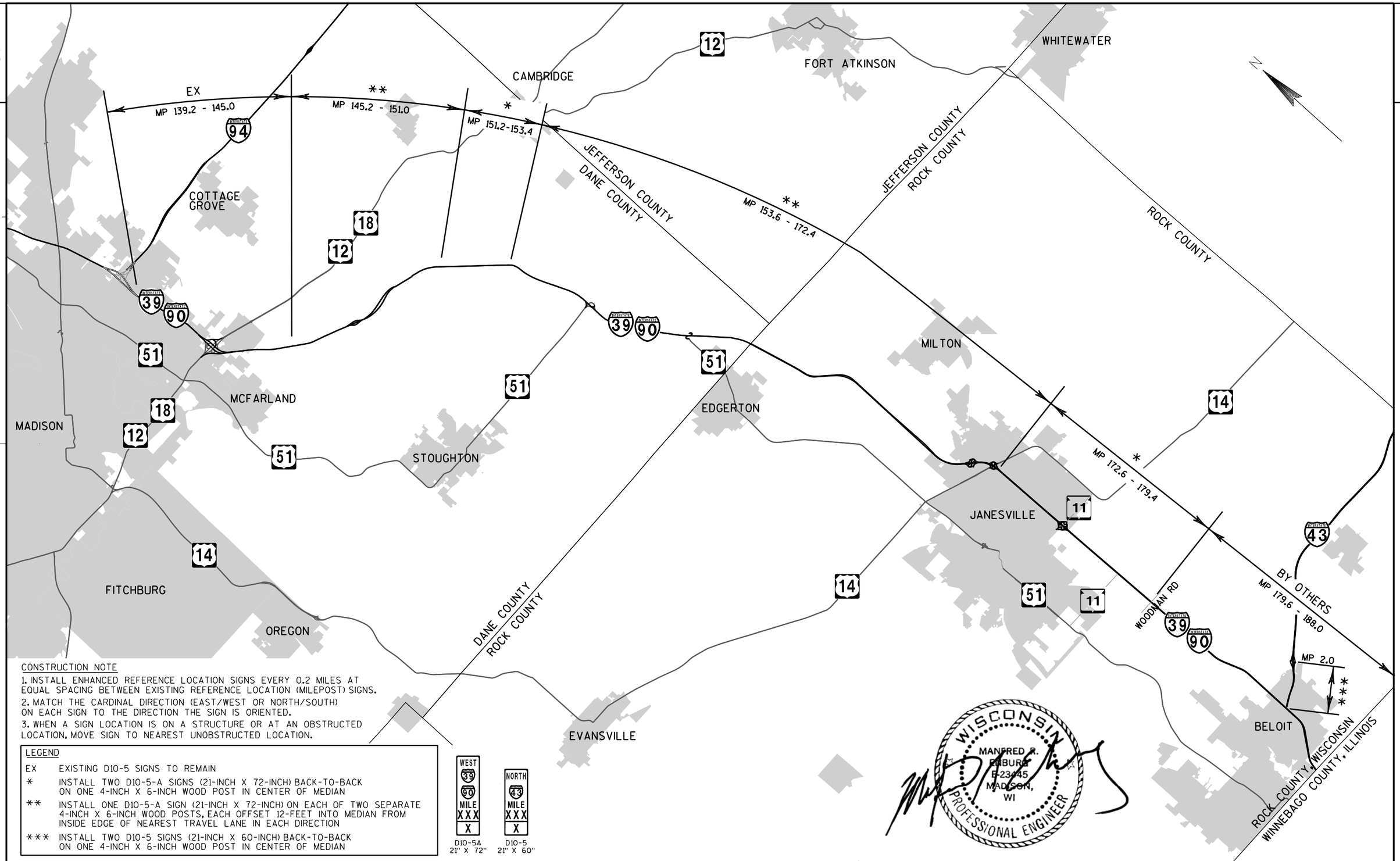
2
2
N
MILTON
JANESVILLE
CLINTON
BELOIT
WISCONSIN
ILLINOIS
ROCK COUNTY
WINNEBAGO COUNTY
PRAIRIE HILL ROAD, ILLINOIS
MP 1.72
MP 7.00
MP 175.45
MP 177.97
MP 183.16
MP 1.92
MP 185.45
MP 187.87
26
27
28
29
30
31
32
33
34
35
36
37
38
45
46
47
48
49
SDS-53-0085-S
DMS-53-0038-S
CCTV-53-0047-S
SDS-53-0083A-S
SDS-53-0083B-S
CCTV-53-0046-S
SDS-53-0082A-S
SDS-53-0082B-S
SDS-53-0086-S
WDS-0025-S
WMN-0072-S
WDS-0019-S
WMN-0066-S
CCTV-53-0045-S
WMN-0067-S
WDS-0020-S
DMS-53-0047-S
DMS-53-0048-S
WDS-0021-S
WDS-0022-S
WMN-0068-S
WMN-0069-S
DMS-53-0042-S
WDS-0023-S
WDS-0024-S
WMN-0070-S
WMN-0071-S
CCTV-53-0048-S
WDS-0026-S
WMN-073-S
WDS-0027-S
S-53-74
14
11
26
140
51
81
67
COUNTY O
COUNTY S
COUNTY X
COUNTY P
39
90
43
XX SHEET NUMBER
SHEET LOCATION
0
4000
8000

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS OVERVIEW - JANESVILLE TO ILLINOIS	SHEET	E

FILE NAME : ...\CADD\Sheets\OverView03.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 8000.00 ' / in.

WISDOT/CADDS SHEET 42

2



CONSTRUCTION NOTE

1. INSTALL ENHANCED REFERENCE LOCATION SIGNS EVERY 0.2 MILES AT EQUAL SPACING BETWEEN EXISTING REFERENCE LOCATION (MILEPOST) SIGNS.
2. MATCH THE CARDINAL DIRECTION (EAST/WEST OR NORTH/SOUTH) ON EACH SIGN TO THE DIRECTION THE SIGN IS ORIENTED.
3. WHEN A SIGN LOCATION IS ON A STRUCTURE OR AT AN OBSTRUCTED LOCATION, MOVE SIGN TO NEAREST UNOBSTRUCTED LOCATION.

LEGEND

EX	EXISTING D10-5 SIGNS TO REMAIN
*	INSTALL TWO D10-5-A SIGNS (21-INCH X 72-INCH) BACK-TO-BACK ON ONE 4-INCH X 6-INCH WOOD POST IN CENTER OF MEDIAN
**	INSTALL ONE D10-5-A SIGN (21-INCH X 72-INCH) ON EACH OF TWO SEPARATE 4-INCH X 6-INCH WOOD POSTS, EACH OFFSET 12-FEET INTO MEDIAN FROM INSIDE EDGE OF NEAREST TRAVEL LANE IN EACH DIRECTION
***	INSTALL TWO D10-5 SIGNS (21-INCH X 60-INCH) BACK-TO-BACK ON ONE 4-INCH X 6-INCH WOOD POST IN CENTER OF MEDIAN

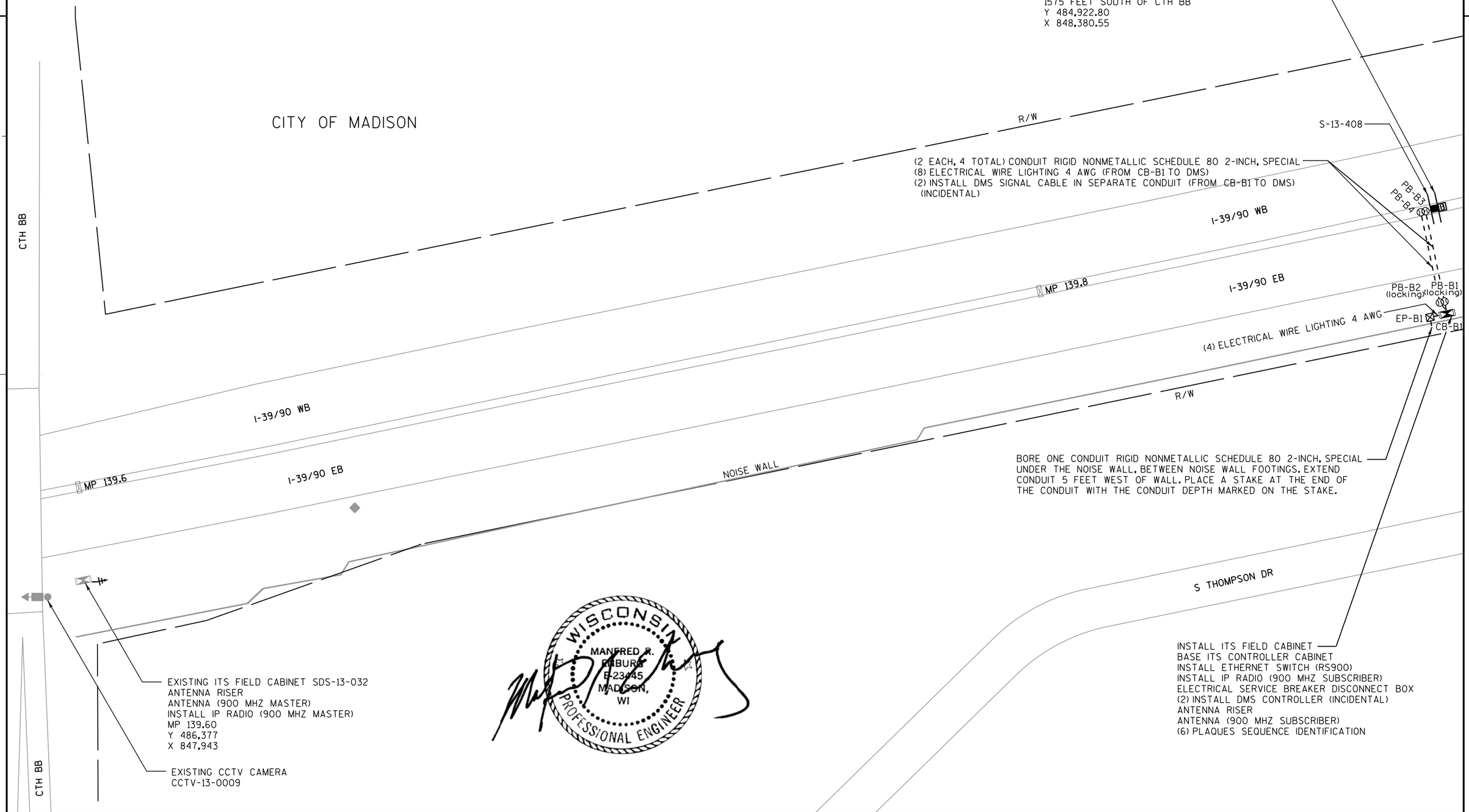
D10-5A
21" X 72"

D10-5
21" X 60"

PROJECT NO: 1003/1005/1007-10-70	HWY: I-39/90	COUNTY: ROCK & DANE	ENHANCED REFERENCE LOCATION SIGNS	0 8000 16000	SHEET 9	E

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
MADISON GAS AND ELECTRIC COMPANY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEETS 2 & 3
SEE ITS COMMUNICATION SCHEMATICS SHEET 2



PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 1	0 50 100	SHEET 10	E

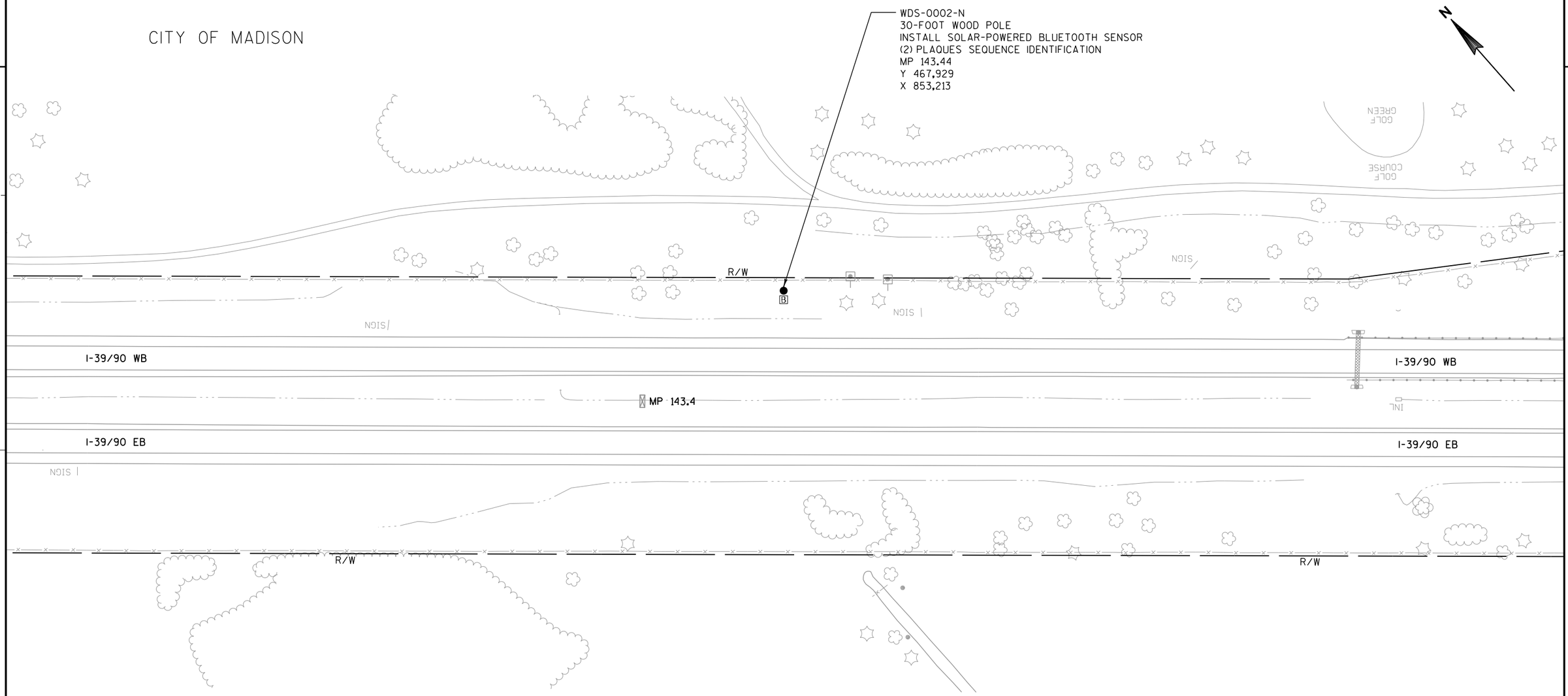
FILE NAME : ...\CADD\Sheets\ts_0301_its_01.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

CITY OF MADISON

WDS-0002-N
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 143.44
Y 467,929
X 853,213



SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 2	0 50 100	SHEET 11	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_02.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

2

N

WILLIAMS DR

R/W

R/W

I-39/90 WB

MP 146.8

MP 147.0

I-39/90 EB

I-39/90 WB

I-39/90 EB

R/W

R/W

B

WDS-0003-N
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 146.85
Y 457481
X 867413

WILLIAMS DR

SEPTIC

SEPTIC

SEPTIC

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 3	0 50 100	SHEET 12	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_03.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

R/W

CTH N

I-39/90 WB

MP 147.4

I-39/90 EB

AREA FOR CLEARING AND GRUBBING

CCTV-13-0100-N
65-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
INSTALL VIDEO ENCODER (INTERNET)
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
MP 147.53
Y 455,930
X 870,507

PB-C2

CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH, SPECIAL
(3) ELECTRICAL WIRE LIGHTING 4 AWG
(EP-C1 TO CCTV-13-0100-N)

PB-C1

EP-C1

CONSTRUCTION NOTE:

1. ENGINEER WILL DETERMINE FINAL AREA FOR CLEARING AND GRUBBING IN THE FIELD AFTER CCTV CAMERA IS INSTALLED.

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 4
SEE ITS COMMUNICATION SCHEMATICS SHEET 3

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 4	0 50 100	SHEET 13	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_04.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

(4) ELECTRICAL WIRE LIGHTING 6 AWG
(EP-D1 TO DMS-13-0039-N)

DMS-13-0039-N
INSTALL GROUND MOUNT DYNAMIC MESSAGE SIGN
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL POLE MOUNTED CABINET
(2) PLAQUES SEQUENCE IDENTIFICATION
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
INSTALL DMS CONTROLLER
MP 149.71
Y 454,961
X 881,728

WDS-0004-N
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 149.75
Y 454,921
X 881,991

EXISTING PORTABLE
CHANGEABLE MESSAGE SIGN
TO BE REMOVED BY OTHERS

N

CHURCH ST

R/W

EP-D1
PB-D1
PB-D2

I-39/90 WB

MP 149.6

MP 149.8

I-39/90 EB

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 1& 5
SEE ITS COMMUNICATION SCHEMATICS SHEET 4

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 5	0 50 100	SHEET 14	E

2

2

N

OH

CTH W

OH

R/W

KOSHKONONG RD

R/W

I-39/90 WB

MP 151.8

MP 152.0

I-39/90 WB

I-39/90 EB

I-39/90 EB

R/W

B

R/W

HO

HO

HO

CTH W

HO

HO

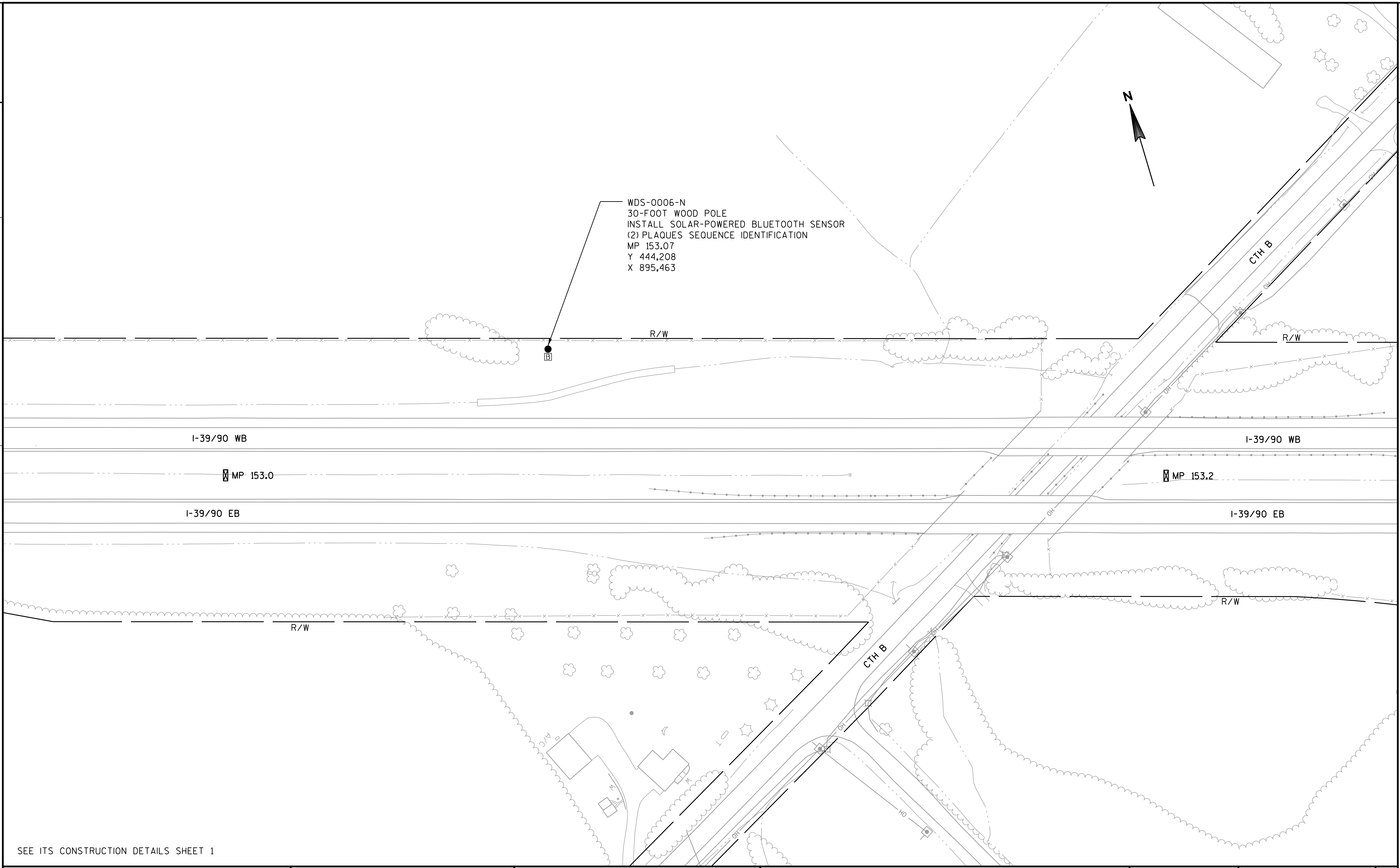
WDS-0005-N
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 151.80
Y 448,851
X 890,644

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 6	0 50 100	SHEET 15	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_06.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42



2

2

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 7	0 50 100	SHEET 16	E

2

CCTV-13-0101-N
65-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
INSTALL VIDEO ENCODER (INTERNET)
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
MP 153.62
Y 442,007
X 897,442

N

R/W

EP-E1

PB-E1

PB-E2

(3) ELECTRICAL WIRE LIGHTING 6 AWG
(EP-E1 TO CCTV-13-0101-N)

I-39/90 WB

MP 153.6

I-39/90 WB

I-39/90 EB

I-39/90 EB

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 6
SEE ITS COMMUNICATION SCHEMATICS SHEET 5

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 8	0 50 100	SHEET 17	E

2

2

5.4

I-39/90 WB

I-39/90 EB

MP 155.6

R/W

R/W

R/W

R/W

CTH A

CTH A

OH

OH

OH

OH

SIGN

SIGN

SIGN

SIGN

M

M

TOWER

B

WDS-0007-N
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 155.55
Y 432,234
X 900,143

N

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 9	0 50 100	SHEET 18	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_09.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

CCTV-13-0102-N
65-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL CELLULAR MODEM
INSTALL POLE MOUNTED CABINET
INSTALL VIDEO ENCODER (INTERNET)
INSTALL ETHERNET SWITCH (RS400)
(2) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER
DISCONNECT BOX
MP 156.54
Y 427,225
X 901,400

EP-F1
PB-F1
PB-F2
(3) ELECTRICAL WIRE LIGHTING 6 AWG
(EP-F1 TO CCTV-13-0102-N)

AREA FOR CLEARING AND GRUBBING

R/W

USH 51

RIPRAP

NOIS

I-39/90 WB

MP 156.4

MP 156.6

I-39/90 EB

AREA FOR CLEARING AND GRUBBING

CONSTRUCTION NOTE

1. ENGINEER WILL DETERMINE FINAL AREA FOR CLEARING AND GRUBBING IN THE FIELD AFTER CCTV CAMERA IS INSTALLED

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 7
SEE ITS COMMUNICATION SCHEMATICS SHEET 6

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 10	0 50 100	SHEET 19	E

2

2

N

WDS-0008-N
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 157.05
Y 424,508
X 901,328

MAPLE GROVE RD

R/W

I-39/90 WB

MP 157.0

I-39/90 EB

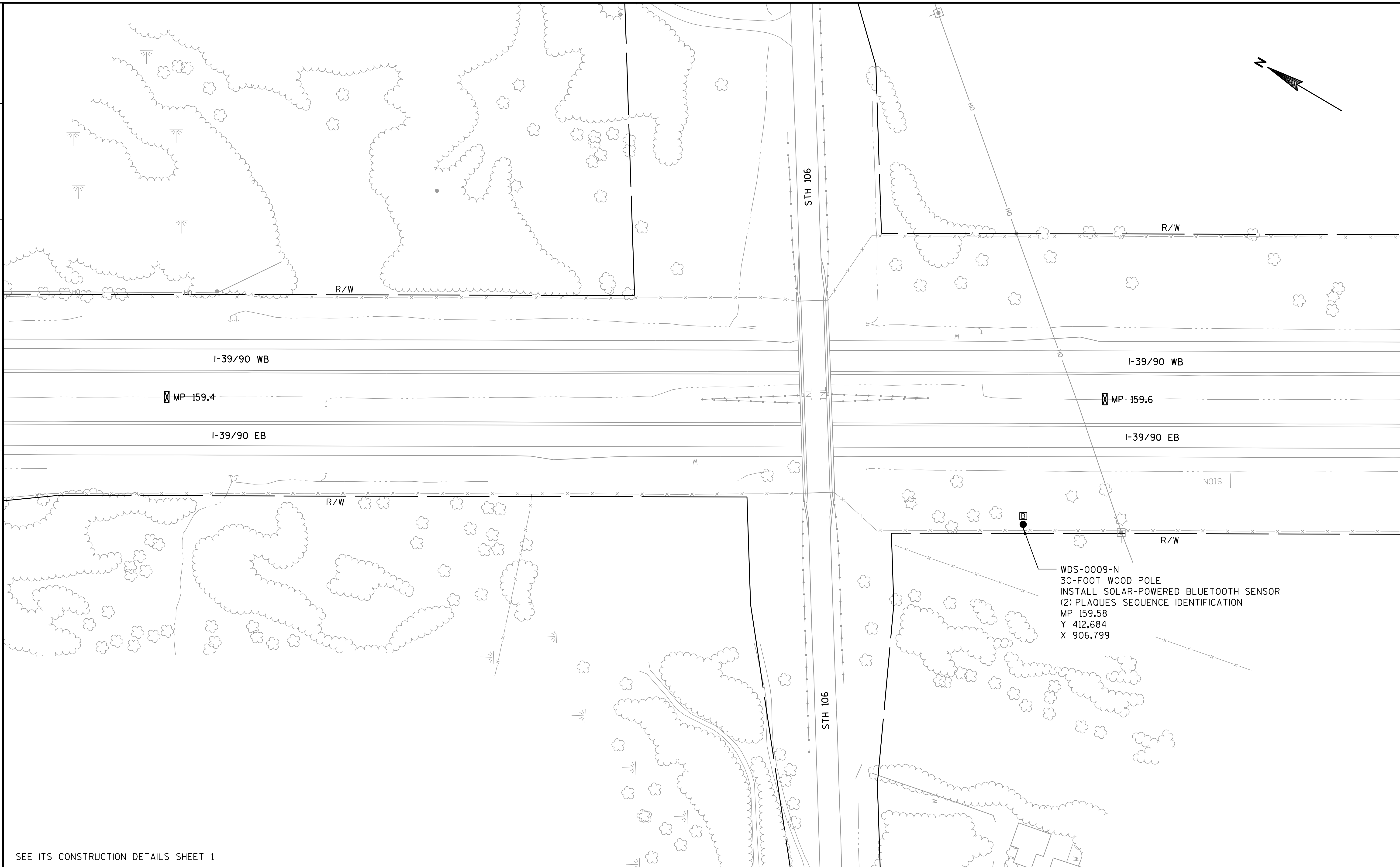
EXISTING DYNAMIC MESSAGE SIGN, ROADSIDE
DMS-13-0027

MP 157.2

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 11	0 50 100	SHEET 20	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_11.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.



PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 12	0 50 100	SHEET 21	E

2

R/W

I-39/90 WB

MP 160.2

I-39/90 EB

AREA FOR CLEARING AND GRUBBING

USH 51

I-39/90 WB

MP 160.4

I-39/90 EB

AREA FOR CLEARING AND GRUBBING

R/W

PB-G3

CCTV-13-0103-N
65-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
INSTALL VIDEO ENCODER (INTERNET)
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
MP 160.30
Y 409,619
X 909,000

CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH
(3) ELECTRICAL WIRE LIGHTING 2 AWG
(EP-G1 TO CCTV-13-0103-N)

PB-G2

EXISTING RAMP
CLOSURE GATE

CONDUIT RIGID NONMETALLIC
SCHEDULE 80 2-INCH, SPECIAL
(3) ELECTRICAL WIRE LIGHTING 2 AWG

R/W

PB-G1

EP-G1

R/W

USH 51

CONSTRUCTION NOTE

1. ENGINEER WILL DETERMINE FINAL AREA FOR CLEARING AND GRUBBING IN THE FIELD AFTER CCTV CAMERA IS INSTALLED

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ROCK ENERGY COOPERATIVE.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 8
SEE ITS COMMUNICATION SCHEMATICS SHEET 7

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 13	0 50 100	SHEET 22	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_13.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

2

2

N

TOWER

R/W

I-39/90 WB

MP 161.8

LAKE DRIVE ROAD

OH

MS-H1

EXISTING RWIS

30-FOOT WOOD POLE
ELECTRICAL SERVICE METER SOCKET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX

OVERHEAD SERVICE CONDUCTOR
ASSEMBLY 6 AWG 4-WIRE

30-FOOT WOOD POLE

(4) ELECTRICAL WIRE LIGHTING 6 AWG

DMS-13-0041-N
INSTALL GROUND MOUNT DYNAMIC
MESSAGE SIGN
INSTALL POLE MOUNTED CABINET
INSTALL DMS CONTROLLER (INCIDENTAL)
INSTALL ETHERNET SWITCH (RS900)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER
DISCONNECT BOX
MP 161.99
Y 402,726
X 914,796

300'

50'

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL
(1 EA.)

WDS-0011-N
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 161.99
Y 402,739
X 914,791

MP 162.0

I-39/90 WB

REMOVING GUARDRAIL (50')
STEEL PLATE BEAM GUARD CLASS A (300')

I-39/90 EB

R/W

PB-H2
PB-H1
EP-H1

(4) ELECTRICAL WIRE LIGHTING 6 AWG
(EP-H1 TO DMS-13-0040-N)

WDS-0010-N
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 161.89
Y 403,071
X 914,220

DMS-13-0040-N
INSTALL GROUND MOUNT DYNAMIC MESSAGE SIGN
INSTALL POLE MOUNTED CABINET
INSTALL DMS CONTROLLER
INSTALL ETHERNET SWITCH (RS900)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
MP 161.89
Y 403,080
X 914,213

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ROCK ENERGY COOPERATIVE.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 1, 9, 10, 44 & 46
SEE ITS COMMUNICATION SCHEMATICS SHEET 8 & 9
SEE POLE ATTACHMENT DETAIL
SEE OVERHEAD SERVICE DETAIL SHEETS

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 14	0 50 100	SHEET 23	E

2

I-39/90 WB

MP 163.2

I-39/90 EB

I-39/90 WB

MP 163.4

I-39/90 EB

R/W

AREA FOR CLEARING AND GRUBBING

AREA FOR CLEARING AND GRUBBING

AREA FOR CLEARING AND GRUBBING

30-FOOT WOOD POLE
ELECTRICAL SERVICE METER SOCKET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX

MS-J1

OVERHEAD SERVICE CONDUCTOR
ASSEMBLY 6 AWG 3-WIRE

30-FOOT WOOD POLE

(3) ELECTRICAL WIRE LIGHTING 6 AWG

CCTV-53-0104-C
65-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
INSTALL VIDEO ENCODER (INTERNET)
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
MP 163.26
Y 325,129
X 491,546

STH 59

R/W

R/W

CONSTRUCTION NOTE

1. ENGINEER WILL DETERMINE FINAL AREA FOR CLEARING AND GRUBBING IN THE FIELD AFTER CCTV CAMERA IS INSTALLED

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 11
SEE ITS COMMUNICATION SCHEMATICS SHEET 10
SEE POLE ATTACHMENT DETAIL
SEE OVERHEAD SERVICE DETAIL SHEETS

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 15	0 50 100	SHEET 24	E

2

N

R/W

NEWVILLE ROAD

WDS-0012-C
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 164.44
Y 319,194
X 493,191

B

R/W

SEPTIC

SIGN

I-39/90 WB

MP 164.4

MP 164.6

I-39/90 EB

SIGN

R/W

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 16	0 50 100	SHEET 25	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_16.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

2

2

N

DMS-53-0045-C (WB) / DMS-53-0046-C (EB)
WDS-0013-C
(2) INSTALL OVERHEAD FREEWAY DMS FULL MATRIX
INSTALL HARDWIRED BLUETOOTH SENSOR
MP 167.12
Y 306,717.55
X 498,179.17

R/W

WSOR

R/W

I-39/90 WB

I-39/90 WB

MP 167.0

S-53-73

MP 167.2

I-39/90 EB

I-39/90 EB

(2 EACH, 4 TOTAL) CONDUIT RIGID NONMETALLIC SCHEDULE 80 1 1/2-INCH, SPECIAL
(8) ELECTRICAL WIRE LIGHTING 4 AWG (FROM CB-K1 TO DMS)
(2) INSTALL DMS SIGNAL CABLE IN SEPARATE CONDUIT (FROM CB-K1 TO DMS)
(INCIDENTAL)

MGS THREE BEAM TRANSITION (39.4')
MGS BEAM GUARD 3 (75')
MGS BEAM GUARD TERMINAL TYPE 2 (1 EA.)

PB-K1
PB-K2
MS-K1
CB-K1

R/W

R/W

ELECTRICAL SERVICE BREAKER DISCONNECT BOX
ELECTRICAL SERVICE METER SOCKET
30-FOOT WOOD POLE

WSOR

(3) ELECTRICAL WIRE
LIGHTING 4 AWG

CCTV-53-0105-C
65-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
INSTALL VIDEO ENCODER
INSTALL ETHERNET SWITCH (RS900)
WIRELESS CLIENT RADIO ASSEMBLY
(6) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
(2) INSTALL DMS CONTROLLER (INCIDENTAL)
MP 167.12
Y 306,696
X 498,053

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ROCK ENERGY COOPERATIVE.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 12 & 13
SEE ITS COMMUNICATION SCHEMATICS SHEET 11
SEE OVERHEAD SERVICE DETAIL SHEETS

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 17	0 50 100	SHEET 26	E

2

2

N

MONOGUE ROAD

R/W

R/W

I-39/90 WB

I-39/90 WB

MP 168.0

I-39/90 EB

I-39/90 EB

NDIS

NDIS

NDIS

R/W

MONOGUE ROAD

WMN-0061-C
WIRELESS MESH RADIO ASSEMBLY - STATE PATROL TOWER
MP 167.99
Y 302,211
X 497,770

WISCONSIN STATE PATROL MONOGUE ROAD
COMMUNICATIONS TOWER

SEE ITS CONSTRUCTION DETAILS SHEET 14
SEE ITS COMMUNICATION SCHEMATICS SHEET 12

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 18	0 50 100	SHEET 27	E

2

2

N

CCTV-53-0106-C
65-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL VIDEO ENCODER
INSTALL ETHERNET SWITCH (RS400)
WIRELESS CLIENT RADIO ASSEMBLY
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 168.84
Y 297,728
X 498,101

R/W

H-M TOWNLINE ROAD

SIGN

OH

R/W

I-39/90 WB

I-39/90 WB

AREA FOR CLEARING AND GRUBBING

MP 169.0

MP 168.8

(3) ELECTRICAL WIRE
LIGHTING 6 AWG

65-FOOT WOOD POLE

OVERHEAD SERVICE CONDUCTOR ASSEMBLY 6 AWG 3-WIRE
(MIN 25 FT CLEARANCE ABOVE FINISHED ROADWAY)

AREA FOR CLEARING AND GRUBBING

I-39/90 EB

I-39/90 EB

OH

MS-L1

OH

OH

OH

OH

R/W

SIGN

H-M TOWNLINE ROAD

R/W

65-FOOT WOOD POLE
ELECTRICAL SERVICE METER SOCKET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX

CONSTRUCTION NOTE

1. ENGINEER WILL DETERMINE FINAL AREA FOR CLEARING AND GRUBBING IN THE FIELD AFTER CCTV CAMERA IS INSTALLED

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ROCK ENERGY COOPERATIVE.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 15
SEE ITS COMMUNICATION SCHEMATICS SHEET 13
SEE POLE ATTACHMENT DETAIL
SEE OVERHEAD SERVICE DETAIL SHEETS

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 19	0 50 100	SHEET 28	E

2

2

N

R/W

R/W

KENNEDY ROAD

I-39/90 WB

I-39/90 WB

MP 170.2

I-39/90 EB

I-39/90 EB

R/W

R/W

OVERLOOK DR

OLD KENNEDY ROAD

CITY OF JANESVILLE

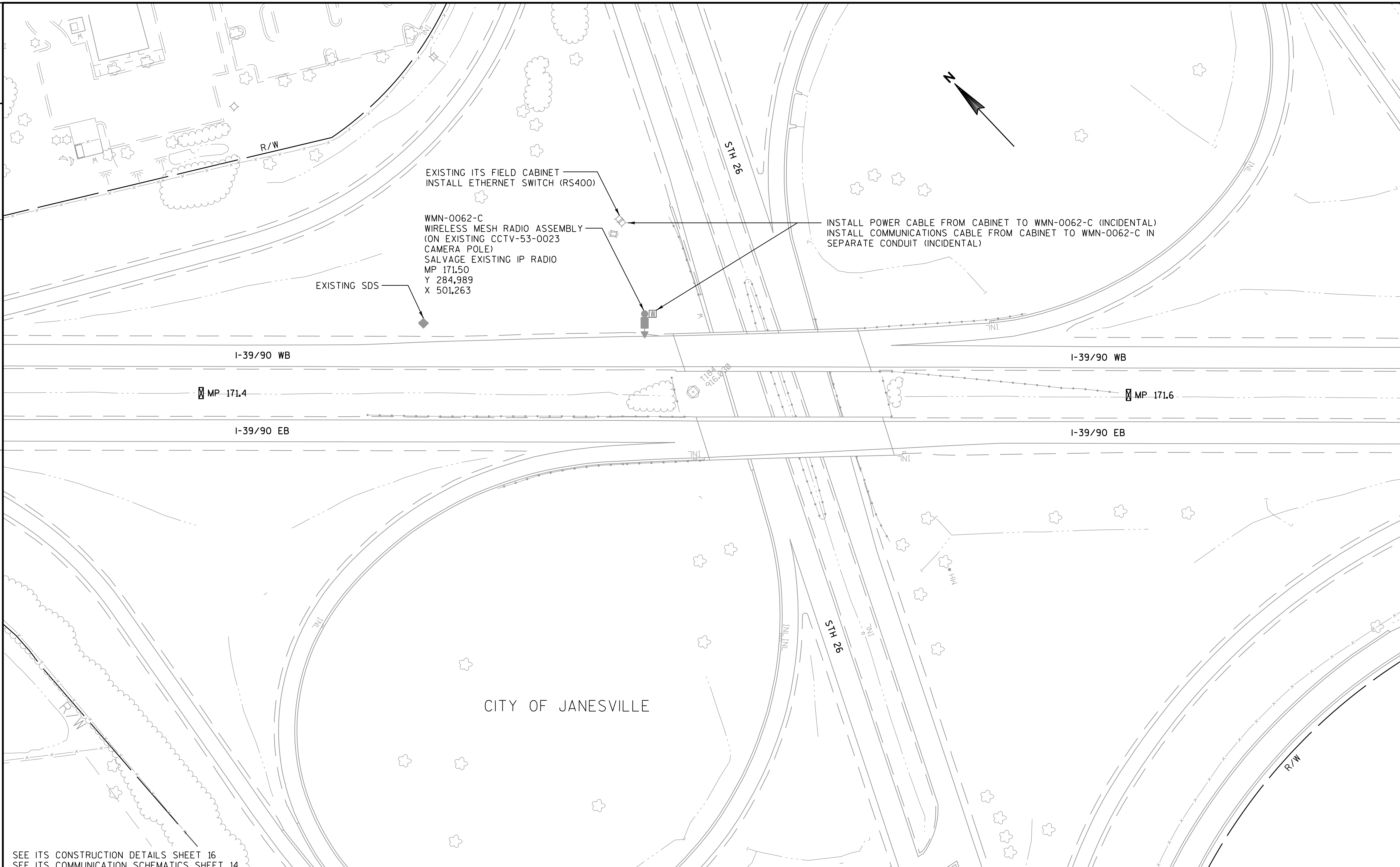
WDS-0014-C
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 170.20
Y 290,522
X 497,847

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 20	0 50 100	SHEET 29	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_20.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42



EXISTING ITS FIELD CABINET
INSTALL ETHERNET SWITCH (RS400)
WMN-0062-C
WIRELESS MESH RADIO ASSEMBLY
(ON EXISTING CCTV-53-0023
CAMERA POLE)
SALVAGE EXISTING IP RADIO
MP 171.50
Y 284,989
X 501,263
EXISTING SDS
INSTALL POWER CABLE FROM CABINET TO WMN-0062-C (INCIDENTAL)
INSTALL COMMUNICATIONS CABLE FROM CABINET TO WMN-0062-C IN
SEPARATE CONDUIT (INCIDENTAL)
N
R/W
STH 26
I-39/90 WB
I-39/90 WB
MP 171.4
MP 171.6
I-39/90 EB
I-39/90 EB
CITY OF JANESVILLE
STH 26
R/W
R/W

SEE ITS CONSTRUCTION DETAILS SHEET 16
SEE ITS COMMUNICATION SCHEMATICS SHEET 14

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 21	0 50 100	SHEET 30	E

2

CITY OF JANESVILLE

N

WDS-0016-C
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 171.77
Y 284,023
X 502,276

R/W

I-39/90 WB

MP 171.8

I-39/90 EB

I-39/90 WB

MP 172.0

I-39/90 EB

R/W

WDS-0015-C
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 171.91
Y 283,344
X 502,612

N PONTIAC DRIVE

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 22	0 50 100	SHEET 31	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_22.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

CITY OF JANESVILLE

USH 14

N

I-39/90 WB

MP 172.2

MP 172.4

I-39/90 EB

WMN-0063-C
WIRELESS MESH RADIO ASSEMBLY
(ON EXISTING CCTV-53-0024 CAMERA POLE)
SALVAGE EXISTING IP RADIO
MP 172.26
Y 281,686
X 503,524

SEE ITS CONSTRUCTION DETAILS SHEET 17
SEE ITS COMMUNICATION SCHEMATICS SHEET 15

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 23	0 50 100	SHEET 32	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_23.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

CITY OF JANESVILLE

N

2

E MILWAUKEE STREET

SOMERSET DRIVE

WDS-0018-C
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED
BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE
IDENTIFICATION
MP 173.64
Y 274,362
X 503,868

EP-N1

PB-N1
(COIL 20' WIRE
IN PULL BOX)

CONDUIT RIGID NONMETALLIC SCHEDULE 80 3-INCH, SPECIAL
(3) ELECTRICAL WIRE LIGHTING 2 AWG

R/W

I-39/90 WB

MP 173.6

MP 173.8

I-39/90 EB

PB-N2 (COIL 20' WIRE IN PULL BOX)

OH

CONDUIT RIGID METALLIC 2-INCH (INCIDENTAL TO WOOD POLE)
(3) ELECTRICAL WIRE LIGHTING 2 AWG

30-FOOT WOOD POLE

OVERHEAD SERVICE CONDUCTOR
ASSEMBLY 2 AWG 3-WIRE
(MIN 20 FT CLEARANCE ABOVE FINISHED GROUND)

30-FOOT WOOD POLE

CCTV-53-0107-C
WDS-0017-C
WMN-0064-C
65-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
(4) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL VIDEO ENCODER
INSTALL ETHERNET SWITCH (RS400)
INSTALL HARDWIRED BLUETOOTH SENSOR
WIRELESS MESH RADIO ASSEMBLY
MP 173.69
Y 274,076
X 503,609

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.
SEE ITS CONSTRUCTION DETAILS SHEET 1 & 18
SEE ITS COMMUNICATION SCHEMATICS SHEET 16
SEE POLE ATTACHMENT DETAIL
SEE OVERHEAD SERVICE DETAIL SHEETS
INSTALL CONDUIT A MINIMUM OF 3 FEET BELOW PROPOSED
ROADWAY GRADE. OBTAIN PROPOSED ROADWAY CROSS-SECTION
FROM ENGINEER.

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 24	0 50 100	SHEET 33	E

2

CITY OF JANESVILLE

EXISTING CCTV CAMERA CCTV-53-0029
TO BE REMOVED BY OTHERS UNDER PROJECT ID 1001-03-74

EXISTING ITS FIELD CABINET

WMN-0065-C
WIRELESS MESH RADIO ASSEMBLY
(ON CCTV CAMERA POLE INSTALLED BY
OTHERS UNDER PROJECT ID 1001-03-74)
MP 175.49
Y 264,691
X 503,958

EXISTING SDS

RACINE STREET

I-39/90 WB

MP 175.4

I-39/90 EB

RIPRAP

SEE ITS CONSTRUCTION DETAILS SHEET 19
SEE ITS COMMUNICATION SCHEMATICS SHEET 17

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 25	0 50 100	SHEET 34	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_25.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

2

N

WDS-0019-S
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 175.95
Y 262,227
X 504,004

B

R/W

CTH O

I-39/90 WB

MP 175.8

MP 176.0

I-39/90 EB

R/W

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 26	0 50 100	SHEET 35	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_26.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

2

2

N

R/W

MH

SIGN

I-39/90 WB

I-39/90 WB

MP 177.4

MP 177.6

I-39/90 EB

I-39/90 EB

SIGN

B

R/W

SIGN

WDS-0020-S
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 177.47
Y 254,249
X 503,906

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 27	0 50 100	SHEET 36	E

2

2

N

AVALON ROAD

WMN-0066-S
WIRELESS MESH RADIO ASSEMBLY
(ON EXISTING CCTV-53-0034 CAMERA POLE)
SALVAGE EXISTING IP RADIO
MP 177.98
Y 251,584
X 504,189

EXISTING MICROWAVE DETECTOR SDS-53-0034

MP 178.0

I-39/90 WB

I-39/90 EB

I-39/90 WB

I-39/90 EB

R/W

SIGN

HW

MH

INL

T

E

RIPRAP

SEE ITS CONSTRUCTION DETAILS SHEET 20
SEE ITS COMMUNICATION SCHEMATICS SHEET 18

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 28	0 50 100	SHEET 37	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_28.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

2

N

WOODMAN RD

R/W

I-39/90 WB

I-39/90 EB

MP 179.6

ATR

EXISTING AUTOMATIC
TRAFFIC RECORDER

EXISTING BARRIER CABLE

MGS GUARDRAIL 3 (312.5')

MGS GUARDRAIL TERMINAL TYPE 2

MGS GUARDRAIL TERMINAL EAT

312.5'

53.1'

15'

CONNECT CONDUITS WITH AIRTIGHT
FITTING TO DMS CONDUITS

S-53-74

2 EACH (4 TOTAL) CONDUIT RIGID NONMETALLIC
SCHEDULE 80 1 1/2-INCH, SPECIAL
(8) ELECTRICAL WIRE LIGHTING 4 AWG
FROM CB-01 TO DMS
(2) INSTALL DMS SIGNAL CABLE IN SEPARATE
CONDUIT (INCIDENTAL)

PB-01

PB-02

EP-01

CB-01

LOCATE EP-01, PB-01, PB-02 AND
CB-01 WITHIN 8 FEET OF FENCE

DMS-53-0047-S (WB) / DMS-53-0048-S (EB)
WDS-0021-S
(2) INSTALL OVERHEAD FREEWAY DMS FULL MATRIX
INSTALL HARDWIRED BLUETOOTH SENSOR
MP 179.66
Y 242,673.99
X 504,221.71

INSTALL ITS FIELD CABINET
BASE ITS CONTROLLER CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL ETHERNET SWITCH (RS900)
(2) INSTALL DMS CONTROLLER (INCIDENTAL)
ANTENNA RISER
WIRELESS CLIENT RADIO ASSEMBLY
(6) PLAQUES SEQUENCE IDENTIFICATION

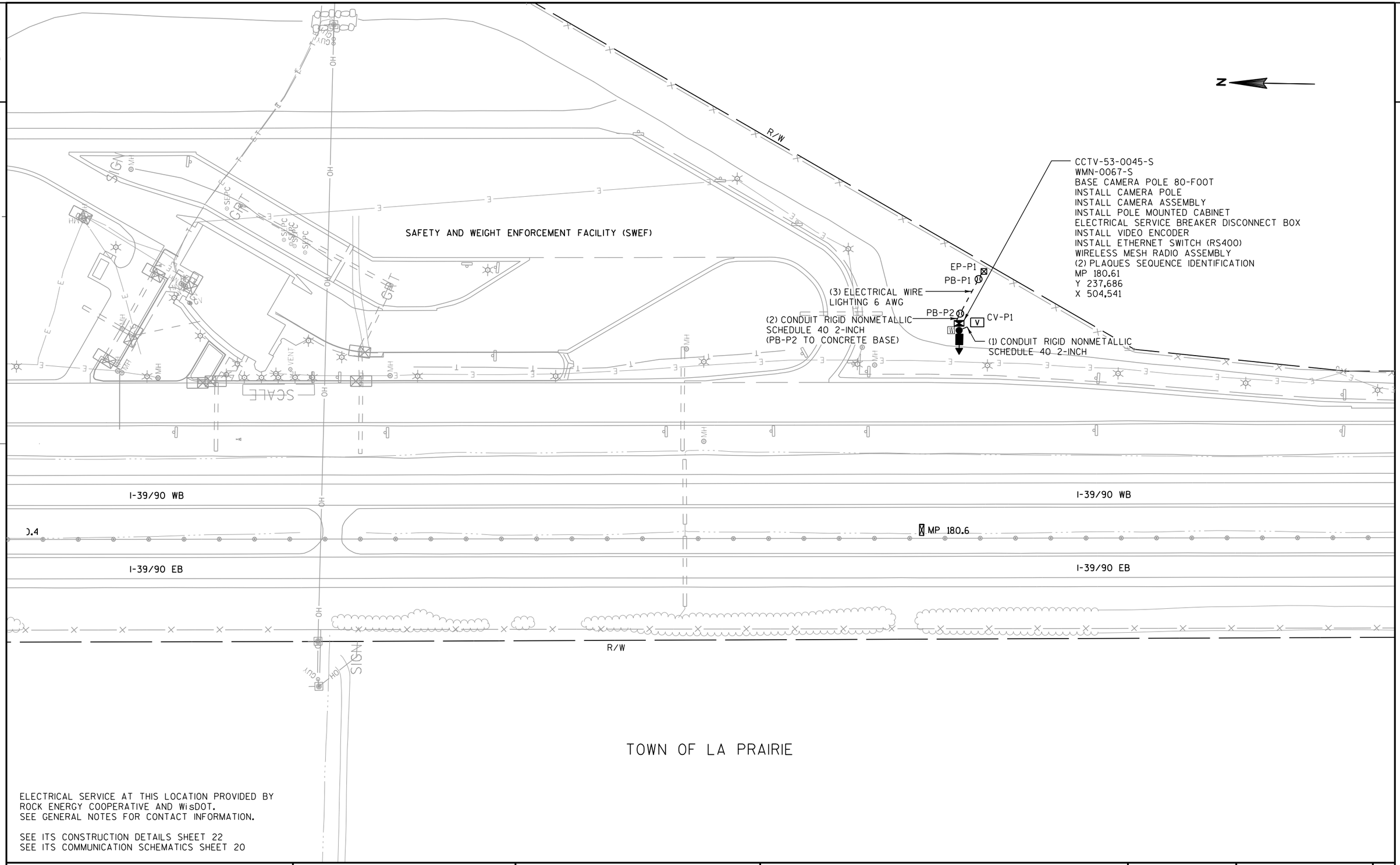
(4) ELECTRICAL WIRE LIGHTING 4 AWG

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ROCK ENERGY COOPERATIVE.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 21
SEE ITS COMMUNICATION SCHEMATICS SHEET 19
COORDINATE WORK WITH CONTRACT ID 1003-10-86

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 29	0 50 100	SHEET 38	E

2



ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ROCK ENERGY COOPERATIVE AND WisDOT.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 22
SEE ITS COMMUNICATION SCHEMATICS SHEET 20

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 30	0 50 100	SHEET 39	E

2

2

N

TOWN LINE RD

R/W

I-39/90 WB

I-39/90 EB

MP 181.4

WDS-0022-S
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 181.34
Y 233,838
X 504,274

TOWN LINE RD

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 31	0 50 100	SHEET 40	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_31.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

2

N

R/W

CREEK RD

R/W

I-39/90 WB

MP 182.6

I-39/90 EB

R/W

OVERHEAD SERVICE CONDUCTOR
ASSEMBLY 6 AWG 3-WIRE

30-FOOT WOOD POLE

(3) ELECTRICAL WIRE LIGHTING 6 AWG

MS-01

I-39/90 WB

MP 182.4

I-39/90 EB

R/W

CREEK RD

WMN-0068-S
65-FOOT WOOD POLE
WIRELESS MESH RADIO ASSEMBLY
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL ETHERNET SWITCH (RS900)
MP 182.52
Y 227,628
X 504,470

30-FOOT WOOD POLE
ELECTRICAL SERVICE METER SOCKET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ROCK ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 23
SEE ITS COMMUNICATION SCHEMATICS SHEET 21
SEE POLE ATTACHMENT DETAIL
SEE OVERHEAD SERVICE DETAIL SHEETS

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 32	0 50 100	SHEET 41	E

2

N

I-39/90 WB

I-39/90 EB

MP 183.2

CTH S

EXISTING CCTV CAMERA
CCTV-53-0039

EXISTING MICROWAVE DETECTOR
SDS-53-0039

EXISTING ITS FIELD CABINET
INSTALL ETHERNET SWITCH (RS400)
WIRELESS CLIENT RADIO ASSEMBLY
ANTENNA RISER
SALVAGE IP RADIO

EXISTING ELECTRICAL SERVICE
METER BREAKER PEDESTAL

WMN-0069-S
65-FOOT WOOD POLE
WIRELESS MESH RADIO ASSEMBLY
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER
DISCONNECT BOX
INSTALL ETHERNET SWITCH (RS900)
MP 183.16
Y 224346
X 505180

(3) ELECTRICAL WIRE
LIGHTING 6 AWG
(EP-T1 TO WMN-0069-S)

PB-T1

EP-T1

PB-T2

EB OFF-RAMP

R/W

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 24
SEE ITS COMMUNICATION SCHEMATICS SHEET 22

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 33	0 50 100	SHEET 42	E

2

30-FOOT WOOD POLE
ELECTRICAL SERVICE METER SOCKET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX

OVERHEAD SERVICE CONDUCTOR ASSEMBLY 6 AWG 3-WIRE
OVERHEAD SERVICE CONDUCTOR ASSEMBLY 6 AWG 4-WIRE

WMN-0070-S
WDS-0024-S
65-FOOT WOOD POLE
WIRELESS MESH RADIO ASSEMBLY
INSTALL POLE MOUNTED CABINET
(2) PLAQUES SEQUENCE IDENTIFICATION
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL ETHERNET SWITCH (RS400)
INSTALL HARDWIRED BLUETOOTH SENSOR
MP 184.16
Y 219313
X 506312

DMS-53-0042-S
INSTALL GROUND MOUNT DYNAMIC MESSAGE SIGN
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL DMS CONTROLLER (INCIDENTAL)
INSTALL ETHERNET SWITCH (RS900)
WIRELESS CLIENT RADIO ASSEMBLY
INSTALL ANTENNA RISER
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 184.16
Y 219298
X 506313

N

W HART ROAD

R/W

I-39/90 WB

MP 184.0

I-39/90 EB

R/W

MS-U1

OH

30-FOOT WOOD POLE

(3) ELECTRICAL WIRE
LIGHTING 6 AWG
(TO WMN-0070-S)

STEEL PLATE BEAM GUARD ENERGY
ABSORBING TERMINAL (1 EA.)

287.5'

50'

R/W

I-39/90 WB

MP 184.2

I-39/90 EB

R/W

REMOVING GUARDRAIL (50')
STEEL PLATE BEAM GUARD CLASS A (287.5')

(4) ELECTRICAL WIRE LIGHTING 6 AWG
(TO DMS-53-0042-S)

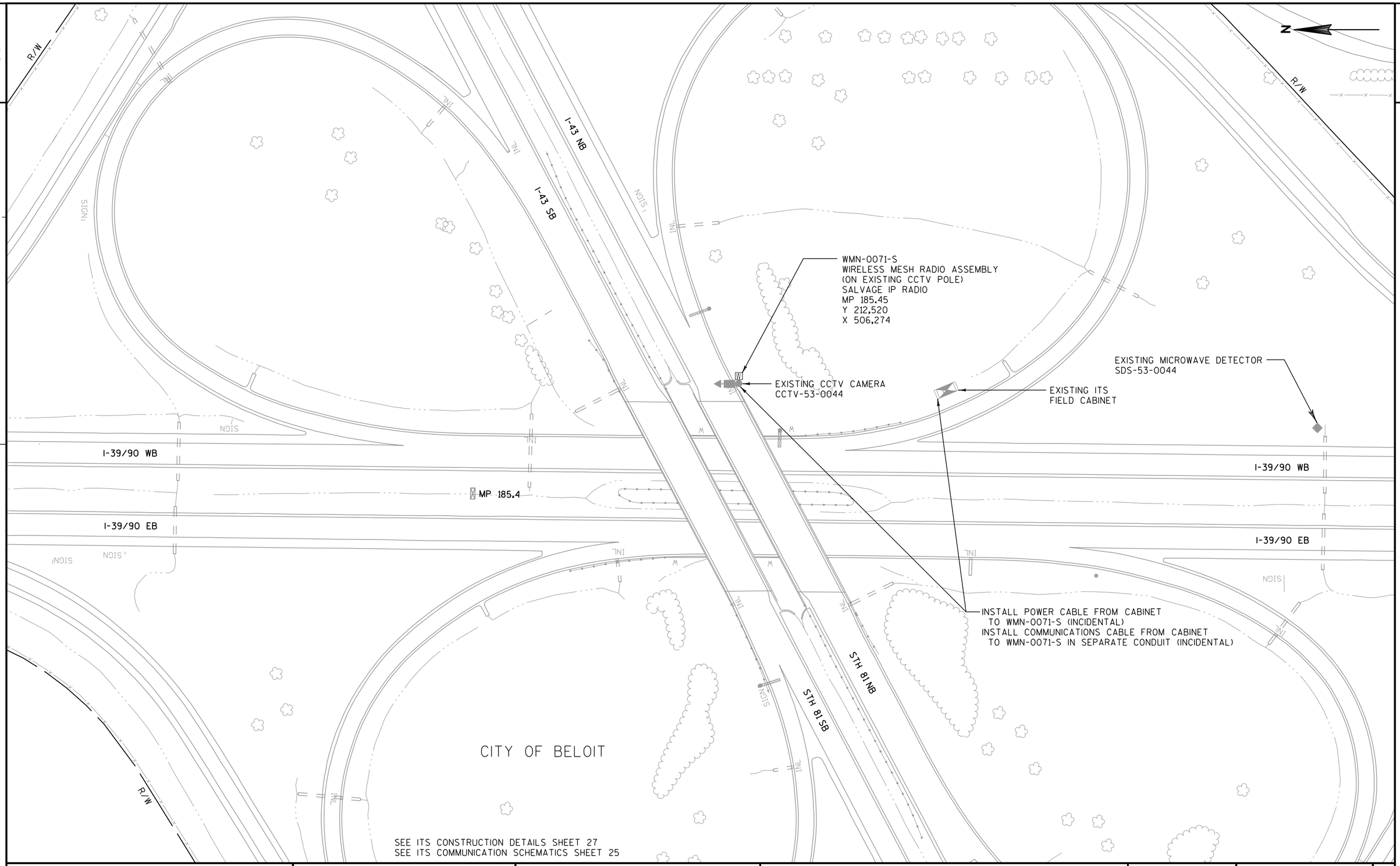
WDS-0023-S
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 184.16
Y 219,314
X 506,121

W HART ROAD

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 1, 25 & 26
SEE ITS COMMUNICATION SCHEMATICS SHEET 23 & 24
SEE POLE ATTACHMENT DETAIL
SEE OVERHEAD SERVICE DETAIL SHEETS

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 34	0 50 100	SHEET 43	E



PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 35	0 50 100	SHEET 44	E

2

CITY OF BELOIT

2

N

186.2

I-39/90 WB

I-39/90 EB

R/W

RIPRAP

SIGN

CRANSTON ROAD

MH

WDS-0025-S
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
MP 186.40
Y 207,514
X 505,688

B

MP 186.4

WMN-0072-S
50-FOOT WOOD POLE
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
WIRELESS MESH RADIO ASSEMBLY
INSTALL ETHERNET SWITCH (RS400)
MP 186.34
Y 207,991
X 505,548

PB-W2

EP-W1

PB-W1

(3) ELECTRICAL WIRE LIGHTING 6 AWG
(EP-W1 TO WMN-0072-S)

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 1& 28
SEE ITS COMMUNICATION SCHEMATICS SHEET 26

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 36	0 50 100	SHEET 45	E

CITY OF BELOIT

I-39/90 WB

I-39/90 EB

R/W

MP 187.8

CAUTION

CABLE MICROWAVE DETECTOR

EXISTING MICROWAVE DETECTOR
SDS-53-0048

PB-X1

ABANDON EXISTING CONDUIT
REMOVE CABLES
INSTALL CONDUIT CAPS ON THE ENDS OF THE CONDUIT

CV-X3

SALVAGE CAMERA ASSEMBLY
SALVAGE 50-FOOT CAMERA POLE
WITH LOWERING SYSTEM
SALVAGE POLE MOUNTED CABINET
SALVAGE IP RADIO
SALVAGE TERMINATION PANEL
SALVAGE ETHERNET SWITCH
SALVAGE VIDEO ENCODER
REMOVE CONCRETE BASE

REMOVE COMMUNICATION VAULT

REMOVE METER BREAKER PEDESTAL

PB-X2
EP-X1

CV-X2

STATELINE ROAD

CCTV-53-0048-S
WDS-0026-S
WMN-S-073
65-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
(4) PLAQUES SEQUENCE IDENTIFICATION
INSTALL VIDEO ENCODER
INSTALL ETHERNET SWITCH (RS900)
INSTALL TERMINATION PANEL
INSTALL IP RADIO (900 MHZ MASTER)
INSTALL HARDWIRED BLUETOOTH SENSOR
WIRELESS MESH RADIO ASSEMBLY
(6) FIBER OPTIC TERMINATION
MP 187.83
Y 201,379
X 501,390

(3) ELECTRICAL WIRE LIGHTING 4 AWG
(EP-X1 TO CCTV-53-0048-S)

CONDUIT RIGID NONMETALLIC
SCHEDULE 80 2-INCH

CONDUIT HDPE 1-DUCT 2-INCH
INSTALL FIBER OPTIC CABLE
OUTDOOR PLANT 6-CT

COMMUNICATION VAULT TYPE 1
LEAVE 100 FT 6-CT FIBER OPTIC
CABLE COILED IN VAULT

ABANDON EXISTING 1.25-INCH HDPE CONDUIT (2)
REMOVE CABLE (24-COUNT FIBER OPTIC)

CONDUIT HDPE 1-DUCT 2-INCH
INSTALL FIBER OPTIC CABLE
OUTDOOR PLANT 6-CT

INTERCEPT EXISTING 1.25-INCH HDPE CONDUIT (2)
COMMUNICATION VAULT TYPE 1
FIBER OPTIC SPLICE ENCLOSURE
(6) FIBER OPTIC SPLICE
LEAVE 100 FT 24-CT FIBER OPTIC CABLE AND
50 FT 6-CT FIBER OPTIC CABLE COILED IN VAULT

CV-X1

COORDINATE WITH GRAHAM HEITZ, SW REGION (608) 246-5362
FOR SPLICING ASSIGNMENTS

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 29
SEE ITS COMMUNICATION SCHEMATICS SHEET 27

INSTALL FIBER OPTIC CABLE MARKERS AT EACH END
AND AT EACH BEND OF NEW FIBER OPTIC CONDUIT

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 37	0 50 100	SHEET 46	E

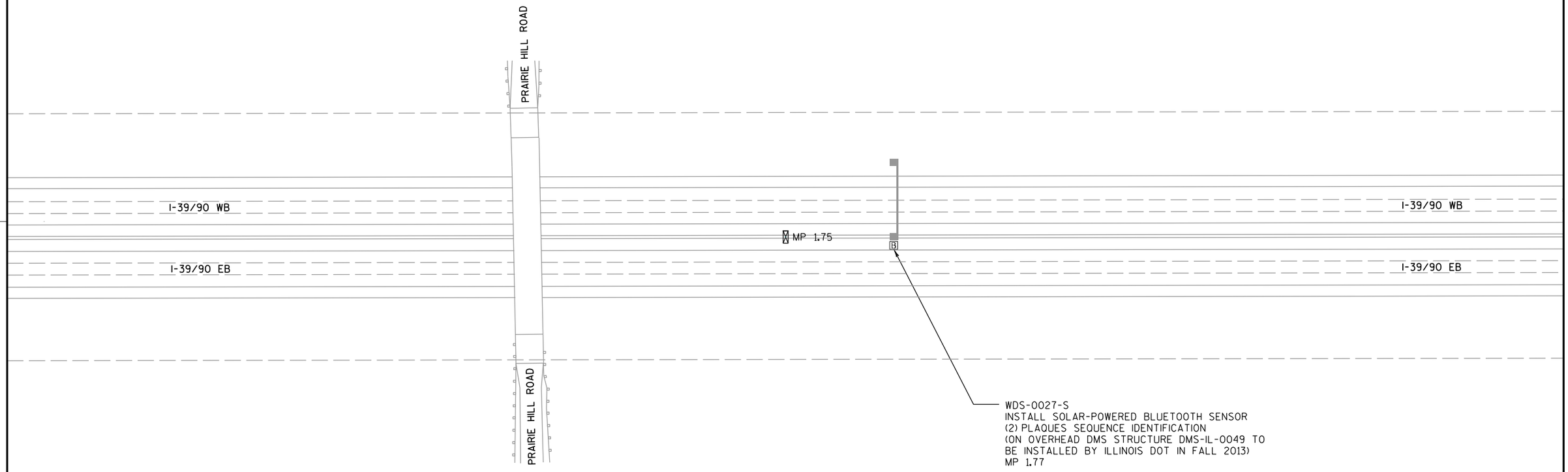
FILE NAME : ...\CADD\Sheets\ts_0301_its_37.dgn PLOT DATE : 2/1/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 100.0000 sf / in.

WISDOT/CADDS SHEET 42

2

N

WINNEBAGO COUNTY, ILLINOIS



SEE ITS CONSTRUCTION DETAILS SHEET 30

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: WINNEBAGO, IL	ITS PLANS - SHEET 38	0 50 100	SHEET 47	E

2

2

N

CITY OF MADISON

N FAIR OAKS AVE

COMMERCIAL AVE

COMMERCIAL AVE

STH 30 WB

STH 30 WB

STH 30 EB

STH 30 EB

DMS-13-0004-N
SDS-13-0062A-N (EB) / SDS-13-0062B-N (WB)
INSTALL CANTILEVER DYNAMIC MESSAGE SIGN (SALVAGED)
INSTALL CANTILEVER STRUCTURE (SALVAGED)
INSTALL IP RADIO (900 MHZ SUBSCRIBER)
ANTENNA (900 MHZ SUBSCRIBER)
(2) INSTALL MOUNTED CONTROLLER MICROWAVE
DETECTOR ASSEMBLY (1 WB & 1 EB)
Y 494,415
X 835,784

200'

S-13-190

CB-A2

PB-A3

PB-A4

EP-A2

6' BETWEEN BACK OF BEAM GUARD AND FACE OF CABINET

(4) ELECTRICAL WIRE LIGHTING 2 AWG

COMMERCIAL AVE

N FAIR OAKS AVE

(2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
(4) ELECTRICAL WIRE LIGHTING 2 AWG
(2) MICROWAVE DETECTOR CABLES
INSTALL DMS SIGNAL CABLE (INCIDENTAL)
ALL CABLES FROM CB-A2 TO DMS-13-0004-N OR
SDS-13-0062A-N/SDS-13-0062B-N
RUN MICROWAVE AND DMS CABLES IN SEPARATE CONDUIT
FROM POWER WIRES

BASE ITS CONTROLLER CABINET
INSTALL ITS FIELD CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL DMS CONTROLLER (INCIDENTAL)
INSTALL ETHERNET SWITCH (RS400)
(4) PLAQUES SEQUENCE IDENTIFICATION

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
MADISON GAS AND ELECTRIC COMPANY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 31
SEE ITS COMMUNICATION SCHEMATICS SHEET 28

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 39	0 50 100	SHEET 48	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_39.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

CITY OF MADISON

EXISTING ITS FIELD CABINET
ANTENNA RISER
ANTENNA (900 MHZ MASTER)
INSTALL ETHERNET SWITCH (RS900)
INSTALL IP RADIO (900 MHZ MASTER)
Y 839,140
X 494,678
(LINK BETWEEN FAIR OAKS AVE
AND STOUGHTON ROAD)

COMMERCIAL AVE SERVICE ROAD

STOUGHTON ROAD

N

EXISTING CCTV CAMERA
CCTV-13-0023

STH 30 WB

STH 30 EB

STH 30 WB

STH 30 EB

STOUGHTON ROAD

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
MADISON GAS AND ELECTRIC COMPANY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 32
SEE ITS COMMUNICATION SCHEMATICS SHEET 29

2

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 40	0 50 100	SHEET 49	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_40.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

2

N

N THOMPSON DR

SALVAGE CANTILEVER DYNAMIC MESSAGE SIGN
SALVAGE CANTILEVER STRUCTURE
REMOVE CONCRETE SIGN SUPPORT
(2) SALVAGE MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY
REMOVE CABLES

COMMERCIAL AVE SERVICE ROAD

EXISTING ITS FIELD CABINET TO REMAIN

ABANDON CONDUITS TO PB-A1
INSTALL CONDUIT CAPS ON THE
END OF CONDUITS

MICROWAVE DETECTOR CABLES
(CB-A1 TO SDS-13-0060-N AND SDS-13-0061-N)
(INSTALL CONDUIT INTO EXISTING PULLBOX PB-A1)

SDS-13-0060-N / SDS-13-0061-N
CONCRETE BASE TYPE 5
POLE TYPE 5-ALUMINUM
TRANSFORMER BASE BREAKAWAY 11½-INCH BOLT CIRCLE
(2) INSTALL MOUNTED CONTROLLER MICROWAVE
DETECTOR ASSEMBLY (1 WB & 1 EB)
(4) PLAQUES SEQUENCE IDENTIFICATION
Y 843,179
X 494,311

6' BETWEEN BACK OF BEAM GUARD
AND MICROWAVE DETECTOR POLE

CTH T

STH 30 WB

STH 30 EB

PB-A2

PB-A1

EP-A1

CB-A1

150'

E

OH

HH

HO

MOVE EXISTING W4-3R SIGN
FROM EXISTING DMS STRUCTIRE
TO NEW SIGN POST

PULL BOX STEEL COMMUNICATIONS
24 X 42-INCH

CITY OF MADISON

BADGER
INTERCHANGE

N THOMPSON DR

R/W

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
MADISON GAS AND ELECTRIC COMPANY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 33
SEE ITS COMMUNICATION SCHEMATICS SHEET 30

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 41	0 50 100	SHEET 50	E

FILE NAME : L:\work\projects\60242867\000_CAD\001_Drawings\ITS\From Transmart\Sheets\ts_0301_its_41.dgn PLOT DATE : 3/5/2013 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : 1:100
WISDOT/CADDS SHEET 42

2

2

CITY OF MADISON

AGRICULTURE DR

N

DYNAMIC MESSAGE SIGN, OVERHEAD
PLANNED FOR 2013 (BY OTHERS)

R/W

R/W

USH 12/18 WB

USH 12/18 WB

USH 12/18 EB

USH 12/18 EB

WDS-0028-N
30-FOOT WOOD POLE
INSTALL SOLAR-POWERED BLUETOOTH SENSOR
(2) PLAQUES SEQUENCE IDENTIFICATION
Y 472,812
X 845,771
B

AGRICULTURE DR

R/W

SEE ITS CONSTRUCTION DETAILS SHEET 1

PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS PLANS - SHEET 42	0 50 100	SHEET 51	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_42.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

2

N

TOWN OF FULTON

SDS-53-0084-C
50-FOOT WOOD POLE
INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY
INSTALL SOLAR POWER SYSTEM - MICROWAVE DETECTOR
INSTALL POLE MOUNTED CABINET
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
0.6 MILES NORTH OF J-F TOWNLINE ROAD
Y 490,524
X 300,437

R/W

USH 51

USH 51

R/W

SEE ITS CONSTRUCTION DETAILS SHEET 34
SEE ITS COMMUNICATION SCHEMATICS SHEET 31

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 43	0 50 100	SHEET 52	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_43.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

2

2

N

USH 51

CCTV-53-0108-C
50-FOOT WOOD POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL VIDEO ENCODER (INTERNET)
INSTALL ETHERNET SWITCH (RS900)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
Y 286,273
X 490,432

USH 14 EB

OH

OH

EP-M1

CB-M1

OH

CONNECT INTO SIDE OF EP-M1
USING AN LB CONDUIT FITTING,
INSTALL NEW 30AMP BREAKER
IN EP-M1 AND CONNECT
ELECTRICAL WIRE LIGHTING

PB-M1
(locking)

(3) ELECTRICAL WIRE LIGHTING 6 AWG
(EP-M1 TO CCTV-53-0108-C)

OH

USH 14 WB

CITY OF JANESVILLE

USH 51

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 35
SEE ITS COMMUNICATION SCHEMATICS SHEET 32

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 44	0 50 100	SHEET 53	E

2

2

N

TOWN OF BRADFORD

230 FEET

SDS-53-0085-S
50-FOOT WOOD POLE
INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY
INSTALL SOLAR POWER SYSTEM - MICROWAVE DETECTOR
INSTALL POLE MOUNTED CABINET
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
0.8 MILES SOUTH OF USH 14
AND 1.1 MILES NORTH OF OLD HWY 140
Y 254,656
X 534,472

STH 140

STH 140

SEE ITS CONSTRUCTION DETAILS SHEET 36
SEE ITS COMMUNICATION SCHEMATICS SHEET 33

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 45	0 50 100	SHEET 54	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_45.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

2

2

TOWN OF CLINTON

CARVERS ROCK ROAD

N

DMS-53-0038-S
INSTALL GROUND MOUNT DYNAMIC MESSAGE SIGN
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL DMS CONTROLLER
INSTALL ETHERNET SWITCH (RS900)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
Y 229,023
X 543,952

EP-R1

PB-R1

PB-R2

87.5'

50'

I-43 SB

I-43 SB

(4) ELECTRICAL WIRE LIGHTING 6 AWG
(EP-R1 TO DMS-53-0038-S)

STEEL PLATE BEAM GUARD ENERGY
ABSORBING TERMINAL (1 EA.)

I-43 NB

I-43 NB

REMOVING GUARDRAIL (50')
STEEL PLATE BEAM GUARD CLASS A (87.5')

CARVERS ROCK ROAD

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 37
SEE ITS COMMUNICATION SCHEMATICS SHEET 34

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 46	0 50 100	SHEET 55	E

2

2

N

EXISTING RAMP CLOSURE GATE

EXISTING FTMS CONTROL CABINET

CONNECT NEW WIRE AND CABLE TO EXISTING EQUIPMENT
EXISTING METER BREAKER PEDESTAL (NO METER)
COORDINATE WITH ELECTRIC UTILITY TO COMPLETE
SERVICE INSTALLATION

EXISTING (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
REMOVE EXISTING CABLES
(3) ELECTRICAL WIRE LIGHTING 4 AWG (INCIDENTAL)

PB-S4

EP-S1

CB-S1

PB-S3

EXISTING CONDUIT RIGID NONMETALLIC
SCHEDULE 40 2-INCH
EXISTING RAMP CLOSURE GATE FLASHER CABLES

PB-S5

STH 140

EXISTING CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
EXISTING RAMP CLOSURE GATE FLASHER CABLES

EXISTING MICROWAVE DETECTOR
SALVAGE MOUNTED CONTROLLER
MICROWAVE DETECTOR ASSEMBLY
SALVAGE TYPE 5 POLE
REMOVE CABLE
PEDESTAL BASE TO REMAIN
CONCRETE BASE TO REMAIN

PB-S2

PB-S6

EXISTING CCTV (NO CAMERA)
SALVAGE CAMERA ASSEMBLY
SALVAGE 50-FOOT CAMERA POLE WITH LOWERING SYSTEM
REMOVE CONCRETE BASE
ABANDON CONDUITS TO PB-S1
INSTALL CONDUIT CAPS ON THE ENDS
OF THE 2 EXISTING 3-INCH CONDUITS

I-43 SB

EXISTING (2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH
REMOVE CABLE (ELECTRICAL CABLES)
(3) ELECTRICAL WIRE LIGHTING 4 AWG (INCIDENTAL)

I-43 SB

PB-S1

(2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
INSTALL CONDUITS INTO PB-S1
(3) ELECTRICAL WIRE LIGHTING 4 AWG (INCIDENTAL)

CV-S1

I-43 NB

I-43 NB

(1) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(TO NEW VAULT)

CCTV-53-0047-S
SDS-53-0083A-S
SDS-53-0083B-S
BASE CAMERA POLE 50-FOOT
INSTALL CAMERA POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL VIDEO ENCODER (INTERNET)
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
(4) PLAQUES SEQUENCE IDENTIFICATION
(2) INSTALL MOUNTED CONTROLLER
MICROWAVE DETECTOR ASSEMBLY
Y 228,932
X 535,698

PB-S7

EXISTING CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
EXISTING RAMP CLOSURE GATE FLASHER CABLES

STH 140

PB-S8

EXISTING RAMP CLOSURE GATE

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 38
SEE ITS COMMUNICATION SCHEMATICS SHEET 35

PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 47	0 50 100	SHEET 56	E

FILE NAME : ...\CADD\Sheets\ts_0301_its_47.dgn PLOT DATE : 1/31/2013 PLOT BY : TRANSMART PLOT NAME : PLOT SCALE : 1199.9978 sf / ft.

WISDOT/CADDS SHEET 42

R/W

R/W

N

EP-V1

CB-V1

PB-V1

SALVAGE LIGHTING CABINET IH 43 AND HART ROAD
LIGHTING CABINET IH 43 AND HART ROAD
DISCONNECT RAMP GATE WIRES IN EP-V1 AND CONNECT IN NEW LIGHTING CABINET
DISCONNECT LIGHTING WIRES IN EXISTING CABINET AND RECONNECT IN NEW LIGHTING CABINET

(3) ELECTRICAL WIRE LIGHTING 2 AWG
CONNECT TO NEW 30AMP BREAKER IN EP-V1

E HART ROAD

I-43 SB

I-43 SB

(2) CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH
(3) ELECTRICAL WIRE LIGHTING 2 AWG
(INSTALL CONDUIT INTO PB-V2)

MP 2.0

MP 1.8

INSTALL CONDUIT INTO
EXISTING PULLBOX

I-43 NB

I-43 NB

PB-V2

PB-V3
(locking)

CV-V1

REMOVE PULL BOX

REMOVE CONCRETE BASE

(1) CONDUIT RIGID NONMETALLIC
SCHEDULE 40 2-INCH
(TO NEW VAULT)

CCTV-53-0046-S
SDS-53-0082A-S / SDS-53-0082B-S
BASE CAMERA POLE 50-FOOT
INSTALL CAMERA POLE
INSTALL CAMERA ASSEMBLY
INSTALL POLE MOUNTED CABINET
ELECTRICAL SERVICE BREAKER DISCONNECT BOX
INSTALL VIDEO ENCODER (INTERNET)
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
(4) PLAQUES SEQUENCE IDENTIFICATION
(2) INSTALL MOUNTED CONTROLLER
MICROWAVE DETECTOR ASSEMBLY
MP 1.94 (I-43)
Y 217,210
X 513,365

R/W

R/W

E HART ROAD

ELECTRICAL SERVICE AT THIS LOCATION PROVIDED BY
ALLIANT ENERGY.
SEE GENERAL NOTES FOR CONTACT INFORMATION.

SEE ITS CONSTRUCTION DETAILS SHEET 39
SEE ITS COMMUNICATION SCHEMATICS SHEET 36

2

CITY OF BELOIT

N

SDS-53-0086-S
50-FOOT WOOD POLE
INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY
INSTALL SOLAR POWER SYSTEM - MICROWAVE DETECTOR
INSTALL POLE MOUNTED CABINET
INSTALL ETHERNET SWITCH (RS400)
INSTALL CELLULAR MODEM
(2) PLAQUES SEQUENCE IDENTIFICATION
0.7 MILES SOUTH OF MILLINGTON ROAD
1.0 MILES NORTH OF CRANSTON ROAD
Y 210,616
X 509,647

38'
AT&T PEDESTAL
R/W
18'
BACK OF CURB
150'
129'
CONC. CULVERT
HYDRANT
GATEWAY BLVD
GATEWAY BLVD
R/W

SEE ITS CONSTRUCTION DETAILS SHEET 40
SEE ITS COMMUNICATION SCHEMATICS SHEET 37

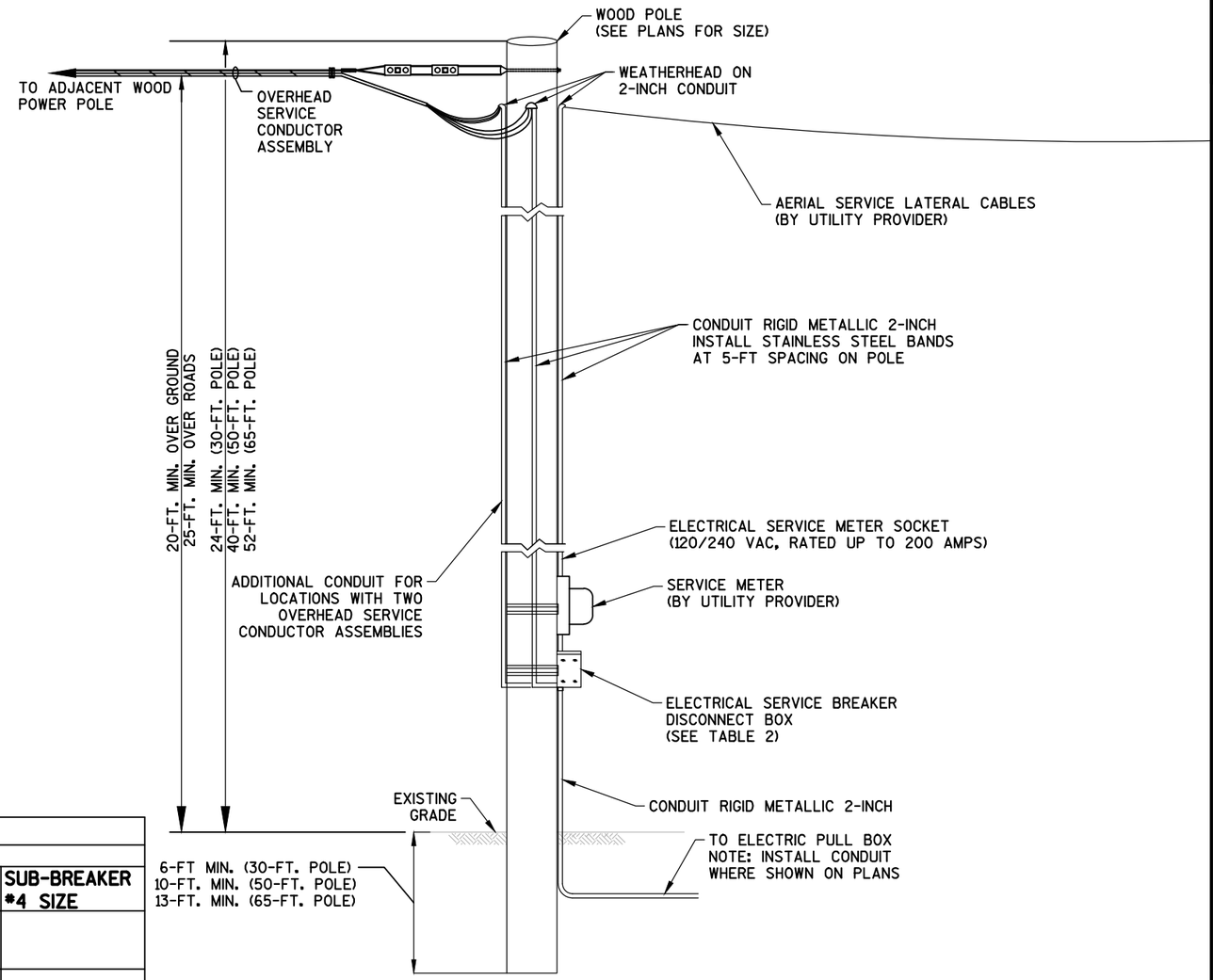
PROJECT NO: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ITS PLANS - SHEET 49	0 50 100	SHEET 58	E

NOT TO SCALE

TABLE 1		
STANDARD BREAKER SIZES + LABELS		
DEVICE TYPE	BREAKER SIZE	BREAKER LABEL
MAIN	*100 AMPS (2P)	MAIN
RWIS	20 AMPS	RWIS
RAMP CLOSURE GATE	20 AMPS	GATE(S)
WIRELESS MESH NODE	30 AMPS	WMN
CCTV CAMERA	30 AMPS	CCTV
SDS	30 AMPS	SDS
CCTV CAMERA + SDS	30 AMPS	CCTV/SDS
DMS	60 AMPS (2P)	DMS
BACK-TO-BACK DMS	100 AMPS (2P)	DMS
SPARE	30 AMPS	SPARE

GENERAL NOTES:
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

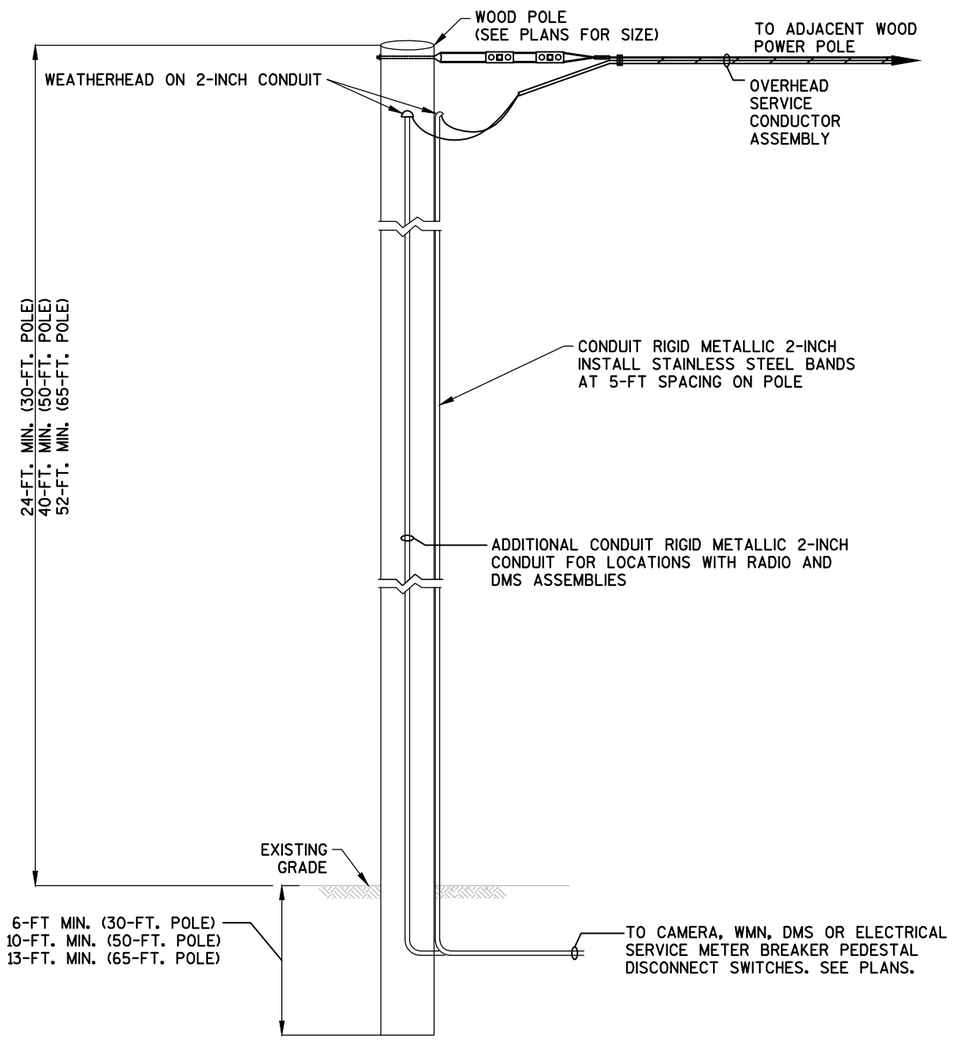
TABLE 2						
BREAKER SIZES BY LOCATION						
LOCATION	ID	MAIN BREAKER SIZE *	SUB-BREAKER #1 SIZE	SUB-BREAKER #2 SIZE	SUB-BREAKER #3 SIZE	SUB-BREAKER #4 SIZE
I-39/90 AT LAKE DRIVE ROAD	DMS-13-0041-N WDS-0011-N	100 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (SPARE)		
I-39/90 AT STH 59	CCTV-53-0104-C	100 AMPS (2P)	30 AMPS (CCTV)	30 AMPS (SPARE)		
I-39/90 AT 0.2 MILES SOUTH OF CTH M	DMS-53-0045-C DMS-53-0046-C CCTV-53-0105-C	200 AMPS (2P)	60 AMPS (2P) (DMS)	60 AMPS (2P) (DMS)	30 AMPS (CCTV)	30 AMPS (SPARE)
I-39/90 AT H-M TOWNLINE ROAD	CCTV-53-0106-C	100 AMPS (2P)	30 AMPS (CCTV)	30 AMPS (SPARE)		
I-39/90 AT CREEK ROAD	WMN-0068-S	100 AMPS (2P)	30 AMPS (WMN)	30 AMPS (SPARE)		
I-39/90 AT HART ROAD	DMS-53-0042-S WDS-0024-S WMN-0070-S	100 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (WMN)	30 AMPS (SPARE)	



ELECTRICAL SERVICE METER SOCKET (LOCATION)

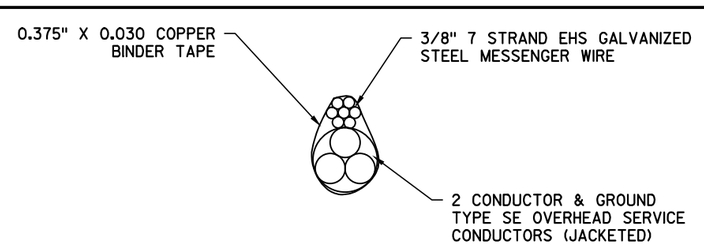
*NOTE:
MAIN BREAKER SIZE MAY BE INCREASED IF MAXIMUM POWER DRAW IS EXPECTED TO EXCEED 100 AMPS.

NOT TO SCALE

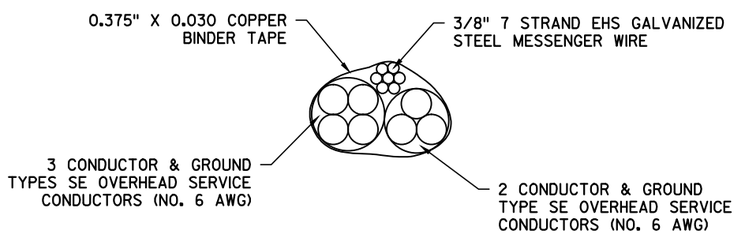


WOOD POLE
WITH WEATHERHEAD AND RISER

GENERAL NOTES:
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.



CONDUCTOR LASHING DETAIL - NO. 6 or NO. 2 AWG
OVERHEAD SERVICE CONDUCTORS
N.T.S.

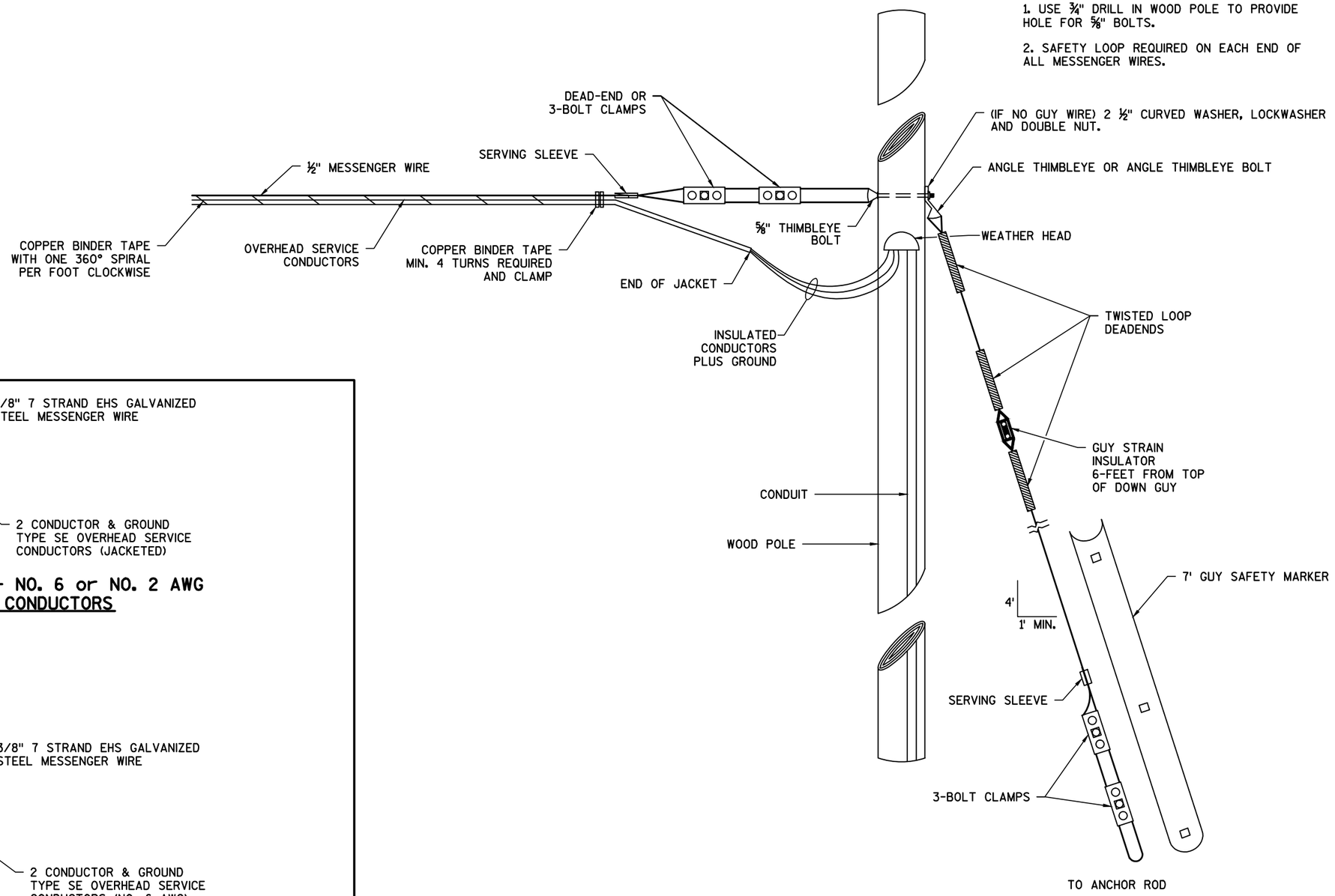


CONDUCTOR LASHING DETAIL - NO. 6 AWG - 3 WIRE
AND NO. 6 AWG - 4 WIRE AWG
OVERHEAD SERVICE CONDUCTORS
N.T.S.

GENERAL NOTES

1. USE ¾" DRILL IN WOOD POLE TO PROVIDE HOLE FOR ⅝" BOLTS.

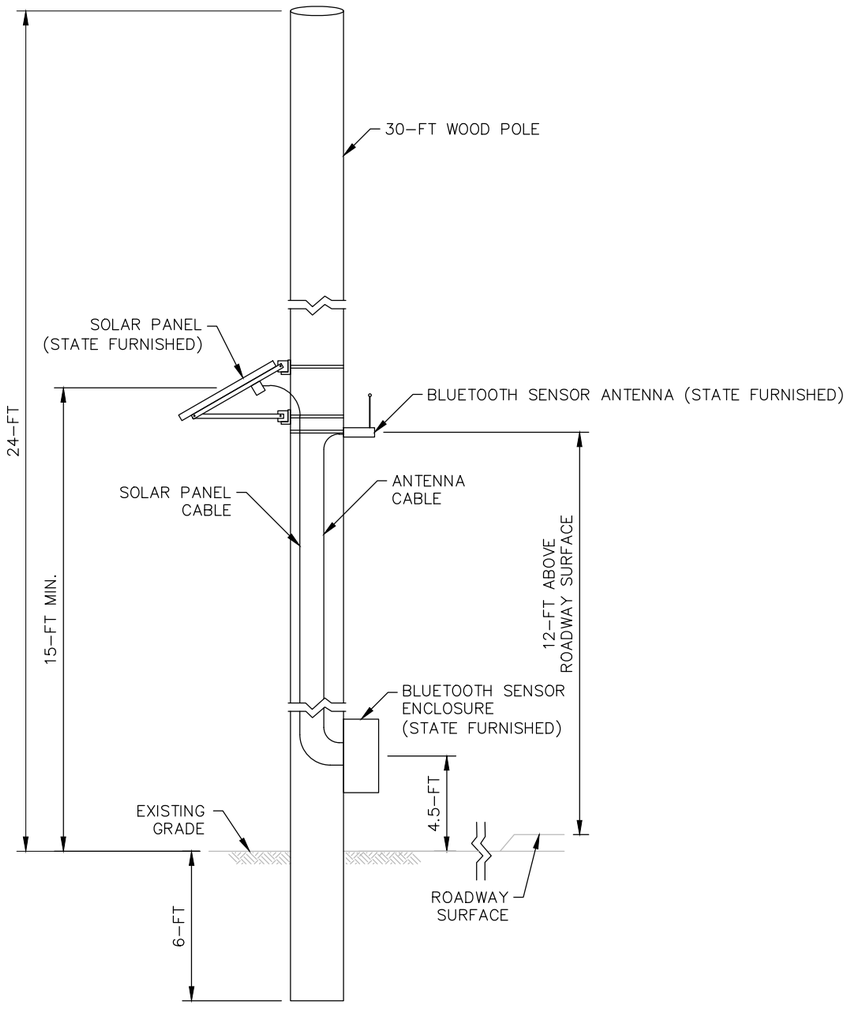
2. SAFETY LOOP REQUIRED ON EACH END OF ALL MESSENGER WIRES.



OVERHEAD SERVICE POLE ATTACHMENT DETAIL
N.T.S.

PROJECT NO: 1003-30/50/70-10-70	HWY: IH 39	COUNTY: ROCK & DANE	OVERHEAD SERVICE CONSTRUCTION DETAILS - SHEET 3 OF 3	SHEET	E

FILE NAME : L:\WORK\PROJECTS\60242867\000_CAD\001_DRAWINGS\ITS\021003_CD_ITS.DWG
PLOT DATE : 3/8/2013 10:06 AM PLOT BY : ARBUCKLE, ADRIAN PLOT NAME : PLOT SCALE : N.T.S.
WISDOT/CADDS SHEET 42



STANDALONE SOLAR–POWERED BLUETOOTH SITES		
ID	LOCATION	ITS PLANS
WDS–0002–N (WB)	I–39/90 @ STORCK ROAD	SHEET 2
WDS–0003–N (EB)	I–39/90 @ WILLIAMS DRIVE	SHEET 3
WDS–0004–N (WB)	I–39/90 @ CHURCH STREET	SHEET 5
WDS–0005–N (EB)	I–39/90 @ CTH W	SHEET 6
WDS–0006–N (WB)	I–39/90 @ CTH B	SHEET 7
WDS–0007–N (EB)	I–39/90 @ CTH A	SHEET 9
WDS–0008–N (WB)	I–39/90 @ MAPLE GROVE ROAD	SHEET 11
WDS–0009–N (EB)	I–39/90 @ STH 106	SHEET 12
WDS–0010–N (EB)	I–39/90 @ LAKE DRIVE ROAD	SHEET 14
WDS–0011–N (WB)	I–39/90 @ LAKE DRIVE ROAD	SHEET 14
WDS–0012–C (WB)	I–39/90 @ KNUTSON ROAD	SHEET 16
WDS–0014–C (EB)	I–39/90 @ RUSSEL ROAD	SHEET 20
WDS–0015–C (EB)	I–39/90 @ BETWEEN USH 14 & STH 26	SHEET 22
WDS–0016–C (WB)	I–39/90 @ BETWEEN USH 14 & STH 26	SHEET 22
WDS–0018–C (WB)	I–39/90 @ MILWAUKEE STREET	SHEET 24
WDS–0019–S (WB)	I–39/90 @ CTH O	SHEET 26
WDS–0020–S (EB)	I–39/90 @ 0.5 MILES NORTH OF AVALON ROAD	SHEET 27
WDS–0022–S (EB)	I–39/90 @ L–T TOWNLINE ROAD	SHEET 31
WDS–0023–S (EB)	I–39/90 @ HART ROAD	SHEET 34
WDS–0025–S (WB)	I–39/90 @ CRANSTON ROAD	SHEET 36
WDS–0028–N (EB)	USH 12/18 @ AGRICULTURE DRIVE	SHEET 42

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

ORIENT SOLAR PANEL AS CLOSE TO SOUTH AS POSSIBLE.

INSTALL SOLAR–POWERED BLUETOOTH SENSOR
(STANDALONE SOLAR–POWERED BLUETOOTH SITES)

ORIGINAL PLANS PREPARED BY

SRF Consulting Group, Inc.

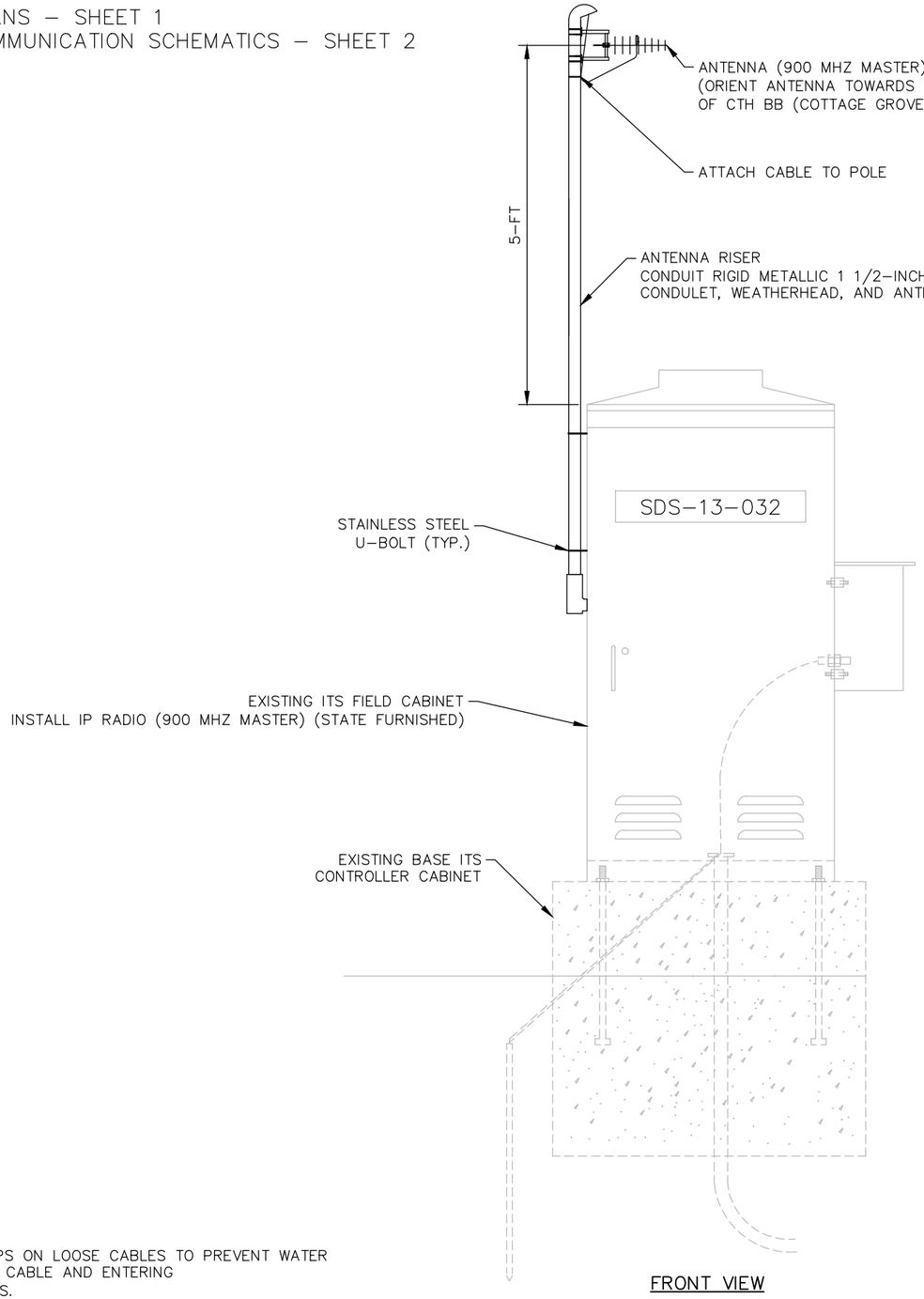
ITS CONSTRUCTION DETAILS – SHEETS 1–46

WISCONSIN
JORDAN J. SCHWARZE
E-41326
PLYMOUTH, MN
PROFESSIONAL ENGINEER

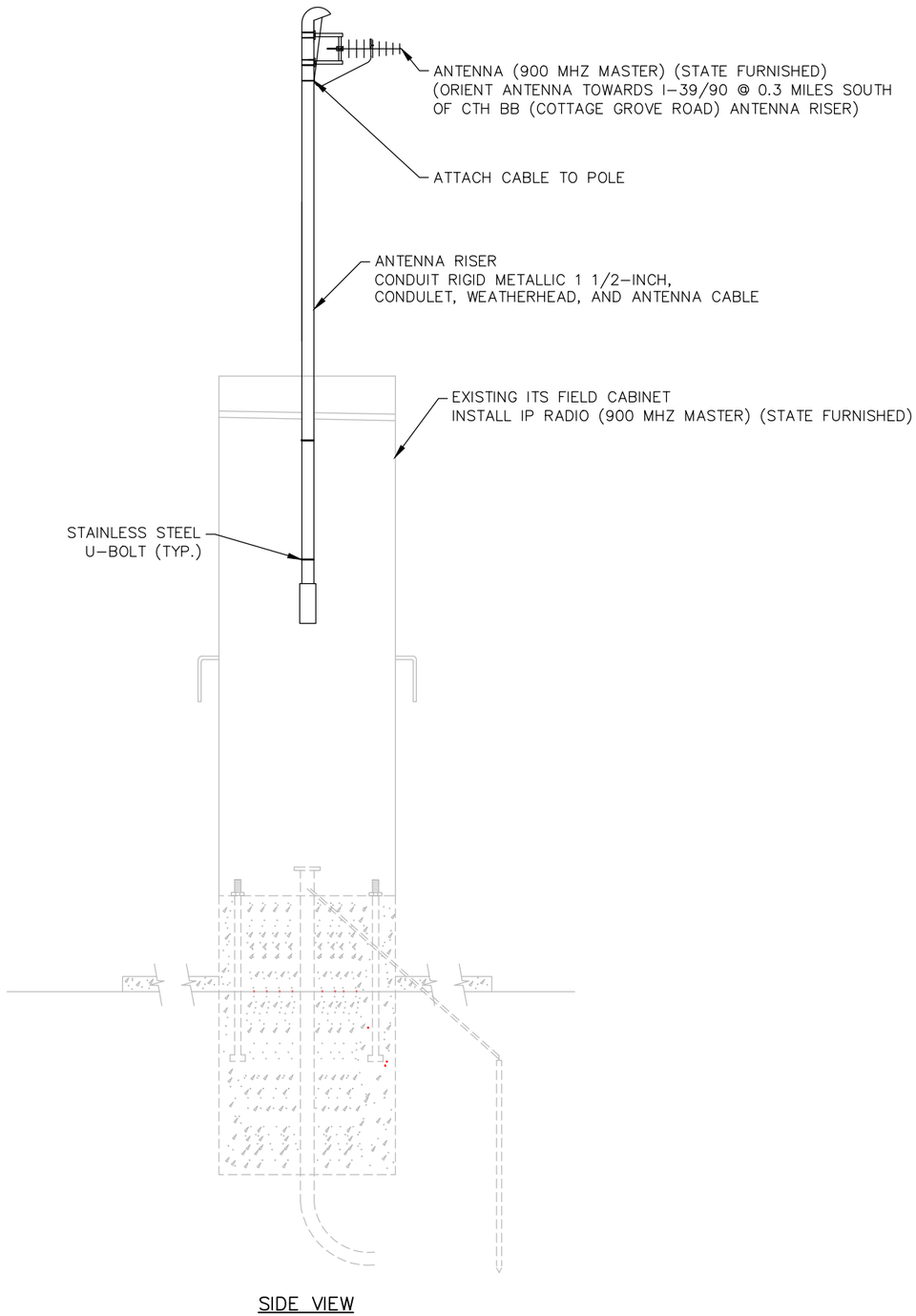
2/1/2013 (Date)

Jordan Schwarze (Signature)

SEE ITS PLANS – SHEET 1
SEE ITS COMMUNICATION SCHEMATICS – SHEET 2



FRONT VIEW



SIDE VIEW

GENERAL NOTES:

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

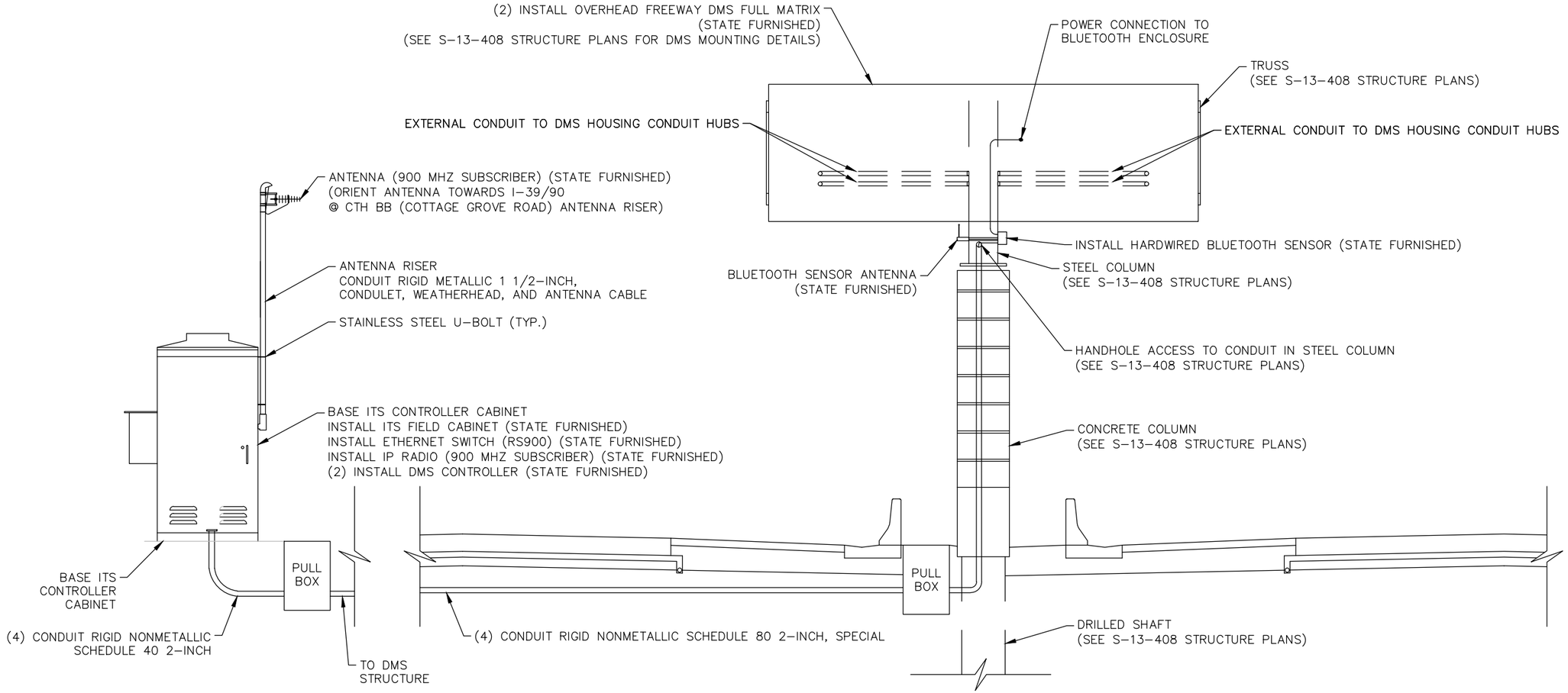
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

I–39/90 @ CTH BB (COTTAGE GROVE ROAD)

PROJECT NO:1007–10–70	HWY:I-39/90	COUNTY:DANE	ITS CONSTRUCTION DETAILS - SHEET 2	SHEET	E

FILE NAME : H:\PROJMDSN\7644\IT\PLAN\DETAILS\CONSTRUCTION DETAILS\ITS EARLY LETTING CONSTRUCTION DETAILS.DWG PLOT DATE : 2/1/2013 4:17 PM PLOT BY : JORDAN SCHWARZE PLOT NAME : ----------
WISDOT/CADDS SHEET 42

SEE ITS PLANS – SHEET 1
SEE ITS COMMUNICATION SCHEMATICS – SHEET 2



ELEVATION VIEW

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

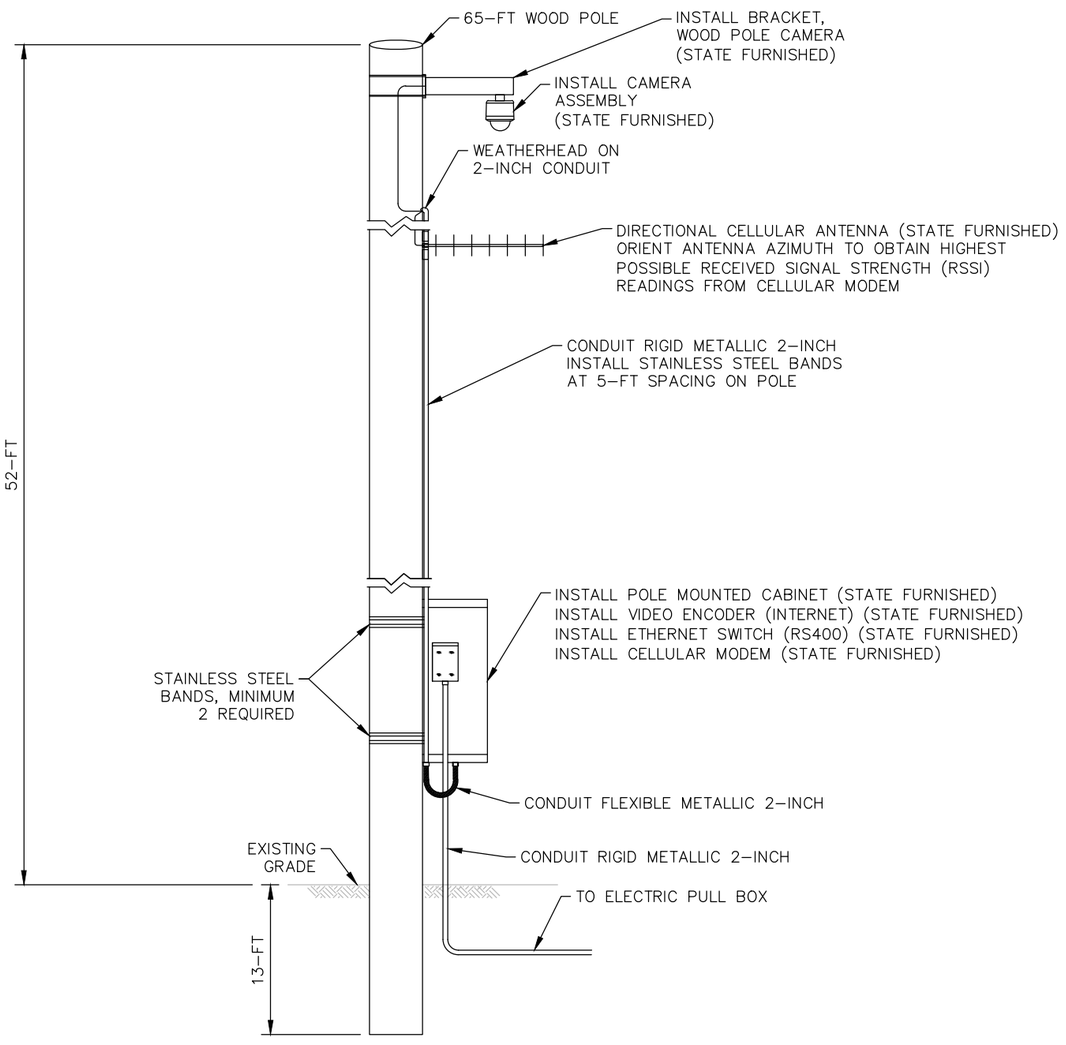
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

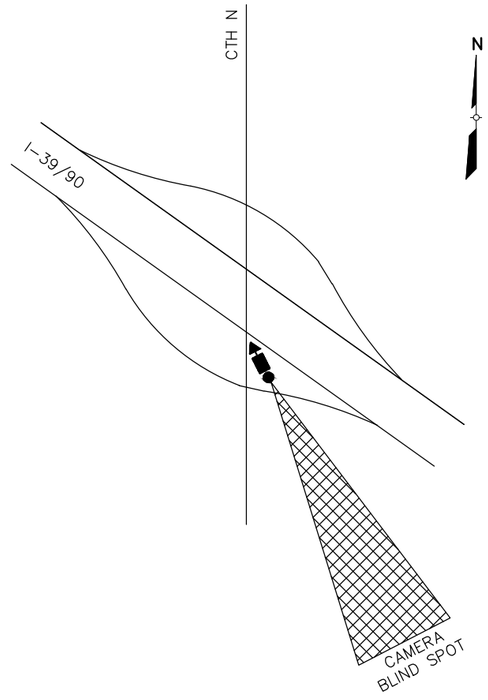
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT AND SECURED TO DMS STRUCTURE AT 5–FT INTERVALS.

DMS–13–0043–N (WB)
DMS–13–0044–N (EB)
WDS–0001–N (WB/EB)
I–39/90 @ 0.3 MILES SOUTH OF CTH BB (COTTAGE GROVE ROAD)

SEE ITS PLANS – SHEET 4
SEE ITS COMMUNICATION SCHEMATICS – SHEET 3

2





CAMERA ORIENTATION DETAIL

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

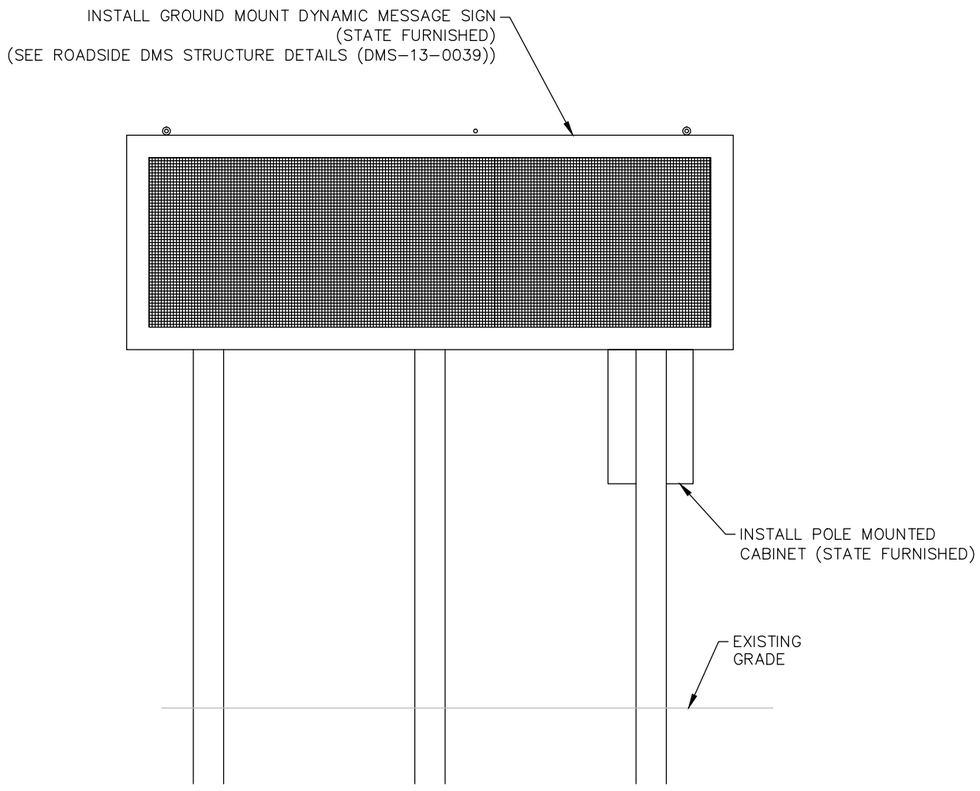
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

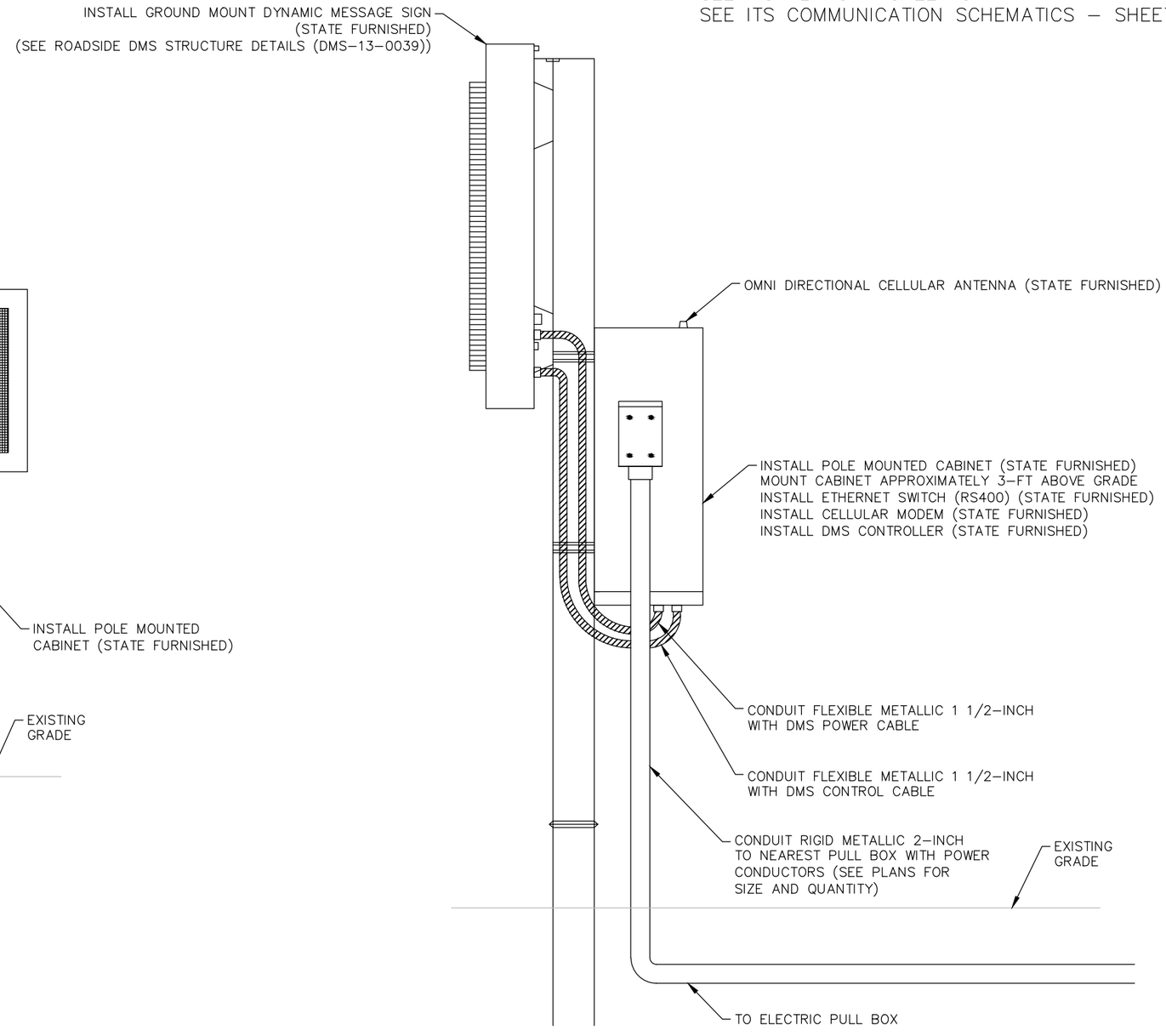
CCTV–13–0100–N
I–39/90 @ CTH N

SEE ITS PLANS – SHEET 5
SEE ITS COMMUNICATION SCHEMATICS – SHEET 4

2



ELEVATION VIEW



SECTION VIEW

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

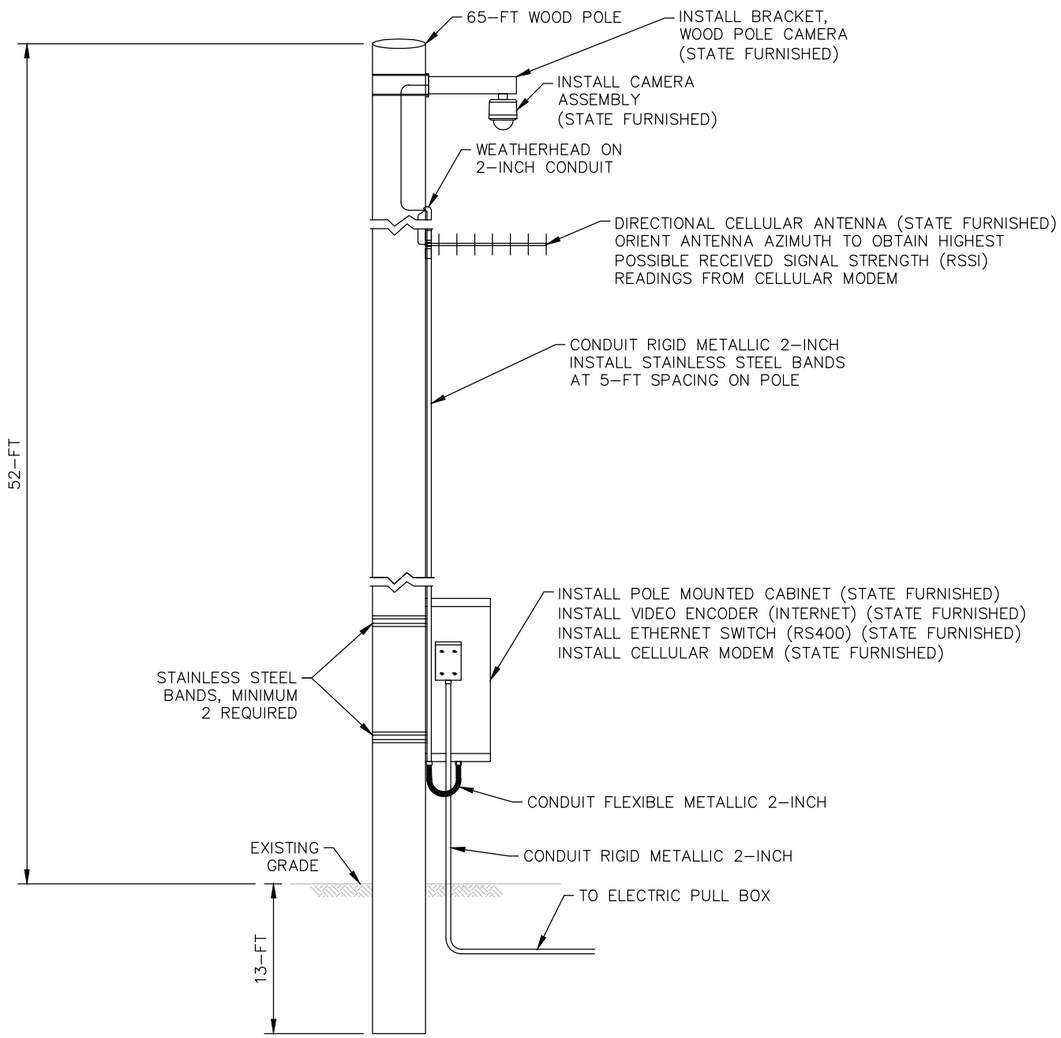
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

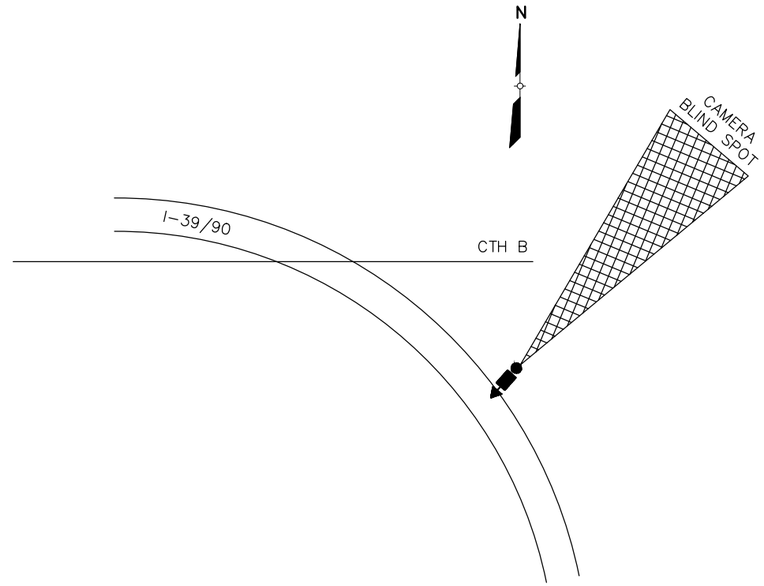
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT AND SECURED TO DMS STRUCTURE AT 5–FT INTERVALS.

DMS–13–0039–N (WB)
I–39/90 @ CHURCH STREET

SEE ITS PLANS – SHEET 8
SEE ITS COMMUNICATION SCHEMATICS – SHEET 5

2





CAMERA ORIENTATION DETAIL

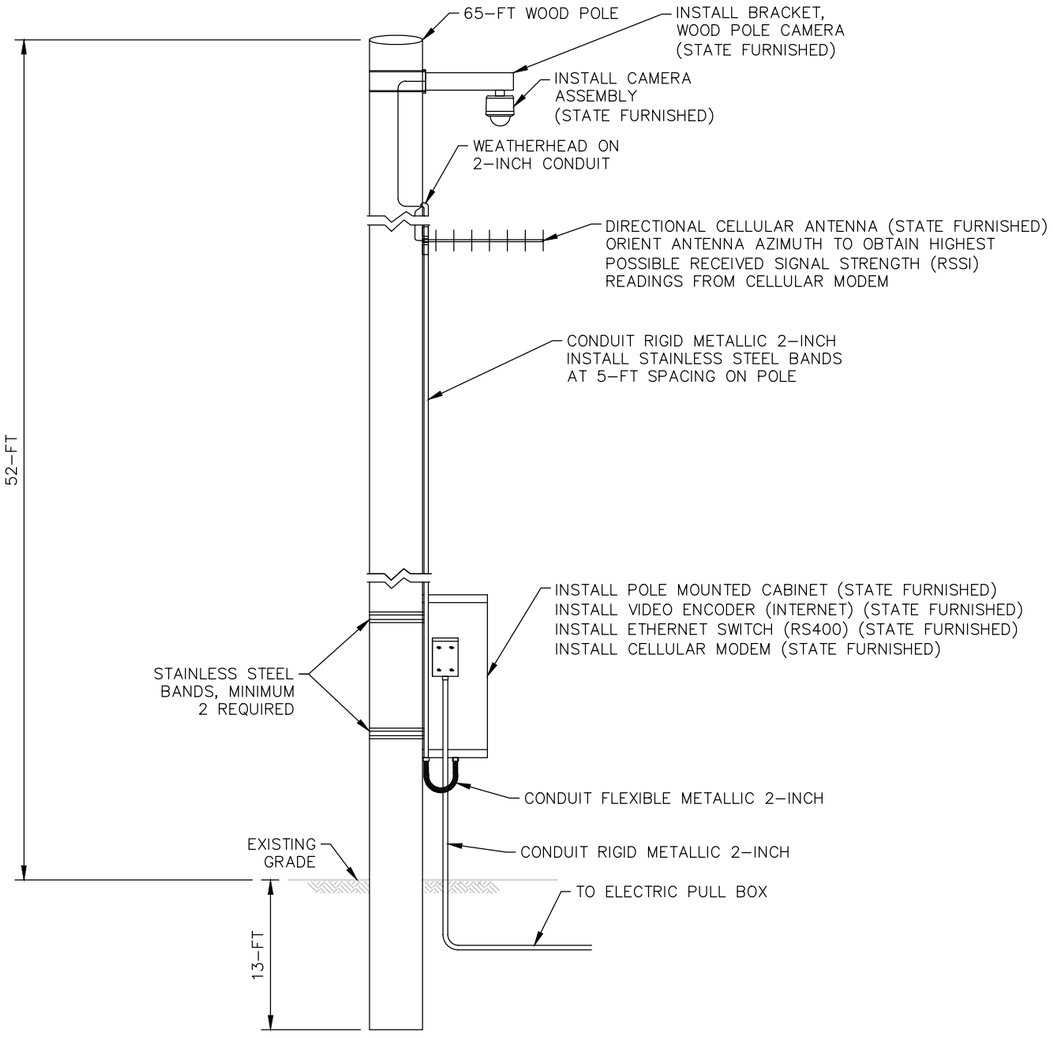
GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

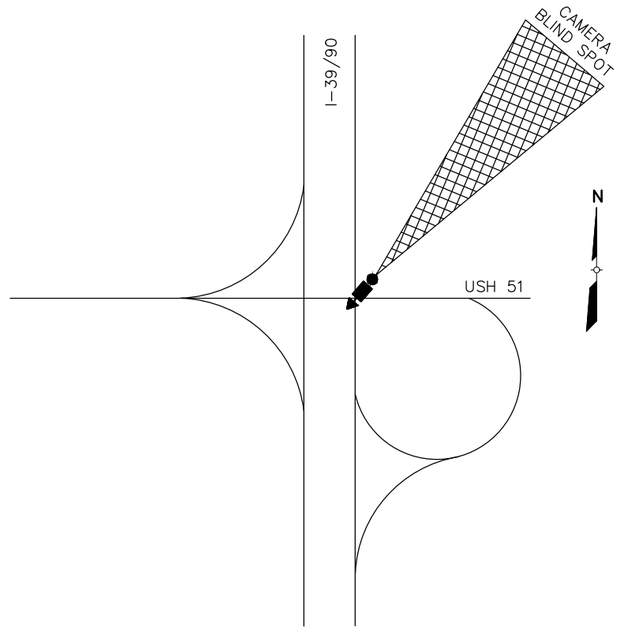
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

CCTV–13–0101–N
I–39/90 @ CTH B





CAMERA ORIENTATION DETAIL

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

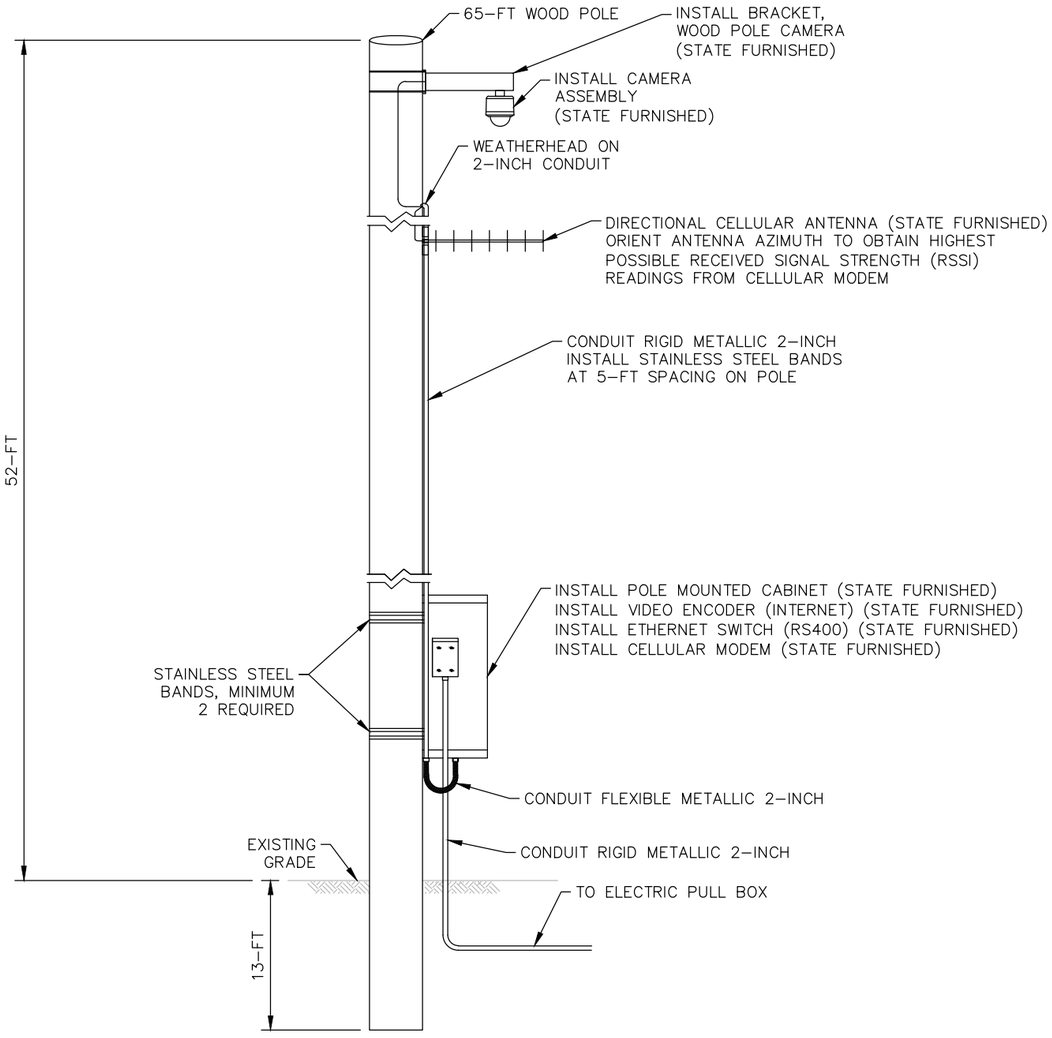
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

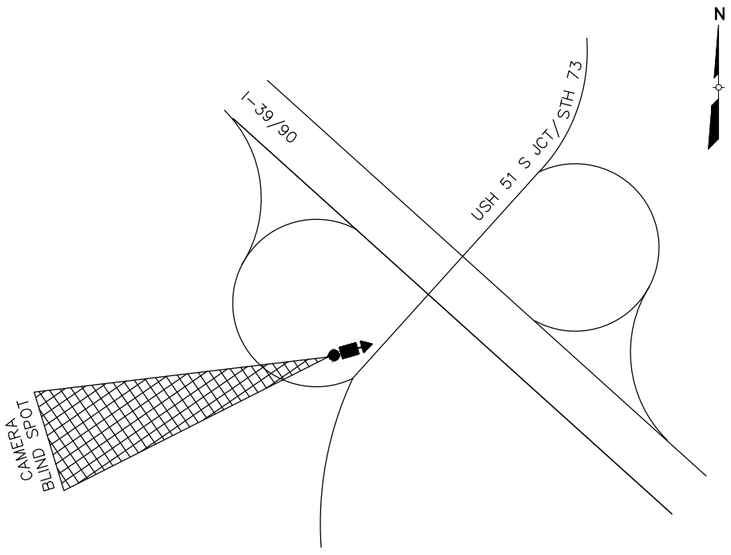
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

CCTV–13–0102–N
I–39/90 @ USH 51 N JCT

SEE ITS PLANS – SHEET 13
SEE ITS COMMUNICATION SCHEMATICS – SHEET 7

2





CAMERA ORIENTATION DETAIL

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

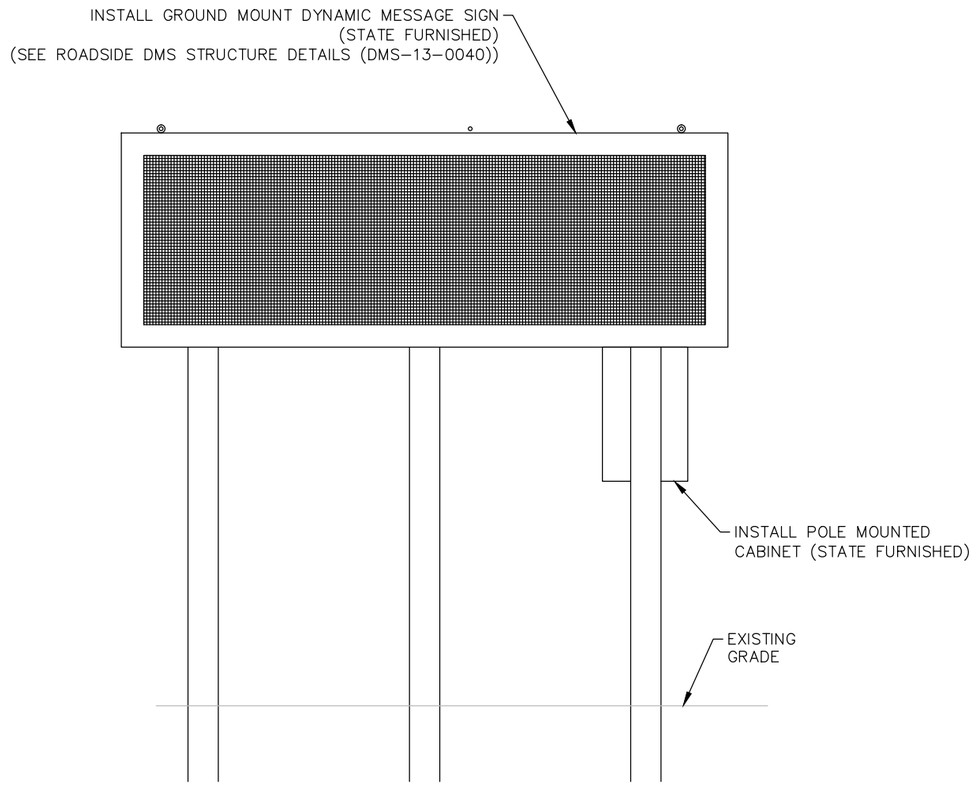
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

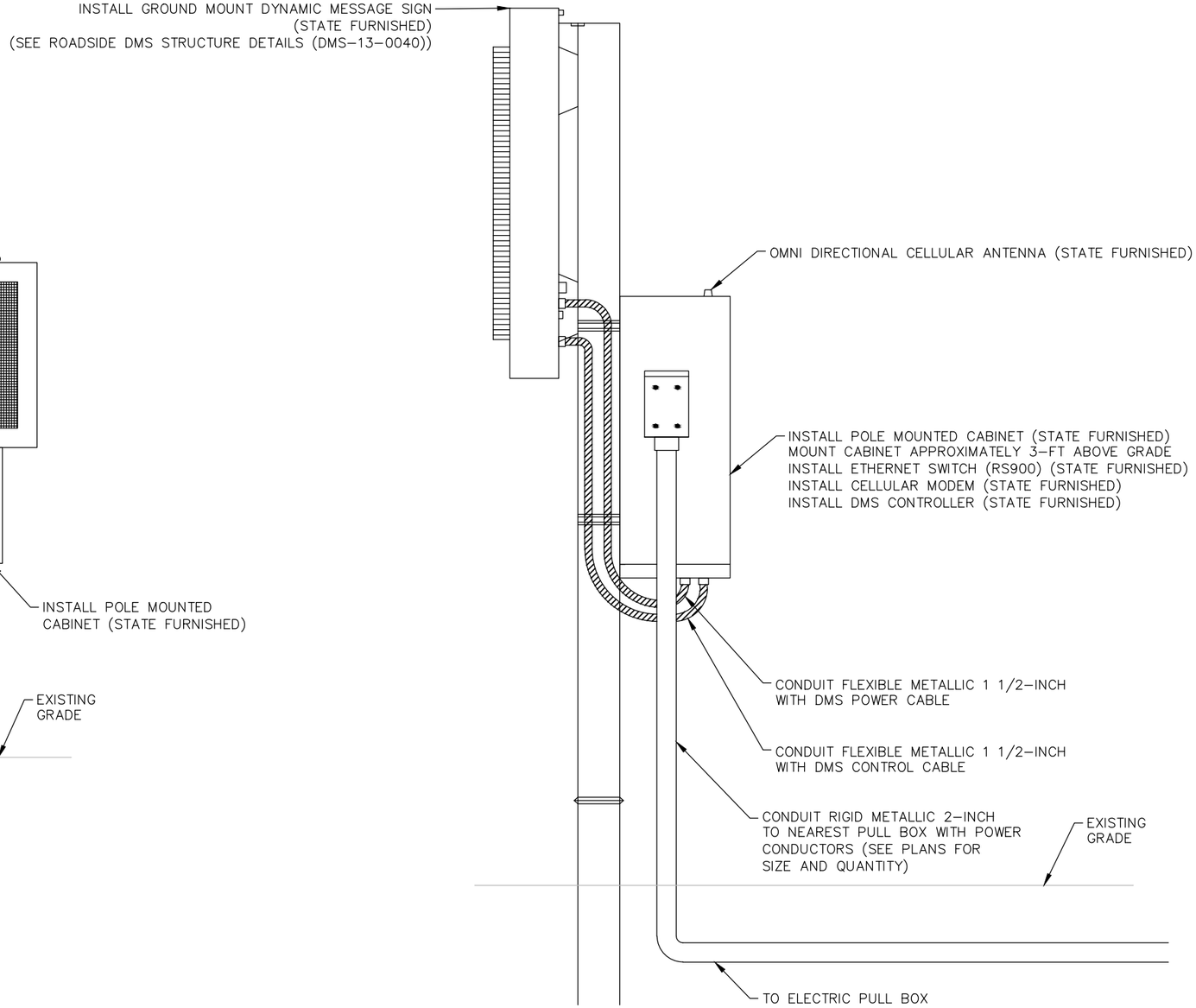
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

CCTV–13–0103–N
I–39/90 @ USH 51 S JCT/STH 73

SEE ITS PLANS – SHEET 14
SEE ITS COMMUNICATION SCHEMATICS – SHEET 8



ELEVATION VIEW



SECTION VIEW

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

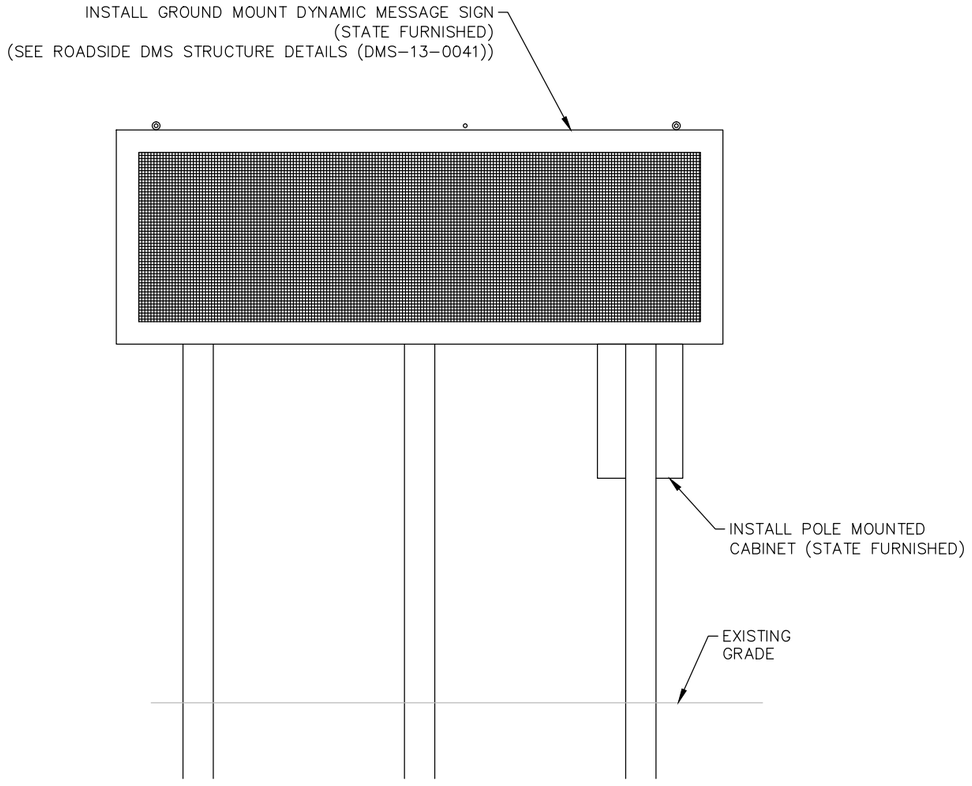
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

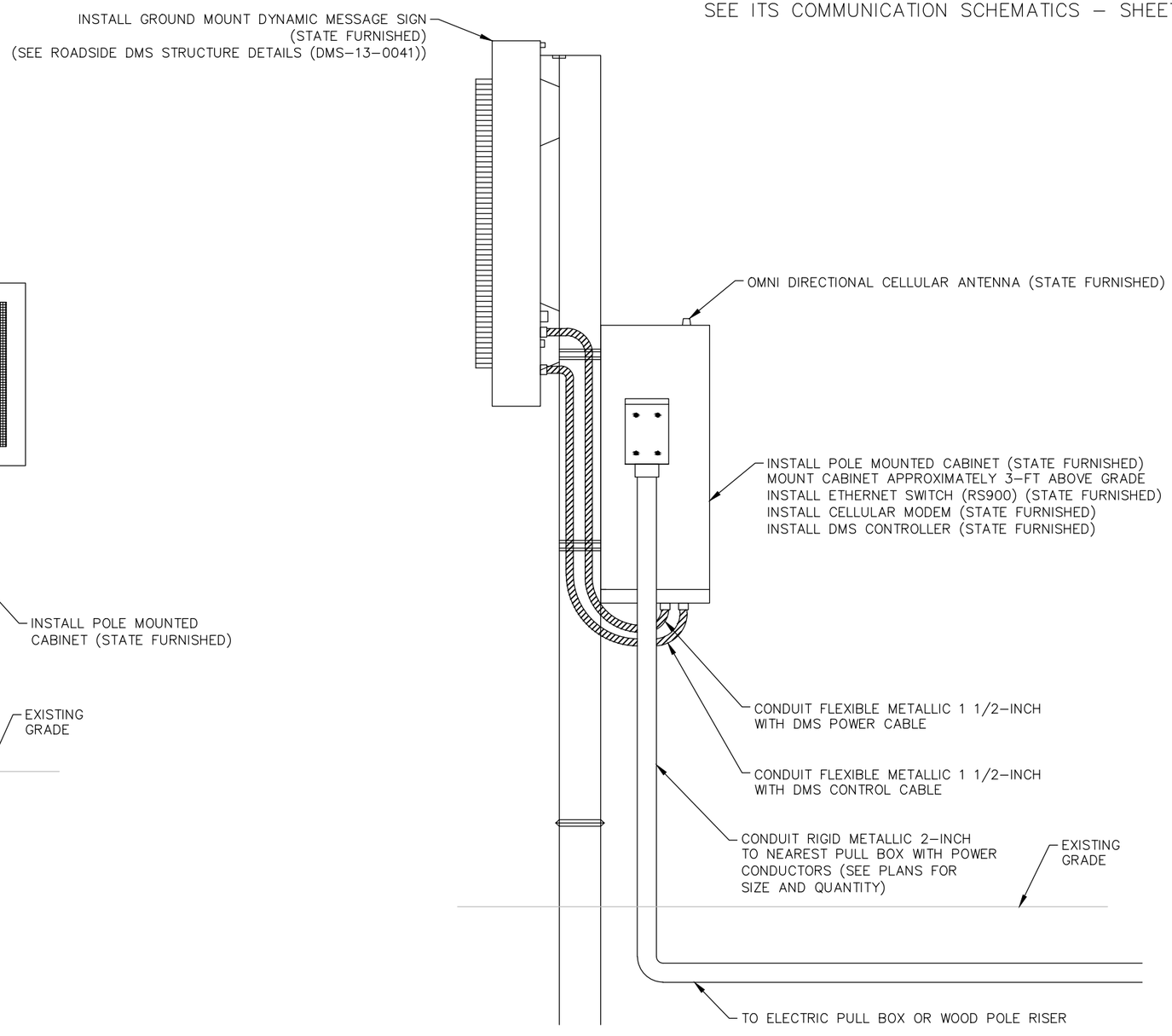
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT AND SECURED TO DMS STRUCTURE AT 5–FT INTERVALS.

DMS–13–0040–N (EB)
I–39/90 @ LAKE DRIVE ROAD

SEE ITS PLANS – SHEET 14
SEE ITS COMMUNICATION SCHEMATICS – SHEET 9



ELEVATION VIEW



SECTION VIEW

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

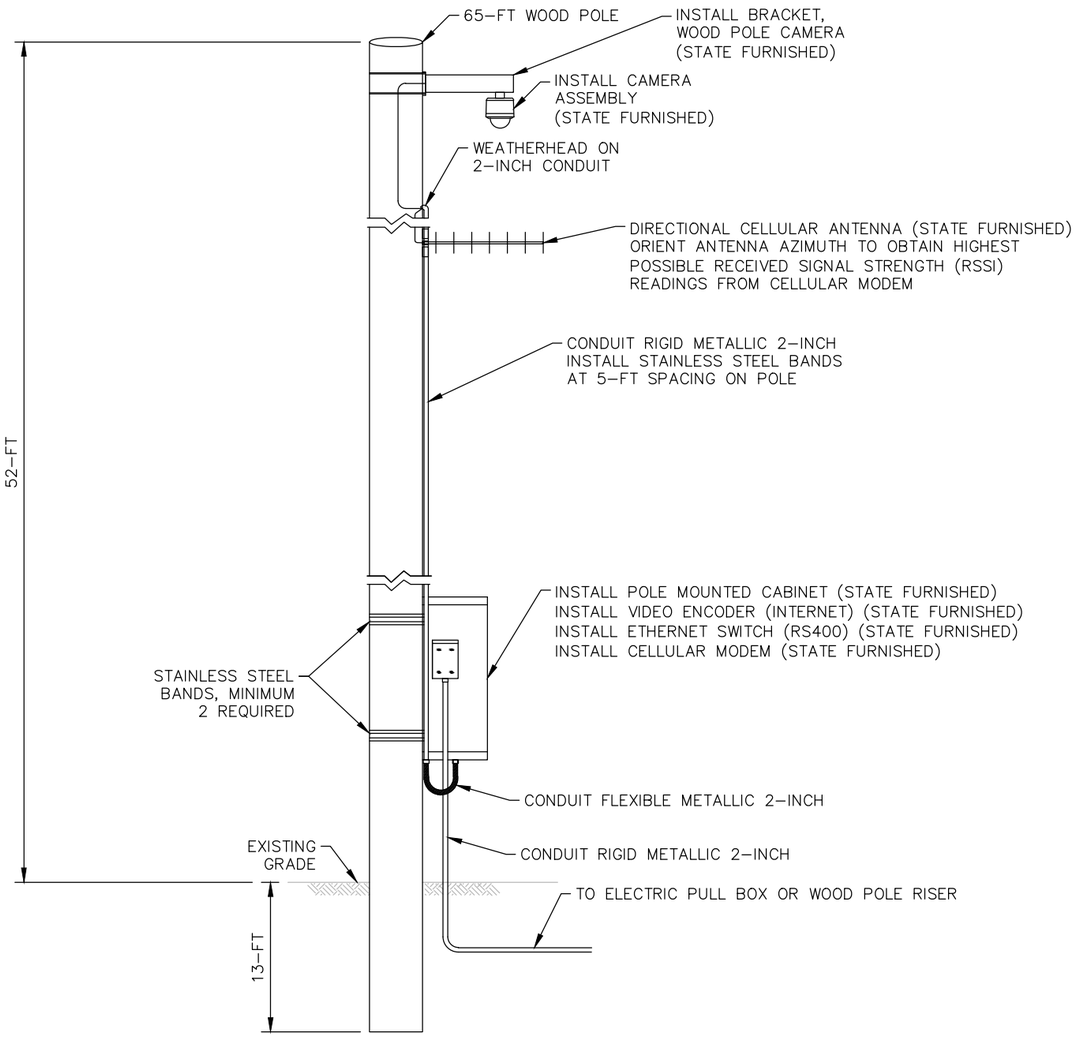
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

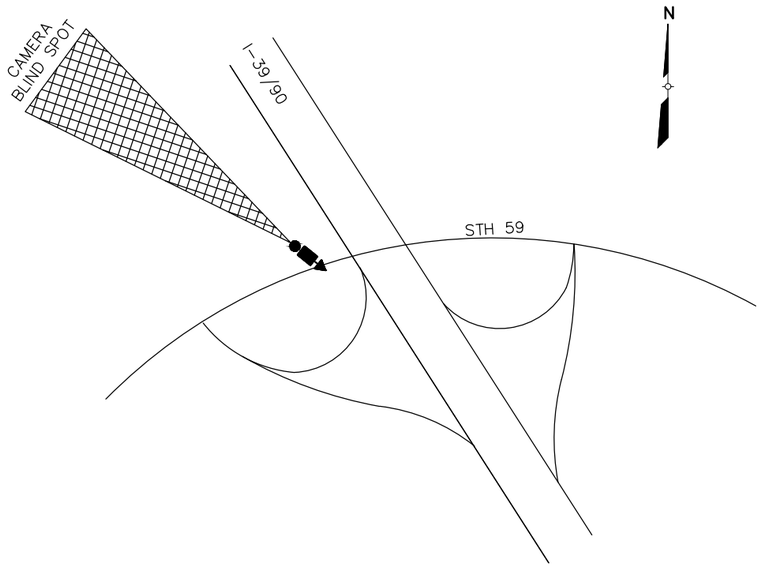
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT AND SECURED TO DMS STRUCTURE AT 5–FT INTERVALS.

DMS–13–0041–N (WB)
I–39/90 @ LAKE DRIVE ROAD

SEE ITS PLANS – SHEET 15
SEE ITS COMMUNICATION SCHEMATICS – SHEET 10

2





CAMERA ORIENTATION DETAIL

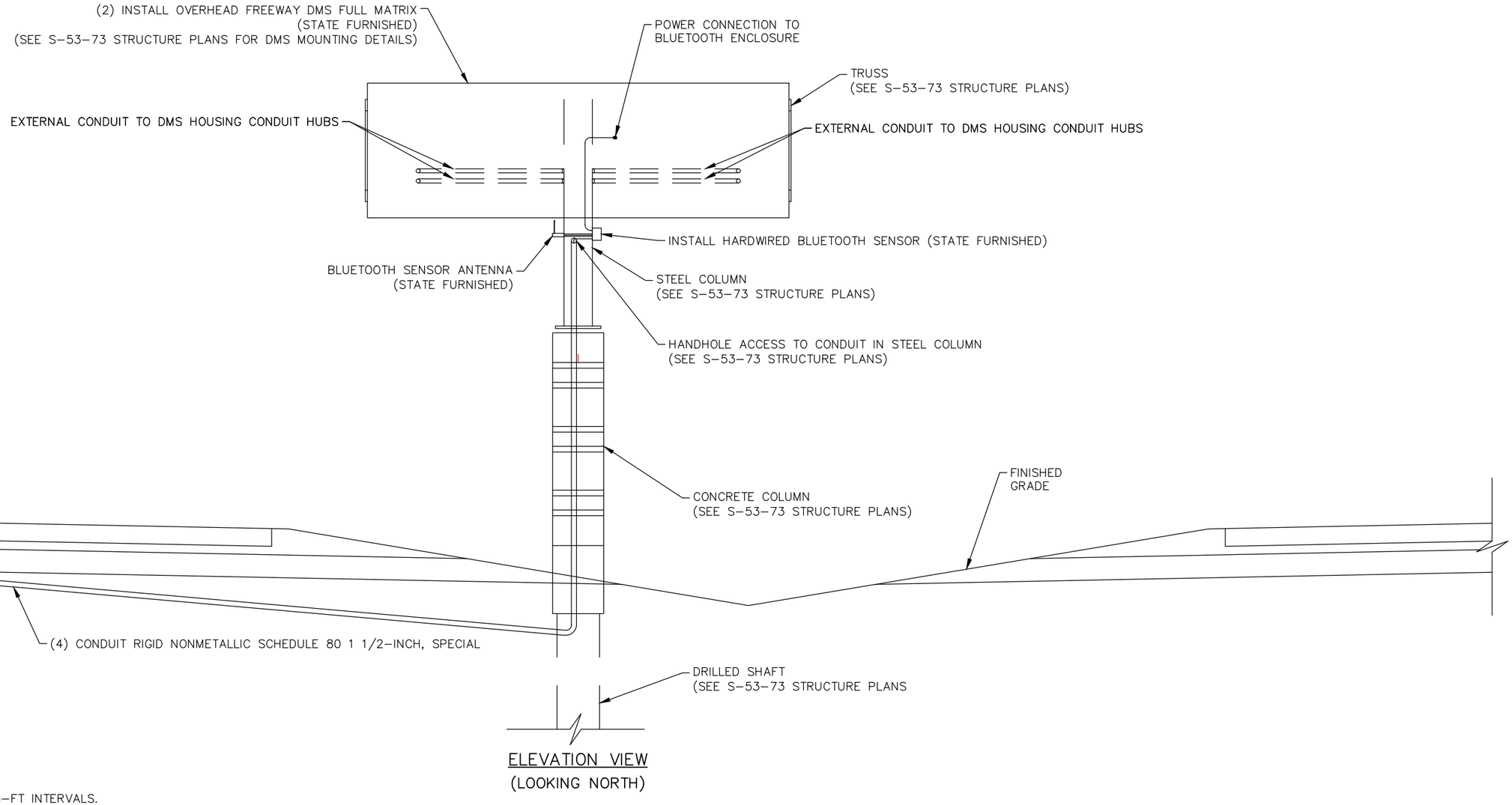
GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

CCTV–53–0104–C
I–39/90 @ STH 59



ELEVATION VIEW
(LOOKING NORTH)

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

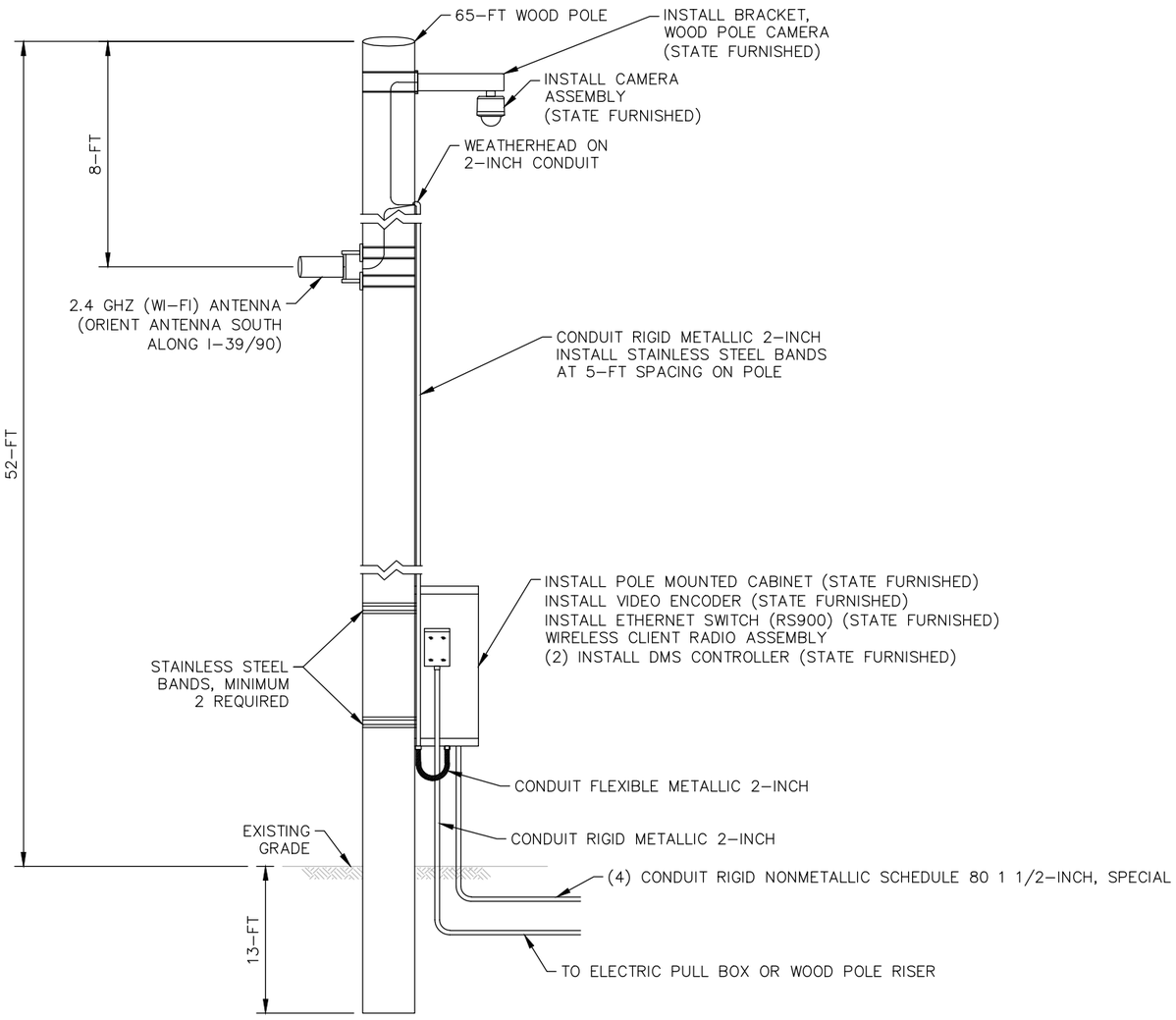
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

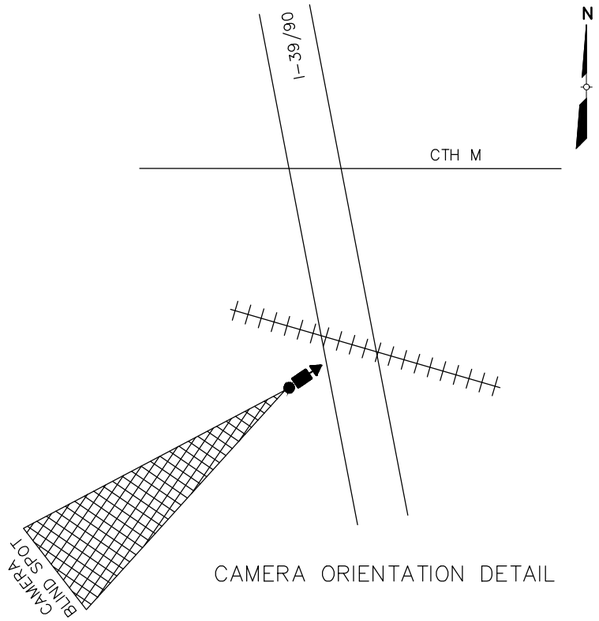
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT AND SECURED TO DMS STRUCTURE AT 5–FT INTERVALS.

DMS–53–0045–C (WB)
DMS–53–0046–C (EB)
WDS–0013–C (WB/EB)
I–39/90 @ 0.2 MILES SOUTH OF CTH M

SEE ITS PLANS – SHEET 17
SEE ITS COMMUNICATION SCHEMATICS – SHEET 11

2





CAMERA ORIENTATION DETAIL

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

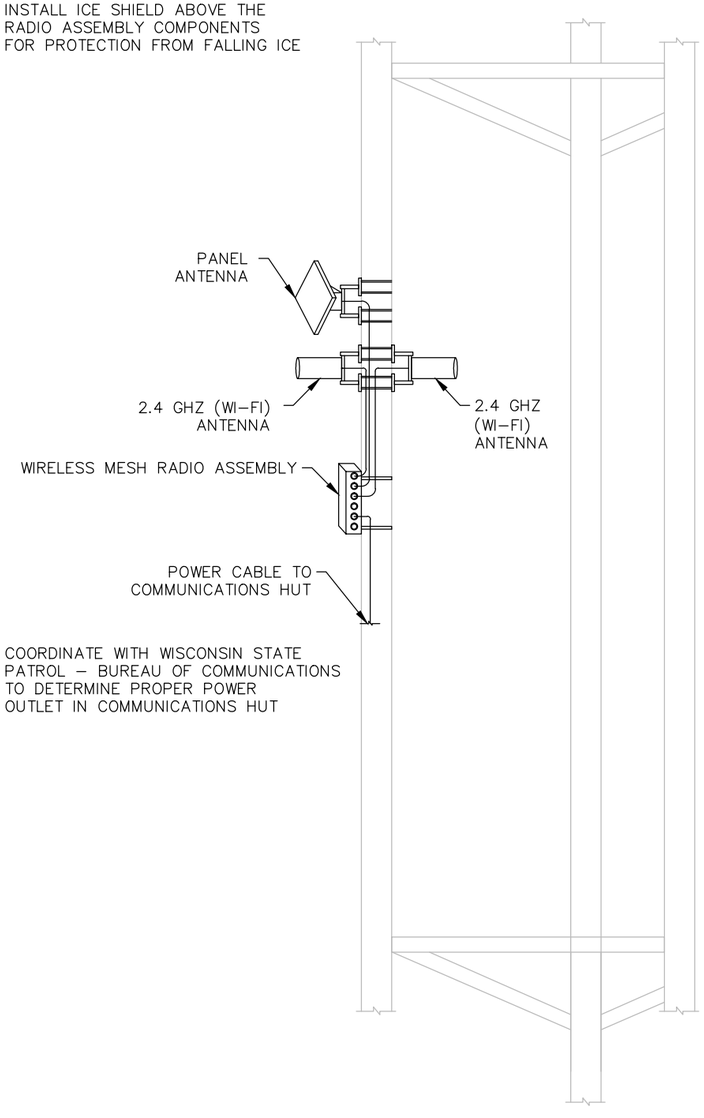
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

CCTV–53–0105–C
I–39/90 @ 0.2 MILES SOUTH OF CTH M

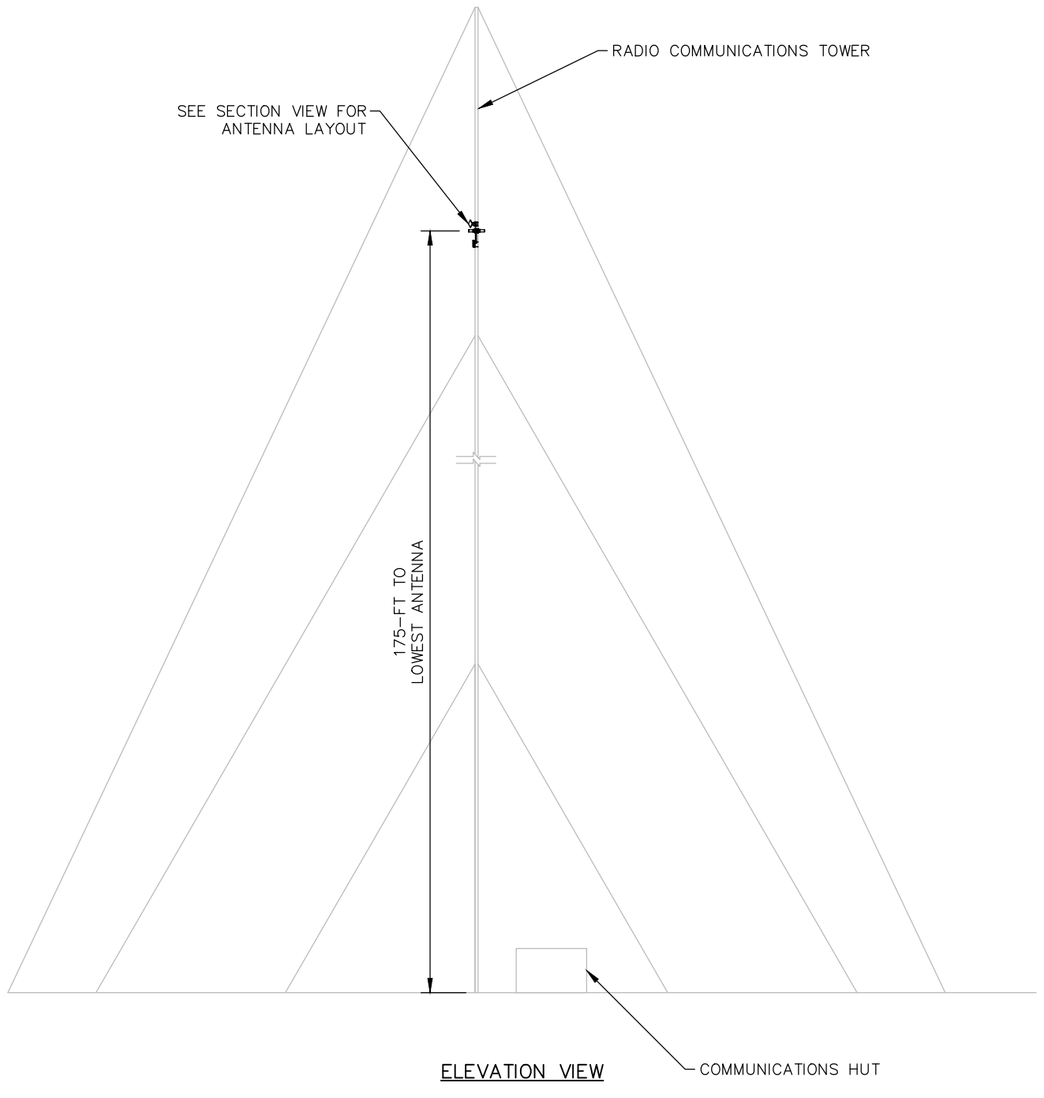
INSTALL ICE SHIELD ABOVE THE RADIO ASSEMBLY COMPONENTS FOR PROTECTION FROM FALLING ICE



COORDINATE WITH WISCONSIN STATE PATROL – BUREAU OF COMMUNICATIONS TO DETERMINE PROPER POWER OUTLET IN COMMUNICATIONS HUT

SECTION VIEW

SEE ITS PLANS – SHEET 18
SEE ITS COMMUNICATIONS SCHEMATICS – SHEETS 12



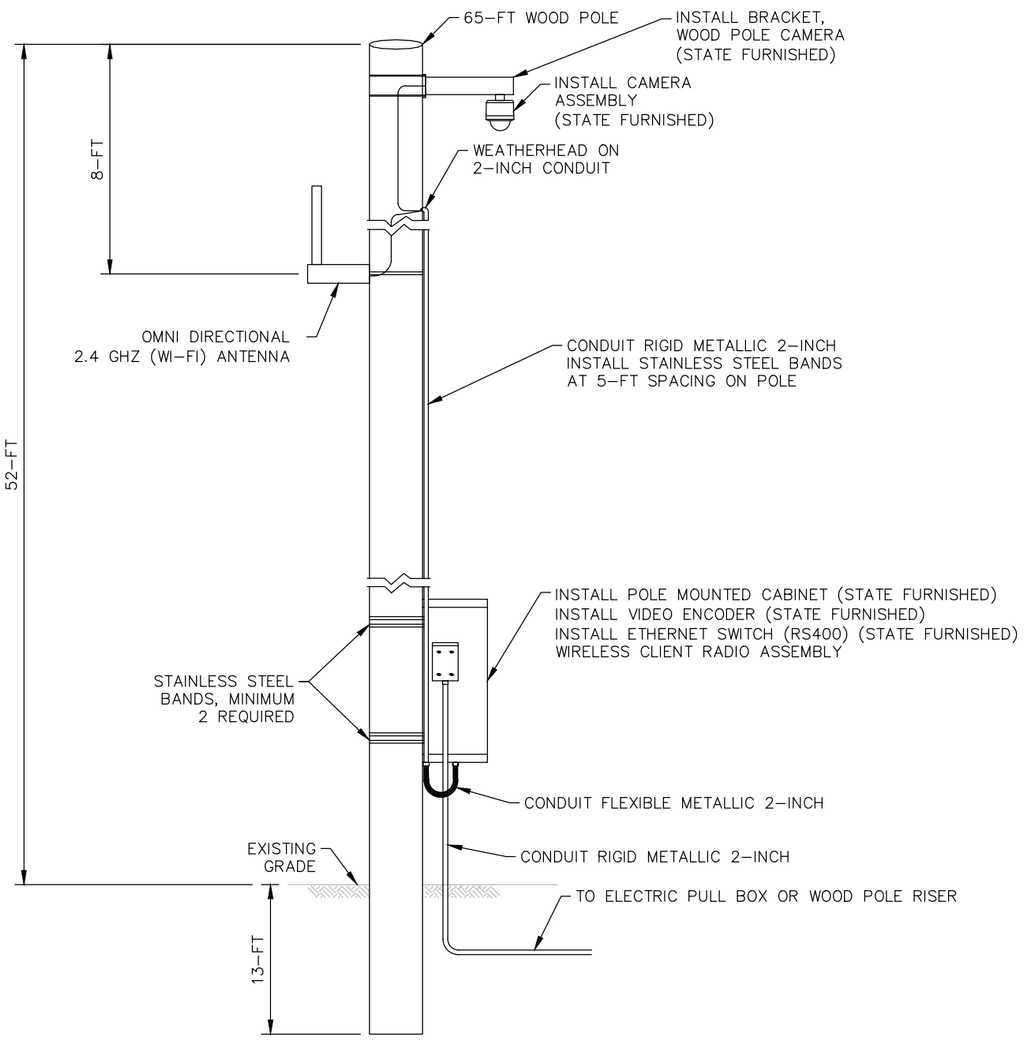
ELEVATION VIEW

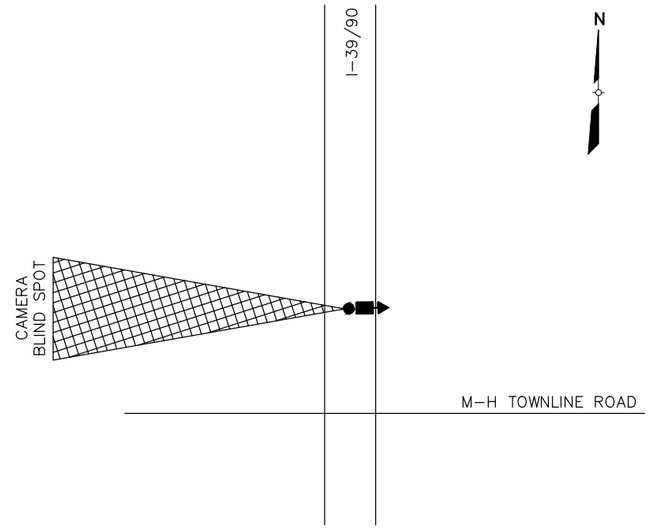
GENERAL NOTES:
SECURE CABLES ON TOWER AS DIRECTED BY THE WISCONSIN STATE PATROL–BUREAU OF COMMUNICATIONS.

MOUNT EQUIPMENT ON TOWER UTILIZING STAINLESS STEEL BANDS OR AS DIRECTED BY THE WISCONSIN STATE PATROL – BUREAU OF COMMUNICATIONS.

ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

WMN–0061–C
MANOGUE ROAD STATE PATROL
RADIO COMMUNICATIONS TOWER
I–39/90 @ EB JANESVILLE REST AREA





CAMERA ORIENTATION DETAIL

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

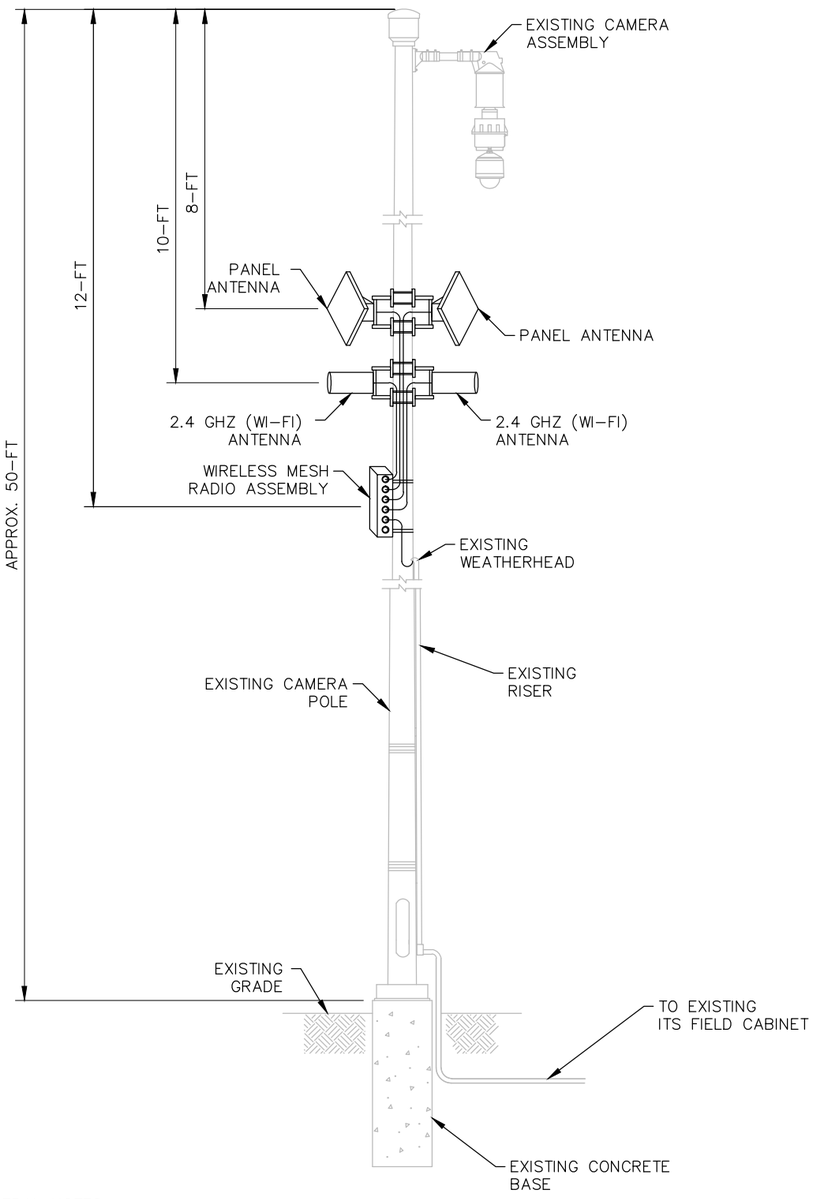
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

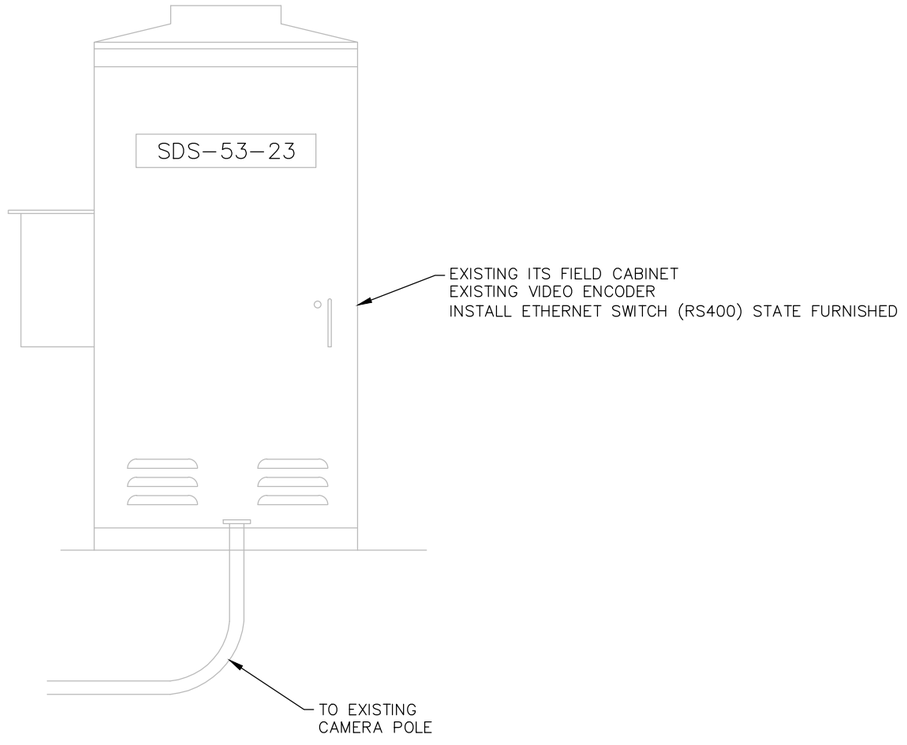
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

CCTV–53–0106–C
I–39/90 @ M–H TOWNLINE ROAD

PROJECT NO:1005–10–70	HWY:I-39/90	COUNTY:ROCK	ITS CONSTRUCTION DETAILS - SHEET 15	SHEET 76	E





GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5-FT INTERVALS.

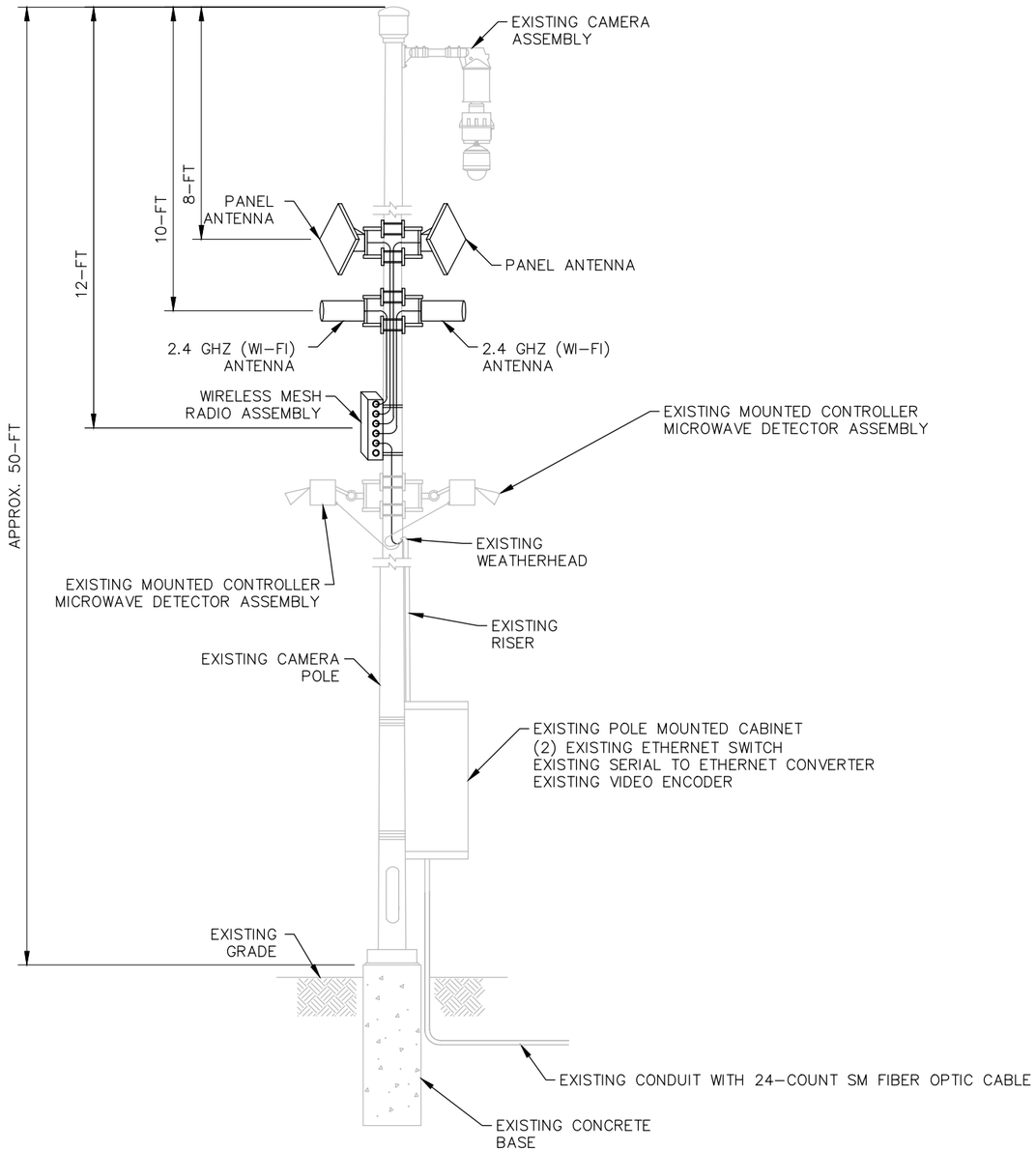
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

WMN-0062-C
I-39/90 @ STH 26

SEE ITS PLANS – SHEET 23
SEE ITS COMMUNICATION SCHEMATICS – SHEET 15



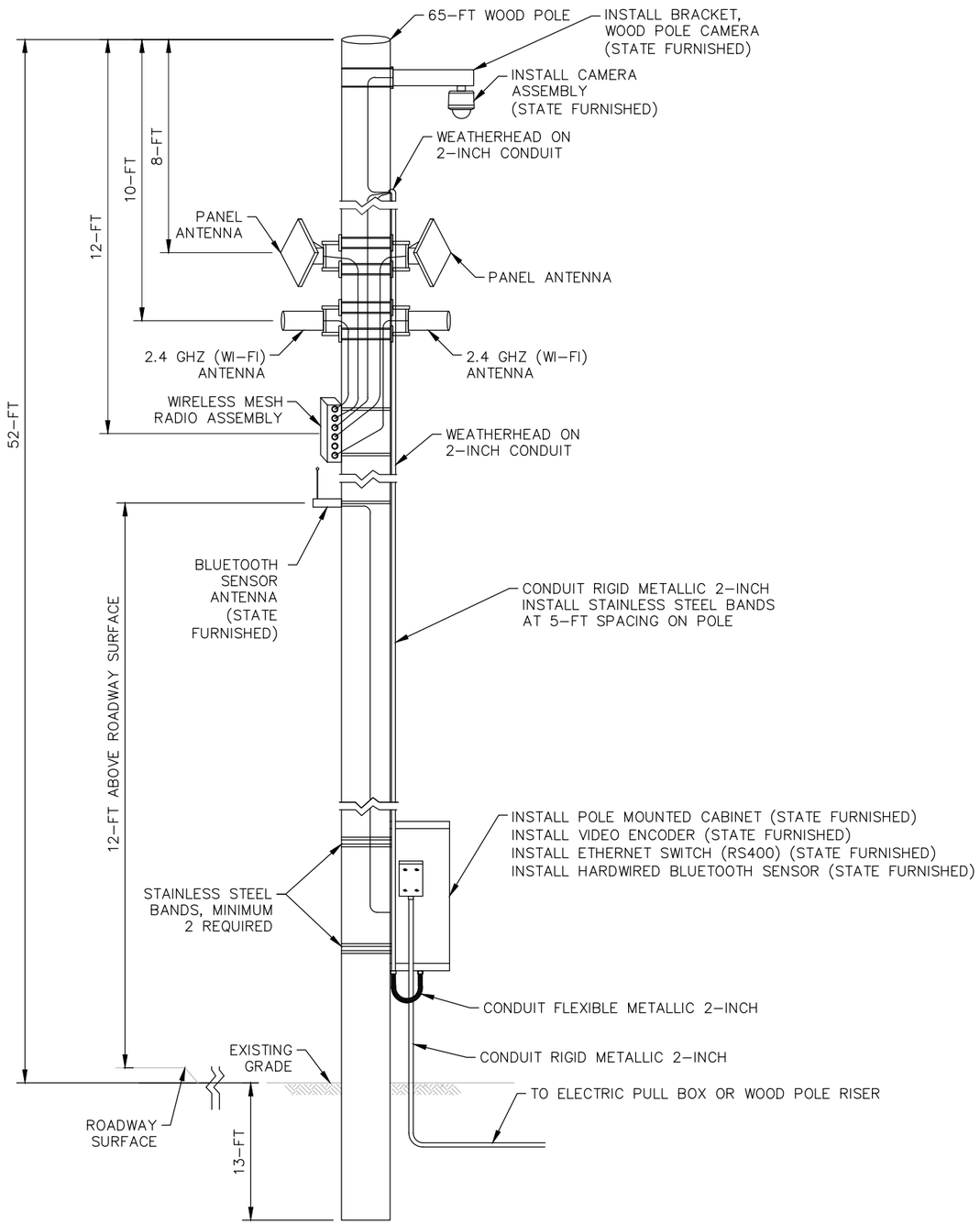
GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

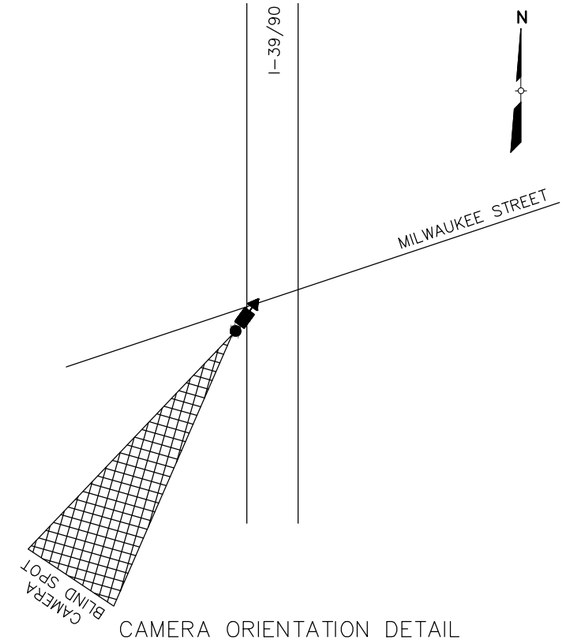
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

WMN–0063–C
I–39/90 @ USH 14





CAMERA ORIENTATION DETAIL

CCTV–53–0107–C
WDS–0017–C (EB)
WMN–0064–C
I–39/90 @ MILWAUKEE STREET

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

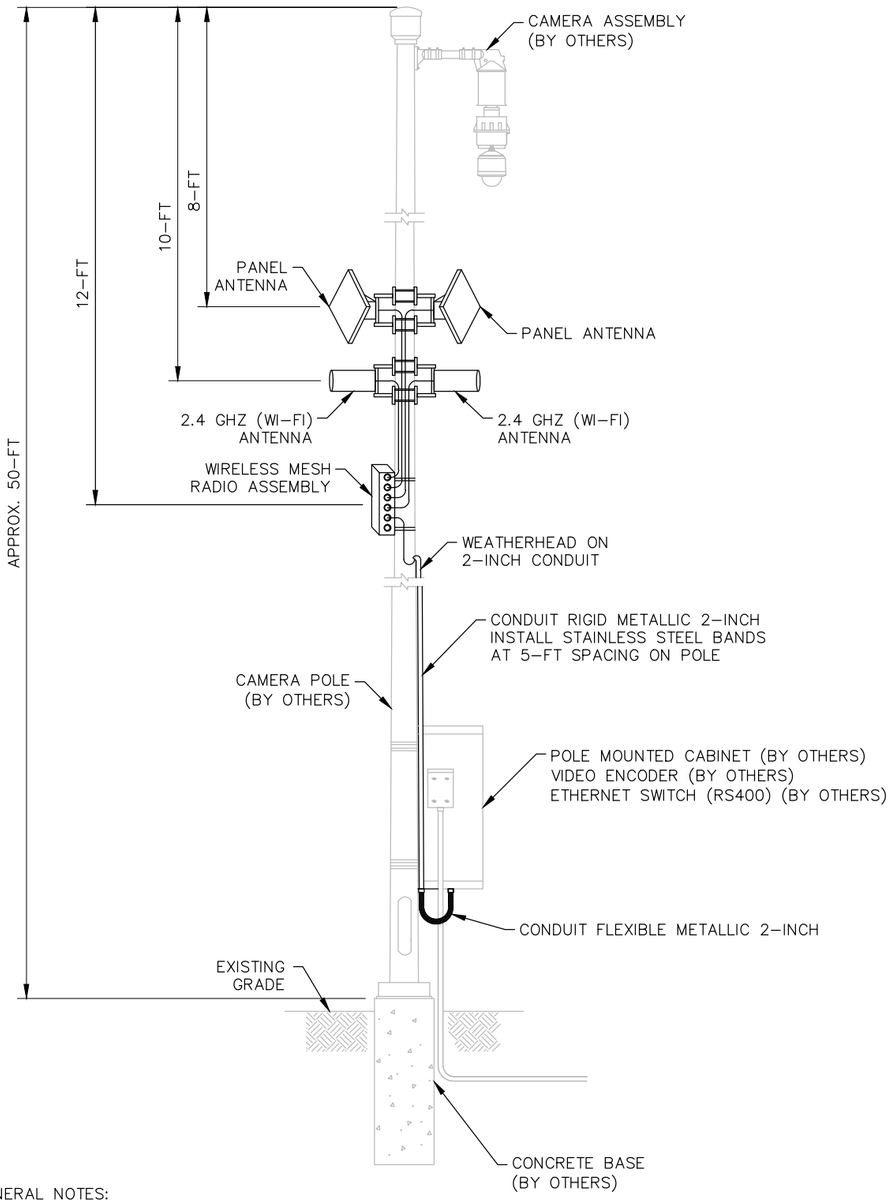
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

SEE ITS PLANS – SHEET 25
SEE ITS COMMUNICATION SCHEMATICS – SHEET 17



GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

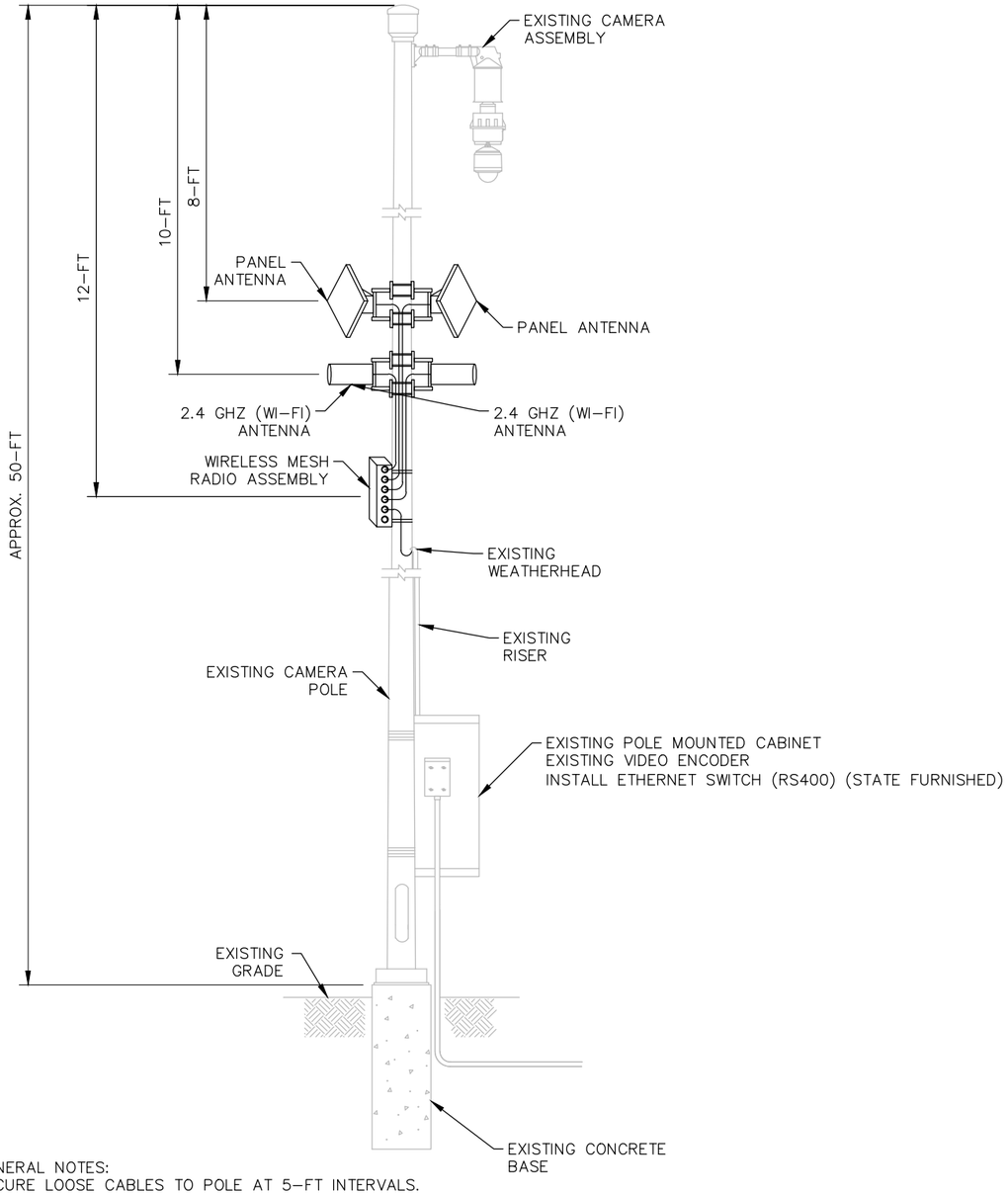
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

WMN–0065–C
I–39/90 @ RACINE STREET

SEE ITS PLANS – SHEET 28
SEE ITS COMMUNICATION SCHEMATICS – SHEET 18



GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

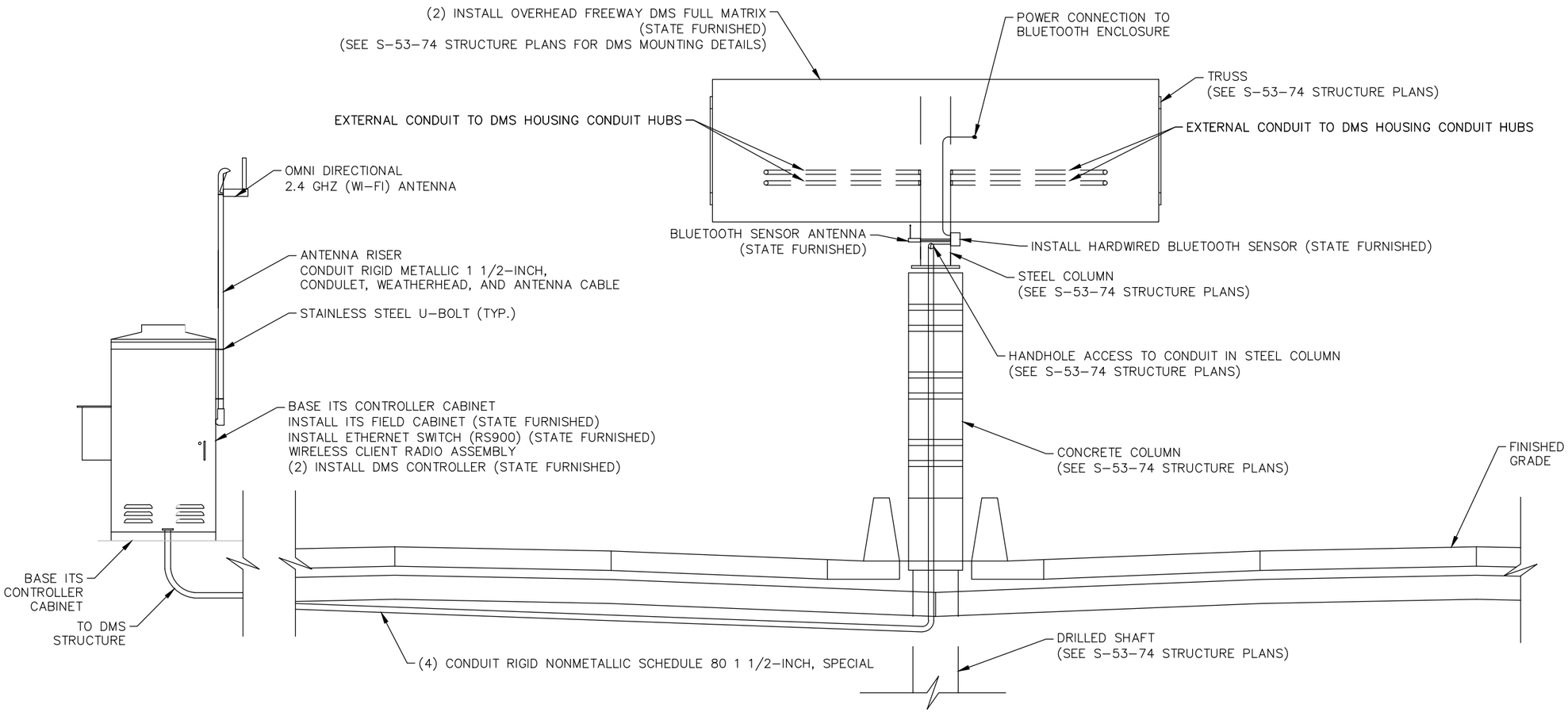
ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

WMN–0066–S
I–39/90 @ AVALON ROAD

SEE ITS PLANS – SHEET 29
SEE ITS COMMUNICATION SCHEMATICS – SHEET 19

2



ELEVATION VIEW

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

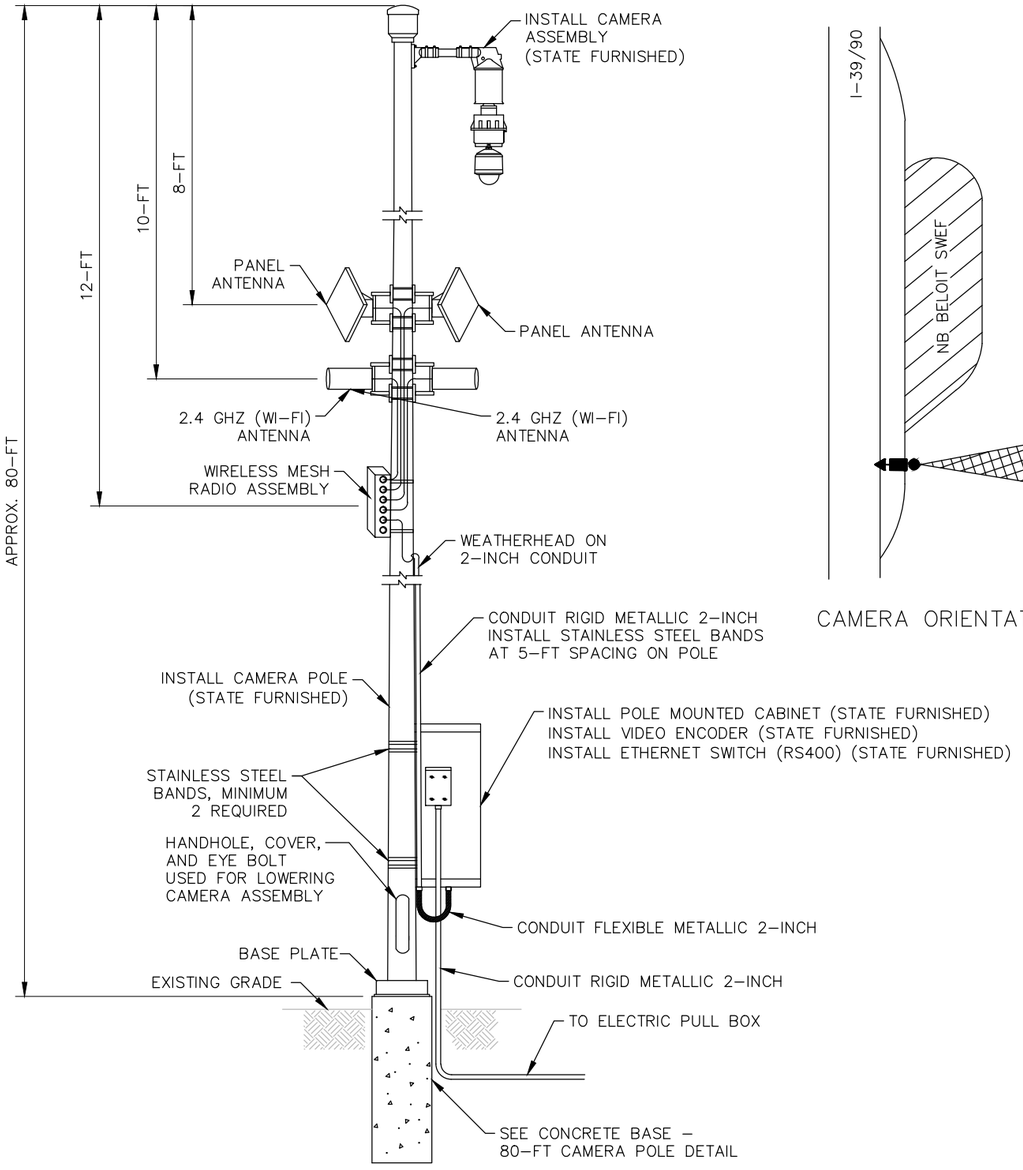
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

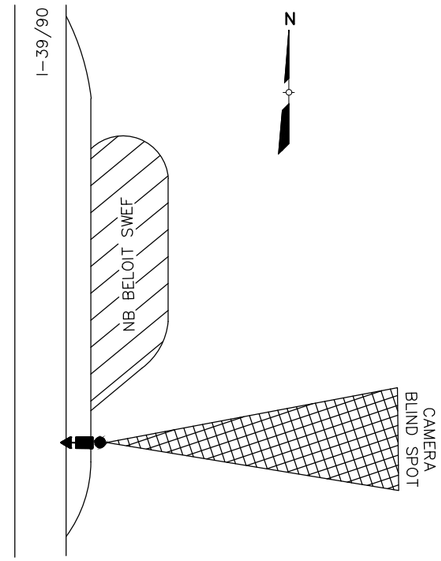
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT AND SECURED TO DMS STRUCTURE AT 5–FT INTERVALS.

DMS–53–0047–S (WB)
DMS–53–0048–S (EB)
WDS–0021–S (WB/EB)
I–39/90 @ 0.2 MILES SOUTH OF WOODMAN ROAD

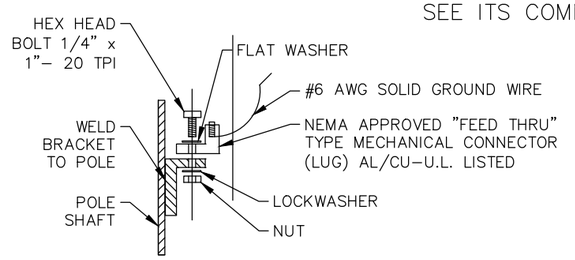
PROJECT NO:1003–10–70	HWY:I–39/90	COUNTY:ROCK	ITS CONSTRUCTION DETAILS - SHEET 21	SHEET 82	E

SEE ITS PLANS – SHEET 30
SEE ITS COMMUNICATION SCHEMATICS – SHEET 20

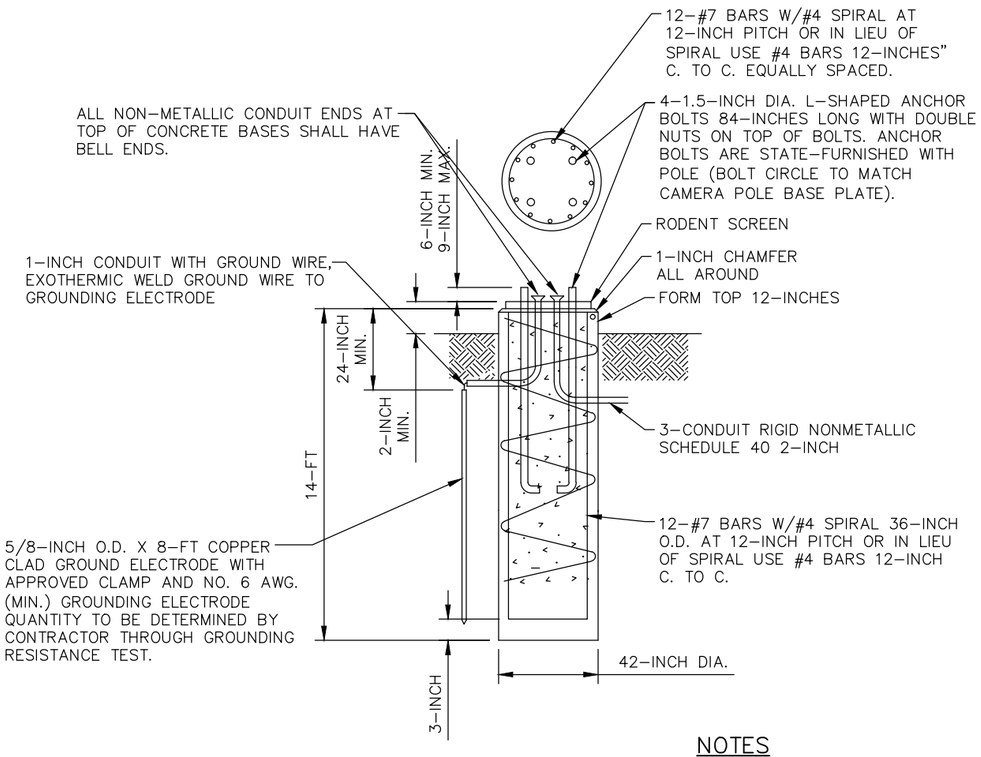




CAMERA ORIENTATION DETAIL



FIELD INSTALLED GROUNDING LUG



GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

MATERIALS DATA

CONCRETE	f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

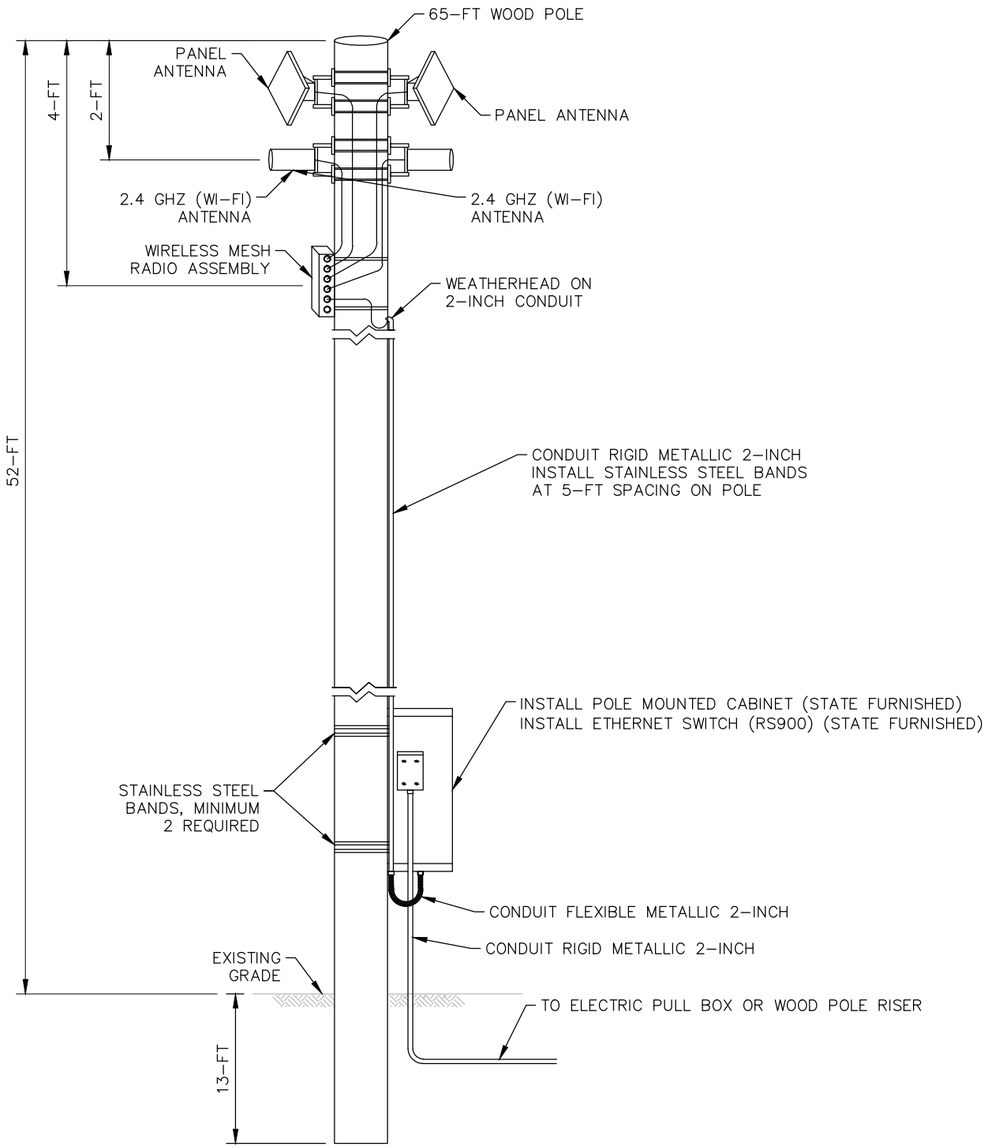
CONCRETE BASE – 80–FT CAMERA POLE DETAIL

CCTV–53–0045–S
WMN–0067–S
I–39/90 @ WB BELOIT SWEF

NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL.
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE 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.

SEE ITS PLANS – SHEET 32
SEE ITS COMMUNICATION SCHEMATICS – SHEET 21



GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

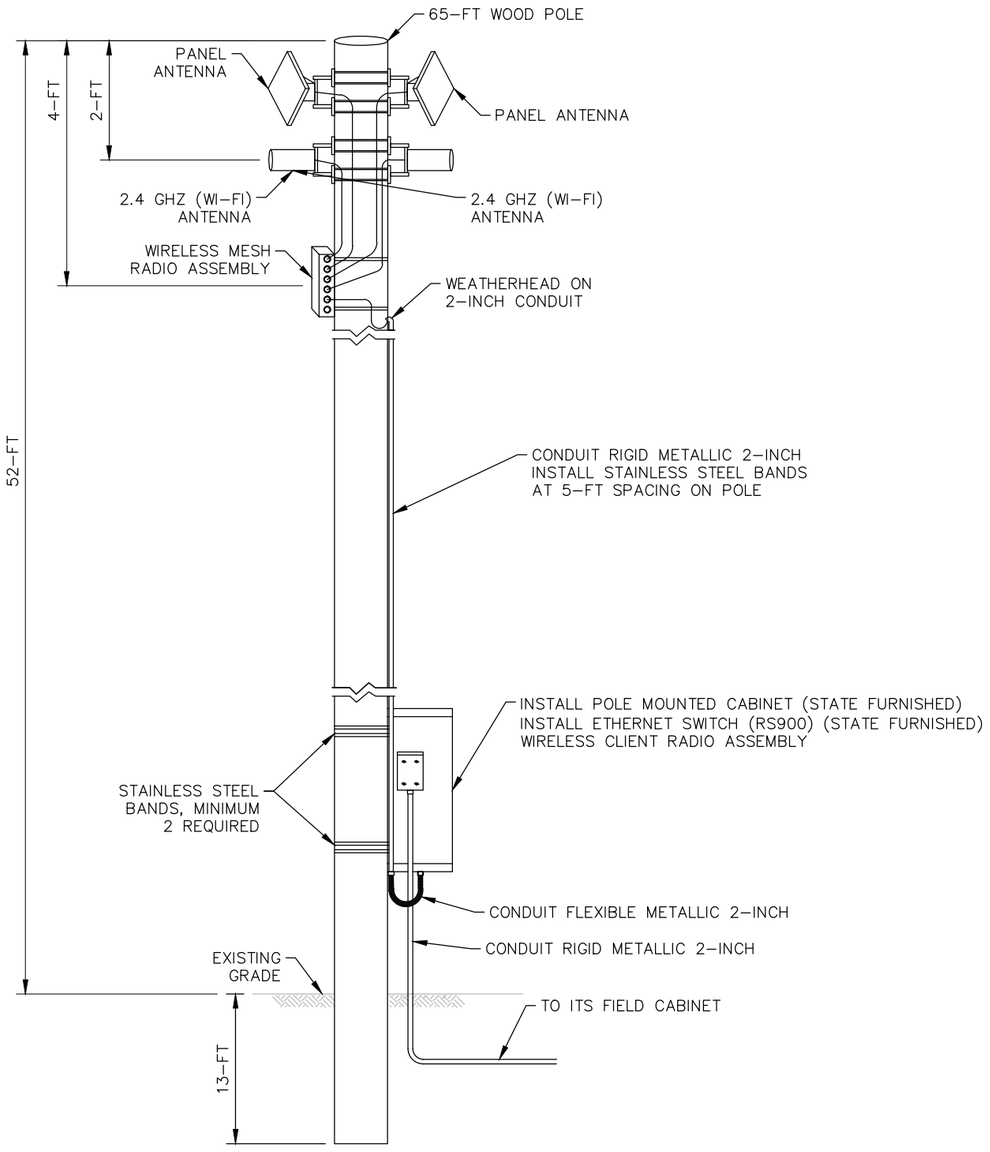
ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

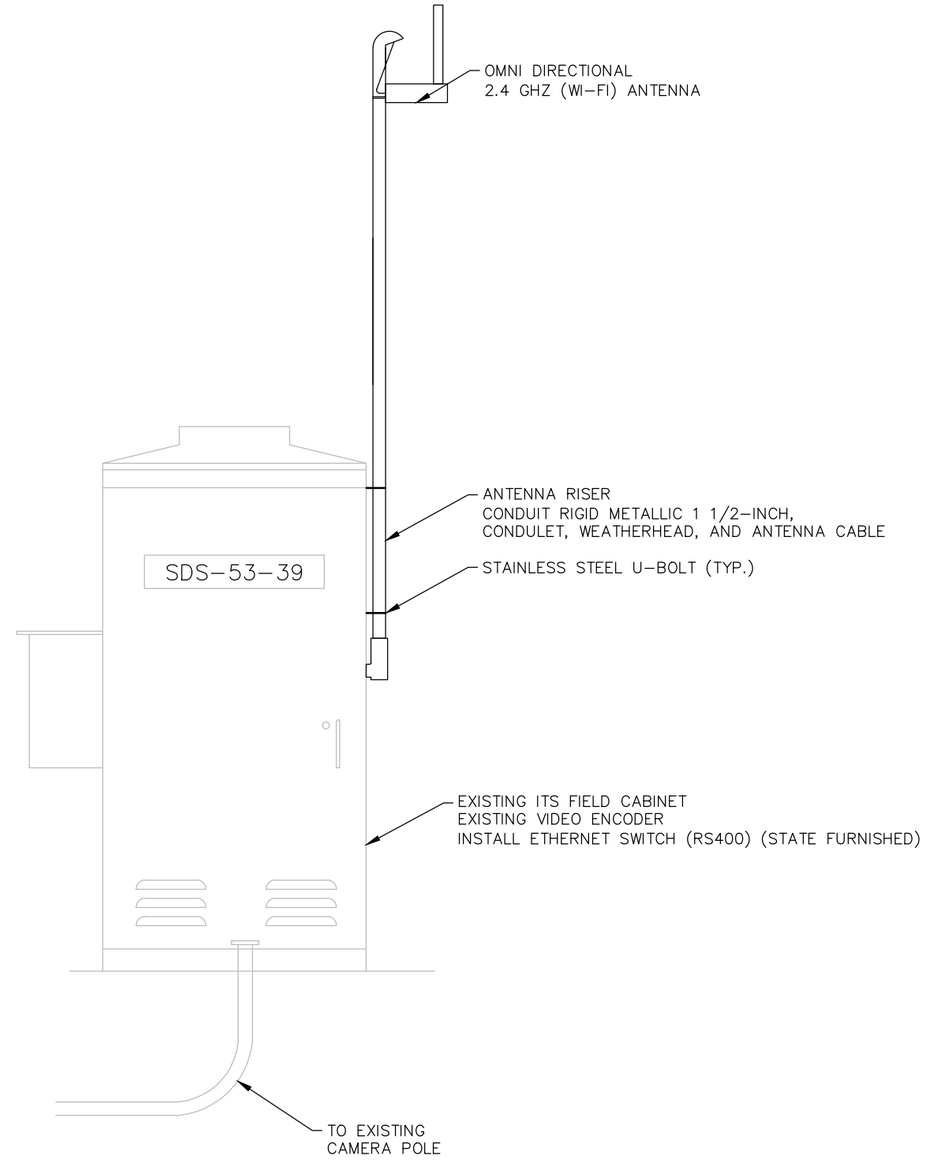
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

WMN–0068–S
I–39/90 @ CREEK ROAD

PROJECT NO:1003–10–70	HWY: I-39/90	COUNTY: ROCK	ITS CONSTRUCTION DETAILS - SHEET 23	SHEET 84	E

SEE ITS PLANS – SHEET 33
SEE ITS COMMUNICATION SCHEMATICS – SHEET 22





GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

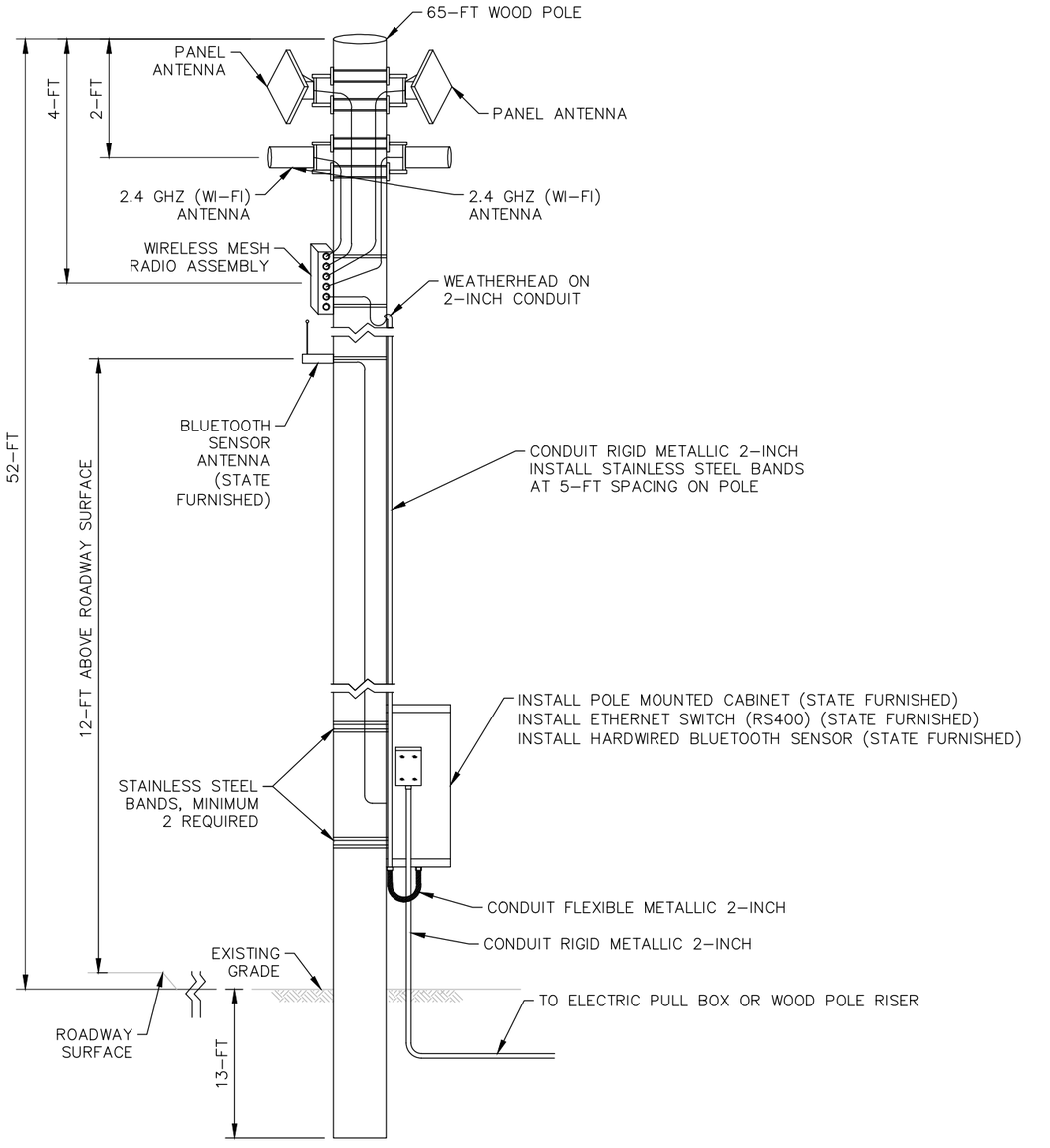
ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

WMN–0069–S
I–39/90 @ CTH S

PROJECT NO:1003–10–70	HWY:I-39/90	COUNTY:ROCK	ITS CONSTRUCTION DETAILS - SHEET 24	SHEET 85	E

SEE ITS PLANS – SHEET 34
SEE ITS COMMUNICATION SCHEMATICS – SHEET 23



GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

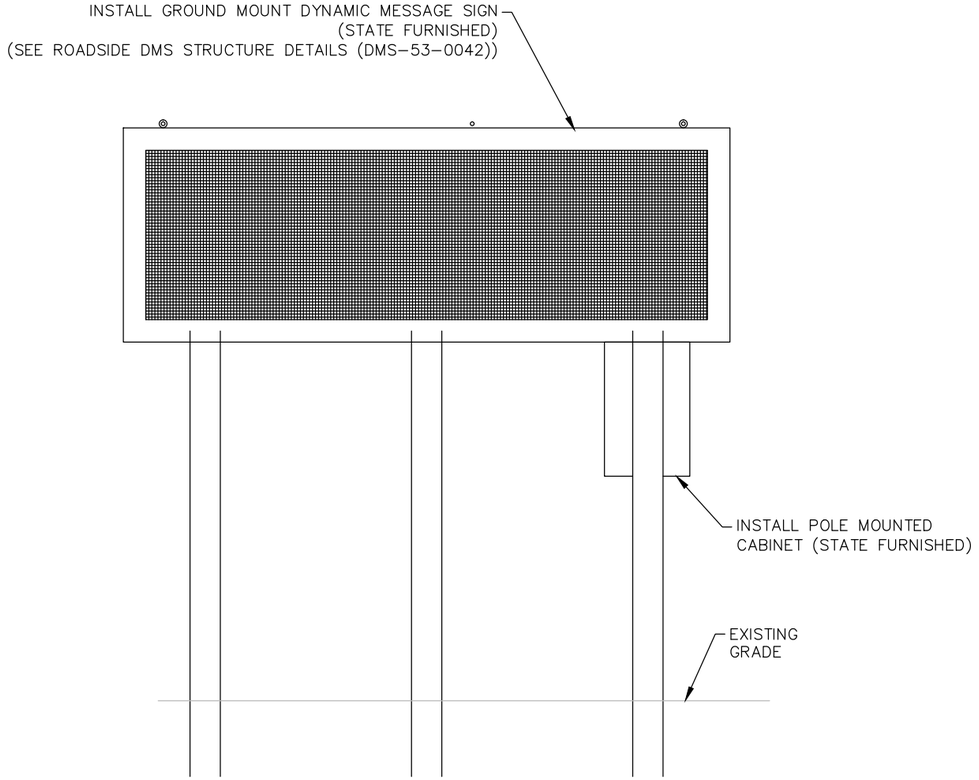
ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

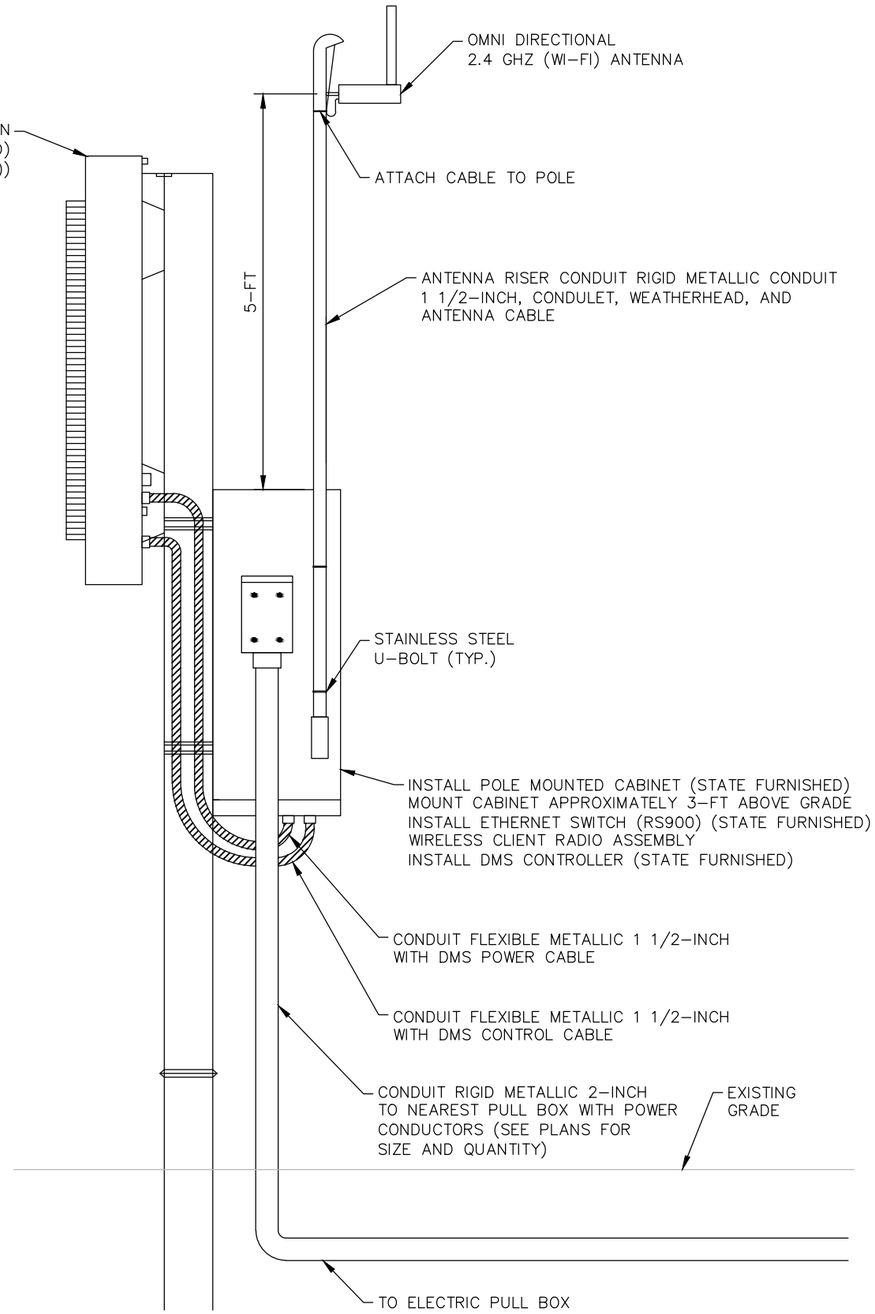
WDS–0024–S (WB)
WMN–0070–S
I–39/90 @ HART ROAD

PROJECT NO:1003–10–70	HWY:I–39/90	COUNTY:ROCK	ITS CONSTRUCTION DETAILS - SHEET 25	SHEET 86	E

SEE ITS PLANS – SHEET 34
SEE ITS COMMUNICATION SCHEMATICS – SHEET 24



ELEVATION VIEW



SECTION VIEW

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

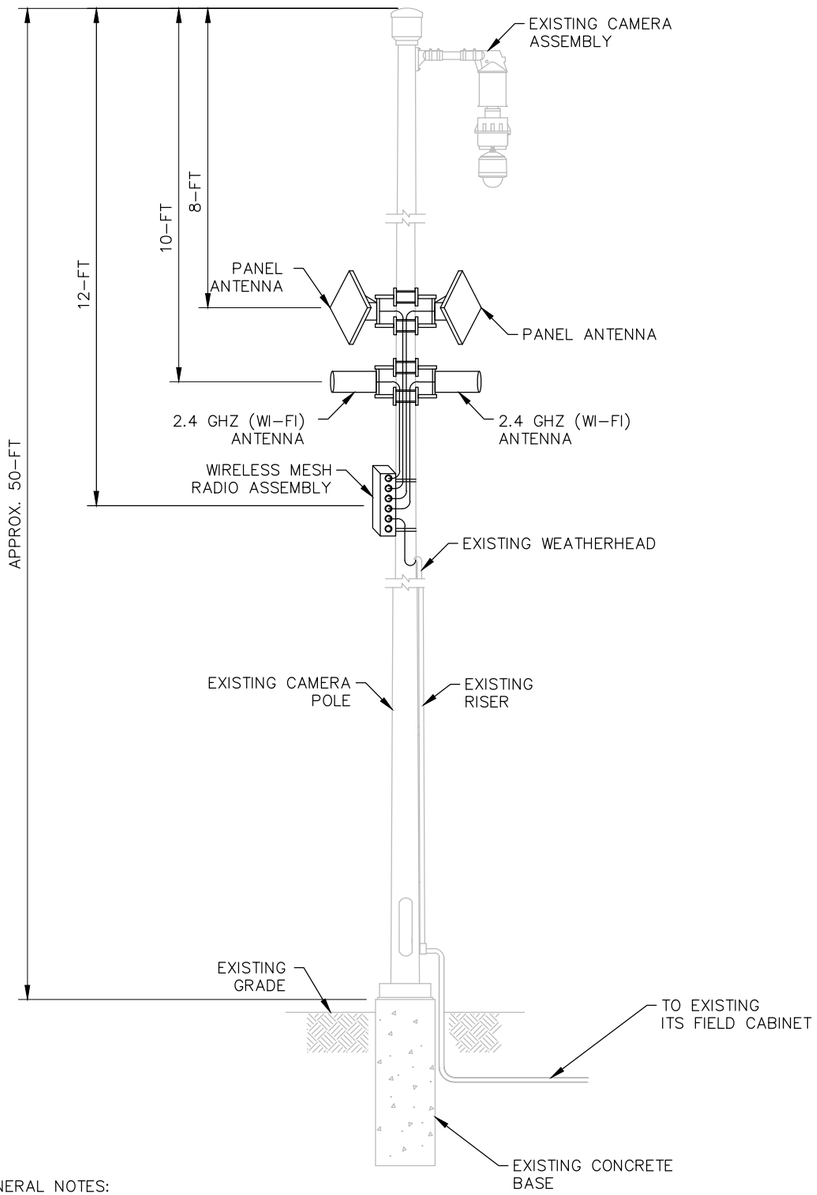
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

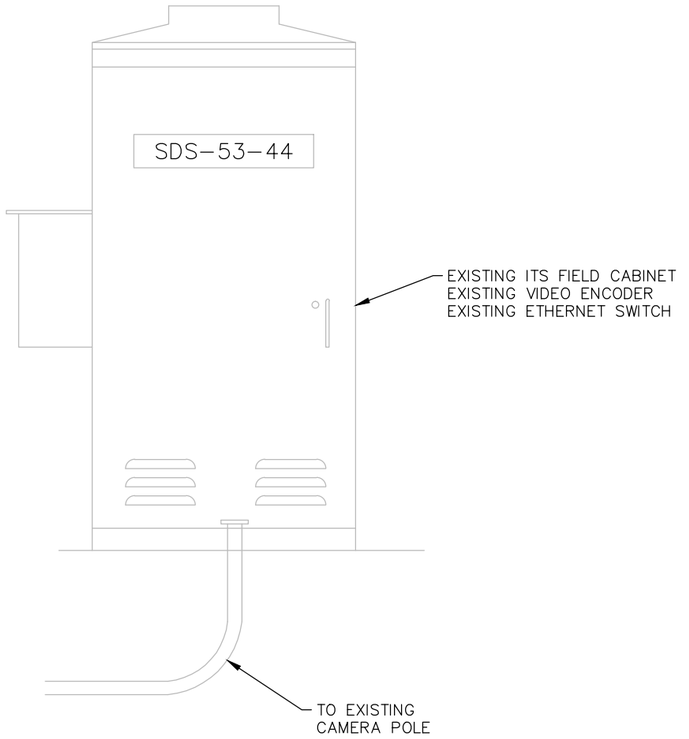
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT AND SECURED TO DMS STRUCTURE AT 5–FT INTERVALS.

DMS–53–0042–S (WB)
I–39/90 @ HART ROAD

PROJECT NO:1003–10–70	HWY:I–39/90	COUNTY:ROCK	ITS CONSTRUCTION DETAILS - SHEET 26	SHEET 87	E





GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5-FT INTERVALS.

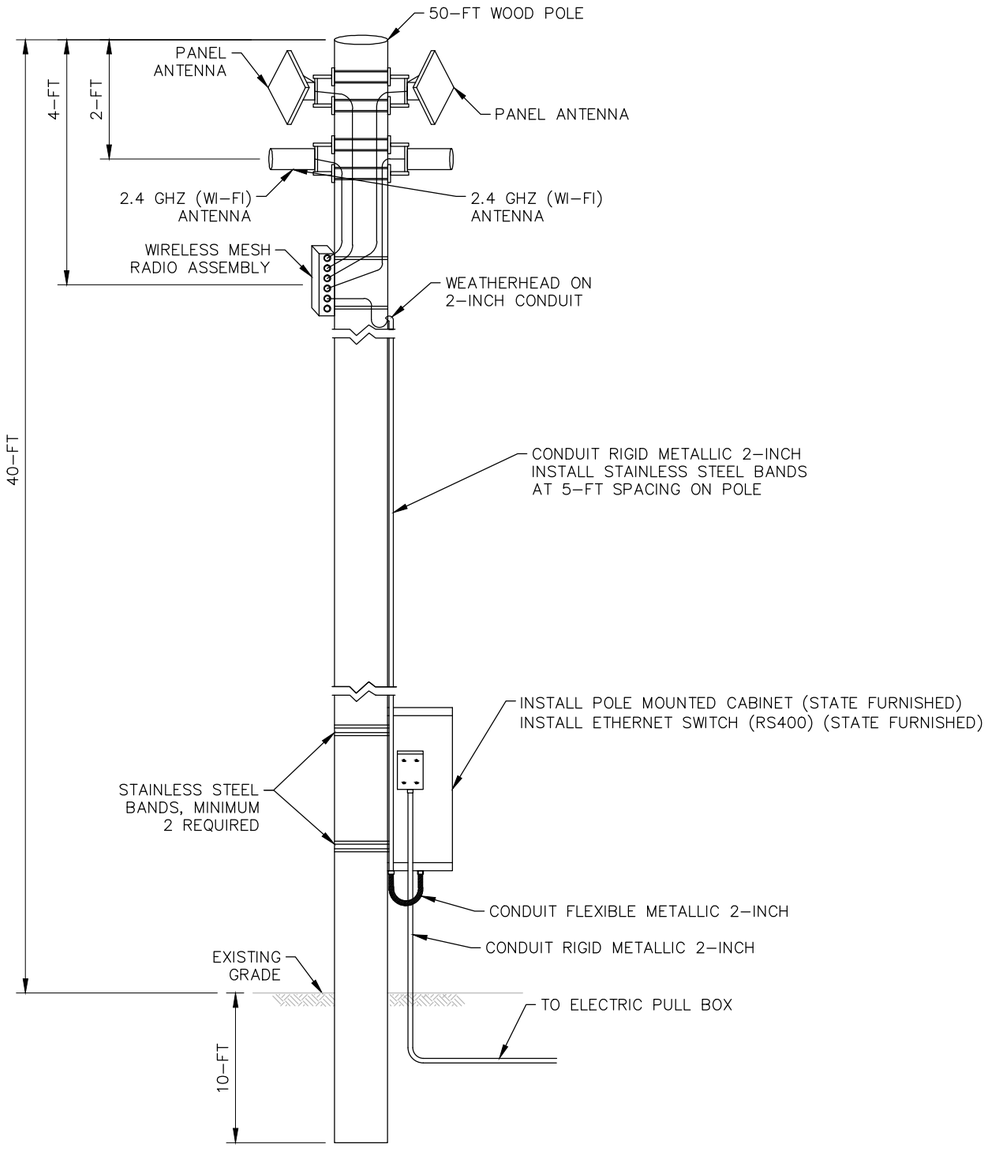
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

WMN-0071-S
I-39/90 @ I-43/STH 81

SEE ITS PLANS – SHEET 36
SEE ITS COMMUNICATION SCHEMATICS – SHEET 26



GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

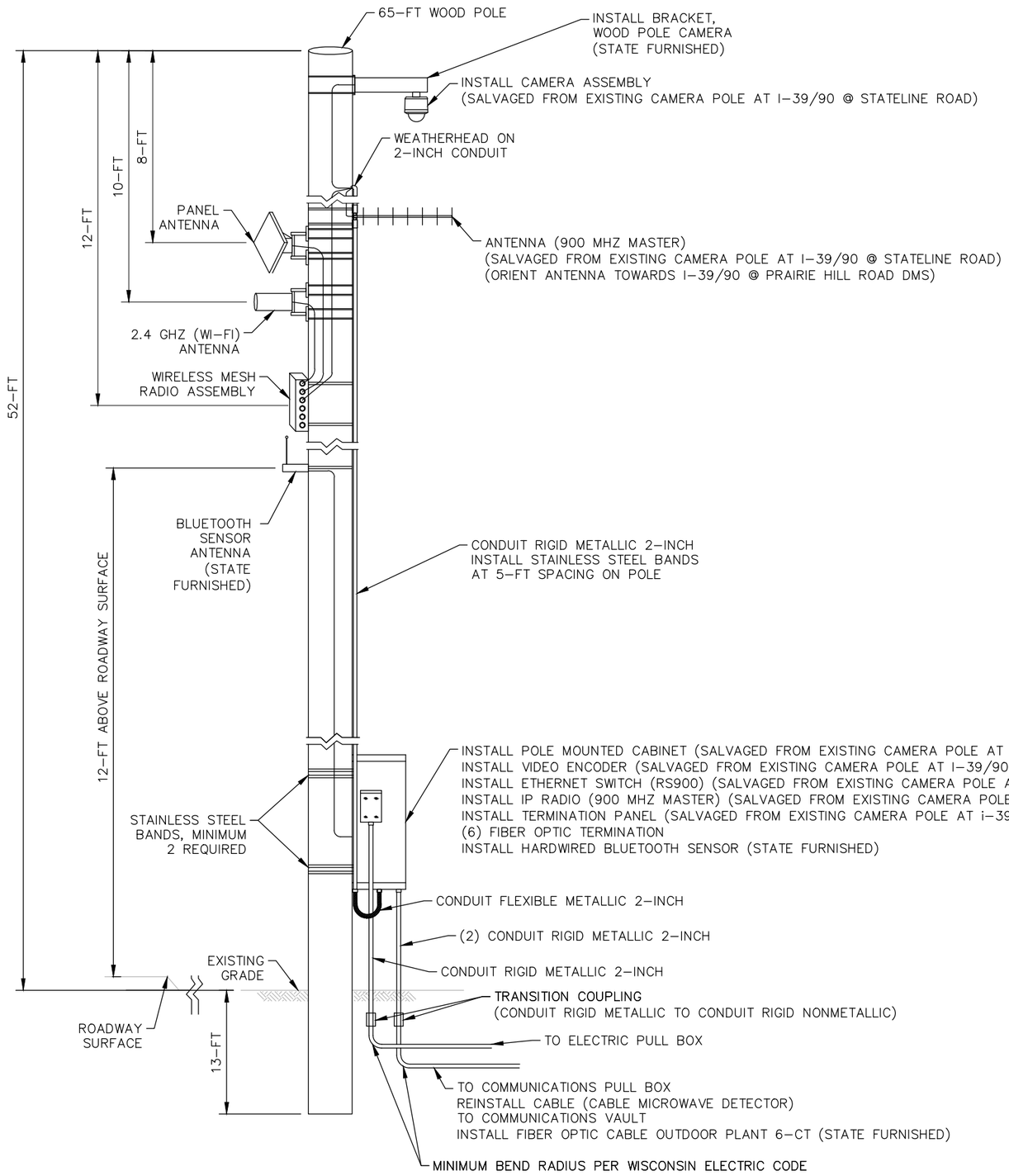
ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

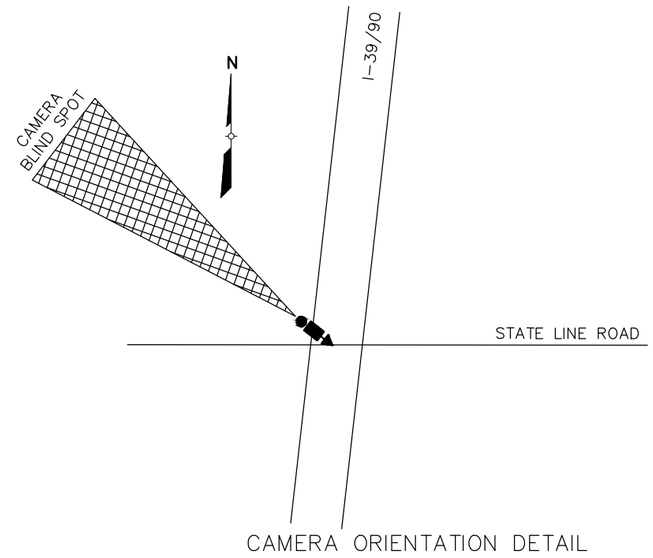
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

WMN–0072–S
I–39/90 @ CRANSTON ROAD

PROJECT NO:1003–10–70	HWY:I-39/90	COUNTY:ROCK	ITS CONSTRUCTION DETAILS - SHEET 28	SHEET 89	E

SEE ITS PLANS – SHEET 37
SEE ITS COMMUNICATION SCHEMATICS – SHEET 27





CAMERA ORIENTATION DETAIL

CCTV–53–0048–S
WDS–0026–S (EB)
WMN–0073–S
I–39/90 @ STATELINE ROAD

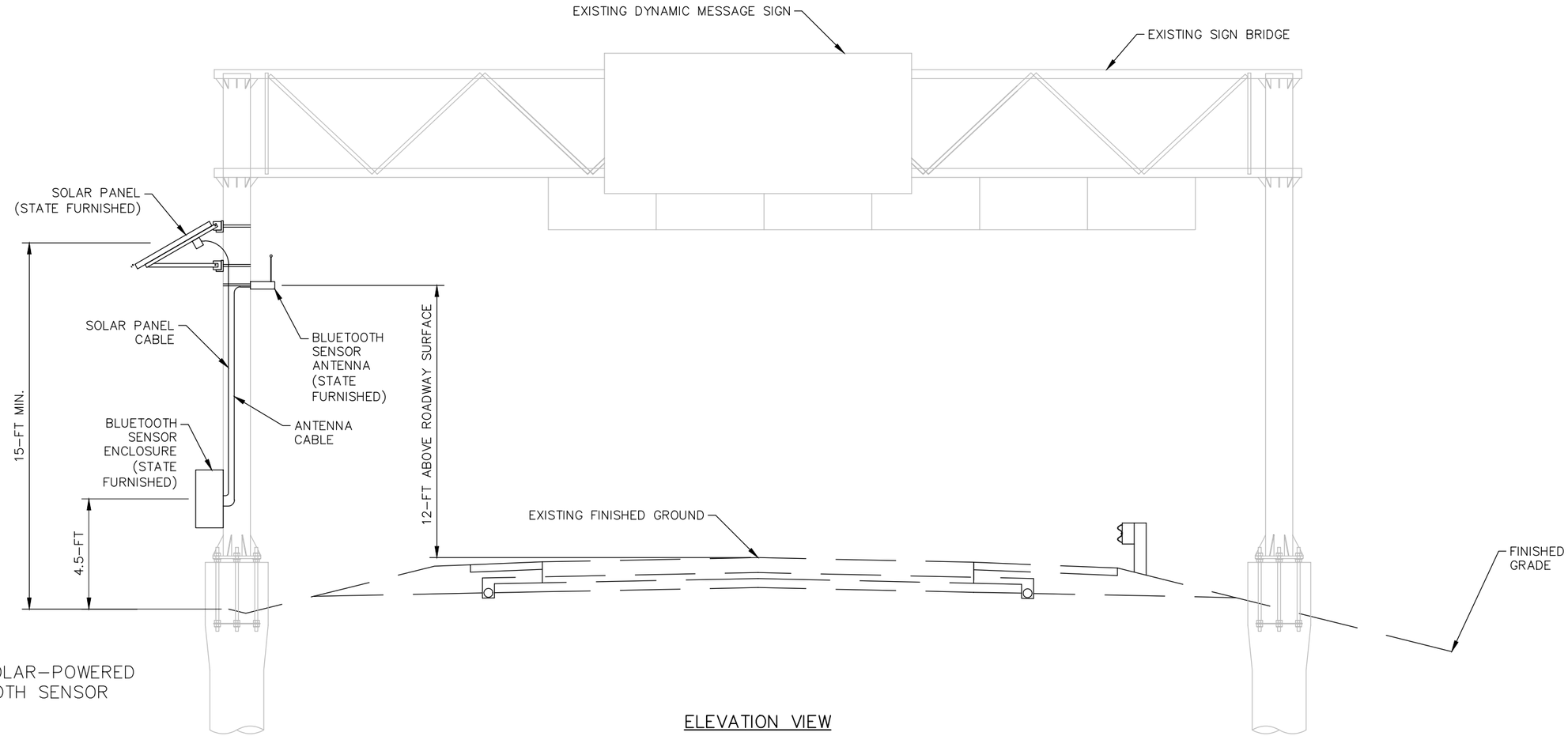
GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

ORIENT ANTENNAS TO OPTIMIZE SIGNAL STRENGTH.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.



INSTALL SOLAR–POWERED
BLUETOOTH SENSOR

ELEVATION VIEW

(LOOKING NORTH/WEST)

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

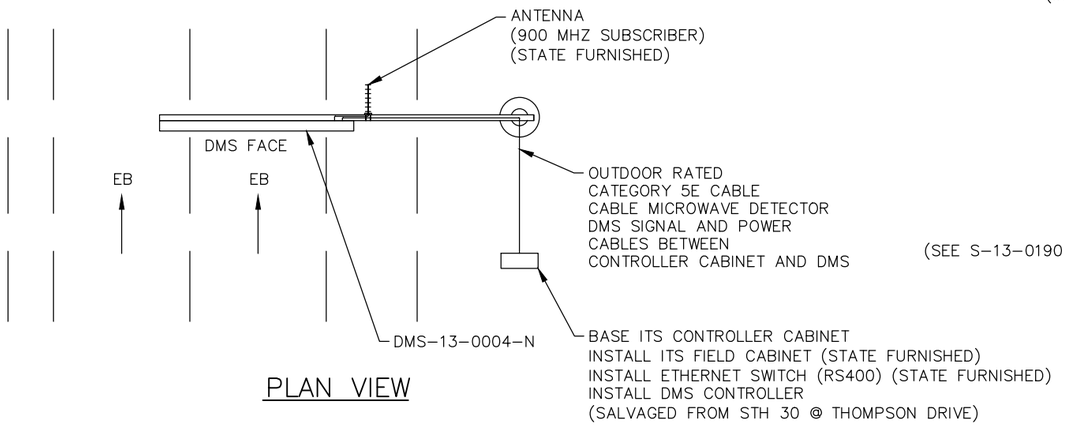
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

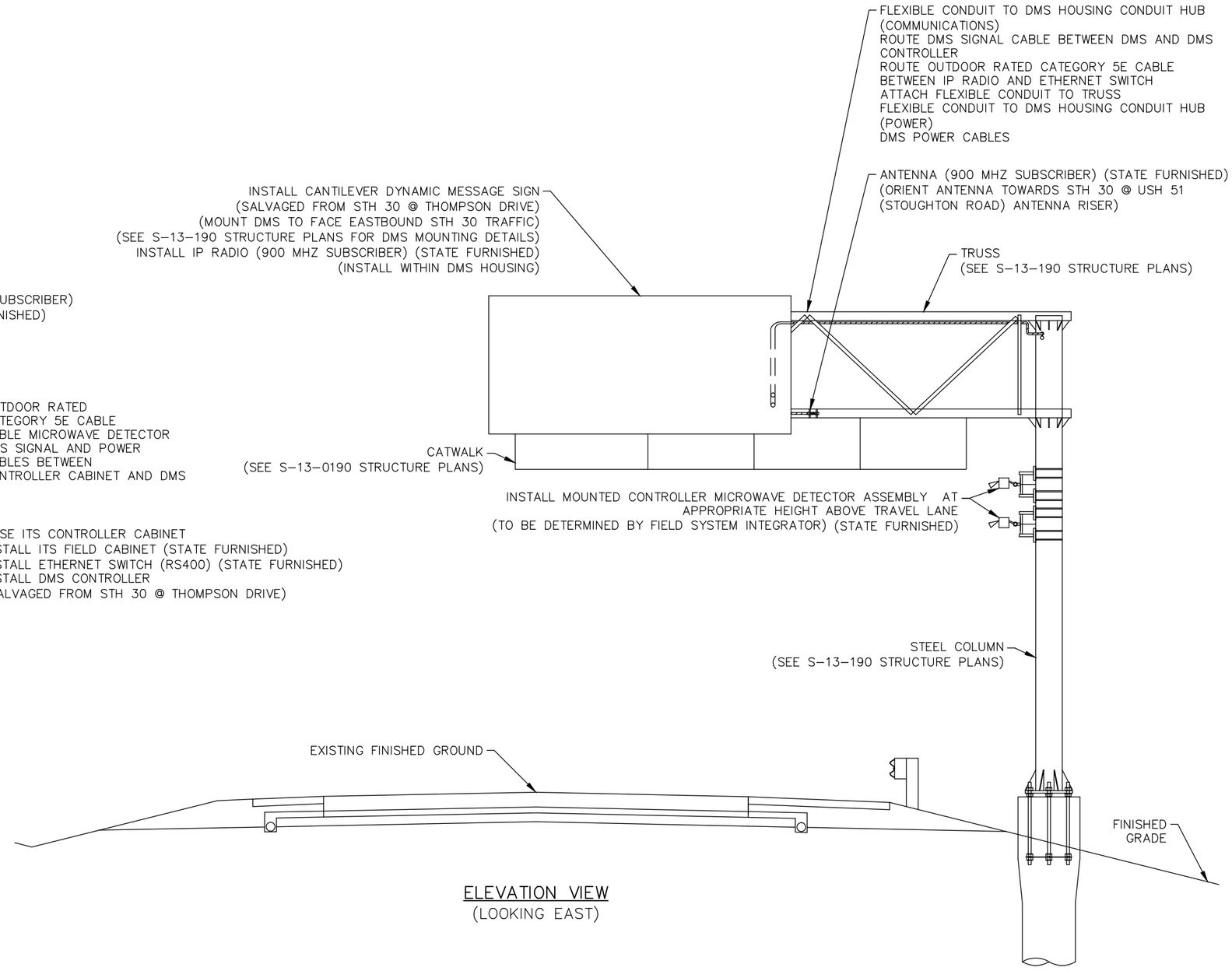
ORIENT SOLAR PANEL AS CLOSE TO SOUTH AS POSSIBLE.

WDS–0027–S (WB/EB)
I–39/90 @ PRAIRIE HILL ROAD

SEE ITS PLANS – SHEET 39
SEE ITS COMMUNICATION SCHEMATICS – SHEET 28



PLAN VIEW



ELEVATION VIEW
(LOOKING EAST)

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5-FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

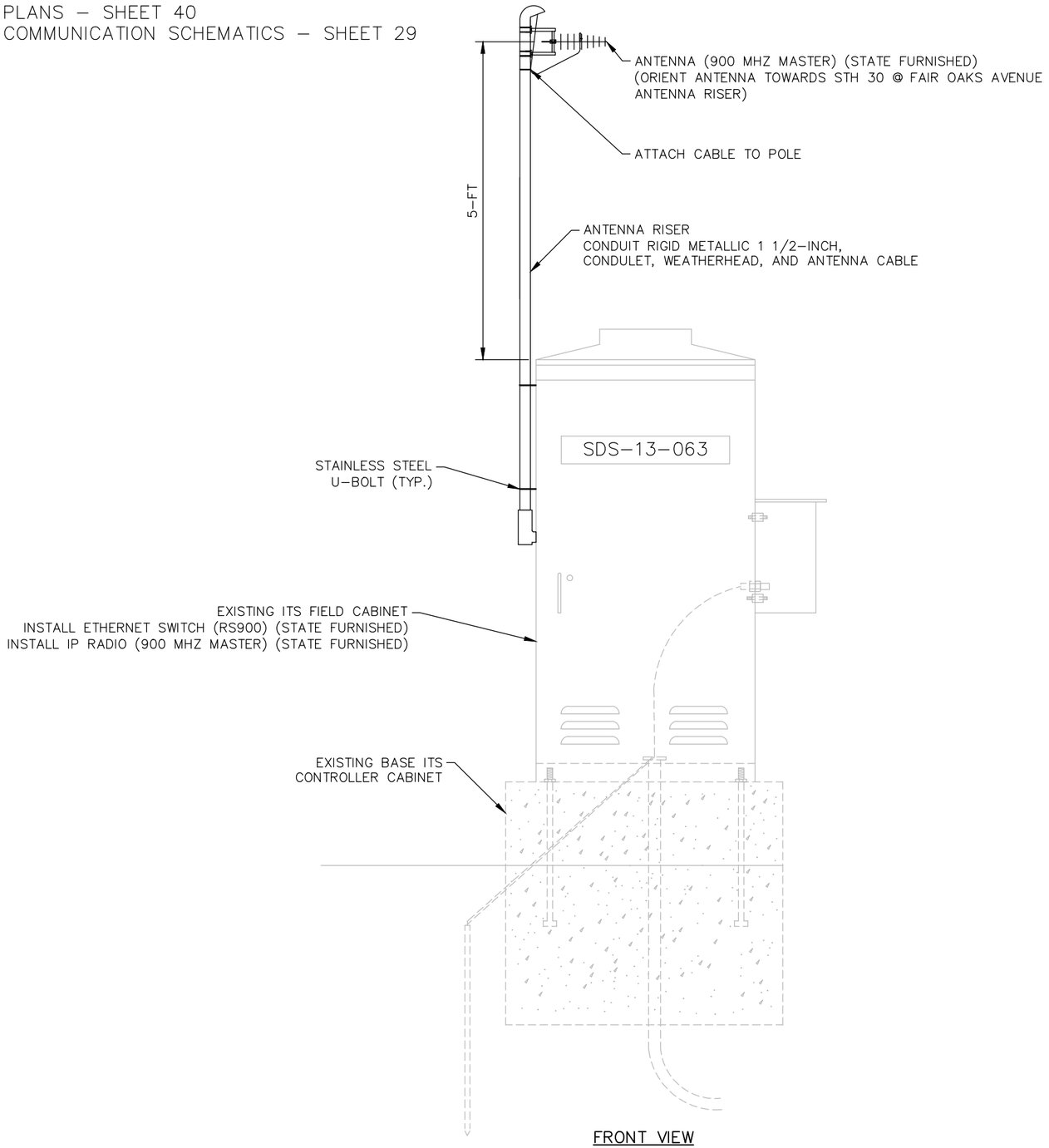
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT AND SECURED TO DMS STRUCTURE AT 5-FT INTERVALS.

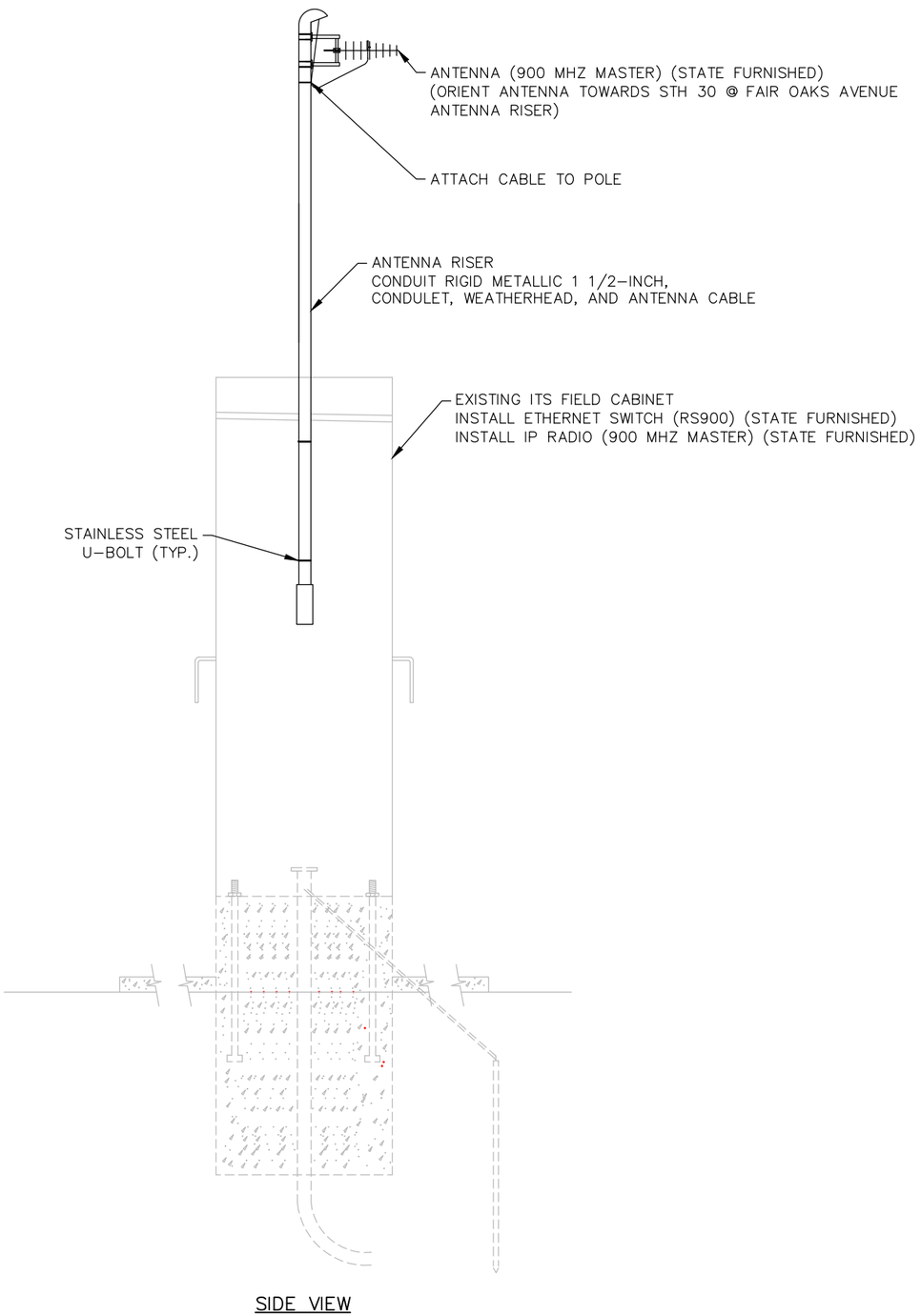
DMS-13-0004-N (EB)
SDS-13-0062A-N (EB)
SDS-13-0062B-N (WB)
STH 30 @ FAIR OAKS AVENUE

PROJECT NO:1007-10-70	HWY:I-39/90	COUNTY:DANE	ITS CONSTRUCTION DETAILS - SHEET 31	SHEET 92	E

SEE ITS PLANS – SHEET 40
SEE ITS COMMUNICATION SCHEMATICS – SHEET 29



FRONT VIEW

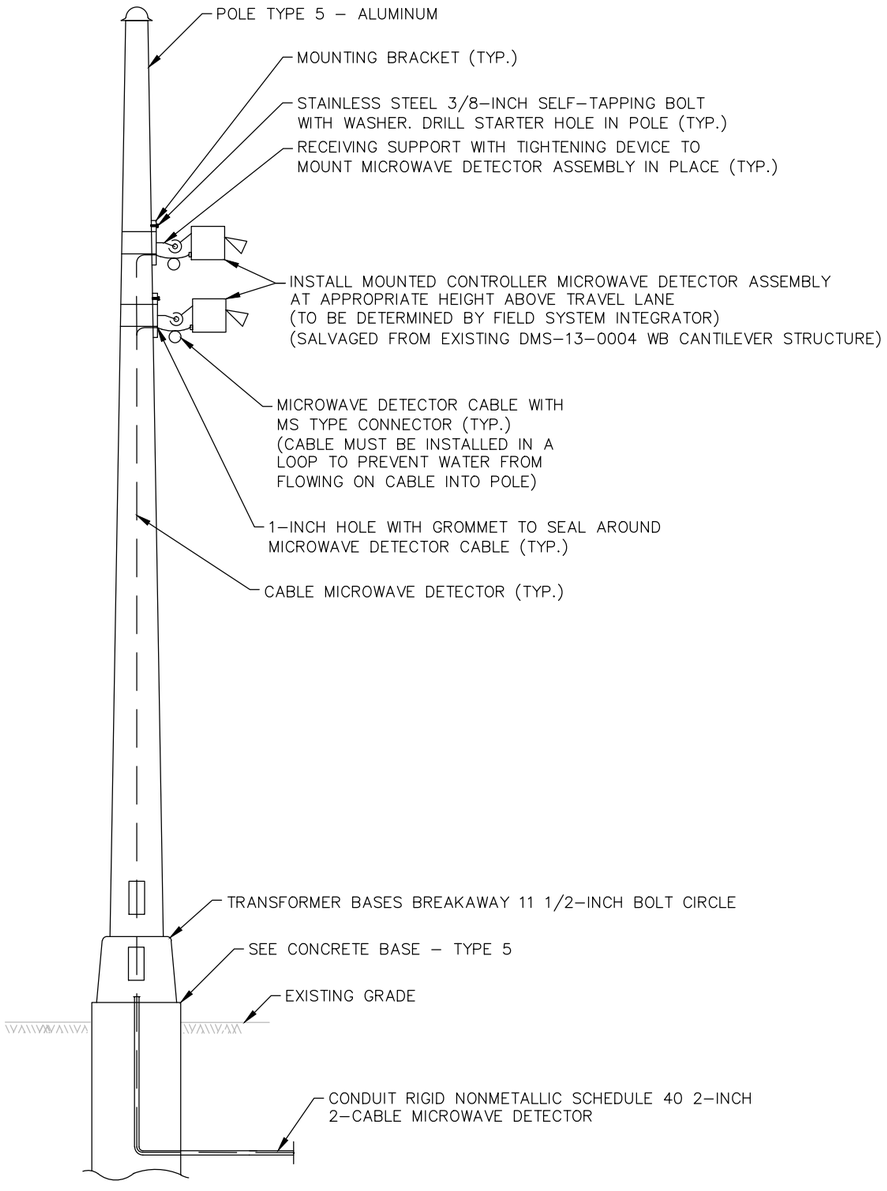


SIDE VIEW

STH 30 @ USH 51 (STOUGHTON ROAD)

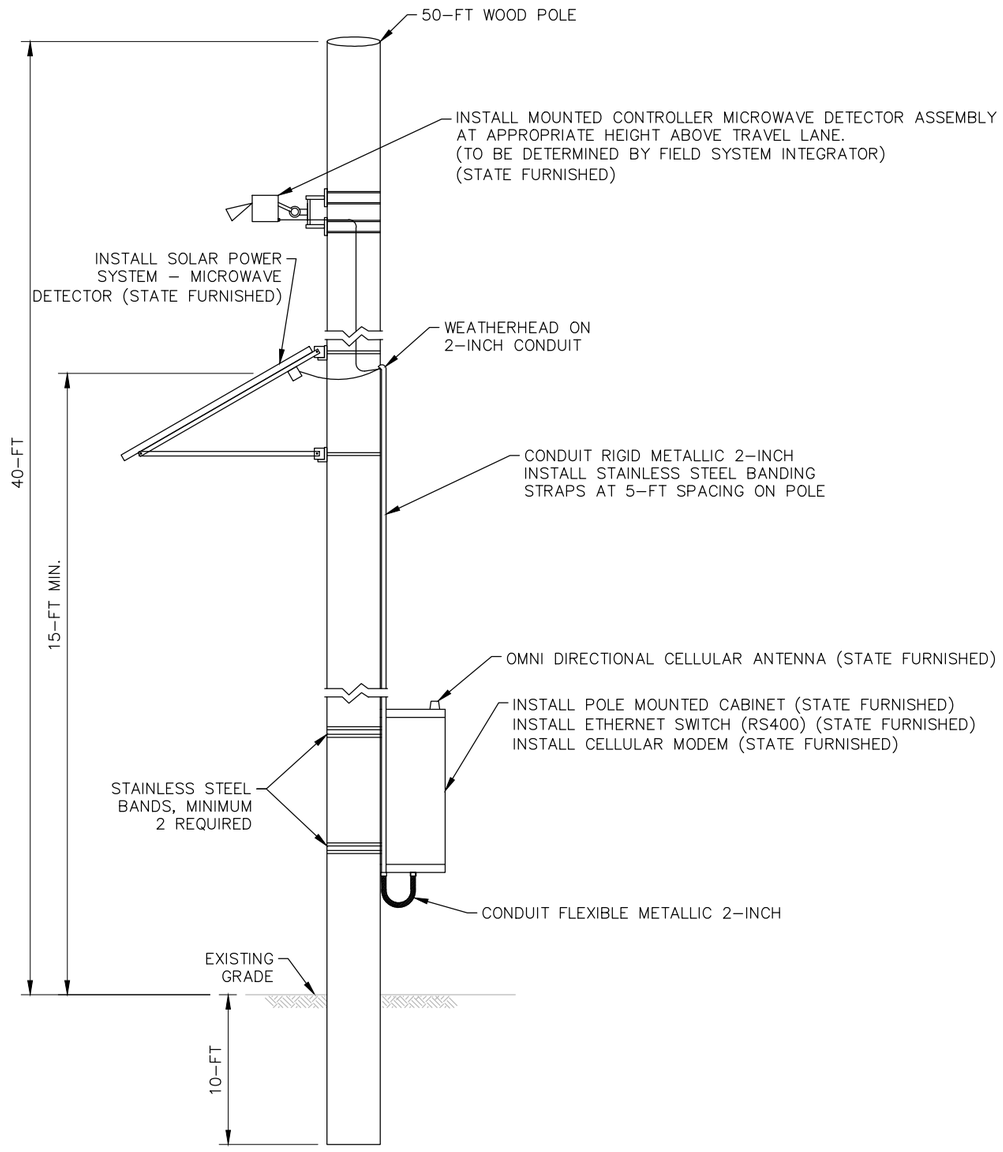
PROJECT NO:1007–10–70	HWY:I-39/90	COUNTY:DANE	ITS CONSTRUCTION DETAILS - SHEET 32	SHEET 93	E

SEE ITS PLANS – SHEET 41
SEE ITS COMMUNICATION SCHEMATICS – SHEET 30



SDS–13–0060–N (WB)
SDS–13–0061–N (EB)
STH 30 @ THOMPSON DRIVE

SEE ITS PLANS – SHEET 43
SEE ITS COMMUNICATION SCHEMATICS – SHEET 31



GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

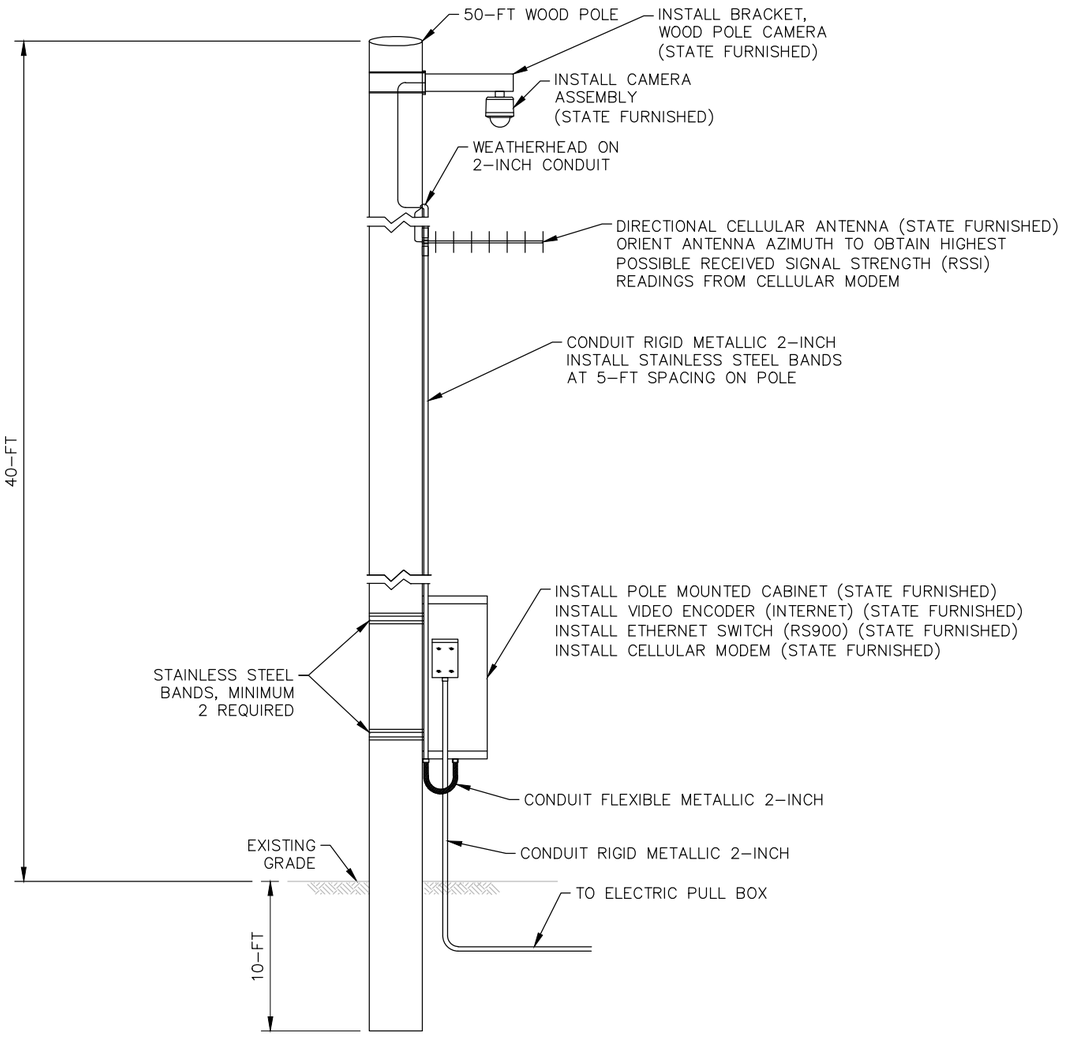
ORIENT SOLAR PANEL AS CLOSE TO SOUTH AS POSSIBLE.

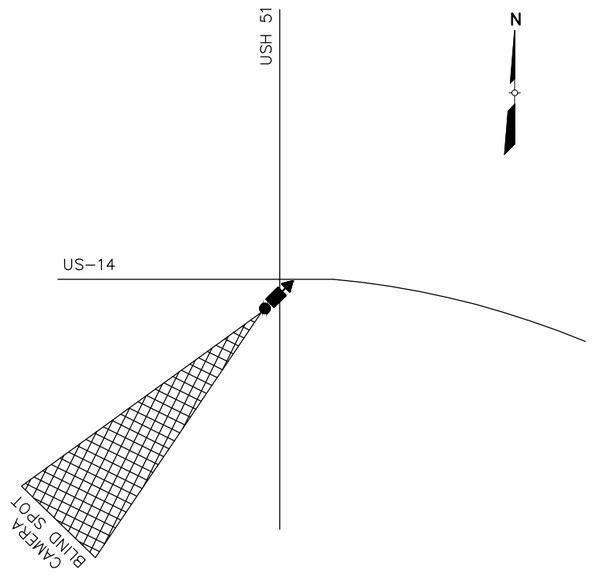
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

SDS–53–0084–C
USH 51 @ 0.6 MILES NORTH OF J–F TOWNLINE ROAD

SEE ITS PLANS – SHEET 44
SEE ITS COMMUNICATION SCHEMATICS – SHEET 32

2





CAMERA ORIENTATION DETAIL

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

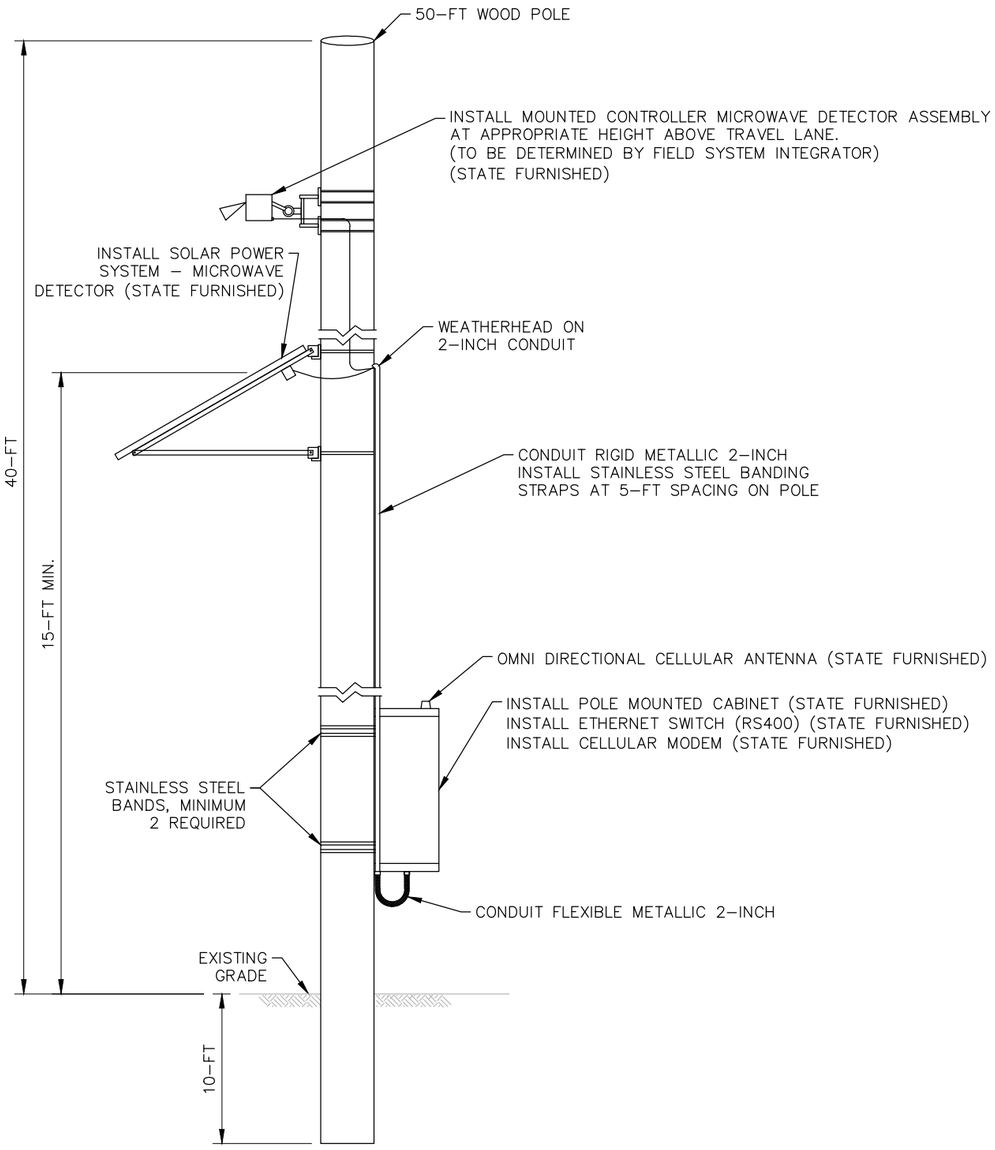
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

CCTV–53–0108–C
USH 51 @ USH 14

PROJECT NO:1005–10–70	HWY: I-39/90	COUNTY: ROCK	ITS CONSTRUCTION DETAILS - SHEET 35	SHEET 96	E

SEE ITS PLANS – SHEET 45
SEE ITS COMMUNICATION SCHEMATICS – SHEET 33



GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

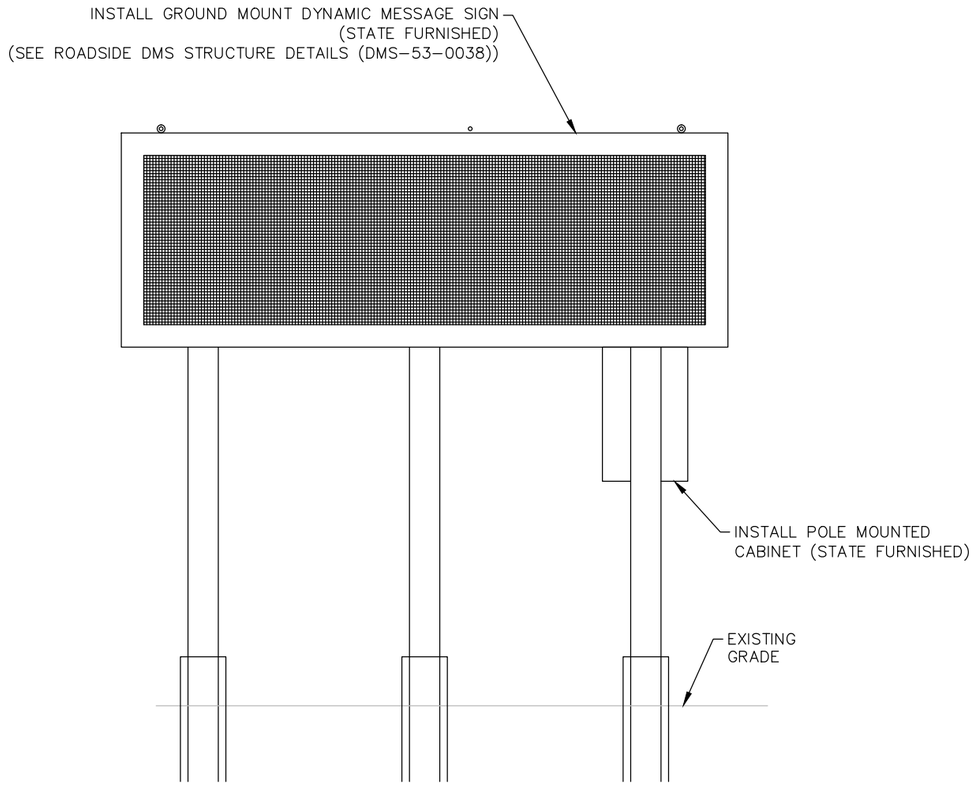
ORIENT SOLAR PANEL AS CLOSE TO SOUTH AS POSSIBLE.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

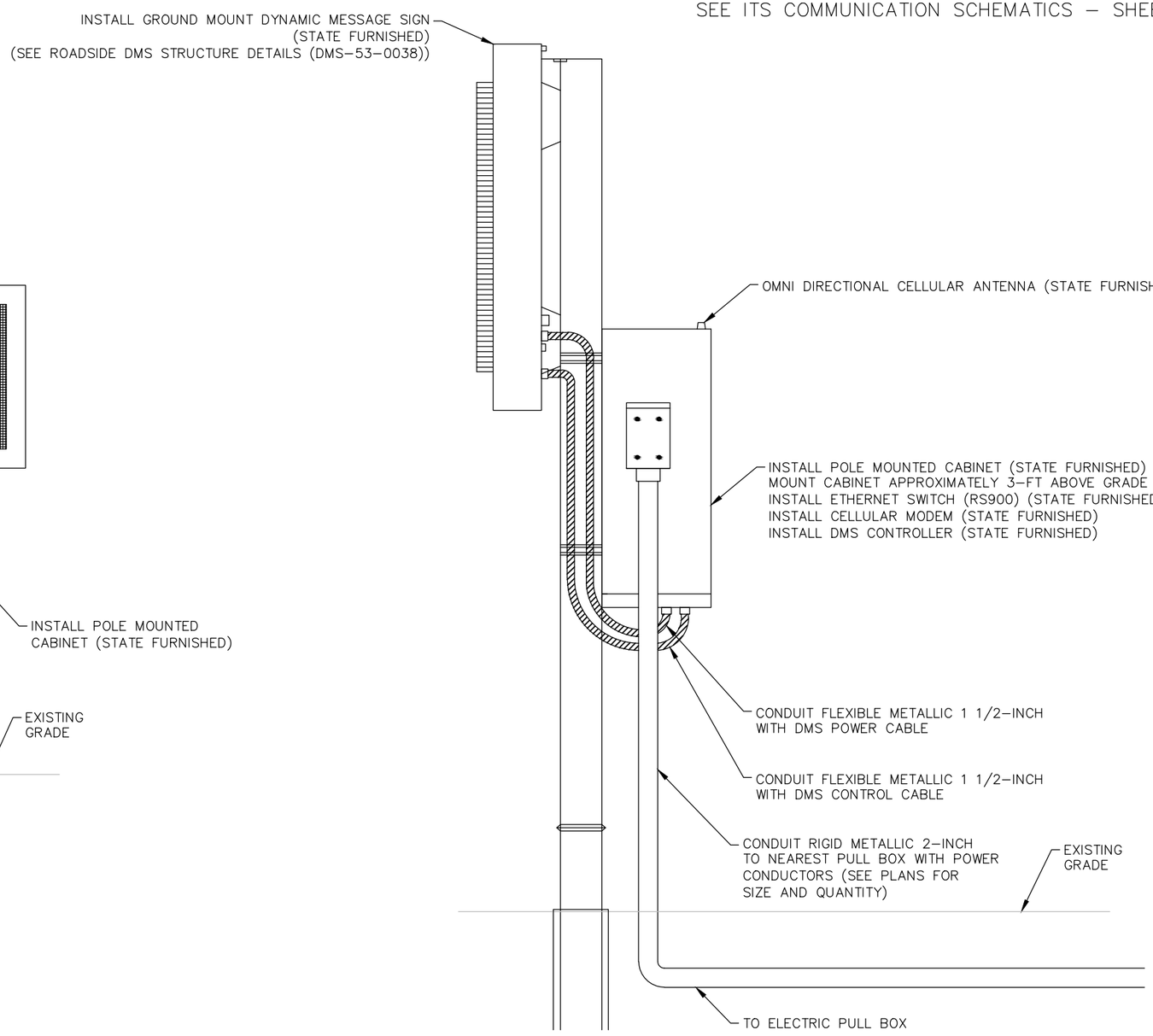
SDS–53–0085–S
STH 140 @ 0.8 MILES SOUTH OF USH 14

SEE ITS PLANS – SHEET 46
SEE ITS COMMUNICATION SCHEMATICS – SHEET 34

2



ELEVATION VIEW



SECTION VIEW

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

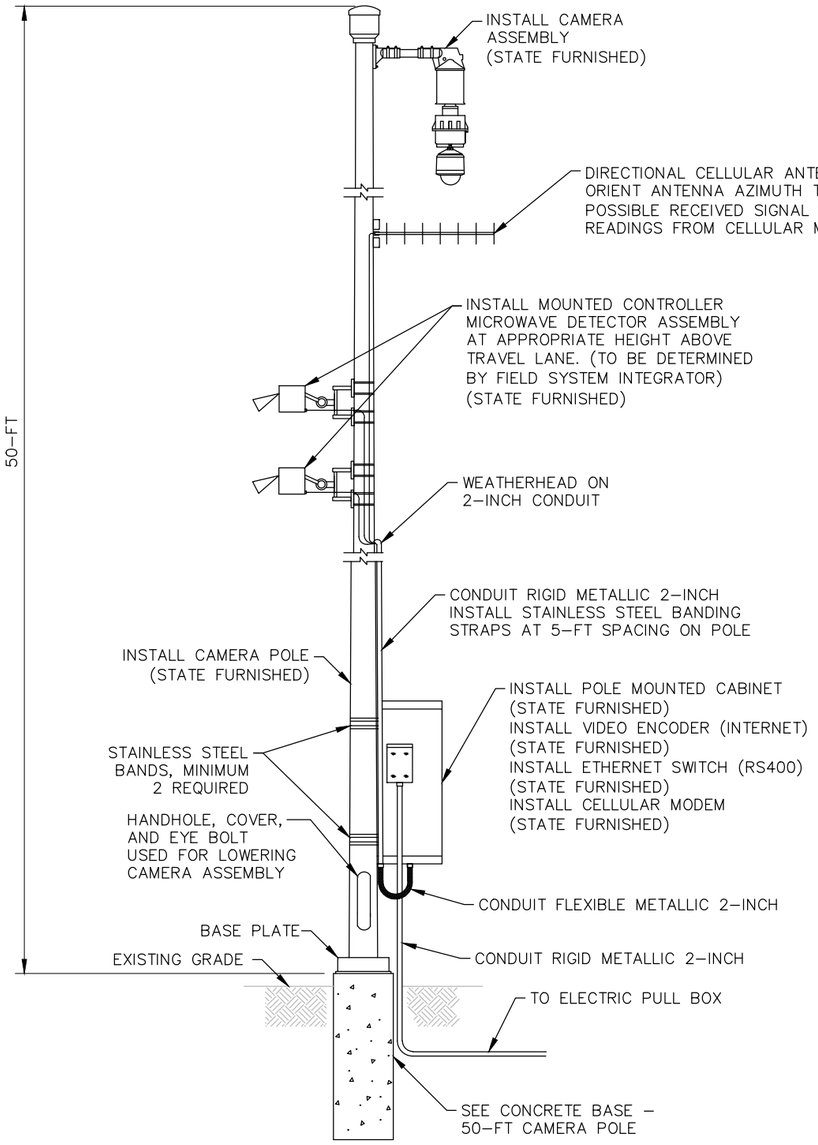
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

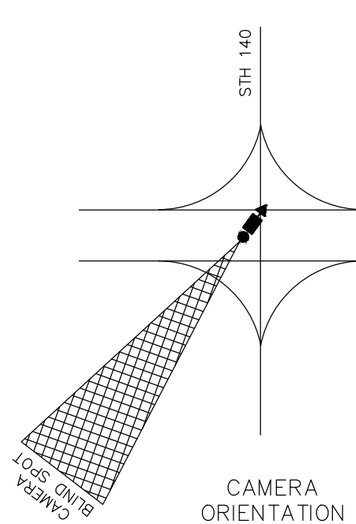
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT AND SECURED TO DMS STRUCTURE AT 5–FT INTERVALS.

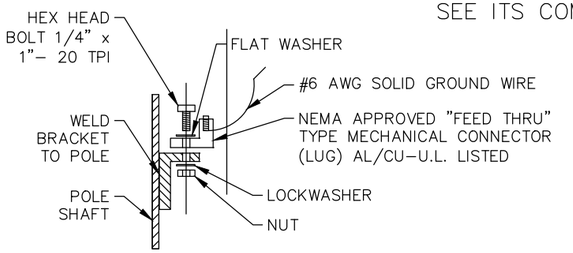
DMS–53–0038–S (SB)
I–43 @ CARVERS ROCK ROAD

SEE ITS PLANS – SHEET 47
SEE ITS COMMUNICATION SCHEMATICS – SHEET 35

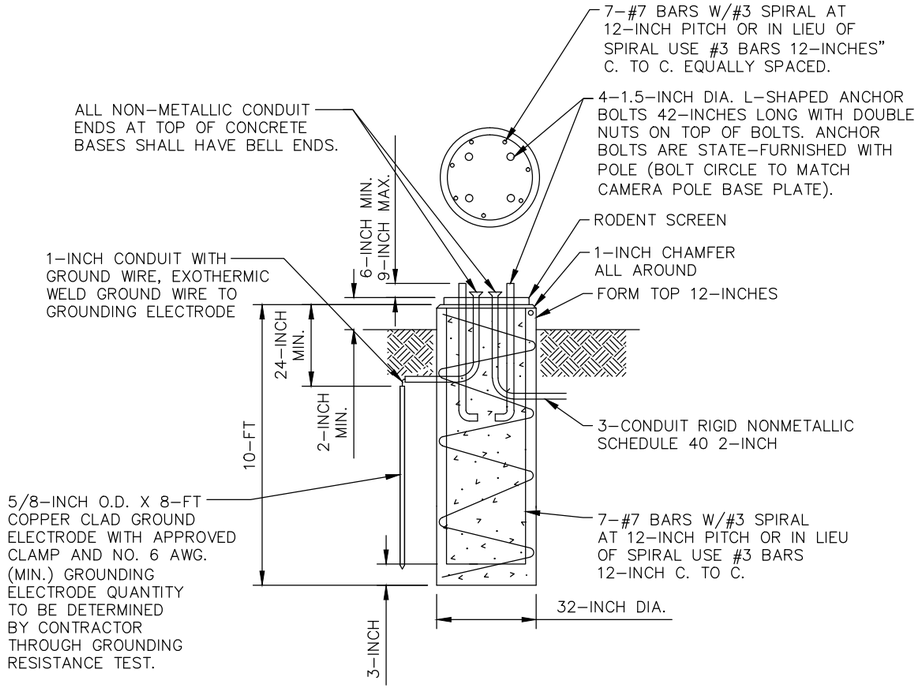




CAMERA ORIENTATION DETAIL



FIELD INSTALLED GROUNDING LUG



MATERIALS DATA

CONCRETE	f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

CONCRETE BASE, 50–FT CAMERA POLE

GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

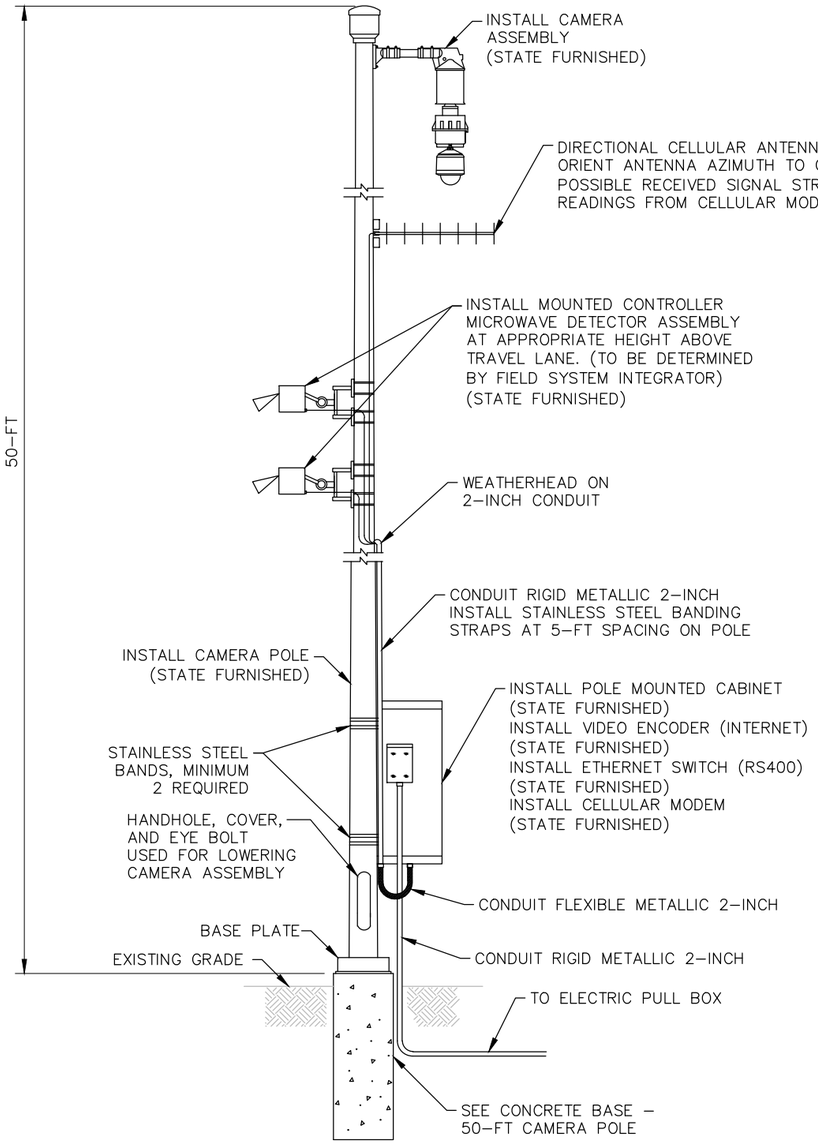
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL.
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE 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.

CCTV–53–0047–S
SDS–53–0083A–S (NB)
SDS–53–0083B–S (SB)
I–43 @ STH 140

SEE ITS PLANS – SHEET 48
SEE ITS COMMUNICATION SCHEMATICS – SHEET 36

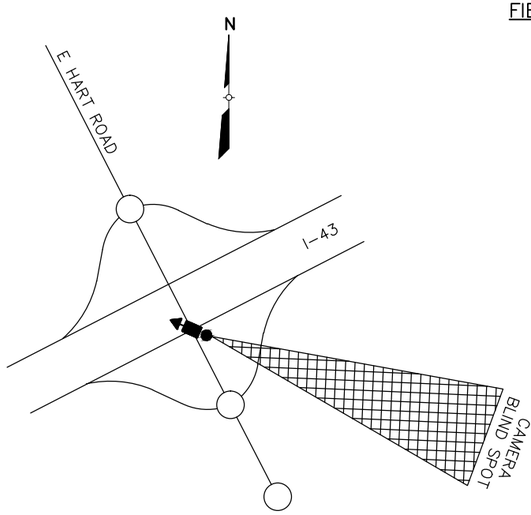


GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

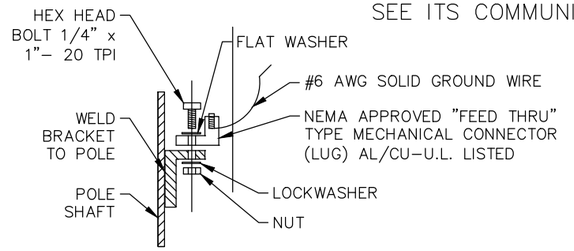
INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

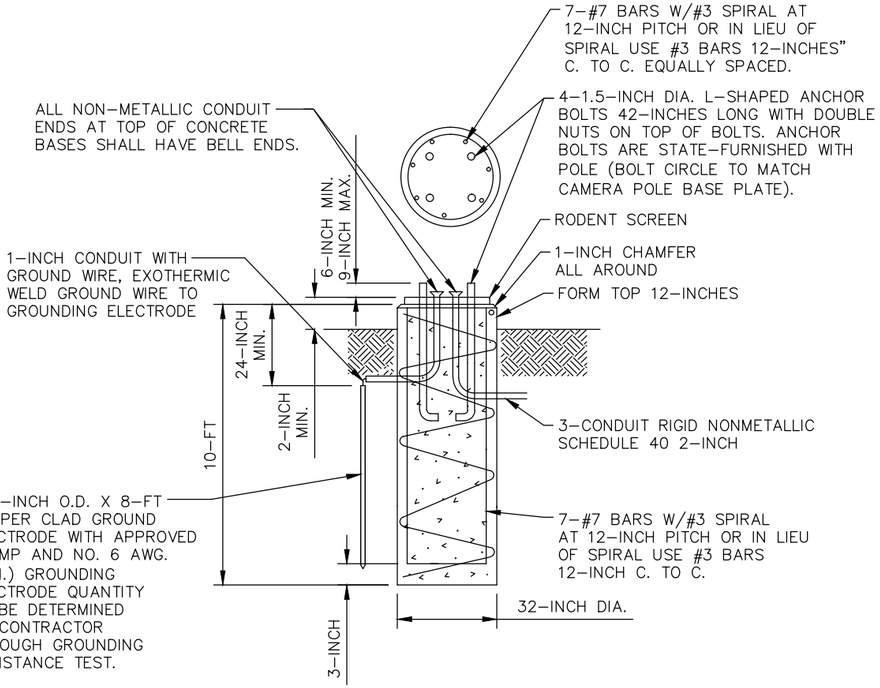
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.



CAMERA ORIENTATION DETAIL



FIELD INSTALLED GROUNDING LUG



MATERIALS DATA

CONCRETE	f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

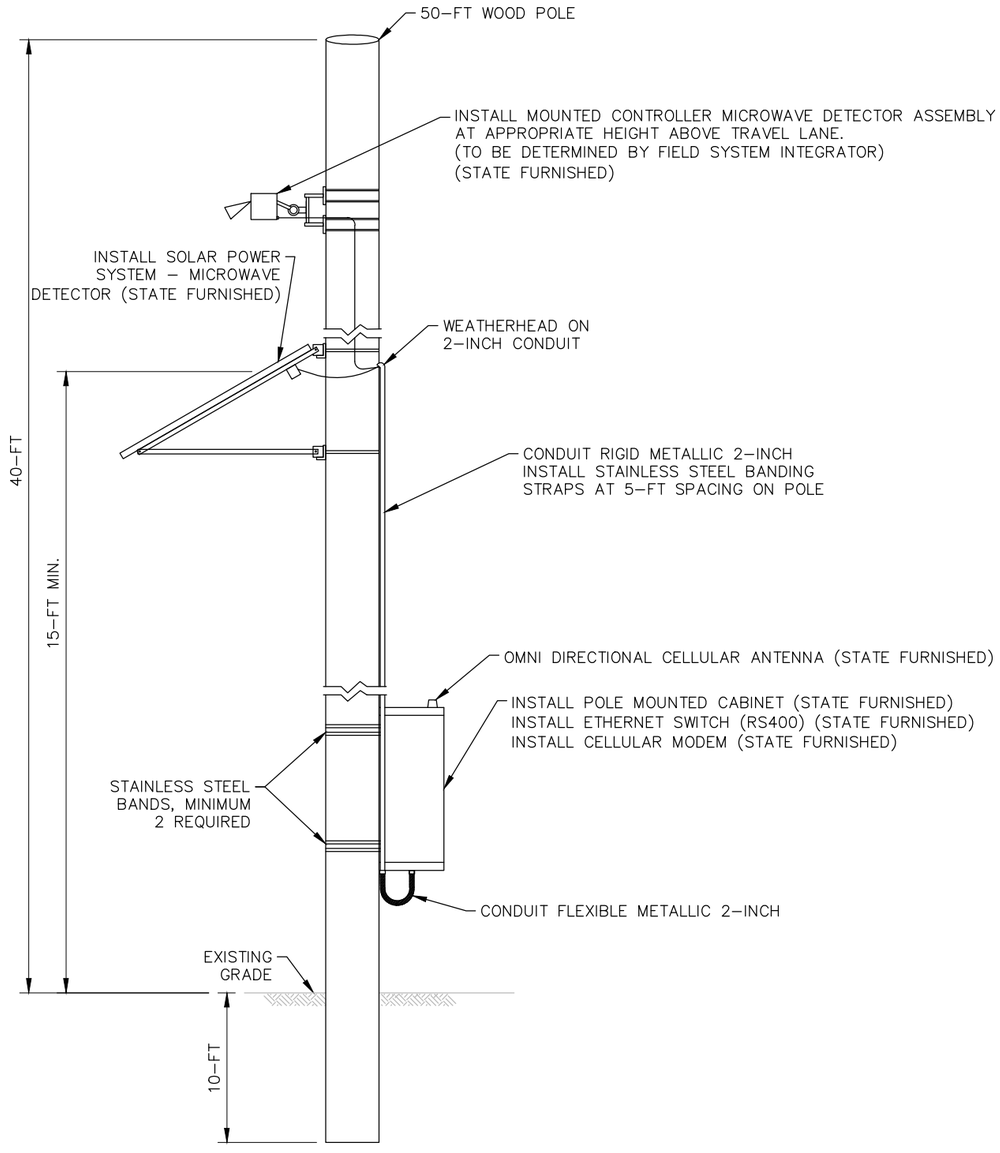
CONCRETE BASE, 50–FT CAMERA POLE

NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL.
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE 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.

CCTV–53–0046–S
SDS–53–0082A–S (NB)
SDS–53–0082B–S (SB)
I–43 @ HART ROAD

SEE ITS PLANS – SHEET 49
SEE ITS COMMUNICATION SCHEMATIC – SHEET 37



GENERAL NOTES:
SECURE LOOSE CABLES TO POLE AT 5–FT INTERVALS.

INSTALL DRIP LOOPS ON LOOSE CABLES TO PREVENT WATER FROM FLOWING ON CABLE AND ENTERING POLES/ENCLOSURES.

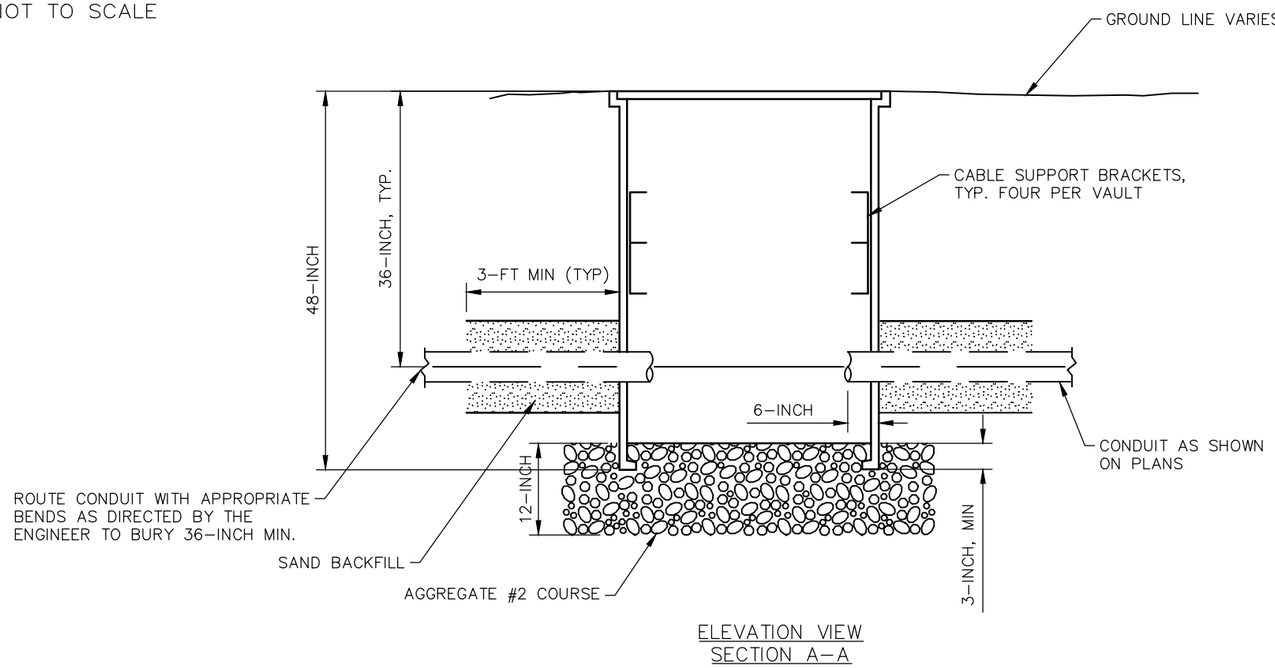
MOUNT EQUIPMENT UTILIZING STAINLESS STEEL BANDS OR METHOD APPROVED BY THE ENGINEER.

ORIENT SOLAR PANEL AS CLOSE TO SOUTH AS POSSIBLE.

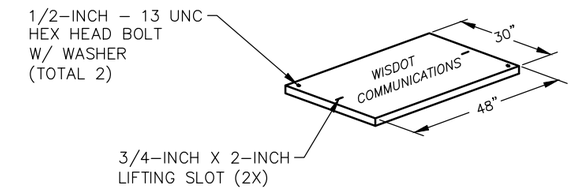
CONDUIT FLEXIBLE METALLIC SHALL BE LIQUID TIGHT.

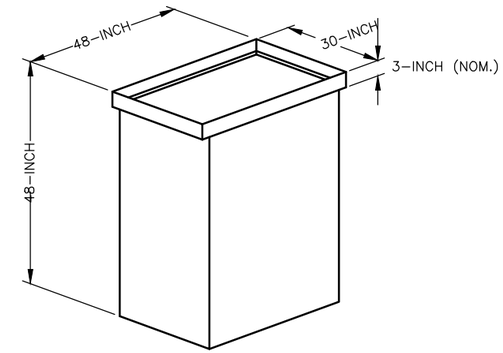
SDS–53–0086–S
GATEWAY BLVD @ 0.7 MILES SOUTH OF MILLINGTON ROAD

NOT TO SCALE

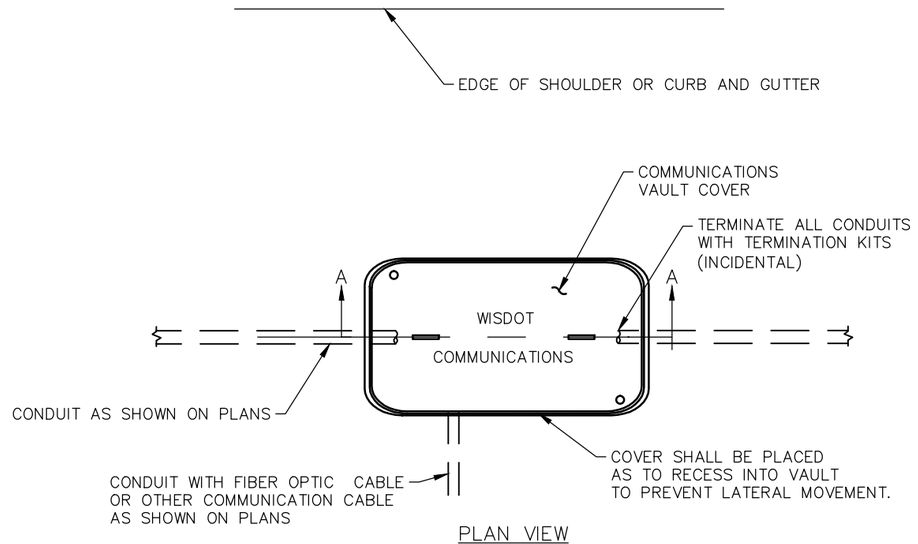


ELEVATION VIEW
SECTION A–A





ISOMETRIC VIEW



PLAN VIEW

GENERAL NOTES:
BOX SHALL HAVE AN OPEN BASE.

COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

VAULT COVERS TO BE IMPRINTED WITH "WISDOT COMMUNICATIONS" IN 2–INCH LETTERING.

ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

VAULTS SHALL BE OF ONE–PIECE CONSTRUCTION. TWO–PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

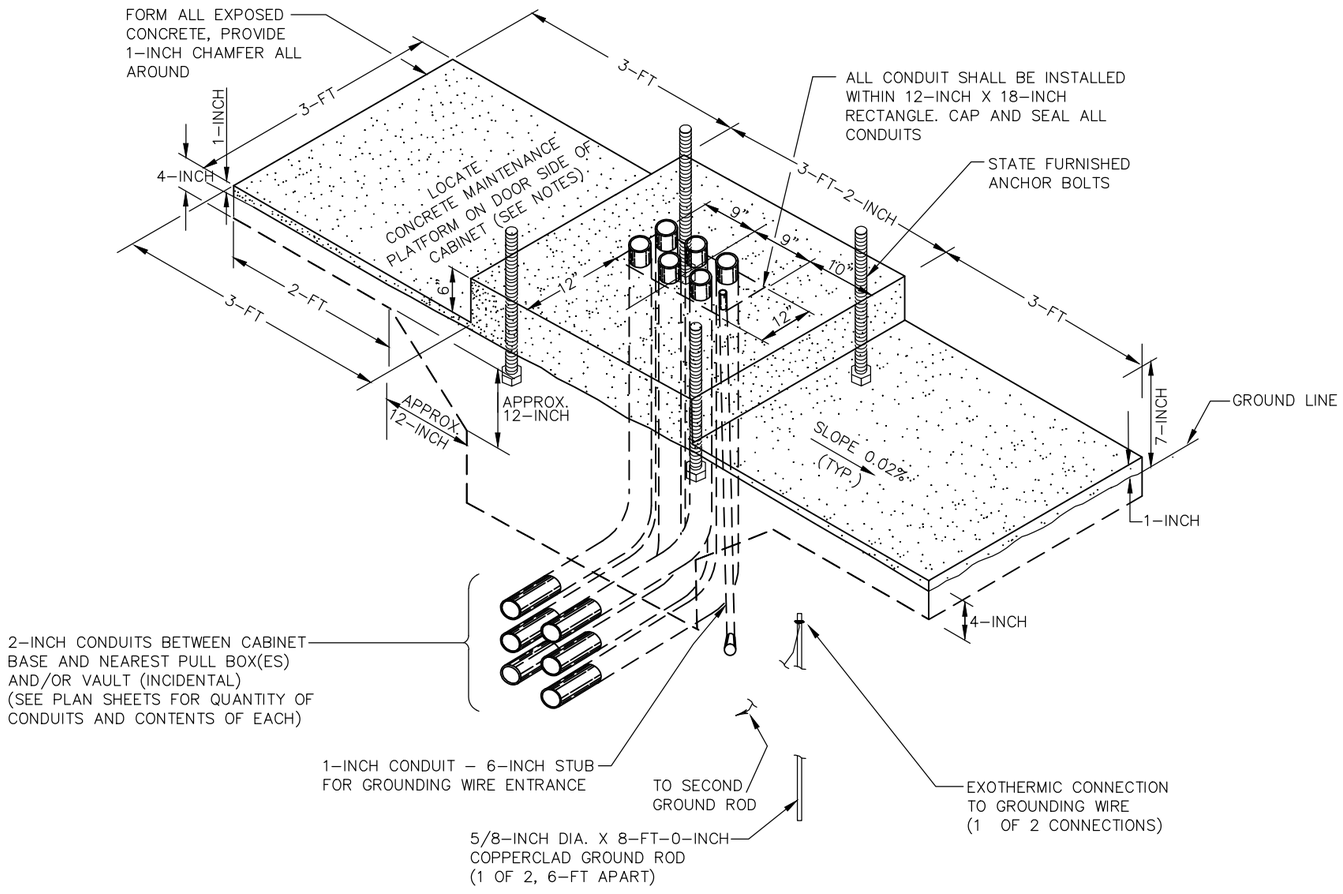
FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.

NOTE: COMMUNICATION VAULT TYPE 1 SHOWN ON ITS PLANS AS...
V CV_

COMMUNICATION VAULT TYPE 1

PROJECT NO: 1003/05/07–10–70	HWY: I-39/90	COUNTY: ROCK & DANE	ITS CONSTRUCTION DETAILS - SHEET 41	SHEET 102	E

NOT TO SCALE



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

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 3–INCHES.

DEPTH OF CONDUIT SHALL BE 24–INCHES MINIMUM AND 36–INCHES MAXIMUM.

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

CONTROLLER CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL, PRIOR TO CABINET INSTALLATION. LEVELING OF TOP SURFACES AFTER CONCRETE BASE HAS CURED SHALL ONLY BE ACCOMPLISHED BY GRINDING.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 x THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC, IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS PLACED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

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

ALL METALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE BUSHINGS IF WIRE IS INSTALLED.

ALL NONMETALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE END BELLS IF WIRE IS INSTALLED.

ANCHOR BOLTS TO ANCHOR THE FIELD CABINET TO THE CABINET BASE WILL BE STATE FURNISHED WITH THE FIELD CABINET.

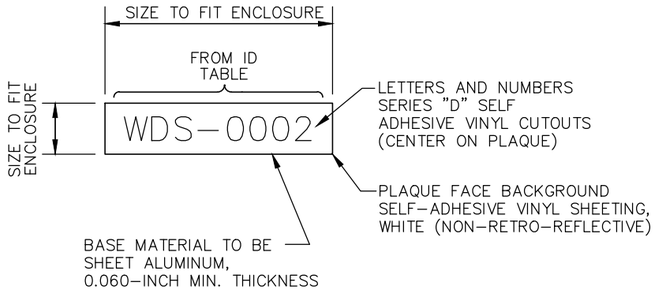
CONFIRM BOLT PATTERN OF CABINET PRIOR TO CONSTRUCTION OF CONCRETE BASE.

CONDUIT TO NEAREST PULL BOX(ES) AND/OR VAULT, CONDUIT FOR GROUNDING AND ALL GROUNDING COMPONENTS ARE INCIDENTAL.

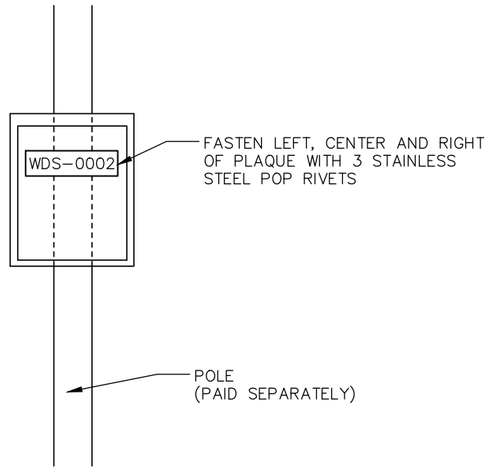
BASE ITS CONTROLLER CABINET

NOT TO SCALE

PLAQUES SEQUENCE IDENTIFICATION TABLE		
SITE LOCATION	ID PLAQUE	NO. OF PLAQUES
I-39/90 @ 0.3 MILES S OF CTH BB	DMS-13-0043	2
	DMS-13-0044	2
	WDS-0001	2
I-39/90 @ STORCK ROAD	WDS-0002	2
I-39/90 @ WILLIAMS DRIVE	WDS-0003	2
I-39/90 @ CTH N	CCTV-13-0100	2
I-39/90 @ CHURCH STREET	DMS-13-0039	2
	WDS-0004	2
I-39/90 @ CTH W	WDS-0005	2
I-39/90 @ CTH B	WDS-0006	2
	CCTV-13-0101	2
I-39/90 @ CTH A	WDS-0007	2
I-39/90 @ USH 51 N JCT	CCTV-13-0102	2
I-39/90 @ MAPLE GROVE ROAD	WDS-0008	2
I-39/90 @ STH 106	WDS-0009	2
I-39/90 @ USH 51 S JCT/STH 73	CCTV-13-0103	2
I-39/90 @ LAKE DRIVE ROAD (EB)	WDS-0010	2
	DMS-13-0040	2
I-39/90 @ LAKE DRIVE ROAD (WB)	WDS-0011	2
	DMS-13-0041	2
I-39/90 @ STH 59	CCTV-53-0104	2
I-39/90 @ KNUTSON ROAD	WDS-0012	2
I-39/90 @ 0.2 MILES S OF CTH M	WDS-0013	2
	DMS-53-0045	2
	DMS-53-0046	2
	CCTV-53-0105	2
I-39/90 @ M-H TOWNLINE ROAD	CCTV-53-0106	2
I-39/90 @ RUSSELL ROAD	WDS-0014	2
I-39/90 BETWEEN USH 14 & STH 26 (EB)	WDS-0015	2
I-39/90 BETWEEN USH 14 & STH 26 (WB)	WDS-0016	2
I-39/90 @ MILWAUKEE STREET (EB)	WDS-0017	2
	CCTV-53-0107	2
I-39/90 @ MILWAUKEE STREET (WB)	WDS-0018	2
I-39/90 @ CTH O	WDS-0019	2
I-39/90 @ 0.5 MILES N OF AVALON ROAD	WDS-0020	2
I-39/90 @ 0.2 MILES S OF WOODMAN ROAD	DMS-53-0047	2
	DMS-53-0048	2
	WDS-0021	2
I-39/90 @ WB BELOIT SWEF	CCTV-53-0045	2
I-39/90 @ L-T TOWNLINE ROAD	WDS-0022	2
I-39/90 @ HART ROAD (EB)	WDS-0023	2
I-39/90 @ HART ROAD (WB)	WDS-0024	2
	DMS-53-0042	2
I-39/90 @ CRANSTON ROAD	WDS-0025	2
I-39/90 @ STATELINE ROAD	WDS-0026	2
	CCTV-53-0048	2
I-39/90 @ PRAIRIE HILL ROAD	WDS-0027	2
STH 30 @ FAIR OAKS AVENUE	DMS-13-0004	2
	SDS-13-0062	2
STH 30 @ THOMPSON DRIVE	SDS-13-0060	2
	SDS-13-0061	2
USH 12/18 @ AGRICULTURE DRIVE	WDS-0028	2
USH 51 @ 0.6 MILES N OF J-F TOWNLINE ROAD	SDS-53-0084	2
USH 51 @ USH 14	CCTV-53-0108	2
STH 140 @ 0.8 MILES S OF USH 14	SDS-53-0085	2
IH 43 @ CARVERS ROCK ROAD	DMS-53-0038	2
IH 43 @ STH 140	CCTV-53-0047	2
	SDS-53-0083	2
IH 43 @ HART ROAD	CCTV-53-0046	2
	SDS-53-0082	2
GATEWAY BOULEVARD @ 0.7 MILES S OF MILLINGTON ROAD	SDS-53-0086	2



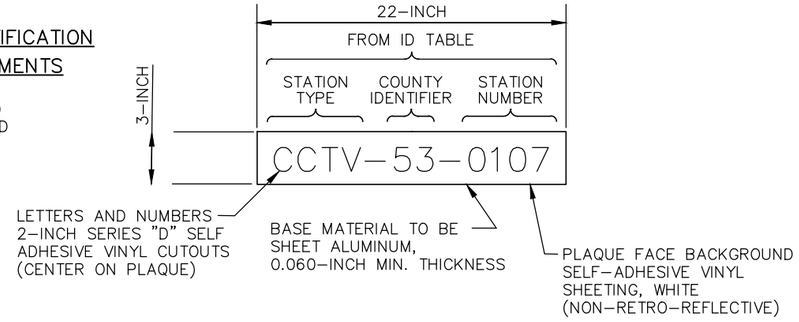
BLUETOOTH IDENTIFICATION PLAQUE DETAIL



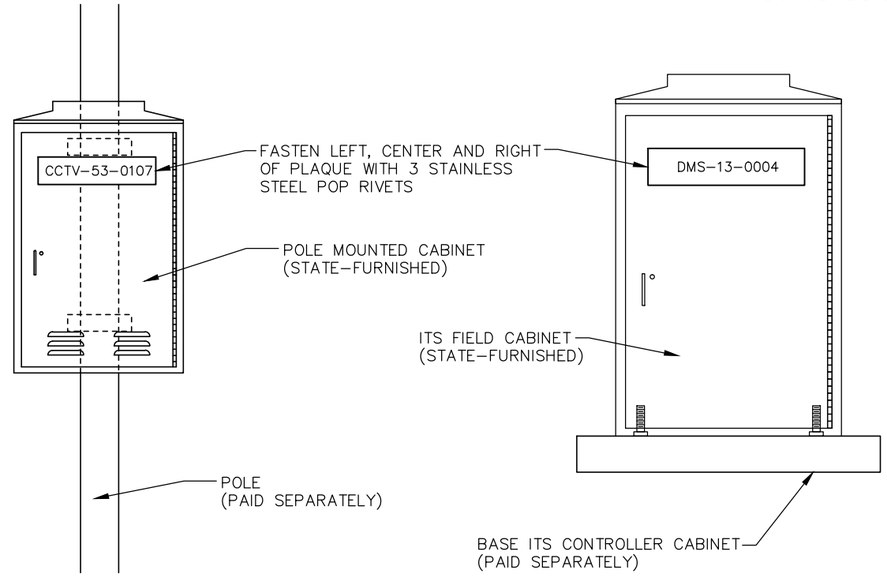
BLUETOOTH SENSOR ENCLOSURE IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL BLUETOOTH ENCLOSURES)
TWO PLAQUES PER ENCLOSURE REQUIRED

ELEVATION VIEW



CONTROL CABINET IDENTIFICATION PLAQUE DETAIL



CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)

ELEVATION VIEW

LEGEND STATION TYPE

RM – RAMP METER
CCTV – CLOSED CIRCUIT TELEVISION
ATR – AUTOMATIC TRAFFIC RECORDER
SDS – SYSTEM DETECTOR STATION
DMS – DYNAMIC MESSAGE SIGN
G – RAMP CLOSURE GATE
WDS – WIRELESS DETECTION SENSOR

CONTROL CABINET NOTES

TWO PLAQUES PER DEVICE REQUIRED ON CONTROL CABINET.

FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.

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.

COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

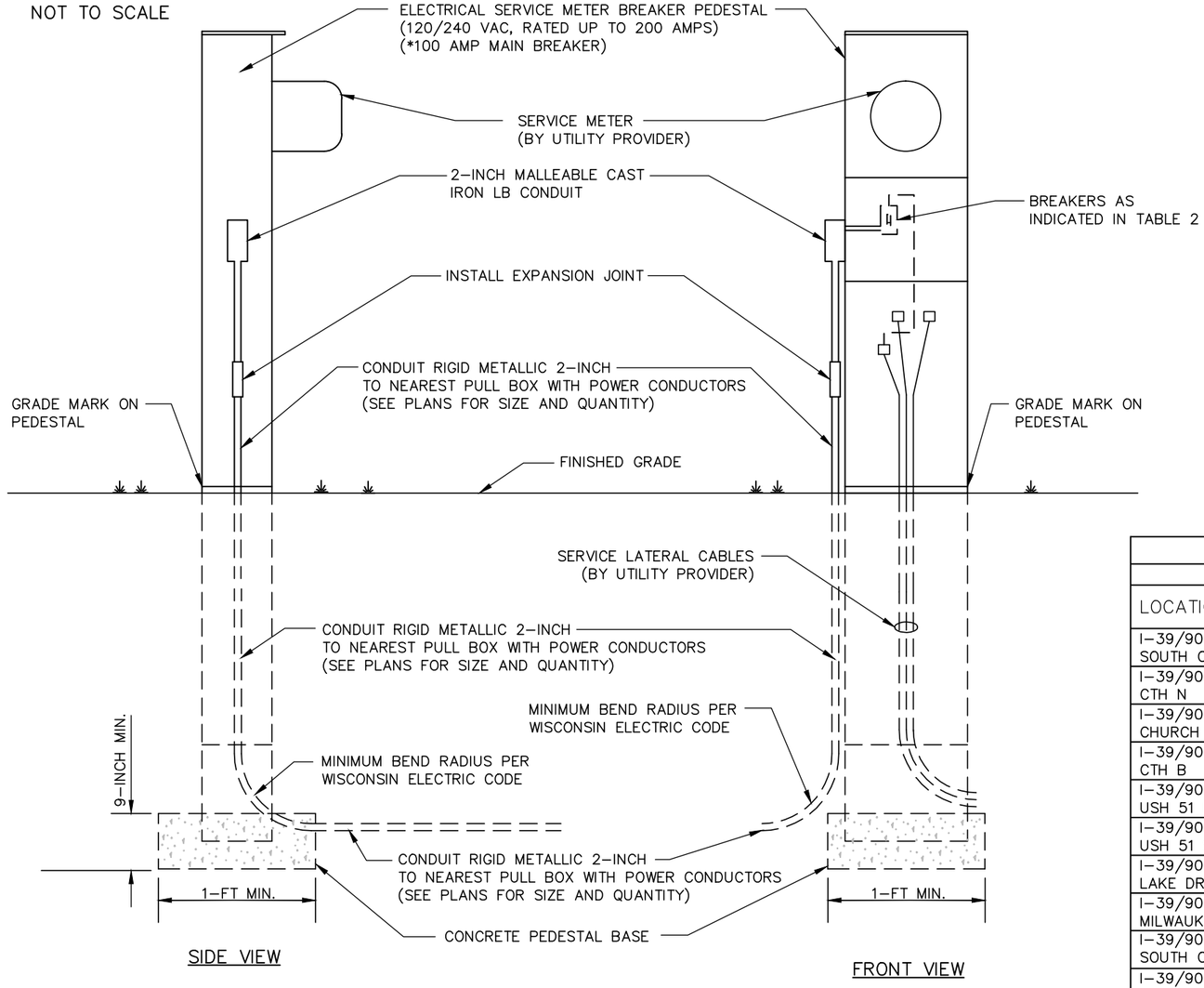
BLUETOOTH SENSOR ENCLOSURE NOTES

FOR BLUETOOTH SENSOR ENCLOSURES MOUNTED DIRECTLY TO A WOOD POLE, FASTEN PLAQUES TO BLUETOOTH SENSOR ENCLOSURE.

FOR BLUETOOTH SENSOR ENCLOSURES LOCATED IN A CONTROL CABINET, FASTEN PLAQUES TO CONTROL CABINET.

PLAQUES SEQUENCE IDENTIFICATION

NOT TO SCALE



SIDE VIEW

FRONT VIEW

*NOTE: MAIN BREAKER SIZE MAY BE INCREASED IF MAXIMUM POWER DRAW IS EXPECTED TO EXCEED 100 AMPS.

TABLE 1

STANDARD BREAKER SIZES + LABELS

DEVICE TYPE	BREAKER SIZE	BREAKER LABEL
MAIN	*100 AMPS (2P)	MAIN
RWIS	20 AMPS	RWIS
RAMP CLOSURE GATE	20 AMPS	GATE(S)
WIRELESS MESH NODE	30 AMPS	WMN
CCTV CAMERA	30 AMPS	CCTV
SDS	30 AMPS	SDS
CCTV CAMERA + SDS	30 AMPS	CCTV/SDS
DMS	60 AMPS (2P)	DMS
BACK–TO–BACK DMS	100 AMPS (2P)	DMS
SPARE	30 AMPS	SPARE

TABLE 2

BREAKER SIZES BY LOCATION

LOCATION	ID	MAIN BREAKER SIZE	SUB–BREAKER #1 SIZE	SUB–BREAKER #2 SIZE	SUB–BREAKER #3 SIZE
I–39/90 @ 0.3 MILES SOUTH OF CTH BB	DMS–13–0043–N DMS–13–0044–N	100 AMPS (2P)	100 AMPS (2P) (DMS)	30 AMPS (SPARE)	
I–39/90 @ CTH N	CCTV–13–0100–N	100 AMPS (2P)	30 AMPS (CCTV)	30 AMPS (SPARE)	
I–39/90 @ CHURCH STREET	DMS–13–0039–N	100 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (SPARE)	
I–39/90 @ CTH B	CCTV–13–0101–N	100 AMPS (2P)	30 AMPS (CCTV)	30 AMPS (SPARE)	
I–39/90 @ USH 51 N JCT	CCTV–13–0102–N	100 AMPS (2P)	30 AMPS (CCTV)	30 AMPS (SPARE)	
I–39/90 @ USH 51 S JCT/STH 73	CCTV–13–0103–N	100 AMPS (2P)	30 AMPS (CCTV)	30 AMPS (SPARE)	
I–39/90 @ LAKE DRIVE ROAD (EB)	DMS–13–0040–N	100 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (SPARE)	
I–39/90 @ MILWAUKEE STREET	CCTV–53–0107–C	100 AMPS (2P)	30 AMPS (CCTV)	30 AMPS (SPARE)	
I–39/90 @ 0.2 MILES SOUTH OF WOODMAN ROAD	DMS–13–0047–S DMS–13–0048–S	100 AMPS (2P)	100 AMPS (2P) (DMS)	30 AMPS (SPARE)	
I–39/90 @ WB BELOIT SWEF	CCTV–53–0045–S WMN–0067–S	100 AMPS (2P)	30 AMPS (CCTV)	30 AMPS (SPARE)	
I–39/90 @ CTH S	WMN–0069–S	100 AMPS (2P)	30 AMPS (WMN)	30 AMPS (SPARE)	
I–39/90 @ CRANSTON ROAD	WMN–0072–S	100 AMPS (2P)	30 AMPS (WMN)	30 AMPS (SPARE)	
I–39/90 @ STATELINE ROAD	CCTV–53–0048–S SDS–53–0048–S	100 AMPS (2P)	30 AMPS (CCTV/SDS)	30 AMPS (SPARE)	
STH 30 @ FAIR OAKS AVENUE	DMS–13–0004–N SDS–13–0062A–N SDS–13–0062B–N	100 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (SPARE)	
I–43 @ CARVERS ROCK ROAD	DMS–53–0038–S	100 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (SPARE)	

ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION)

NOT TO SCALE

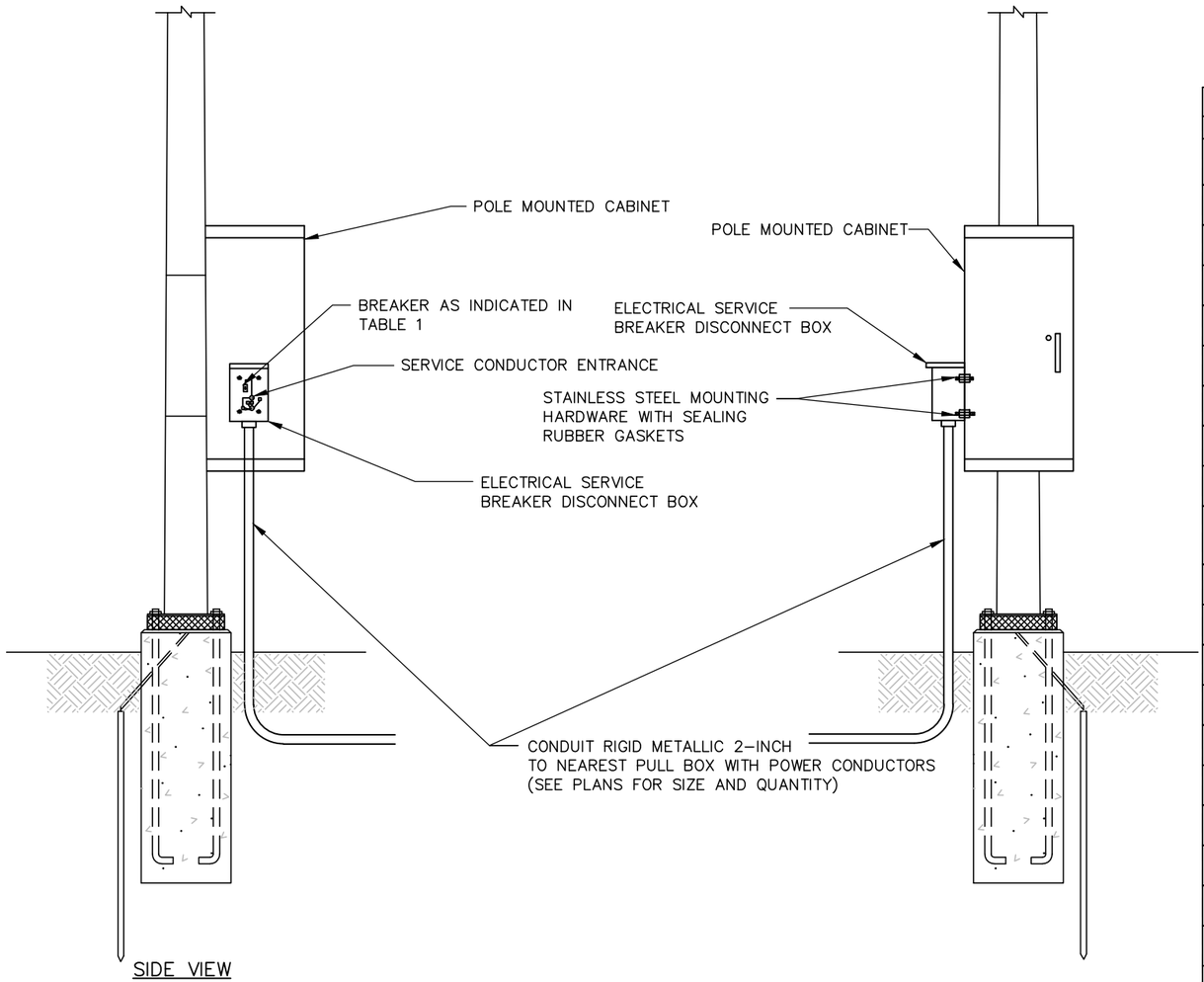


TABLE 1

BREAKER SIZES BY LOCATION

LOCATION	ID	MAIN BREAKER SIZE	SUB-BREAKER #1 SIZE	SUB-BREAKER #2 SIZE	SUB-BREAKER #3 SIZE
I-39/90 @ CTH N	CCTV-13-0100-N	30 AMPS			
I-39/90 @ CHURCH STREET	DMS-13-0039-N	60 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (CB)	
I-39/90 @ CTH B	CCTV-13-0101-N	30 AMPS			
I-39/90 @ USH 51 N JCT	CCTV-13-0102-N	30 AMPS			
I-39/90 @ USH 51 S JCT/STH 73	CCTV-13-0103-N	30 AMPS			
I-39/90 @ LAKE DRIVE ROAD (EB)	DMS-13-0040-N	60 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (2P) (CB)	
I-39/90 @ LAKE DRIVE ROAD (WB)	DMS-13-0041-N	60 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (2P) (CB)	
I-39/90 @ STH 59	CCTV-53-0104-C	30 AMPS			
I-39/90 @ 0.2 MILES SOUTH OF CTH M	DMS-53-0045-C DMS-53-0046-C CCTV-53-0105-C	200 AMPS (2P)	60 AMPS (2P) (DMS)	60 AMPS (2P) (DMS)	30 AMPS (2P) (CCTV)
I-39/90 @ M-H TOWNLINE ROAD	CCTV-53-0106-C	30 AMPS			
I-39/90 @ MILWAUKEE STREET	CCTV-53-0107-C WMN-064-C	30 AMPS			
I-39/90 @ WB BELOIT SWEF	CCTV-53-0045-S WMN-067-S	30 AMPS			
I-39/90 @ CREEK ROAD	WMN-0068-S	30 AMPS			
I-39/90 @ CTH S	WMN-0069-S	30 AMPS			
I-39/90 @ HART ROAD	DMS-53-0042-S	60 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (2P) (CB)	
I-39/90 @ HART ROAD	WMN-0070-S	30 AMPS			
I-39/90 @ CRANSTON ROAD	WMN-0072-S	30 AMPS			
I-39/90 @ STATELINE ROAD	CCTV-53-0048-S SDS-53-0048-S	30 AMPS			
USH 51 @ USH 14	CCTV-53-0108-C	30 AMPS			
I-43 @ CARVERS ROCK ROAD	DMS-53-0038-S	60 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (2P) (CB)	
I-43 @ STH 140	CCTV-53-0047-S SDS-53-0083A SDS-53-0083B	30 AMPS			
I-43 @ HART ROAD	CCTV-53-0046-S SDS-53-0082A SDS-53-0083B	30 AMPS			

POLE MOUNTED CABINET ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION)

NOT TO SCALE

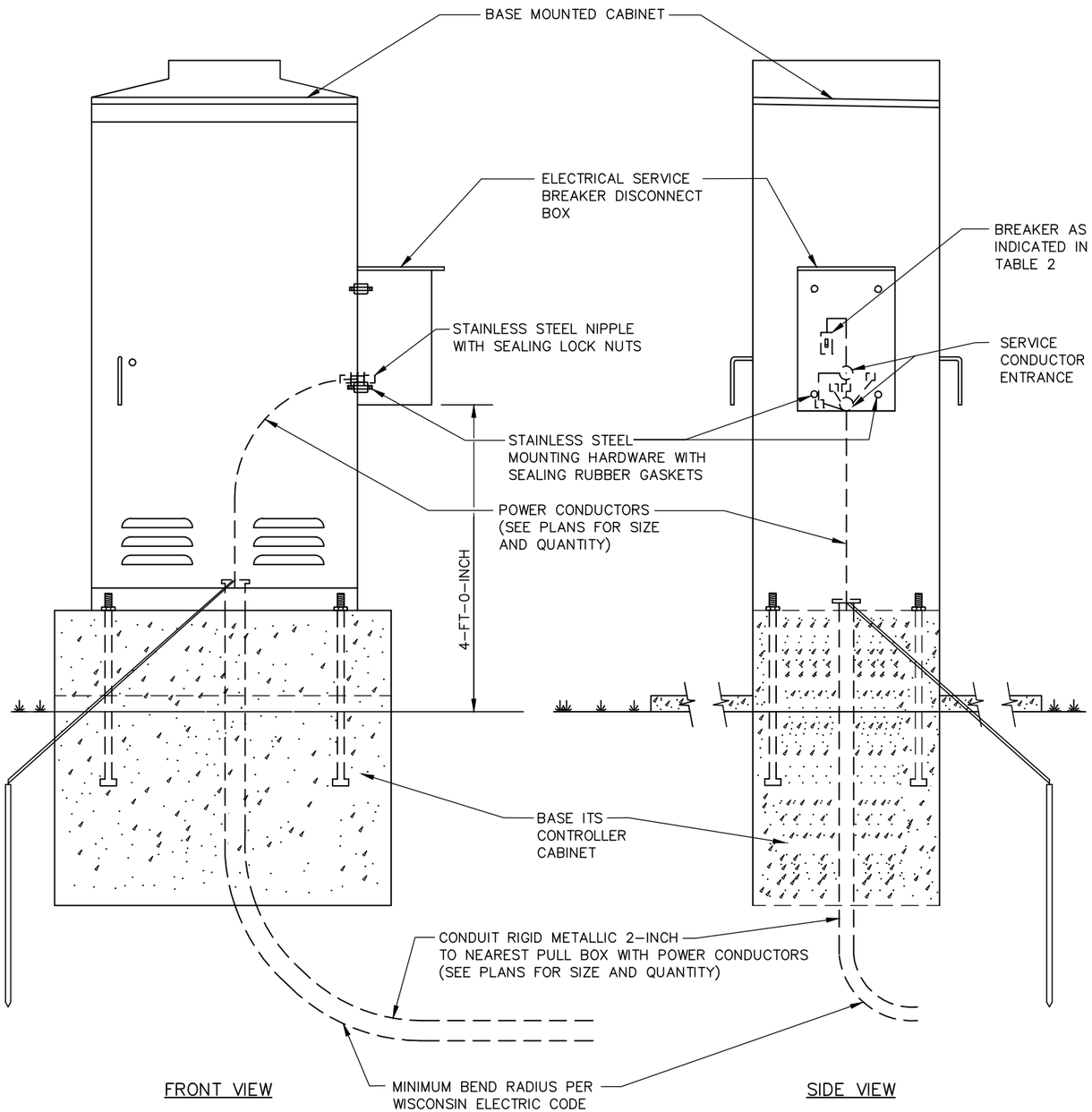


TABLE 1

BREAKER SIZES BY LOCATION

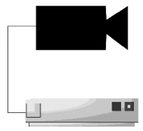
LOCATION	ID	MAIN BREAKER SIZE	SUB-BREAKER #1 SIZE	SUB-BREAKER #2 SIZE	SUB-BREAKER #3 SIZE
I-39/90 @ 0.3 MILES SOUTH OF CTH BB	DMS-13-0043-N DMS-13-0044-N	100 AMPS (2P)	60 AMPS (2P) (DMS)	60 AMPS (2P) (DMS)	30 AMPS (CB)
I-39/90 @ 0.2 MILES SOUTH OF WOODMAN ROAD	DMS-53-0047-S DMS-53-0048-S	100 AMPS (2P)	60 AMPS (2P) (DMS)	60 AMPS (2P) (DMS)	30 AMPS (CB)
STH 30 @ FAIR OAKS AVENUE	DMS-13-0004-N SDS-13-0062A-N SDS-13-0062B-N	60 AMPS (2P)	60 AMPS (2P) (DMS)	30 AMPS (CB)	

ITS FIELD CABINET ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION)

2

Alternate Route & I-39/90 North of CTH M Devices

CCTV

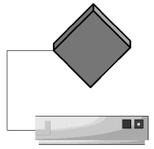


Cell Modem

DMS

Cell Modem

Detectors



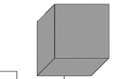
Cell Modem

Cellular Network

Bluetooth Detection

Data Provider Processing

Cellular Network

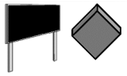


Bluetooth Sensor

Cell Modem

Travel Time Data

Madison Area Devcices



STH 30 @ Fair Oaks Ave

I-39/90 near Cottage Grove Rd

STH 30 @ Thompson Dr

900 MHz Link **900 MHz Link**

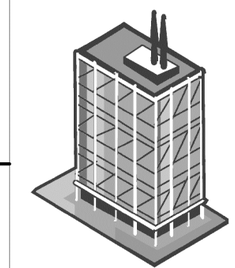
STH30 @ USH 51

I-39/90 @ Cottage Grove Rd

Internet

BITS Internet Gateway

WisDOT Wide Area Network



STOC

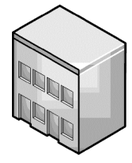
ITSNET

State Line Rd Fiber Connection

Existing Leased Fiber Facility

US14 Fiber Connection

Access to traffic data and video images provided by STOC



Project Field Office

5 GHZ Wireless Mesh Network (along I-39/90 from Illinois Border to Manogue Rest Area Tower)

Wi-Fi 2.4 GHZ Access Layer Network (coverage along I-39/90 from Illinois Border to CTH M) | **900 MHz Link**

CCTV

DMS

Vehicle Detectors

Prairie Hill Rd DMS

I-39/90 South Segment (to CTH M) Devices

ORIGINAL PLANS PREPARED BY

SRF Consulting Group, Inc.

ITS COMMUNICATION SCHEMATICS
SHEETS 1–37

WISCONSIN
JORDAN J. SCHWARZE
E-41326
PLYMOUTH, MN
PROFESSIONAL ENGINEER

2/1/2013 (Date)

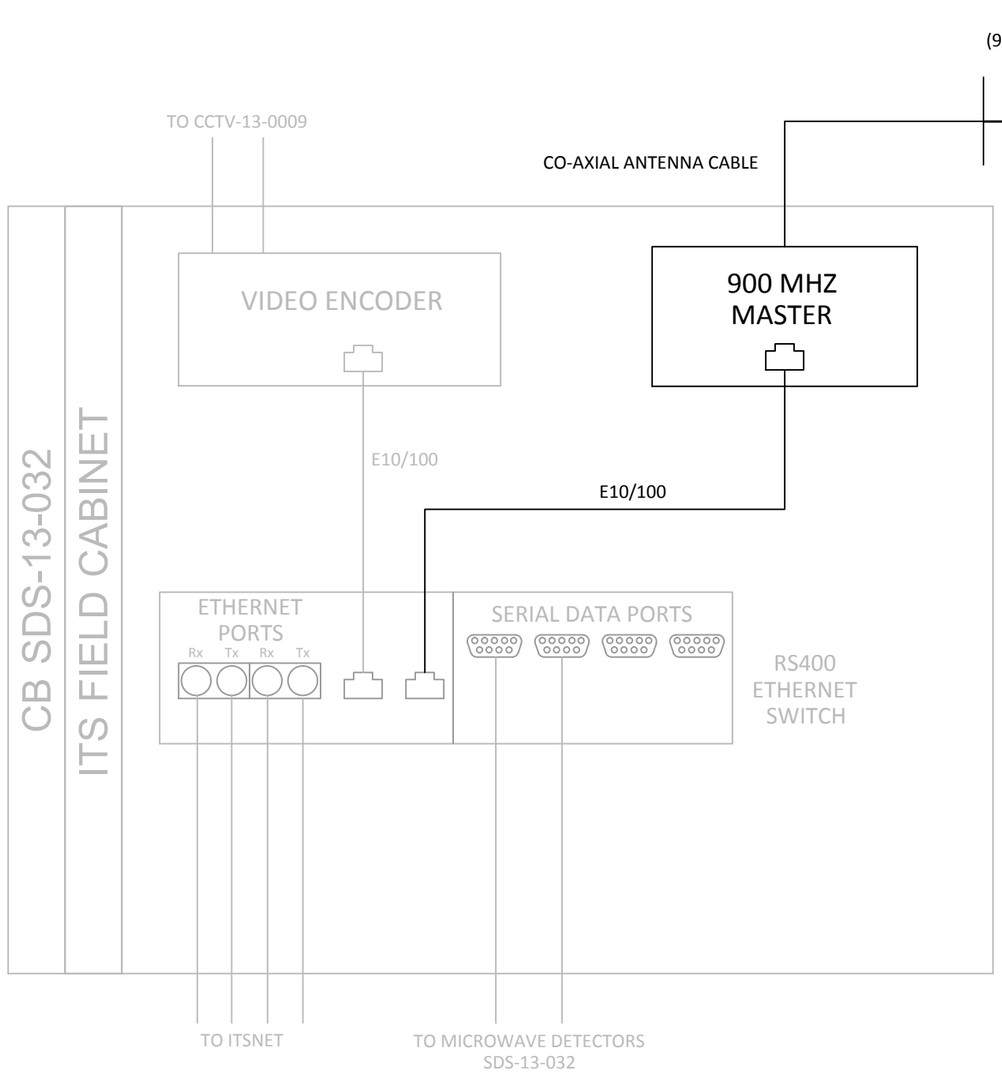
Jordan Schwarze (Signature)

COMMUNICATION OVERVIEW

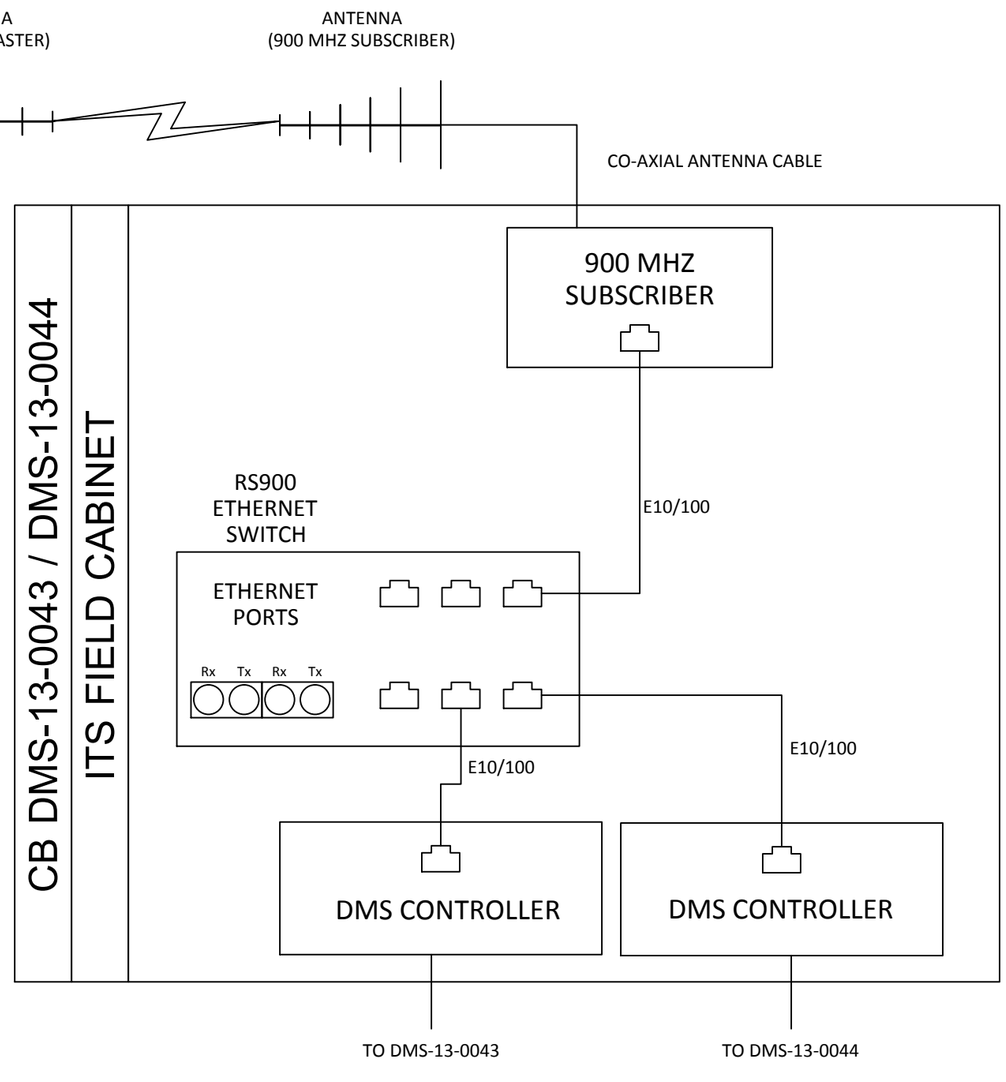
PROJECT NO:1003/05/07–10–70	HWY:I-39/90	COUNTY:ROCK & DANE	ITS COMMUNICATION SCHEMATICS – SHEET 1	SHEET 108	E

SEE ITS PLANS - SHEET 1
SEE ITS CONSTRUCTION DETAILS - SHEETS 2 & 3

2



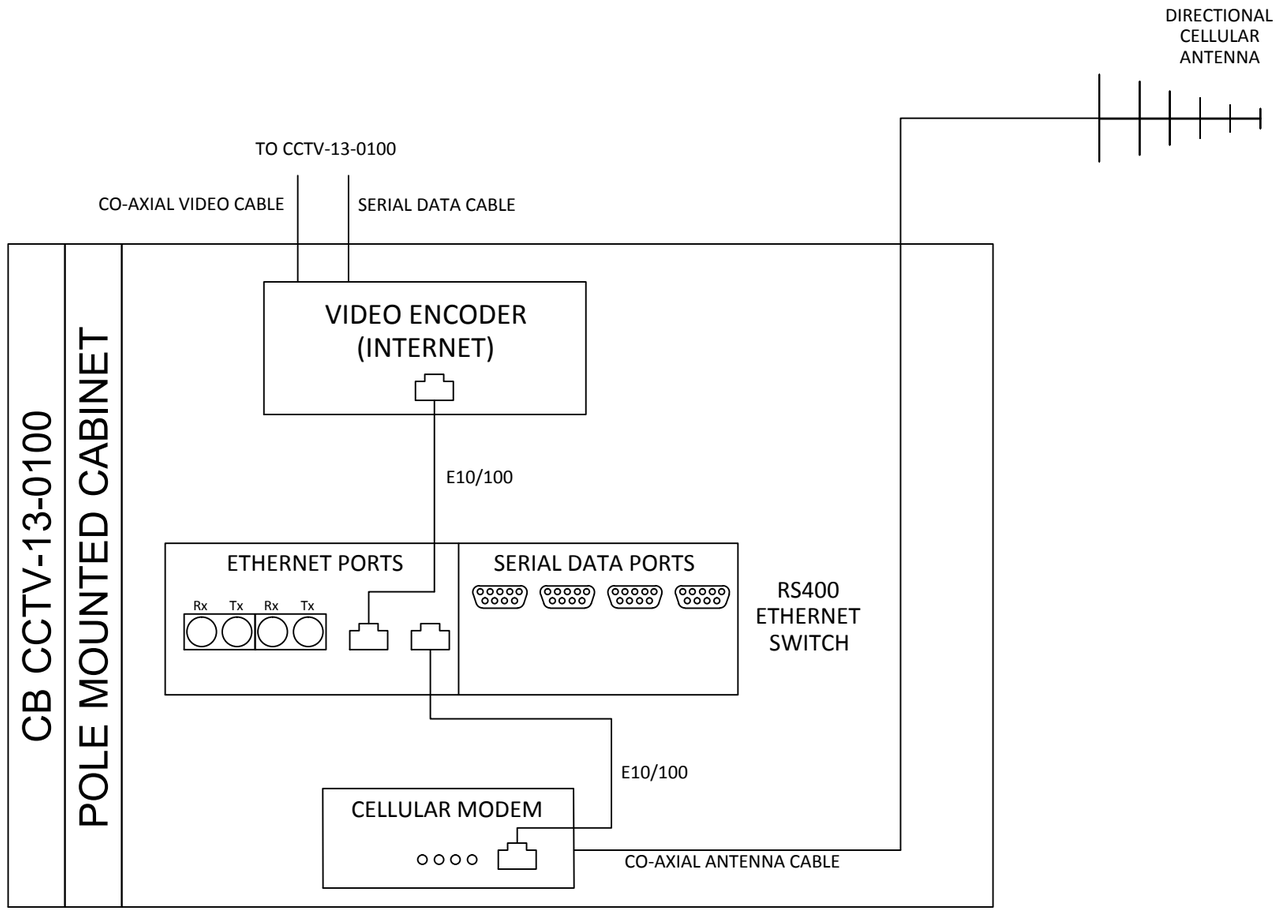
I-39/90 @ CTH BB (COTTAGE GROVE ROAD)



I-39/90 @ 0.3 MILES SOUTH OF CTH BB (COTTAGE GROVE ROAD)

SEE ITS PLANS - SHEET 4
SEE ITS CONSTRUCTION DETAILS - SHEET 4

2



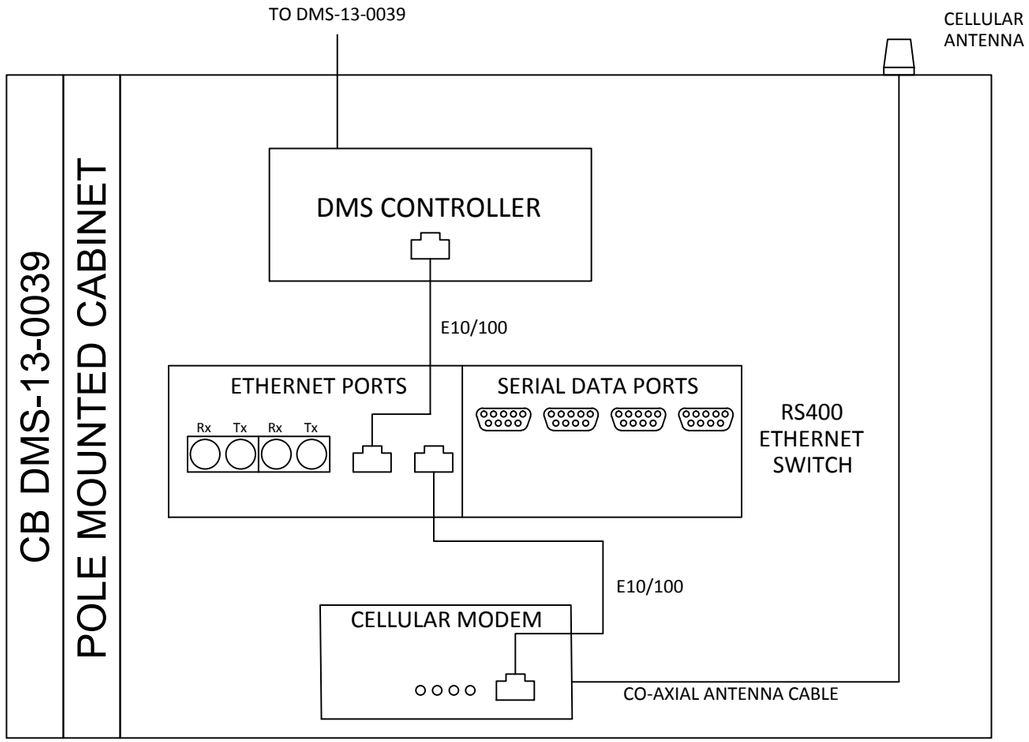
I-39/90 @ CTH N

NOTE:

ORIENT ANTENNA AZIMUTH TO OBTAIN HIGHEST POSSIBLE RECEIVED SIGNAL STRENGTH (RSSI) READINGS FROM CELLULAR MODEM

SEE ITS PLANS - SHEET 5
SEE ITS CONSTRUCTION DETAILS - SHEET 5

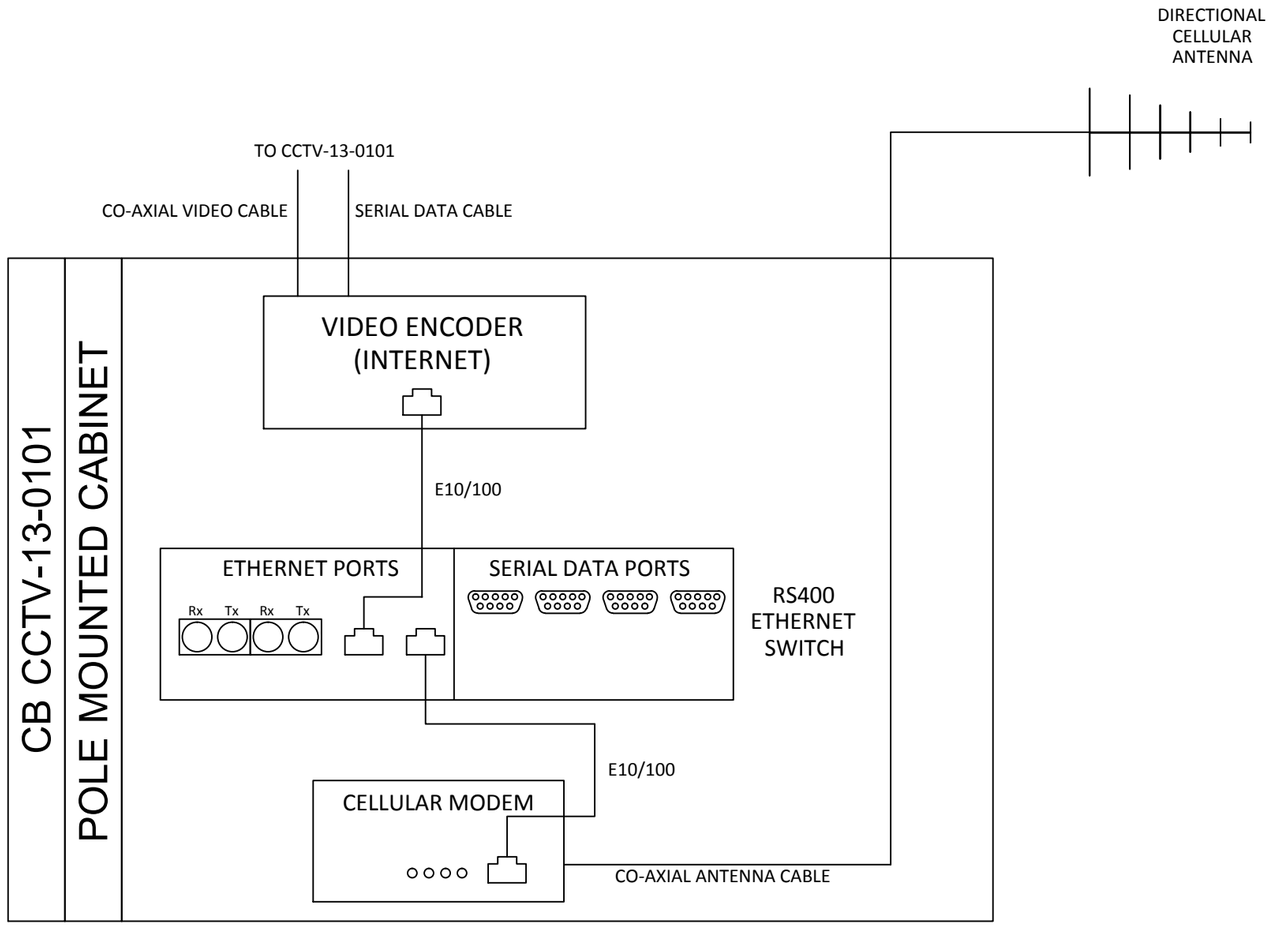
2



I-39/90 @ CHURCH STREET WB

SEE ITS PLANS - SHEET 8
SEE ITS CONSTRUCTION DETAILS - SHEET 6

2



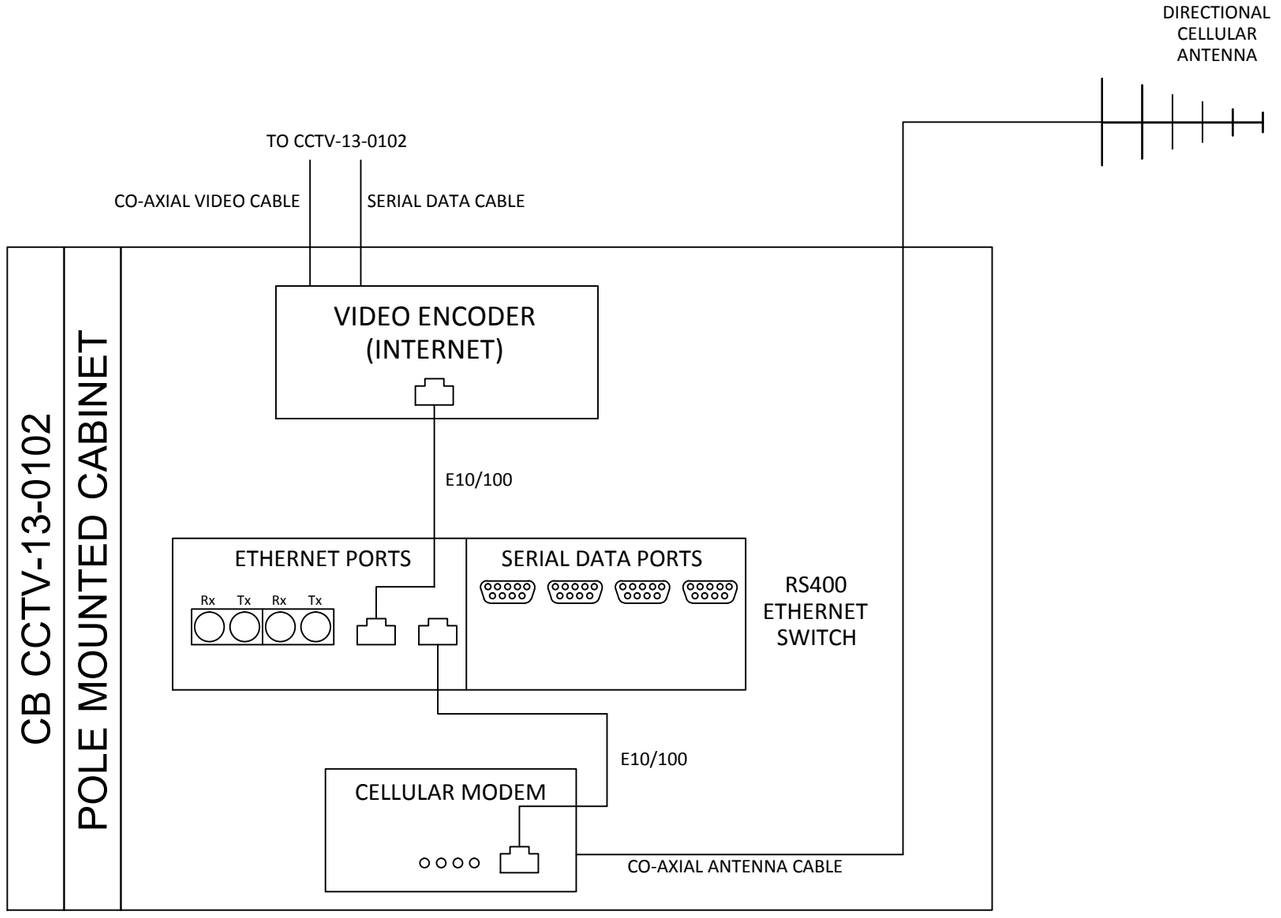
I-39/90 @ CTH B

NOTE:

ORIENT ANTENNA AZIMUTH TO OBTAIN HIGHEST POSSIBLE RECEIVED SIGNAL STRENGTH (RSSI) READINGS FROM CELLULAR MODEM

SEE ITS PLANS - SHEET 10
SEE ITS CONSTRUCTION DETAILS - SHEET 7

2



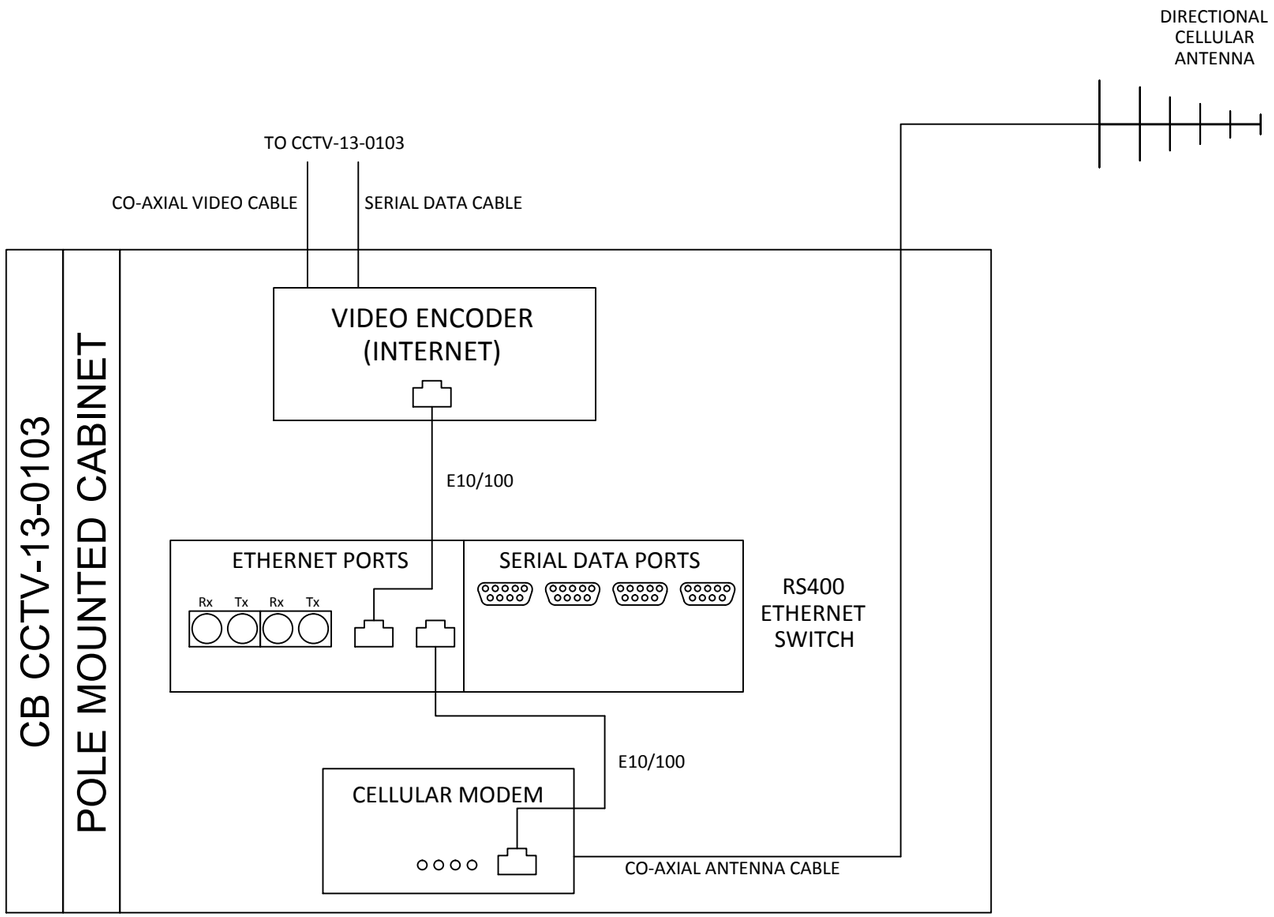
I-39/90 @ USH 51 N JCT

NOTE:

ORIENT ANTENNA AZIMUTH TO OBTAIN HIGHEST POSSIBLE RECEIVED SIGNAL STRENGTH (RSSI) READINGS FROM CELLULAR MODEM

SEE ITS PLANS - SHEET 13
SEE ITS CONSTRUCTION DETAILS - SHEET 8

2



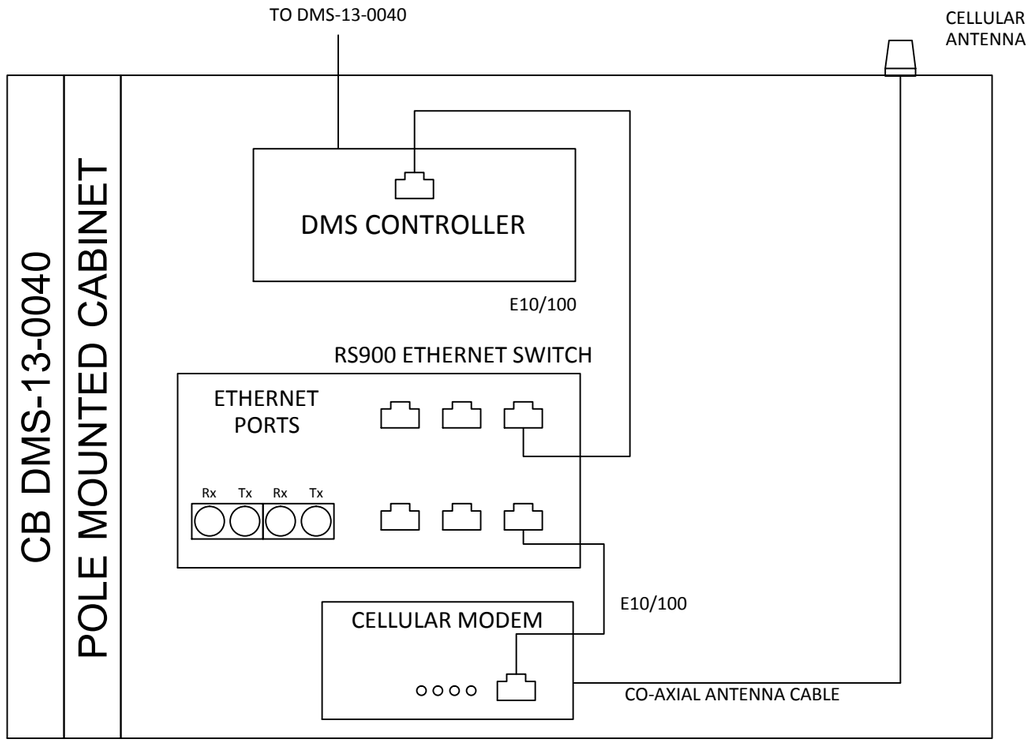
I-39/90 @ USH 51 S JCT/STH 73

NOTE:

ORIENT ANTENNA AZIMUTH TO OBTAIN HIGHEST POSSIBLE RECEIVED SIGNAL STRENGTH (RSSI) READINGS FROM CELLULAR MODEM

SEE ITS PLANS - SHEET 14
SEE ITS CONSTRUCTION DETAILS - SHEET 9

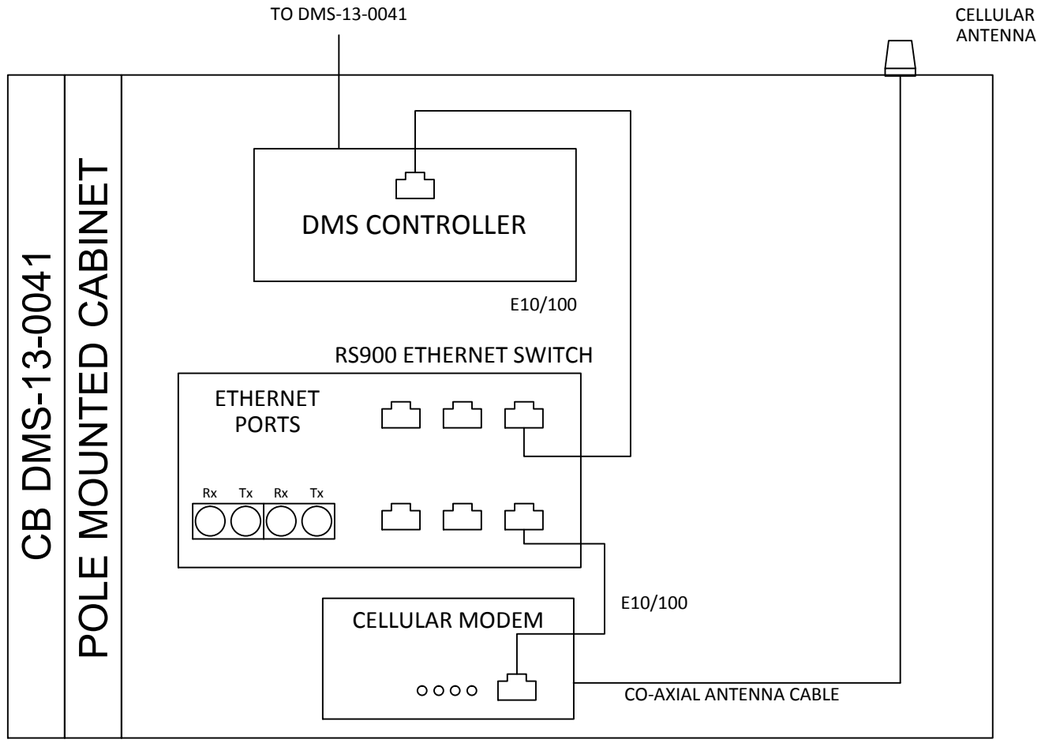
2



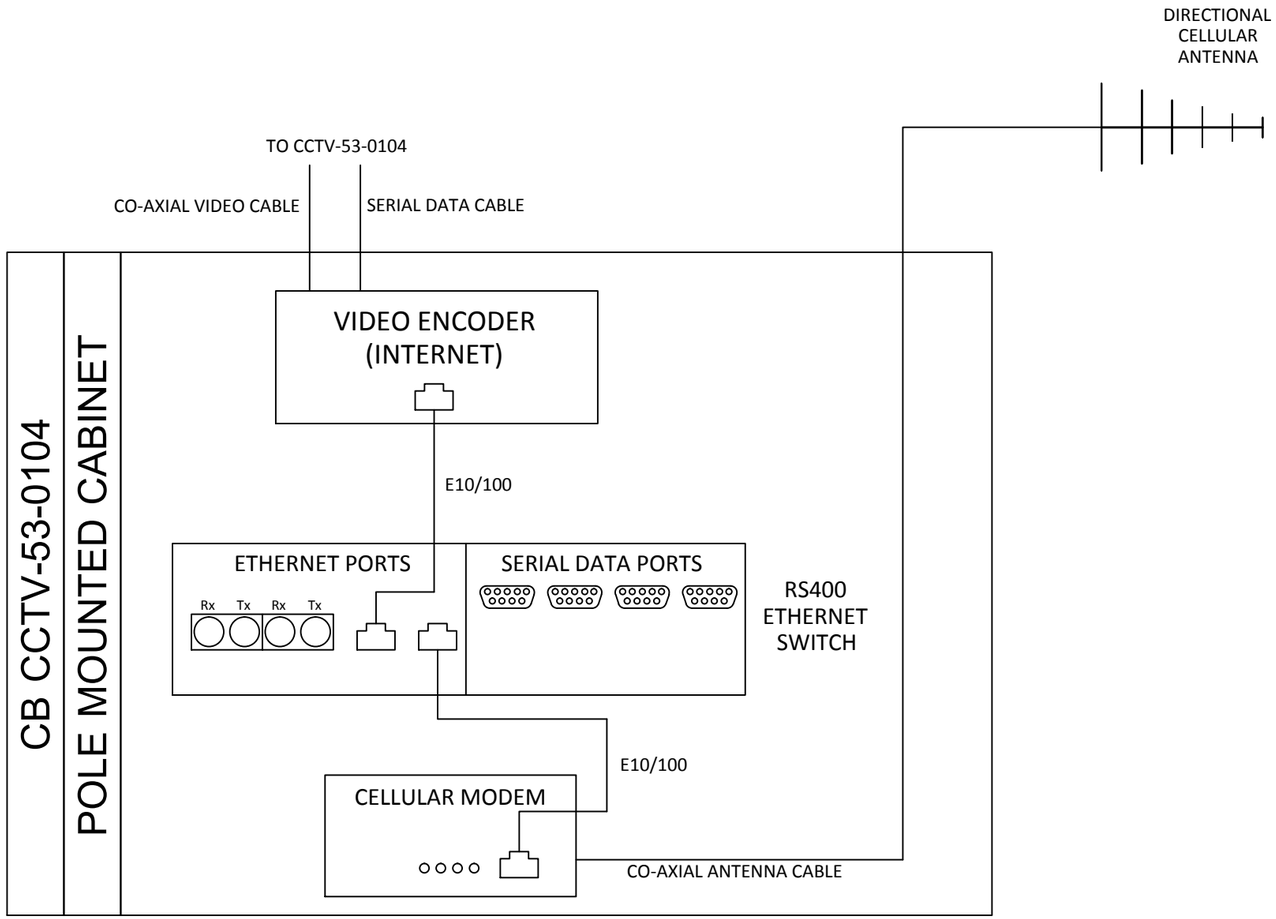
I-39/90 @ LAKE DRIVE ROAD EB

SEE ITS PLANS - SHEET 14
SEE ITS CONSTRUCTION DETAILS - SHEET 10

2



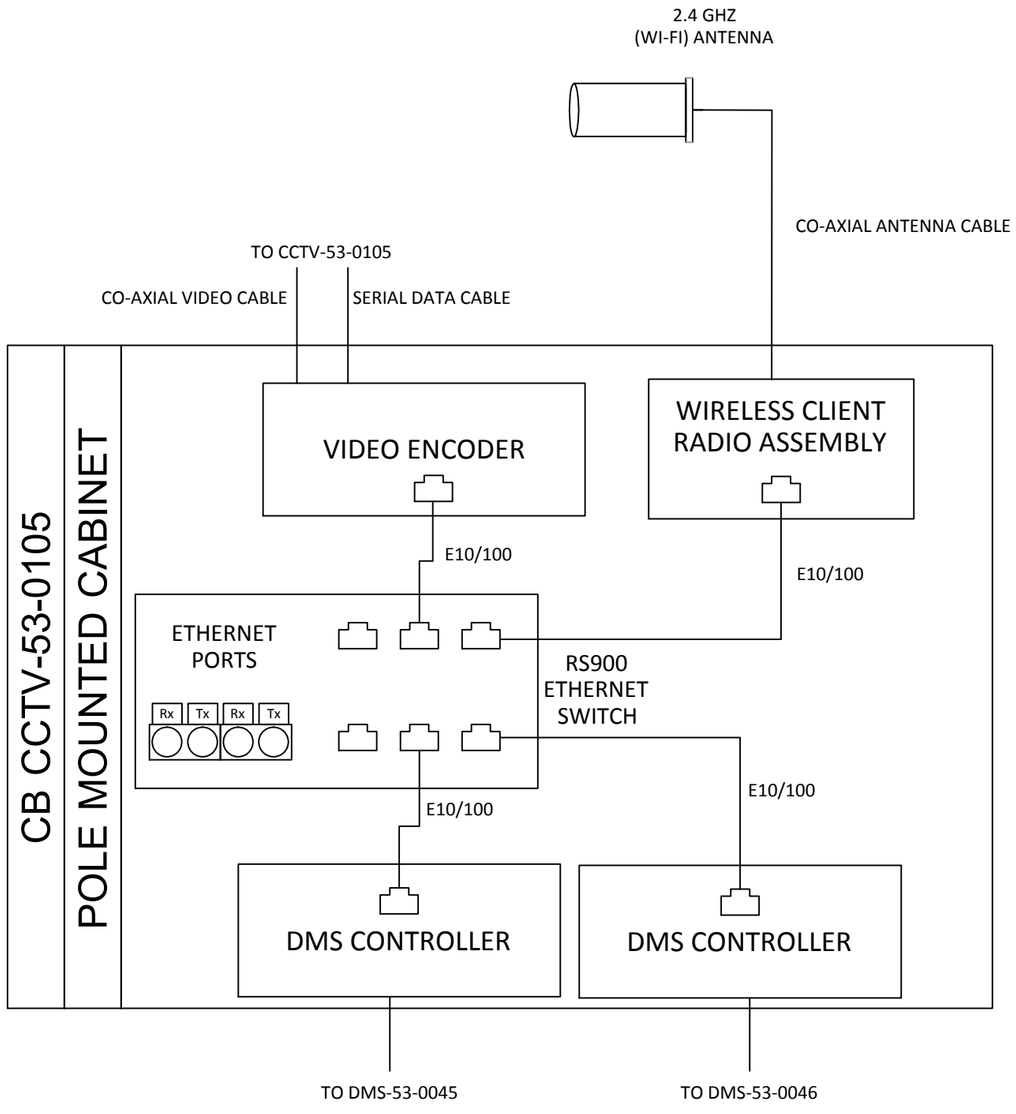
I-39/90 @ LAKE DRIVE ROAD WB



I-39/90 @ STH 59

NOTE:

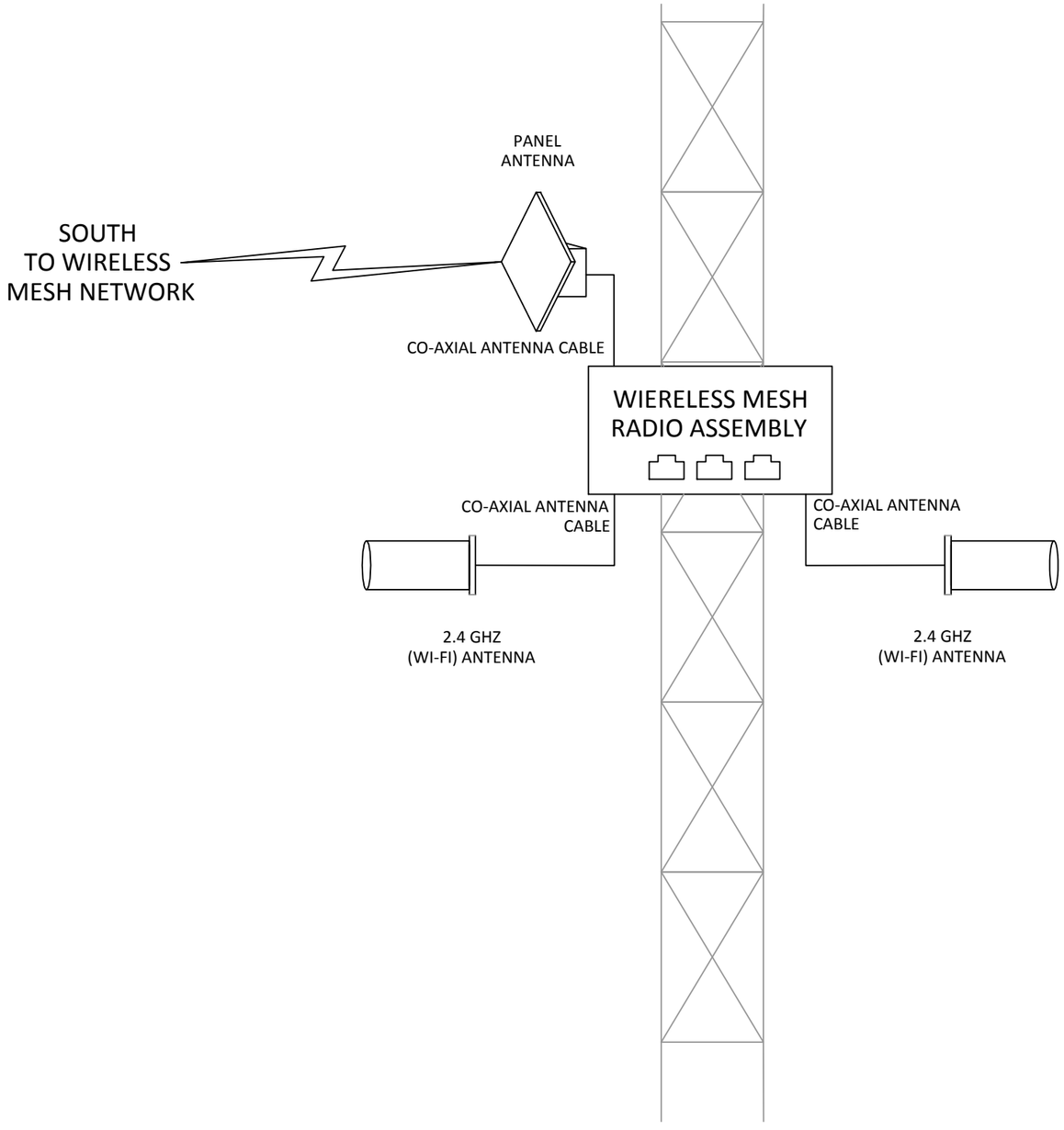
ORIENT ANTENNA AZIMUTH TO OBTAIN HIGHEST POSSIBLE RECEIVED SIGNAL STRENGTH (RSSI) READINGS FROM CELLULAR MODEM



I-39/90 @ 0.2 MILES SOUTH OF CTH M

SEE ITS PLANS - SHEET 18
SEE ITS CONSTRUCTION DETAILS - SHEET 14

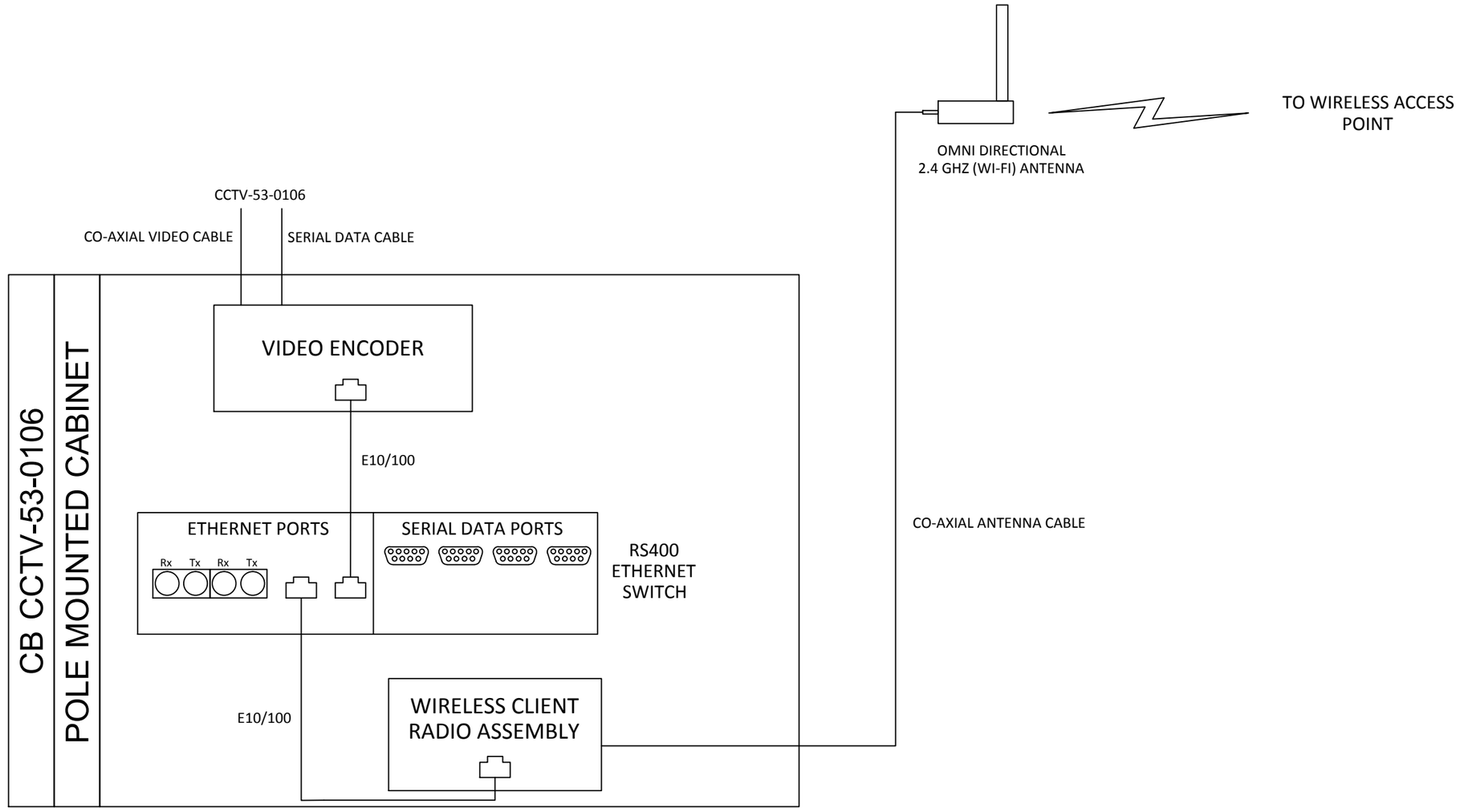
2



MANOGUE ROAD STATE PATROL
COMMUNICATIONS TOWER
I-39/90 @ EB JANESVILLE REST AREA

SEE ITS PLANS - SHEET 19
SEE ITS CONSTRUCTION DETAILS - SHEET 15

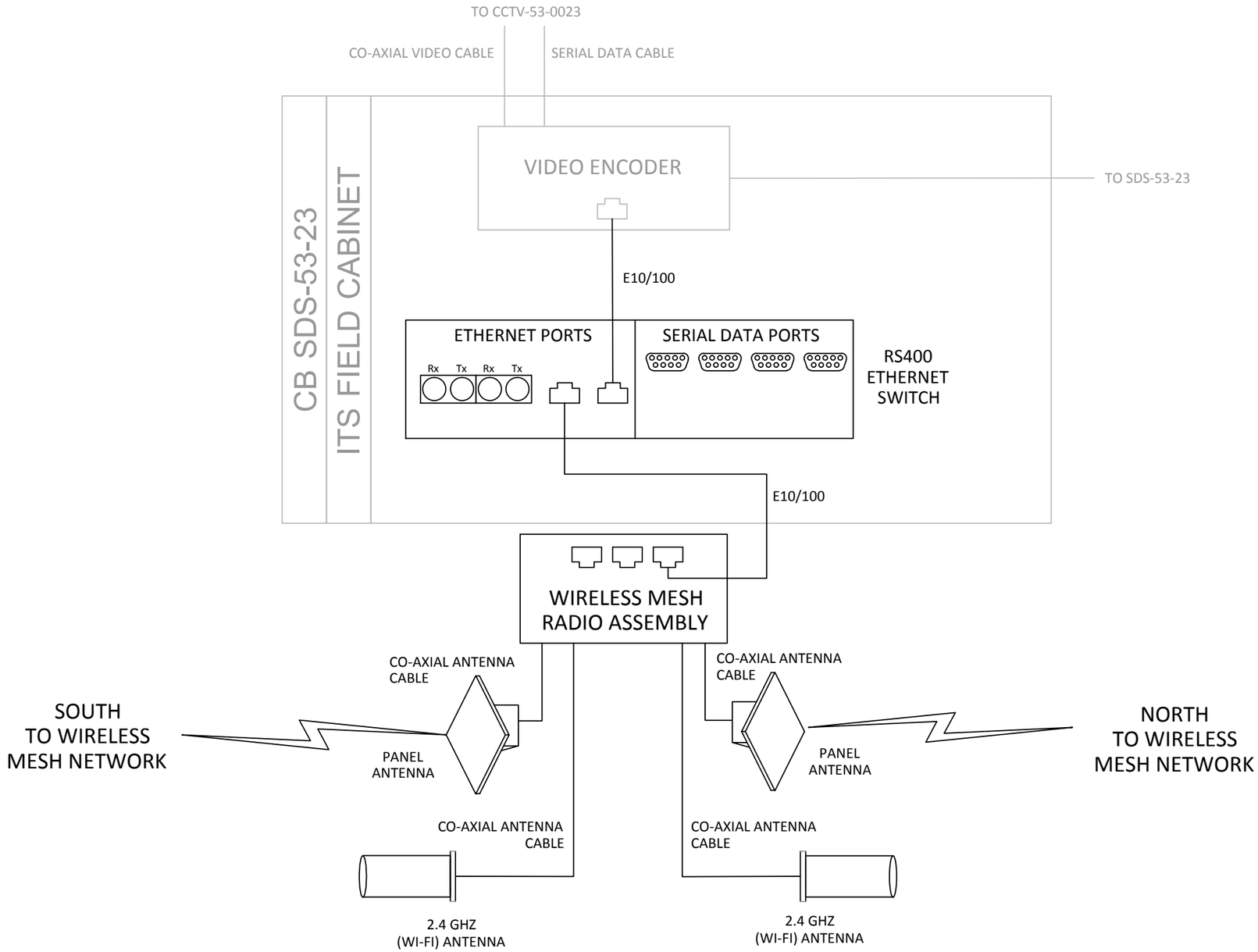
2



I-39/90 @ M-H TOWNLINE ROAD

SEE ITS PLANS - SHEET 21
SEE ITS CONSTRUCTION DETAILS - SHEET 16

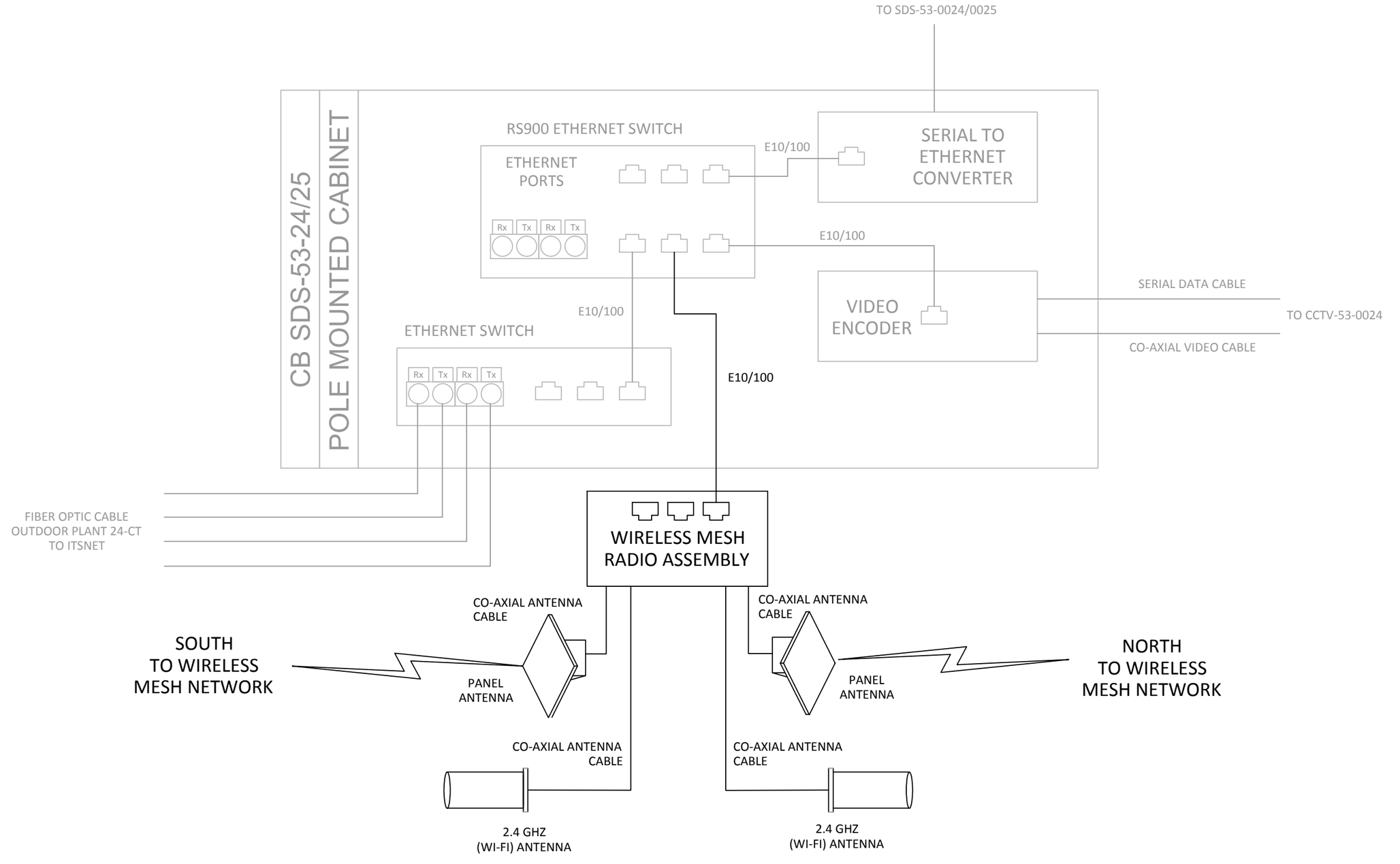
2



I-39/90 @ STH 26

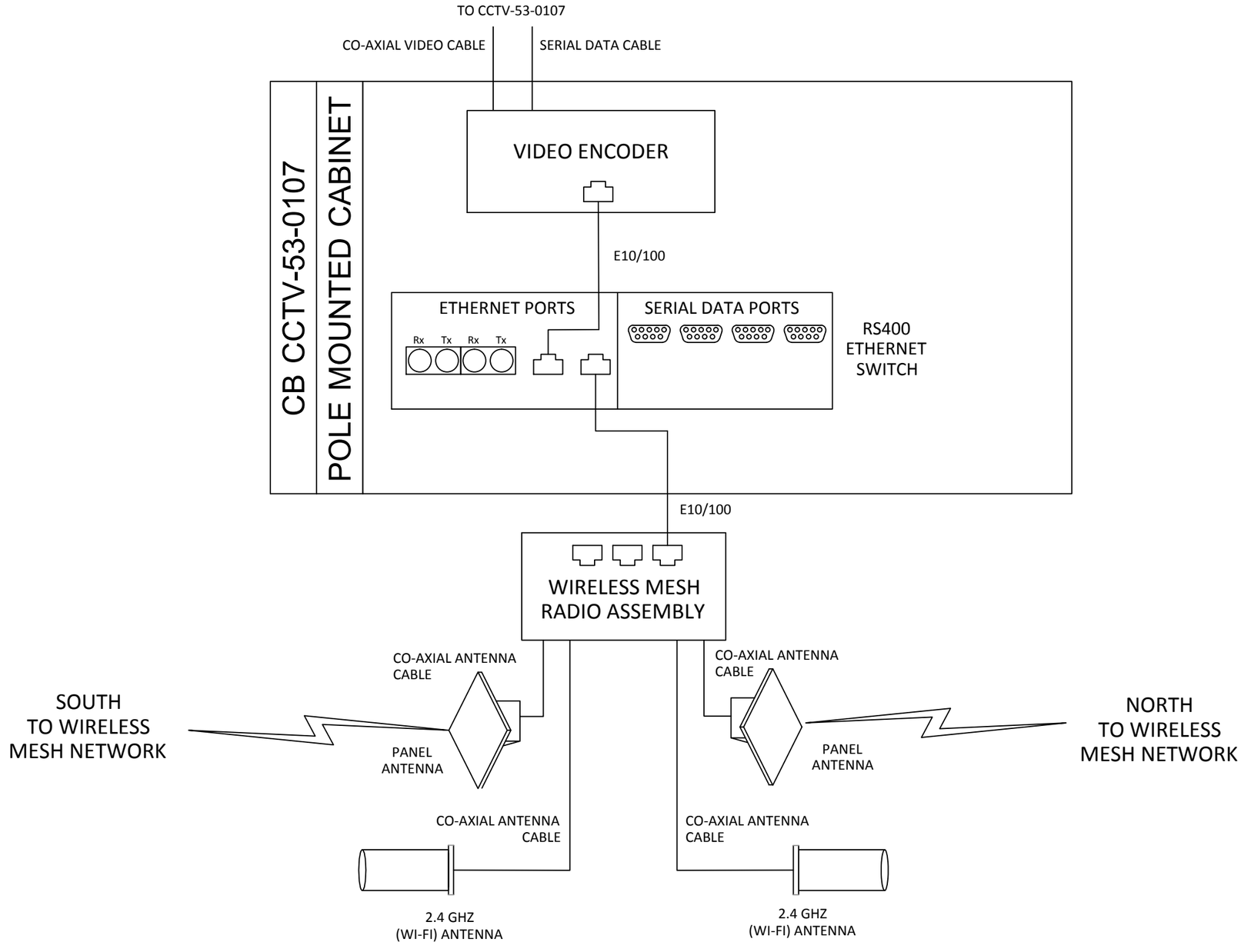
SEE ITS PLANS - SHEET 23
SEE ITS CONSTRUCTION DETAILS - SHEET 17

2



I-39/90 @ USH 14

SEE ITS PLANS - SHEET 24
SEE ITS CONSTRUCTION DETAILS - SHEET 18

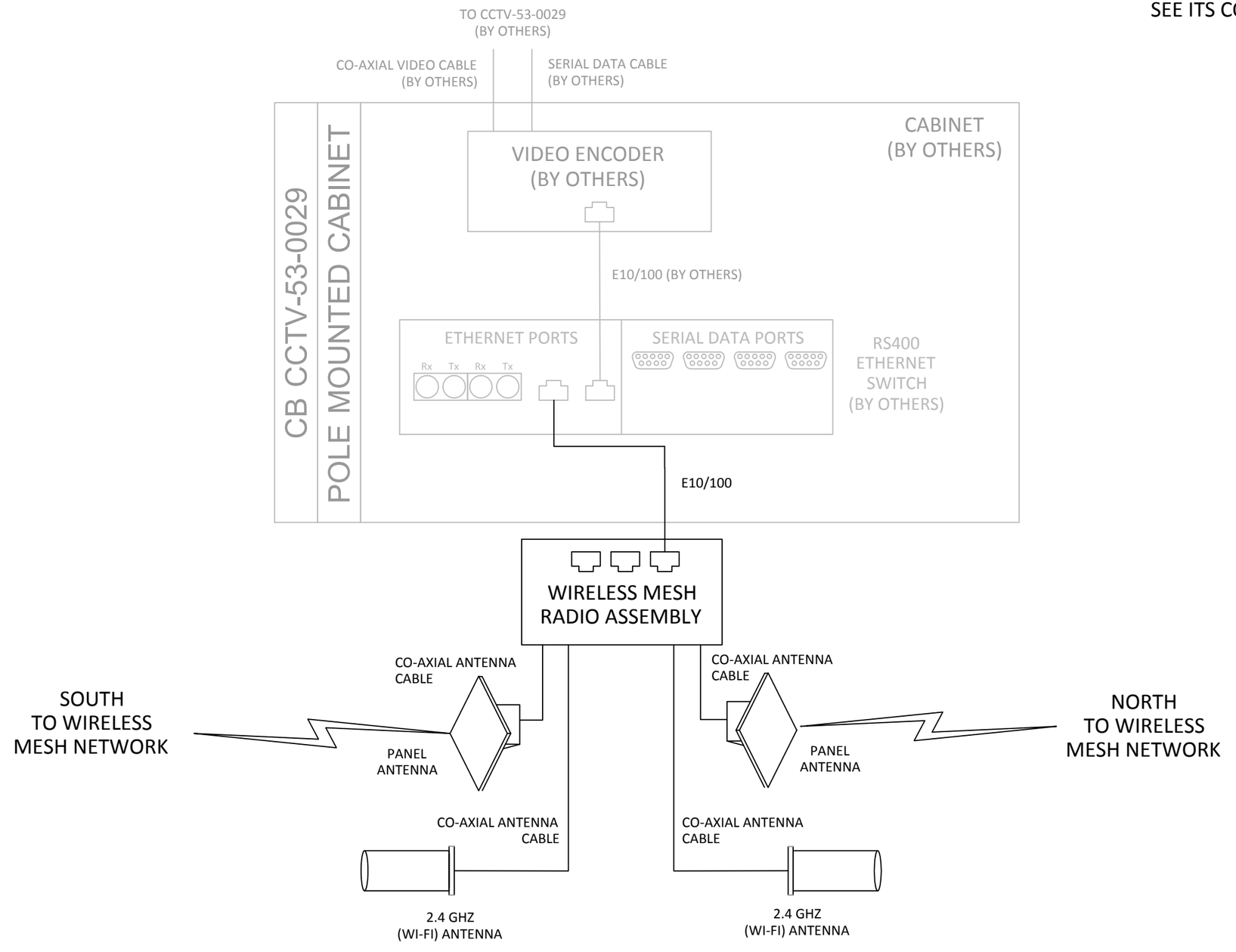


I-39/90 @ MILWAUKEE STREET

PROJECT NO: 1005-10-70	HWY: I-39/90	COUNTY: ROCK	ITS COMMUNICATION SCHEMATICS – SHEET 16	SHEET 123	E

SEE ITS PLANS - SHEET 25
SEE ITS CONSTRUCTION DETAILS - SHEET 19

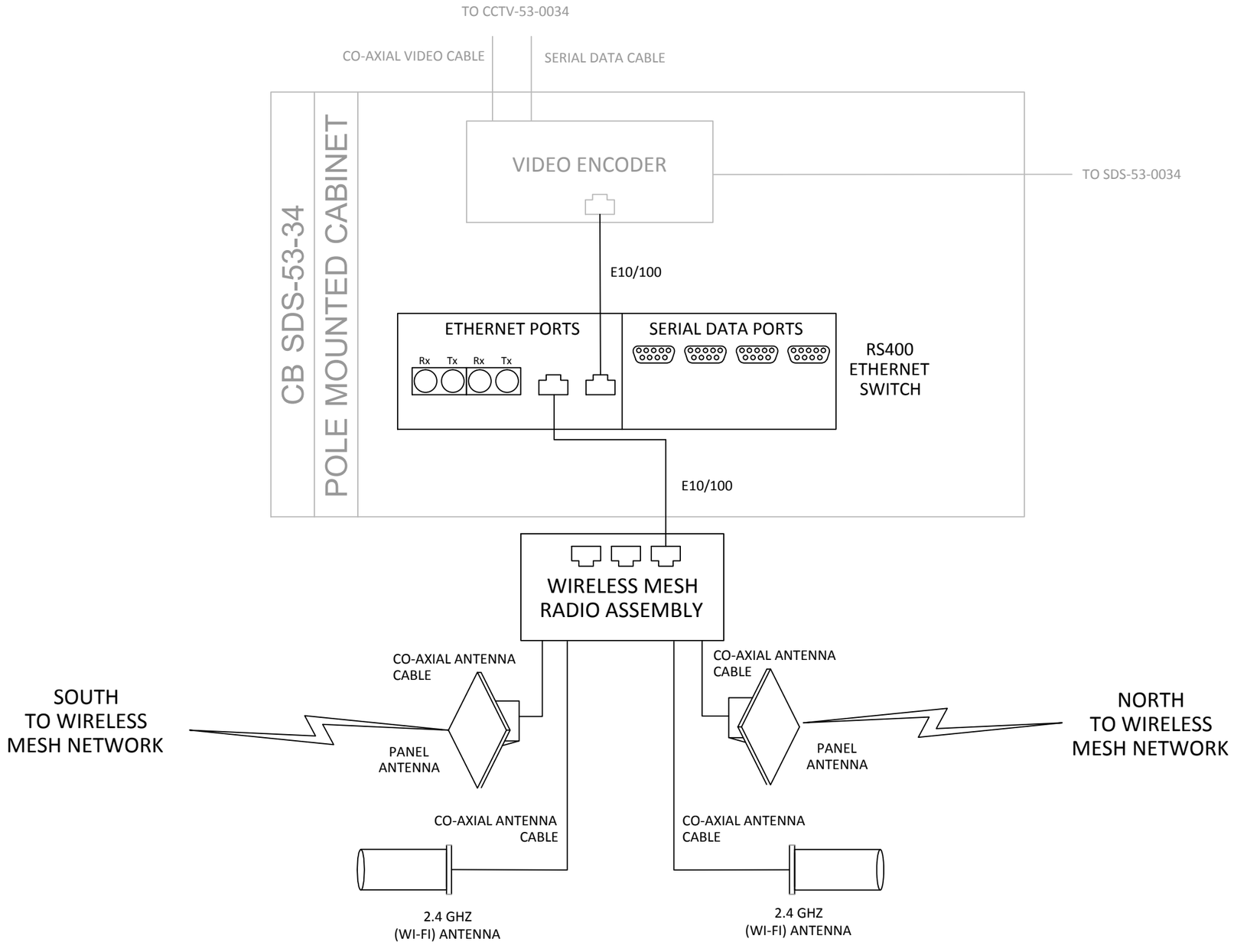
2



I-39/90 @ RACINE STREET

SEE ITS PLANS - SHEET 28
SEE ITS CONSTRUCTION DETAILS - SHEET 20

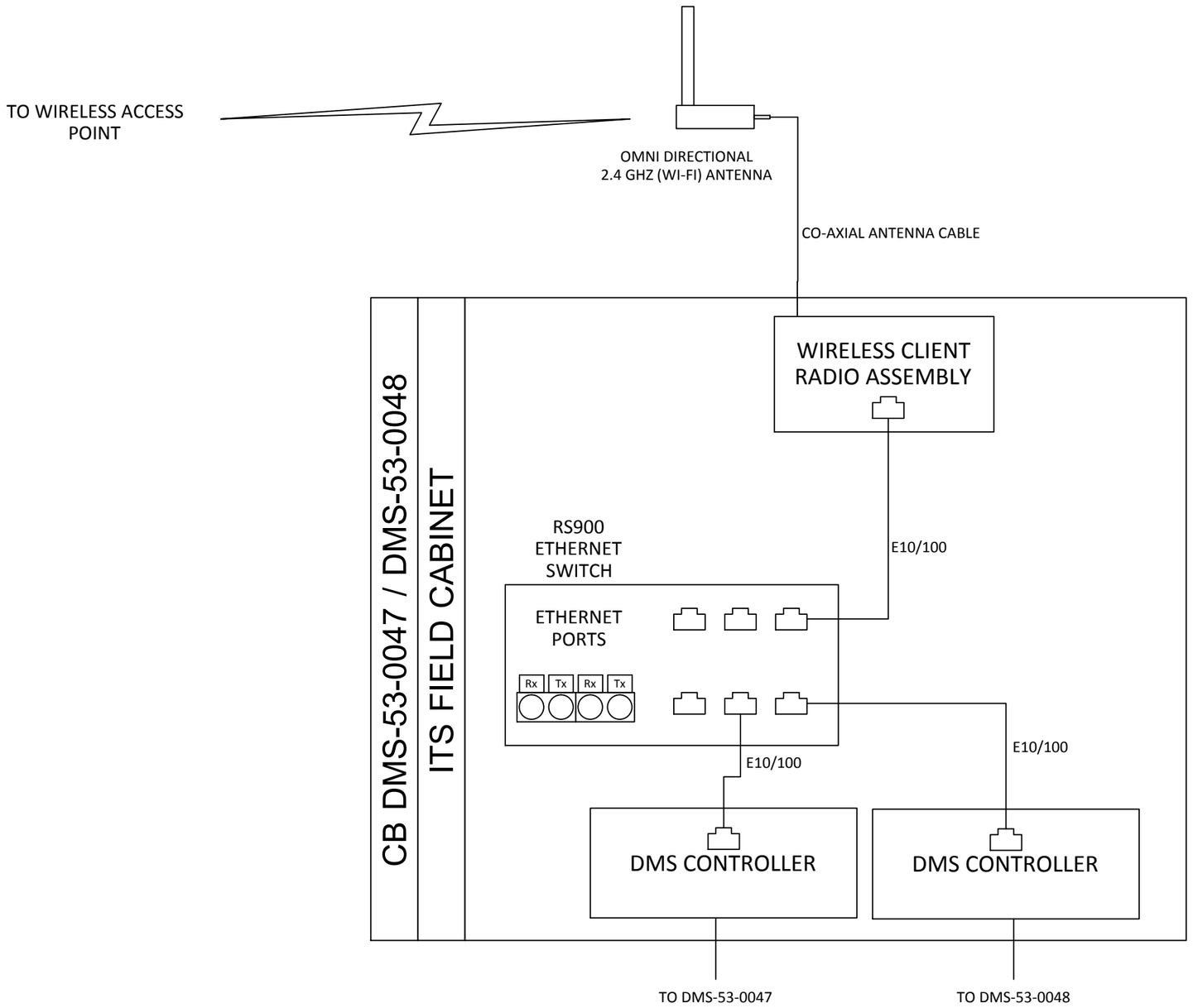
2



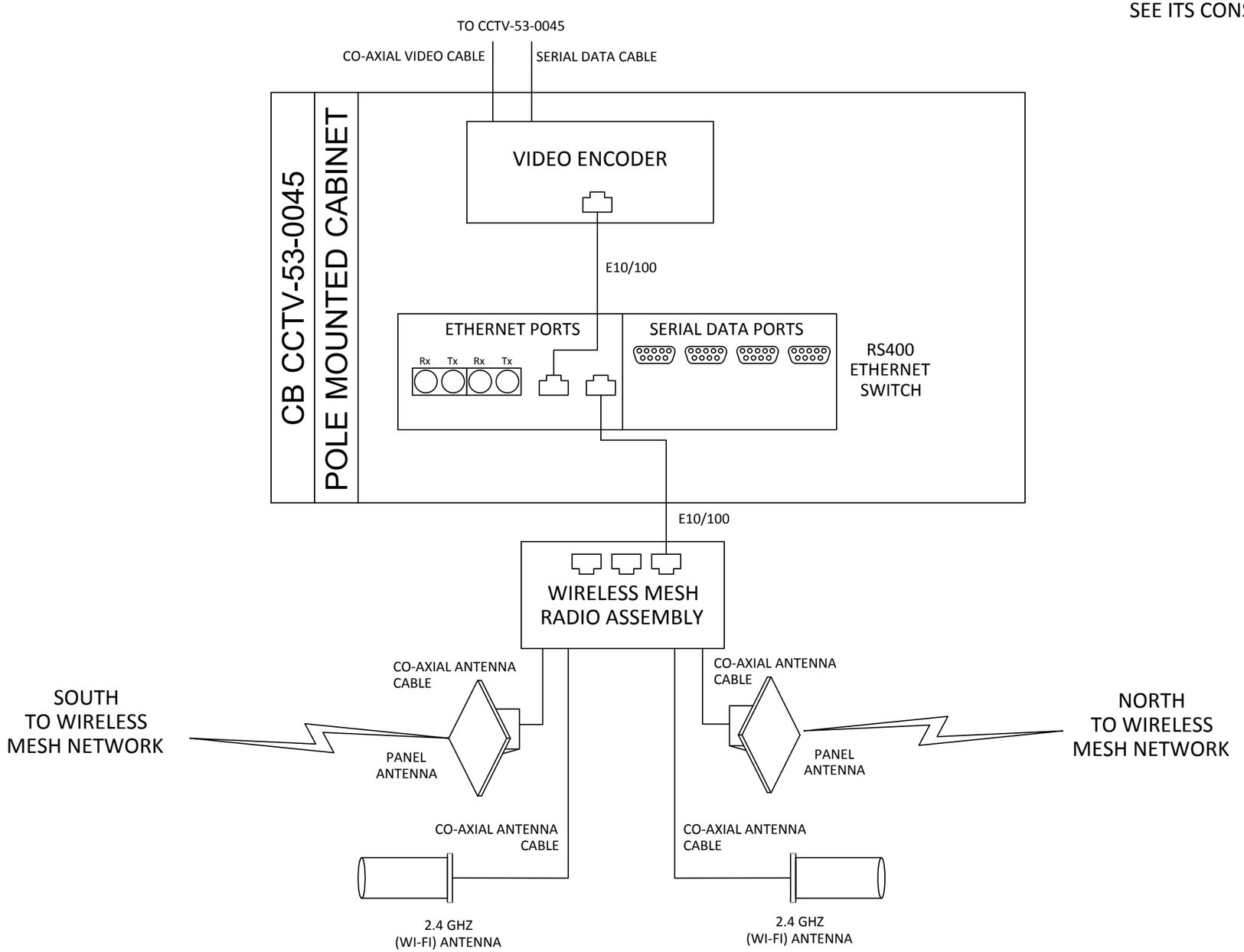
I-39/90 @ AVALON ROAD

SEE ITS PLANS - SHEET 29
SEE ITS CONSTRUCTION DETAILS - SHEET 21

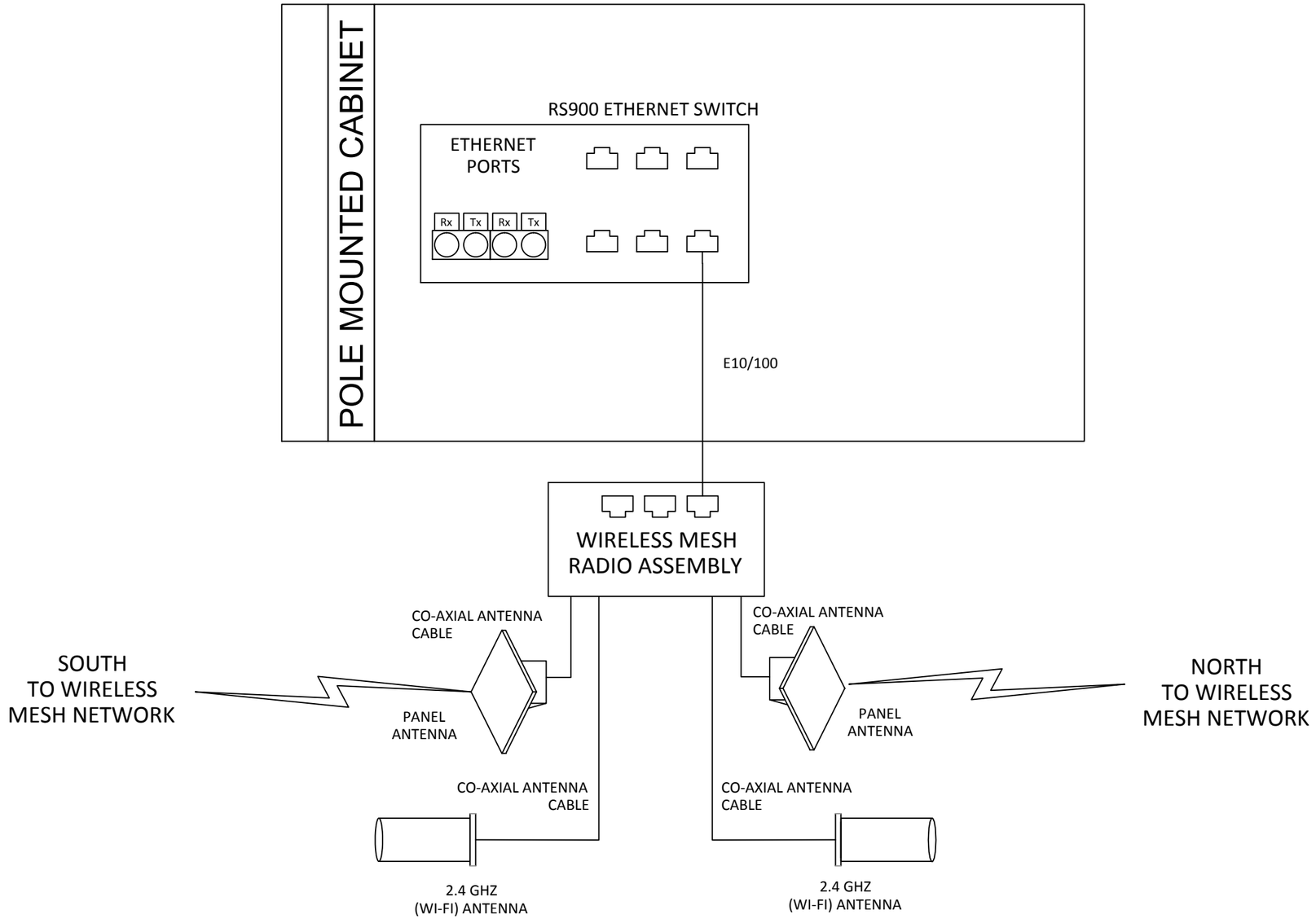
2



I-39/90 @ 0.2 MILES SOUTH OF WOODMAN ROAD

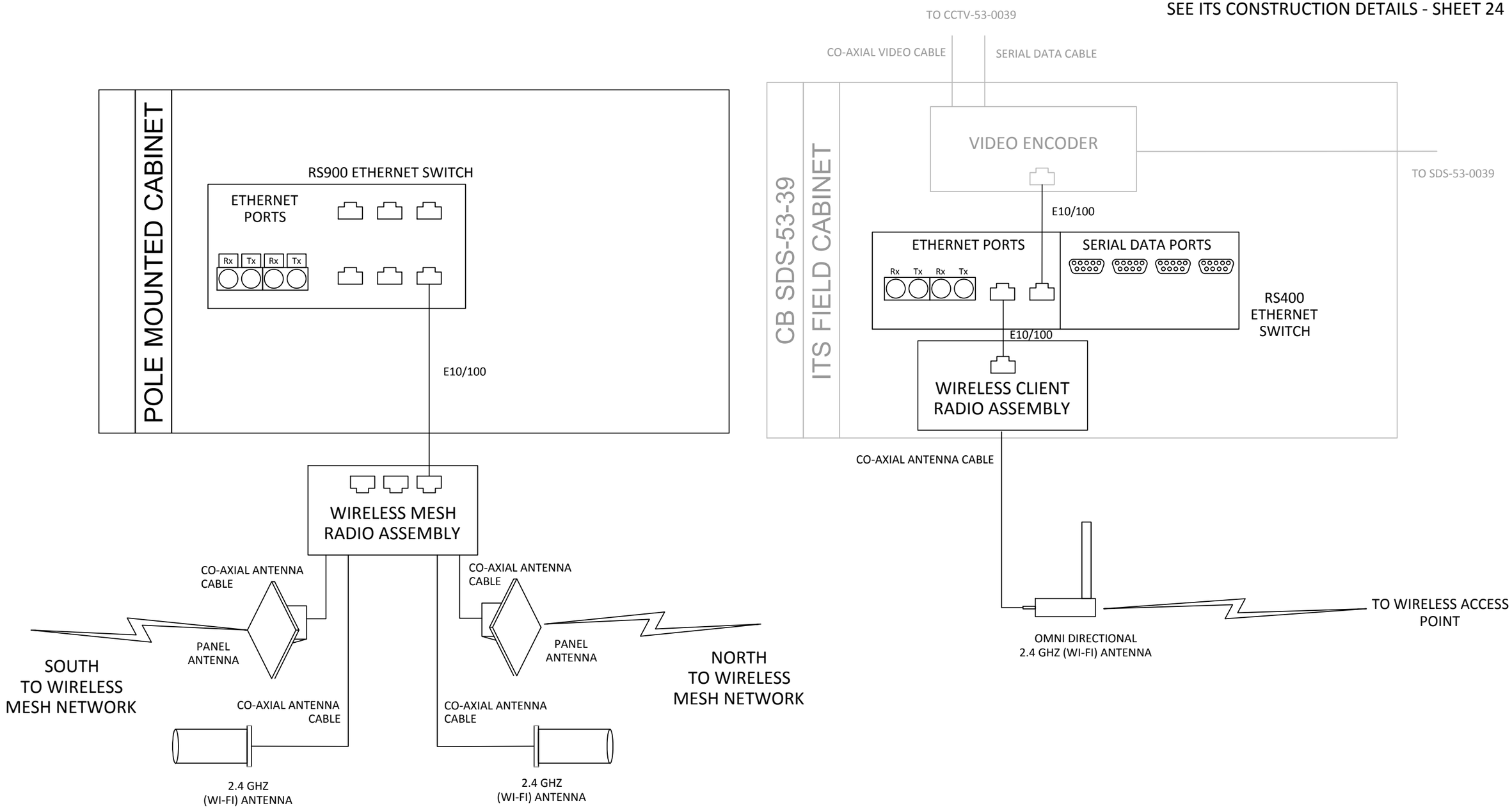


I-39/90 @ WB BELOIT SWEF



I-39/90 @ CREEK ROAD

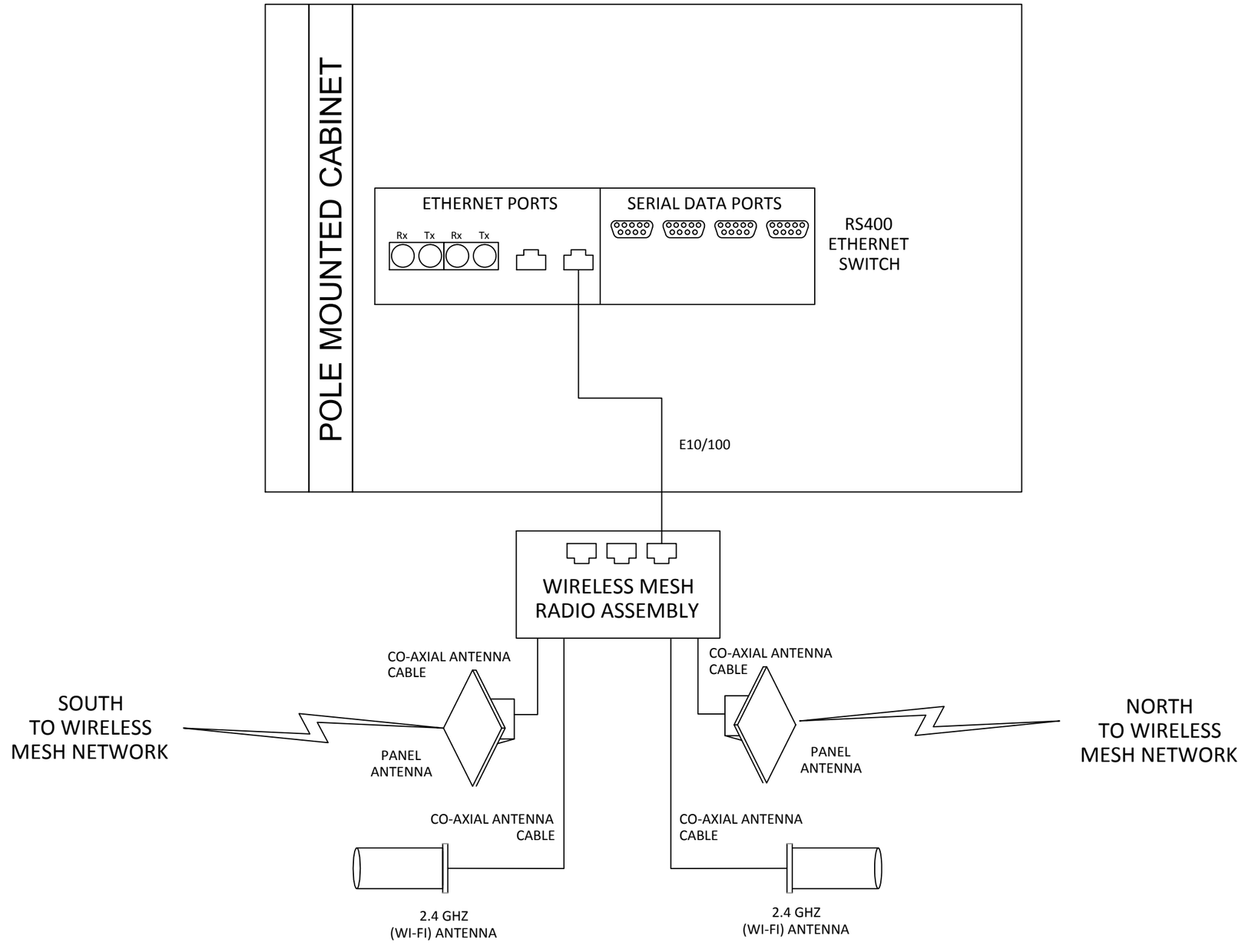
SEE ITS PLANS - SHEET 33
SEE ITS CONSTRUCTION DETAILS - SHEET 24



I-39/90 @ CTH S

SEE ITS PLANS - SHEET 34
SEE ITS CONSTRUCTION DETAILS - SHEET 25

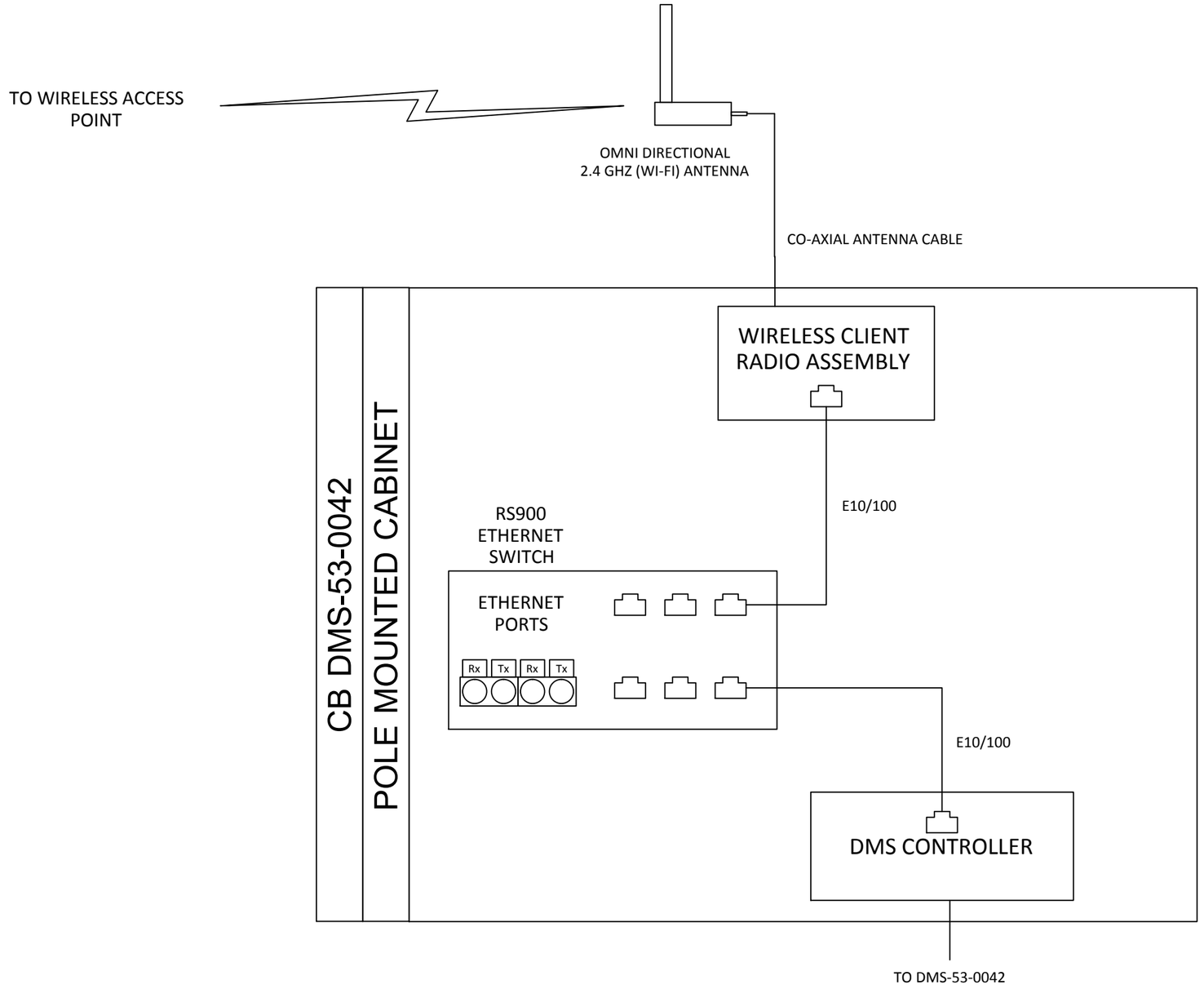
2



I-39/90 @ HART ROAD

SEE ITS PLANS - SHEET 34
SEE ITS CONSTRUCTION DETAILS - SHEET 26

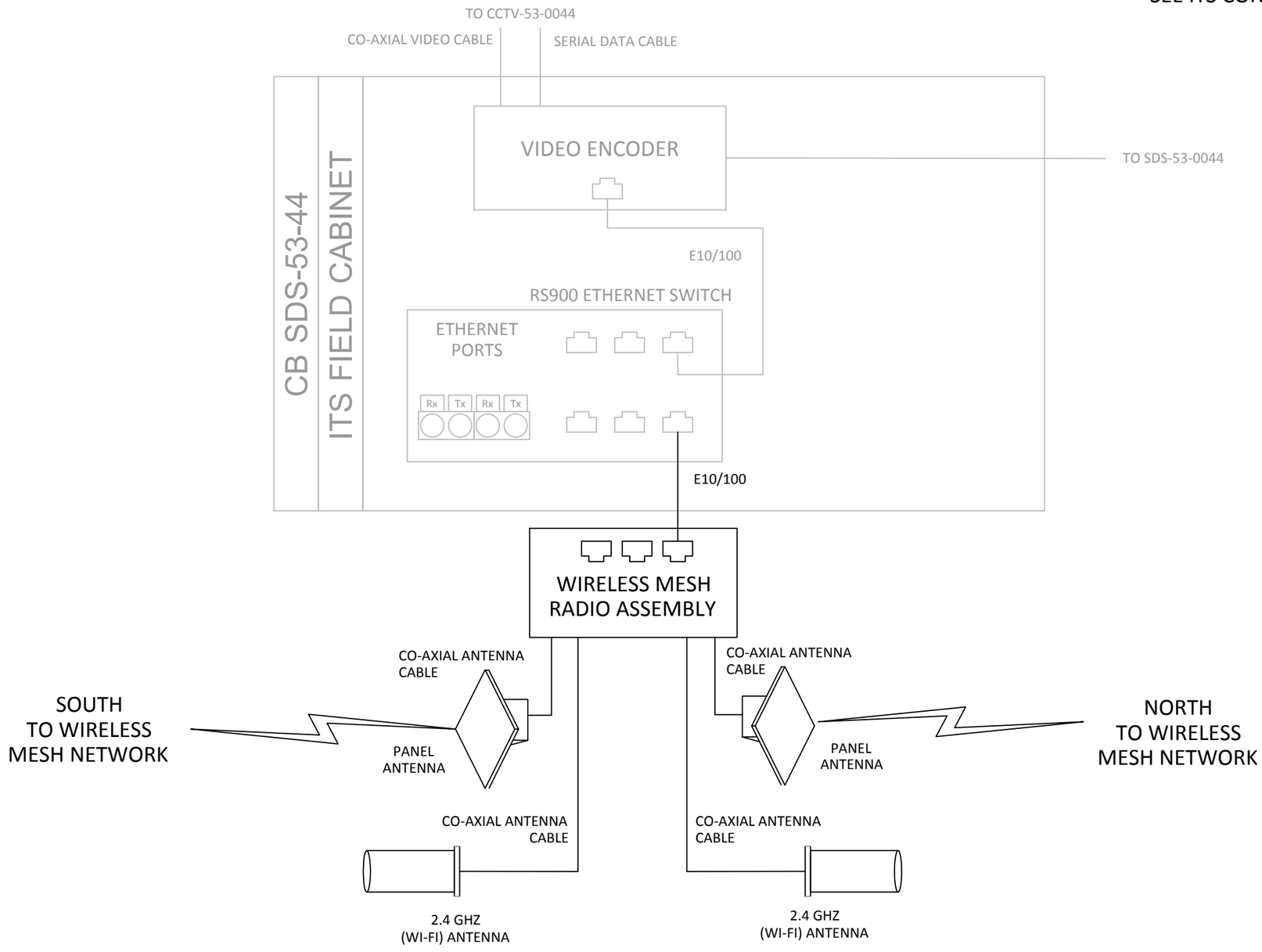
2



I-39/90 @ HART ROAD WB

SEE ITS PLANS - SHEET 35
SEE ITS CONSTRUCTION DETAILS - SHEET 27

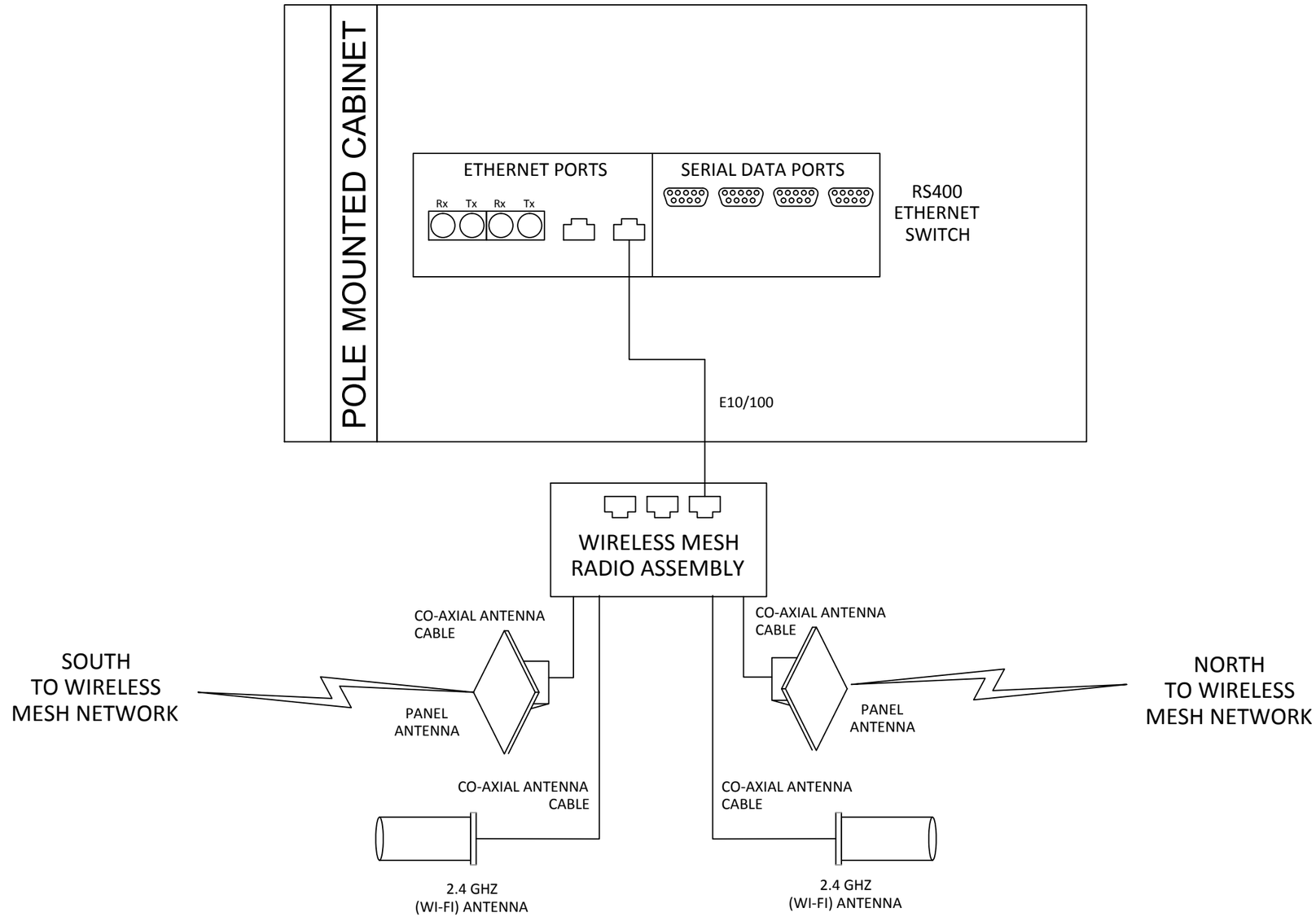
2



I-39/90 @ I-43/STH 81

SEE ITS PLANS - SHEET 36
SEE ITS CONSTRUCTION DETAILS - SHEET 28

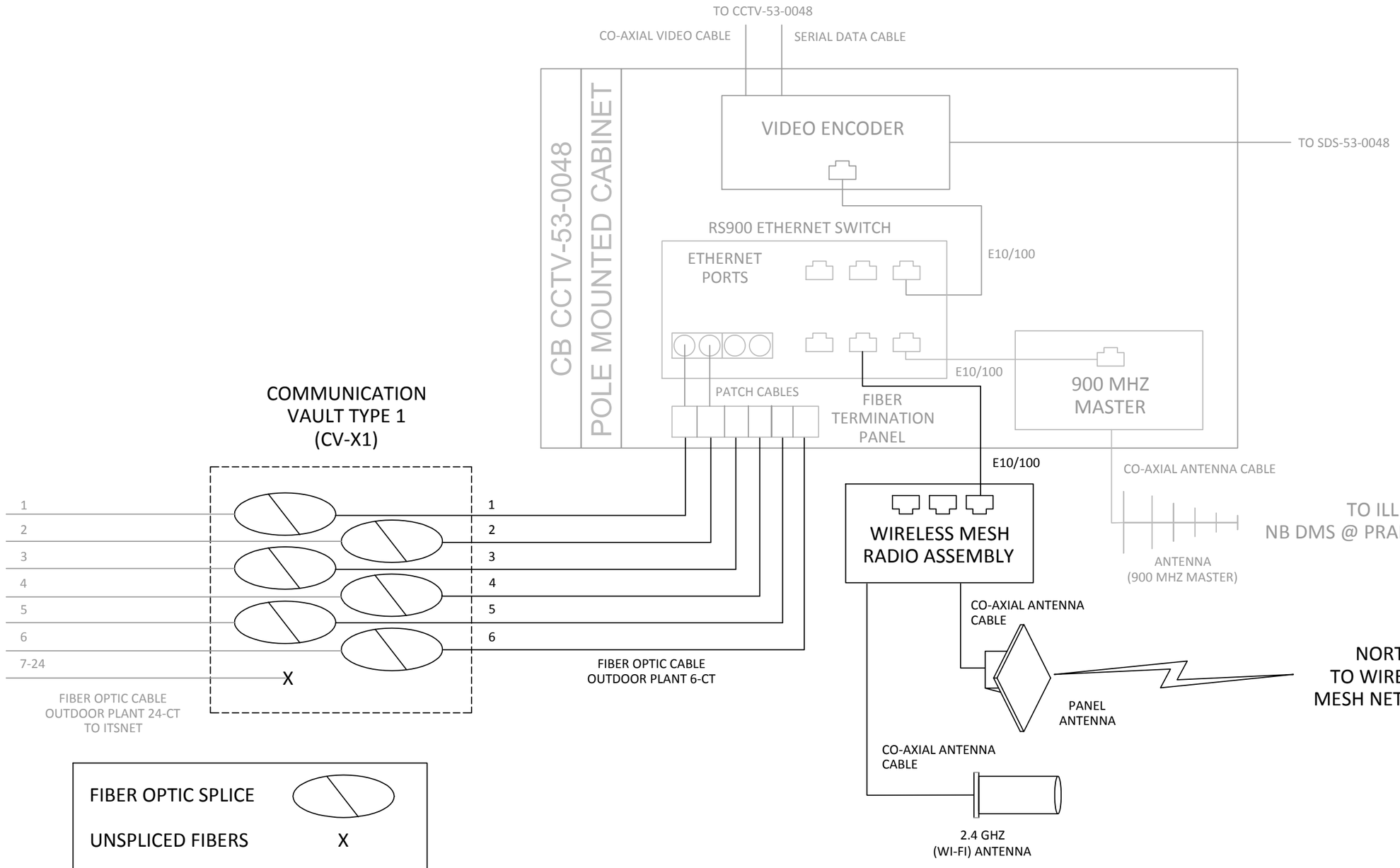
2



I-39/90 @ CRANSTON ROAD

SEE ITS PLANS - SHEET 37
SEE ITS CONSTRUCTION DETAILS - SHEET 29

2



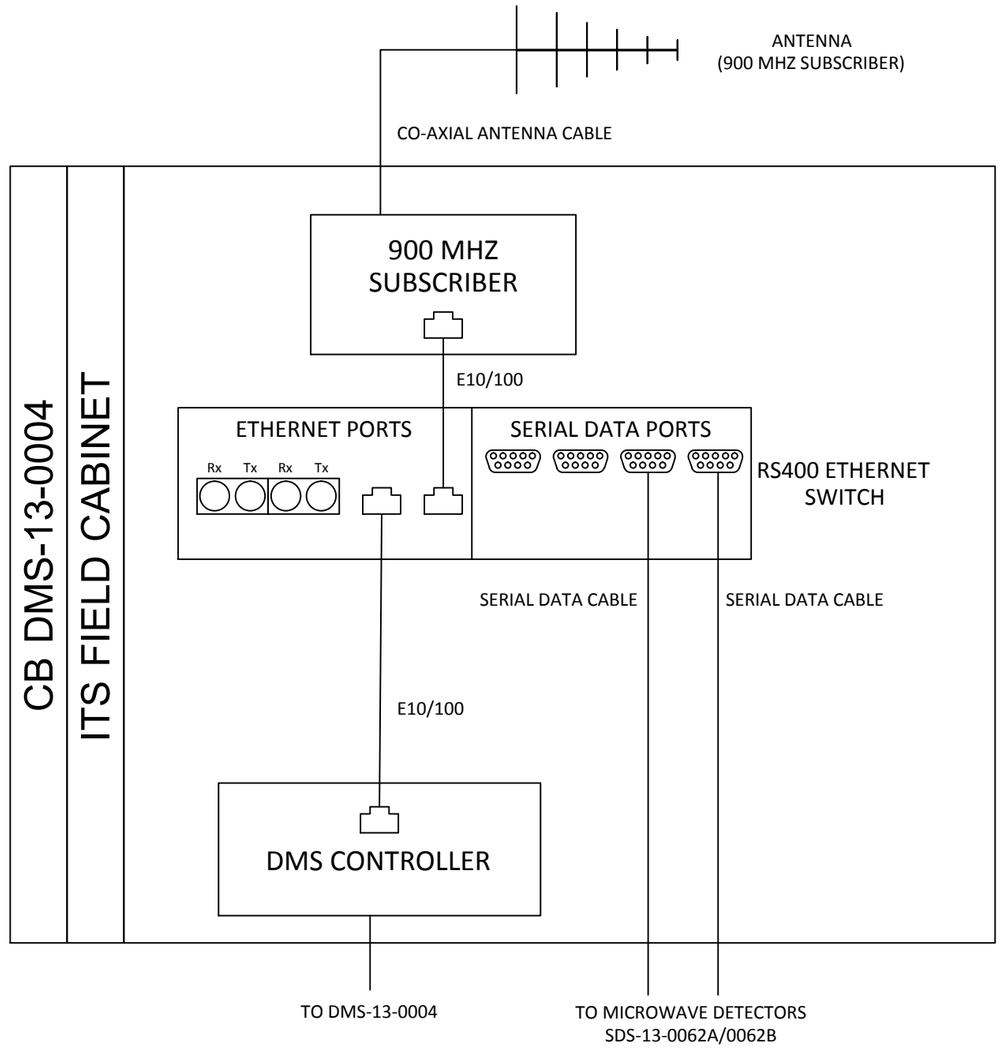
NOTE:

COMPONENTS SHOWN AS INPLACE ON THIS ITS COMMUNICATION SCHEMATIC ARE SALVAGED FROM EXISTING CAMERA POLE AT I-39/90 @ STATELINE ROAD

I-39/90 @ STATELINE ROAD

SEE ITS PLANS - SHEET 39
SEE ITS CONSTRUCTION DETAILS - SHEET 31

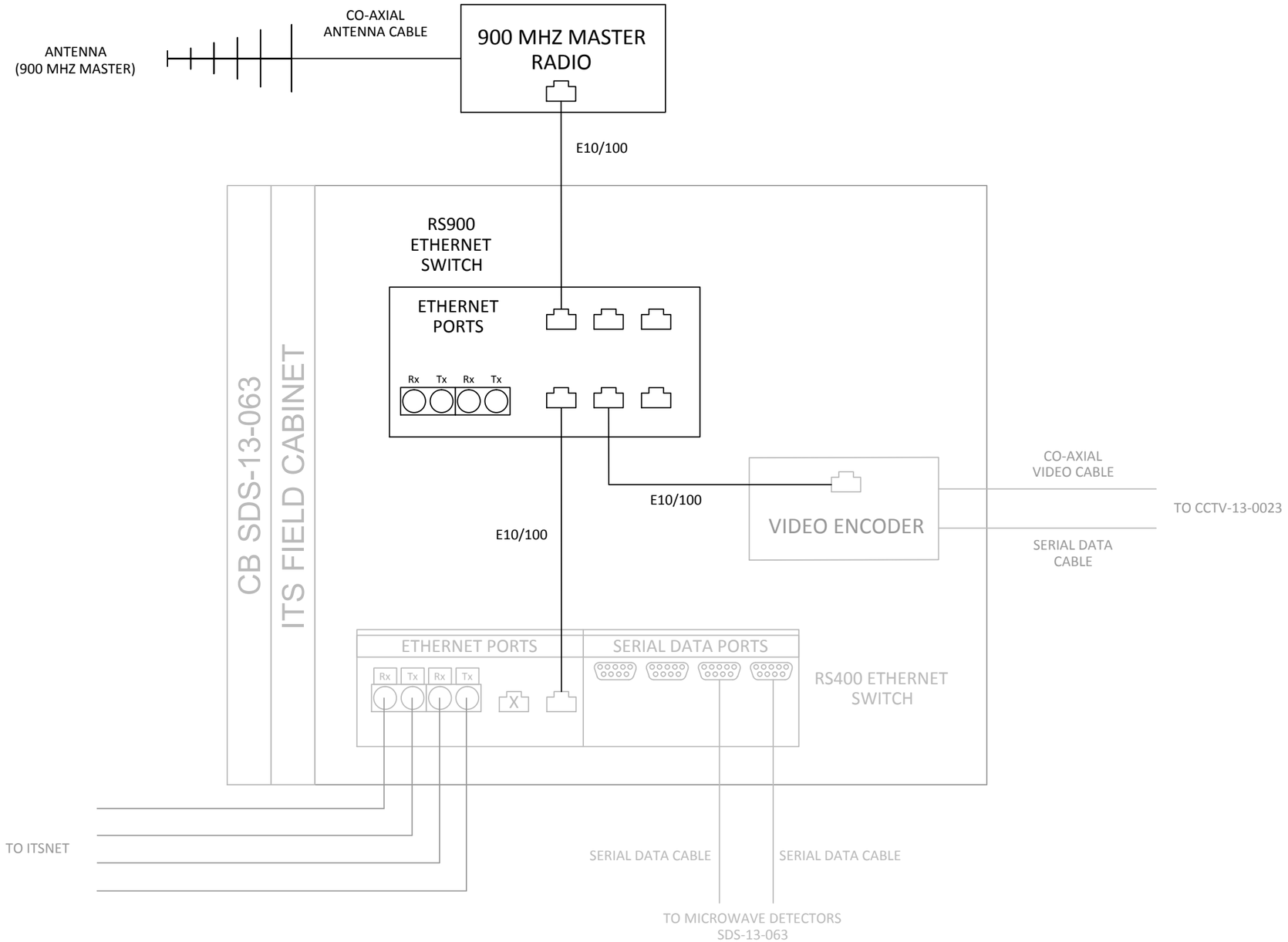
2



STH 30 @ FAIR OAKS AVENUE

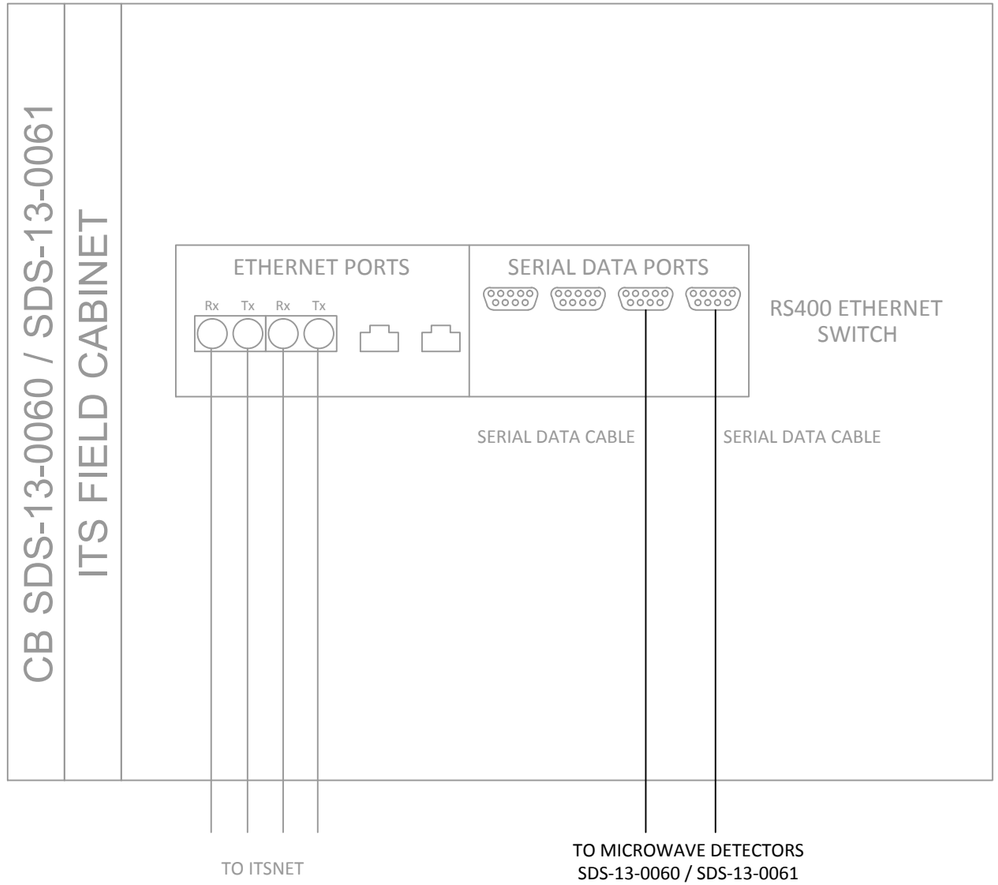
SEE ITS PLANS - SHEET 40
SEE ITS CONSTRUCTION DETAILS - SHEET 32

2



STH 30 @ USH 51 (STOUGHTON ROAD)

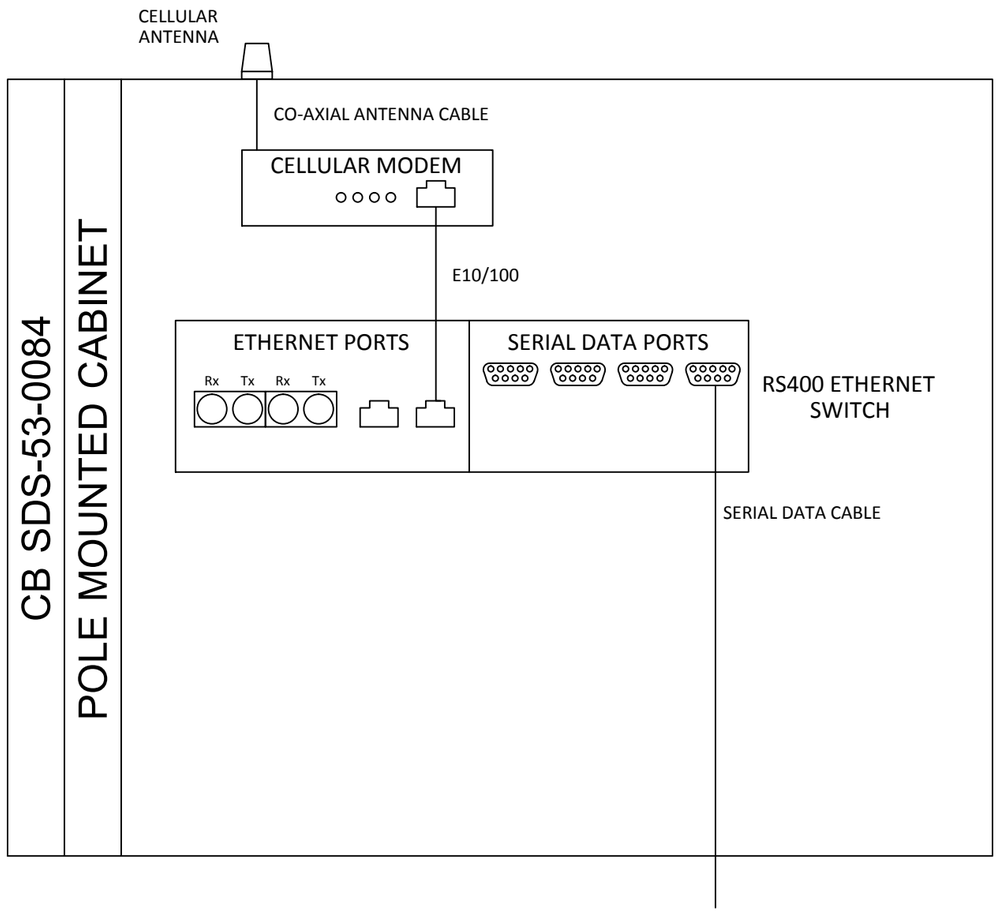
PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ITS COMMUNICATION SCHEMATICS – SHEET 29	SHEET 136	E



STH 30 @ THOMPSON DRIVE

SEE ITS PLANS - SHEET 43
SEE ITS CONSTRUCTION DETAILS - SHEET 34

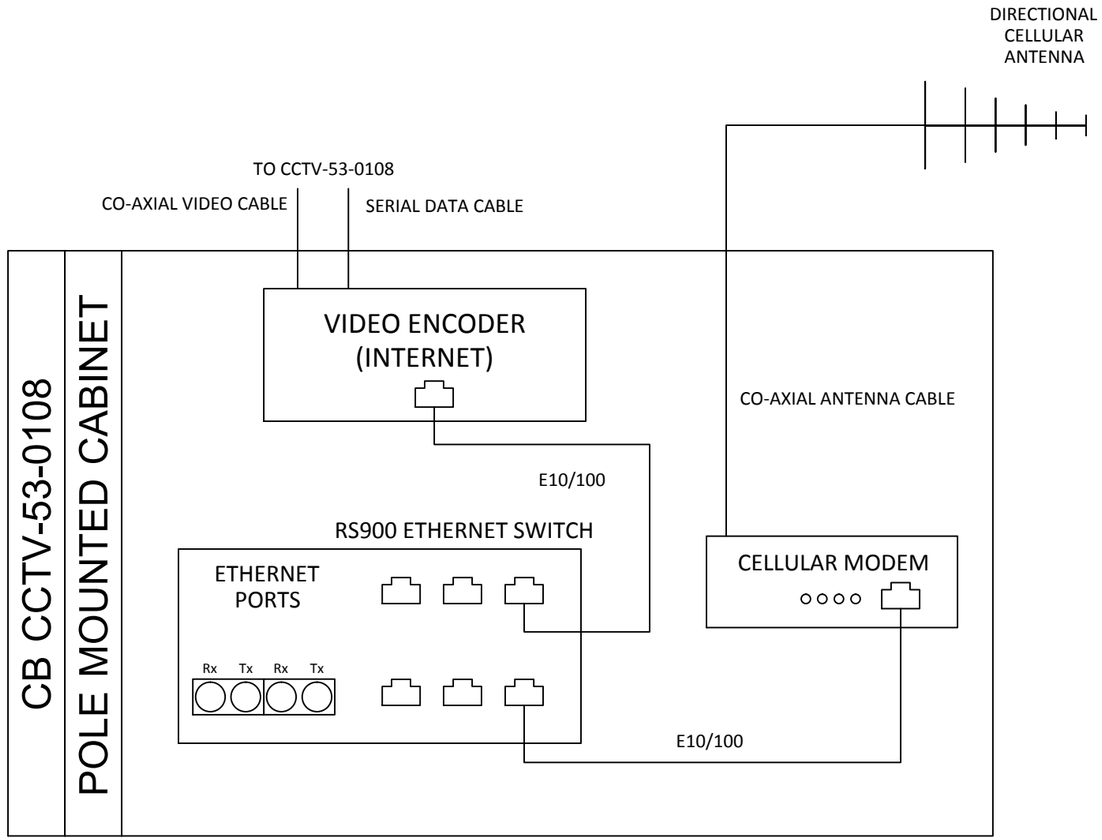
2



USH 51 @ 0.6 MILES NORTH OF J-F TOWNLINE ROAD

SEE ITS PLANS - SHEET 44
SEE ITS CONSTRUCTION DETAILS - SHEET 35

2



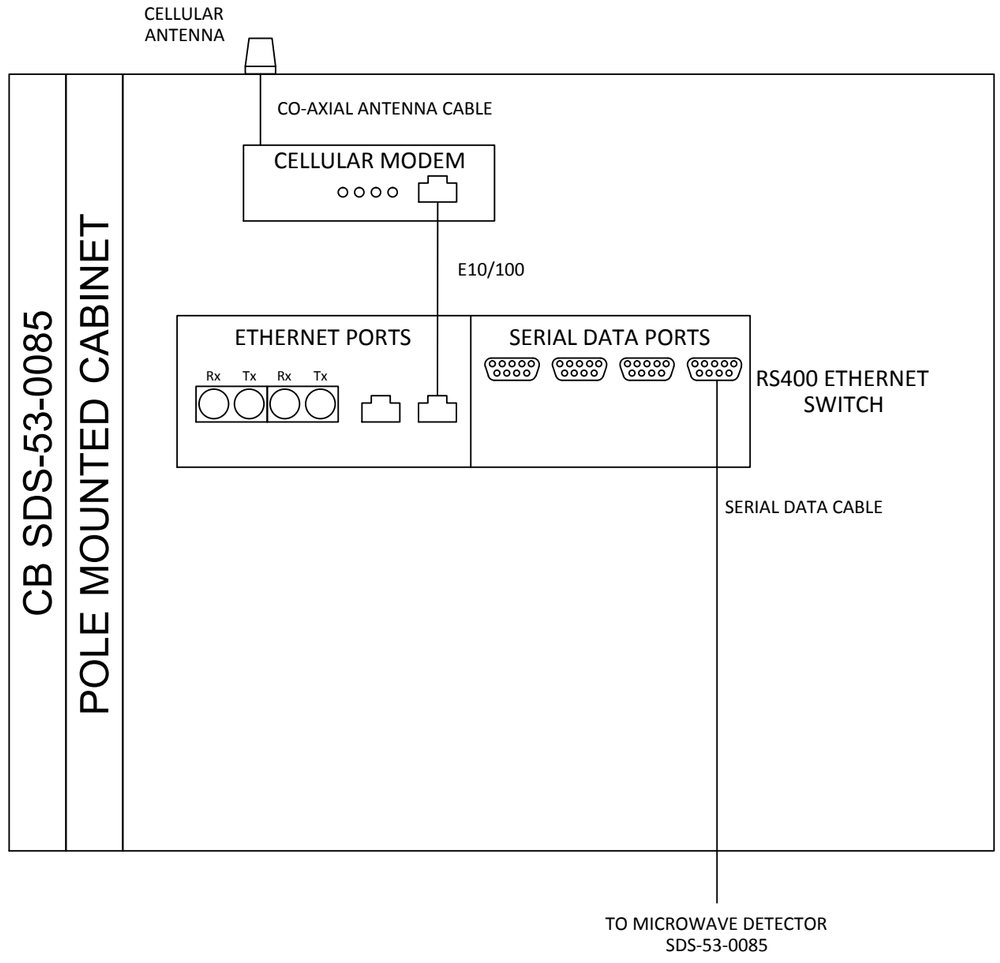
USH 51 @ USH 14

NOTE:

ORIENT ANTENNA AZIMUTH TO OBTAIN HIGHEST POSSIBLE RECEIVED SIGNAL STRENGTH (RSSI) READINGS FROM CELLULAR MODEM

SEE ITS PLANS - SHEET 45
SEE ITS CONSTRUCTION DETAILS - SHEET 36

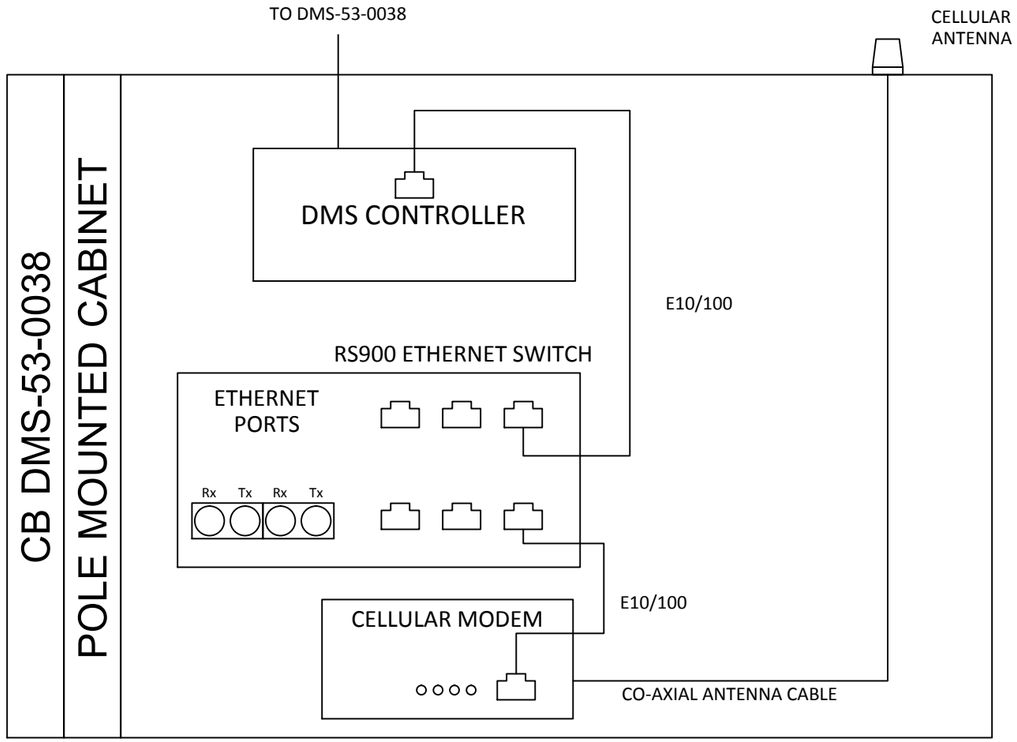
2



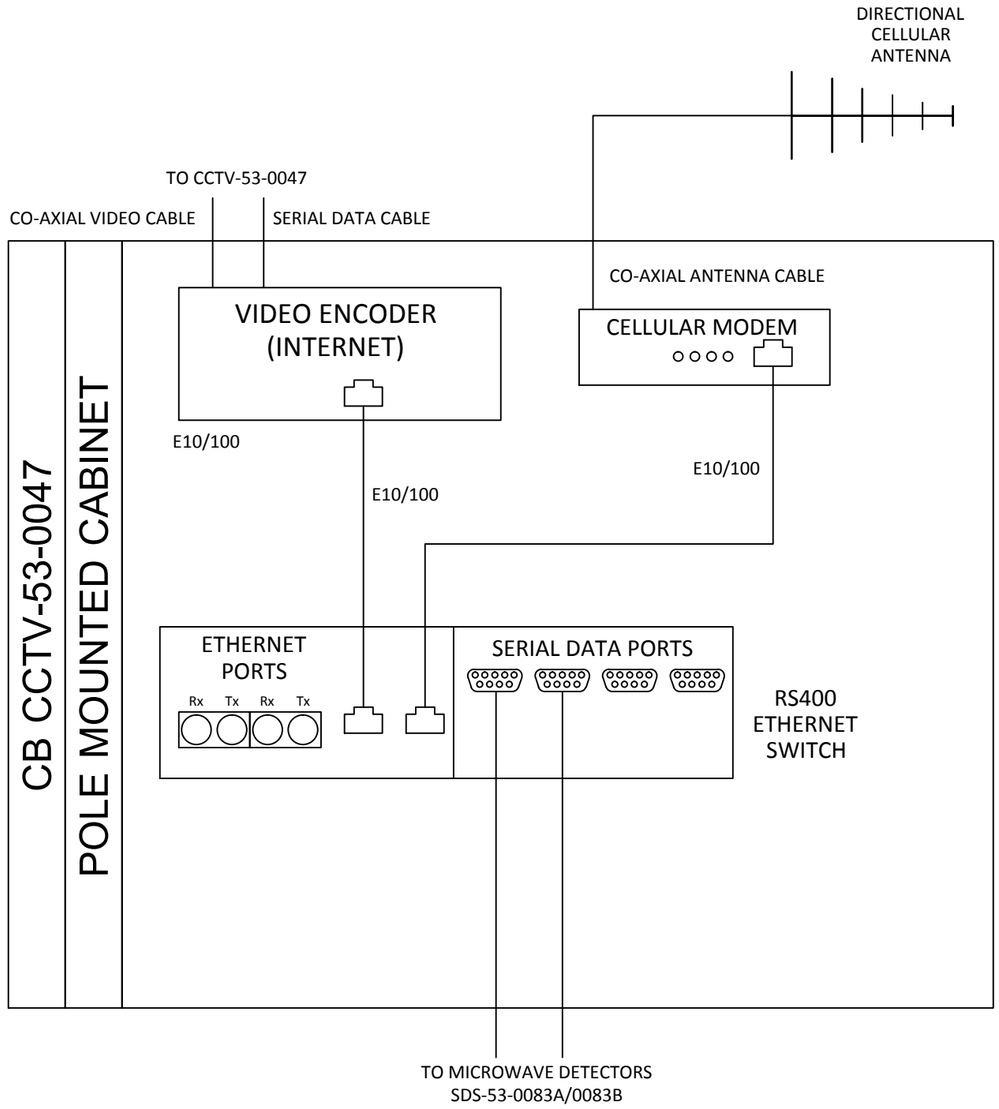
STH 140 @ 0.8 MILES SOUTH OF USH 14

SEE ITS PLANS - SHEET 46
SEE ITS CONSTRUCTION DETAILS - SHEET 37

2



I-43 @ CARVERS ROCK ROAD



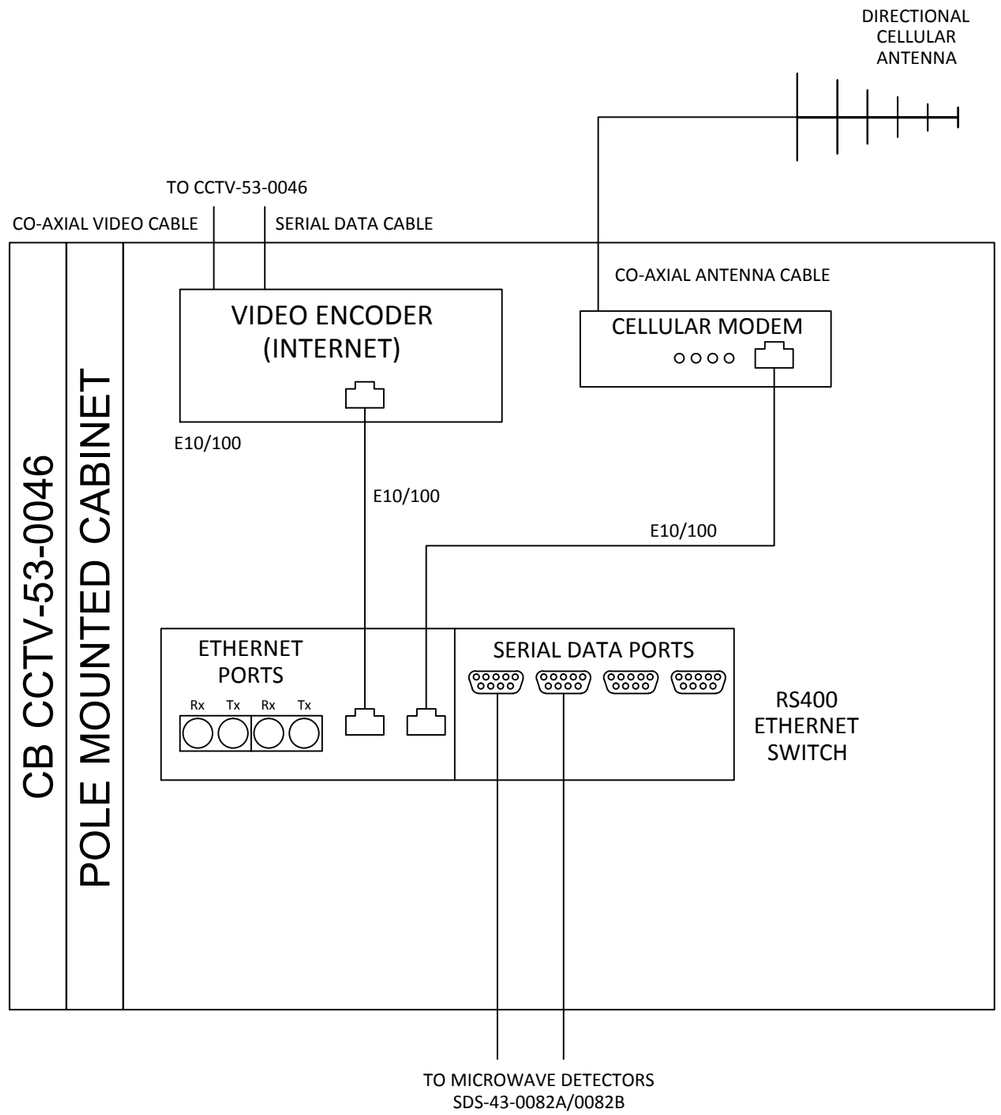
I-43 @ STH 140

NOTE:

ORIENT ANTENNA AZIMUTH TO OBTAIN HIGHEST POSSIBLE RECEIVED SIGNAL STRENGTH (RSSI) READINGS FROM CELLULAR MODEM

SEE ITS PLANS - SHEET 48
SEE ITS CONSTRUCTION DETAILS - SHEET 39

2



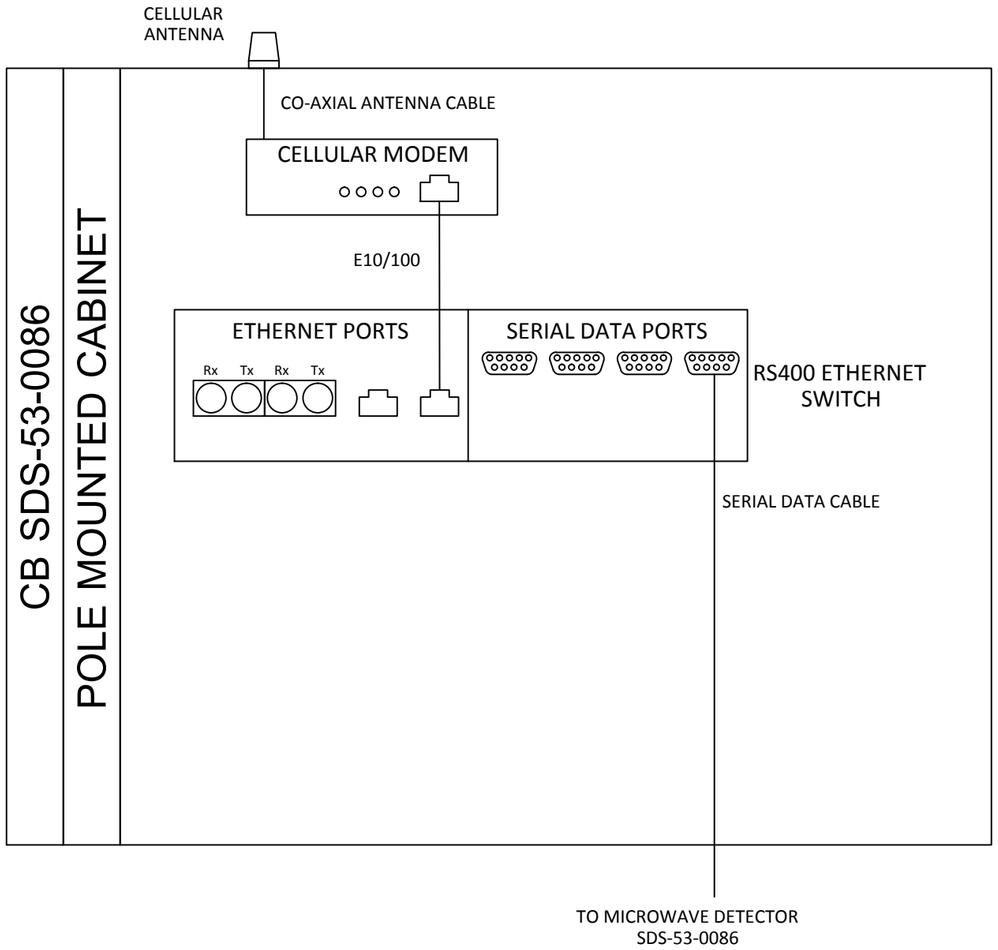
I-43 @ HART ROAD

NOTE:

ORIENT ANTENNA AZIMUTH TO OBTAIN HIGHEST POSSIBLE RECEIVED SIGNAL STRENGTH (RSSI) READINGS FROM CELLULAR MODEM

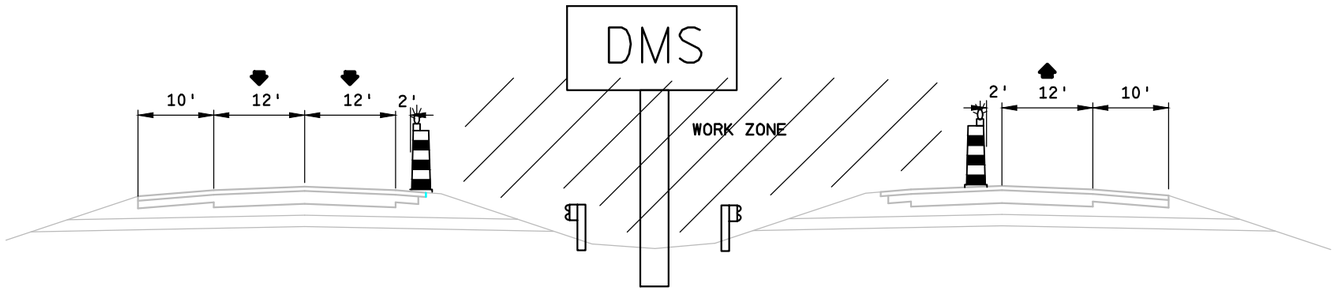
SEE ITS PLANS - SHEET 49
SEE ITS CONSTRUCTION DETAILS - SHEET 40

2



GATEWAY BOULEVARD @ 0.7 MILES SOUTH OF MILLINGTON ROAD

2



TRAFFIC CONTROL TYPICAL SECTION
BUTTERFLY DMS IN MEDIAN

0.2 MILES SOUTH OF CTH M
0.2 MILES SOUTH OF WOODMAN RD

I-39/90 BUTTERFLY DMS IN MEDIAN TRAFFIC CONTROL STAGING SUMMARY

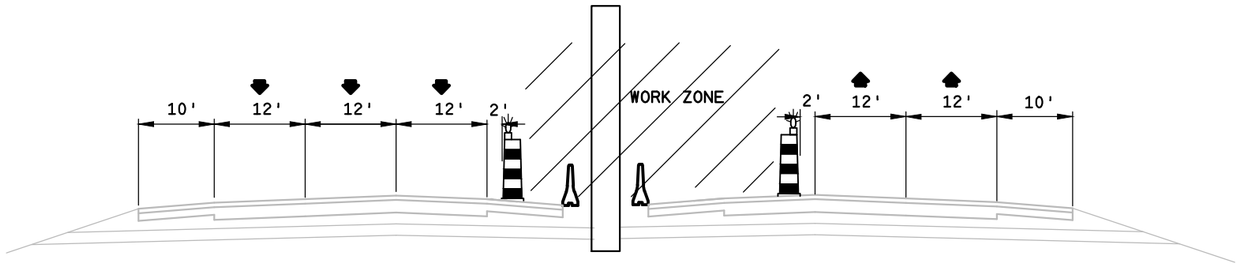
SINGLE STAGE:

TRAFFIC: I-39 REDUCED BY ONE LANE IN ONE DIRECTION. SHOULDER CLOSURE IN OTHER DIRECTION.

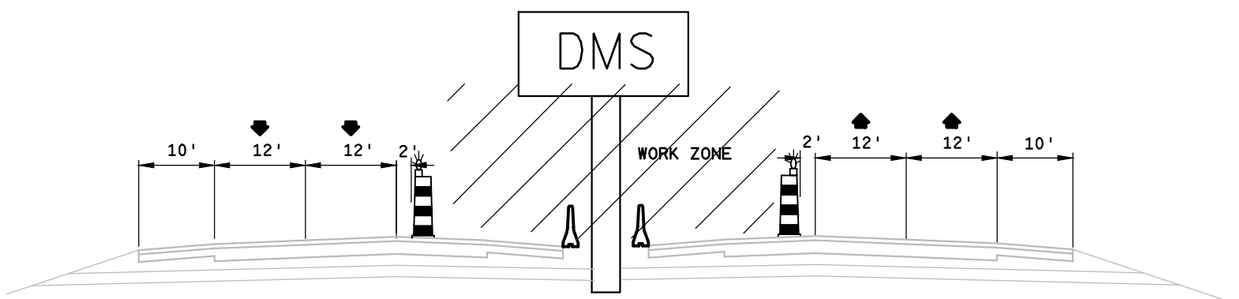
CONSTRUCTION: CONSTRUCT FOUNDATION AND UPRIGHT, OVERHANGING SUPPORTS, DMS PANELS, BULLNOSE BEAM GUARD INSTALLATION.

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWINGS "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.", AND "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H."

WORK HOURS: NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.



STAGE 1



STAGE 2

TRAFFIC CONTROL TYPICAL SECTION
BUTTERFLY DMS IN MEDIAN

BETWEEN CTH AB AND CTH BB

I-39/90 BUTTERFLY DMS IN MEDIAN BETWEEN CTH AB AND CTH BB TRAFFIC CONTROL STAGING SUMMARY

STAGE 1:

TRAFFIC: I-39 REDUCED BY ONE LANE IN ONE DIRECTION. SHOULDER CLOSURE IN OTHER DIRECTION.

CONSTRUCTION: FOUNDATION AND UPRIGHT SUPPORT

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWINGS "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." AND "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H."

WORK HOURS: NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.

STAGE 2:

TRAFFIC: I-39 REDUCED BY ONE LANE IN EACH DIRECTION.

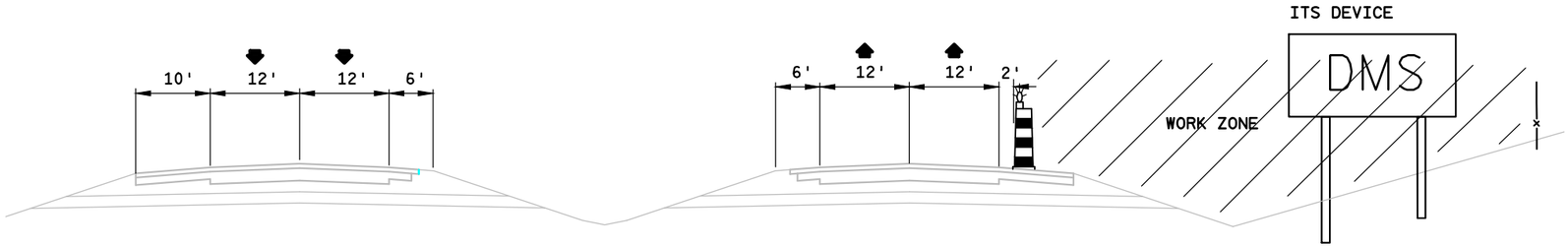
CONSTRUCTION: OVERHANGING SUPPORTS, DMS SIGN PANELS, CATWALK

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H."

WORK HOURS: NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.

PROJECT NO: 1003,1005,1007-10-70	HWY: I-39/90	COUNTY: DANE, ROCK	TRAFFIC CONTROL STAGING - INTERSTATE BUTTERFLY DMS	SHEET ---	E

FILE NAME : L:\WORK\PROJECTS\60242867\000_CAD\001_DRAWINGS\025001_TC_TS_ITSEARLYLET.DWG PLOT DATE : 7/13/2012 12:34 PM PLOT BY : ARBUCKLE, ADRIAN PLOT NAME : ---------- PLOT SCALE : 1:20_XREF WISDOT/CADDS SHEET 42



TRAFFIC CONTROL TYPICAL SECTION
ROADSIDE ITS CONSTRUCTION

DMS-Roadside: I-43 at Carvers Rock Rd - SB
DMS-Roadside: I-39/90 at Church St - NB
DMS-Roadside: I-39/90 at Lake Drive Rd - SB
DMS-Roadside: I-39/90 at Lake Drive Rd - NB
DMS-Roadside: I-39/90 at Hart Rd - NB
WIRELESS MESH NODE: I-39/90 at STH 26
WIRELESS MESH NODE: I-39/90 at USH 14
WIRELESS MESH NODE: I-39/90 at Racine St
WIRELESS MESH NODE: I-39/90 at Creek Rd
WIRELESS MESH NODE: I-39/90 at Hart Rd - NB
WIRELESS MESH NODE: I-39/90 at I-43/STH 81
WIRELESS MESH NODE: I-39/90 at State Line Rd
CCTV: I-43 at Hart Rd
CCTV: I-43 at STH 140
CCTV: I-39/90 at CTH N
CCTV: I-39/90 at CTH B
CCTV: I-39/90 at USH 51 N Jct
CCTV: I-39/90 at USH 51 S Jct/STH 73
DETECTOR-Microwave: STH 30 @ Thompson Dr
DETECTOR-Bluetooth: I-39/90 at Storck Rd - NB
DETECTOR-Bluetooth: I-39/90 at Williams Dr - SB
DETECTOR-Bluetooth: I-39/90 at CTH W - SB
DETECTOR-Bluetooth: I-39/90 at CTH B - NB
DETECTOR-Bluetooth: I-39/90 at CTH A - SB
DETECTOR-Bluetooth: I-39/90 at Maple Grove Rd - NB
DETECTOR-Bluetooth: I-39/90 at STH 106 - SB
DETECTOR-Bluetooth: I-39/90 at Knutson Rd - NB
DETECTOR-Bluetooth: I-39/90 at Russell Rd - SB
DETECTOR-Bluetooth: I-39/90 between USH 14 & STH 26 - SB
DETECTOR-Bluetooth: I-39/90 between USH 14 & STH 26 - NB
DETECTOR-Bluetooth: I-39/90 at Milwaukee St - NB
DETECTOR-Bluetooth: I-39/90 at CTH O - NB
DETECTOR-Bluetooth: I-39/90 at 0.5 miles north of Avalon Rd - SB
DETECTOR-Bluetooth: I-39/90 at L-T Townline Rd - SB
DETECTOR-Bluetooth: I-39/90 at Hart Rd - SB

I-39/90 AND I-43 ROADSIDE ITS DEVICE TRAFFIC CONTROL STAGING SUMMARY

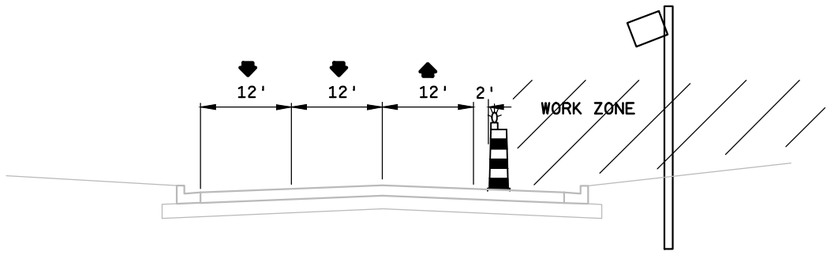
SINGLE STAGE:

TRAFFIC: SHOULDER CLOSURE IN ONE DIRECTION

CONSTRUCTION: FOUNDATION AND SIGN PANEL OR ITS DEVICE

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWING "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H."

WORK HOURS: OFF PEAK AND NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.



TRAFFIC CONTROL TYPICAL SECTION
ROADSIDE DETECTOR OR CAMERA CONSTRUCTION
URBAN LOCATION

DMS-Roadside: I-43 at Carvers Rock Rd - SB
CCTV: I-43 at Hart Rd
WIRELESS MESH NODE: I-39/90 at Cranston Rd
CCTV: USH 51 at USH 14
DETECTOR-Microwave: Gateway Blvd at 0.7 miles south of Millington Rd - NB/SB

URBAN ROADSIDE ITS DEVICE TRAFFIC CONTROL STAGING SUMMARY

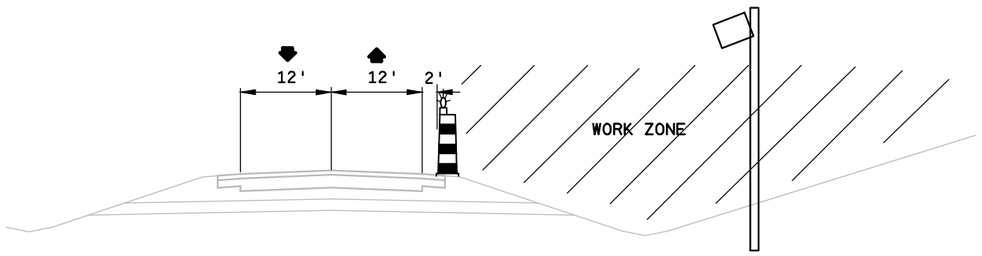
SINGLE STAGE:

TRAFFIC: SINGLE LANE CLOSURE IN ONE DIRECTION, SIDEWALK CLOSURE IF APPLICABLE.

CONSTRUCTION: FOUNDATION, SUPPORT, AND MOUNTED DEVICES

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWINGS "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." AND "TRAFFIC CONTROL, SIDEWALK CLOSURE".

WORK HOURS: OFF PEAK AND NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.



TRAFFIC CONTROL TYPICAL SECTION
ROADSIDE DETECTOR OR CAMERA CONSTRUCTION
RURAL 2-LANE LOCATION

CCTV: CTH P at I-39/90
WIRELESS MESH NODE: I-39/90 at CTH S
CCTV: I-39/90 at STH 59
DETECTOR-Microwave: USH 51 at 0.6 miles north of M-H Townline Rd - NB/SB
DETECTOR-Microwave: STH 140 at 0.8 miles south of USH 14 - NB/SB

2-LANE ROADSIDE ITS DEVICE TRAFFIC CONTROL STAGING SUMMARY

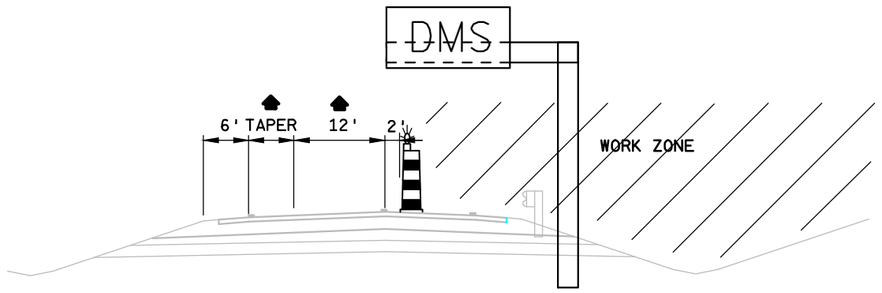
SINGLE STAGE:

TRAFFIC: SHOULDER CLOSURE IN ONE DIRECTION

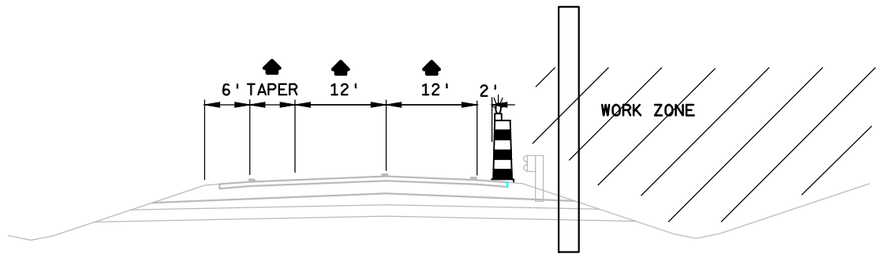
CONSTRUCTION: FOUNDATION, SUPPORT, AND MOUNTED DEVICES.

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWING "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".

WORK HOURS: OFF PEAK AND NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.



TRAFFIC CONTROL TYPICAL SECTION
DMS REMOVAL AT WB STH 30
STAGE 1



TRAFFIC CONTROL TYPICAL SECTION
DMS REMOVAL AT WB STH 30
STAGE 2

STH 30 CANTILEVER DMS REMOVAL TRAFFIC CONTROL STAGING SUMMARY

STAGE 1:

TRAFFIC: WB STH 30 REDUCED TO A SINGLE LANE. ADVISORY SPEED 45 MPH.

CONSTRUCTION: REMOVE SIGN PANEL, SUPPORTS, FOUNDATION

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H."

WORK HOURS: NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.

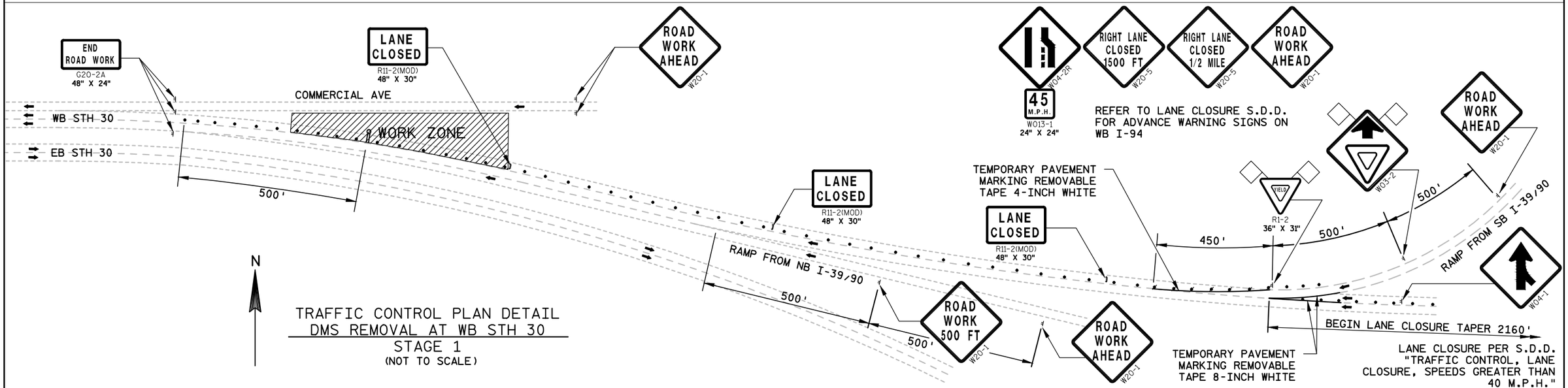
STAGE 2:

TRAFFIC: WB STH 30 SHOULDER CLOSURE

CONSTRUCTION: REMOVE TRAFFIC DETECTORS AND CONDUITS. INSTALL NEW CABINET, NEW POLE, AND MICROWAVE DETECTORS AT OLD DMS LOCATION.

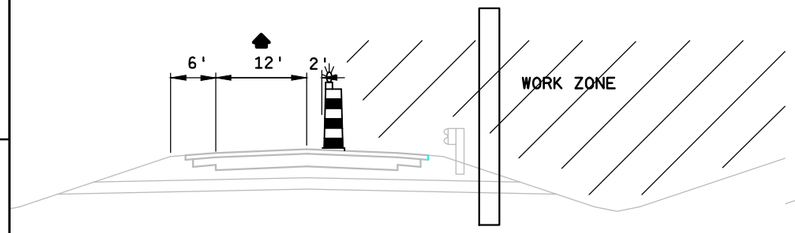
TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWING "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H."

WORK HOURS: OFF PEAK AND NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.

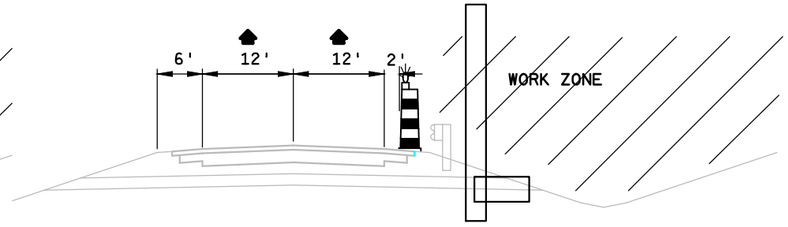


TRAFFIC CONTROL PLAN DETAIL
DMS REMOVAL AT WB STH 30
STAGE 1
(NOT TO SCALE)

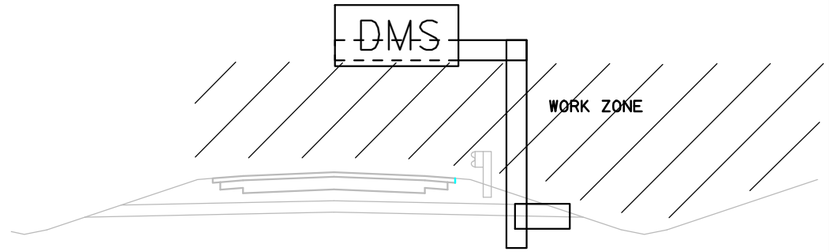
PROJECT NO: 1007-10-70	HWY: I-39/90	COUNTY: DANE	TRAFFIC CONTROL STAGING - STH 30 CANTILEVER DMS REMOVAL	SHEET 148	E



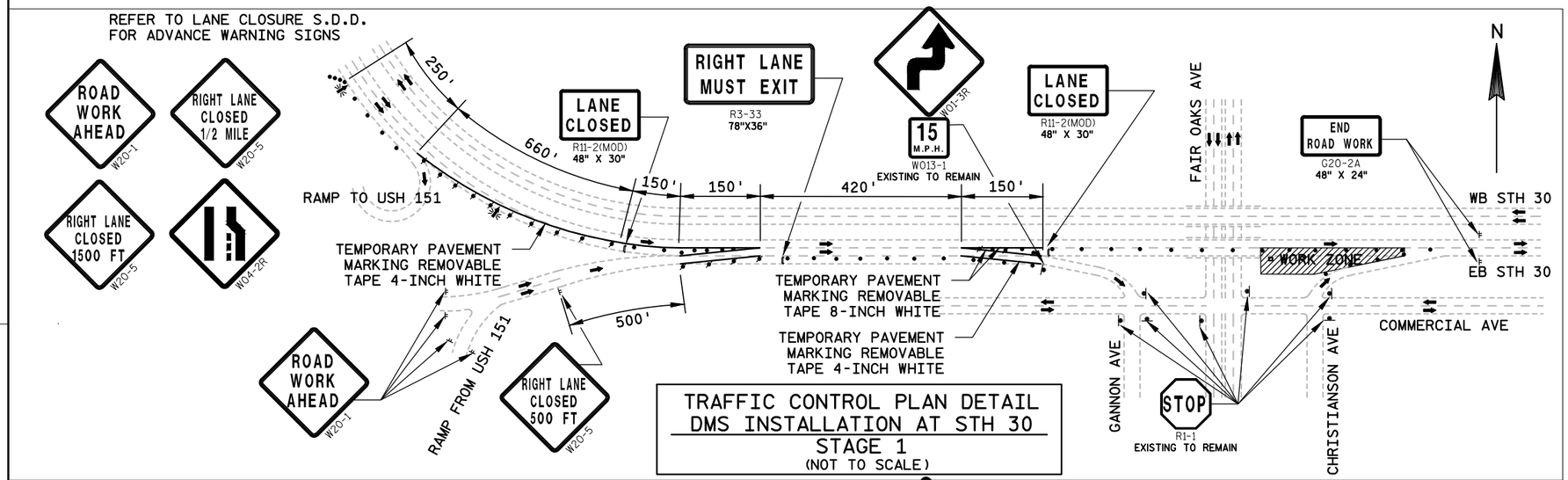
TRAFFIC CONTROL TYPICAL SECTION
DMS INSTALLATION AT EB STH 30
STAGE 1



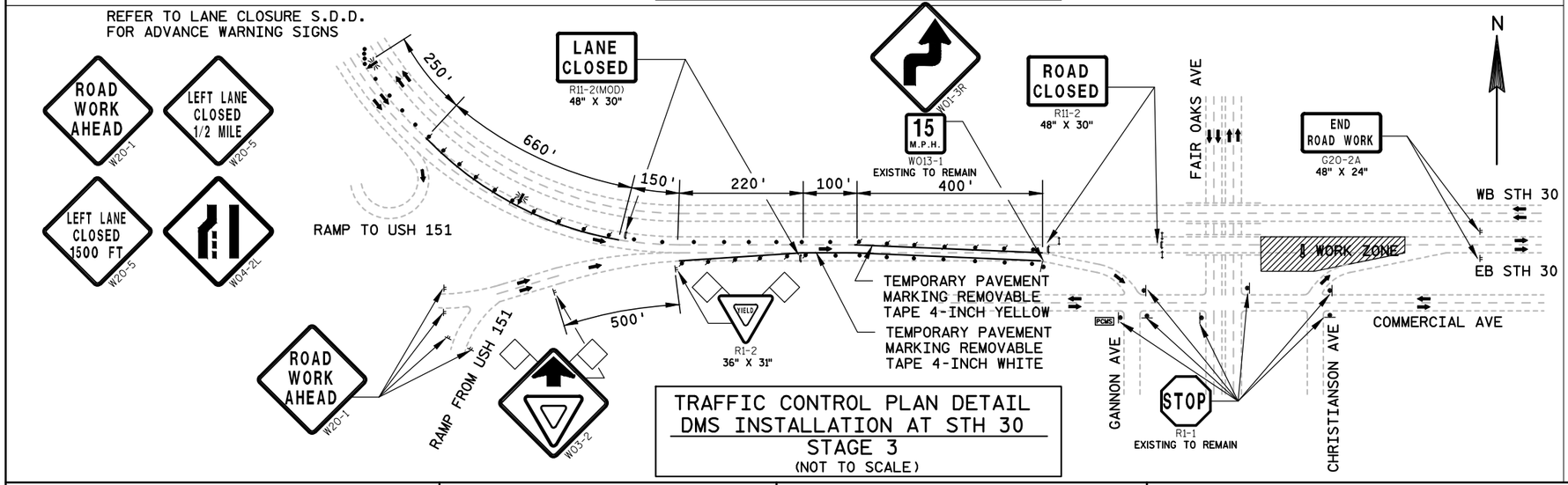
TRAFFIC CONTROL TYPICAL SECTION
DMS INSTALLATION AT EB STH 30
STAGE 2



TRAFFIC CONTROL TYPICAL SECTION
DMS INSTALLATION AT EB STH 30
STAGE 3



TRAFFIC CONTROL PLAN DETAIL
DMS INSTALLATION AT STH 30
STAGE 1
(NOT TO SCALE)



TRAFFIC CONTROL PLAN DETAIL
DMS INSTALLATION AT STH 30
STAGE 3
(NOT TO SCALE)

STH 30 CANTILEVER DMS INSTALLATION TRAFFIC CONTROL STAGING SUMMARY

STAGE 1:

TRAFFIC: EB STH 30 LANE CLOSURE.

CONSTRUCTION: FOUNDATION, UPRIGHT SUPPORTS, CONDUIT

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H."

WORK HOURS: NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.

STAGE 2:

TRAFFIC: EB STH 30 SHOULDER CLOSURE.

CONSTRUCTION: CONTROL CABINET, CONDUIT

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWING "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H."

WORK HOURS: OFF PEAK AND NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.

STAGE 3:

TRAFFIC: EB STH 30 ROADWAY CLOSED. EB TRAFFIC REDUCED TO ONE LANE AND DETOURED OFF OF AND BACK ON TO STH 30 USING RAMPS AT FAIR OAKS AVE.

CONSTRUCTION: OVERHANGING SUPPORTS, DMS SIGN PANEL.

TRAFFIC CONTROL: REFER TO STANDARD DETAIL DRAWING "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H."

WORK HOURS: NIGHT WORK. REFER TO SPECIAL PROVISIONS FOR SPECIFIC HOURS.

S-53-73 (ROCK COUNTY COORDINATES)

POINT NO.	N	E
403M	307716.905	498070.933

S-53-74 (ROCK COUNTY COORDINATES)

POINT NO.	N	E
204L	243609.383	504202.332

DMS-53-0038-S (ROCK COUNTY COORDINATES)

POINT NO.	N	E
502	229017.833	543902.392

DMS-53-0038-S (ROCK COUNTY COORDINATES)

POINT NO.	N	E
122T	219283.096	512284.509

S-13-190 (DANE COUNTY COORDINATES)

POINT NO.	N	E
201	494424.128	835565.444

S-13-408 (DANE COUNTY COORDINATES)

POINT NO.	N	E
703B	475626.597	849733.036

DMS-13-0039-N (DANE COUNTY COORDINATES)

POINT NO.	N	E
608P	454744.093	881624.209

DMS-13-0040-N (DANE COUNTY COORDINATES)

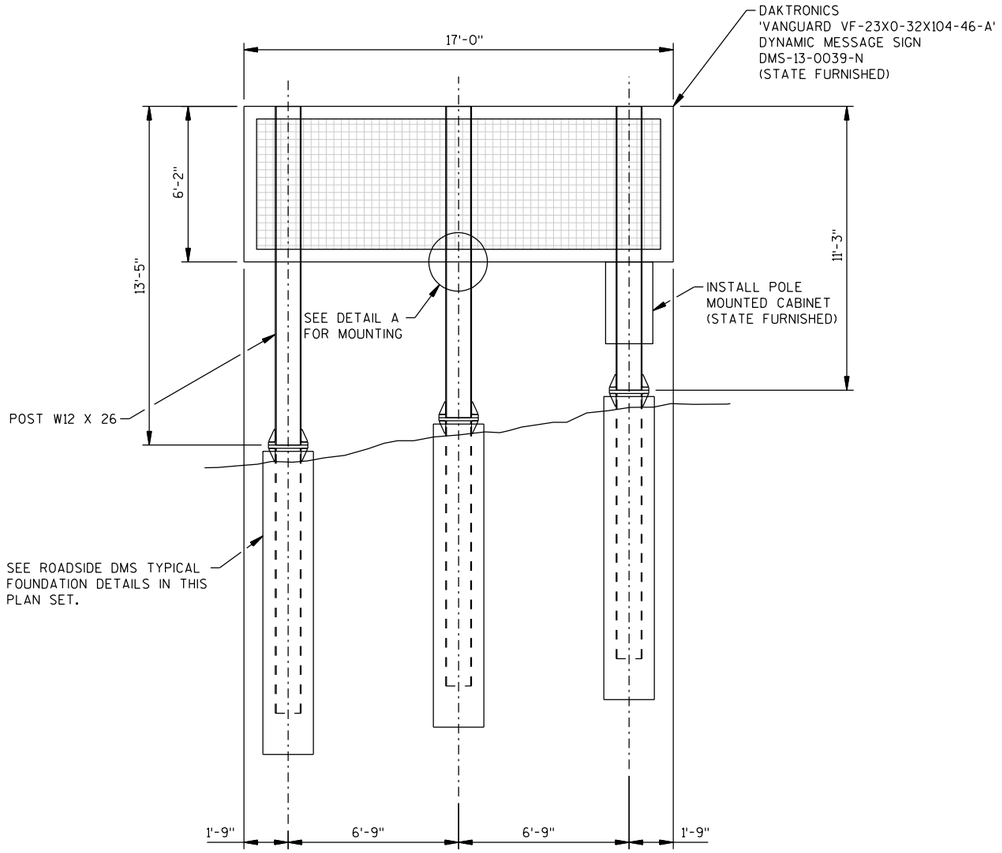
POINT NO.	N	E
501A	403063.073	914219.255

DMS-13-0041-N (DANE COUNTY COORDINATES)

POINT NO.	N	E
501A	403063.073	914219.255

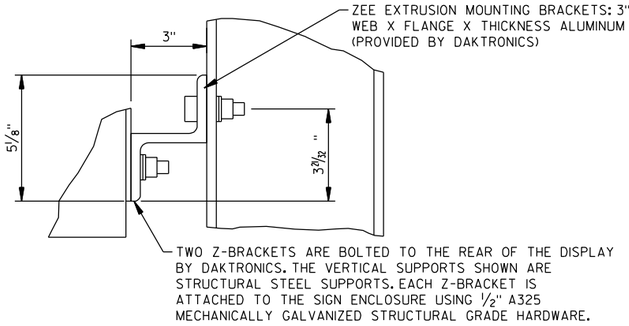
ALL COORDINATES ARE NAD 83 (2007) AND NAVD 88 (2007)

PROJECT NO: 1003/05/07-10-70	HWY: I-39/90	COUNTY: ROCK & DANE	ITS CONTROL POINTS	SHEET 150	E

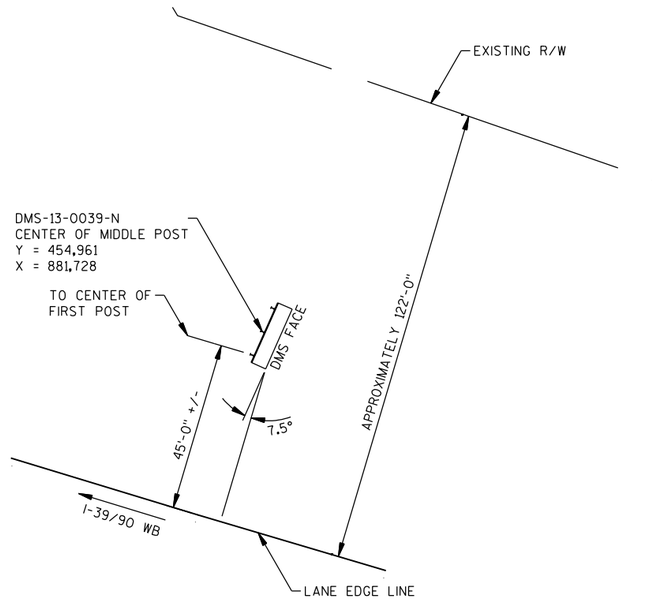


ELEVATION

DMS-13-0039-N
I-39/90 WB AT CHURCH STREET
Y = 454,961
X = 881,728
MP = 149.71



DETAIL A
SIGN ATTACHMENT



PLAN VIEW

DMS-13-0039-N
I-39/90 WB AT CHURCH STREET
Y = 454,961
X = 881,728
MP = 149.71

DMS-13-0039-N
I-39/90 WB AT CHURCH STREET

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

COORDINATES ARE THE LOCATION OF THE CENTER POST.

DESIGN DATA

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, 2009, WITH 2010 AND 2011 INTERIMS.

DEAD LOAD - WEIGHT OF DMS SIGN (1,150 LBS), AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND 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 + 1/2 (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

ALLOWABLE DESIGN STRESSES

POST, ASTM A709, GRADE 50	fy = 50,000 psi
CONCRETE MASONRY	f'c = 3,500 psi
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 psi

BENCH MARK TABLE

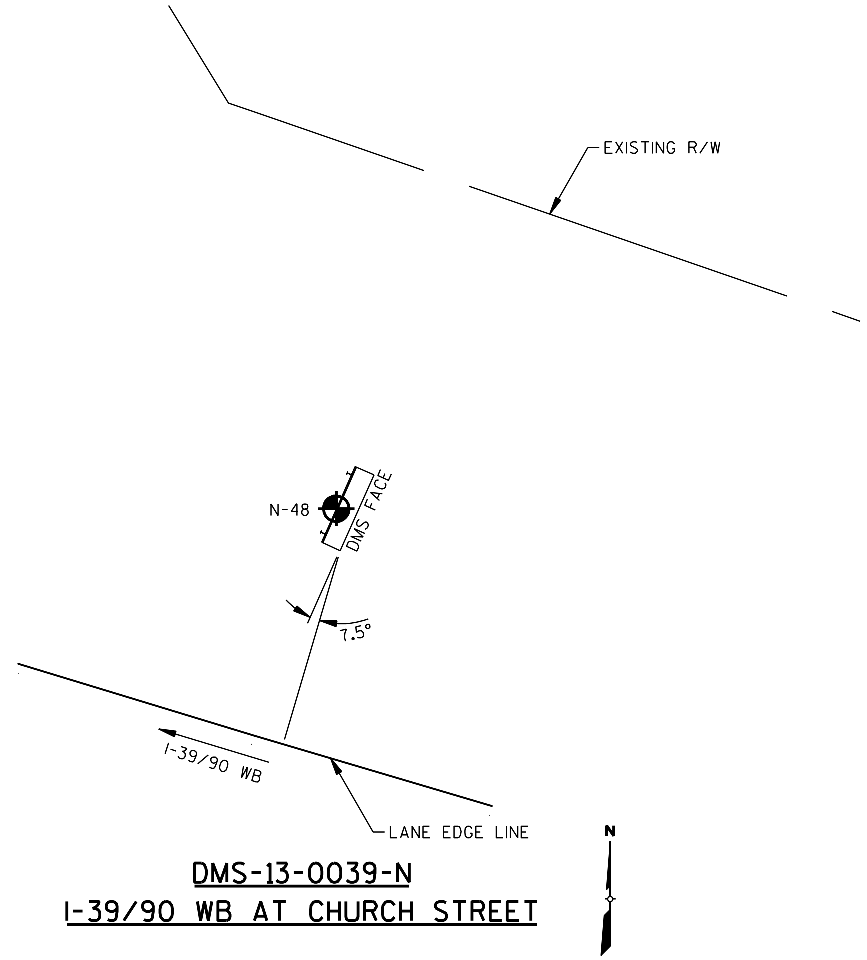
NO.	DESCRIPTION	ELEVATION
656P	CHISELED SQUARE ON BARRIER WALL ALONG IH 39 SB, SW OF CHURCH STREET OVERPASS	902.83

PROJECT NUMBER: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ROADSIDE DMS STRUCTURE DETAILS	SHEET 151	E

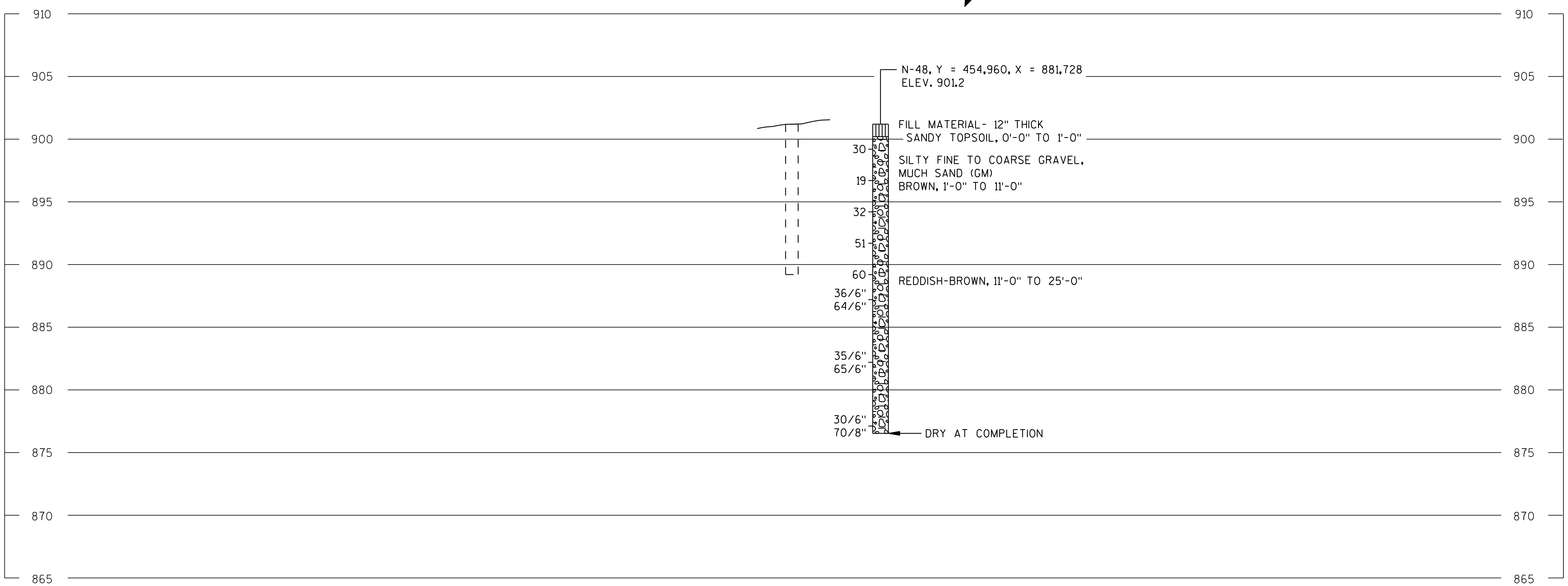
2

BORINGS AND REPORT BY:
SOILS & ENGINEERING SERVICES, INC.
1102 STEWART ST.
MADISON, WI 53713-4648

BORINGS WERE PERFORMED OCTOBER 2, 2012



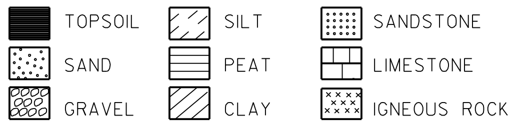
DMS-13-0039-N
I-39/90 WB AT CHURCH STREET



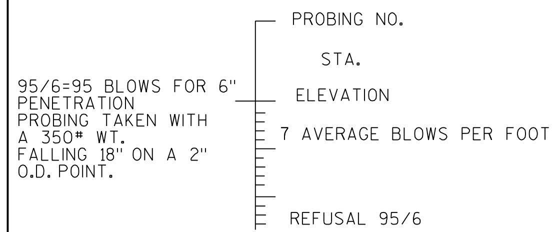
ABBREVIATIONS

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

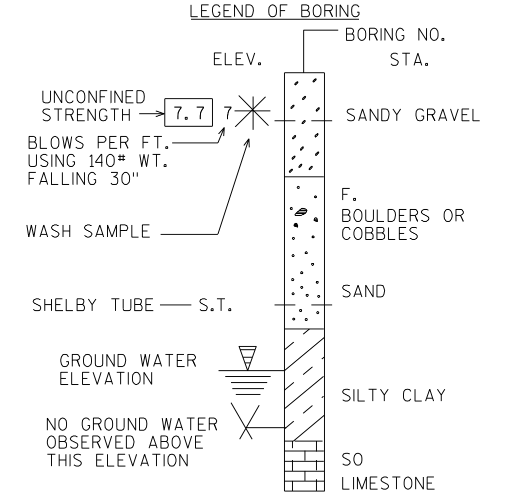
MATERIAL SYMBOLS



LEGEND OF PROBING



LEGEND OF BORING



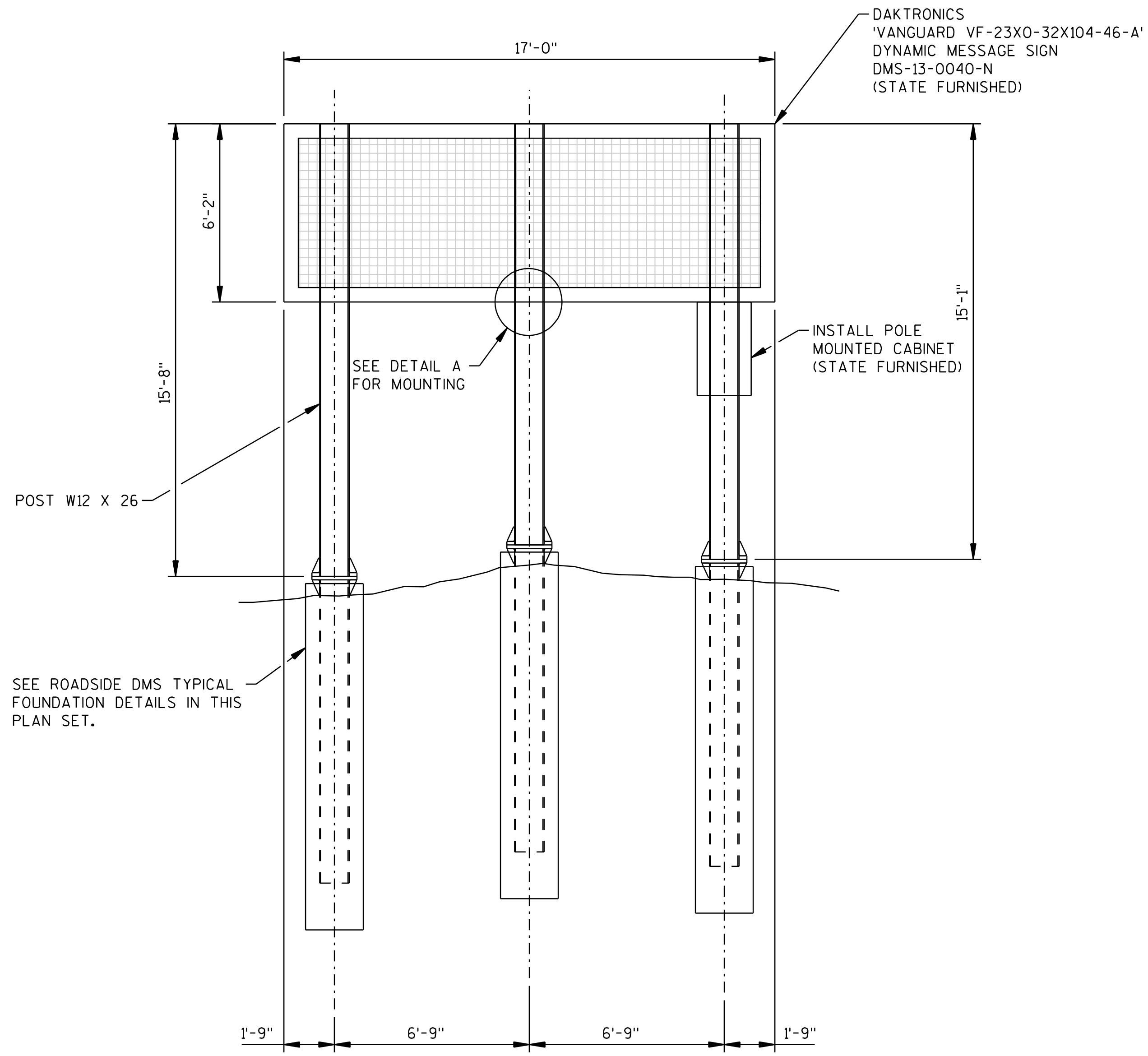
UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE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

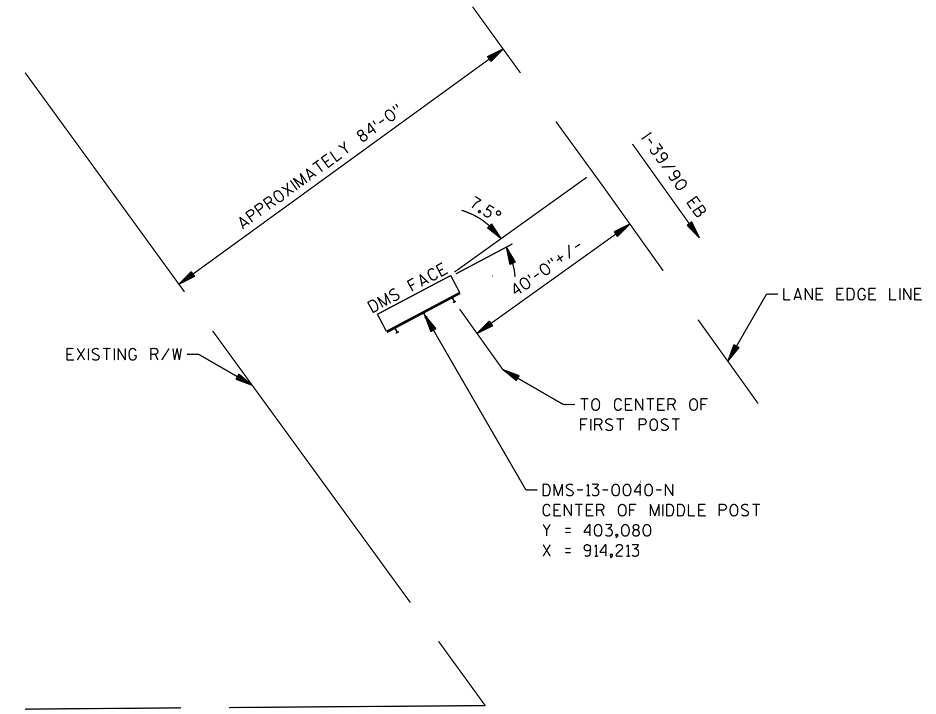
2

PROJECT NUMBER: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ROADSIDE DMS STRUCTURE DETAILS	SHEET 152	E



ELEVATION

DMS-13-0040-N
I-39/90 EB AT LAKE DRIVE ROAD
Y = 403,080
X = 914,213
MP = 161.89



PLAN VIEW

DMS-13-0040-N
I-39/90 EB AT LAKE DRIVE ROAD
Y = 403,080
X = 914,213
MP = 161.89

N

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

COORDINATES ARE THE LOCATION OF THE CENTER POST.

DESIGN DATA

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, 2009, WITH 2010 AND 2011 INTERIMS.

DEAD LOAD - WEIGHT OF DMS SIGN (1,150 LBS), AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND EXPOSED MEMBERS.

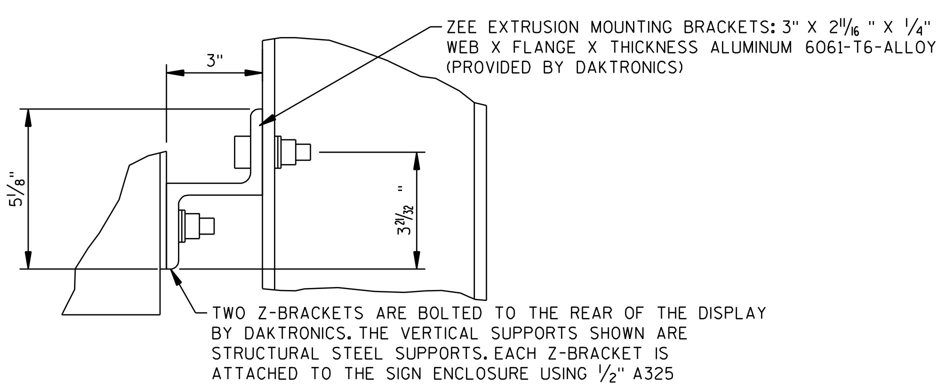
WIND COMPONENTS	NORMAL	TRANSVERSE
COMBINATION 1	1.0	0.2
COMBINATION 2	0.6	0.3

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

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

ALLOWABLE DESIGN STRESSES

POST, ASTM A709, GRADE 50	fy = 50,000 psi
CONCRETE MASONRY	f'c = 3,500 psi
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 psi



DETAIL A
SIGN ATTACHMENT

BENCH MARK TABLE

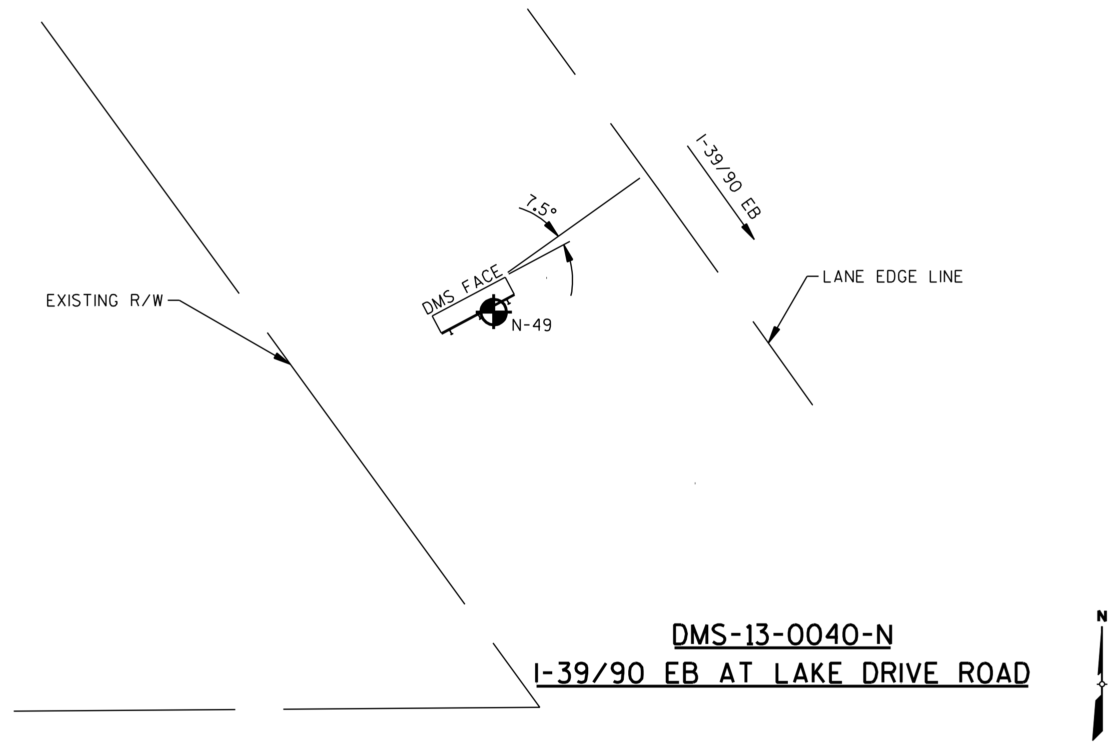
NO.	DESCRIPTION	ELEVATION
552A	CHISELED "X" ON WEST SIGN BOLT OF "OAKLAWN ACADEMY-EXIT 160" SIGN ALONG IH 39 NB, 2400' NORTH OF LAKE DRIVE OVERPASS.	831.41

DMS-13-0040-N
I-39/90 EB AT LAKE DRIVE ROAD

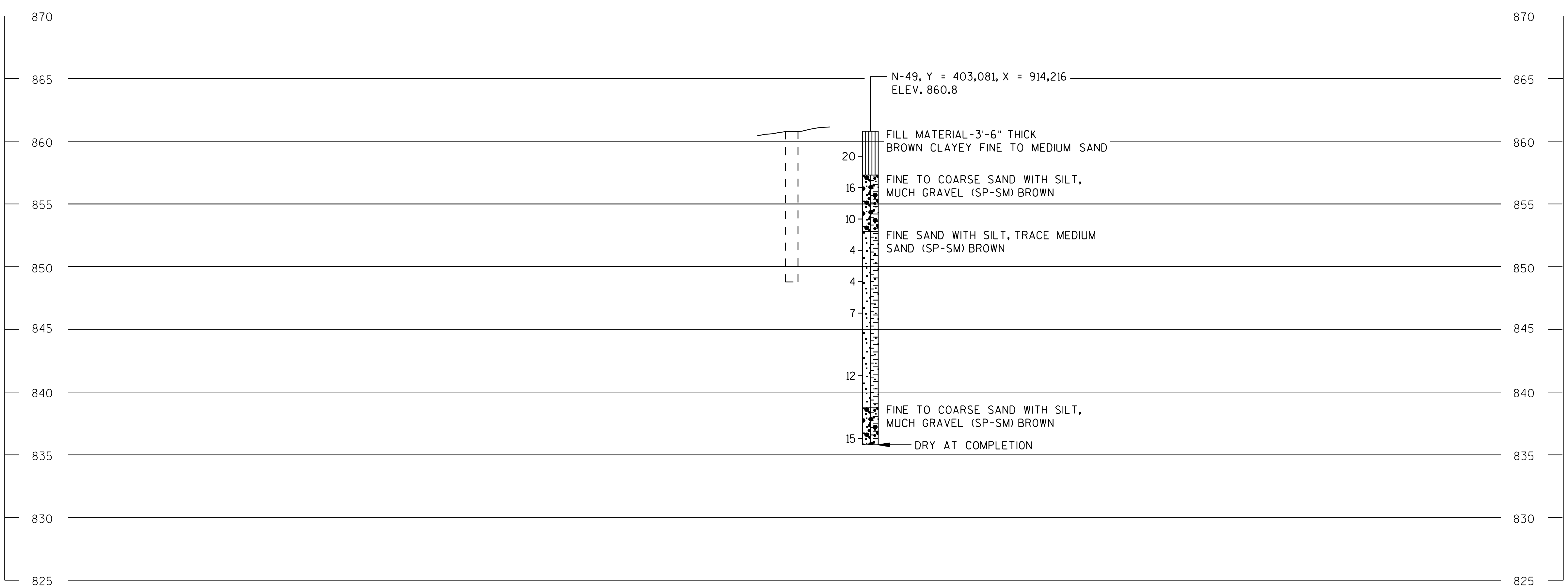
PROJECT NUMBER: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ROADSIDE DMS STRUCTURE DETAILS	SHEET 153	E

BORINGS AND REPORT BY:
SOILS & ENGINEERING SERVICES, INC.
1102 STEWART ST.
MADISON, WI 53713-4648

BORINGS WERE PERFORMED OCTOBER 4, 2012



DMS-13-0040-N
I-39/90 EB AT LAKE DRIVE ROAD



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

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6
95/6=95 BLOWS FOR 6" PENETRATION PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

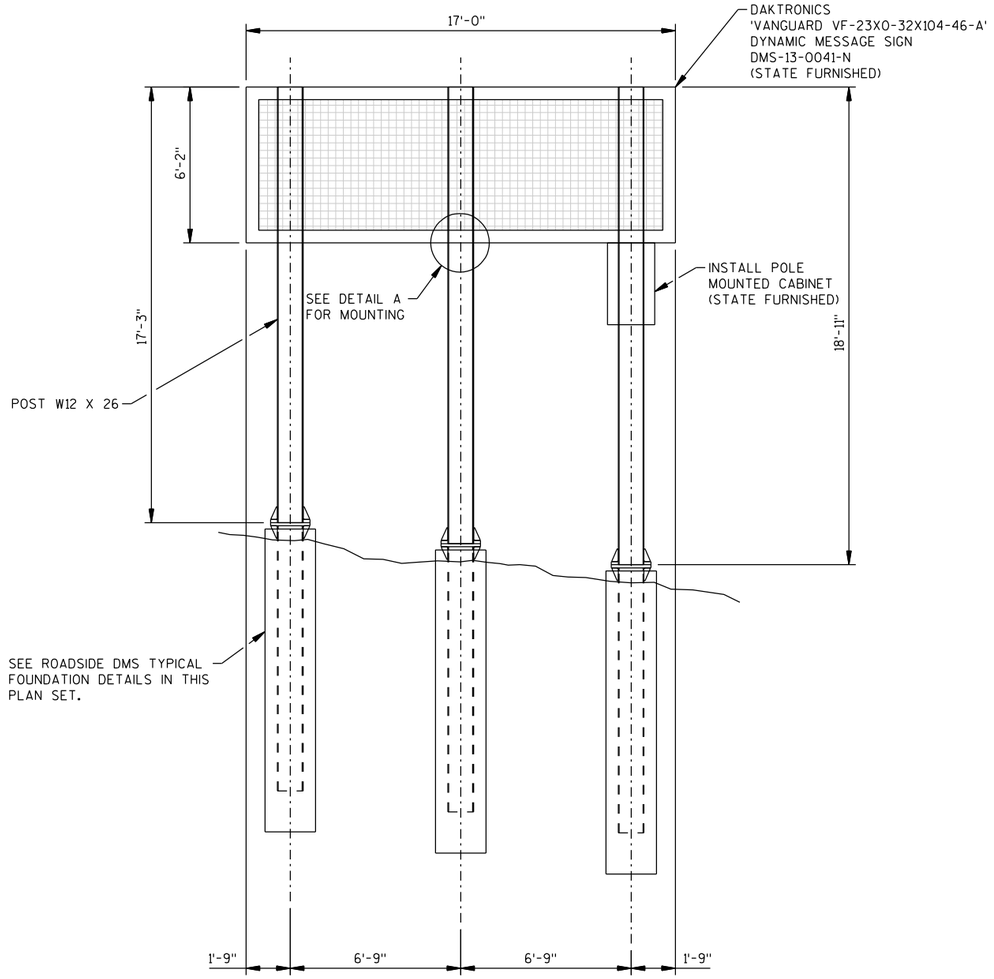
LEGEND OF BORING

BORING NO.
ELEV.
STA.
UNCONFINED STRENGTH → 7.7 7
SANDY GRAVEL
BLOWS PER FT. USING 140# WT. FALLING 30"
F. BOULDERS OR COBBLES
WASH SAMPLE
SAND
SHELBY TUBE — S.T.
GROUND WATER ELEVATION
SILTY CLAY
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
SO LIMESTONE

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.

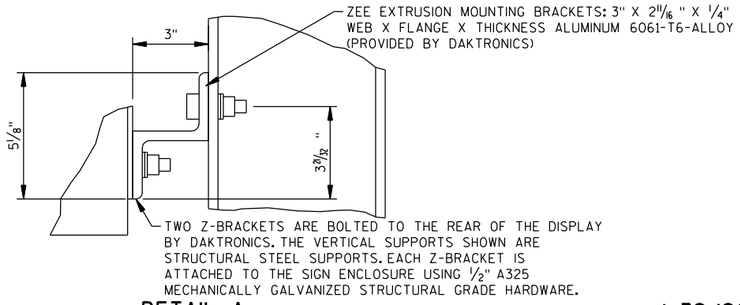
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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.

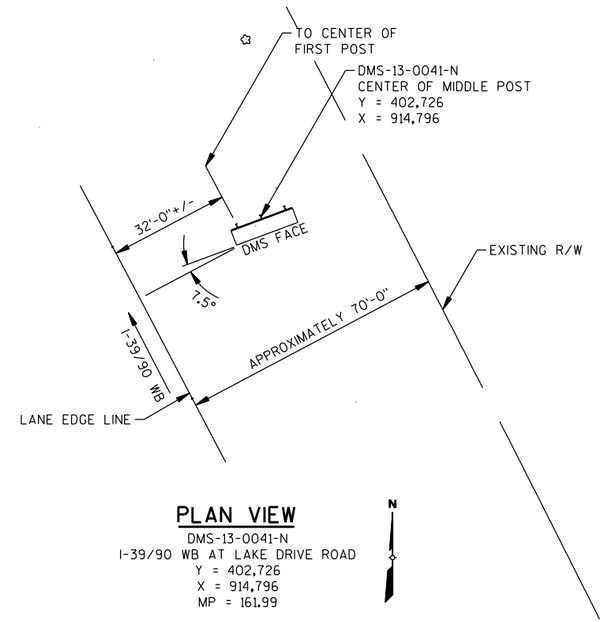


ELEVATION

DMS-13-0041-N
I-39/90 WB AT LAKE DRIVE ROAD
Y = 402,726
X = 914,796
MP = 161.99



DETAIL A
SIGN ATTACHMENT



PLAN VIEW

DMS-13-0041-N
I-39/90 WB AT LAKE DRIVE ROAD
Y = 402,726
X = 914,796
MP = 161.99

DMS-13-0041-N
I-39/90 WB AT LAKE DRIVE ROAD

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

COORDINATES ARE THE LOCATION OF THE CENTER POST.

DESIGN DATA

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, 2009, WITH 2010 AND 2011 INTERIMS.

DEAD LOAD - WEIGHT OF DMS SIGN (1,150 LBS), AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND 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 + 1/2 (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

ALLOWABLE DESIGN STRESSES

POST, ASTM A709, GRADE 50 ____ fy = 50,000 psi
CONCRETE MASONRY ____ f'c = 3,500 psi
BAR STEEL REINFORCEMENT, GRADE 60 ____ fy = 60,000 psi

BENCH MARK TABLE

NO.	DESCRIPTION	ELEVATION
552A	CHISELED "X" ON WEST SIGN BOLT OF "OAKLAWN ACADEMY-EXIT 160" SIGN ALONG IH 39 NB, 2400' NORTH OF LAKE DRIVE OVERPASS.	831.41

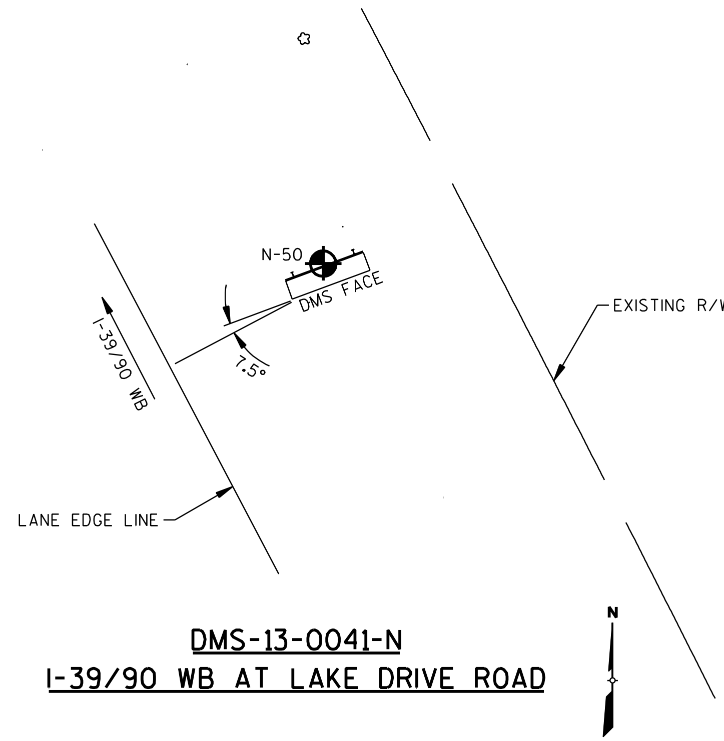
PROJECT NUMBER: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ROADSIDE DMS STRUCTURE DETAILS	SHEET 155	E

FILE NAME: I:\work\projects\60242867\000_cad\001_drawings\structures\final early let its structures\roadside dms\DMS-13-0041-N_Edg.dgn
BATCH PRINT SHEET 5 OF 11
PLOTTED BY DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000_cad\001_drawings\structures\final early let its structures\roadside dms\MS_Printing\Pen_Tables\ET_WisDOT.tbl
PLOT DATE: 1/31/2013
PLOT TIME: 2:59:45 PM
PLOT SCALE: 1:2
WISDOT/CADDS SHEET 42

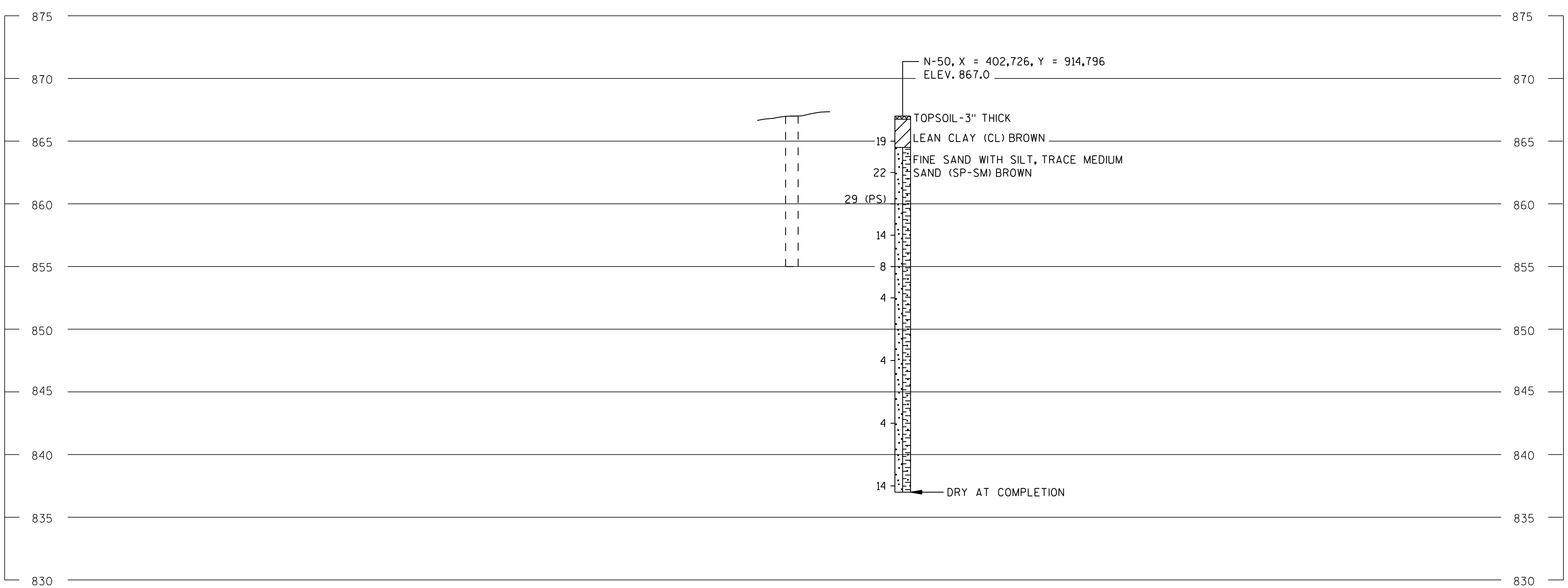
2

BORINGS AND REPORT BY:
SOILS & ENGINEERING SERVICES, INC.
1102 STEWART ST.
MADISON, WI 53713-4648

BORINGS WERE PERFORMED OCTOBER 10, 2012



DMS-13-0041-N
I-39/90 WB AT LAKE DRIVE ROAD



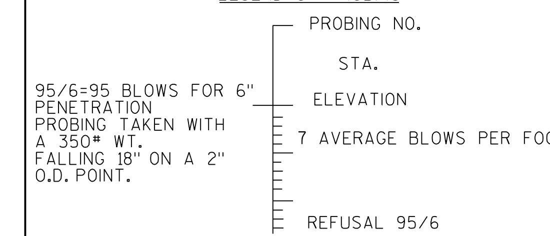
ABBREVIATIONS

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

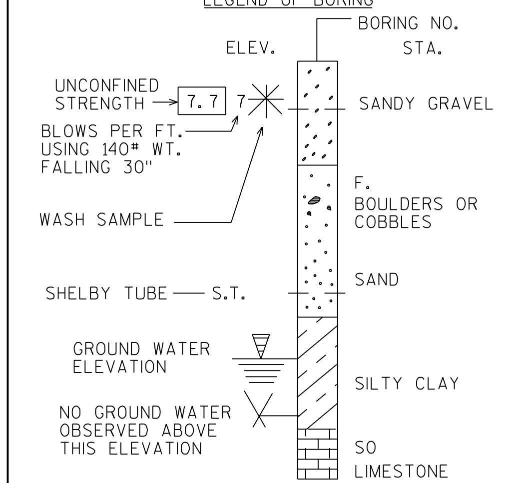
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



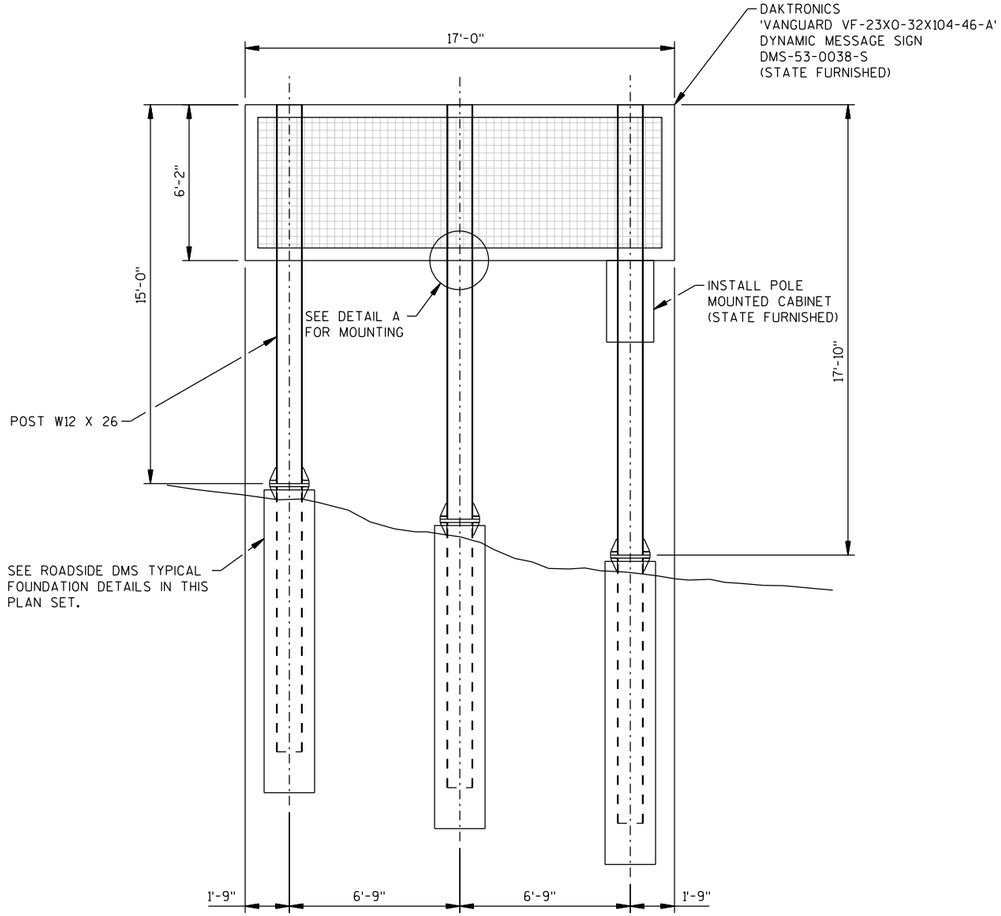
UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE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

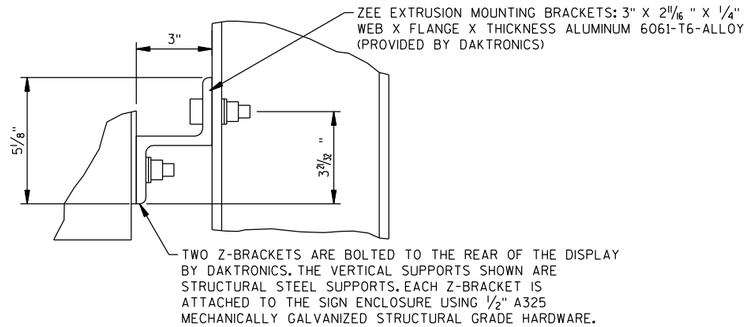
2

PROJECT NUMBER: 1007-10-70	HWY: I-39/90	COUNTY: DANE	ROADSIDE DMS STRUCTURE DETAILS	SHEET 156	E

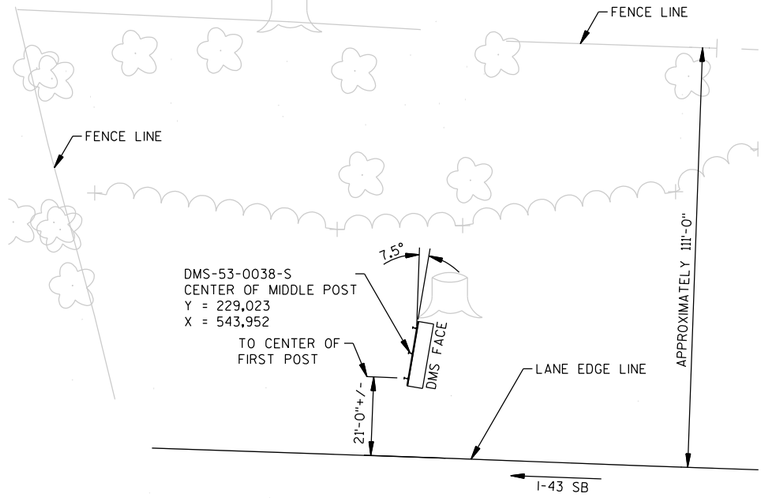


ELEVATION

DMS-53-0038-S
I-43 SB AT CARVERS ROCK ROAD
Y = 229,023
X = 543,952



DETAIL A
SIGN ATTACHMENT



PLAN VIEW

DMS-53-0038-S
I-43 SB AT CARVERS ROCK ROAD
Y = 229,023
X = 543,952

N

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

COORDINATES ARE THE LOCATION OF THE CENTER POST.

DESIGN DATA

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, 2009, WITH 2010 AND 2011 INTERIMS.

DEAD LOAD - WEIGHT OF DMS SIGN (1,150 LBS), AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND 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 + 1/2 (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

ALLOWABLE DESIGN STRESSES

POST, ASTM A709, GRADE 50 ____ fy = 50,000 psi
CONCRETE MASONRY ____ f'c = 3,500 psi
BAR STEEL REINFORCEMENT, GRADE 60 ____ fy = 60,000 psi

BENCH MARK TABLE

NO.	DESCRIPTION	ELEVATION
728	CHISELED SQUARE NE CORNER B-53-117 ON I-43 SB	954.66

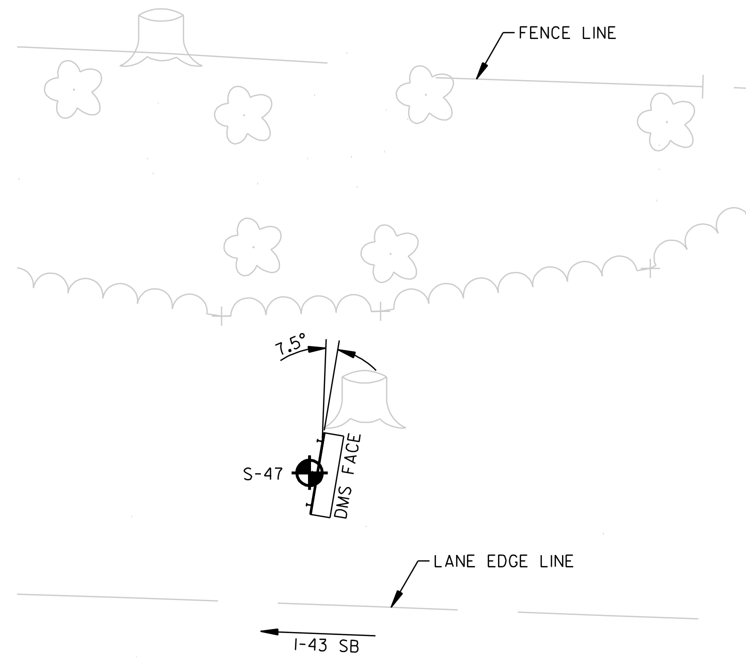
DMS-53-0038-S
I-43 SB AT CARVERS ROCK ROAD

PROJECT NUMBER: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ROADSIDE DMS STRUCTURE DETAILS	SHEET 157	E

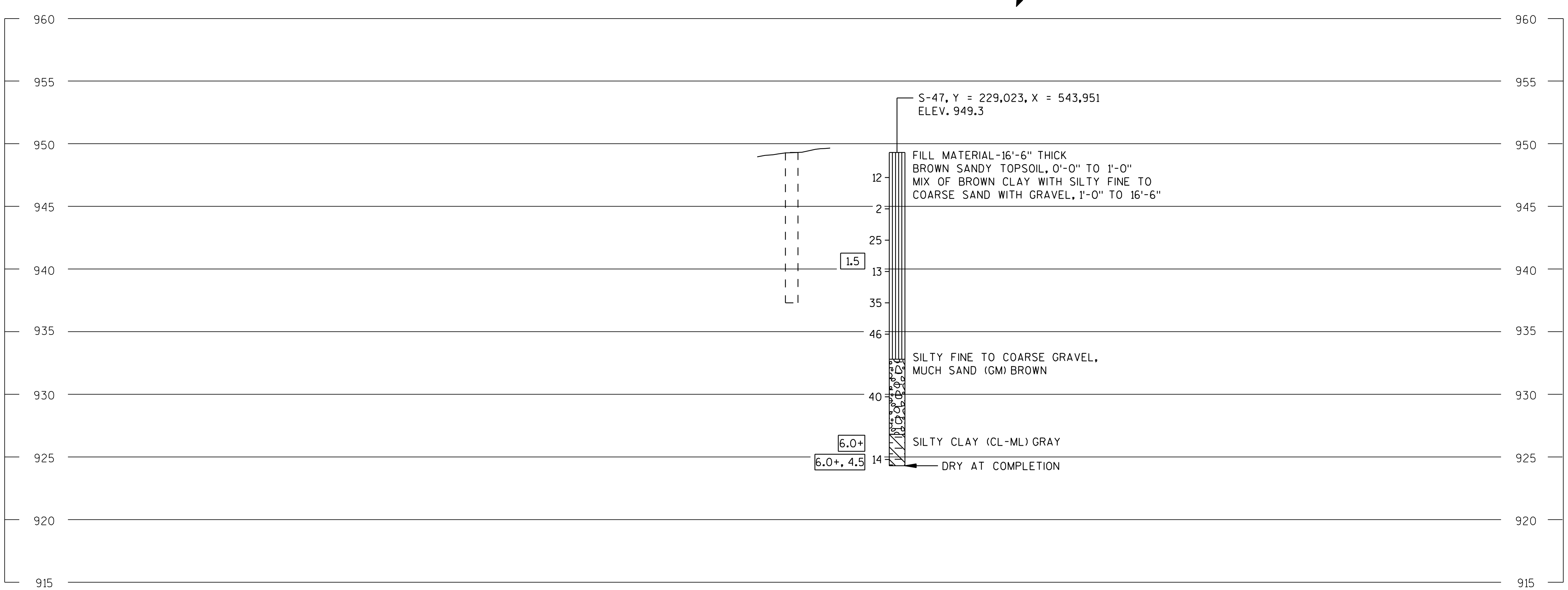
2

BORINGS AND REPORT BY:
SOILS & ENGINEERING SERVICES, INC.
1102 STEWART ST.
MADISON, WI 53713-4648

BORINGS WERE PERFORMED OCTOBER 3, 2012



DMS-53-0038-S
I-43 SB AT CARVERS ROCK ROAD



ABBREVIATIONS

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

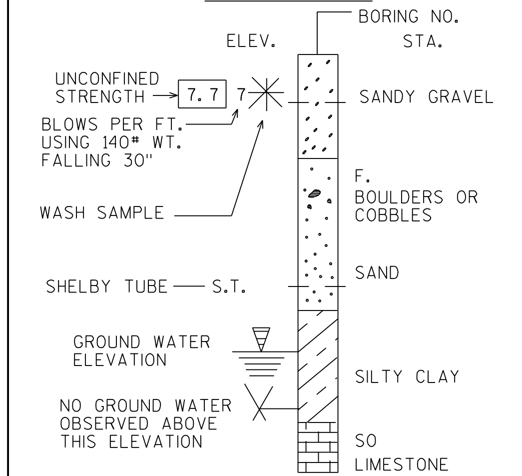
MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

LEGEND OF BORING



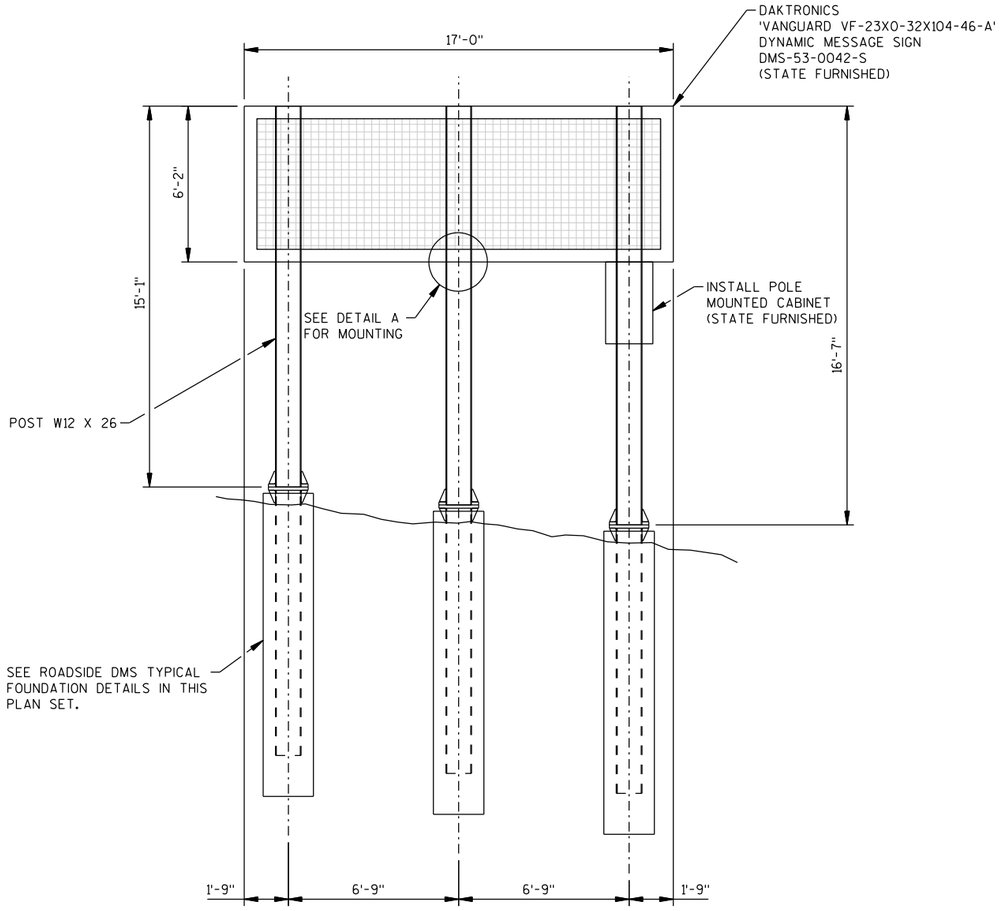
UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE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

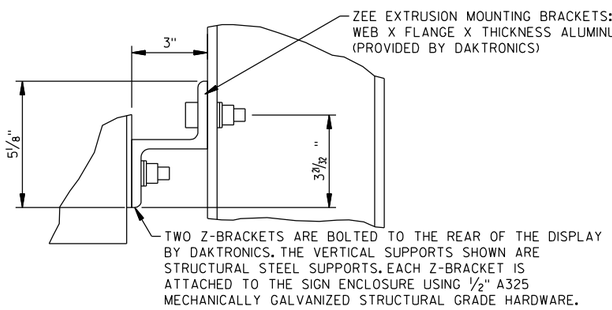
2

PROJECT NUMBER: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ROADSIDE DMS STRUCTURE DETAILS	SHEET 158	E

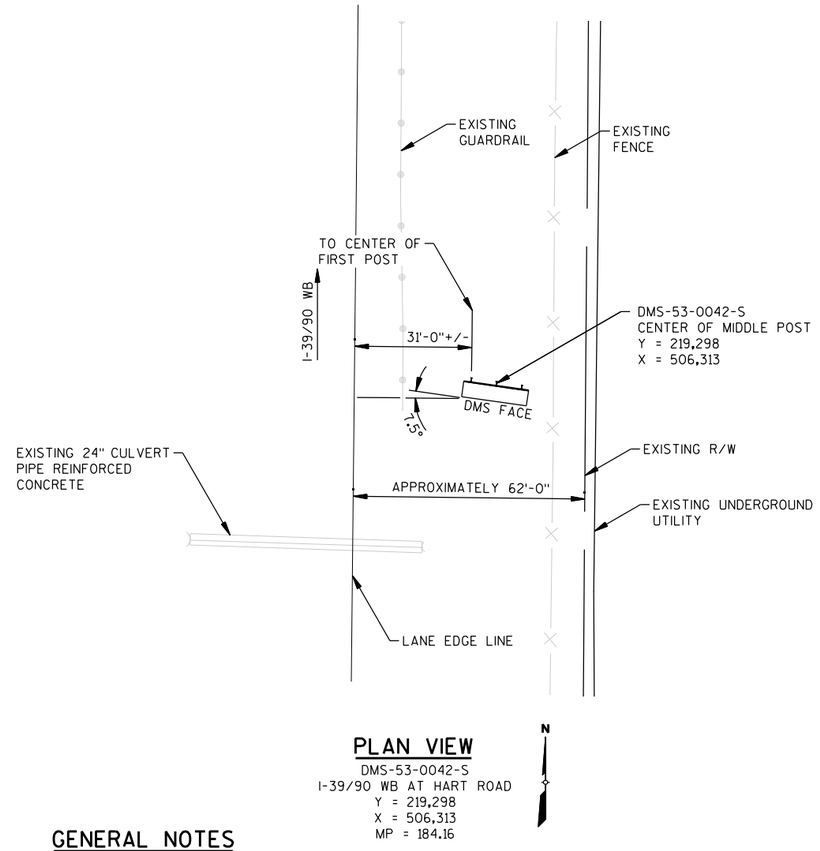


ELEVATION

DMS-53-0042-S
I-39/90 WB AT HART ROAD
Y = 219,298
X = 506,313
MP = 184.16



DETAIL A
SIGN ATTACHMENT



PLAN VIEW

DMS-53-0042-S
I-39/90 WB AT HART ROAD
Y = 219,298
X = 506,313
MP = 184.16

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

COORDINATES ARE THE LOCATION OF THE CENTER POST.

DESIGN DATA

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, 2009, WITH 2010 AND 2011 INTERIMS.

DEAD LOAD - WEIGHT OF DMS SIGN (1,150 LBS), AND SUPPORTING STRUCTURE.
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND 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 + 1/2 (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

ALLOWABLE DESIGN STRESSES

POST, ASTM A709, GRADE 50 ____ fy = 50,000 psi
CONCRETE MASONRY ____ f'c = 3,500 psi
BAR STEEL REINFORCEMENT, GRADE 60 ____ fy = 60,000 psi

BENCH MARK TABLE

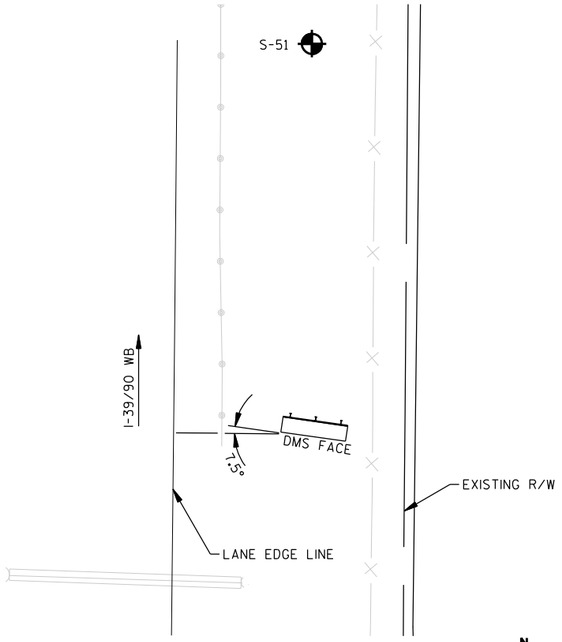
NO.	DESCRIPTION	ELEVATION
107 T	CUT "SQUARE" ON SOUTH END OF NORTH BOUND CONCRETE BARRIER WALL AT I-39 NB AND HART ROAD	824.14

DMS-53-0042-S
I-39/90 WB AT HART ROAD

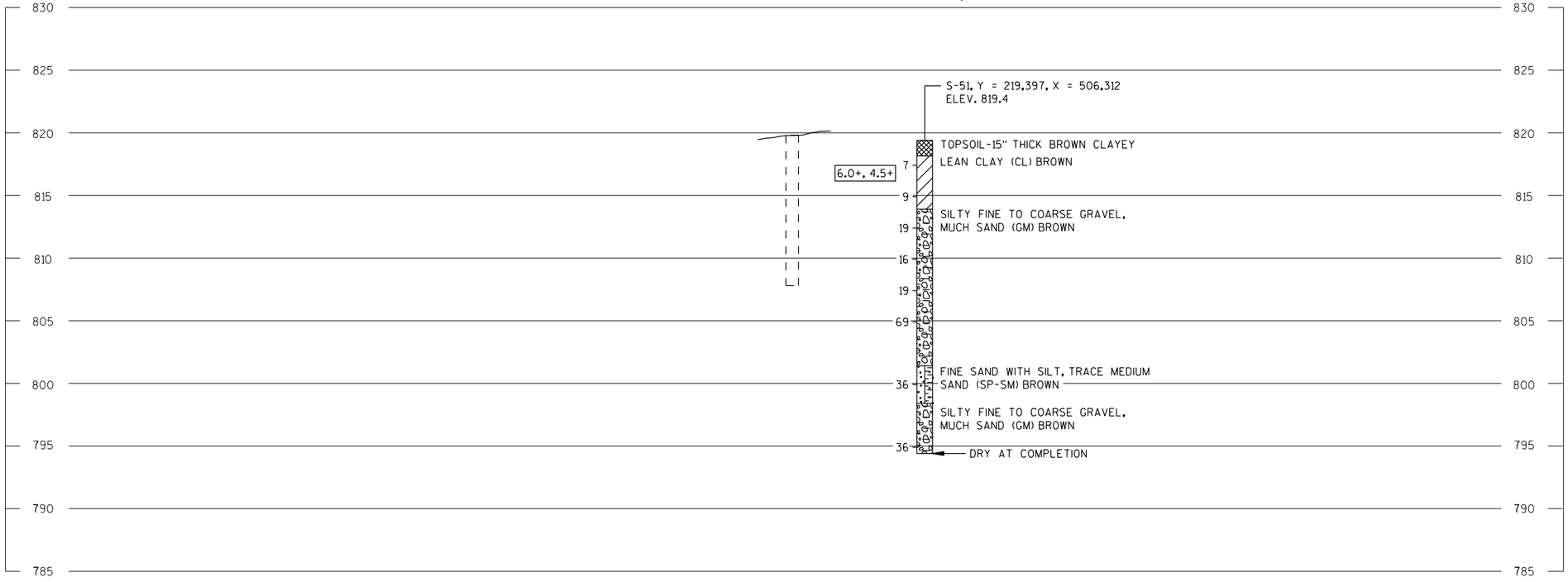
PROJECT NUMBER: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ROADSIDE DMS STRUCTURE DETAILS	SHEET 159	E

BORINGS AND REPORT BY:
SOILS & ENGINEERING SERVICES, INC.
1102 STEWART ST.
MADISON, WI 53713-4648

BORINGS WERE PERFORMED OCTOBER 3, 2012



DMS-53-0042-S
I-39/90 WB AT HART ROAD



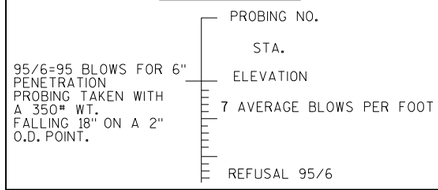
ABBREVIATIONS

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

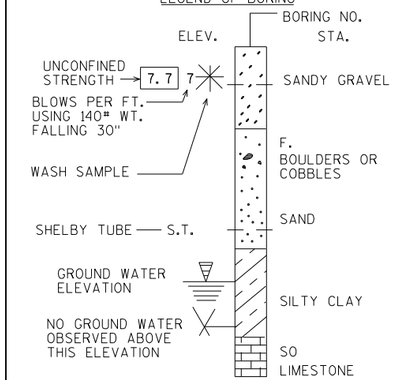
MATERIAL SYMBOLS

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

LEGEND OF PROBING



LEGEND OF BORING



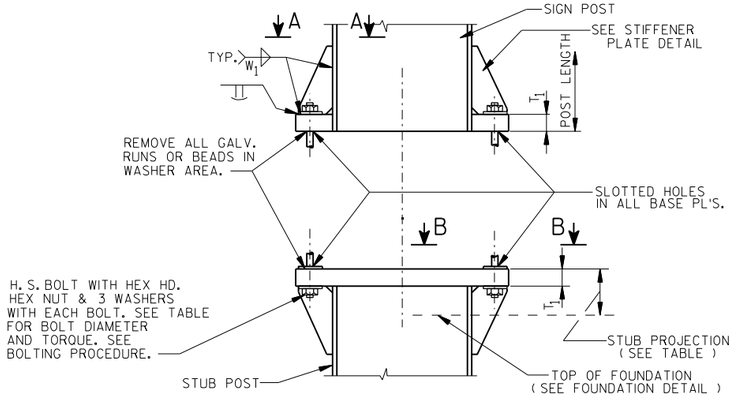
UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

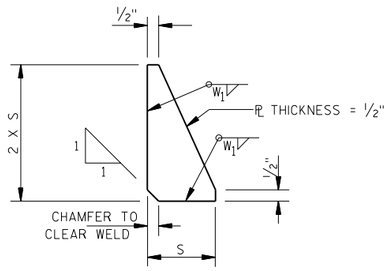
TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE 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.

PROJECT NUMBER: 1003-10-70	HWY: I-39/90	COUNTY: ROCK	ROADSIDE DMS STRUCTURE DETAILS	SHEET 160	E

FILE NAME: I:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\roadside dms\DMS-53-0042-S_roadside_details.dgn
PEN TABLE: I:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\roadside dms\MS_Printing\Pen_Tables\ET_WisDOT.tbl
PLOT DATE: 1/31/2013
PLOT TIME: 3:01:04 PM
PLOT SCALE: 1:2
BATCH PRINT SHEET 11 OF 11
WISDOT/CADDS SHEET 42

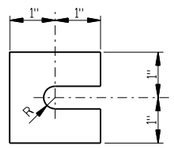


SIGN POST AND STUB POST ELEVATION



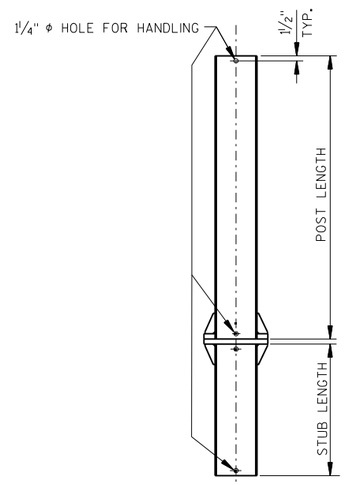
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

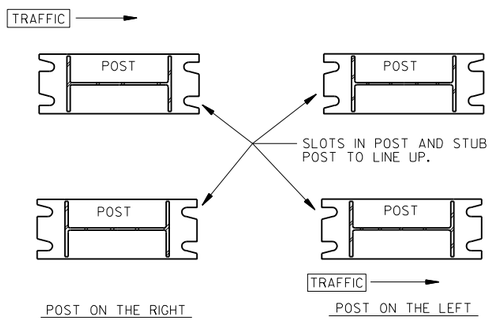


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

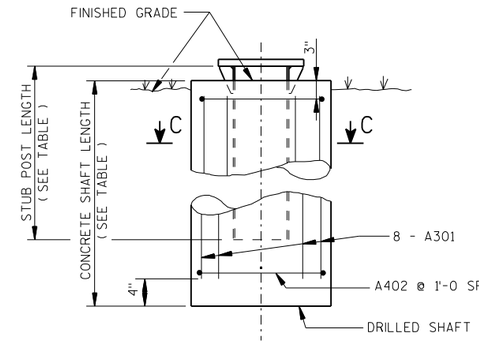
SHIM DETAIL



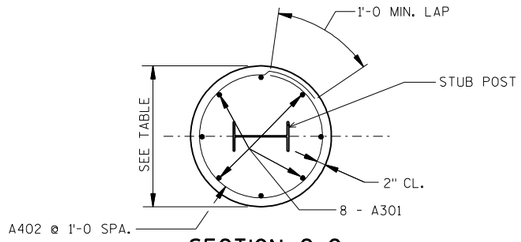
POST DETAIL



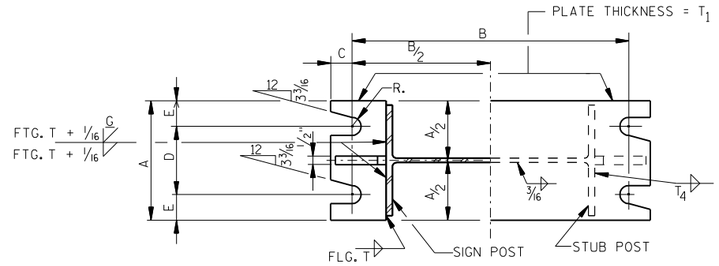
POST SLOT ORIENTATION



FOUNDATION DETAIL

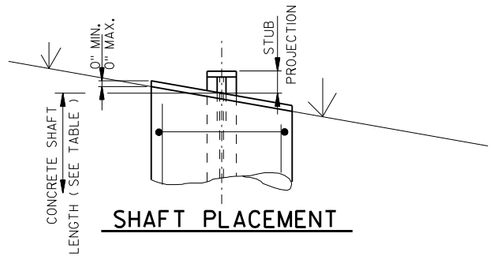


SECTION C-C

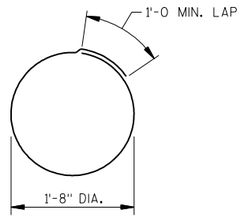


SECTION A-A

SECTION B-B



SHAFT PLACEMENT



A402

NOTES

THESE FOUNDATION DETAILS ARE TO BE USED WITH THE FOLLOWING ROADSIDE DMS STRUCTURES:
- DMS-13-0039-N, I-39/90 WB AT CHURCH STREET
- DMS-13-0040-N, I-39/90 EB AT LAKE DRIVE ROAD
- DMS-13-0041-N, I-39/90 WB AT LAKE DRIVE ROAD
- DMS-53-0038-S, I-43 SB AT CARVERS ROCK ROAD
- DMS-53-0042-S, I-39/90 WB AT HART ROAD

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

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.

BASE CONNECTION DATA TABLE											FOUNDATION DATA			
BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH
1" Φ @ 90#-FT.	7"	1'-4 1/4	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	17/32"	3"	10'-6"	3"	2'-0 Φ	12'-0"

BILL OF BARS

ALL BARS ARE UNCOATED.

BILL OF BARS INCLUDES STEEL REQUIRED FOR 1 SIGN.

MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	TOTAL WEIGHT = 270 LBS
A301	24	11 - 5			VERTICAL	
A402	39	6 - 3	X		STIRRUPS	

DATE 12MAR13 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	1003-10-70 QUANTITY	1005-10-70 QUANTITY	1007-10-70 QUANTITY
0010	204.0165	REMOVING GUARDRAIL	LF	150.000	100.000		50.000
0020	204.0195	REMOVING CONCRETE BASES	EACH	3.000	3.000		
0030	213.0100	FINISHING ROADWAY (PROJECT) 001. 1003-10-70	EACH	1.000	1.000		
0040	213.0100	FINISHING ROADWAY (PROJECT) 002. 1005-10-70	EACH	1.000		1.000	
0050	213.0100	FINISHING ROADWAY (PROJECT) 003. 1007-10-70	EACH	1.000			1.000
0060	517.1010.S	CONCRETE STAINING (STRUCTURE) 001. S-13-408	SF	455.000			455.000
0070	517.1010.S	CONCRETE STAINING (STRUCTURE) 002. CONCRETE STAINING S-53-73	SF	530.000		530.000	
0080	517.1010.S	CONCRETE STAINING (STRUCTURE) 003. CONCRETE STAINING S-53-74	SF	510.000	510.000		
0090	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	5.000	3.000	1.000	1.000
0100	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	562.500	300.000		262.500
0110	614.0370	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	EACH	3.000	2.000		1.000
0120	614.2300	MGS GUARDRAIL 3	LF	387.500	312.500	75.000	
0130	614.2500	MGS THRIE BEAM TRANSITION	LF	39.400		39.400	
0140	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	1.000	1.000		
0150	614.2620	MGS GUARDRAIL TERMINAL TYPE 2	EACH	2.000	1.000	1.000	
0160	619.1000	MOBILIZATION	EACH	1.000	0.330	0.330	0.340
0170	625.0500	SALVAGED TOPSOIL	SY	21,935.000	828.000	8,191.000	12,916.000
0180	627.0200	MULCHING	SY	21,494.000	633.000	8,085.000	12,776.000
0190	628.1504	SILT FENCE	LF	9,180.000	2,090.000	2,820.000	4,270.000
0200	628.1520	SILT FENCE MAINTENANCE	LF	9,180.000	2,090.000	2,820.000	4,270.000
0210	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	23.000	10.000	5.000	8.000
0220	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	9.000	3.000	3.000	3.000
0230	628.2002	EROSION MAT CLASS I TYPE A	SY	441.000	195.000	106.000	140.000
0240	628.6510	SOIL STABILIZER TYPE B	ACRE	1.120	0.040	0.420	0.660
0250	629.0205	FERTILIZER TYPE A	CWT	13.820	0.510	5.170	8.140
0260	630.0120	SEEDING MIXTURE NO. 20	LB	592.000	22.000	221.000	349.000
0270	633.5200	MARKERS CULVERT END	EACH	42.000	17.000	5.000	20.000
0280	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	250.000		100.000	150.000
0290	634.0620	POSTS WOOD 4X6-INCH X 20-FT	EACH	11.000	11.000		
0300	634.0622	POSTS WOOD 4X6-INCH X 22-FT	EACH	47.000	18.000	17.000	12.000
0310	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	10,190.000	4,160.000		6,030.000
0320	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	128.000	40.000	36.000	52.000
0330	636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	3,350.000	540.000		2,810.000
0340	636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	16,940.000	5,370.000	6,260.000	5,310.000
0350	637.0202	SIGNS REFLECTIVE TYPE II	SF	3,804.500	570.500	1,407.000	1,827.000
0360	641.0600	SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (STRUCTURE) 001. S-13-408	LS	1.000			1.000
0370	641.0600	SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (STRUCTURE) 002. S-53-73	LS	1.000		1.000	
0380	641.0600	SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (STRUCTURE) 003. S-53-74	LS	1.000	1.000		
0390	642.5001	FIELD OFFICE TYPE B	EACH	1.000	0.330	0.330	0.340
0400	643.0100	TRAFFIC CONTROL (PROJECT) 001. 1003-10-70	EACH	1.000	1.000		
0410	643.0100	TRAFFIC CONTROL (PROJECT) 002. 1005-10-70	EACH	1.000		1.000	
0420	643.0100	TRAFFIC CONTROL (PROJECT) 003. 1007-10-70	EACH	1.000			1.000

3

DATE 12MAR13 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	1003-10-70 QUANTITY	1005-10-70 QUANTITY	1007-10-70 QUANTITY
0430	643.0300	TRAFFIC CONTROL DRUMS	DAY	3,439.000	1,029.000	957.000	1,453.000
0440	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	44.000	7.000	7.000	30.000
0450	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	88.000	14.000	14.000	60.000
0460	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	467.000	112.000	112.000	243.000
0470	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	224.000	72.000	59.000	93.000
0480	643.0900	TRAFFIC CONTROL SIGNS	DAY	1,741.000	578.000	450.000	713.000
0490	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	6.000			6.000
0500	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	23,710.000	5,460.000	5,460.000	12,790.000
0510	649.0801	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	LF	2,400.000			2,400.000
0520	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	1,490.000	820.000	180.000	490.000
0530	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	440.000			440.000
0540	652.0325	CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH	LF	740.000	290.000		450.000
0550	652.0605	CONDUIT SPECIAL 2-INCH	LF	900.000			900.000
0560	652.0615	CONDUIT SPECIAL 3-INCH	LF	330.000		330.000	
0570	652.0690	CONDUIT SPECIAL (INCH) 001. 1 1/2-INCH	LF	1,040.000	480.000	560.000	
0580	652.0700.S	INSTALL CONDUIT INTO EXISTING ITEM	EACH	4.000	4.000		
0590	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	36.000	12.000	5.000	19.000
0600	653.0180	PULL BOXES STEEL COMMUNICATIONS (INCH) 001. 24X42-INCH	EACH	1.000			1.000
0610	653.0905	REMOVING PULL BOXES	EACH	1.000	1.000		
0620	654.0105	CONCRETE BASES TYPE 5	EACH	1.000			1.000
0630	655.0615	ELECTRICAL WIRE LIGHTING 10 AWG	LF	1,510.000	485.000	110.000	915.000
0640	655.0625	ELECTRICAL WIRE LIGHTING 6 AWG	LF	4,535.000	2,630.000	445.000	1,460.000
0650	655.0630	ELECTRICAL WIRE LIGHTING 4 AWG	LF	5,970.000	1,820.000	1,360.000	2,790.000
0660	655.0635	ELECTRICAL WIRE LIGHTING 2 AWG	LF	5,950.000	1,410.000	1,800.000	2,740.000
0670	656.0100	ELECTRICAL SERVICE METER SOCKET (LOCATION) 001. CCTV-53-0104-C	LS	1.000		1.000	
0680	656.0100	ELECTRICAL SERVICE METER SOCKET (LOCATION) 002. CCTV-53-0106-C	LS	1.000		1.000	
0690	656.0100	ELECTRICAL SERVICE METER SOCKET (LOCATION) 003. DMS-13-0041-N	LS	1.000			1.000
0700	656.0100	ELECTRICAL SERVICE METER SOCKET (LOCATION) 004. DMS-53-0042-S	LS	1.000	1.000		
0710	656.0100	ELECTRICAL SERVICE METER SOCKET (LOCATION) 005. DMS-53-0045-C	LS	1.000		1.000	
0720	656.0100	ELECTRICAL SERVICE METER SOCKET (LOCATION) 006. WMN-0068-S	LS	1.000	1.000		
0730	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 001. CCTV-53-0045-S	LS	1.000	1.000		
0740	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 002. CCTV-13-0100-N	LS	1.000			1.000
0750	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 003. CCTV-13-0101-N	LS	1.000			1.000
0760	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 004. CCTV-13-0102-N	LS	1.000			1.000
0770	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 005. CCTV-13-0103-N	LS	1.000			1.000
0780	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 006. CCTV-53-0107-C	LS	1.000		1.000	
0790	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 007. CCTV-53-0048-S	LS	1.000	1.000		

3

DATE 12MAR13 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	1003-10-70 QUANTITY	1005-10-70 QUANTITY	1007-10-70 QUANTITY
0800	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 008. DMS-53-0038-S	LS	1.000	1.000		
0810	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 009. DMS-13-0039-N	LS	1.000			1.000
0820	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 010. DMS-13-0040-N	LS	1.000			1.000
0830	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 011. DMS-13-0043-N	LS	1.000			1.000
0840	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 012. DMS-53-0047-S	LS	1.000	1.000		
0850	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 013. DMS-13-0004-N	LS	1.000			1.000
0860	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 014. WMN-0069-S	LS	1.000	1.000		
0870	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 015. WMN-0072-S	LS	1.000	1.000		
0880	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 001. CCTV-13-0100-N	LS	1.000			1.000
0890	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 002. DMS-13-0039-N	LS	1.000			1.000
0900	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 003. CCTV-13-0101-N	LS	1.000			1.000
0910	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 004. CCTV-13-0102-N	LS	1.000			1.000
0920	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 005. CCTV-13-0103-N	LS	1.000			1.000
0930	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 006. DMS-13-0040-N	LS	1.000			1.000
0940	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 007. DMS-13-0041-N	LS	1.000			1.000
0950	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 008. CCTV-53-0104-C	LS	1.000		1.000	
0960	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 009. CCTV-53-0105-C	LS	1.000		1.000	
0970	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 010. CCTV-53-0106-C	LS	1.000		1.000	
0980	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 011. CCTV-53-0107-C	LS	1.000		1.000	
0990	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 012. DMS-53-0047-S	LS	1.000	1.000		
1000	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 013. CCTV-53-0045-S	LS	1.000	1.000		
1010	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 014. WMN-0069-S	LS	1.000	1.000		
1020	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 015. WMN-0070-S	LS	1.000	1.000		
1030	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 016. DMS-53-0042-S	LS	1.000	1.000		
1040	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 017. WMN-0072-S	LS	1.000	1.000		
1050	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 018. DMS-13-0004-N	LS	1.000			1.000
1060	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 019. CCTV-53-0047-S	LS	1.000	1.000		
1070	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 020. CCTV-53-0048-S	LS	1.000	1.000		
1080	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 021. CCTV-53-0108-C	LS	1.000		1.000	

DATE 12MAR13 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	1003-10-70 QUANTITY	1005-10-70 QUANTITY	1007-10-70 QUANTITY
1090	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 022. DMS-53-0038-S	LS	1.000	1.000		
1100	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 023. CCTV-53-0046-S	LS	1.000	1.000		
1110	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 024. WMN-0068-S	LS	1.000	1.000		
1120	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 025. DMS-13-0043-N	LS	1.000			1.000
1130	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 026. CCTV-53-0104-C POLE MOUNTED	LS	1.000		1.000	
1140	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 027. CCTV-53-0106-C POLE MOUNTED	LS	1.000		1.000	
1150	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 028. DMS-13-0041-N POLE MOUNTED	LS	1.000			1.000
1160	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 029. DMS-53-0042-S POLE MOUNTED	LS	1.000	1.000		
1170	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 030. DMS-53-0045-C	LS	1.000		1.000	
1180	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 031. WMN-0068-S POLE MOUNTED	LS	1.000	1.000		
1190	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	1.000			1.000
1200	657.0322	POLES TYPE 5-ALUMINUM	EACH	1.000			1.000
1210	659.0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	122.000	42.000	30.000	50.000
1220	670.0100	FIELD SYSTEM INTEGRATOR 001. PROJECT 1003-10-70	LS	1.000	1.000		
1230	670.0100	FIELD SYSTEM INTEGRATOR 002. PROJECT 1005-10-70	LS	1.000		1.000	
1240	670.0100	FIELD SYSTEM INTEGRATOR 003. PROJECT 1007-10-70	LS	1.000			1.000
1250	670.0200	ITS DOCUMENTATION 001. PROJECT 1003-10-70	LS	1.000	1.000		
1260	670.0200	ITS DOCUMENTATION 002. PROJECT 1005-10-70	LS	1.000		1.000	
1270	670.0200	ITS DOCUMENTATION 003. PROJECT 1007-10-70	LS	1.000			1.000
1280	671.0300	FIBER OPTIC CABLE MARKER	EACH	5.000	5.000		
1290	672.0100	BASE ITS CONTROLLER CABINET	EACH	3.000	1.000		2.000
1300	672.0250	BASE CAMERA POLE 50-FT	EACH	2.000	2.000		
1310	672.0280	BASE CAMERA POLE 80-FT	EACH	1.000	1.000		
1320	673.0105	COMMUNICATION VAULT TYPE 1	EACH	5.000	5.000		
1330	673.0200.S	INSTALL ITS FIELD CABINET	EACH	3.000	1.000		2.000
1340	673.0225.S	INSTALL POLE MOUNTED CABINET	EACH	25.000	12.000	6.000	7.000
1350	674.0200	CABLE MICROWAVE DETECTOR	LF	605.000	165.000		440.000
1360	674.0300	REMOVE CABLE	LF	955.000	955.000		
1370	675.0300	INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY	EACH	11.000	6.000	1.000	4.000
1380	675.0400.S	INSTALL ETHERNET SWITCH	EACH	31.000	14.000	7.000	10.000
1390	677.0100	INSTALL CAMERA POLE	EACH	3.000	3.000		
1400	677.0200	INSTALL CAMERA ASSEMBLY	EACH	13.000	4.000	5.000	4.000
1410	677.0300.S	INSTALL VIDEO ENCODER	EACH	13.000	4.000	5.000	4.000

DATE 12MAR13 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	1003-10-70 QUANTITY	1005-10-70 QUANTITY	1007-10-70 QUANTITY
1420	677.9050.S	SALVAGE 50-FOOT CAMERA POLE WITH LOWERING SYSTEM	EACH	2.000	2.000		
1430	678.0006	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT	LF	935.000	935.000		
1440	678.0100.S	INSTALL OVERHEAD FREEWAY DMS FULL MATRIX	EACH	6.000	2.000	2.000	2.000
1450	678.0200	FIBER OPTIC SPLICE ENCLOSURE	EACH	1.000	1.000		
1460	678.0300	FIBER OPTIC SPLICE	EACH	6.000	6.000		
1470	678.0400	FIBER OPTIC TERMINATION	EACH	6.000	6.000		
1480	678.0500	COMMUNICATION SYSTEM TESTING 001. PROJECT 1003-10-70	LS	1.000	1.000		
1490	678.0500	COMMUNICATION SYSTEM TESTING 002. PROJECT 1005-10-70	LS	1.000		1.000	
1500	678.0500	COMMUNICATION SYSTEM TESTING 003. PROJECT 1007-10-70	LS	1.000			1.000
1510	SPV.0005	SPECIAL 001. TREE CLEARING	ACRE	9.460	0.500	3.160	5.800
1520	SPV.0060	SPECIAL 400. SALVAGE CANTILEVER DYNAMIC MESSAGE SIGN	EACH	1.000			1.000
1530	SPV.0060	SPECIAL 401. SALVAGE MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY	EACH	3.000	1.000		2.000
1540	SPV.0060	SPECIAL 402. SALVAGE IP RADIO	EACH	6.000	4.000	2.000	
1550	SPV.0060	SPECIAL 403. REMOVE ELECTRICAL SERVICE METER BREAKER PEDESTAL	EACH	1.000	1.000		
1560	SPV.0060	SPECIAL 404. SALVAGE CAMERA ASSEMBLY	EACH	2.000	2.000		
1570	SPV.0060	SPECIAL 405. SALVAGE VIDEO ENCODER	EACH	1.000	1.000		
1580	SPV.0060	SPECIAL 406. SALVAGE POLE MOUNTED CABINET	EACH	1.000	1.000		
1590	SPV.0060	SPECIAL 407. SALVAGE ETHERNET SWITCH	EACH	1.000	1.000		
1600	SPV.0060	SPECIAL 408. SALVAGE TERMINATION PANEL	EACH	1.000	1.000		
1610	SPV.0060	SPECIAL 409. REMOVE COMMUNICATION VAULT	EACH	1.000	1.000		
1620	SPV.0060	SPECIAL 410. SALVAGE TYPE 5 POLE	EACH	1.000	1.000		
1630	SPV.0060	SPECIAL 411. INSTALL CANTILEVER DYNAMIC MESSAGE SIGN	EACH	1.000			1.000
1640	SPV.0060	SPECIAL 412. INSTALL TERMINATION PANEL	EACH	1.000	1.000		
1650	SPV.0060	SPECIAL 413. INSTALL GROUND MOUNT DYNAMIC MESSAGE SIGN	EACH	5.000	2.000		3.000
1660	SPV.0060	SPECIAL 414. INSTALL HARDWIRED BLUETOOTH SENSOR	EACH	6.000	3.000	2.000	1.000
1670	SPV.0060	SPECIAL 415. INSTALL SOLAR-POWERED BLUETOOTH SENSOR	EACH	22.000	6.000	5.000	11.000
1680	SPV.0060	SPECIAL 416. INSTALL SOLAR POWER SYSTEM - MICROWAVE DETECTOR	EACH	3.000	2.000	1.000	
1690	SPV.0060	SPECIAL 417. INSTALL CELLULAR MODEM	EACH	15.000	5.000	3.000	7.000
1700	SPV.0060	SPECIAL 418. INSTALL IP RADIO	EACH	5.000	1.000		4.000
1710	SPV.0060	SPECIAL 419. WIRELESS CLIENT RADIO ASSEMBLY	EACH	5.000	3.000	2.000	
1720	SPV.0060	SPECIAL 420. WIRELESS MESH RADIO ASSEMBLY	EACH	12.000	8.000	4.000	
1730	SPV.0060	SPECIAL 421. WIRELESS MESH RADIO ASSEMBLY, STATE PATROL TOWER	EACH	1.000		1.000	
1740	SPV.0060	SPECIAL 422. 30-FOOT WOOD POLE	EACH	31.000	9.000	9.000	13.000
1750	SPV.0060	SPECIAL 423. 50-FOOT WOOD POLE	EACH	5.000	3.000	2.000	
1760	SPV.0060	SPECIAL 424. 65-FOOT WOOD POLE	EACH	14.000	4.000	6.000	4.000
1770	SPV.0060	SPECIAL 425. ANTENNA RISER	EACH	6.000	3.000		3.000
1780	SPV.0060	SPECIAL 426. INCIDENT MANAGEMENT TRAILER	EACH	4.000	1.000	1.000	2.000
1790	SPV.0060	SPECIAL 427. SALVAGE LIGHTING CABINET IH 43 AND HART RD	EACH	1.000	1.000		

DATE 12MAR13 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	1003-10-70 QUANTITY	1005-10-70 QUANTITY	1007-10-70 QUANTITY
1800	SPV.0060	SPECIAL 428. LIGHTING CABINET IH 43 AND HART RD	EACH	1.000	1.000		
1810	SPV.0060	SPECIAL 950. SALVAGE CANTILEVER SIGN BRIDGE S-13-190	EACH	1.000			1.000
1820	SPV.0060	SPECIAL 951. REMOVE CONCRETE SIGN SUPPORT	EACH	1.000			1.000
1830	SPV.0090	SPECIAL 401. CONDUIT HDPE 1-DUCT 2-INCH	LF	775.000	775.000		
1840	SPV.0090	SPECIAL 402. OVERHEAD SERVICE CONDUCTOR ASSEMBLY 3-WIRE	LF	555.000	200.000	355.000	
1850	SPV.0090	SPECIAL 403. OVERHEAD SERVICE CONDUCTOR ASSEMBLY 4-WIRE	LF	205.000	100.000		105.000
1860	SPV.0105	SPECIAL 401. SURVEY PROJECT 1003-10-70	LS	1.000	1.000		
1870	SPV.0105	SPECIAL 402. SURVEY PROJECT 1005-10-70	LS	1.000		1.000	
1880	SPV.0105	SPECIAL 403. SURVEY PROJECT 1007-10-70	LS	1.000			1.000
1890	SPV.0105	SPECIAL 404. LOCATE UTILITIES SAFETY AND WEIGHT ENFORCEMENT FACILITY	LS	1.000	1.000		

BEAM GUARD ITEMS

SEGMENT	HIGHWAY	COUNTY	TYPE	LOCATION	204.0165 REMOVING GUARDRAIL (LF)	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING (EACH)	614.0305 STEEL PLATE BEAM GUARD CLASS A (LF)	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL (EACH)	614.2300 MGS GUARDRAIL 3 (LF)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 (EACH)
CATEGORY 1000												
PROJECT 1003-10-70												
SOUTH	I-39/90	ROCK	DMS-BUTTERFLY	I-39/90 AT 0.2 MILES SOUTH OF WOODMAN RD - NB/SB	-	1	-	-	312.5	-	1	1
SOUTH	I-39/90	ROCK	DMS-ROADSIDE	I-39/90 AT HART RD - NB	50	1	250	1	-	-	-	-
SOUTH	I-43	ROCK	DMS-ROADSIDE	I-43 AT CARVERS ROCK RD - SB	50	1	50	1	-	-	-	-
				1003-10-70 SUBTOTAL	100	3	300	2	312.5	0	1	1
PROJECT 1005-10-70												
CENTRAL	I-39/90	ROCK	DMS-BUTTERFLY	I-39/90 AT 0.2 MILES SOUTH OF CTH M - SB	-	1	-	-	75	39.4	-	1
				1005-10-70 SUBTOTAL	0	1	0	0	75	39.4	0	1
PROJECT 1007-10-70												
NORTH	I-39/90	DANE	DMS-ROADSIDE	I-39/90 AT LAKE DRIVE RD - NB	50	1	262.5	1	-	-	-	-
				1007-10-70 SUBTOTAL	50	1	262.5	1	0	0	0	0
				PROJECT TOTAL	150	5	562.5	3	387.5	39.4	1	2

DMS STRUCTURE ITEMS

	STRUCTURE	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS (LB)	636.0100 SIGN SUPPORT CONCRETE MASONRY (CY)	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT (LB)
PROJECT 1003-10-70				
CATEGORY 6008	DMS-53-0042-S	2060	5	270
CATEGORY 6009	DMS-53-0038-S	2100	5	270
	1003-10-70 SUBTOTAL	4160	10	540
PROJECT 1007-10-70				
CATEGORY 6003	DMS-13-0039-N	1790	5	270
CATEGORY 6004	DMS-13-0040-N	2010	5	270
CATEGORY 6005	DMS-13-0041-N	2230	5	270
	1007-10-70 SUBTOTAL	6030	15	810
	PROJECT TOTAL	**10190**	**25**	**1350**

BARRIER SYSTEM GRADING SHAPING FINISHING, ITEM 614.0010

SEGMENT	LOCATION	SHEET	EXCAVATION COMMON* (CY)	BORROW* (CY)	SALVAGED TOPSOIL* (SY)	FERTILIZER TYPE A* (CWT)	SEEDING MIXTURE NO. 20* (LB)	MULCHING* (SY)
NORTH	I-39/90 AT LAKE DRIVE RD - NB	14	0	50	310	0.20	8.4	310
CENTRAL	I-39/90 SOUTH OF CTH M - NB/SB	17	0	5	35	0.02	0.9	35
SOUTH	I-39/90 AT 0.2 MI. SOUTH OF WOODMAN RD - NB/SB	29	0	30	230	0.14	6.2	230
SOUTH	I-43 AT CARVERS ROCK RD - SB	46	0	90	310	0.20	8.4	310
SOUTH	I-39/90 AT HART RD - NB	34	0	90	330	0.21	8.9	330
	TOTAL		0	265	1215	1	33	1215

* ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY.

FINISHING AND EROSION CONTROL ITEMS

SEG	HIGHWAY	COUNTY	TYPE	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)	628.2002 EROSION MAT CLASS I TYPE A (SY)	628.6510 SOIL STABILIZER TYPE B (ACRE)	629.0205 FERTILIZER TYPE A (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)
CATEGORY 1000														
PROJECT 1003-10-70														
S	I-39/90	ROCK	DMS-BUTTERFLY	I-39/90 AT 0.2 MI. SO. OF WOODMAN RD - NB/SB	150	120	90	90	1	-	30	-	0.09	4.05
S			BEAM GUARD END	I-39/90 AT 0.2 MI. SO. OF WOODMAN RD - NB/SB	-	-	100	100	-	-	-	-	-	-
S	I-39/90	ROCK	WIRELESS MESH NODI	I-39/90 AT NB BELOIT SWEF	30	30	90	90	1	-	-	-	0.02	0.81
S	I-39/90	ROCK	WIRELESS MESH NODI	I-39/90 AT CREEK RD	45	45	130	130	1	-	-	-	0.03	1.22
S	I-43	ROCK	DMS-ROADSIDE	I-43 AT CARVERS ROCK RD - SB	50	-	150	150	1	-	50	-	0.03	1.35
S			BEAM GUARD END	I-43 AT CARVERS ROCK RD - SB	-	-	60	60	-	-	-	-	-	-
S	I-43	ROCK	CCTV	I-43 AT STH 140	4	4	20	20	1	-	-	-	0.00	0.11
S	I-39/90	ROCK	WIRELESS MESH NODI	I-39/90 AT CTH S	80	80	250	250	1	-	-	-	0.05	2.16
S	I-39/90	ROCK	DMS-ROADSIDE	I-39/90 AT HART RD - NB	55	-	160	160	1	-	55	-	0.03	1.49
S			BEAM GUARD END	I-39/90 AT HART RD - NB	-	-	60	60	-	-	-	-	-	-
S	I-43	ROCK	CCTV	I-43 AT HART RD	4	4	20	20	1	-	-	-	0.00	0.11
S	I-39/90	ROCK	WIRELESS MESH NODI	I-39/90 AT CRANSTON RD	30	-	80	80	1	-	30	-	0.02	0.81
S	I-39/90	ROCK	WIRELESS MESH NODI	I-39/90 AT STATE LINE RD	320	290	800	800	1	-	30	-	0.20	8.64
S				UNDISTRIBUTED	60	60	80	80	-	3	-	0.04	0.04	1.62
				1003-10-70 SUBTOTAL	828	633	2090	2090	10	3	195	0.04	0.51	22
PROJECT 1005-10-70														
C	I-39/90	ROCK	CCTV	I-39/90 AT STH 59	30	-	90	90	1	-	30	-	0.02	0.81
C			TREE CLEARING	I-39/90 AT STH 59	4000	4000	700	700	-	-	-	-	2.52	108.00
C	I-39/90	ROCK	DMS-BUTTERFLY	I-39/90 AT 0.2 MI. SO. OF CTH M - NB/SB	40	-	120	120	1	-	40	-	0.03	1.08
C	I-39/90	ROCK	CCTV	I-39/90 AT M-H TOWNLINE RD	45	25	140	140	1	-	20	-	0.03	1.22
			TREE CLEARING	I-39/90 AT M-H TOWNLINE RD	4000	4000	1600	1600	-	-	-	-	2.52	108.00
C	USH 51	ROCK	CCTV	USH 51 AT USH 14	6	-	60	60	1	-	6	-	0.00	0.16
C	I-39/90	ROCK	CCTV	I-39/90 AT MILWAUKEE ST	10	-	30	30	1	-	10	-	0.01	0.27
C				UNDISTRIBUTED	60	60	80	80	-	3	-	0.42	0.04	1.62
				1005-10-70 SUBTOTAL	8191	8085	2820	2820	5	3	106	0.42	5.17	221
PROJECT 1007-10-70														
N	STH 30	DANE	DMS-Cantilever	STH 30 AT FAIR OAKS AV - EB	50	-	210	210	1	-	50	-	0.03	1.35
N	I-39/90	DANE	DMS-BUTTERFLY	I-39/90 S. OF CTH BB - NB/SB	11	-	80	80	1	-	11	-	0.01	0.30
N	I-39/90	DANE	CCTV	I-39/90 AT CTH N	55	46	160	160	1	-	9	-	0.03	1.49
N			TREE CLEARING	I-39/90 AT CTH N	5000	5000	1200	1200	-	-	-	-	3.15	135.00
N	I-39/90	DANE	DMS-ROADSIDE	I-39/90 AT CHURCH ST - NB	10	10	80	80	1	-	-	-	0.01	0.27
N	I-39/90	DANE	CCTV	I-39/90 AT CTH B	30	30	90	90	1	-	-	-	0.02	0.81
N	I-39/90	DANE	CCTV	I-39/90 AT USH 51 N JCT	20	-	60	60	1	-	20	-	0.01	0.54
N			TREE CLEARING	I-39/90 AT USH 51 N JCT	1400	1400	250	250	-	-	-	-	0.88	37.80
N	I-39/90	DANE	CCTV	I-39/90 AT USH 51 S JCT/STH 73	170	170	450	450	1	-	-	-	0.11	4.59
N			TREE CLEARING	I-39/90 AT USH 51 S JCT/STH 73	6000	6000	1200	1200	-	-	-	-	3.78	162.00
N	I-39/90	DANE	DMS-ROADSIDE	I-39/90 AT LAKE DRIVE RD - SB	20	20	60	60	1	-	-	-	0.01	0.54
N	I-39/90	DANE	DMS-ROADSIDE	I-39/90 AT LAKE DRIVE RD - NB	40	40	130	130	-	-	-	-	0.03	1.08
N			BEAM GUARD END	I-39/90 AT LAKE DRIVE RD - NB	-	-	60	60	-	-	-	-	-	-
N	STH 30	DANE	DMS-Cantilever	STH 30 AT THOMPSON AV - WB	50	-	160	160	-	-	50	-	0.03	1.35
N				UNDISTRIBUTED	60	60	80	80	-	3	-	0.66	0.04	1.62
				1007-10-70 SUBTOTAL	12916	12776	4270	4270	8	3	140	0.66	8.14	349
				PROJECT TOTAL	**21935**	**21494**	**9180**	**9180**	**23**	**9**	**441**	**1.12**	**13.82**	**592**

TRAFFIC CONTROL ITEMS

SEG	HIGHWAY	COUNTY	TYPE	LOCATION	643.0300 TRAFFIC CONTROL DRUMS (DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C (DAY)	643.0800 TRAFFIC CONTROL ARROW BOARDS (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.1050 TRAFFIC CONTROL SIGNS PCMS (DAY)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LF)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW) (LF)	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE) (LF)
CATEGORY 1000														
PROJECT 1003-10-70														
S	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT AVALON RD	36	0	0	0	3	24	0	0	0	0
S	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT NB BELOIT SWEF	36	0	0	0	0	24	0	0	0	0
S	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT CREEK RD	36	0	0	0	3	24	0	0	0	0
S	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 at CTH S	36	0	0	0	3	24	0	0	0	0
S	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT HART RD	12	0	0	0	1	8	0	0	0	0
S	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT I-43/STH 81	36	0	0	0	3	24	0	0	0	0
S	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT CRANSTON RD	36	0	0	0	3	24	0	0	0	0
S	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT STATE LINE RD	36	0	0	0	3	24	0	0	0	0
S	I-39/90	ROCK	CCTV	I-39/90 AT NB BELOIT SWEF	36	0	0	0	3	24	0	0	0	0
S	I-43	ROCK	CCTV	I-43 AT HART RD	36	0	0	0	3	24	0	0	0	0
S	I-43	ROCK	CCTV	I-43 AT STH 140	36	0	0	0	3	24	0	0	0	0
S	STH 140	ROCK	DETECTOR-MICROWAVE	STH 140 AT 0.8 MILES SOUTH OF USH 14 - NB/SB	26	0	0	0	0	10	0	0	0	0
S	Gateway Blvd	ROCK	DETECTOR-MICROWAVE	GATEWAY BLVD AT 0.7 MILES SOUTH OF MILLINGTON RD - NB/SB	26	0	0	0	0	10	0	0	0	0
S	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT CTH O - NB	24	0	0	0	2	16	0	0	0	0
S	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 at 0.5 MILES NORTH OF AVALON RD - SB	24	0	0	0	2	16	0	0	0	0
S	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 at 0.2 MILES SOUTH OF WOODMAN RD - NB/SB	24	0	0	0	2	16	0	0	0	0
S	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT L-T TOWNLINE RD - SB	24	0	0	0	2	16	0	0	0	0
S	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT HART RD - SB	24	0	0	0	2	16	0	0	0	0
S	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT HART RD - NB	12	0	0	0	1	8	0	0	0	0
S	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT CRANSTON RD - NB	24	0	0	0	2	16	0	0	0	0
S	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT STATE LINE RD - SB	24	0	0	0	2	16	0	0	0	0
S	I-39/90	WINNEBAGO	DETECTOR-BLUETOOTH	I-39/90 AT PRAIRIE HILL RD - NB/SB	24	0	0	0	2	16	0	0	0	0
S	I-43	ROCK	DMS-ROADSIDE	I-43 AT CARVERS ROCK RD - SB	36	0	0	0	3	24	0	0	0	0
S	I-39/90	ROCK	DMS-ROADSIDE	I-39/90 AT HART RD - NB	36	0	0	0	3	24	0	0	0	0
S	I-39/90	ROCK	DMS-BUTTERFLY	I-39/90 AT 0.2 MILES SOUTH OF WOODMAN RD - NB/SB	329	7	14	112	21	126	0	0	5460	0
												0	5460	
				1003-10-70 SUBTOTAL	1029	7	14	112	72	578	0	5460		0
PROJECT 1005-10-70														
C	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT STH 26	36	0	0	0	3	24	0	0	0	0
C	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT USH 14	36	0	0	0	3	24	0	0	0	0
C	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT MILWAUKEE ST	36	0	0	0	3	24	0	0	0	0
C	I-39/90	ROCK	WIRELESS MESH NODE	I-39/90 AT RACINE ST	36	0	0	0	3	24	0	0	0	0
C	I-39/90	ROCK	CCTV	I-39/90 AT STH 59	36	0	0	0	3	24	0	0	0	0
C	I-39/90	ROCK	CCTV	I-39/90 AT CTH M	36	0	0	0	3	24	0	0	0	0
C	I-39/90	ROCK	CCTV	I-39/90 AT M-H TOWNLINE RD	36	0	0	0	3	24	0	0	0	0
C	I-39/90	ROCK	CCTV	I-39/90 AT MILWAUKEE ST	36	0	0	0	3	24	0	0	0	0
C	USH 51	ROCK	CCTV	USH 51 AT USH 14	26	0	0	0	0	10	0	0	0	0
C	USH 51	ROCK	DETECTOR-MICROWAVE	USH 51 AT 0.6 miles NORTH OF M-H TOWNLINE RD - NB/SB	26	0	0	0	0	10	0	0	0	0
C	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT KNUTSON RD - NB	24	0	0	0	2	16	0	0	0	0
C	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT 0.2 MILES SOUTH OF CTH M - NB/SB	24	0	0	0	2	16	0	0	0	0
C	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT RUSSELL RD - SB	24	0	0	0	2	16	0	0	0	0
C	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 BETWEEN USH 14 & STH 26 - SB	24	0	0	0	2	16	0	0	0	0
C	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 BETWEEN USH 14 & STH 26 - NB	24	0	0	0	2	16	0	0	0	0
C	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT MILWAUKEE ST - SB	24	0	0	0	2	16	0	0	0	0
C	I-39/90	ROCK	DETECTOR-BLUETOOTH	I-39/90 AT MILWAUKEE ST - NB	24	0	0	0	2	16	0	0	0	0
C	I-39/90	ROCK	DMS-BUTTERFLY	I-39/90 AT 0.2 MILES SOUTH OF CTH M - NB/SB	329	7	14	112	21	126	0	0	5460	0
C	USH 14	ROCK	PCMS	USH 14 AT 0.3 MILES EAST OF USH 51 - EB	60	0	0	0	0	0	0	0	0	0
C	USH 14	ROCK	PCMS	USH 14 AT 0.1 MILES NORTH OF RUGER AVE - WB	60	0	0	0	0	0	0	0	0	0
												0	5460	
				1005-10-70 SUBTOTAL	957	7	14	112	59	450	0	5460		0

TRAFFIC CONTROL ITEMS

SEG	HIGHWAY	COUNTY	TYPE	LOCATION	643.0300 TRAFFIC CONTROL DRUMS (DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C (DAY)	643.0800 TRAFFIC CONTROL ARROW BOARDS (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.1050 TRAFFIC CONTROL SIGNS PCMS (DAY)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LF)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW) (LF)	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE) (LF)
CATEGORY 1000														
PROJECT 1007-10-70														
N	I-39/90	DANE	CCTV	I-39/90 AT CTH N	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	CCTV	I-39/90 AT CTH B	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	CCTV	I-39/90 AT USH 51 N JCT	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	CCTV	I-39/90 AT USH 51 S JCT/STH 73	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	RADIO	I-39/90 AT 0.3 MILES SOUTH OF COTTAGE GROVE RD (CTH BB) - NB/	24	0	0	0	2	16	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 AT STORCK RD - NB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 AT WILLIAMS DR - SB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 CHURCH ST - NB	24	0	0	0	2	16	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 AT CTH W - SB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 AT CTH B - NB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 AT CTH A - SB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 AT MAPLE GROVE RD - NB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 AT STH 106 - SB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 AT LAKE DRIVE RD - SB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DETECTOR-BLUETOOTH	I-39/90 AT LAKE DRIVE RD - NB	36	0	0	0	3	24	0	0	0	0
N	USH 12/18	DANE	DETECTOR-BLUETOOTH	US 12/18 AT AGRICULTURE DR - EB/WB	24	0	0	0	2	16	0	0	0	0
N	I-39/90	DANE	DMS-ROADSIDE	I-39/90 AT CHURCH ST - NB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DMS-ROADSIDE	I-39/90 AT LAKE DRIVE RD - SB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DMS-ROADSIDE	I-39/90 AT LAKE DRIVE RD - NB	36	0	0	0	3	24	0	0	0	0
N	I-39/90	DANE	DMS-BUTTERFLY	I-39/90 S. OF CTH BB - NB/SB, STAGE 1	329	7	14	112	21	126	0	0	5460	0
				I-39/90 S. OF CTH BB - NB/SB, STAGE 2	70	2	4	32	4	20	0	0	1560	0
N	STH 30	DANE	DMS-CANTILEVER	STH 30 AT THOMPSON AVE - WB, STAGE 1	83	5	10	23	2	26	1	1110	0	300
				STH 30 AT THOMPSON AVE - WB, STAGE 2	36	0	0	0	3	24	0	0	0	0
N	STH 30	DANE	DMS-CANTILEVER	STH 30 AT FAIR OAKS AVE - EB, STAGE 1	213	9	18	54	6	57	3	2880	0	1800
				STH 30 AT FAIR OAKS AVE - EB, STAGE 2	12	0	0	0	1	8	0	0	0	0
				STH 30 AT FAIR OAKS AVE - EB, STAGE 3	62	7	14	22	2	20	2	720	1060	300
												4710	8080	
				1007-10-70 SUBTOTAL	1453	30	60	243	93	713	6	12790		2400
				PROJECT TOTAL	**3439**	**44**	**88**	**467**	**224**	**1741**	**6**	**23710**		**2400**

TYPE II SIGNING ITEMS

SEG	HIGHWAY	COUNTY	LOCATION	SIGN PLATE	634.0618 POSTS WOOD 4X6-INCH X 18-FT (EACH)	634.0620 POSTS WOOD 4X6-INCH X 20-FT (EACH)	634.0622 POSTS WOOD 4X6-INCH X 22-FT (EACH)	637.0202 SIGNS REFLECTIVE TYPE II (SF)
CATEGORY 1000								
PROJECT 1003-10-70								
S	I-39/90	ROCK	MP 176.0 TO 179.4	D10-5A	-	-	18	378.00
S	I-43	ROCK	I-43 FROM I-39/90 TO CTH X	D10-5	-	11	-	192.50
			1003-10-70 SUBTOTAL		0	11	18	570.50
PROJECT 1005-10-70								
C	I-39/90	ROCK	MP 172.6 TO 175.8	D10-5A	-	-	17	357.00
C	I-39/90	ROCK	MP 162.6 TO 172.4	D10-5A	100	-	-	1050.00
			1005-10-70 SUBTOTAL		100	0	17	1407.00
PROJECT 1007-10-70								
N	I-39/90	DANE	MP 153.6 TO 162.4	D10-5A	90	-	-	945.00
N	I-39/90	DANE	MP 151.2 TO 153.4	D10-5A	-	-	12	252.00
N	I-39/90	DANE	MP 145.2 TO 151.0	D10-5A	60	-	-	630.00
			1007-10-70 SUBTOTAL		150	0	12	1827.00
			PROJECT TOTAL		**250**	**11**	**47**	**3804.5**

OVERALL PROJECT ITEMS

	619.1000 MOBILIZATION (EACH)	642.5001 FIELD OFFICE TYPE B (EACH)	643.0100 TRAFFIC CONTROL (PROJECT) (EACH)	SPV.0060.426 INCIDENT MANAGEMENT TRAILER (EACH)	SPV.0105.401 SURVEY PROJECT 1003-10-70 (LS)	SPV.0105.402 SURVEY PROJECT 1005-10-70 (LS)	SPV.0105.403 SURVEY PROJECT 1007-10-70 (LS)	SPV.0105.404 LOCATE UTILITIES SAFETY AND WEIGHT ENFORCEMENT FACILITY (LS)
PROJECT 1003-10-70								
CATEGORY 1000	0.33	0.33	1	-	1	-	-	1
CATEGORY 1200	-	-	-	1	-	-	-	-
PROJECT 1005-10-70								
CATEGORY 1000	0.33	0.33	1	-	-	1	-	-
CATEGORY 1200	-	-	-	1	-	-	-	-
PROJECT 1007-10-70								
CATEGORY 1000	0.34	0.34	1	-	-	-	1	-
CATEGORY 1200	-	-	-	2	-	-	-	-
PROJECT TOTAL	**1**	**1**	**3**	**4**	**1**	**1**	**1**	**1**

PROJECT NUMBER: 1003-, 1005-, 1007-10-71	HWY: I-39/90	COUNTY: ROCK & DANE	MISCELLANEOUS QUANTITIES	SHEET 171	E

TREE CLEARING

SEG	HIGHWAY	COUNTY	LOCATION	SPV.0005.001 TREE CLEARING (ACRE)
CATEGORY 1000				
PROJECT 1003-10-70				
S	I-39/90	ROCK	UNDISTRIBUTED	0.50
			1003-10-70 SUBTOTAL	0.50
PROJECT 1005-10-70				
C	I-39/90	ROCK	NORTHWARD FROM STH 59	0.96
C	I-39/90	ROCK	SOUTHWARD FROM STH 59	0.28
C	I-39/90	ROCK	WB SIDE AT M-H TOWNLINE RD	0.71
C	I-39/90	ROCK	EB SIDE AT M-H TOWNLINE RD	0.71
C	I-39/90	ROCK	UNDISTRIBUTED	0.50
			1005-10-70 SUBTOTAL	3.16
PROJECT 1007-10-70				
N	I-39/90	DANE	WESTWARD FROM CTH N	1.56
N	I-39/90	DANE	EASTWARD FROM CTH N	0.90
N	I-39/90	DANE	USH 51 N JCT	0.29
N	I-39/90	DANE	NORTHWARD FROM USH 51 S JC	2.02
N	I-39/90	DANE	SOUTHWARD FROM USH 51 S JC	0.53
N	I-39/90	DANE	UNDISTRIBUTED	0.50
			1007-10-70 SUBTOTAL	5.80
			PROJECT TOTAL	**9.46**

ITS POLES AND BASES

LOCATION	MILEPOST	ITEM ID	204.0195 REMOVING CONCRETE BASES	654.0105 CONCRETE BASES TYPE 5 EA	657.0255 TRANSFORMER BASE BREAKAWAY 11 1/2-INCH BOLT CIRCLE EA	657.0322 POLES TYPE 5 ALUMINUM EA	672.0250 BASE CAMERA POLE 50-FT EA	672.0280 BASE CAMERA POLE 80-FT EA	* 677.0100 INSTALL CAMERA POLE EA	677.9050.S SALVAGE 50-FOOT CAMERA POLE WITH LOWERING SYSTEM EA	SPV.0060.410 SALVAGE TYPE 5 POLE EA	SPV.0060.422 30-FOOT WOOD POLE EA	SPV.0060.423 50-FOOT WOOD POLE EA	SPV.0060.424 65-FOOT WOOD POLE EA
CATEGORY 1200														
PROJECT 1003-10-70														
I-39/90 at CTH O	175.95	WDS-0019-S	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at 0.5 mi N of Avalon Rd	177.47	WDS-0020-S	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at NB Beloit SWEF	180.61	multiple	--	--	--	--	--	1	1	--	--	--	--	--
I-39/90 at L-T Townline Rd	181.34	WDS-0022-S	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at Creek Rd	182.52	WMN-S-068	--	--	--	--	--	--	--	--	--	2	--	1
I-39/90 at CTH S	183.16	WMN-S-069	--	--	--	--	--	--	--	--	--	--	--	1
I-39/90 at Hart Rd	184.16	multiple	--	--	--	--	--	--	--	--	--	3	--	1
I-39/90 at Cranston Rd	186.34	multiple	--	--	--	--	--	--	--	--	--	1	1	--
I-39/90 at State Line Rd	187.83	multiple	1	--	--	--	--	--	--	1	--	--	--	1
STH 140 at 0.8 mi S of USH 14	n/a	SDS-53-0085-S	--	--	--	--	--	--	--	--	--	--	1	--
I-43 at STH 140	n/a	multiple	1	--	--	--	1	--	1	1	1	--	--	--
I-43 at Hart Rd	1.94	multiple	1	--	--	--	1	--	1	--	--	--	--	--
Gateway Blvd at 0.7 S of Millington Rd	n/a	SDS-53-0086-S	--	--	--	--	--	--	--	--	--	--	1	--
1003-10-70 SUBTOTAL			3	0	0	0	2	1	3	2	1	9	3	4
PROJECT 1005-10-70														
I-39/90 at STH 59	163.26	CCTV-53-0104-C	--	--	--	--	--	--	--	--	--	2	--	1
I-39/90 at Knutson Rd	164.44	WDS-0012-C	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at 0.2 mi S of CTH M	167.12	CCTV-53-0105-C	--	--	--	--	--	--	--	--	--	1	--	1
I-39/90 at M-H Townline Rd	168.84	CCTV-53-0106-C	--	--	--	--	--	--	--	--	--	--	--	3
I-39/90 at Russell Rd	170.20	WDS-0014-C	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 between STH 26 & USH 14	171.91	multiple	--	--	--	--	--	--	--	--	--	2	--	--
I-39/90 at Milwaukee St	173.69	multiple	--	--	--	--	--	--	--	--	--	2	--	1
USH 51 at 0.6 mi N of J-H Townline Rd	n/a	SDS-53-0084-C	--	--	--	--	--	--	--	--	--	--	1	--
USH 51 at USH 14	n/a	CCTV-53-0108-C	--	--	--	--	--	--	--	--	--	--	1	--
1005-10-70 SUBTOTAL			0	0	0	0	0	0	0	0	0	9	2	6
PROJECT 1007-10-70														
I-39/90 at Storck Rd	143.44	WDS-0002-N	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at Williams Dr	146.85	WDS-0003-N	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at CTH N	147.42	CCTV-13-0100-N	--	--	--	--	--	--	--	--	--	--	--	1
I-39/90 at Church St	149.71	WDS-0004-N	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at CTH W	151.80	WDS-0005-N	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at CTH B	153.07	WDS-0006-N	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at 0.4 mi S of CTH B	153.62	CCTV-13-0101-N	--	--	--	--	--	--	--	--	--	--	--	1
I-39/90 at CTH A	155.55	WDS-0007-N	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at USH 51 N Jct	156.54	CCTV-13-0102-N	--	--	--	--	--	--	--	--	--	--	--	1
I-39/90 at Maple Grove Rd	157.05	WDS-0008-N	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at STH 106	159.58	WDS-0009-N	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at USH 51 S Jct / STH 73	160.30	CCTV-13-0103-N	--	--	--	--	--	--	--	--	--	--	--	1
I-39/90 at Lake Drive Rd	161.89	multiple	--	--	--	--	--	--	--	--	--	4	--	--
STH 30 at Thompson Dr	n/a	multiple	--	1	1	1	--	--	--	--	--	--	--	--
US 12/18 at Agriculture Dr	n/a	WDS-0028-N	--	--	--	--	--	--	--	--	--	1	--	--
1007-10-70 SUBTOTAL			0	1	1	1	0	0	0	0	0	13	0	4
PROJECT TOTAL			**3**	**1**	**1**	**1**	**2**	**1**	**3**	**2**	**1**	**31**	**5**	**14**

NOTE: * PAY ITEM INCLUDES INSTALLATION OF STATE FURNISHED EQUIPMENT

ITS PULL BOXES

LOCATION	MILEPOST	ITEM ID	633.5200 MARKERS CULVERT END EA	653.0140 PULL BOXES STEEL 24 X 42-INCH EA	653.0180 PULL BOXES STEEL COMMUNICATIONS 24 X 42-INCH EA	653.0905 REMOVING PULL BOXES EA	673.0105 COMMUNICATION VAULT TYPE 1 EA	SPV 0060.409 REMOVE COMMUNICATION VAULT EA
CATEGORY 1200								
PROJECT 1003-10-70								
I-39/90 at 0.2 mi S of Woodman Rd	179.66	multiple	2	2	--	--	--	--
I-39/90 at NB Beloit SWEF	180.61	multiple	3	2	--	--	1	--
I-39/90 at CTH S	183.16	WMN-S-069	2	2	--	--	--	--
I-39/90 at Cranston Rd	186.34	WMN-S-072	2	2	--	--	--	--
I-39/90 at State Line Rd	187.83	multiple	3	1	--	--	2	1
I-43 at Carvers Rock Rd	n/a	DMS-53-0038-S	2	2	--	--	--	--
I-43 at STH 140	n/a	multiple	1	--	--	--	1	--
I-43 at Hart Rd	1.94	multiple	2	1	--	1	1	--
1003-10-70 SUBTOTAL			17	12	0	1	5	1
PROJECT 1005-10-70								
I-39/90 at 0.2 mi S of CTH M	167.12	multiple	2	2	--	--	--	--
I-39/90 at Milwaukee St	173.69	multiple	2	2	--	--	--	--
USH 51 at USH 14	n/a	CCTV-53-0108-C	1	1	--	--	--	--
1005-10-70 SUBTOTAL			5	5	0	0	0	0
PROJECT 1007-10-70								
I-39/90 at 0.3 mi S of CTH BB	139.89	multiple	4	4	--	--	--	--
I-39/90 at CTH N	147.42	CCTV-13-0100-N	2	2	--	--	--	--
I-39/90 at Church St	149.71	multiple	2	2	--	--	--	--
I-39/90 at 0.4 mi S of CTH B	153.62	CCTV-13-0101-N	2	2	--	--	--	--
I-39/90 at USH 51 N Jct	156.54	CCTV-13-0102-N	2	2	--	--	--	--
I-39/90 at USH 51 S Jct / STH 73	160.30	CCTV-13-0103-N	3	3	--	--	--	--
I-39/90 at Lake Drive Rd	161.89	multiple	2	2	--	--	--	--
STH 30 at Fair Oaks Ave	n/a	multiple	2	2	--	--	--	--
STH 30 at Thompson Dr	n/a	multiple	1	--	1	--	--	--
1007-10-70 SUBTOTAL			20	19	1	0	0	0
PROJECT TOTAL			**42**	**36**	**1**	**1**	**5**	**1**

ITS CONDUIT (TABLE 1)

LOCATION	MILEPOST	ITEM ID	FROM	TO	LINEAR DISTANCE	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0325 CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF	652.0690.001 CONDUIT SPECIAL 1 1/2-INCH LF	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EA	SPV.0090.401 CONDUIT HDPE 1-DUCT 2-INCH LF
CATEGORY 1200													
PROJECT 1003-10-70													
I-39/90 at 0.2 mi S of Woodman Rd	179.66	multiple	EP-01	CB-01	20	20	--	--	--	--	--	--	--
			CB-01	PB-01	15	30	--	--	--	--	--	--	--
			PB-01	DMS-53-0047-S	120	--	--	--	--	--	240	--	--
			CB-01	PB-02	15	30	--	--	--	--	--	--	--
			PB-02	DMS-53-0048-S	120	--	--	--	--	--	240	--	--
I-39/90 at NB Beloit SWEF	180.61	multiple	EP-P1	PB-P1	15	15	--	--	--	--	--	--	--
			PB-P1	PB-P2	45	45	--	--	--	--	--	--	--
			PB-P2	CCTV-53-0045-S	15	30	--	--	--	--	--	--	--
			CV-P1	CCTV-53-0045-S	15	15	--	--	--	--	--	--	--
I-39/90 at CTH S	183.16	WMN-S-069	EP-T1	PB-T1	15	15	--	--	--	--	--	--	--
			PB-T1	PB-T2	200	200	--	--	--	--	--	--	--
			PB-T2	WMN-S-069	15	15	--	--	--	--	--	--	--
I-39/90 at Cranston Rd	186.34	multiple	EP-W1	PB-W1	15	15	--	--	--	--	--	--	--
			PB-W1	PB-W2	35	35	--	--	--	--	--	--	--
			PB-W2	WMN-S-072	15	15	--	--	--	--	--	--	--
I-39/90 at State Line Rd	187.83	multiple	EP-X1	PB-X2	15	--	--	15	--	--	--	--	--
			PB-X2	CCTV-53-0048-S	135	--	--	135	--	--	--	--	--
			CV-X1	CV-X2	600	--	--	--	--	--	--	--	600
			CV-X2	CCTV-53-0048-S	175	--	--	--	--	--	--	--	175
			PB-X1	CCTV-53-0048-S	140	--	--	140	--	--	--	1	--
I-43 at Carvers Rock Rd	n/a	DMS-53-0038-S	EP-R1	PB-R1	15	15	--	--	--	--	--	--	--
			PB-R1	PB-R2	110	110	--	--	--	--	--	--	--
			PB-R2	DMS-53-0038-S	20	20	--	--	--	--	--	--	--
I-43 at STH 140	n/a	multiple	PB-S1	CCTV-53-0047-S	20	40	--	--	--	--	--	1	--
			CV-S1	CCTV-53-0047-S	20	20	--	--	--	--	--	--	--
I-43 at Hart Rd	1.94	multiple	PB-V2	PB-V3	30	60	--	--	--	--	--	2	--
			PB-V3	CCTV-53-0046-S	25	50	--	--	--	--	--	--	--
			CV-V1	CCTV-53-0046-S	25	25	--	--	--	--	--	--	--
1003-10-70 SUBTOTAL						820	0	290	0	0	480	4	775
PROJECT 1005-10-70													
I-39/90 at 0.2 mi S of CTH M	167.12	multiple	CB-K1	PB-K1	25	50	--	--	--	--	--	--	--
			PB-K1	DMS-53-0045-C	140	--	--	--	--	--	280	--	--
			CB-K1	PB-K2	25	50	--	--	--	--	--	--	--
			PB-K2	DMS-53-0046-C	140	--	--	--	--	--	280	--	--
I-39/90 at Milwaukee St	173.69	multiple	EP-N1	PB-N1	20	--	--	--	--	20	--	--	--
			PB-N1	PB-N2	310	--	--	--	--	310	--	--	--
USH 51 at USH 14	n/a	CCTV-53-0108-C	CB-M1	PB-M1	50	50	--	--	--	--	--	--	--
			PB-M1	CCTV-53-0108-C	15	15	--	--	--	--	--	--	--
1005-10-70 SUBTOTAL						165	0	0	0	330	560	0	0

ITS CONDUIT (TABLE 2)

LOCATION	MILEPOST	ITEM ID	FROM	TO	LINEAR DISTANCE	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0325 CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF	652.0690.001 CONDUIT SPECIAL 1 1/2-INCH LF	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EA	SPV.0090.401 CONDUIT HDPE 1-DUCT 2-INCH LF
CATEGORY 1200													
PROJECT 1007-10-70													
I-39/90 at 0.3 mi S of CTH BB	139.89	multiple	EP-B1	CB-B1	30	--	--	30	--	--	--	--	--
			CB-B1	PB-B1	15	--	--	30	--	--	--	--	--
			PB-B1	PB-B3	100	--	--	--	200	--	--	--	--
			PB-B3	DMS-13-0043-N	15	--	--	30	--	--	--	--	--
			CB-B1	PB-B2	15	--	--	30	--	--	--	--	--
			PB-B2	PB-B4	100	--	--	--	200	--	--	--	--
			PB-B4	DMS-13-0044-N	15	--	--	30	--	--	--	--	--
I-39/90 at CTH N	147.42	CCTV-13-0100-N	EP-C1	PB-C1	15	15	--	--	--	--	--	--	--
			PB-C1	PB-C2	325	--	--	--	325	--	--	--	--
			PB-C2	CCTV-13-0100-N	20	20	--	--	--	--	--	--	--
I-39/90 at Church St	149.71	multiple	EP-D1	PB-D1	15	15	--	--	--	--	--	--	--
			PB-D1	PB-D2	20	20	--	--	--	--	--	--	--
			PB-D2	CCTV-13-0100-N	25	25	--	--	--	--	--	--	--
I-39/90 at 0.4 mi S of CTH B	153.62	CCTV-13-0101-N	EP-E1	PB-E1	15	15	--	--	--	--	--	--	--
			PB-E1	PB-E2	55	55	--	--	--	--	--	--	--
			PB-E2	CCTV-13-0101-N	20	20	--	--	--	--	--	--	--
I-39/90 at USH 51 N Jct	156.54	CCTV-13-0102-N	EP-F1	PB-F1	10	10	--	--	--	--	--	--	--
			PB-F1	PB-F2	15	15	--	--	--	--	--	--	--
			PB-F2	CCTV-13-0102-N	20	20	--	--	--	--	--	--	--
I-39/90 at USH 51 S Jct / STH 73	160.30	CCTV-13-0103-N	EP-G1	PB-G1	15	15	--	--	--	--	--	--	--
			PB-G1	PB-G2	175	--	--	--	175	--	--	--	--
			PB-G2	PB-G3	300	--	--	300	--	--	--	--	--
			PB-G3	CCTV-13-0103-N	20	20	--	--	--	--	--	--	--
I-39/90 at Lake Drive Rd	161.89	multiple	EP-H1	PB-H1	10	10	--	--	--	--	--	--	--
			PB-H1	PB-H2	20	20	--	--	--	--	--	--	--
			PB-H2	DMS-13-0040-N	20	20	--	--	--	--	--	--	--
STH 30 at Fair Oaks Ave	n/a	multiple	EP-A1	CB-A1	20	--	40	--	--	--	--	--	--
			CB-A1	PB-A1	20	--	40	--	--	--	--	--	--
			PB-A1	PB-A2	160	--	320	--	--	--	--	--	--
			PB-A2	DMS-13-0004-N	20	--	40	--	--	--	--	--	--
STH 30 at Thompson Dr	n/a	multiple	PB-A1	PB-A2	150	150	--	--	--	--	--	--	--
			PB-A2	SDS-13-0060-S	25	25	--	--	--	--	--	--	--
1007-10-70 SUBTOTAL						490	440	450	900	0	0	0	0
PROJECT TOTAL						**1475**	**440**	**740**	**900**	**330**	**1040**	**4**	**775**

ITS CABLES (TABLE 1)

LOCATION	MILEPOST	ITEM ID	FROM	TO	LINEAR DISTANCE	WIRE SLACK LF	NUM WIRES	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF	655.0635 ELECTRICAL WIRE LIGHTING 2 AWG LF	671.0300 FIBER OPTIC CABLE MARKER EA	674.0200 CABLE MICROWAVE DETECTOR LF	674.0300 REMOVE CABLE LF	* 678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF	678.0200 FIBER OPTIC SPLICE ENCLOSURE EA	678.0300 FIBER OPTIC SPLICE EA	678.0400 FIBER OPTIC TERMINATION EA	SPV.0090.402 OVERHEAD SERVICE CONDUCTOR ASSEMBLY 3-WIRE LF	SPV.0090.403 OVERHEAD SERVICE CONDUCTOR ASSEMBLY 4-WIRE LF
CATEGORY 1200																				
PROJECT 1003-10-70																				
I-39/90 at 0.2 mi S of Woodman Rd	179.66	multiple	EP-01	CB-01	20	16	4	--	--	145	--	--	--	--	--	--	--	--	--	--
			CB-01	DMS-53-0047-S	135	18	8	68	--	1120	--	--	--	--	--	--	--	--	--	--
I-39/90 at NB Beloit SWEF	180.61	multiple	EP-P1	PB-P1	15	23	3	34	115	--	--	--	--	--	--	--	--	--	--	--
			PB-P1	PB-P2	45	15	3	--	180	--	--	--	--	--	--	--	--	--	--	--
			PB-P2	CCTV-53-0045-S	15	10	3	36	75	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at Creek Rd	182.52	WMN-S-068	MS-Q1	POLE	100			--	--	--	--	--	--	--	--	--	--	--	100	--
			POLE	WMN-S-068	15	10	3	--	75	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at CTH S	183.16	WMN-S-069	EP-T1	PB-T1	15	23	3	34	115	--	--	--	--	--	--	--	--	--	--	--
			PB-T1	PB-T2	200	15	3	--	645	--	--	--	--	--	--	--	--	--	--	--
			PB-T2	WMN-S-069	15	10	3	36	75	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at Hart Rd	184.16	multiple	MS-U1	POLE	100			--	--	--	--	--	--	--	--	--	--	--	100	100
			POLE	DMS-53-0042-S	30	10	4	--	160	--	--	--	--	--	--	--	--	--	--	--
			POLE	WMN-S-070	15	10	3	--	75	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at Cranston Rd	186.34	multiple	EP-W1	PB-W1	15	23	3	34	115	--	--	--	--	--	--	--	--	--	--	--
			PB-W1	PB-W2	35	15	3	--	150	--	--	--	--	--	--	--	--	--	--	--
			PB-W2	WMN-S-072	15	10	3	36	75	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at State Line Rd	187.83	multiple	EP-X1	PB-X2	15	23	3	34	--	115	--	--	--	--	--	--	--	--	--	--
			PB-X2	CCTV-53-0048-S	135	10	3	--	--	435	--	--	--	--	--	--	--	--	--	--
			CV-X1	CV-X2	600	50		--	--	--	--	4	--	--	650	1	6	--	--	--
			CV-X2	CCTV-53-0048-S	175	110		--	--	--	--	1	--	--	285	--	--	6	--	--
			CV-X1	CV-X3	575			--	--	--	--	--	--	575	--	--	--	--	--	--
			CV-X3	PB-X1	140			--	--	--	--	--	--	140	--	--	--	--	--	--
			PB-X1	CCTV-53-0048-S	140	25		9	--	--	--	--	165	--	--	--	--	--	--	--
I-43 at Carvers Rock Rd	n/a	DMS-53-0038-S	EP-R1	PB-R1	15	23	4	34	150	--	--	--	--	--	--	--	--	--	--	--
			PB-R1	PB-R2	110	15	4	--	500	--	--	--	--	--	--	--	--	--	--	--
			PB-R2	DMS-53-0038-S	20	10	4	41	120	--	--	--	--	--	--	--	--	--	--	--
I-43 at STH 140	n/a	multiple	CB-S1	PB-S3	10			9	--	--	--	--	--	--	--	--	--	--	--	--
			PB-S3	PB-S2	175			9	--	--	--	--	--	175	--	--	--	--	--	--
			PB-S2	PB-S1	65			9	--	--	--	--	--	65	--	--	--	--	--	--
I-43 at Hart Rd	1.94	multiple	CB-V1	PB-V1	20	23	3	9	--	--	130	--	--	--	--	--	--	--	--	--
			PB-V1	PB-V2	330	15	3	9	--	--	1035	--	--	--	--	--	--	--	--	--
			PB-V2	PB-V3	30	15	3	--	--	--	135	--	--	--	--	--	--	--	--	--
			PB-V3	CCTV-53-0046-S	25	10	3	46	--	--	105	--	--	--	--	--	--	--	--	--
1003-10-70 SUBTOTAL								485	2630	1820	1410	5	165	955	935	1	6	6	200	100
PROJECT 1005-10-70																				
I-39/90 at STH 59	163.26	CCTV-53-0104-C	MS-J1	POLE	75	0		--	--	--	--	--	--	--	--	--	--	--	75	--
			POLE	CCTV-53-0104-C	15	5	3	--	75	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at 0.2 mi S of CTH M	167.12	multiple	POLE	CB-K1	25		3	--	--	100	--	--	--	--	--	--	--	--	--	--
			CB-K1	DMS-53-0045-C	150	15	8	78	--	1260	--	--	--	--	--	--	--	--	--	--
I-39/90 at M-H Townline Rd	168.84	CCTV-53-0106-C	MS-L1	POLE	150			--	--	--	--	--	--	--	--	--	--	--	150	--
			POLE	CCTV-53-0106-C	15		3	--	75	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at Milwaukee St	173.69	multiple	EP-N1	PB-N1	20	20	3	--	--	--	120	--	--	--	--	--	--	--	--	--
			PB-N1	PB-N2	310	20	3	--	--	--	1020	--	--	--	--	--	--	--	--	--
			POLE	POLE	130		3	--	--	--	660	--	--	--	--	--	--	--	130	--
USH 51 at USH 14	n/a	CCTV-53-0108-C	CB-M1	PB-M1	50	15	3	--	220	--	--	--	--	--	--	--	--	--	--	--
			PB-M1	CCTV-53-0108-C	15	5	3	34	75	--	--	--	--	--	--	--	--	--	--	--
1005-10-70 SUBTOTAL								110	445	1360	1800	0	0	0	0	0	0	0	355	0

ITS CABLES (TABLE 2)

LOCATION	MILEPOST	ITEM ID	FROM	TO	LINEAR DISTANCE	WIRE SLACK LF	NUM WIRES WIRES	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF	655.0635 ELECTRICAL WIRE LIGHTING 2 AWG LF	671.0300 FIBER OPTIC CABLE MARKER EA	674.0200 CABLE MICROWAVE DETECTOR LF	674.0300 REMOVE CABLE LF	* 678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF	678.0200 FIBER OPTIC SPLICE ENCLOSURE EA	678.0300 FIBER OPTIC SPLICE EA	678.0400 FIBER OPTIC TERMINATION EA	SPV.0090.402 OVERHEAD SERVICE CONDUCTOR ASSEMBLY 3-WIRE LF	SPV.0090.403 OVERHEAD SERVICE CONDUCTOR ASSEMBLY 4-WIRE LF
CATEGORY 1200																				
PROJECT 1007-10-70																				
I-39/90 at 0.3 mi S of CTH BB	139.89	multiple	EP-B1	CB-B1	30	16	4	--	--	184	--	--	--	--	--	--	--	--	--	--
			CB-B1	PB-B1	15	23	4	34	--	152	--	--	--	--	--	--	--	--	--	--
			PB-B1	PB-B3	100	15	4	--	--	460	--	--	--	--	--	--	--	--	--	--
			PB-B3	DMS-13-0043-N	15	10	4	36	--	100	--	--	--	--	--	--	--	--	--	--
			CB-B1	PB-B2	15	23	4	34	--	152	--	--	--	--	--	--	--	--	--	--
			PB-B2	PB-B4	100	15	4	--	--	460	--	--	--	--	--	--	--	--	--	--
			PB-B4	DMS-13-0044-N	15	10	4	36	--	100	--	--	--	--	--	--	--	--	--	--
I-39/90 at CTH N	147.42	CCTV-13-0100-N	EP-C1	PB-C1	15	23	3	34	--	90	--	--	--	--	--	--	--	--	--	--
			PB-C1	PB-C2	325	15	3	--	--	1020	--	--	--	--	--	--	--	--	--	--
			PB-C2	CCTV-13-0100-N	20	10	3	39	--	75	--	--	--	--	--	--	--	--	--	--
I-39/90 at Church St	149.71	multiple	EP-D1	PB-D1	15	23	4	34	120	--	--	--	--	--	--	--	--	--	--	--
			PB-D1	PB-D2	20	15	4	--	140	--	--	--	--	--	--	--	--	--	--	--
			PB-D2	CCTV-13-0100-N	25	10	4	46	120	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at 0.4 mi S of CTH B	153.62	CCTV-13-0101-N	EP-E1	PB-E1	15	23	3	34	90	--	--	--	--	--	--	--	--	--	--	--
			PB-E1	PB-E2	55	15	3	--	210	--	--	--	--	--	--	--	--	--	--	--
			PB-E2	CCTV-13-0101-N	20	10	3	41	75	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at USH 51 N Jct	156.54	CCTV-13-0102-N	EP-F1	PB-F1	10	23	3	29	75	--	--	--	--	--	--	--	--	--	--	--
			PB-F1	PB-F2	15	15	3	--	90	--	--	--	--	--	--	--	--	--	--	--
			PB-F2	CCTV-13-0102-N	20	10	3	41	75	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at USH 51 S Jct / STH 73	160.30	CCTV-13-0103-N	EP-G1	PB-G1	15	23	3	34	--	--	90	--	--	--	--	--	--	--	--	--
			PB-G1	PB-G2	175	15	3	210	--	--	570	--	--	--	--	--	--	--	--	--
			PB-G2	PB-G3	300	15	3	--	--	--	945	--	--	--	--	--	--	--	--	--
			PB-G3	CCTV-13-0103-N	20	10	3	39	--	--	75	--	--	--	--	--	--	--	--	--
I-39/90 at Lake Drive Rd	161.89	multiple	EP-H1	PB-H1	10	23	4	29	100	--	--	--	--	--	--	--	--	--	--	--
			PB-H1	PB-H2	20	15	4	--	140	--	--	--	--	--	--	--	--	--	--	--
			PB-H2	DMS-13-0040-N	20	10	4	41	100	--	--	--	--	--	--	--	--	--	--	--
			MS-H1	POLE	105			--	--	--	--	--	--	--	--	--	--	--	--	105
			POLE	DMS-13-0041-N	30	10	4	--	120	--	--	--	--	--	--	--	--	--	--	--
STH 30 at Fair Oaks Ave	n/a	multiple	EP-A2	CB-A2	20	16	4	--	--	--	120	--	--	--	--	--	--	--	--	--
			CB-A2	PB-A3	20	23	4	39	--	--	140	--	45	--	--	--	--	--	--	--
			PB-A3	PB-A4	160	15	4	--	--	--	700	--	175	--	--	--	--	--	--	--
			PB-A4	DMS-13-0004-N	20	10	4	41	--	--	100	--	30	--	--	--	--	--	--	--
STH 30 at Thompson Dr	n/a	multiple	CB-A1	SDS-13-0060-S	150	18		46	--	--	--	--	190	--	--	--	--	--	--	--
1007-10-70 SUBTOTAL								915	1460	2790	2740	0	440	0	0	0	0	0	0	105
PROJECT TOTAL								**1510**	**4535**	**5970**	**5950**	**5**	**605**	**955**	**935**	**1**	**6**	**6**	**555**	**205**

NOTE: * PAY ITEM INCLUDES INSTALLATION OF STATE FURNISHED EQUIPMENT

NOTE: ** GROUNDING CONDUCTOR (10 AWG) TOTAL INCLUDES RING AND COVER BONDING QUANTITIES

ITS ELECTRICAL SERVICE METER SOCKETS AND BREAKER PEDESTALS (TABLE 1)

LOCATION	MILEPOST	ITEM ID	656.0100.001 ELECTRICAL SERVICE METER SOCKET CCTV-53-0104-C LS	656.0100.002 ELECTRICAL SERVICE METER SOCKET CCTV-53-0106-C LS	656.0100.003 ELECTRICAL SERVICE METER SOCKET DMS-13-0041-N LS	656.0100.004 ELECTRICAL SERVICE METER SOCKET DMS-53-0042-S LS	656.0100.005 ELECTRICAL SERVICE METER SOCKET DMS-53-0045-C LS	656.0100.006 ELECTRICAL SERVICE METER SOCKET WMN-0068-S LS	656.0200.001 ELECTRICAL SERVICE METER BREAKER PEDESTAL CCTV-53-0045-S LS	656.0200.002 ELECTRICAL SERVICE METER BREAKER PEDESTAL CCTV-13-0100-N LS	656.0200.003 ELECTRICAL SERVICE METER BREAKER PEDESTAL CCTV-13-0101-N LS	656.0200.004 ELECTRICAL SERVICE METER BREAKER PEDESTAL CCTV-13-0102-N LS	656.0200.005 ELECTRICAL SERVICE METER BREAKER PEDESTAL CCTV-13-0103-N LS
CATEGORY 1200													
PROJECT 1003-10-70													
I-39/90 at NB Beloit SWEF	180.61	multiple	--	--	--	--	--	--	1	--	--	--	--
I-39/90 at Creek Rd	182.52	WMN-S-068	--	--	--	--	--	1	--	--	--	--	--
I-39/90 at Hart Rd	184.16	multiple	--	--	--	1	--	--	--	--	--	--	--
1003-10-70 SUBTOTAL			0	0	0	1	0	1	1	0	0	0	0
PROJECT 1005-10-70													
I-39/90 at STH 59	163.26	CCTV-53-0104-C	1	--	--	--	--	--	--	--	--	--	--
I-39/90 at 0.2 mi S of CTH M	167.12	multiple	--	--	--	--	1	--	--	--	--	--	--
I-39/90 at M-H Townline Rd	168.84	CCTV-53-0106-C	--	1	--	--	--	--	--	--	--	--	--
1005-10-70 SUBTOTAL			1	1	0	0	1	0	0	0	0	0	0
PROJECT 1007-10-70													
I-39/90 at CTH N	147.42	CCTV-13-0100-N	--	--	--	--	--	--	--	1	--	--	--
I-39/90 at 0.4 mi S of CTH B	153.62	CCTV-13-0101-N	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at USH 51 N Jct	156.54	CCTV-13-0102-N	--	--	--	--	--	--	--	--	--	1	--
I-39/90 at USH 51 S Jct / STH 73	160.30	CCTV-13-0103-N	--	--	--	--	--	--	--	--	--	--	1
I-39/90 at Lake Drive Rd	161.89	multiple	--	--	1	--	--	--	--	--	--	--	--
1007-10-70 SUBTOTAL			0	0	1	0	0	0	0	1	1	1	1
PROJECT TOTAL			1	1	1	1	1	1	1	1	1	1	1

ITS ELECTRICAL SERVICE METER SOCKETS AND BREAKER PEDESTALS (TABLE 2)

LOCATION	MILEPOST	ITEM ID	656.0200.006 ELECTRICAL SERVICE METER BREAKER PEDESTAL CCTV-53-0107-C LS	656.0200.007 ELECTRICAL SERVICE METER BREAKER PEDESTAL CCTV-53-0048-S LS	656.0200.008 ELECTRICAL SERVICE METER BREAKER PEDESTAL DMS-53-0038-S LS	656.0200.009 ELECTRICAL SERVICE METER BREAKER PEDESTAL DMS-13-0039-N LS	656.0200.010 ELECTRICAL SERVICE METER BREAKER PEDESTAL DMS-13-0040-N LS	656.0200.011 ELECTRICAL SERVICE METER BREAKER PEDESTAL DMS-13-0043-N LS	656.0200.012 ELECTRICAL SERVICE METER BREAKER PEDESTAL DMS-53-0047-S LS	656.0200.013 ELECTRICAL SERVICE METER BREAKER PEDESTAL DMS-13-0004-N LS	656.0200.014 ELECTRICAL SERVICE METER BREAKER PEDESTAL WMN-0069-S LS	656.0200.015 ELECTRICAL SERVICE METER BREAKER PEDESTAL WMN-0072-S LS	SPV.0060.403 REMOVE ELECTRICAL SERVICE METER BREAKER PEDESTAL EA
CATEGORY 1200													
PROJECT 1003-10-70													
I-39/90 at 0.2 mi S of Woodman Rd	179.66	multiple	--	--	--	--	--	--	1	--	--	--	--
I-39/90 at CTH S	183.16	WMN-S-069	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at Cranston Rd	186.34	multiple	--	--	--	--	--	--	--	--	--	1	--
I-39/90 at State Line Rd	187.83	multiple	--	1	--	--	--	--	--	--	--	--	1
I-43 at Carvers Rock Rd	n/a	DMS-53-0038-S	--	--	1	--	--	--	--	--	--	--	--
1003-10-70 SUBTOTAL			0	1	1	0	0	0	1	0	1	1	1
PROJECT 1005-10-70													
I-39/90 at Milwaukee St	173.69	multiple	1	--	--	--	--	--	--	--	--	--	--
1005-10-70 SUBTOTAL			1	0	0	0	0	0	0	0	0	0	0
PROJECT 1007-10-70													
I-39/90 at 0.3 mi S of CTH BB	139.89	multiple	--	--	--	--	--	1	--	--	--	--	--
I-39/90 at Church St	149.71	multiple	--	--	--	1	--	--	--	--	--	--	--
I-39/90 at Lake Drive Rd	161.89	multiple	--	--	--	--	1	--	--	--	--	--	--
STH 30 at Fair Oaks Ave	n/a	multiple	--	--	--	--	--	--	--	1	--	--	--
1007-10-70 SUBTOTAL			0	0	0	1	1	1	0	1	0	0	0
PROJECT TOTAL			1	1	1	1	1	1	1	1	1	1	1

ELECTRICAL SERVICE BREAKER DISCONNECT BOXES (TABLE 1)

LOCATION	MILEPOST	ITEM ID	656.0500.001 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-13-0100-N LS	656.0500.002 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-13-0039-N LS	656.0500.003 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-13-0101-N LS	656.0500.004 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-13-0102-N LS	656.0500.005 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-13-0103-N LS	656.0500.006 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-13-0040-N LS	656.0500.007 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-13-0041-N LS	656.0500.008 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0104-C LS	656.0500.009 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0105-C LS	656.0500.010 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0106-C LS	656.0500.011 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0107-C LS
CATEGORY 1200													
PROJECT 1003-10-70													
			--	--	--	--	--	--	--	--	--	--	--
1003-10-70 SUBTOTAL			0	0	0	0	0	0	0	0	0	0	0
PROJECT 1005-10-70													
I-39/90 at STH 59	163.26	CCTV-53-0104-C	--	--	--	--	--	--	--	1	--	--	--
I-39/90 at 0.2 mi S of CTH M	167.12	multiple	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at M-H Townline Rd	168.84	CCTV-53-0106-C	--	--	--	--	--	--	--	--	--	1	--
I-39/90 at Milwaukee St	173.69	multiple	--	--	--	--	--	--	--	--	--	--	1
1005-10-70 SUBTOTAL			0	0	0	0	0	0	0	1	1	1	1
PROJECT 1007-10-70													
I-39/90 at CTH N	147.42	CCTV-13-0100-N	1	--	--	--	--	--	--	--	--	--	--
I-39/90 at Church St	149.71	multiple	--	1	--	--	--	--	--	--	--	--	--
I-39/90 at 0.4 mi S of CTH B	153.62	CCTV-13-0101-N	--	--	1	--	--	--	--	--	--	--	--
I-39/90 at USH 51 N Jct	156.54	CCTV-13-0102-N	--	--	--	1	--	--	--	--	--	--	--
I-39/90 at USH 51 S Jct / STH 73	160.30	CCTV-13-0103-N	--	--	--	--	1	--	--	--	--	--	--
I-39/90 at Lake Drive Rd	161.89	multiple	--	--	--	--	--	1	1	--	--	--	--
1007-10-70 SUBTOTAL			1	1	1	1	1	1	1	0	0	0	0
PROJECT TOTAL			1	1	1	1	1	1	1	1	1	1	1

ELECTRICAL SERVICE BREAKER DISCONNECT BOXES (TABLE 2)

LOCATION	MILEPOST	ITEM ID	656.0500.012 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-53-0047-S LS	656.0500.013 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0045-S LS	656.0500.014 ELECTRICAL SERVICE BREAKER DISCONNECT BOX WMN-0069-S LS	656.0500.015 ELECTRICAL SERVICE BREAKER DISCONNECT BOX WMN-0070-S LS	656.0500.016 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-53-0042-S LS	656.0500.017 ELECTRICAL SERVICE BREAKER DISCONNECT BOX WMN-0072-S LS	656.0500.018 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-13-0004-N LS	656.0500.019 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0047-S LS	656.0500.020 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0048-S LS	656.0500.021 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0108C LS	656.0500.022 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-53-0038-S LS
CATEGORY 1200													
PROJECT 1003-10-70													
I-39/90 at 0.2 mi S of Woodman Rd	179.66	multiple	1	--	--	--	--	--	--	--	--	--	--
I-39/90 at NB Beloit SWEF	180.61	multiple	--	1	--	--	--	--	--	--	--	--	--
I-39/90 at CTH S	183.16	WMN-S-069	--	--	1	--	--	--	--	--	--	--	--
I-39/90 at Hart Rd	184.16	multiple	--	--	--	1	1	--	--	--	--	--	--
I-39/90 at Cranston Rd	186.34	multiple	--	--	--	--	--	1	--	--	--	--	--
I-39/90 at State Line Rd	187.83	multiple	--	--	--	--	--	--	--	--	1	--	--
I-43 at Carvers Rock Rd	n/a	DMS-53-0038-S	--	--	--	--	--	--	--	--	--	--	1
I-43 at STH 140	n/a	multiple	--	--	--	--	--	--	--	1	--	--	--
1003-10-70 SUBTOTAL			1	1	1	1	1	1	0	1	1	0	1
PROJECT 1005-10-70													
USH 51 at USH 14	n/a	CCTV-53-0108-C	--	--	--	--	--	--	--	--	--	1	--
1005-10-70 SUBTOTAL			0	0	0	0	0	0	0	0	0	1	0
PROJECT 1007-10-70													
STH 30 at Fair Oaks Ave	n/a	multiple	--	--	--	--	--	--	1	--	--	--	--
1007-10-70 SUBTOTAL			0	0	0	0	0	0	1	0	0	0	0
PROJECT TOTAL			1	1	1	1	1	1	1	1	1	1	1

3

ELECTRICAL SERVICE BREAKER DISCONNECT BOXES (TABLE 3)

LOCATION	MILEPOST	ITEM ID	656.0500.023 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0046-S LS	656.0500.024 ELECTRICAL SERVICE BREAKER DISCONNECT BOX WMN-0068-S LS	656.0500.025 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-13-0043-N LS	656.0500.026 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0104-C POLE MOUNTED LS	656.0500.027 ELECTRICAL SERVICE BREAKER DISCONNECT BOX CCTV-53-0106-C POLE MOUNTED LS	656.0500.028 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-13-0041-N POLE MOUNTED LS	656.0500.029 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-13-0042-S POLE MOUNTED LS	656.0500.030 ELECTRICAL SERVICE BREAKER DISCONNECT BOX DMS-53-0045-C POLE MOUNTED LS	656.0500.031 ELECTRICAL SERVICE BREAKER DISCONNECT BOX WMN-0068-S POLE MOUNTED LS
CATEGORY 1200											
PROJECT 1003-10-70											
I-39/90 at Creek Rd	182.52	WMN-S-068	--	1	--	--	--	--	--	--	1
I-39/90 at Hart Rd	184.16	multiple	--	--	--	--	--	--	1	--	--
I-43 at Hart Rd	1.94	multiple	1	--	--	--	--	--	--	--	--
1003-10-70 SUBTOTAL			1	1	0	0	0	0	1	0	1
PROJECT 1005-10-70											
I-39/90 at STH 59	163.26	CCTV-53-0104-C	--	--	--	1	--	--	--	--	--
I-39/90 at 0.2 mi S of CTH M	167.12	multiple	--	--	--	--	--	--	--	1	--
I-39/90 at M-H Townline Rd	168.84	CCTV-53-0106-C	--	--	--	--	1	--	--	--	--
1005-10-70 SUBTOTAL			0	0	0	1	1	0	0	1	0
PROJECT 1007-10-70											
I-39/90 at 0.3 mi S of CTH BB	139.89	multiple	--	--	1	--	--	--	--	--	--
I-39/90 at Lake Drive Rd	161.89	multiple	--	--	--	--	--	1	--	--	--
1007-10-70 SUBTOTAL			0	0	1	0	0	1	0	0	0
PROJECT TOTAL			**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

ITS CABINETS

LOCATION	MILEPOST	ITEM ID	659.0802 PLAQUES SEQUENCE IDENTIFICATION EA	672.0100 BASE ITS CONTROLLER CABINET EA	* 673.0200.S INSTALL ITS FIELD CABINET EA	* 673.0225.S INSTALL POLE MOUNTED CABINET EA	* 675.0400.S INSTALL ETHERNET SWITCH EA	* 677.0300.S INSTALL VIDEO ENCODER EA	SPV.0060.402 SALVAGE IP RADIO EA	SPV.0060.405 SALVAGE VIDEO ENCODER EA	SPV.0060.406 SALVAGE POLE MOUNTED CABINET EA	SPV.0060.407 SALVAGE ETHERNET SWITCH EA	SPV.0060.408 SALVAGE TERMINATION PANEL EA	* SPV.0060.412 INSTALL TERMINATION PANEL EA	* SPV.0060.417 INSTALL CELLULAR MODEM EA	* SPV.0060.418 INSTALL IP RADIO EA	SPV.0060.425 ANTENNA RISER EA	SPV.0060.427 SALVAGE LIGHTING CABINET IH 43 AND HART RD EA	SPV.0060.428 LIGHTING CABINET IH 43 AND HART RD EA
CATEGORY 1200																			
PROJECT 1003-10-70																			
I-39/90 at CTH O	175.95	WDS-0019-S	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at 0.5 mi N of Avalon Rd	177.47	WDS-0020-S	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at Avalon Rd	177.98	WMN-S-066	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
I-39/90 at 0.2 mi S of Woodman Rd	179.66	multiple	6	1	1	--	1	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at NB Beloit SWEF	180.61	multiple	2	--	--	1	1	1	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at L-T Townline Rd	181.34	WDS-0022-S	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at Creek Rd	182.52	WMN-S-068	--	--	--	1	1	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at CTH S	183.16	WMN-S-069	--	--	--	1	2	--	1	--	--	--	--	--	--	--	1	--	--
I-39/90 at Hart Rd	184.16	multiple	6	--	--	2	2	--	--	--	--	--	--	--	--	--	1	--	--
I-39/90 at I-43 / STH 81	185.45	WMN-S-071	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
I-39/90 at Cranston Rd	186.34	multiple	2	--	--	1	1	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at State Line Rd	187.83	multiple	4	--	--	1	1	1	1	1	1	1	1	1	--	1	--	--	--
I-39/90 at Prairie Hill Rd (in IL)	1.75	WDS-0027-S	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
STH 140 at 0.8 mi S of USH 14	n/a	SDS-53-0085-S	2	--	--	1	1	--	--	--	--	--	--	--	1	--	--	--	--
I-43 at Carvers Rock Rd	n/a	DMS-53-0038-S	2	--	--	1	1	--	--	--	--	--	--	--	1	--	--	--	--
I-43 at STH 140	n/a	multiple	4	--	--	1	1	1	--	--	--	--	--	--	1	--	--	--	--
I-43 at Hart Rd	1.94	multiple	4	--	--	1	1	1	--	--	--	--	--	--	1	--	--	1	1
Gateway Blvd at 0.7 S of Millington Rd	n/a	SDS-53-0086-S	2	--	--	1	1	--	--	--	--	--	--	--	1	--	--	--	--
1003-10-70 SUBTOTAL			42	1	1	12	14	4	4	1	1	1	1	1	5	1	3	1	1
PROJECT 1005-10-70																			
I-39/90 at STH 59	163.26	CCTV-53-0104-C	2	--	--	1	1	1	--	--	--	--	--	--	1	--	--	--	--
I-39/90 at Knutson Rd	164.44	WDS-0012-C	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at 0.2 mi S of CTH M	167.12	multiple	8	--	--	1	1	1	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at M-H Townline Rd	168.84	CCTV-53-0106-C	2	--	--	1	1	1	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at Russell Rd	170.20	WDS-0014-C	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at STH 26	171.50	WMN-C-062	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--
I-39/90 between STH 26 & USH 14	171.91	multiple	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at USH 14	172.26	WMN-C-063	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--	--
I-39/90 at Milwaukee St	173.69	multiple	6	--	--	1	1	1	--	--	--	--	--	--	--	--	--	--	--
USH 51 at 0.6 mi N of J-H Townline Rd	n/a	SDS-53-0084-C	2	--	--	1	1	--	--	--	--	--	--	--	1	--	--	--	--
USH 51 at USH 14	n/a	CCTV-53-0108-C	2	--	--	1	1	1	--	--	--	--	--	--	1	--	--	--	--
1005-10-70 SUBTOTAL			30	0	0	6	7	5	2	0	0	0	0	0	3	0	0	0	0
PROJECT 1007-10-70																			
I-39/90 at 0.3 mi S of CTH BB	139.89	multiple	6	1	1	--	1	--	--	--	--	--	--	--	--	2	2	--	--
I-39/90 at Storck Rd	143.44	WDS-0002-N	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at Williams Dr	146.85	WDS-0003-N	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at CTH N	147.42	CCTV-13-0100-N	2	--	--	1	1	1	--	--	--	--	--	--	1	--	--	--	--
I-39/90 at Church St	149.71	multiple	4	--	--	1	1	--	--	--	--	--	--	--	1	--	--	--	--
I-39/90 at CTH W	151.80	WDS-0005-N	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at CTH B	153.07	WDS-0006-N	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at 0.4 mi S of CTH B	153.62	CCTV-13-0101-N	2	--	--	1	1	1	--	--	--	--	--	--	1	--	--	--	--
I-39/90 at CTH A	155.55	WDS-0007-N	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at USH 51 N Jct	156.54	CCTV-13-0102-N	2	--	--	1	1	1	--	--	--	--	--	--	1	--	--	--	--
I-39/90 at Maple Grove Rd	157.05	WDS-0008-N	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at STH 106	159.58	WDS-0009-N	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
I-39/90 at USH 51 S Jct / STH 73	160.30	CCTV-13-0103-N	2	--	--	1	1	1	--	--	--	--	--	--	1	--	--	--	--
I-39/90 at Lake Drive Rd	161.89	multiple	8	--	--	2	2	--	--	--	--	--	--	--	2	--	--	--	--
STH 30 at Fair Oaks Ave	n/a	multiple	4	1	1	--	1	--	--	--	--	--	--	--	--	1	--	--	--
STH 30 at USH 51 (Stoughton Rd)	n/a	n/a	--	--	--	--	1	--	--	--	--	--	--	--	--	1	1	--	--
STH 30 at Thompson Dr	n/a	multiple	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
US 12/18 at Agriculture Dr	n/a	WDS-0028-N	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1007-10-70 SUBTOTAL			50	2	2	7	10	4	0	0	0	0	0	0	7	4	3	0	0
PROJECT TOTAL			**122**	**3**	**3**	**25**	**31**	**13**	**6**	**1**	**1**	**1**	**1**	**1**	**15**	**5**	**6**	**1**	**1**

NOTE: * PAY ITEM INCLUDES INSTALLATION OF STATE FURNISHED OR SALVAGED EQUIPMENT

ITS MISCELLANEOUS

LOCATION	670.0100.001 FIELD SYSTEM INTEGRATOR LS	670.0100.002 FIELD SYSTEM INTEGRATOR LS	670.0100.003 FIELD SYSTEM INTEGRATOR LS	670.0200.001 ITS DOCUMENTATION LS	670.0200.002 ITS DOCUMENTATION LS	670.0200.003 ITS DOCUMENTATION LS	678.0500.001 COMMUNICATION SYSTEM TESTING LS	678.0500.002 COMMUNICATION SYSTEM TESTING LS	678.0500.003 COMMUNICATION SYSTEM TESTING LS
CATEGORY 1200									
SOUTH SEGMENT									
1003-10-70 SUBTOTAL	1	-	-	1	-	-	1	-	-
CENTRAL SEGMENT									
1005-10-70 SUBTOTAL	-	1	-	-	1	-	-	1	-
NORTH SEGMENT									
1007-10-70 SUBTOTAL	-	-	1	-	-	1	-	-	1
PROJECT TOTAL	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**

MICROWAVE DETECTORS

LOCATION	MILEPOST	ITEM ID	* 675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY EA	SPV.0060.401 SALVAGE MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY EA	* SPV.0060.416 INSTALL SOLAR POWER SYSTEM - MICROWAVE DETCTOR EA
CATEGORY 1200					
PROJECT 1003-10-70					
STH 140 at 0.8 mi S of USH 14	n/a	SDS-53-0085-S	1	--	1
I-43 at STH 140	n/a	multiple	2	1	--
I-43 at Hart Rd	1.94	multiple	2	--	--
Gateway Blvd at 0.7 S of Millington Rd	n/a	SDS-53-0086-S	1	--	1
1003-10-70 SUBTOTAL			6	1	2
PROJECT 1005-10-70					
USH 51 at 0.6 mi N of J-H Townline Rd	n/a	SDS-53-0084-C	1	--	1
1005-10-70 SUBTOTAL			1	0	1
PROJECT 1007-10-70					
STH 30 at Fair Oaks Ave	n/a	multiple	2	--	--
STH 30 at Thompson Dr	n/a	multiple	2	2	--
1007-10-70 SUBTOTAL			4	2	0
PROJECT TOTAL			**11**	**3**	**3**

NOTE: * PAY ITEM INCLUDES INSTALLATION OF STATE FURNISHED OR SALVAGED EQUIPMENT

CCTV CAMERAS

LOCATION	MILEPOST	ITEM ID	* 677.0200 INSTALL CAMERA ASSEMBLY EA	SPV.0060.404 SALVAGE CAMERA ASSEMBLY EA
CATEGORY 1200				
PROJECT 1003-10-70				
I-39/90 at NB Beloit SWEF	180.61	CCTV-53-0045-S	1	--
I-39/90 at State Line Rd	187.83	CCTV-53-0048-S	1	1
I-43 at STH 140	n/a	CCTV-53-0047-S	1	1
I-43 at Hart Rd	1.94	CCTV-53-0046-S	1	--
1003-10-70 SUBTOTAL			4	2
PROJECT 1005-10-70				
I-39/90 at STH 59	163.26	CCTV-53-0104-C	1	--
I-39/90 at 0.2 mi S of CTH M	167.12	CCTV-53-0105-C	1	--
I-39/90 at M-H Townline Rd	168.84	CCTV-53-0106-C	1	--
I-39/90 at Milwaukee St	173.69	CCTV-53-0107-C	1	--
USH 51 at USH 14	n/a	CCTV-53-0108-C	1	--
1005-10-70 SUBTOTAL			5	0
PROJECT 1007-10-70				
I-39/90 at CTH N	147.42	CCTV-13-0100-N	1	--
I-39/90 at 0.4 mi S of CTH B	153.62	CCTV-13-0101-N	1	--
I-39/90 at USH 51 N Jct	156.54	CCTV-13-0102-N	1	--
I-39/90 at USH 51 S Jct / STH 73	160.30	CCTV-13-0103-N	1	--
1007-10-70 SUBTOTAL			4	0
PROJECT TOTAL			**13**	**2**

NOTE: * PAY ITEM INCLUDES INSTALLATION OF STATE FURNISHED OR SALVAGED EQUIPMENT

DYNAMIC MESSAGE SIGNS

LOCATION	MILEPOST	ITEM ID	* 678.0100.S INSTALL OVERHEAD FREEWAY DMS FULL MATRIX EA	SPV.0060.400 SALVAGE CANTILEVER DYNAMIC MESSAGE SIGN EA	* SPV.0060.411 INSTALL CANTILEVER DYNAMIC MESSAGE SIGN EA	* SPV.0060.413 INSTALL GROUND MOUNT DYNAMIC MESSAGE SIGN EA
CATEGORY 1200						
PROJECT 1003-10-70						
I-39/90 at 0.2 mi S of Woodman Rd	179.66	multiple	2	--	--	--
I-39/90 at Hart Rd	184.16	DMS-53-0042-S	--	--	--	1
I-43 at Carvers Rock Rd	n/a	DMS-53-0038-S	--	--	--	1
1003-10-70 SUBTOTAL			2	0	0	2
PROJECT 1005-10-70						
I-39/90 at 0.2 mi S of CTH M	167.12	multiple	2	--	--	--
1005-10-70 SUBTOTAL			2	0	0	0
PROJECT 1007-10-70						
I-39/90 at 0.3 mi S of CTH BB	139.89	multiple	2	--	--	--
I-39/90 at Church St	149.71	DMS-13-0039-N	--	--	--	1
I-39/90 at Lake Drive Rd	161.89	multiple	--	--	--	2
STH 30 at Fair Oaks Ave	n/a	DMS-13-0004-N	--	--	1	--
STH 30 at Thompson Dr	n/a	DMS-13-0004-N	--	1	--	--
1007-10-70 SUBTOTAL			2	1	1	3
PROJECT TOTAL			**6**	**1**	**1**	**5**

NOTE: * PAY ITEM INCLUDES INSTALLATION OF STATE FURNISHED OR SALVAGED EQUIPMENT

BLUETOOTH DETECTORS

LOCATION	MILEPOST	ITEM ID	* SPV.0060.414 INSTALL HARDWIRED BLUETOOTH SENSOR EA	* SPV.0060.415 INSTALL SOLAR-POWERED BLUETOOTH SENSOR EA
CATEGORY 1200				
PROJECT 1003-10-70				
I-39/90 at CTH O	175.95	WDS-0019-S	--	1
I-39/90 at 0.5 mi N of Avalon Rd	177.47	WDS-0020-S	--	1
I-39/90 at 0.2 mi S of Woodman Rd	179.66	WDS-0021-S	1	--
I-39/90 at L-T Townline Rd	181.34	WDS-0022-S	--	1
I-39/90 at Hart Rd	184.16	multiple	1	1
I-39/90 at Cranston Rd	186.34	WDS-0025-S	--	1
I-39/90 at State Line Rd	187.83	WDS-0026-S	1	--
I-39/90 at Prairie Hill Rd (in IL)	1.75	WDS-0027-S	--	1
1003-10-70 SUBTOTAL			3	6
PROJECT 1005-10-70				
I-39/90 at Knutson Rd	164.44	WDS-0012-C	--	1
I-39/90 at 0.2 mi S of CTH M	167.12	WDS-0013-C	1	--
I-39/90 at Russell Rd	170.20	WDS-0014-C	--	1
I-39/90 between STH 26 & USH 14	171.91	multiple	--	2
I-39/90 at Milwaukee St	173.69	multiple	1	1
1005-10-70 SUBTOTAL			2	5
PROJECT 1007-10-70				
I-39/90 at 0.3 mi S of CTH BB	139.89	WDS-0001-N	1	--
I-39/90 at Storck Rd	143.44	WDS-0002-N	--	1
I-39/90 at Williams Dr	146.85	WDS-0003-N	--	1
I-39/90 at Church St	149.71	WDS-0004-N	--	1
I-39/90 at CTH W	151.80	WDS-0005-N	--	1
I-39/90 at CTH B	153.07	WDS-0006-N	--	1
I-39/90 at CTH A	155.55	WDS-0007-N	--	1
I-39/90 at Maple Grove Rd	157.05	WDS-0008-N	--	1
I-39/90 at STH 106	159.58	WDS-0009-N	--	1
I-39/90 at Lake Drive Rd	161.89	multiple	--	2
US 12/18 at Agriculture Dr	n/a	WDS-0028-N	--	1
1007-10-70 SUBTOTAL			1	11
PROJECT TOTAL			**6**	**22**

NOTE: * PAY ITEM INCLUDES INSTALLATION OF STATE FURNISHED EQUIPMENT

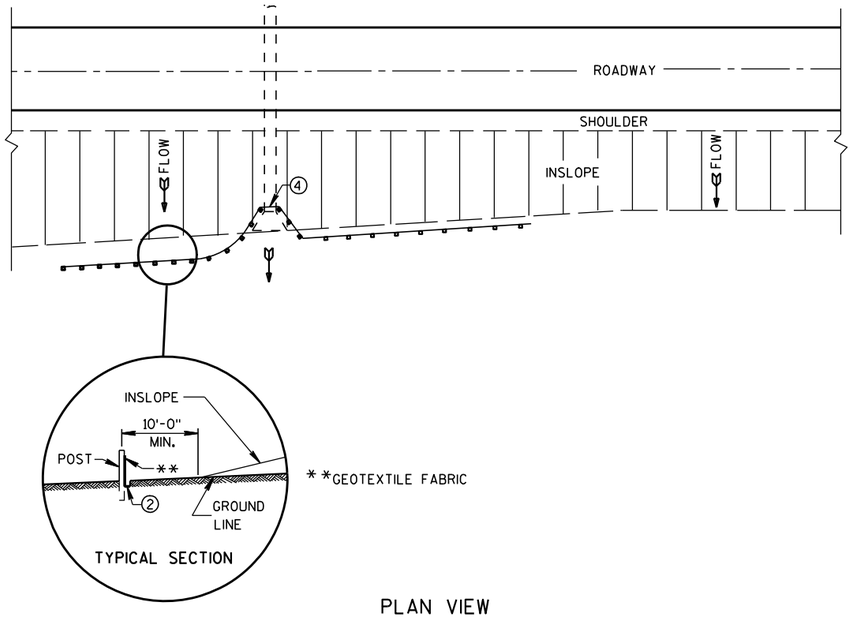
WIRELESS MESH

LOCATION	MILEPOST	ITEM ID	SPV.0060.419 WIRELESS CLIENT RADIO ASSEMBLY EA	SPV.0060.420 WIRELESS MESH RADIO ASSEMBLY EA	SPV.0060.421 WIRELESS MESH RADIO ASSEMBLY, STATE PATROL TOWER EA
CATEGORY 1200					
PROJECT 1003-10-70					
I-39/90 at Avalon Rd	177.98	WMN-S-066	--	1	--
I-39/90 at 0.2 mi S of Woodman Rd	179.66	multiple	1	--	--
I-39/90 at NB Beloit SWEF	180.61	WMN-S-067	--	1	--
I-39/90 at Creek Rd	182.52	WMN-S-068	--	1	--
I-39/90 at CTH S	183.16	WMN-S-069	1	1	--
I-39/90 at Hart Rd	184.16	WMN-S-070	1	1	--
I-39/90 at I-43 / STH 81	185.45	WMN-S-071	--	1	--
I-39/90 at Cranston Rd	186.34	WMN-S-072	--	1	--
I-39/90 at State Line Rd	187.83	WMN-S-073	--	1	--
1003-10-70 SUBTOTAL			3	8	0
PROJECT 1005-10-70					
I-39/90 at 0.2 mi S of CTH M	167.12	multiple	1	--	--
I-39/90 at SB Rest Area (WSP Tower)	167.99	WMN-C-061	--	--	1
I-39/90 at M-H Townline Rd	168.84	CCTV-53-0106-C	1	--	--
I-39/90 at STH 26	171.50	WMN-C-062	--	1	--
I-39/90 at USH 14	172.26	WMN-C-063	--	1	--
I-39/90 at Milwaukee St	173.69	WMN-C-064	--	1	--
I-39/90 at Racine St	175.49	WMN-C-065	--	1	--
1005-10-70 SUBTOTAL			2	4	1
PROJECT 1007-10-70					
			--	--	--
1007-10-70 SUBTOTAL			0	0	0
PROJECT TOTAL			**5**	**12**	**1**

Standard Detail Drawing List

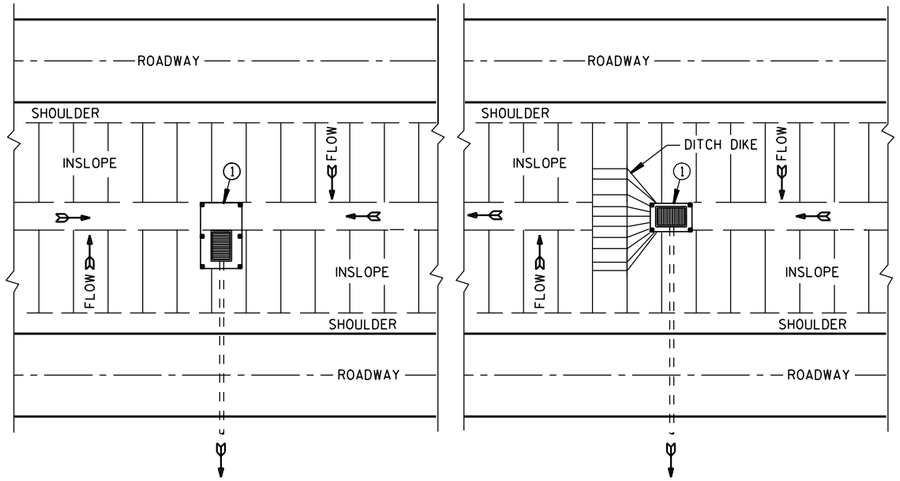
08E09-06	SILT FENCE
09B02-07	CONDUIT
09B04-09	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E01-11D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
09E01-11G	HARDWARE DETAILS FOR POLE MOUNTINGS
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B24-07A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-07C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-01A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-01	MARKER POSTS, FLEXIBLE, FOR CULVERT END
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15D12-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D27-01	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-01	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

6



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

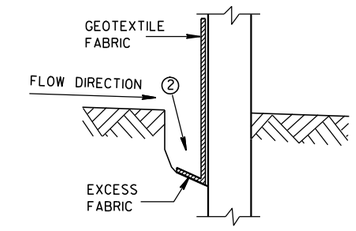
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

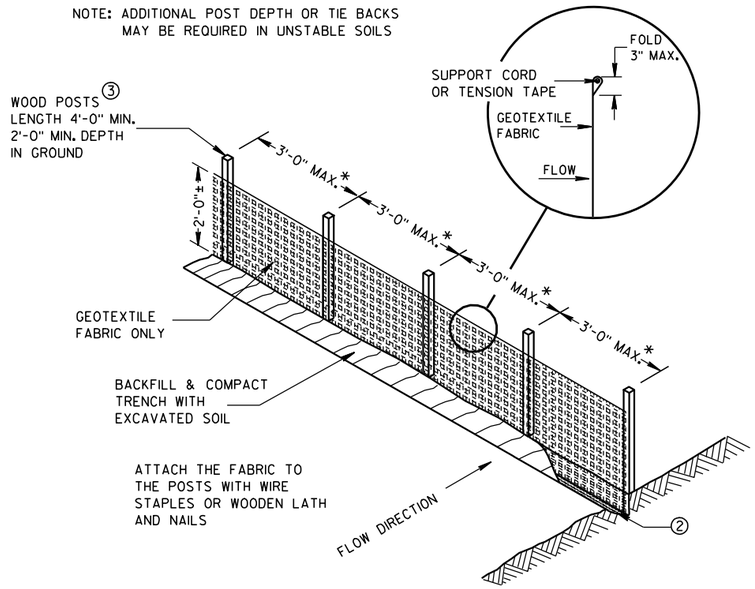
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

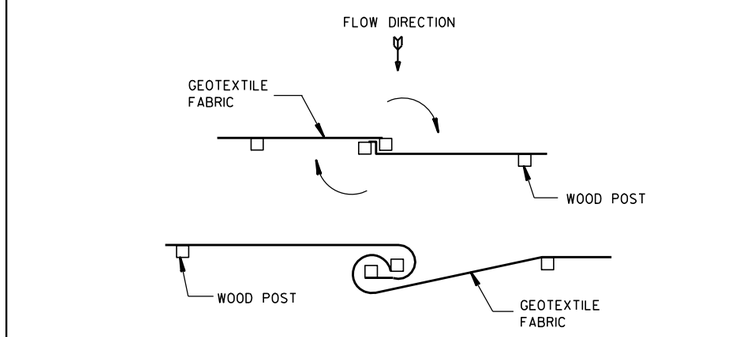
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



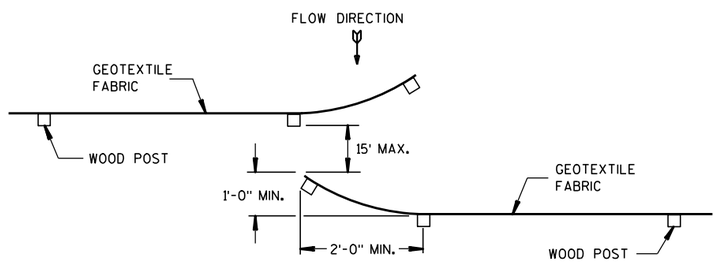
TRENCH DETAIL



SILT FENCE

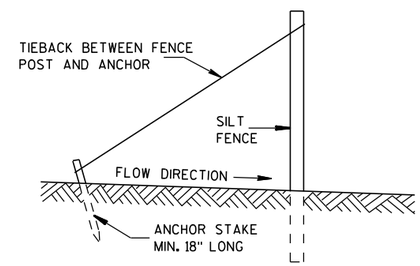


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

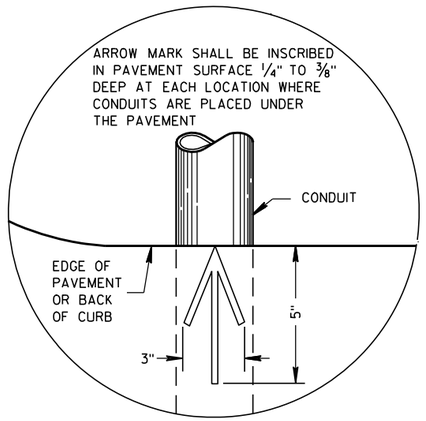
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

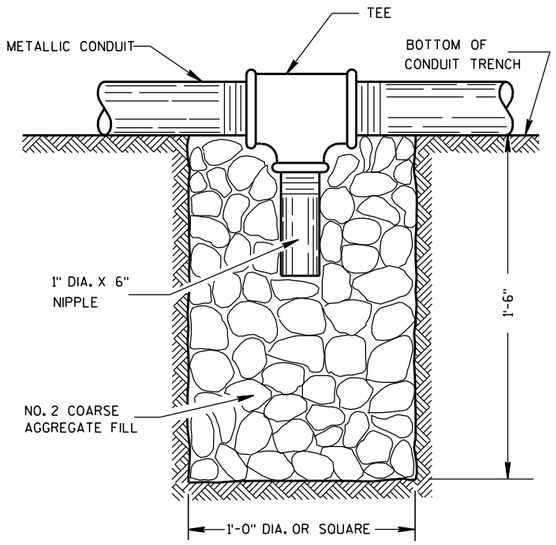
6

S.D.D. 8 E 9-6



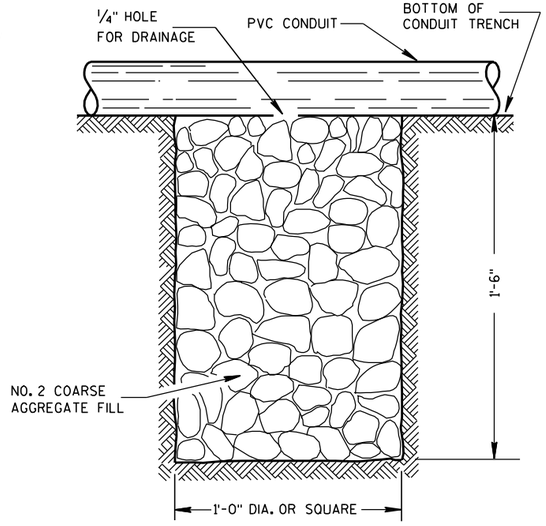
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

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.

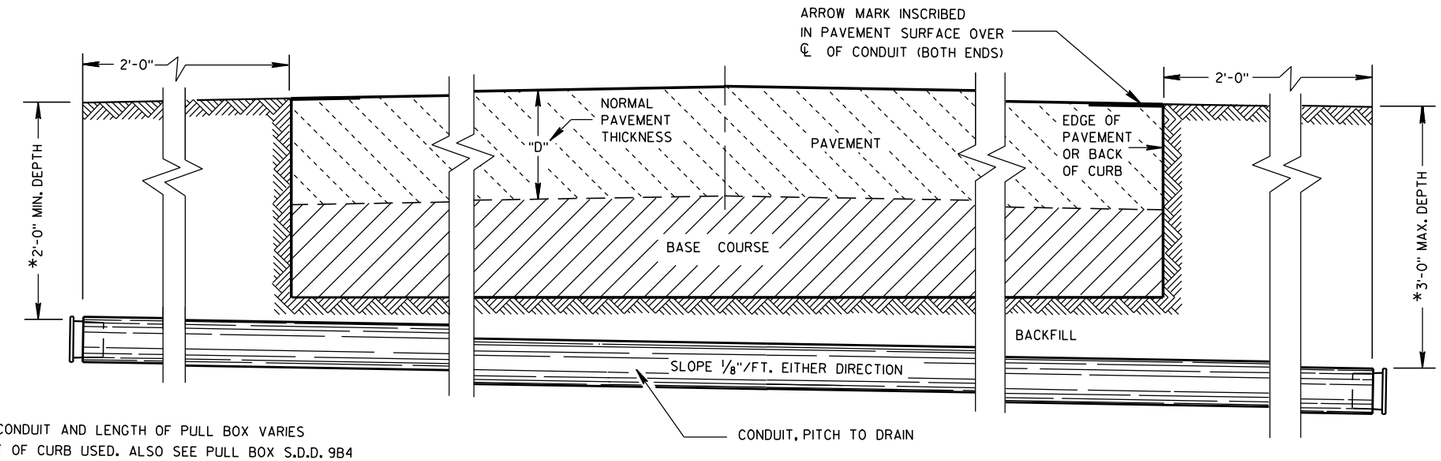
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.).

POLY ROPE OR A PULL 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.



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

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03 DATE

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

187

HWYS

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. THE MECHANICAL CONNECTION (INSIDE AND OUTSIDE) TO THE PULL BOX, SHALL BE TOTALLY AND PERMANENTLY SEALED WITH A SILICONE OR RUBBERIZED CAULKING COMPOUND AS APPROVED BY THE ENGINEER.

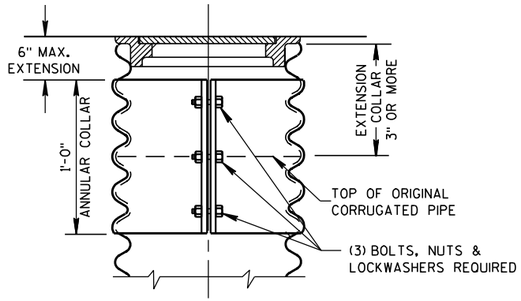
GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

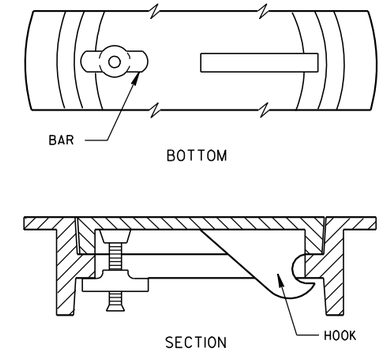
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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.

IF PULL BOX EQUIPMENT GROUNDING IS REQUIRED USING AN EQUIPMENT GROUNDING ELECTRODE IN EACH PULL BOX, THE EQUIPMENT GROUNDING ELECTRODE SHALL BE 5/8" X 8'-0", COPPERCLAD AND BE EXOTHERMICALLY WELDED TO A #4 AWG, COPPER, STRANDED WIRE (BARE OR GREEN INSULATED). THE #4 AWG WIRE SHALL BE 4 FEET IN LENGTH, NEATLY COILED, TAPED AND AVAILABLE FOR USE WHEN REQUIRED.

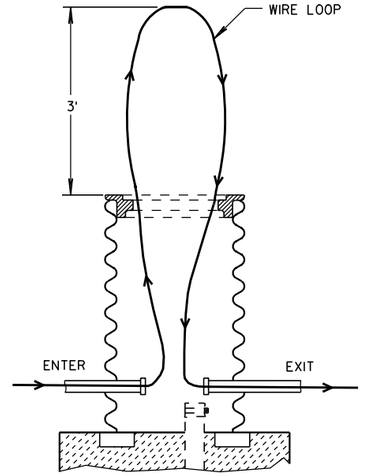


CORRUGATED PIPE EXTENDER

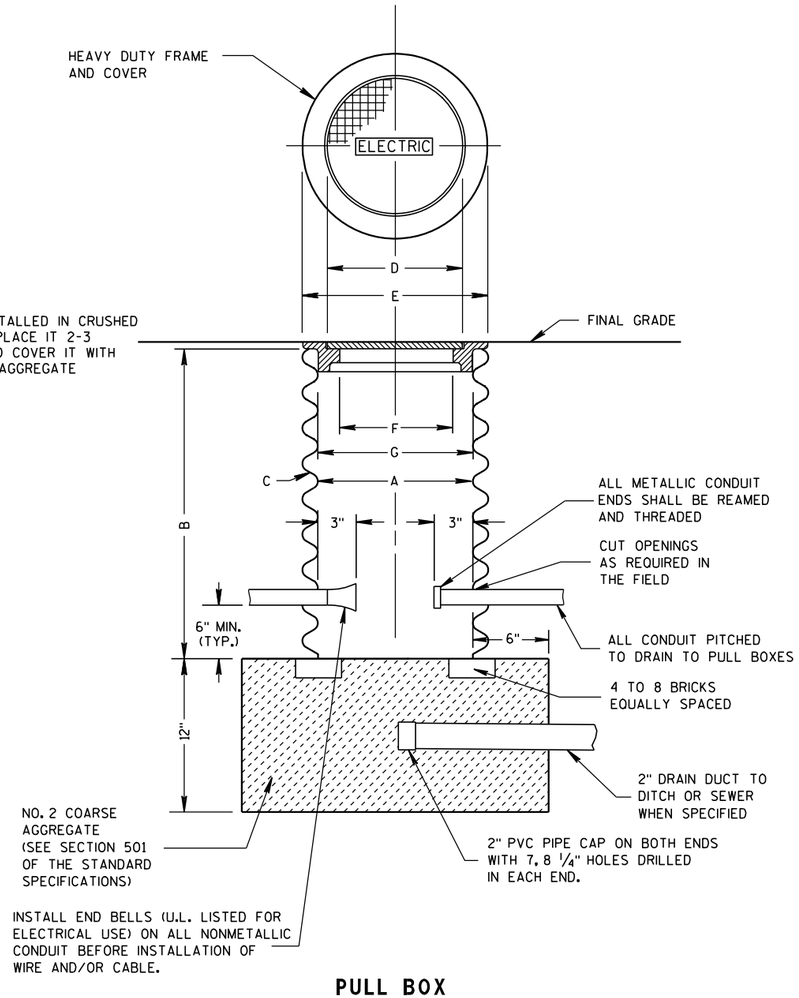


ALTERNATE COVER (LOCKING)

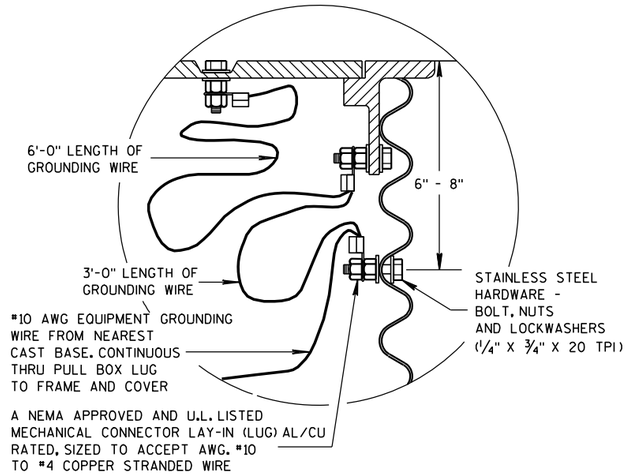
TIGHTENING BAR TYPE



MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX



PULL BOX



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/27/06 DATE

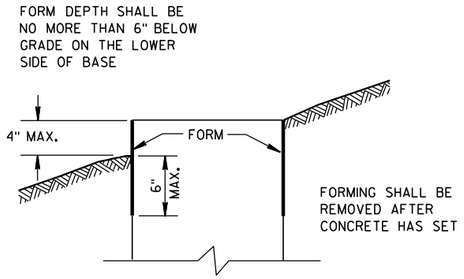
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI

HWYS

FHWA

6

S.D.D. 9 B 4-9



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

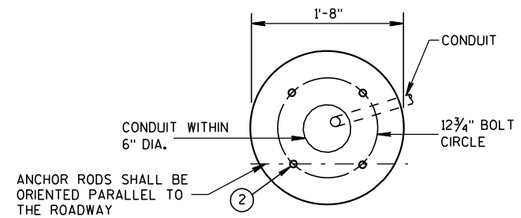
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

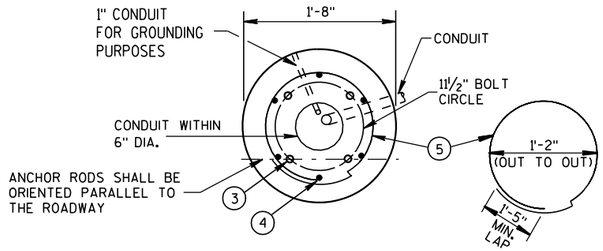
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

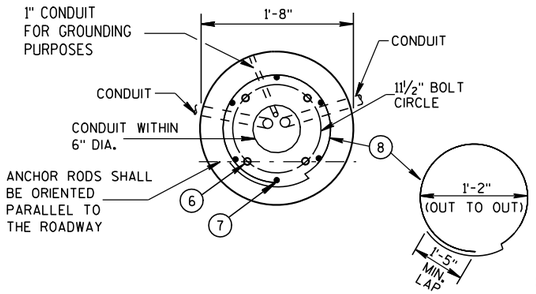
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

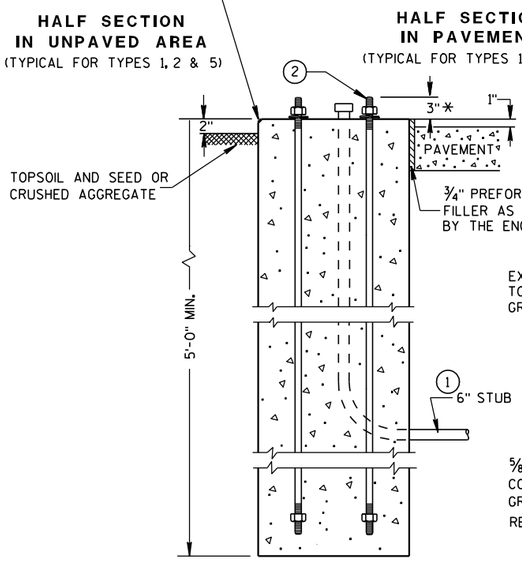






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

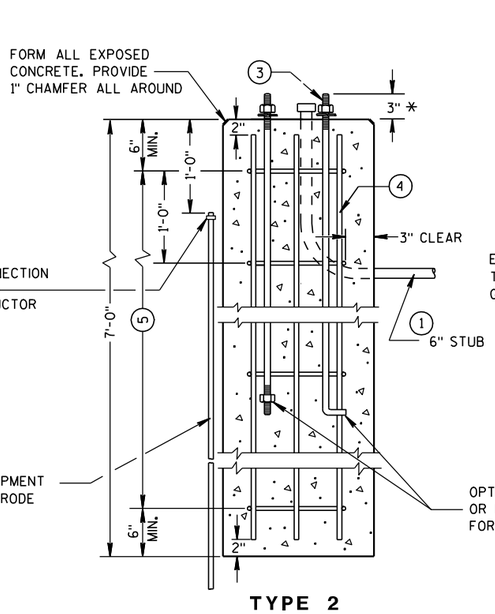
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2 & 5)

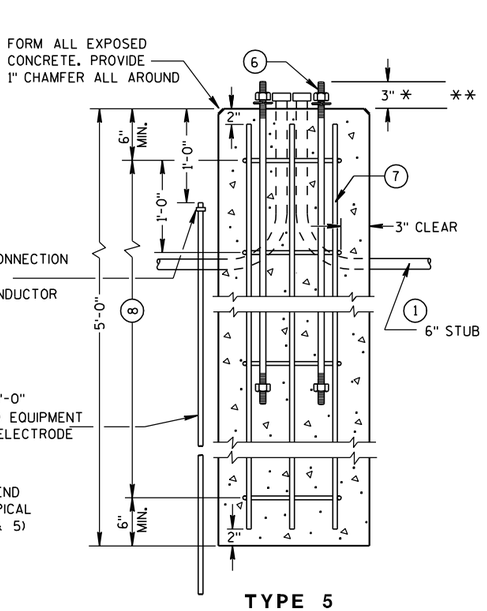
TYPE 1

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2

FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/3/10 — DATE
/S/ Joanna L. Rush — STATE ELECTRICAL ENGI
189
HWYS
FHWA

6
S.D.D. 9 C 2-6

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

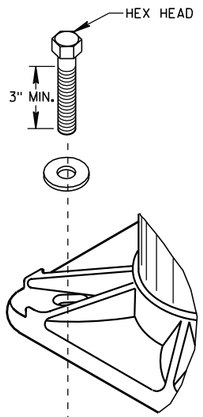
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

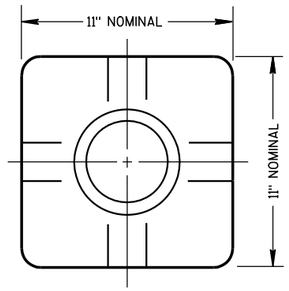
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

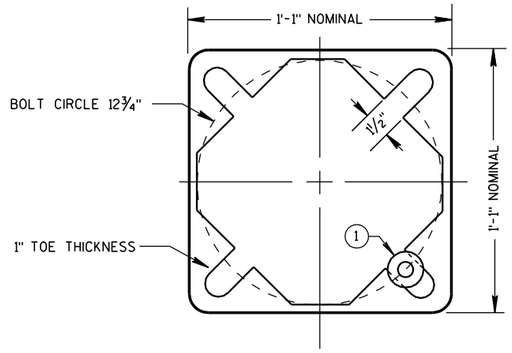
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

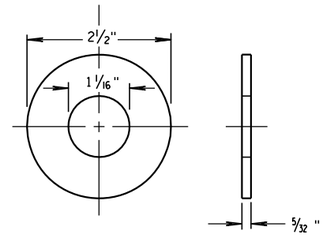




TOP VIEW
(PEDESTAL BASE)

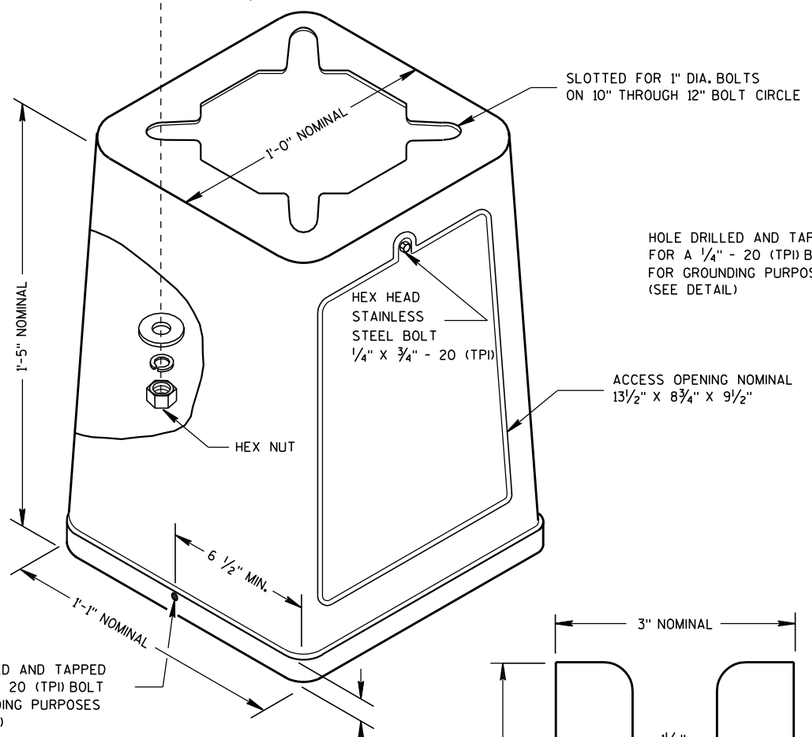


BOTTOM VIEW
(PEDESTAL BASE)

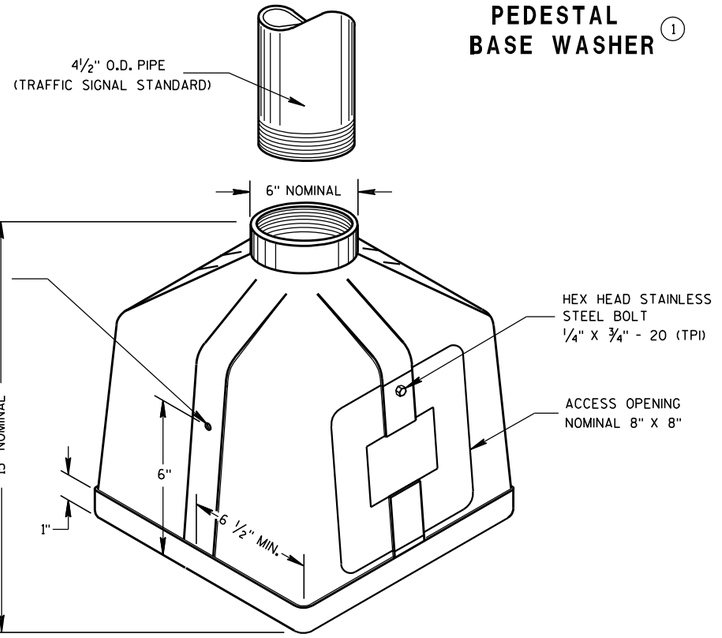


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

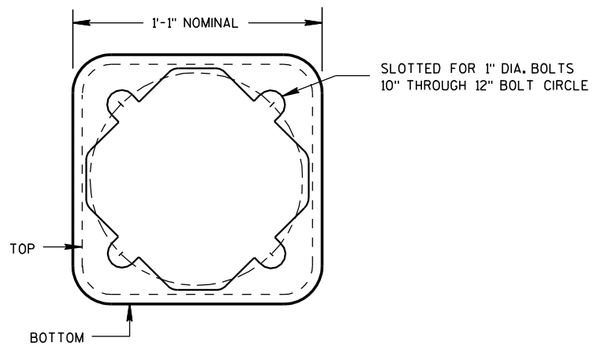


ISOMETRIC VIEW

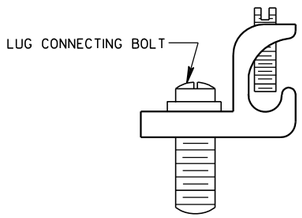


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

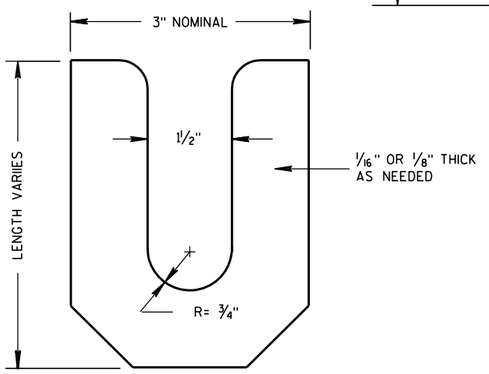


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

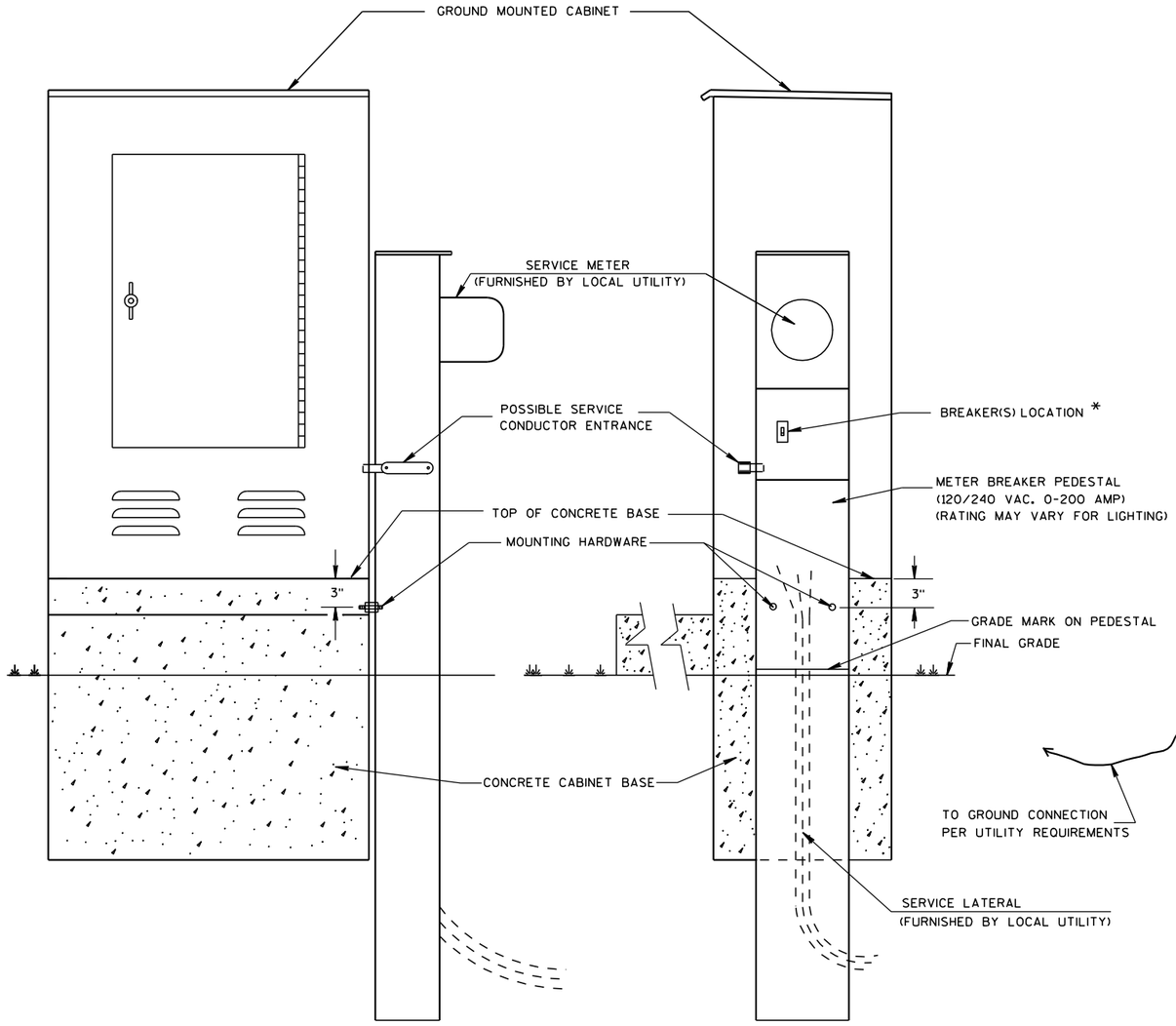
APPROVED
10/27/09 — DATE
/S/ Joanna L. Rich — STATE ELECTRICAL ENGI
190 — HWYS
FHWA

6

S.D.D. 9 C 3-3

6

S.D.D. 9 C 3-3



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

6

S.D.D. 9 D 1-4

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

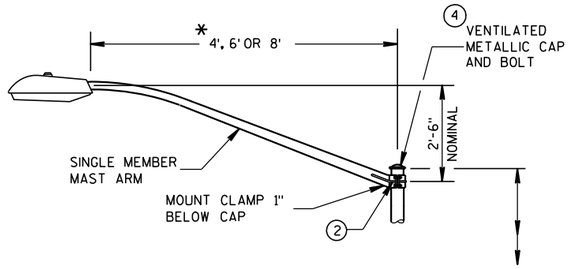
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

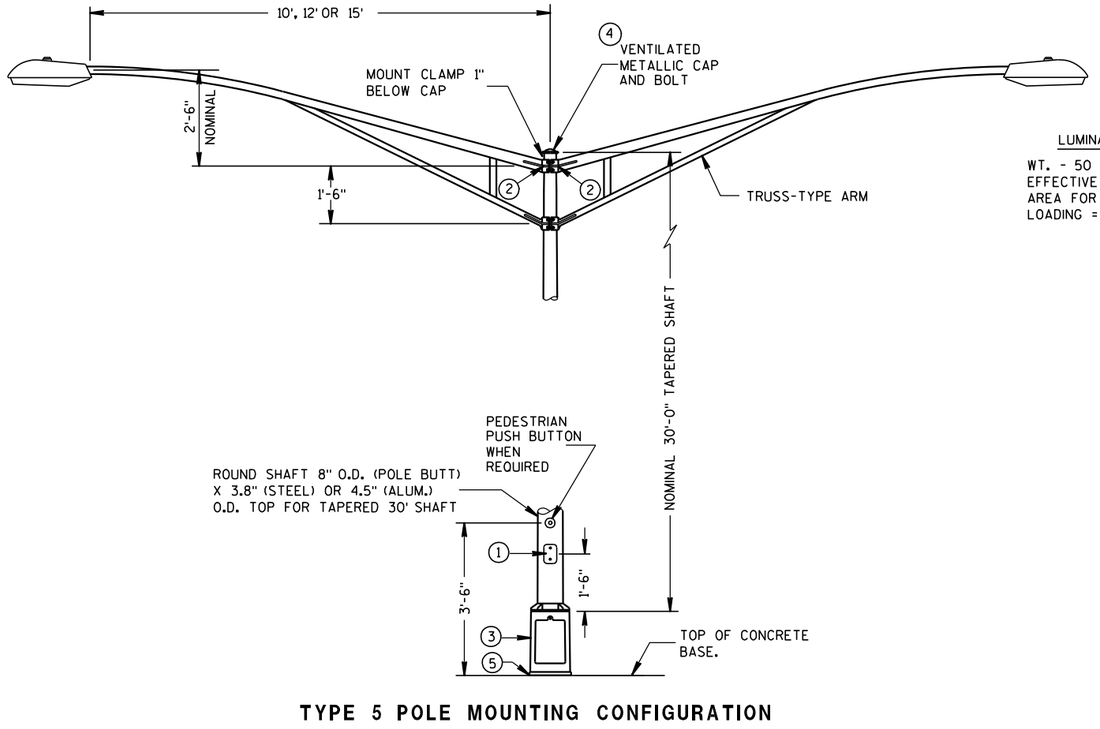
APPROVED
10/27/09 DATE
/S/ Joanna L. Bush STATE ELECTRICAL ENGI
191
HWYS
FHWA

6

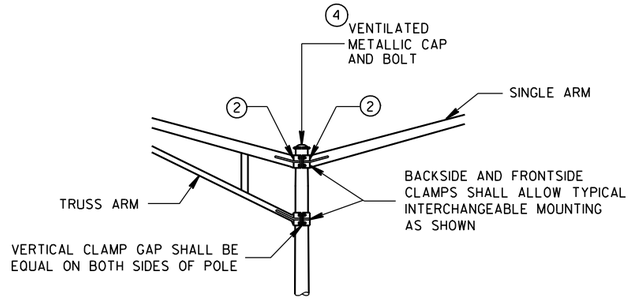
S.D.D. 9 D 1-4

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

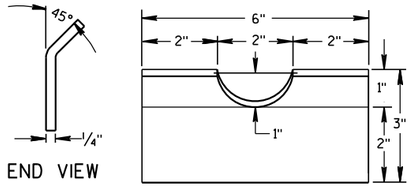
WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

1. 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
2. GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.
3. CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
4. FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
5. SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

POLE MONTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)

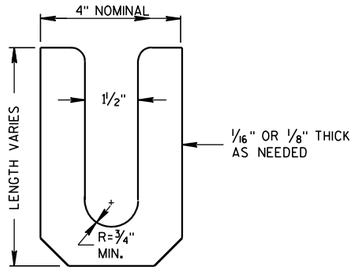
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 9 E 1-11d



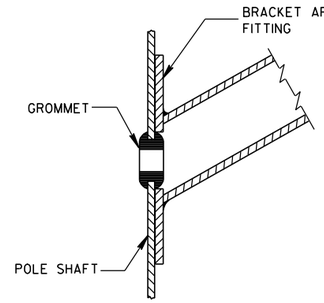
RECTANGULAR CLAMP SHIM

(4 TO A SET)

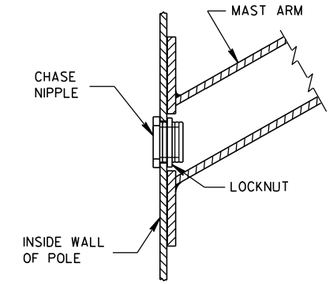


LEVELING SHIM (15)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

(10.) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11.) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

(12.) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13.) OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)
(6.625" O.D. FOR TROMBONE MAST ARM)

(14.) VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")

SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35", 0.53" OR 0.70".

SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10", 0.25" OR 0.35".

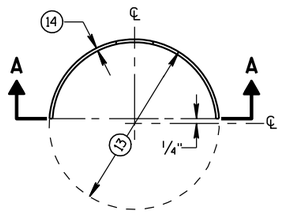
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS SHALL BE 1/4" HIGH AND LEGIBLE.

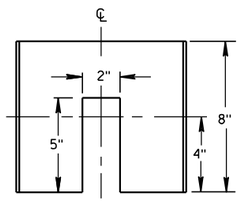
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(15.) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



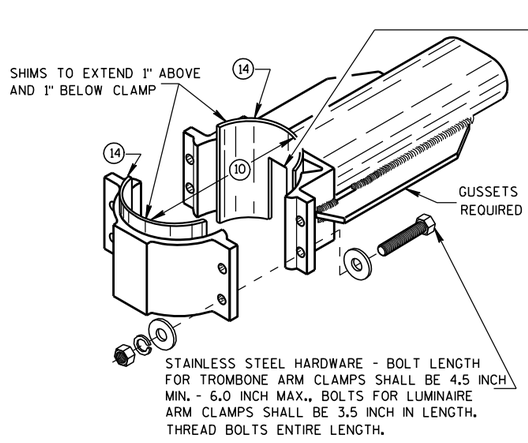
PLAN VIEW



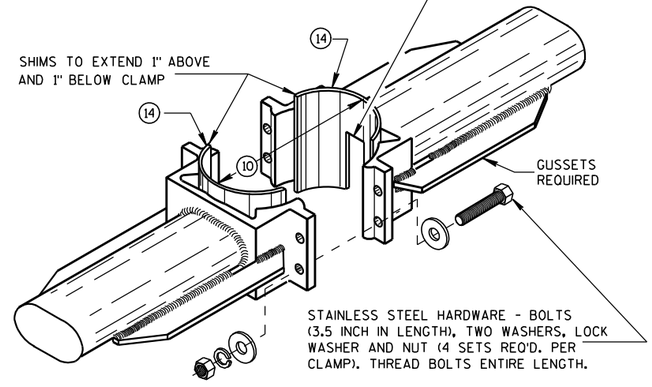
SECTION A-A

CIRCULAR CLAMP SHIM

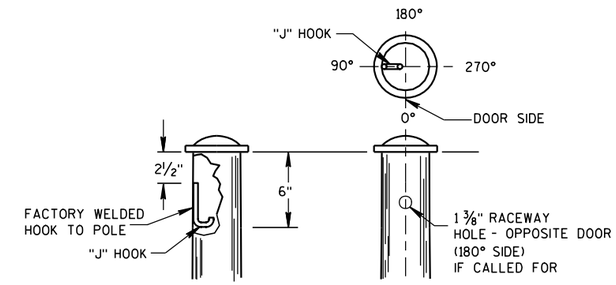
(2 TO A SET)



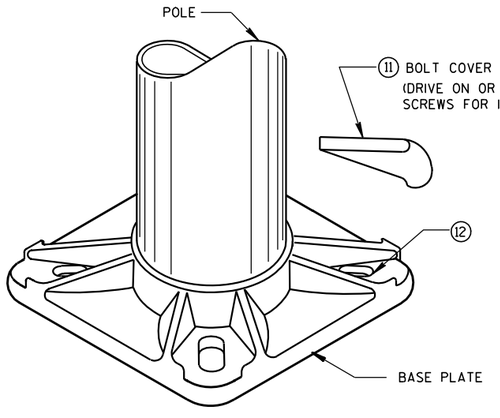
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



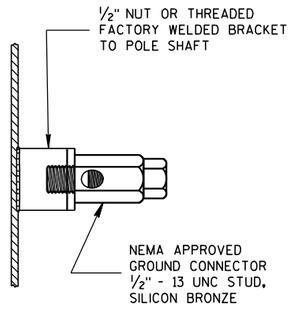
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

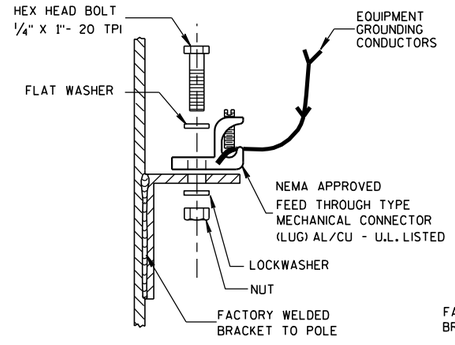


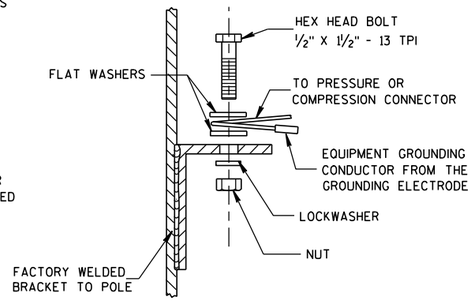
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/11 — DATE

/S/ Thomas J. Goerlinger — STATE ELECTRICAL ENGI

193

HWYS

FHWA

6

S.D.D. 9 E 1-11g

GENERAL NOTES

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

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

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

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

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

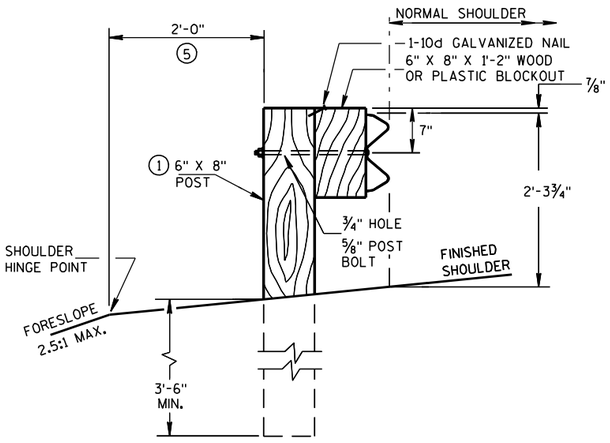
(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

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

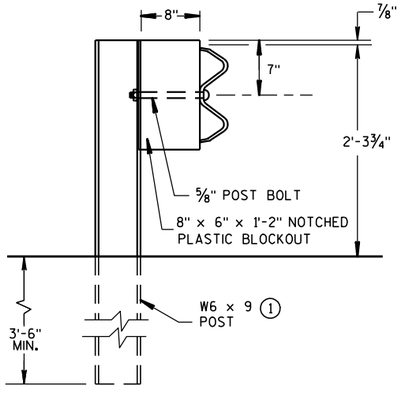
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED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

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

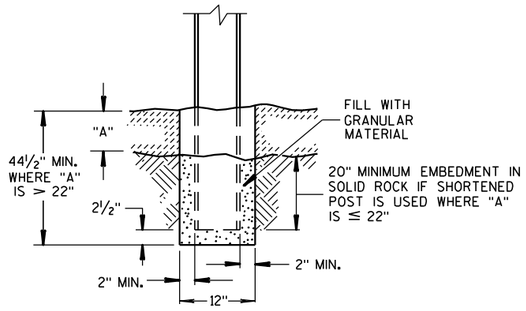
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



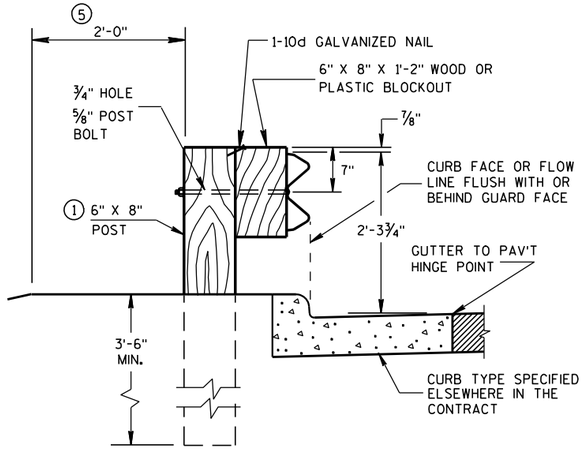
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



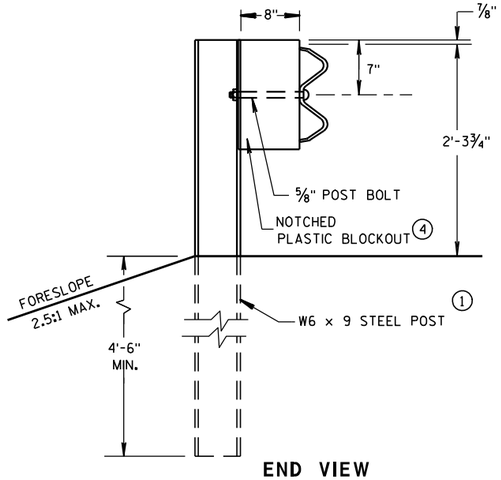
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



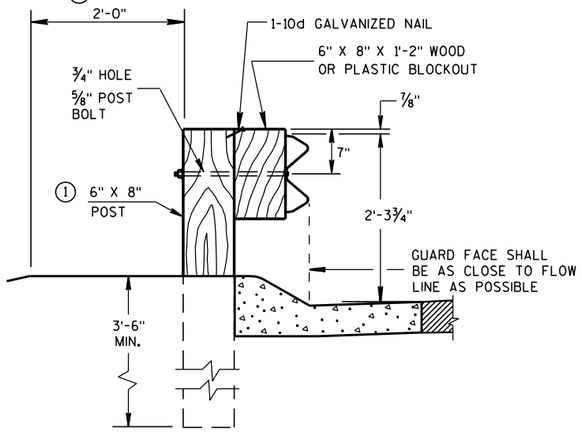
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



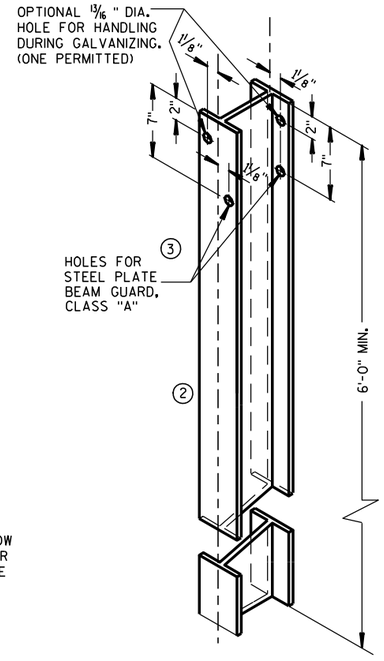
END VIEW
LOCATED ALONG A CURBED ROADWAY



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

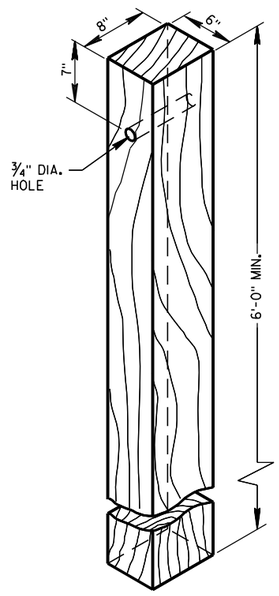


END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

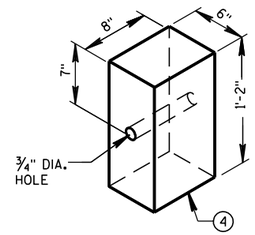


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

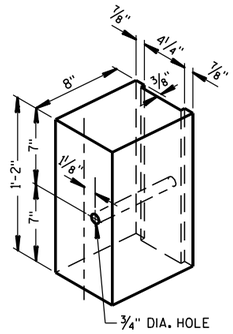
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



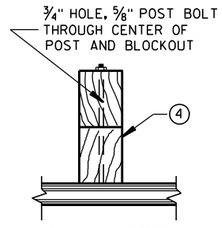
WOOD POST
(6"X8") NOMINAL



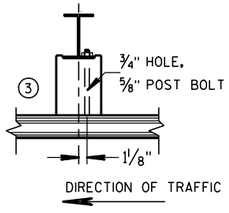
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



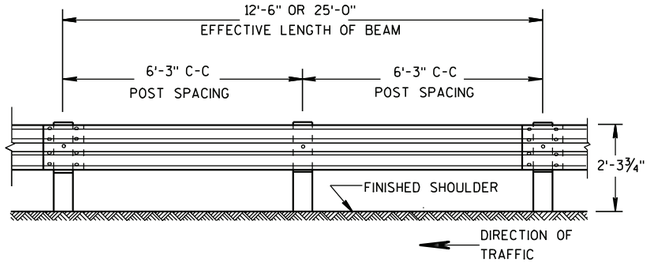
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

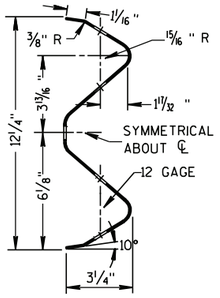
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

6
S.D.D. 14 B 15-7a

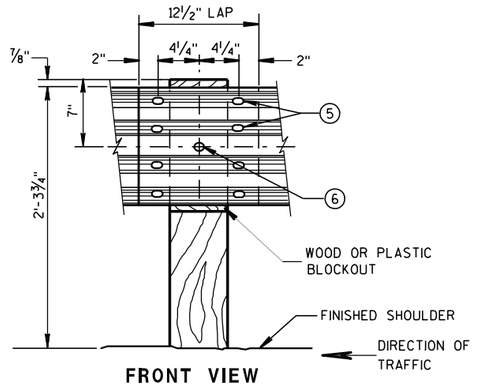


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

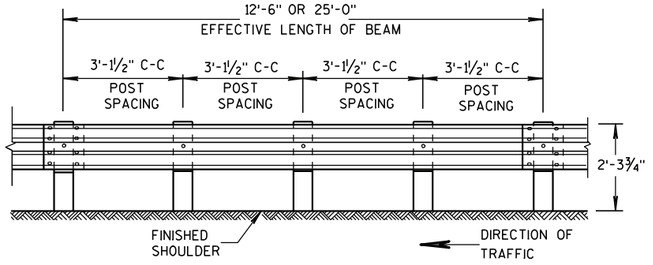


FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

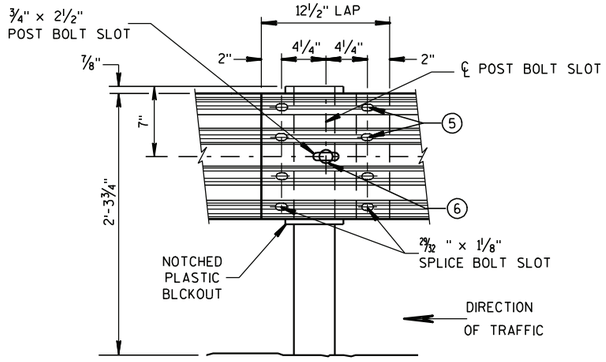
GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 8 - 5/8" ϕ X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
6. 5/8" ϕ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



FRONT VIEW

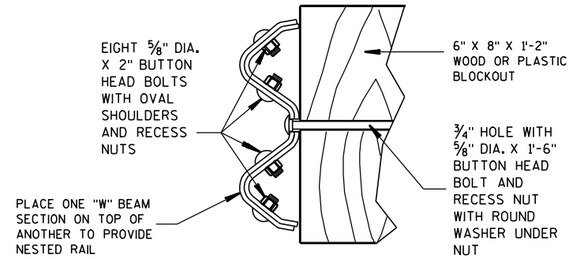
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

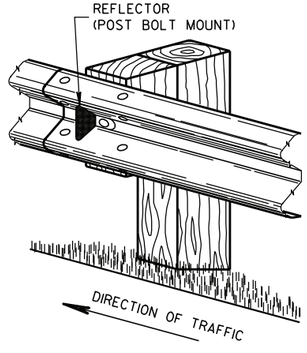


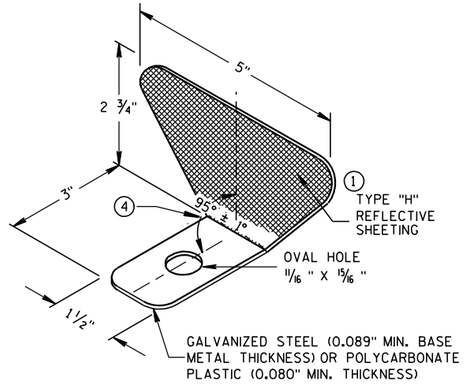
NESTED W BEAM (NW)

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

REFLECTOR SPACING (2)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (3)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 (4)	



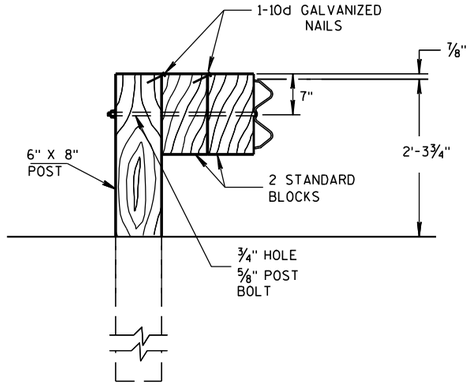


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

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

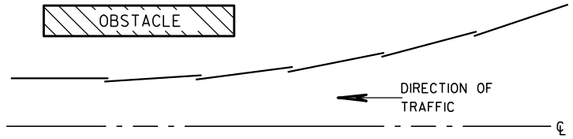
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-7b

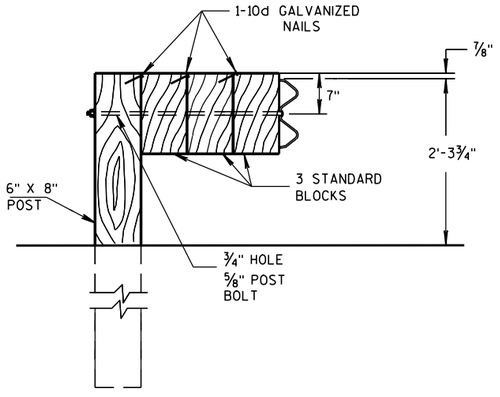


DETAIL FOR DOUBLE BLOCKS

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

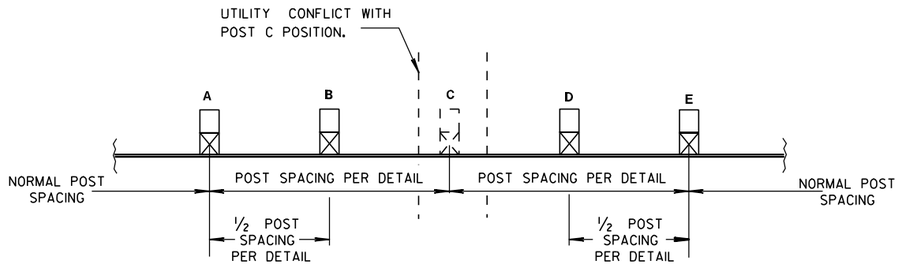


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

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



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

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

DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/11
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

ENT

6

S.D.D. 14 B 15-7c

BILL OF MATERIALS

NOTE NO.	QTY.	DESCRIPTION
(1)	4	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
(2)	**	STEEL TUBE: OPTION 1 - QUANITY OF 4 TS 8" X 6" X 0.188", 4'-6" LONG OR OPTION 2 - QUANITY OF 2 TS 8" X 6" X 0.188", 6'-0" AND 2 TS 8" X 6" X 0.188", 4'-6" LONG
(3)	2	SOIL PLATE: 2'-0" X 1'-6" X ¼" **
(4)	4	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
(5)	6	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
(6)	1	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
(7)	1	BEARING PLATE
(8)	1	BCT CABLE ASSEMBLY
(9)	1	CABLE ANCHOR BOX
(10)	1	STRUT & YOKE
(11)	1	STEEL PLATE BEAM, END PANEL 12 GA. 13'-6½" LONG FOR SKT-350, ET-2000 AND ET-2000 PLUS
(12)	3	STEEL PLATE BEAM: 12 GA. 13'-6½"
(13)	1	ET-2000/ET-2000 PLUS GUARDRAIL EXTRUDER OR SKT-350 IMPACT HEAD: AS FURNISHED BY MANUFACTURER
(14)	1	REFLECTIVE SHEETING TYPE H: 18" X 18"
(15)	1	E.A.T. MARKER POST

GENERAL NOTES

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

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

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

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

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

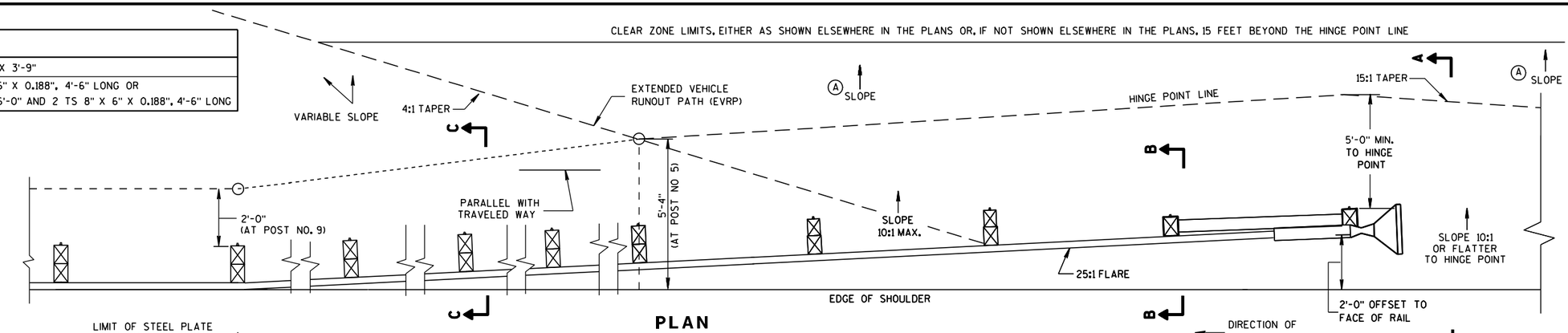
(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

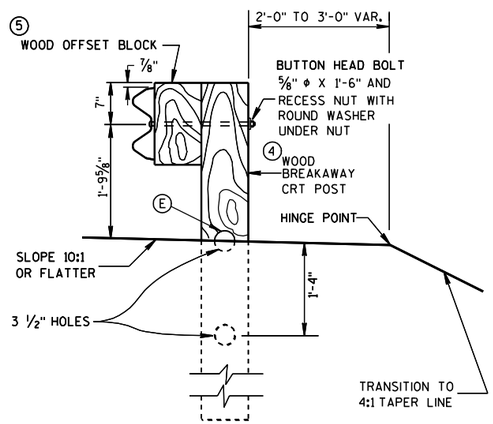
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

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

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

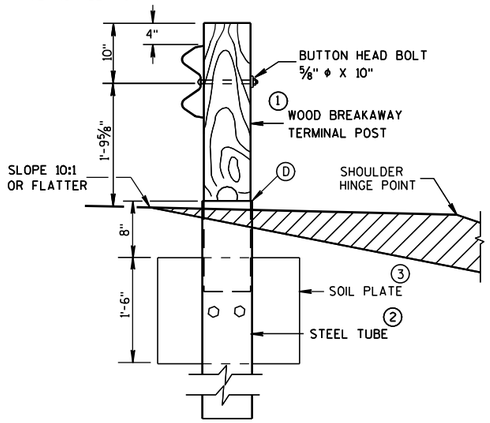
** SDD SHOWS 4 - 54 INCH STEEL TUBES WITH SOIL PLATES INSTALLED ON POST 1 AND POST 2. POST 3 AND 4 DO NOT NEED SOIL PLATES. AN ALTERNATIVE INSTALLATION WOULD CONSIST OF 2 - 72 INCH STEEL TUBES ON POST 1 AND POST 2 AND 54 INCH SOIL TUBES ON POSTS 3 AND 4. THE ALTERNATIVE INSTALLATION DOES NOT REQUIRE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





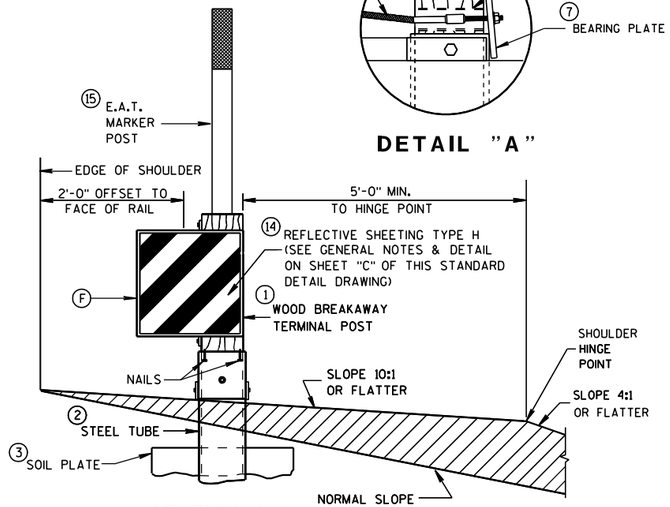
SECTION C-C

TYPICAL AT POST NOS. 6, 8



SECTION B-B

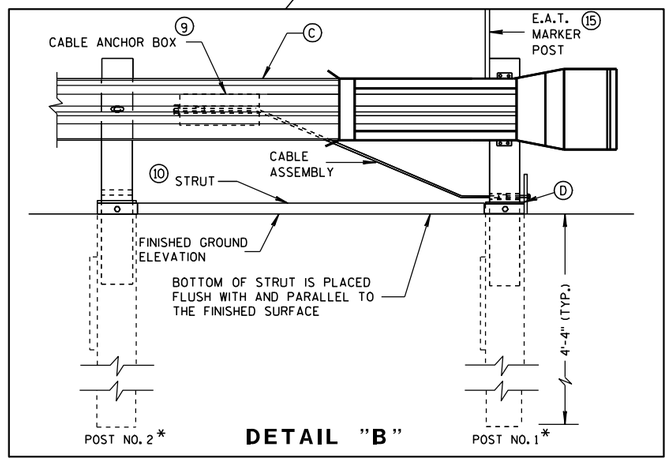
TYPICAL AT POST NO. 2*



DETAIL "A"

SECTION A-A

TYPICAL AT POST NO. 1*

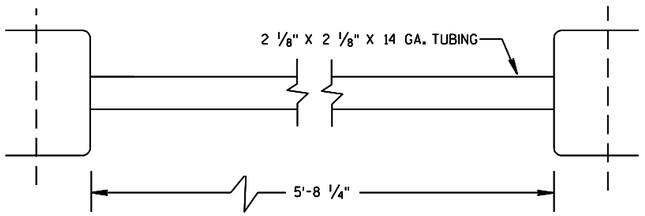


DETAIL "B"

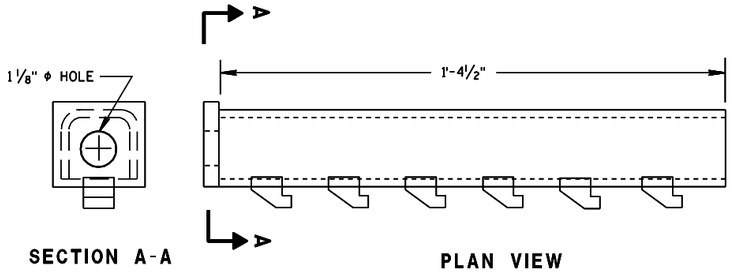
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

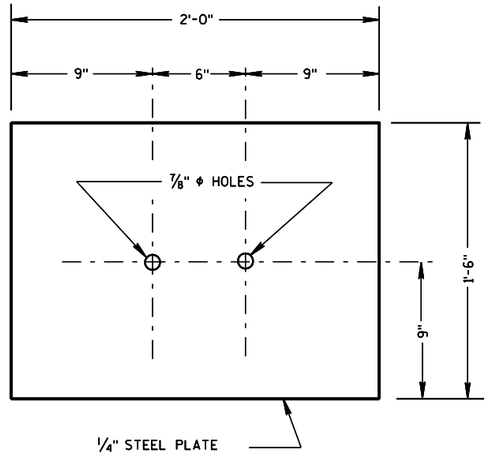
6
S.D.D. 14 B 24-7a



⑩ STRUT DETAIL (SKT-350)

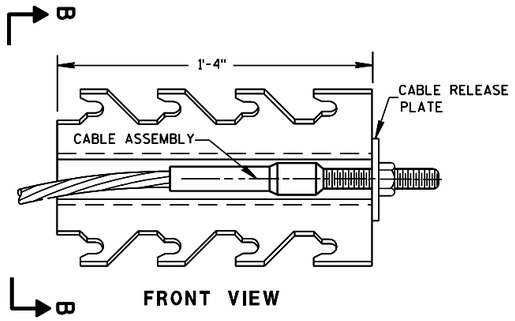


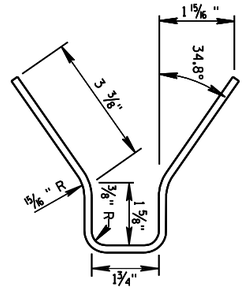
⑨ CABLE ANCHOR BOX (ET-2000/ET-2000 PLUS)



③ SOIL PLATE

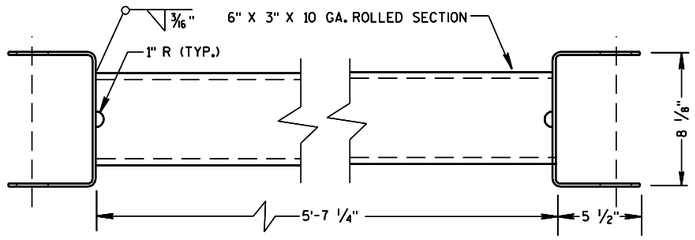
(SKT-350, ET-2000/ET-2000 PLUS)





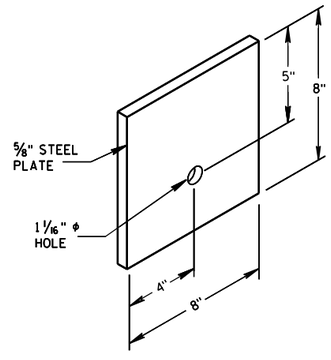
⑨ CABLE ANCHOR BOX (SKT-350)

(SKT-350)



⑩ STRUT DETAIL (ET-2000/ET-2000 PLUS)

(ET-2000/ET-2000 PLUS)



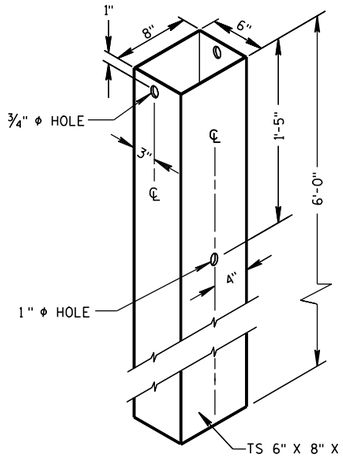
⑦ STEEL BEARING PLATE

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

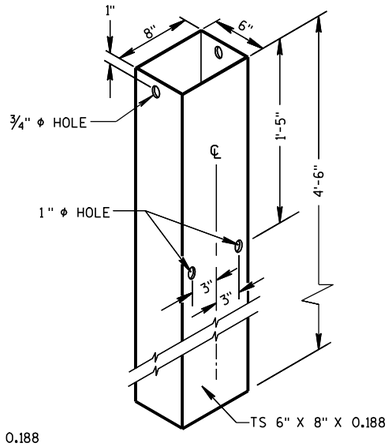
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

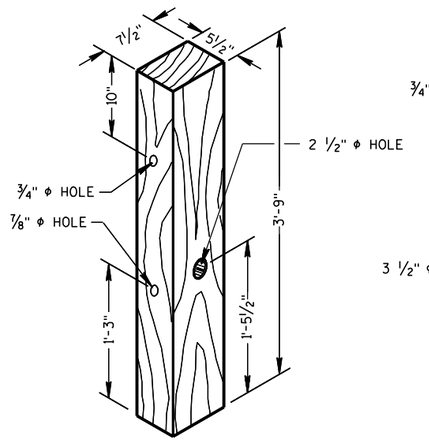
6
S.D.D. 14 B 24-7b



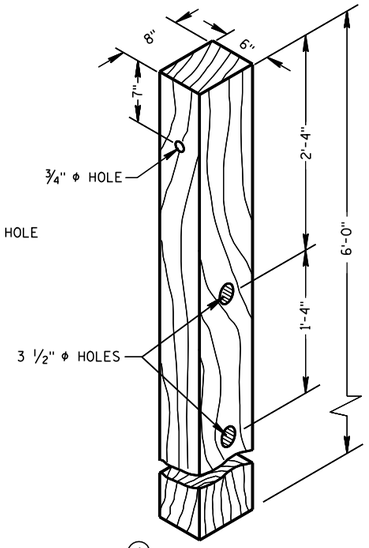
② 72" STEEL TUBE
(POSTS NO. 1-4



② 54" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST
(POSTS NO. 1-4



④ CRT POST
(POSTS NO'S 5-8

WOOD BREAKAWAY POSTS

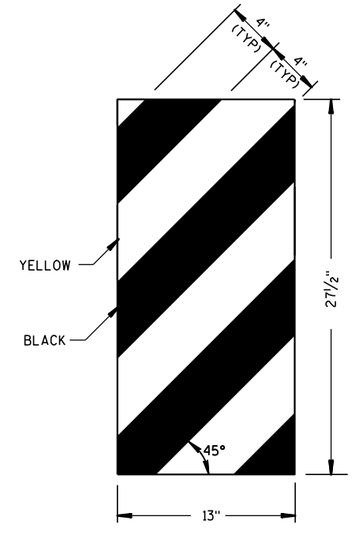
GENERAL NOTES

STEEL PLATE BEAM GUARD, ENERGY ABSORBING TERMINAL SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH, WHICH SHALL INCLUDE HARDWARE, STEEL PLATE BEAM GUARD, POSTS, REFLECTIVE SHEETING AND INSTALLATION AS SHOWN.

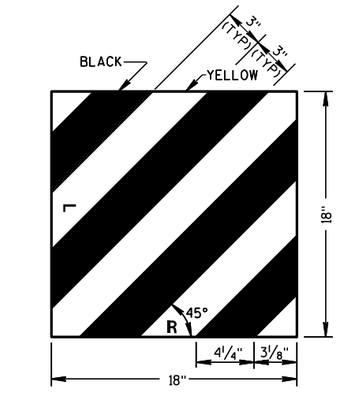
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH,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

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

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

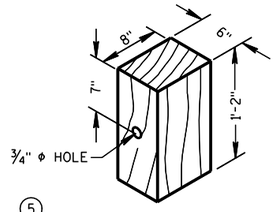


ET-2000 PLUS ONLY

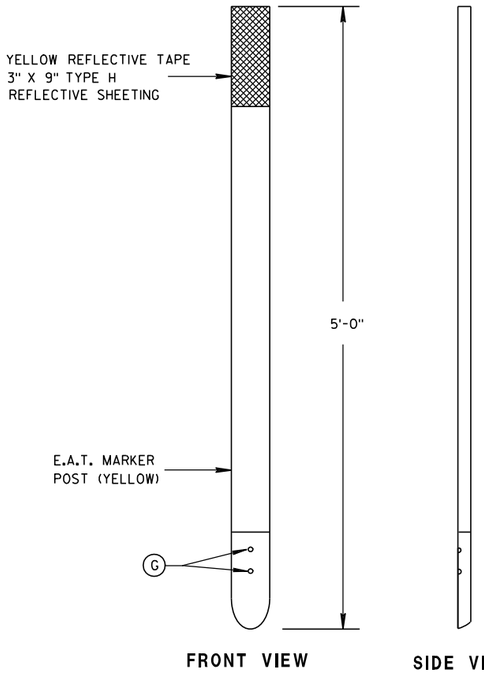


ET-2000 AND SKT-350

⑭ REFLECTIVE SHEETING DETAILS

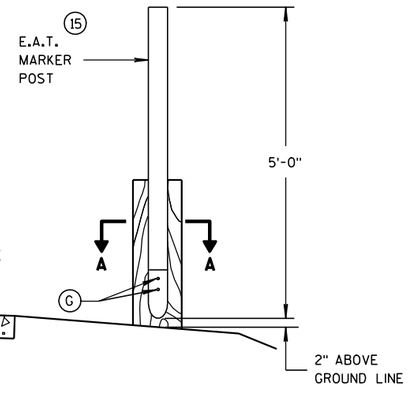


⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

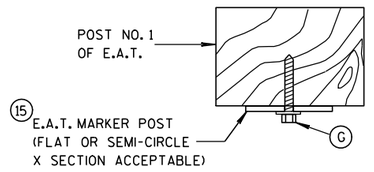


FRONT VIEW SIDE VIEW

⑮ E.A.T. MARKER POST



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



SECTION A-A

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-12-10
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

199

6

S.D.D. 14 B 24-7c

6

S.D.D. 14 B 24-7c

GENERAL NOTES

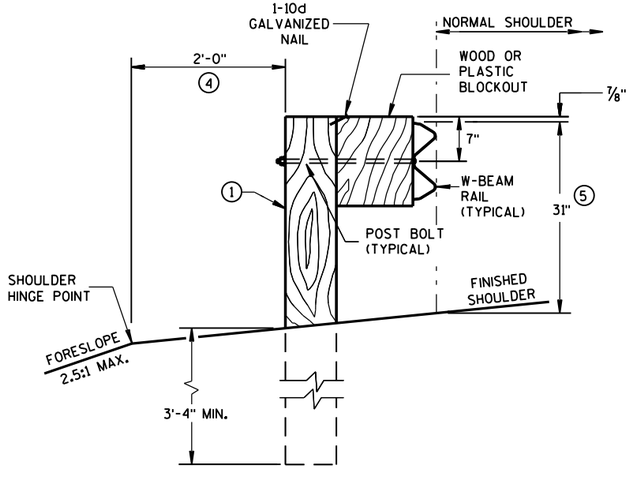
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

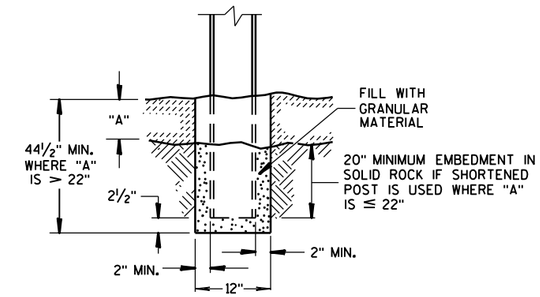
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".



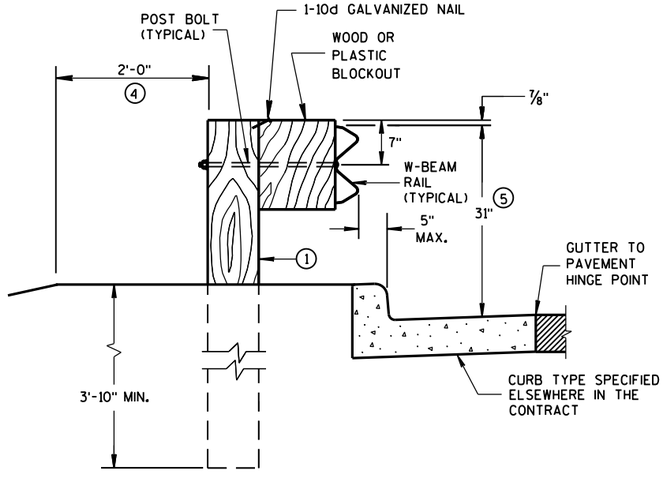
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



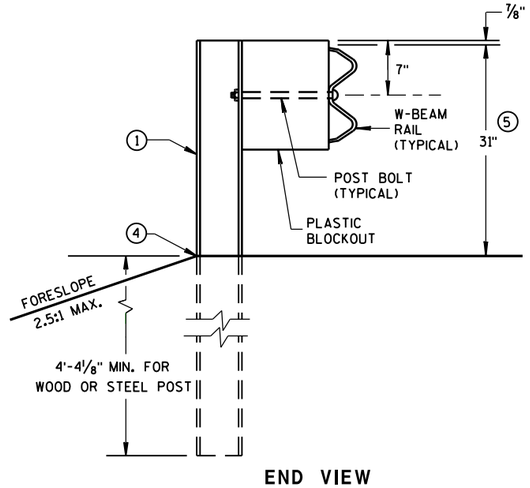
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



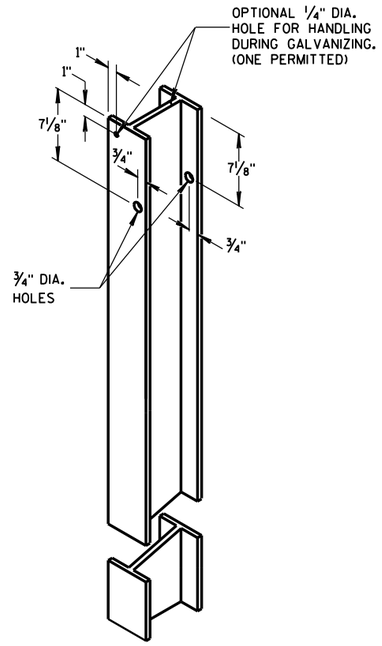
END VIEW

LOCATED ALONG A CURBED ROADWAY

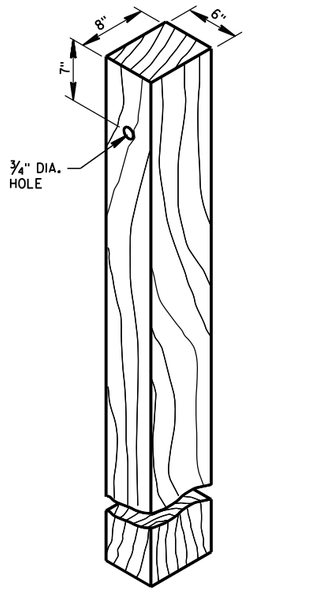


END VIEW

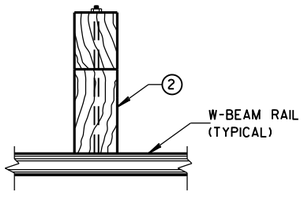
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



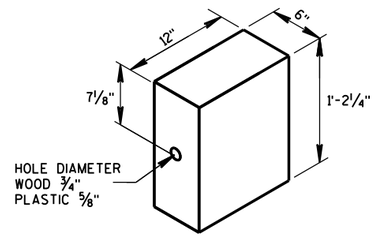
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



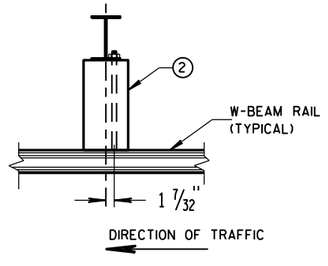
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

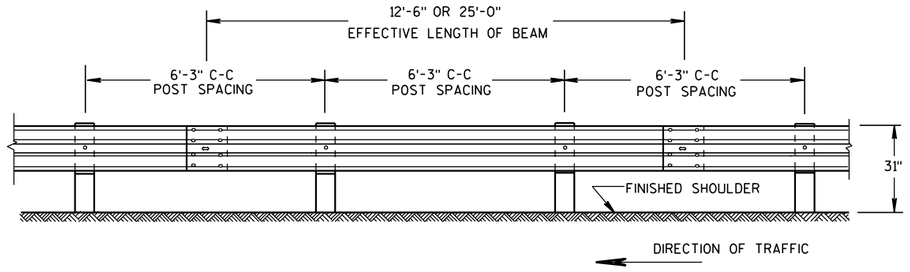


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

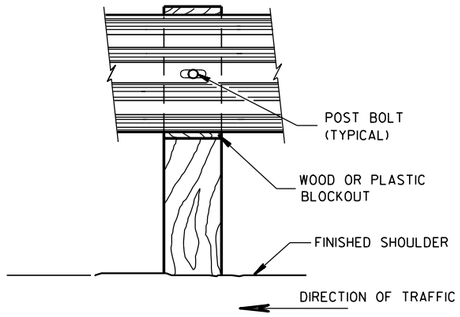
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



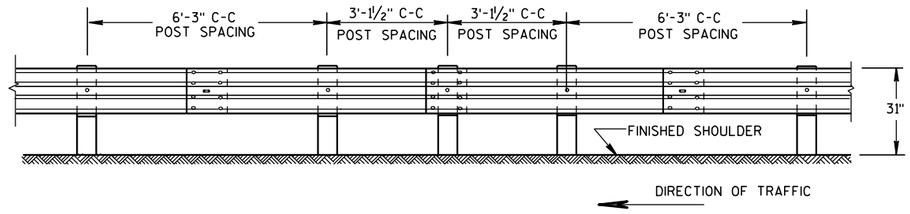
FRONT VIEW AT WOOD POST

GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

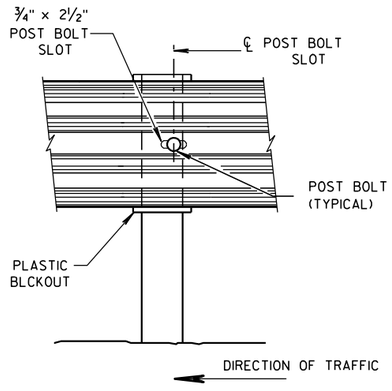
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

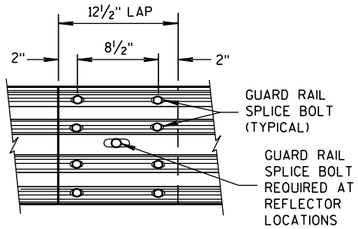


FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

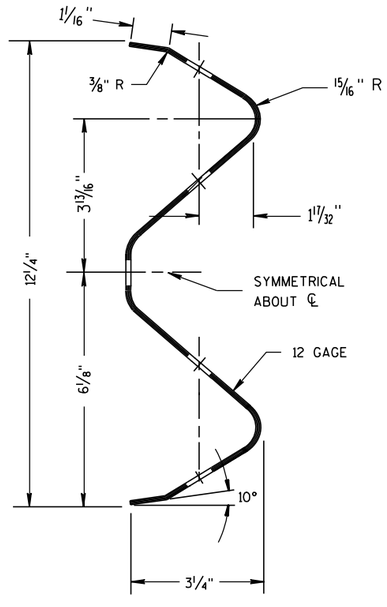


FRONT VIEW AT STEEL POST

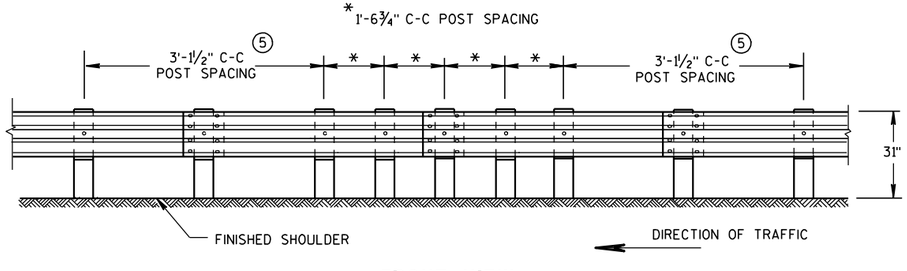


FRONT VIEW

MID-SPAN BEAM SPLICE

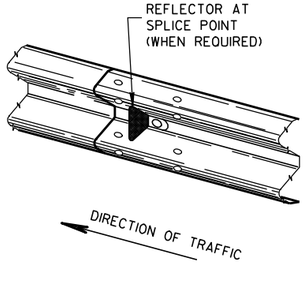


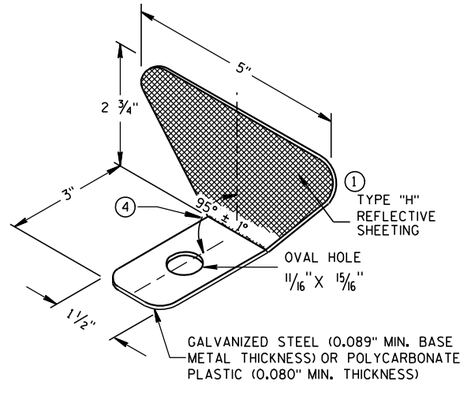
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

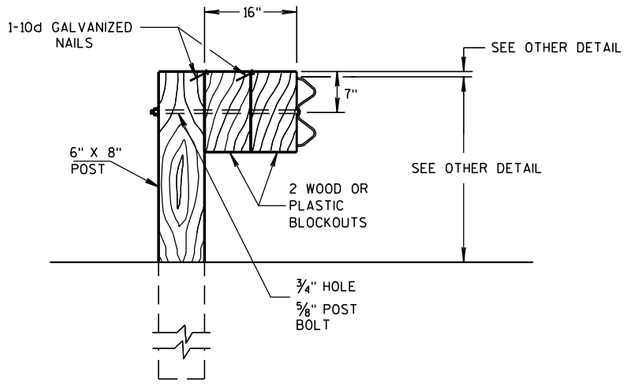
REFLECTOR SPACING ②

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 ③	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 ④	3
	> 200'	100' C-C	2	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

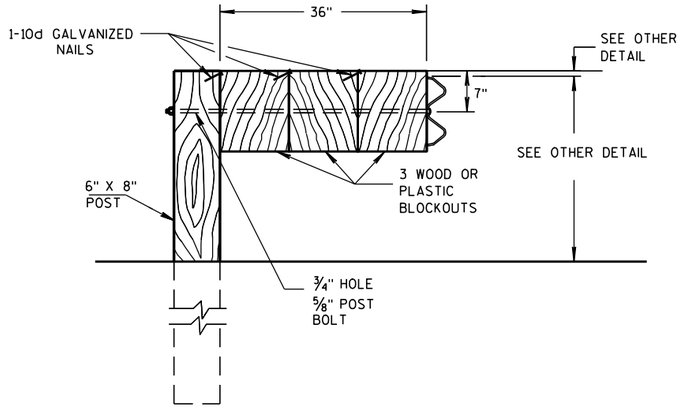
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 42-2b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

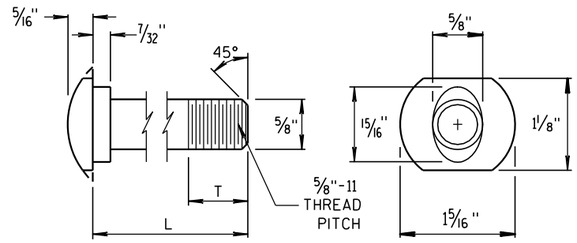


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

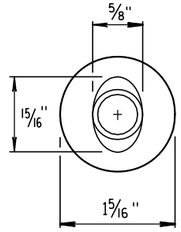
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

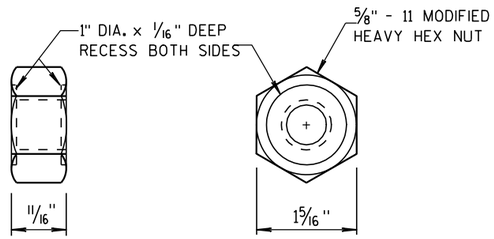


POST BOLT TABLE

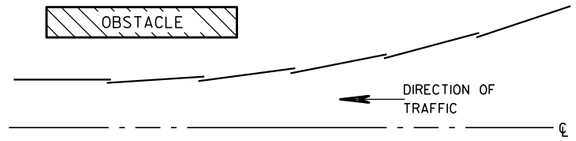
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

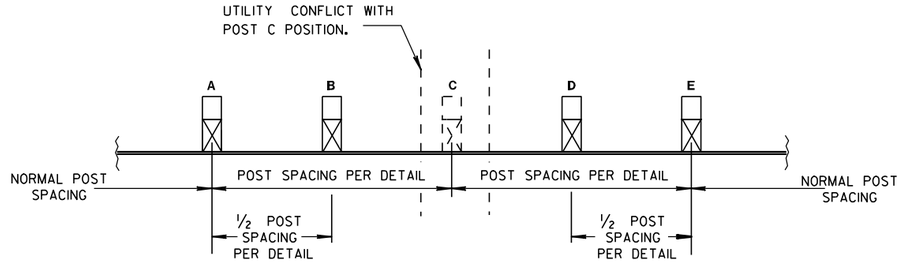


POST BOLT AND RECESS NUT

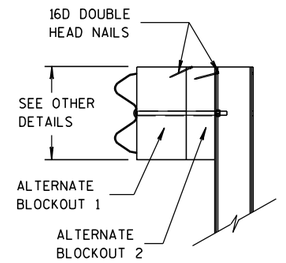


PLAN VIEW

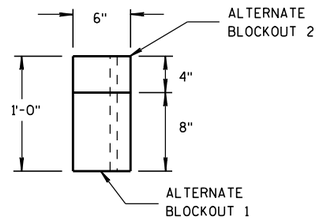
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

ENT

6

S.D.D. 14 B 42-2c

6

S.D.D. 14 B 42-2c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

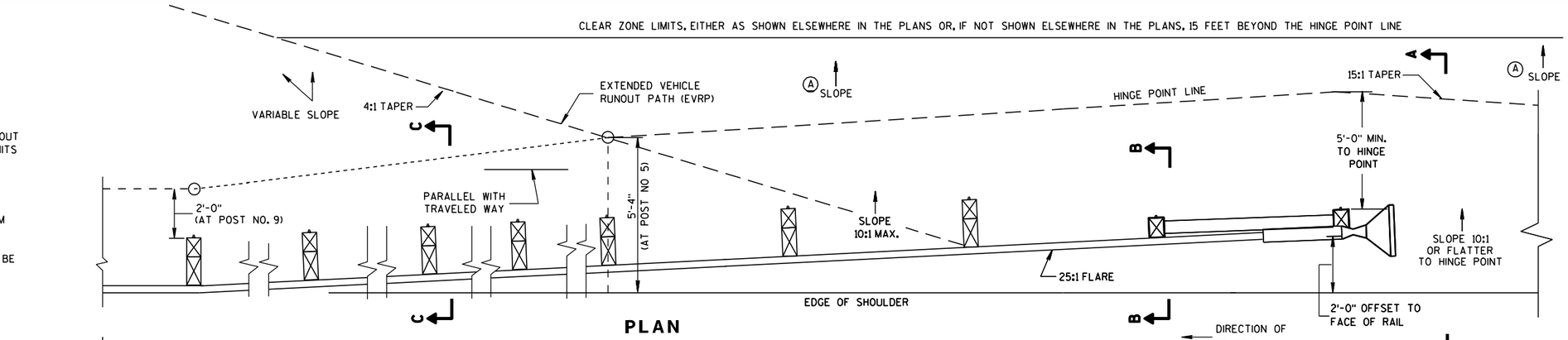
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

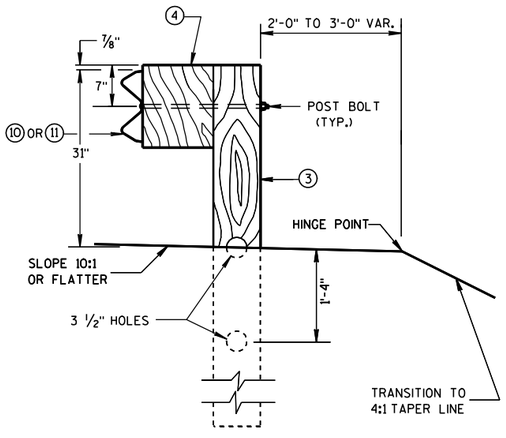
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

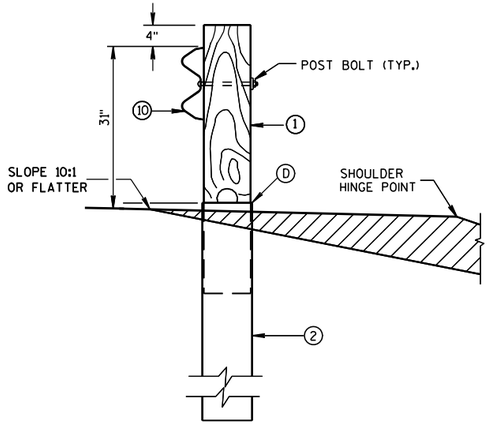
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

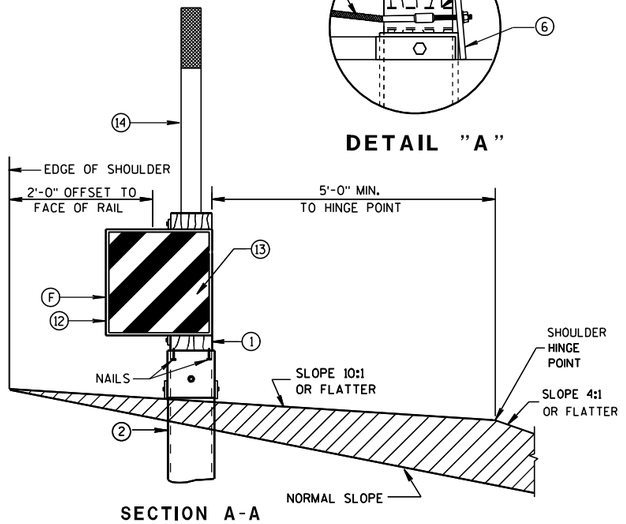




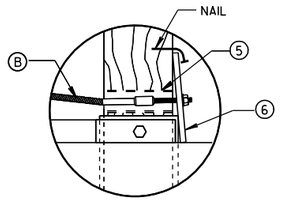
SECTION C-C
TYPICAL AT POST NOS. 3-9



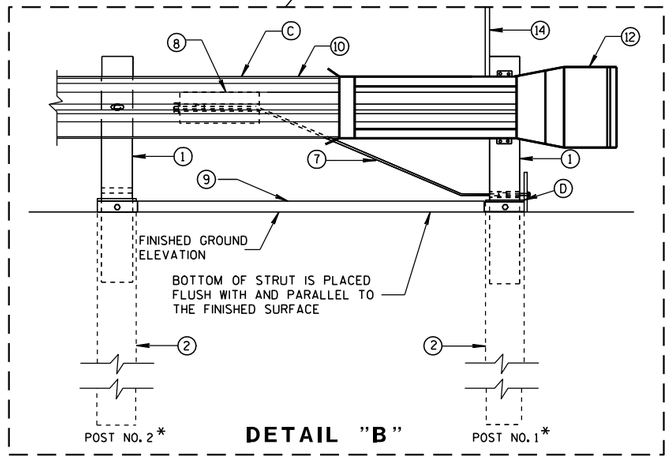
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



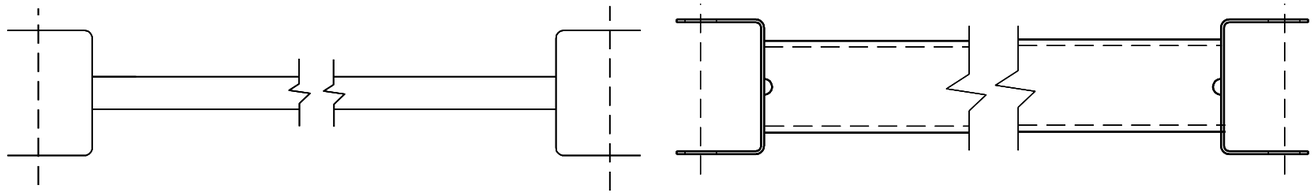
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 14 B 44-1a

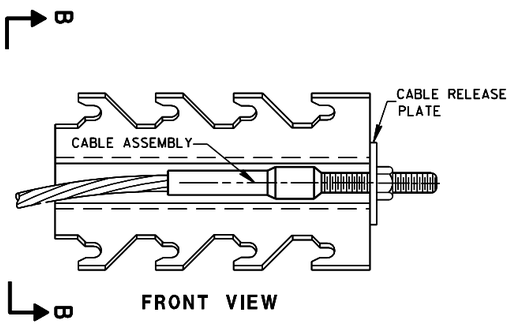
6



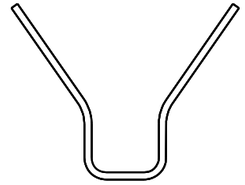
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

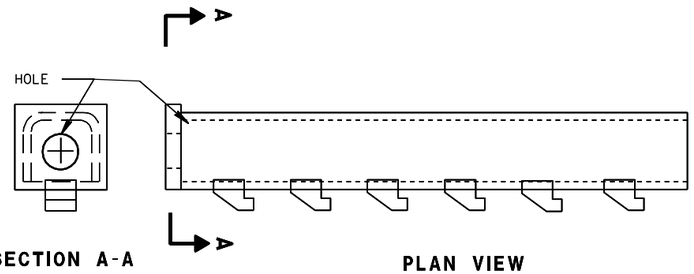
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



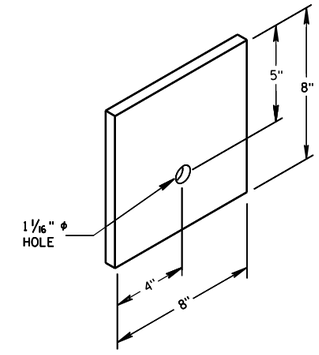
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



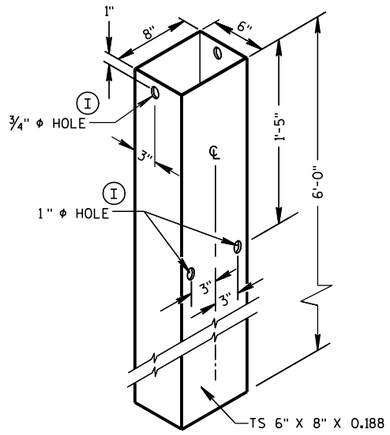
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

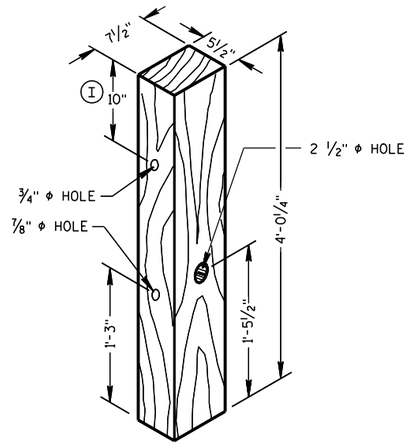
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1b

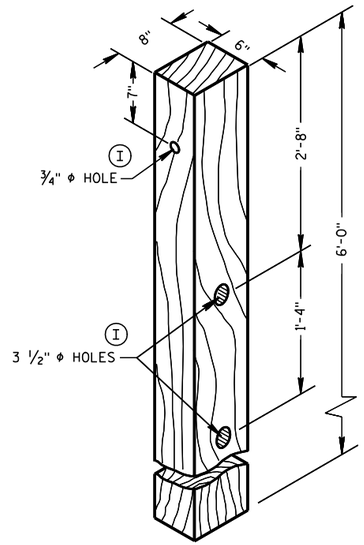


FOUNDATION TUBE (2)



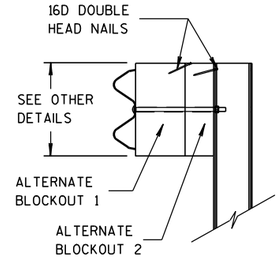
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

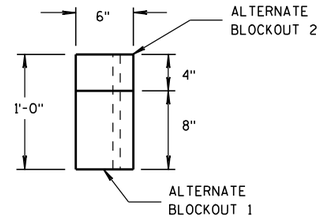


POSTS NUMBER 3-9

WOOD CRT POST (3)

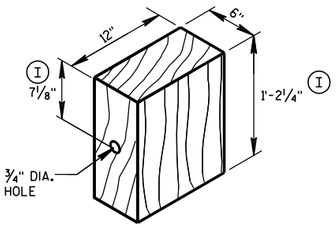


SIDE VIEW



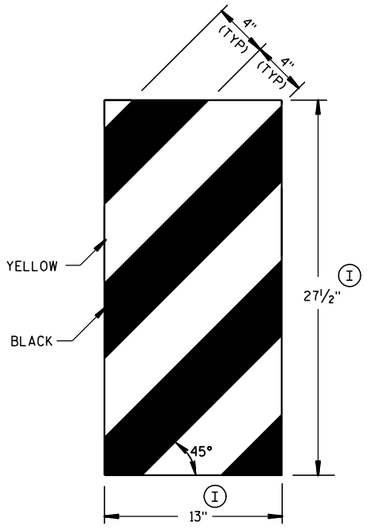
TOP VIEW

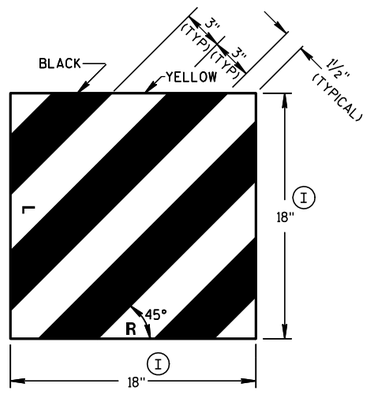
ALTERNATE WOOD BLOCKOUT DETAIL



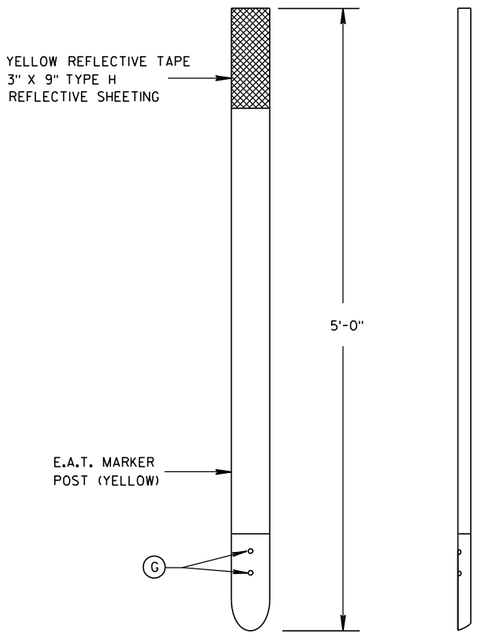
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





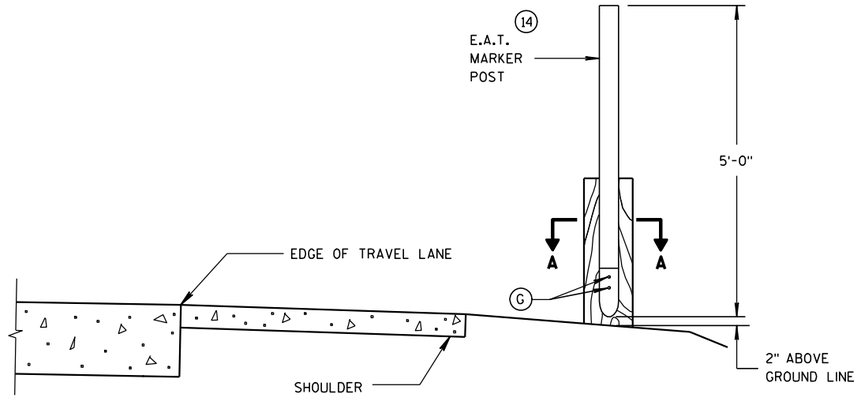
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

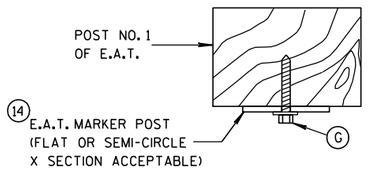
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

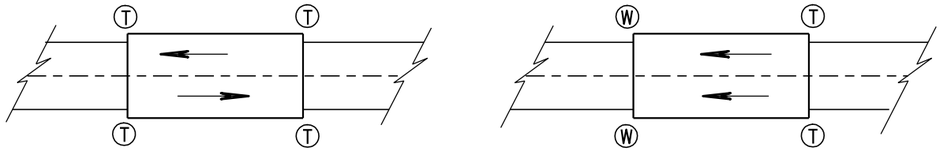
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 14 B 44-1c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

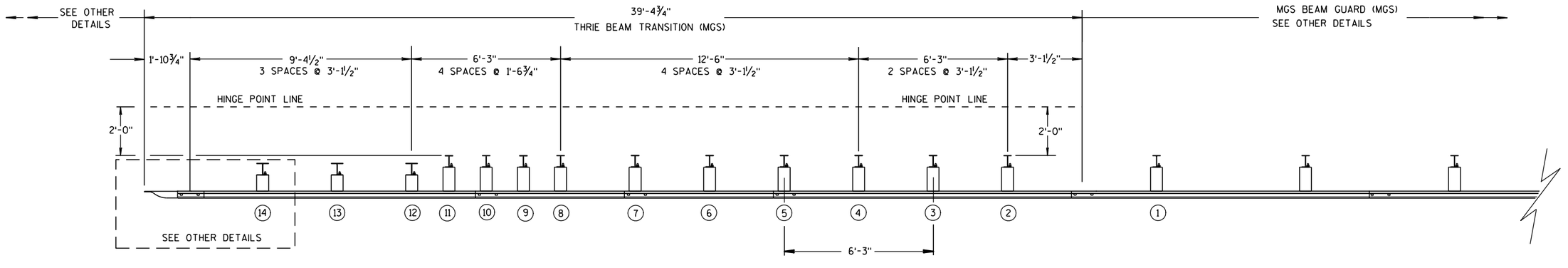
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

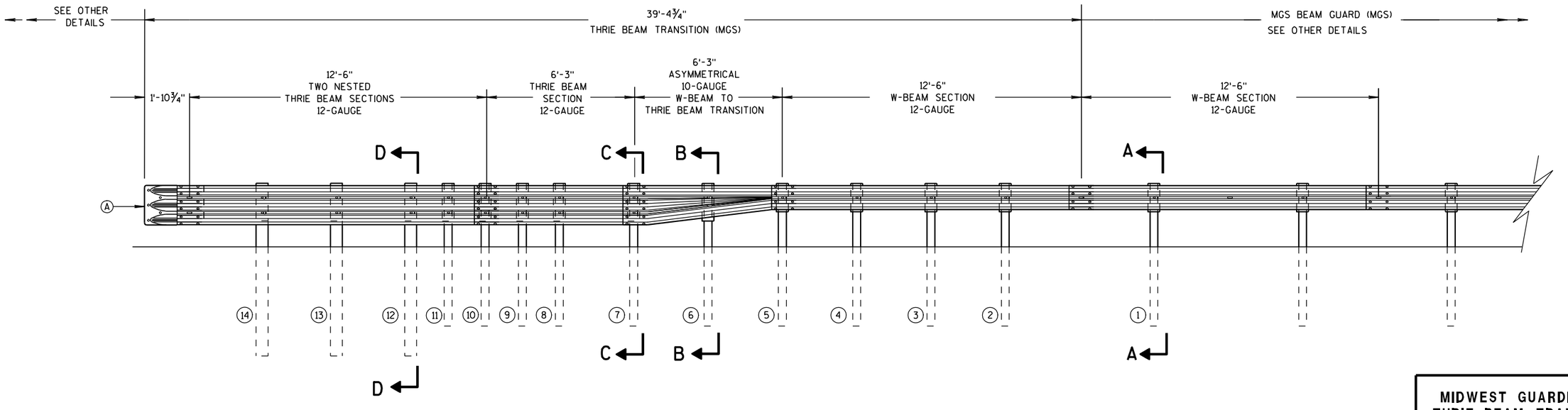
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

Ⓐ BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

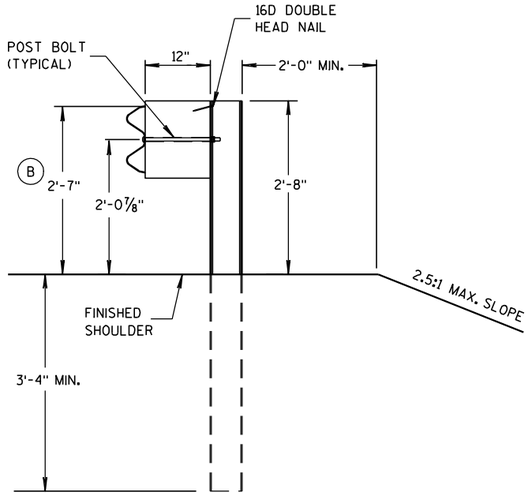
S.D.D. 14 B 45-3a

6

S.D.D. 14 B 45-3a

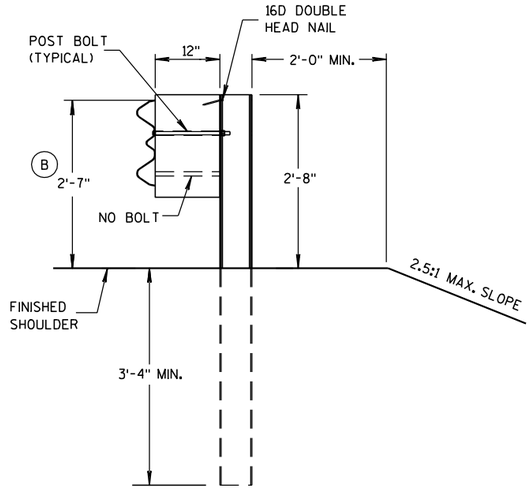
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



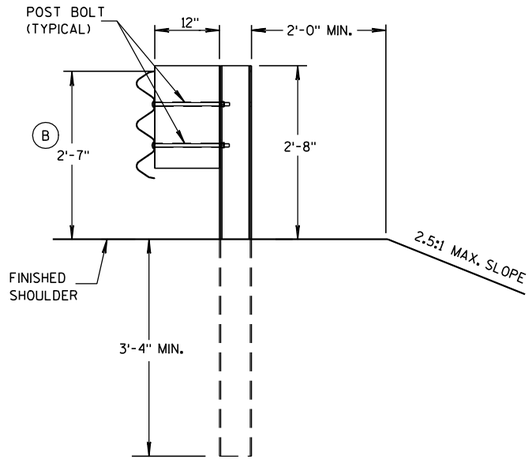
SECTION A-A

POSTS 1-5



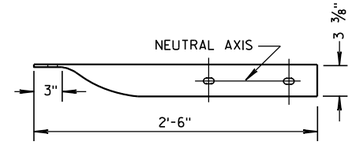
SECTION B-B

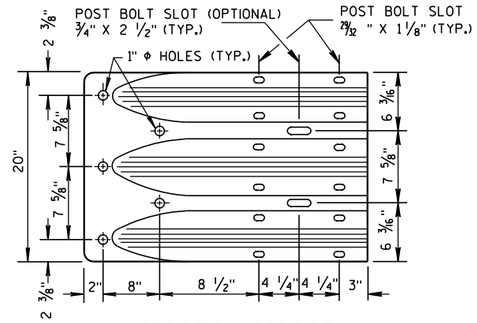
POST 6



SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR

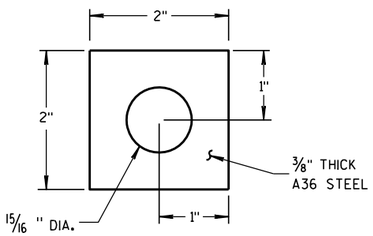
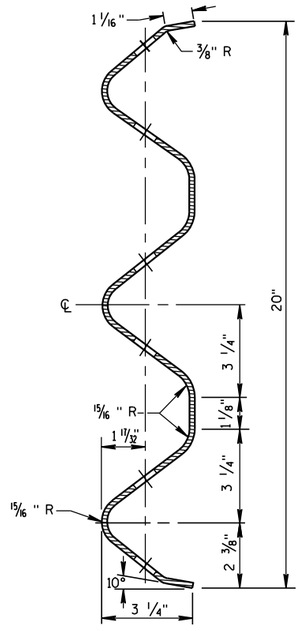
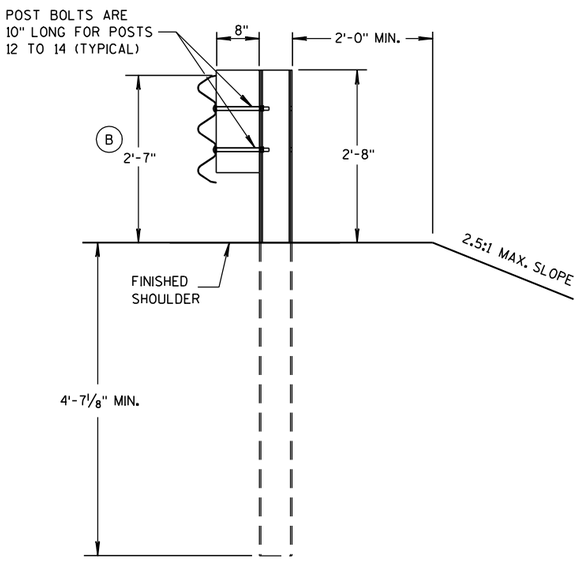


PLATE WASHER DETAIL

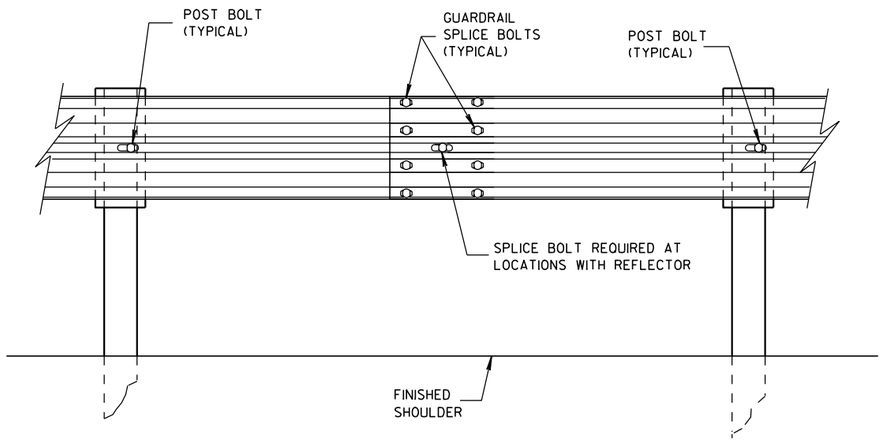


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-14



SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

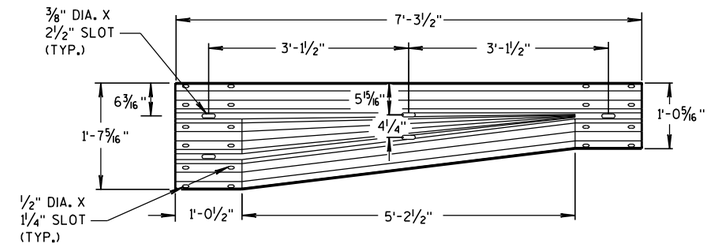
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

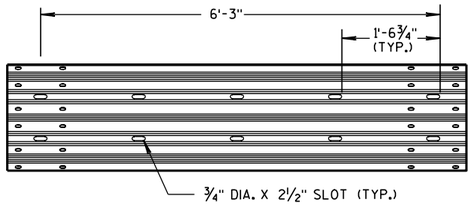
S.D.D. 14 B 45-3b

6

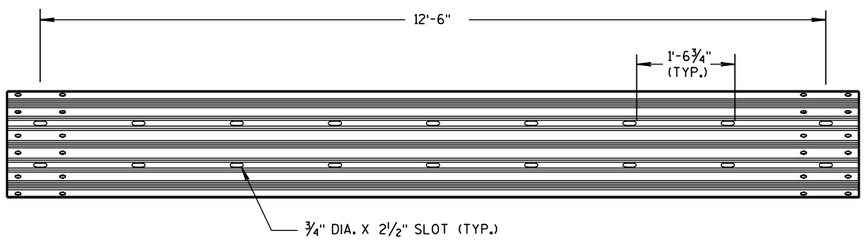
S.D.D. 14 B 45-3b



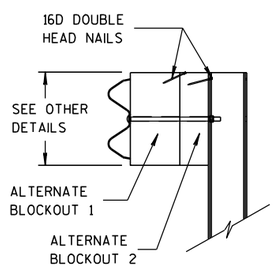
W-BEAM TO THRIE BEAM TRANSITION SECTION



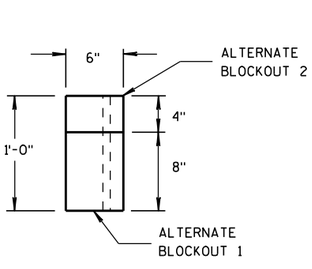
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

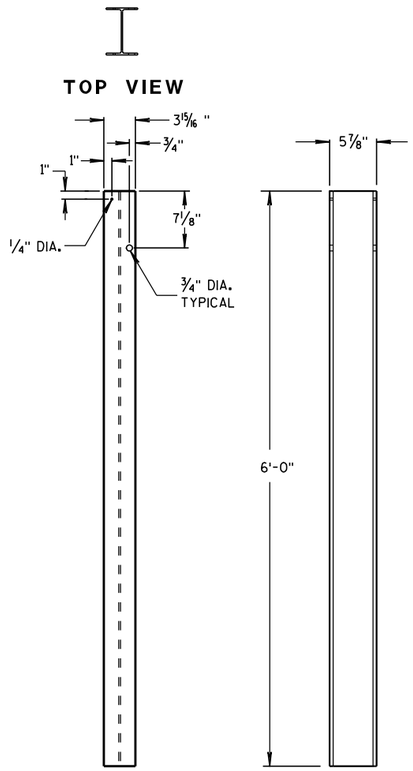


SIDE VIEW

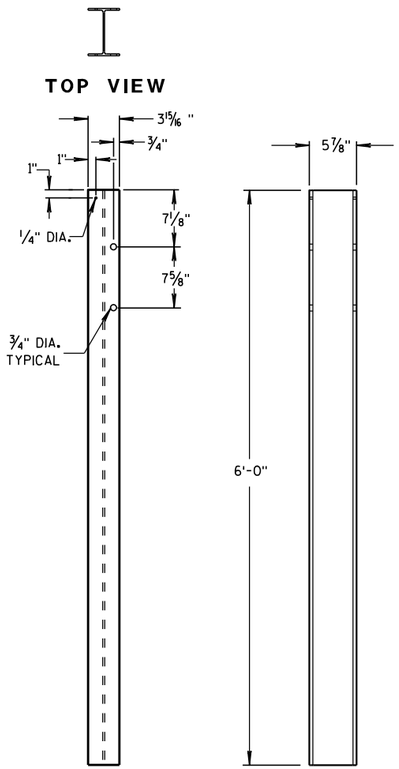


TOP VIEW

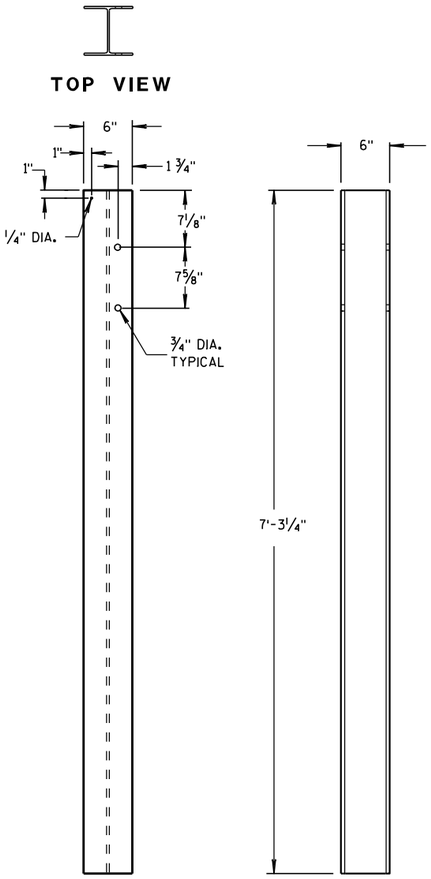
ALTERNATE WOOD BLOCKOUT DETAIL



STEEL POSTS 1-5

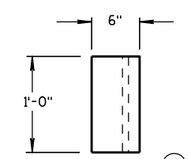


STEEL POSTS 6-11

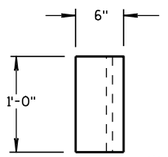


STEEL POSTS 12-14

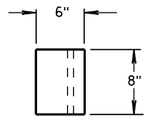
1 WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



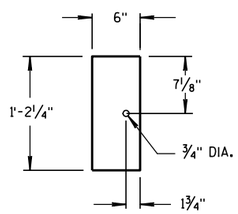
TOP VIEW (1)



TOP VIEW (1)

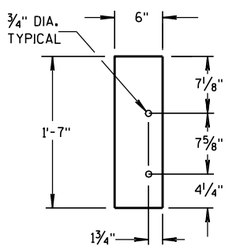


TOP VIEW



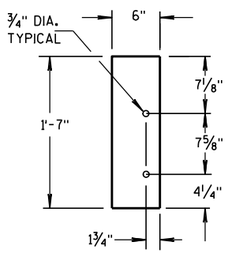
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

STEEL POST SIZES

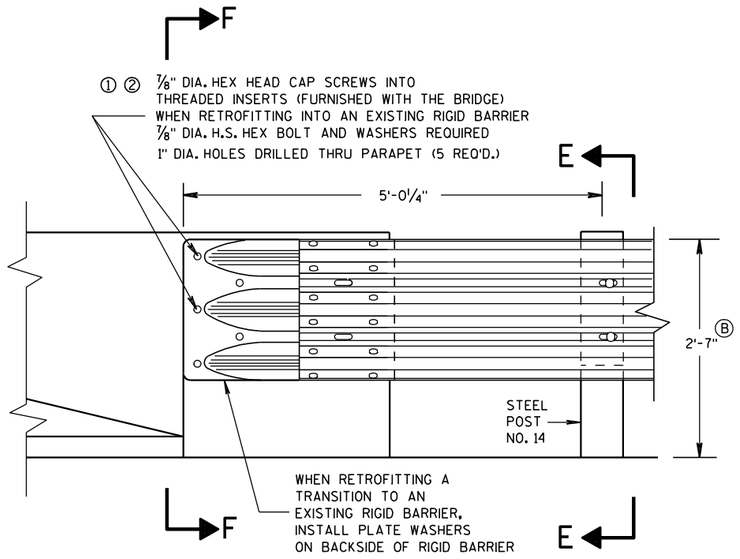
POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

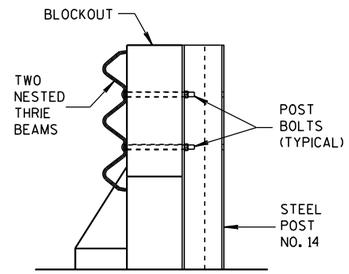
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 45-3c



FRONT VIEW



SECTION E-E

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

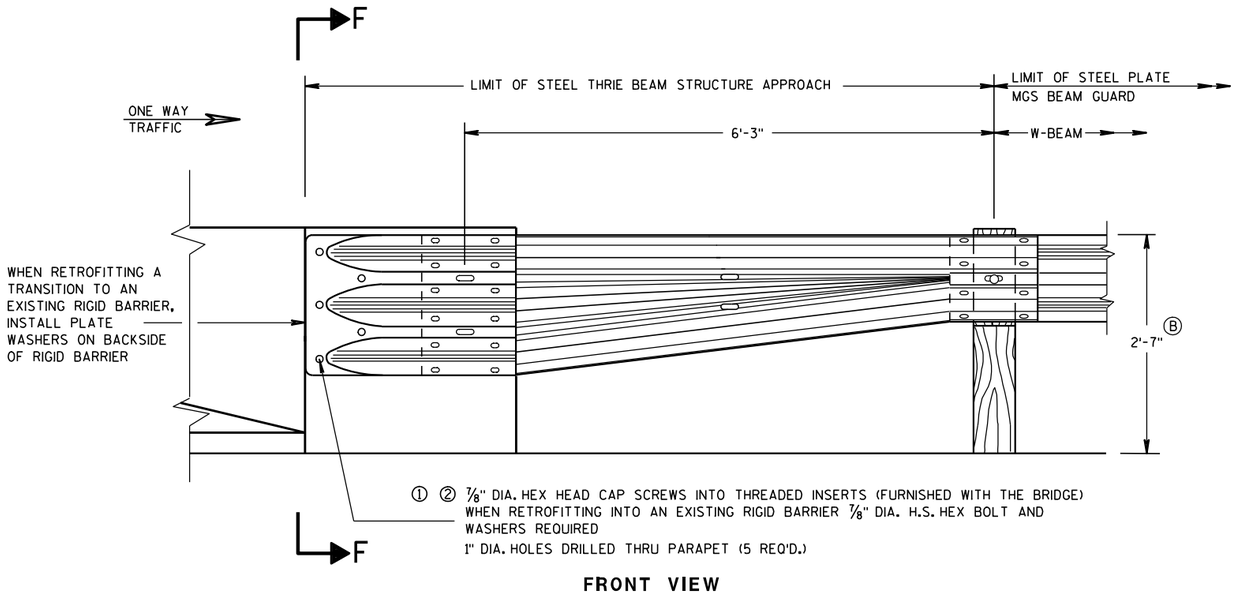
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

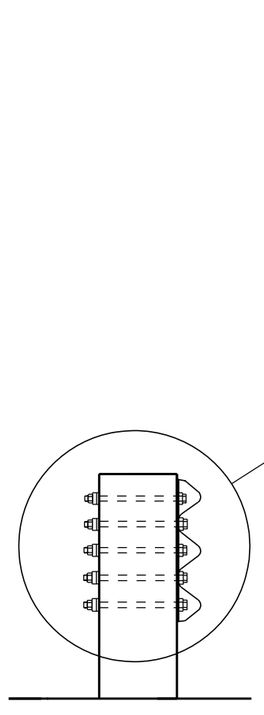
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

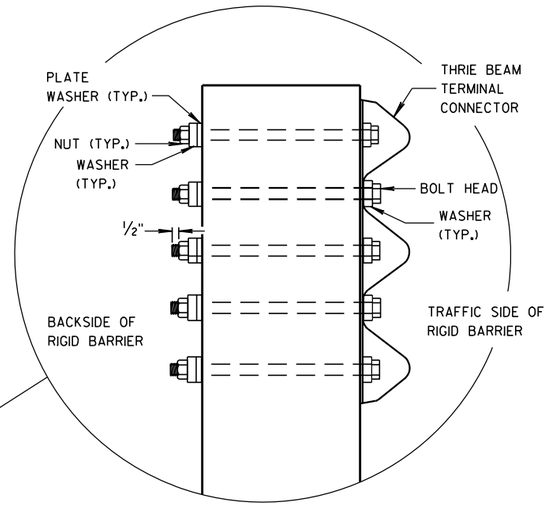
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW





W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 14 B 45-3d

6

S.D.D. 14 B 45-3d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

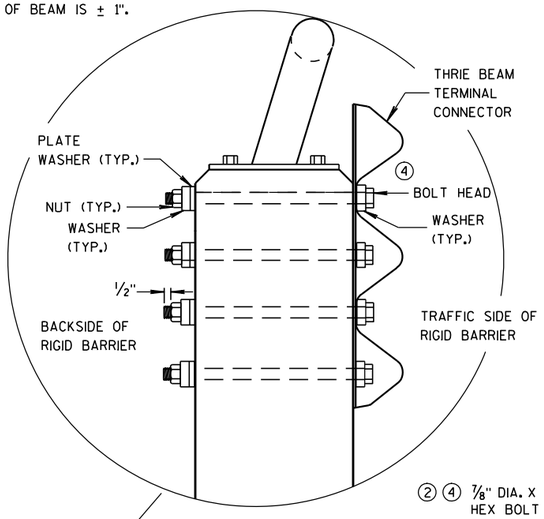
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

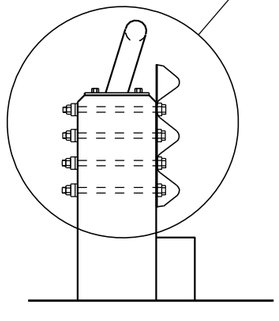
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2". BLOCK IS INCIDENTAL TO THE CONTRACT.

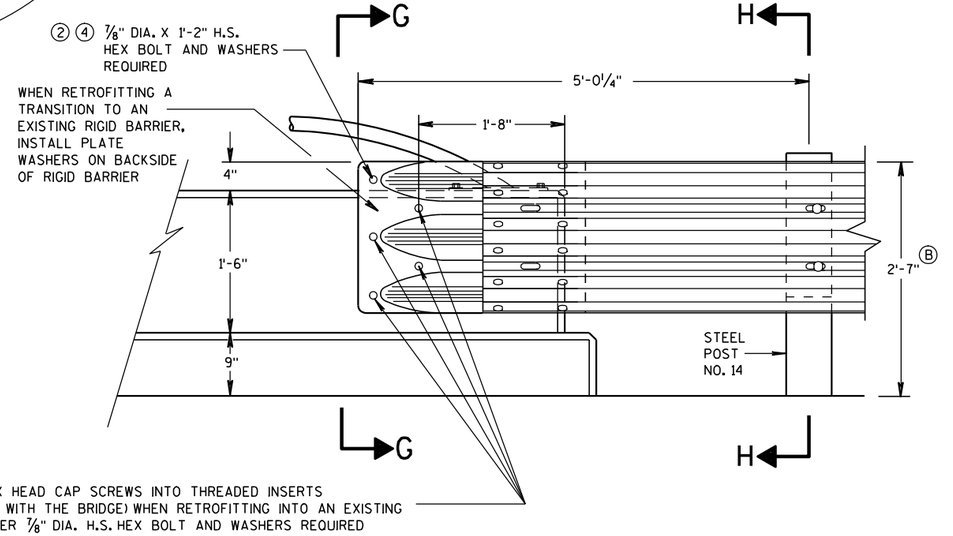
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

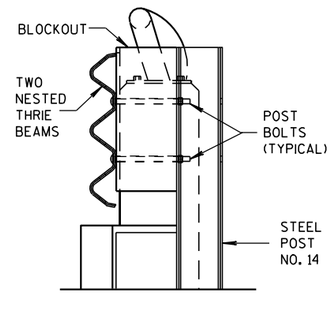




SECTION G-G

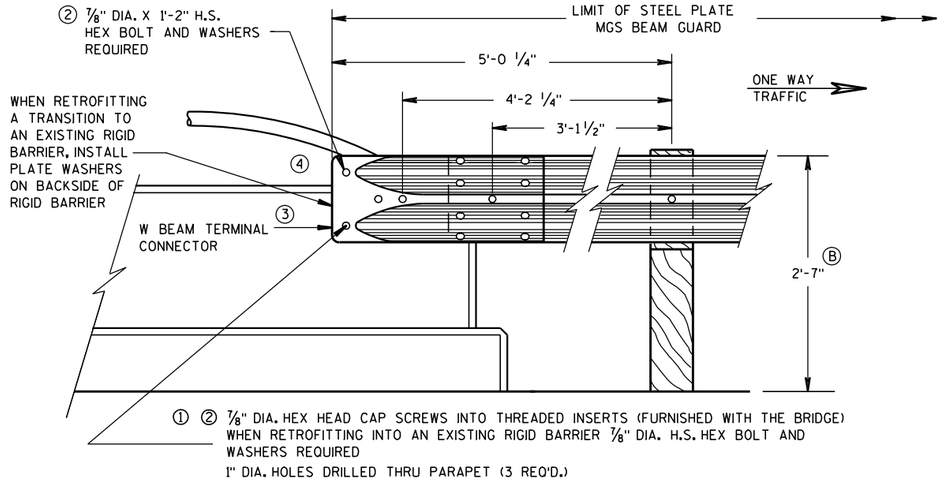


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



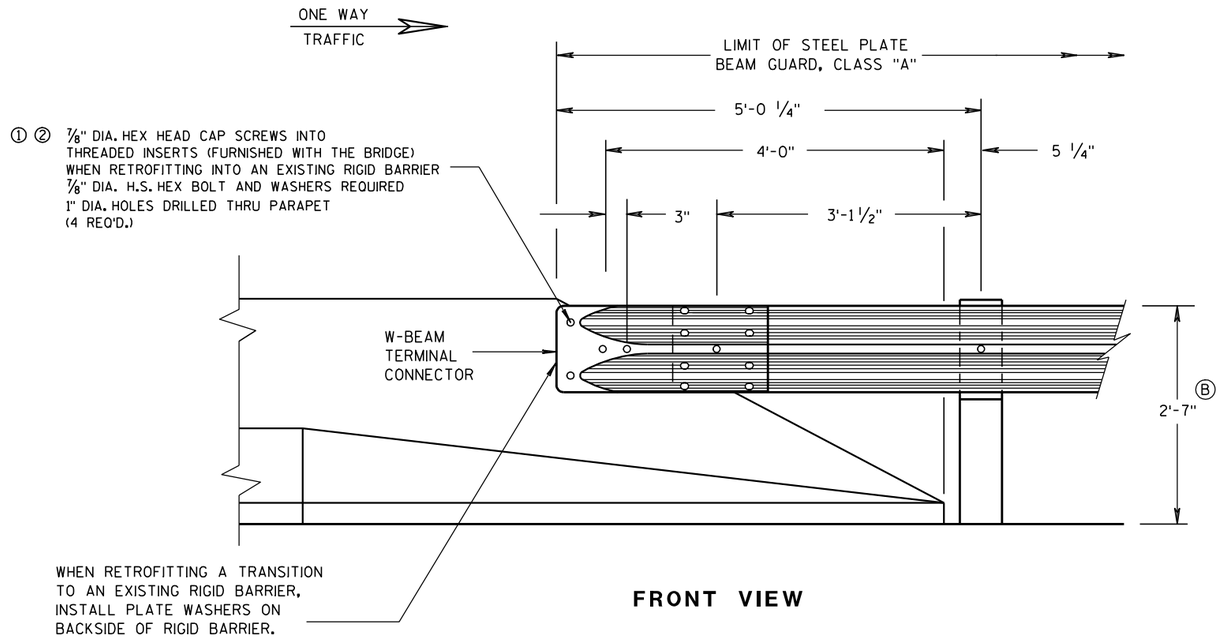
FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8-31-2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

6
S.D.D. 14 B 45-3e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

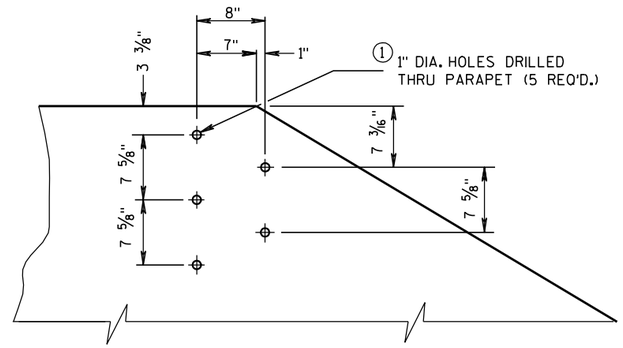
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

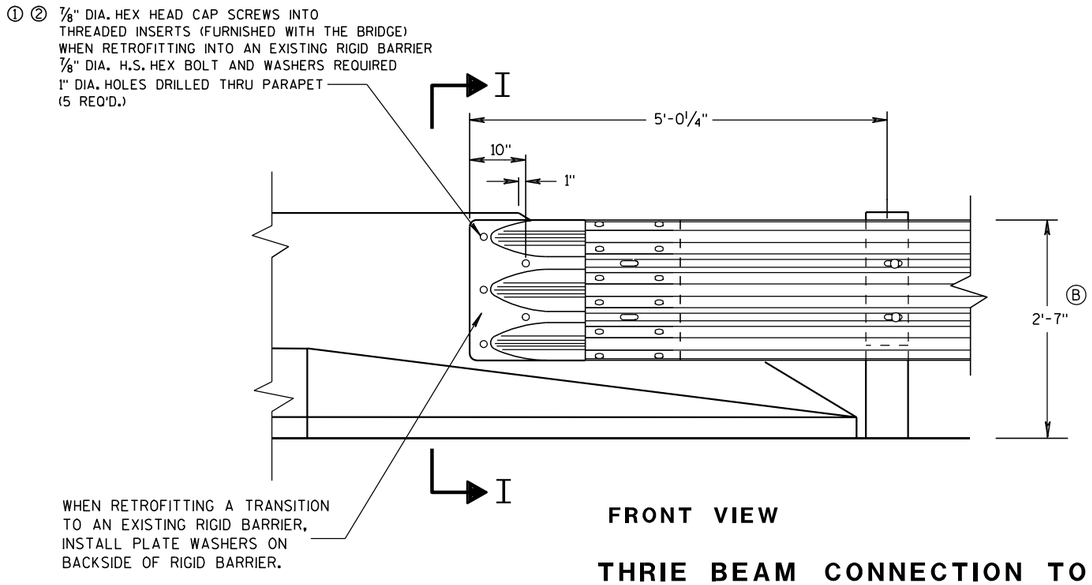
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

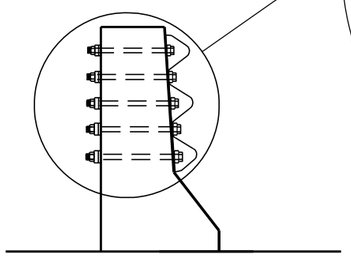
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



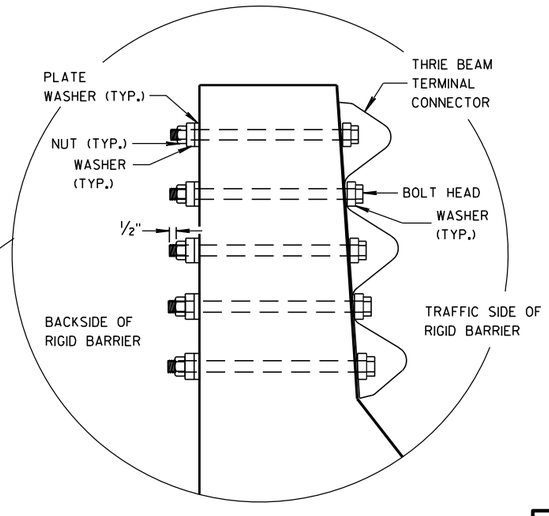
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER

211

ENT

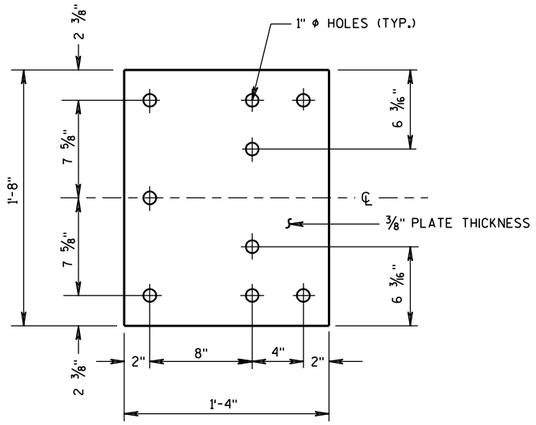
FHWA

6

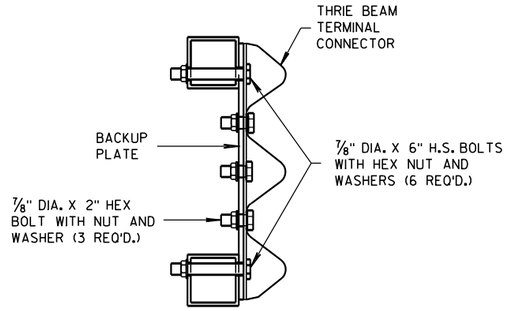
S.D.D. 14 B 45-3f

6

S.D.D. 14 B 45-3f



BACK-UP PLATE DETAIL

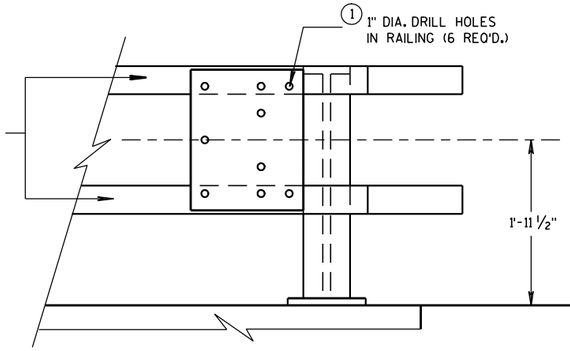


SECTION J-J

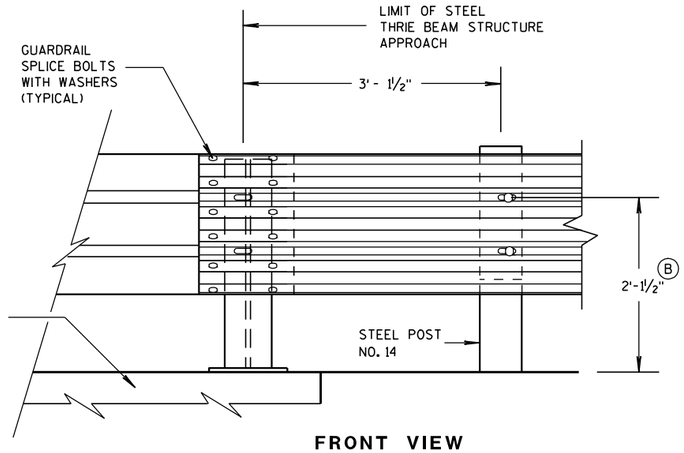
GENERAL NOTES

(1) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(B) TOLERANCE FOR TOP OF BEAM IS ± 1".

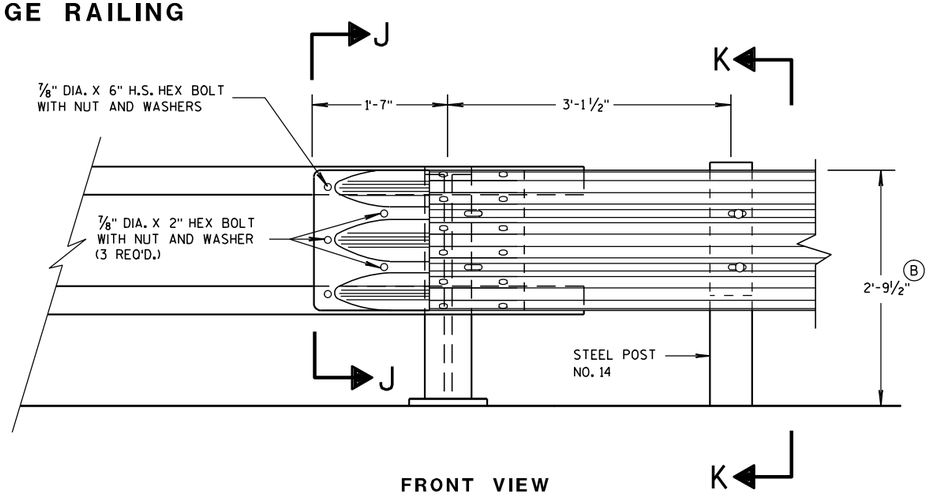


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

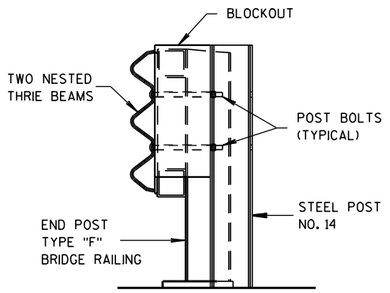


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
8/31/2012 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	

6

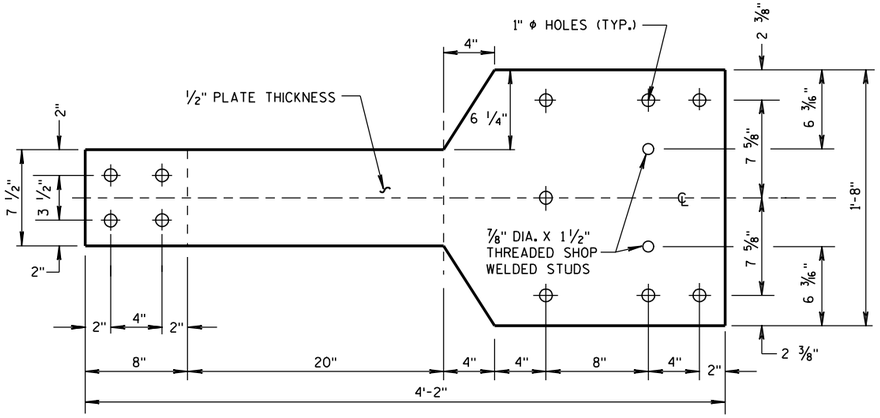
S.D.D. 14 B 45-3g

6

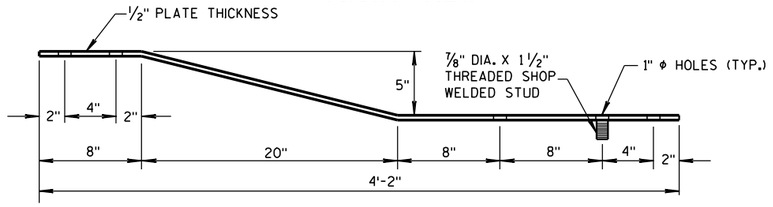
S.D.D. 14 B 45-3g

GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

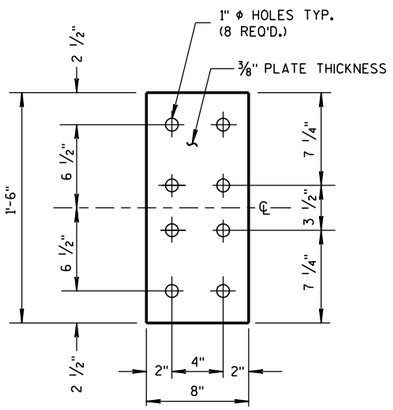


FRONT VIEW



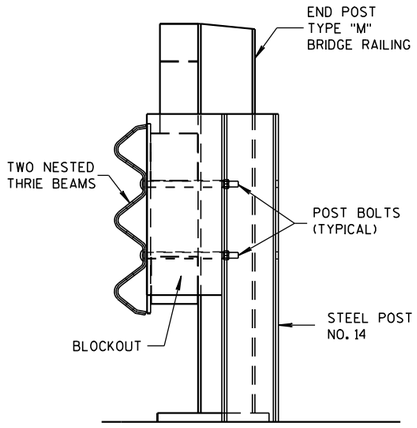
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

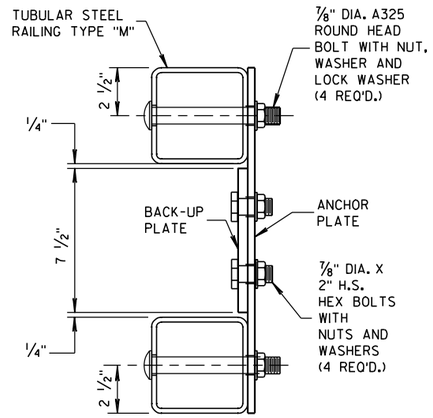


FRONT VIEW

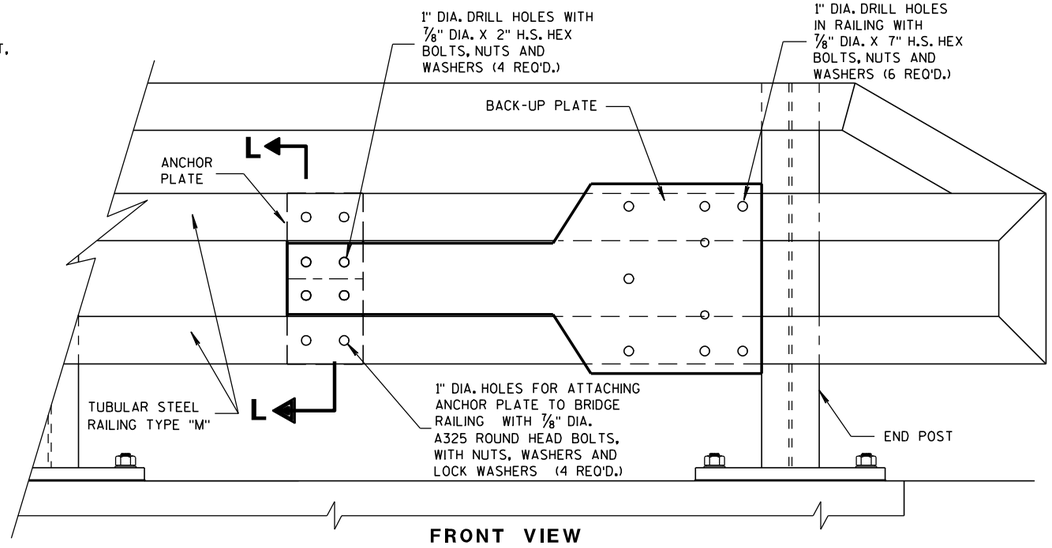
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

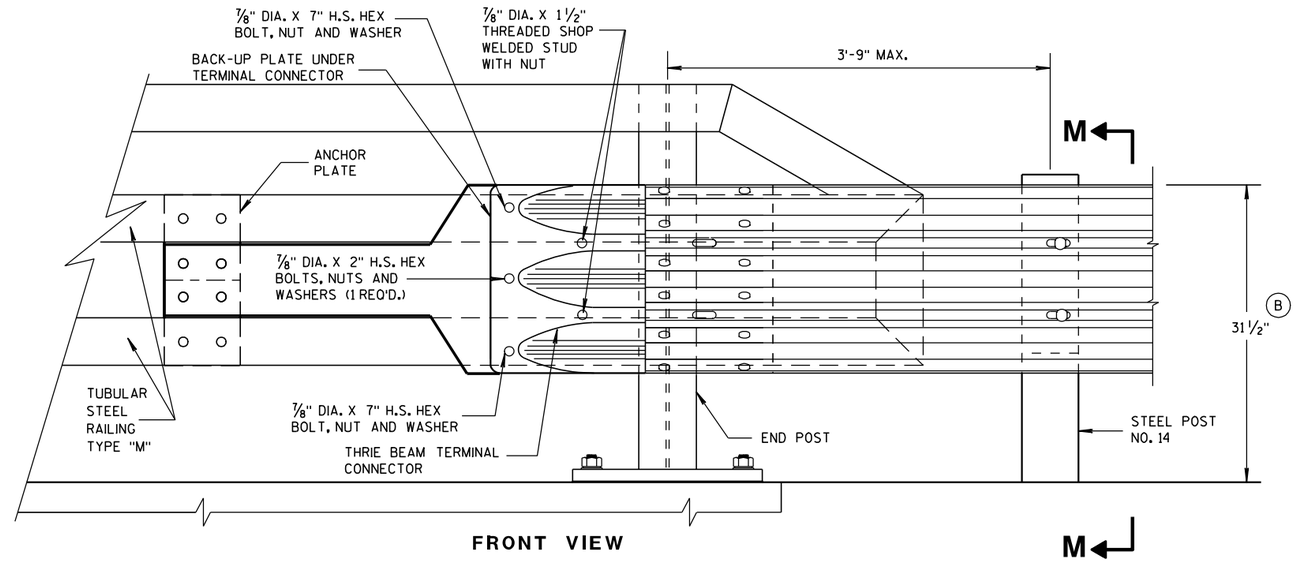


SECTION L-L

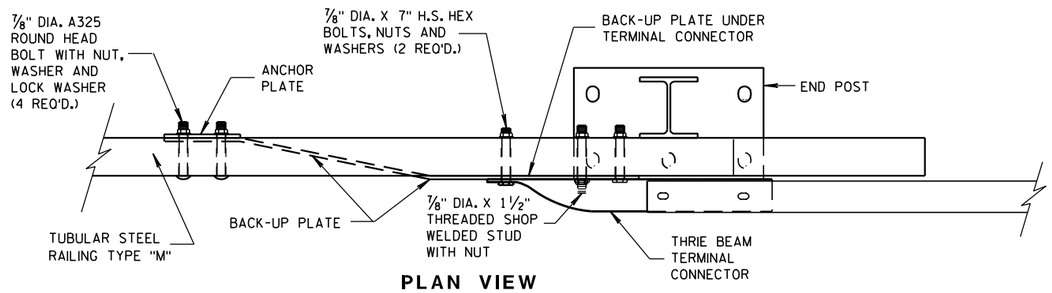


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-31-2012 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D. 14 B 45-3h

6

S.D. 14 B 45-3h

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

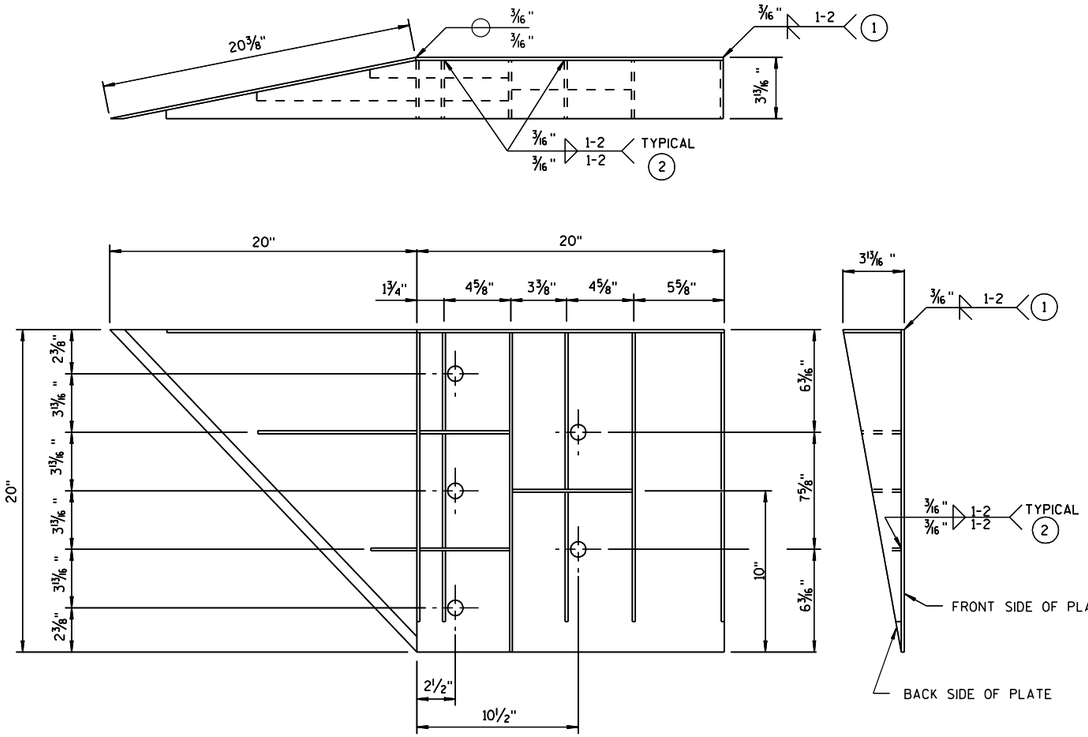
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

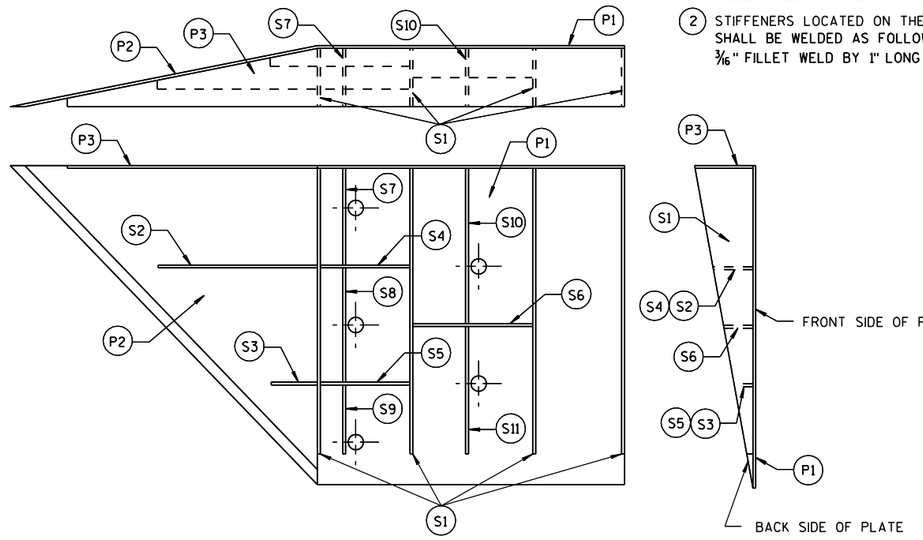


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

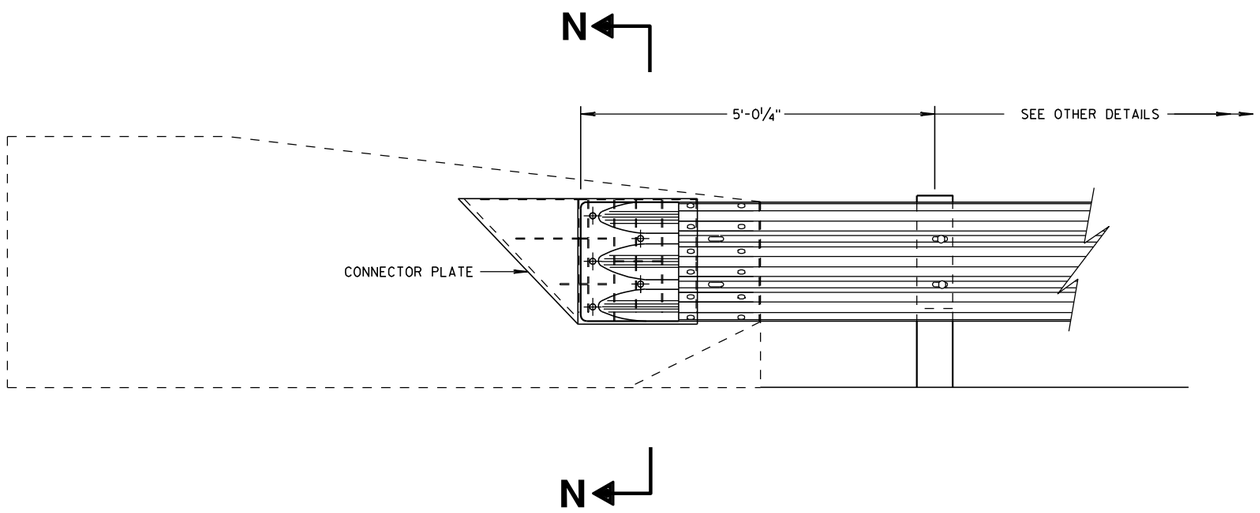
APPROVED
8/31/2012
DATE
/S/ Jerry H ...
ROADWAY STANDARDS ENGINEER
214
...MENT
FHWA

6

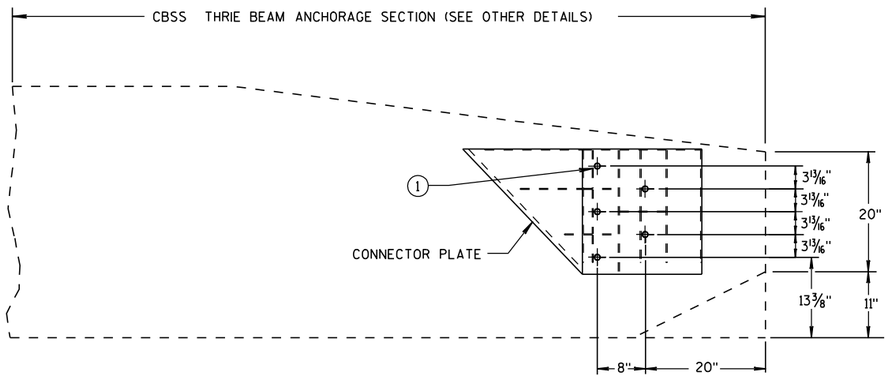
S.D.D. 14 B 45-3i

6

S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

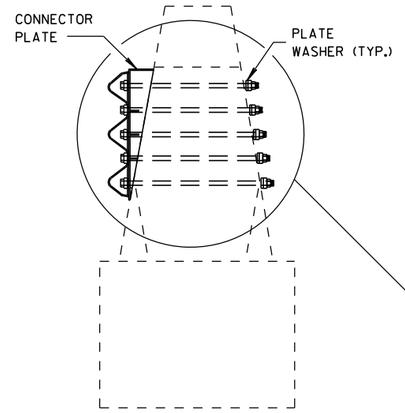


SINGLE SLOPE CONNECTION PLATE PLACEMENT

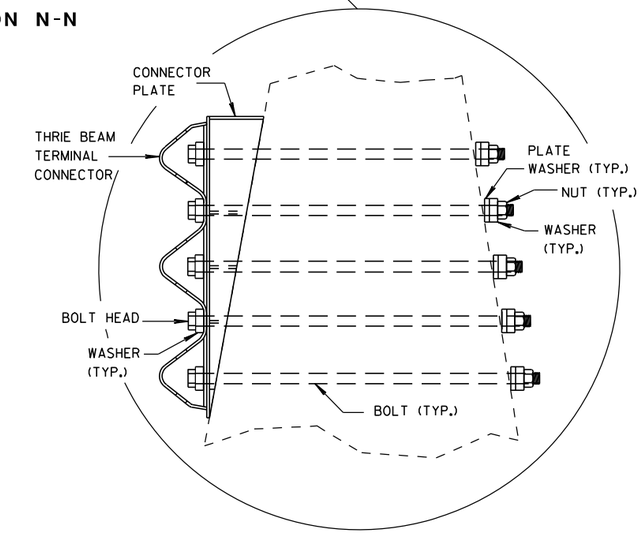
GENERAL NOTES

CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

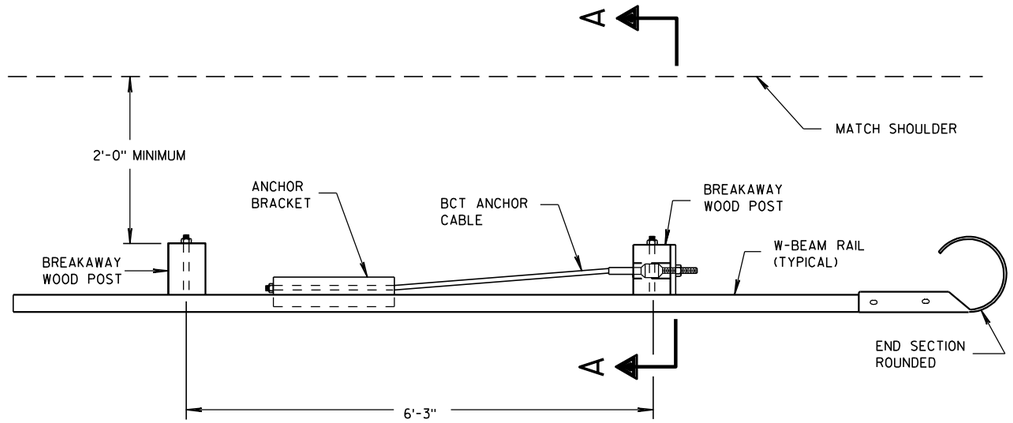
FHWA

6

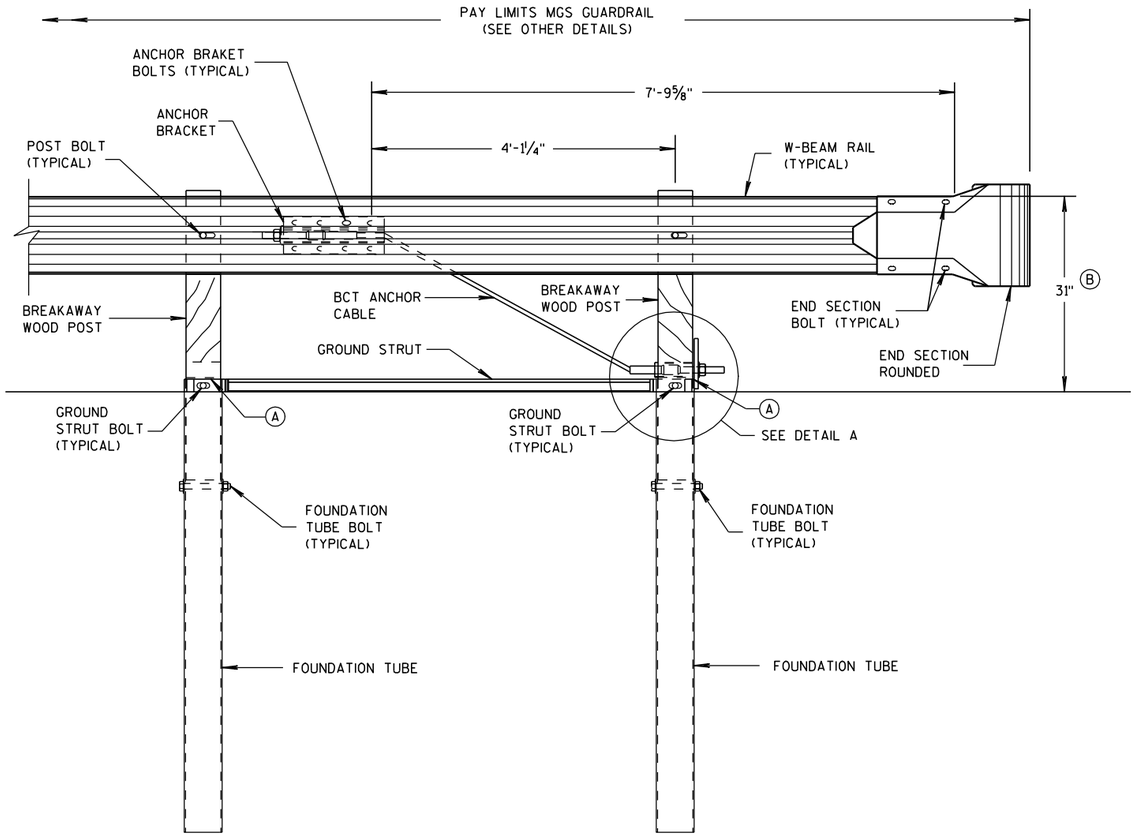
S.D.D. 14 B 45-3j

6

S.D.D. 14 B 45-3j

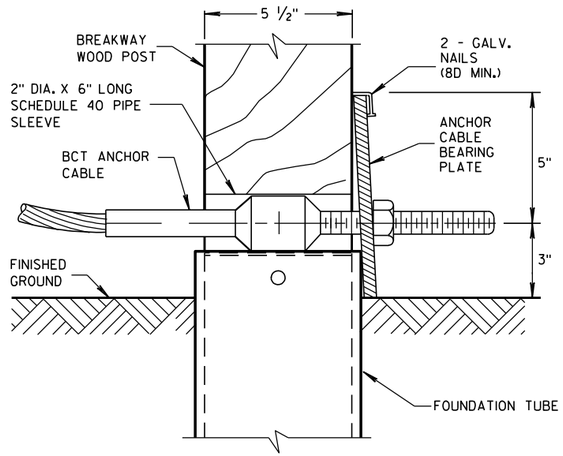


PLAN VIEW



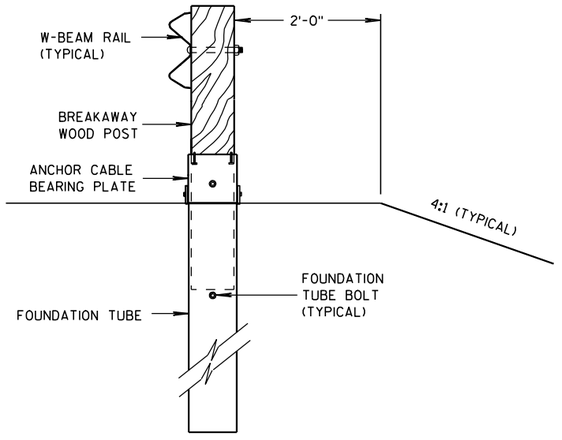
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

POST BOLTS ARE A ⅝" DIAMETER X 10" LONG GUARDRAIL BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER DH MODIFIED (RECESSED) HEAVY HEX NUT AND ⅝" DIAMETER FLAT WASHER.

FOUNDATION TUBE BOLTS ARE A ⅞" DIAMETER X 7½" LONG HEAVY HEX HEAD BOLT. A FOUNDATION TUBE BOLT REQUIRES A ⅞" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

GROUND STRUT BOLTS ARE A ⅝" DIAMETER X 10" LONG HEAVY HEX HEAD BOLT. A GROUND STRUT BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

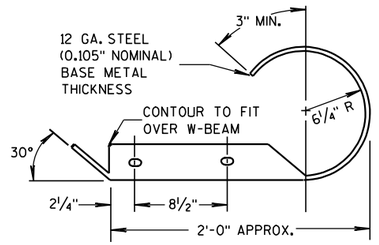
ANCHOR BRAKET BOLTS ARE A ⅝" DIAMETER X 1½" LONG HEAVY HEX HEAD BOLT. AN ANCHOR BRAKET BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A FLAT WASHER.

END SECTION BOLTS ARE A ⅝" DIAMETER X 1½" HEAVY HEX HEAD BOLT. AN END SECTION BOLT REQUIRES ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

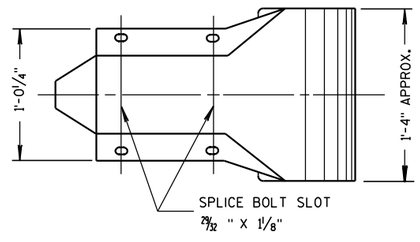
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



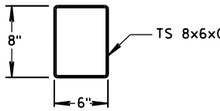
FRONT VIEW

W BEAM END SECTION ROUNDED

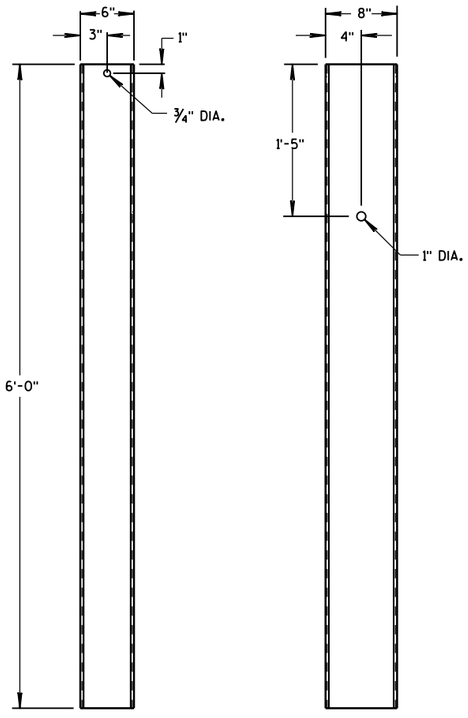
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 47-1a

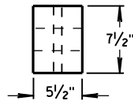


PLAN VIEW

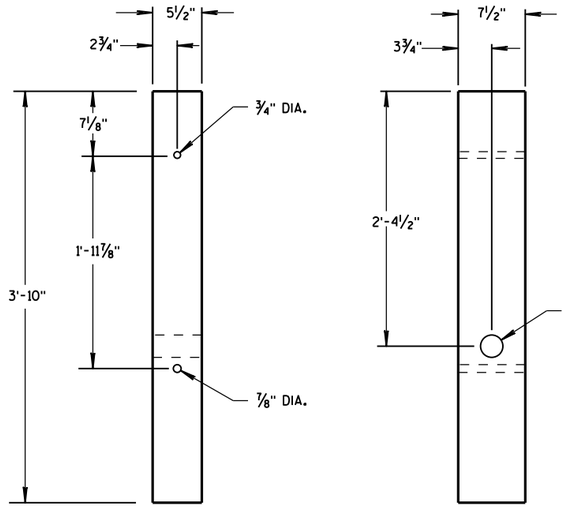


FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW



FRONT VIEW

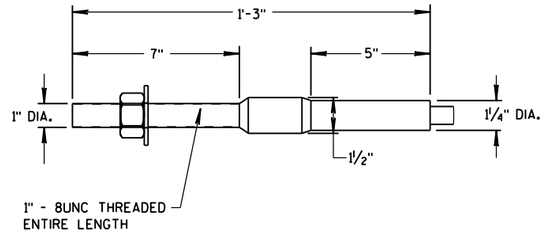
SIDE VIEW

BREAKAWAY WOOD POST

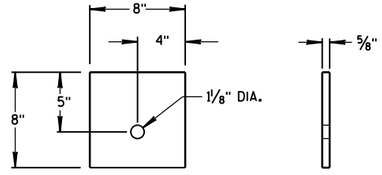
GENERAL NOTES

BCT ANCHOR CABLE IS A ⅜" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. THE END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. THE TREADED STUD SHOULD CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B

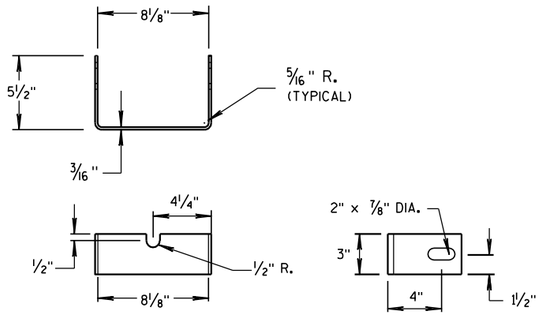


SIDE VIEW FRONT VIEW

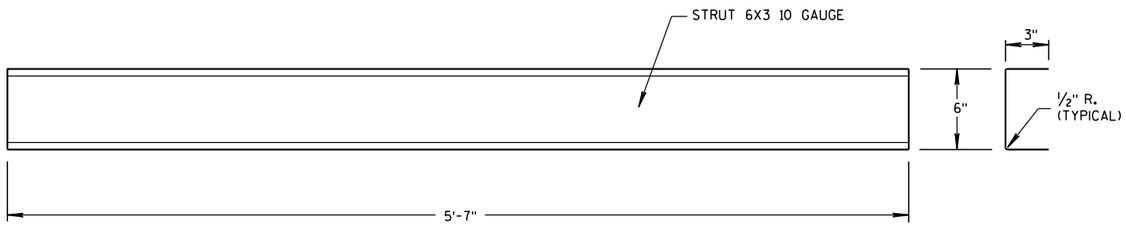
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

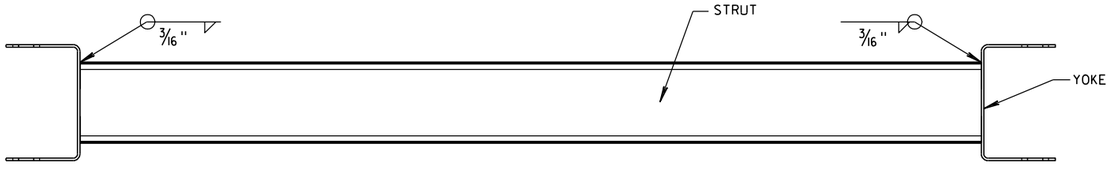
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



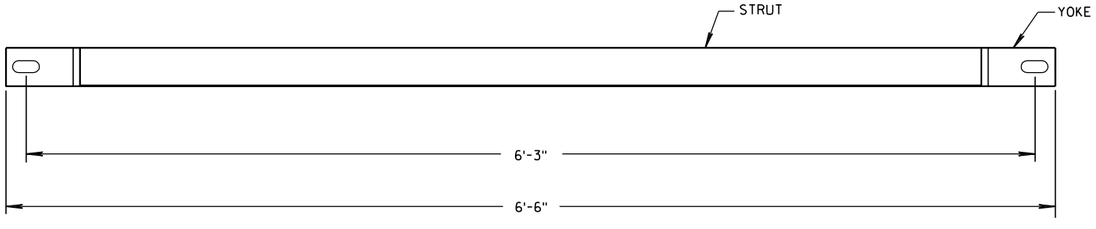
YOKE DETAIL



STRUT DETAIL

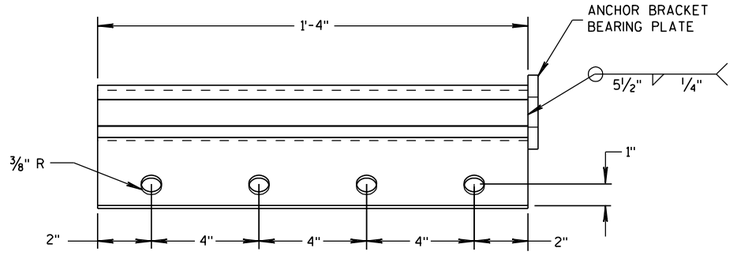


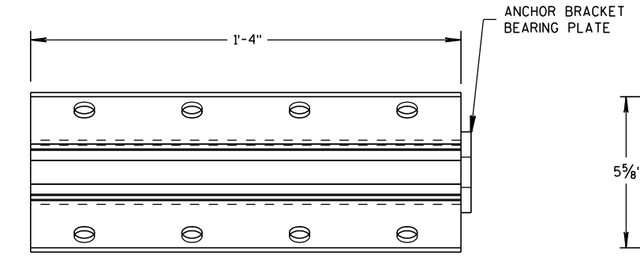
PLAN VIEW

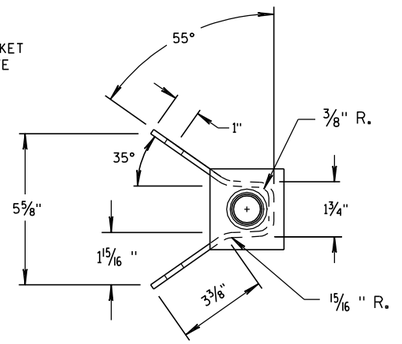


FRONT VIEW

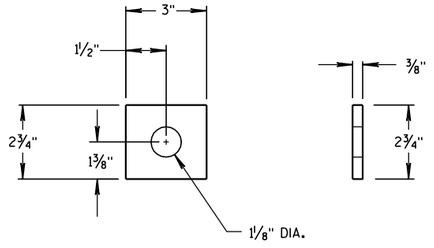
GROUND STRUT DETAIL







ANCHOR BRACKET

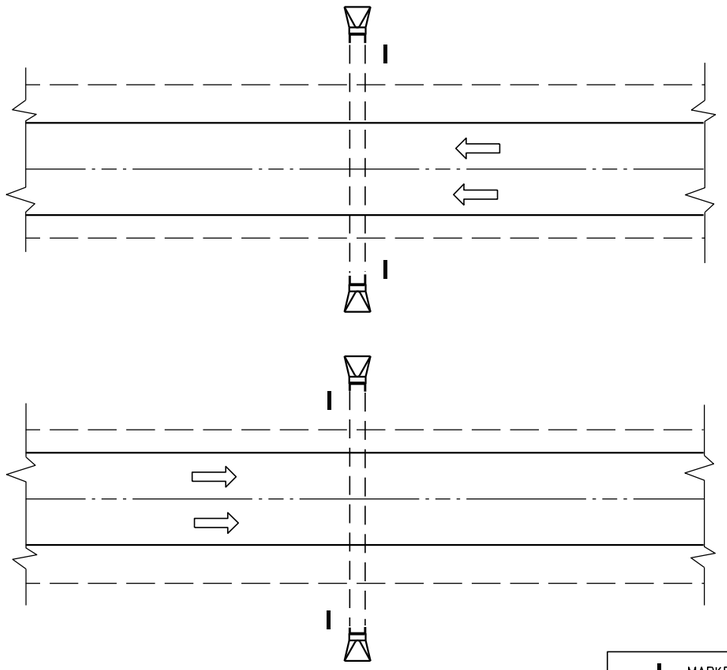


ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
5/23/2011 DATE	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
FHWA	

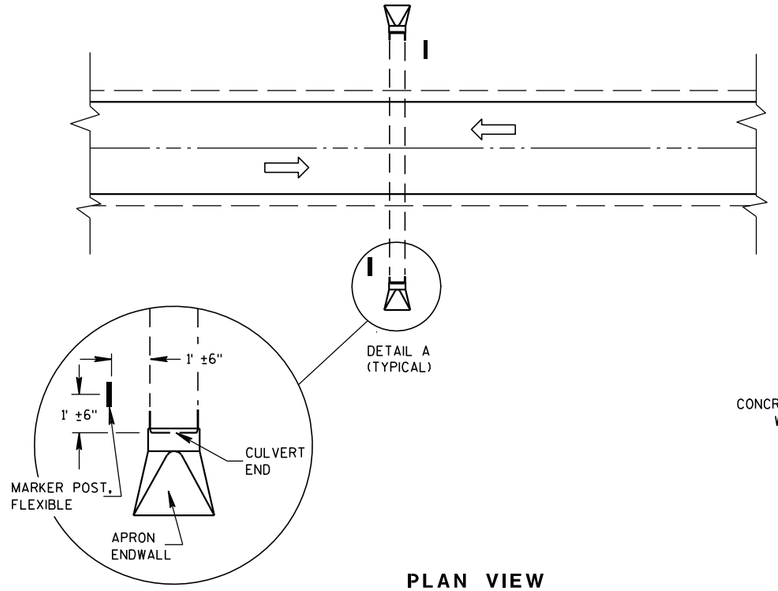
6

S.D.D. 14 B 47-1c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

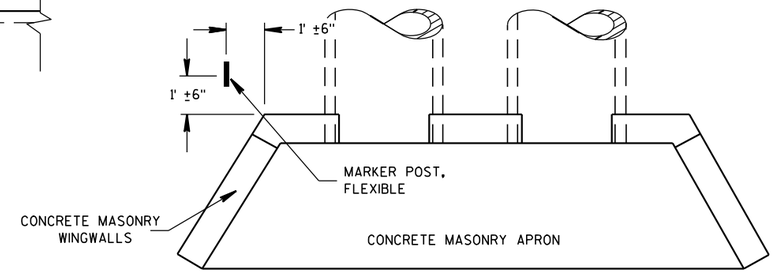
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

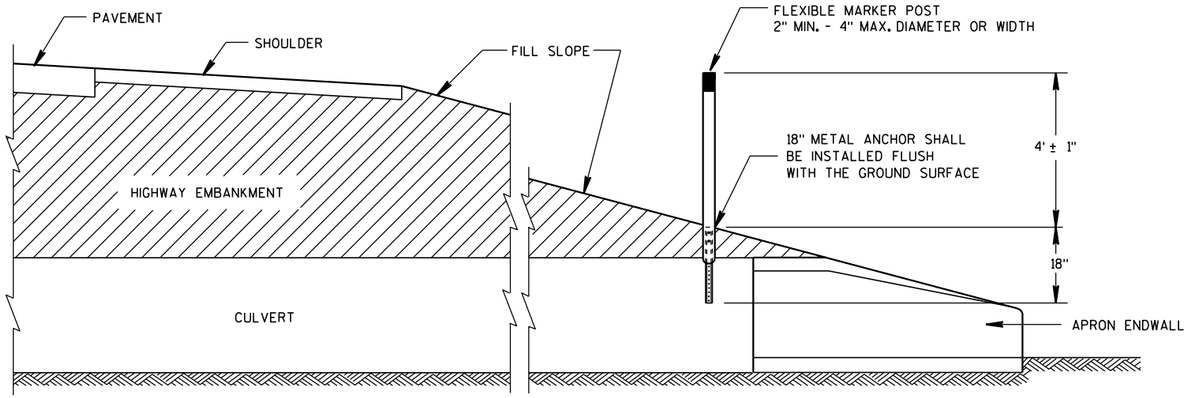
GENERAL NOTES

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

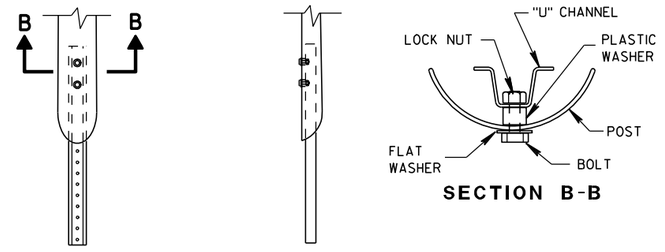
CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH



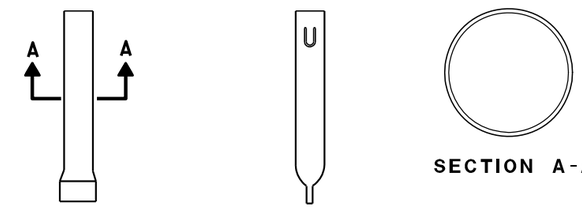
CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST LOCATION

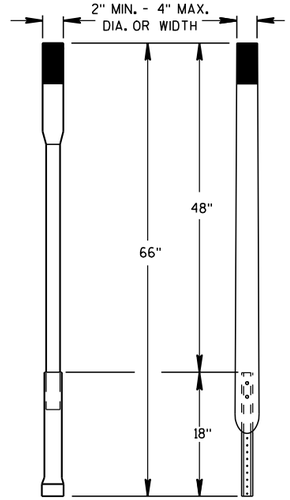


FRONT VIEW SIDE VIEW
CURVED MARKER



FRONT VIEW SIDE VIEW
ROUND MARKER

FLEXIBLE MARKER POST ANCHORS



ALTERNATE 1 ALTERNATE 2

FLEXIBLE MARKER POST

MARKER POST, FLEXIBLE, FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/1/98
DATE

/S/ Rory L. Rhinesmith
CHEIF ROADWAY DEVELOP ENGINEER

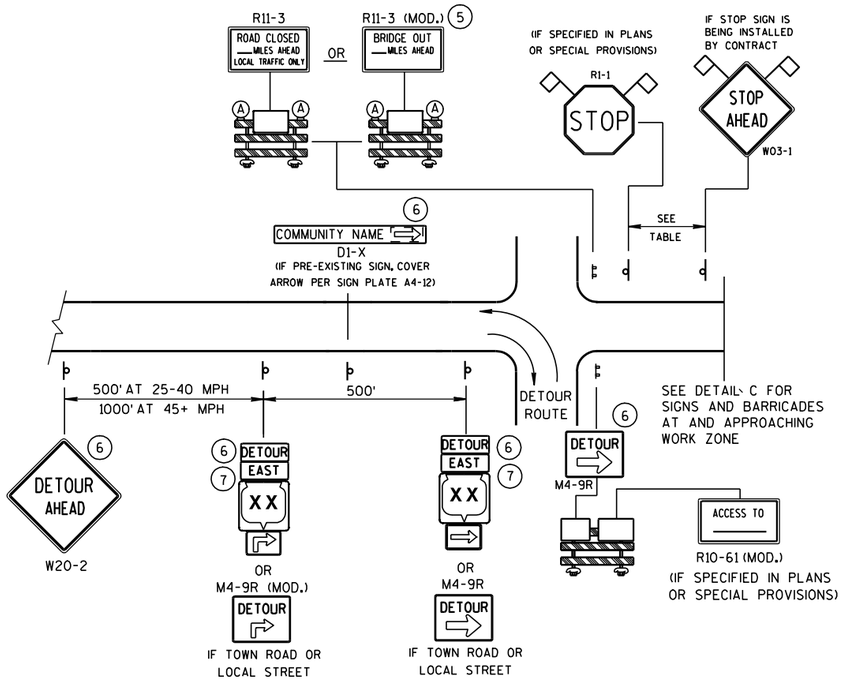
FHWA

6

S.D.D. 15 A 3-1

6

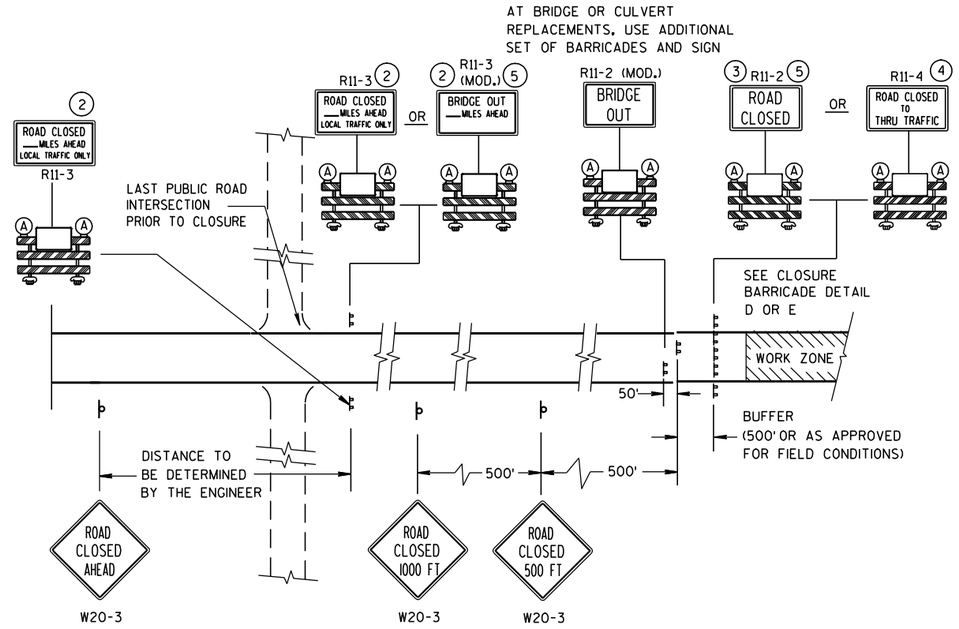
S.D.D. 15 A 3-1



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

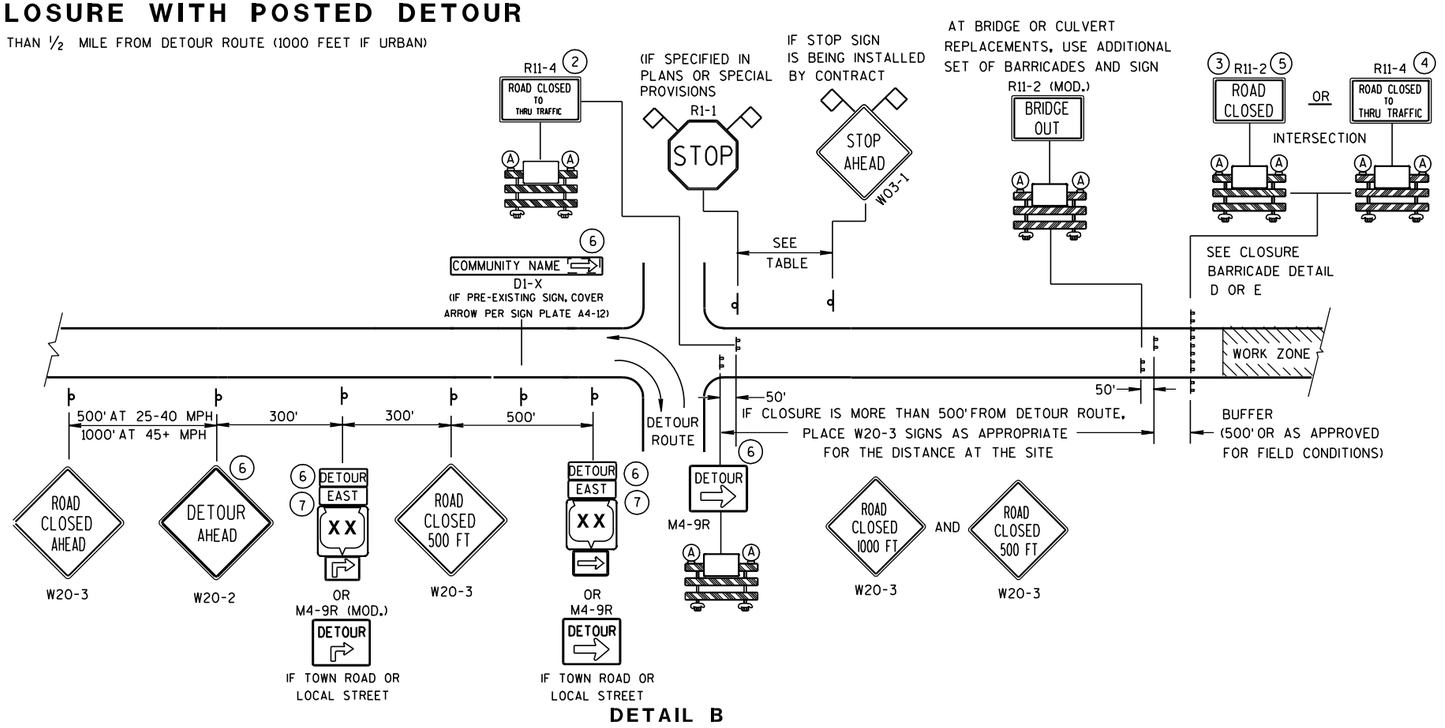


DETAIL C

MAINLINE CLOSURE, NO POSTED DETOUR

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

SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

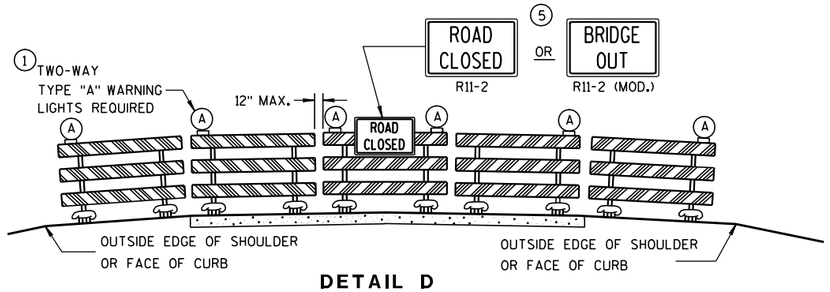
- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1; M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

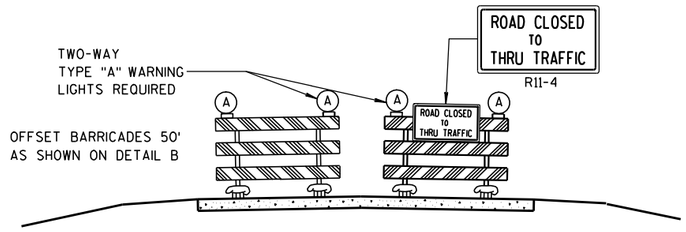
S.D.D. 15 C 2-4a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

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

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/16/03
DATE

/S/ Thomas N. N[illegible]
CHIEF SIGNS AND MAR[illegible]INEER

FHWA

6

S.D.D. 15 C 2-4b

LEGEND

- POST WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN IN DRUM
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- 8' TYPE III BARRICADE
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

GENERAL NOTES :

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

(1) 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.

GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

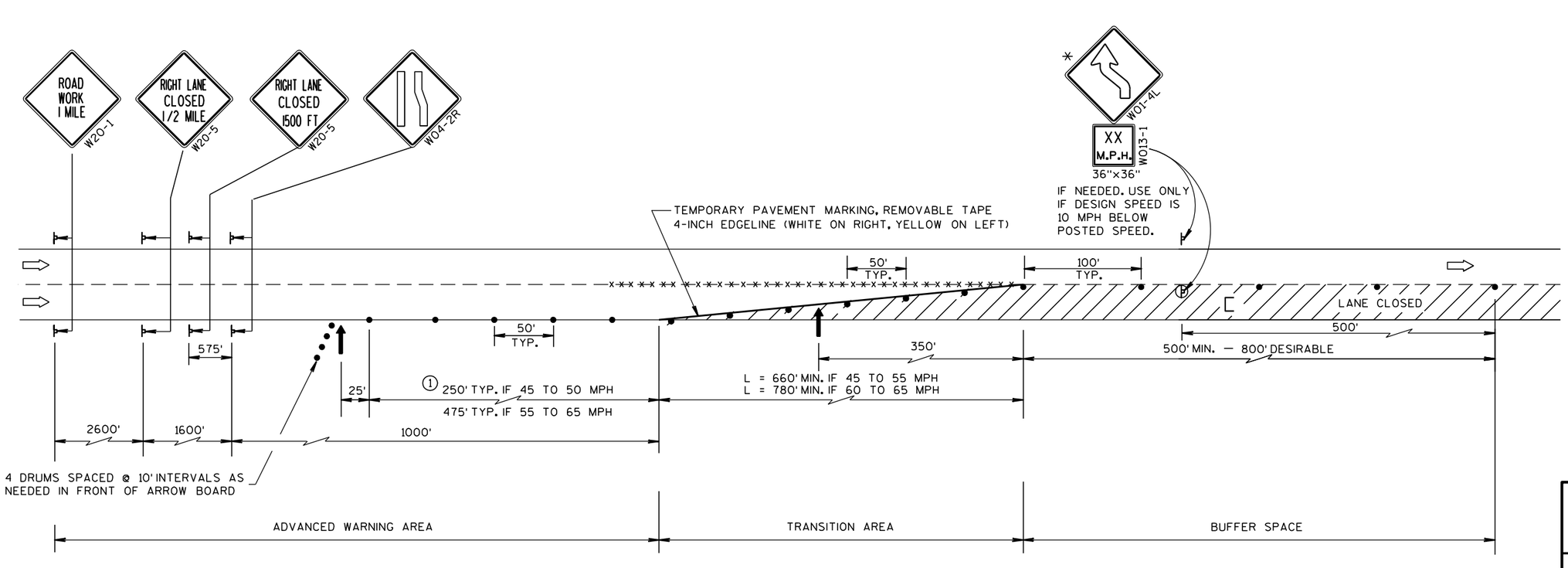
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

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

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

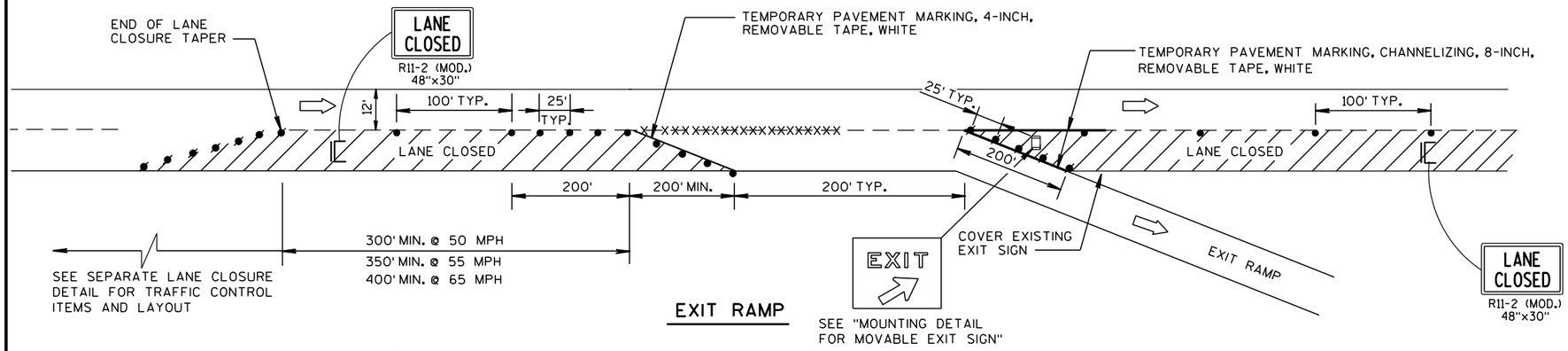


TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

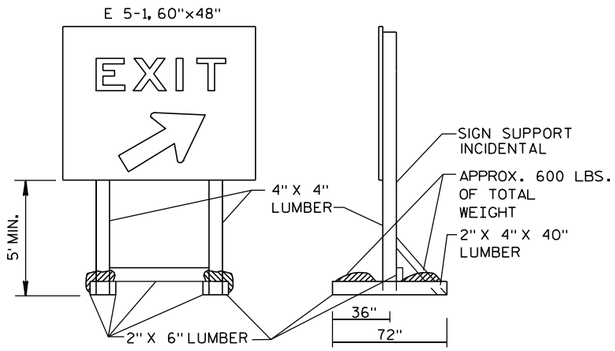
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-7-95 DATE
/S/ Chester J. [illegible]
DIRECTOR, OFFICE O 222 C
FHWA

6
S.D.D. 15 D 12-2

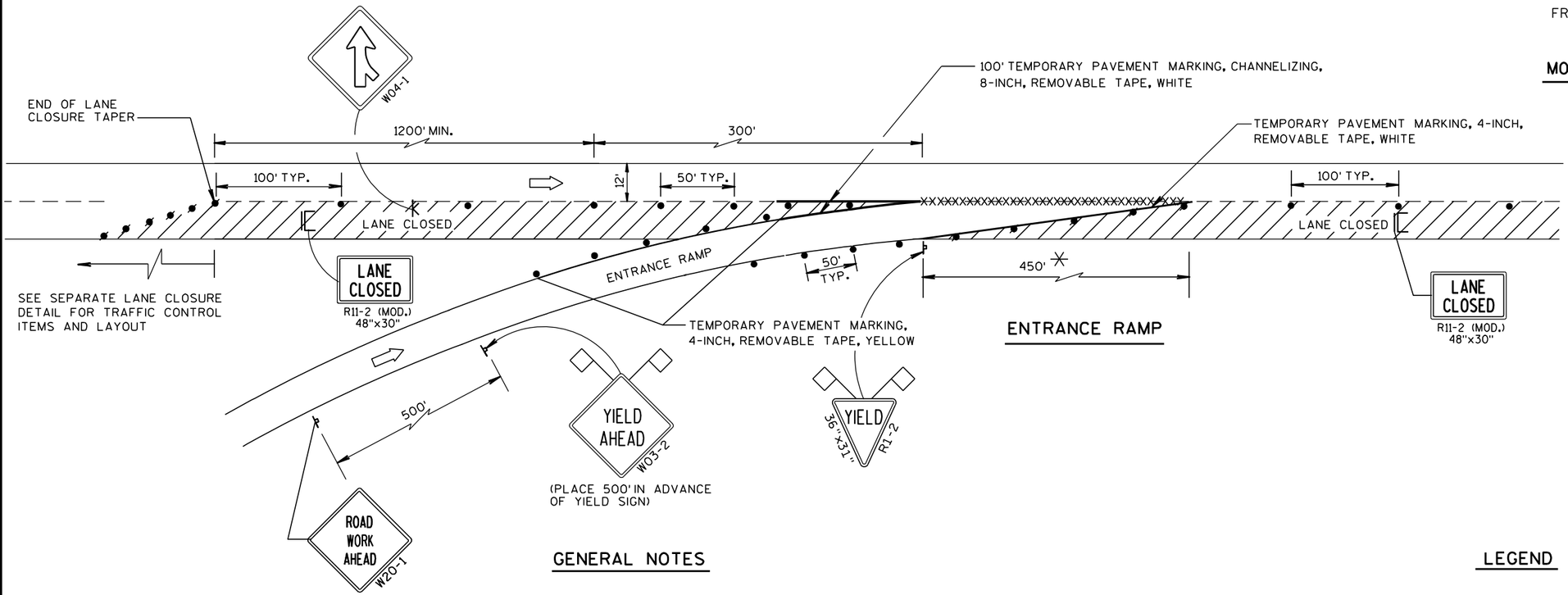


EXIT RAMP



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

MOUNTING DETAIL FOR MOVABLE EXIT SIGN



ENTRANCE RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2 (MOD.) "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

✳ LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000
DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKING ENGINEER
FHWA

SYMBOLS

- TRAFFIC CONTROL DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW
- ARROW BOARD IN CAUTION MODE

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

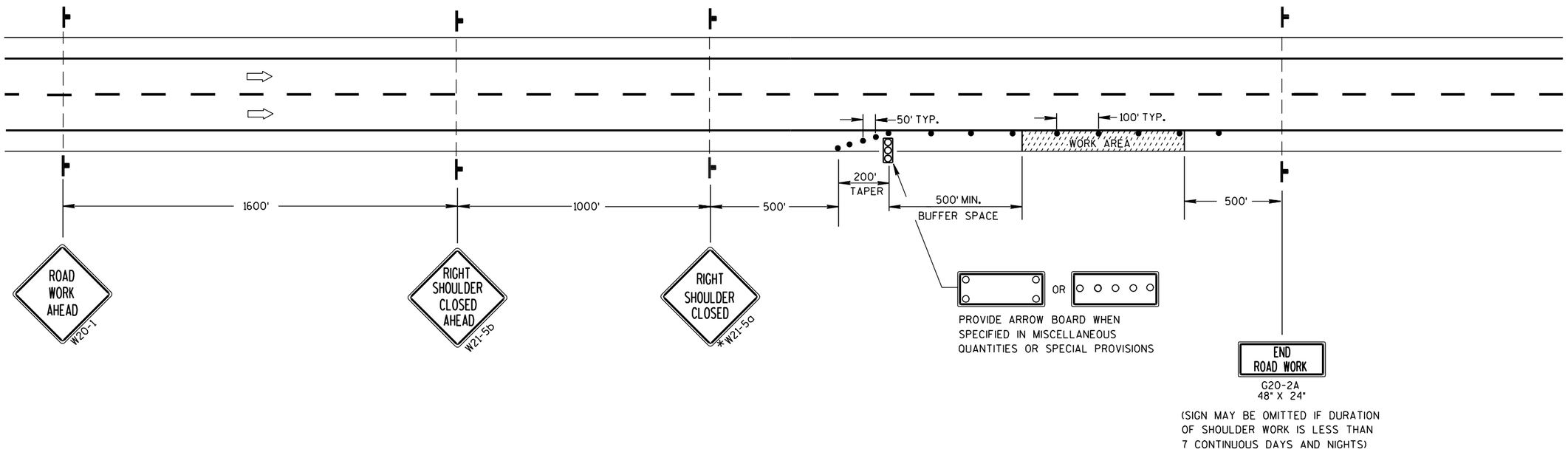
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/00
DATE

/S/ Chester J Spano
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

S.D.D. 15 D 27-1

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.

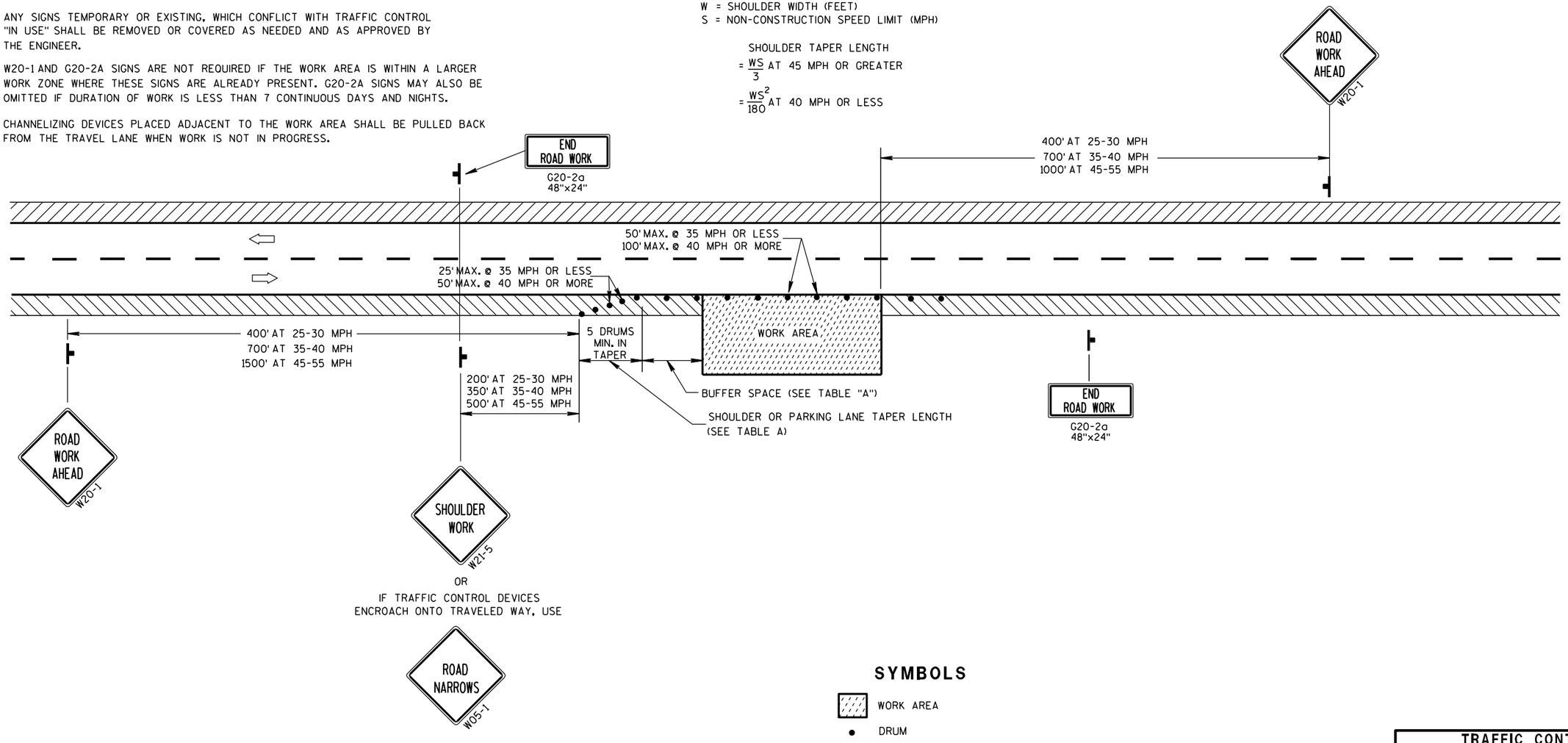
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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



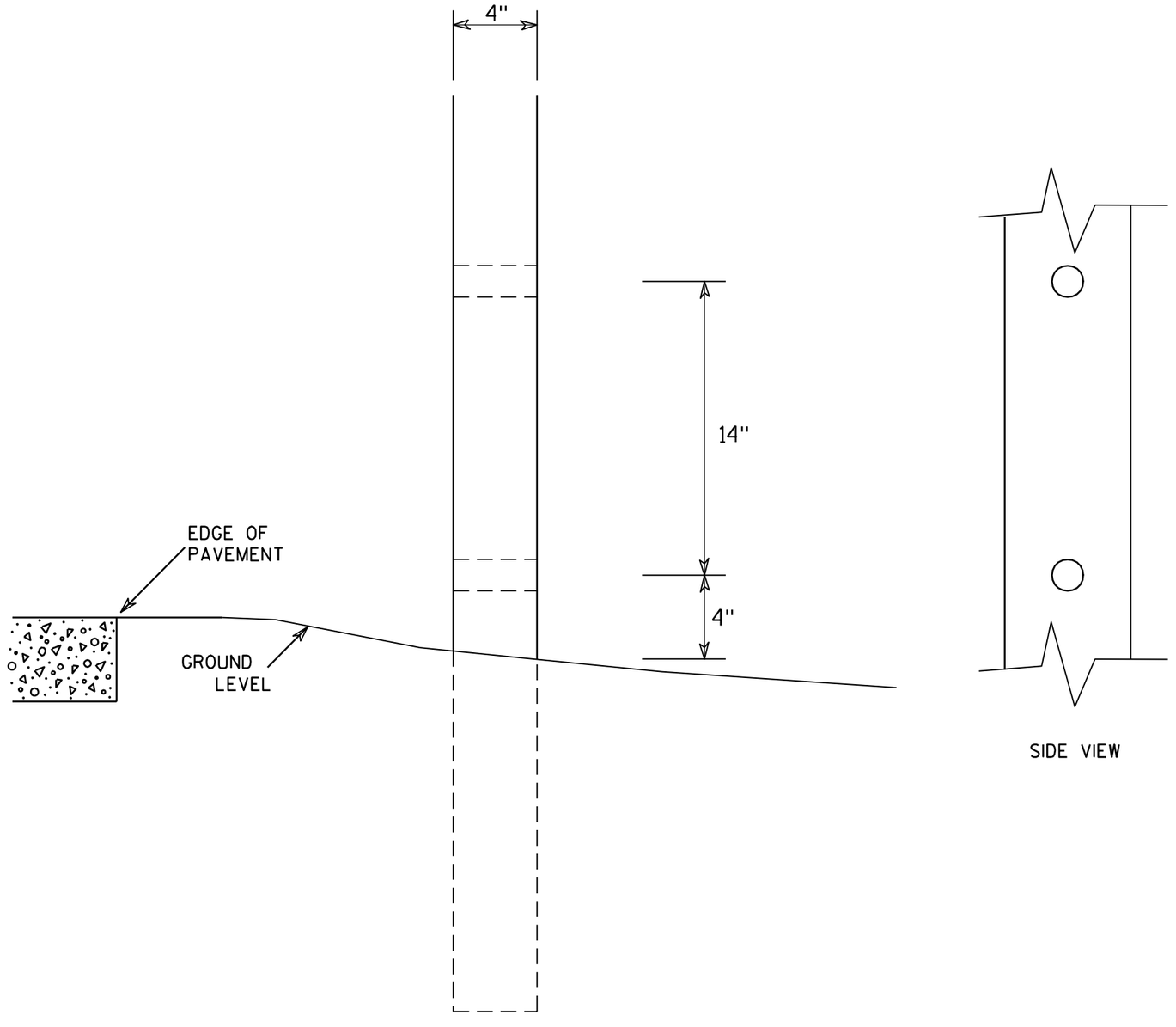
SYMBOLS

- 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] 225
CHIEF SIGNS AND MARK[illegible] NEER
FHWA



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

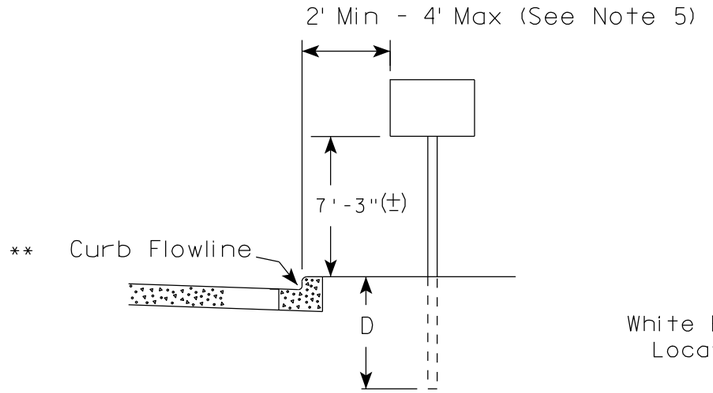
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

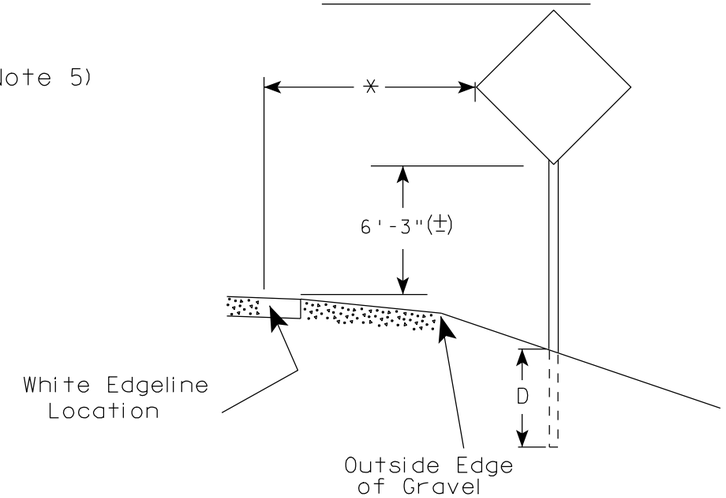
DATE 3/27/97 PLATE NO. A4-11.2

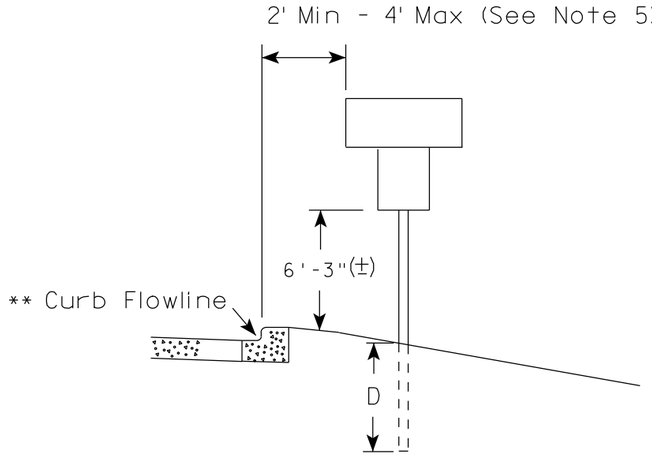
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 226	E

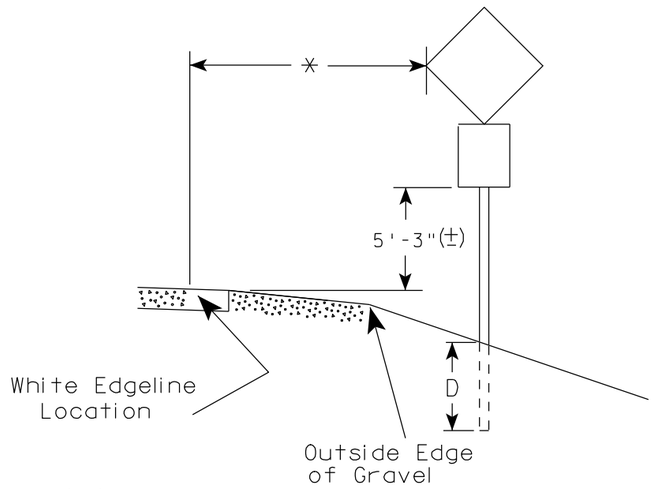
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

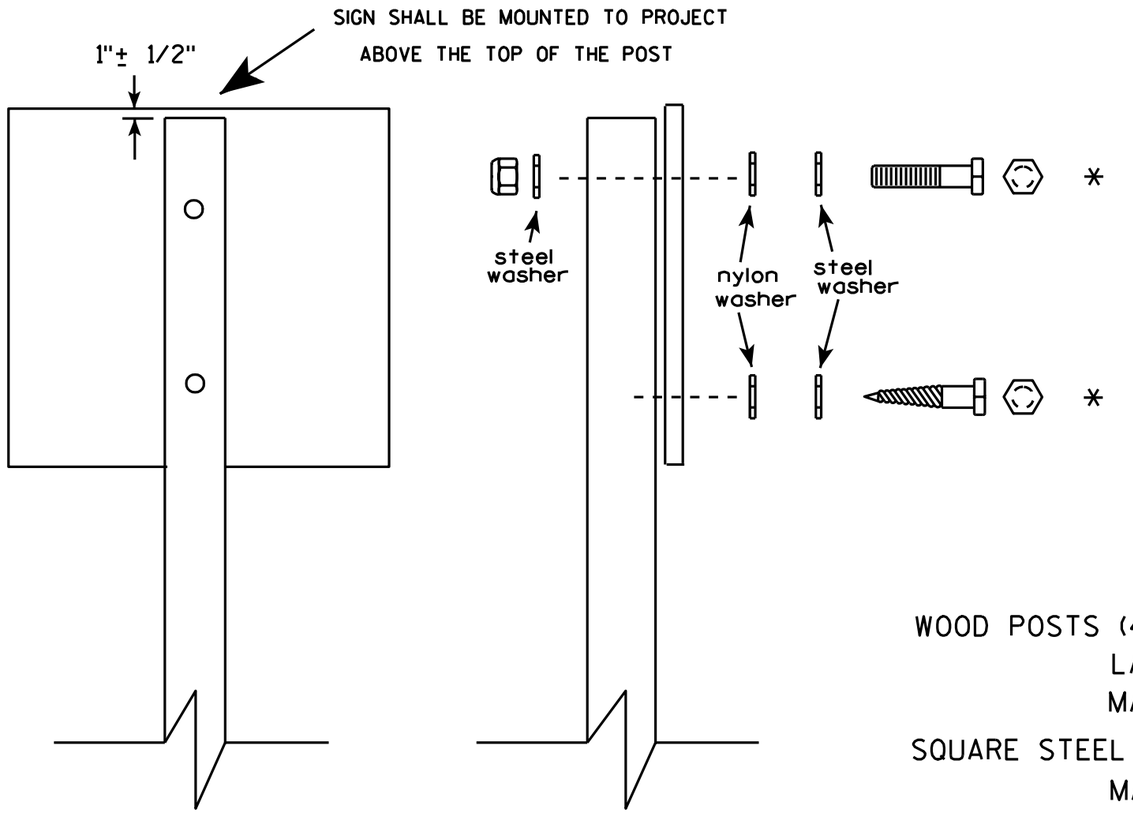
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-3.16

7

7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 227 | E



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

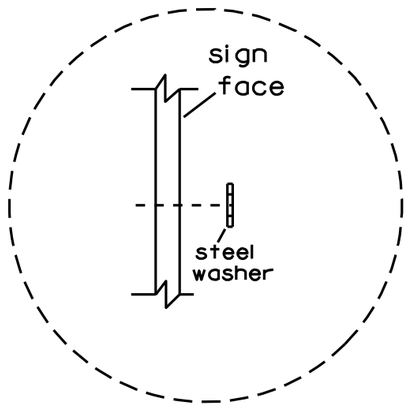
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

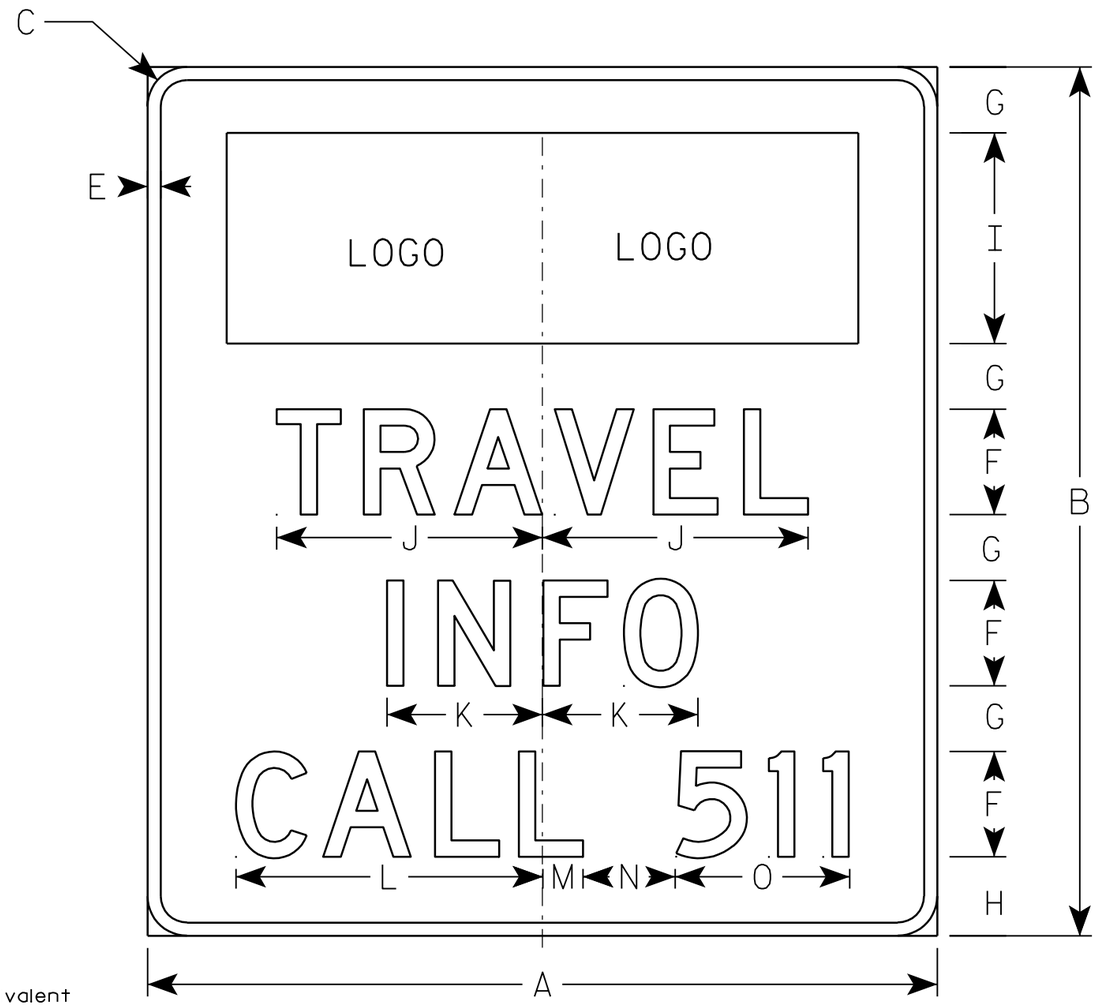
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 228 E



D12-5

NOTES

1. Sign is Type II - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	
2	1500 mm X 1650 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	60	66	2 1/4		1	8	5	6	16	20 1/4	11 7/8	23 3/8	3 1/8	7	13 1/4												27.5	2.48
3																												
4																												
5																												

STANDARD SIGN
D12-5

WISCONSIN DEPT OF TRANSPORTATION

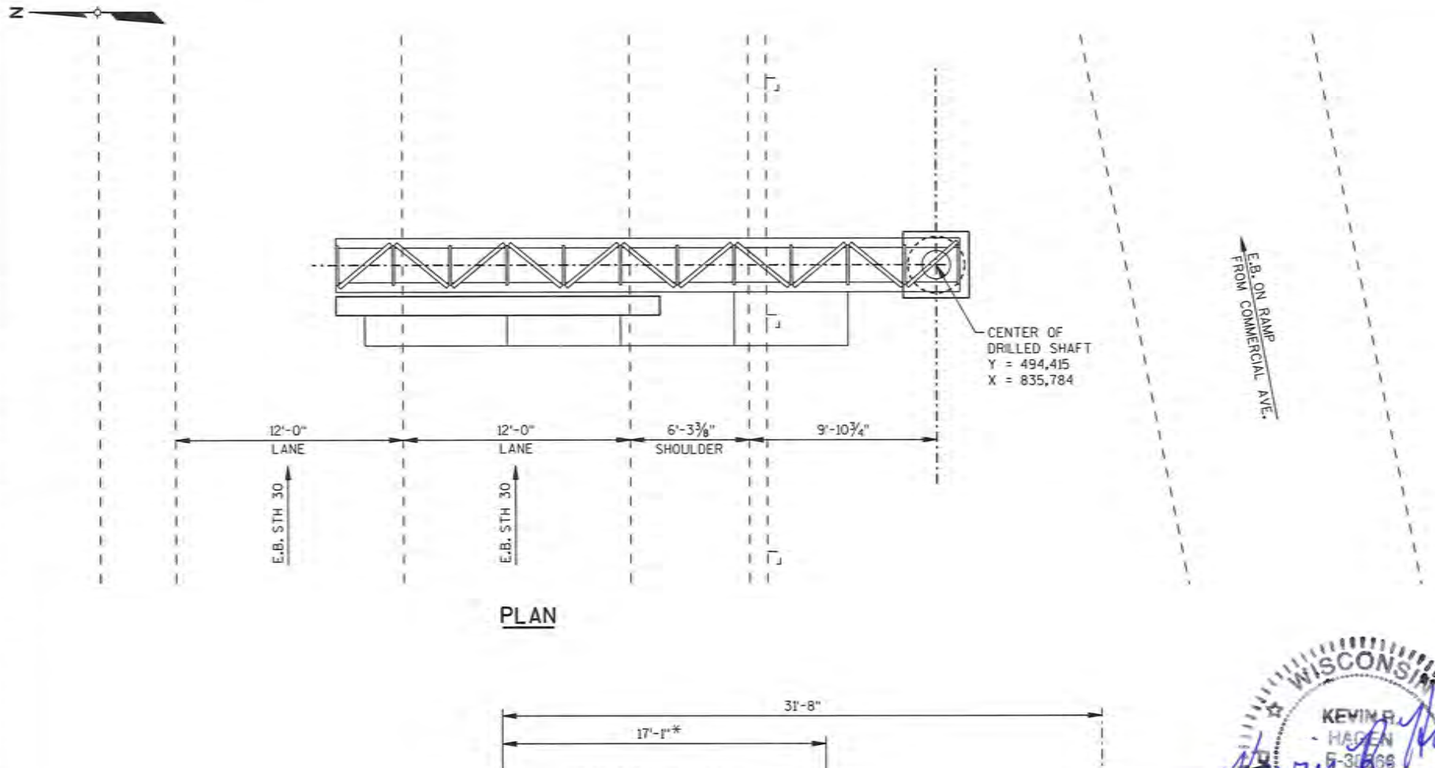
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/5/08 PLATE NO. D12-5.2

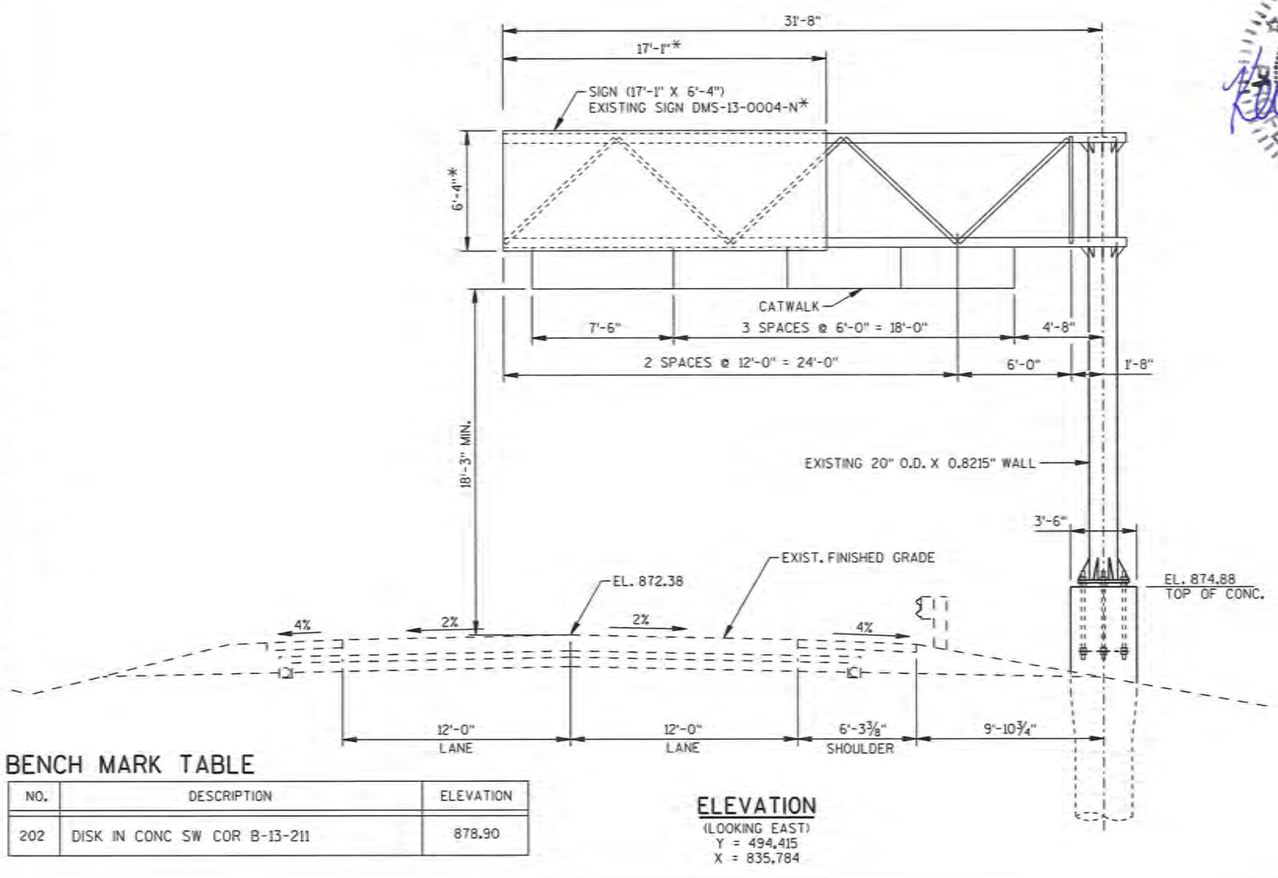
PROJECT NO:

SHEET NO: 229 E

PRINTER DRIVER: S:\TPN.CADstds\Workspace-CLIENTS\WisDOT\MicroStation\WMS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: L:\work\projects\60242867\000.CAD\001_Drawings\Structures\S-13-190\WMS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: L:\work\projects\60242867\000.CAD\001_Drawings\Structures\Final Early Let ITS Structures\S-13-190\S-13-190-1 GP and Elev.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 3:26:00 PM
BATCH PRINT SHEET 1 OF 3



PLAN



ELEVATION
(LOOKING EAST)
Y = 494,415
X = 835,784

BENCH MARK TABLE

NO.	DESCRIPTION	ELEVATION
202	DISK IN CONC SW COR B-13-211	878.90

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	8
636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	2,000
SPV.0060.950	SALVAGE CANTILEVER SIGN BRIDGE S-13-190	EACH	1
SPV.0060.951	REMOVING CONCRETE SIGN SUPPORT	EACH	1

ALL ITEMS ARE CATEGORY 6001

GENERAL NOTES & LEGEND

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" UNLESS OTHERWISE SHOWN.

S-13-190 WILL BE RELOCATED FROM ITS CURRENT STH 30 WB LOCATION TO THE PROPOSED LOCATION SHOWN. THE CONCRETE FOUNDATION AT THE EXISTING LOCATION SHALL BE REMOVED.

CASINGS FOR FOOTING SHAFTS ARE INCLUDED WITH THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY" IN ACCORDANCE WITH SECTION 636.3.3 OF THE STANDARD SPECIFICATIONS.

CASINGS SHALL BE USED WHEN POURING FOOTING SHAFT. CASINGS SHALL NOT BE LEFT IN PLACE.

EXCAVATION REQUIRED FOR DRILLED SHAFT WILL BE INCLUDED WITH THE "SALVAGE CANTILEVER SIGN BRIDGE S-13-190" BID ITEM.

THE FIRST DIGIT OF A THREE DIGIT AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

ANCHOR RODS, NUTS, AND WASHERS SHALL BE GALVANIZED PER ASTM A123 AND IN ACCORDANCE WITH THE AASHTO SPECIFICATIONS AS STATED IN SECTION 641 OF WISDOT STANDARD SPECIFICATIONS.

ALTERNATE DESIGNS ARE NOT ALLOWED.

SEE ITS CONSTRUCTION DETAILS FOR DEVICES AND CABLING THAT WILL BE MOUNTED ON AND IN THE STRUCTURE.

COORDINATES ARE THE LOCATION OF THE CENTER OF THE SHAFT.

*EXISTING PLANS AND DESIGN DMS DIMENSIONS DO NOT MATCH WHAT IS CURRENTLY IN THE FIELD. 17'-1" X 6'-4" IS AN ESTIMATE TO BE VERIFIED IN THE FIELD.

DESIGN DATA

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, 2009, WITH 2010 AND 2011 INTERIMS.

DEAD LOAD - WEIGHT OF DMS, CATWALK, AND SUPPORTING STRUCTURE.
DESIGN SIGN AREA: 298.5" X 93.79"*
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS, FRONT AND BACK FACE, SIDES, AND TOP OF DMS SIGNS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND 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

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY	f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 psi
PLATES, ASTM A709 GRADE 36	fy = 36,000 psi
ANCHOR RODS, A.A.S.H.T.O. M314	fy = 55,000 psi

FOUNDATION DATA

THE FOLLOWING DATA WAS USED FOR THE DESIGN OF THE FOUNDATION SYSTEM. IF VARIATIONS IN THE ASSUMED DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY THE PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

ALLOWABLE SOIL BEARING PRESSURE ____ 3,000 PSF

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. DRILLED SHAFT
3. SUBSURFACE EXPLORATION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
BILL DREHER (608) 266-8489

CONSULTANT:
KEVIN HAGEN (715) 342-3053

KEVIN R. HAGEN E-30668 STEVENS POINT WI 3/11/2013 PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

AECOM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 03/12/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-13-190

STH 30 EB AT FAIR OAKS AVE.

COUNTY DANE ~~TOWN/CITY/VILLAGE~~ MADISON

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MAH	KRH	BRD	MAH

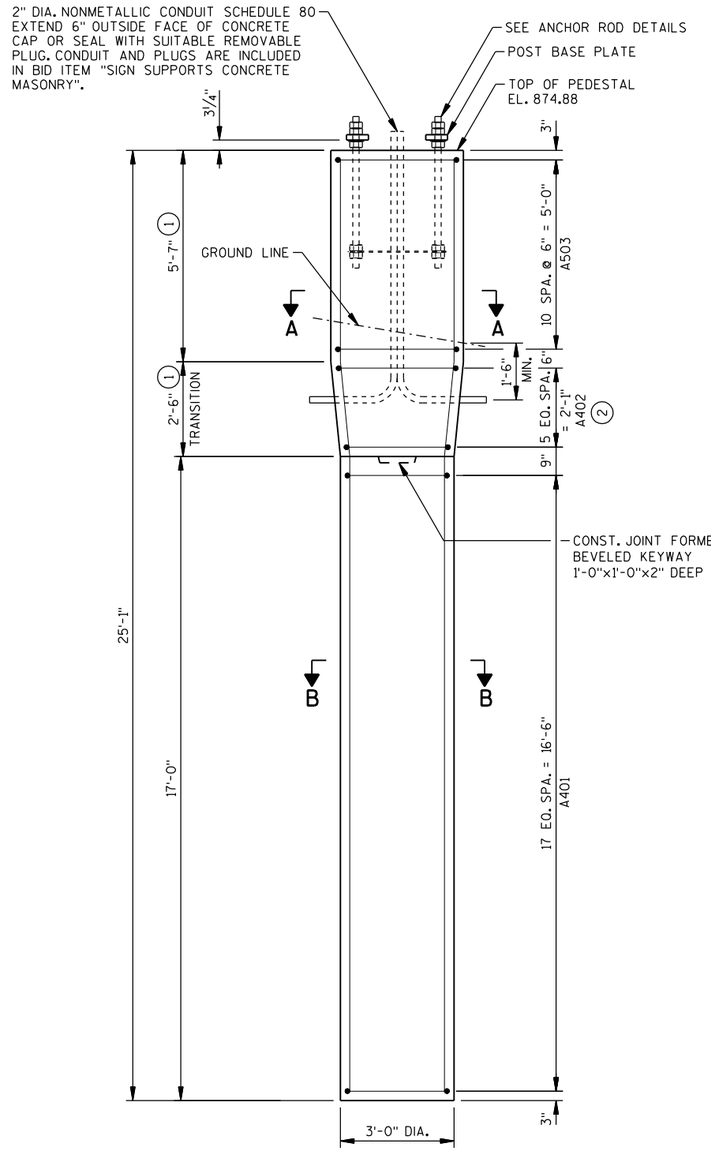
GENERAL PLAN AND ELEVATION

SHEET 1 OF 3

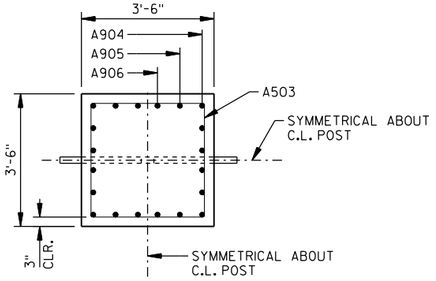
PRINTER DRIVER: S:\TPL_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-190\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-190\S-13-190-2 DrillShaftDtl.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 3:26:04 PM BATCH PRINT SHEET 2 OF 3

STATE PROJECT NUMBER

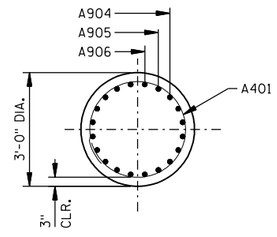
1007-10-70



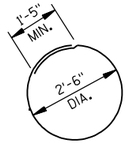
DRILLED SHAFT ELEVATION



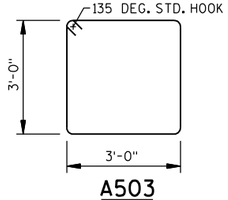
SECTION A-A



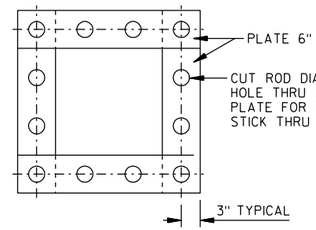
SECTION B-B



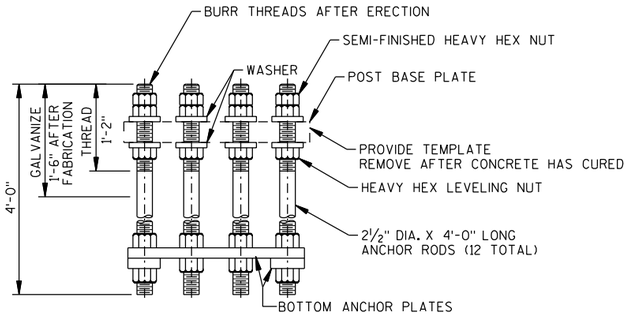
A401



A503

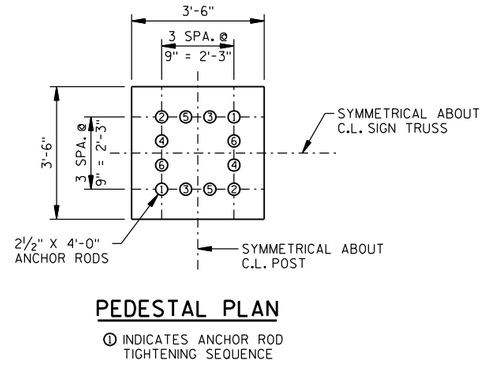


ANCHOR PLATE PLAN



ELEVATION

ANCHOR ROD DETAILS



PEDESTAL PLAN

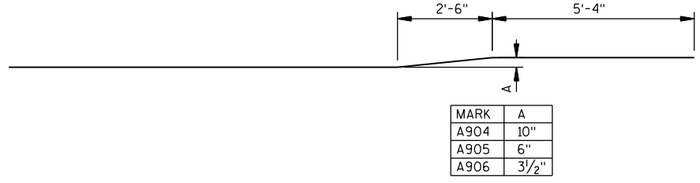
① INDICATES ANCHOR ROD TIGHTENING SEQUENCE

NOTES & LEGEND

ANCHOR RODS 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 RODS.

① PEDESTAL AND TRANSITION SHALL BE FORMED TO CONSTRUCTION JOINT. THE SOIL EXCAVATED FOR FORMING SHALL BE BACKFILLED AND TAMPED TO EQUIVALENT COMPACTION AS SURROUNDING MATERIAL.

② BEND AS REQUIRED TO FORM A CLOSED LOOP.



MARK	A
A904	10"
A905	6"
A906	3½"

A904, A905 & A906

BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
NON-COATED BARS						TOTAL WEIGHT = 2,000 LBS
A401	18	9 - 4	X		CIRCULAR COLUMN, TIE BARS	HORIZ.
A402	6	12 - 2	②		TRANSITION, TIE BARS	HORIZ.
A503	11	12 - 7	X		SQUARE COLUMN, TIE BARS	HORIZ.
A904	4	24 - 8	X		COLUMN, ALL FACES	VERT.
A905	8	24 - 7	X		COLUMN, ALL FACES	VERT.
A906	8	24 - 7	X		COLUMN, ALL FACES	VERT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-13-190

DRAWN BY BRD | PLANS CK'D. MAH

DRILLED SHAFT

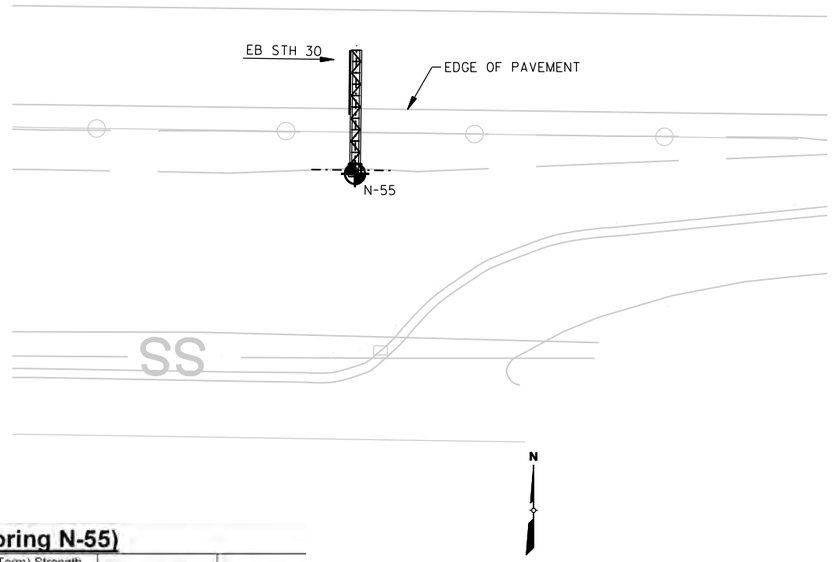
SHEET 2 OF 3
231

8

8

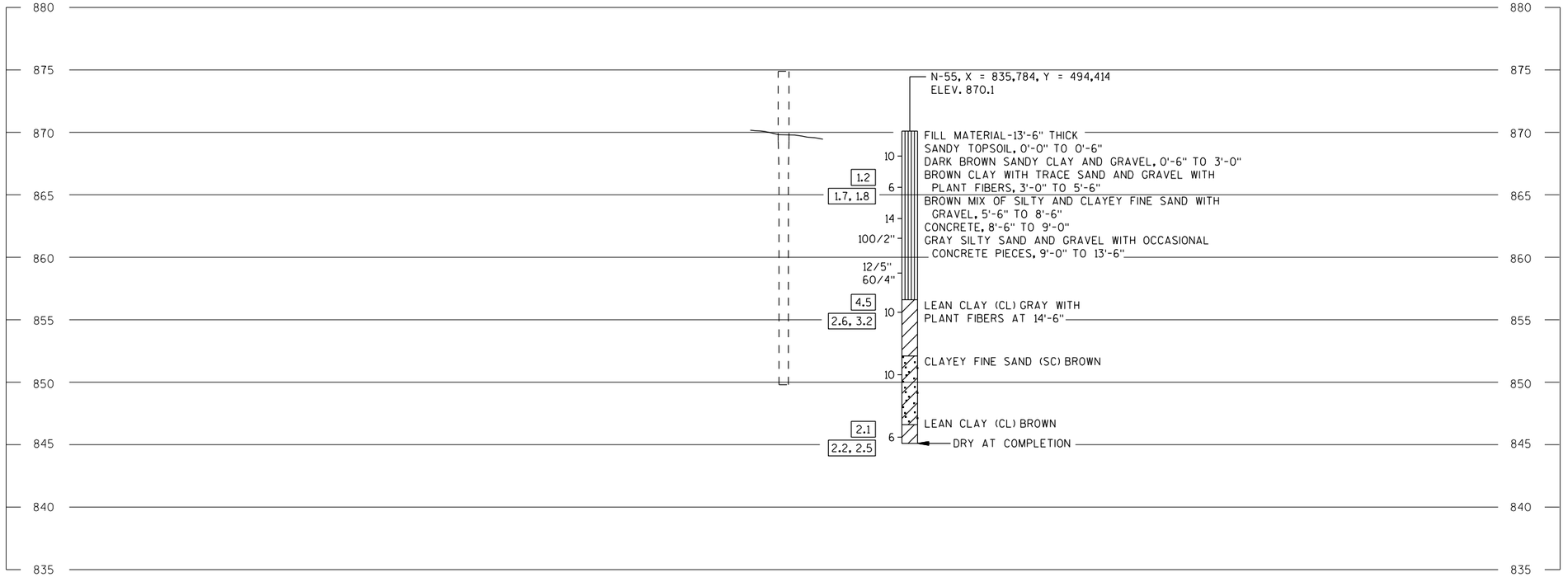
BORINGS AND REPORT BY:
SOILS & ENGINEERING SERVICES, INC.
1102 STEWART ST.
MADISON, WI 53713-4648

BORINGS WERE PERFORMED OCTOBER 2, 2012



Soil Properties for Structure S-13-190 (Based on Boring N-55)

Elevation (feet)			Layer Description	Unit Weight (lb/ft³)	Undrained (Short Term)		Drained (Long Term) Strength		Allowable End Bearing Pressure (lb/ft²)	Allowable Skin Friction (lb/ft²)
					Total Cohesion, c (lb/ft²)	Total Friction Angle, ϕ (degrees)	Effective Cohesion, c' (lb/ft²)	Effective Friction Angle, ϕ' (degrees)		
870.1	-	867.1	Fill Material (Sand)	128.0	0	30	0	30	0	0
867.1	-	865.1	Fill Material (Clay)	134.0	1,560	0	80	25	0	0
865.1	-	861.1	Fill Material (Sand)	128.0	0	34	0	34	0	310
861.1	-	856.6	Fill Material (Sand)	125.0	0	30	0	30	0	450
856.6	-	852.1	Lean Clay	126.2	3,430	0	170	25	3,300	610
852.1	-	846.6	Clayey Fine Sand	125.0	0	31	0	31	3,300	630
846.6	-	845.1	Lean Clay	134.0	2,250	0	110	25	5,300	410



STATE PROJECT NUMBER

1007-10-70

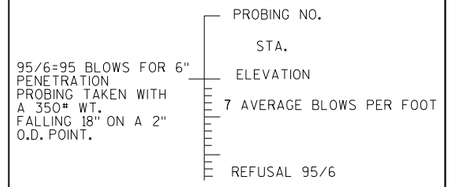
ABBREVIATIONS

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

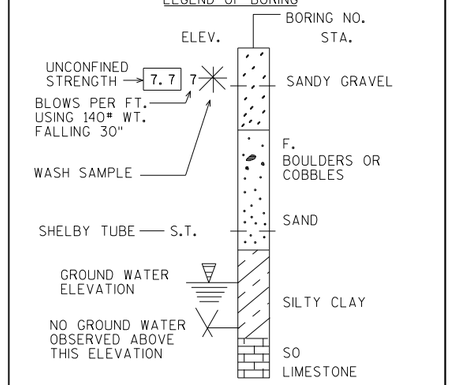
MATERIAL SYMBOLS

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

STRUCTURE S-13-190

DRAWN BY BRD | PLANS CK'D. MAH

SUBSURFACE EXPLORATION

SHEET 3 OF 3
232

FILE =
SCALE =

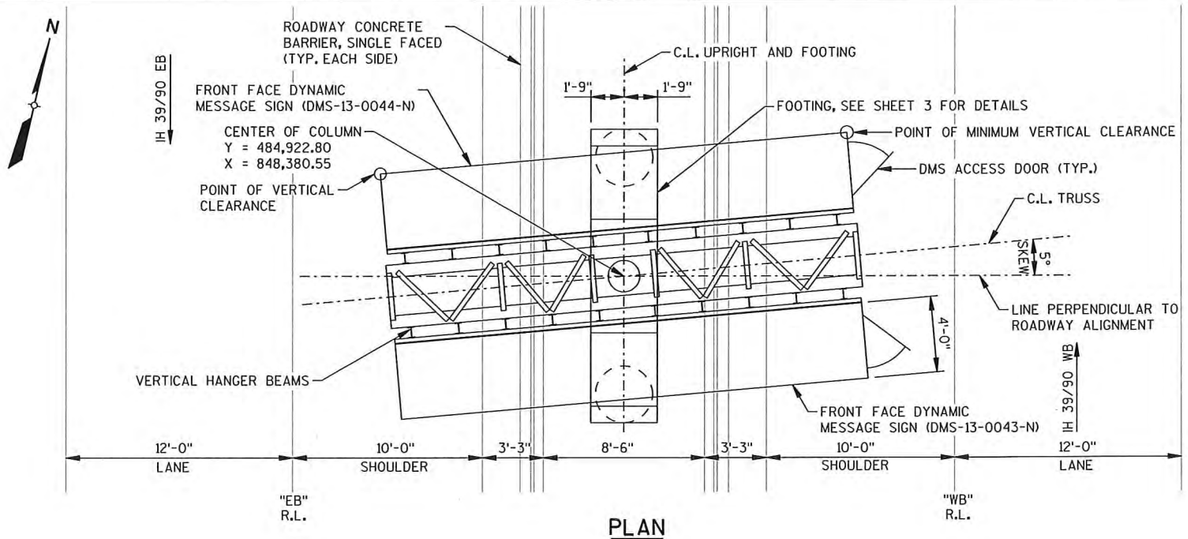
8

8

PRINTER DRIVER: S:\TPN.CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET.PDF.11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-190\MS_Printing\Pen_Tables\ET.WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-190\S-13-190-9 Subsurf.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 3:26:35 PM BATCH PRINT SHEET 3 OF 3

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\WMS_Printing\Printer_Drivers\ET.PDF.11 x 17.plt
PEN TABLE: L:\work\projects\60242867\000_CAD\001_Drawings\Structures\Final Early Let ITS Structures\S-13-408 WMS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: L:\work\projects\60242867\000_CAD\001_Drawings\Structures\Final Early Let ITS Structures\S-13-408 S-13-408 GP and Elev.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:36:14 PM BATCH PRINT SHEET 1 OF 9

STATE PROJECT NUMBER
1007-10-70



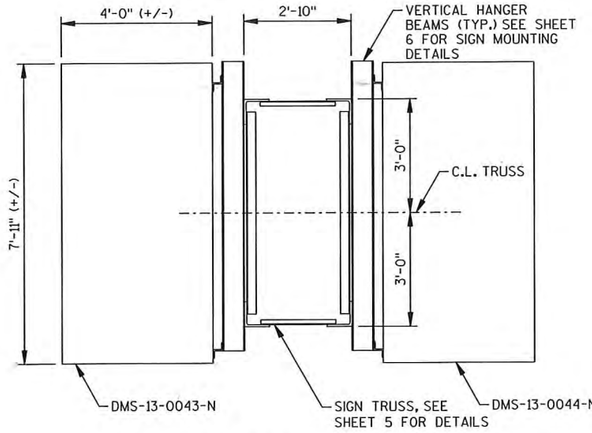
PLAN

TOTAL ESTIMATED QUANTITIES

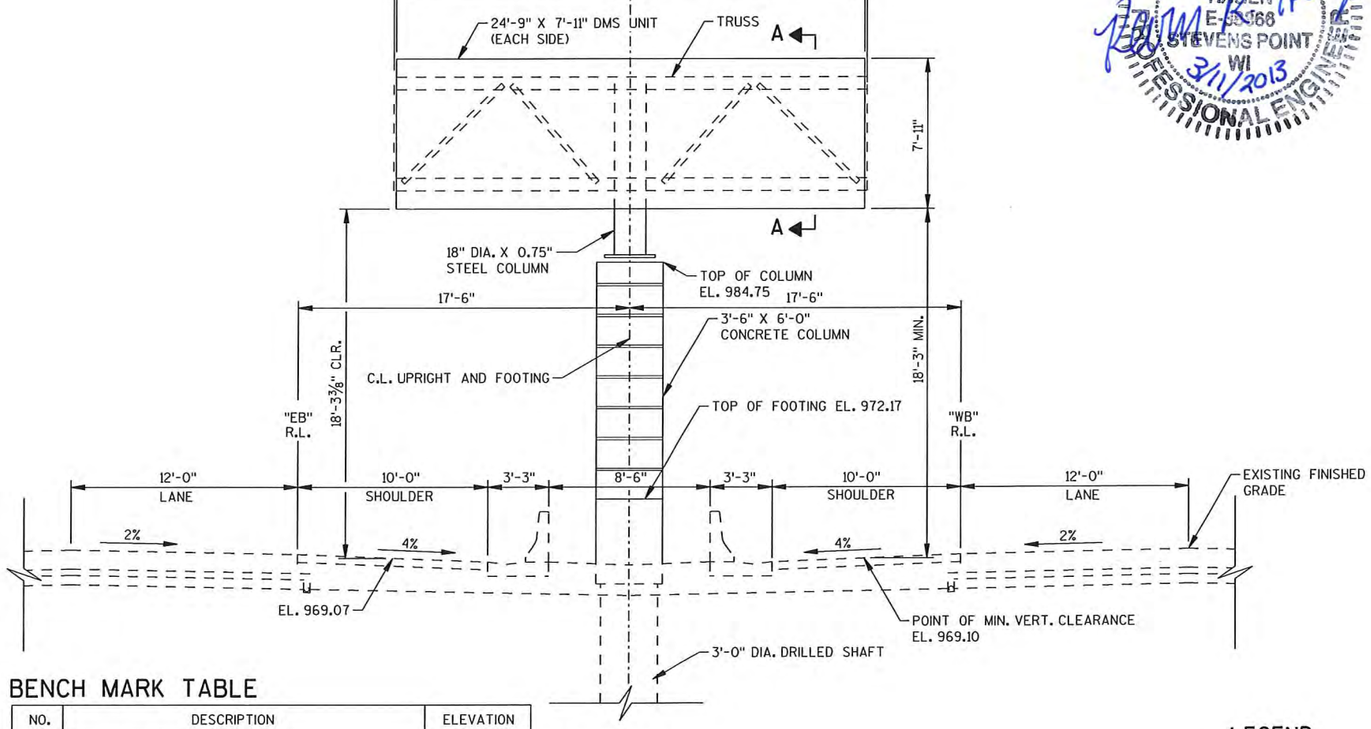
BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
517.1010.S.001	CONCRETE STAINING S-13-408	SF	455
636.0100	SIGN SUPPORT CONCRETE MASONRY	CY	29
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	5,310
◑ 641.0600.001	SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-13-408)	LS	1

ALL ITEMS ARE CATEGORY 6002

DYNAMIC MESSAGE SIGNS AND HOUSINGS WILL BE STATE-FURNISHED.
SEE ROADWAY PLANS AND SPECIAL PROVISIONS FOR INSTALLATION.



SECTION A-A



ELEVATION
(LOOKING NORTH)
Y = 484,922.80
X = 848,380.55

BENCH MARK TABLE

NO.	DESCRIPTION	ELEVATION
755B	"X" ON NORTHEAST SIGN BOLT OF EB 12 SIGN FOR "EXIT 267 B TO MILWAUKEE WIS DELLS" AT MP 267.4.	870.22

WISCONSIN
KEVIN R. HAGEN
E-35168
STEVENS POINT
WI
3/11/2013
PROFESSIONAL ENGINEER

LEGEND

◑ THIS LUMP SUM PAY ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

LIST OF DRAWINGS

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
BILL DREHER (608) 266-8489

CONSULTANT:
KEVIN HAGEN (715) 342-3053

NO.	DATE	REVISION	BY

AECOM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Duchac KAR 03/12/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-13-408

I-39/90 AT CTH BB

COUNTY DANE | ~~TOWN/CITY/VILLAGE~~ MADISON

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	CAK	DESIGN CK'D.	MAH	DRAWN BY	BRD	PLANS CK'D.	MAH

GENERAL PLAN AND ELEVATION

SHEET 1 OF 9
233

8

8

PRINTER DRIVER: S:\TPN.CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\s-13-408\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-408\S-13-408-2 GenNotesDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:36:18 PM BATCH PRINT SHEET 2 OF 9

DESIGN DATA

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, 2009, WITH 2010 AND 2011 INTERIMS.

DEAD LOAD - WEIGHT OF 2 DMS SIGNS (3,400 LBS EACH), AND SUPPORTING STRUCTURE.
NO PROVISIONS HAVE BEEN PROVIDED FOR CATWALK OR LIGHTING.
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS, FRONT AND BACK FACE, SIDES, AND TOP OF DMS SIGNS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND EXPOSED MEMBERS.
DESIGNED WITH A WIND IMPORTANCE FACTOR (Ir) OF 1.15

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 + 1/2 (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

DMS UNIT DATA

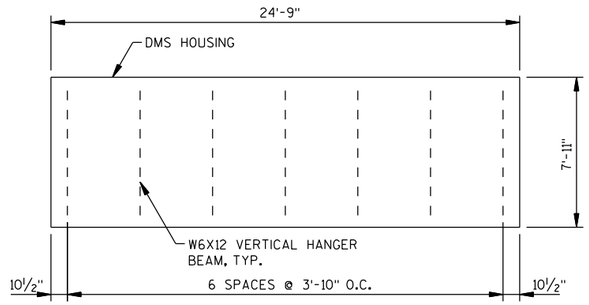
DMS UNIT DIMENSIONS = 24'-9" WIDE x 7'-11" TALL x 4'-0" DEEP
DMS UNIT WEIGHT = 3,400 LBS. EACH

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY	f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 psi
STEEL COLUMN, A.P.I. 5L X 42	fy = 42,000 psi
PLATES, BARS, STRUCTURAL W-SHAPES & ANGLES, ASTM A709 GRADE 36	fy = 36,000 psi
ANCHOR BOLTS, A.A.S.H.T.O. M314	fy = 55,000 psi
HIGH STRENGTH BOLTS - A325	fy = 92,000 psi

FOUNDATION DATA

SOIL PROPERTIES USED FOR THIS DESIGN ARE LOCATED ON THE SUBSURFACE EXPLORATION PLAN SHEET. IF VARIATIONS IN THE DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY THE PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.



DMS PANEL MOUNTING BEAM SPACING

NOTE:
BEAM SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS DETAILS IS ENCOUNTERED.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STRUCTURAL STEEL, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER ASTM A123, AND IN ACCORDANCE WITH THE AASHTO SPECIFICATIONS AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELDING SHALL CONFORM TO AWS D1.1.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY BAR SIZE.

BAR STEEL SHALL BE EMBEDDED 2" CLEAR FROM NEAREST EDGE OF CONCRETE UNLESS OTHERWISE NOTED.

THE DMS VIEWED BY WB TRAFFIC IS DMS-13-0043-N AND THE DMS VIEWED BY EB TRAFFIC IS DMS-13-0044-N.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE INCLUDED WITH THE BID ITEM "SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-13-408)". FABRICATION IN ACCORDANCE WITH S.D.D. 12A4-2.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

CASINGS FOR FOOTING SHAFTS ARE INCLUDED WITH THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY" IN ACCORDANCE WITH SECTION 636.3.3 OF THE STANDARD SPECIFICATIONS.

CASINGS SHALL BE USED WHEN POURING FOOTING SHAFTS. CASINGS SHALL NOT BE LEFT IN PLACE.

CENTER SIGNS VERTICALLY AND HORIZONTALLY ON TRUSS.

ALTERNATE DESIGNS ARE NOT ALLOWED.

NUTS FOR ANCHOR BOLTS SHALL BE ASTM A563 GRADE 'A' HEAVY HEX. ANCHOR BOLTS SHALL HAVE DOUBLE NUTS.

DO NOT GROUT THE SPACE BETWEEN TOP OF FOOTING AND BOTTOM OF BASE PLATE.

HANDHOLES AND GROUND RODS ARE REQUIRED.

THE STRUCTURE IS INTENDED TO BE FABRICATED, GALVANIZED AND SHIPPED AS A SINGLE UNIT.

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

SIGN OR BLANKS SHALL BE INSTALLED ON TRUSS AT THE TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF TRUSS, 2'-0" DEEPER THAN C.L. TO C.L. OF CHORDS AND SHALL BE CENTERED ON THE TRUSS. PERMANENT SIGNS SHALL BE LOCATED AS SHOWN.

SEE ITS CONSTRUCTION DETAILS FOR DEVICES AND CABLING THAT WILL BE MOUNTED ON AND IN THE STRUCTURE.

PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

EXCAVATION REQUIRED TO CONSTRUCT THE CONCRETE COLUMN FOUNDATION ABOVE THE DRILLED SHAFTS SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

NO CAMBER IS REQUIRED FOR TRUSS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS FOR THE VERTICAL HANGER BEAM CONNECTION, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-13-408

DRAWN BY BRD | PLANS CK'D. MAH

GENERAL NOTES AND DETAILS

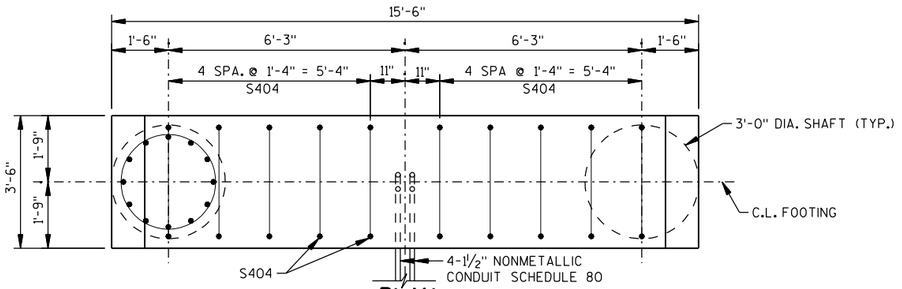
SHEET 2 OF 9
234

8

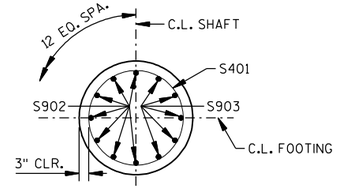
8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET.PDF.11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-408\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-408\S-13-408-3 FndDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:36:23 PM BATCH PRINT SHEET 3 OF 9

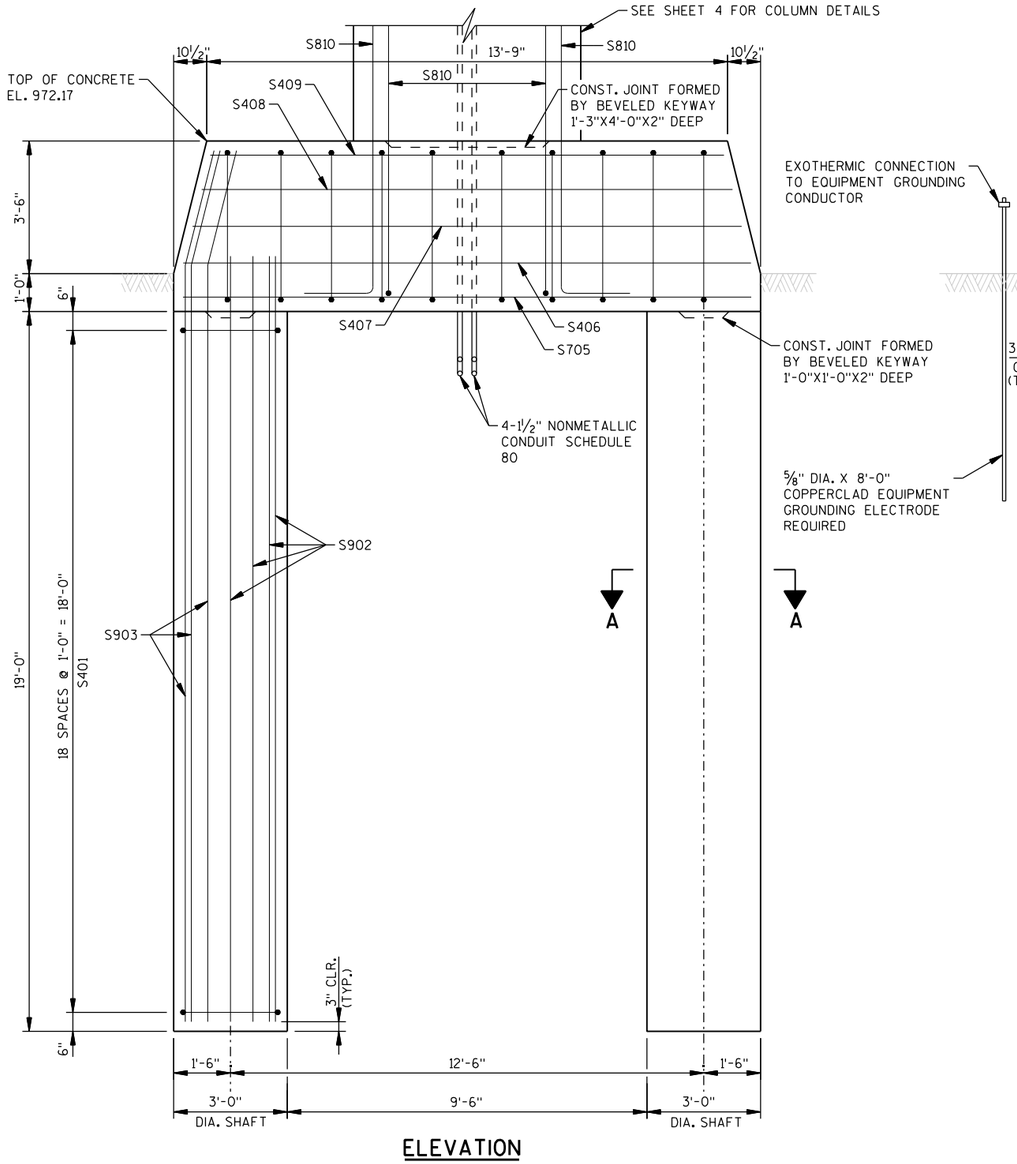
STATE PROJECT NUMBER
1007-10-70



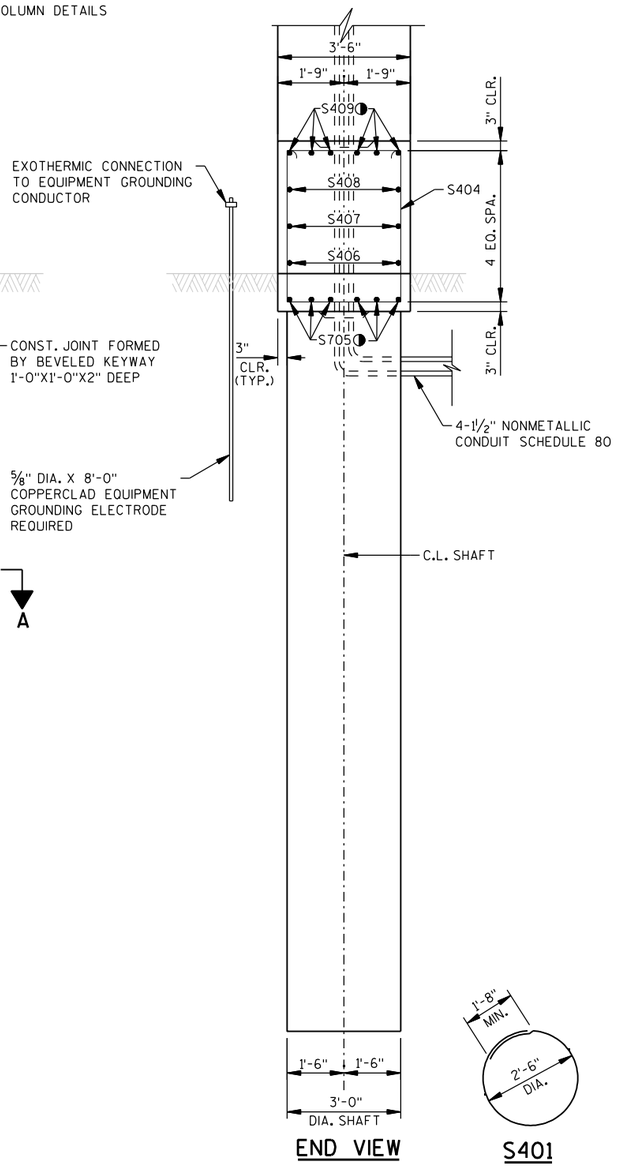
PLAN



SECTION A-A

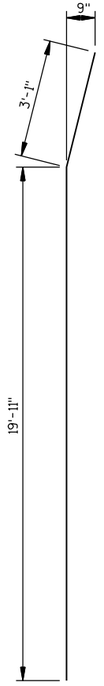


ELEVATION

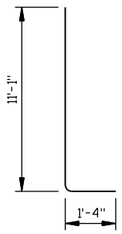


END VIEW

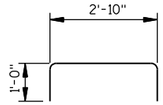
S401



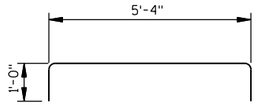
S903



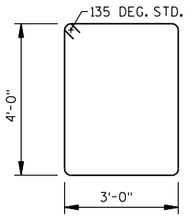
S810



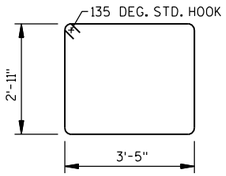
S422



S423



S404



S421

BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 5,310 LBS
S401	38	9 - 6	X		DRILLED SHAFT HORIZONTAL
S902	14	21 - 2			DRILLED SHAFT VERTICAL
S903	10	23 - 0	X		DRILLED SHAFT VERTICAL
S404	10	14 - 6	X		FOOTING VERTICAL
S705	6	15 - 0			FOOTING HORIZONTAL
S406	2	14 - 10			FOOTING HORIZONTAL
S407	2	14 - 4			FOOTING HORIZONTAL
S408	2	13 - 10			FOOTING HORIZONTAL
S409	6	13 - 4			FOOTING HORIZONTAL
S810	40	12 - 3	X		COLUMN VERTICAL
S820	40	12 - 3			COLUMN VERTICAL
S421	28	13 - 2	X		COLUMN STIRRUP HORIZONTAL
S422	2	4 - 8	X		COLUMN HORIZONTAL
S423	2	7 - 2	X		COLUMN HORIZONTAL

NOTES & LEGEND

PROVIDE A ¾" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

4 - 1½" NONMETALLIC CONDUIT SCHEDULE 80 SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE FOOTING THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES.

GROUNDING ELECTRODE, GROUNDING CONDUCTOR AND 1-INCH CONDUIT SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

◑ SPACE TO MISS VERTICAL SHAFT REINFORCEMENT AND CONDUIT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

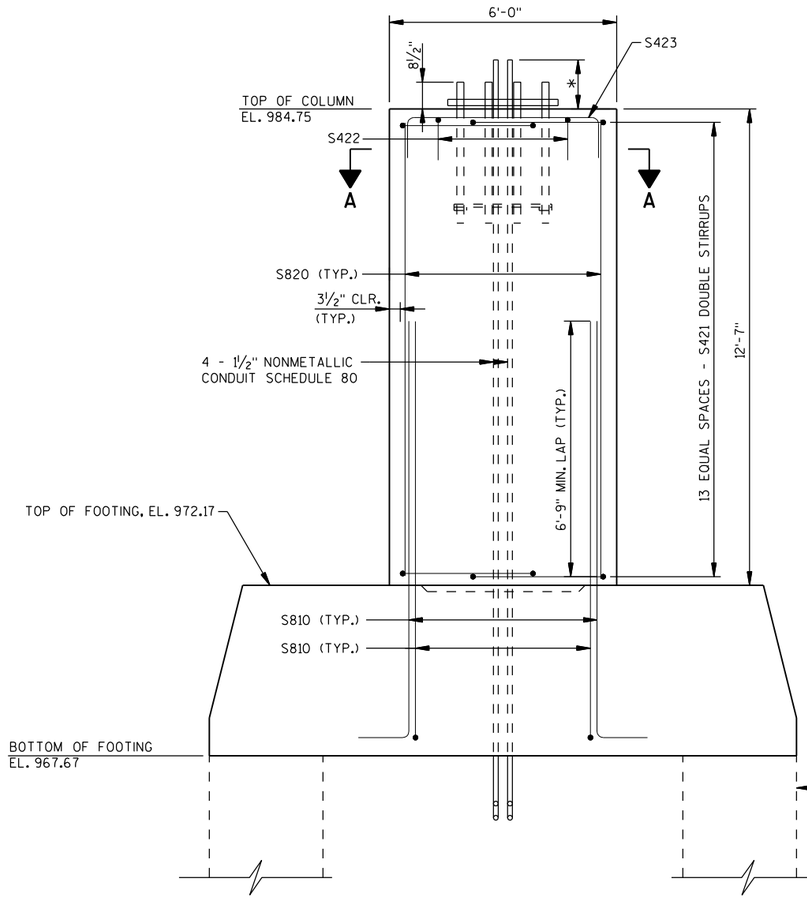
STRUCTURE S-13-408

DRAWN BY BRD | PLANS CK'D. MAH

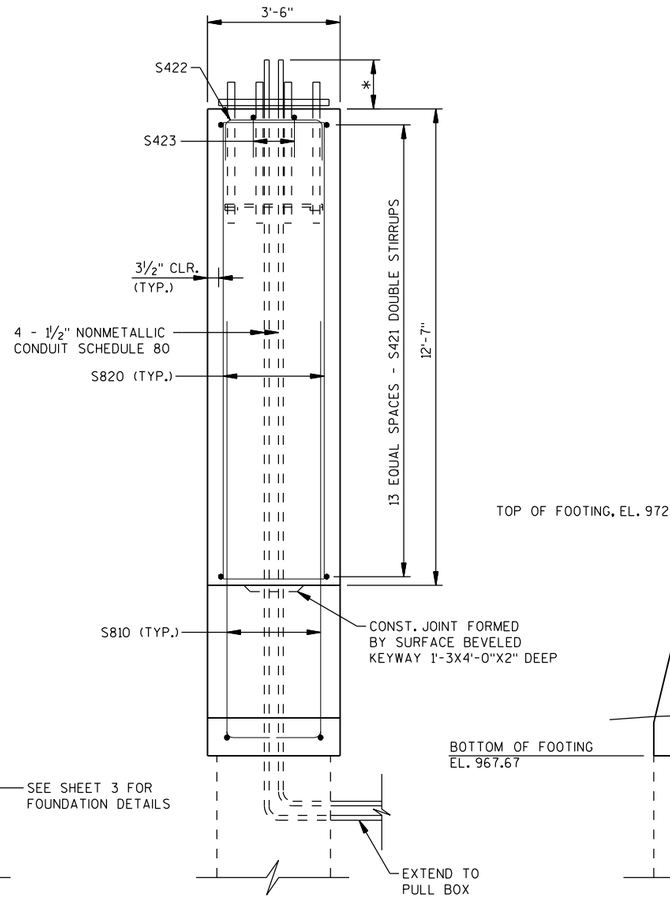
FOUNDATION DETAILS

SHEET 3 OF 9
235

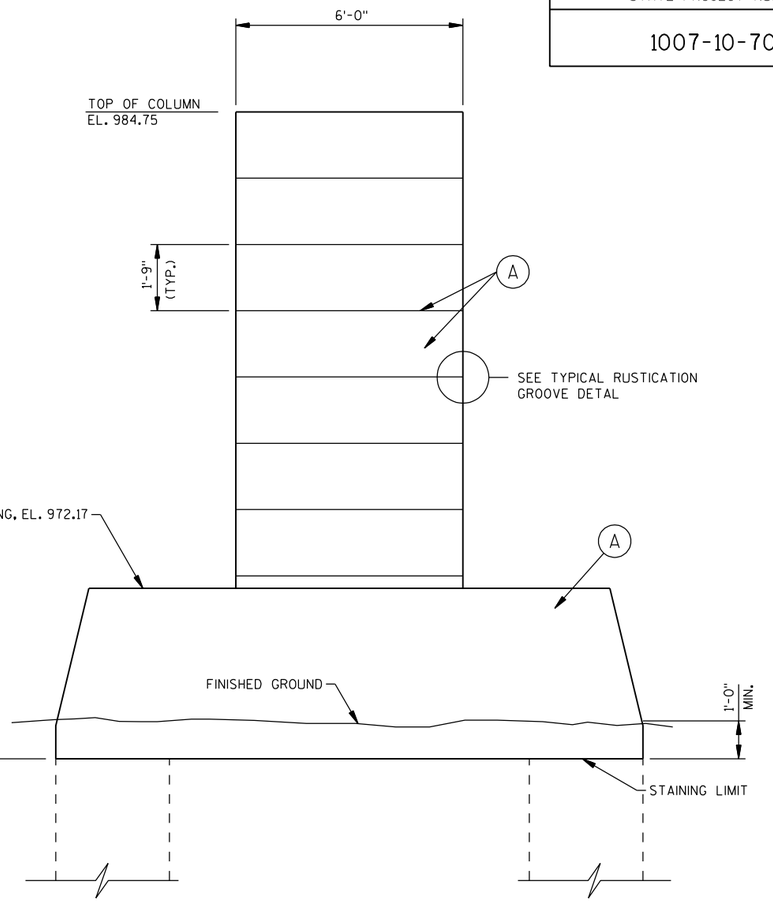
PRINTER DRIVER: S:\TPN.CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\s-13-408\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: i:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\s-13-408\S-13-408-4 ConcColDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:36:27 PM BATCH PRINT SHEET 4 OF 9



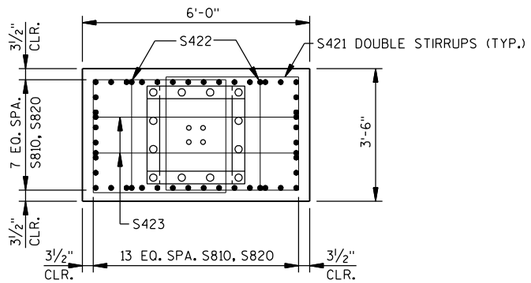
FRONT ELEVATION



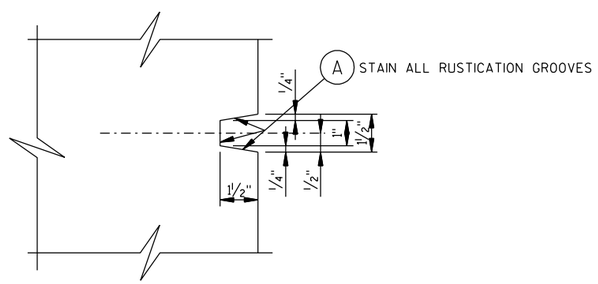
SIDE ELEVATION



FRONT ELEVATION - AESTHETICS
(SIDE ELEVATION SIMILAR)



SECTION A-A



TYPICAL RUSTICATION GROOVE DETAIL

NOTES & LEGEND

ALL SPACING OF RUSTICATION GROOVES TO START AT TOP OF PIER (TOP).

DIMENSIONS FOR RUSTICATION ARE TO CENTER OF JOINT.

ALL STAINING SHALL EXTEND A MINIMUM OF 1'-0" BELOW FINISHED GROUND.

TYPICAL RUSTICATION GROOVE DETAIL SHALL BE USED FOR ALL RUSTICATION GROOVES.

PROVIDE A ¾" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

4 - 1½" NONMETALLIC CONDUIT SCHEDULE 80 SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

* EXTEND 1½" NONMETALLIC CONDUIT SCHEDULE 80 TO THE BOTTOM OF THE HANDHOLE, 1'-6" +/-.

(A) CONCRETE STAIN COLOR
PEARL GREY
FEDERAL COLOR 26622

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-13-408

DRAWN BY BRD | PLANS CK'D. MAH

CONCRETE COLUMN DETAILS

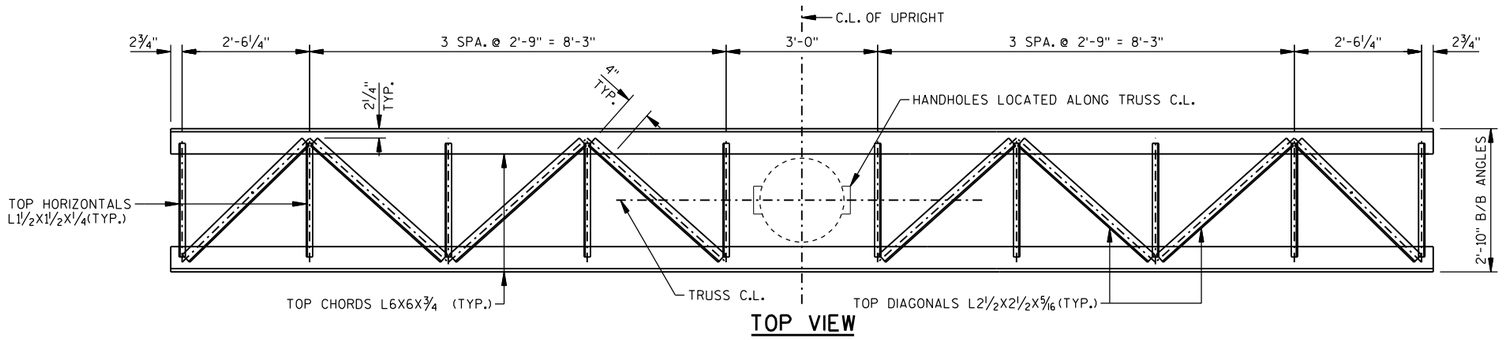
SHEET 4 OF 9
236

8

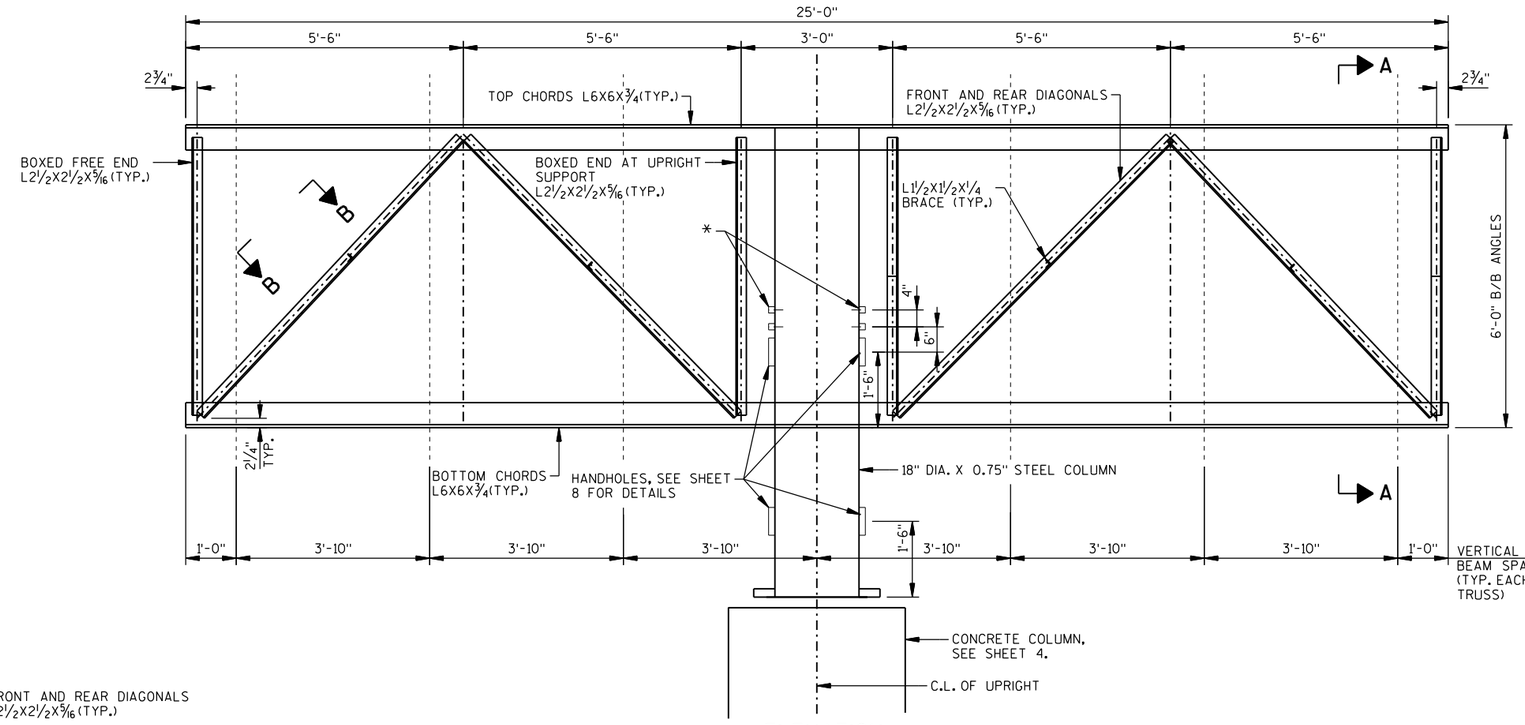
8

STATE PROJECT NUMBER

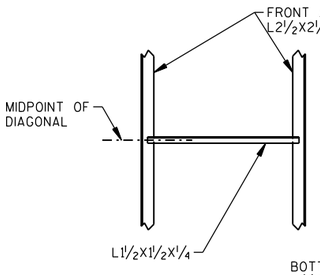
1007-10-70



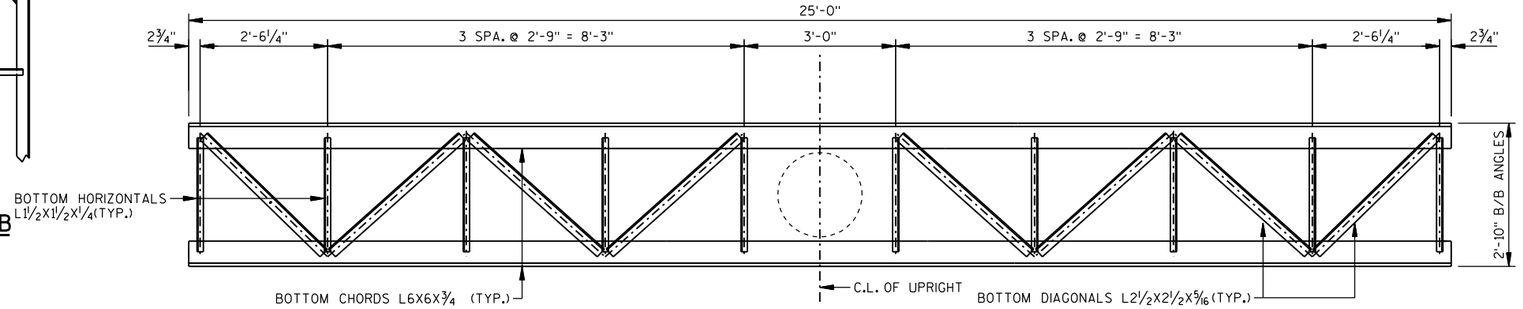
TOP VIEW



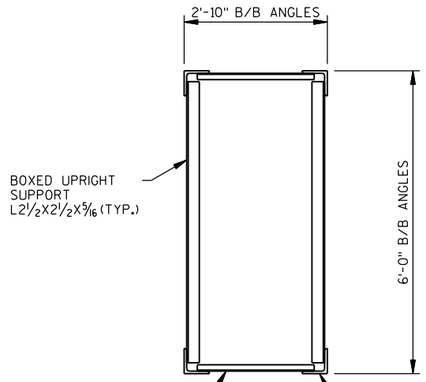
ELEVATION



SECTION B-B



BOTTOM VIEW



SECTION A-A

NOTES

TRUSS AND COLUMN SHALL BE SUPPLIED AS A SINGLE UNIT.

UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.

TRUSSES SHALL BE SHOP ASSEMBLED AND MATCH MARKED.

ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.

SEE SHEET 7 FOR POST CONNECTION DETAILS.

LEGEND

* 2- 1½" CONDUIT COUPLINGS IN STEEL COLUMN. TYPICAL ABOVE EACH UPPER HANDHOLE. CONDUIT COUPLINGS ARE INCLUDED WITH THE BID ITEM "641.0600.01, SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-13-408)".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-13-408

DRAWN BY BRD | PLANS CK'D. MAH

SIGN TRUSS DETAILS

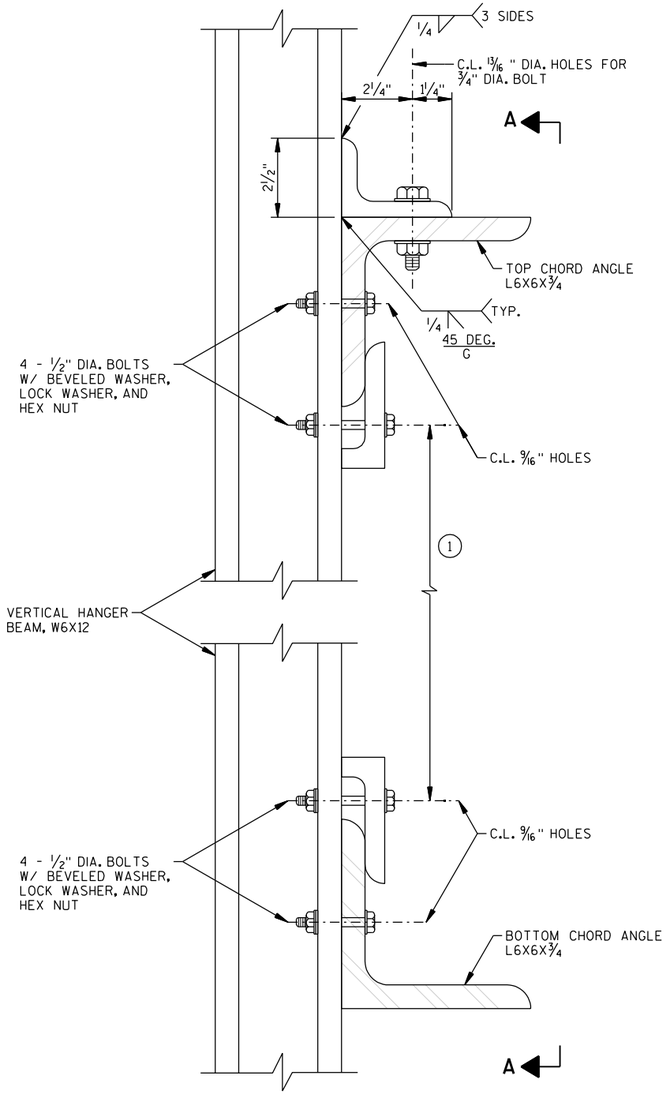
SHEET 5 OF 9
237

8

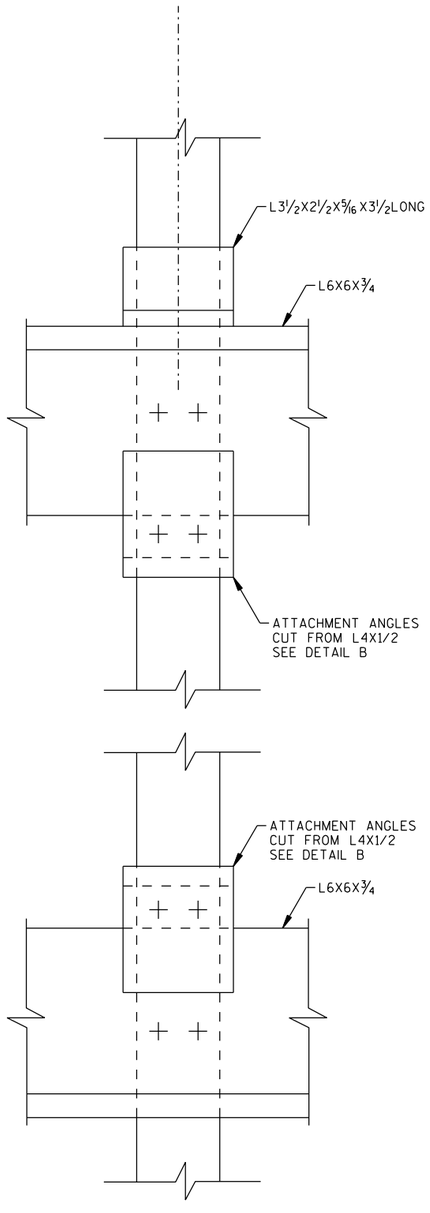
8

PRINTER DRIVER: S:\TPN.CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-408\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-408\S-13-408-5 TrussDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:36:30 PM BATCH PRINT SHEET 5 OF 9

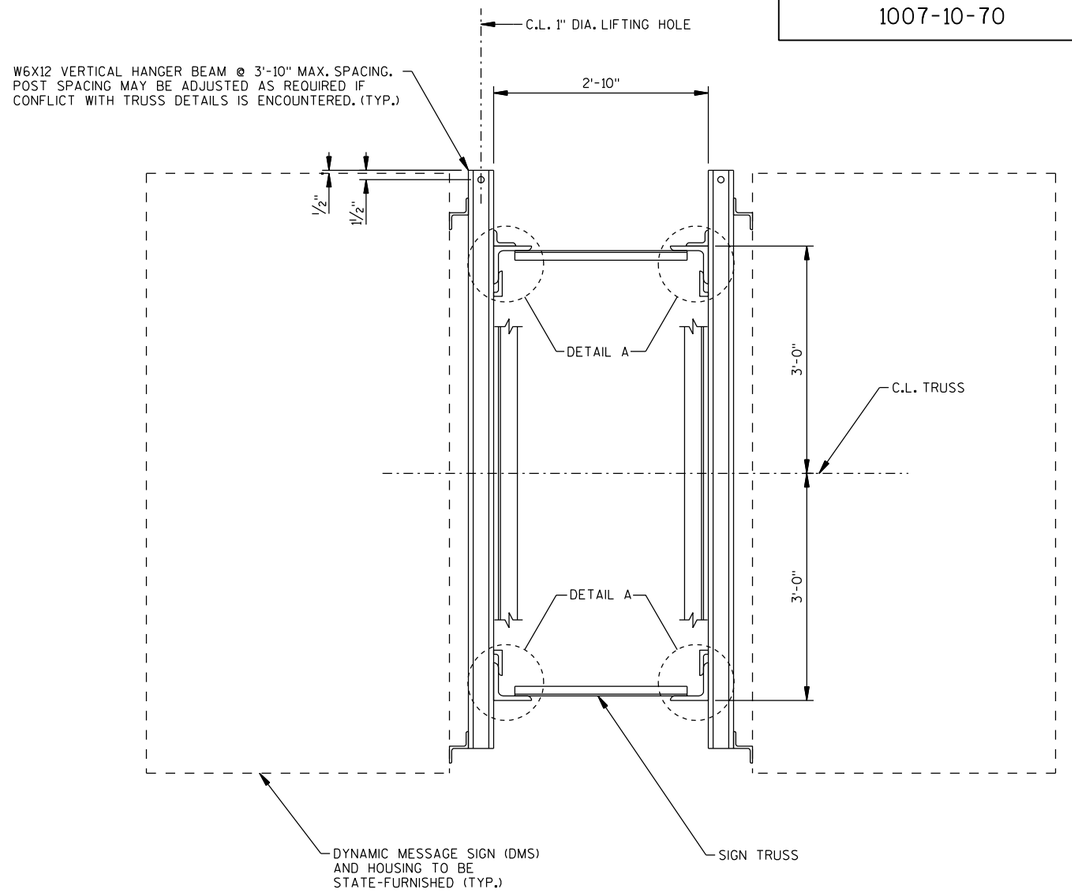
PRINTER DRIVER: S:\TPN.CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET.PDF.11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-408\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-408\S-13-408-6 MountDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:36:34 PM BATCH PRINT SHEET 6 OF 9



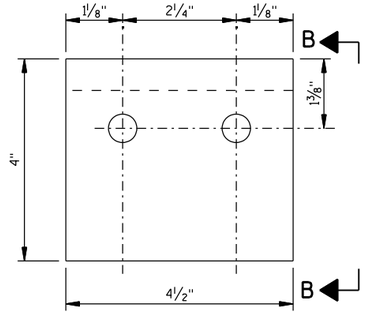
DETAIL A



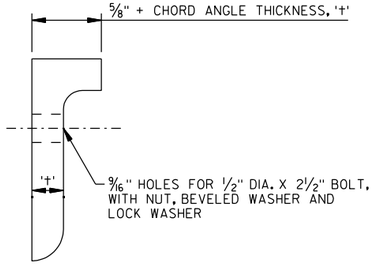
SECTION A-A



SECTION THRU TRUSS AT DYNAMIC MESSAGE SIGN (DMS)



DETAIL B



SECTION B-B

NOTES

(1) (TRUSS DEPTH) - (TOP & BOTTOM CHORD < LEGS) - 1 1/4"

W6X12 VERTICAL HANGER BEAM, 3 1/2X 2 1/2 ANGLES WELDED TO THE HANGER BEAM AND ATTACHMENT ANGLES ARE INCLUDED WITH THE BID ITEM "641.0600.01 SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-13-408)".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-13-408

DRAWN BY BRD | PLANS CK'D. MAH

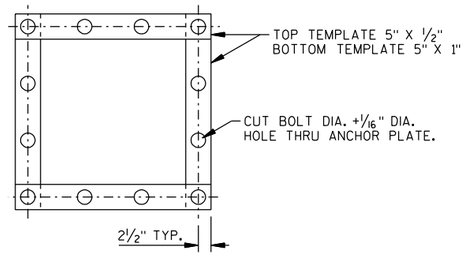
DMS SIGN PANEL MOUNTING DETAILS

SHEET 6 OF 9
238

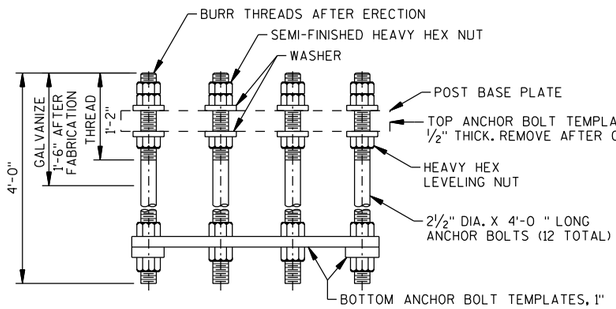
8

8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\60242867\000.cad\001.drawings\structures\s-13-408\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: i:\work\projects\60242867\000.cad\001.drawings\structures\s-13-408\S-13-408-7 ConnectDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:36:37 PM BATCH PRINT SHEET 7 OF 9

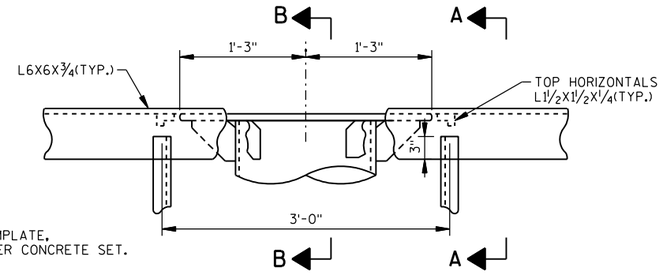


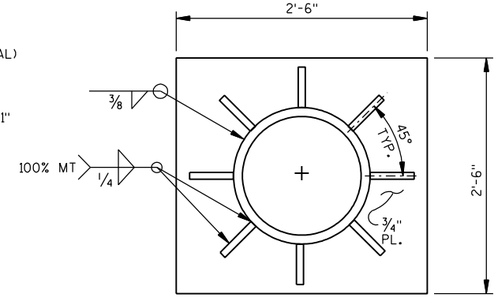
ANCHOR BOLT TEMPLATE PLAN
(TOP AND BOTTOM PLATES)



ELEVATION

ANCHOR BOLT DETAILS





UPPER JUNCTION

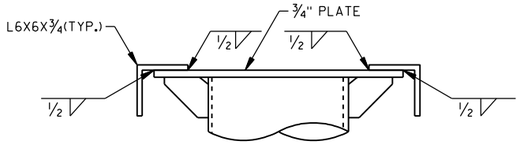
NOTES

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.

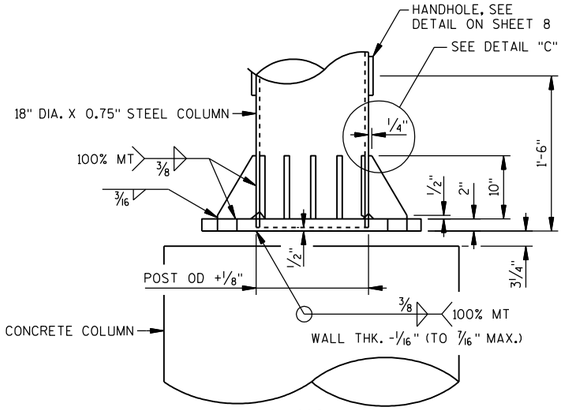
HANDHOLE COVERS SHALL BE GALVANIZED SEPARATELY.

THE FOLLOWING TORQUE VALUE SHALL BE USED WHEN INSTALLING ALL ANCHOR NUTS:

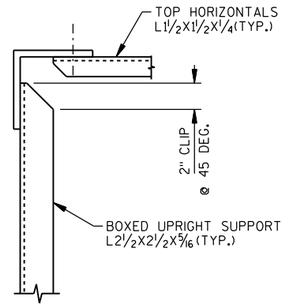
ANCHOR BOLT DIA.	TORQUE (FT./LBS.)
2 1/2"	450



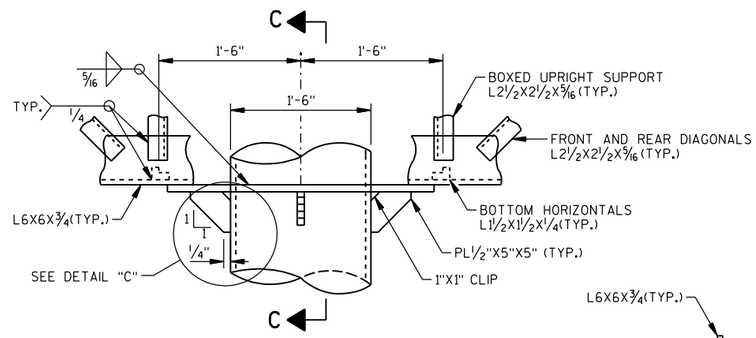
VIEW B-B

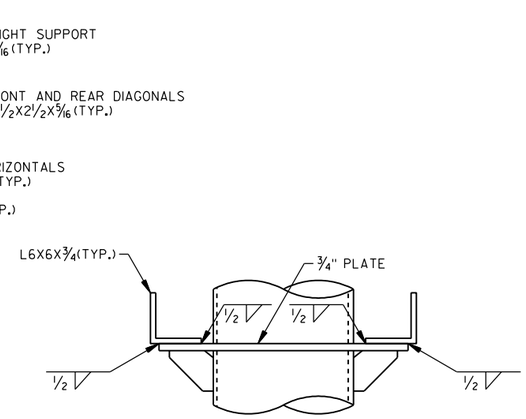


ELEVATION

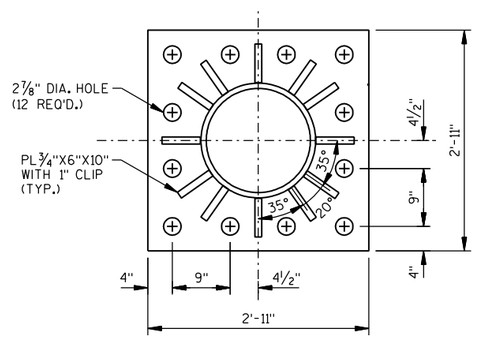


VIEW A-A



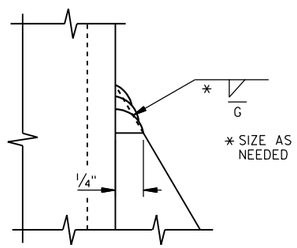


VIEW C-C

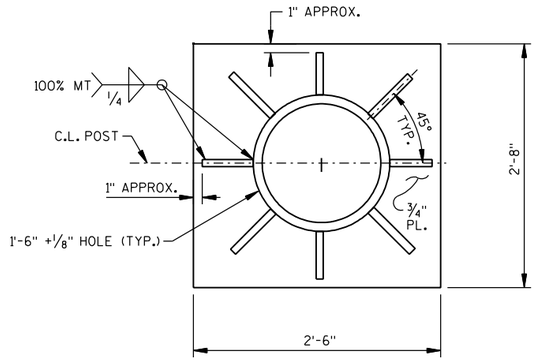


PLAN

BASE PLATE DETAILS



DETAIL "C"



LOWER JUNCTION

BUTTERFLY TRUSS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-13-408

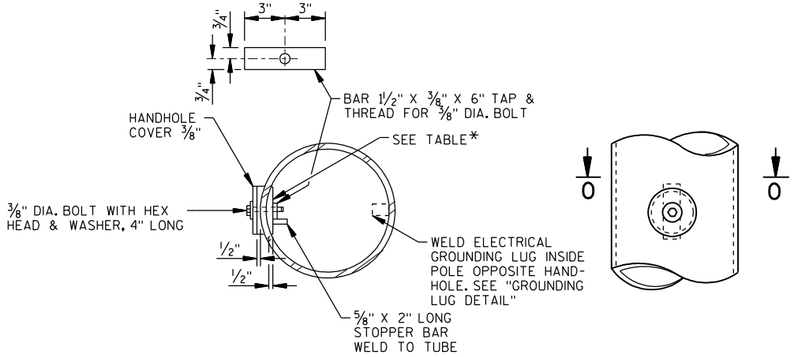
DRAWN BY BRD | PLANS CK'D. MAH

TRUSS/POST CONNECTION & BASE PLATES

SHEET 7 OF 9
239

8

8



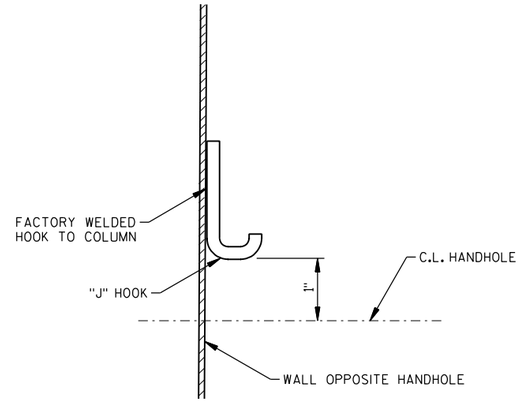
SECTION 'O'

HANDHOLE DETAILS

HANDHOLE NOTES

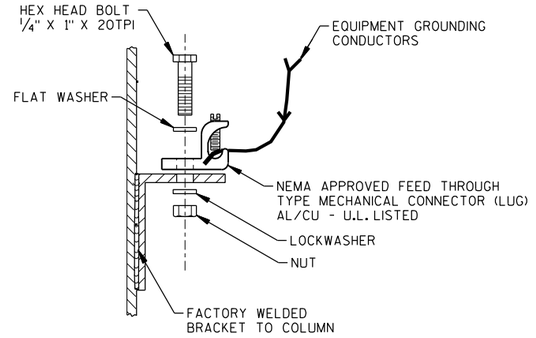
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMN AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

*	UPRIGHT DIA. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
	UP TO AND INCLD. 16" X .375"	5.562" X .500"
	GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"



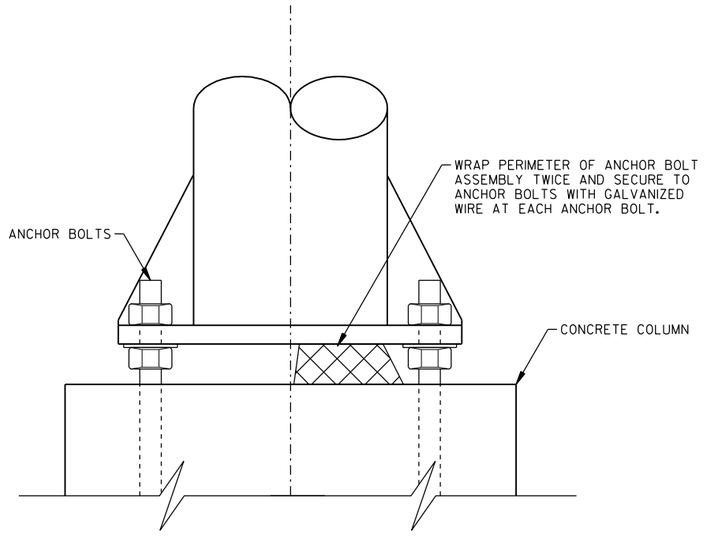
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



RODENT SCREEN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-13-408

DRAWN BY BRD | PLANS CK'D. MAH

HANDHOLE DETAILS

SHEET 8 OF 9

240

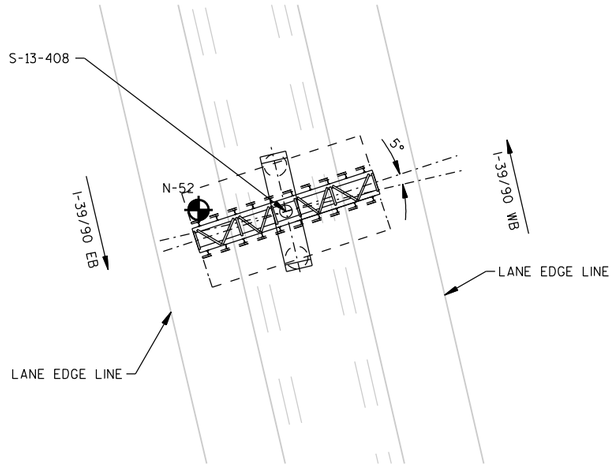
8

8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-408\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: i:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-13-408\S-13-408-8 Handhole.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:36:40 PM BATCH PRINT SHEET 8 OF 9

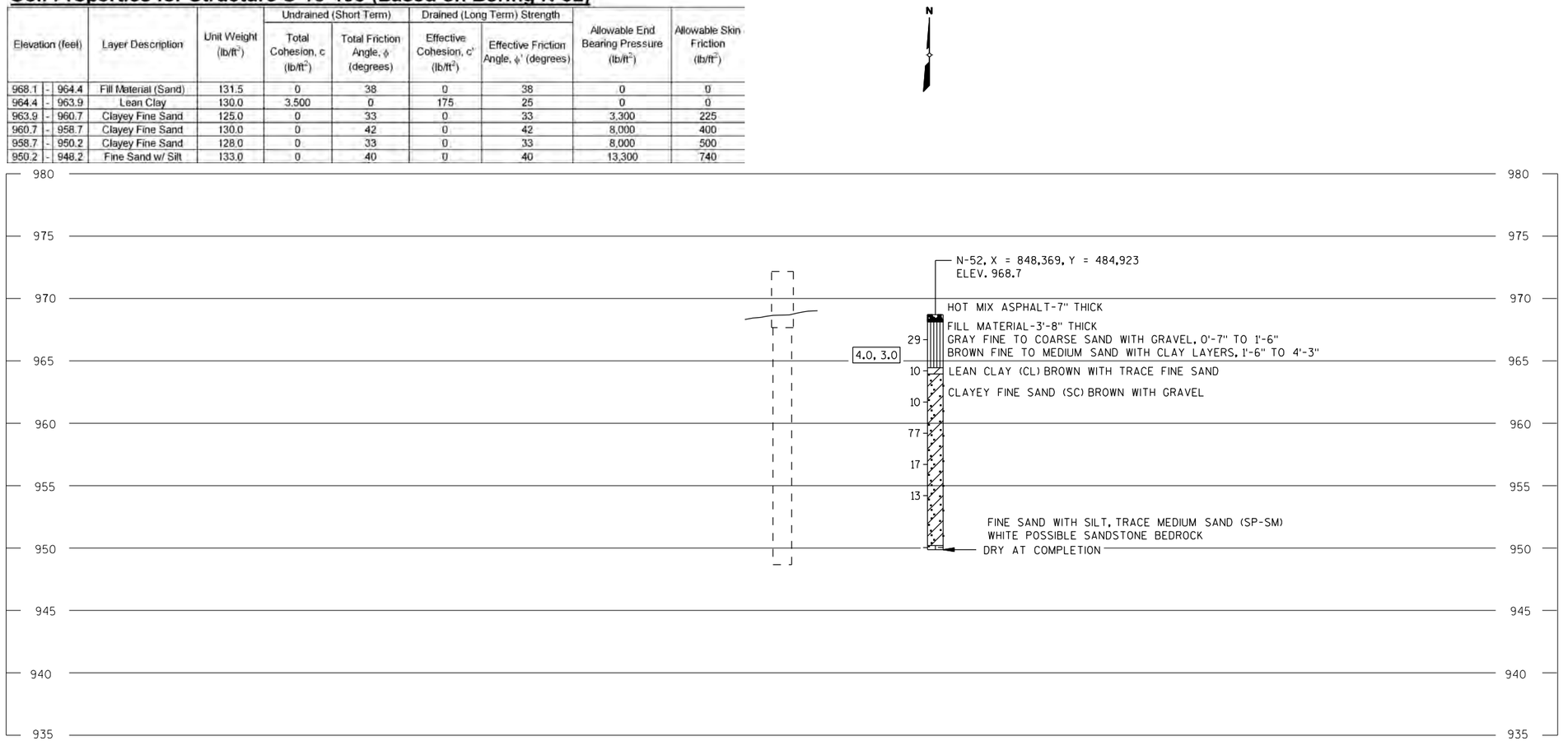
BORINGS AND REPORT BY:
SOILS & ENGINEERING SERVICES, INC.
1102 STEWART ST.
MADISON, WI 53713-4648

BORINGS WERE PERFORMED OCTOBER 8, 2012



Soil Properties for Structure S-13-408 (Based on Boring N-52)

Elevation (feet)	Layer Description	Unit Weight (lb/ft³)	Undrained (Short Term)		Drained (Long Term) Strength		Allowable End Bearing Pressure (lb/ft²)	Allowable Skin Friction (lb/ft²)
			Total Cohesion, c (lb/ft²)	Total Friction Angle, ϕ (degrees)	Effective Cohesion, c' (lb/ft²)	Effective Friction Angle, ϕ' (degrees)		
968.1 - 964.4	Fill Material (Sand)	131.5	0	38	0	38	0	0
964.4 - 963.9	Lean Clay	130.0	3,500	0	175	25	0	0
963.9 - 960.7	Clayey Fine Sand	125.0	0	33	0	33	3,300	225
960.7 - 958.7	Clayey Fine Sand	130.0	0	42	0	42	8,000	400
958.7 - 950.2	Clayey Fine Sand	128.0	0	33	0	33	8,000	500
950.2 - 948.2	Fine Sand w/ Silt	133.0	0	40	0	40	13,300	740



STATE PROJECT NUMBER

1007-10-70

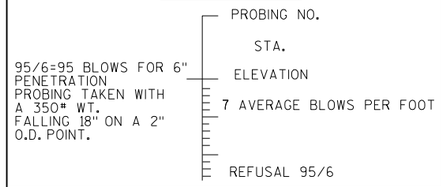
ABBREVIATIONS

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

MATERIAL SYMBOLS

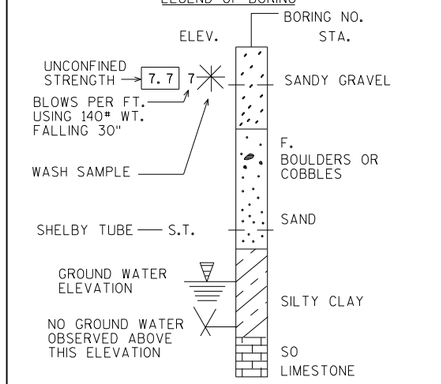
TOPSOIL, SILT, SANDSTONE, SAND, PEAT, LIMESTONE, GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING



95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

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

STRUCTURE S-13-408

DRAWN BY BRD | PLANS CK'D. MAH

SUBSURFACE EXPLORATION

SHEET 9 OF 9
241

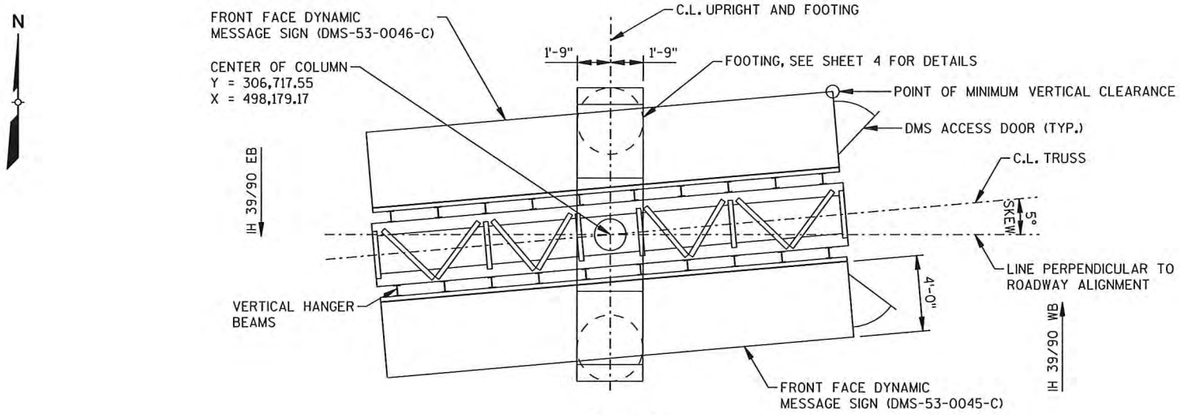
FILE =
SCALE =

8

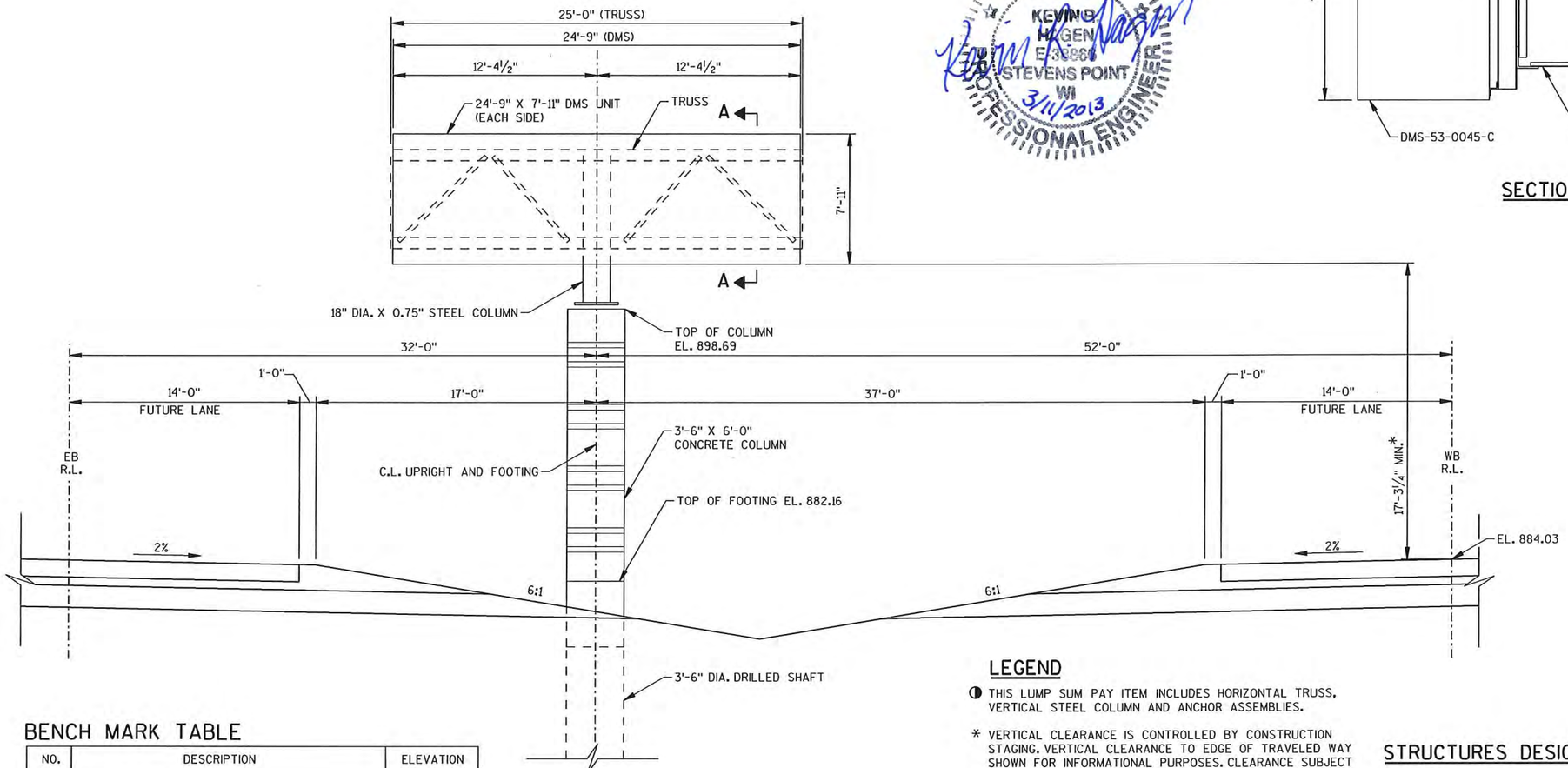
8

PRINTER DRIVER: S:\TPN.CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\s-13-408\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\s-13-408\S-13-408-9 Subsurf.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:37:11 PM BATCH PRINT SHEET 9 OF 9

PRINTER DRIVER: S:\TPNLCADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\WS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: L:\work\projects\60242867\000_CAD\001_Drawings\Structures\S-53-73\WS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: L:\work\projects\60242867\000_CAD\001_Drawings\Structures\Final Early Let ITS Structures\S-53-73\S-53-73-1 GP and Elev.dgn
PLOT DATE: 3/11/2013 BATCH PRINT SHEET 1 OF 10
PLOT TIME: 6:45:15 PM



PLAN



ELEVATION
(LOOKING NORTH)
Y = 306,717.55
X = 498,179.17

(FUTURE ROADWAY CROSS SECTION SHOWN, SEE SHEET 3 FOR ROADWAY CROSS SECTION STAGING DETAILS)

BENCH MARK TABLE

NO.	DESCRIPTION	ELEVATION
425M	CHISELED SQUARE ON TOP OF BARRIER IN SE CORNER OF B-53-77	885.50

LEGEND

◑ THIS LUMP SUM PAY ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

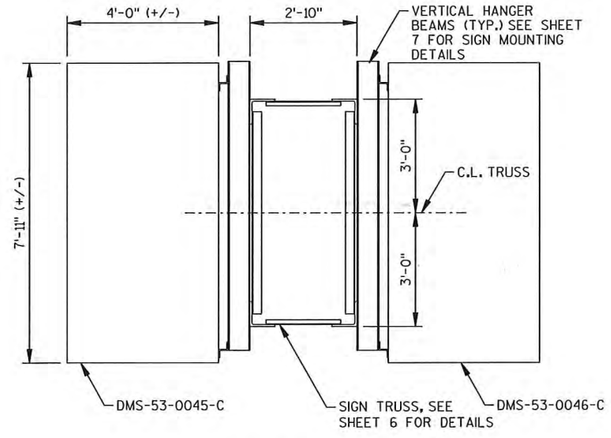
* VERTICAL CLEARANCE IS CONTROLLED BY CONSTRUCTION STAGING. VERTICAL CLEARANCE TO EDGE OF TRAVELED WAY SHOWN FOR INFORMATIONAL PURPOSES. CLEARANCE SUBJECT TO CHANGE AS FUTURE ROADWAY DESIGN WAS NOT FINALIZED AT TIME OF SUBMITTAL.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
517.1010.S.002	CONCRETE STAINING S-53-73	SF	530
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	36
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	6,260
◑ 641.0600.002	SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-53-73)	LS	1

ALL ITEMS ARE CATEGORY 6006

DYNAMIC MESSAGE SIGNS AND HOUSINGS WILL BE STATE-FURNISHED. SEE ROADWAY PLANS AND SPECIAL PROVISIONS FOR INSTALLATION.



SECTION A-A

LIST OF DRAWINGS

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
BILL DREHER (608) 266-8489

CONSULTANT:
KEVIN HAGEN (715) 342-3053

NO.	DATE	REVISION	BY

AECOM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 03/12/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-53-73

I-39/90 AT CTH M

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
ROCK	MILTON

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	CAK	DESIGN CK'D.	MAH	DRAWN BY	BRD	PLANS CK'D.	MAH

GENERAL PLAN AND ELEVATION

SHEET 1 OF 10
242

8

8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\60242867\0000.cad\001_drawings\structures\final early let its structures\s-53-73\MS_Printing\Pen_Tables\ET_MisDOT.tbl
FILE NAME: i:\work\projects\60242867\0000.cad\001_drawings\structures\final early let its structures\s-53-73\S-53-73-2 GenNotesDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 6:07:52 PM BATCH PRINT SHEET 2 OF 10

DESIGN DATA

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, 2009, WITH 2010 AND 2011 INTERIMS.

DEAD LOAD - WEIGHT OF 2 DMS SIGNS (3,400 LBS EACH), AND SUPPORTING STRUCTURE.
NO PROVISIONS HAVE BEEN MADE FOR CATWALK OR LIGHTING.
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS, FRONT AND BACK FACE, SIDES, AND TOP OF DMS SIGNS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND EXPOSED MEMBERS.
DESIGNED WITH A WIND IMPORTANCE FACTOR (Ir) OF 1.15

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 + 1/2 (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

DMS UNIT DATA

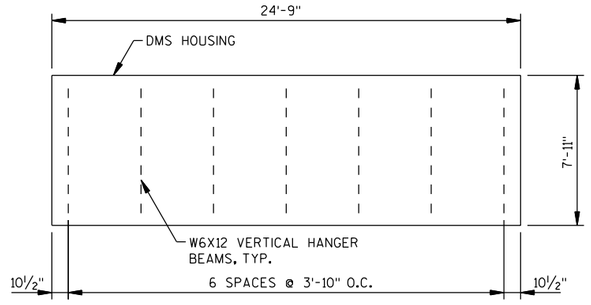
DMS UNIT DIMENSIONS = 24'-9" WIDE x 7'-11" TALL x 4'-0" DEEP
DMS UNIT WEIGHT = 3,400 LBS. EACH

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY	f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 psi
STEEL COLUMN, A.P.I. 5L X 42	fy = 42,000 psi
PLATES, BARS, STRUCTURAL W-SHAPES & ANGLES, ASTM A709 GRADE 36	fy = 36,000 psi
ANCHOR BOLTS, A.A.S.H.T.O. M314	fy = 55,000 psi
HIGH STRENGTH BOLTS - A325	fy = 92,000 psi

FOUNDATION DATA

SOIL PROPERTIES USED FOR THIS DESIGN ARE LOCATED ON THE SUBSURFACE EXPLORATION PLAN SHEET. IF VARIATIONS IN THE DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY THE PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.



DMS PANEL MOUNTING BEAM SPACING

NOTE:
BEAM SPACING MAY BE ADJUSTED AS REQUIRED
IF CONFLICT WITH TRUSS DETAILS IS ENCOUNTERED.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STRUCTURAL STEEL, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER ASTM A123, AND IN ACCORDANCE WITH THE AASHTO SPECIFICATIONS AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELDING SHALL CONFORM TO AWS D1.1.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY BAR SIZE.

BAR STEEL SHALL BE EMBEDDED 2" CLEAR FROM NEAREST EDGE OF CONCRETE UNLESS OTHERWISE NOTED.

THE DMS VIEWED BY WB TRAFFIC IS DMS-53-0045-C AND THE DMS VIEWED BY EB TRAFFIC IS DMS-53-0046-C.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE INCLUDED WITH THE BID ITEM "SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-53-73)". FABRICATION IN ACCORDANCE WITH S.D.D. 12A4-2.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

CASINGS FOR FOOTING SHAFTS ARE INCLUDED WITH THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY" IN ACCORDANCE WITH SECTION 636.3.3 OF THE STANDARD SPECIFICATIONS.

CASINGS SHALL BE USED WHEN POURING FOOTING SHAFTS. CASINGS SHALL NOT BE LEFT IN PLACE.

CENTER SIGNS VERTICALLY AND HORIZONTALLY ON TRUSS.

ALTERNATE DESIGNS ARE NOT ALLOWED.

NUTS FOR ANCHOR BOLTS SHALL BE ASTM A563 GRADE 'A' HEAVY HEX. ANCHOR BOLTS SHALL HAVE DOUBLE NUTS.

DO NOT GROUT THE SPACE BETWEEN TOP OF FOOTING AND BOTTOM OF BASE PLATE.

HANDHOLES AND GROUND RODS ARE REQUIRED.

THE STRUCTURE IS INTENDED TO BE FABRICATED, GALVANIZED AND SHIPPED AS A SINGLE UNIT.

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

SIGN OR BLANKS SHALL BE INSTALLED ON TRUSS AT THE TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF TRUSS, 2'-0" DEEPER THAN C.L. TO C.L. OF CHORDS AND SHALL BE CENTERED ON THE TRUSS. PERMANENT SIGNS SHALL BE LOCATED AS SHOWN.

SEE ITS CONSTRUCTION DETAILS FOR DEVICES AND CABLING THAT WILL BE MOUNTED ON AND IN THE STRUCTURE.

PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

EXCAVATION REQUIRED TO CONSTRUCT THE CONCRETE COLUMN FOUNDATION ABOVE THE DRILLED SHAFTS SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

NO CAMBER IS REQUIRED FOR TRUSS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS FOR THE VERTICAL HANGER BEAM CONNECTION, IF UNIT CAN BE GALVANIZED IN ONE PIECE.

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-73

DRAWN BY BRD | PLANS CK'D. MAH

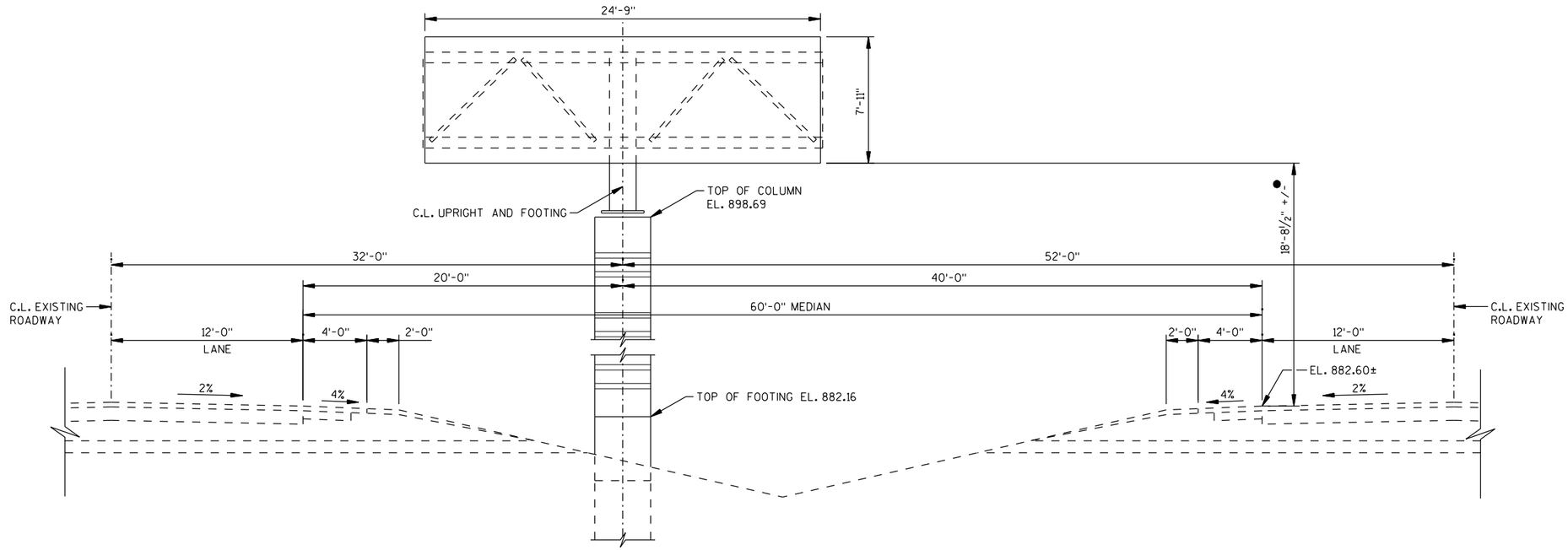
GENERAL NOTES AND DETAILS

SHEET 2 OF 10
243

8

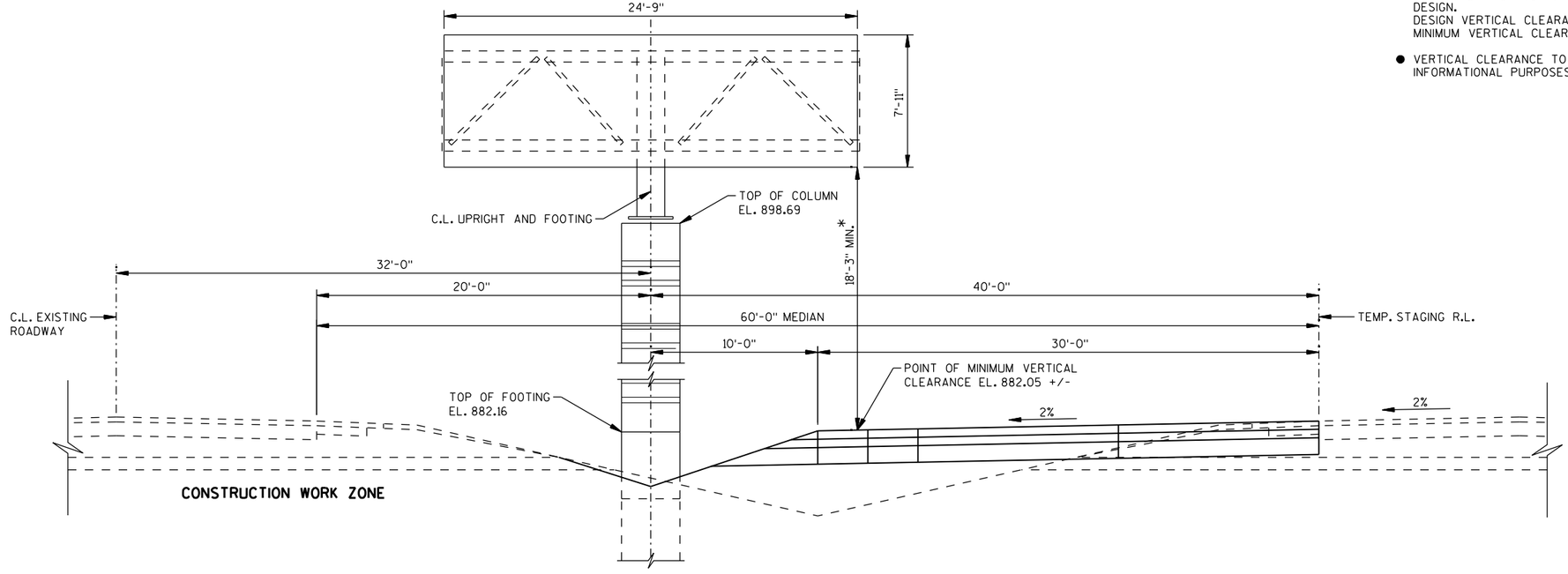
PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\s-53-73\MS_Printing\Pen_Tables\ET_MisDOT.tbl
FILE NAME: i:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\s-53-73\S-53-73-3 CrossSectStage.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 6:07:55 PM
BATCH PRINT SHEET 3 OF 10

STATE PROJECT NUMBER
1005-10-70



ELEVATION - EXISTING ROADWAY

(LOOKING NORTH)



ELEVATION - CONSTRUCTION STAGING

(LOOKING NORTH)

LEGEND

* VERTICAL CLEARANCE IS CONTROLLED BY CONSTRUCTION STAGING - 1'-0" OF ADDITIONAL VERTICAL CLEARANCE IS INCLUDED TO ALLOW FOR POTENTIAL MODIFICATIONS TO THE CONSTRUCTION STAGING DESIGN.
DESIGN VERTICAL CLEARANCE = 19'-3"
MINIMUM VERTICAL CLEARANCE = 18'-3"

● VERTICAL CLEARANCE TO EDGE OF TRAVELED WAY SHOWN FOR INFORMATIONAL PURPOSES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

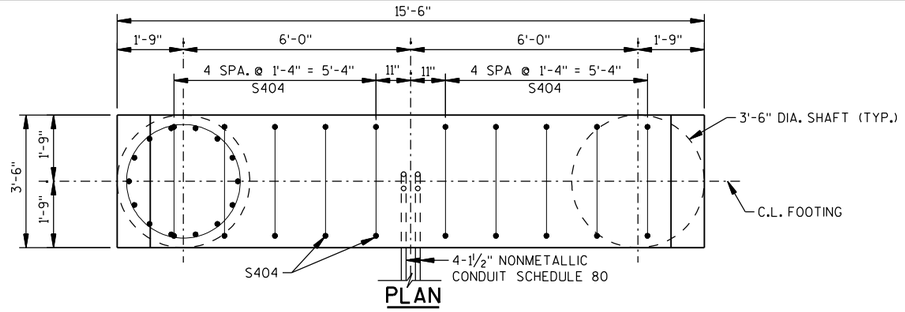
STRUCTURE S-53-73

DRAWN BY	BRD	PLANS CK'D.	MAH

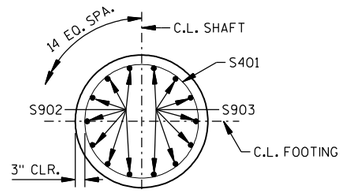
CROSS SECTION STAGING

SHEET 3 OF 10

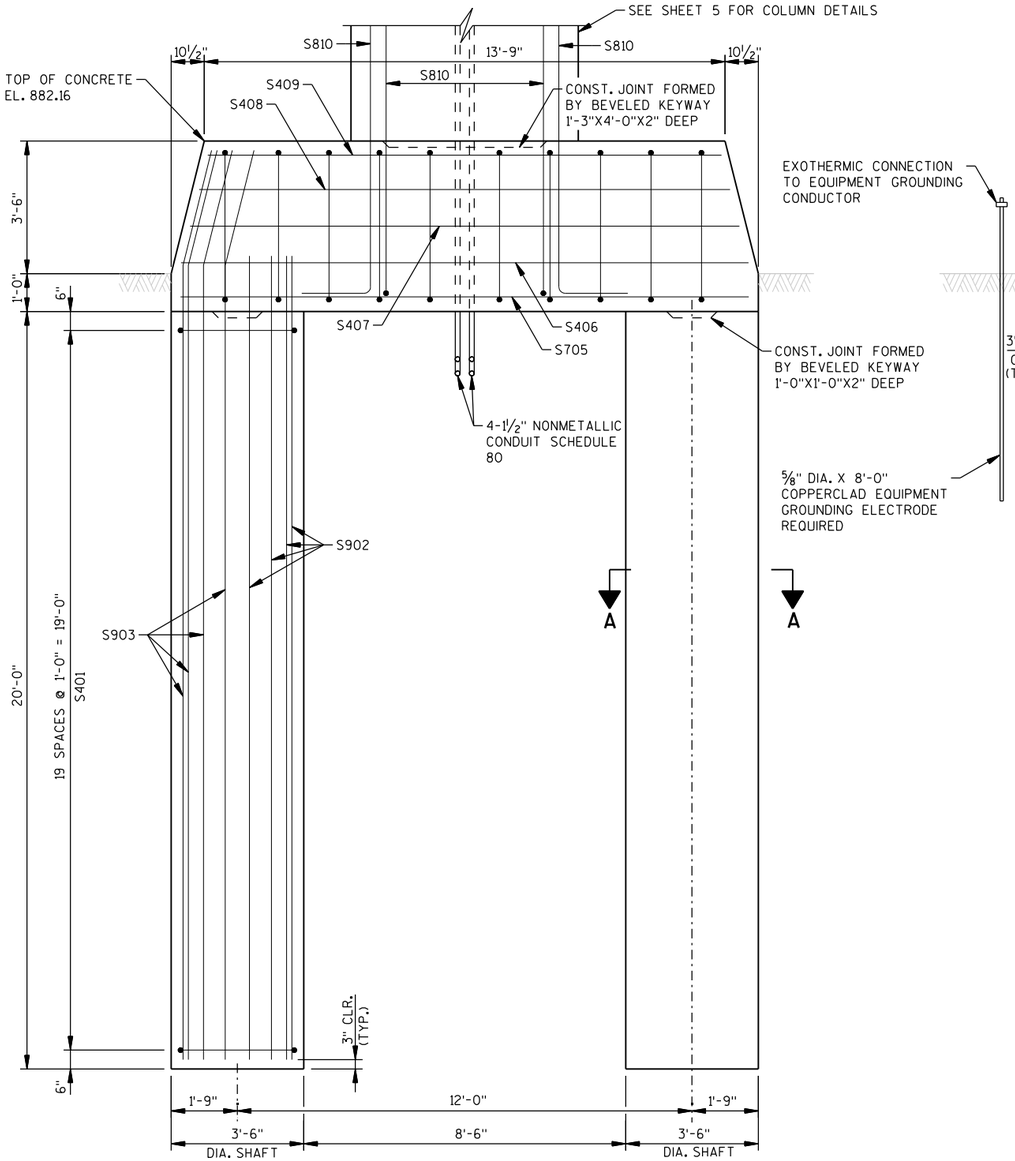
PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\602422867\000_cad\001_drawings\structures\s-53-73\MS_Printing\Pen_Tables\ET_Mis001.tbl
FILE NAME: i:\work\projects\602422867\000_cad\001_drawings\structures\final early let its structures\s-53-73\S-53-73-4 FndDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 6:07:59 PM
BATCH PRINT SHEET 4 OF 10



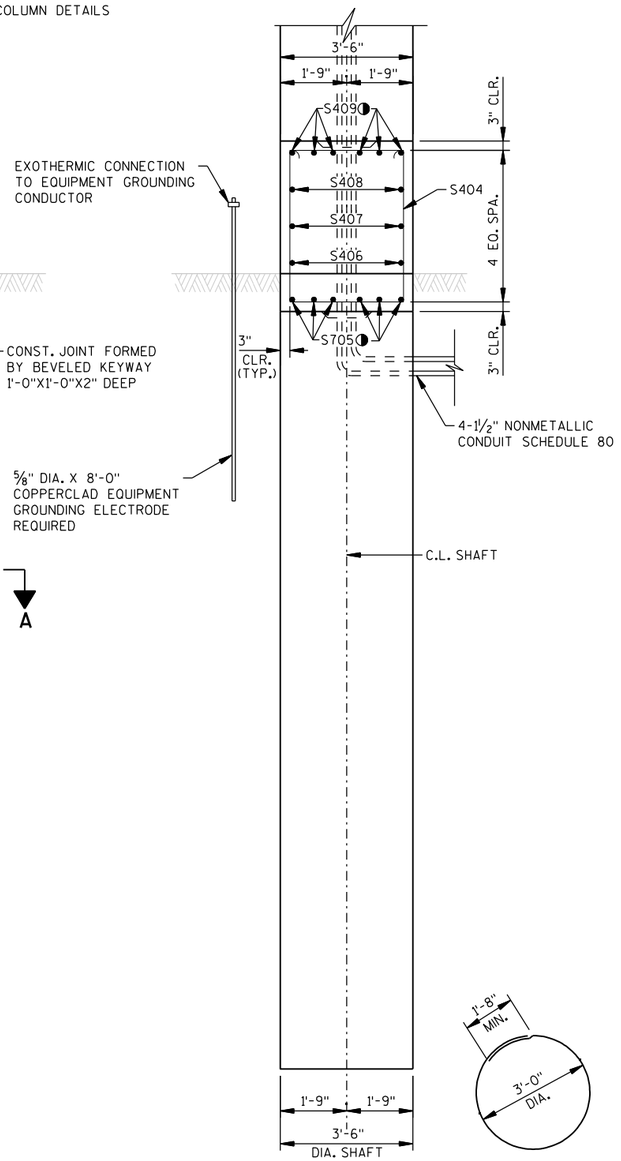
PLAN



SECTION A-A

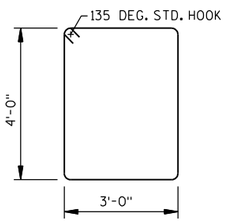


ELEVATION

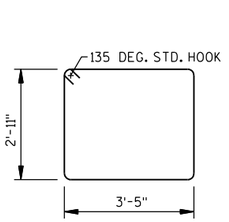


END VIEW

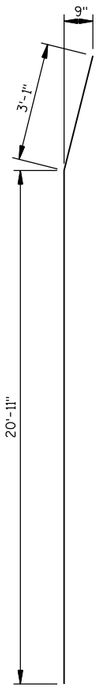
S401



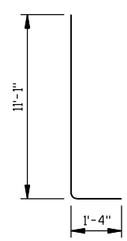
S404



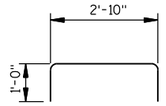
S421



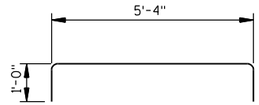
S903



S810



S422



S423

BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
COATED BARS						TOTAL WEIGHT = 6,260 LBS
S401	40	11 - 2	X		DRILLED SHAFT	HORIZONTAL
S902	14	22 - 2			DRILLED SHAFT	VERTICAL
S903	14	24 - 0	X		DRILLED SHAFT	VERTICAL
S404	10	14 - 6	X		FOOTING	VERTICAL
S705	6	15 - 0			FOOTING	HORIZONTAL
S406	2	14 - 10			FOOTING	HORIZONTAL
S407	2	14 - 4			FOOTING	HORIZONTAL
S408	2	13 - 10			FOOTING	HORIZONTAL
S409	6	13 - 4			FOOTING	HORIZONTAL
S810	40	12 - 3	X		COLUMN	VERTICAL
S820	40	16 - 2			COLUMN	VERTICAL
S421	36	13 - 2	X		COLUMN STIRRUP	HORIZONTAL
S422	2	4 - 8	X		COLUMN	HORIZONTAL
S423	2	7 - 2	X		COLUMN	HORIZONTAL

NOTES & LEGEND

PROVIDE A ¾" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

4 - 1½" NONMETALLIC CONDUIT SCHEDULE 80 SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE FOOTING THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES.

GROUNDING ELECTRODE, GROUNDING CONDUCTOR AND 1-INCH CONDUIT SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

◑ SPACE TO MISS VERTICAL SHAFT REINFORCEMENT AND CONDUIT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-73

DRAWN BY BRD | PLANS CK'D. MAH

FOUNDATION DETAILS

SHEET 4 OF 10
245

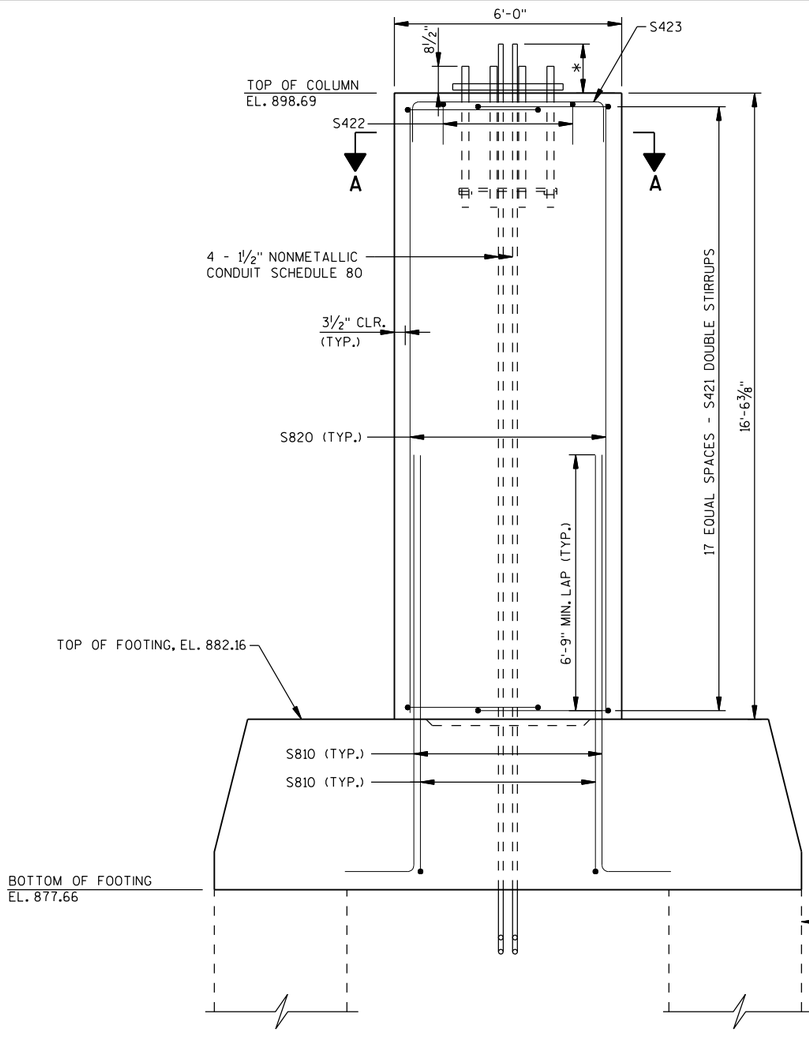
8

8

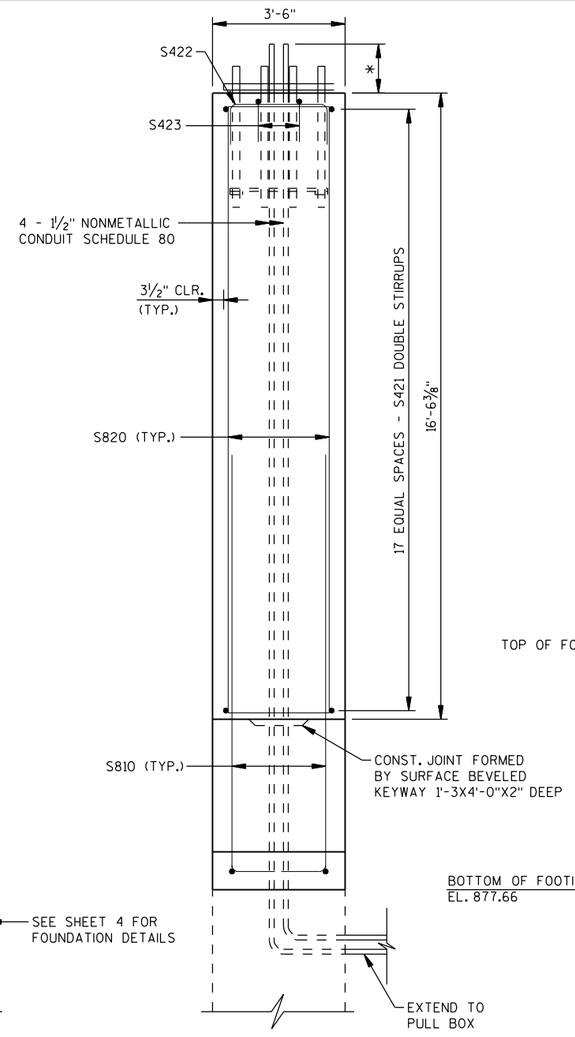
PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET.PDF.11 x 17.plt
PEN TABLE: i:\work\projects\60242867\000.cad\001.drawings\structures\s-53-73\MS_Printing\Pen_Tables\ET_MisDOT.tbl
FILE NAME: i:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-73\S-53-73-5 ConcColDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 6:08:03 PM BATCH PRINT SHEET 5 OF 10

STATE PROJECT NUMBER

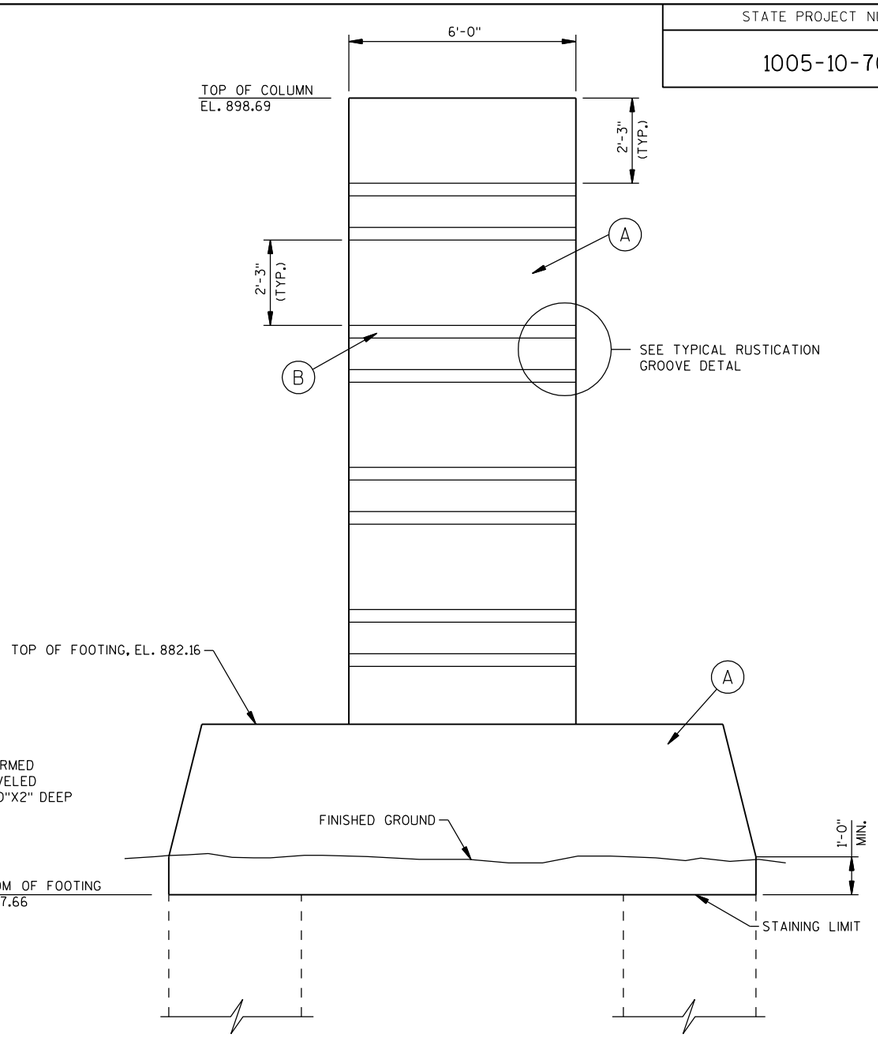
1005-10-70



FRONT ELEVATION

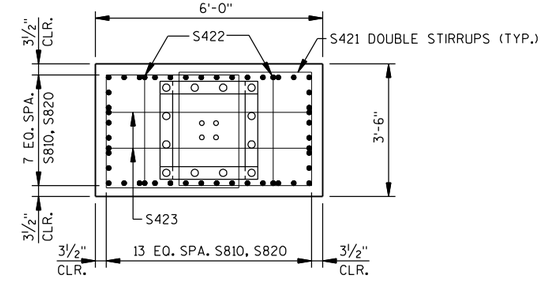


SIDE ELEVATION

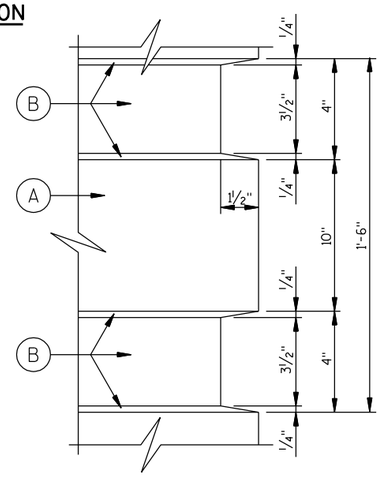


FRONT ELEVATION - AESTHETICS

(SIDE ELEVATION SIMILAR)



SECTION A-A



TYPICAL RUSTICATION GROOVE DETAIL

NOTES & LEGEND

ALL STAINING SHALL EXTEND A MINIMUM OF 1'-0" BELOW FINISHED GROUND.

TYPICAL RUSTICATION GROOVE DETAIL SHALL BE USED FOR ALL RUSTICATION GROOVES.

PROVIDE A ¾" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

4 - 1½" NONMETALLIC CONDUIT SCHEDULE 80 SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

* EXTEND 1½" NONMETALLIC CONDUIT SCHEDULE 80 TO THE BOTTOM OF THE HANDHOLE, 1'-6" +/-.

(A) CONCRETE STAIN BASE COLOR
FEDERAL COLOR 30372

(B) CONCRETE STAIN ACCENT COLOR
FEDERAL COLOR 30140

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-73

DRAWN BY BRD | PLANS CK'D. MAH

CONCRETE COLUMN DETAILS

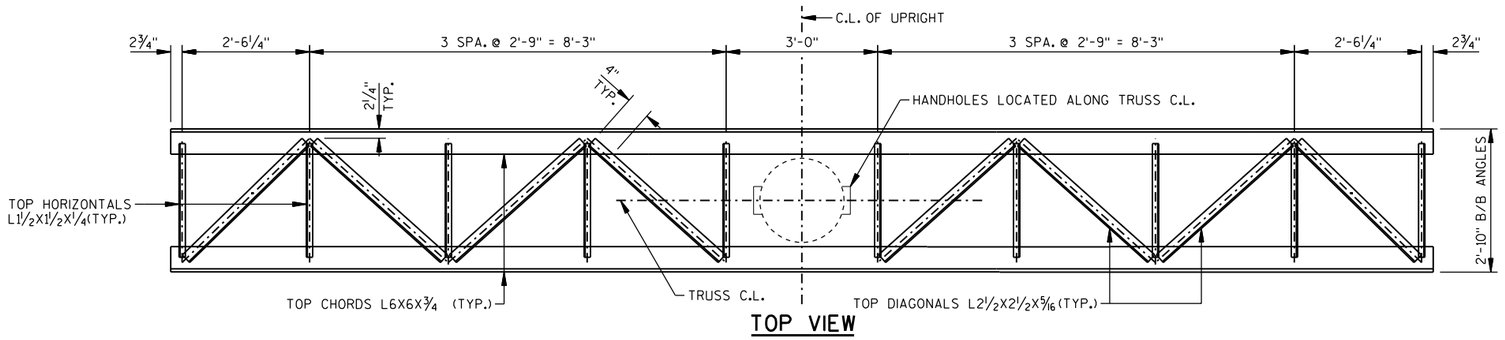
SHEET 5 OF 10

246

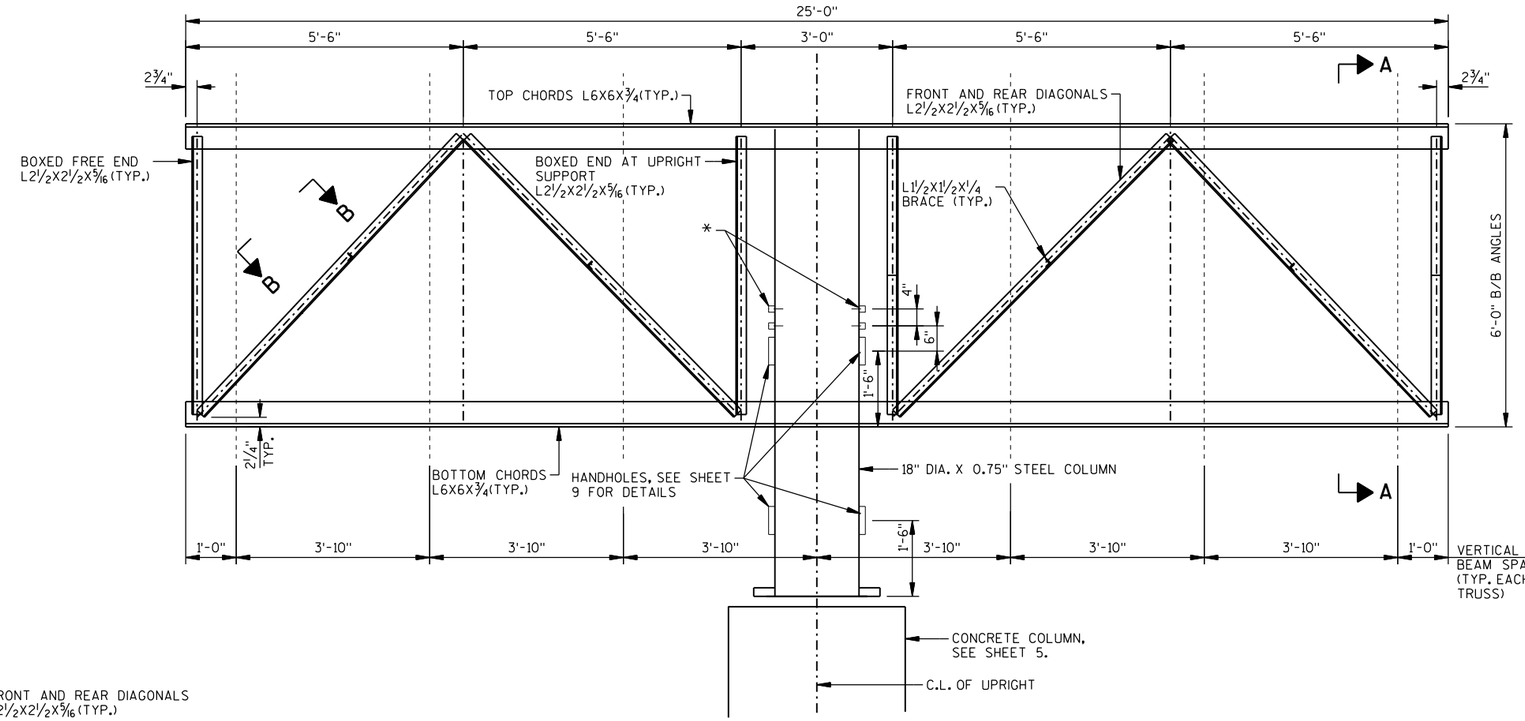
8

8

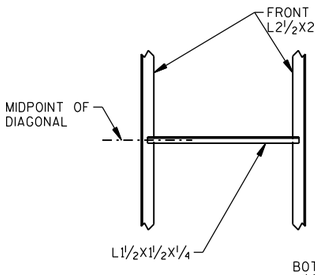
PRINTER DRIVER: S:\TPN.CADs\tds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\s-53-73\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001_drawings\structures\final early let its structures\s-53-73\S-53-73-6 TrussDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 6:08:07 PM BATCH PRINT SHEET 6 OF 10



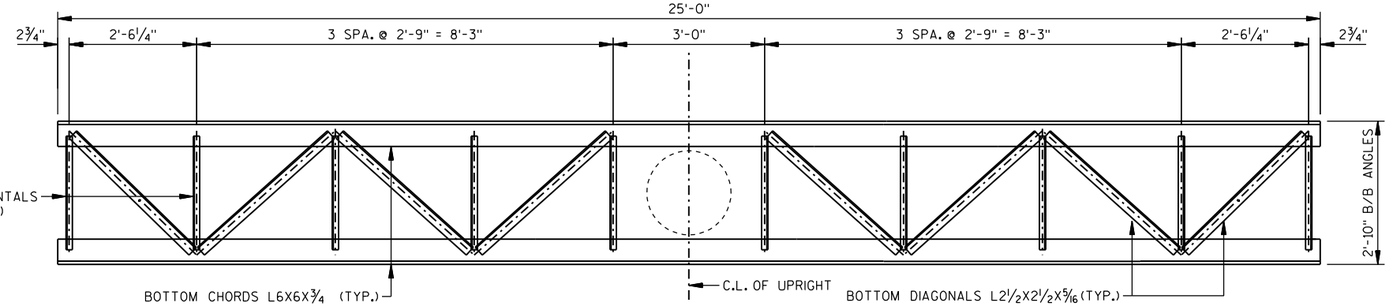
TOP VIEW



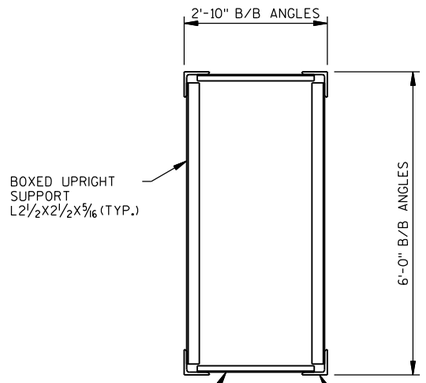
ELEVATION



SECTION B-B



BOTTOM VIEW



SECTION A-A

NOTES

TRUSS AND COLUMN SHALL BE SUPPLIED AS A SINGLE UNIT.

UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.

TRUSSES SHALL BE SHOP ASSEMBLED AND MATCH MARKED.

ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.

SEE SHEET 8 FOR POST CONNECTION DETAILS.

LEGEND

* 2- 1½" CONDUIT COUPLINGS IN STEEL COLUMN. TYPICAL ABOVE EACH UPPER HANDHOLE. CONDUIT COUPLINGS ARE INCLUDED WITH THE BID ITEM "641.0600.02, SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-53-73)".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-73

DRAWN BY BRD | PLANS CK'D. MAH

SIGN TRUSS DETAILS

SHEET 6 OF 10
247

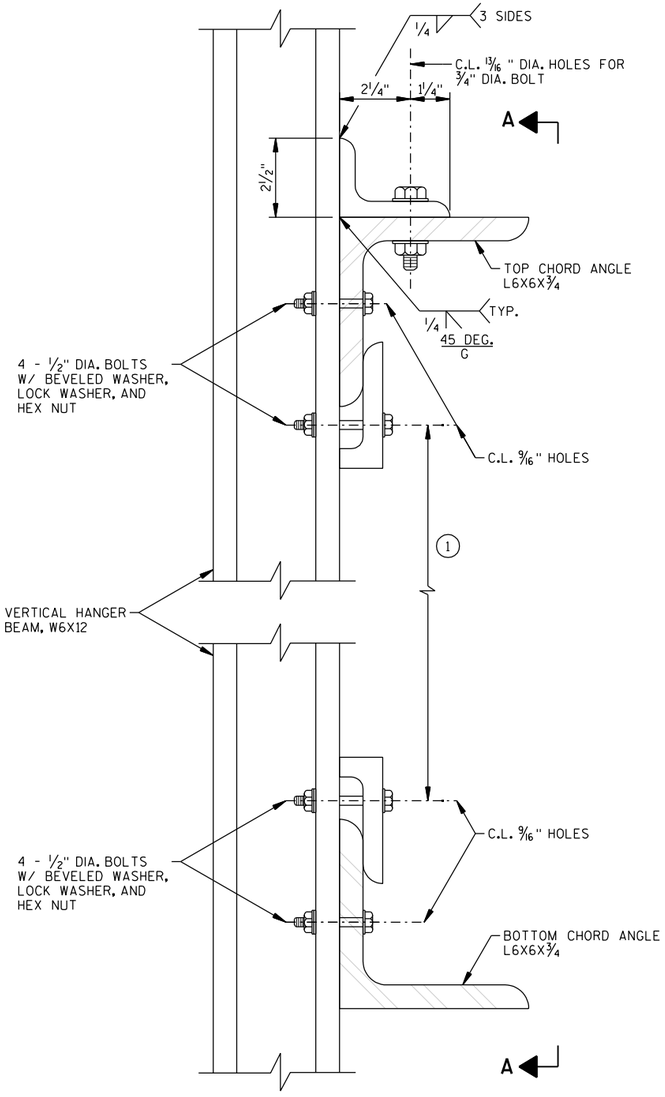
8

8

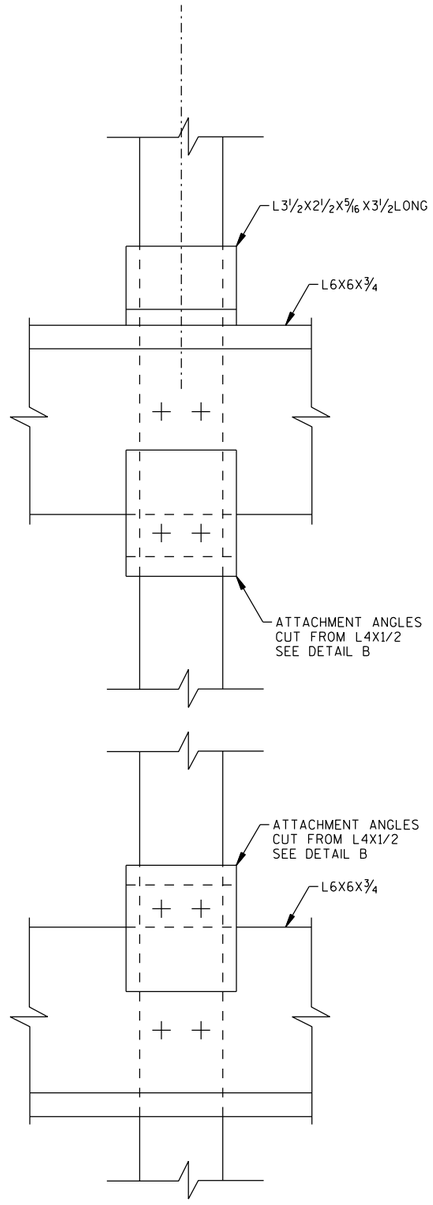
PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET.PDF.11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-73\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-73\S-53-73-7 MountDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 6:08:10 PM BATCH PRINT SHEET 7 OF 10

STATE PROJECT NUMBER

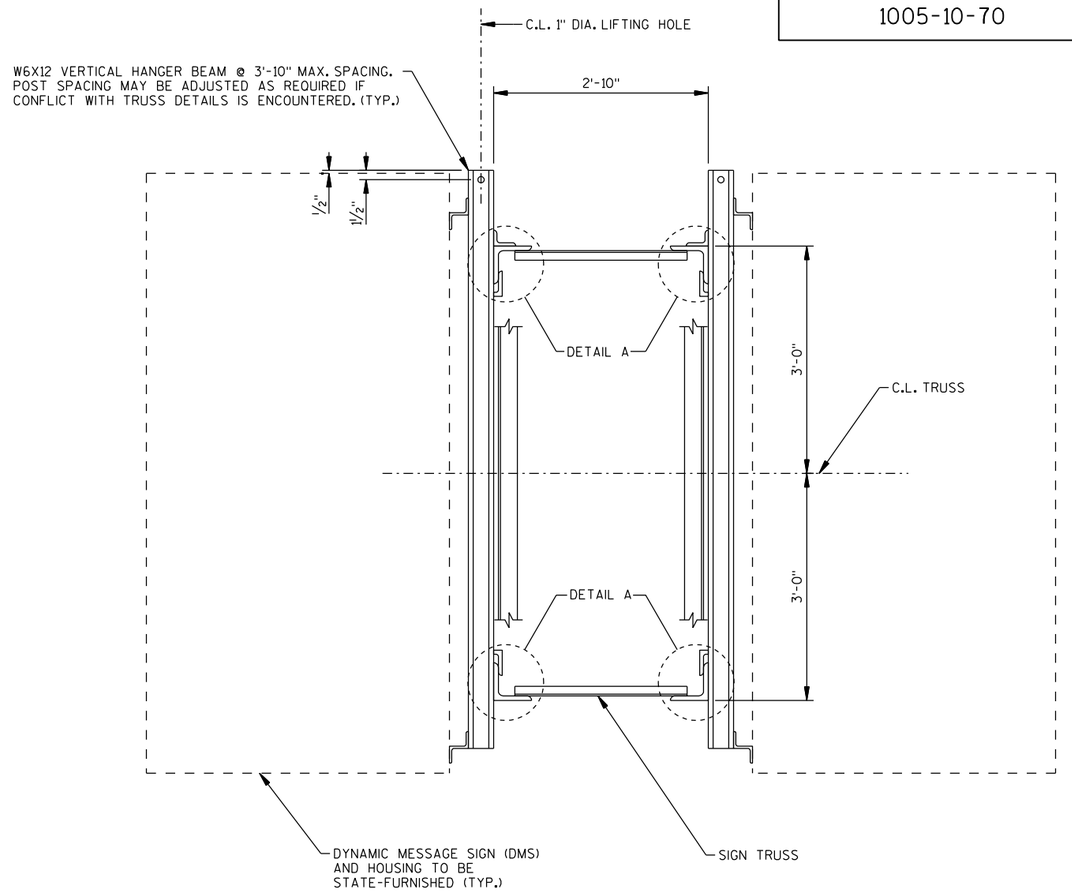
1005-10-70



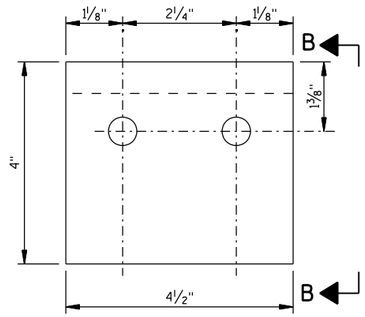
DETAIL A



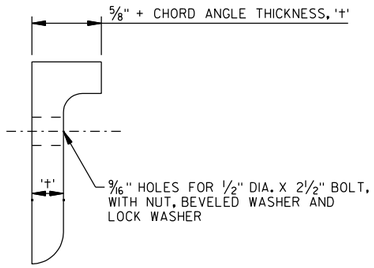
SECTION A-A



SECTION THRU TRUSS AT DYNAMIC MESSAGE SIGN (DMS)



DETAIL B



SECTION B-B

NOTES

(1) (TRUSS DEPTH) - (TOP & BOTTOM CHORD < LEGS) - 1 1/4"

W6X12 VERTICAL HANGER BEAM, 3 1/2X 2 1/2 ANGLES WELDED TO THE HANGER BEAM AND ATTACHMENT ANGLES ARE INCLUDED WITH THE BID ITEM "641.0600.02 SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-53-73)".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-73

DRAWN BY BRD | PLANS CK'D. MAH

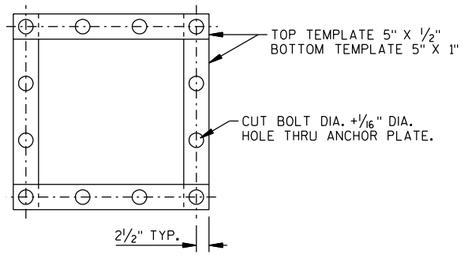
DMS SIGN PANEL MOUNTING DETAILS

SHEET 7 OF 10
248

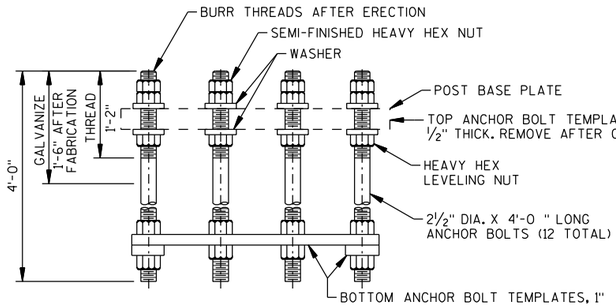
8

8

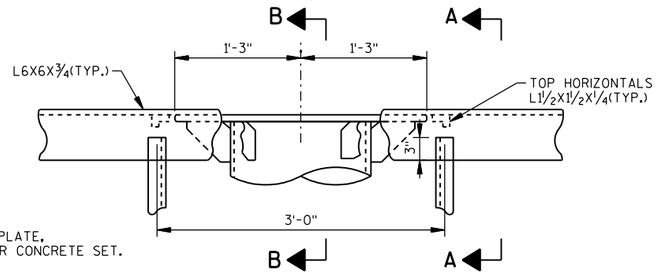
PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\6024286?\0000.cad\000_drawings\structures\s-53-73\MS_Printing\Pen_Tables\ET_MisD01.tbl
FILE NAME: i:\work\projects\6024286?\0000.cad\001_drawings\structures\s-53-73\S-53-73-8 Connect01s.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 6:08:14 PM BATCH PRINT SHEET 8 OF 10

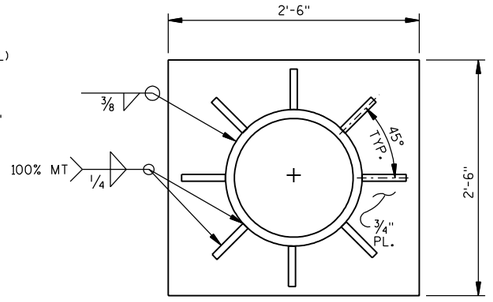


ANCHOR BOLT TEMPLATE PLAN
(TOP AND BOTTOM PLATES)



ELEVATION





UPPER JUNCTION

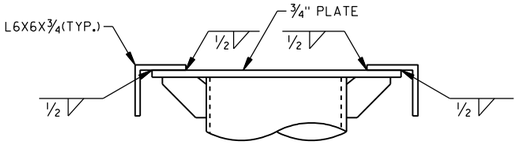
NOTES

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.

HANDHOLE COVERS SHALL BE GALVANIZED SEPARATELY.

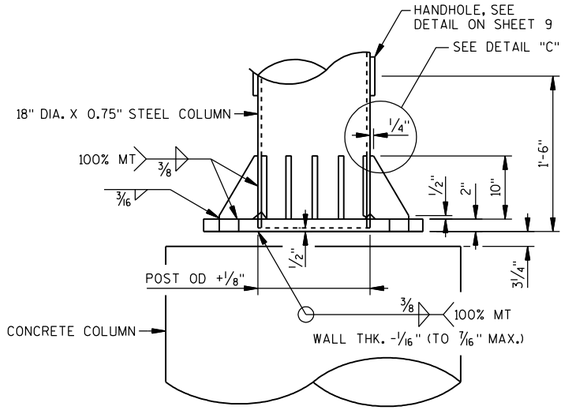
THE FOLLOWING TORQUE VALUE SHALL BE USED WHEN INSTALLING ALL ANCHOR NUTS:

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

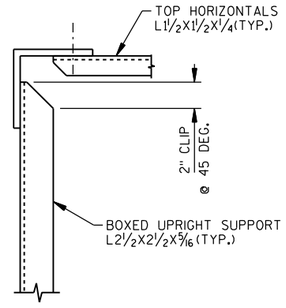


VIEW B-B

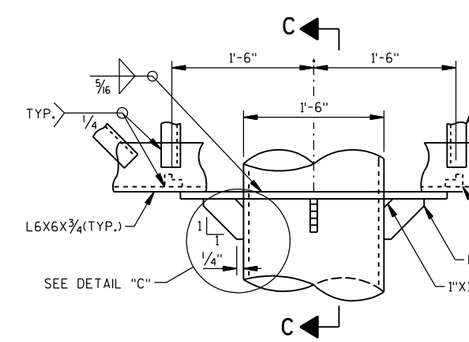
ANCHOR BOLT DETAILS

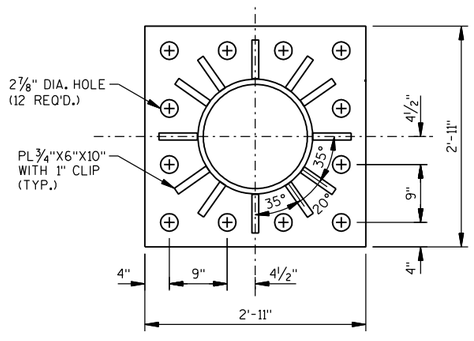


ELEVATION



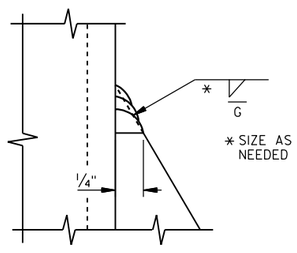
VIEW A-A



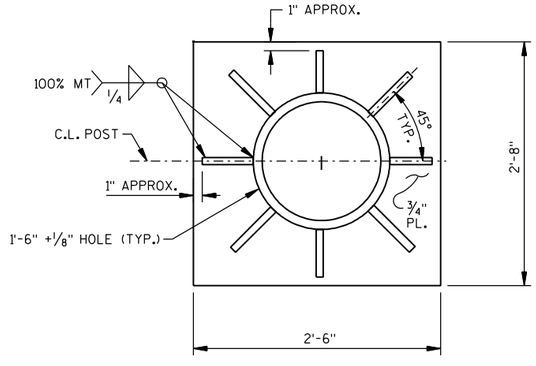


PLAN

BASE PLATE DETAILS

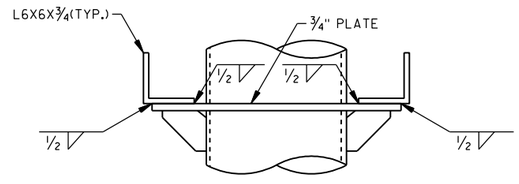


DETAIL "C"



LOWER JUNCTION

BUTTERFLY TRUSS



VIEW C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-73

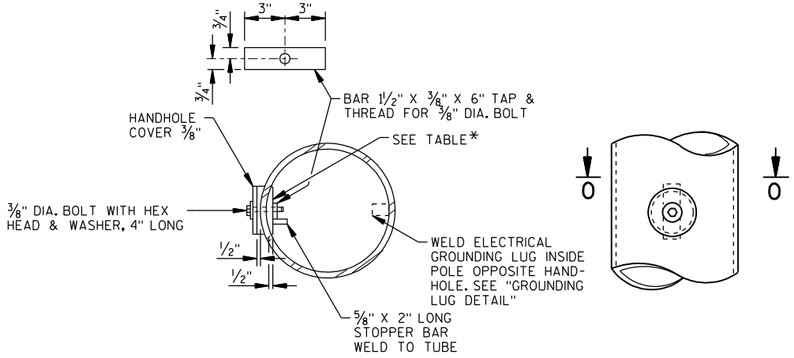
DRAWN BY BRD | PLANS CK'D. MAH

TRUSS/POST CONNECTION & BASE PLATES

SHEET 8 OF 10
249

8

8



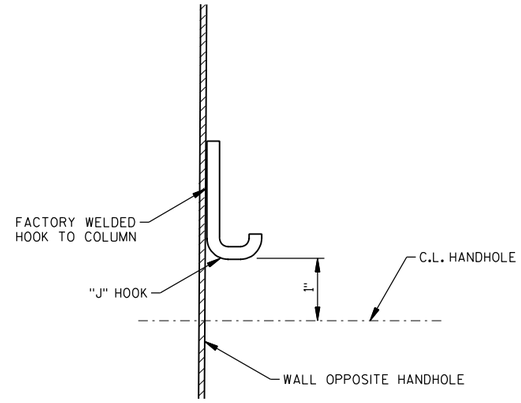
SECTION '0'

HANDHOLE DETAILS

HANDHOLE NOTES

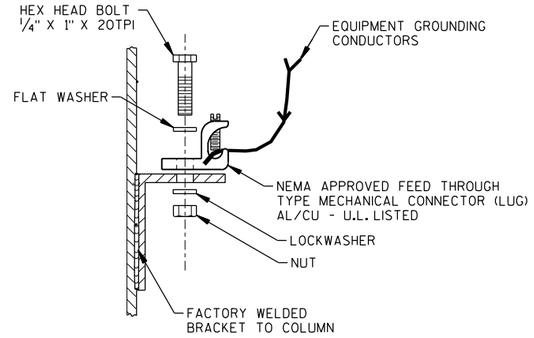
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMN AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

✳ UPRIGHT DIA. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
UP TO AND INCLD. 16" X .375"	5.562" X .500"
GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"



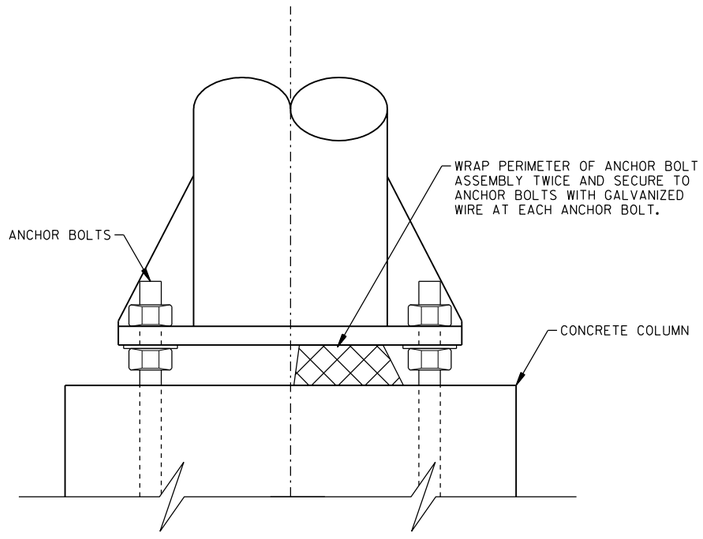
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



RODENT SCREEN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-73

DRAWN BY BRD | PLANS CK'D. MAH

HANDHOLE DETAILS

SHEET 9 OF 10

250

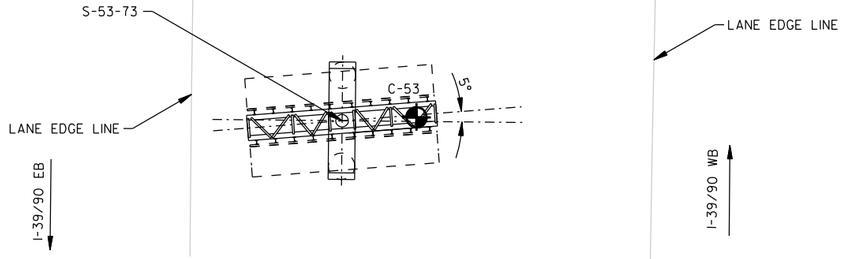
8

8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-73\MS_Printing\Pen_Tables\ET_Mis001.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-73\S-53-73-9 Handhole.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 6:08:17 PM BATCH PRINT SHEET 9 OF 10

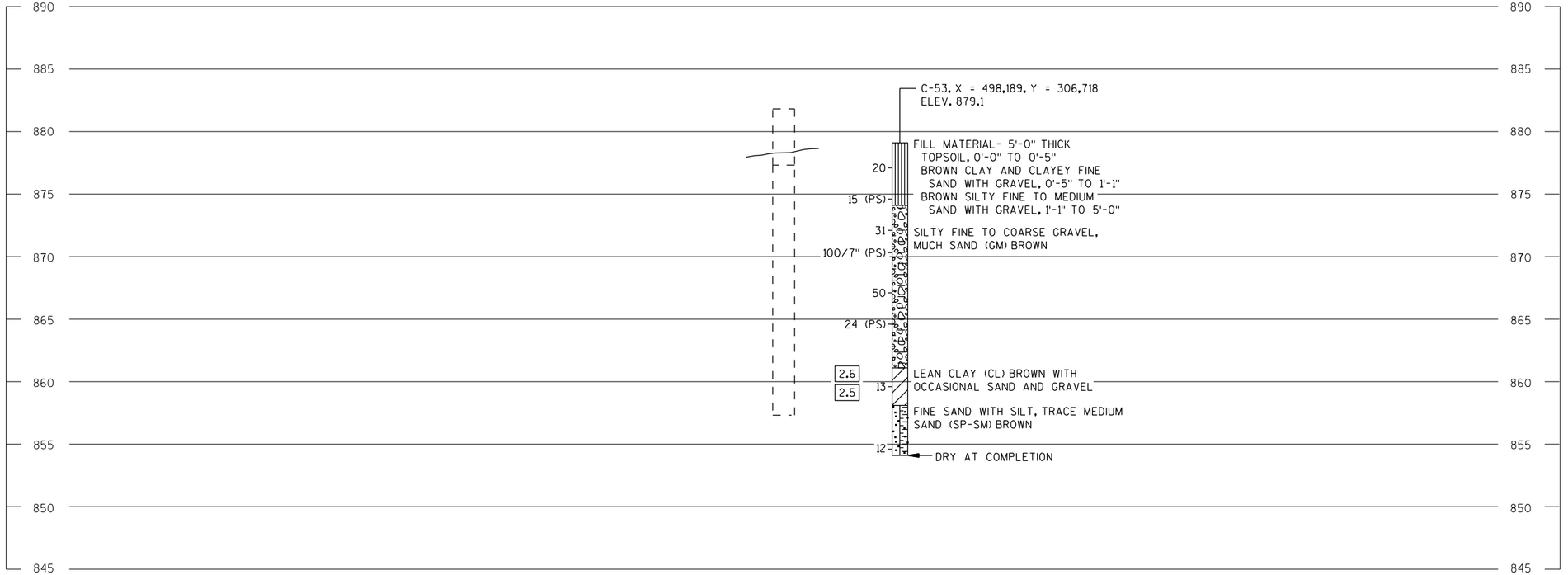
BORINGS AND REPORT BY:
SOILS & ENGINEERING SERVICES, INC.
1102 STEWART ST.
MADISON, WI 53713-4648

BORINGS WERE PERFORMED OCTOBER 10, 2012



Soil Properties for Structure S-53-73 (Based on Boring C-53)

Elevation (feet)			Layer Description	Unit Weight (lb/ft³)	Undrained (Short Term)		Drained (Long Term) Strength		Allowable End Bearing Pressure (lb/ft²)	Allowable Skin Friction (lb/ft²)
					Total Cohesion, c (lb/ft²)	Total Friction Angle, ϕ (degrees)	Effective Cohesion, c' (lb/ft²)	Effective Friction Angle, ϕ' (degrees)		
879.1	-	876.1	Fill Material (Sand)	128.0	0	38	0	38	0	0
876.1	-	874.1	Fill Material (Sand)	125.0	0	31	0	31	0	0
874.1	-	867.1	Silty Gravel	135.0	0	38	0	38	5,300	280
867.1	-	861.6	Silty Gravel	130.0	0	31	0	31	5,300	570
861.6	-	858.1	Lean Clay	132.7	2,500	0	125	25	4,600	460
858.1	-	854.1	Fine Sand	122.0	0	31	0	31	6,000	815



STATE PROJECT NUMBER

1005-10-70

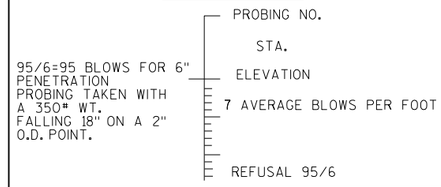
ABBREVIATIONS

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

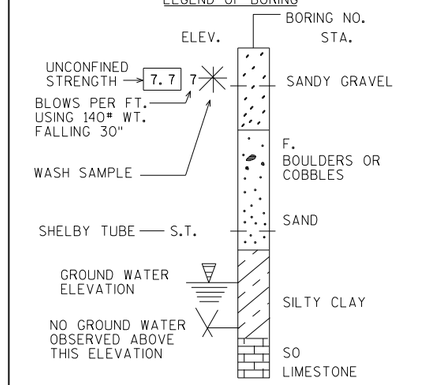
MATERIAL SYMBOLS

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

STRUCTURE S-53-73

DRAWN BY BRD | PLANS CK'D. MAH

SUBSURFACE EXPLORATION

SHEET 10 OF 10
251

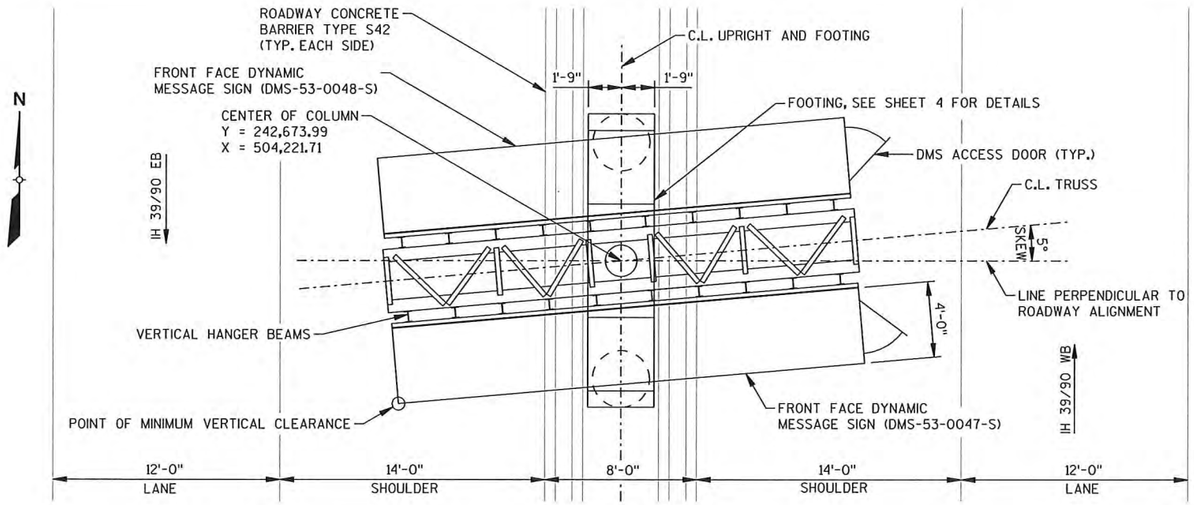
FILE =
SCALE =

8

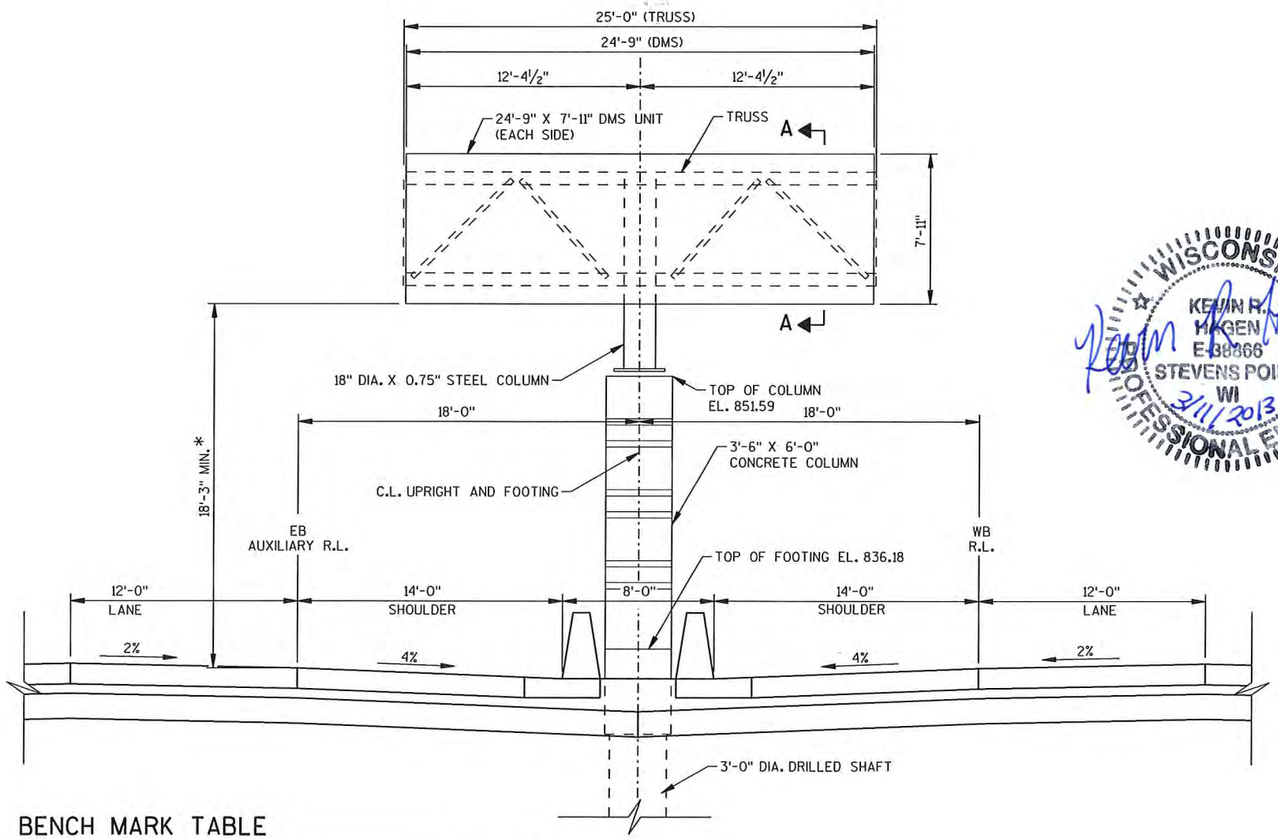
8

PRINTER DRIVER: S:\TPN.CAD\stds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET.PDF.11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-73\MS_Printing\Pen_Tables\ET_MisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-73\S-53-73-10 Subsurf.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 6:08:47 PM BATCH PRINT SHEET 10 OF 10

PRINTER DRIVER: S:\TPN.CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET.PDF.11 x 17.plt
PEN TABLE: L:\work\projects\60242867\000_CAD\001_Drawings\Structures\S-53-74\MS_Printing\Pen_Tables\ET_MsD01.tbl
FILE NAME: L:\work\projects\60242867\000_CAD\001_Drawings\Structures\S-53-74\S-53-74-1 GP and Elev.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:38:25 PM
BATCH PRINT SHEET 1 OF 10



PLAN



BENCH MARK TABLE

NO.	DESCRIPTION	ELEVATION
251L	RR SPIKE IN UTILITY POLE AT THE SW CORNER OF THE INTERSECTION OF S. READ ROAD AND E. WOODMAN ROAD	834.98

ELEVATION

(LOOKING NORTH)
Y = 242,673.99
X = 504,221.71

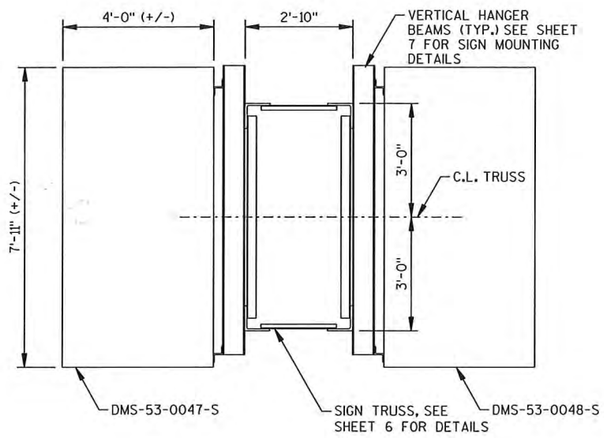
(FUTURE ROADWAY CROSS SECTION SHOWN, SEE SHEET 3 FOR EXISTING ROADWAY CROSS SECTION.)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	QUANTITY
517.1010.S.003	CONCRETE STAINING S-53-74	SF	510
636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	30
636.1500	SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	LB	5,370
◑ 641.0600.003	SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-53-74)	LS	1

ALL ITEMS ARE CATEGORY 6007

DYNAMIC MESSAGE SIGNS AND HOUSINGS WILL BE STATE-FURNISHED. SEE ROADWAY PLANS AND SPECIAL PROVISIONS FOR INSTALLATION.



SECTION A-A

LEGEND

◑ THIS LUMP SUM PAY ITEM INCLUDES HORIZONTAL TRUSS, VERTICAL STEEL COLUMN AND ANCHOR ASSEMBLIES.

* VERTICAL CLEARANCE IS CONTROLLED BY FUTURE ROADWAY CROSS SECTION. 1-0" ADDITIONAL VERTICAL CLEARANCE IS INCLUDED TO ALLOW FOR POTENTIAL MODIFICATIONS TO THE FINAL ROADWAY DESIGN.
DESIGN VERTICAL CLEARANCE = 19'-3"
MINIMUM VERTICAL CLEARANCE = 18'-3"

LIST OF DRAWINGS

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
BILL DREHER (608) 266-8489

CONSULTANT:
KEVIN HAGEN (715) 342-3053

NO.	DATE	REVISION	BY

AECOM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 03/12/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-53-74

I-39/90 AT WOODMAN RD.

COUNTY ROCK | TOWN/~~CITY~~/~~VILLAGE~~ LA PRAIRIE

DESIGN SPEC. AASHTO STANDARD SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CAK	MAH	BRD	MAH

GENERAL PLAN AND ELEVATION

SHEET 1 OF 10
252

8

8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\60242867\000.cad\001_drawings\structures\s-53-74\MS_Printing\Pen_Tables\ET_MisDOT.tbl
FILE NAME: i:\work\projects\60242867\000.cad\001_drawings\structures\s-53-74\s-53-74-2 GenNotesDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:30:29 PM
BATCH PRINT SHEET 2 OF 10

DESIGN DATA

DESIGNED ACCORDING TO A.A.S.H.T.O. "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 5TH EDITION, 2009, WITH 2010 AND 2011 INTERIMS.

DEAD LOAD - WEIGHT OF 2 DMS SIGNS (3,400 LBS EACH), AND SUPPORTING STRUCTURE.
NO PROVISIONS HAVE BEEN PROVIDED FOR CATWALK OR LIGHTING.
ICE LOAD - 3 PSF APPLIED TO ALL MEMBER SURFACE AREAS, FRONT AND BACK FACE, SIDES, AND TOP OF DMS SIGNS.
WIND PRESSURE - 90 MPH (3 SECOND GUST SPEED) TO SIGN AREA AND EXPOSED MEMBERS.
DESIGNED WITH A WIND IMPORTANCE FACTOR (Ir) OF 1.15

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 + 1/2 (WIND)	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 P.S.F.

DMS UNIT DATA

DMS UNIT DIMENSIONS = 24'-9" WIDE x 7'-11" TALL x 4'-0" DEEP
DMS UNIT WEIGHT = 3,400 LBS. EACH

ULTIMATE DESIGN STRESSES

CONCRETE MASONRY	f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 psi
STEEL COLUMN, A.P.I. 5L X 42	fy = 42,000 psi
PLATES, BARS, STRUCTURAL W-SHAPES & ANGLES, ASTM A709 GRADE 36	fy = 36,000 psi
ANCHOR BOLTS, A.A.S.H.T.O. M314	fy = 55,000 psi
HIGH STRENGTH BOLTS - A325	fy = 92,000 psi

FOUNDATION DATA

SOIL PROPERTIES USED FOR THIS DESIGN ARE LOCATED ON THE SUBSURFACE EXPLORATION PLAN SHEET. IF VARIATIONS IN THE DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION NOTIFY THE PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STRUCTURAL STEEL, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED PER ASTM A123, AND IN ACCORDANCE WITH THE AASHTO SPECIFICATIONS AS STATED IN SECTION 641 OF THE WISDOT STANDARD SPECIFICATIONS.

WELDING SHALL CONFORM TO AWS D1.1.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY BAR SIZE.

BAR STEEL SHALL BE EMBEDDED 2" CLEAR FROM NEAREST EDGE OF CONCRETE UNLESS OTHERWISE NOTED.

THE DMS VIEWED BY WB TRAFFIC IS DMS-53-0047-S AND THE DMS VIEWED BY EB TRAFFIC IS DMS-53-0048-S.

SIGN BRIDGE IDENTIFICATION PLAQUES SHALL BE INCLUDED WITH THE BID ITEM "SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-53-74)". FABRICATION IN ACCORDANCE WITH S.D.D. 12A4-2.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

CASINGS FOR FOOTING SHAFTS ARE INCLUDED WITH THE BID ITEM "SIGN SUPPORTS CONCRETE MASONRY" IN ACCORDANCE WITH SECTION 636.3.3 OF THE STANDARD SPECIFICATIONS.

CASINGS SHALL BE USED WHEN POURING FOOTING SHAFTS. CASINGS SHALL NOT BE LEFT IN PLACE.

CENTER SIGNS VERTICALLY AND HORIZONTALLY ON TRUSS.

ALTERNATE DESIGNS ARE NOT ALLOWED.

NUTS FOR ANCHOR BOLTS SHALL BE ASTM A563 GRADE 'A' HEAVY HEX. ANCHOR BOLTS SHALL HAVE DOUBLE NUTS.

DO NOT GROUT THE SPACE BETWEEN TOP OF FOOTING AND BOTTOM OF BASE PLATE.

HANDHOLES AND GROUND RODS ARE REQUIRED.

THE STRUCTURE IS INTENDED TO BE FABRICATED, GALVANIZED AND SHIPPED AS A SINGLE UNIT.

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

SIGN OR BLANKS SHALL BE INSTALLED ON TRUSS AT THE TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF TRUSS, 2'-0" DEEPER THAN C.L. TO C.L. OF CHORDS AND SHALL BE CENTERED ON THE TRUSS. PERMANENT SIGNS SHALL BE LOCATED AS SHOWN.

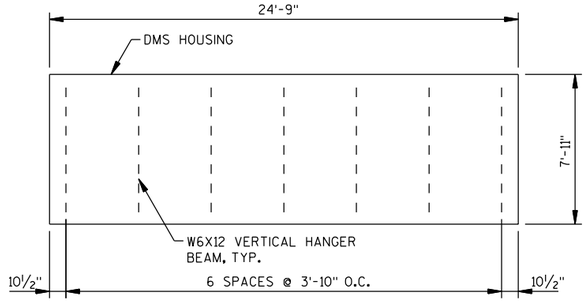
SEE ITS CONSTRUCTION DETAILS FOR DEVICES AND CABLING THAT WILL BE MOUNTED ON AND IN THE STRUCTURE.

PROVIDE A 3/4" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

EXCAVATION REQUIRED TO CONSTRUCT THE CONCRETE COLUMN FOUNDATION ABOVE THE DRILLED SHAFTS SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

NO CAMBER IS REQUIRED FOR TRUSS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS FOR THE VERTICAL HANGER BEAM CONNECTION, IF UNIT CAN BE GALVANIZED IN ONE PIECE.



DMS PANEL MOUNTING BEAM SPACING

NOTE:
BEAM SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS DETAILS IS ENCOUNTERED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-74

DRAWN BY BRD | PLANS CK'D. MAH

GENERAL NOTES AND DETAILS

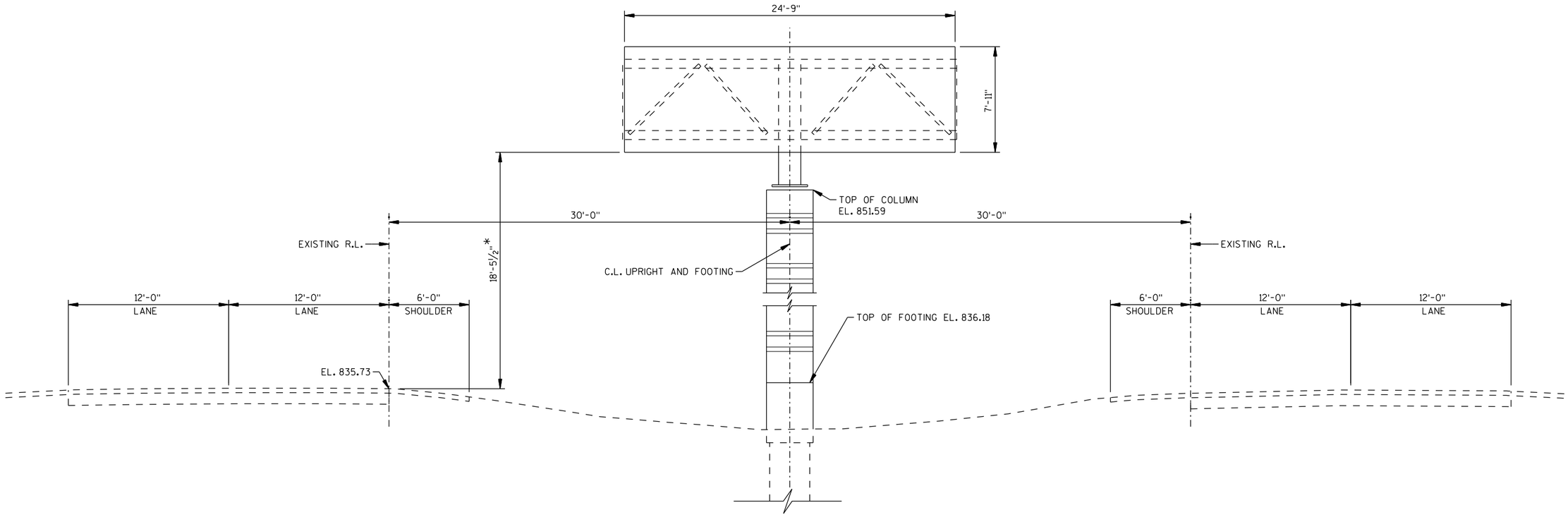
SHEET 2 OF 10
253

8

8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\60242867\000_cad\001_drawings\structures\s-53-74\MS_Printing\Pen_Tables\ET_Wis001.tbl
FILE NAME: i:\work\projects\60242867\000_cad\001_drawings\structures\s-53-74\S-53-74-3 CrossSectStage.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:30:32 PM
BATCH PRINT SHEET 3 OF 10

STATE PROJECT NUMBER
1003-10-70



ELEVATION - EXISTING ROADWAY

(LOOKING NORTH)

LEGEND

* VERTICAL CLEARANCE IS CONTROLLED BY FUTURE ROADWAY CROSS SECTION. VERTICAL CLEARANCE TO EDGE OF TRAVELED WAY SHOWN FOR INFORMATIONAL PURPOSES.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-74

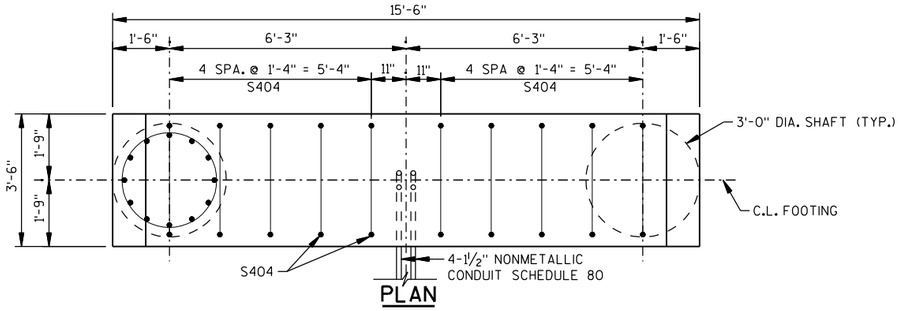
DRAWN BY	BRD	PLANS CK'D.	MAH

EXISTING ROADWAY CROSS SECTION

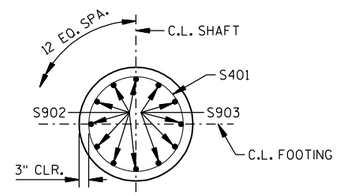
SHEET 3 OF 10

STATE PROJECT NUMBER

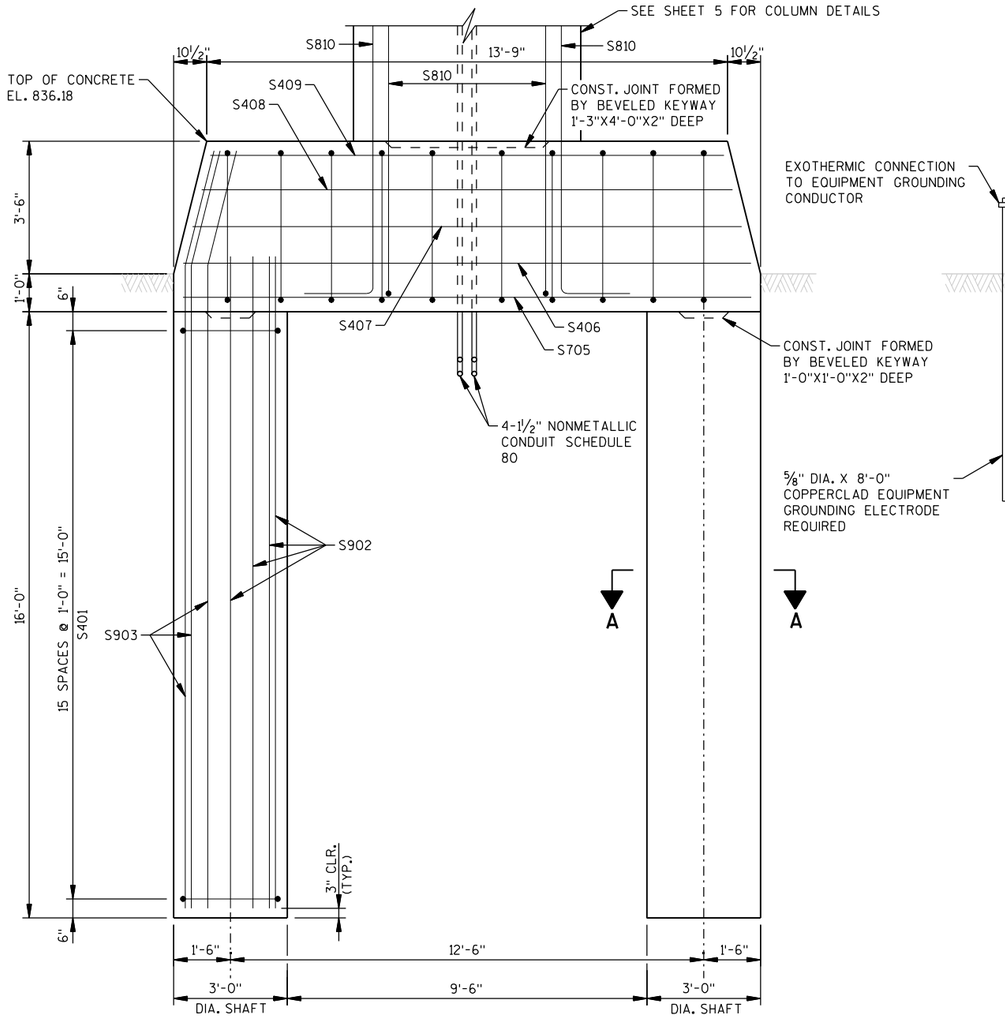
1003-10-70



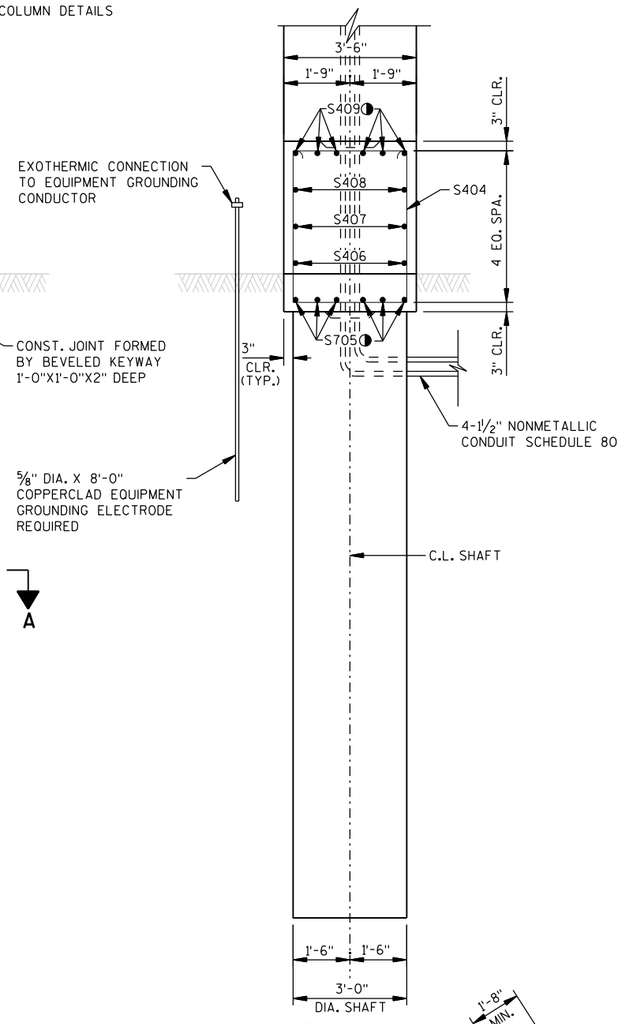
PLAN



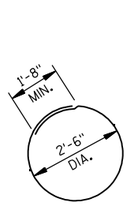
SECTION A-A



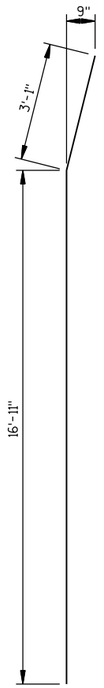
ELEVATION



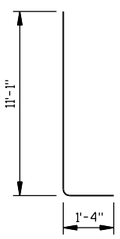
END VIEW



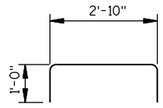
S401



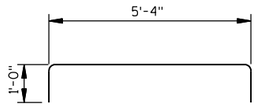
S903



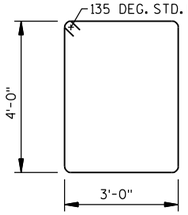
S810



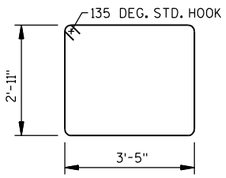
S422



S423



S404



S421

BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 5,370 LBS
S401	32	9 - 6	X		DRILLED SHAFT HORIZONTAL
S902	14	18 - 2			DRILLED SHAFT VERTICAL
S903	10	20 - 0	X		DRILLED SHAFT VERTICAL
S404	10	14 - 6	X		FOOTING VERTICAL
S705	6	15 - 0			FOOTING HORIZONTAL
S406	2	14 - 10			FOOTING HORIZONTAL
S407	2	14 - 4			FOOTING HORIZONTAL
S408	2	13 - 10			FOOTING HORIZONTAL
S409	6	13 - 4			FOOTING HORIZONTAL
S810	40	12 - 3	X		COLUMN VERTICAL
S820	40	15 - 0			COLUMN VERTICAL
S421	34	13 - 2	X		COLUMN STIRRUP HORIZONTAL
S422	2	4 - 8	X		COLUMN HORIZONTAL
S423	2	7 - 2	X		COLUMN HORIZONTAL

NOTES & LEGEND

PROVIDE A ¾" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

4 - 1½" NONMETALLIC CONDUIT SCHEDULE 80 SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD).

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE FOOTING THROUGH A 1-INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES.

GROUNDING ELECTRODE, GROUNDING CONDUCTOR AND 1-INCH CONDUIT SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

◑ SPACE TO MISS VERTICAL SHAFT REINFORCEMENT AND CONDUIT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-74

DRAWN BY BRD | PLANS CK'D. MAH

FOUNDATION DETAILS

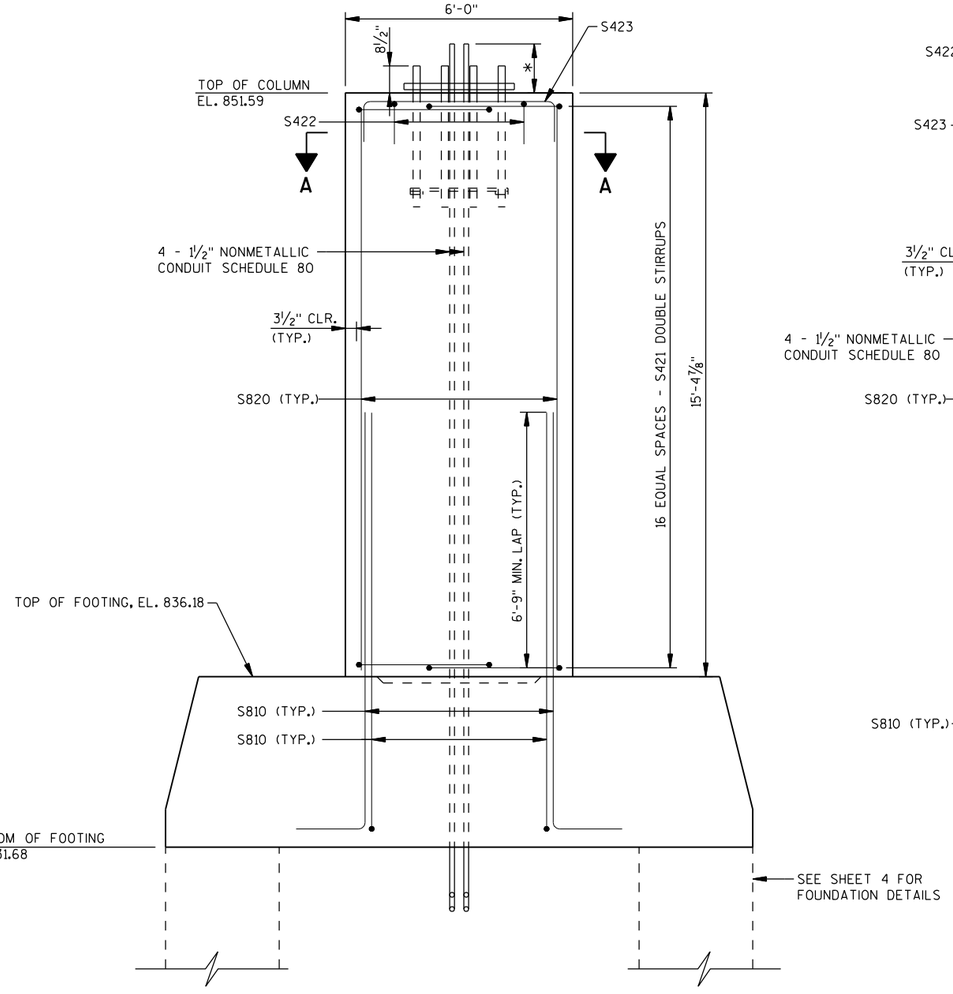
SHEET 4 OF 10
255

8

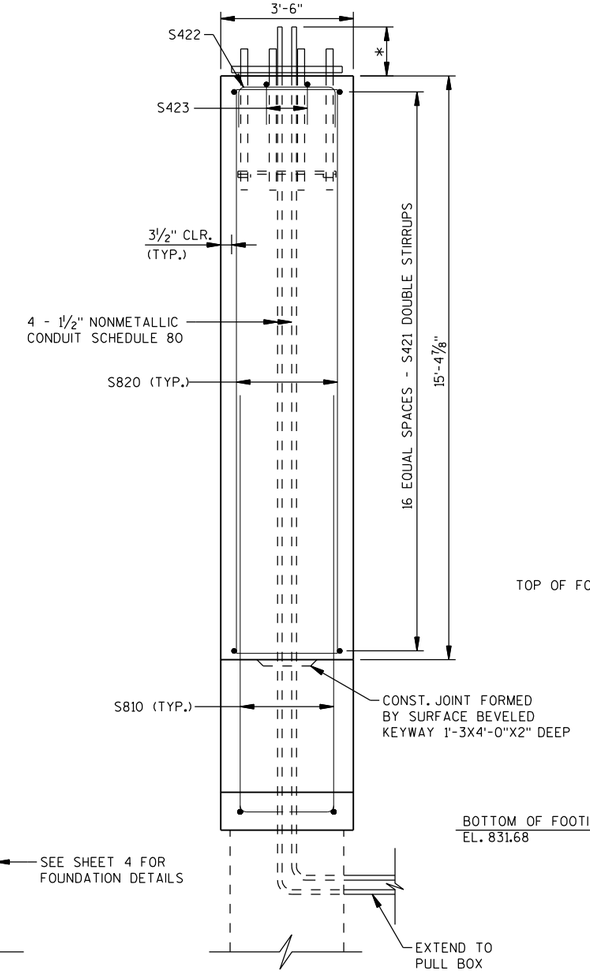
8

PRINTER DRIVER: S:\TPN.CAD\stds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\s-53-74\MS_Printing\Pen_Tables\ET_Mis001.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-74\S-53-74-4 FndDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:30:36 PM
BATCH PRINT SHEET 4 OF 10

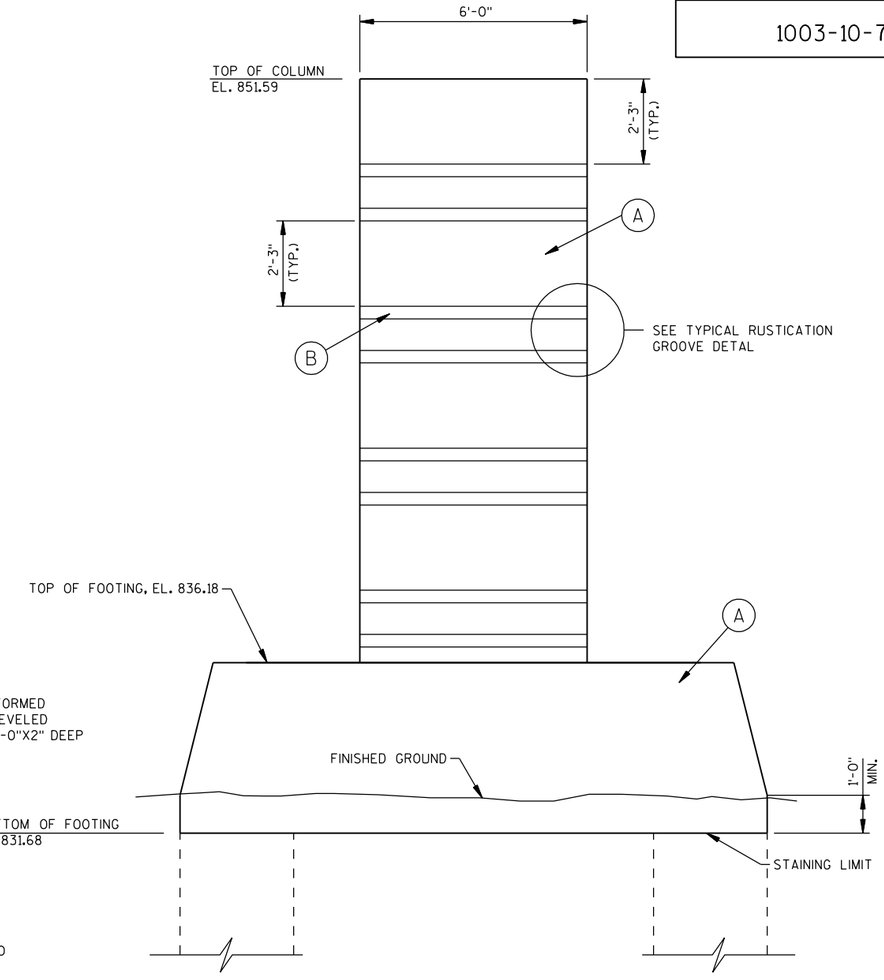
PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\60242867\000.cad\001.drawings\structures\s-53-74\MS_Printing\Pen_Tables\ET_MisDOT.tbl
FILE NAME: i:\work\projects\60242867\000.cad\001.drawings\structures\s-53-74\S-53-74-5 ConcColDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:30:40 PM
BATCH PRINT SHEET 5 OF 10



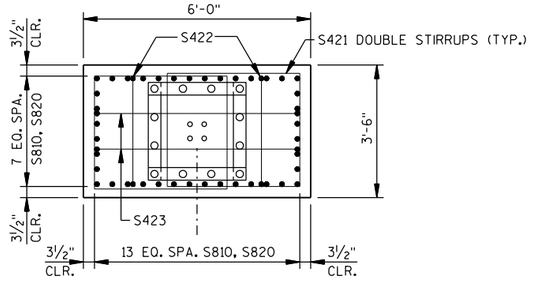
FRONT ELEVATION



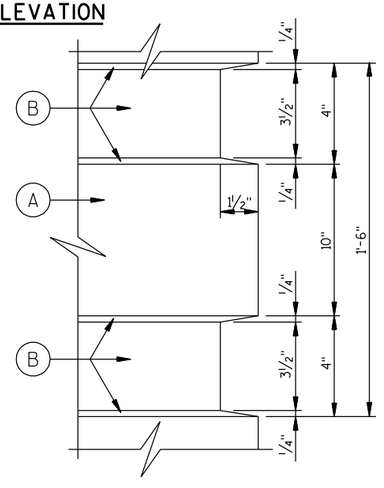
SIDE ELEVATION



FRONT ELEVATION - AESTHETICS
(SIDE ELEVATION SIMILAR)



SECTION A-A



TYPICAL RUSTICATION GROOVE DETAIL

NOTES & LEGEND

ALL STAINING SHALL EXTEND A MINIMUM OF 1'-0" BELOW FINISHED GROUND.

TYPICAL RUSTICATION GROOVE DETAIL SHALL BE USED FOR ALL RUSTICATION GROOVES.

PROVIDE A ¾" CHAMFER ON ALL EXPOSED CONCRETE EDGES.

4 - 1½" NONMETALLIC CONDUIT SCHEDULE 80 SHALL BE INCLUDED WITH THE BID ITEM "SIGN SUPPORT CONCRETE MASONRY."

* EXTEND 1½" NONMETALLIC CONDUIT SCHEDULE 80 TO THE BOTTOM OF THE HANDHOLE, 1'-6" +/-.

(A) CONCRETE STAIN BASE COLOR
FEDERAL COLOR 30372

(B) CONCRETE STAIN ACCENT COLOR
FEDERAL COLOR 30140

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-74

DRAWN BY BRD | PLANS CK'D. MAH

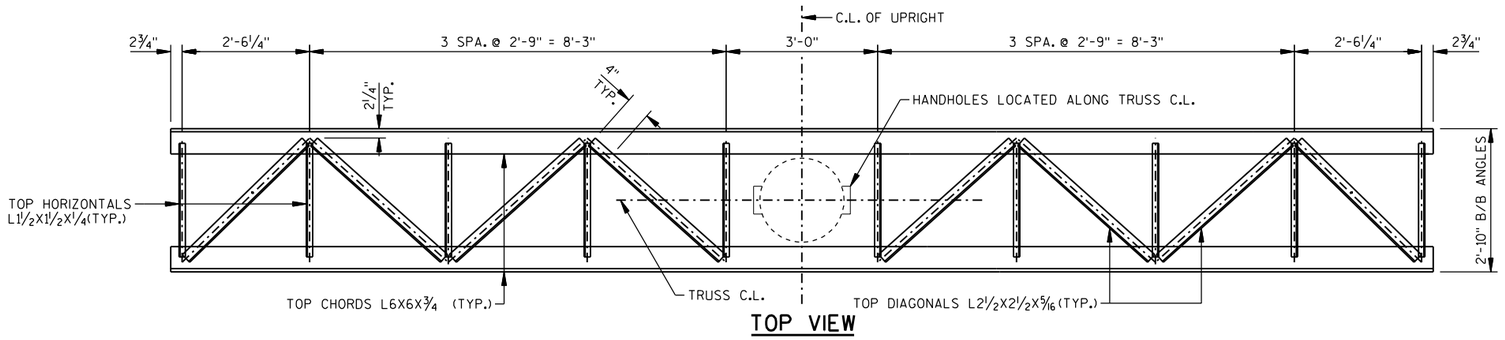
CONCRETE COLUMN DETAILS

SHEET 5 OF 10
256

8

8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000_cad\001_drawings\structures\final early let its structures\s-53-74\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000_cad\001_drawings\structures\final early let its structures\s-53-74\S-53-74-6 TrussDtls.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:30:43 PM BATCH PRINT SHEET 6 OF 10



TOP VIEW

NOTES

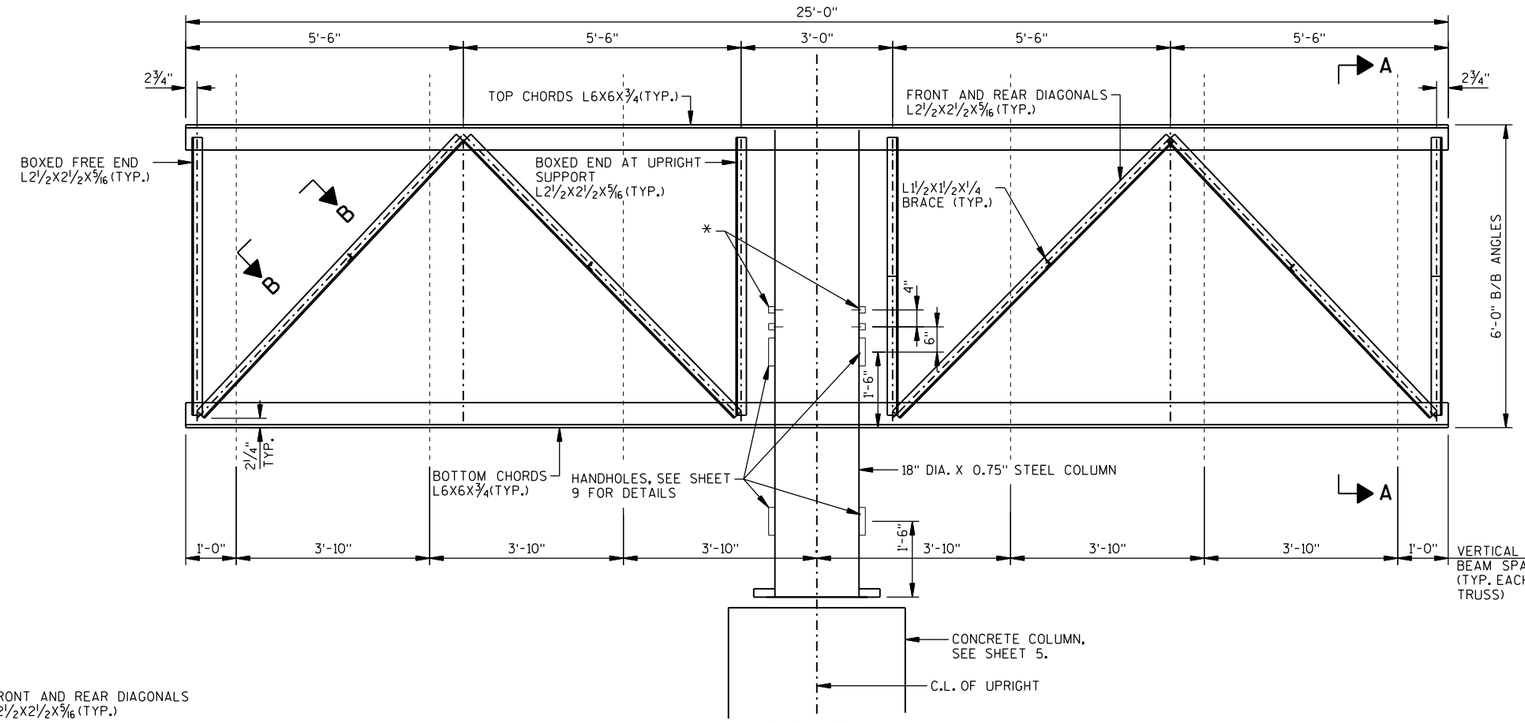
TRUSS AND COLUMN SHALL BE SUPPLIED AS A SINGLE UNIT.

UNLESS OTHERWISE SHOWN, ALL WELDS SHALL BE ¼" FILLET WELDS ALL AROUND.

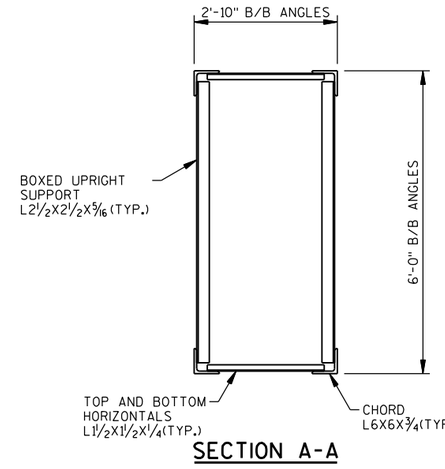
TRUSSES SHALL BE SHOP ASSEMBLED AND MATCH MARKED.

ALL VIEWS OF THE TRUSSES ARE DRAWN FROM THE INSIDE OF THE TRUSS LOOKING OUT.

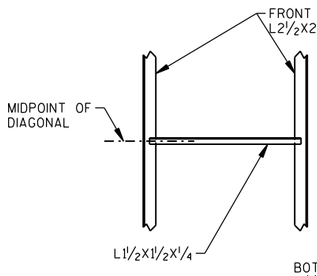
SEE SHEET 8 FOR POST CONNECTION DETAILS.



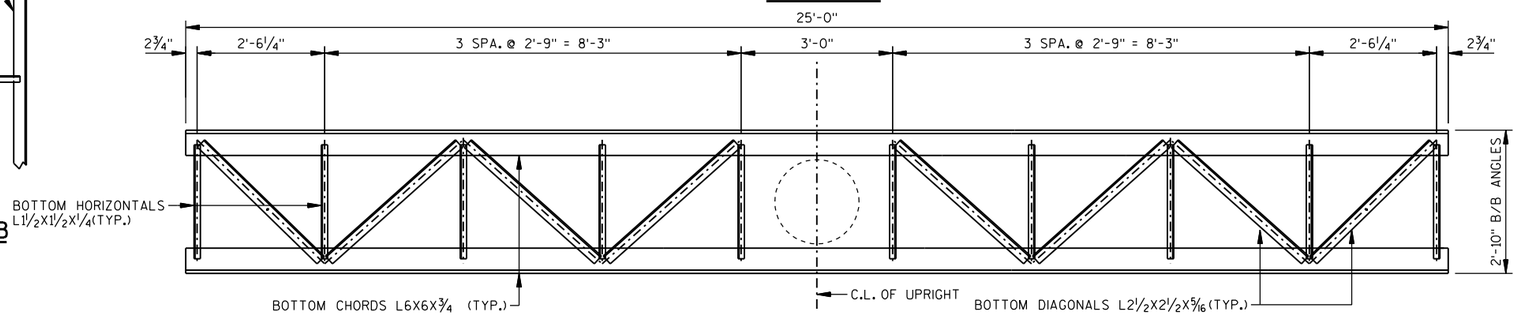
ELEVATION



SECTION A-A



SECTION B-B



BOTTOM VIEW

LEGEND

* 2- 1½" CONDUIT COUPLINGS IN STEEL COLUMN. TYPICAL ABOVE EACH UPPER HANDHOLE. CONDUIT COUPLINGS ARE INCLUDED WITH THE BID ITEM "641.0600.03, SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-53-74)".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-74

DRAWN BY BRD | PLANS CK'D. MAH

SIGN TRUSS DETAILS

SHEET 6 OF 10
257

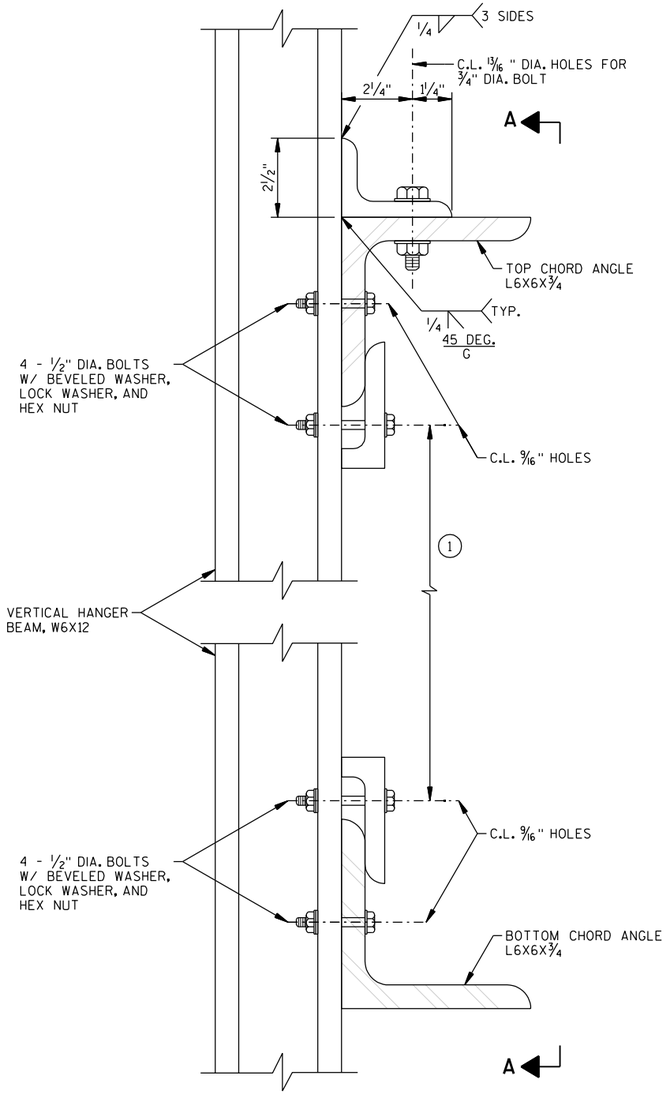
8

8

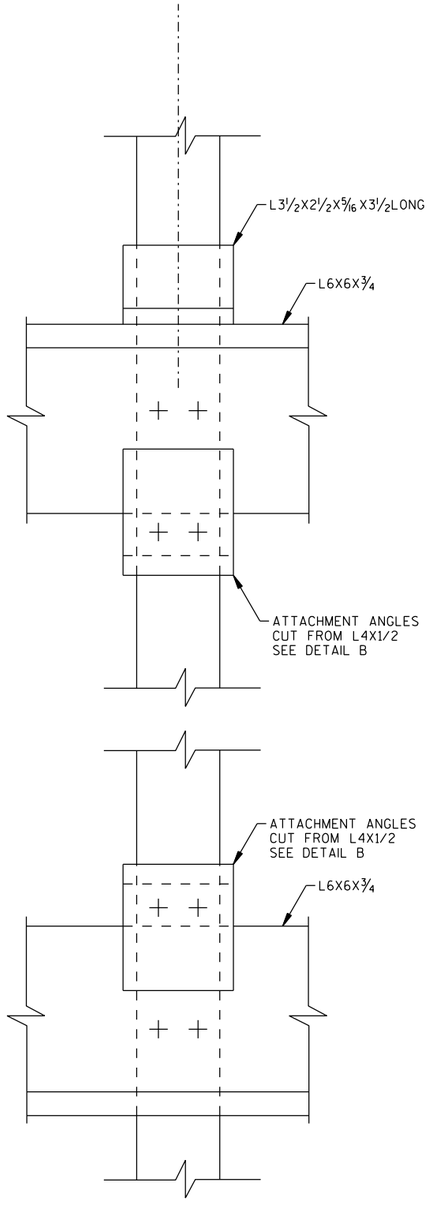
PRINTER DRIVER: S:\TPN.CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-74\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-74\S-53-74-7 MountDtlsdgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:30:47 PM BATCH PRINT SHEET 7 OF 10

STATE PROJECT NUMBER

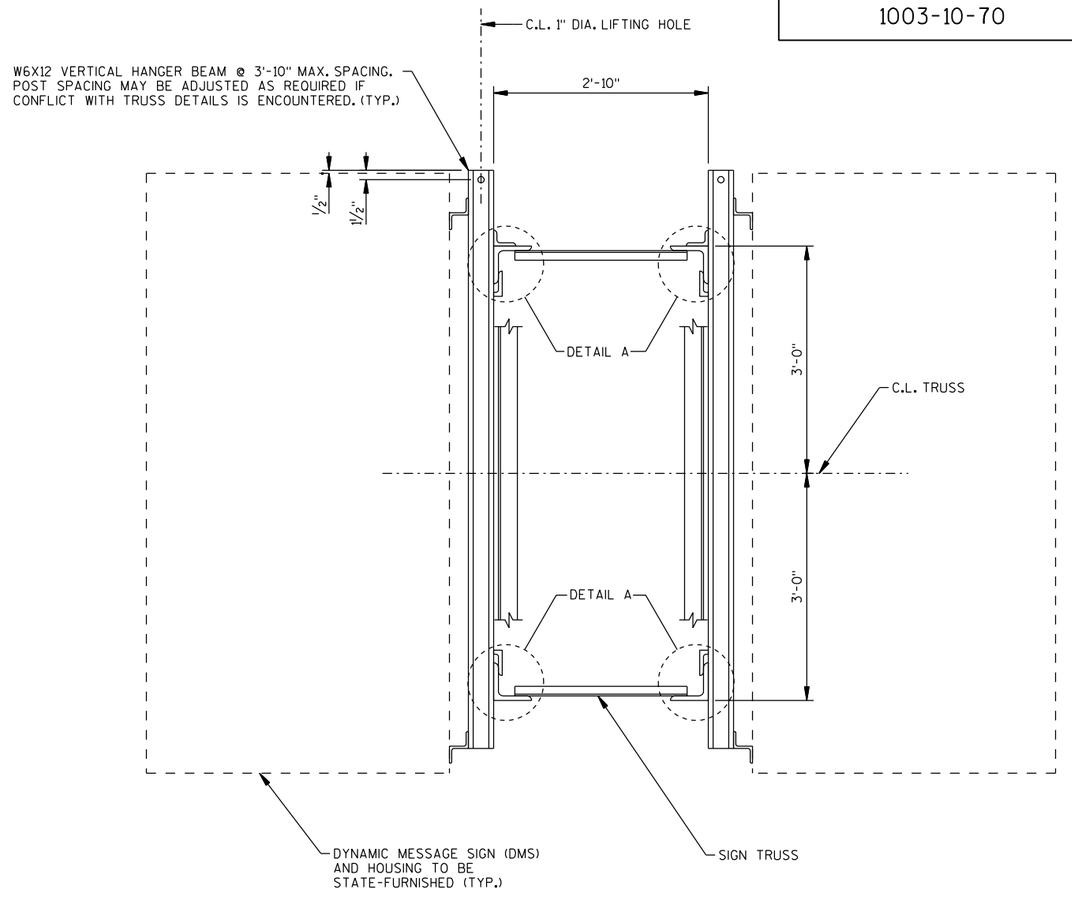
1003-10-70



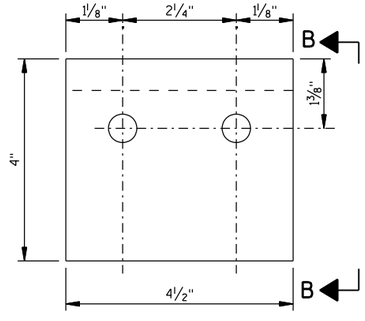
DETAIL A



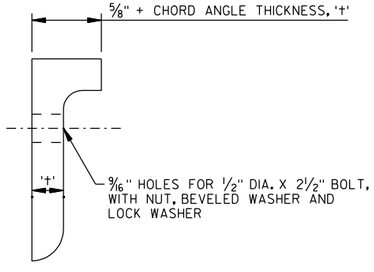
SECTION A-A



SECTION THRU TRUSS AT DYNAMIC MESSAGE SIGN (DMS)



DETAIL B



SECTION B-B

NOTES

(1) (TRUSS DEPTH) - (TOP & BOTTOM CHORD < LEGS) - 1 1/4"

W6X12 VERTICAL HANGER BEAM, 3 1/2X 2 1/2 ANGLES WELDED TO THE HANGER BEAM AND ATTACHMENT ANGLES ARE INCLUDED WITH THE BID ITEM "641.0600.03 SIGN BRIDGE SINGLE POLE SIGN SUPPORT TWO SIGNS (S-53-74)".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-74

DRAWN BY BRD | PLANS CK'D. MAH

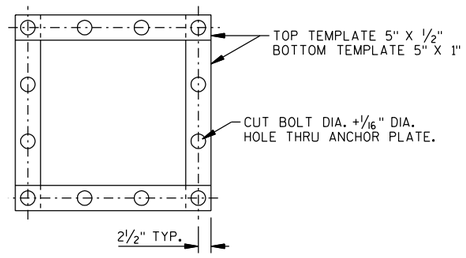
DMS SIGN PANEL MOUNTING DETAILS

SHEET 7 OF 10
258

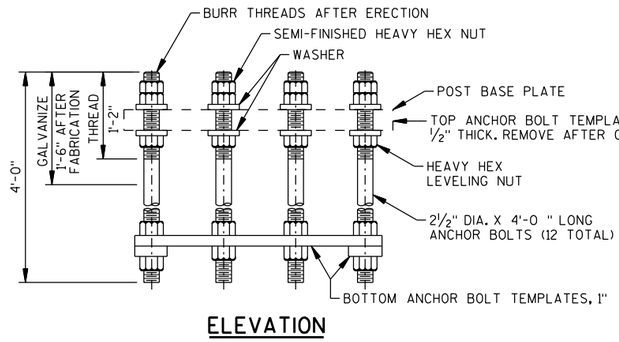
8

8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\60242867\000_cad\001_drawings\structures\s-53-74\MS_Printing\Pen_Tables\ET_MisDOT.tbl
FILE NAME: i:\work\projects\60242867\000_cad\001_drawings\structures\s-53-74\S-53-74-8 Connect01s.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:30:50 PM
BATCH PRINT SHEET 8 OF 10

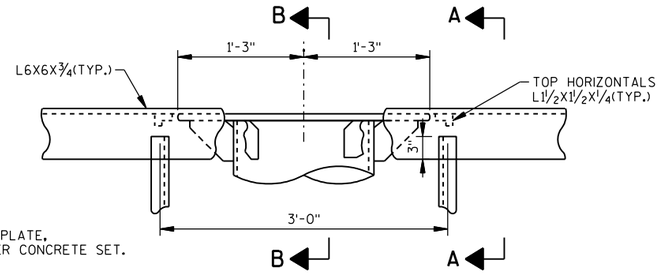


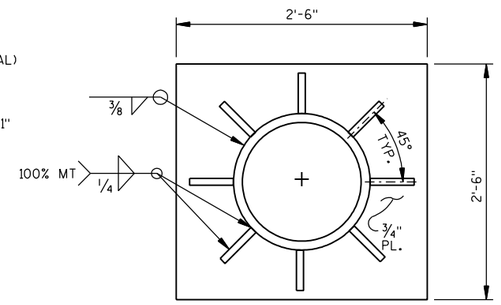
ANCHOR BOLT TEMPLATE PLAN
(TOP AND BOTTOM PLATES)



ELEVATION

ANCHOR BOLT DETAILS





UPPER JUNCTION

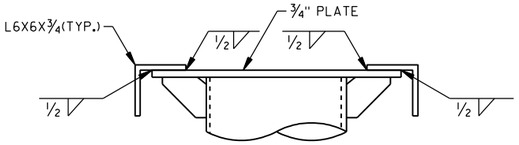
NOTES

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.

HANDHOLE COVERS SHALL BE GALVANIZED SEPARATELY.

THE FOLLOWING TORQUE VALUE SHALL BE USED WHEN INSTALLING ALL ANCHOR NUTS:

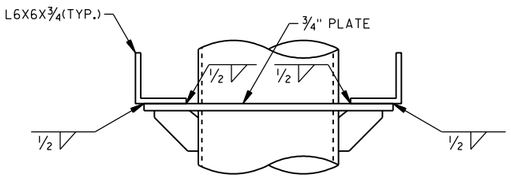
ANCHOR BOLT DIA.	TORQUE (FT./LBS.)
2 1/2"	450



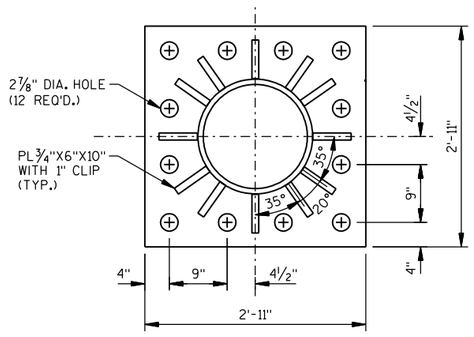
VIEW B-B

ELEVATION

VIEW A-A

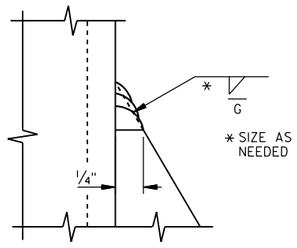


VIEW C-C

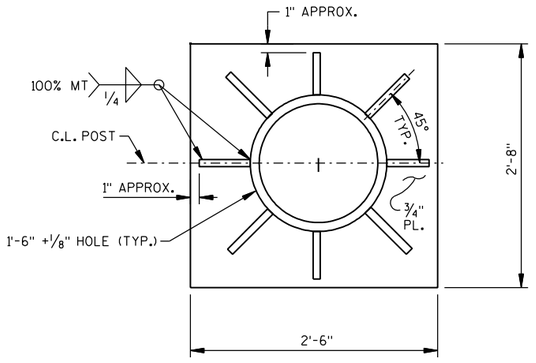


PLAN

BASE PLATE DETAILS



DETAIL "C"



LOWER JUNCTION

BUTTERFLY TRUSS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-74

DRAWN BY BRD | PLANS CK'D. MAH

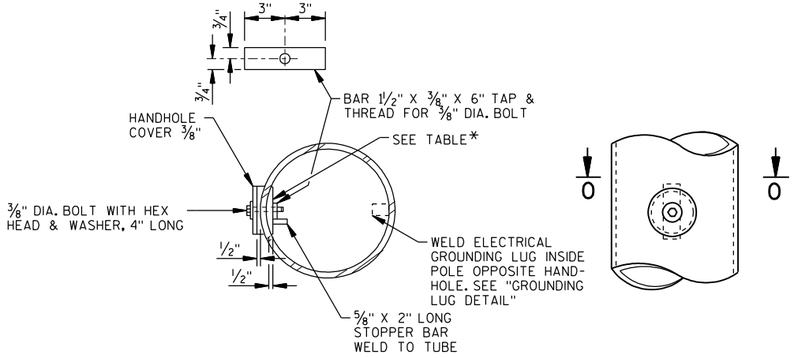
TRUSS/POST CONNECTION & BASE PLATES

SHEET 8 OF 10
259

8

8

PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: I:\work\projects\60242867\000.cad\001.drawings\structures\s-53-74\MS_Printing\Pen_Tables\ET_Mis001.tbl
FILE NAME: I:\work\projects\60242867\000.cad\001.drawings\structures\s-53-74\S-53-74-9 Handhole.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:30:53 PM BATCH PRINT SHEET 9 OF 10



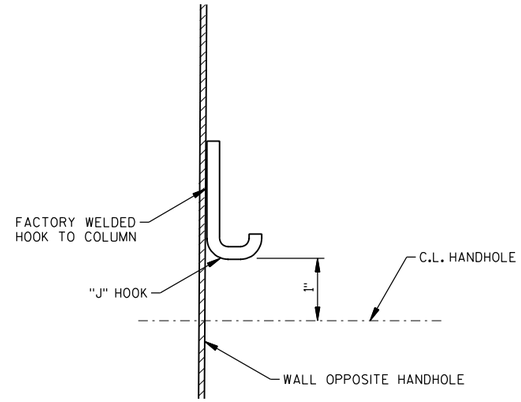
SECTION '0'

HANDHOLE DETAILS

HANDHOLE NOTES

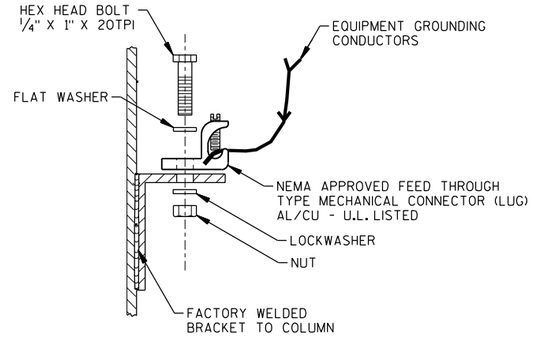
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN BRIDGE STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE DISTRICT TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN BRIDGE COLUMN AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL DETAIL PLAN SHEETS.

*	UPRIGHT DIA. SIZE	HANDHOLE PIPE O.D. X MIN. THK.
	UP TO AND INCLD. 16" X .375"	5.562" X .500"
	GREATER THAN 16" X .375" TO AND INCLD. 24" X .562"	6.625" X .562"



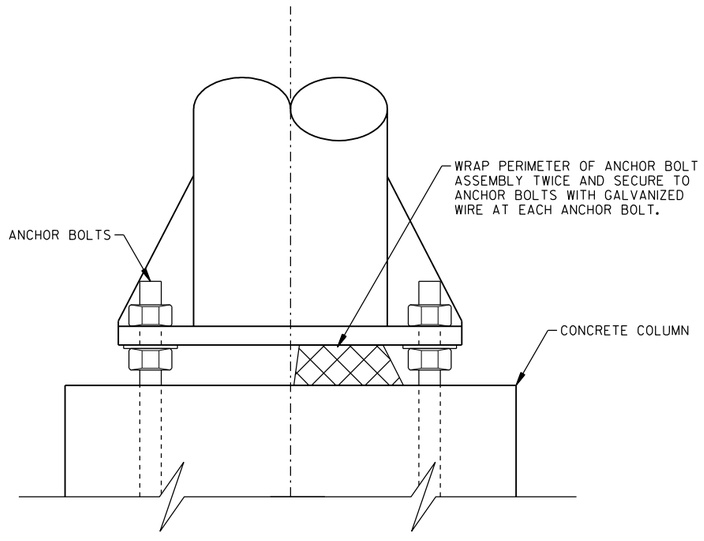
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



RODENT SCREEN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE S-53-74

DRAWN BY BRD | PLANS CK'D. MAH

HANDHOLE DETAILS

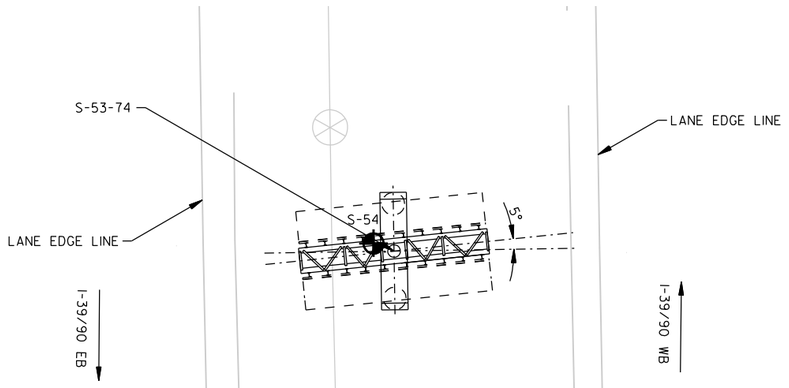
SHEET 9 OF 10
260

8

8

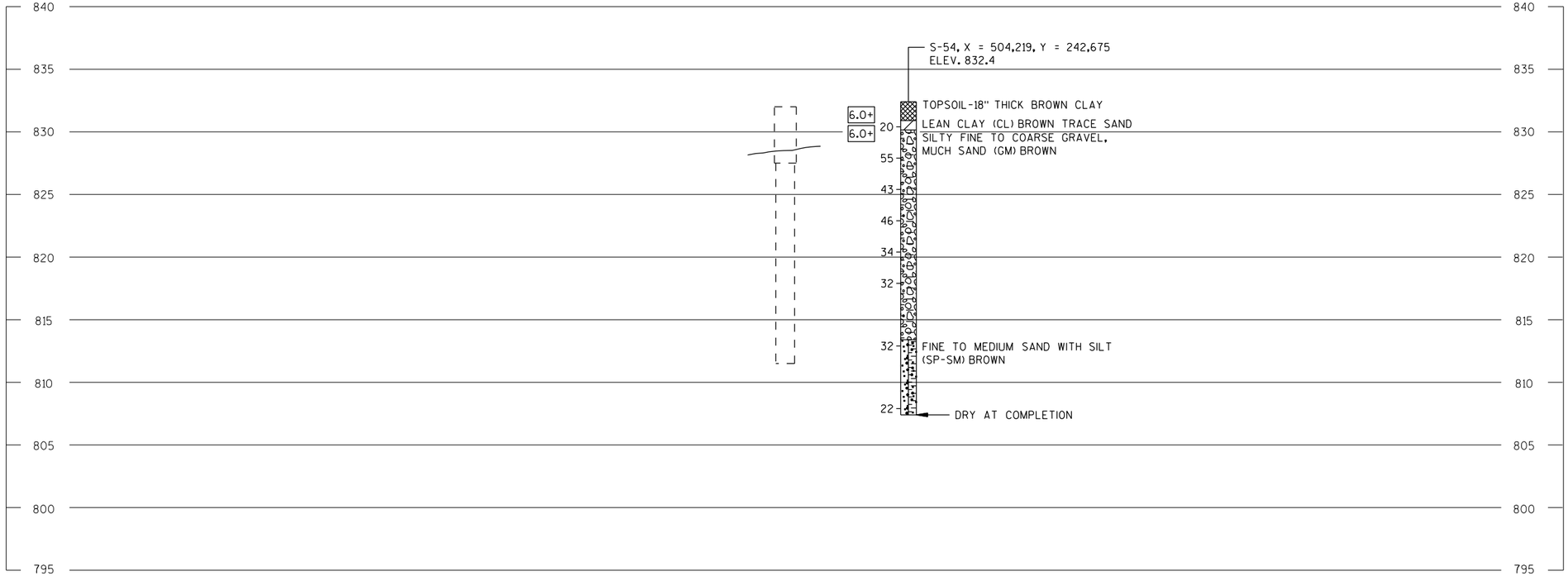
BORINGS AND REPORT BY:
SOILS & ENGINEERING SERVICES, INC.
1102 STEWART ST.
MADISON, WI 53713-4648

BORINGS WERE PERFORMED OCTOBER 4, 2012



Soil Properties for Structure S-53-74 (Based on Boring S-54)

Elevation (feet)			Layer Description	Unit Weight (lb/ft³)	Undrained (Short Term) Total Cohesion, c (lb/ft²)	Undrained (Short Term) Total Friction Angle, ϕ (degrees)	Drained (Long Term) Strength Effective Cohesion, c' (lb/ft²)	Drained (Long Term) Strength Effective Friction Angle, ϕ' (degrees)	Allowable End Bearing Pressure (lb/ft²)	Allowable Skin Friction (lb/ft²)
832.4	-	830.9	Topsoil	115.0	500	0	25	20	0	0
830.9	-	830.2	Lean Clay	135.0	6,000	0	300	25	0	0
830.2	-	827.4	Silty Gravel	138.0	0	40	0	40	0	0
827.4	-	821.4	Silty Gravel	138.0	0	40	0	40	10,000	295
821.4	-	813.4	Silty Gravel	134.0	0	38	0	38	10,000	520
813.4	-	810.4	Fine Sand	130.0	0	37	0	37	10,000	790
810.4	-	807.4	Fine Sand	125.0	0	34	0	34	11,300	865



STATE PROJECT NUMBER

1003-10-70

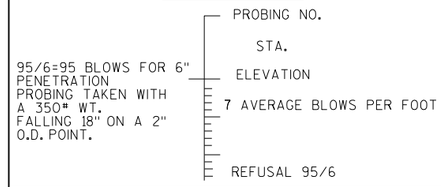
ABBREVIATIONS

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

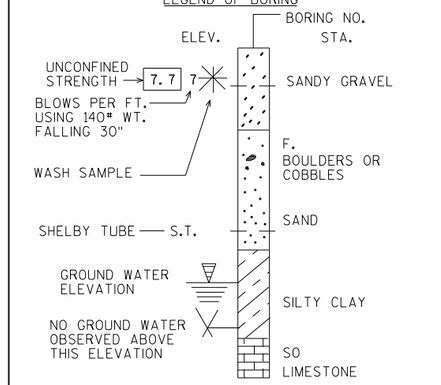
MATERIAL SYMBOLS

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

STRUCTURE S-53-74

DRAWN BY BRD | PLANS CK'D. MAH

SUBSURFACE EXPLORATION

SHEET 10 OF 10
261

FILE =
SCALE =

8

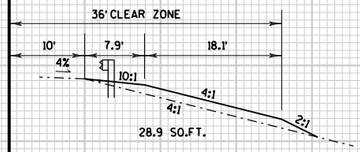
8

PRINTER DRIVER: S:\TPN.CAD\stds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: i:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-74\MS_Printing\Pen_Tables\ET_WisDOT.tbl
FILE NAME: i:\work\projects\60242867\000.cad\001.drawings\structures\final early let its structures\s-53-74\S-53-74-10 Subsurf.dgn
PLOT DATE: 3/11/2013 PLOT TIME: 5:31:25 PM BATCH PRINT SHEET 10 OF 10

I-43 AT CARVERS ROCK

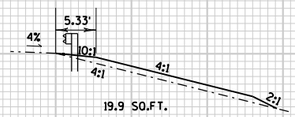
BEGIN TAPER: 0 SQ.FT.

POST #1



28.9 SQ.FT.

POST #5



19.9 SQ.FT.

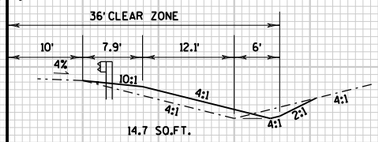
POST #9

0.8 SQ.FT.

I-39 AT LAKE DRIVE RD. NB

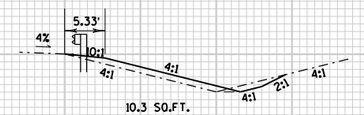
BEGIN TAPER: 0 SQ.FT.

POST #1



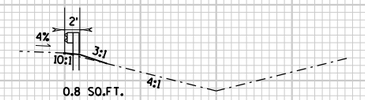
14.7 SQ.FT.

POST #5

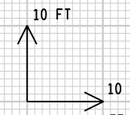


10.3 SQ.FT.

POST #9



0.8 SQ.FT.



TEMPLATE IS SUBGRADE
PRINTED ELEVATION IS SUBGRADE

9 9

STATE PROJECT NUMBER:1003/05/07-10-70	HWY:I-39/90	COUNTY:ROCK & DANE	CROSS SECTIONS: BEAM GUARD POSTS #1, #5, #9	SHEET 262	E

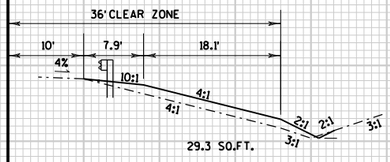
FILE NAME: L:\work\projects\60242867\000_CAD\001_Drawings\090201_xs_ITS.DGN
BATCH PRINT SHEET 1 OF 2
PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: L:\work\projects\60242867\000_CAD\001_Drawings\MS_Printing\Pen_Tables\ET_WisDOT.tbl
PLOT DATE: 1/31/2013
PLOT TIME: 11:40:12 AM
PLOT SCALE: 1:20
WISDOT/CADDS SHEET 21A

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160

I-39 AT HART RD. NB

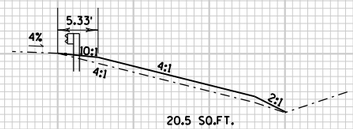
BEGIN TAPER: 0 SQ.FT.

POST #1



29.3 SQ.FT.

POST #5



20.5 SQ.FT.

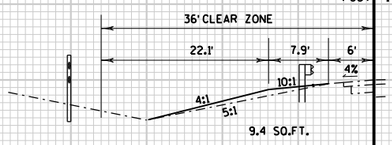
POST #9

0.8 SQ.FT.

I-39 AT WOODMAN RD.

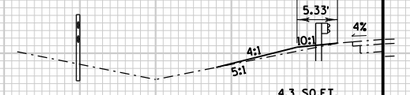
BEGIN TAPER: 0 SQ.FT.

POST #1



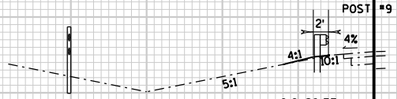
9.4 SQ.FT.

POST #5

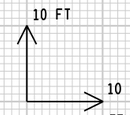


4.3 SQ.FT.

POST #9



0.6 SQ.FT.



TEMPLATE IS SUBGRADE
PRINTED ELEVATION IS SUBGRADE

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160

9 9

STATE PROJECT NUMBER: 1003/05/07-10-70	HWY: I-39/90	COUNTY: ROCK & DANE	CROSS SECTIONS: BEAM GUARD POSTS #1, #5, #9	SHEET 263 E

FILE NAME: L:\work\projects\60242867\000_CAD\001_Drawings\090201_xs_ITS.DGN
BATCH PRINT SHEET 2 OF 2
PRINTER DRIVER: S:\TPN_CADstds\Workspace-CLIENTS\WisDOT\MicroStation\Resources\MS_Printing\Printer_Drivers\ET_PDF_11 x 17.plt
PEN TABLE: L:\work\projects\60242867\000_CAD\001_Drawings\MS_Printing\Pen_Tables\ET_WisDOT.tbl
PLOT DATE: 1/31/2013
PLOT TIME: 11:40:12 AM
PLOT SCALE: 1:20
WISDOT/CADDS SHEET 21A

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov