

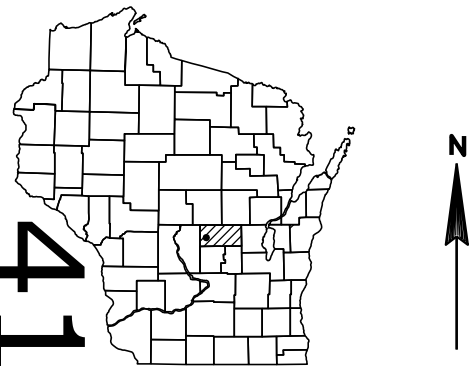
WISCONSIN
PROJECT ID: 1166-03-70
WITH:
COUNTY: WAUSHARA

MAY 2013

ORDER OF SHEETS

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

TOTAL SHEETS = 32



DESIGN DESIGNATION: IH-39

A.A.D.T. (2009)	=	17,100
A.A.D.T.	=	
D.H.V.	=	
D.D.	=	
T. (28.4%)	=	4,850
DESIGN SPEED	=	
ESALS	=	

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	
MARSH AREA	
WOODED OR SHRUB AREA	
PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

COLOMA - PLAINFIELD

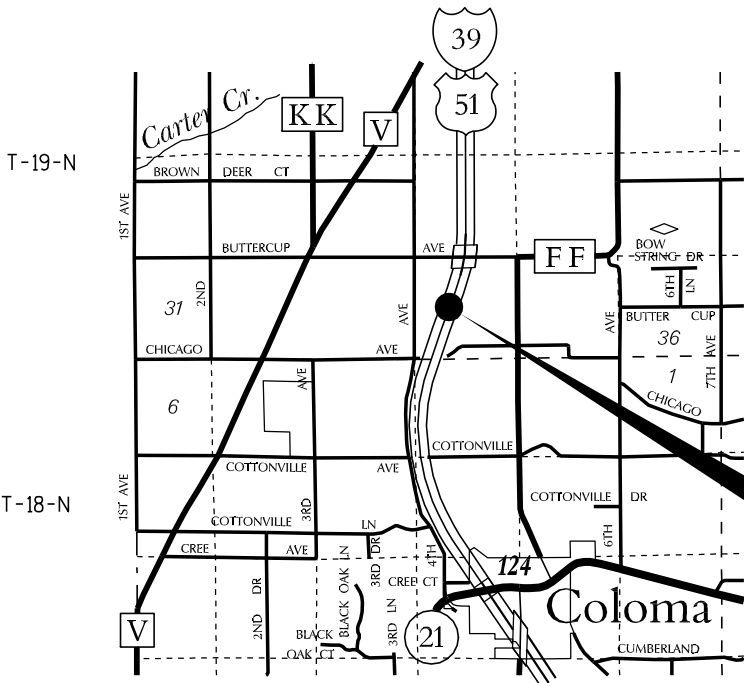
(COLOMA SAFETY & WEIGHT FACILITY)

IH 39

WAUSHARA COUNTY

STATE PROJECT NUMBER

1166-03-70



PROJECT LOCATION

COLOMA SWEF #44

Y= 757,000 +/- 1000

X= 2,122,000 +/- 1000

MM 127 MEDIAN

LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

"Coordinates on this plan are referenced to the Wisconsin State Plane Coordinate System (WSPCS), 'South' Zone."

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1166-03-70		

PLANS PREPARED BY

WISDOT STAFF

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	
Designer	Robert Spoerl
Project Manager	
Project Examiner	
Supervisor	Todd Matheson
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 1/31/2013

(Signature)

E

GENERAL NOTES

ASPHALTIC PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 110 LB/IN-SY

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

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

DETAILS OF CONSTRUCTION NOT SHOWN ON THE PLAN SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

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

NUMBER, LOCATION, AND SPACING OF SIGNS AND DEVICES, AS SHOWN IN THE PLANS, SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

ALL CONNECTIONS BETWEEN SENSORS AND LEAD CABLES SHALL BE DONE IN PULLBOX, SOLDERED, THEN SEALED FOR WATERPROOFING. NUMBER AND PLACEMENT OF PULL BOXES NOT SHOWN.

POWER CABLES SHALL BE RUN IN SEPARATE CONDUITS/PULLBOXES FROM SIGNAL CABLES.

SENSOR SPACING SHOWN IS TYPICAL SPACING REQUIREMENT. ACTUAL SENSOR SPACING MAY BE ALTERED TO FIT SITE CONDITIONS.

ROAD SURFACE SHALL MEET ASTM 1318 SPECIFICATIONS FOR PAVEMENT CONDITIONS TO ACHIEVE OPTIMAL SYSTEM PERFORMANCE.

CABLES SHALL BE PROTECTED BY PVC SLEEVES WHERE THEY CROSS PAVEMENT JOINTS/CRACKS.

PIEZO SENSORS SHALL BE A MINIMUM OF 6' FROM CRACKS, JOINTS OR SAWCUTS WHEN POSSIBLE.

PULLBOXES SHALL BE NO MORE THAN 200' FEET APART, MINIMUM 24" DIAMETER.

EXACT ROUTING OF CONDUIT TO BE DETERMINED ON SITE. CONDUITS ARE LABELED LEFT TO RIGHT, TOP TO BOTTOM.

120 VC AND HIGH SPEED INTERNET TELECOMMUNICATIONS SERVICES ARE REQUIRED TO BE PROVIDED TO SERVICE POINTS WITHIN 25 FEET OF THE VIRTUAL WEIGH STATION CABINET LOCATION.

DETECTOR LOOPS SHALL CONFORM TO WISDOT STANDARD SPECIFICATIONS.

DETECTOR LOOPS SHALL NOT BE CUT DIRECTLY INTO THE EXISTING PAVEMENT SURFACE.

DETECTOR LOOPS SHALL BE INSTALLED UNDERNEATH NEW CONCRETE PAVEMENT.

CONTACT LIST

ELECTRIC SERVICE PROVIDER
ADAMS COLUMBIA ELECTRIC COOP.
PO BOX 70
401 EAST LAKE STREET
FRIENDSHIP, WI 53934-0070
PHONE: 800-831-8629

TELECOMMUNICATIONS PROVIDER
UNION TELEPHONE COMPANY
100 WEST NORTH STREET
PO BOX 96
PLAINFIELD, WI 54966
PHONE: 715-335-6301

WISCONSIN STATE PATROL
SGT. ROBERT HARTSON
EMAIL: robert.hartson @dot.wi.gov
PHONE: 715-249-5920 (SITE)
PHONE: 715-845-1143 (POST)

SWEF MAINTENANCE
WAUSHARA INDUSTRIES, INC.
210 E. CHICAGO ROAD
PO BOX 590
WAUTOMA, WI 54982-0590
PHONE: (920) 787-4696
FAX: (920) 787-4698
ATTN: PETE FISCHBACH

WAUSHARA COUNTY HIGHWAY DEPARTMENT
BILL PATTERSON
1001 EAST MAIN STREET
WAUTOMA, WI 54982
PHONE: 920-787-3327
MOBILE: 920-572-7756



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

CALL DIGGERS HOTLINE

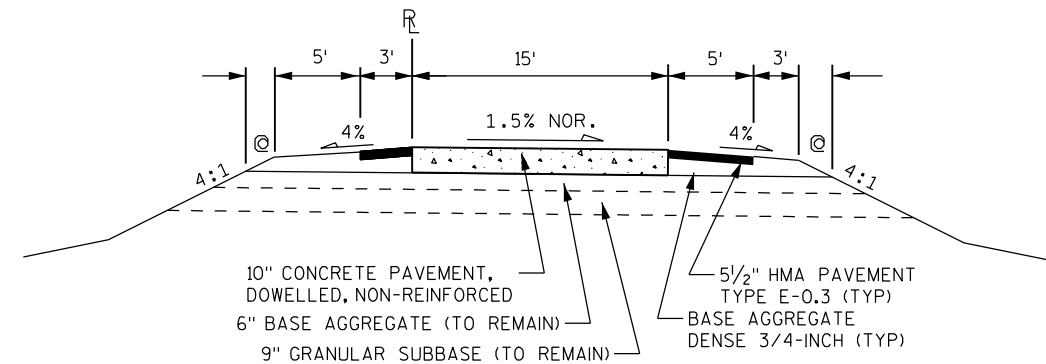
1-800-242-8511
TDD (FOR HEARING IMPAIRED)
1-800-542-2289
TOLL FREE

TELEFAX (414)259-0947

WWW.DIGGERSHOTLINE.COM

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

DNR LIAISON
BOBBI JO FISCHER
WAUTOMA SERVICE CENTER
427 EAST TOWER DRIVE - SUITE 100
WAUTOMA, WI 54982
PHONE: (920) 787-3015
EMAIL: bobbi.fischer@wisconsin.gov



PROPOSED TYPICAL SECTION EXIT & ENTRANCE RAMPS

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

STATE PROJECT NUMBER: 1166-03-70

HWY: IH 39

COUNTY: WAUSHARA

GENERAL NOTES, TYP. SECTIONS, CONTACTS

SCALE:

SHEET NO:

E

FILE NAME : C:\CAEFiles\Projects\swe44\02010_gn.dgn

PLOT DATE : 22-MAR-2013 13:06

PLOT BY : dotres

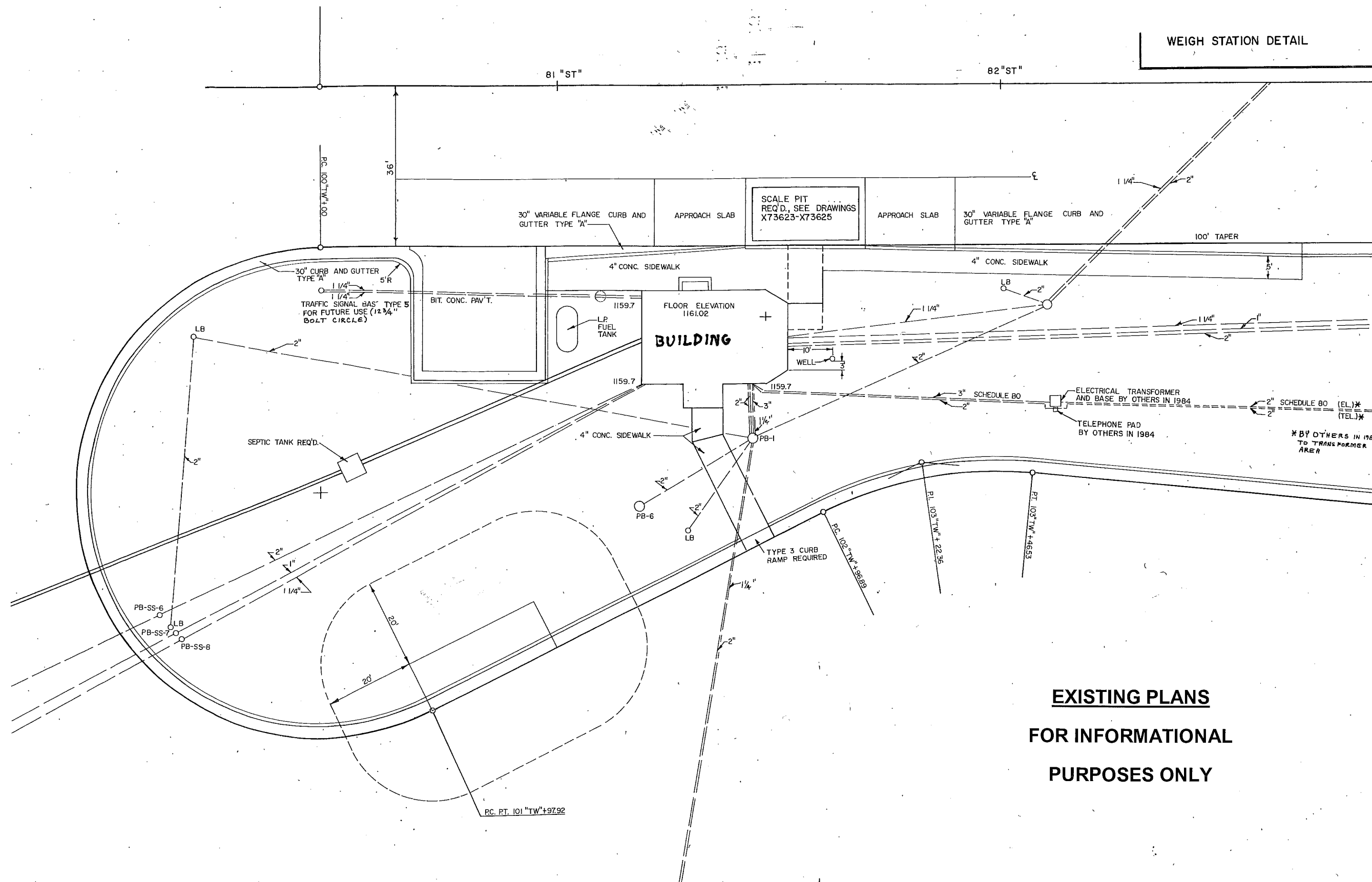
PLOT NAME : 02010 GN.dgn

ORG DATE : 1-28-2013

Originator : BHM HM&RM

PLOT SCALE : 120.000000:1.000000

WISDOT/CADDs SHEET 42



**EXISTING PLANS
FOR INFORMATIONAL
PURPOSES ONLY**

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

STATE PROJECT NUMBER: 1166-03-70

HWY: IH 39

COUNTY: WAUSHARA

DETAILS - COLOMA SWEF #44

SCALE:

SHEET NO:

E

FILE NAME : C:\CAEFiles\Projects\swe44\02010_gn.dgn

PLOT DATE : 29-JAN-2013 14:08

PLOT BY : dotres

PLOT NAME : GENNOTES.dgn

ORG DATE : 4-16-2012

Originator : BHM HM&RM

PLOT SCALE : 120.000000:1.000000

WISDOT/CADDs SHEET 42

STATE PROJECT NUMBER	SHEET NO.
SCALE SYSTEM CONDUITS, ELECTRICAL CO. CONDUIT, AND TELEPHONE CO. CONDUIT	

CONVENTIONAL SIGNS
PB-SS-1 PULL BOX SCALE SYSTEM - 1

**EXISTING PLANS
FOR INFORMATIONAL
PURPOSES ONLY**

NO.	SIZE	LOCATION	NO.	SIZE	LOCATION
PB-SS-1	24" Ø	77'NT'+00 (15' LT)	PB-SS-10	24" Ø	84'ST'+50 (52' RT)
PB-SS-2	24" Ø	78'NT'+10 (35' LT)	PB-SS-11	24" Ø	84'ST'+50 (64' RT)
PB-SS-3	18" Ø	77'NT'+85 (15' LT)	PB-SS-12	24" Ø	86'ST'+40 (45' RT)
PB-SS-4	24" Ø	79'NT'+55 (40' LT)	PB-SS-13	18" Ø	87'ST'+45 (35' RT)
PB-SS-5	18" Ø	79'NT'+60 (33' LT)	PB-SS-14	24" Ø	87'ST'+45 (40' RT)
PB-SS-6	24" Ø	101'TW'+20 (10' LT)	PB-SS-15	24" Ø	88'ST'+90 (32' RT)
PB-SS-7	24" Ø	101'TW'+27 (10' LT)	PB-SS-16	18" Ø	89'ST'+15 (15' RT)
PB-SS-8	24" Ø	101'TW'+30 (10' LT)	PB-SS-17	24" Ø	90'ST'+00 (15' RT)
PB-SS-9	24" Ø	84'ST'+50 (15' RT)			

NO.	TYPE	LOCATION	VEHICLE DETECTOR REMARKS
H-1	2	481'NB'+50 (33' LT)	TYPE 5 SIGNAL BASE REQ'D.
H-2	2	481'NB'+50 (56' RT)	TYPE 5 SIGNAL BASE REQ'D.

STATE PROJECT NUMBER: 1166-03-70

HWY: IH 39

COUNTY: WAUSHARA

DETAILS - COLOMA SWEF #44

SCALE:

SHEET NO:

E

FILE NAME : C:\CAEF\Files\Projects\swe44\02010_gn.dgn

PLOT DATE : 29-JAN-2013 14:08

PLOT BY : dotres

PLOT NAME : GENNOTES.dgn

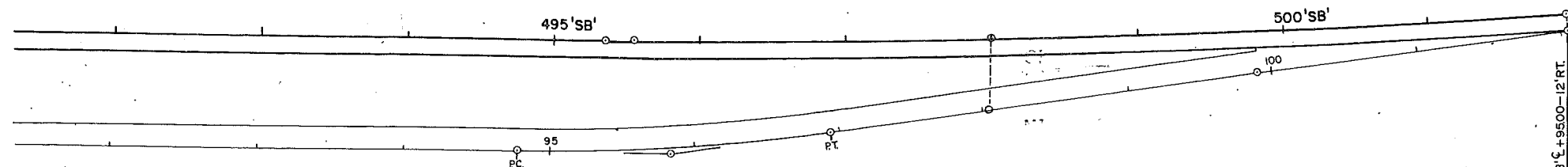
ORG DATE : 4-16-2012

Originator : BHM HM&RM

PLOT SCALE : 120.000000:1.000000

WISDOT/CADDs SHEET 42

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63



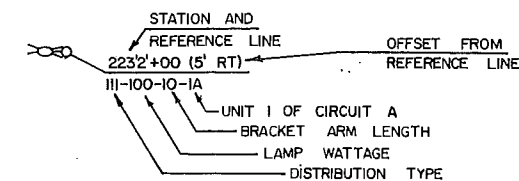
*CIRCUIT "A"	*CIRCUIT "B"	*CIRCUIT "C"	**CIRCUIT "D"
FROM BUILDING TO BASE 3A (ONE RUN)	FROM BUILDING DISCONNECT TO BASE 3B (ONE RUN)	FROM BUILDING TO 3C (ONE RUN)	FROM BUILDING TO 1D
FROM 3A TO 2A (ONE RUN)	FROM 3B TO 2B (ONE RUN)	FROM 3C TO 2C (ONE RUN)	FROM BUILDING TO 2D
FROM 2A TO 1A (ONE RUN)	FROM 2B TO 1B (ONE RUN)	FROM 2C TO 1C (ONE RUN)	
FROM 3A TO 4A (ONE RUN)	FROM 3B TO 4B (ONE RUN)	FROM BUILDING TO 5C	
FROM 4A TO 5A (ONE RUN)	FROM 4B TO 5B (ONE RUN)	FROM 5C TO 4C	
FROM 5A TO 6A (ONE RUN)	FROM 5B TO 6B (ONE RUN)	FROM BUILDING TO 6C	
	FROM 6B TO 7B (ONE RUN)	FROM 6C TO 7C	
		FROM 7C TO 8C	

ALL CABLE RUNS TO CONSIST OF 3 #8 A.W.G. SINGLE CONDUCTOR INSULATED COPPER WIRE.
ALL CONDUCTORS TO BE STRANDED WIRE.

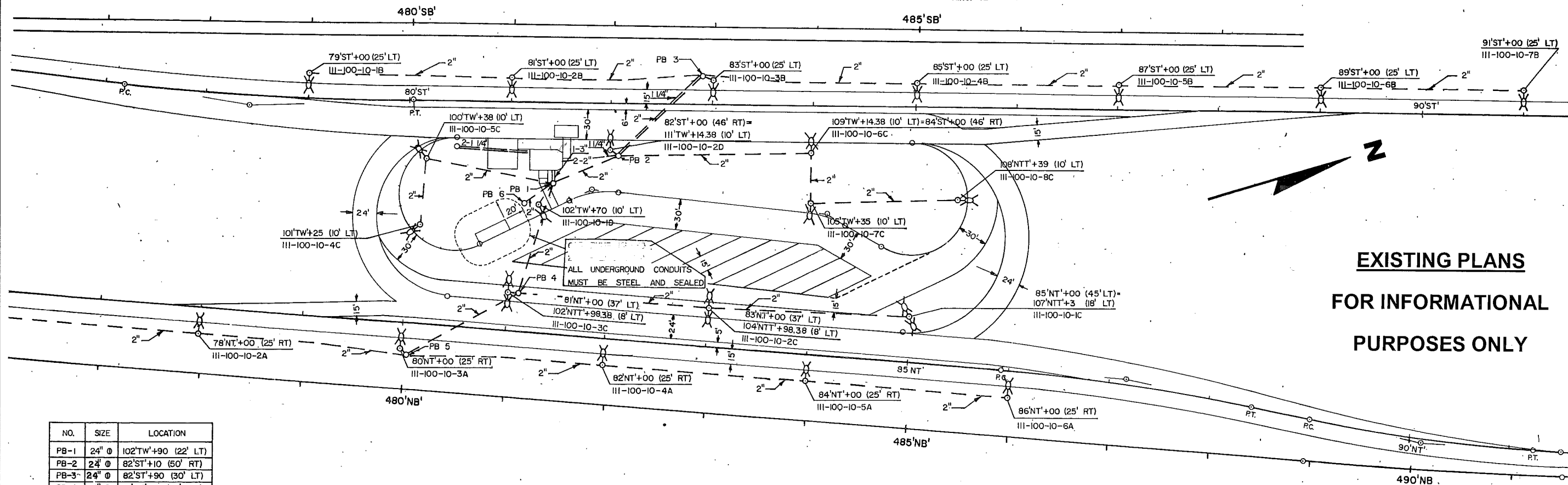
* CIRCUIT A,B, AND C SHALL BE 240 VOLT CIRCUITS.
** CIRCUIT "D" SHALL BE SECURITY CIRCUIT 100/W
H.P.S. 120 VOLT WITH PHOTO CELL.

AREA LIGHTING

CONVENTIONAL SIGNS

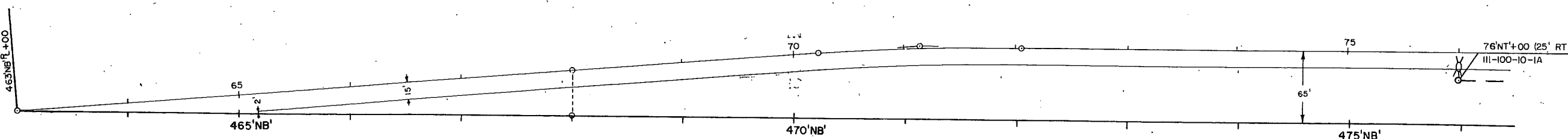


PB-1 PULL BOX LIGHTING SYSTEM-1
LB-1A LIGHT BASE 1-A



**EXISTING PLANS
FOR INFORMATIONAL
PURPOSES ONLY**

NO.	SIZE	LOCATION
PB-1	24" Ø	102'TW'+90 (22' LT)
PB-2	24" Ø	82'ST'+10 (50' RT)
PB-3	24" Ø	82'ST'+90 (30' LT)
PB-4	24" Ø	81'NT'+10 (37' LT)
PB-5	24" Ø	80'NT'+10 (30' RT)
PB-6	24" Ø	102'TW'+60 (20' LT)



STATE PROJECT NUMBER: 1166-03-70

HWY: IH 39

COUNTY: WAUSHARA

DETAILS - COLOMA SWEF #44

SCALE:

SHEET NO:

E

FILE NAME : C:\CAEFiles\Projects\swe44\02010-gn.dgn

PLOT DATE : 29-JAN-2013 14:08

PLOT BY : dotres

PLOT NAME : GENNOTES.dgn

ORG DATE : 4-16-2012

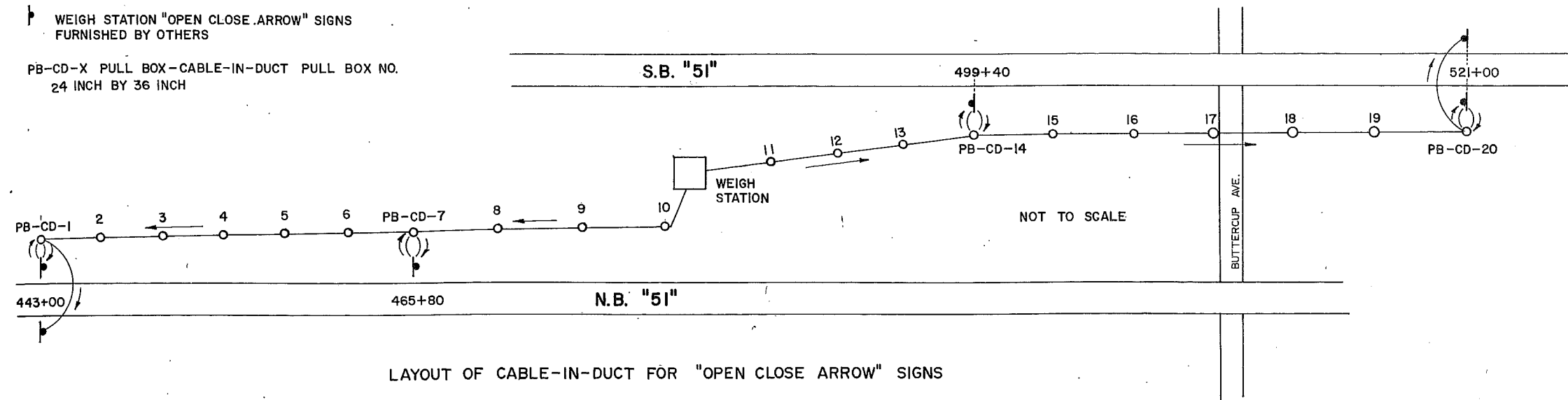
Originator : BHM HM&RM

PLOT SCALE : 120.000000:1.000000

WISDOT/CADDs SHEET 42

STATE PROJECT NUMBER

SHEET NO.

CONSTRUCTION DETAIL FOR
WEIGH STATION SIGNSWEIGH STATION "OPEN CLOSE .ARROW" SIGNS
FURNISHED BY OTHERSPB-CD-X PULL BOX-CABLE-IN-DUCT PULL BOX NO.
24 INCH BY 36 INCH

LAYOUT OF CABLE-IN-DUCT FOR "OPEN CLOSE ARROW" SIGNS

EXISTING PLANS
FOR INFORMATIONAL
PURPOSES ONLY

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

STATE PROJECT NUMBER: 1166-03-70

HWY: IH 39

COUNTY: WAUSHARA

DETAILS - COLOMA SWEF #44

SCALE:

SHEET NO:

E

FILE NAME : C:\CAEFiles\Projects\swef44\02010_gn.dgn

PLOT DATE : 29-JAN-2013 16:21

PLOT BY : dotres

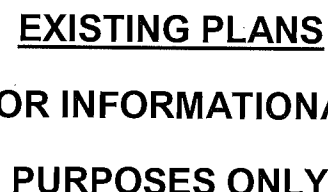
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ORG DATE : 4-16-2012

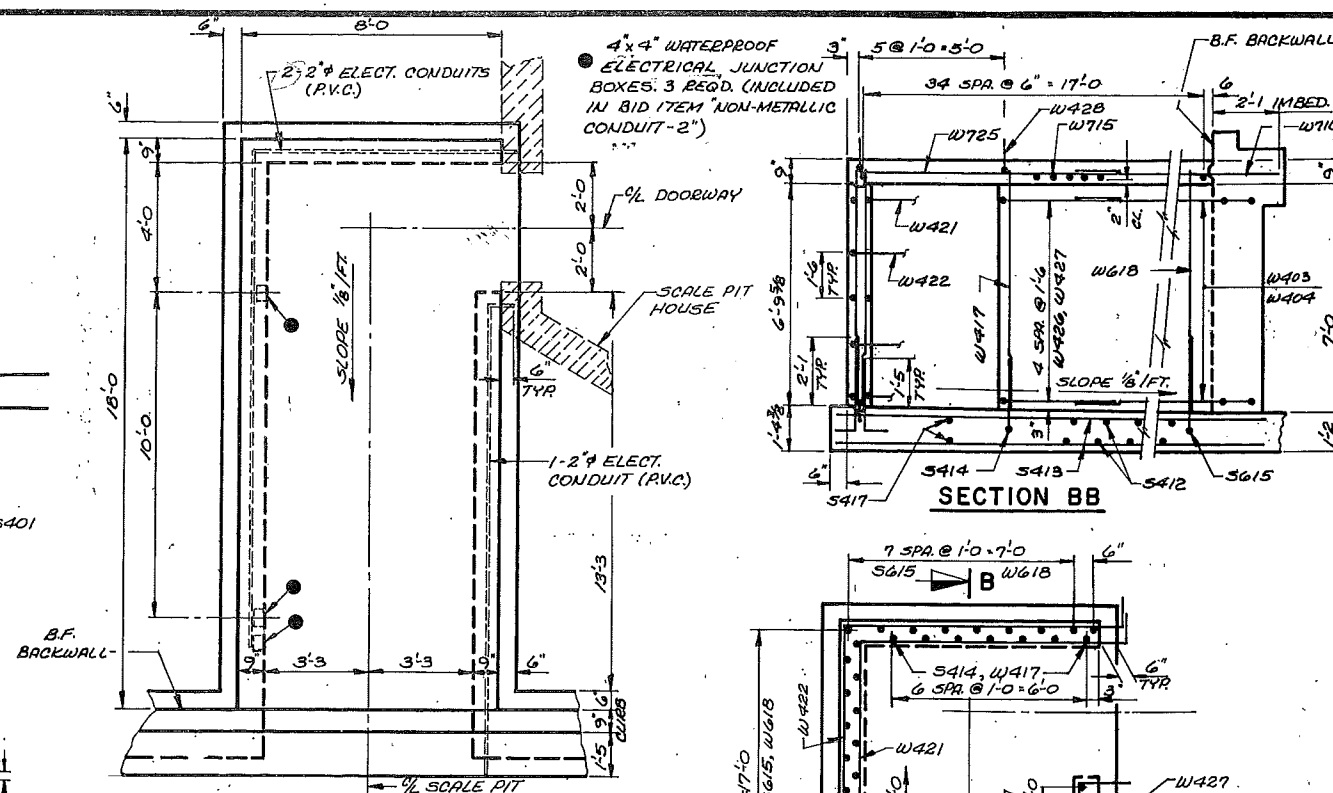
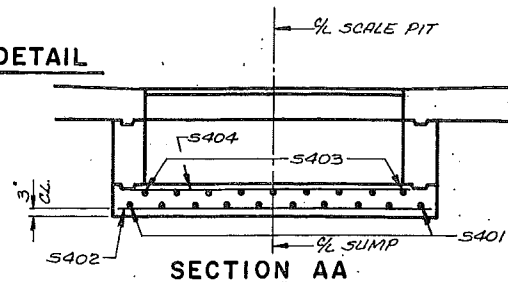
Originator : BHM HM&RM

PLOT SCALE : 120.000000:1.000000

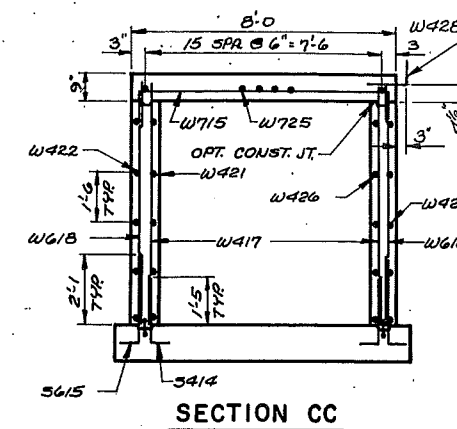
WISDOT/CADDs SHEET 42



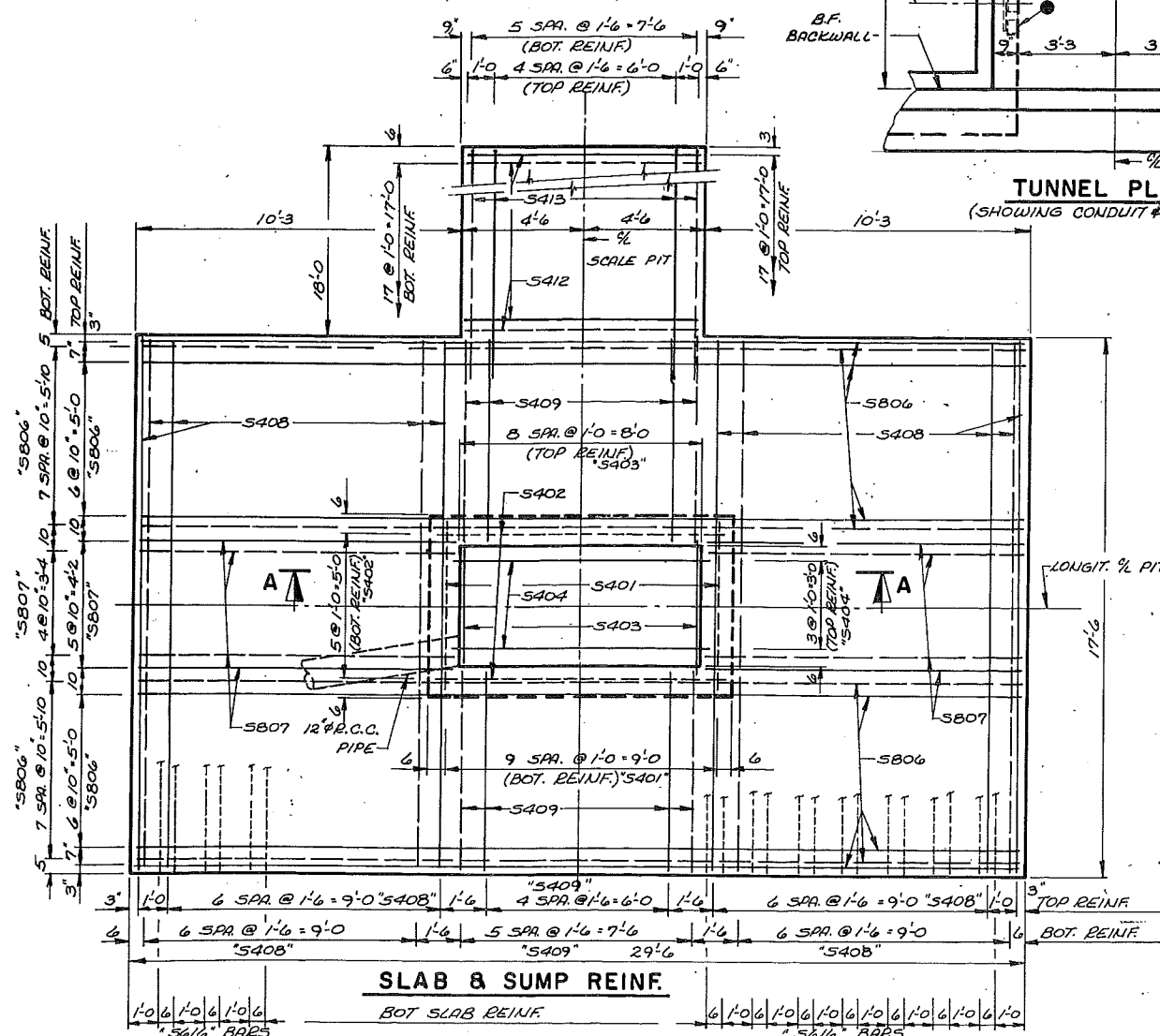
No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE: COLOMA SCALE PIT			
U.S.H. 51 N.B. & S.B. (IN MEDIAN)			
County	Town/City/Village WAUSHARA COLOMA		
Design Spec. By	A. A. S. H. T. O. '81	Load	Const. Spec. 1981
Design By	B. F. K. Checked B. F. K.	Drawn By R. J. G.	Plans Checked J. C. K.
Approved	<i>Stanley W. Woods</i> Chief Bridge Engineer		<i>5-21-84</i> Date
SCALE PIT		SHEET 1 OF 3	
24' X 12'		X73623	



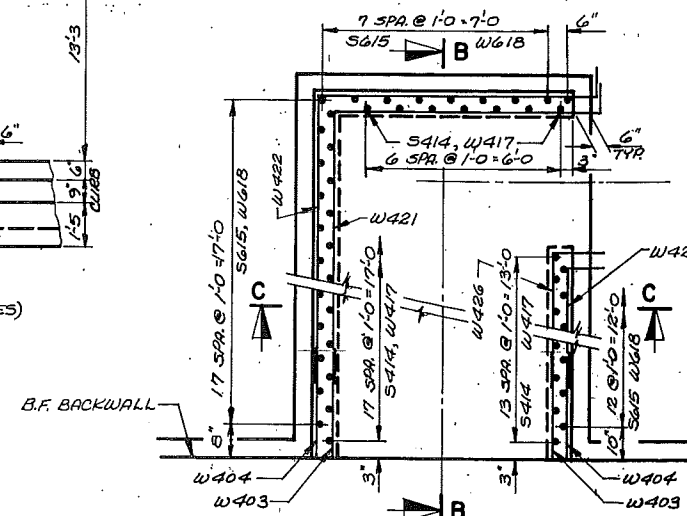
TUNNEL PLAN
(SHOWING CONDUIT & ELECT. BOXES)



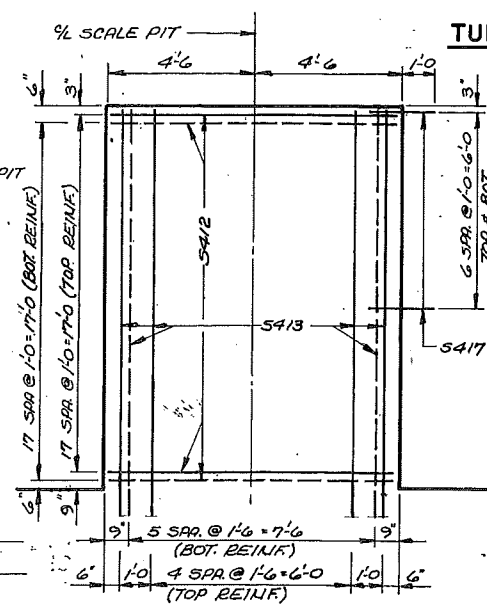
NOTE:
AT HOUSE DOORWAY, FIELD BEND
LEG OF "W715" INTO HOUSE WALLS TO
CLEAR OPENING BY 2."



SLAB & SUMP REINFORCEMENT



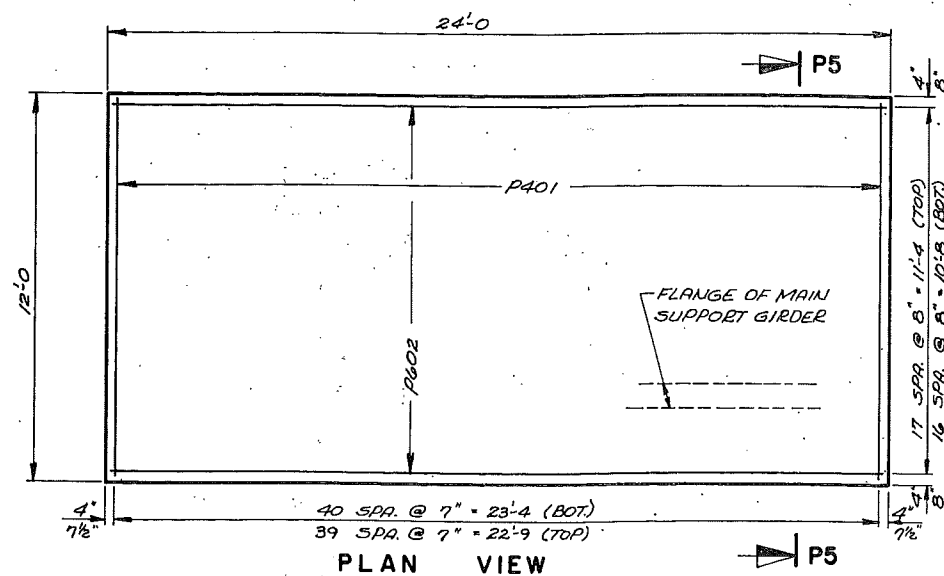
TUNNEL WALL PLAN



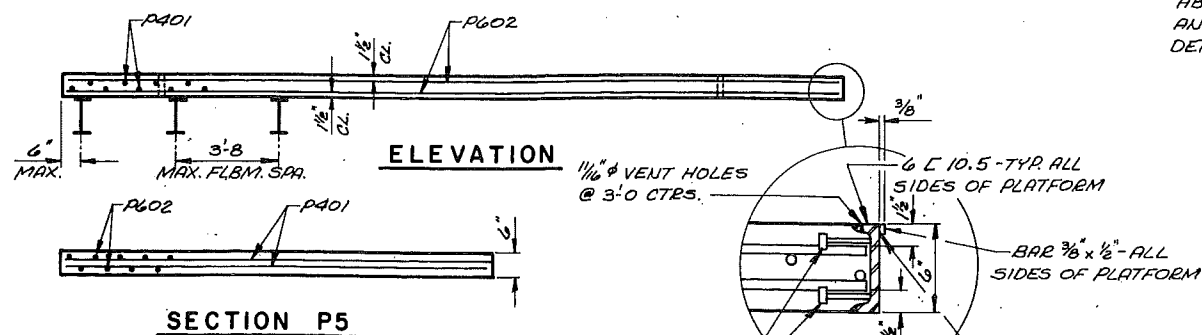
TUNNEL SLAB REINF

EXISTING PLANS
FOR INFORMATIONAL
PURPOSES ONLY

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE : COLOMA SCALE PIT			
Const. Spec.	1981	Drawn By R.J.G.	Plans Checked J.C.K.
SCALE PIT DETAILS			SHEET 2 OF 3 X73624



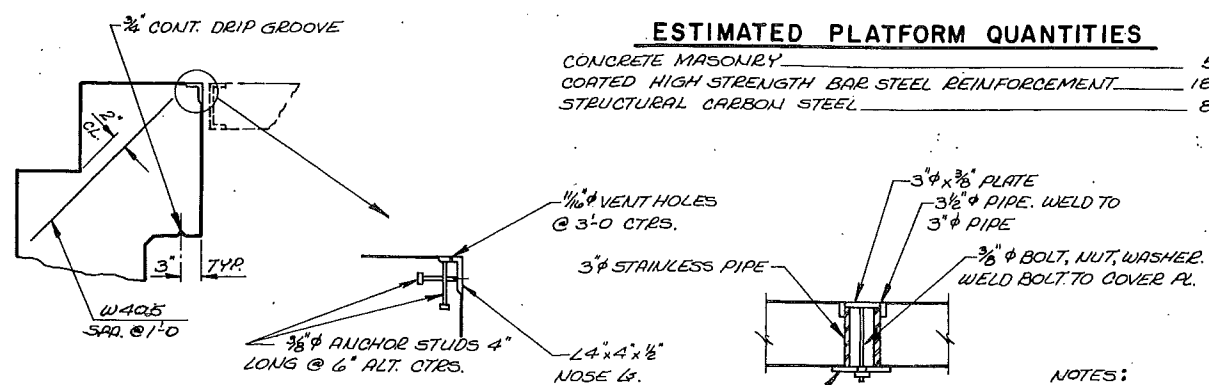
PLAN VIEW



ELEVATION

SECTION P5

PLATFORM DETAILS



NOSE ANGLES

(STRUCTURAL CARBON STEEL)

ESTIMATED PLATFORM QUANTITIES

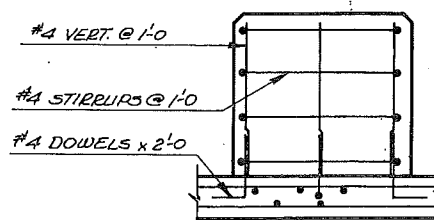
CONCRETE MASONRY	5.3	C.Y.
COATED HIGH STRENGTH BAR STEEL REINFORCEMENT	1880	LB.
STRUCTURAL CARBON STEEL	820	LB.

PLATFORM LIFTING SLEEVES

(BY SCALE MFG.)

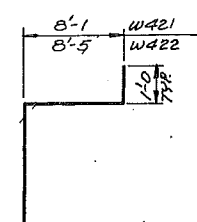
NOTES:
ALL PIPE IS SCH. 40, TYPE A.I.S.I. 304 STAINLESS STEEL.
ALL MEMBERS ARE STAINLESS STEEL.
LOCATION OF SLEEVES THROUGH CONJ. SCALE PLATFORM TO BE DETERMINED BY SCALE MFG.

TYPICAL BEARING SEAT REINF.



NOTE: BRG. SEAT REINF. DETAILS SHOWN ABOVE ARE TYPICAL. FOR EXACT SIZE AND LOCATION OF BRG. SEATS, SEE DETAILS BY SCALE MANUFACTURER.

SECTION P4



W423

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
BAR STEEL REINF. SHALL BE EMBEDDED 2" CL.
UNLESS OTHERWISE SHOWN OR NOTED.
ALL OTHER STRUCTURAL STEEL SHALL BE FURNISHED BY SCALE PIT CONTRACTOR.
BUMPERS & PLATFORM CHANNEL FRAME SHALL BE FURNISHED BY SCALE MFG.

*EPOXY COATED REINF.
SEE SYMBOL ON SHT. 1.
(NOT PART OF THIS CONTRACT)

1'-6	W428
1'-8	W427
8	S414
1'-0	S415
9'-6	W606
9'-2	W608
7'-0	W411
2'-0	W426
1'-5	W403, W404

BILL OF BARS

MARK	Nº REQ'D	LENGTH	BENT	LOCATION
* P401	81	11-8		PLATFORM - TOP & BOT.
* P602	36	23-8		" " " "
* S401	10	8-8		SUMP - SLAB - BOT.
* S402	6	9-8		" " " "
* S403	9	5-0		" " " - TOP
* S404	4	9-0		" " " " "
* S405	38	5'-0	*	" " - WALLS
S806	32	29-2		PIT - SLAB - TOP & BOT.
S807	22	10-5		" " " " "
S408	30	17-2		" " " " "
S409	22	6-5		" " " " "
* S410	4	14-1	*	SUMP - WALLS - INSIDE
* S411	4	16'-0	*	" " " - OUTSIDE
S412	36	8-8		TUNNEL SLAB - TOP & BOT.
S413	13	19-11		" " " " "
S414	115	2-9	*	SLAB - WALLS & TUNNEL - VERT.
S415	121	3-8	*	" " " " "
S416	20	17-2		PIT - SLAB - BOT.
S417	14	2-0		TUNNEL SLAB @ HOUSE
W401	76	7'-0		WALLS - VERT.
W602	81	6'-10		" " " " "
W403	10	10-11	*	" " - HORIZ - TUNNEL
W404	10	9-9	*	" " " " "
* W405	54	2-3		" " " " "
W606	52	17-4	*	" " " " "
W607	13	11-0		" " " " "
W608	52	19-4	*	" " " " "
W609	13	11-8		" " " " "
* W410	54	4'-1	*	" " - TOP
* W411	8	15-5	*	" " - HORIZ.
* W412	2	10-5		" " " " "
* W413	6	10-6		HEADER - TUNNEL
* W414	8	7-0	*	" " " " "
* W715	36	13-0	*	SLAB - TOP - TUNNEL
* W716	16	10-9		" " " " "
W417	39	7-6		TUNNEL WALLS - INSIDE FACE
W618	39	7-6		" " - OUTSIDE FACE
* W419	26	2-7	*	HEADER - TUNNEL
* W420	2	7-8		" " " " "
W421	5	19-6	*	TUNNEL WALL - HORIZ.
W422	5	20-4	*	" " " " "
* W423	18	7-4	*	BACKWALL - VERT.
W624	4	9-4		" " - HORIZ.
* W725	16	12-0		TOP SLAB - TUNNEL
W426	5	8-6	*	TUNNEL WALL - HORIZ.
W427	5	7-10	*	" " " " "
* W428	6	2-11	*	TOP SLAB - TUNNEL

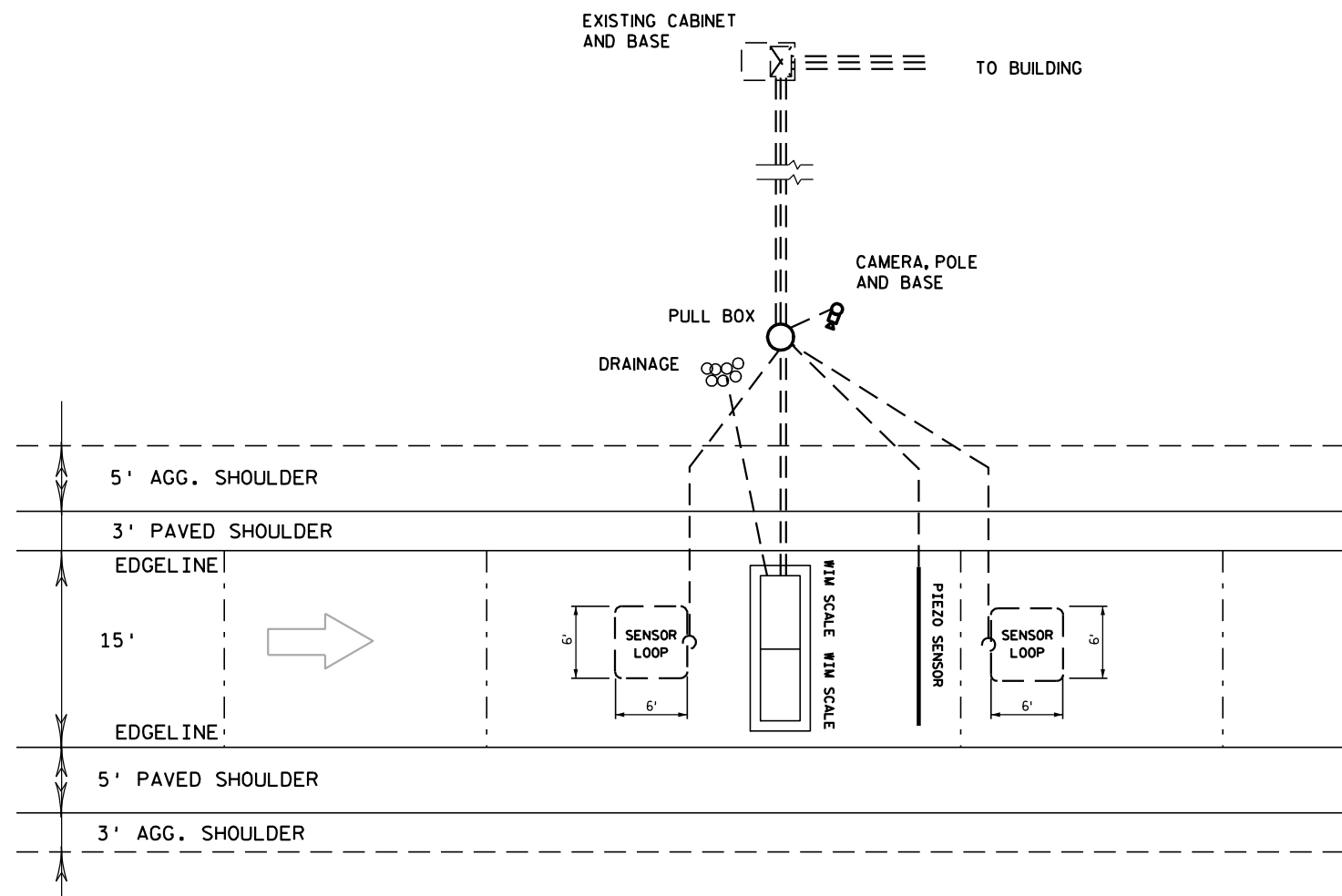
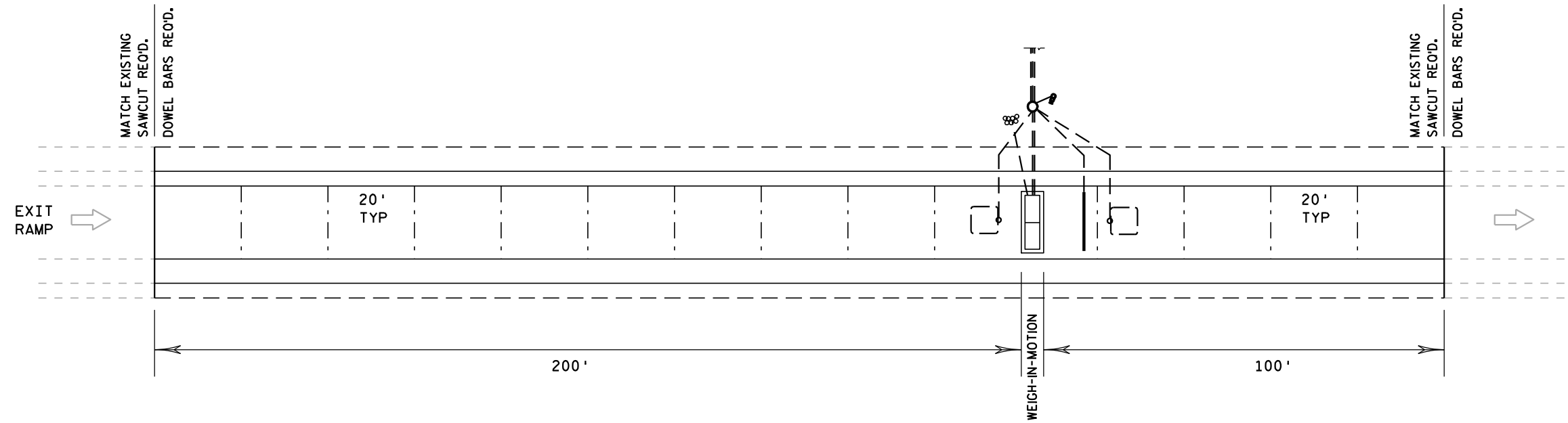
EXISTING PLANS

FOR INFORMATIONAL

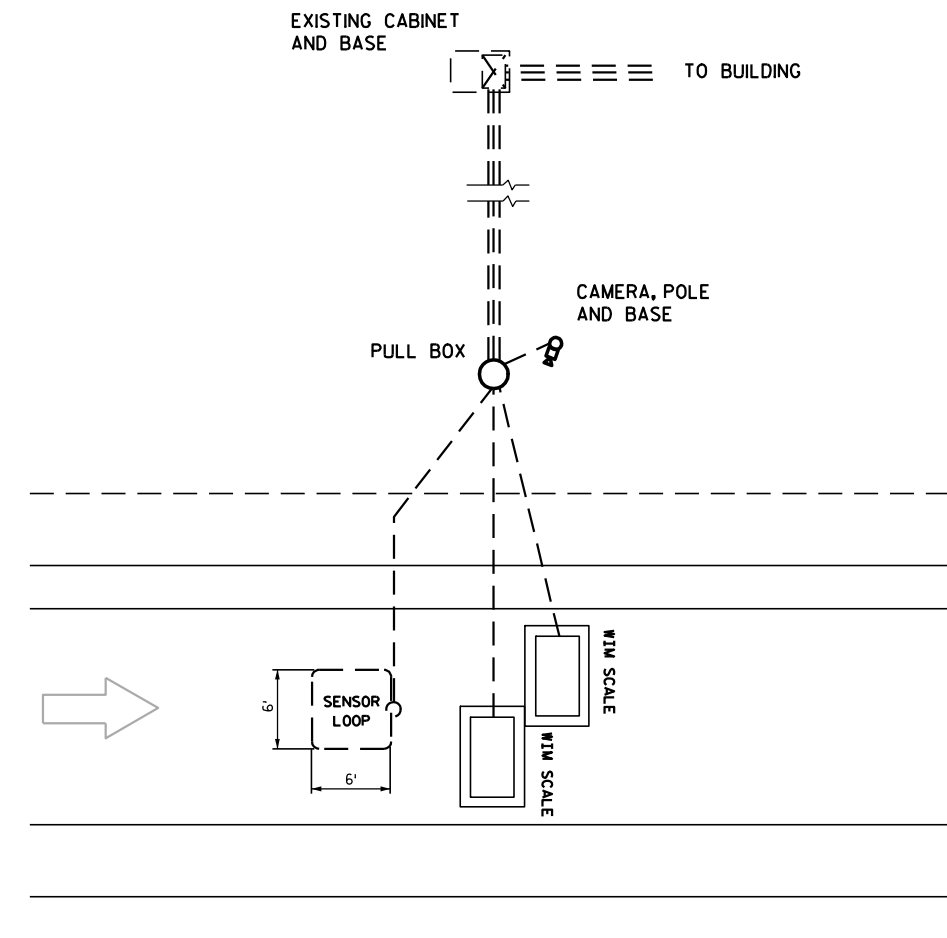
PURPOSES ONLY

No.	Date	Revision	By
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE: COLOMA SCALE PIT			
Const. Spec.	1981	Drawn By R. J. G.	Plans Checked J. C. V.
SCALE PLATFORM 24' X 12'			SHEET 3 OF 3 X73625

LEVELS ON - 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63



CONFIGURATION A



CONFIGURATION B

LEVELS ON * 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

PB-SS-1

PB-SS-2

PB-SS-3

LOOP

PB-SS-4

PB-SS-5

LOOP

LOOP

PB-SS-6

PB-SS-7

PB-SS-8

PARKING
AREA

SCALE LANE

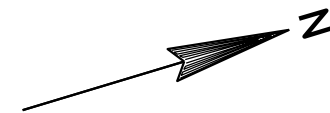
BYPASS LANE

RAMP CONTROL CMS

IH 39 NORTHBOUND

IH 39 NB

480'NB'



485'SB'

IH 39 SOUTHBOUND

RAMP CONTROL CMS

BYPASS LANE

LOOP

LOOP

LOOP

90'ST'

GRASS

SCALE LANE

PB-SS-13

PB-SS-14

PB-SS-15

PB-SS-16

PB-SS-17

PB-SS-10

PB-SS-11

PB-SS-12

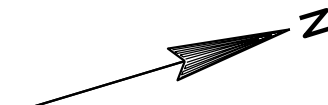
CONDUIT FOR ELECTRIC

CONDUIT FOR TELEPHONE

GRASS

30'

24'



PROJECT NO: 1166-03-70

HWY: IH 39

COUNTY: WAUSHARA

COLOMA SWEF #44

SCALE:

SHEET

E

FILE NAME : C:\CAEFiles\Projects\swef44\05010.pl.dgn

PLOT DATE : 22-FEB-2013 14:44

PLOT BY : dotres

PLOT NAME : 05012.dgn

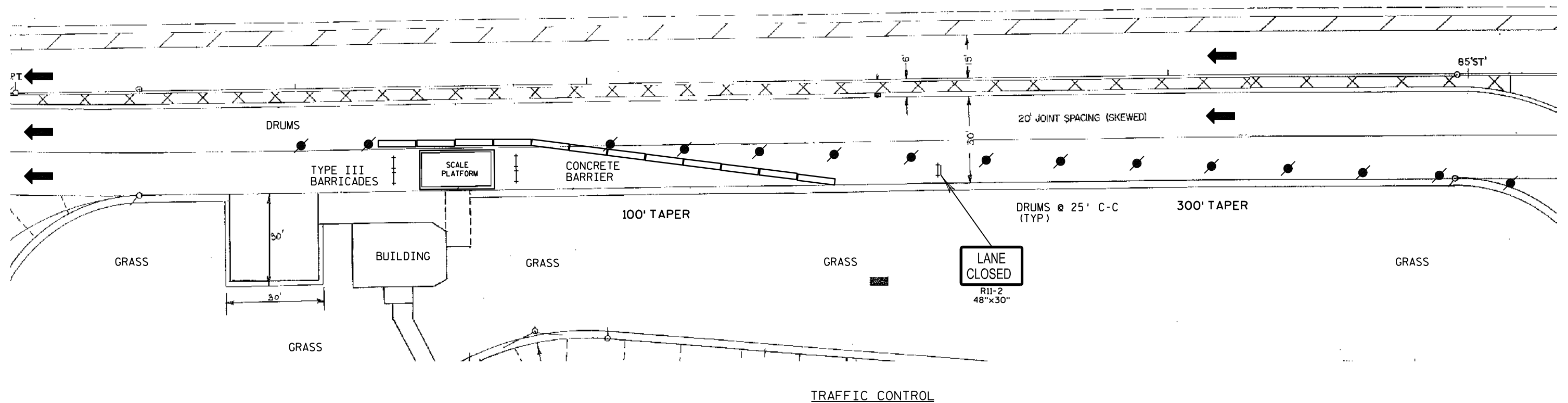
PLOT SCALE : 40:1

WISDOT/CADDs SHEET 42

LEGEND

- ↓ TYPE III
BARRICADE
- ↓↑ TYPE III
BARRICADE W/ SIGN
- DRUMS W/ WARNING
LIGHTS, TYPE A
- ▬ CONCRETE BARRIER
TEMPORARY PRECAST

FOR RAMP
CLOSURE
DETAIL



STATE PROJECT NUMBER: 1166-03-70

HWY: IH 39

COUNTY: WAUSHARA

TRAFFIC CONTROL

SCALE:

SHEET NO:

E

FILE NAME : C:\CAEFiles\Projects\swef44\02025_fc.dgn

PLOT DATE : 22-FEB-2013 09:35

PLOT BY : dotres

PLOT NAME : GENNOTES.dgn

ORG DATE : 4-16-2012

Originator : BHM HM&RM

PLOT SCALE : 240.000000:1.000000

WISDOT/CADDs SHEET 42

DATE 06MAR13		E S T I M A T E O F Q U A N T I T I E S			
LINE		1166-03-70			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	204.0100	REMOVING PAVEMENT	SY	1,244.000	1,244.000
0020	204.0110	REMOVING ASPHALTIC SURFACE	SY	660.000	660.000
0030	305.0115	BASE AGGREGATE DENSE 3/4-INCH	CY	154.000	154.000
0040	415.0100	CONCRETE PAVEMENT 10-INCH	SY	1,244.000	1,244.000
0050	416.0620	DRILLED DOWEL BARS	EACH	80.000	80.000
0060	465.0105	ASPHALTIC SURFACE	TON	200.000	200.000
0070	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	150.000	150.000
0080	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	150.000	150.000
0090	619.1000	MOBILIZATION	EACH	1.000	1.000
0100	643.0100	TRAFFIC CONTROL (PROJECT) 01. 1166-03-70	EACH	1.000	1.000
0110	643.0300	TRAFFIC CONTROL DRUMS	DAY	2,130.000	2,130.000
0120	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	620.000	620.000
0130	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	960.000	960.000
0140	643.0900	TRAFFIC CONTROL SIGNS	DAY	310.000	310.000
0150	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	1,480.000	1,480.000
0160	690.0150	SAWING ASPHALT	LF	96.000	96.000
0170	690.0250	SAWING CONCRETE	LF	240.000	240.000
0180	SPV.0105	SPECIAL 01. REMOVING WEIGHT SCALE	LS	1.000	1.000
0190	SPV.0105	SPECIAL 02. REMOVING WEIGH-IN-MOTION SCALE SYSTEM	LS	1.000	1.000
0200	SPV.0105	SPECIAL 03. STATIC SCALE SYSTEM	LS	1.000	1.000
0210	SPV.0105	SPECIAL 04. STATIC SCALE SYSTEM WARRANTY MAINTENANCE	LS	1.000	1.000
0220	SPV.0105	SPECIAL 05. WEIGH-IN-MOTION SCALE SYSTEM	LS	1.000	1.000
0230	SPV.0105	SPECIAL 06. WEIGH-IN-MOTION SCALE SYSTEM WARRANTY MAINTENANCE	LS	1.000	1.000

3

REMOVING PAVEMENT

STATION - STATION	LOCATION	204.0100 SY
71'NT'+85 - 74'NT'+90	NORTHBOUND EXIT RAMP	517
73'NT'+82 - 73'NT'+87	WEIGH-IN-MOTION SCALES	5
77'NT'+70 - 77'NT'+90	NB LOOP REPLACEMENT	33
79'NT'+50 - 79'NT'+70	NB LOOP REPLACEMENTS	67
87'ST'+25 - 87'ST'+45	SB LOOP REPLACEMENTS	67
89'ST'+10 - 89'ST'+30	SB LOOP REPLACEMENT	33
92'ST'+15 - 95'ST'+20	SOUTHBOUND EXIT RAMP	517
92'ST'+12 - 92'ST'+17	WEIGH-IN-MOTION SCALES	5
TOTAL		1244

REMOVING ASPHALTIC SURFACE

STATION - STATION	LOCATION	204.0110 S.Y.
71'NT'+85 - 74'NT'+90	NORTHBOUND LT & RT	276
77'NT'+70 - 77'NT'+90	NB LOOP REPLACEMENT	18
79'NT'+50 - 79'NT'+70	NB LOOP REPLACEMENTS	36
87'ST'+25 - 87'ST'+45	SB LOOP REPLACEMENTS	36
89'ST'+10 - 89'ST'+30	SB LOOP REPLACEMENT	18
92'ST'+15 - 95'ST'+20	SOUTHBOUND LT & RT	276
TOTAL		660

BASE AGGREGATE DENSE 3/4-INCH

STATION - STATION	LOCATION	305.0115 CY
71'NT'+85 - 74'NT'+90	NORTHBOUND LT & RT	64
77'NT'+70 - 77'NT'+90	NB LOOP REPLACEMENT	5
79'NT'+50 - 79'NT'+70	NB LOOP REPLACEMENTS	8
87'ST'+25 - 87'ST'+45	SB LOOP REPLACEMENTS	8
89'ST'+10 - 89'ST'+30	SB LOOP REPLACEMENT	5
92'ST'+15 - 95'ST'+20	SOUTHBOUND LT & RT	64
TOTAL =		154

ASPHALTIC SURFACE

STATION - STATION	LOCATION	465.0105 TONS
71'NT'+85 - 74'NT'+90	NORTHBOUND LT & RT	84
77'NT'+70 - 77'NT'+90	NB LOOP REPLACEMENT	5
79'NT'+50 - 79'NT'+70	NB LOOP REPLACEMENTS	11
87'ST'+25 - 87'ST'+45	SB LOOP REPLACEMENTS	11
89'ST'+10 - 89'ST'+30	SB LOOP REPLACEMENT	5
92'ST'+15 - 95'ST'+20	SOUTHBOUND LT & RT	84
TOTAL =		200

CONCRETE PAVEMENT

STATION - STATION	LOCATION	415.0100 10-INCH S.Y.
71'NT'+85 - 74'NT'+90	NORTHBOUND	522
77'NT'+70 - 77'NT'+90	NB LOOP REPLACEMENT	33
79'NT'+50 - 79'NT'+70	NB LOOP REPLACEMENTS	67
87'ST'+25 - 87'ST'+45	SB LOOP REPLACEMENTS	67
89'ST'+10 - 89'ST'+30	SB LOOP REPLACEMENT	33
92'ST'+15 - 95'ST'+20	SOUTHBOUND	522
TOTAL =		1244

DRILLED DOWEL BARS

STATION	LOCATION	416.0620 EACH
71'NT'+85	LT. - RT.	5
74'NT'+90	LT. - RT.	5
77'NT'+70	LT. - RT.	5
77'NT'+90	LT. - RT.	5
79'NT'+50	LT. - RT.	10
79'NT'+70	LT. - RT.	10
87'ST'+25	LT. - RT.	10
87'ST'+45	LT. - RT.	10
89'ST'+10	LT. - RT.	5
89'ST'+30	LT. - RT.	5
92'ST'+15	LT. - RT.	5
95'ST'+20	LT. - RT.	5
TOTAL		80

CONCRETE BARRIER TEMPORARY PRECAST

STATION - STATION	LOCATION	603.8000 DELIVERED LF	603.8125 INSTALLED LF
81'ST'+30 - 82'ST'+80	RT.	150	150
TOTAL		150	150

TRAFFIC CONTROL

LOCATION	643.0300 DRUMS		643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.0900 SIGNS	
	NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS
NORTHBOUND EXIT RAMP CLOSURE	17	765	4	180	4	180	3	135
SOUTHBOUND EXIT RAMP CLOSURE	17	765	4	180	4	180	3	135
NORTHBOUND LOOP REPLACEMENTS			6	30				
SOUTHBOUND LOOP REPLACEMENTS			6	30				
STATIC SCALE	15	600	5	200	15	600	1	40
TOTALS=		2,130		620		960		310

WEIGH SCALE ITEMS

LOCATION	REMOVING WEIGHT SCALE SPV.0105.01	REMOVING WEIGH-IN-MOTION SCALE SYSTEM SPV.0105.02	STATIC SCALE SYSTEM SPV.0105.03	STATIC SCALE SYSTEM WARRANTY MAINTENANCE SPV.0105.04	WEIGH-IN-MOTION SCALE SYSTEM SPV.0105.05	WEIGH-IN-MOTION SCALE SYSTEM WARRANTY MAINTENANCE SPV.0105.06
	L.S.	L.S.	L.S.	L.S.	L.S.	L.S.
PROJECT	1	1	1	1	1	1

PAVEMENT MARKING

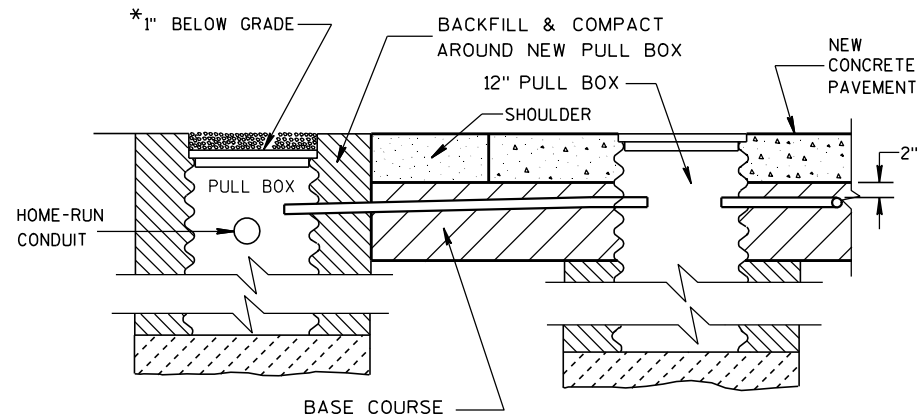
STATION - STATION	LOCATION	646.0106 EPOXY 4-INCH LF
71'NT'+85 - 74'NT'+90	NB LT-YELLOW & RT-WHITE	620
77'NT'+70 - 77'NT'+90	NB LT-YELLOW & RT-WHITE	40
79'NT'+50 - 79'NT'+70	NB LT-YELLOW & RT-WHITE	80
87'ST'+25 - 87'ST'+45	SB LT-WHITE & RT-YELLOW	80
89'ST'+10 - 89'ST'+30	SB LT-WHITE & RT-YELLOW	40
92'ST'+15 - 95'ST'+20	SB LT-WHITE & RT-YELLOW	620
TOTAL =		1480

SAWING

STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
71'NT'+85	LT. - RT.	8	15
72'NT'+82	LT. - RT.	-	15
72'NT'+87	LT. - RT.	-	15
74'NT'+90	LT. - RT.	8	15
77'NT'+70	LT. - RT.	8	15
77'NT'+90	LT. - RT.	8	15
79'NT'+50	LT. - RT.	8	15
79'NT'+70	LT. - RT.	8	15
87'ST'+25	LT. - RT.	8	15
87'ST'+45	LT. - RT.	8	15
89'ST'+10	LT. - RT.	8	15
89'ST'+30	LT. - RT.	8	15
92'ST'+15	LT. - RT.	8	15
93'ST'+12	LT. - RT.	-	15
93'ST'+17	LT. - RT.	-	15
95'ST'+20	LT. - RT.	8	15
TOTAL		96	240

Standard Detail Drawing List

09F09-03	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
13C01-15	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-10A	RURAL DOWELED CONCRETE PAVEMENT
13C11-10B	RURAL DOWELED CONCRETE PAVEMENT
14B07-13A	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-13B	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-13C	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-13D	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-13E	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-13F	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-13G	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12' -6"
15C08-14A	PAVEMENT MARKING (MAINLINE)
15D16-01	TRAFFIC CONTROL, EXIT RAMP CLOSURE



SECTION A-A
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAILS

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS SUCH AS 3M TYPE 82A1 OR APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

ANTI-SIEZE LUBRICATING MATERIAL SHALL BE USED ON ALL THREADS OF THREADED ASSEMBLIES BEFORE INSTALLATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

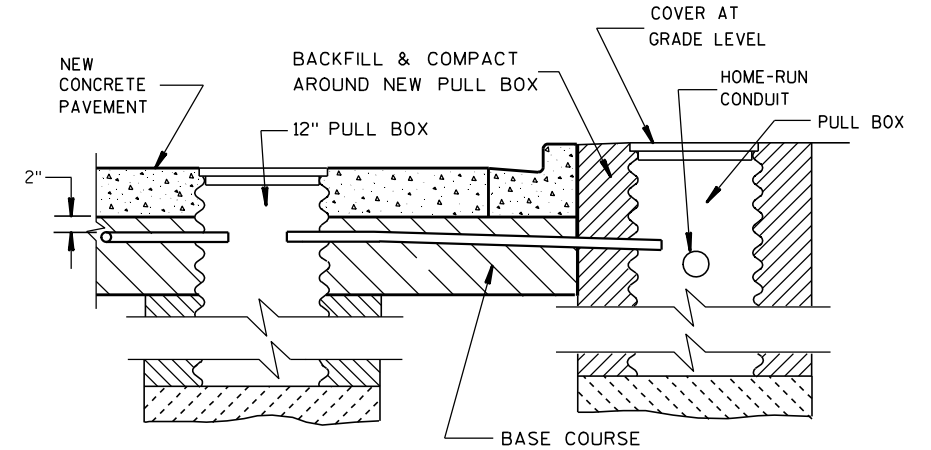
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP DUCT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

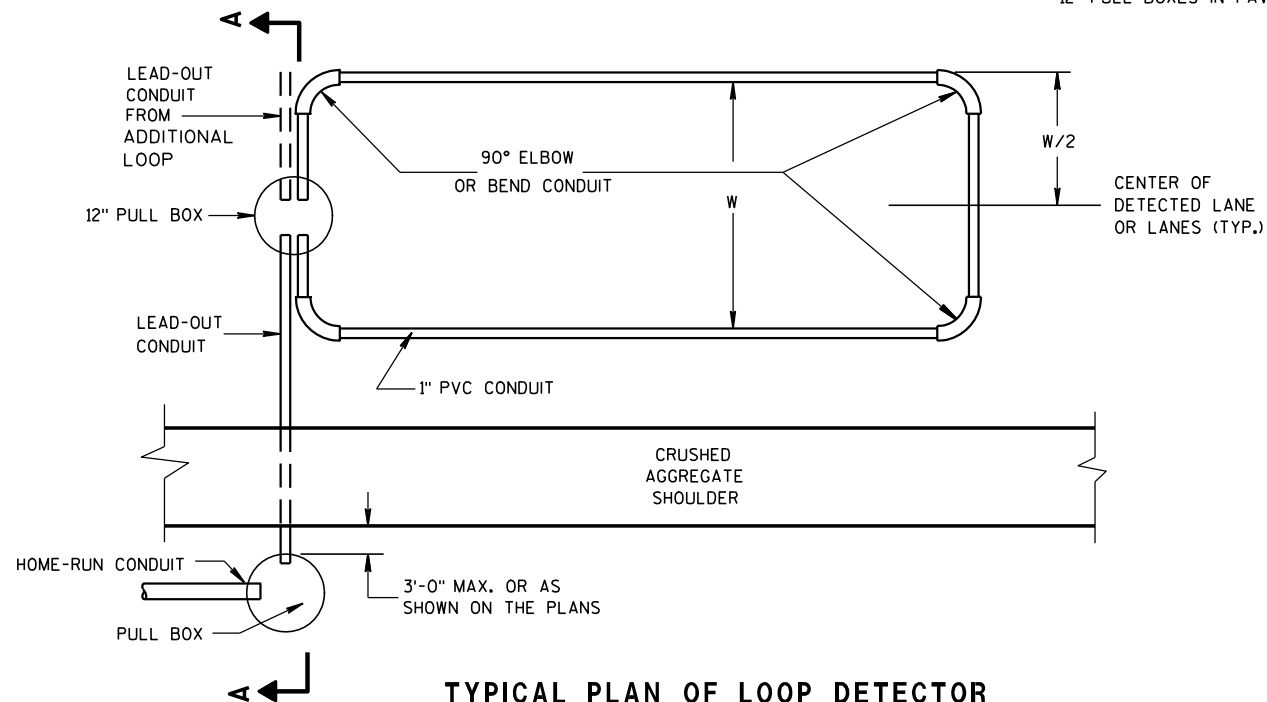
PROTECTION OF THE CONDUIT, CONDULET AND PULL BOX SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE NEW CONCRETE PAVEMENT IS PLACED.

12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.

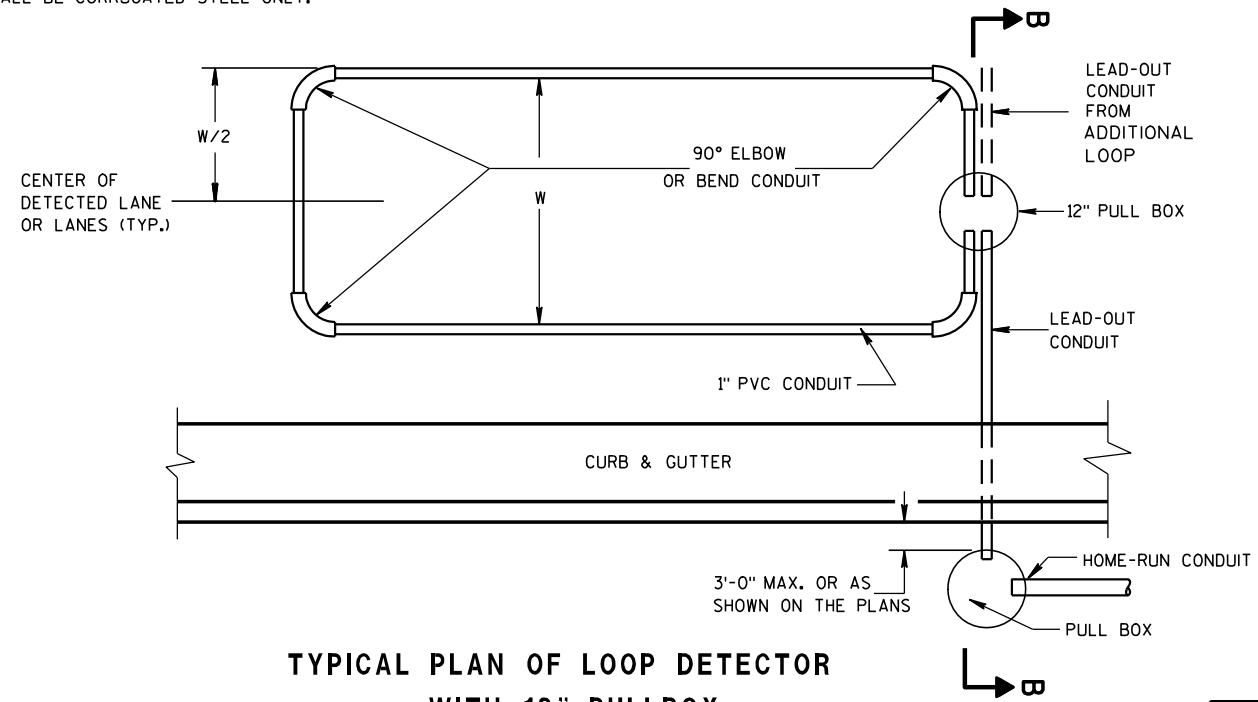


SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAILS



TYPICAL PLAN OF LOOP DETECTOR
WITH 12" PULLBOX



TYPICAL PLAN OF LOOP DETECTOR
WITH 12" PULLBOX

LOOP DETECTOR PLACED
IN CRUSHED AGGREGATE BASE
(NEW CONCRETE PAVEMNET)

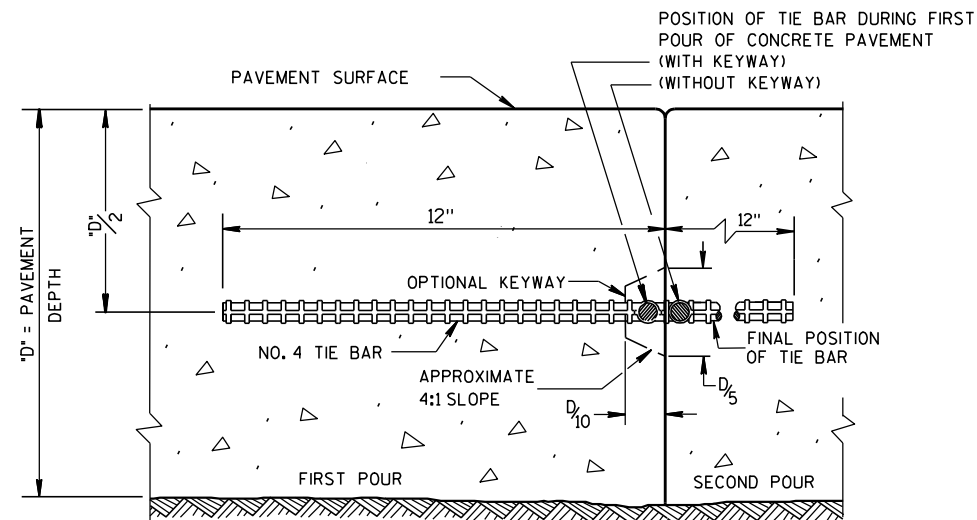
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

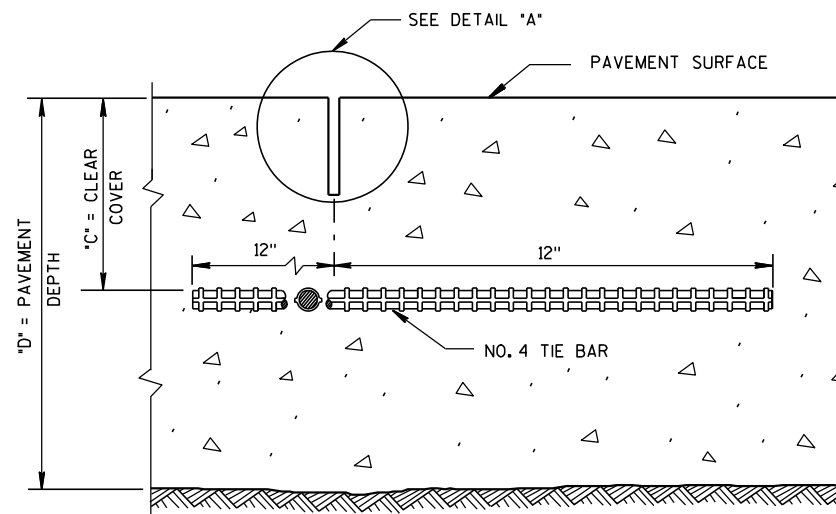
6-7-06
DATE

FHWA

/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGINEER FOR HWYS



CONSTRUCTION JOINT



SAWED JOINT

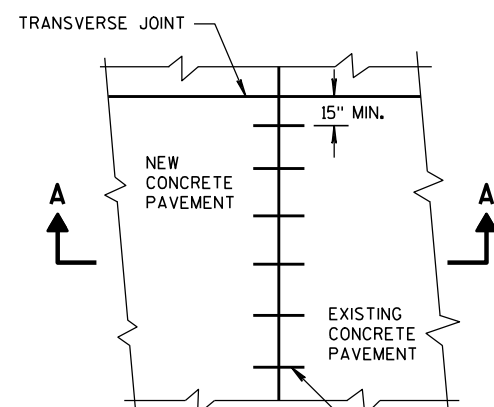
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

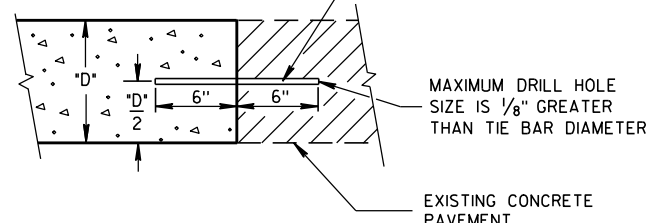
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

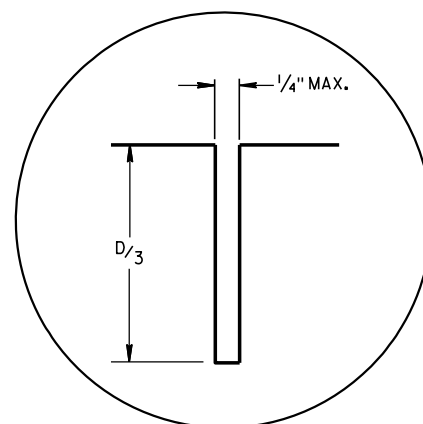


PLAN VIEW

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①

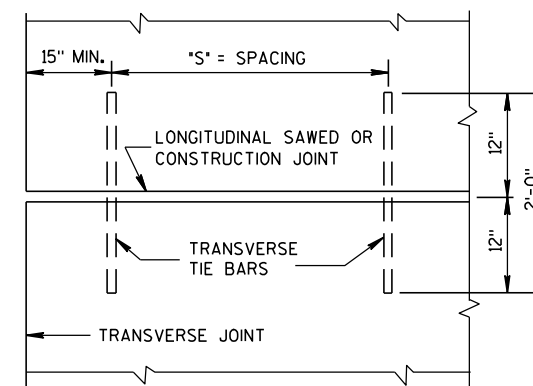


**SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT**



DETAIL "A"

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S"	
		PAVEMENT WIDTH 24' OR 26'	≥ 30'
6, 6 1/2"	3" ± 1/2"	48"	42"
7, 7 1/2"	3 1/4" ± 1"	45"	36"
8, 8 1/2"	3 3/4" ± 1"	39"	30"
9, 9 1/2"	4 1/4" ± 1"	33"	27"
10, 10 1/2"	4 3/4" ± 1"	30"	24"
11, 11 1/2"	5 1/4" ± 1"	27"	21"
12"	5 3/4" ± 1"	24"	21"



**PLAN VIEW
SHOWING LOCATION OF TIE BARS**

**CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES**

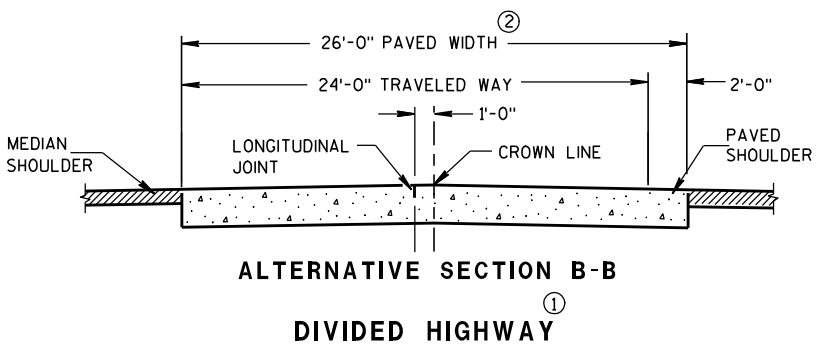
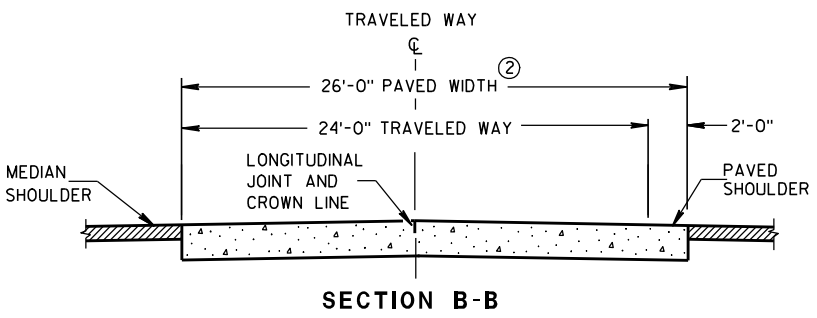
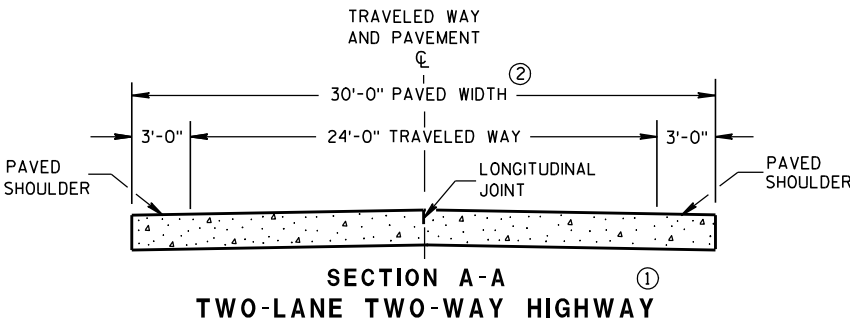
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10-5-2010
DATE

FHWA

/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER



GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, CENTER THE DOWEL ASSEMBLY ACROSS THE LANES. LOCATE THE INNER AND OUTER MOST DOWEL BARS SO THAT THE CENTER OF THE BARS ARE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 12 INCHES FROM THE LONGITUDINAL JOINT AND THE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

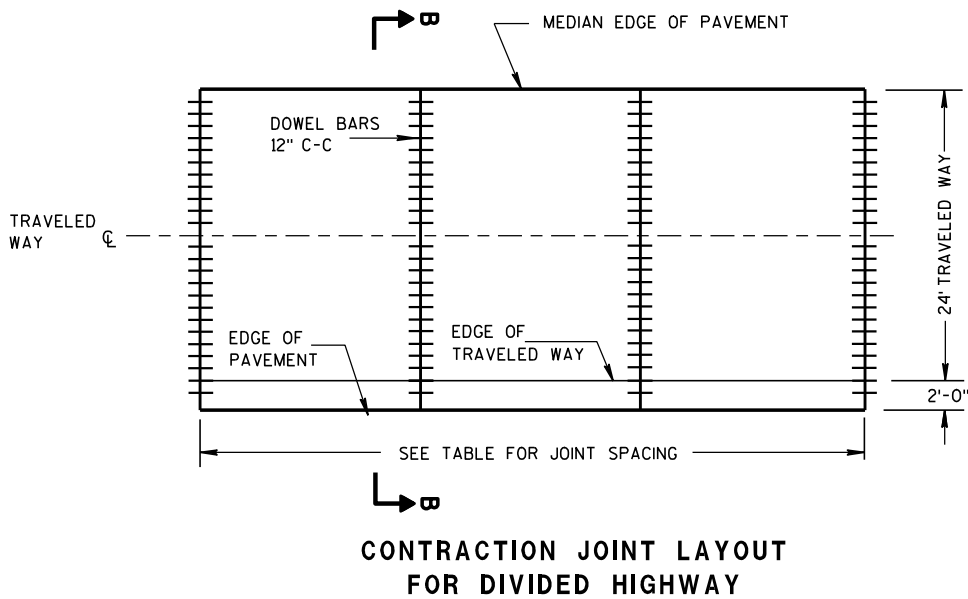
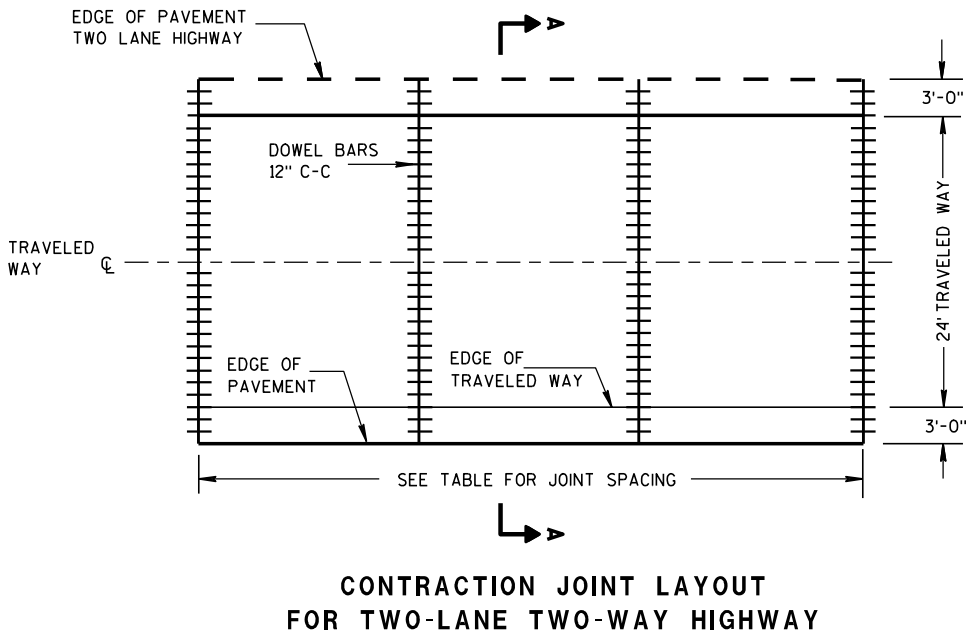
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

- ① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.
- ② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

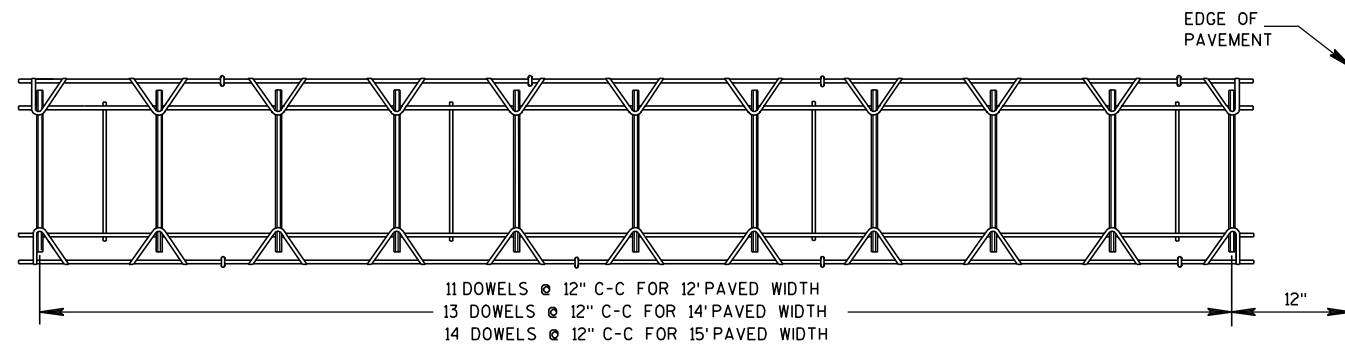
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

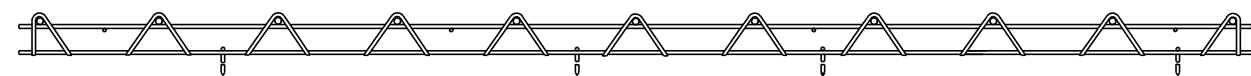


RURAL DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

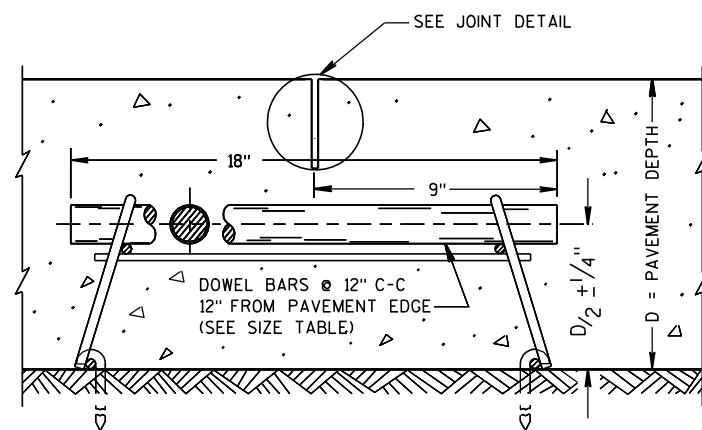


PLAN VIEW

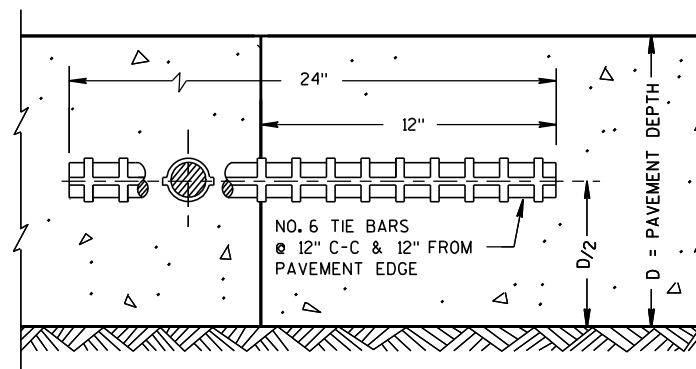


SIDE VIEW

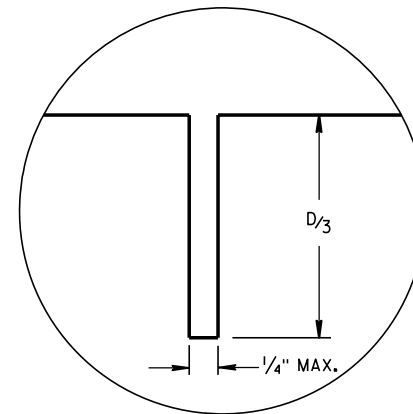
(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY^①

DOWELED CONTRACTION JOINT



CONSTRUCTION JOINT

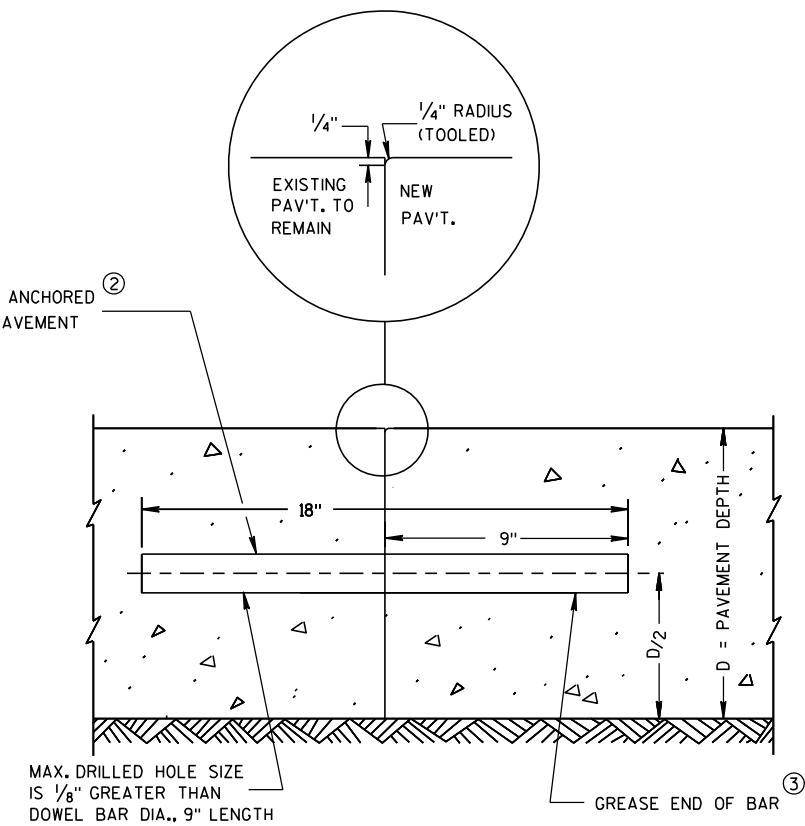


JOINT DETAIL

GENERAL NOTES

- ① THE ENGINEER MAY APPROVE THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. THE CONTRACTOR MAY USE MECHANICAL DOWEL BAR INSERTERS INSTEAD OF DOWEL ASSEMBLIES.
- ② ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.
- ③ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ④ SPACE DOWEL BARS INSTALLED BY DRILLING 1'-3" ON CENTER. CENTER THE GROUPING OF DOWEL BARS INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.
- ⑤ SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

18" DOWEL BARS ANCHORED
INTO EXISTING PAVEMENTTRANSVERSE CONTRACTION JOINTS ABUTTING
EXISTING PAVEMENT

④ DOWEL BAR DETAIL

RURAL DOWELED
CONCRETE PAVEMENTSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

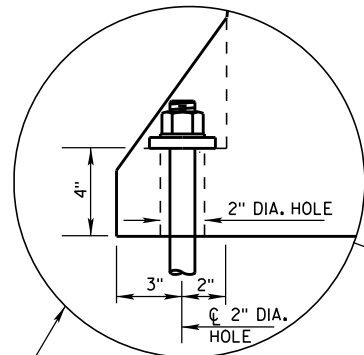
12/11/09

DATE

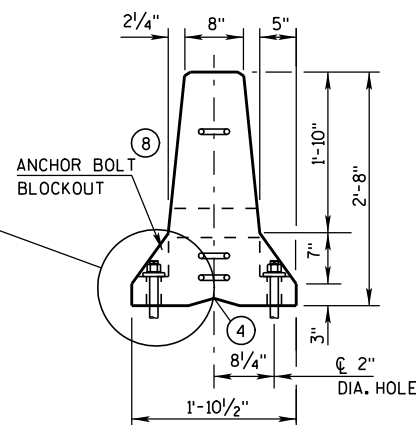
/S/ Deb Bischoff

PAVEMENT POLICY & DESIGN ENGINEER

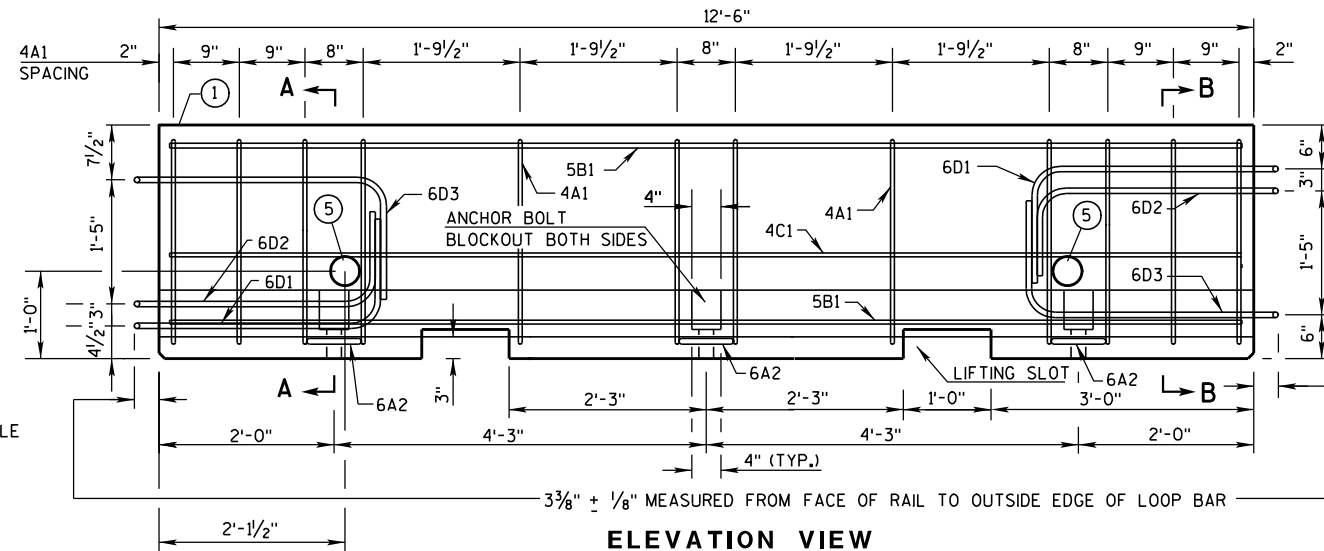
FHWA



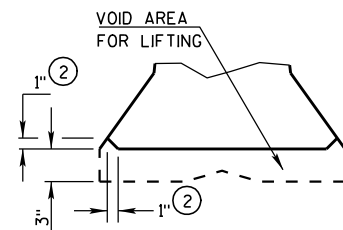
ANCHOR ON TRAFFIC SIDE
ONLY WHEN REQUIRED
(SEE SHEET D FOR ADDITIONAL
ANCHOR DETAIL)



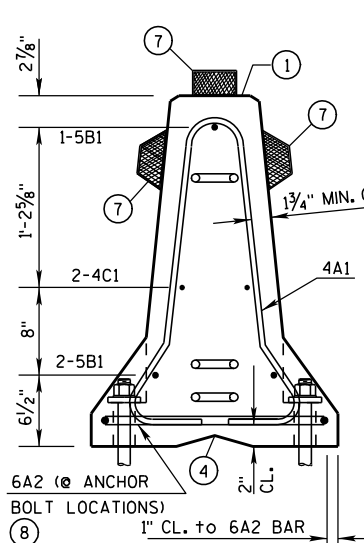
END VIEW



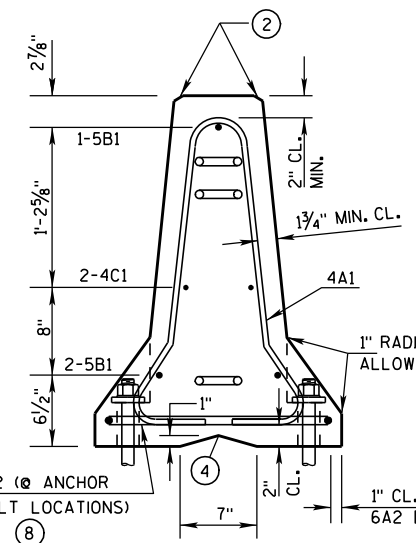
ELEVATION VIEW



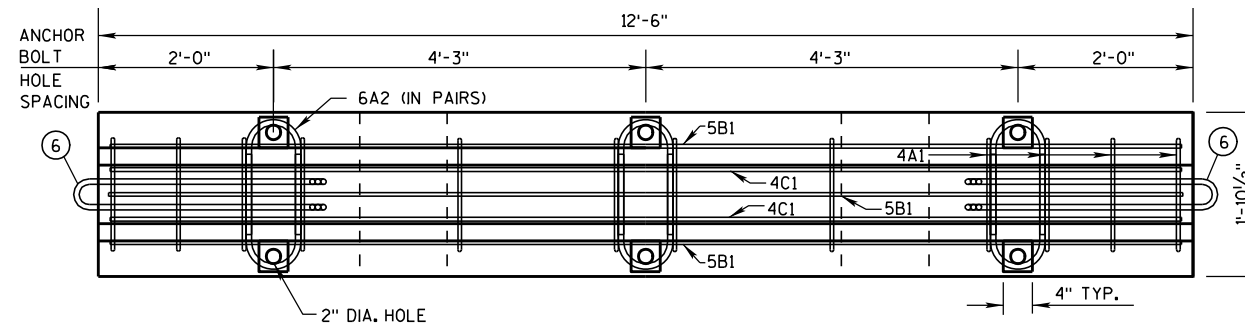
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

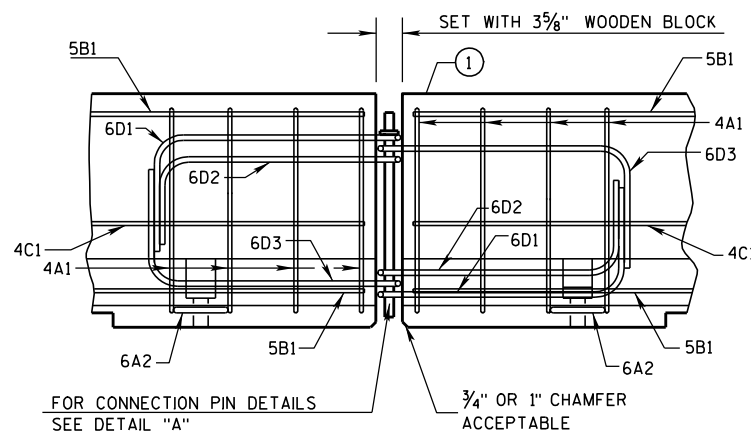


SECTION B-B
(STIRRUP PLACEMENT)

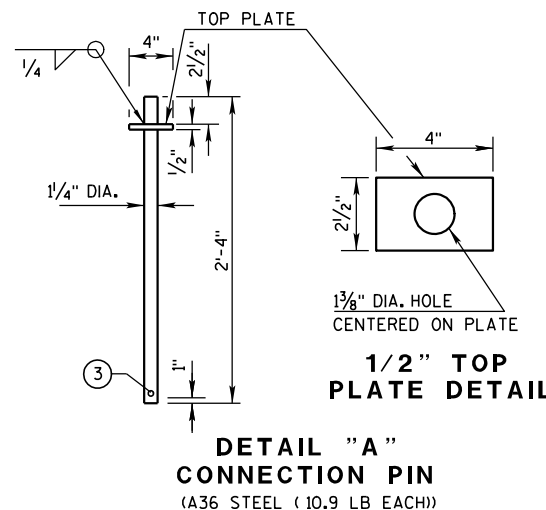


PLAN VIEW

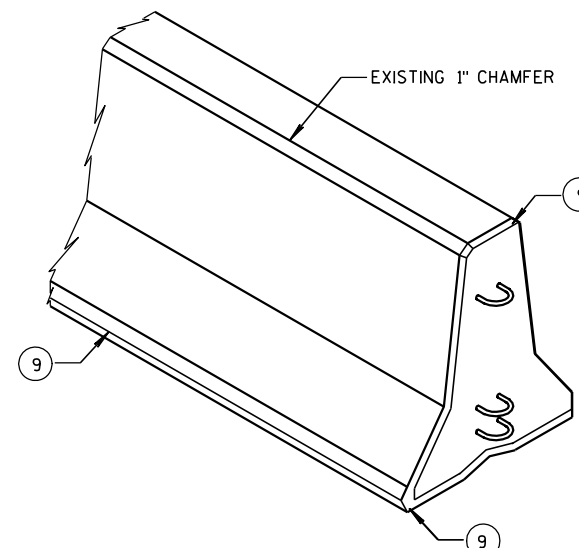
DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION



DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



1/2" TOP
PLATE DETAIL

GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(g) THRU 14B7-13(h).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE 3/4" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-1/2" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN 1/8" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR EPOXY ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
- a. TYPE: WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)

- ② 1" CHAMFER TO PREVENT SPALLING.

- ③ A 3/8" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..

- ④ "V" NOTCH IS OPTIONAL.

- ⑤ THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).

- ⑥ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

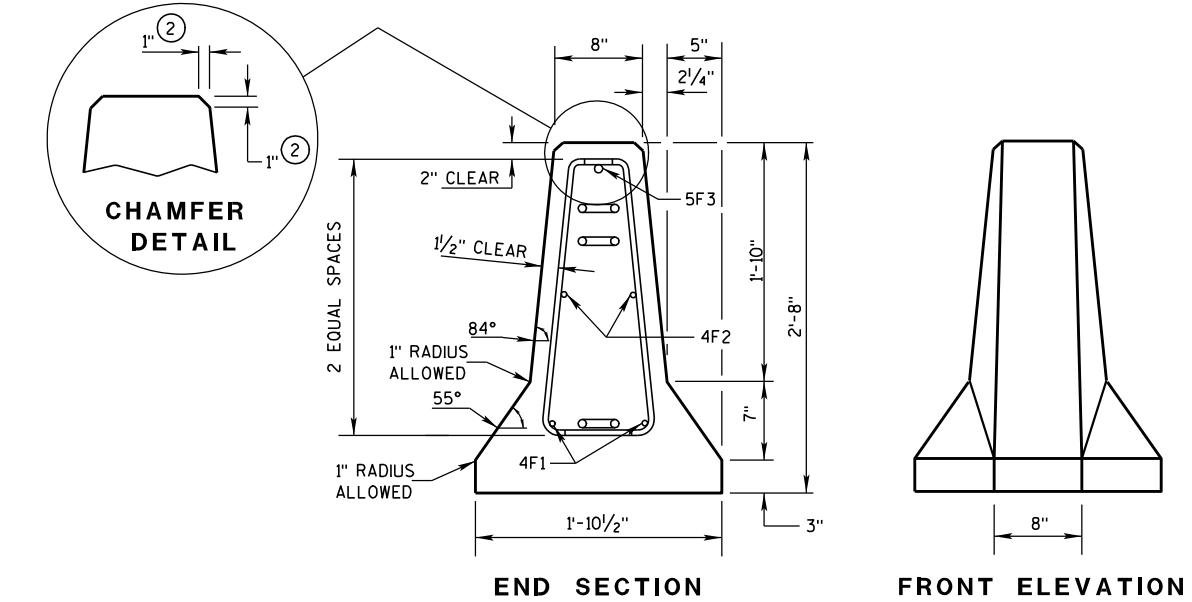
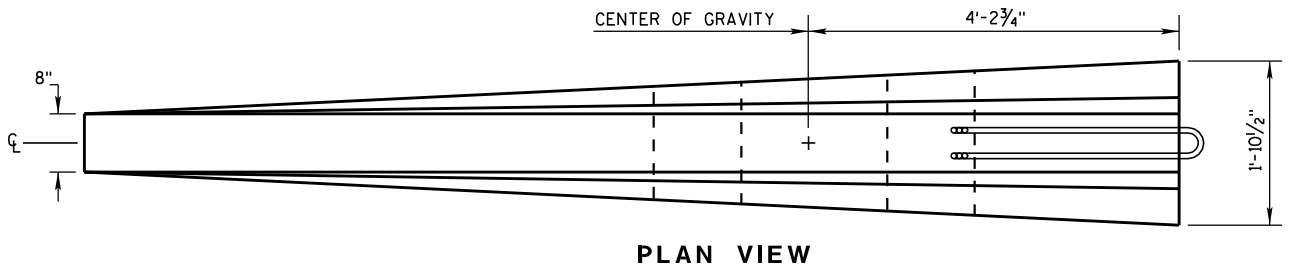
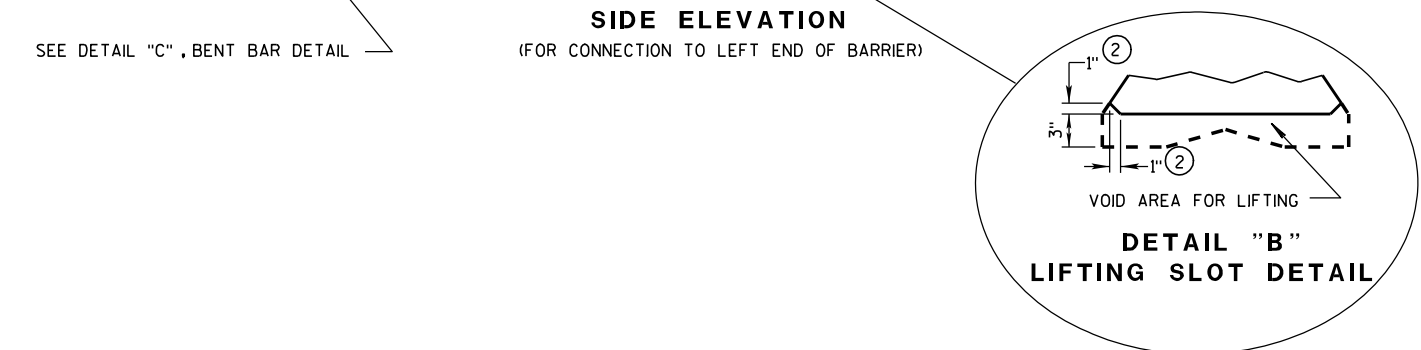
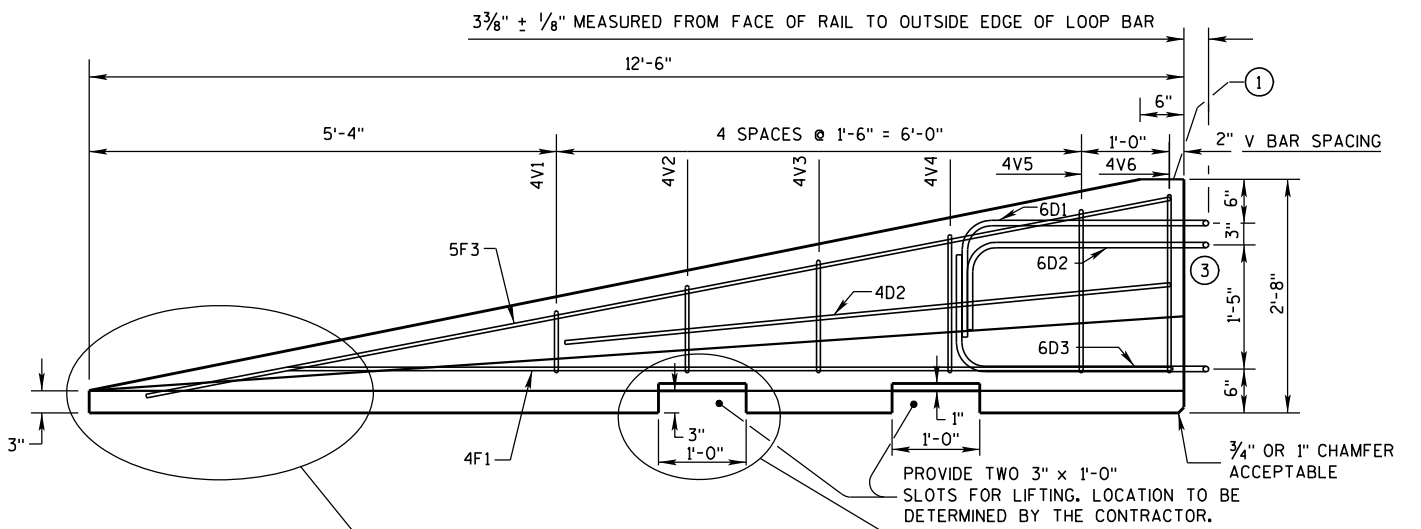
- ⑦ USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURER'S INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.

- ⑧ SEE SHEET D FOR ANCHORING CRITERIA.

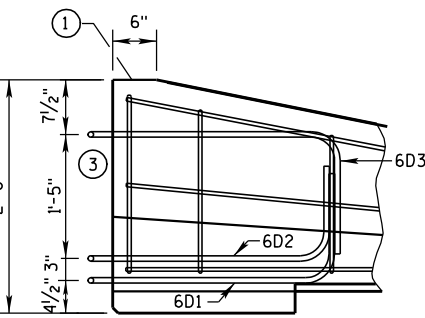
- ⑨ 1" CHAMFER OPTIONAL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



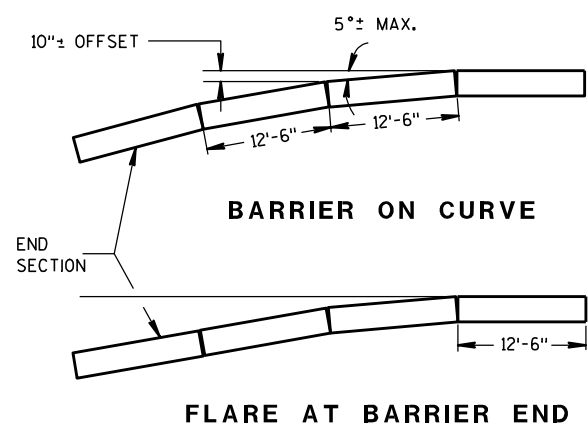
DETAILS OF BARRIER TAPER SECTION



SIDE ELEVATION
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
 - a. TYPE WICBTP
 - b. MANUFACTURER
 - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

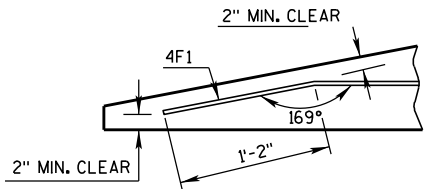
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

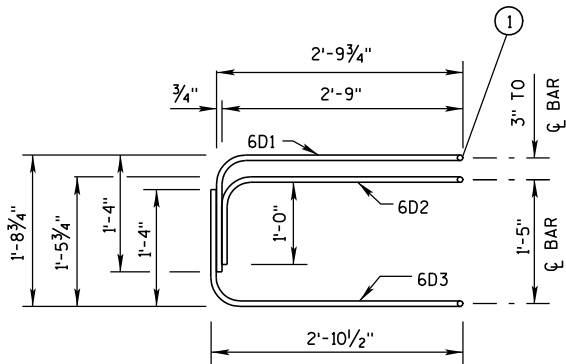
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

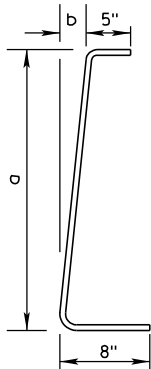
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

BAR	a	b
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 5/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

TAPER BARRIER SECTION

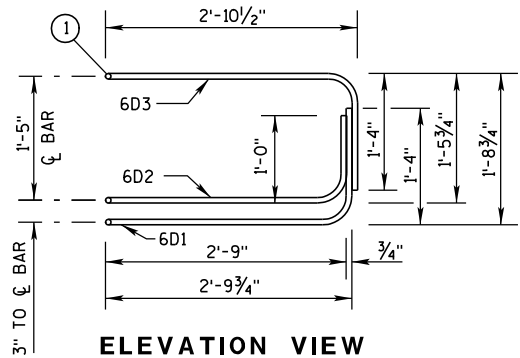
GENERAL NOTES

① NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

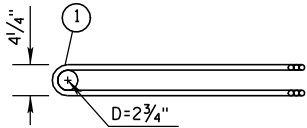
BARRIER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

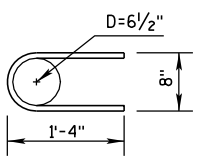


ELEVATION VIEW

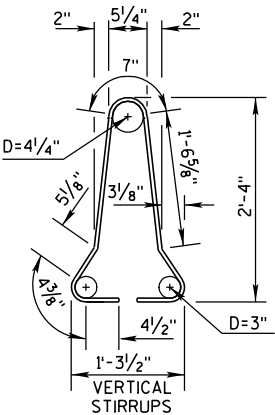


PLAN VIEW
LOOP BAR ASSEMBLY

(MARKED END SHOWN, INVERT FOR OTHER END)



6A2

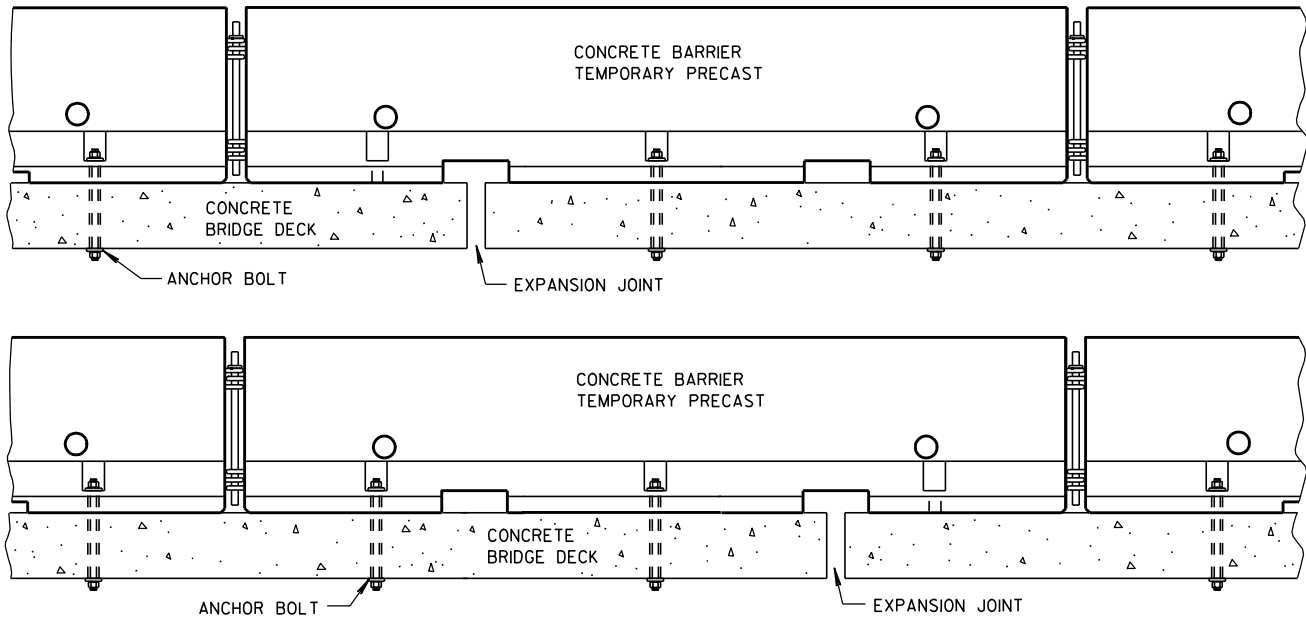


4A1

BARRIER SECTION

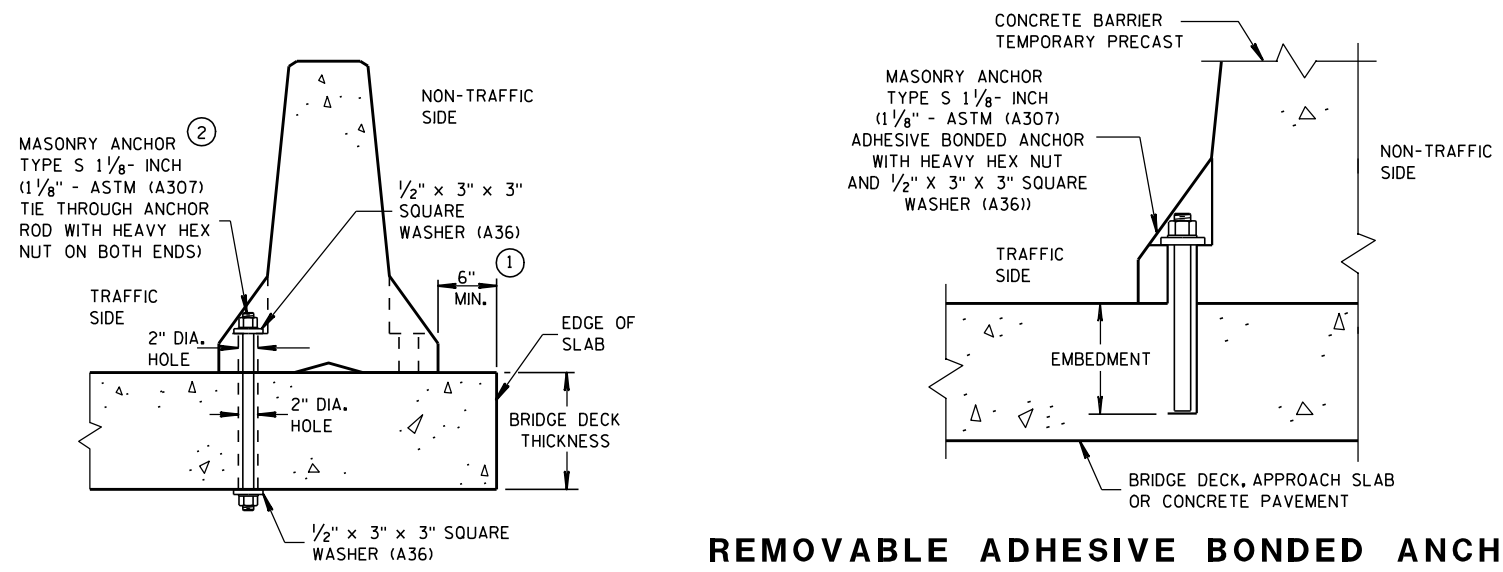
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)

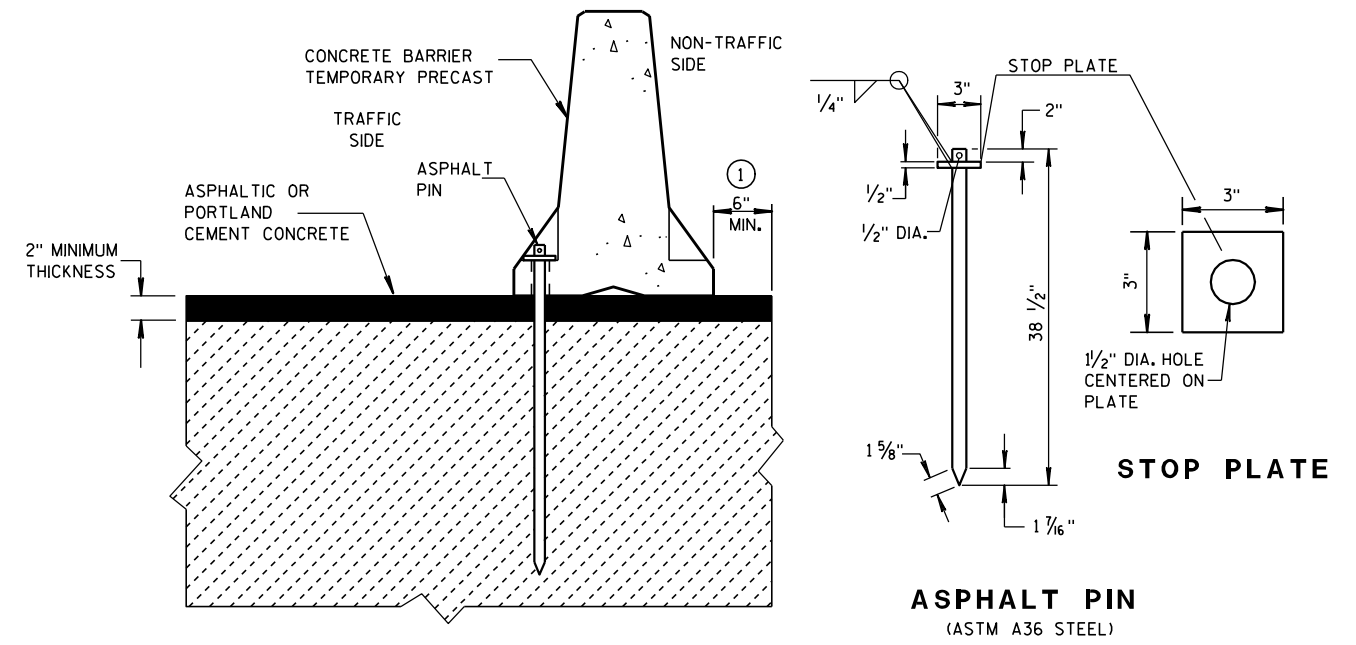


THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

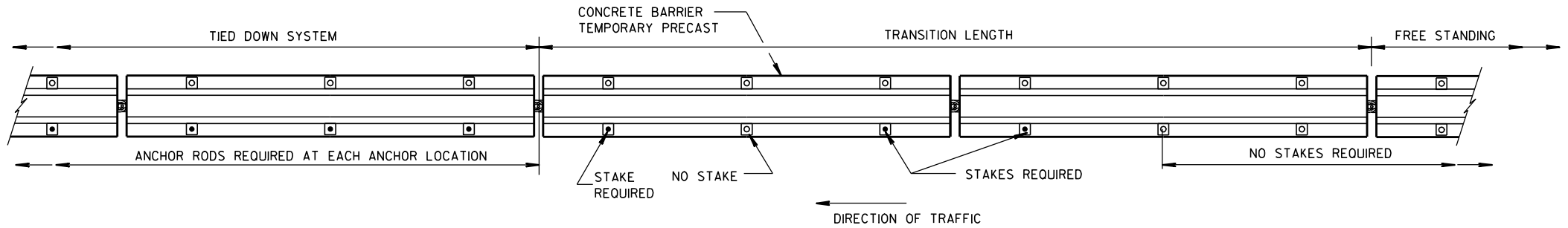
REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

GENERAL NOTES

- 1 CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

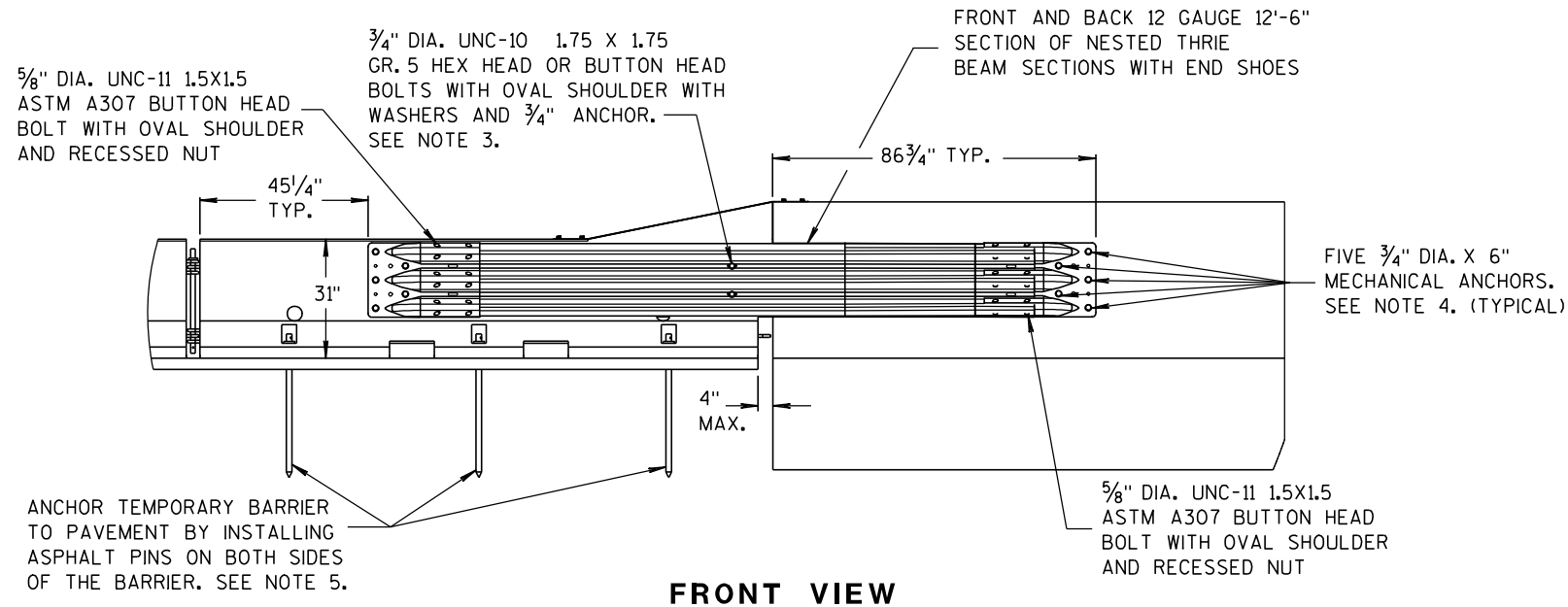
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.
- 2 ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.

WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1 1/8-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

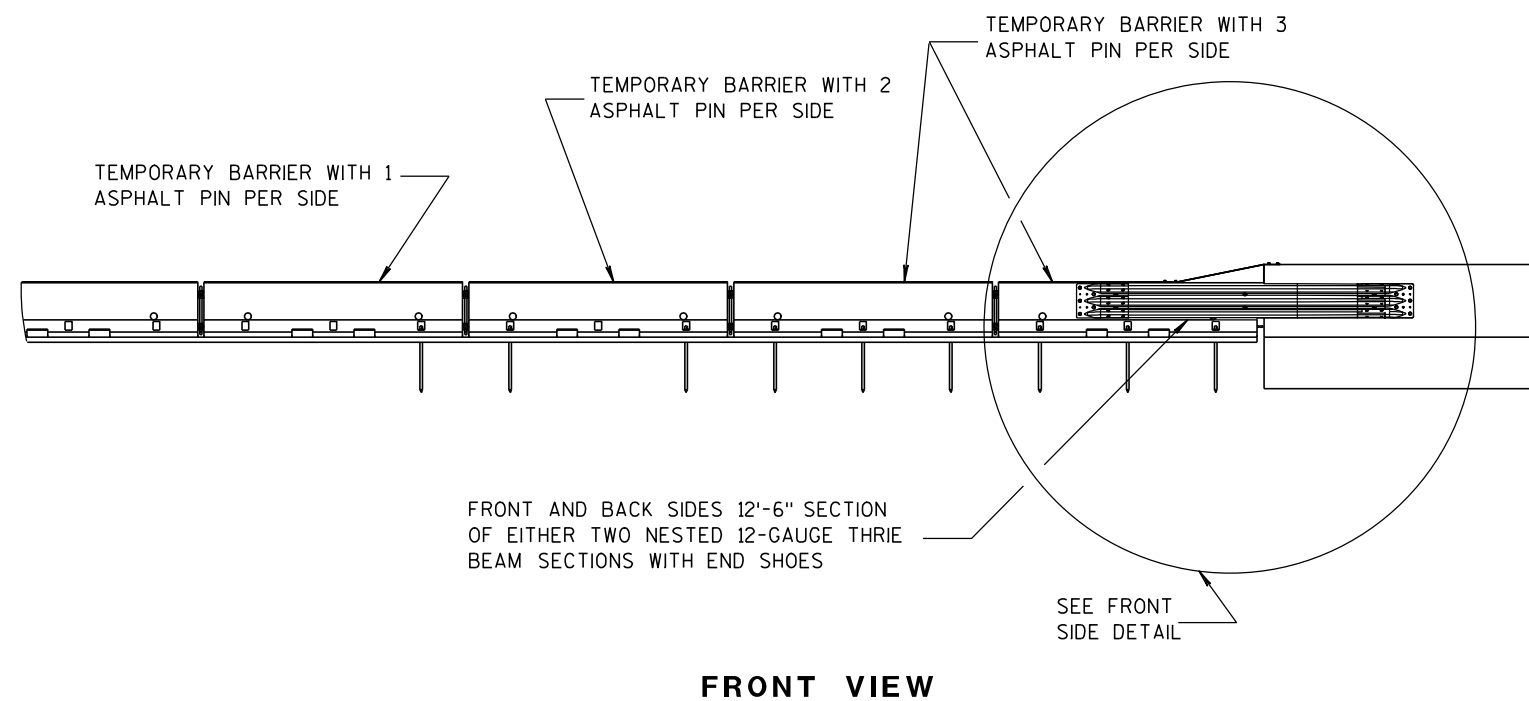
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

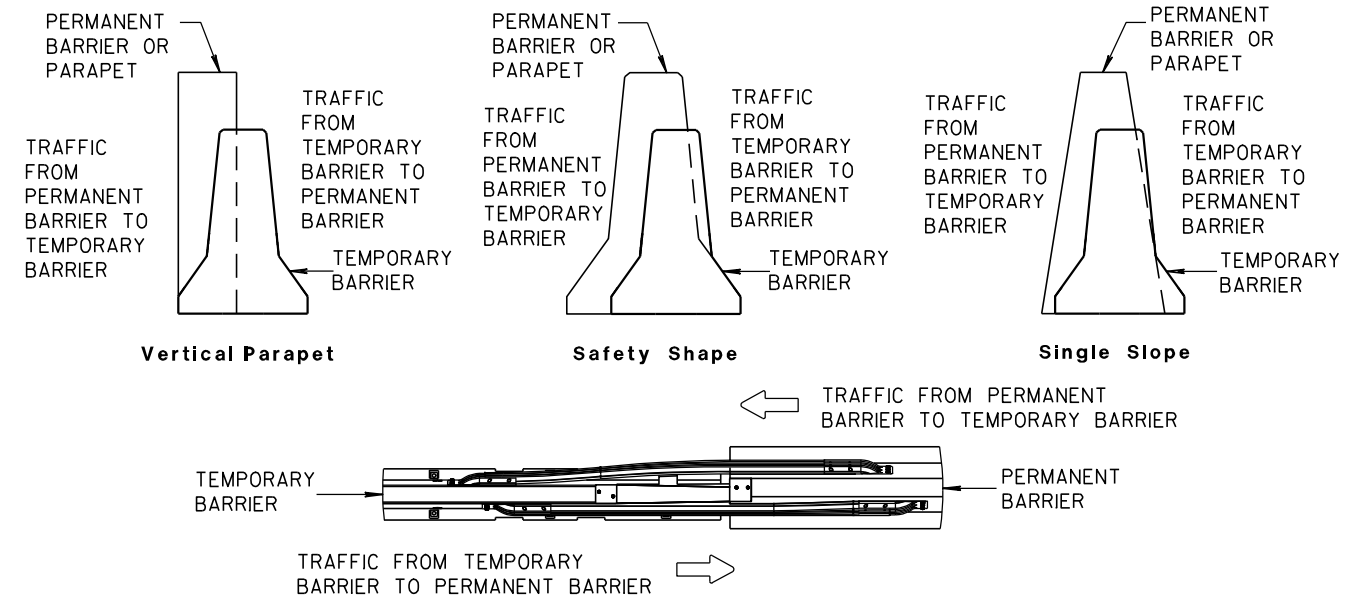


NOTES

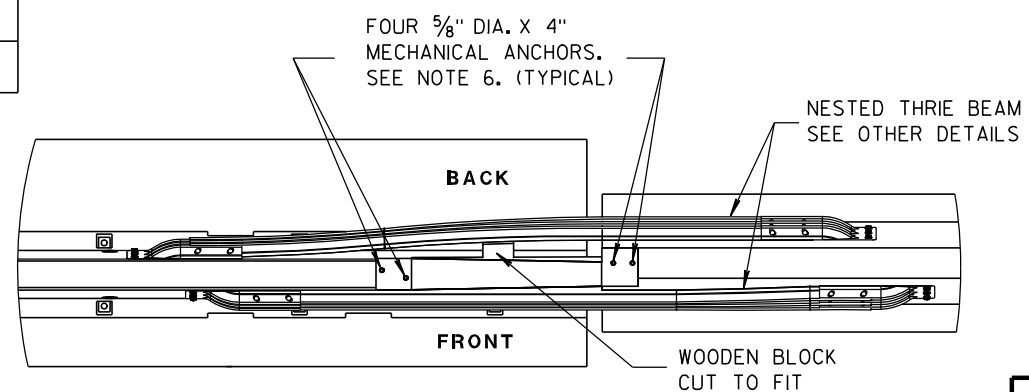
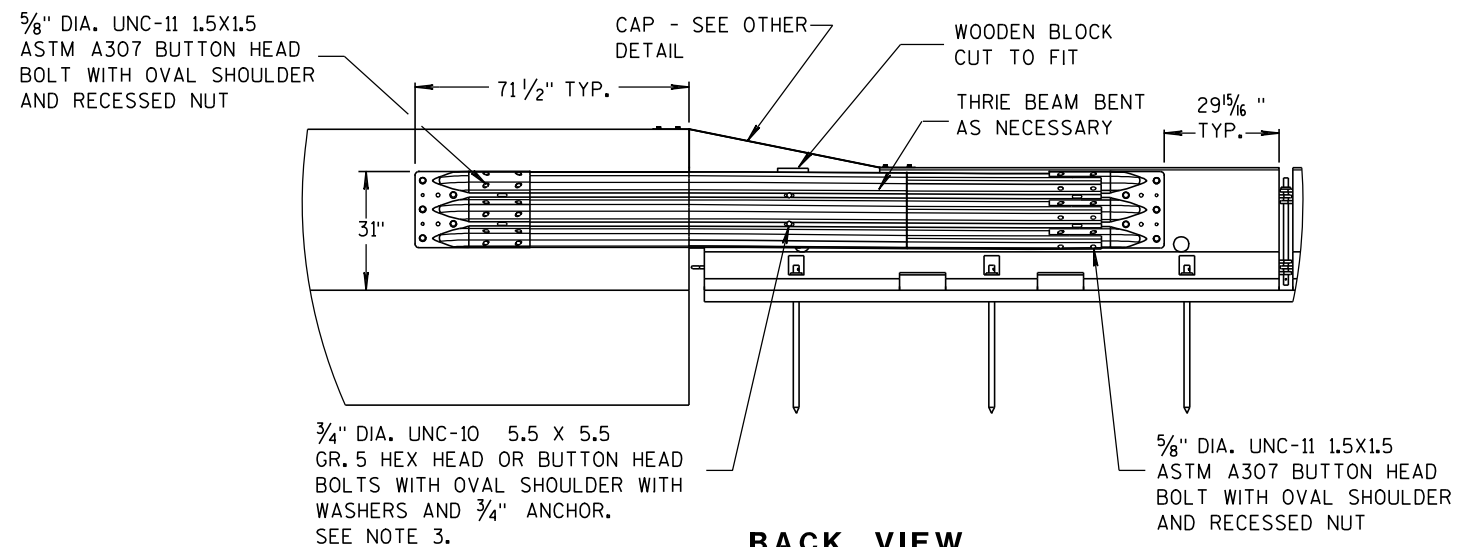
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.
4. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.
6. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.



BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

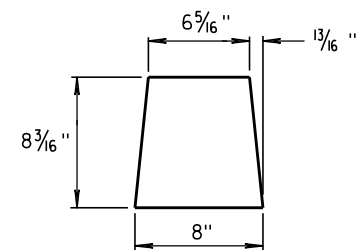


TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

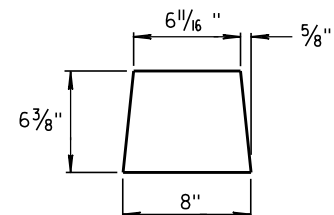


CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

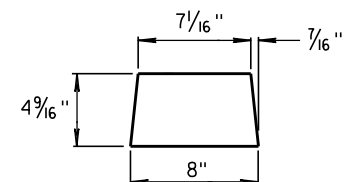
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



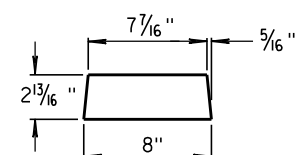
GUSSET 1



GUSSET 2

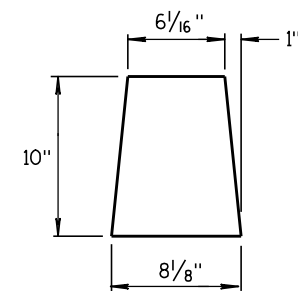


GUSSET 3

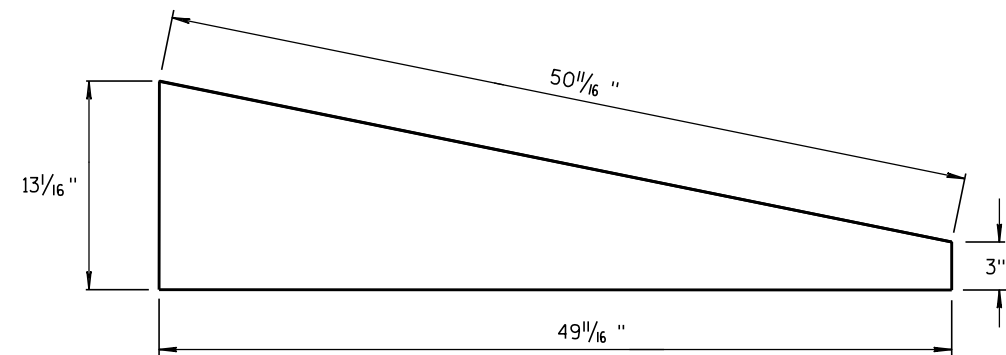


GUSSET 4

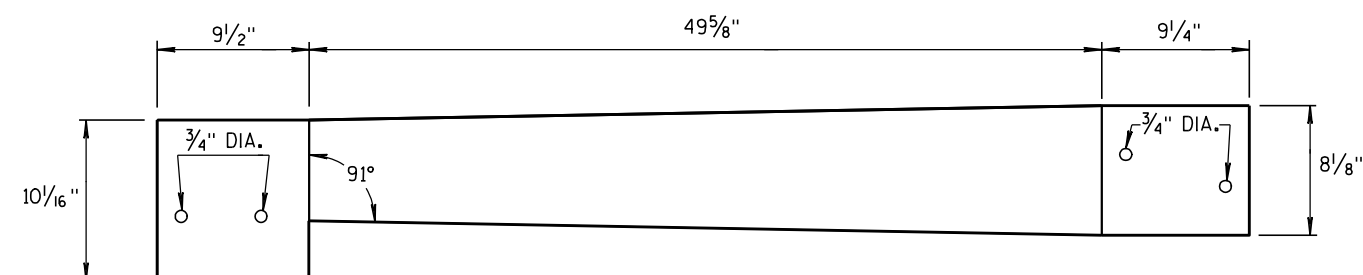
GUSSETS



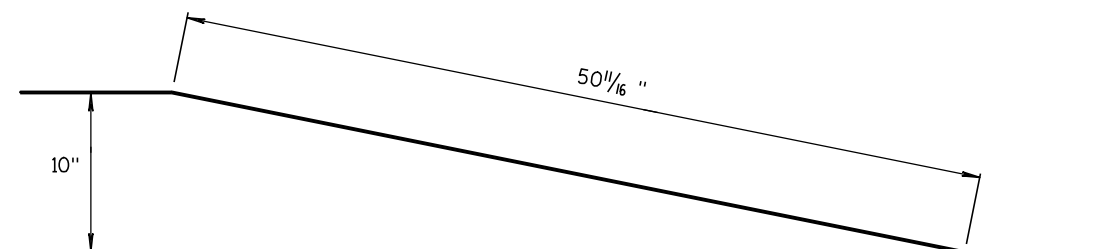
END PLATE



SIDE PLATE

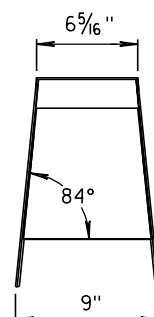


TOP PLATE

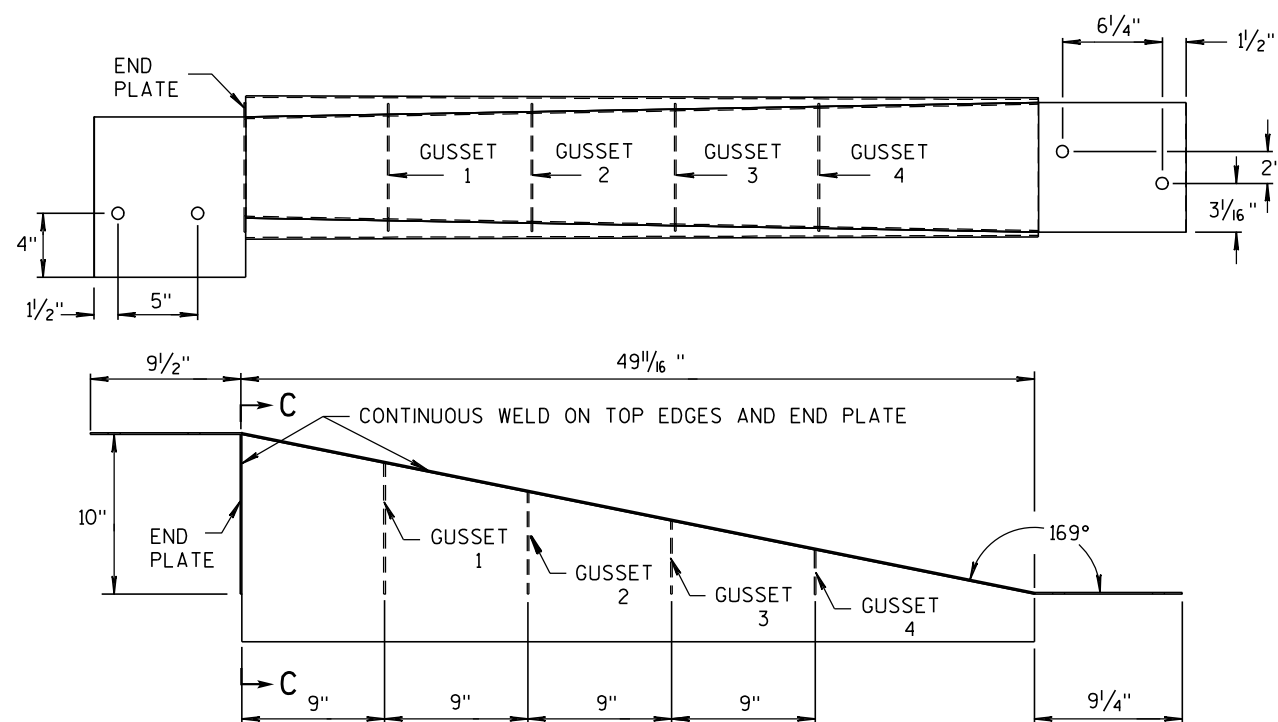


**SIDE, TOP AND END PLATES FOR CAP
FROM TEMPORARY CONCRETE BARRIER
TO 42" PERMANENT CONCRETE BARRIER**

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.



SECTION C-C



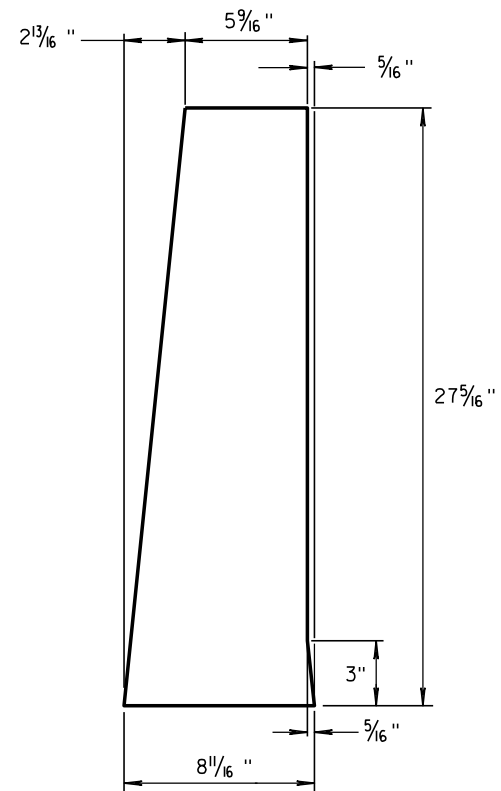
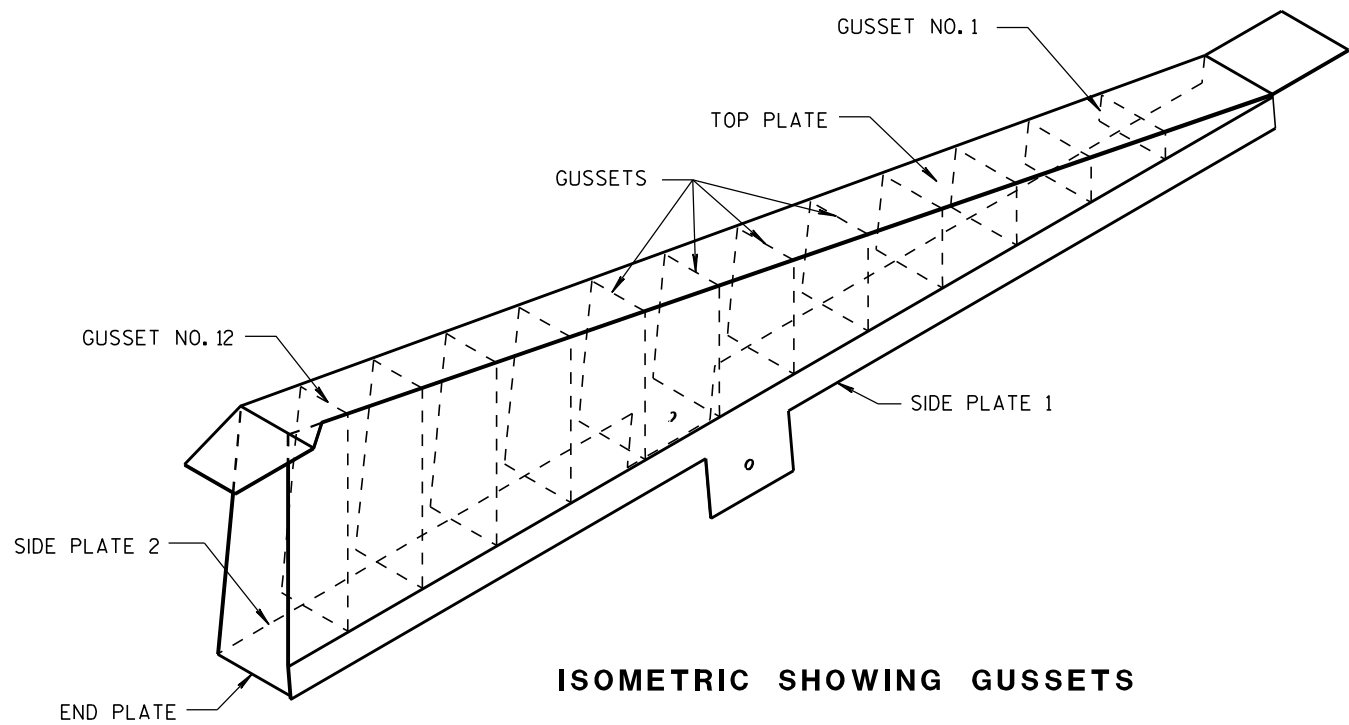
NOTES

- FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
- TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

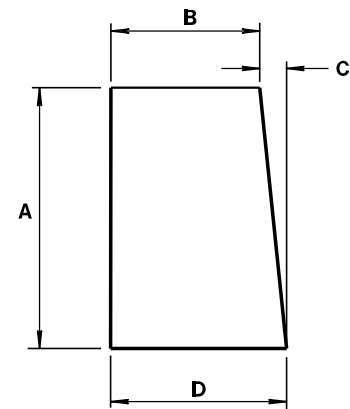
**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 42" PERMANENT CONCRETE BARRIER**

**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



1/8" STEEL PLATE

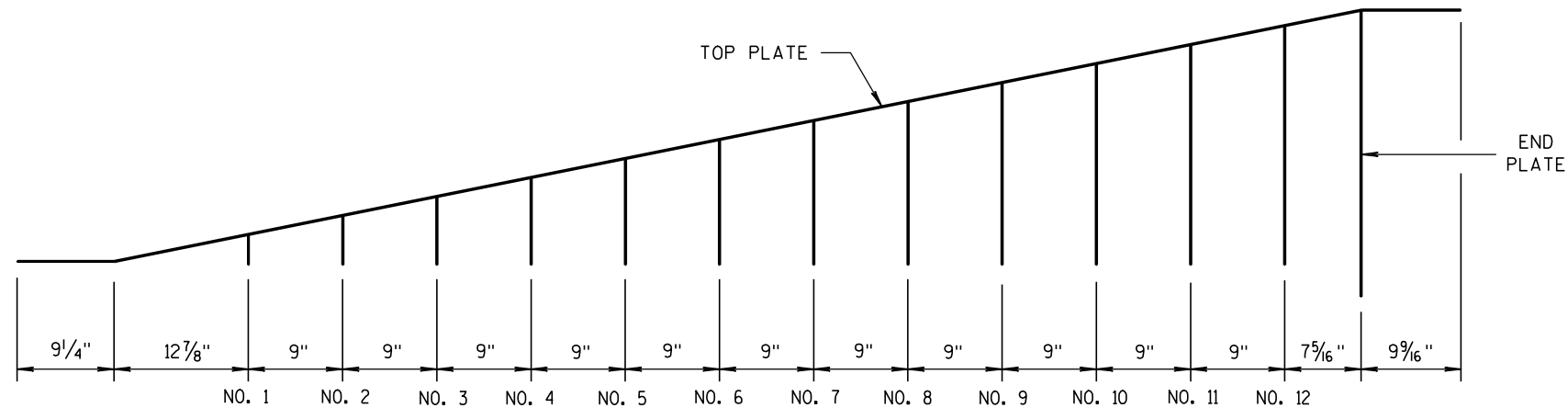


ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 11/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	11/16 "	8 1/16 "
4	8 5/16 "	7 3/16 "	7/8"	8 1/16 "
5	10 1/8 "	7"	1 1/16 "	8 1/16 "
6	11 5/16 "	6 13/16 "	1 1/4"	8 1/16 "
7	13 3/4"	6 5/8"	1 7/16 "	8 1/16 "
8	15 9/16 "	6 7/16 "	1 9/16 "	8 1/16 "
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16 "
10	19 3/16 "	6 1/16 "	1 15/16 "	8 1/16 "
11	21"	5 7/8"	2 3/16 "	8 1/16 "
12	22 13/16 "	5 11/16 "	2 5/16 "	8 1/16 "

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

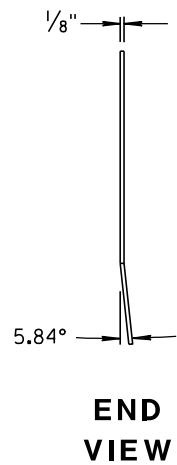
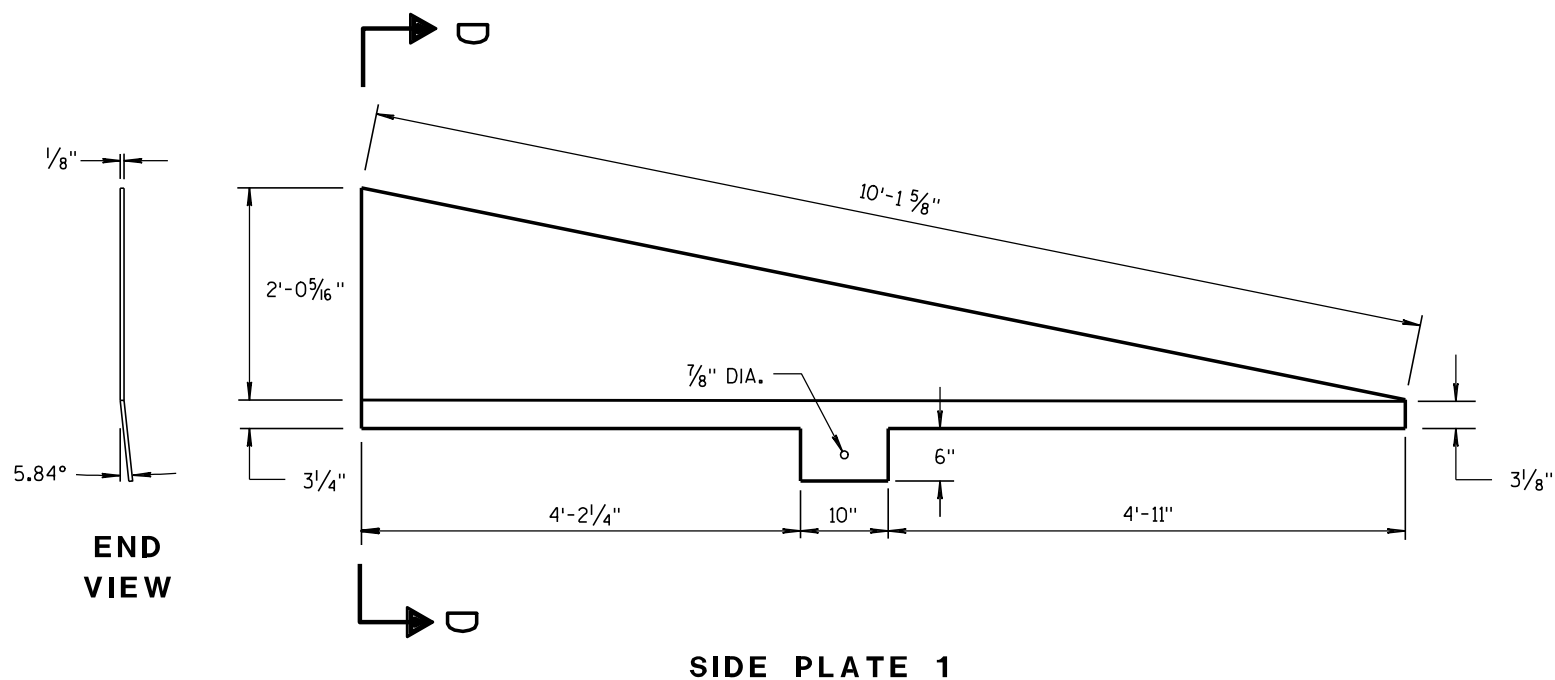
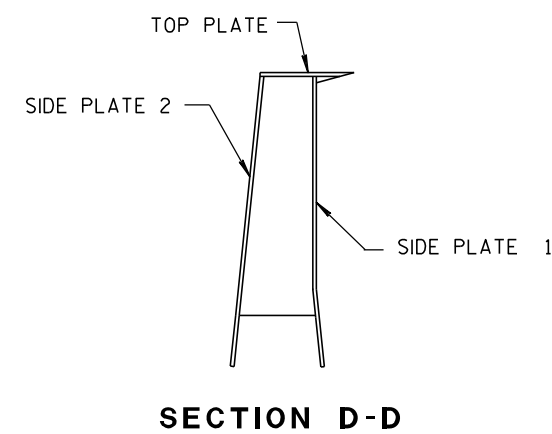
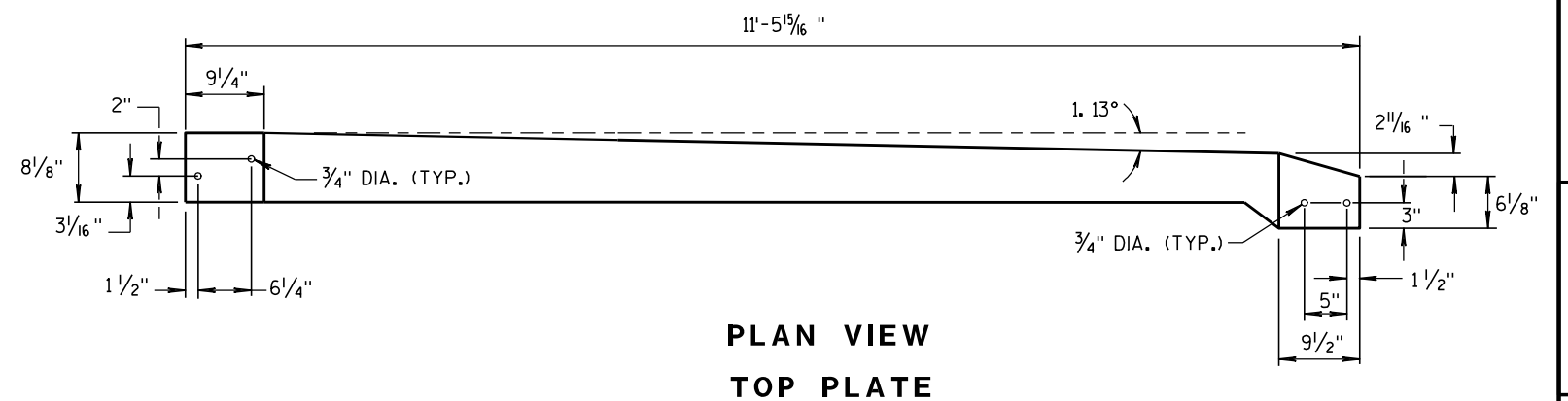
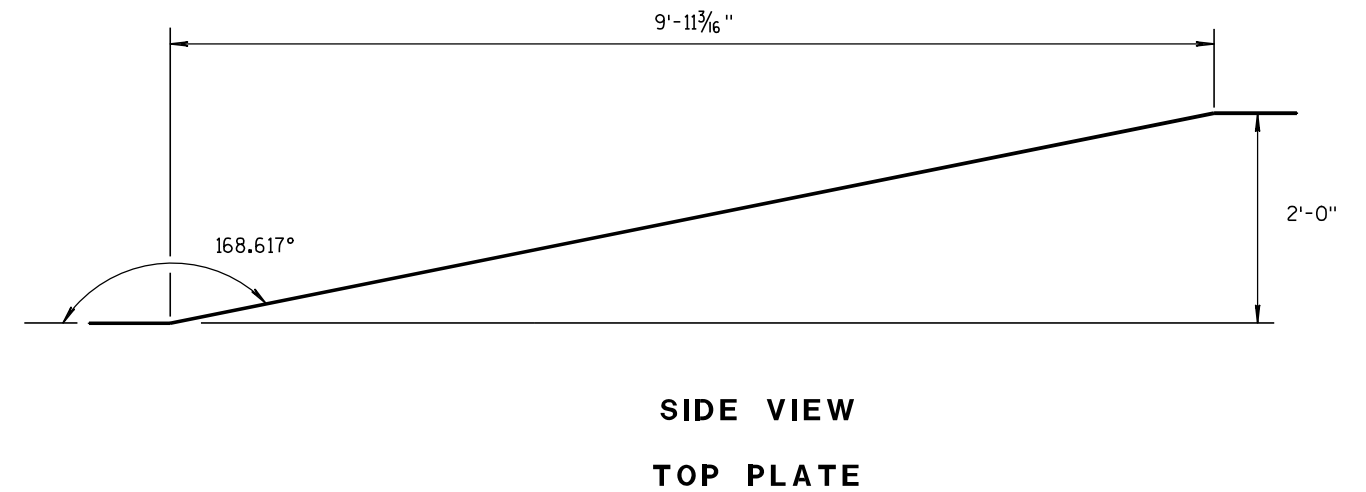
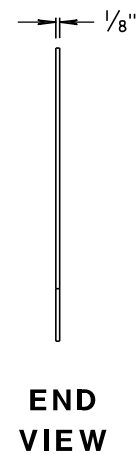
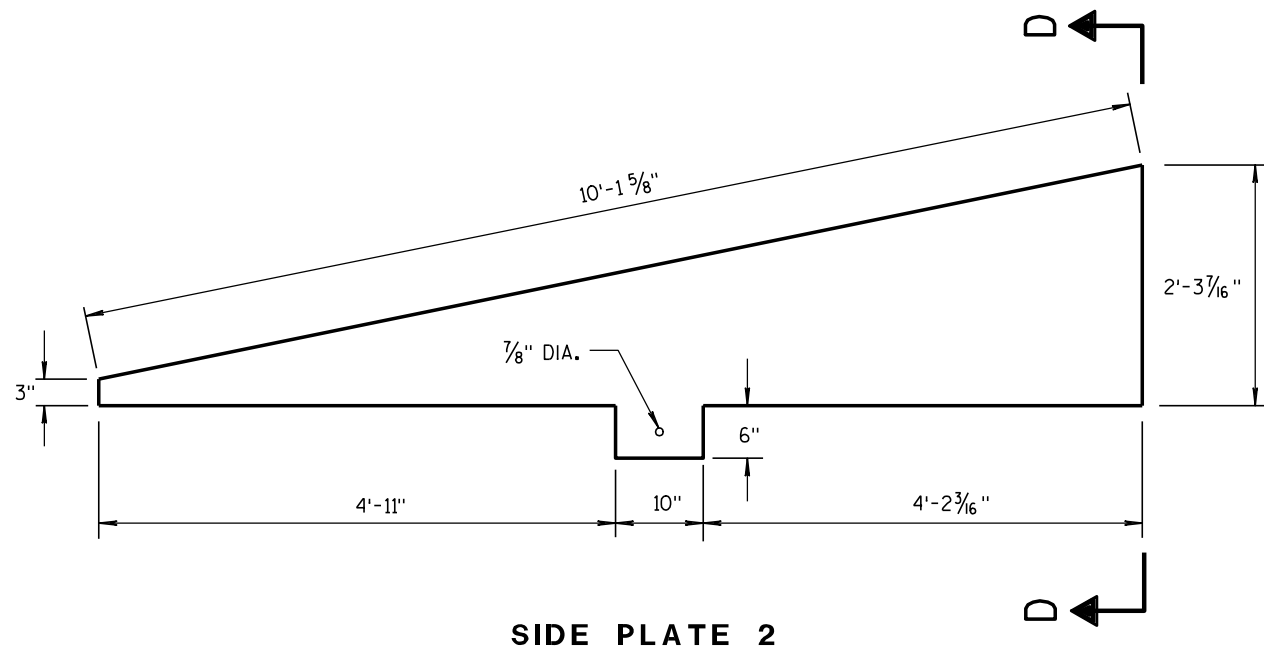
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 56" PERMANENT CONCRETE BARRIER**

**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

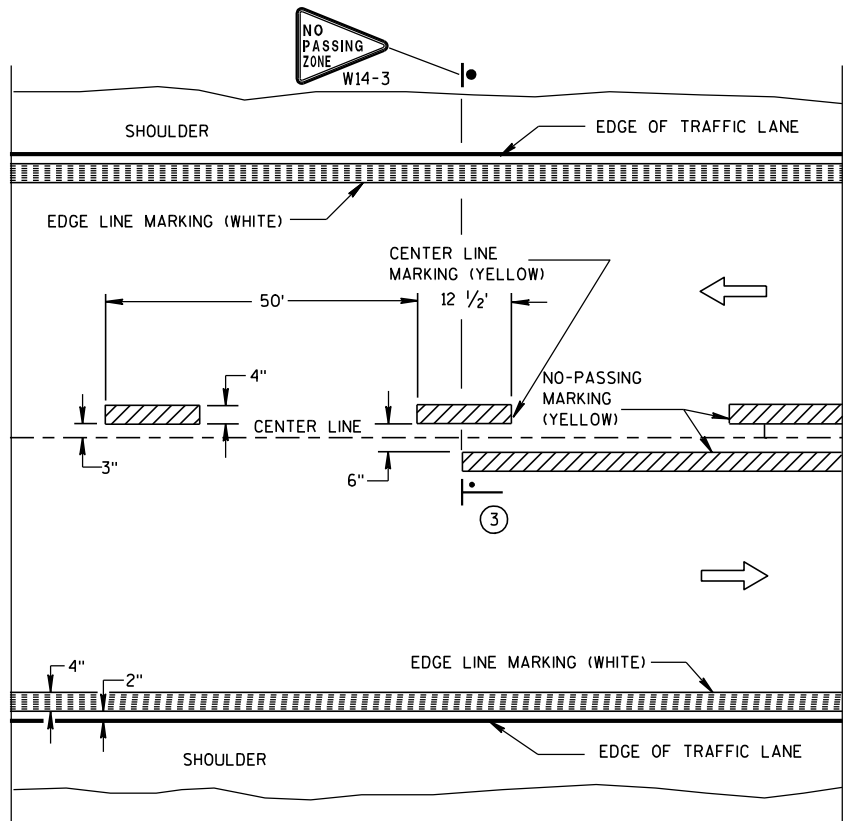
APPROVED

8/31/2012

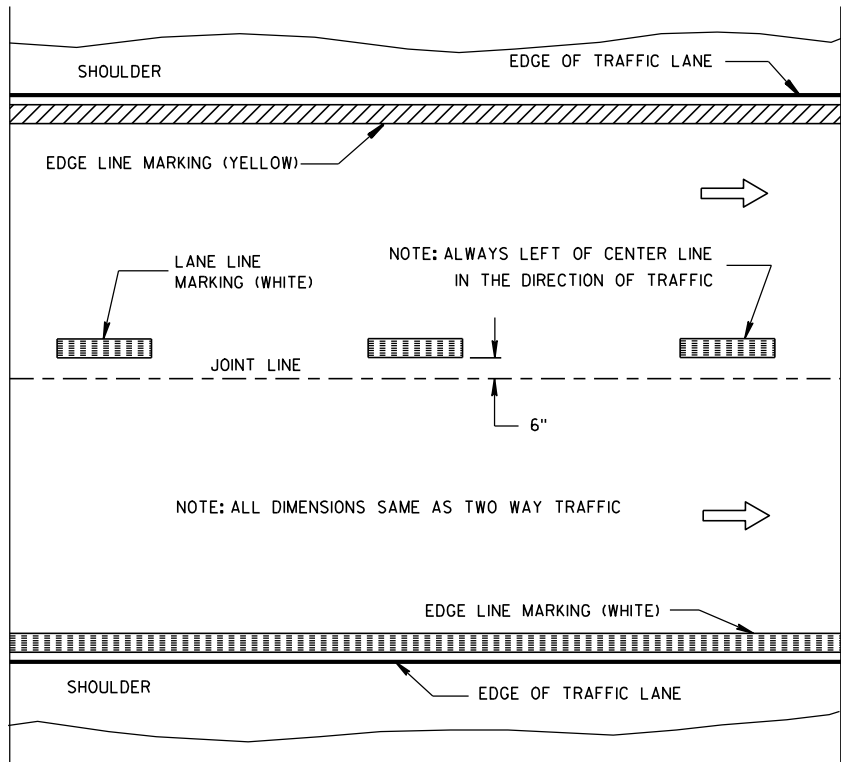
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARD DEVELOPMENT
ENGINEER

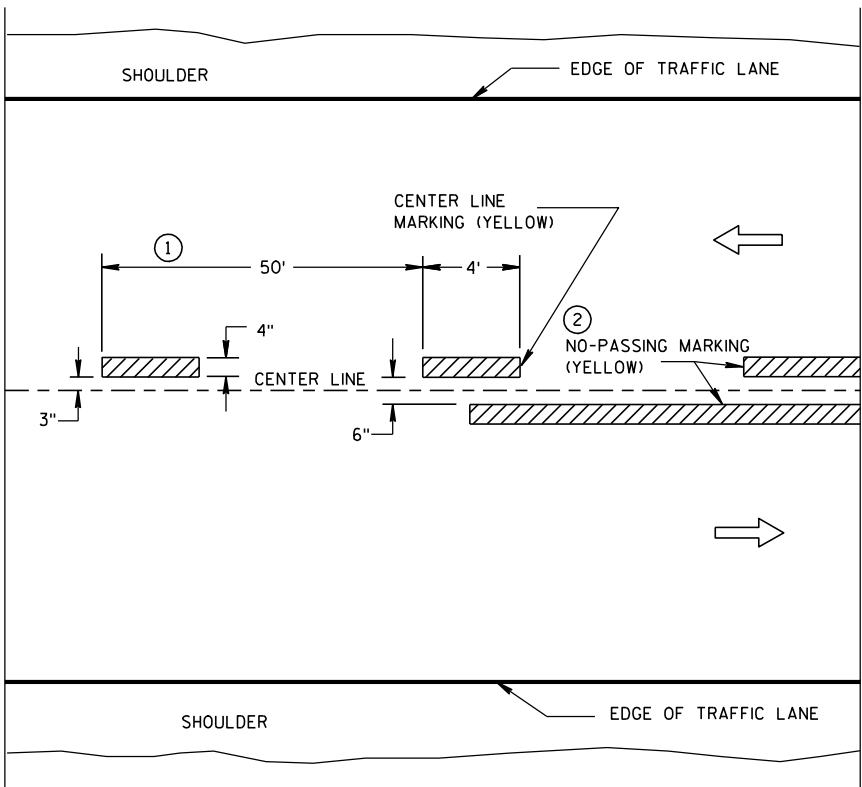


TWO WAY TRAFFIC

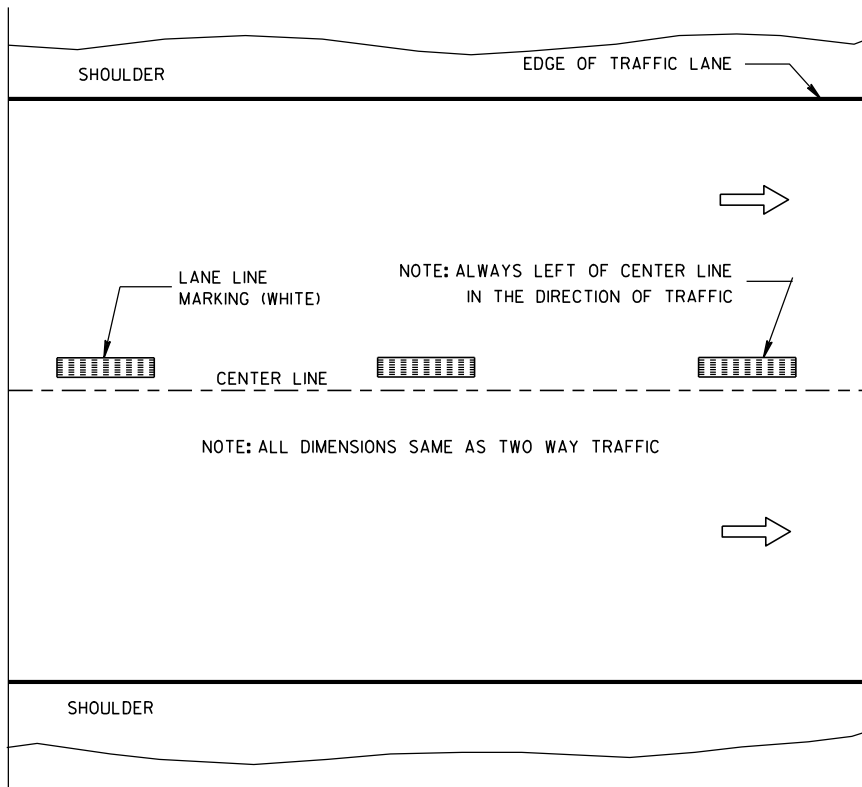


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

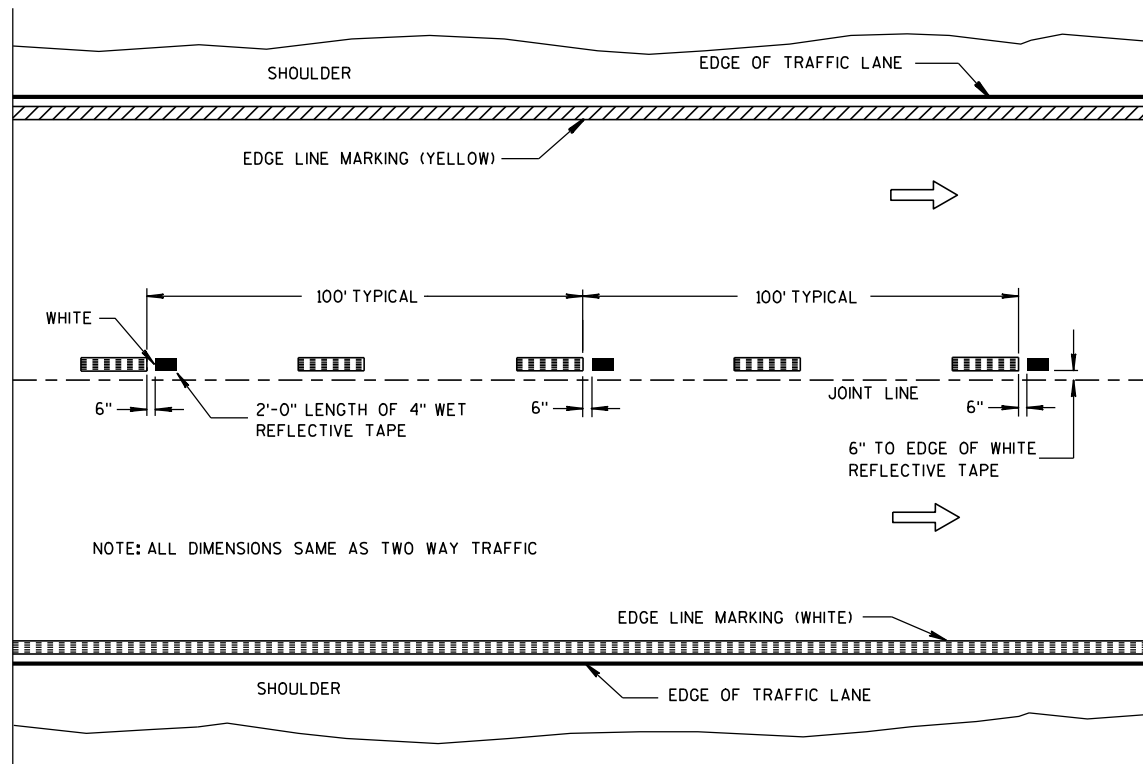
GENERAL NOTES

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

- 1 HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- 2 NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- 3 NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-23-11 /S/ Thomas N. Notbohm
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA

SYMBOLS

-  TYPE III BARRICADE (8' EQUIVALENT) WITH/WITHOUT SIGN
 DRUM
 POST MOUNTED SIGN
 WARNING LIGHT, TYPE A (FLASHING)
 DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

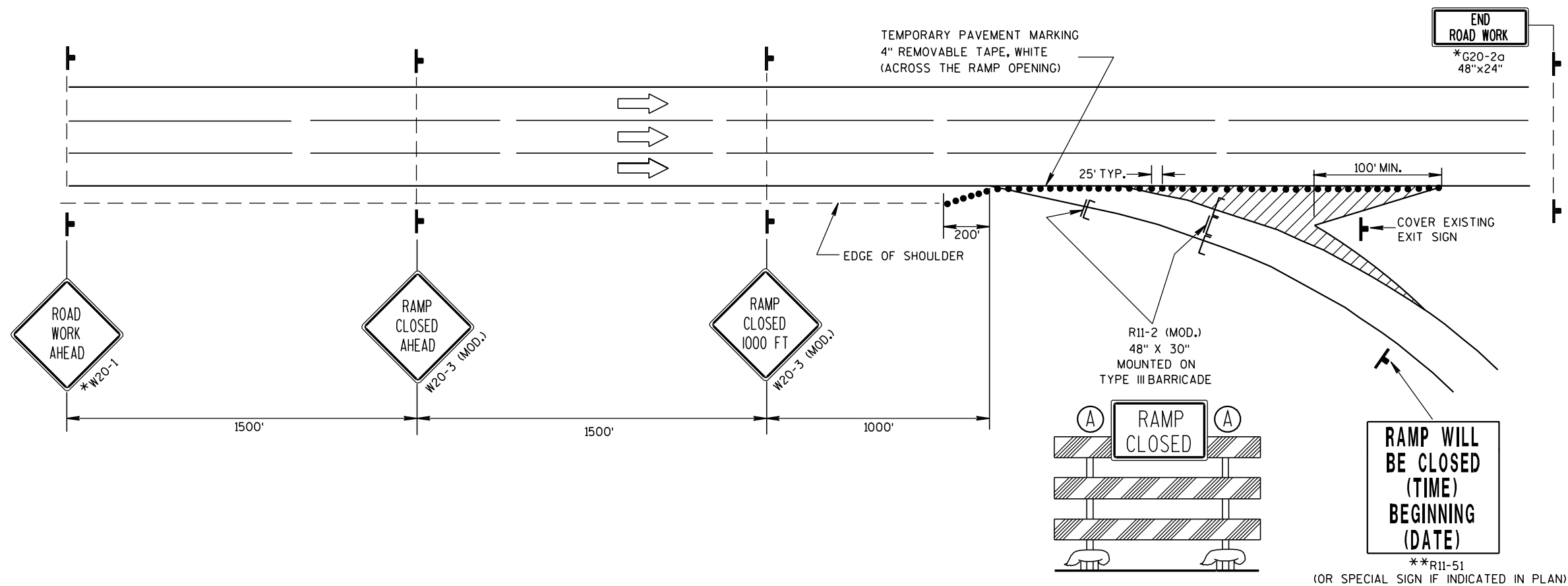
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

**USE THE "RAMP WILL BE CLOSED" SIGN IF INDICATED IN MISCELLANEOUS QUANTITIES. PLACE 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

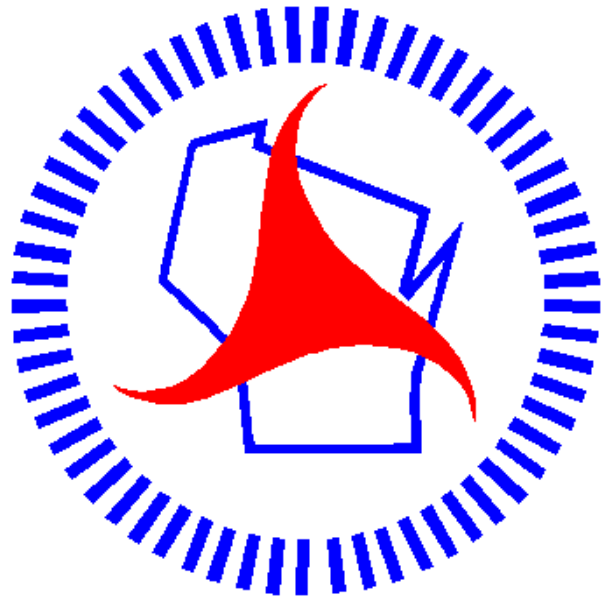
5/23/2000

DATE

FHWA

/S/ Chester J. Spang
CHIEF SIGNS AND MARKING ENGINEER

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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