WIS

JULY 2014

PROJECT ID: 1166-02-81

COUNTY: MARATHON

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 = 308



27

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STEVENS POINT - WAUSAU

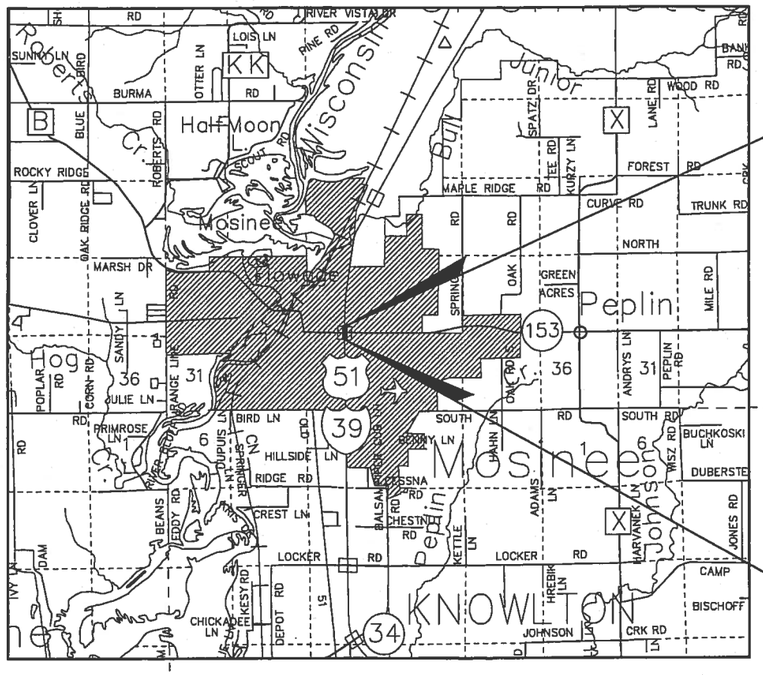
STH 153 BRIDGES, B-37-148 & 149

IH 39

MARATHON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1166-02-81	WISC 2014274	1

STATE PROJECT NUMBER
1166-02-81



END PROJECT 1166-02-81
STA 226+00.00'NB'
MATCH EXISTING

BEGIN PROJECT 1166-02-81
STA 203+00.00'NB'
Y= 137,707.48
X= 268,314.70
MATCH EXISTING

LAYOUT
SCALE 0 1.0 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.436 MI.

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

DESIGN DESIGNATION

A.A.D.T. (2014)	=	25,500
A.A.D.T. (2034)	=	32,200
D.H.V.	=	10.6%
D.D.	=	60/40
T.	=	12.0%
DESIGN SPEED	=	70 MPH
ESALS	=	480,000

CONVENTIONAL SYMBOLS

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

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

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

ORIGINAL PLANS PREPARED BY

Mead & Hunt
Mead & Hunt, Inc.
6501 Watts Road
Madison, WI 53719
608.273.6380
fax: 608.273.6391
www.meadhunt.com

WISCONSIN
SCOTT A. HASBURGH
E-33329
BARNEVELD, WI
PROFESSIONAL ENGINEER

8/1/2013

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MEAD & HUNT, INC.
Designer	MEAD & HUNT, INC.
Project Manager	MARK STEIDL
Regional Examiner	CHERYL SIMON
Regional Supervisor	SHANNON RILEY
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 7/30/13 (Signature)

E

GENERAL NOTES

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

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

CONTRACTOR WILL BE FULLY RESPONSIBLE FOR REPAIRING ANY AND ALL AREAS DISTURBED BY PLANTING OPERATIONS, BANNER POLE INSTALLATION, OR MONUMENT SIGN CONSTRUCTION ACCORDING TO SECTION 630 OF THE STANDARD SPECIFICATIONS.

BEARINGS SHOWN ON THE PLANS ARE TRUE BEARINGS TO THE NEAREST SECOND.

ALL DISTANCES ARE GROUND DISTANCES.

ALL COORDINATES ARE GROUND COORDINATES.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

CURVE DATA IS BASED ON THE ARC DEFINITION.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON OR ROCK EXCAVATION.

ASPHALTIC SURFACE/HMA PAVEMENT SHALL BE CONSTRUCTED WITH THE FOLLOWING LAYER THICKNESSES:

PAVEMENT THICKNESS (INCH)	LOWER (INCH)	NOM AGG SIZE (mm)	LOWER (INCH)	NOM AGG SIZE (mm)	UPPER (INCH)	NOM AGG SIZE (mm)
6	3.5	19.0	----	----	2.5	12.5
2	----	----	----	----	2	12.5
8	3	19.0	3	19.0	2	12.5
----	----	----	----	----	----	----
4	2.25	19.0	----	----	1.75	12.5

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL AND DRAINAGE DETAILS
PLANTING DETAILS
SIGNING DETAILS
PAVEMENT MARKING DETAILS
TRAFFIC CONTROL DETAILS
ALIGNMENT DETAILS

DNR LIAISON
DEPARTMENT OF NATURAL RESOURCES
ATTN: MARC HERSHFIELD
WEST CENTRAL REGION (WCR)
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494

TELEPHONE: 715-421-7867
E-MAIL: marc.hershfield@wisconsin.gov

UTILITY CONTACTS

* **CHARTER COMMUNICATIONS**
COMMUNICATION LINE
ATTN: MR. SCOTT OLSON
853 MCINTOSH STREET
WAUSAU, WI 54402

TELEPHONE: 715-301-4079
E-MAIL: scott.olson@chartercom.com

* **MOSINEE MUNICIPAL WATER AND SEWER**
WATER AND SEWER
ATTN: MR. KEVIN BREIT
225 MAIN STREET
MOSINEE, WI 54455

TELEPHONE: 715-693-3840
E-MAIL: publicworks@mosinee.wi.us

* **WINDSTREAM KDL, INC.**
COMMUNICATION
ATTN: MR. JIM KOSTUCH
13935 BISHOPS DRIVE
BROOKFIELD, WI 53005

TELEPHONE: 262-792-7938
E-MAIL: james.kostuch@windstream.com

* **PACKERLAND BROAD BAND**
COMMUNICATION LINE
ATTN: MR. WAYNE CRETTON
105 KENT STREET
IRON MOUNTAIN, MI 49801

TELEPHONE: 906-282-3768
E-MAIL: wayne.cretton@packerlandbroadband.com

* **MOSINEE TELEPHONE COMPANY d/b/a TDS TELECOM**
COMMUNICATION
ATTN: JEREMIAH LUBEN
1130 HILLCREST LANE
SEYMOUR, WI 54165

TELEPHONE: 920-655-8478
E-MAIL:jeremiah.luben@tdstelecom.com

* **WISCONSIN PUBLIC SERVICE CORPORATION**
GAS
ATTN: ELIZABETH STEMPIHAR
2001 PLOVER ROAD
PLOVER, WI 54467

TELEPHONE: 715-848-7338
E-MAIL: eastempihar@wisconsinpublicservice.com

* **WISCONSIN PUBLIC SERVICE CORPORATION**
ELECTRIC
ATTN: CLAYTON VIRCKS

P.O. BOX 1166
WAUSAU, WI 54402

TELEPHONE: 715-848-7317
E-MAIL: chvircks@wisconsinpublicservice.com

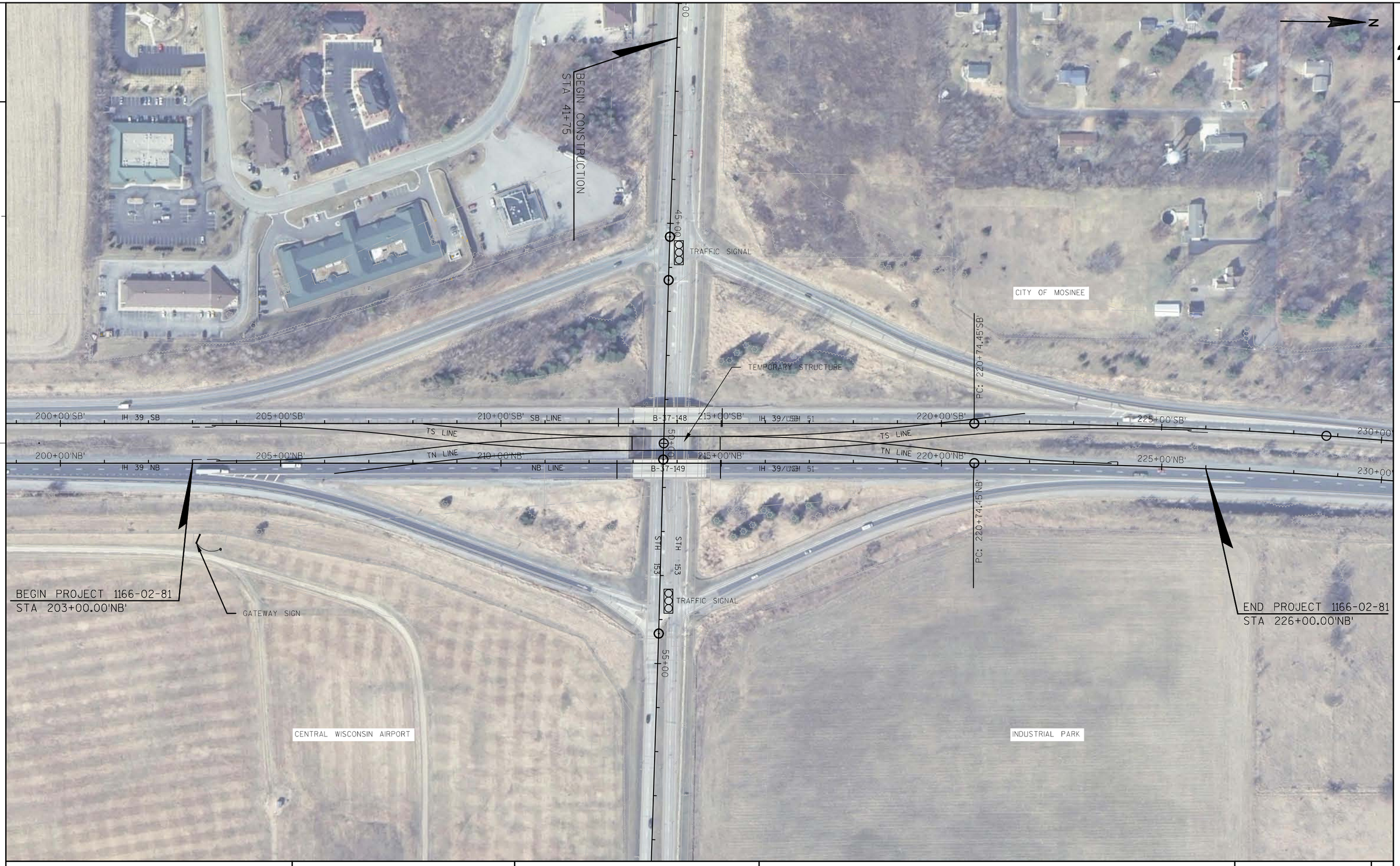
*** Denotes Diggers Hotline Member**

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

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AP	ACCESS POINT
AR	ACCESS RIGHTS
AC	ACRE
AGG	AGGREGATE
AH	AHEAD
ET AL	AND OTHERS
∠	ANGLE
ASPH	ASPHALTIC
APM	ASPHALTIC PLANT MIX
AVG	AVERAGE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
BK	BACK
BF	BACK FACE
BL or B/L	BASE LINE
BM	BENCH MARK
BLK	BLOCK
BR	BRIDGE
CB	CATCH BASIN
CL or C/L	CENTER LINE
CC	CENTER TO CENTER
	CENTRAL ANGLE OR DELTA
CH	CHORD
CH BRG	CHORD BEARING
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CB#	CONTROL BASE
CORR	CORRUGATED
CACP	CORRUGATED ALUMINUM CULVERT PIPE
CAPA	CORRUGATED ALUMINUM PIPE ARCH
CSCP	CORRUGATED STEEL CULVERT PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CSPCP	CORRUGATED STEEL PIPE CATTLE PASS
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CR	CREEK
CR	CRUSHED
CABC	CRUSHED AGGREGATE BASE COURSE
CY or CUYD	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
CG	C & G CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DISCH	DISCHARGE
DIST	DISTRICT
DG	DITCH GRADE
DOC	DOCUMENT
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC (AL)
EL or ELEV	ELEVATION
EMB	EMBANKMENT
EVP	EMERGENCY VEHICLE PREEMPT
EVPR	EMERGENCY VEHICLE PREEMPT RECEIVER
EW	ENDWALL
ENT	ENTRANCE
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EX or EXIST	EXISTING
FL or F/L	FLOW LINE
FT	FOOT
FTG	FOOTING
FDN	FOUNDATION
FTMS	FREEWAY TRAFFIC MANAGEMENT SYSTEM
G	GARAGE
GN	GRID NORTH
EXP	EXPANSION
FF	FACE TO FACE OR FRONT FACE
FP	FENCE POST
FERT	FERTILIZE
FE	FIELD ENTRANCE
F	FILL
FG	FINISH GRADE
FAB	FLASHING ARROW BOARD
HES	HIGH EARLY STRENGTH
H	HOUSE
HYD	HYDRANT
IN DIA	INCH DIAMETER
INTERS	INTERSECTION
INV	INVERT
IP	IRON PIPE OR PIN
JT	JOINT
JCT	JUNCTION
LT	LEFT
LHF	LEFT-HAND FORWARD
L	LENGTH OF CURVE
LIN FT or LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LS	LUMP SUM
MAINT	MAINTENANCE
MH	MANHOLE
MP	MARKER POST
M	MARSH
ML or M/L	MATCH LINE
MATL	MATERIAL
MB	MESSAGE BOARD
NOM	NOMINAL
NRCPSS	NON REINFORCED CONCRETE PIPE STORM SEWER
NC	NORMAL CROWN
NW or N/W	NORMAL WATER
N	NORTH
Y	NORTH GRID COORDINATE
NB	NORTHBOUND
NO	NUMBER
OBLIT	OBLITERATE
OL	OUT LOT
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PERM	PERMANENT
PLE	PERMANENT LIMITED EASEMENT
PU	PIPE UNDERDRAIN
PUDT	PIPE UNDERDRAIN DRAIN
PUU	PIPE UNDERDRAIN UNPERFORATED
PT	POINT
PCC	POINT OF COMPOUND CURVE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PCC	PORTLAND CEMENT CONCRETE
LB Pound	LB POUND
PSI	POUNDS PER SQUARE INCH
PE	PRIVATE ENTRANCE
PROJ	PROJECT
PL	PROPERTY LINE
R	RADIUS
RP	RADIUS POINT
RR	RAILROAD
RM	RAMP METER
R	RANGE
RECY	RECYCLED
RL or R/L	REFERENCE LINE
RP	REFERENCE POINT
RCCP	REINFORCED CONCRETE CULVERT PIPE
CP	CULVERT PIPE
RCHECP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE
RCPA	REINFORCED CONCRETE PIPE ARCH
RCPCP	REINFORCED CONCRETE PIPE CATTLE PASS
RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
REBAR	REINFORCEMENT BAR
REINF	REINFORCING OR REINFORCEMENT
REL	RELOCATE (D)
REM	REMAINING
REQD	REQUIRED
RES	RESIDENCE OR RESIDENTIAL
RW	RETAINING WALL
RT	RIGHT
RHF	RIGHT-HAND FORWARD
R/W	RIGHT-OF-WAY
R	RIVER
RD	ROAD
RDWY	ROADWAY
SALV	SALVAGED
SSS	SANITARY AND STORM SEWER
SAN S	SANITARY SEWER
SEC	SECTION
SHLDR	SHOULDER
SHR	SHRINKAGE
SW	SIDEWALK
SB#	SIGNAL BASE
S	SOUTH
SB	SOUTHBOUND
SP	SPECIAL
SC	SPECIAL CROSSING
SPECS	SPECIFICATIONS
SQ	SQUARE
SF or SQ FT	SQUARE FEET
SY or SQ YD	SQUARE YARD
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
SE	SUPERELEVATION
SURF	SURFACE
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TI	TEMPORARY INTEREST
TLE	TEMPORARY LIMITED EASEMENT
TPM	TEMPORARY PAVEMENT MARKING
TPMRT	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE
†	TON
TC	TOP OF CURB
T or TN	TOWN
TRANS	TRANSITION
TL or T/L	TRANSIT LINE
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
UG	UNDERGROUND
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
V	VELOCITY OR DESIGN SPEED
VERT	VERTICAL
VC	VERTICAL CURVE
VPCC	VERTICAL POINT OF COMPOUND
Curve	CURVE
VPC	VERTICAL POINT OF CURVE
VPI	VERTICAL POINT OF INTERSECTION
VPRC	VERTICAL POINT OF REVERSE CURVE
VPT	VERTICAL POINT OF TANGENCY
VIT	VITRIFIED
VOL	VOLUME
W	WATER
WM	WATER MAIN
WV	WATER VALVE
W	WELL
W	WEST
WB	WESTBOUND
YD	YARD

2



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET 4	E

2

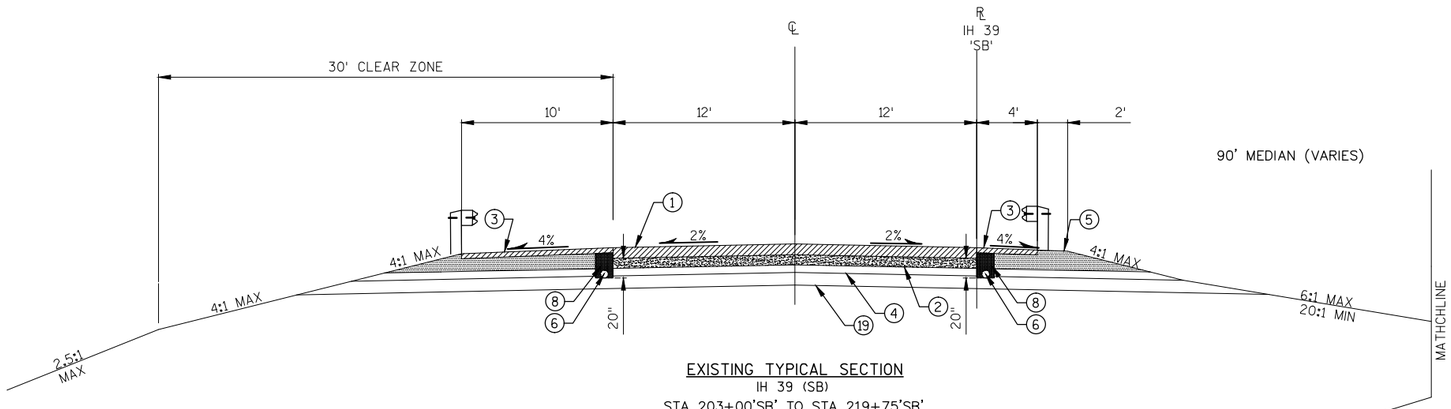


PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET 5	E

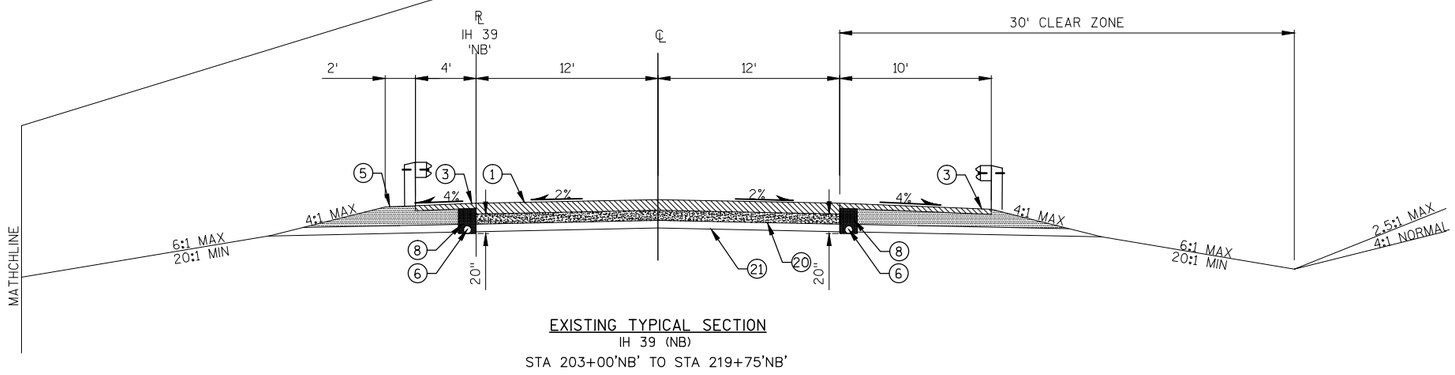
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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PROJECT OVERVIEW	SHEET 6	E



EXISTING TYPICAL SECTION
IH 39 (SB)
STA 203+00'SB' TO STA 219+75'SB'



EXISTING TYPICAL SECTION
IH 39 (NB)
STA 203+00'NB' TO STA 219+75'NB'

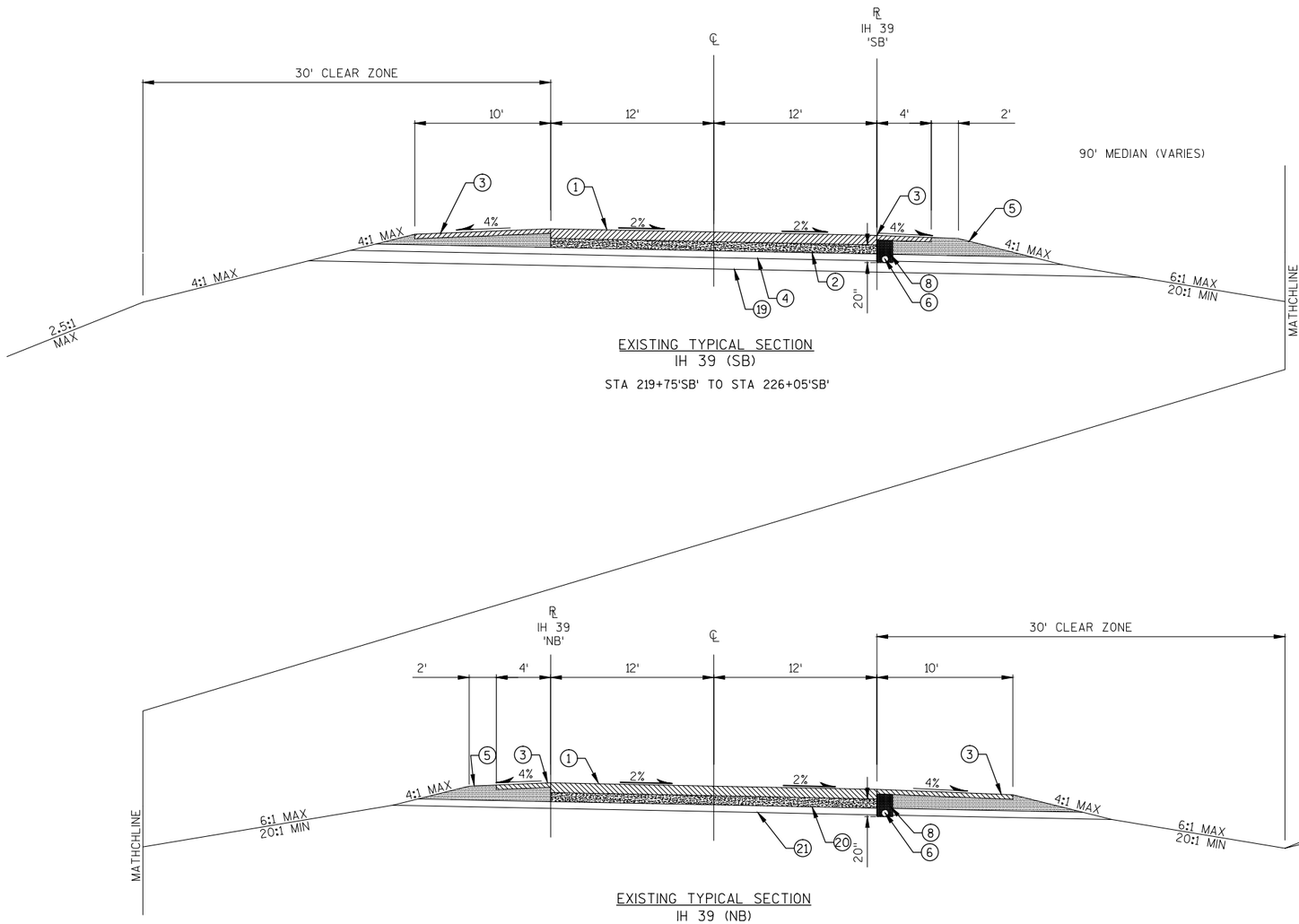
BEAMGUARD:
STA 214+77'SB' TO STA 216+46'SB' LT
STA 214+76'SB' TO STA 217+42'SB' RT

KEY

(1) 5.5" - 8.5" ASPHALT PAVEMENT
(2) 9" RUBBLIZED CONCRETE PAVEMENT
(3) 4" ASPHALT PAVEMENT
(4) 6" DISINTEGRATED GRANITE BASE COURSE
(5) SHOULDER BASE AGGREGATE
(6) 6" PIPE UNDERDRAIN
(8) OPEN GRADED BASE AGGREGATE
(19) 10" SAND/GRAVEL FILL
(20) 10" RUBBLIZED CONCRETE PAVEMENT
(21) 5" BITUMINOUS BASE COURSE

BEAMGUARD:
STA 209+42'NB' TO STA 212+86'NB' LT
STA 210+63'NB' TO STA 212+87'NB' RT

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	EXISTING TYPICAL SECTIONS	SHEET 7	E



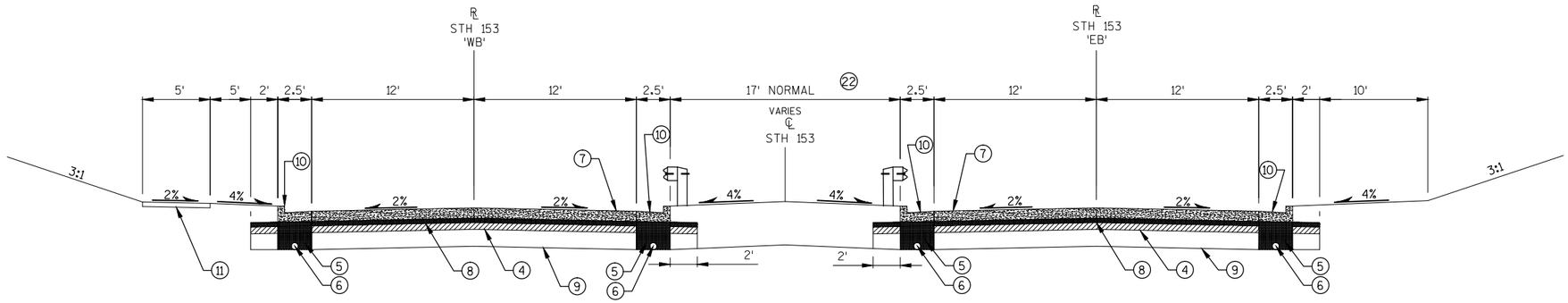
EXISTING TYPICAL SECTION
IH 39 (SB)
STA 219+75'SB' TO STA 226+05'SB'

EXISTING TYPICAL SECTION
IH 39 (NB)
STA 219+75'NB' TO STA 224+05'NB'

KEY

(1) 5.5" - 8.5" ASPHALT PAVEMENT
(2) 9" RUBBLIZED CONCRETE PAVEMENT
(3) 4" ASPHALT PAVEMENT
(4) 6" DISINTEGRATED GRANITE BASE COURSE
(5) SHOULDER BASE AGGREGATE
(6) 6" PIPE UNDERDRAIN
(8) OPEN GRADED BASE AGGREGATE
(19) 10" SAND/GRAVEL FILL
(20) 10" RUBBLIZED CONCRETE PAVEMENT
(21) 5" BITUMINOUS BASE COURSE

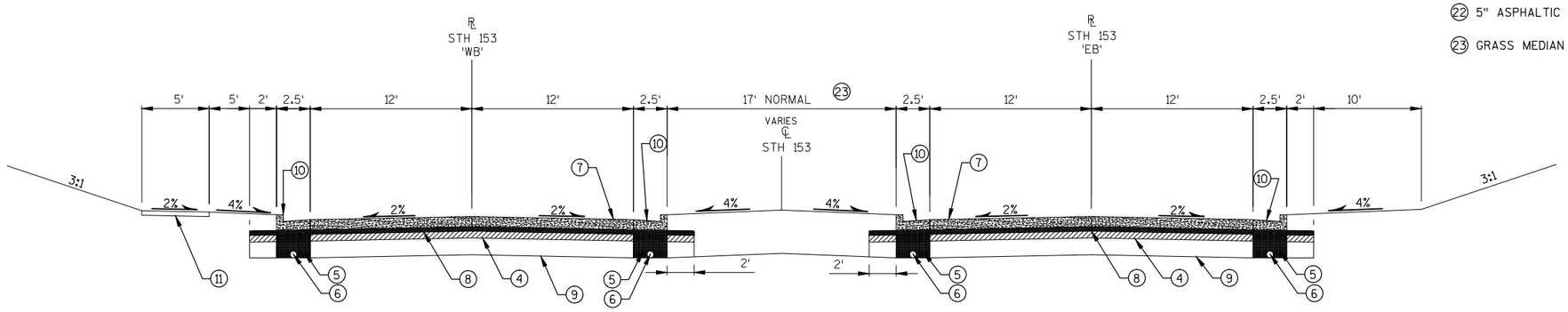
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	EXISTING TYPICAL SECTIONS	SHEET 8	E



EXISTING TYPICAL SECTION
STH 153
(IH 39 TEMPORARY BYPASS PIER LOCATION)
STA 48+60 TO STA 51+50

KEY

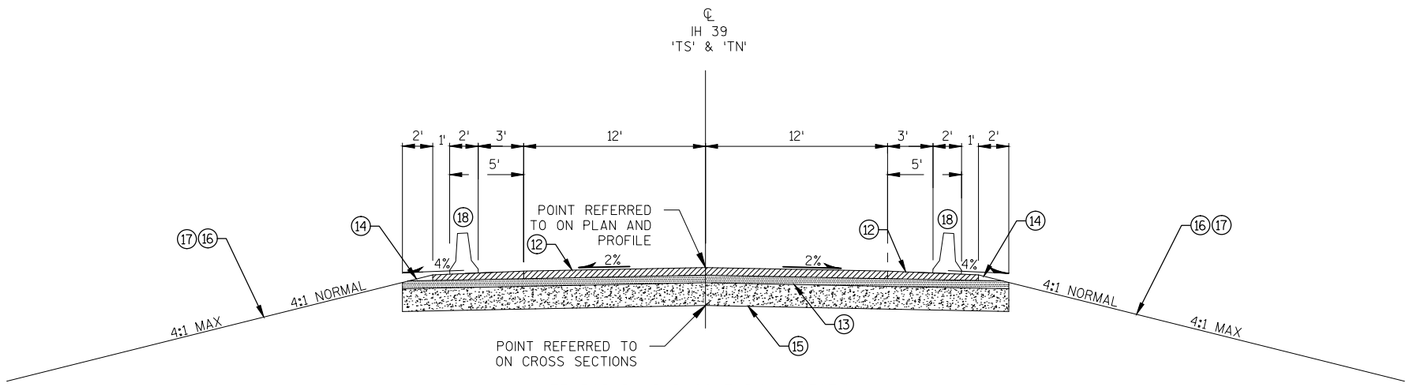
④ 6" BASE AGGREGATE DENSE
⑤ OPEN GRADED BASE AGGREGATE
⑥ 6" PIPE UNDERDRAIN
⑦ 9" CONCRETE PAVEMENT
⑧ 4" AGGREGATE BASE COURSE, OPEN GRADED
⑨ 15" GRANULAR SUBBASE
⑩ CONCRETE CURB AND GUTTER
⑪ 4" CONCRETE SIDEWALK
㉒ 5" ASPHALTIC PAVEMENT
㉓ GRASS MEDIAN



EXISTING TYPICAL SECTION
STH 153
(IN STREETSCAPE AREAS)
STA 41+75 TO STA 48+60
STA 51+50 TO STA 74+50

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	EXISTING TYPICAL SECTIONS	SHEET 9	E

2



TEMPORARY BYPASS TYPICAL SECTION

IH 39 (SB & NB)

STA 208+36'TS' TO STA 213+00'TS'
STA 215+00'TS' TO STA 219+69'TS'
STA 208+37'TN' TO STA 213+00'TN'
STA 215+00'TN' TO STA 219+67'TN'

KEY

⑫ 6" ASPHALTIC SURFACE TEMPORARY

⑬ 6" BASE AGGREGATE DENSE 1 ¼-INCH

⑭ 6" BASE AGGREGATE DENSE ¾-INCH

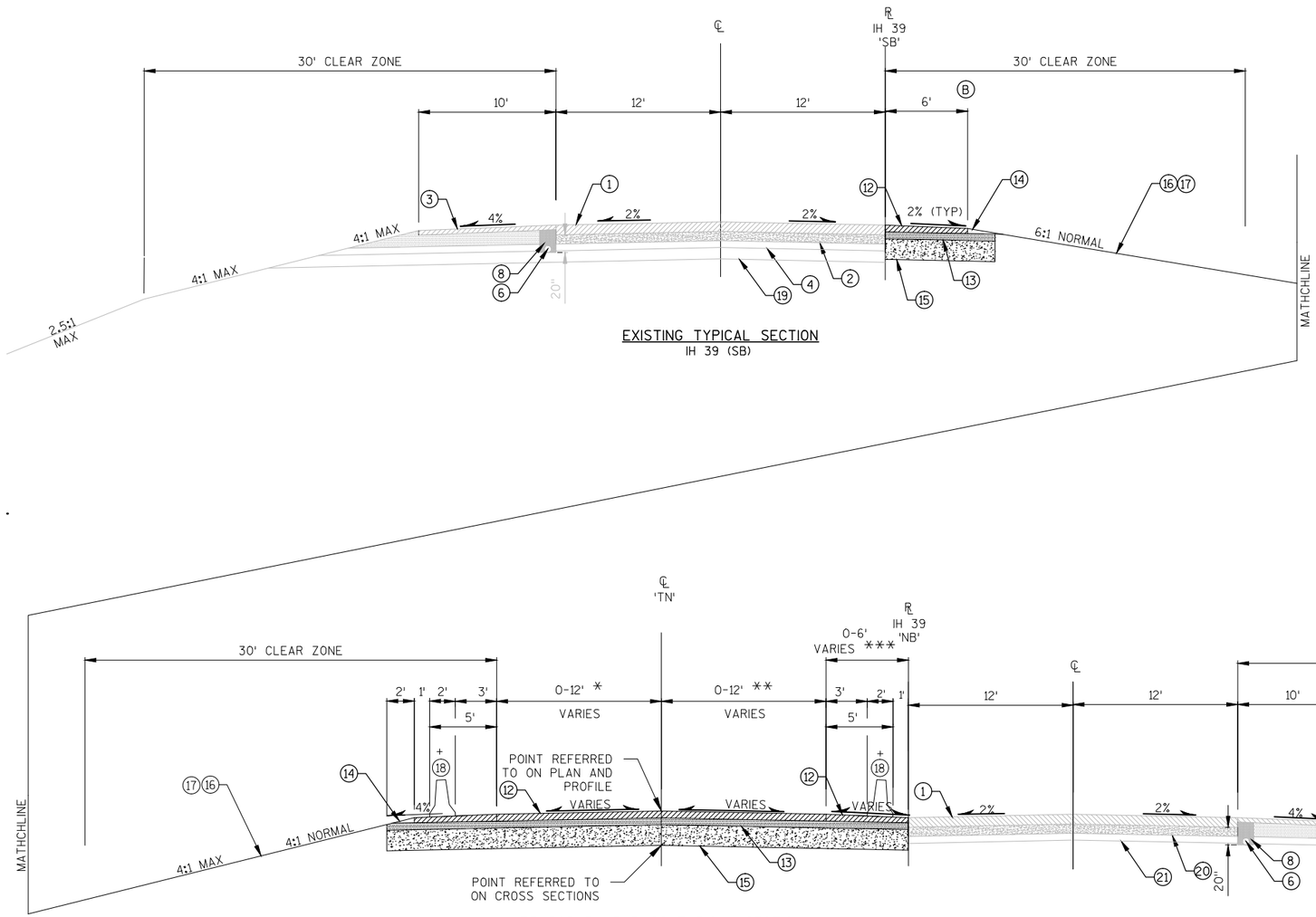
⑮ 18" SELECT CRUSHED MATERIAL

⑯ SALVAGED TOPSOIL

⑰ SEEDING TEMPORARY AND FERTILIZER TYPE B

⑱ CONCRETE BARRIER TEMPORARY PRECAST

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TEMPORARY BYPASS TYPICAL SECTIONS	SHEET 10	E



EXISTING TYPICAL SECTION
IH 39 (SB)

TEMPORARY BYPASS TYPICAL SECTION
TN LINE
STA 203+00'TN' TO STA 208+37'TN'
STA 219+67'TN' TO STA 224+05'TN'

+(18) TEMPORARY PRECAST CONCRETE BARRIER
STA 203+54'TN' TO STA 223+90'TN', LT
STA 207+00'TN' TO STA 222+00'TN', RT

KEY

(1) 5.5" - 8.5" ASPHALT PAVEMENT
(2) 9" RUBBLIZED CONCRETE PAVEMENT
(3) 4" ASPHALT PAVEMENT
(4) 6" DISINTEGRATED GRANITE BASE COURSE
(5) SHOULDER BASE AGGREGATE
(6) 6" PIPE UNDERDRAIN
(8) OPEN GRADED BASE AGGREGATE
(12) 6" ASPHALTIC SURFACE TEMPORARY
(13) 6" BASE AGGREGATE DENSE 1 ¼-INCH
(14) 6" BASE AGGREGATE DENSE ¾-INCH
(15) 18" SELECT CRUSHED MATERIAL
(16) SALVAGED TOPSOIL
(17) SEEDING TEMPORARY AND FERTILIZER TYPE B
(18) CONCRETE BARRIER TEMPORARY PRECAST
(19) 10" SAND/GRAVEL FILL
(20) 10" RUBBLIZED CONCRETE PAVEMENT
(21) 5" BITUMINOUS BASE COURSE

SOUTH OF STH 153
* STA 203+00'TN' TO STA 206+49'TN'
** STA 206+49'TN' TO STA 207+95'TN'
*** STA 207+95'TN' TO STA 208+37'TN'

NORTH OF STH 153
* STA 221+28'TN' TO STA 224+05'TN'
** STA 220+18'TN' TO 221+28'TN'
*** STA 219+67'TN' TO STA 220+18'TN'

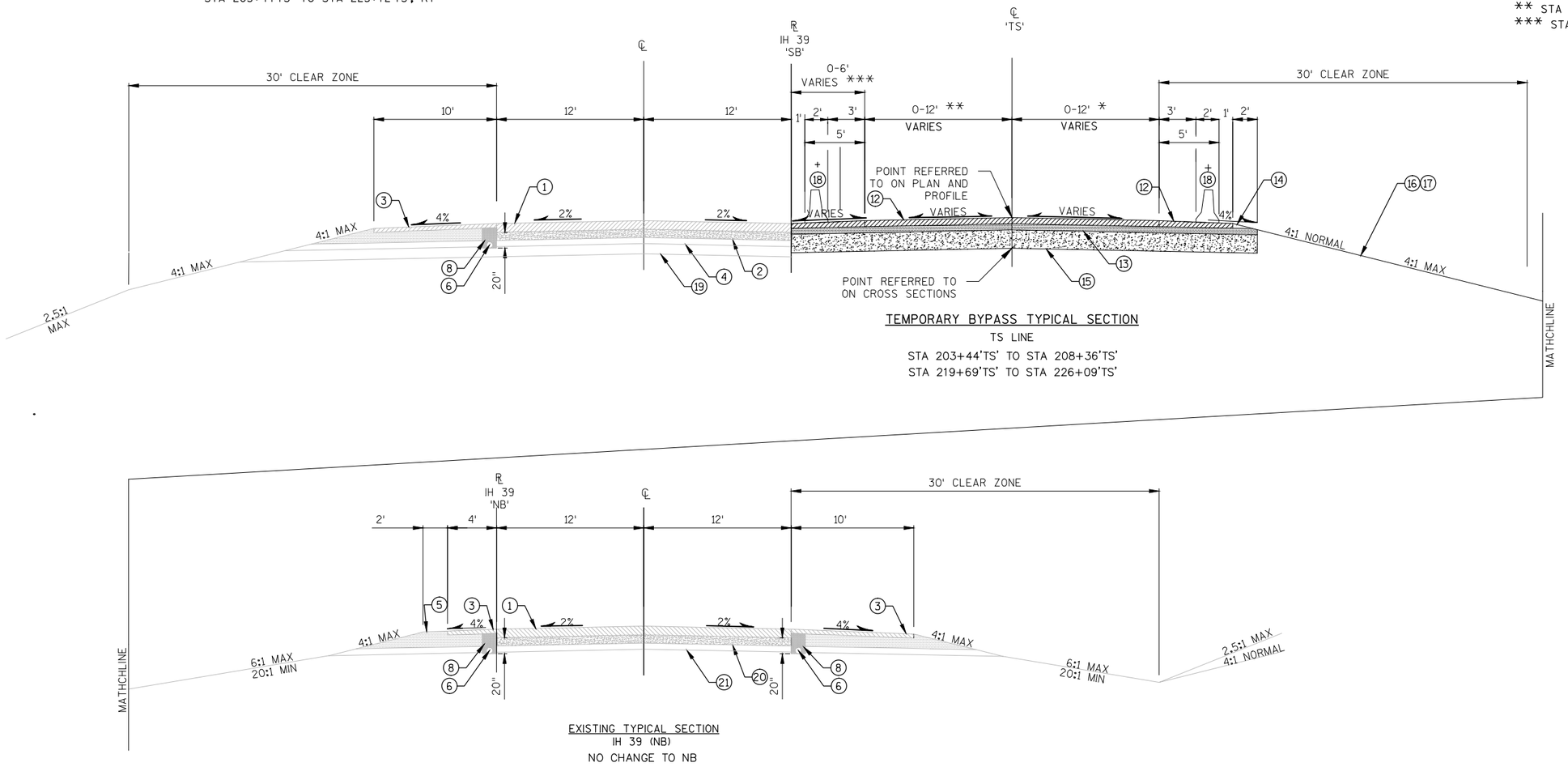
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TEMPORARY BYPASS TYPICAL SECTIONS	SHEET 11	E

2

+⑱ TEMPORARY PRECAST CONCRETE BARRIER
STA 208+23'TS' TO STA 222+10'TS', LT
STA 203+44'TS' TO STA 225+72'TS', RT

SOUTH OF STH 153
* STA 203+00'TS' TO STA 206+54'TS'
** STA 206+54'TS' TO STA 207+81'TS'
*** STA 207+81'TS' TO STA 208+36'TS'

NORTH OF STH 153
* STA 221+94'TS' TO STA 226+09'TS'
** STA 220+30'TS' TO 221+94'TS'
*** STA 219+69'TS' TO STA 220+30'TS'



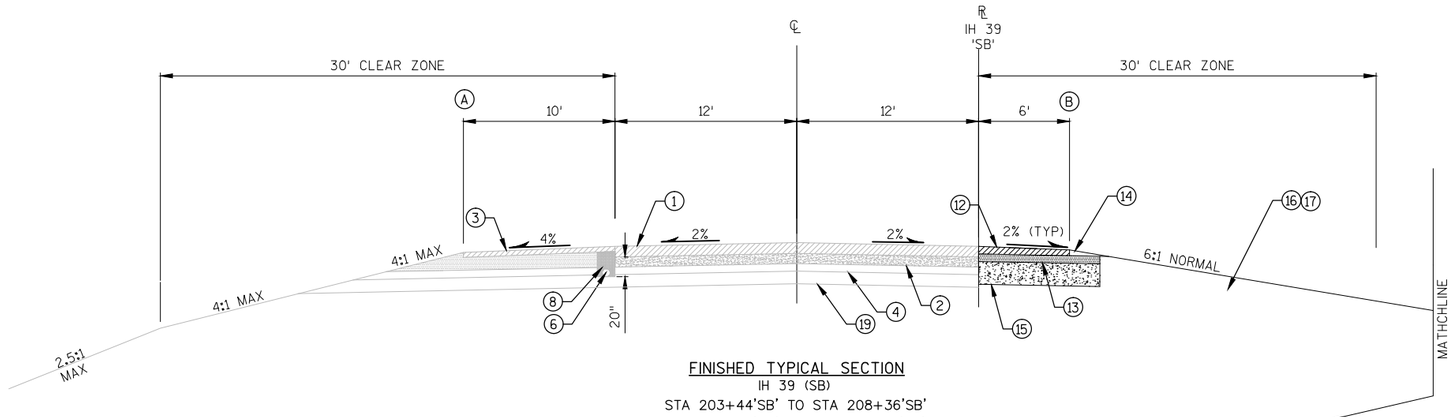
TEMPORARY BYPASS TYPICAL SECTION
TS LINE
STA 203+44'TS' TO STA 208+36'TS'
STA 219+69'TS' TO STA 226+09'TS'

EXISTING TYPICAL SECTION
IH 39 (NB)
NO CHANGE TO NB

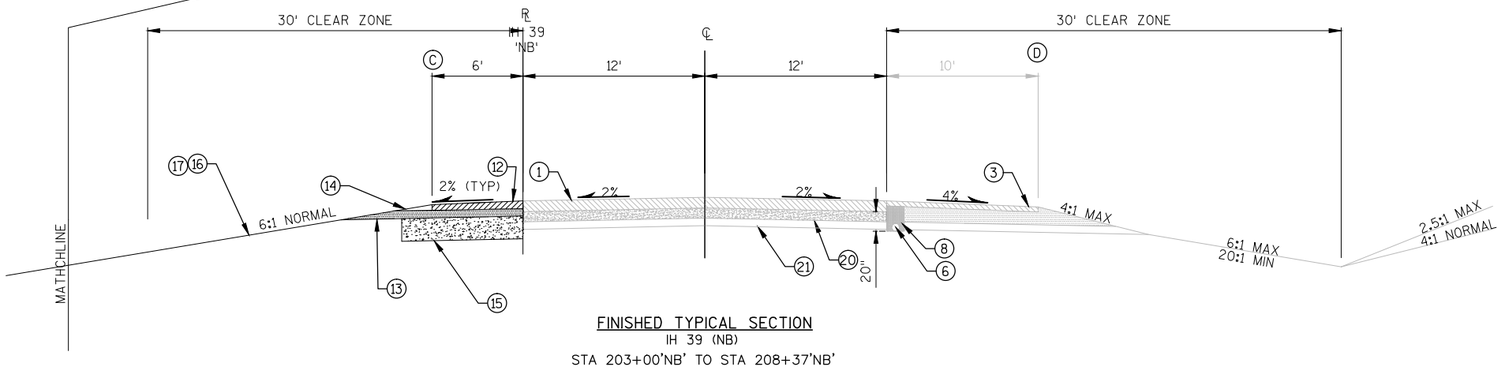
KEY

① 5.5" - 8.5" ASPHALT PAVEMENT
② 9" RUBBLIZED CONCRETE PAVEMENT
③ 4" ASPHALT PAVEMENT
④ 6" DISINTEGRATED GRANITE BASE COURSE
⑤ SHOULDER BASE AGGREGATE
⑥ 6" PIPE UNDERDRAIN
⑧ OPEN GRADED BASE AGGREGATE
⑫ 6" ASPHALTIC SURFACE TEMPORARY
⑬ 6" BASE AGGREGATE DENSE 1 ¼-INCH
⑭ 6" BASE AGGREGATE DENSE ¾-INCH
⑮ 18" SELECT CRUSHED MATERIAL
⑯ SALVAGED TOPSOIL
⑰ SEEDING TEMPORARY AND FERTILIZER TYPE B
⑱ CONCRETE BARRIER TEMPORARY PRECAST
⑲ 10" SAND/GRAVEL FILL
⑳ 10" RUBBLIZED CONCRETE PAVEMENT
㉑ 5" BITUMINOUS BASE COURSE

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TEMPORARY BYPASS TYPICAL SECTIONS	SHEET 12	E



FINISHED TYPICAL SECTION
IH 39 (SB)
STA 203+44'SB' TO STA 208+36'SB'
STA 219+69'SB' TO STA 219+75'SB'

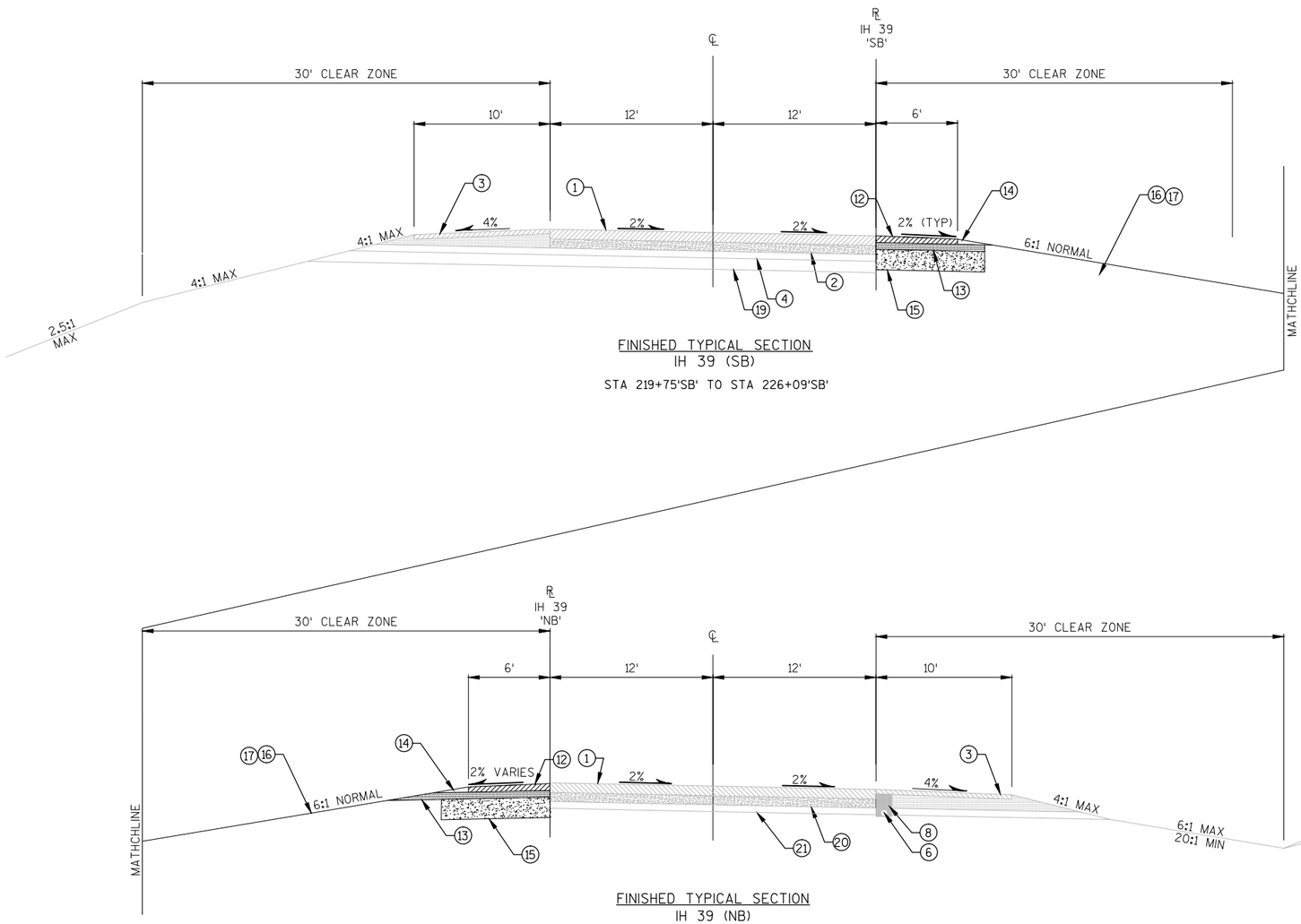


FINISHED TYPICAL SECTION
IH 39 (NB)
STA 203+00'NB' TO STA 208+37'NB'
STA 219+67'NB' TO STA 219+75'NB'

KEY

1. 5.5" - 8.5" ASPHALT PAVEMENT
2. 9" RUBBLIZED CONCRETE PAVEMENT
3. 4" ASPHALT PAVEMENT
4. 6" DISINTEGRATED GRANITE BASE COURSE
6. 6" PIPE UNDERDRAIN
8. OPEN GRADED BASE AGGREGATE
12. 6" ASPHALTIC SURFACE TEMPORARY
13. 6" BASE AGGREGATE DENSE 1 ¼-INCH
14. 6" BASE AGGREGATE DENSE ¾-INCH
15. 18" SELECT CRUSHED MATERIAL
16. SALVAGED TOPSOIL
17. SEEDING TEMPORARY AND FERTILIZER TYPE B
19. 10" SAND/GRAVEL FILL
20. 10" RUBBLIZED CONCRETE PAVEMENT
21. 5" BITUMINOUS BASE COURSE

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 13	E



FINISHED TYPICAL SECTION
IH 39 (SB)
STA 219+75'SB' TO STA 226+09'SB'

FINISHED TYPICAL SECTION
IH 39 (NB)
STA 219+75'NB TO STA 224+05"NB'

KEY

(1) 5.5" - 8.5" ASPHALT PAVEMENT
(2) 9" RUBBLIZED CONCRETE PAVEMENT
(3) 4" ASPHALT PAVEMENT
(4) 6" DISINTEGRATED GRANITE BASE COURSE
(6) 6" PIPE UNDERDRAIN
(8) OPEN GRADED BASE AGGREGATE
(12) 6" ASPHALTIC SURFACE TEMPORARY
(13) 6" BASE AGGREGATE DENSE 1 ¼-INCH
(14) 6" BASE AGGREGATE DENSE ¾-INCH
(15) 18" SELECT CRUSHED MATERIAL
(16) SALVAGED TOPSOIL
(17) SEEDING TEMPORARY AND FERTILIZER TYPE B
(19) 10" SAND/GRAVEL FILL
(20) 10" RUBBLIZED CONCRETE PAVEMENT
(21) 5" BITUMINOUS BASE COURSE

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TYPICAL SECTIONS	SHEET 14	E

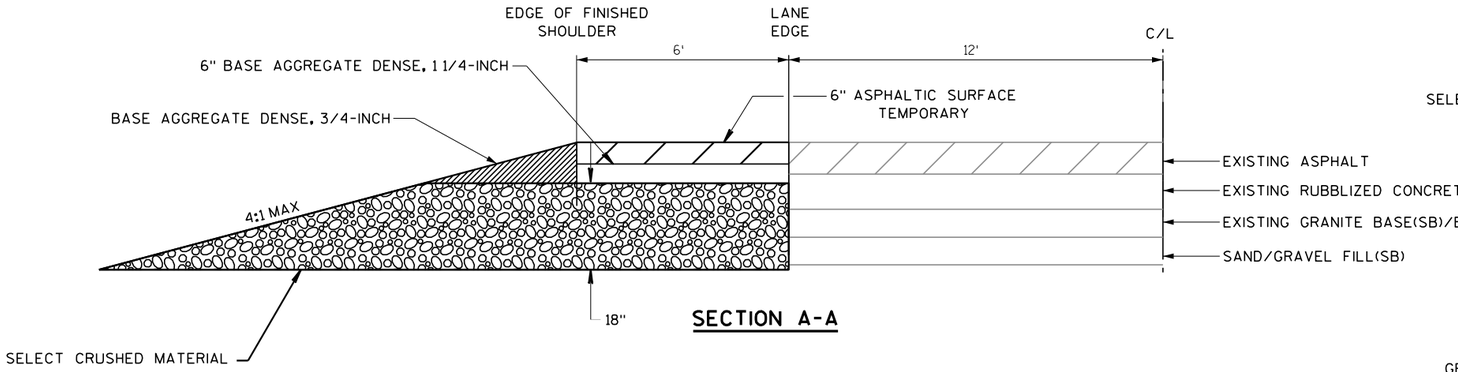
2

SB TEMPORARY BYPASS SUPER-ELEVATION TABLE

STATION	INSIDE LANE	OUTSIDE LANE
203+00 'TS'	-	-
203+50 'TS'	-	-2.00%
204+00 'TS'	-	-2.00%
204+50 'TS'	-	-2.00%
205+00 'TS'	-	-2.00%
205+50 'TS'	-	-2.00%
206+00 'TS'	-	-2.00%
206+50 'TS'	-	-2.00%
207+00 'TS'	-1.00%	-2.00%
207+50 'TS'	-1.50%	-2.00%
208+00 'TS'	-2.00%	-2.00%
208+50 'TS'	-1.00%	-1.00%
209+00 'TS'	0.00%	0.00%
209+50 'TS'	1.00%	1.00%
210+00 'TS'	2.00%	2.00%
210+50 'TS'	2.00%	2.00%
211+00 'TS'	2.00%	2.00%
211+50 'TS'	2.00%	1.00%
212+00 'TS'	2.00%	0.00%
212+50 'TS'	2.00%	-1.00%
212+97 'TS'	2.00%	-2.00%
215+00 'TS'	2.00%	-2.00%
215+50 'TS'	2.00%	-1.00%
216+00 'TS'	2.00%	0.00%
216+50 'TS'	2.00%	1.00%
217+00 'TS'	2.00%	2.00%
217+50 'TS'	2.00%	2.00%
218+00 'TS'	2.00%	2.00%
218+50 'TS'	1.00%	1.00%
219+00 'TS'	0.00%	0.00%
219+50 'TS'	-1.00%	-1.00%
220+00 'TS'	-2.00%	-2.00%
220+50 'TS'	-2.00%	-2.00%
221+00 'TS'	-2.00%	-2.00%
221+50 'TS'	-2.00%	-2.00%
222+00 'TS'	-	-2.00%
222+50 'TS'	-	-2.00%
223+00 'TS'	-	-2.00%
223+50 'TS'	-	-2.00%
224+00 'TS'	-	-2.00%
224+50 'TS'	-	-2.00%
225+00 'TS'	-	-2.00%
225+50 'TS'	-	-2.00%
226+00 'TS'	-	-
226+05 'TS'	-	-

NB TEMPORARY BYPASS SUPER-ELEVATION TABLE

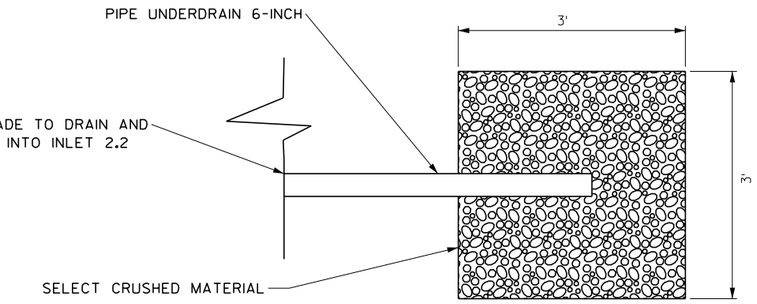
STATION	INSIDE LANE	OUTSIDE LANE
203+00 'TN'	-	-
203+50 'TN'	-	2.00%
204+00 'TN'	-	2.00%
204+50 'TN'	-	2.00%
205+00 'TN'	-	2.00%
205+50 'TN'	-	2.00%
206+00 'TN'	-	2.00%
206+50 'TN'	-	2.00%
207+00 'TN'	2.00%	2.00%
207+50 'TN'	2.00%	2.00%
208+00 'TN'	2.00%	2.00%
208+50 'TN'	1.00%	1.00%
209+00 'TN'	0.00%	0.00%
209+50 'TN'	-1.00%	-1.00%
210+00 'TN'	-2.00%	-2.00%
210+50 'TN'	-2.00%	-2.00%
211+00 'TN'	-2.00%	-2.00%
211+50 'TN'	-1.00%	-2.00%
212+00 'TN'	0.00%	-2.00%
212+50 'TN'	1.00%	-2.00%
212+97 'TN'	2.00%	-2.00%
215+00 'TN'	2.00%	-2.00%
215+50 'TN'	1.00%	-2.00%
216+00 'TN'	0.00%	-2.00%
216+50 'TN'	-1.00%	-2.00%
217+00 'TN'	-2.00%	-2.00%
217+50 'TN'	-2.00%	-2.00%
218+00 'TN'	-2.00%	-2.00%
218+50 'TN'	-1.00%	-1.00%
219+00 'TN'	0.00%	0.00%
219+50 'TN'	1.00%	1.00%
220+00 'TN'	2.00%	2.00%
220+50 'TN'	2.00%	2.00%
221+00 'TN'	2.00%	2.00%
221+50 'TN'	-	2.00%
222+00 'TN'	-	2.00%
222+50 'TN'	-	2.00%
223+00 'TN'	-	2.00%
223+50 'TN'	-	-
224+00 'TN'	-	-
224+50 'TN'	-	-
224+53 'TN'	-	-



SECTION A-A

SELECT CRUSHED MATERIAL DRAIN DETAIL

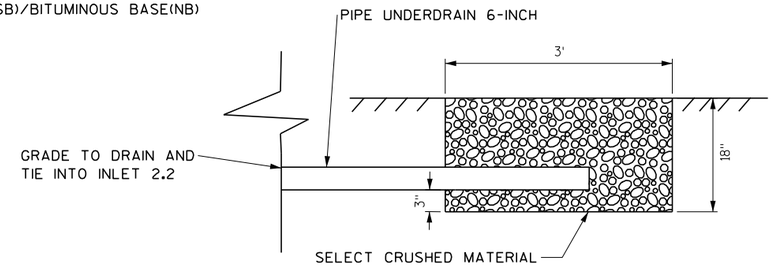
(LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER, 200' NOR SPACING)



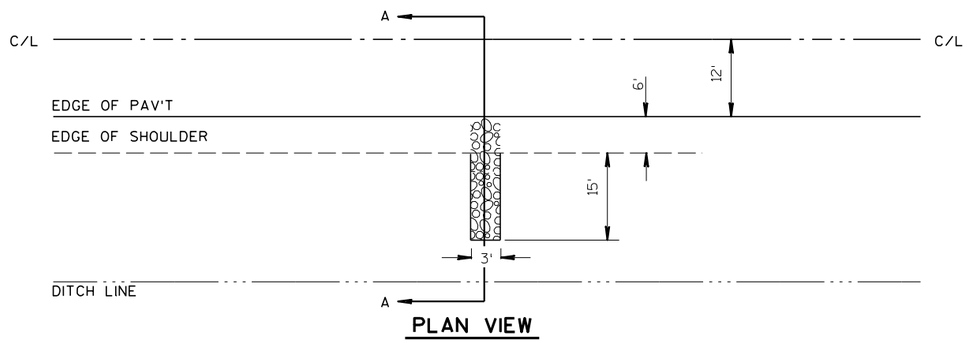
PLAN

STA 219+00 'SB', 5.5'RT

*PAID AS SELECT CRUSHED MATERIAL DRAIN (1 EACH)



PROFILE



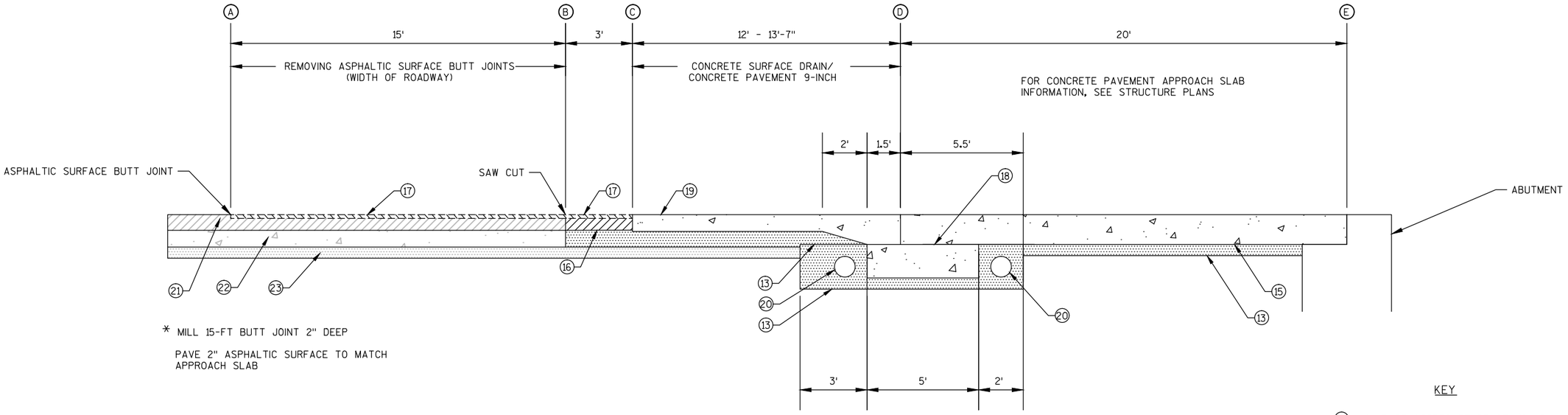
PLAN VIEW

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 20 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 7.5 ACRES

	B-37-148	B-37-149
A	215+17.56 'SB'	215+13.57 'NB'
B	215+02.56 'SB'	214+98.57 'NB'
C	214+99.56 'SB'	214+95.57 'NB'
D	214+86.21 'SB'	214+83.33 'NB'
D	214+66.34 'SB'	214+63.46 'NB'

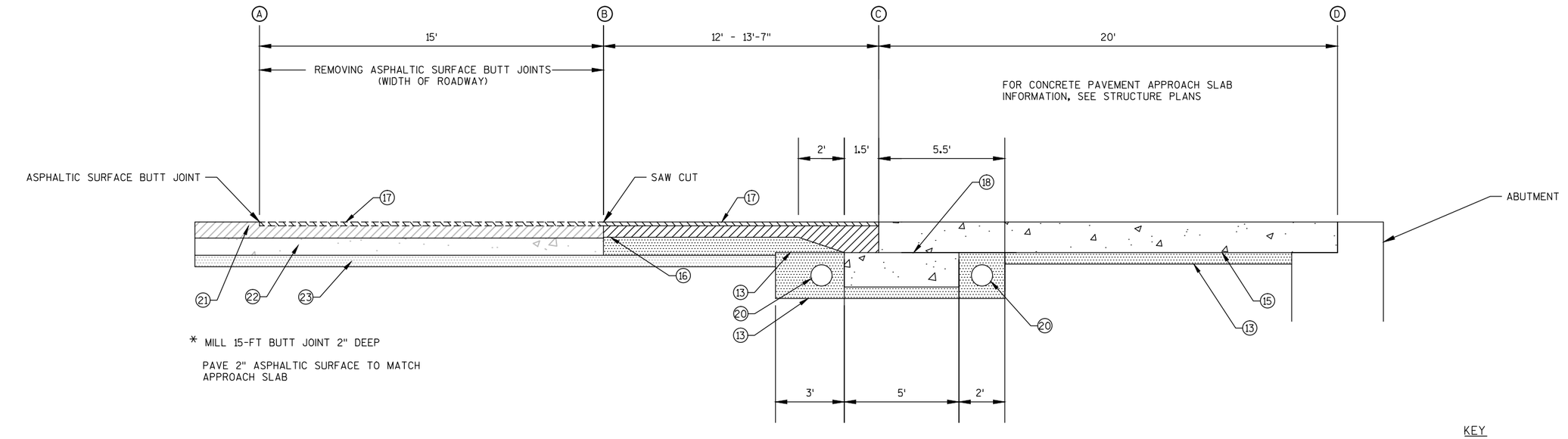


NORTH APPROACH SLAB PAVING DETAIL

KEY

(12) 8" BASE AGGREGATE DENSE 1¼-INCH
(13) 6" BASE AGGREGATE DENSE 1¼-INCH
(15) 16" CONCRETE APPROACH SLAB
(16) 8" ASPHALTIC SURFACE (HMA PAVEMENT TYPE E-10)
(17) 2" ASPHALTIC SURFACE (HMA PAVEMENT TYPE E-10)
(18) 18" CONCRETE FOOTING
(19) CONCRETE PAVEMENT 9-INCH
(20) UNDERDRAIN, SEE STRUCTURE DETAIL
(21) EXISTING 5.5" - 8.5" ASPHALT PAVEMENT
(22) EXISTING 10" RUBBLIZED CONCRETE PAVEMENT
(23) EXISTING 6" BASE AGGREGATE DENSE

	B-37-148	B-37-149
A	212+51.89 'SB'	212+48.41 'NB'
B	212+66.89 'SB'	212+63.41 'NB'
C	212+79.13 'SB'	212+76.75 'NB'
D	212+99.00 'SB'	212+96.62 'NB'

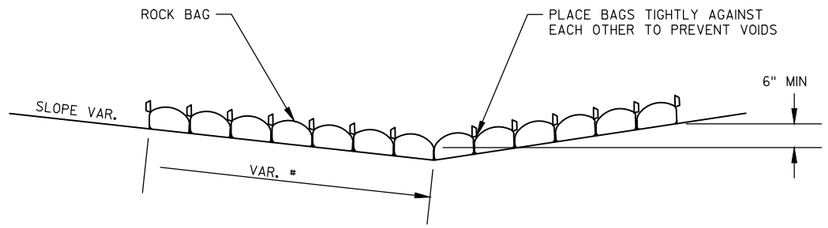


SOUTH APPROACH SLAB PAVING DETAIL

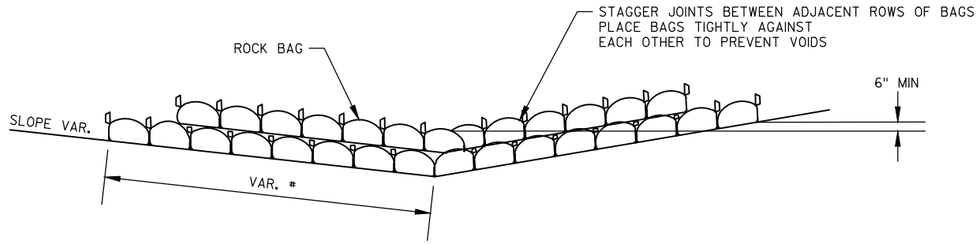
KEY

- (12) 8" BASE AGGREGATE DENSE 1¼-INCH
- (13) 6" BASE AGGREGATE DENSE 1¼-INCH
- (15) 16" CONCRETE APPROACH SLAB
- (16) 8" ASPHALTIC SURFACE (HMA PAVEMENT TYPE E-10)
- (17) 2" ASPHALTIC SURFACE (HMA PAVEMENT TYPE E-10)
- (18) 18" CONCRETE FOOTING
- (20) UNDERDRAIN, SEE STRUCTURE DETAIL
- (21) EXISTING 5.5" - 8.5" ASPHALT PAVEMENT
- (22) EXISTING 10" RUBBLIZED CONCRETE PAVEMENT
- (23) EXISTING 6" BASE AGGREGATE DENSE

2

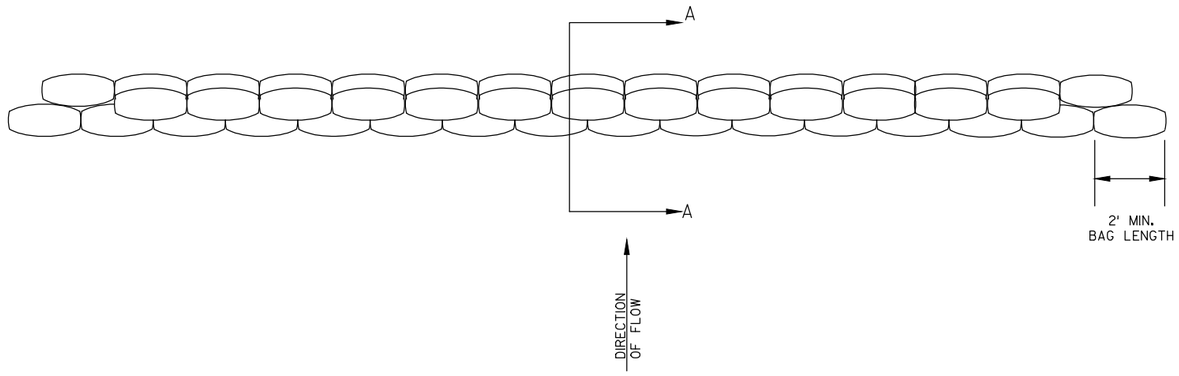


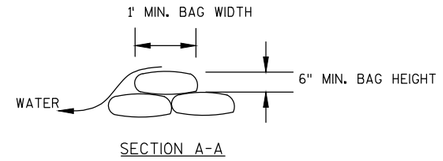
SIDE VIEW (SINGLE LAYER)



LENGTH AND NUMBER OF BAGS MAY VARY
DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)

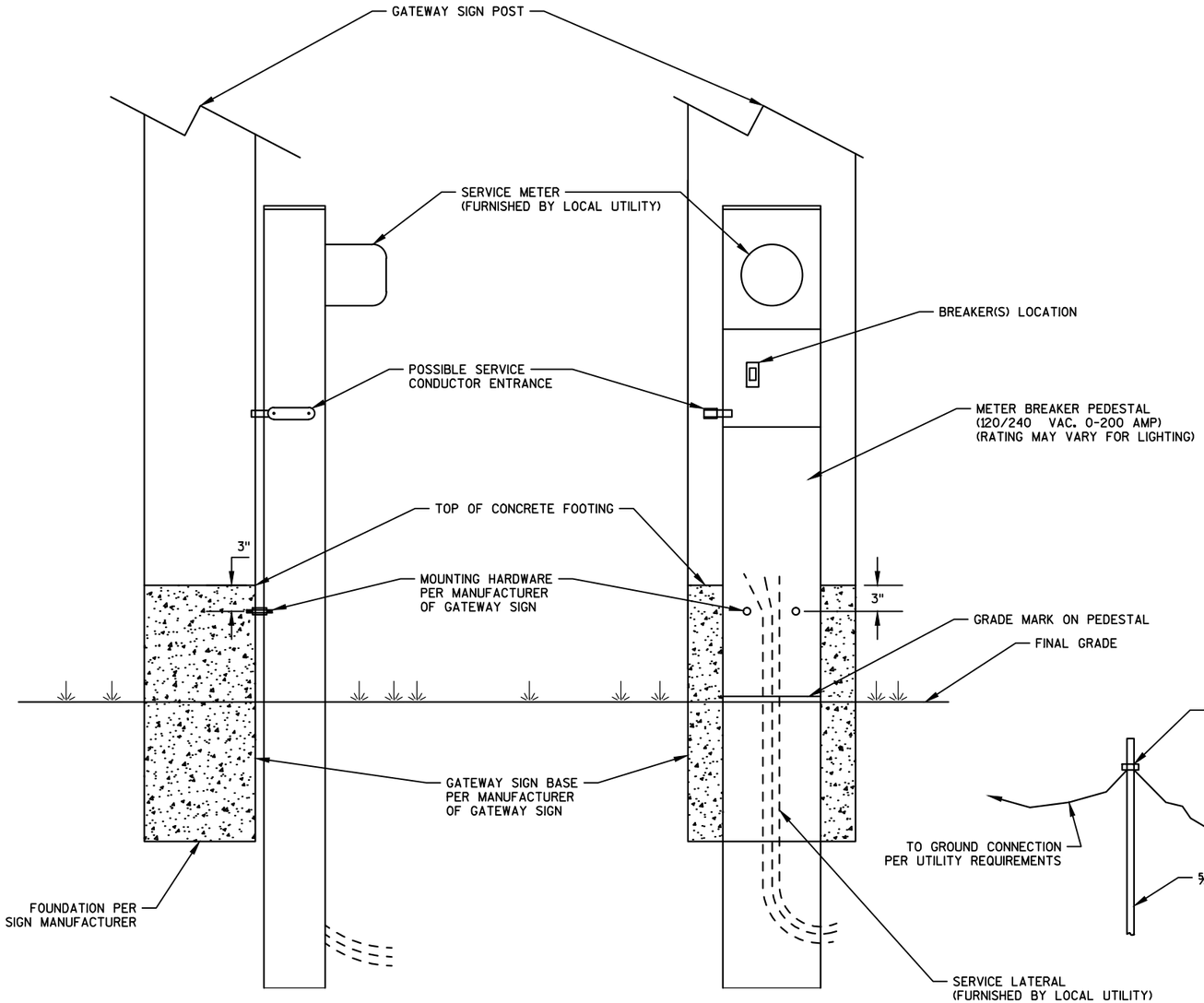




SECTION A-A

ROCK BAGS USED FOR DITCH CHECKS DETAIL

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CONSTRUCTION DETAILS	SHEET 19	E



ELECTRICAL SERVICE INSTALLATION
GATEWAY SIGN

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING 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.

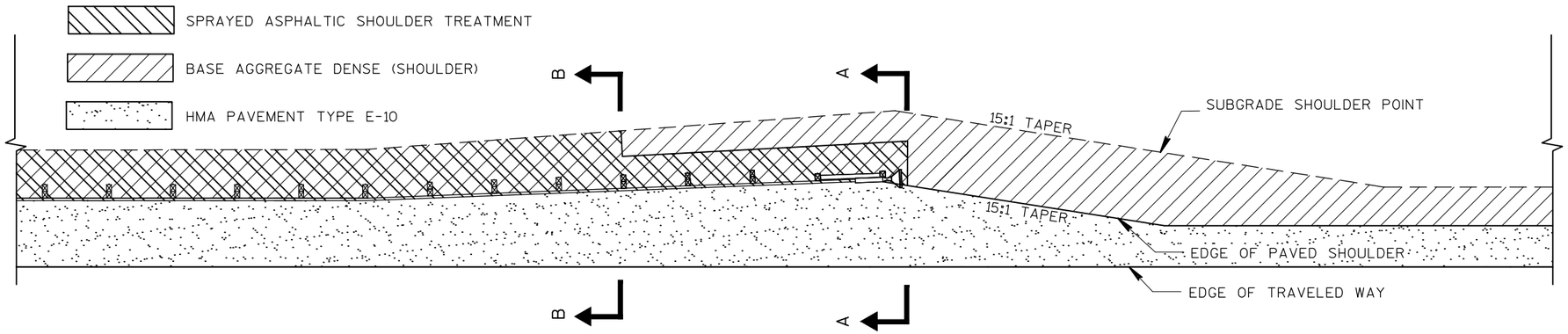
CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE GATEWAY SIGN THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

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.

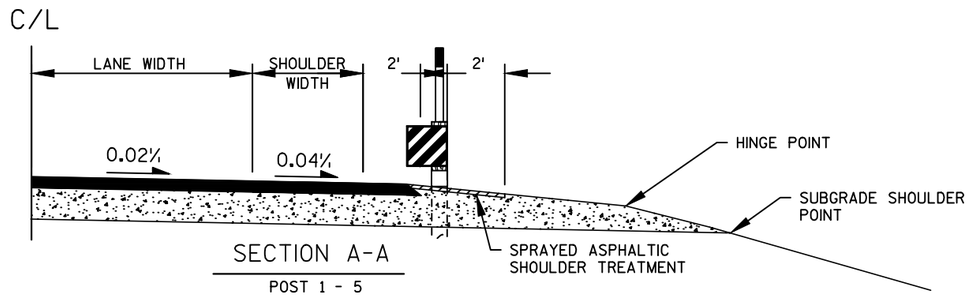
SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

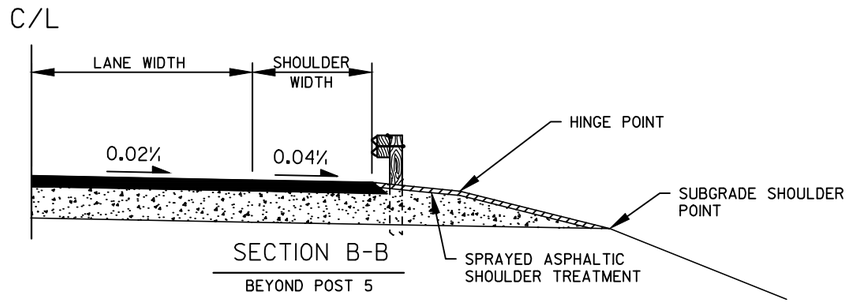
ELECTRICAL SERVICE IS INCIDENTAL TO GATEWAY SIGN.



NOTE: SEE STANDARD DETAIL DRAWINGS
MIDWEST GUARDRAIL SYSTEM SYSTEM (MGS) GUARDRAIL
MIDWEST GUARDRAIL SYSTEM (MGS) EAT
MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION

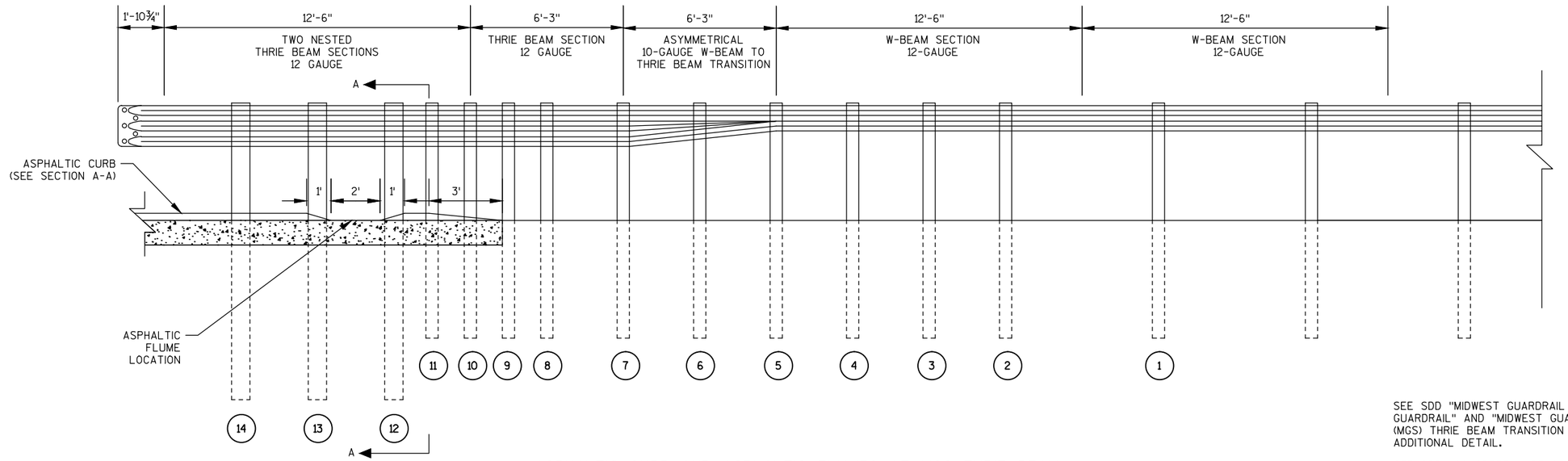


SECTION A-A
POST 1 - 5



SECTION B-B
BEYOND POST 5

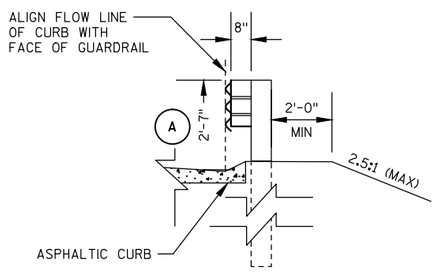
GUARDRAIL DETAIL



ASPHALTIC CURB AND ASPHALTIC FLUMES AT MGS THRIE BEAM

SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL" AND "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION (MGS)" FOR ADDITIONAL DETAIL.

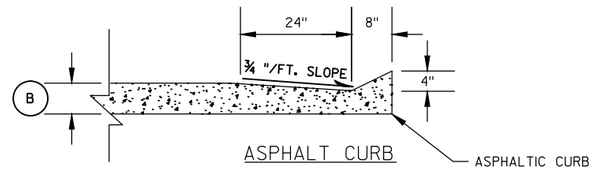
SEE SDD "CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES" FOR ADDITIONAL DETAILS.



SECTION A-A
POSTS 9-14

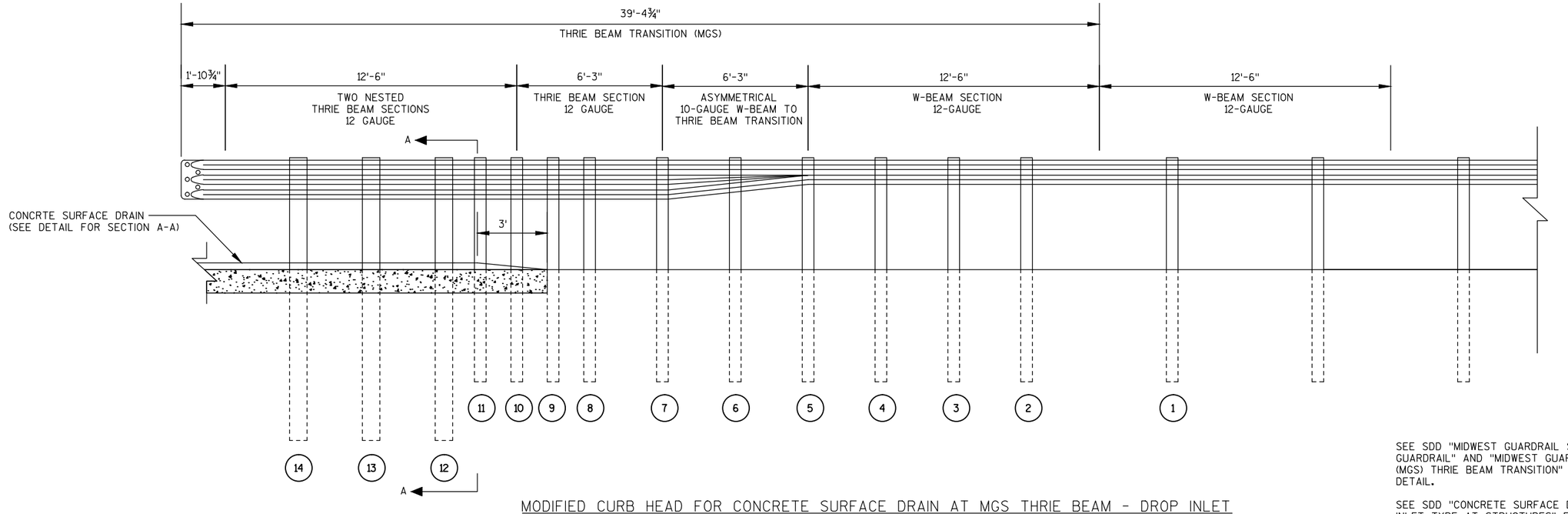
(A) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1".

(B) MATCH DEPTH OF ASPHALTIC SURFACE



ASPHALT CURB

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	GUARDRAIL DETAIL	SHEET 22	E

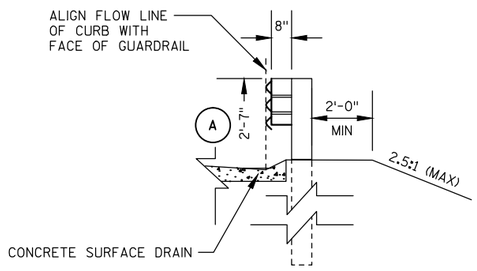


MODIFIED CURB HEAD FOR CONCRETE SURFACE DRAIN AT MGS THRIE BEAM - DROP INLET

SEE SDD "MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL" AND "MIDWEST GUARDRAIL SYSTEM (MGS) THRIE BEAM TRANSITION" FOR ADDITIONAL DETAIL.

SEE SDD "CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES" FOR ADDITIONAL DETAILS.

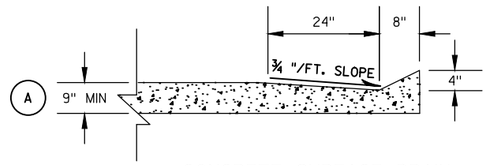
MODIFIED CURB HEAD CONSTRUCTION IS INCIDENTAL TO CONCRETE SURFACE DRAIN



SECTION A-A
POSTS 9-14

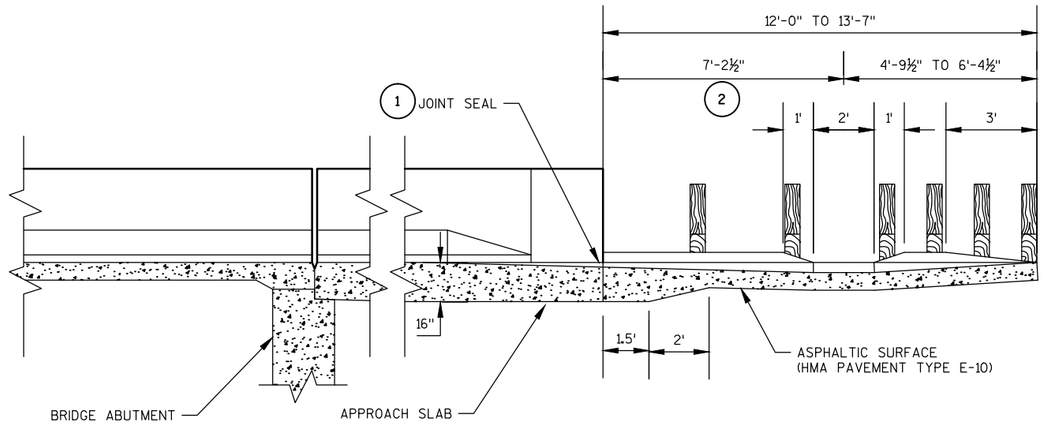
(A) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1".

(A) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 9" MINIMUM GUTTER THICKNESS IS MAINTAINED.

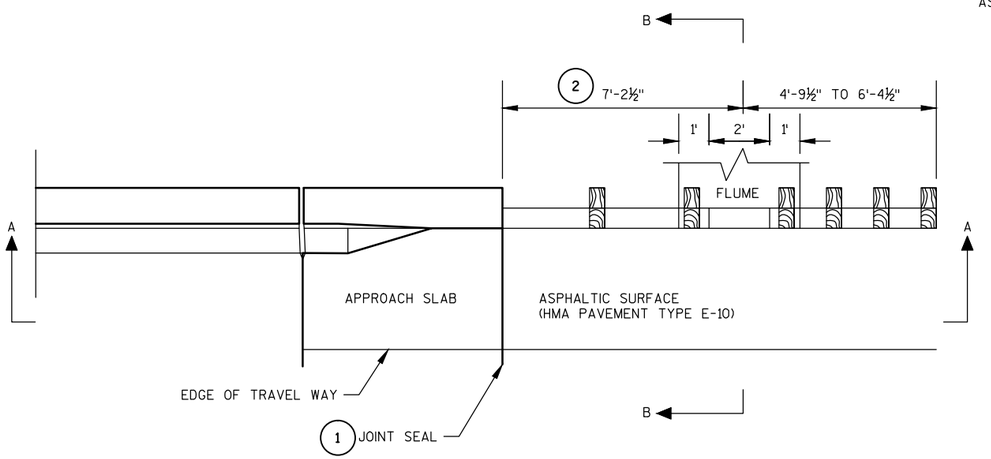


CONCRETE SURFACE DRAIN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	GUARDRAIL DETAIL	SHEET 23	E



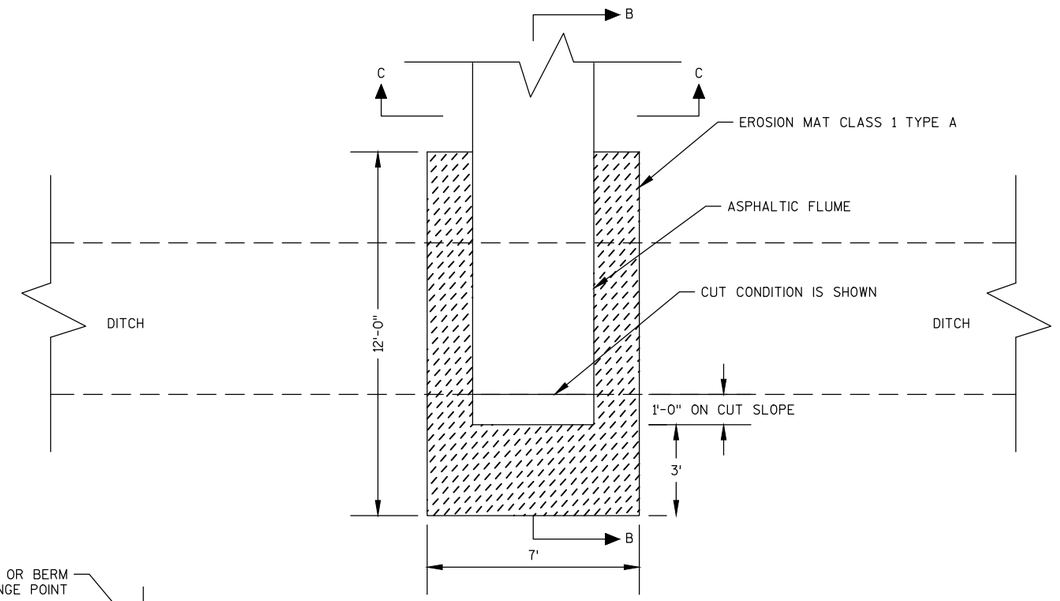
SECTION A-A



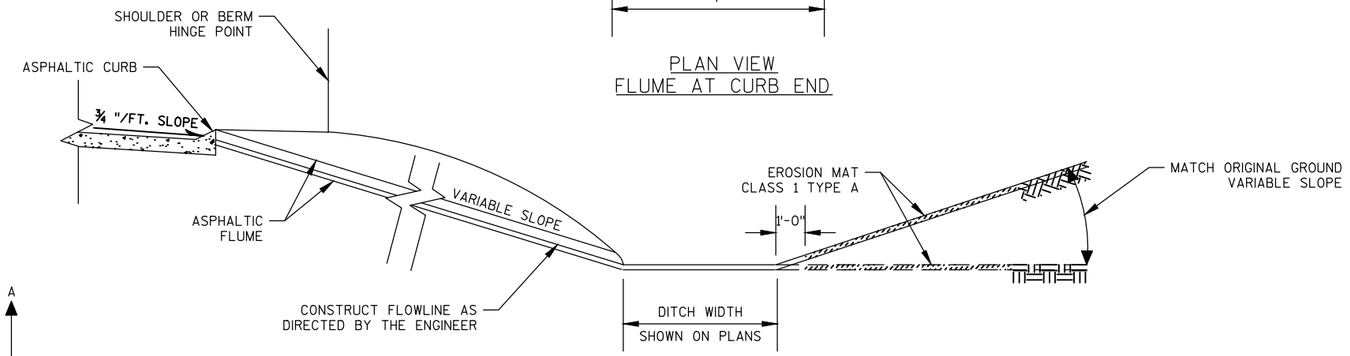
PLAN VIEW

GENERAL NOTES

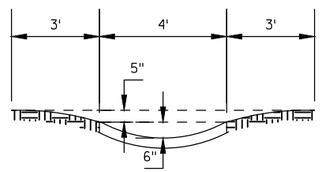
1. HOT-APPLIED SEALANT UNLESS OTHRWISE SPECIFIED
2. DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE MGS THRIE BEAM TRANSITION. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½". LAYOUT POSTS BEFORE INLET INSTALLATION.



PLAN VIEW
FLUME AT CURB END



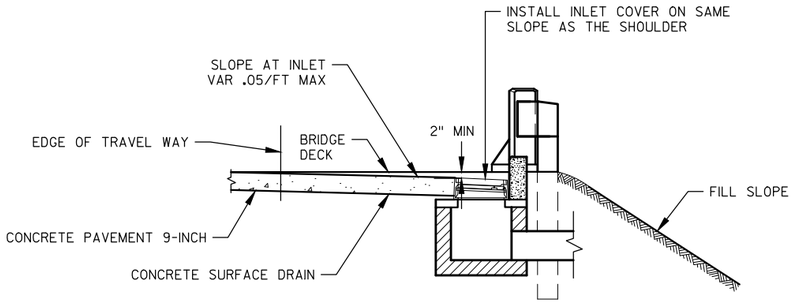
SECTION B-B



SECTION C-C

ASPHALTIC FLUME AT STRUCTURES

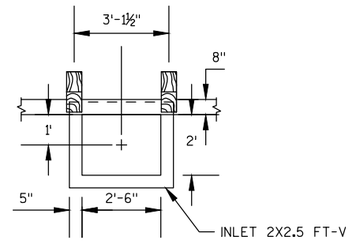
2



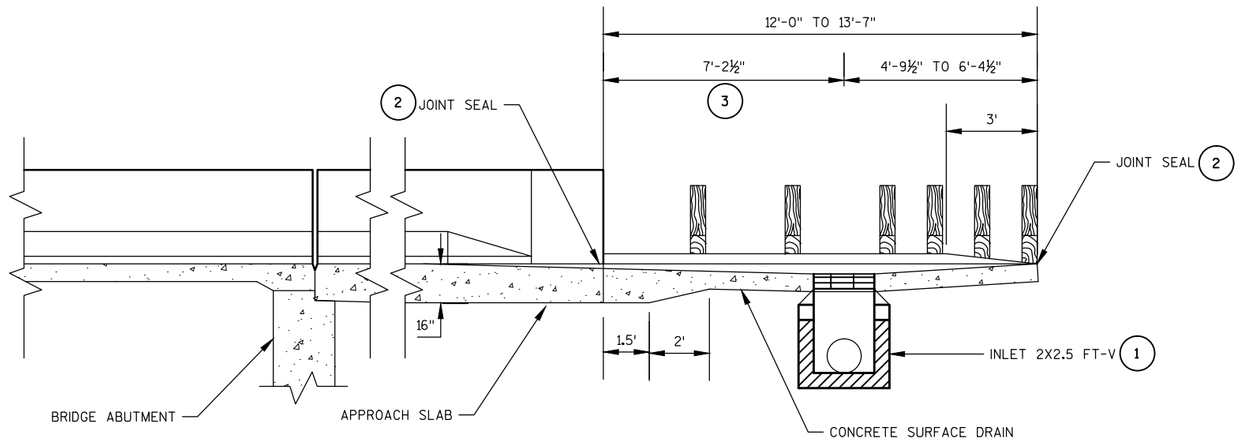
SECTION B-B

GENERAL NOTES

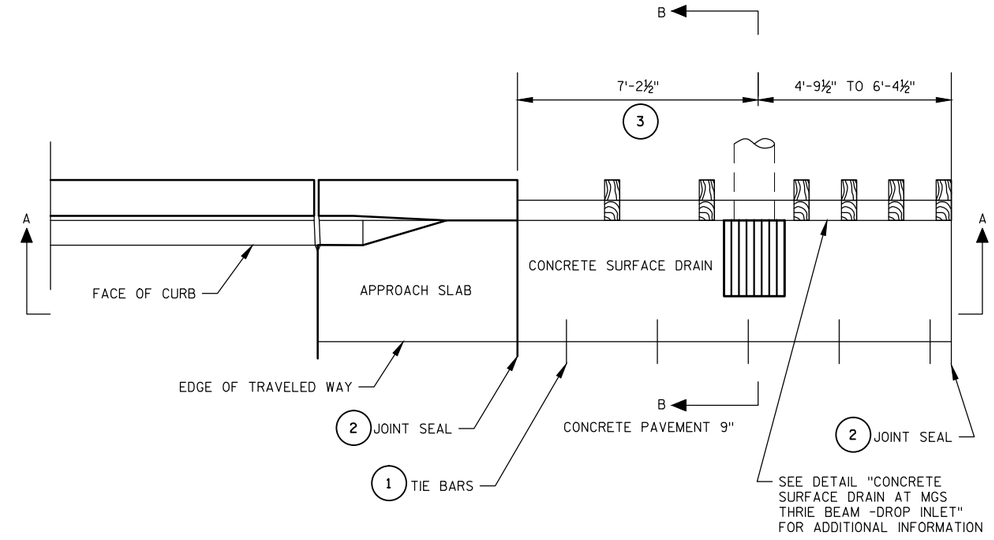
1. NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS.
2. HOT-APPLIED SEALANT UNLESS OTHRWISE SPECIFIED
3. DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE MGS THRIE BEAM TRANSITION. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½". LAYOUT POSTS BEFORE INLET INSTALLATION.
4. SEE CURRENT STANDARD DETAIL DRAWING INLETS AND MANHOLE COVERS AND STANDARD DETAIL DRAWING INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, & 2.5X3-FT FOR DETAILS.



PLAN VIEW

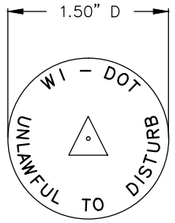


SECTION A-A



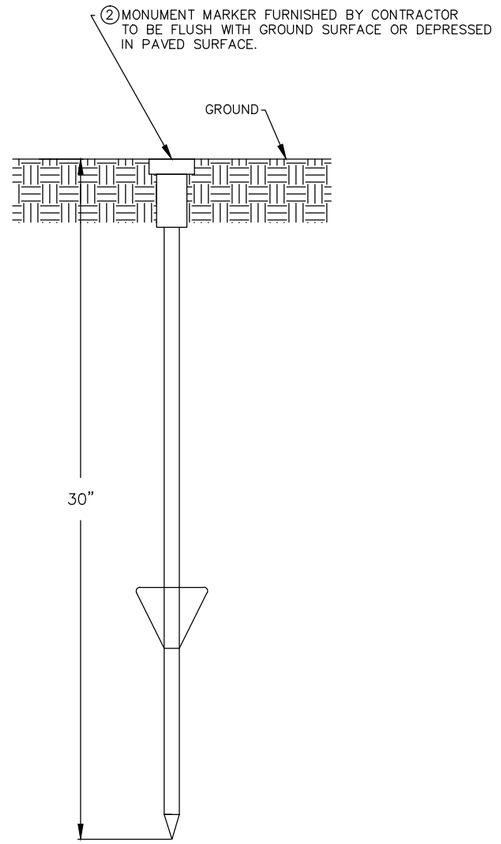
PLAN VIEW

CONCRETE SURFACE DRAIN DROP INLET



② WIS DOT MONUMENT CAP MARKER LOGO (SSDR130)

CONTRACTOR TO ORDER LANDMARK REFERENCE MONUMENTS
WITH THE ABOVE STAMPING



(FRONT VIEW)

BERNSTEN DRIVABLE MONUMENT SSDR130

LANDMARK REFERENCE MONUMENT (TIES ONLY)

LANDMARK REFERENCE MONUMENT DETAIL

PROJECT NO:1166-02-81	HWY:IH 39	COUNTY:MARATHON	CONSTRUCTION DETAILS	SHEET 26	E

2

2

N

MOSINEE TELEPHONE COMPANY

SEE CONSTRUCTION DETAILS FOR LAYOUT

SAW CUT

ASPHALTIC SURFACE BUTT JOINT

+80

IH 39 SB

B-37-148

208+00'SB'

210+00'SB'

212+00'SB'

214+00'SB'

+52

+67

+79

MGS3

MGSTB

CHARTER

MGSEAT

+62

+15

BACK SIDE OF TEMPORARY PRECAST CONCRETE BARRIER

EXISTING BEAMGUARD

6'

+48

+63

+77

208+00'NB'

15:1 TAPER

END AT 6' SHOULDER

210+00'NB'

212+00'NB'

214+00'NB'

IH 39 NB

24'

B-37-149

BM 1

10'

15:1 TAPER

+80

+75

4" ASPHALTIC SURFACE, SEE GUARDRAIL DETAIL

+10

+63

SAW CUT REQ'D

MGSEAT

SAW CUT REQ'D

ASPHALTIC SURFACE BUTT JOINT

SAW CUT

SEE CONSTRUCTION DETAILS FOR LAYOUT

MGSTB

REMOVING ASPHALTIC SURFACE

* CONSTRUCT CONCRETE PAVEMENT APPROACH SLAB

TRAFFIC SIGNAL CONDUIT

WPS (ELECTRIC)

STH 153

STH 153

MGS3 MGS GUARDRAIL 3

MGSEAT MGS GUARDRAIL TERMINAL EAT

MGSTB MGS THRIE BEAM TRANSITION

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PAVING & GUARDRAIL DETAIL - SOUTH END	SHEET 27	E

2

2

N

MGS3 MGS GUARDRAIL 3

MGSEAT MGS GUARDRAIL TERMINAL EAT

MGSTB MGS THRIE BEAM TRANSITION

MOSINEE TELEPHONE COMPANY

MOSINEE MUNICIPAL (WATER)

MOSINEE MUNICIPAL (SEWER)

* CONSTRUCT CONCRETE PAVEMENT APPROACH SLAB

REMOVING ASPHALTIC SURFACE

SAW CUT

MGSEAT

MGSTB

+88 +00 +18

+00 +53 +83

15:1 TAPER

4" ASPHALTIC SURFACE, SEE GUARDRAIL DETAIL

B-37-148

214+00'SB' 216+00'SB' 218+00'SB'

IH 39 SB

10'

24'

6'

+86 +03

ASPHALTIC SURFACE BUTT JOINT

SAW CUT REQ'D (SHOULDER)

SAW CUT

REMOVING ASPHALTIC SURFACE (6' RT)

MGS3

+48 +01 +31

SAW CUT REQ'D (SHOULDER)

EXISTING BEAMGUARD

MGSEAT

4" ASPHALTIC SURFACE, SEE GUARDRAIL DETAIL

BACK SIDE OF TEMPORARY PRECAST CONCRETE BARRIER

5:1 TAPER

CHARTER

SEE CONSTRUCTION DETAILS FOR LAYOUT

+96 +84 +14

214+00'NB' 216+00'NB' 218+00'NB'

B-37-149

BM 1

IH 39 NB

+99

ASPHALTIC SURFACE BUTT JOINT

SAW CUT

SEE CONSTRUCTION DETAILS FOR LAYOUT

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PAVING & GUARDRAIL DETAIL - NORTH END	SHEET 28	E

2

N

IH 39 SB

IH 39 NB

218+00'SB'

218+00'NB'

216+00'SB'

216+00'NB'

214+00'SB'

214+00'NB'

212+00'SB'

212+00'NB'

210+00'SB'

210+00'NB'

MOSINEE MUNICIPAL (WATER)

MOSINEE MUNICIPAL (SEWER)

INLET PROTECTION TYPE C

INLET PROTECTION TYPE C

45+00

50+00

55+00

STH 153

CHARTER
MOSINEE TELEPHONE COMPANY

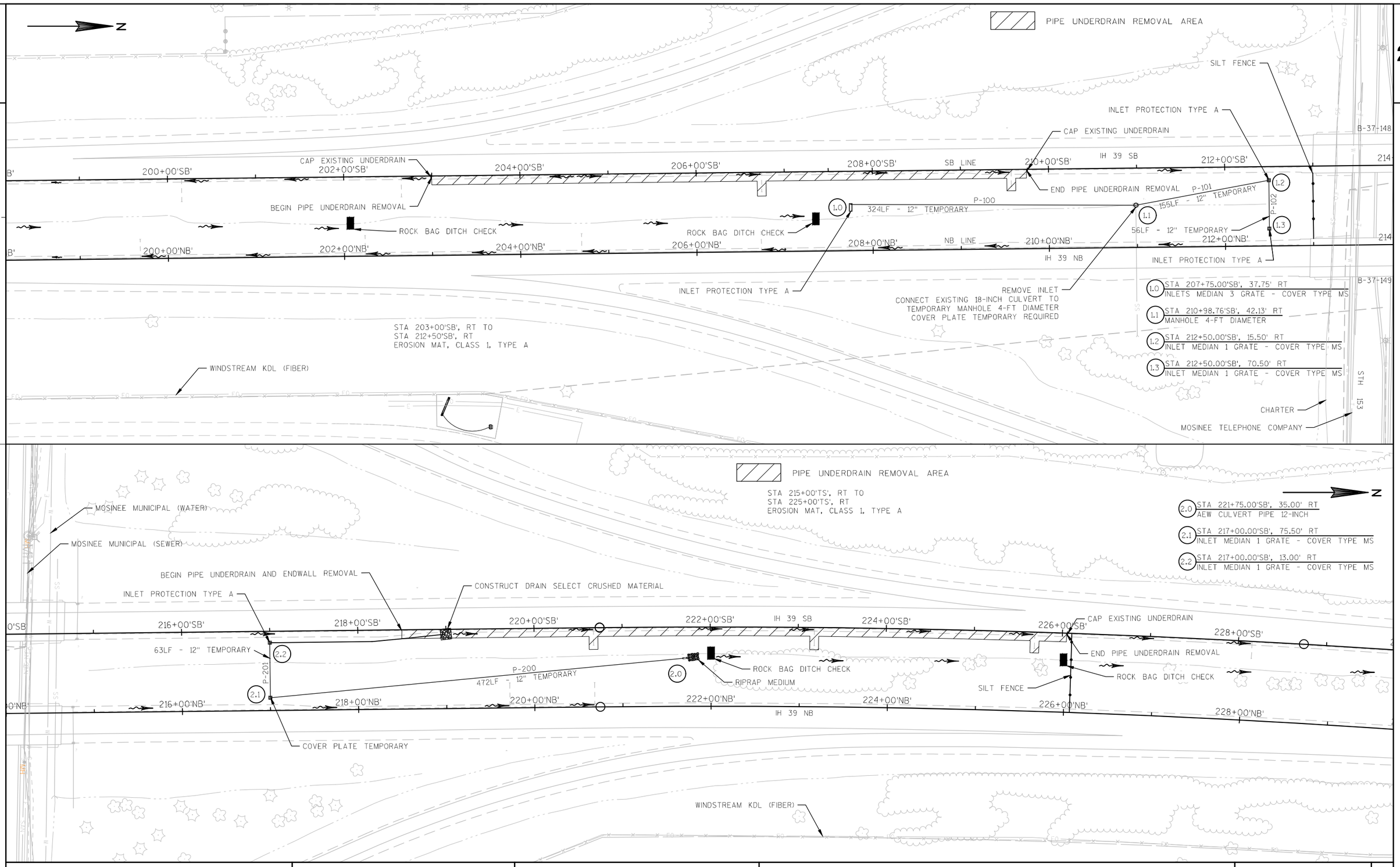
INLET PROTECTION TYPE A

FLAG

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TEMPORARY BYPASS DRAINAGE AND EROSION CONTROL (STAGE 1)	SHEET 29	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\022501_SS (STAGE 2) 153.DWG PLOT DATE : 5/4/2012 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TEMPORARY BYPASS DRAINAGE AND EROSION CONTROL (STAGE 1)	SHEET 30	E

2

N

STA. 212+73.26 'SB'
END OF FLUME 44.5' LT

STA. 212+71.68 'SB'
END OF FLUME 11.5' RT

B-37-148

214

B'

200+00'SB'

202+00'SB'

204+00'SB'

206+00'SB'

IH 39 SB

208+00'SB'

SB LINE

210+00'SB'

212+00'SB'

B'

200+00'NB'

202+00'NB'

204+00'NB'

206+00'NB'

208+00'NB'

NB LINE

210+00'NB'

212+00'NB'

214

IH 39 NB

B-37-149

MOSINEE TELEPHONE COMPANY

CHARTER

WINDSTREAM KDL (FIBER)

STH 153

N

3.0 STA 214+82.73'SB', 41.00' LT
MANHOLE 3-FT DIA. - COVER TYPE J

3.1 STA 214+94.76'SB', 41.00' LT
MANHOLE 3-FT DIA. - COVER TYPE J

3.2 STA 214+94.76'SB', 33.00' LT
INLET 2X2.5-FT - COVER TYPE V

3.3 STA 214+93.18'SB', 5.00' RT
INLET 2X2.5-FT - COVER TYPE V

MOSINEE MUNICIPAL WATER

REMOVE EXISTING PIPES AND INLETS

CONNECT EXISTING 12-INCH PIPE TO MANHOLE 3-FT DIAMETER
P300, 12LF - 12" CLASS III

P301, 8LF - 12" CLASS III

INLET PROTECTION TYPE C

P302, 38LF - 12" CLASS III

INLET PROTECTION TYPE C

SEE CONSTRUCTION
DETAILS FOR LAYOUT

3.0

3.1

3.2

3.3

0'SB

216+00'SB'

218+00'SB'

220+00'SB'

222+00'SB'

IH 39 SB

224+00'SB'

226+00'SB'

228+00'SB'

0'NB'

216+00'NB'

218+00'NB'

220+00'NB'

222+00'NB'

224+00'NB'

226+00'NB'

228+00'NB'

IH 39 NB

MOSINEE MUNICIPAL (SEWER)

WINDSTREAM KDL (FIBER)

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	DRAINAGE AND EROSION CONTROL (STAGE 2)	SHEET 31	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\022502_SS (STAGE 3).DWG PLOT DATE : 5/4/2012 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

2

N

PIPE UNDERDRAIN REMOVAL AREA

B-37-148

B'

200+00'SB'

202+00'SB'

204+00'SB'

206+00'SB'

IH 39 SB

208+00'SB'

SB LINE

210+00'SB'

212+00'SB'

214

B'

200+00'NB'

CAP EXISTING UNDERDRAIN

202+00'NB'

204+00'NB'

206+00'NB'

208+00'NB'

NB LINE

210+00'NB'

212+00'NB'

214

BEGIN PIPE UNDERDRAIN REMOVAL

IH 39 NB

END PIPE UNDERDRAIN REMOVAL

DRAIN EXISTING UNDERDRAIN
INTO SELECT CRUSHED MATERIAL

B-37-149

STA 202+00'SB' TO STA 213+00'SB', MEDIAN
PLACE EROSION MAT CLASS I TYPE A
ON ALL GRADED SLOPES

WINDSTREAM KDL (FIBER)

CHARTER

MOSINEE TELEPHONE COMPANY

STH 153

PIPE UNDERDRAIN REMOVAL AREA

N

STA 214+00'SB' TO STA 224+50'SB', MEDIAN
PLACE EROSION MAT CLASS I TYPE A
ON ALL GRADED SLOPES

0'SB'

216+00'SB'

218+00'SB'

220+00'SB'

222+00'SB'

IH 39 SB

224+00'SB'

226+00'SB'

228+00'SB'

0'NB'

216+00'NB'

218+00'NB'

220+00'NB'

222+00'NB'

224+00'NB'

226+00'NB'

228+00'NB'

INLET PROTECTION TYPE A

BEGIN PIPE UNDERDRAIN REMOVAL

END PIPE UNDERDRAIN REMOVAL

IH 39 NB

DRAIN EXISTING UNDERDRAIN
INTO SELECT CRUSHED MATERIAL

MOSINEE MUNICIPAL (WATER)

MOSINEE MUNICIPAL (SEWER)

WINDSTREAM KDL (FIBER)

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TEMPORARY BYPASS DRAINAGE AND EROSION CONTROL (STAGE 3)	SHEET 32	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\022503_SS (STAGE 4).DWG PLOT DATE : 5/4/2012 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

2

2

N

B'

200+00'SB'

202+00'SB'

204+00'SB'

206+00'SB'

IH 39 SB

208+00'SB'

SB LINE

210+00'SB'

212+00'SB'

B-37-148

214+

B'

200+00'NB'

202+00'NB'

204+00'NB'

206+00'NB'

208+00'NB'

NB LINE

210+00'NB'

212+00'NB'

IH 39 NB

214+

B-37-149

STA. 212+69.78 'NB'
END OF FLUME 11.5' LT

STA. 212+68.19 'NB'
END OF FLUME 44.5' RT

MOSINEE TELEPHONE COMPANY

CHARTER

STH 153

WINDSTREAM KDL (FIBER)

FO

E

N

(4.0) STA 214+75.75'NB', 41.00' RT
MANHOLE 3-FT DIA. - COVER TYPE J

(4.1) STA 214+89.20'NB', 41.00' RT
MANHOLE 3-FT DIA. - COVER TYPE J

(4.2) STA 214+89.20'NB', 33.00' RT
INLET 2X2.5-FT - COVER TYPE V

(4.3) STA 214+90.78'NB', 5.00' LT
INLET 2X2.5-FT - COVER TYPE V

MOSINEE MUNICIPAL (WATER)

MOSINEE MUNICIPAL (SEWER)

0'SB

216+00'SB'

218+00'SB'

220+00'SB'

222+00'SB'

IH 39 SB

224+00'SB'

226+00'SB'

228+00'SB'

REMOVE EXISTING PIPES AND INLETS
SEE CONSTRUCTION DETAIL FOR LAYOUT

(4.3)

0'NB'

216+00'NB'

218+00'NB'

220+00'NB'

222+00'NB'

IH 39 NB

224+00'NB'

226+00'NB'

228+00'NB'

P402, 38LF - 12" CLASS III

(4.2)

INLET PROTECTION TYPE C

(4.0) (4.1)

P401, 8LF - 12" CLASS III

P400, 13LF - 12" CLASS III

CONNECT EXISTING 12-INCH PIPE TO MANHOLE 3-FT DIAMETER

WINDSTREAM KDL (FIBER)

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	DRAINAGE AND EROSION CONTROL (STAGE 4)	SHEET 33	E

2

N

CONSTRUCT SELECT CRUSHED MATERIAL DRAIN

REMOVE TEMPORARY MANHOLE, REPLACE WITH INLET MEDIAN 2 GRATE

INLET PROTECTION TYPE A

STA. 212+71.68 'NB' END OF FLUME 21.5' RT

B-37-148

B'

200+00'SB'

202+00'SB'

204+00'SB'

206+00'SB'

IH 39 SB

208+00'SB'

SB LINE

210+00'SB'

212+00'SB'

214

REMOVE

5.0

REMOVE

B'

200+00'NB'

202+00'NB'

204+00'NB'

206+00'NB'

208+00'NB'

NB LINE

210+00'NB'

212+00'NB'

214

IH 39 NB

B-37-149

CONSTRUCT SELECT CRUSHED MATERIAL DRAIN

STA. 212+69.78 'NB' END OF FLUME 23.5' LT

CONNECT EXISTING 18-INCH CULVERT TO INLET MEDIAN 2 GRATE

MOSINEE TELEPHONE COMPANY

CHARTER

STA 202+00'SB' TO STA 213+00'SB', MEDIAN PLACE EROSION MAT CLASS I TYPE A ON ALL GRADED SLOPES

WINDSTREAM KDL (FIBER)

STH 153

5.0 STA 210+98.76'SB', 42.13' RT INLET MEDIAN 2 GRATE

STA 215+00'SB' TO STA 226+00'SB', MEDIAN PLACE EROSION MAT CLASS I TYPE A ON ALL GRADED SLOPES

N

MOSINEE MUNICIPAL (WATER)

MOSINEE MUNICIPAL (SEWER)

CONSTRUCT SELECT CRUSHED MATERIAL DRAIN

0'SB'

216+00'SB'

218+00'SB'

220+00'SB'

222+00'SB'

IH 39 SB

224+00'SB'

226+00'SB'

228+00'SB'

REMOVE

REMOVE

0'NB'

216+00'NB'

218+00'NB'

220+00'NB'

222+00'NB'

224+00'NB'

226+00'NB'

228+00'NB'

IH 39 NB

CONSTRUCT SELECT CRUSHED MATERIAL DRAIN

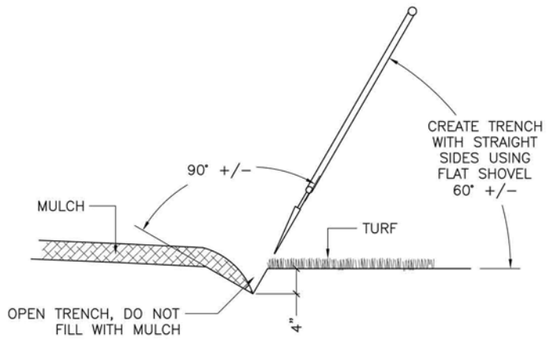
WINDSTREAM KDL (FIBER)

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TEMPORARY BYPASS DRAINAGE AND EROSION CONTROL (STAGE 5)	SHEET 34	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\022505_SS (STAGE 6).DWG PLOT DATE : 5/4/2012 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

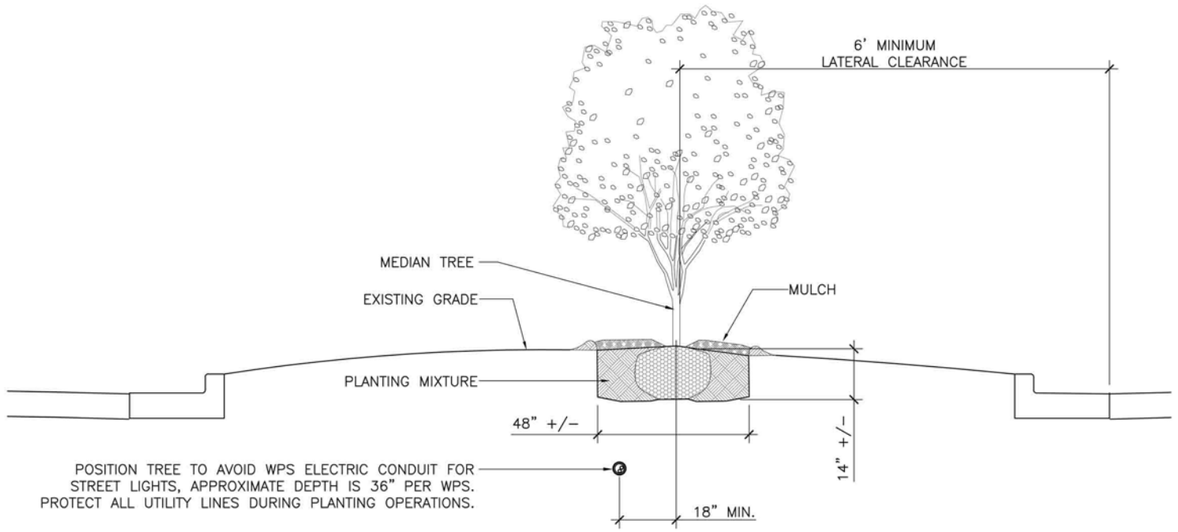
WISDOT/CADDS SHEET 42

2



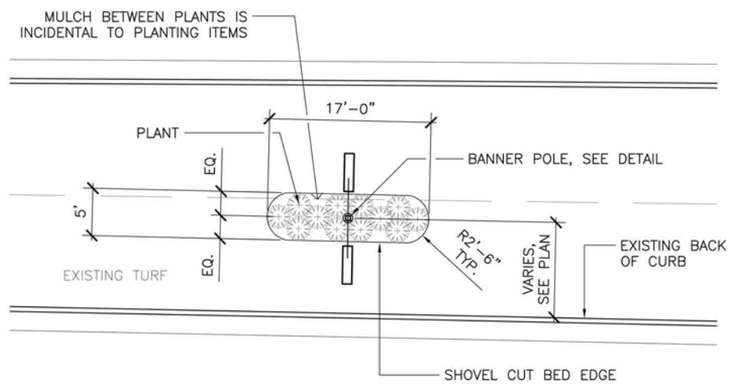
SHOVEL CUT BED EDGE DETAIL

1" = 1'–0"



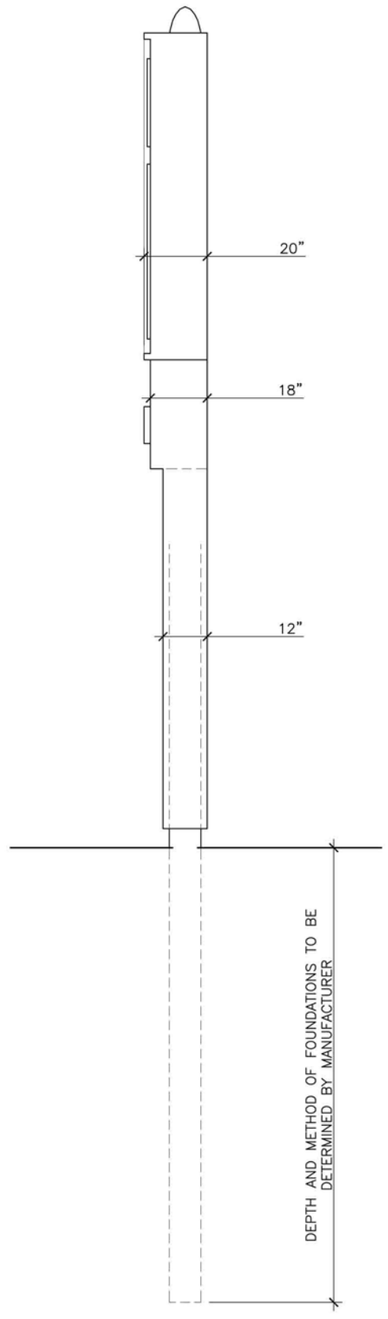
MEDIAN TREE PLANTING

1/2" = 1'–0"

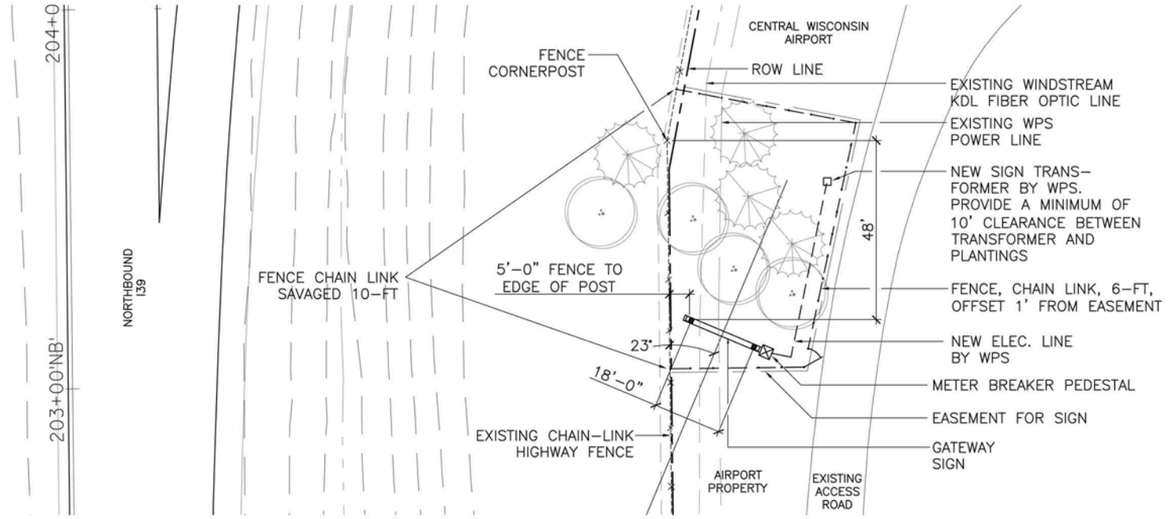


PLANTING GROUP - MEDIAN SHRUBS

1/8" = 1'–0"



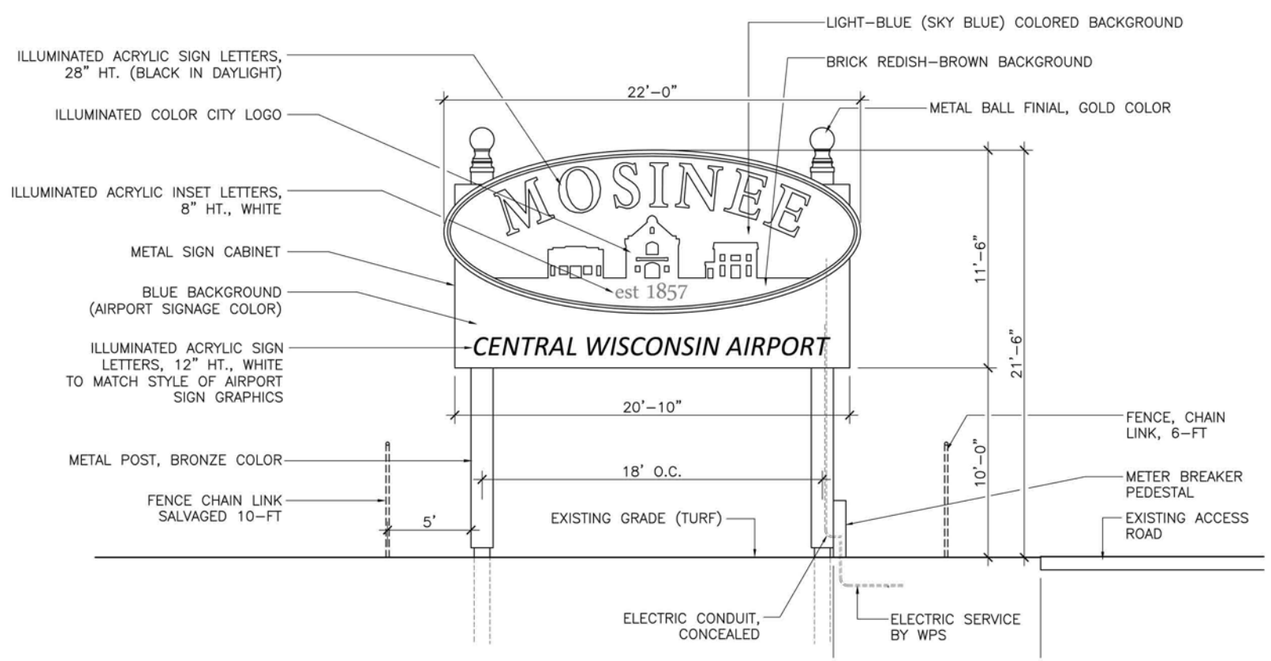
GATEWAY SIGN - SECTION
1" = 2'-0"



GATEWAY SIGN - PLAN VIEW
1" = 20'-0"



GATEWAY SIGN – TOP VIEW



GATEWAY SIGN - ELEVATION
1" = 4'-0"

SIGN NOTES

SIGN DESIGN SHOWN IS DIAGRAMMATIC. CREATE MORE DETAILED SHOP DRAWINGS AND GRAPHIC PROOFS, AND SUBMIT TO ENGINEER FOR APPROVAL PRIOR TO ORDERING OF MATERIALS OR FABRICATION OF ANY SIGN ELEMENTS.

STRUCTURAL DESIGN AND FOUNDATION DESIGN METHODS TO BE DETERMINED BY MANUFACTURER FOR ALL SIGN ELEMENTS TO ENSURE THAT SIGN CAN WITHSTAND WIND LOADING AND FROST HEAVE PER STATE AND LOCAL CODE.

SEE SPECIFICATIONS / SPECIAL PROVISIONS FOR ADDITIONAL SIGN FABRICATION INSTRUCTIONS.



LOOKING EAST



LOOKING WEST

BANNER SAMPLE STYLES

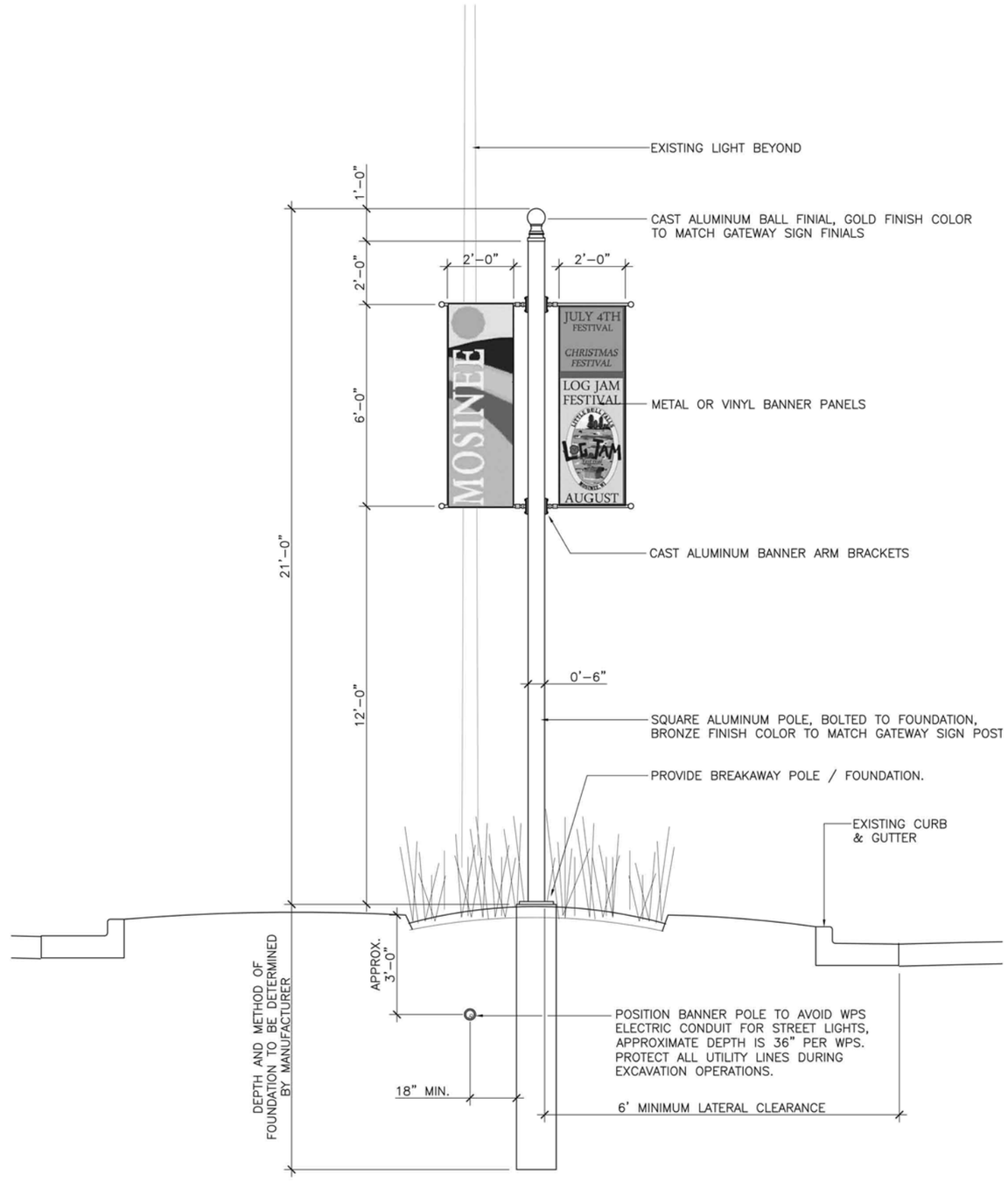
1/2" = 1'-0"

BANNER POLE NOTES

BANNER POLE AND SIGN DESIGNS SHOWN ARE DIAGRAMMATIC. MANUFACTURER SHALL CREATE MORE DETAILED SHOP DRAWINGS AND GRAPHIC PROOFS, AND SUBMIT TO ENGINEER FOR APPROVAL PRIOR TO ORDERING OF MATERIALS OR FABRICATION OF ANY SIGN ELEMENTS.

CONTRACTOR SHALL ADJUST FINAL LOCATION OF BANNER POLES IN THE FIELD TO AVOID DAMAGE TO EXISTING GUILTILY LINES. CONTRACTOR SHALL OBTAIN APPROVAL FOR LOCATIONS PRIOR TO INSTALLATION OF POLE FOUNDATIONS.

SEE SPECIFICATIONS / SPECIAL PROVISIONS FOR ADDITIONAL BANNER AND SIGN FABRICATION INSTRUCTIONS.



BANNER POLE

1/2" = 1'-0"

LEGEND

- DECIDUOUS TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- MEDIUM DECIDUOUS SHRUB
- ACCENT DECIDUOUS SHRUB
- ORNAMENTAL GRASS
- MEADOW SEEDING AREA
- LB / 12 — PLANT SYMBOL / QUANTITY

NOTES

SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL PLANTING INSTRUCTIONS.

PLANTING BED LOCATIONS ARE APPROXIMATE. ADJUST TO FIT FIELD CONDITIONS.

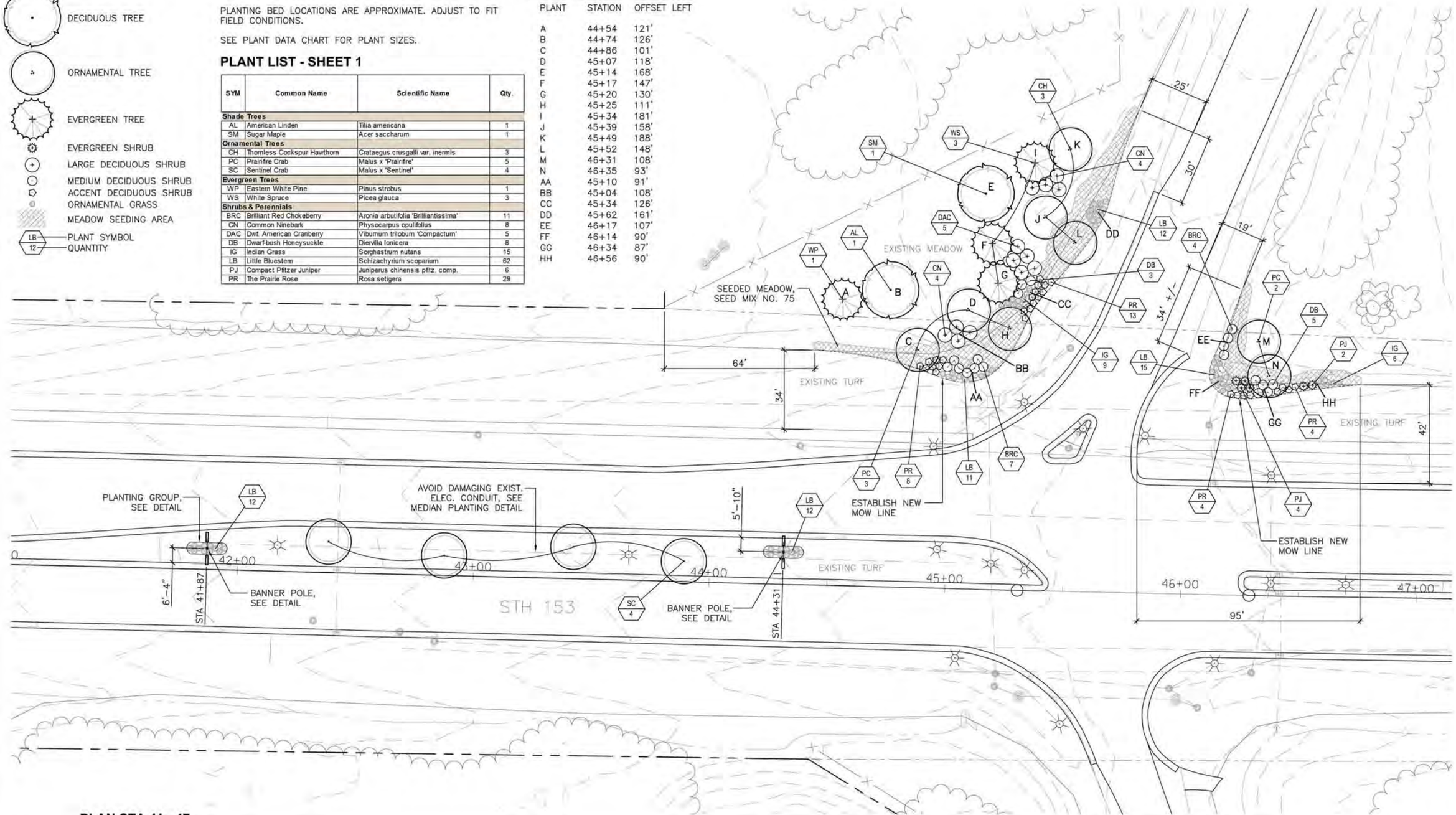
SEE PLANT DATA CHART FOR PLANT SIZES.

PLANT LIST - SHEET 1

SYM	Common Name	Scientific Name	Qty.
Shade Trees			
AL	American Linden	Tilia americana	1
SM	Sugar Maple	Acer saccharum	1
Ornamental Trees			
CH	Thornless Cockspur Hawthorn	Crataegus crusgalli var. inermis	3
PC	Prairifire Crab	Malus x 'Prairifire'	5
SC	Sentinel Crab	Malus x 'Sentinel'	4
Evergreen Trees			
WP	Eastern White Pine	Pinus strobus	1
WS	White Spruce	Picea glauca	3
Shrubs & Perennials			
BRC	Brilliant Red Chokeberry	Aronia arbutifolia 'Brilliantissima'	11
CN	Common Ninebark	Physocarpus opulifolius	8
DAC	Dwf. American Cranberry	Viburnum trilobum 'Compactum'	5
DB	DwarFbush Honeysuckle	Diervilla lonicera	8
IG	Indian Grass	Sorghastrum nutans	15
LB	Little Bluestem	Schizachyrium scoparium	62
PJ	Compact Pfitzer Juniper	Juniperus chinensis pfitz. comp.	6
PR	The Prairie Rose	Rosa setigera	29

PLANT LOCATION TABLE

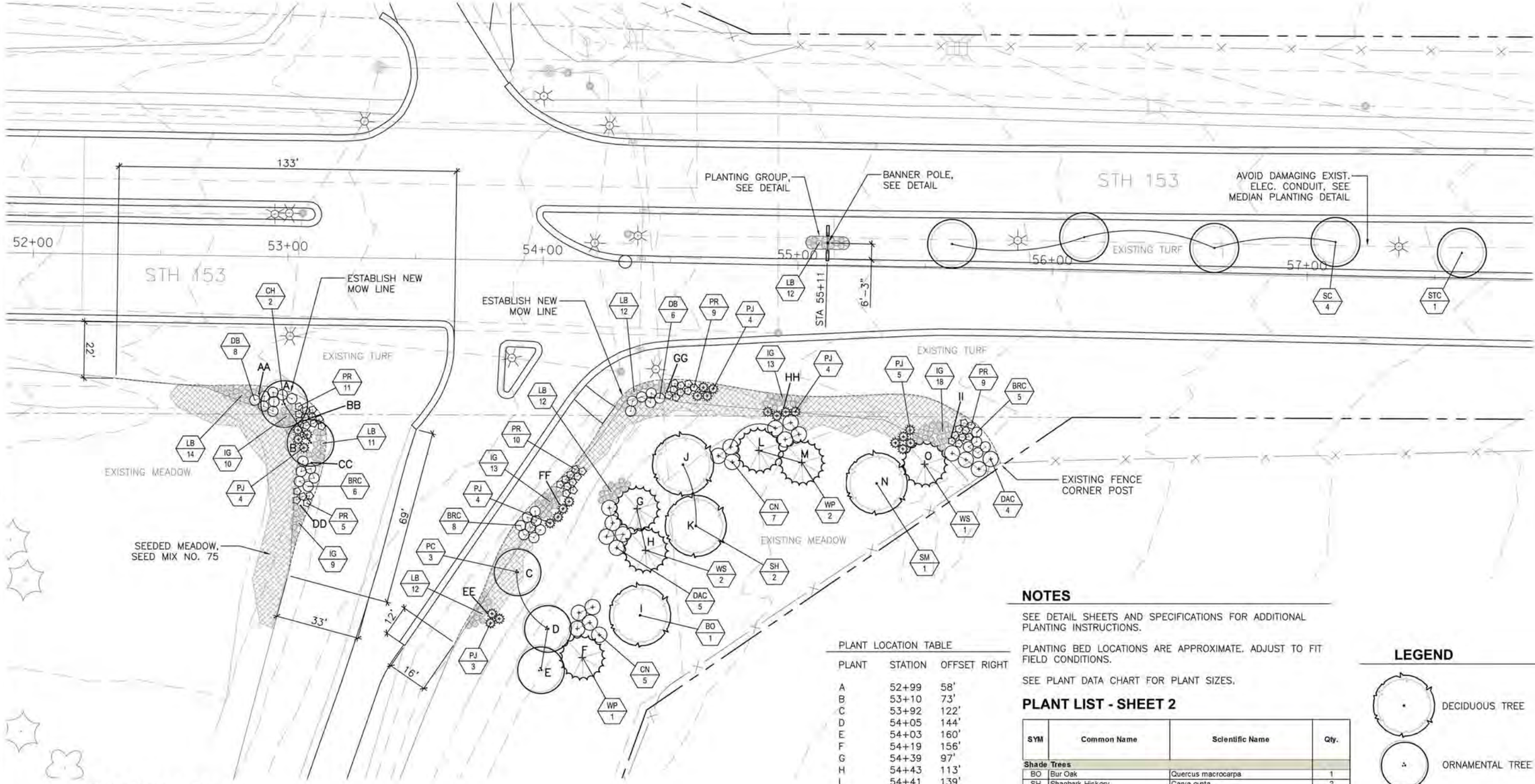
PLANT	STATION	OFFSET LEFT
A	44+54	121'
B	44+74	126'
C	44+86	101'
D	45+07	118'
E	45+14	168'
F	45+17	147'
G	45+20	130'
H	45+25	111'
I	45+34	181'
J	45+39	158'
K	45+49	188'
L	45+52	148'
M	46+31	108'
N	46+35	93'
AA	45+10	91'
BB	45+04	108'
CC	45+34	126'
DD	45+62	161'
EE	46+17	107'
FF	46+14	90'
GG	46+34	87'
HH	46+56	90'



PLAN STA 41 - 47

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	LANDSCAPE PLAN	SHEET	E

FILE NAME : XXXXXXXX.XXX PLOT DATE : 2/26/2014 8:30 AM PLOT BY : JDS PLOT NAME : PLOT SCALE : 1" = 20'-0" WISDOT/CADDS SHEET XX



PLAN STA 52 - 57

PLANT LOCATION TABLE

PLANT	STATION	OFFSET RIGHT
A	52+99	58'
B	53+10	73'
C	53+92	122'
D	54+05	144'
E	54+03	160'
F	54+19	156'
G	54+39	97'
H	54+43	113'
I	54+41	139'
J	54+57	79'
K	54+62	103'
L	54+86	73'
M	55+03	77'
N	55+33	85'
O	55+51	77'
AA	52+90	54'
BB	53+09	63'
CC	53+11	81'
DD	53+07	98'
EE	53+19	138'
FF	54+09	96'
GG	54+50	50'
HH	54+96	56'
II	55+62	66'

NOTES

SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL PLANTING INSTRUCTIONS.

PLANTING BED LOCATIONS ARE APPROXIMATE. ADJUST TO FIT FIELD CONDITIONS.

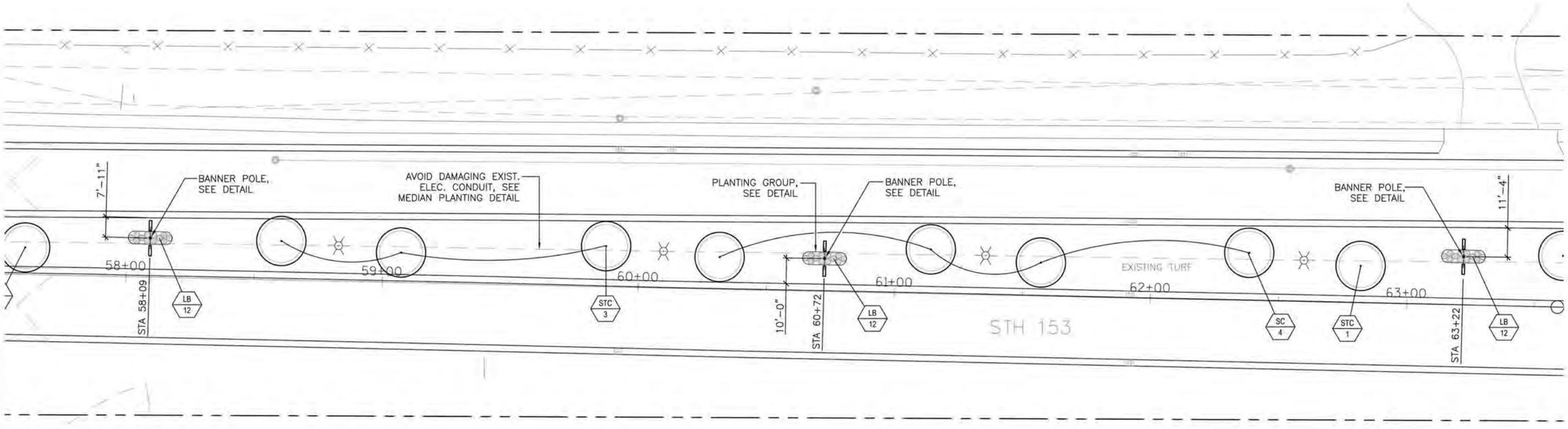
SEE PLANT DATA CHART FOR PLANT SIZES.

PLANT LIST - SHEET 2

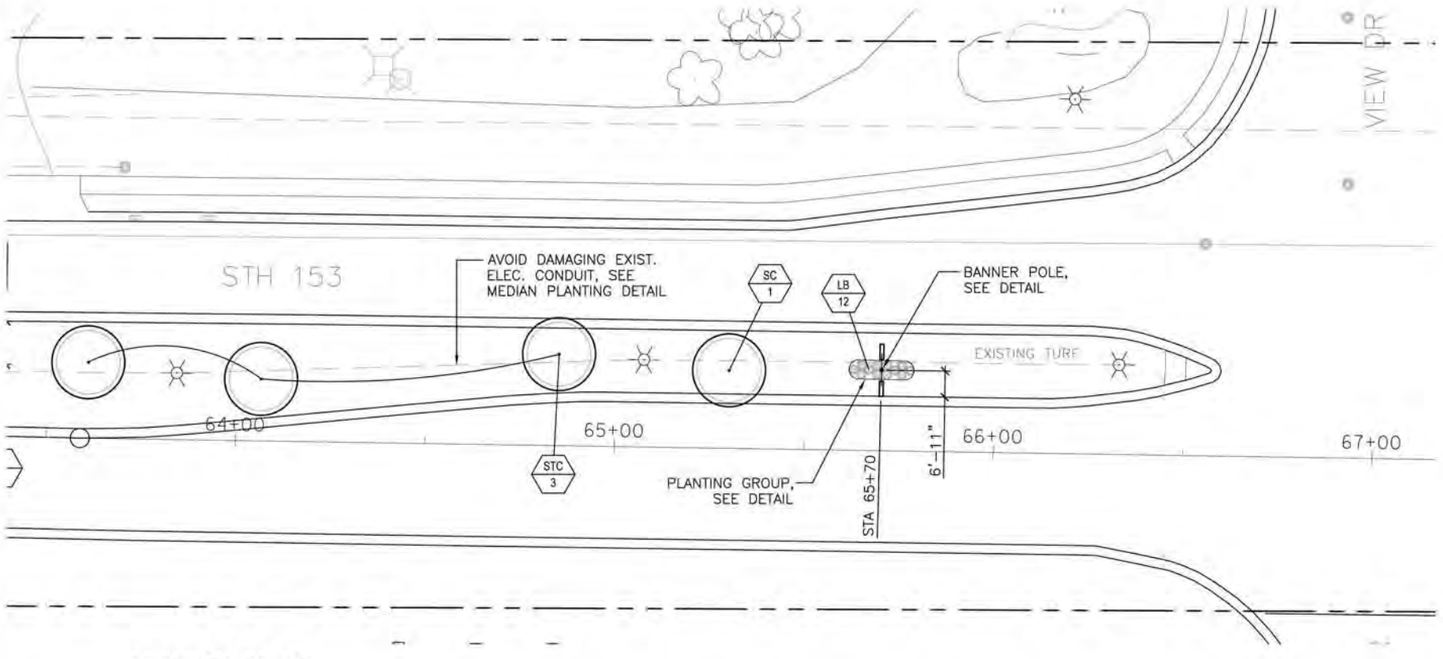
SYM	Common Name	Scientific Name	Qty.
Shade Trees			
BO	Bur Oak	Quercus macrocarpa	1
SH	Shagbark Hickory	Carya ovata	2
SM	Sugar Maple	Acer saccharum	1
Ornamental Trees			
CH	Thornless Cockspur Hawthorn	Crataegus crusgalli var. inermis	2
PC	Prairifire Crab	Malus x 'Prairifire'	3
SC	Sentinel Crab	Malus x 'Sentinel'	4
STC	Sugar Tyme Crab	Malus x 'Sugar Tyme'	1
Evergreen Trees			
WP	Eastern White Pine	Pinus strobus	3
WS	White Spruce	Picea glauca	3
Shrubs & Perennials			
BRC	Brilliant Red Chokeberry	Aronia arbutifolia 'Brilliantissima'	19
CN	Common Ninebark	Physocarpus opulifolius	12
DAC	Dwf. American Cranberry	Viburnum trilobum 'Compactum'	9
DB	Dwarf-bush Honeysuckle	Diervilla lonicera	14
IG	Indian Grass	Sorghastrum nutans	63
LB	Little Bluestem	Schizachyrium scoparium	73
PJ	Compact Pfitzer Juniper	Juniperus chinensis pfitz. comp.	24
PR	The Prairie Rose	Rosa setigera	44

LEGEND

- DECIDUOUS TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- MEDIUM DECIDUOUS SHRUB
- ACCENT DECIDUOUS SHRUB
- ORNAMENTAL GRASS
- MEADOW SEEDING AREA
- LB / 12 — PLANT SYMBOL / QUANTITY



PLAN STA 58 - 63



PLAN STA 64 - 67

NOTES

SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL PLANTING INSTRUCTIONS.

PLANTING BED LOCATIONS ARE APPROXIMATE. ADJUST TO FIT FIELD CONDITIONS.

SEE PLANT DATA CHART FOR PLANT SIZES.

PLANT LIST - SHEET 3

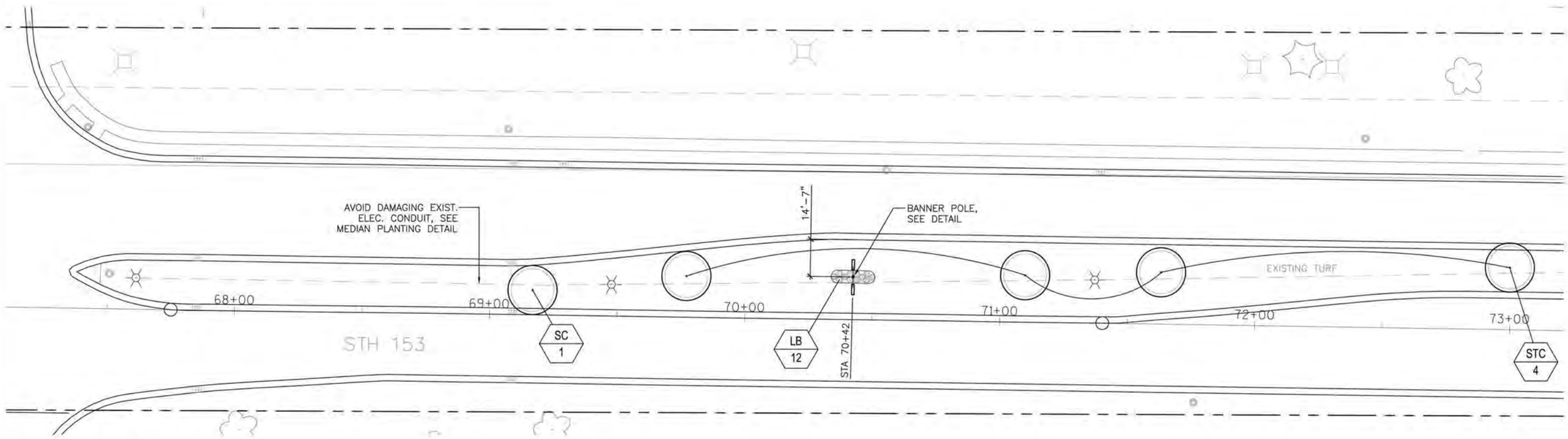
SYM	Common Name	Scientific Name	Qty.
Ornamental Trees			
SC	Sentinel Crab	Malus x 'Sentinel'	5
STC	Sugar Tyme Crab	Malus x 'Sugar Tyme'	7
Shrubs & Perennials			
LB	Little Bluestem	Schizachyrium scoparium	48

LEGEND

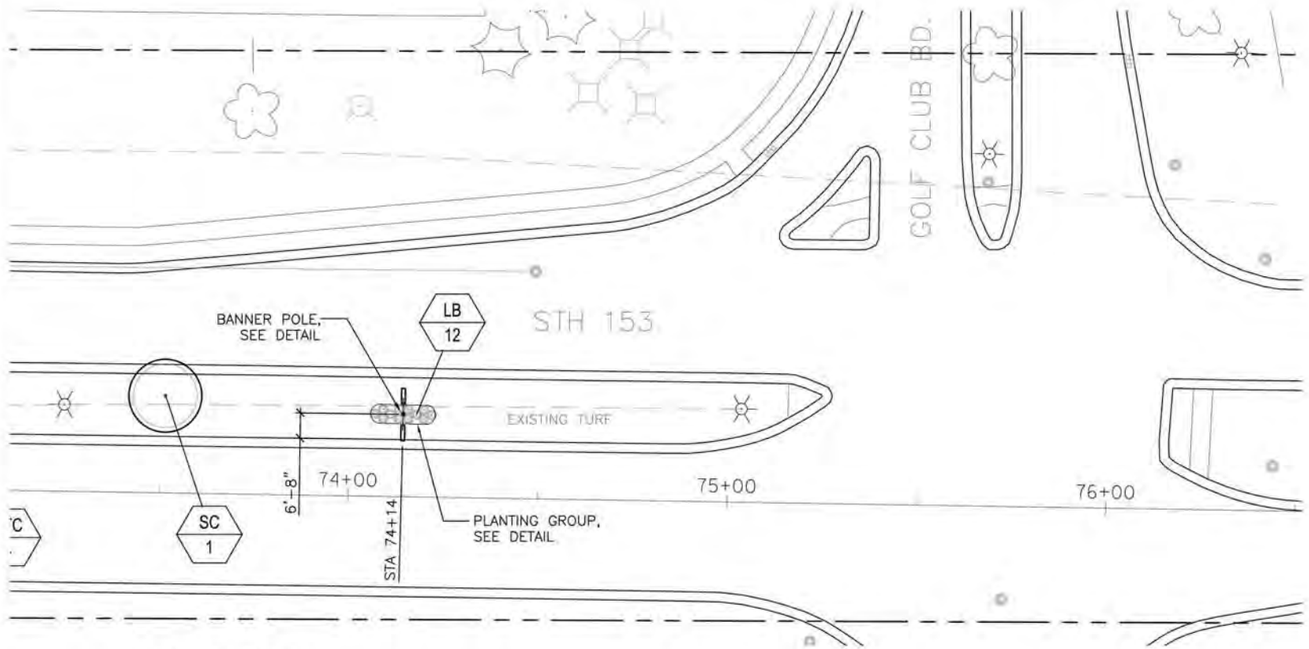
- DECIDUOUS TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- MEDIUM DECIDUOUS SHRUB
- ACCENT DECIDUOUS SHRUB
- ORNAMENTAL GRASS
- MEADOW SEEDING AREA
- LB / 12 — PLANT SYMBOL / QUANTITY

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	LANDSCAPE PLAN	SHEET	E

FILE NAME : XXXXXXXX.XXX PLOT DATE : 2/26/2014 8:31 AM PLOT BY : JDS PLOT NAME : PLOT SCALE : 1" = 20'-0" WISDOT/CADDS SHEET XX



PLAN STA 68 - 73



PLAN STA 74 - 76

NOTES

SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL PLANTING INSTRUCTIONS.

PLANTING BED LOCATIONS ARE APPROXIMATE. ADJUST TO FIT FIELD CONDITIONS.

SEE PLANT DATA CHART FOR PLANT SIZES.

PLANT LIST - SHEET 4

SYM	Common Name	Scientific Name	Qty.
Ornamental Trees			
SC	Sentinel Crab	Malus x 'Sentinel'	2
STC	Sugar Tyme Crab	Malus x 'Sugar Tyme'	4
Shrubs & Perennials			
LB	Little Bluestem	Schizachyrium scoparium	24

LEGEND

- DECIDUOUS TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- EVERGREEN SHRUB
- LARGE DECIDUOUS SHRUB
- MEDIUM DECIDUOUS SHRUB
- ACCENT DECIDUOUS SHRUB
- ORNAMENTAL GRASS
- MEADOW SEEDING AREA
- LB / 12 — PLANT SYMBOL / QUANTITY

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	LANDSCAPE PLAN	SHEET	E

FILE NAME : XXXXXXXX.XXX PLOT DATE : 2/26/2014 8:31 AM PLOT BY : JDS PLOT NAME : PLOT SCALE : 1" = 20'-0" WISDOT/CADDS SHEET XX

FENCE CORNERS LOCATION TABLE

POINT	STATION	OFFSET RIGHT
A	203+77.80	162.4'
B	203+68.61	208.7'
C	203+56.11	158.1'
D	203+02.54	158.1'
E	203+02.54	194.0'

PLANT LOCATION TABLE

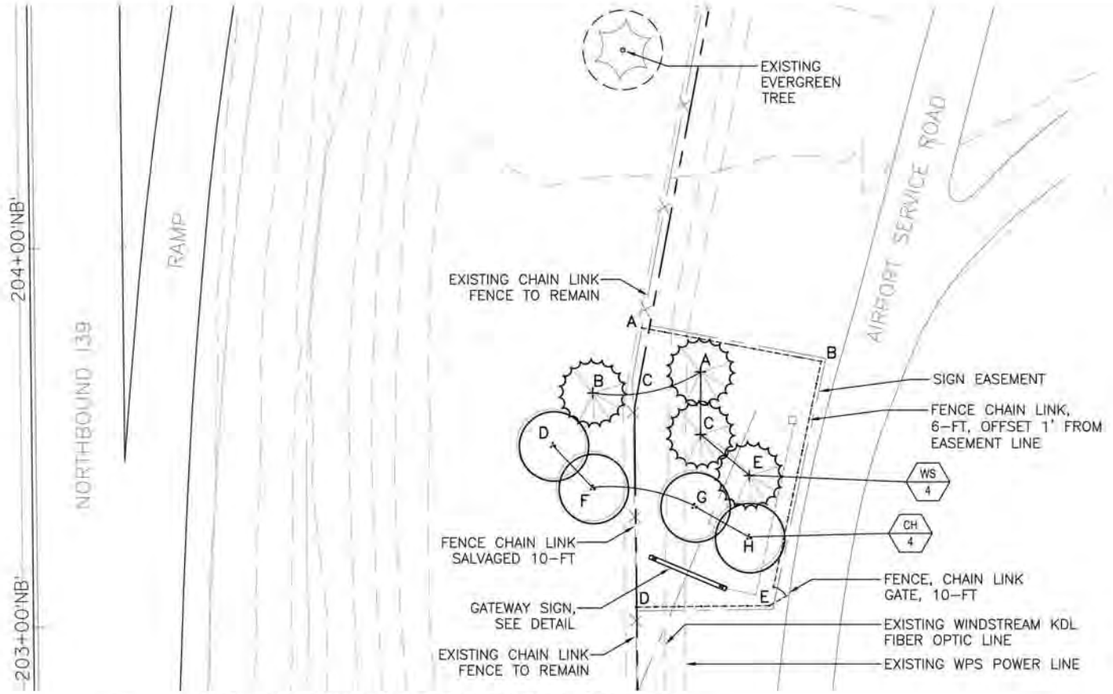
PLANT	STATION	OFFSET RIGHT
A	203+65.4	176'
B	203+60.2	147'
C	203+48.9	49'
D	203+46.5	136'
E	203+37.9	188'
F	203+35.3	147'
G	203+30.0	174'
H	203+21.7	188'

NOTES

SEE DETAIL SHEETS AND SPECIFICATIONS FOR ADDITIONAL PLANTING INSTRUCTIONS.

PLANTING BED LOCATIONS ARE APPROXIMATE. ADJUST TO FIT FIELD CONDITIONS.

SEE PLANT DATA CHART FOR PLANT SIZES.



PLAN - IH 39 NORTHBOUND STH 153 RAMP EXIT

PLANT DATA CHART

SYM	Common Name	Scientific Name	Type	Ave. Mature Height	Size (Cal. Or Ht. When Planted)	Root Zone Mode	Spacing	Minimum Size					Brace or Guy	Fert. Units Req'd.	Rodent Protect Req'd.	Mulch Ring Diam.	Quantity by Sheet Number					
								Ball/Pot			Plant Hole											
								Dia.	Depth	Root Spread	Diam.	Depth					SHT 1	SHT 2	SHT 3	SHT 4	SHT 5	TOTAL
Shade Trees																						
AL	American Linden	Tilia americana	1	50'	2.5" cal.	B&B		28"	17"	-	52"	17"	brace	3	yes	64"	1					1
BO	Bur Oak	Quercus macrocarpa	1	75'	2.5" cal.	B&B		28"	17"	-	52"	17"	brace	3	yes	64"		1				1
SH	Shagbark Hickory	Carya ovata	1	75'	2.5" cal.	B&B		28"	17"	-	52"	17"	brace	3	yes	64"		2				2
SM	Sugar Maple	Acer saccharum	1	75'	2.5" cal.	B&B		28"	17"	-	52"	17"	brace	3	yes	64"	1	1				2
Ornamental Trees																						
CH	Thornless Cockspur Hawthorn	Crataegus crusgalli var. inermis	3	20'	2" cal.	B&B		24"	14"	-	48"	14"	brace	3	no	60"	3	2			4	9
PC	Prairifire Crab	Malus x 'Prairifire'	3	20'	2" cal.	B&B		24"	14"	-	48"	14"	brace	3	no	60"	5	3				8
SC	Sentinel Crab	Malus x 'Sentinel'	3	20'	2" cal.	B&B		24"	14"	-	48"	14"	brace	3	no	60"	4	4	5	2		15
STC	Sugar Tyme Crab	Malus x 'Sugar Tyme'	3	20'	2" cal.	B&B		24"	14"	-	48"	14"	brace	3	no	60"		1	7	4		12
Evergreen Trees																						
WP	Eastern White Pine	Pinus strobus	4	50'	6' ht.	B&B		22"	13"	-	46"	13"	guy	3	no	58"	1	3				4
WS	White Spruce	Picea glauca	4	50'	6' ht.	B&B		22"	13"	-	46"	13"	guy	3	no	58"	3	3			4	10
Shrubs & Perennials																						
BRC	Brilliant Red Chokeberry	Aronia arbutifolia 'Brilliantissima'	3	8'	24" ht.	CG	48" o.c.	11"	8"	-	35"	8"	no	2	no	47"	11	19				30
CN	Common Ninebark	Physocarpus opulifolius	3	10'	36" ht.	B&B	60" o.c.	14"	10"	-	38"	10"	no	2	no	50"	8	12				20
DAC	Dwf. American Cranberry	Viburnum trilobum 'Compactum'	3	12'	36"	B&B	60" o.c.	14"	10"	-	38"	10"	no	2	no	50"	5	9				14
DB	Dwarf-bush Honeysuckle	Diervilla lonicera	2	6'	18" ht.	CG	48" o.c.	10"	6.5"	-	34"	6.5"	no	2	no	46"	8	14				22
IG	Indian Grass	Sorghastrum nutans	-	60"	1 gal.	CG	30" o.c.	10"	6.5"	-	34"	6.5"	no	1	no	46"	15	63				78
LB	Little Bluestem	Schizachyrium scoparium	-	48"	1 gal.	CG	30" o.c.	10"	6.5"	-	34"	6.5"	no	1	no	46"	62	73	48	24		207
PJ	Compact Pfitzer Juniper	Juniperus chinensis pfitz. comp.	2	4'	12" ht.	B&B	48" o.c.	10"	6.5"	-	34"	6.5"	no	2	no	46"	6	24				30
PR	The Prairie Rose	Rosa setigera	3	5'	18" ht.	CG	36" o.c.	10"	6.5"	-	34"	6.5"	no	2	no	46"	29	44				73
Meadow Areas																						
Standard WISDOT Seed Mix #75		Seeded Meadow Areas																				

2

N

REMOVE

3

W5-52R
18" X 54"

REMOVE

4

W5-52L
18" X 54"

PC: 220+74.45'SB'

210+00'SB'

B-37-148

215+00'SB'

IH 39 SB

220+00'SB'

210+00'NB'

215+00'NB'

220+00'NB'

B-37-149

IH 39 NB

REMOVE

W5-52L
18" X 54"

1

REMOVE

W5-52R
18" X 54"

2

STH 153

STH 153

PC: 220+74.45'NB'

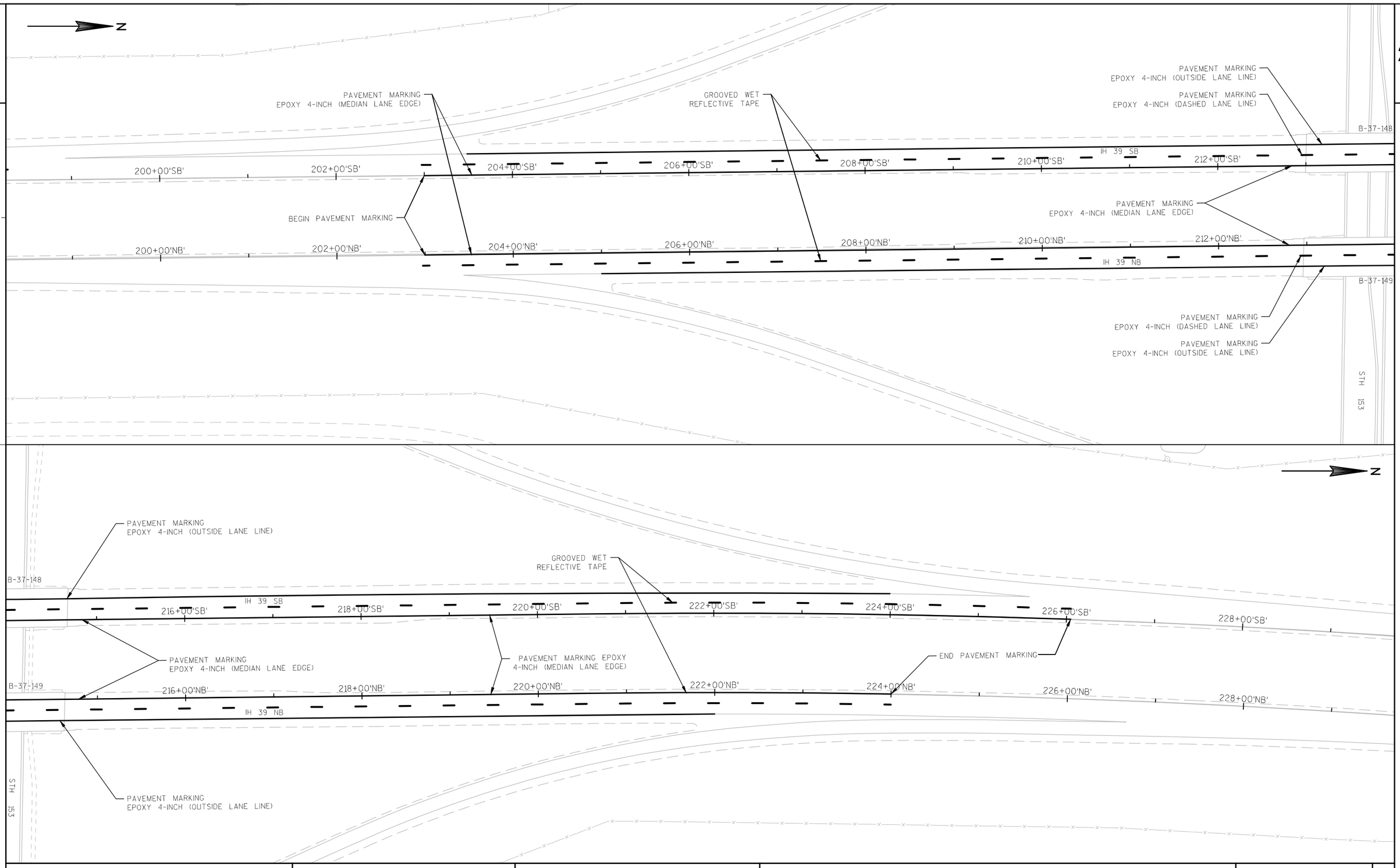
LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

(XXX) DENOTES SIGN NUMBER

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PERMANENT SIGNING	SHEET 43	E



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PAVEMENT MARKING	SHEET 44	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\024501_PM.DWG PLOT DATE : 5/4/2012 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2

GENERAL NOTES FOR CHANGEABLE MESSAGE SIGNS

PCMS = PORTABLE CHANGEABLE MESSAGE SIGN

CONSIDER ROADWAY GEOMETRY WHEN LOCATING MESSAGE SIGNS. PLACE THE SIGNS SO THE DRIVER HAS A CLEAR VIEW OF THE MESSAGE FOR A MINIMUM OF 1,000 FEET.

MESSAGE SIGNS SHOULD BE PLACED AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY. IN ADVANCE OF INTERSTATE CONSTRUCTION PROJECTS, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SHOULD BE AT OR SLIGHTLY ABOVE THE ELEVATION OF THE ROADWAY.

FOR INTERMITTENT WORK SUCH AS A FREEWAY LANE CLOSURE, OR WHERE SITE CONDITIONS DO NOT ALLOW OTHERWISE, THE SIGNS MAY BE PLACED ON THE SHOULDER. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTORIZED DRUMS OR BARRICADES SHOULD BE PLACED AHEAD OF A PCMS THAT IS PLACED ON THE SHOULDER IF IT IS NOT SHIELDED BY A BARRIER.

SITE 1, 3, 4, & 6 MESSAGE SIGNS ARE TO BE IN PLACE AND DISPLAYING THE "PRIOR TO CONSTRUCTION" MESSAGE FOR SEVEN DAYS PRIOR TO THE EXPECTED START OF WORK ON IH 39 AND STH 153. THESE MESSAGE SIGNS WILL ALSO BE USED FOR WARNING MESSAGES ON IH 39 AND STH 153.

REMOTE COMMUNICATIONS REQUIRED ON IH 39 PCMS, SITE 1, 2, 5, & 6, AND ARE NOT REQUIRED ALONG STH 153.

PCMS SHOULD BE REMOVED DURING WINTER SHUTDOWN AND MUST BE REINSTALLED IN SPRING 2015, MINIMUM OF 1 WEEK PRIOR TO STARTING WORK.

PCMS SITE NO.	7 DAYS PRIOR TO CONSTRUCTION		IH 39 MEDIAN LANE CLOSURE		STH 153 MEDIAN LANE CLOSURE		STH 153 OUTSIDE LANE CLOSURE		STH 153 EB DETOUR (NIGHT TIME)		STH 153 WB DETOUR (NIGHT TIME)		TEMPORARY LANES IN USE		EMERGENCY MESSAGE	
	Phase 1 (3 Sec.)	Phase 2 (3 Sec.)	Phase 1 (3 Sec.)	Phase 2 (3 Sec.)	Phase 1 (3 Sec.)	Phase 2 (3 Sec.)	Phase 1 (3 Sec.)	Phase 2 (3 Sec.)	Phase 1 (3 Sec.)	Phase 2 (3 Sec.)	Phase 1 (3 Sec.)	Phase 2 (3 Sec.)	Phase 1 (3 Sec.)	Phase 2 (3 Sec.)	Phase 1 (3 Sec.)	Phase 2 (3 Sec.)
SITE 1 - IH 39 SB 3 MILES NORTH OF STH 153 (MM 182.8)	ROAD WORK STARTS	(DAY) (DATE)	LEFT LANE CLOSED	3 MILES AHEAD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	LANE SHIFT	3 MILES AHEAD	TRAFFIC STOPPED AHEAD	USE ALTERNATE ROUTE
SITE 2 - IH 39 SB 1 MILE NORTH OF STH 153 (MM 180.6)	N/A	N/A	LEFT LANE CLOSED	1 MILE MERGE RIGHT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	LANE SHIFT	1 MILE AHEAD	TRAFFIC STOPPED AHEAD	PREPARE TO STOP
SITE 3 - STH 153 WB 1500 FT WEST OF BRIDGE	ROAD WORK STARTS	(DAY) (DATE)	N/A	N/A	LEFT LANE CLOSED	MERGE RIGHT	RIGHT LANE CLOSED	MERGE LEFT	AIRPORT TRAFFIC	FOLLOW DETOUR	N/A	N/A	N/A	N/A	IH 39 (NB OR SB) CLOSED	USE ALTERNATE ROUTE
SITE 4 - STH 153 EB 1500 FT EAST OF BRIDGE	ROAD WORK STARTS	(DAY) (DATE)	N/A	N/A	LEFT LANE CLOSED	MERGE RIGHT	RIGHT LANE CLOSED	MERGE LEFT	N/A	N/A	ROAD CLOSED AHEAD	FOLLOW DETOUR	N/A	N/A	IH 39 (NB OR SB) CLOSED	USE ALTERNATE ROUTE
SITE 5 - IH 39 NB 1 MILE SOUTH OF STH 153 (MM 178.6)	N/A	N/A	LEFT LANE CLOSED	1 MILE MERGE RIGHT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	LANE SHIFT	1 MILE AHEAD	TRAFFIC STOPPED AHEAD	PREPARE TO STOP
SITE 6 - IH 39 NB 3 MILES SOUTH OF STH 153 (MM 176.2)	ROAD WORK STARTS	(DAY) (DATE)	LEFT LANE CLOSED	3 MILES AHEAD	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	LANE SHIFT	3 MILES AHEAD	TRAFFIC STOPPED AHEAD	USE ALTERNATE ROUTE

GENERAL NOTES FOR TRAFFIC CONTROL/STAGING STAGE 1, 2, 3, 4, & 5

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

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

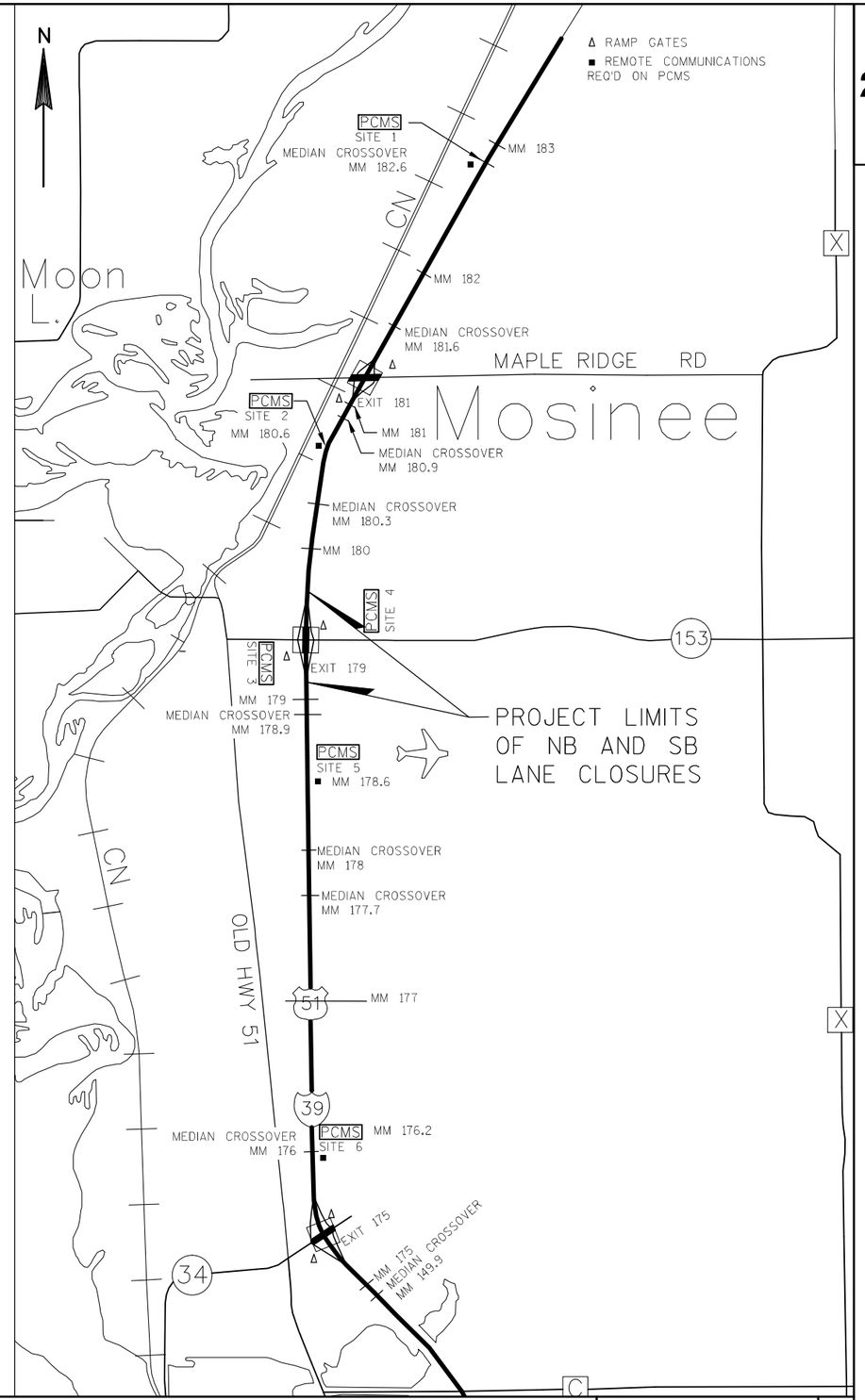
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND APPROVED BY THE ENGINEER.

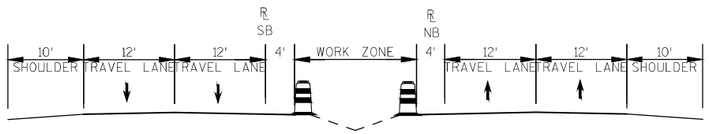
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

'WO' SIGNS ARE 'W' SERIES SIGNS WITH ORANGE BACKGROUND.

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

ALL TRAFFIC CONTROL SIGNING SHALL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.





TRAFFIC CONTROL TYPICAL SECTION
NB AND SB MEDIAN SHOULDERS CLOSED

TRAFFIC:

STAGE 1: IH 39 TRAFFIC IS ON THE PERMANENT LANES
THE MEDIAN SHOULDERS ON BOTH IH 39 ROADWAYS WILL BE CLOSED
A SB IH 39 MEDIAN LANE CLOSURE WILL BE ALLOWED FOR MATERIAL DELIVERY
NB IH 39 LANE CLOSURE IS NOT ALLOWED
STH 153 MEDIAN LANES CLOSURES IN BOTH DIRECTIONS FOR TEMP PIER CONSTRUCTION AND LANDSCAPING
TEMP GIRDER PLACEMENT OVER STH 153 EB UTILIZES A U-TURN DETOUR AT THE STH 34 INTERCHANGE
TEMP GIRDER PLACEMENT OVER STH 153 WB UTILIZES A U-TURN DETOUR AT THE MAPLE RIDGE ROAD INTERCHANGE
IH 39 SB RAMP-OFF/RAMP-ON IS REQUIRED TO COMPLETE THE TEMP BYPASS CONNECTIONS
IH 39 EXIT RAMP SHOULDER CLOSURES REQUIRED FOR LANDSCAPE WORK
ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

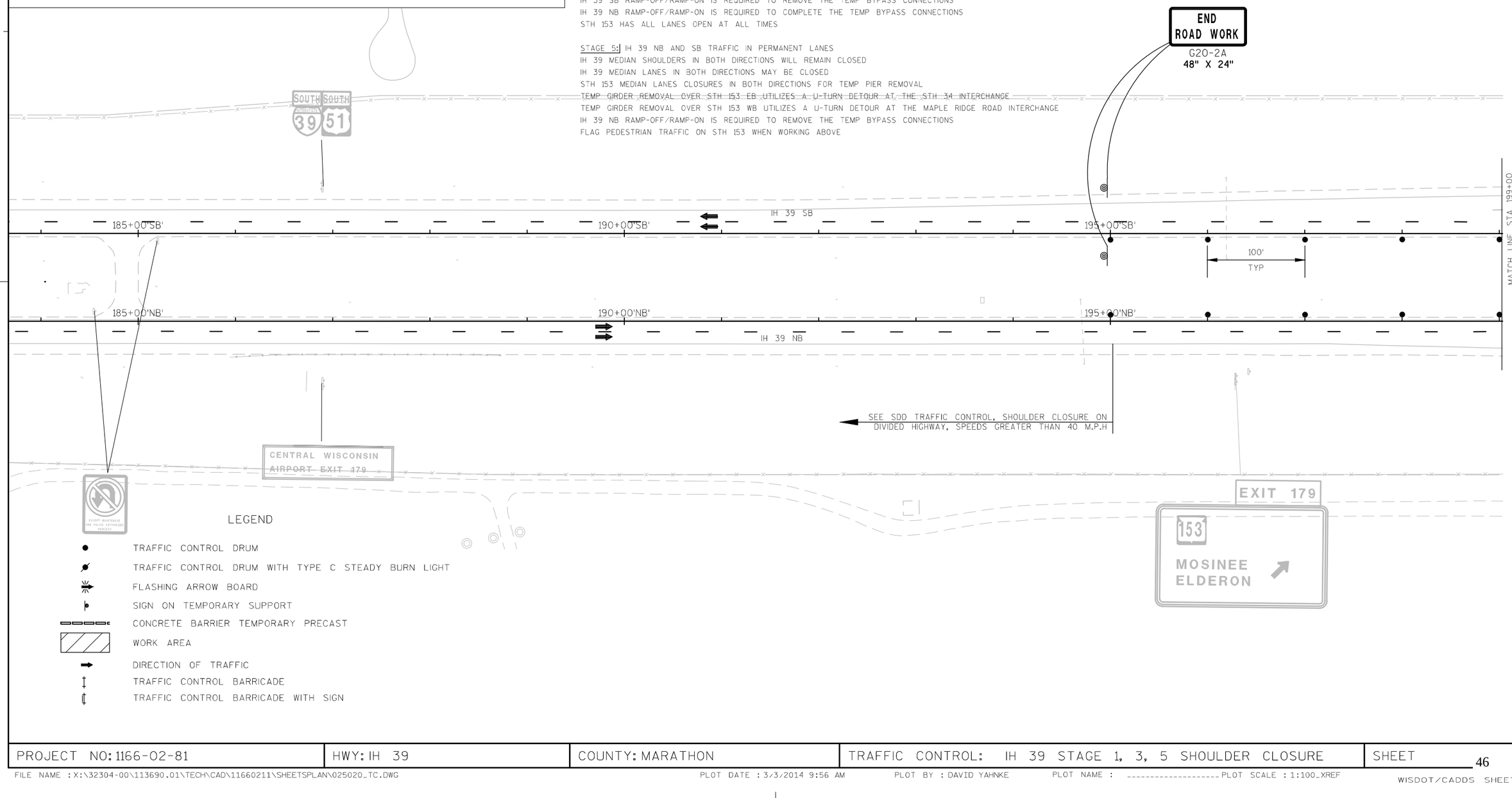
STAGE 3: IH 39 NB AND SB IS ON THE PERMANENT LANES
IH39 MEDIAN SHOULDERS ON BOTH ROADWAYS REMAIN CLOSED
IH 39 SB MEDIAN LANE CLOSURES FOR TS LINE REMOVAL
IH 39 NB MEDIAN LANE CLOSURES FOR TN LINE CONSTRUCTION
IH 39 SB RAMP-OFF/RAMP-ON IS REQUIRED TO REMOVE THE TEMP BYPASS CONNECTIONS
IH 39 NB RAMP-OFF/RAMP-ON IS REQUIRED TO COMPLETE THE TEMP BYPASS CONNECTIONS
STH 153 HAS ALL LANES OPEN AT ALL TIMES

STAGE 5: IH 39 NB AND SB TRAFFIC IN PERMANENT LANES
IH 39 MEDIAN SHOULDERS IN BOTH DIRECTIONS WILL REMAIN CLOSED
IH 39 MEDIAN LANES IN BOTH DIRECTIONS MAY BE CLOSED
STH 153 MEDIAN LANES CLOSURES IN BOTH DIRECTIONS FOR TEMP PIER REMOVAL
TEMP GIRDER REMOVAL OVER STH 153 EB UTILIZES A U-TURN DETOUR AT THE STH 34 INTERCHANGE
TEMP GIRDER REMOVAL OVER STH 153 WB UTILIZES A U-TURN DETOUR AT THE MAPLE RIDGE ROAD INTERCHANGE
IH 39 NB RAMP-OFF/RAMP-ON IS REQUIRED TO REMOVE THE TEMP BYPASS CONNECTIONS
FLAG PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

N

CONSTRUCTION:

STAGE 1: CONSTRUCT TEMPORARY STRUCTURE INCLUDING MEDIAN PIER
CONSTRUCT TEMPORARY SB BYPASS ROADWAY (TS LINE)
LANDSCAPE INTERSECTIONS AND STH 153 MEDIAN
STAGE 3: RE-DECK IH 39 SB STRUCTURE AND COMPLETE APPROACHES
STAGE 5: REMOVE THE TN LINE AND TEMPORARY STRUCTURE
FINAL GRADE IH 39 AND STH 153 MEDIANS



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 1, 3, 5 SHOULDER CLOSURE	SHEET 46	E

2

2

N

MATCH LINE STA 199+00

MATCH LINE STA 213+00

IH 39 SB

200+00 SB

205+00 SB

210+00 SB

50' TYP

100' TYP

200+00 NB

205+00 NB

210+00 NB

IH 39 NB

EXIT 179

ELDERON

WEST 153

EAST 153

FOOD

SUBWAY

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 1, 3, 5 SHOULDER CLOSURE	SHEET 47	E

2

2

N

EXIT
179

IH 39 SB

IH 39 NB

50'
TYP

100'
TYP

225+00'SB'

215+00'NB

220+00'NB

225+00'NB

MATCH LINE STA 213+00

MATCH LINE STA 228+00

STH 153

STH 153

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 1, 3, 5 SHOULDER CLOSURE	SHEET 48	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025020_TC.DWG PLOT DATE : 3/3/2014 9:56 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

2

N

EXIT 179

153

MOSINEE
ELDERON

FOOD

SUBWAY

SEE SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED HIGHWAY, SPEEDS GREATER THAN 40 M.P.H

MATCH LINE STA 229+00

230+00'SB'

235+00'SB'

236+74'SB'

IH 39 SB

100'
TYP

230+00'NB'

235+00'NB'

240+00'NB'

IH 39 NB

END
ROAD WORK

G20-2A
48" X 24"

NORTH
39
51

EXIT 181

MAPLE RIDGE
ROAD

1 MILE

SPEED
LIMIT
65

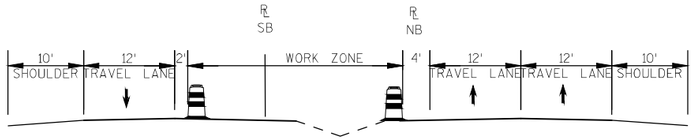
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 1, 3, 5 SHOULDER CLOSURE	SHEET 49	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025020_TC.DWG PLOT DATE : 3/3/2014 9:57 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44



TRAFFIC CONTROL TYPICAL
SOUTHBOUND LANE CLOSED

N

END
ROAD WORK
G20-2A
48" X 24"

SOUTH SOUTH
39 51

SEE SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED HIGHWAY, SPEEDS GREATER THAN 40 M.P.H

185+00'SB' 190+00'SB' IH 39 SB 195+00'SB'

MATCH LINE STA 199+00

100' TYP

185+00'NB' 190+00'NB' IH 39 SB 195+00'NB'

SEE SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED HIGHWAY, SPEEDS GREATER THAN 40 M.P.H

CENTRAL WISCONSIN AIRPORT EXIT 179

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

EXIT 179
153
MOSINEE
ELDERON

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

TRAFFIC:

IH 39 TRAFFIC IS ON THE PERMANENT LANES
THE MEDIAN SHOULDERS ON BOTH IH 39 ROADWAYS WILL BE CLOSED
A SB IH 39 MEDIAN LANE CLOSURE WILL BE ALLOWED FOR MATERIAL DELIVERY
NB IH 39 LANE CLOSURE IS NOT ALLOWED
STH 153 MEDIAN LANES CLOSURES IN BOTH DIRECTIONS FOR TEMP PIER CONSTRUCTION AND LANDSCAPING
TEMP GIRDER PLACEMENT OVER STH 153 EB UTILIZES A U-TURN DETOUR AT THE STH 34 INTERCHANGE
TEMP GIRDER PLACEMENT OVER STH 153 WB UTILIZES A U-TURN DETOUR AT THE MAPLE RIDGE ROAD INTERCHANGE
IH 39 SB RAMP-OFF/RAMP-ON IS REQUIRED TO COMPLETE THE TEMP BYPASS CONNECTIONS
IH 39 EXIT RAMP SHOULDER CLOSURES REQUIRED FOR LANDSCAPE WORK
ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

CONSTRUCTION:

CONSTRUCT TEMPORARY STRUCTURE INCLUDING STH 153 MEDIAN PIER
CONSTRUCT TEMPORARY SB BYPASS ROADWAY (TS LINE)
LANDSCAPE INTERSECTIONS AND STH 153 MEDIAN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 1 LANE CLOSURE	SHEET 50	E

2

N

R11-2L
48" X 30"
LANE CLOSED

TYPE III BARRICADE

SEE SDD TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED HIGHWAY, SPEEDS GREATER THAN 40 M.P.H

50'
TYP

MATCH LINE STA 199+00

MATCH LINE STA 213+00

IH 39 SB

200+00'SB'

205+00'SB'

210+00'SB'

100'
TYP

200+00'NB'

205+00'NB'

210+00'NB'

IH 39 NB

EXIT
179

ELDERON

WEST 153
EAST 153

FOOD

SUBWAY

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 1 LANE CLOSURE	SHEET 51	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025021_TC.DWG PLOT DATE : 3/3/2014 9:57 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

2

2

N

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H

EXIT 179

IH 39 SB

IH 39 NB

215+00'NB

220+00'NB

225+00'NB

50' TYP

100' TYP

MATCH LINE STA 213+00

MATCH LINE STA 228+00

STH 153

STH 153

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 1 LANE CLOSURE	SHEET 52	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025021_TC.DWG PLOT DATE : 3/3/2014 9:57 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

2

N

EXIT 179

153

MOSINEE
ELDERON

TYPE III BARRICADE
1320' INTERVAL

SEE SDD TRAFFIC CONTROL, LANE CLOSURE,
SPEEDS GREATER THAN 40 M.P.H

FOOD

SUBWAY

MATCH LINE STA 229+00

230+00'SB'

100'

235+00'SB'

236+74'SB'

IH 39 SB

230+00'NB'

235+00'NB'

240+00'NB'

IH 39 NB

R/W

END
ROAD WORK
G20-2A
48" X 24"

NORTH
39
51

EXIT 181

MAPLE RIDGE
ROAD
1 MILE

SPEED
LIMIT
65

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 1 LANE CLOSURE	SHEET 53	E

2

N

8" MIN.

36" MIN.

VERTICAL PANEL - 10' OFFSET FROM LANE EDGE

R11-2L
48" X 30"
ROAD CLOSED

TYPE III BARRICADE

PAVEMENT MARKING
EPOXY 4-INCH (LANE MEDIAN EDGE)

200+00'TS'
200+00'SB'

IH 39 SB

205+00'TS'
205+00'SB'

12.5'

210+00'SB'

210+00'TS'

MATCH LINE STA 213+00

IH 39 NB

EXIT
179

ELDERON

FOOD

SUBWAY

WEST 153
EAST 153

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN
- VERTICAL PANEL

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 POST STAGE 1 WINTER SHUTDOWN	SHEET 54	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025020_TC_WINTER.DWG PLOT DATE : 3/3/2014 9:57 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

2

N

R11-2L
48" X 30"
ROAD CLOSED
TYPE III BARRICADE

EXIT
179

VERTICAL PANEL

TEMPORARY STRUCTURE

PAVEMENT MARKING
EPOXY 4-INCH (MEDIAN LANE EDGE)

IH 39 SB

215+00'TS'

220+00'TS'

225+00'TS'
225+00'SB'

12.5'

MATCH LINE STA 213+00

IH 39 NB

STH 153

STH 153

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN
- VERTICAL PANEL

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 POST STAGE 1 WINTER SHUTDOWN	SHEET 55	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025020_TC_WINTER.DWG PLOT DATE : 3/3/2014 9:57 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

2

TRAFFIC:

IH 39 NB TRAFFIC IS ON THE PERMANENT NB LANES

IH 39 SB TRAFFIC WILL USE THE TEMP BYPASS ROADWAY AND STRUCTURE (TS LINE)

NO LANE CLOSURES ON IH 39 DURING THIS STAGE

DETOUR EB STH 153 TO STH 34 INTERCHANGE FOR REMOVAL OF IH 39 SB DECK OVER EB STH 153

DETOUR WB STH 153 TO MAPLE RIDGE ROAD INTERCHANGE FOR REMOVAL OF IH 39 SB DECK OVER WB STH 153

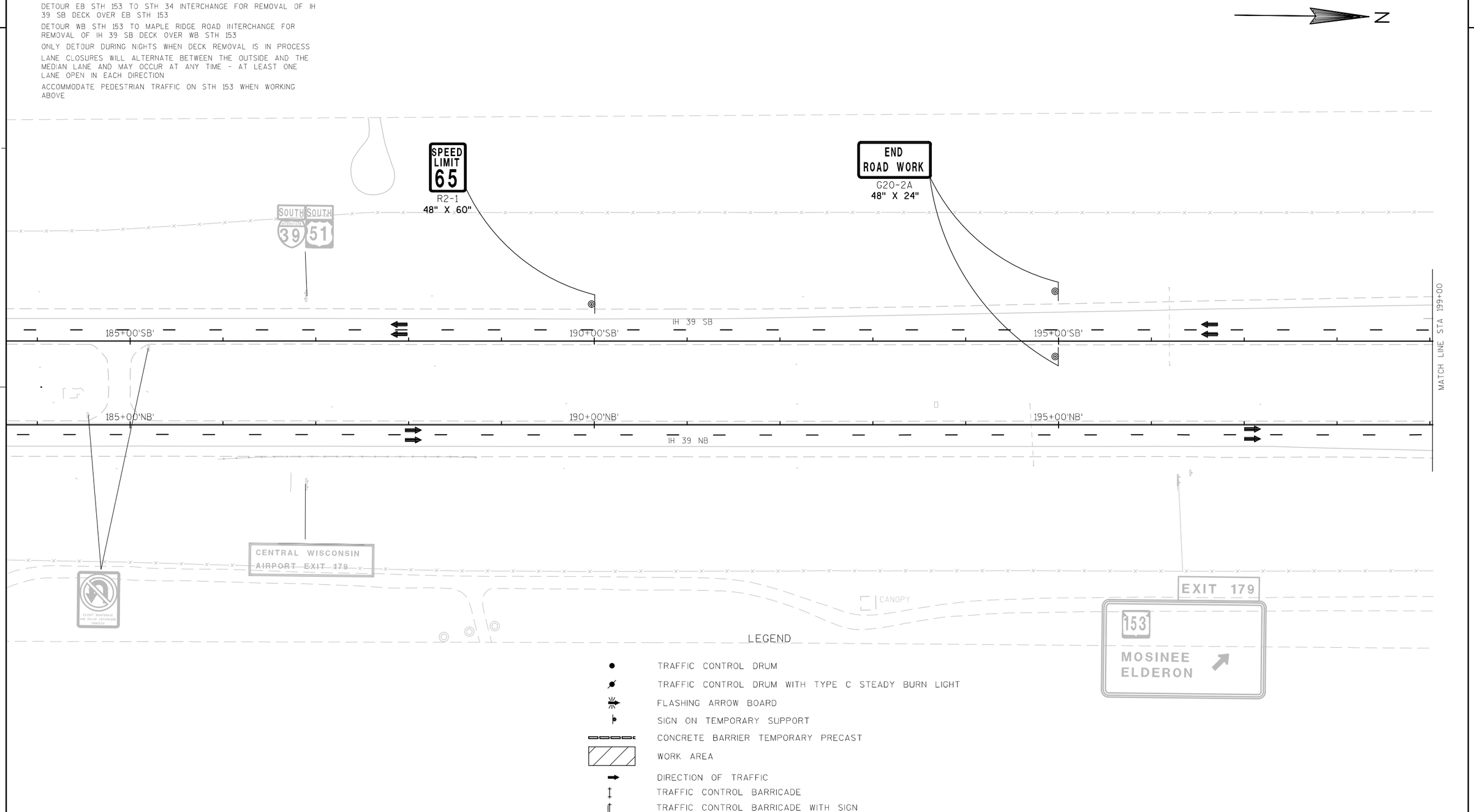
ONLY DETOUR DURING NIGHTS WHEN DECK REMOVAL IS IN PROCESS

LANE CLOSURES WILL ALTERNATE BETWEEN THE OUTSIDE AND THE MEDIAN LANE AND MAY OCCUR AT ANY TIME - AT LEAST ONE LANE OPEN IN EACH DIRECTION

ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

CONSTRUCTION:

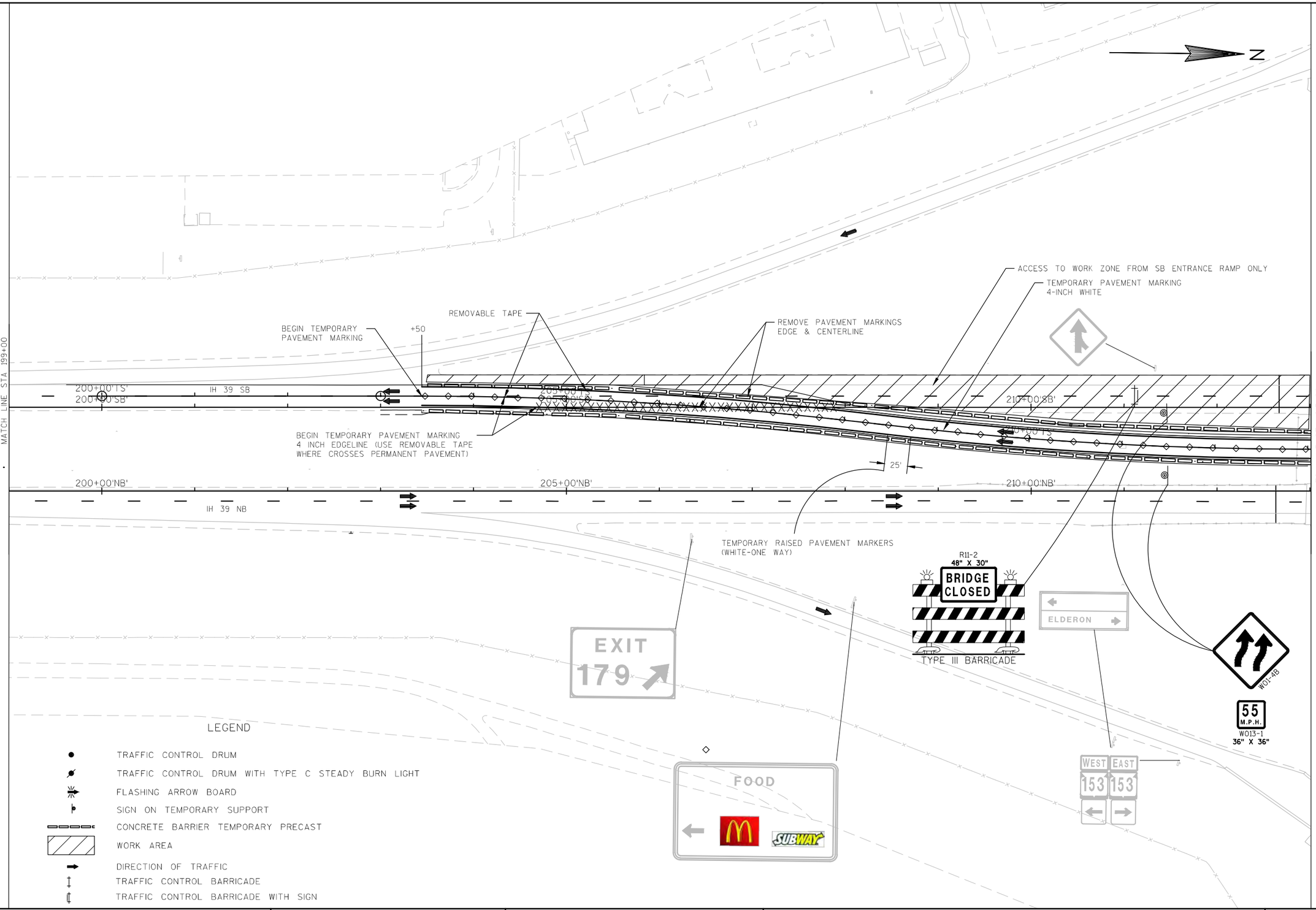
RE-DECK IH 39 SB STRUCTURE AND COMPLETE APPROACHES



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 2	SHEET 56	E



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 2	SHEET 57	E

2

N

R11-2
48" X 30"
BRIDGE CLOSED
TYPE III BARRICADE

W01-6
48" X 24"

W5-52R
12" X 36"

EXIT
179

W01-4B

55
M.P.H.
W013-1
36" X 36"

TEMPORARY CRASH CUSHION

PERFORM WORK ON
B-37-148

ACCESS TO WORKZONE FROM
SB ENTRANCE RAMP ONLY

50' 50'

IH 39 SB

225+00'TS'
225+00'SB'

220+00'TS'

215+00'TS'

REMOVE PAVEMENT MARKINGS
EDGE & CENTERLINE

END TEMPORARY PAVEMENT
MARKING 4-INCH EDGELINES
(USE REMOVABLE TAPE WHERE
CROSSES PERMANENT PAVEMENT

TEMPORARY CRASH CUSHION

TEMPORARY PAVEMENT MARKINGS
4-INCH WHITE

MATCH LINE STA 213+00

215+00'NB'

25'

220+00'NB'

225+00'NB'

IH 39 NB

MATCH LINE STA 228+00

TEMPORARY STRUCTURE

STH 153

STH 153

TEMPORARY RAISED PAVEMENT MARKERS
(WHITE-ONE WAY)

W5-52L
18" X 54"

W5-52R
18" X 54"

W5-52L
18" X 54"

STAY
IN
LANE
R4-9
48" X 60"

3' 12' 12' 3'

TEMPORARY BRIDGE TYPICAL
30FT MINIMUM WIDTH

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 2	SHEET 58	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025022_TC.DWG PLOT DATE : 3/3/2014 9:58 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

2

N

EXIT 179

153

MOSINEE
ELDERON

W01-4B

1/2 MILE AHEAD

W057-52
48" X 36"

SPEED LIMIT 55

R2-1
48" X 60"

55 M.P.H.

W013-1
36" X 36"

SPEED LIMIT 55

W3-5

ROAD WORK AHEAD

W20-1

500'

2600'

500'

2600'

FOOD

SUBWAY

230+00'TS'

230+04'TS'

230+00'SB'

235+00'SB'

236+74'SB'

IH 39 NB

MATCH LINE STA 228+00

230+00'NB'

235+00'NB'

240+00'NB'

IH 39 SB

NORTH
39
51

EXIT 181

MAPLE RIDGE ROAD

1 MILE

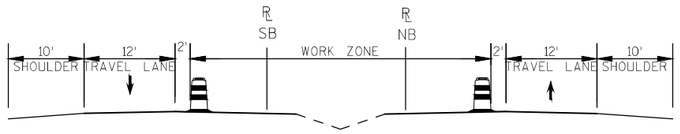
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 2	SHEET 59	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025022_TC.DWG PLOT DATE : 3/3/2014 9:58 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44



TRAFFIC CONTROL TYPICAL SECTION
NB AND SB MEDIAN LANES CLOSED

TRAFFIC:

STAGE 3: IH 39 NB AND SB IS ON THE PERMANENT LANES
IH39 MEDIAN SHOULDERS ON BOTH ROADWAYS REMAIN CLOSED
IH 39 SB MEDIAN LANE CLOSURES FOR TS LINE REMOVAL
IH 39 NB MEDIAN LANE CLOSURES FOR TN LINE CONSTRUCTION
IH 39 SB RAMP-OFF/RAMP-ON IS REQUIRED TO REMOVE THE TEMP BYPASS CONNECTIONS
IH 39 NB RAMP-OFF/RAMP-ON IS REQUIRED TO COMPLETE THE TEMP BYPASS CONNECTIONS
STH 153 HAS ALL LANES OPEN AT ALL TIMES

STAGE 5: IH 39 NB AND SB TRAFFIC IN PERMANENT LANES
IH 39 MEDIAN SHOULDERS IN BOTH DIRECTIONS WILL REMAIN CLOSED
IH 39 MEDIAN LANES IN BOTH DIRECTIONS MAY BE CLOSED
STH 153 MEDIAN LANES CLOSURES IN BOTH DIRECTIONS FOR TEMP PIER REMOVAL
TEMP GIRDER REMOVAL OVER STH 153 EB UTILIZES A U-TURN DETOUR AT THE STH 34 INTERCHANGE
TEMP GIRDER REMOVAL OVER STH 153 WB UTILIZES A U-TURN DETOUR AT THE MAPLE RIDGE ROAD INTERCHANGE
IH 39 NB RAMP-OFF/RAMP-ON IS REQUIRED TO REMOVE THE TEMP BYPASS CONNECTIONS
FLAG PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

CONSTRUCTION:

STAGE 3: REMOVE IH 39 TEMP SB BYPASS (TS LINE)
CONSTRUCT IH 39 TEMP NB BYPASS (TN LINE)

STAGE 5: REMOVE THE TN LINE AND TEMPORARY STRUCTURE
FINAL GRADE IH 39 AND STH 153 MEDIANS

N

END
ROAD WORK
G20-2A
48" X 24"

SOUTH 39 SOUTH 51

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

IH 39 SB
185+00'SB'
190+00'SB'
195+00'SB'
MATCH LINE STA 199+00

100'
TYP

185+00'NB'
190+00'NB'
195+00'NB'
IH 39 NB

SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H

CENTRAL WISCONSIN AIRPORT EXIT 179

EXCEPT MAINTENANCE AND POLICE AUTHORIZED VEHICLES

EXIT 179
153
MOSINEE
ELDERON

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 3 & 5 LANE CLOSURE	SHEET 60	E

2

N

R11-2L
48" X 30"
LANE CLOSED

TYPE III BARRICADE

MATCH LINE STA 199+00

IH 39 SB

200+00 SB

205+00 SB

210+00 SB

50'
TYP

SEE SDD TRAFFIC CONTROL, LANE CLOSURE,
SPEEDS GREATER THAN 40 M.P.H

200+00 NB

205+00 NB

210+00 NB

IH 39 NB

MATCH LINE STA 213+00

EXIT
179

FOOD

ELDERON

WEST 153
EAST 153

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STAGE 3 & 5 LANE CLOSURE	SHEET 61	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025023_TC.DWG PLOT DATE : 3/3/2014 9:58 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

2

2

N

EXIT
179

R11-2L
48" X 30"
LANE CLOSED
TYPE III BARRICADE

50'

100'
TYP

IH 39 SB

225+00'SB

SEE SDD TRAFFIC CONTROL, LANE CLOSURE,
SPEEDS GREATER THAN 40 M.P.H

MATCH LINE STA 213+00

215+00'NB'

220+00'NB'

225+00'NB'

IH 39 NB

MATCH LINE STA 228+00

STH 153

STH 153

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 3 & 5 LANE CLOSURE	SHEET 62	E

2

N

EXIT 179

153

MOSINEE
ELDERON

R11-2L
48" X 30"

LANE CLOSED

TYPE III BARRICADE

SEE SDD TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H

FOOD

SUBWAY

MATCH LINE STA 228+00

IH 39 SB

230+00'SB'

100'

235+00'SB'

236+74'SB'

230+00'NB'

235+00'NB'

IH 39 NB

240+00'NB'

END ROAD WORK

G20-2A
48" X 24"

NORTH
39
51

EXIT 181

MAPLE RIDGE ROAD

1 MILE

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 3 & 5 LANE CLOSURE	SHEET 63	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025023_TC.DWG PLOT DATE : 3/3/2014 9:59 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

2

2

TRAFFIC:

IH 39 SB TRAFFIC IS ON THE PERMANENT SB LANES

IH 39 NB TRAFFIC WILL USE THE TEMP BYPASS ROADWAY AND STRUCTURE (TN LINE)

NO LANE CLOSURES ON IH 39 DURING THIS STAGE

DETOUR EB STH 153 TO STH 34 INTERCHANGE FOR REMOVAL OF IH 39 NB DECK OVER EB STH 153

DETOUR WB STH 153 TO MAPLE RIDGE ROAD INTERCHANGE FOR REMOVAL OF IH 39 NB DECK OVER WB STH 153

ONLY DETOUR DURING NIGHTS WHEN DECK REMOVAL IS IN PROCESS

LANE CLOSURES WILL ALTERNATE BETWEEN THE OUTSIDE AND THE MEDIAN LANE AND MAY OCCUR AT ANY TIME

ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

CONSTRUCTION:

RE-DECK IH 39 NB STRUCTURE AND COMPLETE APPROACHES

N

SOUTH SOUTH
Junction
39 51

IH 39 SB

185+00'SB

190+00'SB

195+00'SB

MATCHLINE STA 199+00

185+00'NB

190+00'NB

195+00'NB

IH 39 NB

CENTRAL WISCONSIN AIRPORT EXIT 179

2600'

500'

2600'

500'

ROAD WORK AHEAD
W20-1

SPEED LIMIT 55
W3-5

W01-4B

SPEED LIMIT 55
R2-1
48" X 60"

1/2 MILE AHEAD
W057-52
48" X 36"

55 M.P.H.
W013-1

EXIT 179
153
MOSINEE
ELDERON

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 4	SHEET 64	E

2

2

N

STAY IN LANE
R4-9
48" X 60"

TEMPORARY PAVEMENT MARKING
4-INCH EDGELINE
(USE REMOVABLE TAPE WHERE TEMPORARY CROSSES PERMANENT PAVEMENT MARKINGS)

TEMPORARY PAVEMENT MARKING
4-INCH WHITE

TEMPORARY STRUCTURE

B-37-148

MATCHLINE STA 199+00

200+00'SB

IH 39 SB

205+00'SB

210+00'SB

215+

TEMPORARY CRASH CUSHION

W5-52L
18" X 54"

REMOVE EDGE & CENTERLINE PAVEMENT MARKINGS

200+00'NB'
200+00'TN'

IH 39 NB

205+00'NB'

210+00'TN

210+00'NB'

50'

25'

B-37-149

TEMPORARY RAISED PAVEMENT MARKERS
(WHITE-ONE WAY)

W01-6
48" X 24"

TYPE III BARRICADE

TEMPORARY CRASH CUSHION

W5-52R
18" X 54"

R11-2
48" X 30"

BRIDGE CLOSED

TYPE III BARRICADE

W5-52L
18" X 54"

W5-52R
18" X 54"

PERFORM WORK ON B-37-149

ACCESS TO WORK ZONE FROM NB ENTRANCE RAMP ONLY

MATCHLINE STA 215+00

W01-4B

55
M.P.H.

W013-1
36" X 36"

EXIT
179

STH 153

STH 153

ELDERON

WEST 153 EAST 153

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

℄

3' 12' 12' 3'

TEMPORARY BRIDGE TYPICAL
30FT MINIMUM WIDTH

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 4	SHEET 65	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025024_TC.DWG PLOT DATE : 3/3/2014 9:59 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

2

N

EXIT
179

IH 39 SB

220+00'SB

225+00'SB

MATCH LINE STA 215+00

220+00'TN

220+00'NB

IH 39 NB

225+00'NB'

225+00'TN'

+00

25'

500'

TEMPORARY PAVEMENT MARKING
4-INCH WHITE

TEMPORARY PAVEMENT MARKING
4-INCH EDGELINE (USE REMOVABLE TAPE
WHERE TEMPORARY CROSSES PERMANENT PAVEMENT)

ACCESS TO WORKZONE FROM
NB ENTRANCE RAMP ONLY

REMOVE EDGE & CENTERLINE
PAVEMENT MARKINGS

TEMPORARY RAISED PAVEMENT MARKERS
(WHITE-ONE WAY)

W01-4B

55
M.P.H.
W013-1
36" X 36"

R11-2
48" X 30"
BRIDGE
CLOSED
TYPE III BARRICADE

END
ROAD WORK
G20-2A
48" X 24"

SPEED
LIMIT
65
R2-1
48" X 60"

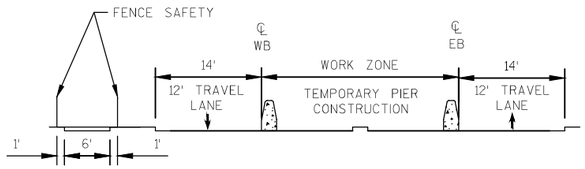
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: IH 39 STAGE 4	SHEET 66	E

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WISDOT/CADDS SHEET 44



TRAFFIC CONTROL TYPICAL SECTION
STAGE 1 & 5 (LOOKING EAST)

TRAFFIC:

STAGE 1: IH 39 TRAFFIC IS ON THE PERMANENT LANES
THE MEDIAN SHOULDERS ON BOTH IH 39 ROADWAYS WILL BE CLOSED
A SB IH 39 MEDIAN LANE CLOSURE WILL BE ALLOWED FOR MATERIAL DELIVERY
NB IH 39 LANE CLOSURE IS NOT ALLOWED
STH 153 MEDIAN LANES CLOSURES IN BOTH DIRECTIONS FOR TEMP PIER CONSTRUCTION AND LANDSCAPING
TEMP GIRDER PLACEMENT OVER STH 153 EB UTILIZES A U-TURN DETOUR AT THE STH 34 INTERCHANGE
TEMP GIRDER PLACEMENT OVER STH 153 WB UTILIZES A U-TURN DETOUR AT THE MAPLE RIDGE ROAD INTERCHANGE
IH 39 SB RAMP-OFF/RAMP-ON IS REQUIRED TO COMPLETE THE TEMP BYPASS CONNECTIONS
IH 39 EXIT RAMP SHOULDER CLOSURES REQUIRED FOR LANDSCAPE WORK
ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

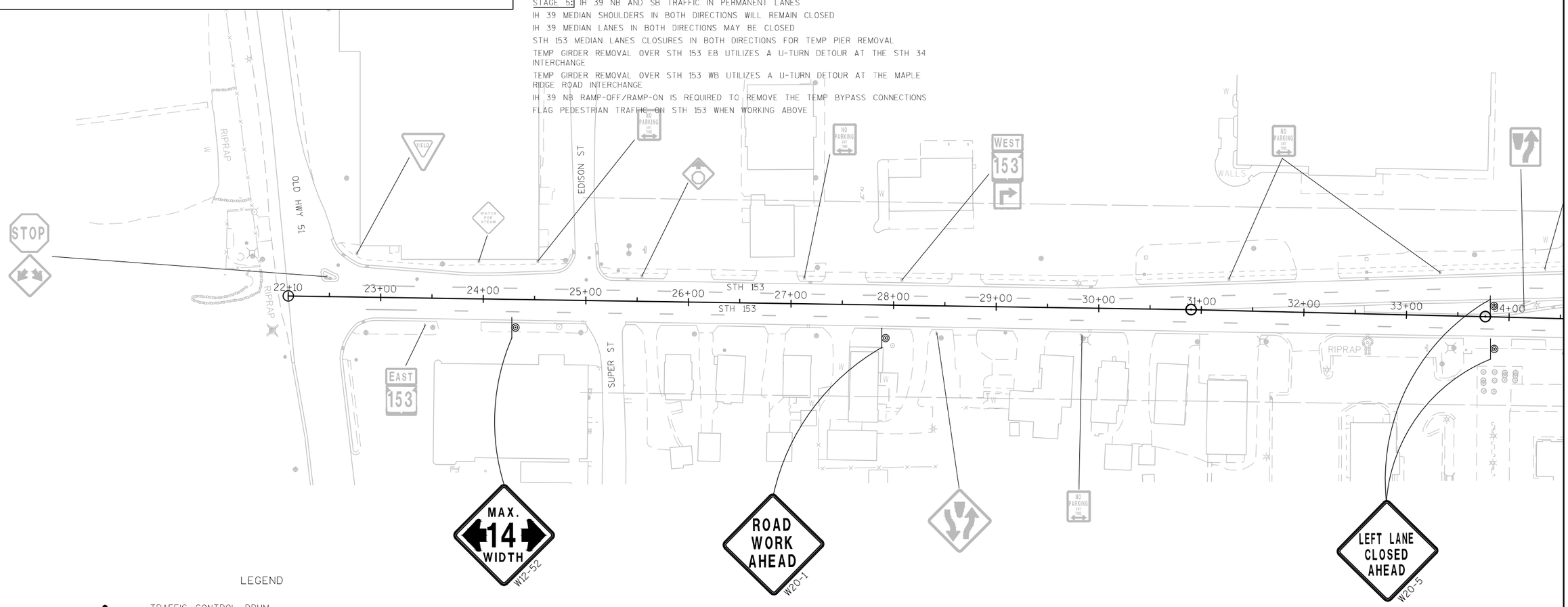
STAGE 5: IH 39 NB AND SB TRAFFIC IN PERMANENT LANES
IH 39 MEDIAN SHOULDERS IN BOTH DIRECTIONS WILL REMAIN CLOSED
IH 39 MEDIAN LANES IN BOTH DIRECTIONS MAY BE CLOSED
STH 153 MEDIAN LANES CLOSURES IN BOTH DIRECTIONS FOR TEMP PIER REMOVAL
TEMP GIRDER REMOVAL OVER STH 153 EB UTILIZES A U-TURN DETOUR AT THE STH 34 INTERCHANGE
TEMP GIRDER REMOVAL OVER STH 153 WB UTILIZES A U-TURN DETOUR AT THE MAPLE RIDGE ROAD INTERCHANGE
IH 39 NB RAMP-OFF/RAMP-ON IS REQUIRED TO REMOVE THE TEMP BYPASS CONNECTIONS
FLAG PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

CONSTRUCTION:

STAGE 1: CONSTRUCT TEMPORARY STRUCTURE INCLUDING MEDIAN PIER
CONSTRUCT TEMPORARY SB BYPASS ROADWAY (TS LINE)
LANDSCAPE INTERSECTIONS AND STH 153 MEDIAN

STAGE 5: REMOVE THE TN LINE AND TEMPORARY STRUCTURE
FINAL GRADE IH 39 AND STH 153 MEDIANS

N



LEGEND

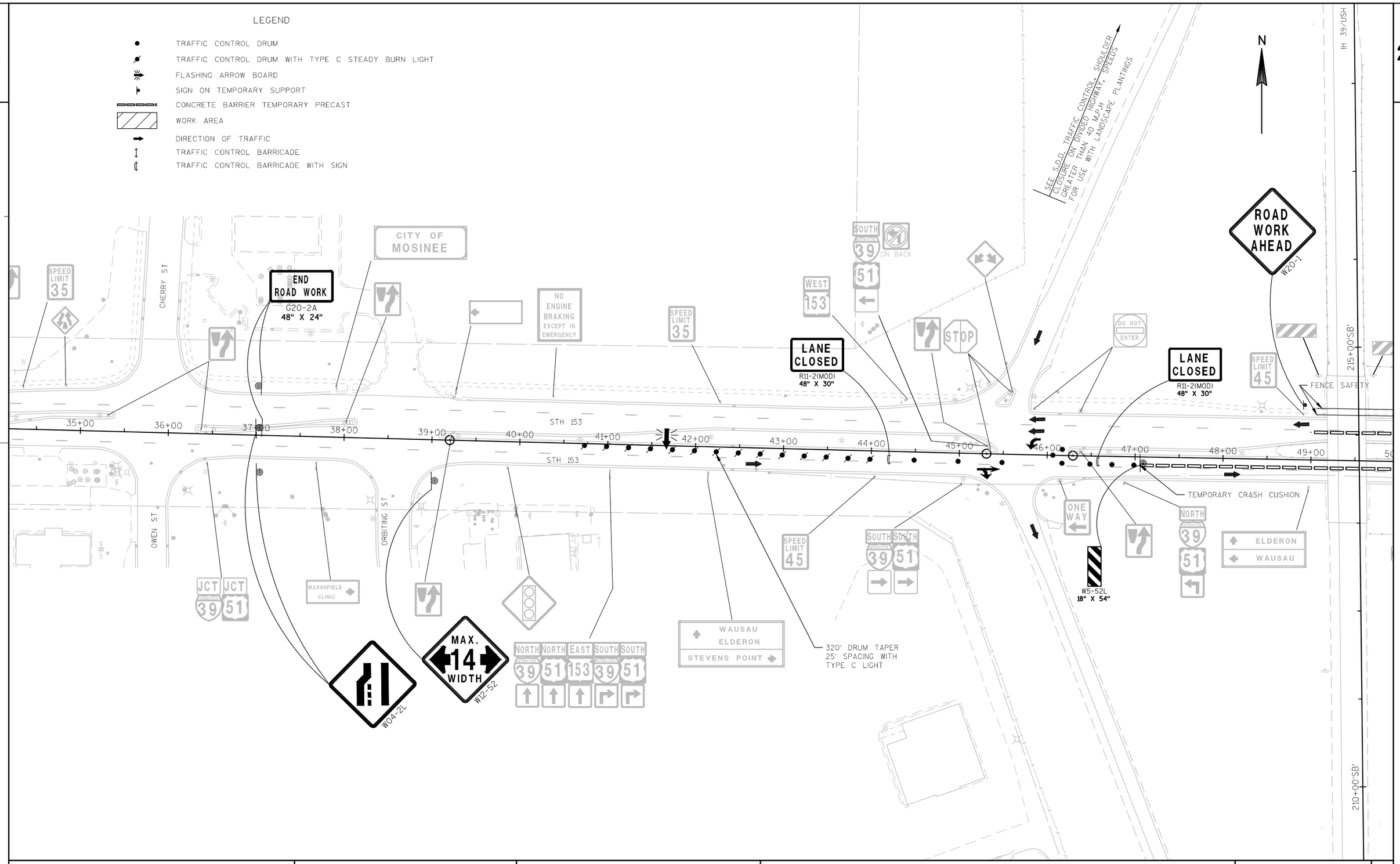
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 1 & 5	SHEET 67	E

2

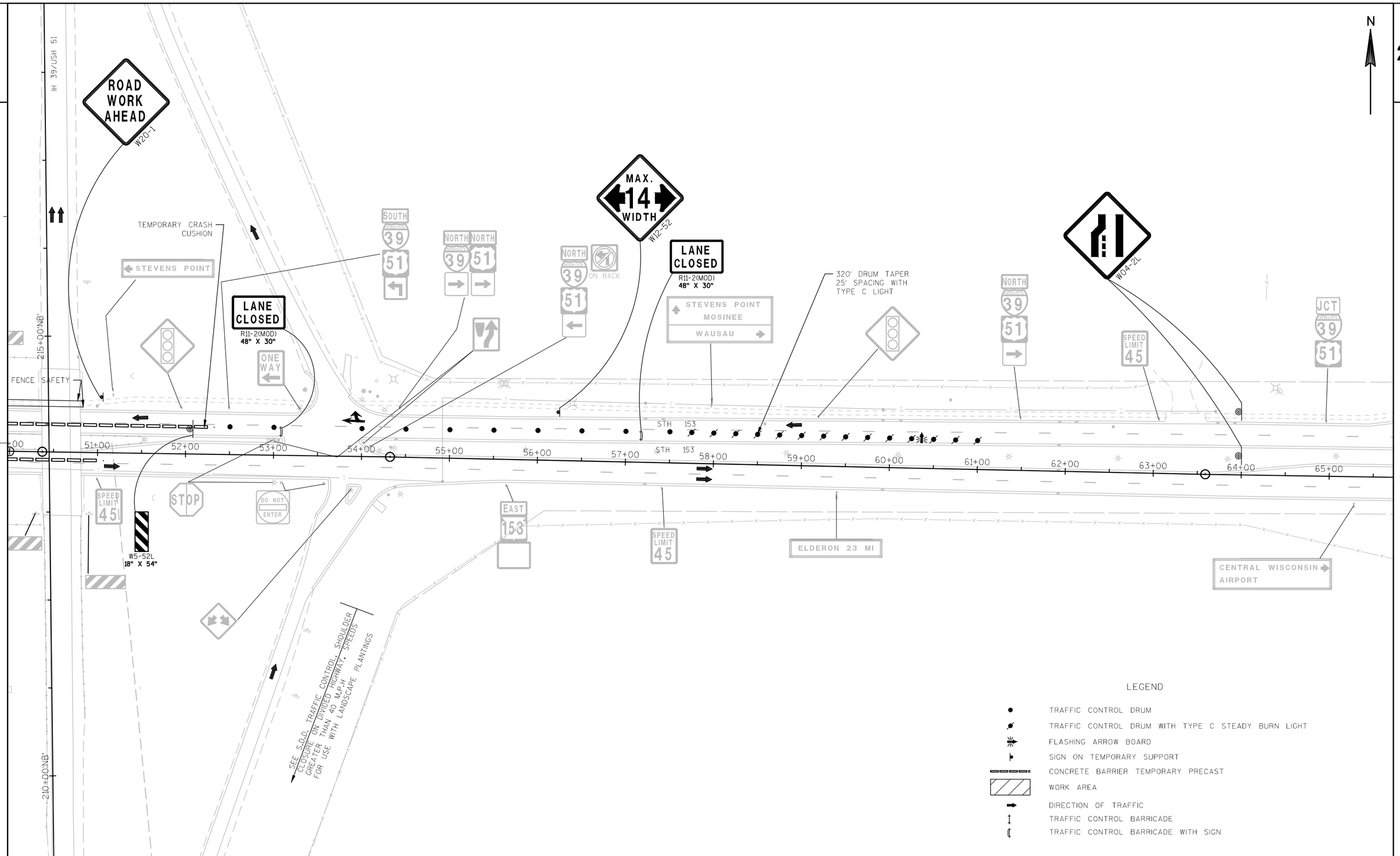
LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 1 & 5	SHEET 68	E

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WISDOT/CADDS SHEET 42



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 1 & 5	SHEET 69	E

2

2

N

ROAD WORK AHEAD
W20-1

MAX. 14 WIDTH
W12-52

WEST VIEW DR

GOLF CLUB BLVD

STH 153

66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00

STH 153

CWA DR

CWA DR

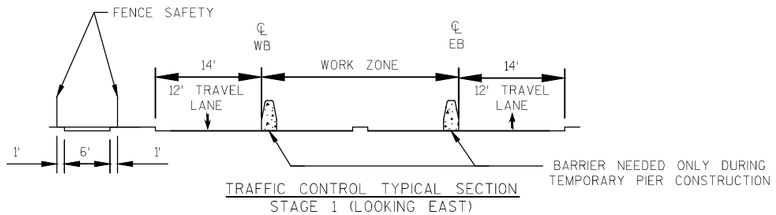
LEFT LANE CLOSED AHEAD
W20-5

END ROAD WORK
G20-2A
48" X 24"

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 1 & 5	SHEET 70	E



TRAFFIC CONTROL TYPICAL SECTION
STAGE 1 (LOOKING EAST)

TRAFFIC:

STAGE 1: IH 39 TRAFFIC IS ON THE PERMANENT LANES
THE MEDIAN SHOULDERS ON BOTH IH 39 ROADWAYS WILL BE CLOSED
A SB IH 39 MEDIAN LANE CLOSURE WILL BE ALLOWED FOR MATERIAL DELIVERY
NB IH 39 LANE CLOSURE IS NOT ALLOWED
STH 153 MEDIAN LANES CLOSURES IN BOTH DIRECTIONS FOR TEMP PIER CONSTRUCTION AND LANDSCAPING
TEMP GIRDER PLACEMENT OVER STH 153 EB UTILIZES A U-TURN DETOUR AT THE STH 34 INTERCHANGE
TEMP GIRDER PLACEMENT OVER STH 153 WB UTILIZES A U-TURN DETOUR AT THE MAPLE RIDGE ROAD INTERCHANGE
IH 39 SB RAMP-OFF/RAMP-ON IS REQUIRED TO COMPLETE THE TEMP BYPASS CONNECTIONS
IH 39 EXIT RAMP SHOULDER CLOSURES REQUIRED FOR LANDSCAPE WORK
ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

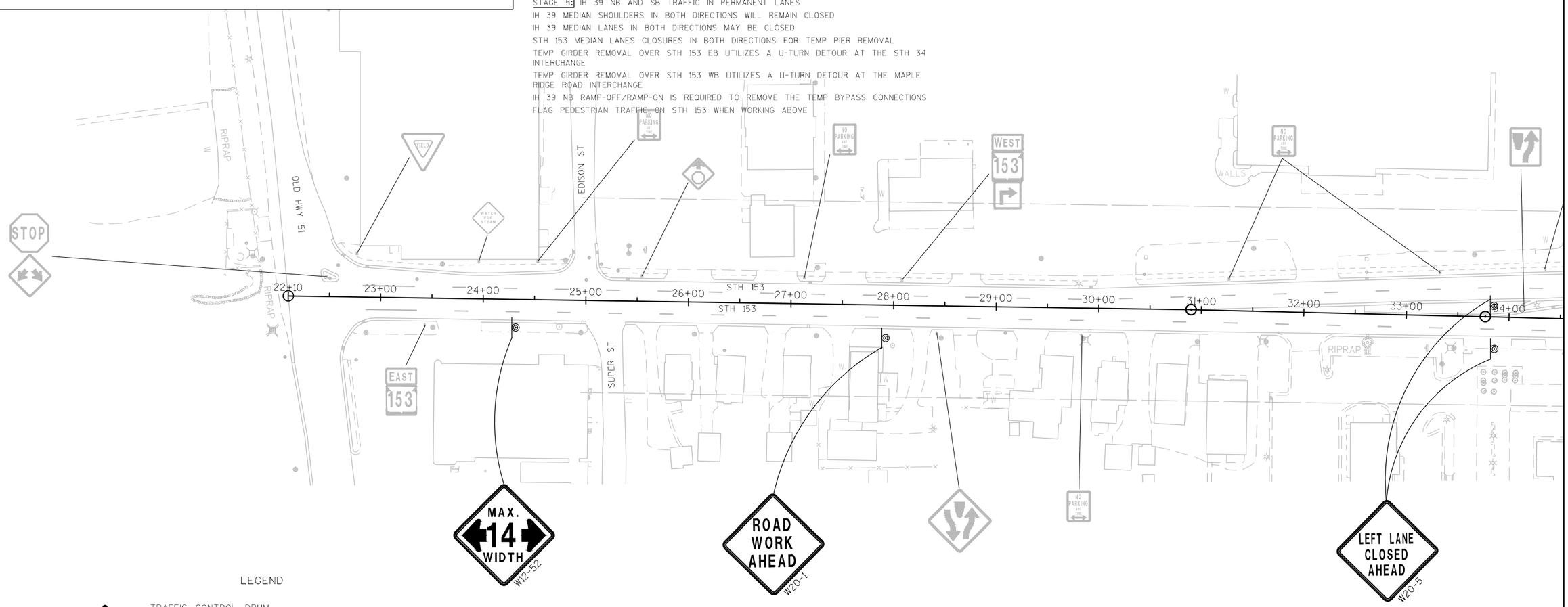
STAGE 5: IH 39 NB AND SB TRAFFIC IN PERMANENT LANES
IH 39 MEDIAN SHOULDERS IN BOTH DIRECTIONS WILL REMAIN CLOSED
IH 39 MEDIAN LANES IN BOTH DIRECTIONS MAY BE CLOSED
STH 153 MEDIAN LANES CLOSURES IN BOTH DIRECTIONS FOR TEMP PIER REMOVAL
TEMP GIRDER REMOVAL OVER STH 153 EB UTILIZES A U-TURN DETOUR AT THE STH 34 INTERCHANGE
TEMP GIRDER REMOVAL OVER STH 153 WB UTILIZES A U-TURN DETOUR AT THE MAPLE RIDGE ROAD INTERCHANGE
IH 39 NB RAMP-OFF/RAMP-ON IS REQUIRED TO REMOVE THE TEMP BYPASS CONNECTIONS
FLAG PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

CONSTRUCTION:

STAGE 1: CONSTRUCT TEMPORARY STRUCTURE INCLUDING MEDIAN PIER
CONSTRUCT TEMPORARY SB BYPASS ROADWAY (TS LINE)
LANDSCAPE INTERSECTIONS AND STH 153 MEDIAN

STAGE 5: REMOVE THE TN LINE AND TEMPORARY STRUCTURE
FINAL GRADE IH 39 AND STH 153 MEDIANS

N



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGE 1 STREETSCAPE	SHEET 71	E

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

SEE S.D.D. TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE FOR USE WITH LANDSCAPE PLANTINGS

EXTEND OUTSIDE PEDESTRIAN SAFETY FENCE PAST PLANTING AREAS; REMOVE AFTER PLANTING IS COMPLETED

DO NOT CLOSE BOTH SHOULDERS AT ONE TIME. ACCESS TO PLANTING AREAS AT RAMP TERMINALS IS TO BE FROM RAMPS ONLY

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED HIGHWAY, SPEEDS GREATER THAN 40 M.P.H FOR USE WITH LANDSCAPE PLANTINGS

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED HIGHWAY, SPEEDS GREATER THAN 40 M.P.H FOR USE WITH LANDSCAPE PLANTINGS

N

IH 39/USH

CITY OF MOSINEE

CHERRY ST

SPEED LIMIT 35

END ROAD WORK
C20-2A
48" X 24"

NO ENGINE BRAKING EXCEPT IN EMERGENCY

SPEED LIMIT 35

LANE CLOSED
R11-2(MOD)
48" X 30"

SOUTH 39 51 ON BACK

WEST 153

W01-6
48" X 24"

STOP

DO NOT ENTER

BEGIN LEFT TURN LANE
R3-20L
24"X36"

ROAD WORK AHEAD
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

SPEED LIMIT 45

FENCE SAFETY

215+00'SB'

35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00

STH 153

STH 153

TEMPORARY CRASH CUSHION

ONE WAY

NORTH 39 51

ELDERON
WAUSAU

OWEN ST

ORBITING ST

JCT 39 JCT 51

MARSHFIELD CLINIC

SPEED LIMIT 45

SOUTH 39 SOUTH 51

W5-52L
18" X 54"

MAX. 14 WIDTH
W12-52

W04-2L

NORTH 39 NORTH 51 EAST 153 SOUTH 39 SOUTH 51

WAUSAU
ELDERON
STEVENS POINT

320' DRUM TAPER
25' SPACING WITH
TYPE C LIGHT

210+00'SB'

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGE 1 STREETSCAPE	SHEET 72 E

2

N

IH 39/USH 51

ROAD WORK AHEAD W20-1

TEMPORARY CRASH CUSHION

STEVENS POINT

LANE CLOSED R11-2(MOD) 48" X 30"

ONE WAY

FENCE SAFETY

215+00 NB'

210+00 NB'

SOUTH 39 51

NORTH NORTH 39 51

NORTH 39 51 ON BACK

MAX. 14 WIDTH W12-52

STEVENS POINT
MOSINEE
WAUSAU

NORTH 39 51

SPEED LIMIT 45

JCT 39 51

STH 153

50+00 51+00 52+00 53+00 54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00

STOP

SPEED LIMIT 45

W5-52L 18" X 54"

EAST 153

SPEED LIMIT 45

ELDERON 23 MI

CENTRAL WISCONSIN AIRPORT

W01-6 48" X 24"

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED HIGHWAY, SPEEDS GREATER THAN 40 M.P.H FOR USE WITH LANDSCAPE PLANTINGS

SEE S.D.D. TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED HIGHWAY, SPEEDS GREATER THAN 40 M.P.H FOR USE WITH LANDSCAPE PLANTINGS

DO NOT CLOSE BOTH SHOULDERS AT ONE TIME. ACCESS TO PLANTING AREAS AT RAMP TERMINALS IS TO BE FROM RAMPS ONLY

SEE S.D.D. TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE FOR USE WITH LANDSCAPE PLANTINGS

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGE 1 STREETSCAPE	SHEET 73	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025030_TC_SIGNING_STREETSCAPE.DWG PLOT DATE : 5/4/2012 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

2

N

ROAD WORK AHEAD W20-1

W01-6 48" X 24"

WEST VIEW DR

W01-6 48" X 24"

ROAD WORK AHEAD W20-1

GOLF CLUB BLVD

MAX. 14 WIDTH W12-52

LANE CLOSED R11-2(MOD) 48" X 30"

320' DRUM TAPER 25' SPACING WITH TYPE C LIGHT

PLACE EAST OF CTH X

AG

STH 153

66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00

STH 153

W01-6 48" X 24"

CWA DR

CWA DR

ROAD WORK AHEAD W20-1

ROAD WORK AHEAD W20-1

SEE S.D.D. TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE FOR USE WITH LANDSCAPE PLANTINGS

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

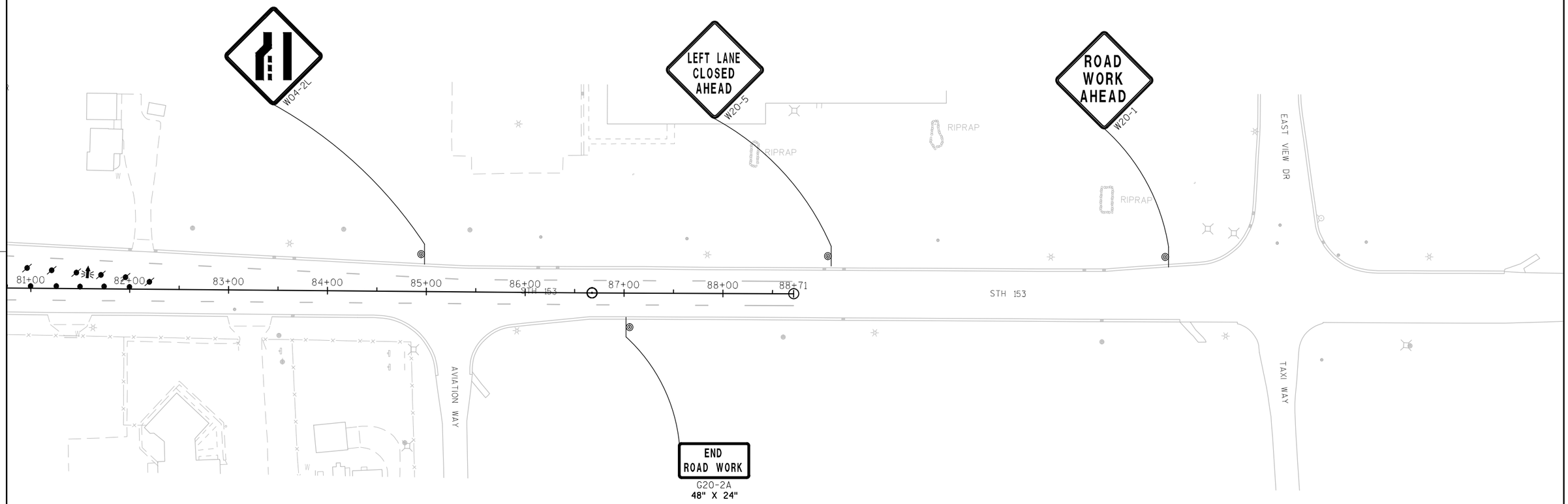
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGE 1 STREETSCAPE	SHEET 74	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025030_TC_SIGNING_STREETSCAPE.DWG PLOT DATE : 5/4/2012 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

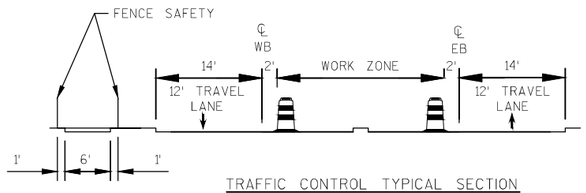
WISDOT/CADDS SHEET 42

2

N



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGE 1 STREETSCAPE	SHEET 75	E



TRAFFIC CONTROL TYPICAL SECTION
STAGE 2 & 4 (LOOKING EAST)

TRAFFIC:

STAGE 2: IH 39 NB TRAFFIC IS ON THE PERMANENT NB LANES
IH 39 SB TRAFFIC WILL USE THE TEMP BYPASS ROADWAY AND STRUCTURE (TS LINE)
NO LANE CLOSURES ON IH 39 DURING THIS STAGE
DETOUR EB STH 153 TO STH 34 INTERCHANGE FOR REMOVAL OF IH 39 SB DECK OVER EB STH 153
DETOUR WB STH 153 TO MAPLE RIDGE ROAD INTERCHANGE FOR REMOVAL OF IH 39 SB DECK OVER WB STH 153
ONLY DETOUR DURING NIGHTS WHEN DECK REMOVAL IS IN PROCESS
LANE CLOSURES WILL ALTERNATE BETWEEN THE OUTSIDE AND THE MEDIAN LANE AND MAY OCCUR AT ANY TIME - AT LEAST ONE LANE OPEN IN EACH DIRECTION
ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

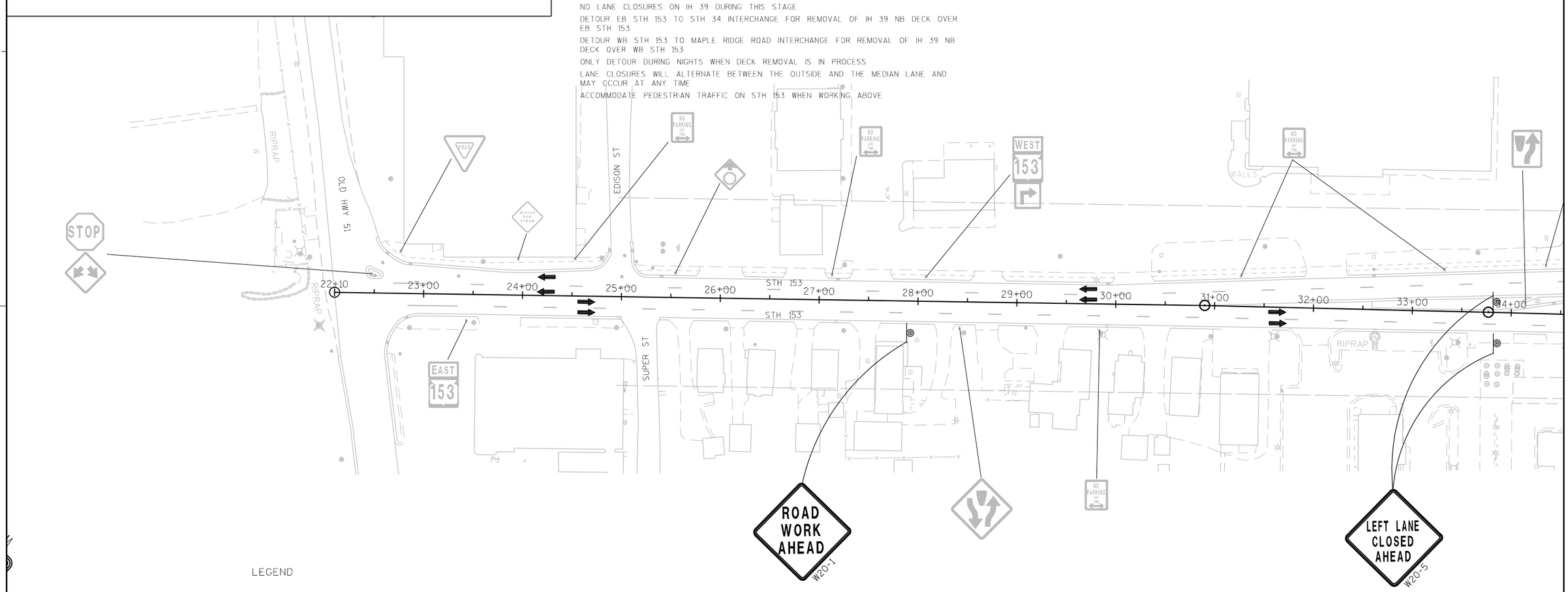
STAGE 4: IH 39 SB TRAFFIC IS ON THE PERMANENT SB LANES
IH 39 NB TRAFFIC WILL USE THE TEMP BYPASS ROADWAY AND STRUCTURE (TN LINE)
NO LANE CLOSURES ON IH 39 DURING THIS STAGE
DETOUR EB STH 153 TO STH 34 INTERCHANGE FOR REMOVAL OF IH 39 NB DECK OVER EB STH 153
DETOUR WB STH 153 TO MAPLE RIDGE ROAD INTERCHANGE FOR REMOVAL OF IH 39 NB DECK OVER WB STH 153
ONLY DETOUR DURING NIGHTS WHEN DECK REMOVAL IS IN PROCESS
LANE CLOSURES WILL ALTERNATE BETWEEN THE OUTSIDE AND THE MEDIAN LANE AND MAY OCCUR AT ANY TIME
ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

CONSTRUCTION:

STAGE 2: RE-DECK IH 39 SB STRUCTURE AND COMPLETE APPROACHES

STAGE 4: RE-DECK IH 39 NB STRUCTURE AND COMPLETE APPROACHES

N



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 2 & 4	SHEET 76	E

2

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

N

END ROAD WORK
G20-2A
48" X 24"

SPEED LIMIT 35

CHERRY ST

CITY OF MOSINEE

NO ENGINE BRAKING EXCEPT IN EMERGENCY

SPEED LIMIT 35

SOUTH 39 51 ON BACK

WEST 153

LANE CLOSED
R11-2(MOD)
48" X 30"

STOP

DO NOT ENTER

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1

IH 39 SB

215+00'SB'

SPEED LIMIT 45

FENCE SAFETY

35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00

STH 153

STH 153

OWEN ST

ORBITING ST

ONE WAY

NORTH 39 51

ELDERON
WAUSAU

JCT 39 JCT 51

MARSHFIELD CLINIC

W04-2L

NORTH 39 NORTH 51 EAST 153 SOUTH 39 SOUTH 51

WAUSAU
ELDERON
STEVENS POINT

320' DRUM TAPER
25' SPACING WITH
TYPE C LIGHT

SPEED LIMIT 45

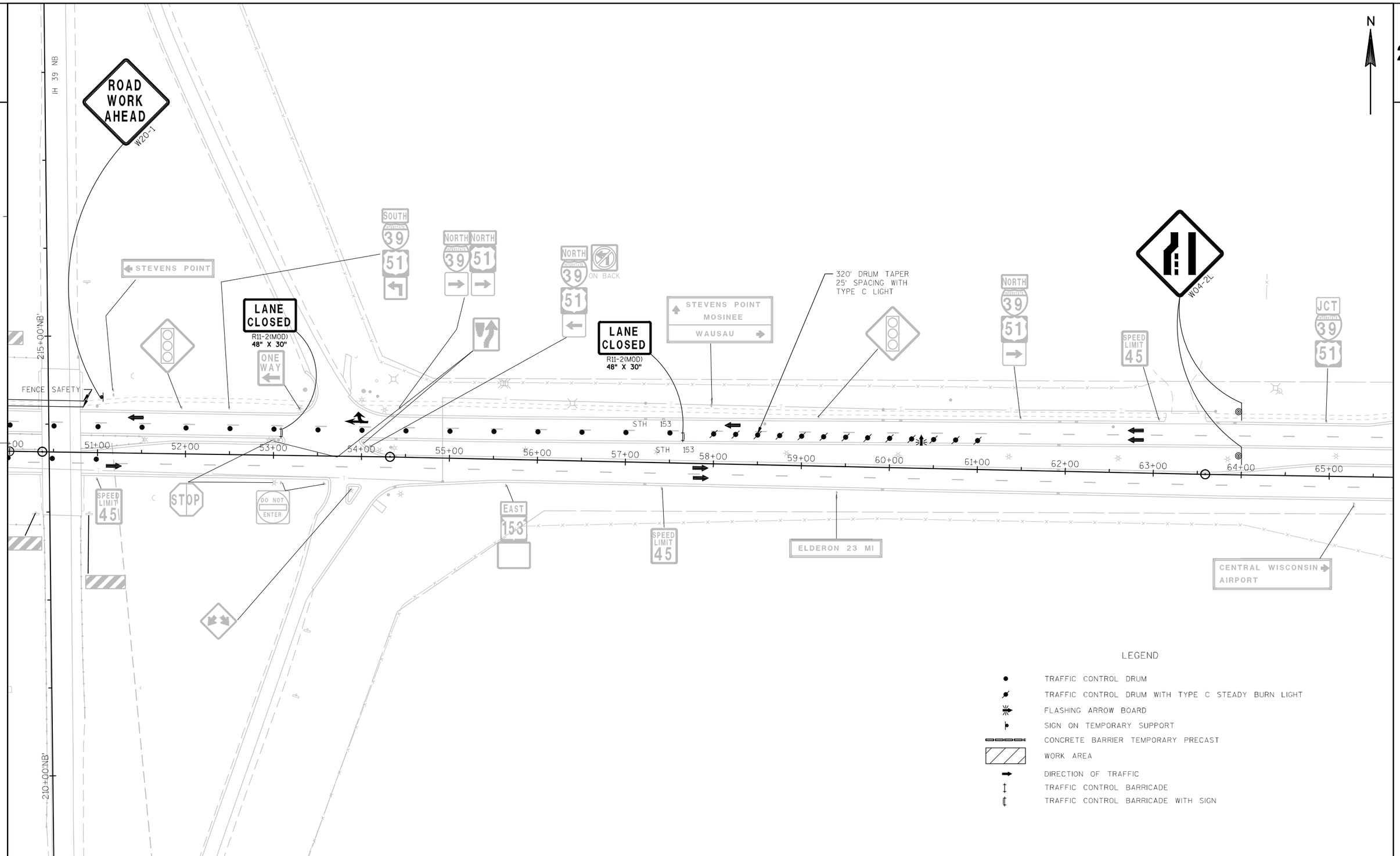
SOUTH 39 SOUTH 51

210+00'SB'

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 2 & 4	SHEET 77	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025031_TC_SIGNING.DWG PLOT DATE : 5/4/2012 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42



LEGEND

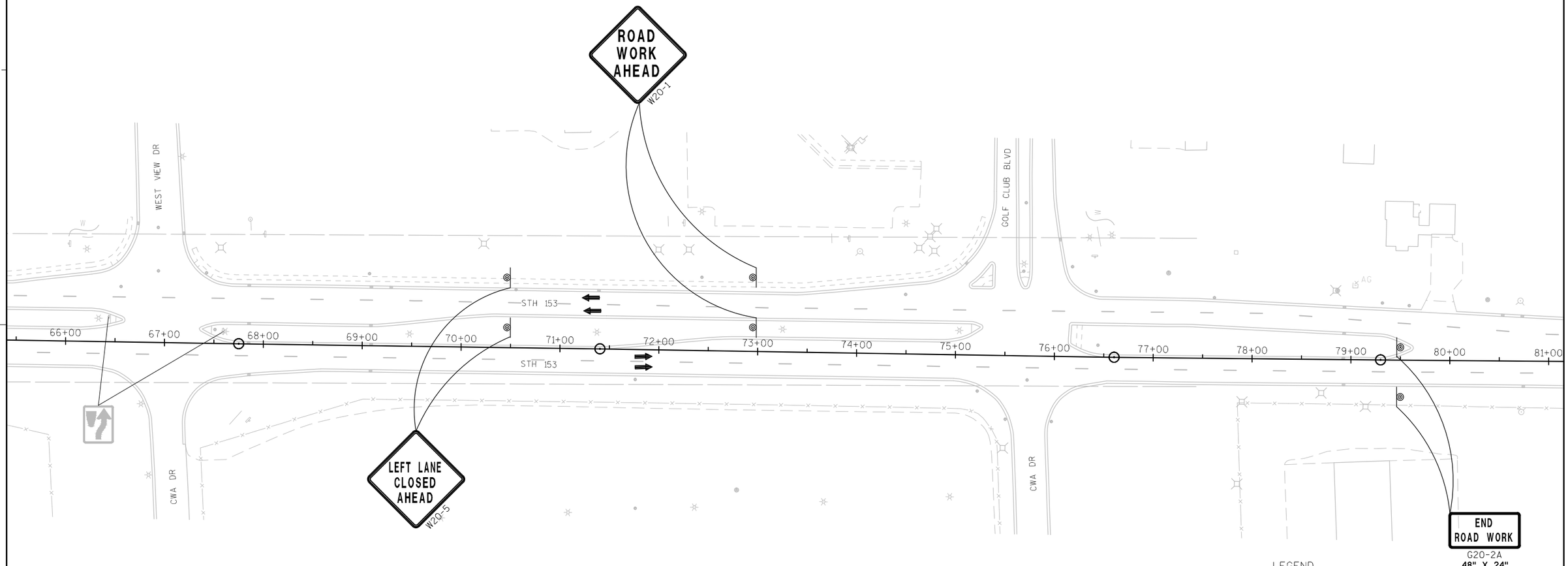
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 2 & 4	SHEET 78	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025031_TC_SIGNING.DWG
PLOT DATE : 5/4/2012 1:41 PM
PLOT BY : DAVID YAHNKE
PLOT NAME : ---------- PLOT SCALE : 1:100_XREF
WISDOT/CADDS SHEET 42

2

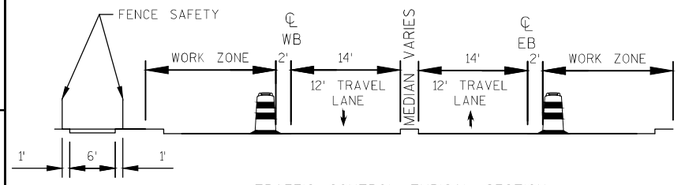
N



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 2 & 4	SHEET 79	E



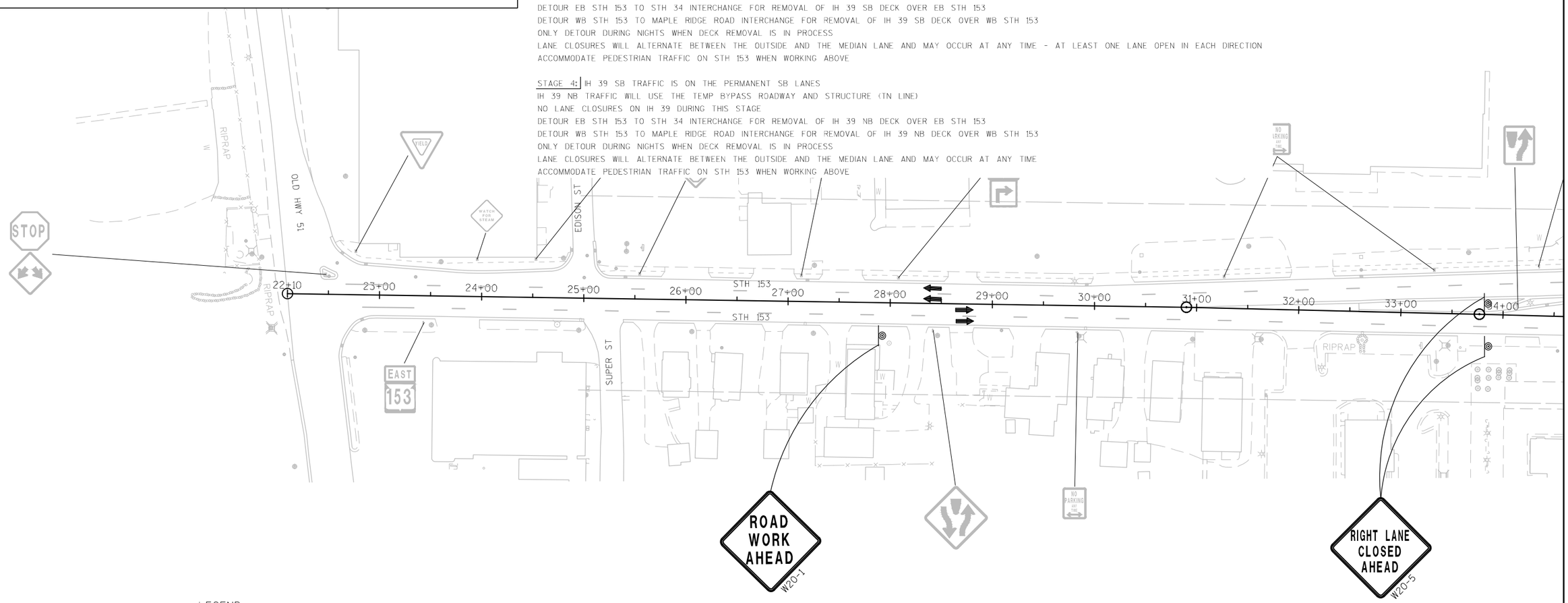
TRAFFIC CONTROL TYPICAL SECTION
STAGE 1, 2, 4 (LOOKING EAST)

TRAFFIC:

STAGE 1: IH 39 TRAFFIC IS ON THE PERMANENT LANES
THE MEDIAN SHOULDERS ON BOTH IH 39 ROADWAYS WILL BE CLOSED
A SB IH 39 MEDIAN LANE CLOSURE WILL BE ALLOWED FOR MATERIAL DELIVERY
NB IH 39 LANE CLOSURE IS NOT ALLOWED
STH 153 MEDIAN LANES CLOSURES IN BOTH DIRECTIONS FOR TEMP PIER CONSTRUCTION AND LANDSCAPING
TEMP GIRDER PLACEMENT OVER STH 153 EB UTILIZES A U-TURN DETOUR AT THE STH 34 INTERCHANGE
TEMP GIRDER PLACEMENT OVER STH 153 WB UTILIZES A U-TURN DETOUR AT THE MAPLE RIDGE ROAD INTERCHANGE
IH 39 SB RAMP-OFF/RAMP-ON IS REQUIRED TO COMPLETE THE TEMP BYPASS CONNECTIONS
IH 39 EXIT RAMP SHOULDER CLOSURES REQUIRED FOR LANDSCAPE WORK
ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

STAGE 2: IH 39 NB TRAFFIC IS ON THE PERMANENT NB LANES
IH 39 SB TRAFFIC WILL USE THE TEMP BYPASS ROADWAY AND STRUCTURE (TS LINE)
NO LANE CLOSURES ON IH 39 DURING THIS STAGE
DETOUR EB STH 153 TO STH 34 INTERCHANGE FOR REMOVAL OF IH 39 SB DECK OVER EB STH 153
DETOUR WB STH 153 TO MAPLE RIDGE ROAD INTERCHANGE FOR REMOVAL OF IH 39 SB DECK OVER WB STH 153
ONLY DETOUR DURING NIGHTS WHEN DECK REMOVAL IS IN PROCESS
LANE CLOSURES WILL ALTERNATE BETWEEN THE OUTSIDE AND THE MEDIAN LANE AND MAY OCCUR AT ANY TIME - AT LEAST ONE LANE OPEN IN EACH DIRECTION
ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE

STAGE 4: IH 39 SB TRAFFIC IS ON THE PERMANENT SB LANES
IH 39 NB TRAFFIC WILL USE THE TEMP BYPASS ROADWAY AND STRUCTURE (TN LINE)
NO LANE CLOSURES ON IH 39 DURING THIS STAGE
DETOUR EB STH 153 TO STH 34 INTERCHANGE FOR REMOVAL OF IH 39 NB DECK OVER EB STH 153
DETOUR WB STH 153 TO MAPLE RIDGE ROAD INTERCHANGE FOR REMOVAL OF IH 39 NB DECK OVER WB STH 153
ONLY DETOUR DURING NIGHTS WHEN DECK REMOVAL IS IN PROCESS
LANE CLOSURES WILL ALTERNATE BETWEEN THE OUTSIDE AND THE MEDIAN LANE AND MAY OCCUR AT ANY TIME
ACCOMMODATE PEDESTRIAN TRAFFIC ON STH 153 WHEN WORKING ABOVE



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

CONSTRUCTION:

STAGE 1: CONSTRUCT TEMPORARY STRUCTURE INCLUDING MEDIAN PIER
CONSTRUCT TEMPORARY SB BYPASS ROADWAY (TS LINE)
LANDSCAPE INTERSECTIONS AND STH 153 MEDIAN

STAGE 2: RE-DECK IH 39 SB STRUCTURE AND COMPLETE APPROACHES

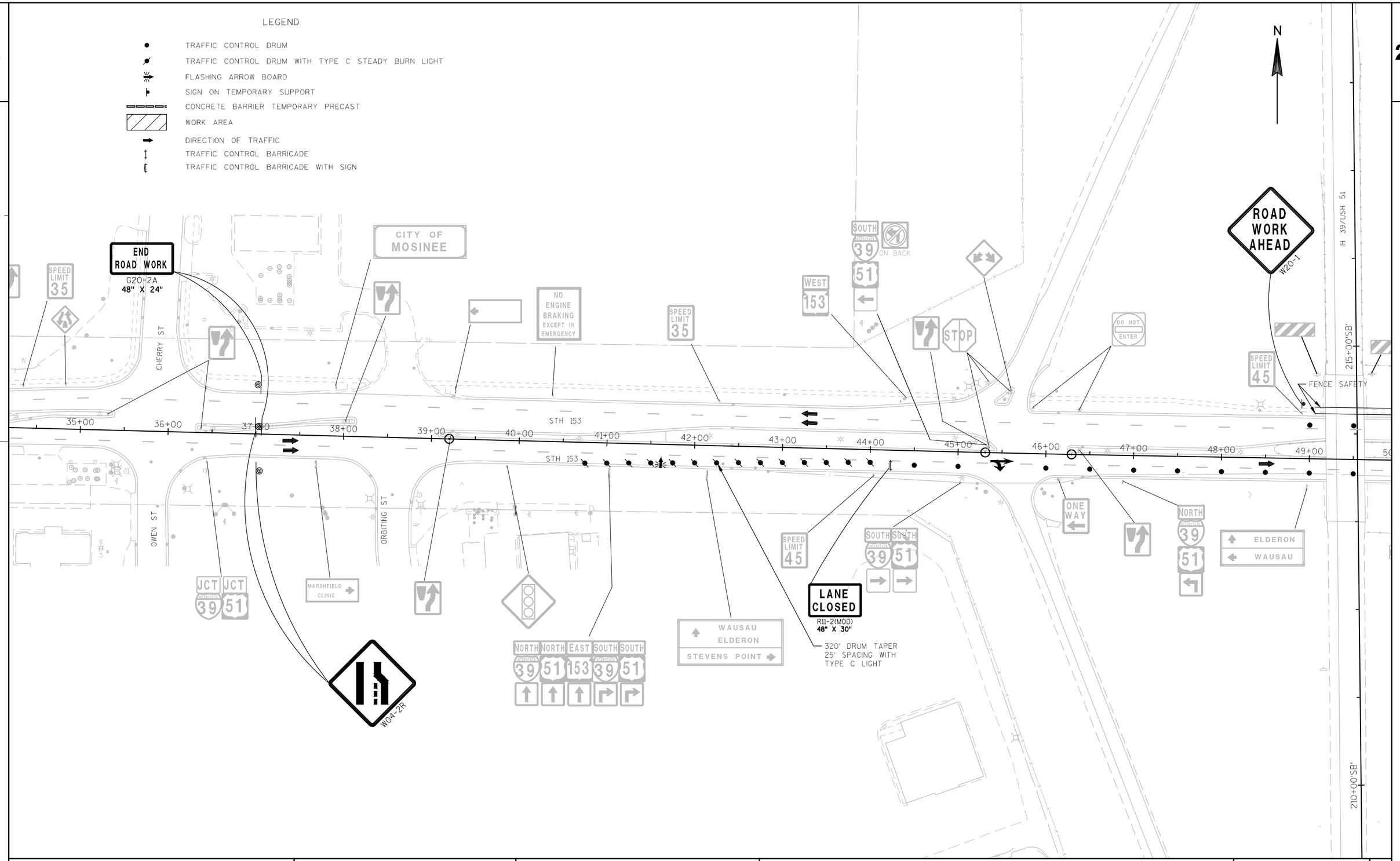
STAGE 4: RE-DECK IH 39 NB STRUCTURE AND COMPLETE APPROACHES

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 1, 2, 4	SHEET 80	E

2

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 1, 2, 4	SHEET 81 E

2

N

ROAD WORK AHEAD W20-1

IH 39 NB

215+00 NB

STEVENS POINT

FENCE SAFETY

ONE WAY

SOUTH 39 51

NORTH 39 51

NORTH 39 51 ON BACK

LANE CLOSED
R11-2(MOD)
48" X 30"

STEVENS POINT
MOSINEE
WAUSAU

320' DRUM TAPER
25' SPACING WITH
TYPE C LIGHT

NORTH 39 51

W04-2R

SPEED LIMIT 45

JCT 39 51

50+00
51+00
52+00
53+00
54+00
55+00
56+00
57+00
58+00
59+00
60+00
61+00
62+00
63+00
64+00
65+00

STH 153

STH 153

SPEED LIMIT 45

STOP

DO NOT ENTER

EAST 153

ELDERON 23 MI

CENTRAL WISCONSIN AIRPORT

210+00 NB

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 1, 2, 4	SHEET 82	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\025032_TC_SIGNING.DWG PLOT DATE : 5/4/2012 1:41 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

2

N

ROAD WORK AHEAD
W20-1

WEST VIEW DR

GOLF CLUB BLVD

STH 153

66+00 67+00 68+00 69+00 70+00 71+00 72+00 73+00 74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00

STH 153

CWA DR

CWA DR

RIGHT LANE CLOSED AHEAD
W20-5

END ROAD WORK
G20-2A
48" X 24"

LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- CONCRETE BARRIER TEMPORARY PRECAST
- WORK AREA
- DIRECTION OF TRAFFIC
- TRAFFIC CONTROL BARRICADE
- TRAFFIC CONTROL BARRICADE WITH SIGN

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: STH 153 STAGES 1, 2, 4	SHEET 83	E

2

N

BEGIN PROJECT 1166-02-81
STA 203+00.00'NB'

190+00'SB' 195+00'SB' 200+00'SB' IH 39 SB 205+00'SB' 210+00'SB' SB LINE B-37-148 215+00'SB' IH 39/USH 51

190+00'NB' 195+00'NB' 200+00'NB' IH 39 NB 205+00'NB' 210+00'NB' NB LINE B-37-149 215+00'NB' IH 39/USH 51

45+00

50+00

55+00

STH 153

STH 153

100'

DO NOT CLOSE BOTH SHOULDERS AT THE SAME TIME

CITY OF MOSINEE EASEMENT FOR SIGN

GATEWAY SIGN CONSTRUCTION AREA

CENTRAL WISCONSIN AIRPORT

SEE S.D.D. TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H (BEGIN AT STATION 182+00)



REMOVE SIGNS TYPE ii AND REMOVE SMALL SIGN SUPPORTS. (STA 182+45, 50' RT)

LEGEND

- TRAFFIC CONTROL DRUM
- WORK AREA
- DIRECTION OF TRAFFIC

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL: GATEWAY SIGN	SHEET 84 E

NOTES:

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD.

ADJUSTMENTS TO FIELD CONDITIONS SHALL BE APPROVED BY THE ENGINEER.

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

'WO' IS THE SAME AS 'W' EXCEPT THE BACKGROUND IS ORANGE

ANY SIGN TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL 'IN USE' SHALL BE REMOVED OR COVERED AS NEEDED.

ANY 'STOP' SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK ORANGE PANEL.

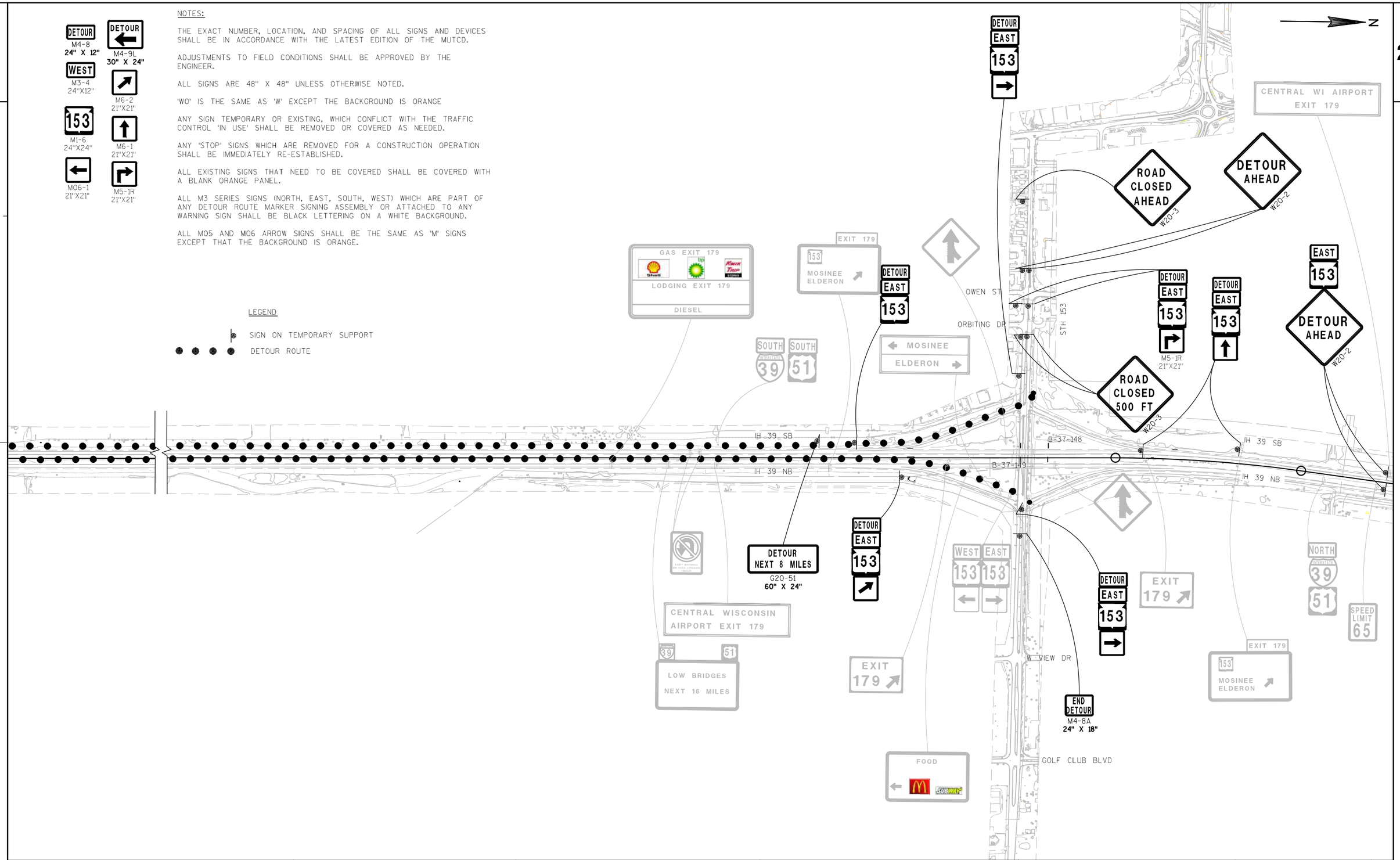
ALL M3 SERIES SIGNS (NORTH, EAST, SOUTH, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS 'M' SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

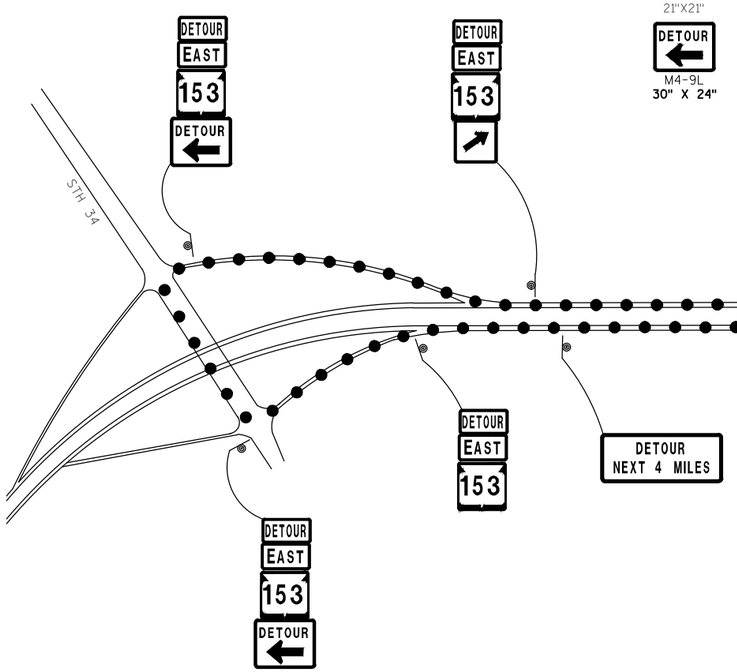
LEGEND

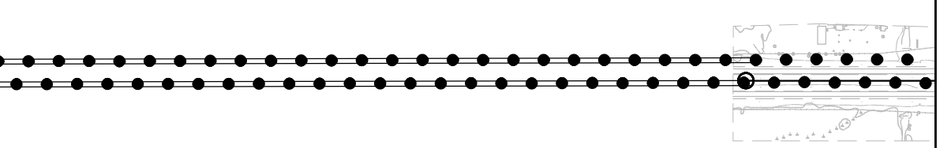
SIGN ON TEMPORARY SUPPORT

DETOUR ROUTE



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL STH 153 EASTBOUND DETOUR	SHEET 85	E







G20-51
60" X 24"



M4-8
24" X 12"



M3-4
24"X12"



M1-6
24"X24"



MO6-2
21"X21"

M4-9L
30" X 24"

NOTES:

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD.

ADJUSTMENTS TO FIELD CONDITIONS SHALL BE APPROVED BY THE ENGINEER.

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

'WO' IS THE SAME AS 'W' EXCEPT THE BACKGROUND IS ORANGE

ANY SIGN TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL 'IN USE' SHALL BE REMOVED OR COVERED AS NEEDED.

ANY 'STOP' SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK ORANGE PANEL.

ALL M3 SERIES SIGNS (NORTH, EAST, SOUTH, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

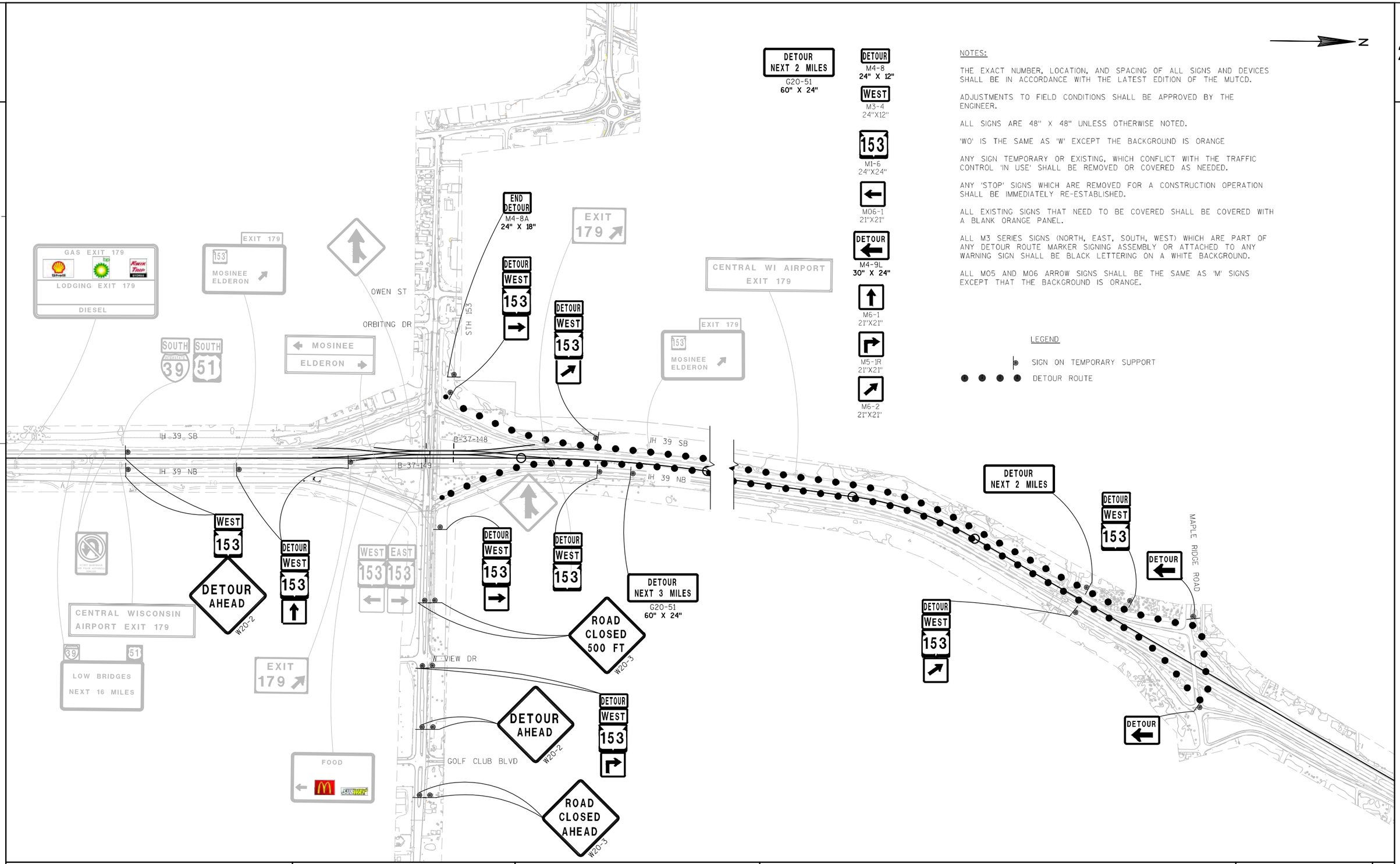
ALL MO5 AND MO6 ARROW SIGNS SHALL BE THE SAME AS 'M' SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

LEGEND

SIGN ON TEMPORARY SUPPORT

DETOUR ROUTE

N



N

NOTES:

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD.

ADJUSTMENTS TO FIELD CONDITIONS SHALL BE APPROVED BY THE ENGINEER.

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

'WO' IS THE SAME AS 'W' EXCEPT THE BACKGROUND IS ORANGE

ANY SIGN TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL 'IN USE' SHALL BE REMOVED OR COVERED AS NEEDED.

ANY 'STOP' SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK ORANGE PANEL.

ALL M3 SERIES SIGNS (NORTH, EAST, SOUTH, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

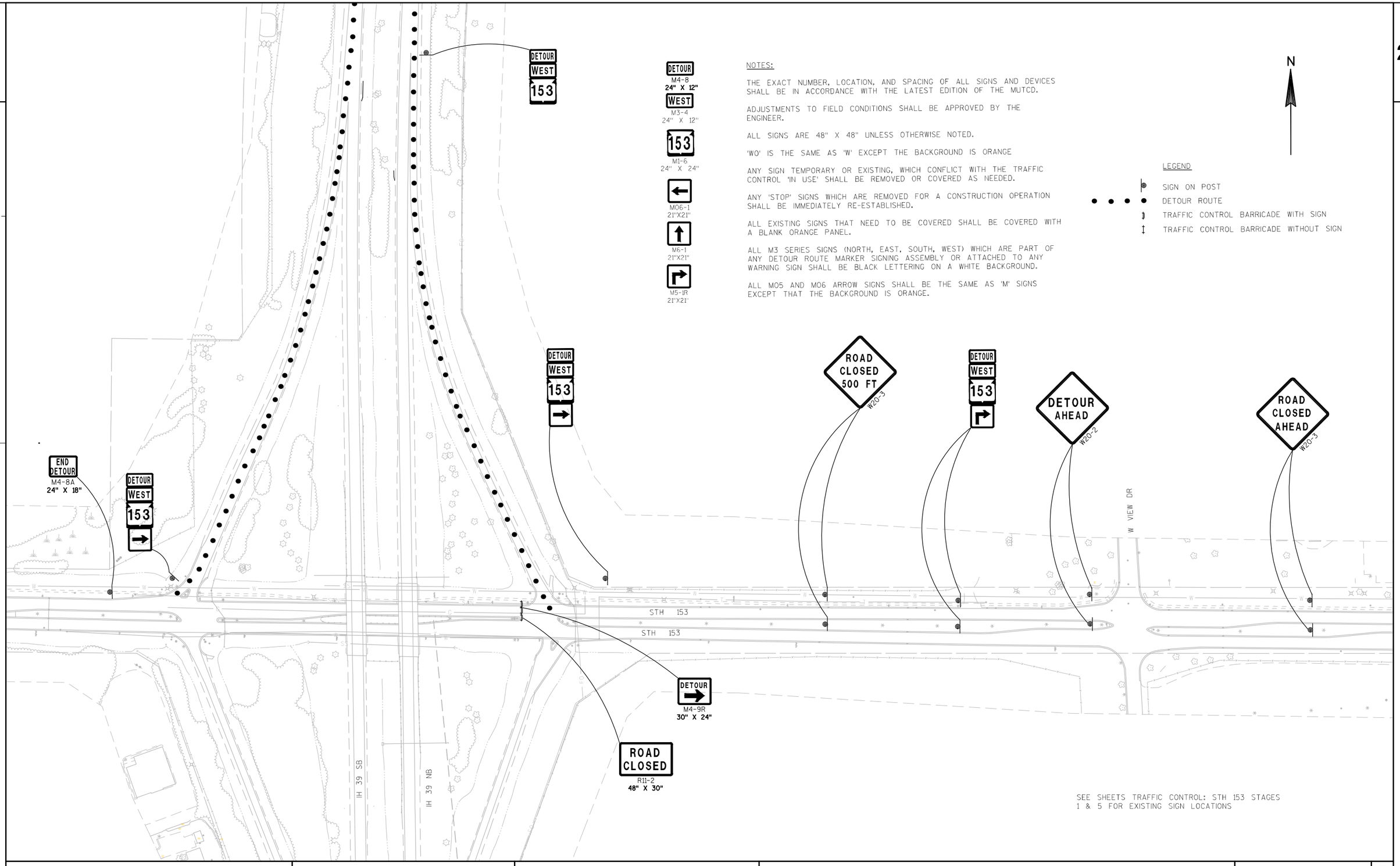
ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS 'M' SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

LEGEND

SIGN ON TEMPORARY SUPPORT

DETOUR ROUTE

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL STH 153 WESTBOUND DETOUR	SHEET 87	E



DETOUR
M4-8
24" X 12"

WEST
M3-4
24" X 12"

153
M1-6
24" X 24"

M06-1
21"X21"

M6-1
21"X21"

M5-1R
21"X21"

NOTES:

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD.

ADJUSTMENTS TO FIELD CONDITIONS SHALL BE APPROVED BY THE ENGINEER.

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

'WO' IS THE SAME AS 'W' EXCEPT THE BACKGROUND IS ORANGE

ANY SIGN TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL 'IN USE' SHALL BE REMOVED OR COVERED AS NEEDED.

ANY 'STOP' SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK ORANGE PANEL.

ALL M3 SERIES SIGNS (NORTH, EAST, SOUTH, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS 'M' SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

N

LEGEND

- SIGN ON POST
- DETOUR ROUTE
- TRAFFIC CONTROL BARRICADE WITH SIGN
- TRAFFIC CONTROL BARRICADE WITHOUT SIGN

SEE SHEETS TRAFFIC CONTROL: STH 153 STAGES 1 & 5 FOR EXISTING SIGN LOCATIONS

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL STH 153 WESTBOUND DETOUR	SHEET 88	E

DETOUR
M4-8
24" X 12"

WEST
M3-4
24" X 12"

153
M1-6
24" X 24"

M6-1
21"X21"

M6-1
21"X21"

M5-1R
21"X21"

NOTES:

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MUTCD.

ADJUSTMENTS TO FIELD CONDITIONS SHALL BE APPROVED BY THE ENGINEER.

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

'WO' IS THE SAME AS 'W' EXCEPT THE BACKGROUND IS ORANGE

ANY SIGN TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL 'IN USE' SHALL BE REMOVED OR COVERED AS NEEDED.

ANY 'STOP' SIGNS WHICH ARE REMOVED FOR A CONSTRUCTION OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED.

ALL EXISTING SIGNS THAT NEED TO BE COVERED SHALL BE COVERED WITH A BLANK ORANGE PANEL.

ALL M3 SERIES SIGNS (NORTH, EAST, SOUTH, WEST) WHICH ARE PART OF ANY DETOUR ROUTE MARKER SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND.

ALL M05 AND M06 ARROW SIGNS SHALL BE THE SAME AS 'M' SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

LEGEND

- SIGN ON POST
- DETOUR ROUTE
- TRAFFIC CONTROL BARRICADE WITH SIGN
- TRAFFIC CONTROL BARRICADE WITHOUT SIGN

N

DETOUR
EAST
153

ROAD CLOSED
R11-2
48"X30"

DETOUR
M4-9R
30" X 24"

ROAD CLOSED AHEAD
W20-3

DETOUR AHEAD
W20-2

DETOUR
EAST
153

ROAD CLOSED 500 FT
W20-3

IH 39 SB

IH 391 NB

STH 153

OWEN ST

ORBITING DR

DETOUR
EAST
153

DETOUR
EAST
153

END DETOUR
M4-8A
24" X 18"

SEE SHEETS TRAFFIC CONTROL: STH 153 STAGES 1 & 5 FOR EXISTING SIGN LOCATIONS

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	TRAFFIC CONTROL STH 153 EASTBOUND DETOUR	SHEET 89	E

DETOUR GENERAL NOTES:

STAGE 1 AND STAGE 3 NIGHT TIME DETOUR WILL BE USED WHEN PLACING AND REMOVING TEMPORARY PRECAST CONCRETE BARRIER.
THE NIGHT TIME DETOUR WILL BE BETWEEN 10:00 P.M. - 5:00 A.M. SUNDAY NIGHT THROUGH THURSDAY MORNING, AS APPROVED BY THE PROJECT ENGINEER.

SB & NB WILL NOT BE DETOURED AT THE SAME TIME.

LEGEND

WORK ZONE

DETOUR ROUTE

SIGN ON TEMPORARY SUPPORT

TRAFFIC SIGNALS

N

DETOUR M4-8 24" X 12" SOUTH MB3-3 24"X12" INTERSTATE 39 M1-1 24"X24" M06-1 21"X21"

DETOUR M4-8 24" X 12" SOUTH M3-3 24"X12" 51 M1-4 24"X24" M06-1 21"X21"

DETOUR M4-8 24" X 12" SOUTH MB3-3 24"X12" INTERSTATE 39 M1-1 24"X24" M06-2 21" X 21"

DETOUR M4-8 24" X 12" SOUTH M3-3 24"X12" 51 M1-4 24"X24" M06-2 21" X 21"

SOUTH MB3-3 24"X12" INTERSTATE 39 M1-1 24"X24" 51 M1-4 24"X24" DETOUR AHEAD W20-2

ALL TRAFFIC MUST EXIT
W19-5
90" X 48"
PLACE ON IH 39 ½ MILE FROM EXIT RAMP OR DETERMINED BY ENGINEER IN FIELD

END DETOUR M4-8A 24" X 18"

STH 153

IH 39 SB

IH 39 NB

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH" FOR DETAILS

EXIT 179

PLACE BEFORE MAPLE RIDGE ROAD EXIT RAMP

SOUTH M3-3 24"X12" INTERSTATE 39 M1-1 24"X24" 51 M1-4 24"X24" DETOUR AHEAD W20-2

MAPLE RIDGE ROAD

EXIT 181

STAGE 1 AND 3 (LANE CLOSURE)

STAGE 1 AND 3 TRAFFIC WILL BE REDUCED TO ONE LANE, FOR TRAFFIC TO EXIT ON SB IH 39 RAMP (EXIT 179) FOR NIGHT TIME DETOUR.

USE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH" DURING DETOUR.

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	STAGE 1 AND 3 NIGHT TIME DETOUR OVERVIEW IH 39 SB	SHEET 90	E

LEGEND

WORK ZONE

DETOUR ROUTE

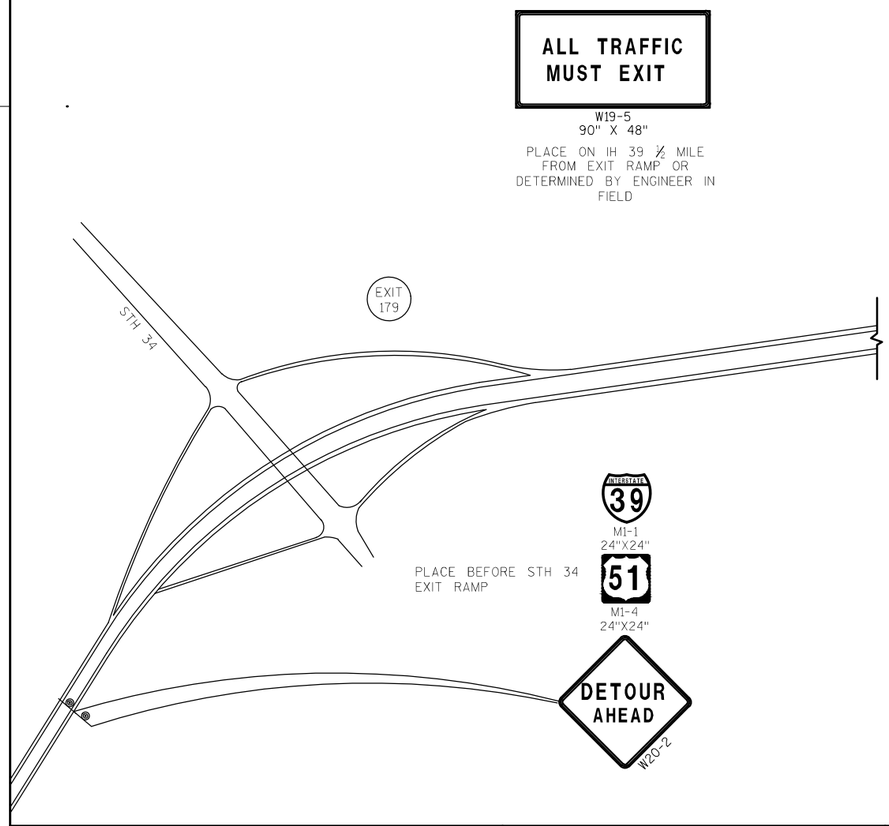
SIGN ON TEMPORARY SUPPORT

TRAFFIC SIGNALS

DETOUR GENERAL NOTES:

STAGE 3 AND STAGE 5 NIGHT TIME DETOUR WILL BE USED WHEN PLACING AND REMOVING TEMPORARY PRECAST CONCRETE BARRIER.
THE NIGHT TIME DETOUR WILL BE BETWEEN 10:00 P.M. - 5:00 A.M. SUNDAY NIGHT THROUGH THURSDAY MORNING, AS APPROVED BY THE PROJECT ENGINEER.

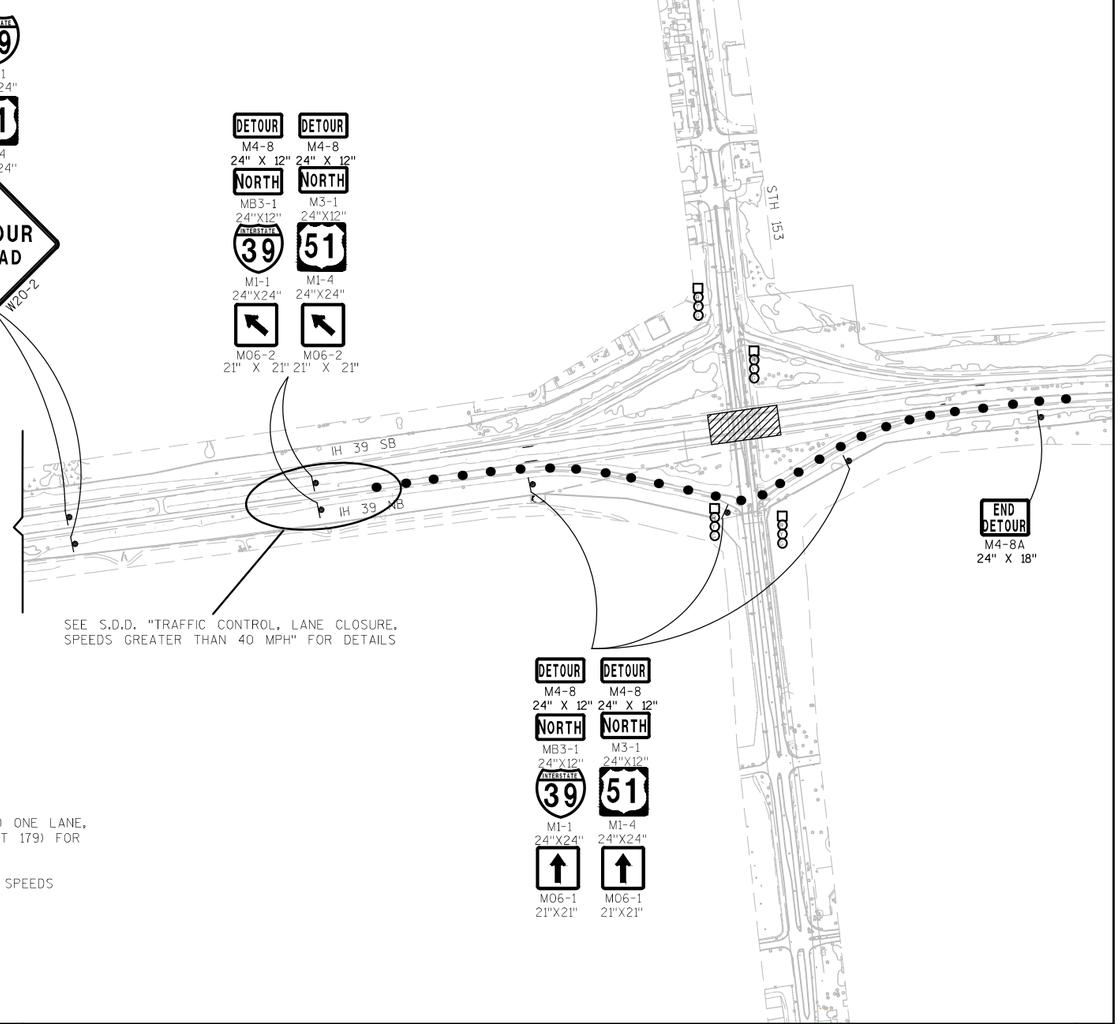
SB & NB WILL NOT BE DETOURED AT THE SAME TIME.



STAGE 3 AND 5 (LANE CLOSURE)

STAGE 3 AND 5 TRAFFIC WILL BE REDUCED TO ONE LANE, FOR TRAFFIC TO EXIT ON NB IH 39 RAMP (EXIT 179) FOR NIGHT TIME DETOUR.

USE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH" DURING DETOUR.



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	STAGE 3 AND 5 NIGHT TIME DETOUR OVERVIEW IH 39 NB	SHEET 91	E

2

N

PI STA = 205+83.98'TS'
DELTA = 6°48'29"
D = 1°25'19"
T = 239.68'
L = 478.80'
R = 4029.58'
PC STA = 203+44.30'TS'
PT STA = 208+23.10'TS'

PI STA = 210+62.97'TS'
DELTA = 6°50'36"
D = 1°25'41"
T = 239.88'
L = 479.18'
R = 4012.00'
PC STA = 208+23.10'TS'
PT STA = 213+02.28'TS'

PI STA = 217+25.62'TS'
DELTA = 6°22'22"
D = 1°25'41"
T = 223.35'
L = 446.24'
R = 4012.00'
PC STA = 215+02.28'TS'
PT STA = 219+48.51'TS'

PI STA = 222+60.91'TS'
DELTA = 8°38'58"
D = 1°23'13"
T = 312.40'
L = 623.61'
R = 4130.95'
PC STA = 219+48.51'TS'
PT STA = 225+72.12'TS'

PI STA = 228+06.67'TS'
DELTA = 1°58'25"
D = 0°30'00"
T = 197.37'
L = 394.71'
R = 11459.16'
PC STA = 226+09.29'TS'
PT STA = 230+04.00'TS'

PI STA = 228+75.45'SB'
DELTA = 8°00'19"
D = 0°30'02"
T = 801.00'
L = 1599.38'
R = 11447.17'
PC STA = 220+74.45'SB'
PT STA = 236+73.84'SB'

EB LINE
STH 153
45+00
PI: 45+30.76
PI: 46+29.04
55+00
PI: 54+32.27

BP: 200+00.00'TS'
200+00'TS'
N0°38'39"W
200+00'SB'
200+00'NB'
N0°38'59"W
200+00'TN'
BP: 200+00.00'TN'

PI: 203+00.00'TS'
PC: 203+44.30'TS'
N0°38'39"W
N1°44'10"W
PI: 203+00.00'TN'
PC: 203+54.24'TN'

PI: 205+83.98'TS'
205+00'TS'
205+00'SB'
205+00'NB'
205+00'TN'
PI: 205+91.43'TN'

N0°38'39"W
N0°38'59"W
PRC: 208+23.10'TS'
PRC: 208+28.06'TN'

PI: 210+65.41'TN'
210+00'SB'
SB LINE
TS LINE 210+00'TS'
TN LINE 210+00'TN'
210+00'NB'
NB LINE
PI: 210+62.97'TS'

PT: 213+02.28'TS'
B-37-148
215+00'SB'
N0°38'59"W
215+00'TS'
215+00'NB'
B-37-149
PT: 50+37.12
PT: 213+02.21'TN'

PC: 215+02.28'TS'
PC: 215+02.21'TN'

PI: 217+55.52'TN'
PI: 217+25.62'TS'

PRC: 219+48.51'TS'
220+00'SB'
TS LINE
220+00'TS'
220+00'TN'
TN LINE
220+00'NB'
PRC: 220+08.17'TN'

PC: 220+74.45'SB'
PC: 220+74.45'NB'

PI: 222+60.91'TS'
PI: 221+99.25'TN'

225+00'TS'
N1°54'42"E
225+00'SB'
N1°05'20"W
225+00'NB'
225+00'TN'
PT: 223+90.05'TN'

PT: 225+72.12'TS'
PC: 226+09.29'TS'
PC: 224+04.83'TN'

PI: 228+06.67'TS'
PI: 228+69.14'NB'
PI: 228+04.85'TN'

PI: 228+75.45'SB'
230+00'
230+00'TN'
PC: 226+04.83'TN'

EP: 230+04.00'TS'
EP: 230+04.83'TN'

BEGIN PROJECT 1166-02-81
STA 203+00.00'NB'

END PROJECT 1166-02-81
STA 226+00.00'NB'

PI STA = 228+69.14'NB'
DELTA = 8°00'19"
D = 0°30'16"
T = 794.70'
L = 1586.81'
R = 11357.16'
PC STA = 220+74.45'NB'
PT STA = 236+61.25'NB'

PI STA = 205+91.43'TN'
DELTA = 6°46'00"
D = 1°25'41"
T = 237.19'
L = 473.82'
R = 4012.00'
PC STA = 203+54.24'TN'
PT STA = 208+28.06'TN'

PI STA = 210+65.41'TN'
DELTA = 6°46'17"
D = 1°25'41"
T = 237.35'
L = 474.15'
R = 4012.00'
PC STA = 208+28.06'TN'
PT STA = 213+02.21'TN'

PI STA = 217+55.52'TN'
DELTA = 7°13'32"
D = 1°25'41"
T = 253.31'
L = 505.95'
R = 4012.00'
PC STA = 215+02.21'TN'
PT STA = 220+08.17'TN'

PI STA = 221+99.25'TN'
DELTA = 5°27'13"
D = 1°25'41"
T = 191.09'
L = 381.89'
R = 4012.00'
PC STA = 220+08.17'TN'
PT STA = 223+90.05'TN'

PI STA = 228+04.85'TN'
DELTA = 2°02'06"
D = 0°30'32"
T = 200.02'
L = 400.00'
R = 11262.06'
PC STA = 226+04.83'TN'
PT STA = 230+04.83'TN'

ALL DISTANCES IN SURVEY FEET

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	ALIGNMENT DIAGRAM	SHEET 92	E

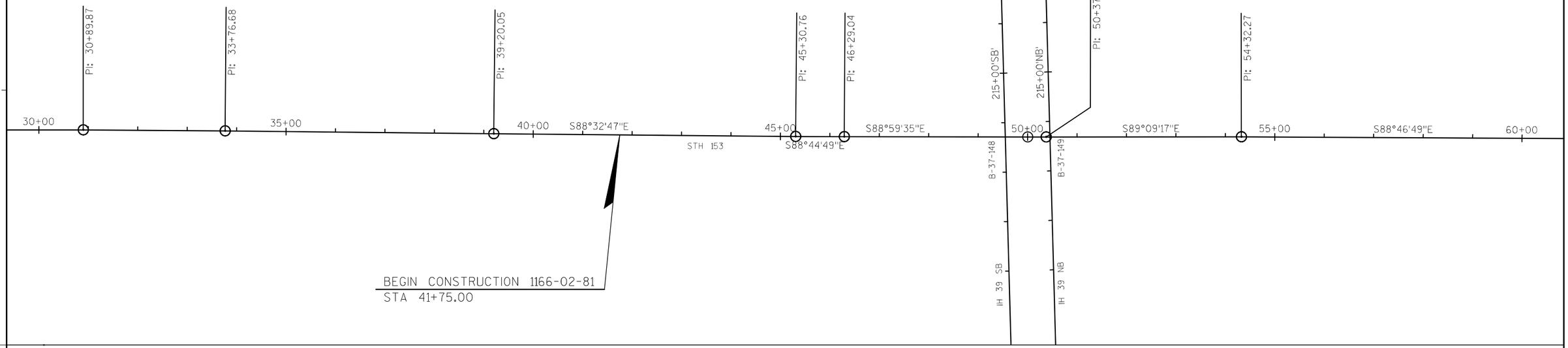
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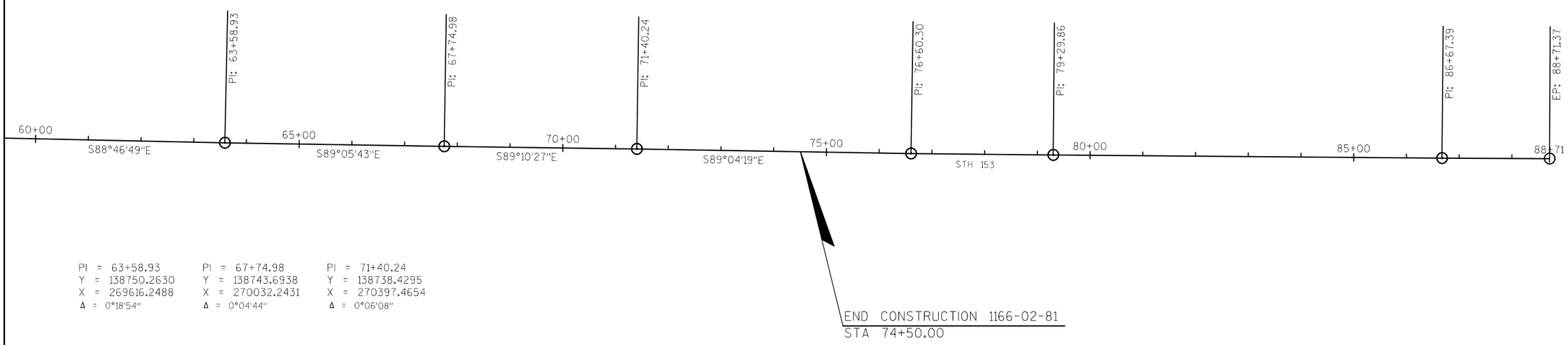
PI = 45+30.76
Y = 138785.1377
X = 267788.4183
Δ = 0°12'02"

PI = 46+29.04
Y = 138782.9888
X = 267886.6730
Δ = 0°14'46"

PI = 50+37.12
Y = 138775.8183
X = 268294.6923
Δ = 0°09'42"

PI = 54+32.27
Y = 138769.9882
X = 268689.8007
Δ = 0°22'28"





PI = 63+58.93
Y = 138750.2630
X = 269616.2488
Δ = 0°18'54"

PI = 67+74.98
Y = 138743.6938
X = 270032.2431
Δ = 0°04'44"

PI = 71+40.24
Y = 138738.4295
X = 270397.4654
Δ = 0°06'08"

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	ALIGNMENT DIAGRAM	SHEET 93	E

DATE 29MAY14 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	1166-02-81 QUANTITY
0010	201.0105	CLEARING	STA	3.000	3.000
0020	201.0205	GRUBBING	STA	3.000	3.000
0030	203.0200	REMOVING OLD STRUCTURE (STATION) 01. STA 213+84	LS	1.000	1.000
0040	203.0200	REMOVING OLD STRUCTURE (STATION) 02. STA 213+79	LS	1.000	1.000
0050	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 01. B-37-149	LS	1.000	1.000
0060	204.0110	REMOVING ASPHALTIC SURFACE	SY	800.000	800.000
0070	204.0115	REMOVING ASPHALTIC SURFACE BUTT JOINTS	SY	272.000	272.000
0080	204.0210	REMOVING MANHOLES	EACH	1.000	1.000
0090	204.0220	REMOVING INLETS	EACH	9.000	9.000
0100	204.0245	REMOVING STORM SEWER (SIZE) 01. 12 - INCH	LF	80.000	80.000
0110	204.9060.S	REMOVING (ITEM DESCRIPTION) 01. APRON ENDWALLS	EACH	1.000	1.000
0120	204.9090.S	REMOVING (ITEM DESCRIPTION) 01. PIPE UNDERDRAIN	LF	2,775.000	2,775.000
0130	205.0100	EXCAVATION COMMON	CY	11,700.000	11,700.000
0140	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-37-148	LS	1.000	1.000
0150	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-37-149	LS	1.000	1.000
0160	210.0100	BACKFILL STRUCTURE	CY	560.000	560.000
0170	213.0100	FINISHING ROADWAY (PROJECT) 01. 1166-02-81	EACH	1.000	1.000
0180	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	800.000	800.000
0190	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	4,250.000	4,250.000
0200	312.0110	SELECT CRUSHED MATERIAL	TON	10,650.000	10,650.000
0210	415.0090	CONCRETE PAVEMENT 9-INCH	SY	70.000	70.000
0220	416.1010	CONCRETE SURFACE DRAINS	CY	13.000	13.000
0230	455.0605	TACK COAT	GAL	578.000	578.000
0240	465.0105	ASPHALTIC SURFACE	TON	122.000	122.000
0250	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	3,830.000	3,830.000
0260	465.0305	ASPHALTIC SURFACE SAFETY ISLANDS	TON	25.000	25.000
0270	465.0310	ASPHALTIC CURB	LF	52.000	52.000
0280	465.0315	ASPHALTIC FLUMES	SY	27.000	27.000
0290	465.0400	ASPHALTIC SHOULDER RUMBLE STRIP	LF	3,075.000	3,075.000
0300	492.2010.S	SEALING CRACKS AND JOINTS WITH HOT-APPLIED SEALANT	GAL	12.000	12.000
0310	502.0100	CONCRETE MASONRY BRIDGES	CY	804.000	804.000
0320	502.3200	PROTECTIVE SURFACE TREATMENT	SY	2,176.000	2,176.000
0330	502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	168.000	168.000
0340	502.5015	MASONRY ANCHORS TYPE L NO. 7 BARS	EACH	64.000	64.000
0350	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1,200.000	1,200.000
0360	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	190,120.000	190,120.000
0370	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 01. B-37-148	EACH	10.000	10.000
0380	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 02. B-37-149	EACH	10.000	10.000
0390	506.7000.S	BEARING REPLACEMENT (STRUCTURE) 01. B-37-148	EACH	22.000	22.000
0400	506.7000.S	BEARING REPLACEMENT (STRUCTURE) 02. B-37-149	EACH	16.000	16.000
0410	509.1500	CONCRETE SURFACE REPAIR	SF	26.000	26.000

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DATE 29MAY14 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	1166-02-81 QUANTITY
0420	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	48.000	48.000
0430	517.1010.S	CONCRETE STAINING (STRUCTURE) 01. B-37-148	SF	514.000	514.000
0440	517.1010.S	CONCRETE STAINING (STRUCTURE) 02. B-37-149	SF	513.000	513.000
0450	520.1012	APRON ENDWALLS FOR CULVERT PIPE 12-INCH	EACH	1.000	1.000
0460	520.4012	CULVERT PIPE TEMPORARY 12-INCH	LF	1,070.000	1,070.000
0470	526.0100	TEMPORARY STRUCTURE (STATION) 01. 14+00 'SB'	LS	1.000	1.000
0480	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	160.000	160.000
0490	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	7,790.000	7,790.000
0500	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	7,790.000	7,790.000
0510	604.0400	SLOPE PAVING CONCRETE	SY	55.000	55.000
0520	604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	120.000	120.000
0530	604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	310.000	310.000
0540	606.0200	RIPRAP MEDIUM	CY	3.000	3.000
0550	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	117.000	117.000
0560	611.0530	MANHOLE COVERS TYPE J	EACH	4.000	4.000
0570	611.0642	INLET COVERS TYPE MS	EACH	9.000	9.000
0580	611.0654	INLET COVERS TYPE V	EACH	4.000	4.000
0590	611.2003	MANHOLES 3-FT DIAMETER	EACH	4.000	4.000
0600	611.2004	MANHOLES 4-FT DIAMETER	EACH	1.000	1.000
0610	611.3225	INLETS 2X2.5-FT	EACH	4.000	4.000
0620	611.3901	INLETS MEDIAN 1 GRATE	EACH	4.000	4.000
0630	611.3902	INLETS MEDIAN 2 GRATE	EACH	1.000	1.000
0640	611.3903	INLETS MEDIAN 3 GRATE	EACH	1.000	1.000
0650	611.8120.S	COVER PLATES TEMPORARY	EACH	1.000	1.000
0660	612.0106	PIPE UNDERDRAIN 6-INCH	LF	380.000	380.000
0670	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	20.000	20.000
0680	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	830.000	830.000
0690	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	2.000	2.000
0700	614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4.000	4.000
0710	614.0905	CRASH CUSHIONS TEMPORARY	EACH	8.000	8.000
0720	614.0920	SALVAGED RAIL	LF	903.000	903.000
0730	614.0925	SALVAGED GUARDRAIL END TREATMENTS	EACH	4.000	4.000
0740	614.2300	MGS GUARDRAIL 3	LF	850.000	850.000
0750	614.2500	MGS THRIE BEAM TRANSITION	LF	160.000	160.000
0760	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	4.000	4.000
0770	616.0206	FENCE CHAIN LINK 6-FT	LF	145.000	145.000
0780	616.0329	GATES CHAIN LINK (WIDTH) 01. 10 FEET	EACH	1.000	1.000
0790	616.0410	FENCE CHAIN LINK SALVAGED 10-FT	LF	75.000	75.000
0800	616.0700.S	FENCE SAFETY	LF	760.000	760.000
0810	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1166-02-81	EACH	1.000	1.000
0820	619.1000	MOBILIZATION	EACH	1.000	1.000
0830	621.0100	LANDMARK REFERENCE MONUMENTS	EACH	4.000	4.000
0840	624.0100	WATER	MGAL	20.000	20.000
0850	625.0500	SALVAGED TOPSOIL	SY	28,000.000	28,000.000
0860	628.1504	SILT FENCE	LF	240.000	240.000
0870	628.1520	SILT FENCE MAINTENANCE	LF	240.000	240.000
0880	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	12.000	12.000

3

DATE 29MAY14 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	1166-02-81 QUANTITY
0890	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	12.000	12.000
0900	628.2002	EROSION MAT CLASS I TYPE A	SY	28,000.000	28,000.000
0910	628.7005	INLET PROTECTION TYPE A	EACH	5.000	5.000
0920	628.7015	INLET PROTECTION TYPE C	EACH	10.000	10.000
0930	628.7504	TEMPORARY DITCH CHECKS	LF	500.000	500.000
0940	628.7570	ROCK BAGS	EACH	80.000	80.000
0950	629.0205	FERTILIZER TYPE A	CWT	22.000	22.000
0960	630.0120	SEEDING MIXTURE NO. 20	LB	520.000	520.000
0970	630.0175	SEEDING MIXTURE NO. 75	LB	4.000	4.000
0980	630.0200	SEEDING TEMPORARY	LB	510.000	510.000
0990	632.0101	TREES (SPECIES, ROOT, SIZE) 01. AMERICAN LINDEN, B&B, 2.5-INCH	EACH	1.000	1.000
1000	632.0101	TREES (SPECIES, ROOT, SIZE) 02. BUR OAK, B&B, 2.5-INCH	EACH	1.000	1.000
1010	632.0101	TREES (SPECIES, ROOT, SIZE) 03. SHAGBARK HICKORY, B&B, 2.5-INCH	EACH	2.000	2.000
1020	632.0101	TREES (SPECIES, ROOT, SIZE) 04. SUGAR MAPLE, B&B, 2.5-INCH	EACH	2.000	2.000
1030	632.0101	TREES (SPECIES, ROOT, SIZE) 05. THORNLESS COCKSPUR HAWTHORN, B&B, 2-INCH	EACH	9.000	9.000
1040	632.0101	TREES (SPECIES, ROOT, SIZE) 06. PRAIRIFIRE CRAB, B&B, 2-INCH	EACH	8.000	8.000
1050	632.0101	TREES (SPECIES, ROOT, SIZE) 07. SENTINEL CRAB, B&B, 2-INCH	EACH	15.000	15.000
1060	632.0101	TREES (SPECIES, ROOT, SIZE) 08. SUGAR TYME CRAB, B&B, 2-INCH	EACH	12.000	12.000
1070	632.0101	TREES (SPECIES, ROOT, SIZE) 09. EASTERN WHITE PINE, B&B, 6-FOOT	EACH	4.000	4.000
1080	632.0101	TREES (SPECIES, ROOT, SIZE) 10. WHITE SPRUCE, B&B, 6-FOOT	EACH	10.000	10.000
1090	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 01. BRILLIANT RED CHOKEBERRY, CG, 24-INC	EACH	30.000	30.000
1100	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 02. COMMON NINEBARK, B&B, 36-INCH	EACH	20.000	20.000
1110	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 03. DWARF AMERICAN CRANBERRY, B&B, 36-INCH	EACH	14.000	14.000
1120	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 04. DWARF-BUSH HONEYSUCKLE, CG, 18-INCH	EACH	22.000	22.000
1130	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 05. INDIAN GRASS, CG, 1 GAL	EACH	78.000	78.000
1140	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 06. LITTLE BLUESTEM, CG, 1 GAL	EACH	207.000	207.000
1150	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 07. COMPACT PFITZER JUNIPER, B&B, 12-INC	EACH	30.000	30.000
1160	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 08. THE PRAIRIE ROSE, CG, 18-INCH	EACH	73.000	73.000
1170	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	4.000	4.000
1180	637.2230	SIGNS TYPE II REFLECTIVE F	SF	27.000	27.000
1190	638.2602	REMOVING SIGNS TYPE II	EACH	7.000	7.000
1200	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	7.000	7.000
1210	642.5201	FIELD OFFICE TYPE C	EACH	1.000	1.000
1220	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1166-02-81	DAY	268.000	268.000
1230	643.0300	TRAFFIC CONTROL DRUMS	DAY	38,040.000	38,040.000
1240	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,659.000	1,659.000
1250	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	2,207.000	2,207.000

3

DATE 29MAY14 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	1166-02-81 QUANTITY
1260	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	8,065.000	8,065.000
1270	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	698.000	698.000
1280	643.0900	TRAFFIC CONTROL SIGNS	DAY	12,115.000	12,115.000
1290	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	1,512.000	1,512.000
1300	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 1166-02-81	EACH	1.000	1.000
1310	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	665.000	665.000
1320	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	6.000	6.000
1330	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	9,500.000	9,500.000
1340	646.0600	REMOVING PAVEMENT MARKINGS	LF	2,890.000	2,890.000
1350	646.0881.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH	LF	1,050.000	1,050.000
1360	649.0200	TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	LF	9,250.000	9,250.000
1370	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	2,740.000	2,740.000
1380	649.2100	TEMPORARY RAISED PAVEMENT MARKERS	EACH	177.000	177.000
1390	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	15.000	15.000
1400	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	4,000.000	4,000.000
1410	650.5000	CONSTRUCTION STAKING BASE	LF	4,000.000	4,000.000
1420	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1166-02-81	LS	1.000	1.000
1430	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	8,000.000	8,000.000
1440	690.0150	SAWING ASPHALT	LF	5,800.000	5,800.000
1450	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	500.000	500.000
1460	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	4,824.000	4,824.000
1470	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5.	HRS	4,000.000	4,000.000
1480	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR 00/HR	HRS	5,040.000	5,040.000
1490	SPV.0045	SPECIAL 01. PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) REMOTE COMMUNICATIONS	DAY	1,080.000	1,080.000
1500	SPV.0045	SPECIAL 02. TRAFFIC CONTROL VERTICAL PANEL	DAY	16,960.000	16,960.000
1510	SPV.0060	SPECIAL 01. GATEWAY SIGN	EACH	1.000	1.000
1520	SPV.0060	SPECIAL 02. BANNER POLE ASSEMBLIES	EACH	9.000	9.000
1530	SPV.0060	SPECIAL 04. SELECT CRUSHED MATERIAL DRAIN	EACH	14.000	14.000
1540	SPV.0085	SPECIAL 01. BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	2,940.000	2,940.000
1550	SPV.0090	SPECIAL 01. SALVAGING AND RE-INSTALLING GUARDRAIL	LF	800.000	800.000
1560	SPV.0090	SPECIAL 02. SHOVEL CUT BED EDGE	LF	396.000	396.000
1570	SPV.0105	SPECIAL 01. LANDSCAPE SURVEILLANCE AND CARE CYCLE	LS	1.000	1.000
1580	SPV.0120	SPECIAL 01. WATER FOR SEEDED AREAS	MGAL	5.000	5.000
1590	SPV.0165	SPECIAL 01. SPRAYED ASPHALTIC SHOULDER TREATMENT	SF	4,485.000	4,485.000
1600	SPV.0165	SPECIAL 02. PRESTRESSED CONCRETE GIRDER REPAIR	SF	9.000	9.000

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CLEARING AND GRUBBING

CATEGORY	STATION	-	STATION	LOCATION	201.0105 CLEARING (STA)	201.0205 GRUBBING (STA)
0040 STAGE 1	222+00 'TN'	-	225+00'TN'	LT	3	3
				TOTAL	3	3

REMOVING ASHPALTIC SURFACE

CATEGORY	STATION	-	STATION	204.0110 REMOVING ASPHALTIC SURFACE (SY)	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS (SY)
0010 STAGE 2	212+52 'SB'	-	212+67 'SB'		68
	215+03 'SB'	-	215+18 'SB'		68
STAGE 4	212+48 'NB'	-	212+63 'NB'		68
	214+99 'NB'	-	215+14 'NB'		68
0040 STAGE 3	212+00 'TS'	-	213+00 'TS'	400	
	215+00 'TS'	-	216+00 'TS'	400	
			TOTAL	800	272

PIPE UNDERDRAIN

CATEGORY	STATION	-	STATION	LOCATION	204.9090.S REMOVING PIPE UNDERDRAIN (LF)	612.0106 PIPE UNDERDRAIN 6-INCH (LF)
0010 STAGE 2	212+77 'SB'			LT/RT		45
	214+82 'SB'			LT/RT		45
STAGE 4	212+74 'NB'			LT/RT		45
	214+79 'NB'			LT/RT		45
0040 STAGE 1	203+00 'SB'	-	209+70 'SB'	RT	670	
	218+50 'SB'	-	226+00 'SB'	RT	750	
	206+75 'SB'			RT	20	
	209+75 'SB'			RT	20	
	220+75 'SB'			RT	20	
	223+25 'SB'			RT	20	
	225+75 'SB'			RT	20	
	217+00 'SB'	-	219+00 'SB'	RT		200
STAGE 3	203+00 'NB'	-	210+00 'NB'	LT	700	
	218+00 'NB'	-	220+75 'NB'	LT	275	
	204+75 'SB'			LT	20	
	206+75 'SB'			LT	20	
	219+75 'SB'			LT	20	
	220+75 'SB'			LT	20	
STAGE 5	217+00 'SB'	-	219+00 'SB'	RT	200	
CAT 0010				SUBTOTAL		180
CAT 0040				SUBTOTAL	2,775	200
				TOTAL	2,775	380

REMOVING STORM SEWER

CATEGORY	STATION	-	STATION	204.0210 REMOVING MANHOLES (EACH)	204.0220 REMOVING INLETS (EACH)	204.0245 REMOVING STORM SEWER 12-INCH (LF)	204.9060.S REMOVING APRON ENDWALLS (EACH)
0010 STAGE 2	214+92 'SB'	-	215+07 'SB'		2	40	
STAGE 4	212+30 'NB'	-	212+45 'NB'		2	40	
0040 STAGE 5	207+75 'SB'				1		
	210+98.76 'SB'			1			
	212+50 'SB'				2		
	217+00 'SB'				2		
	221+75 'SB'						1
CAT 0010			SUBTOTAL		4	80	
CAT 0040			SUBTOTAL	1	5		1
			TOTAL	1	9	80	1

BASE AGGREGATE

CATEGORY	STATION	-	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	312.0110 SELECT CRUSHED MATERIAL (TON)
0010 STAGE 2	212+79 'SB'		212+99 'SB'			70	75
	214+66 'SB'		214+86 'SB'			70	75
	214+77 'SB'	-	217+45 'SB'	LT	20		
	214+76 'SB'	-	217+94 'SB'	RT	20		
STAGE 4	209+69 'NB'	-	221+87 'NB'	LT	20		
	210+18 'NB'	-	212+86 'NB'	RT	20		
	212+77 'NB'		212+97 'NB'			70	75
	214+64 'NB'		214+84 'NB'			70	75
0040 STAGE 1	203+00 'TS'	-	213+00 'TS'	LT & RT	180	1,080	2,980
	215+00 'TS'	-	226+09 'TS'	LT & RT	200	1,150	3,200
STAGE 3	203+00 'TN'	-	213+00 'TN'	LT & RT	180	880	2,060
	215+00 'TN'	-	224+05 'TN'	LT & RT	160	860	2,110
CAT 0010				SUBTOTAL	80	280	300
CAT 0040				SUBTOTAL	720	3,970	10,350
				TOTAL	800	4,250	10,650

ASPHALTIC SURFACE

CATEGORY	STATION	-	STATION	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)	465.0125 ASPHALTIC SURFACE TEMPORARY (TON)	465.0305 ASPHALTIC SURFACE SAFETY ISLANDS (TON)
0010 STAGE 2	212+52 'SB'	-	212+79 'SB'	6	45		
	215+00 'SB'	-	215+18 'SB'	3	16		
STAGE 4	212+48 'NB'	-	212+77 'NB'	6	45		
	214+96 'NB'	-	215+14 'NB'	3	16		
0040 STAGE 1	203+00 'TS'	-	213+00 'TS'	140		950	
	215+00 'TS'	-	226+09 'TS'	150		1,020	
STAGE 3	203+00 'TN'	-	213+00 'TN'	140		955	
	215+00 'TN'	-	224+05 'TN	130		905	
STAGE 5	USH 153 MEDIAN						25
CAT 0010			SUBTOTAL	18	122		
CAT 0040			SUBTOTAL	560		3,830	25
			TOTAL	578	122	3,830	25

CONCRETE PAVEMENT

CATEGORY	STATION	-	STATION	LOCATION	415.0090 CONCRETE PAVEMENT 9-INCH (SY)	416.1010 CONCRETE SURFACE DRAINS (CY)
0010 STAGE 2	214+88 'SB'	-	215+00 'SB'	LT		4
	214+86 'SB'	-	215+00 'SB'	LT	35	
	214+86 'SB'	-	215+00 'SB'	RT		2.5
STAGE 4	214+84 'NB'	-	214+96 'NB'	LT		2.5
	214+82 'NB'	-	214+96 'NB'	RT	35	
	214+82 'NB'	-	214+96 'NB'	RT		4
			TOTAL		70	13

ASPHALTIC FLUMES

CATEGORY	STATION	LOCATION	465.0310 ASPHALTIC CURB (LF)	465.0315 ASPHALTIC FLUMES (SY)
0010 STAGE 2	212+73 'SB'	LT	14	5
	212+72 'SB'	RT	12	3
STAGE 4	212+70 'NB'	LT	14	3
	212+69 'NB'	RT	12	5
STAGE 5	212+72 'SB'	RT		5
	212+70 'NB'	LT		6
		TOTAL	52	27

ASPHALTIC SHOULDER RUMBLE STRIP

CATEGORY	STATION	-	STATION	LOCATION	465.0400 ASPHALTIC SHOULDER RUMBLE STRIP (LF)
0040 STAGE 5	203+00 'SB'	-	209+70 'SB'	RT	670
	218+00 'SB'	-	226+00 'SB'	RT	800
	203+00 'NB'	-	210+00 'NB'	LT	700
	215+00 'NB'	-	224+05 'NB	LT	905
				TOTAL	3,075

SEALING CRACKS/JOINTS WITH HOT-APPLIED SEALANT

CATEGORY	STATION	LOCATION	492.2010.S SEALING CRACK/JOINTS WITH HOT-APPLIED SEALANT (GAL)
0010 STAGE 2	212+79 'SB'	LT/RT	2
	214+86 'SB'	LT/RT	2
	215+00 'SB'	LT/RT	2
STAGE 4	212+77 'NB'	LT/RT	2
	214+83 'NB'	LT/RT	2
	214+96 'NB'	LT/RT	2
		TOTAL	12

EARTHWORK SUMMARY

CATEGORY	STATION	-	STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT FROM EW DATA (CY)	205.0400 EXCAVATION MARSH (2) EBS (CY)	(2A) SALVAGED/ UNUSABLE PAVEMENT MATERIAL (CY)	(3) REDUCED EBS IN FILL FACTOR = 0.8 (CY)	312.0115 SELECT CRUSHED MATERIAL (4) EXPANDED EBS BACKFILL FACTOR = 1.3 (CY)	(5) EXPANDED FILL FROM EW DATA (CY)	(6) EXPANDED FILL (CY)	(7) MASS ORDINATE (CY)	208.0100 BORROW (8) BORROW (CY)	WASTE (CY)	REMARKS
	STAGE 1														
0040	203+00'SB'	-	212+97'SB'	SB TEMPORARY BYPASS	1,234					797	797	437			
	215+00'SB'	-	226+05SB'	SB TEMPORARY BYPASS	1,083					1,227	1,227	-144			
	STAGE 1 SUBTOTAL				2,317					2,024	2,024	293		293	
	STAGE 2														
0010	212+66.89'SB'	-	212+84.63'SB'	SB APPROACH SLAB	90							90			
	214+80.71'SB'	-	215+02.56'SB'	SB APPROACH SLAB	90							90			
	STAGE 2 SUBTOTAL				180							180		180	
	STAGE 3														
0040	203+00'SB'	-	212+97'SB'	NB TEMPORARY BYPASS	1,420					674	674	746			
	215+00'SB'	-	224+53'SB'	NB TEMPORARY BYPASS	1,280					1,718	1,718	-438			
	STAGE 3 SUBTOTAL				2,700					2,392	2,392	308		308	
	STAGE 4														
0010	212+63.41'NB'	-	212+82.25"NB'	NB APPROACH SLAB	90							90			
	214+77.83'NB'	-	214+98.57'NB'	NB APPROACH SLAB	90							90			
	STAGE 4 SUBTOTAL				180							180		180	
	STAGE 5														
0040	203+00'SB'	-	212+85'SB'	FINAL GRADING	2,890					253	253	2,637			
	215+00'SB'	-	226+05'SB'	FINAL GRADING	3,433					401	401	3,032			
	STAGE 5 SUBTOTAL				6,323					654	654	5,669		5,669	
0040				SUBTOTAL	11,340					5,070	5,070	6,270			
0010				SUBTOTAL	360							360			
	PROJECT			TOTAL	11,700					5,070	5,070	6,630	6,630		

(1) COMMON FROM COMPUTER EARTHWORK DATA, INCLUDES PAVEMENT REMOVAL(CONTAINS SALVAGED/UNUSABLE PAVEMENT MATERIAL)
(2) UNDISTRIBUTED EBS
EBS AREAS TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL
EBS IS ESTIMATED AS AN UNDISTRIBUTED QUANTITY
EBS QUANTITIES ARE USED IN EARTHWORK BALANCE
(2A) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(3) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.8
(4) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL
(5) EXPANDED FILL FROM COMPUTER EARTHWORK DATA
(6) EXPANDED FILL. FACTOR = 1.3
EXPANDED FILL = EW DATA FILL - REDUCED EBS IN FILL
(7) MASS ORDINATE IS + OR - QUANTITY FOR STAGE . PLUS IS EXCESS, MINUS IS SHORTAGE.
(8) BORROW TO BE OBTAINED FROM LOCATION OF CONTRACTOR'S CHOICE.

STRUCTURES, MANHOLES, AND INLETS

CATEGORY	STRUCT. NO.	STATION	OFFSET		RIM ELEVATION*	TOP OF STRUCTURE ELEVATION	INVERT ELEVATION	**520.1012** APRON ENDWALLS FOR CULVERT PIPE 12-INCH (EACH)	**611.0530** MANHOLE COVERS TYPE J (EACH)	**611.0642** INLET COVERS TYPE MS (EACH)	**611.0654** INLET COVERS TYPE V (EACH)	**611.2003** MANHOLES 3-FT DIAMETER (EACH)	**611.2004** MANHOLES 4-FT DIAMETER (EACH)	**611.3225** INLETS 2X2.5-FT (EACH)	**611.3901** INLETS MEDIAN 1 GRATE (EACH)	**611.3902** INLETS MEDIAN 2 GRATE (EACH)	**611.3903** INLETS MEDIAN 3 GRATE (EACH)	**611.8120.S** COVER PLATES TEMPORARY (EACH)
0010	3.0	214+82.73'SB'	41.00	LT	1271.50	1270.75	1266.55		1			1						
STAGE 2	3.1	214+94.76'SB'	41.00	LT	1271.60	1270.85	1268.00		1			1						
	3.2	214+94.76'SB'	33.00	LT	1270.89	1270.14	1268.20				1			1				
	3.3	214+93.18'SB'	5.00	RT	1271.55	1270.80	1268.90				1			1				
STAGE 4	4.0	214+75.75'NB'	41.00	RT	1275.40	1274.65	1270.35		1			1						
	4.1	214+89.20'NB'	41.00	RT	1275.50	1274.75	1271.80		1			1						
	4.2	214+89.20'NB'	33.00	RT	1274.67	1273.92	1272.00				1			1				
	4.3	214+90.78'NB'	5.00	LT	1275.30	1274.55	1272.60				1			1				
0040	1.0	207+75.00'SB'	37.75	RT			1270.82			3							1	
STAGE 1	1.1	210+98.76'SB'	42.13	RT		1269.70	1265.10						1					
	1.2	212+50.00'SB'	15.50	RT	1271.66		1268.90			1					1			
	1.3	212+50.00'SB'	70.50	RT	1272.60		1270.00			1					1			
	2.0	221+75.00'SB'	35.00	RT			1261.00	1										
	2.1	217+00.00'SB'	75.50	RT	1271.20		1265.10			1					1			
	2.2	217+00.00'SB'	13.00	RT	1268.50		1265.70			1					1			1
STAGE 5	5.0	210+98.76'SB'	42.13	RT	1270.78		1265.10			2							1	
							TOTAL	1	4	9	4	4	1	4	4	1	1	1

*RIM ELEVATION OF INLETS WITH TYPE V COVERS IS AT FLOW LINE OF CASTING

STORM SEWER PIPE

CATEGORY		FROM	TO	UP STREAM INVERT ELEVATION	DOWN STREAM INVERT ELEVATION	**520.4012** CULVERT PIPE TEMPORARY 12-INCH (LF)	**608.0312** STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH (LF)
0010	P-300	3.0	3.1	1268.00	1267.90		12
STAGE 2	P-301	3.1	3.2	1268.20	1268.10		8
	P-302	3.2	3.3	1268.90	1268.30		38
STAGE 4	P-400	4.0	4.1	1271.80	1271.70		13
	P-401	4.1	4.2	1272.00	1271.90		8
	P-402	4.2	4.3	1272.60	1272.10		38
0040	P-100	1.0	1.1	1272.82	1267.00	324	
STAGE 1	P-101	1.1	1.2	1268.90	1267.00	155	
	P-102	1.2	1.3	1270.00	1269.00	56	
	P-200	2.0	2.1	1265.10	1261.00	472	
	P-201	2.1	2.2	1265.70	1265.20	63	
					TOTAL	1,070	117

BARRIER SYSTEM GRADING SHAPING FINISHING

CATEGORY	STATION	LOCATION	**614.0010** BARRIER SYSTEM GRADING SHAPING FINISHING (EACH)	FOR INFORMATIONAL PURPOSES ONLY: BORROW (CY)	SALVAGED TOPSOIL (SY)	FERTILIZER TYPE B (CWT)	SEEDING MIXTURE NO. 20 (LB)
0010	217+53'SB'	SB OUTSIDE APPROACH	1	4	110	0.07	0.4
	210+10'NB'	NB OUTSIDE APPROACH	1	0	160	0.1	0.6
		TOTAL	2	4	270	0.17	1

CONCRETE BARRIER TEMPORARY PRECAST

CATEGORY	STATION		STATION	LOCATION	**603.8000** CONCRETE BARRIER TEMPORARY PRECAST DELIVERED (LF)	**603.8125** CONCRETE BARRIER TEMPORARY PRECAST INSTALLED (LF)
0040	47+15	-	51+00	RT	385	385
STAGE 1	49+00	-	52+15	LT	315	315
STAGE 2	203+50'TS'	-	213+00'TS'	RT	950	950
	208+30'TS'	-	213+00'TS'	LT	470	470
	214+85'TS'	-	222+25'TS'	LT	740	740
	214+85'TS'	-	225+60'TS'	RT	1,075	1,075
STAGE 4	203+60'TN'	-	213+00'TN'	LT	940	940
	207+00'TN'	-	213+00'TN'	RT	600	600
	214+85'TN'	-	223+85'TN'	LT	900	900
	214+85'TN'	-	222+00'TN'	RT	715	715
STAGE 5	47+15	-	51+00	RT	385	385
	49+00	-	52+15	LT	315	315
				TOTAL	7,790	7,790

RIPRAP

CATEGORY	STATION	LOCATION	**606.0200** RIPRAP MEDIUM (CY)	**645.0120** GEOTEXTILE FABRIC TYPE HR (SY)
0040	221+75 'SB'	35' RT	3	6
STAGE 1				
		TOTAL	3	6

TEMPORARY STRUCTURE

CATEGORY	STATION	LOCATION	**526.0100** TEMPORARY STRUCTURE (LS)
0040	14+00 'SB'	45' RT	1
STAGE 1			
		TOTAL	1

3

RAILING

CATEGORY	STATION	-	STATION	LOCATION	SPV.0090.01 SALVAGING AND RE-INSTALLING GUARDRAIL (LF)	614.0920 SALVAGED RAIL (LF)	614.0925 SALVAGED GUARDRAIL END TREATMENTS (LF)	614.2300 MGS GUARDRAIL 3 (LF)	614.2500 MGS THRIE BEAM TRANSITION (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)
0010	214+77 'SB'	-	216+46 'SB'	LT		170	1			
STAGE 2	214+85 'SB'	-	217+53 'SB'	LT				175	40	1
	214+83 'SB'	-	218+01 'SB'	RT				225	40	1
	214+76 'SB'	-	217+42 'SB'	RT		265	1			
STAGE 4	209+42 'NB'	-	212+86 'NB'	LT		294	1			
	209+62 'NB'	-	213+05 'NB'	LT				250	40	1
	210+10 'NB'	-	213+03 'NB'	RT				200	40	1
	210+63 'NB'	-	212+87 'NB'	RT		174	1			
0040	49+00 (STH 153)	-	51+00 (STH 153)	LT	200					
STAGE 1	49+00 (STH 153)	-	51+00 (STH 153)	RT	200					
STAGE 5	49+00 (STH 153)	-	51+00 (STH 153)	LT	200					
	49+00 (STH 153)	-	51+00 (STH 153)	RT	200					
				TOTAL	800	903	4	850	160	4

CRASH CUSHIONS TEMPORARY

CATEGORY	STATION	LOCATION	BACK WIDTH	OBJECT MARKING PATTERN	CRASH TEST LEVEL	TRAFFIC DIRECTION	TRAFFIC LOCATION	CRASH CUSHION SHIELDS	614.0905 CRASH CUSHIONS TEMPORARY (EACH)
0040	47+15	RT	2	OM-3L	TL-2	UNIDIRECTIONAL	R	TEMP. BARRIER	1
STAGE 1	52+15	LT	2	OM-3L	TL-2	UNIDIRECTIONAL	R	TEMP. BARRIER	1
STAGE 2	222+25 'TS'	LT	2	OM-3R	TL-3	UNIDIRECTIONAL	L	TEMP. BARRIER	1
	225+60 'TS'	RT	2	OM-3L	TL-3	UNIDIRECTIONAL	R	TEMP. BARRIER	1
STAGE 4	203+60 'TN'	LT	2	OM-3L	TL-3	UNIDIRECTIONAL	R	TEMP. BARRIER	1
	207+00 'TN'	RT	2	OM-3R	TL-3	UNIDIRECTIONAL	L	TEMP. BARRIER	1
STAGE 5	47+15	RT	2	OM-3L	TL-2	UNIDIRECTIONAL	R	TEMP. BARRIER	1
	52+15	LT	2	OM-3L	TL-2	UNIDIRECTIONAL	R	TEMP. BARRIER	1
		TOTAL							8

3

LANDMARK REFERENCE MONUMENTS

CATEGORY	LOCATION	621.0100 LANDMARK REFERENCE MONUMENTS (EACH)
0010	UNDISTRIBUTED	4
	TOTAL	4

WATER

CATEGORY	LOCATION	624.0100 WATER (MGAL)
0040	DUST CONTROL	20
	TOTAL	20

FENCE

CATEGORY	LOCATION	616.0206 FENCE CHAIN LINK 6-FT (FT)	616.0329 GATES CHAIN LINK 10 FEET (EACH)	616.0410 FENCE CHAIN LINK SALVAGED 10-FT (FT)
0060	GATEWAY SIGN	145	1	75
	TOTAL	145	1	75

SIGNING SUMMARY

CATEGORY	SIGN NUMBER	STATION	LOCATION	SIGN CODE	MESSAGE	SIGN SIZE	634.0614 POSTS WOOD 4X6-INCH X 14-FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
0010	1	213+00 'NB'	LT	W5-52L	OBJECT MARKER	18'X54"	1	6.75	1	1
	2	213+00 'NB'	RT	W5-52R	OBJECT MARKER	18'X54"	1	6.75	1	1
	3	214+60 'SB'	RT	W5-52L	OBJECT MARKER	18'X54"	1	6.75	1	1
	4	214+60 'SB'	LT	W5-52R	OBJECT MARKER	18'X54"	1	6.75	1	1
	5	182+45 'NB'	RT	M1-4	US 51	24"X24"			1	1
	6	182+45 'NB'	RT	M1-1	IH 39	24"X24"			1	1
	7	182+45 'NB'	RT	W12-50	LOW BRIDGES NEXT 16 MILES	144"X48"			1	1
						TOTAL	4	27.00	7	7

FENCE SAFETY

CATEGORY	STATION	-	STATION	LOCATION	616.0700.S FENCE SAFETY (LF)
0040					
STAGE 1	49+00	-	50+90	LT	380
STAGE 2-5	49+00	-	50+90	LT	380
				TOTAL	760

STAGE 1 FENCE NOT INTENDED TO REMAIN FOR STAGE 2
FENCE TO REMAIN IN PLACE FROM STAGE 2 THROUGH 5

TRAFFIC CONTROL

CATEGORY	ROADWAY	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (DAY)	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)	643.3000 TRAFFIC CONTROL DETOUR SIGNS (DAY)	SPV.0045.02 TRAFFIC CONTROL VERTICAL PANEL (DAY)
0040	I39	73	8,030	61	122	230	146	1,752	80	
STAGE 1	STH 153		10,600	370	740	980	70	1,254	20	
STAGE 2	I39	58	499	100	200	116		1,784	140	
	STH 153		3,596	116	232	2,262	118	1,102	20	
STAGE 3	I39	38	4,215	79	152	456	78	924	85	
	STH 153									
STAGE 4	I39	58	499	100	200	116		1,784	140	
	STH 153		3,596	116	232	2,262	118	1,102	20	
STAGE 5	I39	41	4,545	83	164	492	84	996	140	
	STH 153		2,460	82	165	1,151	84	865	20	
WINTER (NOV 13- MAR 31)	I39			552				552		16,960
	TOTAL	268	38,040	1,659	2,207	8,065	698	12,115	665	16,960

TRAFFIC CONTROL SIGNS

SIGN SITE NUMBER	ROADWAY	LOCATION	643.1050 TRAFFIC CONTROL SIGNS PCMS (DAY)	SPV.0045.01 PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) REMOTE COMMUNICATIONS (DAY)
1	IH 39	SB	270	270
2	IH 39	SB	270	270
3	STH 153	WB	186	
4	STH 153	EB	186	
5	IH 39	NB	270	270
6	IH 39	NB	270	270
DETOUR	VARIOUS	VARIOUS	60	
		TOTAL	1,512	1,080

EROSION CONTROL

CATEGORY	STATION	- STATION	LOCATION	STRUCTURE NUMBER	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)	625.0500 SALVAGED TOPSOIL (SY)	628.2002 EROSION MAT CLASS I TYPE A (SY)	628.7005 INLET PROTECTION TYPE A (EACH)	628.7015 INLET PROTECTION TYPE C (EACH)	628.7570 ROCK BAGS (EACH)	629.0205 FERTILIZER TYPE A (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0175 SEEDING MIXTURE NO. 75 (LB)	630.0400 SEEDING TEMPORARY (LB)	628.7504 TEMPORARY DITCH CHECKS (LF)
0040	46+15 (STH 153)		50' LT									2						
STAGE 1	46+40 (STH 153)		10' LT									2						
	209+00'TS'	- 219+00'TS'	LT						1,160	1,160				1			32	
	203+00'TS'	- 212+50'TS'	RT						690	690							20	
	215+00'TS'	- 226+00'TS'	RT						1,005	1,005				1			28	
	202+10'SB'		RT										20					
	213+00 'SB'		RT		80	80												
	226+00 'SB'		RT		60	60												
	207+75 'SB'		RT	1.0							1							
	212+50'SB'		18' RT	1.2							1							
	212+50'SB'		66' RT	1.3							1							
	213+00 'SB'		9' RT	2.1							1							
	217+00 'SB'		70' RT	2.2							1							
	222+00'SB'		30' RT										20					
	226+10'SB'		30' RT										20					
STAGE 2	214+83 'SB'		34' LT	3.2								1						
	214+81 'SB'		6' RT	3.3								1						
STAGE 3	202+00'TN'	- 213+00'TN'	LT/RT						2,165	2,165				1			58	
	215+00'TN'	- 224+50'TN'	LT						2,420	2,420				2			66	
	209+00'TN'	- 220+00'TN'	RT						1,690	1,690				1			46	
STAGE 4	214+76 'NB'		34' RT	4.2								1						
	214+76 'NB'		7' LT	4.3								1						
STAGE 5	202+00'SB'	- 213+00'SB'	RT/LT						9,170	9,170				6	250		125	
	215+00'SB'	- 226+00'SB'	RT/LT						9,170	9,170				6	250		125	
	UNDISTRIBUTED		RT/LT		100	100	12	12	530	530		2	20	5	20		10	500
0050	MEADOW															4		
			TOTAL		240	240	12	12	28,000	28,000	5	10	80	22	520	4	510	500

PLANTINGS

CATEGORY	ITEM NUMBER	COMMON NAME	SCIENTIFIC NAME	SIZE (CAL OR HT WHEN PLANTED)	ROOT ZONE MODE	TOTAL
0050	632.0101.01	AMERICAN LINDEN	TILIA AMERICANA	2.5" CAL	B&B	1
	632.0101.02	BUR OAK	QUERCUS MACROCARPA	2.5" CAL	B&B	1
	632.0101.03	SHAGBARK HICKORY	CARYA OVATA	2.5" CAL	B&B	2
	632.0101.04	SUGAR MAPLE	ACER SACCHARUM	2.5" CAL	B&B	2
	632.0101.05	THORNLESS COCKSPUR HAWTHORN	CRATAEGUS CRUSGALLI VAR. INERMIS	2" CAL	B&B	9
	632.0101.06	PRAIRIFIRE CRAB	MALUS X 'PRAIRIFIRE'	2" CAL	B&B	8
	632.0101.07	SENTINEL CRAB	MALUS X 'SENTINEL'	2" CAL	B&B	15
	632.0101.08	SUGAR TYME CRAB	MALUS X 'SUGAR TYME'	2" CAL	B&B	12
	632.0101.09	EASTERN WHITE PINE	PINUS STROBUS	6' HT	B&B	4
	632.0101.10	WHITE SPRUCE	PICEA GLAUCA	6' HT	B&B	10
	632.0201.01	BRILLIANT RED CHOKEBERRY	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	24" HT	CG	30
	632.0201.02	COMMON NINEBARK	PHYSOCARPUS OPULIFOLIUS	36" HT	B&B	20
	632.0201.03	DWF. AMERICAN CRANBERRY	VIBURNUM TRILOBUM 'COMPACTUM'	36"	B&B	14
	632.0201.04	DWARF-BUSH HONEYSUCKLE	DIERVILLA LONICERA	18" HT	CG	22
	632.0201.05	INDIAN GRASS	SORGHASTRUM NUTANS	1 GAL	CG	78
	632.0201.06	LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	1 GAL	CG	207
	632.0201.07	COMPACT PFITZER JUNIPER	JUNIPERUS CHINENSIS PFITZ. COMP.	12" HT	B&B	30
	632.0201.08	THE PRAIRIE ROSE	ROSA SETIGERA	18" HT	CG	73

LANDSCAPE SURVEILLANCE AND CARE CYCLE

CATEGORY	LOCATION	SPV.0105.01 LANDSCAPE SURVEILLANCE AND CARE CYCLE (LS)
0050	UNDISTRIBUTED	1
	TOTAL	1

SHOVEL CUT BED EDGE

CATEGORY	STATION	LOCATION	SPV.0090.02 SHOVEL CUT BED EDGE (LF)
0050	41+85 (STH 153)	8' LT	44
	44+30 (STH 153)	13' LT	44
	55+11 (STH 153)	8' LT	44
	58+08 (STH 153)	13' LT	44
	60+72 (STH 153)	13' LT	44
	63+22 (STH 153)	18' LT	44
	65+70 (STH 153)	21' LT	44
	70+43 (STH 153)	18' LT	44
	74+14 (STH 153)	21' LT	44
		TOTAL	396

PAVEMENT MARKING

CATEGORY	STATION		STATION	LOCATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH (LF)	646.0600 REMOVING PAVEMENT MARKINGS (LF)	646.0881.S GROOVED WET REFLECTIVE TAPE 4-INCH (LF)	649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH YELLOW (LF)	649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH WHITE (LF)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH YELLOW (LF)	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH WHITE (LF)	649.2100 TEMPORARY RAISED PAVEMENT MARKERS (EACH)
0010	203+00 'SB'	-	209+00 'SB'	YELLOW LANE LINE	600							
WINTER SHUTDOWN	219+50 'SB'	-	226+00 'SB'	YELLOW LANE LINE	650							
STAGE 2	203+00 'SB'	-	212+80 'SB'	LANE SKIPS			250					
	212+80 'SB'	-	214+85 'SB'	LANE SKIPS	50							
	214+85 'SB'	-	226+00 'SB'	LANE SKIPS			300					
	203+00 'SB'	-	226+00 'SB'	YELLOW LANE LINE	2,300							
	203+50 'SB'	-	224+00 'SB'	WHITE LANE LINE	2,050							
STAGE 4	203+00 'NB'	-	212+80 'NB'	LANE SKIPS			250					
	212+80 'NB'	-	214+85 'NB'	LANE SKIPS	50							
	214+85 'NB'	-	224+00 'NB'	LANE SKIPS			250					
	203+00 'NB'	-	224+00 'NB'	YELLOW LANE LINE	2,100							
	205+00 'NB'	-	222+00 'NB'	WHITE LANE LINE	1,700							
0040	203+40 'TS'	-	207+85 'TS'	LT							445	
STAGE 2	203+40 'TS'	-	204+70 'TS'	RT						130		
	203+50'TS'	-	225+50'TS'	CL								90
	204+30 'TS'	-	206+50 'TS'	CL							63	
	204+70 'TS'	-	223+50 'TS'	RT				1,880				
	206+45 'TS'	-	221+90 'TS'	CL					1,545			
	207+85 'TS'	-	220+50 'TS'	LT					1,265			
	220+50 'TS'	-	224+00 'TS'	LT							350	
	223+50 'TS'	-	225+60 'TS'	RT						210		
	221+90 'TS'	-	225+60 'TS'	CL							100	
	203+00 'SB'	-	209+00 'SB'	LANE SKIPS		165						
	203+00 'SB'	-	209+00 'SB'	YELLOW LANE LINE		600						
	219+50 'SB'	-	226+00 'SB'	LANE SKIPS		175						
	219+50 'SB'	-	226+00 'SB'	YELLOW LANE LINE		650						
STAGE 4	203+00'TN'	-	224+50'TN'	CL								87
	203+30 'TN'	-	205+00 'TN'	LT						170		
	203+30 'TN'	-	207+65 'TN'	RT							435	
	203+30 'TN'	-	206+50 'TN'	CL							88	
	205+00 'TN'	-	223+00 'TN'	LT				1,800				
	206+50 'TN'	-	221+25 'TN'	CL					1,475			
	207+65 'TN'	-	220+50 'TN'	RT					1,285			
	223+00 'TN'	-	225+00 'TN'	LT						200		
	220+50 'TN'	-	225+00 'TN'	RT							450	
	221+25 'TN'	-	225+00 'TN'	CL							100	
	203+00 'NB'	-	208+75 'NB'	LANE SKIPS		150						
	203+00 'NB'	-	208+75 'NB'	YELLOW LANE LINE		575						
	203+00 'NB'	-	208+75 'NB'	LANE SKIPS		125						
	203+00 'NB'	-	208+75 'NB'	YELLOW LANE LINE		450						
				SUBTOTAL	9,500	2,890	1,050	3,680	5,570	710	2,030	177
CAT 0010				SUBTOTAL	9,500		1,050					
CAT 0040				SUBTOTAL		2,890			9,250		2,740	177
				TOTAL	9,500	2,890	1,050		9,250		2,740	177

3

CONSTRUCTION STAKING

CATEGORY	STATION	-	STATION	LOCATION	STR NUMBER	650.4000 CONSTRUCTION STAKING STORM SEWER (EACH)	650.4500 CONSTRUCTION STAKING SUBGRADE (LF)	650.5000 CONSTRUCTION STAKING BASE (LF)	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (LS)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)
0010	214+82.73 'SB'			41.00' LT	3.0	1				
STAGE2	214+92.07 'SB'			41.00' LT	3.1	1				
	214+92.07 'SB'			33.00' RT	3.2	1				
	214+90.49 'SB'			5.00' RT	3.3	1				
STAGE 4	214+75.65 'NB'			41.00' RT	4.0	1				
	214+86.57 'NB'			41.00' RT	4.1	1				
	214+86.57 'NB'			33.00' RT	4.2	1				
	214+88.26 'NB'			5.00' LT	4.3	1				
0040	203+00 'TS'	-	213+00 'TS'				1,000	1,000		1,000
STAGE 1	215+00 'TS'	-	226+00 'TS'				1,100	1,100		1,100
	207+75 'SB'			37.75' RT	1.0	1				
	210+98.76 'SB'			42.13' RT	1.1	1				
	212+50 'SB'			15.50' RT	1.2	1				
	212+50 'SB'			70.50' RT	1.3	1				
	221+75 'SB'			35.00' RT	2.0	1				
	217+00 'SB'			75.50' RT	2.1	1				
	217+00' 'SB'			13.00' RT	2.2	1				
STAGE 3	203+00 'TN'	-	213+00 'TN'				1,000	1,000		1,000
	215+00 'TN'	-	224+00 'TN'				900	900		900
STAGE 5	203+00 'SB'	-	213+00 'SB'	RT						1,000
	215+00 'SB'	-	226+00 'SB'	RT						1,100
	203+00 'NB'	-	213+00 'NB'	LT						1,000
	215+00 'NB'	-	224+00 'NB'	LT						900
	PROJECT LENGTH								1	
CAT 0010					SUBTOTAL	8				
CAT 0040					SUBTOTAL	7	4,000	4,000	1	8,000
					TOTAL	15	4,000	4,000	1	8,000

SAWING ASPHALT

CATEGORY	STATION	-	STATION	LOCATION	690.0150 SAWING ASPHALT (LF)
0010	212+67 'SB'				40
STAGE 2	215+03 'SB'				40
STAGE 4	212+63 'NB'				40
	214+99 'NB'				40
0040	203+00 'SB'			SHLDR	4
STAGE 1	203+00 'SB'	-	209+00 'SB'	RT	600
	219+00 'SB'	-	226+00 'SB'	RT	700
	226+00 'SB'			SHLDR	4
	209+00 'SB'			SHLDR	4
	219+00 'SB'			SHLDR	4
STAGE 3	203+00 'NB'			SHLDR	4
	203+00 'NB'	-	209+00 'NB'	LT	600
	216+00 'NB'	-	226+00 'NB'	LT	1,000
	209+00 'NB'			SHLDR	4
	216+00 'NB'			SHLDR	4
	226+00 'NB'			SHLDR	4
STAGE 5	203+00 'NB'	-	208+36 'NB'	LT	536
	216+00 'NB'	-	226+00 'NB'	LT	1,000
	203+00 'SB'	-	208+36 'SB'	RT	536
	219+64 'SB'	-	226+00 'SB'	RT	636
CAT 0010				SUBTOTAL	160
CAT 0040				SUBTOTAL	5,640
				TOTAL	5,800

GATEWAY SIGN

CATEGORY	SPV.0060.01 GATEWAY SIGN (EACH)
0050	1
TOTAL	1

BANNER POLE ASSEMBLIES

CATEGORY	STATION	LOCATION	SPV.0060.02 BANNER POLE ASSEMBLIES (EACH)
0050	41+85 (STH 153)	8' LT	1
	44+30 (STH 153)	13' LT	1
	55+11 (STH 153)	8' LT	1
	58+08 (STH 153)	13' LT	1
	60+72 (STH 153)	13' LT	1
	63+22 (STH 153)	18' LT	1
	65+70 (STH 153)	21' LT	1
	70+43 (STH 153)	18' LT	1
	74+14 (STH 153)	21' LT	1
		TOTAL	9

SELECT CRUSHED MATERIAL DRAIN

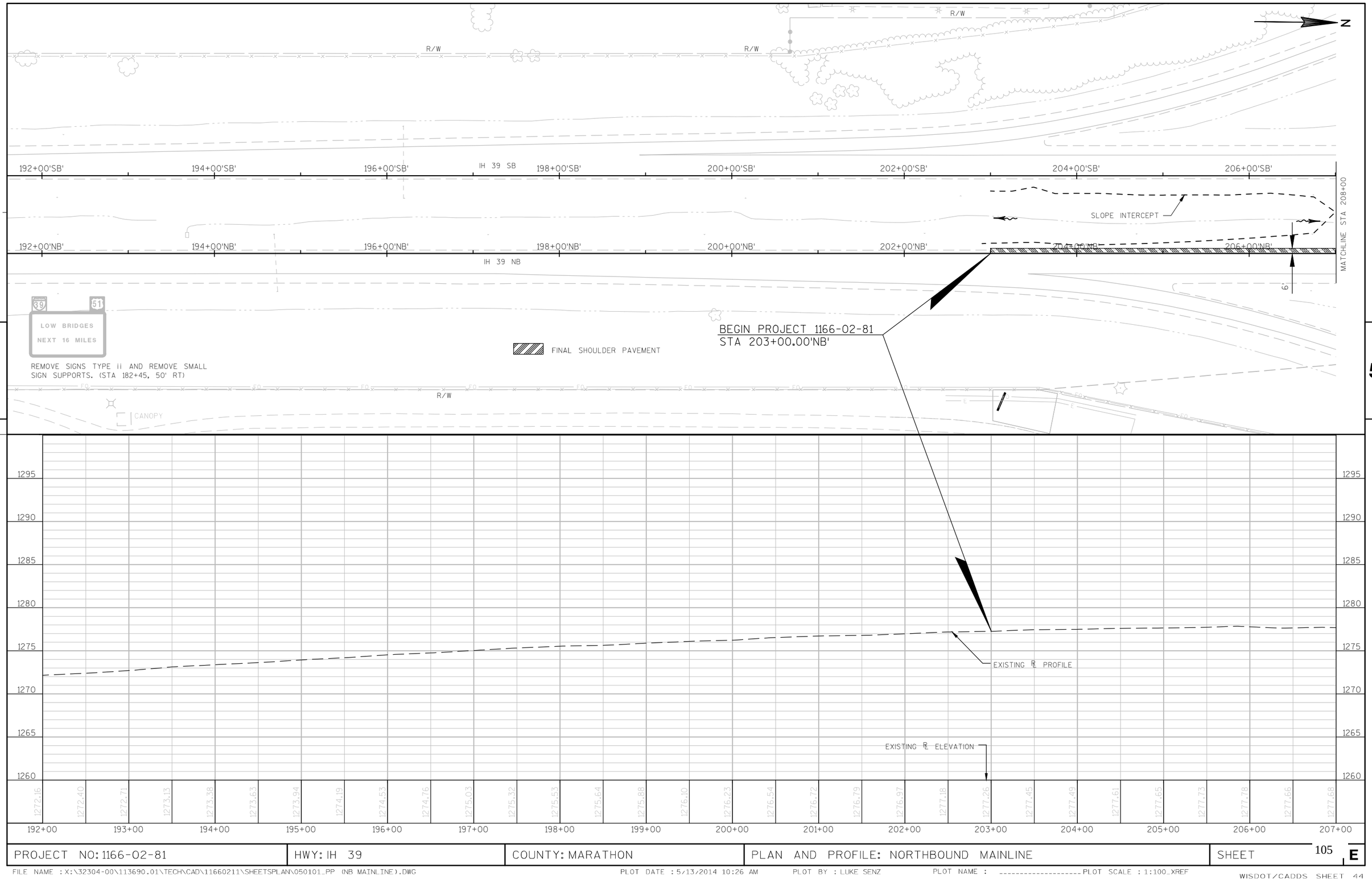
CATEGORY	STATION	LOCATION	SPV.0060.04 SELECT CRUSHED MATERIAL DRAIN (EACH)
0010	204+00'SB'	8' RT	1
STAGE 5	206+80'SB	8' RT	1
	209+77'SB'	8' RT	1
	218+10'SB'	8' RT	1
	220+01'SB'	8' RT	1
	222+00'SB'	8' RT	1
	224+00'SB'	8' RT	1
	226+00'SB'	8' RT	1
	204+76'NB'	8' LT	1
	208+00'NB'	8' LT	1
	210+00'NB'	8' LT	1
	218+00'NB'	8' LT	1
	220+67'NB'	8' LT	1
0040			
STAGE 1	219+00 'SB'	5.5' RT	1
CAT 0010		SUBTOTAL	13
CAT 0040		SUBTOTAL	1
		TOTAL	14

WATER FOR SEEDED AREAS

CATEGORY	LOCATION	SPV.0120.01 WATER FOR SEEDED AREAS (MGAL)
0050	UNDISTRIBUTED	5
	TOTAL	5

SPRAYED ASPHALTIC SHOULDER TREATMENT

CATEGORY	STATION	-	STATION	LOCATION	SPV.0165.01 SPRAYED ASPHALTIC SHOULDER TREATMENT (SF)
0010	214+77 'SB'	-	217+45 'SB'	LT	1,075
STAGE 2	214+76 'SB'	-	217+94 'SB'	RT	1,060
STAGE 4	209+69 'NB'	-	212+97 'NB'	LT	1,275
	210+18 'NB'	-	212+86 'NB'	RT	1,075
				TOTAL	4,485



5

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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: NORTHBOUND MAINLINE	SHEET 105 E

BENCH MARKS

NO.	STATION, OFFSET	DESCRIPTION	ELEV.
1	213+79.24'NB',28.26' RT	3/4" IRON ROD	1256.10

N

FINAL SHOULDER PAVEMENT

MOSINEE TELEPHONE COMPANY

MOSINEE MUNICIPAL (WATER)

MOSINEE MUNICIPAL (SEWER)

WPS (GAS)

B-37-148

MGS3 MGS GUARDRAIL 3

MGSEAT MGS GUARDRAIL TERMINAL EAT

MGSTB MGS THRIE BEAM TRANSITION

PC: 220+74.45'SB'

MATCHLINE STA 207+00 'NB'

208+00'SB' 210+00'SB' 212+00'SB' 214+00'SB' 216+00'SB' IH 39 SB 218+00'SB' 220+00'SB'

CHARTER

MGS3

MGSTB

MGSEAT +62 +15

208+00'NB' 210+00'NB' 212+00'NB' +48 +63 +77 214+00'NB' +84 +96 +14 216+00'NB' 218+00'NB' 220+00'NB'

SLOPE INTERCEPT

24'

BM 1

IH 39 NB

* CONSTRUCT CONCRETE PAVEMENT APPROACH SLAB

MGSEAT +10

+63 ASPHALTIC SURFACE BUTT JOINT

SAW CUT

MGSTB

+75

B-37-149

+82 +99

ASPHALTIC SURFACE BUTT JOINT

SAW CUT

STA. 209+69'NB' - STA. 212+87'NB', LT.
STA. 210+18'NB' - STA. 212+86'NB', RT.
SALVAGE GUARDRAIL AND END TREATMENTS
INSTALL MGS THRIE BEAM, GUARDRAIL, AND EAT TERMINALS.

TRAFFIC SIGNAL CONDUIT

STH 153

STH 153

WPS (ELECTRIC)

PC: 220+74.45'NB'

MATCHLINE STA 222+00 'NB'

R/W

WINDSTREAM KDL (FIBER)

5

5

1290 1285 1280 1275 1270 1265 1260 1255

STA 212+29.50
EL 1276.41

-0.40%

FINISHED ℄ PROFILE

-0.30%

STA 214+75.00
EL 1275.62

STA 215+18.50
EL 1275.40

-0.50%

EXISTING ℄ PROFILE

STATION 213+79
REMOVE STRUCTURE B-37-149
TWO SPAN 45" PRESTRESSED GIRDER STRUCTURE
166.8' OVERALL LENGTH
43.8' OVERALL WIDTH

STATION 213+80.54
STRUCTURE B-37-149 REQUIRED
TWO SPAN 45" PRESTRESSED GIRDER STRUCTURE
166'-10" OVERALL LENGTH
40'-0" CLEAR ROADWAY WIDTH
SKEW 2°17' LHF

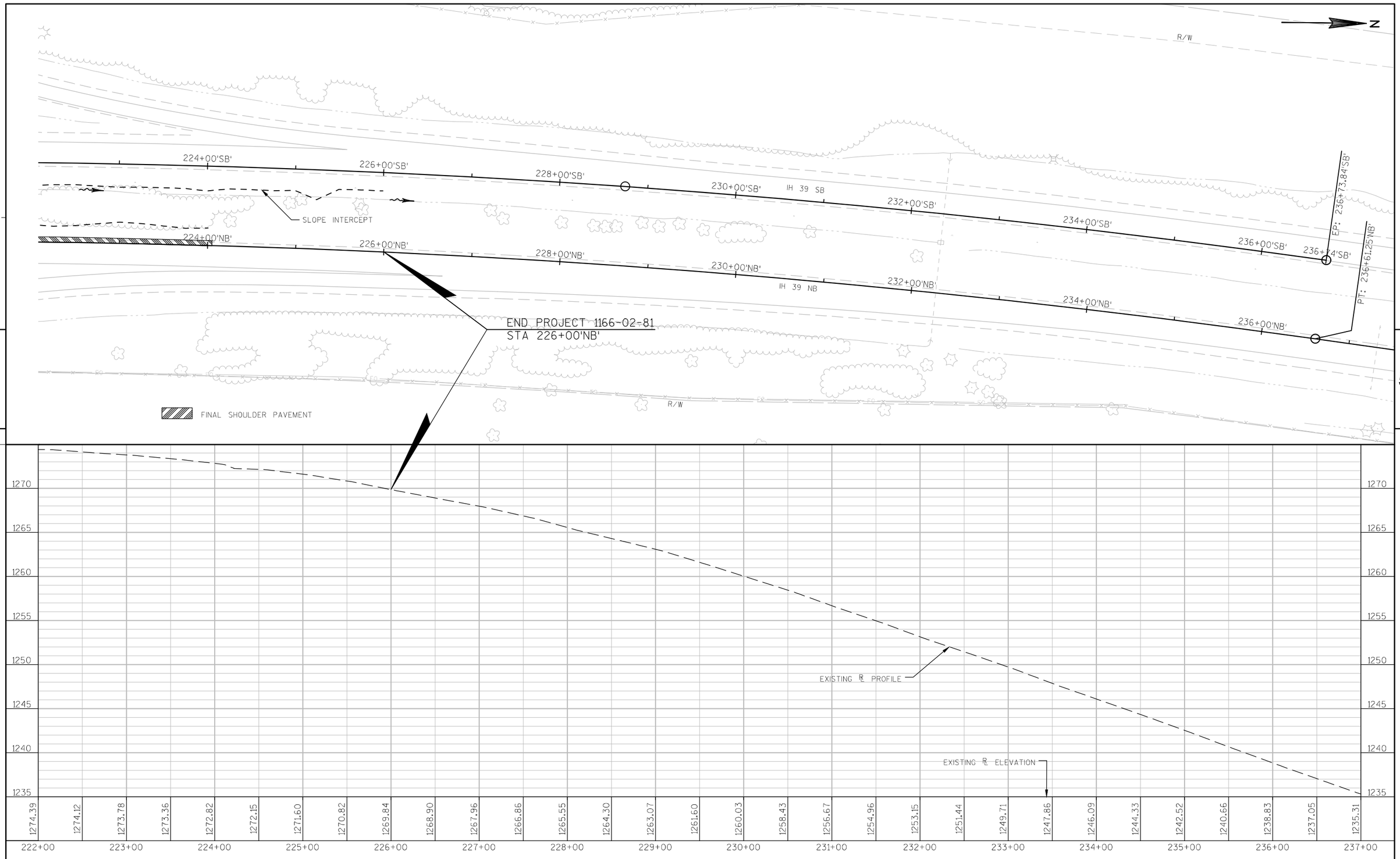
EXISTING ℄ ELEVATION

FINISHED ℄ ELEVATION

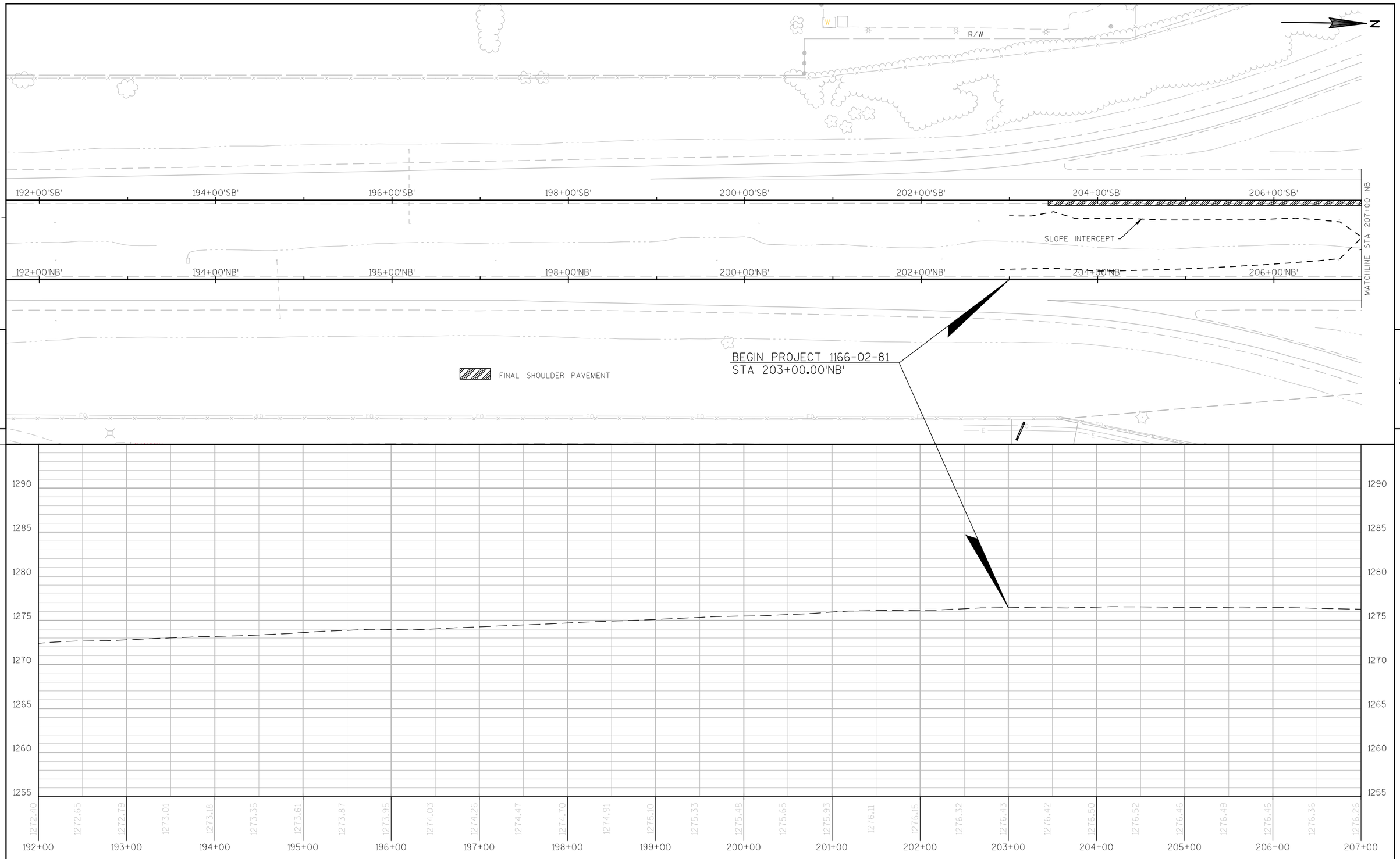
1277.68 1277.55 1277.54 1277.49 1277.33 1277.13 1277.09 1277.00 1276.96 1276.89 1276.78 1276.34 1276.33 1276.15 1276.15 1275.97 1276.00 1275.82 1275.85 1275.69 1275.69 1275.48 1275.49 1275.57 1275.39 1275.19 1275.13 1274.92 1274.80 1274.87 1274.91 1274.82 1274.62 1274.49 1274.45 1274.44 1274.39

207+00 208+00 209+00 210+00 211+00 212+00 213+00 214+00 215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: NORTHBOUND MAINLINE	SHEET 106	E



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: NORTHBOUND MAINLINE	SHEET 107 E



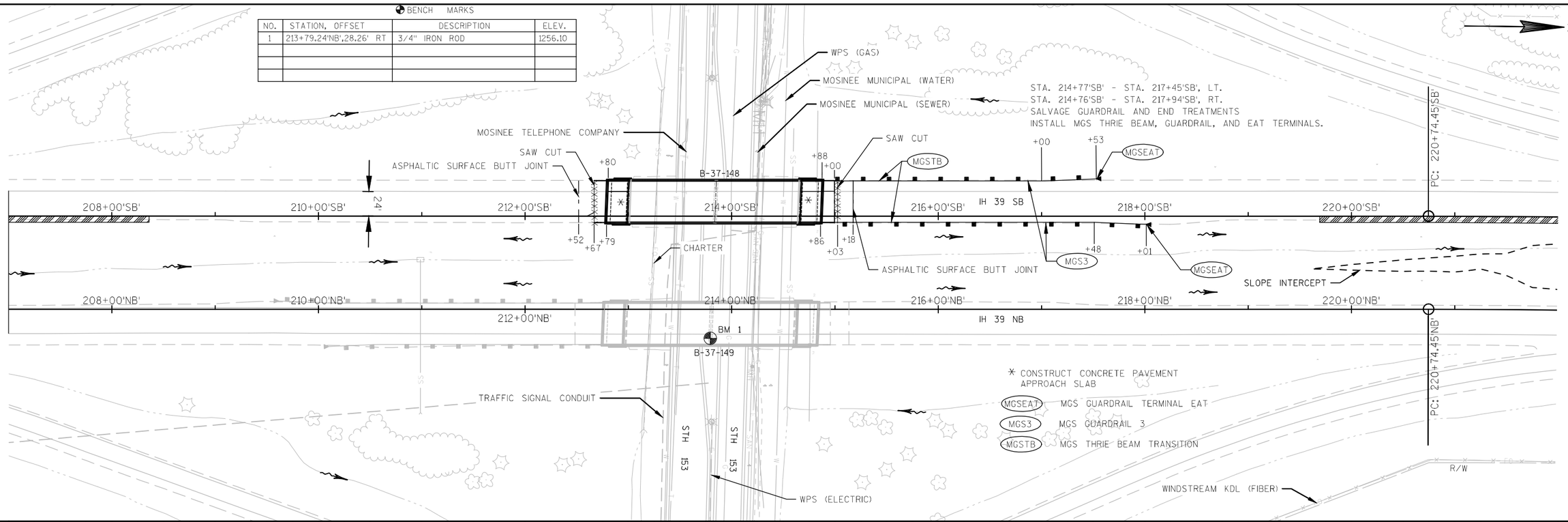
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: SOUTHBOUND MAINLINE	SHEET 108	E

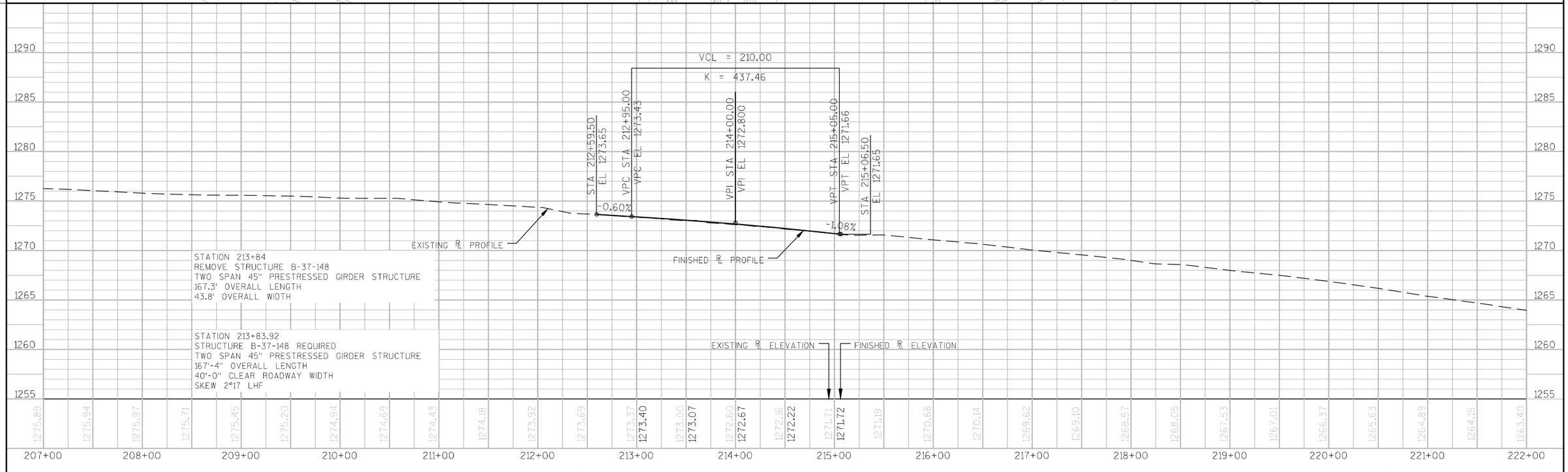
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\050101_PP (SB MAINLINE).DWG PLOT DATE : 3/3/2014 10:27 AM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

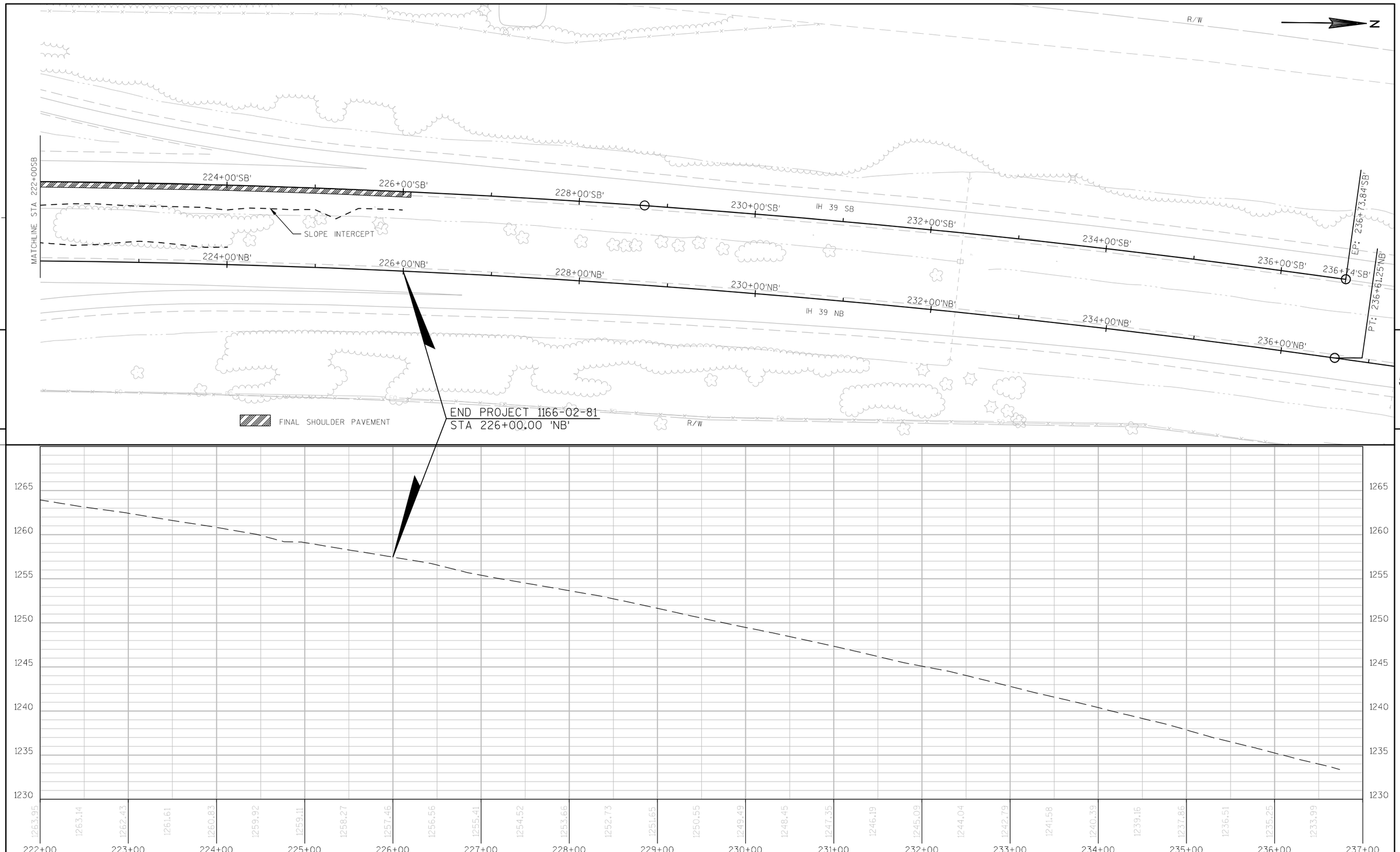
BENCH MARKS

NO.	STATION, OFFSET	DESCRIPTION	ELEV.
1	213+79.24'NB',28.26' RT	3/4" IRON ROD	1256.10

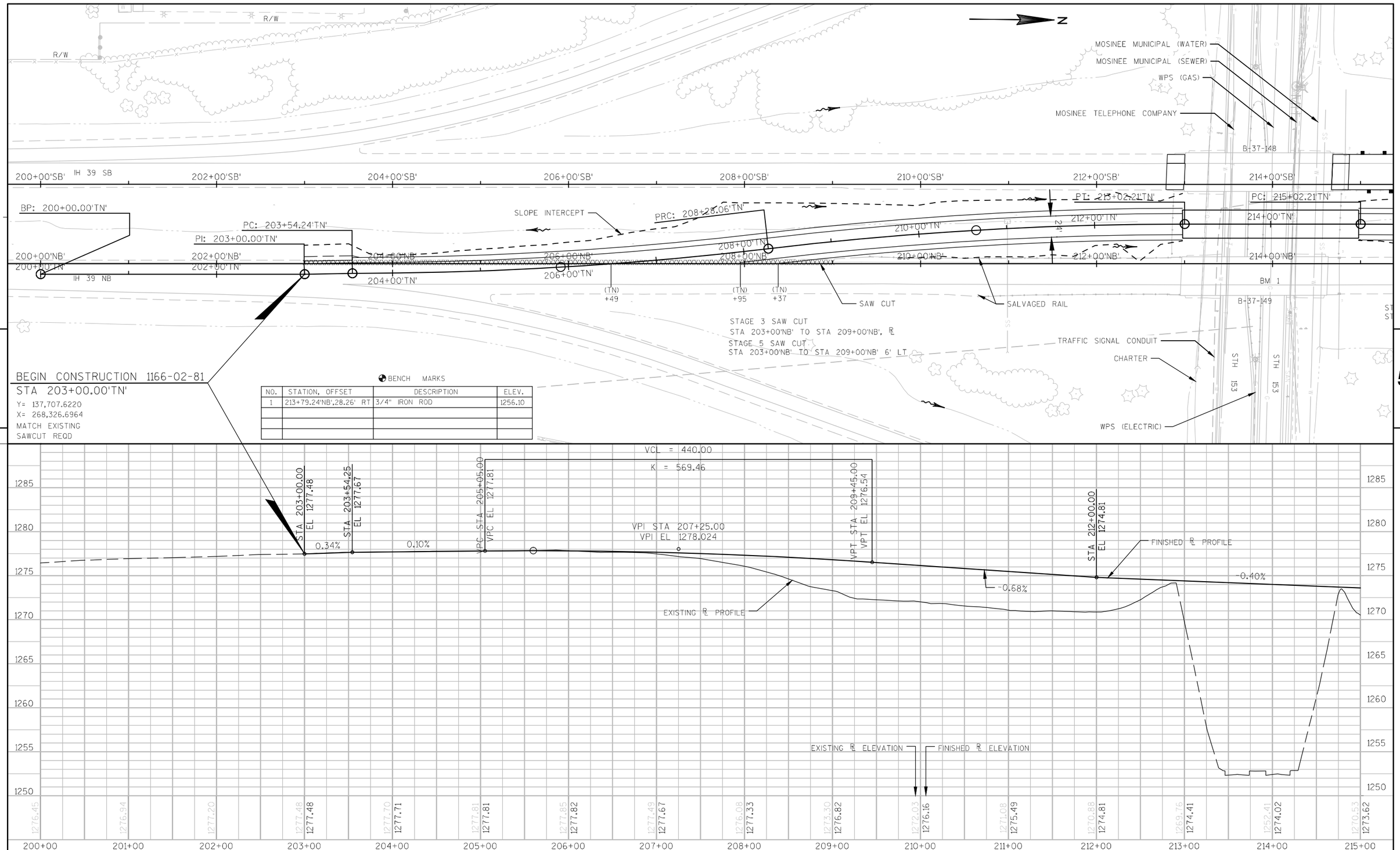




PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: SOUTHBOUND MAINLINE	SHEET 109	E



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: SOUTHBOUND MAINLINE	SHEET 110	E



BENCH MARKS

NO.	STATION, OFFSET	DESCRIPTION	ELEV.
1	213+79.24'NB',28.26' RT	3/4" IRON ROD	1256.10

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: NORTHBOUND TEMPORARY BYPASS	SHEET 111 E

STA 222+00'TN' TO STA 225+00'TN'
CLEAR AND GRUB LT

N

STAGE 3 SAW CUT
STA 216+00'NB' TO STA 224+05'NB', ℄

216+00'SB' 218+00'SB' IH 39 SB 220+00'SB' 222+00'SB' 224+00'SB' 226+00'SB' 228+00'SB' 230+00'SB'

PC: 220+74.45'SB'

SLOPE INTERCEPT

PRC: 220+08.17'TN'

PC: 224+04.83'TN'

PT: 223+90.05'TN'

PCC: 226+04.83'TN'

EP: 230+04.83'TN'

216+00'TN' 218+00'TN' 220+00'TN' 222+00'TN' 224+00'TN' 226+00'TN' 228+00'TN' 230+00'TN'

216+00'NB' 218+00'NB' IH 39 NB 220+00'NB' 222+00'NB' 224+00'NB' 226+00'NB' 228+00'NB' 230+00'NB'

STAGE 5 SAW CUT
STA 216+00'NB' TO STA 224+05'NB', 6' LT

SAW CUT

(TN) +67 (TN) +18 (TN) +28

PC: 220+74.45'NB'

WINDSTREAM KDL (FIBER)

R/W

END CONSTRUCTION 1166-02-81
STA 224+04.83'TN'

R/W

5 5

1290 1285 1280 1275 1270 1265 1260 1255

VCL = 200.00
K = 256.61
VPC STA 215+50.00
VPC EL 1273.42
VPT STA 217+50.00
VPT EL 1273.40
VPI STA 216+50.00
VPI EL 1273.019

VCL = 400.00
K = 284.00
VPC STA 219+80.00
VPC EL 1274.28
VPI STA 221+80.00
VPI EL 1275.038

VCL = 200.00
K = 210.52
VPT STA 223+80.00
VPT EL 1272.98
VPC STA 224+00.00
VPC EL 1272.78
STA 223+90.05
EL 1272.88
VPT STA 226+00.00
VPT EL 1269.77
STA 226+04.83
EL 1269.68
VPI STA 225+00.00
VPI EL 1271.750

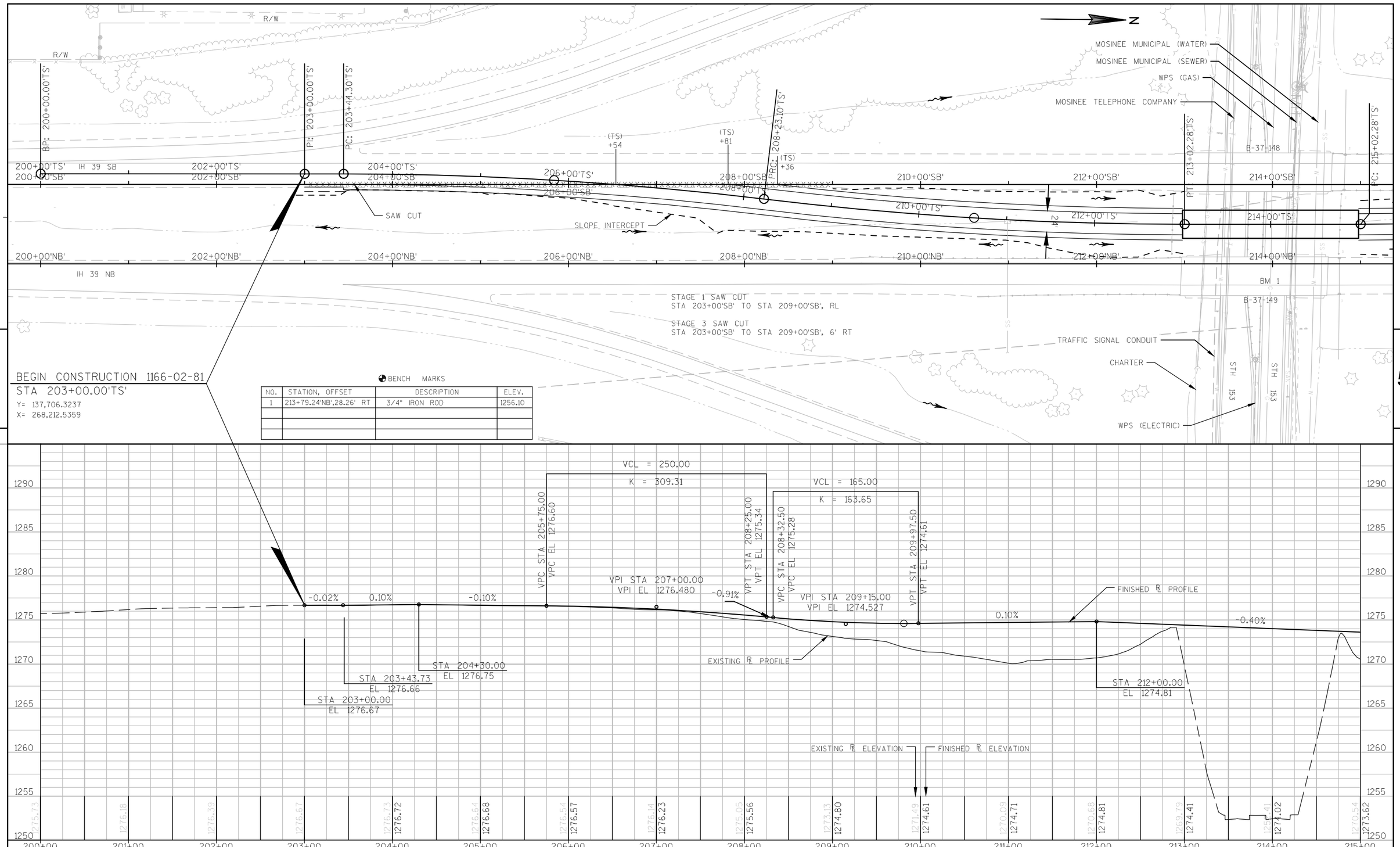
FINISHED ℄ PROFILE
EXISTING ℄ PROFILE
0.38%
-1.03%
-1.03%
-1.98%

EXISTING ℄ ELEVATION
FINISHED ℄ ELEVATION

1270.53 1273.62 | 1268.86 1273.27 | 1268.95 1273.26 | 1269.36 1273.59 | 1271.49 1273.97 | 1273.23 1274.35 | 1274.31 1274.48 | 1274.33 1274.26 | 1273.77 1273.69 | 1272.78 1272.78 | 1271.52 1271.51 | 1269.77 1269.77 | 1267.79 | 1265.60 | 1262.99 | 1259.99

215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: NORTHBOUND TEMPORARY BYPASS	SHEET 112 E



5

BEGIN CONSTRUCTION 1166-02-81
STA 203+00.00'TS'
Y= 137,706.3237
X= 268,212.5359

BENCH MARKS

NO.	STATION, OFFSET	DESCRIPTION	ELEV.
1	213+79.24'NB',28.26' RT	3/4" IRON ROD	1256.10

5

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: SOUTHBOUND TEMPORARY BYPASS	SHEET 113	E

STAGE 1 SAW CUT
STA 219+00'SB' TO STA 226+00'SB', RL

STAGE 3 SAW CUT
STA 219+00'SB' TO STA 226+00'SB', 6' RT

N

PC: 215+02.28'TS'
216+00'SB'
IH 39 SB
218+00'SB'
PRC: 219+48.51'TS'
(TS) +69
220+00'SB'
(TS) +30
PC: 220+74.45'SB'
(TS) +94
222+00'SB'
224+00'TS'
224+00'SB'
PT: 225+72.12'TS'
226+00'TS'
PC: 226+09.29'TS'
226+00'SB'
228+00'TS'
228+00'SB'
230+04'TS'
230+00'TS'
EP: 230+04.00'TS'
230+00'SB'
216+00'TS'
218+00'TS'
220+00'TS'
222+00'TS'
SAW CUT
SLOPE INTERCEPT
216+00'NB'
218+00'NB'
220+00'NB'
222+00'NB'
224+00'NB'
226+00'NB'
228+00'NB'
230+00'NB'
IH 39 NB
PC: 220+74.45'NB'
WINDSTREAM KDL (FIBER)
R/W
END CONSTRUCTION 1166-02-81
STA 226+09.29'TS'
R/W

5

5

VCL = 250.00
K = 141.97
VPC STA 215+50.00
VPC EL 1273.42
VPI STA 216+75.00
VPI EL 1272.920
VPT STA 218+00.00
VPT EL 1270.22
-2.16%
VCL = 165.00
K = 163.75
VPC STA 218+67.50
VPC EL 1268.76
VPI STA 219+50.00
VPI EL 1266.981
VPT STA 220+32.50
VPT EL 1266.03
-1.15%
VCL = 340.00
K = 543.09
VPC STA 221+30.00
VPC EL 1264.91
VPI STA 223+00.00
VPI EL 1262.950
VPT STA 224+70.00
VPT EL 1259.93
-1.78%
STA 225+63.95
EL 1258.26
-1.63%
STA 226+09.27
EL 1257.52
EXISTING ℄ PROFILE
EXISTING ℄ ELEVATION
FINISHED ℄ ELEVATION
FINISHED ℄ PROFILE

1290 1285 1280 1275 1270 1265 1260 1255 1250

270.54 1273.62 | 268.55 1273.13 | 267.00 1272.03 | 265.66 1270.22 | 264.96 1268.09 | 265.83 1266.44 | 265.20 1265.25 | 264.03 1264.06 | 262.65 1262.68 | 261.14 1261.13 | 259.47 1259.39 | 257.69 1257.67 | 255.95 | 254.17 | 252.15 | 250.01

215+00 216+00 217+00 218+00 219+00 220+00 221+00 222+00 223+00 224+00 225+00 226+00 227+00 228+00 229+00 230+00

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN AND PROFILE: SOUTHBOUND TEMPORARY BYPASS	SHEET 114	E

N

WINDSTREAM KDL (FIBER)

WINDSTREAM KDL (FIBER)

STA 49+50 - STA 50+50
SALVAGE AND RE-INSTALLING GUARDRAIL
(BOTH SIDES OF MEDIAN)
2 STAGES (1,5)

MOSINEE MUNICIPAL (WATER)

MOSINEE MUNICIPAL (SEWER)

WPS (GAS)

STH 153 MEDIAN ASPHALTIC SURFACE SAFETY ISLAND REQUIRED BETWEEN B-37-148 AND B-37-149

CHARTER

MOSINEE TELEPHONE COMPANY

LANDSCAPE WORK TO OCCUR ON STH 153
FROM STA 41+75 TO STA 74+50 MEDIAN AND
AT INTERCHANGE TERMINALS

LANDMARK REFERENCE MONUMENTS (4)

TRAFFIC SIGNAL CONDUIT

WPS (ELECTRIC)

LANDSCAPE WORK TO OCCUR ON STH 153
FROM STA 41+75 TO STA 74+50 MEDIAN AND
AT INTERCHANGE TERMINALS

R/W

218+00'SB'

218+00'NB'

216+00'SB'

216+00'NB'

214+00'SB'

214+00'NB'

212+00'SB'

212+00'NB'

210+00'SB'

210+00'NB'

24'

24'

IH 39 SB

IH 39 NB

B-37-148

B-37-149

PI: 45+30.76

PI: 46+29.04

PI: 50+37.12

PI: 54+32.27

44+00

46+00

48+00

50+00

52+00

54+00

56+00

58

STH 153

STH 153

BM 1

FLAG

SS

CONCRETE PAVEMENT

BENCH MARKS

NO.	STATION, OFFSET	DESCRIPTION	ELEV.
1	213+79.24'NB',28.26' RT	3/4" IRON ROD	1256.10

5

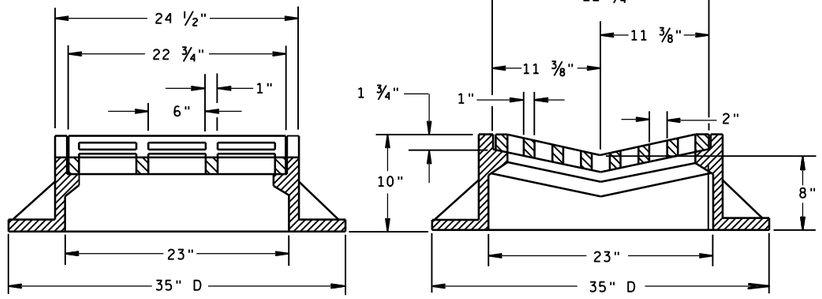
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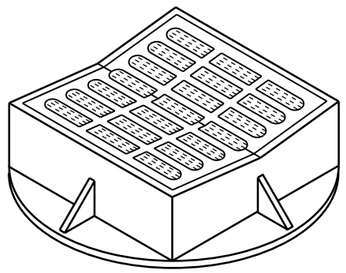
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	PLAN: STH 153	SHEET 115	E

Standard Detail Drawing List

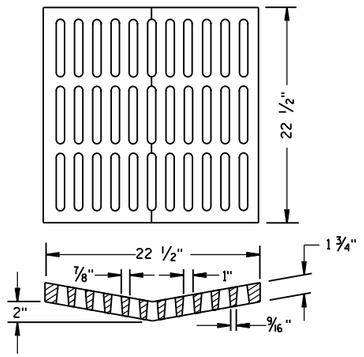
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08C09-01	INLETS MEDIAN 3 AND 4 GRATE
08D03-06	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
14A01-03	TREE PRESERVATION DETAILS
14A02-01	TREE PLANTING DETAIL
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"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
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
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)
15B03-13A	FENCE CHAIN LINK
15B03-13B	FENCE CHAIN LINK
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15D12-03	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D21-02	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE
15D31-02	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

6



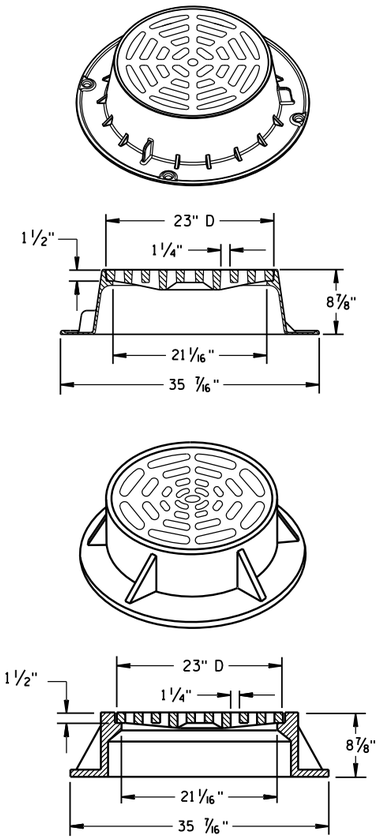


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

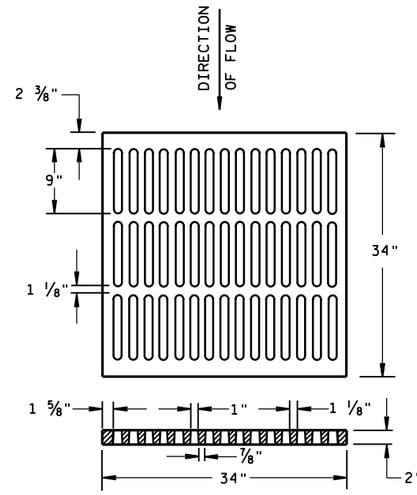
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

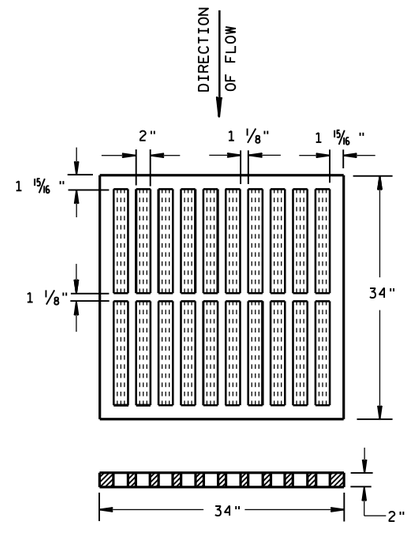
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



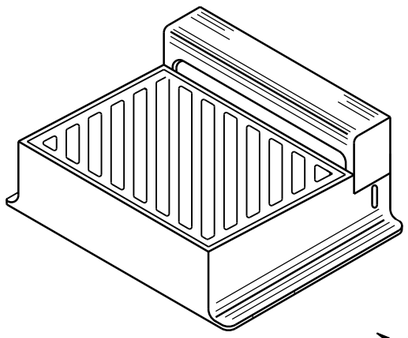
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

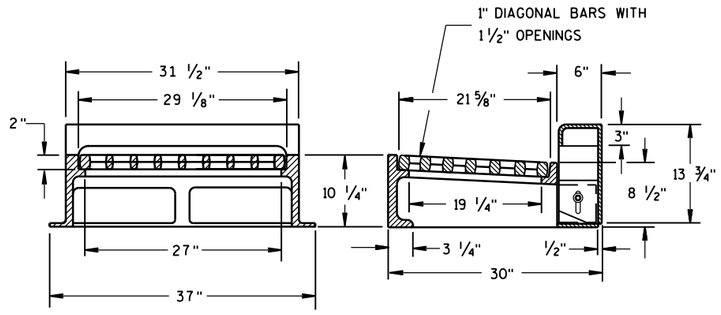


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

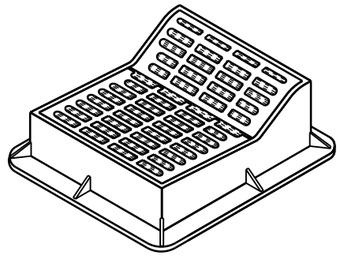
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

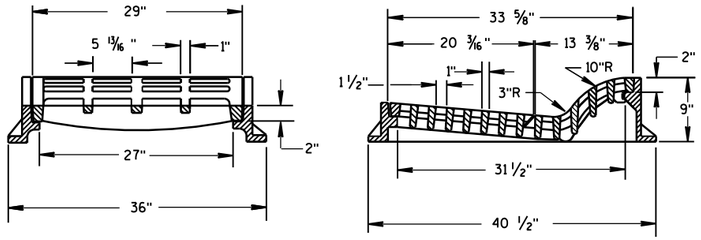
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

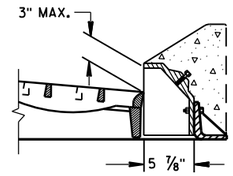
S.D.D. 8 A 5-19b





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

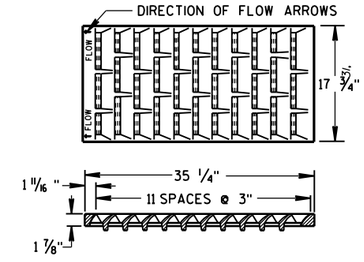
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

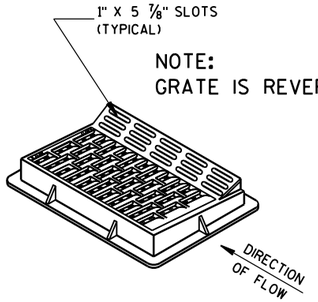
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

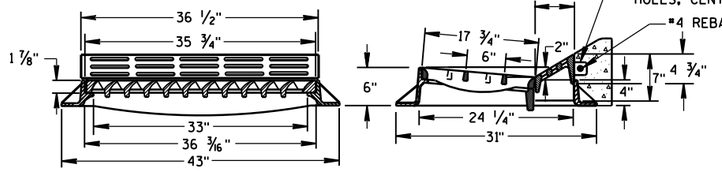
GENERAL NOTES

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

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



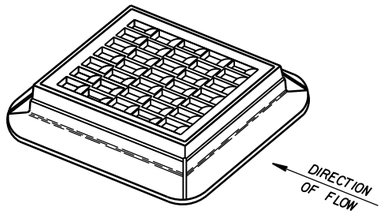


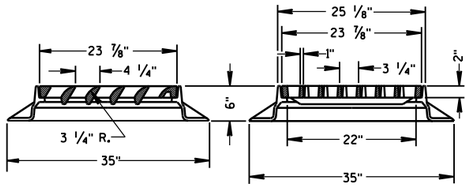


TYPE "HM"

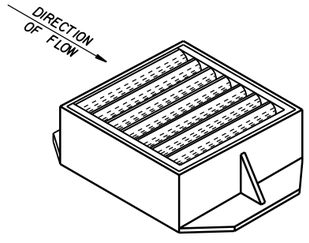
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

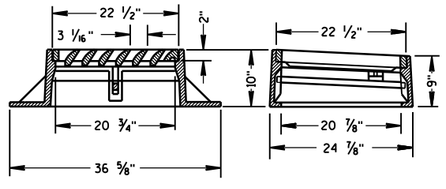
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



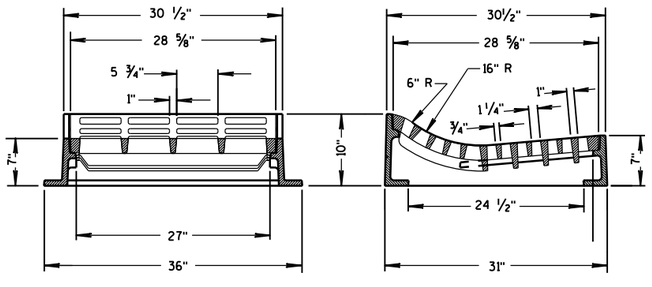


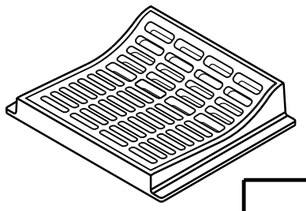
TYPE "S"





TYPE "V"





TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

INLET COVERS
TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

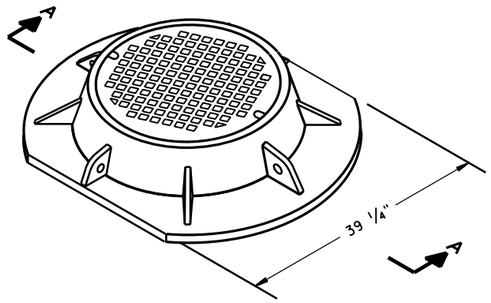
APPROVED
11/27/2013
DATE

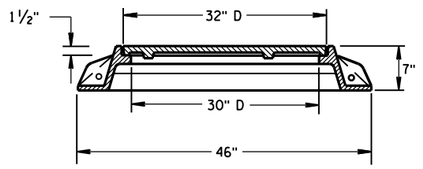
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

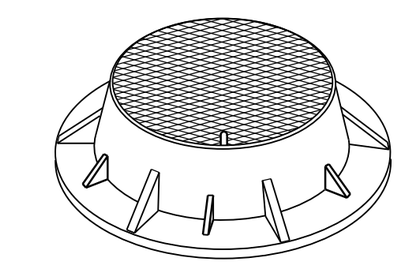
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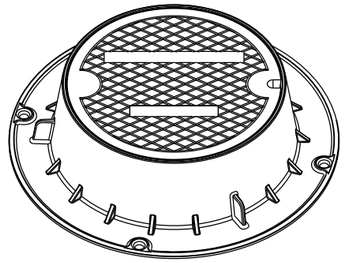
S.D.D. 8 A 5-19c

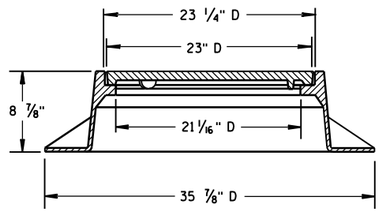


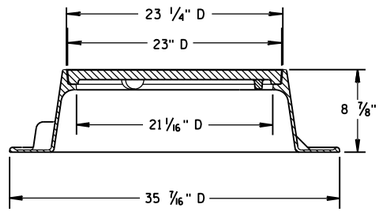


SECTION A-A
TYPE "K"









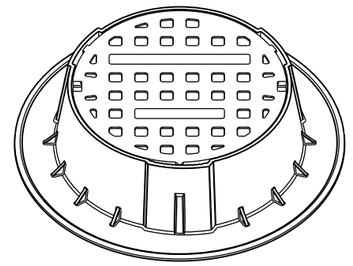
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

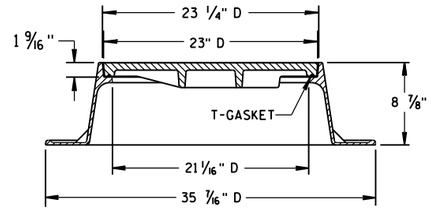
GENERAL NOTES

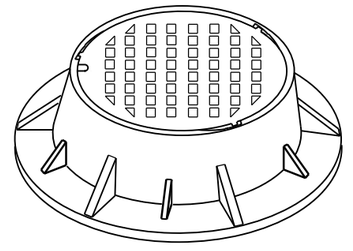
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

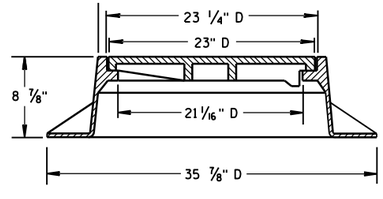
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

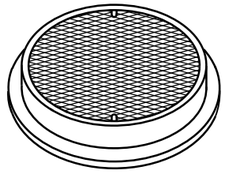


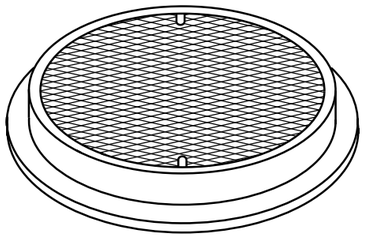


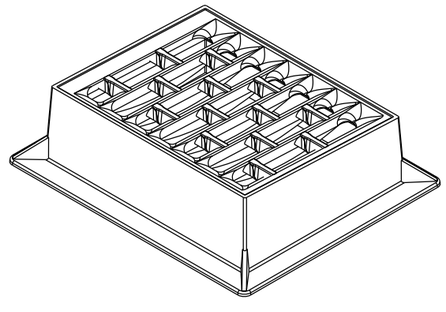


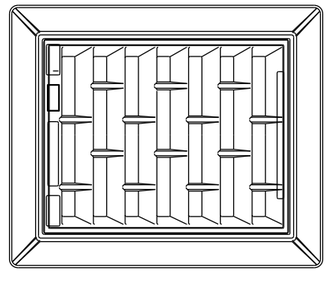


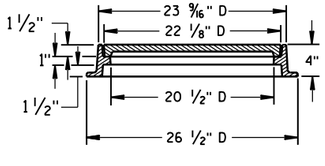
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



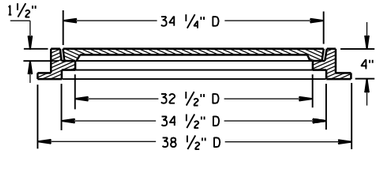




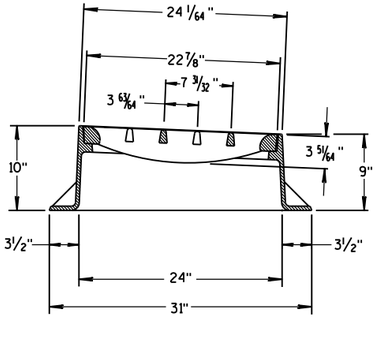


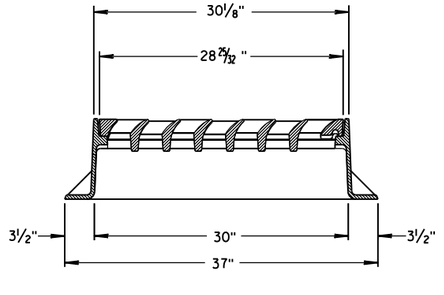


TYPE "L"



TYPE "M"





INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

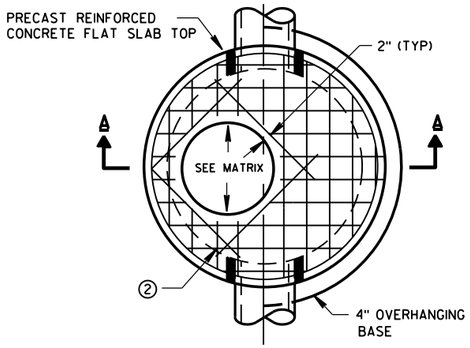
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

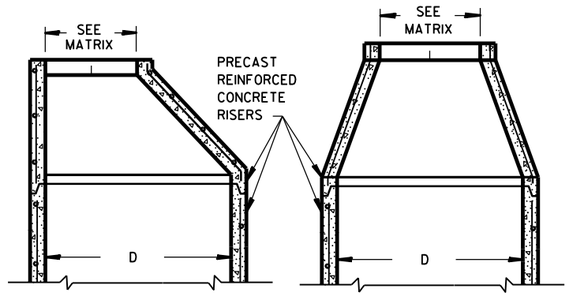
S.D.D. 8 A 5-19d

6

S.D.D. 8 A 5-19d

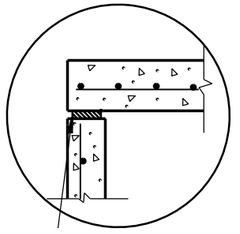


PLAN VIEW CIRCULAR OPENING

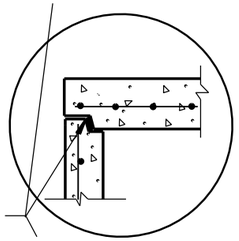


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

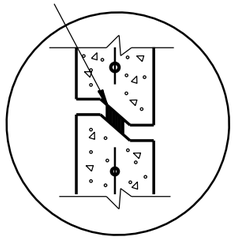


TOP WITH PLAIN END JOINT



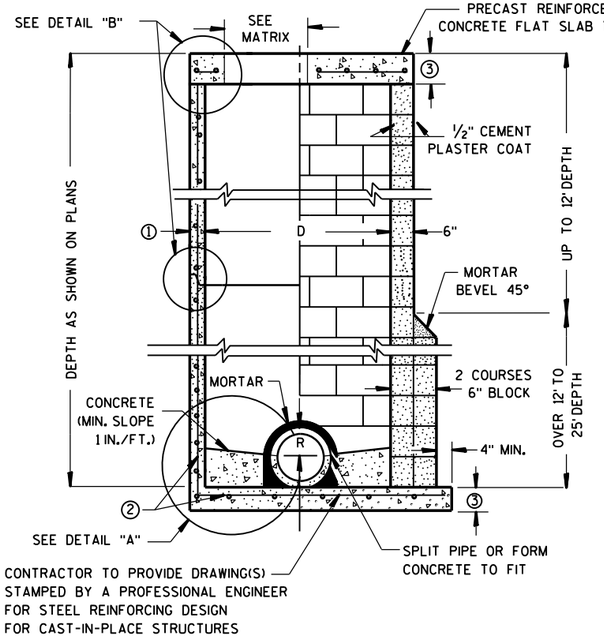
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



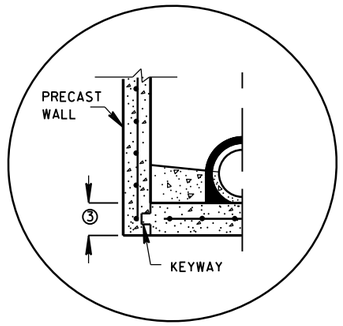
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

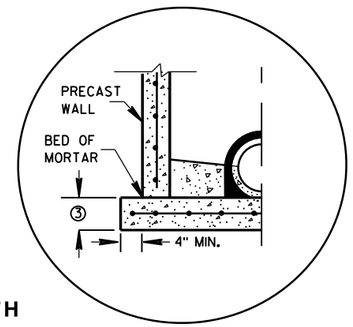


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

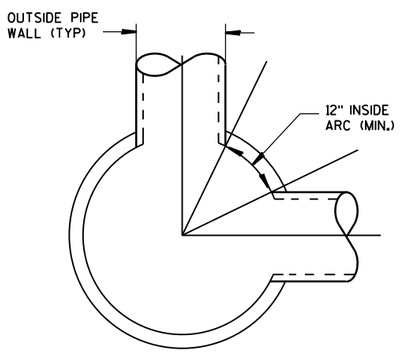


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

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

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

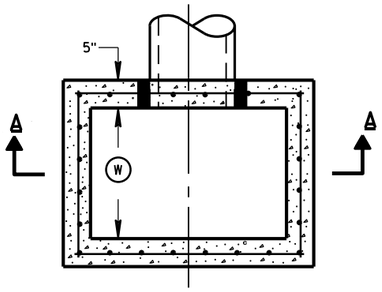
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

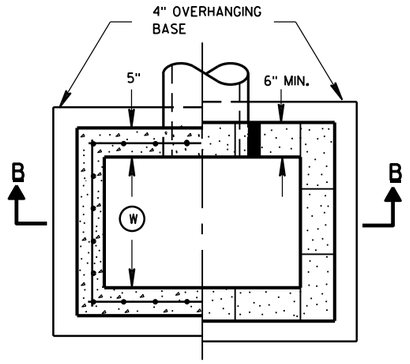
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

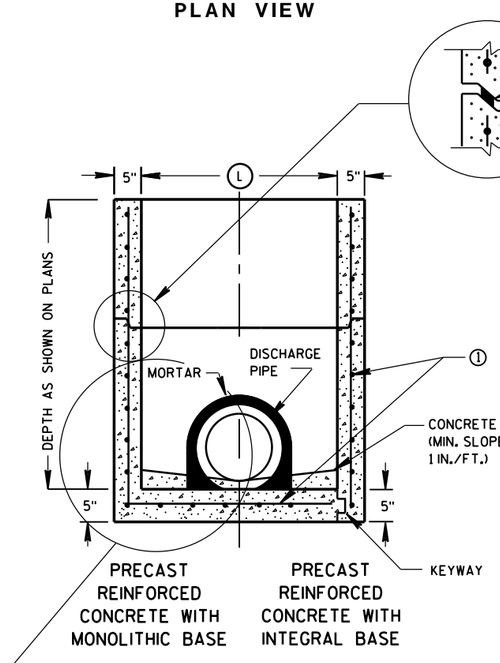
6
S.D.D. 8 B 9-1



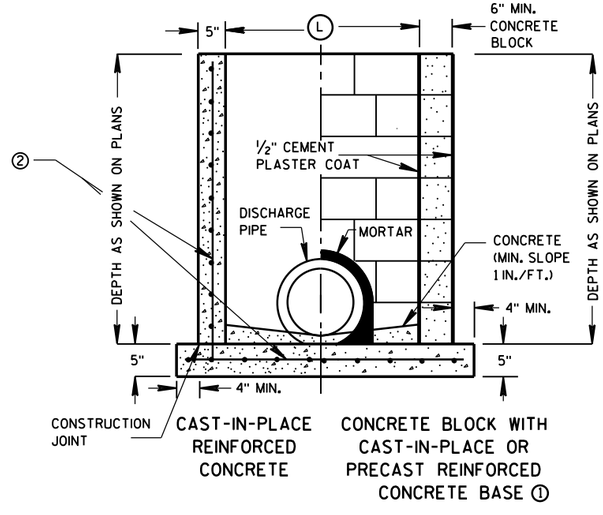
PLAN VIEW



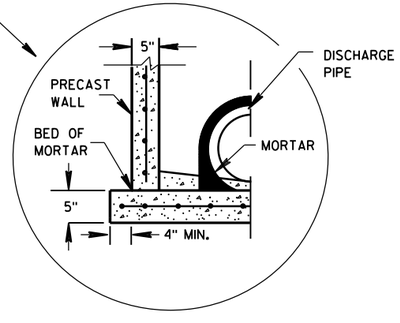
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

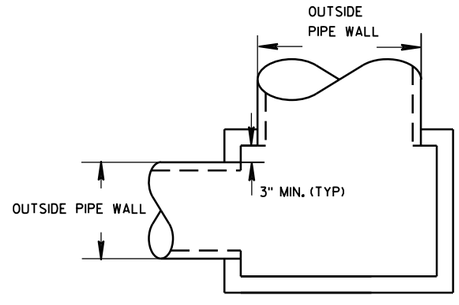
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

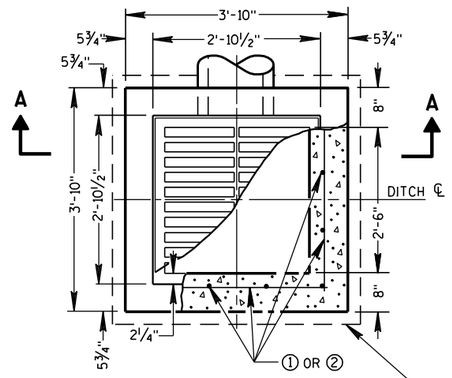
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

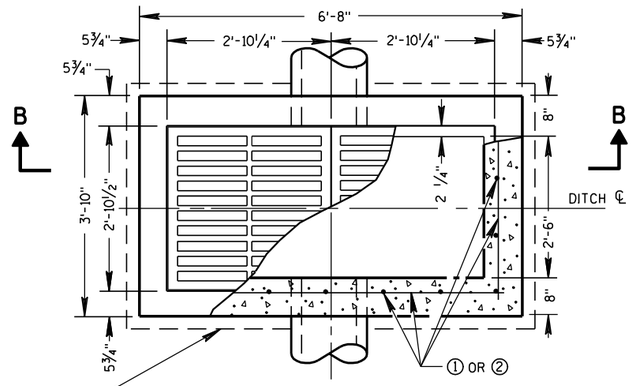
/S/ Jerry H. Zogg
ROADWAY STANDARDS DE ENGINEER

6

S.D.D. 8 C 7-1

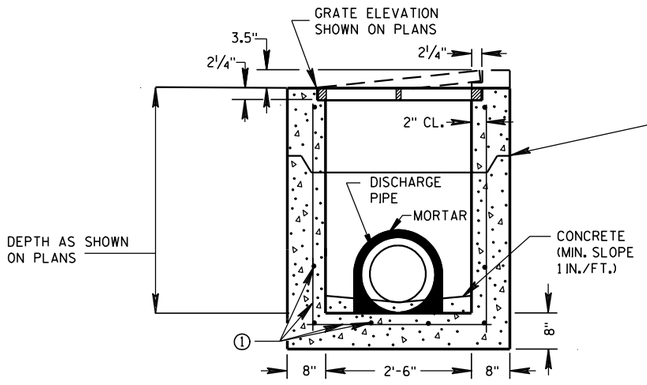


PLAN VIEW

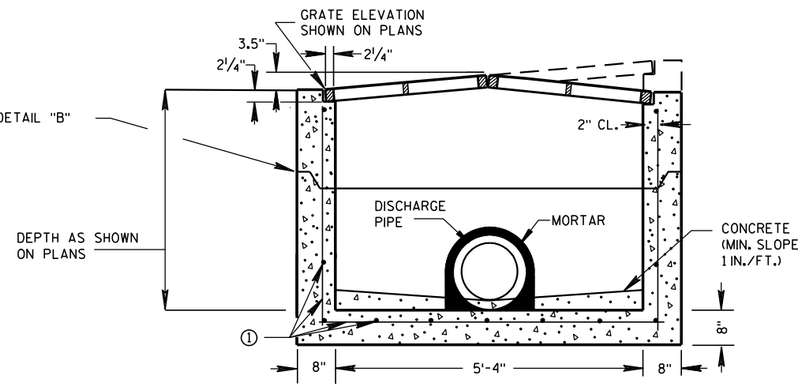


PLAN VIEW

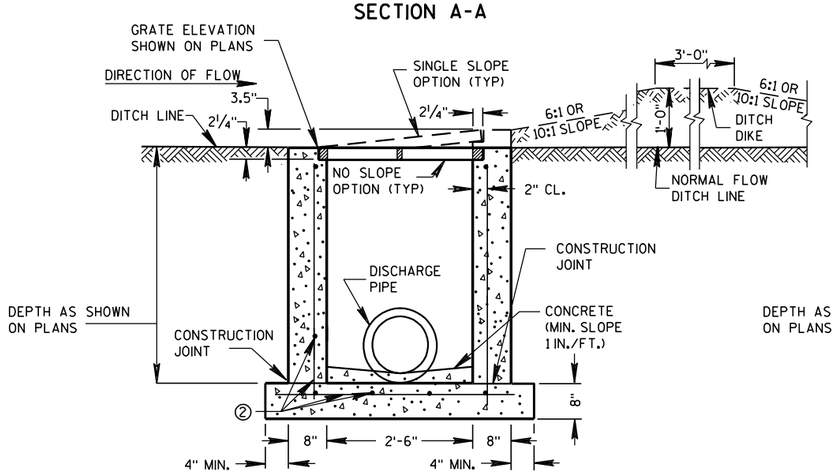
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



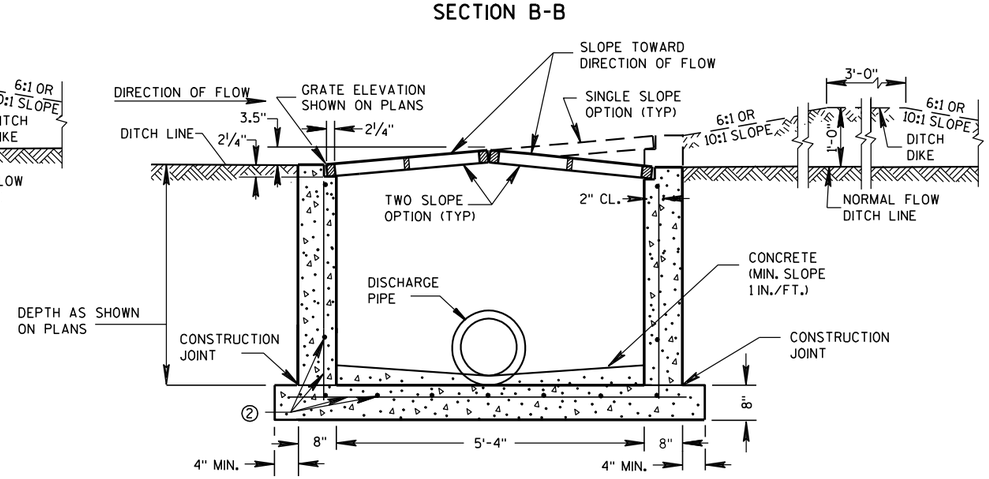
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

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.

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DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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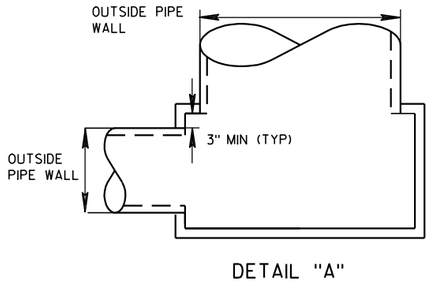
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

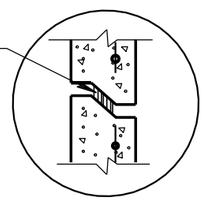
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

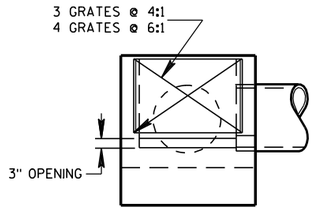
APPROVED

6/5/2012
DATE

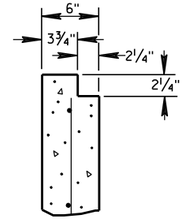
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 C 8-1



SECTION B-B



SECTION C-C

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.

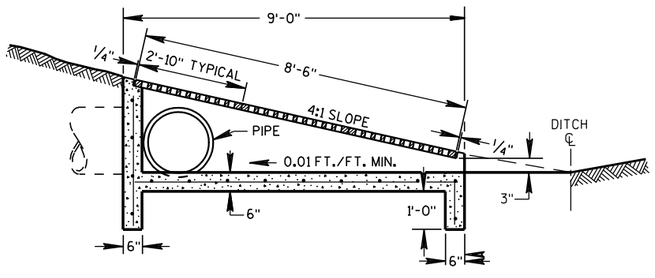
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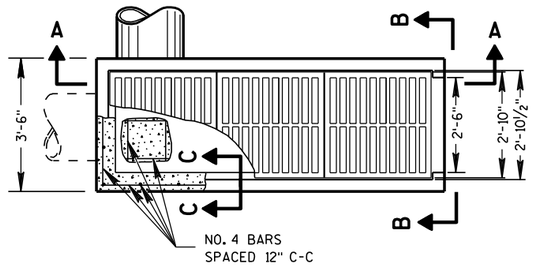
ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 3G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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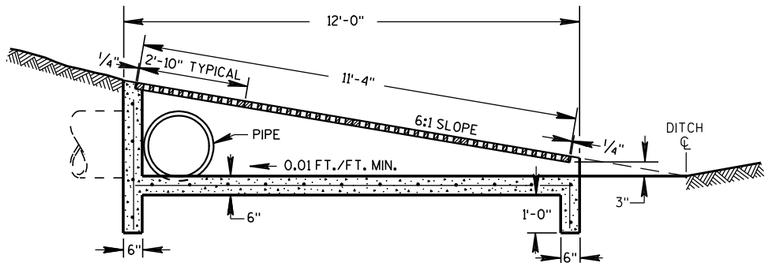


SECTION A-A

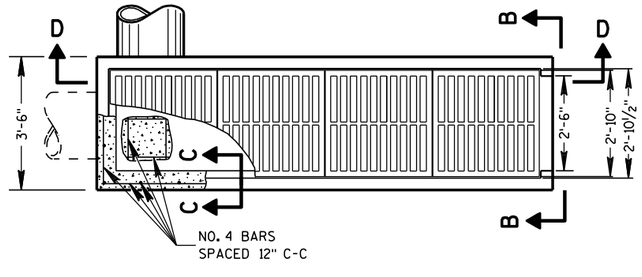


PLAN VIEW

INLETS MEDIAN 3 GRATE



SECTION D-D



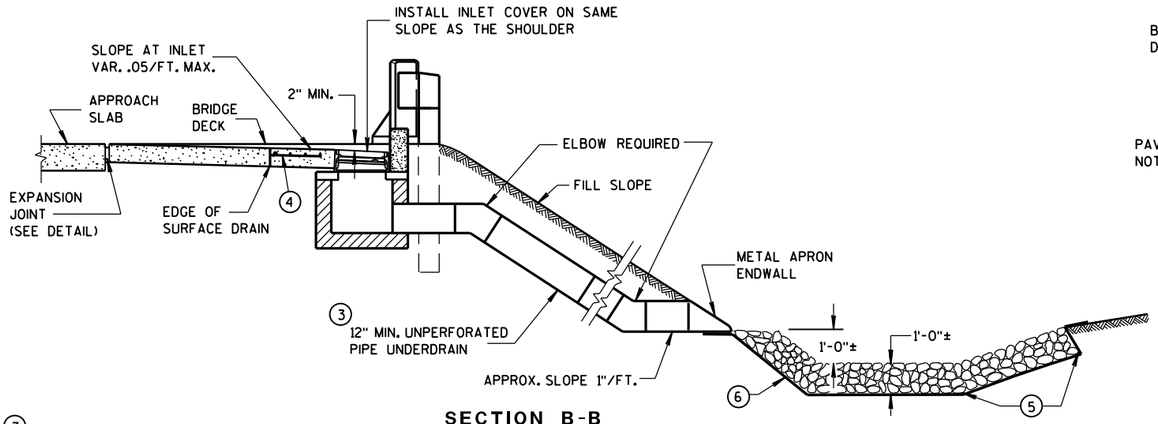
PLAN VIEW

INLETS MEDIAN 4 GRATE

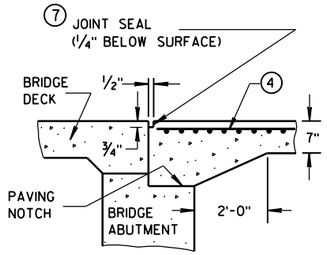
INLETS MEDIAN 3 AND 4 GRATE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/5/2012 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEV ENGINEER

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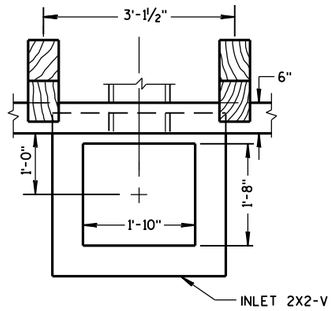
S.D.D. 8 C 9-1



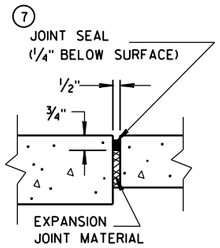
SECTION B-B



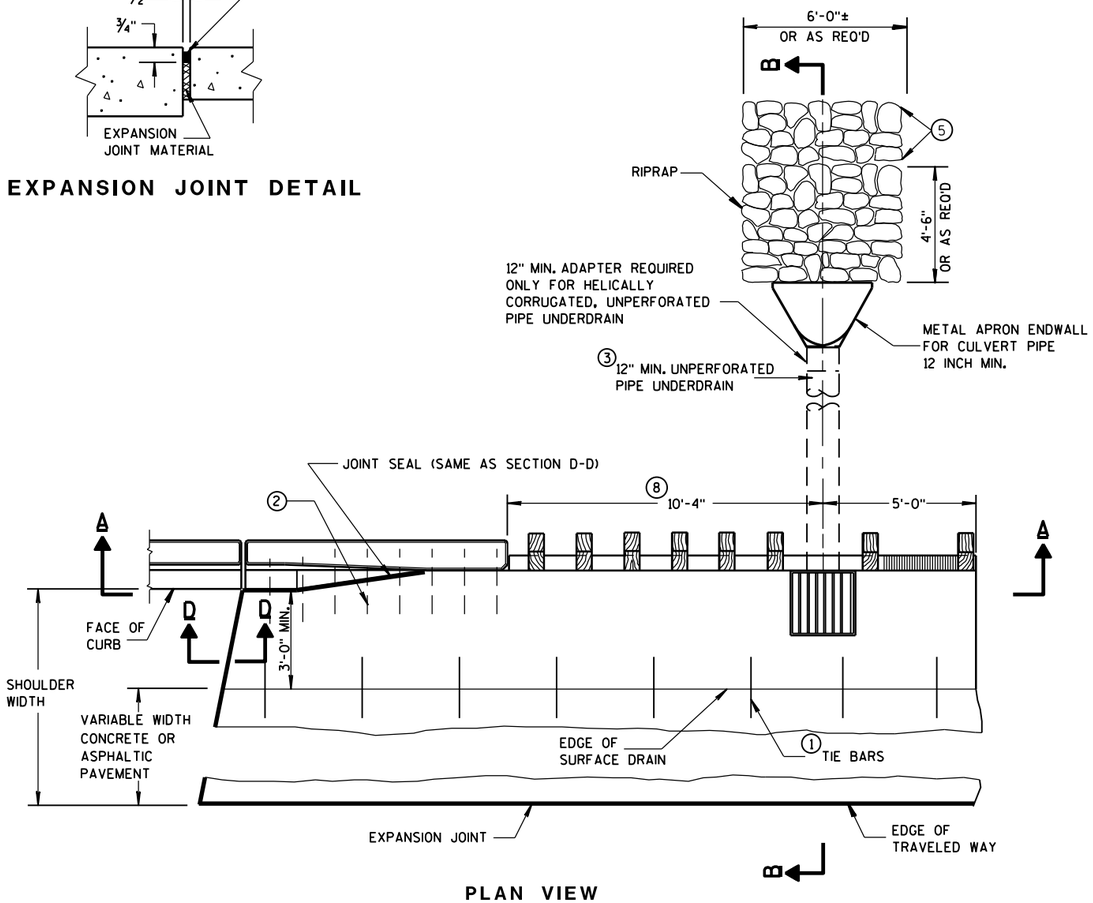
SECTION D-D



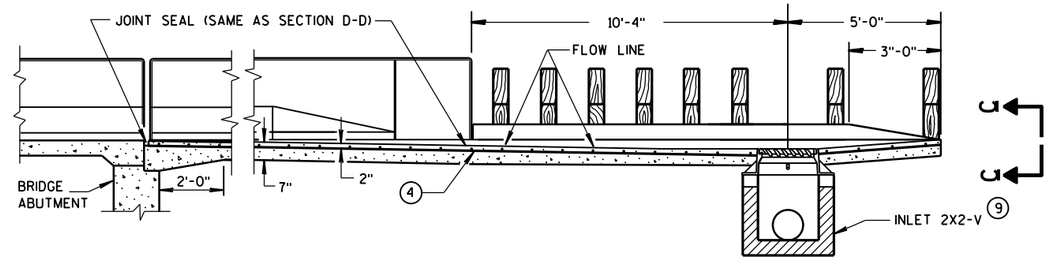
PLAN VIEW



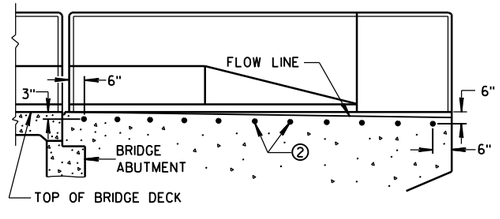
EXPANSION JOINT DETAIL



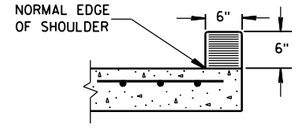
PLAN VIEW



SECTION A-A



LOCATION OF TIE BARS IN WINGWALL



SECTION C-C

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.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

(1) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

(2) NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) THE PIPE UNDERDRAIN MAY BE ANY ONE OF THE SIX MATERIALS LISTED IN THE STANDARD SPECIFICATIONS SECTION 612.2 EXCEPT DRAIN TILE.

(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

(5) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(6) GEOTEXTILE FABRIC, TYPE 'R'

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".

(9) SEE CURRENT STANDARD DETAIL DRAWINGS 8A5 AND 8C7 FOR DETAILS.

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

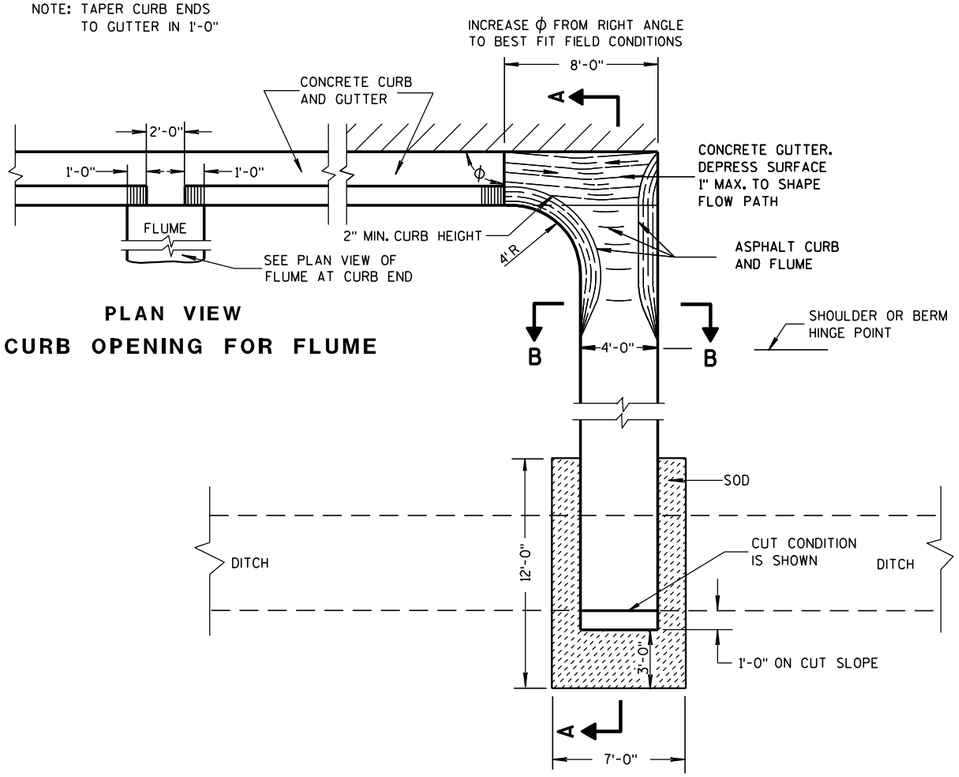
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S.D.D. 8 D 3-6

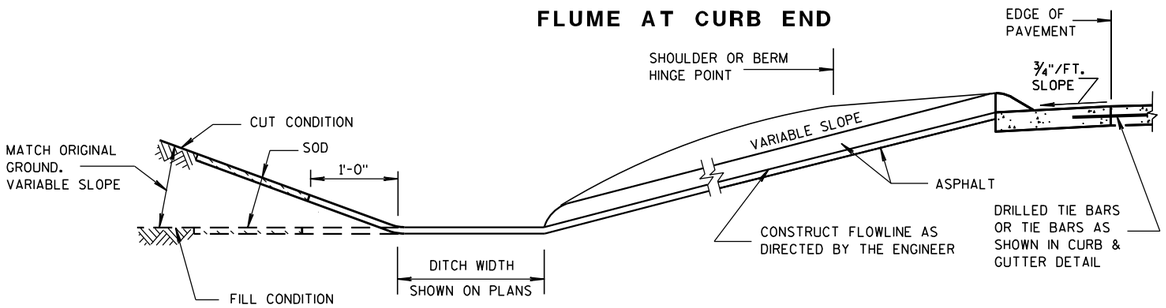
S.D.D. 8 D 3-6

ASPHALTIC FLUME

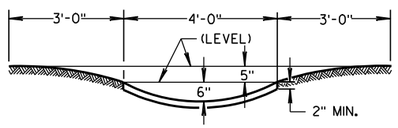


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

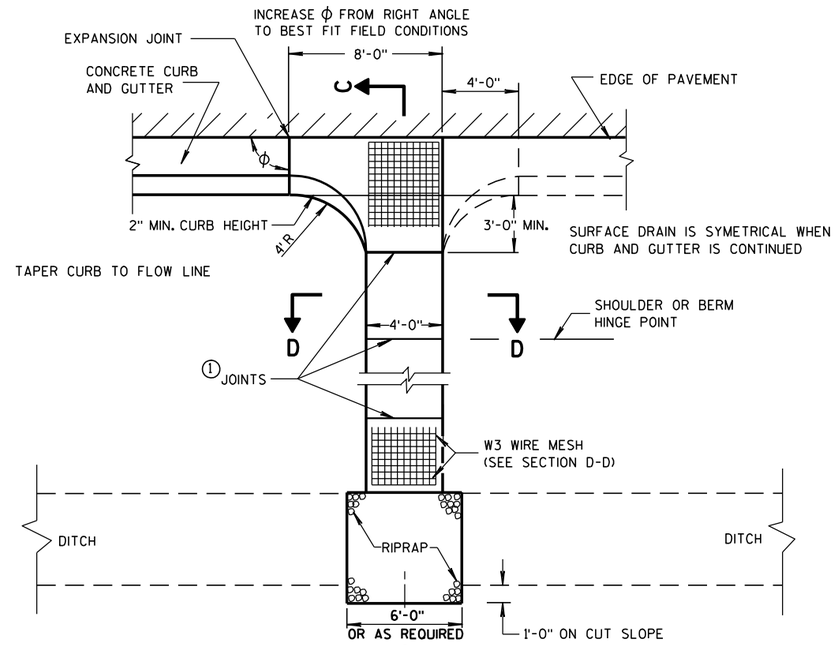
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

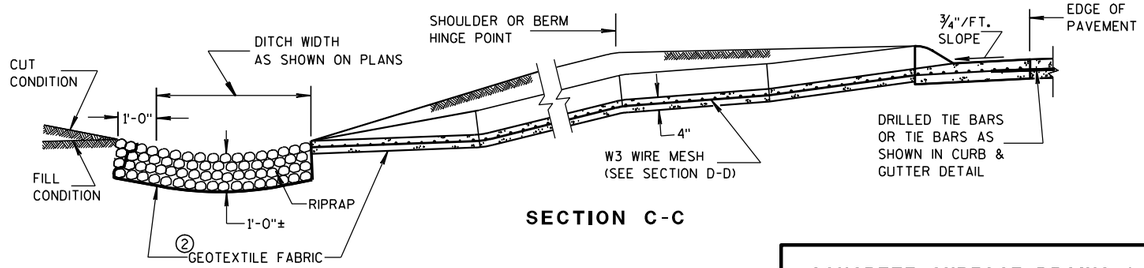
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

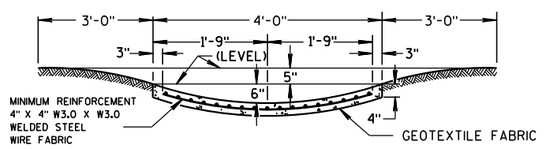
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-4-08 DATE — /S/ Jerry H. ... ROADWAY STANDARDS ENGINEER — MENT

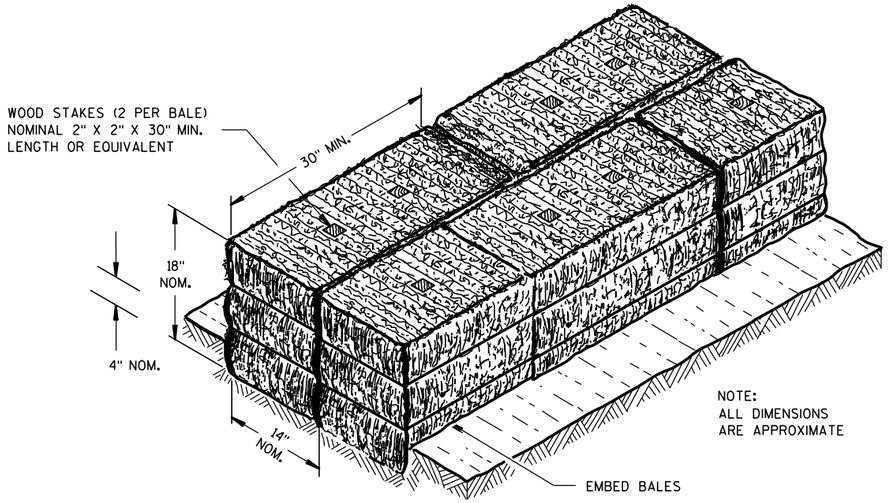
FHWA

6

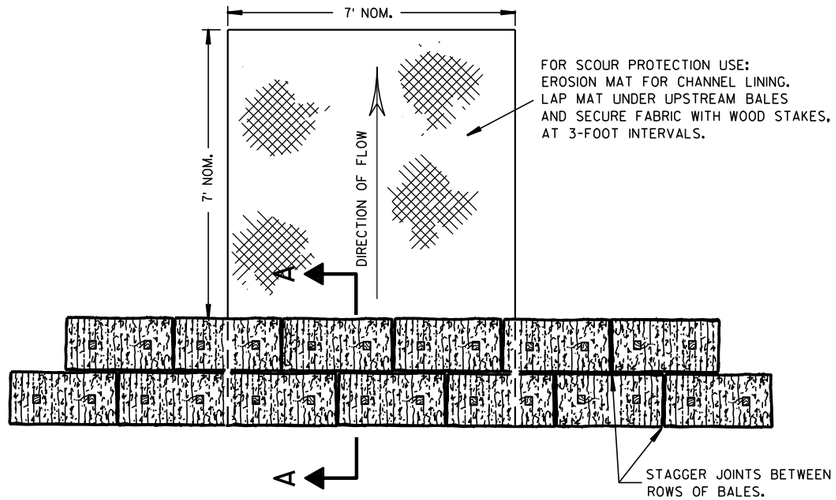
S.D.D. 8 D 4-5

6

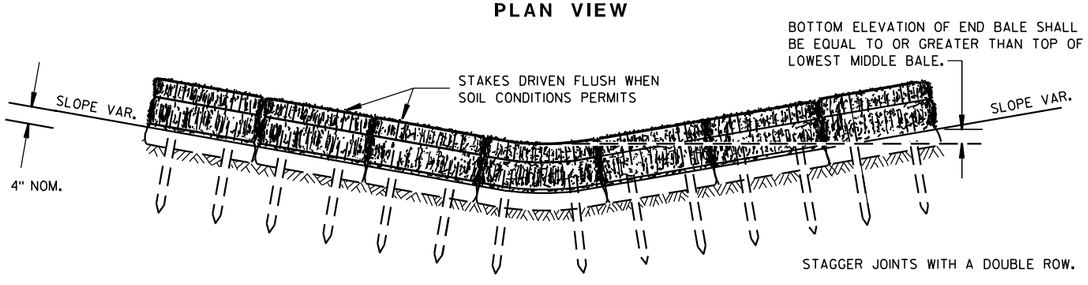
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



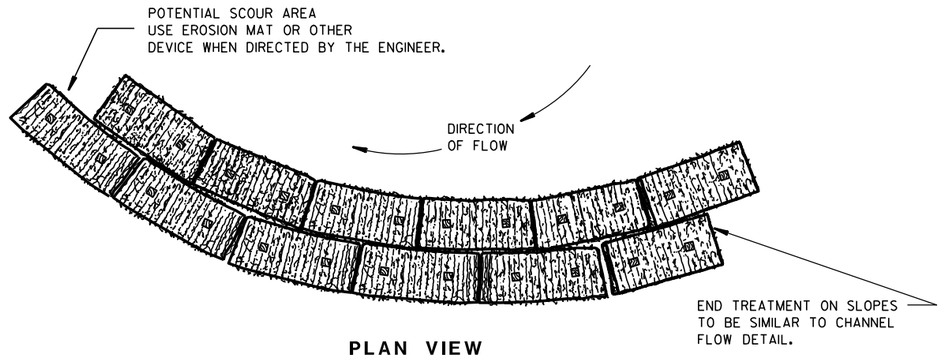
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

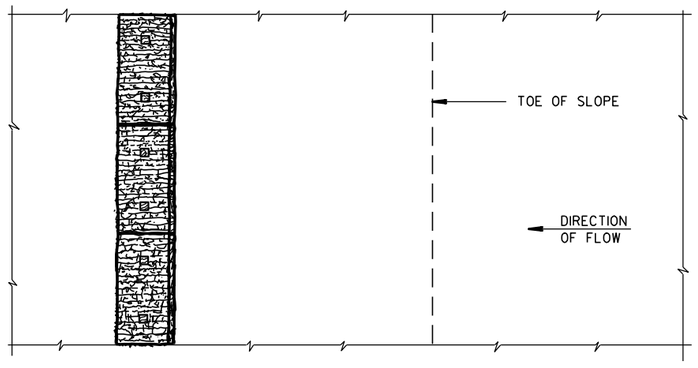
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

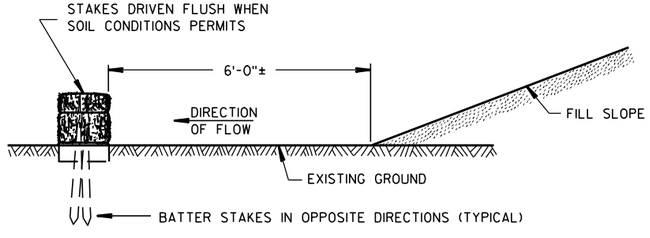


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

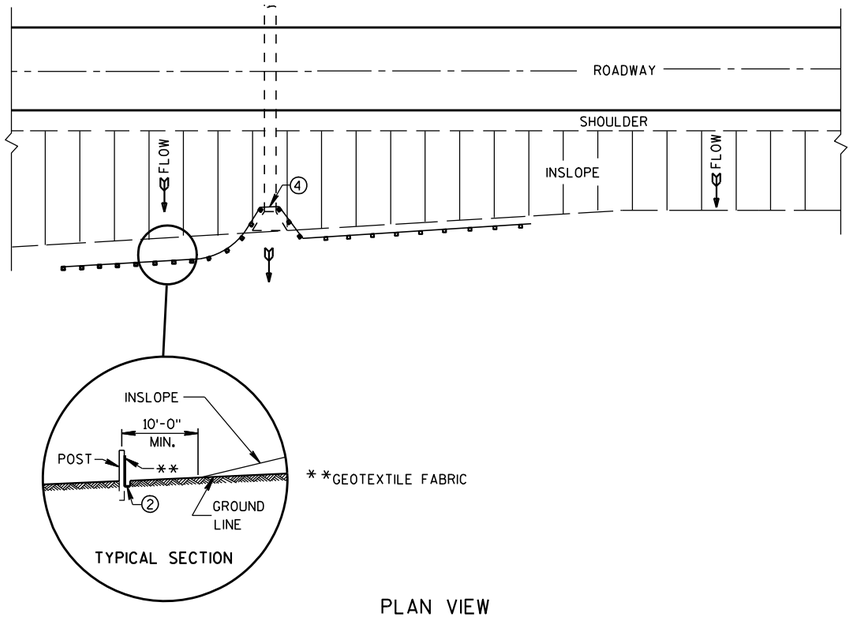
APPROVED
6/04/02 DATE
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

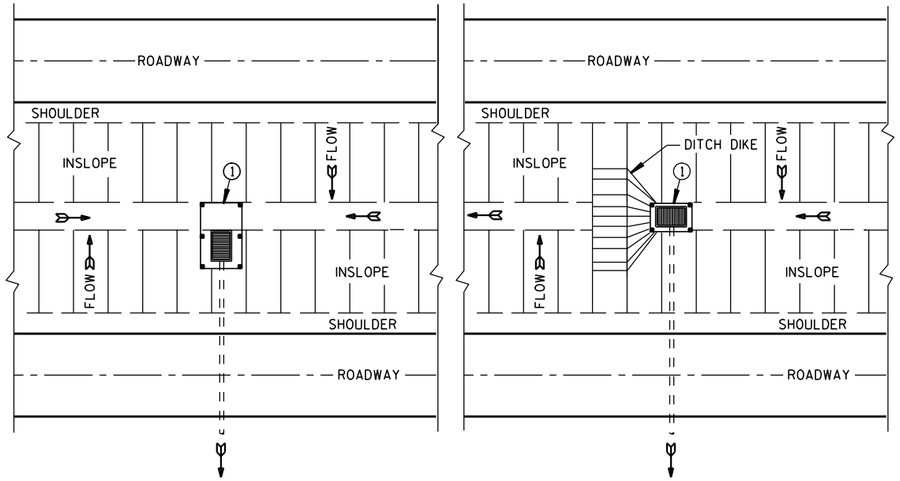
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



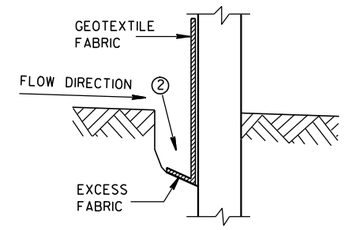
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

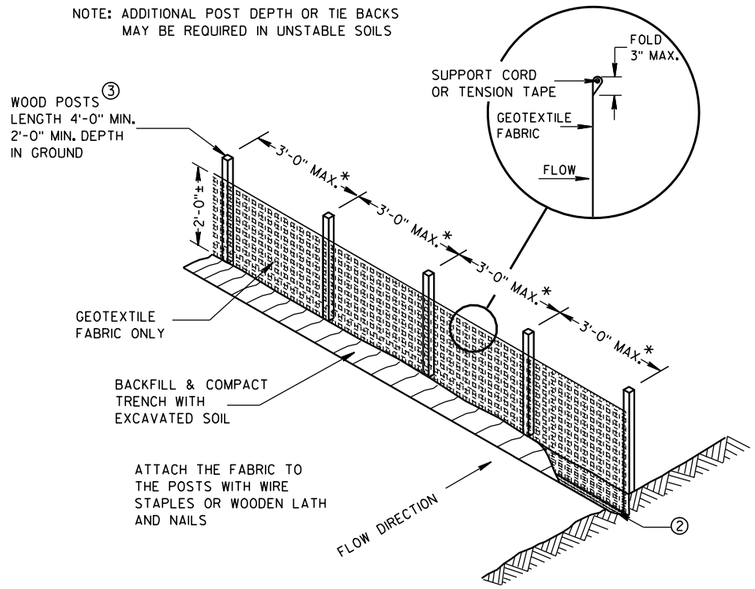
GENERAL NOTES

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

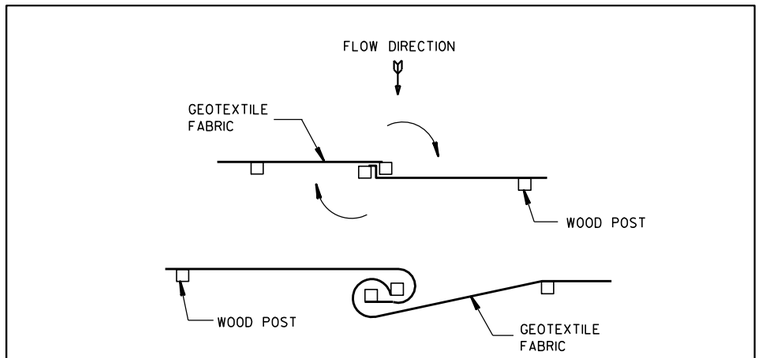
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



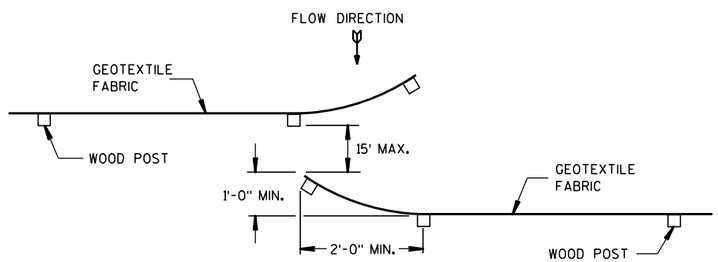
TRENCH DETAIL



SILT FENCE

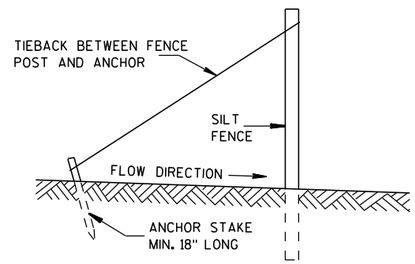


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

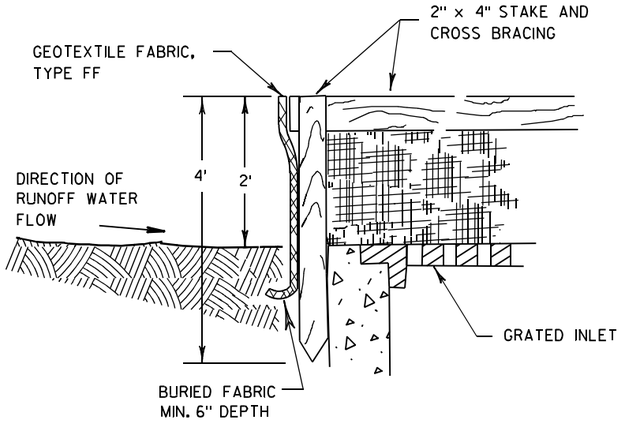
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

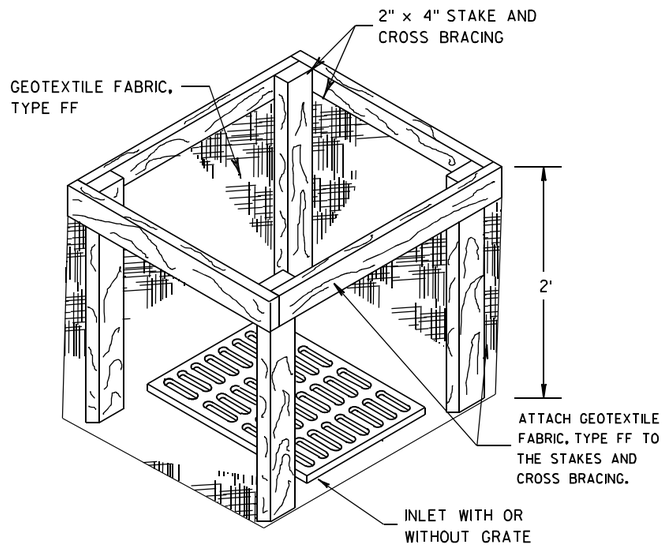
6

S.D.D. 8 E 9-6

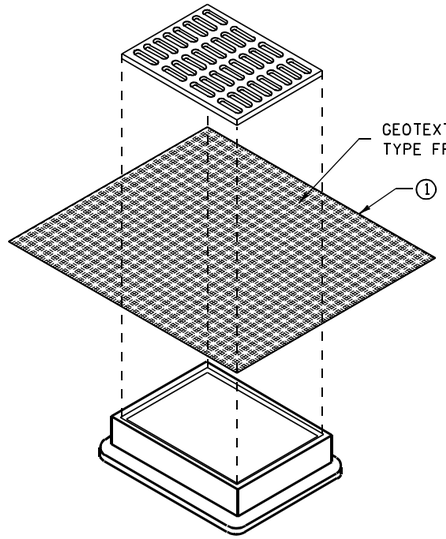
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S.D.D. 8 E 9-6



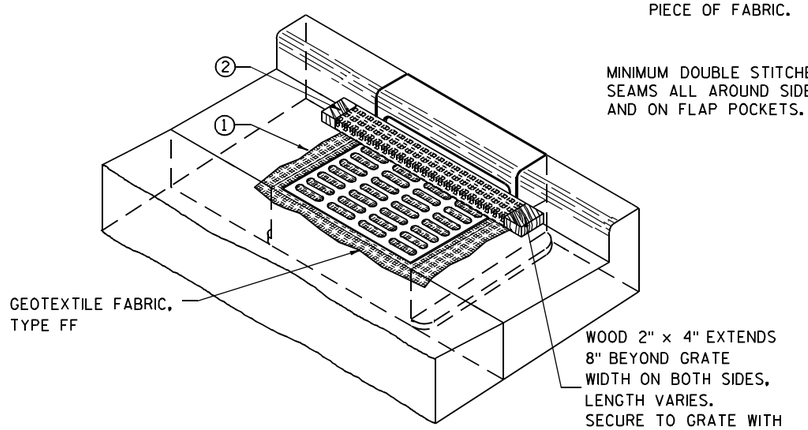


INLET PROTECTION, TYPE A

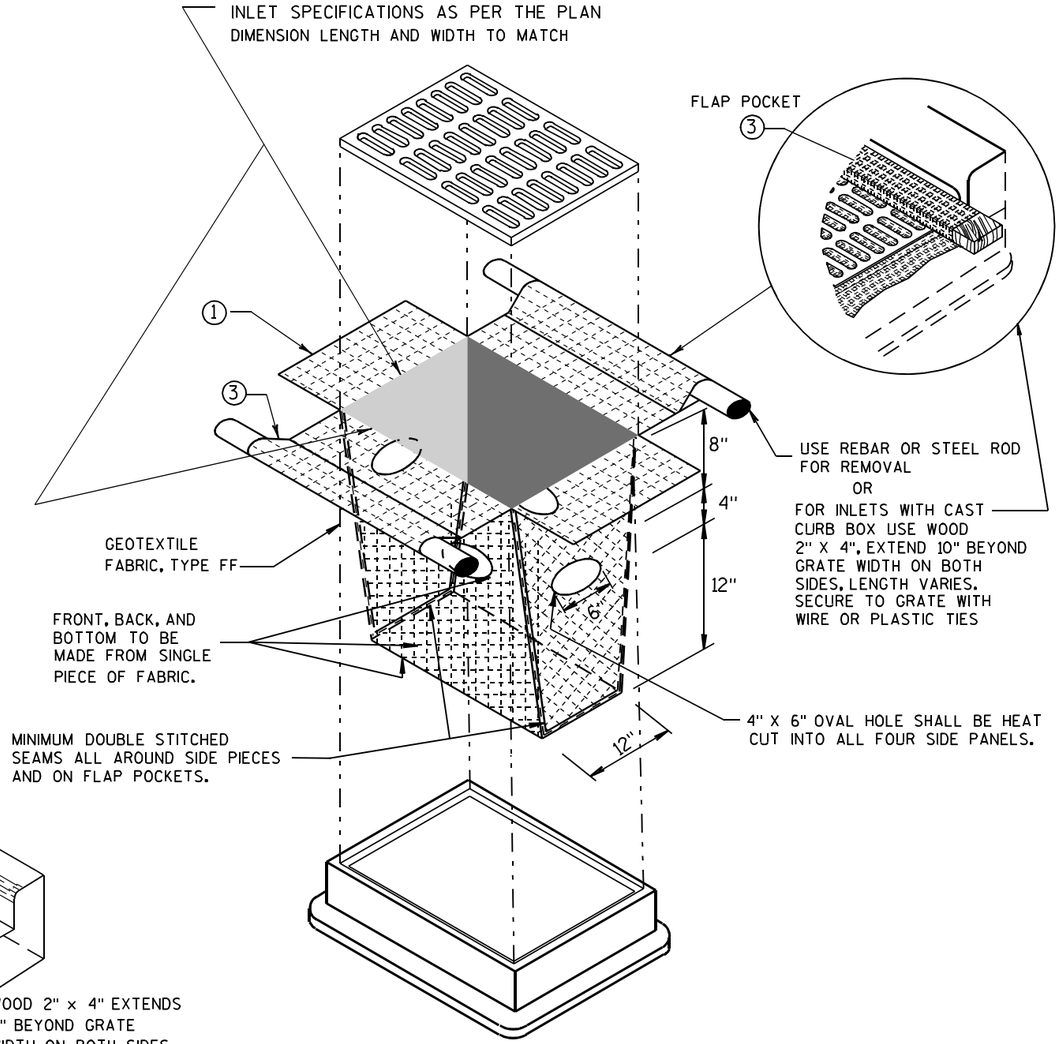


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

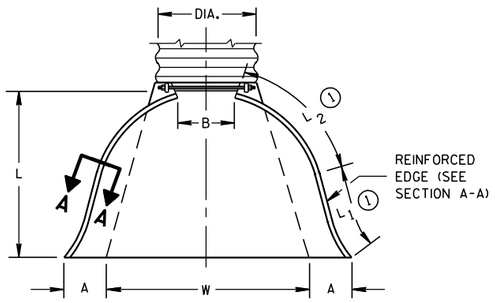
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

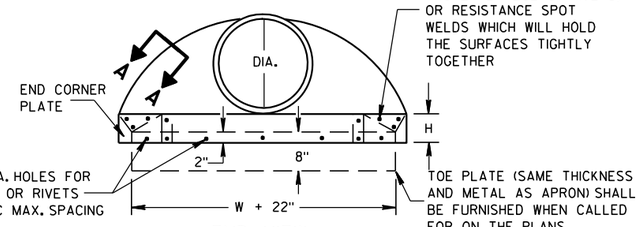
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

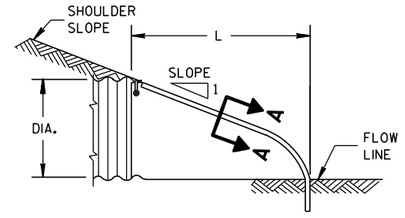
* MINIMUM
** MAXIMUM



PLAN VIEW

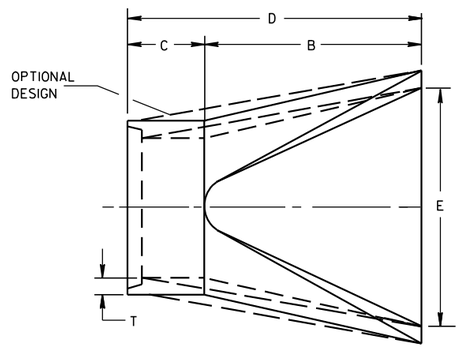


END VIEW

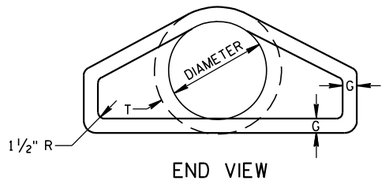


SIDE ELEVATION

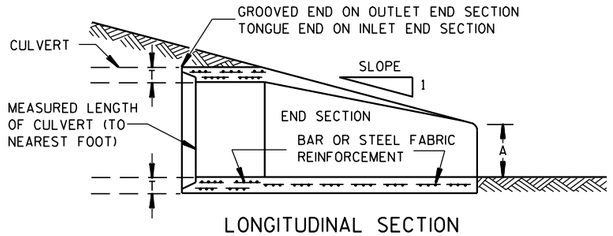
METAL ENDWALLS



PLAN

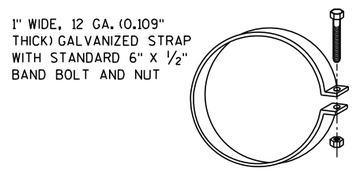


END VIEW



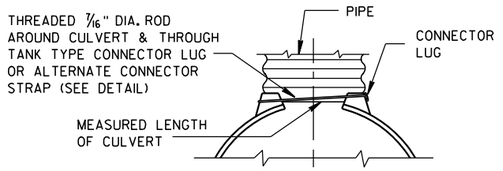
LONGITUDINAL SECTION

CONCRETE ENDWALLS

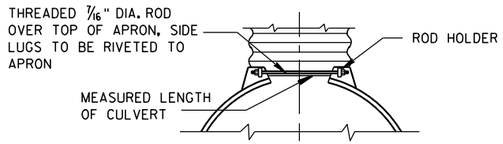


ALTERNATE FOR TYPE 1 CONNECTION

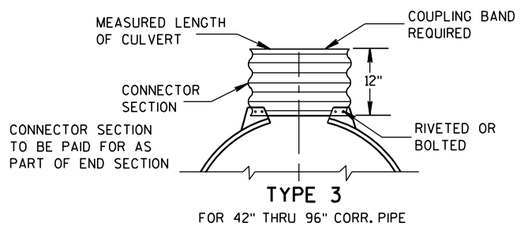
END SECTION CONNECTOR STRAP



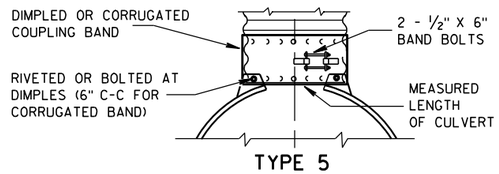
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

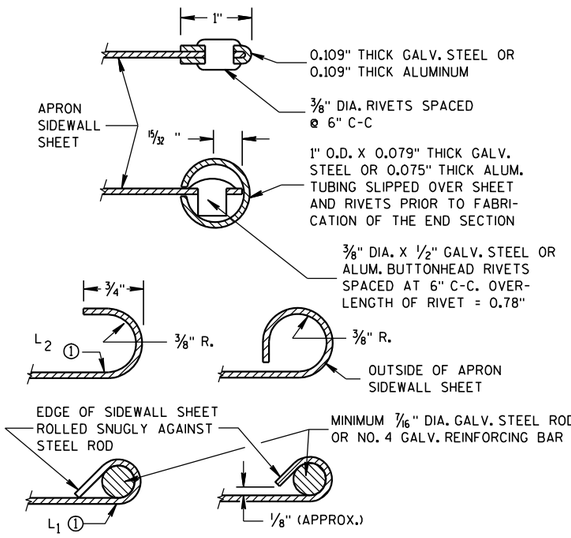
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

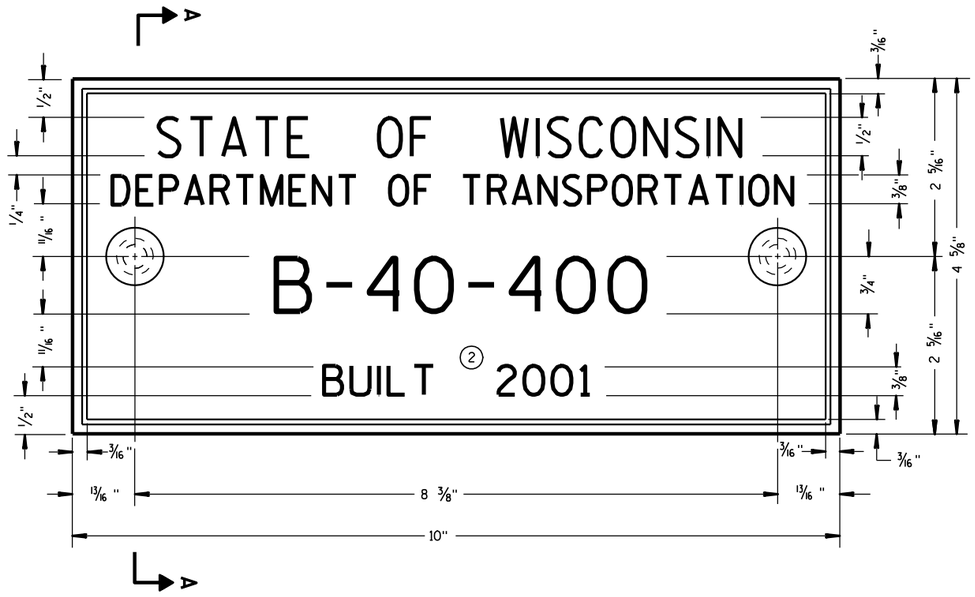
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

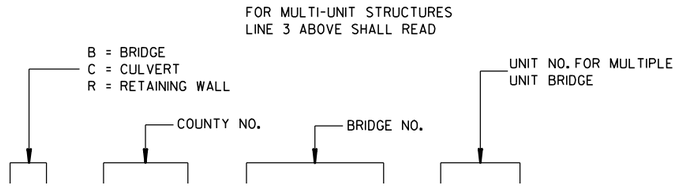
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

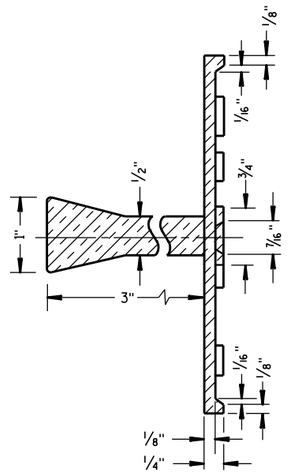
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

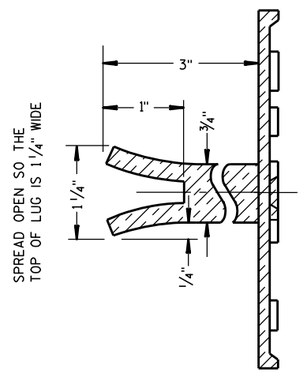
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

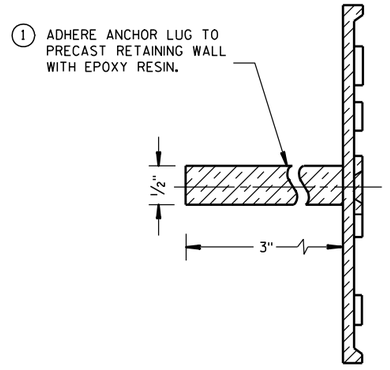
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP 130 ENGINEER

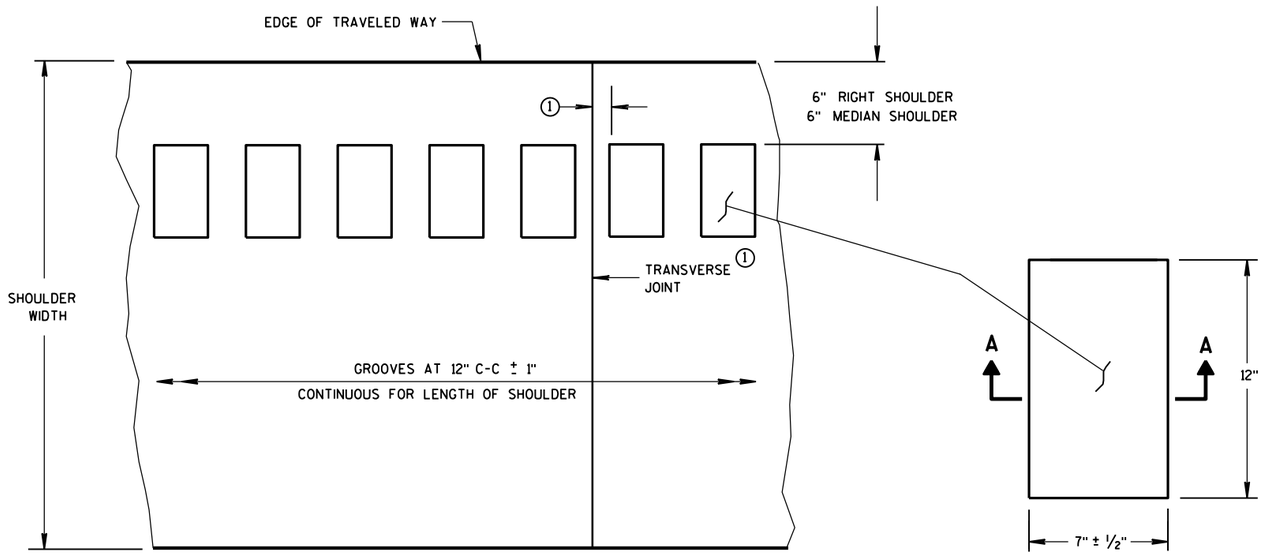
FHWA

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S.D.D. 12 A 3-10

6

S.D.D. 12 A 3-10



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

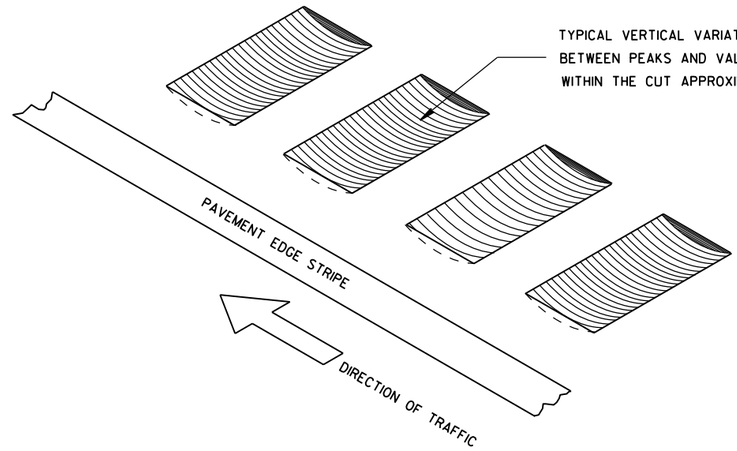
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

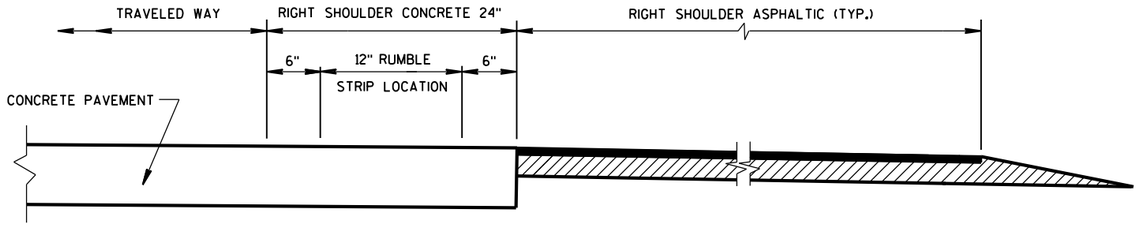
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

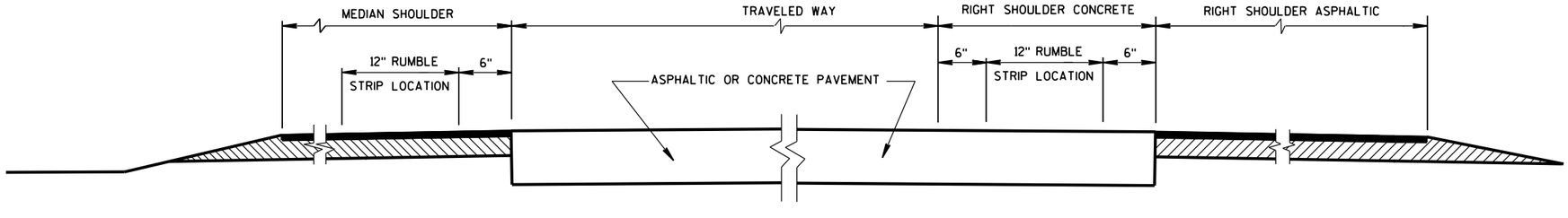
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



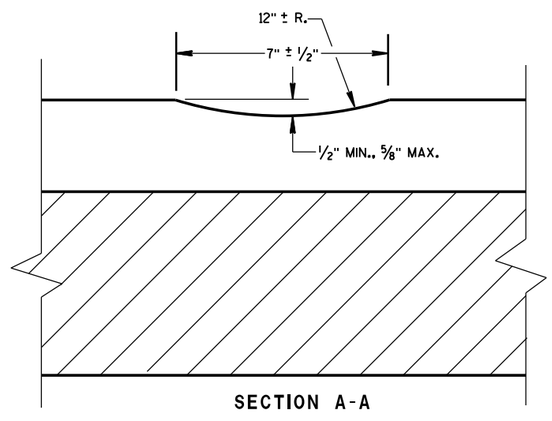
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

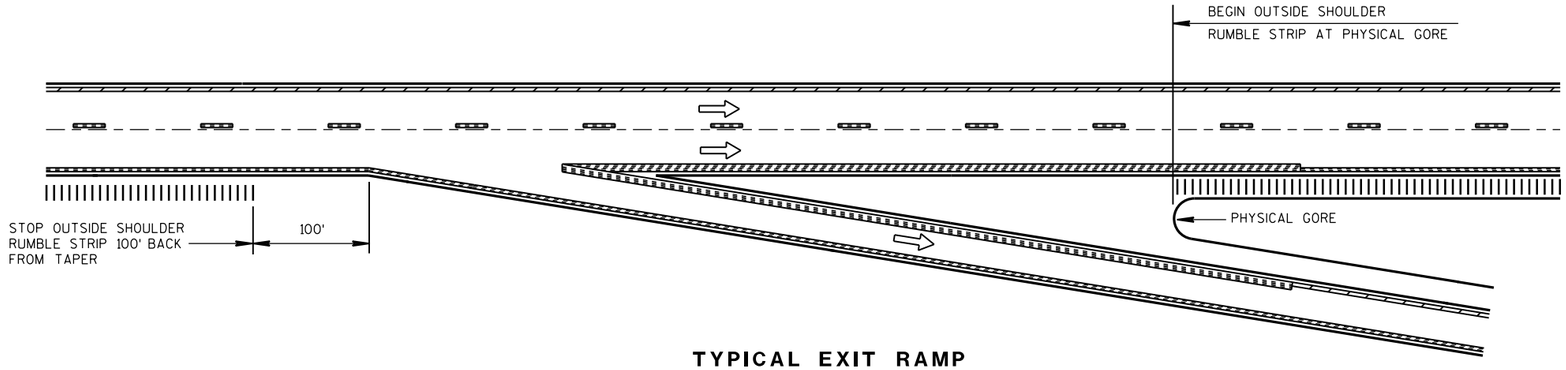
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 A 5-5a

6

S.D.D. 13 A 5-5a



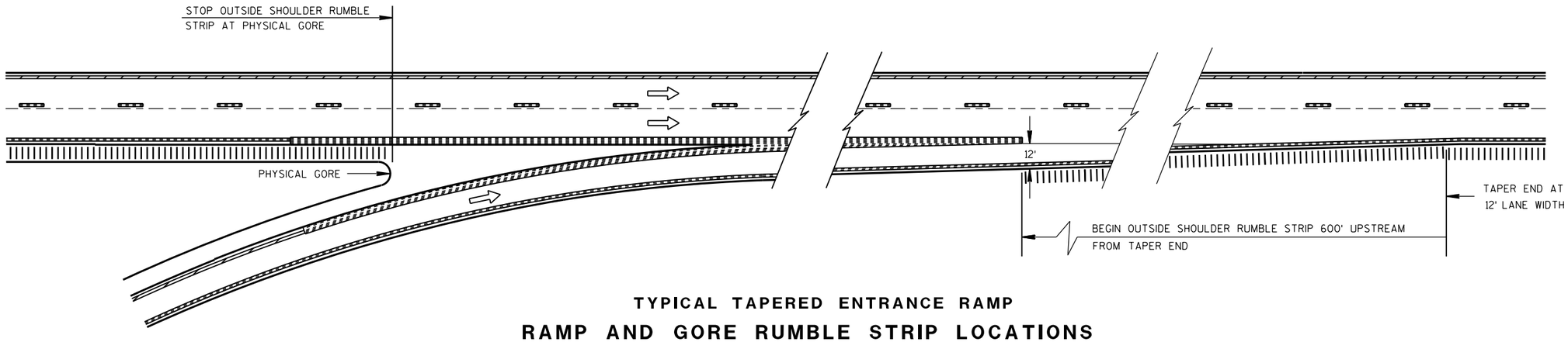
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

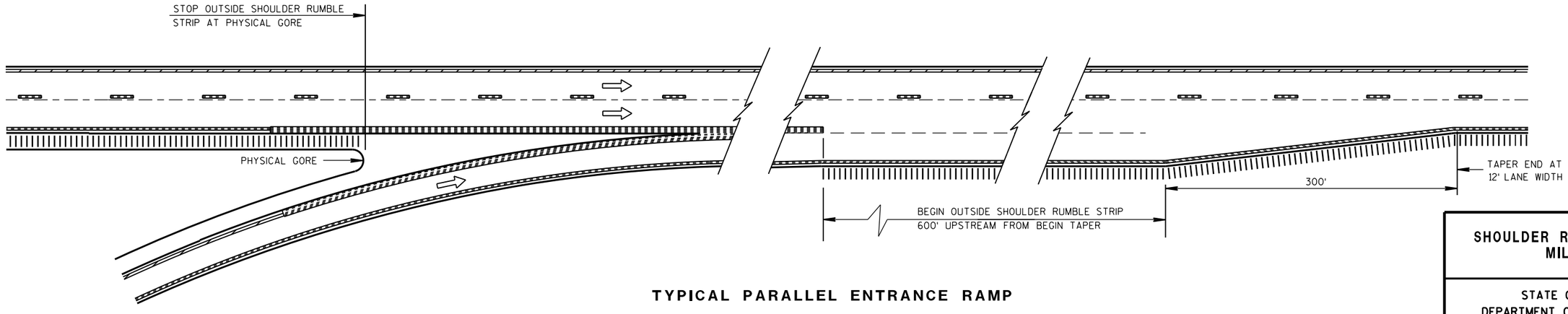
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

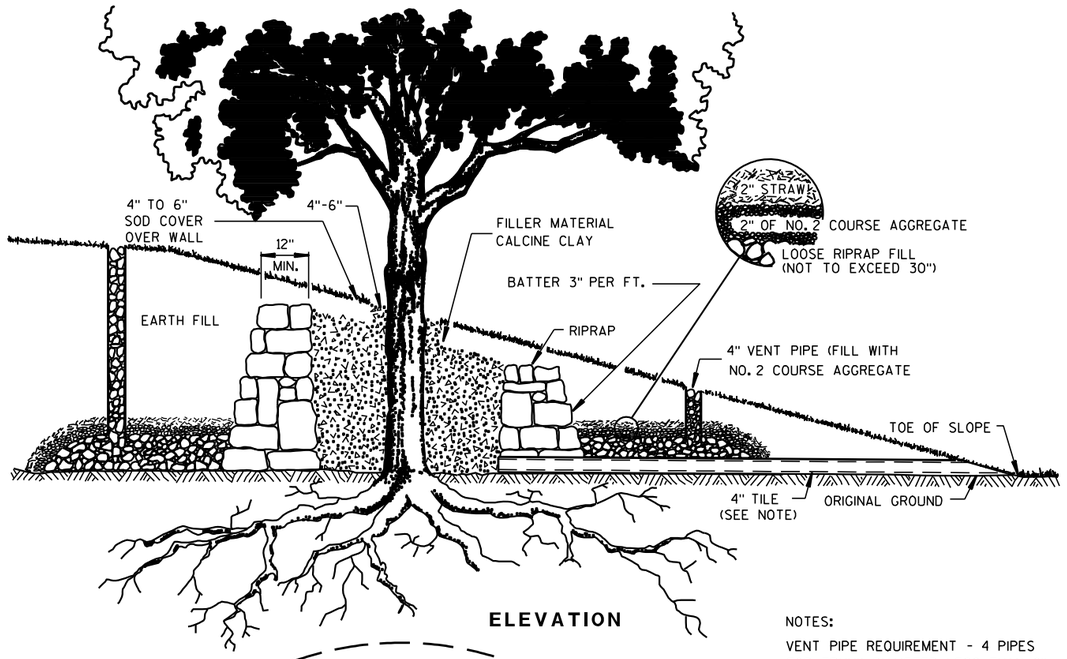
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

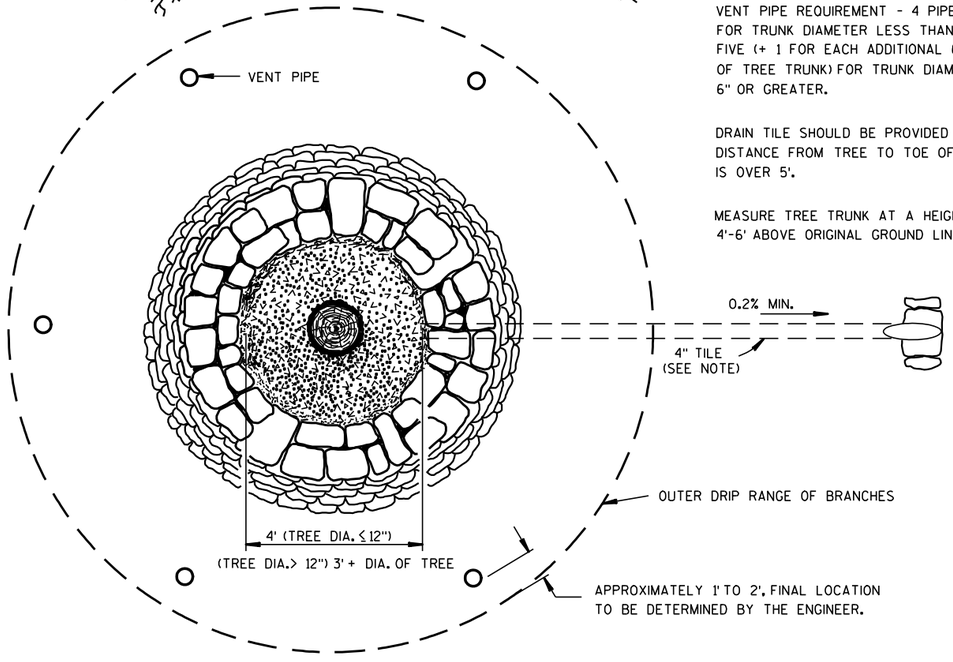
APPROVED
12/17/2012 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 13 A 5-5b



ELEVATION



PLAN

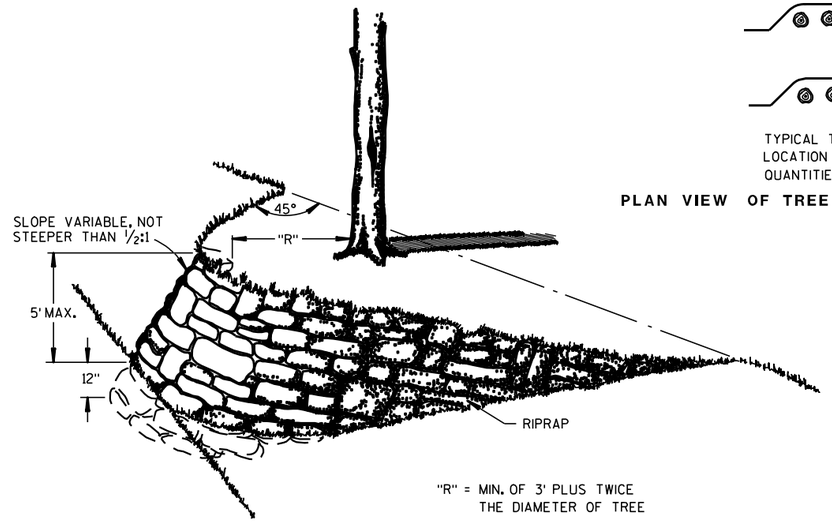
FULL TREE WELL WITH RIPRAP WALL

NOTES:

VENT PIPE REQUIREMENT - 4 PIPES FOR TRUNK DIAMETER LESS THAN 6". FIVE (+ 1 FOR EACH ADDITIONAL 6" OF TREE TRUNK) FOR TRUNK DIAMETER 6" OR GREATER.

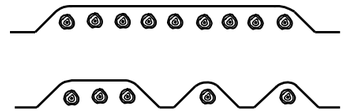
DRAIN TILE SHOULD BE PROVIDED IF DISTANCE FROM TREE TO TOE OF SLOPE IS OVER 5'.

MEASURE TREE TRUNK AT A HEIGHT 4'-6' ABOVE ORIGINAL GROUND LINE.



"R" = MIN. OF 3' PLUS TWICE THE DIAMETER OF TREE

DETAILS OF TREE ISLAND AND ROOT PROTECTION



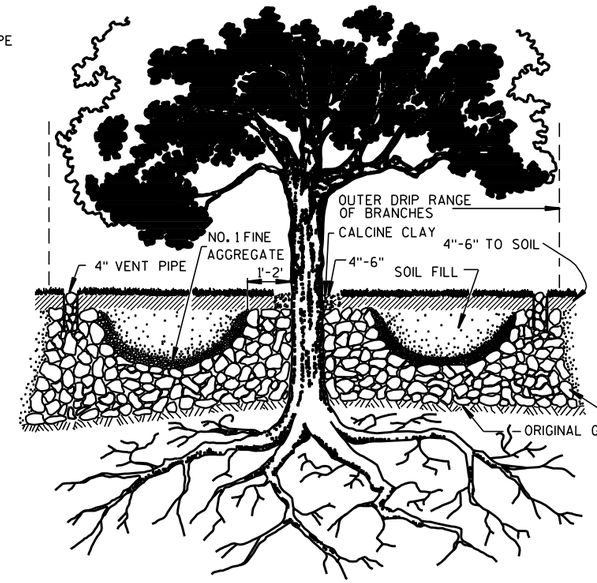
TYPICAL TREATMENTS OF ROOT PROTECTION. LOCATION SHOWN ON MISCELLANEOUS QUANTITIES SHEET.

PLAN VIEW OF TREE ISLANDS FOR ONE OR MORE TREES

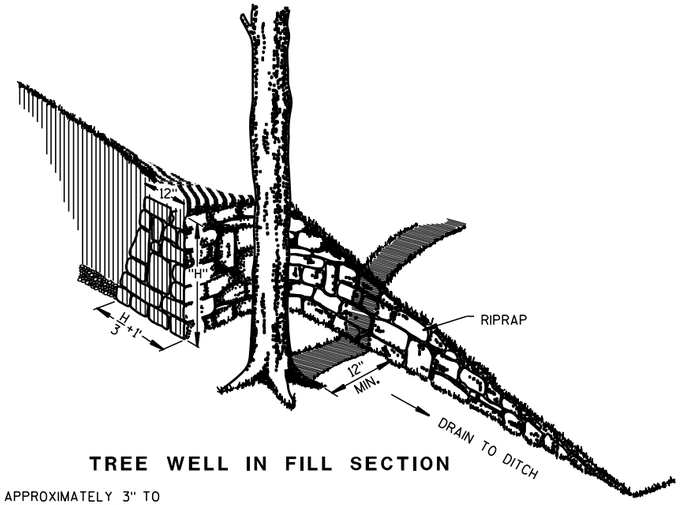
GENERAL NOTES

WALLS TO BE BUILT TO APPROXIMATE SHAPE AND DIMENSIONS SHOWN. STONE TO CONFORM TO SPECIFICATIONS FOR RIPRAP.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.



TREE WELL WITHOUT WALL



TREE WELL IN FILL SECTION

DETAILS FOR TREE WELLS

TREE PRESERVATION DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/25/76 DATE

/S/ D. L. Strand STATE DESIGN ENGINEER

FHWA

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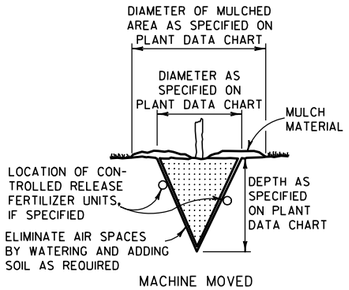
WYS

6

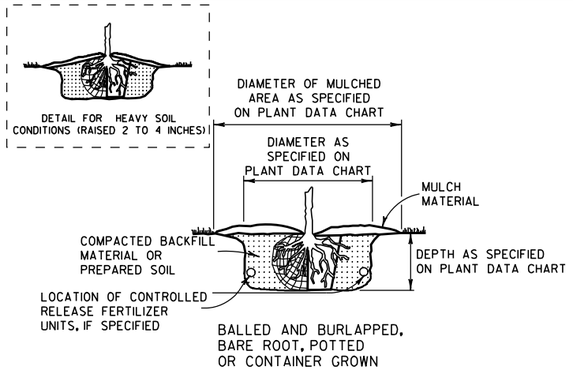
S.D.D. 14 A 1-3

6

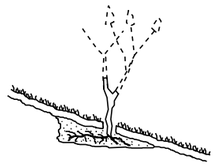
S.D.D. 14 A 1-3



MACHINE MOVED

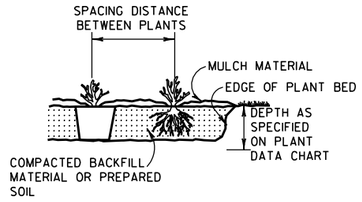


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



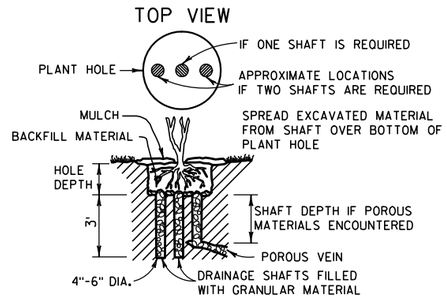
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

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



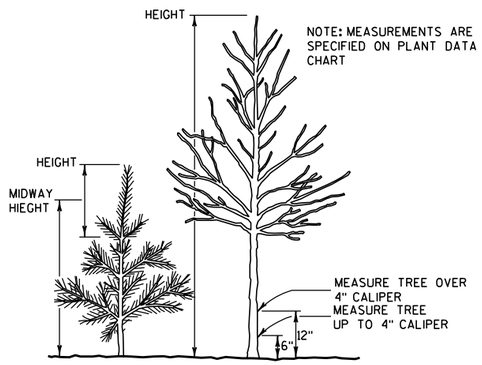
PREPARED BED (BARE ROOT AND POTTED)

PLANTING

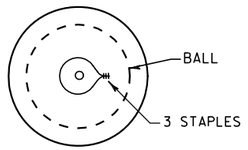


NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

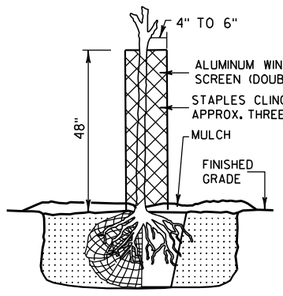
DRAINING



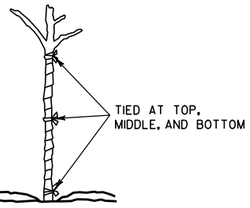
MEASURING



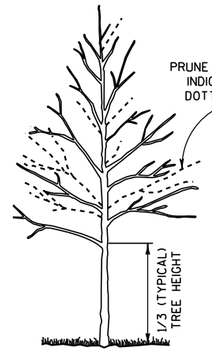
TOP VIEW



RODENT PROTECTION



WRAPPING

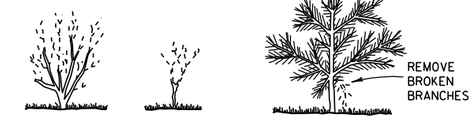


TALL DECIDUOUS TREES (ASH, MAPLE, LINDEN, OAK)

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

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

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

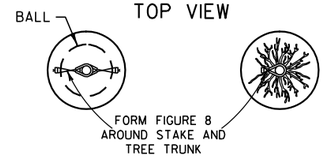


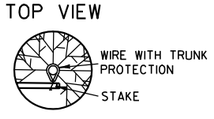
SHRUBS (GRAY DOGWOOD ARROWWOOD VIBURNUM)

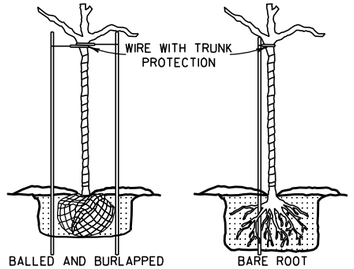
SUMAC

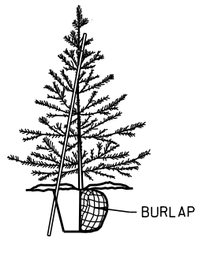
TREE TYPE EVERGREENS (PINE, SPRUCE, FIR) EVERGREENS USUALLY ARE NOT PRUNED

PRUNING



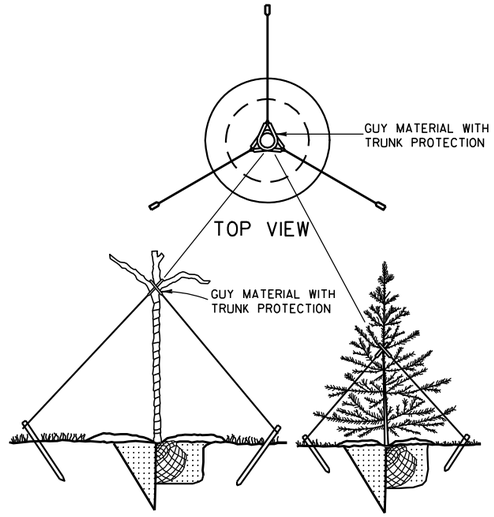






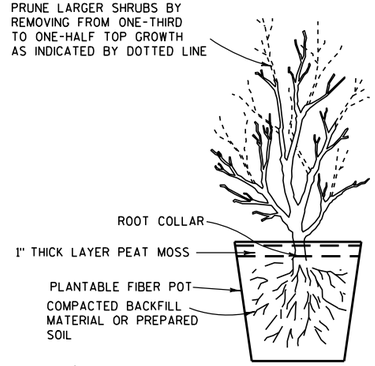
NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE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

BRACING



GUYING

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



POTTING

NOTES

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

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

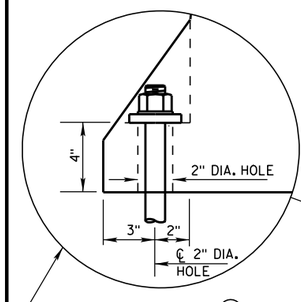
TREE PLANTING DETAIL

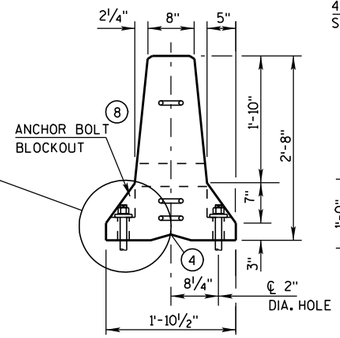
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

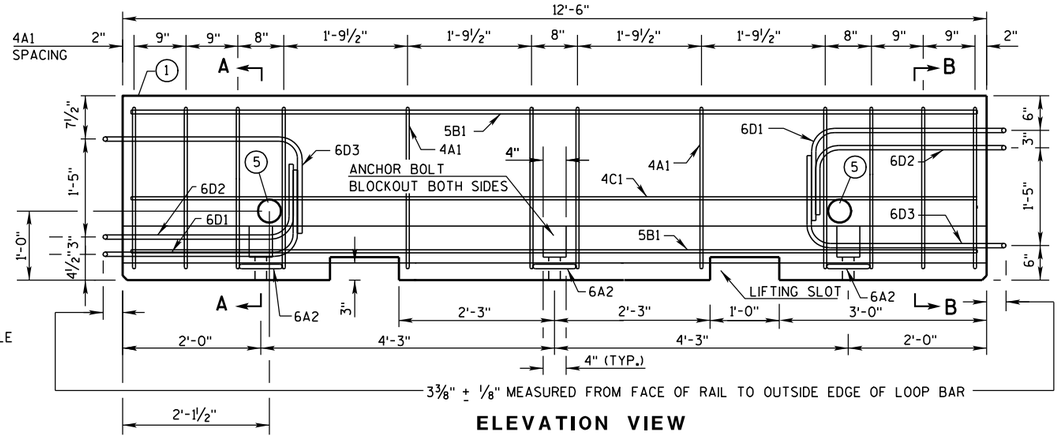
S.D.D. 14 A 2-1

S.D.D. 14 A 2-1

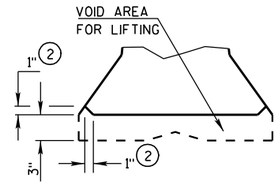




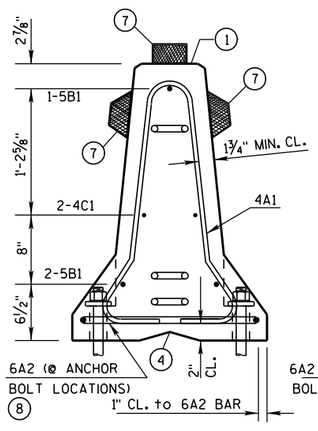
END VIEW



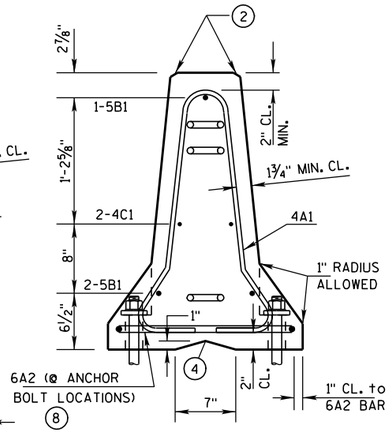
ELEVATION VIEW



DETAIL "B"
LIFTING SLOT DETAIL



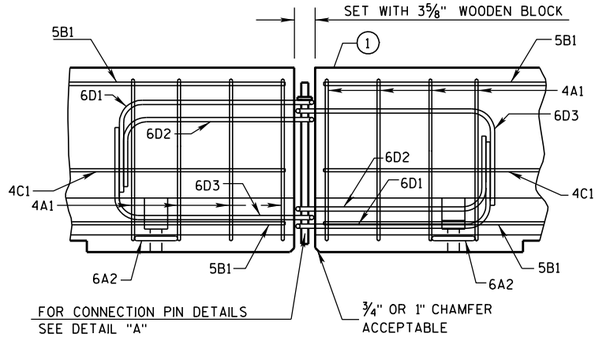
SECTION A-A
(STIRRUP PLACEMENT)



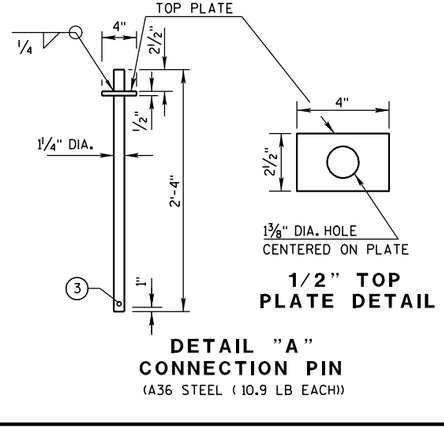
SECTION B-B
(STIRRUP PLACEMENT)

PLAN VIEW

DETAILS OF BARRIER SECTION

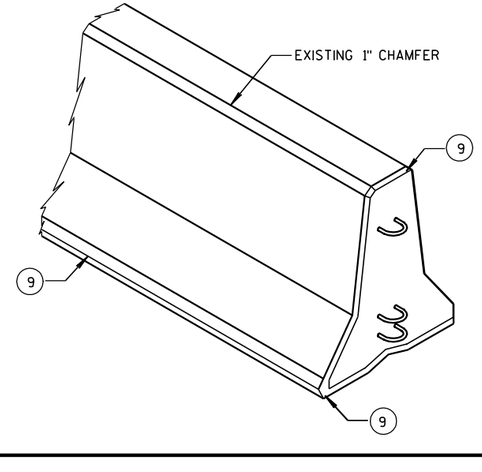


DETAILS OF BARRIER CONNECTION



1/2" TOP PLATE DETAIL

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



GENERAL NOTES

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

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRCAST, 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 ¾" 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 3-½" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN ⅛" 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 ⅜" 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 MANUFACTURES 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.

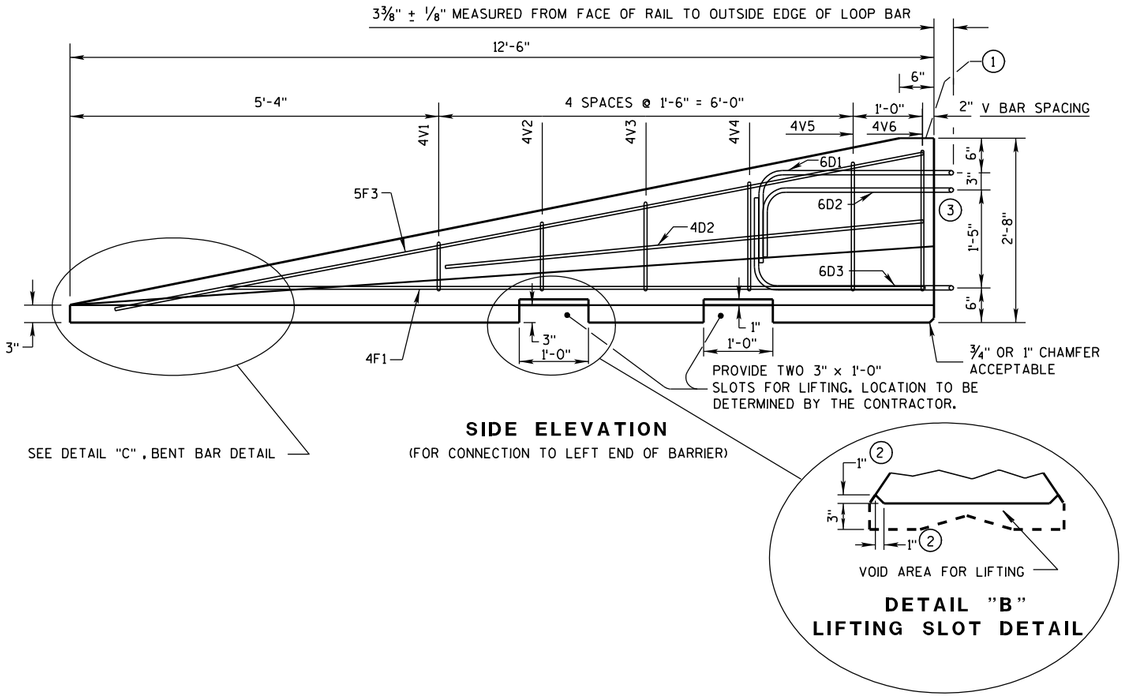
(9) 1" CHAMFER OPTIONAL.

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

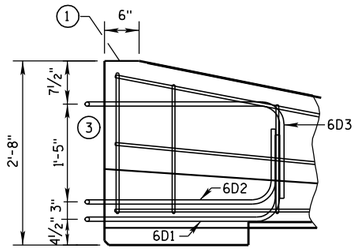
S.D.D. 14 B 7-13a



SIDE ELEVATION

(FOR CONNECTION TO LEFT END OF BARRIER)

DETAIL "B"
LIFTING SLOT DETAIL

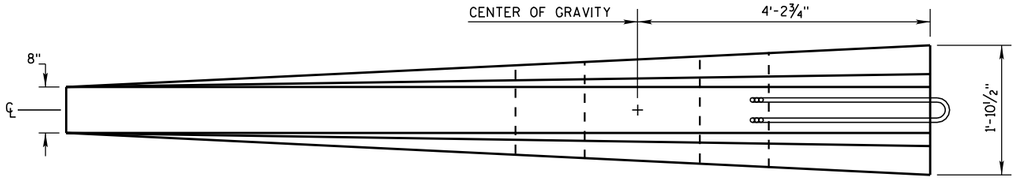


SIDE ELEVATION

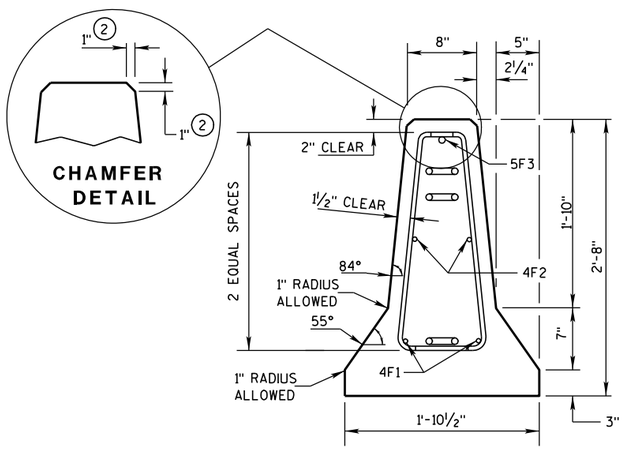
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

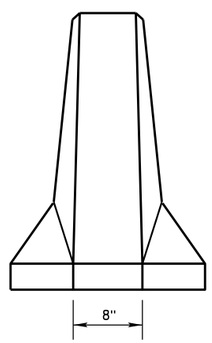
1. MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
   a. TYPE WICBTP
   b. MANUFACTURER
   c. DATE MANUFACTURED (MONTH AND YEAR)
2. 1" CHAMFER TO PREVENT SPALLING.
3. NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



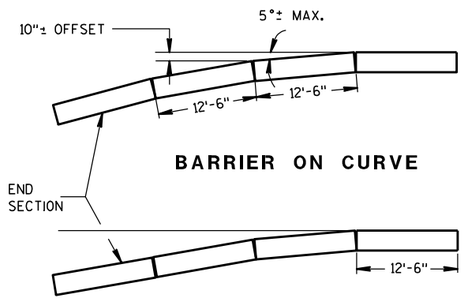
PLAN VIEW



END SECTION



FRONT ELEVATION



BARRIER ON CURVE

FLARE AT BARRIER END

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

DETAILS OF BARRIER TAPER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

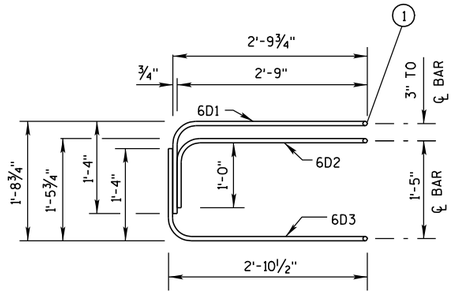
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S.D.D. 14 B 7-13b

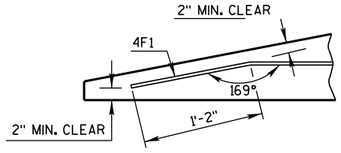
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

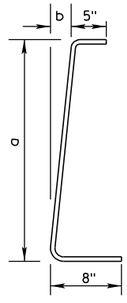
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



ELEVATION
LOOP BAR ASSEMBLY



DETAIL "C"
BENT BAR DETAIL



BAR	a	b
V1	10"	1"
V2	1'-1"	1¼"
V3	1'-5"	1⅝"
V4	1'-8"	1⅞"
V5	2'-0½"	2⅜"
V6	2'-3"	2¾"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

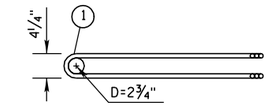
GENERAL NOTES

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

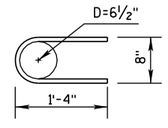
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

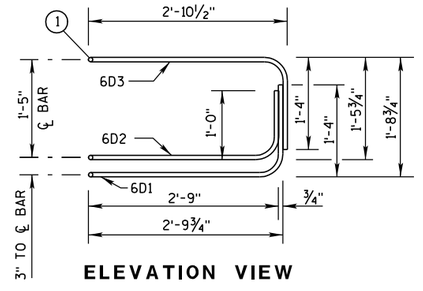
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



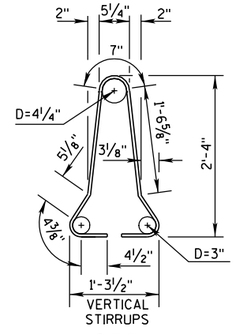
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



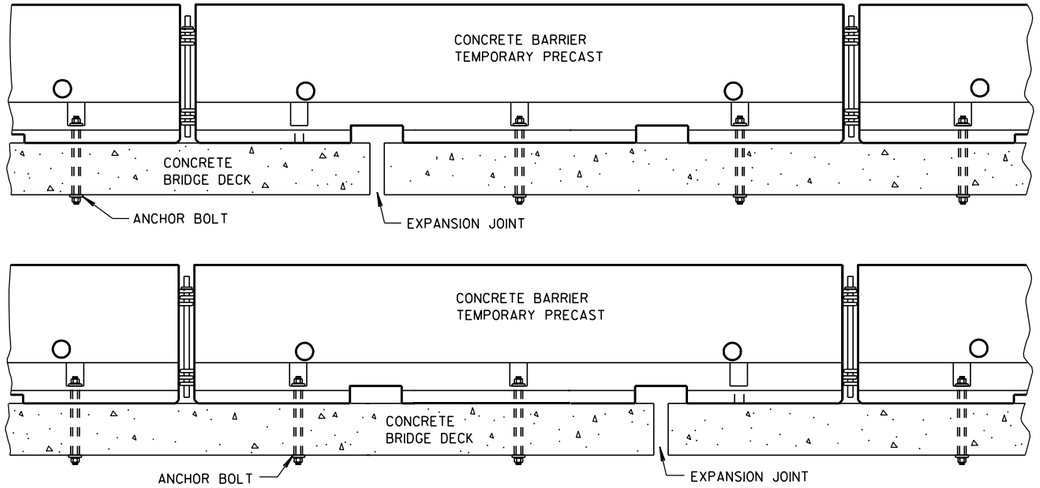
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

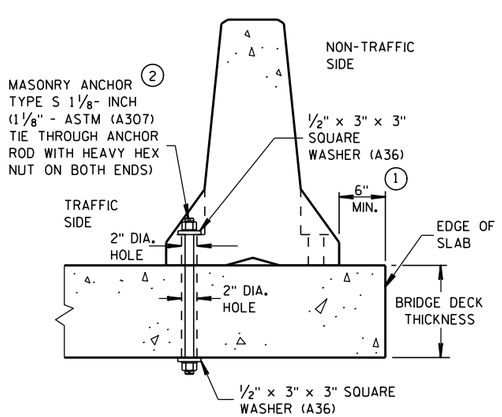
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 7-13c



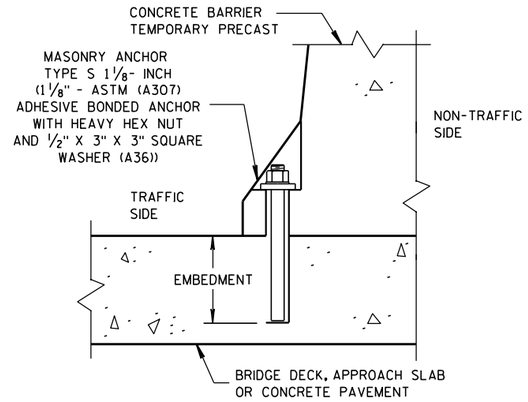
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 NOTUSE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE BONDED ANCHOR (2) INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

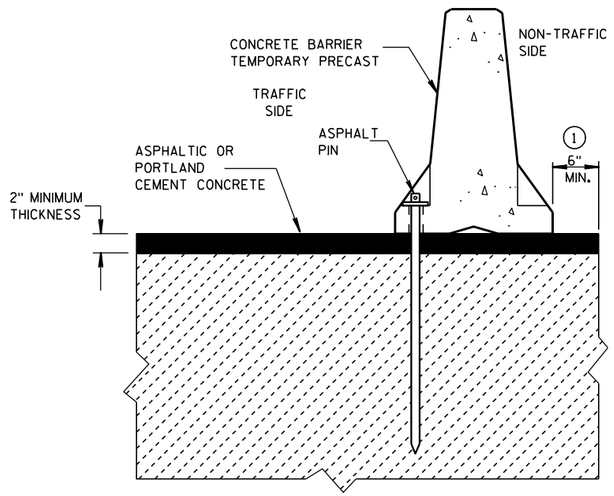
(1) CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED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

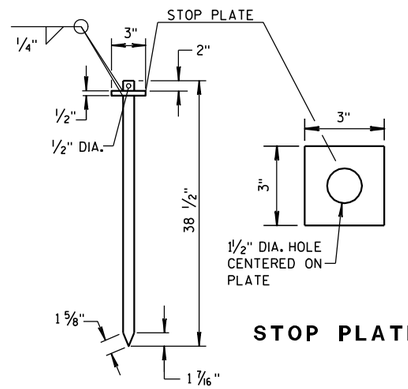
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

(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 1⅛-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 ALLANCHOR 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 COMMERICAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.



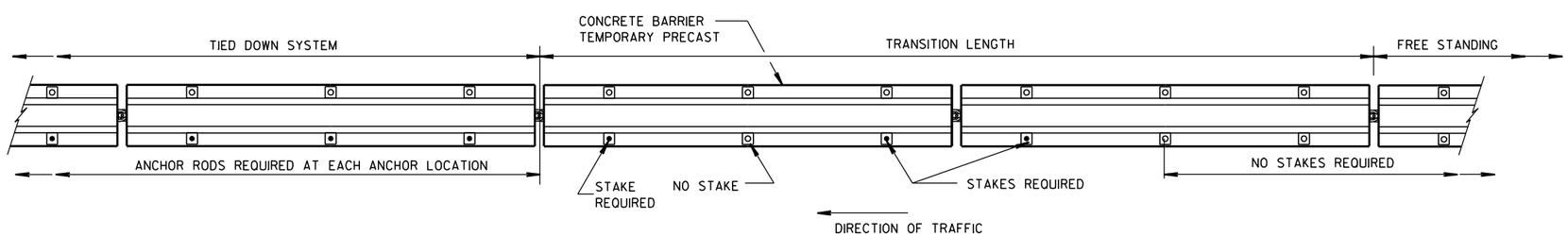


STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)

STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



PLAN VIEW

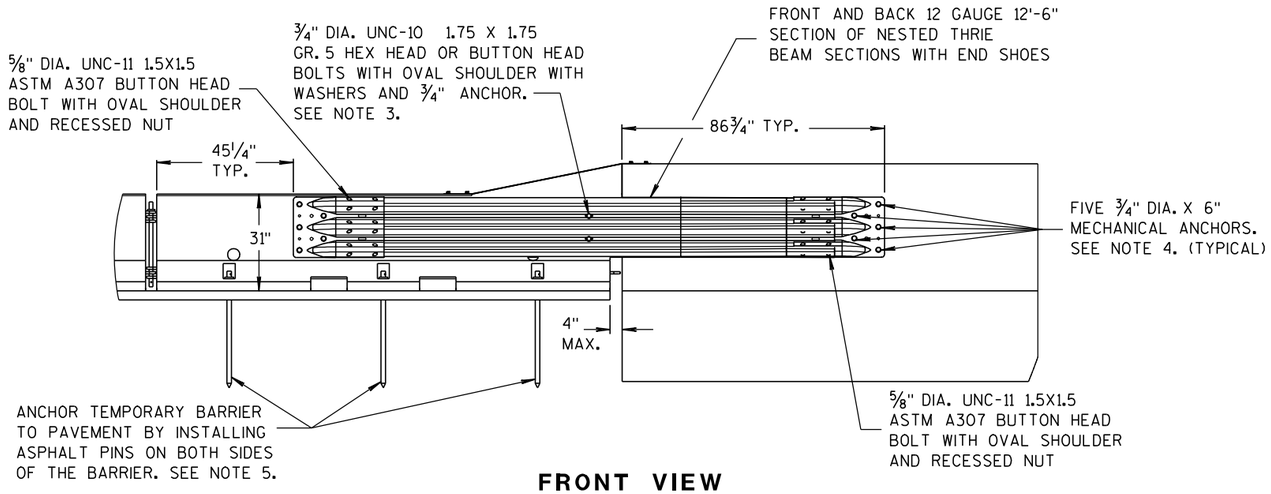
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

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

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

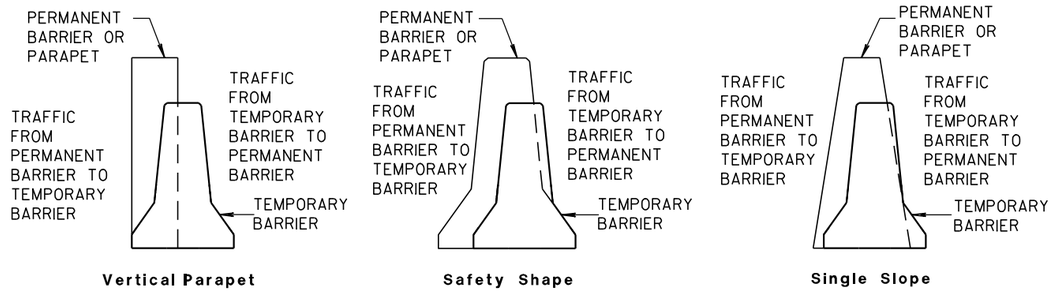
6
S.D.D. 14 B 7-13d



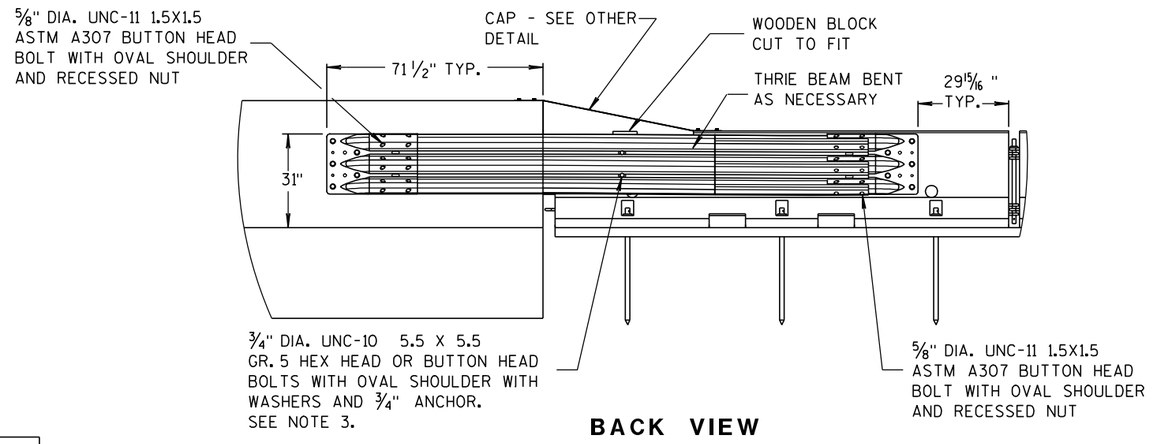
FRONT VIEW

NOTES

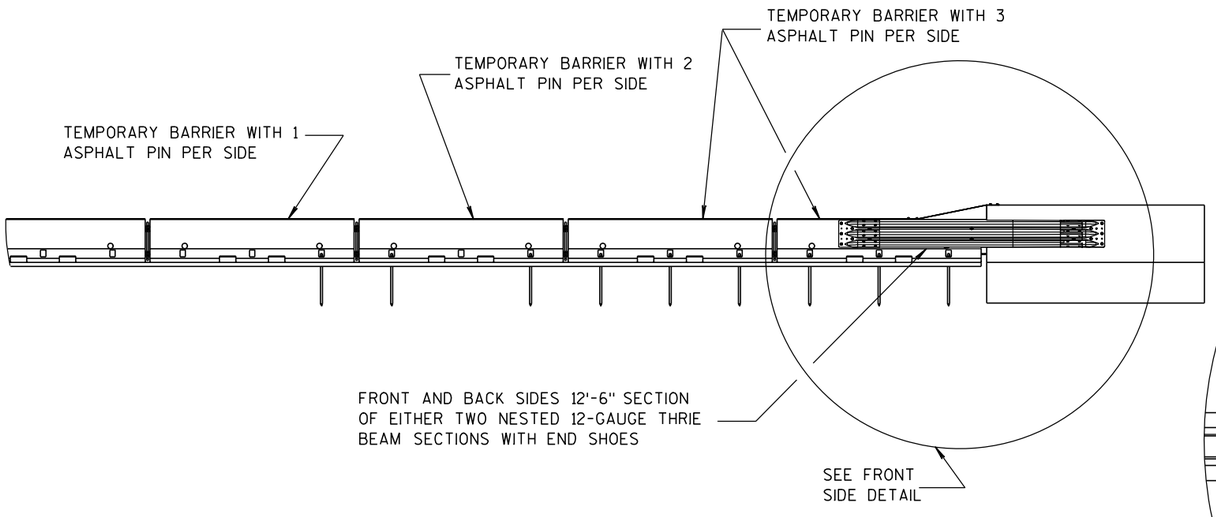
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 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.



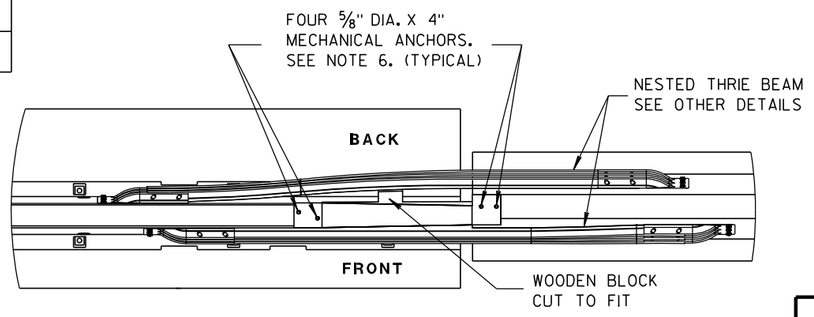
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



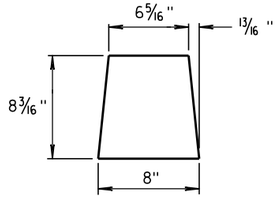
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

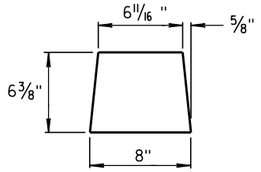
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

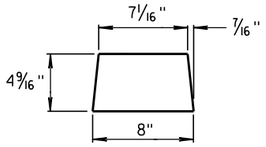
6
S.D.D. 14 B 7-13e



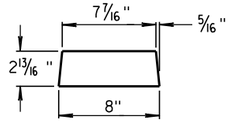
GUSSET 1



GUSSET 2

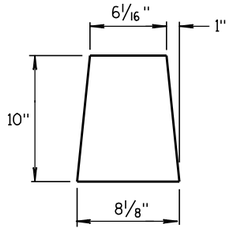


GUSSET 3

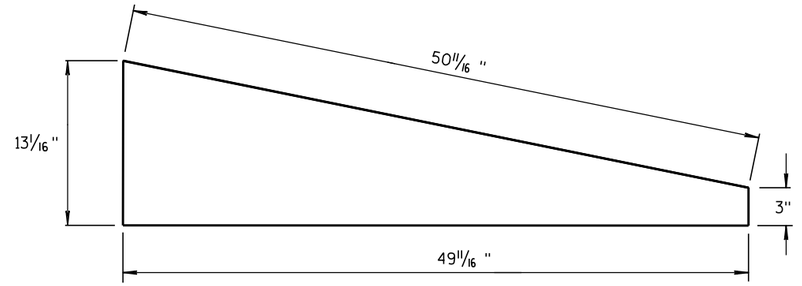


GUSSET 4

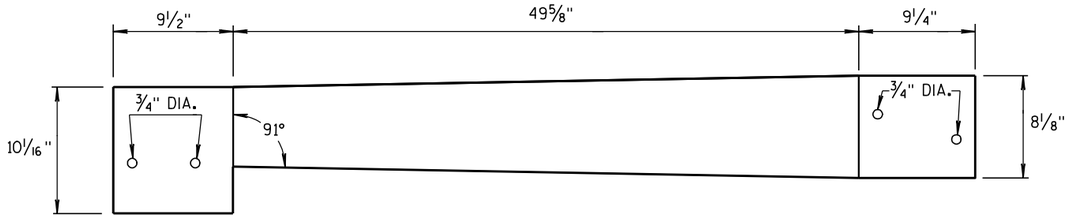
GUSSETS

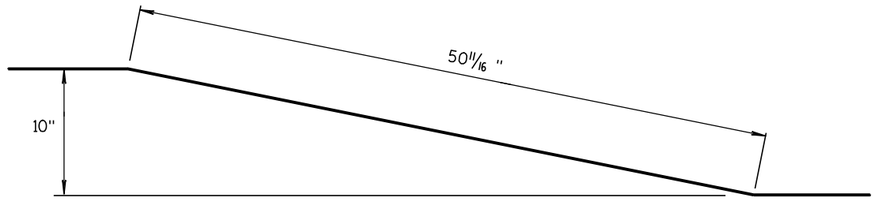


END PLATE

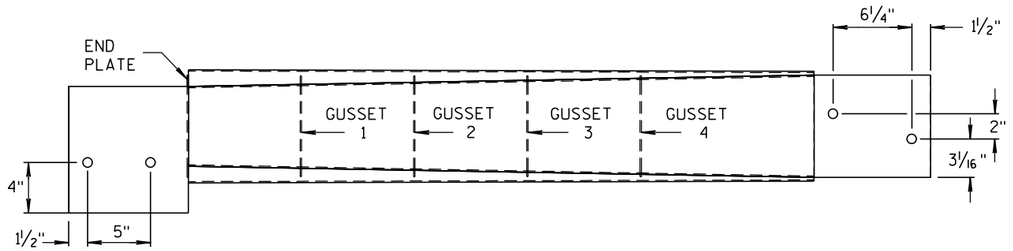


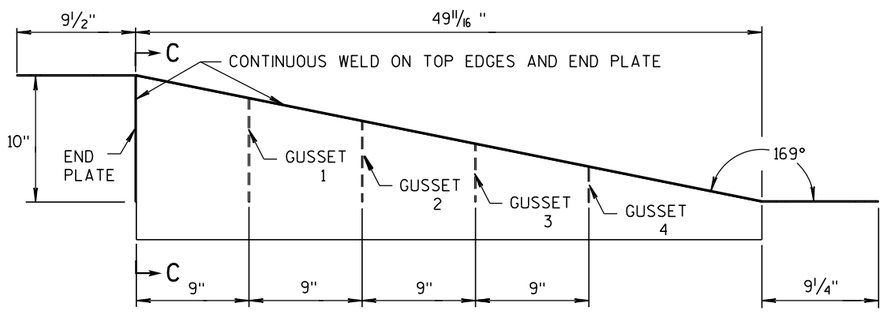
SIDE PLATE

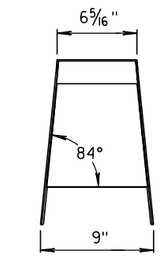




TOP PLATE







SECTION C-C

NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. 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

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

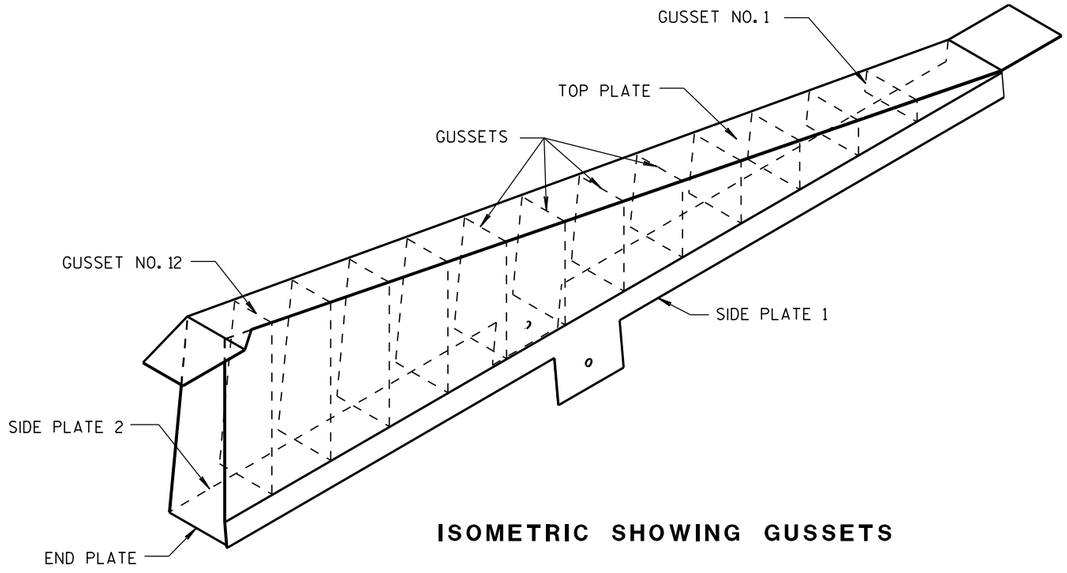
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

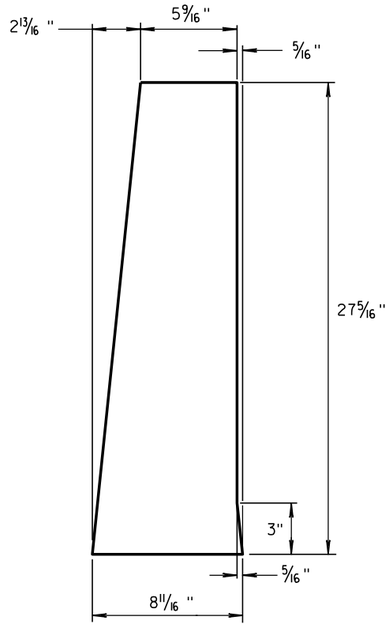
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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S.D.D. 14 B 7-13f

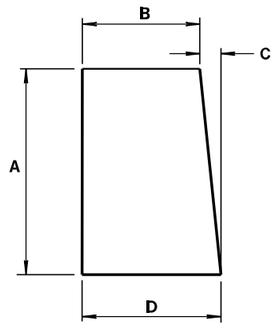


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

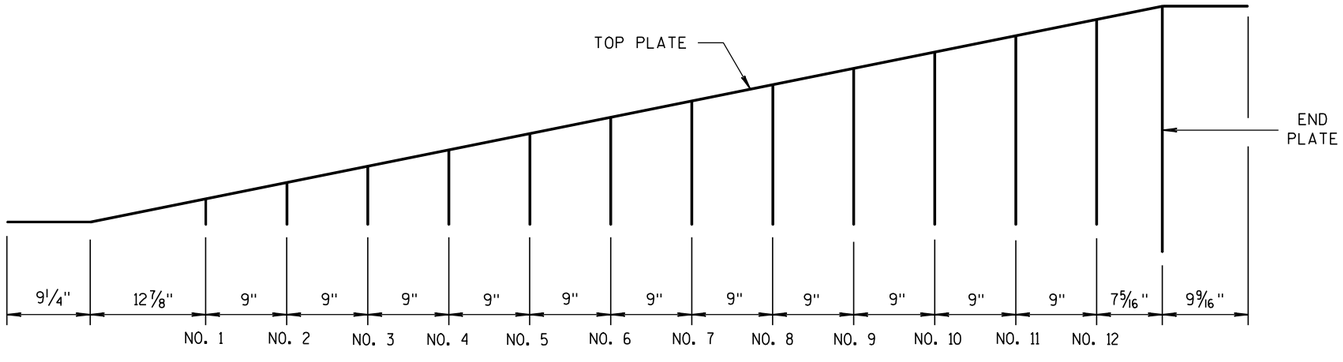
ALL GUSSETS 1/8" STEEL PLATE

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 15/16 "	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.



GUSSET LOCATION

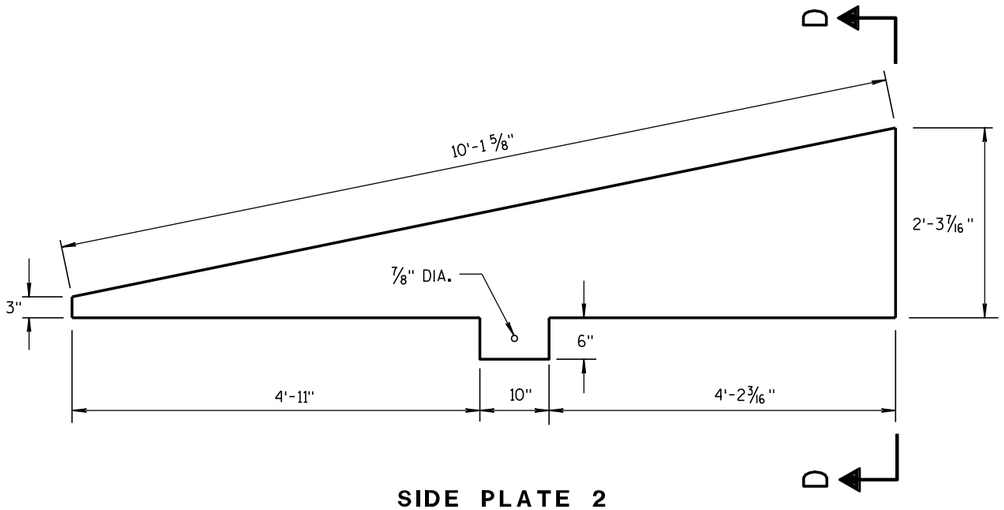
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

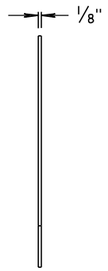
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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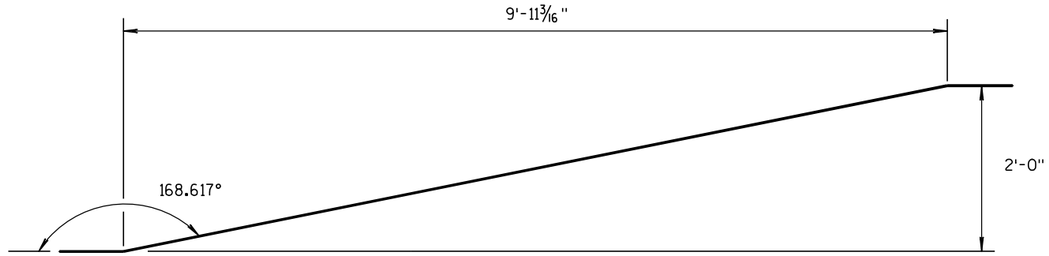
S.D.D. 14 B 7-13g



SIDE PLATE 2

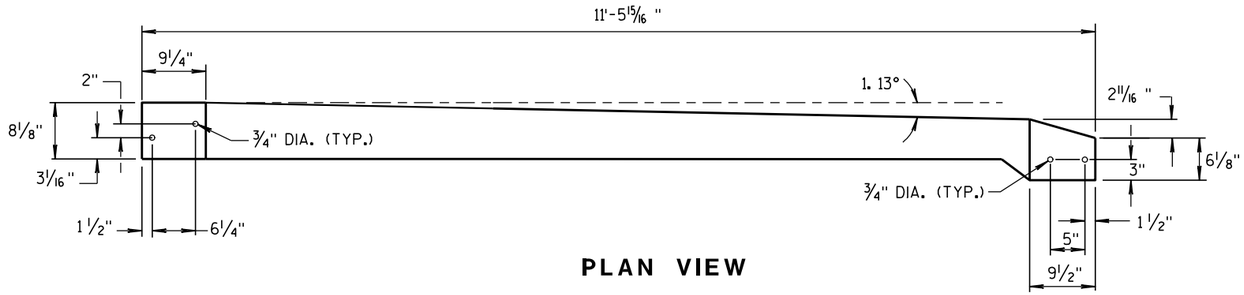


END VIEW



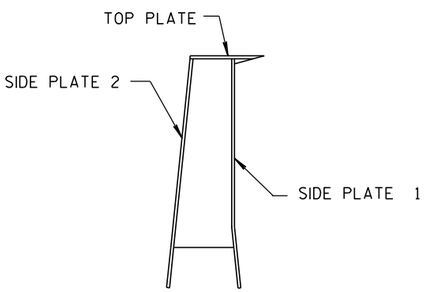
SIDE VIEW

TOP PLATE

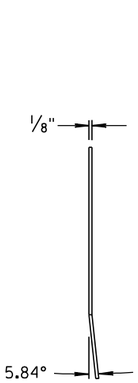


PLAN VIEW

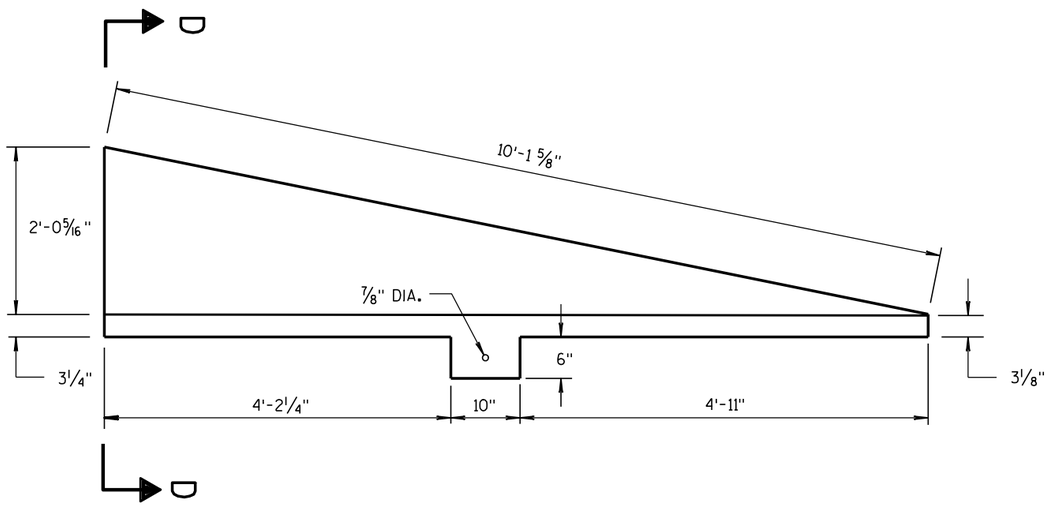
TOP PLATE



SECTION D-D



END VIEW



SIDE PLATE 1

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

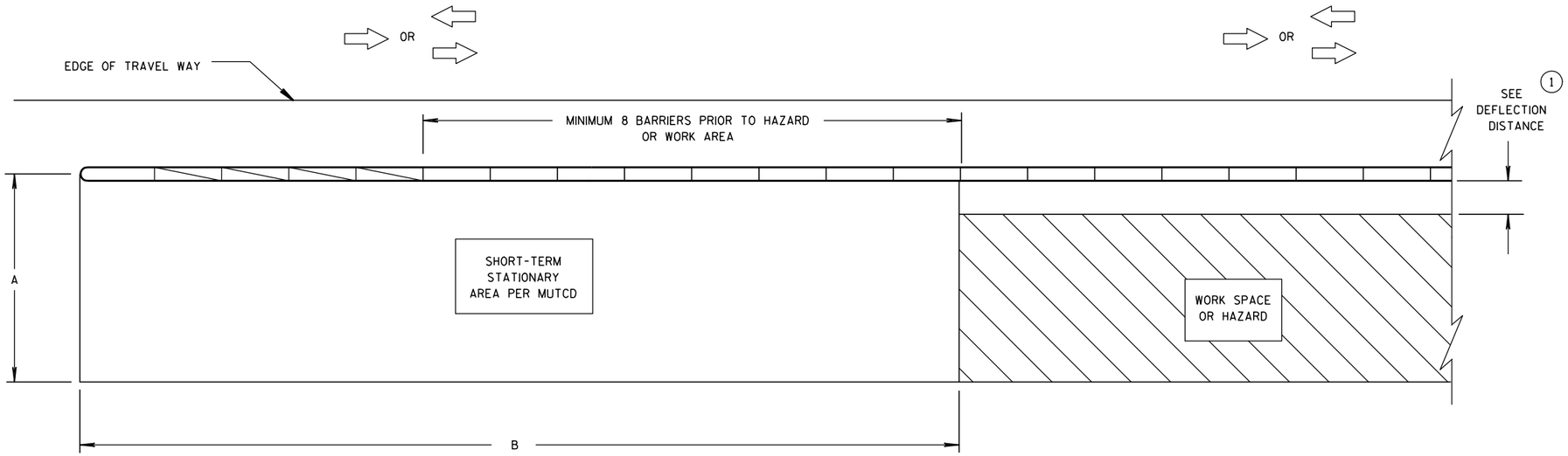
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 8/31/2012 DATE /S/ Jerry H. ROADWAY STANDARDS ENGINEER 142 ENT FHWA

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S.D.D. 14 B 7-13h

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S.D.D. 14 B 7-13h



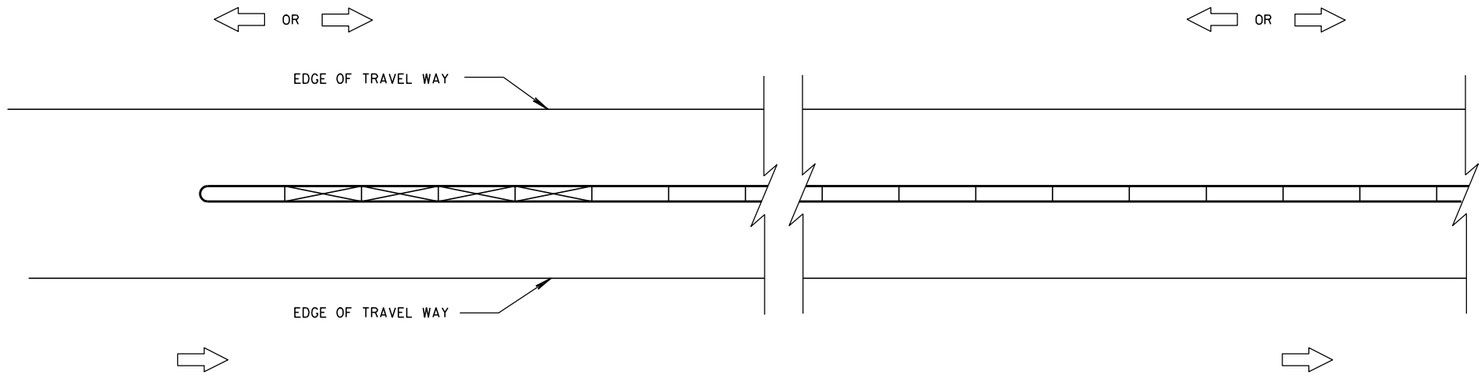
CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER

DIMENSION A TABLE (2)

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE (2)

POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

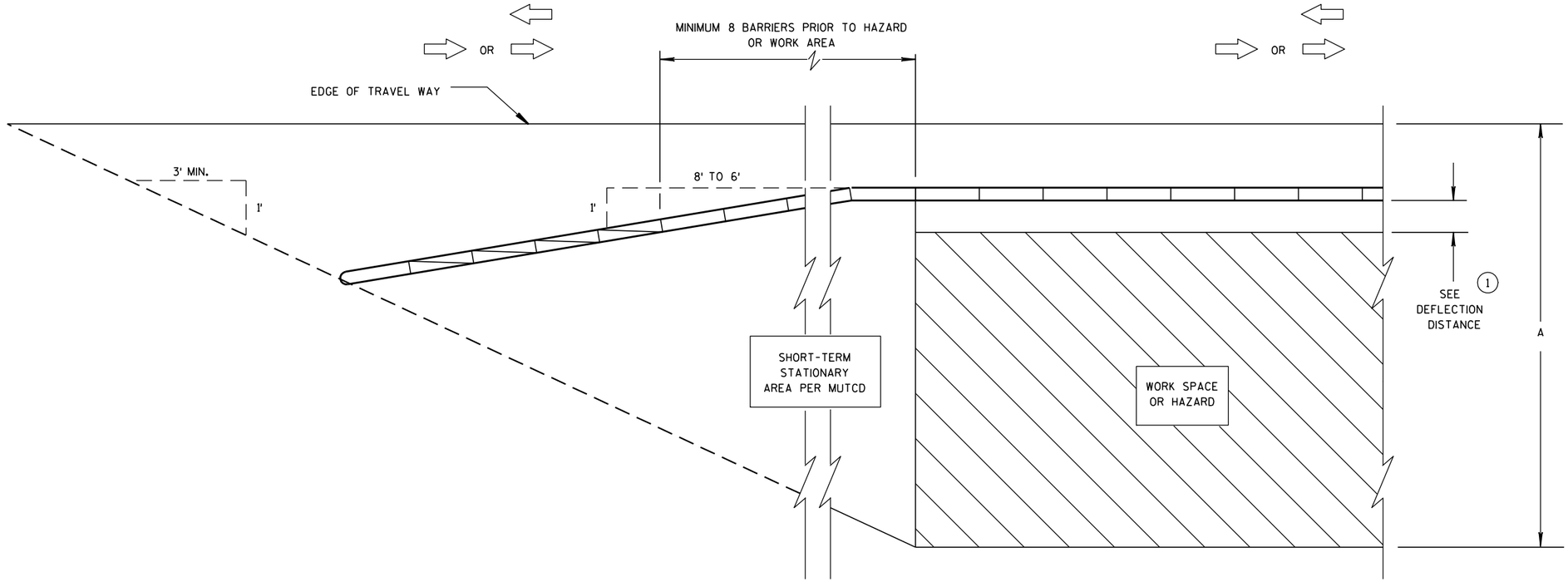
(1) FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.

(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

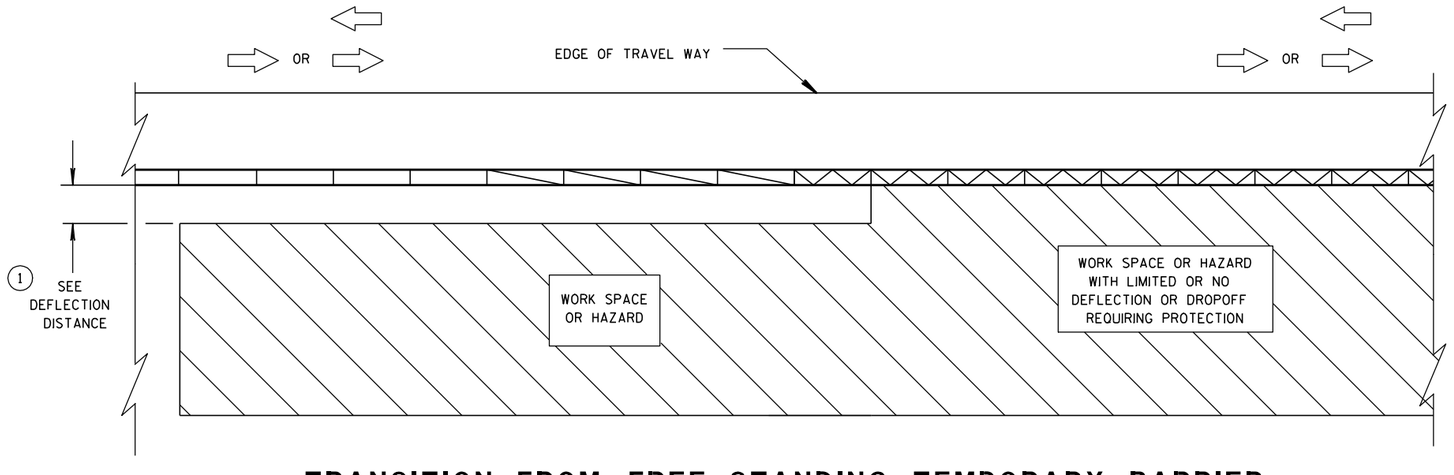
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 8-1a



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION



TRANSITION FROM FREE STANDING TEMPORARY BARRIER TO ANCHORED BARRIER

LEGEND

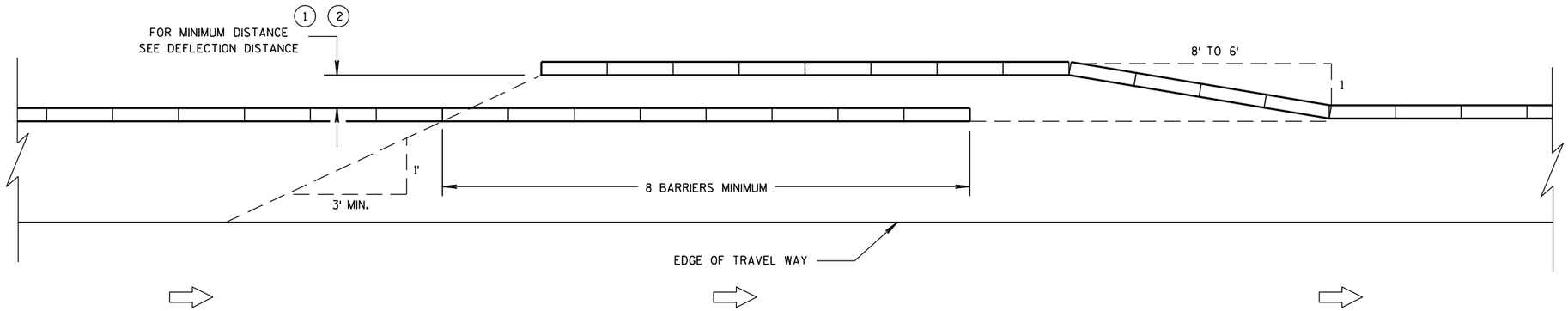
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

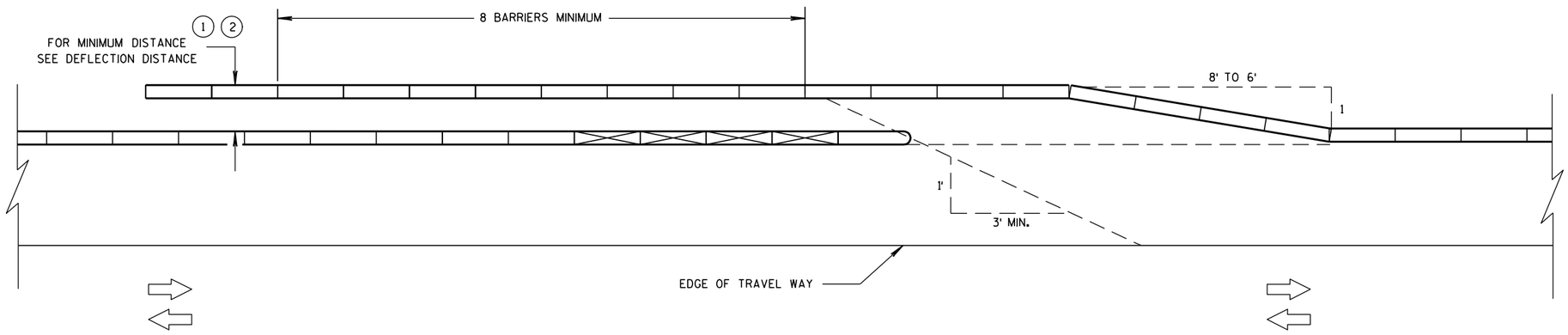
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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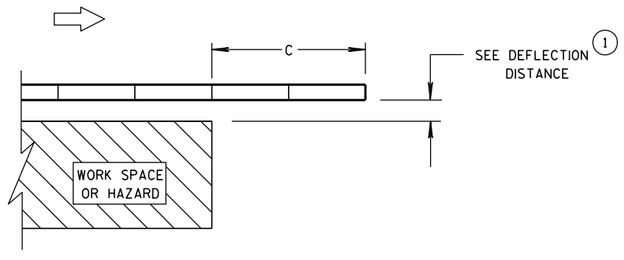
S.D.D. 14 B 8-1b



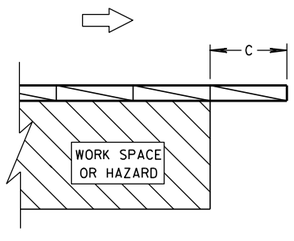
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

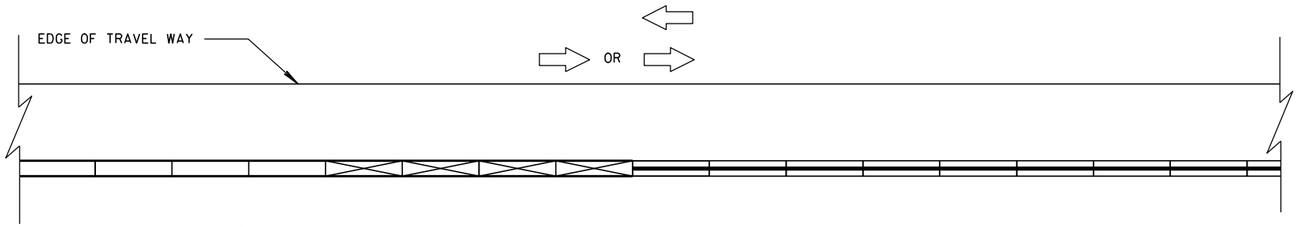
LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

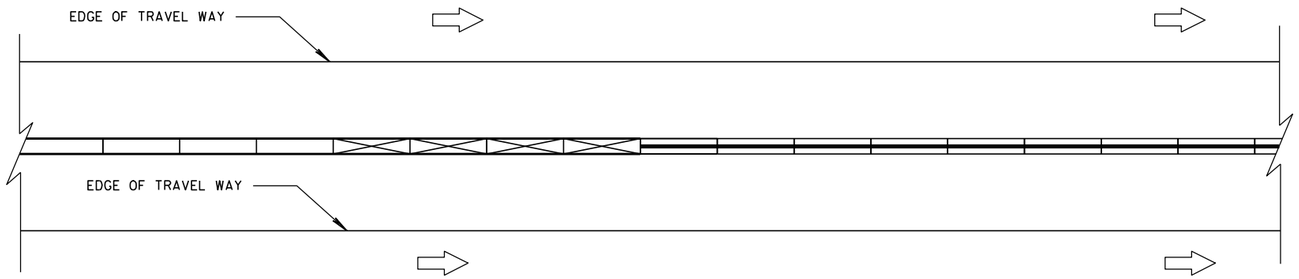
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 8-1c



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR
SAND BARREL ARRAY

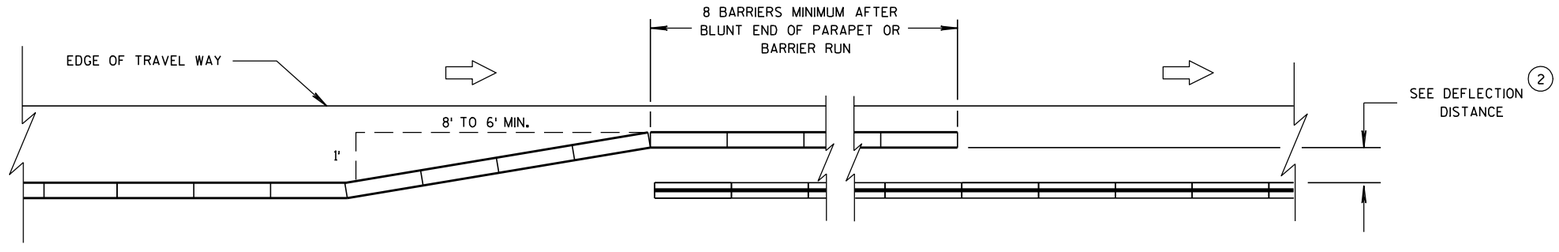
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

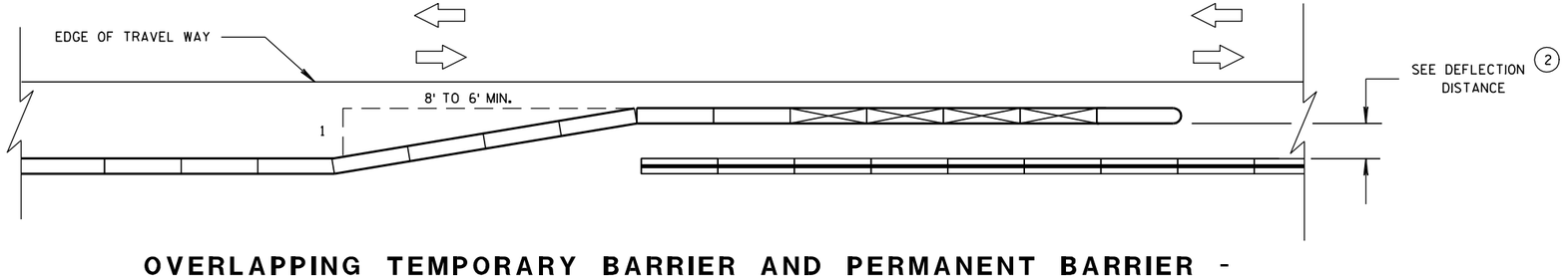
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER
OR CONCRETE PARAPET

FREE STANDING TEMPORARY
BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6
S.D.D. 14 B 8-1d

LEGEND

DIRECTION OF TRAVEL

CRASH CUSHION OR SAND BARREL ARRAY

SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS

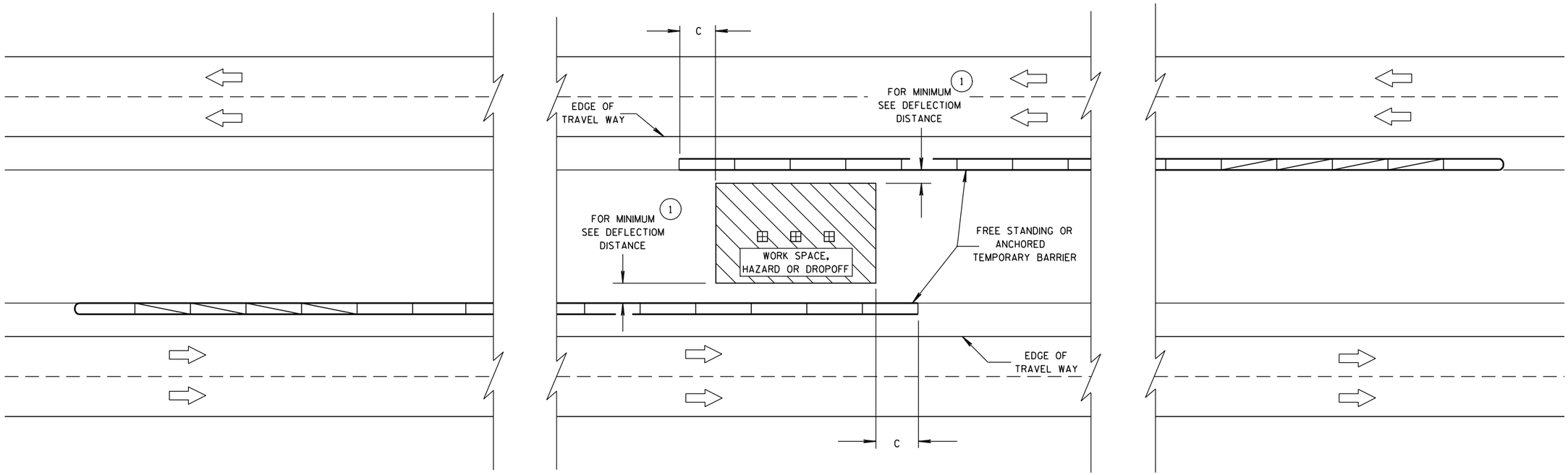
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

FREE STANDING TEMPORARY BARRIER

DIMENSION C TABLE (2)

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINNER

FHWA

6

S.D.D. 14 B 8-1e

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S.D.D. 14 B 8-1e

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.

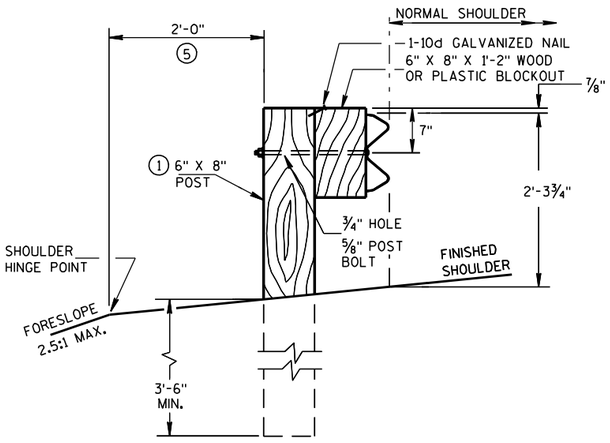
(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

(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).

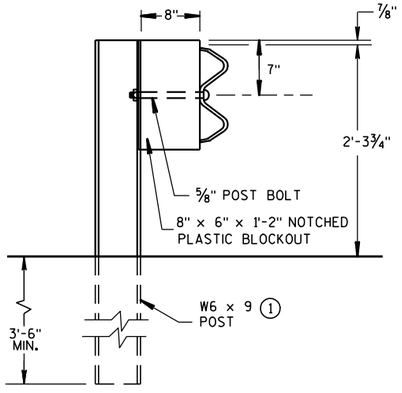
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED 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.

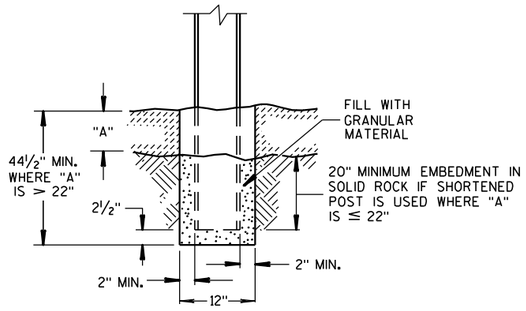
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



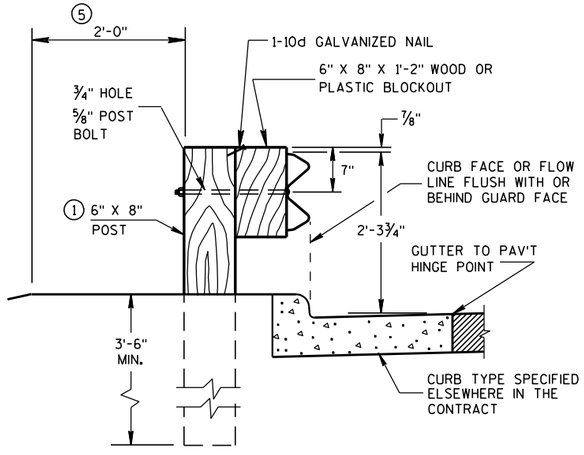
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



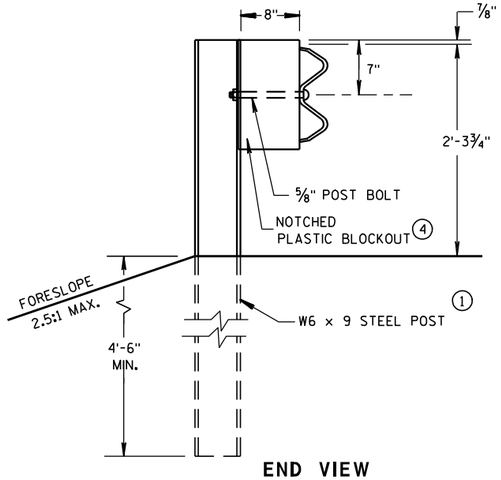
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



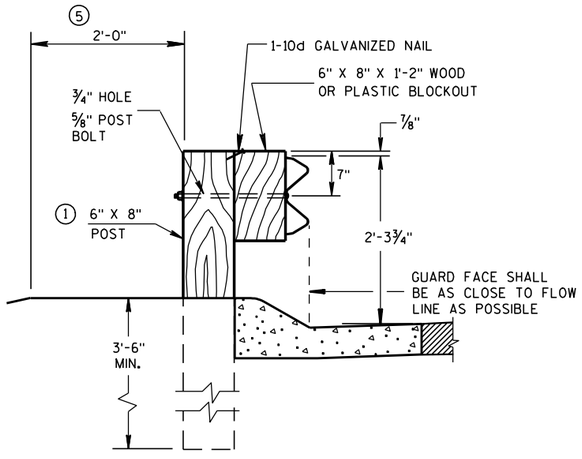
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



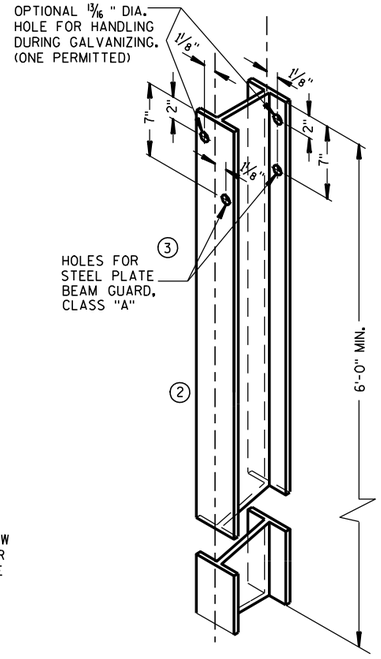
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

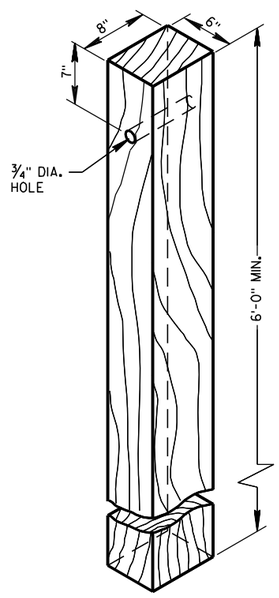


END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

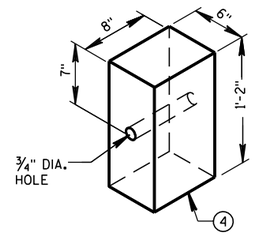


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

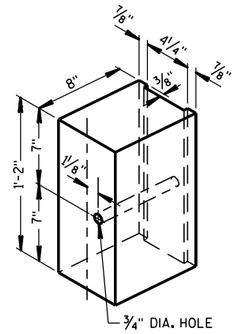
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



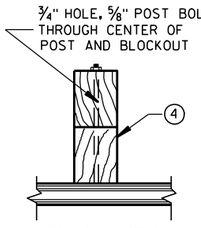
WOOD POST
(6"X8") NOMINAL



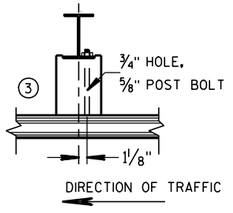
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



(1)
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



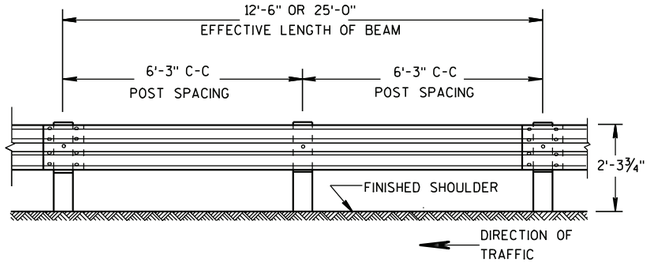
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

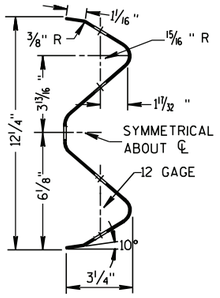
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-7a

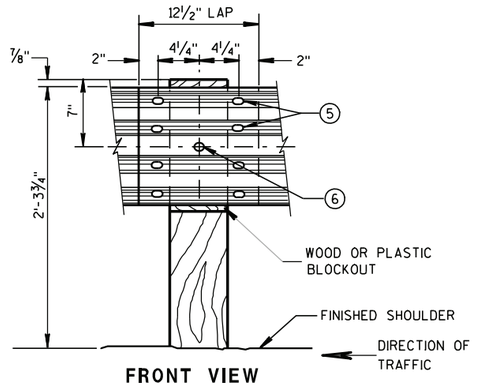


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

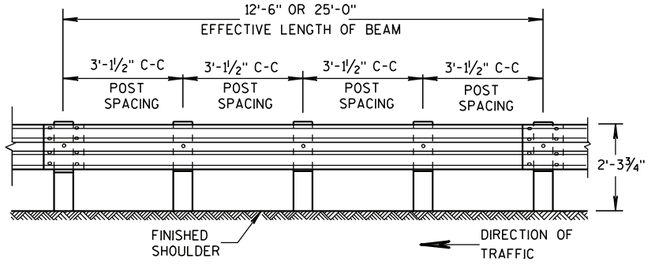


FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

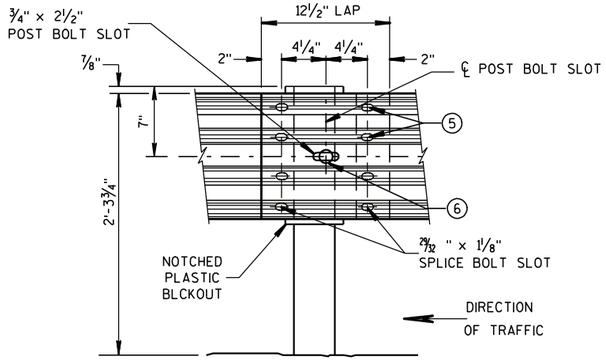
GENERAL NOTES

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

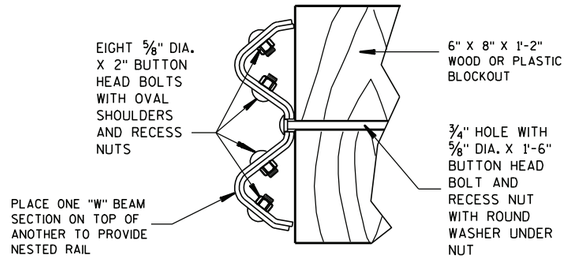
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

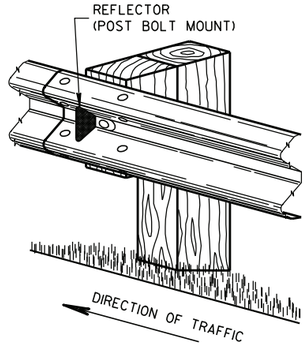


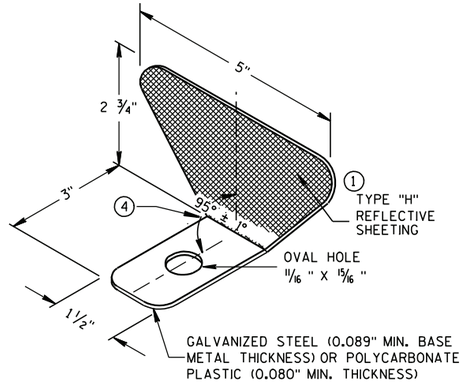
NESTED W BEAM (NW)

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)	



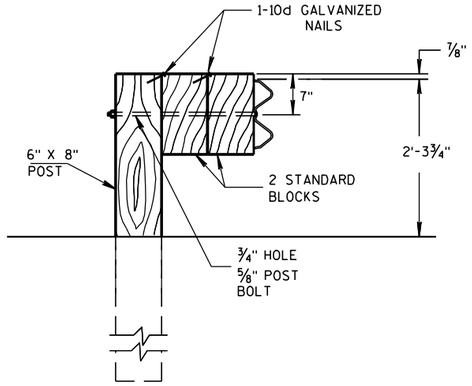


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

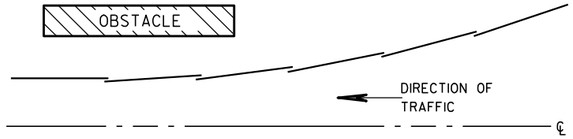
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-7b

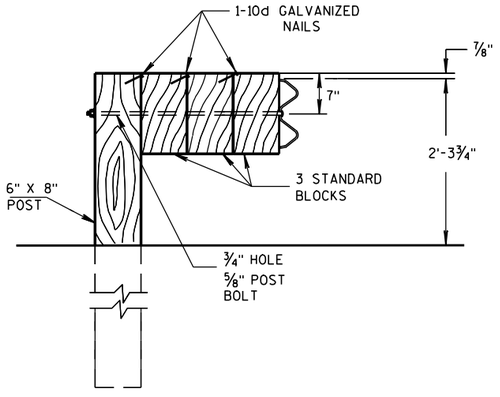


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

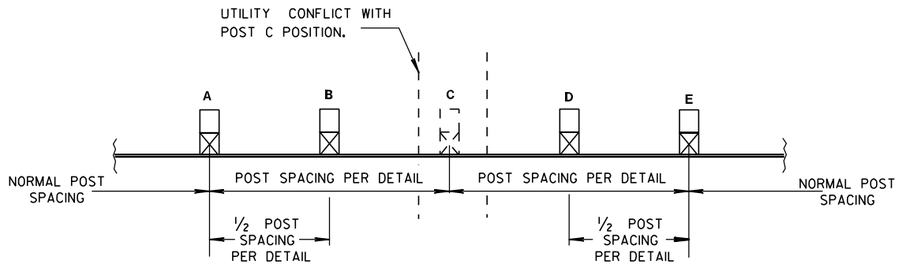


PLAN VIEW
BEAM LAPPING DETAIL



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

150

ENT

FHWA

6
S.D.D. 14 B 15-7c

GENERAL NOTES

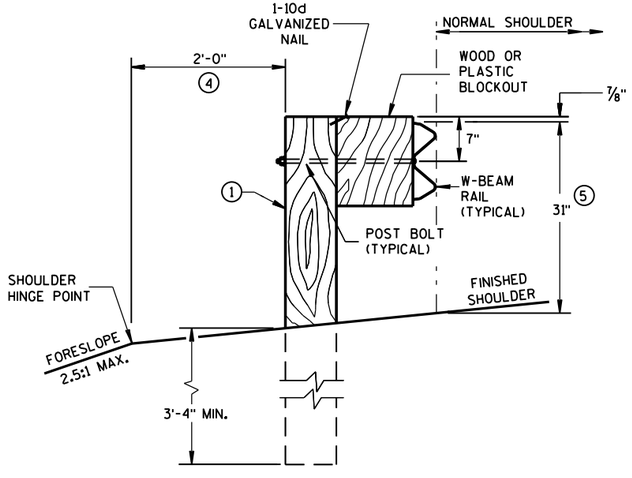
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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.

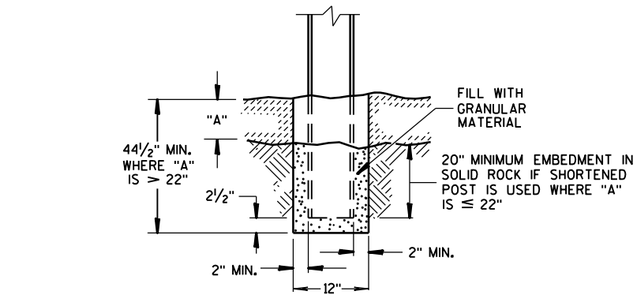
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

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".



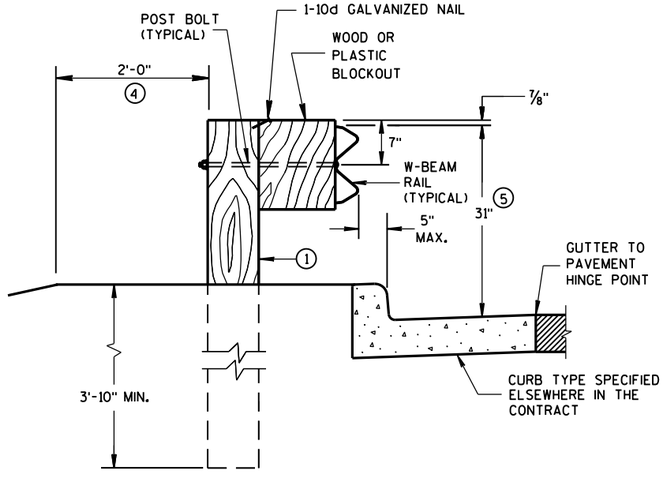
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



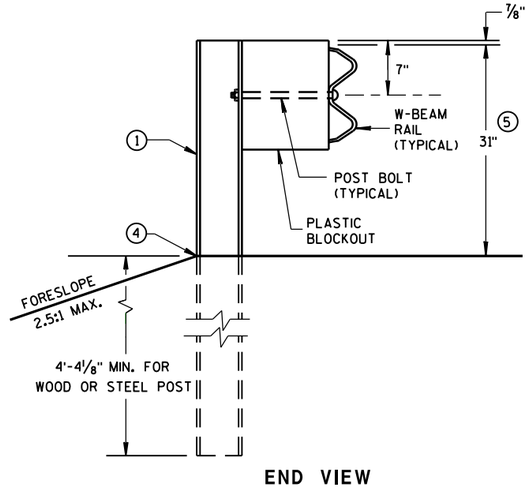
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



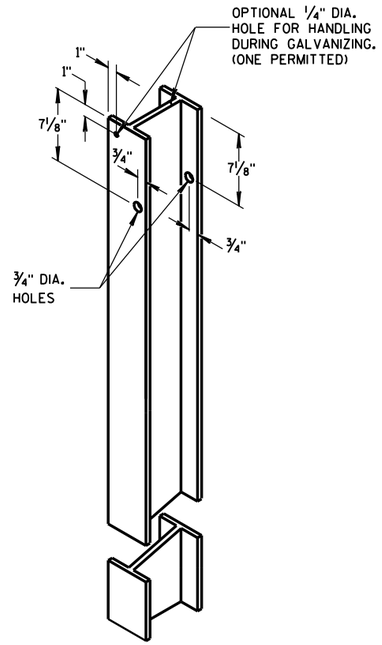
END VIEW

LOCATED ALONG A CURBED ROADWAY

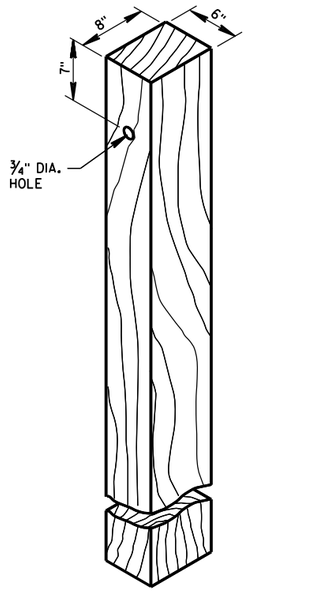


END VIEW

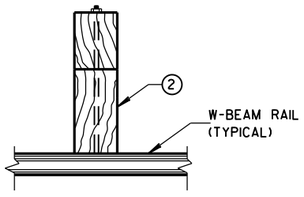
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



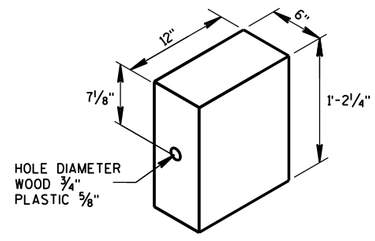
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



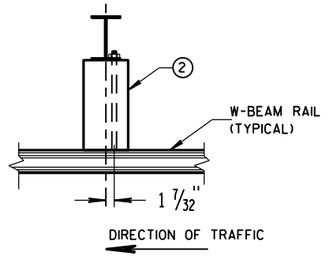
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

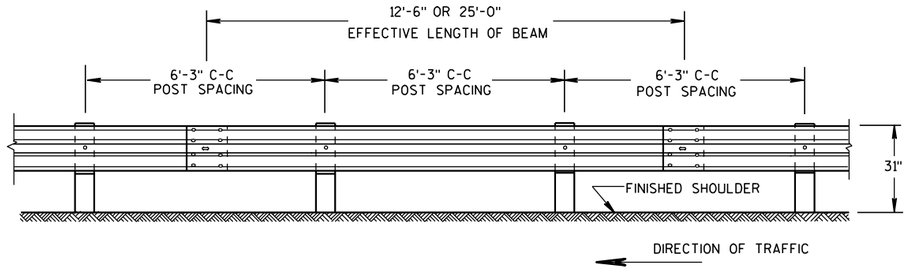


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

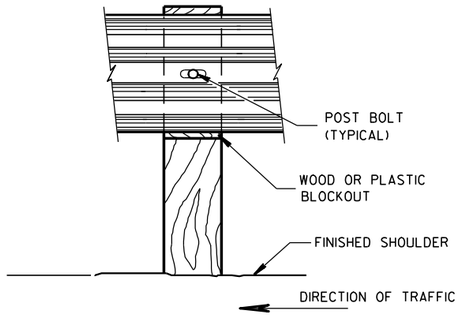
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



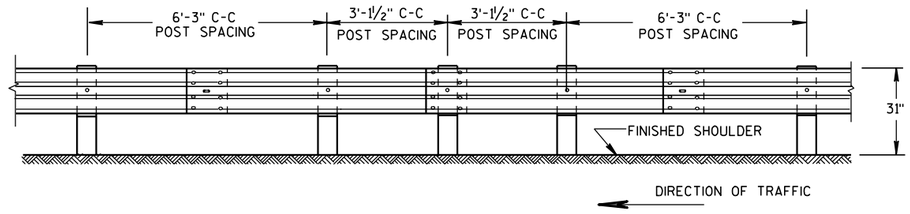
FRONT VIEW AT WOOD POST

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.

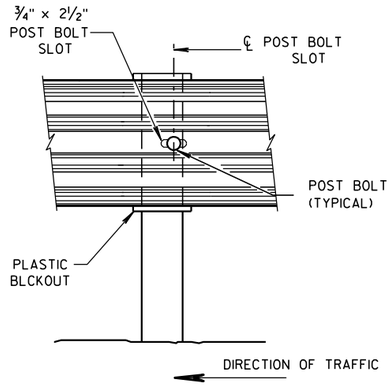
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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.

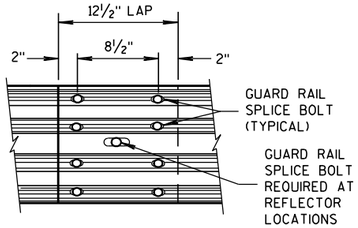


FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

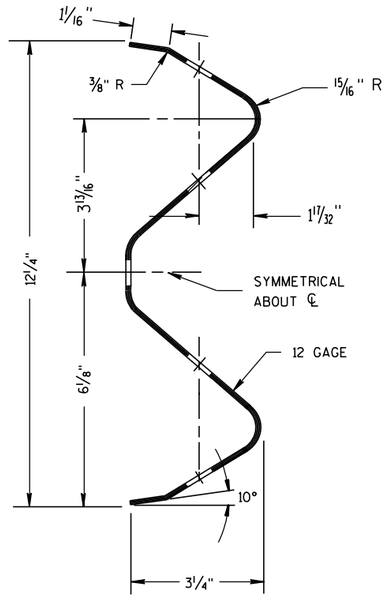


FRONT VIEW AT STEEL POST

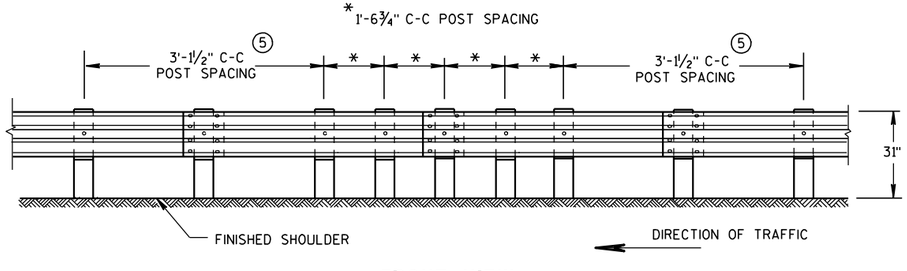


FRONT VIEW

MID-SPAN BEAM SPLICE

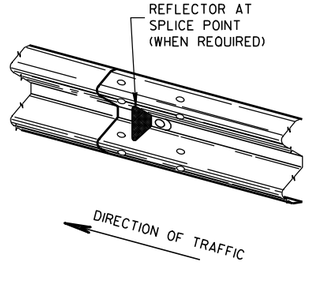


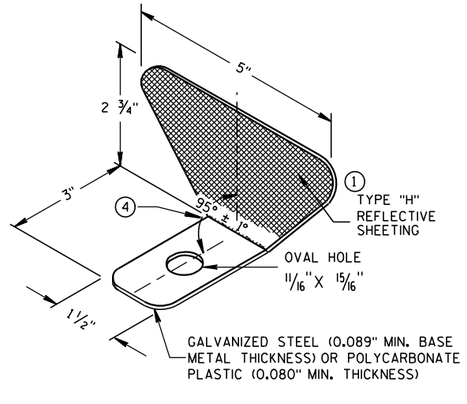
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ①

REFLECTOR SPACING ②

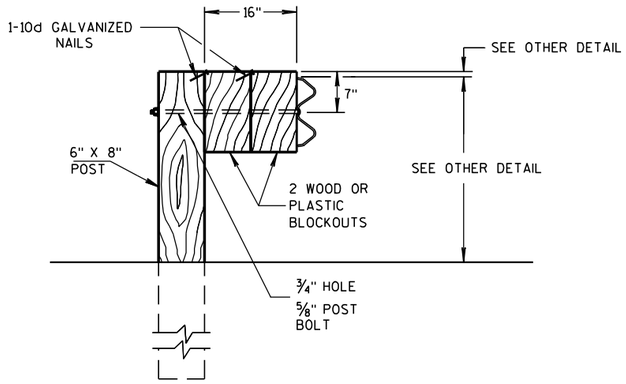
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ③ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 ④ 2	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

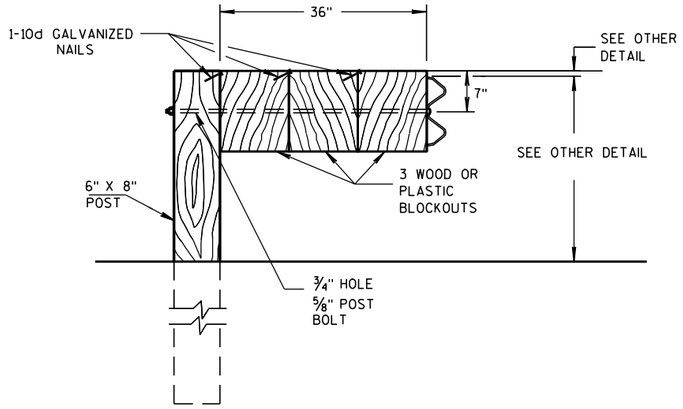
S.D.D. 14 B 42-2b

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.

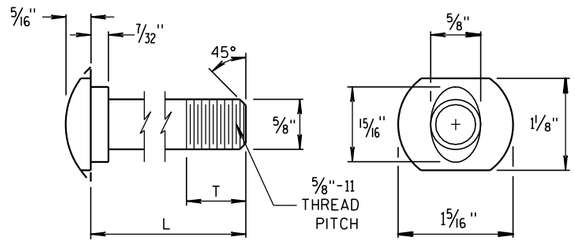


DETAIL FOR 36" BLOCKOUT DEPTH

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.

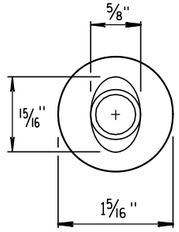
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

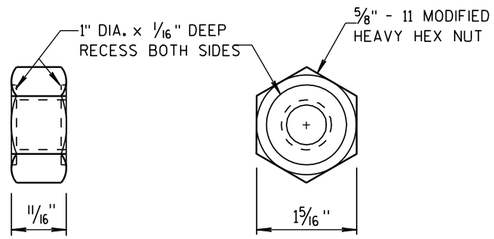


POST BOLT TABLE

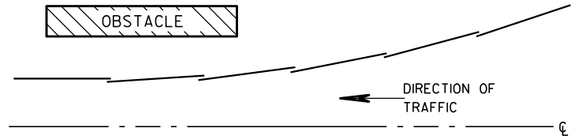
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

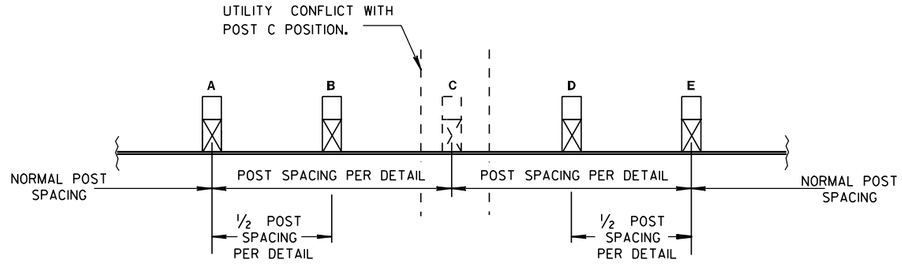


POST BOLT AND RECESS NUT

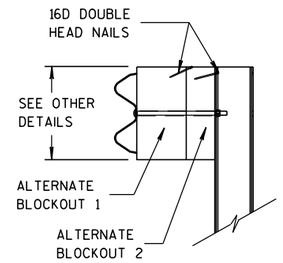


PLAN VIEW

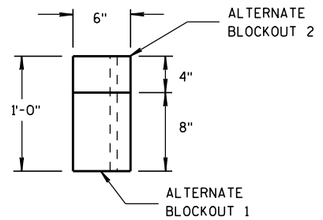
BEAM LAPPING DETAIL



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.

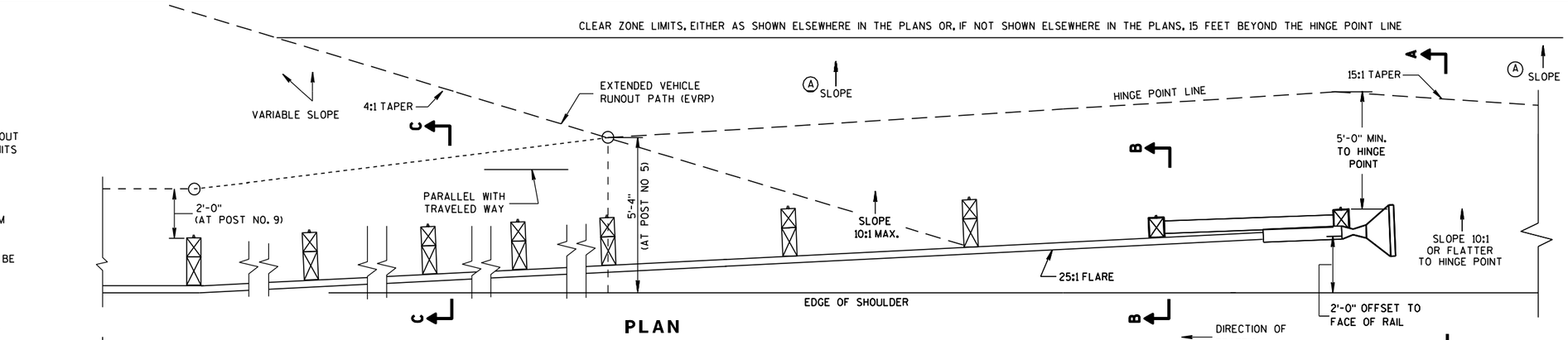
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

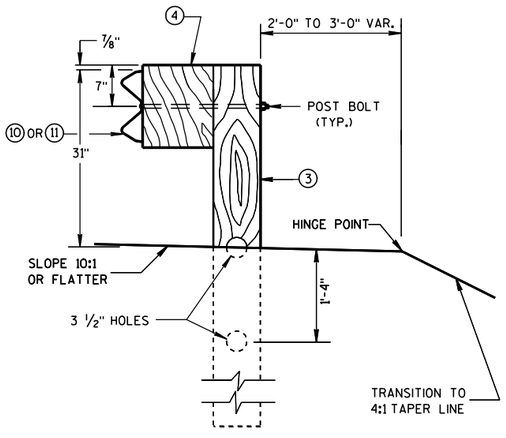
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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.

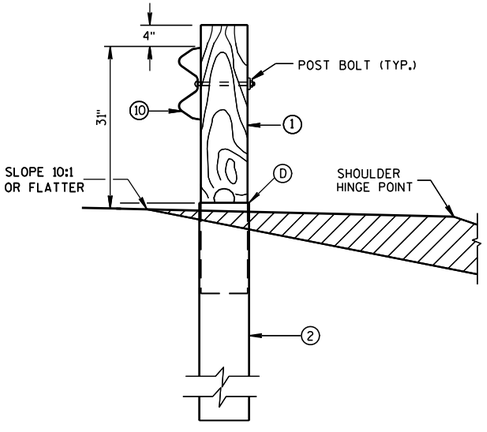
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

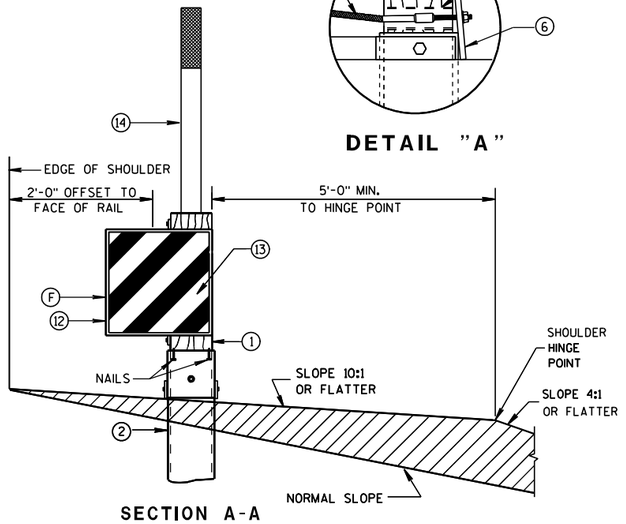




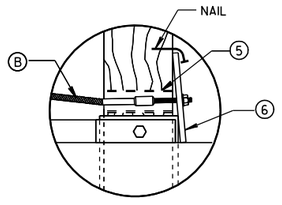
SECTION C-C
TYPICAL AT POST NOS. 3-9



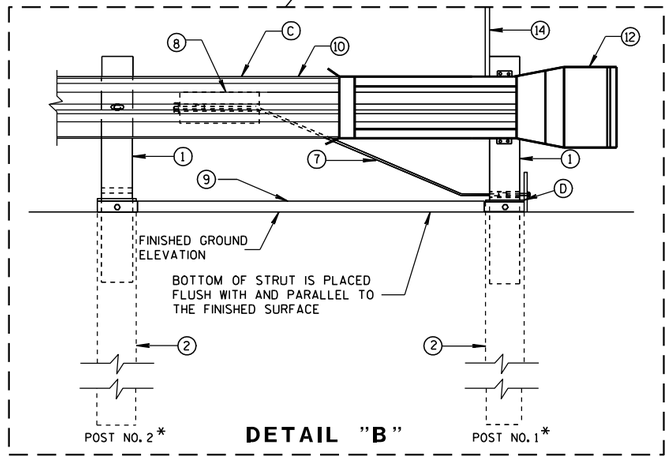
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

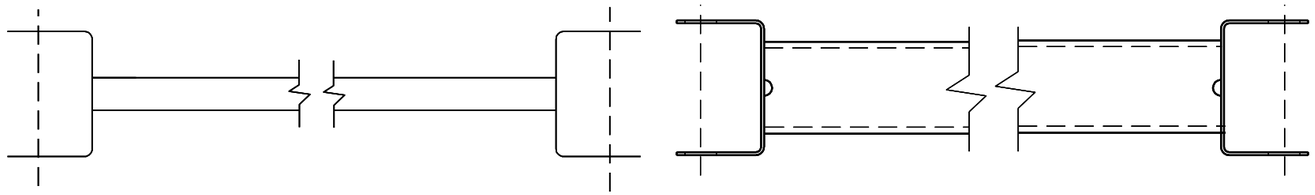
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 44-1a

6

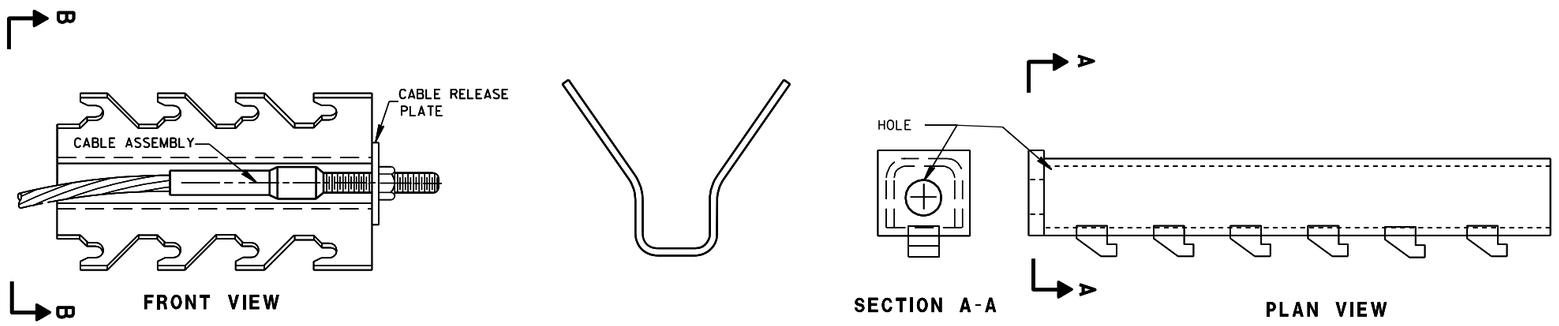
S.D.D. 14 B 44-1a



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)



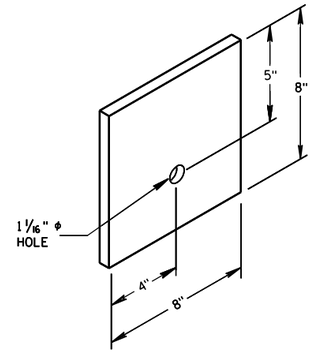
FRONT VIEW

SECTION B-B

SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

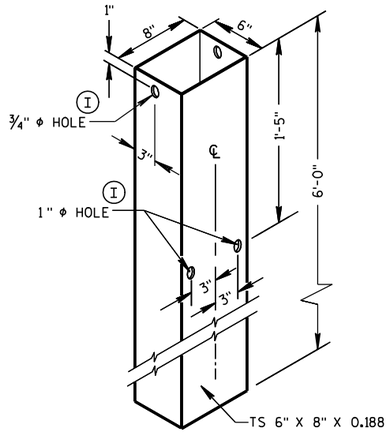
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

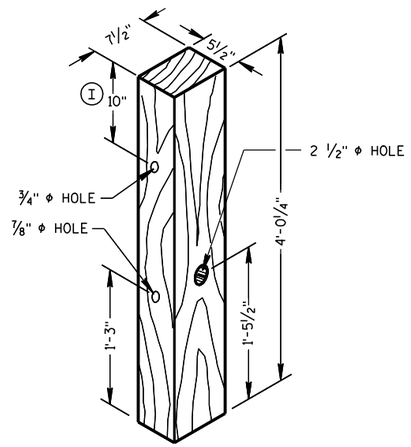
S.D.D. 14 B 44-1b

6

S.D.D. 14 B 44-1b

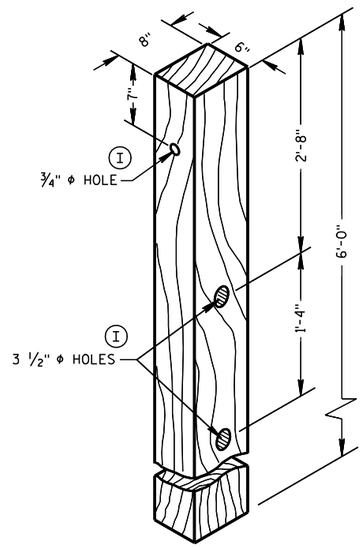


FOUNDATION TUBE (2)



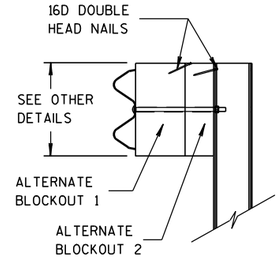
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

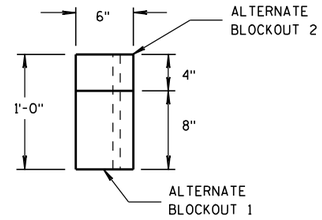


POSTS NUMBER 3-9

WOOD CRT POST (3)

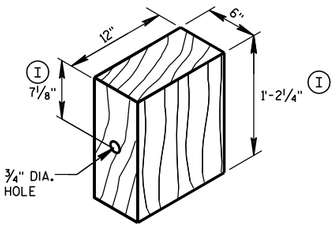


SIDE VIEW



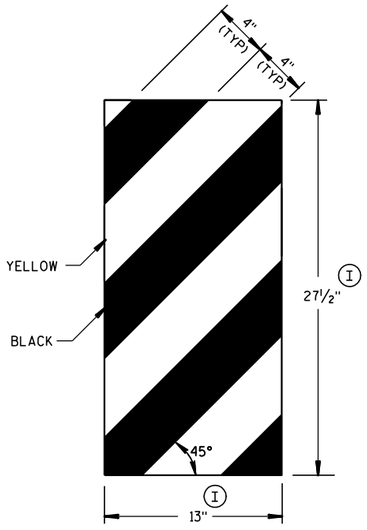
TOP VIEW

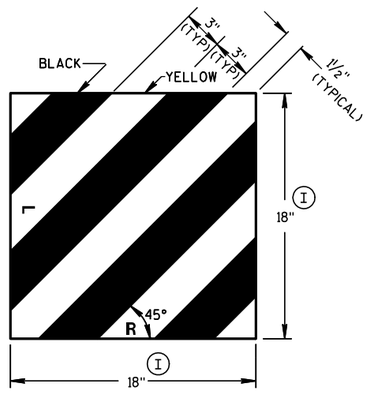
ALTERNATE WOOD BLOCKOUT DETAIL



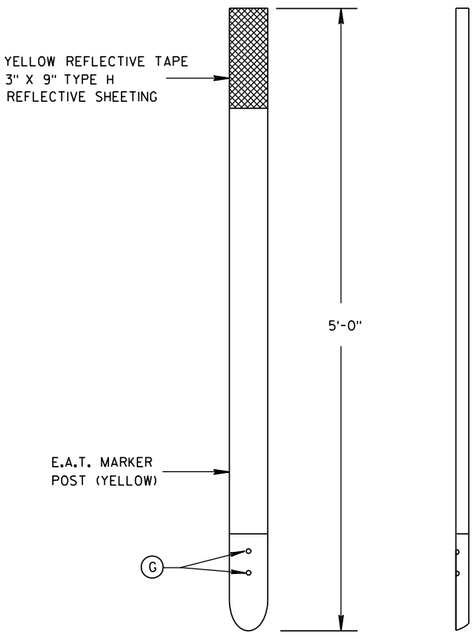
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





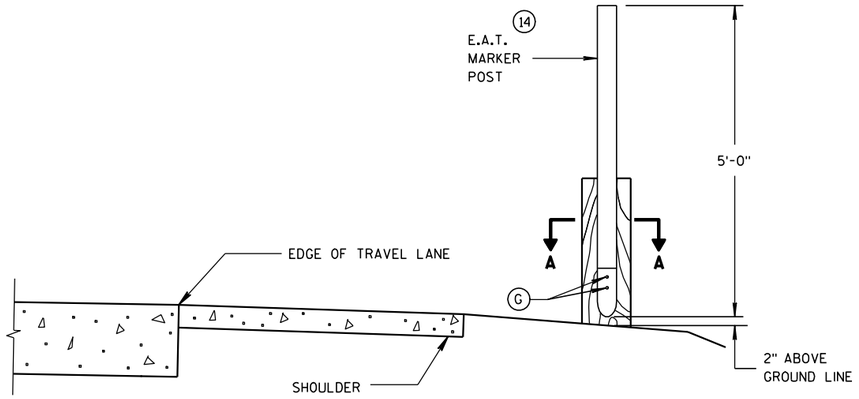
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

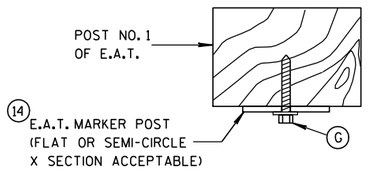
SIDE VIEW

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)



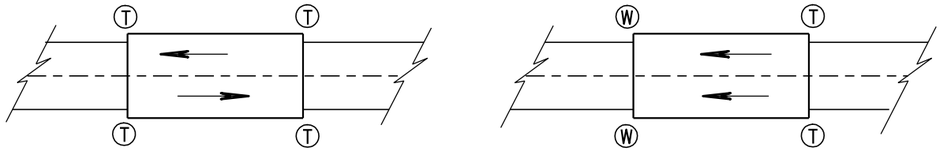
SECTION A-A

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
[illegible]ENT
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

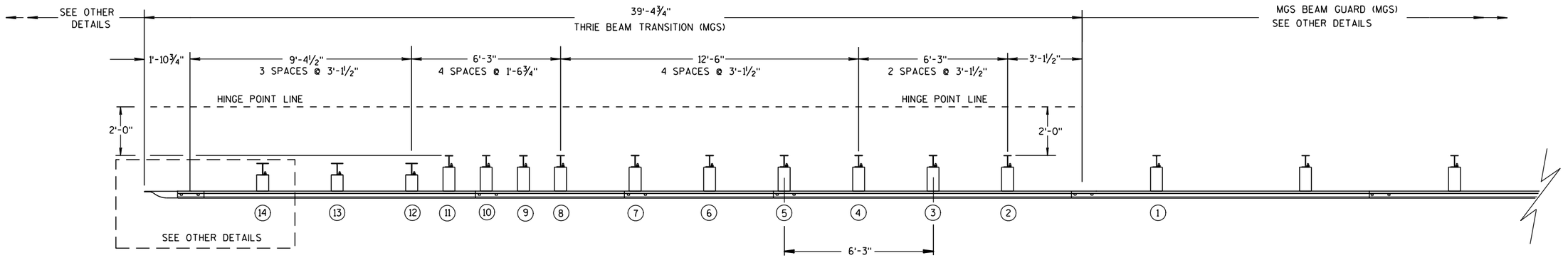
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

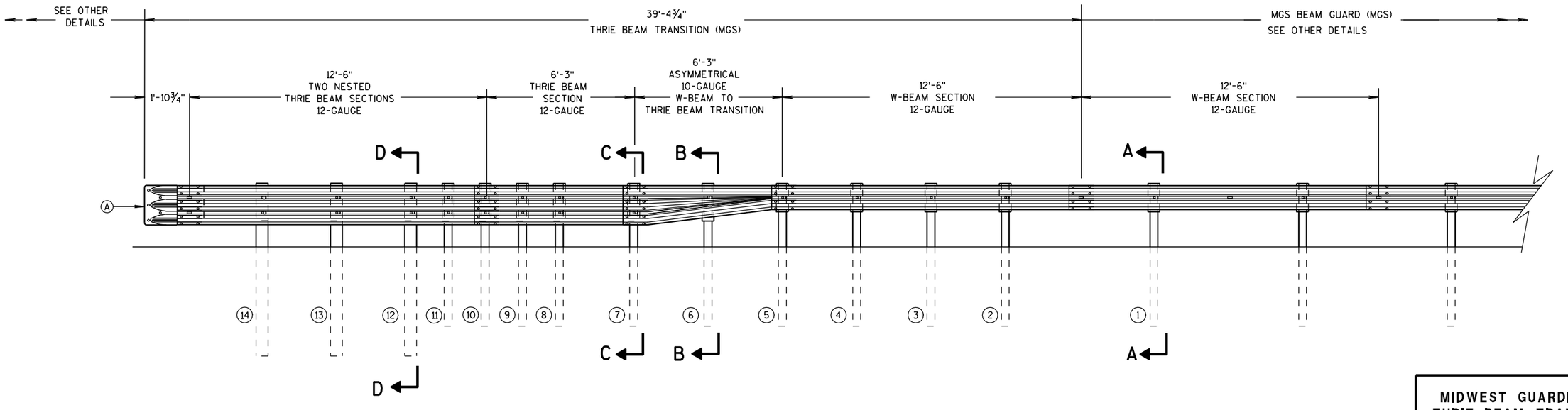
TRANSITION USES STEEL POSTS ONLY.

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

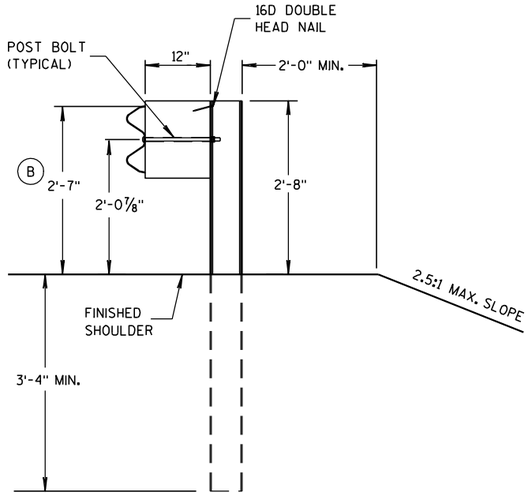
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3a

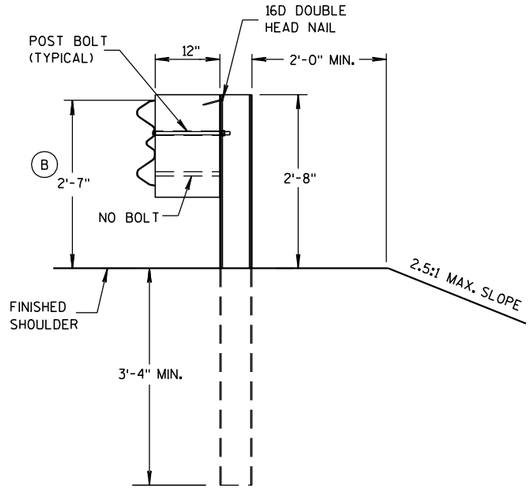
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



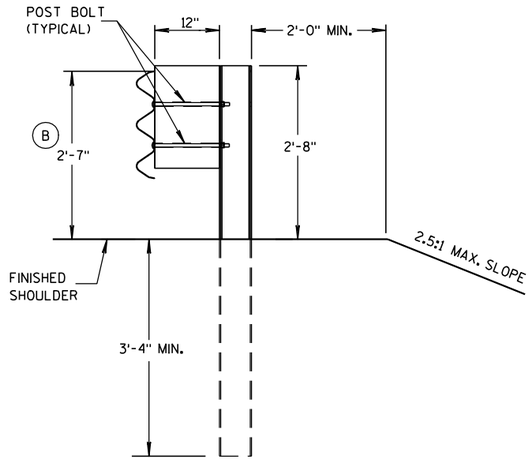
SECTION A-A

POSTS 1-5



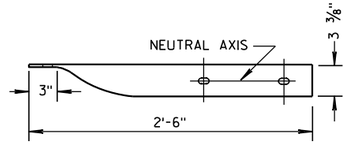
SECTION B-B

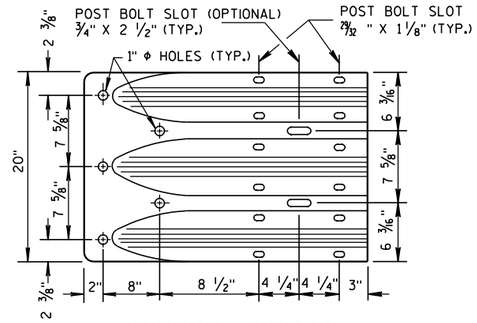
POST 6



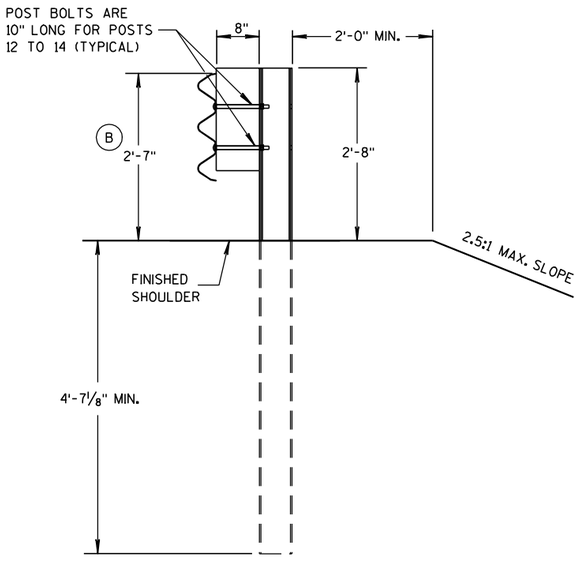
SECTION C-C

POSTS 7-11





THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-14

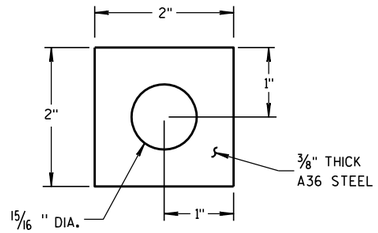
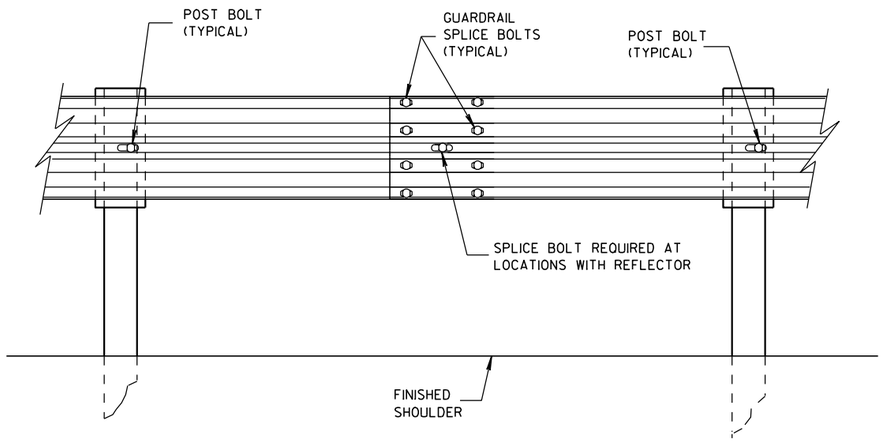
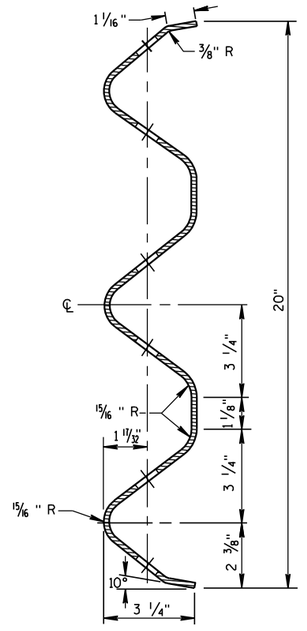


PLATE WASHER DETAIL



SPLICE DETAIL



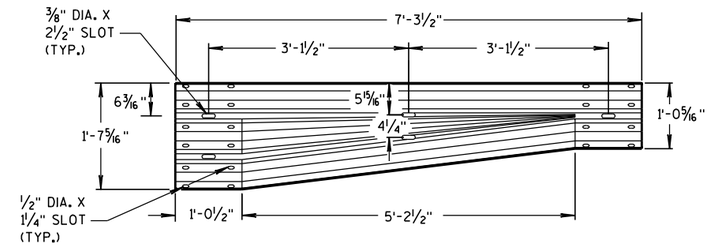
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

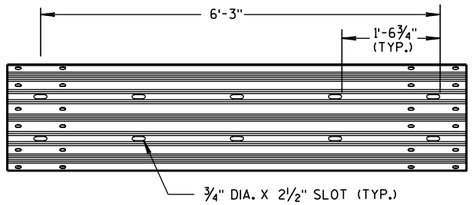
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

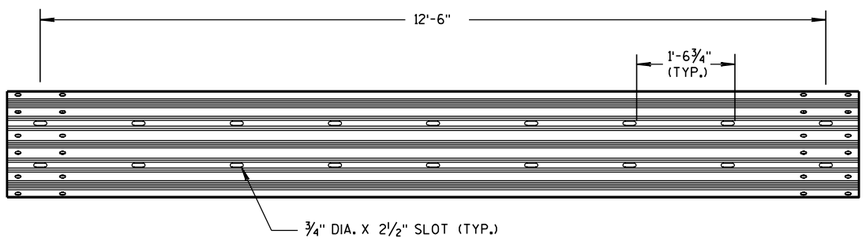
S.D.D. 14 B 45-3b



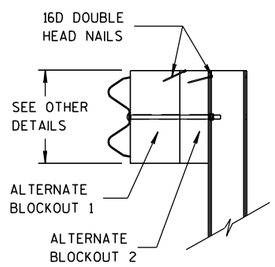
W-BEAM TO THRIE BEAM TRANSITION SECTION



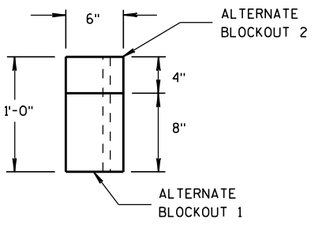
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

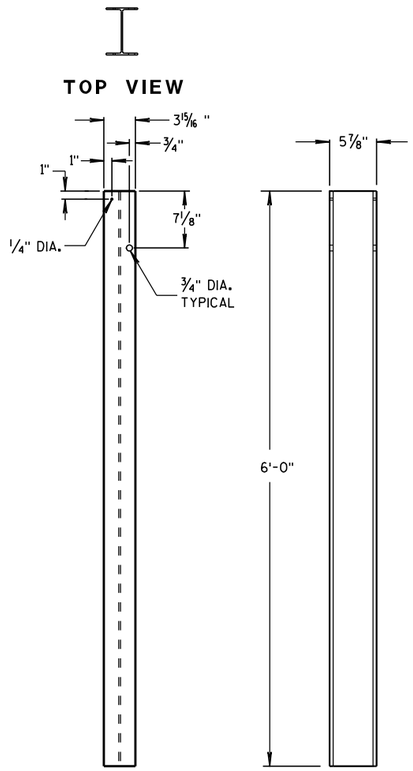


SIDE VIEW



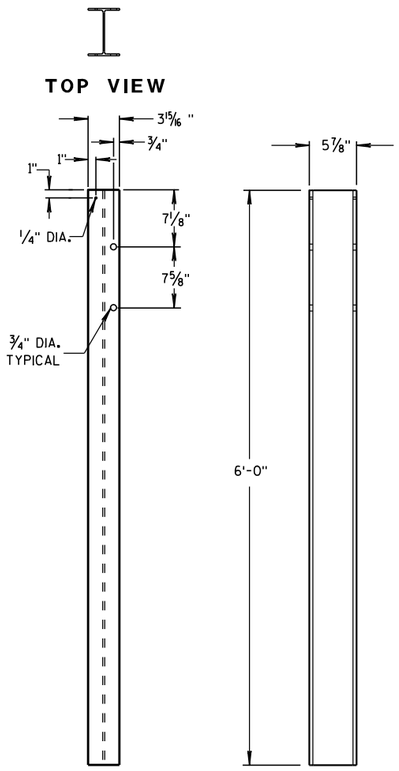
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



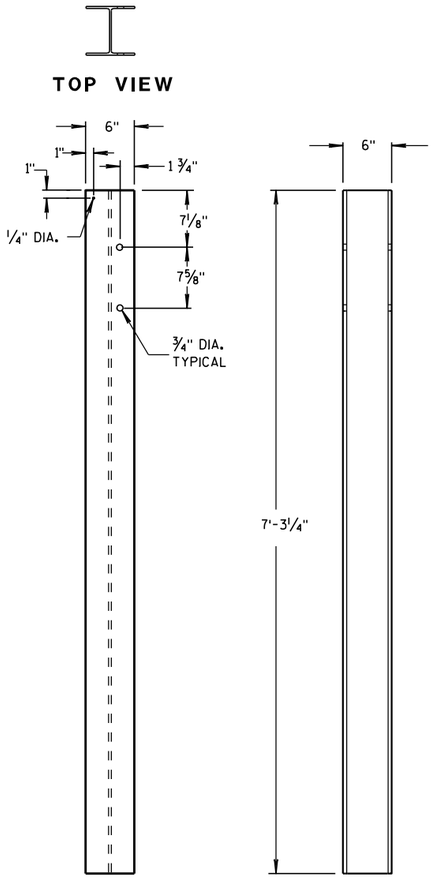
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5



FRONT VIEW SIDE VIEW

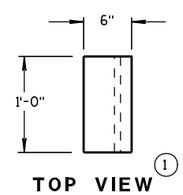
STEEL POSTS 6-11



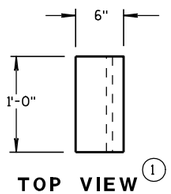
FRONT VIEW SIDE VIEW

STEEL POSTS 12-14

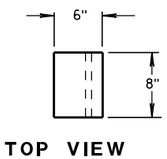
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



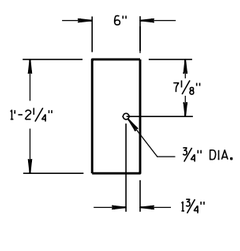
TOP VIEW (1)



TOP VIEW (1)

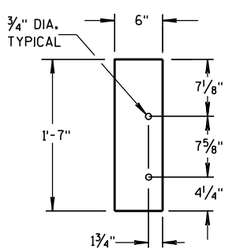


TOP VIEW



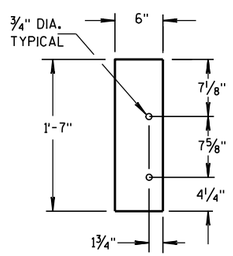
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

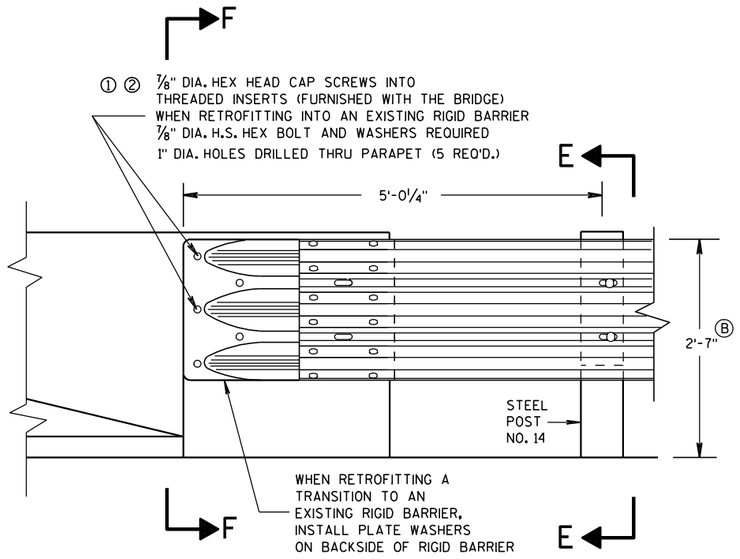
BLOCKOUT POSTS 12-14

STEEL POST SIZES

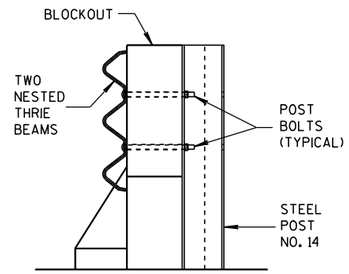
POST NUMBER	SECTION TYPE	LENGTH
1	W6x9	72"
2	W6x9	72"
3	W6x9	72"
4	W6x9	72"
5	W6x9	72"
6	W6x9	72"
7	W6x9	72"
8	W6x9	72"
9	W6x9	72"
10	W6x9	72"
11	W6x9	72"
12	W6x15	87 1/8"
13	W6x15	87 1/8"
14	W6x15	87 1/8"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

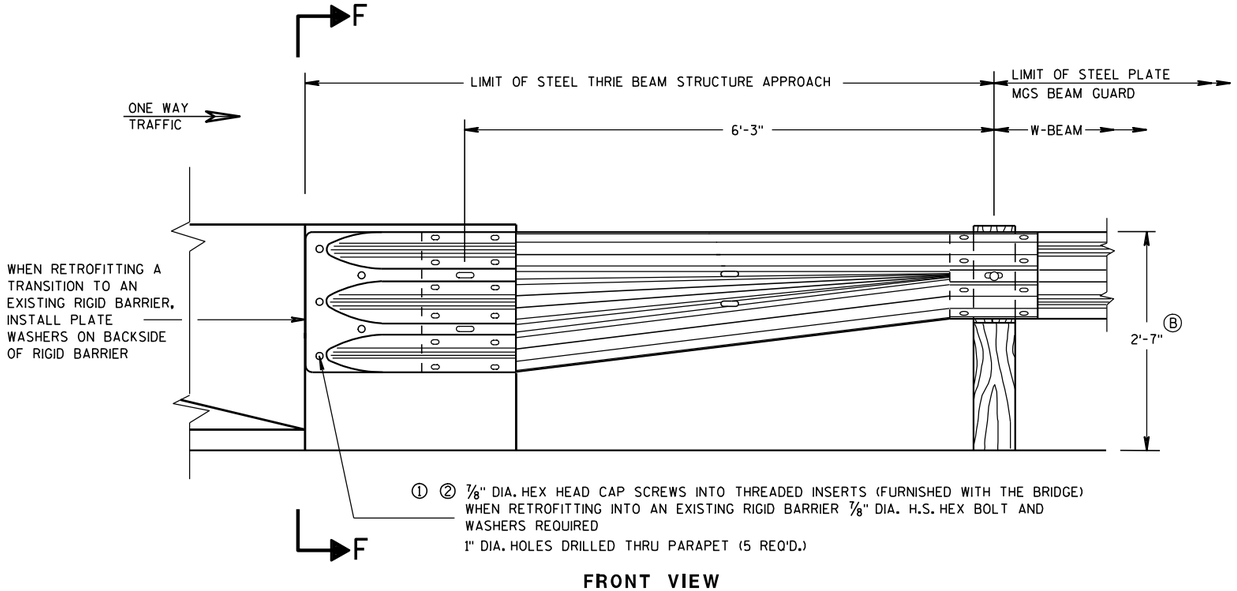
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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.

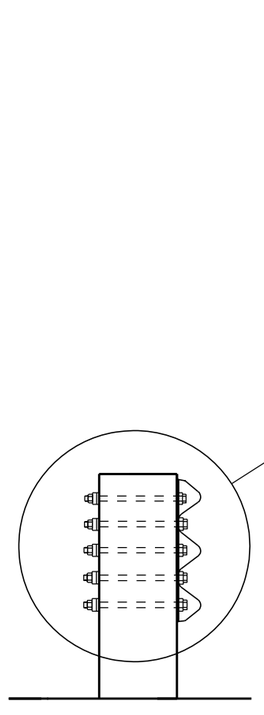
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

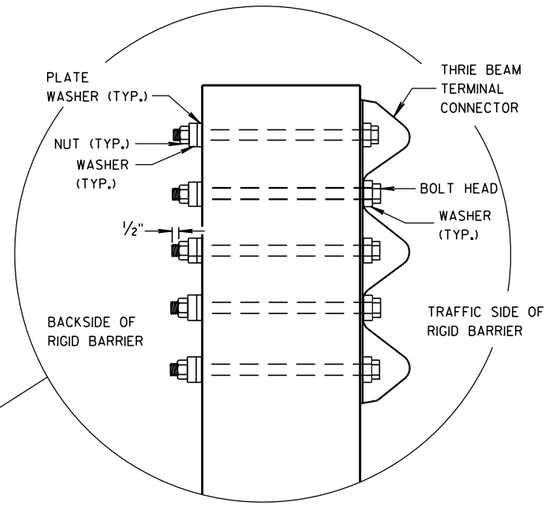
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

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.

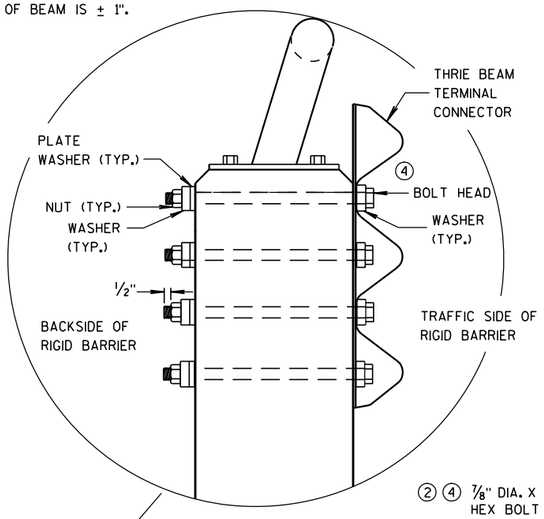
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

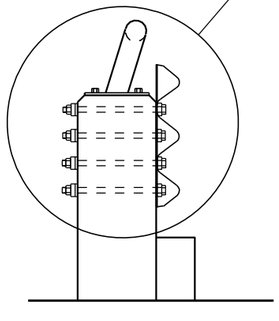
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③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2". BLOCK IS INCIDENTAL TO THE CONTRACT.

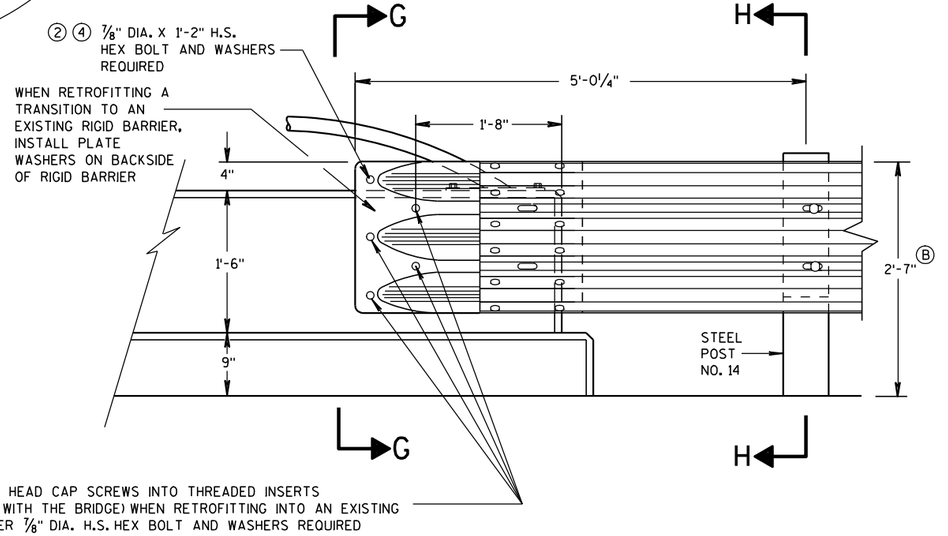
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

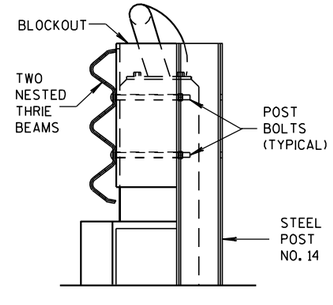




SECTION G-G

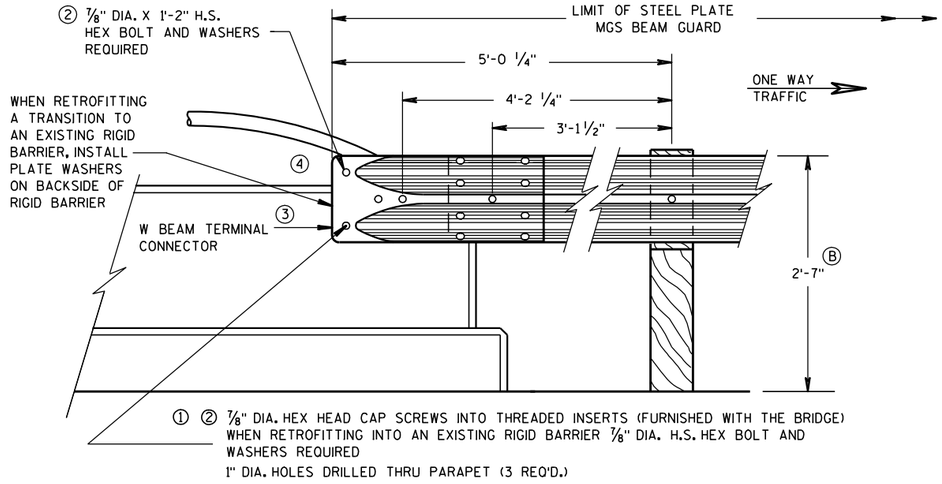


FRONT VIEW



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

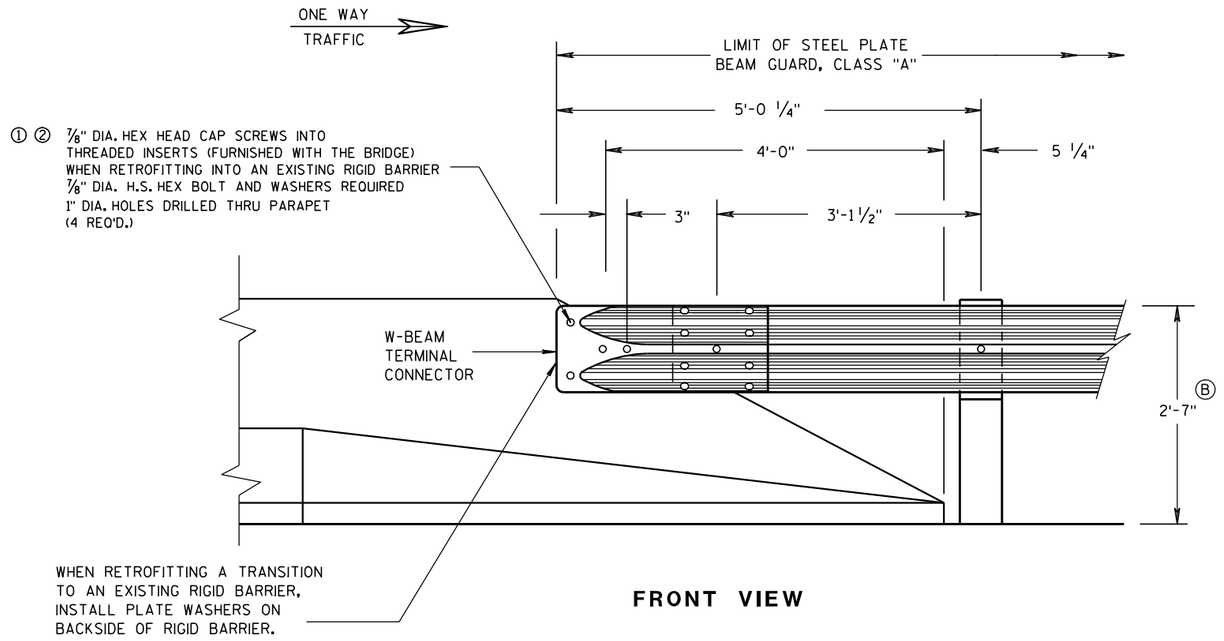
FHWA

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S.D.D. 14 B 45-3e

6

S.D.D. 14 B 45-3e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

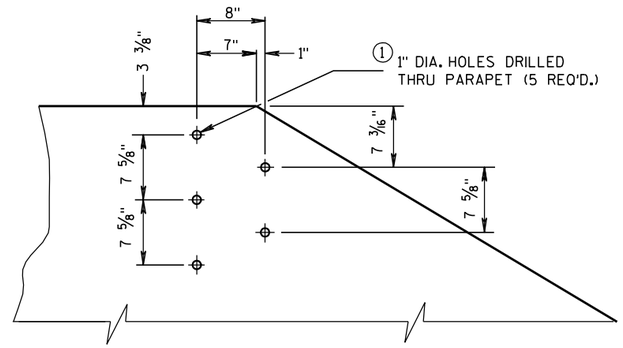
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

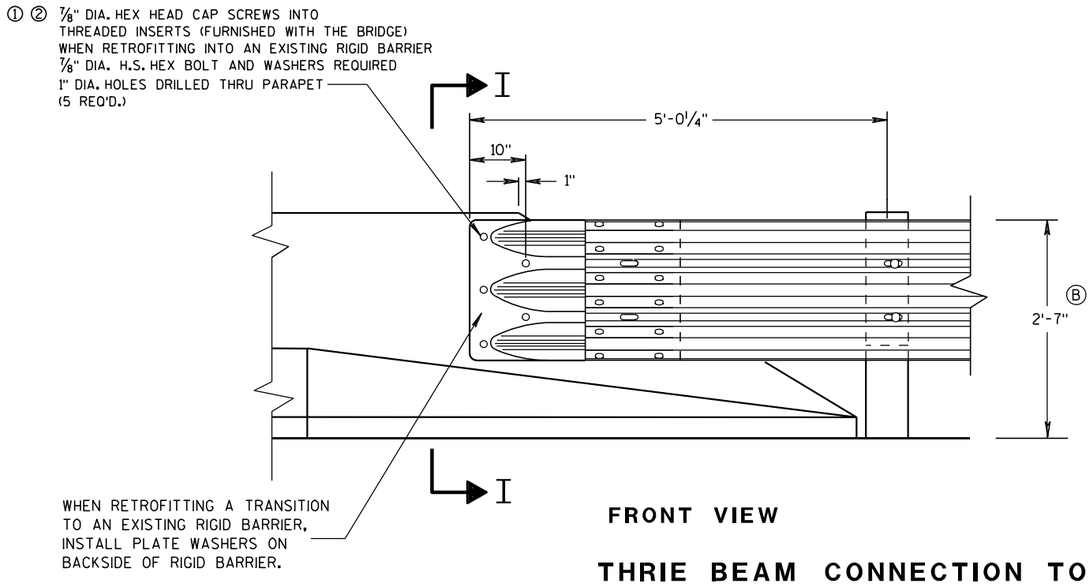
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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.

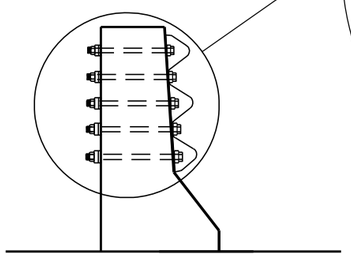
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



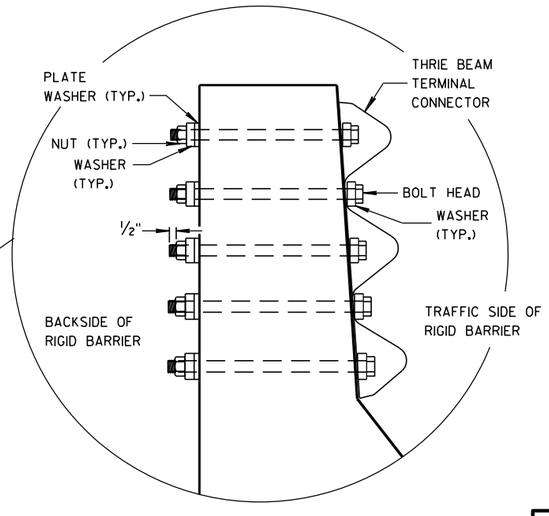
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



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. Zogg — ROADWAY STANDARDS ENGINEER

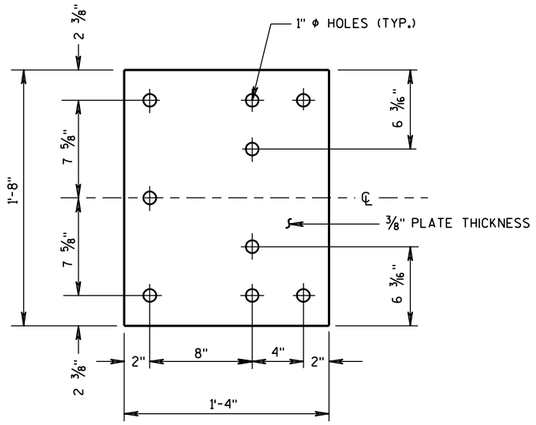
FHWA

6

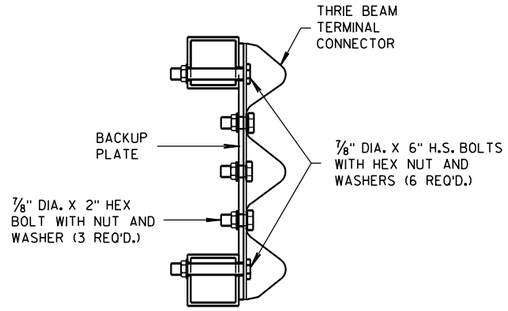
S.D.D. 14 B 45-3f

6

S.D.D. 14 B 45-3f



BACK-UP PLATE DETAIL

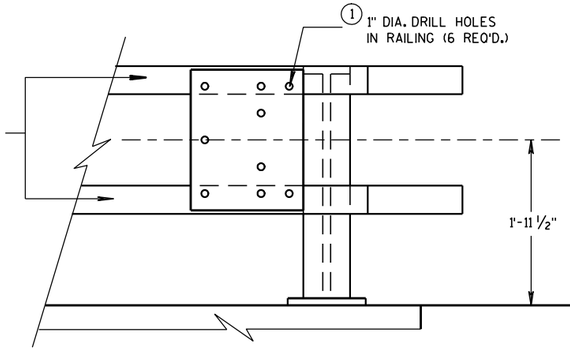


SECTION J-J

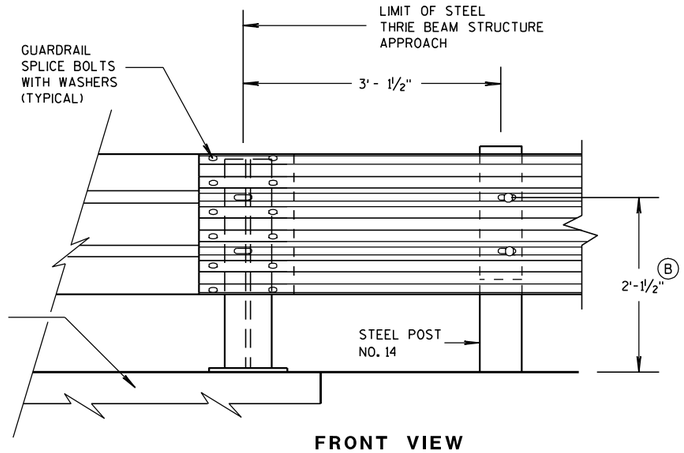
GENERAL NOTES

(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".

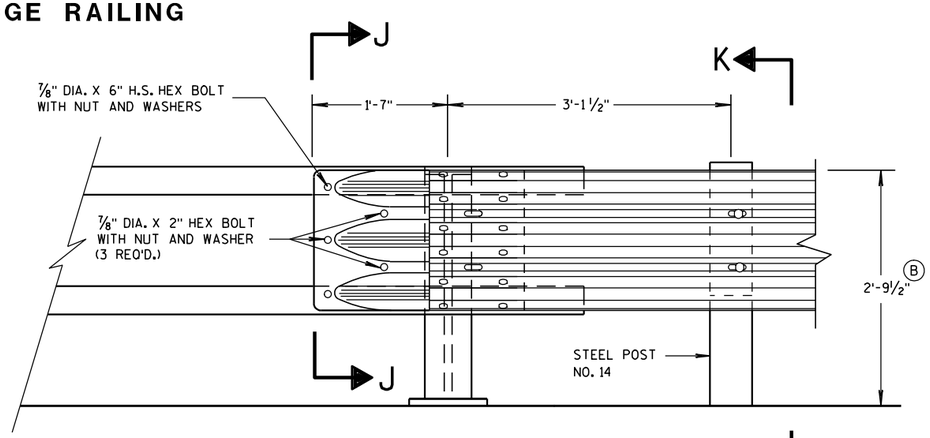


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

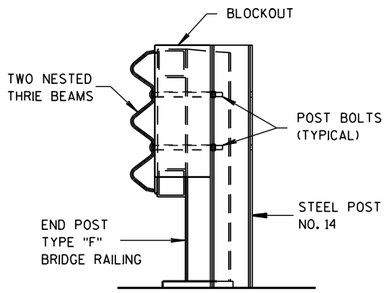


FRONT VIEW

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 FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER

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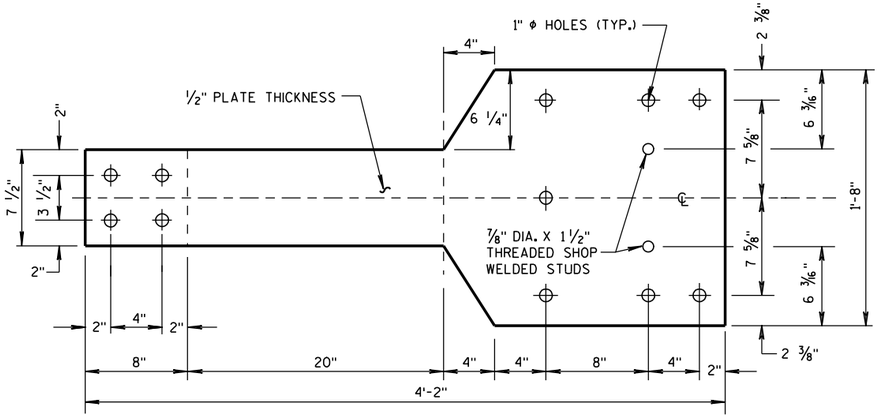
S.D.D. 14 B 45-3g

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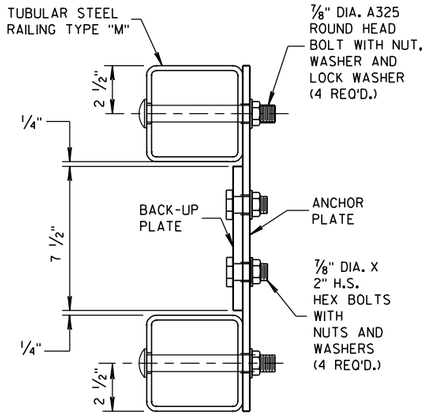
S.D.D. 14 B 45-3g

GENERAL NOTES

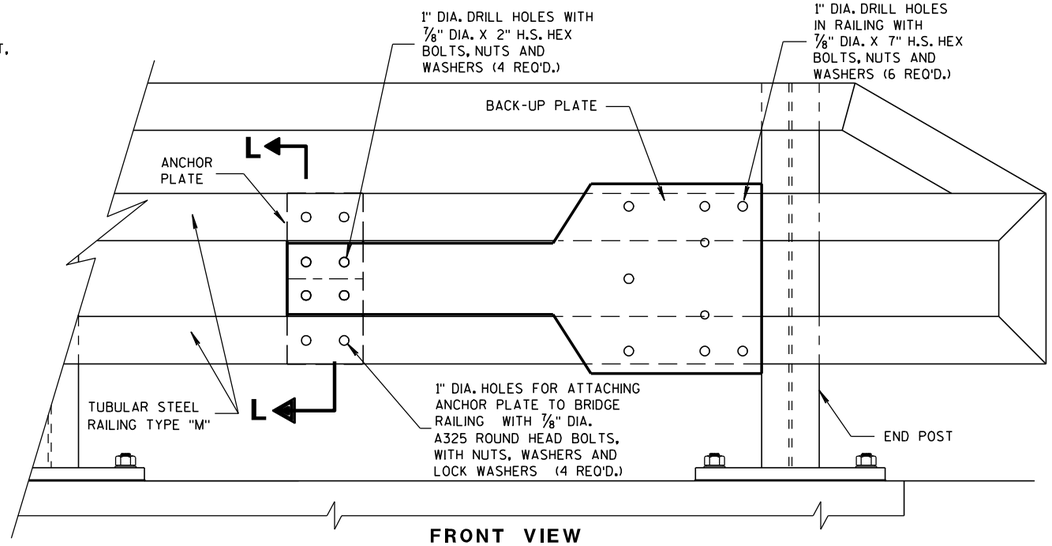
(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

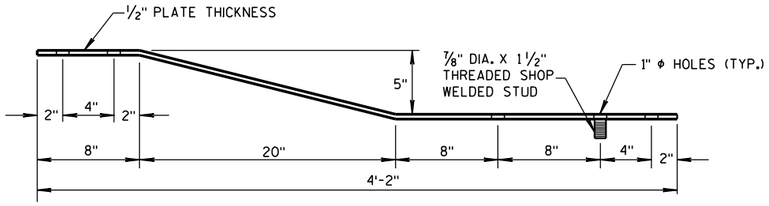


SECTION L-L



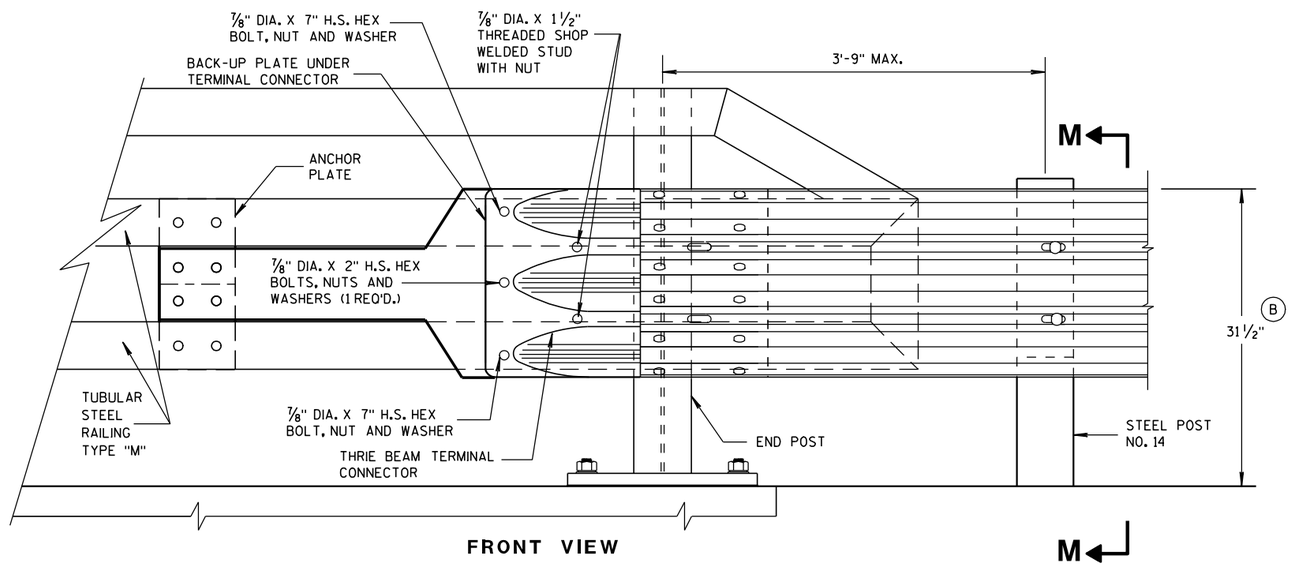
FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"

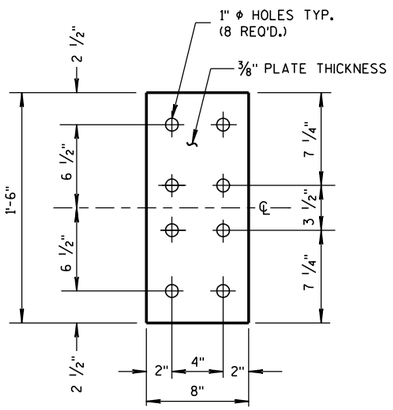


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

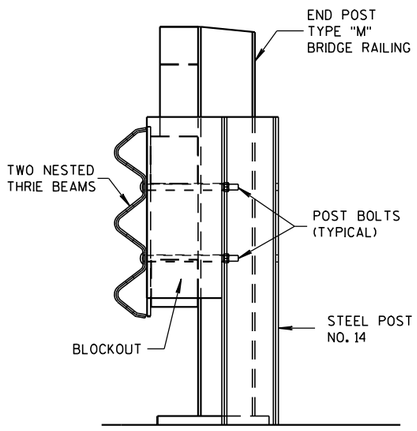


FRONT VIEW

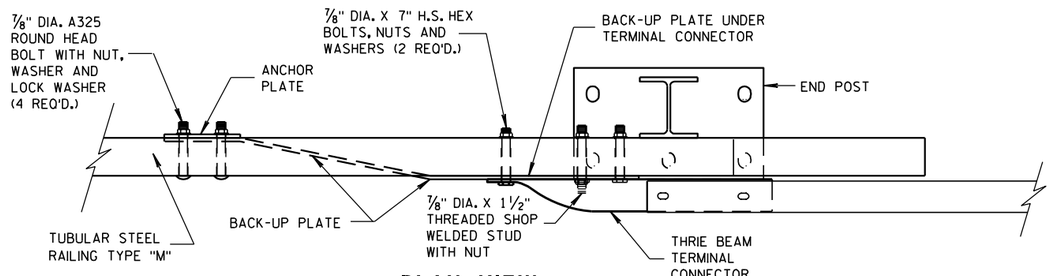


FRONT VIEW

ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



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

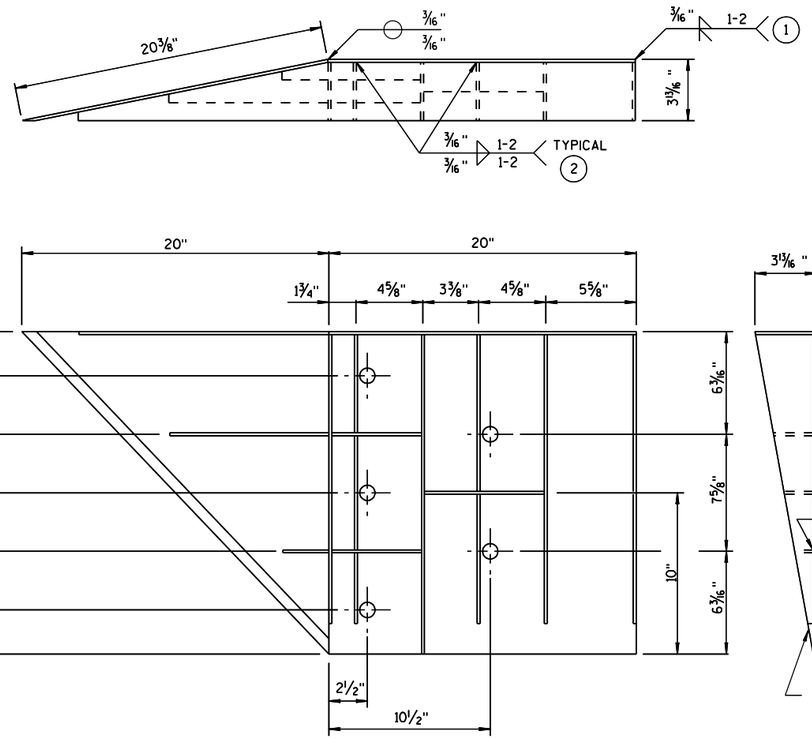
FHWA ENT

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S.D.D. 14 B 45-3h

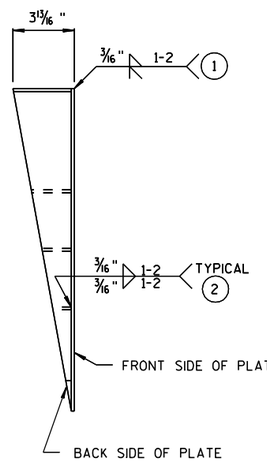
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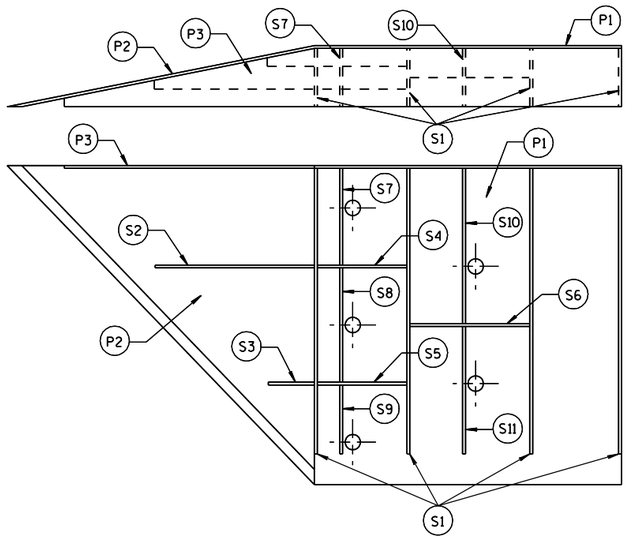
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WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)





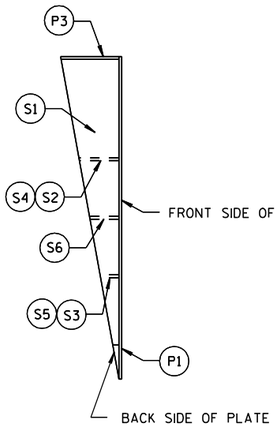


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

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".

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

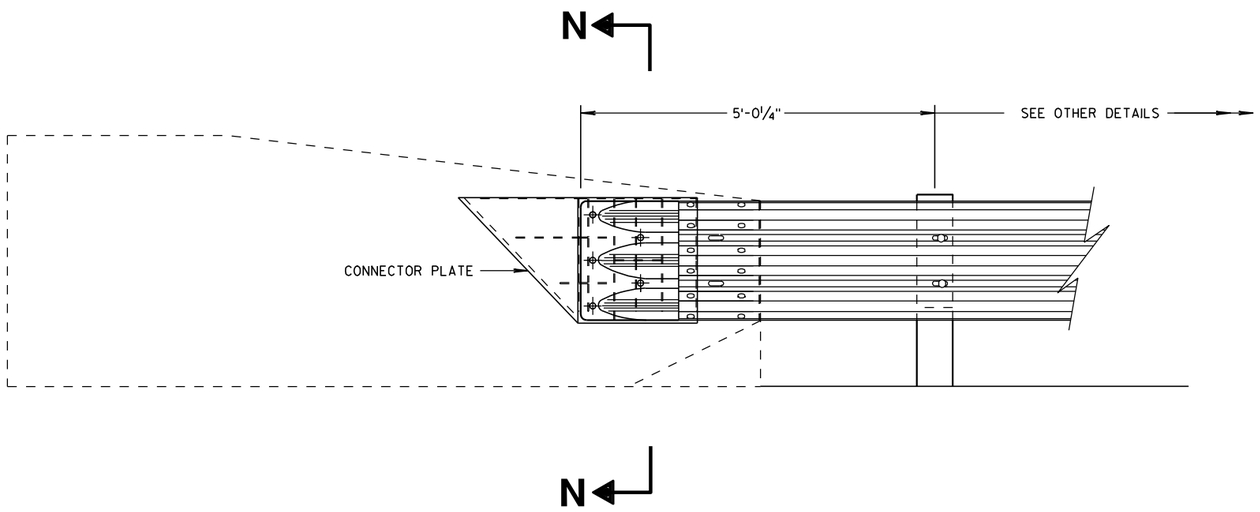
APPROVED
8/31/2012
DATE
/S/ Jerry H ----
ROADWAY STANDARDS ENGINEER
FHWA

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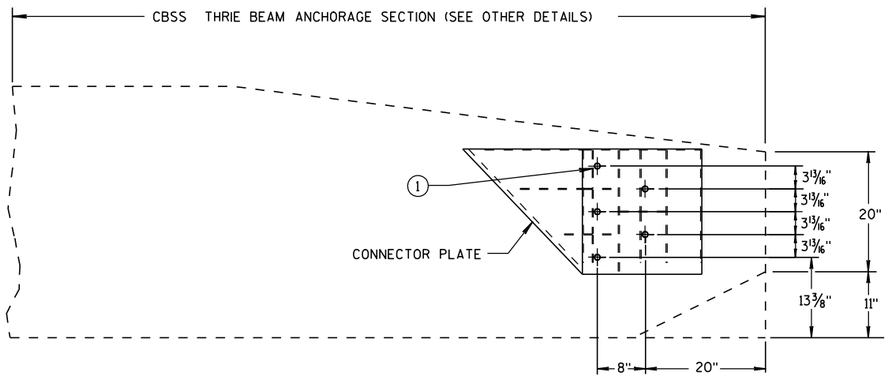
S.D.D. 14 B 45-3i

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S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

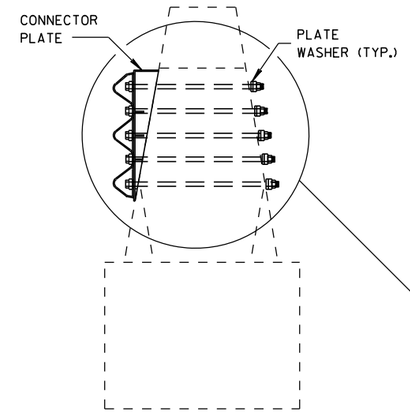


SINGLE SLOPE CONNECTION PLATE PLACEMENT

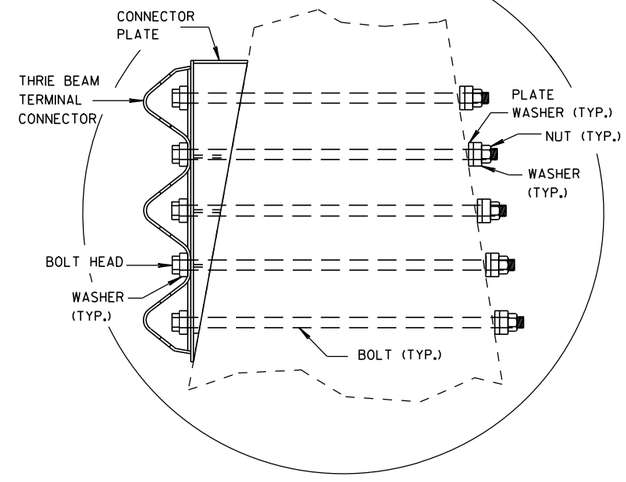
GENERAL NOTES

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

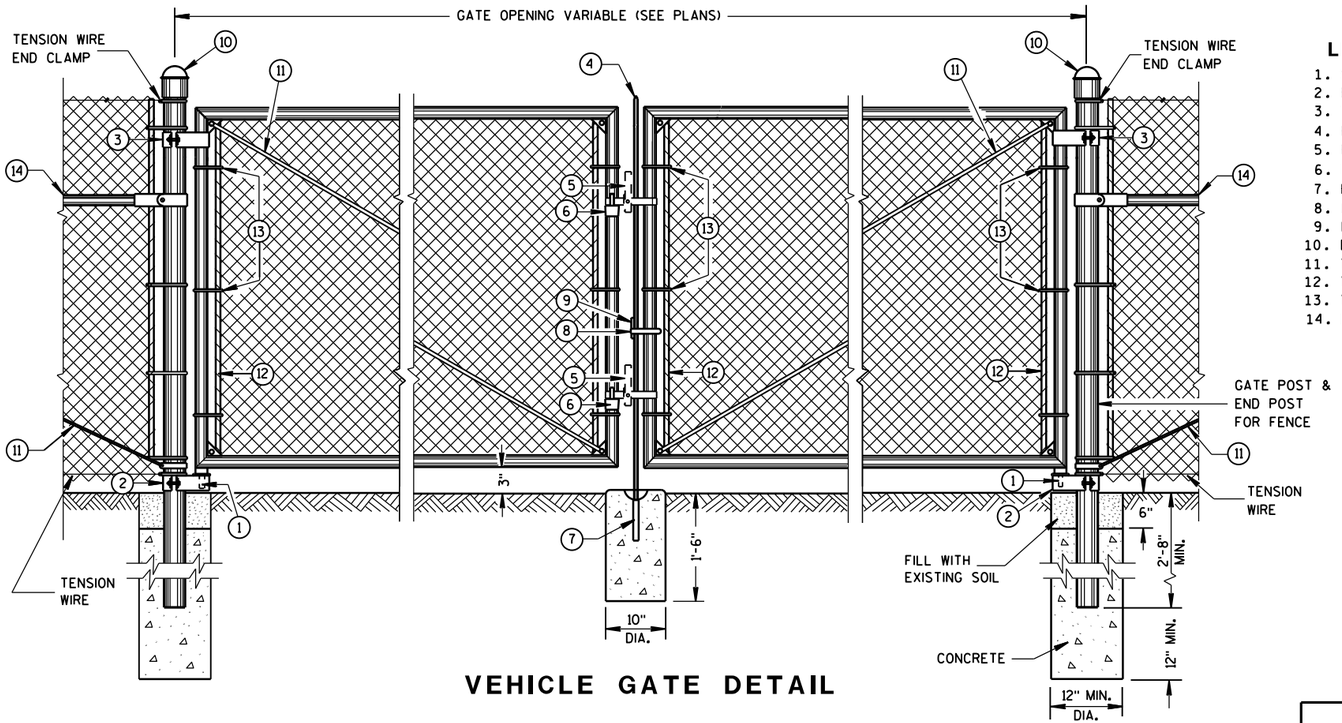
APPROVED
8/31/2012 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

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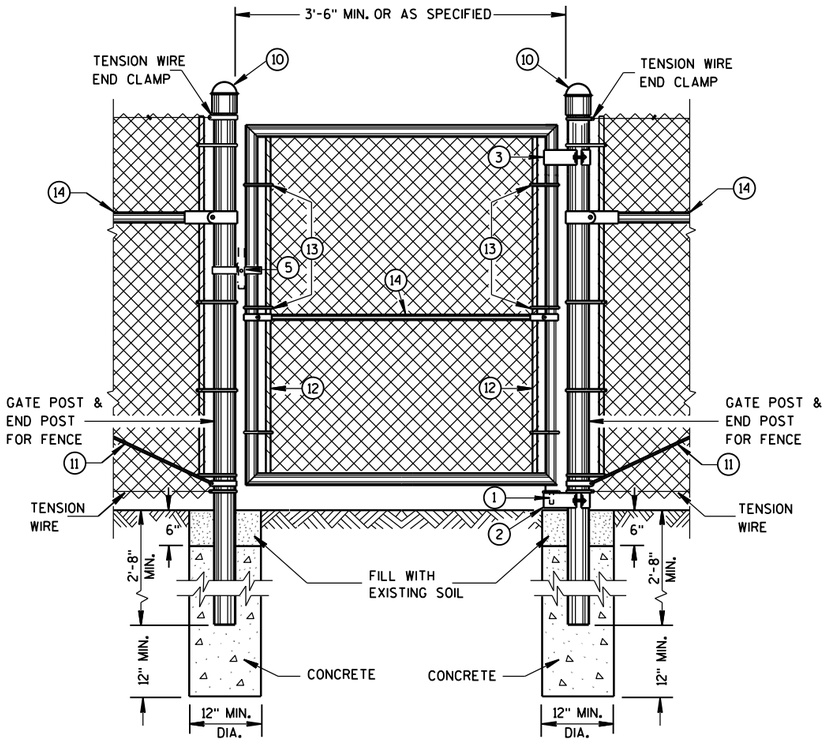
S.D.D. 14 B 45-3j

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S.D.D. 14 B 45-3j



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

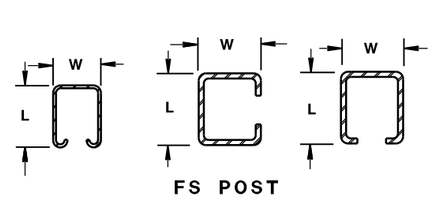
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

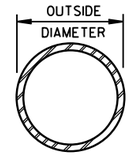
FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.



FS POST



SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FORMED STEEL FENCE POST

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR ROUND STEEL FENCE POST

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

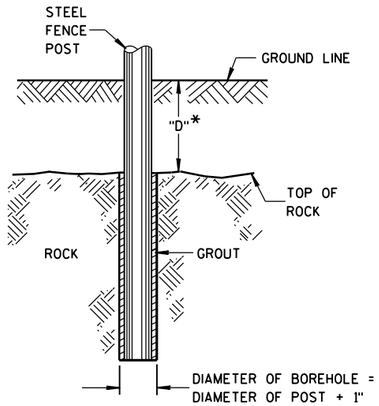
USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

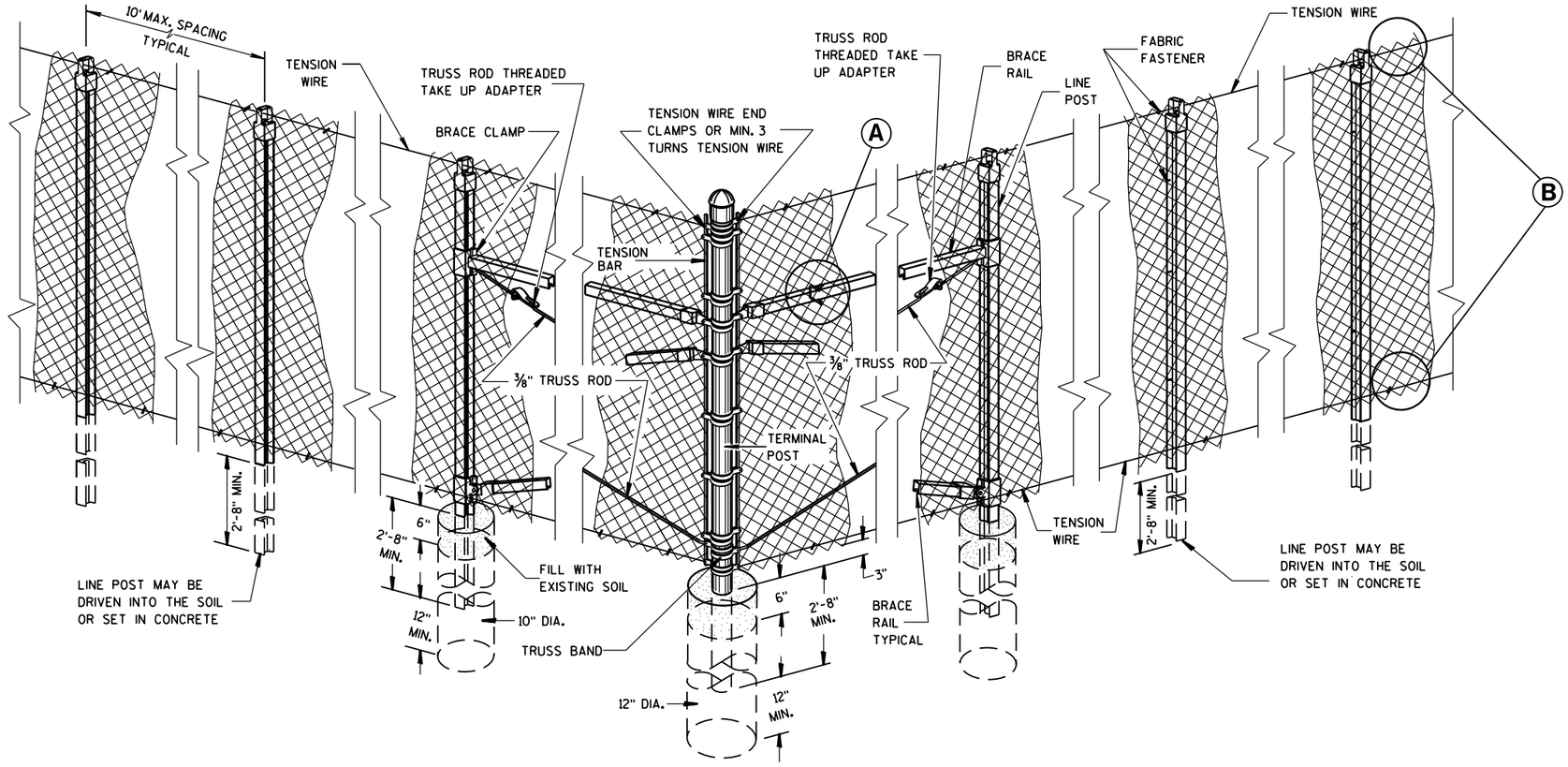
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 15 B 3-13a

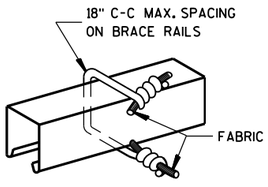


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



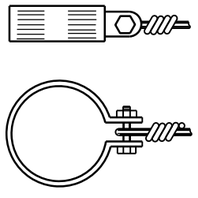
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



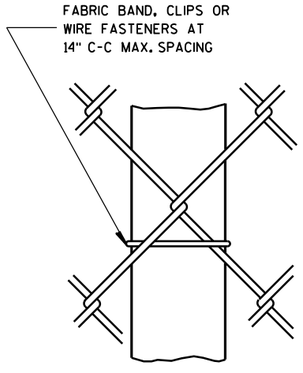
BRACE RAIL

FABRIC FASTENER

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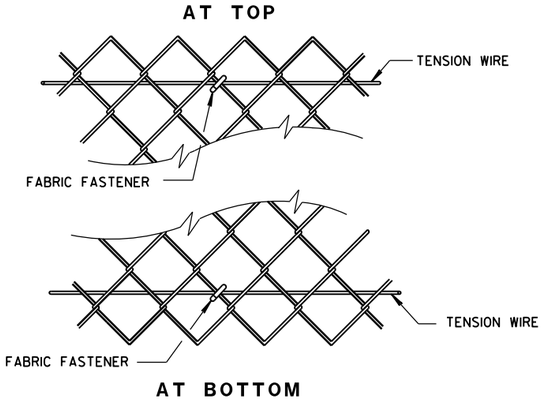
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

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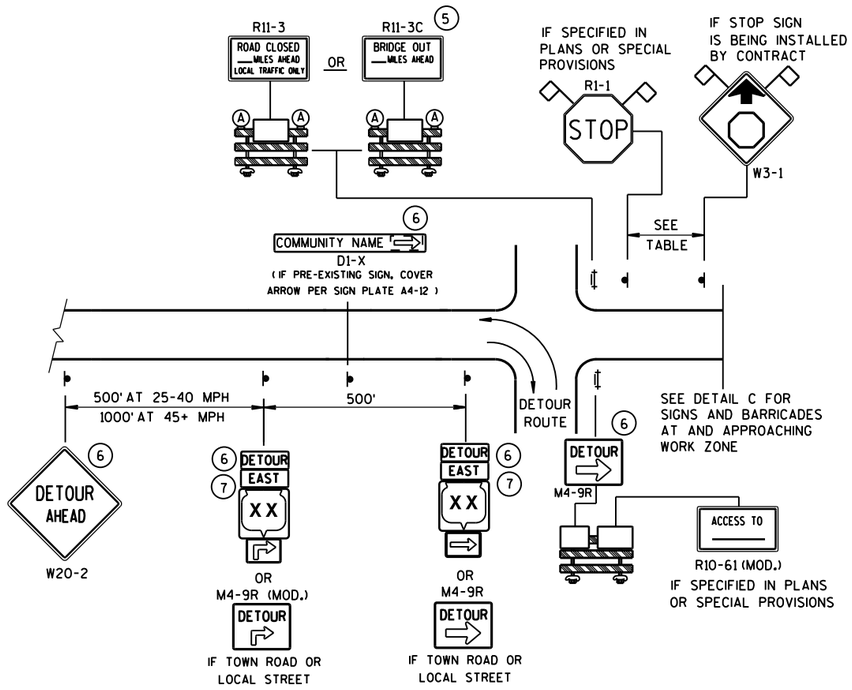
FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/16/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS D ENGINEER
FHWA

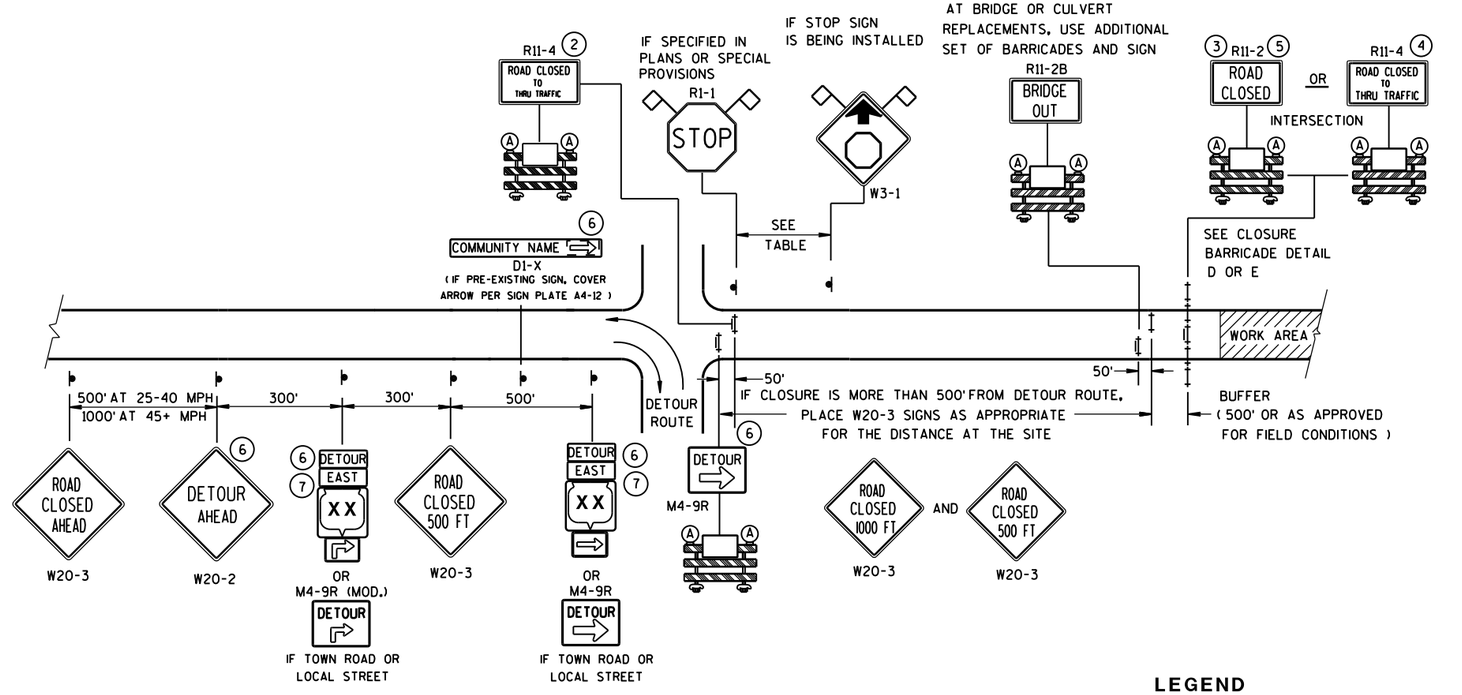
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S.D.D. 15 B 3-13b



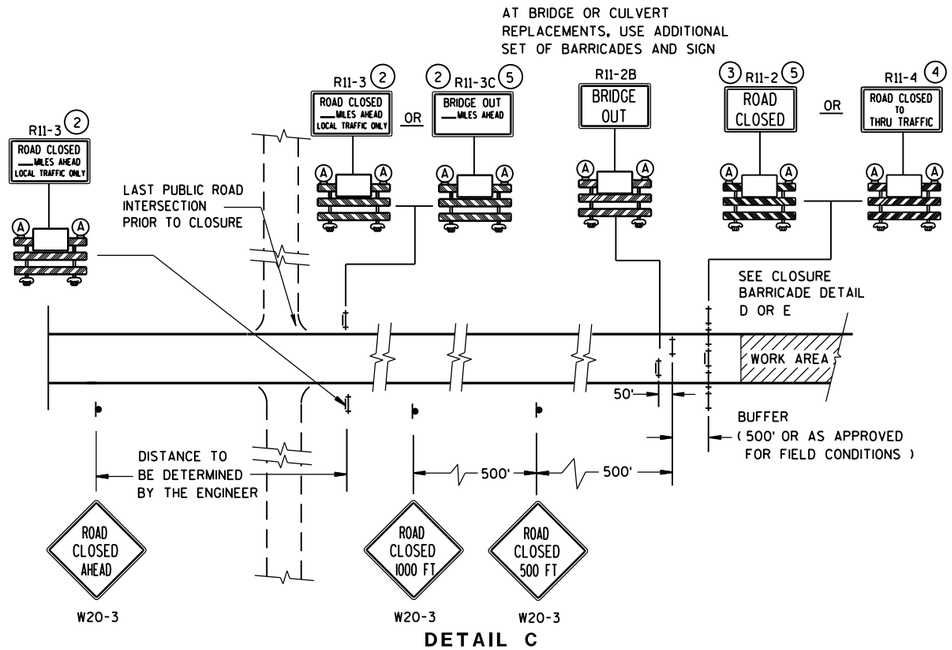
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

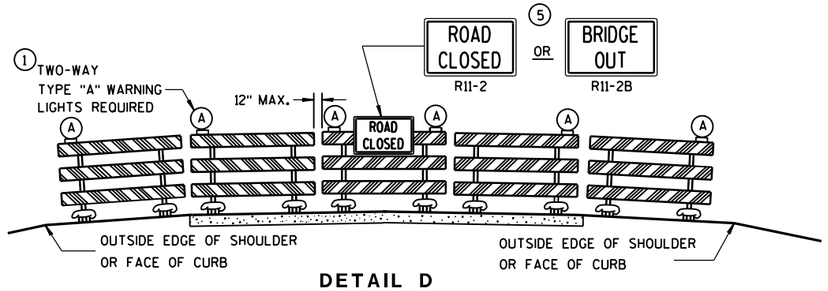
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

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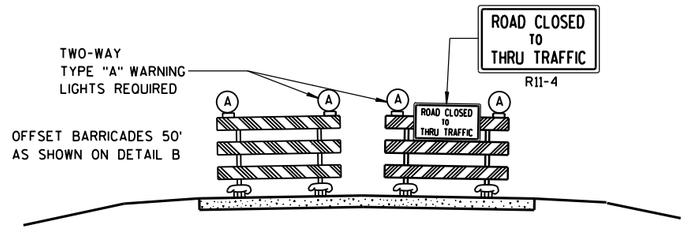
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (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

8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
DESIGN
FHWA

6

S.D.D. 15 C 2-5b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

GENERAL NOTES

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

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. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

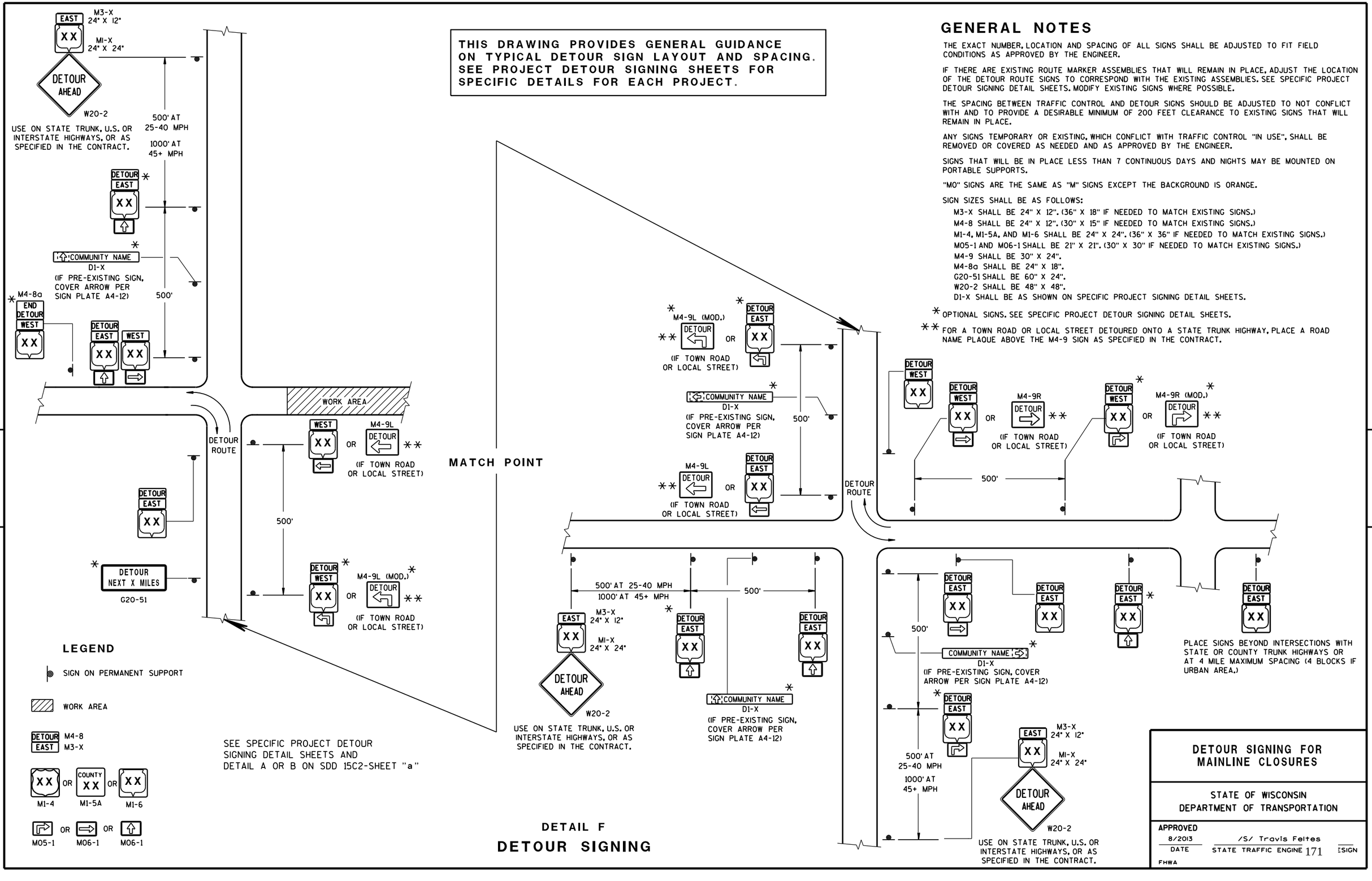
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- 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.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETAIL F

DETOUR SIGNING

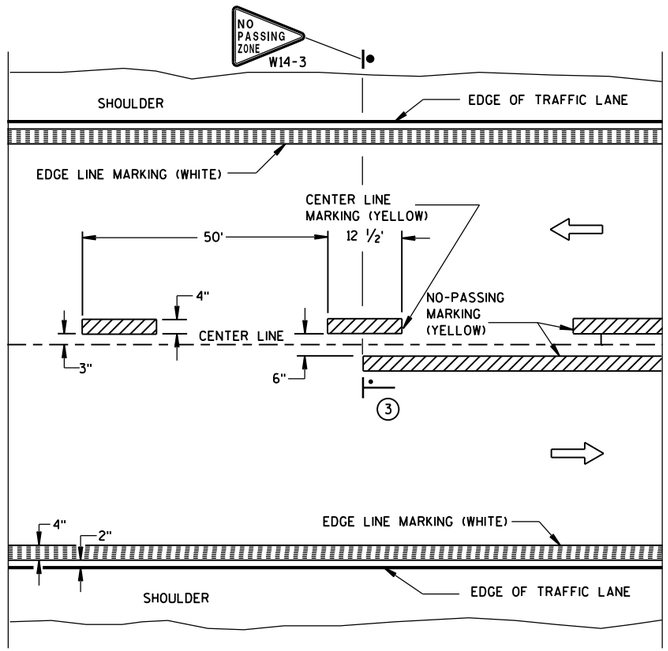
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

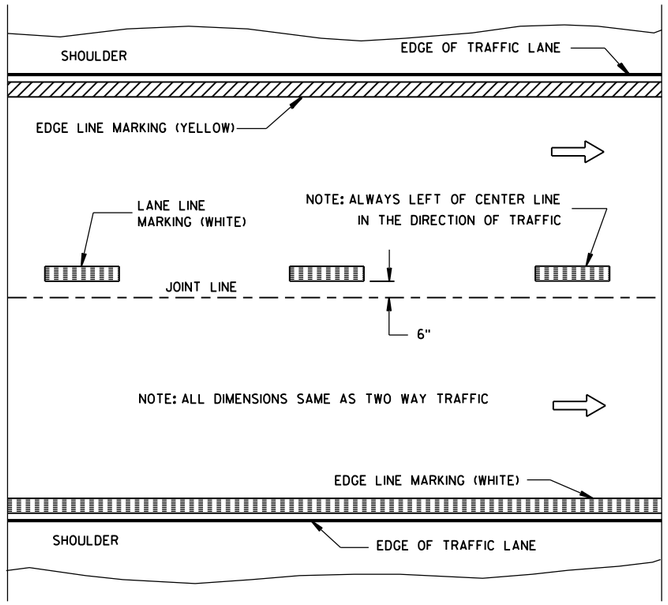
APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINE
FHWA

S.D.D. 15 C 2-5c

6

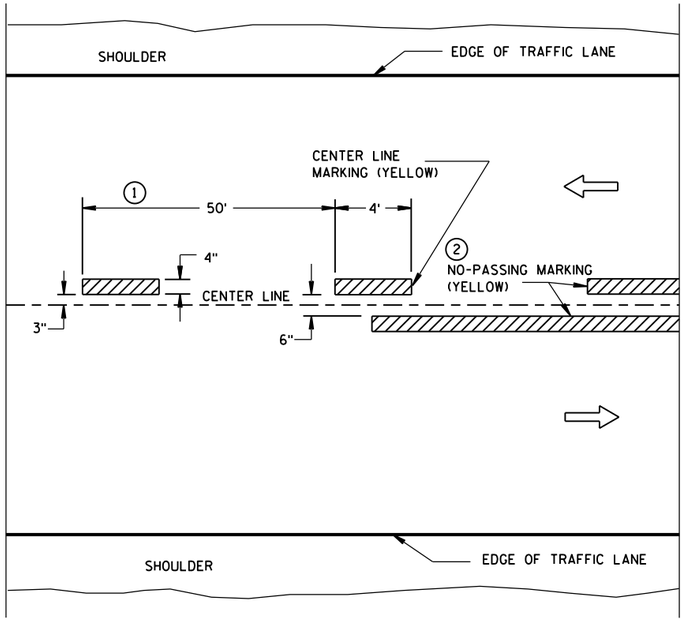


TWO WAY TRAFFIC

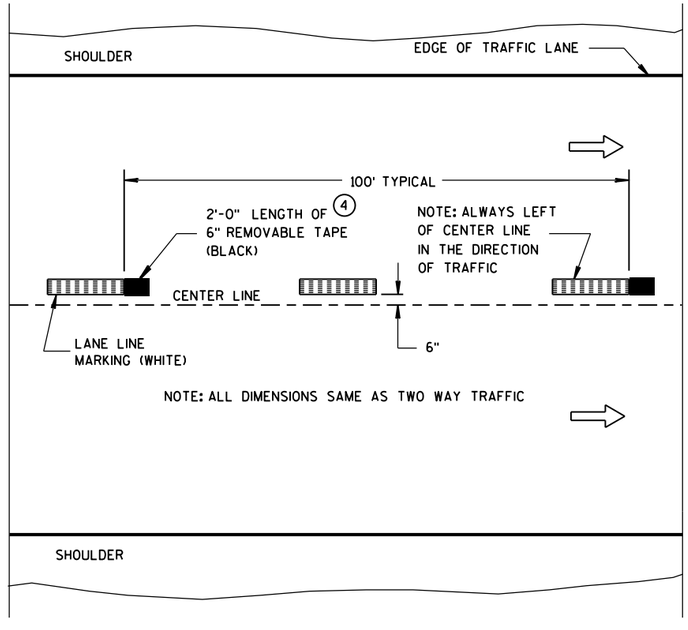


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

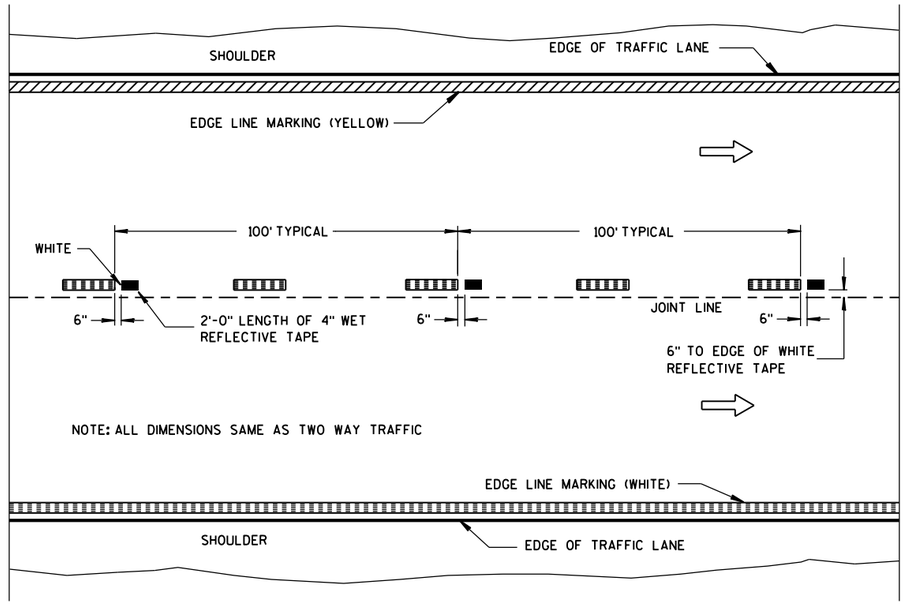
GENERAL NOTES

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.
4. CONCRETE ONLY.

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
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

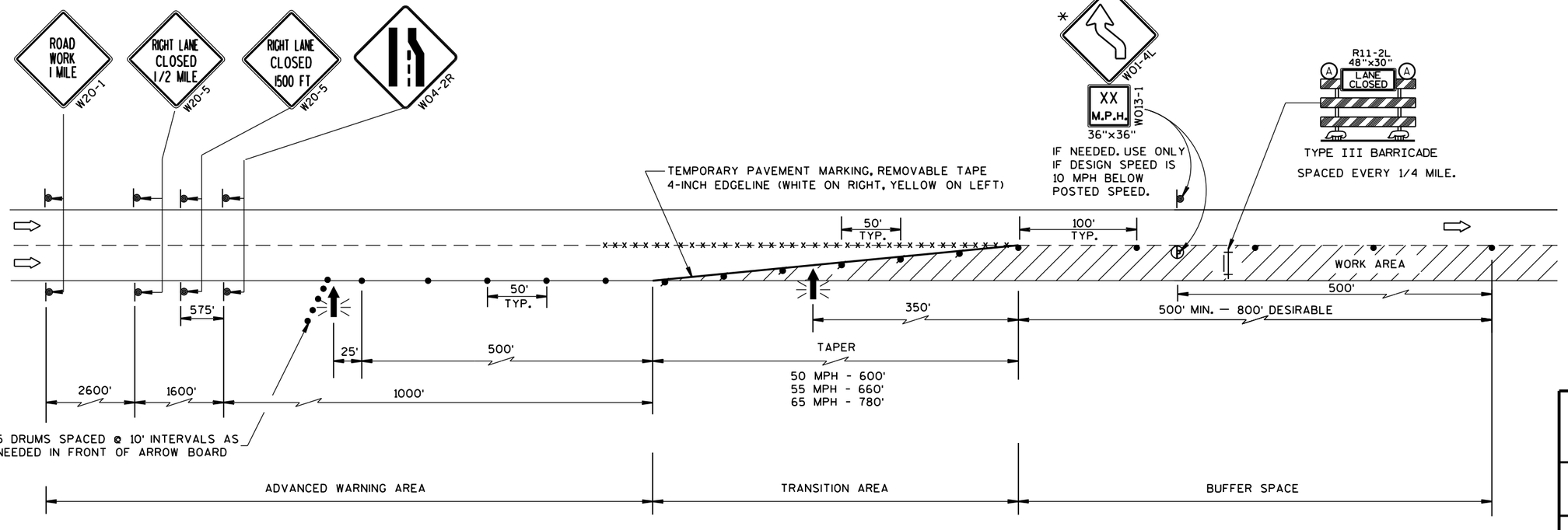


LOCATED 500 FEET IN ADVANCE OF R2-1 SIGN AND 500 FEET BEYOND THE "ROAD WORK 1 MILE" SIGN.



R2-1
48"×60"
(BLACK AND WHITE)

IF THE REGULATORY SPEED HAS BEEN REDUCED, A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES.



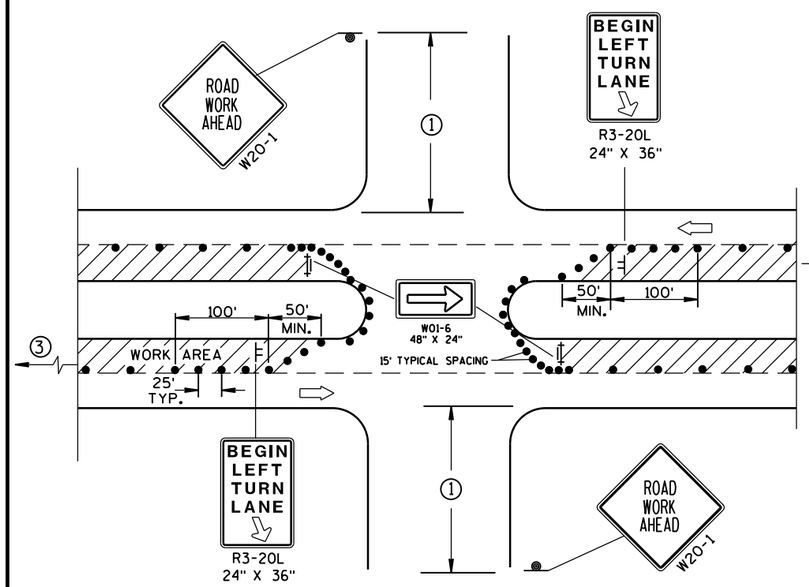
TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

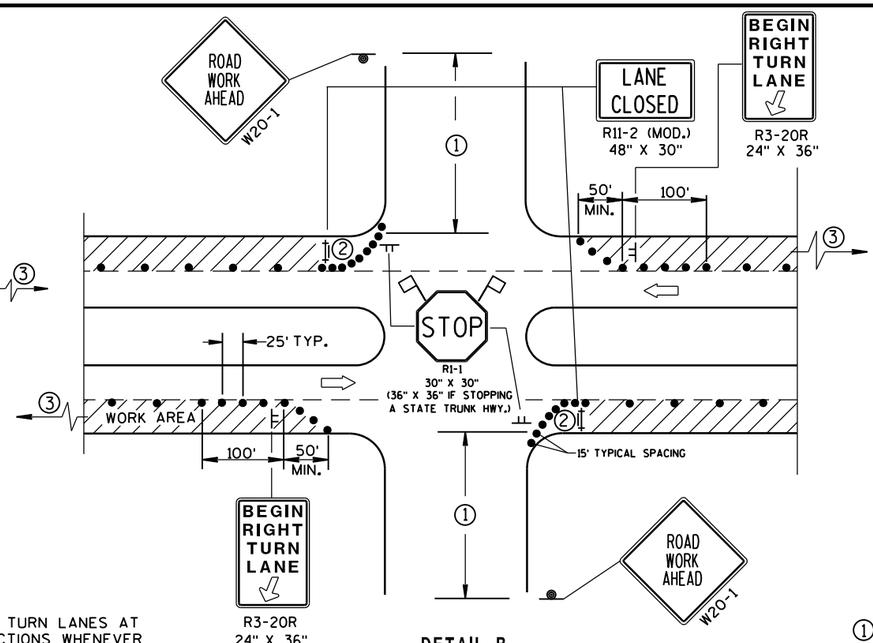
S.D.D. 15 D 12-3



DETAIL A

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING

PROVIDE TURN LANES AT INTERSECTIONS WHENEVER STAGING OF WORK ALLOWS. TAPER AND TURN LANE LENGTHS BASED ON FIELD CONDITIONS AS APPROVED BY THE ENGINEER.



DETAIL B

FOR RIGHT LANE CLOSURE AT INTERSECTION

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 SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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, OR THAT WILL BE PLACED IN A CLOSED LANE, 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.

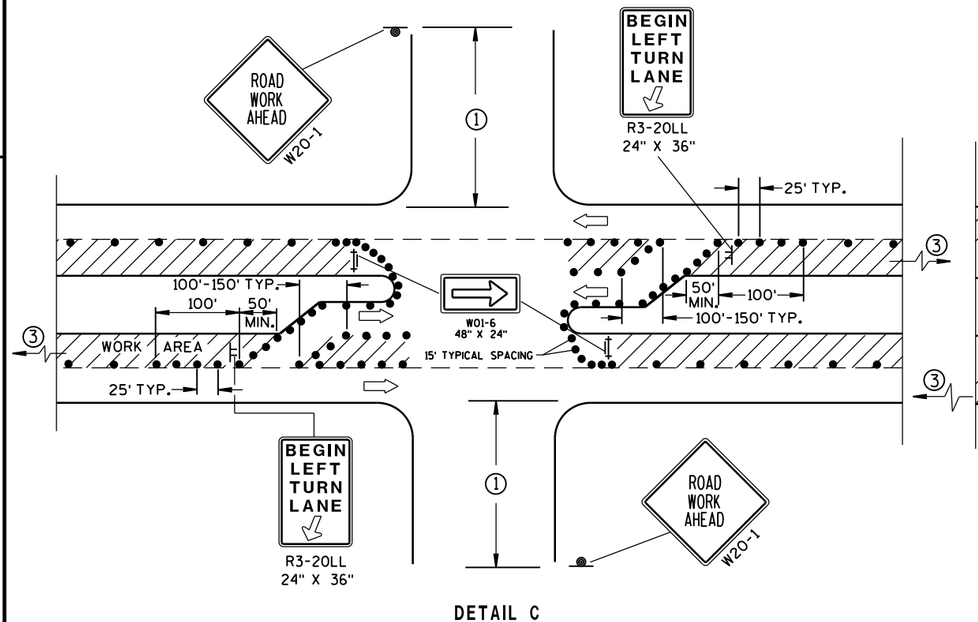
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

BARRICADES IN A CLOSED LANE 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.

① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.

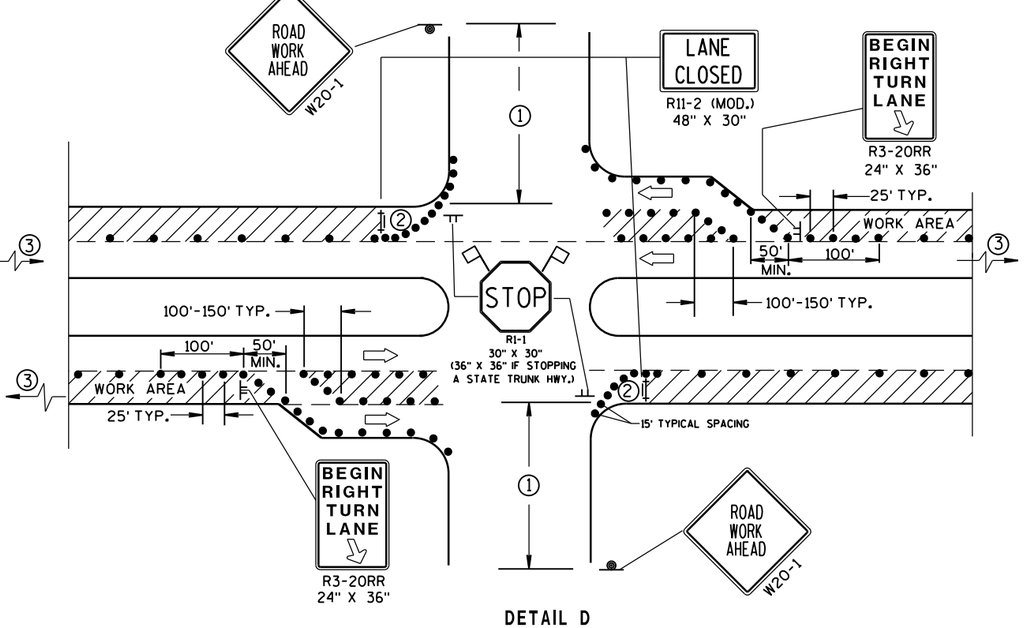
② ALSO USE BARRICADE AND 15-FOOT TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C

FOR LEFT LANE CLOSURE AT INTERSECTION OR MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D

FOR RIGHT LANE CLOSURE AT INTERSECTION (WITH RIGHT TURN BAY OPEN)

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE WITH ATTACHED SIGN AND TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- FLAGS, 16" X 16" MIN., (ORANGE)
- WORK AREA

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013	/S/ Travis Feltes
DATE	STATE TRAFFIC ENGINE ESIGN

FHWA

6

S.D.D. 15 D 21-2

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

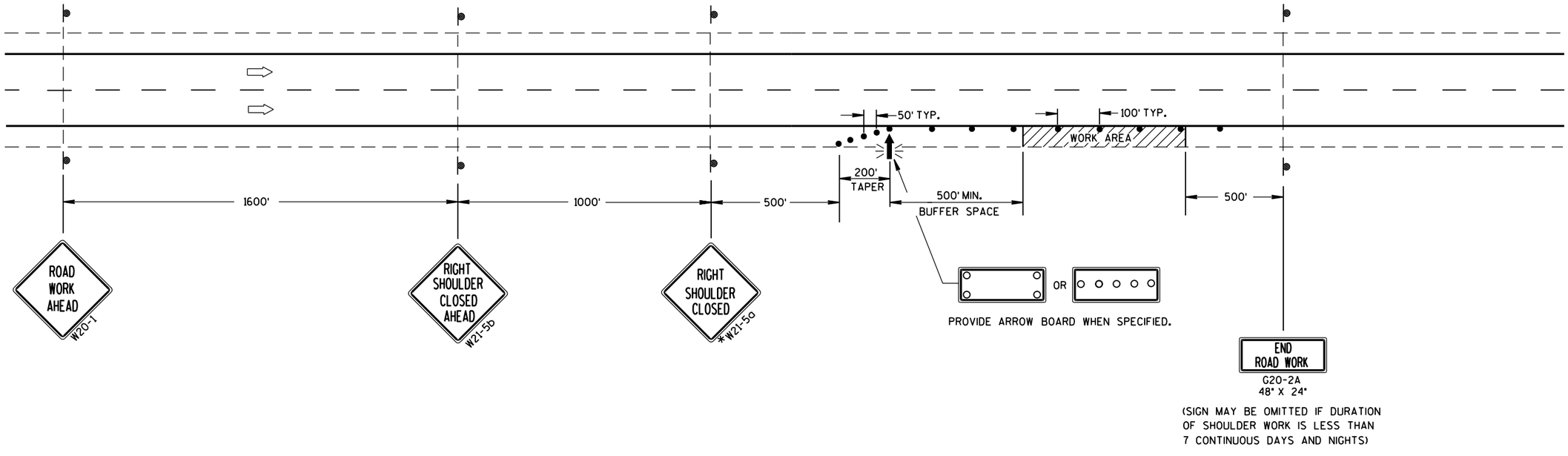
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

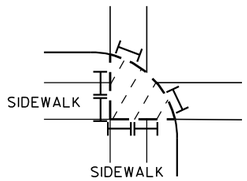
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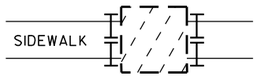
S.D.D. 15 D 27-2

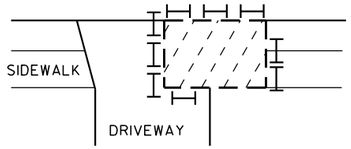
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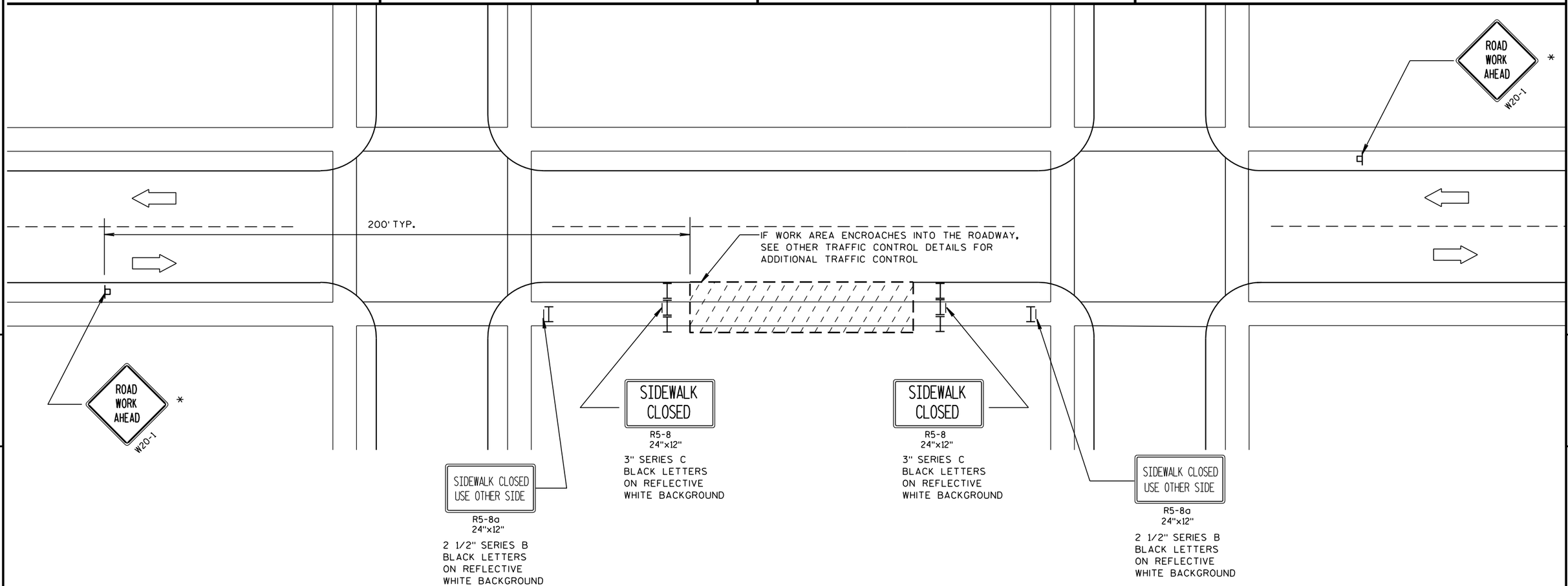
S.D.D. 15 D 27-2

WARNING OF LOCALIZED SIDEWALK WORK AREAS









LEGEND

- POST MOUNTED SIGN
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- WORK AREA
- DIRECTION OF TRAFFIC FLOW

GENERAL NOTES :

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

THE EXACT LOCATION AND PLACEMENT OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

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

* "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

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

TRAFFIC CONTROL, SIDEWALK CLOSURE

TRAFFIC CONTROL, SIDEWALK CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible]NEER
FHWA

6

S.D.D. 15 D 30-1

S	BUFFER SPACE (DESIRABLE)
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'

S = NON-CONSTRUCTION SPEED LIMIT (MPH)

END ROAD WORK
G20-2A
48"x24"

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

NO PASSING ZONE
W14-3
48"x36"

1000'
500'
400'
500'
200'
50'
50'
25' TYP.

W01-6
48"x24"
✳✳✳

R11-2
48"x30"
ROAD CLOSED
TYPE III BARRICADE

FOR BRIDGE OR CULVERT REPLACEMENTS SUBSTITUTE
BRIDGE OUT
R11-2B
48"x30"

W01-6
48"x24"
TYPE III BARRICADE

W01-6
48"x24"
TYPE III BARRICADE

ROAD CLOSURE OR BRIDGE/CULVERT REPLACEMENT

BUFFER SPACE (SEE TABLE)

WORK AREA

BUFFER SPACE (SEE TABLE)

W01-6
48"x24"
TYPE III BARRICADE

TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT WHEN INCLUDED IN THE CONTRACT. FOR LAYOUT, SEE DETAILS ELSEWHERE IN THE PLAN.

W5-52L
12"x36"

W5-52R
12"x36"

25' TYP.

W01-6
48"x24"
✳✳✳

W01-3L
W013-1
XX M.P.H.
24"x24"

OR

W01-4L
W013-1
XX M.P.H.
24"x24"

ROAD WORK 1000 FT
W20-1

ROAD WORK AHEAD
W20-1

W01-6
48"x24"
✳✳✳

400'
50'
50'
25' TYP.

END TEMPORARY PAVEMENT MARKING, 4-INCH SOLID YELLOW CENTERLINE ✳✳

200'
500'
500'
1000'

NO PASSING ZONE
W14-3
48"x36"

END ROAD WORK
G20-2A
48"x24"

BEGIN TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

ROAD WORK AHEAD
W20-1

ROAD WORK 1000 FT
W20-1

W01-4R
W013-1
XX M.P.H.
24"x24"

OR

W01-3R
W013-1
XX M.P.H.
24"x24"

W01-6
48"x24"
✳✳✳

W01-4R
W013-1
XX M.P.H.
24"x24"

OR

W01-3R
W013-1
XX M.P.H.
24"x24"

W01-4L
W013-1
XX M.P.H.
24"x24"

OR

W01-3L
W013-1
XX M.P.H.
24"x24"

END TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINE

TEMPORARY PAVEMENT MARKING, 4-INCH WHITE EDGELINES. (USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT)

W01-6
48"x24"

TEMPORARY PAVEMENT MARKING, 4-INCH DOUBLE YELLOW CENTERLINE AND 2-WAY YELLOW RAISED PAVEMENT MARKERS AT 25' SPACING. USE REMOVABLE TAPE WHERE TEMPORARY MARKING CROSSES PERMANENT PAVEMENT.

GENERAL NOTES

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

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.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

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

EQUIPMENT, VEHICLES, OR MATERIAL SHOULD NOT BE STORED IN BUFFER SPACE.

✳ IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE W01-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE W01-3 SIGN.

✳✳ WHEN THE DISTANCE TO/FROM THE NEXT CLOSEST NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

✳✳✳ OMIT THESE W01-6 SIGNS IF THE ADVISORY SPEED OF THE CURVE IS GREATER THAN 30 MPH.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY-BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY DELINEATOR, (WHITE) (SINGLE DELINEATOR)
- TEMPORARY RAISED PAVEMENT MARKERS (TWO-WAY YELLOW)
- XXX REMOVE PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT
- WORK AREA

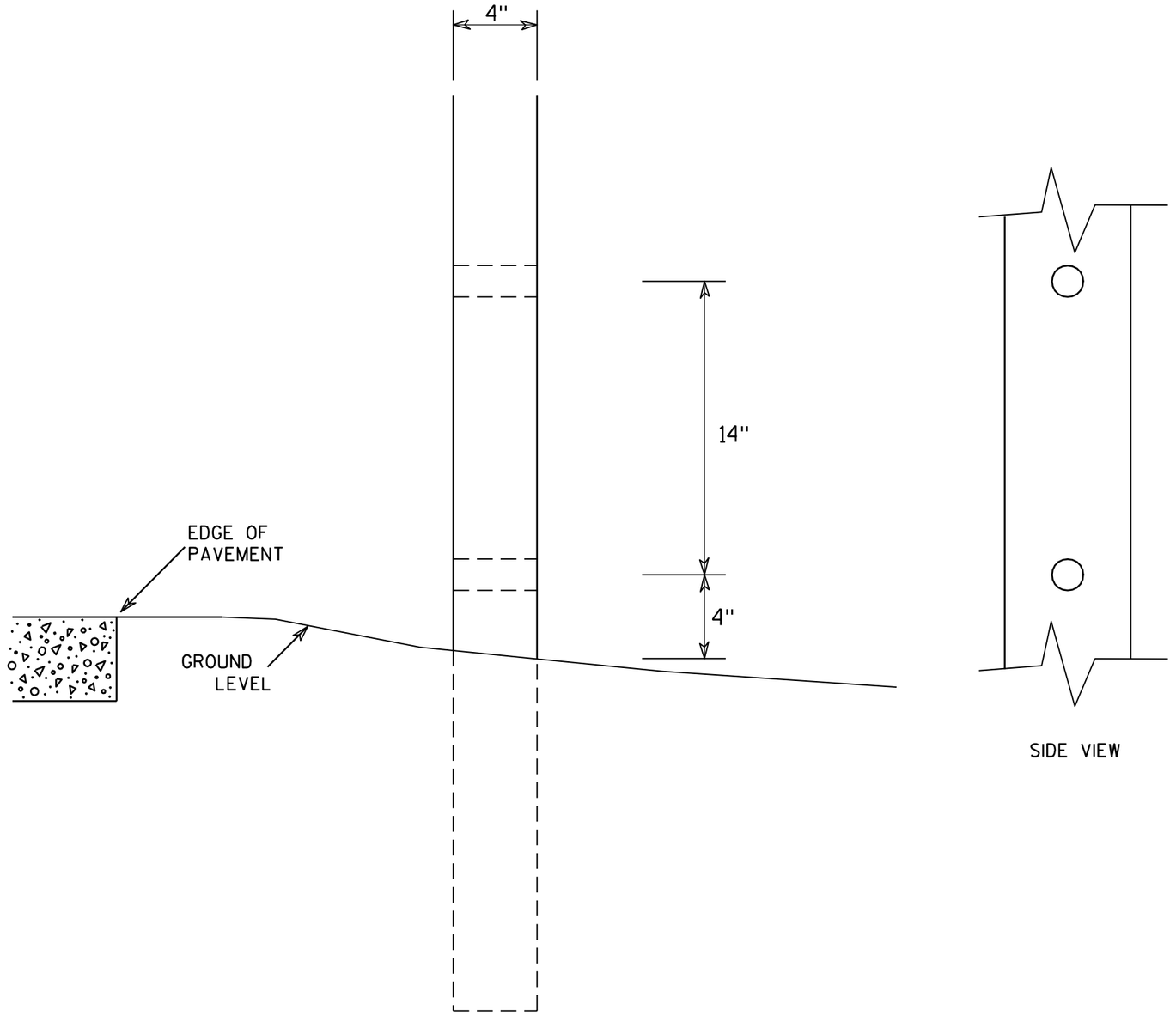
TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 D 31-2



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

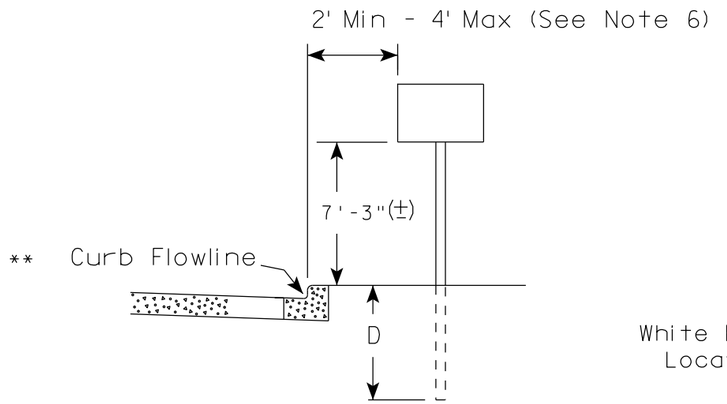
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

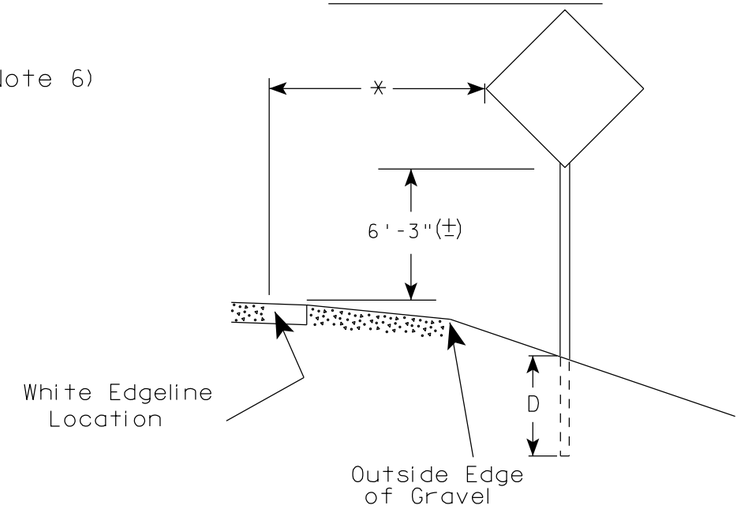
DATE 3/27/97 PLATE NO. A4-11.2

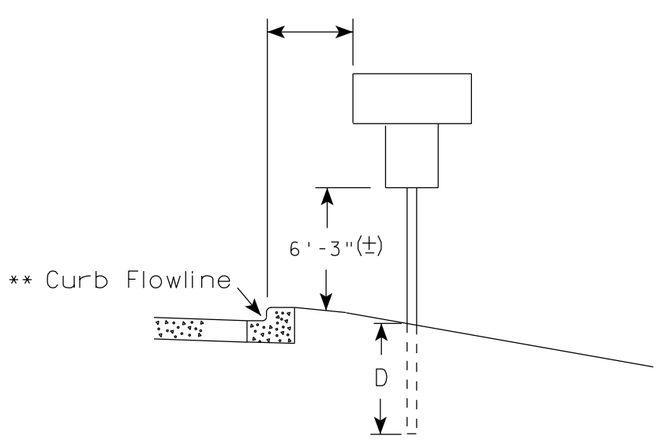
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 178	E

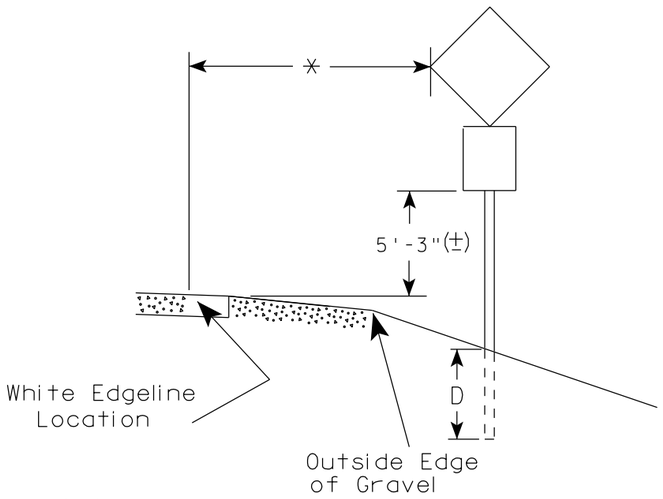
URBAN AREA



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, 20 sq.ft or larger, 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), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod 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

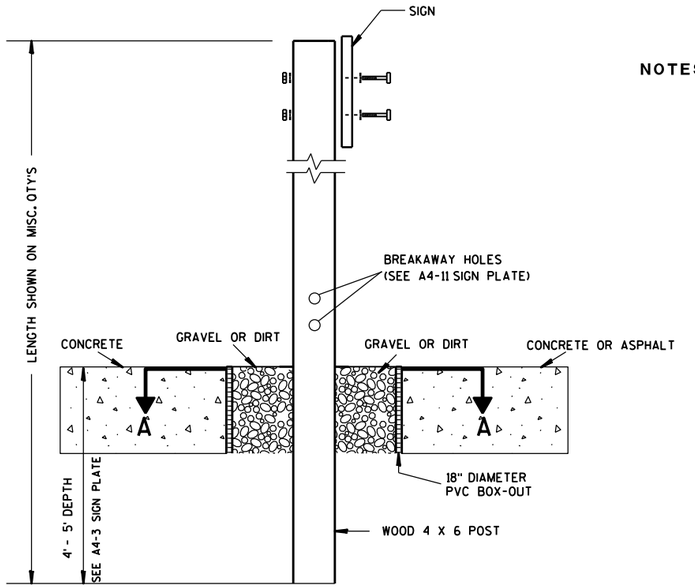
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

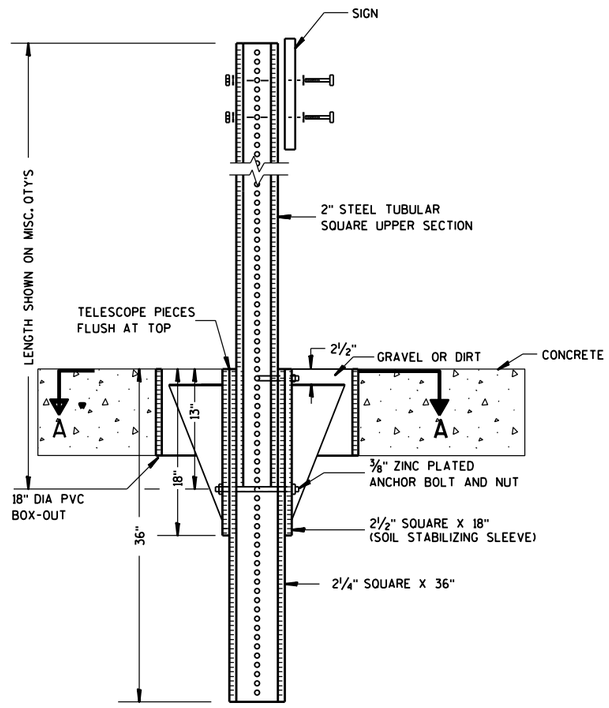
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 30-SEP-2013 13:25 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000 WISDOT/CADDS SHEET 42



ELEVATION VIEW

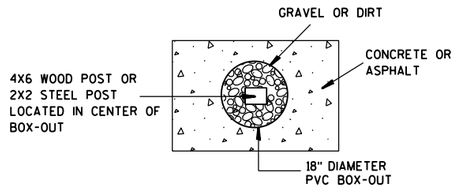
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

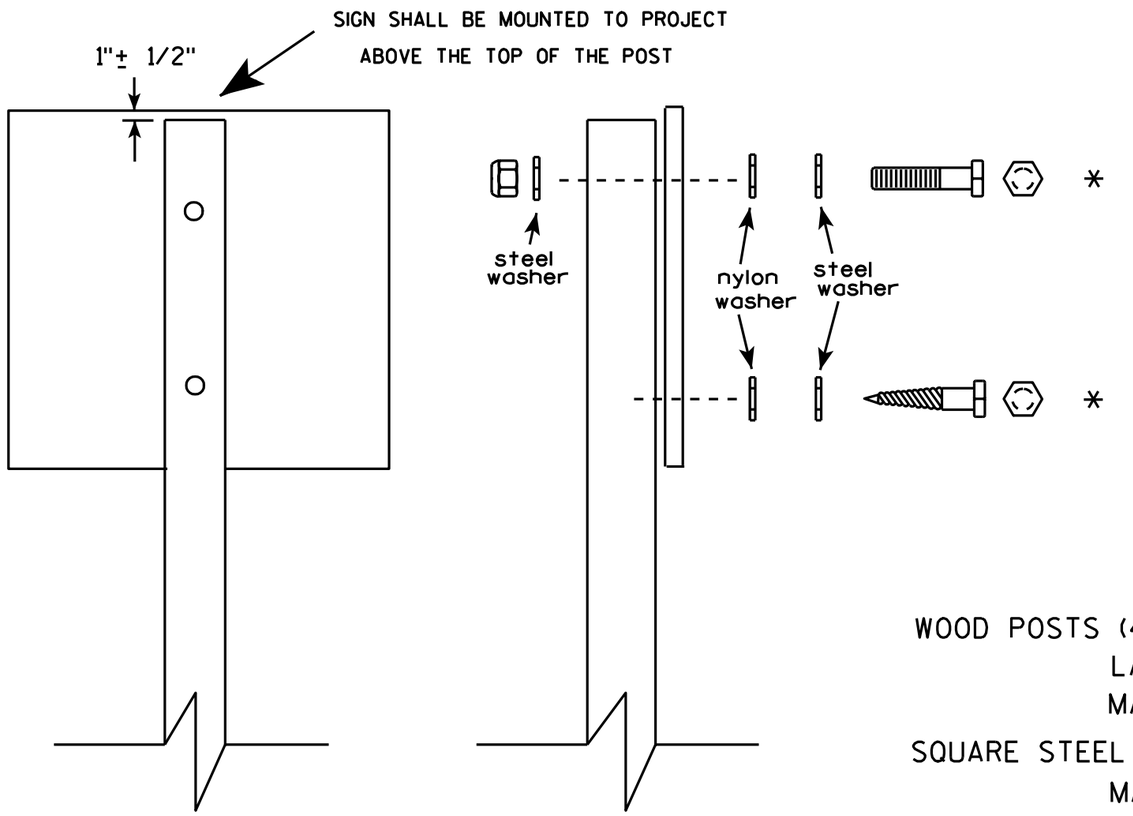
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42



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

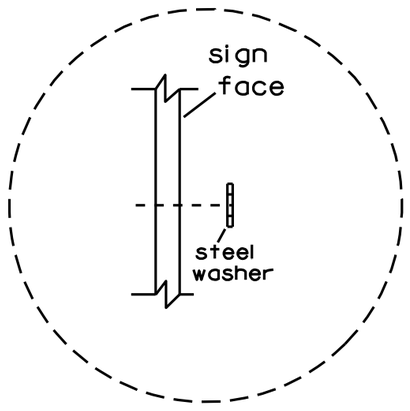
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

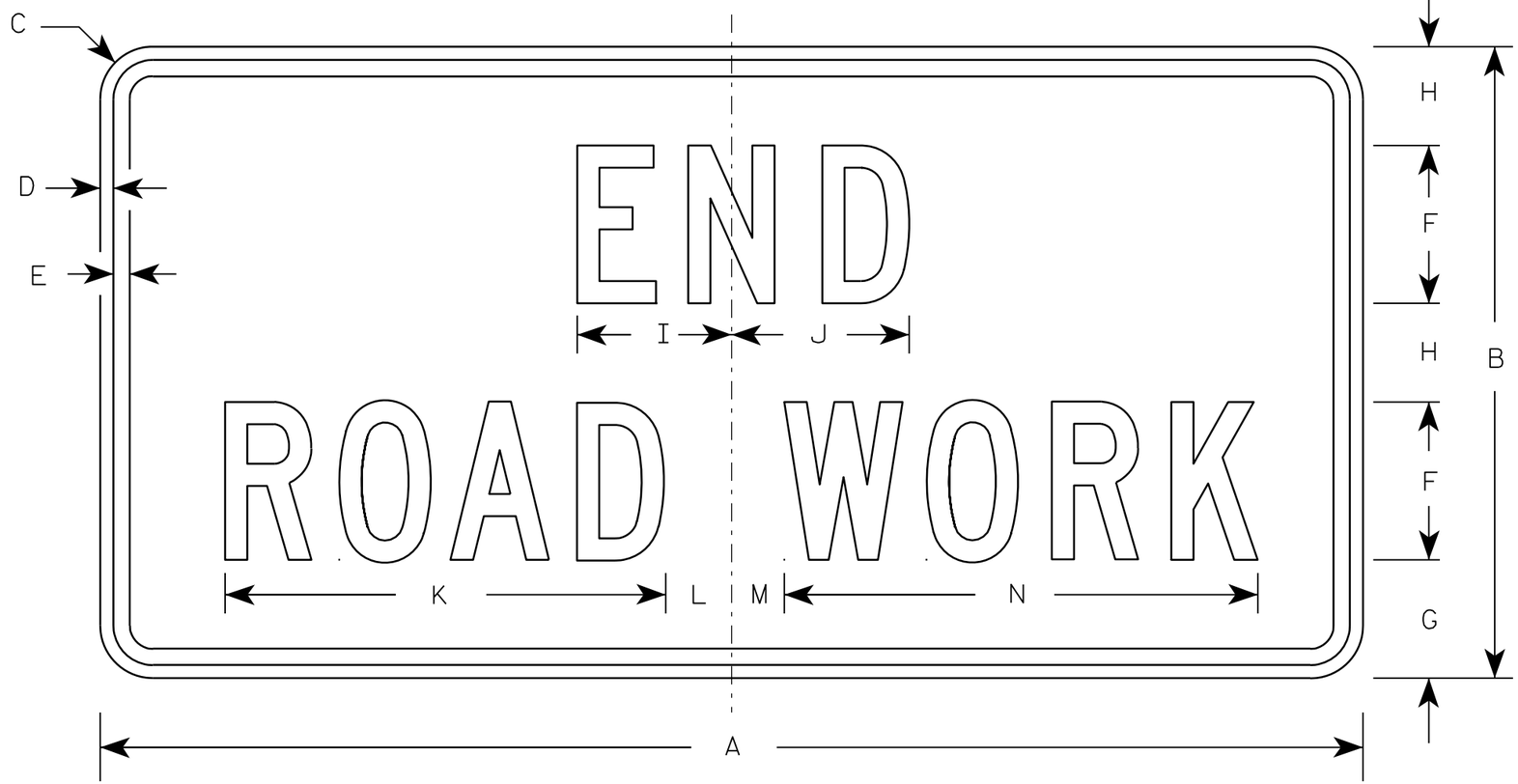
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 181 E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

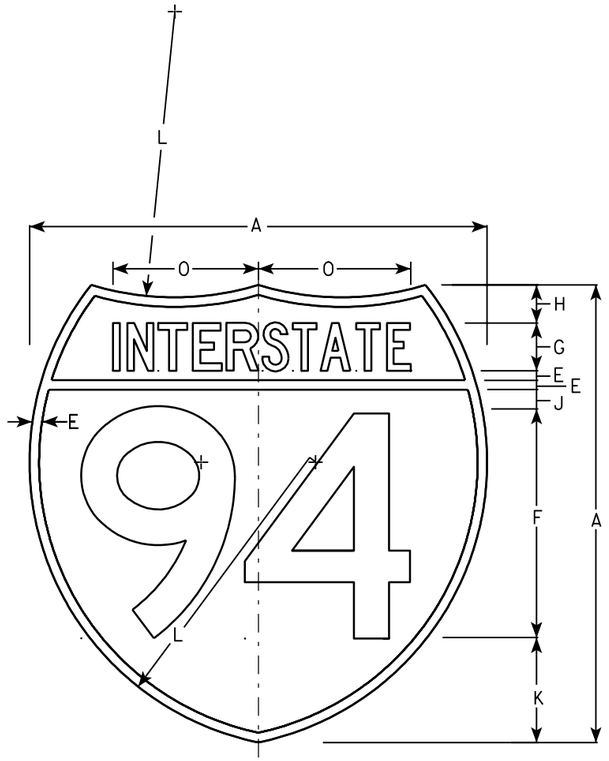
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

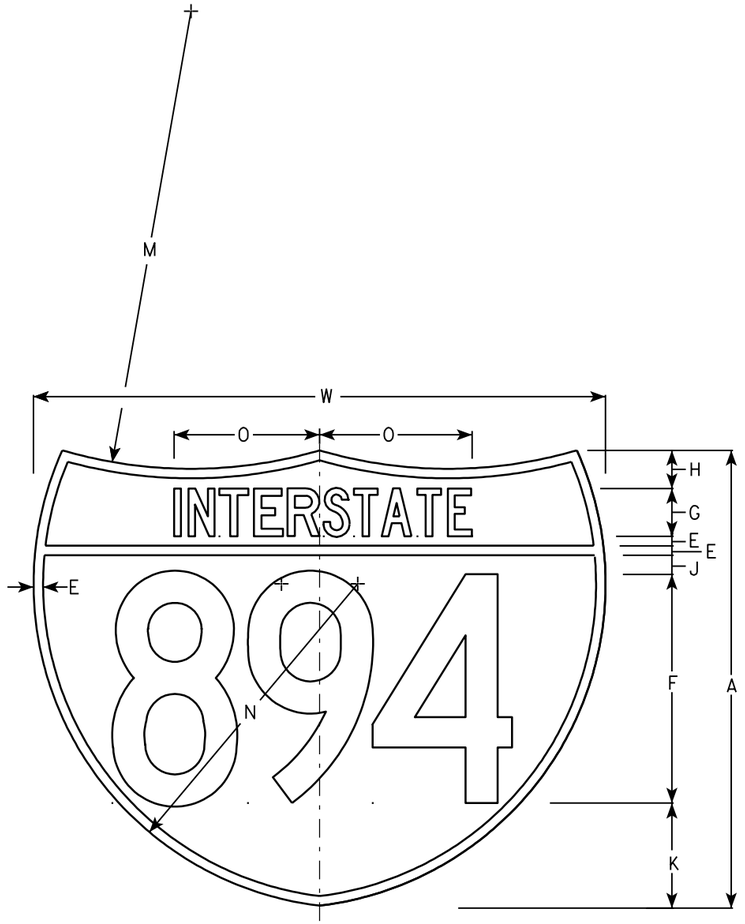
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 182	E



M1-1



M1-1A

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Top Red - Bottom Blue (See Note 6)
   Message - White - See Note 6
3. Message Series - See note 5
4. Substitute appropriate numerals & ajust spacing as per plate A10-1.
5. M1-1 - Numerals - D
   Interstate - C
   M1-1A - All copy - C
6. Permanent Signs
   Message - Type H Reflective
   Detour or other temporary signs
   Background - Reflective
   Message - Reflective

Metric equivalent for these signs are:

SIZE	M1-1	SIZE	M1-1A
1			
2	600 mm X 600 mm	2	600 mm X 750 mm
3	900 mm X 900 mm	3	900 mm X 1125 mm
4	900 mm X 900 mm	4	900 mm X 1125 mm
5	900 mm X 900 mm	5	900 mm X 1125 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	M1-1 Area sq. ft.	M1-1A Area sq. ft.	M1-1 Area m2	M1-1A Area m2
1																													
2	24				1/2	12	2 1/2	2		1	5 1/2	15	24	17	7 7/8								30			3.13	3.91	.36	.46
3	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
4	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05
5	36				3/4	18	3 3/4	3		1 1/2	8 1/4	22 1/2	36	25 1/2	11 3/4								45			7.03	8.79	.81	1.05

INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

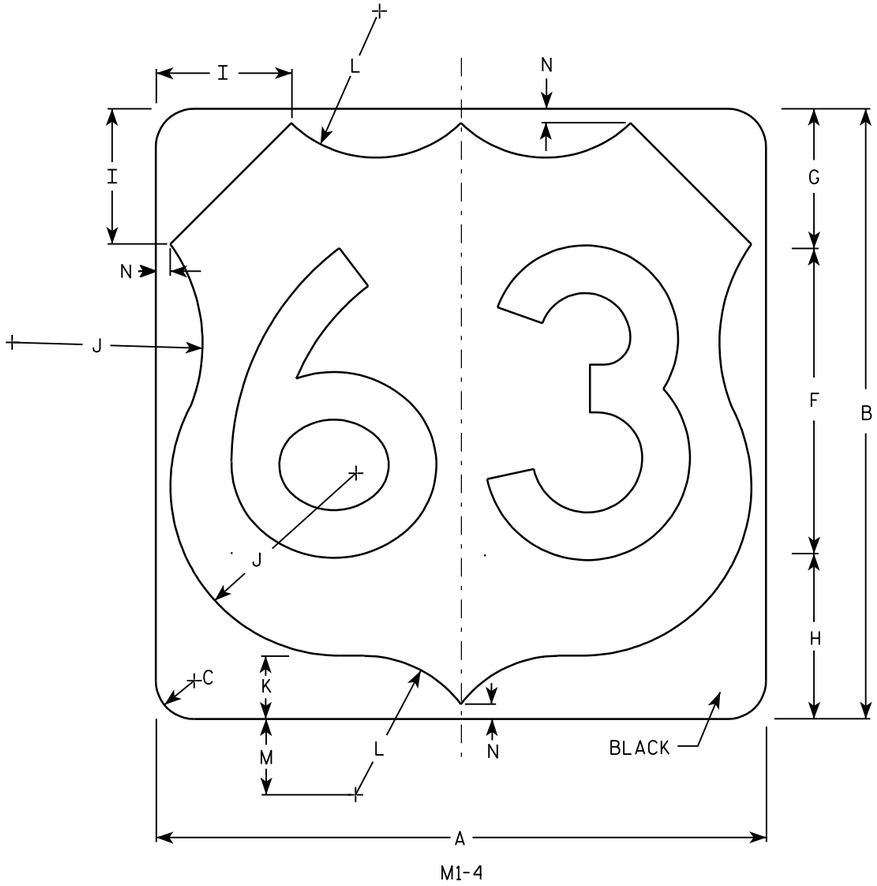
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

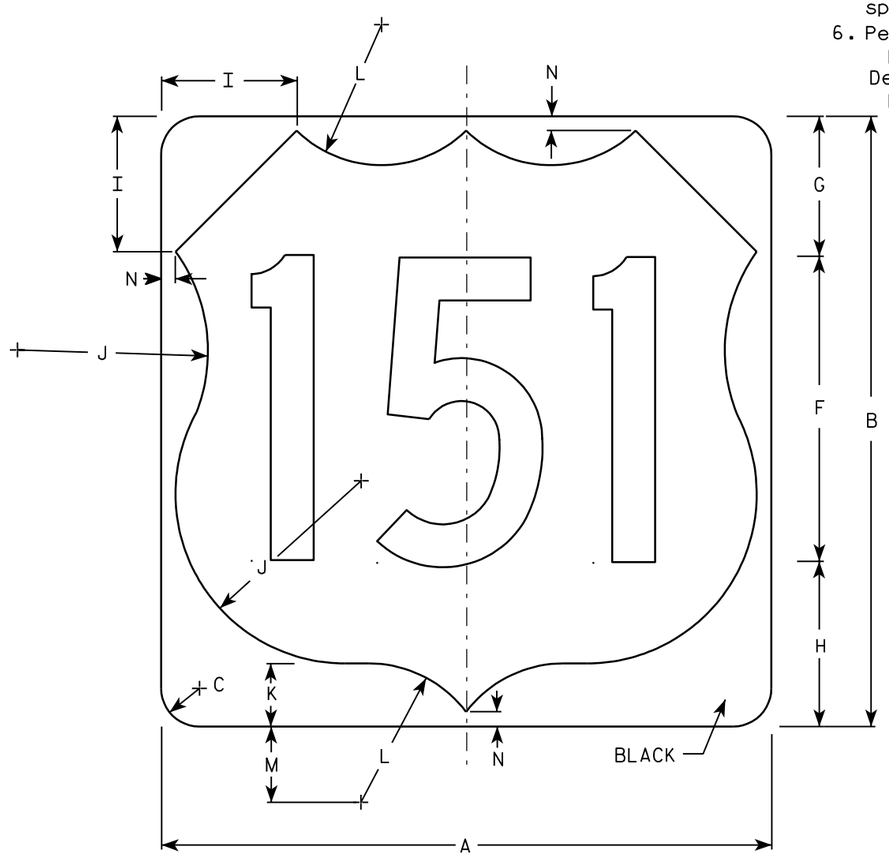
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 183	E

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

7

7

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

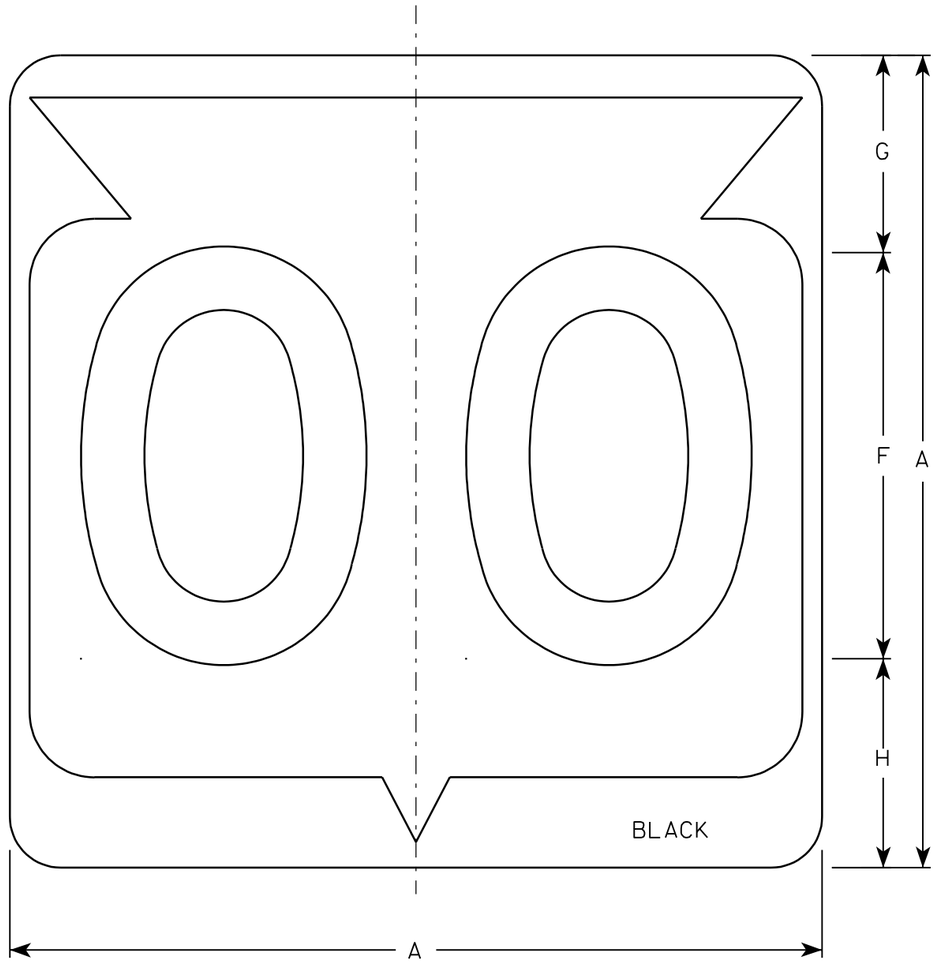
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/25/05 PLATE NO. M1-4.9

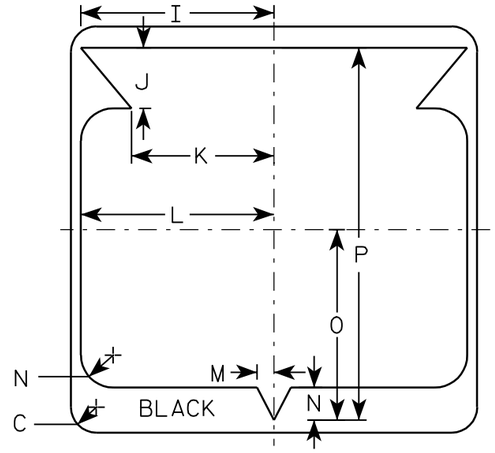
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 184	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

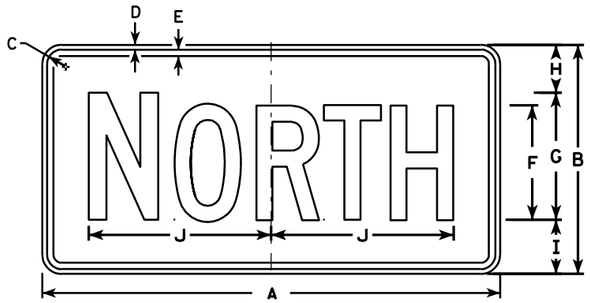
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

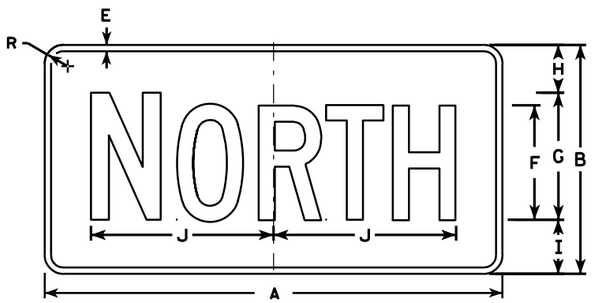
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 185	E



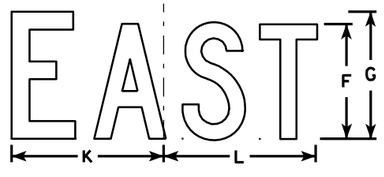
M3-1
MK3-1
MO3-1



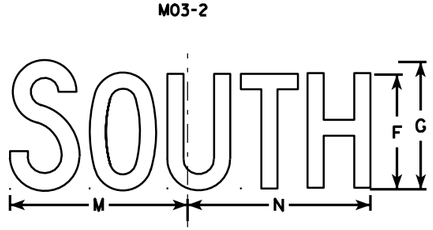
MB3-1
MG3-1
MM3-1
MN3-1



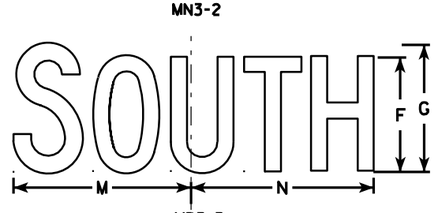
M3-2
MK3-2
MO3-2



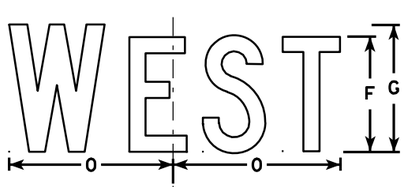
MB3-2
MG3-2
MM3-2
MN3-2



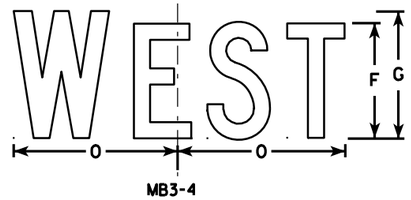
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green
   Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green
   Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective
   Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

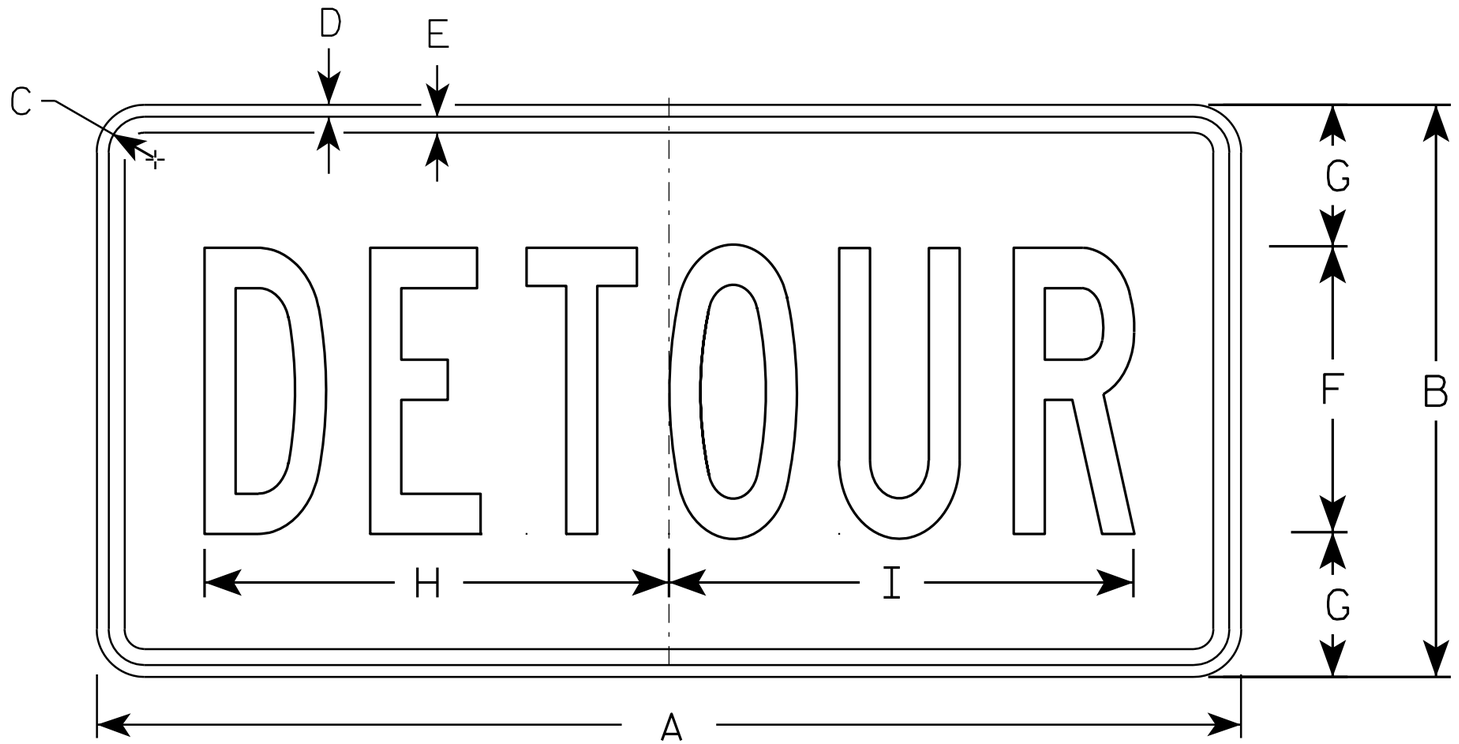
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 186	E



M4-8

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

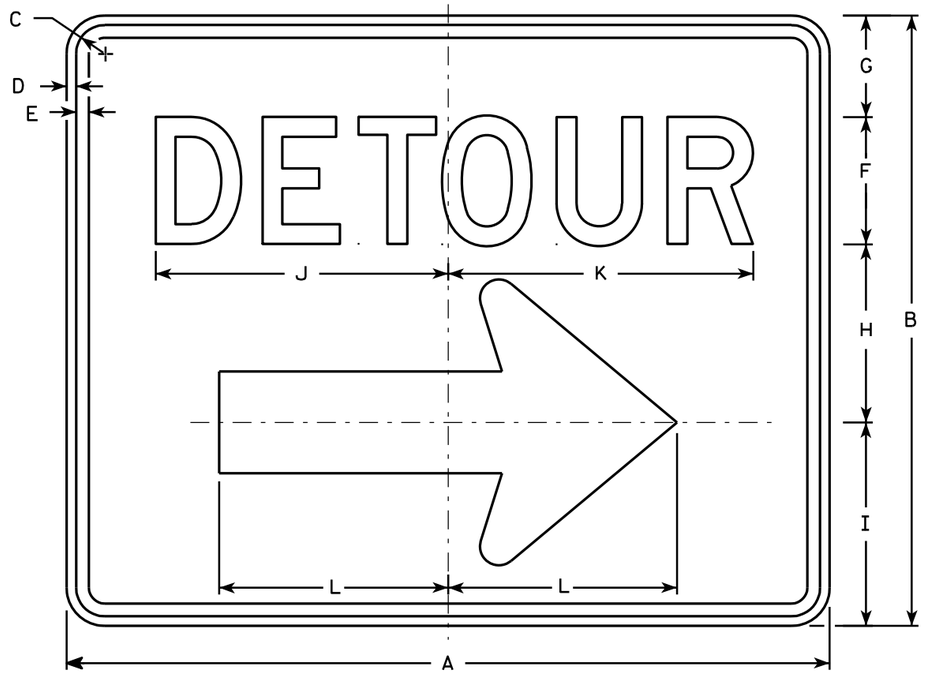
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 187	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\M48.DGN PLOT DATE : 10-NOV-2010 13:18 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 4.767233:1.000000

WISDOT/CADDS SHEET 42

7

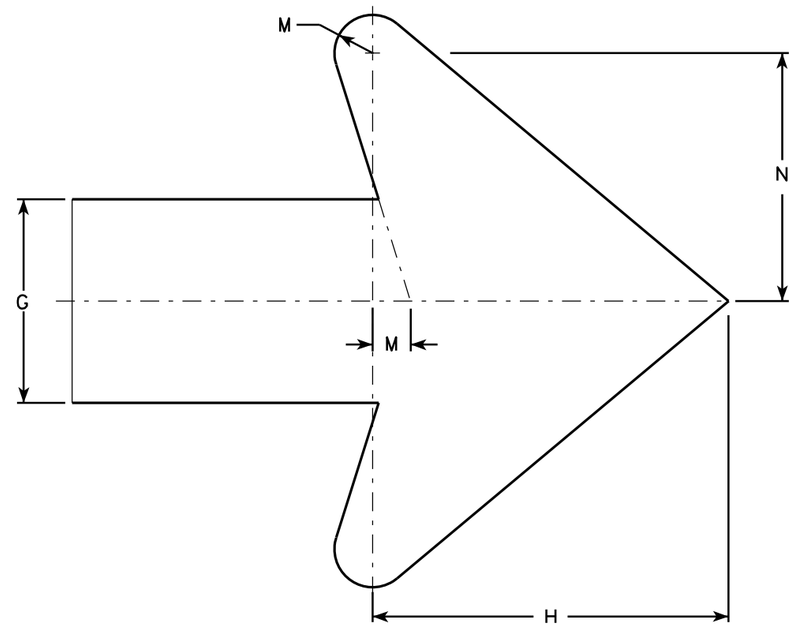
7



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

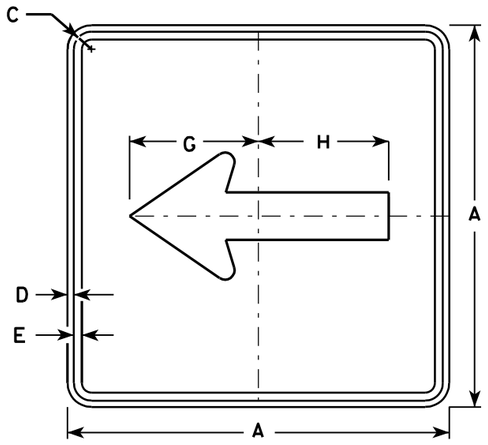
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

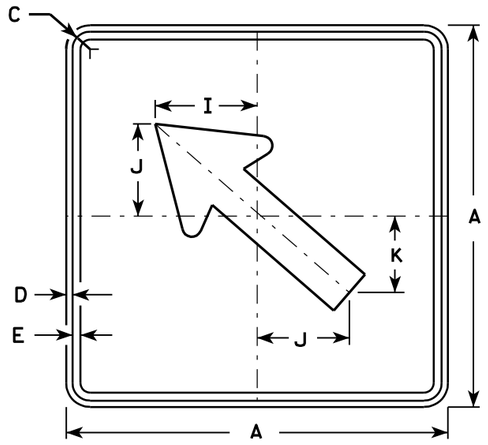
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

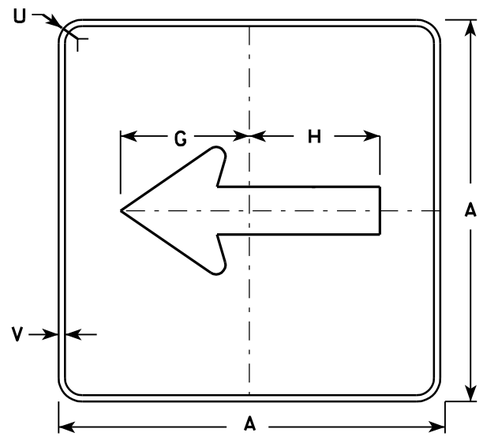
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 188 | E



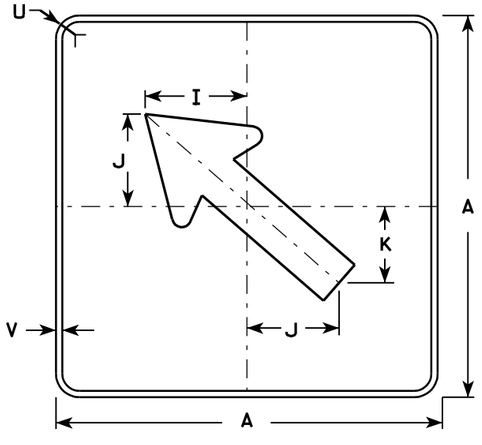
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

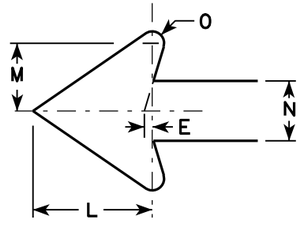
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - White - Type H Reflective



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

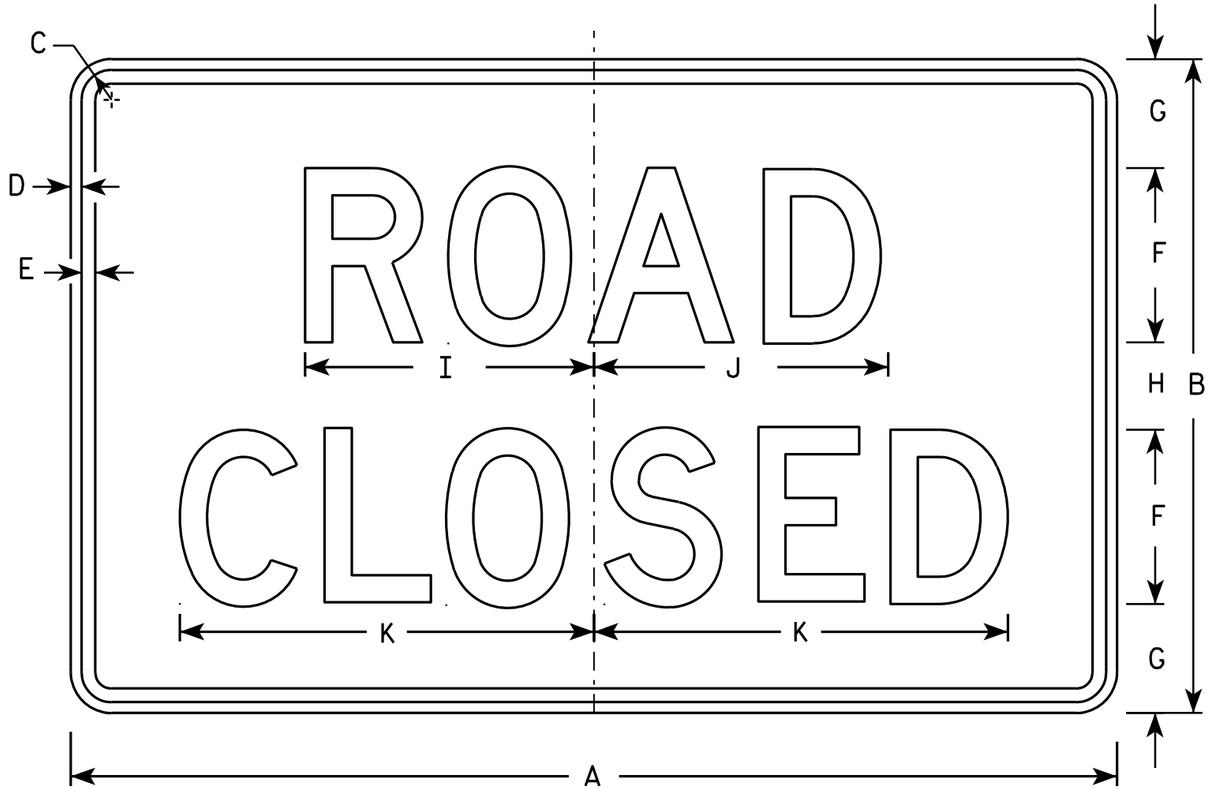
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

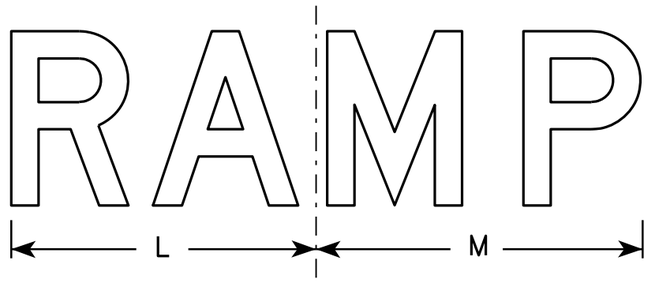
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 189	E



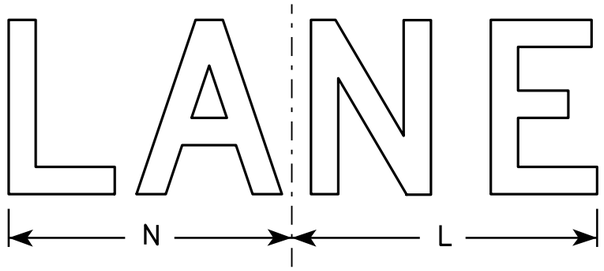
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

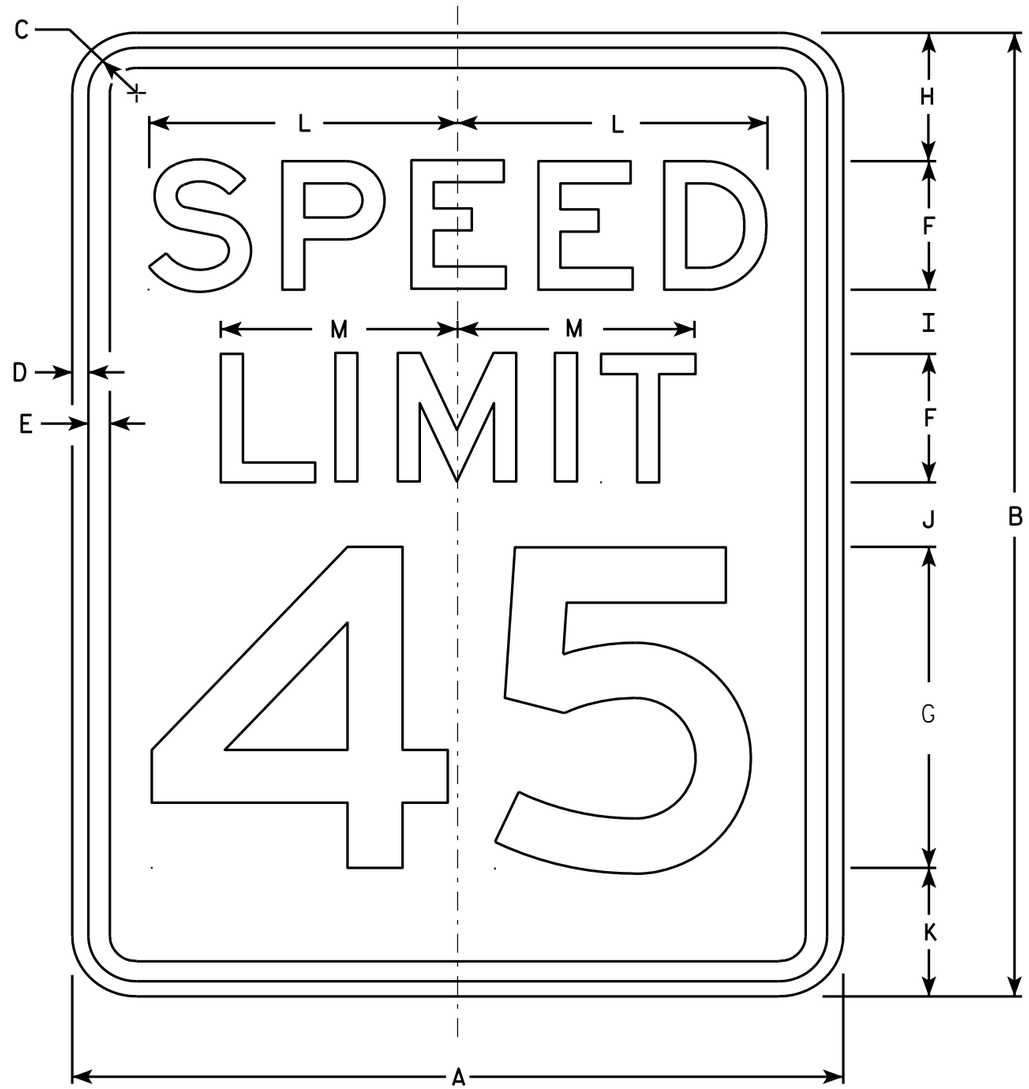
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 190	E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

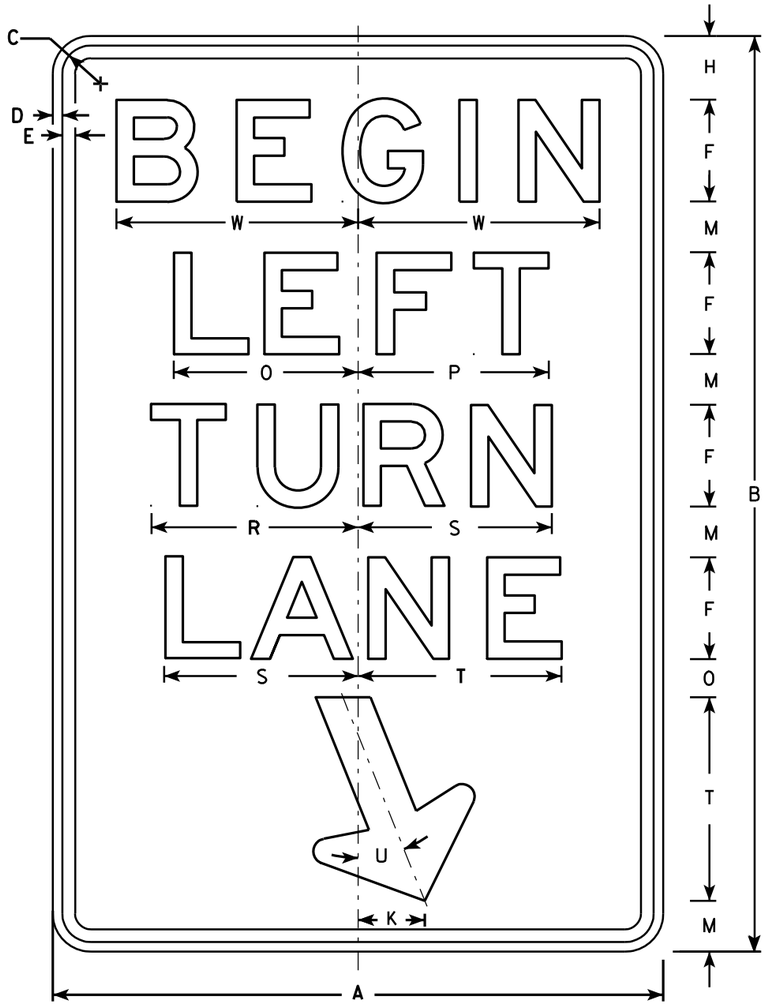
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

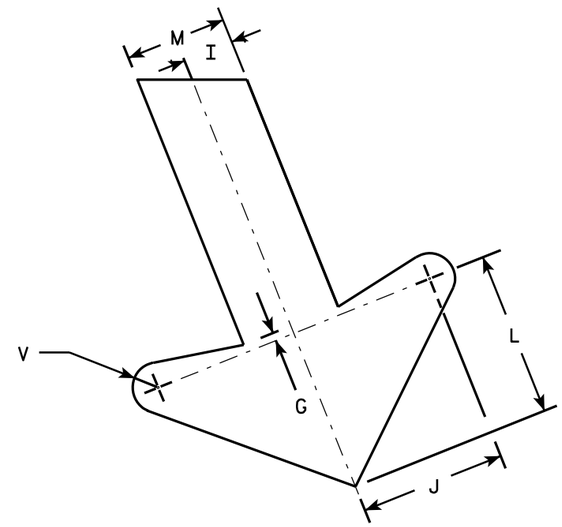
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 191 | E



R3-20L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

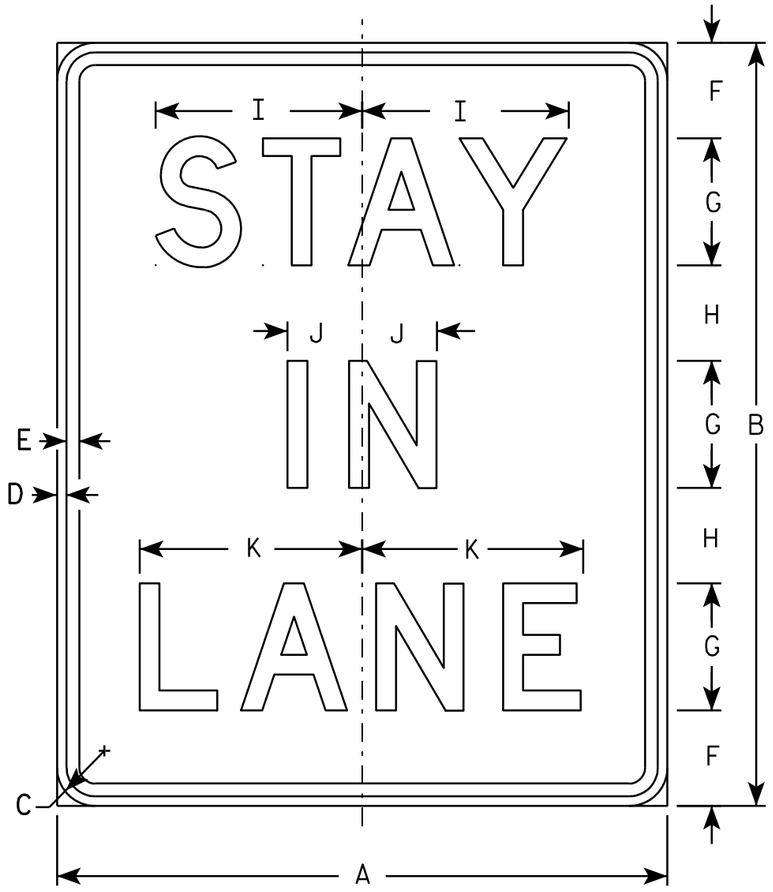
STANDARD SIGN
R3-20L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/18/10 PLATE NO. R3-20L.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 192 | E



R4-9

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	3/8	3	4	3	6 1/2	2 3/8	7																3.0
2S	24	30	1 1/8	3/8	1/2	3 5/8	5	3 7/8	8 1/8	3	8 3/4																5.0
2M	24	30	1 1/8	3/8	1/2	3 5/8	5	3 7/8	8 1/8	3	8 3/4																5.0
3	36	48	1 3/8	1/2	5/8	8 1/4	7	5 1/4	11 3/8	4 1/8	12 1/4																12.0
4	36	48	1 3/8	1/2	5/8	8 1/4	7	5 1/4	11 3/8	4 1/8	12 1/4																12.0
5	48	60	2 1/4	3/4	1	7 1/2	10	7 1/2	16 1/4	5 7/8	17 1/2																20.0

STANDARD SIGN
R4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-9.2

PROJECT NO:

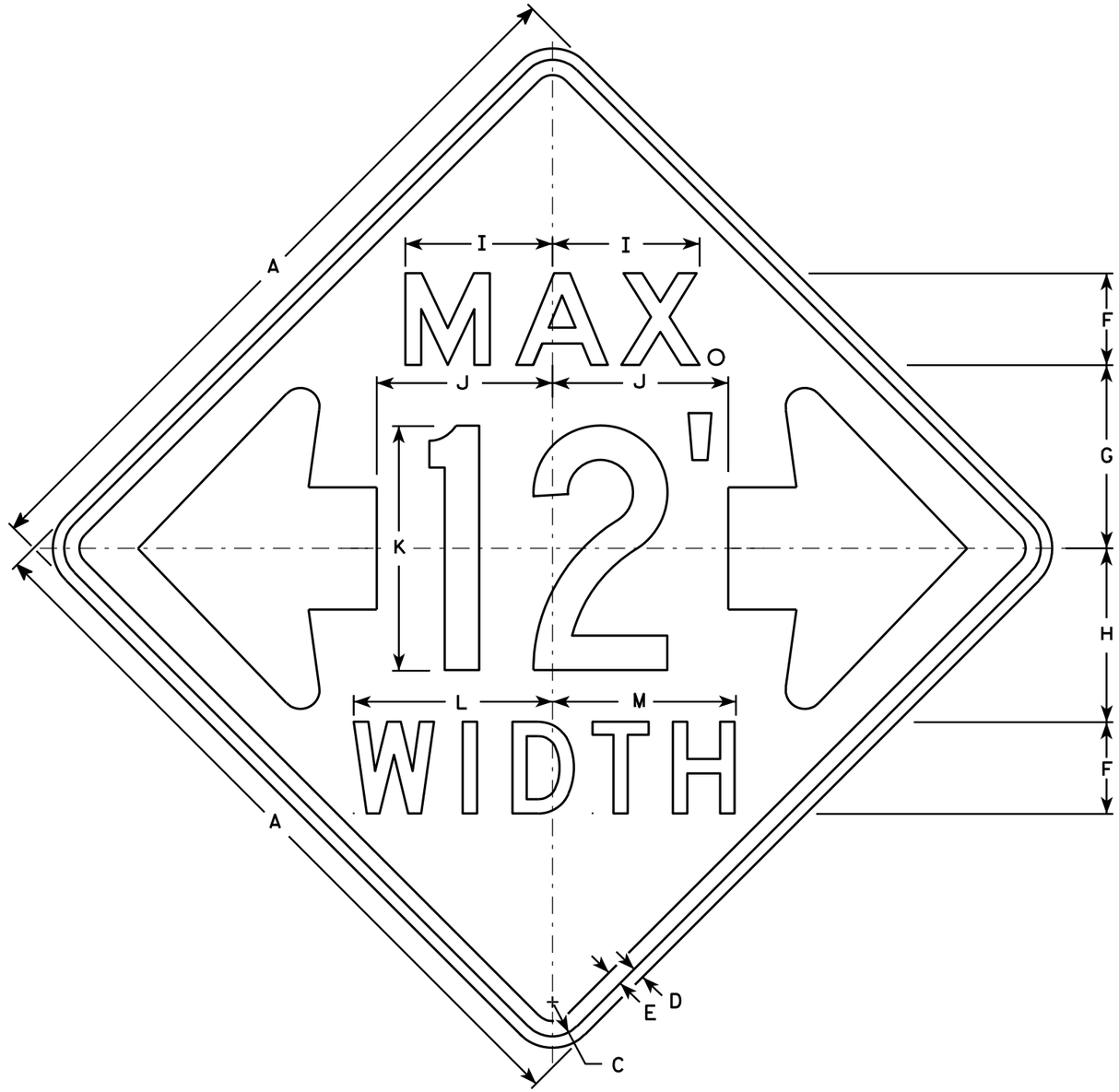
SHEET NO: 193 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R49.DGN PLOT DATE : 25-MAR-2011 14:17 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

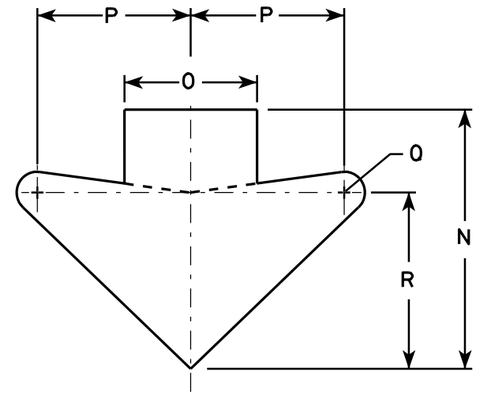
7



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

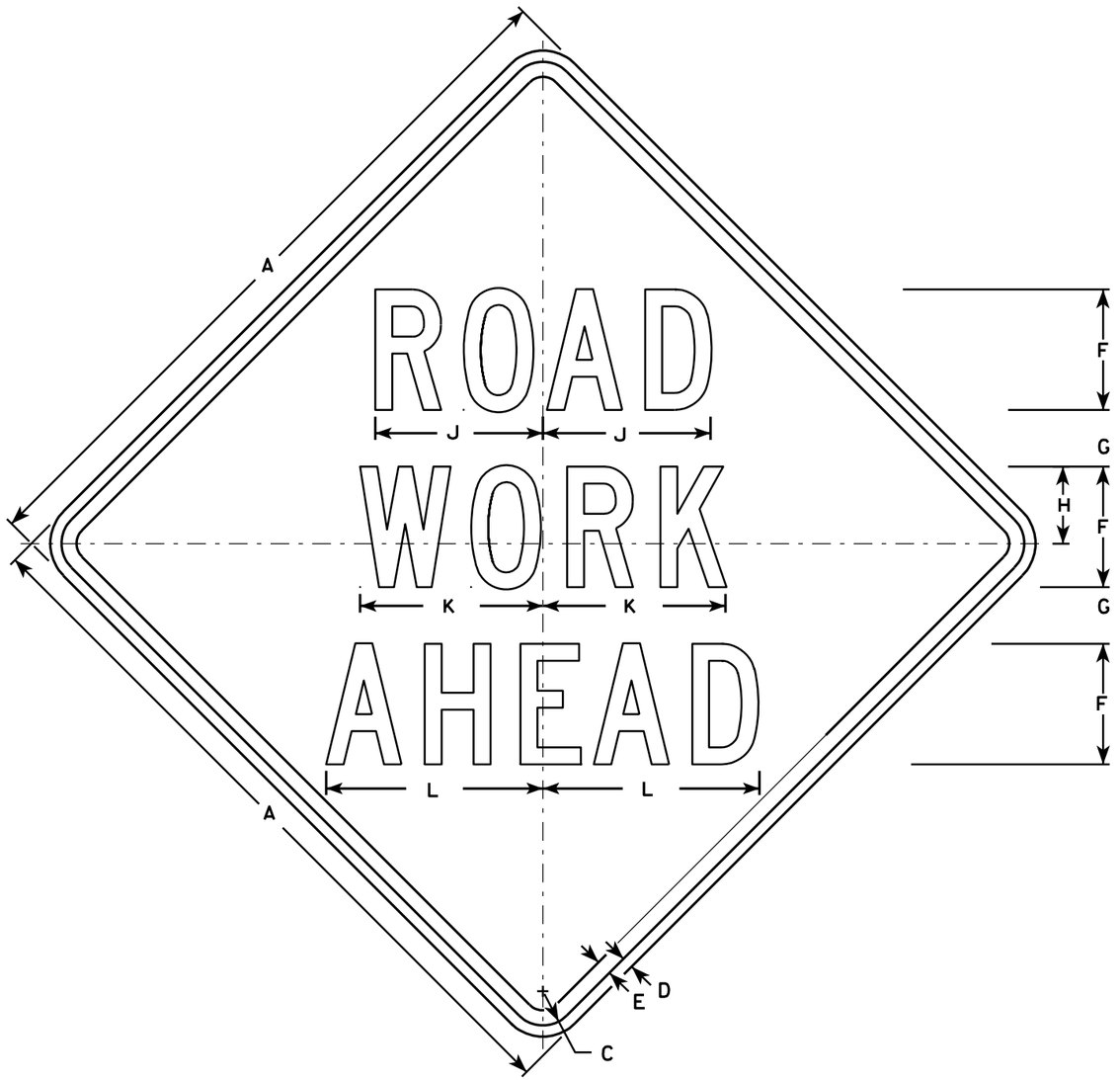
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

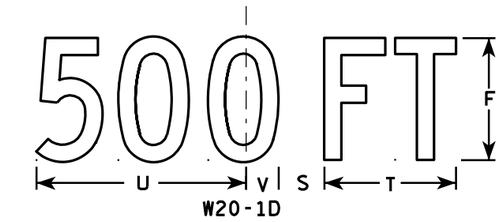
DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 194 | E

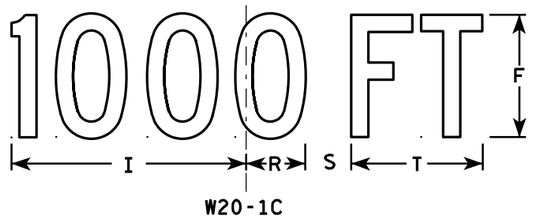
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000
WISDOT/CADDS SHEET 42



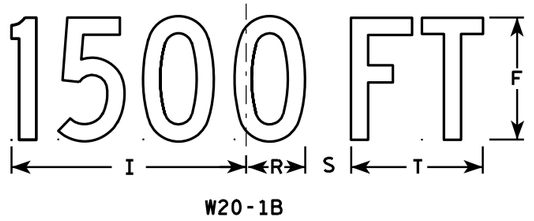
W20-1A



W20-1D



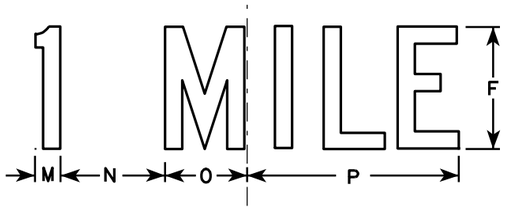
W20-1C



W20-1B



W20-1G



W20-1F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	1 7/8	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

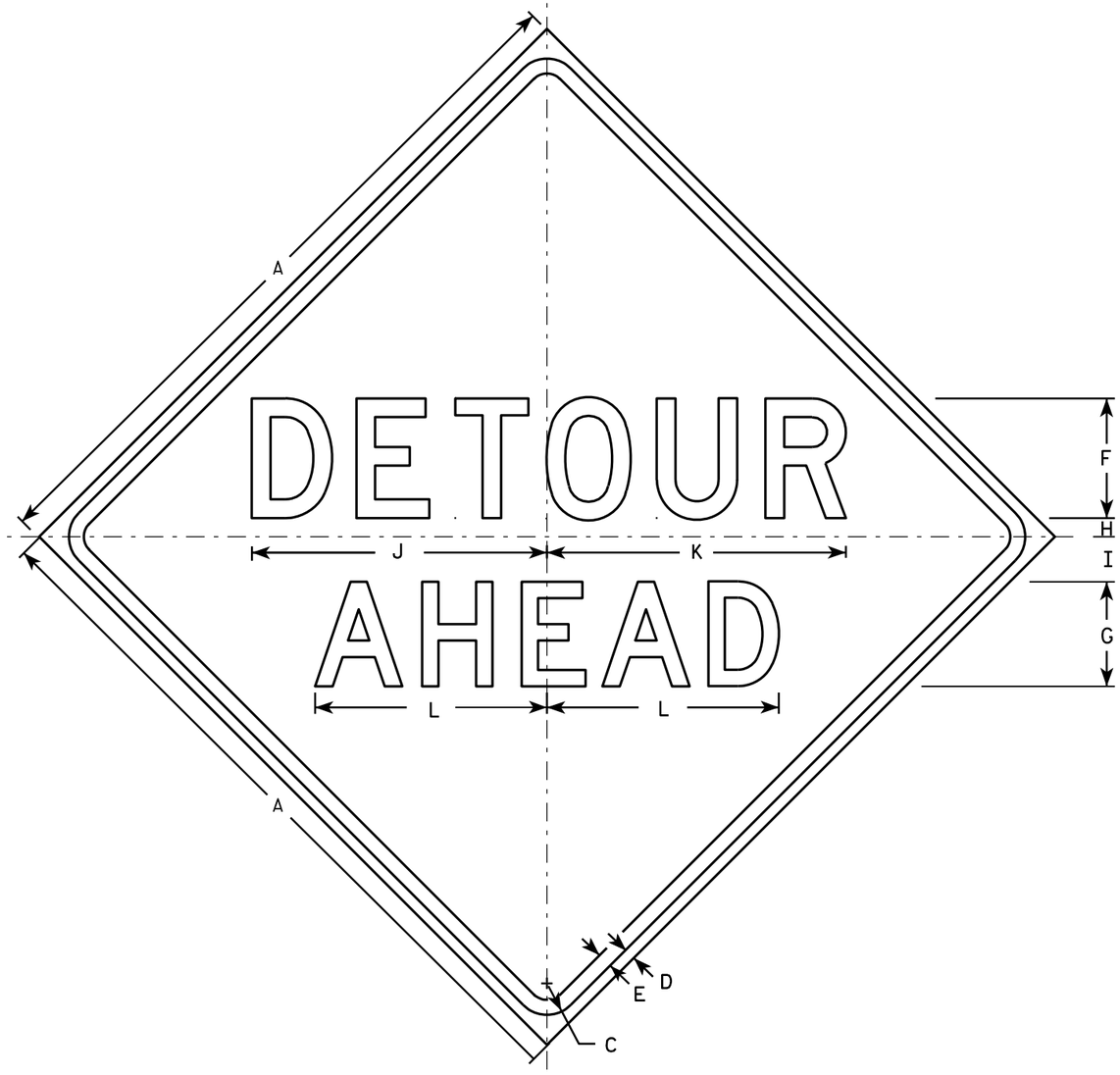
SHEET NO: 195 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

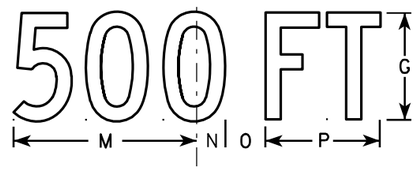
WISDOT/CADDS SHEET 42

7

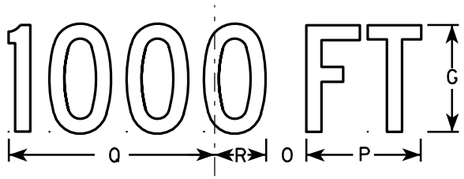
7



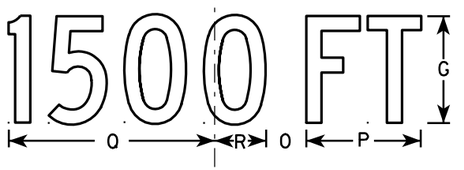
W20-2A



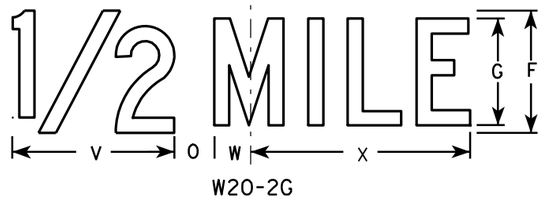
W20-2D



W20-2C



W20-2B



W20-2G



W20-2F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D.
   Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

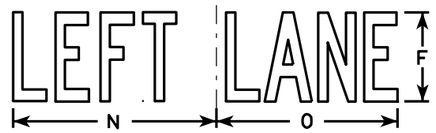
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 196 | E

7

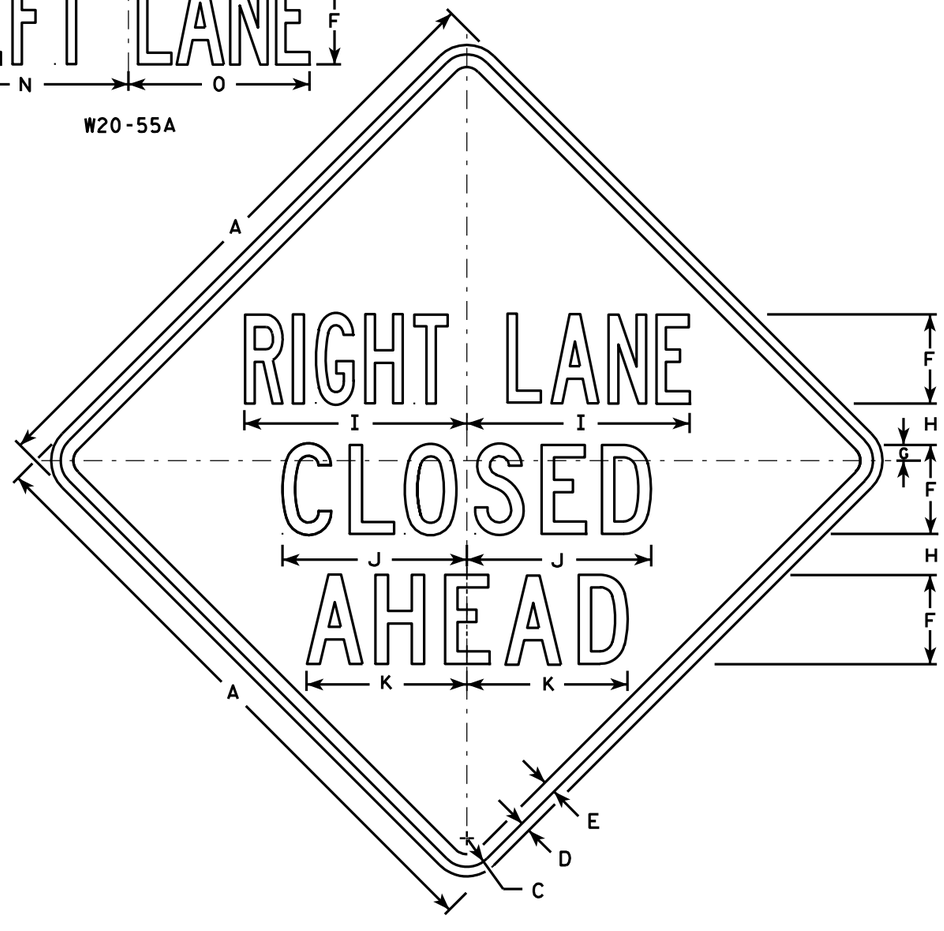
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W202.DGN PLOT DATE : 18-MAR-2011 10:00 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000
WISDOT/CADDS SHEET 42



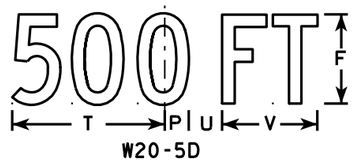
W20-56A



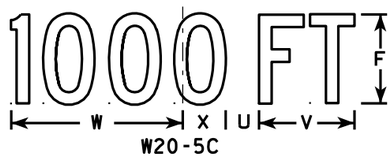
W20-55A



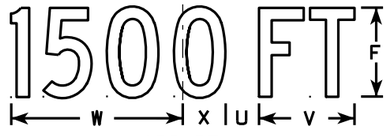
W20-5A



W20-5D



W20-5C



W20-5B



W20-5G



W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

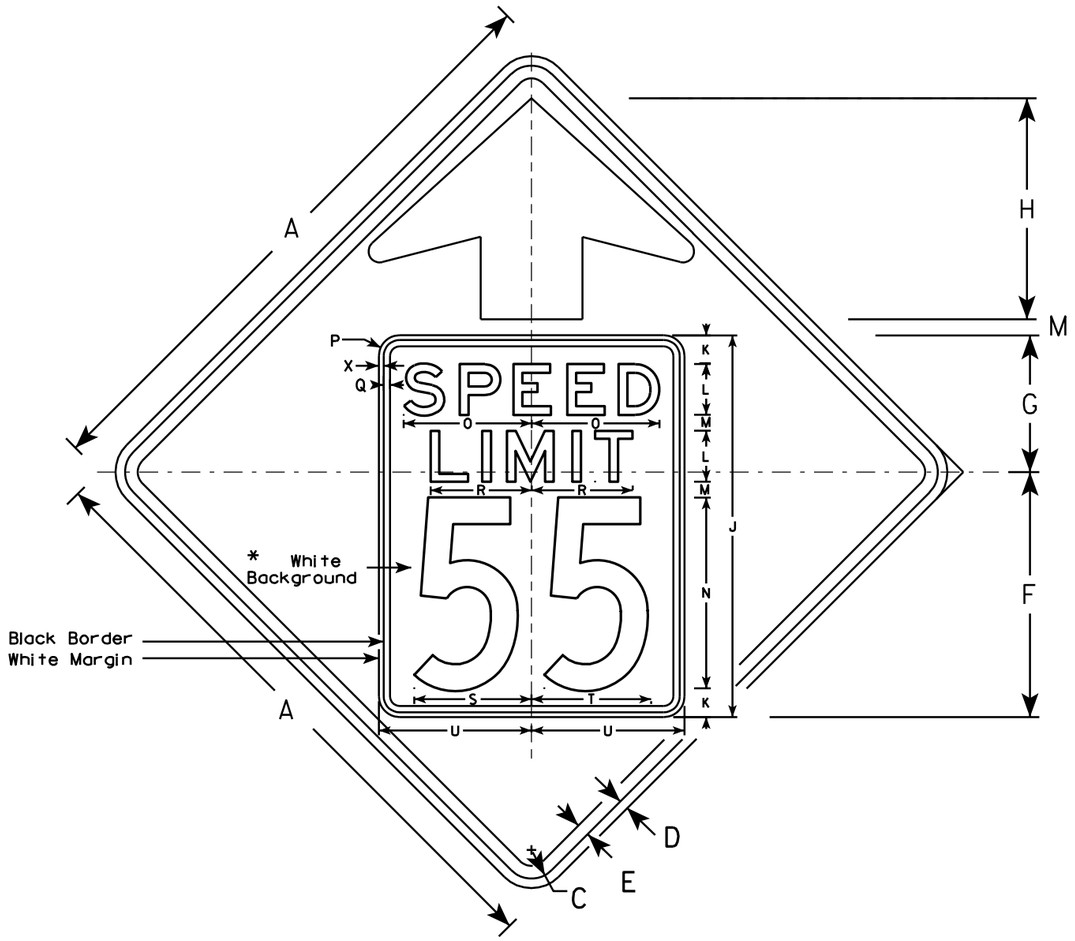
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 197 | E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42

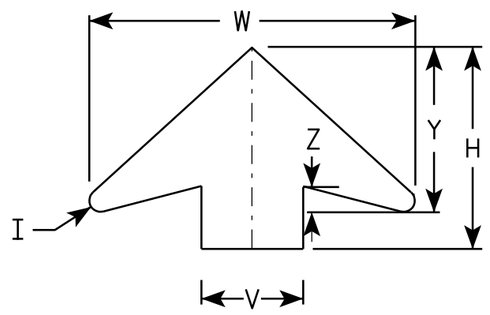


W3-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
   Background - YELLOW*
   Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

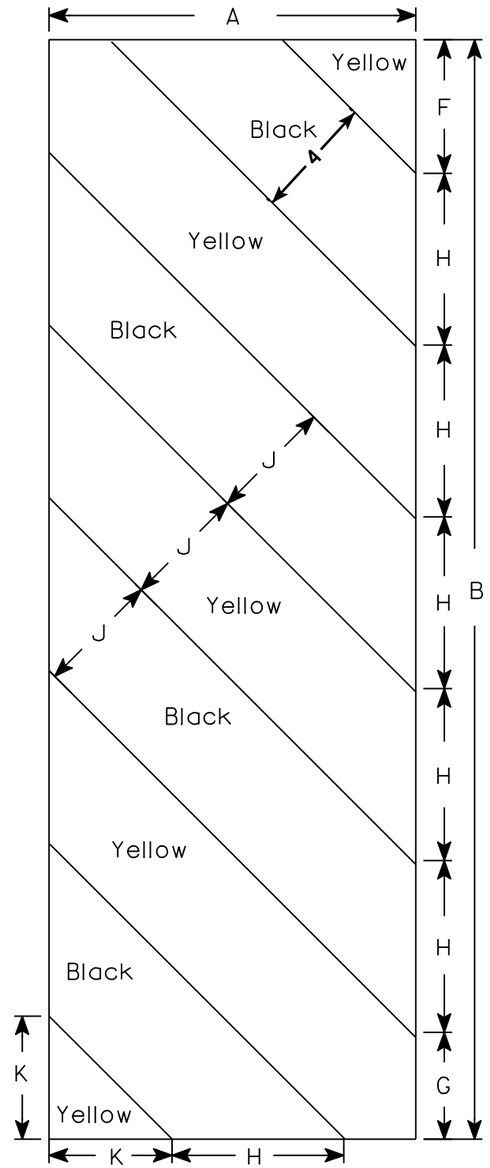
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

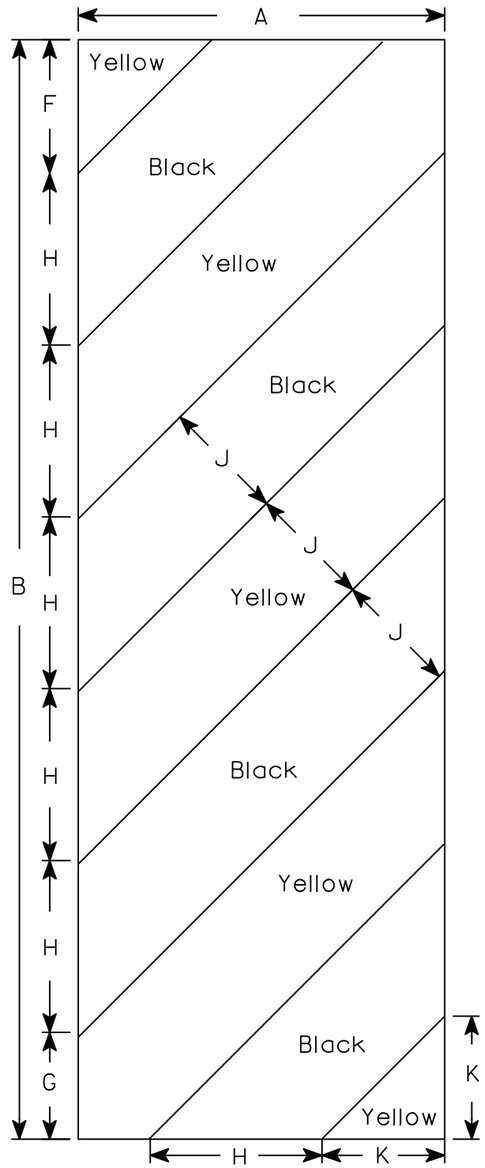
DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 198 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

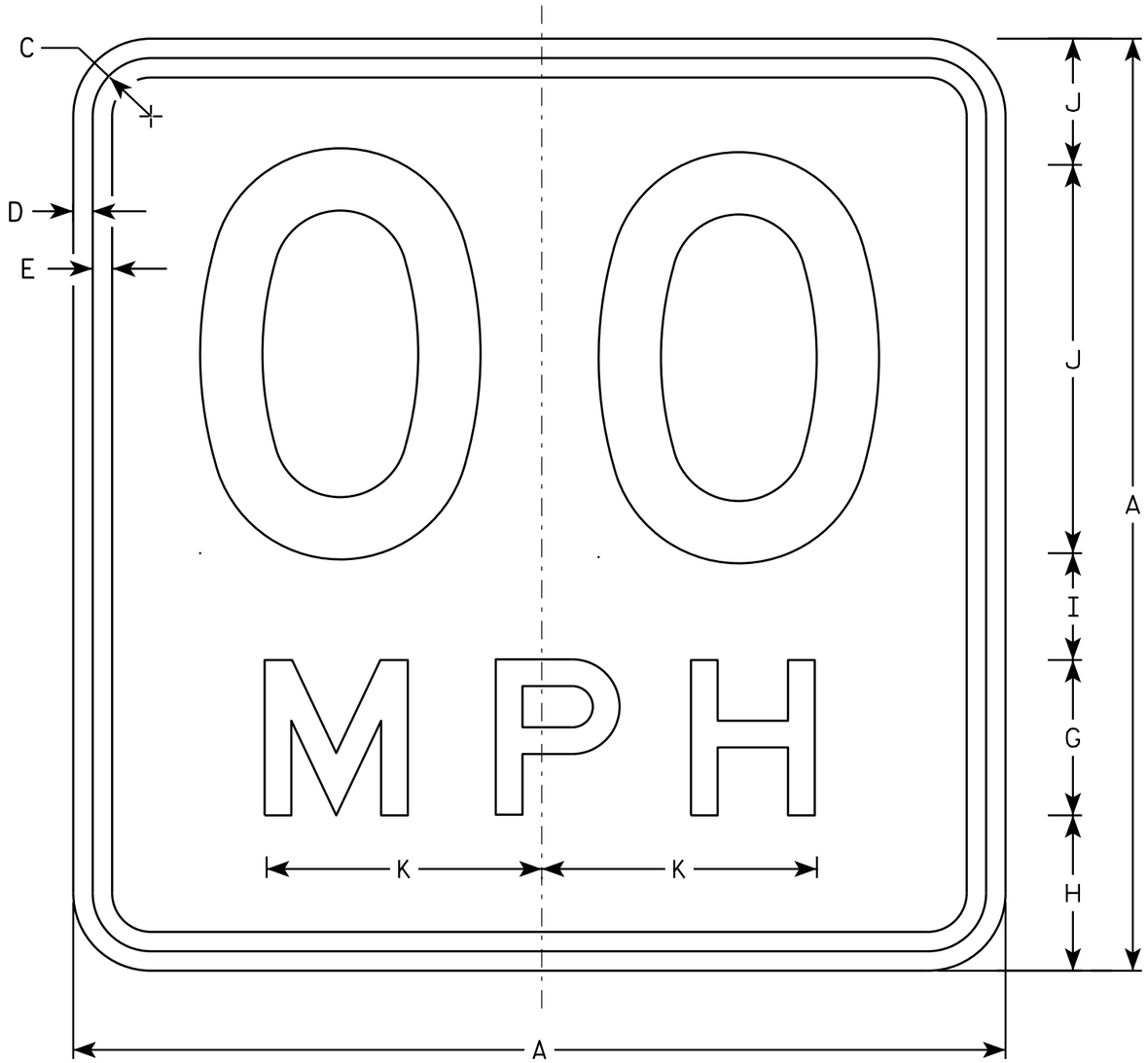
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 199 | E



W013-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

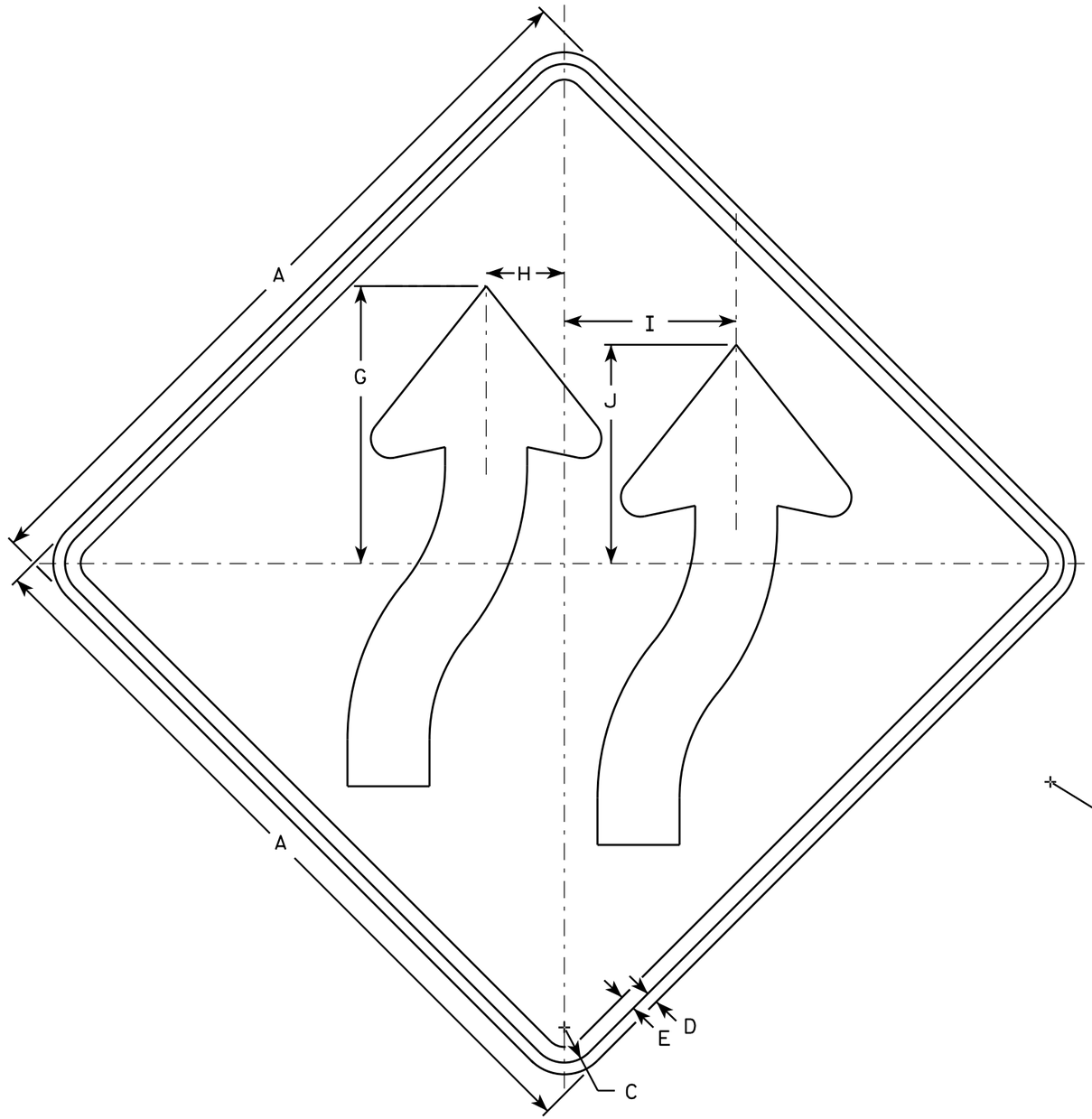
STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

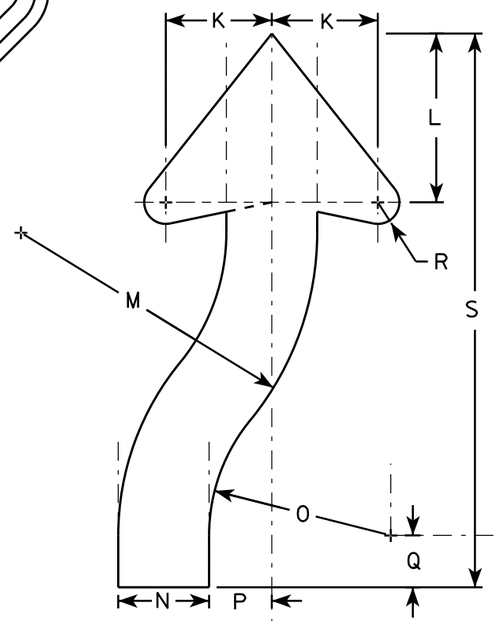
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/13 PLATE 200 W013-1.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W01-4bR



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4bL is the same as W014-bR exept arrows are reversed along the vertical centerline

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

STANDARD SIGN
W01-4b

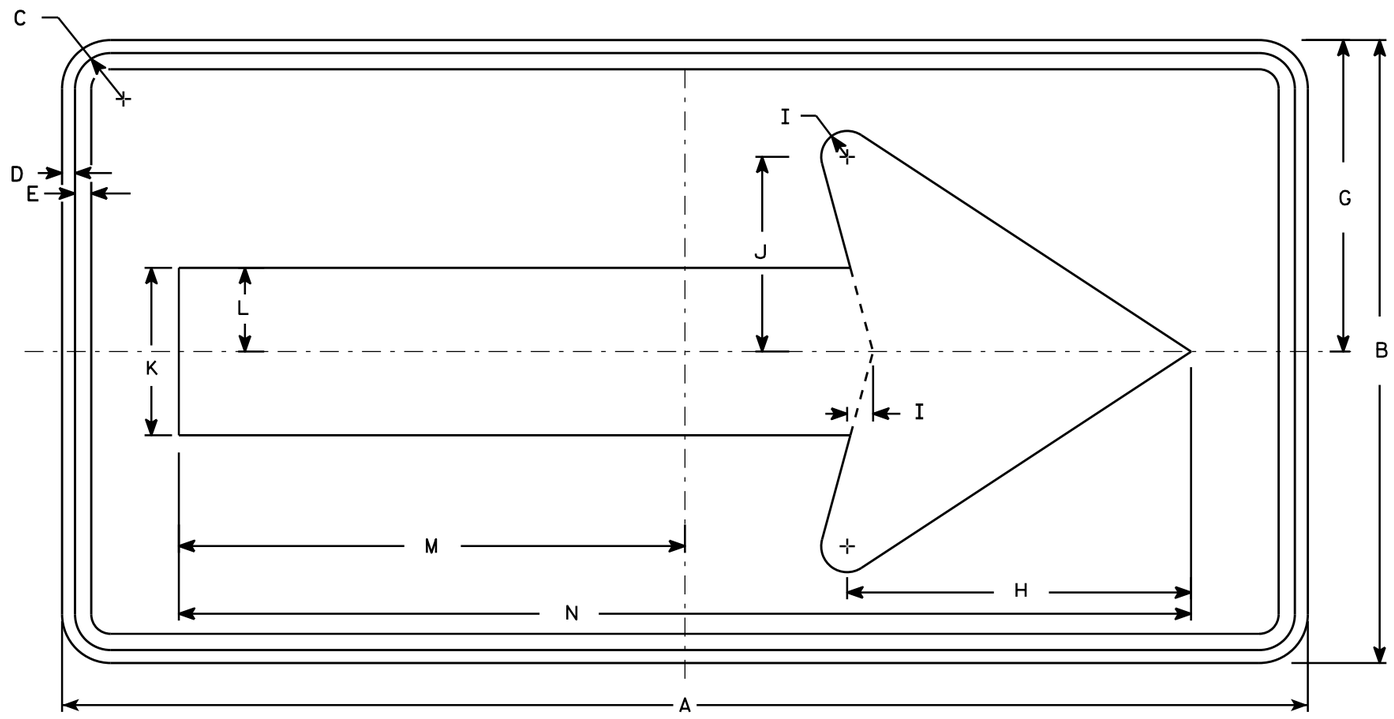
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W014B.DGN PLOT DATE : 28-FEB-2014 11:36 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.756290:1.000000
WISDOT/CADDS SHEET 42



W01-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5

STANDARD SIGN
W01-6

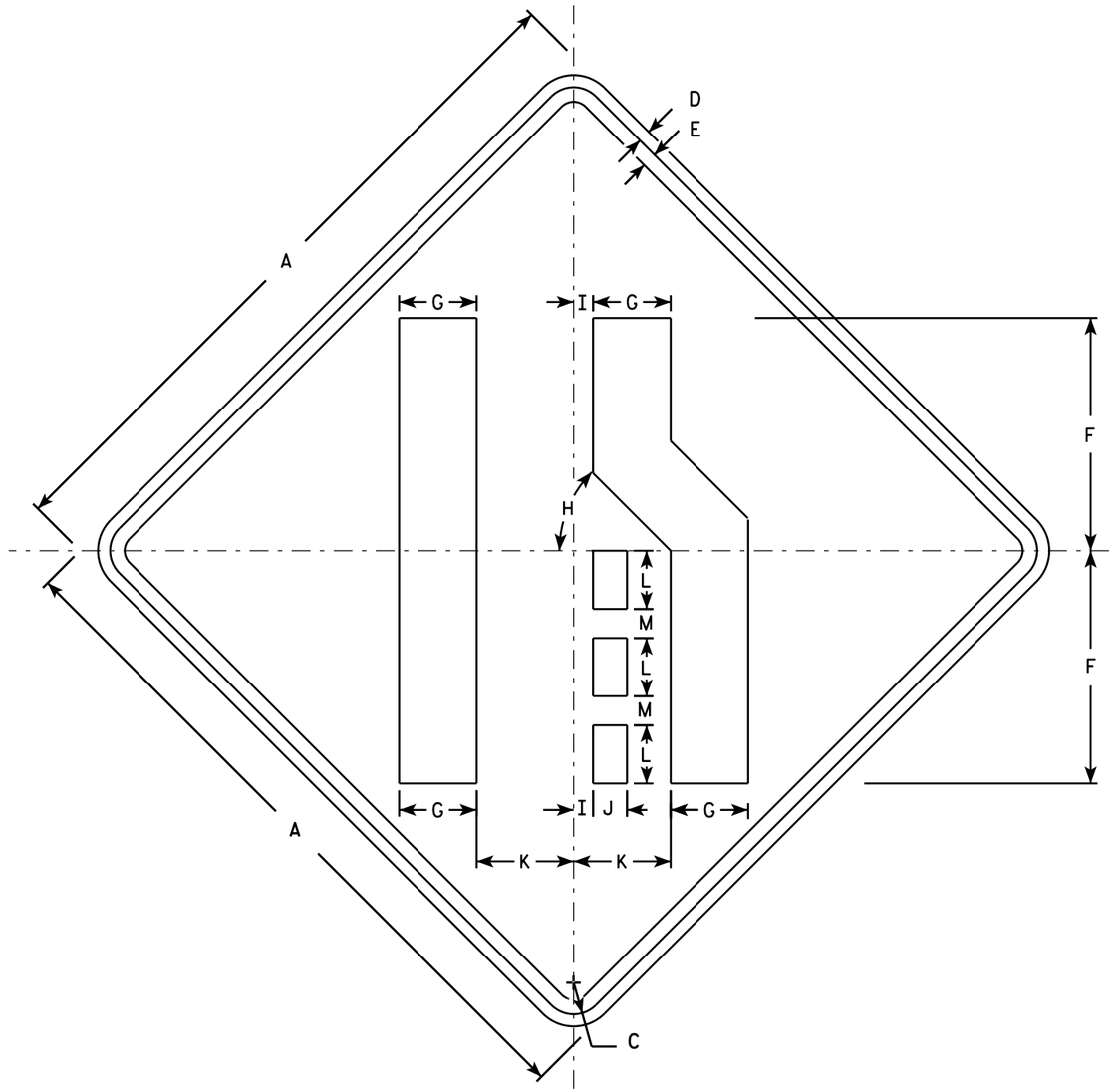
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W016.DGN PLOT DATE : 28-FEB-2014 11:37 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 5.837526:1.000000 WISDOT/CADDS SHEET 42



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

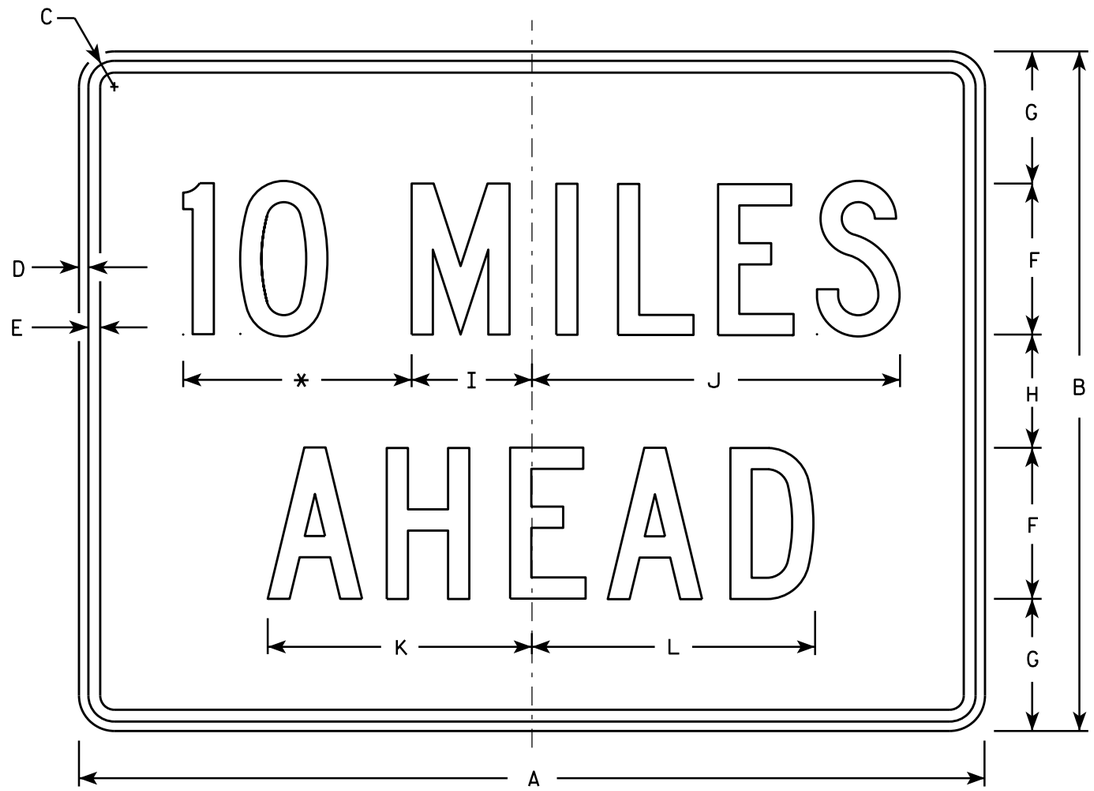
STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

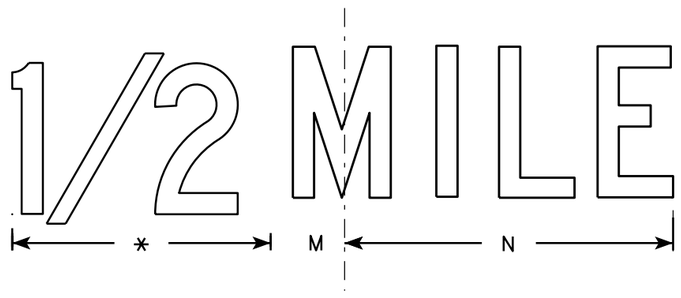
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 203 W04-2.1

PROJECT NO: | SHEET NO: E



W057-52



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

* See note 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.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	13													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	17 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

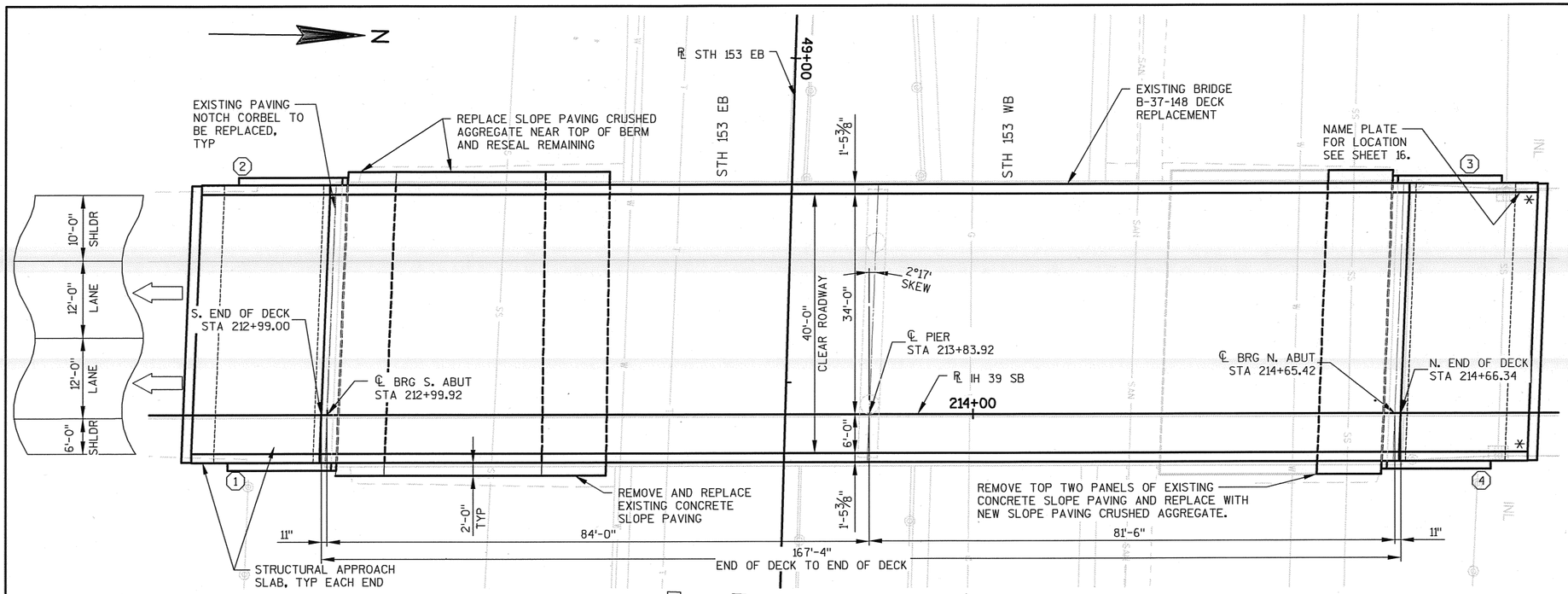
DATE 11/20/13 PLATE W057-52.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W05752.DGN PLOT DATE : 28-FEB-2014 11:42 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 8.026599:1.000000 WISDOT/CADDS SHEET 42

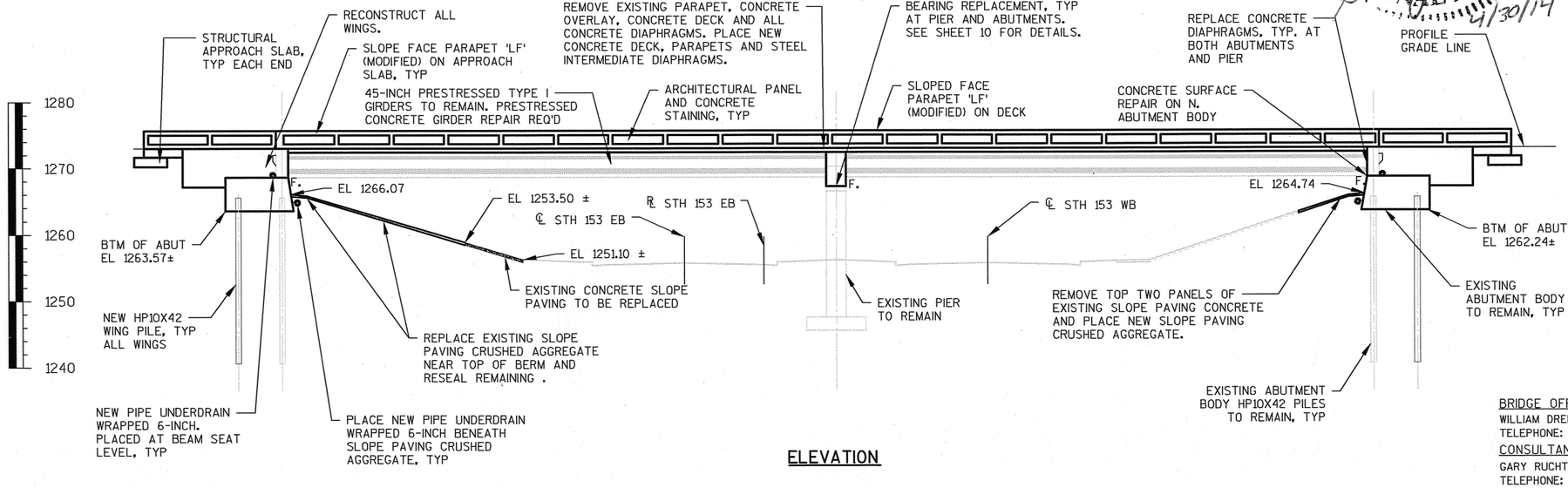
STATE PROJECT NUMBER

1166-02-81



PLAN

(DECK REPLACEMENT OF AN EXISTING TWO SPAN 45-INCH PRESTRESSED GIRDER BRIDGE)



ELEVATION

DESIGN DATA:

RATING

DESIGN LOADING	HS20
INVENTORY RATING	HS19
OPERATIONAL RATING	HS45
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

DECK DESIGN

DESIGN LOADING	HL-93

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SLAB	f'c = 4000 psi
ALL OTHER	f'c = 3500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

TRAFFIC DATA:

IH 39

ADT (2014) =	25,500
ADT (2034) =	32,200
DESIGN SPEED =	70 MPH

FOUNDATION DATA:

NEW WINGS TO BE SUPPORTED ON ON HP 10 X 42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 110 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 20' LONG.

* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

LIST OF DRAWINGS:

SHEET NUMBER	SHEET TITLE
1	GENERAL PLAN
2	TYPICAL SECTION, GENERAL NOTES & QUANTITIES
3	SUBSURFACE EXPLORATION
4	SOUTH ABUTMENT
5	SOUTH ABUTMENT DETAILS
6	SOUTH ABUTMENT DETAILS
7	NORTH ABUTMENT
8	NORTH ABUTMENT DETAILS
9	NORTH ABUTMENT DETAILS
10	BEARING REPLACEMENT DETAILS
11	INTERMEDIATE STEEL DIAPHRAGMS
12	SUPERSTRUCTURE
13	SUPERSTRUCTURE DETAILS
14	SUPERSTRUCTURE DETAILS
15	STRUCTURAL APPROACH SLAB
16	SLOPED FACE PARAPET TYPE 'LF' (MODIFIED)
17	AESTHETIC DETAILS
18	SLOPE PAVING REPAIRS

WISCONSIN
GARY A. RUCHTI
E-30936
MADISON
WI
PROFESSIONAL ENGINEER
4/30/14

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
6501 Watts Road
Madison, WI 53719
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 04/30/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-37-148

IH 39/USH 51 S. BOUND OVER STH 153

COUNTY	TOWN/~~CITY/VILLAGE~~
MARATHON	KRONENWETTER

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
RCP	GAR	TAV	GAR

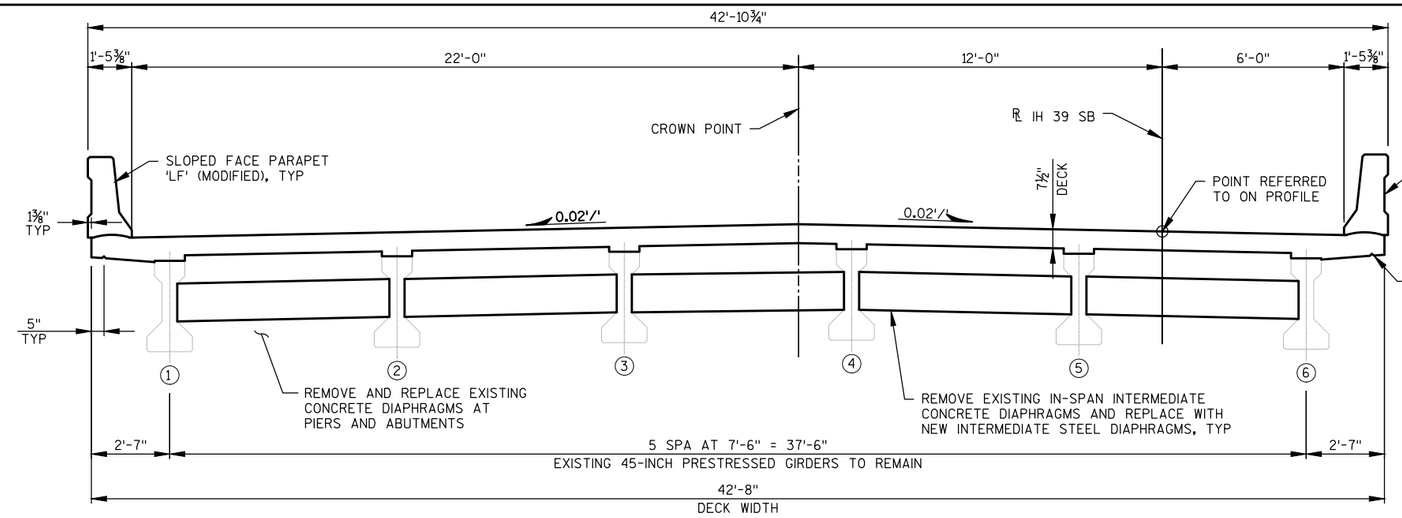
GENERAL PLAN

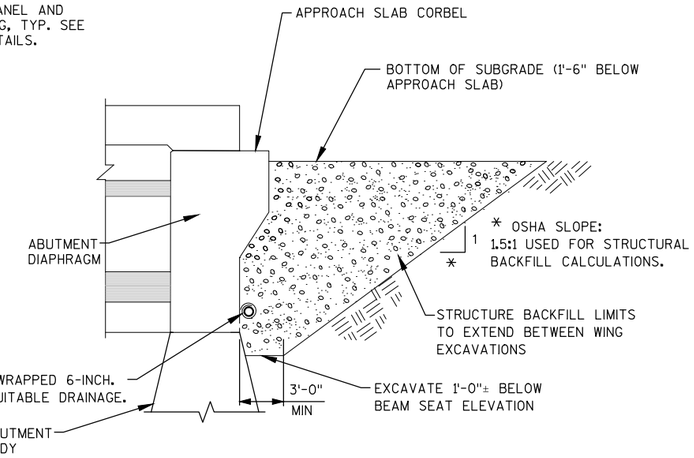
SHEET 1 OF 18

205

BRIDGE OFFICE CONTACT
WILLIAM DREHER, P.E.
TELEPHONE: (608) 266-8489
CONSULTANT CONTACT
GARY RUCHTI, P.E.
TELEPHONE: (608) 273-6380

FILE NAME • X:\323304-00\113690.01\TECH\CAD\116602111\DESIGN\STRUCTURE\080101_GP.DWG PLOT DATE • 4/30/2014 PLOT BY • ---- PLOT SCALE • ********



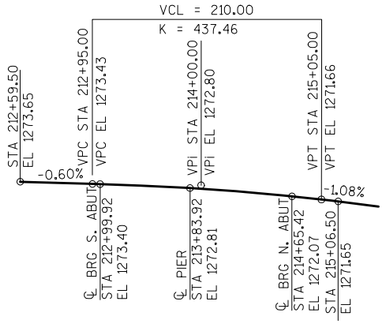


TYPICAL ABUTMENT BACKFILL
(TYPICAL AT BOTH ABUTMENTS)

STATE PROJECT NUMBER
1166-02-81

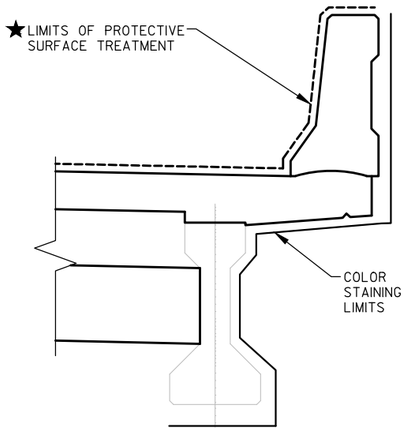
BENCH MARKS

NO.	STATION, OFFSET	DESCRIPTION	ELEV.
1	213+79.24'NB',28.26' RT	3/4" IRON ROD	1256.10



PROFILE GRADE LINE, ℄ IH 39 SB

CROSS SECTION THRU BRIDGE
(LOOKING NORTH)



LIMITS OF PROTECTIVE SURFACE TREATMENT AND COLOR STAINING

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING CONCRETE AND ASPHALTIC COATED CRUSHED AGGREGATE TO THE EXTENT SHOWN ON SHEET 1 AND IN THE SLOPE PAVING DETAILS ON SHEET 18.

AT THE BACKFACE OF THE ABUTMENT OR WING VOLUME WHICH CANNOT BE PLACED BEFORE THE SUPERSTRUCTURE CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH OF 2 ¼ INCHES, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

SUPERSTRUCTURE QUANTITIES INCLUDE CONCRETE AND REINFORCEMENT OF THE PARAPET ON THE DECK. THE CONCRETE AND REINFORCEMENT QUANTITIES FOR THE PARAPETS ON THE APPROACH SLAB ARE INCLUDED IN THE APPROACH SLAB QUANTITIES.

★ PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF DECK, OR TOP OF APPROACH SLAB, BOTH INSIDE FACES AND ON TOP OF BOTH PARAPETS, SEE DETAIL ON THIS SHEET.

BEARING REPLACEMENT SHALL INCLUDE GALVANIZED MASONRY SHIM PLATES WITH ELASTOMERIC BEARING PADS. SEE DETAILS ON SHEET 10.

DIMENSIONS SHOWN ARE BASED ON ORIGINAL STRUCTURE PLANS.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

ALL CONCRETE REMOVAL NOT COVERED WITH CONCRETE SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1973.

EXISTING ALUMINUM PARAPET RAILING SHALL BE SALVAGED FOR USE BY THE COUNTY. SEE SPECIAL PROVISIONS.

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

(#) INDICATES GIRDER NUMBER

BENCH ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88).

WING BACKFILL DETAIL
(TYPICAL AT ALL WINGS)

* OSHA SLOPE: 1.5:1 USED FOR STRUCTURAL BACKFILL CALCULATIONS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	S ABUT	S APP. SLAB	PIER	N ABUT	N APP. SLAB	SUPER	TOTALS
203.0200	REMOVING OLD STRUCTURE (STA 213+84)	LS	—	---	---	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-37-148)	LS	—	---	---	---	---	---	1
210.0100	BACKFILL STRUCTURE	CY	140	---	---	140	---	---	280
502.0100	CONCRETE MASONRY BRIDGES	CY	19	58	---	19	58	248	402
502.3200	PROTECTIVE SURFACE TREATMENT	SY	—	105	---	---	105	879	1089
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	42	---	---	42	---	---	84
502.5015	MASONRY ANCHORS TYPE L NO. 7 BARS	EACH	16	---	---	16	---	---	32
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	300	---	---	300	---	0	600
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1630	9770	---	1630	9770	72330	95130
506.4000	STEEL DIAPHRAGMS (B-37-148)	EACH	—	---	---	---	---	10	10
506.7000.S.01	BEARING REPLACEMENT (B-37-148)	EACH	—	---	---	---	---	22	22
509.1500	CONCRETE SURFACE REPAIR	SF	—	---	---	6	---	---	6
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12	---	---	12	---	---	24
517.1015.S.01	CONCRETE STAINING MULTI-COLOR (B-37-148)	SF	35	14	---	35	14	416	514
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	40	---	---	40	---	---	80
604.0400	SLOPE PAVING CONCRETE	SY	55	---	---	---	---	---	55
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	15	---	---	45	---	---	60
604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	160	---	---	---	---	---	160
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	—	---	---	---	10	---	10
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	160	51	---	160	44	---	415
614.0150	ANCHORAGES ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	---	---	---	2	---	2
SPV.0085.01	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	—	---	---	---	---	1470	1470
SPV.0165.02	PRESTRESSED CONCRETE GIRDER REPAIR	SF	—	---	---	---	---	1	1
	NON BID ITEMS								
	FILLER	SIZE							1/2" & 3/4"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

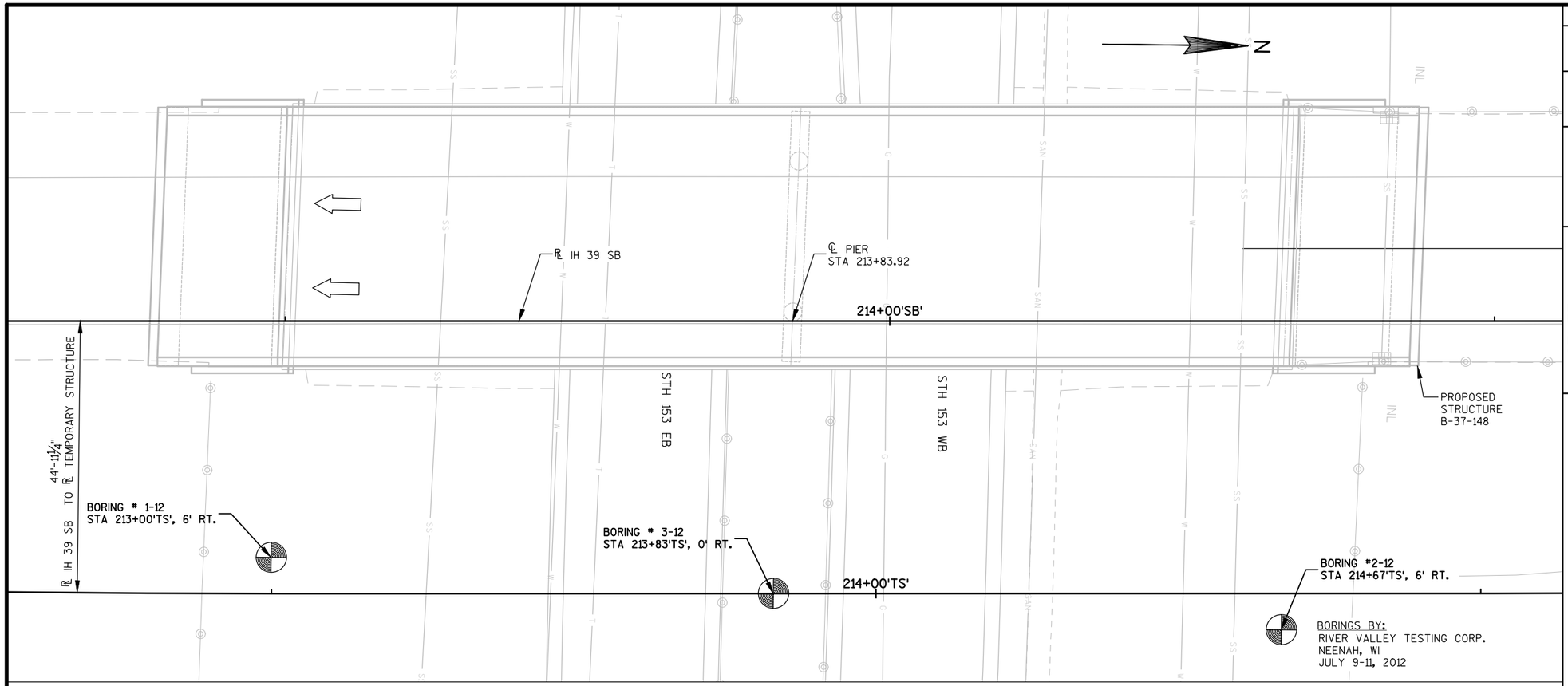
DRAWN BY TAV | PLANS CK'D. GAR

TYPICAL SECTION, GENERAL NOTES & QUANTITIES

SHEET 2 OF 18
206

8

8



STATE PROJECT NUMBER

1166-02-81

ABBREVIATIONS

F — Fine M — Medium C — Coarse
Ws — Weathered So — Sound

MATERIAL SYMBOLS

Asphalt, Concrete, Gravel, Silt, Organic Soil, Clay, Sand, Air, Water

LEGEND OF PROBING

95/6=95 BLOWS FOR 6" PENETRATION
PROBING TAKEN WITH A 350# WT. FALLING 18" ON A 2" O.D. POINT.

Probing No.
Sta.
Elevation
7 Average Blows Per Foot
Refusal 95/6

LEGEND OF BORING

Boring No.
Elev.
Sta.
Unconfined STRENGTH → 7. 7
Blows Per Ft. USING 140# WT. FALLING 30"
Wash Sample
Shelby Tube — S.T.
Ground Water
No Ground Water OBSERVED ABOVE THIS ELEVATION
Sandy Gravel
F. Boulders or COBBLES
Sand
Silty Clay
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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

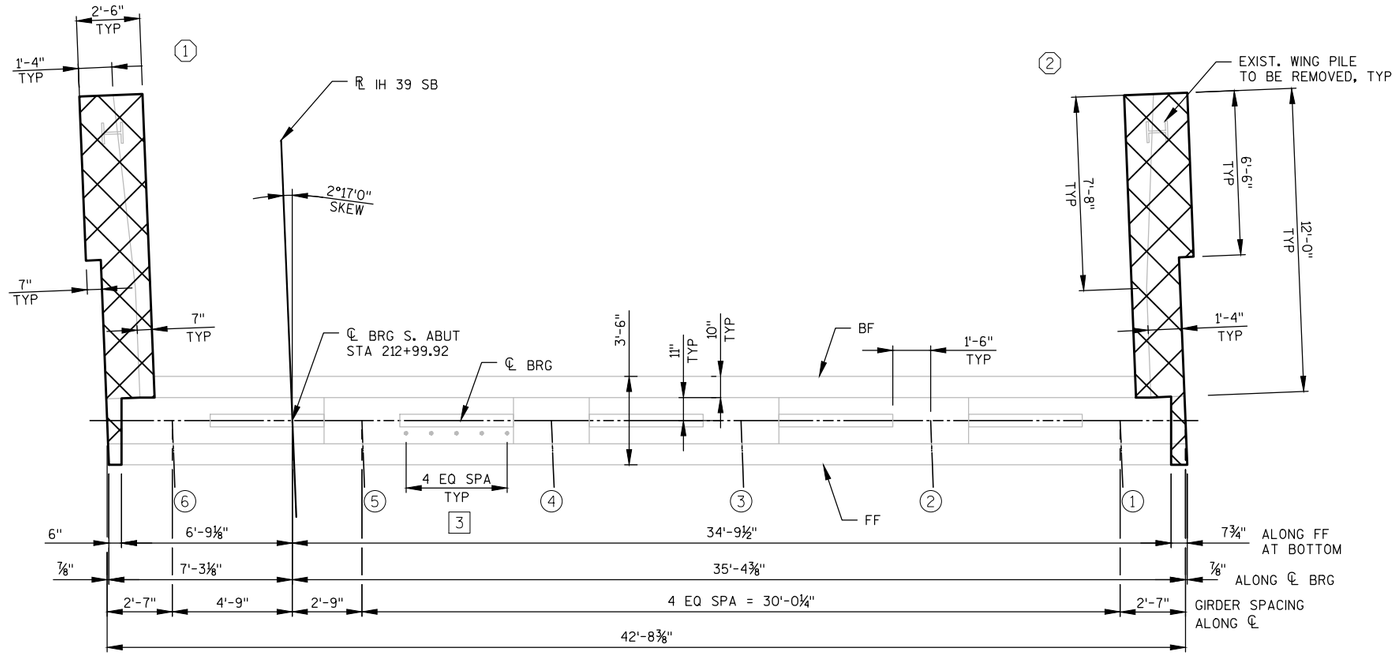
DRAWN BY TAV | PLANS CK'D. GAR

SUBSURFACE EXPLORATION

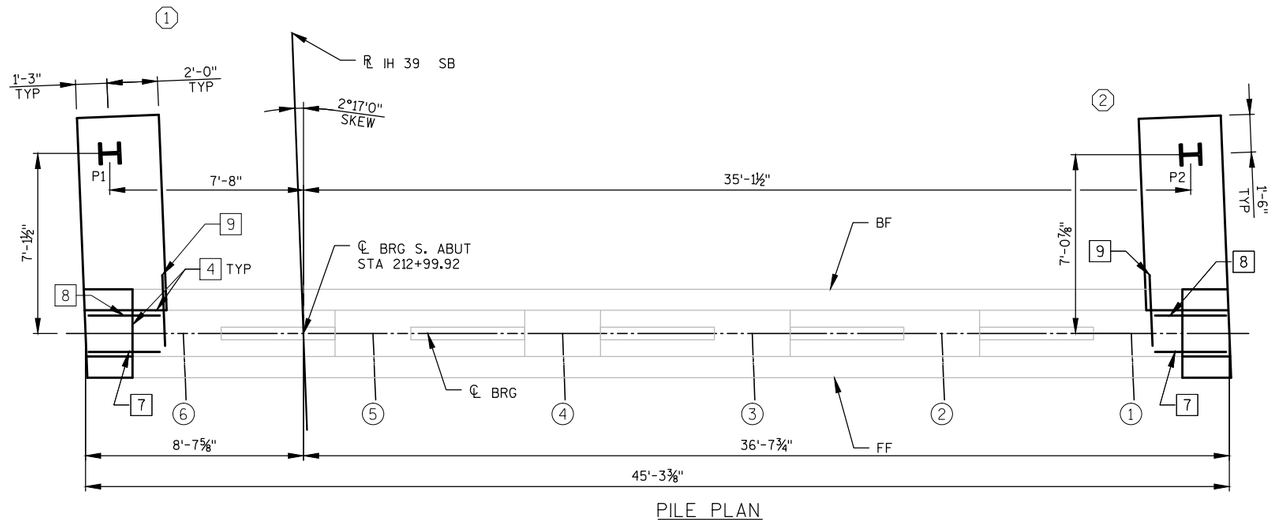
SHEET 207 # OF 18

8

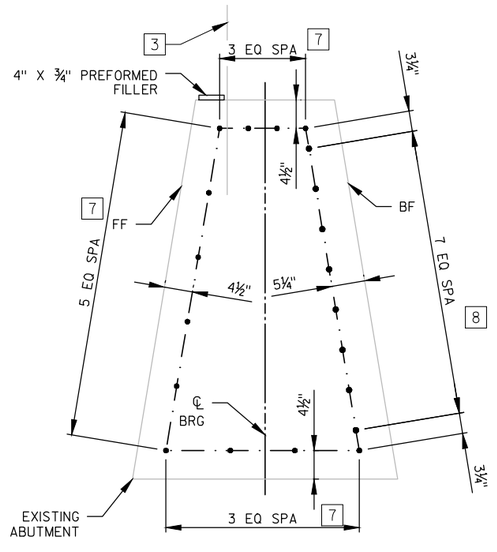
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EXISTING PLAN



PILE PLAN



MASONRY ANCHOR LAYOUT

ABUTMENT NOTES

FILL / EXCAVATE TO BOTTOM OF WING BODY EL 1263.57± BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL DETAIL.

WINGS TO SUPPORTED ON HP 10 X 42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED AT 20' LONG.

BEARING REPLACEMENT NEEDED AT GIRDERS 2 THROUGH 6. SEE SHEET 10 FOR DETAILS.

1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
2. OPTIONAL CONST. JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE. DEFINE WITH ¾" BEVEL ON FF.
3. SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.
4. ROUGHEN SURFACE OF CONCRETE ¼" MIN. ALL AREAS OF NEW TO EXIST. CONCRETE CONTACT. SEE MASONRY ANCHOR LAYOUT ON THIS SHEET FOR ANCHOR PLACEMENT IN EXISTING ABUTMENT BODY.
5. ½" FILLER - EXTENDED FROM BEARING SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.
6. PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN.
7. CONCRETE MASONRY ANCHORS, TYPE L, NO. 6 BARS, MINIMUM PULLOUT CAPACITY OF 26.4 KIPS. EMBED 1'-1" IN CONCRETE WITH A601 BARS. TOTAL NUMBER REQUIRED = 24 FOR SOUTH ABUTMENT.
8. CONCRETE MASONRY ANCHORS, TYPE L, NO. 7 BARS, MINIMUM PULLOUT CAPACITY OF 36 KIPS. EMBED 1'-4" IN CONCRETE WITH A702 BARS. TOTAL NUMBER REQUIRED = 16 FOR SOUTH ABUTMENT.
9. CONCRETE MASONRY ANCHORS, TYPE L, NO. 6 BARS, MINIMUM PULLOUT CAPACITY OF 26.4 KIPS. EMBED 1'-1" IN CONCRETE WITH A604 BARS. TOTAL NUMBER REQUIRED = 18 FOR SOUTH ABUTMENT WINGS.

(#) INDICATES GIRDER NUMBER

⟨#⟩ INDICATES WING NUMBER

P# INDICATES PILE NUMBER

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP

REMOVAL LIMITS OF EXISTING WING. WING BODY TO BE REMOVED TO BF OF ABUTMENT BODY. EXISTING WING PILE TO BE REMOVED.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

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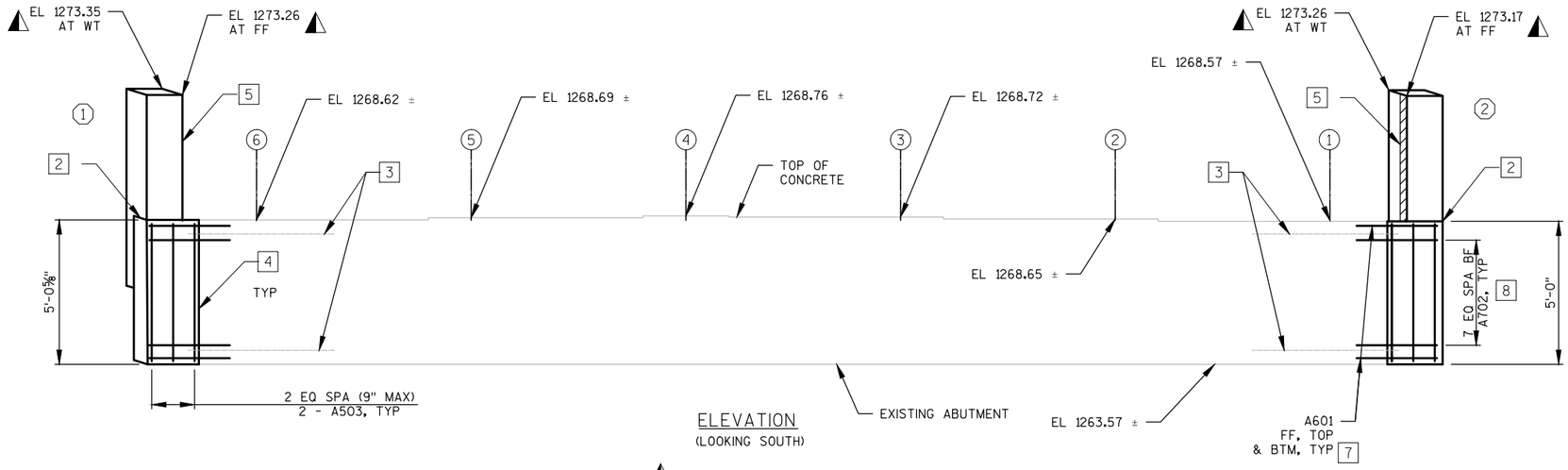
SOUTH ABUTMENT

SHEET 4 OF 18
208

8

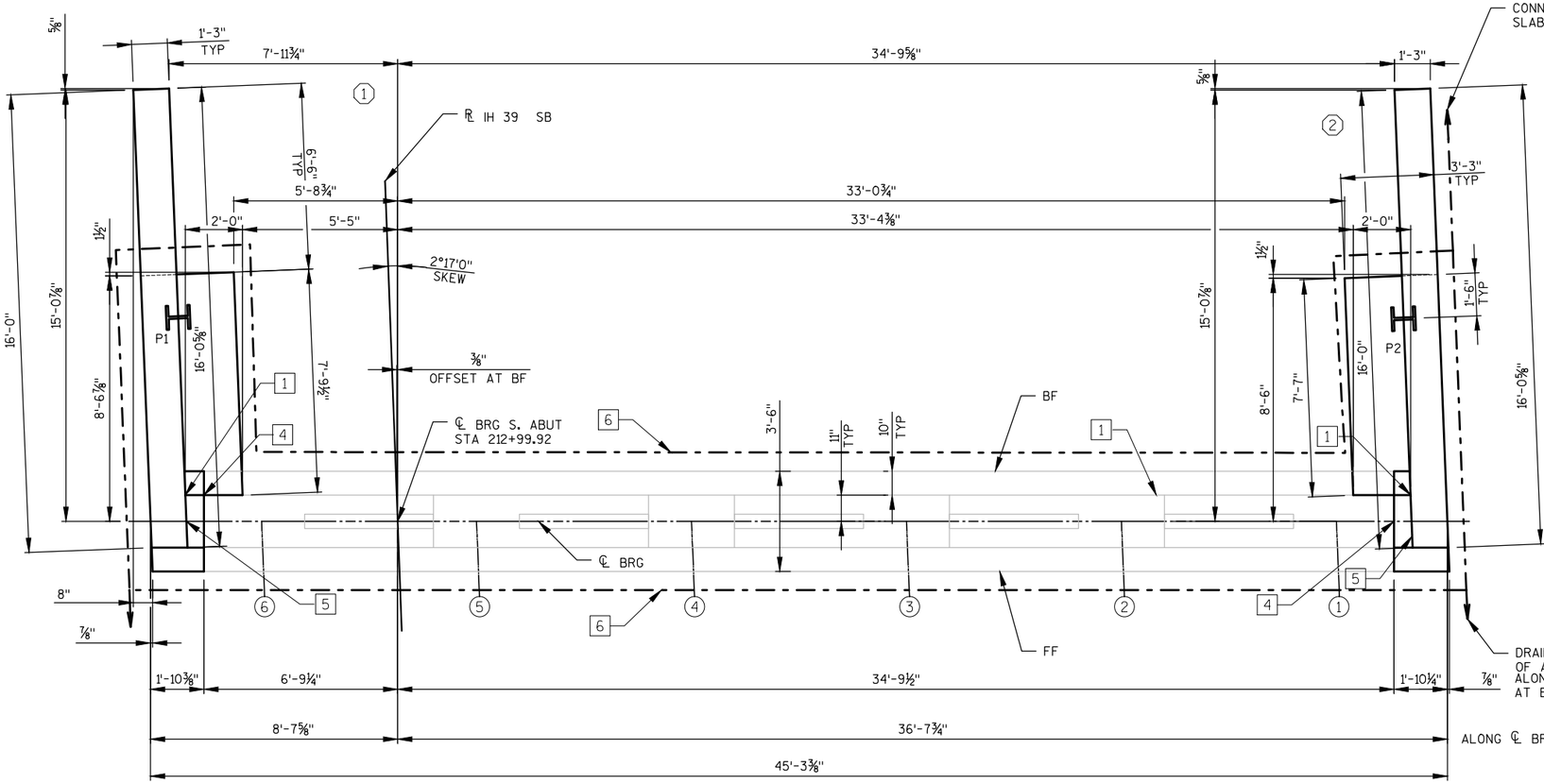
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STATE PROJECT NUMBER
1166-02-81



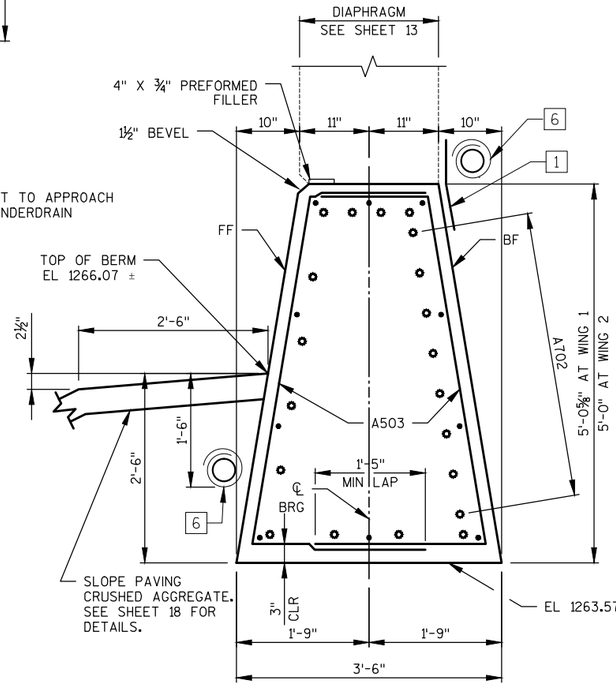
ELEVATION
(LOOKING SOUTH)

⚠ A ¼" GAP BETWEEN TOP OF WALL AND BOTTOM OF PARAPET WAS USED IN DETERMINING WING ELEVATIONS.



PROPOSED PLAN

ABUTMENT NOTES



SECTION THRU ABUTMENT BODY

ALL ANCHORED BARS NOT LABELED ARE A601 BARS

- HOLLOW CIRCLES REPRESENT ANCHORED BARS, SEE DETAIL ON SHEET 4.
- SOLID DOTS REPRESENT A413 BARS AT 1'-6" MAX SPACING.

A604 BARS NOT SHOWN. SEE SHEET 6.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

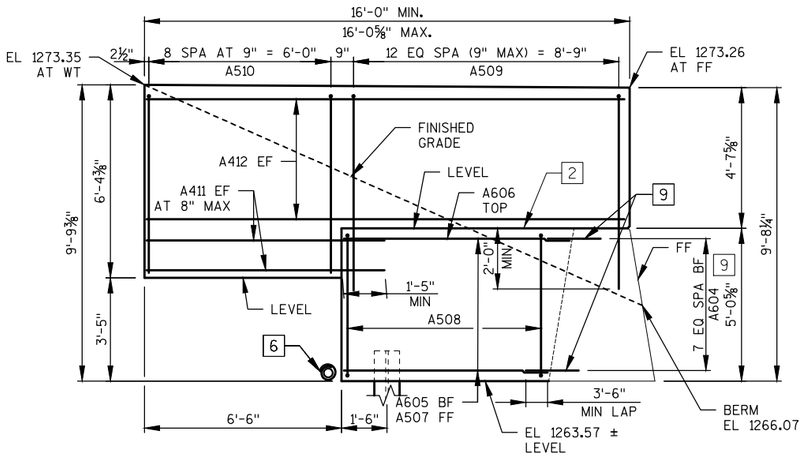
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SOUTH ABUTMENT DETAILS

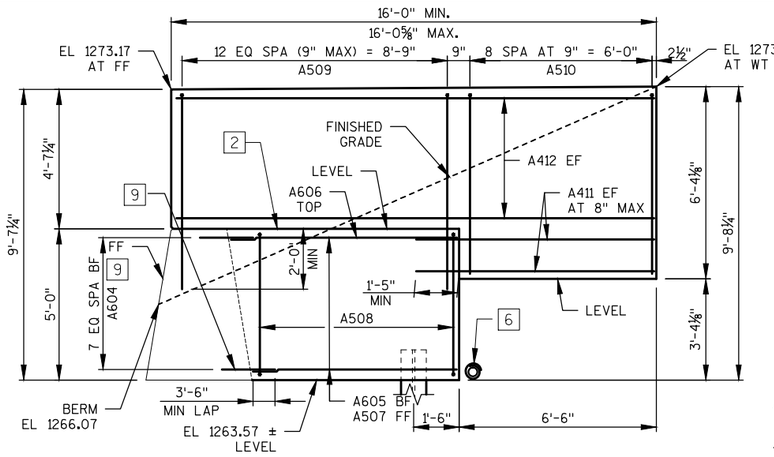
SHEET 5 OF 18
209

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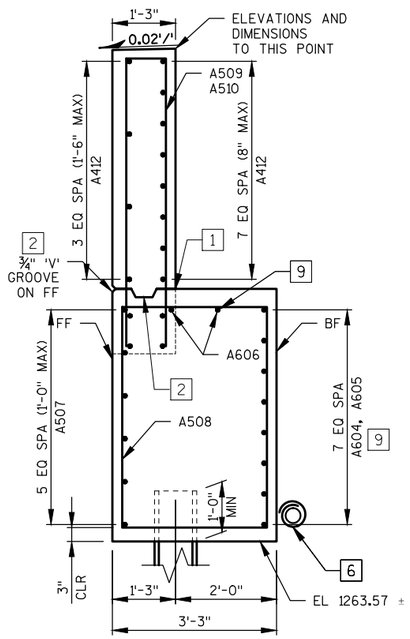
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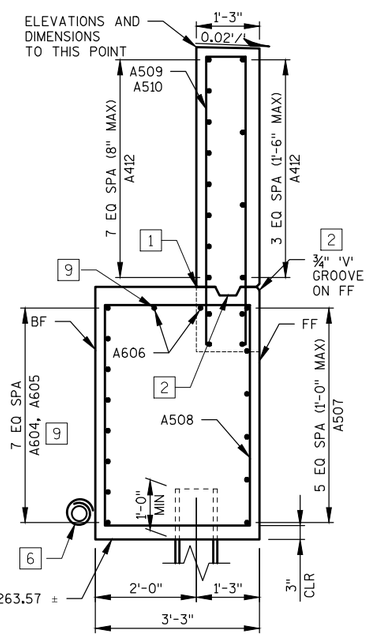
WING 1 ELEVATION



WING 2 ELEVATION



WING 1 SECTION



WING 2 SECTION

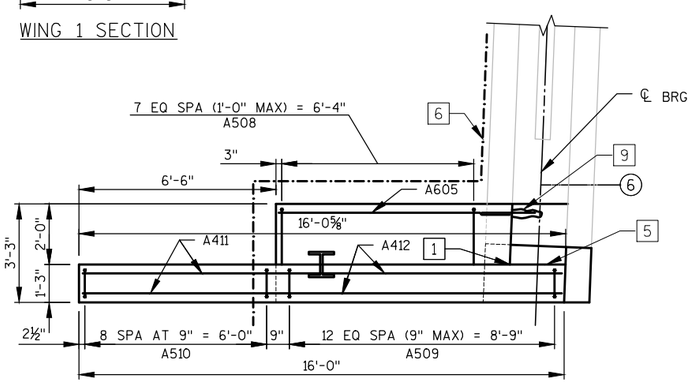
NOTES

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2. OPTIONAL CONST. JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
5. ½" FILLER - EXTENDED FROM BEARING SEAT TO TOP OF WING, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.
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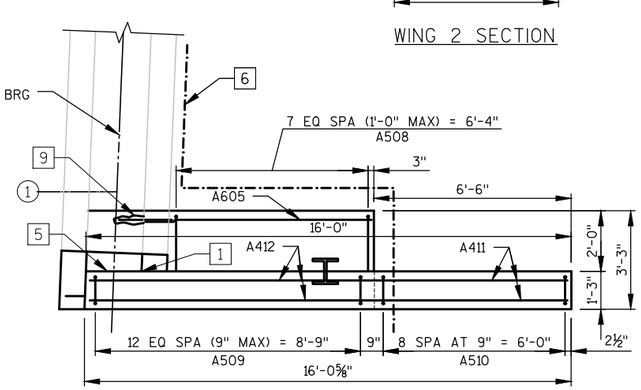
(#) INDICATES GIRDER NUMBER

(#) INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP



WING 1 PLAN



WING 2 PLAN

STATE PROJECT NUMBER

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BILL OF BARS
SOUTH ABUTMENT

COATED= 1630 LBS.
UNCOATED= 300 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
A601		24	2 - 8			ABUTMENT BODY - DOWELS FF	HORIZ
A702		16	2 - 11			ABUTMENT BODY - DOWELS BF	HORIZ
A503		12	8 - 3	X		ABUTMENT BODY - STIRRUPS	VERT
A604	18		4 - 9			WING BODY - DOWELS BF	HORIZ
⚠ A605	16		6 - 10		X	WING BODY - BF	HORIZ
A606	4		7 - 3			WING BODY - TOP	HORIZ
⚠ A507	12		9 - 5		X	WING BODY - FF	HORIZ
A508	16		15 - 3	X		WING BODY - STIRRUPS	VERT
A509	26		13 - 10	X		WING TOP - STIRRUPS	VERT
A510	18		12 - 6	X		WING TOP - STIRRUPS	VERT
A411	8		7 - 9			WING TOP - EF	HORIZ
A412	24		15 - 7			WING TOP - EF	HORIZ
A413	20		1 - 6			ABUTMENT BODY - TIE STEEL	HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

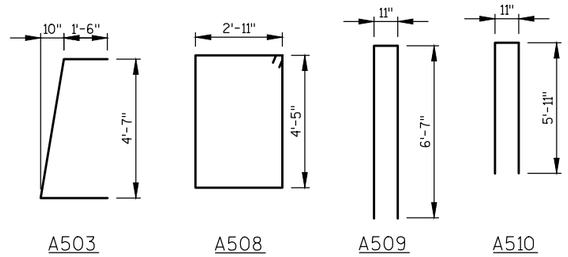
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

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

BAR SERIES ⚠

MARK	NO. REQUIRED	LENGTH
A605	2 SERIES OF 8	6'-5" TO 7'-3"
A507	2 SERIES OF 6	9'-0" TO 9'-10"

BUNDLE AND TAG EACH SERIES SEPERATELY



A503 A508 A509 A510

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

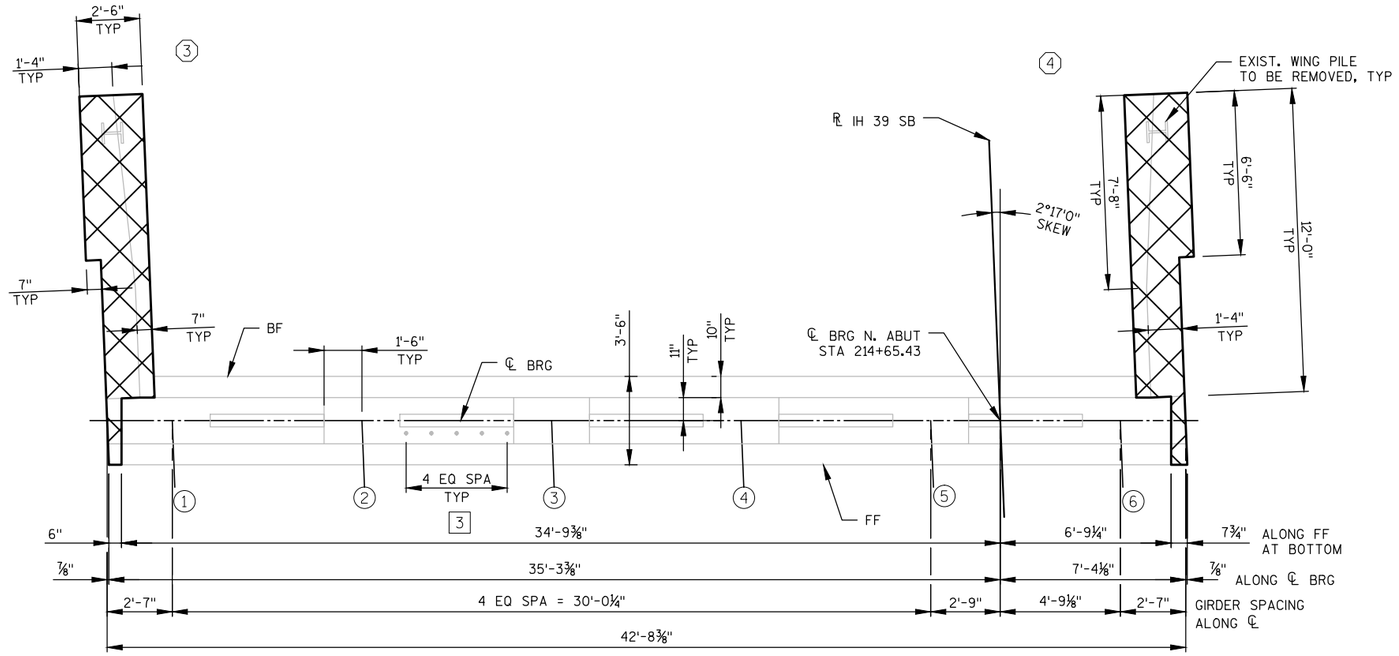
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SOUTH ABUTMENT DETAILS

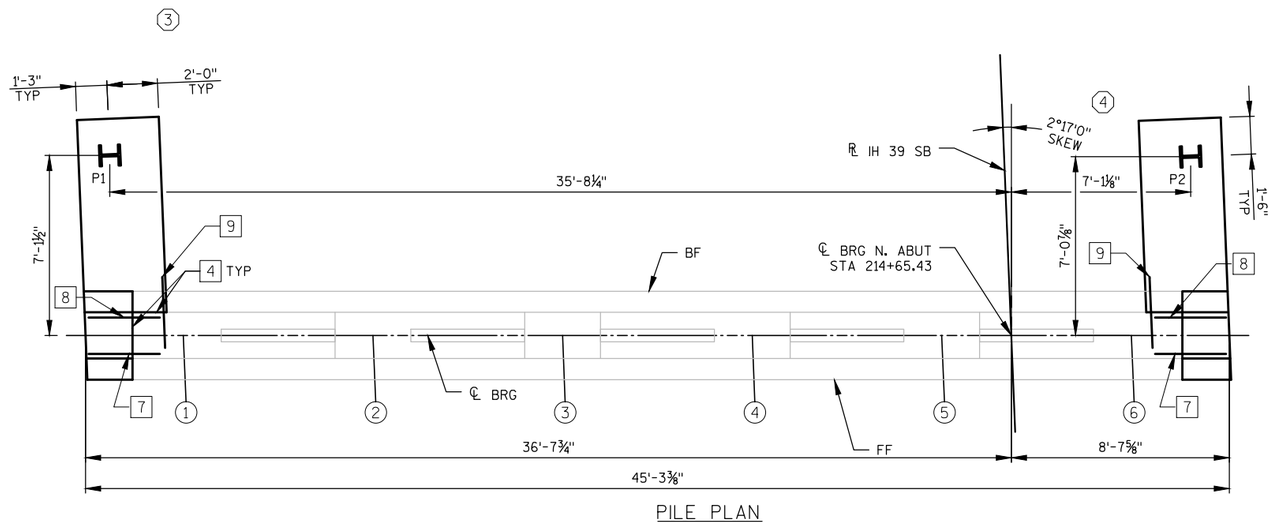
SHEET 6 OF 18
210

8

8



EXISTING PLAN



PILE PLAN

ABUTMENT NOTES

FILL / EXCAVATE TO BOTTOM OF WING BODY EL 1263.24± BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL DETAIL.

WINGS TO SUPPORTED ON HP 10 X 42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED AT 20' LONG.

BEARING REPLACEMENT NEEDED AT GIRDERS 2 THROUGH 6. SEE SHEET 10 FOR DETAILS.

1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
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3. SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.
4. ROUGHEN SURFACE OF CONCRETE ¼" MIN. ALL AREAS OF NEW TO EXIST. CONCRETE CONTACT. SEE MASONRY ANCHOR LAYOUT ON THIS SHEET FOR ANCHOR PLACEMENT IN EXISTING ABUTMENT BODY.
5. ½" FILLER - EXTENDED FROM BEARING SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.
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7. CONCRETE MASONRY ANCHORS, TYPE L, NO. 6 BARS, MINIMUM PULLOUT CAPACITY OF 26.4 KIPS. EMBED 1'-1" IN CONCRETE WITH B601 BARS. TOTAL NUMBER REQUIRED = 24 FOR NORTH ABUTMENT.
8. CONCRETE MASONRY ANCHORS, TYPE L, NO. 7 BARS, MINIMUM PULLOUT CAPACITY OF 36 KIPS. EMBED 1'-4" IN CONCRETE WITH B702 BARS. TOTAL NUMBER REQUIRED = 16 FOR NORTH ABUTMENT.
9. CONCRETE MASONRY ANCHORS, TYPE L, NO. 6 BARS, MINIMUM PULLOUT CAPACITY OF 26.4 KIPS. EMBED 1'-1" IN CONCRETE WITH B604 BARS. TOTAL NUMBER REQUIRED = 18 FOR NORTH ABUTMENT WINGS.

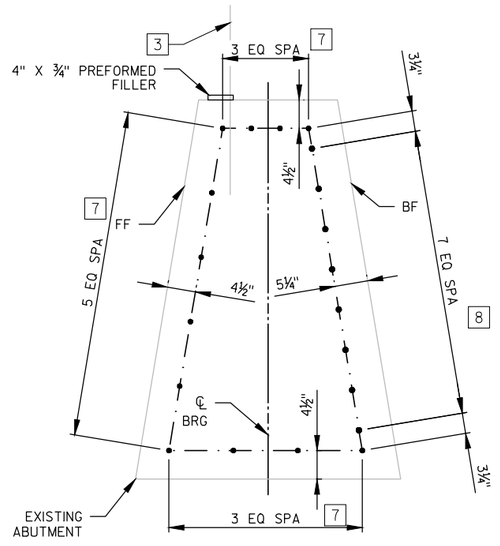
(#) INDICATES GIRDER NUMBER

(#) INDICATES WING NUMBER

P# INDICATES PILE NUMBER

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP

REMOVAL LIMITS OF EXISTING WING. WING BODY TO BE REMOVED TO BF OF ABUTMENT BODY. EXISTING WING PILE TO BE REMOVED.



MASONRY ANCHOR LAYOUT

STATE PROJECT NUMBER

1166-02-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

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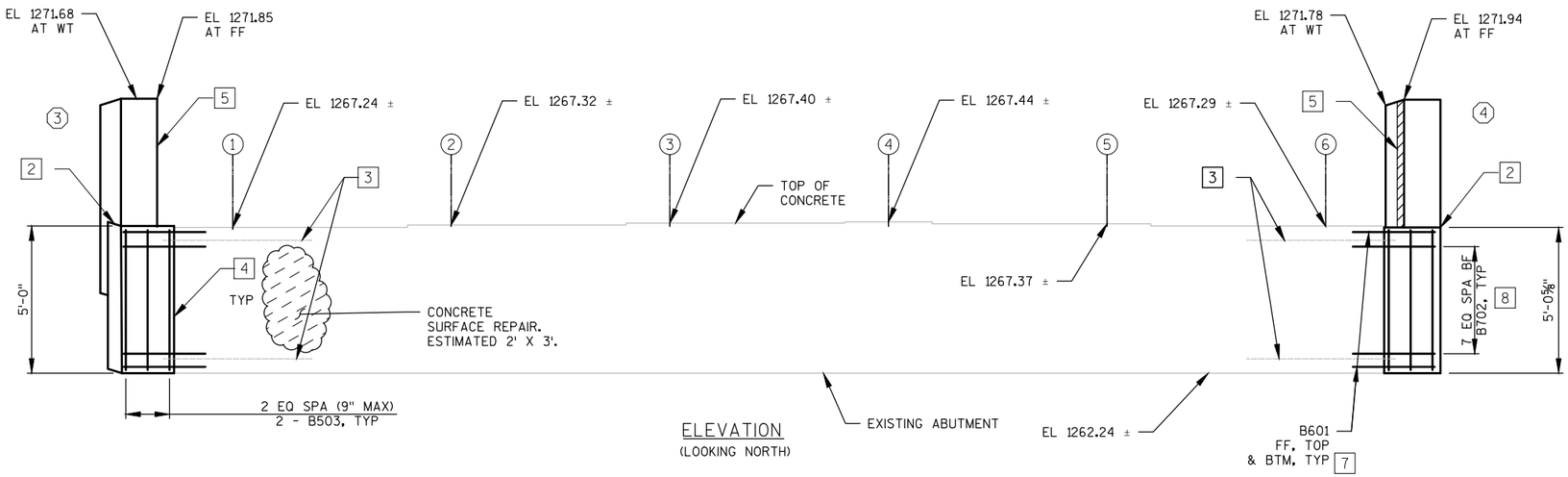
NORTH ABUTMENT

SHEET 7 OF 18
211

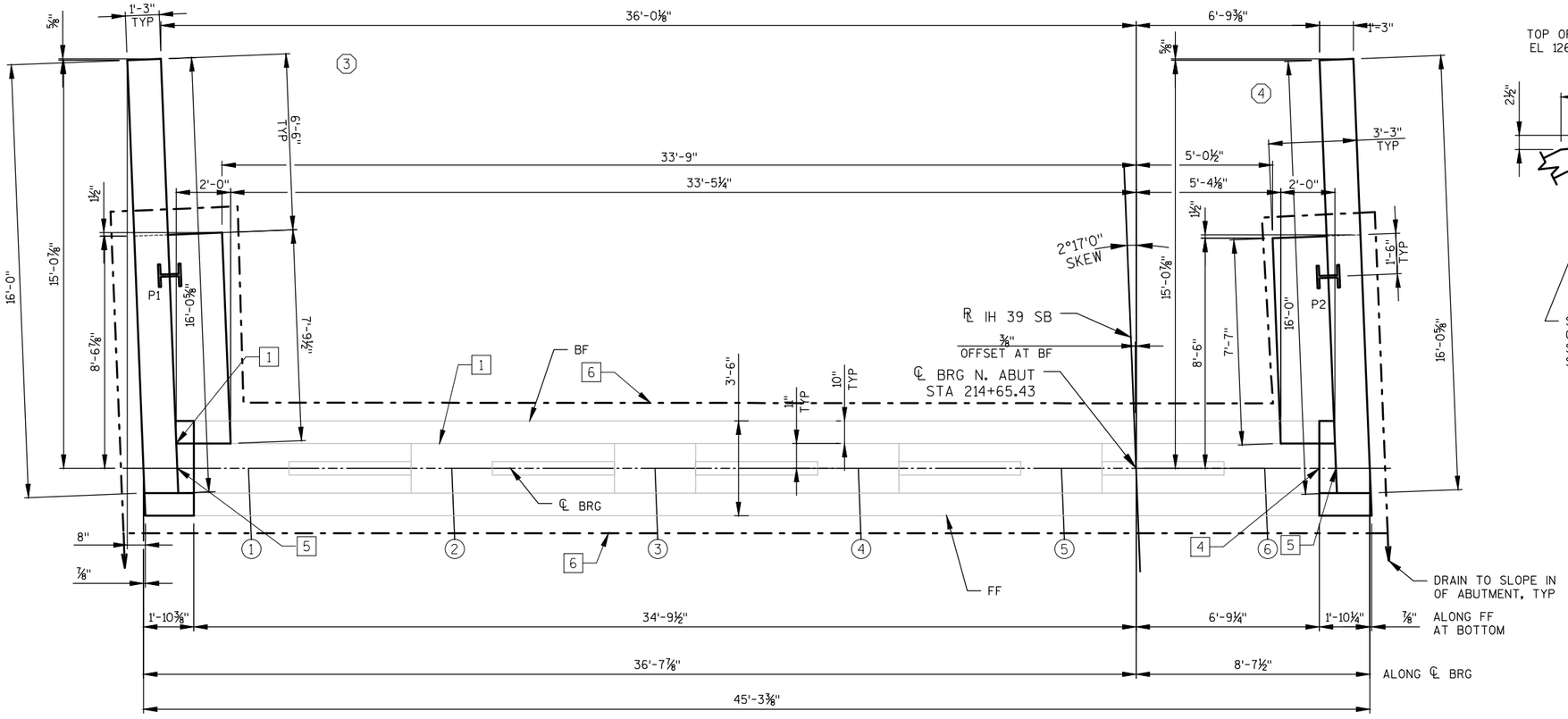
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STATE PROJECT NUMBER
1166-02-81



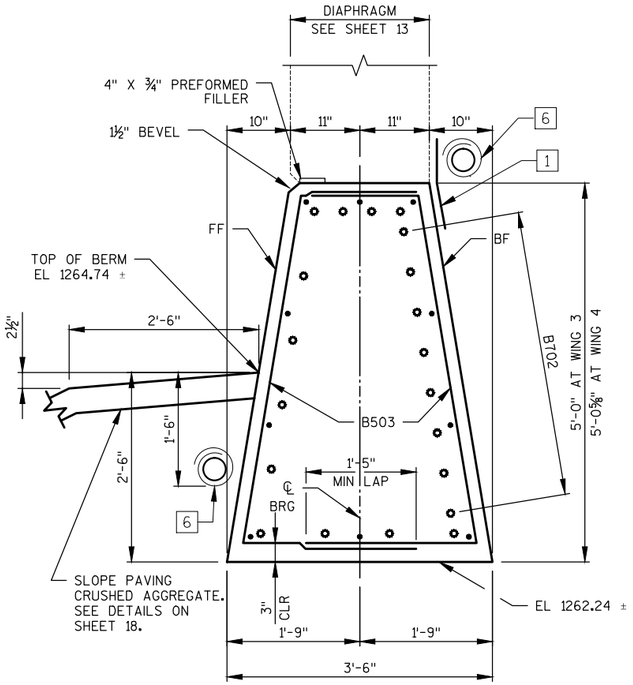
ELEVATION
(LOOKING NORTH)



PROPOSED PLAN

ABUTMENT NOTES

SEE SHEET 7 FOR ALL ABUTMENT NOTES.



SECTION THRU ABUTMENT BODY

ALL ANCHORED BARS NOT LABELED ARE B601 BARS

✪ HOLLOW CIRCLES REPRESENT ANCHORED BARS, SEE DETAIL ON SHEET 7.

• SOLID DOTS REPRESENT B413 BARS AT 1'-6" MAX SPACING.

B604 BARS NOT SHOWN. SEE SHEET 9.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

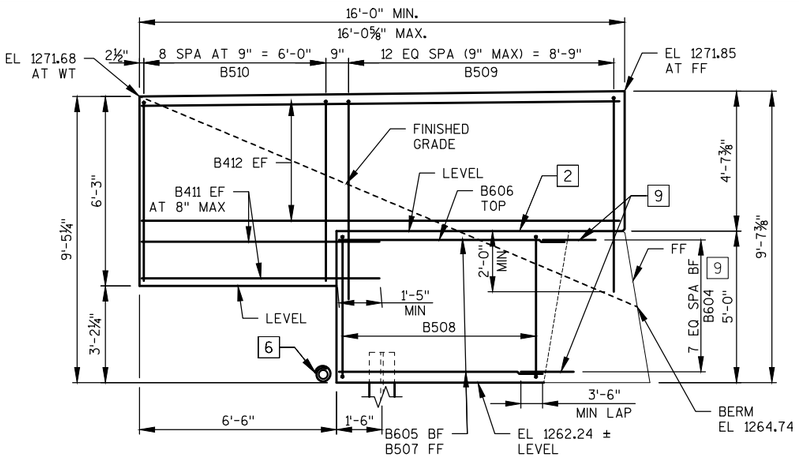
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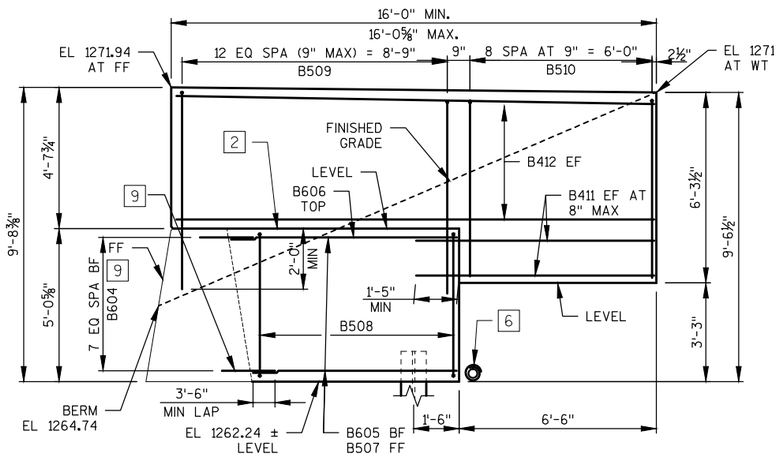
NORTH ABUTMENT DETAILS

SHEET 8 OF 18
212

STATE PROJECT NUMBER

1166-02-81





WING 3 ELEVATION

WING 3 SECTION

NOTES

1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
2. OPTIONAL CONST. JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
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(#) INDICATES GIRDER NUMBER

(#) INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP

WING 4 ELEVATION

WING 4 SECTION

BILL OF BARS
NORTH ABUTMENT

COATED= 1630 LBS.
UNCOATED= 300 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
B601		24	2 - 8			ABUTMENT BODY - DOWELS FF	HORIZ
B702		16	2 - 11			ABUTMENT BODY - DOWELS BF	HORIZ
B503		12	8 - 3	X		ABUTMENT BODY - STIRRUPS	VERT
B604	18		4 - 9			WING BODY - DOWELS BF	HORIZ
⚠ B605	16		6 - 10		X	WING BODY - BF	HORIZ
B606	4		7 - 3			WING BODY - TOP	HORIZ
⚠ B507	12		9 - 5		X	WING BODY - FF	HORIZ
B508	16		15 - 3	X		WING BODY - STIRRUPS	VERT
B509	26		13 - 10	X		WING TOP - STIRRUPS	VERT
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BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

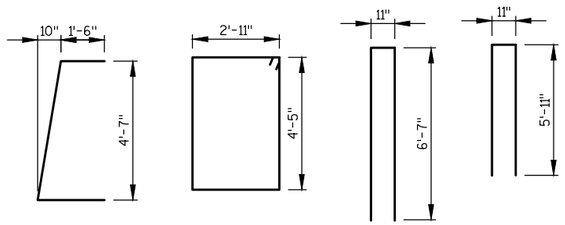
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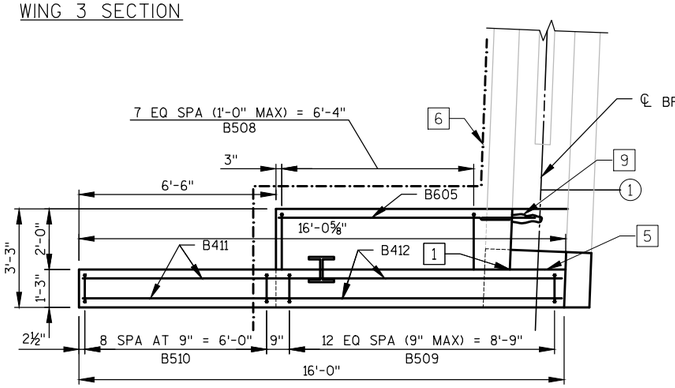
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES ⚠

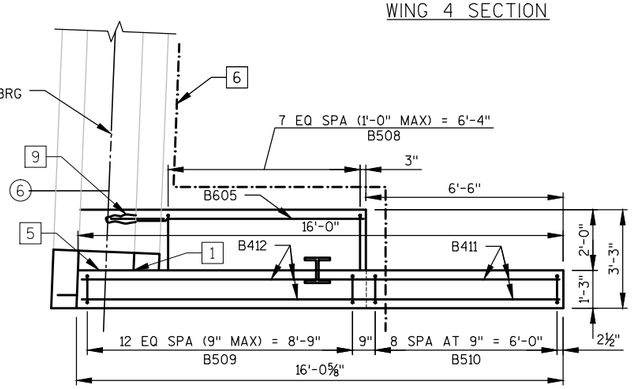
MARK	NO. REQUIRED	LENGTH
B605	2 SERIES OF 8	6'-5" TO 7'-3"
B507	2 SERIES OF 6	9'-0" TO 9'-10"

BUNDLE AND TAG EACH SERIES SEPERATELY





WING 3 PLAN



WING 4 PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

DRAWN BY MJB | PLANS CK'D. GAR

NORTH ABUTMENT DETAILS

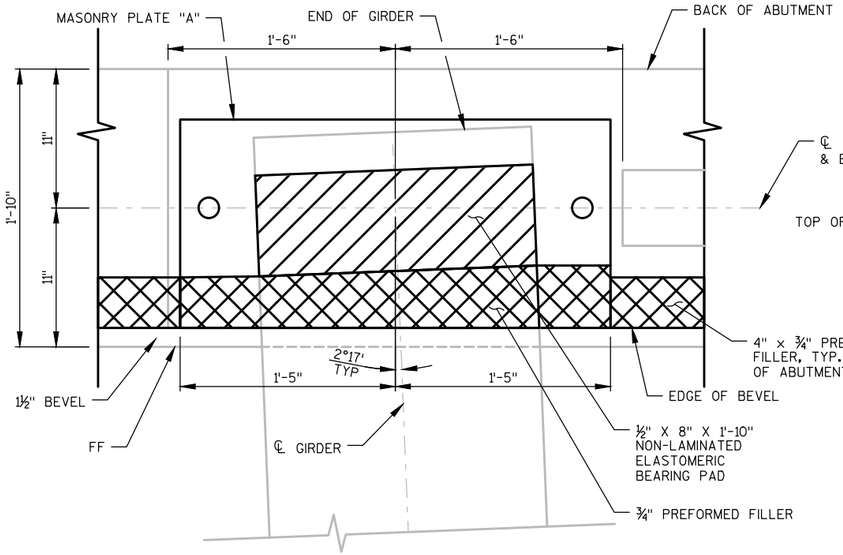
SHEET 9 OF 18
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8

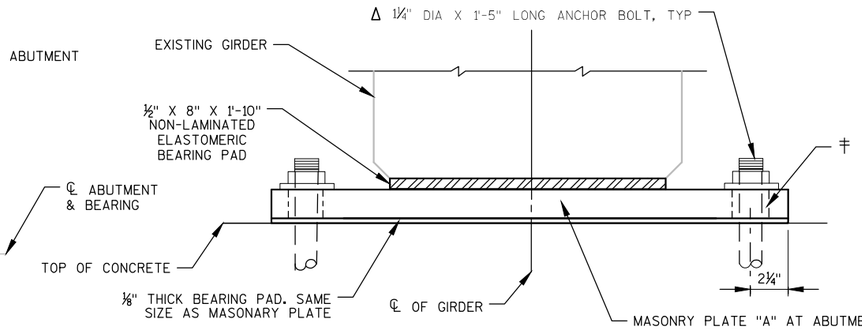
8

STATE PROJECT NUMBER

1166-02-81



PLAN AT ABUTMENT



SECTION B1-B1

BEARING NOTES

MASONARY PLATE "A" AND MASONRY PLATE "P" SHALL CONFORM TO ASTM A709 GRADE 50W.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIALENT YIELD STRENGTH AND ELONGATION.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS "MASONRY PLATE" THICKNESS + 2¼" ABOVE TOP OF CONCRETE.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

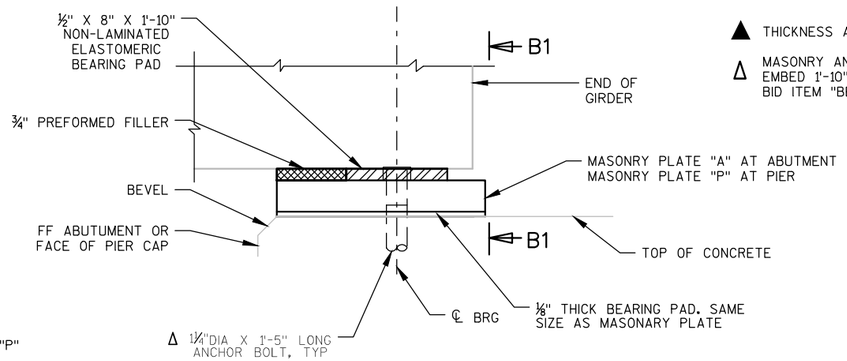
‡ DRILLED HOLES FOR ANCHOR BOLTS SHALL HAVE A DIAMETER ⅜" LARGER THAN ANCHOR BOLT.

MASONRY PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS "C".

ALL MATERIALS ON THIS SHEET SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING REPLACEMENT (B-37-148)", EACH.

▲ THICKNESS AS SHOWN IN INCLUDED TABLE.

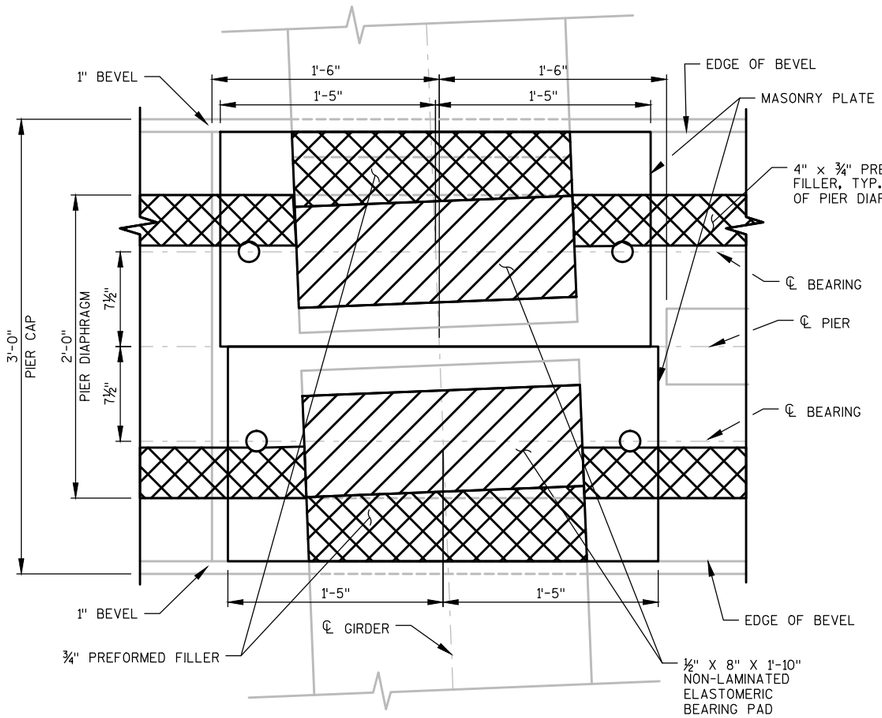
Δ MASONRY ANCHOR TYPE L NO. 10, MINIMUM PULLOUT CAPACITY OF 76.2 KIPS. EMBED 1'-10" MINIMUM INTO CONCRETE. PAYMENT INCIDENTAL TO THE BID ITEM "BEARING REPLACEMENT (B-37-148)", EACH.



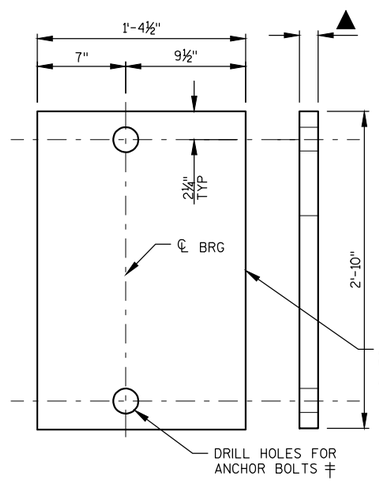
BEARING ASSEMBLY

GIRDER	SOUTH ABUTMENT	PIER	NORTH ABUTMENT
1	N/A	5/8	N/A
2	7/8	1 1/2	7/8
3	1 7/8	2 3/8	1 3/4
4	2 3/8	2 7/8	2 1/4
5	1 3/8	1 7/8	1 1/4
6	1/2	1	1/2

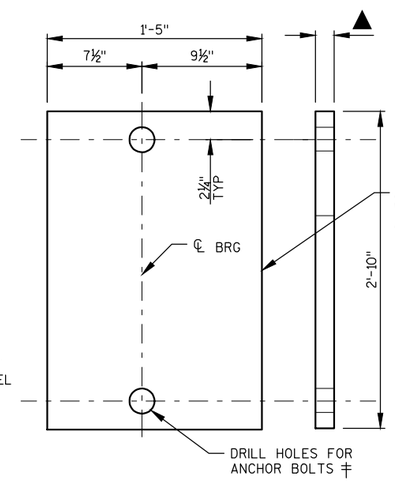
▲ MASONRY PLATE THICKNESSES



PLAN AT PIER



MASONRY PLATE "A"
FOR USE AT ABUTMENTS



MASONRY PLATE "P"
FOR USE AT PIER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

DRAWN BY DAY | PLANS CK'D. GAR

BEARING REPLACEMENT DETAILS

SHEET 10 OF 18

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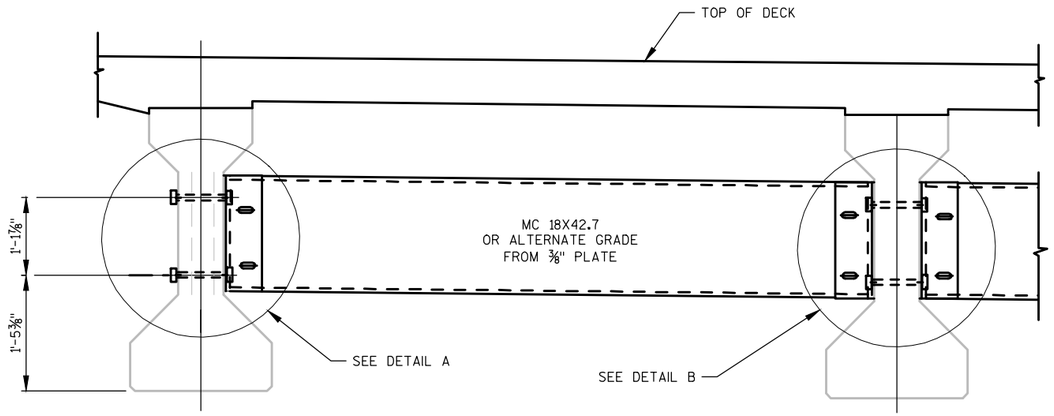
8

8

FILE NAME : X:±32304-00±113690.01±TECH±CAD±11660211±DESIGN±STRUCTURE±080110_BD.DWG PLOT DATE :6/10/2013 PLOT BY : MATTHEW BUCKLI PLOT SCALE : 1" = 1'

STATE PROJECT NUMBER

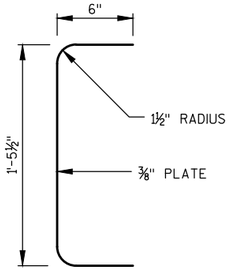
1166-02-81



EXTERIOR GIRDER

INTERIOR GIRDER

PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM

◑ USE 2½" FOR ALTERNATE PLATE DIAPHRAGM

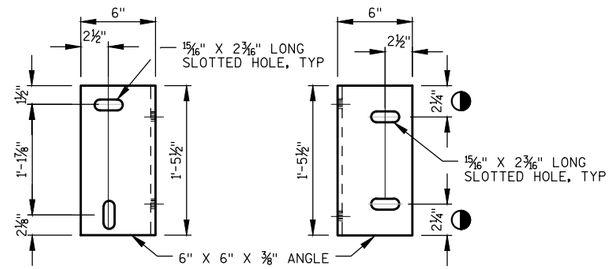
NOTES

ALL DIAPHRAGM MATERIAL AND CORED HOLES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS, STRUCTURE B-37-148, EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

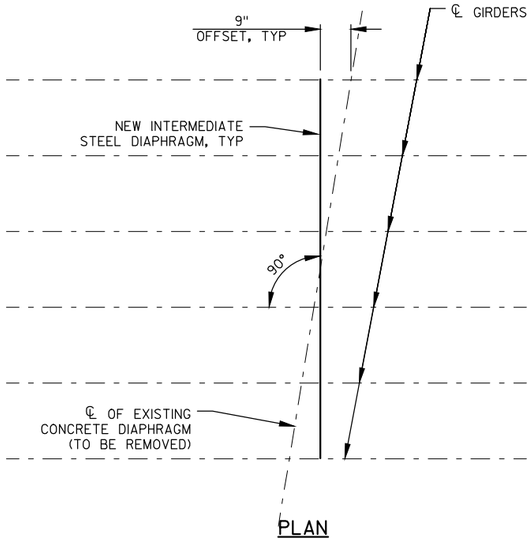
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



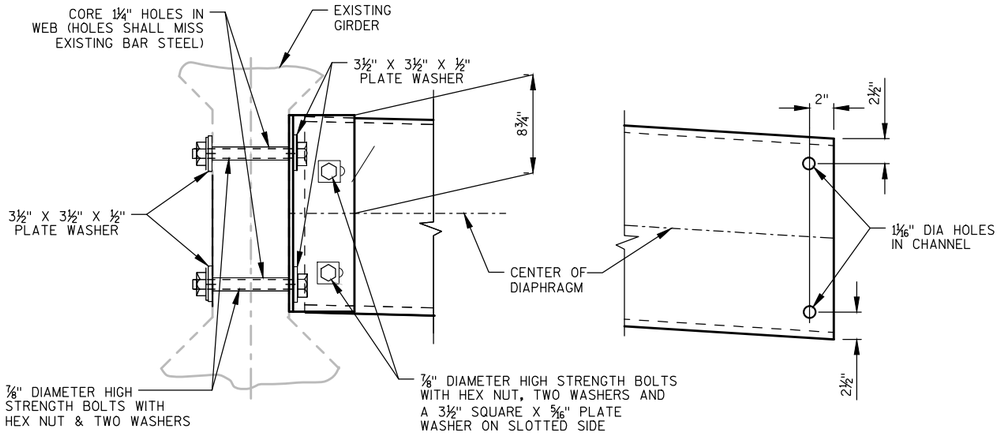
BEAM FACE

DIAPHRAGM FACE



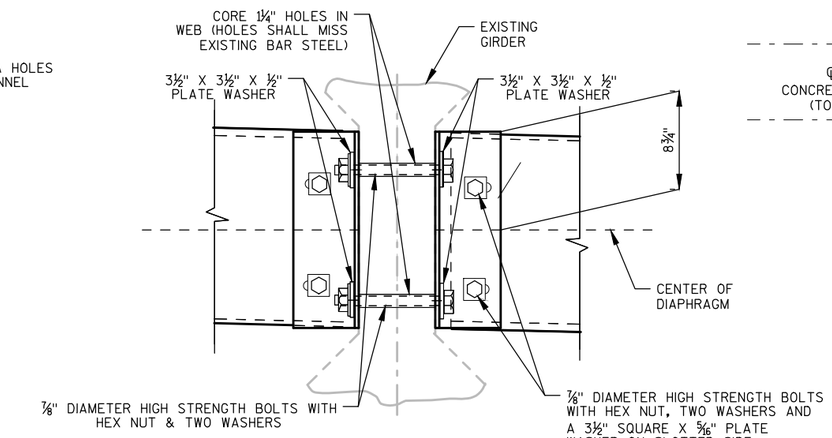
PLAN

DIAPHRAGM SUPPORT



DETAIL A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

(FOR INTERIOR ATTACHMENT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

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INTERMEDIATE STEEL DIAPHRAGMS

SHEET 11 OF 18

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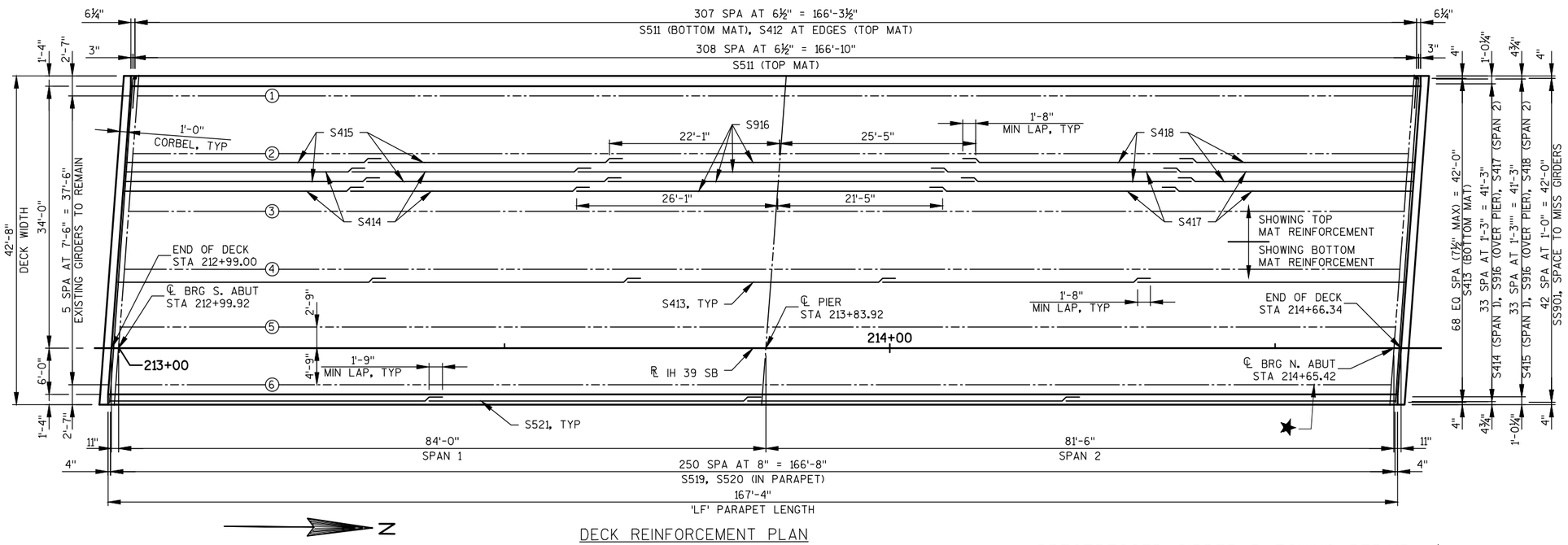
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FILE NAME : X:±32304-00±113690.01±TECH±CAD±11660211±DESIGN±STRUCTURE±080111_DIA.DWGLOT DATE : 6/10/2013

PLOT BY : ----

PLOT SCALE : 1" = 1'

STATE PROJECT NUMBER
1166-02-81



DECK REINFORCEMENT PLAN

SUPERSTRUCTURE NOTES:

1. EXISTING #5 DOWEL BARS. SALVAGE EXIST. REINF. AND EXTEND FULL LENGTH INTO NEW WORK.
2. ½" ELASTOMERIC BEARING PAD AND MASONRY PLATE. GIRDERS 2 THROUGH 6 AT ABUTMENTS AND ALL GIRDERS AT PIER. SEE SHEET 10 FOR DETAILS.
3. ¾" PREFORMED FILLER IN FRONT OF BEARING PAD BETWEEN MASONRY PLATE AND GIRDER FLANGE.
4. ¾" PREFORMED FILLER UNDER ABUTMENT AND PIER DIAPHRAGMS. SEE SHEET 10 FOR DETAILS.
5. OPTIONAL CONSTRUCTION JOINT. PLACE EVEN WITH TOP OF CORBEL AT ABUTMENTS OR BOTTOM OF HAUNCH AT PIERS. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.
6. CONSTRUCTION JOINT. STRIKE OFF AS SHOWN.

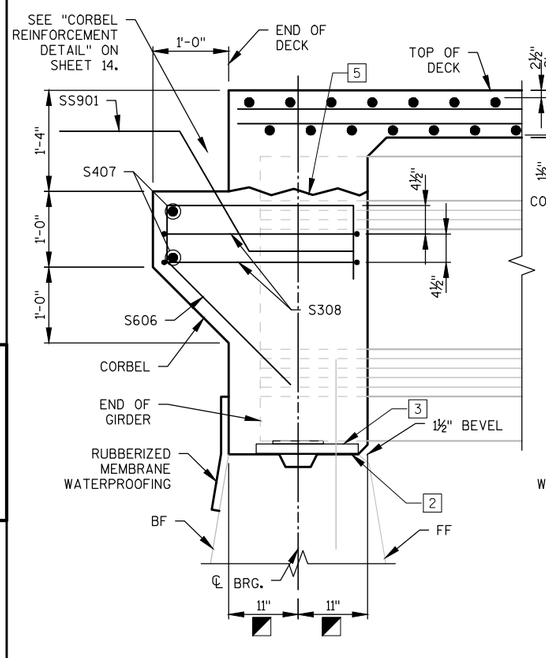
DIMENSION IS TAKEN NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

DIMENSION IS TAKEN PARALLEL TO GIRDER ℄.

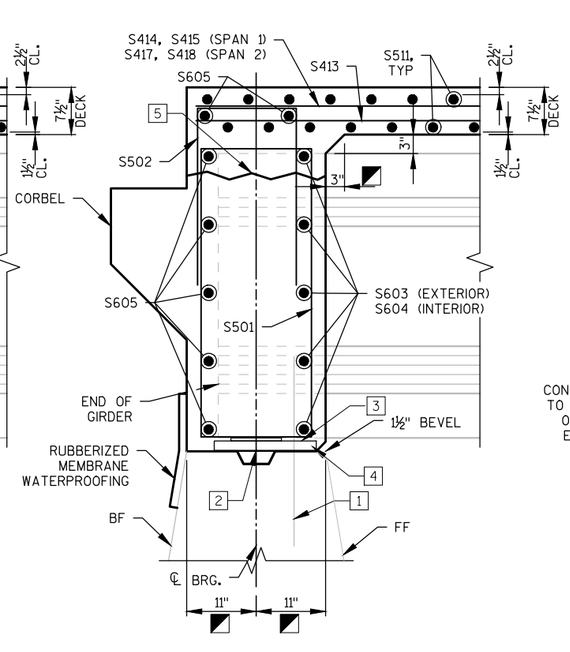
FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

PRESTRESSED GIRDER PATCHING REPAIR ★

LOCATION	AREA (SF)
SPAN 2, GIRDER 6, EXTERIOR SIDE OF BOTTOM FLANGE	1.0

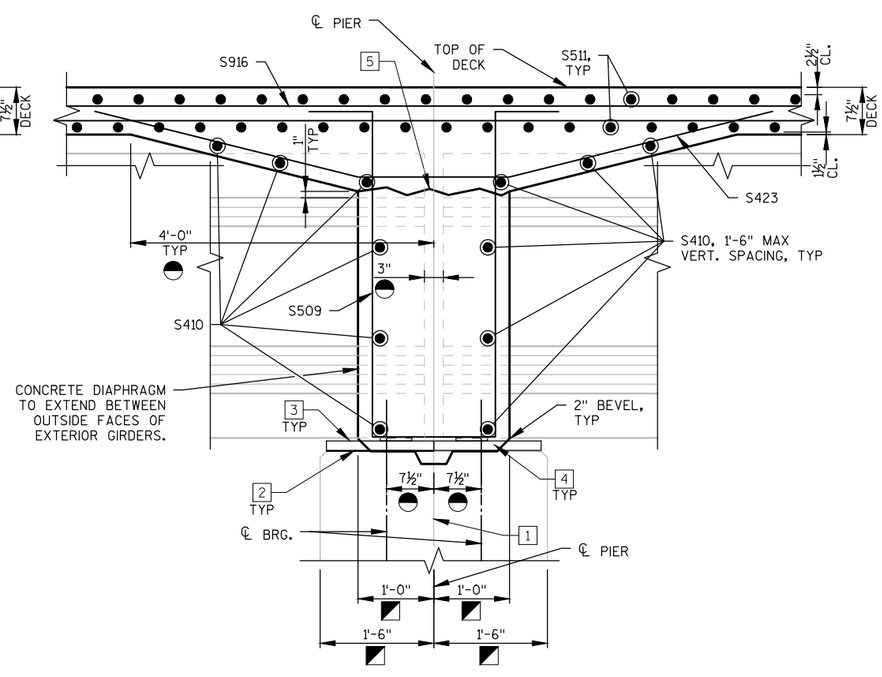


SHOWING CORBEL DETAILS

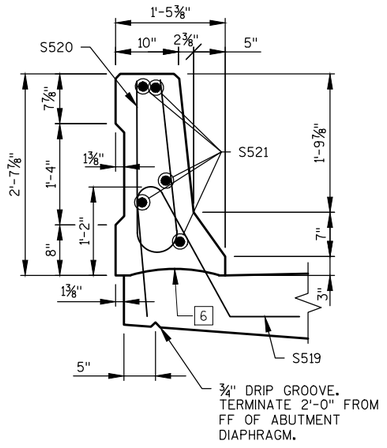


SHOWING ABUTMENT DIAPHRAGM

PARTIAL LONGITUDINAL SECTION



SHOWING PIER DIAPHRAGM



SECTION THRU PARAPET ON BRIDGE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

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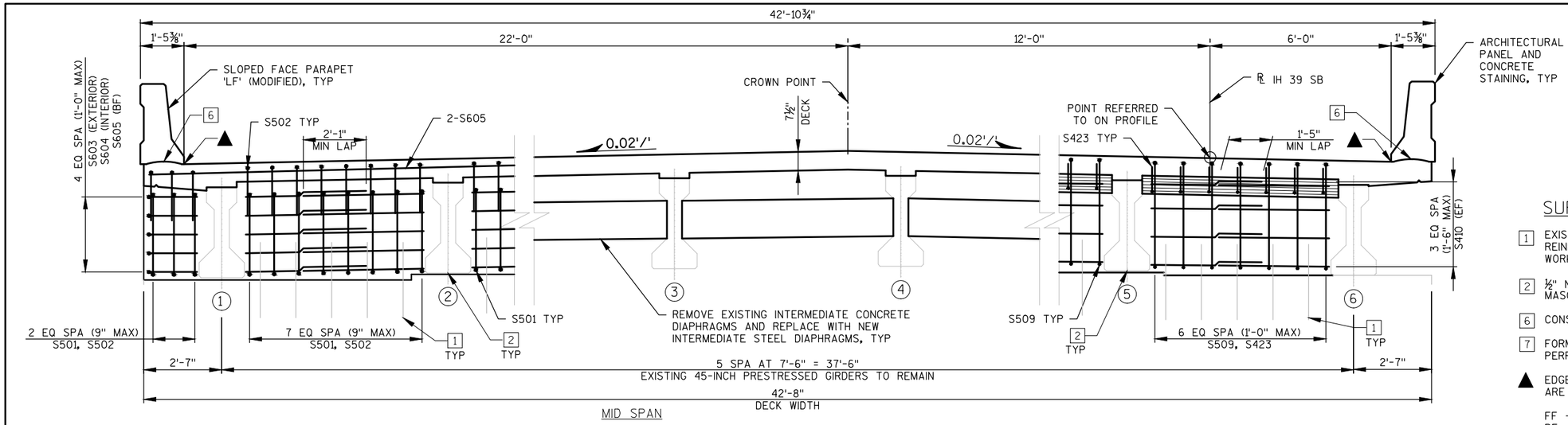
SUPERSTRUCTURE

SHEET 12 OF 18
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STATE PROJECT NUMBER
1166-02-81



AT ABUTMENT

MID SPAN

AT PIER

CROSS SECTION THRU DECK

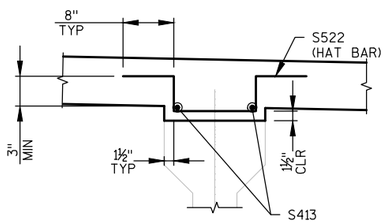
(LOOKING NORTH)
(SHOWING DIAPHRAGM REINFORCEMENT)

SUPERSTRUCTURE NOTES:

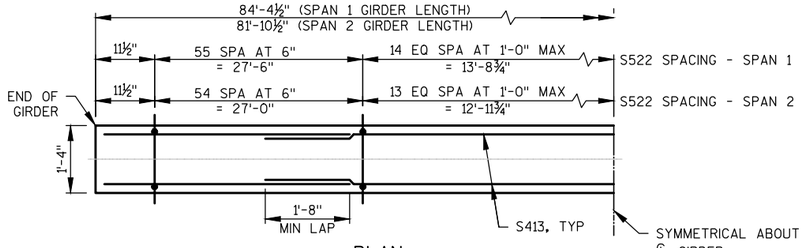
1. EXISTING #5 DOWEL BARS. SALVAGE EXIST. REINF. AND EXTEND FULL LENGTH INTO NEW WORK.
2. ½" NON-LAMINATED ELASTOMERIC PAD AND MASONRY PLATE. SEE SHEET 10 FOR DETAILS.
6. CONSTRUCTION JOINT. STRIKE OFF AS SHOWN.
7. FORM END OF DECK, WITHIN LIMITS OF PARAPET, PERPENDICULAR TO EDGE OF DECK.

▲ EDGE OF DECK ELEVATIONS SHOWN ON SHEET 11 ARE GIVEN AT THIS POINT.

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

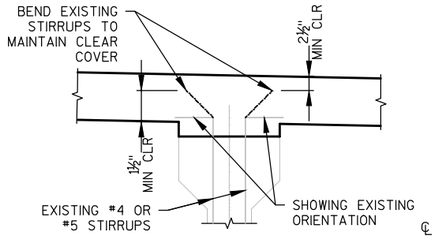


GIRDER HAUNCH DETAIL

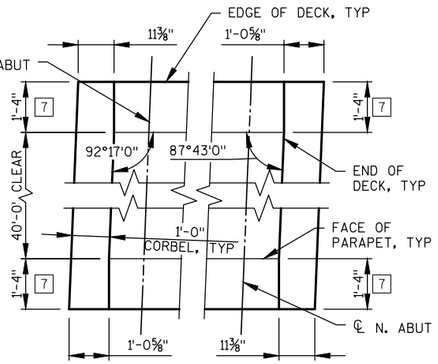


PLAN

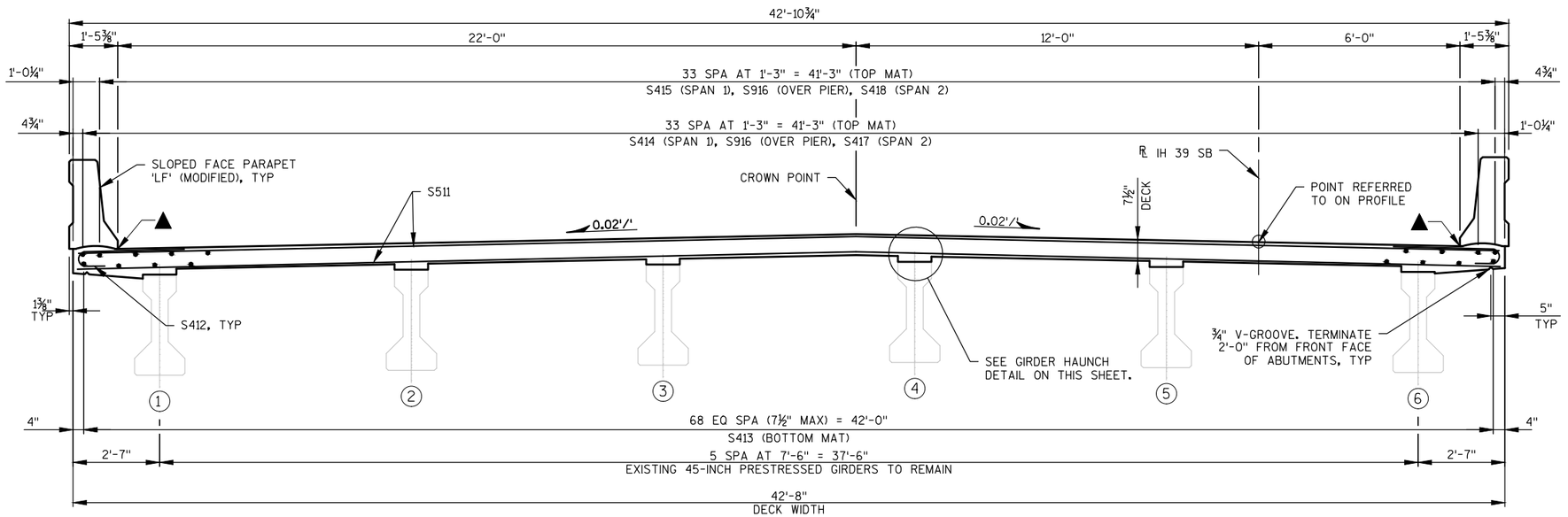
SHOWING HAUNCH REINFORCEMENT



EXISTING GIRDER STIRRUPS



CORNER FORMING DETAIL



CROSS SECTION THRU DECK

(LOOKING NORTH)
(SHOWING DECK REINFORCEMENT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

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SUPERSTRUCTURE DETAILS

SHEET 13 OF 18
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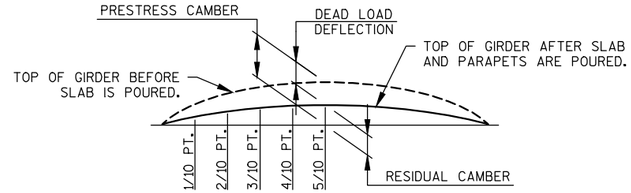
8

STATE PROJECT NUMBER
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ELEVATION TABLE

SPAN POINT	WEST EDGE OF DECK		GIRDER 1		GIRDER 2		GIRDER 3		CROWN POINT		GIRDER 4		GIRDER 5		REFERENCE LINE		GIRDER 6		EAST EDGE OF DECK	
	STATION	ELEVATION	TD	TG	TD	TG	TD	TG	STATION	ELEVATION	TD	TG	TD	TG	STATION	ELEVATION	TD	TG	STATION	ELEVATION
S ABUT	213+01.28 SB	1273.19	1273.22	1272.37	1273.37	1272.52	1273.52	1272.67	213+00.40 SB	1273.64	1273.60	1272.75	1273.45	1272.60	212+99.92 SB	1273.40	1273.31	1272.46	212+99.68 SB	1273.28
0.1	213+09.68 SB	1273.14	1273.16		1273.32		1273.47		213+08.80 SB	1273.59	1273.55		1273.40		213+08.32 SB	1273.35	1273.25		213+08.08 SB	1273.23
0.2	213+18.08 SB	1273.09	1273.11		1273.26		1273.41		213+17.20 SB	1273.53	1273.50		1273.35		213+16.72 SB	1273.29	1273.20		213+16.48 SB	1273.18
0.3	213+26.48 SB	1273.03	1273.06		1273.21		1273.36		213+25.60 SB	1273.48	1273.44		1273.29		213+25.12 SB	1273.24	1273.15		213+24.88 SB	1273.12
0.4	213+34.88 SB	1272.97	1273.00		1273.15		1273.30		213+34.00 SB	1273.42	1273.38		1273.24		213+33.52 SB	1273.18	1273.09		213+33.28 SB	1273.06
0.5	213+43.28 SB	1272.91	1272.94		1273.09		1273.24		213+42.40 SB	1273.36	1273.33		1273.18		213+41.92 SB	1273.12	1273.03		213+41.68 SB	1273.00
0.6	213+51.68 SB	1272.85	1272.88		1273.03		1273.18		213+50.80 SB	1273.30	1273.26		1273.12		213+50.32 SB	1273.06	1272.97		213+50.08 SB	1272.94
0.7	213+60.08 SB	1272.79	1272.82		1272.97		1273.12		213+59.20 SB	1273.24	1273.20		1273.05		213+58.72 SB	1273.00	1272.91		213+58.48 SB	1272.88
0.8	213+68.48 SB	1272.73	1272.75		1272.90		1273.06		213+67.60 SB	1273.17	1273.14		1272.99		213+67.12 SB	1272.94	1272.84		213+66.88 SB	1272.82
0.9	213+76.88 SB	1272.66	1272.69		1272.84		1272.99		213+76.00 SB	1273.11	1273.07		1272.93		213+75.52 SB	1272.87	1272.78		213+75.28 SB	1272.75
PIER	213+85.28 SB	1272.59	1272.62	1271.77	1272.77	1271.92	1272.92	1272.07	213+84.40 SB	1273.04	1273.01	1272.16	1272.86	1272.01	213+83.92 SB	1272.81	1272.71	1271.86	213+83.68 SB	1272.69
0.1	213+93.43 SB	1272.53	1272.55		1272.71		1272.86		213+92.55 SB	1272.97	1272.94		1272.79		213+92.07 SB	1272.74	1272.65		213+91.83 SB	1272.62
0.2	214+01.58 SB	1272.46	1272.48		1272.64		1272.79		214+00.70 SB	1272.91	1272.87		1272.72		214+00.22 SB	1272.67	1272.58		213+99.98 SB	1272.55
0.3	214+09.73 SB	1272.39	1272.41		1272.57		1272.72		214+08.85 SB	1272.84	1272.80		1272.66		214+08.37 SB	1272.60	1272.51		214+08.13 SB	1272.48
0.4	214+17.88 SB	1272.32	1272.34		1272.50		1272.65		214+17.00 SB	1272.77	1272.73		1272.58		214+16.52 SB	1272.53	1272.44		214+16.28 SB	1272.41
0.5	214+26.03 SB	1272.25	1272.27		1272.42		1272.58		214+25.15 SB	1272.69	1272.66		1272.51		214+24.67 SB	1272.46	1272.36		214+24.43 SB	1272.34
0.6	214+34.18 SB	1272.17	1272.20		1272.35		1272.50		214+33.30 SB	1272.62	1272.58		1272.44		214+32.82 SB	1272.38	1272.29		214+32.58 SB	1272.27
0.7	214+42.33 SB	1272.10	1272.12		1272.27		1272.43		214+41.45 SB	1272.54	1272.51		1272.36		214+40.97 SB	1272.31	1272.21		214+40.73 SB	1272.19
0.8	214+50.48 SB	1272.02	1272.04		1272.20		1272.35		214+49.60 SB	1272.47	1272.43		1272.28		214+49.12 SB	1272.23	1272.14		214+48.88 SB	1272.11
0.9	214+58.63 SB	1271.94	1271.96		1272.12		1272.27		214+57.75 SB	1272.39	1272.35		1272.21		214+57.27 SB	1272.15	1272.06		214+57.03 SB	1272.03
N ABUT	214+66.78 SB	1271.86	1271.88	1271.03	1272.04	1271.19	1272.19	1271.34	214+65.90 SB	1272.31	1272.27	1271.42	1272.13	1271.28	214+65.42 SB	1272.07	1271.98	1271.13	214+65.18 SB	1271.95

TD = TOP OF DECK
TG = TOP OF GIRDER (VALUE SHOWN IS AFTER BEARING REPLACEMENT IS COMPLETE)
EDGE OF DECK STATIONS AND ELEVATIONS ARE TAKEN TO INSIDE FACE OF PARAPET



DEAD LOAD DEFLECTION DIAGRAM

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10
1	1-6	84'-4 1/2"	3/8	3/4	1	1 1/8	1 1/4	1 1/8	1	3/4	3/8
2	1-6	81'-10 1/2"	3/8	5/8	7/8	1	1 1/8	1	7/8	5/8	3/8

BILL OF BARS **COATED= 72330 LBS.**
SUPERSTRUCTURE **UNCOATED= 0 LBS.**

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
S501	92		10 - 9	X		ABUTMENT DIAPHRAGM STIRRUPS	VERT
S502	92		5 - 11	X		ABUTMENT DIAPHRAGM TO SLAB TIES	VERT
S603	20		3 - 9	X		ABUTMENT DIAPHRAGM AT ENDS	HORIZ
S604	100		4 - 4			ABUTMENT DIAPHRAGM FF	HORIZ
S605	14		42 - 4			ABUTMENT DIAPHRAGM BF	HORIZ
S606	146		6 - 11	X		ABUTMENT DIAPHRAGM CORBEL	VERT
S407	4		42 - 4			ABUTMENT DIAPHRAGM CORBEL	TRANS
S308	176		7 - 7	X		ABUTMENT DIAPHRAGM CORBEL TIES	HORIZ
S509	35		11 - 6	X		PIER DIAPHRAGM STIRRUP	VERT
S410	120		4 - 0			PIER DIAPHRAGM	HORIZ
S511	617		42 - 4			SLAB BOTTOM & TOP	TRANS
S412	616		3 - 11	X		SLAB TOP - AT OUTSIDE EDGES	TRANS
S413	405		34 - 10			SLAB BOTTOM & IN GIRDER HAUNCH	LONG
S414	68		31 - 0			SLAB TOP - SPAN 1	LONG
S415	68		33 - 0			SLAB TOP - SPAN 1	LONG
S916	68		47 - 6			SLAB TOP - OVER PIER	LONG
S417	68		32 - 1			SLAB TOP - SPAN 2	LONG
S418	68		30 - 1			SLAB TOP - SPAN 2	LONG
S519	502		4 - 2	X		LF PARAPET ANCHOR	VERT
S520	502		4 - 11	X		LF PARAPET STIRRUP	VERT
S521	40		43 - 1			LF PARAPET	LONG
S522	1644		2 - 7	X		GIRDER HAUNCH HAT BAR	VERT
S423	35		9 - 6	X		SLAB BOTTOM OVER PIER	LONG

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

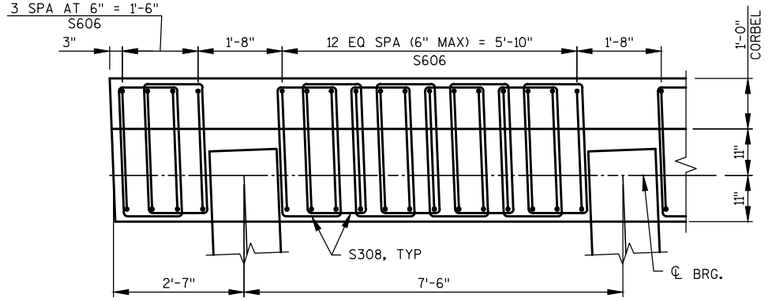
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

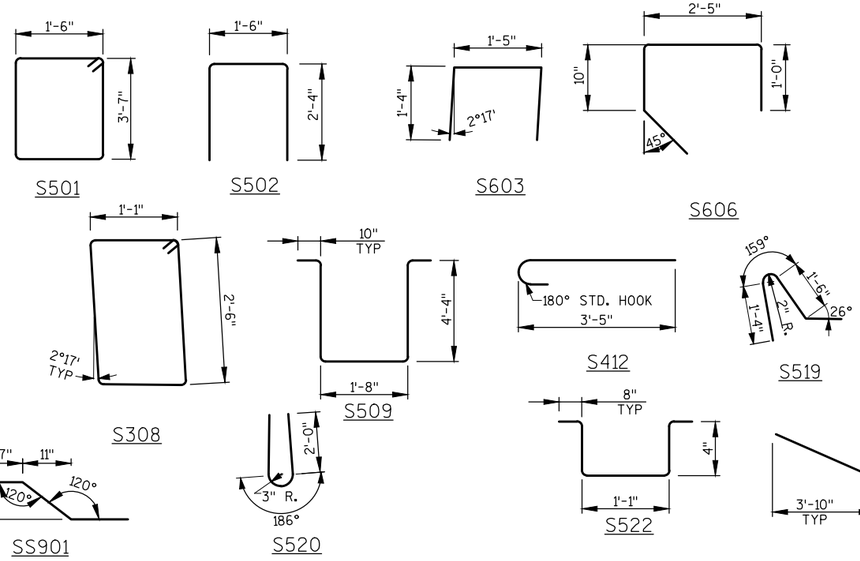
STAINLESS STEEL BILL OF BARS

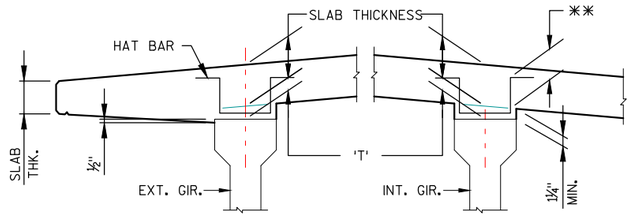
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
SS901		86	5'-0"	X	CONC. DIAPH. AT ABUTS TO APPROACH APRON

BID ITEM "BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES"



CORBEL REINFORCEMENT DETAIL





SLAB HAUNCH DETAIL

IF 1½" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF HAT BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
\+ DEAD LOAD DEFLECTION
\- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

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STRUCTURE B-37-148

DRAWN BY DAY | PLANS CK'D. GAR

SUPERSTRUCTURE DETAILS

SHEET 14 OF 18
218

STATE PROJECT NUMBER
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SOUTH APRON COATED= 8850 LBS.
SOUTH APRON UNCOATED= 0 LBS.
NORTH APRON COATED= 8850 LBS.
NORTH APRON UNCOATED= 0 LBS.

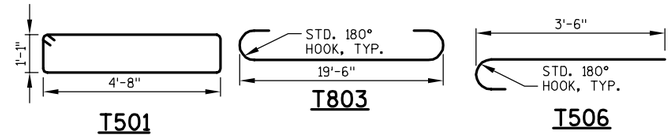
BILL OF BARS
APPROACH APRONS

MARK	COATED	NO. REQ'D. S APRON	NO. REQ'D. N APRON	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
T 5 01	X	43	43	12 - 1	X		FOOTING - STIRRUPS	VERT
T 8 02	X	12	12	42 - 4			FOOTING	HORIZ
T 8 03	X	71	71	21 - 4	X		APPROACH APRON - BOTTOM	LONGIT
T 5 04	X	43	43	19 - 6			APPROACH APRON - TOP	LONGIT
T 5 05	X	42	42	42 - 4			APPROACH APRON - TOP & BOTTOM	TRANS
T 5 06	X	40	40	4 - 1	X		APPROACH APRON - TOP AT EDGES	TRANS

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

ALL REINFORCING BARS ARE ENGLISH.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.



DESIGN DATA:

ALLOWABLE SOIL BEARING PRESSURE: ——— 2,000 P.S.I.
CONCRETE STRENGTH fc: ——— 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60, fy: ——— 60,000 P.S.I.

NOTES:

POLYETHYLENE SHEETS INCIDENTAL TO CONCRETE MASONRY BRIDGES BID ITEM.

SEE SUPERSTRUCTURE SHEETS FOR DETAILS ON SS901 BARS.

PLACE T802, T505 AND T506 BARS ALONG THE SKEW.

PLACE T501, T803 AND T504 PARALLEL TO ℄ IH 39 SB.

SEE ROADWAY PLANS FOR BASE MATERIAL REQUIREMENTS UNDER APPROACH SLABS

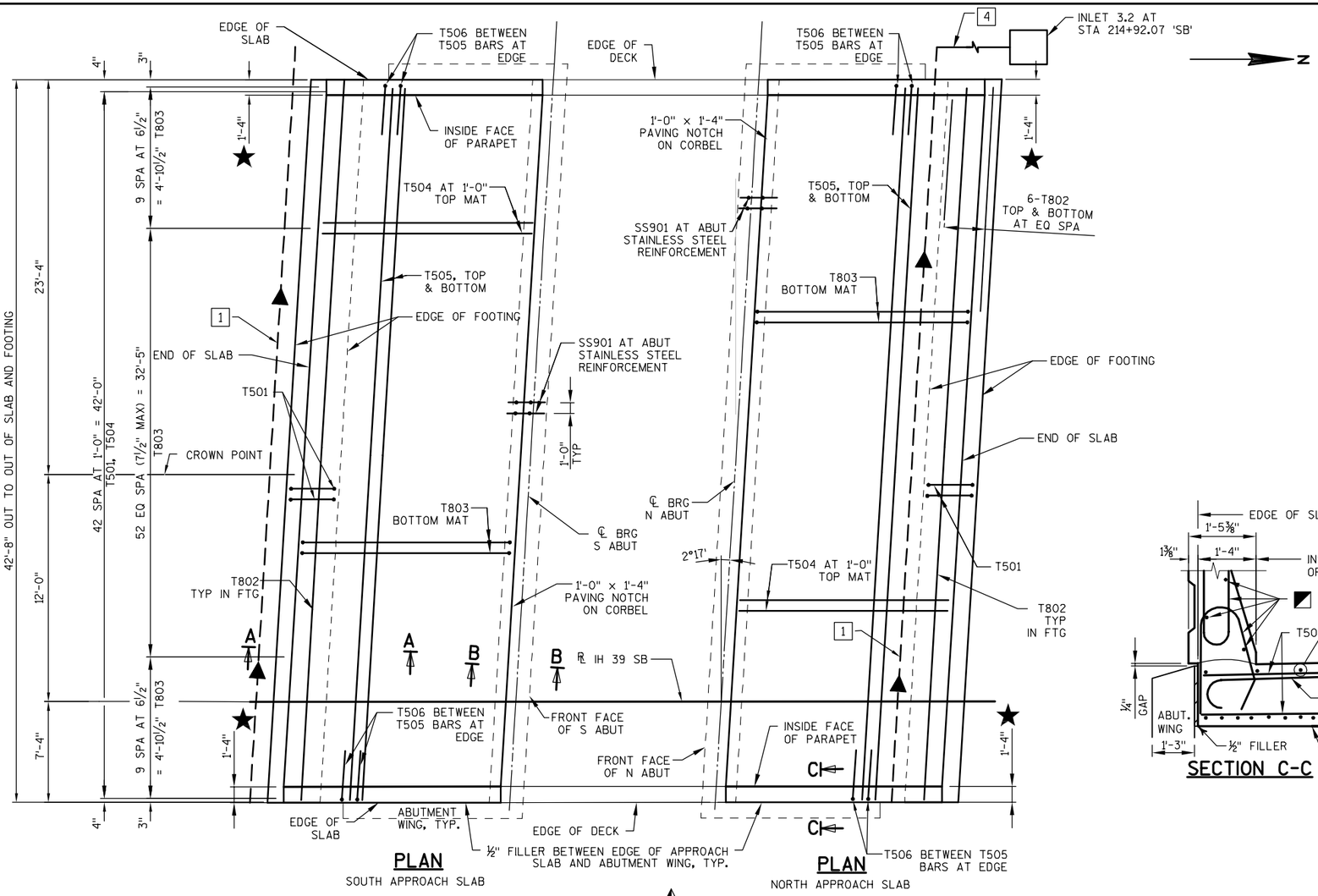
SEAL ALL EXPOSED HORIZTONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOE SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

1. PIPE UNDERDRAIN WRAPPED (6-INCH). AT APPROACH SLAB FOOTING. LOCATED ON UPHILL SIDE OF APPROACH SLAB FOOTING. SLOPE 0.5% MIN. AND TO SUITABLE DRAINAGE. PROVIDE A RODENT SCREEN.
2. STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
3. PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.
4. PIPE UNDERDRAIN UNPERFORATED (6-INCH). SLOPE 0.5 MIN. TO INLET. SEE ROADWAY PLANS.

▲ MEASURED PARALLEL TO ℄ IH 39 SB.

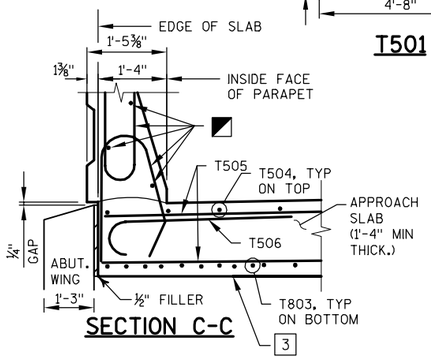
◩ SEE SHEETS 16 FOR DETAILS ON PARAPET BARS.

★ FORM APPROACH SLAB PERPENDICULAR TO EDGE OF SLAB WITHIN LIMITS OF PARAPET.

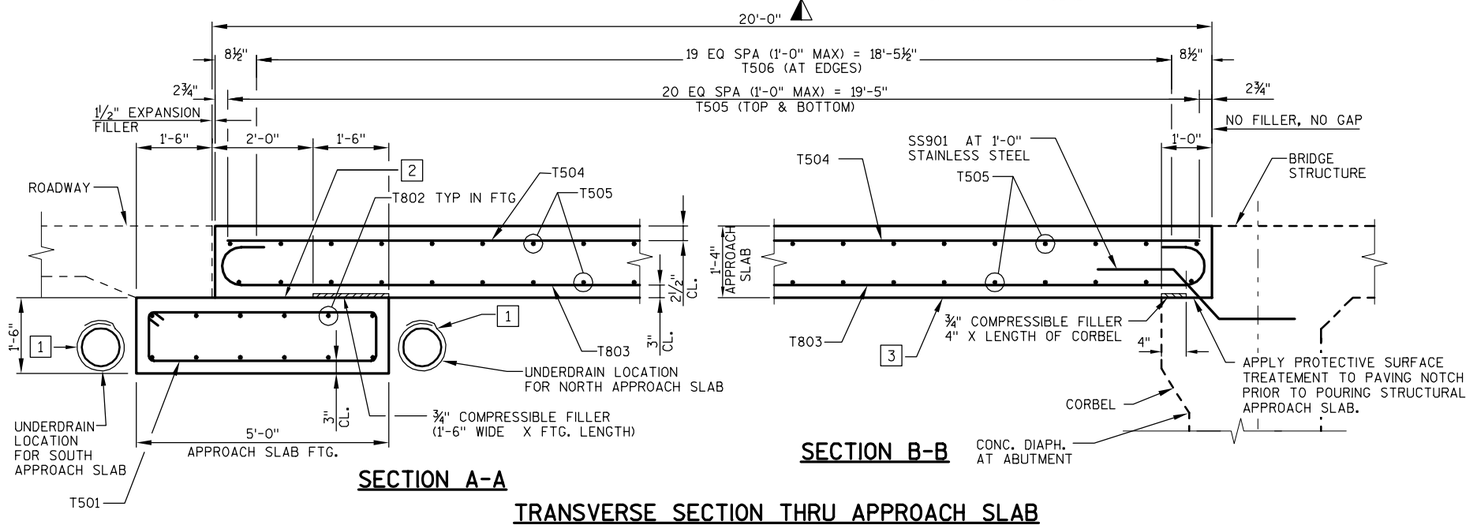


PLAN
SOUTH APPROACH SLAB

PLAN
NORTH APPROACH SLAB



SECTION C-C



SECTION A-A

SECTION B-B

TRANSVERSE SECTION THRU APPROACH SLAB

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

DRAWN BY DAY | PLANS CK'D. GAR

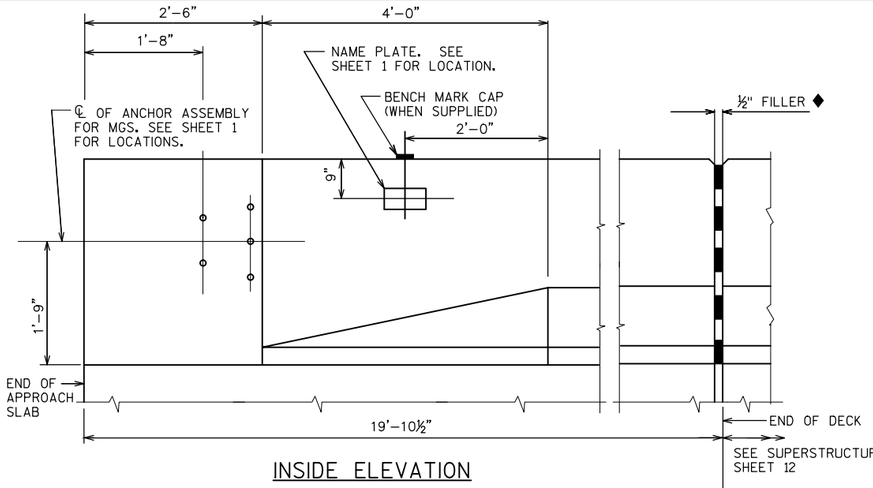
STRUCTURAL APPROACH SLAB

SHEET 15 OF 18
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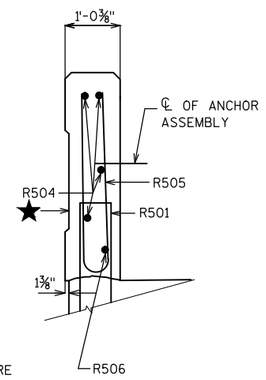
FILE NAME : X:±32304-00±113690.01±TECH±CAD±11660211±DESIGN±STRUCTURE±080115_AP.DWBLOT DATE : 4/25/2014 PLOT BY : ---- PLOT SCALE : 1" = 1'

STATE PROJECT NUMBER

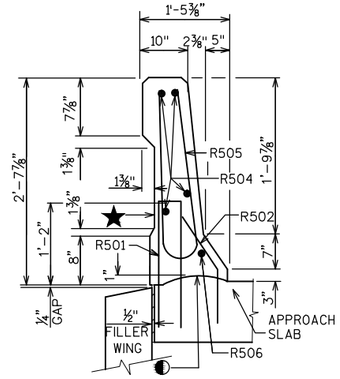
1166-02-81



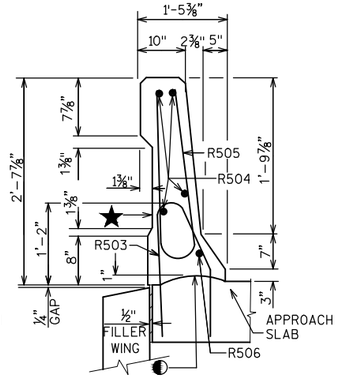
INSIDE ELEVATION



SECTION A



SECTION B



SECTION C

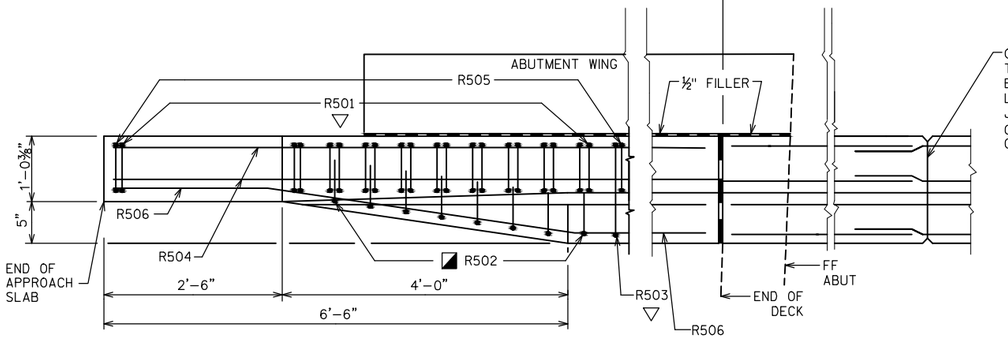
◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◪ R502 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R502 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R503 BARS TO BE TIED TO APPROACH SLAB STEEL BEFORE APPROACH SLAB IS POURED.

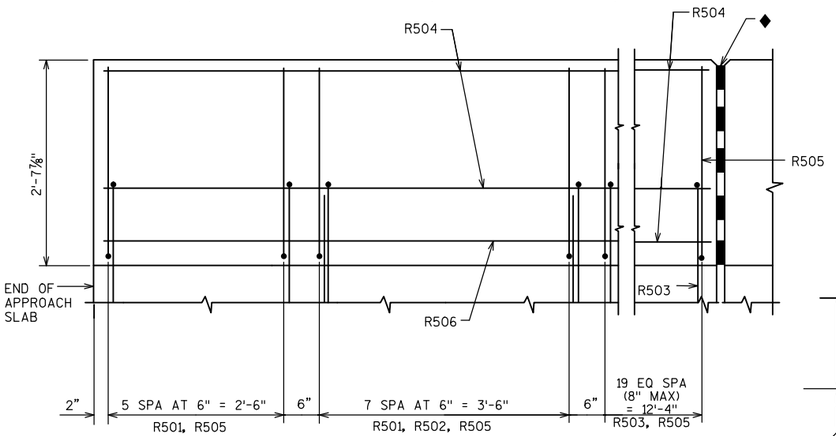
★ AESTHETIC RECESSED PANEL AND CONCRETE STAINING, SEE SHEET 17 FOR DETAILS.

◆ ½" FILLER TO EXTEND TO TOP OF PARAPET.



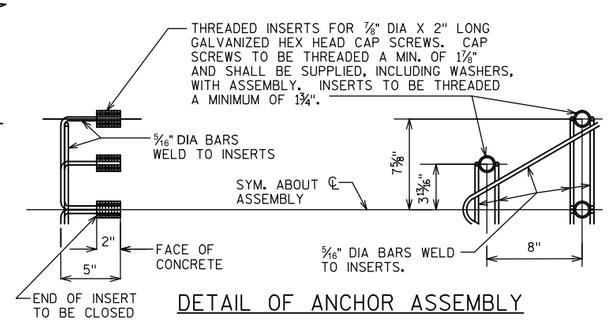
PLAN

A B C



A B C

OUTSIDE ELEVATION



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

SOUTH APRON COATED= 920 LBS.
SOUTH APRON UNCOATED= 0 LBS.
NORTH APRON COATED= 920 LBS.
NORTH APRON UNCOATED= 0 LBS.

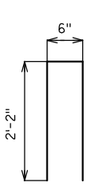
BILL OF BARS
LF PARAPET

MARK	COATED	NO. REQ'D. S APRON	NO. REQ'D. N APRON	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
R 5 01	X	28	28	4 - 7	X		PARAPET TIE	VERT
R 5 02	X	16	16	2 - 4	X		PARAPET TIE	VERT
R 5 03	X	40	40	4 - 7	X		PARAPET TIE	VERT
R 5 04	X	8	8	19 - 6			PARAPET	LONGIT
R 5 05	X	68	68	4 - 10	X		PARAPET STIRRUP	VERT
R 5 06	X	2	2	19 - 6	X		PARAPET	LONGIT

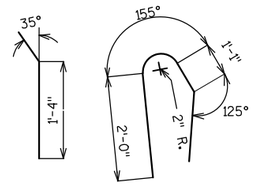
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

ALL REINFORCING BARS ARE ENGLISH.

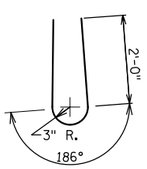
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.



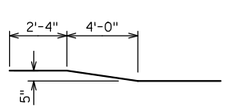
R501



R502 R503



R505



R506

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

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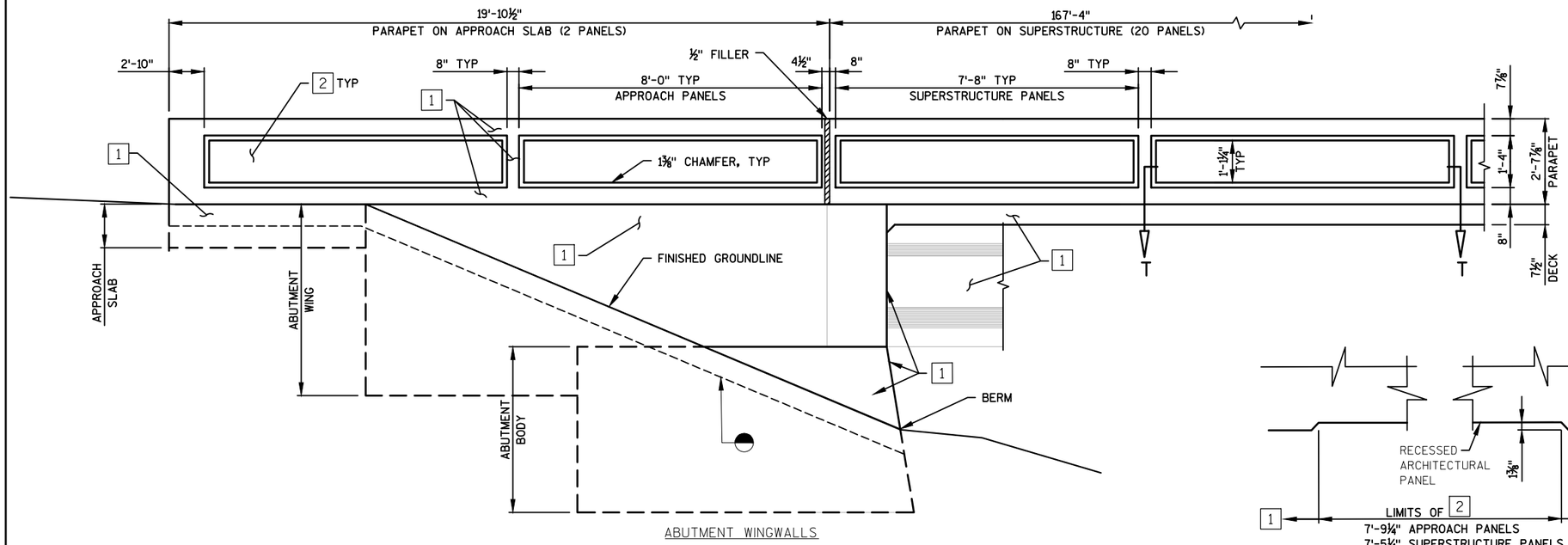
SLOPED FACE PARAPET TYPE 'LF' (MODIFIED)

SHEET 16 OF 18
220

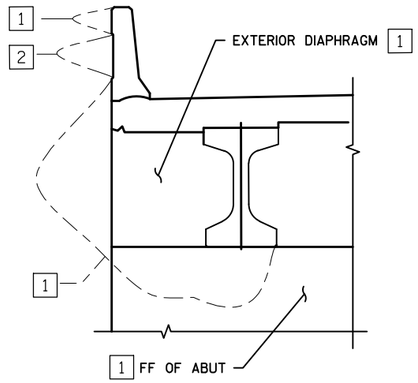
8

8

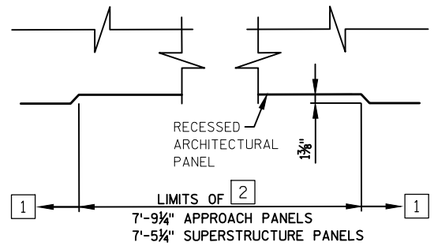
STATE PROJECT NUMBER
1166–02–81



ABUTMENT WINGWALLS



SUPERSTRUCTURE



SECTION T

ARCHITECTURAL PANEL AND CONCRETE STAINING DETAILS

SEE SPECIAL PROVISIONS

◓ BOTTOM OF CONCRETE STAINING TO EXTEND 1'-0" MIN BELOW FINISHED GROUNDLINE.

1 STAIN SHALL BE PEARL GRAY (FEDERAL STANDARD COLOR NUMBER 26622)

2 STAIN SHALL BE DARK GRAY (FEDERAL STANDARD COLOR NUMBER 26132) NOTE: FLAT SURFACE ONLY NOT BEVELS ON SIDES OF PARAPET.

STAINING COLOR NUMBERS SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO ORDERING MATERIALS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B–37–148

DRAWN BY DAY | PLANS CK'D. GAR

AESTHETIC DETAILS

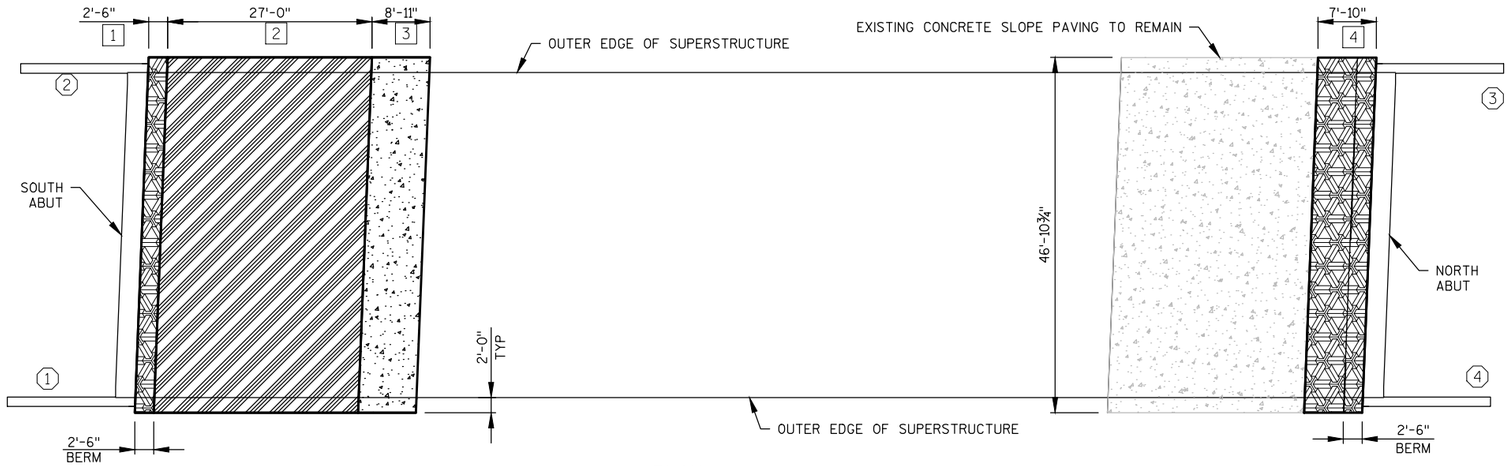
SHEET 17 OF 18
221

8

8

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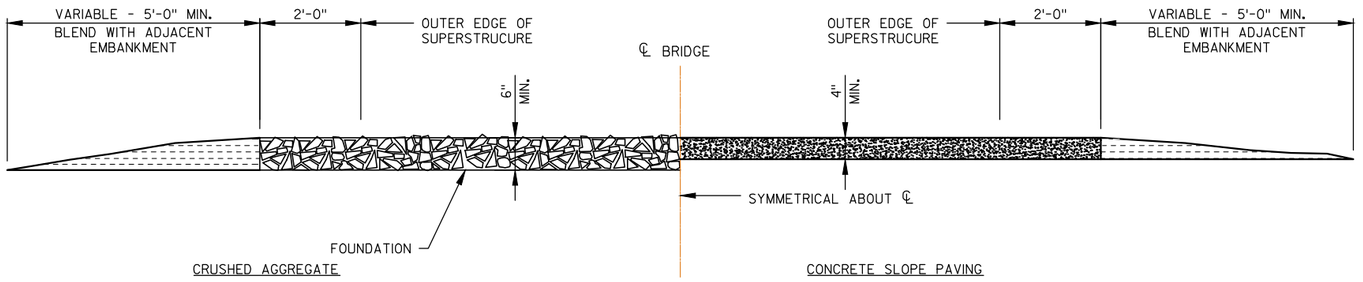
PLAN

SLOPE PAVING NOTES:

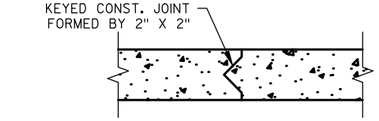
ELEVATIONS AND LIMITS ARE APPROXIMATE BASED ON SURVEY DATA. NEW SLOPE PAVING SHOULD MATCH WITH THE ELEVATION OF ANY EXISTING SLOPE PAVING THAT IS REMAINING.

1. REMOVE EXISTING CRUSHED AGGREGATE SLOPE PAVING AND PLACE NEW CRUSHED AGGREGATE SLOPE PAVING.
2. RESEAL EXISTING CRUSHED AGGREGATE SLOPE PAVING.
3. REMOVE EXISTING CONCRETE SLOPE PAVING AND REPLACE WITH NEW CONCRETE SLOPE PAVING. CONSTRUCTION JOINTS PARALLEL TO ℄ IH 39 SB SHOULD MATCH JOINT SPACING OF NORTH ABUTMENT. CONSTRUCTION JOINTS SPACED 5-10 FEET. SEE CONSTRUCTION JOINT DETAIL ON THIS SHEET.
4. REMOVE EXISTING CONCRETE SLOPE PAVING TO FIRST JOINT ON SLOPE AND PLACE NEW CRUSHED AGGREGATE SLOPE PAVING.

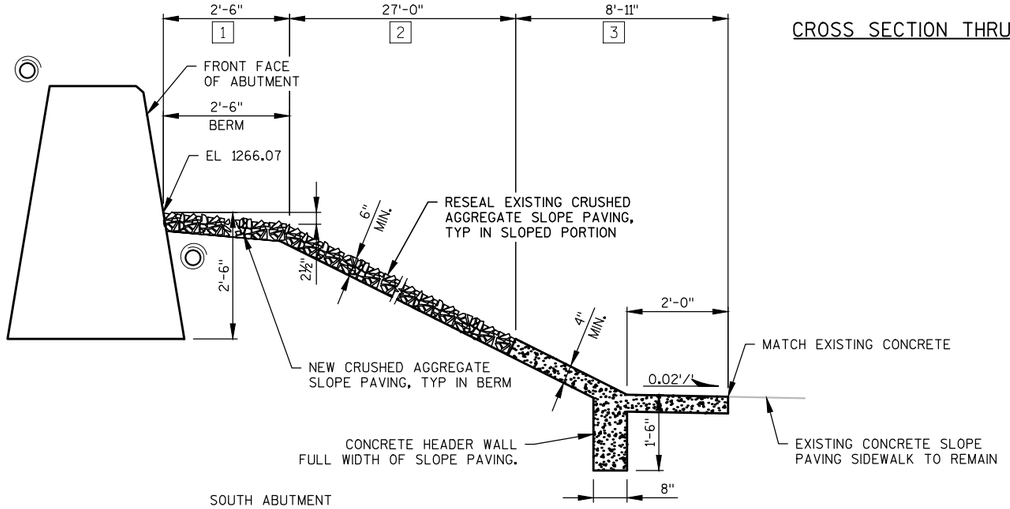
(#) INDICATES WING NUMBER



CROSS SECTION THRU SLOPE PAVING

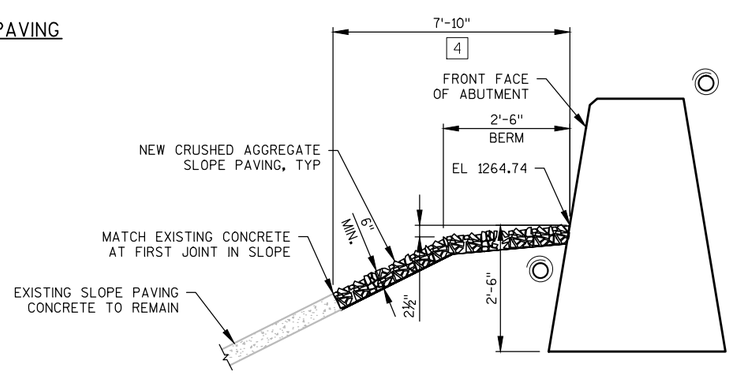


CONSTRUCTION JOINT DETAIL



SOUTH ABUTMENT

ROUND STONE WILL NOT BE ACCEPTED.



NORTH ABUTMENT

ROUND STONE WILL NOT BE ACCEPTED.

ELEVATION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-148

DRAWN BY TAV | PLANS CK'D. GAR

SLOPE PAVING REPAIRS

SHEET 18 OF 18

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STATE PROJECT NUMBER

1166-02-81

N

℄ STH 153 EB

166'-10"
END OF DECK TO END OF DECK

11" | 83'-0" | 82'-0" | 11"

REPLACE EXISTING AGGREGATE SLOPE PAVING NEAR TOP OF BERM

RESEAL EXISTING SLOPE PAVING CRUSHED AGGREGATE

EXISTING PAVING NOTCH CORBEL TO BE REPLACED, TYP

2°17' SKEW

1'-5⅜"

6'-0" SHLDR | 12'-0" LANE | 12'-0" LANE | 10'-0" SHLDR

6'-0"

40'-0" CLEAR ROADWAY

34'-0"

1'-5⅜"

214+00

℄ IH 39 NB

END OF DECK
STA 212+96.62

℄ BRG S. ABUT
212+97.54

℄ PIER
213+80.54

℄ BRG N. ABUT
214+62.54

END OF DECK
STA 214+63.46

STRUCTURE APPROACH SLAB TYP EACH END

STH 153 EB

STH 153 WB

51+00

EXISTING BRIDGE B-37-149 DECK REPLACEMENT

REMOVE TOP TWO PANELS OF EXISTING CONCRETE SLOPE PAVING AND REPLACE WITH NEW SLOPE PAVING CRUSHED AGGREGATE.

⚹ ANCHOR ASSEMBLY FOR THRIE BEAM GUARD

(#) INDICATES WING NUMBER

2'-6" GUTTER | 12'-0" LANE | 12'-0" LANE | 17'-0" MEDIAN | 12'-0" LANE | 12'-0" LANE | 2'-6" GUTTER

℄ STH 153 EB | ℞ STH 153 EB | ℄ STH 153 WB

PLAN

(DECK REPLACEMENT OF AN EXISTING TWO SPAN 45-INCH PRESTRESSED GIRDER BRIDGE)

CONCRETE SURFACE REPAIR ON S. ABUT

SLOPED FACE PARAPET 'LF' (MODIFIED) ON APPROACH SLAB, TYP

STRUCTURE APPROACH SLAB TYP EACH END

45-INCH PRESTRESSED TYPE I GIRDERS TO REMAIN PRESTRESSED CONCRETE GIRDER REPAIR REQ'D

REMOVE EXISTING PARAPET, CONCRETE OVERLAY, CONCRETE DECK AND ALL CONCRETE DIAPHRAGMS. PLACE NEW CONCRETE DECK, PARAPETS AND STEEL INTERMEDIATE DIAPHRAGMS.

ARCHITECTURAL PANEL AND CONCRETE STAINING, TYP

BEARING REPLACEMENT, TYP. AT PIER AND ABUTMENTS. SEE DETAILS ON SHEET 10.

SLOPED FACE PARAPET 'LF' (MODIFIED) ON DECK

REPLACE CONCRETE DIAPHRAGMS, TYP AT BOTH ABUTMENTS AND PIER

CONCRETE SURFACE REPAIR ON N. ABUT

NEW PIPE UNDERDRAIN WRAPPED 6-INCH. PLACED AT BEAM SEAT LEVEL, TYP

PROFILE GRADE LINE

1280 | 1270 | 1260 | 1250 | 1240

EL 1268.85

EL 1256.50 ± (MATCH EXISTING)

PRESTRESSED GIRDER PATCHING

℄ STH 153 EB

℄ STH 153 WB

EL 1268.35

EL 1266.00 ± (MATCH EXISTING)

RECONSTRUCT ALL WINGS

BTM ABUT EL 1266.35±

BTM ABUT EL 1265.85±

NEW HP10X42 WING PILE, TYP ALL WINGS

REPLACE EXISTING SLOPE PAVING CRUSHED AGGREGATE NEAR TOP OF BERM AND RESEAL REMAINING

℞ STH 153 EB

EXISTING PIER TO REMAIN

REMOVE TOP TWO PANELS OF EXISTING SLOPE PAVING CONCRETE AND PLACE NEW SLOPE PAVING CRUSHED AGGREGATE.

EXISTING ABUTMENT BODY TO REMAIN, TYP

PLACE NEW PIPE UNDERDRAIN WRAPPED 6-INCH BENEATH SLOPE PAVING CRUSHED AGGREGATE, TYP

EXISTING ABUTMENT BODY HP10X42 PILES TO REMAIN, TYP

ELEVATION

DESIGN DATA:

RATING

DESIGN LOADING	HS20
INVENTORY RATING	HS20
OPERATIONAL RATING	HS46
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

DECK DESIGN

DESIGN LOADING	HL-93

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY, SLAB	f'c = 4000 psi
ALL OTHER	f'c = 3500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

TRAFFIC DATA:

IH 39

ADT (2014) =	25,500
ADT (2034) =	32,200
DESIGN SPEED =	70 MPH

FOUNDATION DATA:

NEW WINGS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 110 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED AT 20' LONG.

* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

LIST OF DRAWINGS:

SHEET NUMBER	SHEET TITLE
1	GENERAL PLAN
2	TYPICAL SECTION, GENERAL NOTES & QUANTITIES
3	SUBSURFACE EXPLORATION
4	SOUTH ABUTMENT
5	SOUTH ABUTMENT DETAILS
6	SOUTH ABUTMENT DETAILS
7	NORTH ABUTMENT
8	NORTH ABUTMENT DETAILS
9	NORTH ABUTMENT DETAILS
10	BEARING REPLACEMENT DETAILS
11	INTERMEDIATE STEEL DIAPHRAGMS
12	SUPERSTRUCTURE
13	SUPERSTRUCTURE DETAILS
14	SUPERSTRUCTURE DETAILS
15	STRUCTURAL APPROACH SLAB
16	SLOPED FACE PARAPET TYPE 'LF' (MODIFIED)
17	AESTHETIC DETAILS
18	SLOPE PAVING REPAIRS

WISCONSIN
GARY A. RUCHTI
E-30936
MADISON
WI
PROFESSIONAL ENGINEER
4/30/14

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
6501 Watts Road
Madison, WI 53719
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 04/30/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-37-149

IH 39/USH 51 N. BOUND OVER STH 153

COUNTY	TOWN/~~CITY/VILLAGE~~
MARATHON	KRONENWETTER

DESIGN SPEC. REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
RCP	GAR	TAV	GAR

GENERAL PLAN

SHEET 1 OF 18
223

BRIDGE OFFICE CONTACT
WILLIAM DREHER, P.E.
TELEPHONE: (608) 266-8489

CONSULTANT CONTACT
GARY RUCHTI, P.E.
TELEPHONE: (608) 273-6380

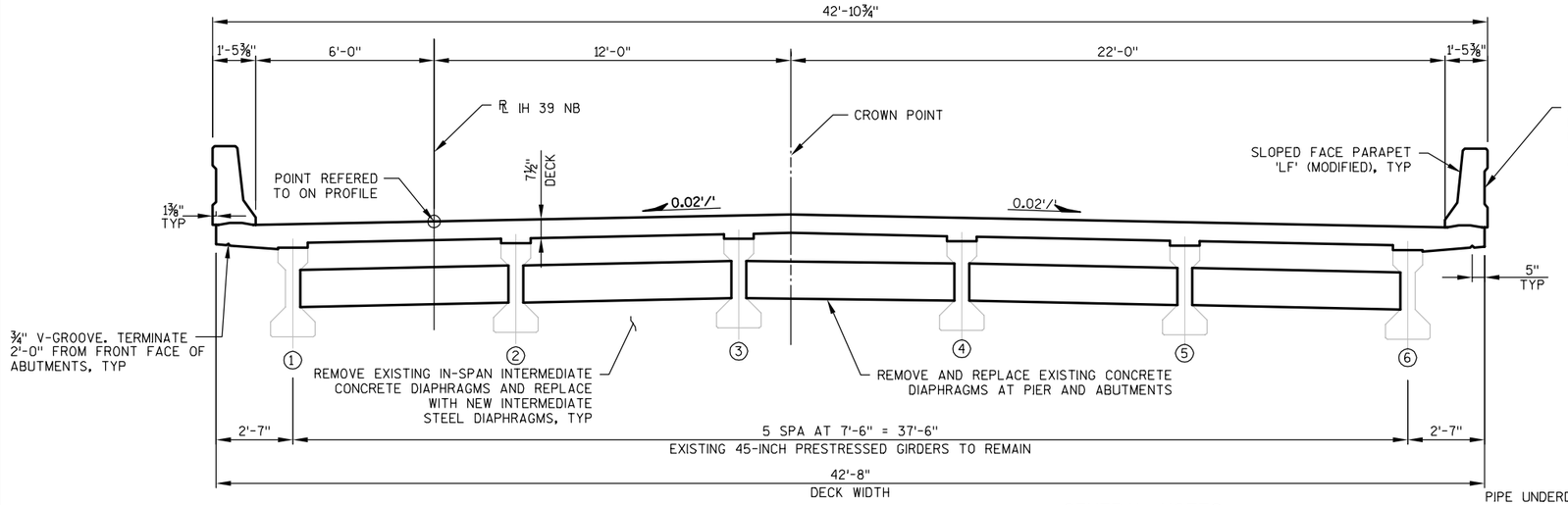
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FILE NAME • X:\32304-00\113690.01\TECH\CAD\116602II\DESIGN\STRUCTURE\080201.GP.DWG PLOT DATE • 4/30/2014 PLOT BY • ---- PLOT SCALE • ********

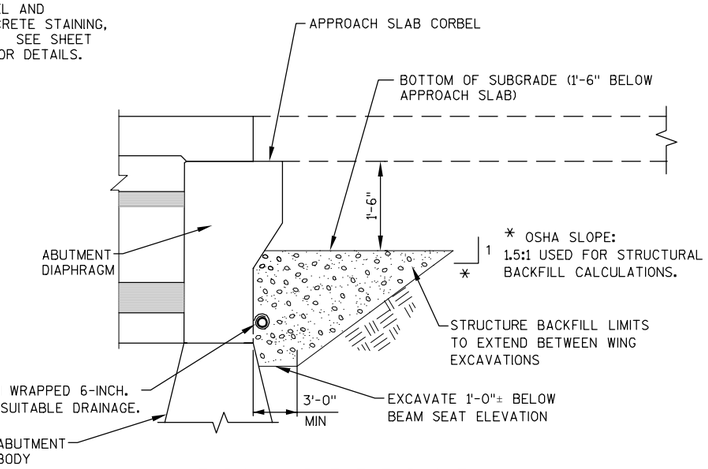
STATE PROJECT NUMBER

1166-02-81



CROSS SECTION THRU BRIDGE

(LOOKING NORTH)



TYPICAL ABUTMENT BACKFILL

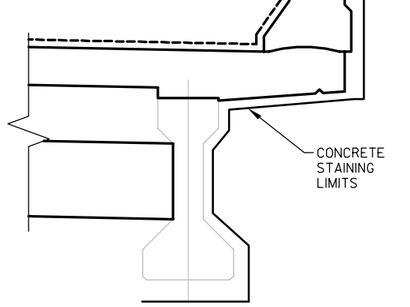
(TYPICAL AT BOTH ABUTMENTS)

BENCH MARKS

NO.	STATION, OFFSET	DESCRIPTION	ELEV.
1	213+79.24'NB',28.26' RT	3/4" IRON ROD	1256.10



PROFILE GRADE LINE, ℄ IH 39 NB



LIMITS OF PROTECTIVE SURFACE TREATMENT AND CONCRETE STAINING

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING CONCRETE AND ASPHALTIC COATED CRUSHED AGGREGATE TO THE EXTENT SHOWN ON SHEET 1 AND IN THE SLOPE PAVING DETAILS ON SHEET 18.

AT THE BACKFACE OF THE ABUTMENT OR WING VOLUME WHICH CANNOT BE PLACED BEFORE THE SUPERSTRUCTURE CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH OF 2 ¼ INCHES, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

SUPERSTRUCTURE QUANTITIES INCLUDE CONCRETE AND REINFORCEMENT OF THE PARAPET ON THE DECK. THE CONCRETE AND REINFORCEMENT QUANTITIES FOR THE PARAPETS ON THE APPROACH SLAB ARE INCLUDED IN THE APPROACH SLAB QUANTITIES.

★ PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF DECK, OR TOP OF APPROACH SLAB, BOTH INSIDE FACES AND ON TOP OF BOTH PARAPETS, SEE DETAIL ON THIS SHEET.

BEARING REPLACEMENT SHALL INCLUDE GALVANIZED MASONRY SHIM PLATES WITH ELASTOMERIC BEARING PADS. SEE DETAILS ON SHEET 10.

DIMENSIONS SHOWN FOR THE EXISTING ABUTMENTS, PIER, BEARING SEAT ELEVATIONS AND PRESTRESSED GIRDER SPACING ARE BASED ON ORIGINAL STRUCTURE PLANS.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

ALL CONCRETE REMOVAL NOT COVERED WITH CONCRETE SHALL BE DEFINED BY A 1-INCH DEEP SAW CUT.

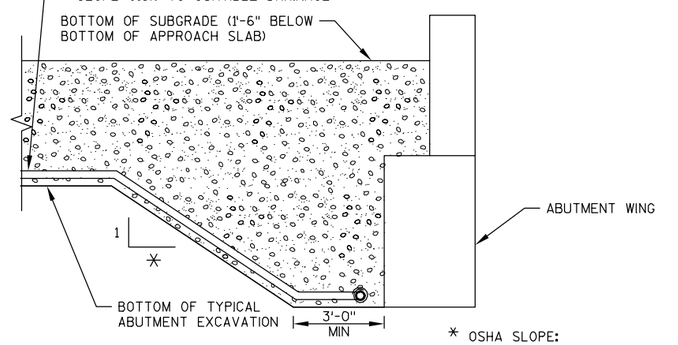
THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR OF 1973.

EXISTING ALUMINUM PARAPET RAILING SHALL BE SALVAGED FOR USE BY THE COUNTY. SEE SPECIAL PROVISIONS.

VARIATIONS TO THE NEW GRADE LINE OVER ¼" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

(#) INDICATES GIRDER NUMBER

BENCH ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88).



WING BACKFILL DETAIL

(TYPICAL AT ALL WINGS)

* OSHA SLOPE: 1.5:1 USED FOR STRUCTURAL BACKFILL CALCULATIONS.

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	S ABUT	S APP. SLAB	PIER	N ABUT	N APP. SLAB	SUPER	TOTALS
203.0200	REMOVING OLD STRUCTURE STA 213+79	LS	---	---	---	---	---	---	1
203.0210.S.01	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-37-149	LS	---	---	---	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-37-149	LS	---	---	---	---	---	---	1
210.0100	BACKFILL STRUCTURE	CY	140	---	---	140	---	---	280
502.0100	CONCRETE MASONRY BRIDGES	CY	19	58	---	19	58	248	402
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	105	---	---	105	877	1087
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	42	---	---	42	---	---	84
502.5015	MASONRY ANCHORS TYPE L NO. 7 BARS	EACH	16	---	---	16	---	---	32
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	300	---	---	300	---	0	600
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1630	9770	---	1630	9770	72190	94990
506.4000	STEEL DIAPHRAGMS B-37-149	EACH	---	---	---	---	---	10	10
506.7000.S.02	BEARING REPLACEMENT B-37-149	EACH	---	---	---	---	---	16	16
509.1500	CONCRETE SURFACE REPAIR	SF	8	---	---	12	---	---	20
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12	---	---	12	---	---	24
517.1010.S.02	CONCRETE STAINING B-37-149	SF	35	14	---	35	14	415	513
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	40	---	---	40	---	---	80
604.0500	SLOPE PAVING CRUSHED AGGREGATE	SY	15	---	---	45	---	---	60
604.9015.S	RESEAL CRUSHED AGGREGATE SLOPE PAVING	SY	150	---	---	---	---	---	150
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	---	---	---	---	10	---	10
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	160	51	---	160	44	---	415
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	---	2	---	---	---	---	2
SPV.0085.01	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	---	---	---	---	---	1470	1470
SPV.0165.02	PRESTRESSED CONCRETE GIRDER REPAIR	SF	---	---	---	---	---	8	8
	NON BID ITEMS								
	FILLER	SIZE							1/2" & 3/4"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

DRAWN BY TAV | PLANS CK'D. GAR

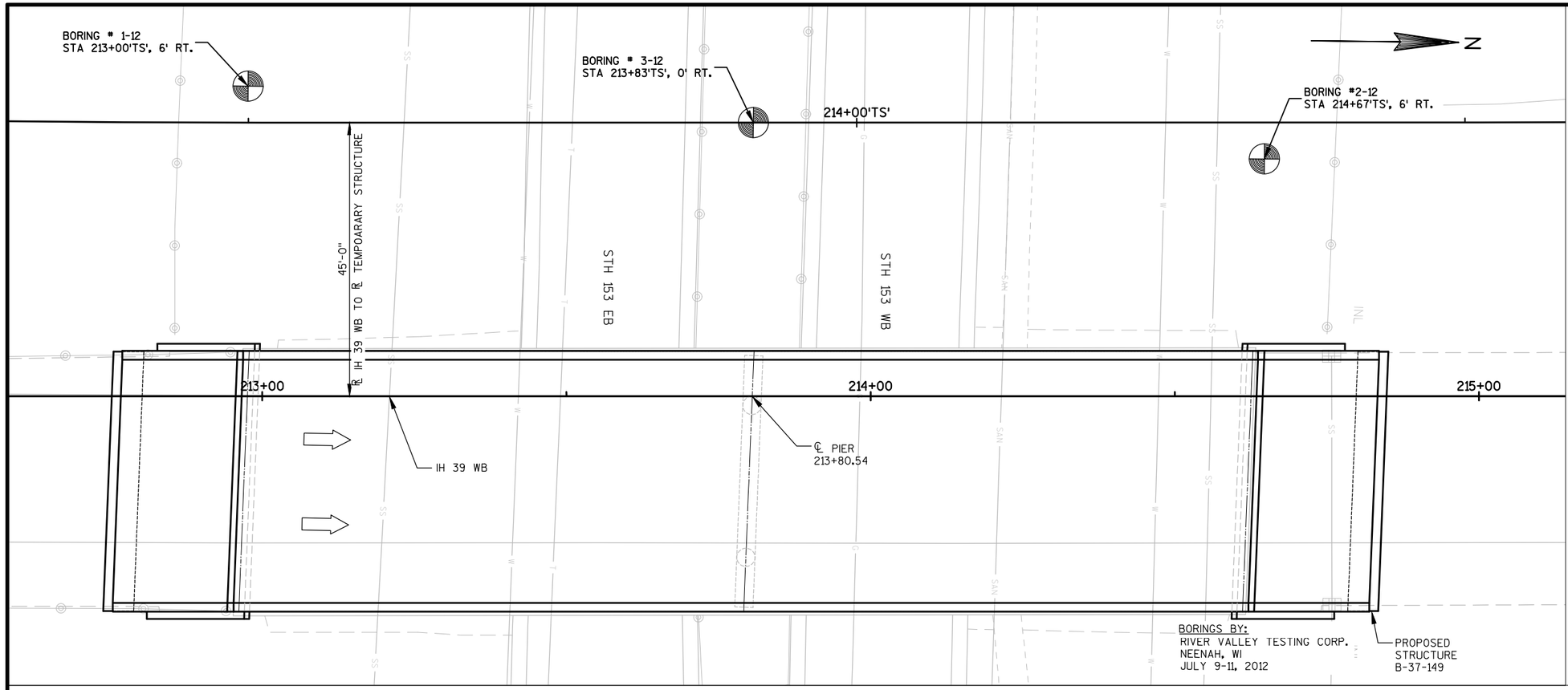
TYPICAL SECTION, GENERAL NOTES & QUANTITIES

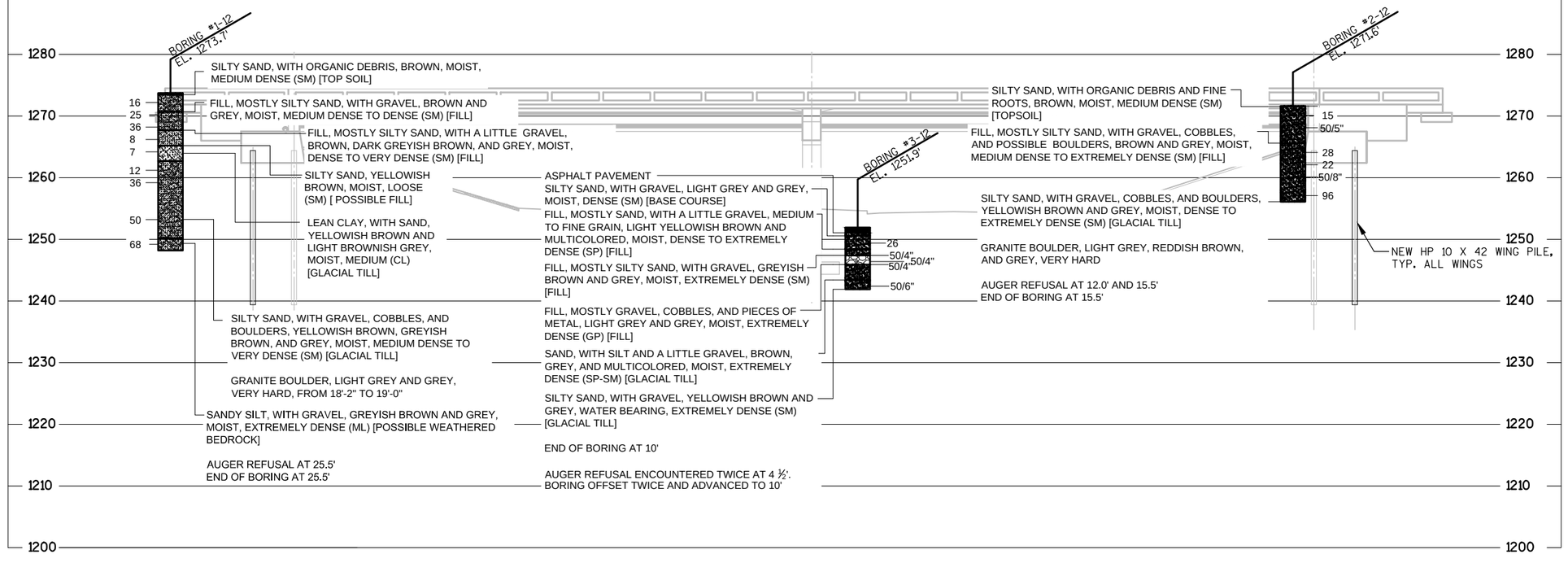
SHEET 2 OF 18

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STATE PROJECT NUMBER

1166-02-81

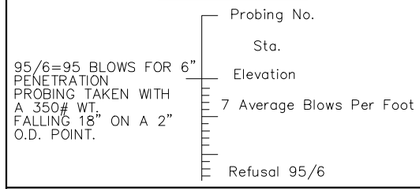
ABBREVIATIONS

F— Fine M—Medium C— Coarse
Ws—Weathered So—Sound

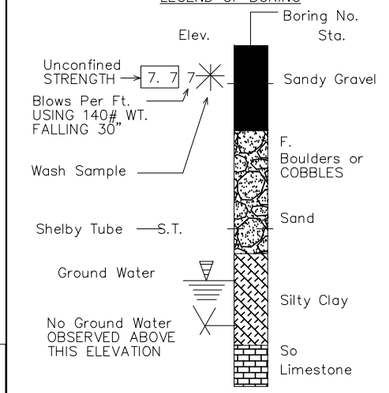
MATERIAL SYMBOLS

Asphalt, Concrete, Gravel, Silt, Organic Soil, Clay, Sand, Air, Water

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 B-37-149

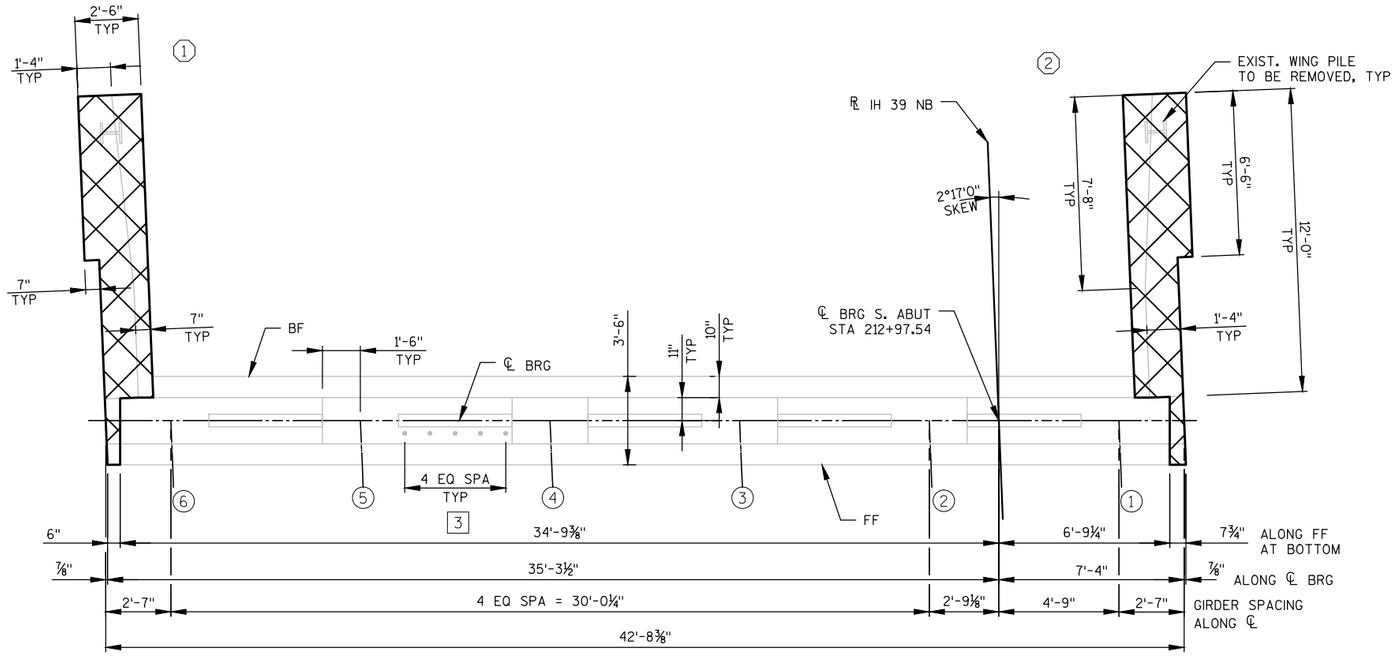
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SUBSURFACE EXPLORATION

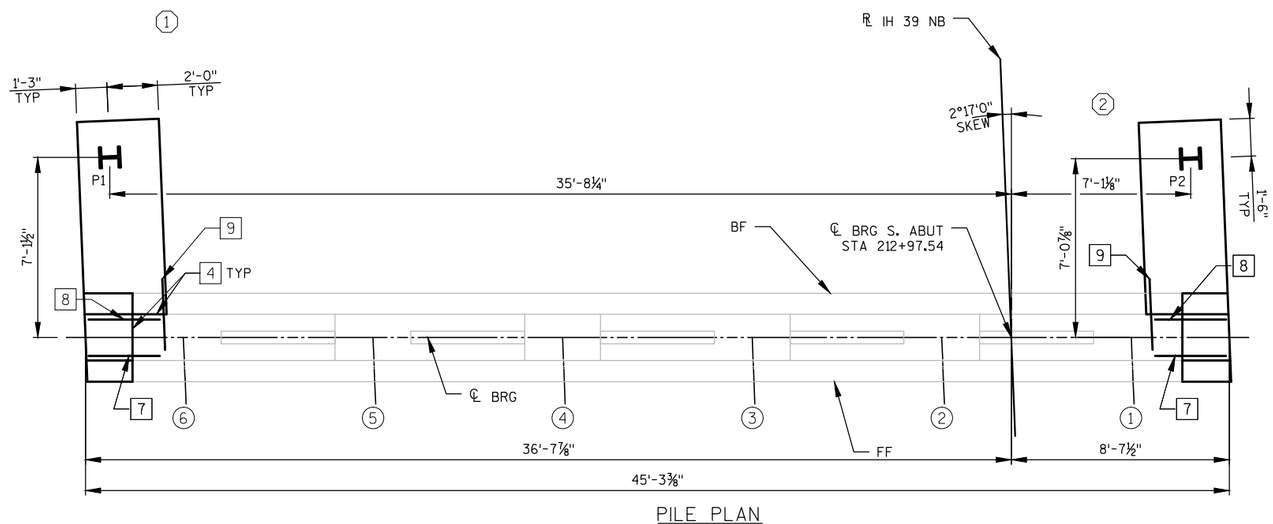
SH 225 OF 18

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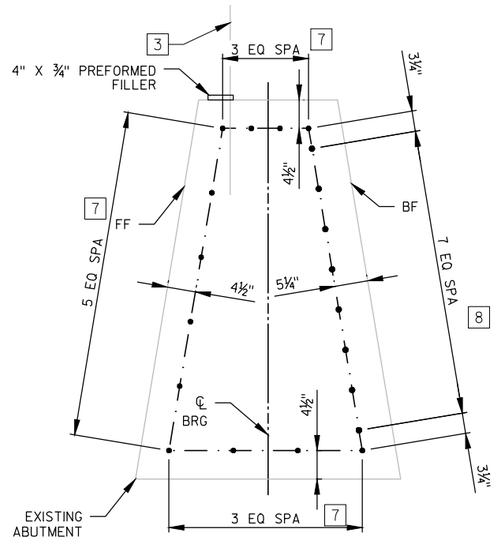
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EXISTING PLAN



PILE PLAN



MASONRY ANCHOR LAYOUT

ABUTMENT NOTES

FILL / EXCAVATE TO BOTTOM OF WING BODY EL 1266.35± BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL DETAIL.

WINGS TO SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED AT 20' LONG.

BEARING REPLACEMENT AT GIRDERS 2 THROUGH 5. SEE SHEET 10 FOR DETAILS.

1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
2. OPTIONAL CONST. JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE. DEFINE WITH ¾" BEVEL ON FF.
3. SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.
4. ROUGHEN SURFACE OF CONCRETE ¼" MIN. ALL AREAS OF NEW TO EXIST. CONCRETE CONTACT. SEE MASONRY ANCHOR LAYOUT ON THIS SHEET FOR ANCHOR PLACEMENT IN EXISTING ABUTMENT BODY.
5. ½" FILLER - EXTENDED FROM BEARING SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.
6. PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN.
7. CONCRETE MASONRY ANCHORS, TYPE L, NO. 6 BARS, MINIMUM PULLOUT CAPACITY OF 26.4 KIPS. EMBED 1'-1" IN CONCRETE WITH A601 BARS. TOTAL NUMBER REQUIRED = 24 FOR SOUTH ABUTMENT.
8. CONCRETE MASONRY ANCHORS, TYPE L, NO. 7 BARS, MINIMUM PULLOUT CAPACITY OF 36 KIPS. EMBED 1'-4" IN CONCRETE WITH A702 BARS. TOTAL NUMBER REQUIRED = 16 FOR SOUTH ABUTMENT.
9. CONCRETE MASONRY ANCHORS, TYPE L, NO. 6 BARS, MINIMUM PULLOUT CAPACITY OF 26.4 KIPS. EMBED 1'-1" IN CONCRETE WITH A604 BARS. TOTAL NUMBER REQUIRED = 18 FOR SOUTH ABUTMENT WINGS.

(#) INDICATES GIRDER NUMBER

(#) INDICATES WING NUMBER

P# INDICATES PILE NUMBER

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP

REMOVAL LIMITS OF EXISTING WING. WING BODY TO BE REMOVED TO BF OF ABUTMENT BODY. EXISTING WING PILE TO BE REMOVED.

STATE PROJECT NUMBER

1166-02-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

DRAWN BY MJB | PLANS CK'D. GAR

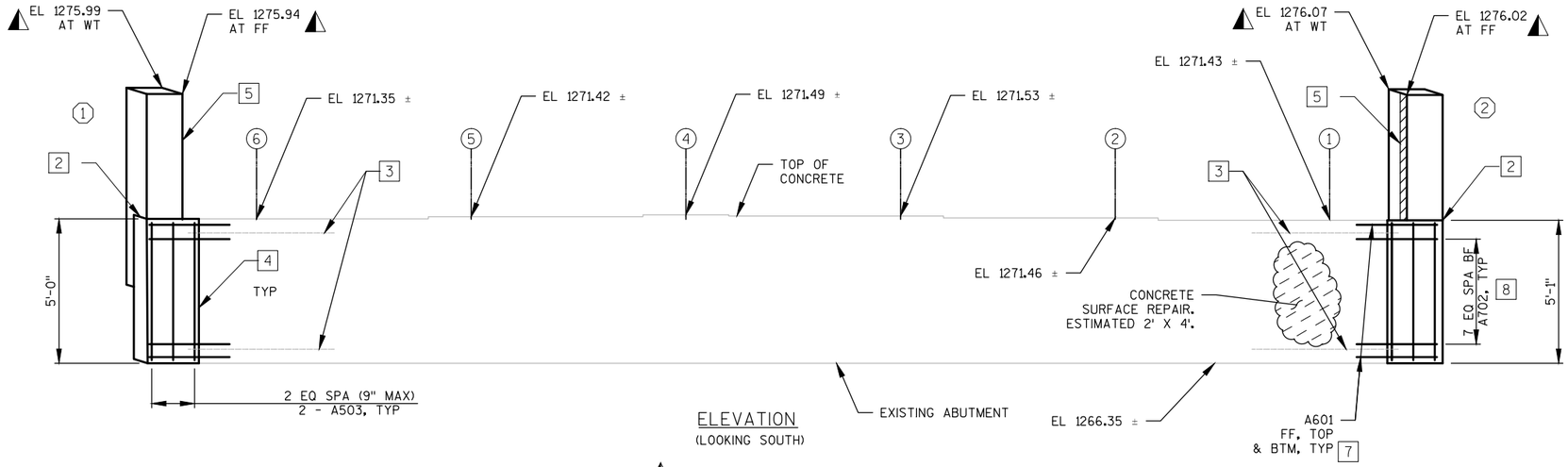
SOUTH ABUTMENT

SHEET 4 OF 18
226

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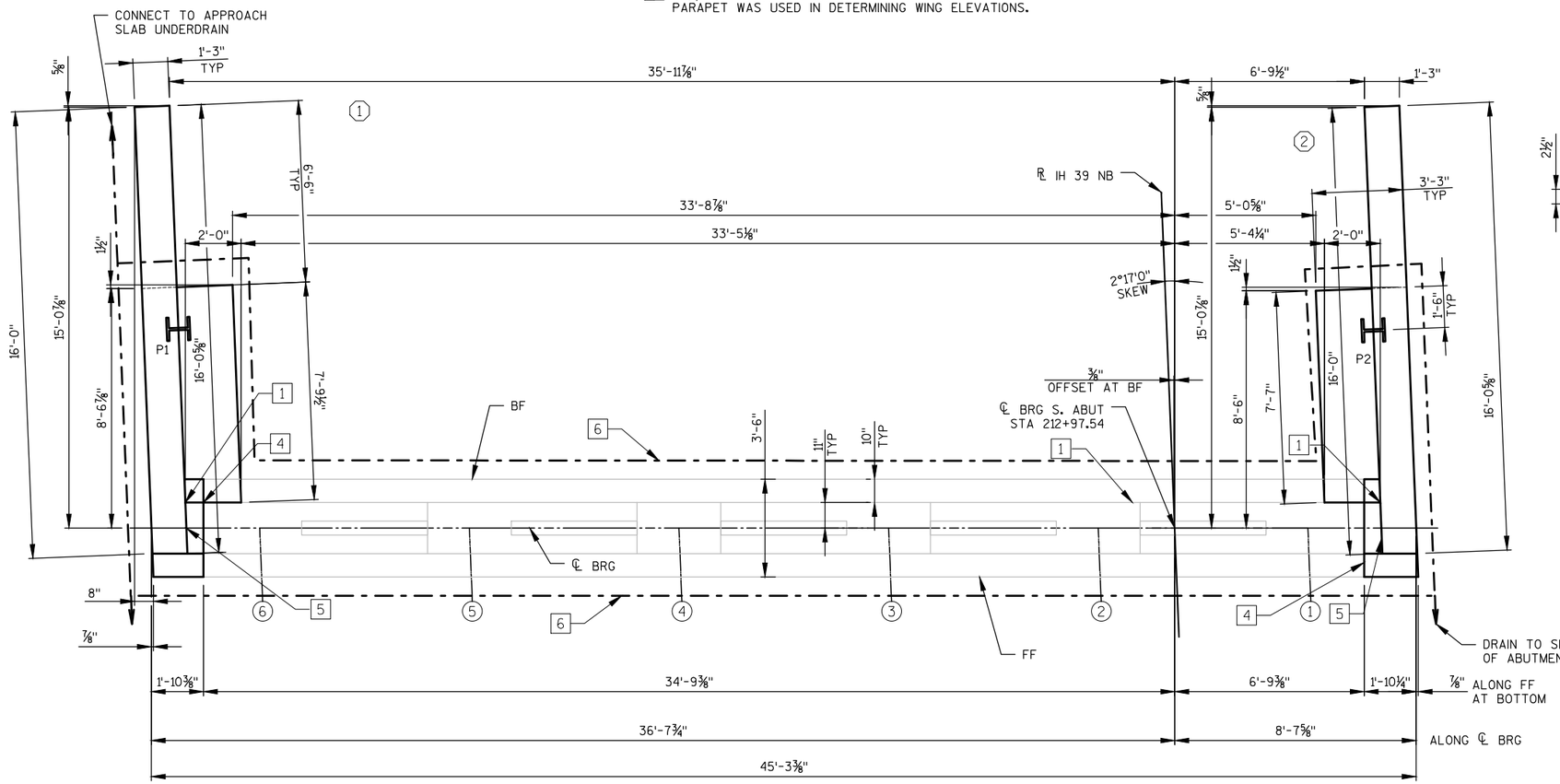
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STATE PROJECT NUMBER
1166-02-81



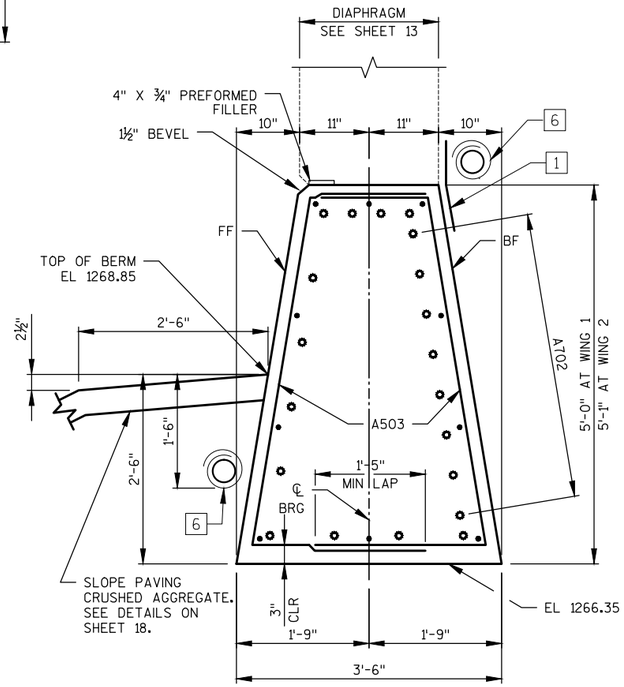
ELEVATION
(LOOKING SOUTH)

A ¼" GAP BETWEEN TOP OF WALL AND BOTTOM OF PARAPET WAS USED IN DETERMINING WING ELEVATIONS.



PROPOSED PLAN

ABUTMENT NOTES



SECTION THRU ABUTMENT BODY

ALL ANCHORED BARS NOT LABELED ARE A601 BARS

- HOLLOW CIRCLES REPRESENT ANCHORED BARS, SEE DETAIL ON SHEET 4.
- SOLID DOTS REPRESENT A413 BARS AT 1'-6" MAX SPACING.

A604 BARS NOT SHOWN. SEE SHEET 6.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

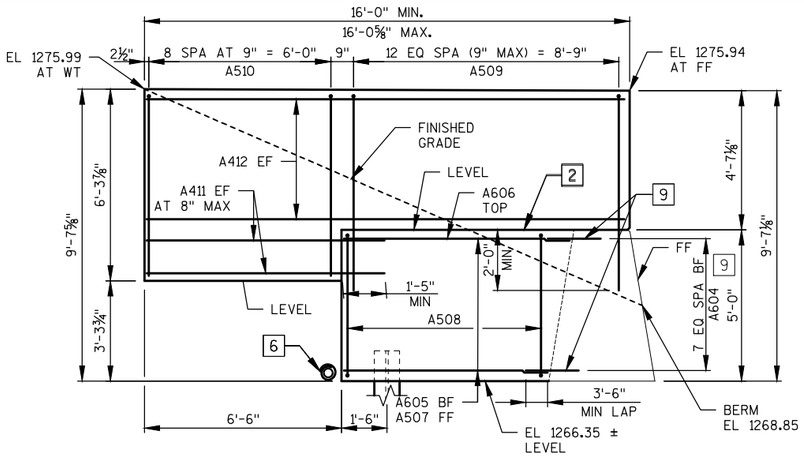
DRAWN BY MJB | PLANS CK'D. GAR

SOUTH ABUTMENT DETAILS

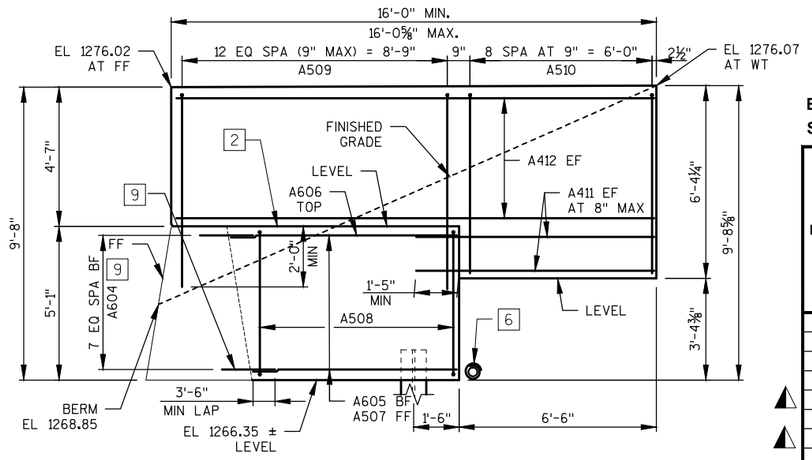
SHEET 227 5 OF 18

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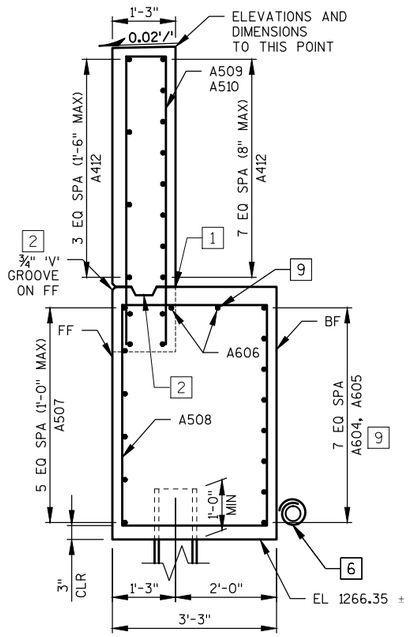
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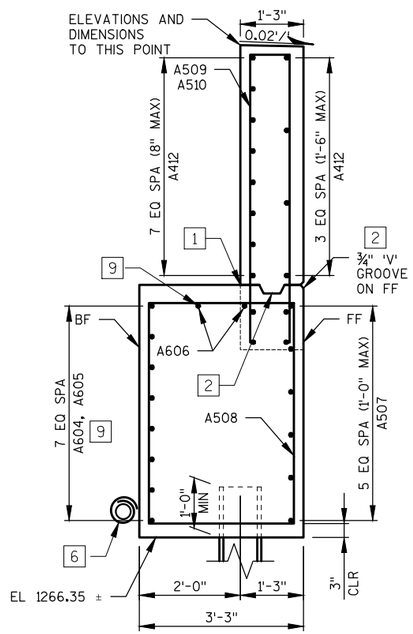
WING 1 ELEVATION



WING 2 ELEVATION



WING 1 SECTION



WING 2 SECTION

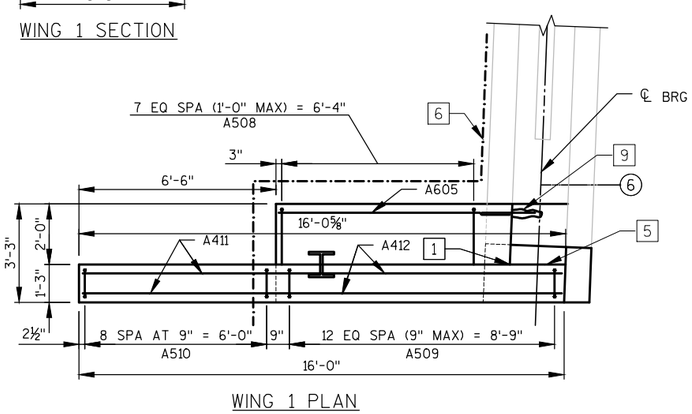
NOTES

1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
2. OPTIONAL CONST. JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
5. ½" FILLER - EXTENDED FROM BEARING SEAT TO TOP OF WING, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.
6. PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN.
9. CONCRETE MASONRY ANCHORS, TYPE L, NO. 6 BARS, MINIMUM PULLOUT CAPACITY OF 26.4 KIPS. EMBED 1'-1" IN CONCRETE WITH A604 BARS. TOTAL NUMBER REQUIRED = 18 FOR SOUTH ABUTMENT WINGS.

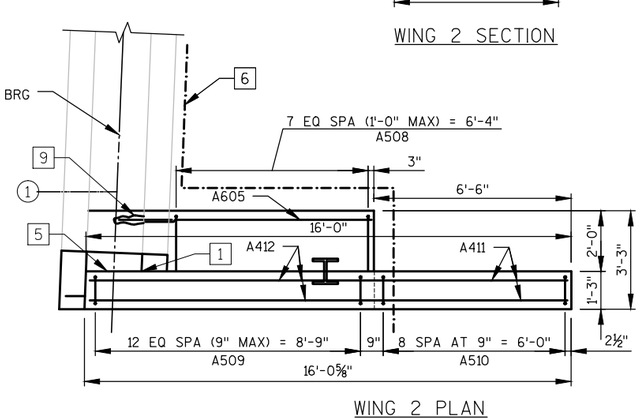
(#) INDICATES GIRDER NUMBER

(#) INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP



WING 1 PLAN



WING 2 PLAN

STATE PROJECT NUMBER

1166-02-81

BILL OF BARS
SOUTH ABUTMENT

COATED= 1630 LBS.
UNCOATED= 300 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
A601		24	2 - 8			ABUTMENT BODY - DOWELS FF	HORIZ
A702		16	2 - 11			ABUTMENT BODY - DOWELS BF	HORIZ
A503		12	8 - 3	X		ABUTMENT BODY - STIRRUPS	VERT
A604	18		4 - 9			WING BODY - DOWELS BF	HORIZ
⚠ A605	16		6 - 10		X	WING BODY - BF	HORIZ
A606	4		7 - 3			WING BODY - TOP	HORIZ
⚠ A507	12		9 - 5		X	WING BODY - FF	HORIZ
A508	16		15 - 3	X		WING BODY - STIRRUPS	VERT
A509	26		13 - 10	X		WING TOP - STIRRUPS	VERT
A510	18		12 - 6	X		WING TOP - STIRRUPS	VERT
A411	8		7 - 9			WING TOP - EF	HORIZ
A412	24		15 - 7			WING TOP - EF	HORIZ
A413	20		1 - 6			ABUTMENT BODY - TIE STEEL	HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

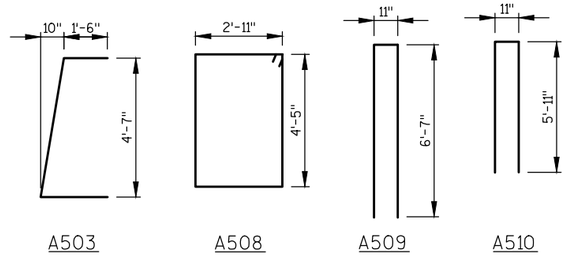
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

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

BAR SERIES ⚠

MARK	NO. REQUIRED	LENGTH
A605	2 SERIES OF 8	6'-5" TO 7'-3"
A507	2 SERIES OF 6	9'-0" TO 9'-10"

BUNDLE AND TAG EACH SERIES SEPERATELY



A503 A508 A509 A510

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

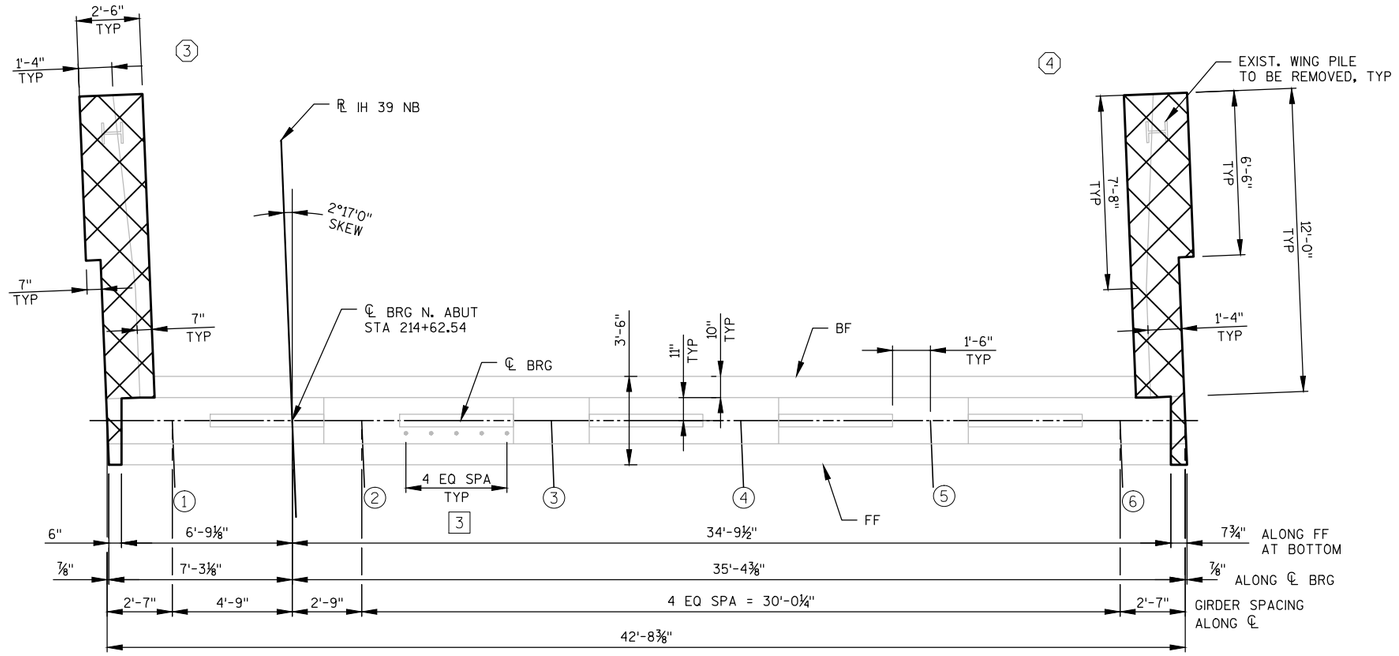
DRAWN BY MJB | PLANS CK'D. GAR

SOUTH ABUTMENT DETAILS

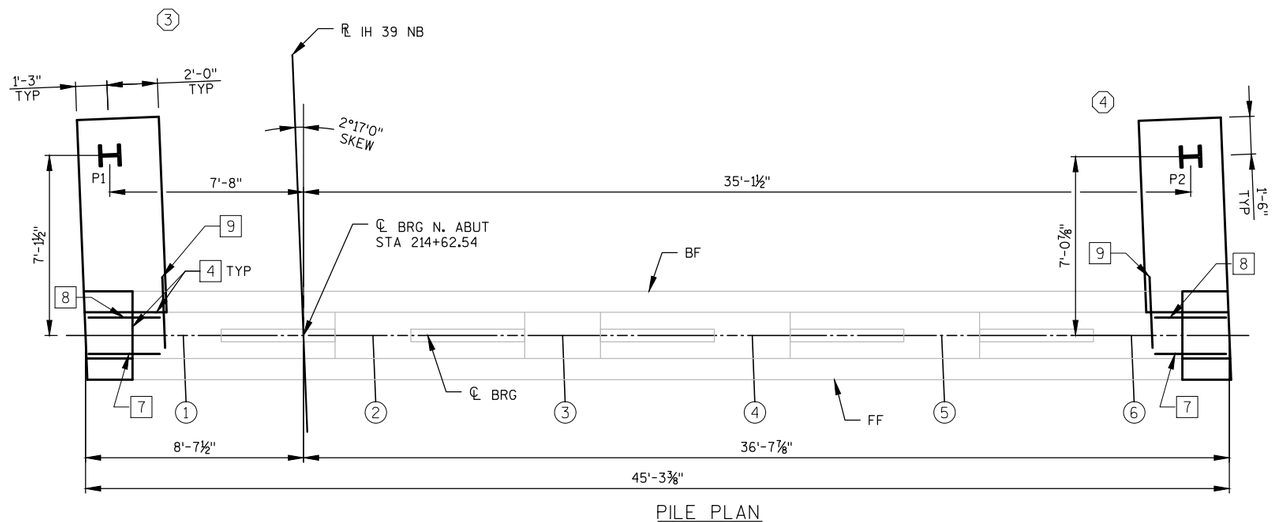
SHEET 6 OF 18
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8

8



EXISTING PLAN



PILE PLAN

ABUTMENT NOTES

FILL / EXCAVATE TO BOTTOM OF WING BODY EL 1265.85± BEFORE DRIVING PILING.

SEE SHEET 2 FOR STRUCTURE BACKFILL DETAIL.

WINGS TO SUPPORTED ON HP 10 X 42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED AT 20' LONG.

BEARING REPLACEMENT AT GIRDERS 2 THROUGH 5. SEE SHEET 10 FOR DETAILS.

1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
2. OPTIONAL CONST. JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE. DEFINE WITH ¾" BEVEL ON FF.
3. SALVAGE EXIST. REINF. & EXTEND FULL LENGTH INTO NEW WORK.
4. ROUGHEN SURFACE OF CONCRETE ¼" MIN. ALL AREAS OF NEW TO EXIST. CONCRETE CONTACT. SEE MASONRY ANCHOR LAYOUT ON THIS SHEET FOR ANCHOR PLACEMENT IN EXISTING ABUTMENT BODY.
5. ½" FILLER - EXTENDED FROM BEARING SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.
6. PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN.
7. CONCRETE MASONRY ANCHORS, TYPE L, NO. 6 BARS, MINIMUM PULLOUT CAPACITY OF 26.4 KIPS. EMBED 1'-1" IN CONCRETE WITH B601 BARS. TOTAL NUMBER REQUIRED = 24 FOR NORTH ABUTMENT.
8. CONCRETE MASONRY ANCHORS, TYPE L, NO. 7 BARS, MINIMUM PULLOUT CAPACITY OF 36 KIPS. EMBED 1'-4" IN CONCRETE WITH B702 BARS. TOTAL NUMBER REQUIRED = 16 FOR NORTH ABUTMENT.
9. CONCRETE MASONRY ANCHORS, TYPE L, NO. 6 BARS, MINIMUM PULLOUT CAPACITY OF 26.4 KIPS. EMBED 1'-1" IN CONCRETE WITH B604 BARS. TOTAL NUMBER REQUIRED = 18 FOR NORTH ABUTMENT WINGS.

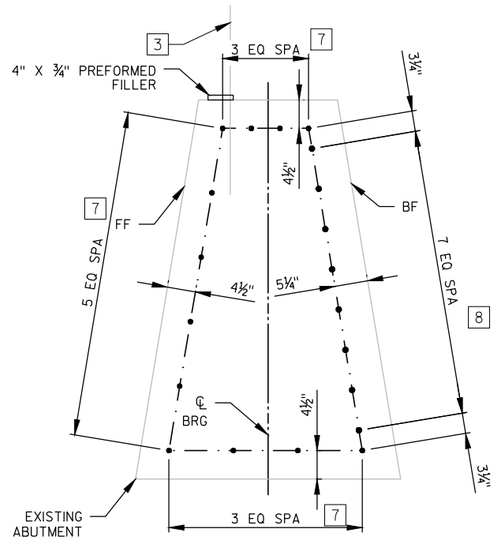
(#) INDICATES GIRDER NUMBER

(#) INDICATES WING NUMBER

P# INDICATES PILE NUMBER

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP

REMOVAL LIMITS OF EXISTING WING. WING BODY TO BE REMOVED TO BF OF ABUTMENT BODY. EXISTING WING PILE TO BE REMOVED.



MASONRY ANCHOR LAYOUT

STATE PROJECT NUMBER

1166-02-81

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

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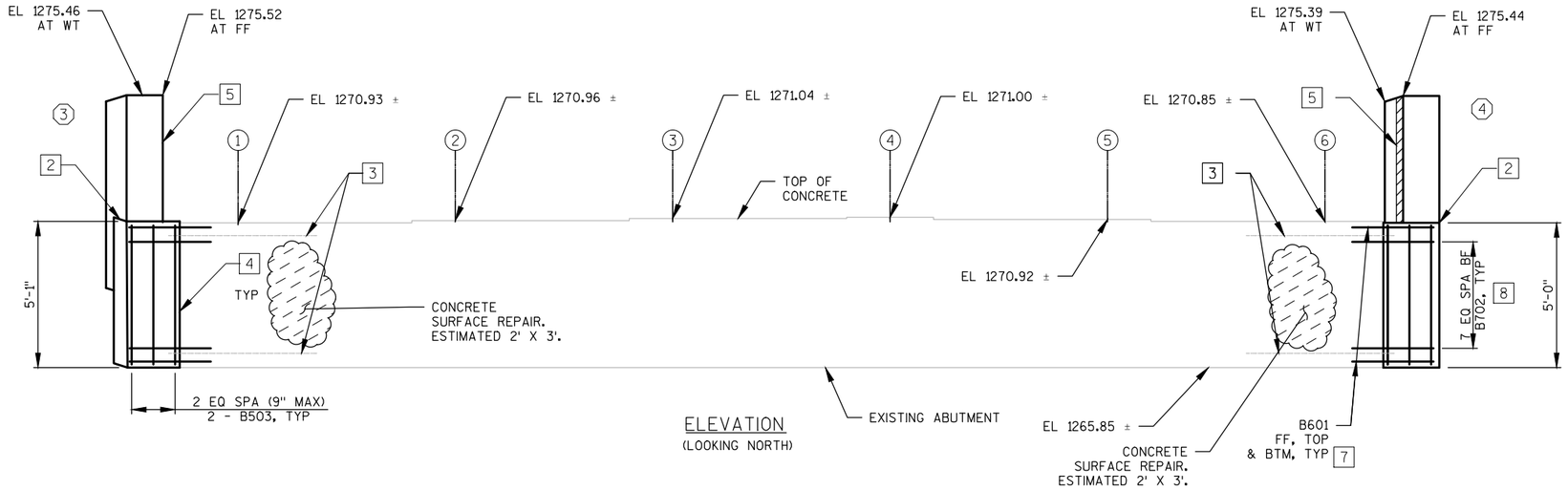
NORTH ABUTMENT

SHEET 7 OF 18
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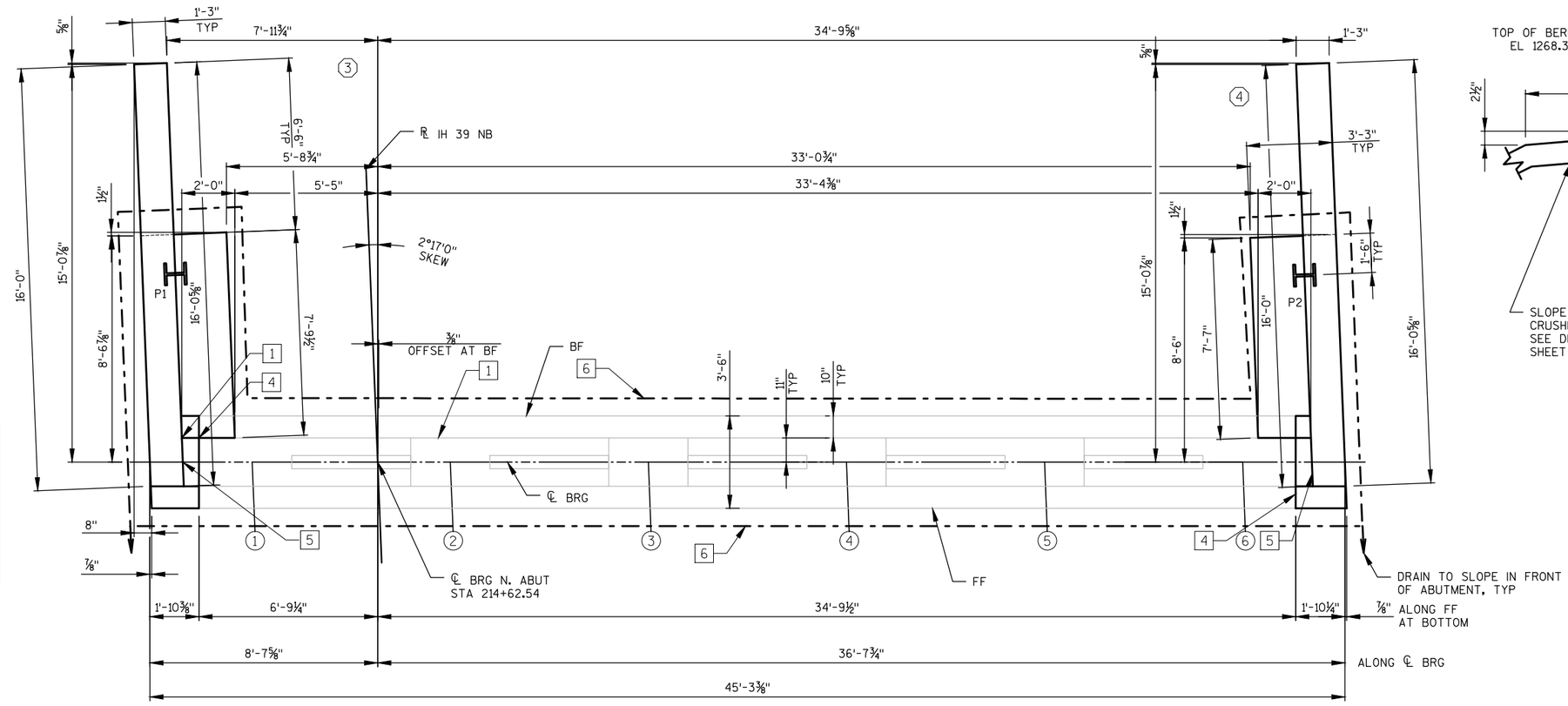
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8

STATE PROJECT NUMBER
1166-02-81



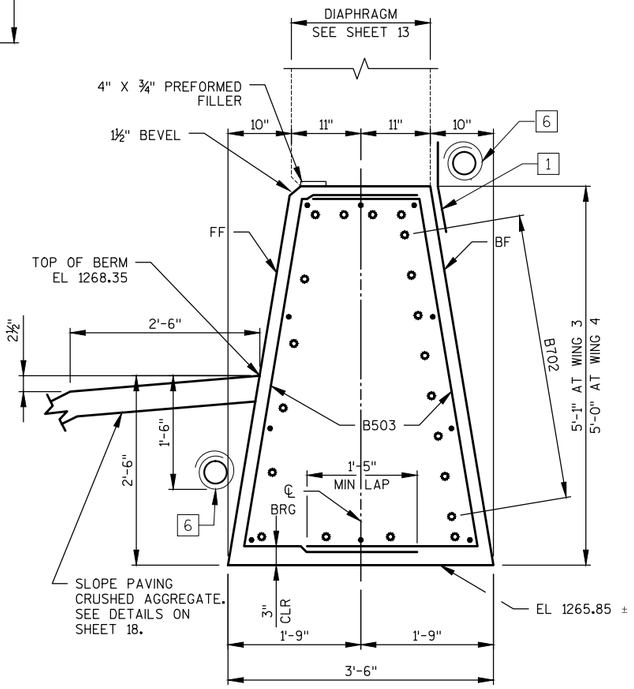
ELEVATION
(LOOKING NORTH)



PROPOSED PLAN

ABUTMENT NOTES

SEE SHEET 7 FOR ALL ABUTMENT NOTES.



SECTION THRU ABUTMENT BODY

ALL ANCHORED BARS NOT LABELED ARE B601 BARS

✪ HOLLOW CIRCLES REPRESENT ANCHORED BARS, SEE DETAIL ON SHEET 7.

• SOLID DOTS REPRESENT B413 BARS AT 1'-6" MAX SPACING.

B604 BARS NOT SHOWN. SEE SHEET 9.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

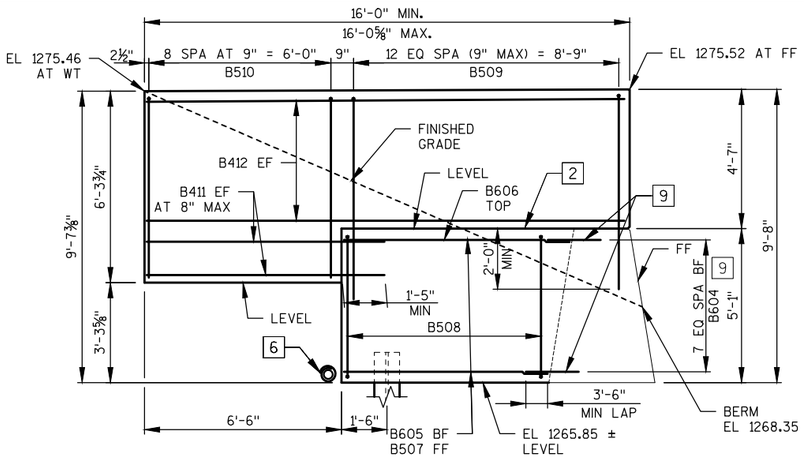
DRAWN BY MJB | PLANS CK'D. GAR

NORTH ABUTMENT DETAILS

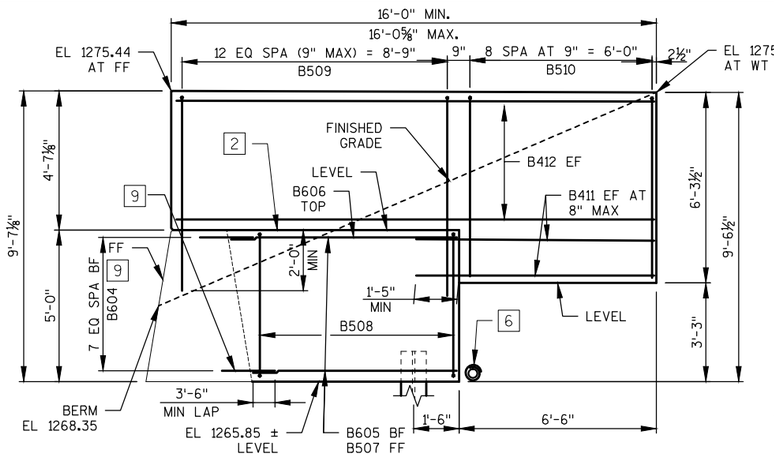
SHEET 8 OF 18
230

8

8



WING 3 ELEVATION



WING 4 ELEVATION

WING 3 SECTION

NOTES

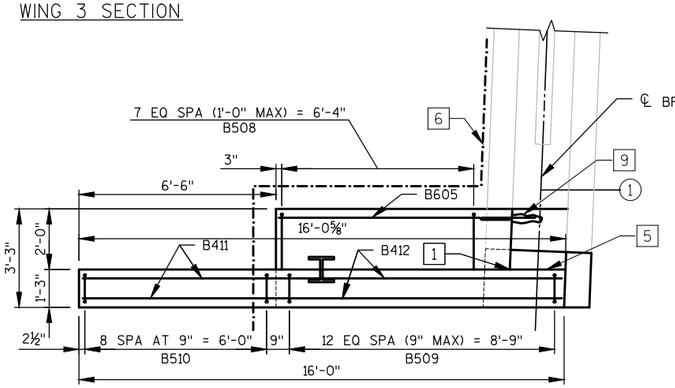
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5. ½" FILLER - EXTENDED FROM BEARING SEAT TO TOP OF WING, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.
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(#) INDICATES GIRDER NUMBER

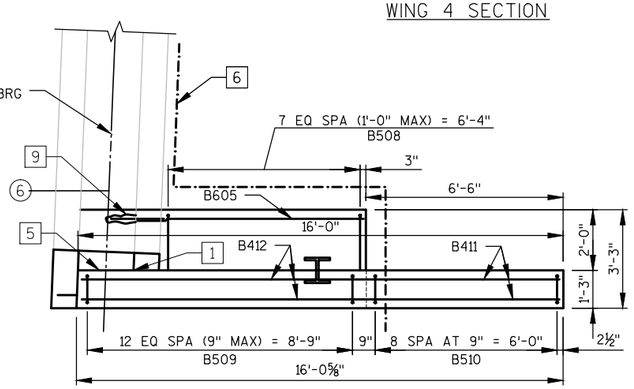
(#) INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP

WING 4 SECTION



WING 3 PLAN



WING 4 PLAN

STATE PROJECT NUMBER

1166-02-81

BILL OF BARS
NORTH ABUTMENT

COATED= 1630 LBS.
UNCOATED= 300 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
B601		24	2 - 8			ABUTMENT BODY - DOWELS FF	HORIZ
B702		16	2 - 11			ABUTMENT BODY - DOWELS BF	HORIZ
B503		12	8 - 3	X		ABUTMENT BODY - STIRRUPS	VERT
B604	18		4 - 9			WING BODY - DOWELS BF	HORIZ
⚠ B605	16		6 - 10		X	WING BODY - BF	HORIZ
B606	4		7 - 3			WING BODY - TOP	HORIZ
⚠ B507	12		9 - 5		X	WING BODY - FF	HORIZ
B508	16		15 - 3	X		WING BODY - STIRRUPS	VERT
B509	26		13 - 10	X		WING TOP - STIRRUPS	VERT
B510	18		12 - 6	X		WING TOP - STIRRUPS	VERT
B411	8		7 - 9			WING TOP - EF	HORIZ
B412	24		15 - 7			WING TOP - EF	HORIZ
B413	20		1 - 6			ABUTMENT BODY - TIE STEEL	HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

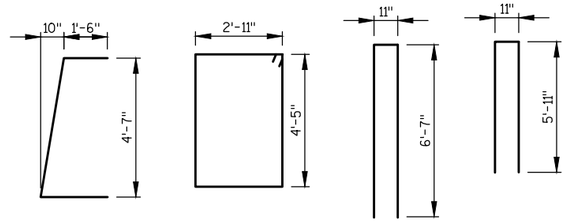
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

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

BAR SERIES ⚠

MARK	NO. REQUIRED	LENGTH
B605	2 SERIES OF 8	6'-5" TO 7'-3"
B507	2 SERIES OF 6	9'-0" TO 9'-10"

BUNDLE AND TAG EACH SERIES SEPERATELY



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

DRAWN BY MJB | PLANS CK'D. GAR

NORTH ABUTMENT DETAILS

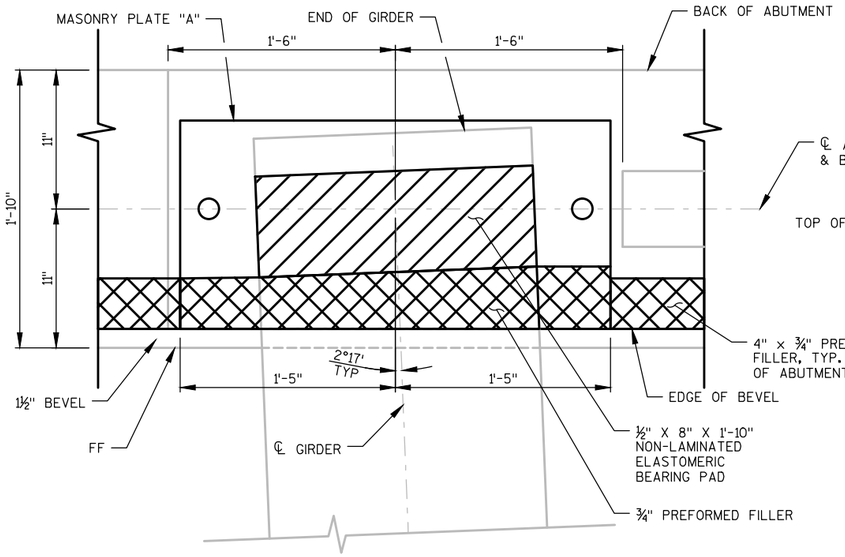
SHEET 9 OF 18
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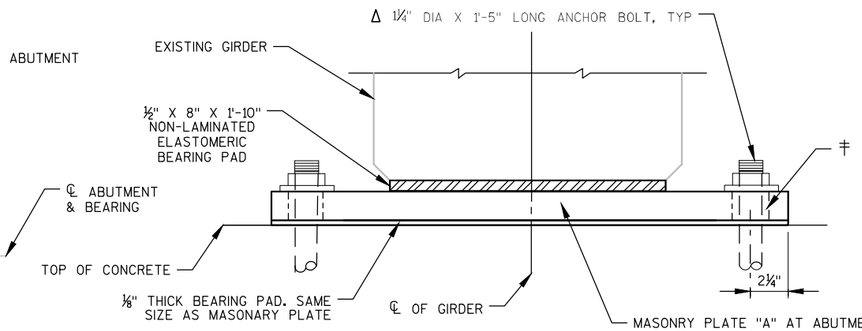
FILE NAME : X:±32304-00±113690.01±TECH±CAD±11660211±DESIGN±STRUCTURE±080207_NA.DWG PLOT DATE : 6/10/2013 PLOT BY : ---- PLOT SCALE : 1" = 1'

STATE PROJECT NUMBER

1166-02-81



PLAN AT ABUTMENT



SECTION B1-B1

BEARING NOTES

MASONARY PLATE "A" AND MASONRY PLATE "P" SHALL CONFORM TO ASTM A709 GRADE 50W.

ANCHOR BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A709 GRADE 36, OR MATERIAL OF EQUIALENT YIELD STRENGTH AND ELONGATION.

ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT, AND VERTICAL.

ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.

ALL FINISHED SURFACES SHALL BE MACHINE FINISHED BY AN AUTOMATIC PROCESS.

ANCHOR BOLTS SHALL BE THREADED 3". PROVIDE ONE STANDARD WROUGHT WASHER AND ONE HEX NUT PER BOLT. PROJECT ANCHOR BOLTS "MASONRY PLATE" THICKNESS + 2¼" ABOVE TOP OF CONCRETE.

CHAMFER ANCHOR BOLTS PRIOR TO THREADING.

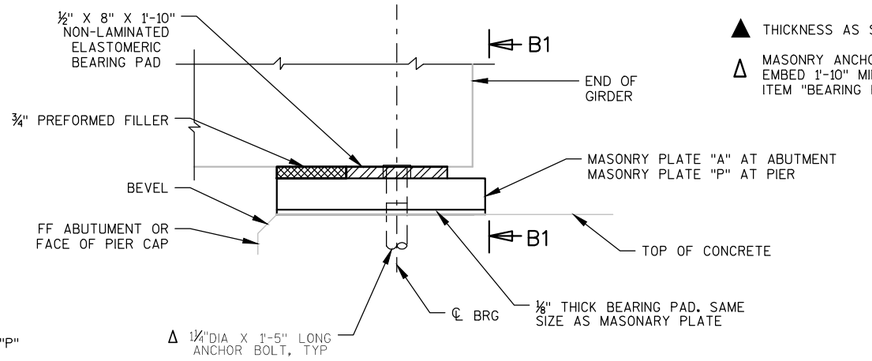
‡ DRILLED HOLES FOR ANCHOR BOLTS SHALL HAVE A DIAMETER ⅜" LARGER THAN ANCHOR BOLT.

MASONRY PLATES, ANCHOR BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AS REQUIRED BY ASTM DESIGNATION A153, CLASS "C".

ALL MATERIALS ON THIS SHEET SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING REPLACEMENT (B-37-149)", EACH.

▲ THICKNESS AS SHOWN IN INCLUDED TABLE.

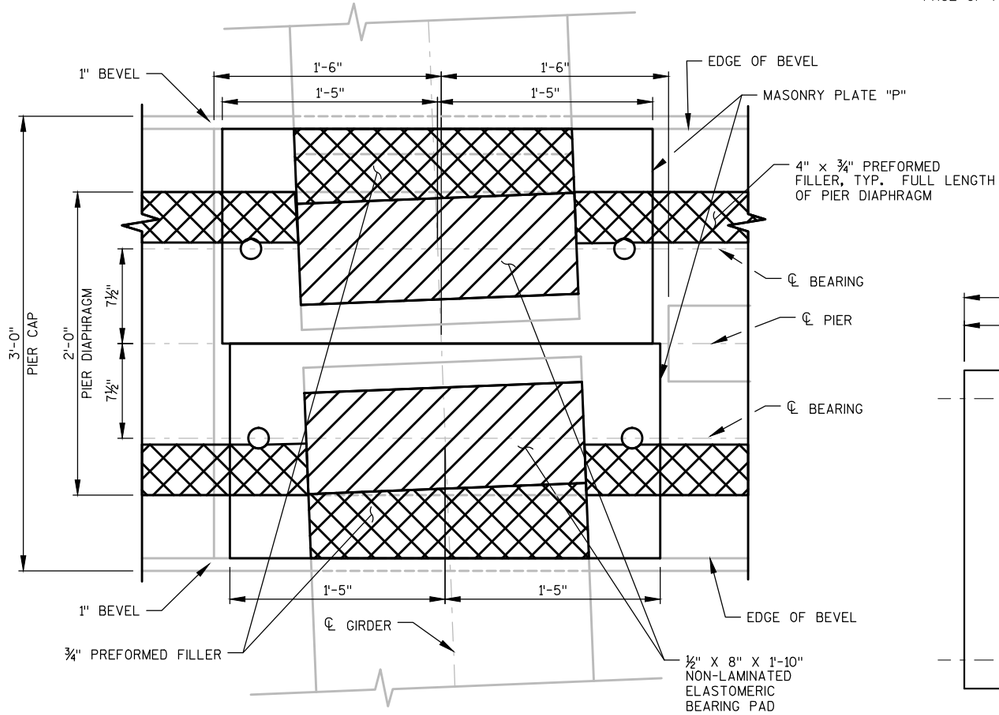
Δ MASONRY ANCHOR TYPE L NO. 10, MINIMUM PULLOUT CAPACITY OF 76.2 KIPS. EMBED 1'-10" MINIMUM INTO CONCRETE. PAYMENT INCIDENTAL TO THE BID ITEM "BEARING REPLACEMENT (B-37-149)", EACH.



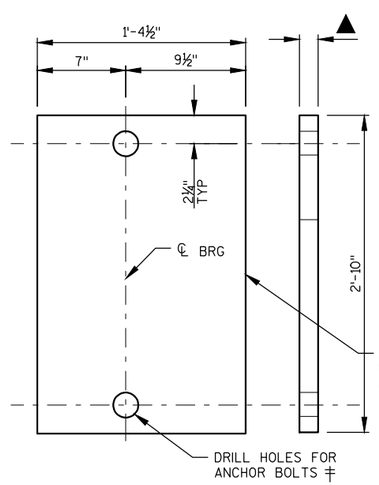
BEARING ASSEMBLY

GIRDER	SOUTH ABUTMENT	PIER	NORTH ABUTMENT
1	N/A	N/A	N/A
2	1 1/4	1 1/4	1 1/4
3	2 1/4	2 1/4	2 1/8
4	1 3/4	1 3/4	1 5/8
5	7/8	3/4	3/4
6	N/A	N/A	N/A

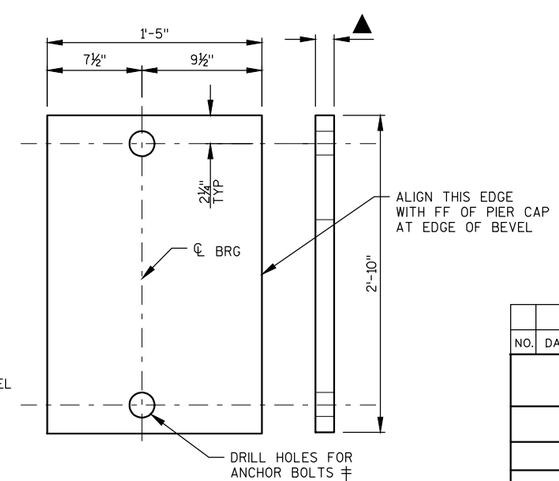
▲ MASONRY PLATE THICKNESSES



PLAN AT PIER



MASONRY PLATE "A"
FOR USE AT ABUTMENTS



MASONRY PLATE "P"
FOR USE AT PIER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

DRAWN BY DAY | PLANS CK'D. GAR

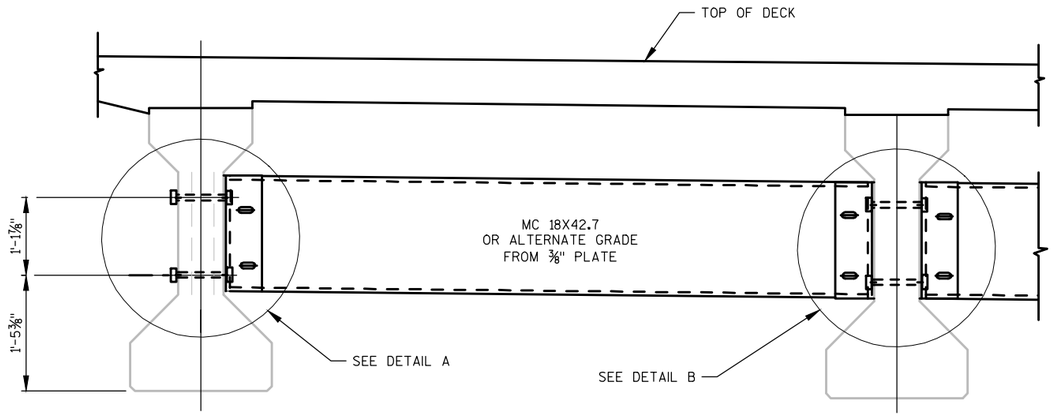
BEARING REPLACEMENT DETAILS

SHEET 10 OF 18
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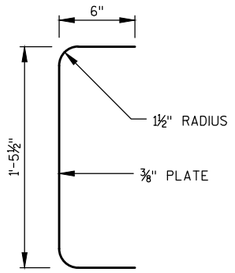
STATE PROJECT NUMBER
1166-02-81



EXTERIOR GIRDER

INTERIOR GIRDER

PART TRANSVERSE SECTION AT DIAPHRAGM



SECTION THRU ALTERNATE DIAPHRAGM

◑ USE 2½" FOR ALTERNATE PLATE DIAPHRAGM

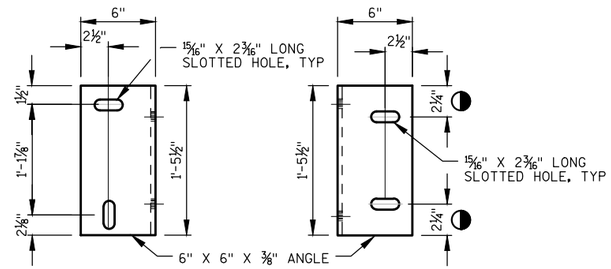
NOTES

ALL DIAPHRAGM MATERIAL AND CORED HOLES SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS, STRUCTURE B-37-149, EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

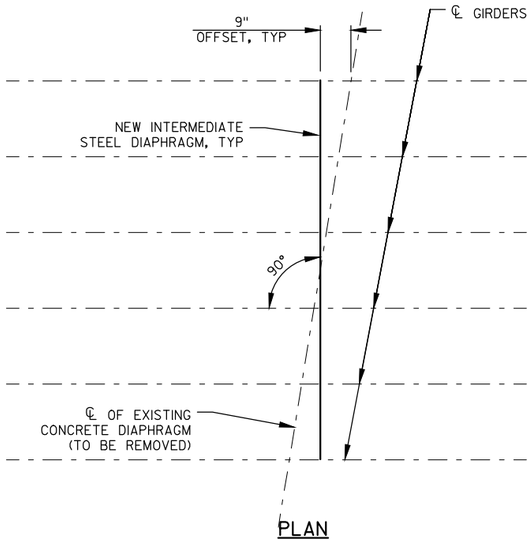
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

ALL DIAPHRAGM STRUCTURAL STEEL SHOWN SHALL BE HOT-DIPPED GALVANIZED. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C. GALVANIZED NUTS SHALL BE TAPPED OVERSIZED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A563 AND SHALL MEET THE REQUIREMENTS OF SUPPLEMENTARY REQUIREMENT S1 OF ASTM A563, LUBRICANT AND TEST FOR COATED NUTS.



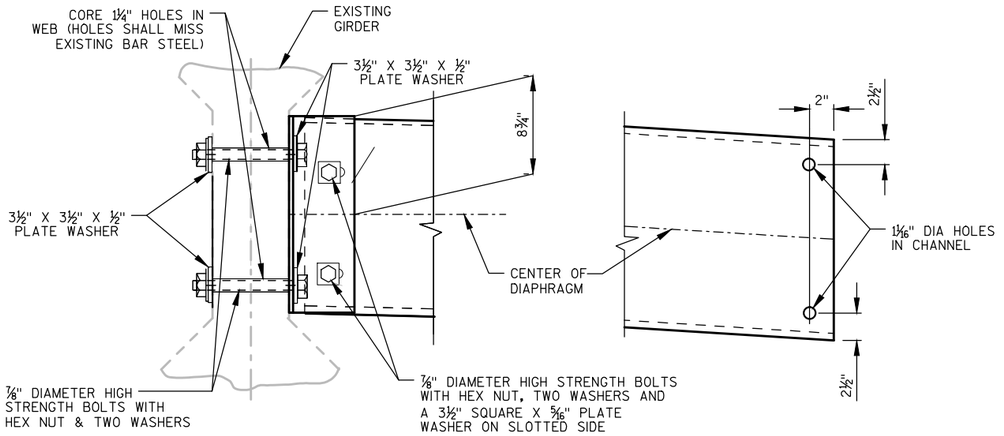
BEAM FACE

DIAPHRAGM FACE



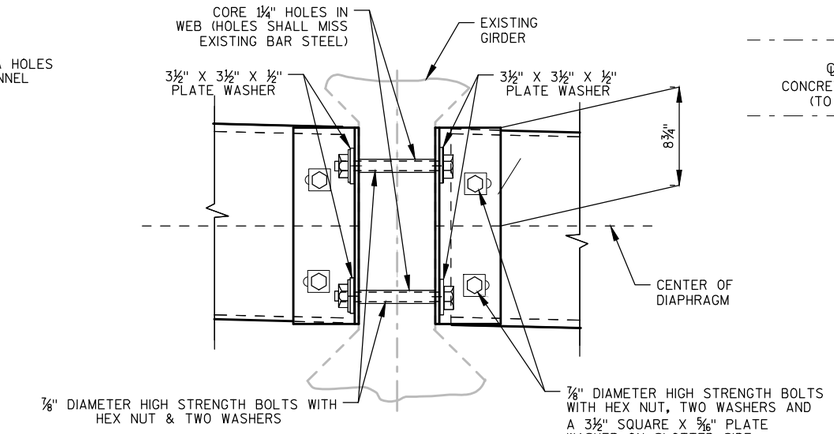
PLAN

DIAPHRAGM SUPPORT



DETAIL A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

(FOR INTERIOR ATTACHMENT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

DRAWN BY DAY | PLANS CK'D. GAR

INTERMEDIATE STEEL DIAPHRAGMS

SHEET 11 OF 18

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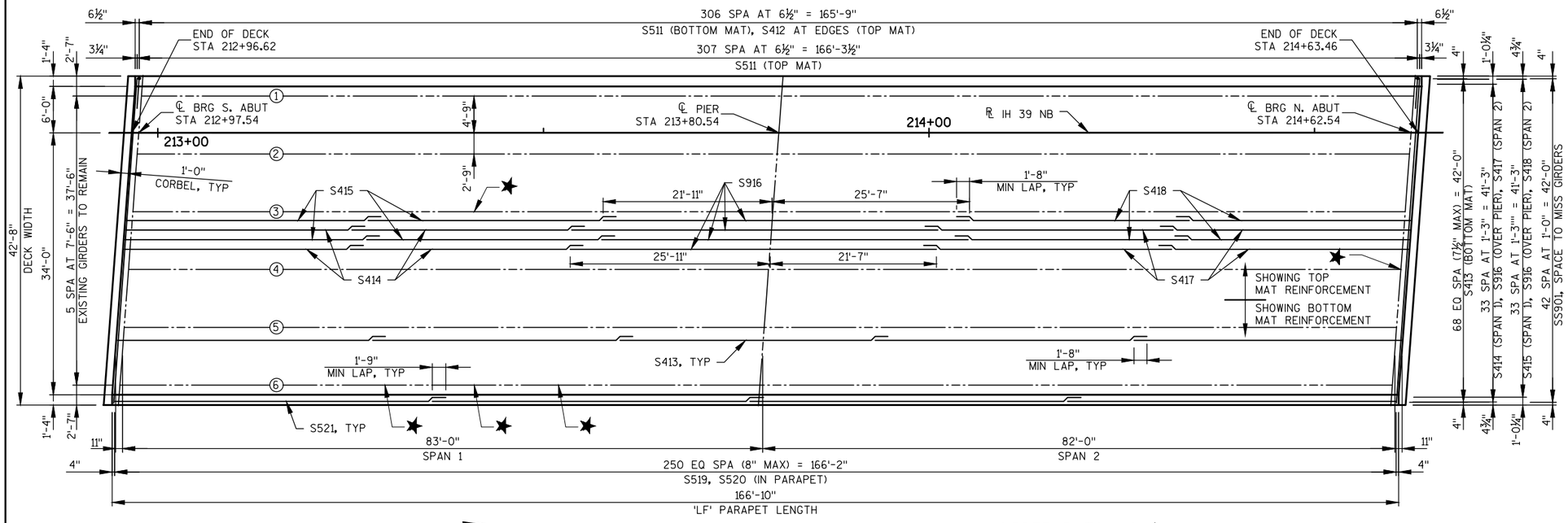
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8

FILE NAME : X:±32304-00±113690.01±TECH±CAD±11660211±DESIGN±STRUCTURE±080211_DIA.DWG PLOT DATE : 6/10/2013 PLOT BY : ---- PLOT SCALE : 1" = 1'

STATE PROJECT NUMBER

1166-02-81



DECK REINFORCEMENT PLAN

PRESTRESSED GIRDER PATCHING ★

LOCATION	AREA (SF)
SPAN 1, GIRDER 3, EAST SIDE OF BOTTOM FLANGE	1.75
SPAN 1, GIRDER 6, BOTTOM FLANGE (3 SEPARATE AREAS)	4.5
SPAN 2, GIRDER 4, BOTTOM FLANGE AT NORTH ABUTMENT	1.5

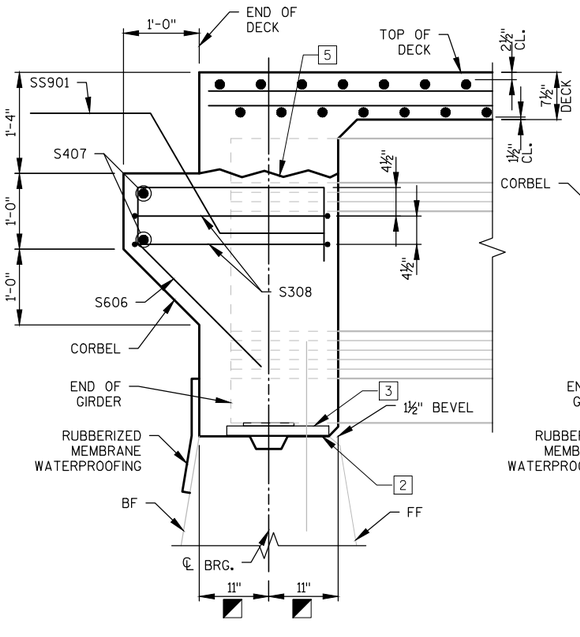
SUPERSTRUCTURE NOTES:

1. EXISTING #5 DOWEL BARS. SALVAGE EXIST. REINF. AND EXTEND FULL LENGTH INTO NEW WORK.
2. ½" ELASTOMERIC BEARING PAD AND MASONRY PLATE. GIRDERS 2 THROUGH 5 AT ABUTMENTS AND PIER. SEE SHEET 10 FOR DETAILS.
3. ¾" PREFORMED FILLER IN FRONT OF BEARING PAD BETWEEN MASONRY PLATE AND GIRDER FLANGE.
4. ¾" PREFORMED FILLER UNDER ABUTMENT AND PIER DIAPHRAGMS. SEE SHEET 10 FOR DETAILS.
5. OPTIONAL CONSTRUCTION JOINT. PLACE EVEN WITH TOP OF CORBEL AT ABUTMENTS OR BOTTOM OF HAUNCH AT PIERS. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.
6. CONSTRUCTION JOINT. STRIKE OFF AS SHOWN.

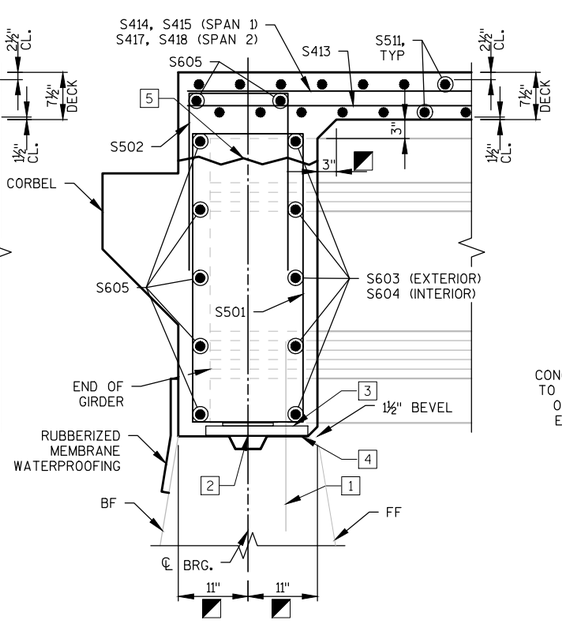
◪ DIMENSION IS TAKEN NORMAL TO ℄ OF SUBSTRUCTURE UNIT.

◓ DIMENSION IS TAKEN PARALLEL TO GIRDER ℄.

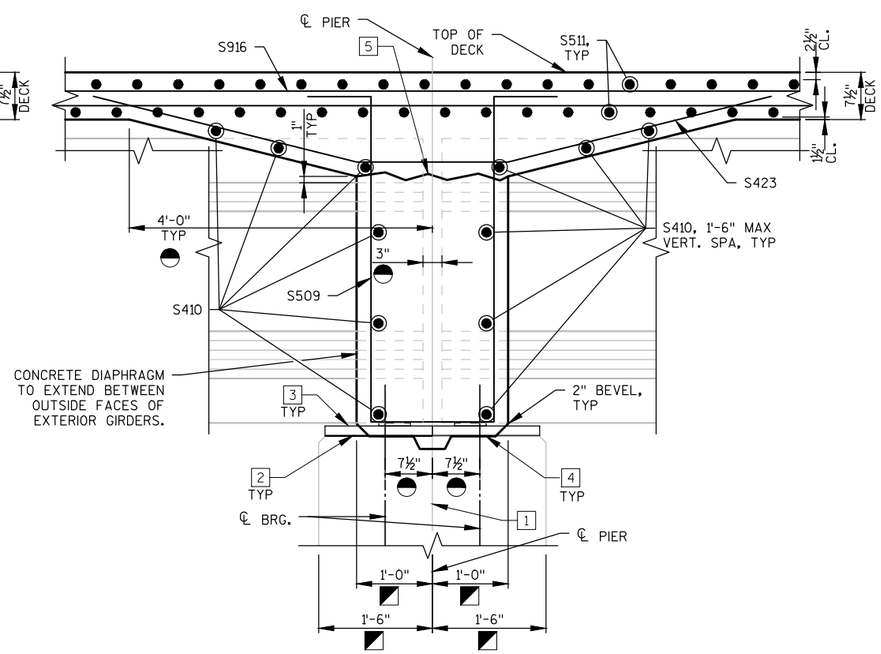
FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE



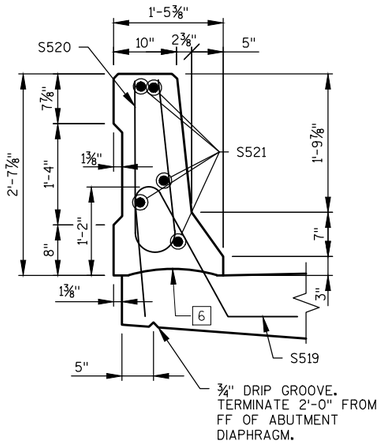
SHOWING CORBEL DETAILS



SHOWING ABUTMENT DIAPHRAGM



SHOWING PIER DIAPHRAGM



SECTION THRU PARAPET ON BRIDGE

PARTIAL LONGITUDINAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

DRAWN BY TAV | PLANS CK'D. GAR

SUPERSTRUCTURE

SHEET 12 OF 18
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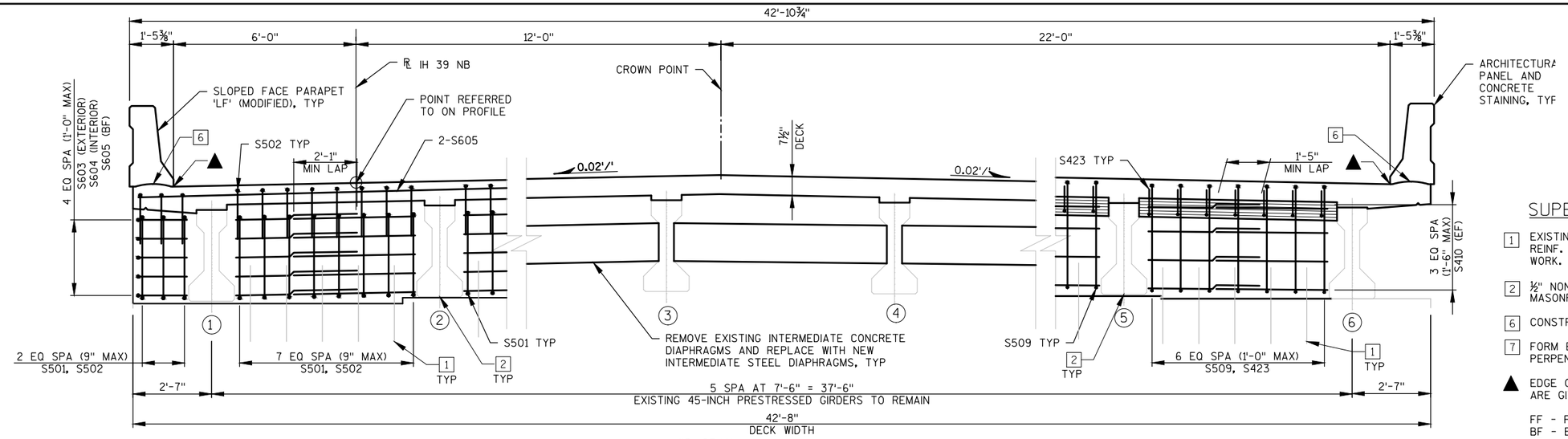
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8

FILE NAME : X:±32304-00±113690.01±TECH±CAD±11660211±DESIGN±STRUCTURE±080212_SS.DWG PLOT DATE : 6/10/2013 PLOT BY : ---- PLOT SCALE : 1" = 1'

STATE PROJECT NUMBER

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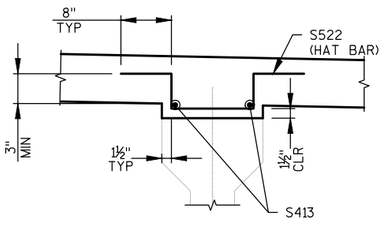
SUPERSTRUCTURE NOTES:

1. EXISTING #5 DOWEL BARS. SALVAGE EXIST. REINF. AND EXTEND FULL LENGTH INTO NEW WORK.
2. ½" NON-LAMINATED ELASTOMERIC PAD AND MASONRY PLATE. SEE SHEET 10 FOR DETAILS.
6. CONSTRUCTION JOINT. STRIKE OFF AS SHOWN.
7. FORM END OF DECK, WITHIN LIMITS OF PARAPET, PERPENDICULAR TO EDGE OF DECK.

▲ EDGE OF DECK ELEVATIONS SHOWN ON SHEET 11 ARE GIVEN AT THIS POINT.

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

AT ABUTMENT

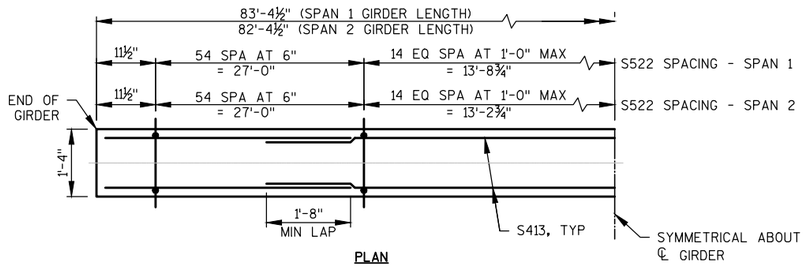


GIRDER HAUNCH DETAIL

MID SPAN

CROSS SECTION THRU DECK

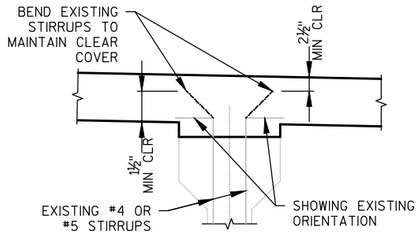
(LOOKING NORTH)
(SHOWING DIAPHRAGM REINFORCEMENT)



PLAN

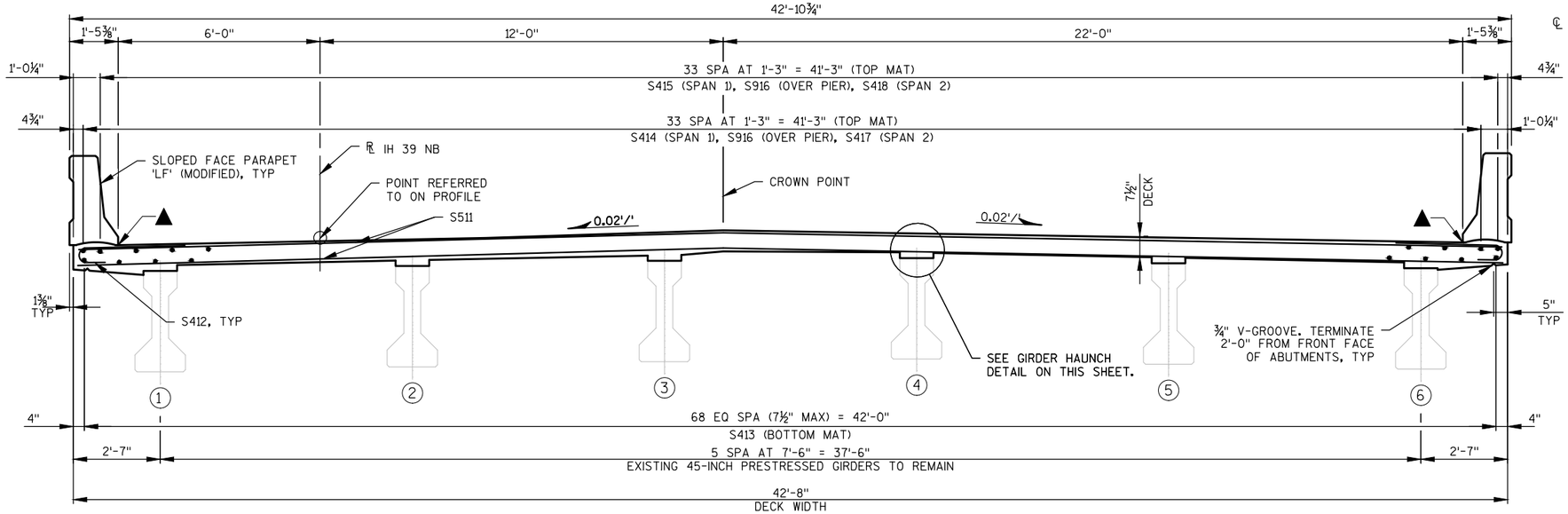
SHOWING HAUNCH REINFORCEMENT

AT PIER



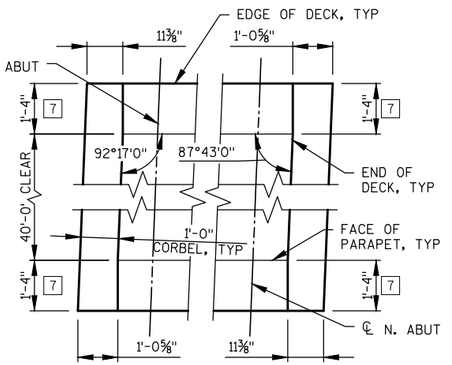
EXISTING GIRDER STIRRUPS

42'-10¾"



CROSS SECTION THRU DECK

(LOOKING NORTH)
(SHOWING DECK REINFORCEMENT)



CORNER FORMING DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

DRAWN BY TAV | PLANS CK'D. GAR

SUPERSTRUCTURE DETAILS

SHEET 13 OF 18
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FILE NAME : X:±32304-00±113690.01±TECH±CAD±11660211±DESIGN±STRUCTURE±080213_SS.DWG PLOT DATE : 6/10/2013 PLOT BY : ---- PLOT SCALE : 1" = 1'

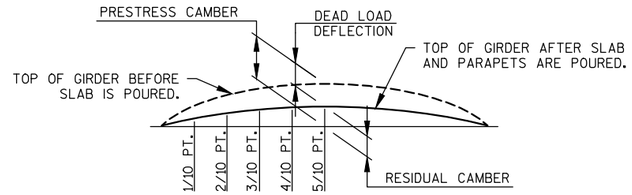
ELEVATION TABLE

SPAN POINT	WEST EDGE OF DECK		GIRDER 1		REFERENCE LINE		GIRDER 2		GIRDER 3		CROWN POINT		GIRDER 4		GIRDER 5		GIRDER 6		EAST EDGE OF DECK	
	STATION	ELEVATION	TD	TG	STATION	ELEVATION	TD	TG	TD	TG	STATION	ELEVATION	TD	TG	TD	TG	TD	TG	STATION	ELEVATION
S ABUT	212+97.78 NB	1276.04	1276.07	1275.22	212+97.54 NB	1276.16	1276.22	1275.37	1276.37	1275.52	212+97.06 NB	1276.40	1276.29	1275.44	1276.14	1275.29	1275.99	1275.14	212+96.18 NB	1275.97
0.1	213+06.08 NB	1276.02	1276.04		213+05.84 NB	1276.14	1276.19		1276.34		213+05.36 NB	1276.38	1276.26		1276.11		1275.96		213+04.48 NB	1275.94
0.2	213+14.38 NB	1275.99	1276.02		213+14.14 NB	1276.11	1276.17		1276.32		213+13.66 NB	1276.35	1276.24		1276.09		1275.94		213+12.78 NB	1275.91
0.3	213+22.68 NB	1275.96	1275.99		213+22.44 NB	1276.09	1276.14		1276.29		213+21.96 NB	1276.33	1276.21		1276.06		1275.91		213+21.08 NB	1275.89
0.4	213+30.98 NB	1275.94	1275.96		213+30.74 NB	1276.06	1276.12		1276.27		213+30.26 NB	1276.30	1276.19		1276.04		1275.89		213+29.38 NB	1275.86
0.5	213+39.28 NB	1275.91	1275.94		213+39.04 NB	1276.03	1276.09		1276.24		213+38.56 NB	1276.28	1276.16		1276.01		1275.86		213+37.68 NB	1275.84
0.6	213+47.58 NB	1275.89	1275.91		213+47.34 NB	1276.01	1276.06		1276.22		213+46.86 NB	1276.25	1276.14		1275.99		1275.84		213+45.98 NB	1275.81
0.7	213+55.88 NB	1275.86	1275.89		213+55.64 NB	1275.98	1276.04		1276.19		213+55.16 NB	1276.23	1276.11		1275.96		1275.81		213+54.28 NB	1275.79
0.8	213+64.18 NB	1275.84	1275.86		213+63.94 NB	1275.96	1276.01		1276.16		213+63.46 NB	1276.20	1276.09		1275.94		1275.79		213+62.58 NB	1275.76
0.9	213+72.48 NB	1275.81	1275.84		213+72.24 NB	1275.93	1275.99		1276.14		213+71.76 NB	1276.17	1276.06		1275.91		1275.76		213+70.88 NB	1275.74
PIER	213+80.78 NB	1275.79	1275.81	1274.96	213+80.54 NB	1275.91	1275.96	1275.11	1276.11	1275.26	213+80.06 NB	1276.15	1276.04	1275.19	1275.89	1275.04	1275.74	1274.89	213+79.18 NB	1275.71
0.1	213+88.98 NB	1275.76	1275.79		213+88.74 NB	1275.88	1275.94		1276.09		213+88.26 NB	1276.12	1276.01		1275.86		1275.71		213+87.38 NB	1275.69
0.2	213+97.18 NB	1275.74	1275.76		213+96.94 NB	1275.86	1275.91		1276.06		213+96.46 NB	1276.10	1275.99		1275.84		1275.69		213+95.58 NB	1275.66
0.3	214+05.38 NB	1275.71	1275.74		214+05.14 NB	1275.83	1275.89		1276.04		214+04.66 NB	1276.07	1275.96		1275.81		1275.66		214+03.78 NB	1275.64
0.4	214+13.58 NB	1275.69	1275.71		214+13.34 NB	1275.81	1275.86		1276.01		214+12.86 NB	1276.05	1275.94		1275.79		1275.64		214+11.98 NB	1275.61
0.5	214+21.78 NB	1275.66	1275.69		214+21.54 NB	1275.78	1275.84		1275.99		214+21.06 NB	1276.02	1275.91		1275.76		1275.61		214+20.18 NB	1275.59
0.6	214+29.98 NB	1275.64	1275.66		214+29.74 NB	1275.76	1275.81		1275.96		214+29.26 NB	1276.00	1275.89		1275.74		1275.59		214+28.38 NB	1275.56
0.7	214+38.18 NB	1275.61	1275.64		214+37.94 NB	1275.73	1275.79		1275.94		214+37.46 NB	1275.97	1275.86		1275.71		1275.56		214+36.58 NB	1275.54
0.8	214+46.38 NB	1275.59	1275.61		214+46.14 NB	1275.71	1275.76		1275.91		214+45.66 NB	1275.95	1275.84		1275.69		1275.54		214+44.78 NB	1275.51
0.9	214+54.58 NB	1275.56	1275.59		214+54.34 NB	1275.68	1275.74		1275.89		214+53.86 NB	1275.92	1275.81		1275.66		1275.51		214+52.98 NB	1275.49
N ABUT	214+62.78 NB	1275.54	1275.56	1274.71	214+62.54 NB	1275.66	1275.71	1274.86	1275.86	1275.01	214+62.06 NB	1275.90	1275.79	1274.94	1275.64	1274.79	1275.49	1274.64	214+61.18 NB	1275.46

TD = TOP OF DECK
TG = TOP OF GIRDER (VALUE SHOWN IS AFTER BEARING REPLACEMENT IS COMPLETE)
EDGE OF DECK STATIONS AND ELEVATIONS ARE TAKEN TO INSIDE FACE OF PARAPET

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DEAD LOAD DEFLECTION DIAGRAM

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10
1	1-6	83'-4 1/2"	3/8	5/8	7/8	1 1/8	1 1/8	1 1/8	7/8	5/8	3/8
2	1-6	82'-4 1/2"	3/8	5/8	7/8	1	1 1/8	1	7/8	5/8	3/8

BILL OF BARS
SUPERSTRUCTURE

COATED= 72190 LBS.
UNCOATED= 0 LBS.

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
S501	92		10 - 9	X		ABUTMENT DIAPHRAGM STIRRUPS	VERT
S502	92		5 - 11	X		ABUTMENT DIAPHRAGM TO SLAB TIES	VERT
S603	20		3 - 9	X		ABUTMENT DIAPHRAGM AT ENDS	HORIZ
S604	100		4 - 4			ABUTMENT DIAPHRAGM FF	HORIZ
S605	14		42 - 4			ABUTMENT DIAPHRAGM BF	HORIZ
S606	146		6 - 11	X		ABUTMENT DIAPHRAGM CORBEL	VERT
S407	4		42 - 4			ABUTMENT DIAPHRAGM CORBEL	TRANS
S308	176		7 - 7	X		ABUTMENT DIAPHRAGM CORBEL TIES	HORIZ
S509	35		11 - 6	X		PIER DIAPHRAGM STIRRUP	VERT
S410	120		4 - 0			PIER DIAPHRAGM	HORIZ
S511	615		42 - 4			SLAB BOTTOM & TOP	TRANS
S412	614		3 - 11	X		SLAB TOP - AT OUTSIDE EDGES	TRANS
S413	405		34 - 9			SLAB BOTTOM & IN GIRDER HAUNCH	LONG
S414	68		30 - 7			SLAB TOP - SPAN 1	LONG
S415	68		32 - 7			SLAB TOP - SPAN 1	LONG
S916	68		47 - 6			SLAB TOP - OVER PIER	LONG
S417	68		32 - 3			SLAB TOP - SPAN 2	LONG
S418	68		30 - 3			SLAB TOP - SPAN 2	LONG
S519	502		4 - 2	X		LF PARAPET ANCHOR	VERT
S520	502		4 - 11	X		LF PARAPET STIRRUP	VERT
S521	40		43 - 1			LF PARAPET	LONG
S522	1644		2 - 7	X		GIRDER HAUNCH HAT BAR	VERT
S423	35		9 - 6	X		SLAB BOTTOM OVER PIER	LONG

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE

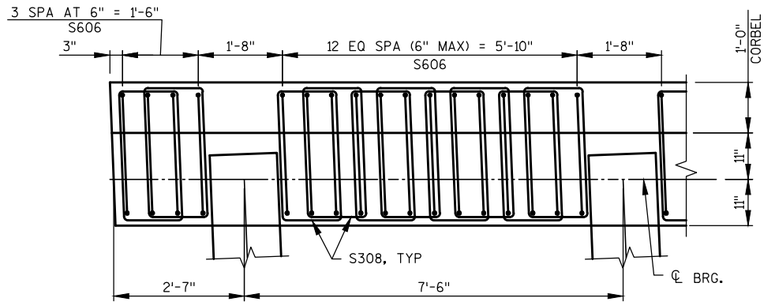
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

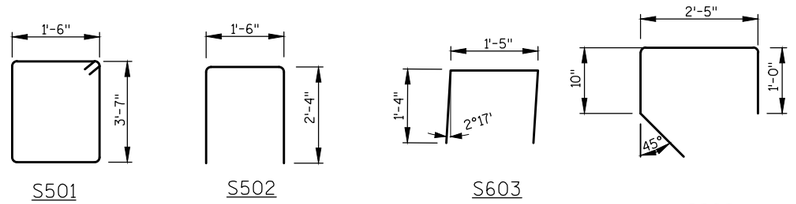
STAINLESS STEEL BILL OF BARS

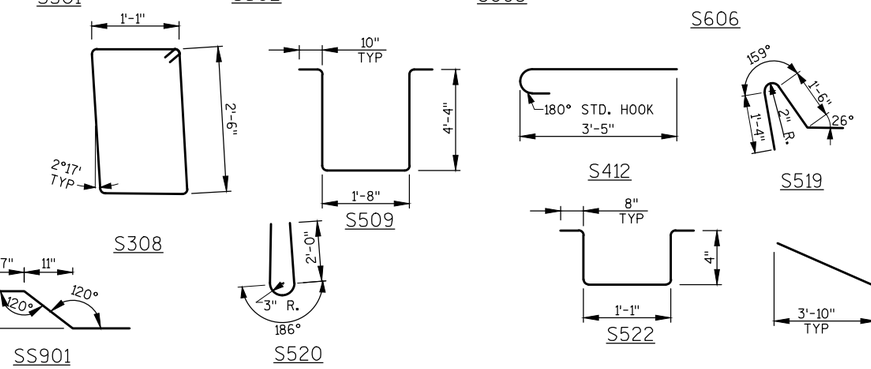
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
SS901		86	5'-0"	X	CONC. DIAPH. AT ABUTS TO APPROACH APRON

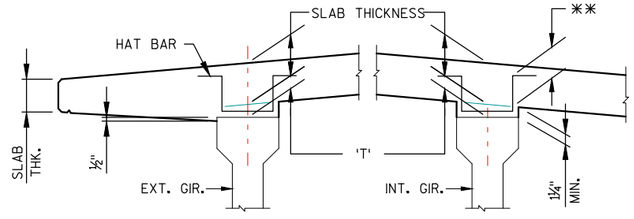
BID ITEM "BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES"



CORBEL REINFORCEMENT DETAIL







SLAB HAUNCH DETAIL

IF ¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR. THE PLAN SLAB THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

** IF 3" MINIMUM DECK EMBEDMENT OF HAT BAR CANNOT BE OBTAINED.

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
\+ DEAD LOAD DEFLECTION
\- SLAB THICKNESS
= HAUNCH HEIGHT 'T'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

DRAWN BY DAY | PLANS CK'D. GAR

SUPERSTRUCTURE DETAILS

SHEET 14 OF 18
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SOUTH APRON COATED= 8850 LBS.
SOUTH APRON UNCOATED= 0 LBS.
NORTH APRON COATED= 8850 LBS.
NORTH APRON UNCOATED= 0 LBS.

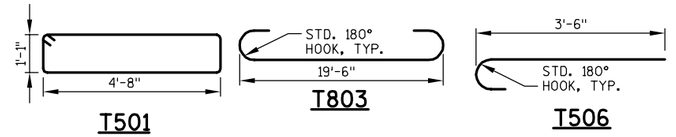
BILL OF BARS
APPROACH APRONS

MARK	COATED	NO. REQ'D. S APRON	NO. REQ'D. N APRON	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
T 5 01	X	43	43	12 - 1	X		FOOTING - STIRRUPS	VERT
T 8 02	X	12	12	42 - 4			FOOTING	HORIZ
T 8 03	X	71	71	21 - 4	X		APPROACH APRON - BOTTOM	LONGIT
T 5 04	X	43	43	19 - 6			APPROACH APRON - TOP	LONGIT
T 5 05	X	42	42	42 - 4			APPROACH APRON - TOP & BOTTOM	TRANS
T 5 06	X	40	40	4 - 1	X		APPROACH APRON - TOP AT EDGES	TRANS

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

ALL REINFORCING BARS ARE ENGLISH.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.



DESIGN DATA:

ALLOWABLE SOIL BEARING PRESSURE: ——— 2,000 P.S.I.
CONCRETE STRENGTH fc: ——— 4,000 P.S.I.
BAR STEEL REINFORCEMENT, GRADE 60, fy: ——— 60,000 P.S.I.

NOTES:

POLYETHYLENE SHEETS INCIDENTAL TO CONCRETE MASONRY BRIDGES BID ITEM.

SEE SUPERSTRUCTURE SHEETS FOR DETAILS ON SS901 BARS.

PLACE T802, T505 AND T506 BARS ALONG THE SKEW.

PLACE T501, T803 AND T504 PARALLEL TO ℄ IH 39 NB.

SEE ROADWAY PLANS FOR BASE MATERIAL REQUIREMENTS UNDER APPROACH SLABS

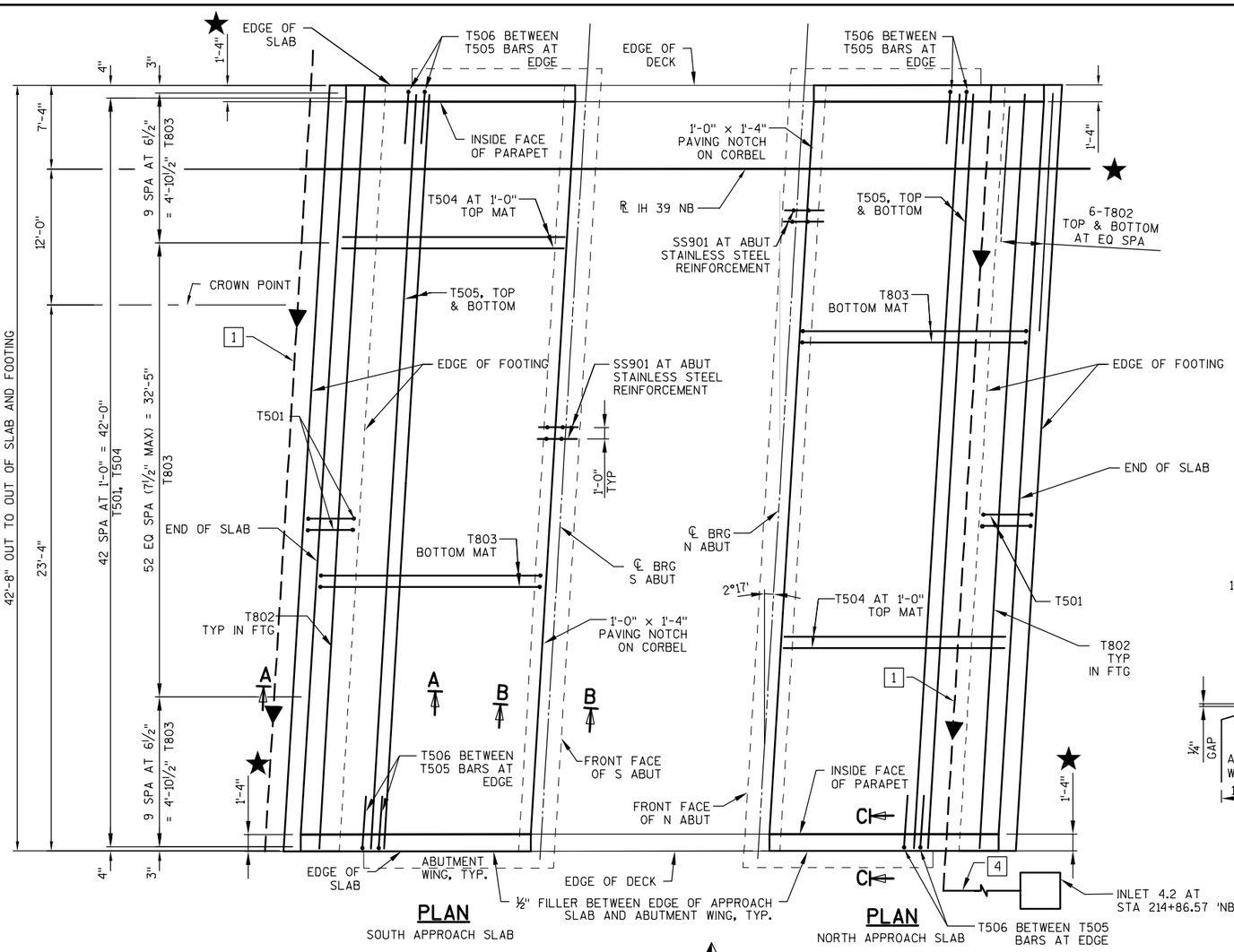
SEAL ALL EXPOSED HORIZTONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOE SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

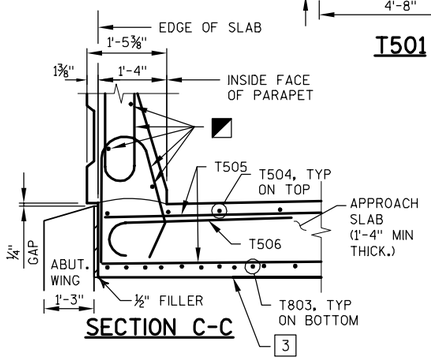
1. PIPE UNDERDRAIN WRAPPED (6-INCH). AT APPROACH SLAB FOOTING, LOCATED ON UPHILL SIDE OF APPROACH SLAB FOOTING. SLOPE 0.5% MIN. AND TO SUITABLE DRAINAGE. PROVIDE A RODENT SCREEN.
2. STEEL TROWEL TOP SURFACE OF FOOTING AND PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE FOOTING.
3. PLACE MULTIPLE LAYERS (0.03" MIN. TOTAL THK.) OF POLYETHLENE SHEETS OVER THE ENTIRE LENGTH OF THE SUBGRADE.
4. PIPE UNDERDRAIN UNPERFORATED (6-INCH). SLOPE 0.5 MIN. TO INLET. SEE ROADWAY PLANS.

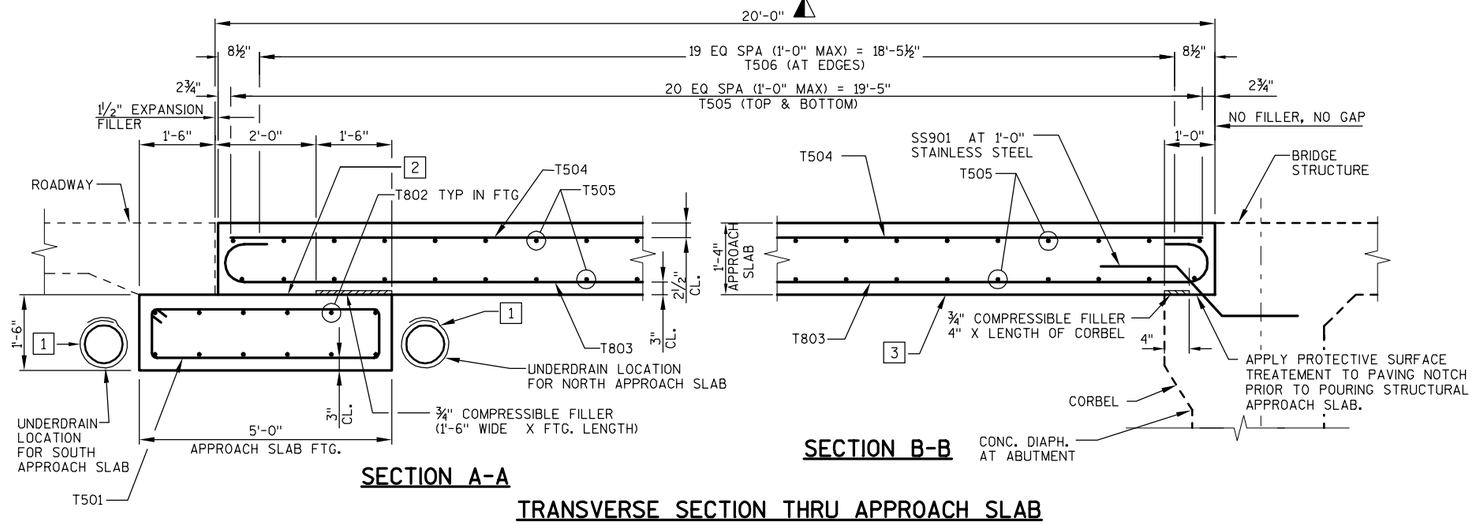
▲ MEASURED PARALLEL TO ℄ IH 39 NB.

◪ SEE SHEETS 16 FOR DETAILS ON PARAPET BARS.

★ FORM APPROACH SLAB PERPENDICULAR TO EDGE OF SLAB WITHIN LIMITS OF PARAPET.







TRANSVERSE SECTION THRU APPROACH SLAB

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STRUCTURE B-37-149

DRAWN BY DAY | PLANS CK'D. GAR

STRUCTURAL APPROACH SLAB

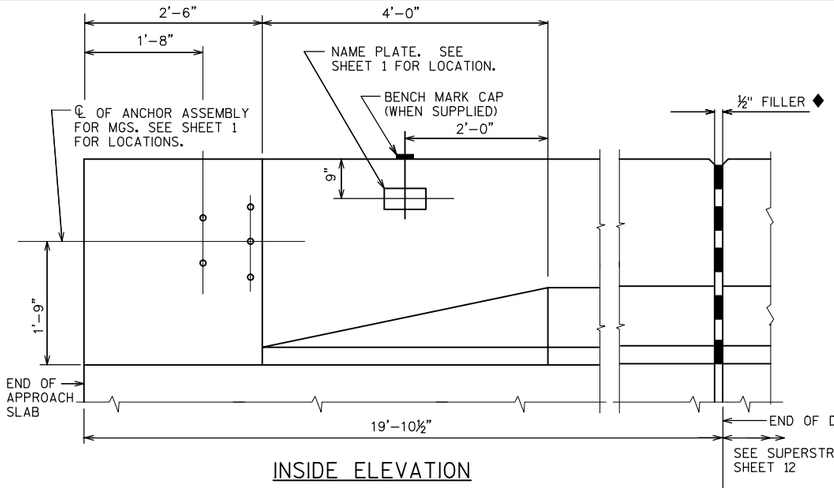
SHEET 15 OF 18
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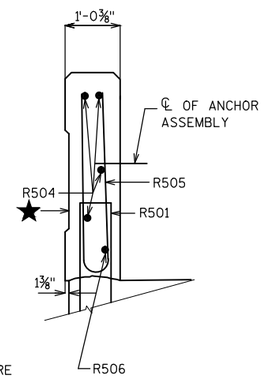
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STATE PROJECT NUMBER

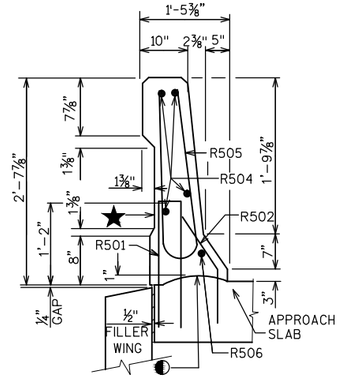
1166-02-81



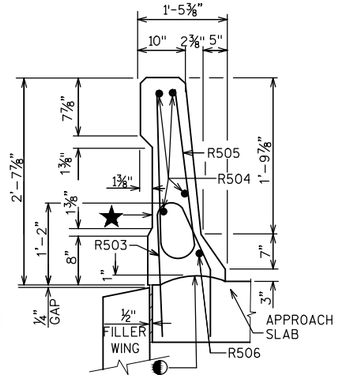
INSIDE ELEVATION



SECTION A



SECTION B



SECTION C

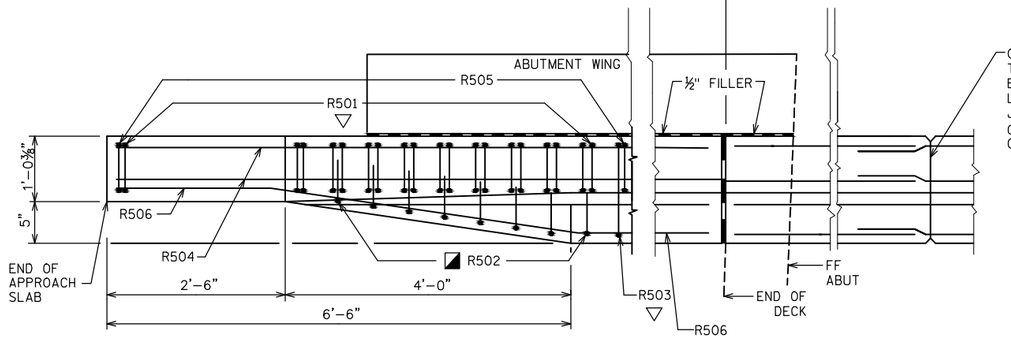
◐ CONST. JOINT - STRIKE OFF AS SHOWN.

◪ R502 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R502 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R503 BARS TO BE TIED TO APPROACH SLAB STEEL BEFORE APPROACH SLAB IS POURED.

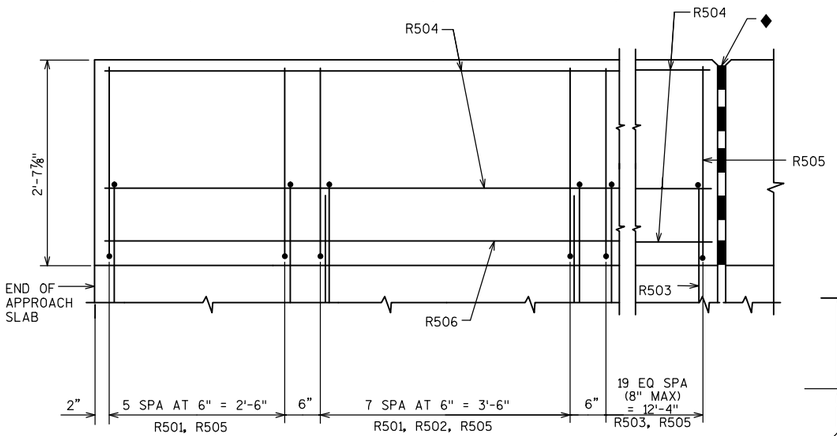
★ AESTHETIC RECESSED PANEL AND CONCRETE STAINING, SEE SHEET 17 FOR DETAILS.

◆ ½" FILLER TO EXTEND TO TOP OF PARAPET.



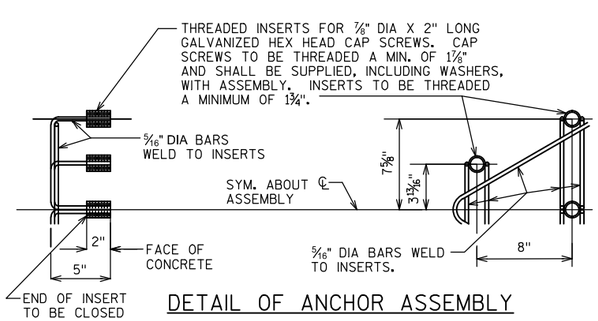
PLAN

A B C



A B C

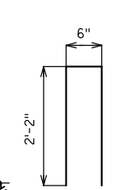
OUTSIDE ELEVATION



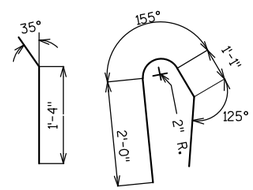
DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

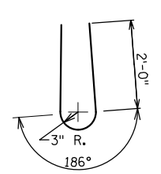
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.



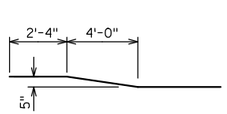
R501



R502 R503



R505



R506

SOUTH APRON COATED= 920 LBS.
SOUTH APRON UNCOATED= 0 LBS.
NORTH APRON COATED= 920 LBS.
NORTH APRON UNCOATED= 0 LBS.

BILL OF BARS
LF PARAPET

MARK	COATED	NO. REQ'D. S APRON	NO. REQ'D. N APRON	LENGTH FT - IN	BENT	BAR SERIES	LOCATION	
R 5 01	X	28	28	4 - 7	X		PARAPET TIE	VERT
R 5 02	X	16	16	2 - 4	X		PARAPET TIE	VERT
R 5 03	X	40	40	4 - 7	X		PARAPET TIE	VERT
R 5 04	X	8	8	19 - 6			PARAPET	LONGIT
R 5 05	X	68	68	4 - 10	X		PARAPET STIRRUP	VERT
R 5 06	X	2	2	19 - 6	X		PARAPET	LONGIT

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

ALL REINFORCING BARS ARE ENGLISH.

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

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STRUCTURE B-37-149

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SLOPED FACE PARAPET TYPE 'LF' (MODIFIED)

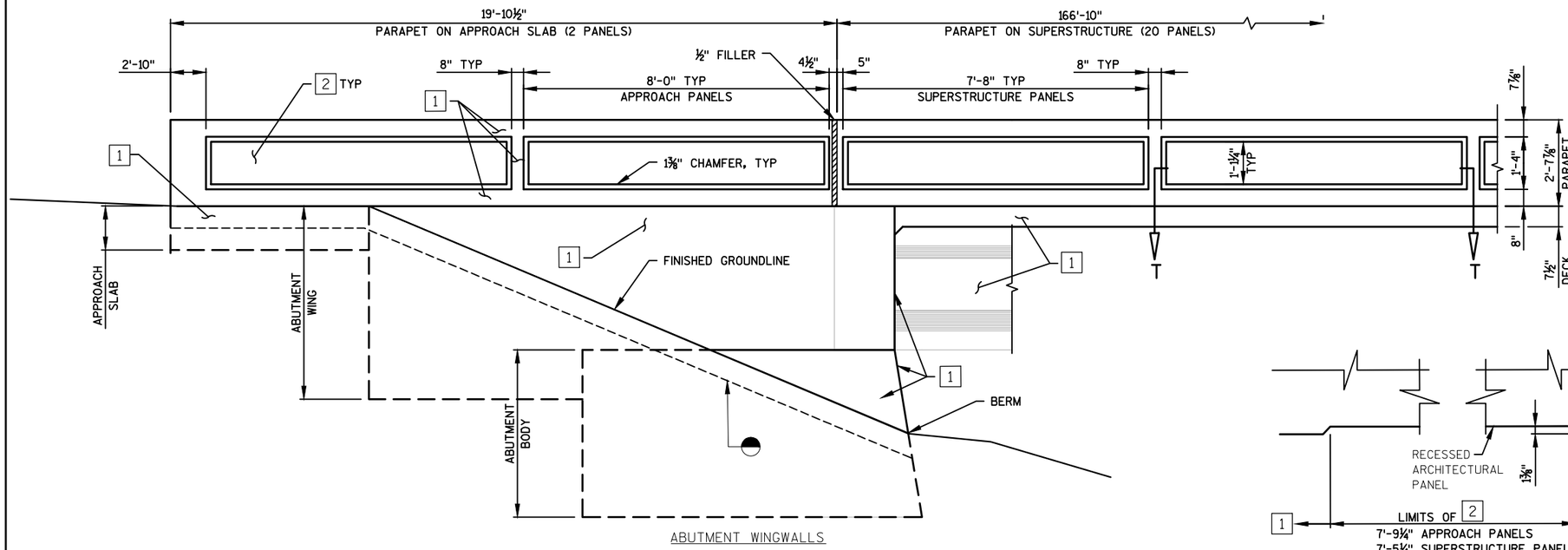
SHEET 16 OF 18
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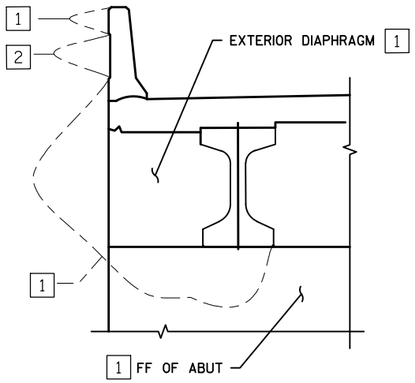
8

STATE PROJECT NUMBER

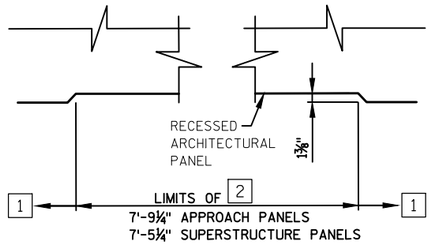
1166-02-81



ABUTMENT WINGWALLS



SUPERSTRUCTURE



SECTION T

ARCHITECTURAL PANEL AND CONCRETE STAINING DETAILS

SEE SPECIAL PROVISIONS

BOTTOM OF CONCRETE STAINING TO EXTEND 1'-0" MIN BELOW FINISHED GROUNDLINE.

1 STAIN SHALL BE PEARL GRAY (FEDERAL STANDARD COLOR NUMBER 26622)

2 STAIN SHALL BE DARK GRAY (FEDERAL STANDARD COLOR NUMBER 26132) NOTE: FLAT SURFACE ONLY NOT BEVELS ON SIDES OF PARAPET.

STAINING COLOR NUMBERS SHALL BE VERIFIED WITH THE ENGINEER PRIOR TO ORDERING MATERIALS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-37-149

DRAWN BY DAY | PLANS CK'D. GAR

AESTHETIC DETAILS

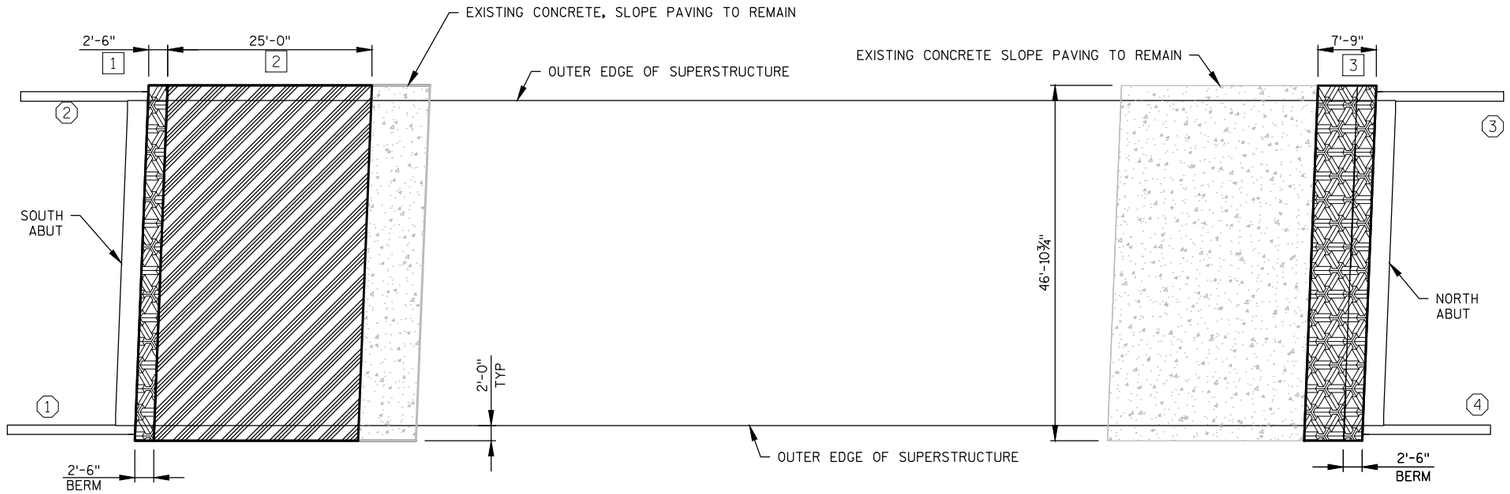
SHEET 17 OF 18
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8

STATE PROJECT NUMBER

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PLAN

SLOPE PAVING NOTES:

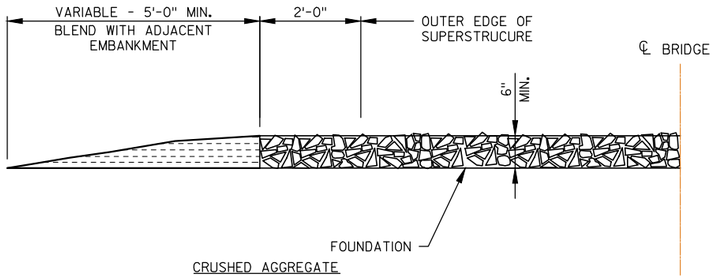
ELEVATIONS AND LIMITS ARE APPROXIMATE BASED ON SURVEY DATA. NEW SLOPE PAVING SHOULD MATCH WITH THE ELEVATION OF ANY EXISTING SLOPE PAVING THAT IS REMAINING.

1 REMOVE EXISTING CRUSHED AGGREGATE SLOPE PAVING AND PLACE NEW CRUSHED AGGREGATE SLOPE PAVING.

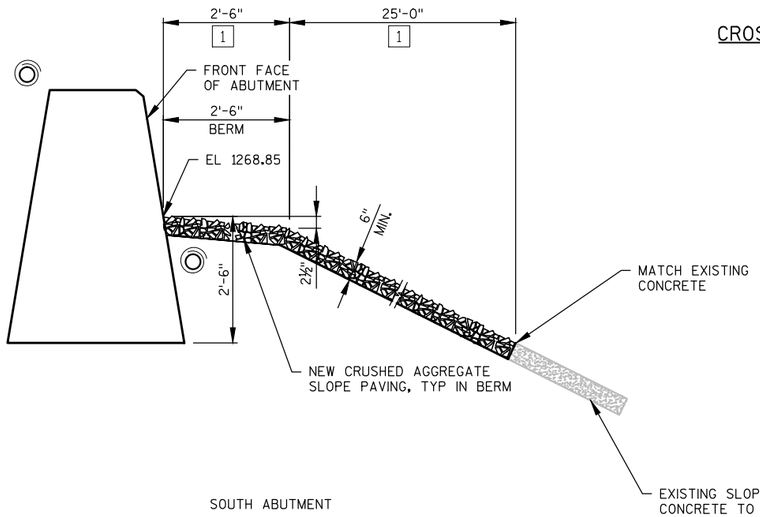
2 RESEAL EXISTING CRUSHED AGGREGATE SLOPE PAVING.

3 REMOVE EXISTING CONCRETE SLOPE PAVING TO FIRST JOINT ON SLOPE AND PLACE NEW CRUSHED AGGREGATE SLOPE PAVING.

(#) INDICATES WING NUMBER.

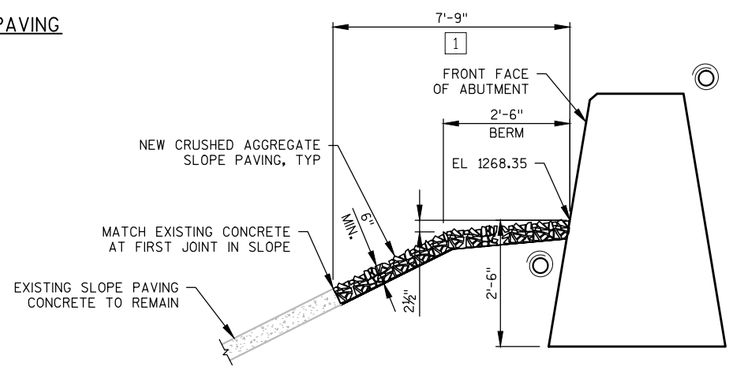


CROSS SECTION THRU SLOPE PAVING



SOUTH ABUTMENT

ROUND STONE WILL NOT BE ACCEPTED.



NORTH ABUTMENT

ROUND STONE WILL NOT BE ACCEPTED.

ELEVATION

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-37-149

DRAWN BY MJB | PLANS CK'D. GAR

SLOPE PAVING REPAIRS

SHEET 18 OF 18

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EARTHWORK TABULATION - STAGE 1 (SB BYPASS) EXPANSION FACTOR = 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	INCREMENTAL VOLUME CUT (CY)	INCREMENTAL VOLUME EXP FILL (CY)	CUMMULATIVE VOLUME CUT (CY)	CUMMULATIVE VOLUME EXP FILL (CY)	MASS ORDINATE (CY)
203+00.00	51.32	0.00	0	0	0	0	0
203+50.00	19.43	0.00	66	0	66	0	66
204+00.00	20.20	0.00	37	0	102	0	102
204+50.00	22.41	0.00	39	0	142	0	142
205+00.00	26.85	0.00	46	0	187	0	187
205+50.00	31.20	0.00	54	0	241	0	241
206+00.00	36.87	0.00	63	0	304	0	304
206+50.00	43.02	0.71	74	1	378	1	377
207+00.00	46.88	4.88	83	7	461	8	454
207+50.00	47.54	9.65	87	17	549	25	524
208+00.00	50.10	11.97	90	26	639	51	588
208+50.00	55.97	15.90	98	34	737	85	653
209+00.00	46.75	25.99	95	50	832	135	697
209+50.00	45.77	25.73	86	62	918	197	721
210+00.00	31.82	32.55	72	70	990	267	722
210+50.00	19.55	34.99	48	81	1037	349	689
211+00.00	11.89	42.22	29	93	1067	442	625
211+50.00	11.41	34.64	22	93	1088	534	554
212+00.00	21.62	36.24	31	85	1119	620	499
212+50.00	53.06	5.42	69	50	1188	670	518
212+97.00	0.00	106.98	46	127	1234	797	437
215+00.00	10.58	24.72	0	0	1234	797	437
215+50.00	11.03	73.71	20	118	1254	915	339
216+00.00	18.09	78.40	27	183	1281	1098	183
216+50.00	12.99	77.36	29	187	1310	1286	24
217+00.00	9.90	75.75	21	184	1331	1470	-139
217+50.00	5.59	62.48	14	166	1345	1637	-291
218+00.00	6.58	49.62	11	135	1357	1772	-415
218+50.00	19.12	25.30	24	90	1380	1862	-481
219+00.00	26.10	19.03	42	53	1422	1915	-493
219+50.00	41.15	7.39	62	32	1485	1947	-462
220+00.00	46.77	4.20	81	14	1566	1961	-395
220+50.00	47.07	6.03	87	12	1653	1973	-320
221+00.00	47.12	7.89	87	17	1740	1990	-250
221+50.00	43.57	6.45	84	17	1824	2007	-183
222+00.00	39.90	3.31	77	12	1901	2019	-118
222+50.00	36.87	0.51	71	5	1972	2024	-51
223+00.00	32.38	0.00	64	1	2037	2024	12
223+50.00	28.15	0.00	56	0	2093	2024	68
224+00.00	23.82	0.00	48	0	2141	2024	117
224+50.00	21.23	0.00	42	0	2182	2024	158
225+00.00	20.27	0.00	38	0	2221	2024	197
225+50.00	18.72	0.00	36	0	2257	2024	233
226+00.00	38.77	0.11	53	0	2310	2024	286
226+05.00	38.88	0.08	7	0	2317	2024	293
		TOTAL	2317	2024			

EARTHWORK TABULATION - STAGE 3 (NB BYPASS) EXPANSION FACTOR = 1.3

STATION	END AREA CUT (SF)	END AREA FILL (SF)	INCREMENTAL VOLUME CUT (CY)	INCREMENTAL VOLUME EXP FILL (CY)	CUMMULATIVE VOLUME CUT (CY)	CUMMULATIVE VOLUME EXP FILL (CY)	MASS ORDINATE (CY)
203+00.00	33.87	0.00	0	0	0	0	0
203+50.00	34.11	0.00	63	0	63	0	63
204+00.00	20.97	0.02	51	0	114	0	114
204+50.00	22.59	0.15	40	0	154	0	154
205+00.00	24.27	1.16	43	2	198	2	196
205+50.00	27.90	2.16	48	4	246	6	240
206+00.00	29.53	4.71	53	8	299	14	285
206+50.00	32.82	9.49	58	17	357	31	326
207+00.00	27.50	27.31	56	44	413	75	337
207+50.00	31.12	41.28	54	83	467	158	309
208+00.00	61.96	60.34	86	122	553	280	273
208+50.00	66.62	58.84	119	143	672	424	248
209+00.00	43.75	41.67	102	121	774	545	230
209+50.00	33.10	23.45	71	78	846	623	222
210+00.00	39.21	6.60	67	36	913	659	253
210+50.00	51.69	1.21	84	9	997	669	328
211+00.00	55.35	0.48	99	2	1096	671	425
211+50.00	49.00	0.34	97	1	1192	672	521
212+00.00	46.13	0.86	88	1	1281	673	607
212+50.00	42.80	0.00	82	1	1363	674	689
212+97.00	22.42	0.00	57	0	1420	674	745
215+00.00	7.81	0.00	0	0	1420	674	745
215+50.00	42.97	0.00	47	0	1467	674	792
216+00.00	45.23	0.51	82	1	1548	675	873
216+50.00	58.63	0.42	96	1	1644	676	969
217+00.00	69.26	2.10	118	3	1763	679	1084
217+50.00	36.42	8.77	98	13	1861	692	1169
218+00.00	32.72	44.06	64	64	1925	756	1169
218+50.00	32.68	81.48	61	151	1985	907	1079
219+00.00	35.06	108.83	63	229	2048	1136	912
219+50.00	45.03	118.03	74	273	2122	1409	713
220+00.00	39.65	111.21	78	276	2201	1685	516
220+50.00	38.88	99.83	73	254	2273	1939	334
221+00.00	36.54	81.50	70	218	2343	2157	186
221+50.00	30.63	52.07	62	161	2405	2318	87
222+00.00	26.15	3.95	53	67	2458	2385	73
222+50.00	23.75	0.86	46	6	2504	2391	113
223+00.00	20.62	0.00	41	1	2545	2392	153
223+50.00	18.24	0.00	36	0	2581	2392	189
224+00.00	36.45	0.00	51	0	2632	2392	240
224+50.00	34.60	0.00	66	0	2698	2392	305
224+53.00	34.60	0.00	4	0	2701	2392	309
		TOTAL	2701	2392			

9

9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	EARTHWORK	SHEET: 241	E

FILE NAME : Entp\32304-00\113690.01\TECH\Misc. Quantities

PLOT SCALE : 1:1

EARTHWORK TABULATION - STAGE 5 (FINAL GRADING) EXPANSION FACTOR = 1.3

	END AREA		INCREMENTAL VOLUME		CUMMULATIVE VOLUME		MASS ORDINATE
	CUT	FILL	CUT	EXP FILL	CUT	EXP FILL	
STATION	(SF)	(SF)	(CY)	(CY)	(CY)	(CY)	(CY)
203+00.00	12.06	0.00	0	0	0	0	0
203+50.00	11.12	0.00	21	0	21	0	21
204+00.00	12.86	0.00	22	0	44	0	44
204+50.00	13.72	0.00	25	0	68	0	68
205+00.00	16.76	0.00	28	0	97	0	97
205+50.00	18.81	0.00	33	0	129	0	129
206+00.00	21.73	0.00	38	0	167	0	167
206+50.00	27.74	0.00	46	0	213	0	213
207+00.00	37.89	0.00	61	0	274	0	274
207+50.00	102.81	5.76	130	7	404	7	397
208+00.00	130.48	2.83	216	10	620	17	603
208+50.00	132.94	1.01	244	5	864	22	842
209+00.00	143.56	0.00	256	1	1120	23	1097
209+50.00	162.06	0.00	283	0	1403	23	1380
209+62.00	185.19	0.00	77	0	1480	23	1457
209+87.00	185.46	0.00	172	0	1652	23	1628
210+00.00	188.31	0.00	90	0	1741	23	1718
210+12.00	182.06	0.00	82	0	1824	23	1801
210+50.00	169.54	0.96	247	1	2071	24	2047
211+00.00	167.40	2.04	312	4	2383	28	2356
211+50.00	72.36	14.22	222	20	2605	47	2558
212+00.00	72.53	14.22	134	34	2739	81	2658
212+50.00	44.32	41.42	108	67	2848	148	2699
212+85.00	21.36	82.51	43	104	2890	253	2637
215+00.00	70.74	41.81	0	0	2890	253	2637
215+50.00	84.12	41.19	143	100	3034	353	2681
216+00.00	92.28	36.09	163	93	3197	446	2751
216+50.00	106.34	31.93	184	82	3381	528	2853
217+00.00	130.17	25.75	219	69	3600	597	3003
217+50.00	142.57	10.54	253	44	3852	641	3212
217+51.00	143.33	10.08	5	0	3858	641	3216
217+76.00	160.47	4.35	141	9	3998	650	3348
218+00.00	179.57	1.36	151	3	4149	653	3496
218+01.00	207.11	0.83	7	0	4157	653	3503
218+50.00	180.33	0.00	352	1	4508	654	3854
219+00.00	164.01	0.00	319	0	4827	654	4173
219+50.00	142.76	0.00	284	0	5111	654	4457
220+00.00	128.54	0.00	251	0	5362	654	4708
220+50.00	110.32	0.00	221	0	5583	654	4929
221+00.00	90.96	0.00	186	0	5770	654	5115
221+50.00	63.07	0.00	143	0	5912	654	5258
222+00.00	36.41	0.00	92	0	6004	654	5350
222+50.00	26.22	0.00	58	0	6062	654	5408
223+00.00	27.15	0.00	49	0	6112	654	5458
223+50.00	22.62	0.02	46	0	6158	654	5504
224+00.00	22.40	0.00	42	0	6200	654	5545
224+50.00	20.82	0.00	40	0	6240	654	5585
225+00.00	15.60	0.00	34	0	6273	654	5619
225+50.00	12.96	0.00	26	0	6300	654	5646
226+00.00	9.67	0.00	21	0	6321	654	5666
226+05.00	9.67	0.00	2	0	6323	654	5668
		TOTAL	6323	654			

204+00

℄ 'TS'

℄ 'SB'

1276.50 0.00

2.0%

4.0%

1276.25 6.40

4.0:1

1274.00 0.00

1273.98 0.40

1273.87 6.40

1273.83 6.40

℄ 'NB'

203+50

℄ 'TS'

℄ 'SB'

1276.41 0.01

2.0%

4.0%

1276.18 6.01

4.0:1

1273.92 0.00

1273.80 6.01

1273.76 6.01

℄ 'NB'

203+00

℄ 'TS'

℄ 'SB'

1276.43 0.00

1276.31 3.00

4.0%

4.0%

1276.12 8.00

10.0%

1275.70 12.25

1273.93 0.00

1273.77 8.00

℄ 'NB'

BEGIN CONSTRUCTION
STA 203+00.00'SB'

10 FT

10 FT

1290
1280
1270

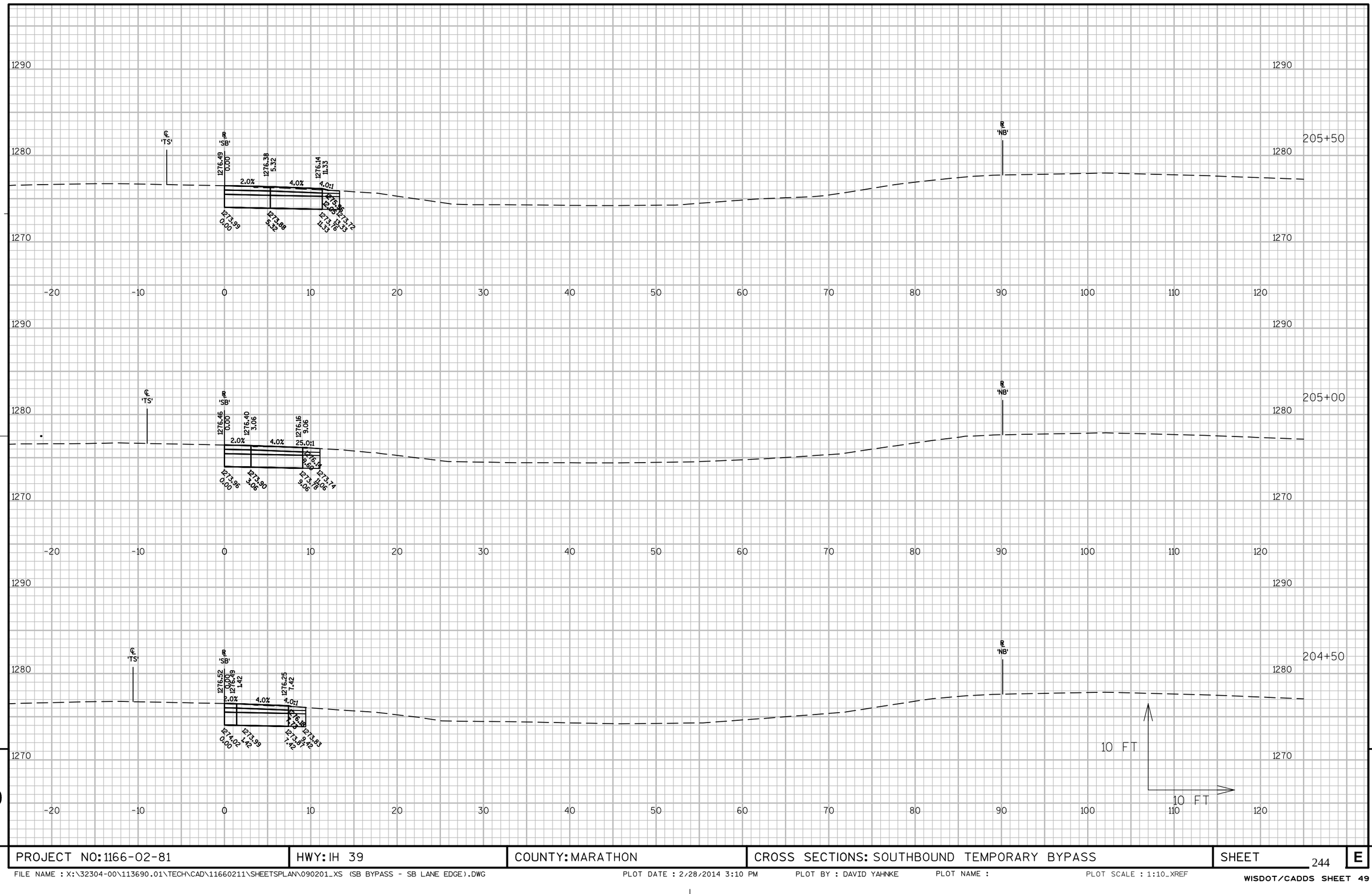
-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

9

9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 243	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:10 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF



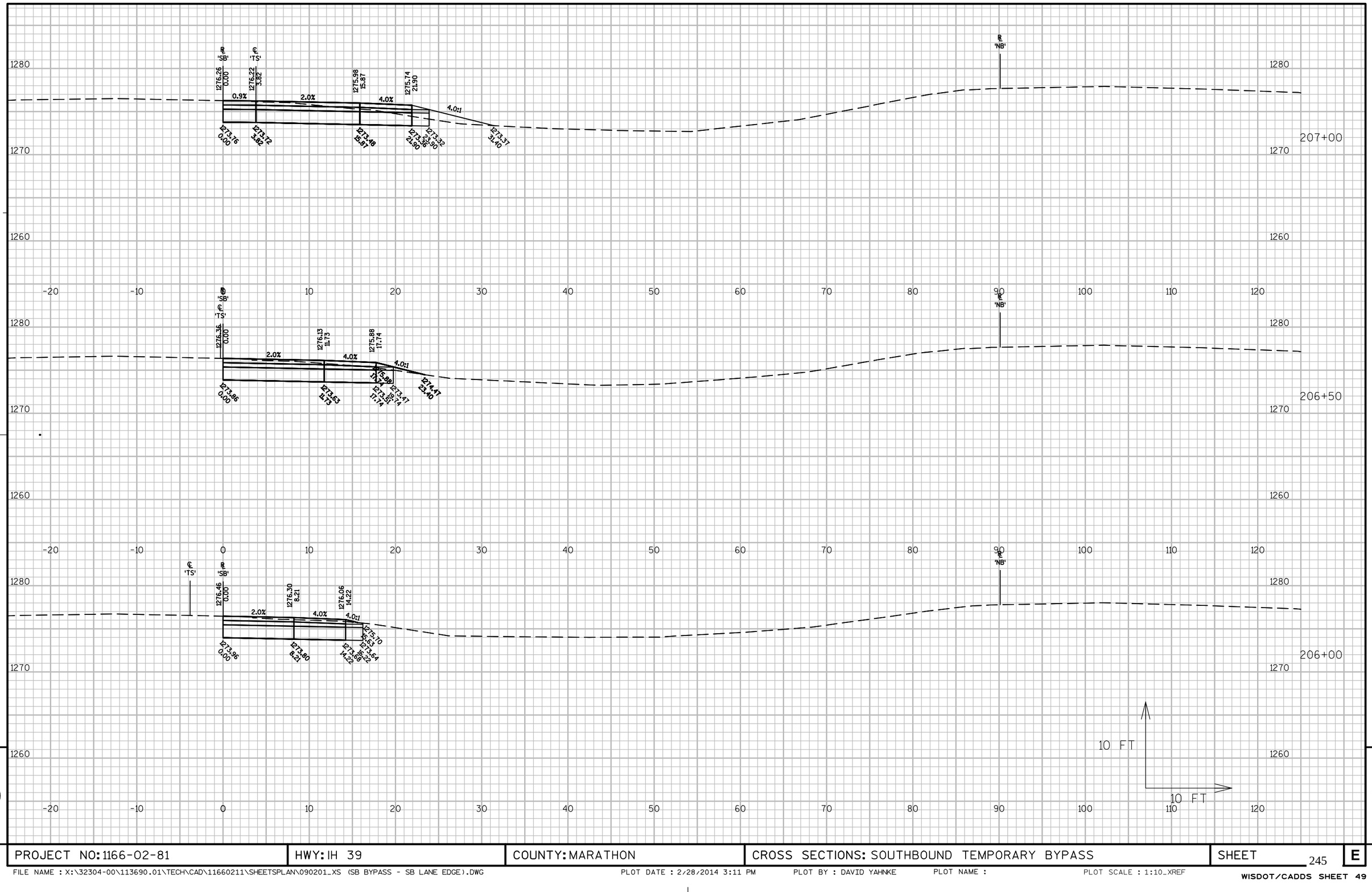
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9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 244	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:10 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

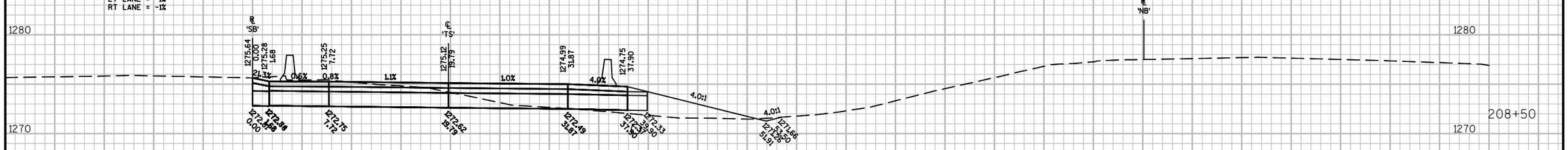


PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 245 E

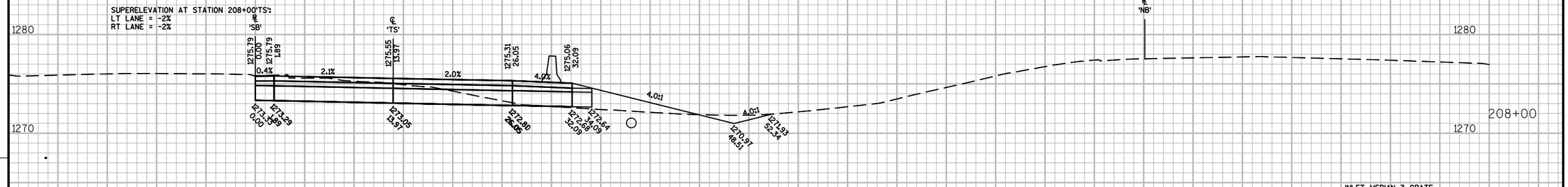
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:11 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

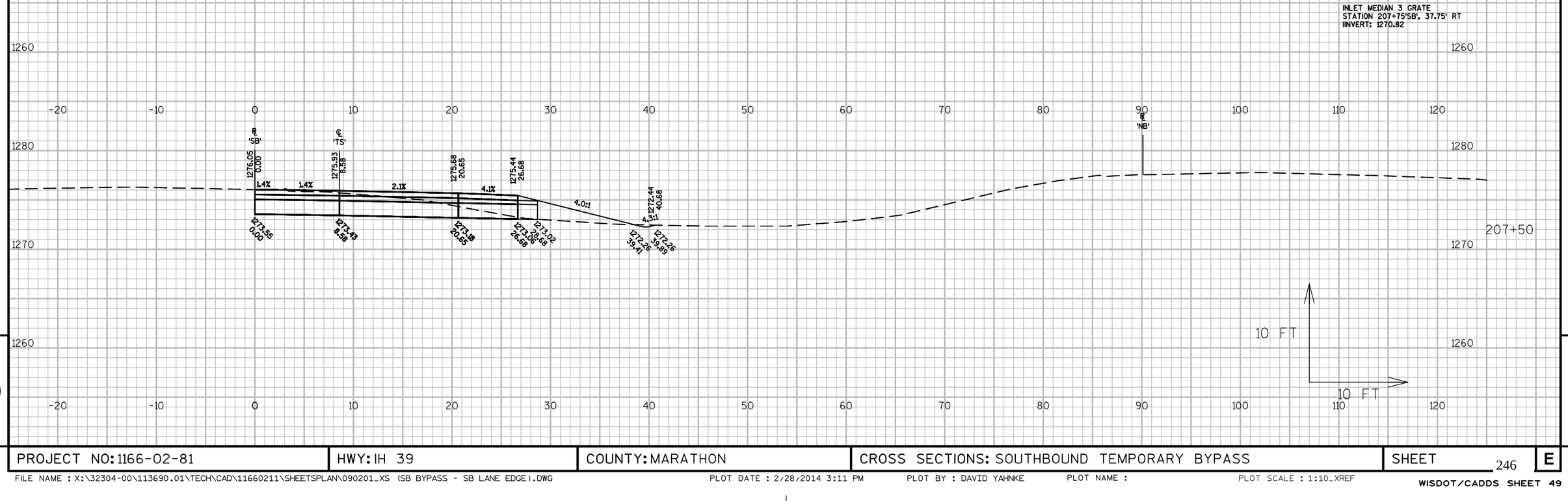
SUPERELEVATION AT STATION 208+50'TS':
LT LANE = -1%
RT LANE = -1%



SUPERELEVATION AT STATION 208+00'TS':
LT LANE = -2%
RT LANE = -2%



INLET MEDIAN 3 GRATE
STATION 207+75'SB', 37.75' RT
INVERT: 1270.82

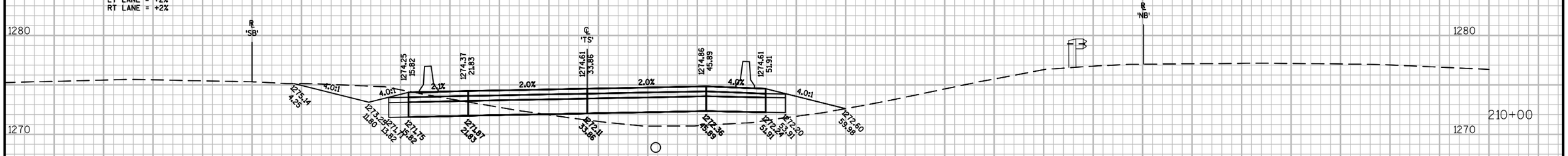


9

9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 246	E

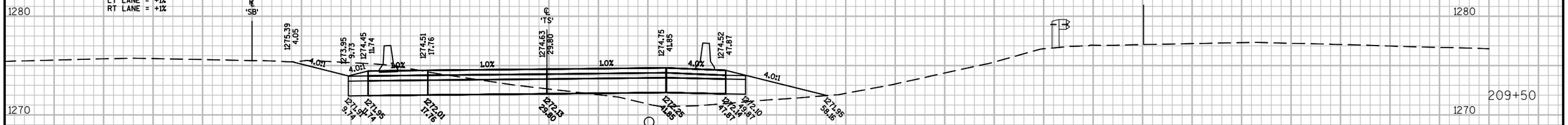
SUPERELEVATION AT STATION 210+00'TS':
LT LANE = +2%
RT LANE = +2%



1260

-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

SUPERELEVATION AT STATION 209+50'TS':
LT LANE = +1%
RT LANE = +1%



1260

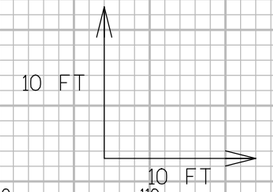
-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

SUPERELEVATION AT STATION 209+00'TS':
LT LANE = 0%
RT LANE = 0%



1260

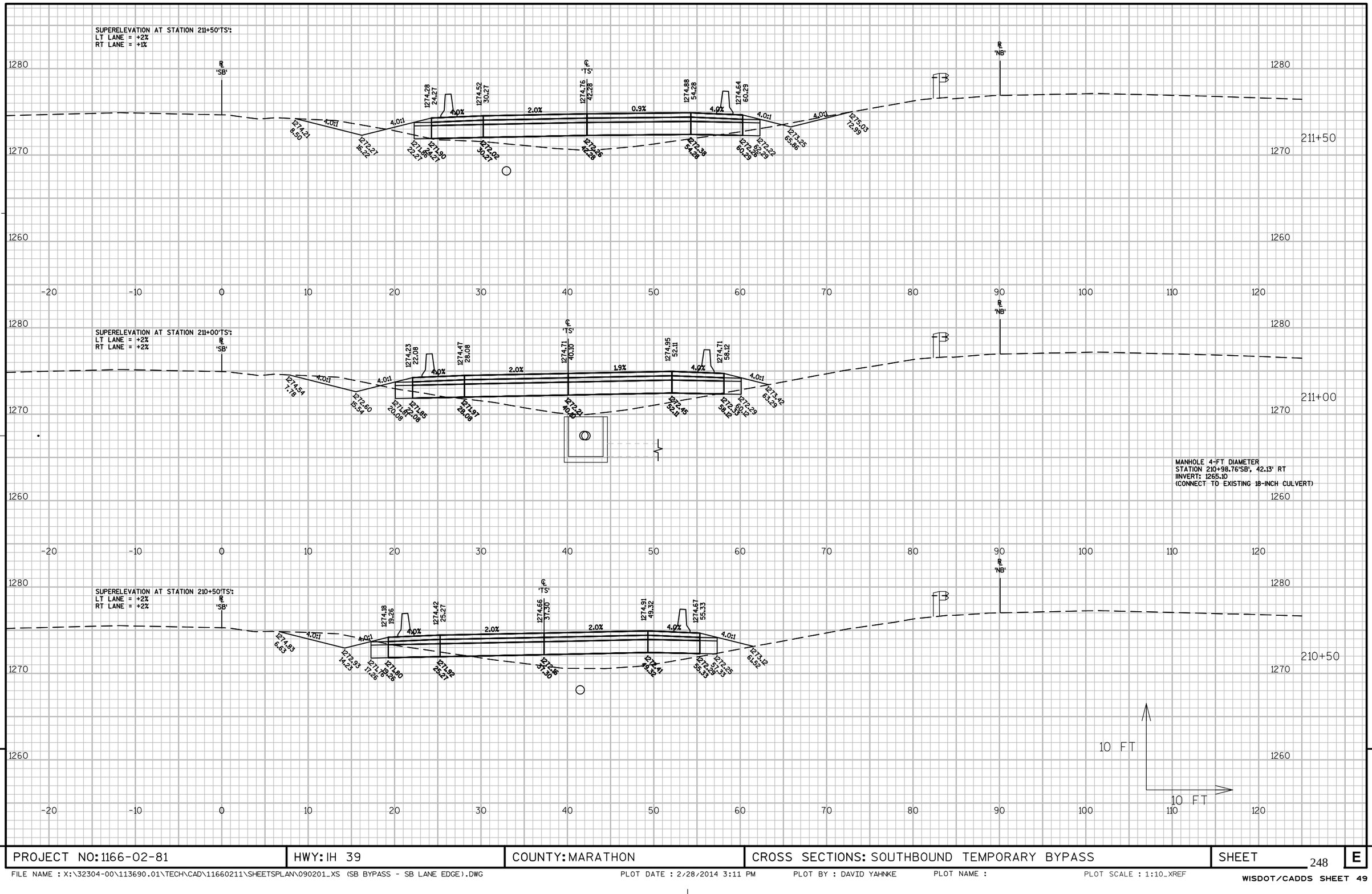
-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120



9 9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 247	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:11 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49

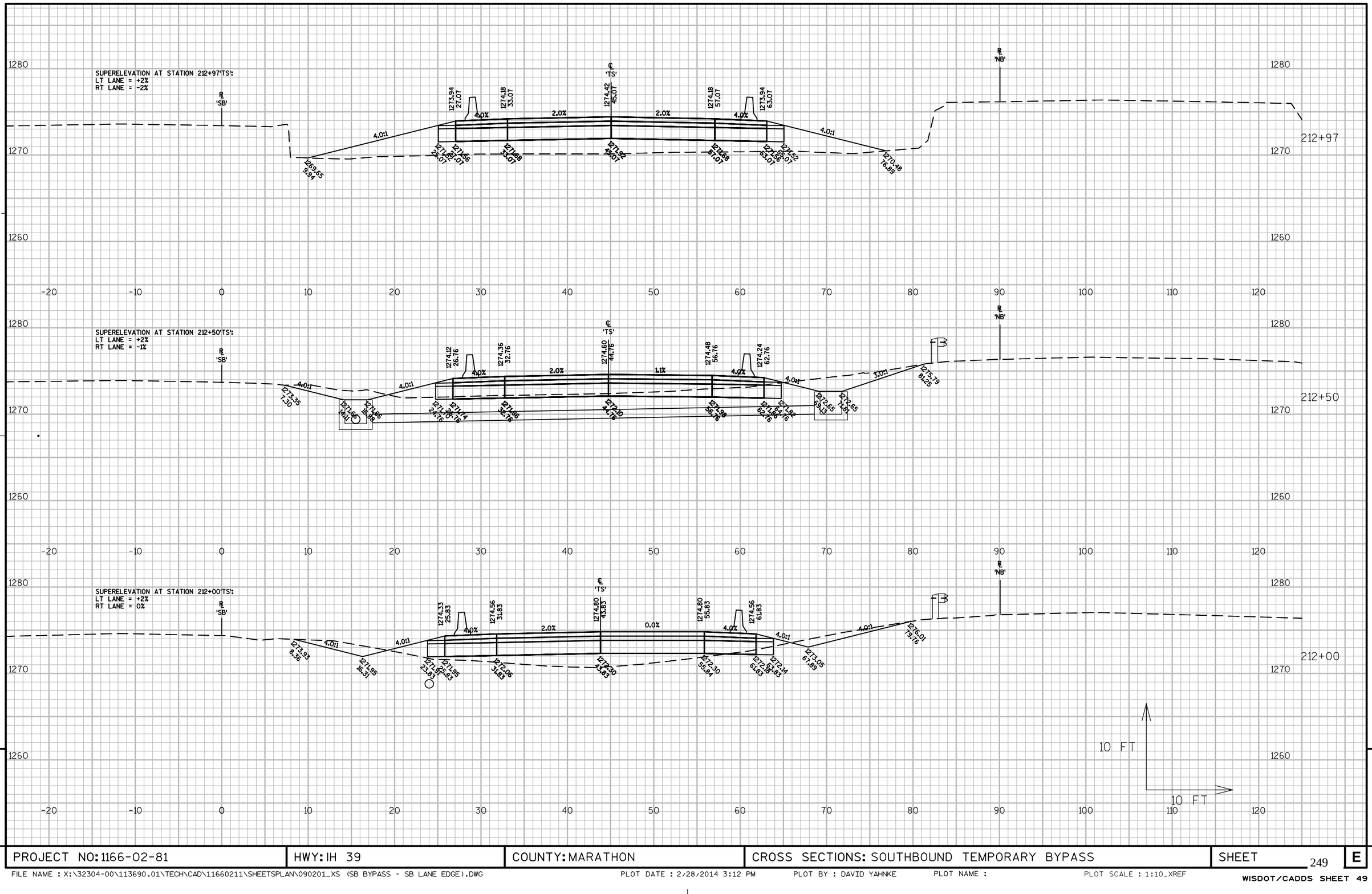


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9

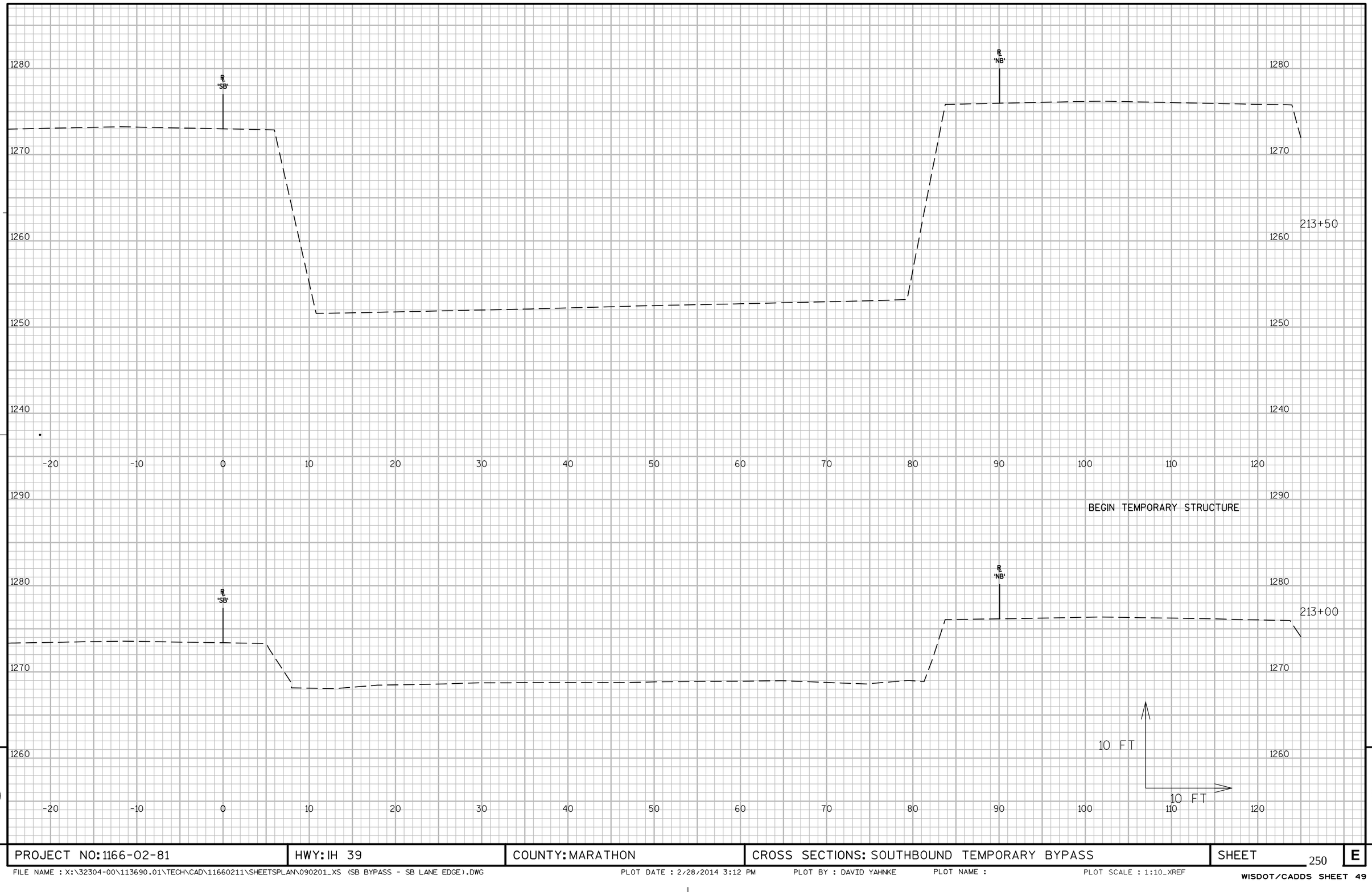
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 248	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:11 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 249	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:12 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF



9

9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 250	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:12 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

END TEMPORARY STRUCTURE

℄ 'SB'

℄ 'NB'

214+50

214+00

10 FT

10 FT

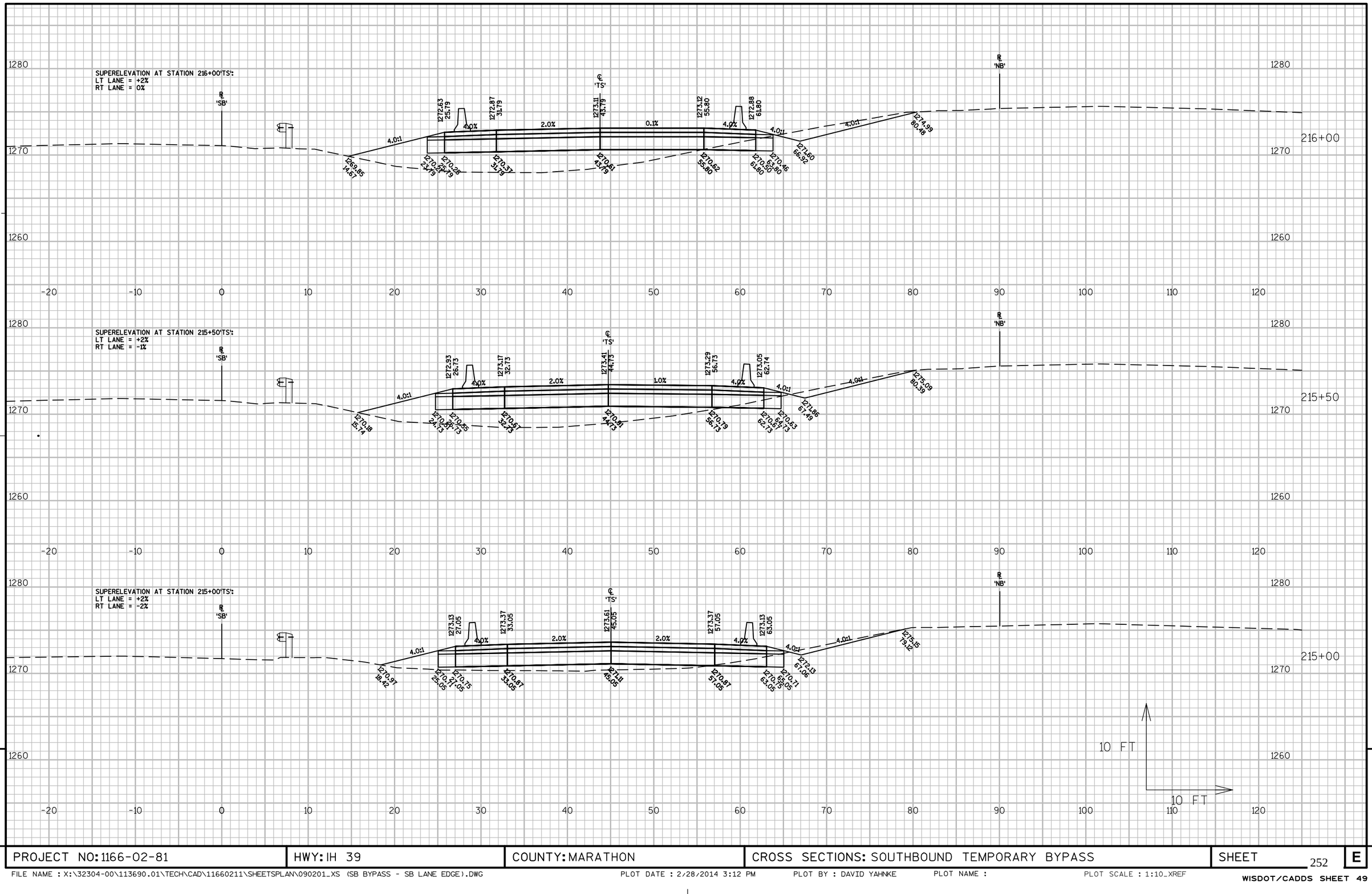
1280
1270
1260
1250
1240

-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120

9

9

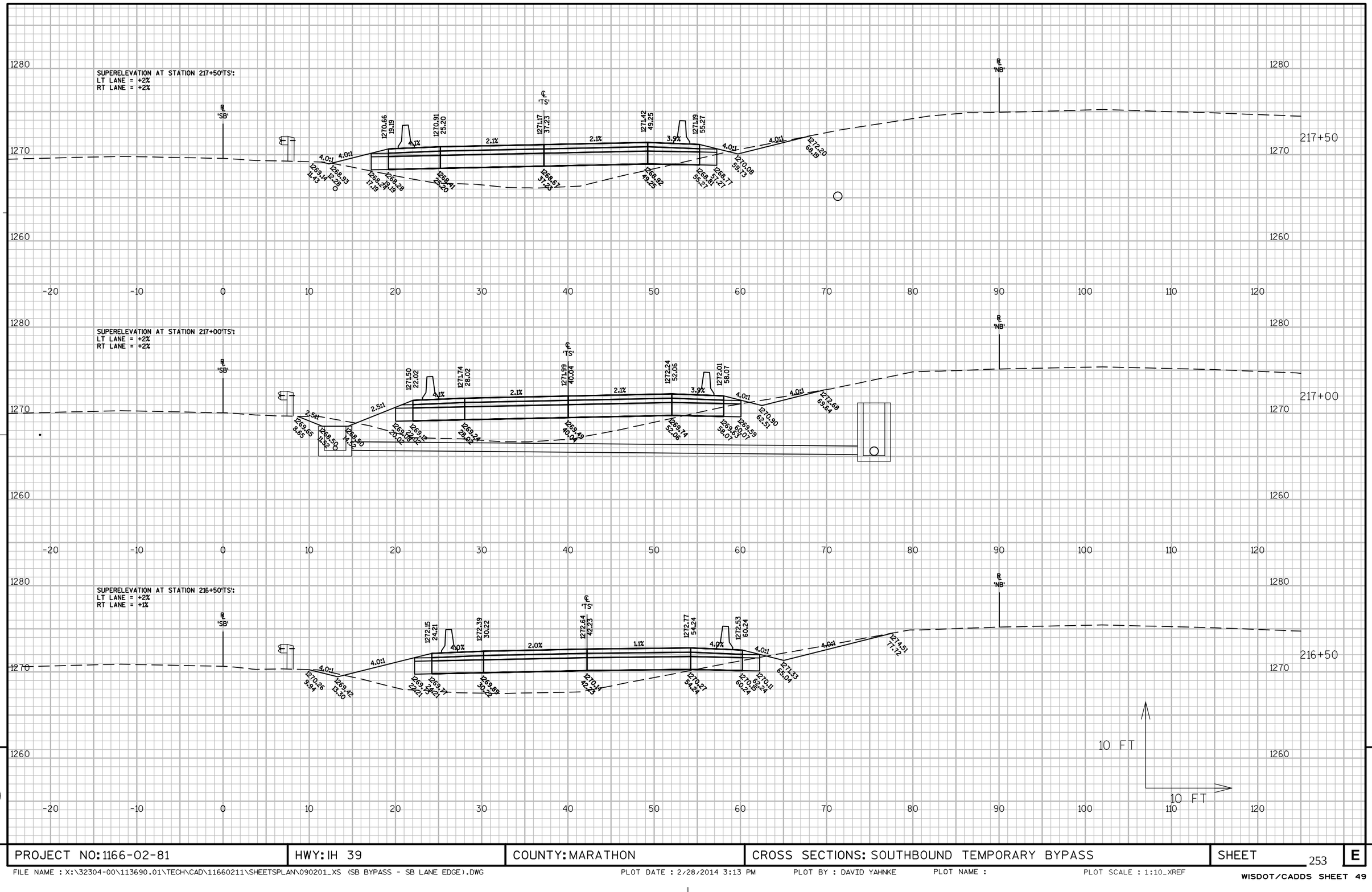
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 251	E



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 252	E

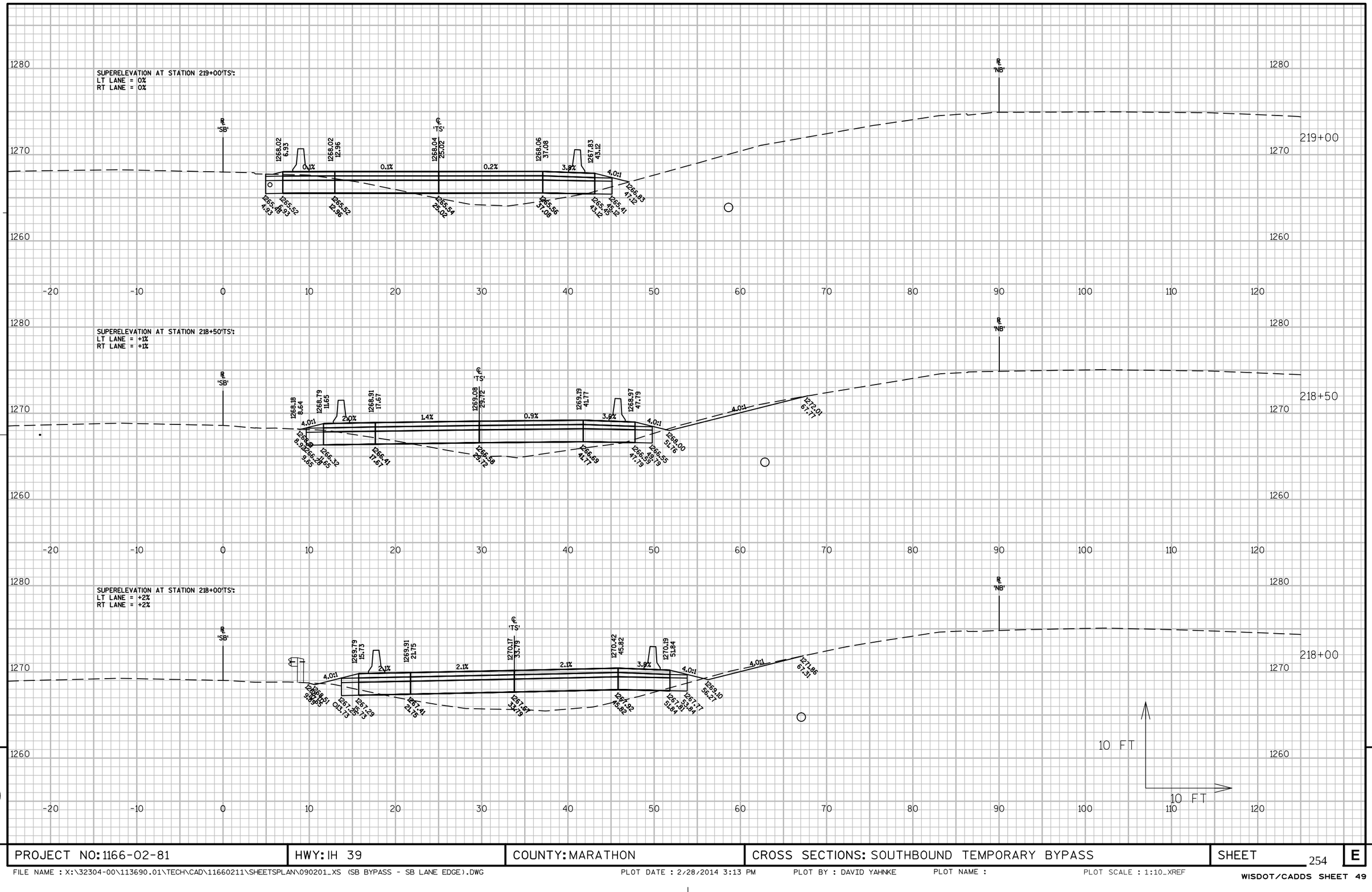
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:12 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 253	E

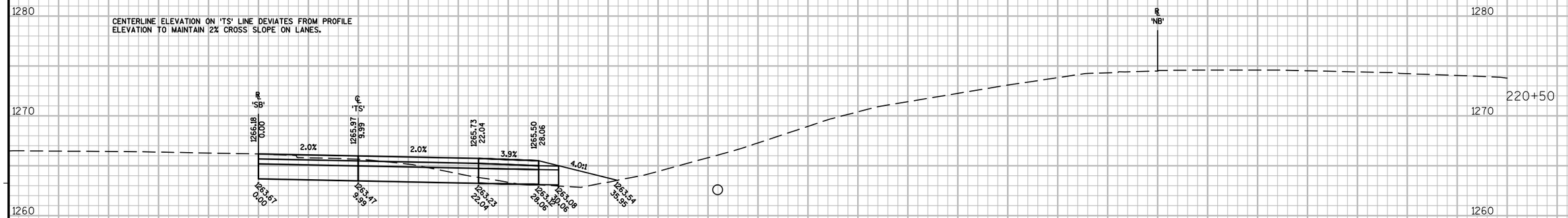
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:13 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49



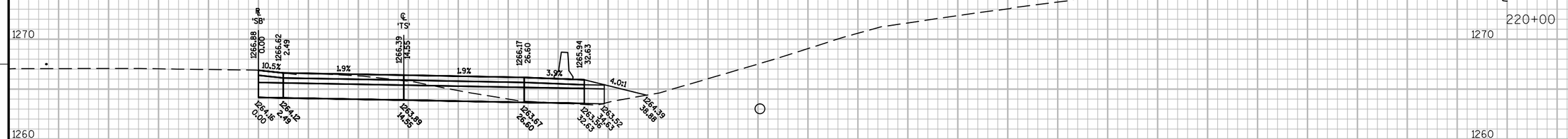
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 254	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:13 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49

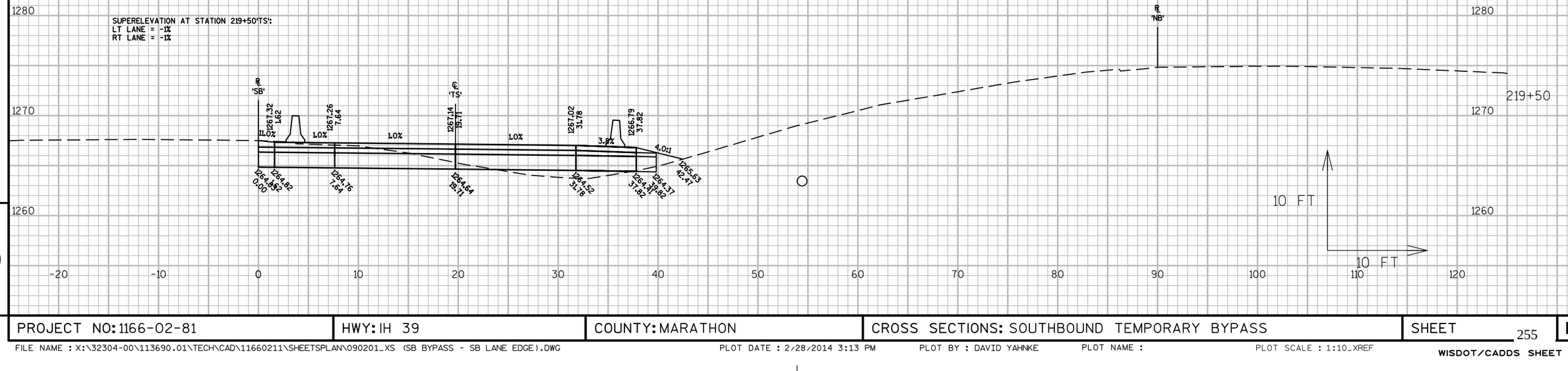
CENTERLINE ELEVATION ON 'TS' LINE DEVIATES FROM PROFILE ELEVATION TO MAINTAIN 2% CROSS SLOPE ON LANES.



SUPERELEVATION AT STATION 220+00'TS':
LT LANE = -2%
RT LANE = -2%



SUPERELEVATION AT STATION 219+50'TS':
LT LANE = -1%
RT LANE = -1%



9

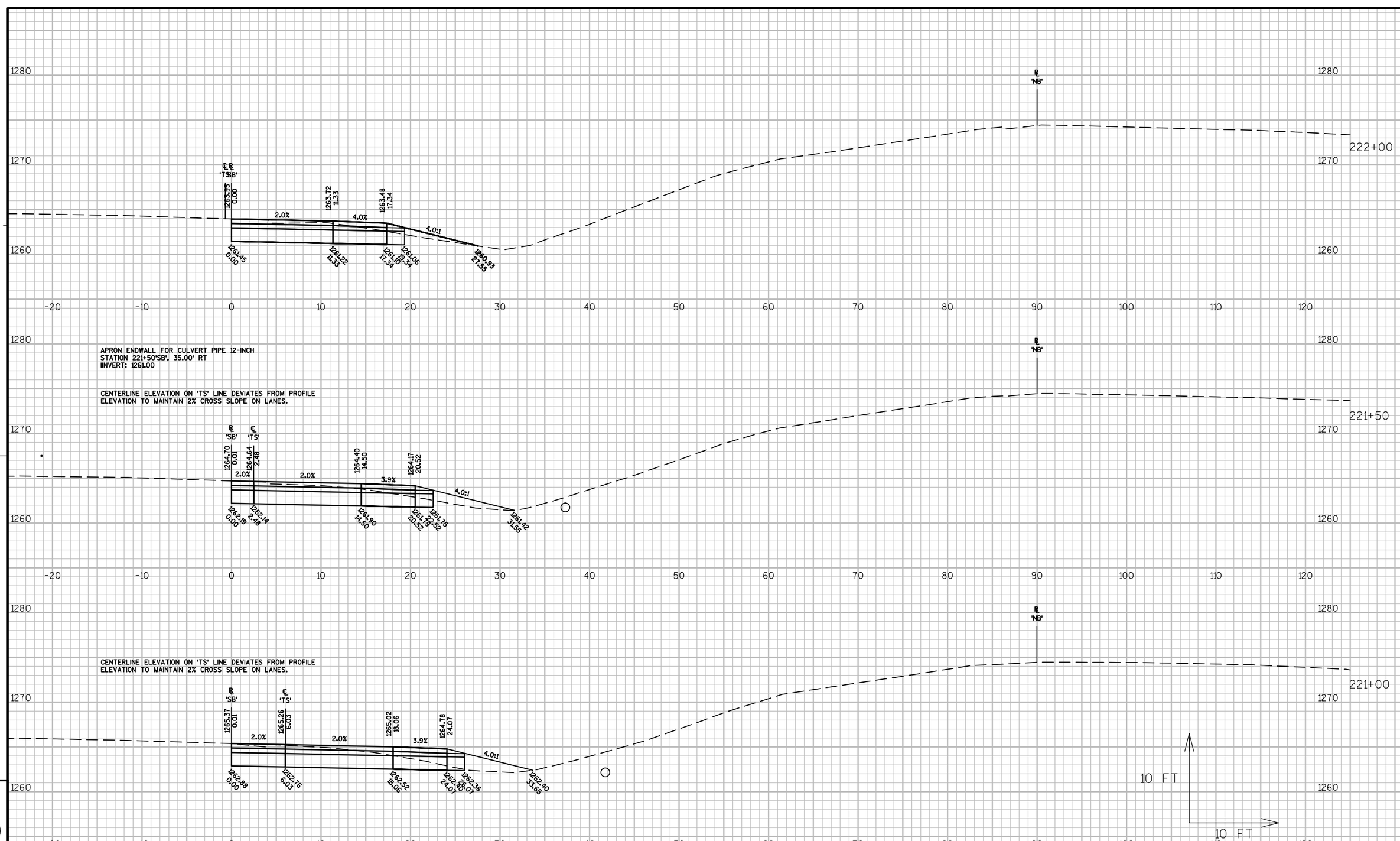
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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 255	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:13 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

APRON ENDWALL FOR CULVERT PIPE 12-INCH
STATION 221+50'SB', 35.00' RT
IINVERT: 1261.00

CENTERLINE ELEVATION ON 'TS' LINE DEVIATES FROM PROFILE ELEVATION TO MAINTAIN 2% CROSS SLOPE ON LANES.

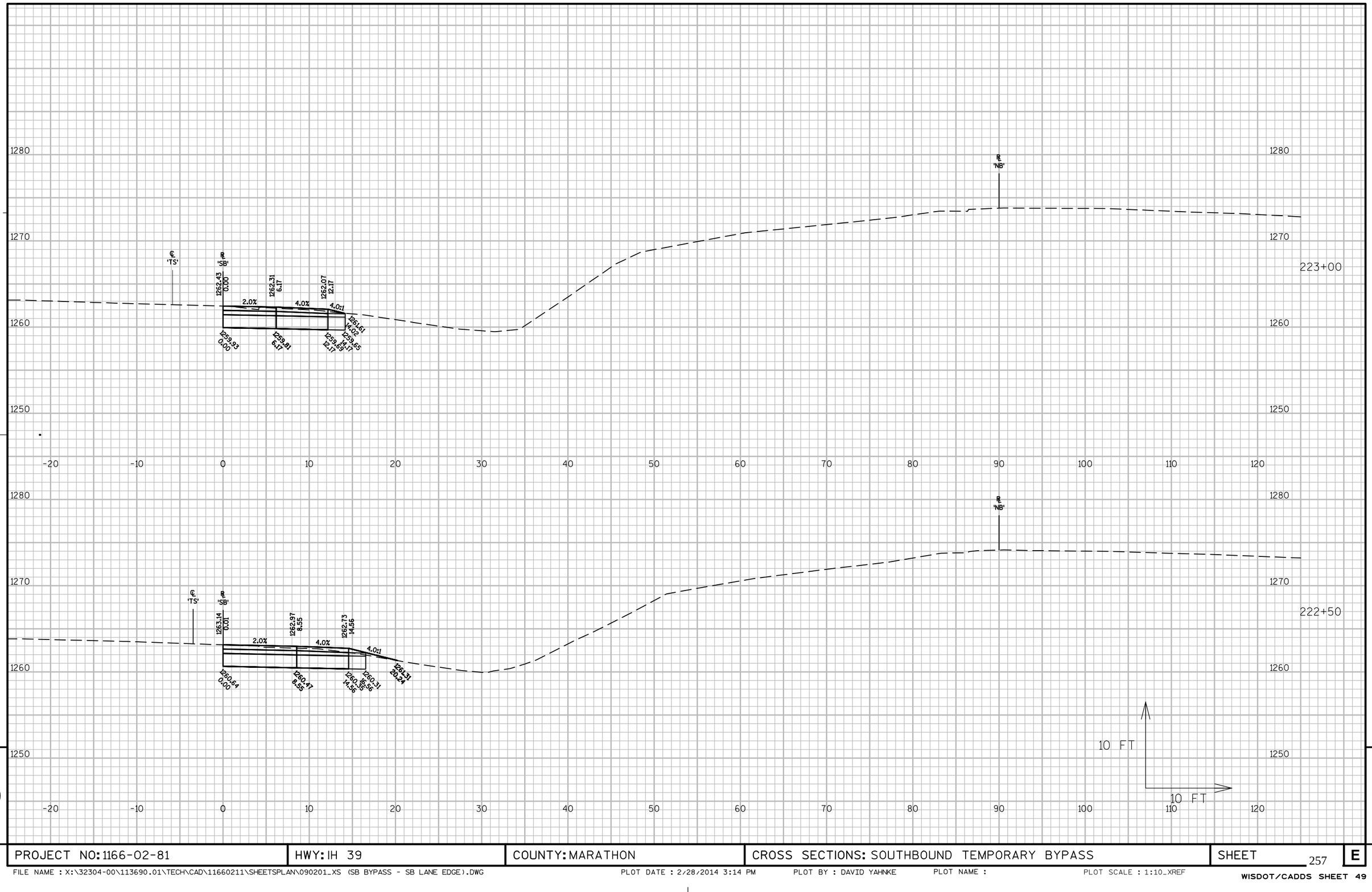


CENTERLINE ELEVATION ON 'TS' LINE DEVIATES FROM PROFILE ELEVATION TO MAINTAIN 2% CROSS SLOPE ON LANES.

9

9

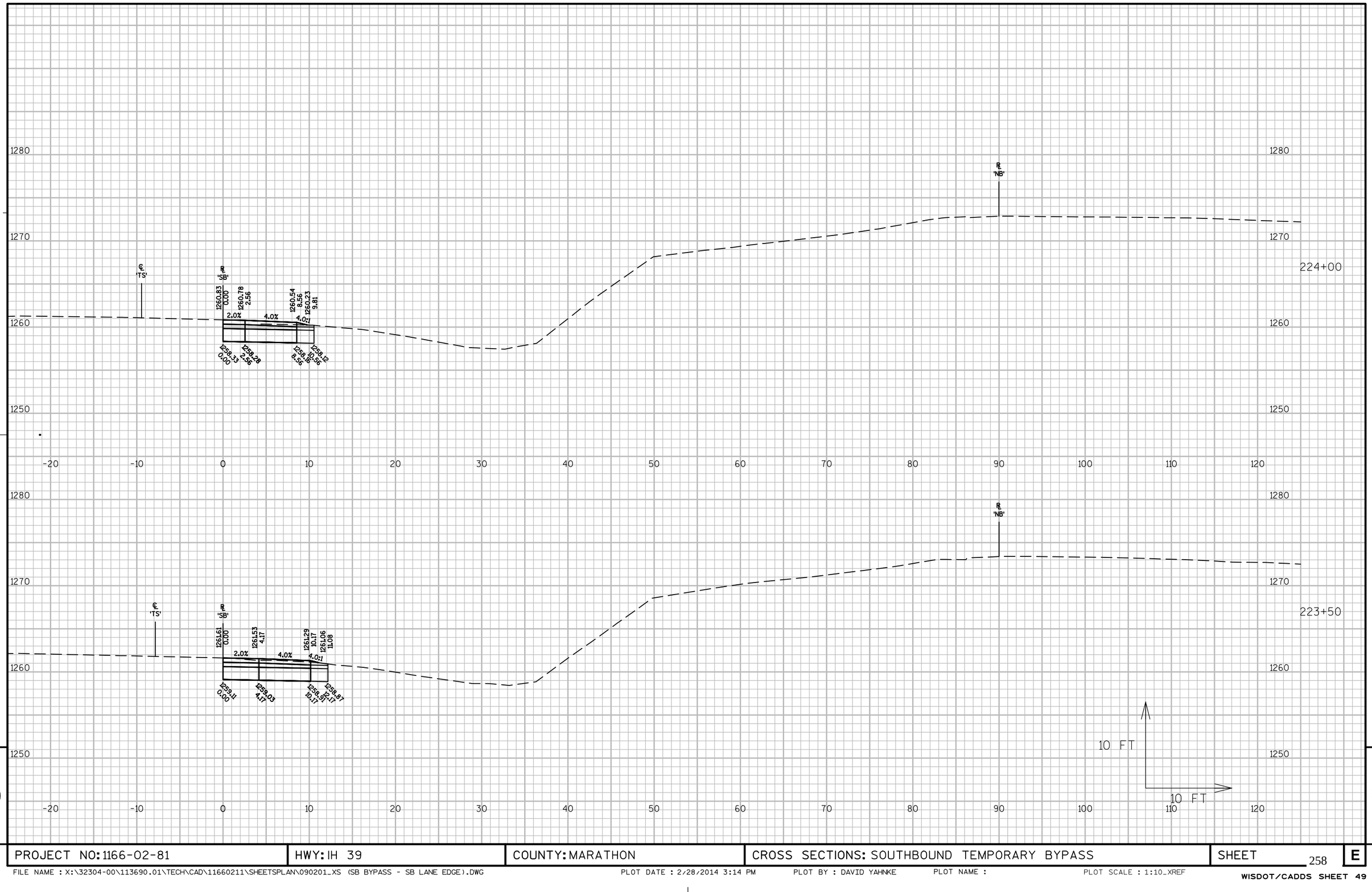
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 256	E



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 257	E

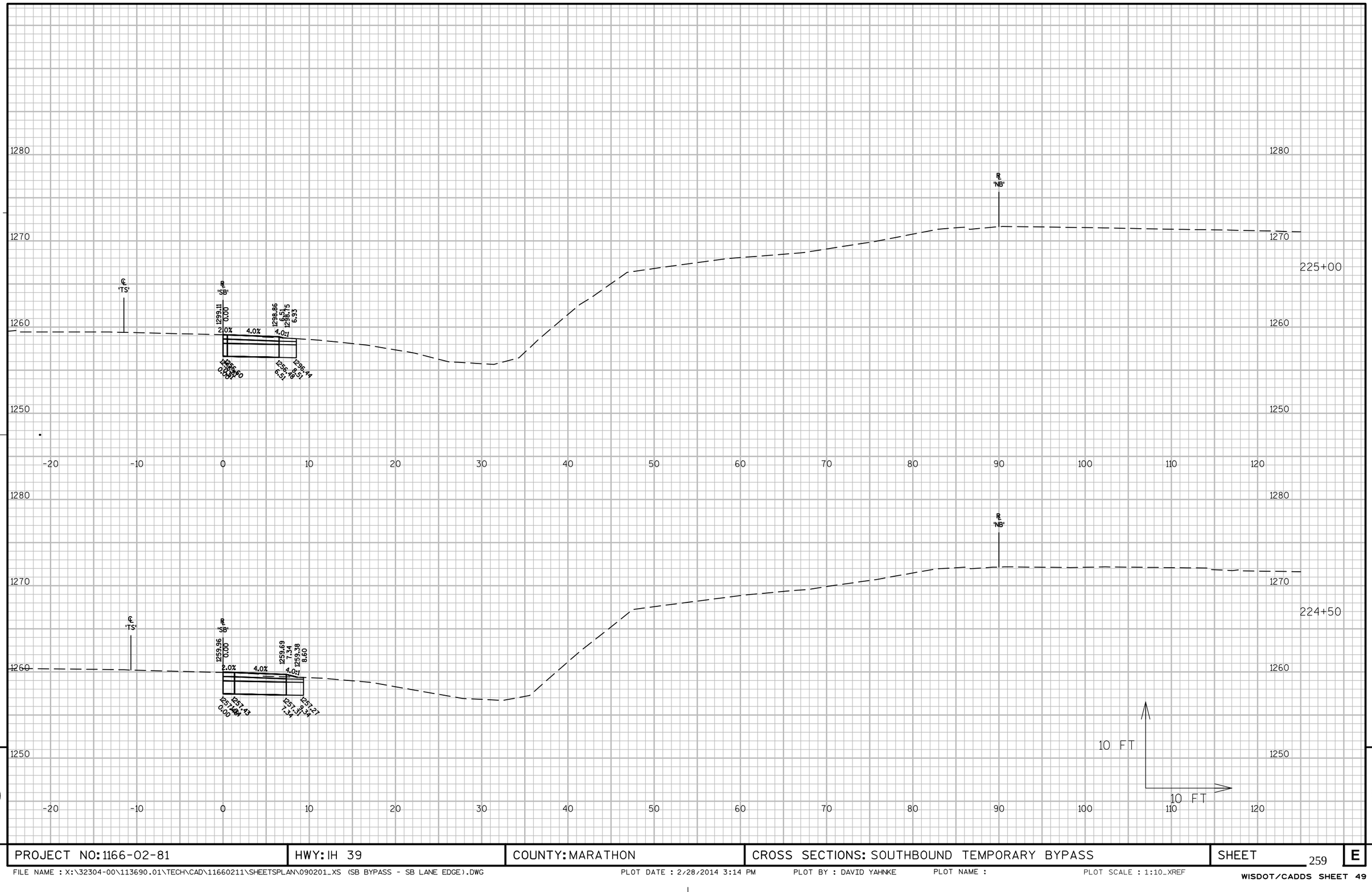
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:14 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 258	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:14 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49

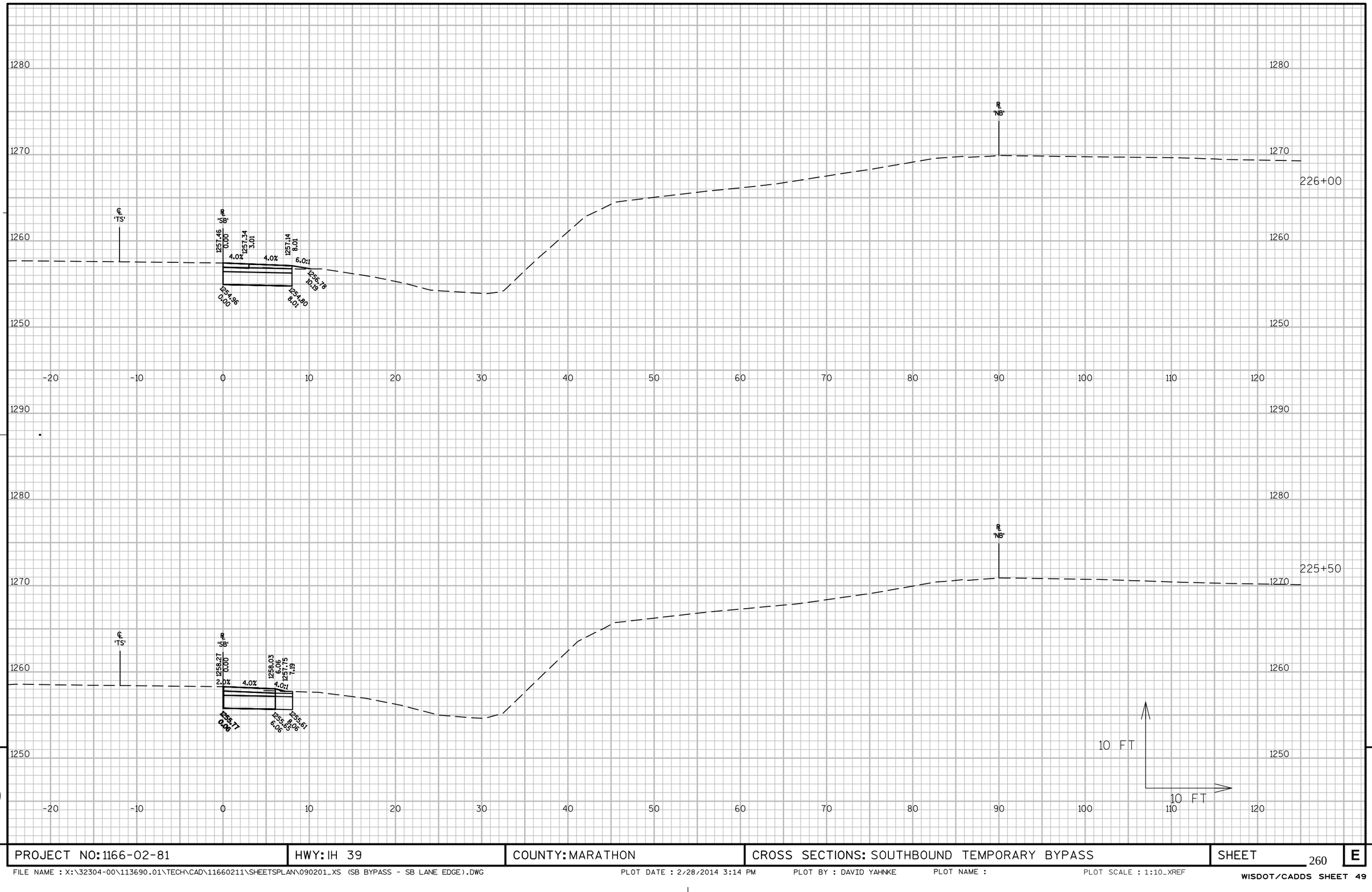


9

9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 259	E

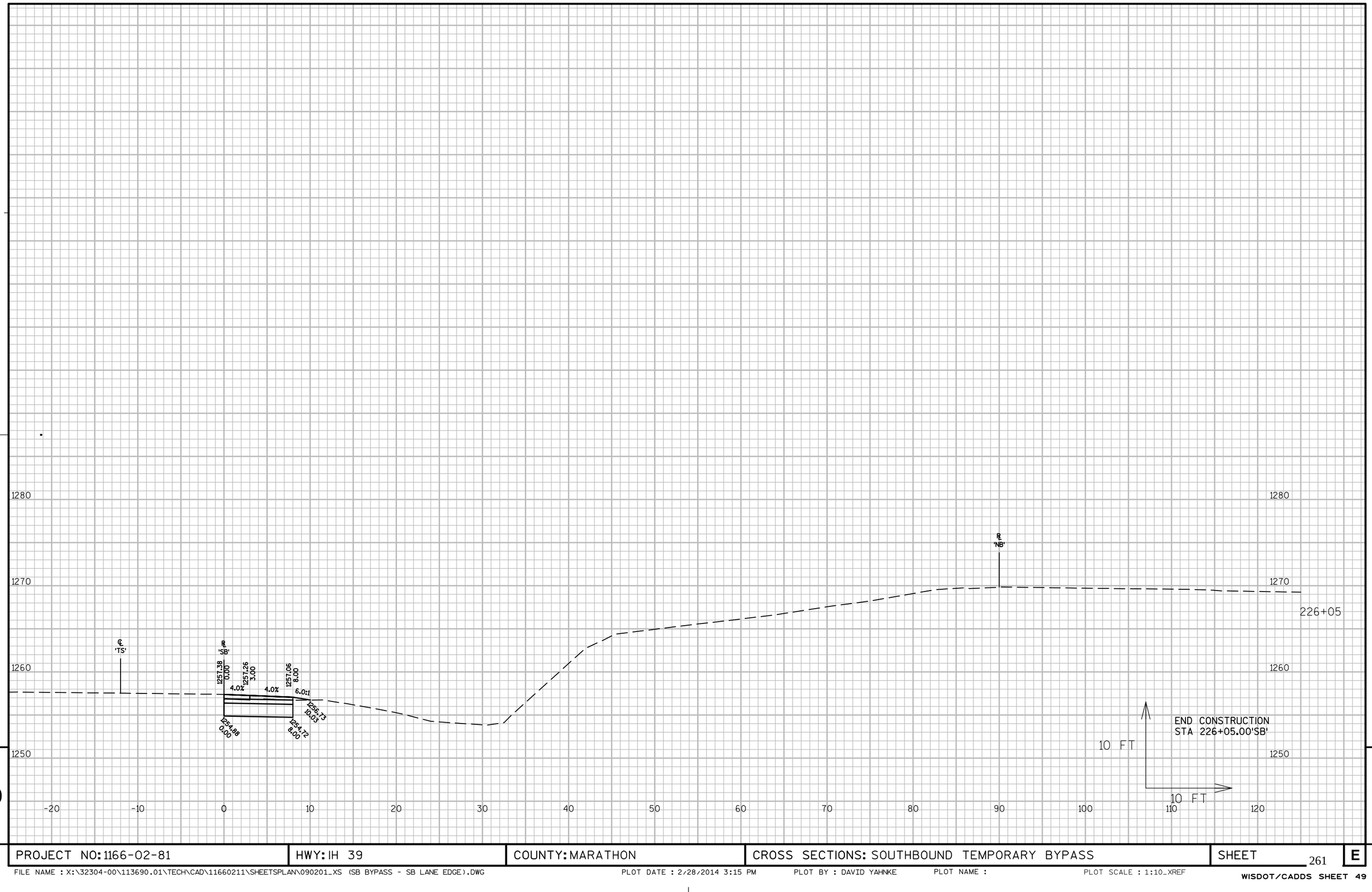
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:14 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF



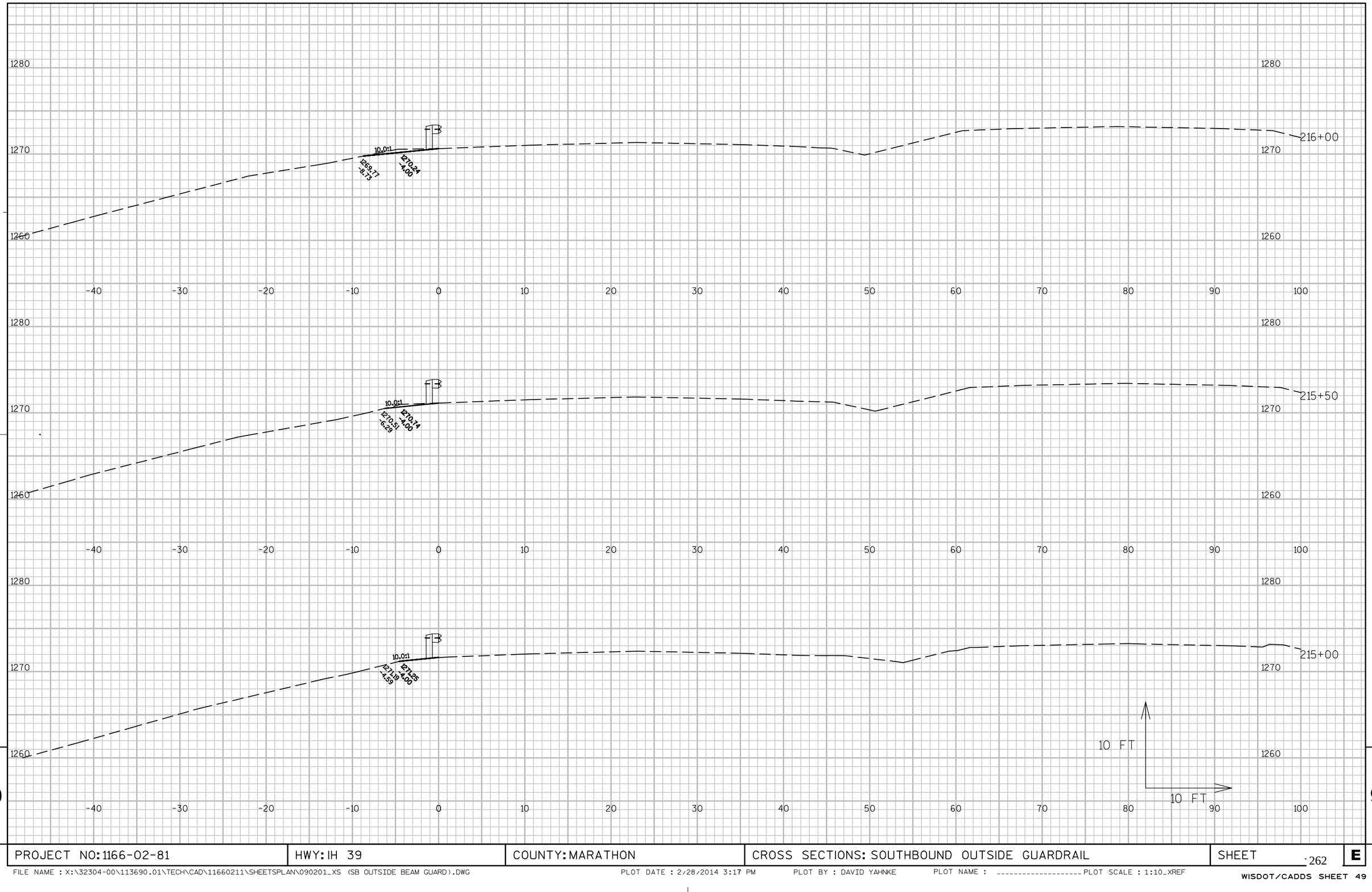
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 260	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (SB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:14 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

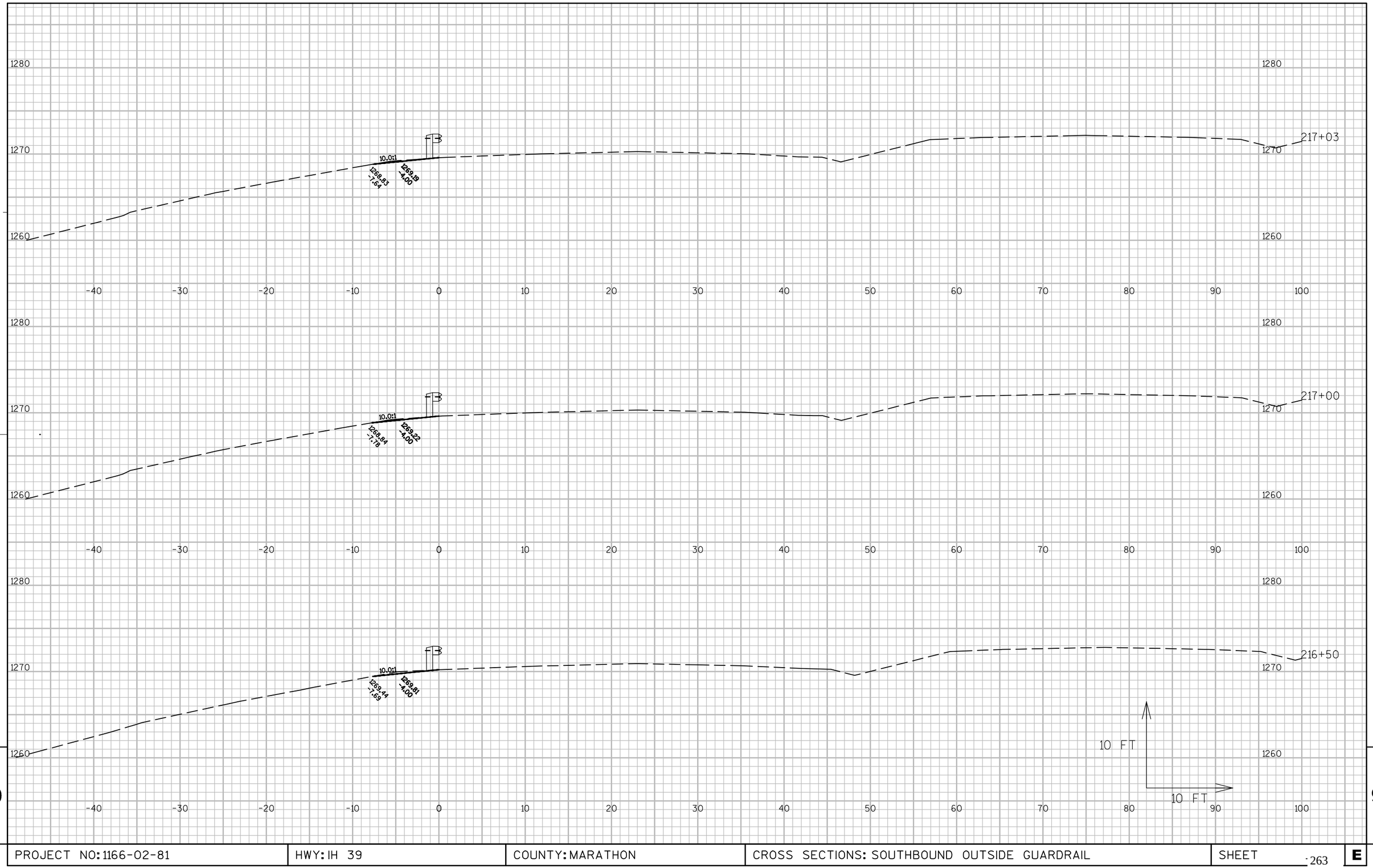


PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND TEMPORARY BYPASS	SHEET 261	E



9

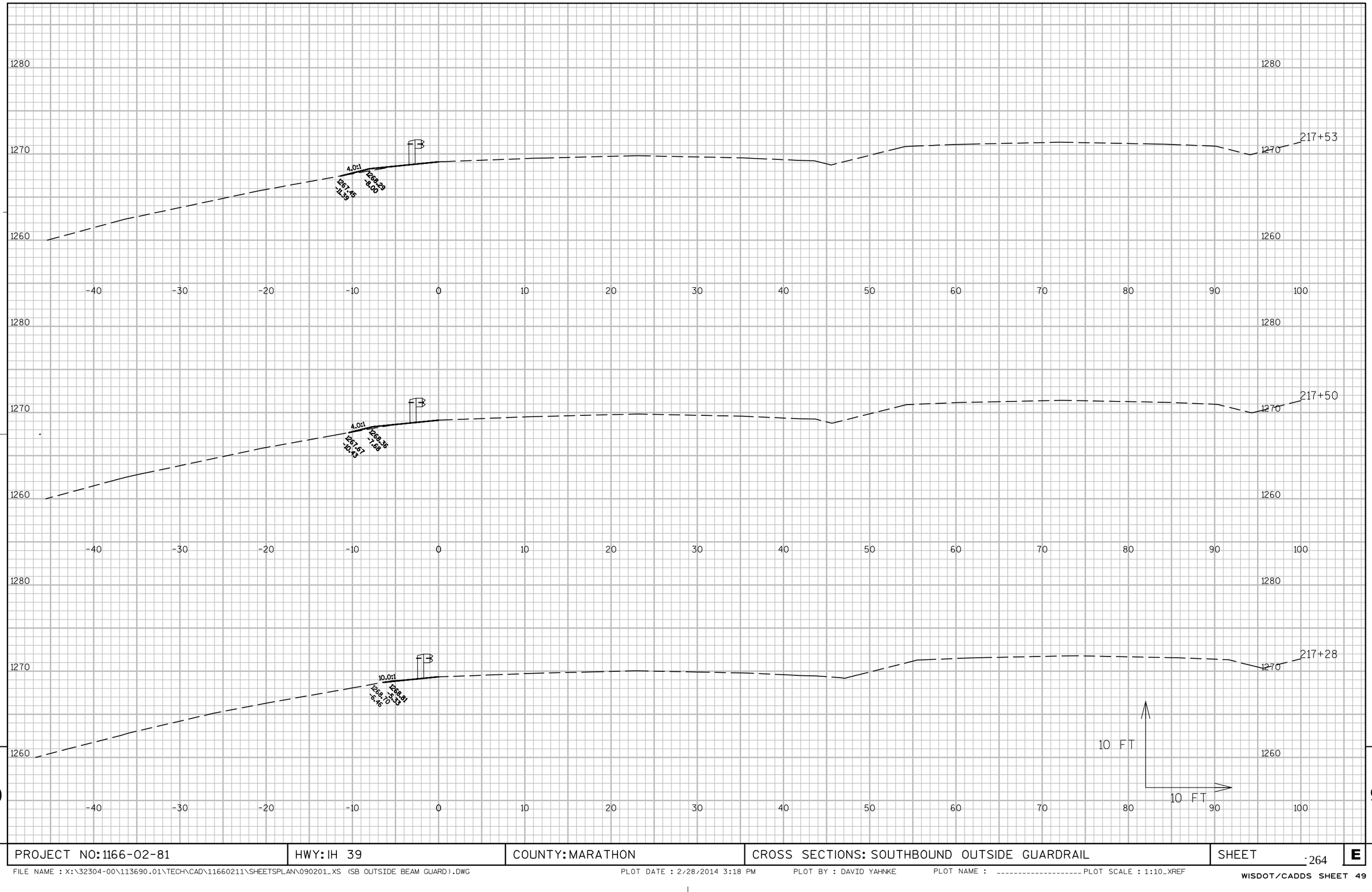
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND OUTSIDE GUARDRAIL	SHEET 262	E



9

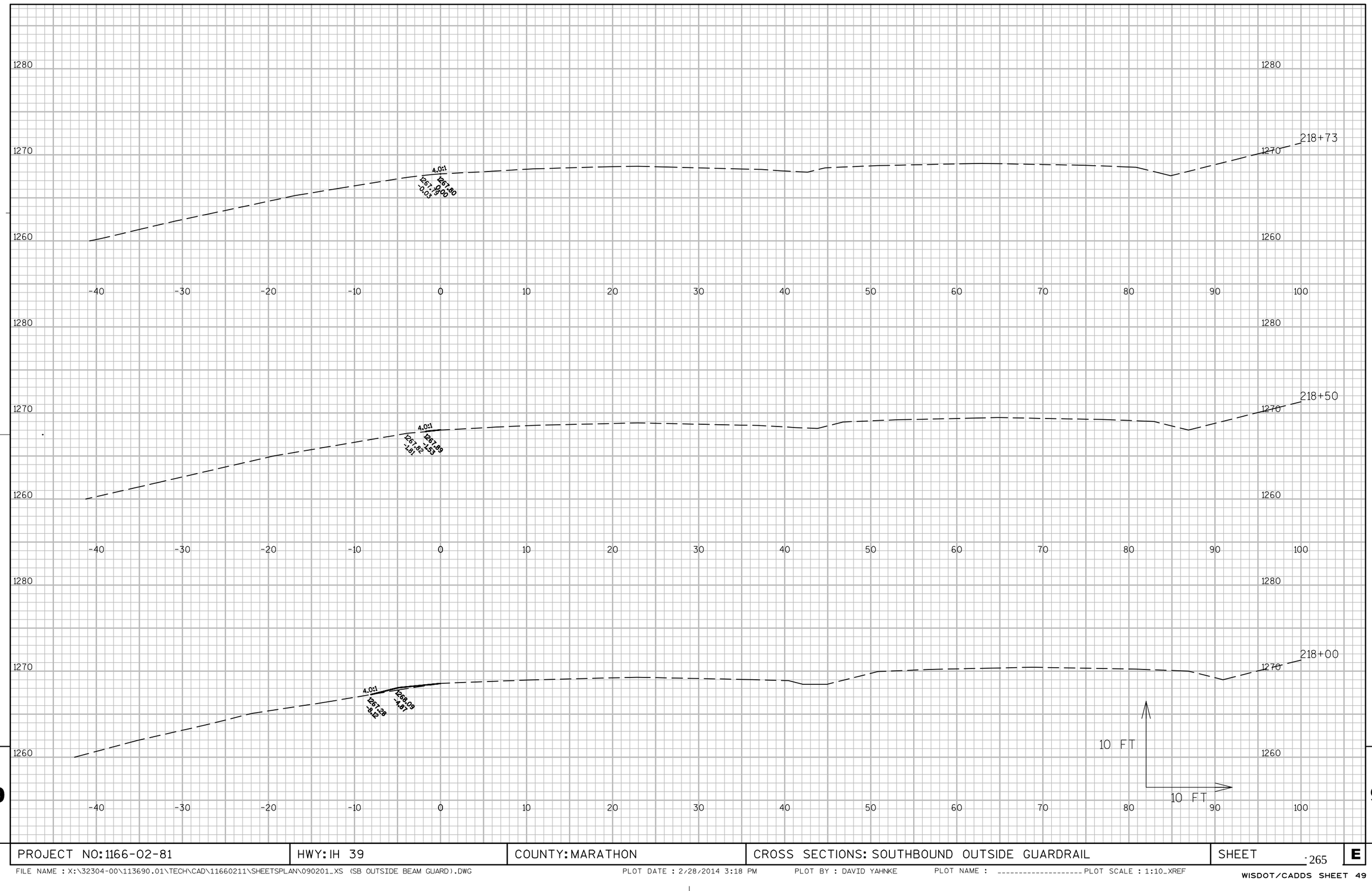
9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND OUTSIDE GUARDRAIL	SHEET 263	E



9

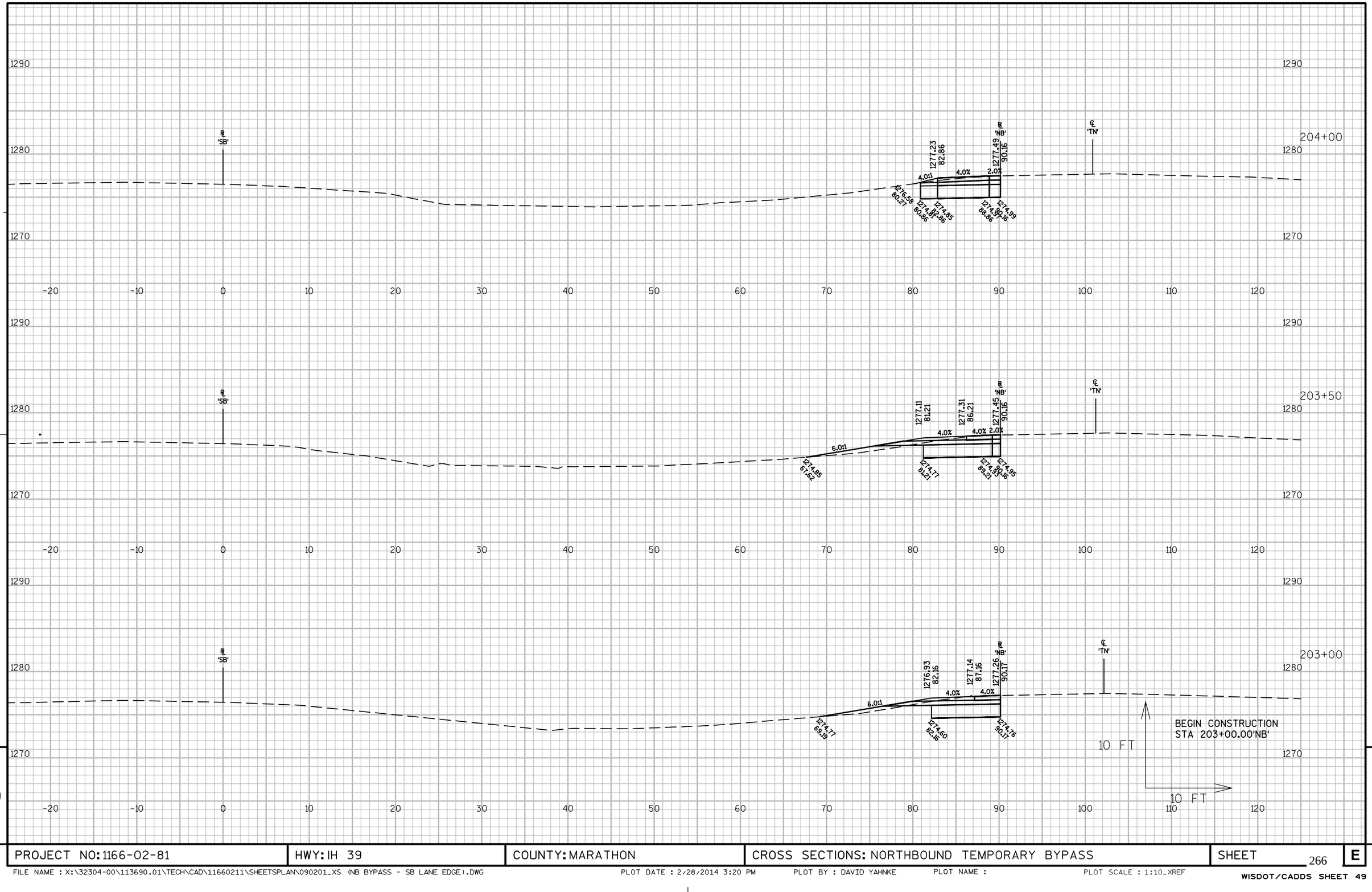
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND OUTSIDE GUARDRAIL	SHEET 264	E



9

9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: SOUTHBOUND OUTSIDE GUARDRAIL	SHEET 265	E

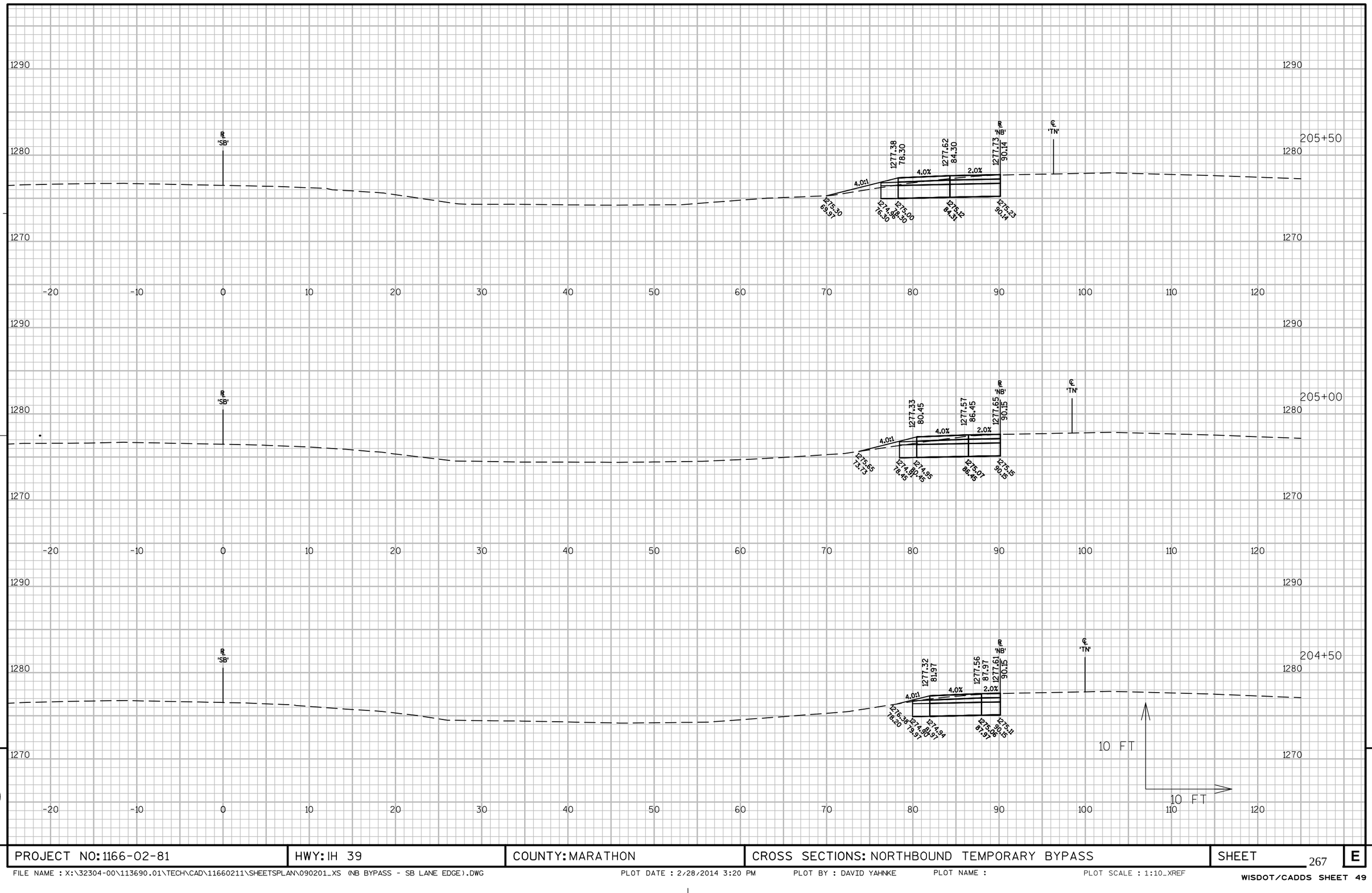


9

9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 266	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:20 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF



9	PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 267 E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:20 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

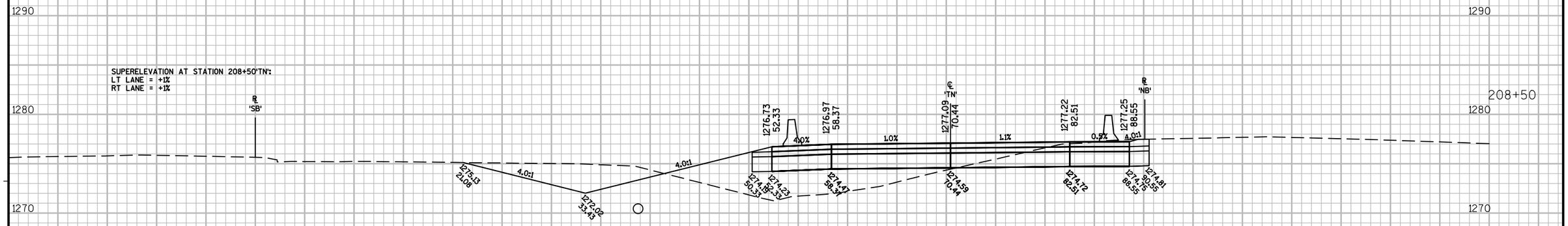
CENTERLINE ELEVATION ON 'TN' LINE DEVIATES FROM PROFILE ELEVATION TO MAINTAIN 2% CROSS SLOPE ON LANES.

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 268	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:20 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

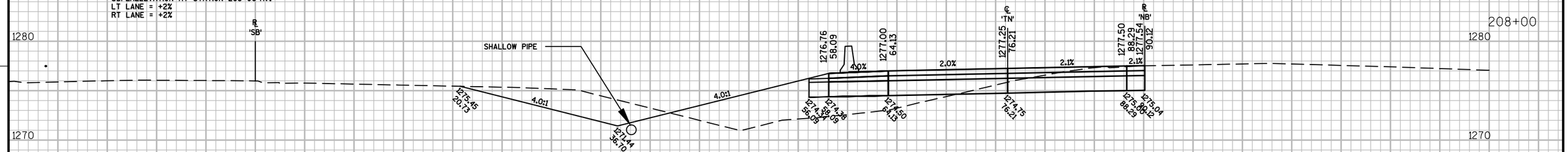
WISDOT/CADDS SHEET 49

SUPERELEVATION AT STATION 208+50'TN':
LT LANE = +1%
RT LANE = +1%



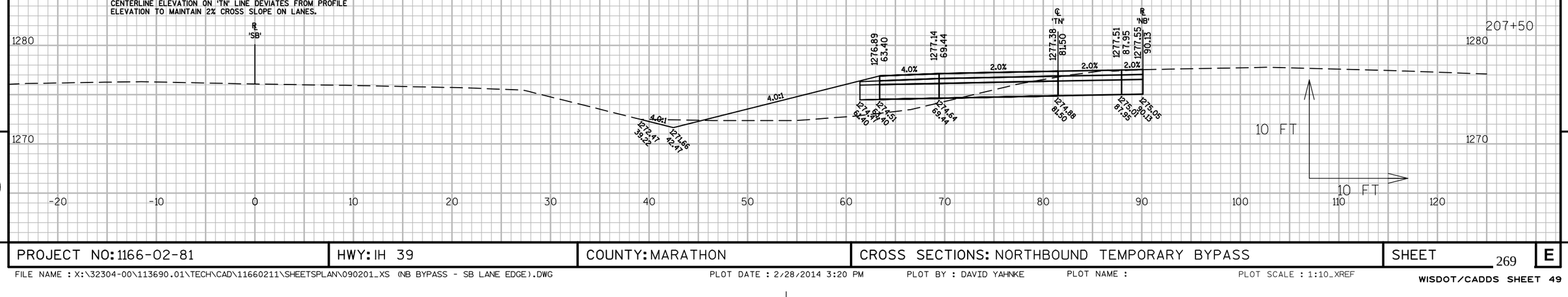
CENTERLINE ELEVATION ON 'TN' LINE DEVIATES FROM PROFILE ELEVATION TO MAINTAIN 2% CROSS SLOPE ON LANES.

SUPERELEVATION AT STATION 208+00'TN':
LT LANE = +2%
RT LANE = +2%



CENTERLINE ELEVATION ON 'TN' LINE DEVIATES FROM PROFILE ELEVATION TO MAINTAIN 2% CROSS SLOPE ON LANES.

INLET MEDIAN 3 GRATE
STATION 207+75'SB', 37.75' RT
IINVERT: 1270.82



9

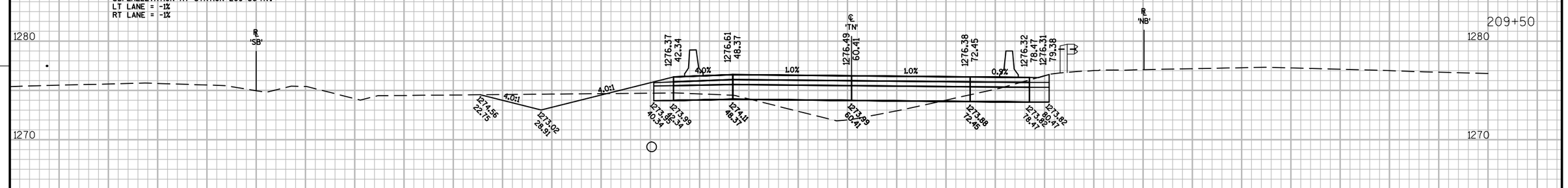
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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 269	E

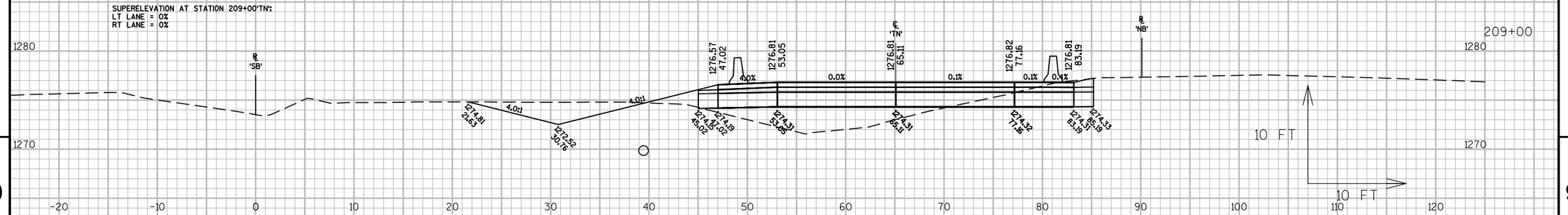
SUPERELEVATION AT STATION 210+00'TN':
LT LANE = -2%
RT LANE = -2%



SUPERELEVATION AT STATION 209+50'TN':
LT LANE = -1%
RT LANE = -1%



SUPERELEVATION AT STATION 209+00'TN':
LT LANE = 0%
RT LANE = 0%



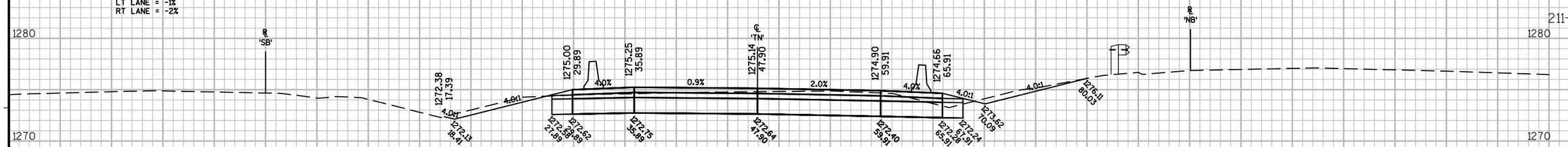
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9

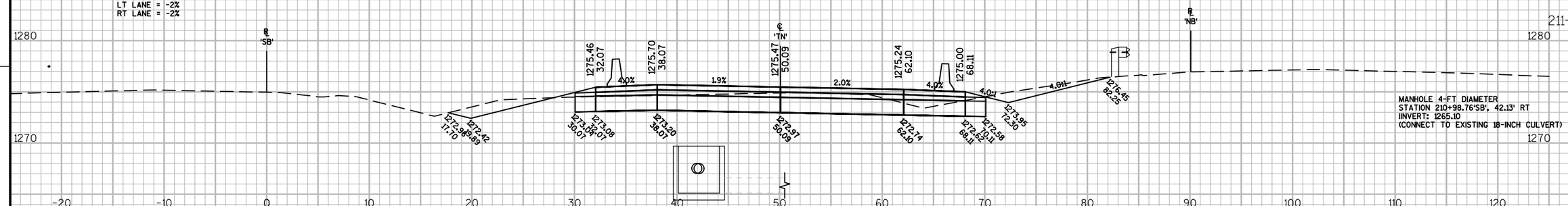
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 270	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:20 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

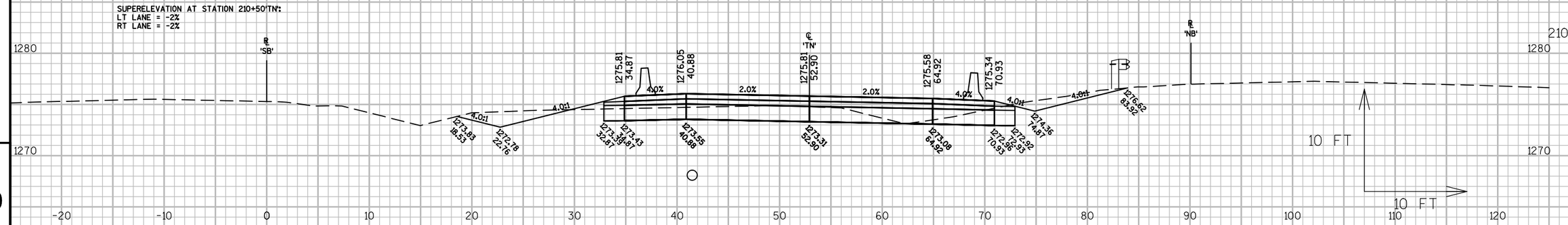
SUPERELEVATION AT STATION 211+50'TN':
LT LANE = -1%
RT LANE = -2%



SUPERELEVATION AT STATION 211+00'TN':
LT LANE = -2%
RT LANE = -2%



SUPERELEVATION AT STATION 210+50'TN':
LT LANE = -2%
RT LANE = -2%



9

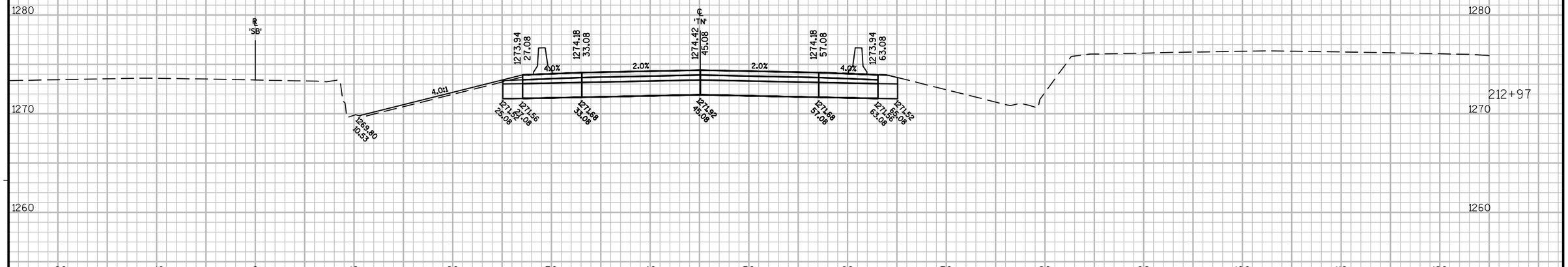
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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 271	E

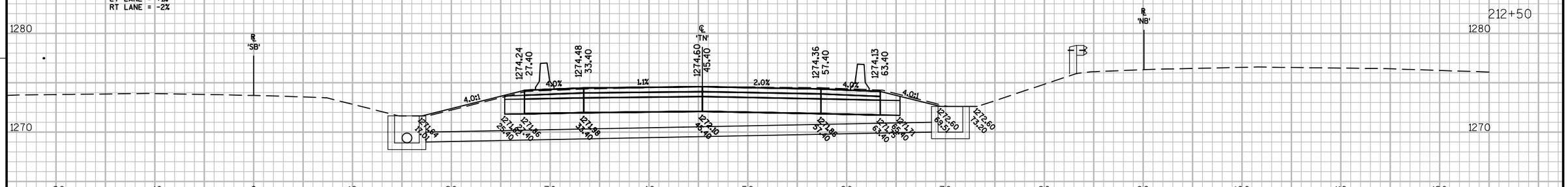
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:21 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

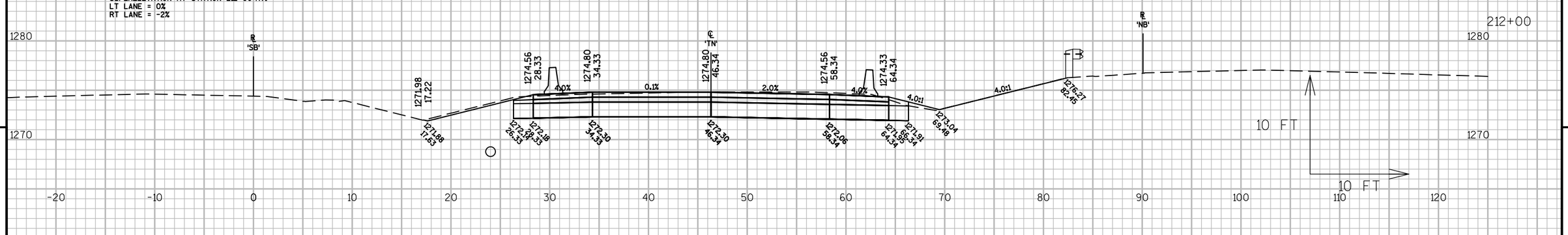
SUPERELEVATION AT STATION 212+97'TN':
LT LANE = +2%
RT LANE = -2%



SUPERELEVATION AT STATION 212+50'TN':
LT LANE = +1%
RT LANE = -2%



SUPERELEVATION AT STATION 212+00'TN':
LT LANE = 0%
RT LANE = -2%



9

9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 272	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:21 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF



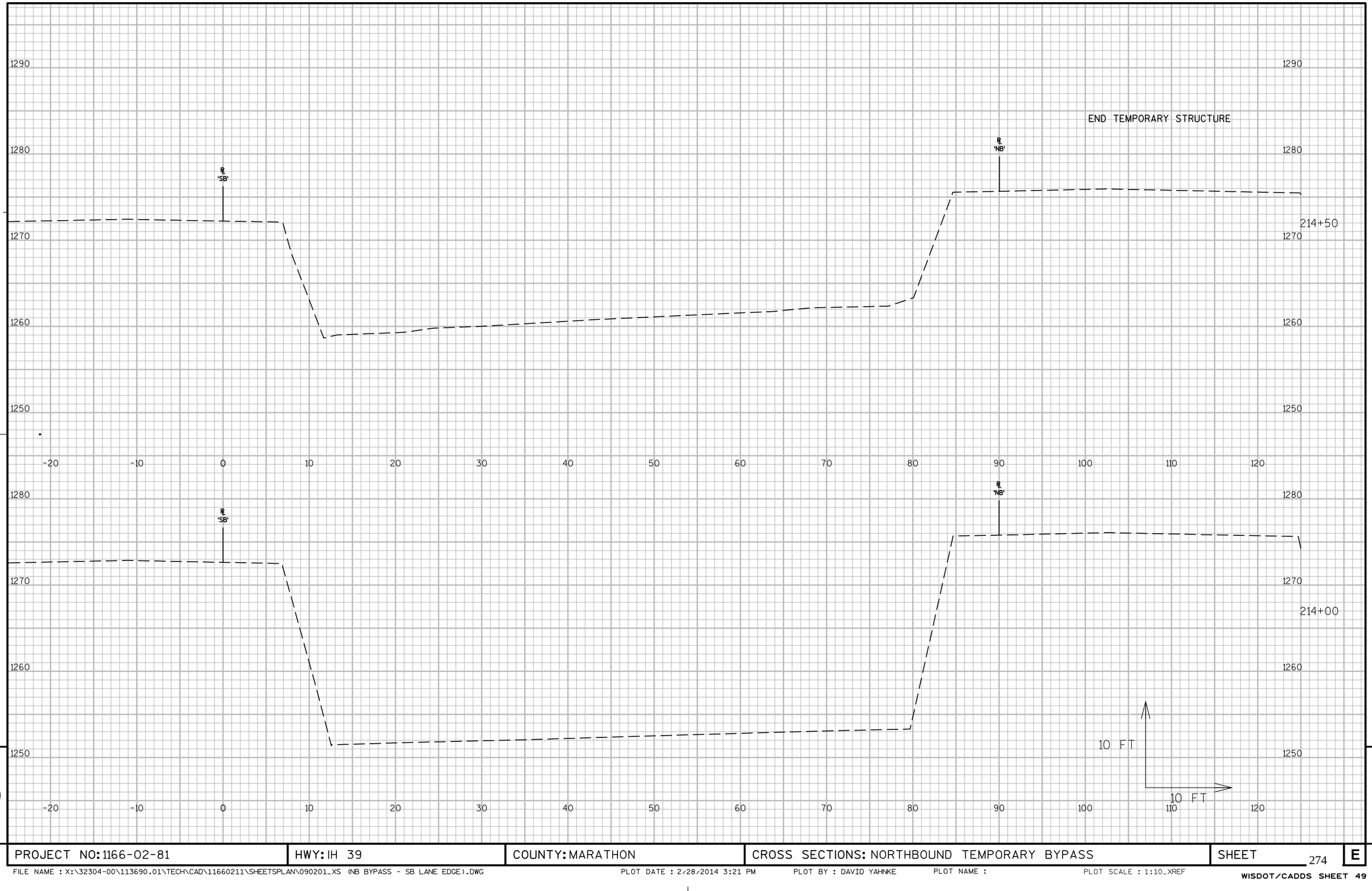
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9

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 273	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:21 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



9

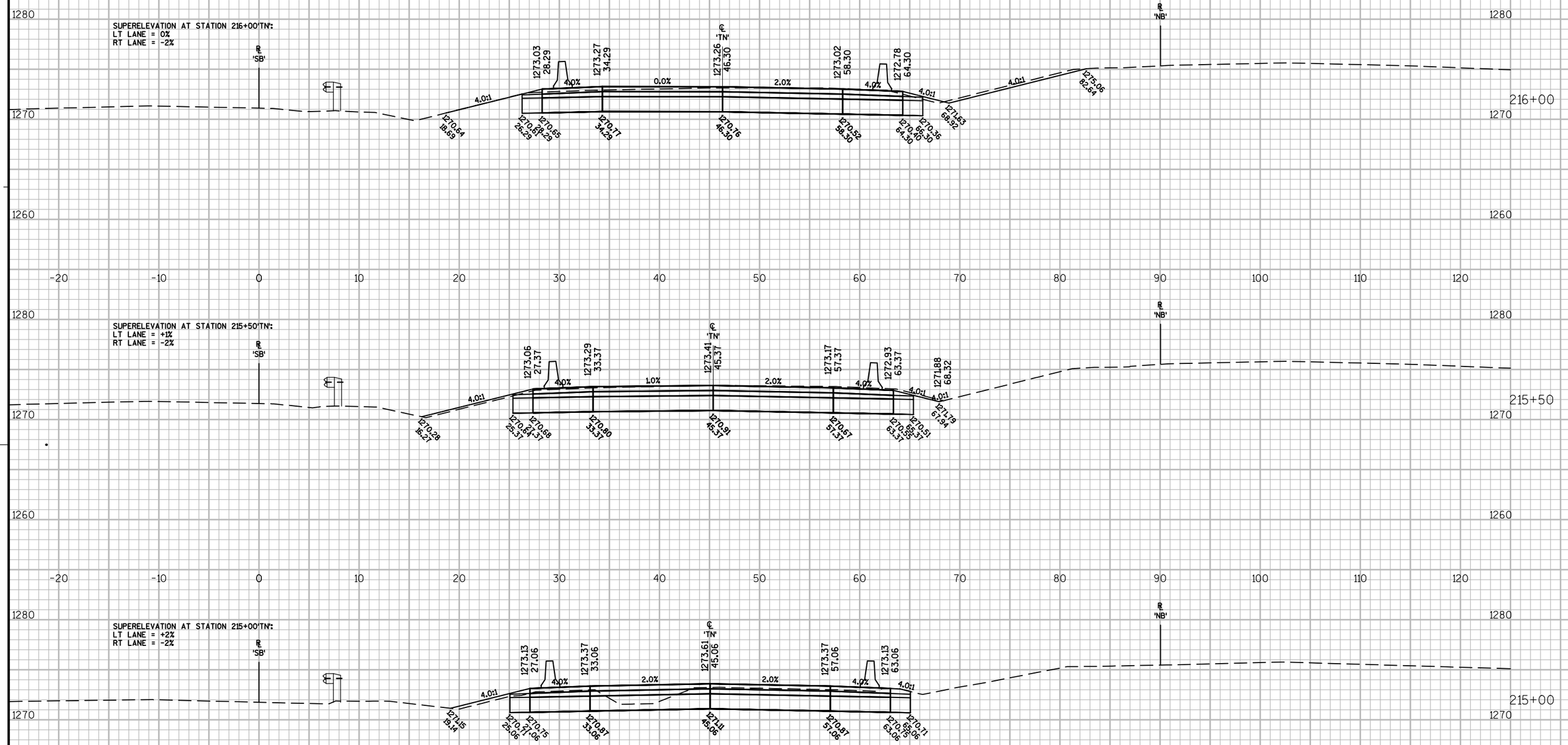
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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 274	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:21 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

SUPERELEVATION AT STATION 216+00'TN':
LT LANE = 0%
RT LANE = -2%



SUPERELEVATION AT STATION 215+50'TN':
LT LANE = +1%
RT LANE = -2%

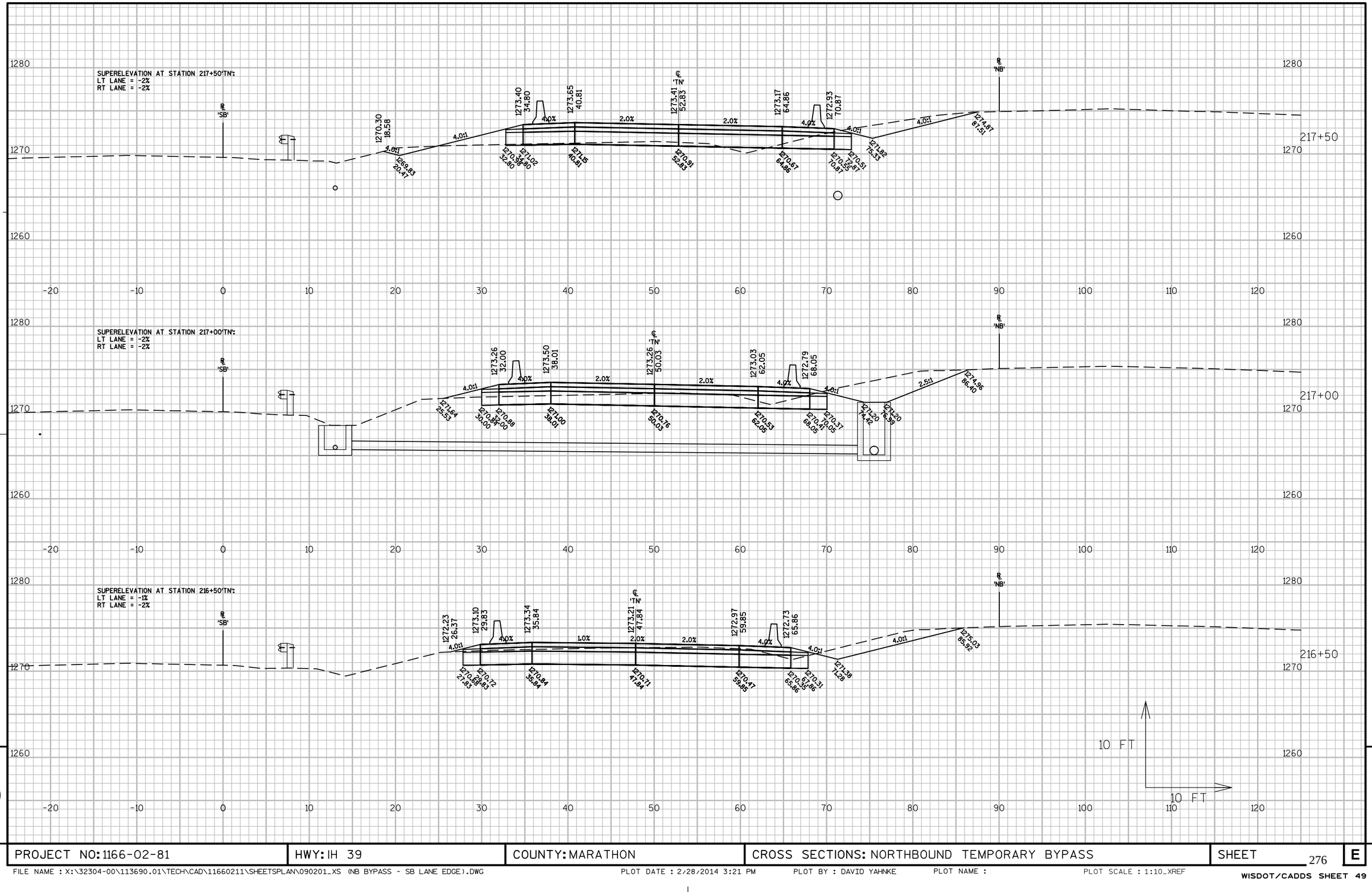
SUPERELEVATION AT STATION 215+00'TN':
LT LANE = +2%
RT LANE = -2%

9

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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 275	E

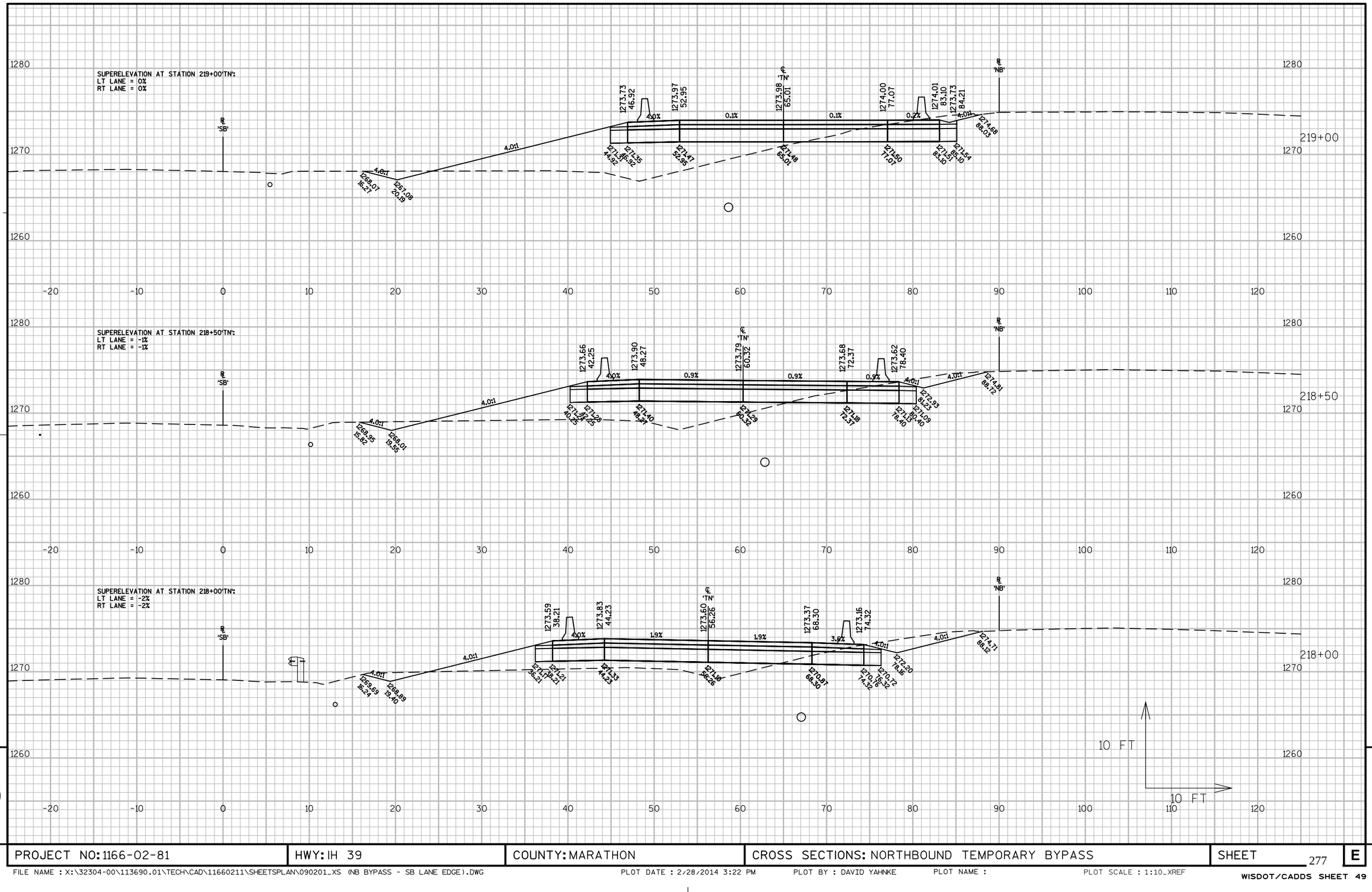
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PLOT DATE : 2/28/2014 3:21 PM
PLOT BY : DAVID YAHNKE
PLOT NAME :
PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 276	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:21 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

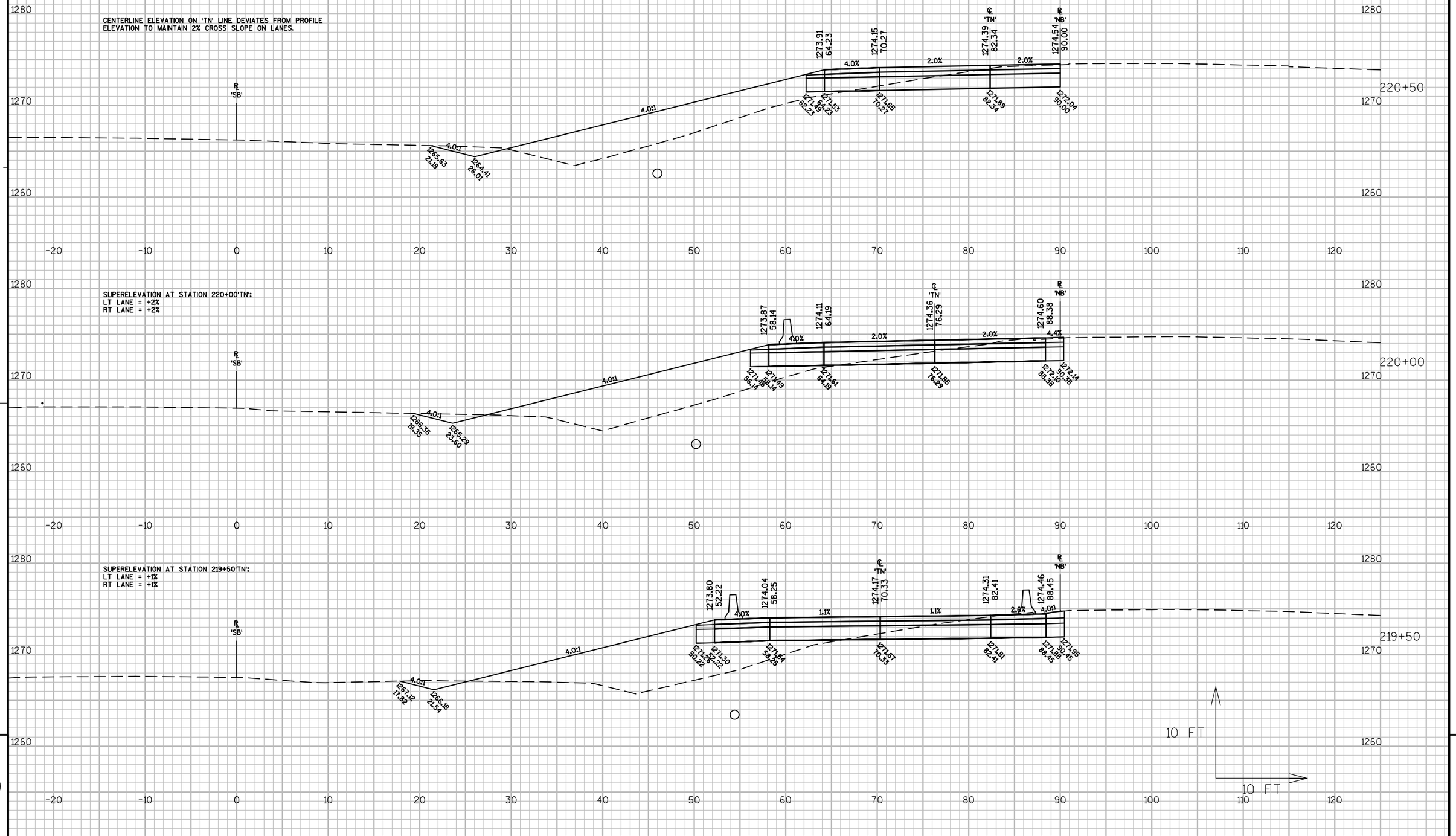
WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 277	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:22 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

CENTERLINE ELEVATION ON 'TN' LINE DEVIATES FROM PROFILE ELEVATION TO MAINTAIN 2% CROSS SLOPE ON LANES.



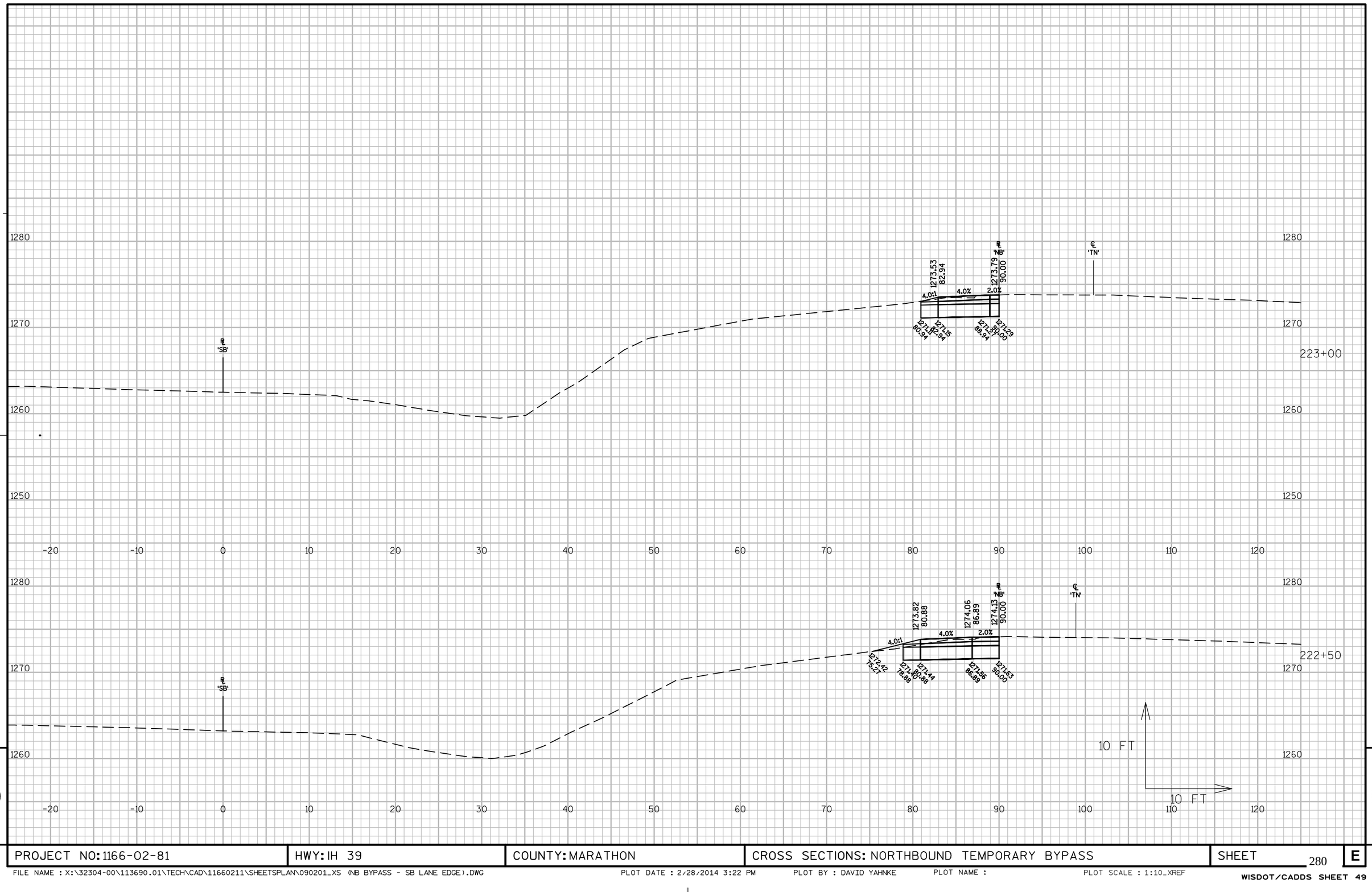
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 278	E

APRON ENDWALL FOR CULVERT PIPE 12-INCH
STATION 221+50'SB', 35.00' RT
IINVERT: 1261.00

CENTERLINE ELEVATION ON 'TN' LINE DEVIATES FROM PROFILE ELEVATION TO MAINTAIN 2% CROSS SLOPE ON LANES.

10 FT
10 FT

PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 279	E

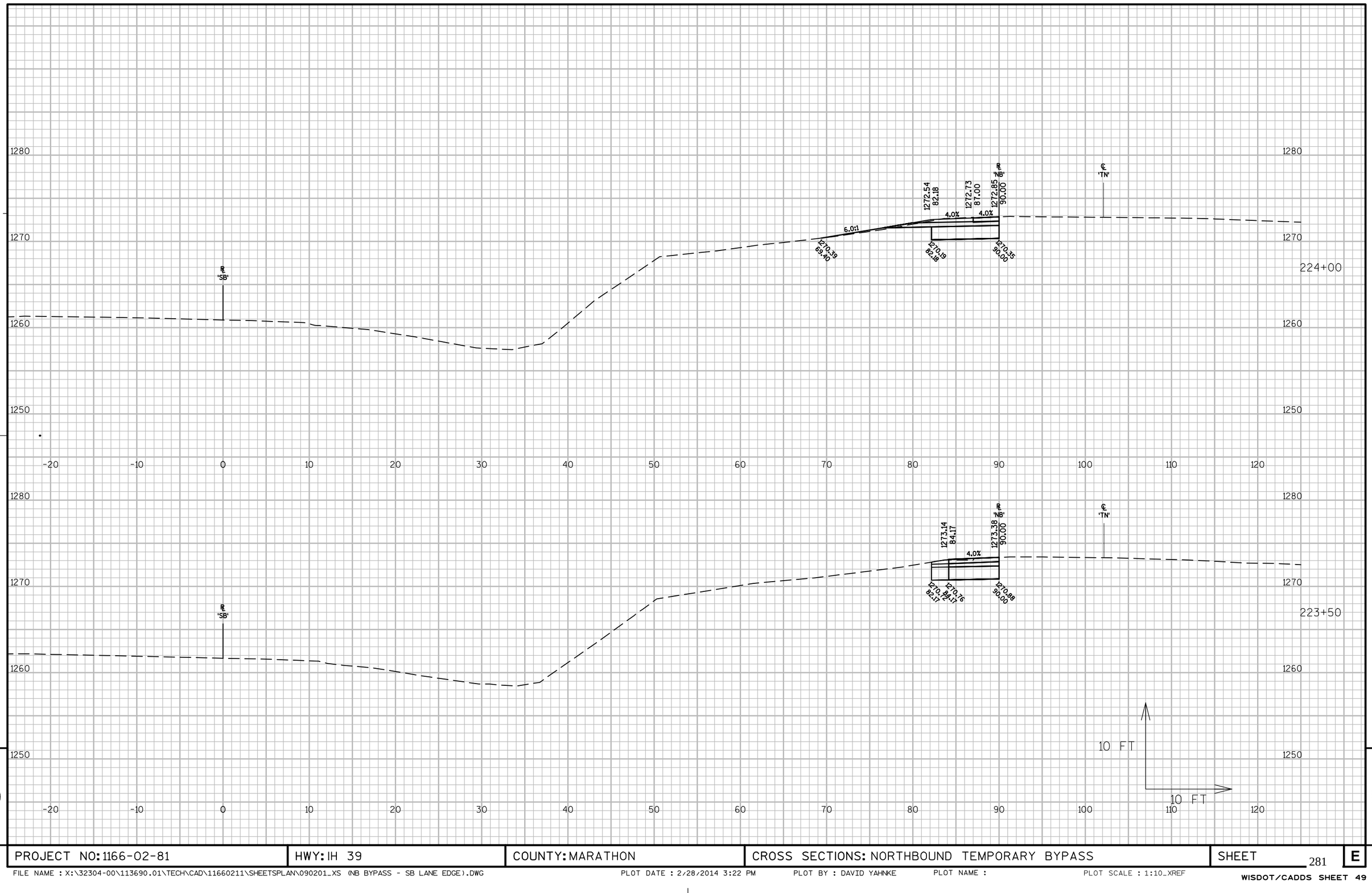


9

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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 280	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:22 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

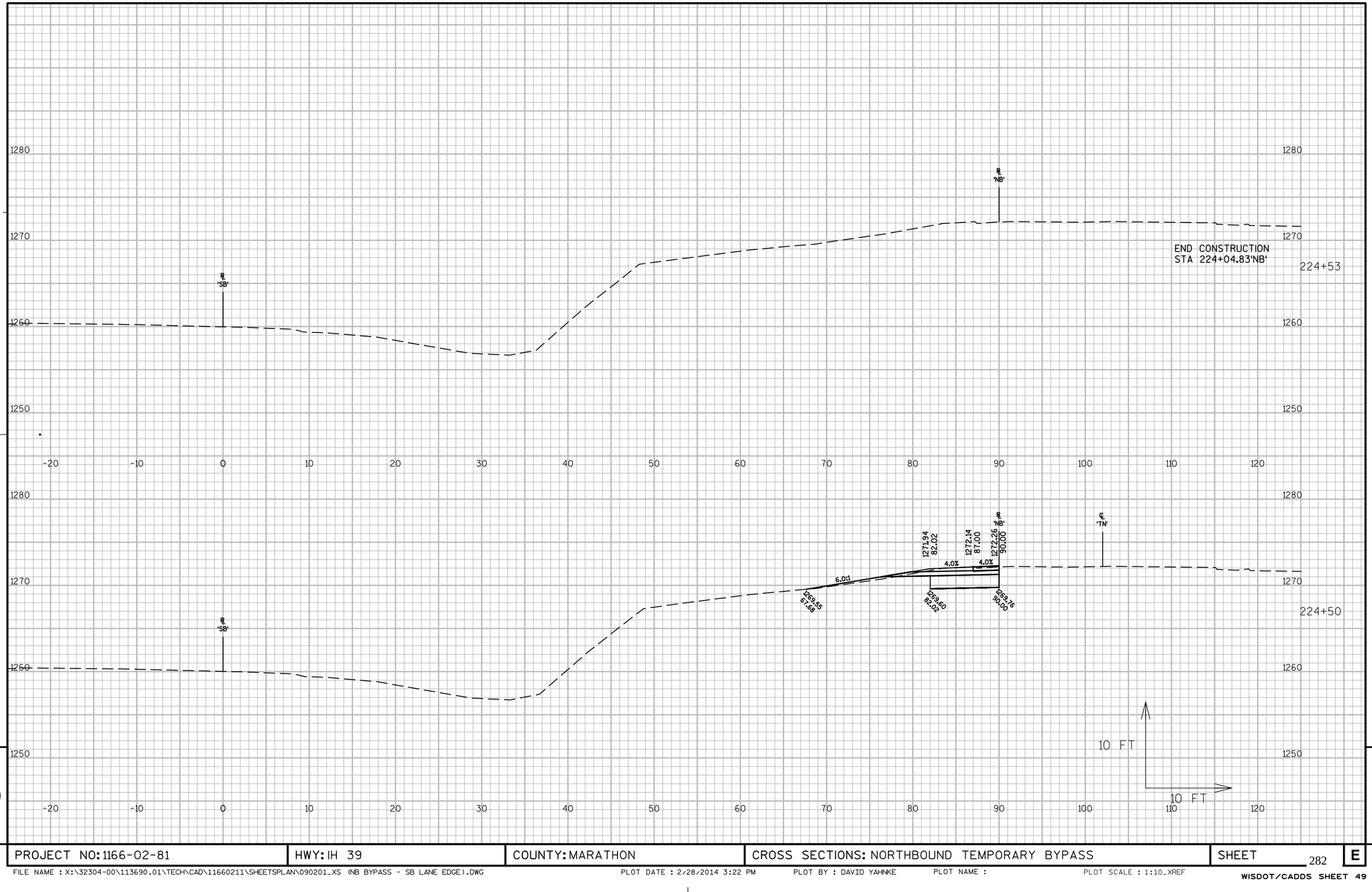


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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 281	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:22 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF

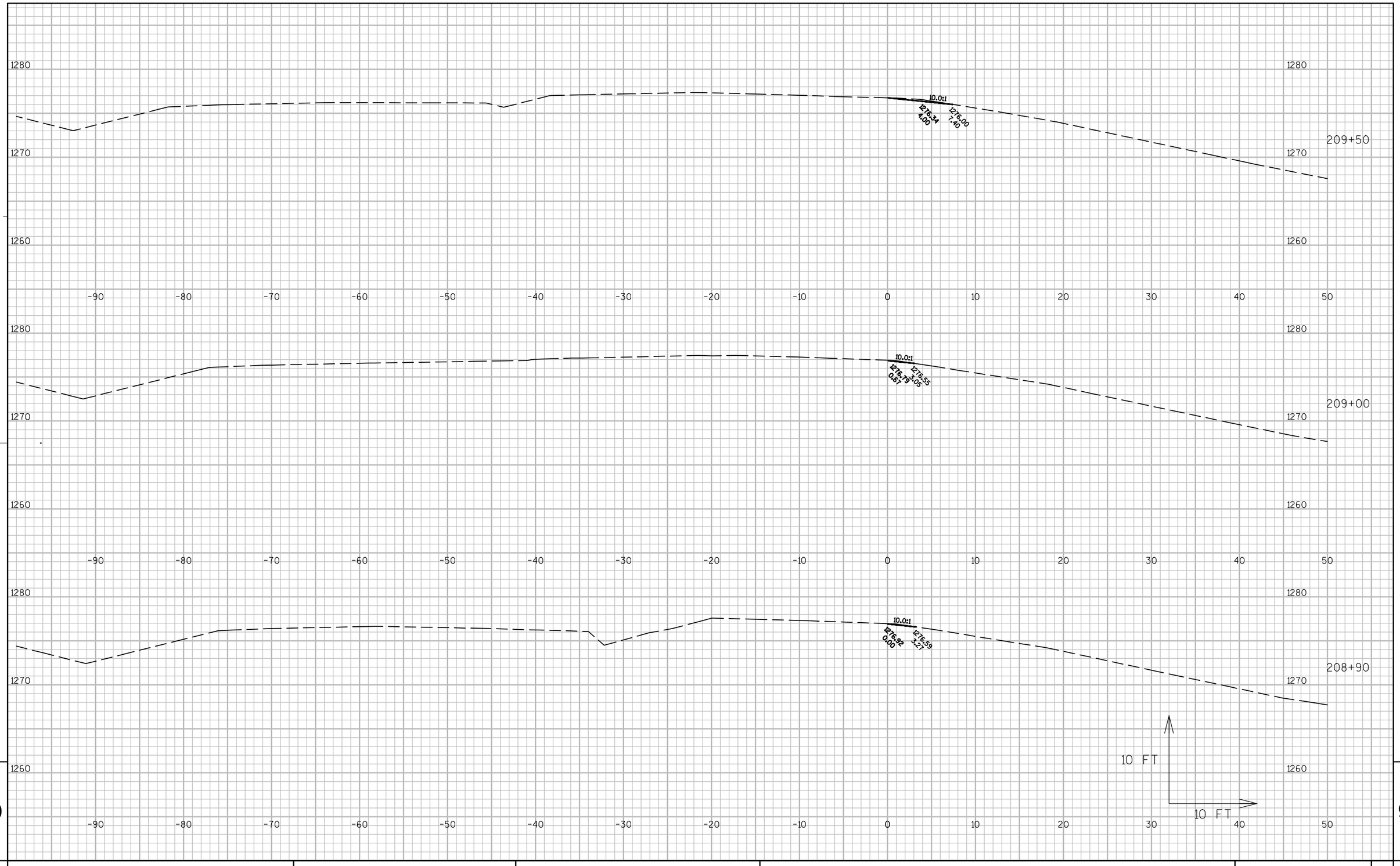


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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND TEMPORARY BYPASS	SHEET 282	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB BYPASS - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:22 PM PLOT BY : DAVID YAHNKE PLOT NAME : PLOT SCALE : 1:10_XREF



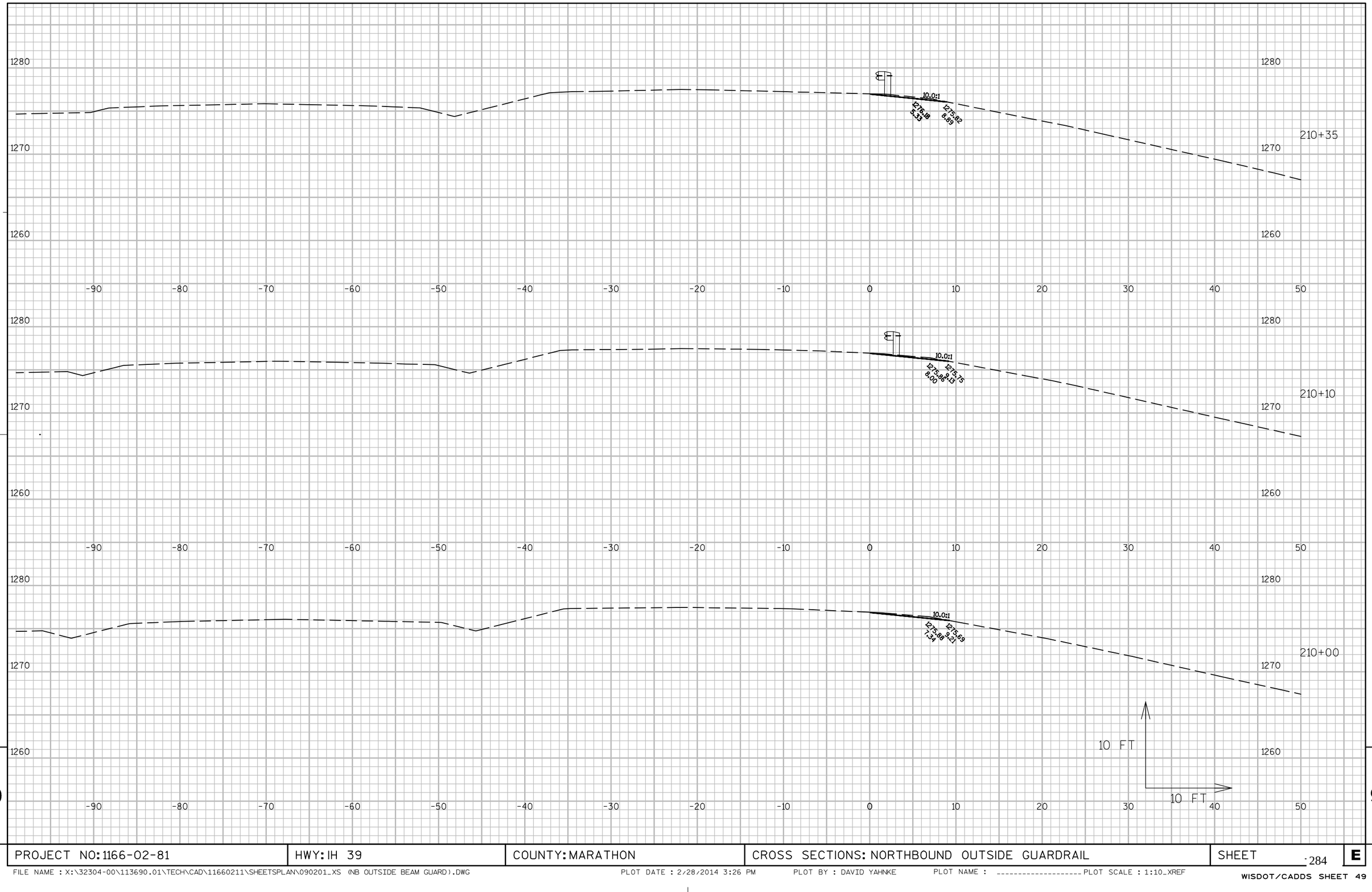
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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND OUTSIDE GUARDRAIL	SHEET 283	E

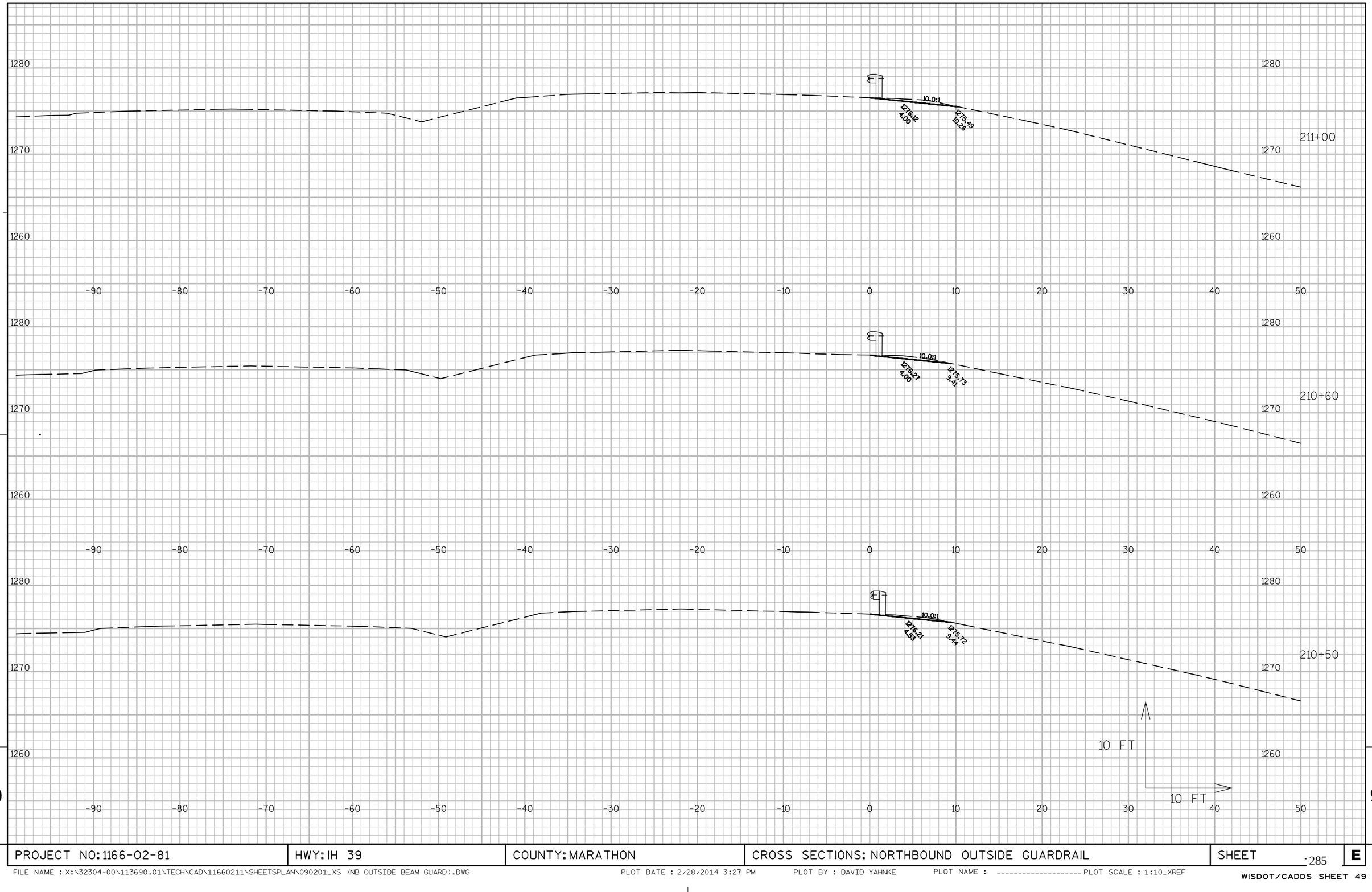
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB OUTSIDE BEAM GUARD).DWG PLOT DATE : 2/28/2014 3:26 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND OUTSIDE GUARDRAIL	SHEET 284	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB OUTSIDE BEAM GUARD).DWG PLOT DATE : 2/28/2014 3:26 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF



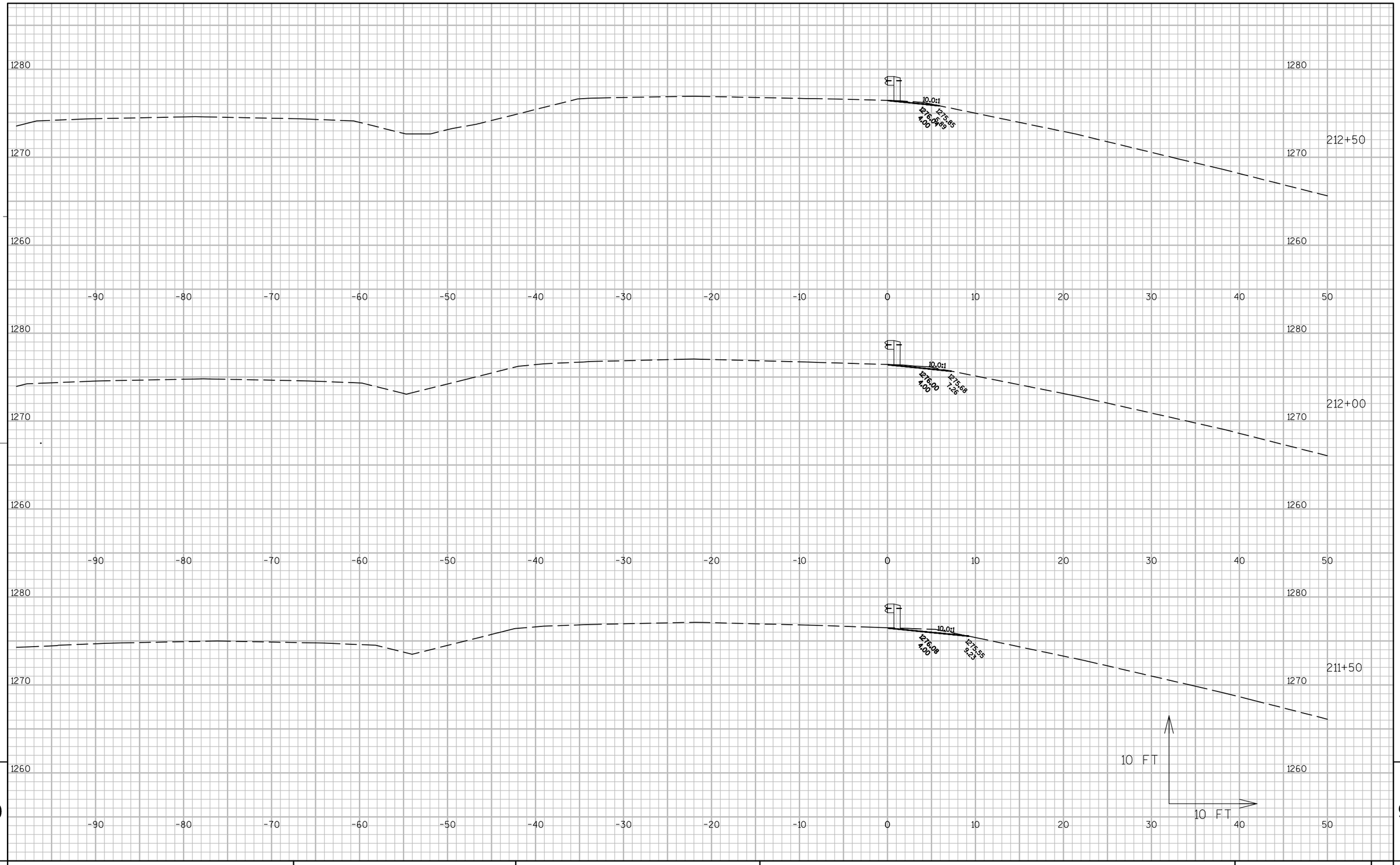
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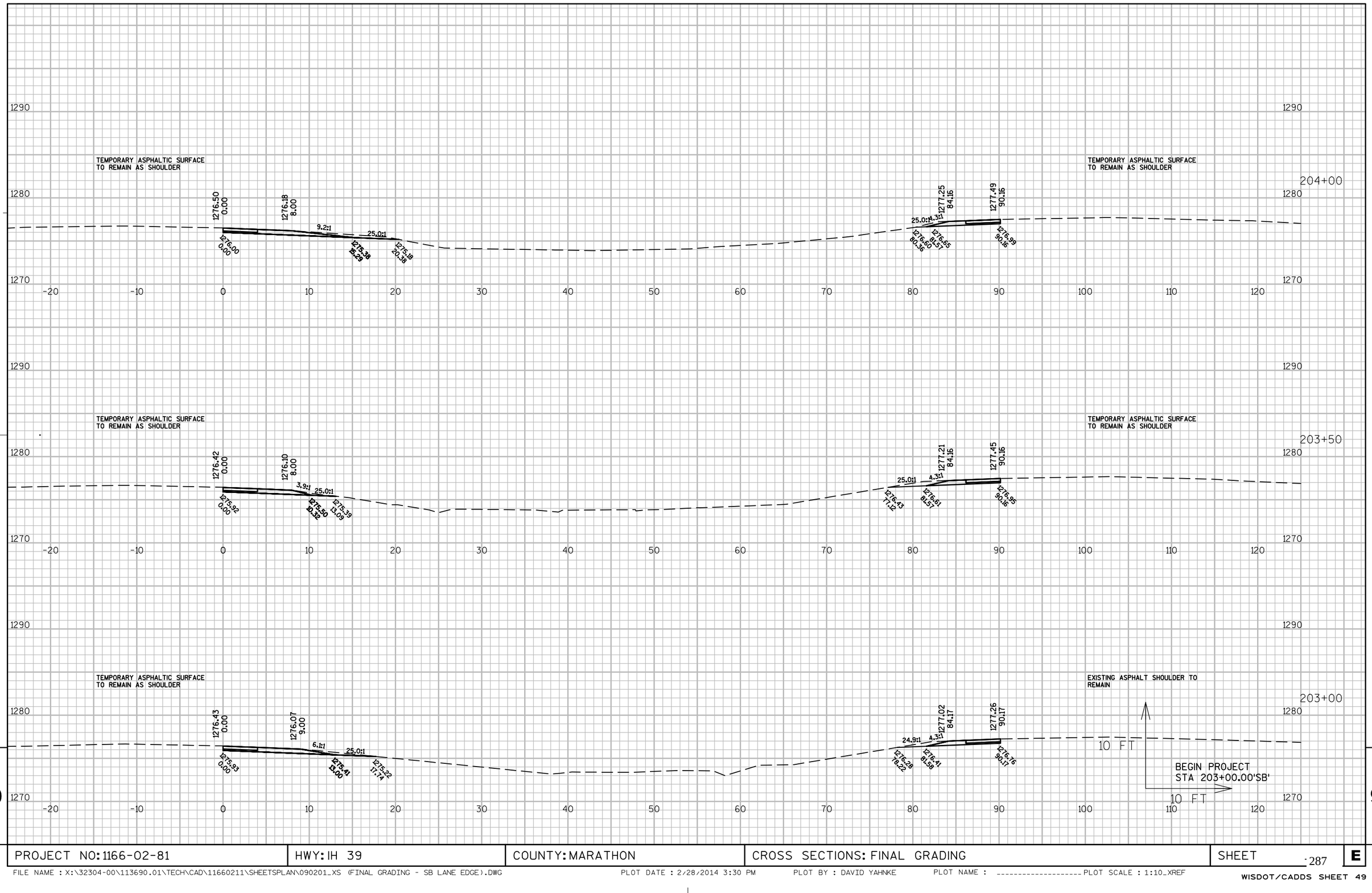
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND OUTSIDE GUARDRAIL	SHEET 285	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (NB OUTSIDE BEAM GUARD).DWG PLOT DATE : 2/28/2014 3:27 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



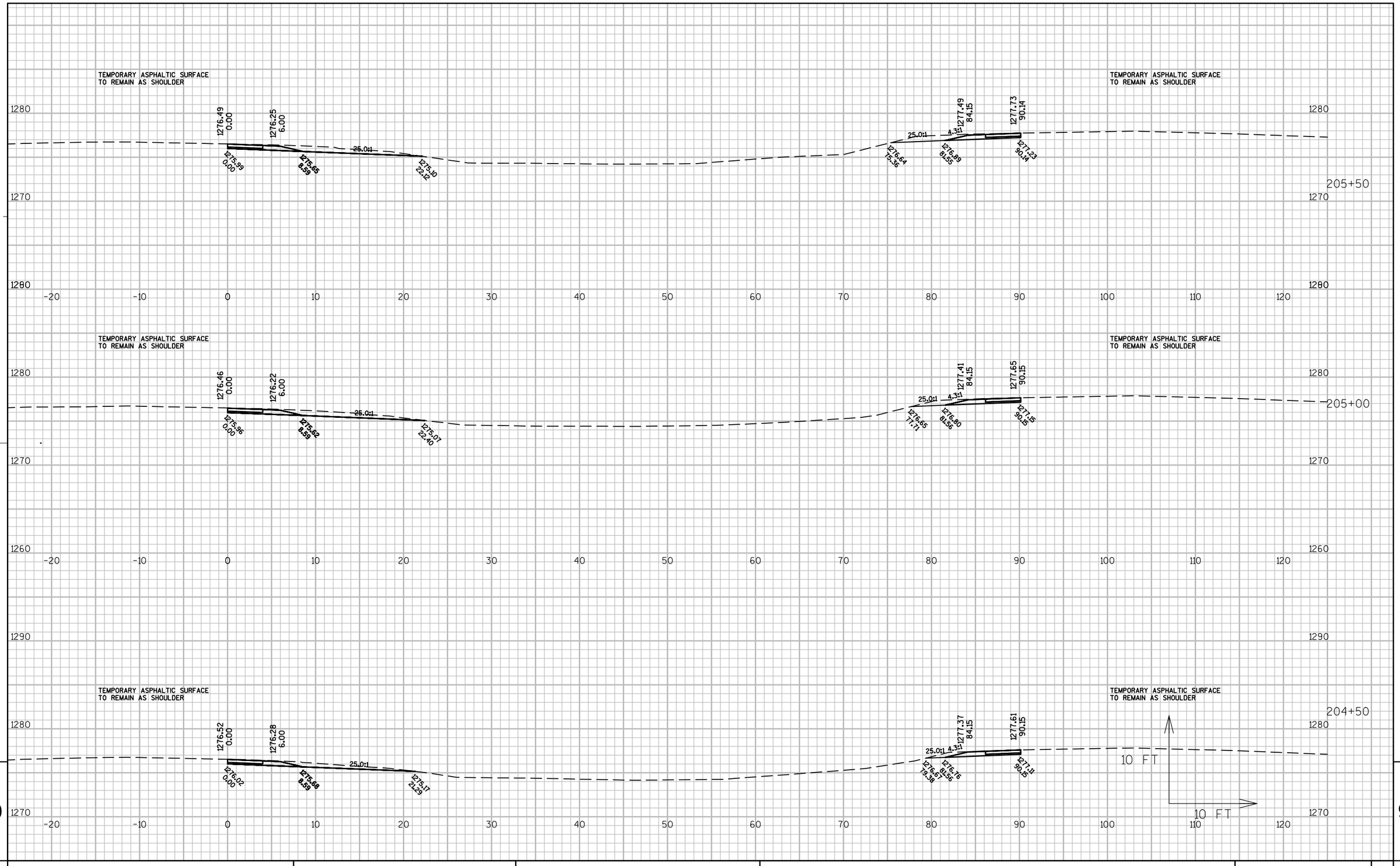
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: NORTHBOUND OUTSIDE GUARDRAIL	SHEET 286	E



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 287	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:30 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

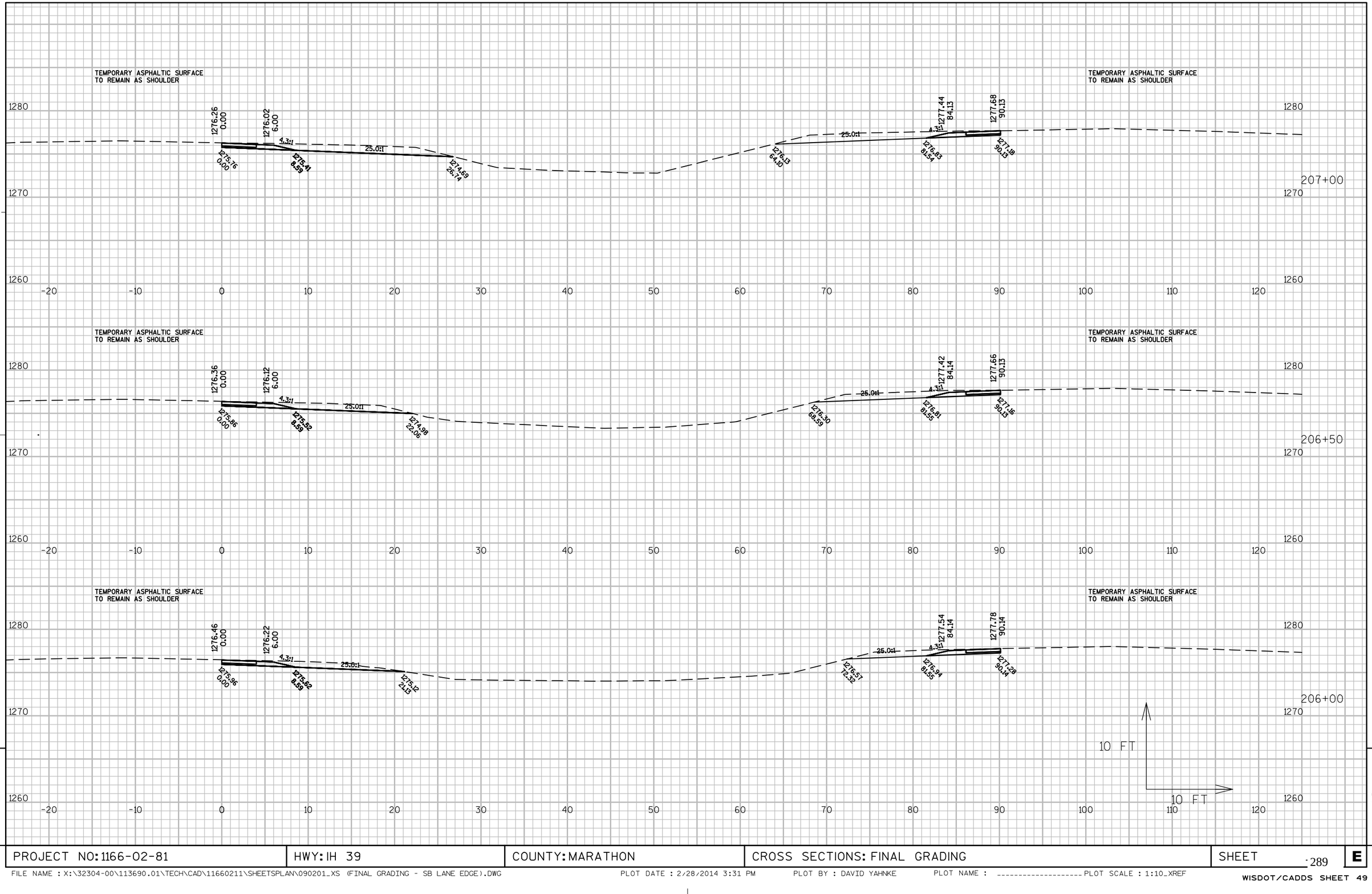
WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 288	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:30 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 289	E

TEMPORARY ASPHALTIC SURFACE
TO REMAIN AS SHOULDER

1275.63
0.00

1275.39
6.00

6.0:1

1275.13
0.00

1274.74
9.95

1273.40
11.97

17.6:1

1272.03
42.00

9.2:1

1275.26
71.69

6.0:1

1276.59
79.64

1277.25
83.58

1277.51
90.12

1277.01
90.12

TEMPORARY ASPHALTIC SURFACE
TO REMAIN AS SHOULDER

1280
1270
1260
-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120
208+50

TEMPORARY ASPHALTIC SURFACE
TO REMAIN AS SHOULDER

1275.80
0.00

1275.56
6.00

6.0:1

1275.30
0.00

1274.90
9.95

1273.56
11.97

18.7:1

1272.28
42.00

10.0:1

1275.30
72.16

6.0:1

1276.64
80.18

1277.30
84.12

1277.54
90.12

1277.04
90.12

TEMPORARY ASPHALTIC SURFACE
TO REMAIN AS SHOULDER

1280
1270
1260
-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120
208+00

TEMPORARY ASPHALTIC SURFACE
TO REMAIN AS SHOULDER

1276.05
0.00

1275.81
6.00

6.0:1

1275.55
0.00

1275.15
9.95

1273.81
11.97

18.7:1

1272.53
42.00

10.8:1

1275.32
72.86

6.0:1

1276.66
80.18

1277.31
84.13

1277.55
90.13

1277.05
90.13

TEMPORARY ASPHALTIC SURFACE
TO REMAIN AS SHOULDER

1280
1270
1260
-20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120
207+50

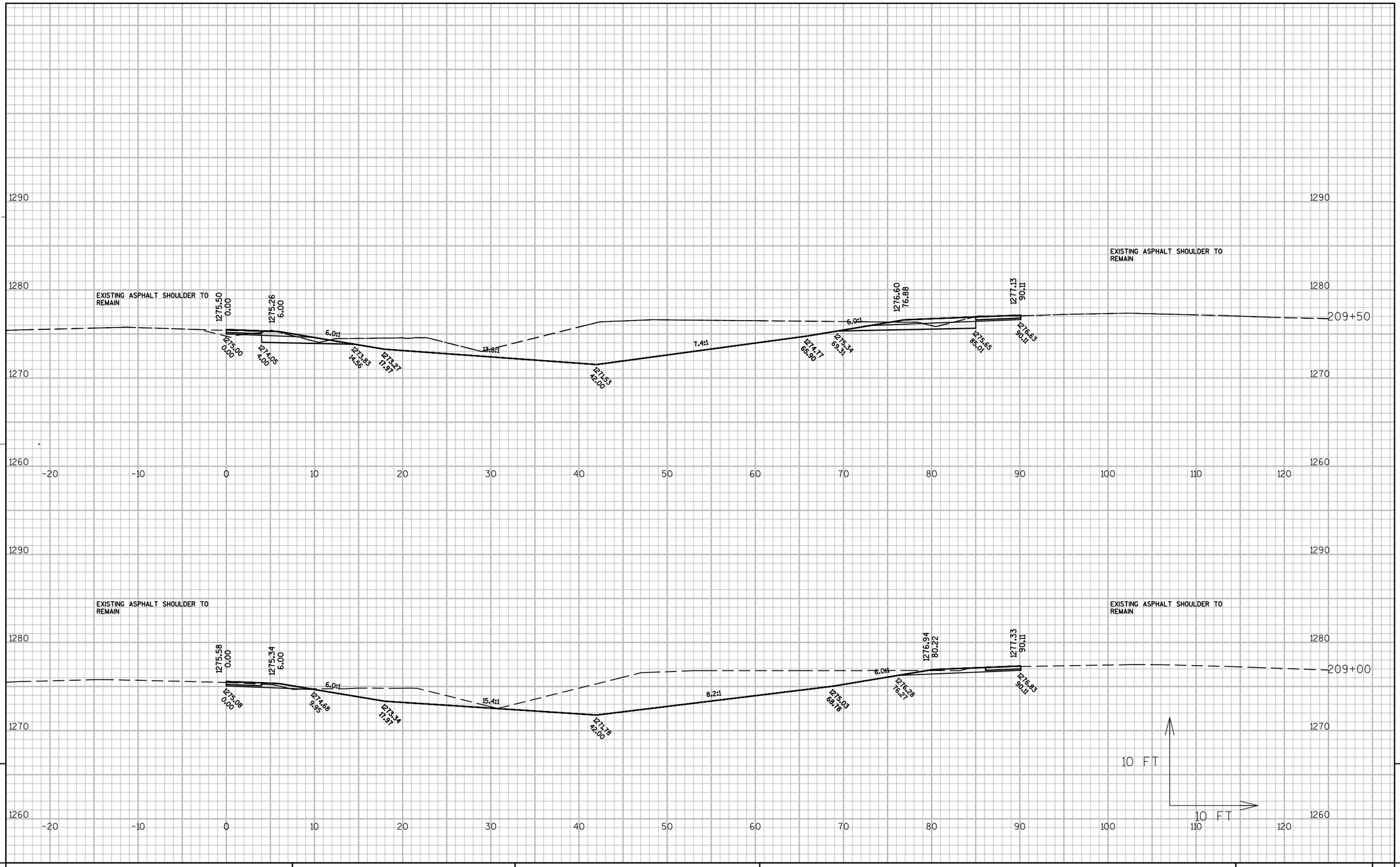
10 FT
10 FT

9

9

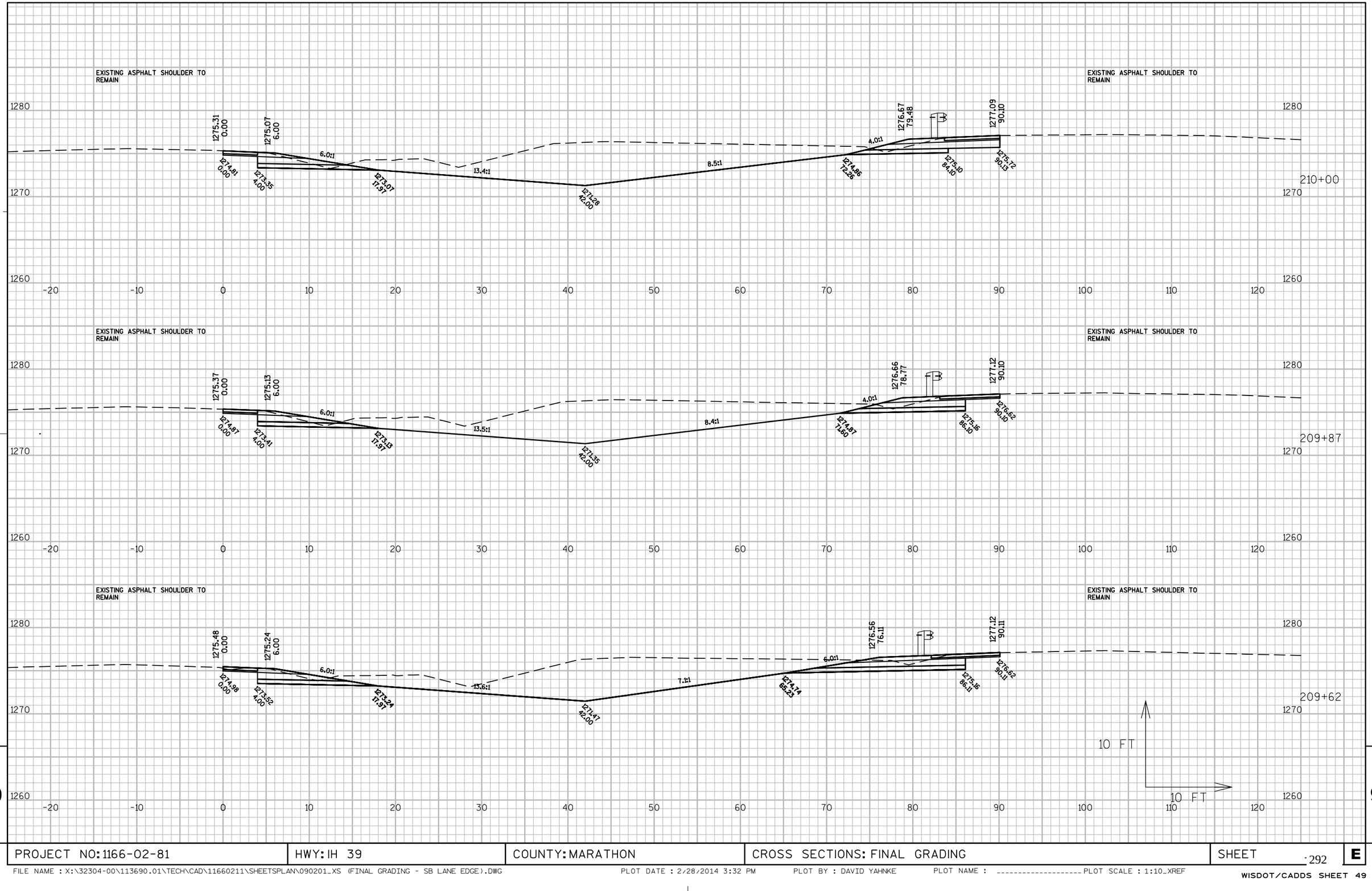
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 290	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:31 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1:10_XREF
WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 291	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:32 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

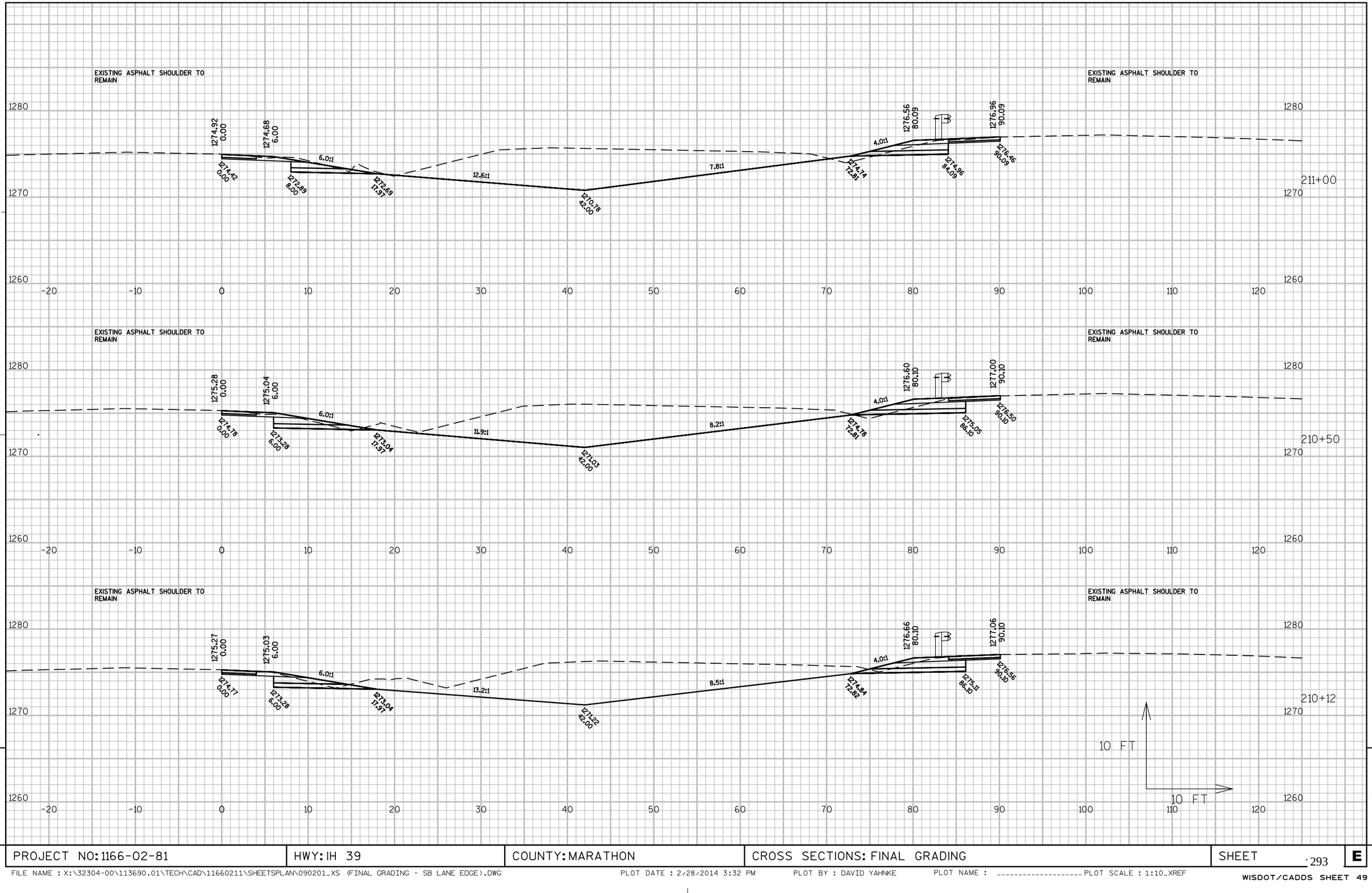


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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 292	E

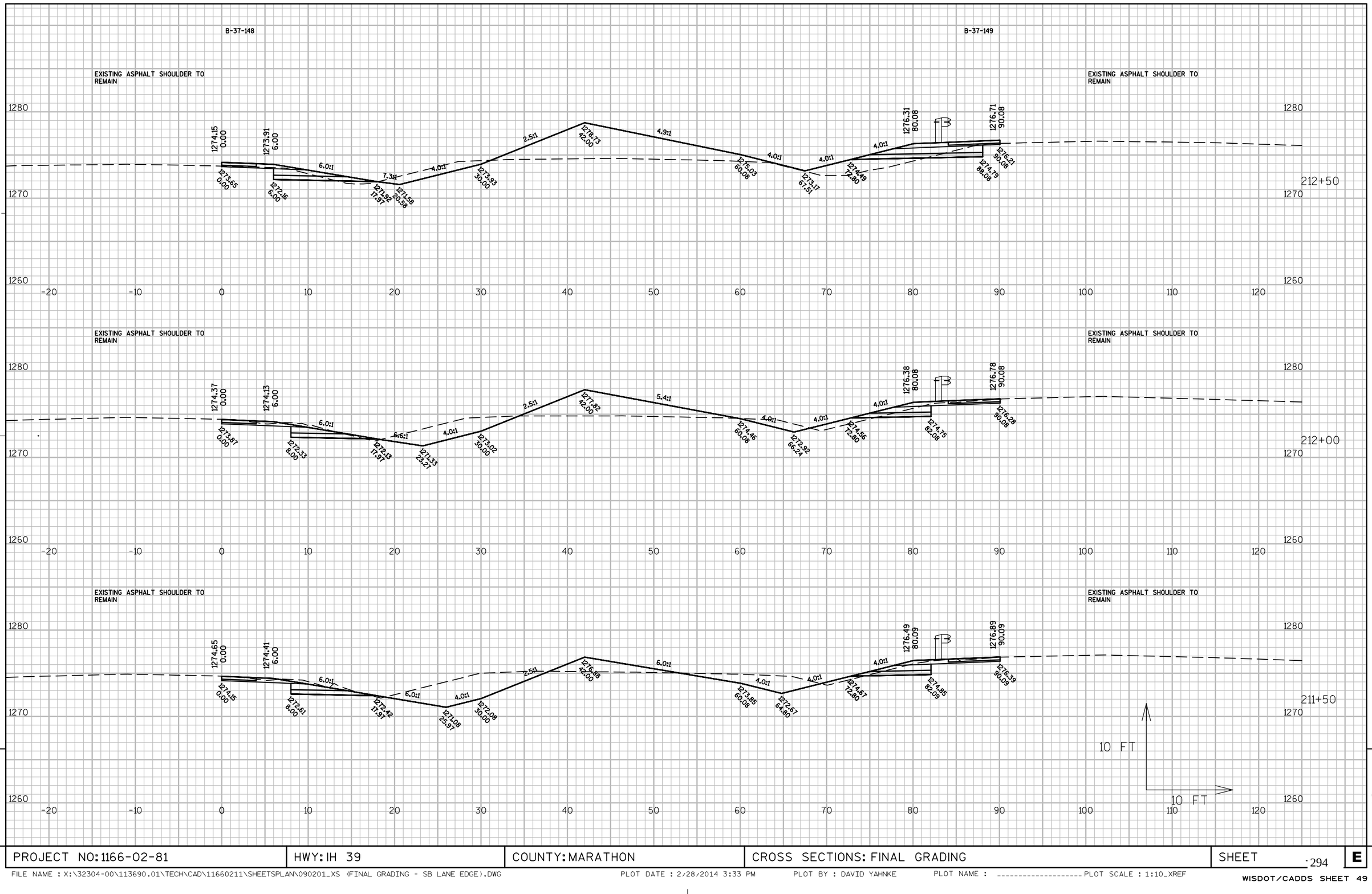
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:32 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1:10_XREF



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 293	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:32 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1:10_XREF

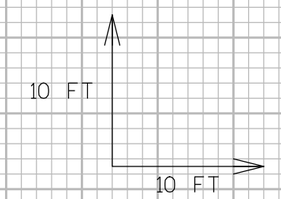
WISDOT/CADDS SHEET 49



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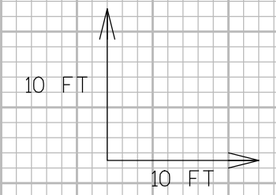
PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 294	E



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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 295	E



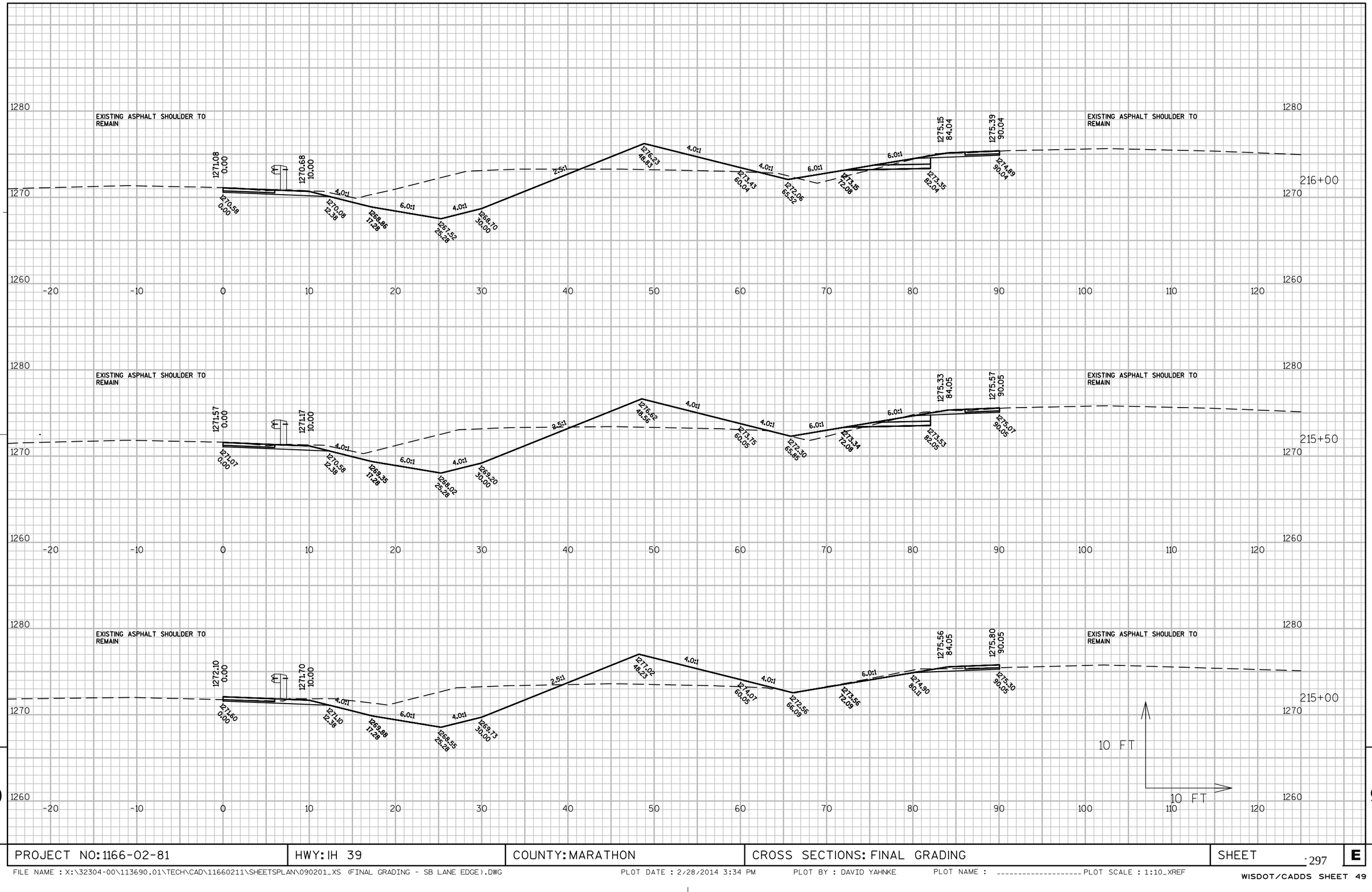
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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 296	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:33 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

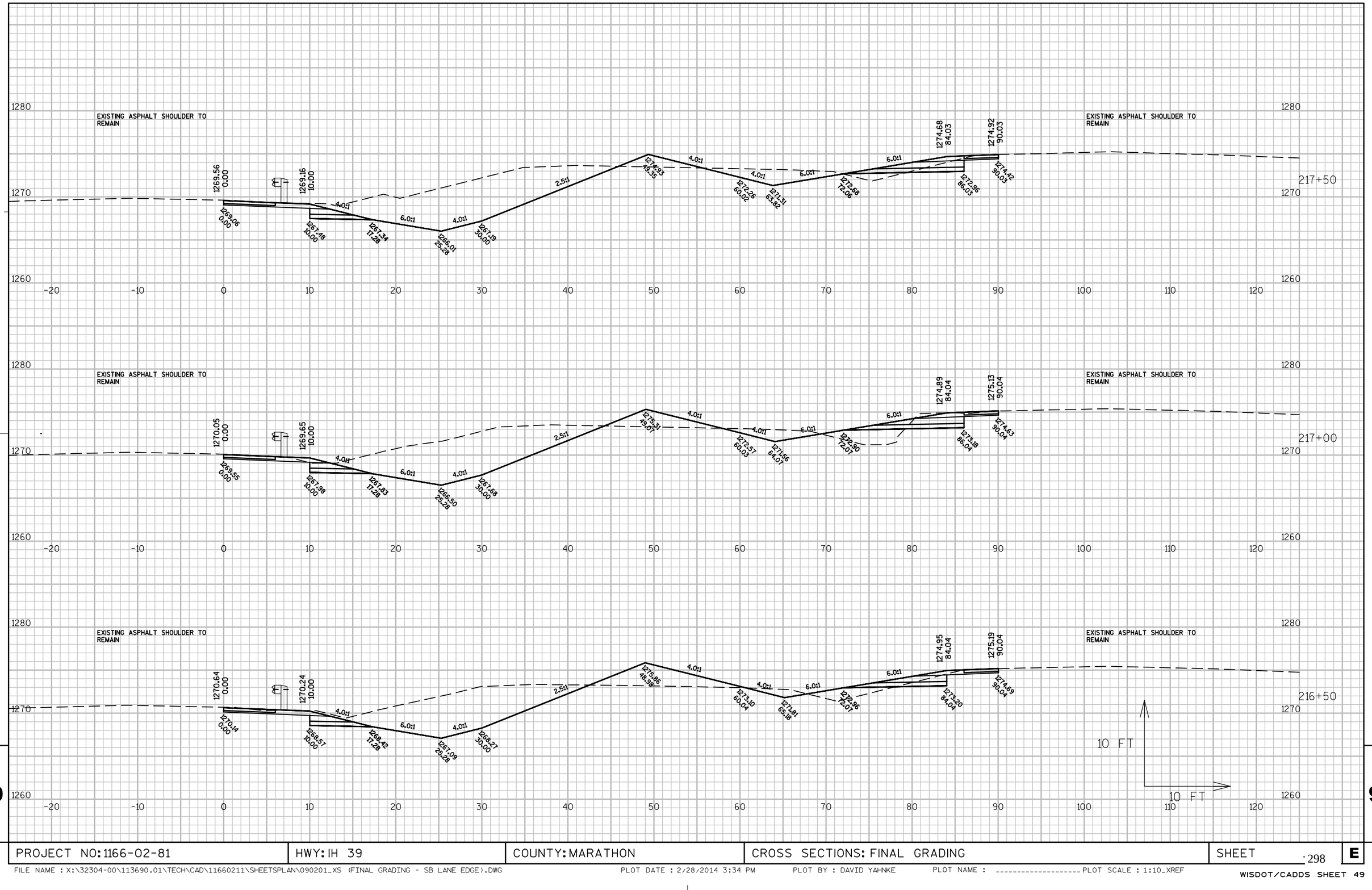


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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 297	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:34 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1:10_XREF

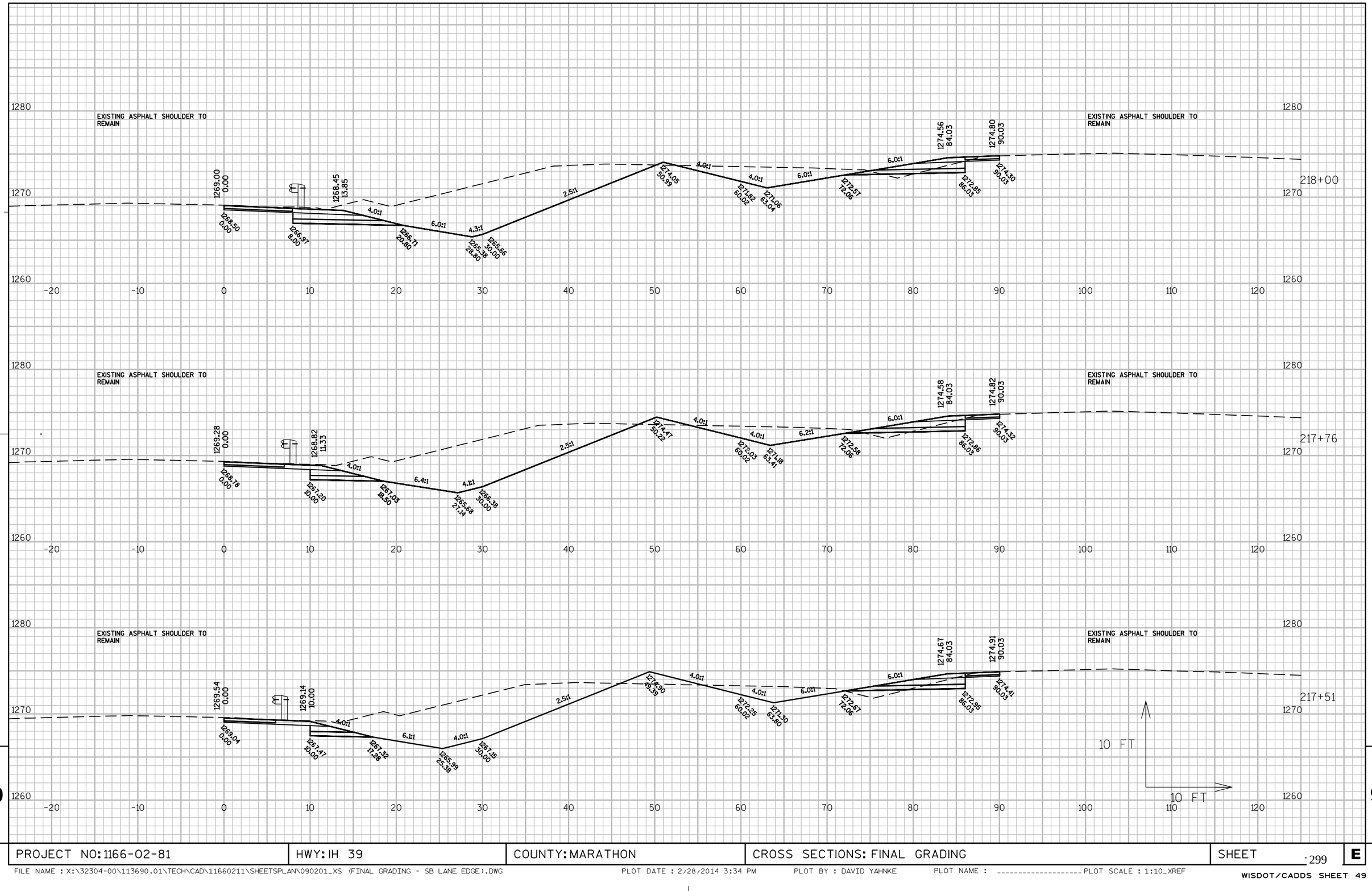
WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 298	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:34 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1:10_XREF

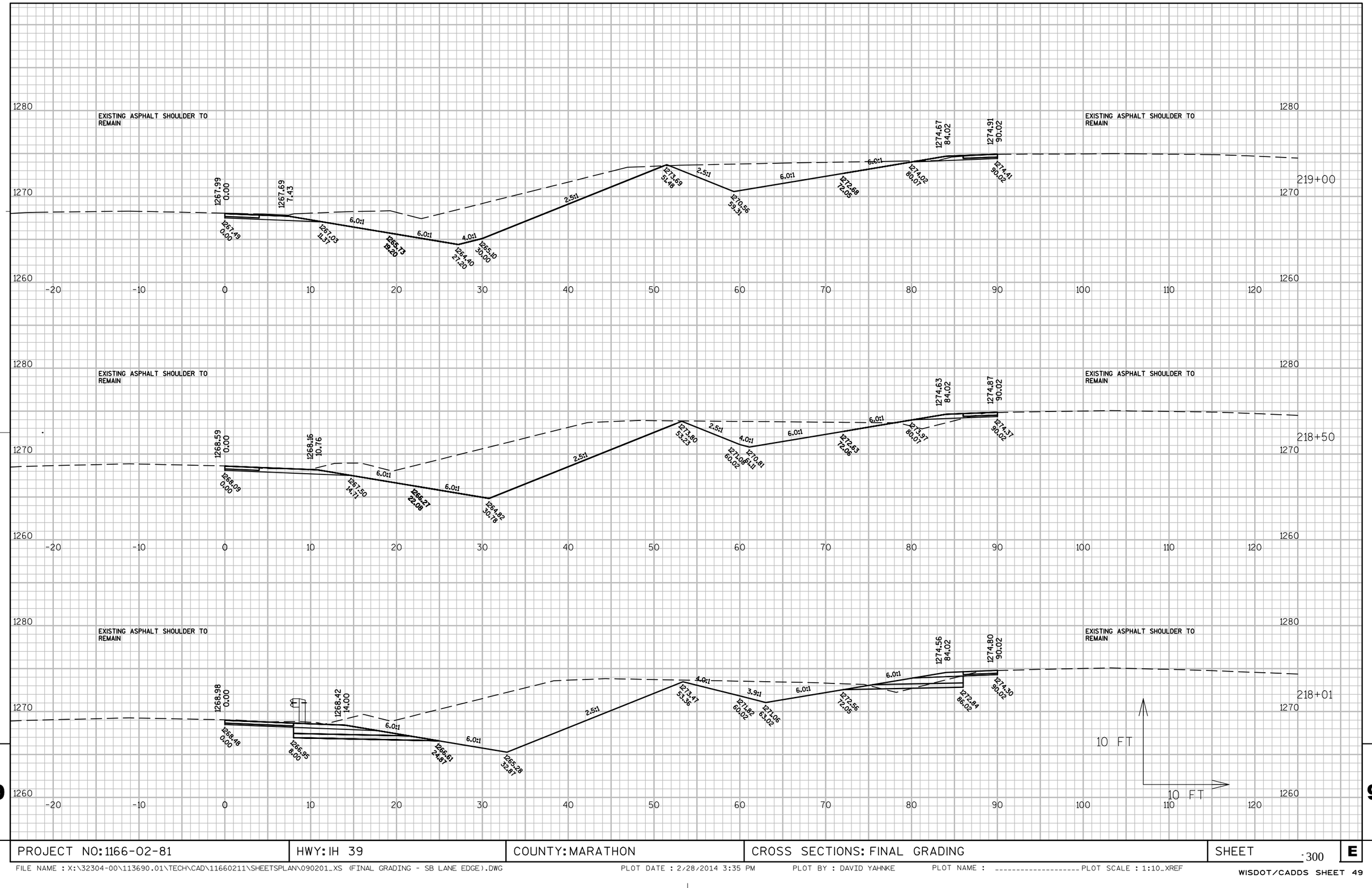
WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 299	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:34 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

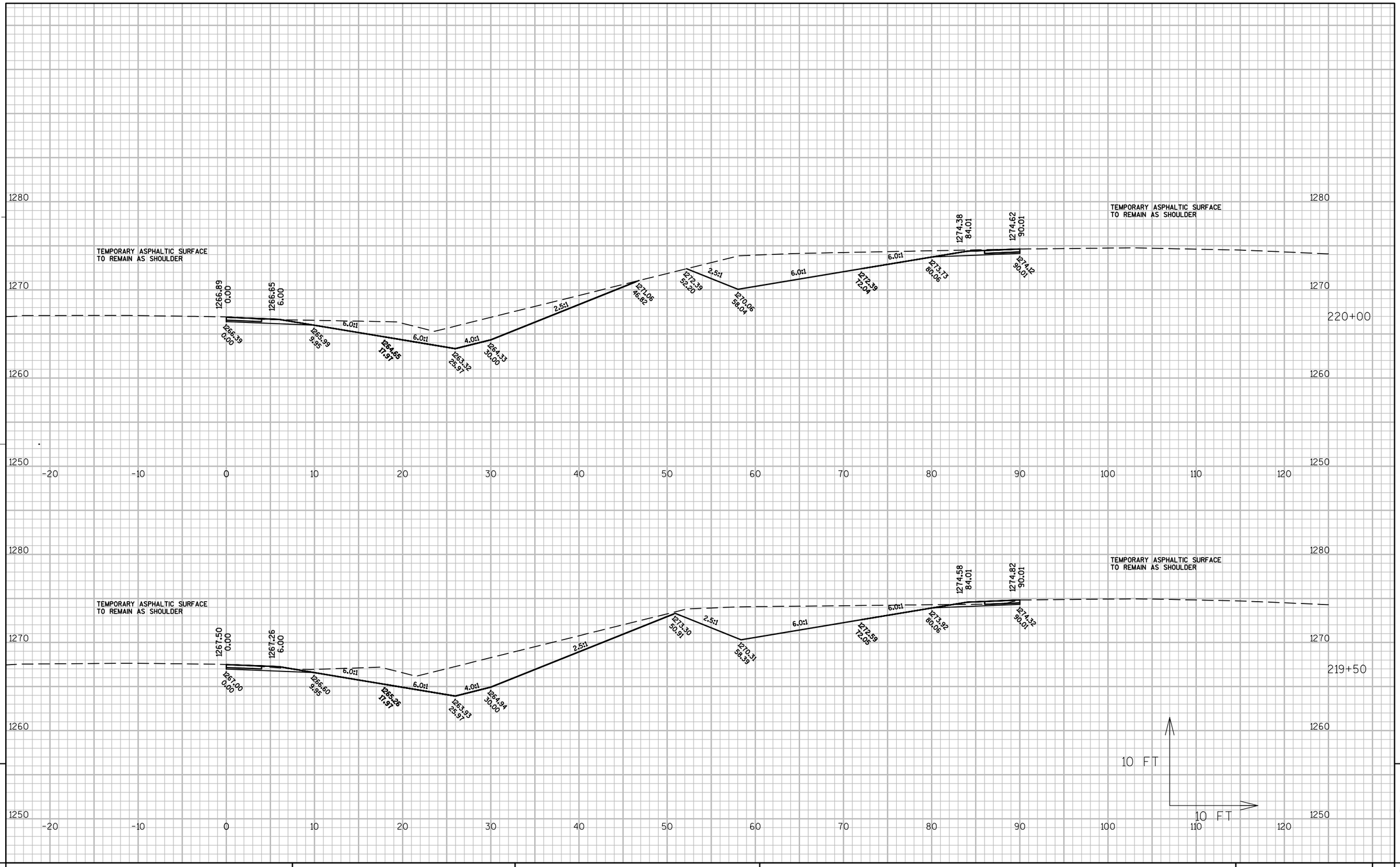


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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 300	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:35 PM PLOT BY : DAVID YAHNKE PLOT NAME : _____ PLOT SCALE : 1:10_XREF

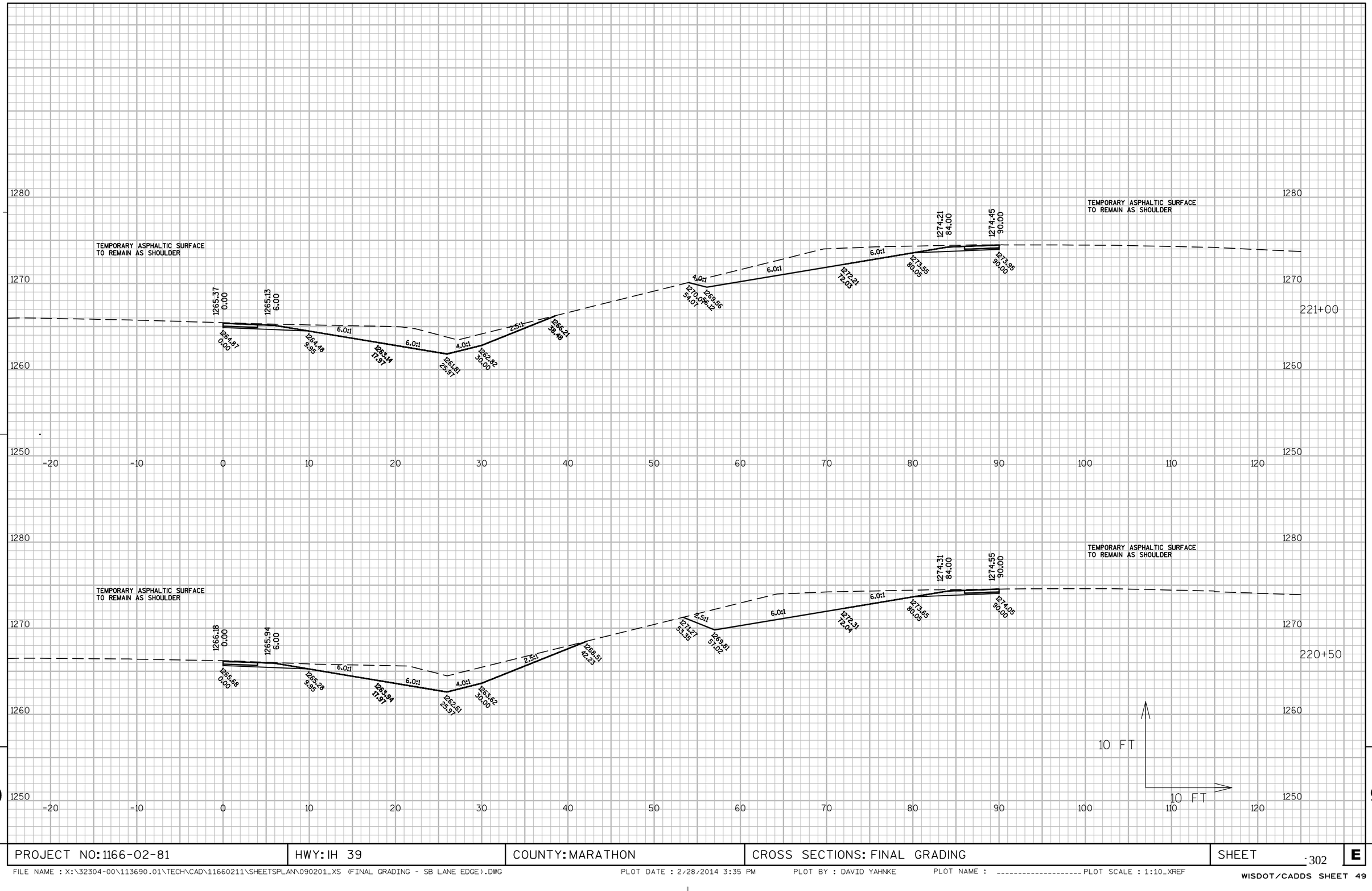


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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 301	E

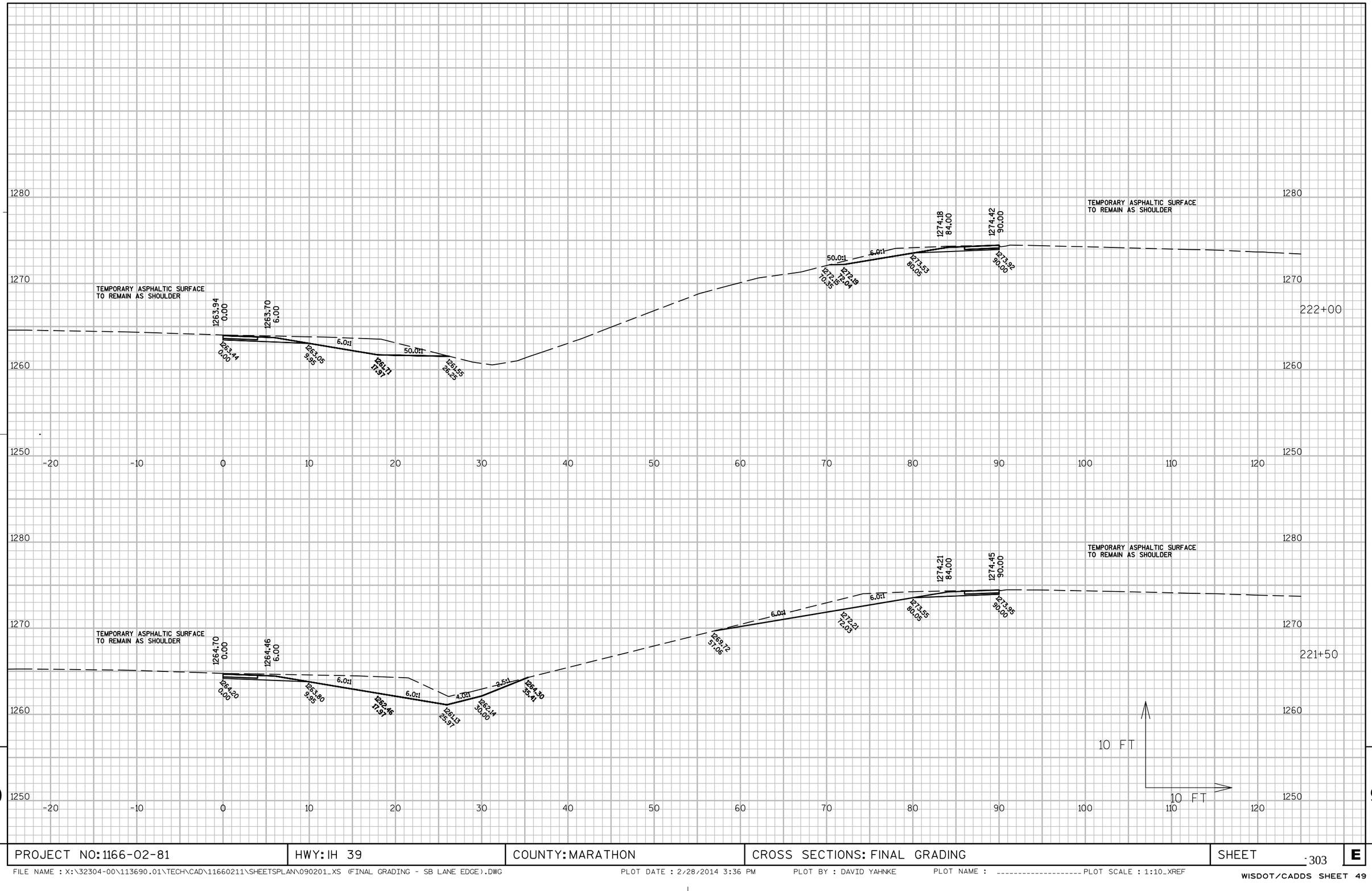
FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:35 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 302	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:35 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

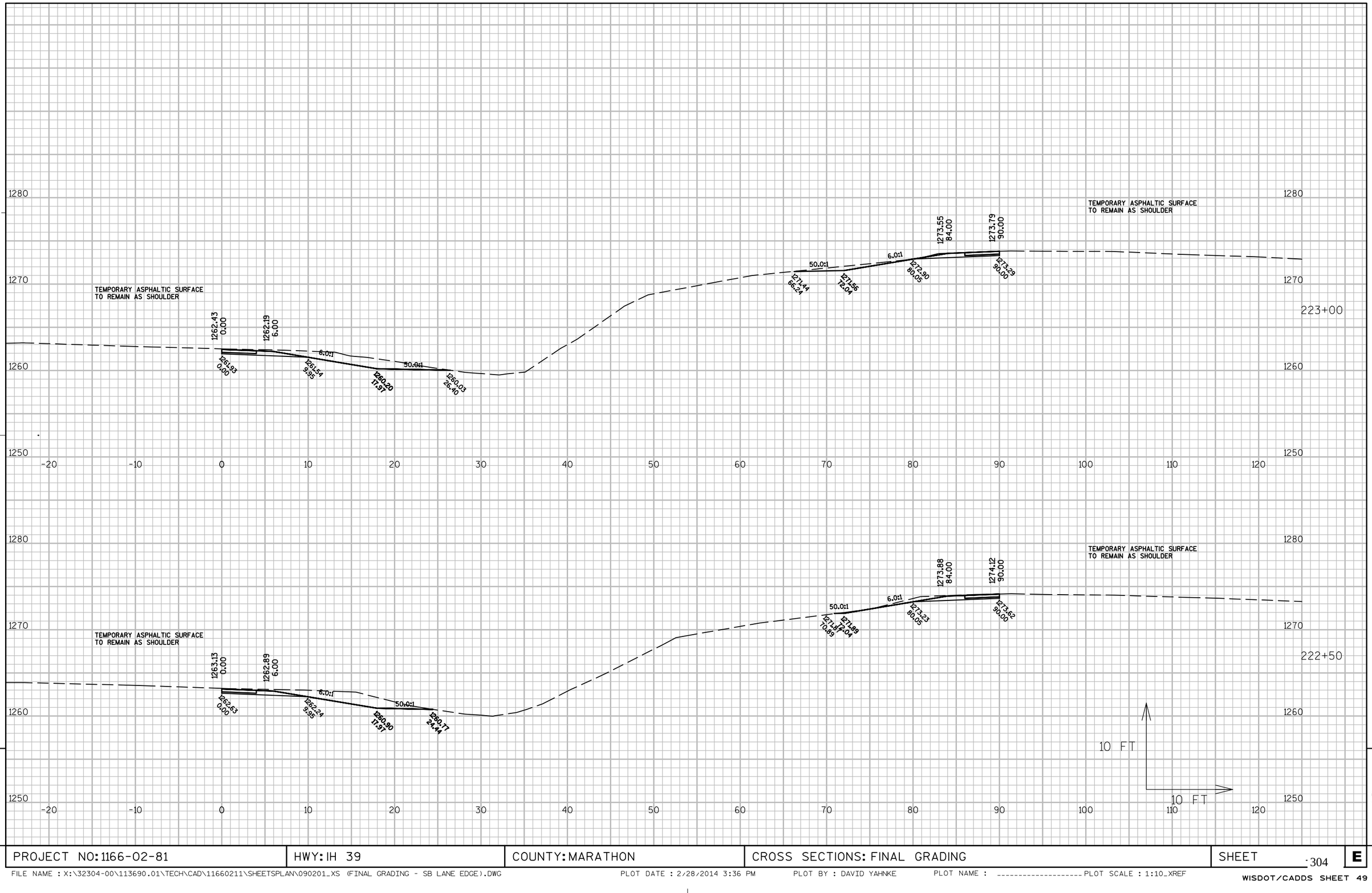
WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 303	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:36 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

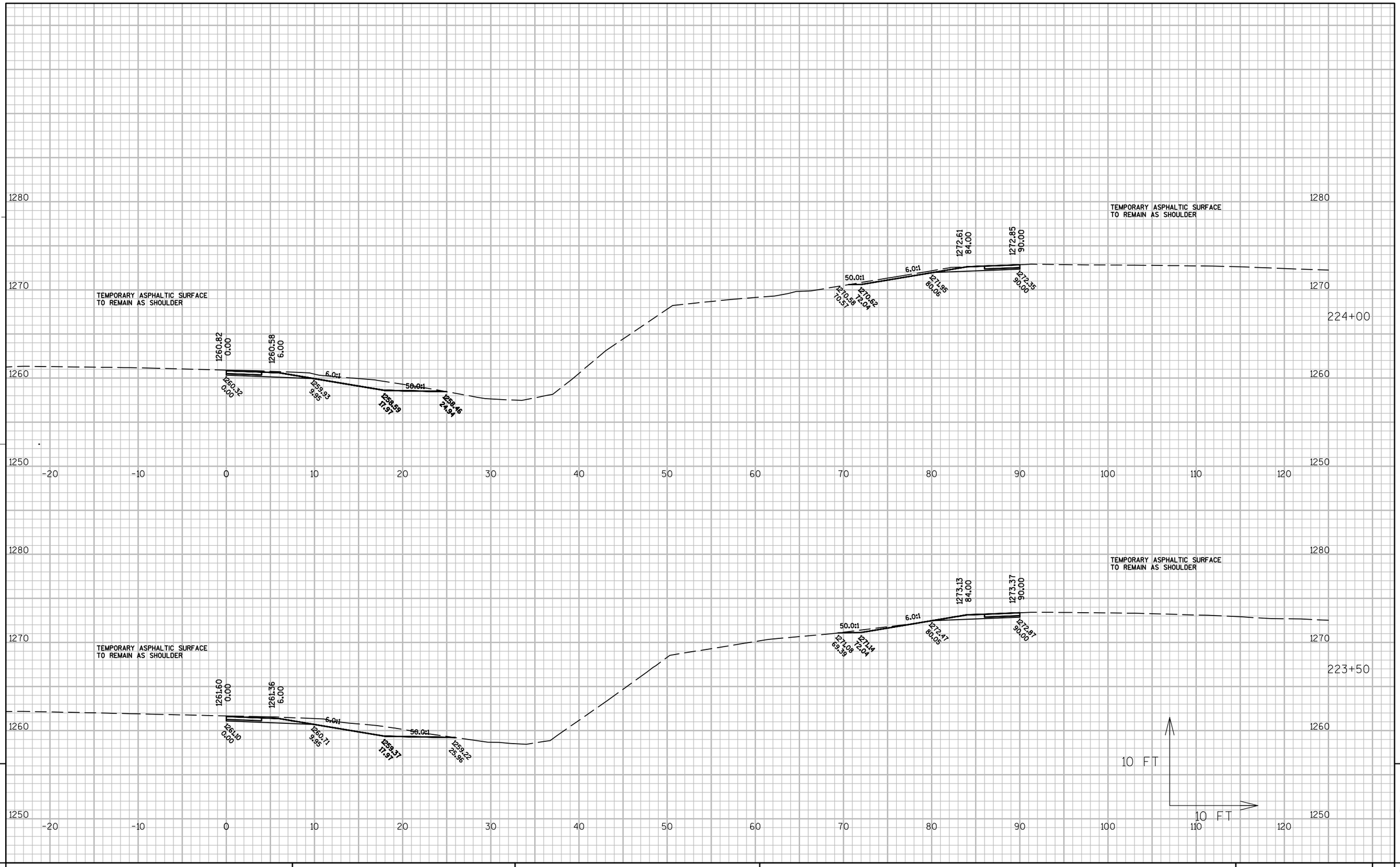


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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 304	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:36 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF



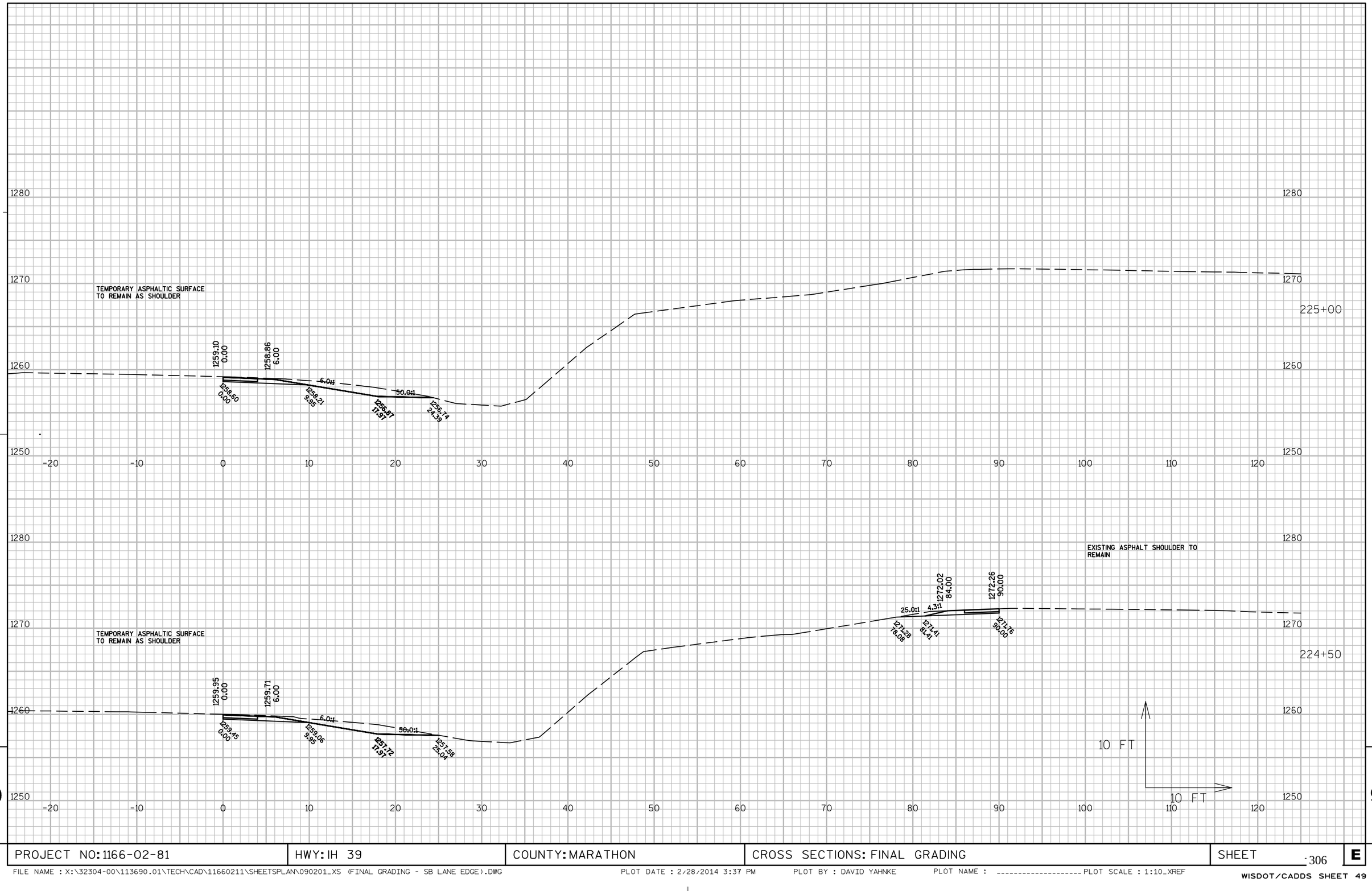
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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 305	E

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FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:36 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



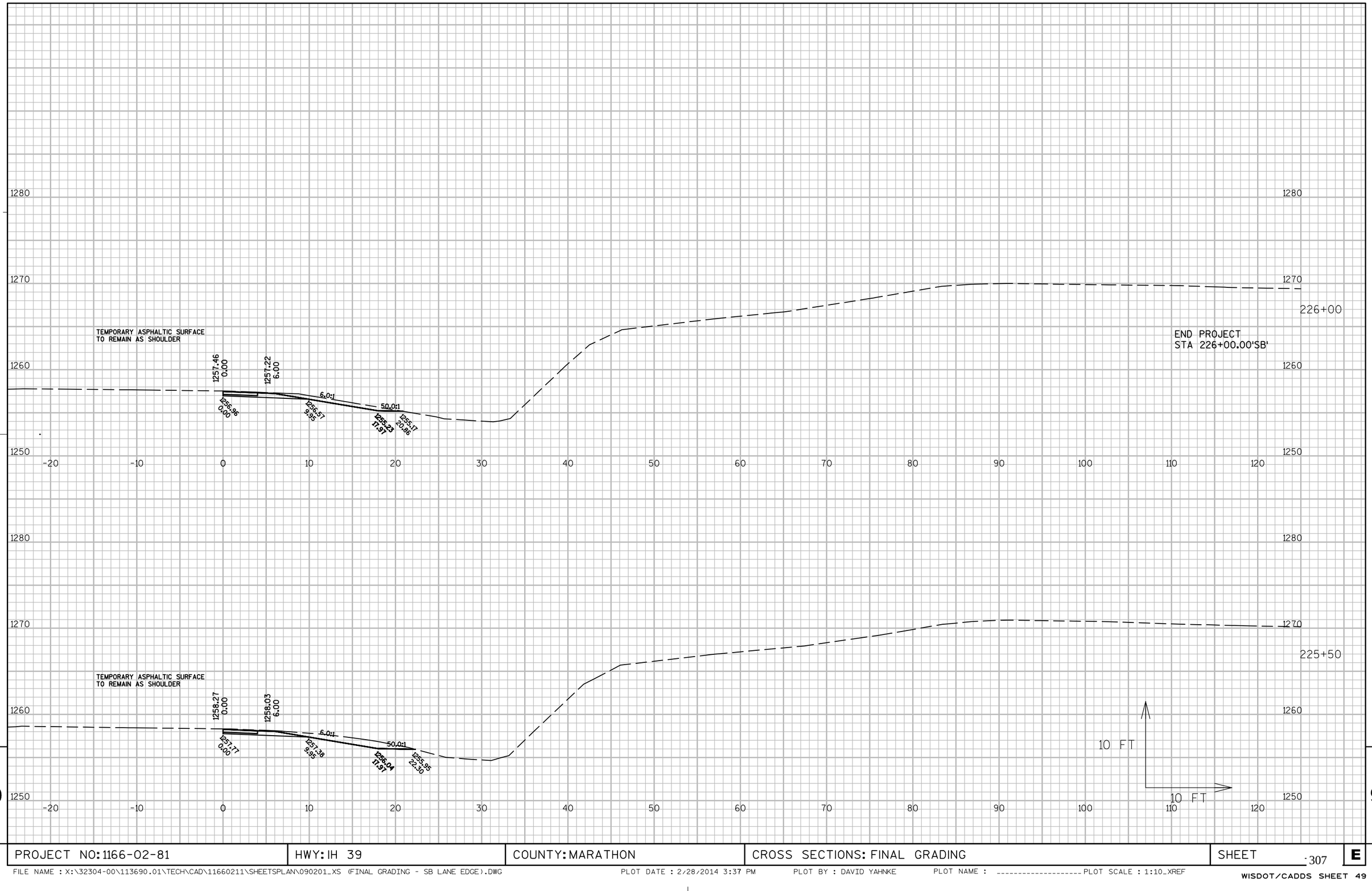
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PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 306	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:37 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



PROJECT NO: 1166-02-81	HWY: IH 39	COUNTY: MARATHON	CROSS SECTIONS: FINAL GRADING	SHEET 307	E

FILE NAME : X:\32304-00\113690.01\TECH\CAD\11660211\SHEETSPLAN\090201_XS (FINAL GRADING - SB LANE EDGE).DWG PLOT DATE : 2/28/2014 3:37 PM PLOT BY : DAVID YAHNKE PLOT NAME : ---------- PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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