

MAD DECEMBER 2013

ORDER OF SHEETS

Section No. 1 Title  
Section No. 2 Typical Sections and Details  
Section No. 3 Estimate of Quantities  
Section No. 3 Miscellaneous Quantities  
Section No. 4 Right of Way Plat  
Section No. 5 Plan and Profile (Includes Erosion Control Plan)  
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 = 188

# STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

## MADISON - PORTAGE

(USH 151 OVERPASS STRUCTURES)

IH 39  
DANE COUNTY

STATE PROJECT NUMBER  
**1010-02-79**



### DESIGN DESIGNATION

A.A.D.T. (2014) = 52,400  
A.A.D.T. (2034) = 68,400  
D.H.V. = NA  
D.D. = 60/40  
T. = 30.7%  
DESIGN SPEED = 70 mph  
ESALS = 20,000,000

### 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  
MARSH AREA  
WOODED OR SHRUB AREA

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

BEGIN PROJECT 1010-02-79

STA. 393+50.00'WB'

Y = 506,195.695  
X = 844,430.644

END PROJECT 1010-02-79

STA. 404+50.00'WB'

Y = 505,208.919  
X = 844,916.719

SCALE 0 1/2 MI. 1 MI.  
TOTAL NET LENGTH OF CENTERLINE = 0.208 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO  
THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS),  
DANE COUNTY, NAD83 (2007) ADJUSTMENT.

STATE PROJECT

1010-02-79

FEDERAL PROJECT

PROJECT

WISC 2013506

CONTRACT

1

ORIGINAL PLANS PREPARED BY

**AYRES**  
ASSOCIATES



7/12/2013 Christopher M. Urchell  
(Date) (Signature)



7/22/2013 John A. Baneck  
(Date) (Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor Ayres Associates  
Designer Ayres Associates  
Project Manager Bob Lex  
Regional Examiner  
Regional Supervisor Chris Hodges  
C.O. Examiner

APPROVED FOR THE DEPARTMENT

DATE: 7/22/13 Chris A. Hodges  
(Signature)

E

GENERAL NOTES

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

COORDINATES AND BEARINGS ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DANE COUNTY, NAD83/2007 ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE USED AS GRID OR GROUND VALUES.

PLAN ELEVATIONS ARE REFERENCED TO NGVD88 (2007).

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY AND WASTE AREAS, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED, MULCHED, OR TEMPORARY SEEDED AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

CONTRACTOR SHOULD NOT OPERATE BEYOND SLOPE INTERCEPTS AS SHOWN IN THE PLANS WHEN ADJACENT TO WETLANDS OR ENVIRONMENTALLY SENSITIVE AREAS.

NO EQUIPMENT OR MATERIALS SHALL BE STORED IN OR IMPACT ANY WETLANDS OR WATERWAYS.

SOME EROSION CONTROL ITEMS ARE INCLUDED AS UNDISTRIBUTED QUANTITIES. THE ENGINEER SHALL DETERMINE THE EXACT LOCATION, IF USED IN THE FIELD. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. AT THAT TIME THE CONTRACTOR SHALL REMOVE THE EROSION CONTROL ITEM.

PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN PAVING DETAILS AND TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING OR TURNING LANE.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 110 LBS/SY-IN. ASPHALTIC MATERIAL IS ESTIMATED AT 5.5% OF HMA PAVEMENT QUANTITY.

3.5" HMA PAVEMENT TYPE E-30 SHALL BE PLACED IN TWO LAYERS ON TRAFFIC LANES AND MAY BE PLACED IN ONE LAYER ON THE SHOULDERS (12.5mm NOMINAL AGGREGATE SIZE). USE ASPHALTIC MATERIAL PG64-28 FOR ALL LAYERS. IF A MICHIGAN JOINT IS USED IN HMA PAVEMENT, REMOVE THIS JOINT PRIOR TO PAVING AGAINST IT

ABBREVIATIONS

|        |                                        |        |                                      |
|--------|----------------------------------------|--------|--------------------------------------|
| A.D.T. | AVERAGE DAILY TRAFFIC                  | NB     | NORTHBOUND                           |
| ATMS   | ARTERIAL TRAFFIC MANAGEMENT SYSTEM     | NOR    | NORMAL                               |
| BM     | BENCHMARK                              | PC     | POINT OF CURVATURE                   |
| BOC    | BACK OF CURB                           | PCC    | POINT OF COMMON CURVATURE            |
| BTWN   | BETWEEN                                | PGL    | PROFILE GRADE LINE                   |
| C&G    | CURB AND GUTTER                        | PI     | POINT OF INTERSECTION                |
| C.E.   | COMMERCIAL ENTRANCE                    | PRC    | POINT OF REVERSE CURVATURE           |
| CONST. | CONSTRUCTION                           | PT     | POINT OF TANGENCY                    |
| CP     | CONTROL POINT                          | PVT    | PAVEMENT                             |
| CTR.   | CENTER                                 | R/L    | REFERENCE LINE                       |
| D.D.   | DIRECTIONAL DISTRIBUTION               | R/W    | RIGHT-OF-WAY                         |
| D.H.V. | DESIGN HOURLY VOLUME                   | REQ'D  | REQUIRED                             |
| DMS    | DYNAMIC MESSAGE SIGN                   | SB     | SOUTHBOUND                           |
| EB     | EASTBOUND                              | SYM    | SYMMETRICAL                          |
| EXIST  | EXISTING                               | T.     | PERCENT TRUCKS                       |
| GALV.  | GALVANIZE                              | TCC    | TRAFFIC CONDITION CAMERA             |
| HMA    | HOT MIX ASPHALT                        | TE     | TRAFFIC ENGINEERING, CITY OF MADISON |
| H.S.   | HIGH STRENGTH                          | TYP.   | TYPICAL                              |
| ITS    | INTELLIGENT TRAFFIC SYSTEM             | VAR.   | VARIABLE                             |
| MAX    | MAXIMUM                                | WB     | WESTBOUND                            |
| MIN    | MINIMUM                                | Wt.    | WEIGHT                               |
| MMSD   | MADISON METROPOLITAN SEWERAGE DISTRICT | X-WALK | CROSS WALK                           |

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES & CONTACTS  
TYPICAL SECTIONS  
CONTROL POINT TIES  
CONSTRUCTION DETAILS  
PAVING DETAILS  
PAVEMENT MARKING  
TRAFFIC CONTROL AND CONSTRUCTION STAGING  
ALIGNMENT DIAGRAM

UTILITY CONTACTS

ALLIANT ENERGY

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MADISON, WI 53718-2148  
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(608)-395-7395 CELL  
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ATC MANAGEMENT, INC. - ELECTRICITY

MIKE OLSEN  
801 O'KEEFE ROAD  
P.O. BOX 6113  
DE PERE, WI 54115-6113  
(920) 660-2390  
MOLSEN@ATCLLC.COM

AT&T LEGACY - COMMUNICATION LINE

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AT&T LEGACY  
866 ROCK CREEK ROAD  
PLANO, IL 60545  
(630) 552-4677  
CDONAHUE@ATT.COM

ALTERNATE CONTACT:  
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BILL KOENIG  
PO BOX 244  
LAKE MILLS, WI 53551  
(608)-628-0575  
JMC@FRONTIER.COM

CENTURYLINK - COMMUNICATION

KYLE TOSTENSON  
100 CENTURYLINK DRIVE  
MONROE, LA 71203  
(318) 417-2768  
KYLE.TOSTENSON@CENTURYLINK.COM

CHARTER COMMUNICATIONS

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2701 DANIELS STREET  
MADISON, WI 53718

CITY OF MADISON LIGHTING/COMMUNICATION

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MADISON, WI 53701-2986  
608-267-8750  
DDRYER@CITYOFMADISON.COM

CITY OF MADISON - SEWER

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210 MARTIN LUTHER KING, JR. BOULEVARD  
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608-266-4751  
RPHILLIPS@CITYOFMADISON.COM

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MADISON WATER UTILITY - WATER

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119 E. OLIN AVENUE  
MADISON, WI 53713-4651  
608-261-9243  
DCAWLEY@MADISONWATER.ORG

MG&E - ELECTRICITY & GAS/PETROLEUM

TIM STATZ  
P.O. BOX 1231  
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TSTATZ@MGE.COM

WISDOT - COMMUNICATION LINE

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433 W. ST. PAUL AVENUE STE 300  
MILWAUKEE, WI 53203-3007  
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JEFFREY.MADSON@DOT.WI.GOV

OTHER CONTACTS

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(608) 267-1540 FAX  
FRICK@CO.DANE.WI.US

FEDERAL HIGHWAY ADMINISTRATION

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525 JUNCTION ROAD  
MADISON, WI 53717  
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JOHNNY.GERBITZ@DOT.GOV

PROJECT DESIGNER - AYRES ASSOCIATES

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SUITE 200  
MADISON, WI 53718  
(608) 443-1284  
BANECKJ@AYRESASSOCIATES.COM

WDNR LIASON

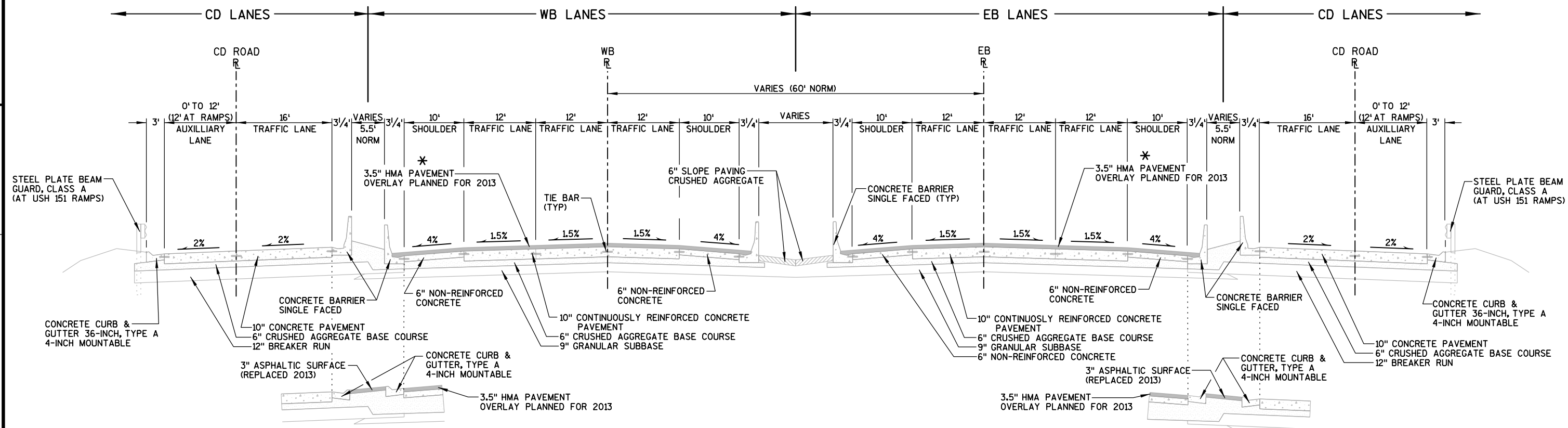
ERIC HEGGELUND  
3911 FISH HATCHERY ROAD  
MADISON, WI 53711  
(608) 275-3485  
ERIC.HEGGELUND@WISCONSIN.GOV

WISDOT PROJECT MANAGER

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WISDOT TRAFFIC

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JEFFREY.GUSTAFSON@DOT.WI.GOV



## CURB &amp; GUTTER

STA 378+50 WB TO STA 392+00 WB  
STA 415+00 WB TO STA 435+00 WB

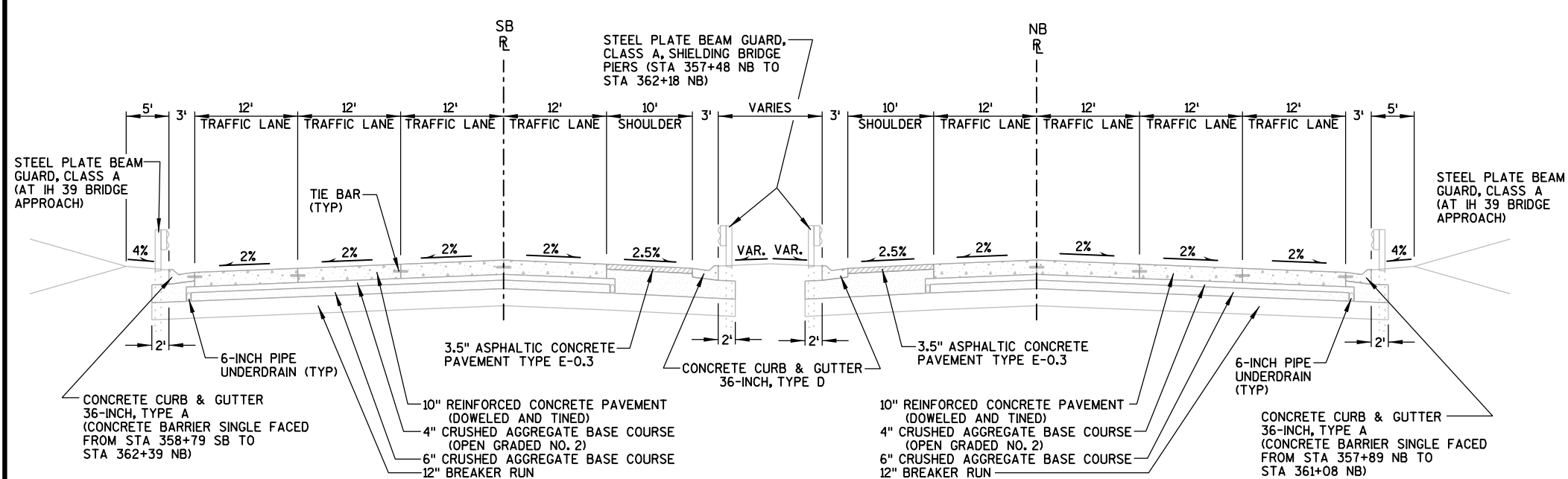
## TYPICAL EXISTING SECTION - IH 39

STA 370+00 EB TO STA 450+00 EB

\* NO HMA OVERLAY ON STRUCTURE OR  
APPROACH SLABS

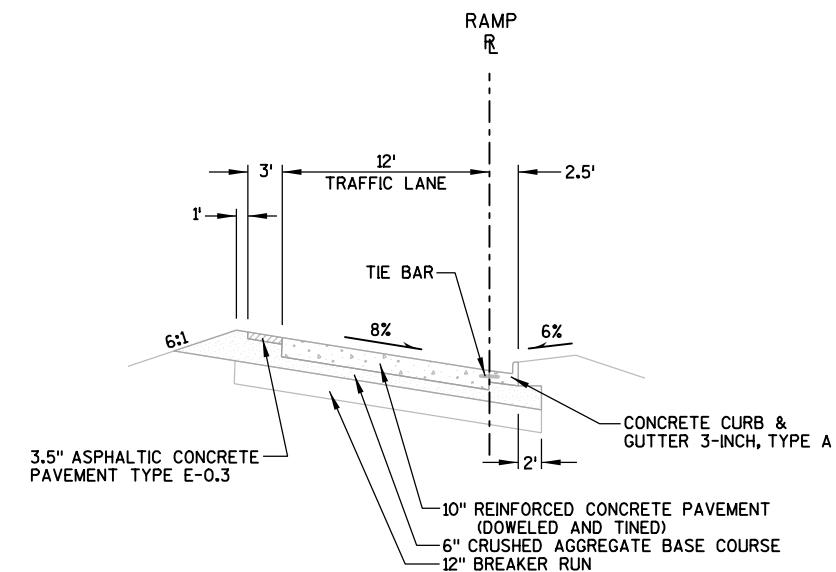
## CURB &amp; GUTTER

STA 381+00 EB TO STA 385+00 EB  
STA 413+00 EB TO STA 416+00 EB



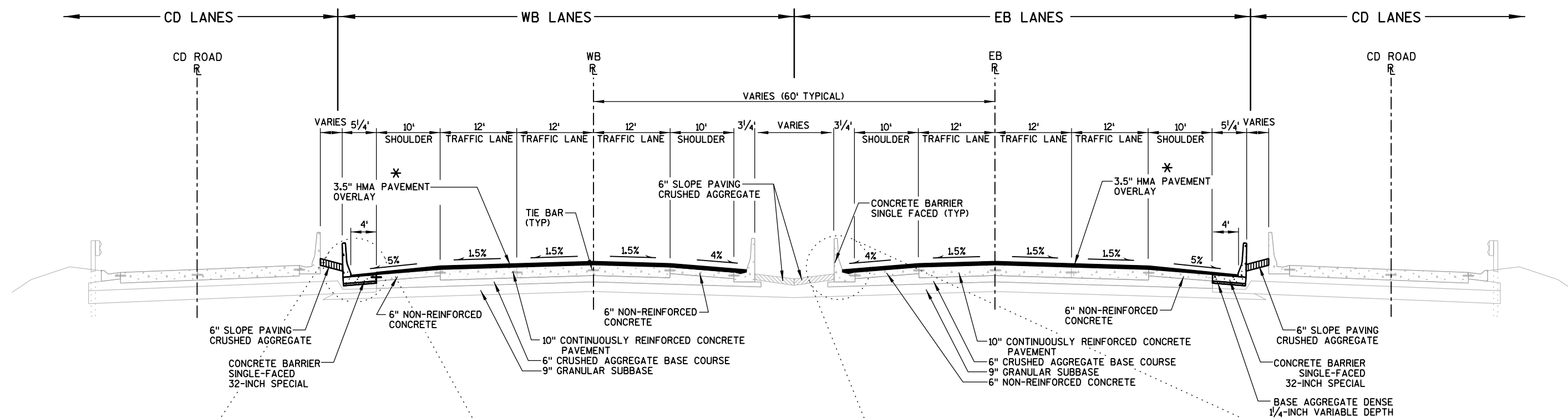
## TYPICAL EXISTING SECTION - USH 151

STA 356+00 NB TO STA 366+00 NB



## TYPICAL EXISTING SECTION - LOOP RAMPS

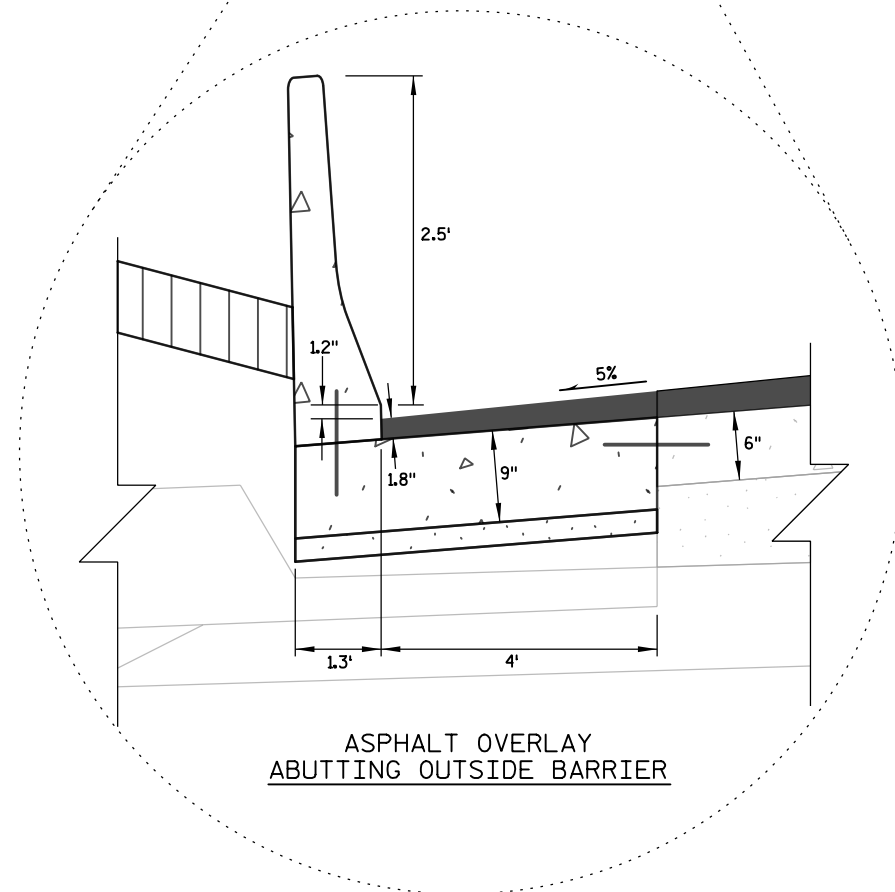
EB IH 39 TO NB USH 151  
WB IH 39 TO SB USH 151 (REVERSE)



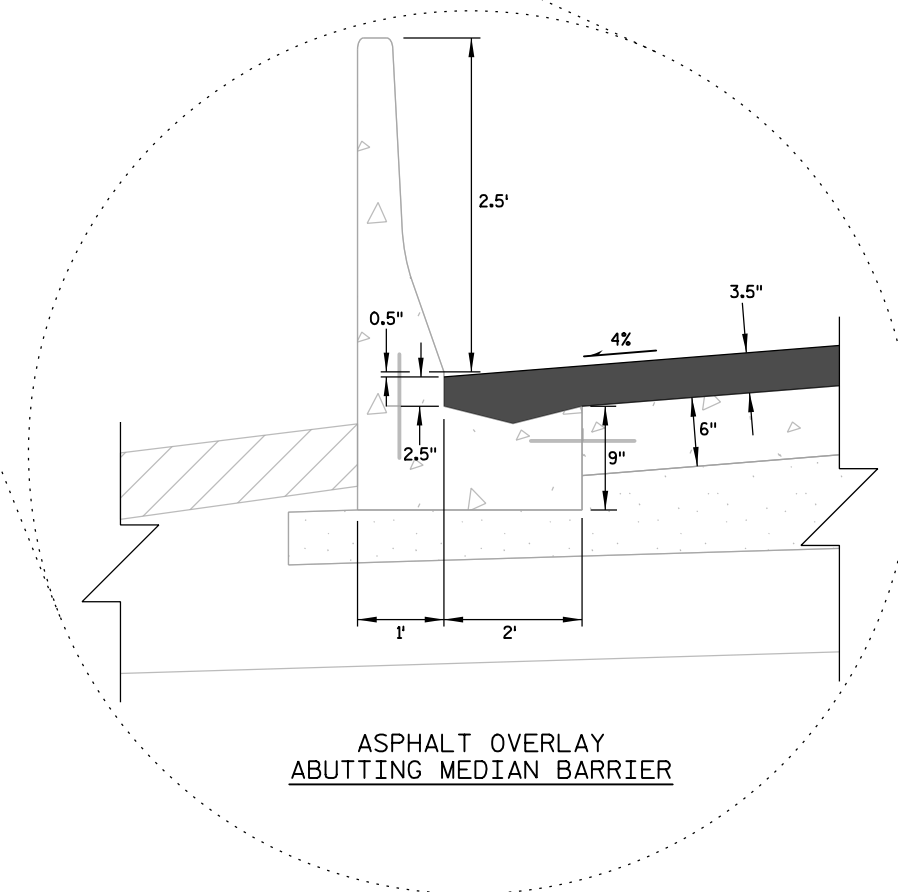
### TYPICAL FINISHED SECTION - IH 39

STA 393+50 WB TO STA 404+50 WB  
STA 394+50 EB TO STA 404+50 EB

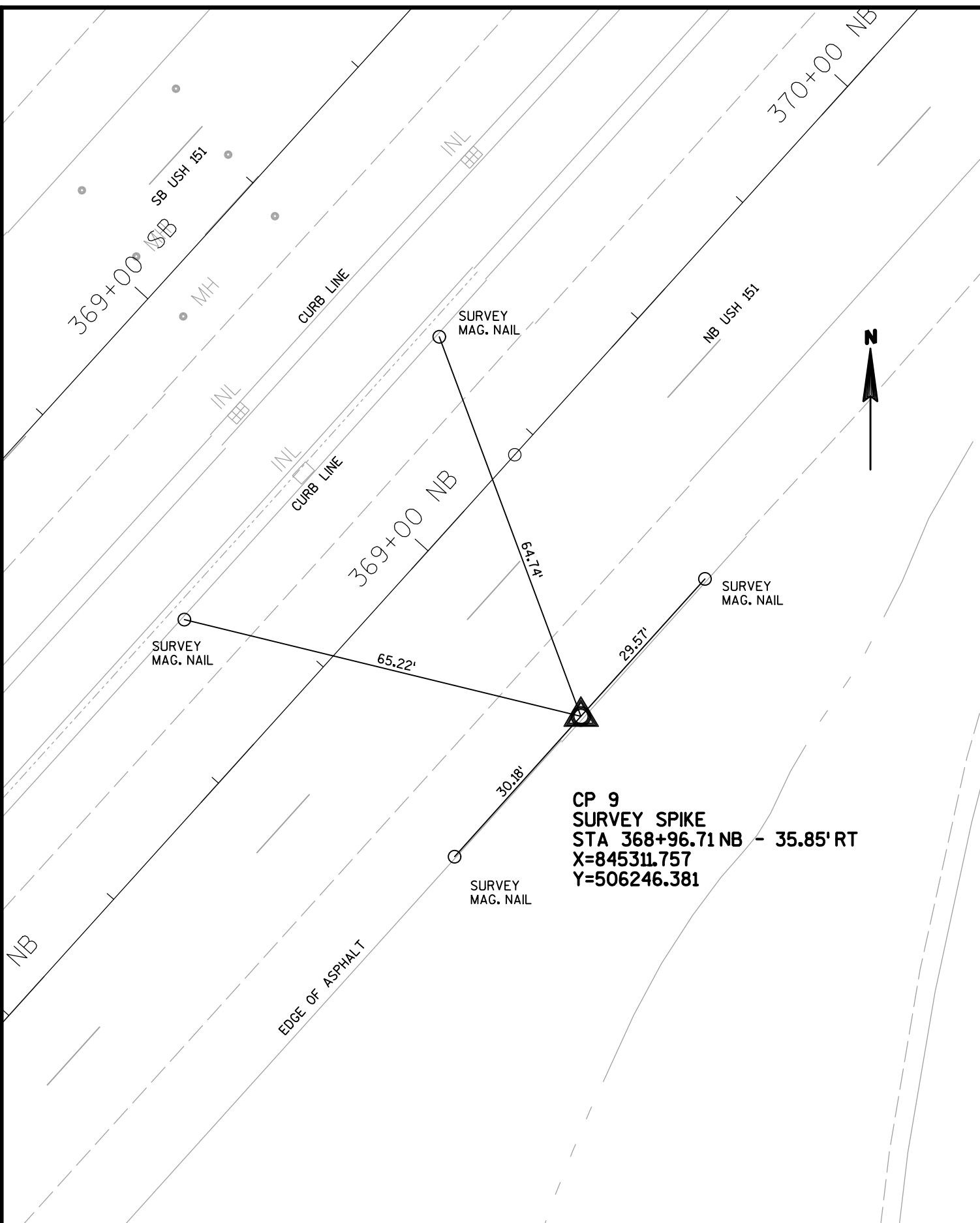
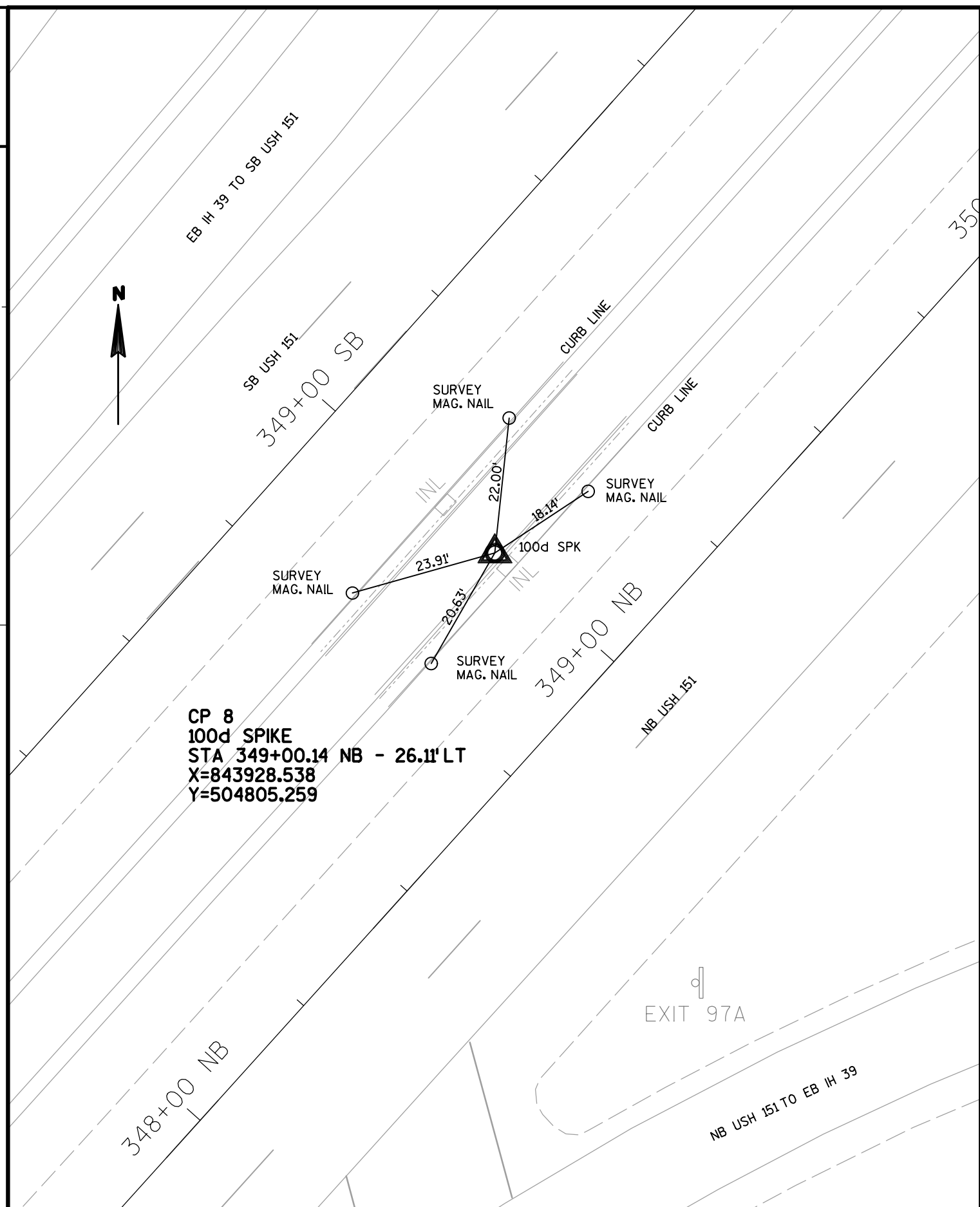
\* NO HMA OVERLAY ON STRUCTURE OR  
APPROACH SLABS

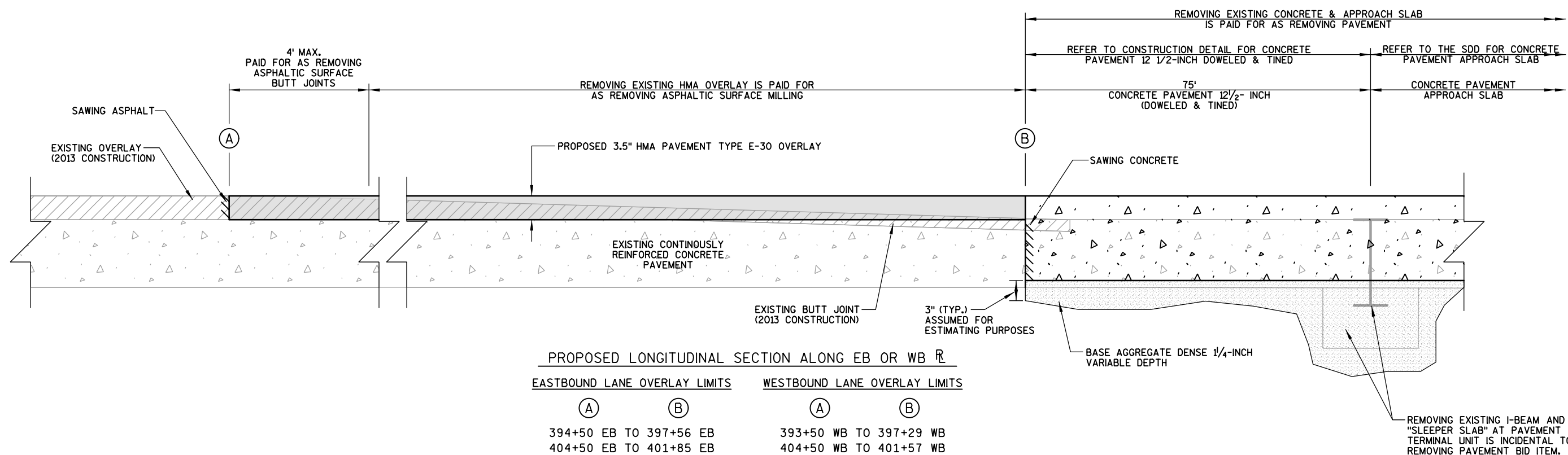
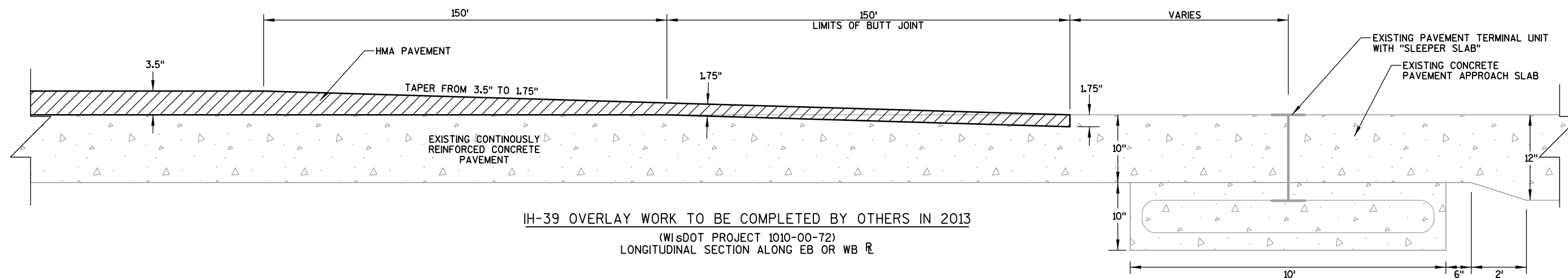


ASPHALT OVERLAY  
ABUTTING OUTSIDE BARRIER

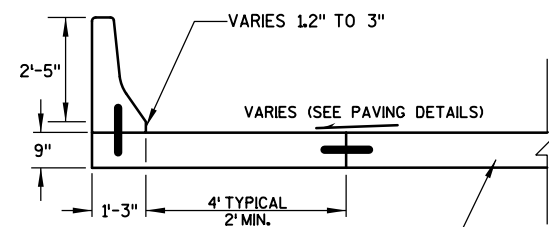
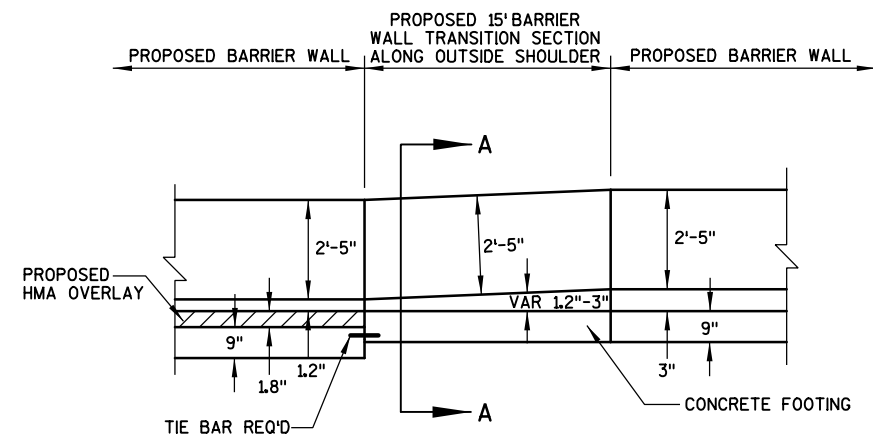


ASPHALT OVERLAY  
ABUTTING MEDIAN BARRIER

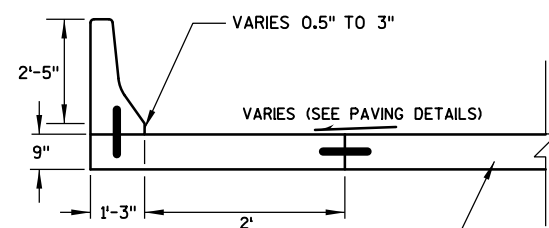
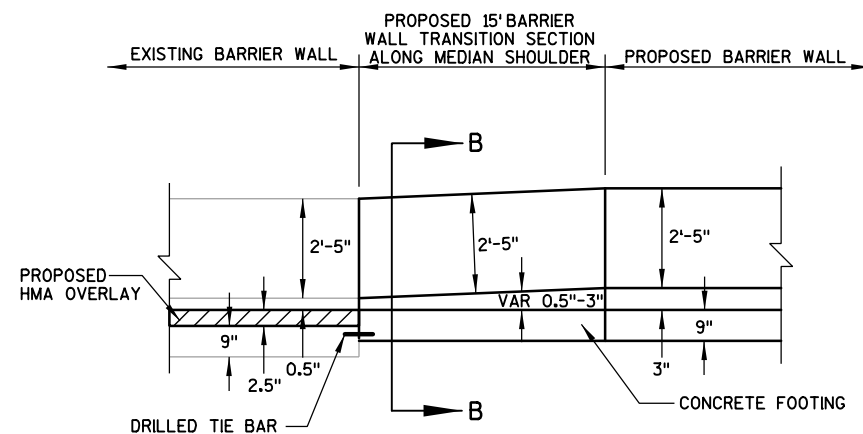




### PAVEMENT DETAILS



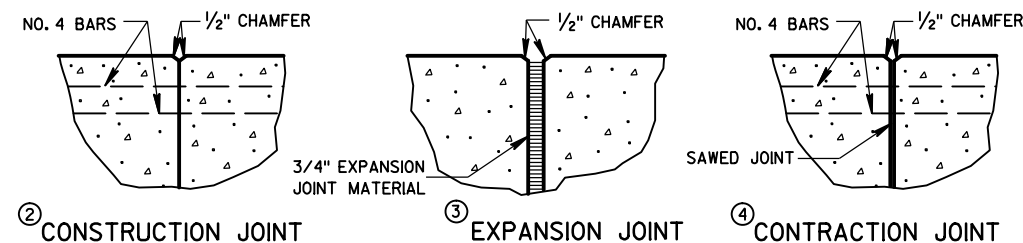
SECTION A-A



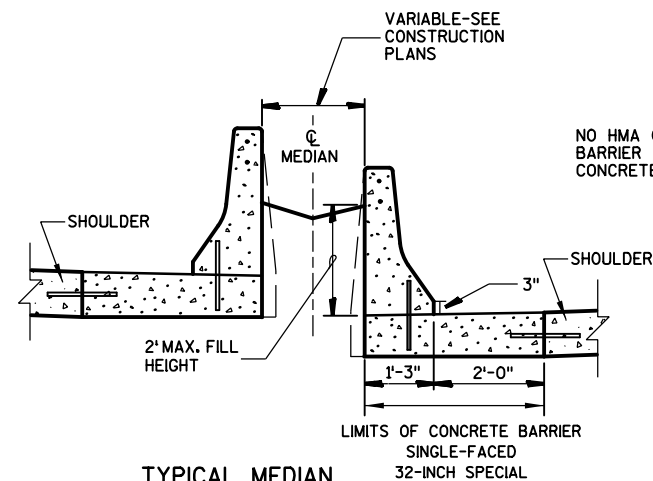
SECTION B-B

**CONCRETE BARRIER WALL TRANSITION SECTION 32-INCH, SPECIAL**

REFER TO THE SDD FOR CONCRETE BARRIER SINGLE FACED (WITH ANCHORAGE), AND CONSTRUCTION DETAIL FOR CONCRETE BARRIER SINGLE-FACED 32-INCH, SPECIAL, FOR OTHER PERTINENT INFORMATION



JOINT DETAILS



TYPICAL MEDIAN SECTION VIEW

**GENERAL NOTES**

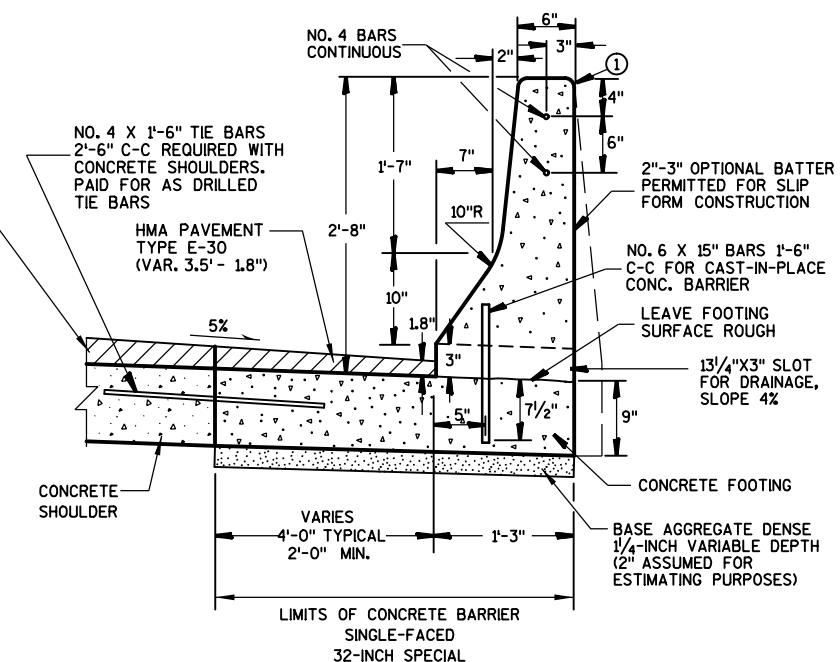
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

PRECAST UNITS SHALL BE FIRMLY BUTTED TOGETHER IN A CONTINUOUS LINE AND BE INTERCONNECTED BY VERTICAL MALE-FEMALE SHEAR CONNECTORS FORMED IN THE BARRIER ENDS.

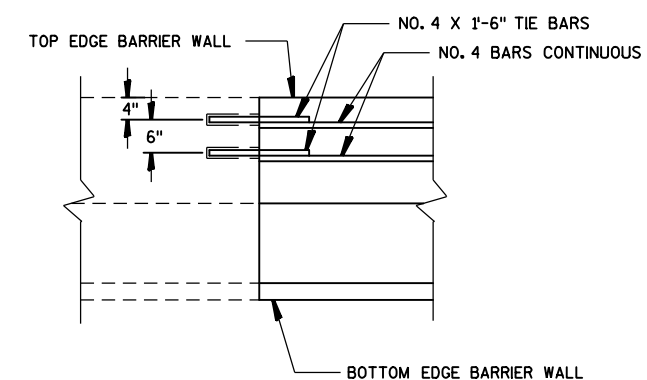
SPLICES OF LONGITUDINAL BARS SHALL BE MADE WITH BARS LAPPED AT LEAST 18-INCHES AND FIRMLY TIED OR FASTENED TOGETHER.

ALL BAR STEEL REINFORCEMENT SHALL CONFORM TO REQUIREMENTS OF AASHTO M31, GRADE 60.

- ① 3/4-INCH BEVEL OR 1-INCH RADIUS (TYPICAL).
- ② NO. 4 BARS SHALL BE CONTINUED THROUGH CONSTRUCTION JOINTS.
- ③ EXPANSION JOINTS SHALL BE PLACED AT EXISTING EXPANSION JOINTS IN THE PAVEMENT AND AT STRUCTURES. SEE REINFORCEMENT AT BARRIER END DETAIL.
- ④ SAWED CONTRACTION JOINTS SHALL BE PROVIDED ACROSS THE FULL WIDTH OF THE BARRIER FOOTING, AND IN FRONT, TOP AND BACK FACE OF THE BARRIER AT EXISTING PAVEMENT JOINTS AND AT UNIFORM INTERVALS BETWEEN WITH A MAXIMUM SPACING OF 25 FEET.



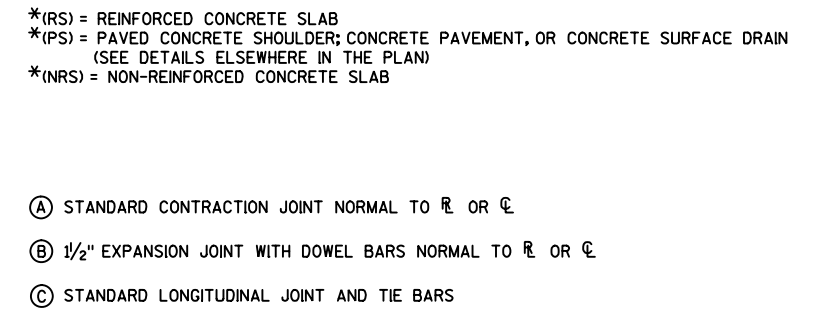
TYPICAL OUTSIDE SECTION VIEW



BARRIER CONNECTION DETAIL

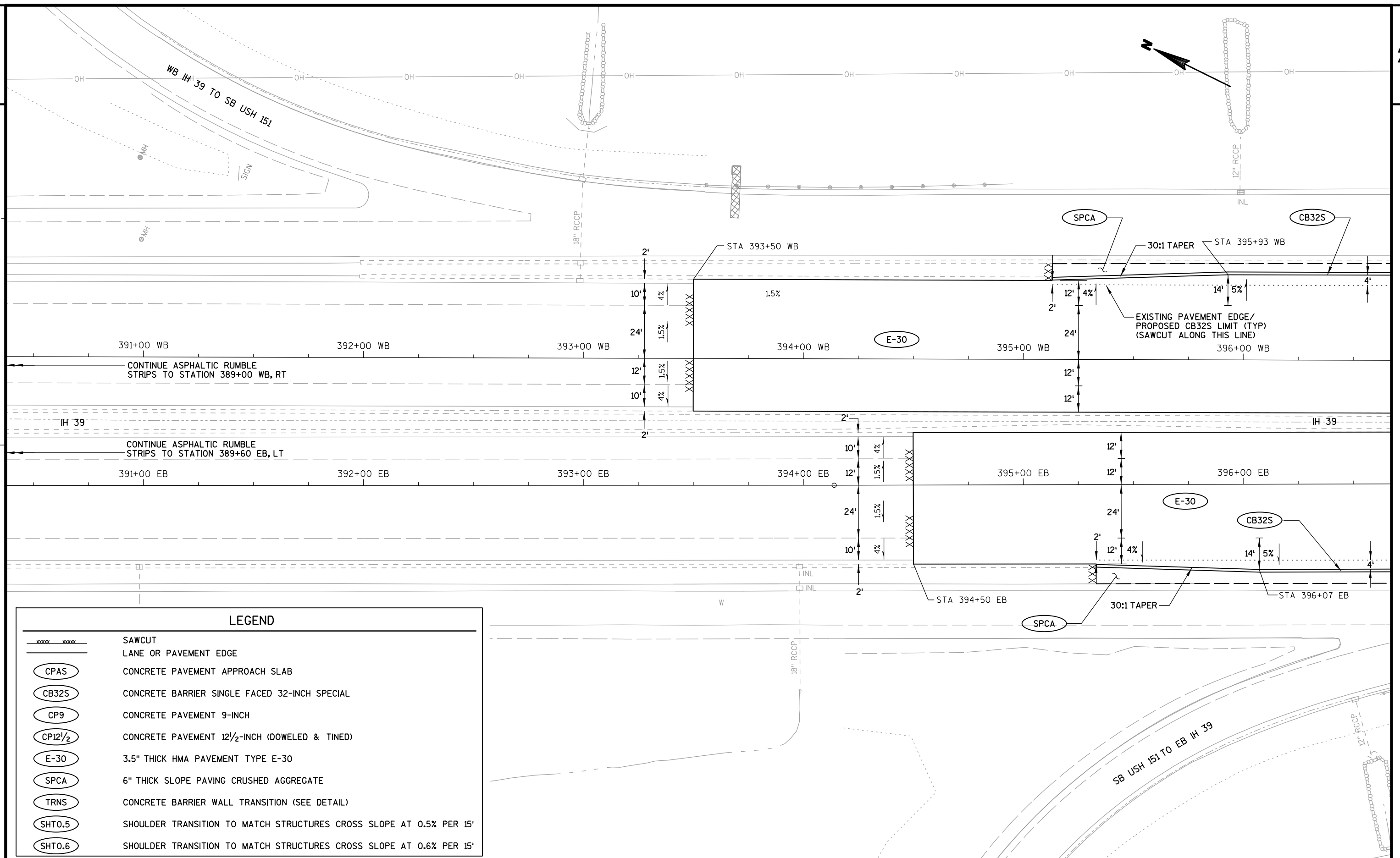
**CONCRETE BARRIER SINGLE-FACED 32-INCH SPECIAL**

REFER TO THE SDD FOR CONCRETE BARRIER SINGLE FACED (WITH ANCHORAGE) FOR OTHER PERTINENT INFORMATION



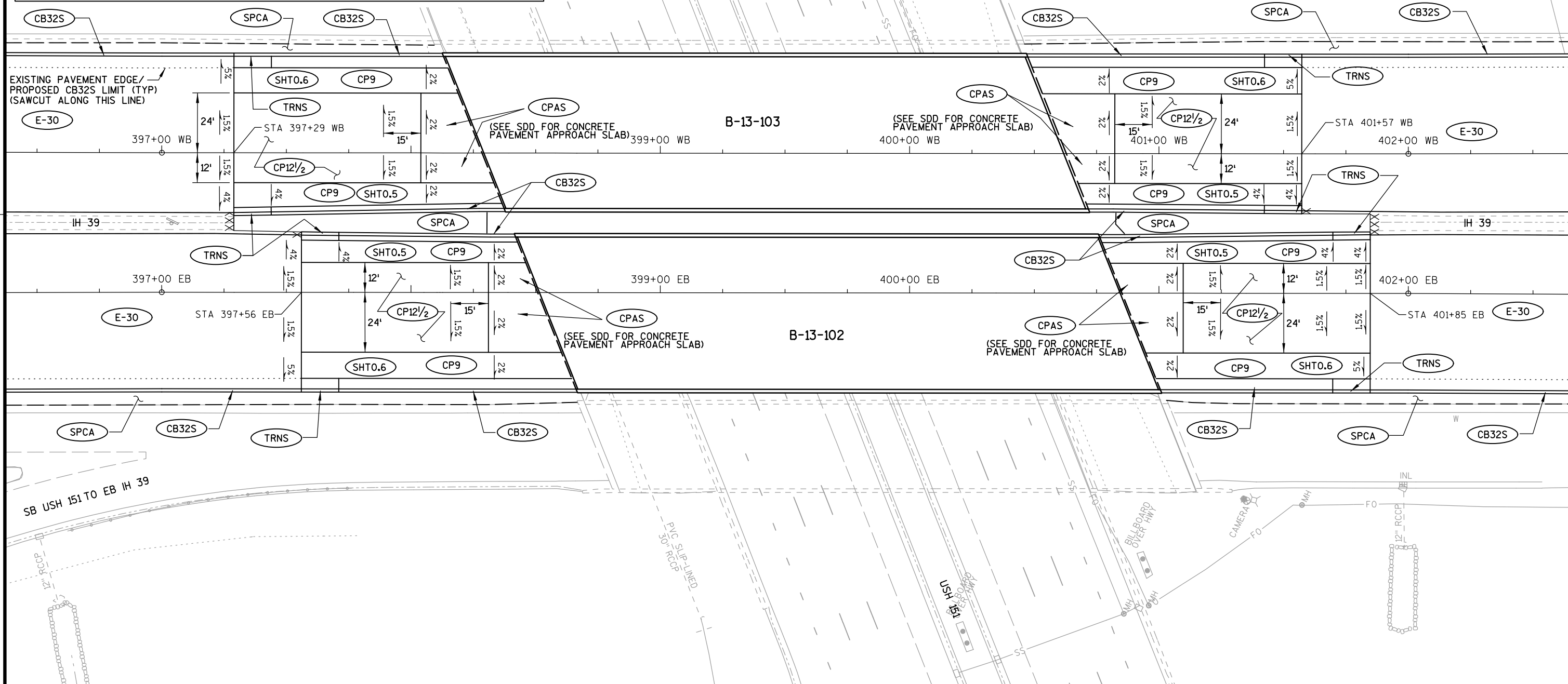
NOTE: THIS DETAIL REPLACES THE SKEWED APPROACH  
(PAVEMENT MORE THAN 2 LANES) DRAWING ON THE SDD  
FOR CONCRETE PAVEMENT APPROACH SLAB.

TOTAL PROJECT AREA = 81.88 ACRES  
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 3.26 ACRES



## LEGEND

|           |                                                                     |
|-----------|---------------------------------------------------------------------|
| xxxxx xxx | SAWCUT                                                              |
|           | LANE OR PAVEMENT EDGE                                               |
| CPAS      | CONCRETE PAVEMENT APPROACH SLAB                                     |
| CB32S     | CONCRETE BARRIER SINGLE FACED 32-INCH SPECIAL                       |
| CP9       | CONCRETE PAVEMENT 9-INCH                                            |
| CP12½     | CONCRETE PAVEMENT 12½-INCH (DOWELED & TINED)                        |
| E-30      | 3.5" THICK HMA PAVEMENT TYPE E-30                                   |
| SPCA      | 6" THICK SLOPE PAVING CRUSHED AGGREGATE                             |
| TRNS      | CONCRETE BARRIER WALL TRANSITION (SEE DETAIL)                       |
| SHT0.5    | SHOULDER TRANSITION TO MATCH STRUCTURES CROSS SLOPE AT 0.5% PER 15' |
| SHT0.6    | SHOULDER TRANSITION TO MATCH STRUCTURES CROSS SLOPE AT 0.6% PER 15' |



PROJECT NO:1010-02-79

HWY: IH 39

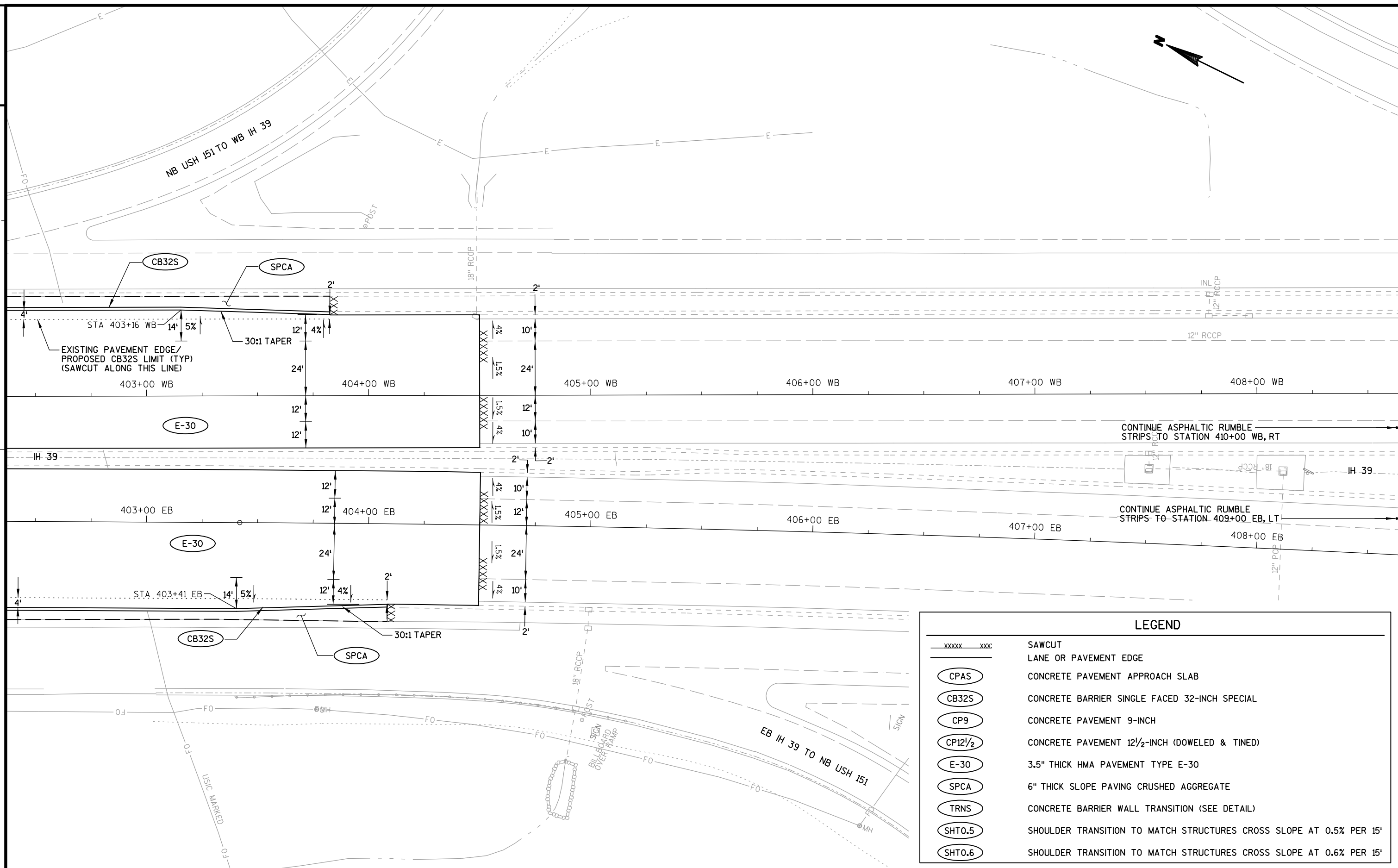
COUNTY: DANE

PAVING DETAILS

SCALE, FEET 0 20 40

SHEET

E



PROJECT NO: 1010-02-79

HWY: IH 39

COUNTY: DANE

PAVING DETAILS

SCALE, FEET

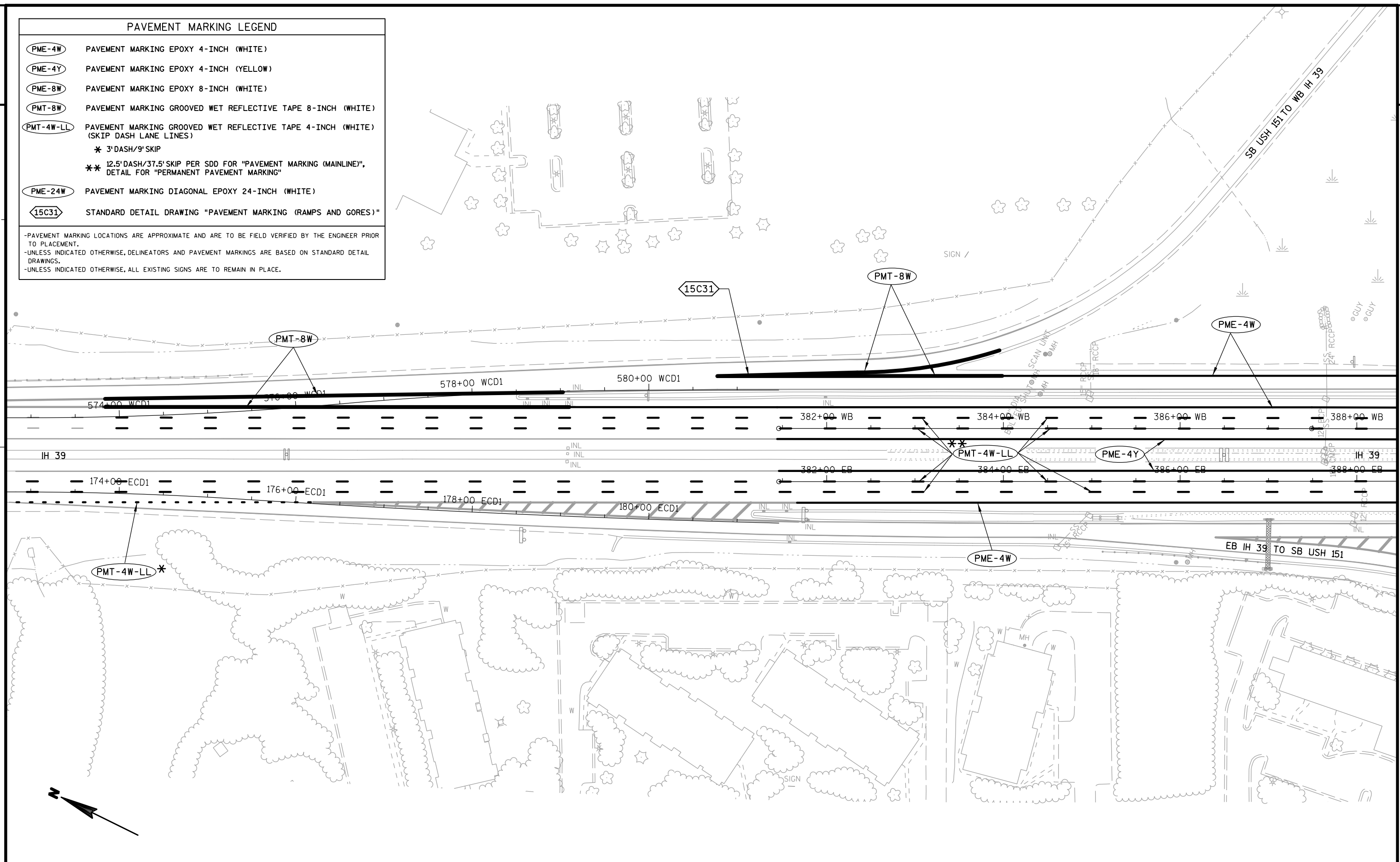
0 20 40

SHEET

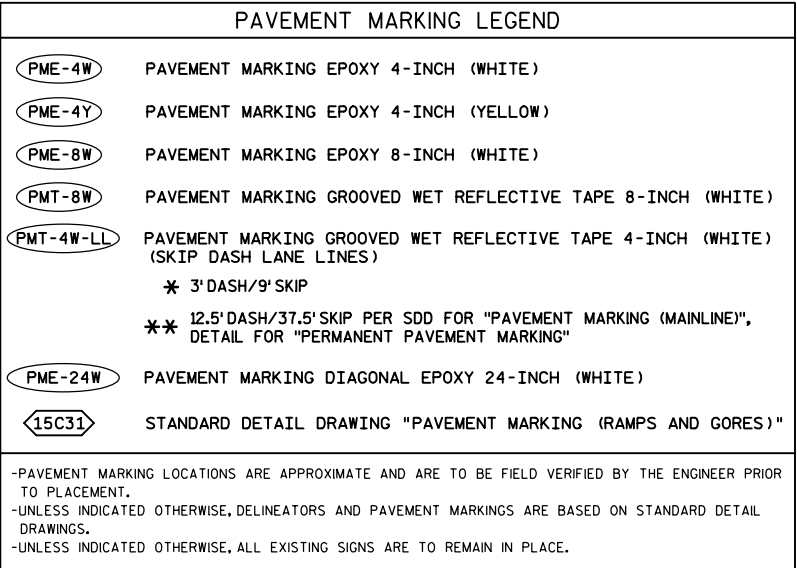
E

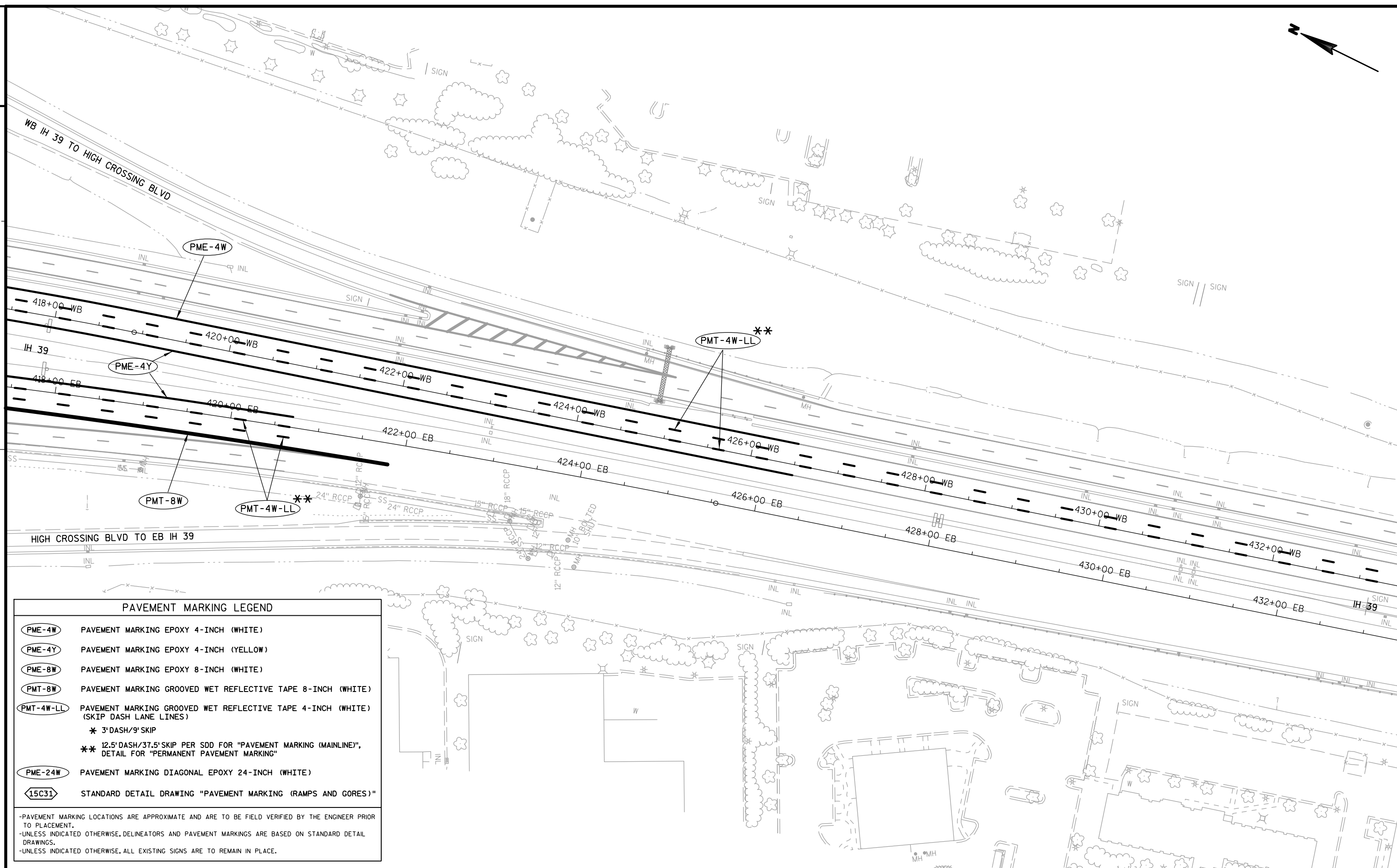
|           |                                                                                                               |
|-----------|---------------------------------------------------------------------------------------------------------------|
| PME-4W    | PAVEMENT MARKING EPOXY 4-INCH (WHITE)                                                                         |
| PME-4Y    | PAVEMENT MARKING EPOXY 4-INCH (YELLOW)                                                                        |
| PME-8W    | PAVEMENT MARKING EPOXY 8-INCH (WHITE)                                                                         |
| PMT-8W    | PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)                                                   |
| PMT-4W-LL | PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE)<br>(SKIP DASH LANE LINES)                         |
|           | * 3'DASH/9'SKIP                                                                                               |
|           | * * 12.5'DASH/37.5'SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)".<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |
| PME-24W   | PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)                                                               |
| 15C31     | STANDARD DETAIL DRAWING "PAVEMENT MARKING (RAMPS AND GORES)"                                                  |

- PAVEMENT MARKING LOCATIONS ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED BY THE ENGINEER PRIOR TO PLACEMENT.
- UNLESS INDICATED OTHERWISE, DELINEATORS AND PAVEMENT MARKINGS ARE BASED ON STANDARD DETAIL DRAWINGS.
- UNLESS INDICATED OTHERWISE, ALL EXISTING SIGNS ARE TO REMAIN IN PLACE.





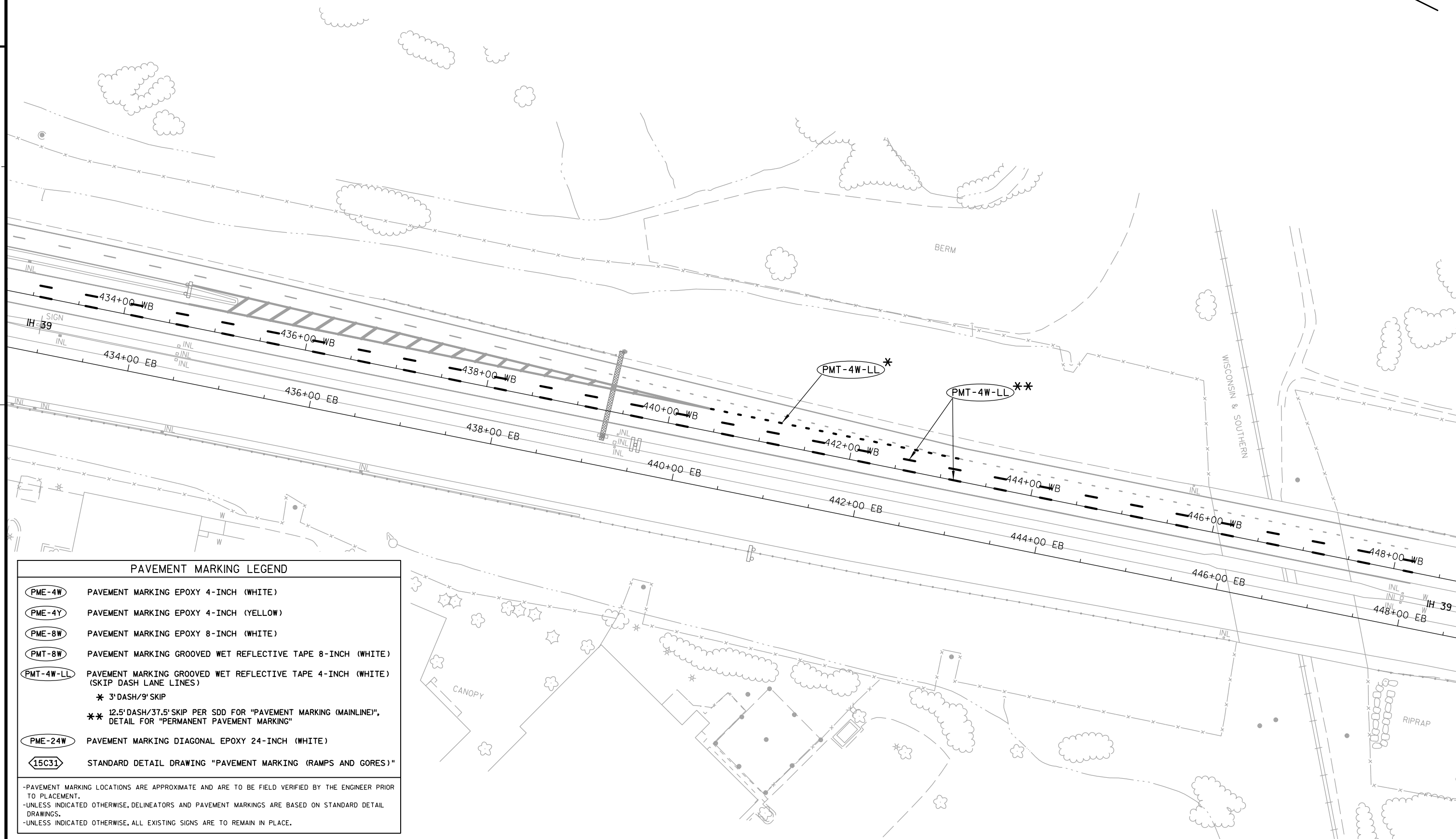


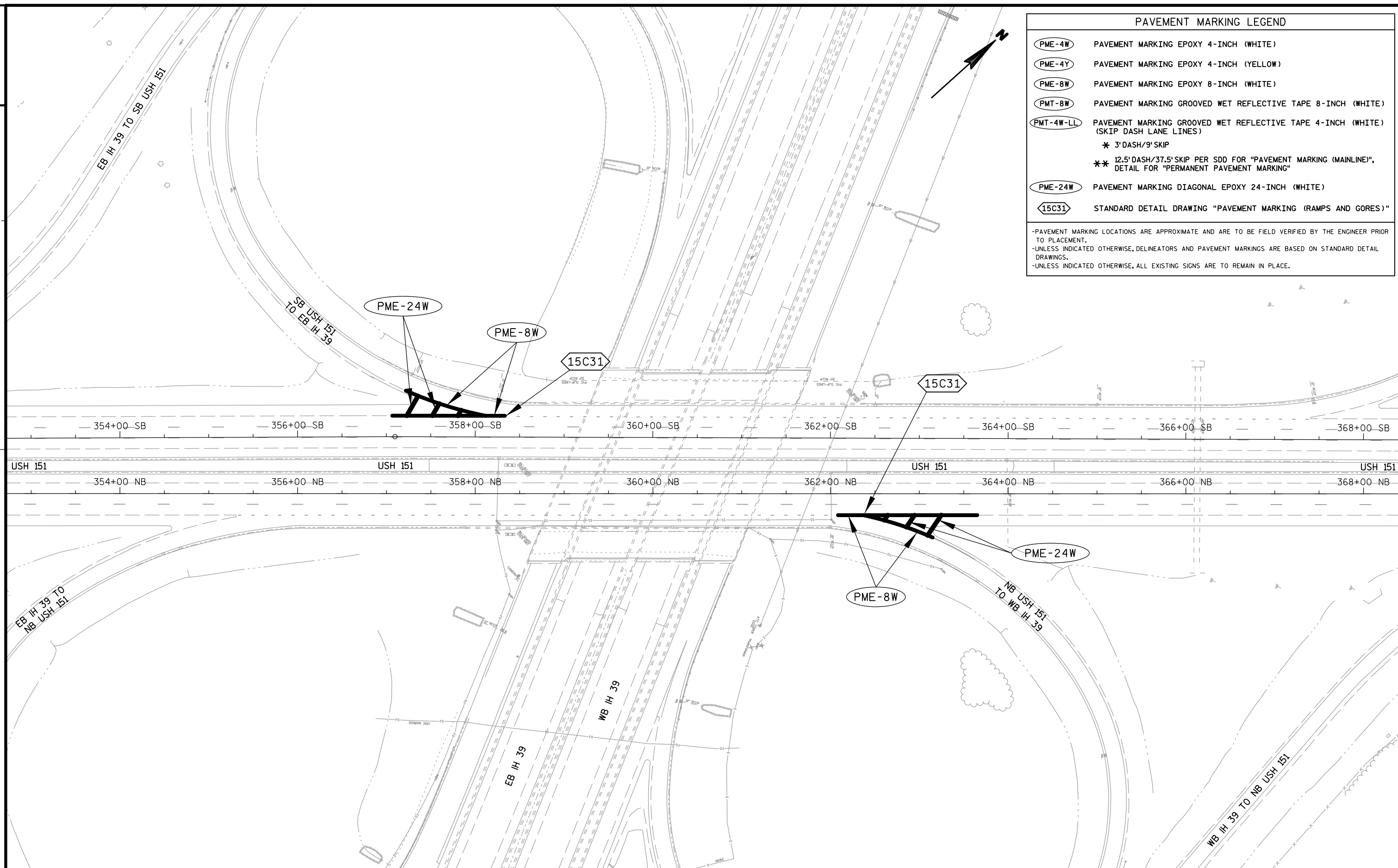


## PAVEMENT MARKING LEGEND

|           |                                                                                                                                                                                                                          |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PME-4W    | PAVEMENT MARKING EPOXY 4-INCH (WHITE)                                                                                                                                                                                    |
| PME-4Y    | PAVEMENT MARKING EPOXY 4-INCH (YELLOW)                                                                                                                                                                                   |
| PME-8W    | PAVEMENT MARKING EPOXY 8-INCH (WHITE)                                                                                                                                                                                    |
| PMT-8W    | PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE)                                                                                                                                                              |
| PMT-4W-LL | PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE)<br>(SKIP DASH LANE LINES)<br>* 3'DASH/9'SKIP<br>** 12.5'DASH/37.5'SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |
| PME-24W   | PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)                                                                                                                                                                          |
| 15C31     | STANDARD DETAIL DRAWING "PAVEMENT MARKING (RAMPS AND GOES)"                                                                                                                                                              |

-PAVEMENT MARKING LOCATIONS ARE APPROXIMATE AND ARE TO BE FIELD VERIFIED BY THE ENGINEER PRIOR TO PLACEMENT.  
-UNLESS INDICATED OTHERWISE, DELINEATORS AND PAVEMENT MARKINGS ARE BASED ON STANDARD DETAIL DRAWINGS.  
-UNLESS INDICATED OTHERWISE, ALL EXISTING SIGNS ARE TO REMAIN IN PLACE.





SYMBOL LEGEND

|  |                                                                                |
|--|--------------------------------------------------------------------------------|
|  | WORK ZONE FULL TIME CLOSURE FOR STAGE CONSTRUCTION                             |
|  | TRAFFIC FLOW ARROWS                                                            |
|  | CRASH CUSHION TEMPORARY                                                        |
|  | CONCRETE BARRIER TEMPORARY PRECAST                                             |
|  | PORTABLE CHANGEABLE MESSAGE SIGN                                               |
|  | TRAFFIC CONTROL DRUMS WITH WARNING LIGHT TYPE C (SPACING)                      |
|  | TRAFFIC CONTROL DRUMS WITHOUT WARNING LIGHT TYPE C (SPACING)                   |
|  | TUBULAR MARKER BASE AND POST, WHITE (SPACING)                                  |
|  | TRAFFIC CONTROL BARRICADE TYPE III WITH/WITHOUT TRAFFIC CONTROL SIGN           |
|  | TRAFFIC CONTROL SIGN ON TEMPORARY SUPPORT                                      |
|  | TEMPORARY RAISED PAVEMENT MARKERS, WHITE, ONE-WAY (50' SPACING)                |
|  | EXISTING HMA PAVEMENT SHOULDER REPLACEMENT AND WIDENING (2013 OVERLAY PROJECT) |
|  |                                                                                |

TEMPORARY PAVEMENT MARKING ITEMS

|  |                                                                                         |
|--|-----------------------------------------------------------------------------------------|
|  | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                  |
|  | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                |
|  | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                              |
|  | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                               |
|  | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                             |
|  | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP) |
|  | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)                  |

\* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"  
\*\* 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",  
DETAIL FOR "PERMANENT PAVEMENT MARKING"

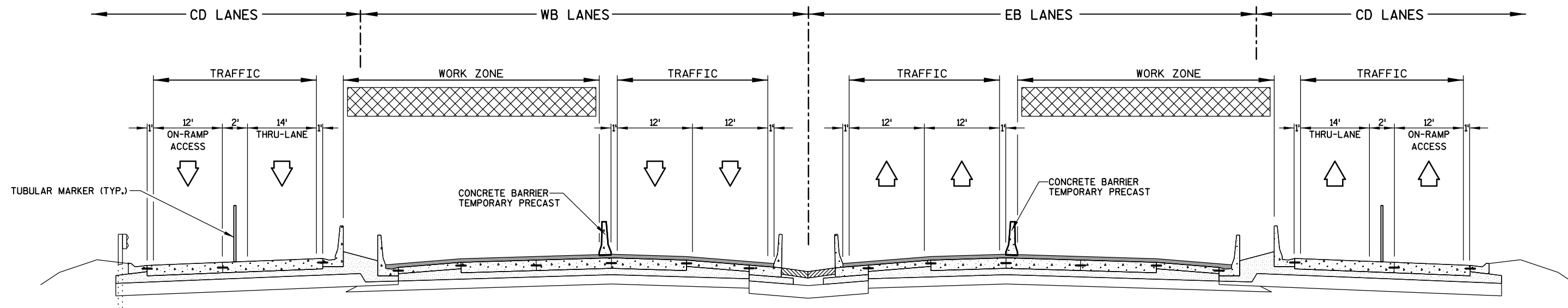
REFERENCED STANDARD DETAIL DRAWINGS

|  |                                                                                             |
|--|---------------------------------------------------------------------------------------------|
|  | TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH WITH BARRIER                      |
|  | TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 MPH                                   |
|  | TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS) |
|  | TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN CLOSURE                                      |
|  | TRAFFIC CONTROL, EXIT RAMP CLOSURE (REPLACE R11-51 WITH PORTABLE CHANGEABLE MESSAGE SIGN)   |
|  | TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H.         |

NOTES

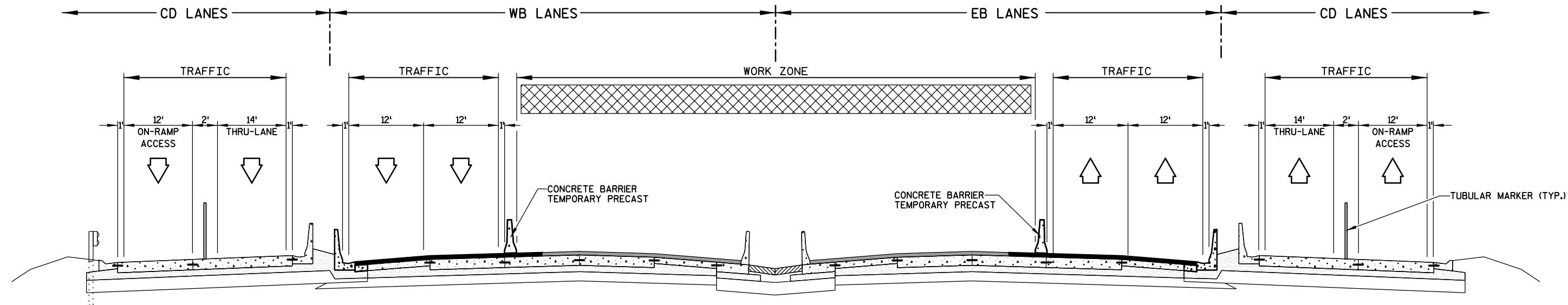
SUPPLEMENTAL TO WHAT IS DISPLAYED IN THE TRAFFIC CONTROL DETAILS, ADDITIONAL NIGHTTIME CLOSURES (DOUBLE-LANE, SINGLE-LANE, AND SHOULDER) WILL BE REQUIRED FOR INSTALLATION OF TRAFFIC CONTROL, INSTALLATION OF TEMPORARY BARRIER, AND VARIOUS CONSTRUCTION OPERATIONS. FOR IMPLEMENTATION OF ADDITIONAL CLOSURES REFER TO SDDS 15D12 , 15D14 , AND 15D27 .

SOME TEMPORARY PAVEMENT MARKING USED IN STAGE 1, CAN REMAIN IN PLACE AND BE USED IN STAGE 2.



### IH 39 - STAGE 1

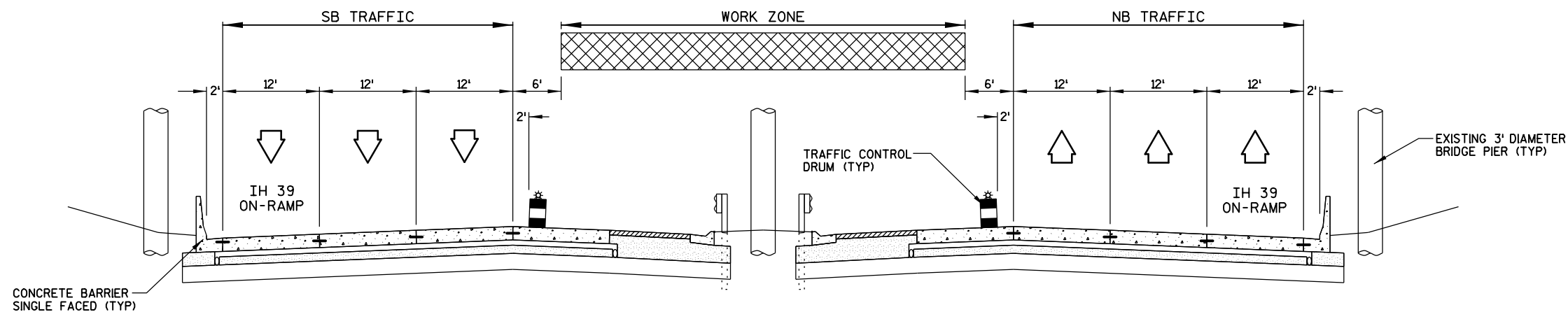
- TWO TRAFFIC LANES ON MAINLINE INSIDE
- ONE THRU-LANE ON CD ROADWAY
- ONE ON-RAMP ACCESS LANE ON CD ROADWAY
- STRUCTURE CONSTRUCTION ON OUTSIDE OF MAINLINE BRIDGES



### IH 39 STAGE 2

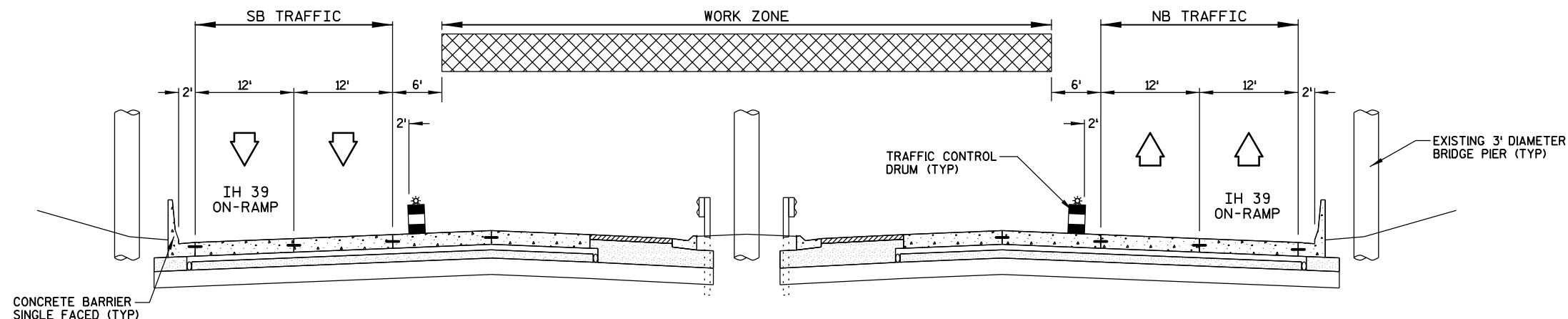
- TWO TRAFFIC LANES ON NEWLY CONSTRUCTED MAINLINE OUTSIDE
- ONE THRU-LANE ON CD ROADWAY
- ONE ON-RAMP ACCESS LANE ON CD ROADWAY
- STRUCTURE CONSTRUCTION ON INSIDE OF MAINLINE BRIDGES

NOTE:  
SEE TYPICAL EXISTING SECTIONS FOR  
EXISTING PAVEMENT STRUCTURE.



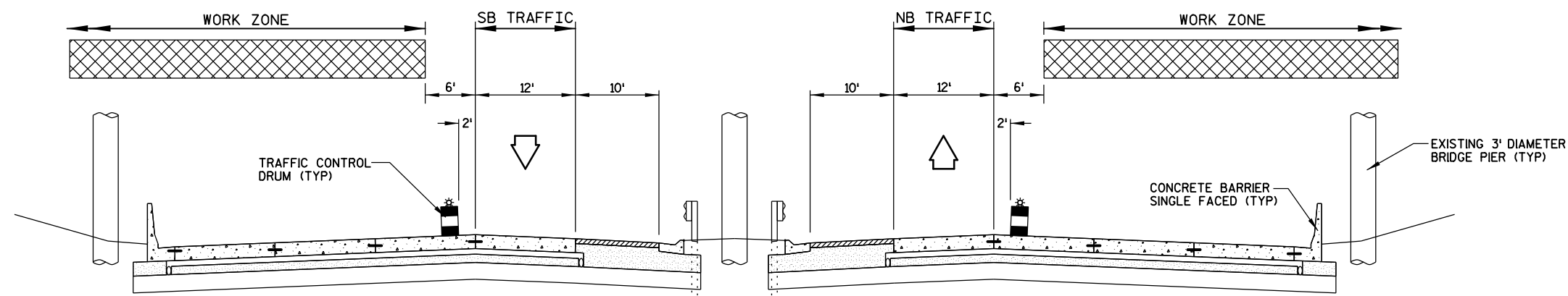
### USH 151 - STAGES 1A & 2A

- TWO TRAFFIC LANES ON OUTSIDE (NIGHT TIME CLOSURES ONLY)
- IH 39 DECK WORK ABOVE WORK ZONE AREA
- OUTSIDE LANE SERVICING I-39 ON-RAMP TRAFFIC TO REMAIN



### USH 151 - STAGES 1B & 2B

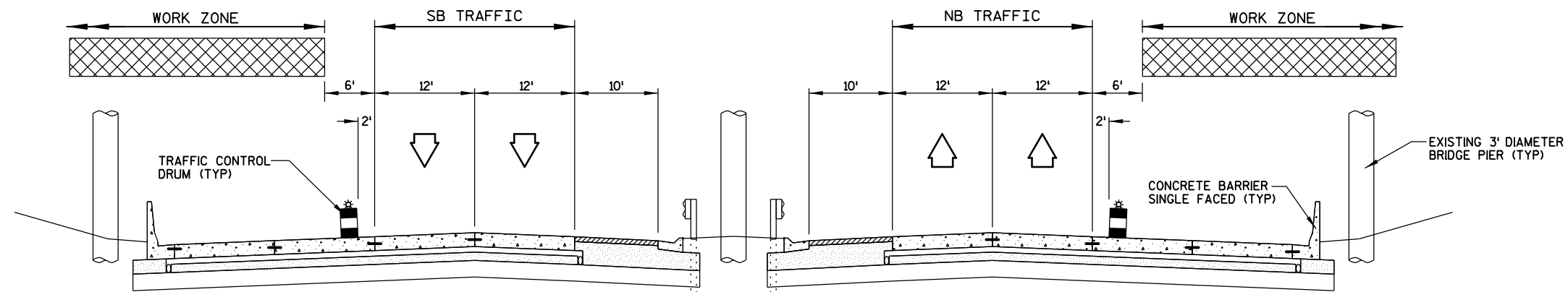
- ONE TRAFFIC LANE ON OUTSIDE (NIGHT TIME CLOSURES ONLY)
- IH 39 DECK WORK ABOVE WORK ZONE AREA
- OUTSIDE LANE SERVICING I-39 ON-RAMP TRAFFIC TO REMAIN



### USH 151 - STAGES 1C & 2C

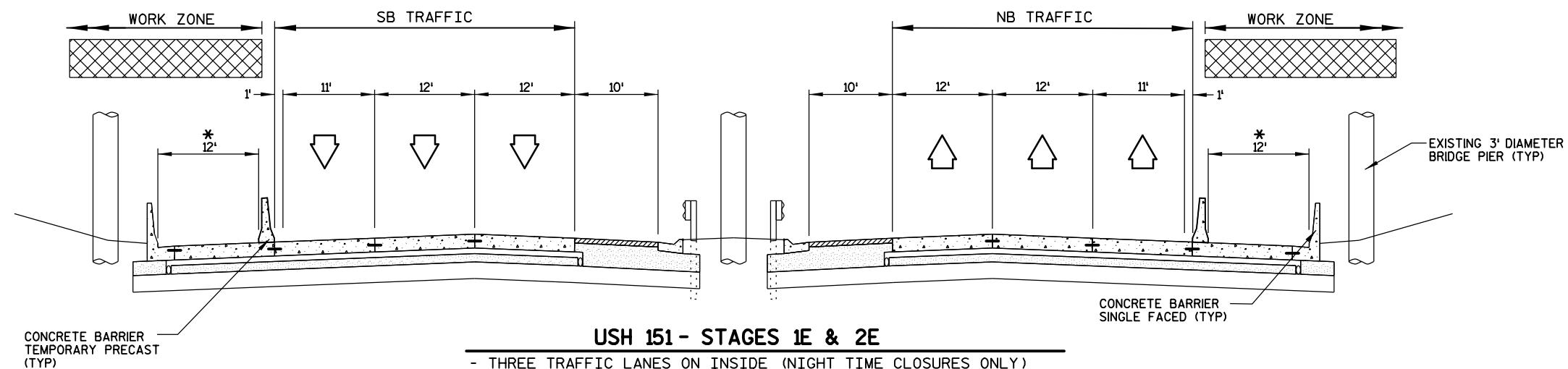
- ONE TRAFFIC LANE ON INSIDE (NIGHT TIME CLOSURES ONLY)
- IH 39 DECK WORK ABOVE WORK ZONE AREA
- PROVIDE TEMPORARY ACCESS TO I-39 ON-RAMPS

NOTES:  
SUB STAGES 1A THRU 1B AND 2A THRU 2B WILL EACH OCCUR FOR DECK  
REMOVAL, FORM WORK, AND FALSE WORK REMOVAL.  
SEE TYPICAL EXISTING SECTIONS FOR EXISTING PAVEMENT STRUCTURE.



### USH 151 - STAGES 1D & 2D

- TWO TRAFFIC LANES ON INSIDE (NIGHT TIME CLOSURES ONLY)
- IH 39 DECK WORK ABOVE WORK ZONE AREA
- PROVIDE TEMPORARY ACCESS TO I-39 ON-RAMPS

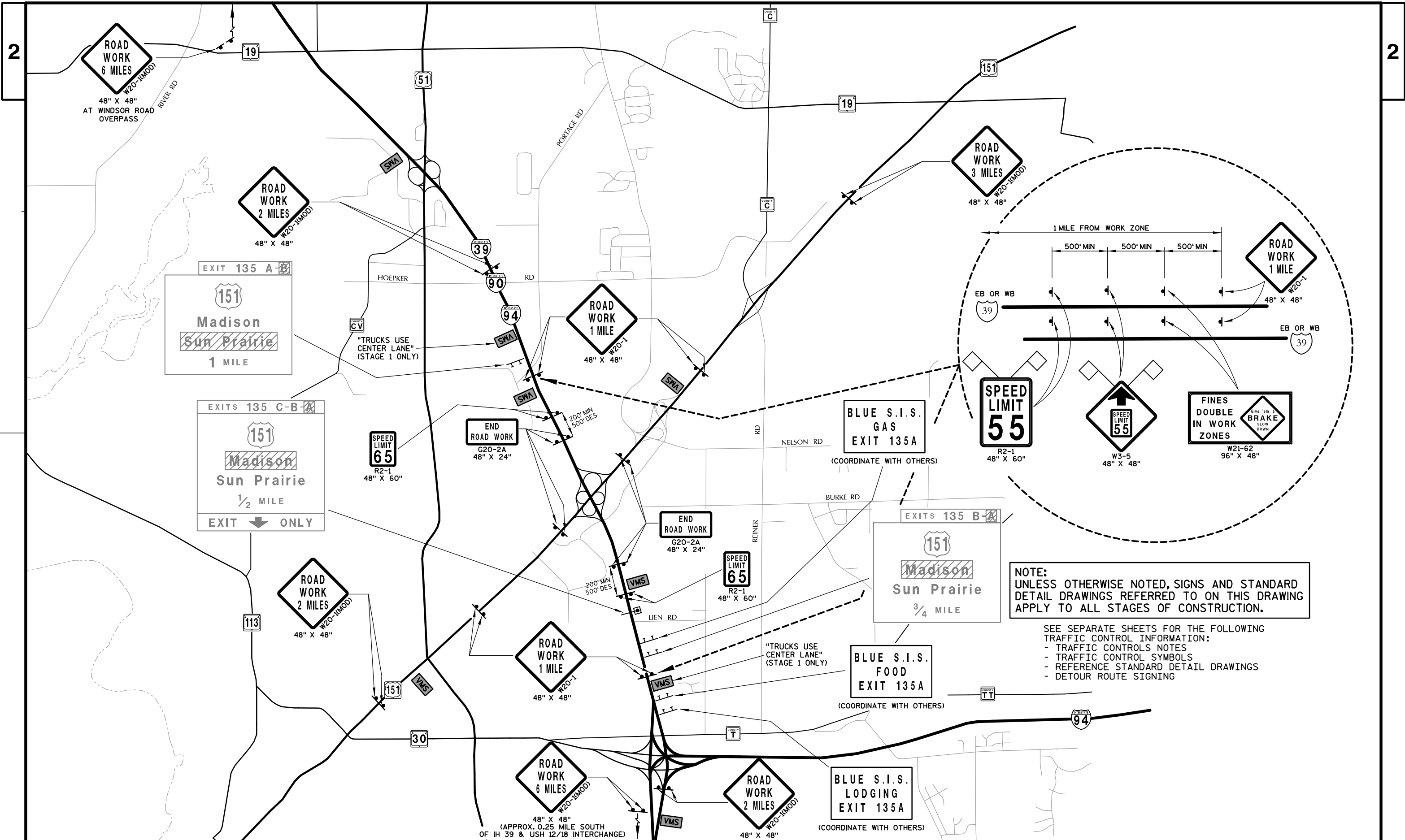


### USH 151 - STAGES 1E & 2E

- THREE TRAFFIC LANES ON INSIDE (NIGHT TIME CLOSURES ONLY)
- PIER CAP FIBER WRAP WORK ON OUTSIDE PIERS AFTER DECK REMOVAL
- PROVIDE TEMPORARY ACCESS TO I-39 ON-RAMPS

\* IF THE CONTRACTOR INSTALLING THE FIBER WRAP DOES NOT REQUIRE 12' ADJACENT TO THE BARRIER WALL, THE OUTSIDE LANE SHOULD BE INCREASED TO 12', MAINTAINING A MINIMUM 1' SHOULDER.

NOTES:  
SUB STAGES 1A THRU 1B AND 2A THRU 2B WILL EACH OCCUR FOR DECK REMOVAL, FORM WORK, AND FALSE WORK REMOVAL.  
SEE TYPICAL EXISTING SECTIONS FOR EXISTING PAVEMENT STRUCTURE.



PROJECT NO:1010-02-79

HWY: IH 39

COUNTY: DANE

TRAFFIC CONTROL OVERVIEW & ADVANCED SIGNING

SHEET

E

PI= 387+48.86 W-1  
Y = 506735.343  
X = 844166.144  
Delta = 00°08'24" RT

## CURVE 1 W-1

PC = 389+62.82 W-1  
X = 844260.311  
Y = 506543.218  
PI= 390+58.44 W-1  
X = 844302.392  
Y = 506457.361  
PRC = 391+54.02 W-1  
X = 844340.348  
Y = 506369.603  
R = 4024.00'  
Delta = 2°43'20" RT  
D = 1°25'26"  
L = 191.19'  
T = 95.61'  
BK = S 26°06'40" E  
AH = S 23°23'20" E

## CURVE 2 W-1

PRC = 391+54.02 W-1  
X = 844340.348  
Y = 506369.603  
PI= 392+52.02 W-1  
X = 844379.253  
Y = 506279.651  
PT = 393+49.99 W-1  
X = 844422.491  
Y = 506191.699  
R = 4024.00'  
Delta = 2°47'25" LT  
D = 1°25'26"  
L = 195.97'  
T = 98.01'  
BK = S 23°23'20" E  
AH = S 26°10'45" E

STA 383+99.85 W-1  
X=844011.772  
Y=507048.364

STA 383+99.81 E-1  
X=843958.000  
Y=507021.815

## CURVE 1 E-1

PC = 389+34.55 E-1  
X = 844194.913  
Y = 506542.419  
PI= 390+36.34 E-1  
X = 844240.010  
Y = 506451.166  
PRC = 391+38.08 E-1  
X = 844289.663  
Y = 506362.309  
R = 4024.00'  
Delta = 2°53'53" LT  
D = 1°25'26"  
L = 203.53'  
T = 101.79'  
BK = S 26°17'54" E  
AH = S 29°11'47" E

## CURVE 2 E-1

PRC = 391+38.08 E-1  
X = 844289.663  
Y = 506362.309  
PI= 392+44.06 E-1  
X = 844341.357  
Y = 506269.799  
PT = 393+49.98 E-1  
X = 844388.110  
Y = 506174.696  
R = 4024.00'  
Delta = 3°01'02" RT  
D = 1°25'26"  
L = 211.90'  
T = 105.97'  
BK = S 29°11'47" E  
AH = S 26°10'45" E

## CURVE 3 W-1

PC = 404+50.04 W-1  
X = 844907.809  
Y = 505204.496  
PI= 405+57.95 W-1  
X = 844955.419  
Y = 505107.651  
PRC = 406+65.82 W-1  
X = 845008.152  
Y = 505013.496  
R = 4024.00'  
Delta = 3°04'21" LT  
D = 1°25'26"  
L = 215.78'  
T = 107.92'  
BK = S 26°10'45" E  
AH = S 29°15'05" E

## CURVE 4 W-1

PRC = 406+65.82 W-1  
X = 845008.152  
Y = 505013.496  
PI= 407+66.03 W-1  
X = 845057.122  
Y = 504926.058  
PT = 408+66.21 W-1  
X = 845101.679  
Y = 504836.292  
R = 4024.00'  
Delta = 2°51'12" RT  
D = 1°25'26"  
L = 200.39'  
T = 100.22'  
BK = S 29°15'05" E  
AH = S 26°23'54" E

## CURVE 5 W-1

PC = 409+71.97 W-1  
X = 845148.703  
Y = 504741.556  
PI= 414+32.91 W-1  
X = 845353.639  
Y = 504328.683  
PT = 418+90.76 W-1  
X = 845472.265  
Y = 503883.272  
R = 4583.66'  
Delta = 11°29'05" RT  
D = 1°15'00"  
L = 918.79'  
T = 460.94'  
BK = S 26°23'54" E  
AH = S 14°54'48" E

## CURVE 3 E-1

PC = 403+41.95 E-1  
X = 844825.321  
Y = 505284.235  
PI= 403+96.01 E-1  
X = 844849.004  
Y = 505235.636  
PCC = 404+50.07 E-1  
X = 844872.227  
Y = 505186.815  
R = 11467.81'  
Delta = 0°32'25" RT  
D = 0°29'59"  
L = 108.13'  
T = 54.06'  
BK = S 25°58'49" E  
AH = S 25°26'24" E

## CURVE 4 E-1

PCC = 404+50.07 E-1  
X = 844872.227  
Y = 505186.815  
PI= 405+84.81 E-1  
X = 844930.106  
Y = 505065.142  
PRC = 407+19.45 E-1  
X = 844979.717  
Y = 504939.869  
R = 4024.00'  
Delta = 3°50'08" RT  
D = 1°25'26"  
L = 269.38'  
T = 134.74'  
BK = S 25°26'24" E  
AH = S 21°36'16" E

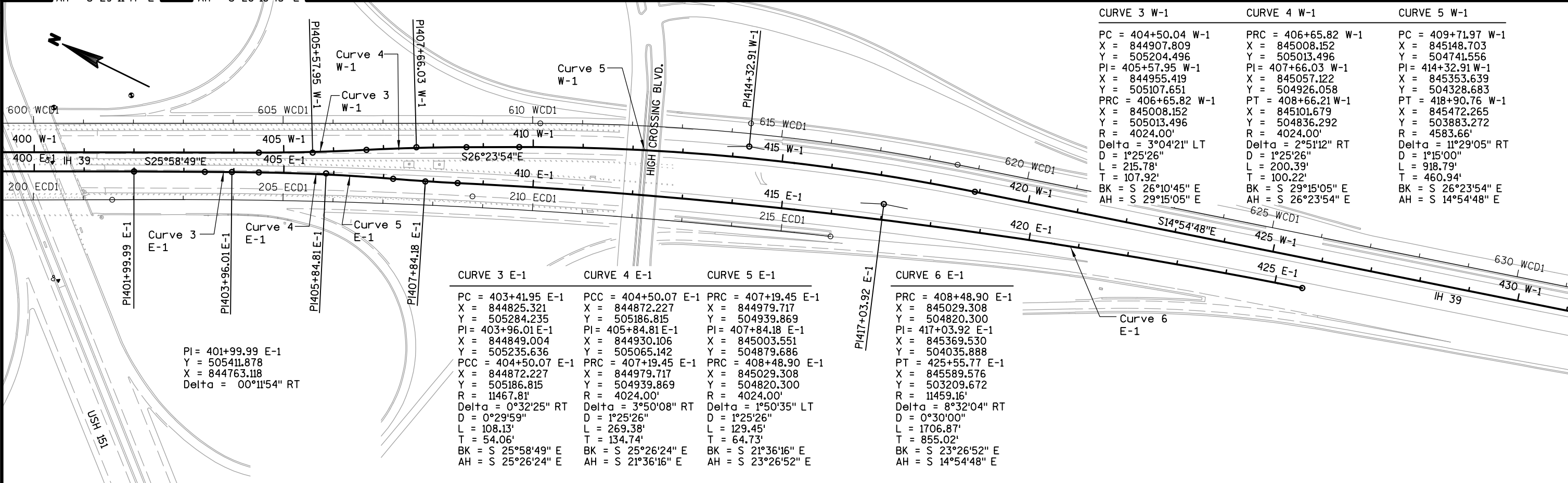
## CURVE 5 E-1

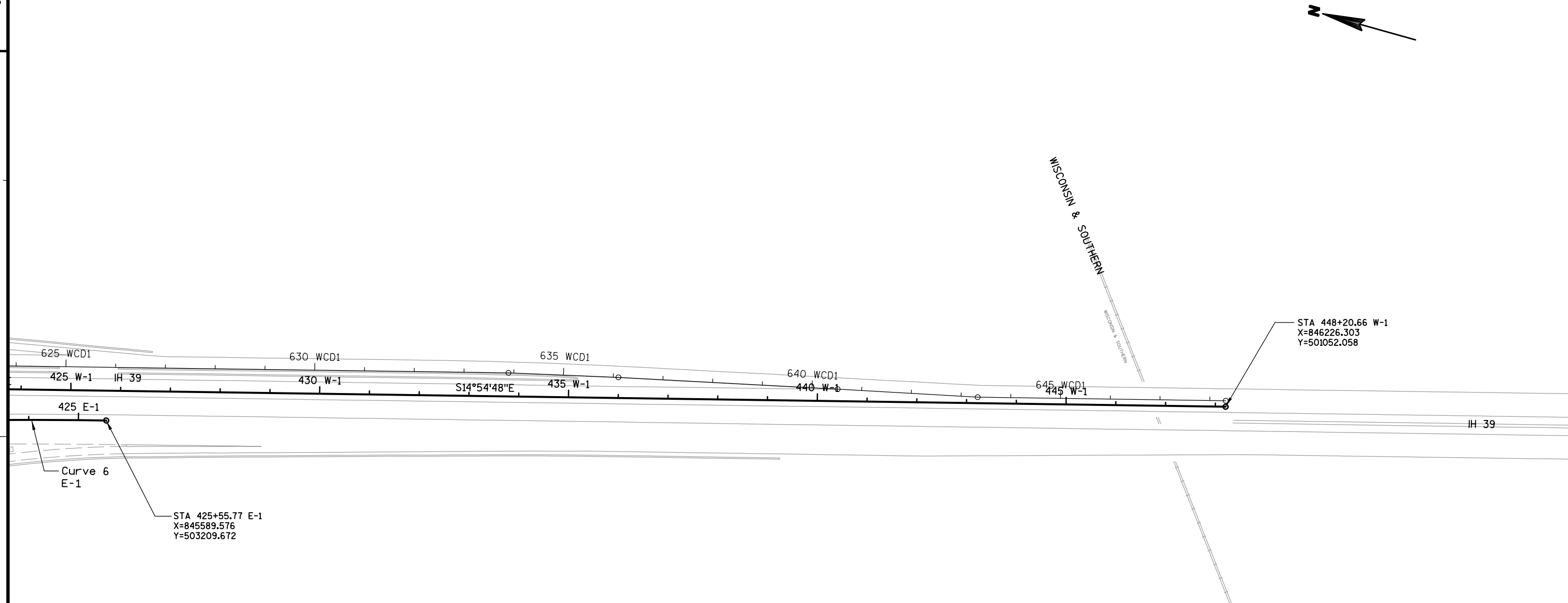
PRC = 407+19.45 E-1  
X = 844979.717  
Y = 504939.869  
PI= 407+84.18 E-1  
X = 845003.551  
Y = 504879.686  
PT = 408+48.90 E-1  
X = 845029.308  
Y = 504820.300  
R = 4024.00'  
Delta = 1°50'35" LT  
D = 1°25'26"  
L = 129.45'  
T = 64.73'  
BK = S 21°36'16" E  
AH = S 23°26'52" E

## CURVE 6 E-1

PRC = 408+48.90 E-1  
X = 845029.308  
Y = 504820.300  
PI= 417+03.92 E-1  
X = 845369.530  
Y = 504035.888  
PT = 425+55.77 E-1  
X = 845589.576  
Y = 503209.672  
R = 11459.16'  
Delta = 8°32'04" RT  
D = 0°30'00"  
L = 1706.87'  
T = 855.02'  
BK = S 23°26'52" E  
AH = S 14°54'48" E

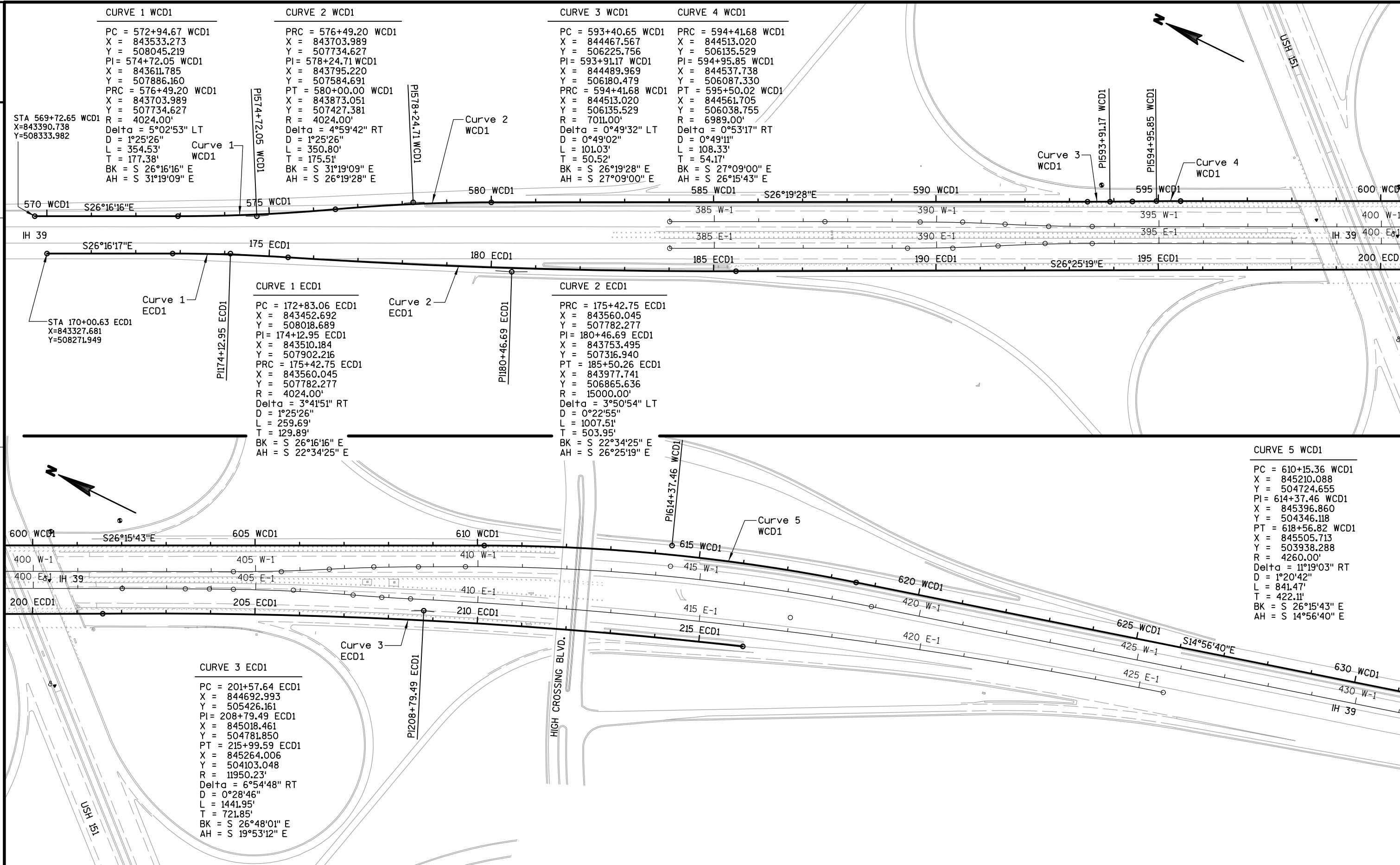
PI= 401+99.99 E-1  
Y = 505411.878  
X = 844763.118  
Delta = 00°11'54" RT

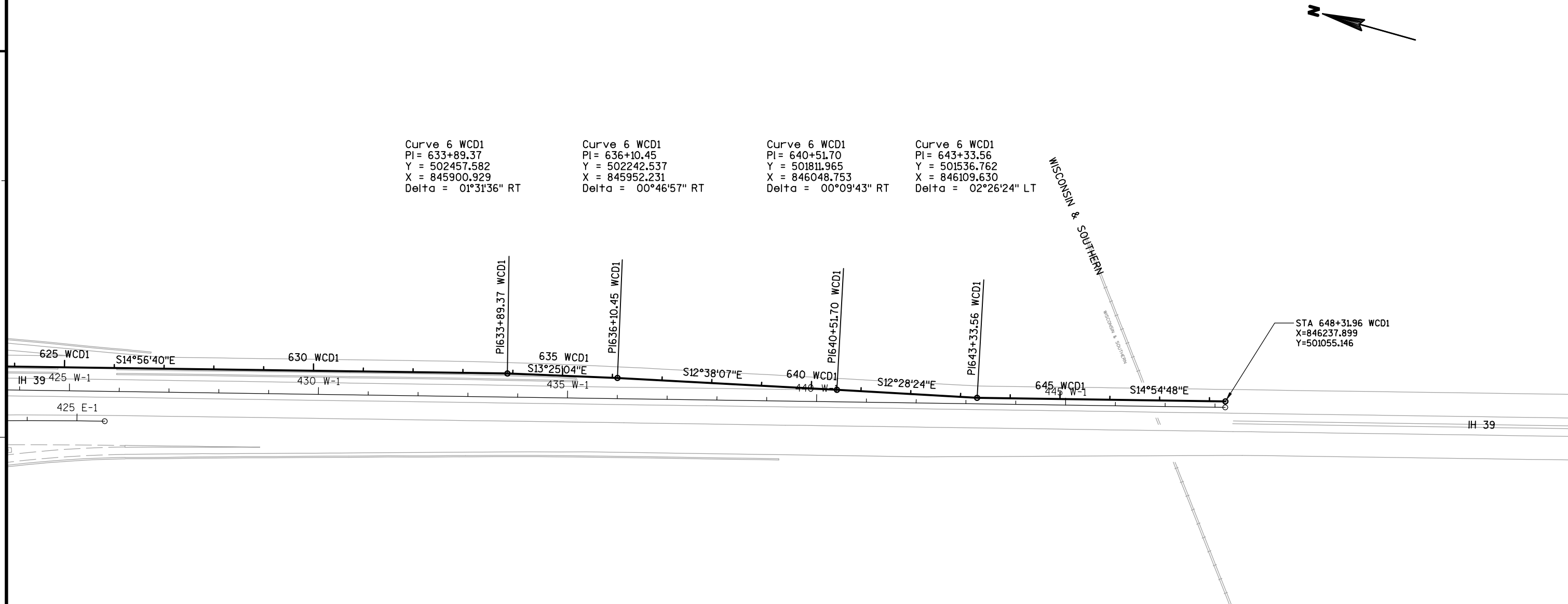




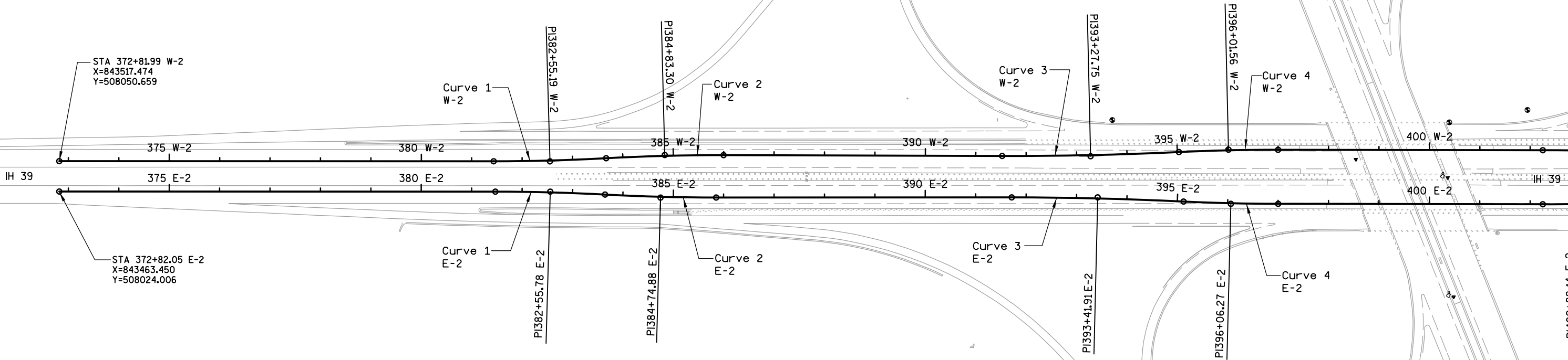
## CURVE 6 E-1

PRC = 408+48.90 E-1  
X = 845029.308  
Y = 504820.300  
PI = 417+03.92 E-1  
X = 845369.530  
Y = 504035.888  
PT = 425+55.77 E-1  
X = 845589.576  
Y = 503209.672  
R = 11459.16'  
Delta = 8°32'04" RT  
D = 0°30'00"  
L = 1706.87'  
T = 855.02'  
BK = S 23°26'52" E  
AH = S 14°54'48" E



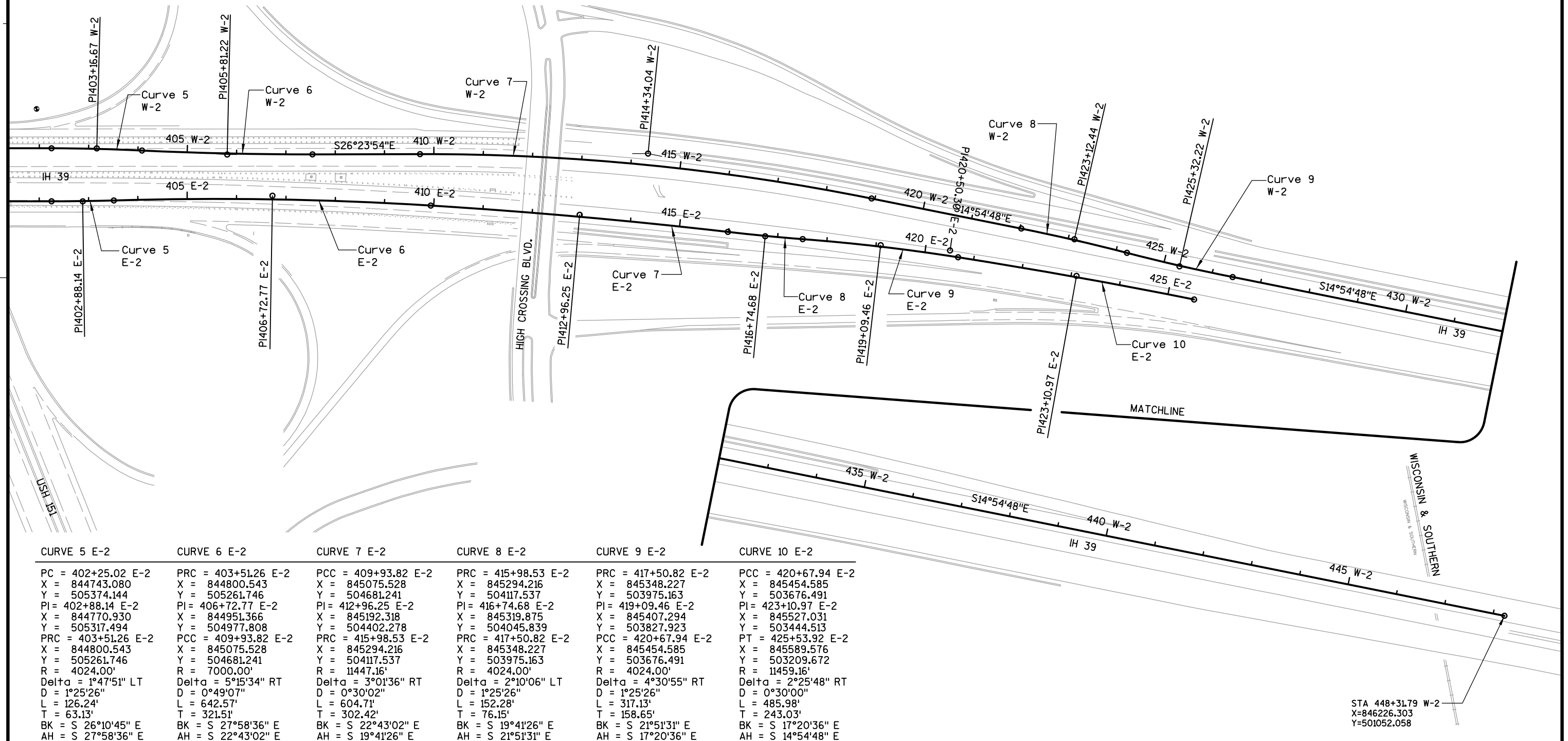
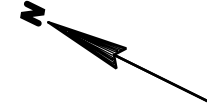


| CURVE 1 W-2         | CURVE 2 W-2         | CURVE 3 W-2         | CURVE 4 W-2         |
|---------------------|---------------------|---------------------|---------------------|
| PC = 381+43.57 W-2  | PRC = 383+66.76 W-2 | PC = 391+52.32 W-2  | PRC = 395+03.10 W-2 |
| X = 843898.555      | X = 844002.771      | X = 844354.507      | X = 844516.717      |
| Y = 507277.937      | Y = 507080.606      | Y = 506378.300      | Y = 506067.317      |
| PI= 382+55.19 W-2   | PI= 384+83.30 W-2   | PI= 393+27.75 W-2   | PI= 396+01.56 W-2   |
| X = 843947.926      | X = 844060.031      | X = 844431.715      | X = 844564.422      |
| Y = 507177.826      | Y = 506979.105      | Y = 506220.776      | Y = 505981.191      |
| PRC = 383+66.76 W-2 | PT = 385+99.77 W-2  | PRC = 395+03.10 W-2 | PT = 396+99.98 W-2  |
| X = 844002.771      | X = 844111.322      | X = 844516.717      | X = 844607.859      |
| Y = 507080.606      | Y = 506874.460      | Y = 506067.317      | Y = 505892.836      |
| R = 4024.00'        | R = 4024.00'        | R = 7000.00'        | R = 4024.00'        |
| Delta = 3°10'40" LT | Delta = 3°19'04" RT | Delta = 2°52'16" LT | Delta = 2°48'11" RT |
| D = 1°25'26"        | D = 1°25'26"        | D = 0°49'07"        | D = 1°25'26"        |
| L = 223.19'         | L = 233.01'         | L = 350.78'         | L = 196.87'         |
| T = 111.62'         | T = 116.54'         | T = 175.43'         | T = 98.46'          |
| BK = S 26°15'04" E  | BK = S 29°25'44" E  | BK = S 26°06'40" E  | BK = S 28°58'56" E  |
| AH = S 29°25'44" E  | AH = S 26°06'40" E  | AH = S 28°58'56" E  | AH = S 26°10'45" E  |



| CURVE 1 E-2         | CURVE 2 E-2         | CURVE 3 E-2         | CURVE 4 E-2         |
|---------------------|---------------------|---------------------|---------------------|
| PC = 381+46.87 E-2  | PRC = 383+64.63 E-2 | PC = 391+71.35 E-2  | PRC = 395+12.41 E-2 |
| X = 843846.085      | X = 843937.100      | X = 844289.054      | X = 844432.650      |
| Y = 507248.438      | Y = 507050.645      | Y = 506324.840      | Y = 506015.522      |
| PI= 382+55.78 E-2   | PI= 384+74.88 E-2   | PI= 393+41.91 E-2   | PI= 396+06.27 E-2   |
| X = 843894.269      | X = 843980.461      | X = 844364.621      | X = 844470.089      |
| Y = 507150.773      | Y = 506949.279      | Y = 506171.930      | Y = 505929.446      |
| PRC = 383+64.63 E-2 | PT = 385+85.07 E-2  | PRC = 395+12.41 E-2 | PT = 397+00.11 E-2  |
| X = 843937.100      | X = 844029.306      | X = 844432.650      | X = 844511.500      |
| Y = 507050.645      | Y = 506850.441      | Y = 506015.522      | Y = 505845.210      |
| R = 4024.00'        | R = 4024.00'        | R = 7000.00'        | R = 4024.00'        |
| Delta = 3°06'02" RT | Delta = 3°08'20" LT | Delta = 2°47'30" RT | Delta = 2°40'21" LT |
| D = 1°25'26"        | D = 1°25'26"        | D = 0°49'07"        | D = 1°25'26"        |
| L = 217.76'         | L = 220.44'         | L = 341.06'         | L = 187.70'         |
| T = 108.90'         | T = 110.25'         | T = 170.56'         | T = 93.86'          |
| BK = S 26°15'36" E  | BK = S 23°09'34" E  | BK = S 26°17'54" E  | BK = S 23°30'24" E  |
| AH = S 23°09'34" E  | AH = S 26°17'54" E  | AH = S 23°30'24" E  | AH = S 26°10'45" E  |

| CURVE 5 W-2                                                                                                                                                                                                                                                                                                | CURVE 6 W-2                                                                                                                                                                                                                                                                                                 | CURVE 7 W-2                                                                                                                                                                                                                                                                                                 | CURVE 8 W-2                                                                                                                                                                                                                                                                                                 | CURVE 9 W-2                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PC = 402+24.98 W-2<br>X = 844839.481<br>Y = 505421.684<br>PI= 403+16.67 W-2<br>X = 844879.933<br>Y = 505339.399<br>PRC = 404+08.33 W-2<br>X = 844916.595<br>Y = 505255.358<br>R = 4024.00'<br>Delta = 2°36'38" RT<br>D = 1°25'26"<br>L = 183.35'<br>T = 91.69'<br>BK = S 26°10'45" E<br>AH = S 23°34'07" E | PRC = 404+08.33 W-2<br>X = 844916.595<br>Y = 505255.358<br>PI= 405+81.22 W-2<br>X = 844985.725<br>Y = 505096.887<br>PT = 407+54.05 W-2<br>X = 845062.594<br>Y = 504942.023<br>R = 7000.00'<br>Delta = 2°49'47" LT<br>D = 0°49'07"<br>L = 345.71'<br>T = 172.89'<br>BK = S 23°34'07" E<br>AH = S 26°23'54" E | PC = 409+71.89 W-2<br>X = 845159.451<br>Y = 504746.891<br>PI= 414+34.04 W-2<br>X = 845364.924<br>Y = 504332.937<br>PT = 418+93.09 W-2<br>X = 845483.861<br>Y = 503886.361<br>R = 4595.66'<br>Delta = 11°29'05" RT<br>D = 1°14'48"<br>L = 921.19'<br>T = 462.14'<br>BK = S 26°23'54" E<br>AH = S 14°54'48" E | PC = 422+11.11 W-2<br>X = 845563.499<br>Y = 503587.340<br>PI= 423+21.03 W-2<br>X = 845591.786<br>Y = 503481.128<br>PRC = 424+30.89 W-2<br>X = 845614.234<br>Y = 503373.531<br>R = 4024.00'<br>Delta = 3°07'45" RT<br>D = 1°25'26"<br>L = 219.77'<br>T = 109.91'<br>BK = S 14°54'48" E<br>AH = S 11°47'03" E | PRC = 424+30.89 W-2<br>X = 845614.234<br>Y = 503373.531<br>PI= 425+40.80 W-2<br>X = 845636.681<br>Y = 503265.934<br>PT = 426+50.66 W-2<br>X = 845664.968<br>Y = 503159.723<br>R = 4024.00'<br>Delta = 3°07'45" LT<br>D = 1°25'26"<br>L = 219.77'<br>T = 109.91'<br>BK = S 11°47'03" E<br>AH = S 14°54'48" E |



PROJECT NO: 1010-02-79

HWY: IH 39

COUNTY: DANE

IH 39 STAGE 2 ALIGNMENT DIAGRAM

SCALE, FEET

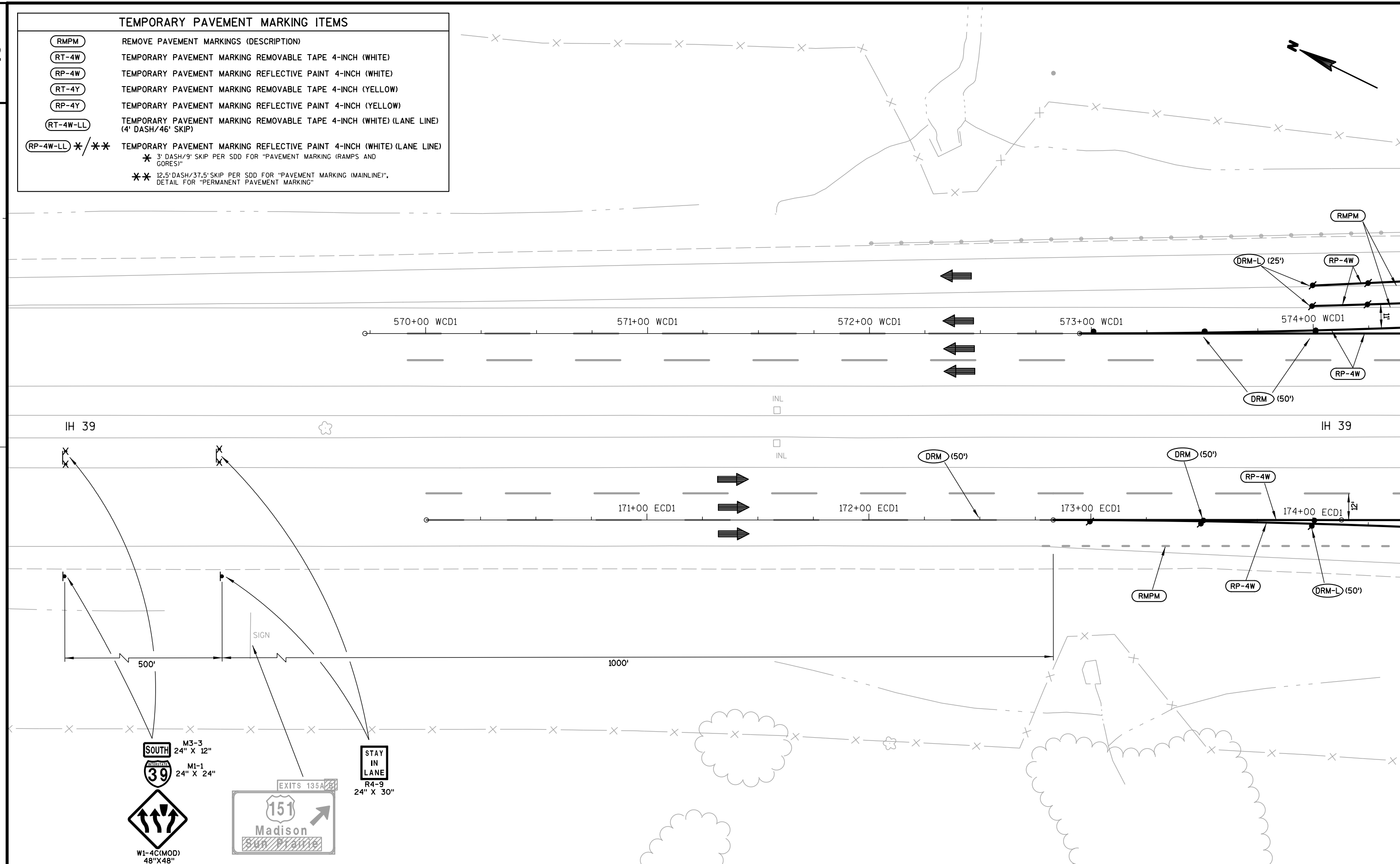
0 100 200

SHEET

E

## TEMPORARY PAVEMENT MARKING ITEMS

|                 |                                                                                                                                                                                                                                                                |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RMPM</b>     | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                         |
| <b>RT-4W</b>    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                       |
| <b>RP-4W</b>    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                     |
| <b>RT-4Y</b>    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                      |
| <b>RP-4Y</b>    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                    |
| <b>RT-4W-LL</b> | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                     |
| <b>RP-4W-LL</b> | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                   |
| <b>*/**</b>     | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |



PROJECT NO:1010-02-79

HWY: IH 39

COUNTY: DANE

STAGED CONSTRUCTION - STAGE 1

SCALE, FEET 0 20 40

SHEET

E

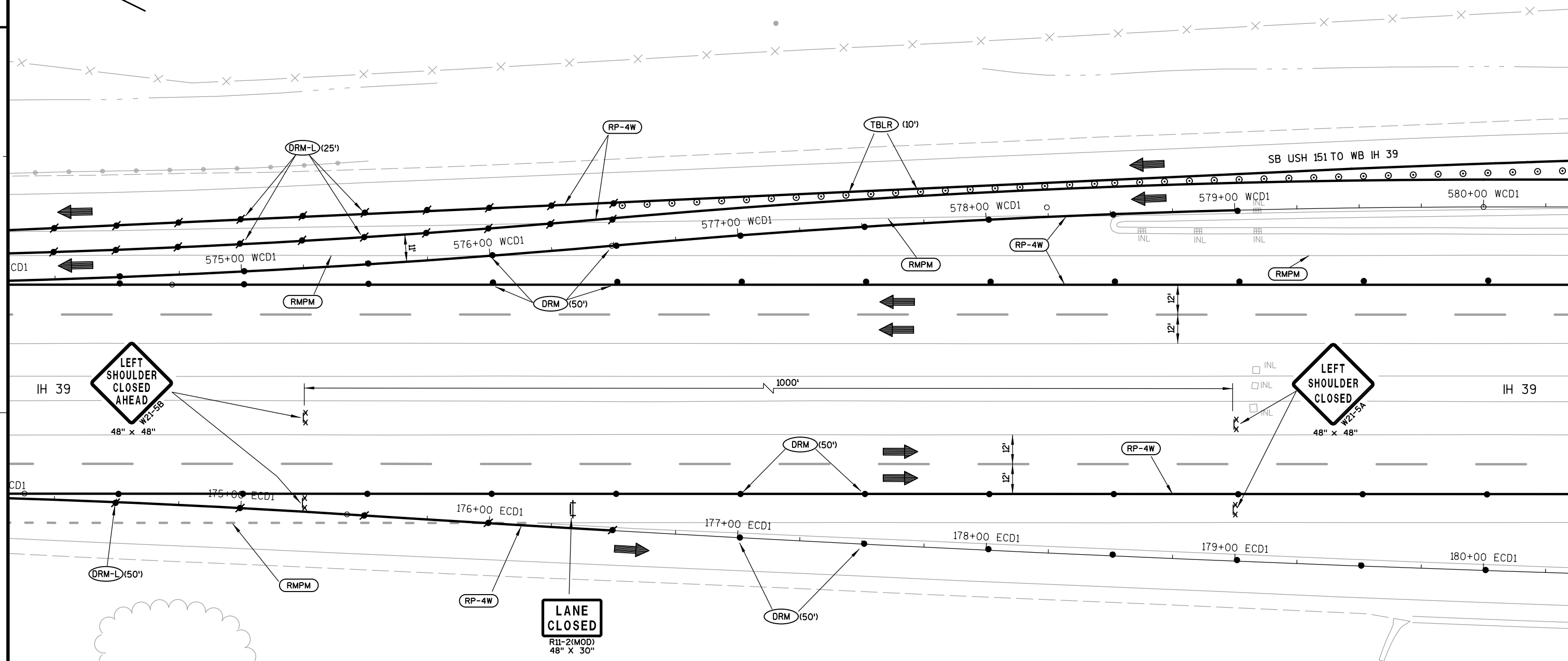
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PLOT BY : hoernken

PLOT DATE : 7/25/2013

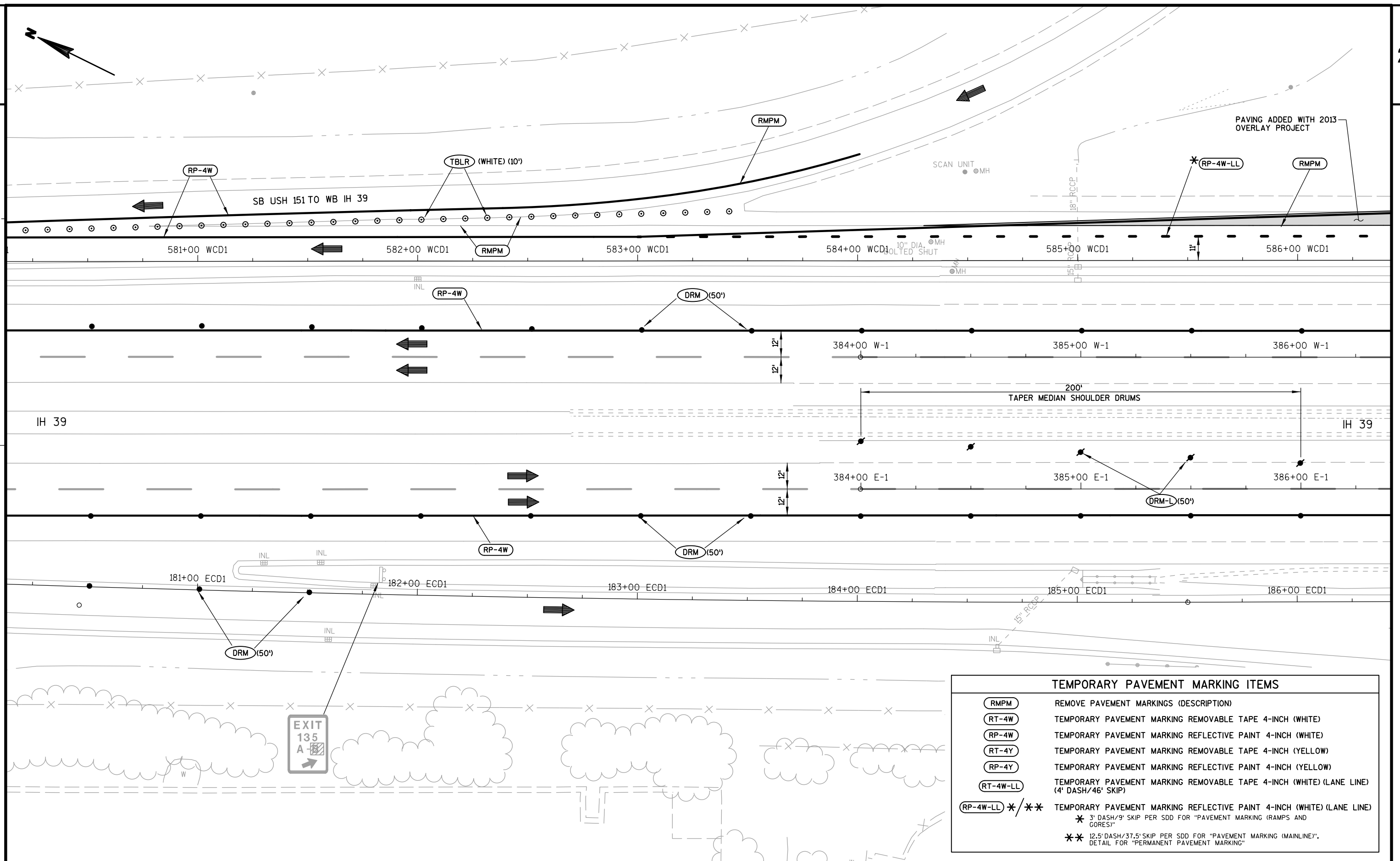
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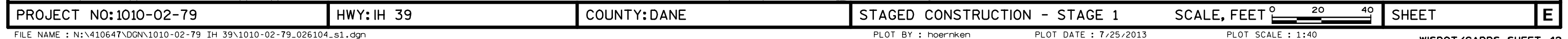
WISDOT/CADDs SHEET 42

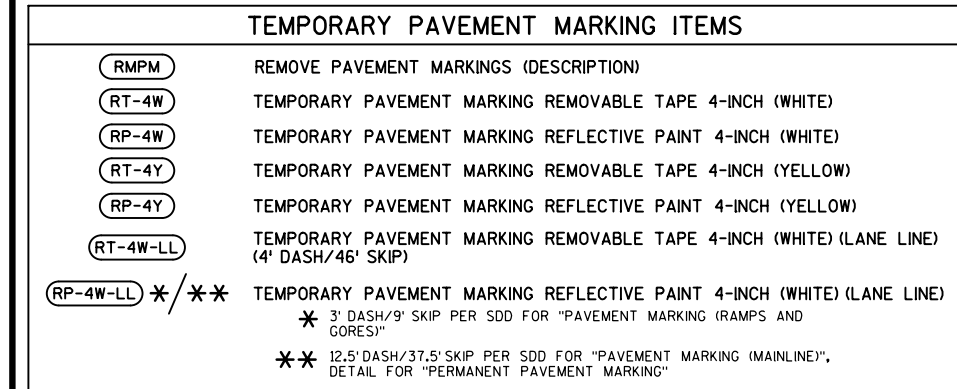


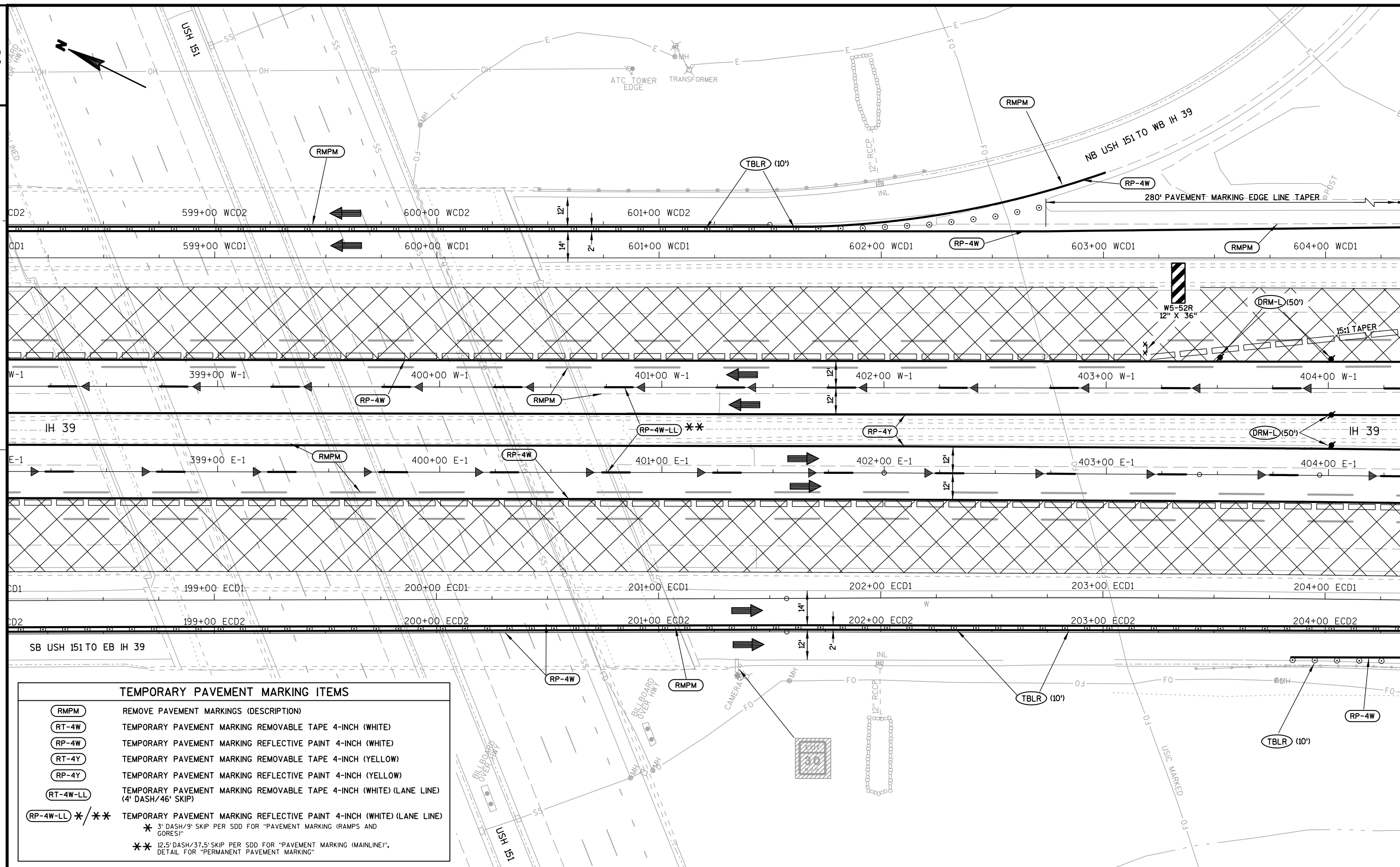
## TEMPORARY PAVEMENT MARKING ITEMS

|          |                                                                                                                                                                                                                                                                   |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM     | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                            |
| RT-4W    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                          |
| RP-4W    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                        |
| RT-4Y    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                         |
| RP-4Y    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                       |
| RT-4W-LL | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                        |
| RP-4W-LL | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |



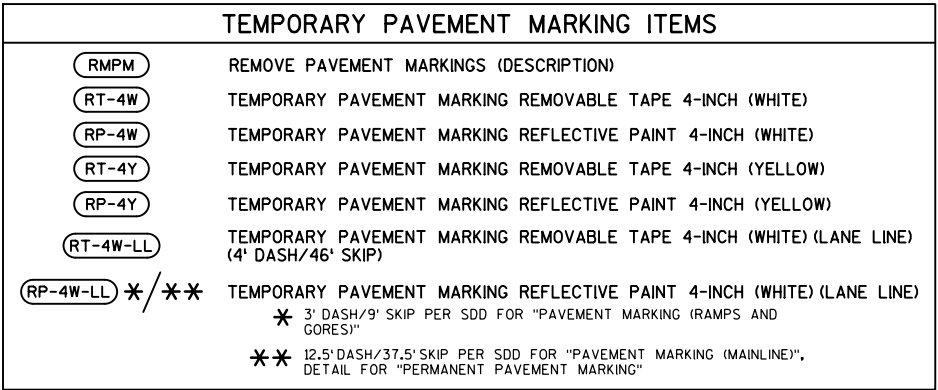


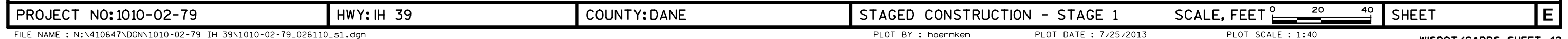


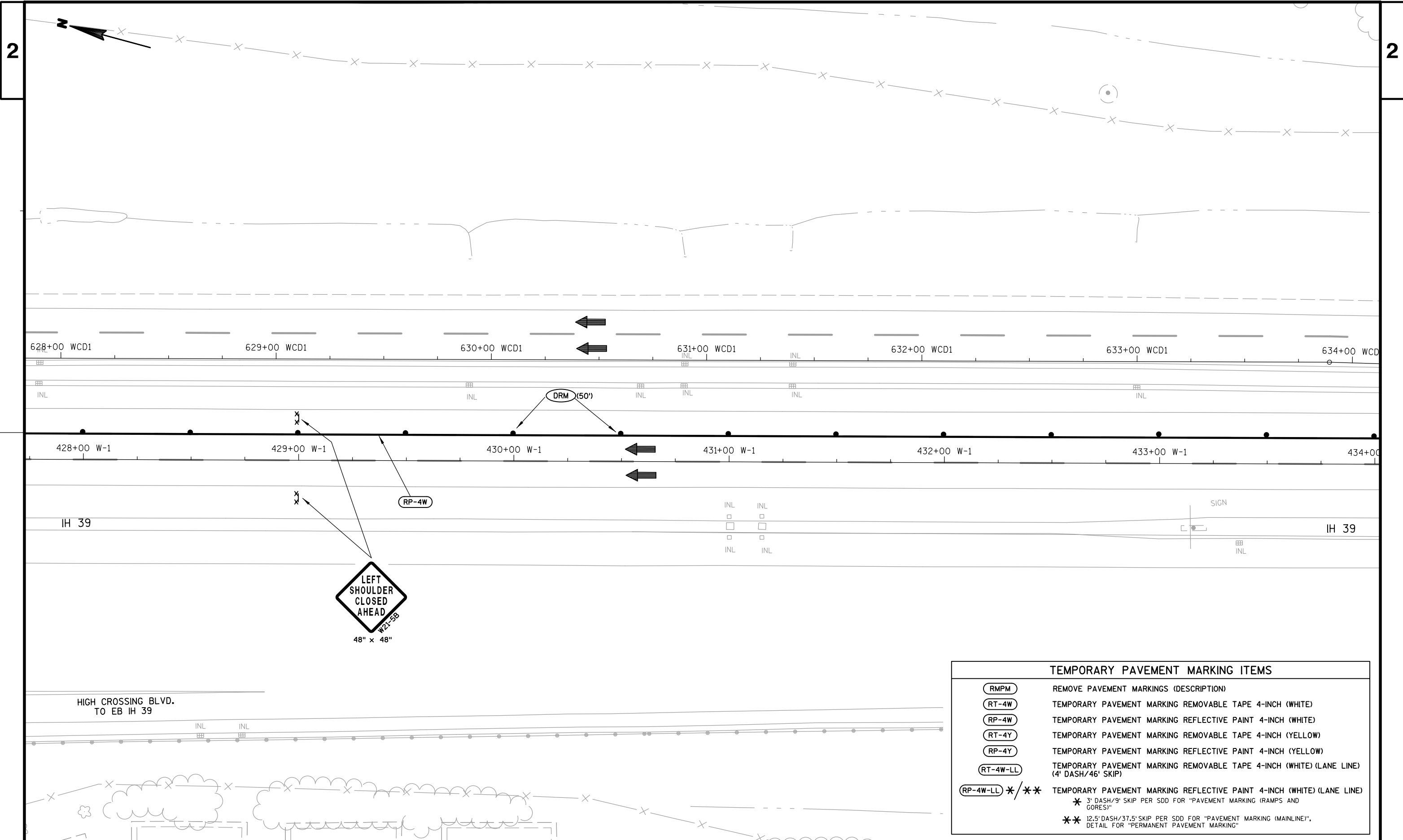


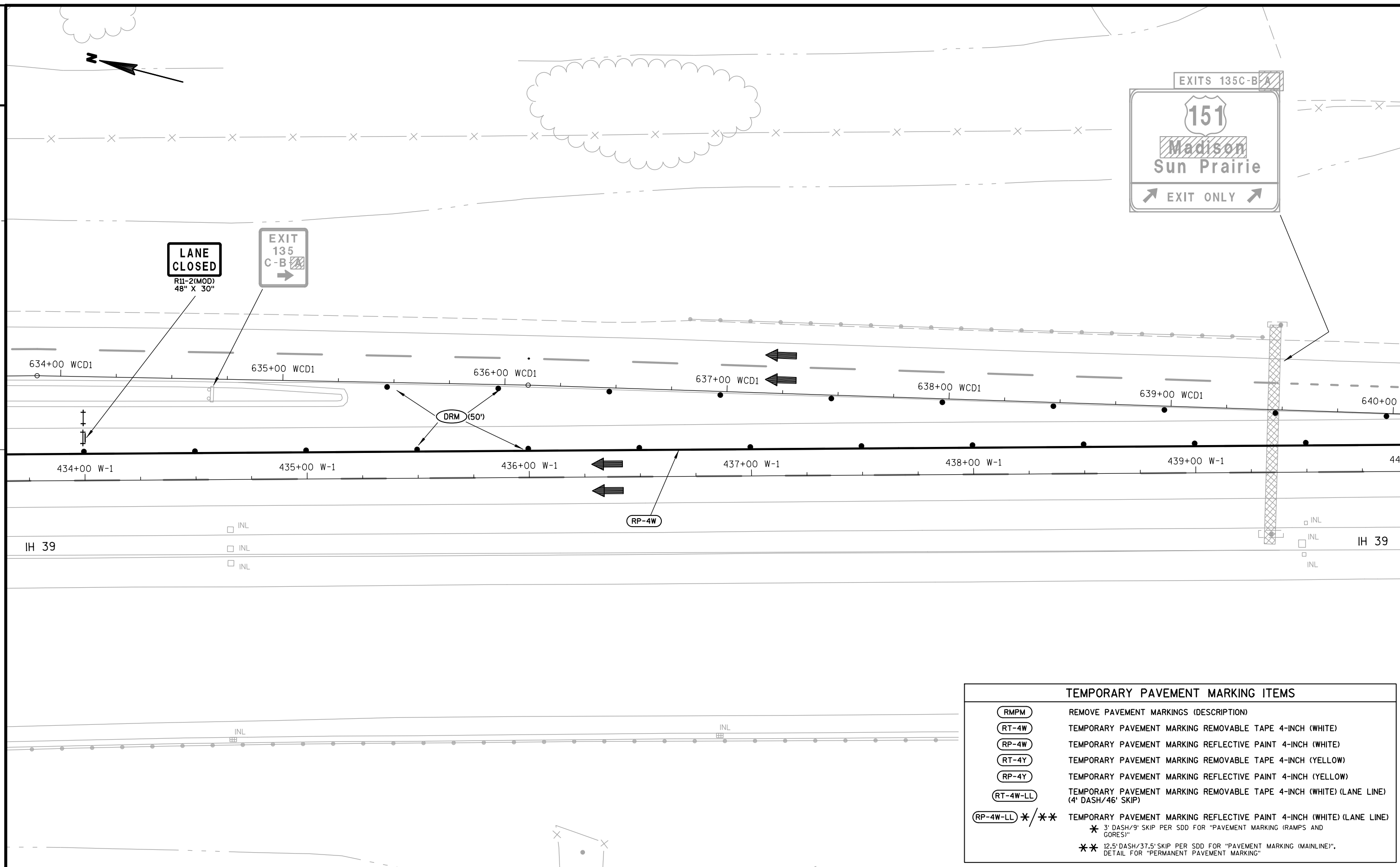












PROJECT NO:1010-02-79

HWY: IH 39

COUNTY: DANE

STAGED CONSTRUCTION - STAGE 1

SCALE, FEET

SHEET

E

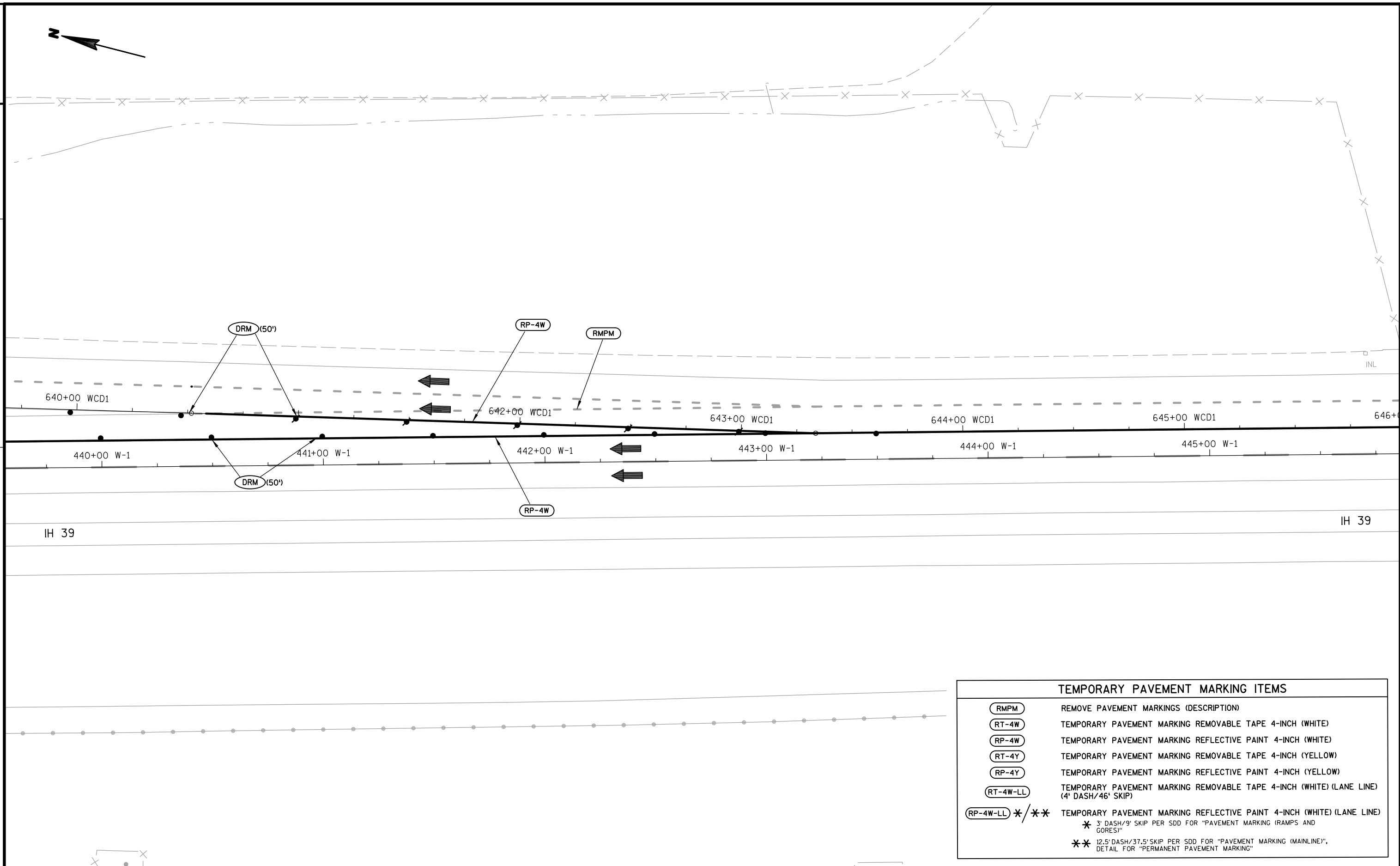
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PLOT DATE : 7/25/2013

PLOT SCALE : 1:40

WISDOT/CADDs SHEET 42



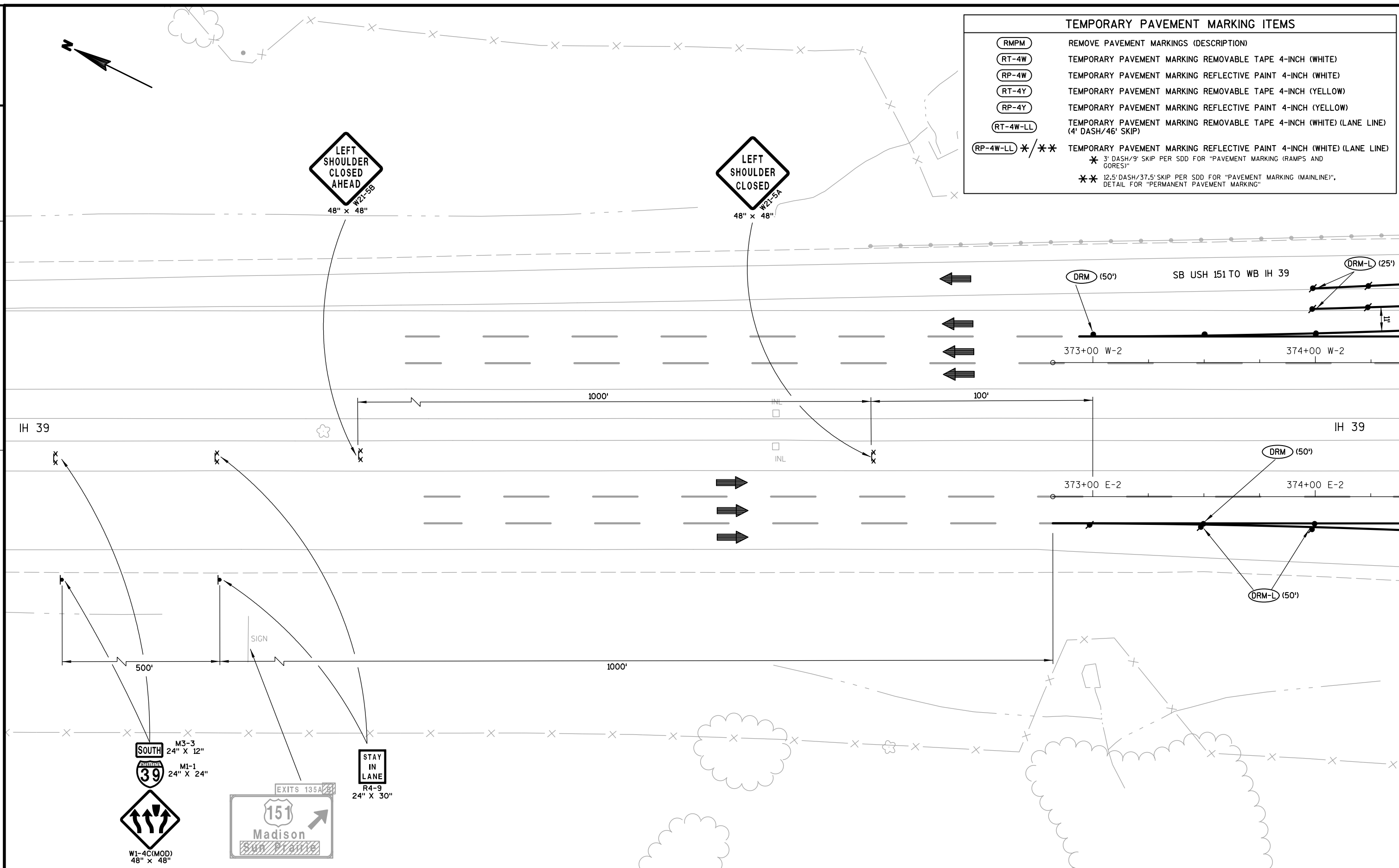
IH 39

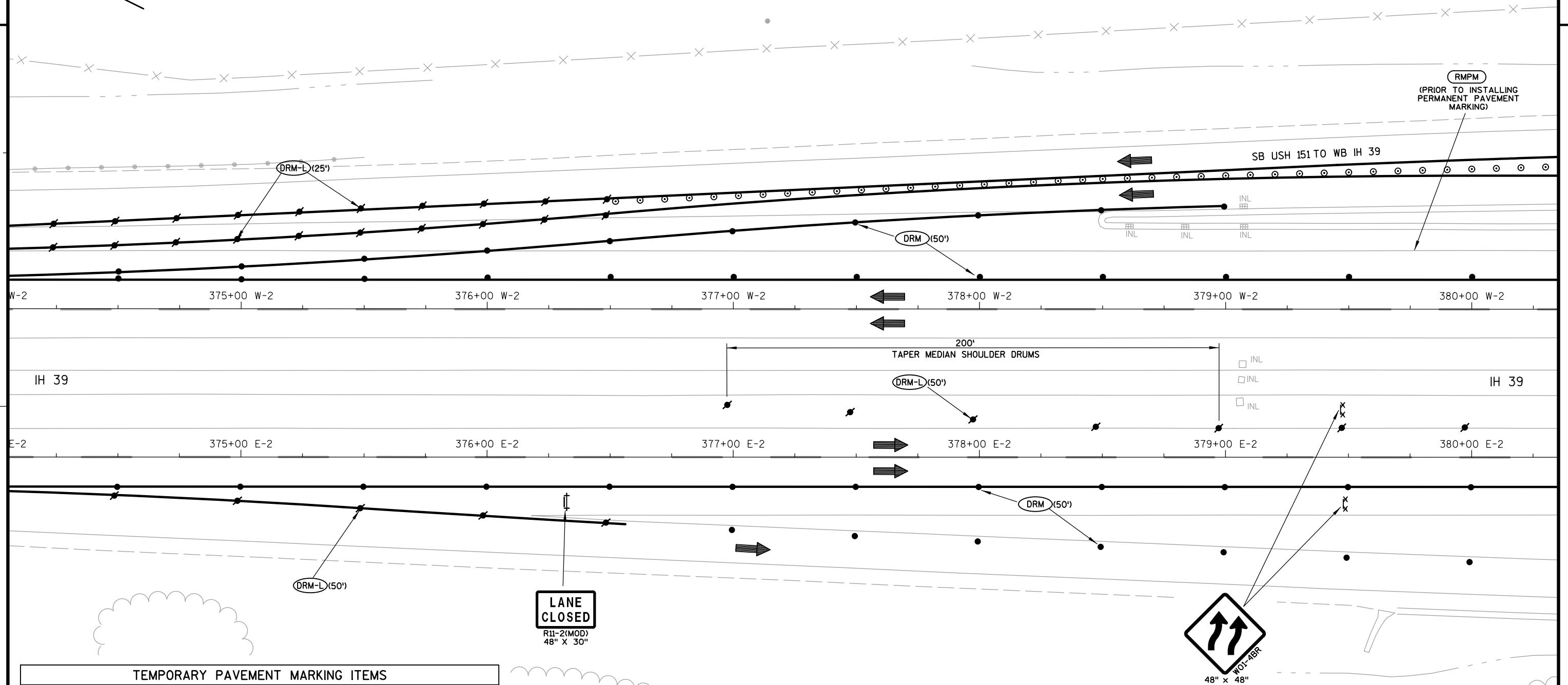
IH 39

TEMPORARY PAVEMENT MARKING ITEMS

|                                                                                                             |                                                                                           |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <b>RMPM</b>                                                                                                 | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                    |
| <b>RT-4W</b>                                                                                                | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                  |
| <b>RP-4W</b>                                                                                                | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                |
| <b>RT-4Y</b>                                                                                                | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                 |
| <b>RP-4Y</b>                                                                                                | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                               |
| <b>RT-4W-LL</b>                                                                                             | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP)   |
| <b>RP-4W-LL</b> */**                                                                                        | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP) |
| * 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"                                          |                                                                                           |
| ** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)", DETAIL FOR "PERMANENT PAVEMENT MARKING" |                                                                                           |







## TEMPORARY PAVEMENT MARKING ITEMS

|                      |                                                                                                                                                                                                                                                                |
|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RMPM</b>          | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                         |
| <b>RT-4W</b>         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                       |
| <b>RP-4W</b>         | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                     |
| <b>RT-4Y</b>         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                      |
| <b>RP-4Y</b>         | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                    |
| <b>RT-4W-LL</b>      | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                     |
| <b>RP-4W-LL</b> */** | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

PROJECT NO: 1010-02-79

HWY: IH 39

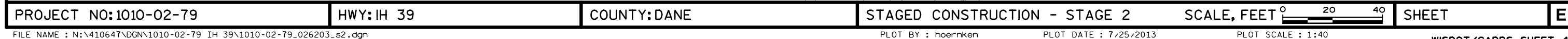
COUNTY: DANE

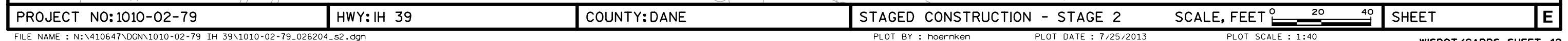
STAGED CONSTRUCTION - STAGE 2

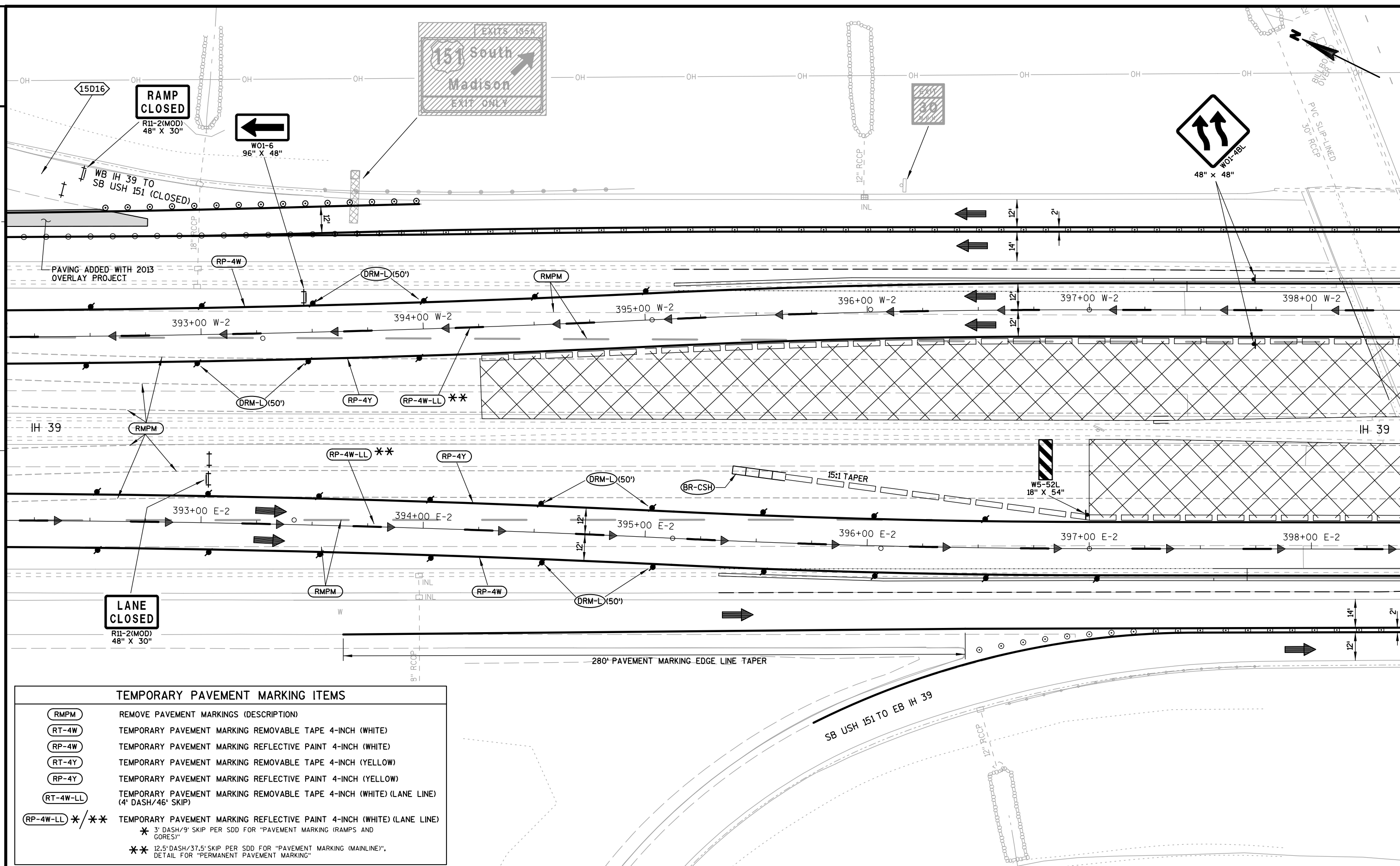
SCALE, FEET

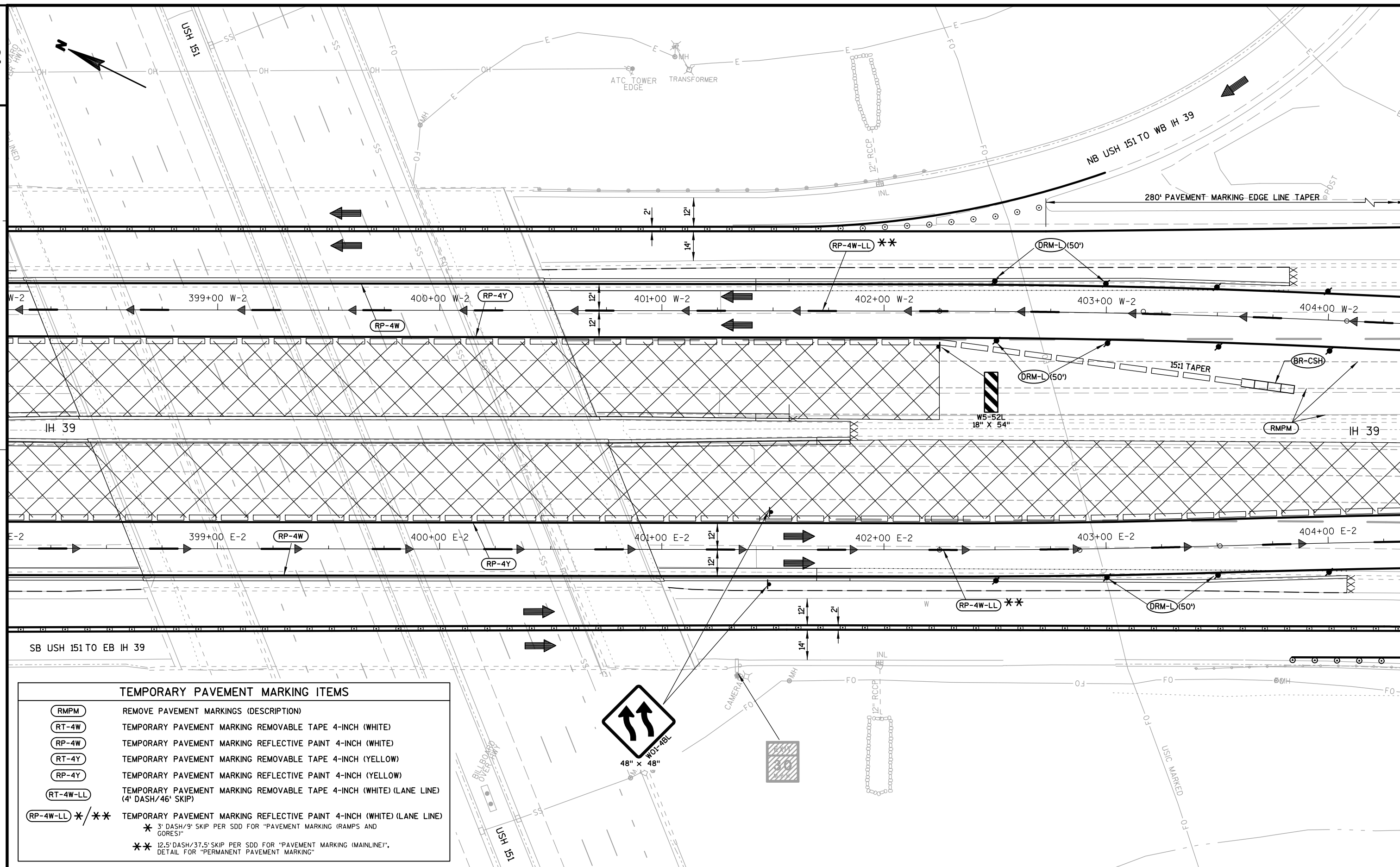
SHEET

E



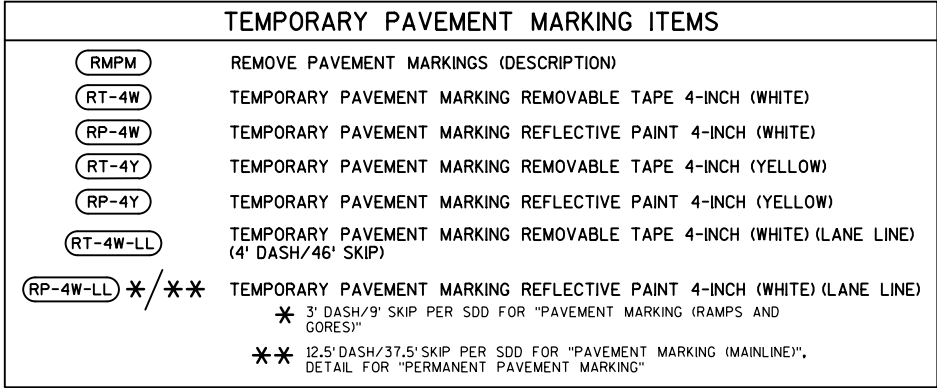


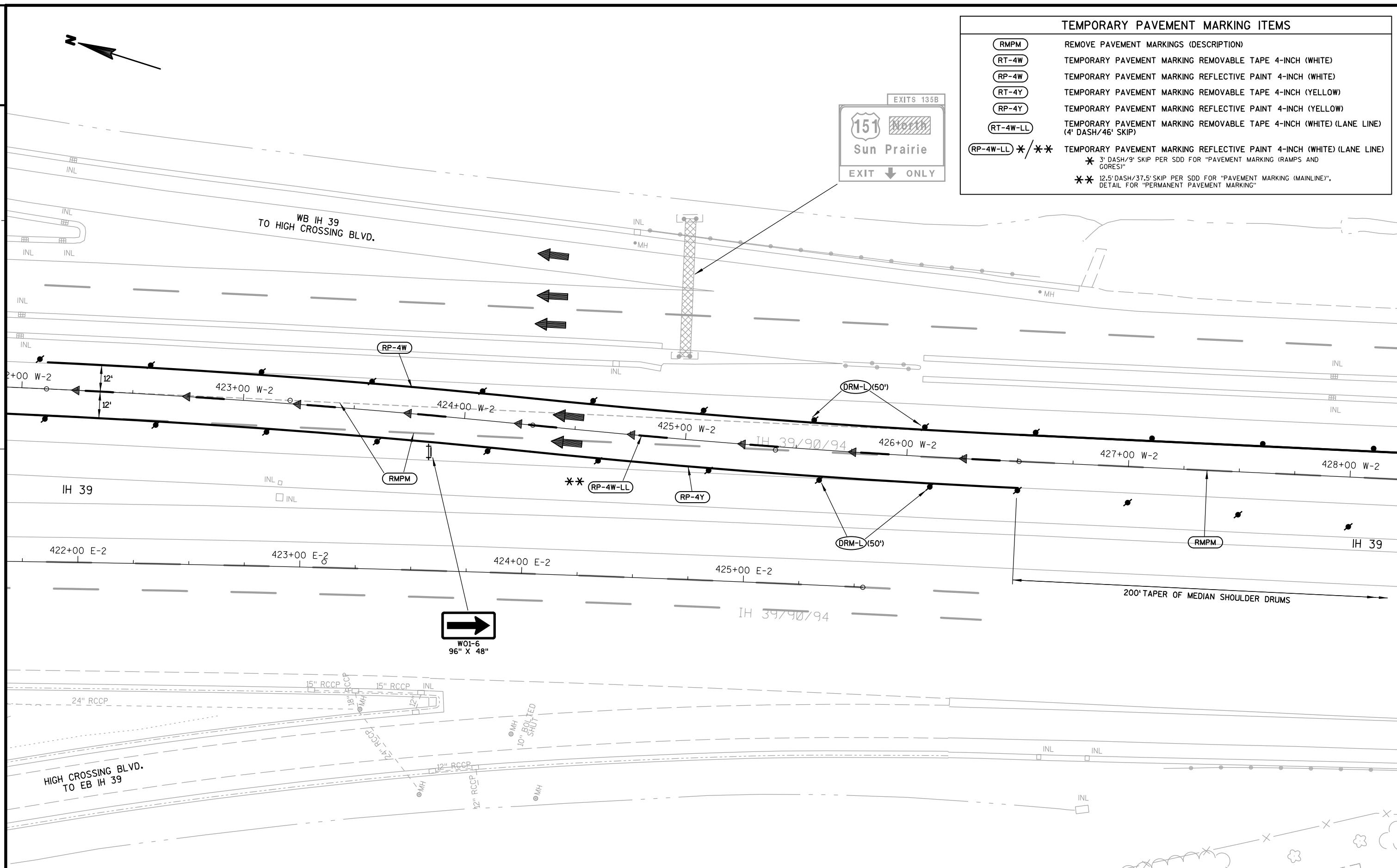












## TEMPORARY PAVEMENT MARKING ITEMS

|                 |                                                                                                                                                                                                                                                                   |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (RMPM)          | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                            |
| (RT-4W)         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                          |
| (RP-4W)         | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                        |
| (RT-4Y)         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                         |
| (RP-4Y)         | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                       |
| (RT-4W-LL)      | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                        |
| (RP-4W-LL) */** | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

FOR STAGE 2 TRAFFIC CONTROL  
434+00 W-2 TO 448+25 W-2, SEE  
STAGE 1 STAGED CONSTRUCTION  
SHEETS

INL

INL

INL

INL

INL

INL

INL

INL

INL

428+00 W-2

429+00 W-2

430+00 W-2

431+00 W-2

432+00 W-2

433+00 W-2

434+00 W-2

IH 39

INL

INL

□

□

□

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INL

INL

RMPM

SIGN

IH 39

INL

1000'

200' TAPER OF MEDIAN  
SHOULDER DRUMS



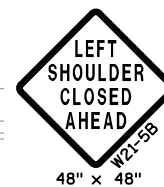
HIGH CROSSING BLVD.  
TO EB IH 39

INL

INL

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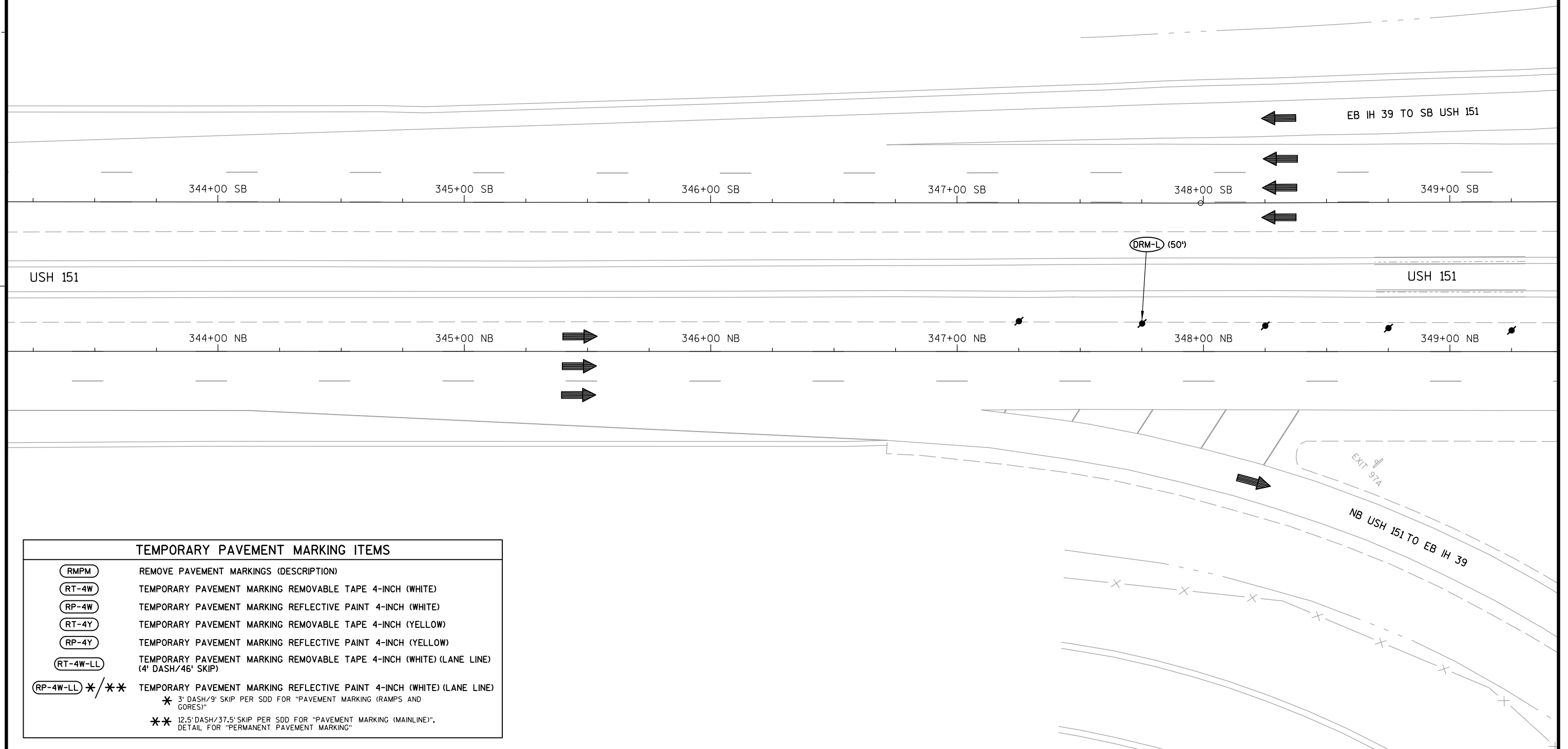
IN



2

NOTE:  
REFER TO  FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

2

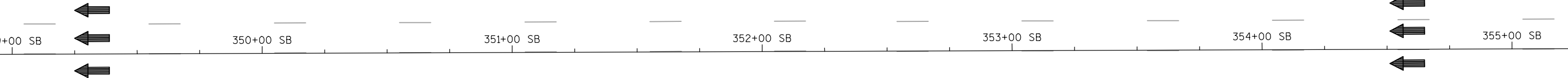


| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RMPM</b>                      | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                         |
| <b>RT-4W</b>                     | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                       |
| <b>RP-4W</b>                     | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                     |
| <b>RT-4Y</b>                     | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                      |
| <b>RP-4Y</b>                     | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                    |
| <b>RT-4W-LL</b>                  | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                     |
| <b>RP-4W-LL</b> **               | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)".<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

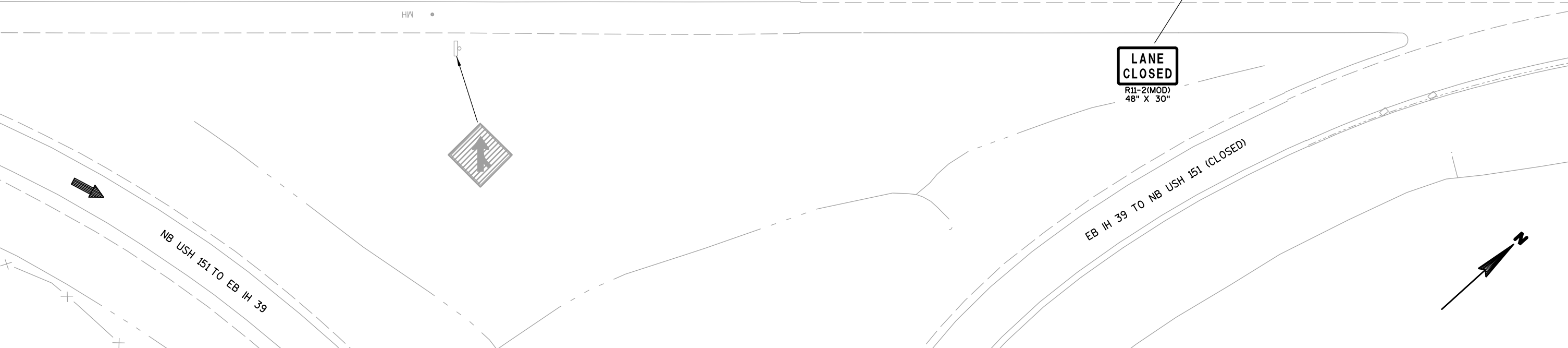
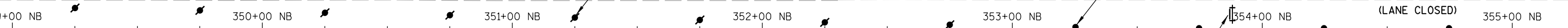
NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                            |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                          |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                        |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                         |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                       |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                        |
| RP-4W-LL * / **                  | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

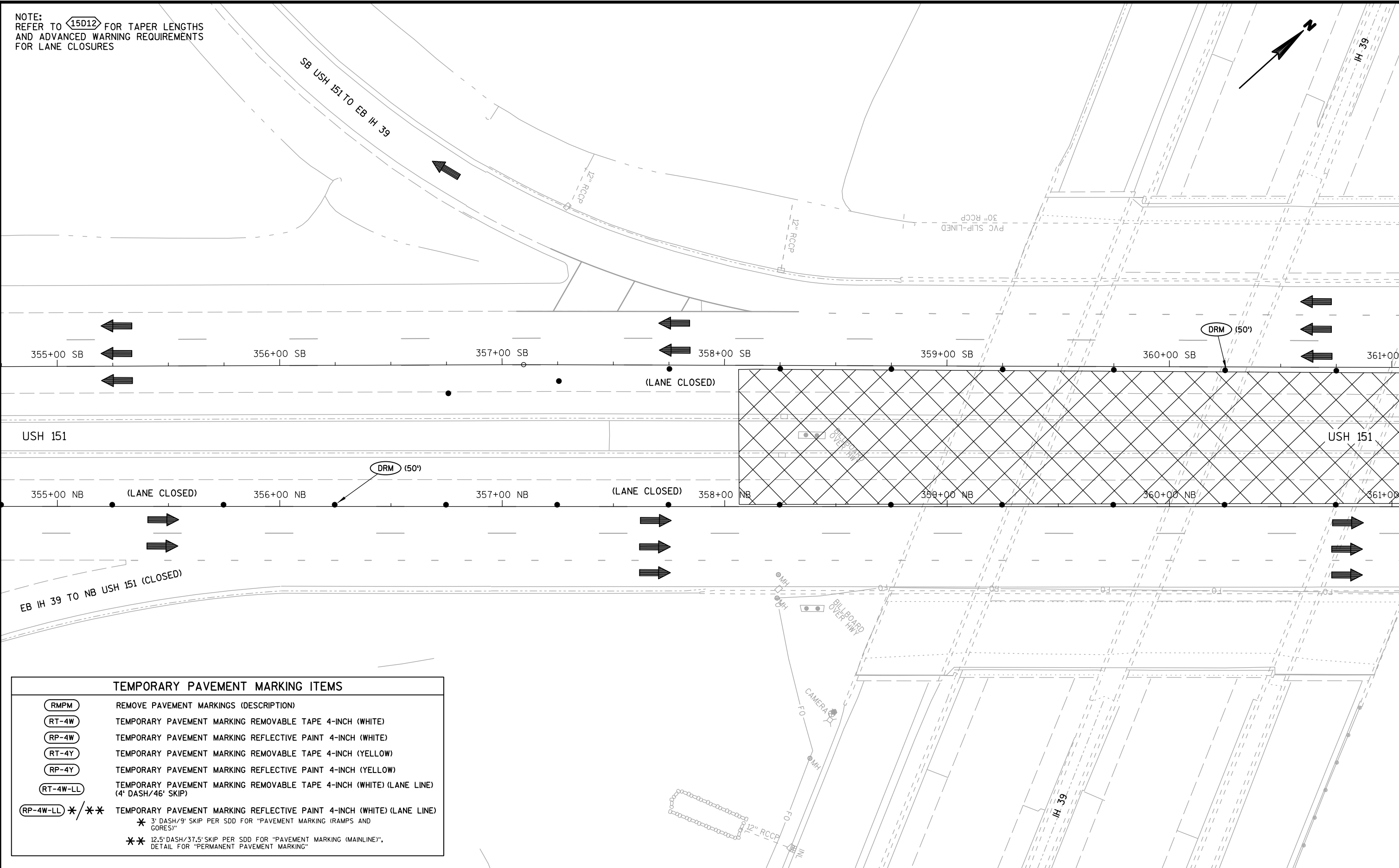
EB IH 39 TO SB USH 151



USH 151



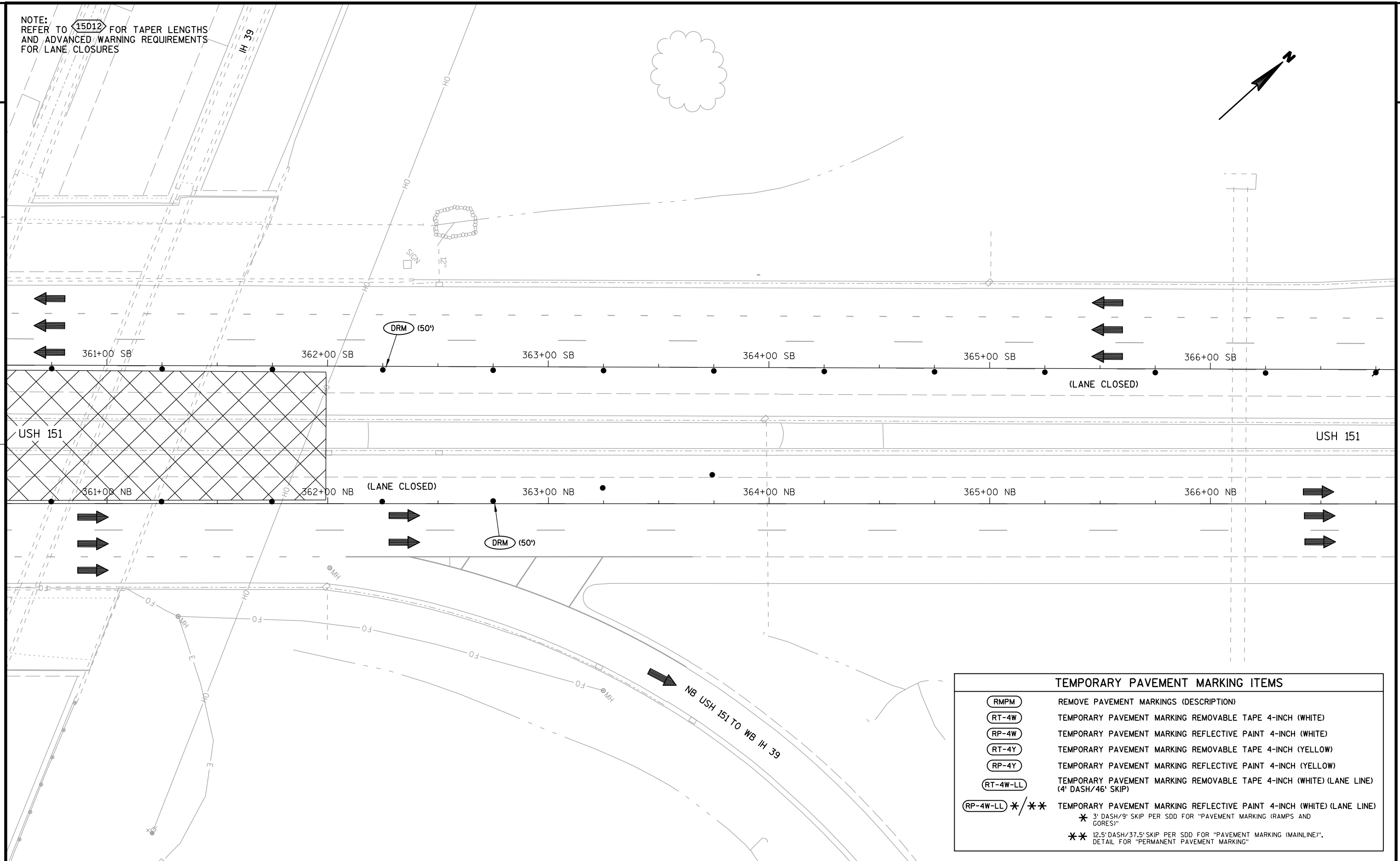
NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



TEMPORARY PAVEMENT MARKING ITEMS

|          |                                                                                                                                                                                                                                                           |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM     | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                    |
| RT-4W    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                  |
| RP-4W    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                |
| RT-4Y    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                 |
| RP-4Y    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                               |
| RT-4W-LL | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                |
| RP-4W-LL | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"<br>12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

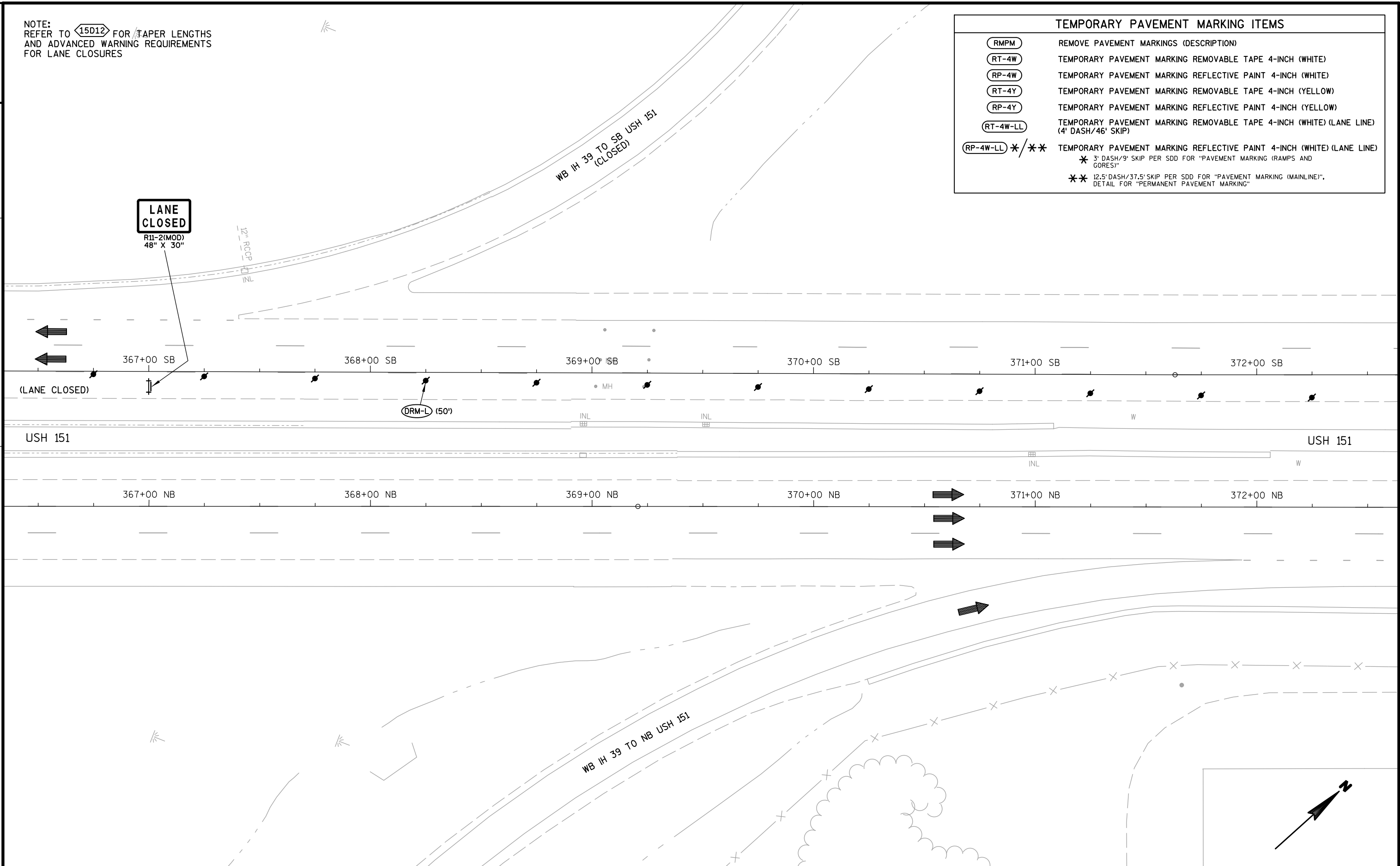
NOTE:  
REFER TO 15012 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



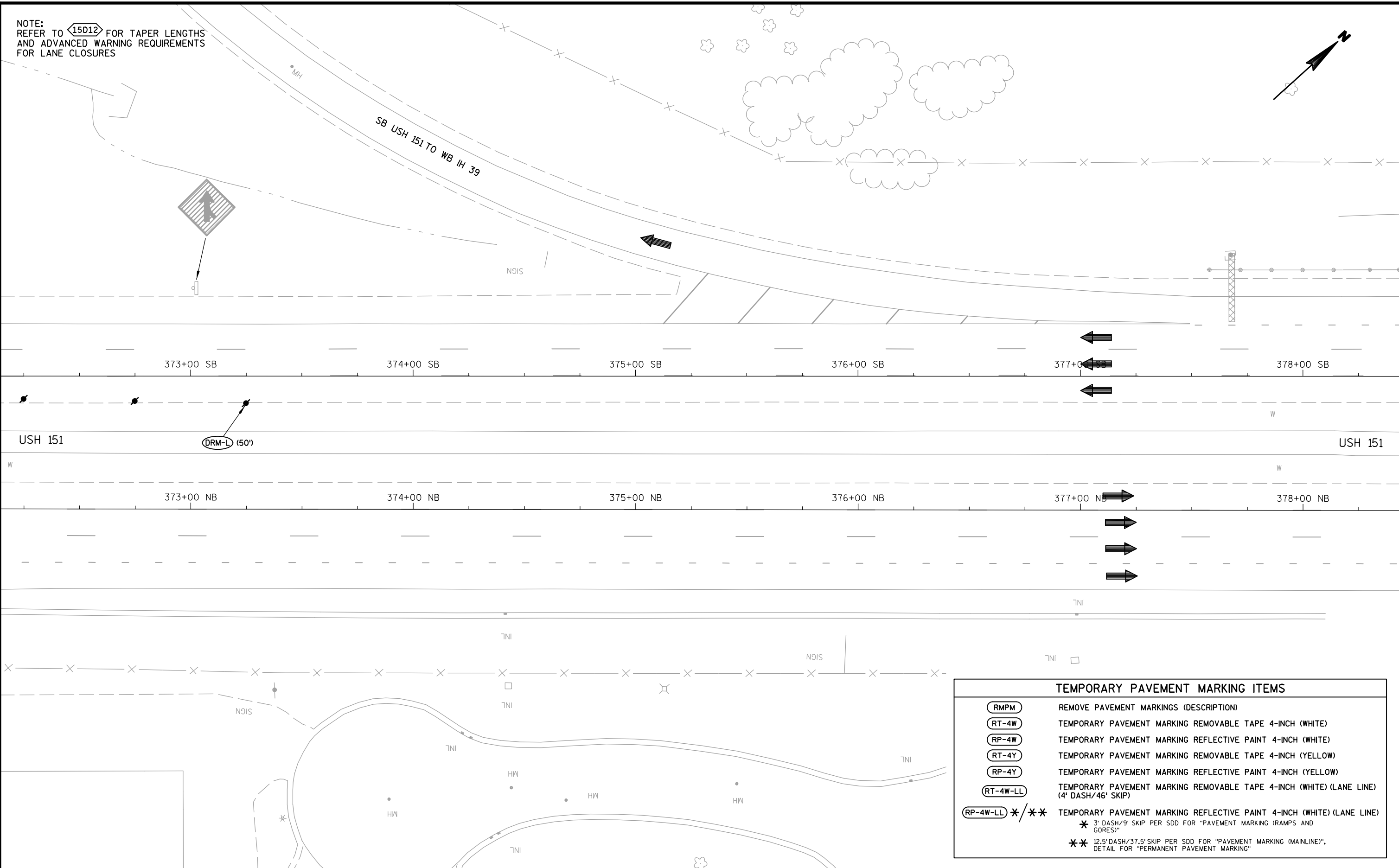
| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                            |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                          |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                        |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                         |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                       |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                        |
| RP-4W-LL                         | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                        |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                                 |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                               |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                             |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                              |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                            |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                             |
| RP-4W-LL                         | * ** TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

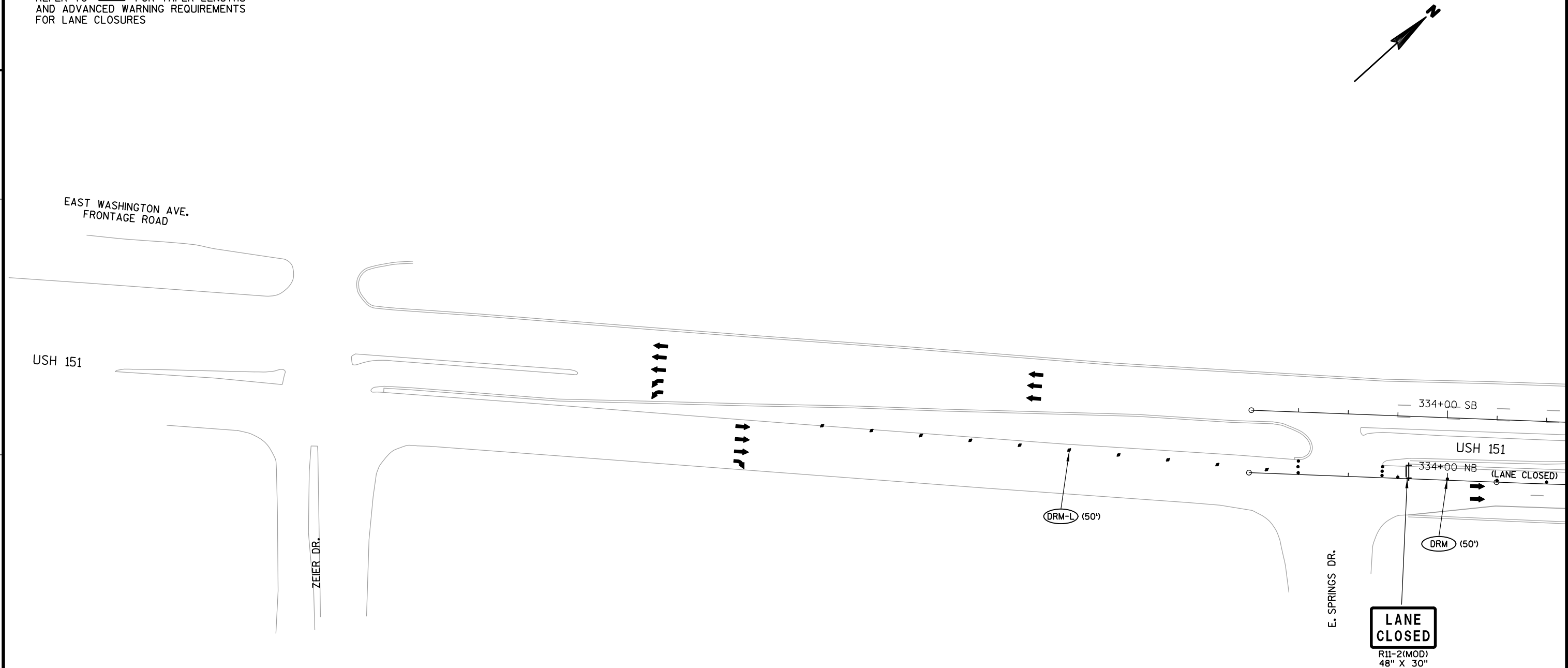


NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



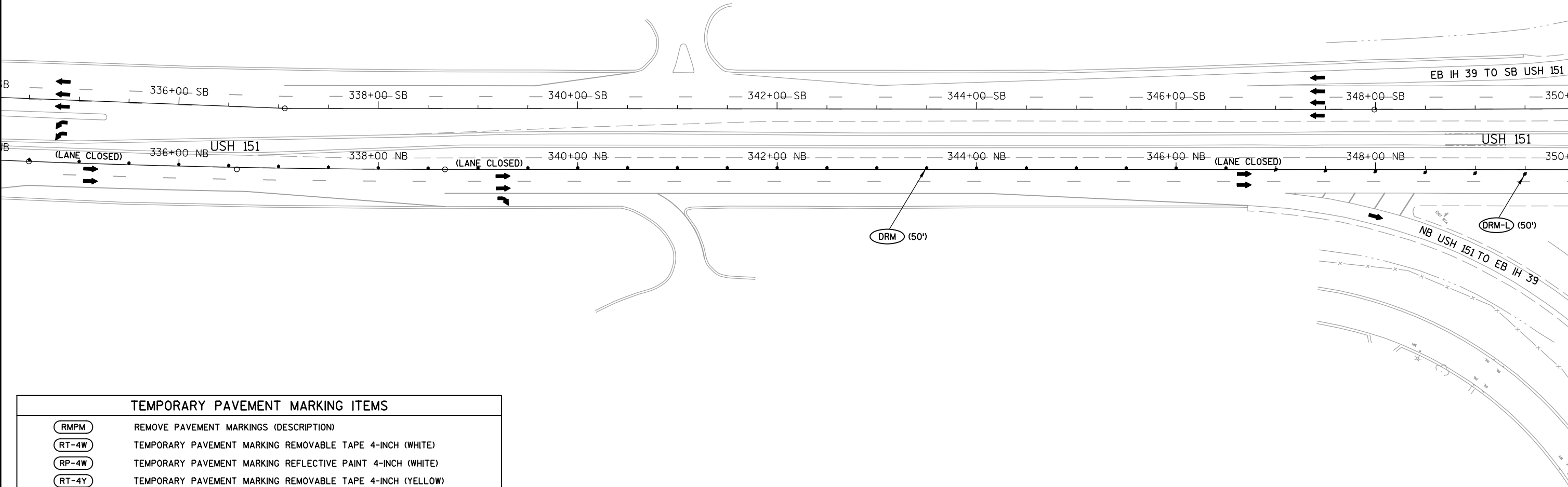
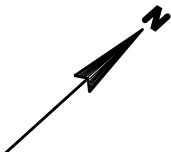
| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                   |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                            |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                          |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                        |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                         |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                       |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP)                                                                                           |
| RP-4W-LL                         | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP)                                                                                         |
| */*/*                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE) (12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)", DETAIL FOR "PERMANENT PAVEMENT MARKING") |

NOTE:  
REFER TO 15014 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPPM                            | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                         |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                       |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                     |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                      |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                    |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                     |
| RP-4W-LL **/**                   | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

NOTE:  
REFER TO 15D14 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

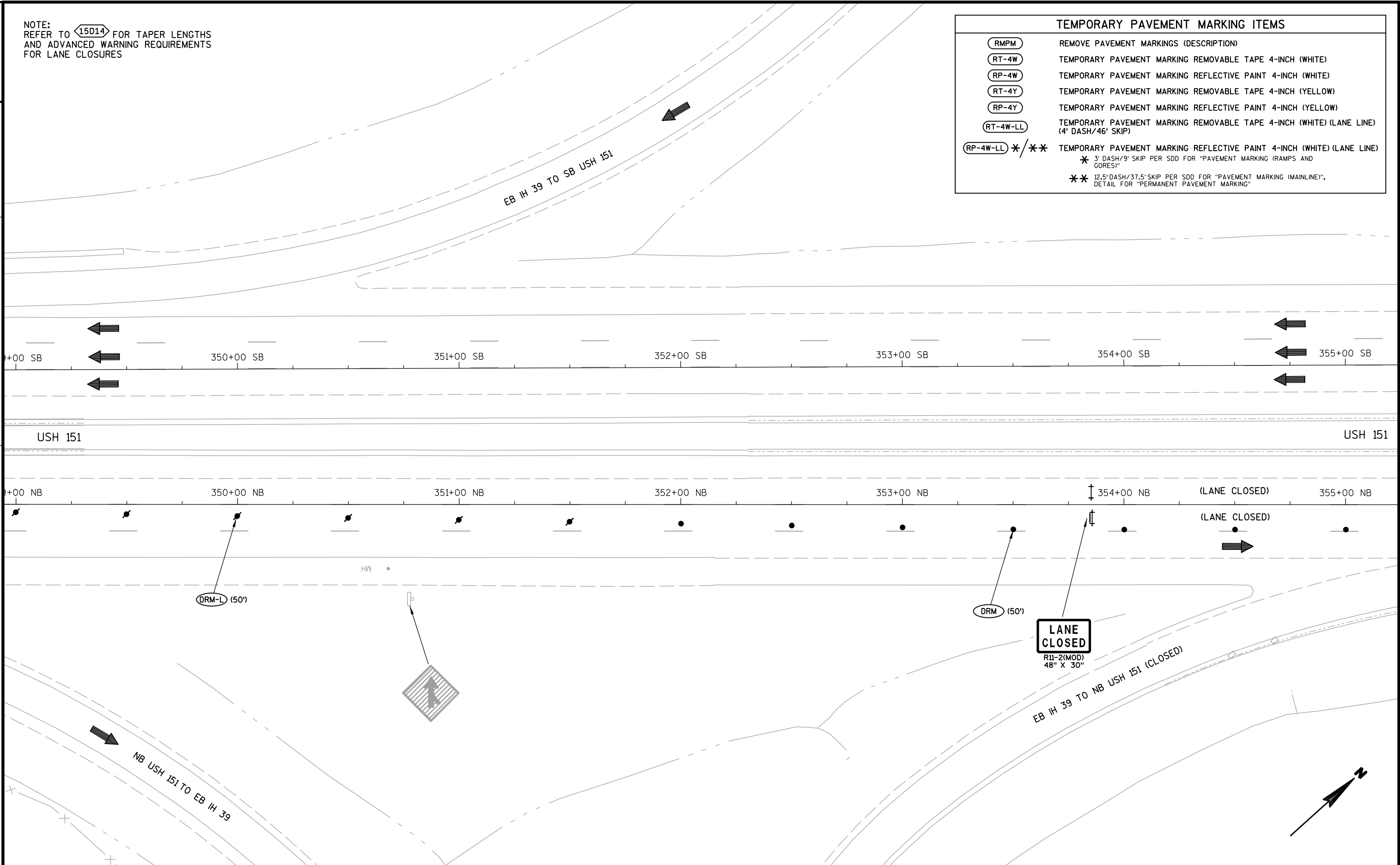


TEMPORARY PAVEMENT MARKING ITEMS

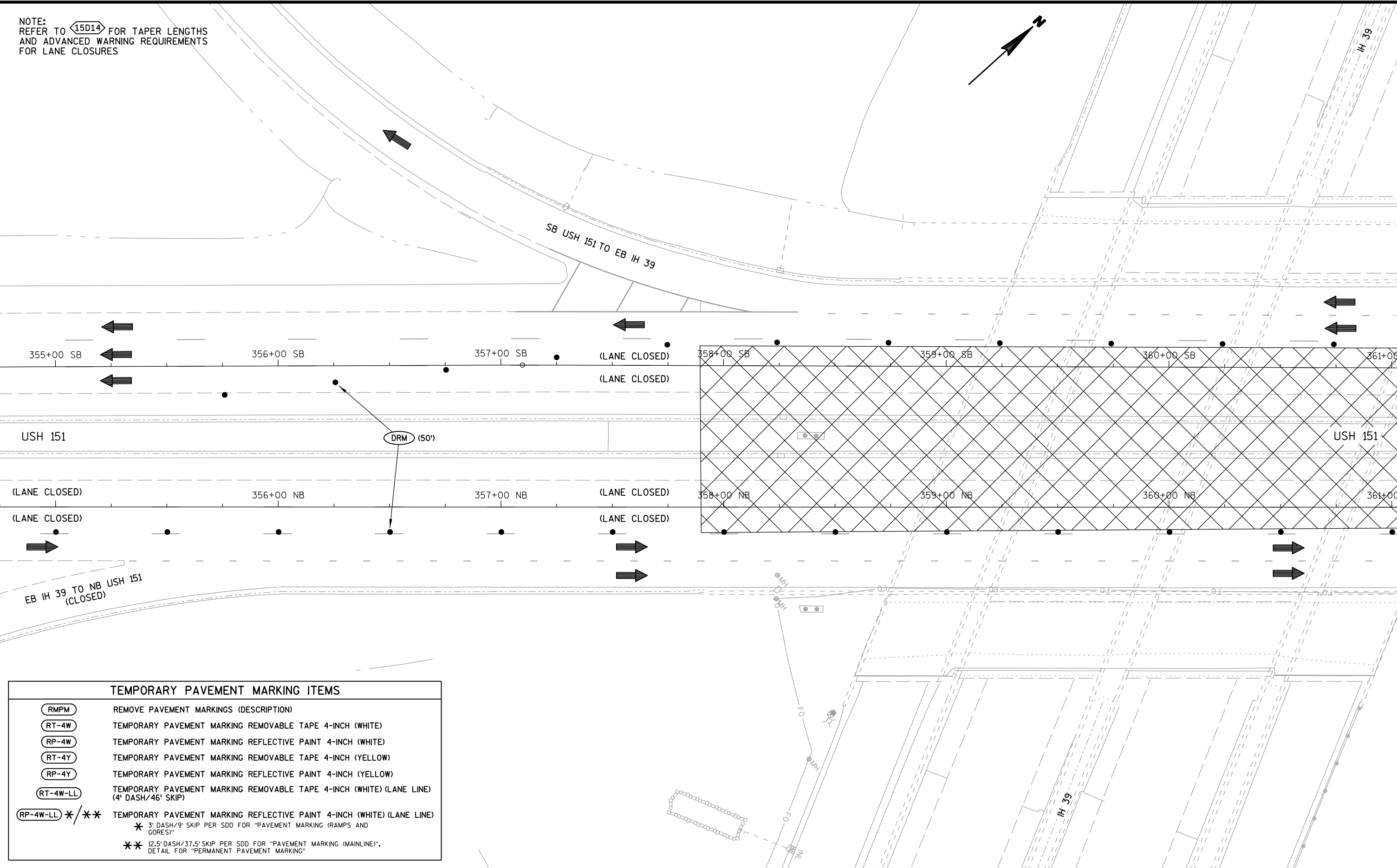
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|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM     | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                             |
| RT-4W    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                           |
| RP-4W    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                         |
| RT-4Y    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                          |
| RP-4Y    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                        |
| RT-4W-LL | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                         |
| RP-4W-LL | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>*** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

NOTE:  
REFER TO 15D14 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

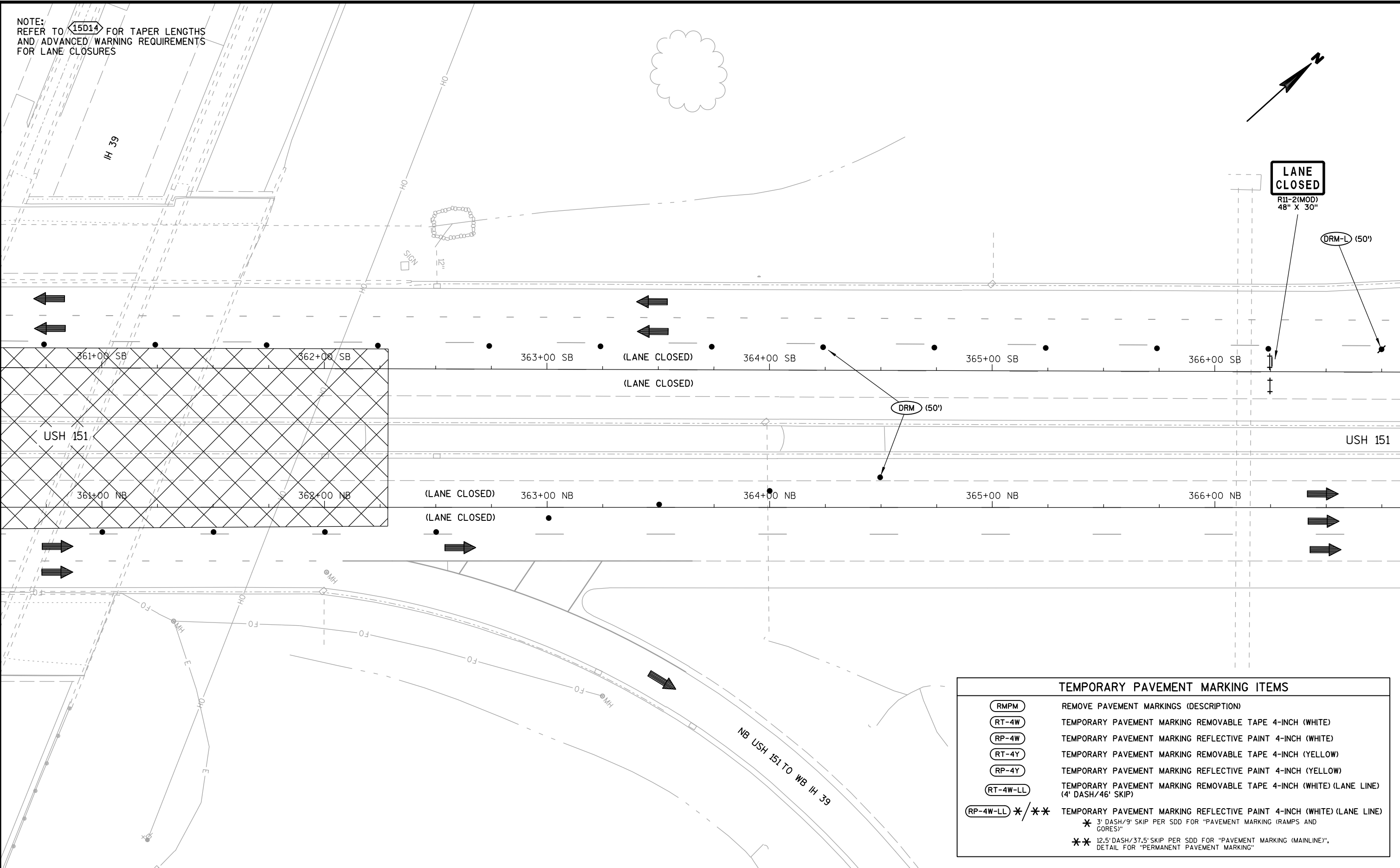
| TEMPORARY PAVEMENT MARKING ITEMS                                                                               |                                                                                              |
|----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| RMPM                                                                                                           | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                       |
| RT-4W                                                                                                          | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                     |
| RP-4W                                                                                                          | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                   |
| RT-4Y                                                                                                          | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                    |
| RP-4Y                                                                                                          | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                  |
| RT-4W-LL                                                                                                       | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)   |
| RP-4W-LL                                                                                                       | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP) |
| * 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GOES)"                                           |                                                                                              |
| ** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)".<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |                                                                                              |



NOTE:  
REFER TO 15D14 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

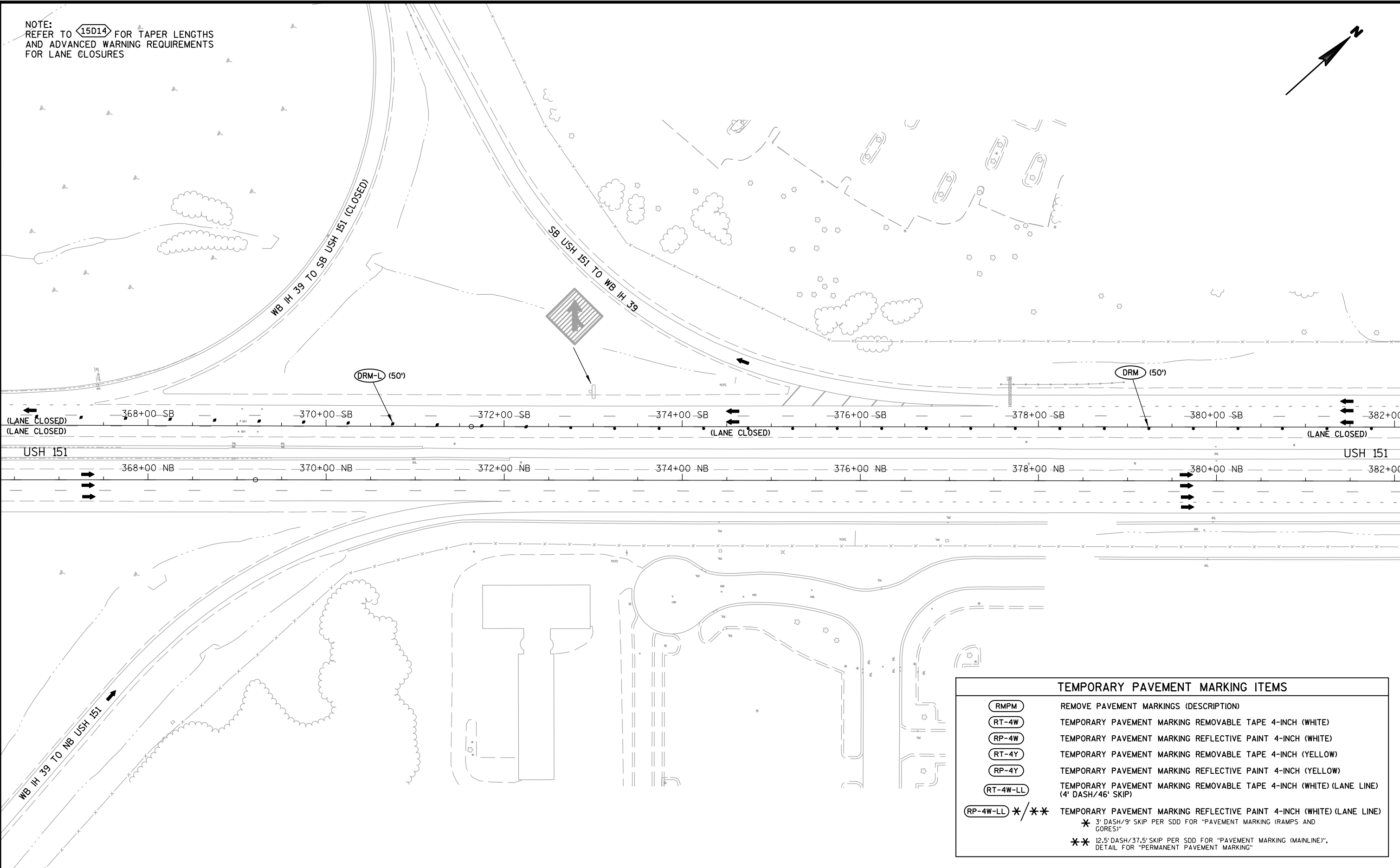
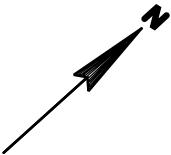


NOTE:  
REFER TO 15D14 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                            |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                          |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                        |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                         |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                       |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                        |
| RP-4W-LL **/**                   | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

NOTE:  
REFER TO 15D14 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



NOTE:  
REFER TO 15D14 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

LANE  
CLOSED

R11-2(MOD)  
48" X 30"

DRM (50')

DRM-L (50')

382+00 SB (LANE CLOSED) 384+00 SB 386+00 SB 388+00 SB 390+00 SB 392+00 SB USH 151 394+00 SB 396+00 SB

382+00 NB 384+00 NB 386+00 NB 388+00 NB 390+00 NB 392+00 NB USH 151 394+00 NB 396+00 NB

USH 151

NB USH 151 TO  
AMERICAN PARKWAY

TEMPORARY PAVEMENT MARKING ITEMS

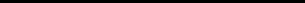
|          |                                                                                                                                               |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM     | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                        |
| RT-4W    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                      |
| RP-4W    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                    |
| RT-4Y    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                     |
| RP-4Y    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                   |
| RT-4W-LL | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                    |
| RP-4W-LL | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)" |
|          | 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING"                                   |

USH 151

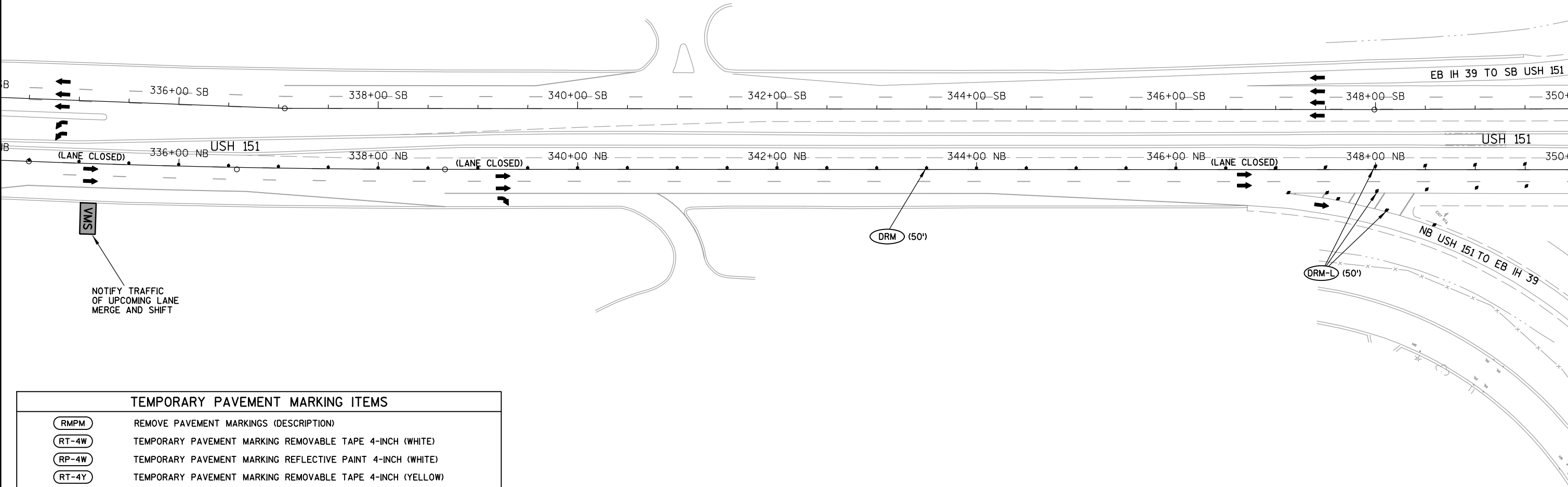
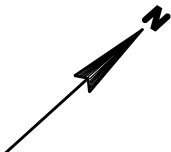
ZEIER DR.

E. SPRINGS DR.

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

|                        |            |              |                                     |                                                                                                   |       |          |
|------------------------|------------|--------------|-------------------------------------|---------------------------------------------------------------------------------------------------|-------|----------|
| PROJECT NO: 1010-02-79 | HWY: IH 39 | COUNTY: DANE | STAGED CONSTRUCTION - STAGE 1C & 2C | SCALE, FEET  | SHEET | <b>E</b> |
|------------------------|------------|--------------|-------------------------------------|---------------------------------------------------------------------------------------------------|-------|----------|

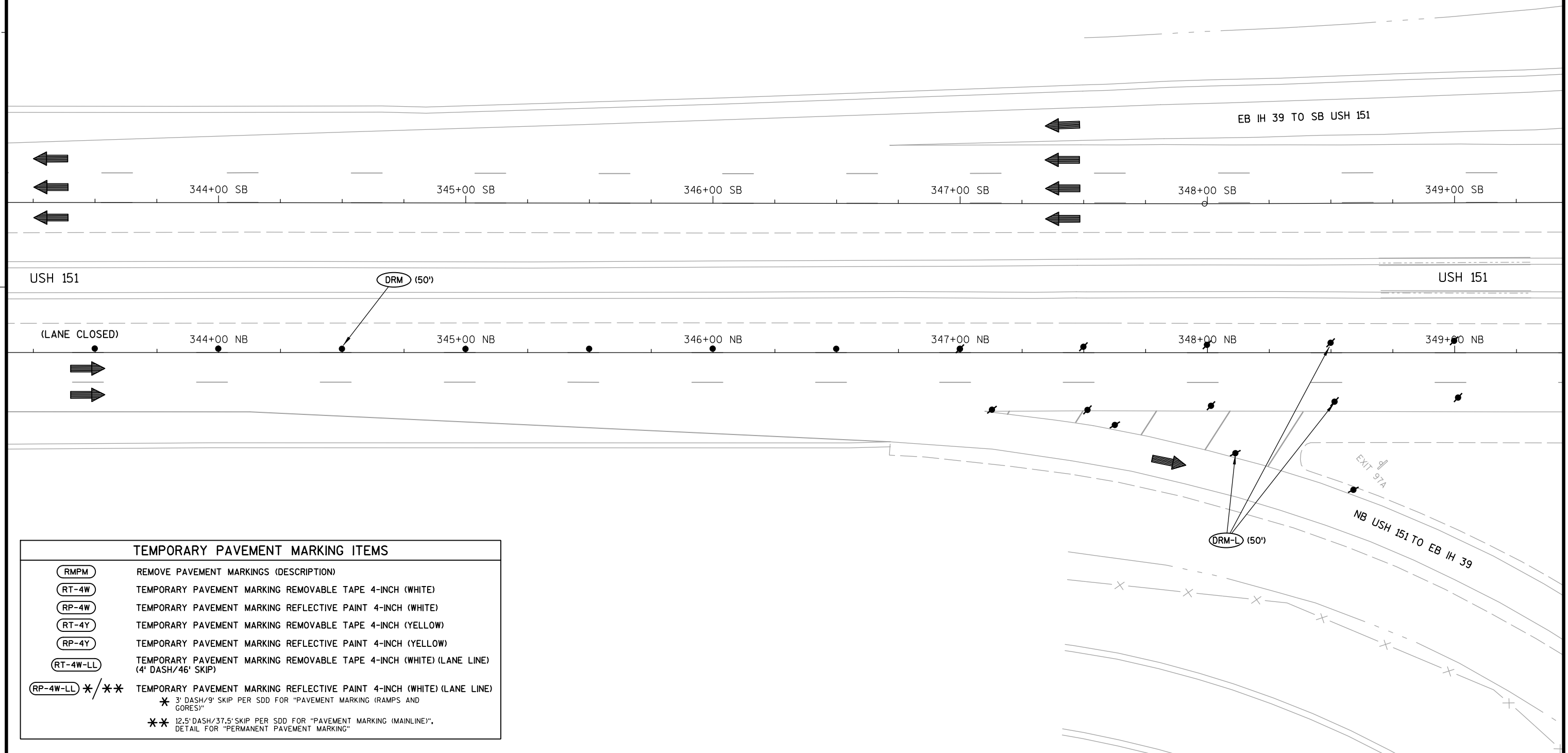
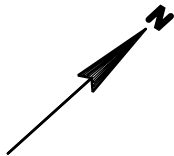
NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



TEMPORARY PAVEMENT MARKING ITEMS

|          |                                                                                                                                               |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM     | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                        |
| RT-4W    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                      |
| RP-4W    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                    |
| RT-4Y    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                     |
| RP-4Y    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                   |
| RT-4W-LL | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                    |
| RP-4W-LL | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)" |
|          | 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING"                                   |

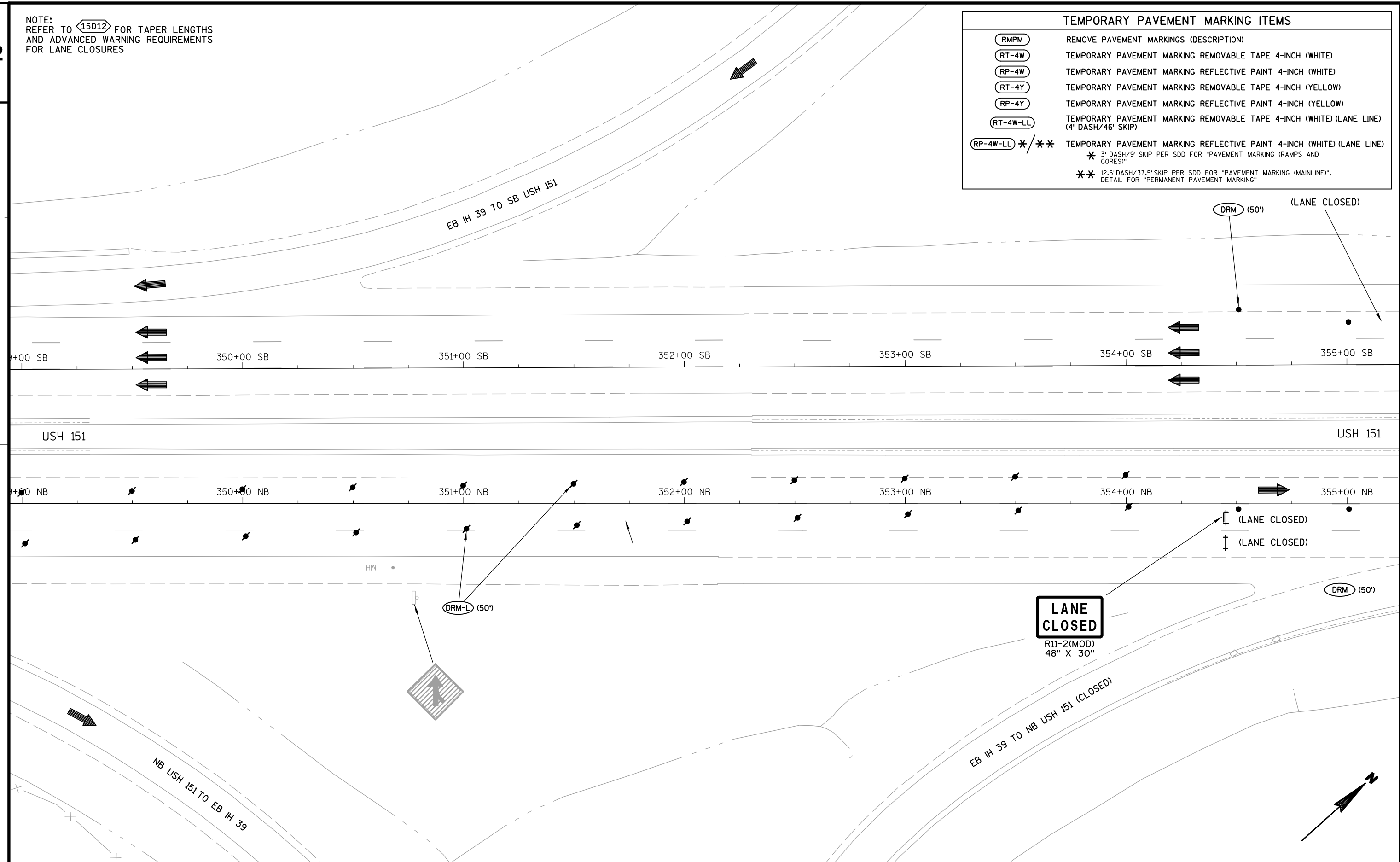
NOTE:  
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FOR LANE CLOSURES



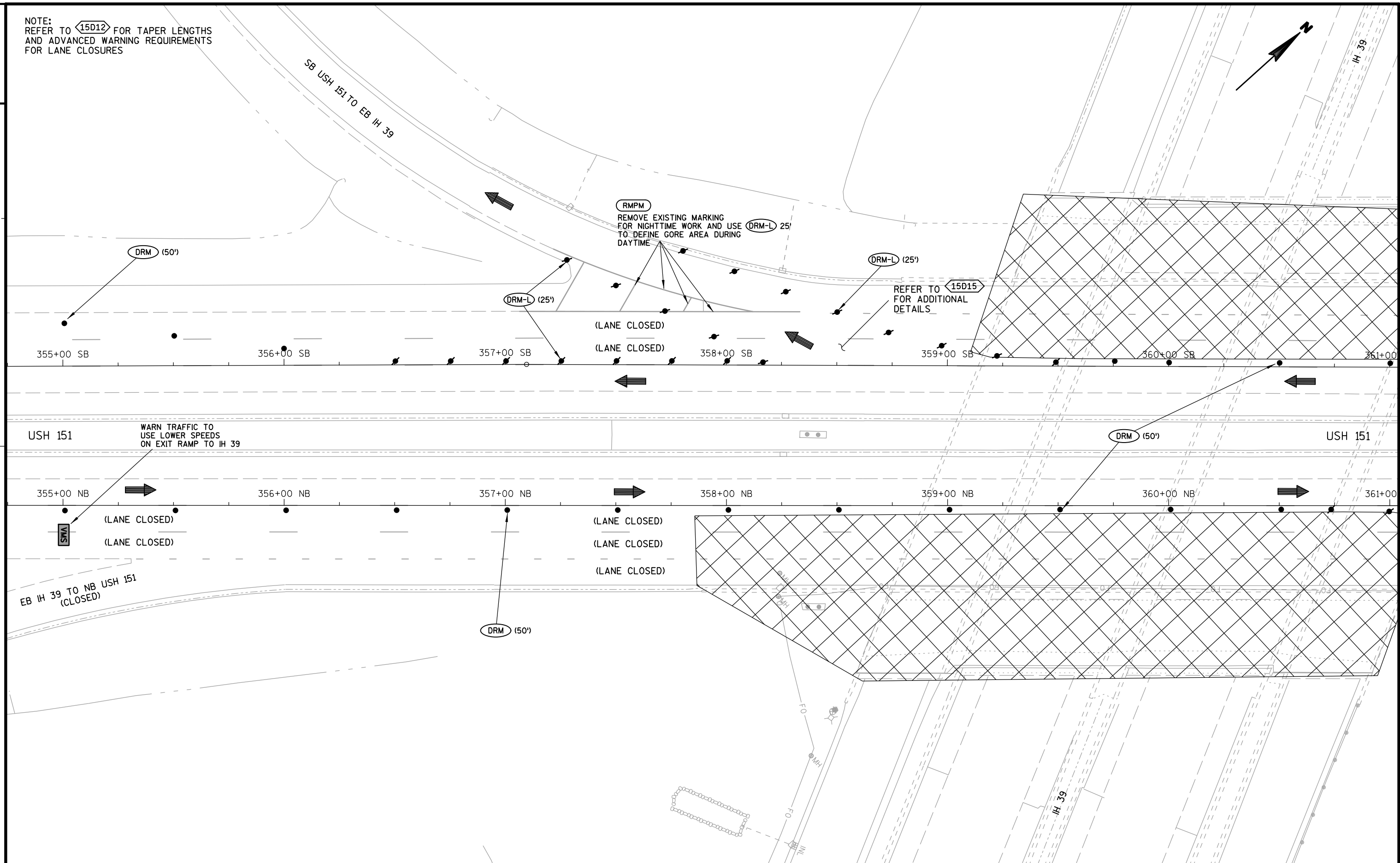
| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                         |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                       |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                     |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                      |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                    |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                     |
| RP-4W-LL **/**                   | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GOES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                               |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                        |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                      |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                    |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                     |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                   |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                    |
| RP-4W-LL                         | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                  |
| ***                              | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)" |
| **                               | 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING"                                   |



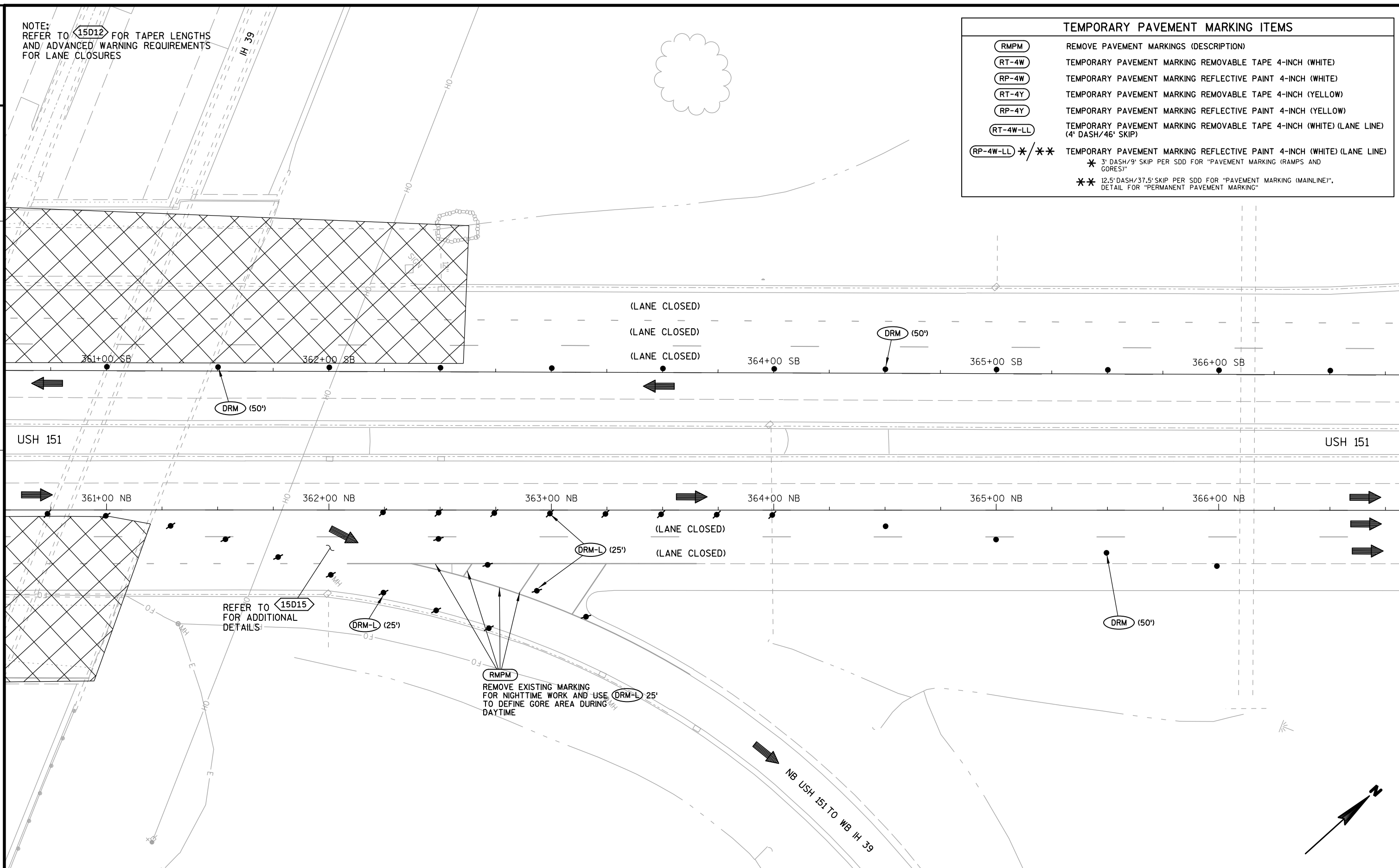
NOTE:  
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AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



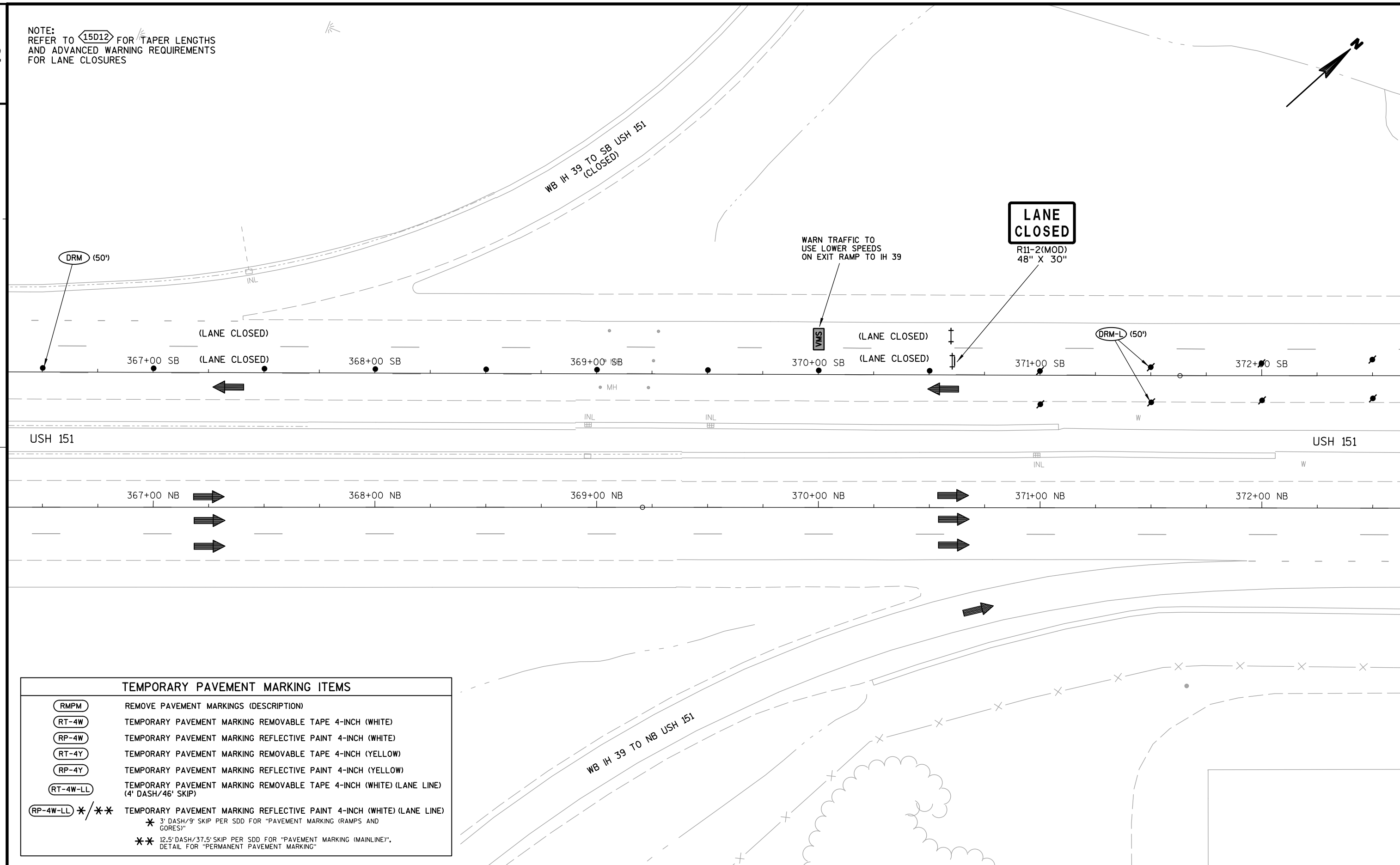
NOTE:  
REFER TO **15D12** FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

## TEMPORARY PAVEMENT MARKING ITEMS

|                        |                                                                                                                                                                                                                                                                   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RMPM</b>            | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                            |
| <b>RT-4W</b>           | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                          |
| <b>RP-4W</b>           | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                        |
| <b>RT-4Y</b>           | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                         |
| <b>RP-4Y</b>           | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                       |
| <b>RT-4W-LL</b>        | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                        |
| <b>(RP-4W-LL) */**</b> | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)".<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |



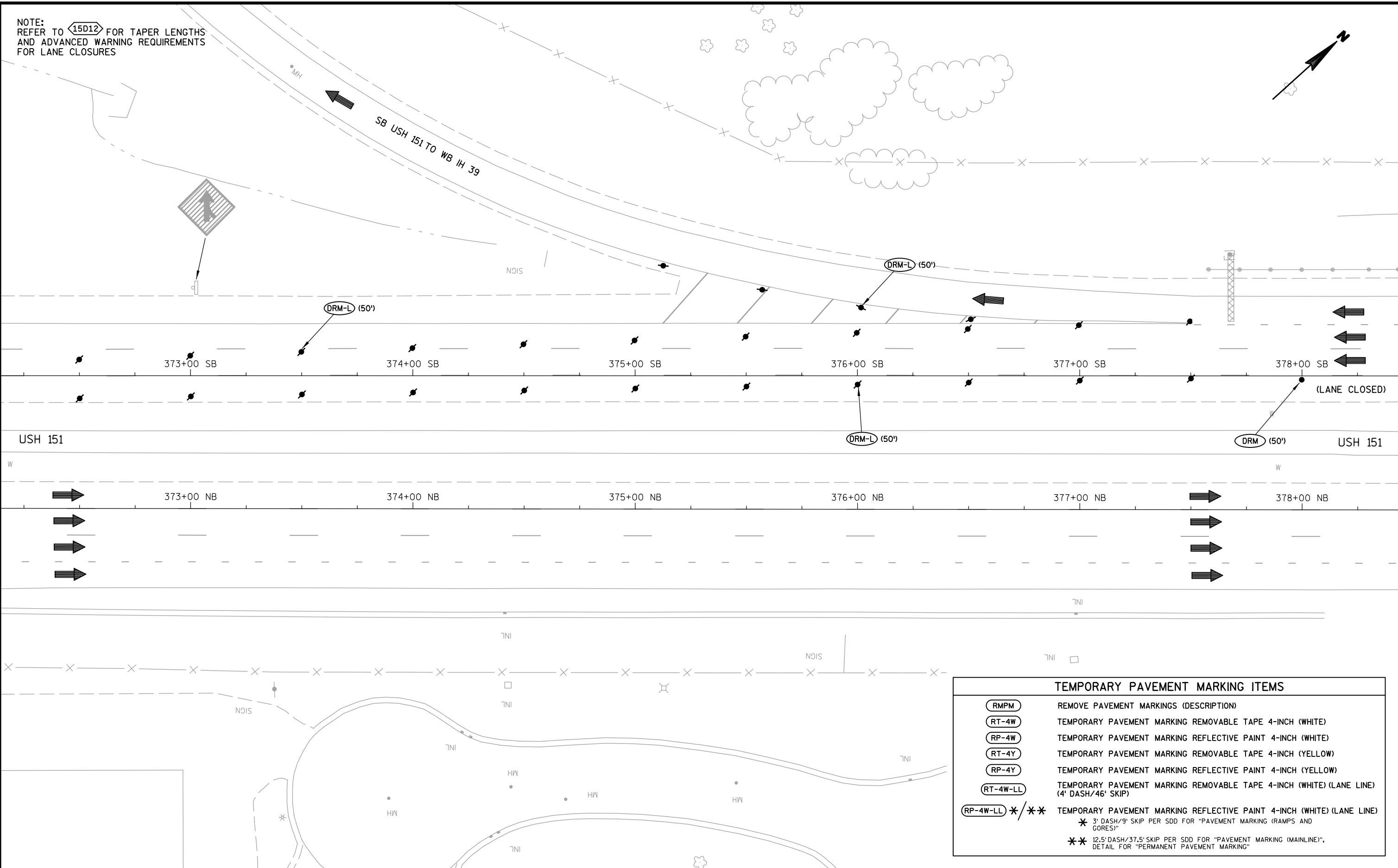
NOTE:  
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AND ADVANCED WARNING REQUIREMENTS  
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TEMPORARY PAVEMENT MARKING ITEMS

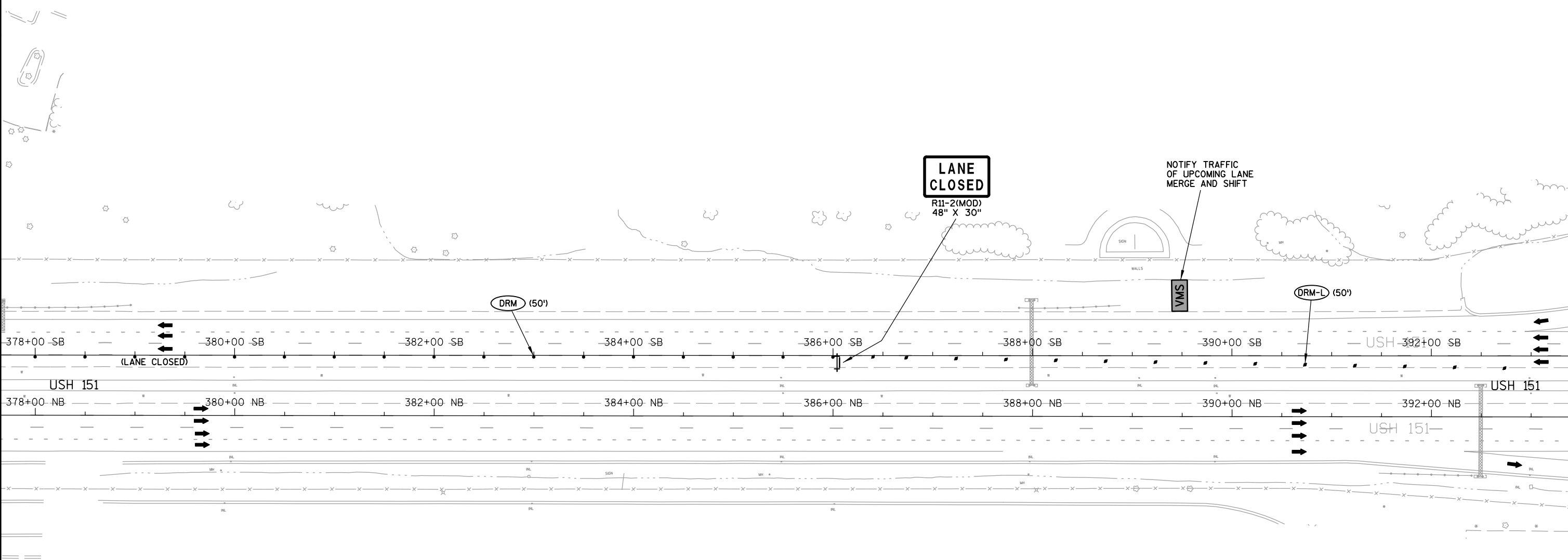
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|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| RMPM                                                                                                           | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                 |
| RT-4W                                                                                                          | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)               |
| RP-4W                                                                                                          | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)             |
| RT-4Y                                                                                                          | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)              |
| RP-4Y                                                                                                          | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)            |
| RT-4W-LL                                                                                                       | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)   |
| RP-4W-LL **/**                                                                                                 | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE) |
| * 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"                                             |                                                                        |
| ** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |                                                                        |

NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



| TEMPORARY PAVEMENT MARKING ITEMS                                                                            |                                                                        |
|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| RMPM                                                                                                        | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                 |
| RT-4W                                                                                                       | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)               |
| RP-4W                                                                                                       | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)             |
| RT-4Y                                                                                                       | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)              |
| RP-4Y                                                                                                       | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)            |
| RT-4W-LL                                                                                                    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)   |
| RP-4W-LL                                                                                                    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE) |
| * 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"                                          |                                                                        |
| ** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)", DETAIL FOR "PERMANENT PAVEMENT MARKING" |                                                                        |

NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
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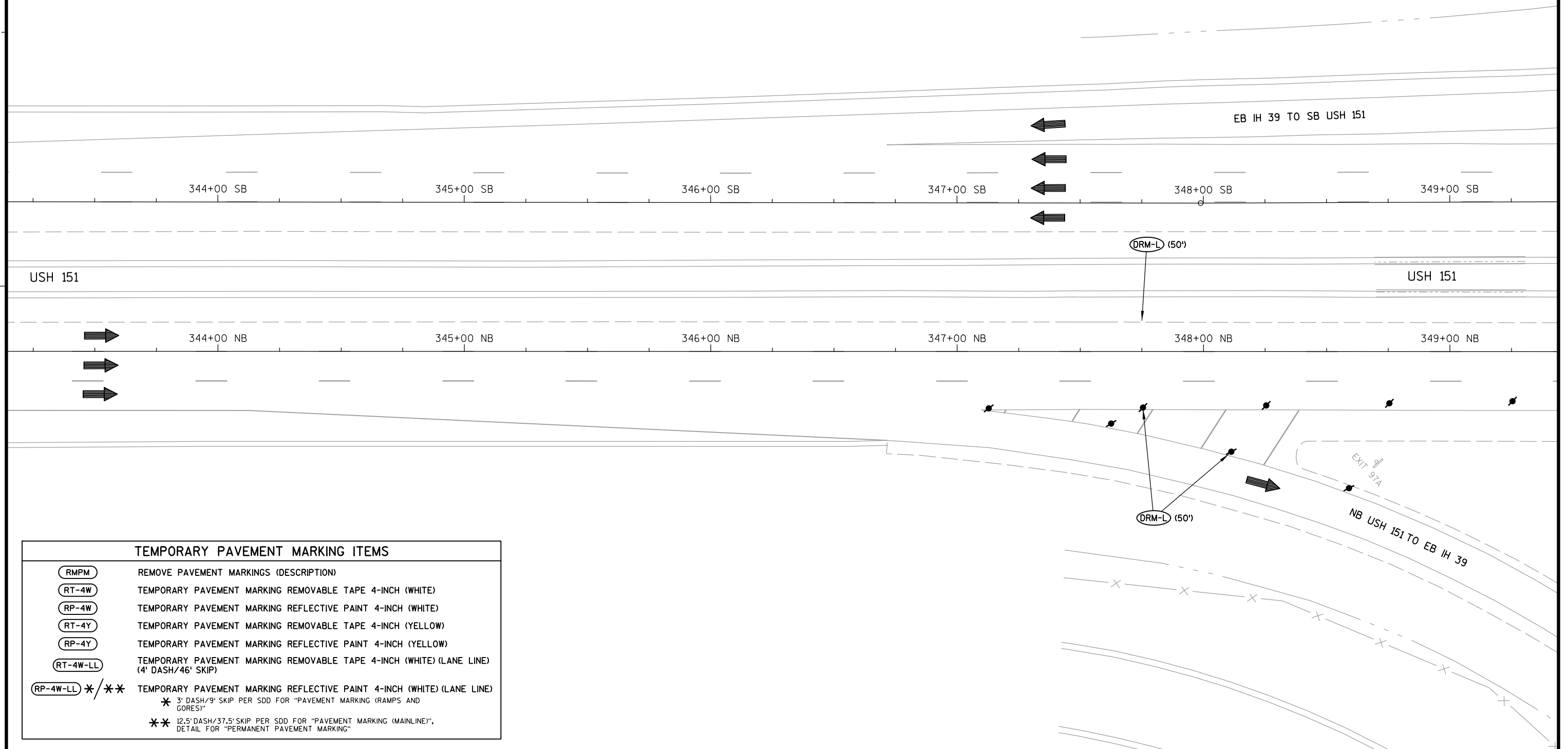
TEMPORARY PAVEMENT MARKING ITEMS

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| RMPM     | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                   |
| RT-4W    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                 |
| RP-4W    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                               |
| RT-4Y    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                |
| RP-4Y    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                              |
| RT-4W-LL | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP)                  |
| RP-4W-LL | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP)                |
| */**     | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP)                |
| *        | 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"                                         |
| **       | 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)", DETAIL FOR "PERMANENT PAVEMENT MARKING" |

2

NOTE:  
REFER TO  FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

2



| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>RMPM</b>                      | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                         |
| <b>RT-4W</b>                     | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                       |
| <b>RP-4W</b>                     | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                     |
| <b>RT-4Y</b>                     | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                      |
| <b>RP-4Y</b>                     | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                    |
| <b>RT-4W-LL</b>                  | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                     |
| <b>RP-4W-LL</b> */**             | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)".<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

2

12

**NOTE:**  
REFER TO **15D12** FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                         |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                       |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                     |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                      |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                    |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                     |
| RP-4W-LL * / **                  | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

The diagram illustrates a plan view of a road construction project involving a lane closure on USH 151. The main road, USH 151, runs horizontally across the center. It has two directions of travel: Southbound (SB) at the top and Northbound (NB) at the bottom. Stationing markers are provided every 100 feet from 349+00 to 355+00 for both directions.

A lane closure is indicated on the Northbound side between stations 354+00 and 355+00, labeled "(LANE CLOSED)". This closure is achieved by shifting the right-of-way boundary towards the left, creating a new exit ramp labeled "EB IH 39 TO NB USH 151 (CLOSED)".

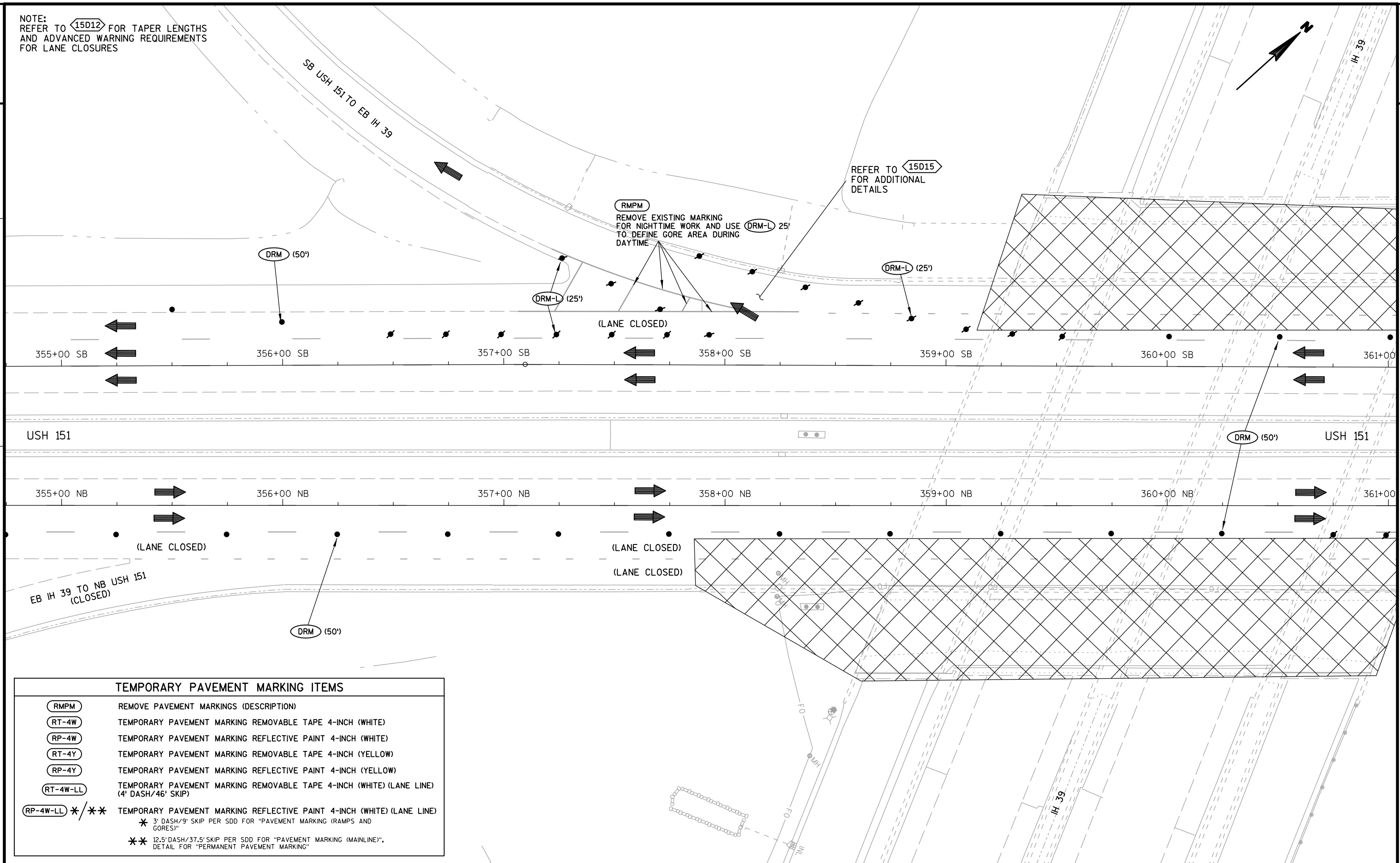
Key features and markings include:

- Exit Ramps:** An existing ramp "EB IH 39 TO SB USH 151" is shown above the SB lanes. A new closed ramp "EB IH 39 TO NB USH 151 (CLOSED)" is shown below the NB lanes.
- Pavement Markings:** Various temporary markings are specified, including removable tape (RT), reflective paint (RP), and their application to lane lines (LL). Specific patterns like 3' dash/9' skip and 12.5' dash/37.5' skip are noted.
- Signage:** Several signs are placed along the route:
  - A diamond-shaped advance warning sign (R11-2(MOD)) with a vertical arrow pointing up, indicating a lane closure ahead.
  - A rectangular speed limit sign (WMS) reading "WARN TRAFFIC TO USE LOWER SPEEDS ON EXIT RAMP TO IH 39".
  - A rectangular "LANE CLOSED" sign (R11-2(MOD), 48" x 30").
  - Circular "DRM-L (50')", likely representing distance markers or detour points.
- Other Features:** A north arrow is located in the bottom right corner. Topographic contour lines are visible in the upper and lower portions of the diagram.

FILE NAME : N:\410647\DGN\1010-02-79 IH 39\1010-02-79\_026252\_s1d.dgn PLOT BY : hoernken PLOT DATE : 7/25/2013 PLOT SCALE : 1:40

2

NOTE:  
REFER TO **15012** FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES

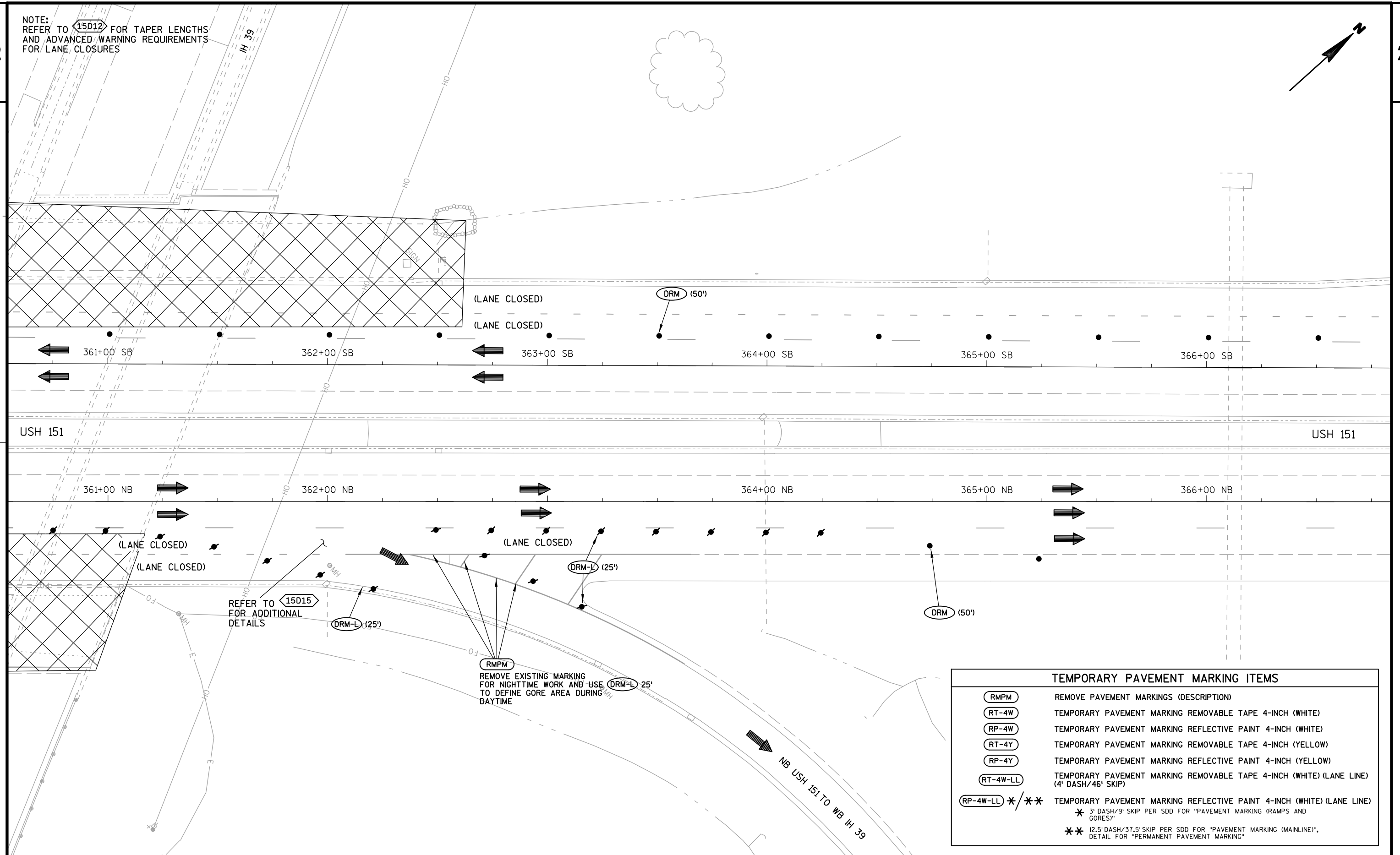


| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (RMPM)                           | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                            |
| (RT-4W)                          | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                          |
| (RP-4W)                          | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                        |
| (RT-4Y)                          | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                         |
| (RP-4Y)                          | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                       |
| (RT-4W-LL)                       | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                        |
| (RP-4W-LL) **                    | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)",<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

2

NOTE: REFER TO 15D12 FOR TAPER LENGTHS AND ADVANCED WARNING REQUIREMENTS FOR LANE CLOSURES

2



PROJECT NO: 1010-02-79

HWY: IH 39

COUNTY: DANE

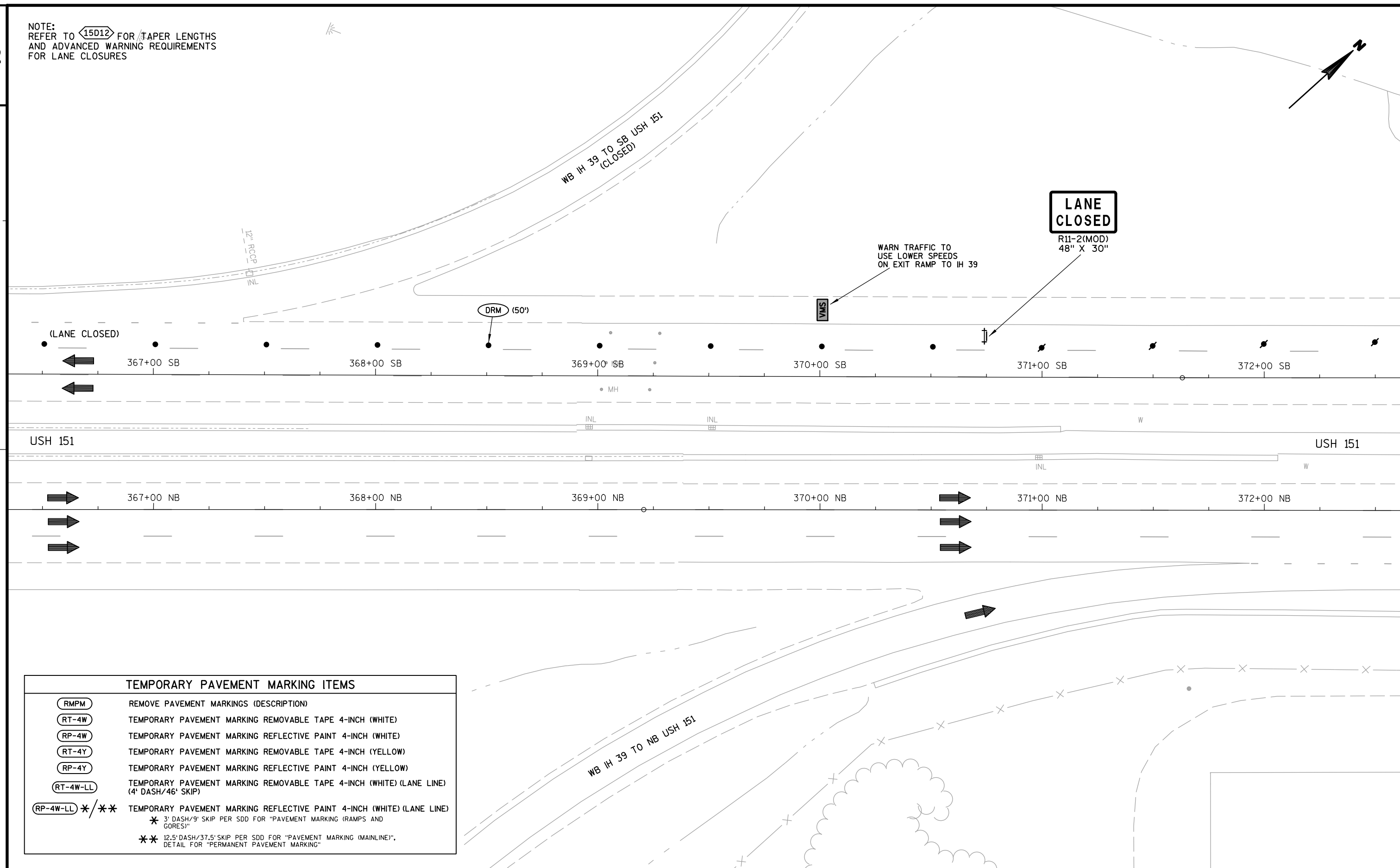
STAGED CONSTRUCTION - STAGE 1D & 2D

SCALE, FEET 0 20 40

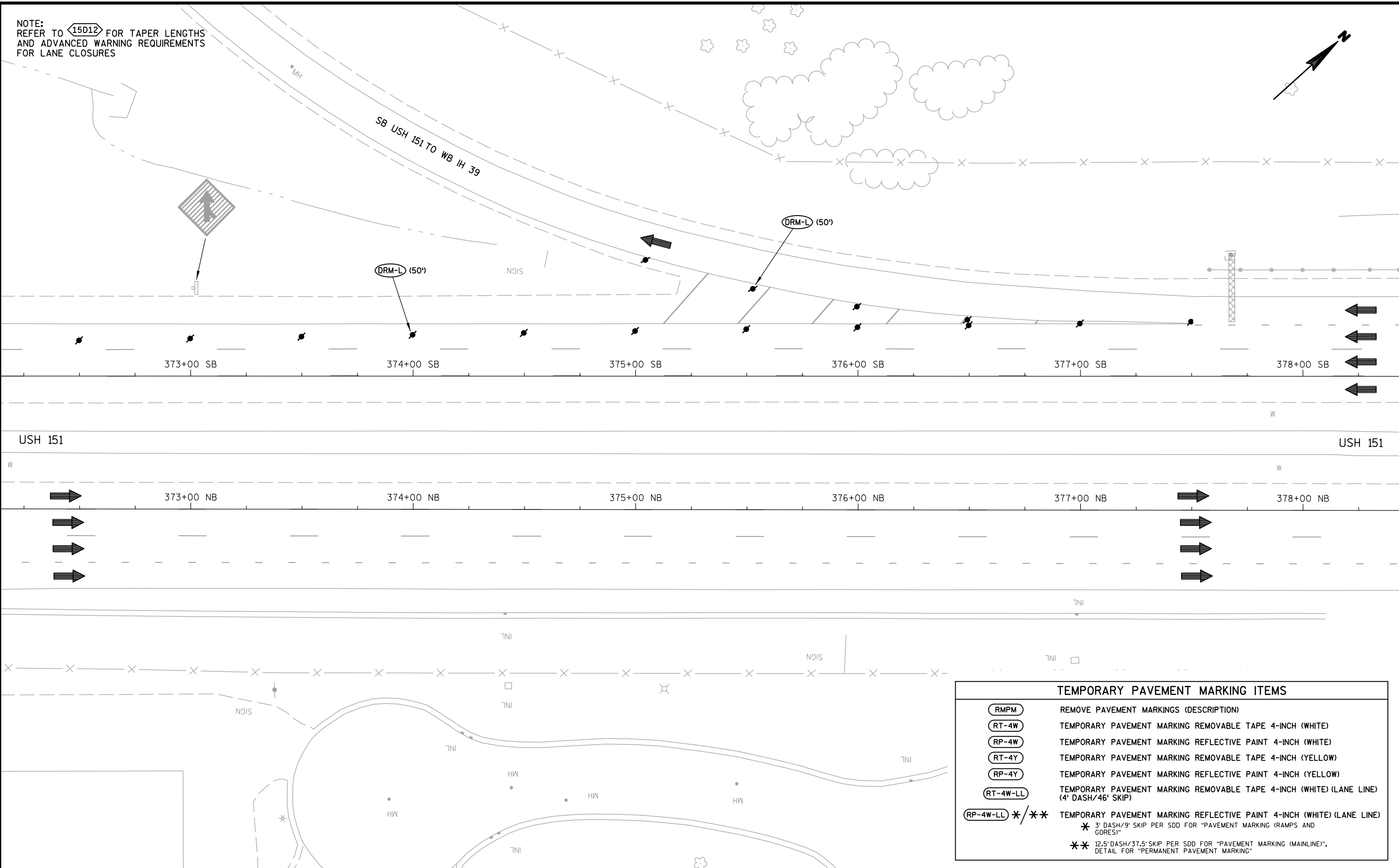
SHEET

■

NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES



| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                          |
|----------------------------------|----------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                   |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                 |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                               |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                              |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP)                  |
| RP-4W-LL                         | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP)                |
| */**                             | 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"                                         |
| **                               | 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)", DETAIL FOR "PERMANENT PAVEMENT MARKING" |

NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES. ARROW BOARDS  
AND W04-2R SIGN NOT REQUIRED

| TEMPORARY PAVEMENT MARKING ITEMS |                                                                                                                                                                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RMPM                             | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                                                                                                                                                                                            |
| RT-4W                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                                                                                                                                                                                          |
| RP-4W                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                                                                                                                                                                                        |
| RT-4Y                            | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                                                                                                                                                                                         |
| RP-4Y                            | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                                                                                                                                                                                                       |
| RT-4W-LL                         | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                        |
| RP-4W-LL                         | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>(4' DASH/46' SKIP)                                                                                                                                                                      |
| */**                             | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE)<br>* 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND<br>GORES)"<br>** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)".<br>DETAIL FOR "PERMANENT PAVEMENT MARKING" |

EB IH 39 TO SB USH 151



349+00 SB

350+00 SB

351+00 SB

352+00 SB

353+00 SB

354+00 SB

355+00 SB



USH 151

USH 151

349+00 NB

350+00 NB

351+00 NB

352+00 NB

353+00 NB

354+00 NB

355+00 NB



HW

15



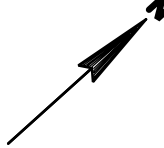
NB USH 151 TO EB IH 39



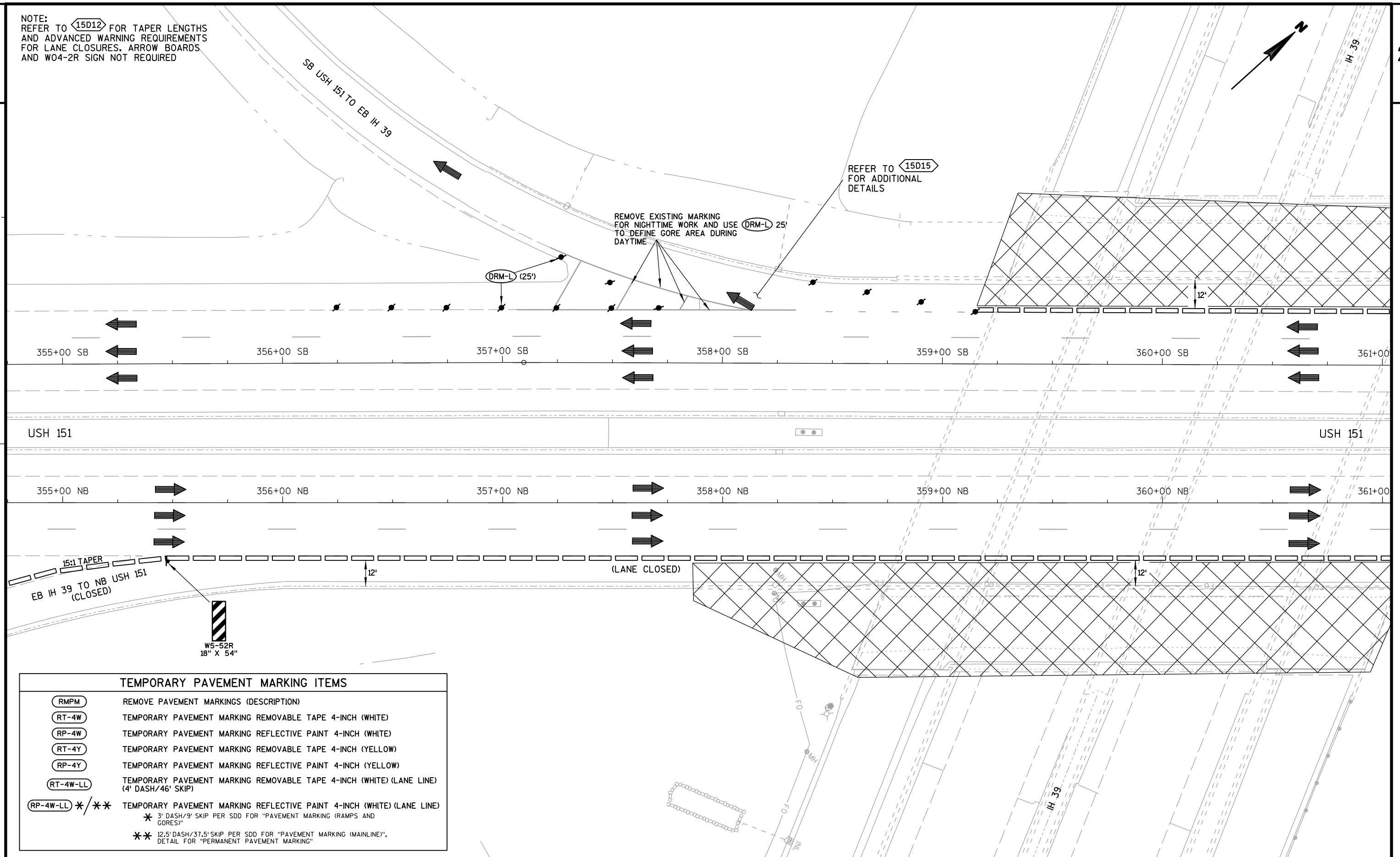
EB IH 39 TO NB USH 151  
(CLOSED)

44' MIN

15:1 TAPER



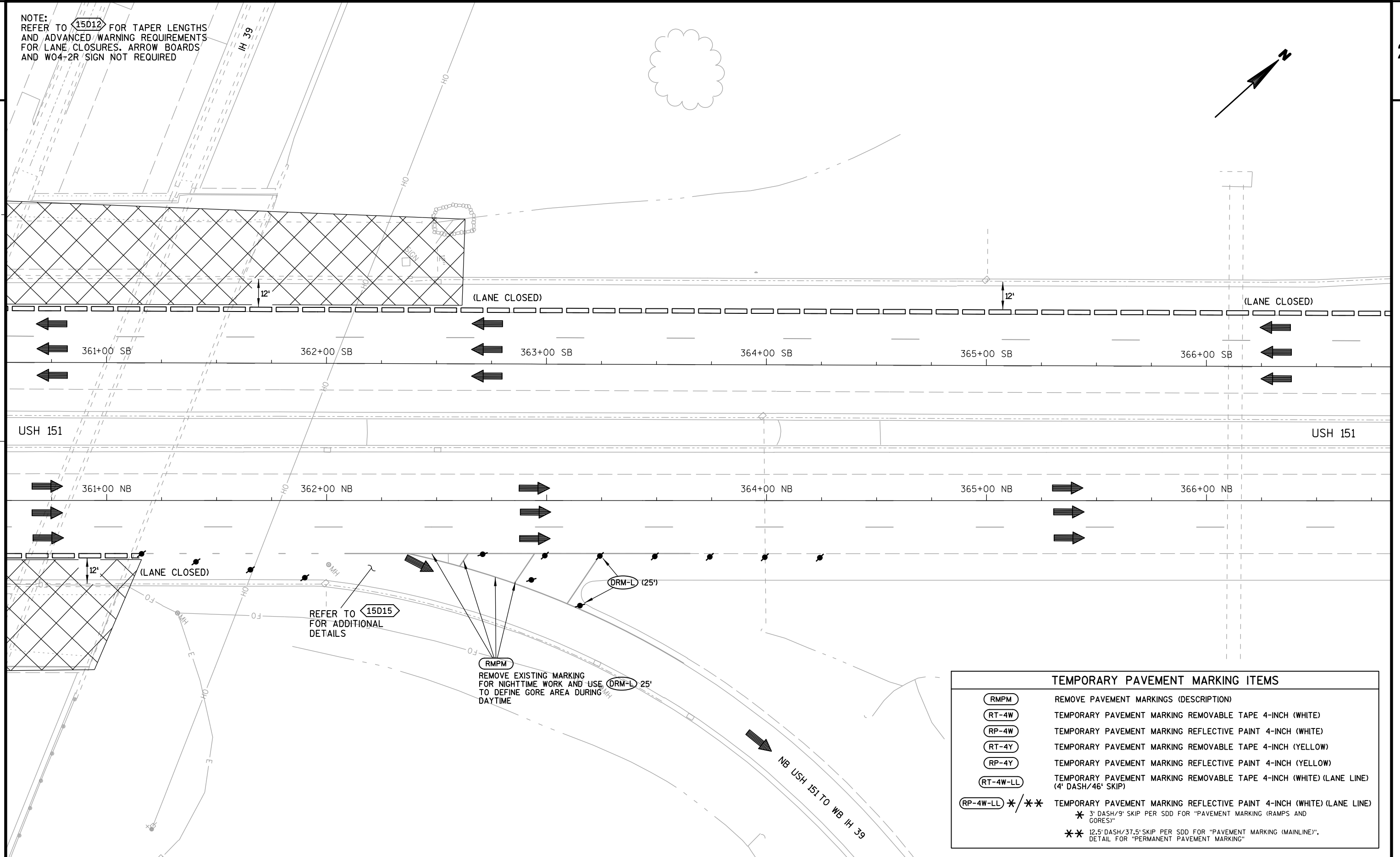
NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES. ARROW BOARDS  
AND W04-2R SIGN NOT REQUIRED



2

NOTE:  
REFER TO **15D12** FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES. ARROW BOARDS  
AND W04-2R SIGN NOT REQUIRED

2



|                       |           |             |                                     |                                                                                                   |       |   |
|-----------------------|-----------|-------------|-------------------------------------|---------------------------------------------------------------------------------------------------|-------|---|
| PROJECT NO:1010-02-79 | HWY:1H 39 | COUNTY:DANE | STAGED CONSTRUCTION - STAGE 1E & 2E | SCALE, FEET  | SHEET | E |
|-----------------------|-----------|-------------|-------------------------------------|---------------------------------------------------------------------------------------------------|-------|---|

FILE NAME : N:\410647\DGN\1010-02-79 IH 39\1010-02-79\_026263\_s1e.dgn

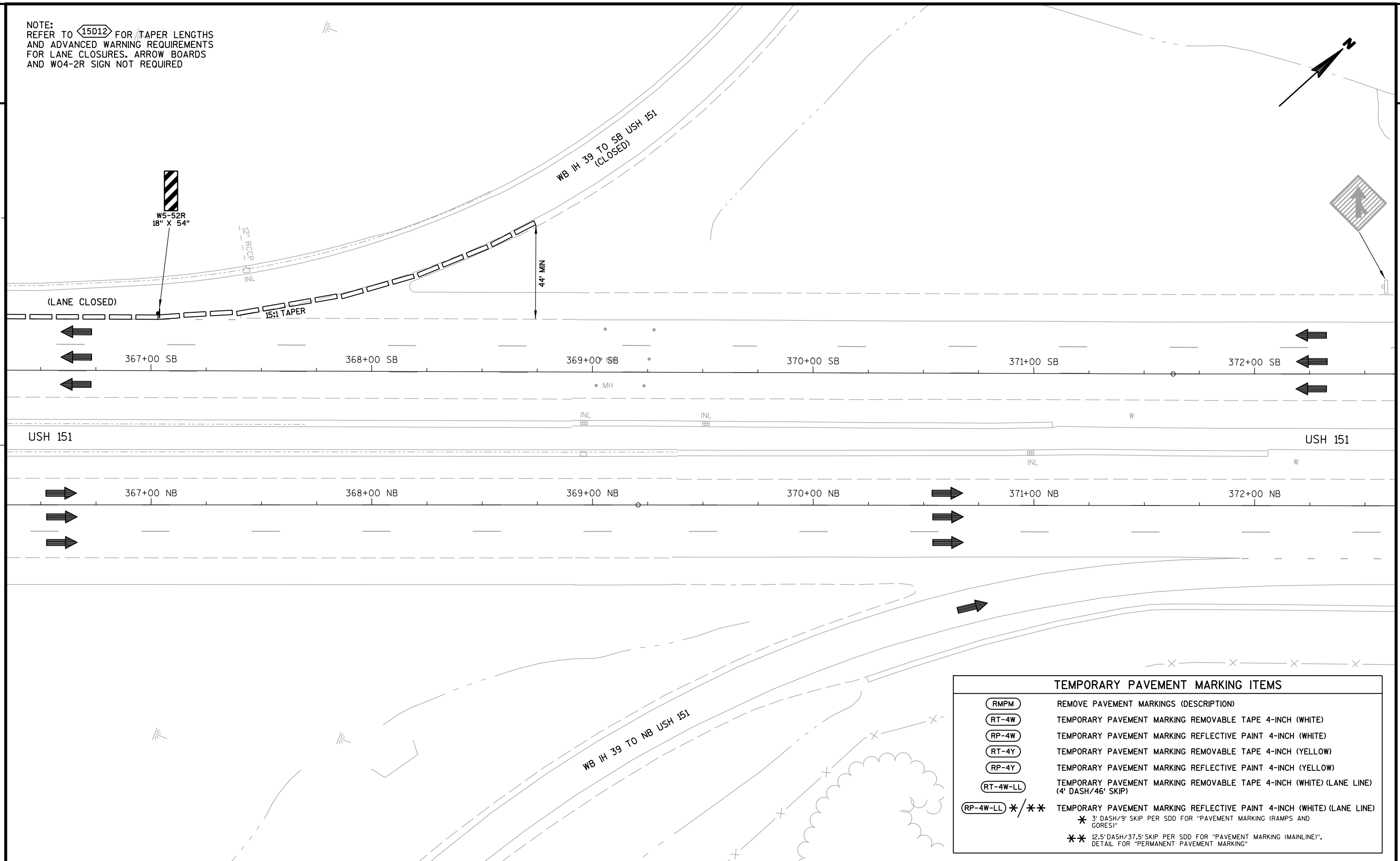
PLOT BY : hoernken

PLOT DATE : 7/25/2013

PLOT SCALE : 1:40

WISDOT/CADDS SHEET 43

NOTE:  
REFER TO 15D12 FOR TAPER LENGTHS  
AND ADVANCED WARNING REQUIREMENTS  
FOR LANE CLOSURES. ARROW BOARDS  
AND W04-2R SIGN NOT REQUIRED



| TEMPORARY PAVEMENT MARKING ITEMS                                                                            |                                                                                           |
|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| RMPM                                                                                                        | REMOVE PAVEMENT MARKINGS (DESCRIPTION)                                                    |
| RT-4W                                                                                                       | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)                                  |
| RP-4W                                                                                                       | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)                                |
| RT-4Y                                                                                                       | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)                                 |
| RP-4Y                                                                                                       | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)                               |
| RT-4W-LL                                                                                                    | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP)   |
| RP-4W-LL **/**                                                                                              | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE) (LANE LINE) (4' DASH/46' SKIP) |
| * 3' DASH/9' SKIP PER SDD FOR "PAVEMENT MARKING (RAMPS AND GORES)"                                          |                                                                                           |
| ** 12.5' DASH/37.5' SKIP PER SDD FOR "PAVEMENT MARKING (MAINLINE)". DETAIL FOR "PERMANENT PAVEMENT MARKING" |                                                                                           |

**151**  
M1-4  
24" X 24"

**SOUTH**  
M3-3  
24" X 12"

**DETOUR**  
M4-8  
24" X 12"

**↑**  
M06-1  
21" X 21"

**↗**  
M06-2  
21" X 21"

**↘**  
M05-2R  
21" X 21"

**↶**  
M05-1L  
21" X 21"

**←**  
M06-1  
21" X 21"

**DETOUR AHEAD**  
W20-2  
48" X 48"

**RAMP CLOSED**  
500 FT  
W20-3(MOD)  
48" X 48"

**RAMP CLOSED**  
R11-2(MOD)  
48" X 30"  
TYPE III BARRICADE

**END DETOUR**  
M4-8A  
24" X 18"

XXXXXX RAMP CLOSURE  
— ► — DETOUR ROUTE

#### GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES WILL 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.

ADJUST SIGN SPACING TO AVOID CONFLICT WITH AND TO PROVIDE A MINIMUM SPACING OF 200 FEET (500 FEET DESIRABLE) TO EXISTING SIGNS.

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

REMOVE OR COVER ANY TEMPORARY OR EXISTING SIGNS THAT CONFLICT WITH "IN USE" TRAFFIC CONTROL.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUOUS OPERATIONS, AT THE END OF EACH WORKING DAY.

ALL TRAFFIC CONTROL SIGNING WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION & THE WISCONSIN SUPPLEMENT, DATED JANUARY 1, 2010.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS SO THE DRIVER HAS A CLEAR VIEW OF THE SIGNS.

SIGNS TO BE IN PLACE 10 DAYS PRIOR TO LOOP RAMP CLOSURE.

SEE STAGING PLANS FOR LOCATIONS OF SIGNS TO BE COVERED AND TYPE III BARRICADE LOCATIONS.

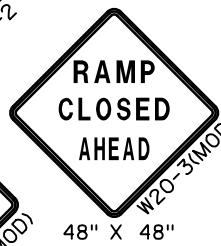
NOTE:  
DASHED SIGNS INDICATE ANALOGOUS NB USH 151 DETOUR SIGNS THAT ARE TO BE LEFT IN PLACE NEXT TO THE SB 151 DETOUR SIGNS. REFER TO NB USH 151 DETOUR SHEET FOR MORE INFORMATION

M1-4  
24" X 24"M1-1  
24" X 24"

48" X 48"



48" X 48"

R11-2(MOD)  
48" X 30"

48" X 48"



TYPE III BARRICADE

M06-1  
21" X 21"M06-2  
21" X 21"M05-2R  
21" X 21"M05-1L  
21" X 21"M06-1  
21" X 21"M05-2L  
21" X 21"M4-8A  
24" X 18"

RAMP CLOSURE

DETOUR ROUTE

## GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES WILL 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.

ADJUST SIGN SPACING TO AVOID CONFLICT WITH AND TO PROVIDE A MINIMUM SPACING OF 200 FEET (500 FEET DESIRABLE) TO EXISTING SIGNS.

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

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BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUOUS OPERATIONS, AT THE END OF EACH WORKING DAY.

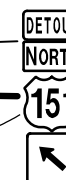
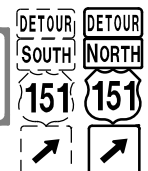
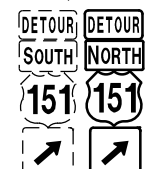
ALL TRAFFIC CONTROL SIGNING WILL CONFORM TO PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 EDITION & THE WISCONSIN SUPPLEMENT, DATED JANUARY 1, 2010.

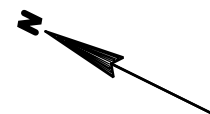
CONSIDER GEOMETRICS WHEN LOCATING SIGNS SO THE DRIVER HAS A CLEAR VIEW OF THE SIGNS.

SIGNS TO BE IN PLACE 10 DAYS PRIOR TO LOOP RAMP CLOSURE.

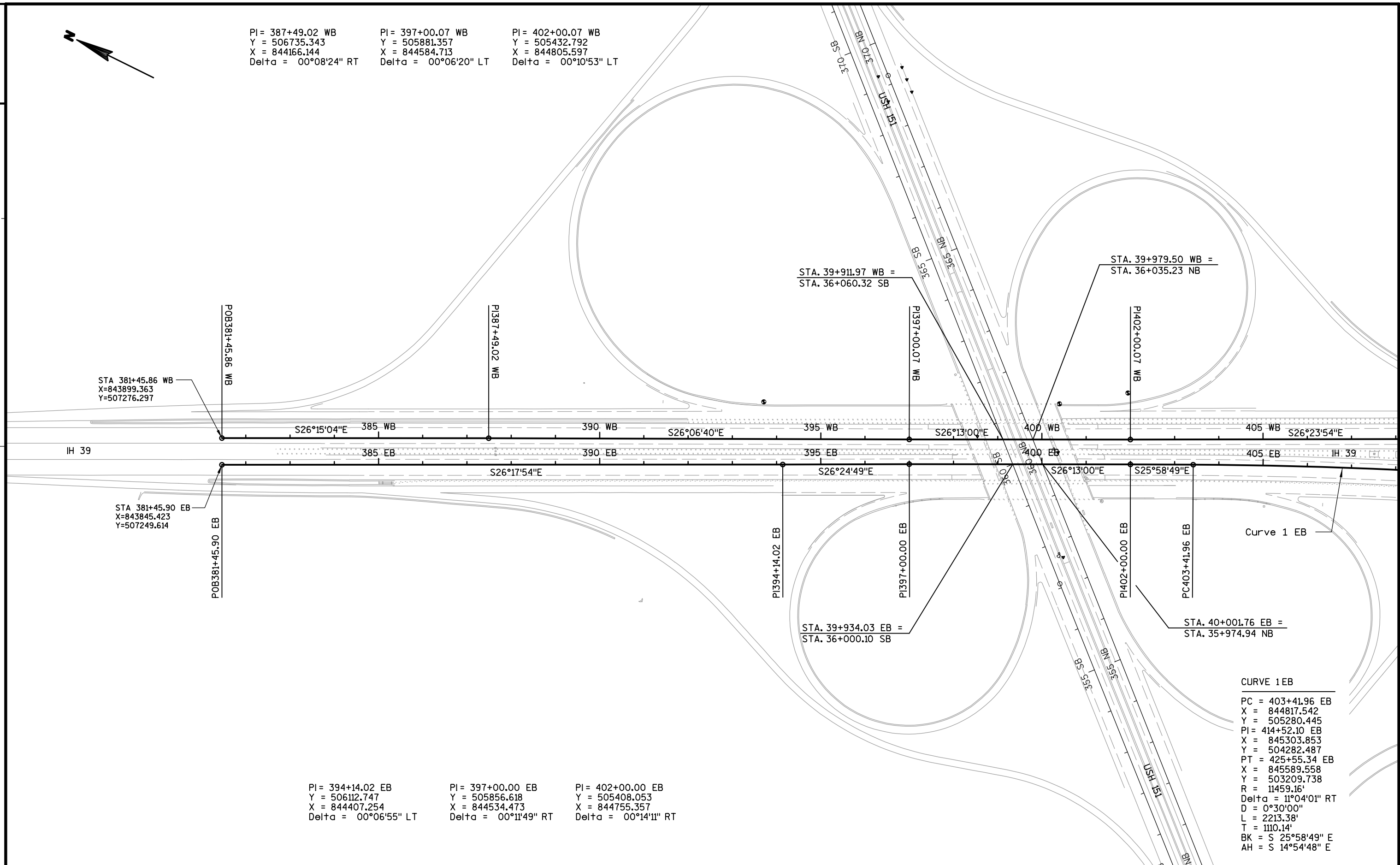
IN PLACE 10 DAYS  
PRIOR TO RAMP  
CLOSUREDETOUR  
AHEAD

51

NORTH  
151RAMP  
CLOSED  
AHEADSEE STAGING PLANS FOR  
LOCATIONS OF SIGNS TO  
BE COVERED AND TYPE III  
BARRICADE LOCATIONS.EXIT  
135B(IN ADDITION TO  
ADVANCE SIGNING SHOWN  
IN SDD (15D16))IN PLACE 10 DAYS PRIOR  
TO RAMP CLOSURE  
(REPLACES FIXED MESSAGE  
SIGN IN SDD (15D16))END  
DETOUR  
NORTH  
151(NEAR OVERHEAD SIGN  
STRUCTURE JUST SOUTH  
OF HIGH CROSSING BLVD)



|                                                                              |                                                                              |                                                                              |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| PI= 387+49.02 WB<br>Y = 506735.343<br>X = 844166.144<br>Delta = 00°08'24" RT | PI= 397+00.07 WB<br>Y = 505881.357<br>X = 844584.713<br>Delta = 00°06'20" LT | PI= 402+00.07 WB<br>Y = 505432.792<br>X = 844805.597<br>Delta = 00°10'53" LT |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|



STA 381+45.86 WB  
X=843899.363  
Y=507276.297

STA 381+45.90 EB  
X=843845.423  
Y=507249.614

STA. 39+911.97 WB =  
STA. 36+060.32 SB

STA. 39+979.50 WB =  
STA. 36+035.23 NB

STA. 39+934.03 EB =  
STA. 36+000.10 SB

STA. 40+001.76 EB =  
STA. 35+974.94 NB

CURVE 1 EB  
PC = 403+41.96 EB  
X = 844817.542  
Y = 505280.445  
PI = 414+52.10 EB  
X = 845303.853  
Y = 504282.487  
PT = 425+55.34 EB  
X = 845589.558  
Y = 503209.738  
R = 11459.16'  
Delta = 11°04'01" RT  
D = 0°30'00"  
L = 2213.38'  
T = 1110.14'  
BK = S 25°58'49" E  
AH = S 14°54'48" E

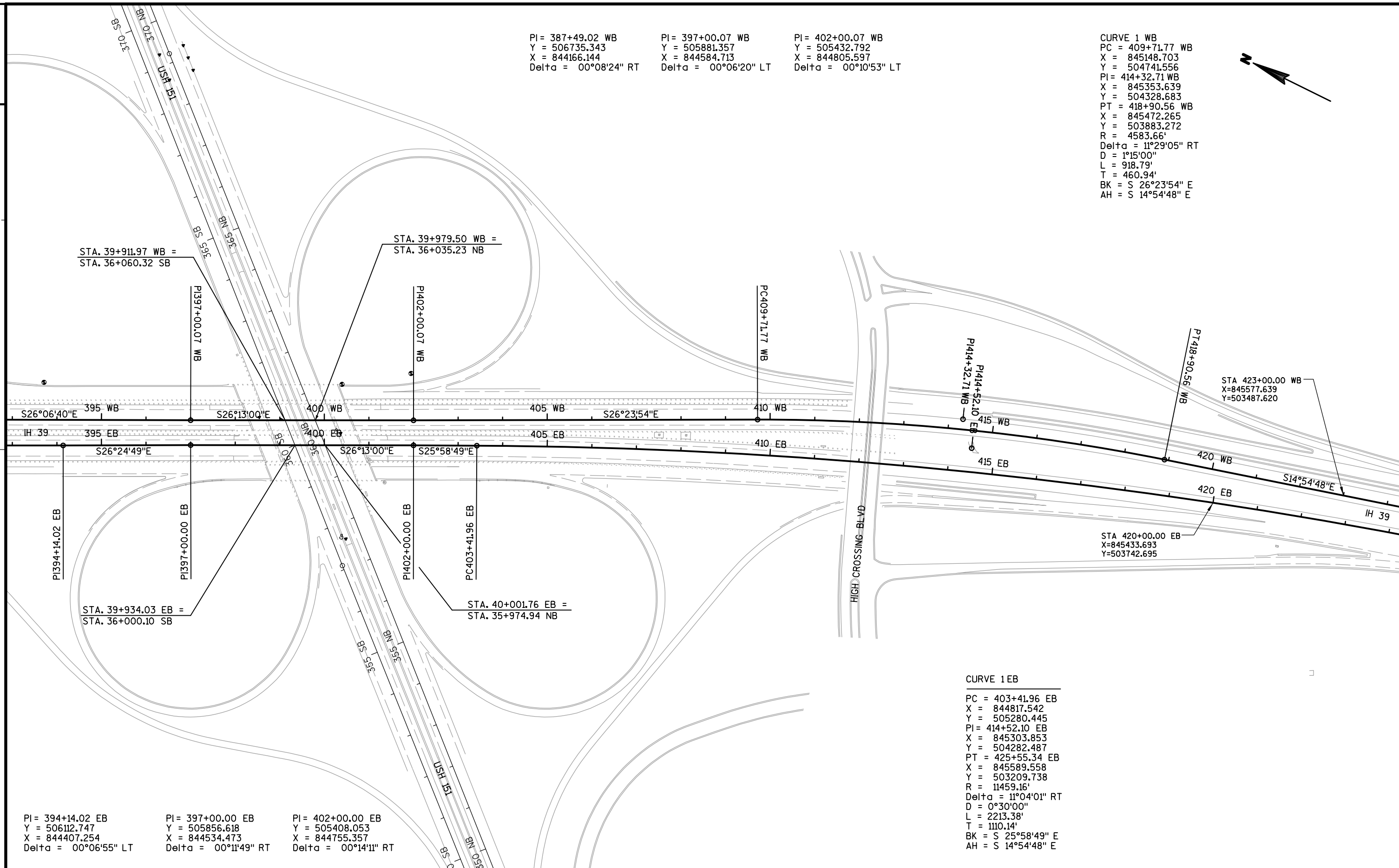
|                                                                              |                                                                              |                                                                              |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| PI= 394+14.02 EB<br>Y = 506112.747<br>X = 844407.254<br>Delta = 00°06'55" LT | PI= 397+00.00 EB<br>Y = 505856.618<br>X = 844534.473<br>Delta = 00°11'49" RT | PI= 402+00.00 EB<br>Y = 505408.053<br>X = 844755.357<br>Delta = 00°14'11" RT |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------|------------------------------------------------------------------------------|

PI= 387+49.02 WB  
Y = 506735.343  
X = 844166.144  
Delta = 00°08'24" RT

PI= 397+00.07 WB  
Y = 505881.357  
X = 844584.713  
Delta = 00°06'20" LT

PI= 402+00.07 WB  
Y = 505432.792  
X = 844805.597  
Delta = 00°10'53" LT

CURVE 1 WB  
PC = 409+71.77 WB  
X = 845148.703  
Y = 504741.556  
PI= 414+32.71 WB  
X = 845353.639  
Y = 504328.683  
PT = 418+90.56 WB  
X = 845472.265  
Y = 503883.272  
R = 4583.66'  
Delta = 11°29'05" RT  
D = 1°15'00"  
L = 918.79'  
T = 460.94'  
BK = S 26°23'54" E  
AH = S 14°54'48" E



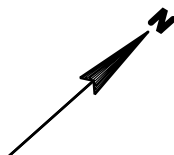
PI= 394+14.02 EB  
Y = 506112.747  
X = 844407.254  
Delta = 00°06'55" LT

PI= 397+00.00 EB  
Y = 505856.618  
X = 844534.473  
Delta = 00°11'49" RT

PI= 402+00.00 EB  
Y = 505408.053  
X = 844755.357  
Delta = 00°14'11" RT

#### CURVE 1 EB

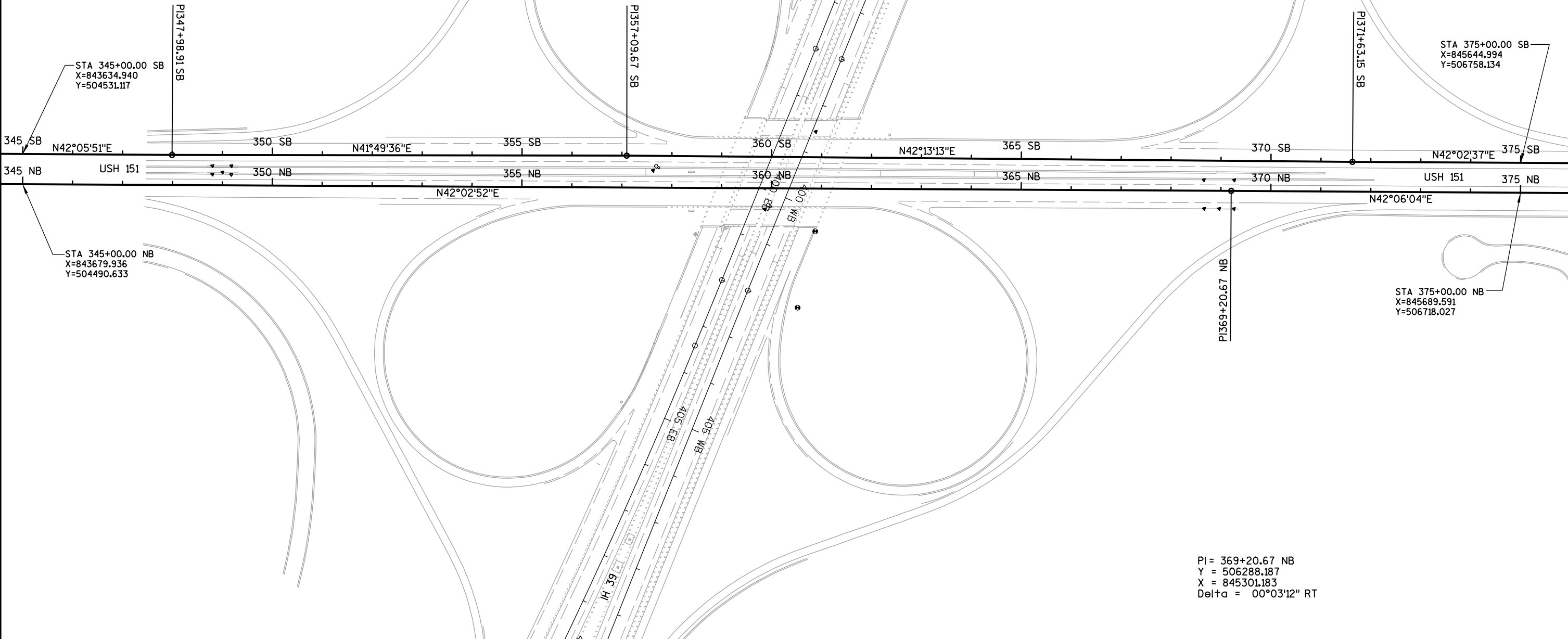
PC = 403+41.96 EB  
X = 844817.542  
Y = 505280.445  
PI= 414+52.10 EB  
X = 845303.853  
Y = 504282.487  
PT = 425+55.34 EB  
X = 845589.558  
Y = 503209.738  
R = 11459.16'  
Delta = 11°04'01" RT  
D = 0°30'00"  
L = 2213.38'  
T = 1110.14'  
BK = S 25°58'49" E  
AH = S 14°54'48" E



PI= 347+98.91 SB  
Y = 504752.907  
X = 843835.324  
Delta = 00°16'14" LT

PI= 357+09.67 SB  
Y = 505431.576  
X = 844442.695  
Delta = 00°23'36" RT

PI= 371+63.15 SB  
Y = 506507.975  
X = 845419.405  
Delta = 00°10'35" LT



| DATE 11SEP13 |            | E S T I M A T E O F Q U A N T I T I E S                              |      |             |             |
|--------------|------------|----------------------------------------------------------------------|------|-------------|-------------|
| LINE         |            |                                                                      |      |             | 1010-02-79  |
| NUMBER       | ITEM       | ITEM DESCRIPTION                                                     | UNIT | TOTAL       | QUANTITY    |
| 0010         | 203.0200   | REMOVING OLD STRUCTURE (STATION) 01.<br>399+67.90 EB                 | LS   | 1.000       | 1.000       |
| 0020         | 203.0200   | REMOVING OLD STRUCTURE (STATION) 02.<br>399+45.74 WB                 | LS   | 1.000       | 1.000       |
| 0030         | 203.0225.S | DEBRIS CONTAINMENT (STRUCTURE) 01.<br>B-13-102                       | LS   | 1.000       | 1.000       |
| 0040         | 203.0225.S | DEBRIS CONTAINMENT (STRUCTURE) 02.<br>B-13-103                       | LS   | 1.000       | 1.000       |
| 0050         | 204.0100   | REMOVING PAVEMENT                                                    | SY   | 2,670.000   | 2,670.000   |
| 0060         | 204.0115   | REMOVING ASPHALTIC SURFACE BUTT JOINTS                               | SY   | 112.000     | 112.000     |
| 0070         | 204.0120   | REMOVING ASPHALTIC SURFACE MILLING                                   | SY   | 8,500.000   | 8,500.000   |
| 0080         | 204.0157   | REMOVING CONCRETE BARRIER                                            | LF   | 1,620.000   | 1,620.000   |
| 0090         | 205.0100   | EXCAVATION COMMON                                                    | CY   | 145.000     | 145.000     |
| 0100         | 206.1000   | EXCAVATION FOR STRUCTURES BRIDGES<br>(STRUCTURE) 01. B-13-102        | LS   | 1.000       | 1.000       |
| 0110         | 206.1000   | EXCAVATION FOR STRUCTURES BRIDGES<br>(STRUCTURE) 02. B-13-103        | LS   | 1.000       | 1.000       |
| 0120         | 210.0100   | BACKFILL STRUCTURE                                                   | CY   | 20.000      | 20.000      |
| 0130         | 211.0100   | PREPARE FOUNDATION FOR ASPHALTIC PAVING<br>(PROJECT) 01. 1010-02-79  | LS   | 1.000       | 1.000       |
| 0140         | 211.0200   | PREPARE FOUNDATION FOR CONCRETE<br>PAVEMENT (PROJECT) 01. 1010-02-79 | LS   | 1.000       | 1.000       |
| 0150         | 213.0100   | FINISHING ROADWAY (PROJECT) 01.<br>1010-02-79                        | EACH | 1.000       | 1.000       |
| 0160         | 305.0120   | BASE AGGREGATE DENSE 1 1/4-INCH                                      | TON  | 671.000     | 671.000     |
| 0170         | 415.0090   | CONCRETE PAVEMENT 9-INCH                                             | SY   | 840.000     | 840.000     |
| 0180         | 415.0125   | CONCRETE PAVEMENT 12 1/2-INCH                                        | SY   | 1,200.000   | 1,200.000   |
| 0190         | 415.0410   | CONCRETE PAVEMENT APPROACH SLAB                                      | SY   | 353.000     | 353.000     |
| 0200         | 416.0610   | DRILLED TIE BARS                                                     | EACH | 623.000     | 623.000     |
| 0210         | 416.0620   | DRILLED DOWEL BARS                                                   | EACH | 144.000     | 144.000     |
| 0220         | 416.1110   | CONCRETE RUMBLE STRIPS SHOULDER                                      | LF   | 700.000     | 700.000     |
| 0230         | 455.0120   | ASPHALTIC MATERIAL PG64-28                                           | TON  | 95.000      | 95.000      |
| 0240         | 455.0605   | TACK COAT                                                            | GAL  | 210.000     | 210.000     |
| 0250         | 460.1130   | HMA PAVEMENT TYPE E-30                                               | TON  | 1,725.000   | 1,725.000   |
| 0260         | 460.2000   | INCENTIVE DENSITY HMA PAVEMENT                                       | DOL  | 1,110.000   | 1,110.000   |
| 0270         | 465.0400   | ASPHALTIC SHOULDER RUMBLE STRIP                                      | LF   | 5,175.000   | 5,175.000   |
| 0280         | 502.0100   | CONCRETE MASONRY BRIDGES                                             | CY   | 1,062.000   | 1,062.000   |
| 0290         | 502.3100   | EXPANSION DEVICE (STRUCTURE) 01.<br>B-13-102                         | LS   | 1.000       | 1.000       |
| 0300         | 502.3100   | EXPANSION DEVICE (STRUCTURE) 02.<br>B-13-103                         | LS   | 1.000       | 1.000       |
| 0310         | 502.3200   | PROTECTIVE SURFACE TREATMENT                                         | SY   | 3,650.000   | 3,650.000   |
| 0320         | 502.5005   | MASONRY ANCHORS TYPE L NO. 5 BARS                                    | EACH | 736.000     | 736.000     |
| 0330         | 505.0605   | BAR STEEL REINFORCEMENT HS COATED<br>BRIDGES                         | LB   | 237,280.000 | 237,280.000 |
| 0340         | 509.1500   | CONCRETE SURFACE REPAIR                                              | SF   | 700.000     | 700.000     |
| 0350         | 516.0500   | RUBBERIZED MEMBRANE WATERPROOFING                                    | SY   | 60.000      | 60.000      |
| 0360         | 517.0900.S | PREPARATION AND COATING OF TOP FLANGES<br>(STRUCTURE) 01. B-13-102   | LS   | 1.000       | 1.000       |
| 0370         | 517.0900.S | PREPARATION AND COATING OF TOP FLANGES<br>(STRUCTURE) 02. B-13-103   | LS   | 1.000       | 1.000       |
| 0380         | 603.8000   | CONCRETE BARRIER TEMPORARY PRECAST<br>DELIVERED                      | LF   | 5,575.000   | 5,575.000   |
| 0390         | 603.8125   | CONCRETE BARRIER TEMPORARY PRECAST<br>INSTALLED                      | LF   | 7,475.000   | 7,475.000   |
| 0400         | 604.0500   | SLOPE PAVING CRUSHED AGGREGATE                                       | SY   | 874.000     | 874.000     |

| DATE 11SEP13 |            | E S T I M A T E O F Q U A N T I T I E S                               |      |            |            |
|--------------|------------|-----------------------------------------------------------------------|------|------------|------------|
| LINE         |            |                                                                       |      |            | 1010-02-79 |
| NUMBER       | ITEM       | ITEM DESCRIPTION                                                      | UNIT | TOTAL      | QUANTITY   |
| 0410         | 604.9015.S | RESEAL CRUSHED AGGREGATE SLOPE PAVING                                 | SY   | 1,040.000  | 1,040.000  |
| 0420         | 611.8115   | ADJUSTING INLET COVERS                                                | EACH | 1.000      | 1.000      |
| 0430         | 614.0905   | CRASH CUSHIONS TEMPORARY                                              | EACH | 4.000      | 4.000      |
| 0440         | 619.1000   | MOBILIZATION                                                          | EACH | 1.000      | 1.000      |
| 0450         | 628.1905   | MOBILIZATIONS EROSION CONTROL                                         | EACH | 2.000      | 2.000      |
| 0460         | 628.1910   | MOBILIZATIONS EMERGENCY EROSION CONTROL                               | EACH | 2.000      | 2.000      |
| 0470         | 628.2004   | EROSION MAT CLASS I TYPE B                                            | SY   | 1,000.000  | 1,000.000  |
| 0480         | 628.7020   | INLET PROTECTION TYPE D                                               | EACH | 4.000      | 4.000      |
| 0490         | 629.0210   | FERTILIZER TYPE B                                                     | CWT  | 1.000      | 1.000      |
| 0500         | 630.0130   | SEEDING MIXTURE NO. 30                                                | LB   | 20.000     | 20.000     |
| 0510         | 630.0200   | SEEDING TEMPORARY                                                     | LB   | 30.000     | 30.000     |
| 0520         | 642.5401   | FIELD OFFICE TYPE D                                                   | EACH | 1.000      | 1.000      |
| 0530         | 643.0200   | TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1010-02-79 | DAY  | 140.000    | 140.000    |
| 0540         | 643.0300   | TRAFFIC CONTROL DRUMS                                                 | DAY  | 66,400.000 | 66,400.000 |
| 0550         | 643.0420   | TRAFFIC CONTROL BARRICADES TYPE III                                   | DAY  | 4,780.000  | 4,780.000  |
| 0560         | 643.0500   | TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS                         | EACH | 360.000    | 360.000    |
| 0570         | 643.0600   | TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES                         | EACH | 360.000    | 360.000    |
| 0580         | 643.0705   | TRAFFIC CONTROL WARNING LIGHTS TYPE A                                 | DAY  | 6,200.000  | 6,200.000  |
| 0590         | 643.0715   | TRAFFIC CONTROL WARNING LIGHTS TYPE C                                 | DAY  | 40,170.000 | 40,170.000 |
| 0600         | 643.0800   | TRAFFIC CONTROL ARROW BOARDS                                          | DAY  | 260.000    | 260.000    |
| 0610         | 643.0900   | TRAFFIC CONTROL SIGNS                                                 | DAY  | 23,400.000 | 23,400.000 |
| 0620         | 643.0910   | TRAFFIC CONTROL COVERING SIGNS TYPE I                                 | EACH | 8.000      | 8.000      |
| 0630         | 643.0920   | TRAFFIC CONTROL COVERING SIGNS TYPE II                                | EACH | 8.000      | 8.000      |
| 0640         | 643.1050   | TRAFFIC CONTROL SIGNS PCMS                                            | DAY  | 840.000    | 840.000    |
| 0650         | 643.2000   | TRAFFIC CONTROL DETOUR (PROJECT) 01. 1010-02-79                       | EACH | 1.000      | 1.000      |
| 0660         | 643.3000   | TRAFFIC CONTROL DETOUR SIGNS                                          | DAY  | 27,400.000 | 27,400.000 |
| 0670         | 646.0106   | PAVEMENT MARKING EPOXY 4-INCH                                         | LF   | 21,065.000 | 21,065.000 |
| 0680         | 646.0126   | PAVEMENT MARKING EPOXY 8-INCH                                         | LF   | 465.000    | 465.000    |
| 0690         | 646.0600   | REMOVING PAVEMENT MARKINGS                                            | LF   | 70,525.000 | 70,525.000 |
| 0700         | 646.0881.S | PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH                   | LF   | 7,586.000  | 7,586.000  |
| 0710         | 646.0883.S | PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH                   | LF   | 4,845.000  | 4,845.000  |
| 0720         | 647.0746   | PAVEMENT MARKING DIAGONAL EPOXY 24-INCH                               | LF   | 275.000    | 275.000    |
| 0730         | 649.0200   | TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH                    | LF   | 50,800.000 | 50,800.000 |
| 0740         | 649.0400   | TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH                      | LF   | 5,000.000  | 5,000.000  |
| 0750         | 649.2100   | TEMPORARY RAISED PAVEMENT MARKERS                                     | EACH | 300.000    | 300.000    |
| 0760         | 650.7000   | CONSTRUCTION STAKING CONCRETE PAVEMENT                                | LF   | 420.000    | 420.000    |
| 0770         | 650.7500   | CONSTRUCTION STAKING CONCRETE BARRIER                                 | LF   | 1,690.000  | 1,690.000  |
| 0780         | 650.9910   | CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1010-02-79    | LS   | 1.000      | 1.000      |
| 0790         | 690.0150   | SAWING ASPHALT                                                        | LF   | 301.000    | 301.000    |
| 0800         | 690.0250   | SAWING CONCRETE                                                       | LF   | 1,364.000  | 1,364.000  |
| 0810         | 715.0415   | INCENTIVE STRENGTH CONCRETE PAVEMENT                                  | DOL  | 718.000    | 718.000    |
| 0820         | 715.0502   | INCENTIVE STRENGTH CONCRETE STRUCTURES                                | DOL  | 6,336.000  | 6,336.000  |
| 0830         | ASP.1T0A   | ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR                           | HRS  | 650.000    | 650.000    |
| 0840         | ASP.1T0G   | ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR                             | HRS  | 1,000.000  | 1,000.000  |
| 0850         | SPV.0090   | SPECIAL 01. CONCRETE BARRIER SINGLE-FACED 32-INCH SPECIAL             | LF   | 1,570.000  | 1,570.000  |

|              |          |                                                                 |      |         |          |
|--------------|----------|-----------------------------------------------------------------|------|---------|----------|
| DATE 11SEP13 |          | E S T I M A T E O F Q U A N T I T I E S                         |      |         |          |
| LINE         |          | 1010-02-79                                                      |      |         |          |
| NUMBER       | ITEM     | ITEM DESCRIPTION                                                | UNIT | TOTAL   | QUANTITY |
| 0860         | SPV.0090 | SPECIAL 02. CONCRETE BARRIER TRANSITION SECTION 32-INCH SPECIAL | LF   | 120.000 | 120.000  |
| 0870         | SPV.0105 | SPECIAL 01. FIBER WRAP PIER REINFORCING B-13-102                | LS   | 1.000   | 1.000    |
| 0880         | SPV.0105 | SPECIAL 02. FIBER WRAP PIER REINFORCING B-13-103                | LS   | 1.000   | 1.000    |

REMOVING PAVEMENT

| 204.0100 |    |        |       |          |      |
|----------|----|--------|-------|----------|------|
| STA      | TO | STA    | ALIGN | LOCATION | SY   |
| 397+29   |    | BRIDGE | WB    | LT &RT   | 670  |
| 397+56   |    | BRIDGE | EB    | LT &RT   | 670  |
| BRIDGE   |    | 401+57 | WB    | LT &RT   | 670  |
| BRIDGE   |    | 401+85 | EB    | LT &RT   | 660  |
| TOTAL    |    |        |       |          | 2670 |

REMOVING ASPHALTIC SURFACE BUTT JOINTS

| 204.0115 |          |       |     |
|----------|----------|-------|-----|
| STA      | LOCATION | ALIGN | SY  |
| 393+50   | LT & RT  | WB    | 28  |
| 394+50   | LT & RT  | EB    | 28  |
| 404+50   | LT & RT  | WB    | 28  |
| 404+50   | LT & RT  | EB    | 28  |
| TOTAL    |          |       | 112 |

REMOVING ASPHALTIC SURFACE MILLING

| 204.0120 |    |        |       |      |
|----------|----|--------|-------|------|
| STA      | TO | STA    | ALIGN | SY   |
| 393+50   |    | 397+29 | WB    | 2580 |
| 394+50   |    | 397+56 | EB    | 2090 |
| 401+57   |    | 404+50 | WB    | 2000 |
| 401+85   |    | 404+50 | EB    | 1830 |
| TOTAL    |    |        |       | 8500 |

REMOVING CONCRETE BARRIER

| 204.0157 |    |        |          |       |      |
|----------|----|--------|----------|-------|------|
| STA      | TO | STA    | LOCATION | ALIGN | LF   |
| 395+13   |    | BRIDGE | LT       | WB    | 300  |
| 395+27   |    | BRIDGE | RT       | EB    | 325  |
| 397+29   |    | BRIDGE | RT       | WB    | 100  |
| 397+56   |    | BRIDGE | LT       | EB    | 80   |
| BRIDGE   |    | 403+83 | LT       | WB    | 325  |
| BRIDGE   |    | 401+57 | RT       | WB    | 80   |
| BRIDGE   |    | 401+85 | LT       | EB    | 100  |
| BRIDGE   |    | 404+09 | RT       | EB    | 310  |
| TOTAL    |    |        |          |       | 1620 |

EARTHWORK

| *EXCAVATION<br>COMMON<br>205.0100 |    |         |       |          |     |
|-----------------------------------|----|---------|-------|----------|-----|
| STA                               | TO | STA     | ALIGN | LOCATION | CY  |
| 395+13                            |    | BRIDGES | WB    | LT       | 25  |
| 395+33                            |    | BRIDGES | EB    | RT       | 35  |
| 397+29                            |    | BRIDGES | WB    | RT       | 15  |
| BRIDGES                           |    | 401+85  | EB    | LT       | 15  |
| BRIDGES                           |    | 403+83  | WB    | LT       | 30  |
| BRIDGES                           |    | 404+09  | EB    | RT       | 25  |
| TOTAL                             |    |         |       |          | 145 |

\*FOR REMOVAL OF EXISTING SLOPE PAVING CRUSHED AGGREGATE

PREPARATION AND FINISHING

| PREPARE<br>FOUNDATION<br>FOR ASPHALTIC<br>PAVING<br>(1010-02-79)<br>211.0100.01 |  |  | PREPARE<br>FOUNDATION<br>FOR CONCRETE<br>PAVEMENT<br>(1010-02-79)<br>211.0200.01 |    |    | FINISHING<br>ROADWAY<br>(1010-02-79)<br>213.0100.01 |  |  |
|---------------------------------------------------------------------------------|--|--|----------------------------------------------------------------------------------|----|----|-----------------------------------------------------|--|--|
| LOCATION                                                                        |  |  | LS                                                                               | LS | LS | EACH                                                |  |  |
| PROJECT WIDE                                                                    |  |  | 1                                                                                | 1  | 1  | 1                                                   |  |  |
| TOTALS                                                                          |  |  | 1                                                                                | 1  | 1  | 1                                                   |  |  |

\*BASE AGGREGATE DENSE 1 1/4-INCH

| 305.0120      |    |        |          |       |     |
|---------------|----|--------|----------|-------|-----|
| STA           | TO | STA    | LOCATION | ALIGN | TON |
| 397+29        |    | BRIDGE | LT & RT  | WB    | 135 |
| 397+56        |    | BRIDGE | LT & RT  | EB    | 135 |
| BRIDGE        |    | 401+57 | LT & RT  | WB    | 135 |
| BRIDGE        |    | 401+85 | LT & RT  | EB    | 135 |
| UNDISTRIBUTED |    |        |          |       | 60  |
| TOTAL         |    |        |          |       | 600 |

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE PAVEMENT APPROACH SLAB

| CONCRETE<br>PAVEMENT<br>APPROACH<br>SLAB<br>415.0410 |    |        |       |          |     |
|------------------------------------------------------|----|--------|-------|----------|-----|
| STA                                                  | TO | STA    | ALIGN | LOCATION | SY  |
| 398+04                                               |    | BRIDGE | WB    | LT &RT   | 88  |
| 398+31                                               |    | BRIDGE | EB    | LT &RT   | 89  |
| BRIDGE                                               |    | 400+82 | WB    | LT &RT   | 87  |
| BRIDGE                                               |    | 401+10 | EB    | LT &RT   | 89  |
| TOTALS                                               |    |        |       |          | 353 |

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

CONCRETE PAVEMENT

|        |    |        |       |          | CONCRETE |             |          |          |
|--------|----|--------|-------|----------|----------|-------------|----------|----------|
|        |    |        |       |          | CONCRETE | CONCRETE    | DRILLED  | RUMBLE   |
|        |    |        |       |          | PAVEMENT | PAVEMENT    | DOWEL    | STRIPS   |
|        |    |        |       |          | 9-INCH   | 12 1/2-INCH | BARS     | SHOULDER |
|        |    |        |       |          | 415.0090 | 415.0125    | 416.0620 | 416.1110 |
| STA    | TO | STA    | ALIGN | LOCATION | SY       | SY          | EACH     | LF       |
| 397+28 |    | 398+04 | WB    | LT & RT  | 0        | 300         | 24       | 0        |
| 397+28 |    | BRIDGE | WB    | LT       | 100      | 0           | 6        | 75       |
| 397+28 |    | BRIDGE | WB    | RT       | 110      | 0           | 6        | 100      |
| 397+56 |    | 398+31 | EB    | LT & RT  | 0        | 300         | 24       | 0        |
| 397+56 |    | BRIDGE | EB    | LT       | 85       | 0           | 6        | 75       |
| 397+56 |    | BRIDGE | EB    | RT       | 125      | 0           | 6        | 100      |
| BRIDGE |    | 401+57 | WB    | LT       | 125      | 0           | 6        | 100      |
| BRIDGE |    | 401+57 | WB    | RT       | 85       | 0           | 6        | 75       |
| 400+83 |    | 401+57 | WB    | LT & RT  | 0        | 300         | 24       | 0        |
| BRIDGE |    | 401+85 | EB    | LT       | 105      | 0           | 6        | 100      |
| BRIDGE |    | 401+85 | EB    | RT       | 105      | 0           | 6        | 75       |
| 401+10 |    | 401+85 | EB    | LT & RT  | 0        | 300         | 24       | 0        |
| TOTALS |    |        |       |          | 840      | 1200        | 144      | 700      |

CONCRETE BARRIER TEMPORARY

|        |    |        |       |          |       | CONCRETE  | CONCRETE  |           |
|--------|----|--------|-------|----------|-------|-----------|-----------|-----------|
|        |    |        |       |          |       | BARRIER   | BARRIER   | CRASH     |
|        |    |        |       |          |       | TEMPORARY | TEMPORARY | CUSHIONS  |
|        |    |        |       |          |       | PRECAST   | PRECAST   | TEMPORARY |
|        |    |        |       |          |       | DELIVERED | INSTALLED |           |
|        |    |        |       |          |       | 603.8000  | 603.8125  | 614.0905  |
| STA    | TO | STA    | ALIGN | LOCATION | STAGE | LF        | LF        | EACH      |
| 392+50 |    | 405+00 | E-1   | RT       | 1     | 1250      | 1250      | 1         |
| 394+25 |    | 405+00 | W-1   | LT       | 1     | 1075      | 1075      | 1         |
| 395+50 |    | 405+00 | E-2   | LT       | 2     | --        | 950       | 1         |
| 394+25 |    | 403+75 | W-2   | RT       | 2     | --        | 950       | 1         |
| 354+75 |    | 362+00 | NB    | RT       | 1E    | 725       | 725       | --        |
| 358+25 |    | 368+00 | SB    | LT       | 1E    | 900       | 900       | --        |
| 354+75 |    | 362+00 | NB    | RT       | 2E    | 725       | 725       | --        |
| 358+25 |    | 368+00 | SB    | LT       | 2E    | 900       | 900       | --        |
| TOTALS |    |        |       |          |       | 5575      | 7475      | 4         |

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

HMA PAVEMENT ITEMS

|        |    |        |       |  | HMA       | ASPHALTIC | ASPHALTIC |          |
|--------|----|--------|-------|--|-----------|-----------|-----------|----------|
|        |    |        |       |  | PAVEMENT  | MATERIAL  | TACK      | SHOULDER |
|        |    |        |       |  | TYPE E-30 | PG64-28   | COAT      | RUMBLE   |
|        |    |        |       |  | 460.1130  | 455.0120  | 455.0605  | STRIP    |
|        |    |        |       |  | TON       | TON       | GAL       | 465.0400 |
| STA    | TO | STA    | ALIGN |  | TON       | TON       | GAL       | LF       |
| 389+00 |    | 393+50 | WB    |  | --        | --        | --        | 450 *    |
| 389+60 |    | 394+50 | EB    |  | --        | --        | --        | 490 *    |
| 391+80 |    | 394+50 | EB    |  | --        | --        | --        | 270 *    |
| 392+30 |    | 393+50 | WB    |  | --        | --        | --        | 120 *    |
| 393+50 |    | 397+28 | WB    |  | 495       | 27        | 60        | 790      |
| 394+50 |    | 397+56 | EB    |  | 400       | 22        | 50        | 640      |
| 401+57 |    | 404+50 | WB    |  | 380       | 21        | 50        | 615      |
| 401+85 |    | 404+50 | EB    |  | 450       | 25        | 50        | 560      |
| 404+50 |    | 407+50 | WB    |  | --        | --        | --        | 120 *    |
| 404+50 |    | 408+00 | WB    |  | --        | --        | --        | 120 *    |
| 404+50 |    | 410+00 | EB    |  | --        | --        | --        | 550 *    |
| 404+50 |    | 409+00 | EB    |  | --        | --        | --        | 450 *    |
| TOTALS |    |        |       |  | 1725      | 95        | 210       | 5175     |

\* WORK OMITTED FROM 2013 OVERLAY PROJECT

SLOPE PAVING CRUSHED AGGREGATE

|         |    |         |       |          | 604.0500 |
|---------|----|---------|-------|----------|----------|
| STA     | TO | STA     | ALIGN | LOCATION | SY       |
| 395+13  |    | BRIDGES | WB    | LT       | 137      |
| 395+33  |    | BRIDGES | EB    | RT       | 199      |
| 397+29  |    | BRIDGES | WB    | RT       | 96       |
| BRIDGES |    | 401+85  | EB    | LT       | 99       |
| BRIDGES |    | 403+83  | WB    | LT       | 188      |
| BRIDGES |    | 404+09  | EB    | RT       | 155      |
| TOTALS  |    |         |       |          | 874      |

CONCRETE BARRIER

|        |    |        |          |       |  | CONCRETE<br>BARRIER<br>SINGLE-FACED<br>32-INCH<br>SPECIAL<br>SPV.0090.01 | CONCRETE<br>BARRIER<br>TRANSITION<br>SECTION<br>32-INCH<br>SPECIAL<br>SPV.0090.02 | DRILLED<br>TIE<br>BARS<br>416.0610 | *BASE<br>AGGREGATE<br>DENSE<br>1 1/4-INCH<br>305.0120 |
|--------|----|--------|----------|-------|--|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------|-------------------------------------------------------|
| STA    | TO | STA    | LOCATION | ALIGN |  | LF                                                                       | LF                                                                                | EACH                               | TON                                                   |
| 395+28 |    | 398+13 | LT       | WB    |  | 285                                                                      | --                                                                                | 104                                | 11                                                    |
| 395+48 |    | 398+66 | RT       | EB    |  | 335                                                                      | --                                                                                | 122                                | 13                                                    |
| 397+29 |    | 397+44 | LT       | WB    |  | --                                                                       | 15                                                                                | 6                                  | 1                                                     |
| 397+29 |    | 397+44 | RT       | WB    |  | --                                                                       | 15                                                                                | 6                                  | 1                                                     |
| 397+44 |    | 398+38 | RT       | WB    |  | 95                                                                       | --                                                                                | 35                                 | 4                                                     |
| 397+56 |    | 397+71 | LT       | EB    |  | --                                                                       | 15                                                                                | 6                                  | 1                                                     |
| 397+56 |    | 397+71 | RT       | EB    |  | --                                                                       | 15                                                                                | 6                                  | 1                                                     |
| 397+71 |    | 398+42 | LT       | EB    |  | 65                                                                       | --                                                                                | 24                                 | 3                                                     |
| 400+47 |    | 403+68 | LT       | WB    |  | 325                                                                      | --                                                                                | 119                                | 13                                                    |
| 400+72 |    | 401+42 | RT       | WB    |  | 75                                                                       | --                                                                                | 28                                 | 3                                                     |
| 401+42 |    | 401+57 | LT       | WB    |  | --                                                                       | 15                                                                                | 6                                  | 1                                                     |
| 401+42 |    | 401+57 | RT       | WB    |  | --                                                                       | 15                                                                                | 6                                  | 1                                                     |
| 400+76 |    | 401+70 | LT       | EB    |  | 95                                                                       | --                                                                                | 35                                 | 4                                                     |
| 401+70 |    | 401+85 | LT       | EB    |  | --                                                                       | 15                                                                                | 6                                  | 1                                                     |
| 401+70 |    | 401+85 | RT       | EB    |  | --                                                                       | 15                                                                                | 6                                  | 1                                                     |
| 401+01 |    | 403+93 | RT       | EB    |  | 295                                                                      | --                                                                                | 108                                | 12                                                    |
| TOTALS |    |        |          |       |  | 1570                                                                     | 120                                                                               | 623                                | 71                                                    |

\* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

EROSION CONTROL

|               |      | 628.1905<br>MOBILIZATIONS<br>EROSION<br>CONTROL | 628.1910<br>MOBILIZATIONS<br>EMERGENCY<br>EROSION CONTROL | 628.2004<br>EROSION MAT<br>CLASS I<br>TYPE B | 629.0210<br>FERTILIZER<br>TYPE B | 630.0130<br>SEEDING<br>MIXTURE<br>NO. 30 | 630.0200<br>SEEDING<br>TEMPORARY |
|---------------|------|-------------------------------------------------|-----------------------------------------------------------|----------------------------------------------|----------------------------------|------------------------------------------|----------------------------------|
| LOCATION      | EACH | EACH                                            |                                                           | SY                                           | CWT                              | LB                                       | LB                               |
| UNDISTRIBUTED | 2    | 2                                               |                                                           | 1000                                         | 1                                | 20                                       | 30                               |
| TOTALS        |      | 2                                               | 2                                                         | 1000                                         | 1                                | 20                                       | 30                               |

TUBULAR POSTS AND BASES

|               |    |        |       |          |  | TRAFFIC CONTROL<br>FLEXIBLE TUBULAR<br>MARKER POSTS<br>643.0500 | TRAFFIC CONTROL<br>FLEXIBLE TUBULAR<br>MARKER BASES<br>643.0600 |
|---------------|----|--------|-------|----------|--|-----------------------------------------------------------------|-----------------------------------------------------------------|
| STA           | TO | STA    | ALIGN | LOCATION |  | EACH                                                            | EACH                                                            |
| 576+50        |    | 583+50 | WCD1  | LT       |  | 70                                                              | 70                                                              |
| 592+00        |    | 602+75 | WCD2  | RT       |  | 108                                                             | 108                                                             |
| 592+50        |    | 594+00 | WCD2  | LT       |  | 15                                                              | 15                                                              |
| 196+50        |    | 206+25 | ECD2  | LT       |  | 98                                                              | 98                                                              |
| 203+75        |    | 205+75 | ECD2  | RT       |  | 20                                                              | 20                                                              |
| UNDISTRIBUTED |    |        |       |          |  | 49                                                              | 49                                                              |
| TOTALS        |    |        |       |          |  | 360                                                             | 360                                                             |

INLET ITEMS

|        |       |        |          |  |  | ADJUSTING<br>INLET<br>COVERS<br>611.8115 | INLET<br>PROTECTION<br>TYPE D<br>628.7020 |
|--------|-------|--------|----------|--|--|------------------------------------------|-------------------------------------------|
| STA    | ALIGN | OFFSET | LOCATION |  |  | EACH                                     | EACH                                      |
| 392+98 | WB    | 35'    | LT       |  |  | --                                       | 1                                         |
| 393+98 | EB    | 35'    | RT       |  |  | --                                       | 1                                         |
| 404+48 | WB    | 35'    | LT       |  |  | 1                                        | 1                                         |
| 405+00 | EB    | 35'    | RT       |  |  | --                                       | 1                                         |
| TOTALS |       |        |          |  |  | 1                                        | 4                                         |

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL ITEMS

| STAGE                         | SERVICE<br>PERIOD<br>DAYS | TRAFFIC CONTROL<br>DRUMS<br>643.0300 |                 | TRAFFIC CONTROL<br>BARRICADES TYPE III<br>643.0420 |                 | TRAFFIC CONTROL<br>WARNING LIGHTS<br>TYPE A<br>643.0705 |                 | TRAFFIC CONTROL<br>WARNING LIGHTS<br>TYPE C<br>643.0715 |                 | TRAFFIC CONTROL<br>ARROW BOARDS<br>643.0800 |                 | TRAFFIC CONTROL<br>SIGNS<br>643.0900 |                 | TRAFFIC CONTROL<br>SIGNS PCMS<br>643.1050 |                 | TRAFFIC CONTROL DETOUR<br>SIGNS<br>643.3000 |                 |
|-------------------------------|---------------------------|--------------------------------------|-----------------|----------------------------------------------------|-----------------|---------------------------------------------------------|-----------------|---------------------------------------------------------|-----------------|---------------------------------------------|-----------------|--------------------------------------|-----------------|-------------------------------------------|-----------------|---------------------------------------------|-----------------|
|                               |                           | NO. IN<br>SERVICE                    | PAY<br>QUANTITY | NO. IN<br>SERVICE                                  | PAY<br>QUANTITY | NO. IN<br>SERVICE                                       | PAY<br>QUANTITY | NO. IN<br>SERVICE                                       | PAY<br>QUANTITY | NO. IN<br>SERVICE                           | PAY<br>QUANTITY | NO. IN<br>SERVICE                    | PAY<br>QUANTITY | NO. IN<br>SERVICE                         | PAY<br>QUANTITY | NO. IN<br>SERVICE                           | PAY<br>QUANTITY |
|                               |                           | EACH                                 | DAY             | EACH                                               | DAY             | EACH                                                    | DAY             | EACH                                                    | DAY             | EACH                                        | DAY             | EACH                                 | DAY             | EACH                                      | DAY             | EACH                                        | DAY             |
| 1                             | 70                        | 290                                  | 20,300          | 12                                                 | 840             | 16                                                      | 1,120           | 140                                                     | 9,800           | --                                          | --              | 100                                  | 7,000           | 4                                         | 280             | --                                          | --              |
| 1A                            | 5                         | 70                                   | 350             | 4                                                  | 20              | 8                                                       | 40              | 30                                                      | 150             | 4                                           | 20              | 30                                   | 150             | 2                                         | 10              | --                                          | --              |
| 1B                            | 5                         | 150                                  | 750             | 4                                                  | 20              | 8                                                       | 40              | 50                                                      | 250             | 6                                           | 30              | 25                                   | 125             | 2                                         | 10              | --                                          | --              |
| 1C                            | 5                         | 225                                  | 1,125           | 8                                                  | 40              | 6                                                       | 30              | 134                                                     | 670             | 8                                           | 40              | 20                                   | 100             | 4                                         | 20              | --                                          | --              |
| 1D                            | 5                         | 110                                  | 550             | 4                                                  | 20              | 8                                                       | 40              | 70                                                      | 350             | 4                                           | 20              | 25                                   | 125             | 2                                         | 10              | --                                          | --              |
| 1E                            | 6                         | 20                                   | 120             | --                                                 | --              | --                                                      | --              | 20                                                      | 120             | --                                          | --              | 27                                   | 162             | 2                                         | 12              | --                                          | --              |
| 2                             | 70                        | 450                                  | 31,500          | 10                                                 | 700             | 32                                                      | 2,240           | 235                                                     | 16,450          | --                                          | --              | 110                                  | 7,700           | 4                                         | 280             | --                                          | --              |
| 2A                            | 5                         | 70                                   | 350             | 4                                                  | 20              | 8                                                       | 40              | 30                                                      | 150             | 4                                           | 20              | 25                                   | 125             | 2                                         | 10              | --                                          | --              |
| 2B                            | 5                         | 150                                  | 750             | 4                                                  | 20              | 8                                                       | 40              | 50                                                      | 250             | 6                                           | 30              | 25                                   | 125             | 2                                         | 10              | --                                          | --              |
| 2C                            | 5                         | 225                                  | 1,125           | 8                                                  | 40              | 6                                                       | 30              | 134                                                     | 670             | 8                                           | 40              | 20                                   | 100             | 4                                         | 20              | --                                          | --              |
| 2D                            | 5                         | 110                                  | 550             | 4                                                  | 20              | 8                                                       | 40              | 70                                                      | 350             | 4                                           | 20              | 25                                   | 125             | 2                                         | 10              | --                                          | --              |
| 2E                            | 6                         | 20                                   | 120             | --                                                 | --              | --                                                      | --              | 20                                                      | 120             | --                                          | --              | 27                                   | 162             | 2                                         | 12              | --                                          | --              |
| TC FOR COVERING SIGNS         | 12                        | 10                                   | 120             | --                                                 | --              | --                                                      | --              | 12                                                      | 144             | --                                          | --              | 12                                   | 144             | --                                        | --              | --                                          | --              |
| DETOUR WB IH 39 TO SB USH 151 | 140                       | --                                   | --              | 8                                                  | 1,120           | 6                                                       | 840             | 20                                                      | 2,800           | --                                          | --              | 15                                   | 2,100           | 2                                         | 20              | 80                                          | 11,200          |
| DETOUR EB IH 39 TO NB USH 151 | 140                       | --                                   | --              | 8                                                  | 1,120           | 6                                                       | 840             | 20                                                      | 2,800           | --                                          | --              | 15                                   | 2,100           | 2                                         | 20              | 90                                          | 12,600          |
| UNDISTRIBUTED                 |                           |                                      | 8,690           |                                                    | 800             |                                                         | 860             |                                                         | 5,096           |                                             | 40              |                                      | 3,057           |                                           | 116             |                                             | 3,600           |
| TOTALS                        |                           |                                      | 66,400          |                                                    | 4,780           |                                                         | 6,200           |                                                         | 40,170          |                                             | 260             |                                      | 23,400          |                                           | 840             |                                             | 27,400          |

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

| PAVEMENT MARKING |       |          |                                           |                                                              |               |                                                               |                                                    |                                                                    |                                                                                  |                                                                                  |
|------------------|-------|----------|-------------------------------------------|--------------------------------------------------------------|---------------|---------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
|                  |       |          |                                           |                                                              |               | PAVEMENT MARKING<br>MARKING EPOXY<br>4-INCH<br>646.0106<br>LF | PAVEMENT MARKING EPOXY<br>8-INCH<br>646.0126<br>LF | PAVEMENT MARKING<br>DIAGONAL<br>EPOXY<br>24-INCH<br>647.0746<br>LF | PAVEMENT MARKING<br>GROOVED WET<br>REFLECTIVE TAPE<br>4-INCH<br>646.0881.S<br>LF | PAVEMENT MARKING<br>GROOVED WET<br>REFLECTIVE TAPE<br>8-INCH<br>646.0883.S<br>LF |
| STA              | ALIGN | LOCATION | COVERING SIGNS TYPE 1<br>643.0910<br>EACH | TRAFFIC CONTROL<br>COVERING SIGNS TYPE 2<br>643.0920<br>EACH | STA           | TO                                                            | STA                                                | ALIGN                                                              | LOCATION                                                                         | DESCRIPTION                                                                      |
| 169+20           | ECD1  | RT       | 1                                         | --                                                           | 172+83        |                                                               | 182+00                                             | ECD1                                                               | LT                                                                               | WHITE 12.5-FT SKIP DASH                                                          |
| 181+85           | ECD1  | LT       | --                                        | 1                                                            | 172+83        |                                                               | 176+20                                             | ECD1                                                               | RT                                                                               | WHITE 3-FT SKIP DASH                                                             |
| 187+00           | ECD1  | RT       | 1                                         | --                                                           | 573+84        |                                                               | 582+00                                             | WCD1                                                               | RT                                                                               | WHITE 12.5-FT SKIP DASH                                                          |
| 591+45           | WCD1  | LT       | --                                        | 1                                                            | 573+84        |                                                               | 579+08                                             | WCD1                                                               | LT                                                                               | WHITE EDGELINE                                                                   |
| 593+70           | WCD2  | LT       | 1                                         | --                                                           | 573+84        |                                                               | 579+03                                             | WBC                                                                | RT                                                                               | WHITE EDGELINE                                                                   |
| 596+20           | WCD2  | LT       | --                                        | 1                                                            | 579+08        |                                                               | 582+00                                             | WCD1                                                               | RT                                                                               | WHITE EDGELINE                                                                   |
| 201+35           | ECD2  | RT       | --                                        | 1                                                            | 580+78        |                                                               | 584+00                                             | WBC                                                                | LT                                                                               | WHITE EDGELINE                                                                   |
| 205+05           | ECD2  | RT       | 1                                         | --                                                           | 580+78        |                                                               | 583+97                                             | WBC                                                                | LT                                                                               | WHITE EDGELINE                                                                   |
| 206+35           | ECD2  | RT       | --                                        | 1                                                            | 381+44        |                                                               | 426+50                                             | WB                                                                 | RT                                                                               | YELLOW EDGELINE                                                                  |
| 613+75           | WCD1  | LT       | 2                                         | --                                                           | 382+00        |                                                               | 426+50                                             | WB                                                                 | LT                                                                               | WHITE EDGELINE                                                                   |
| 625+00           | WCD1  | LT       | 1                                         | --                                                           | 382+00        |                                                               | 448+25                                             | WB                                                                 | LT                                                                               | WHITE 12.5-FT SKIP DASH                                                          |
| 634+70           | WCD1  | RT       | --                                        | 1                                                            | 381+71        |                                                               | 420+70                                             | EB                                                                 | LT                                                                               | YELLOW EDGELINE                                                                  |
| 639+45           | WCD1  | LT       | 1                                         | --                                                           | 382+00        |                                                               | 420+70                                             | EB                                                                 | RT                                                                               | WHITE 12.5-FT SKIP DASH                                                          |
| 350+75           | NB    | RT       | --                                        | 1                                                            | 381+80        |                                                               | 415+50                                             | EB                                                                 | RT                                                                               | WHITE EDGELINE                                                                   |
| 373+00           | SB    | RT       | --                                        | 1                                                            | 584+00        |                                                               | 591+50                                             | WBC                                                                | LT                                                                               | WHITE EDGELINE                                                                   |
| TOTALS           |       |          | 8                                         | 8                                                            | 591+50        |                                                               | 593+03                                             | WBC                                                                | LT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 591+55        |                                                               | 593+03                                             | WBC                                                                | LT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 591+50        |                                                               | 593+03                                             | WBC                                                                | LT                                                                               | WHITE DIAGONAL MARKING                                                           |
|                  |       |          |                                           |                                                              | 593+03        |                                                               | 601+26                                             | WBC                                                                | LT                                                                               | WHITE 3-FT SKIP DASH                                                             |
|                  |       |          |                                           |                                                              | 193+16        |                                                               | 195+70                                             | EBC                                                                | RT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 195+70        |                                                               | 197+87                                             | EBC                                                                | RT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 196+00        |                                                               | 197+87                                             | EBC                                                                | RT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 197+87        |                                                               | 204+85                                             | EBC                                                                | RT                                                                               | WHITE 3-FT SKIP DASH                                                             |
|                  |       |          |                                           |                                                              | 601+26        |                                                               | 603+06                                             | WBC                                                                | RT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 601+26        |                                                               | 603+21                                             | WBC                                                                | LT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 603+06        |                                                               | 605+54                                             | WBC                                                                | RT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 204+85        |                                                               | 206+32                                             | EBC                                                                | RT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 204+85        |                                                               | 206+28                                             | EBC                                                                | RT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 204+85        |                                                               | 205+80                                             | EBC                                                                | RT                                                                               | WHITE DIAGONAL MARKING                                                           |
|                  |       |          |                                           |                                                              | 206+32        |                                                               | 211+67                                             | EBC                                                                | LT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 211+67        |                                                               | 216+59                                             | EBC                                                                | LT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 415+50        |                                                               | 421+83                                             | EB                                                                 | RT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 357+00        |                                                               | 358+40                                             | SB                                                                 | LT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | 362+05        |                                                               | 363+65                                             | NB                                                                 | RT                                                                               | WHITE EDGELINE                                                                   |
|                  |       |          |                                           |                                                              | UNDISTRIBUTED |                                                               |                                                    |                                                                    |                                                                                  |                                                                                  |
|                  |       |          |                                           |                                                              | TOTALS        |                                                               |                                                    |                                                                    |                                                                                  |                                                                                  |

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

|        |     |     |       |       |
|--------|-----|-----|-------|-------|
| 21,065 | 465 | 275 | 7,586 | 4,845 |
|--------|-----|-----|-------|-------|

REMOVING PAVEMENT MARKINGS

|                  |        |      |       |          | REMOVING<br>PAVEMENT<br>MARKINGS<br>646.0600<br>LF |
|------------------|--------|------|-------|----------|----------------------------------------------------|
| STA              | TO     | STA  | ALIGN | LOCATION | COLOR/TYPE                                         |
| STAGE 1 EB IH 39 |        |      |       |          |                                                    |
| 172+50           | 176+25 | ECD1 | RT    |          | WHITE SKIP DASH                                    |
| 389+00           | 408+50 | E-1  | RT    |          | WHITE SKIP DASH                                    |
| 389+00           | 408+50 | E-1  | LT    |          | YELLOW EDGELINE                                    |
| 196+00           | 198+00 | ECD1 | RT    |          | WHITE 8-INCH                                       |
| 198+00           | 204+80 | ECD2 | LT    |          | WHITE SKIP DASH                                    |
| 204+80           | 206+25 | ECD2 | RT    |          | WHITE GORE AREA                                    |
| 206+25           | 211+50 | ECD1 | RT    |          | WHITE EDGELINE                                     |
| 211+50           | 216+25 | ECD1 | RT    |          | WHITE 8-INCH                                       |
| STAGE 1 WB IH 39 |        |      |       |          |                                                    |
| 574+00           | 577+00 | WCD1 | LT    |          | WHITE EDGELINE                                     |
| 574+00           | 579+00 | WCD1 | LT    |          | WHITE EDGELINE                                     |
| 580+75           | 584+00 | WCD1 | LT    |          | WHITE 8-INCH                                       |
| 580+75           | 584+00 | WCD1 | LT    |          | WHITE 8-INCH                                       |
| 584+00           | 591+75 | WCD1 | LT    |          | WHITE EDGELINE                                     |
| 389+50           | 409+00 | W-1  | LT    |          | WHITE SKIP DASH                                    |
| 389+50           | 409+00 | W-1  | RT    |          | YELLOW EDGELINE                                    |
| 591+75           | 593+00 | WCD2 | LT    |          | WHITE GORE AREA                                    |
| 593+00           | 601+50 | WCD2 | LT    |          | WHITE SKIP DASH                                    |
| 601+50           | 603+00 | WCD1 | LT    |          | WHITE 8-INCH                                       |
| 601+50           | 603+00 | WCD1 | LT    |          | WHITE 8-INCH                                       |
| 603+00           | 605+50 | WCD1 | LT    |          | WHITE EDGELINE                                     |
| 640+50           | 643+50 | WCD1 | LT    |          | WHITE SKIP DASH                                    |
| STAGE 2 EB IH 39 |        |      |       |          |                                                    |
| 381+50           | 389+00 | E-2  | LT    |          | WHITE SKIP DASH                                    |
| 381+50           | 389+00 | E-2  | RT    |          | WHITE EDGELINE FROM STAGE 1                        |
| 389+00           | 394+50 | E-2  | LT    |          | WHITE EDGELINE FROM STAGE 1                        |
| 389+00           | 394+50 | E-2  | LT    |          | WHITE SKIP DASH FROM STAGE 1                       |
| 389+00           | 394+50 | E-2  | LT    |          | YELLOW EDGELINE FROM STAGE 1                       |

CONTINUED IN NEXT COLUMN

REMOVING PAVEMENT MARKINGS (CONTINUED)

|                         |        |     |       |          | REMOVING<br>PAVEMENT<br>MARKINGS<br>646.0600<br>LF |
|-------------------------|--------|-----|-------|----------|----------------------------------------------------|
| STA                     | TO     | STA | ALIGN | LOCATION | COLOR/TYPE                                         |
| 391+75                  | 394+50 | E-2 | LT    |          | WHITE SKIP DASH                                    |
| 391+75                  | 394+50 | E-2 | RT    |          | WHITE EDGELINE                                     |
| 404+50                  | 408+50 | E-2 | LT    |          | WHITE EDGELINE FROM STAGE 1                        |
| 404+50                  | 408+50 | E-2 | LT    |          | WHITE SKIP DASH FROM STAGE 1                       |
| 404+50                  | 408+50 | E-2 | LT    |          | YELLOW EDGELINE FROM STAGE 1                       |
| 404+00                  | 410+00 | E-2 | LT    |          | WHITE SKIP DASH                                    |
| 404+00                  | 410+00 | E-2 | RT    |          | WHITE EDGELINE                                     |
| 408+50                  | 420+70 | E-2 | LT    |          | WHITE EDGELINE                                     |
| 416+00                  | 420+70 | E-2 | LT    |          | WHITE SKIP DASH                                    |
| 416+00                  | 421+70 | E-2 | RT    |          | WHITE EDGELINE                                     |
| STAGE 2 WB IH 39        |        |     |       |          |                                                    |
| 381+45                  | 389+50 | W-2 | LT    |          | WHITE EDGELINE FROM STAGE 1                        |
| 381+45                  | 389+50 | W-2 | RT    |          | WHITE SKIP DASH                                    |
| 389+50                  | 393+50 | W-2 | RT    |          | WHITE EDGELINE FROM STAGE 1                        |
| 389+50                  | 393+50 | W-2 | RT    |          | WHITE SKIP DASH FROM STAGE 1                       |
| 389+50                  | 393+50 | W-2 | RT    |          | YELLOW EDGELINE FROM STAGE 1                       |
| 391+50                  | 393+50 | W-2 | LT    |          | WHITE EDGELINE                                     |
| 391+50                  | 393+50 | W-2 | RT    |          | WHITE SKIP DASH                                    |
| 404+50                  | 408+00 | W-2 | LT    |          | WHITE EDGELINE                                     |
| 404+50                  | 408+00 | W-2 | RT    |          | WHITE SKIP DASH                                    |
| 404+50                  | 409+00 | W-2 | RT    |          | WHITE EDGELINE FROM STAGE 1                        |
| 404+50                  | 409+00 | W-2 | RT    |          | WHITE SKIP DASH FROM STAGE 1                       |
| 404+50                  | 409+00 | W-2 | RT    |          | YELLOW EDGELINE FROM STAGE 1                       |
| 409+00                  | 426+50 | W-2 | RT    |          | WHITE SKIP DASH                                    |
| 409+00                  | 426+50 | W-2 | N/A   |          | WHITE EDGELINE FROM STAGE 1                        |
| 422+00                  | 426+50 | W-2 | LT    |          | WHITE EDGELINE FROM STAGE 1                        |
| 422+00                  | 426+50 | W-2 | RT    |          | WHITE SKIP DASH                                    |
| STAGE 1C AND 2C USH 151 |        |     |       |          |                                                    |
| 347+00                  | 354+00 | NB  | N/A   |          | WHITE SKIP DASH                                    |
| 347+00                  | 351+00 | NB  | RT    |          | WHITE SKIP DASH                                    |
| 357+00                  | 358+40 | SB  | LT    |          | WHITE GORE AREA                                    |
| 362+15                  | 363+65 | NB  | RT    |          | WHITE GORE AREA                                    |
| 370+90                  | 377+50 | SB  | N/A   |          | WHITE SKIP DASH                                    |

CONTINUED ON NEXT PAGE

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

| REMOVING PAVEMENT MARKINGS (CONTINUED FROM PREVIOUS PAGE)                   |        |     |       |          |                                           | REMOVING<br>PAVEMENT<br>MARKINGS<br>646.0600 |
|-----------------------------------------------------------------------------|--------|-----|-------|----------|-------------------------------------------|----------------------------------------------|
| STA                                                                         | TO     | STA | ALIGN | LOCATION | COLOR/TYPE                                | LF                                           |
| 374+00                                                                      | 377+50 | SB  | LT    |          | WHITE SKIP DASH                           | 90                                           |
| EB IH 39 REMOVE MARKINGS AFTER STAGE 2 IN PREPARATION FOR PERMANENT MARKING |        |     |       |          |                                           |                                              |
| 372+75                                                                      | 376+50 | E-2 | RT    |          | WHITE EDGELINE FROM STAGE 1               | 375                                          |
| 372+75                                                                      | 381+45 | E-2 | RT    |          | WHITE EDGELINE FROM STAGE 1               | 870                                          |
| 381+45                                                                      | 389+00 | E-2 | LT    |          | YELLOW EDGELINE                           | 755                                          |
| 381+45                                                                      | 420+70 | E-2 | LT    |          | YELLOW EDGELINE FROM STAGE 2              | 3925                                         |
| 381+45                                                                      | 410+00 | E-2 | N/A   |          | WHITE SKIP DASH FROM STAGE 2              | 715                                          |
| 381+45                                                                      | 410+00 | E-2 | RT    |          | WHITE EDGELINE FROM STAGE 2               | 2855                                         |
| 386+40                                                                      | 406+30 | E-2 | RT    |          | WHITE EDGELINE FROM STAGE 1               | 1990                                         |
| 395+75                                                                      | 406+30 | E-2 | RT    |          | WHITE EDGELINE FROM STAGE 1               | 1055                                         |
| 403+85                                                                      | 416+25 | E-2 | RT    |          | WHITE EDGELINE FROM STAGE 1               | 1240                                         |
| 406+30                                                                      | 416+25 | E-2 | RT    |          | WHITE SKIP DASH FROM STAGE 1              | 250                                          |
| 408+50                                                                      | 420+70 | E-2 | LT    |          | YELLOW EDGELINE                           | 1220                                         |
| 410+00                                                                      | 420+70 | E-2 | N/A   |          | WHITE SKIP DASH FROM STAGE 2 AND EXISTING | 135                                          |
| 410+00                                                                      | 420+70 | E-2 | RT    |          | WHITE EDGELINE FROM STAGE 2 AND EXISTING  | 1070                                         |
| WB IH 39 REMOVE MARKINGS AFTER STAGE 2 IN PREPARATION FOR PERMANENT MARKING |        |     |       |          |                                           |                                              |
| 372+95                                                                      | 379+00 | W-2 | LT    |          | WHITE EDGELINE FROM STAGE 1               | 605                                          |
| 372+95                                                                      | 408+00 | W-2 | LT    |          | WHITE EDGELINE FROM STAGE 1 & STAGE 2     | 3505                                         |
| 374+00                                                                      | 384+00 | W-2 | LT    |          | WHITE EDGELINE FROM STAGE 1               | 1000                                         |
| 374+00                                                                      | 394+00 | W-2 | LT    |          | WHITE EDGELINE FROM STAGE 1               | 2000                                         |
| 381+45                                                                      | 386+00 | W-2 | LT    |          | WHITE EDGELINE                            | 455                                          |
| 381+45                                                                      | 426+50 | W-2 | N/A   |          | WHITE SKIP DASH FROM STAGE 2              | 1125                                         |
| 381+45                                                                      | 426+50 | W-2 | RT    |          | WHITE EDGELINE FROM STAGE 2               | 4505                                         |
| 383+00                                                                      | 386+50 | W-2 | LT    |          | WHITE SKIP DASH FROM STAGE 1              | 90                                           |
| 386+50                                                                      | 412+00 | W-2 | LT    |          | WHITE EDGELINE FROM STAGE 1               | 2550                                         |
| 392+00                                                                      | 403+00 | W-2 | LT    |          | WHITE EDGELINE FROM STAGE 1               | 1100                                         |
| 408+00                                                                      | 426+50 | W-2 | LT    |          | WHITE EDGELINE                            | 1850                                         |
| 409+00                                                                      | 426+50 | W-2 | RT    |          | YELLOW EDGELINE                           | 1750                                         |
| 426+50                                                                      | 448+25 | W-2 | LT    |          | WHITE EDGELINE FROM STAGE 1               | 2175                                         |
| 440+50                                                                      | 443+50 | W-2 | LT    |          | WHITE SKIP DASH FROM STAGE 1              | 75                                           |
| UNDISTRIBUTED                                                               |        |     |       |          |                                           | PROJECT WIDE 4,080                           |
| TOTAL                                                                       |        |     |       |          |                                           | 70,525                                       |

STAKING ITEMS

| LOCATION | CONSTRUCTION<br>STAKING<br>CONCRETE<br>PAVEMENT<br>650.7000 | CONSTRUCTION<br>STAKING<br>CONCRETE<br>BARRIER<br>650.7500 | CONSTRUCTION<br>STAKING<br>SUPPLEMENTAL<br>CONTROL<br>(1010-02-79)<br>650.9910.01 |
|----------|-------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------|
|          | LF                                                          | LF                                                         | LS                                                                                |
|          | PROJECT WIDE TOTAL                                          | 420                                                        | 1,690                                                                             |

|        |     |       |   |
|--------|-----|-------|---|
| TOTALS | 420 | 1,690 | 1 |
|--------|-----|-------|---|

SAWCUTS

|               |        |     |       |          | SAWING<br>ASPHALT<br>690.0150 | SAWING<br>CONCRETE<br>690.0250 |
|---------------|--------|-----|-------|----------|-------------------------------|--------------------------------|
| STA           | TO     | STA | ALIGN | LOCATION | LF                            | LF                             |
| 393+50        |        |     | WB    | LT & RT  | 60                            | --                             |
| 394+50        |        |     | EB    | LT & RT  | 60                            | --                             |
| 395+13        |        |     | WB    | LT       | 6                             | 4                              |
| 395+13        | 397+29 |     | WB    | LT       | --                            | 236                            |
| 395+33        |        |     | EB    | RT       | 6                             | 4                              |
| 395+33        | 397+56 |     | EB    | RT       | --                            | 244                            |
| 397+29        |        |     | WB    | LT & RT  | --                            | 63                             |
| 397+29        |        |     | WB    | RT       | 5                             | --                             |
| 397+56        |        |     | EB    | LT & RT  | --                            | 63                             |
| 401+57        |        |     | WB    | LT & RT  | --                            | 63                             |
| 401+57        | 403+83 |     | WB    | LT       | --                            | 245                            |
| 401+85        |        |     | EB    | LT & RT  | --                            | 63                             |
| 401+85        |        |     | EB    | LT       | 5                             | --                             |
| 401+85        | 404+09 |     | EB    | RT       | --                            | 247                            |
| 403+83        |        |     | WB    | LT       | 6                             | 4                              |
| 404+09        |        |     | EB    | RT       | 6                             | 4                              |
| 404+50        |        |     | EB    | LT & RT  | 60                            | --                             |
| 404+50        |        |     | WB    | LT & RT  | 60                            | --                             |
| UNDISTRIBUTED |        |     |       |          | 27                            | 124                            |

|        |     |      |
|--------|-----|------|
| TOTALS | 301 | 1364 |
|--------|-----|------|

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

TEMPORARY PAVEMENT MARKING

|                  |    |        |       |          |             | TEMPORARY<br>PAVEMENT<br>MARKING<br>REFLECTIVE<br>PAINT 4-INCH<br>649.0200<br>LF |        | TEMPORARY<br>PAVEMENT<br>MARKING<br>REMOVABLE<br>TAPE 4-INCH<br>649.0400<br>LF |        | TEMPORARY<br>RAISED<br>PAVEMENT<br>MARKERS<br>649.2100<br>EACH |
|------------------|----|--------|-------|----------|-------------|----------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------|--------|----------------------------------------------------------------|
| STA              | TO | STA    | ALIGN | LOCATION | DESCRIPTION | WHITE                                                                            | YELLOW | WHITE                                                                          | YELLOW | WHITE                                                          |
| STAGE 1 EB IH 39 |    |        |       |          |             |                                                                                  |        |                                                                                |        |                                                                |
| 172+75           |    | 176+50 | ECD1  | N/A      | EDGE LINE   | 375                                                                              | --     | --                                                                             | --     | --                                                             |
| 172+75           |    | 184+00 | ECD1  | LT       | EDGE LINE   | 1130                                                                             | --     | --                                                                             | --     | --                                                             |
| 384+00           |    | 408+50 | E-1   | RT       | EDGE LINE   | 2450                                                                             | --     | --                                                                             | --     | --                                                             |
| 186+40           |    | 206+30 | ECD1  | RT       | EDGE LINE   | 1990                                                                             | --     | --                                                                             | --     | --                                                             |
| 389+00           |    | 408+50 | E-1   | N/A      | SKIP DASH   | 490                                                                              | --     | --                                                                             | --     | 39                                                             |
| 389+00           |    | 408+50 | E-1   | LT       | EDGE LINE   | --                                                                               | 1950   | --                                                                             | --     | --                                                             |
| 195+75           |    | 206+30 | ECD2  | N/A      | EDGE LINE   | 1060                                                                             | --     | --                                                                             | --     | --                                                             |
| 203+85           |    | 216+25 | ECD1  | RT       | EDGE LINE   | 1240                                                                             | --     | --                                                                             | --     | --                                                             |
| 206+30           |    | 216+25 | ECD1  | RT       | SKIP DASH   | 125                                                                              | --     | --                                                                             | --     | 20                                                             |
| STAGE 1 WB IH 39 |    |        |       |          |             |                                                                                  |        |                                                                                |        |                                                                |
| 572+95           |    | 579+00 | WCD1  | N/A      | EDGE LINE   | 605                                                                              | --     | --                                                                             | --     | --                                                             |
| 572+95           |    | 584+00 | WCD1  | RT       | EDGE LINE   | 1105                                                                             | --     | --                                                                             | --     | --                                                             |
| 574+00           |    | 584+00 | WCD1  | LT       | EDGE LINE   | 1000                                                                             | --     | --                                                                             | --     | --                                                             |
| 574+00           |    | 591+75 | WCD1  | LT       | EDGE LINE   | 1780                                                                             | --     | --                                                                             | --     | --                                                             |
| 583+00           |    | 586+50 | WCD1  | LT       | SKIP DASH   | 88                                                                               | --     | --                                                                             | --     | 7                                                              |
| 384+00           |    | 443+25 | W-1   | LT       | EDGE LINE   | 5930                                                                             | --     | --                                                                             | --     | --                                                             |
| 586+50           |    | 612+00 | WCD1  | LT       | EDGE LINE   | 2550                                                                             | --     | --                                                                             | --     | --                                                             |
| 389+50           |    | 409+00 | W-1   | N/A      | SKIP DASH   | 490                                                                              | --     | --                                                                             | --     | 39                                                             |
| 389+50           |    | 409+00 | W-1   | RT       | EDGE LINE   | --                                                                               | 1950   | --                                                                             | --     | --                                                             |
| 591+75           |    | 594+00 | WCD2  | LT       | EDGE LINE   | 225                                                                              | --     | --                                                                             | --     | --                                                             |
| 592+00           |    | 603+00 | WCD2  | N/A      | EDGE LINE   | 1100                                                                             | --     | --                                                                             | --     | --                                                             |
| 640+50           |    | 648+25 | WCD1  | N/A      | EDGE LINE   | 775                                                                              | --     | --                                                                             | --     | --                                                             |
| STAGE 2 EB IH 39 |    |        |       |          |             |                                                                                  |        |                                                                                |        |                                                                |
| 381+50           |    | 420+70 | E-2   | LT       | EDGE LINE   | --                                                                               | 3920   | --                                                                             | --     | --                                                             |
| 381+50           |    | 410+00 | E-2   | N/A      | SKIP DASH   | 715                                                                              | --     | --                                                                             | --     | 57                                                             |
| 381+50           |    | 386+00 | E-2   | RT       | EDGE LINE   | 450                                                                              | --     | --                                                                             | --     | --                                                             |
| 391+75           |    | 410+00 | E-2   | RT       | EDGE LINE   | 1830                                                                             | --     | --                                                                             | --     | --                                                             |
| 416+00           |    | 420+70 | E-2   | N/A      | SKIP DASH   | 120                                                                              | --     | --                                                                             | --     | 9                                                              |
| 416+00           |    | 420+70 | E-2   | RT       | EDGE LINE   | 470                                                                              | --     | --                                                                             | --     | --                                                             |

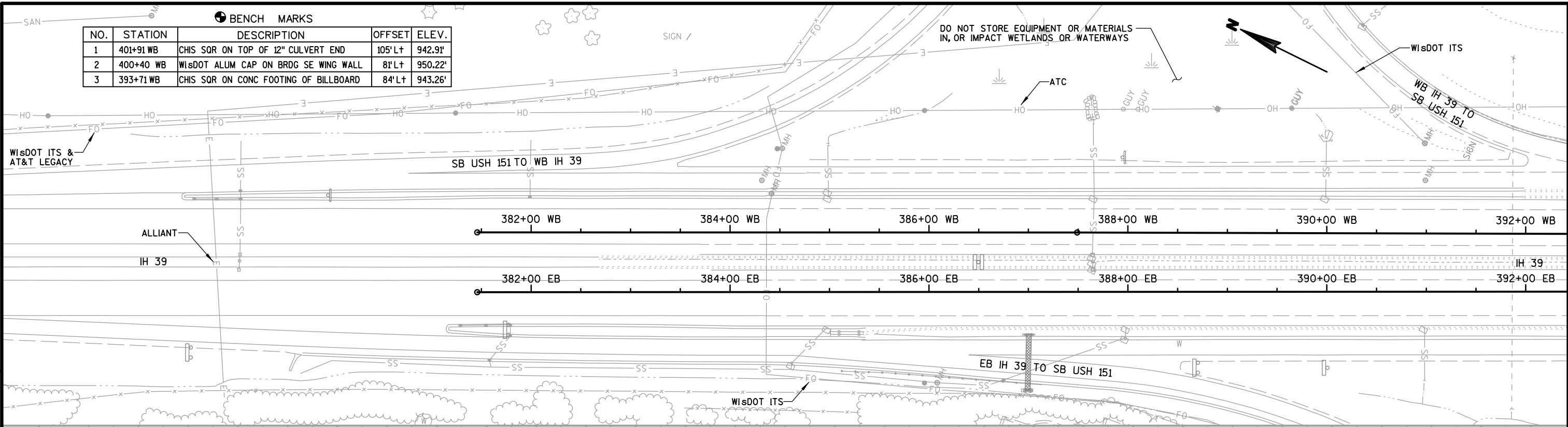
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TEMPORARY PAVEMENT MARKING

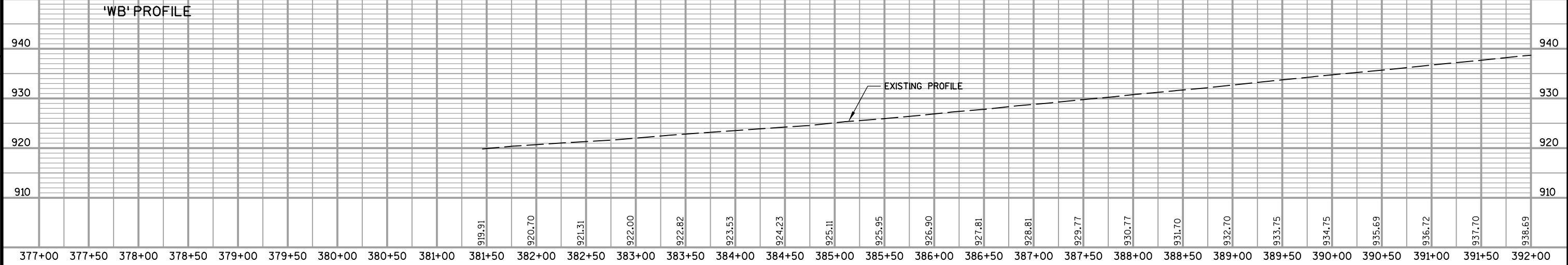
|                  |    |        |       |          |             | TEMPORARY<br>PAVEMENT<br>MARKING<br>REFLECTIVE<br>PAINT 4-INCH<br>649.0200<br>LF |        | TEMPORARY<br>PAVEMENT<br>MARKING<br>REMOVABLE<br>TAPE 4-INCH<br>649.0400<br>LF |        | TEMPORARY<br>RAISED<br>PAVEMENT<br>MARKERS<br>649.2100<br>EACH |
|------------------|----|--------|-------|----------|-------------|----------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------|--------|----------------------------------------------------------------|
| STA              | TO | STA    | ALIGN | LOCATION | DESCRIPTION | WHITE                                                                            | YELLOW | WHITE                                                                          | YELLOW | WHITE                                                          |
| STAGE 2 WB IH 39 |    |        |       |          |             |                                                                                  |        |                                                                                |        |                                                                |
| 381+45           |    | 386+00 | W-2   | LT       | EDGE LINE   | 455                                                                              | --     | --                                                                             | --     | --                                                             |
| 381+45           |    | 408+00 | W-2   | N/A      | SKIP DASH   | 665                                                                              | --     | --                                                                             | --     | 53                                                             |
| 381+45           |    | 426+50 | W-2   | RT       | EDGE LINE   | --                                                                               | 4510   | --                                                                             | --     | --                                                             |
| 391+50           |    | 408+00 | W-2   | LT       | EDGE LINE   | 1650                                                                             | --     | --                                                                             | --     | --                                                             |
| 408+00           |    | 426+50 | W-2   | N/A      | SKIP DASH   | 465                                                                              | --     | --                                                                             | --     | 37                                                             |
| 422+00           |    | 426+50 | W-2   | LT       | EDGE LINE   | 450                                                                              | --     | --                                                                             | --     | --                                                             |
| UNDISTRIBUTED    |    |        |       |          |             | 4800                                                                             | 1892   | 3500                                                                           | 1500   | 39                                                             |
| TOTALS           |    |        |       |          |             | 50800                                                                            |        | 5000                                                                           |        | 300                                                            |

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

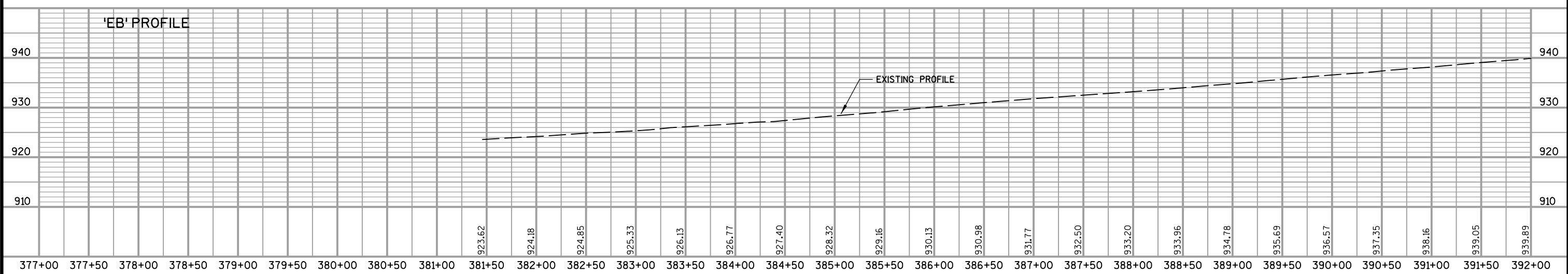
| NO. | STATION   | DESCRIPTION                           | OFFSET  | ELEV.   |
|-----|-----------|---------------------------------------|---------|---------|
| 1   | 401+91 WB | CHIS SQR ON TOP OF 12" CULVERT END    | 105' L+ | 942.91' |
| 2   | 400+40 WB | WisDOT ALUM CAP ON BRDG SE WING WALL  | 81' L+  | 950.22' |
| 3   | 393+71 WB | CHIS SQR ON CONC FOOTING OF BILLBOARD | 84' L+  | 943.26' |



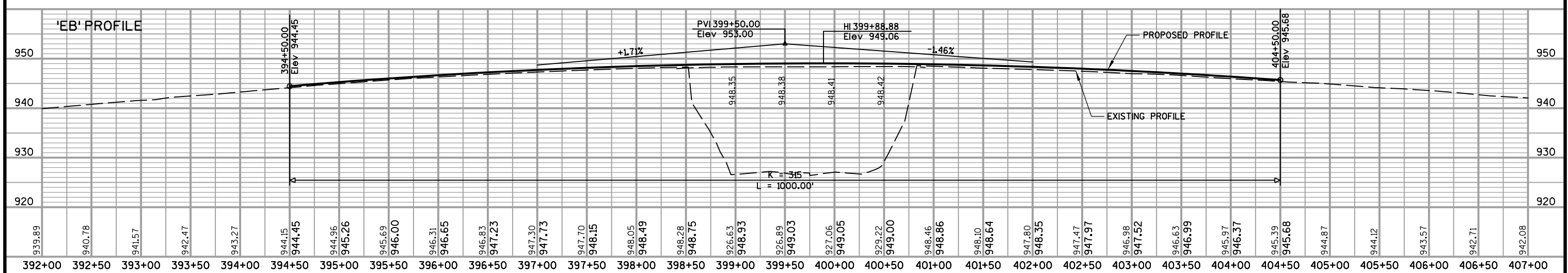
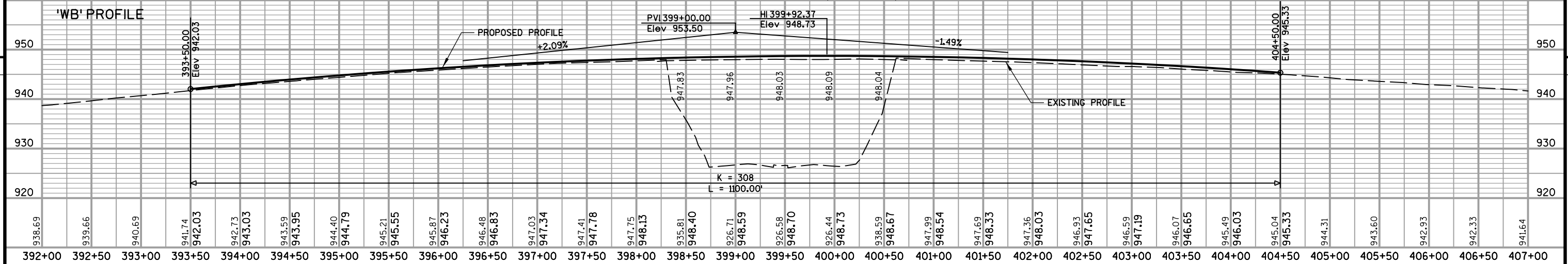
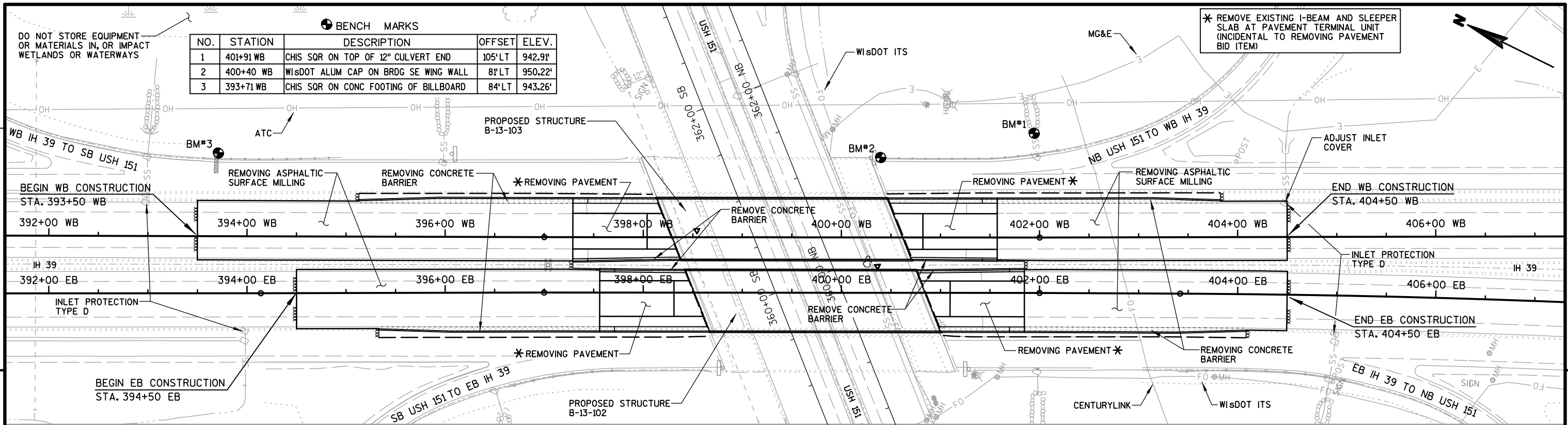
'WB' PROFILE

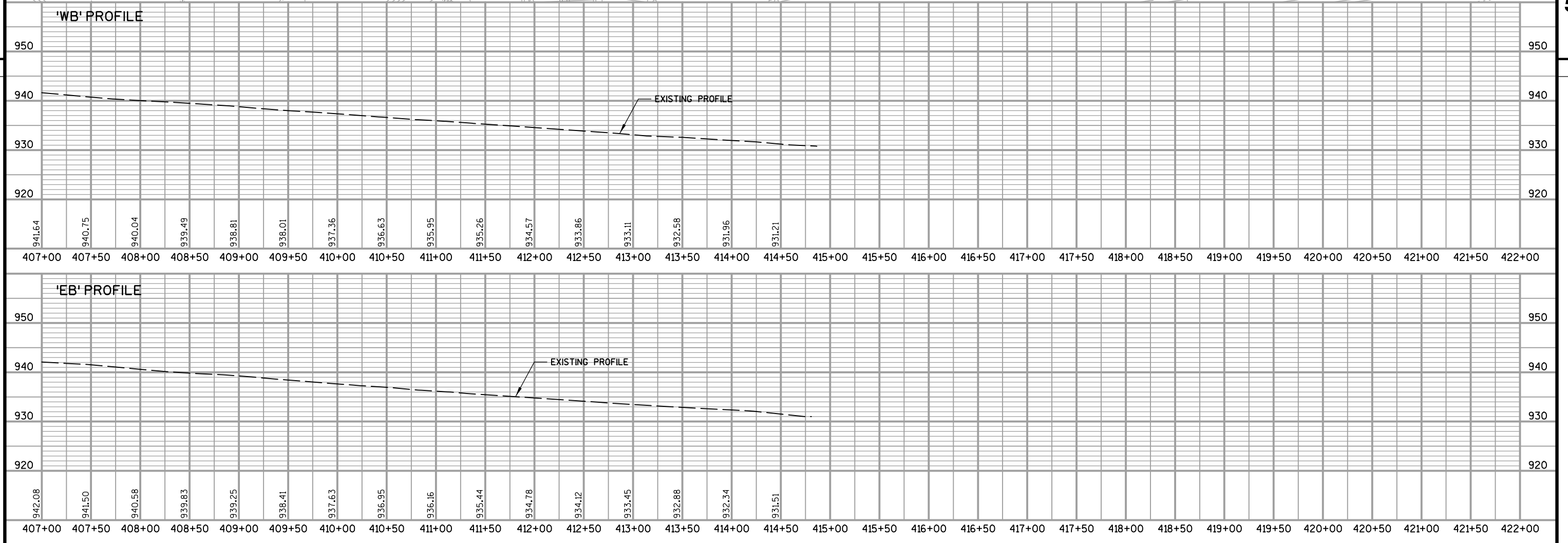
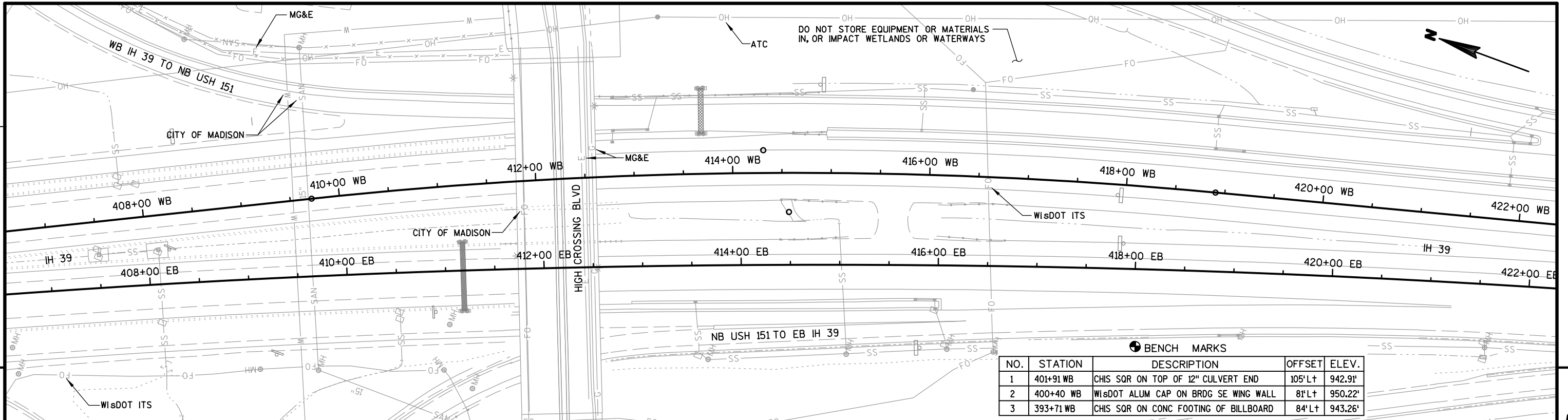


'EB' PROFILE



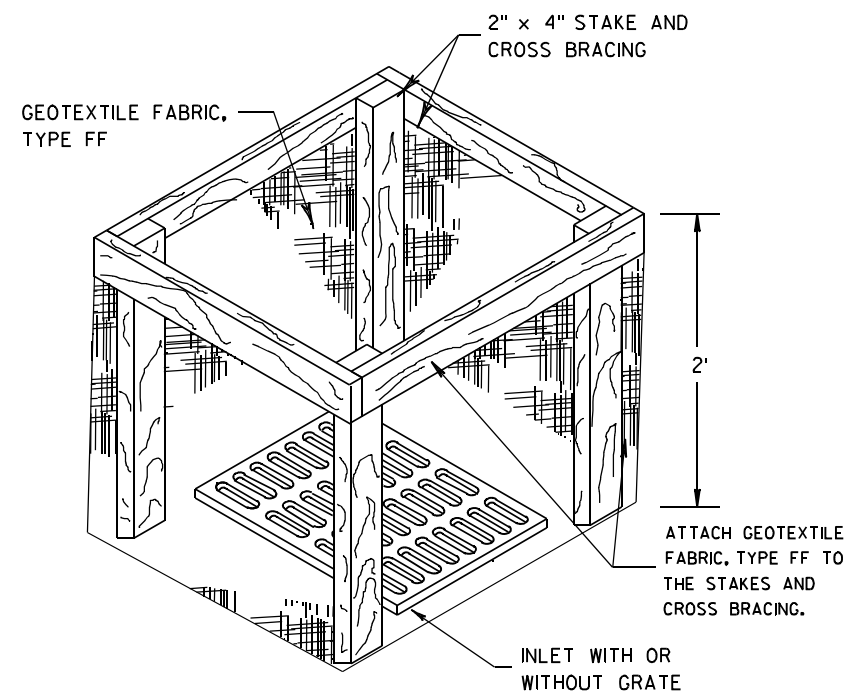
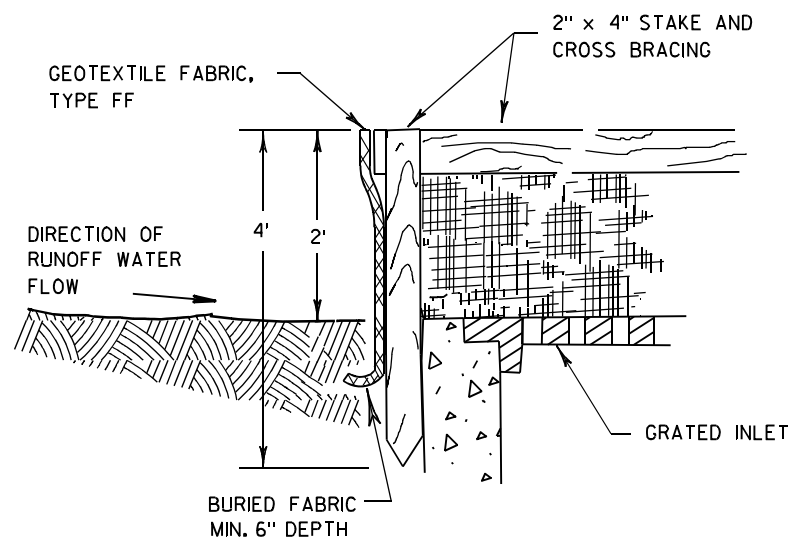
| NO. | STATION   | DESCRIPTION                           | OFFSET  | ELEV.   |
|-----|-----------|---------------------------------------|---------|---------|
| 1   | 401+91 WB | CHIS SQR ON TOP OF 12" CULVERT END    | 105' LT | 942.91' |
| 2   | 400+40 WB | WisDOT ALUM CAP ON BRDG SE WING WALL  | 81' LT  | 950.22' |
| 3   | 393+71 WB | CHIS SQR ON CONC FOOTING OF BILLBOARD | 84' LT  | 943.26' |





Standard Detail Drawing List

|           |                                                                                             |
|-----------|---------------------------------------------------------------------------------------------|
| 08E10-02  | INLET PROTECTION TYPE A, B, C AND D                                                         |
| 13A03-05  | CONCRETE PAVEMENT SHOULDERS                                                                 |
| 13A05-05A | SHOULDER RUMBLE STRIP, MILLING                                                              |
| 13A05-05B | SHOULDER RUMBLE STRIP, MILLING                                                              |
| 13B02-06  | CONCRETE PAVEMENT APPROACH SLAB                                                             |
| 13C01-16  | CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES                                              |
| 13C09-10A | CONCRETE PAVEMENT REPAIR AND REPLACEMENT                                                    |
| 13C09-10B | CONCRETE PAVEMENT REPAIR AND REPLACEMENT                                                    |
| 13C09-10C | CONCRETE PAVEMENT REPAIR AND REPLACEMENT                                                    |
| 13C13-08  | URBAN DOWELED CONCRETE PAVEMENT                                                             |
| 13C18-02A | CONCRETE PAVEMENT JOINTING                                                                  |
| 13C18-02B | CONCRETE PAVEMENT STEEL REINFORCEMENT                                                       |
| 13C18-02C | CONCRETE PAVEMENT JOINT TIES                                                                |
| 13C18-02D | CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES                                              |
| 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                  |
| 14B22-05A | CONCRETE BARRIER, SINGLE-FACED (WITH ANCHORAGE)                                             |
| 14B22-05B | CONCRETE BARRIER, SINGLE-FACED (WITH ANCHORAGE)                                             |
| 15C08-16A | PAVEMENT MARKING (MAINLINE)                                                                 |
| 15C11-05  | FLEXIBLE TUBULAR MARKER POST, ANCHOR & BASES                                                |
| 15C31-01A | PAVEMENT MARKING (RAMPS AND GORES)                                                          |
| 15D03-01  | TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER                   |
| 15D12-02  | TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.                                |
| 15D14-01  | TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS) |
| 15D15-01  | TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE                                 |
| 15D16-01  | TRAFFIC CONTROL, EXIT RAMP CLOSURE                                                          |
| 15D27-01  | TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH            |



**INLET PROTECTION, TYPE A**

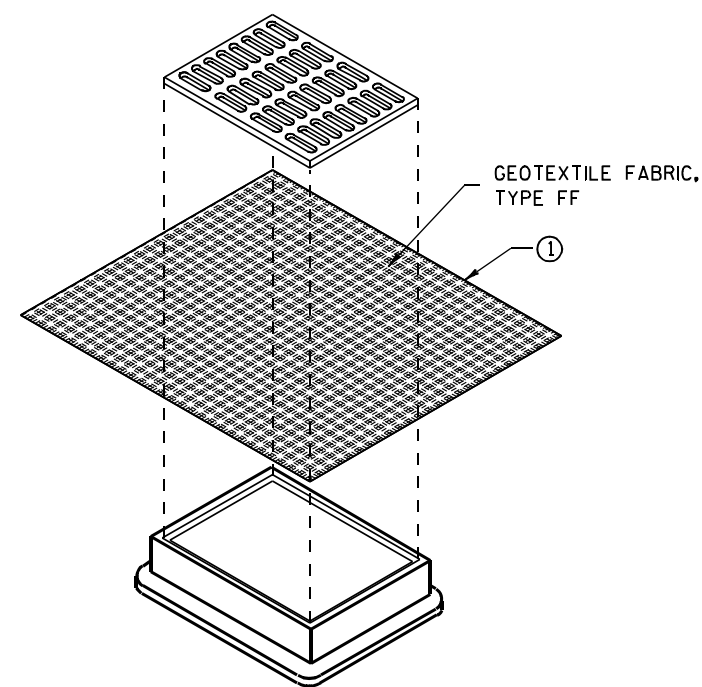
**GENERAL NOTES**

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.

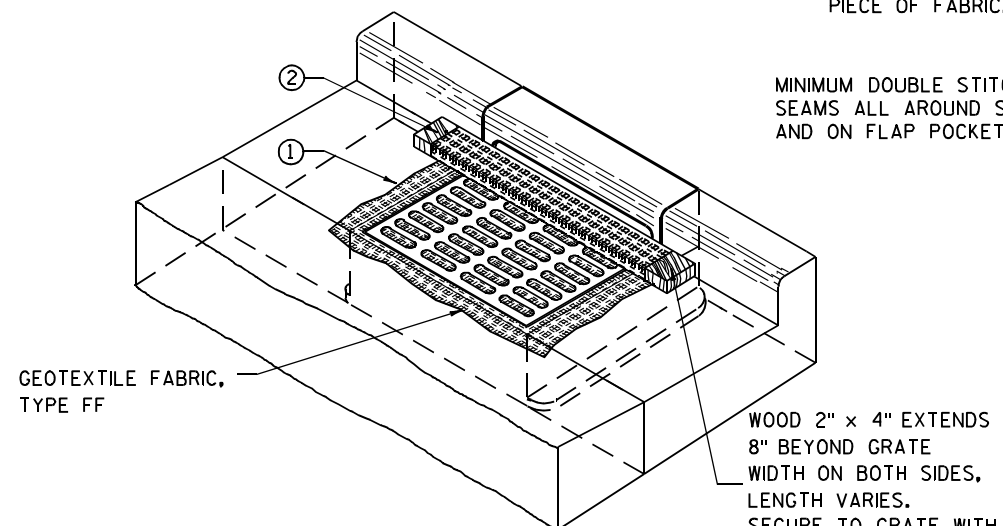
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.



**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**

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



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

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

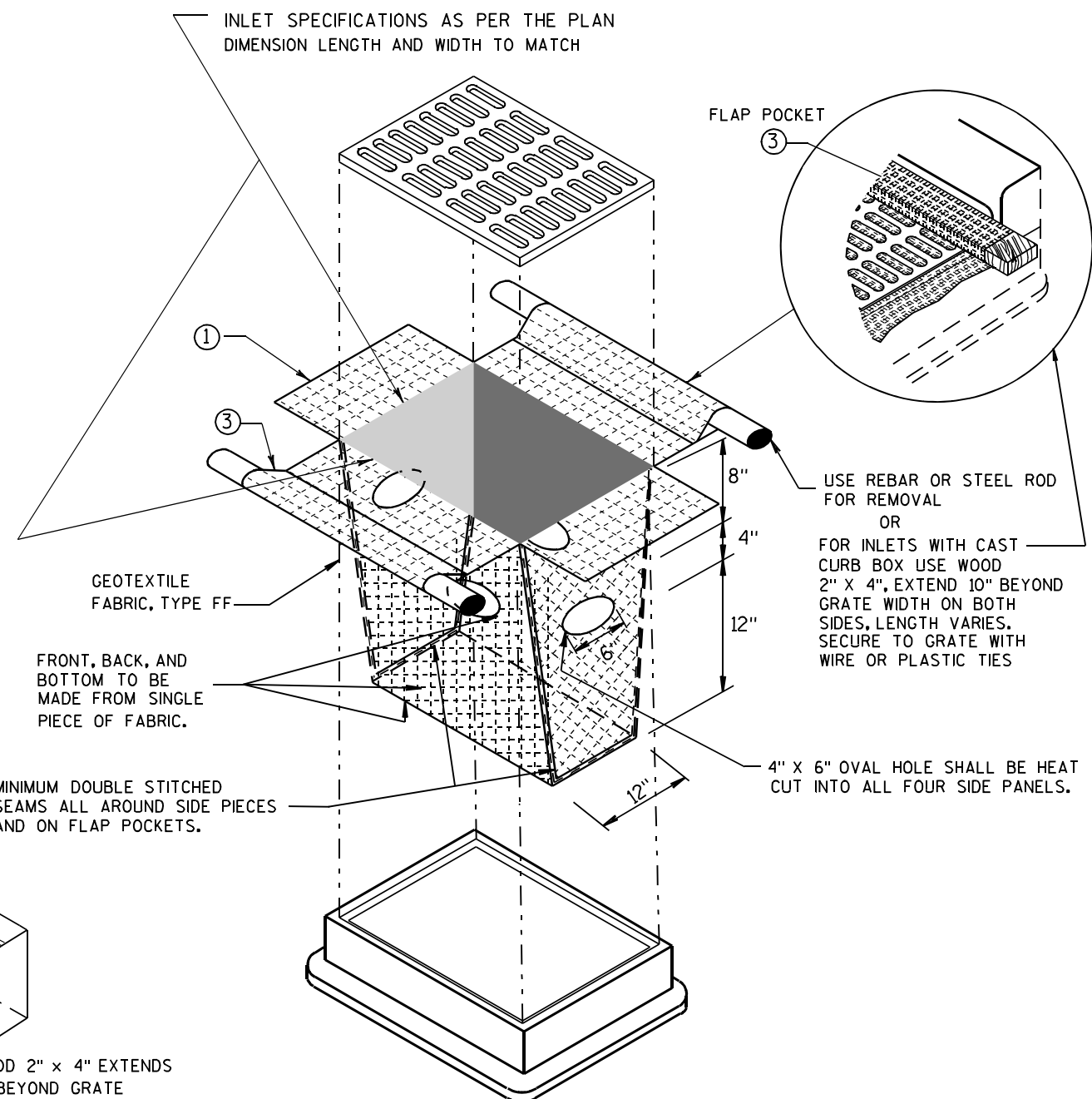
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**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.



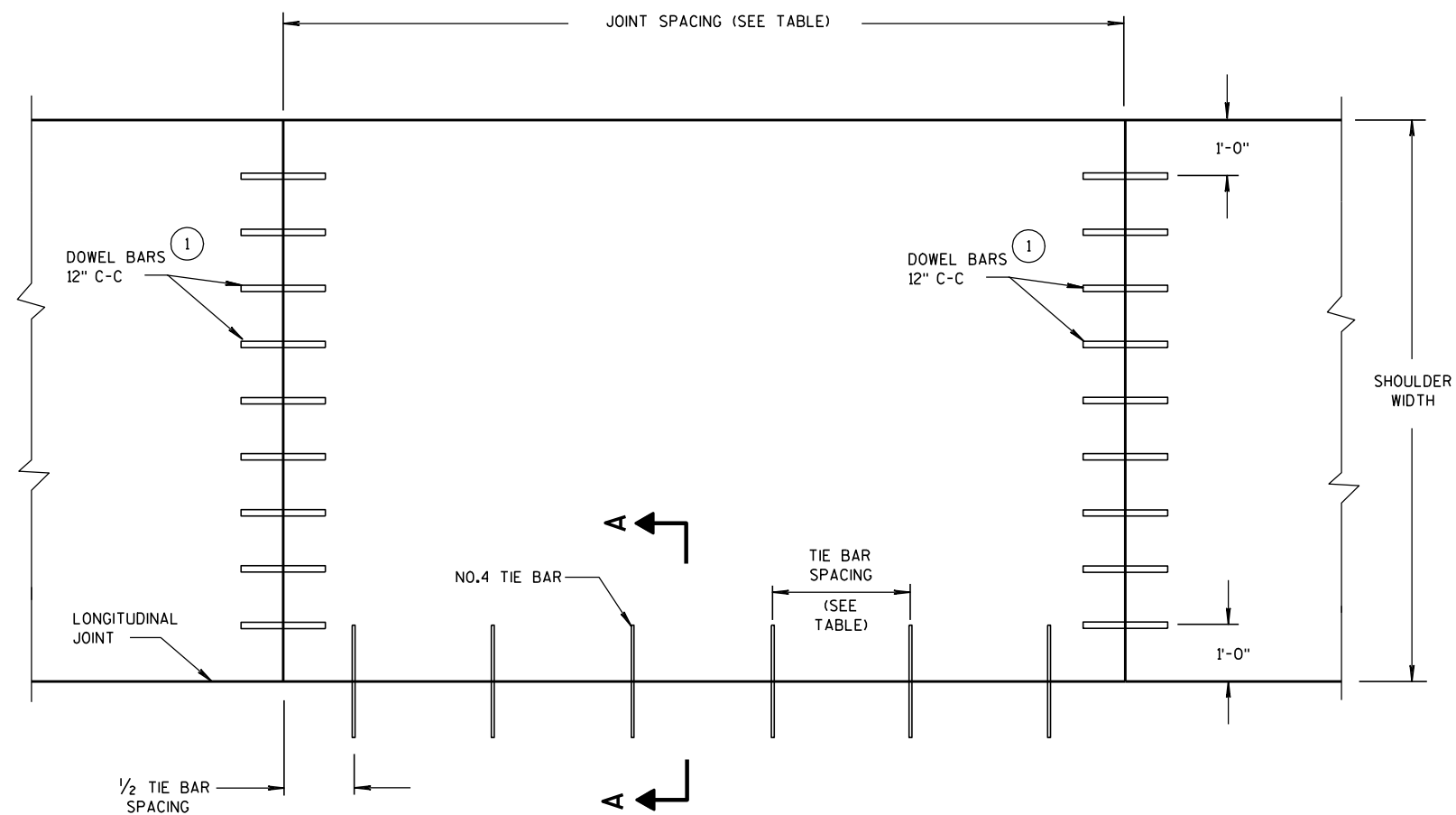
**INLET PROTECTION, TYPE D**

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

**INLET PROTECTION  
TYPE A, B, C, AND D**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW  
CONCRETE PAVEMENT SHOULDER

| PAVEMENT TYPE OF TRAFFIC LANES | TIE BAR SPACING | SHOULDER JOINT SPACING                       |
|--------------------------------|-----------------|----------------------------------------------|
| NON-REINFORCED                 | 30"             | MATCH JOINT SPACING OF ADJACENT TRAFFIC LANE |
| CONTINUOUSLY REINFORCED        | 30"             | 15' FOR 6' TO 10' WIDE SHOULDER              |
| CONTINUOUSLY REINFORCED        | 36"             | 12' FOR 3' WIDE SHOULDER                     |

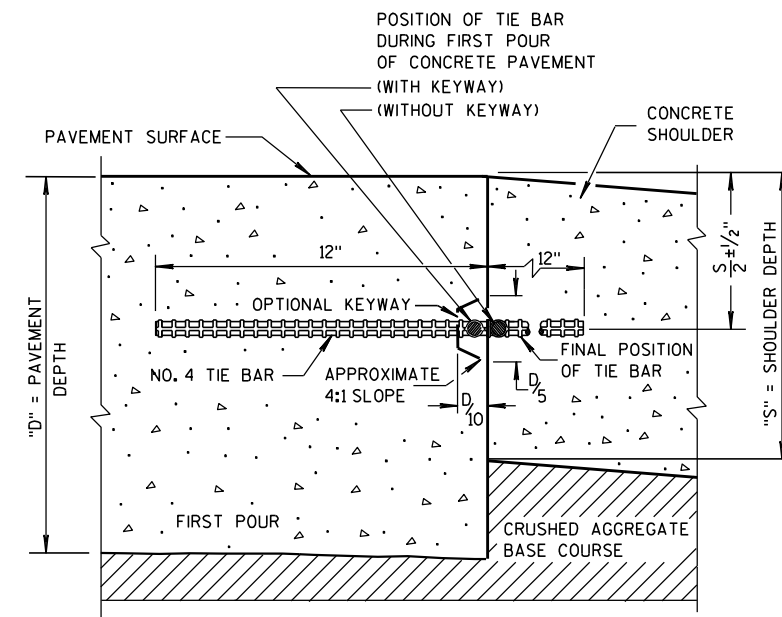
## GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT

1 PAVEMENT DEPTH, DOWEL BAR SIZE  
AND JOINT SPACING TABLE

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

FOR DOWELED CONCRETE SHOULDER WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

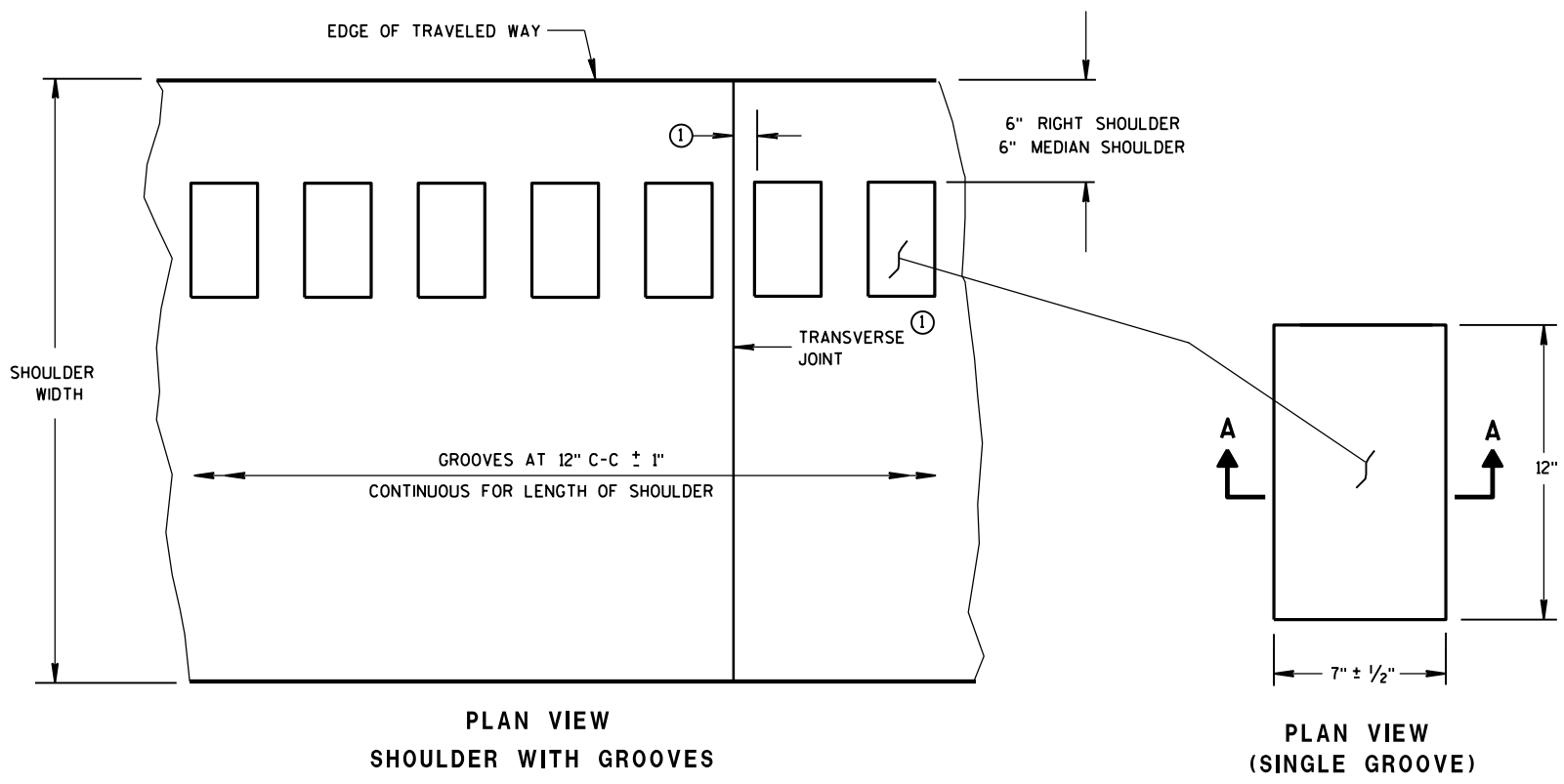
## CONCRETE PAVEMENT SHOULDER

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
8/15/2011  
DATE

FHWA

/S/ Deb Bischoff  
PAVEMENT POLICY & DESIGN ENGINEER



PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

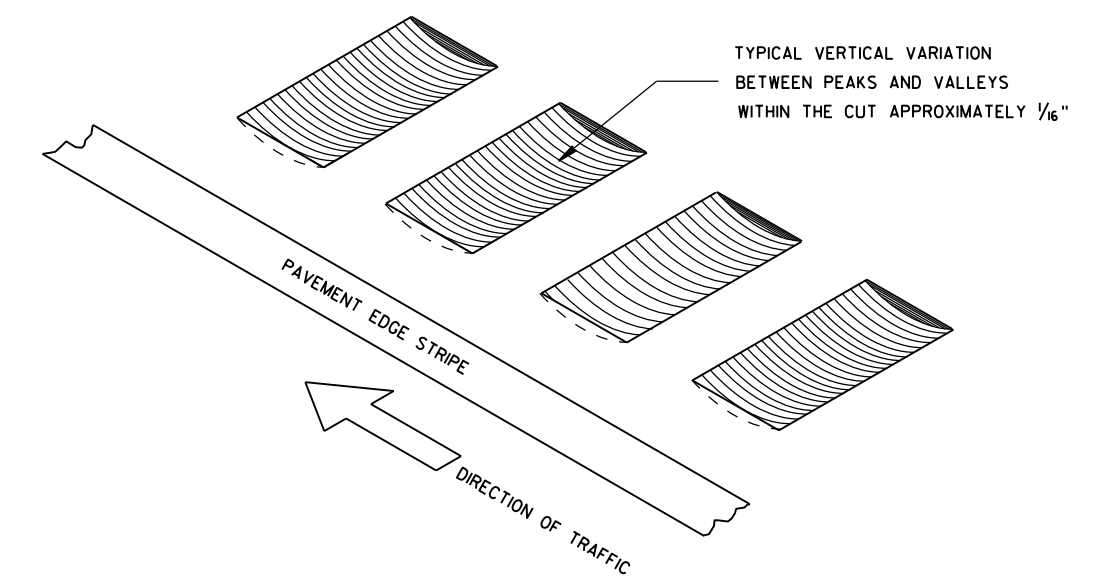
# GENERAL NOTES

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

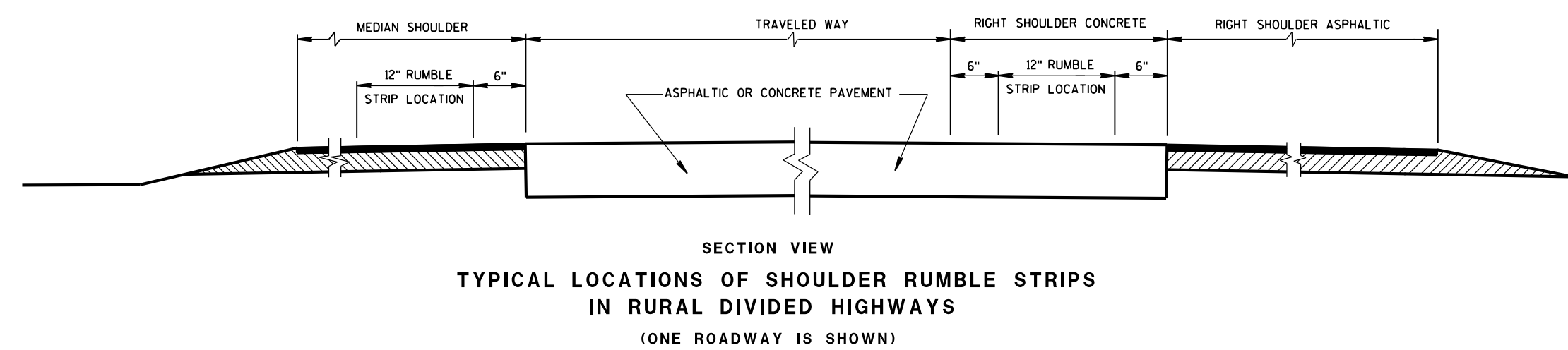
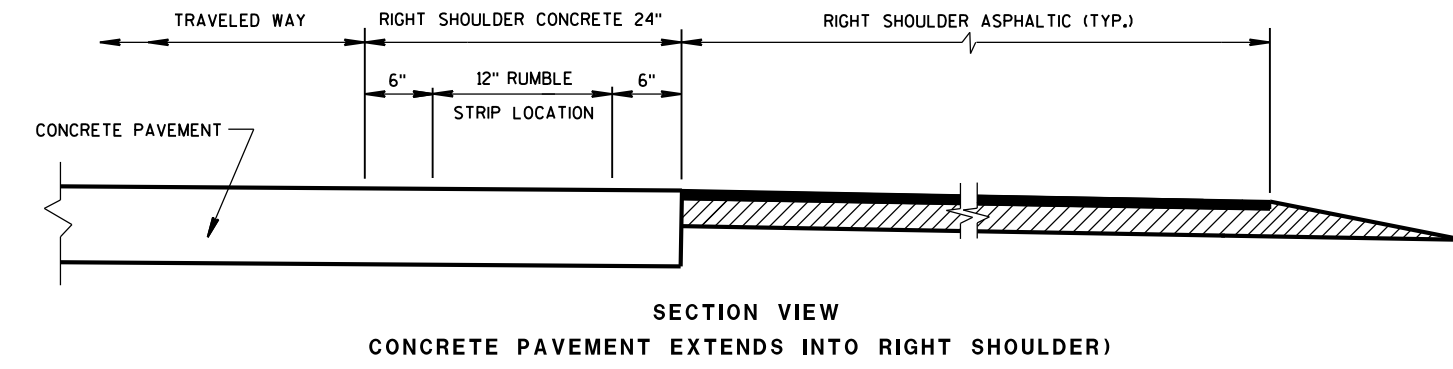
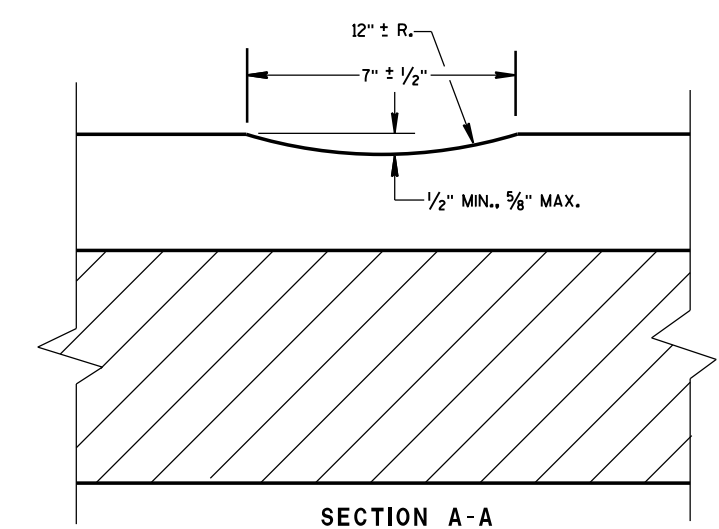
## RUMBLE STRIPS ON EXPRESSWAYS

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.

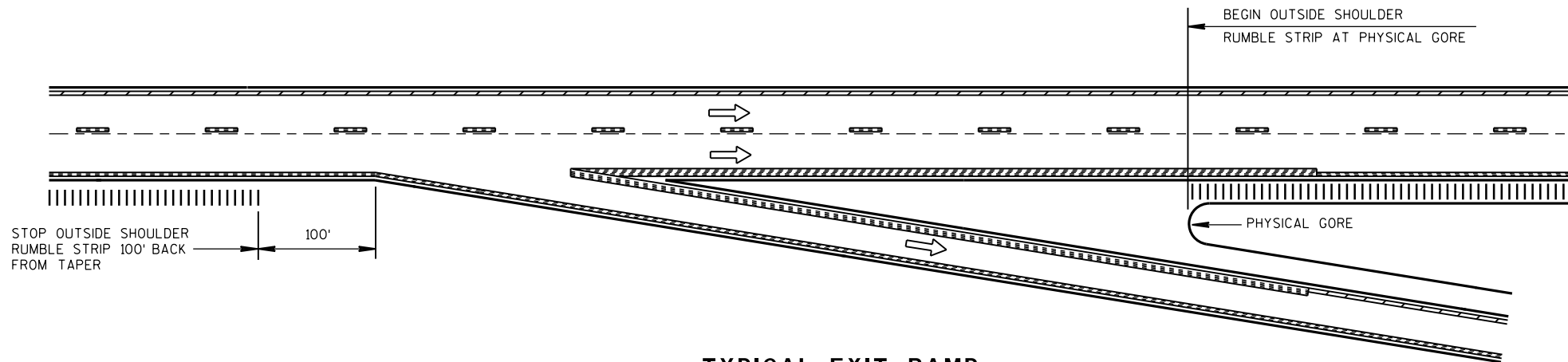


## ISOMETRIC



SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



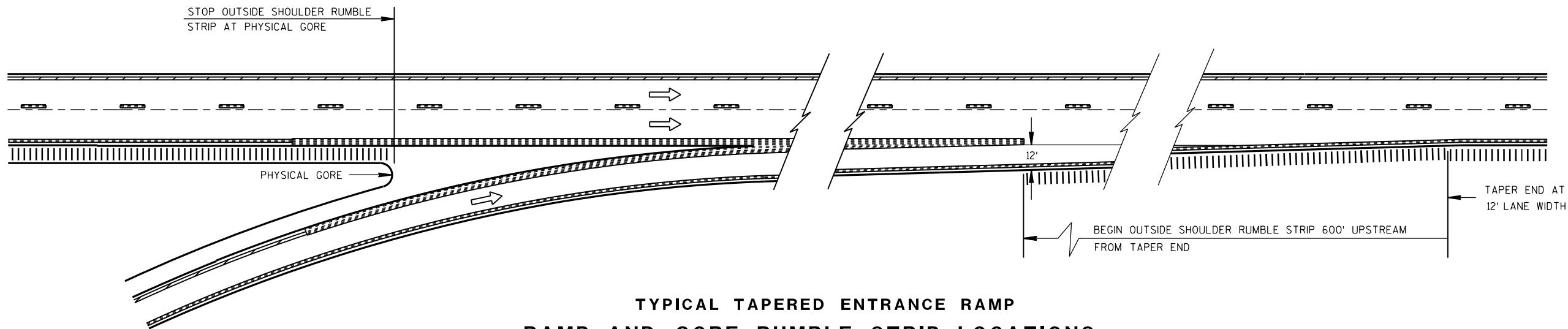
**TYPICAL EXIT RAMP**

**NOTES:**

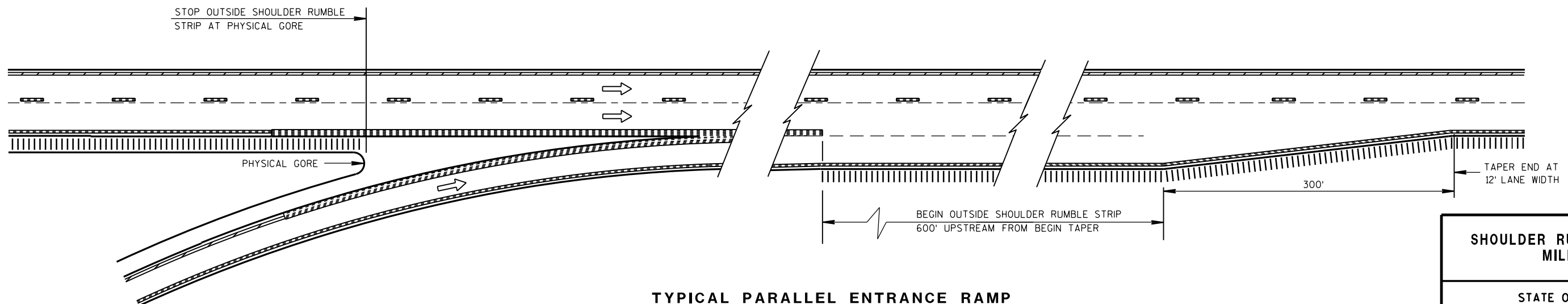
NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

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**



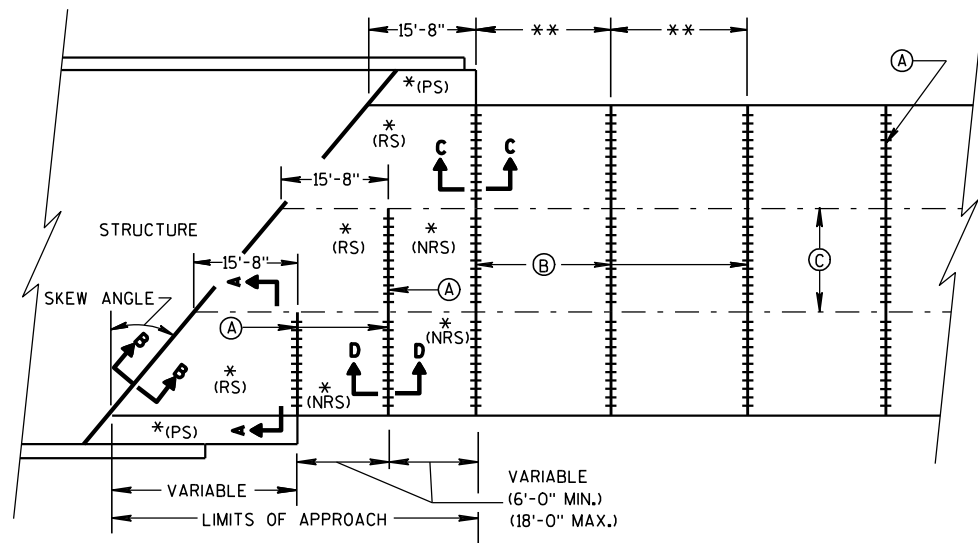
**TYPICAL PARALLEL ENTRANCE RAMP  
RAMP AND GORE RUMBLE STRIP LOCATIONS**

**SHOULDER RUMBLE STRIP,  
MILLING**

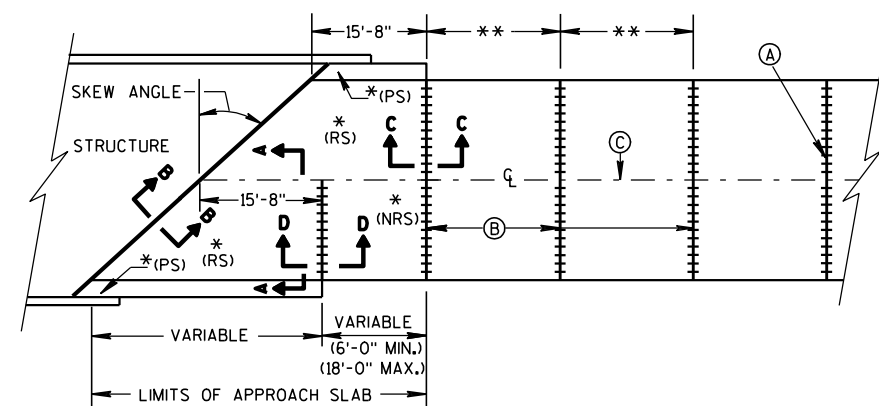
**STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION**

APPROVED  
12/17/2012  
DATE  
FHWA

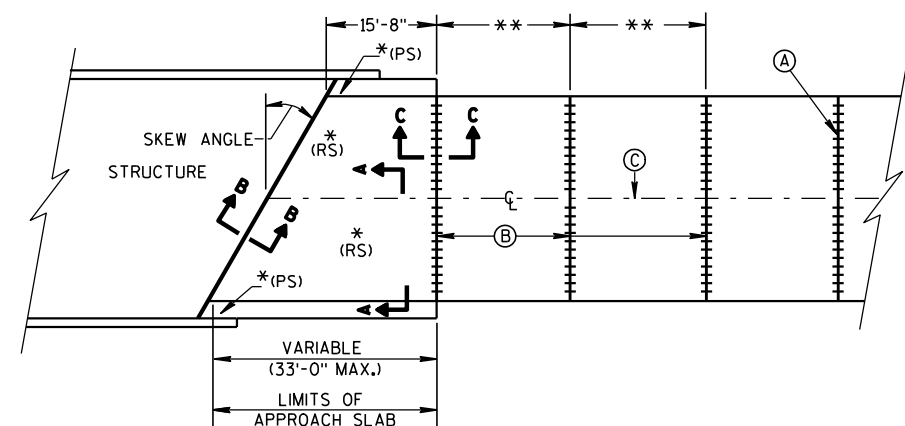
/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER



**SKewed APPROACH  
(PAVEMENT MORE THAN 2 LANES)**

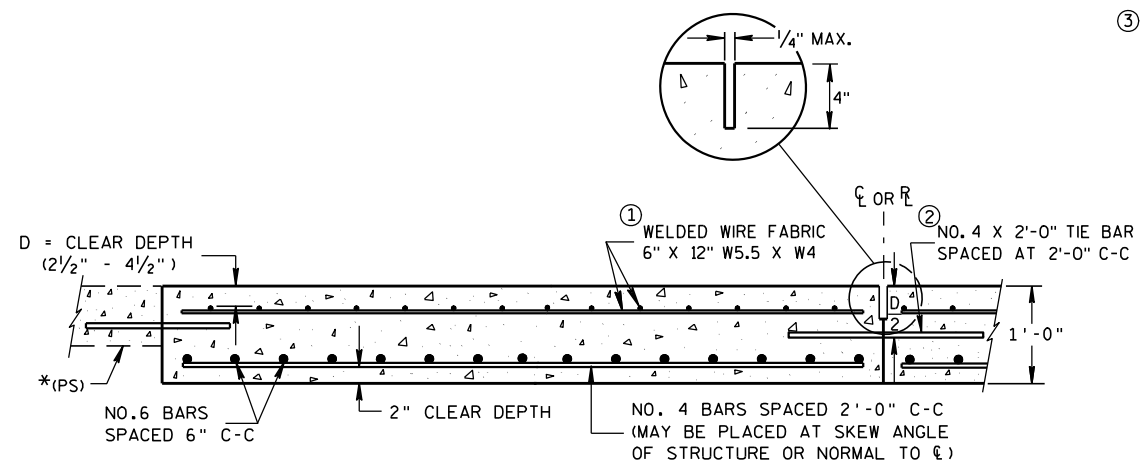


**SKEWS > 30°  
(PAVEMENT WIDTH ≤ 30')**

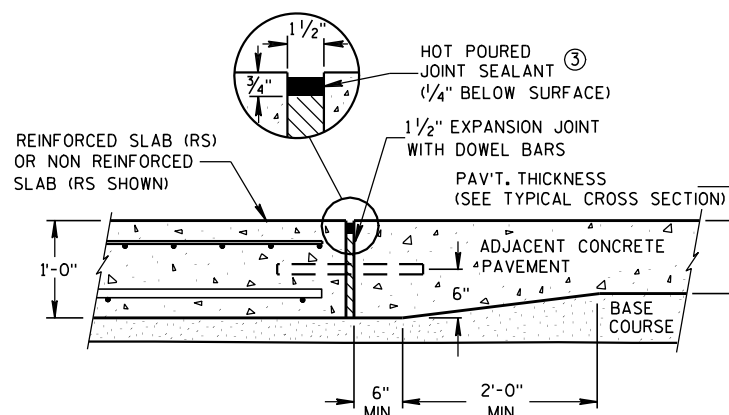


**SKEWS ≤ 30°  
(PAVEMENT WIDTH ≤ 30')  
APPROACH SLAB AND ADJACENT PAVEMENT**

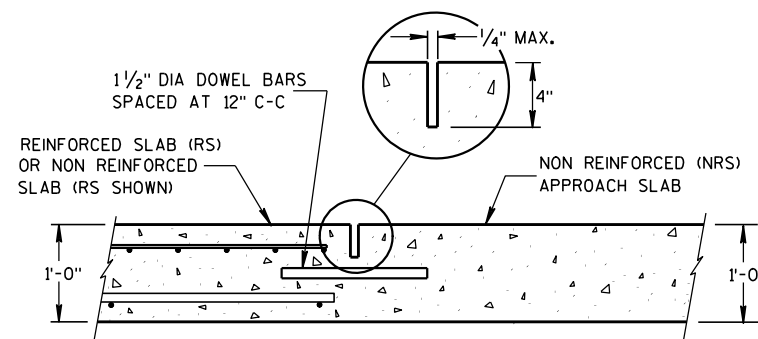
- \* (RS) = REINFORCED CONCRETE SLAB  
 \* (PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN  
 (SEE DETAILS ELSEWHERE IN THE PLAN)  
 \* (NRS) = NON-REINFORCED CONCRETE SLAB  
 \*\* STANDARD TRANSVERSE JOINT SPACING  
 (SEE SDD 13C4, SDD 13C11, & SDD 13C13)  
 (A) STANDARD CONTRACTION JOINT NORMAL TO  $R_L$  OR  $R_C$   
 (B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO  $R_L$  OR  $R_C$   
 (C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



**SECTION A-A  
REINFORCEMENT POSITIONING DETAIL**



**SECTION C-C  
TRANSITION DETAIL  
APPROACH SLAB TO ADJACENT PAVEMENT**



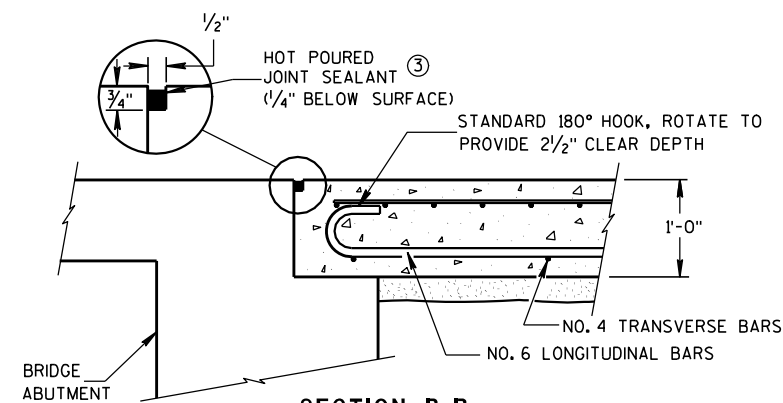
**SECTION D-D  
CONTRACTION JOINT**

## GENERAL NOTES

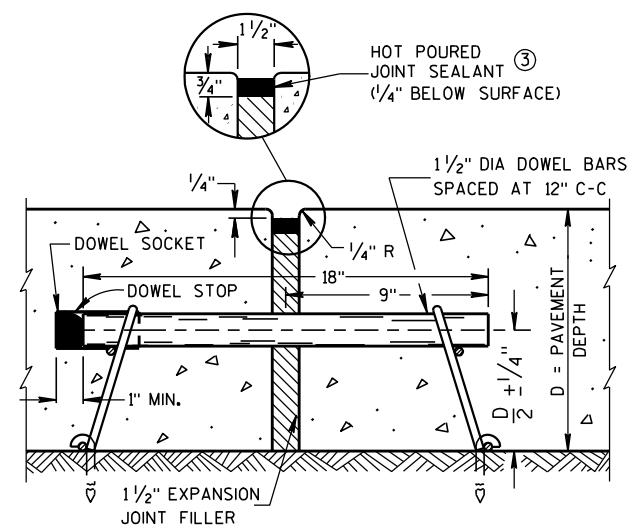
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

- THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
- THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
- USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.



**SECTION B-B  
BEND DETAIL  
BOTTOM REINFORCEMENT**



**EXPANSION JOINT**

## CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

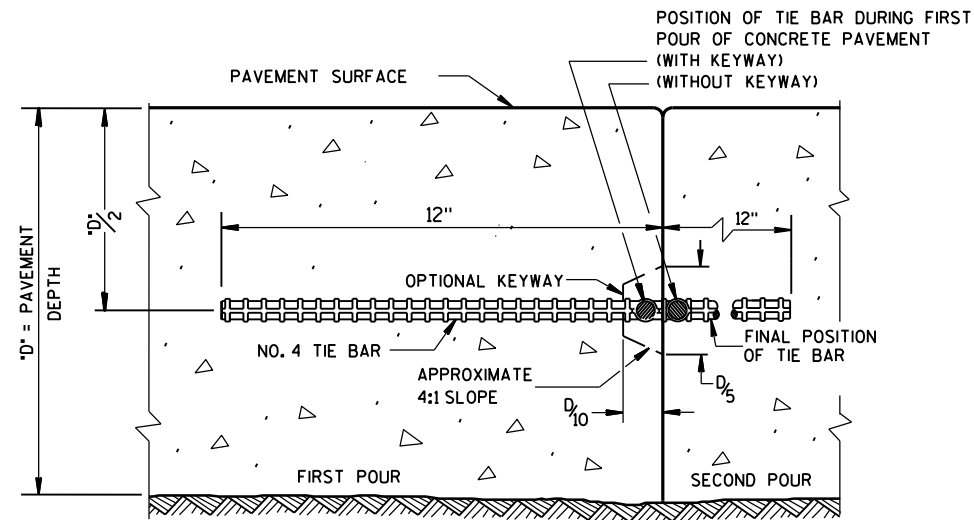
APPROVED

12/11/2009

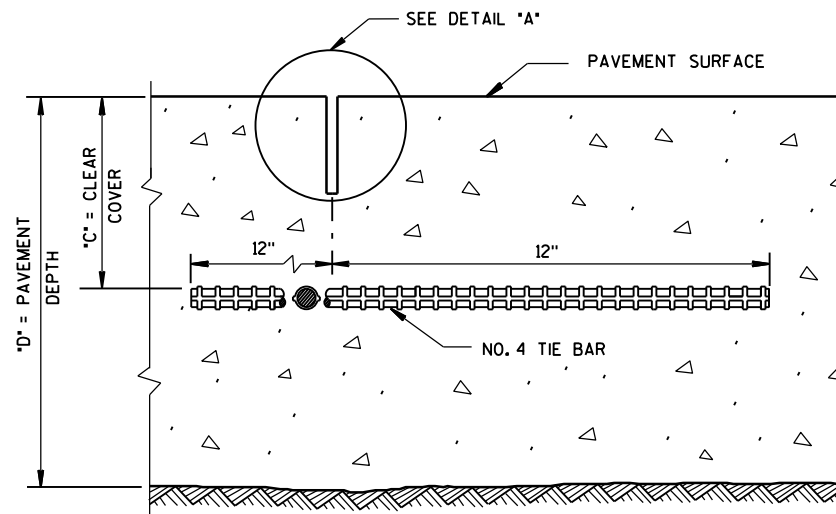
DATE

FHWA

/S/ Deb Bischoff  
PAVEMENT POLICY & DESIGN ENGINEER



CONSTRUCTION JOINT



SAWED JOINT

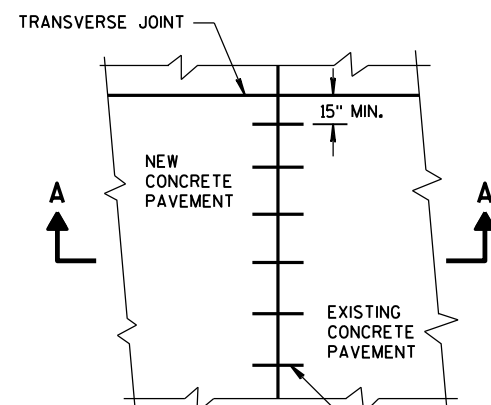
## GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

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

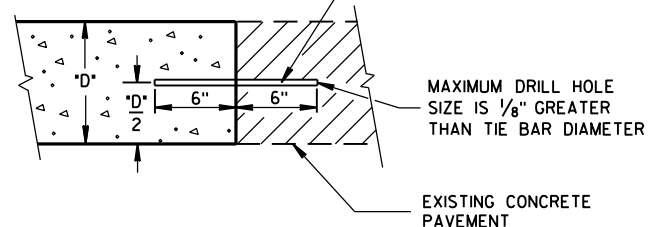
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

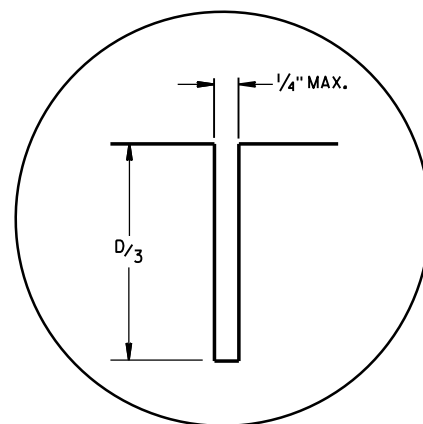


PLAN VIEW

NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



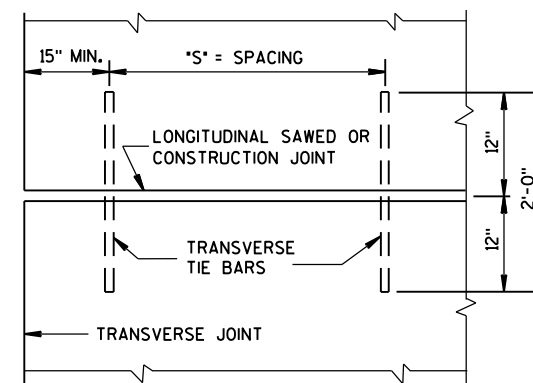
SECTION A-A  
LONGITUDINAL CONSTRUCTION JOINT  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

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



PLAN VIEW  
SHOWING LOCATION OF TIE BARS

## CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

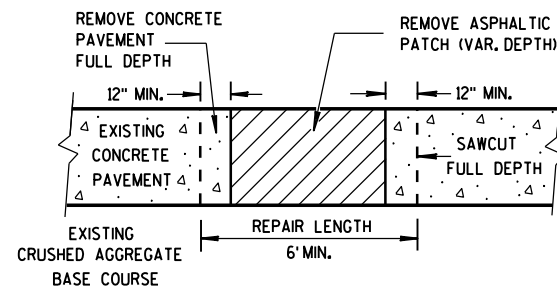
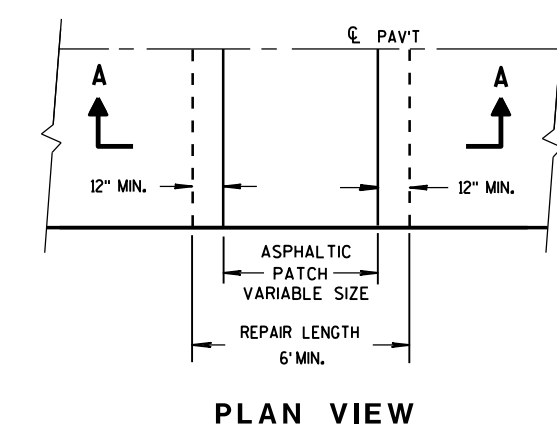
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

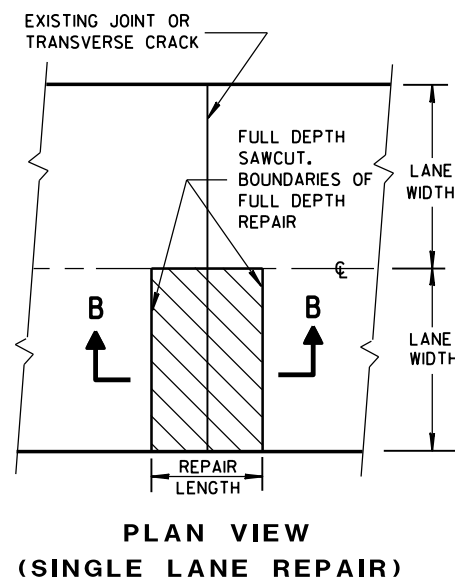
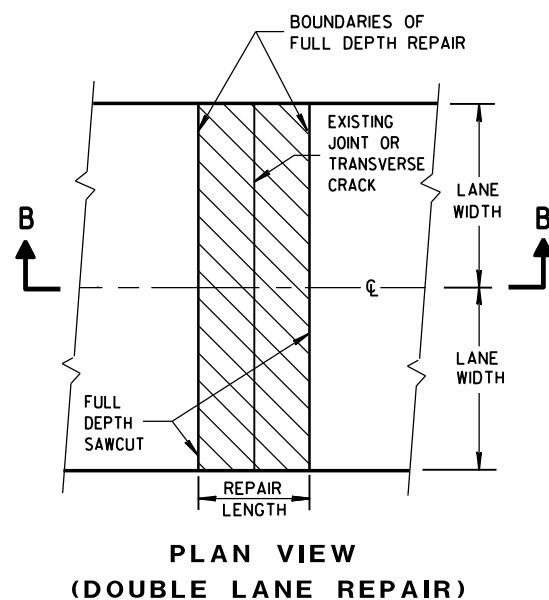
5-3-2013  
DATE

/S/ Deb Bischoff  
PAVEMENT POLICY & DESIGN ENGINEER

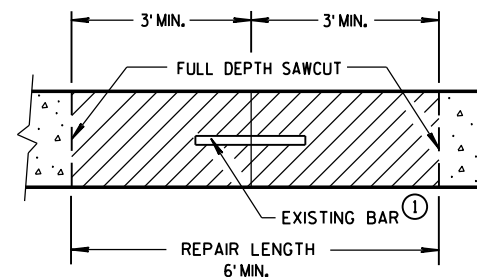
FHWA



SECTION A-A  
HMA PATCH REMOVAL



FULL DEPTH CONCRETE PAVEMENT REMOVAL  
(SEE NOTE)



SECTION B-B  
CONCRETE REMOVAL

GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

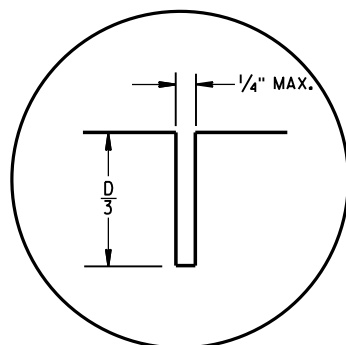
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

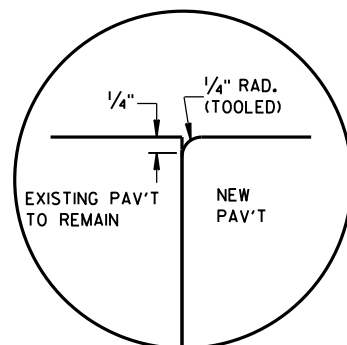
① DOWEL BARS MIGHT NOT EXIST.

TIE BAR TABLE

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

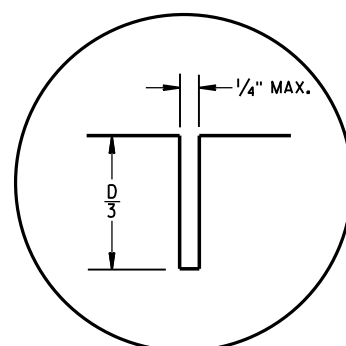


C1

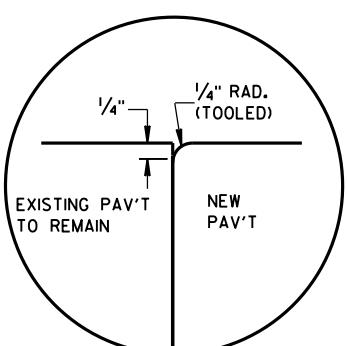


C2

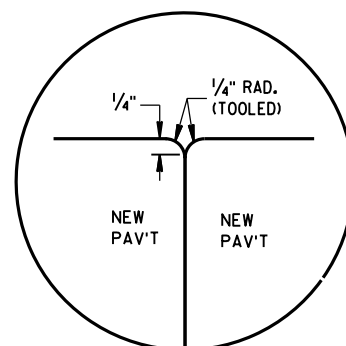
## TRANSVERSE JOINTS



L1

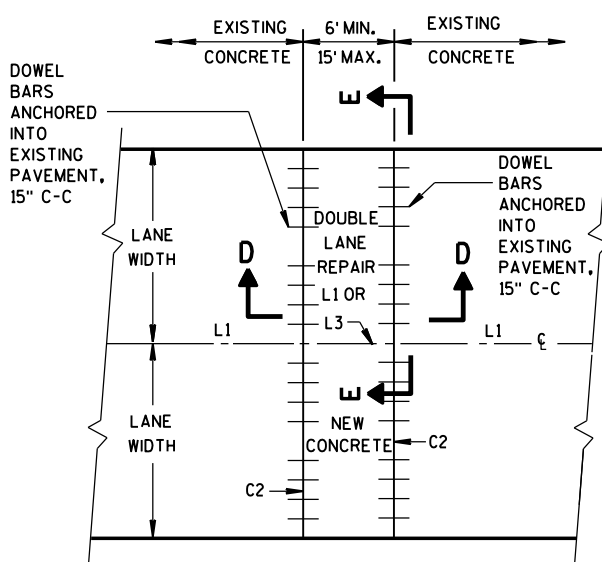


L2



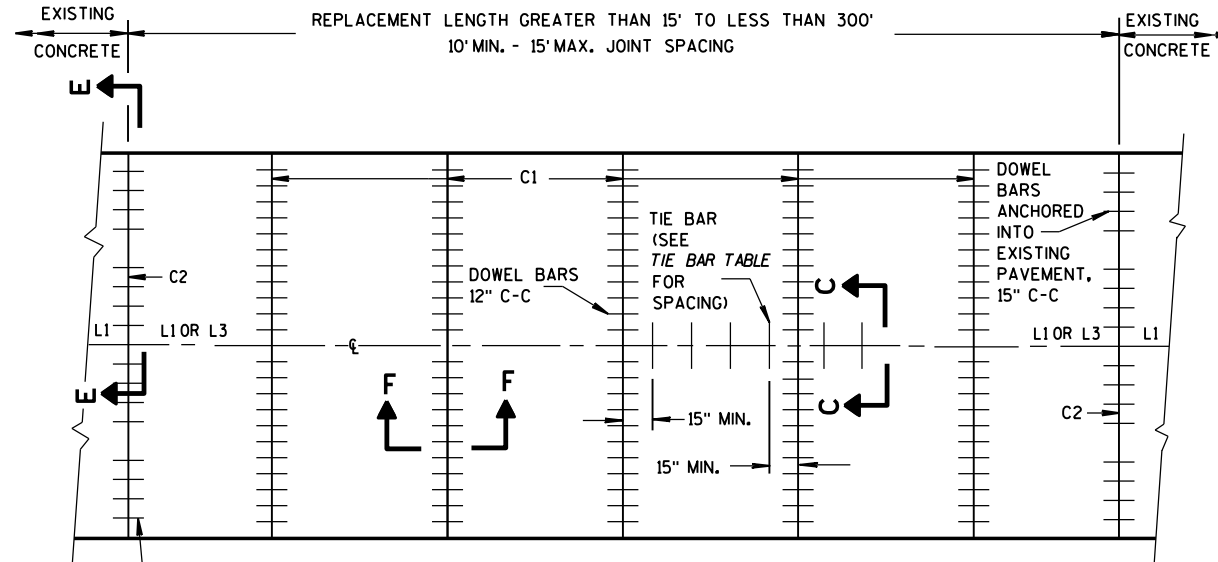
L3

## LONGITUDINAL JOINTS



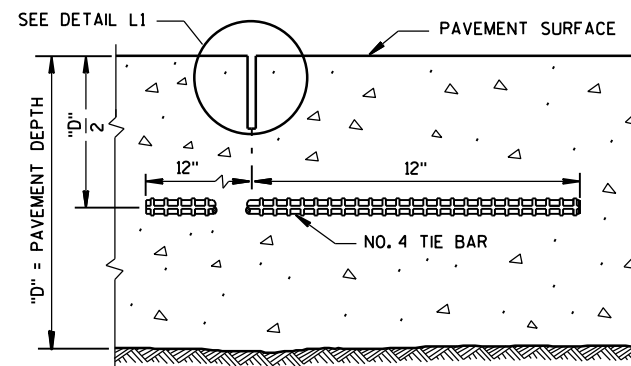
PLAN VIEW

## MULTI-LANE CONCRETE PAVEMENT REPAIR



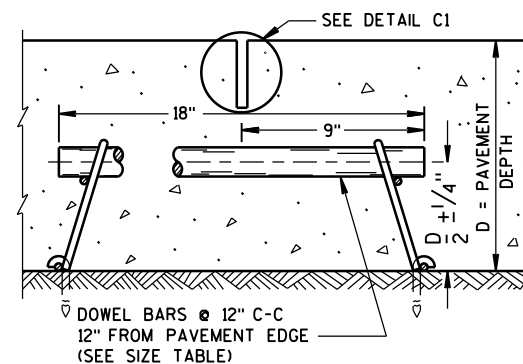
PLAN VIEW

## MULTI-LANE CONCRETE PAVEMENT REPLACEMENT



SECTION C-C

## SAWED LONGITUDINAL JOINT

SECTION F-F  
CONTRACTION JOINT

## GENERAL NOTES

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

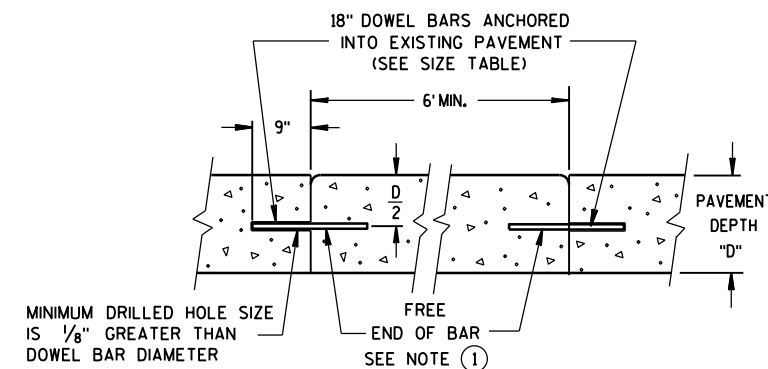
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

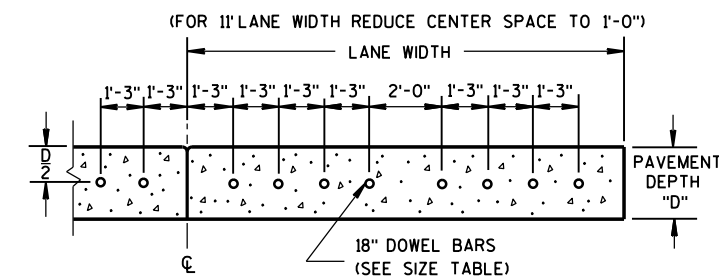
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

- ① APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



SECTION D-D



SECTION E-E

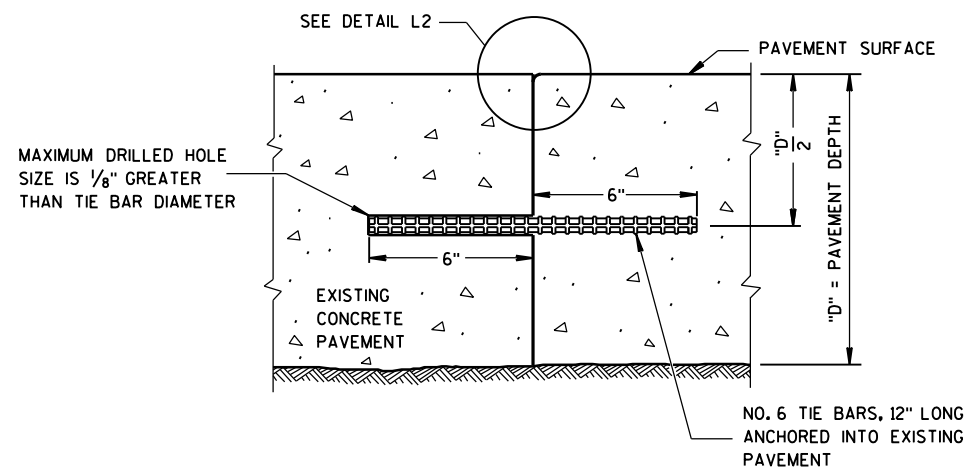
## DRILLED DOWEL BAR CONSTRUCTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE  
AND JOINT SPACING TABLE

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

CONCRETE PAVEMENT  
REPAIR AND REPLACEMENT

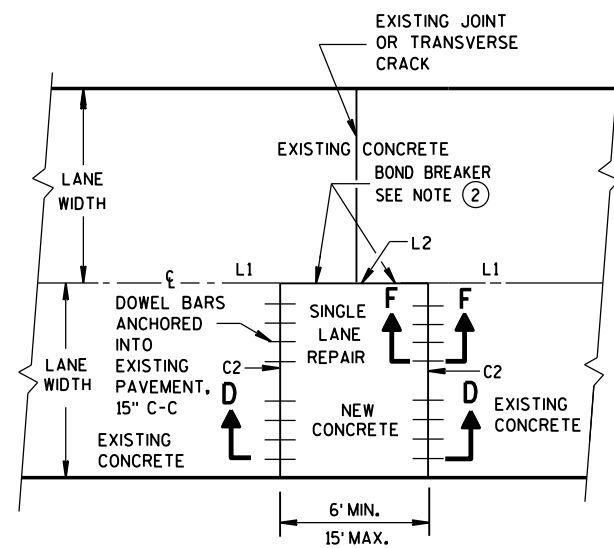
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



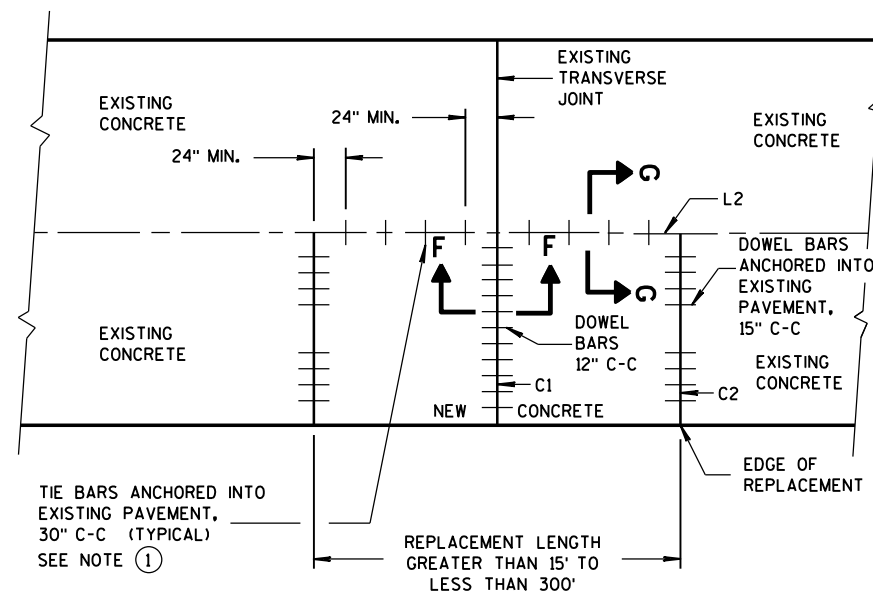
SECTION G-G  
TIE BARS ANCHORED  
INTO EXISTING PAVEMENT

## GENERAL NOTES

- ① WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.
- ② USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.



PLAN VIEW  
SINGLE LANE  
CONCRETE PAVEMENT REPAIR



PLAN VIEW  
SINGLE LANE  
CONCRETE PAVEMENT REPLACEMENT

## CONCRETE PAVEMENT REPAIR AND REPLACEMENT

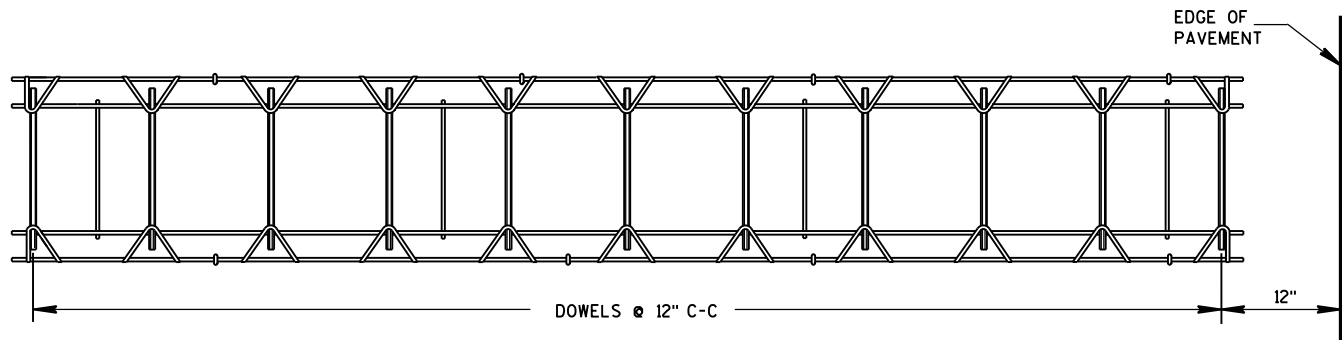
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

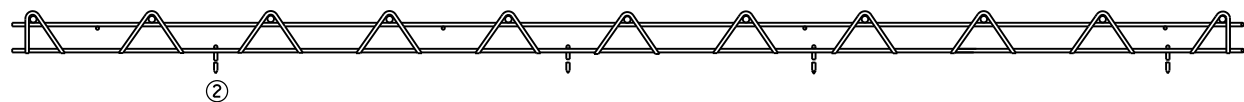
5-3-2013  
DATE

FHWA

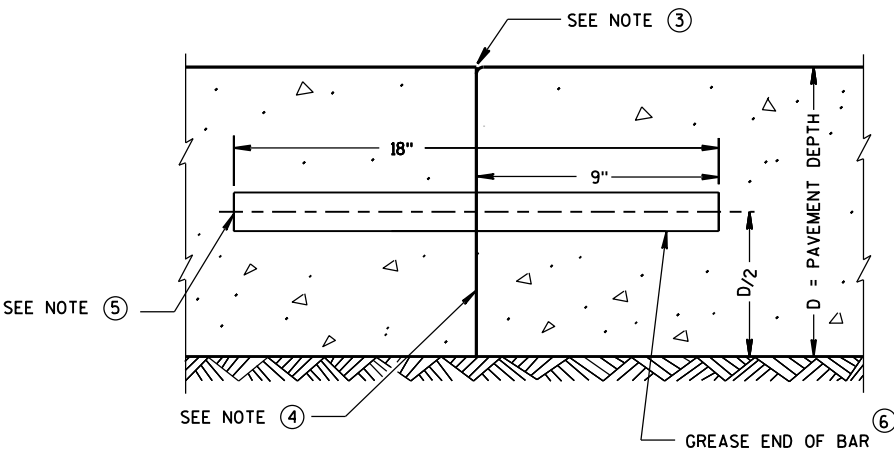
/S/ Deb Bischoff  
PAVEMENT POLICY & DESIGN ENGINEER



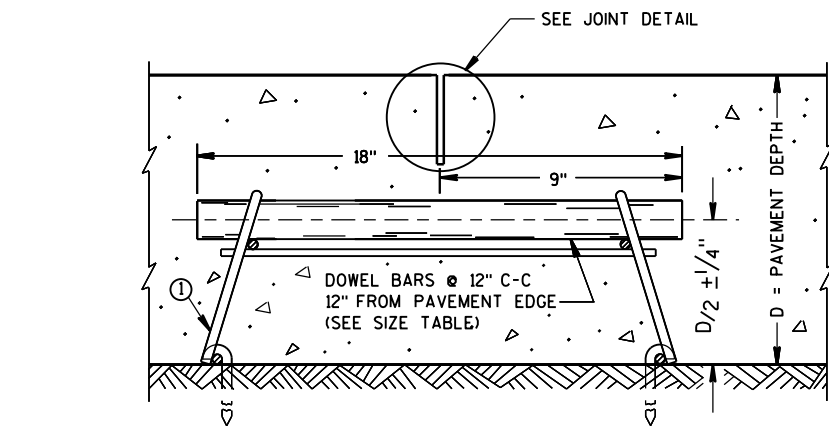
PLAN VIEW



SIDE VIEW  
CONTRACTION JOINT DOWEL ASSEMBLY



TRANSVERSE CONSTRUCTION JOINT



DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE  
AND JOINT SPACING TABLE

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

GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

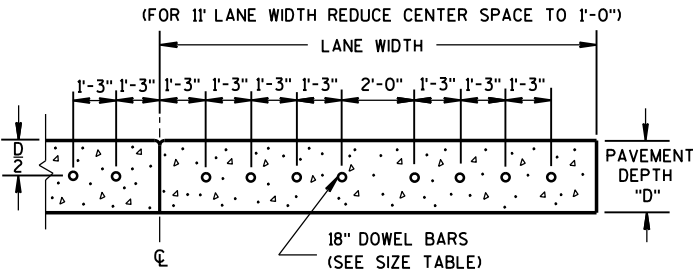
INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

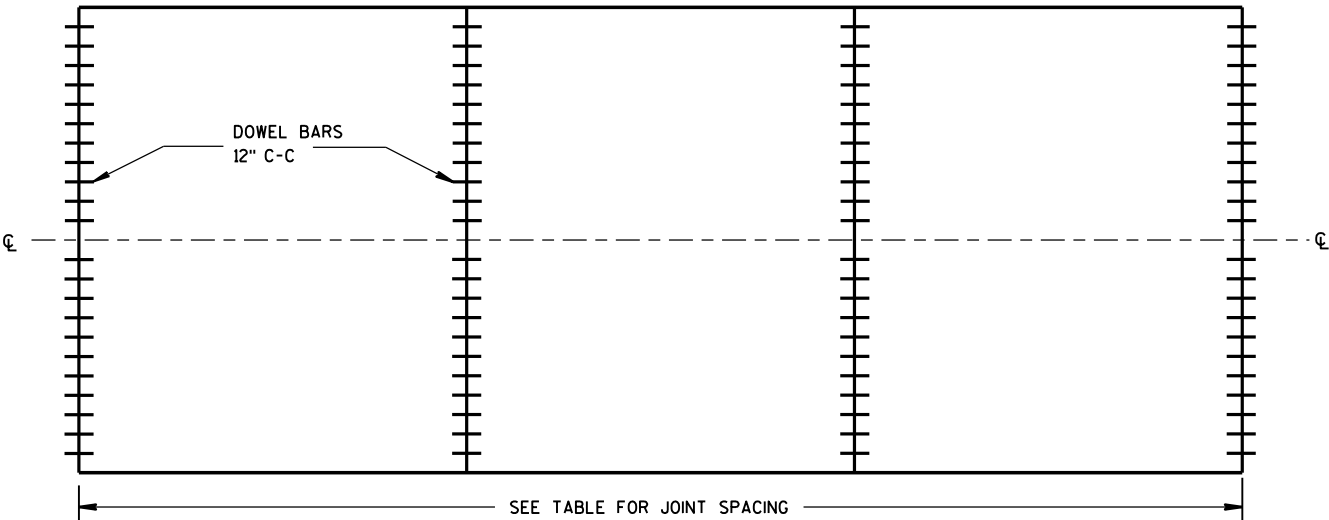
CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

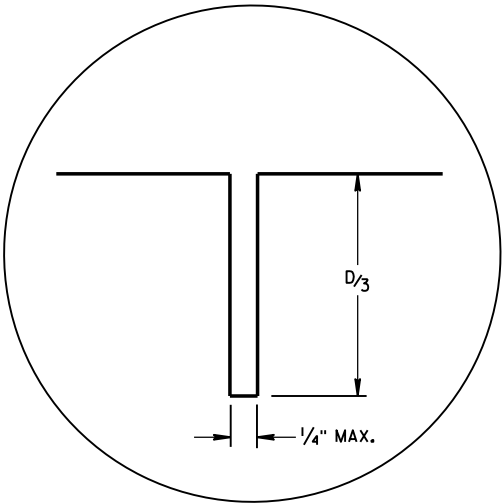
- OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.
- SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.
- FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.
- PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.
- INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.
- APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.
- ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DRILLED DOWEL BAR CONSTRUCTION JOINT



CONTRACTION JOINT LOCATIONS

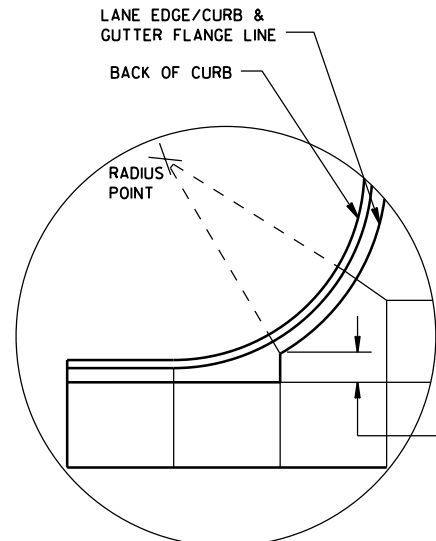


JOINT DETAIL

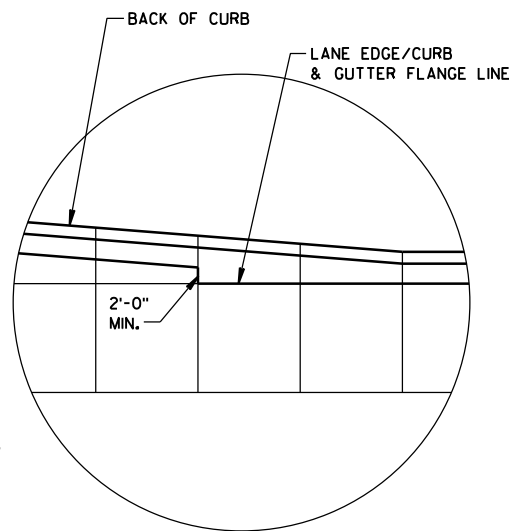
URBAN DOWELED  
CONCRETE PAVEMENT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

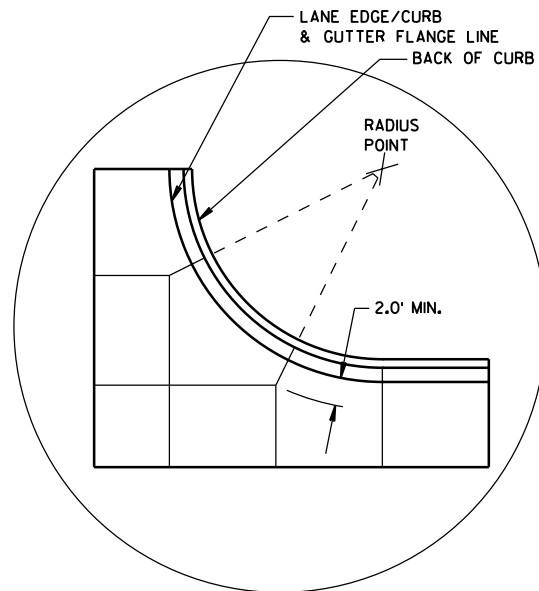
APPROVED  
5/3/2013 /S/ Deb Bischoff  
DATE PAVEMENT POLICY & DESIGN ENGINEER  
FHWA



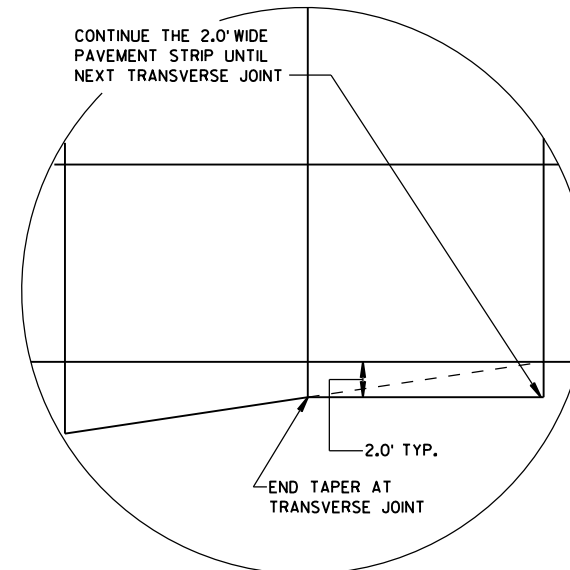
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

## GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

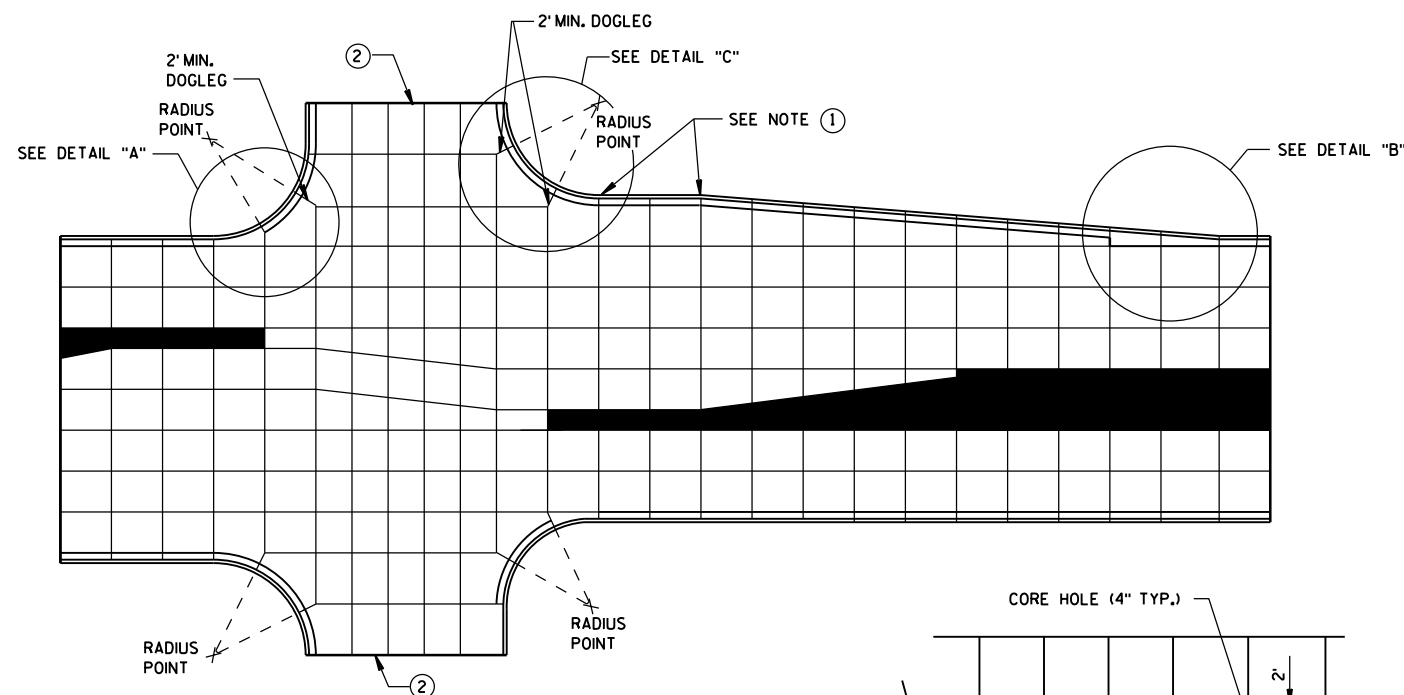
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

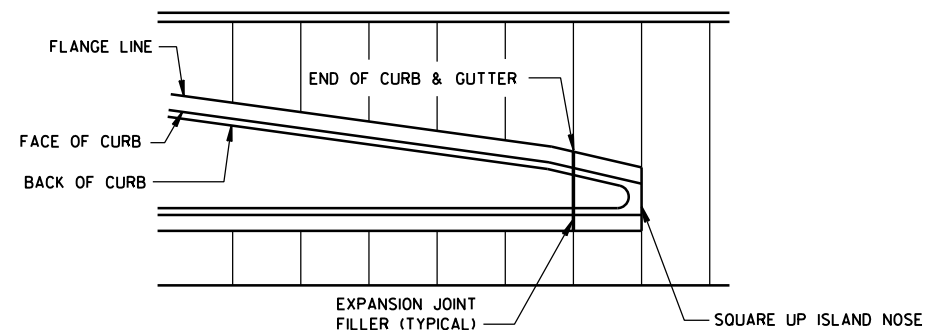
AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

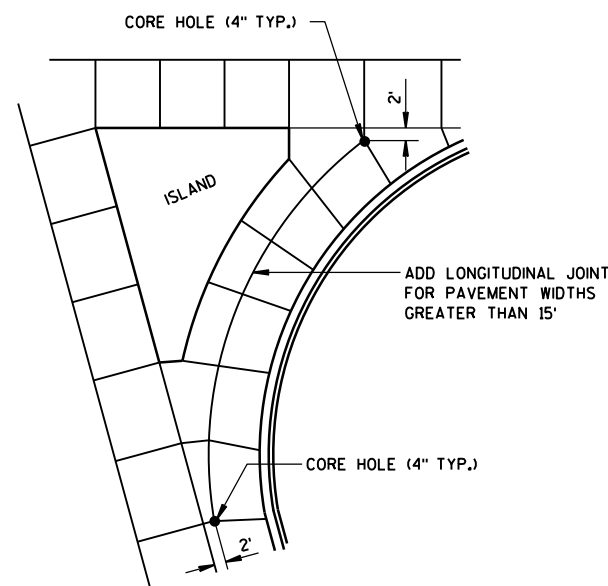
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



STANDARD INTERSECTION



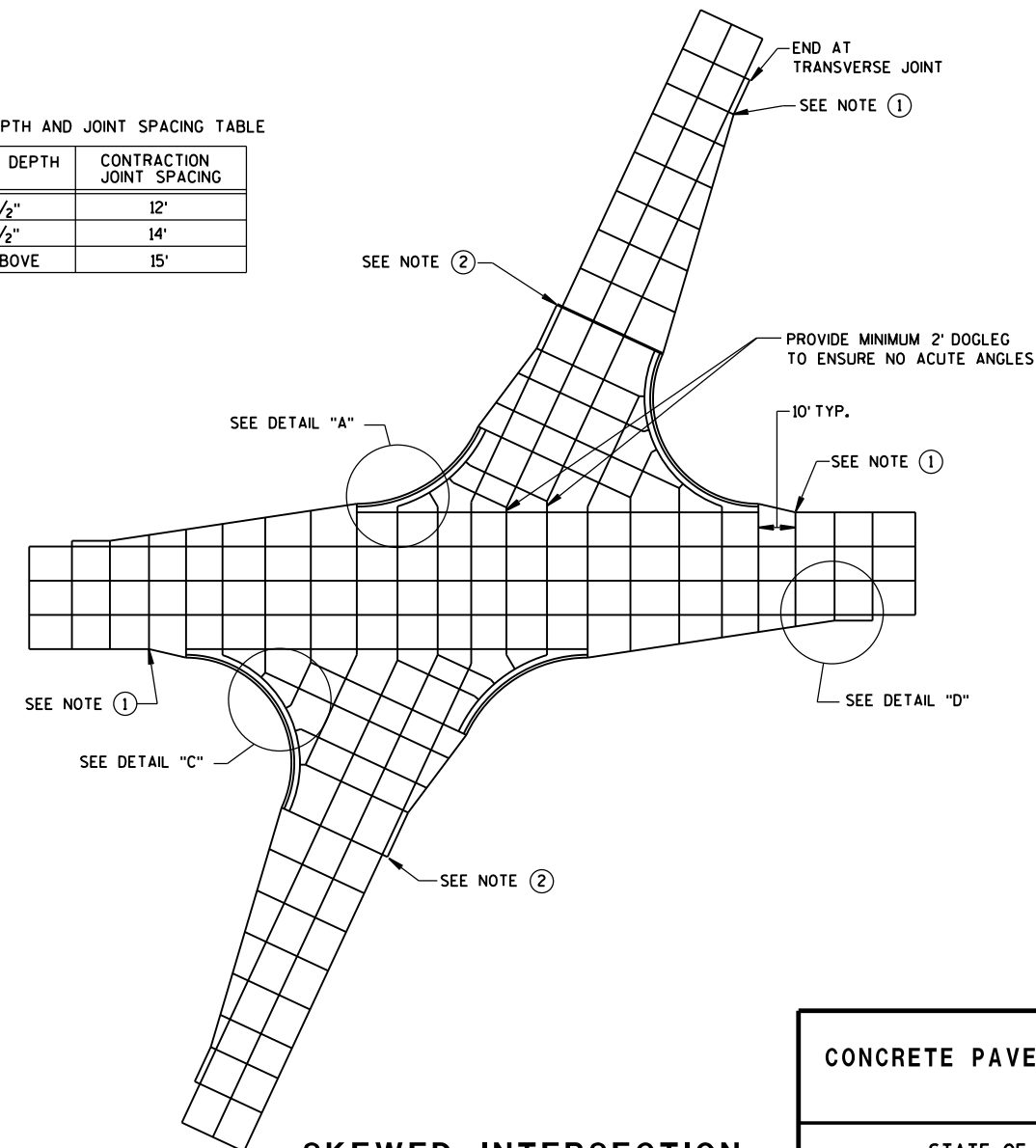
APPROACH TO MEDIAN



LARGE RIGHT TURN

PAVEMENT DEPTH AND JOINT SPACING TABLE

| PAVEMENT DEPTH (D) | CONTRACTION JOINT SPACING |
|--------------------|---------------------------|
| 6", 6 1/2"         | 12'                       |
| 7", 7 1/2"         | 14'                       |
| 8" & ABOVE         | 15'                       |



SKewed INTERSECTION

CONCRETE PAVEMENT JOINTING

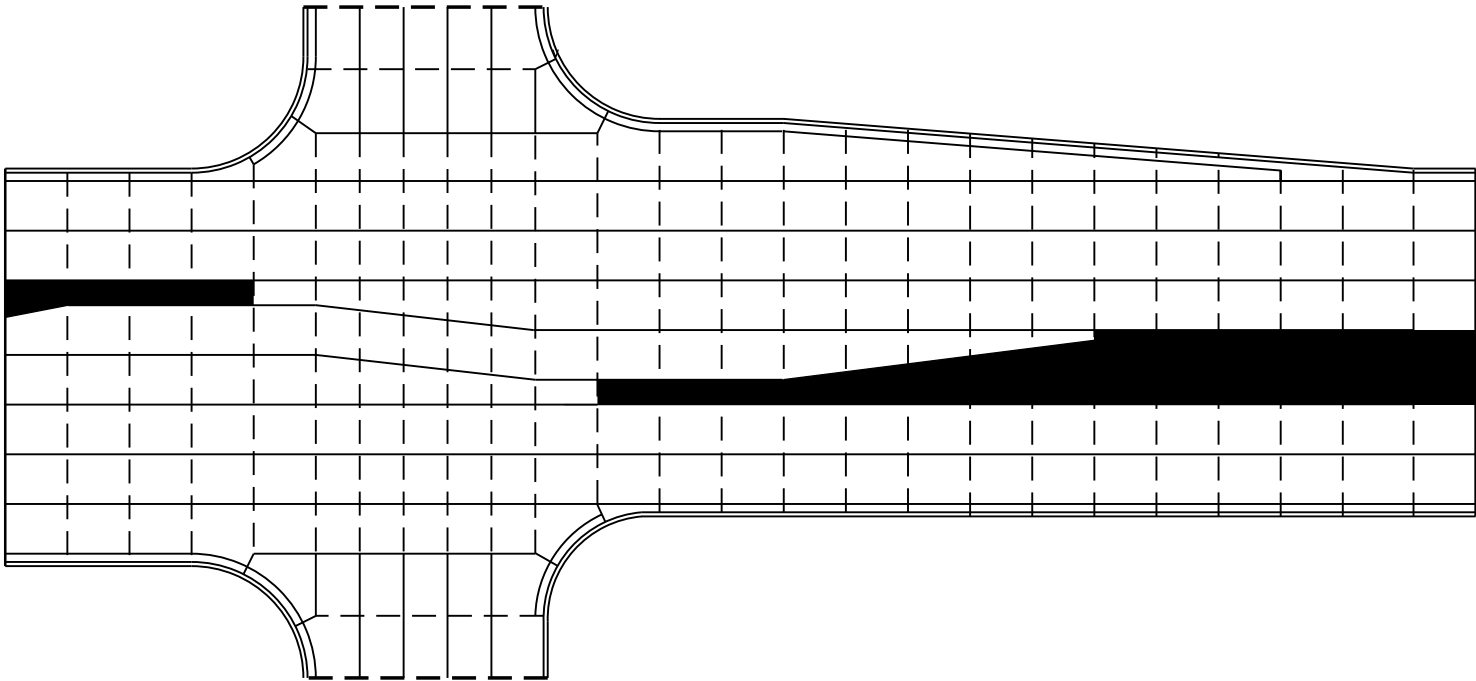
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

LEGEND

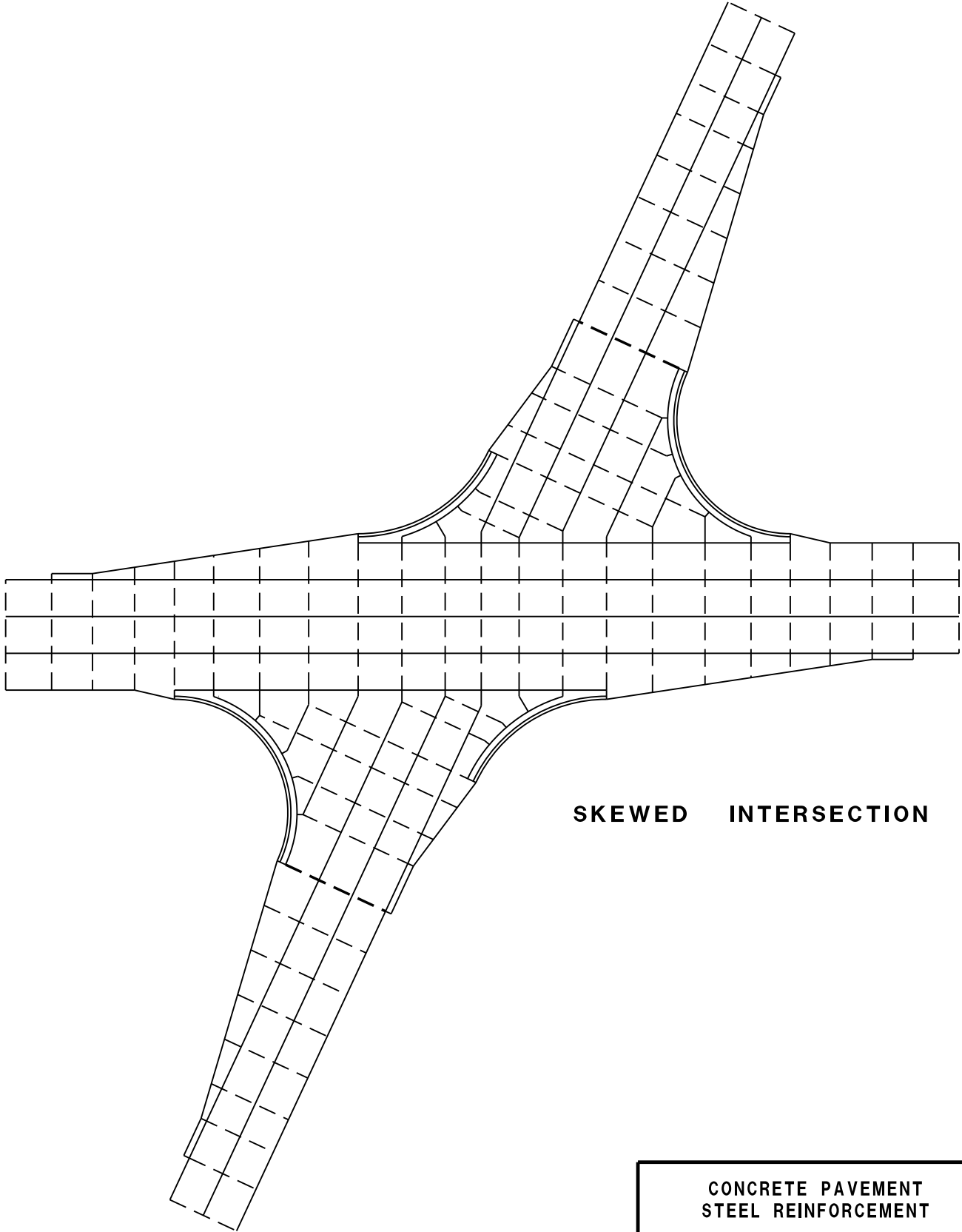
- POTENTIAL DOWELED EXPANSION JOINT
- DOWELED JOINT
- TIED JOINT

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



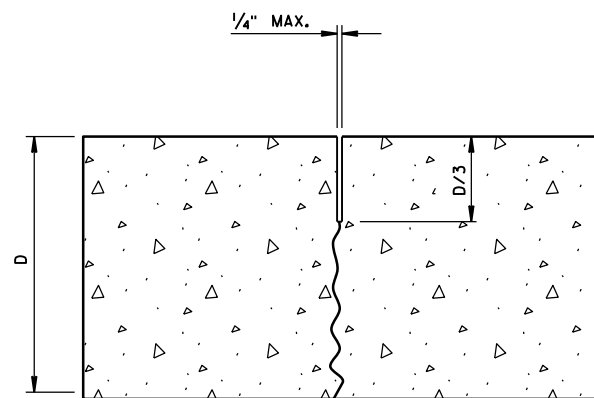
STANDARD INTERSECTION



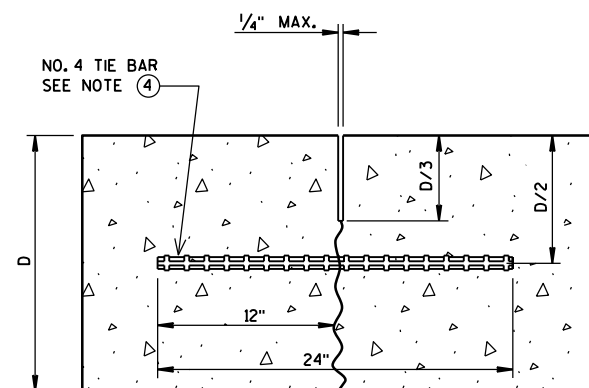
SKewed INTERSECTION

CONCRETE PAVEMENT  
STEEL REINFORCEMENT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

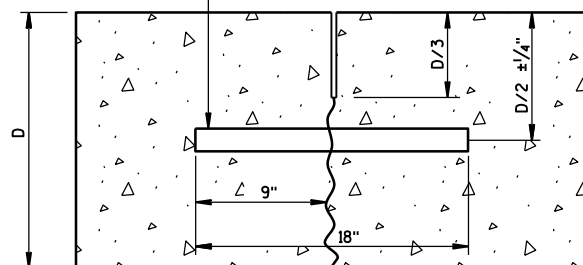


UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

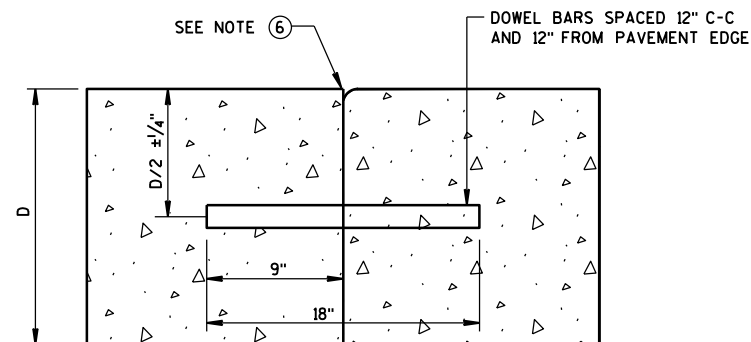
DOWEL BARS AT 12" C-C  
12" FROM PAVEMENT EDGE



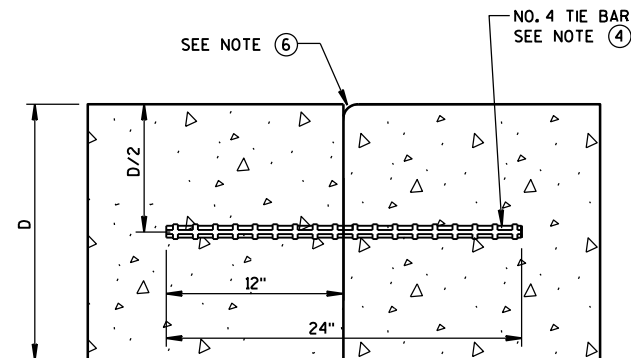
DOWELED-TRANSVERSE

## CONTRACTION JOINTS

SEE NOTE ②

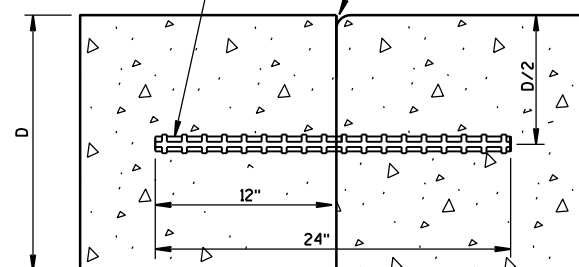
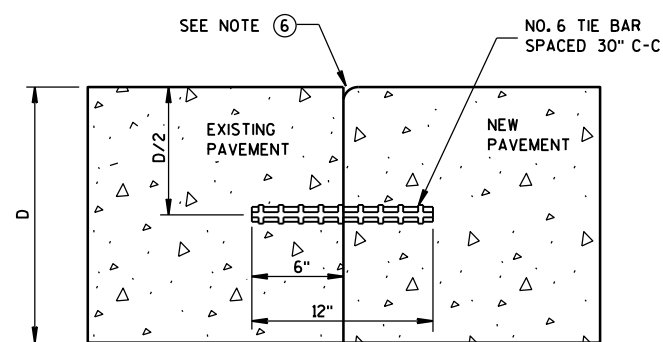


DOWELED TRANSVERSE



TIED LONGITUDINAL

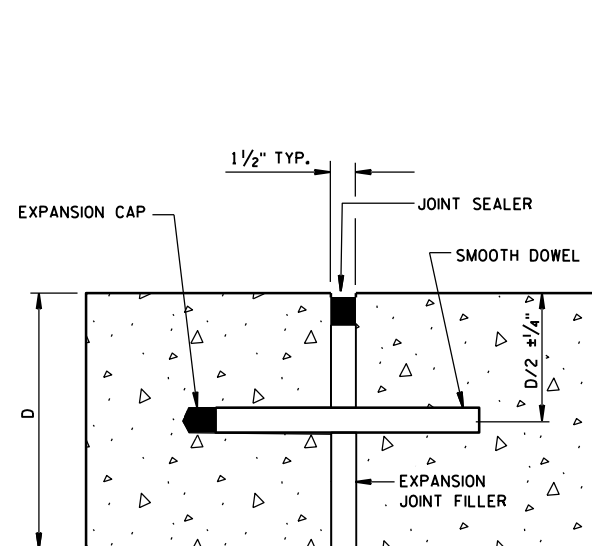
NO. 6 TIE BARS SPACED 12" C-C  
AND 12" FROM PAVEMENT EDGE

TIED TRANSVERSE  
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)

TIED LONGITUDINAL TO EXISTING

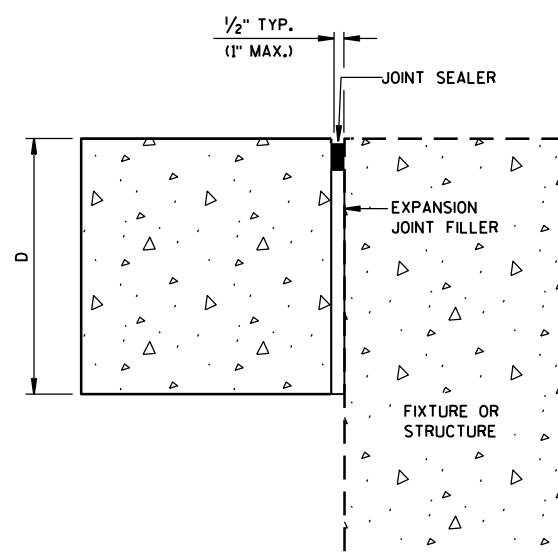
## CONSTRUCTION JOINTS

SEE NOTE ⑤



DOWELED-TRANSVERSE

SEE NOTE ①



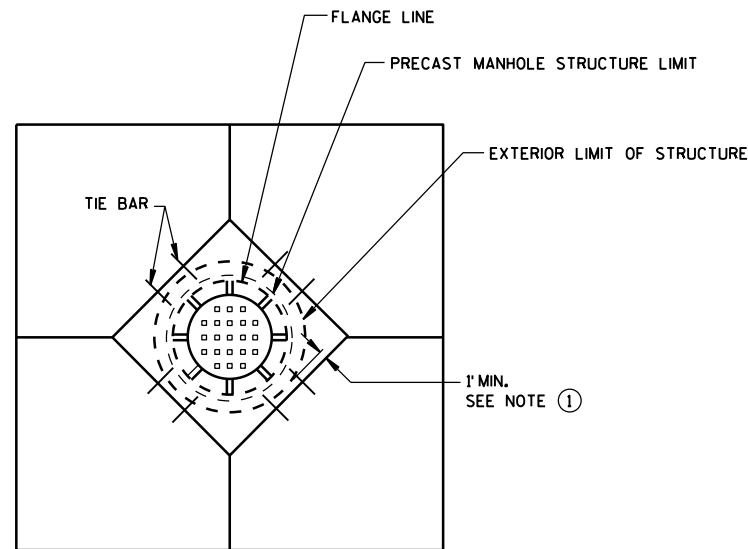
UNTIED-LONGITUDINAL

## EXPANSION JOINTS

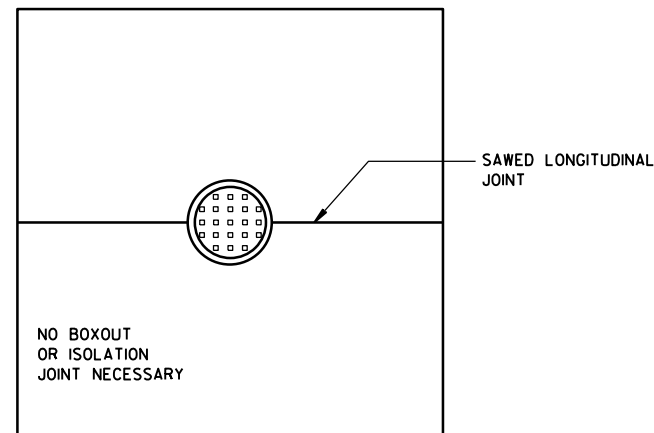
## GENERAL NOTES

1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.

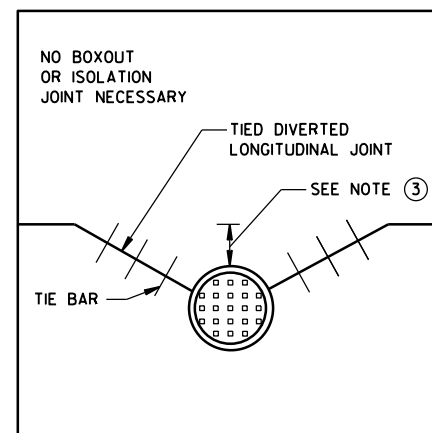
CONCRETE PAVEMENT  
JOINT TYPESSTATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



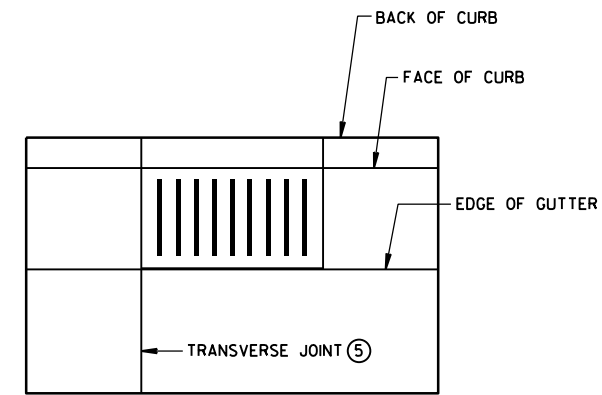
**DIAGONAL MANHOLE BOXOUT  
FOR CONSTRUCTION JOINTS**



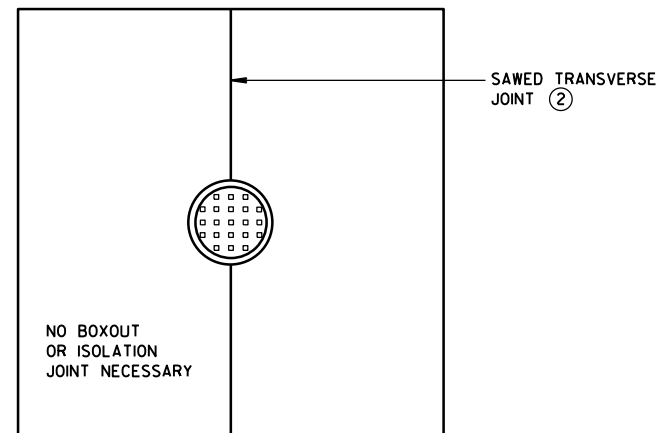
**MANHOLE WITH  
LONGITUDINAL JOINT**



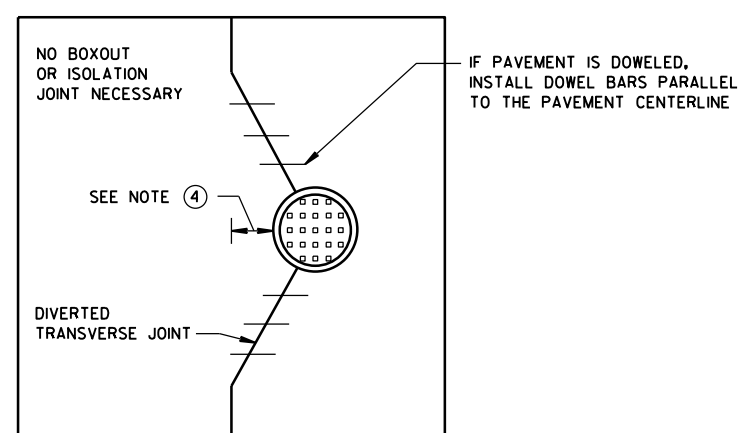
**MANHOLE WITH DIVERTED  
LONGITUDINAL CONTRACTION JOINT**



**INLET WITH  
TRANSVERSE JOINT**



**MANHOLE WITH  
TRANSVERSE JOINT**



**MANHOLE WITH DIVERTED  
TRANSVERSE CONTRACTION JOINT**

**GENERAL NOTES**

- ① USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
- ② ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
- ③ IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ④ IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.
- ⑤ ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

**CONCRETE PAVEMENT  
JOINTING AT UTILITY FIXTURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013  
DATE

/S/ Deb Bischoff  
PAVEMENT POLICY & DESIGN ENGINEER

FHWA

## END VIEW

### ELEVATION VIEW

**DETAIL "B"**  
**LIFTING SLOT DETAIL**

**SECTION A-A**  
(STIRRUP PLACEMENT)

**SECTION B-B**  
(STIRRUP PLACEMENT)

### PLAN VIEW

## DETAILS OF BARRIER SECTION

## DETAILS OF BARRIER CONNECTION

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

## GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-13(d) 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  $\frac{3}{4}$ " SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A  $3\text{--}\frac{1}{2}$ " PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN  $\frac{1}{4}$ " OF THE PLAN DIMENSION.

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

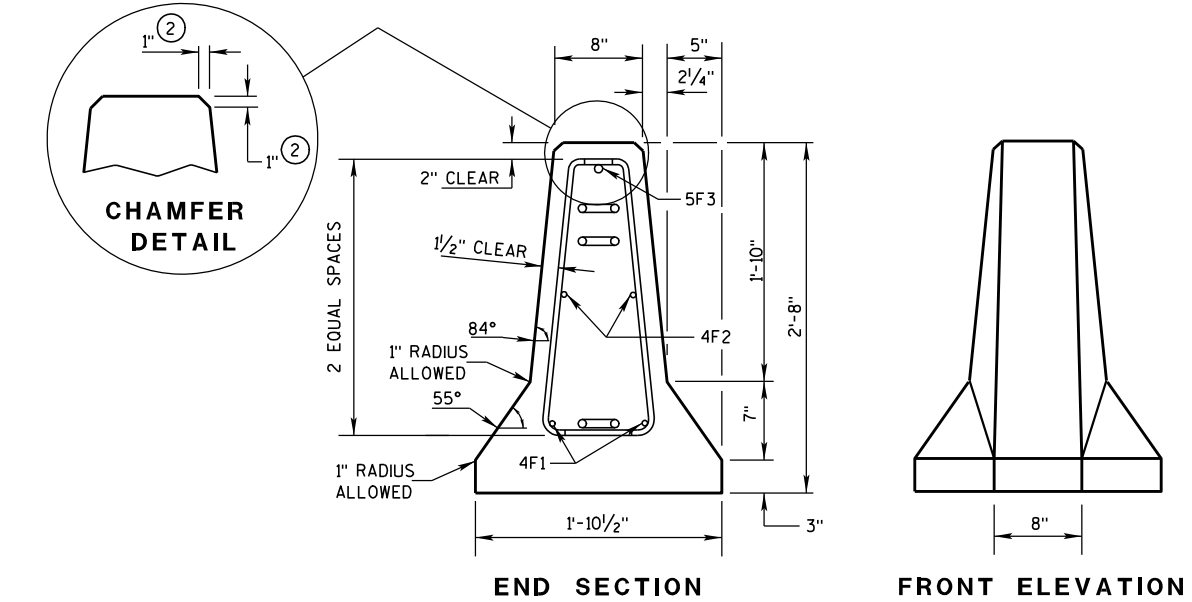
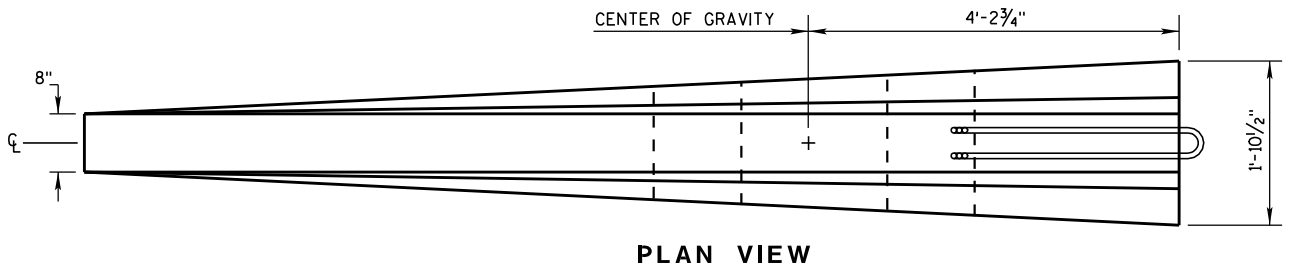
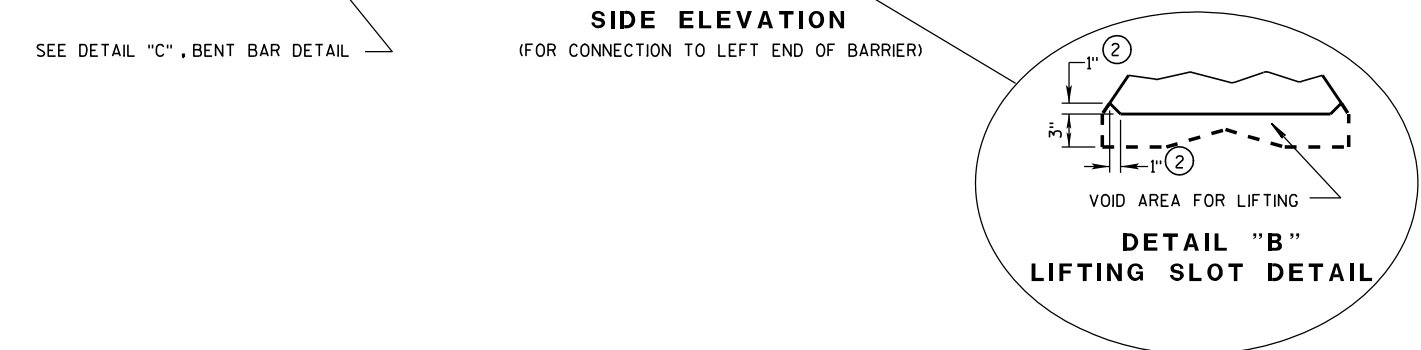
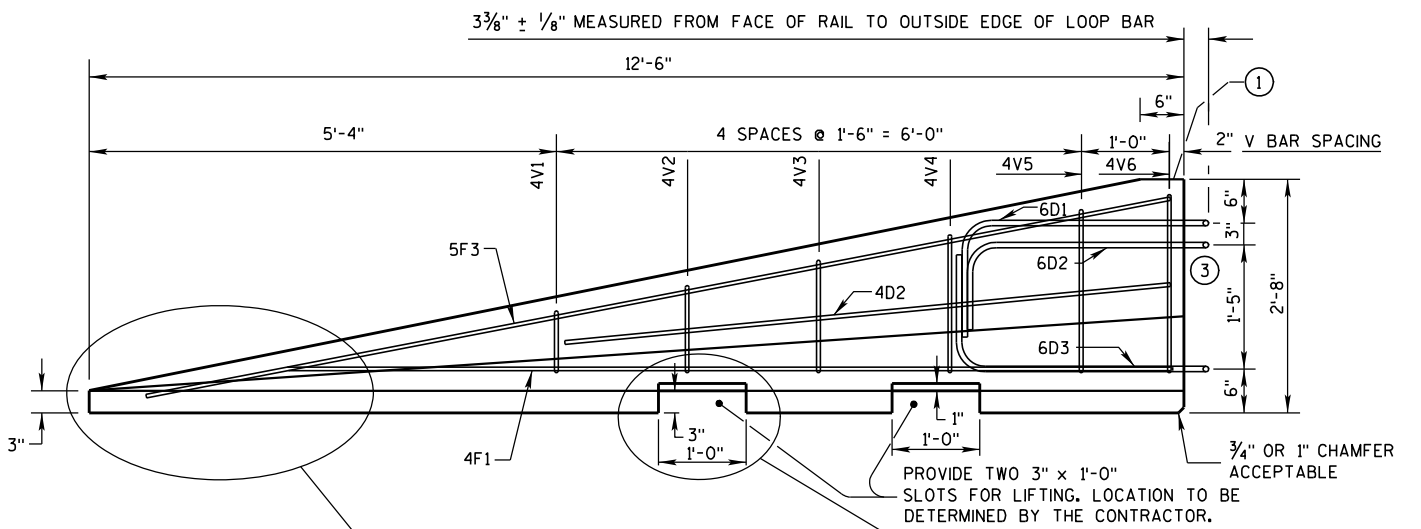
PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

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

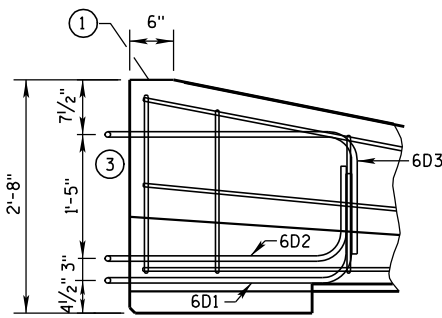
- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
  - a. TYPE: WICBTP
  - b. MANUFACTURER
  - c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ A  $\frac{3}{8}$ " HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..
- ④ "V" NOTCH IS OPTIONAL.
- ⑤ THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).
- ⑥ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- ⑦ USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO 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 TRANSPORTATION



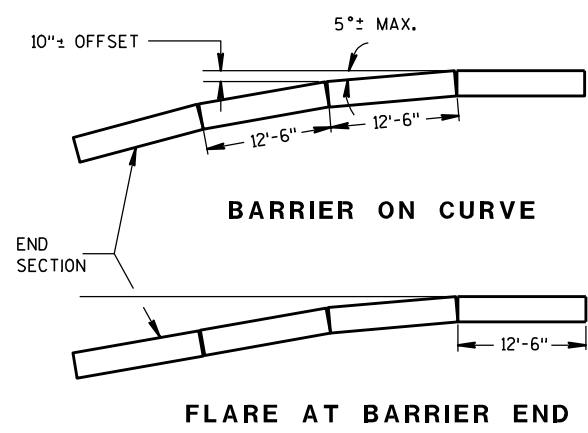
DETAILS OF BARRIER TAPER SECTION



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

GENERAL NOTES

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



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

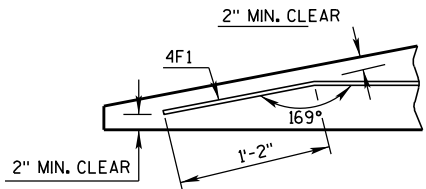
CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

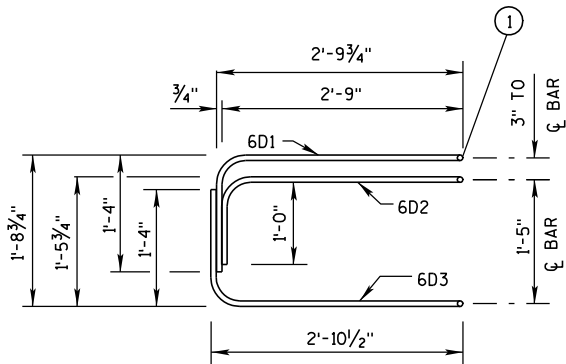
BARRIER TAPER SECTION  
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

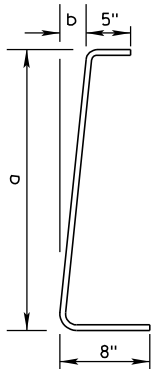
| BAR           | BAR SIZE | NO. OF BARS | LENGTH FT. |
|---------------|----------|-------------|------------|
| 4V1           | 4        | 2           | 1'-11"     |
| 4V2           | 4        | 2           | 2'-2"      |
| 4V3           | 4        | 2           | 2'-6"      |
| 4V4           | 4 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



DETAIL "C"  
BENT BAR DETAIL



ELEVATION  
LOOP BAR ASSEMBLY



4V BARS

2 AT EACH SIZE REQUIRED  
FOR STIRRUP ASSEMBLY

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

TAPER BARRIER SECTION

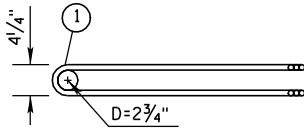
GENERAL NOTES

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

BARRIER SECTION  
BILL OF MATERIALS

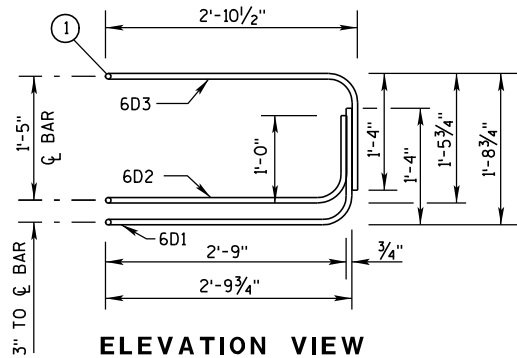
(PER 12'-6" BARRIER SECTION)

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

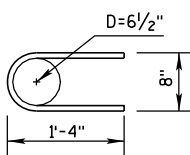


PLAN VIEW  
LOOP BAR ASSEMBLY

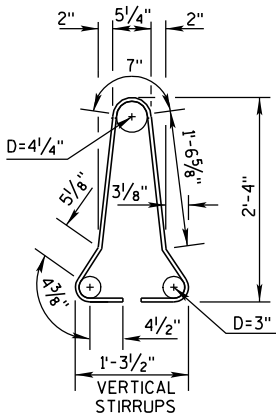
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

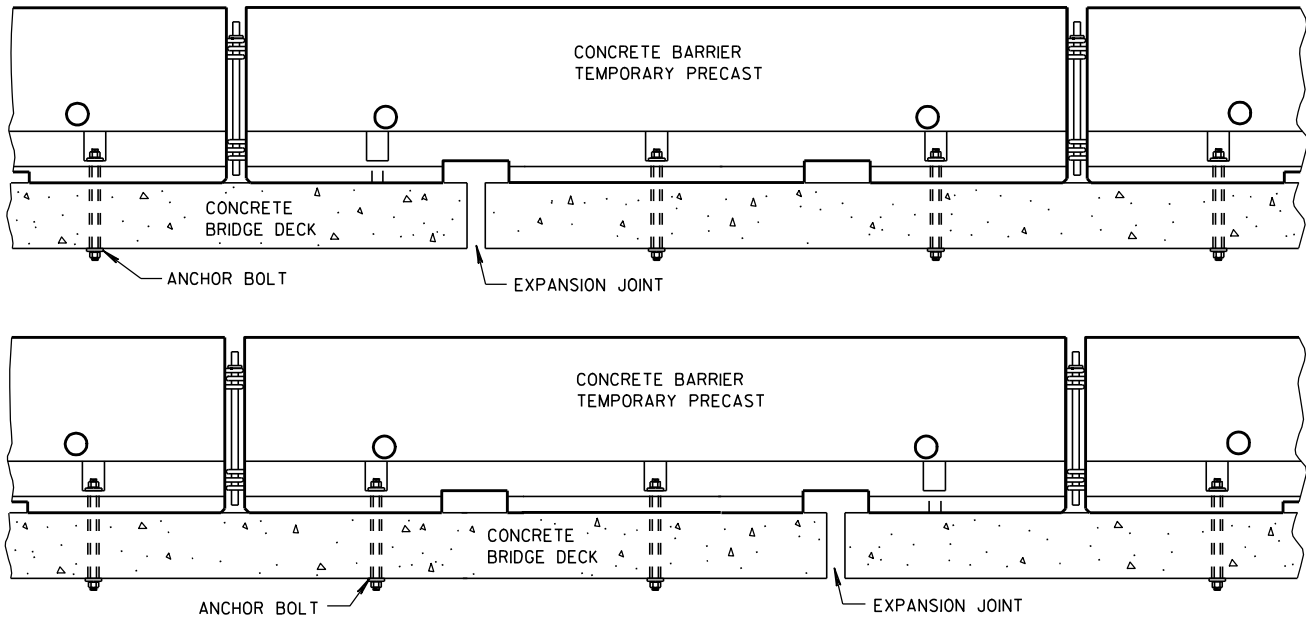


4A1

BARRIER SECTION

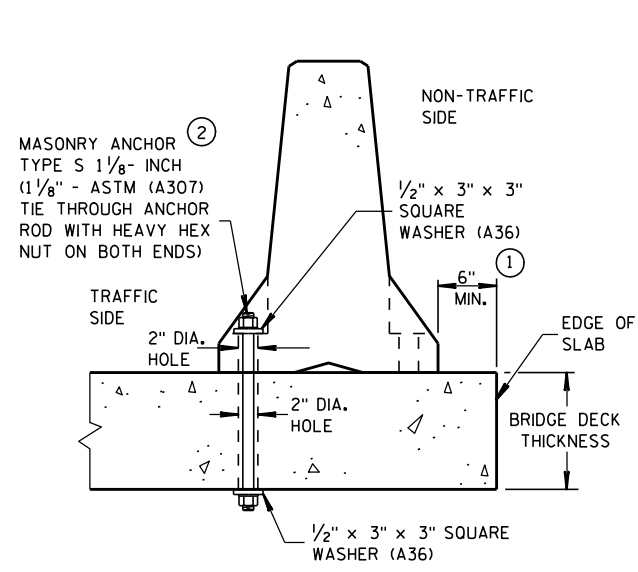
CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



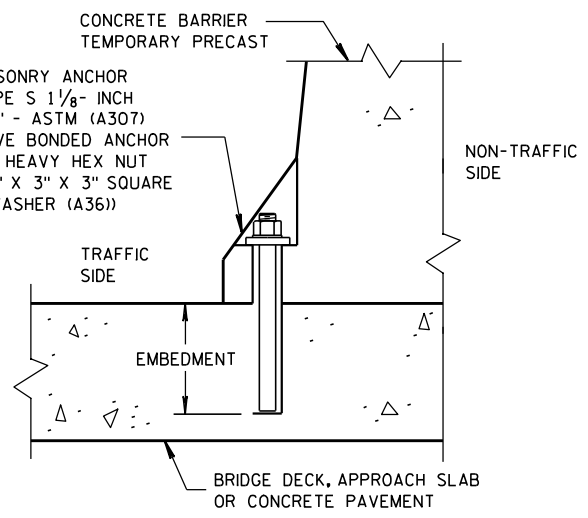
**TREATMENT AT BRIDGE DECK EXPANSION JOINTS**

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



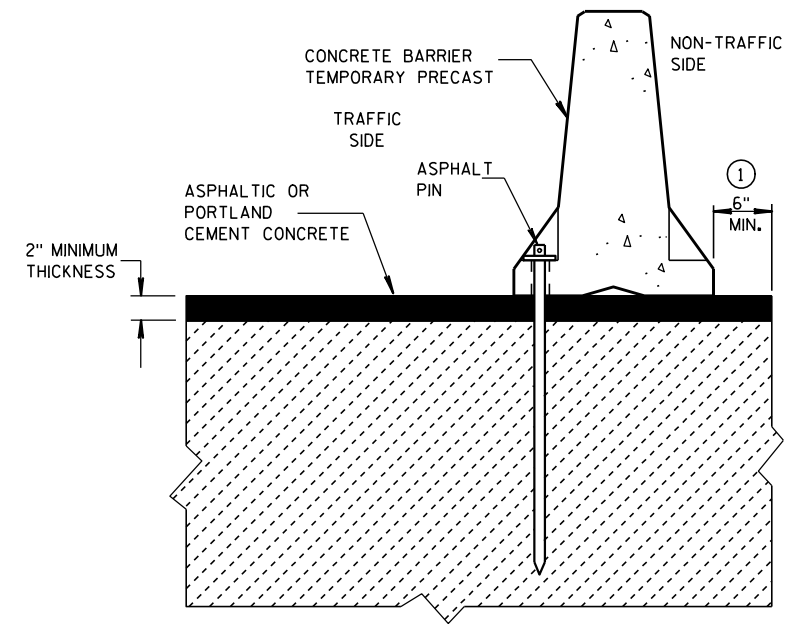
**THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK**

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



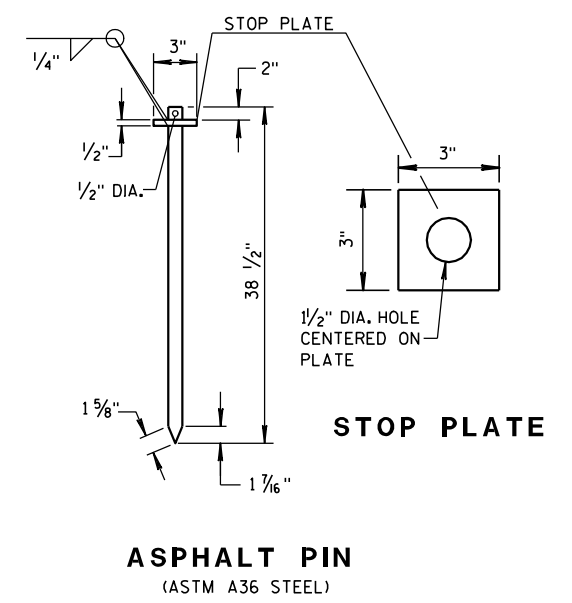
**REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT**

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

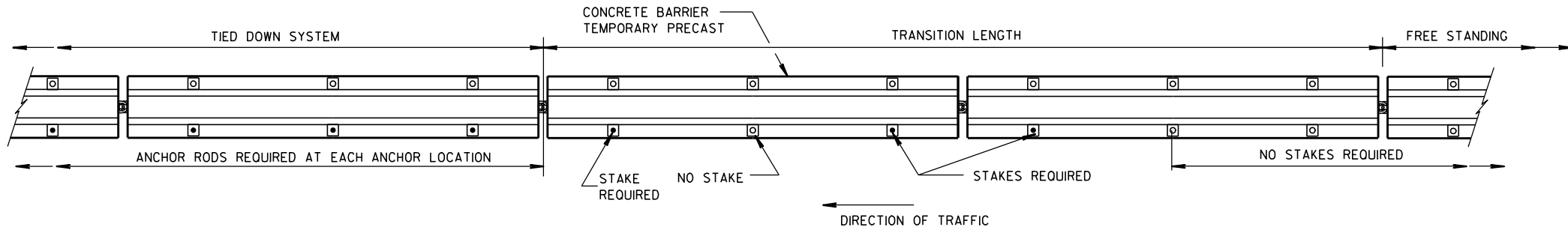


**STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE**

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



**ASPHALT PIN**  
(ASTM A36 STEEL)

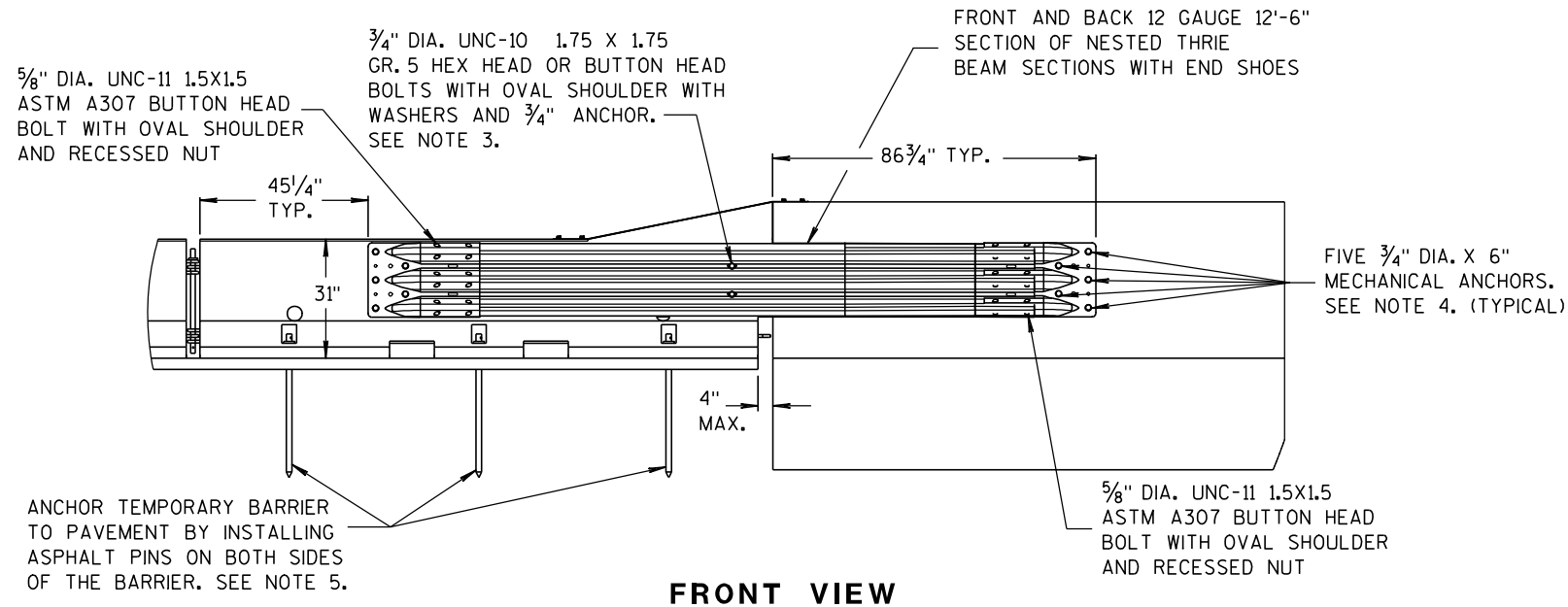


**FREE STANDING TRANSITION TO TIED-DOWN SYSTEM**

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

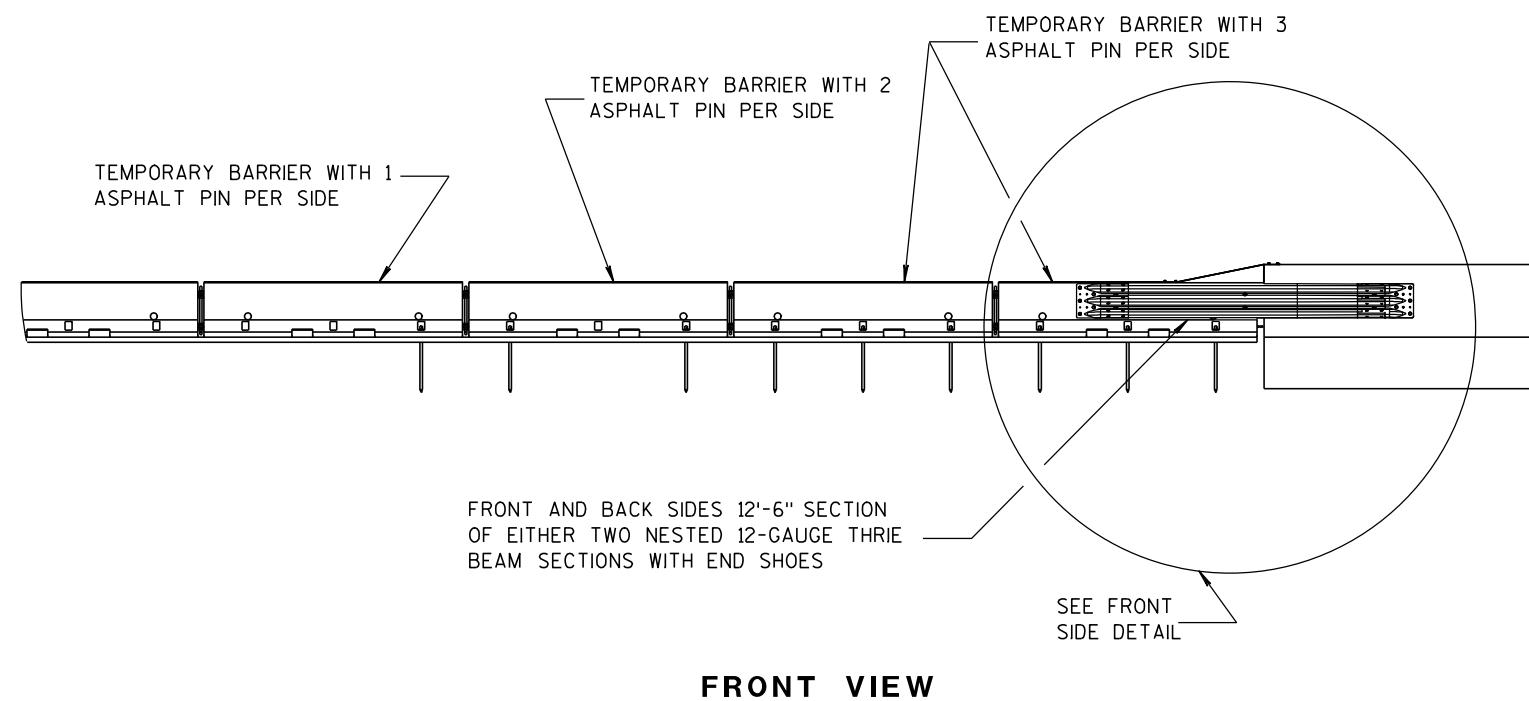
**GENERAL NOTES**

- 1 CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:  
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR  
  
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.
- 2 ANCHORING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST.  
  
WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1 1/8-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.  
  
UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR BOLTS AND COMPLETELY FILL IN THE REMAINING HOLES IN CONCRETE BRIDGE DECKS, CONCRETE APPROACH SLABS AND CONCRETE PAVEMENTS THAT ARE TO REMAIN, WITH A NON-SHRINK COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

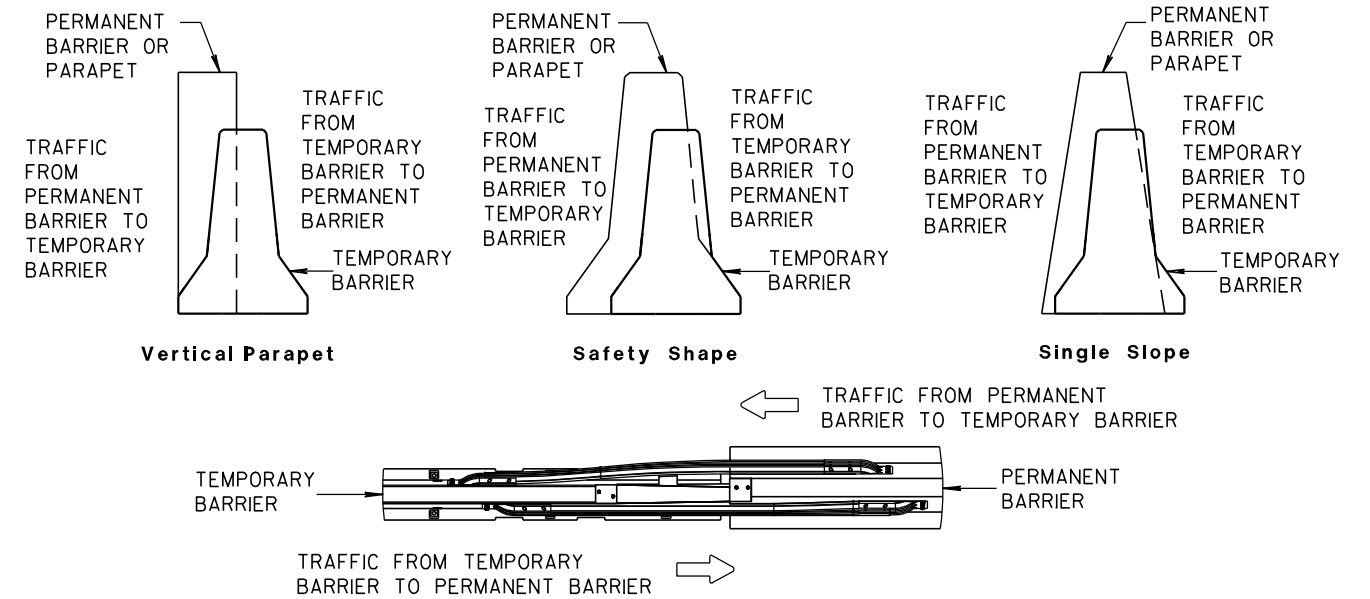


### NOTES

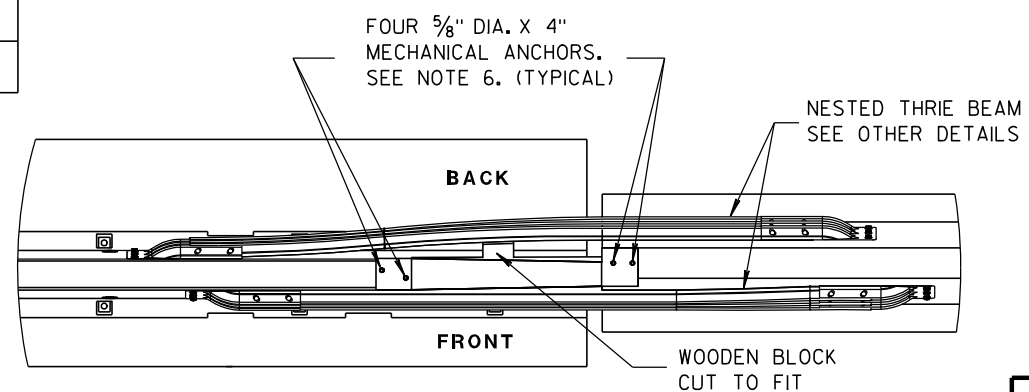
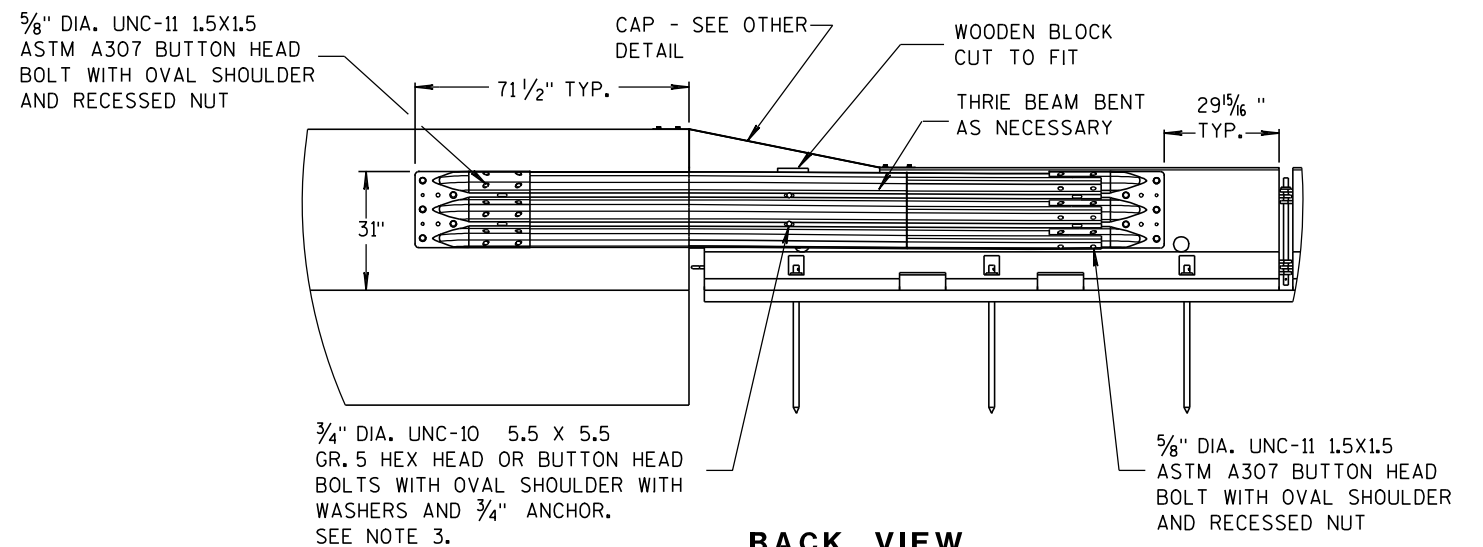
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48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



## BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

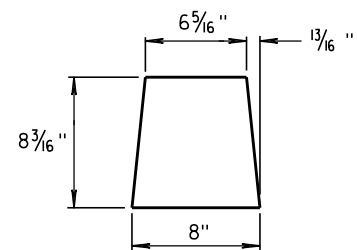


## TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

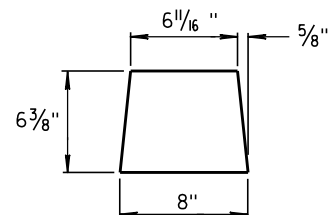


CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

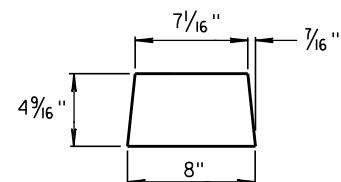
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



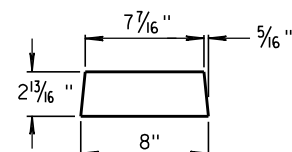
GUSSET 1



GUSSET 2

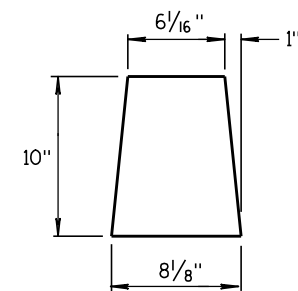


GUSSET 3

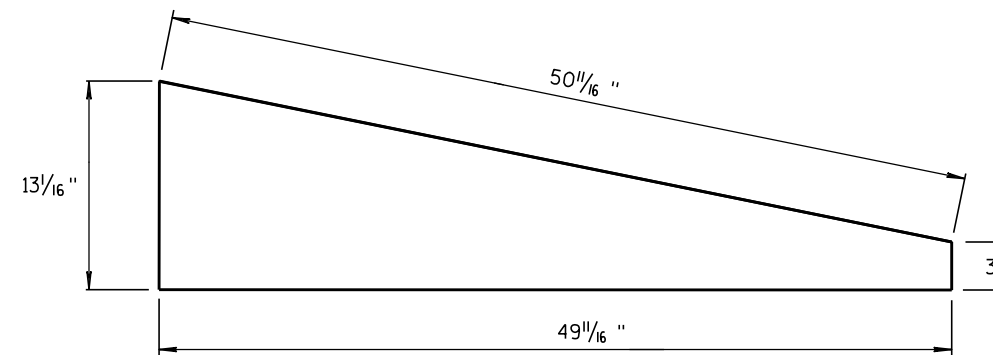


GUSSET 4

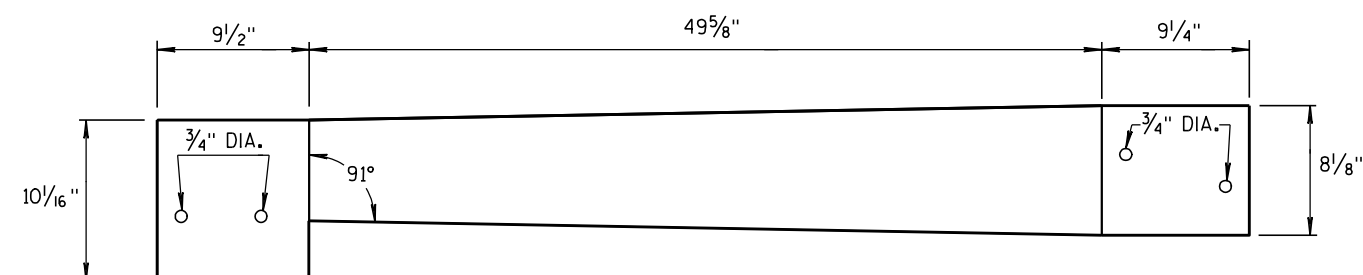
## GUSSETS



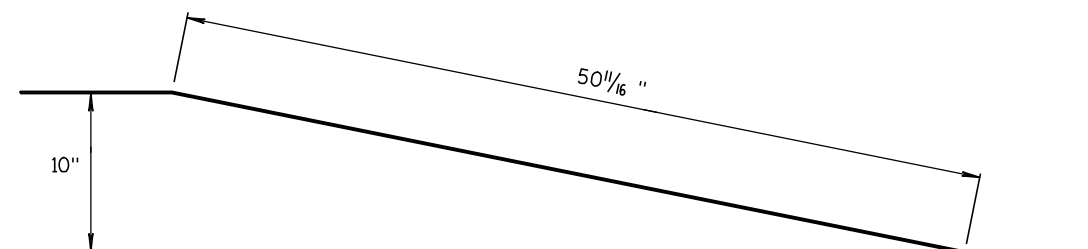
END PLATE



SIDE PLATE

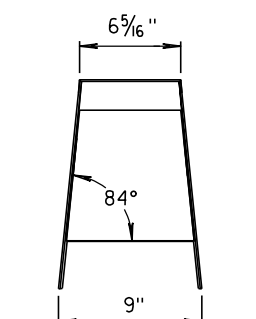


TOP PLATE

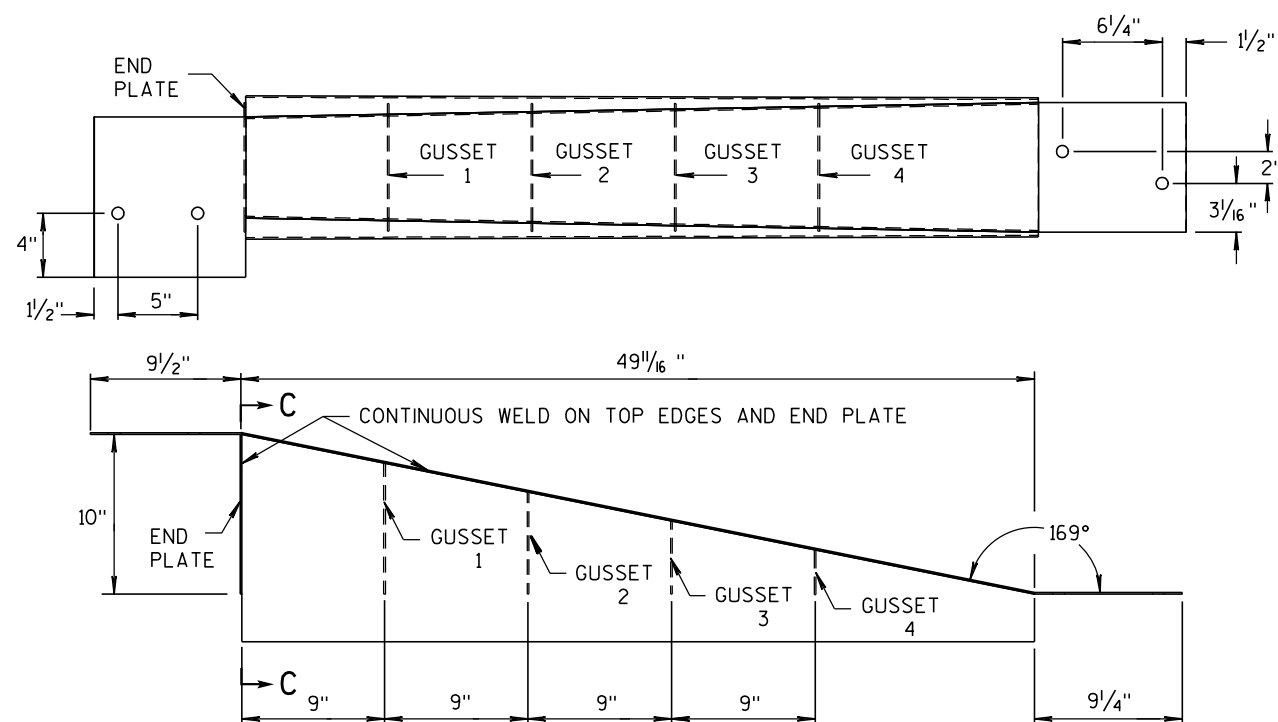


**SIDE, TOP AND END PLATES FOR CAP  
FROM TEMPORARY CONCRETE BARRIER  
TO 42" PERMANENT CONCRETE BARRIER**

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



SECTION C-C



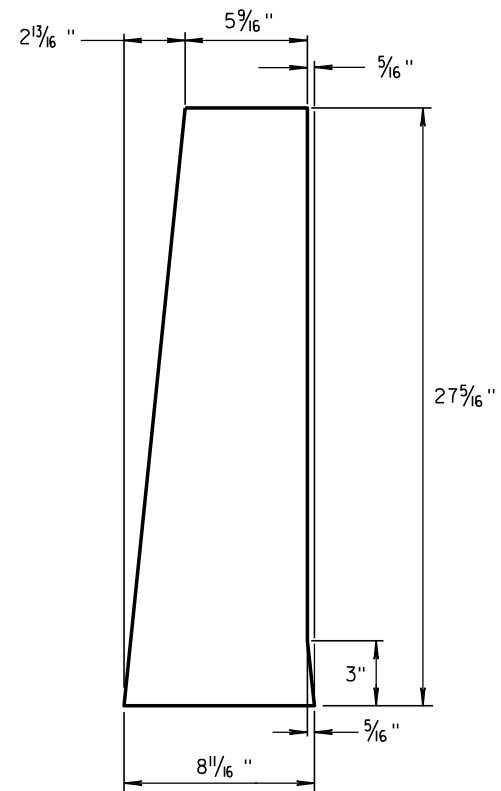
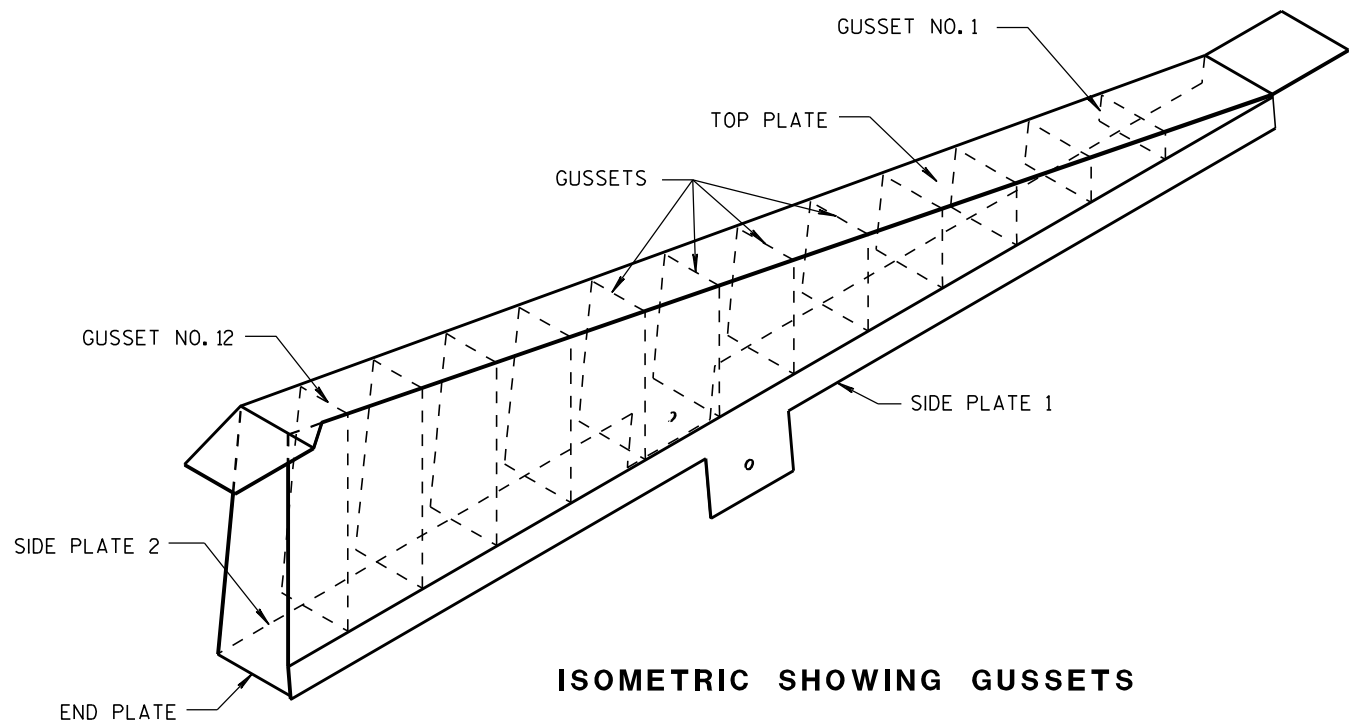
## NOTES

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

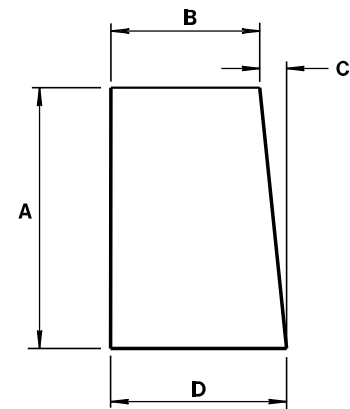
**CAP DETAILS FOR TEMPORARY CONCRETE  
BARRIER TO 42" PERMANENT CONCRETE BARRIER**

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



1/8" STEEL PLATE

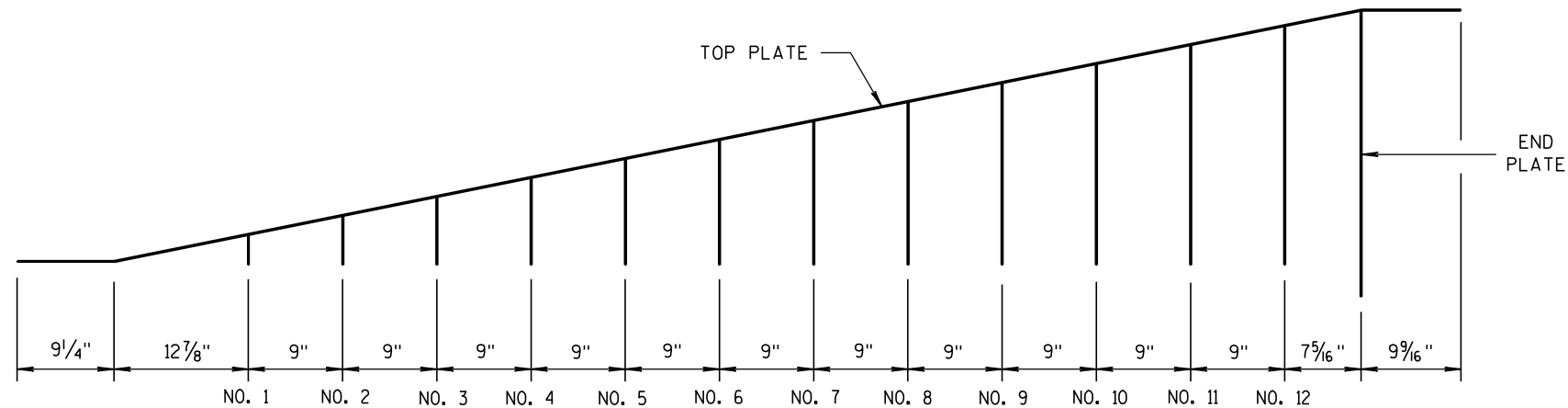


ALL GUSSETS 1/8" STEEL PLATE

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

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

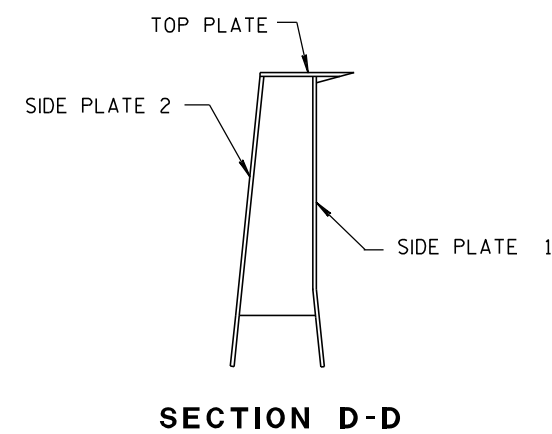
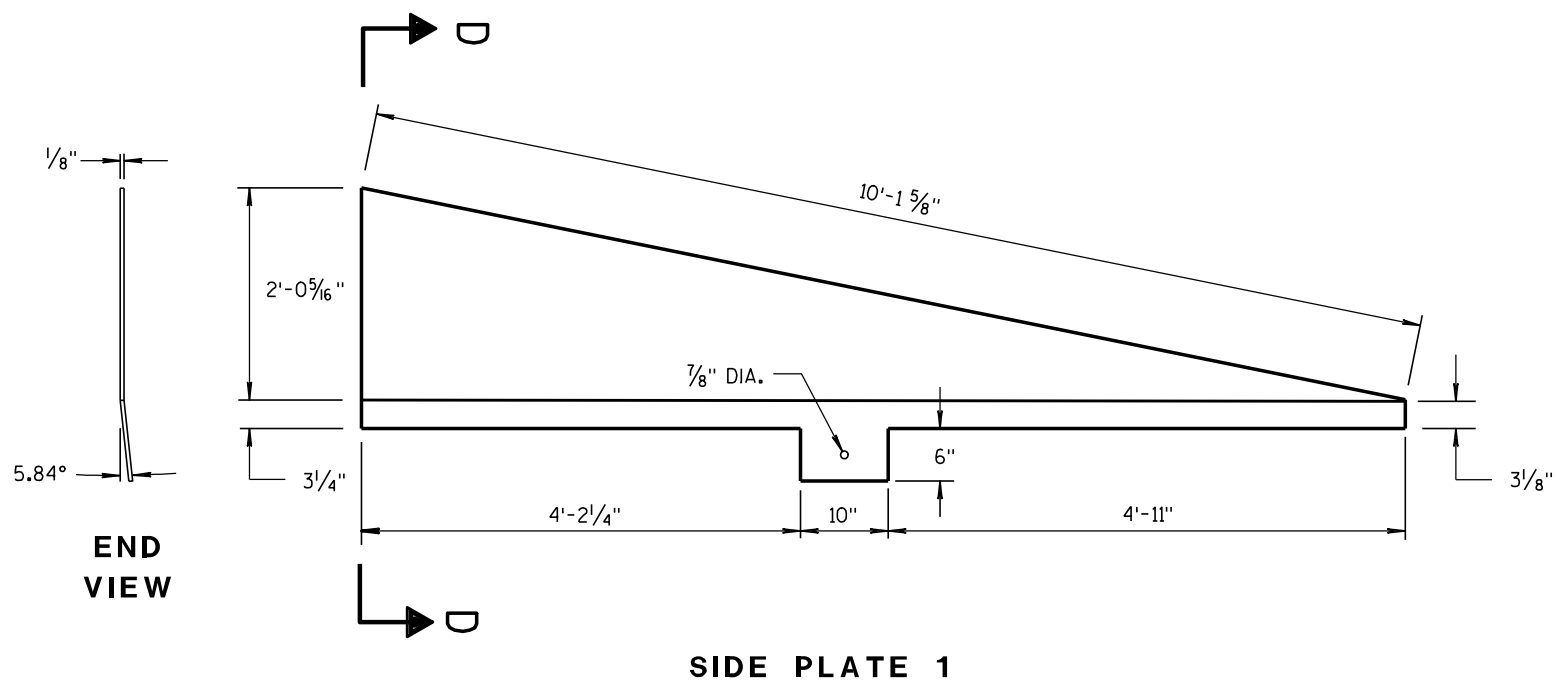
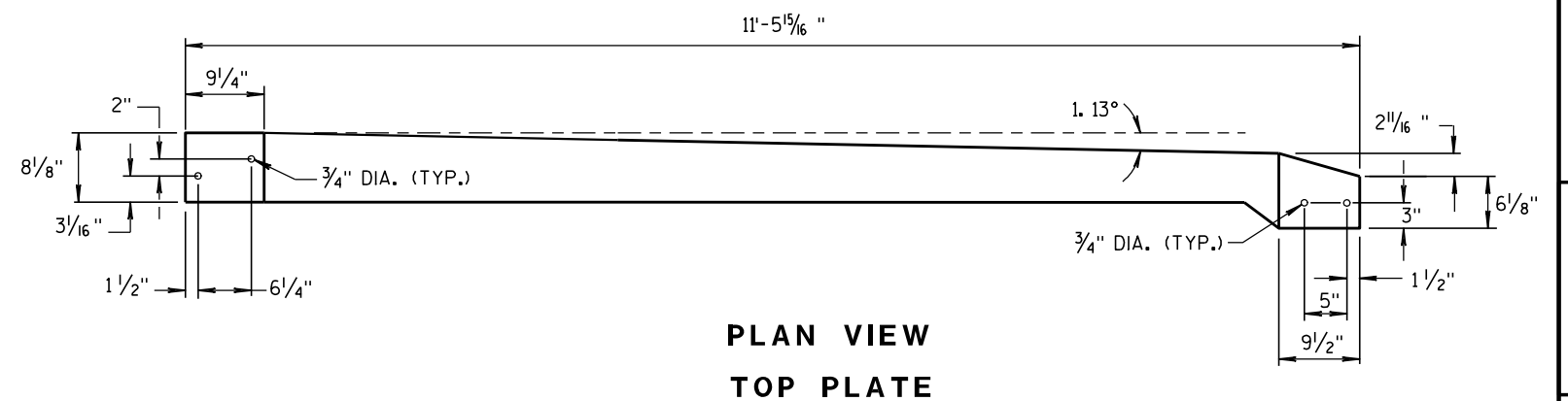
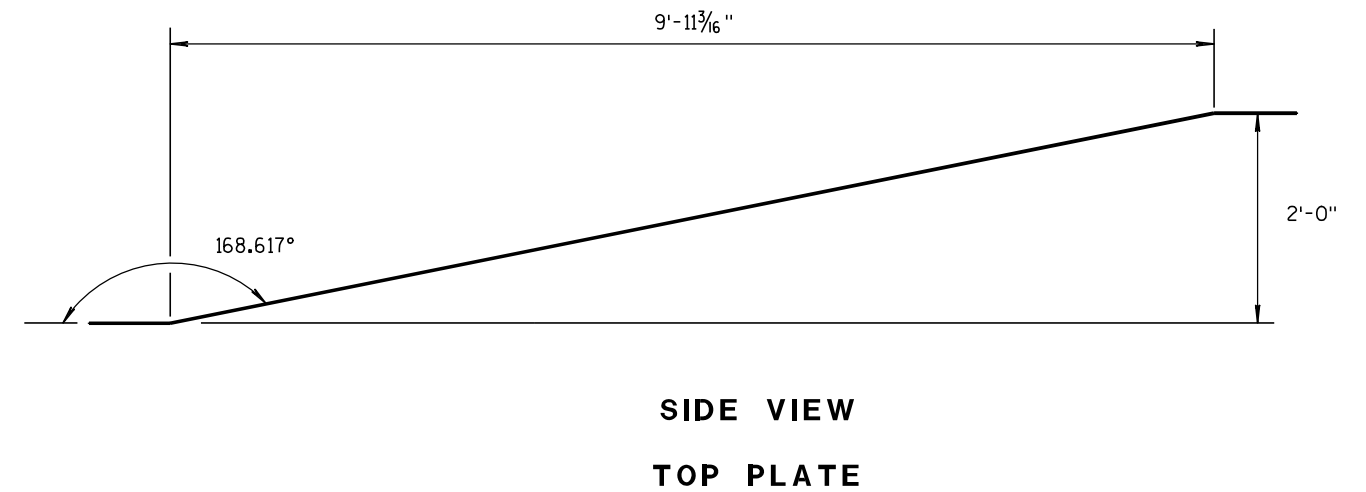
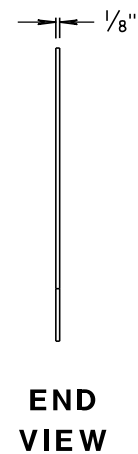
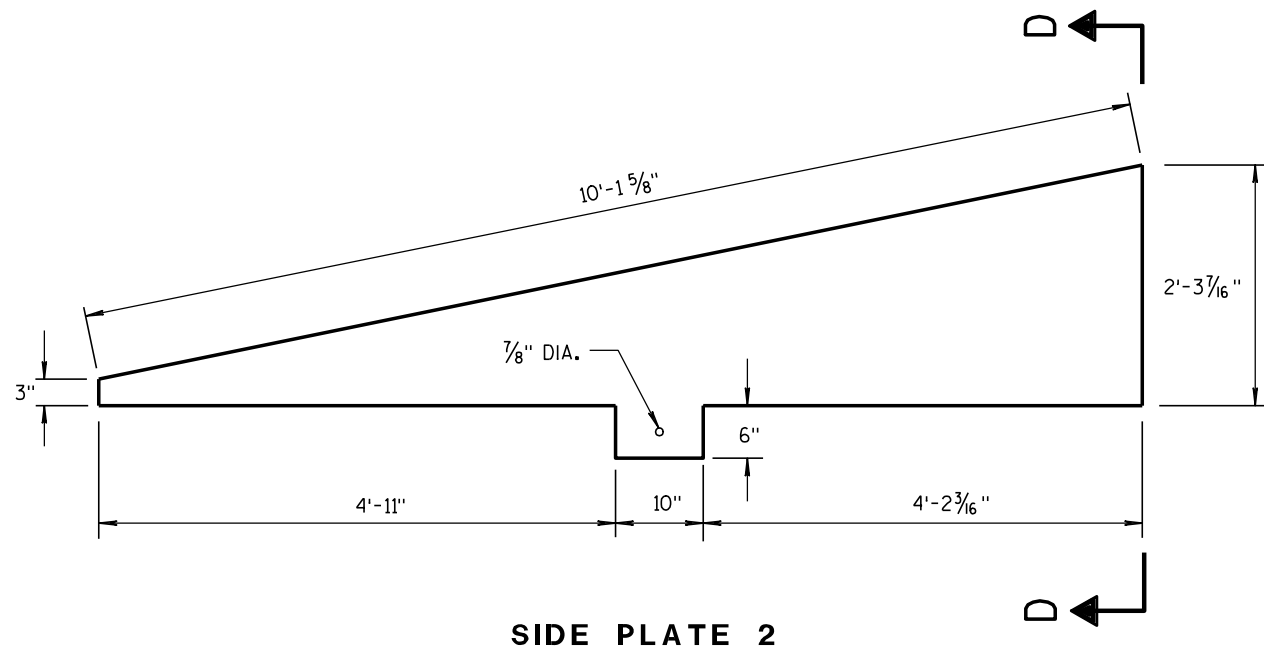
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



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

CONCRETE BARRIER  
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



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

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012

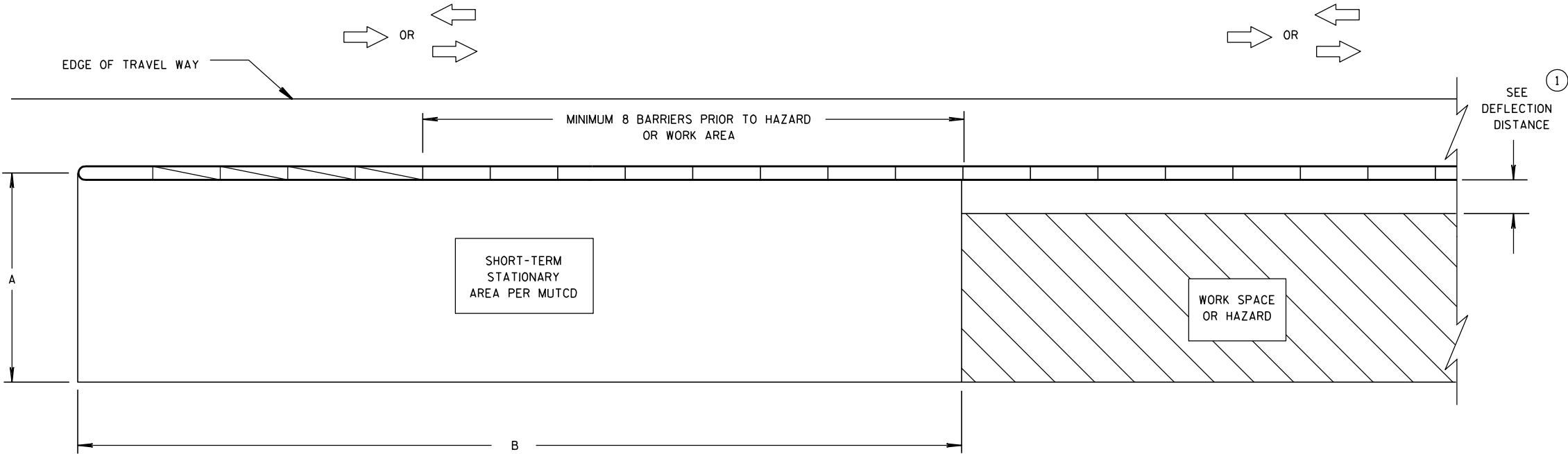
DATE

FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARD DEVELOPMENT

ENGINEER



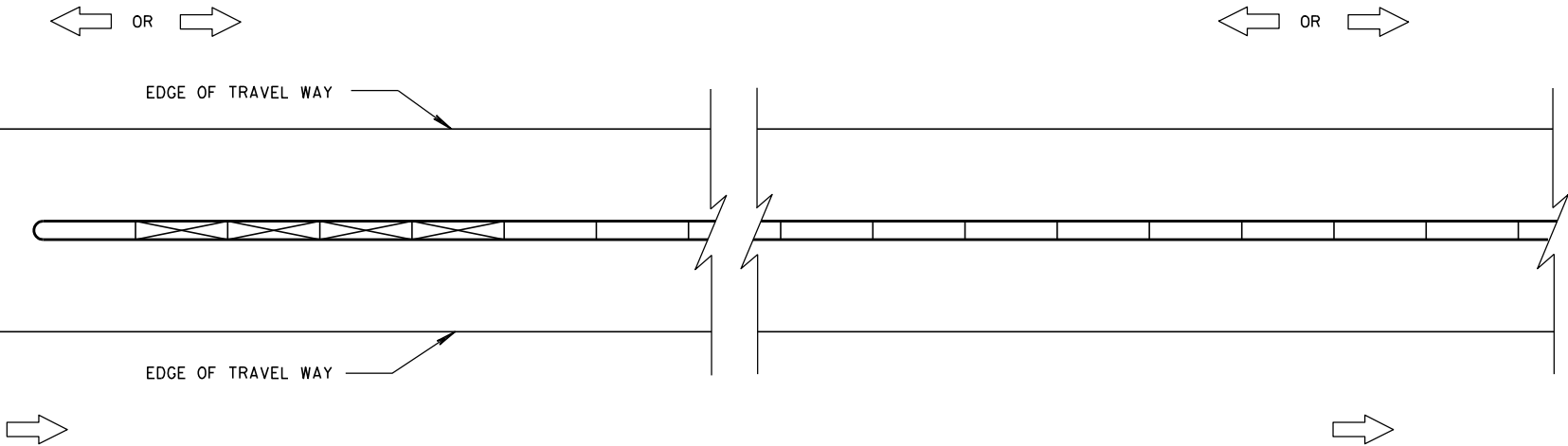
**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER  
INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER**

**DIMENSION A TABLE ②**

| FACILITY               | POSTED SPEED<br>MPH            | DIMENSION A |            |
|------------------------|--------------------------------|-------------|------------|
|                        |                                | MIN.<br>FT  | MAX.<br>FT |
| FREEWAY/EXPRESSWAY     | ALL                            | 15          | 20         |
| NON-FREEWAY/EXPRESSWAY | GREATER THAN<br>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<br>SPEEDS<br>MPH | DIMENSION<br>B<br>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.

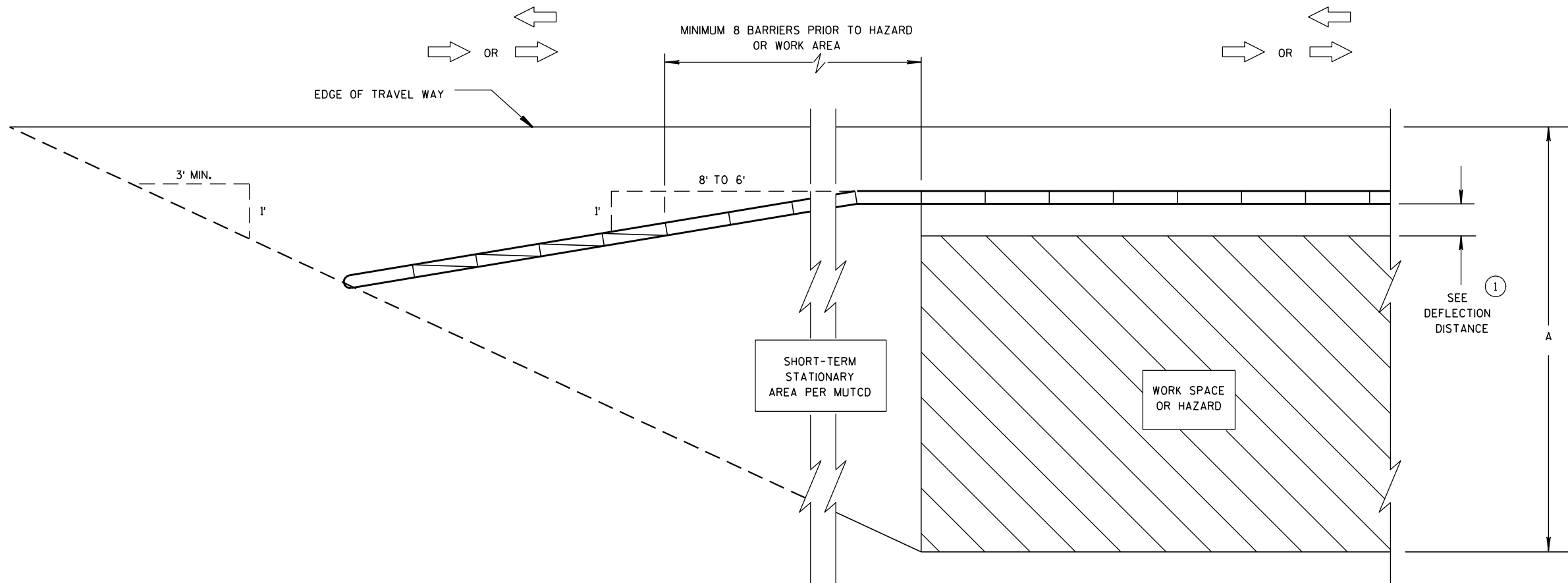
FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

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

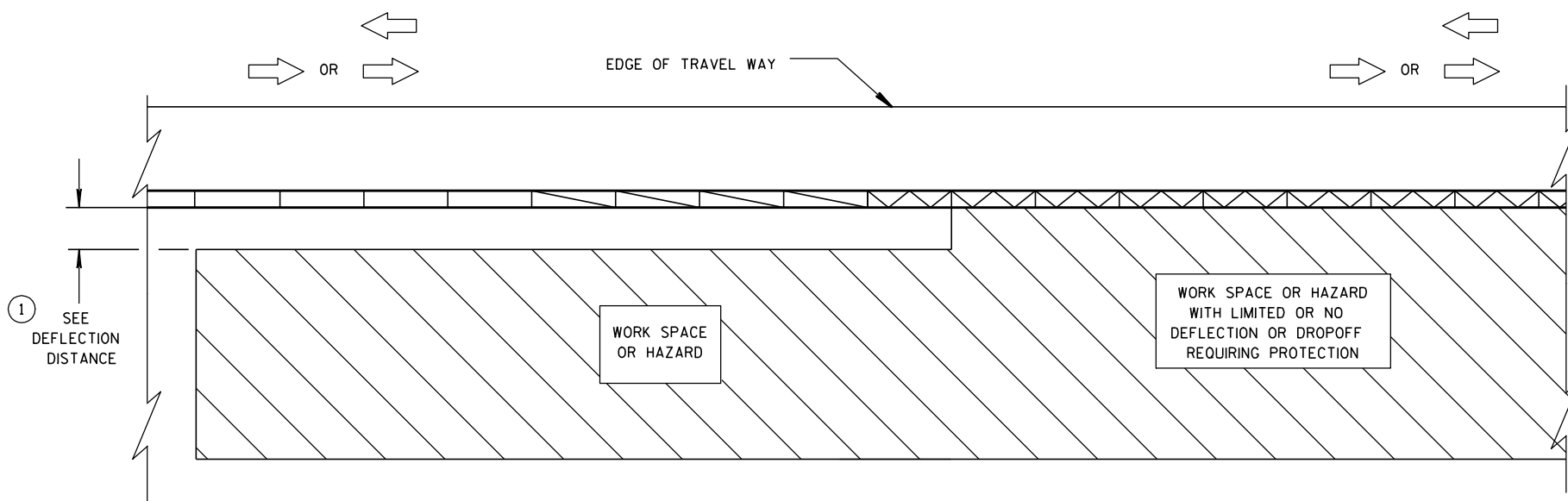
- ① FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.
- ② VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**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**

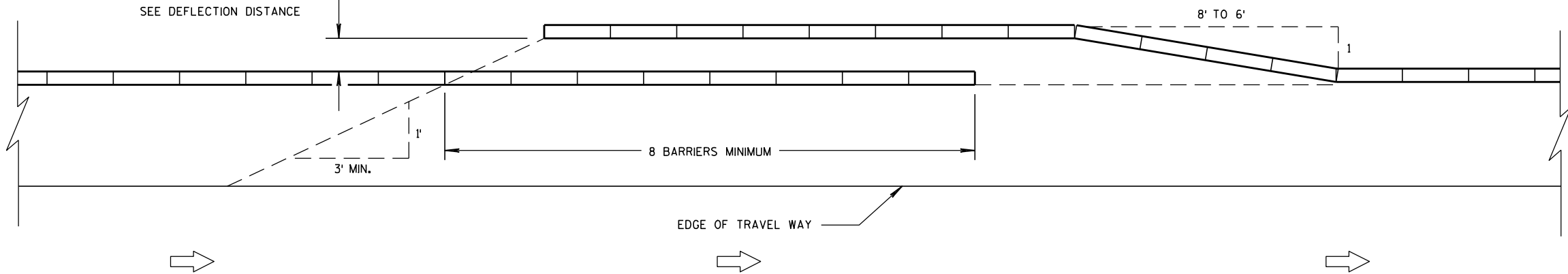
**LEGEND**

|                                                           |  |
|-----------------------------------------------------------|--|
| 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**

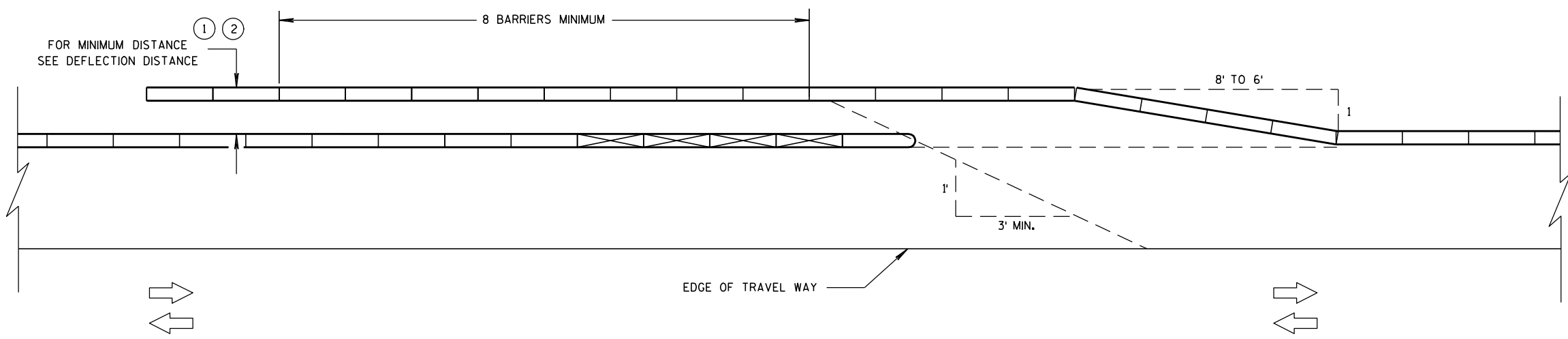
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

FOR MINIMUM DISTANCE  
SEE DEFLECTION DISTANCE

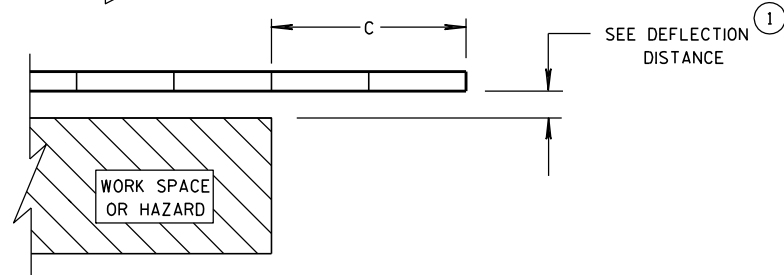


TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC

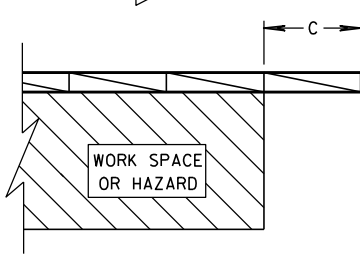
FOR MINIMUM DISTANCE  
SEE DEFLECTION DISTANCE



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER  
DOWNSTREAM - UNANCHORED



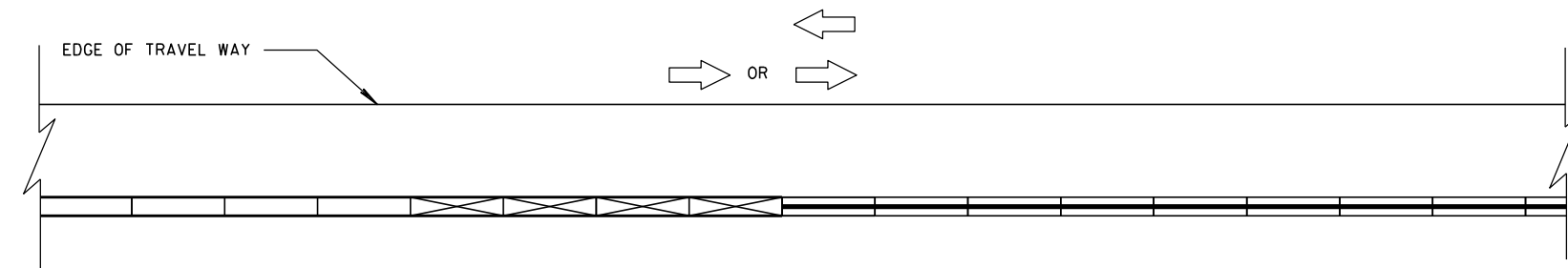
ENDING TEMPORARY BARRIER  
DOWNSTREAM - ANCHORED

LEGEND

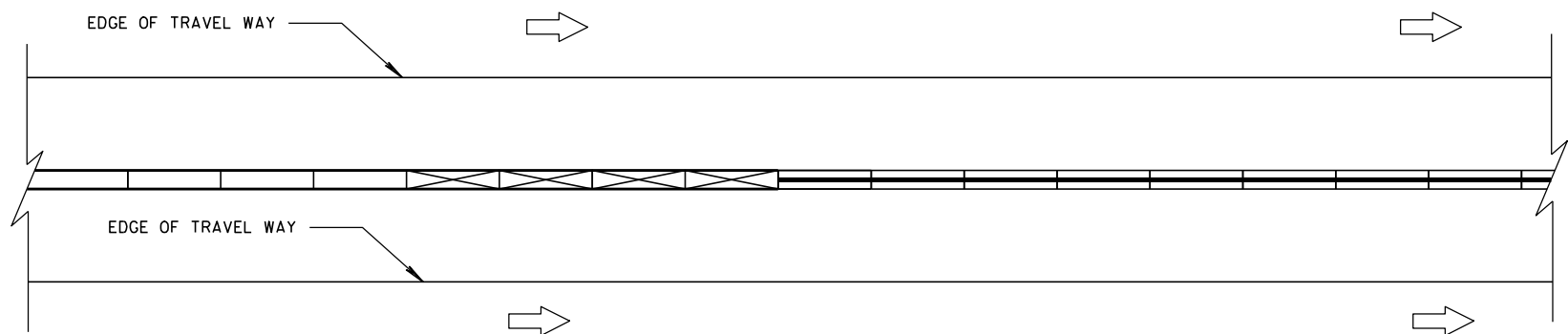
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



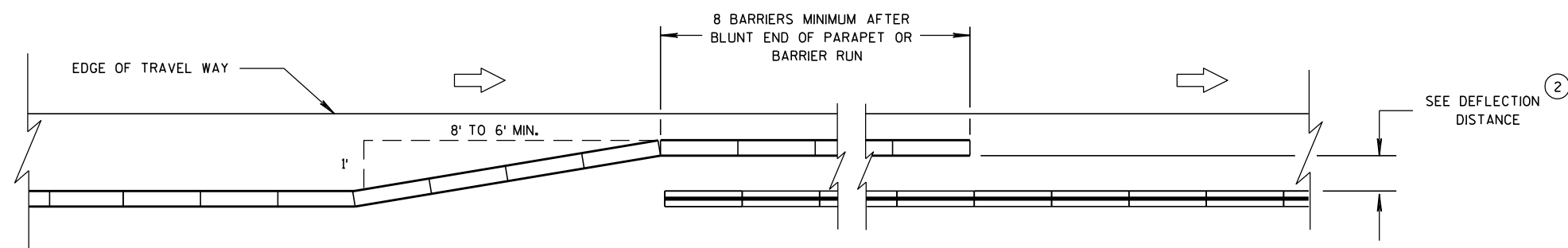
**CONNECTING TEMPORARY BARRIER TO PERMANENT  
CONCRETE BARRIER-TRAFFIC ON ONE SIDE**



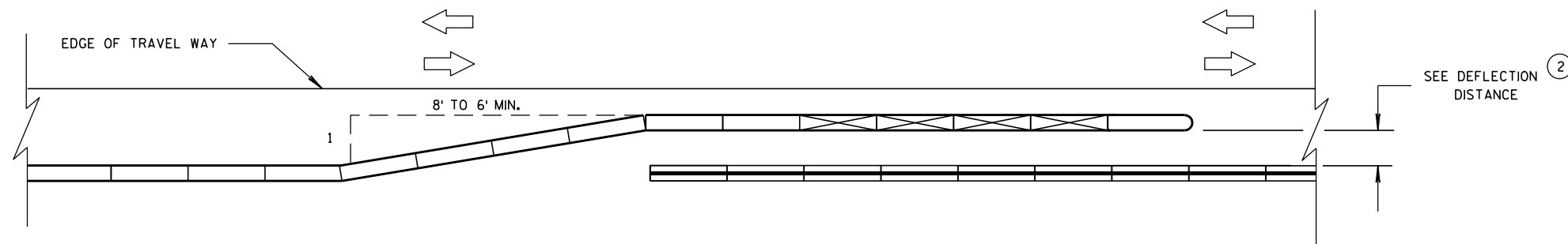
**CONNECTING TEMPORARY BARRIER TO PERMANENT  
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES**

**LEGEND**

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



**OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -  
ONE WAY TRAFFIC**

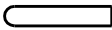
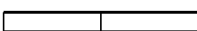


**OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -  
TWO WAY TRAFFIC**

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**LEGEND**

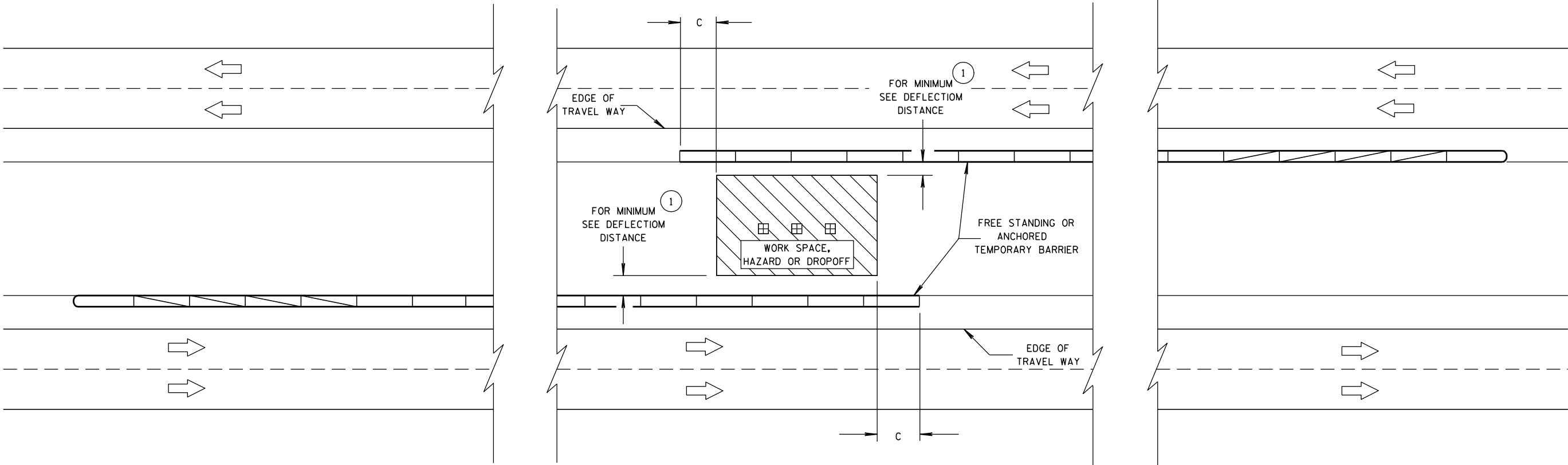
|                                                           |                                                                                   |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------|
| DIRECTION 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                                        |

6



6

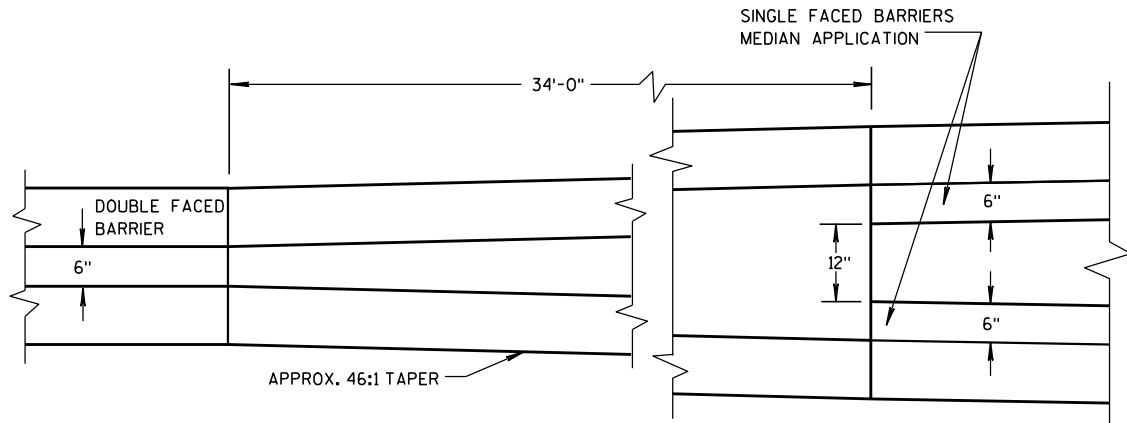
S.D.D. 14 B 8-1e

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

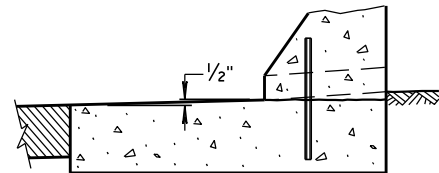
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
8/31/2012  
DATE  
/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA

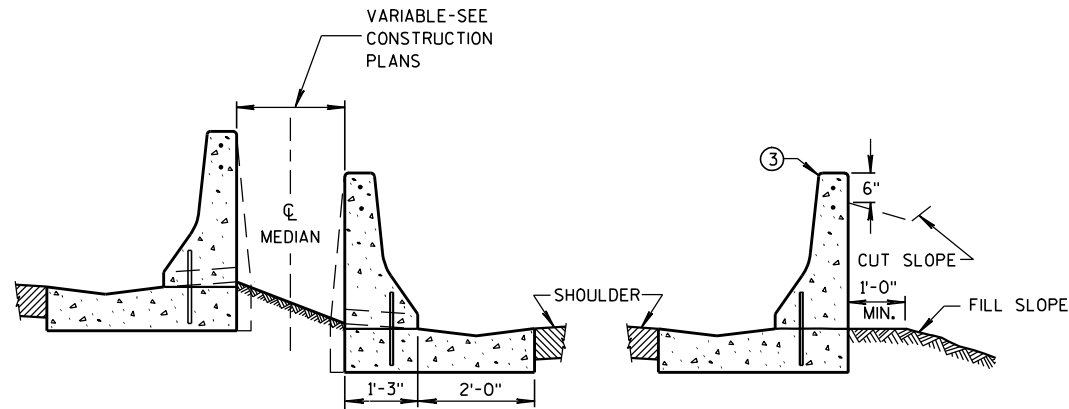
S.D.D. 14 B 8-1e



PLAN VIEW  
TRANSITION DETAILS OF DOUBLE FACED  
TO SINGLE FACED CONCRETE MEDIAN BARRIER  
(FOOTINGS ARE NOT SHOWN)

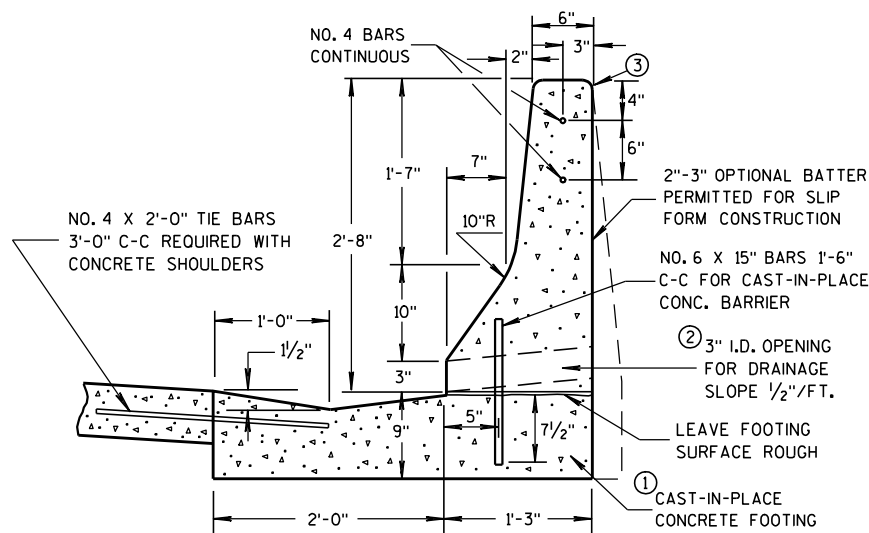


HIGH SIDE  
CONCRETE BARRIER DETAIL



MEDIAN SHOULDER

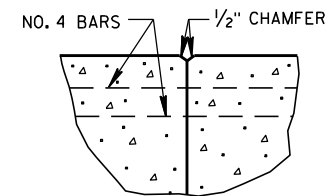
TYPICAL APPLICATIONS



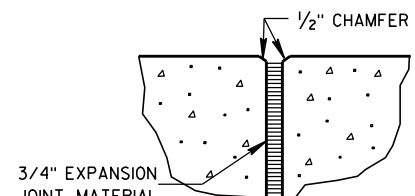
SECTION VIEW

GENERAL NOTES

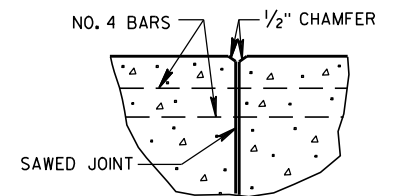
1. SPLICES OF LONGITUDINAL BARS SHALL BE MADE WITH BARS LAPPED AT LEAST 18-INCHES AND FIRMLY TIED OR FASTENED TOGETHER.
2. ALL BAR STEEL REINFORCEMENT SHALL CONFORM TO REQUIREMENTS OF AASHTO M31, GRADE 60.
3. BARRIER SHALL BE INSTALLED ON A CONCRETE SHOULDER INSTEAD OF THE CONCRETE FOOTING WHEN SPECIFIED OR SHOWN ELSEWHERE IN CONTRACT.
4. OPENINGS FOR DRAINAGE SHALL BE PLACED AT LOW POINTS OF VERTICAL CURVES OR WHERE DIRECTED BY THE ENGINEER.
5. 3/4-INCH BEVEL OR 1-INCH RADIUS (TYPICAL).
6. NO. 4 BARS SHALL BE CONTINUED THROUGH CONSTRUCTION JOINTS.
7. EXPANSION JOINTS SHALL BE PLACED AT EXISTING EXPANSION JOINTS IN THE PAVEMENT AND AT STRUCTURES. SEE REINFORCEMENT AT BARRIER END DETAIL.
8. SAWED CONTRACTION JOINTS SHALL BE PROVIDED ACROSS THE FULL WIDTH OF THE BARRIER FOOTING, AND IN FRONT, TOP AND BACK FACE OF THE BARRIER AT EXISTING PAVEMENT JOINTS AND AT UNIFORM INTERVALS BETWEEN WITH A MAXIMUM SPACING OF 25 FEET.



CONSTRUCTION JOINT



EXPANSION JOINT

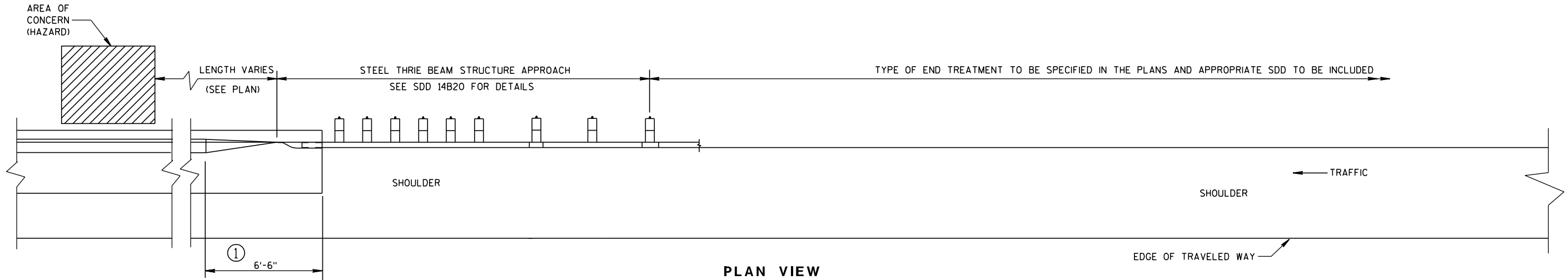


CONTRACTION JOINT

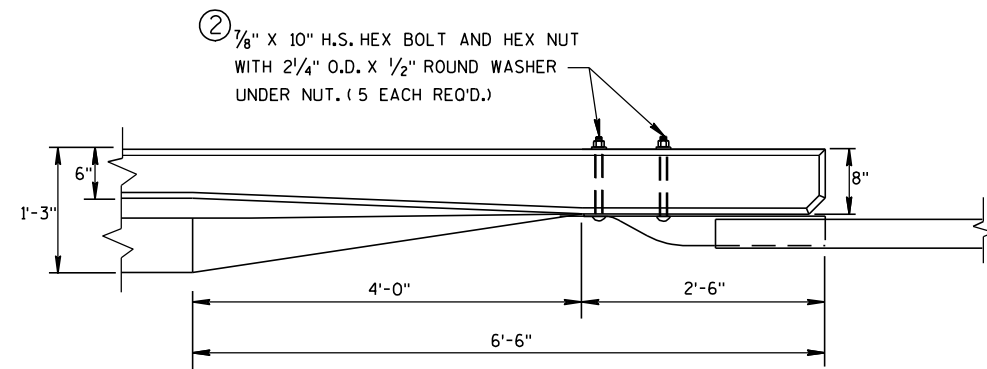
JOINT DETAILS

CONCRETE BARRIER  
SINGLE-FACED  
(WITH ANCHORAGE)

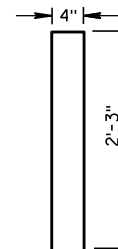
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



PLAN VIEW  
TRANSITION TO STEEL PLATE BEAM GUARD  
AND END TERMINAL



PLAN VIEW

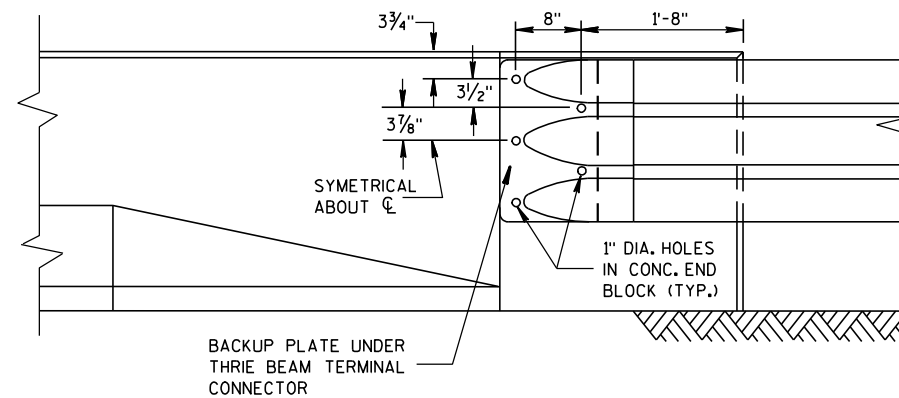


BENT BAR DETAIL

### GENERAL NOTES

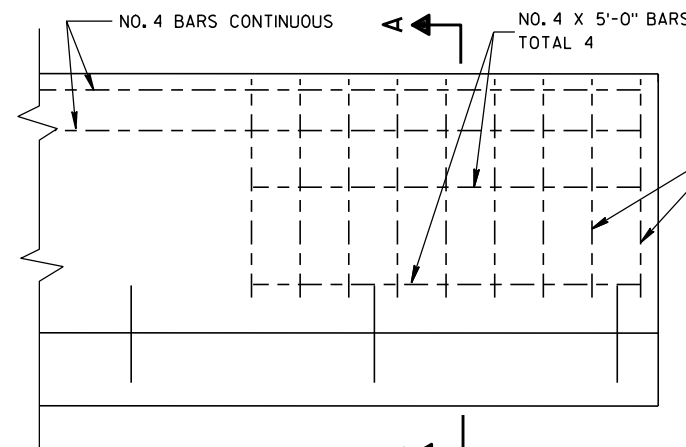
- ① A SPECIAL END IS REQUIRED ON THE CONCRETE BARRIER TO TRANSITION TO A CONNECTION WITH THE STEEL THRIE BEAM STRUCTURE APPROACH. SEE THE DETAILS ON THIS SHEET.
- ② HIGH STRENGTH BOLTS SHALL MEET REQUIREMENTS OF ASTM A325.
- ③ REINFORCEMENT REQUIRED AT EXPANSION JOINTS AND WHERE CONCRETE BARRIER IS TERMINATED.
- ④ PLACE REINFORCEMENT SUCH THAT IT WILL NOT CONFLICT WITH THE BOLT HOLES IN THE THRIE BEAM TERMINAL CONNECTOR.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



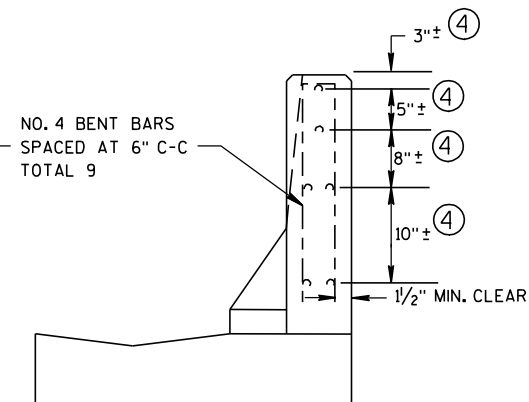
FRONT VIEW

CONCRETE BARRIER TRANSITION TO THRIE BEAM



FRONT VIEW

③ REINFORCEMENT AT BARRIER END



SECTION A-A

CONCRETE BARRIER,  
SINGLE-FACED  
(WITH ANCHORAGE)

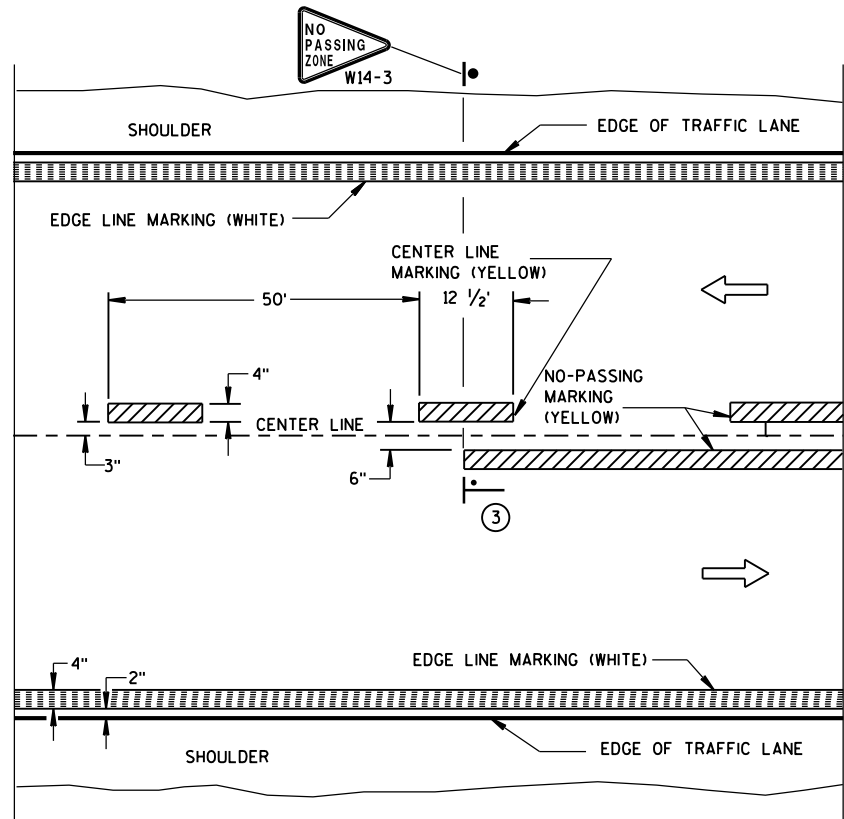
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

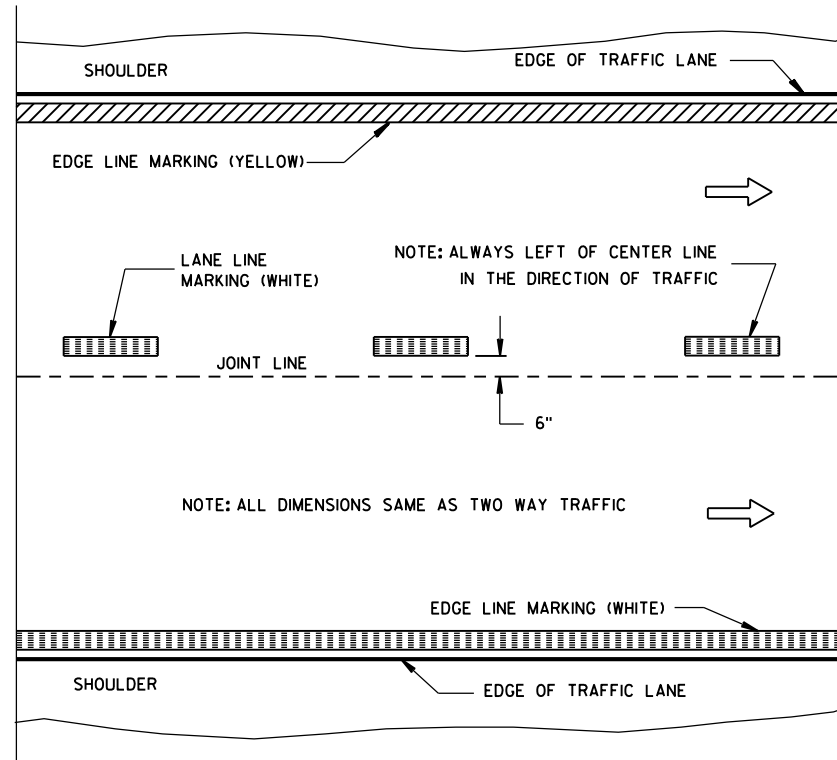
4/12/10  
DATE

FHWA

/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

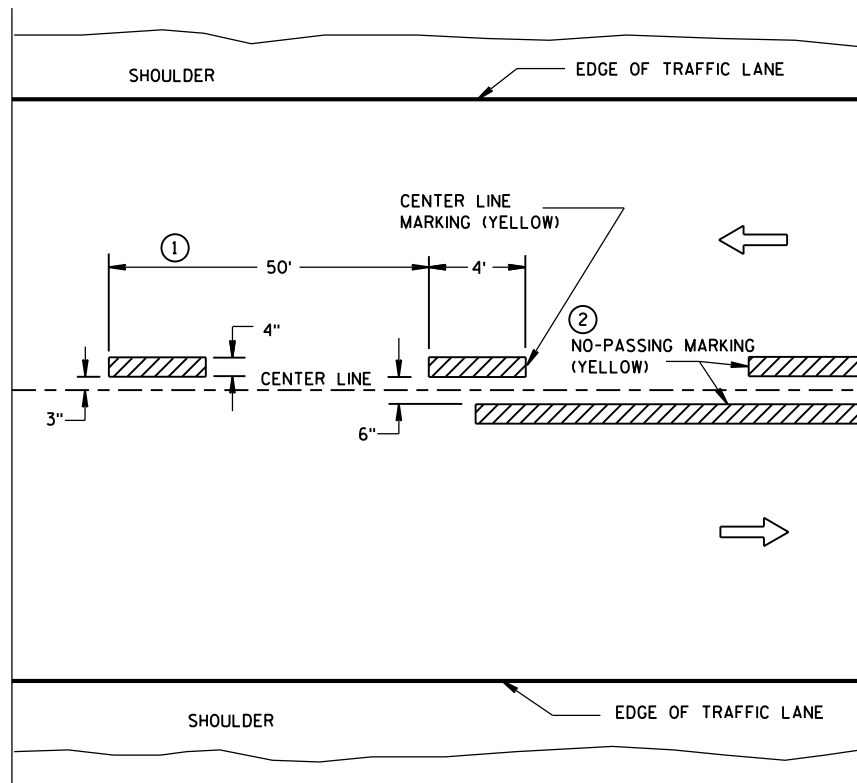


TWO WAY TRAFFIC

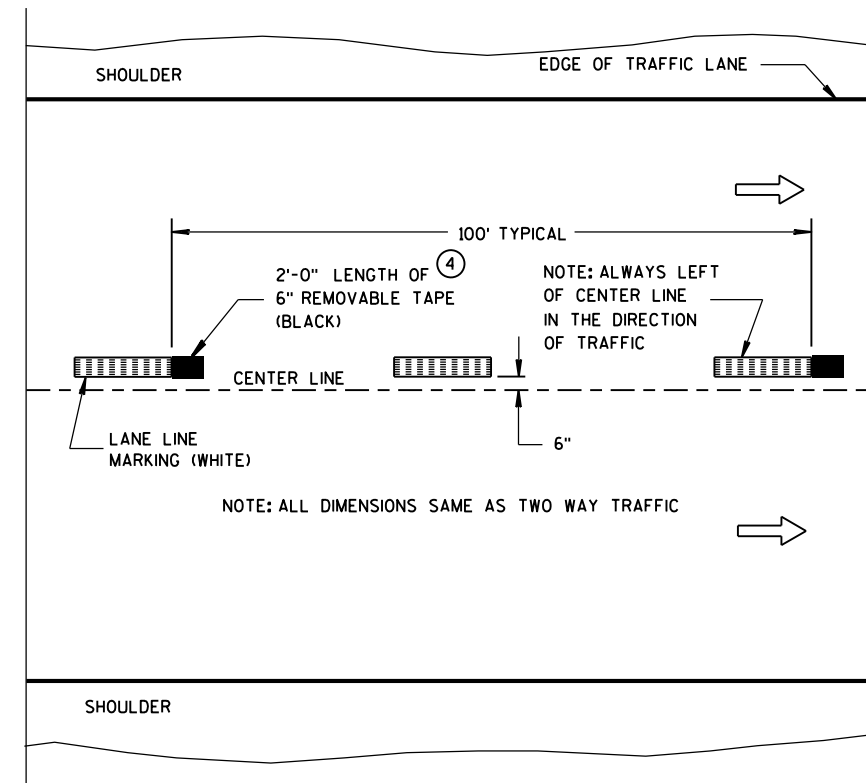


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

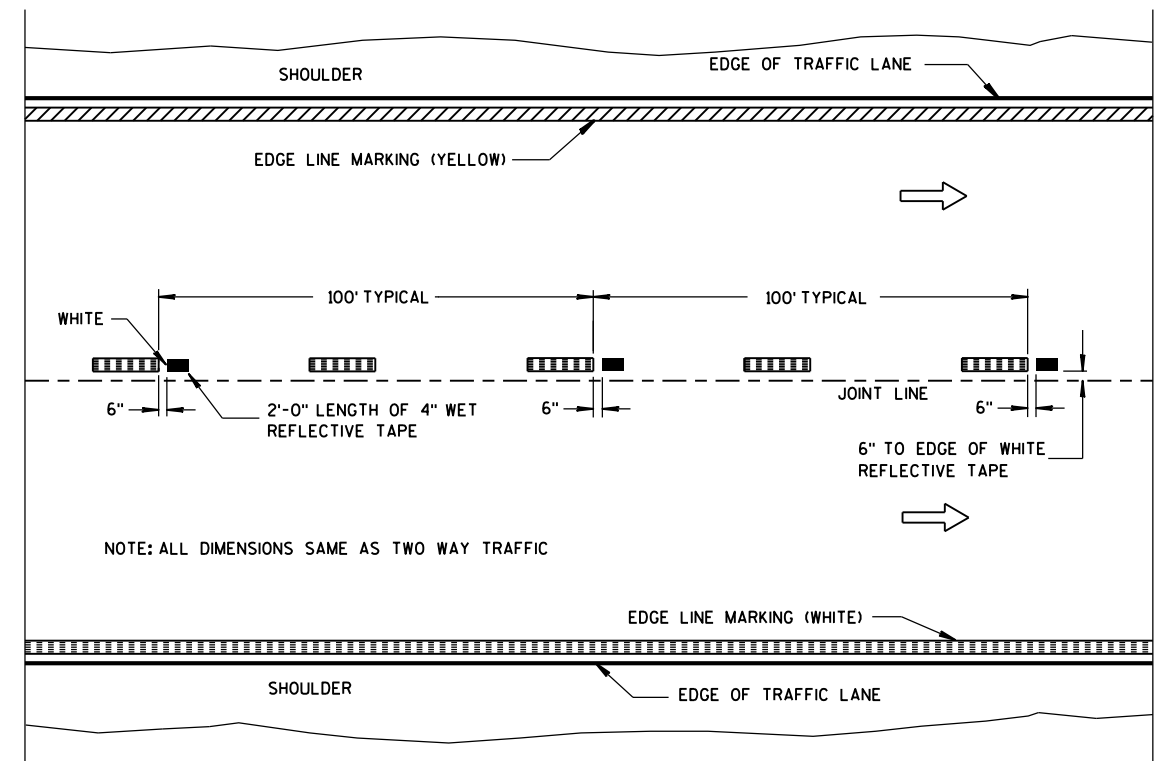
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



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

LEGEND

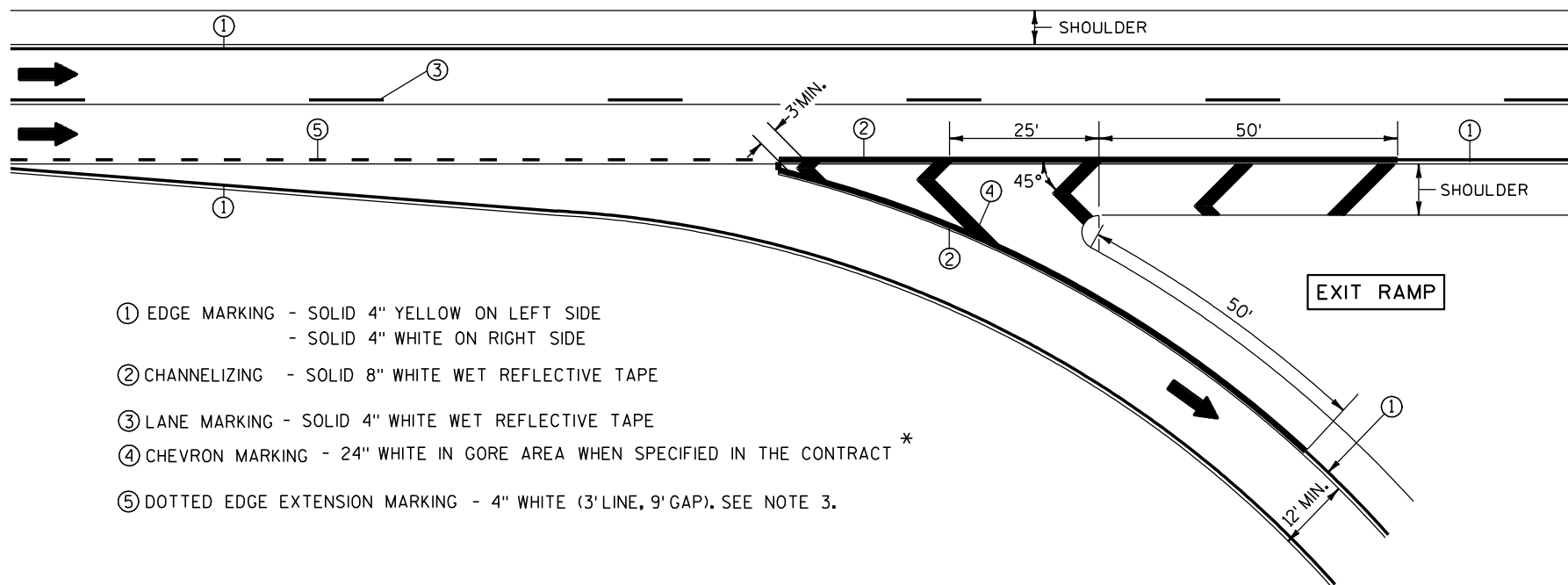
- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING  
(MAINLINE)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
5-13-2013 /S/ Travis Feltes  
DATE STATE TRAFFIC ENGINEER  
FHWA



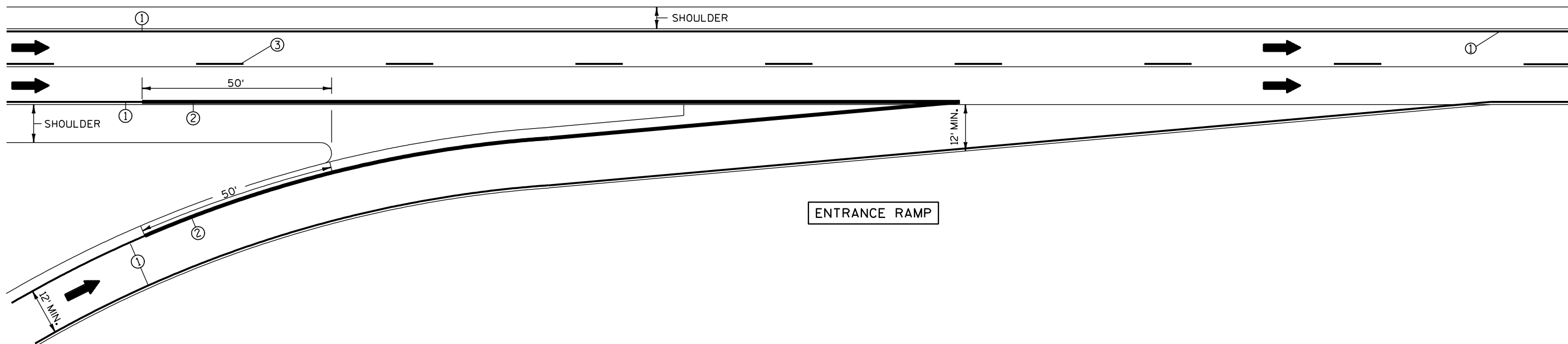


- ① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE  
- SOLID 4" WHITE ON RIGHT SIDE
- ② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE
- ③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE
- ④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT \*
- ⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

- 1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
- 2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
- 3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- 4. RETRACE EXISTING DIAGONAL MARKINGS.

\* REFER TO DESIGN NOTES.

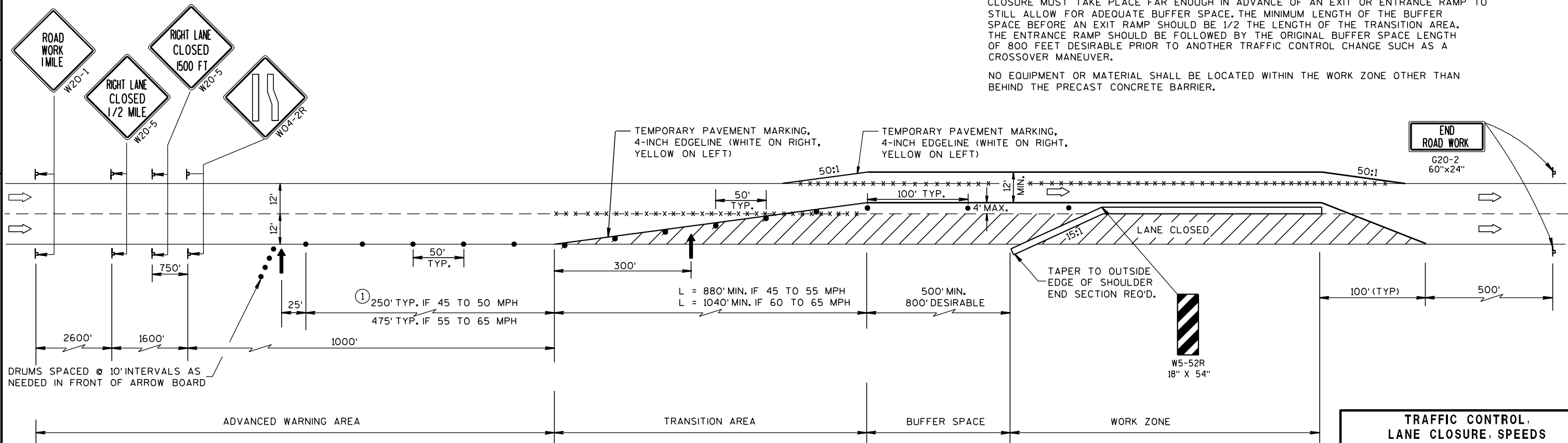


PAVEMENT MARKING  
(RAMPS AND GORES)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE



GENERAL NOTES :

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

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) CLEARANCE TO EXISTING SIGNS.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

① CONSIDER ROADWAY 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 7 CONTINUOUS DAYS AND NIGHTS.

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 OR INTERSECTION. THE LANE CLOSURE 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.

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED WITHIN THE WORK ZONE OTHER THAN BEHIND THE PRECAST CONCRETE BARRIER.

|                                                                                    |                                                     |
|------------------------------------------------------------------------------------|-----------------------------------------------------|
| TRAFFIC CONTROL,<br>LANE CLOSURE, SPEEDS<br>GREATER THAN 40 M.P.H.<br>WITH BARRIER |                                                     |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                                 |                                                     |
| APPROVED<br>7-14-94<br>DATE                                                        | /S/ Chester J. Spang<br>DIRECTOR, OFFICE OF TRAFFIC |
| FHWA                                                                               |                                                     |

LEGEND

- POST WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN IN DRUM
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- 8' TYPE III BARRICADE
- \*-x-\* REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

GENERAL NOTES :

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

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

- ① CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

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

GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

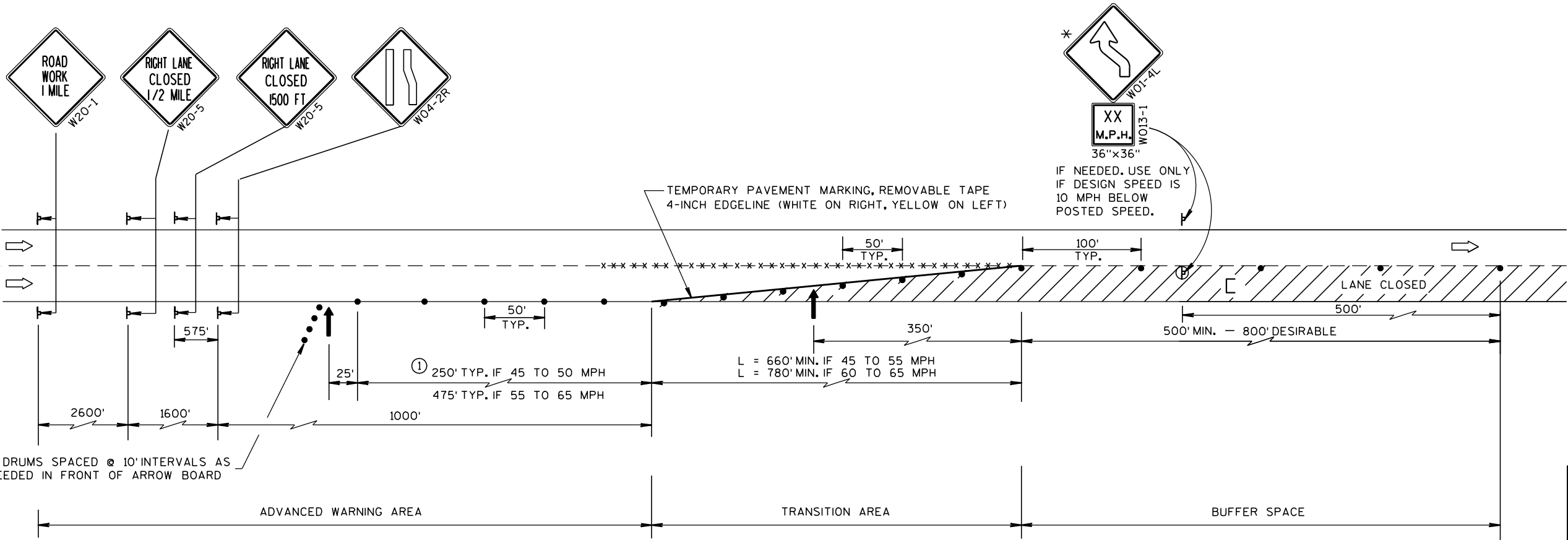
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

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

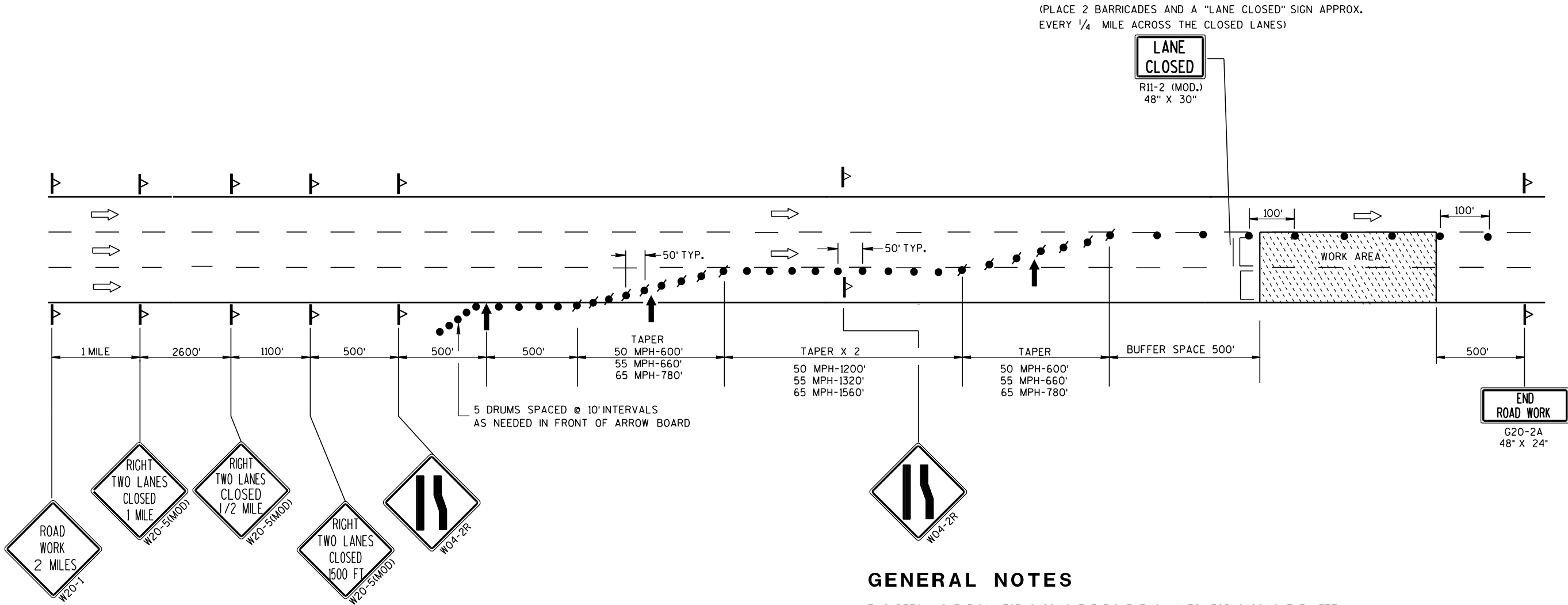
- \* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
8-7-95  
DATE /S/ Chester J. Spang  
DIRECTOR, OFFICE OF TRAFFIC  
FHWA



- LEGEND
- /● DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY BURN)
  - └ SIGN ON POST OR PORTABLE SUPPORT
  - ↑ FLASHING ARROW BOARD
  - ||/|| TYPE III BARRICADE (8' EQUIVALENT) WITH/WITHOUT SIGN
  - DIRECTION OF TRAFFIC FLOW

### GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT TWO LANES. FOR CLOSING THE LEFT TWO LANES, REVERSE THE TRAFFIC CONTROL.

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

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

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

"WO" SIGNS ARE THE SAME AS "W" SIGNS 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.

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

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

WHEN A RAMP OR SIDE ROAD INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

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.

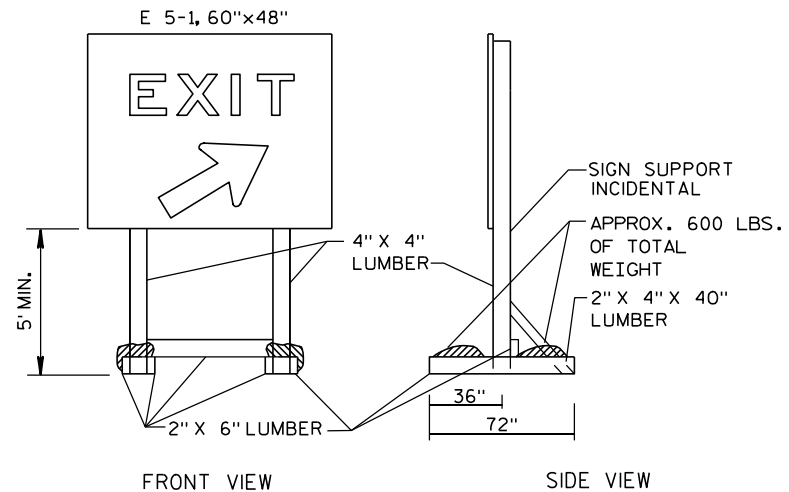
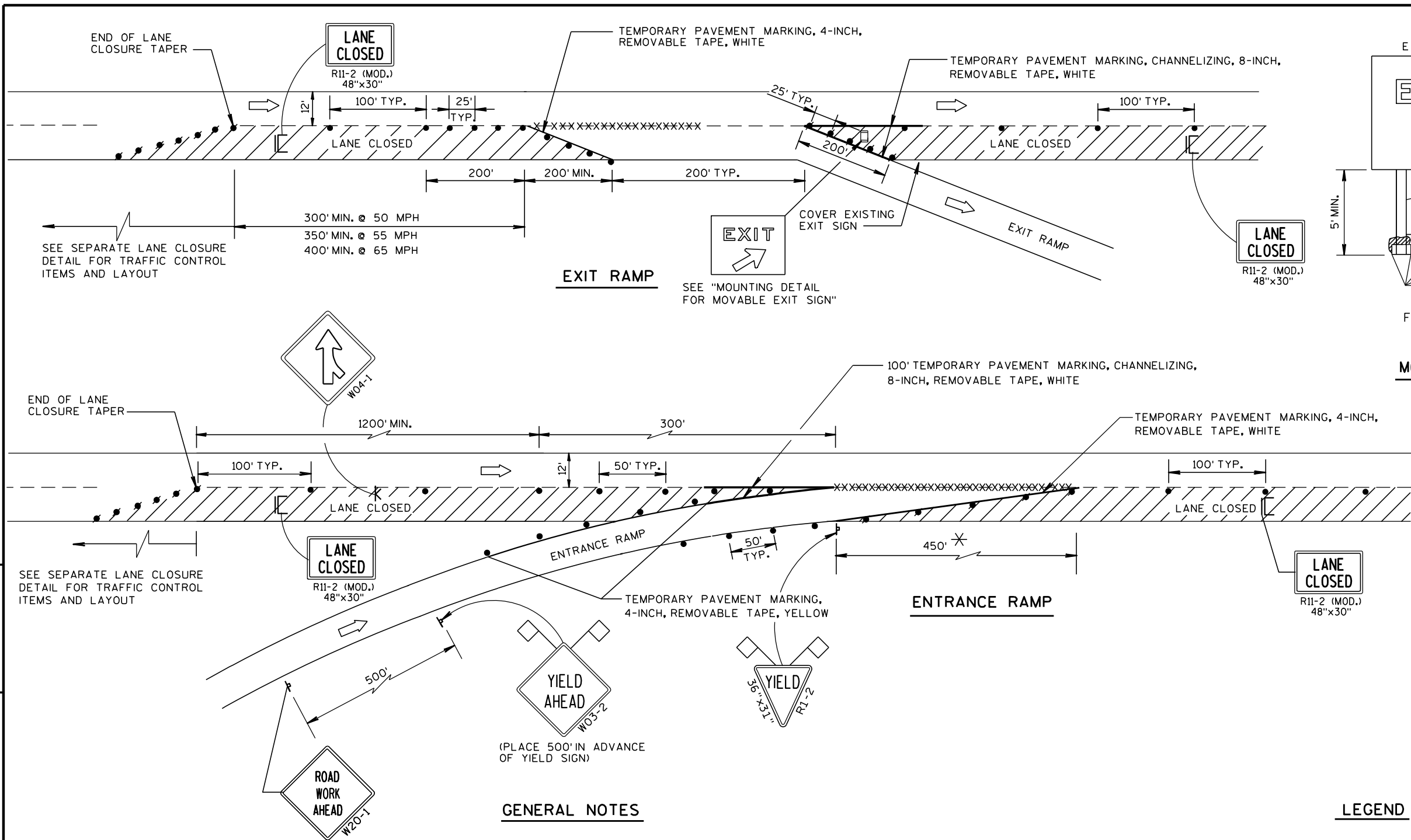
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

TRAFFIC CONTROL,  
TWO LANE CLOSURE ON  
FREEWAY OR EXPRESSWAY,  
SHORT-TERM (LESS THAN 24 HOURS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
5/23/2000 DATE /S/ Chester J. Spang  
CHIEF SIGNS AND MARKING ENGINEER  
FHWA



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL  
**MOUNTING DETAIL FOR MOVABLE EXIT SIGN**

### GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2 (MOD.) "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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

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

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

\* LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

### LEGEND

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

### TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
5/24/2000 DATE /S/ Chester J. Spang  
CHIEF SIGNS AND MARKING ENGINEER  
FHWA

## SYMBOLS

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

## GENERAL NOTES

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

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

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

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

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

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

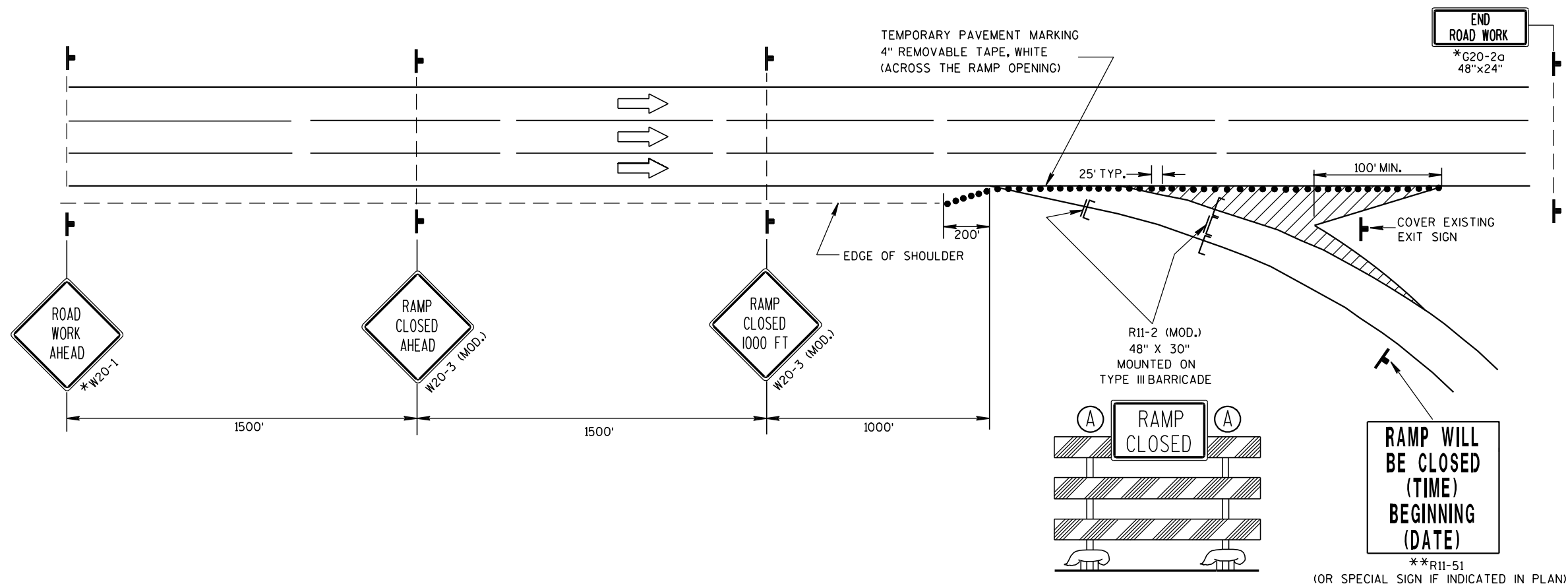
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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

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

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

TRAFFIC CONTROL,  
EXIT RAMP CLOSURE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/2000

DATE

FHWA

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

SYMBOLS

- TRAFFIC CONTROL DRUM
- ┐ POST MOUNTED SIGN
- ➡ DIRECTION OF TRAFFIC FLOW
- ⏏ ARROW BOARD IN CAUTION MODE

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

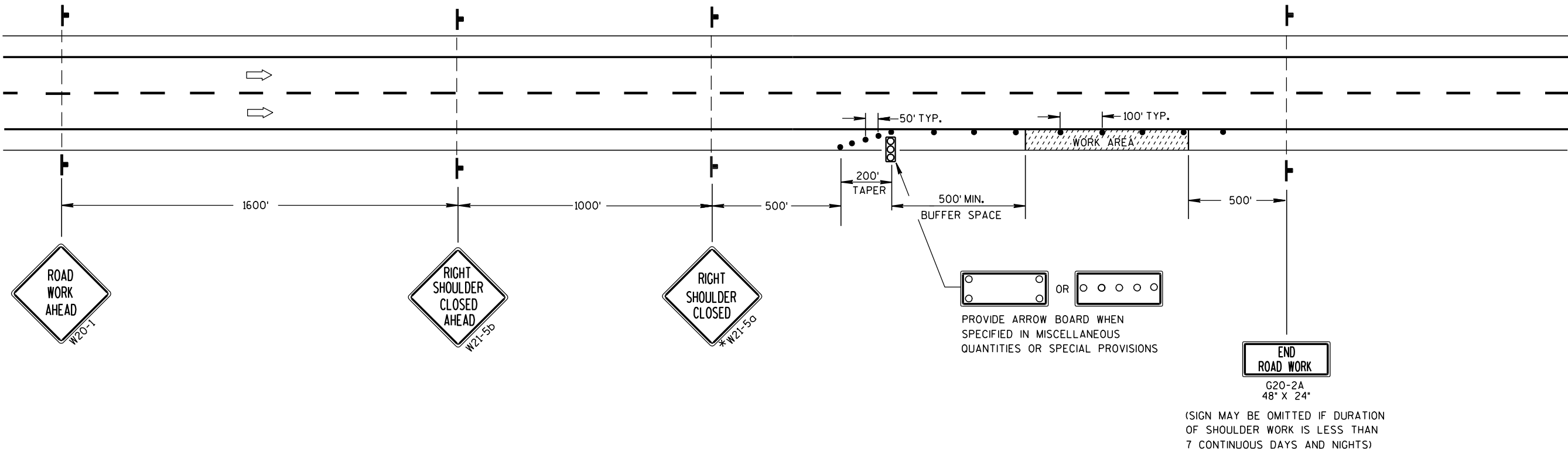
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

\*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL  
SHOULDER CLOSURE ON DIVIDED  
ROADWAY, SPEEDS GREATER  
THAN 40 MPH

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
5/23/00 /S/ Chester J. Spang  
DATE CHIEF SIGNS AND MARKING ENGINEER  
FHWA

## DESIGN DATA

## LIVE LOAD:

DESIGN LOADING: HS-20  
 INVENTORY RATING: HS-18  
 OPERATING RATING: HS-30  
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 210 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING  
 SURFACE OF 20 "/S.F.

## ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY {SLAB / ALL OTHER  $f'_c$  = 4,000 p.s.i.  
 HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)  $f_y$  = 60,000 p.s.i.

HIGH STRENGTH STRUCTURAL STEEL  
 EXISTING 1961 GIRDERS ③ - ④ (ASTM A36)  $f'_y$  = 33,000 p.s.i.  
 EXISTING 1984 GIRDERS ① - ② (ASTM A572)  $f'_y$  = 50,000 p.s.i.

## TRAFFIC DATA:

USH 151  
 A.D.T. = 51,300 (2014)  
 A.D.T. = 65,200 (2034)  
 R.D.S. = 55 M.P.H.

IH 39  
 A.D.T. = 52,400 (2014)  
 A.D.T. = 68,400 (2034)  
 R.D.S. = 70 M.P.H.

## LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTIONS
3. QUANTITIES AND NOTES
4. NORTH ABUTMENT
5. NORTH ABUTMENT WING 1 DETAILS
6. NORTH ABUTMENT WING 2 DETAILS
7. NORTH ABUTMENT DETAILS
8. SOUTH ABUTMENT
9. SOUTH ABUTMENT WING 3 DETAILS
10. SOUTH ABUTMENT WING 4 DETAILS
11. SOUTH ABUTMENT DETAILS
12. EXPANSION JOINT DETAILS AT ABUTMENTS
13. EXPANSION JOINT DETAILS AT ABUTMENTS
14. EXPANSION JOINT DETAILS AT PIERS
15. EXPANSION JOINT DETAILS AT PIERS
16. DECK ELEVATIONS
17. TABLE OF DEFLECTIONS
18. SUPERSTRUCTURE
19. SUPERSTRUCTURE PLAN
20. SUPERSTRUCTURE TRANSVERSE  
SLAB STEEL LAYOUT
21. SUPERSTRUCTURE BILL OF BARS
22. SINGLE SLOPE PARAPET 42SS

○ DENOTES WING NUMBER

PLAN  
 4 SPAN WELDED STEEL PLATE GIRDER BRIDGE

ELEVATION  
 (NORMAL TO USH 151)

BRIDGE OFFICE CONTACT:  
 WILLIAM DREHER  
 (608)-266-8489

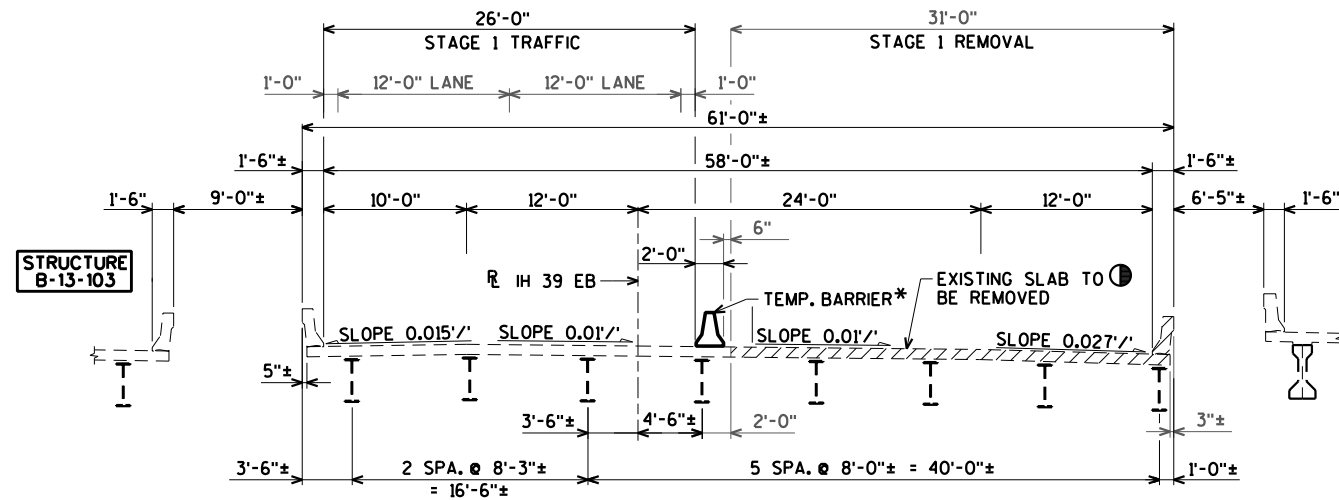
CONSULTANT CONTACT:  
 CHRIS MCMAHON  
 (715)-834-3161



| NO.                                                                                                      | DATE                                                         | REVISION          | BY                             |
|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|-------------------|--------------------------------|
| ORIGINAL PLANS PREPARED BY                                                                               |                                                              |                   |                                |
| <b>AYRES ASSOCIATES</b><br>3433 Oakwood Hills Parkway<br>Eau Claire, WI 54701<br>www.AyresAssociates.com |                                                              |                   |                                |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                                                       |                                                              |                   |                                |
| ACCEPTED                                                                                                 | <i>William C. Dreher</i><br>CHIEF STRUCTURES DESIGN ENGINEER |                   | KAR<br><b>08/12/13</b><br>DATE |
| <b>STRUCTURE B-13-102</b>                                                                                |                                                              |                   |                                |
| IH 39 EB OVER USH 151                                                                                    |                                                              |                   |                                |
| COUNTY                                                                                                   | DANE                                                         | TOWN/CITY/VILLAGE | BURKE                          |
| DESIGN SPEC.                                                                                             | REHABILITATION                                               | N/A               |                                |
| DESIGNED BY                                                                                              | CJM                                                          | DESIGN CK'D.      | AEB                            |
| DRAWN BY                                                                                                 | CJM                                                          | PLANS CK'D.       | CBM                            |
| <b>GENERAL PLAN</b>                                                                                      |                                                              |                   | SHEET 1 OF 22                  |

11X17-5200.plt  
 B-13-102\_gdrehab.dgn

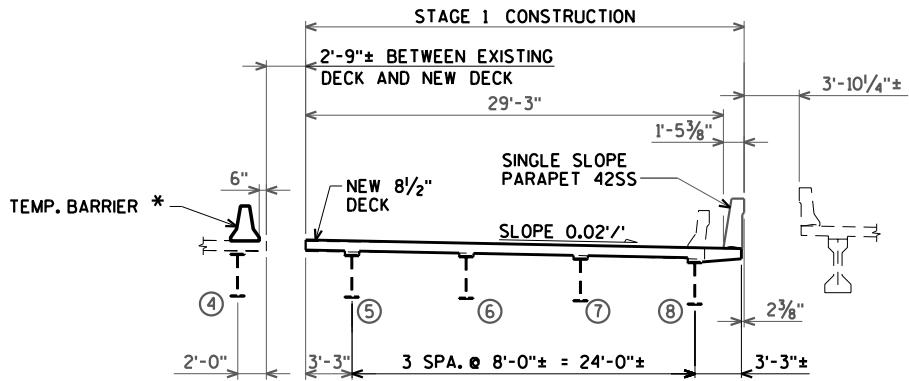
DATE: 4/21/13  
 DATE:  
 DATE:  
 CHECKED BY: CBM  
 BACK CHECKED BY:  
 CORRECTED BY:



B-13-102 STAGE 1 TRAFFIC AND REMOVAL

(LOOKING SOUTH)

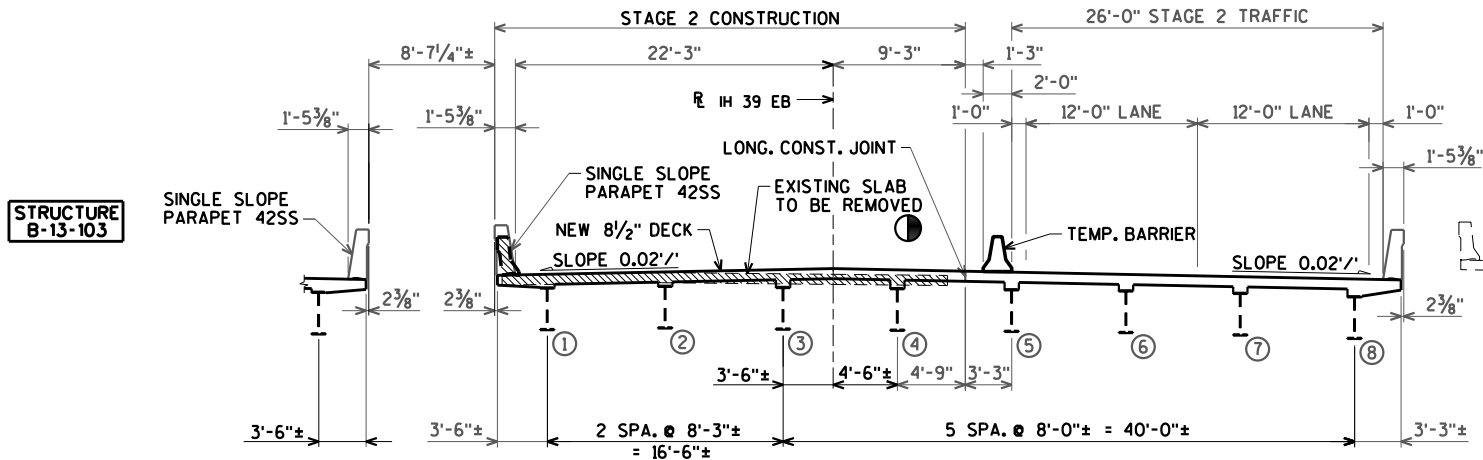
\* TEMPORARY BARRIER TO BE ANCHORED TO THE DECK.



B-13-102 STAGE 1 CONSTRUCTION

(LOOKING SOUTH)

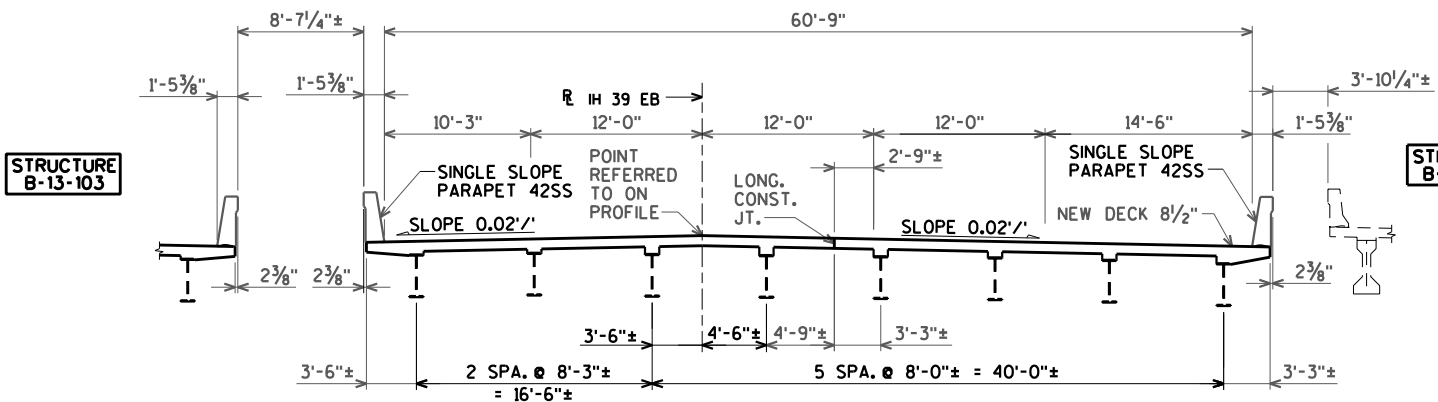
\* TEMPORARY BARRIER TO BE ANCHORED TO THE DECK.



B-13-102 STAGE 2 CONSTRUCTION AND TRAFFIC

(LOOKING SOUTH)

① WEST SIDE OF THE EXISTING DECK VARIES BETWEEN 6 1/8-INCHES AND 7-INCHES WITH A 1/2-INCH MINIMUM OVERLAY THICKNESS ON TOP. THE EAST SIDE OF THE EXISTING DECK IS 7 1/2-INCHES WITH A 1/2-INCH MINIMUM OVERLAY THICKNESS ON TOP. THE ENTIRE DECK ALSO HAS AN ASPHALTIC OVERLAY THAT WAS PLACED ON THE DECK.



B-13-102 CROSS SECTION THRU FINAL DECK

(LOOKING SOUTH)

ecp.dwg.plt  
B-13-102 gpREHAB.dgn

| NO.                                                | DATE | REVISION        | BY            |
|----------------------------------------------------|------|-----------------|---------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                 |               |
| STRUCTURE B-13-102                                 |      |                 |               |
| DRAWN BY CJM                                       |      | PLANS CK'D. CBM |               |
| TYPICAL SECTIONS                                   |      |                 | SHEET 2 OF 22 |

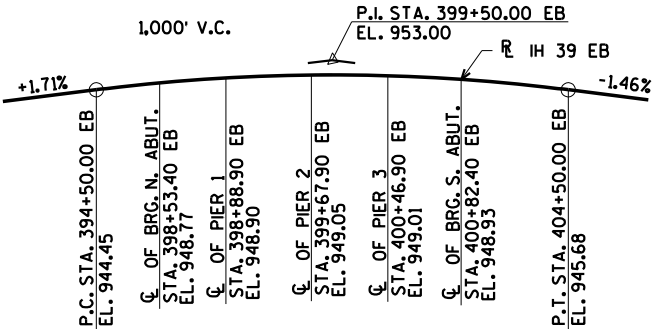
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\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Done County\B-13-102\BRIDGE\B-13-102 gpREHAB.dgn

TOTAL ESTIMATED QUANTITIES

| BID ITEM NUMBER | BID ITEMS                                       | UNIT | N. ABUT. | PIER 1 | PIER 2 | PIER 3 | S. ABUT. | SUPER.  | TOTAL       |
|-----------------|-------------------------------------------------|------|----------|--------|--------|--------|----------|---------|-------------|
| 203.0200        | REMOVING OLD STRUCTURE STATION 399+67.90 EB     | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 203.0225.S.01   | DEBRIS CONTAINMENT STRUCTURE B-13-102           | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 206.1000        | EXCAVATION FOR STRUCTURES BRIDGES B-13-102      | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 210.0100        | BACKFILL STRUCTURE                              | CY   | 5        | -----  | -----  | -----  | 5        | -----   | 10          |
| 502.0100        | CONCRETE MASONRY BRIDGES                        | CY   | 15       | -----  | -----  | -----  | 14       | 502     | 531         |
| 502.3100        | EXPANSION DEVICE B-13-102                       | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 502.3200        | PROTECTIVE SURFACE TREATMENT                    | SY   | 15       | -----  | -----  | -----  | 15       | 1,795   | 1,825       |
| 502.5005        | MASONRY ANCHOR TYPE L NO. 5 BARS                | EACH | 186      | -----  | -----  | -----  | 182      | -----   | 368         |
| 505.0605        | BAR STEEL REINFORCEMENT HS COATED BRIDGES       | LB   | 2,600    | -----  | -----  | -----  | 2,510    | 113,530 | 118,640     |
| 509.1500        | CONCRETE SURFACE REPAIR                         | SF   | 50       | 100    | 50     | 100    | 50       | -----   | 350         |
| 516.0500        | RUBBERIZED MEMBRANE WATERPROOFING               | SY   | 15       | -----  | -----  | -----  | 15       | -----   | 30          |
| 517.0900.S.01   | PREPARATION AND COATING OF TOP FLANGES B-13-102 | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 604.9015.S      | RESEAL CRUSHED AGGREGATE SLOPE PAVING           | SY   | 260      | -----  | -----  | -----  | 260      | -----   | 520         |
| SPV.0105.01     | FIBER WRAP PIER REINFORCING B-13-102            | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
|                 | NON-BID ITEMS                                   |      |          |        |        |        |          |         |             |
|                 | FILLER                                          | SIZE | -----    | -----  | -----  | -----  | -----    | -----   | 1/2" & 3/4" |
|                 | BRIDGE SEAT PROTECTION                          |      |          |        |        |        |          |         |             |

- ALSO REMOVE EXISTING DRAINS THAT WERE PREVIOUSLY PLUGGED WITH CONCRETE.
- UNDISTRIBUTED QUANTITY FOR REPAIRS AS DIRECTED BY THE ENGINEER, IF NECESSARY.



PROFILE GRADE LINE  
IH 39 EB

BENCH MARK:  
WISDOT ALUM. CAP ON BRIDGE SE WING WALL  
STA. 400+40 WB, 81' LT.  
EL. 950.22

GENERAL NOTES

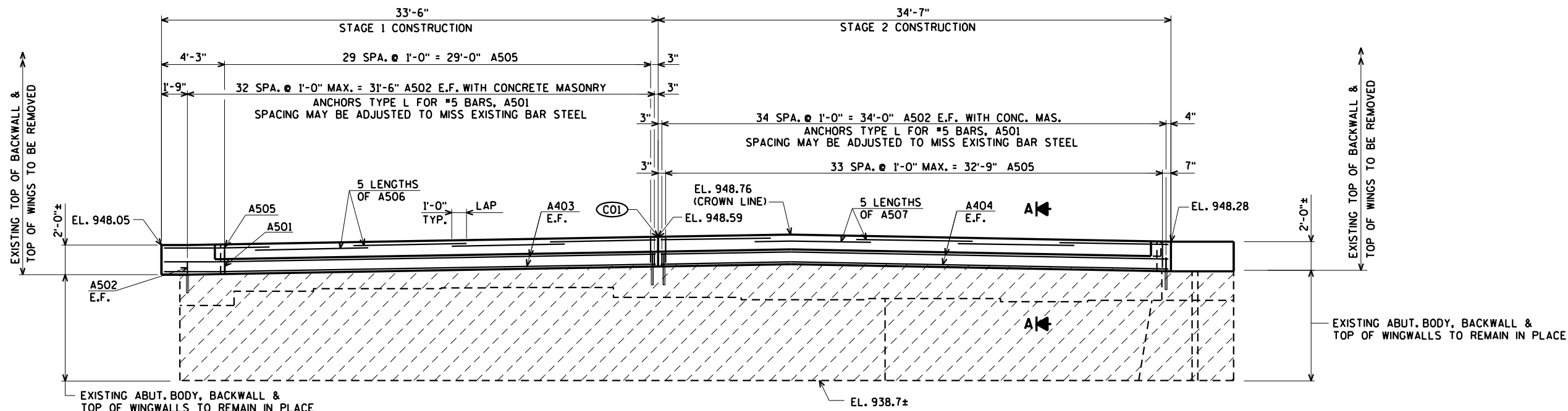
- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
- THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.
- THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.
- AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.
- PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF DECK AND TOP AND INSIDE FACES OF PARAPETS.
- UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.
- DIMENSIONS ARE BASED ON ORIGINAL PLANS.
- ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.
- ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS UNLESS SHOWN OR NOTED OTHERWISE.
- VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.
- THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR.
- ORIGINAL CONSTRUCTION YEAR IS 1961.
- JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.
- APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF ALL ABUTMENTS AND PIERS BELOW EXPANSION DEVICES.

|                                                    |      |          |                 |
|----------------------------------------------------|------|----------|-----------------|
|                                                    |      |          |                 |
| NO.                                                | DATE | REVISION | BY              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CJM      | PLANS CK'D. CBM |
| QUANTITIES AND NOTES                               |      |          | SHEET 3 OF 22   |

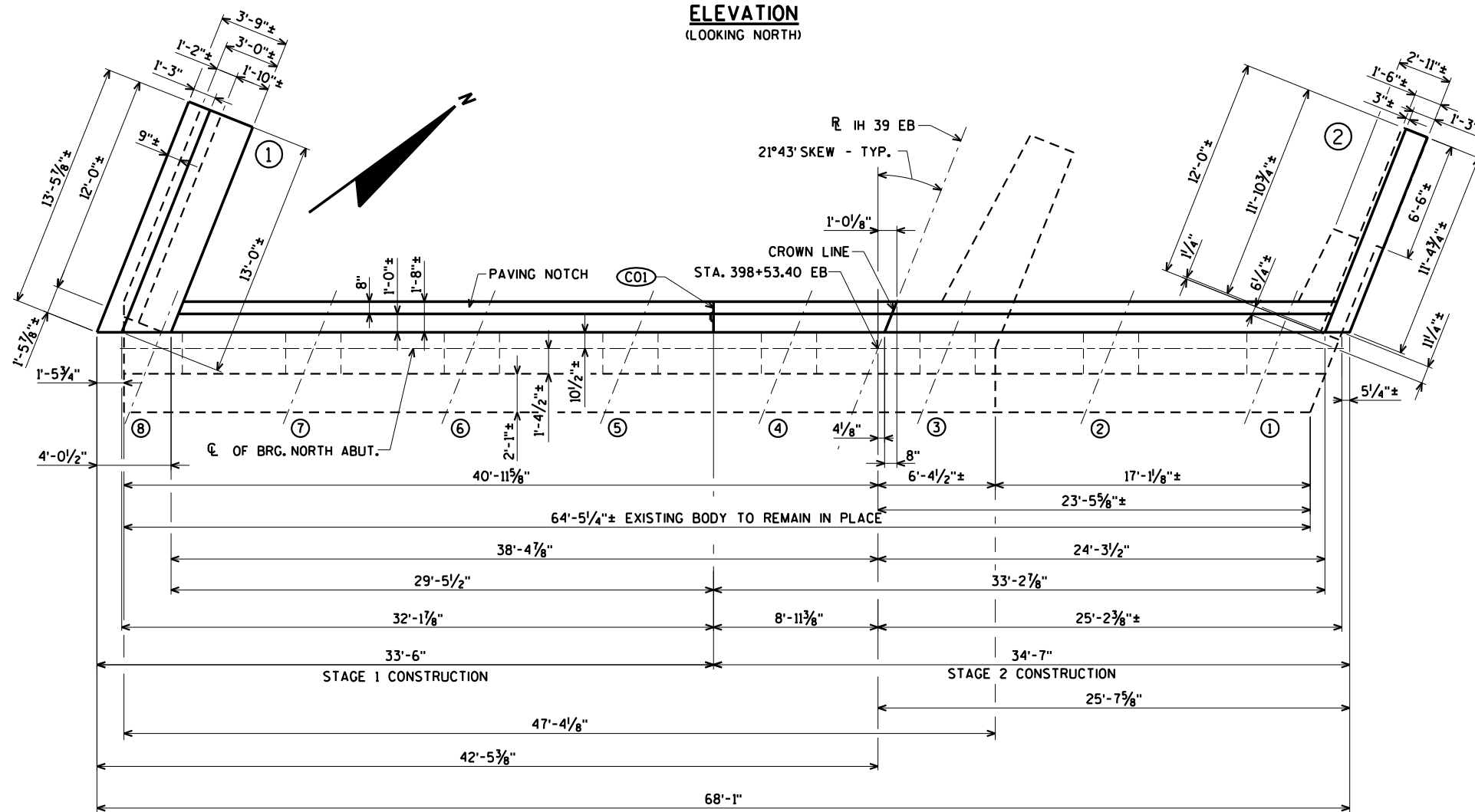
ORIGINAL PLANS PREPARED BY

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Eau Claire, WI 54701  
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FOR SECTION "A" SEE  
SHEET 7



(C01) VERT. CONST. JOINT KEYWAY FORMED  
BY A BEVELED 2" x 8" WITH  
A 3/4" 'V' GROOVE ON FRONT FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 5 THRU 7

| NO. | DATE | REVISION | BY |
|-----|------|----------|----|
|     |      |          |    |

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-102

DRAWN BY CLS PLANS CK'D. CBM

NORTH  
ABUTMENT

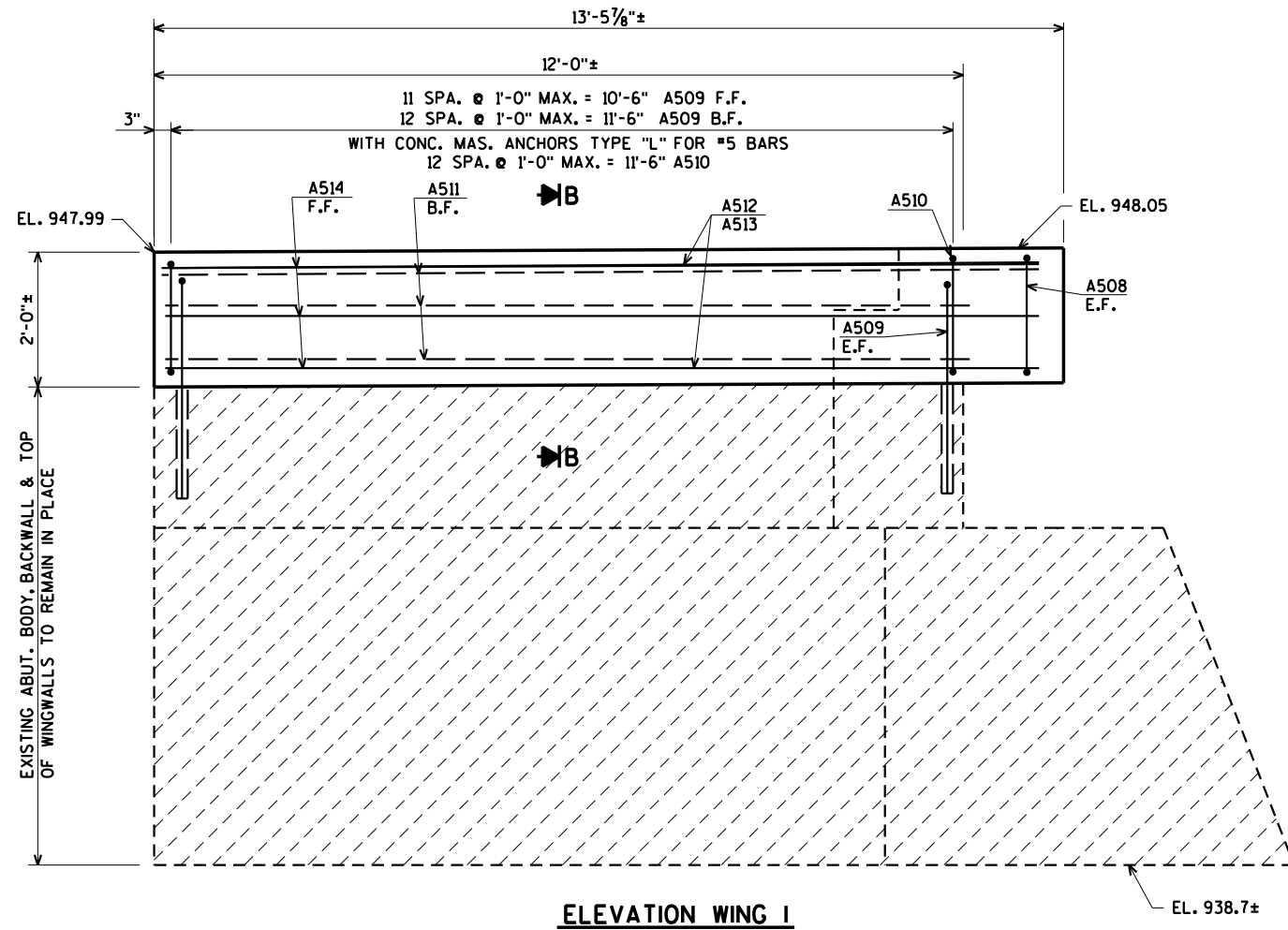
SHEET 4 OF 22

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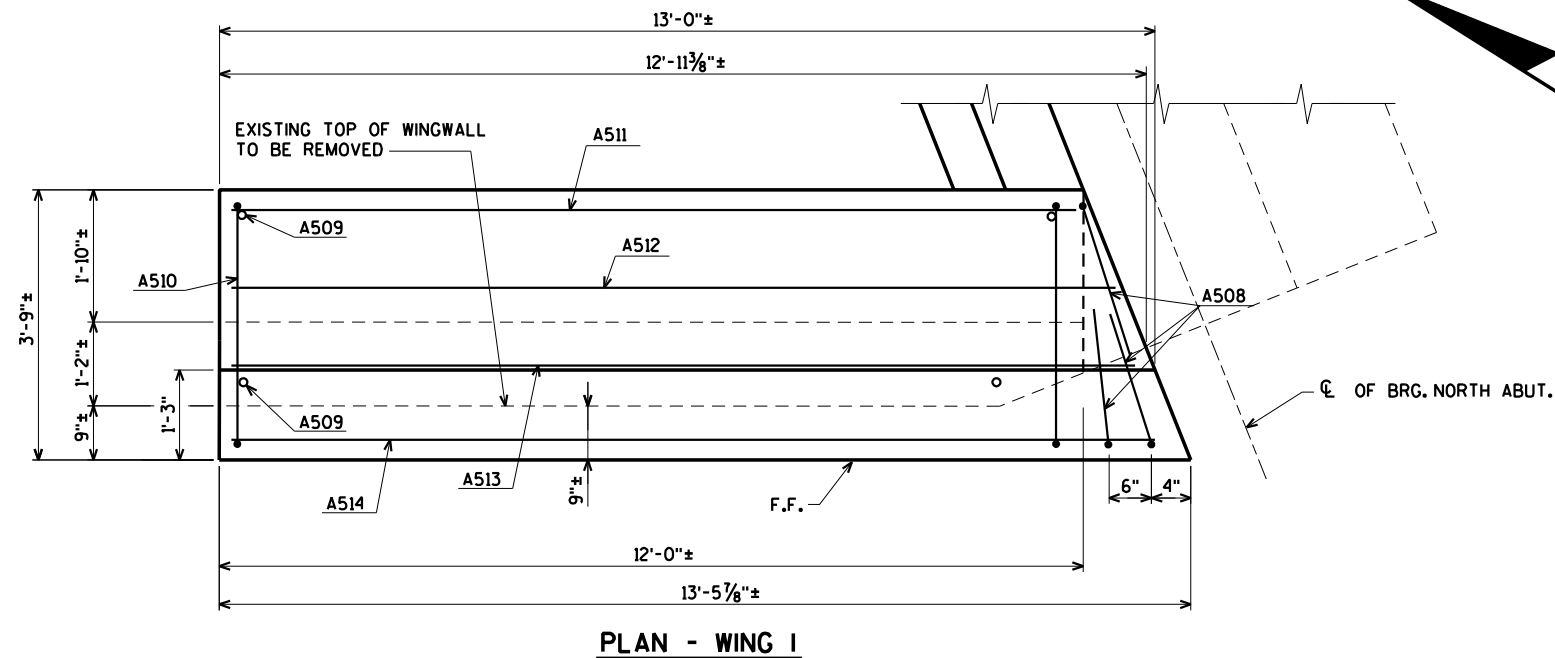
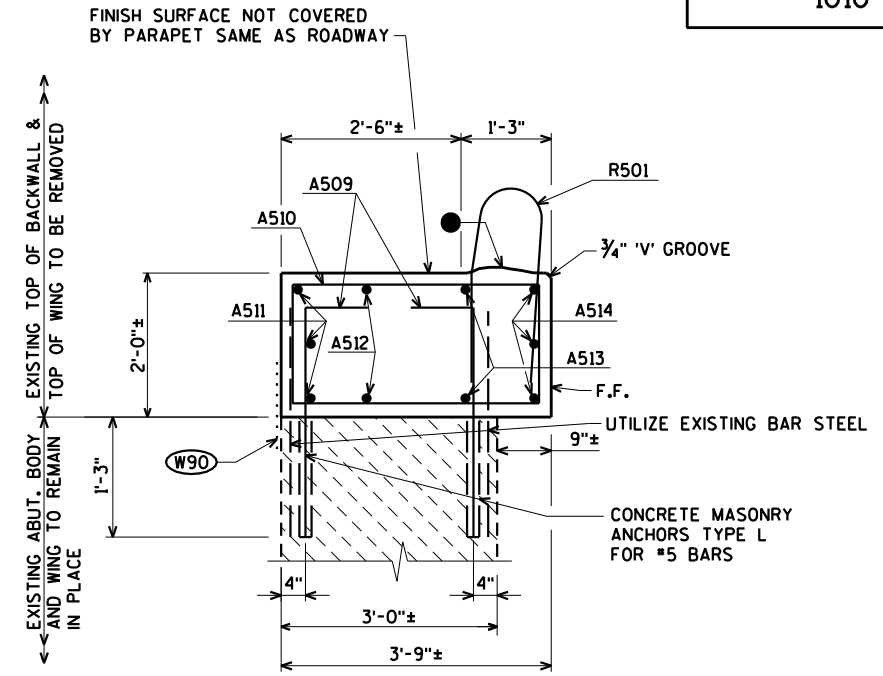
\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-102\BRIDGE\B-13-102 na.dgn

STATE PROJECT NUMBER

1010-02-79



SINGLE SLOPE PARAPET 42SS  
NOT SHOWN FOR DETAILS  
SEE SHEET 22.



(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 4, 6 & 7

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
|                                                    |      |          |                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. CBM |
| NORTH ABUTMENT<br>WING 1 DETAILS                   |      |          | SHEET 5 OF 22   |

ORIGINAL PLANS PREPARED BY

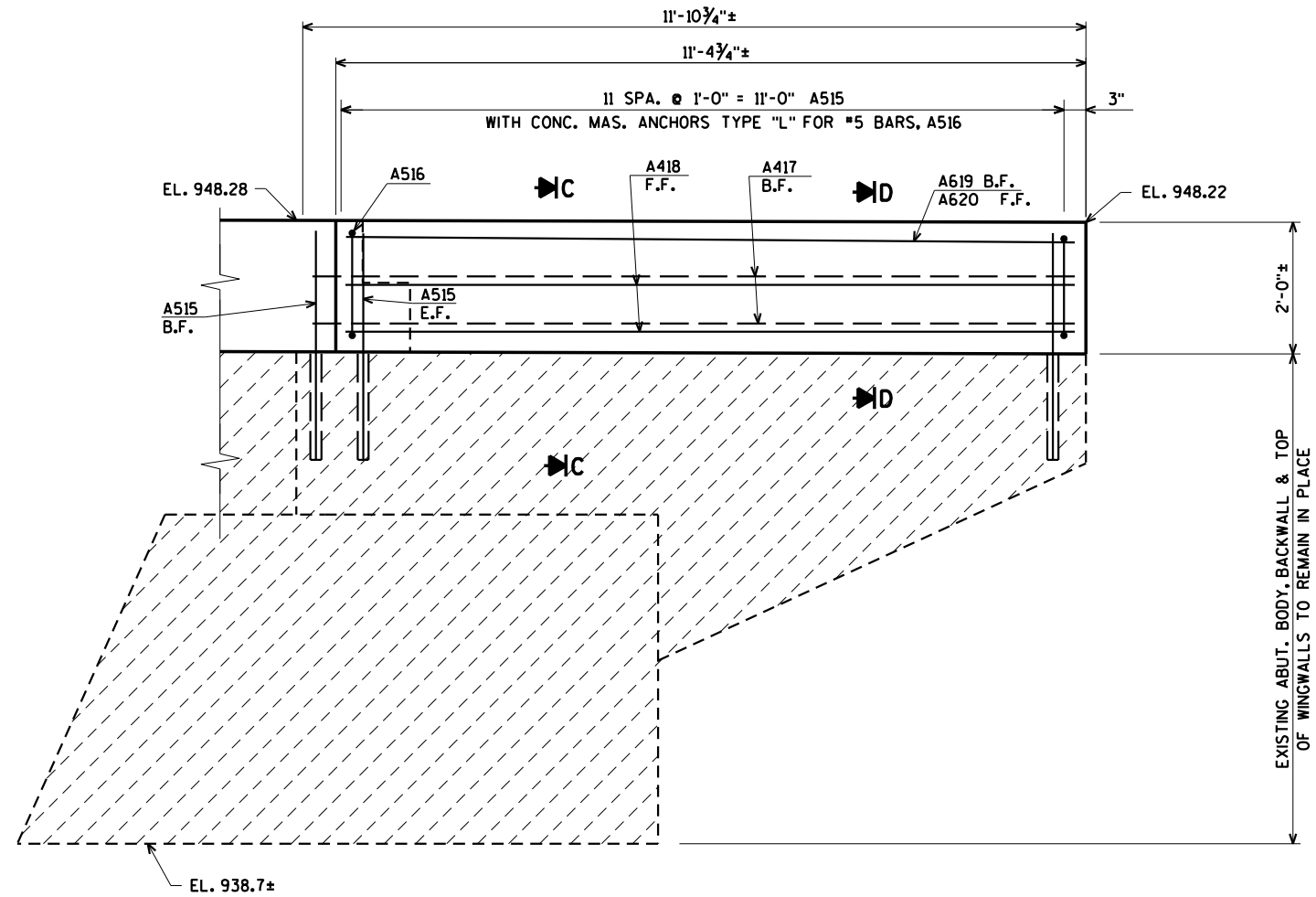
**AYRES ASSOCIATES**

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Eau Claire, WI 54701  
www.AyresAssociates.com

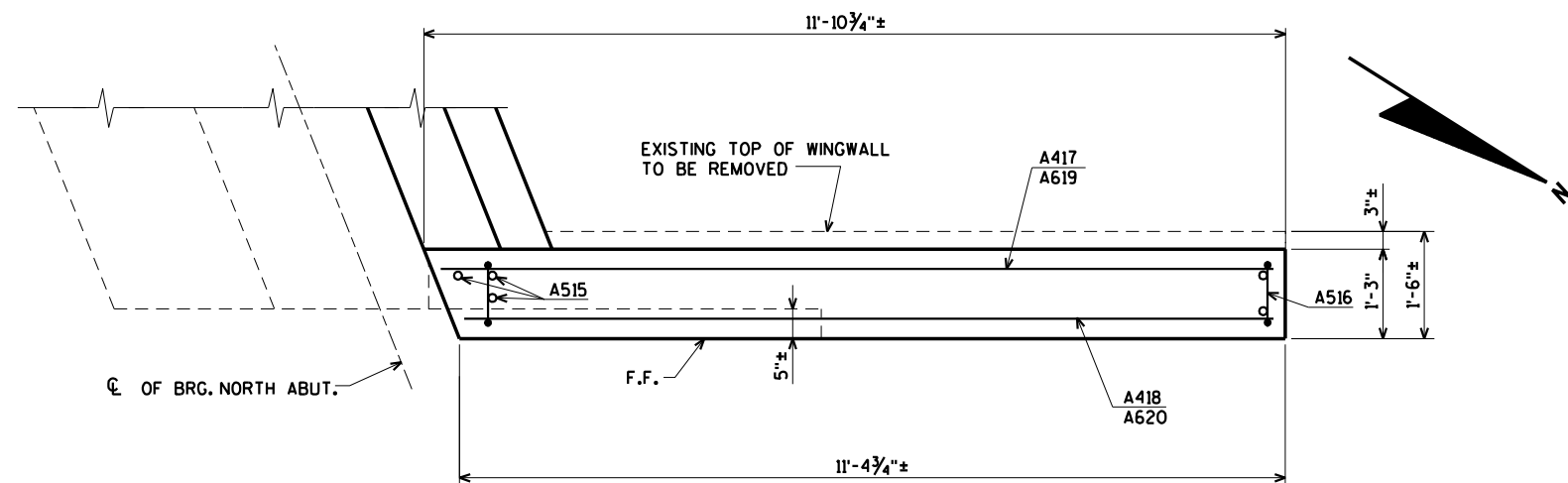
\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-102\BRIDGE\B-13-102 na.dgn

STATE PROJECT NUMBER

1010-02-79

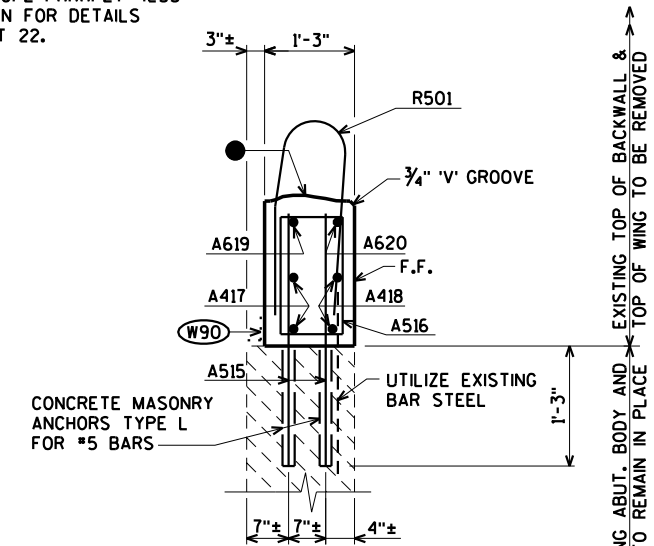


ELEVATION WING 2

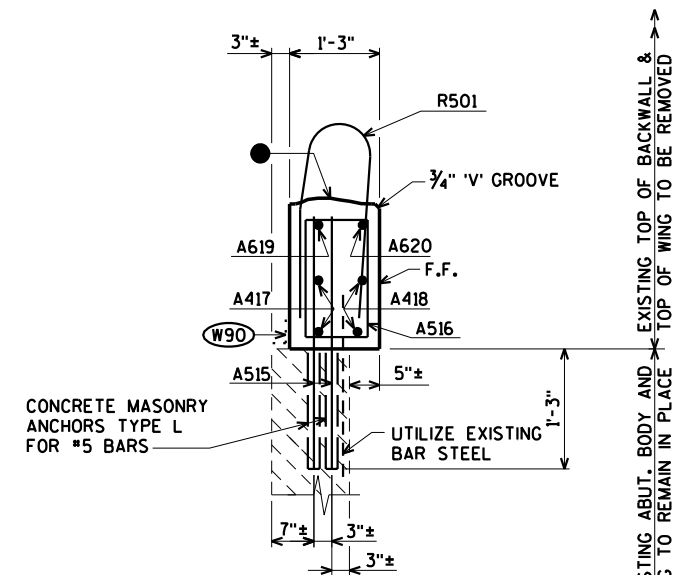


PLAN - WING 2

SINGLE SLOPE PARAPET 42SS  
NOT SHOWN FOR DETAILS  
SEE SHEET 22.



SECTION D



SECTION C

(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING  
SEAL ALL HORIZONTAL AND VERTICAL JOINTS  
ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

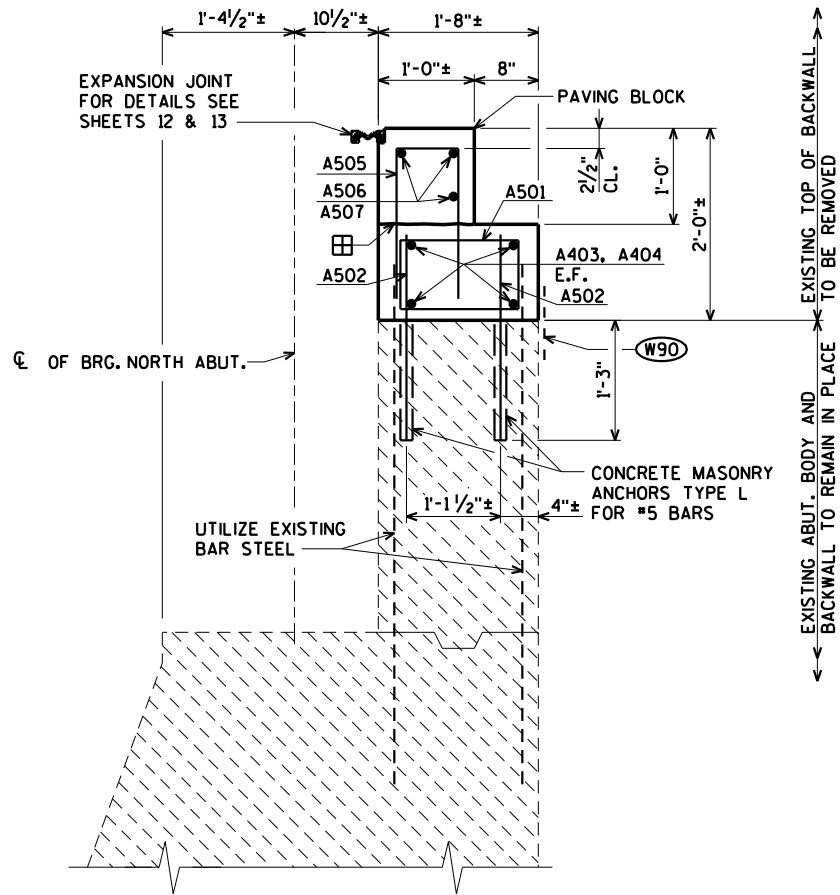
ORIGINAL PLANS PREPARED BY  
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Eau Claire, WI 54701  
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WORK THIS SHEET WITH SHEETS 4, 5, & 7

| NO.                                                | DATE | REVISION       | BY            |
|----------------------------------------------------|------|----------------|---------------|
|                                                    |      |                |               |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                |               |
| STRUCTURE B-13-102                                 |      |                |               |
| DRAWN<br>BY                                        | CLS  | PLANS<br>CK'D. | CBM           |
| NORTH ABUTMENT<br>WING 2 DETAILS                   |      |                | SHEET 6 OF 22 |

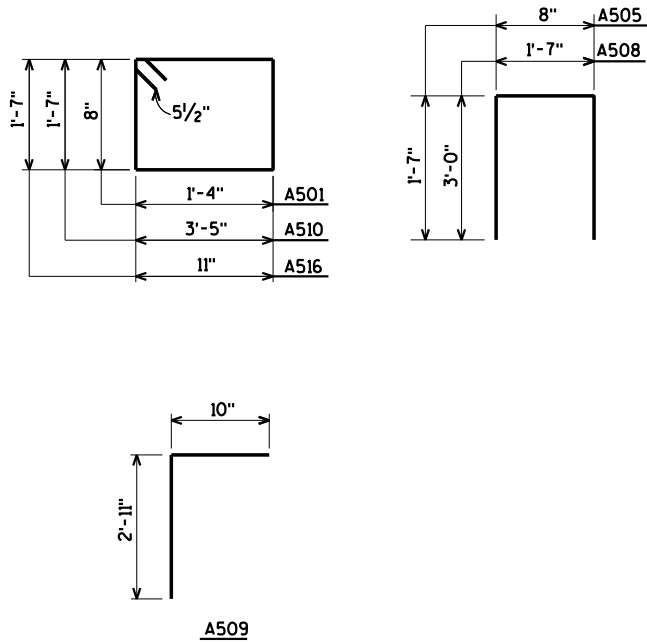
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8



### SECTION A

FOR LOCATION OF SECTION "A"  
SEE SHEET 4.



### BILL OF BARS

WEIGHT INCLUDES PARAPET STEEL  
SHOWN ON SHEET 22

| BAR NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED | BAR SERIES | 2,600# COATED                          |
|---------|------------|------------|--------|----------|---------|------------|----------------------------------------|
|         |            |            |        |          |         |            | LOCATION                               |
| A501    | X          | 68         | 4-8    | X        |         |            | BACKWALL VERT. STAGE 1 & 2             |
| A502    | X          | 136        | 2-1    |          |         |            | BACKWALL VERT. DOWELS E.F. STAGE 1 & 2 |
| A403    | X          | 4          | 32-6   |          |         |            | BACKWALL HORIZ. STAGE 1                |
| A404    | X          | 4          | 34-3   |          |         |            | BACKWALL HORIZ. STAGE 2                |
| A505    | X          | 64         | 3-8    | X        |         |            | BACKWALL PAVING BLOCK VERT.            |
| A506    | X          | 15         | 7-5    |          |         |            | PAVING BLOCK HORIZ. STAGE 1            |
| A507    | X          | 15         | 7-8    |          |         |            | PAVING BLOCK HORIZ. STAGE 2            |
| A508    | X          | 3          | 7-5    | X        |         |            | WING 1 AT BACKWALL STAGE 1             |
| A509    | X          | 25         | 3-8    | X        |         |            | WING 1 VERT. DOWELS E.F. STAGE 1       |
| A510    | X          | 13         | 10-8   | X        |         |            | WING 1 VERT. STAGE 1                   |
| A511    | X          | 3          | 11-8   |          |         |            | WING 1 HORIZ. B.F. STAGE 1             |
| A512    | X          | 2          | 12-1   |          |         |            | WING 1 HORIZ. STAGE 1                  |
| A513    | X          | 2          | 12-6   |          |         |            | WING 1 HORIZ. STAGE 1                  |
| A514    | X          | 3          | 12-11  |          |         |            | WING 1 HORIZ. F.F. STAGE 1             |
| A515    | X          | 25         | 3-1    |          |         |            | WING 2 VERT. DOWELS E.F. STAGE 2       |
| A516    | X          | 12         | 5-8    | X        |         |            | WING 2 VERT. STAGE 2                   |
| A417    | X          | 2          | 11-6   |          |         |            | WING 2 HORIZ. B.F. STAGE 2             |
| A418    | X          | 2          | 11-0   |          |         |            | WING 2 HORIZ. F.F. STAGE 2             |
| A619    | X          | 1          | 11-6   |          |         |            | WING 2 HORIZ. B.F. STAGE 2             |
| A620    | X          | 1          | 11-0   |          |         |            | WING 2 HORIZ. F.F. STAGE 2             |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

W90 18" RUBBERIZED MEMBRANE WATERPROOFING  
SEAL ALL HORIZONTAL AND VERTICAL JOINTS  
ON BACK FACE OF ABUTMENT.

CONST. JOINT - POUR CONCRETE ABOVE  
THIS JOINT AFTER SUPERSTRUCTURE IS IN  
PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

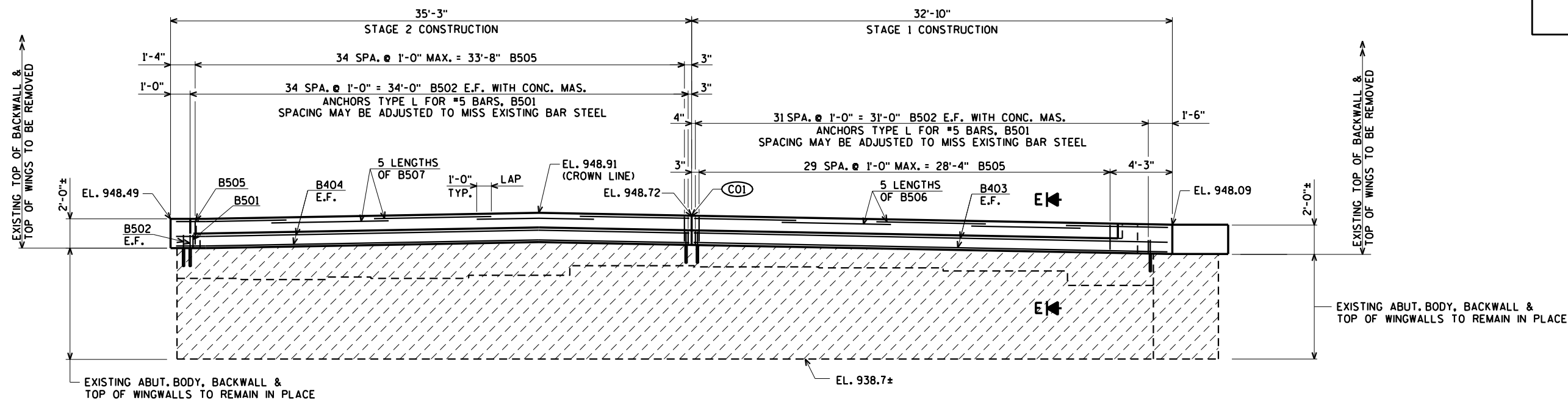
E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 4 THRU 6

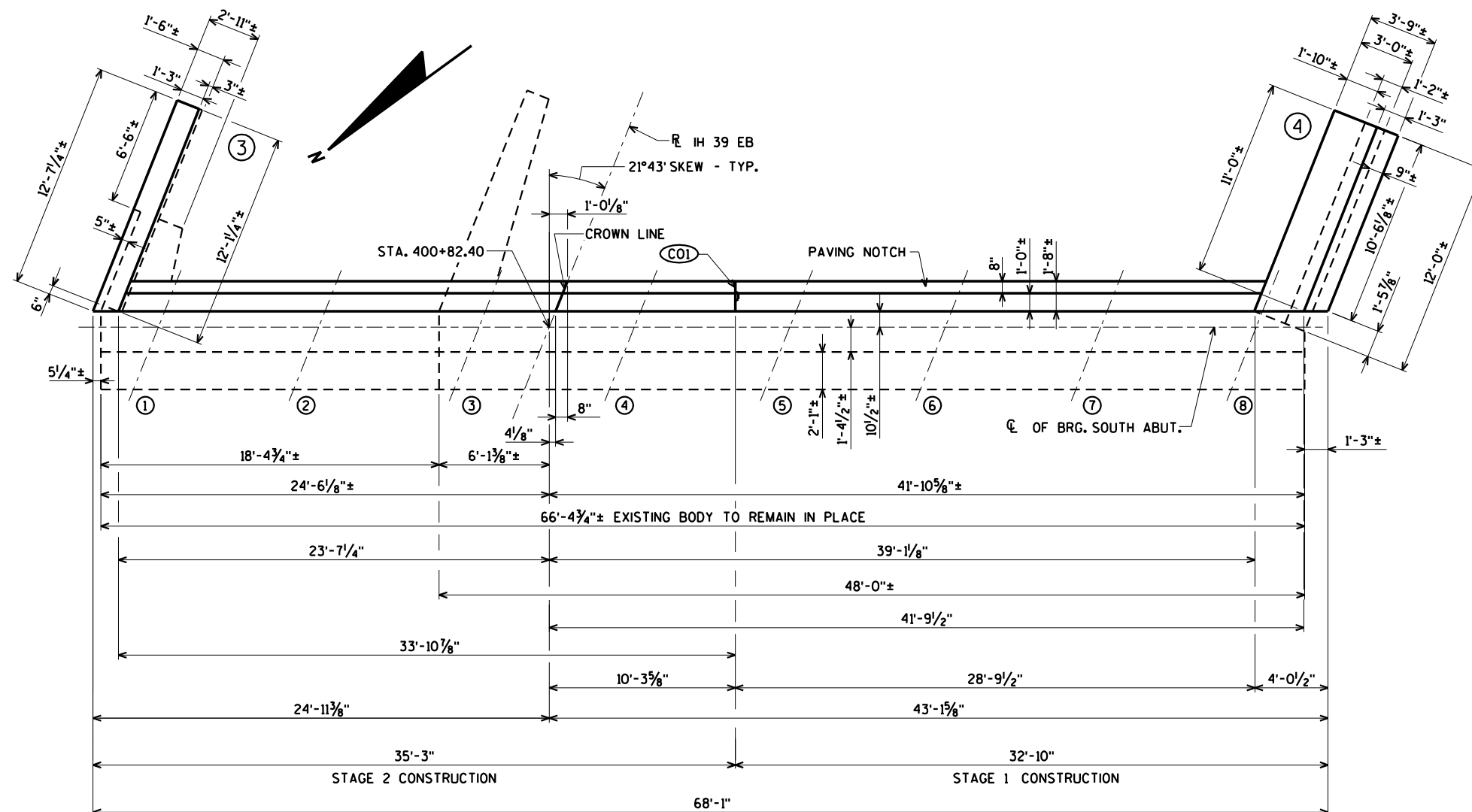
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|----------------------------------------------------|------|----------|-----------------|
|                                                    |      |          |                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. CBM |
| NORTH ABUTMENT<br>DETAILS                          |      |          | SHEET 7 OF 22   |

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8



FOR SECTION "E" SEE SHEET 11



(C01) VERT. CONST. JOINT KEYWAY FORMED BY A BEVELED 2" x 8" WITH A 3/4" 'V' GROOVE ON FRONT FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 9 THRU 11

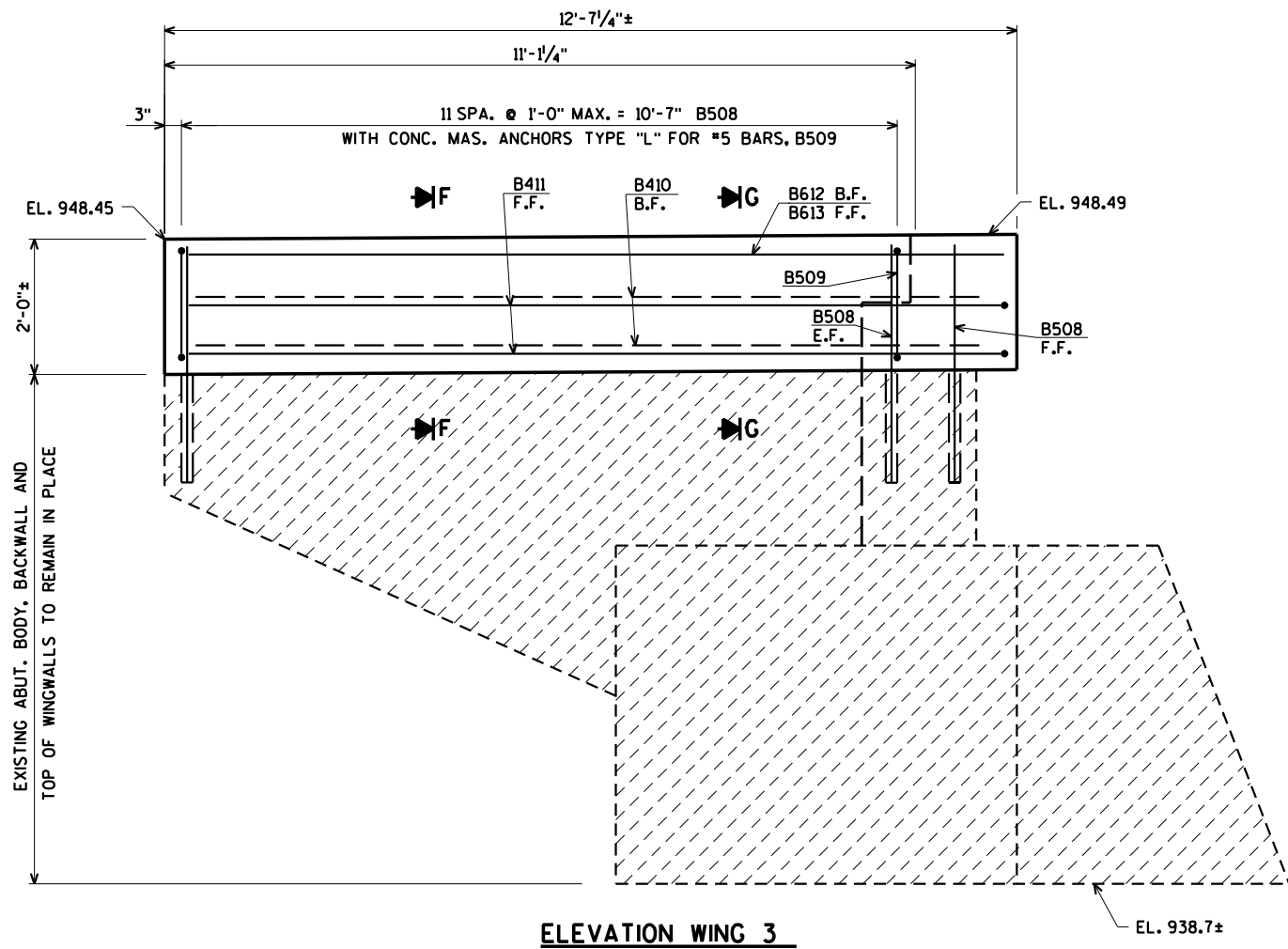
| NO.                                                | DATE | REVISION      | BY              |
|----------------------------------------------------|------|---------------|-----------------|
|                                                    |      |               |                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |               |                 |
| STRUCTURE B-13-102                                 |      |               |                 |
| DRAWN BY                                           |      | CLS           | PLANS CK'D. CBM |
| SOUTH ABUTMENT                                     |      | SHEET 8 OF 22 |                 |

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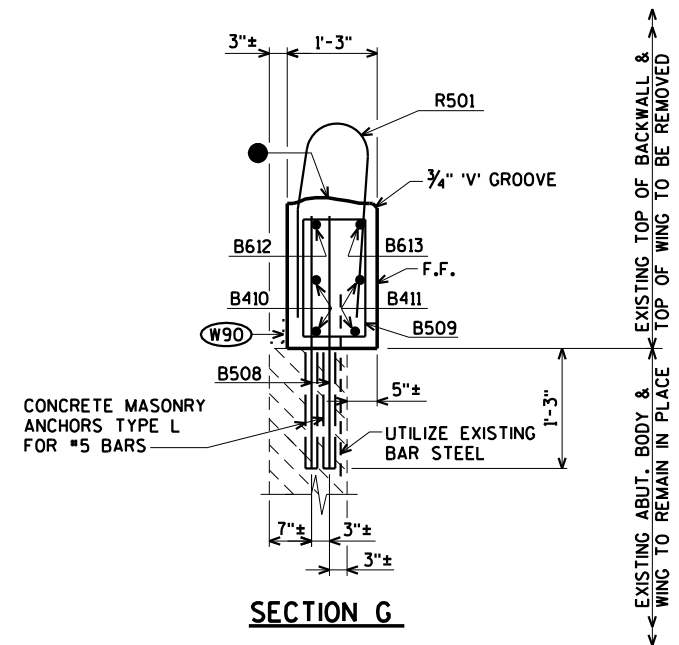
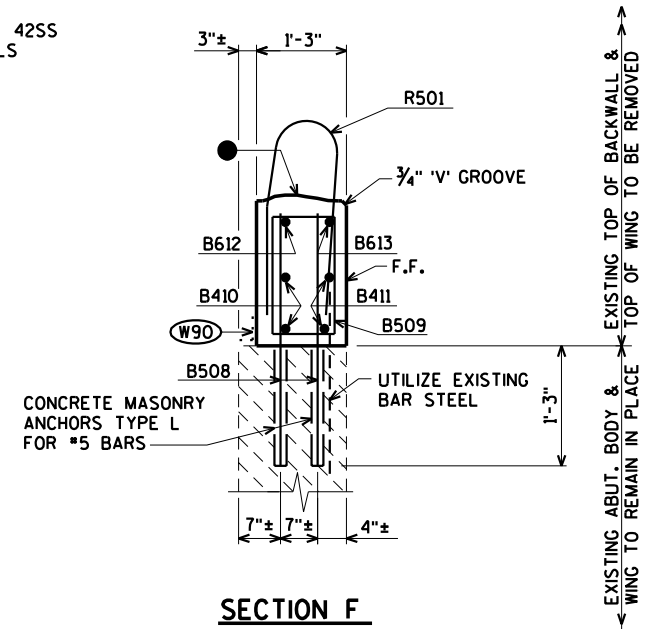
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STATE PROJECT NUMBER

1010-02-79



SINGLE SLOPE PARAPET 42SS  
NOT SHOWN FOR DETAILS  
SEE SHEET 22.



(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING  
SEAL ALL HORIZONTAL AND VERTICAL JOINTS  
ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

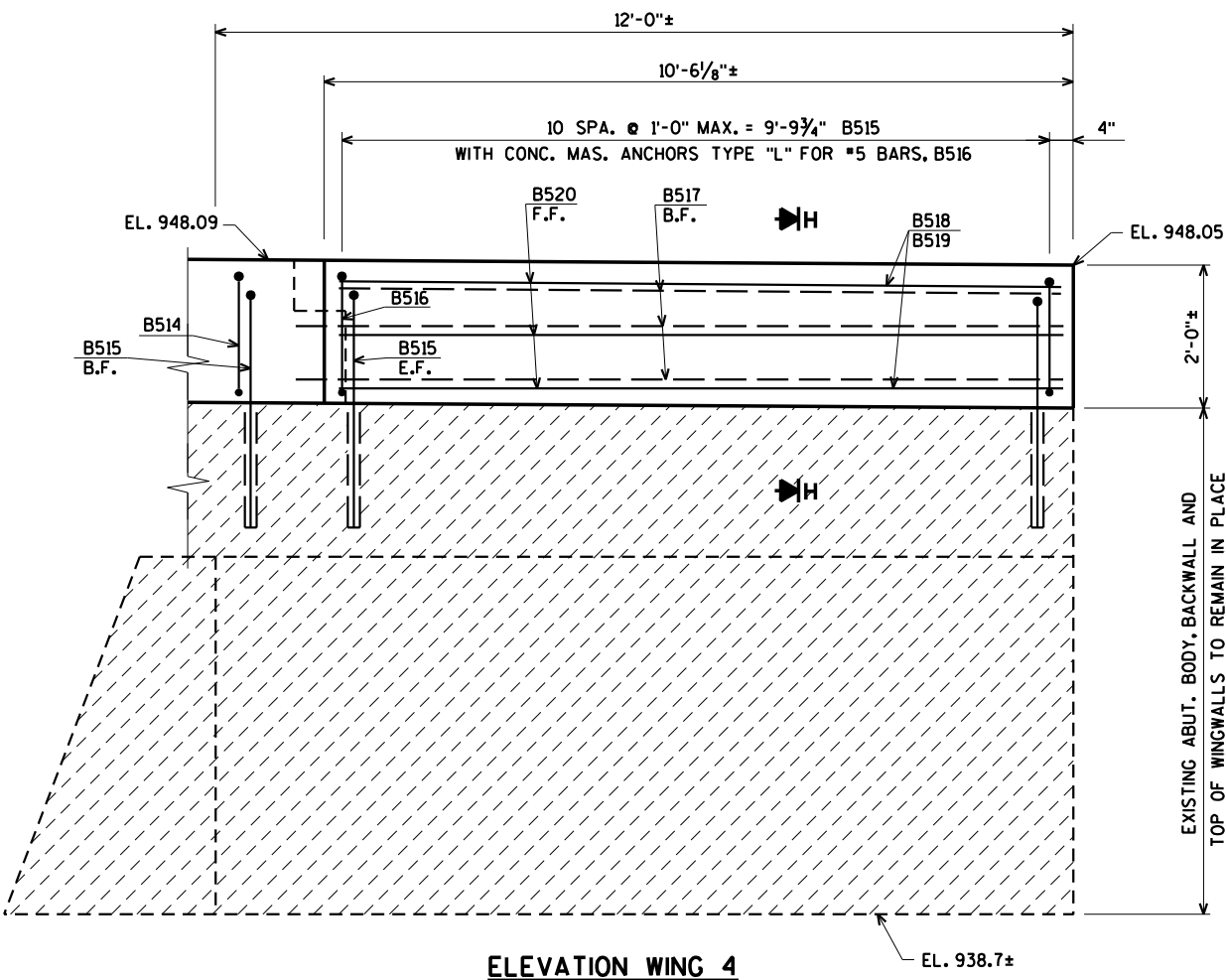
B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

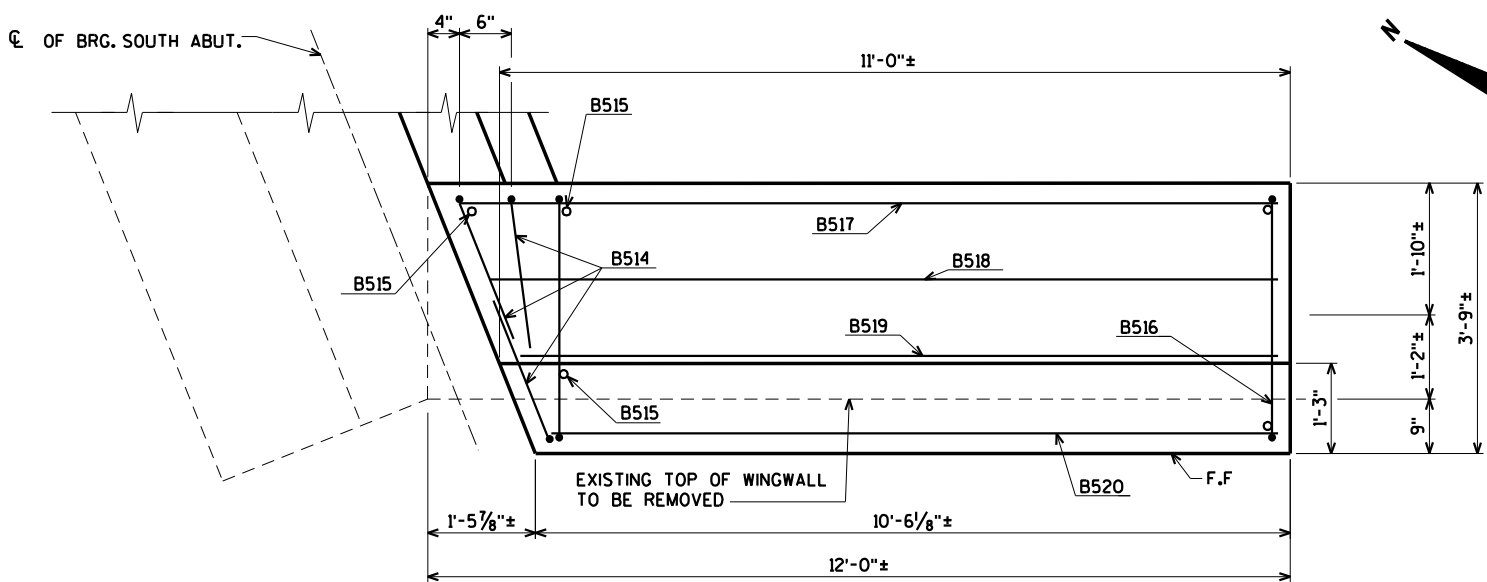
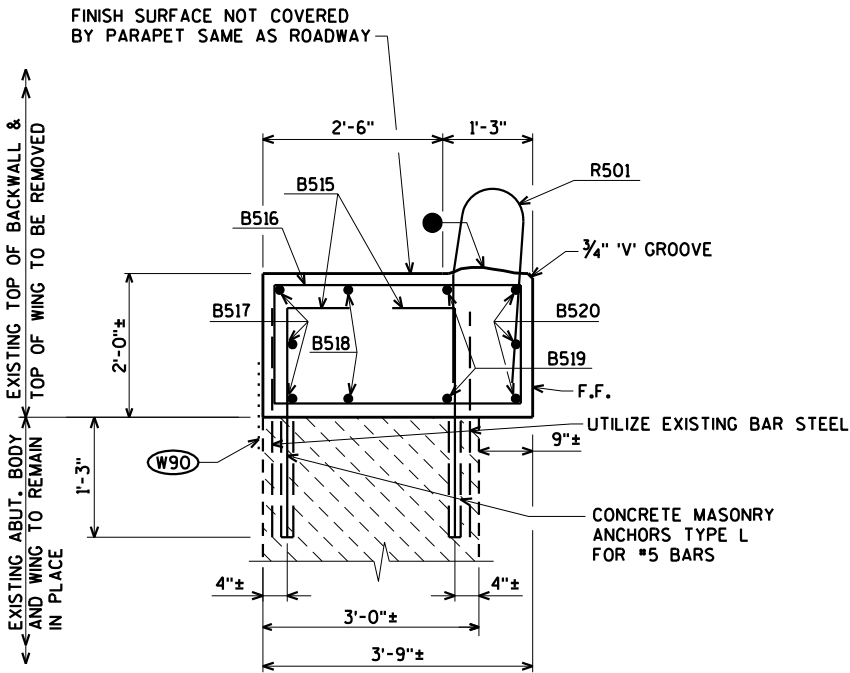
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WORK THIS SHEET WITH SHEETS 8, 10 & 11

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. CBM |
| SOUTH ABUTMENT<br>WING 3 DETAILS                   |      |          | SHEET 9 OF 22   |



SINGLE SLOPE PARAPET 42SS  
NOT SHOWN FOR DETAILS  
SEE SHEET 22.



(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 8, 9 & 11

| NO. | DATE | REVISION | BY |
|-----|------|----------|----|
|     |      |          |    |

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-13-102

|          |     |             |     |
|----------|-----|-------------|-----|
| DRAWN BY | CLS | PLANS CK'D. | CBM |
|----------|-----|-------------|-----|

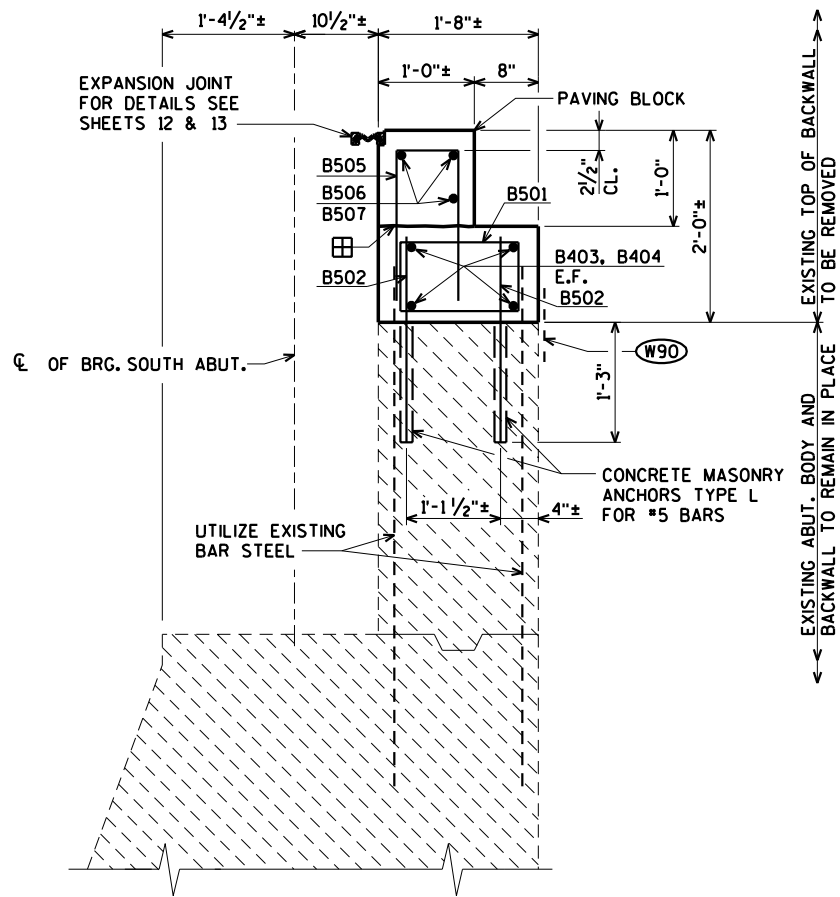
SOUTH ABUTMENT  
WING 4 DETAILS

SHEET 10 OF 22

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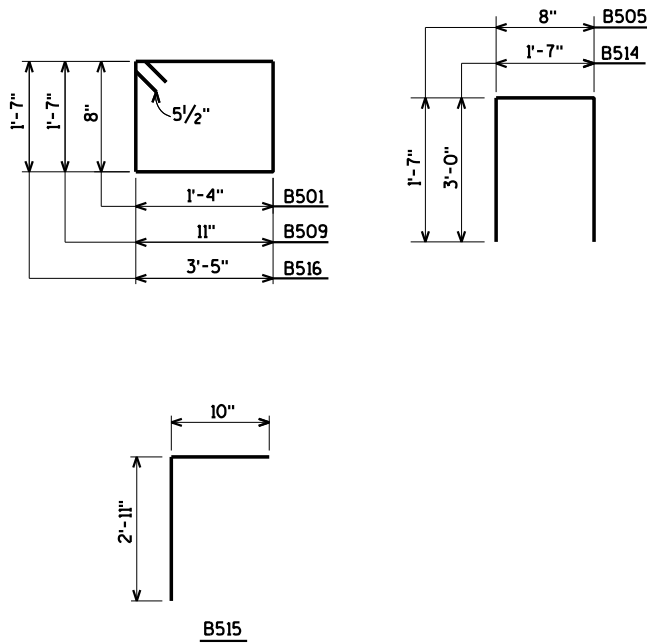
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U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-102\BRIDGE\B-13-102 sa.dgn

8



### SECTION E

FOR LOCATION OF SECTION "E"  
SEE SHEET 8.



### BILL OF BARS

WEIGHT INCLUDES PARAPET STEEL  
SHOWN ON SHEET 22

| BAR NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED | BAR SERIES | 2,510# COATED                          |
|---------|------------|------------|--------|----------|---------|------------|----------------------------------------|
|         |            |            |        |          |         |            | LOCATION                               |
| B501    | X          | 67         | 4-8    | X        |         |            | BACKWALL VERT. STAGE 1 & 2             |
| B502    | X          | 134        | 2-1    |          |         |            | BACKWALL VERT. DOWELS E.F. STAGE 1 & 2 |
| B403    | X          | 4          | 32-6   |          |         |            | BACKWALL HORIZ. STAGE 1                |
| B404    | X          | 4          | 34-7   |          |         |            | BACKWALL HORIZ. STAGE 2                |
| B505    | X          | 65         | 3-8    | X        |         |            | BACKWALL PAVING BLOCK VERT.            |
| B506    | X          | 15         | 7-4    |          |         |            | PAVING BLOCK HORIZ. STAGE 1            |
| B507    | X          | 15         | 7-11   |          |         |            | PAVING BLOCK HORIZ. STAGE 2            |
| B508    | X          | 25         | 3-1    |          |         |            | WING 3 VERT. DOWELS E.F. STAGE 2       |
| B509    | X          | 12         | 5-8    | X        |         |            | WING 3 VERT. STAGE 2                   |
| B410    | X          | 2          | 10-9   |          |         |            | WING 3 HORIZ. B.F. STAGE 2             |
| B411    | X          | 2          | 12-1   |          |         |            | WING 3 HORIZ. F.F. STAGE 2             |
| B612    | X          | 1          | 10-9   |          |         |            | WING 3 HORIZ. B.F. STAGE 2             |
| B613    | X          | 1          | 12-1   |          |         |            | WING 3 HORIZ. F.F. STAGE 2             |
| B514    | X          | 3          | 7-5    | X        |         |            | WING 4 AT BACKWALL STAGE 1             |
| B515    | X          | 23         | 3-8    | X        |         |            | WING 4 VERT. DOWELS E.F. STAGE 1       |
| B516    | X          | 11         | 10-8   | X        |         |            | WING 4 VERT. STAGE 1                   |
| B517    | X          | 3          | 11-7   |          |         |            | WING 4 HORIZ. B.F. STAGE 1             |
| B518    | X          | 2          | 11-2   |          |         |            | WING 4 HORIZ. STAGE 1                  |
| B519    | X          | 2          | 10-9   |          |         |            | WING 4 HORIZ. STAGE 1                  |
| B520    | X          | 3          | 10-2   |          |         |            | WING 4 HORIZ. F.F. STAGE 1             |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS

(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING  
SEAL ALL HORIZONTAL AND VERTICAL JOINTS  
ON BACK FACE OF ABUTMENT.

CONST. JOINT - POUR CONCRETE ABOVE  
THIS JOINT AFTER SUPERSTRUCTURE IS IN  
PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 8 THRU 10

|                                                    |      |          |                 |
|----------------------------------------------------|------|----------|-----------------|
| NO.                                                | DATE | REVISION | BY              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. CBM |
| SOUTH ABUTMENT<br>DETAILS                          |      |          | SHEET 11 OF 22  |

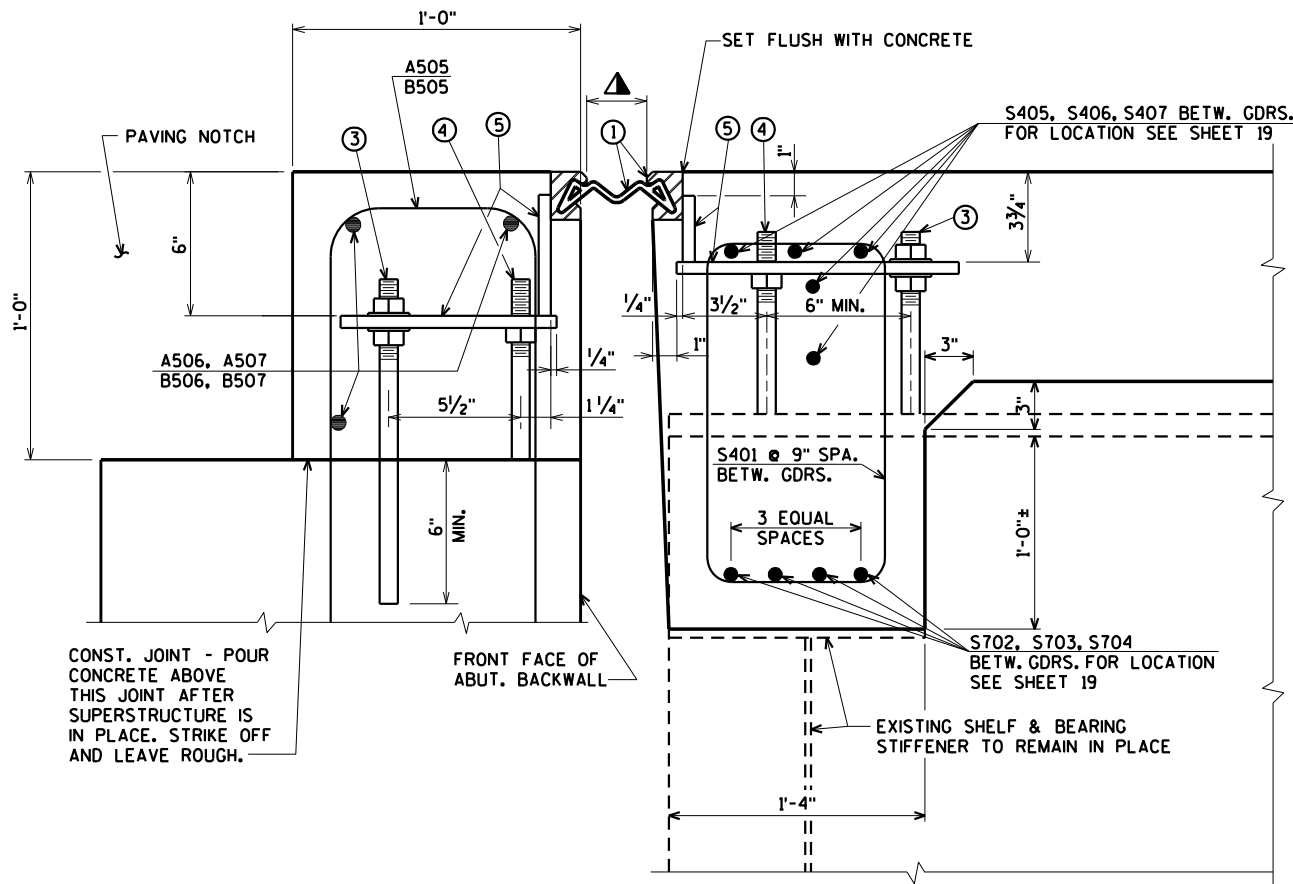
ORIGINAL PLANS PREPARED BY  
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8

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STATE PROJECT NUMBER

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**TYPICAL SECTION THRU JOINT**  
NORMAL TO  $\phi$  SUBSTRUCTURE

**GENERAL NOTES**

ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

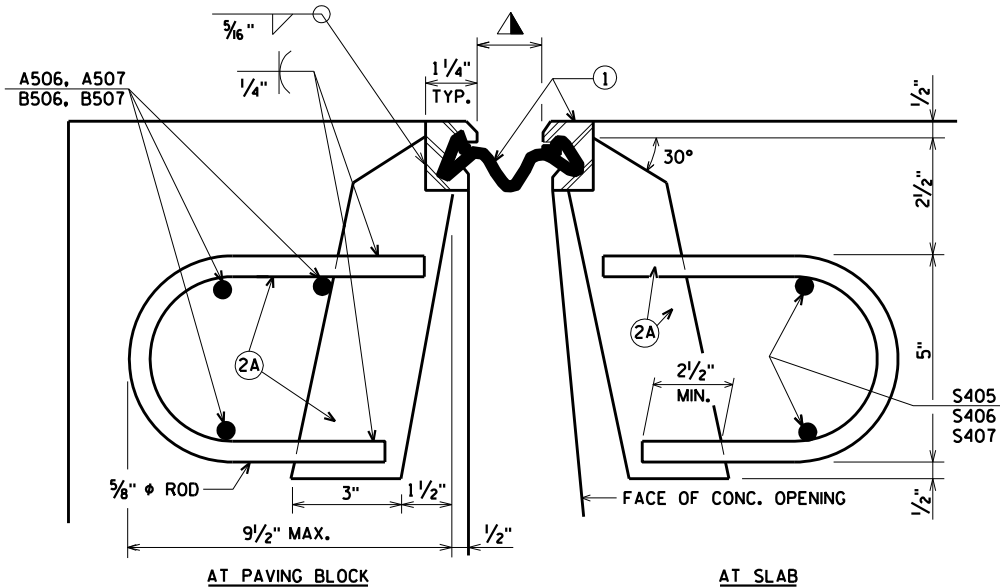
SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-13-102".

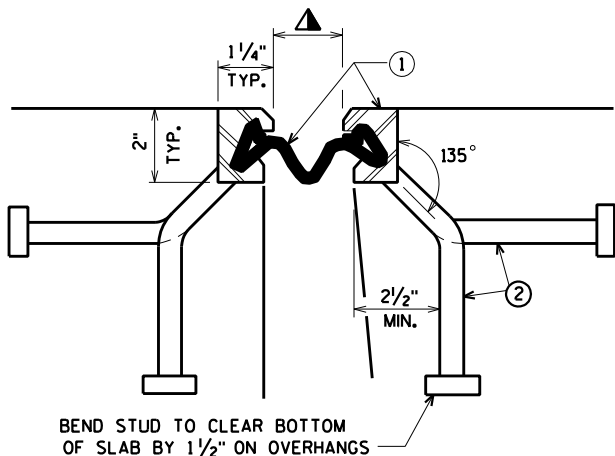
**LEGEND**

- ▲ 1. NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT  $1\frac{3}{4}$ ".
2. STUDS  $\frac{5}{8}$ "  $\phi$  X  $6\frac{3}{8}$ " LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
- 2A.  $\frac{1}{2}$ " THICK ANCHOR PLATE WITH  $\frac{5}{8}$ "  $\phi$  ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO #1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3.  $\frac{3}{4}$ "  $\phi$  THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4.  $\frac{3}{4}$ "  $\phi$  THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X  $\frac{1}{2}$ " BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE  $1\frac{1}{2}$ "  $\phi$  HOLE FOR NO. 3 & 1"  $\phi$  HOLE FOR NO. 4.
6. GALVANIZED PLATE  $\frac{3}{8}$ " X 10" X 2'-2 LONG WITH HOLES FOR #7. BEND AS SHOWN.
7.  $\frac{3}{4}$ "  $\phi$  X  $1\frac{1}{2}$ " STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLES. RECESS  $\frac{1}{16}$ " BELOW PLATE SURFACE.
8.  $\frac{3}{4}$ "  $\phi$  X 4" GALV. HEX HEAD BOLT, BEND 45°.
9.  $\frac{3}{4}$ "  $\phi$  X 2  $\frac{1}{4}$ " GALV. THREADED COUPLING.
11. 1" X 5" SLOTTED CSK. HOLE FOR #7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.



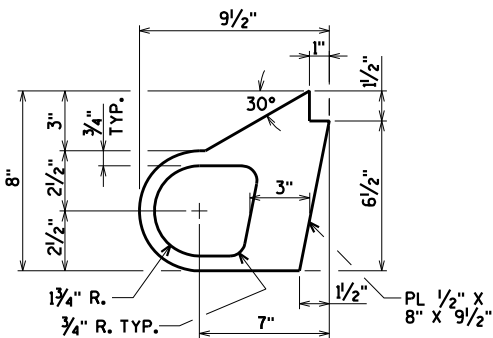
**SECTION THRU JOINT**  
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

SYM. ABOUT  $\phi$  JOINT UNLESS OTHERWISE SHOWN OR NOTED.



**SECTION THRU JOINT**

EXTERIOR GIRDER TO EDGE OF SLAB & AT PARAPETS.



**ALTERNATE STRIP SEAL ANCHOR**

WORK THIS SHEET WITH SHEET 13

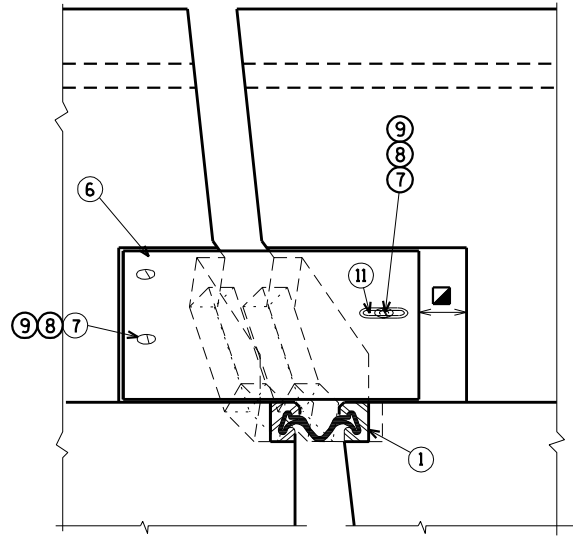
| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. CBM |
| EXPANSION JOINT DETAILS AT ABUTMENTS               |      |          | SHEET 12 OF 22  |

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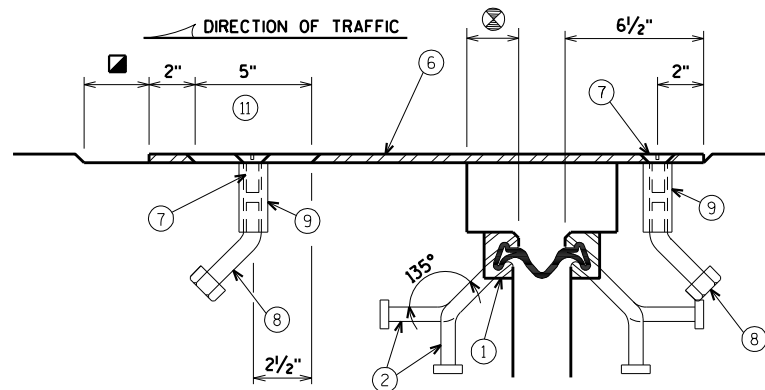
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STATE PROJECT NUMBER

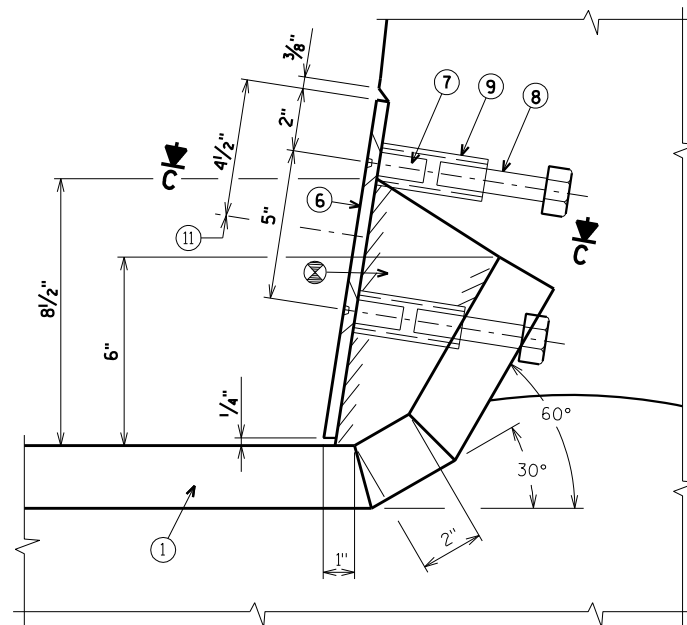
1010-02-79



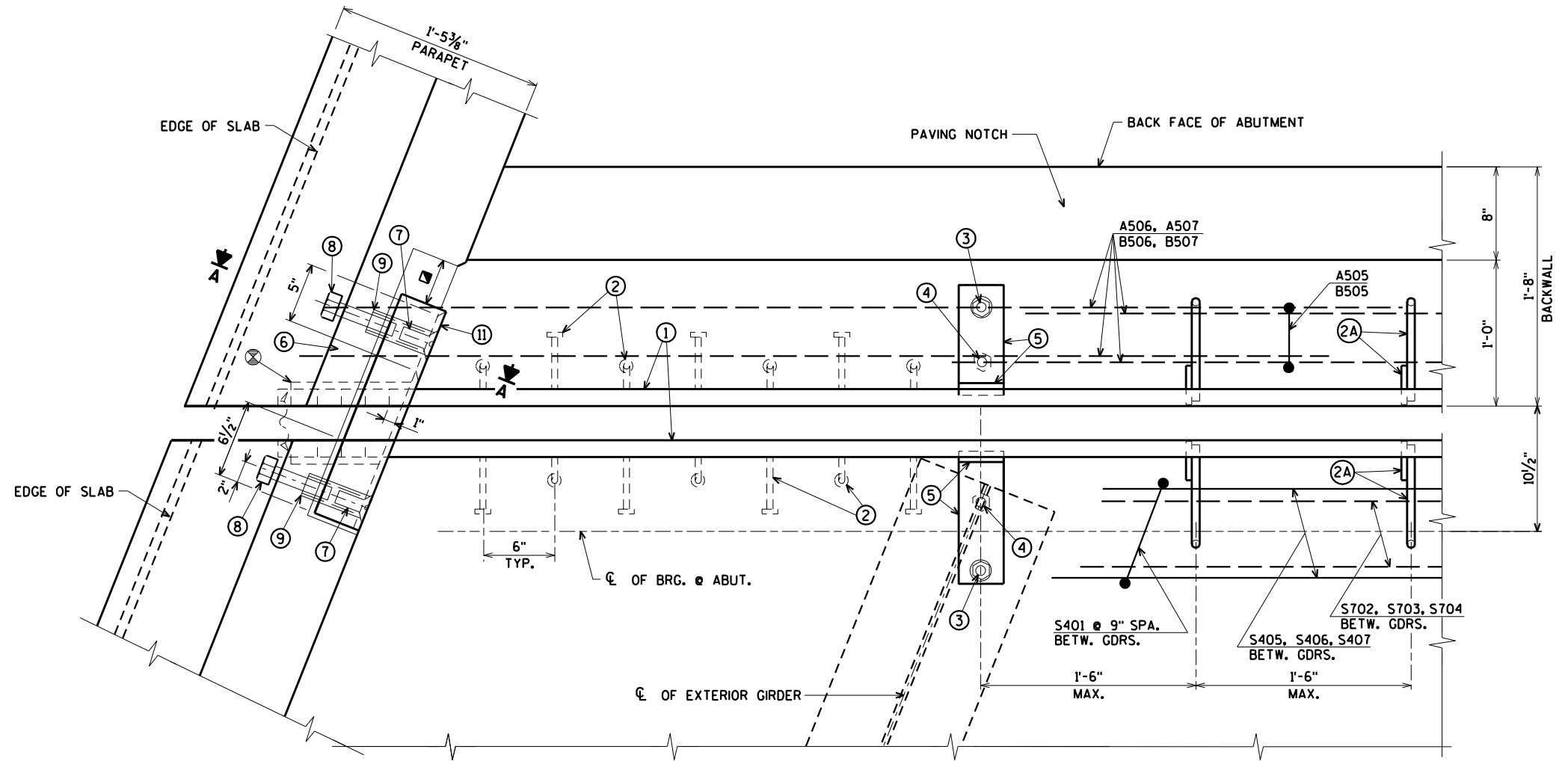
VIEW OF PARAPET PLATES  
FROM ROADWAY



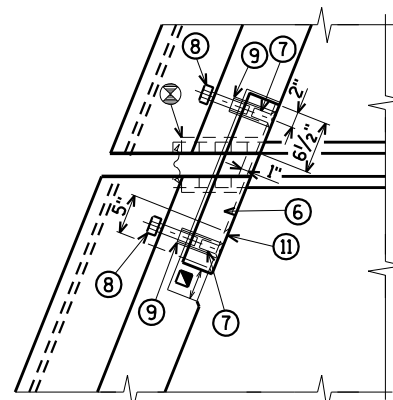
SECTION C



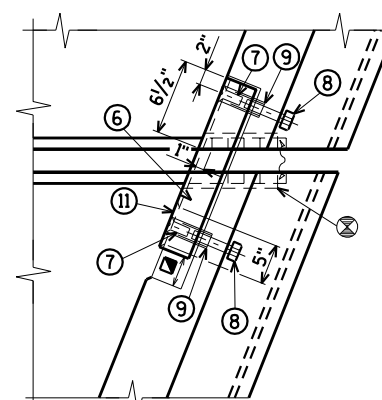
SECTION A



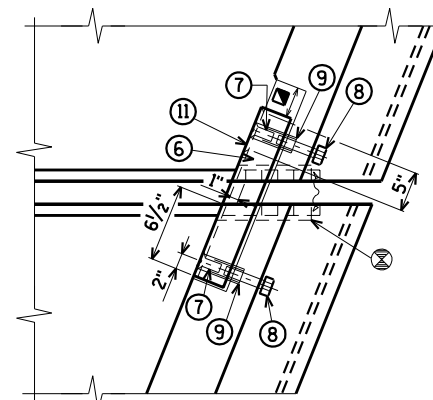
PART PLAN AT PARAPET  
(WING 3 SHOWN)



WING 1



WING 2



WING 4

PART PLANS OF PARAPET PLATES

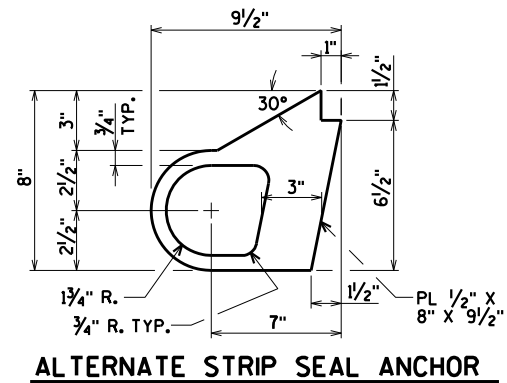
⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

☑ JOINT OPENING DIM. ALONG SKEW PLUS 1/2".

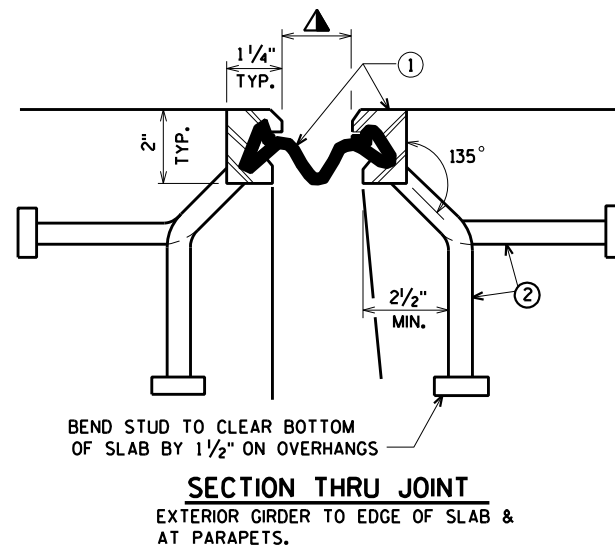
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WORK THIS SHEET WITH SHEET 12

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. CBM |
| EXPANSION<br>JOINT DETAILS<br>AT ABUTMENTS         |      |          | SHEET 13 OF 22  |



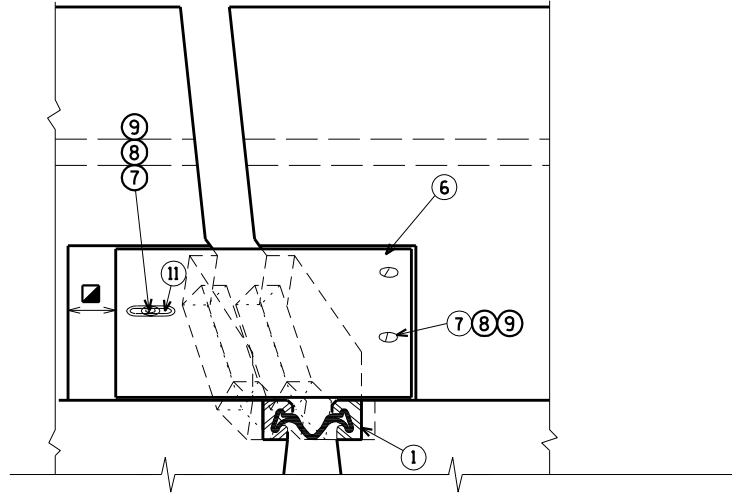
- ONE FIELD SPLICE PERMITTED IN STEEL EXTRUSIONS, IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPICING PERMITTED IN NEOPRENE STRIP SEAL.
- AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.
- FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.
- SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.
- ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.
- STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-13-102".



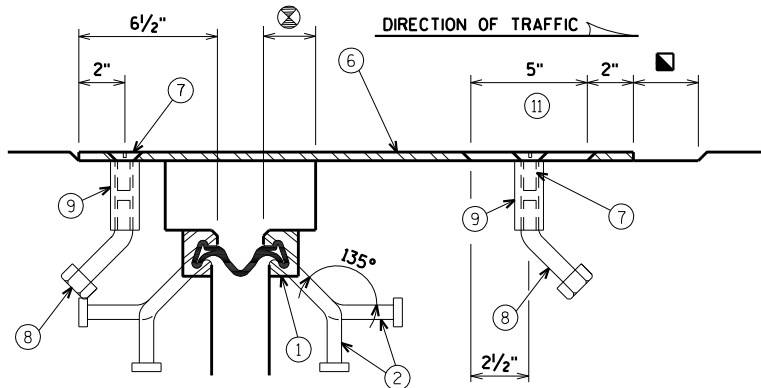
\$PRNAME\$  
U:\141-0647.00 - IH 39 over USH 151-Dane County\B-13-102\BRIDGE\B-13-102\_exp\jt PERS.dgn

STATE PROJECT NUMBER

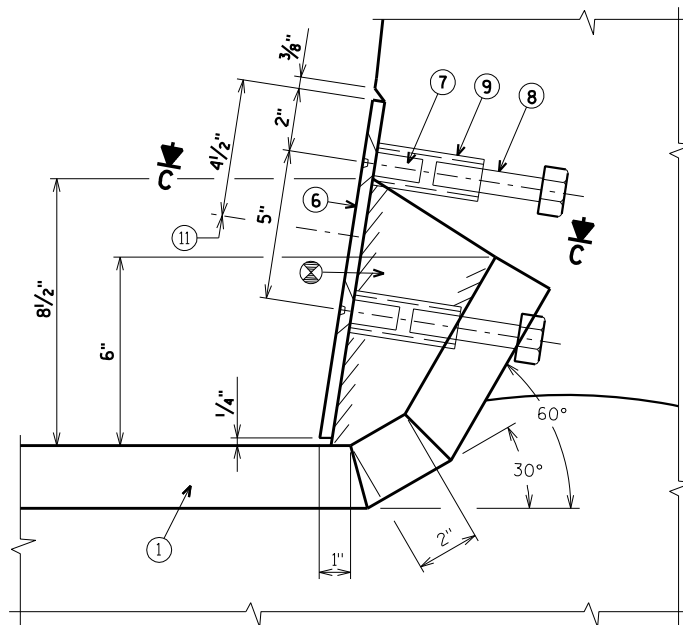
1010-02-79



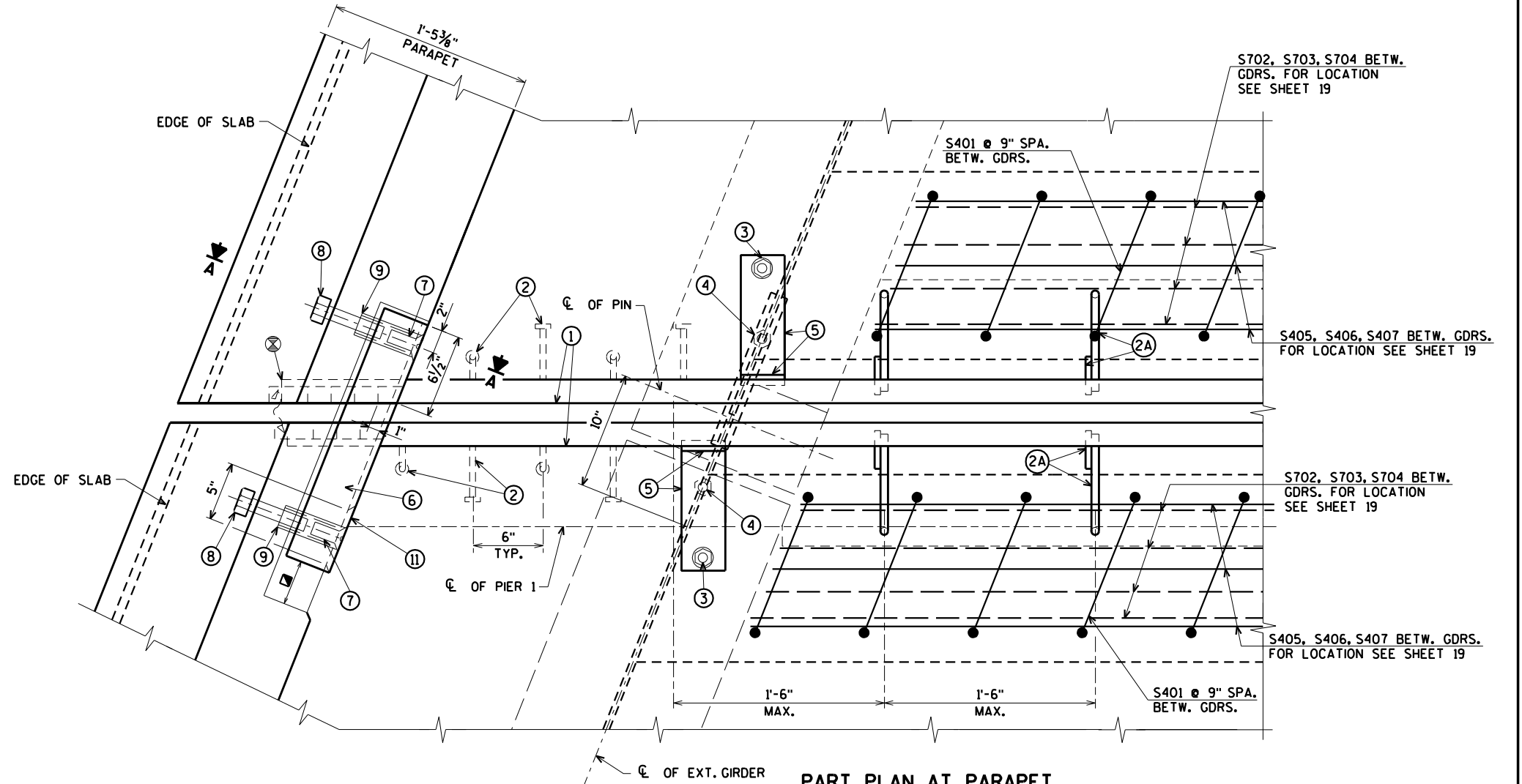
**VIEW OF PARAPET PLATES  
FROM ROADWAY**



**SECTION C**



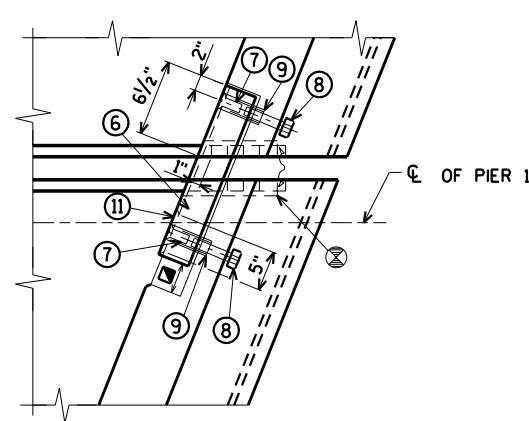
**SECTION A**



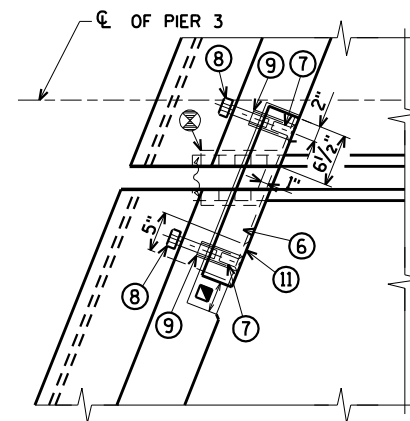
**PART PLAN AT PARAPET  
(WEST SIDE OF PIER 1 SHOWN)**

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

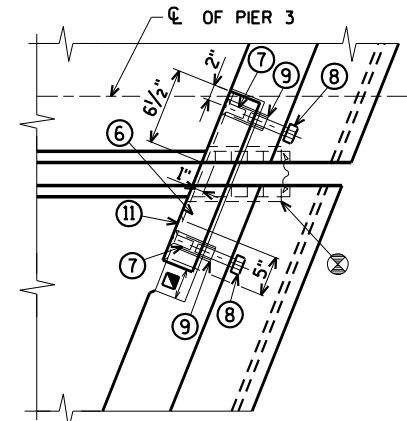
▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2".



**EAST SIDE OF PIER 1**



**WEST SIDE OF PIER 3**



**EAST SIDE OF PIER 3**

**PART PLANS AT PARAPET PLATES**

ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**  
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com

WORK THIS SHEET WITH SHEET 14

| NO.                                                | DATE | REVISION    | BY             |
|----------------------------------------------------|------|-------------|----------------|
|                                                    |      |             |                |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |             |                |
| STRUCTURE B-13-102                                 |      |             |                |
| DRAWN BY                                           | CLS  | PLANS CK'D. | CBM            |
| EXPANSION<br>JOINT DETAILS<br>AT PIERS             |      |             | SHEET 15 OF 22 |

\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County±B-13-102±BRIDGE±B-13-102 deckEL.dgn

8

ELEVATIONS AT TOP OF DECK

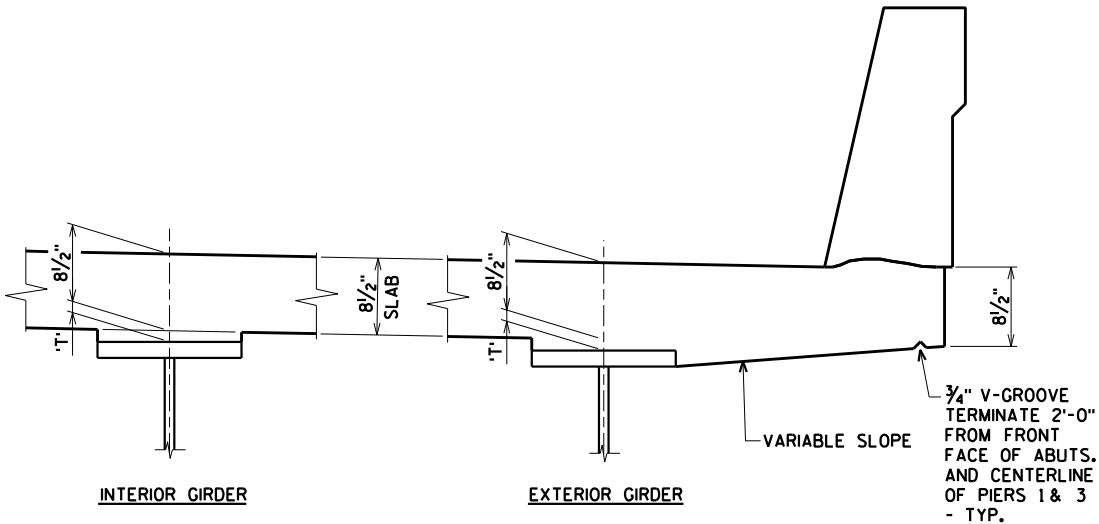
E.O.D. = EDGE OF DECK

| B-13-102 SPAN 1 TOP OF DECK ELEVATIONS |                |         |         |         |         |        |         |        |         |         |        |
|----------------------------------------|----------------|---------|---------|---------|---------|--------|---------|--------|---------|---------|--------|
|                                        | NORTH ABUTMENT | 0.1 Pt. | 0.2 Pt. | 0.3 Pt. | 0.4 Pt. | 0.5Pt. | 0.6 Pt. | 0.7Pt. | 0.8 Pt. | 0.9 Pt. | PIER 1 |
| EAST E.O.D.                            | 948.26         | 948.28  | 948.29  | 948.31  | 948.32  | 948.34 | 948.35  | 948.37 | 948.38  | 948.39  | 948.41 |
| GIRDER 1                               | 948.33         | 948.35  | 948.37  | 948.38  | 948.40  | 948.41 | 948.42  | 948.44 | 948.45  | 948.46  | 948.48 |
| GIRDER 2                               | 948.51         | 948.53  | 948.54  | 948.56  | 948.57  | 948.59 | 948.60  | 948.61 | 948.63  | 948.64  | 948.65 |
| GIRDER 3                               | 948.69         | 948.71  | 948.72  | 948.74  | 948.75  | 948.77 | 948.78  | 948.79 | 948.80  | 948.82  | 948.83 |
| REFERENCE LINE                         | 948.77         | 948.78  | 948.80  | 948.81  | 948.83  | 948.84 | 948.85  | 948.87 | 948.88  | 948.89  | 948.90 |
| GIRDER 4                               | 948.69         | 948.70  | 948.72  | 948.73  | 948.74  | 948.76 | 948.77  | 948.78 | 948.79  | 948.81  | 948.82 |
| LONG. CONST JT.                        | 948.60         | 948.61  | 948.63  | 948.64  | 948.66  | 948.67 | 948.68  | 948.69 | 948.71  | 948.72  | 948.73 |
| GIRDER 5                               | 948.54         | 948.55  | 948.57  | 948.58  | 948.60  | 948.61 | 948.62  | 948.63 | 948.65  | 948.66  | 948.67 |
| GIRDER 6                               | 948.39         | 948.41  | 948.42  | 948.43  | 948.45  | 948.46 | 948.47  | 948.48 | 948.50  | 948.51  | 948.52 |
| GIRDER 7                               | 948.25         | 948.26  | 948.27  | 948.29  | 948.30  | 948.31 | 948.32  | 948.33 | 948.35  | 948.36  | 948.37 |
| GIRDER 8                               | 948.10         | 948.11  | 948.12  | 948.14  | 948.15  | 948.16 | 948.17  | 948.18 | 948.19  | 948.21  | 948.21 |
| WEST E.O.D.                            | 948.04         | 948.05  | 948.06  | 948.08  | 948.09  | 948.10 | 948.11  | 948.12 | 948.13  | 948.14  | 948.15 |

| B-13-102 SPAN 2 TOP OF DECK ELEVATIONS |        |         |         |         |         |        |         |        |         |         |        |
|----------------------------------------|--------|---------|---------|---------|---------|--------|---------|--------|---------|---------|--------|
|                                        | PIER 1 | 0.1 Pt. | 0.2 Pt. | 0.3 Pt. | 0.4 Pt. | 0.5Pt. | 0.6 Pt. | 0.7Pt. | 0.8 Pt. | 0.9 Pt. | PIER 2 |
| EAST E.O.D.                            | 948.41 | 948.43  | 948.46  | 948.48  | 948.50  | 948.52 | 948.54  | 948.55 | 948.56  | 948.57  | 948.58 |
| GIRDER 1                               | 948.48 | 948.50  | 948.53  | 948.55  | 948.57  | 948.59 | 948.60  | 948.62 | 948.63  | 948.64  | 948.65 |
| GIRDER 2                               | 948.65 | 948.68  | 948.70  | 948.72  | 948.74  | 948.76 | 948.77  | 948.79 | 948.80  | 948.81  | 948.82 |
| GIRDER 3                               | 948.83 | 948.85  | 948.87  | 948.90  | 948.91  | 948.93 | 948.95  | 948.96 | 948.97  | 948.98  | 948.98 |
| REFERENCE LINE                         | 948.90 | 948.93  | 948.95  | 948.97  | 948.99  | 949.00 | 949.02  | 949.03 | 949.04  | 949.05  | 949.05 |
| GIRDER 4                               | 948.82 | 948.84  | 948.86  | 948.88  | 948.90  | 948.92 | 948.93  | 948.94 | 948.95  | 948.96  | 948.97 |
| LONG. CONST JT.                        | 948.73 | 948.75  | 948.77  | 948.79  | 948.81  | 948.83 | 948.84  | 948.85 | 948.86  | 948.87  | 948.87 |
| GIRDER 5                               | 948.67 | 948.69  | 948.71  | 948.73  | 948.75  | 948.76 | 948.78  | 948.79 | 948.80  | 948.80  | 948.81 |
| GIRDER 6                               | 948.52 | 948.54  | 948.56  | 948.58  | 948.59  | 948.61 | 948.62  | 948.63 | 948.64  | 948.64  | 948.65 |
| GIRDER 7                               | 948.37 | 948.39  | 948.41  | 948.42  | 948.44  | 948.45 | 948.46  | 948.47 | 948.48  | 948.49  | 948.49 |
| GIRDER 8                               | 948.21 | 948.24  | 948.25  | 948.27  | 948.29  | 948.30 | 948.31  | 948.32 | 948.32  | 948.33  | 948.33 |
| WEST E.O.D.                            | 948.15 | 948.17  | 948.19  | 948.21  | 948.22  | 948.23 | 948.25  | 948.25 | 948.26  | 948.26  | 948.27 |

| B-13-102 SPAN 3 TOP OF DECK ELEVATIONS |        |         |         |         |         |        |         |        |         |         |        |
|----------------------------------------|--------|---------|---------|---------|---------|--------|---------|--------|---------|---------|--------|
|                                        | PIER 2 | 0.1 Pt. | 0.2 Pt. | 0.3 Pt. | 0.4 Pt. | 0.5Pt. | 0.6 Pt. | 0.7Pt. | 0.8 Pt. | 0.9 Pt. | PIER 3 |
| EAST E.O.D.                            | 948.58 | 948.59  | 948.59  | 948.60  | 948.60  | 948.60 | 948.59  | 948.59 | 948.58  | 948.57  | 948.56 |
| GIRDER 1                               | 948.65 | 948.65  | 948.66  | 948.66  | 948.66  | 948.66 | 948.66  | 948.65 | 948.64  | 948.63  | 948.62 |
| GIRDER 2                               | 948.82 | 948.82  | 948.83  | 948.83  | 948.83  | 948.82 | 948.82  | 948.81 | 948.81  | 948.80  | 948.78 |
| GIRDER 3                               | 948.98 | 948.99  | 948.99  | 948.99  | 948.99  | 948.99 | 948.98  | 948.98 | 948.97  | 948.96  | 948.94 |
| REFERENCE LINE                         | 949.05 | 949.06  | 949.06  | 949.06  | 949.06  | 949.06 | 949.05  | 949.04 | 949.03  | 949.02  | 949.01 |
| GIRDER 4                               | 948.97 | 948.97  | 948.97  | 948.97  | 948.97  | 948.97 | 948.96  | 948.95 | 948.94  | 948.93  | 948.92 |
| LONG. CONST JT.                        | 948.87 | 948.88  | 948.88  | 948.88  | 948.87  | 948.87 | 948.86  | 948.85 | 948.84  | 948.83  | 948.82 |
| GIRDER 5                               | 948.81 | 948.81  | 948.81  | 948.81  | 948.81  | 948.80 | 948.80  | 948.79 | 948.78  | 948.76  | 948.75 |
| GIRDER 6                               | 948.65 | 948.65  | 948.65  | 948.65  | 948.65  | 948.64 | 948.63  | 948.62 | 948.61  | 948.60  | 948.58 |
| GIRDER 7                               | 948.49 | 948.49  | 948.49  | 948.49  | 948.48  | 948.48 | 948.47  | 948.46 | 948.45  | 948.43  | 948.42 |
| GIRDER 8                               | 948.33 | 948.33  | 948.33  | 948.33  | 948.32  | 948.32 | 948.31  | 948.30 | 948.28  | 948.27  | 948.25 |
| WEST E.O.D.                            | 948.27 | 948.27  | 948.27  | 948.26  | 948.26  | 948.25 | 948.24  | 948.23 | 948.21  | 948.20  | 948.18 |

| B-13-102 SPAN 4 TOP OF DECK ELEVATIONS |        |         |         |         |         |        |         |        |         |         |                |
|----------------------------------------|--------|---------|---------|---------|---------|--------|---------|--------|---------|---------|----------------|
|                                        | PIER 3 | 0.1 Pt. | 0.2 Pt. | 0.3 Pt. | 0.4 Pt. | 0.5Pt. | 0.6 Pt. | 0.7Pt. | 0.8 Pt. | 0.9 Pt. | SOUTH ABUTMENT |
| EAST E.O.D.                            | 948.56 | 948.55  | 948.55  | 948.54  | 948.54  | 948.53 | 948.52  | 948.51 | 948.50  | 948.50  | 948.49         |
| GIRDER 1                               | 948.62 | 948.62  | 948.61  | 948.60  | 948.60  | 948.59 | 948.58  | 948.57 | 948.57  | 948.56  | 948.55         |
| GIRDER 2                               | 948.78 | 948.78  | 948.77  | 948.76  | 948.76  | 948.75 | 948.74  | 948.73 | 948.72  | 948.71  | 948.70         |
| GIRDER 3                               | 948.94 | 948.94  | 948.93  | 948.92  | 948.91  | 948.91 | 948.90  | 948.89 | 948.88  | 948.87  | 948.86         |
| REFERENCE LINE                         | 949.01 | 949.00  | 949.00  | 948.99  | 948.98  | 948.97 | 948.96  | 948.95 | 948.95  | 948.94  | 948.93         |
| GIRDER 4                               | 948.92 | 948.91  | 948.90  | 948.89  | 948.89  | 948.88 | 948.87  | 948.86 | 948.85  | 948.84  | 948.83         |
| LONG. CONST JT.                        | 948.82 | 948.81  | 948.80  | 948.80  | 948.79  | 948.78 | 948.77  | 948.76 | 948.75  | 948.74  | 948.73         |
| GIRDER 5                               | 948.75 | 948.74  | 948.74  | 948.73  | 948.72  | 948.71 | 948.70  | 948.69 | 948.68  | 948.67  | 948.66         |
| GIRDER 6                               | 948.58 | 948.58  | 948.57  | 948.56  | 948.55  | 948.54 | 948.53  | 948.52 | 948.51  | 948.50  | 948.49         |
| GIRDER 7                               | 948.42 | 948.41  | 948.40  | 948.39  | 948.38  | 948.37 | 948.36  | 948.35 | 948.34  | 948.33  | 948.32         |
| GIRDER 8                               | 948.25 | 948.24  | 948.23  | 948.22  | 948.21  | 948.20 | 948.19  | 948.18 | 948.17  | 948.16  | 948.15         |
| WEST E.O.D.                            | 948.18 | 948.17  | 948.16  | 948.16  | 948.15  | 948.14 | 948.13  | 948.11 | 948.10  | 948.09  | 948.08         |



SLAB HAUNCH DETAIL

TO DETERMINE 'T': AFTER ALL OF THE EXISTING DECK HAS BEEN REMOVED IN THE CONSTRUCTION STAGE (1 OR 2), ELEVATIONS OF THE TOP OR TOP OF SPLICE PLATES, OR TOP OF COVER PLATES WHICHEVER APPLIES, SHALL BE TAKEN AT CENTERLINE OF BEARINGS, AND AT TENTH POINTS OF EACH SPAN.

TOP OF DECK ELEVATION AT FINAL GRADE  
- TOP OF STEEL ELEVATION AFTER PLACEMENT  
+ CONCRETE ONLY DEFLECTION: DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED  
- SLAB THICKNESS (8 1/2")

= HAUNCH THICKNESS 'T'

8

|                                                    |  |      |  |             |  |                |  |                |  |     |  |
|----------------------------------------------------|--|------|--|-------------|--|----------------|--|----------------|--|-----|--|
|                                                    |  |      |  |             |  |                |  |                |  |     |  |
| NO.                                                |  | DATE |  | REVISION    |  |                |  | BY             |  |     |  |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |  |      |  |             |  |                |  |                |  |     |  |
| STRUCTURE B-13-102                                 |  |      |  |             |  |                |  |                |  |     |  |
|                                                    |  |      |  | DRAWN<br>BY |  | CLS            |  | PLANS<br>CK'D. |  | CBM |  |
| DECK ELEVATIONS                                    |  |      |  |             |  | SHEET 16 OF 22 |  |                |  |     |  |
|                                                    |  |      |  |             |  |                |  |                |  |     |  |

ORIGINAL PLANS PREPARED BY

AYRES

ASSOCIATES

3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com

\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-102\BRIDGE\B-13-102 defl.dgn

| B-13-102 SPAN 1 DEFLECTIONS |               |                   |        |        |        |        |        |        |        |        |        |                |
|-----------------------------|---------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
|                             | DEFLECTION    | ¢ BRG.<br>N. ABUT | 0.1 PT | 0.2 PT | 0.3 PT | 0.4 PT | 0.5 PT | 0.6 PT | 0.7 PT | 0.8 PT | 0.9 PT | ¢ OF<br>PIER 1 |
| GIRDER 1                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.1"   | 0.1"   | 0.2"   | 0.2"   | 0.2"   | 0.1"   | 0.1"   | 0.1"   | 0.0"           |
| GIRDER 2                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.1"   | 0.1"   | 0.2"   | 0.2"   | 0.2"   | 0.1"   | 0.1"   | 0.1"   | 0.0"           |
| GIRDER 3                    | CONCRETE ONLY | 0.0"              | 0.0"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.0"   | 0.0"           |
| GIRDER 4                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 5                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 6                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 7                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 8                    | CONCRETE ONLY | 0.0"              | 0.0"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.0"   | 0.0"           |

| B-13-102 SPAN 2 DEFLECTIONS |               |                |        |        |        |        |        |        |        |        |        |                |
|-----------------------------|---------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
|                             | DEFLECTION    | ¢ OF<br>PIER 1 | 0.1 PT | 0.2 PT | 0.3 PT | 0.4 PT | 0.5 PT | 0.6 PT | 0.7 PT | 0.8 PT | 0.9 PT | ¢ OF<br>PIER 2 |
| GIRDER 1                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.8"   | 1.0"   | 1.0"   | 1.0"   | 0.8"   | 0.5"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 2                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.8"   | 1.0"   | 1.0"   | 1.0"   | 0.8"   | 0.5"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 3                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.5"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 4                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 5                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 6                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 7                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 8                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.5"   | 0.2"   | 0.0"   | 0.0"           |

| B-13-102 SPAN 3 DEFLECTIONS |               |                |        |        |        |        |        |        |        |        |        |                |
|-----------------------------|---------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
|                             | DEFLECTION    | ¢ OF<br>PIER 2 | 0.1 PT | 0.2 PT | 0.3 PT | 0.4 PT | 0.5 PT | 0.6 PT | 0.7 PT | 0.8 PT | 0.9 PT | ¢ OF<br>PIER 3 |
| GIRDER 1                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.5"   | 0.8"   | 1.0"   | 1.0"   | 1.0"   | 0.8"   | 0.4"   | 0.0"           |
| GIRDER 2                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.5"   | 0.8"   | 1.0"   | 1.0"   | 1.0"   | 0.8"   | 0.4"   | 0.0"           |
| GIRDER 3                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.5"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 4                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 5                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 6                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 7                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 8                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.5"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |

NOTE: DEFLECTIONS ARE THEORETICAL AND MAY VARY IN THE FIELD.  
CONCRETE ONLY = CONCRETE DECK DEFLECTION + COMPOSITE DEAD LOAD  
DEFLECTION + DIFFERENTIAL SHRINKAGE DEFLECTION.

| B-13-102 SPAN 4 DEFLECTIONS |               |                |        |        |        |        |        |        |        |        |        |                   |
|-----------------------------|---------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------|
|                             | DEFLECTION    | ¢ OF<br>PIER 3 | 0.1 PT | 0.2 PT | 0.3 PT | 0.4 PT | 0.5 PT | 0.6 PT | 0.7 PT | 0.8 PT | 0.9 PT | ¢ BRG.<br>S. ABUT |
| GIRDER 1                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.1"   | 0.1"   | 0.2"   | 0.2"   | 0.2"   | 0.1"   | 0.1"   | 0.1"   | 0.0"              |
| GIRDER 2                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.1"   | 0.1"   | 0.2"   | 0.2"   | 0.2"   | 0.1"   | 0.1"   | 0.1"   | 0.0"              |
| GIRDER 3                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.0"   | 0.0"              |
| GIRDER 4                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"              |
| GIRDER 5                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"              |
| GIRDER 6                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"              |
| GIRDER 7                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"              |
| GIRDER 8                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.0"   | 0.0"              |

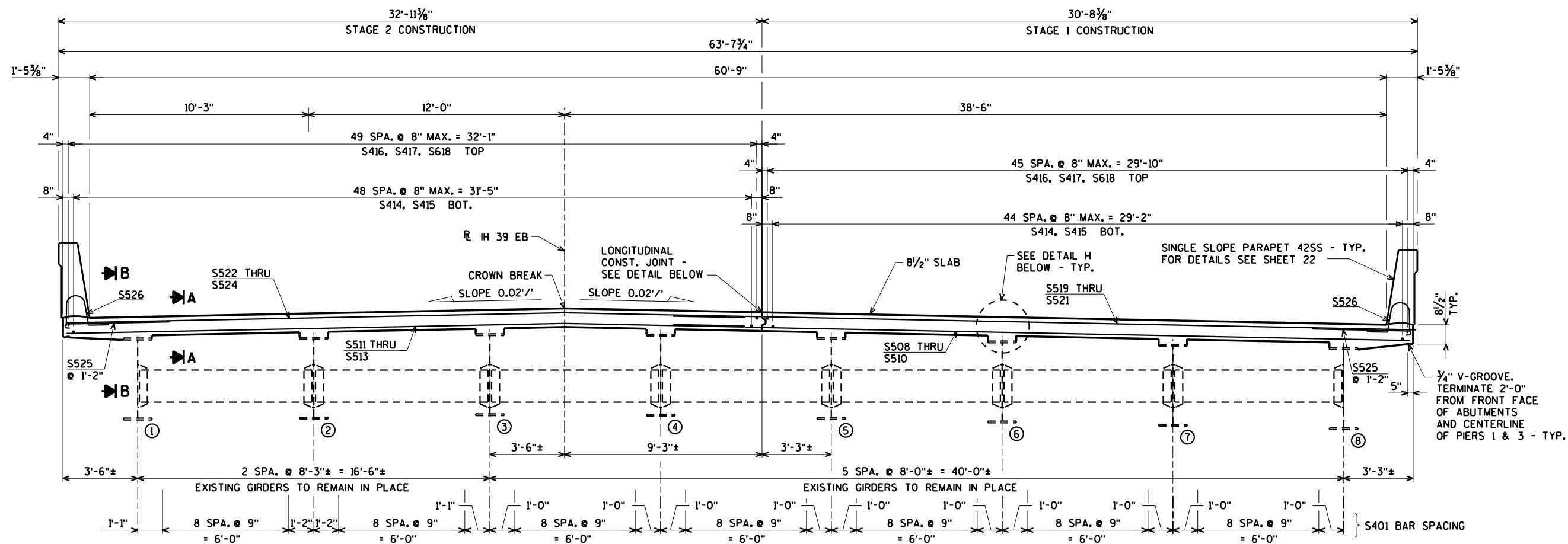
|                                                    |      |          |                    |
|----------------------------------------------------|------|----------|--------------------|
|                                                    |      |          |                    |
| NO.                                                | DATE | REVISION | BY                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                    |
| STRUCTURE B-13-102                                 |      |          |                    |
| DRAWN<br>BY                                        |      | CLS      | PLANS<br>CK'D. CBM |
| TABLE OF<br>DEFLECTIONS                            |      |          | SHEET 17 OF 22     |

ORIGINAL PLANS PREPARED BY

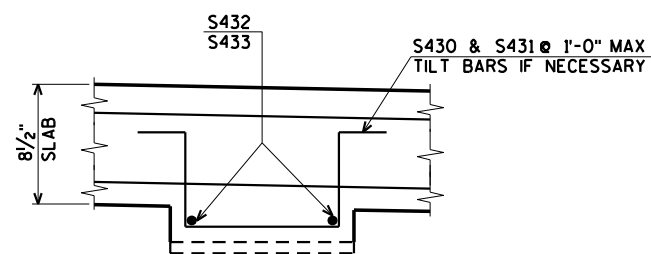
AYRES

ASSOCIATES

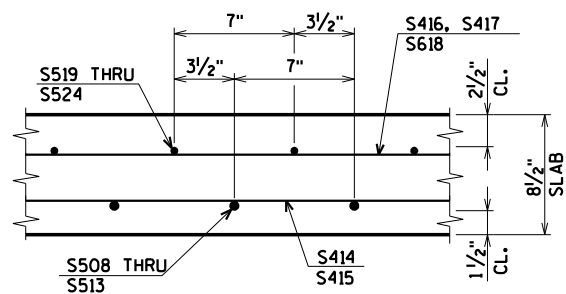
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
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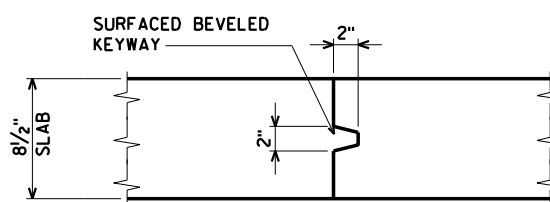
**TYPICAL CROSS SECTION THRU DECK**  
(LOOKING SOUTH)



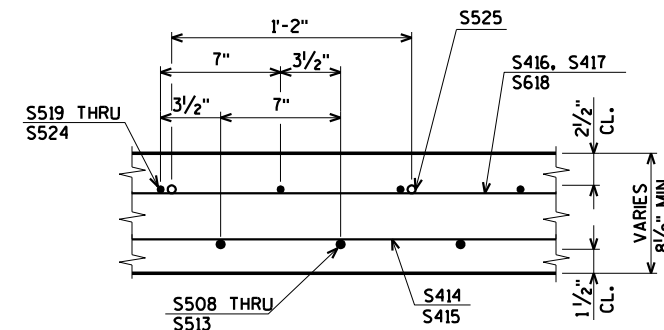
**DETAIL H**



**SECTION A**



**LONG. CONST. JOINT DETAIL**



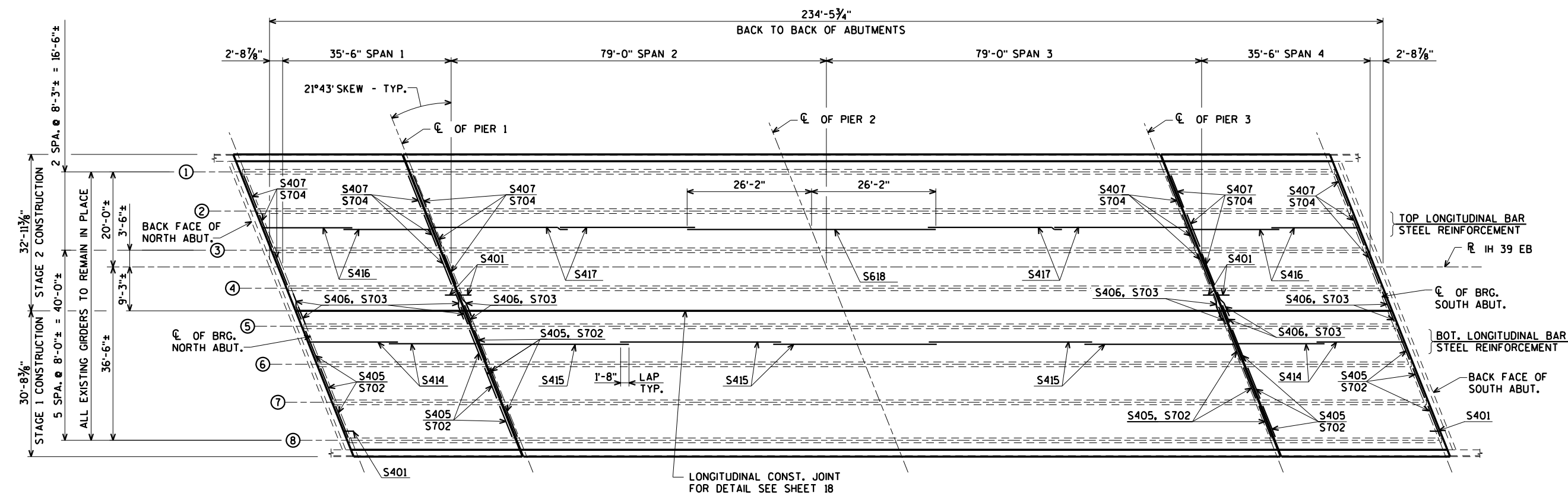
**SECTION B**

\$PRNAMES  
U:\41-0647.00 - IH 39 over USH I51-Dane County-B-13-102+BRIDGE-B-13-102 super.dgn

8

8

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. CBM |
| SUPERSTRUCTURE                                     |      |          | SHEET 18 OF 22  |



PLAN

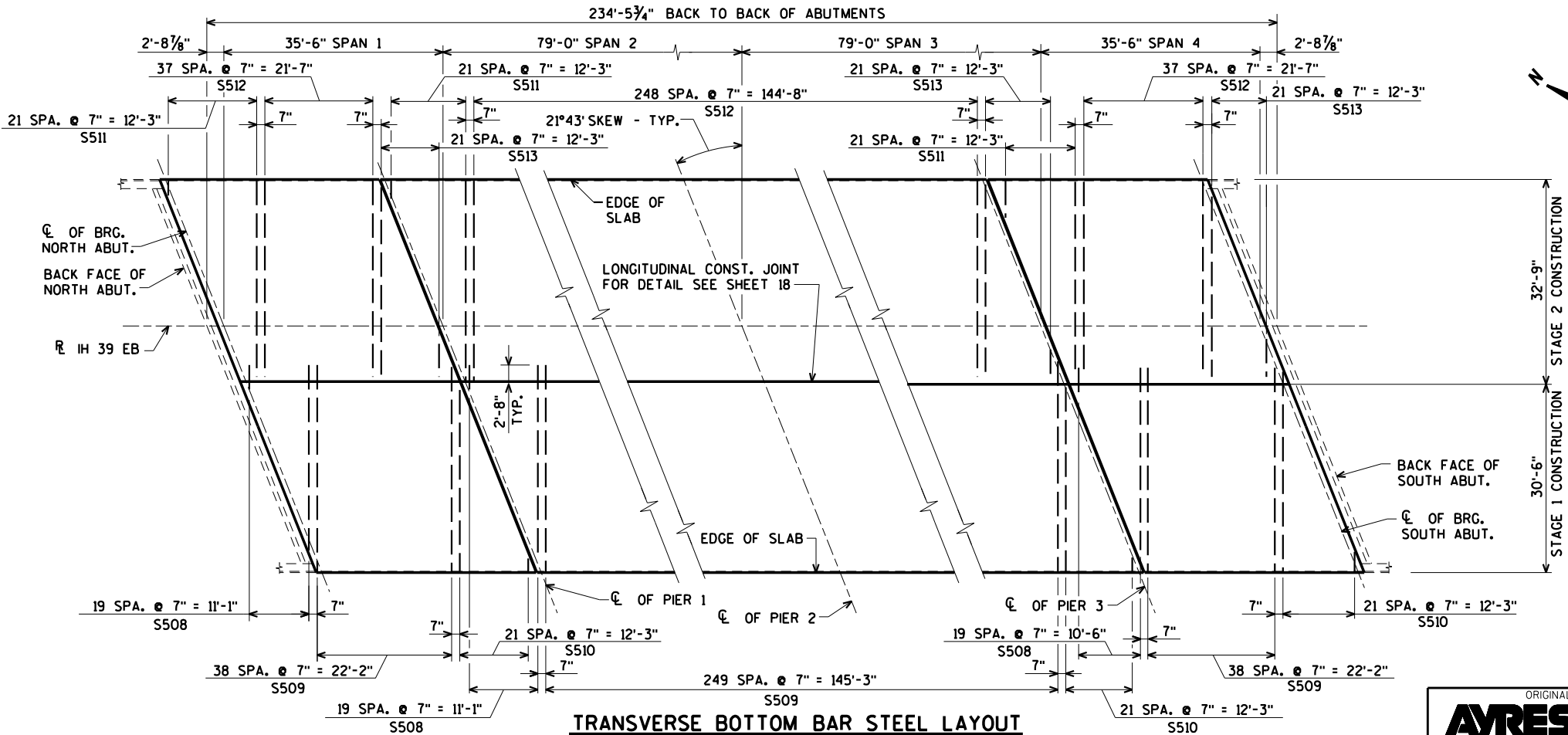
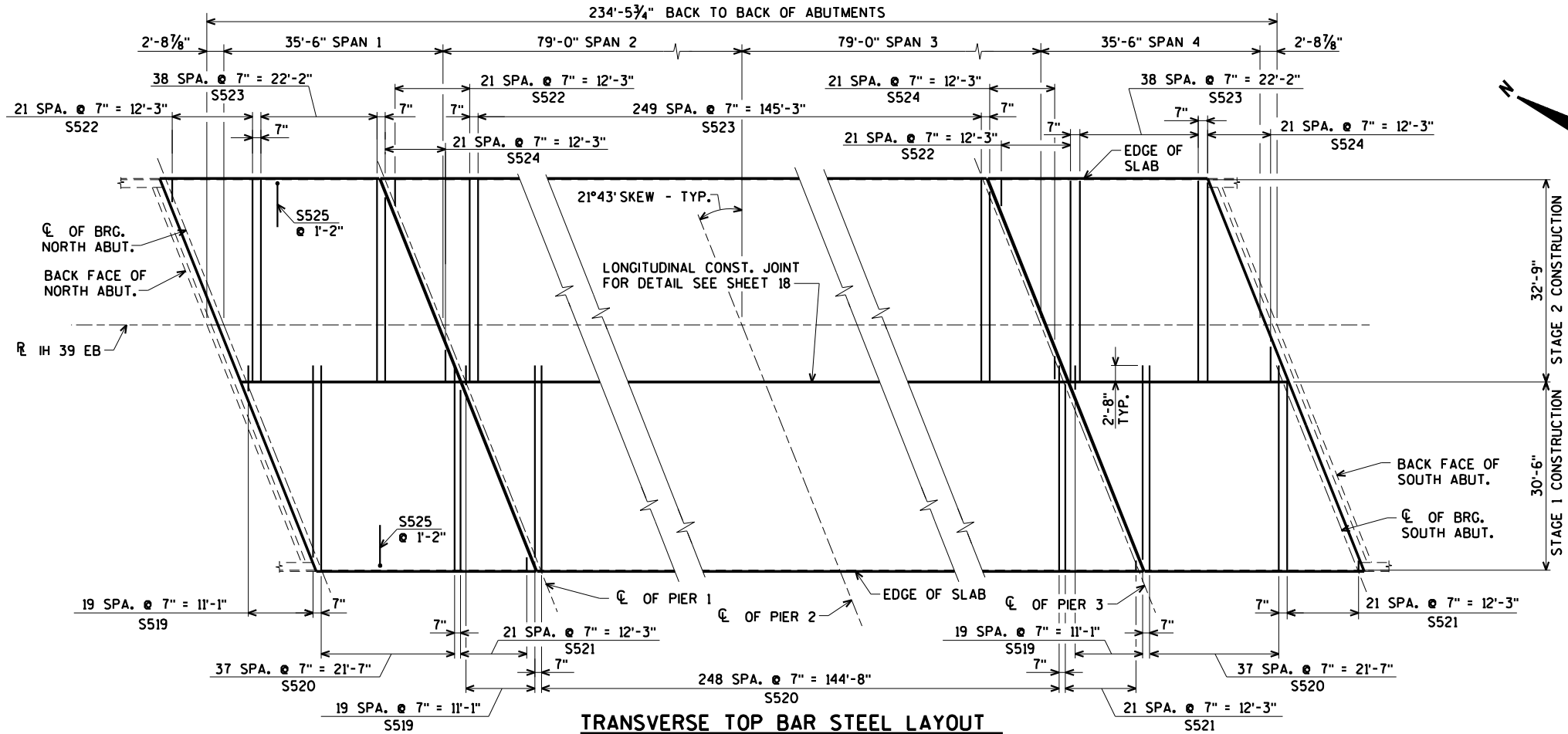
\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-102\BRIDGE\B-13-102 super.dgn

8

8

| NO.                                                | DATE | REVISION       | BY             |
|----------------------------------------------------|------|----------------|----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                |                |
| STRUCTURE B-13-102                                 |      |                |                |
| DRAWN<br>BY                                        | CLS  | PLANS<br>CK'D. | CBM            |
| SUPERSTRUCTURE<br>PLAN                             |      |                | SHEET 19 OF 22 |

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|                                                    |      |          |                 |
|----------------------------------------------------|------|----------|-----------------|
| NO.                                                | DATE | REVISION | BY              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. CBM |
| SUPERSTRUCTURE TRANSVERSE SLAB STEEL LAYOUT        |      |          | SHEET 20 OF 22  |

\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-102\BRIDGE\B-13-102 super.dgn

\$PRFNAMES  
U:\41-0647.00 - IH 39 over USH I51-Dane County\B-13-102\BRIDGE\B-13-102 super.dgn

BILL OF BARS

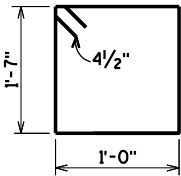
| BAR NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED | BAR SERIES | 113,530* COATED                           |
|---------|------------|------------|--------|----------|---------|------------|-------------------------------------------|
|         |            |            |        |          |         |            | LOCATION                                  |
| S401    | X          | 378        | 5-8    | X        |         |            | SLAB DIAPH. @ JOINTS STAGE 1 & 2          |
| S702    | X          | 72         | 7-2    |          |         |            | SLAB DIAPH. @ JOINTS STAGE 1              |
| S703    | X          | 48         | 4-8    |          |         |            | SLAB DIAPH. @ JOINTS STAGE 1 & 2          |
| S704    | X          | 72         | 7-2    |          |         |            | SLAB DIAPH. AT JOINTS STAGE 2             |
| S405    | X          | 90         | 7-2    |          |         |            | SLAB DIAPH. @ JOINTS STAGE 1              |
| S406    | X          | 60         | 4-8    |          |         |            | SLAB DIAPH. @ JOINTS STAGE 1 & 2          |
| S407    | X          | 90         | 7-2    |          |         |            | SLAB DIAPH. AT JOINTS STAGE 2             |
| S508    | X          | 60         | 17-7   |          |         | ⊗          | SLAB TRANS. BOT. STAGE 1                  |
| S509    | X          | 328        | 33-0   |          |         |            | SLAB TRANS. BOT. STAGE 1                  |
| S510    | X          | 66         | 16-5   |          |         | ⊗          | SLAB TRANS. BOT. STAGE 1                  |
| S511    | X          | 66         | 16-8   |          |         | ⊗          | SLAB TRANS. BOT. STAGE 2                  |
| S512    | X          | 325        | 32-5   |          |         |            | SLAB TRANS. BOT. STAGE 2                  |
| S513    | X          | 66         | 16-8   |          |         | ⊗          | SLAB TRANS. BOT. STAGE 2                  |
| S414    | X          | 376        | 18-5   |          |         |            | SLAB LONG. BOT. SPAN 1 & 4 STAGE 1 & 2    |
| S415    | X          | 470        | 33-0   |          |         |            | SLAB LONG. BOT. SPAN 2 & 3 STAGE 1 & 2    |
| S416    | X          | 384        | 18-5   |          |         |            | SLAB LONG. TOP SPAN 1 & 4 STAGE 1 & 2     |
| S417    | X          | 384        | 28-3   |          |         |            | SLAB LONG. TOP SPAN 2 & 3 STAGE 1 & 2     |
| S618    | X          | 96         | 52-4   |          |         |            | SLAB LONG. TOP @ PIER 2 STAGE 1 & 2       |
| S519    | X          | 60         | 18-4   |          |         | ⊗          | SLAB TRANS. TOP STAGE 1                   |
| S520    | X          | 325        | 33-0   |          |         |            | SLAB TRANS. TOP STAGE 1                   |
| S521    | X          | 66         | 17-2   |          |         | ⊗          | SLAB TRANS. TOP STAGE 1                   |
| S522    | X          | 66         | 16-0   |          |         | ⊗          | SLAB TRANS. TOP STAGE 2                   |
| S523    | X          | 328        | 32-5   |          |         |            | SLAB TRANS. TOP STAGE 2                   |
| S524    | X          | 66         | 16-0   |          |         | ⊗          | SLAB TRANS. TOP STAGE 2                   |
| S525    | X          | 390        | 5-6    | X        |         |            | SLAB TRANS. TOP @ PARAPET STAGE 1 & 2     |
| S526    | X          | 692        | 4-5    | X        |         |            | SLAB @ PARAPET VERT. STAGE 1 & 2          |
| S527    | X          | 692        | 6-8    | X        |         |            | PARAPET VERT. STAGE 1 & 2                 |
| S528    | X          | 64         | 18-11  |          |         |            | PARAPET HORIZ. SPAN 1 & 4 STAGE 1 & 2     |
| S529    | X          | 80         | 33-10  |          |         |            | PARAPET HORIZ. SPAN 2 & 3 STAGE 1 & 2     |
| S430    | X          | 280        | 2-7    | X        |         |            | SLAB AT HAUNCH OVER GDRS. 4-7 SPANS 1 & 4 |
| S431    | X          | 1544       | 2-11   | X        |         |            | SLAB AT HAUNCH OVER GDRS. 1-8             |
| S432    | X          | 64         | 18-5   |          |         |            | SLAB AT HAUNCH OVER GDRS. SPANS 1 & 4     |
| S433    | X          | 80         | 33-0   |          |         |            | SLAB AT HAUNCH OVER GDRS. SPANS 2 & 3     |
|         |            |            |        |          |         |            |                                           |
|         |            |            |        |          |         |            |                                           |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.  
⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

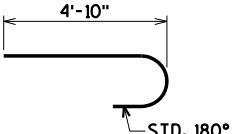
BAR SERIES TABLE

| BAR MARK | NO REQ'D.      | LENGTH           |
|----------|----------------|------------------|
| S508     | 3 SERIES OF 20 | 3'-8" TO 31'-6"  |
| S510     | 3 SERIES OF 22 | 1'-0" TO 31'-10" |
| S511     | 3 SERIES OF 22 | 1'-3" TO 32'-1"  |
| S513     | 3 SERIES OF 22 | 1'-3" TO 32'-1"  |
| S519     | 3 SERIES OF 20 | 4'-5" TO 32'-3"  |
| S521     | 3 SERIES OF 22 | 1'-9" TO 32'-7"  |
| S522     | 3 SERIES OF 22 | 8" TO 31'-4"     |
| S524     | 3 SERIES OF 22 | 8" TO 31'-4"     |

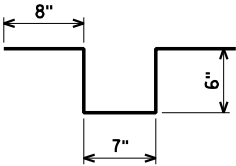
BUNDLE AND TAG EACH SERIES SEPARATELY.



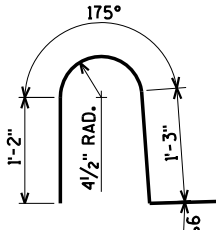
S401



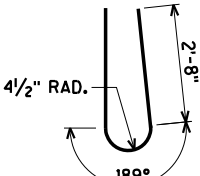
S525



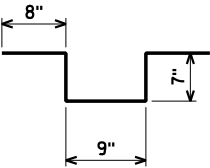
S430



S526



S527



S431

|                                                    |      |          |                 |
|----------------------------------------------------|------|----------|-----------------|
| NO.                                                | DATE | REVISION | BY              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-102                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. CBM |
| SUPERSTRUCTURE<br>BILL OF BARS                     |      |          | SHEET 21 OF 22  |

ORIGINAL PLANS PREPARED BY

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U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-102\BRIDGE\B-13-102 par042SS.dgn

STATE PROJECT NUMBER

1010-02-79

**BILL OF BARS**  
FOR ABUTMENT PARAPETS

WEIGHTS INCLUDED IN  
ABUTMENT WEIGHTS  
SHOWN ON SHEETS 3, 7, & 11.

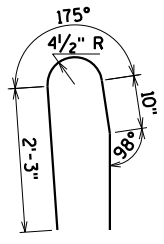
| BAR<br>MARK | COAT | NO.<br>REQ'D. |             | LENGTH | BENT | BAR<br>SERIES | 710#     | COATED | N. ABUT. |
|-------------|------|---------------|-------------|--------|------|---------------|----------|--------|----------|
|             |      | N.<br>ABUT.   | S.<br>ABUT. |        |      |               | 660#     | COATED | S. ABUT. |
|             |      |               |             |        |      |               | LOCATION |        |          |
| R501        | X    | 40            | 37          | 5-10   | X    |               | PARAPET  | VERT.  |          |
| R502        | X    | 28            | 25          | 6-8    | X    |               | PARAPET  | VERT.  |          |
| R503        | X    | 12            | 12          | 5-8    | X    | ▲             | PARAPET  | VERT.  |          |
| R504        | X    | 6             | --          | 12-8   |      |               | PARAPET  | HORIZ. | WING 1   |
| R505        | X    | 6             | --          | 11-6   |      |               | PARAPET  | HORIZ. | WING 2   |
| R506        | X    | 2             | --          | 12-8   | X    |               | PARAPET  | HORIZ. | WING 1   |
| R507        | X    | 2             | --          | 11-6   | X    |               | PARAPET  | HORIZ. | WING 2   |
| R508        | X    | --            | 6           | 11-8   |      |               | PARAPET  | HORIZ. | WING 3   |
| R509        | X    | --            | 6           | 10-7   |      |               | PARAPET  | HORIZ. | WING 4   |
| R510        | X    | --            | 2           | 11-8   | X    |               | PARAPET  | HORIZ. | WING 3   |
| R511        | X    | --            | 2           | 10-7   | X    |               | PARAPET  | HORIZ. | WING 4   |

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

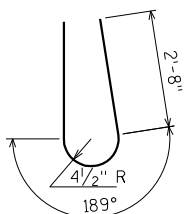
**BAR SERIES TABLE**

| MARK | NO.<br>REQ'D.    | LENGTH            |
|------|------------------|-------------------|
| R503 | 4 SERIES<br>OF 6 | 5'-0" TO<br>6'-4" |

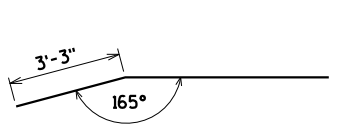
BUNDLE AND TAG EACH SERIES SEPARATELY.  
SHOWN FOR BOTH ABUTMENTS



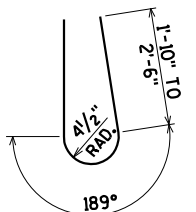
R501



R502

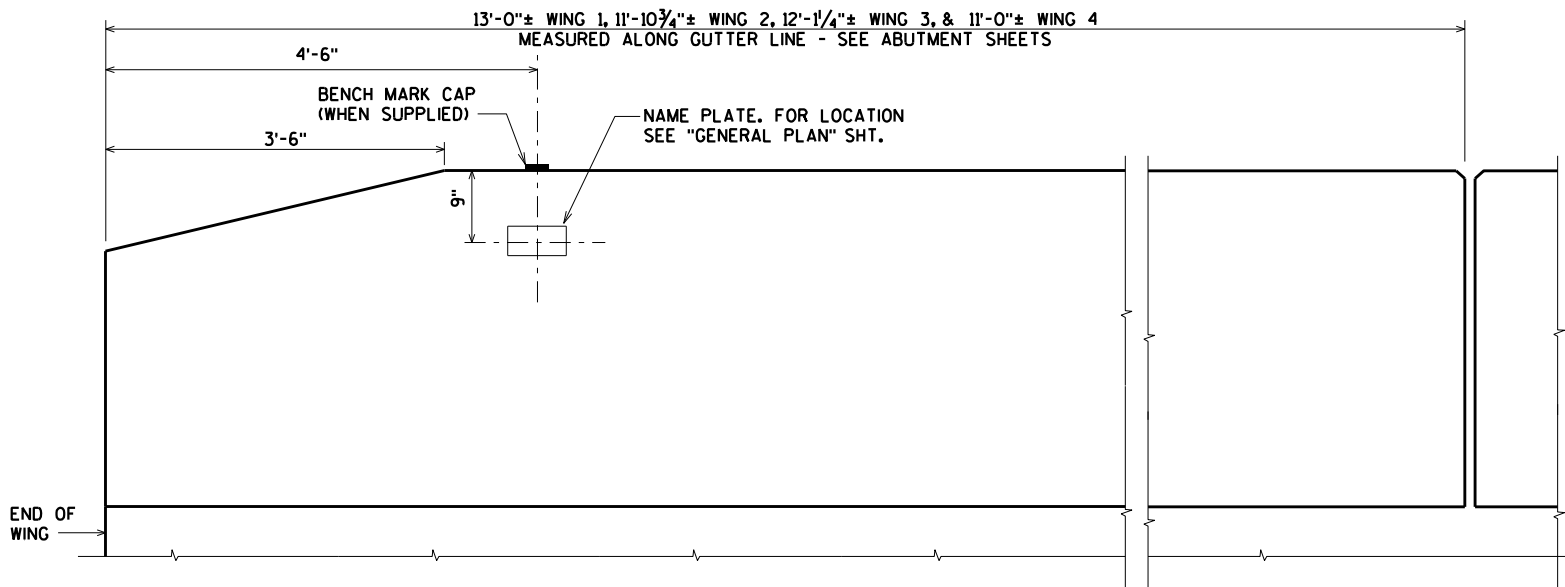


R506, R507

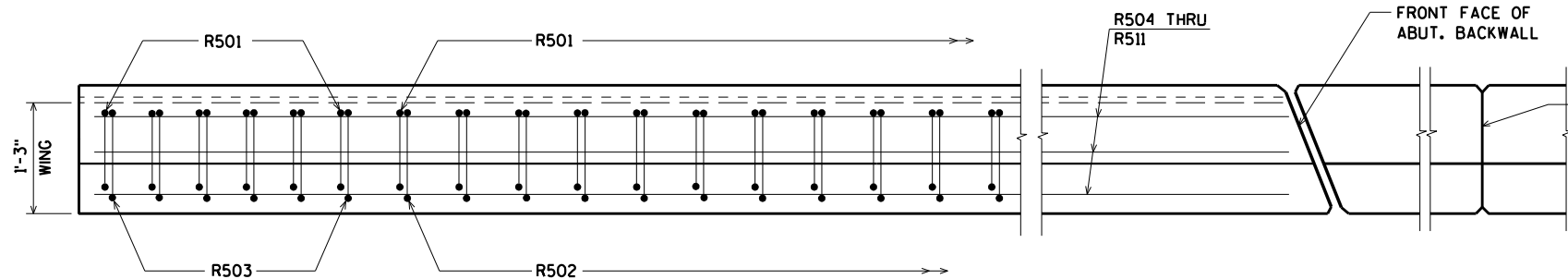


R503

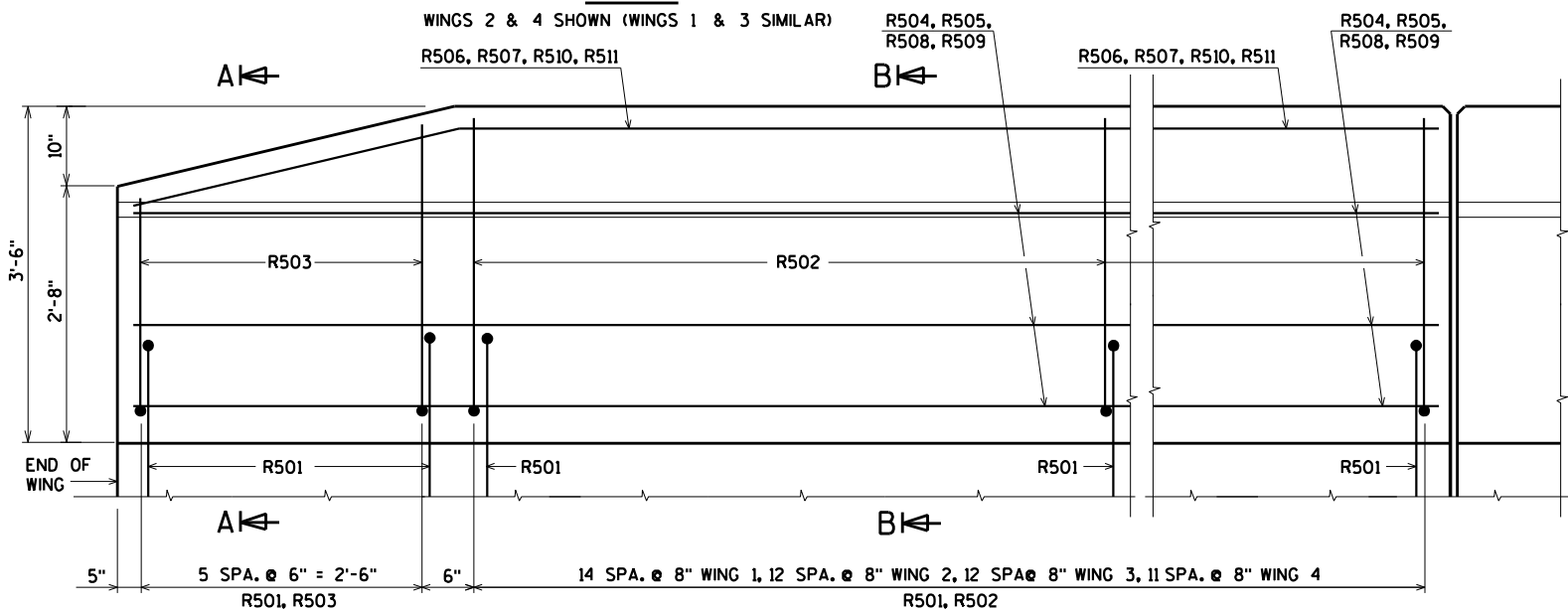
● CONST. JOINT - STRIKE OFF AS SHOWN.



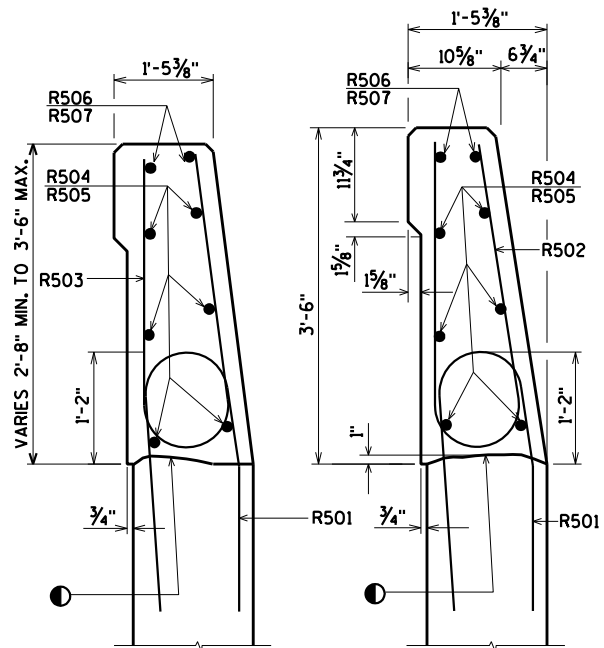
INSIDE ELEVATION



PLAN

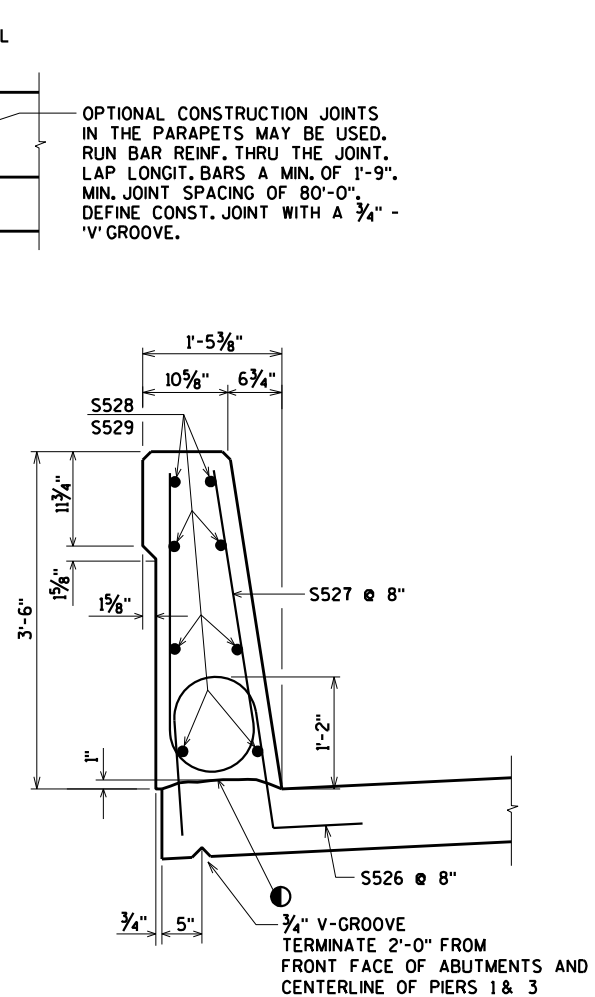


OUTSIDE ELEVATION



SECTION A

SECTION B

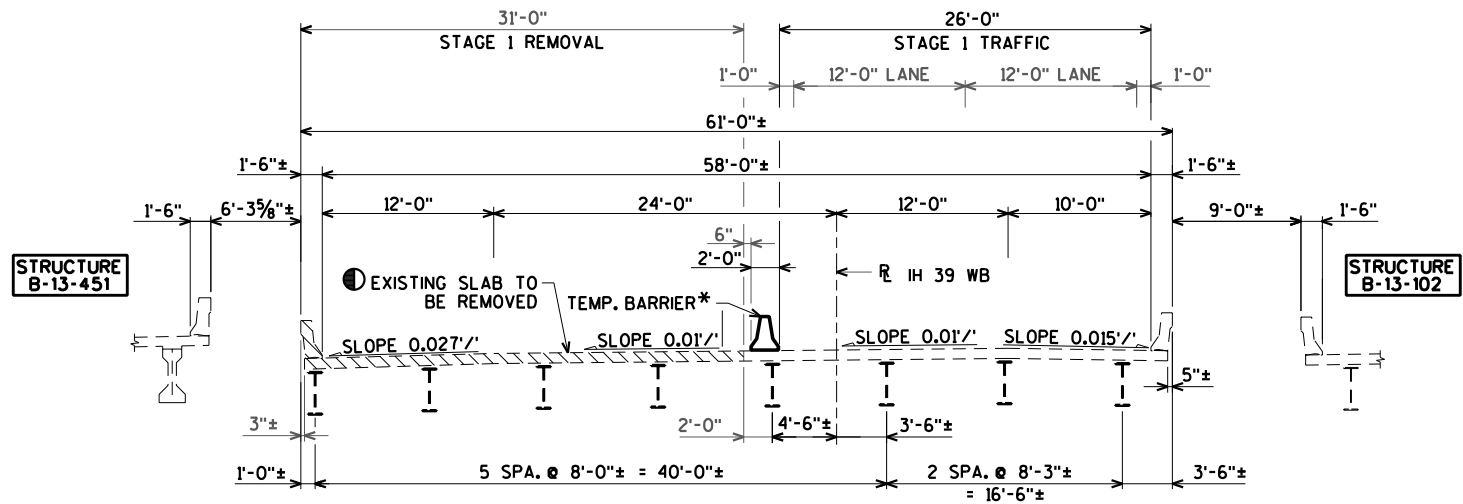


SECTION THRU PARAPET ON BRIDGE

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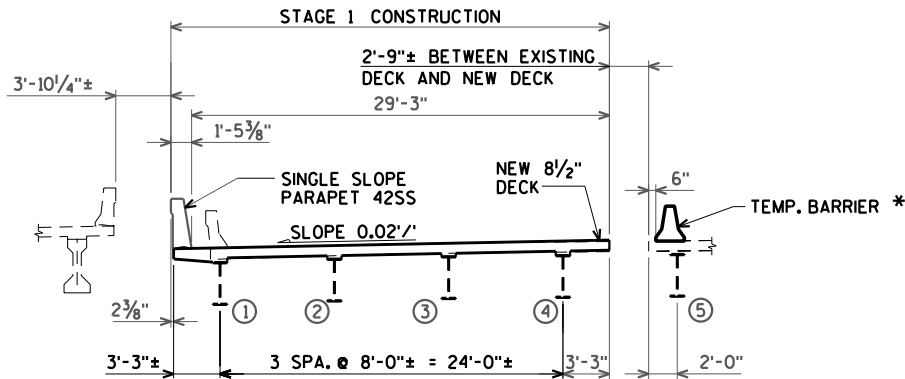
|                                                    |      |                |                |
|----------------------------------------------------|------|----------------|----------------|
| NO.                                                | DATE | REVISION       | BY             |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                |                |
| STRUCTURE B-13-102                                 |      |                |                |
| DRAWN<br>BY                                        | CLS  | PLANS<br>CK'D. | CBM            |
| SINGLE SLOPE<br>PARAPET 42SS                       |      |                | SHEET 22 OF 22 |





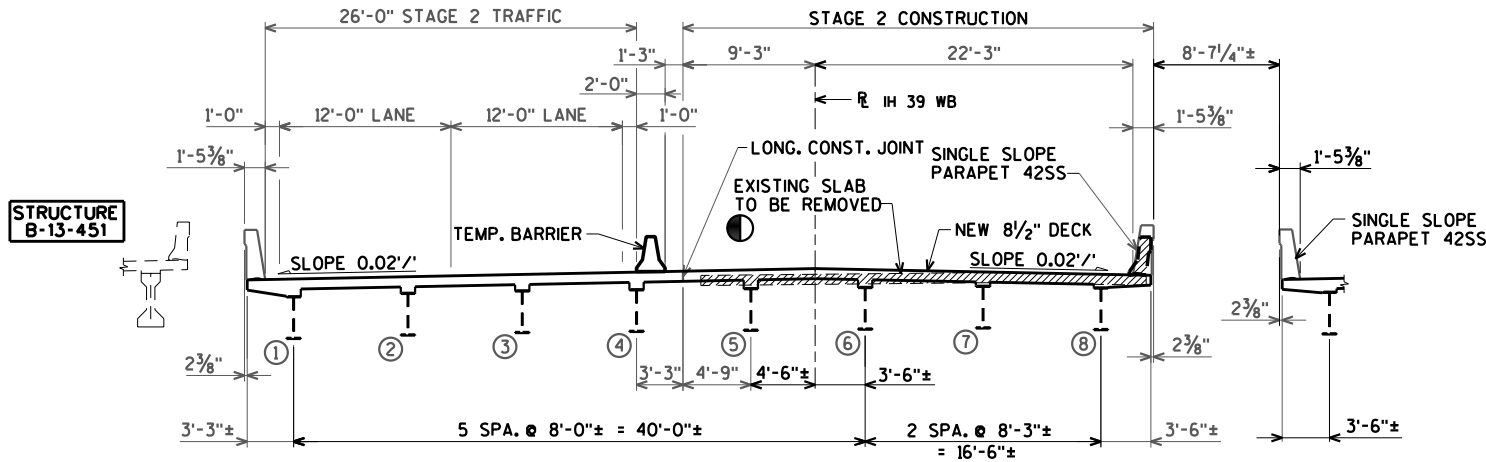
**B-13-103 STAGE 1 TRAFFIC AND REMOVAL**  
(LOOKING SOUTH)

\*TEMPORARY BARRIER TO BE  
ANCHORED TO THE DECK.



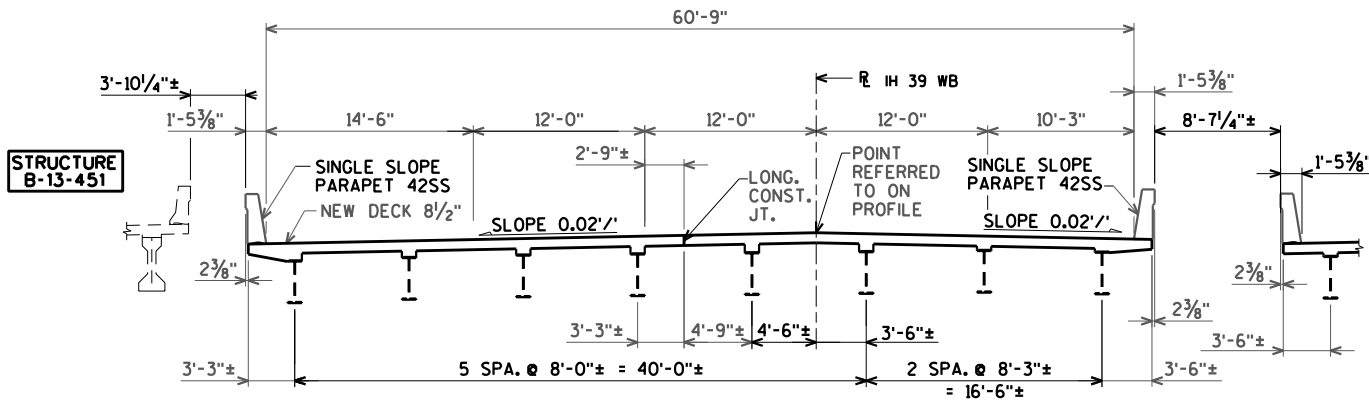
**B-13-103 STAGE 1 CONSTRUCTION**  
(LOOKING SOUTH)

\*TEMPORARY BARRIER TO BE  
ANCHORED TO THE DECK.



**B-13-103 STAGE 2 CONSTRUCTION AND TRAFFIC**  
(LOOKING SOUTH)

① EAST SIDE OF THE EXISTING DECK VARIES BETWEEN 6 7/8-INCHES AND 7-INCHES WITH A 1/2-INCH MINIMUM OVERLAY THICKNESS ON TOP. THE WEST SIDE OF THE EXISTING DECK IS 7 1/2-INCHES WITH A 1/2-INCH MINIMUM OVERLAY THICKNESS ON TOP. THE ENTIRE DECK ALSO HAS AN ASPHALTIC OVERLAY THAT WAS PLACED ON THE DECK.



**B-13-103 CROSS SECTION THRU FINAL DECK**  
(LOOKING SOUTH)

| NO.                                                | DATE | REVISION        | BY            |
|----------------------------------------------------|------|-----------------|---------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                 |               |
| STRUCTURE B-13-103                                 |      |                 |               |
| DRAWN BY CJM                                       |      | PLANS CK'D. AEB |               |
| TYPICAL SECTIONS                                   |      |                 | SHEET 2 OF 22 |

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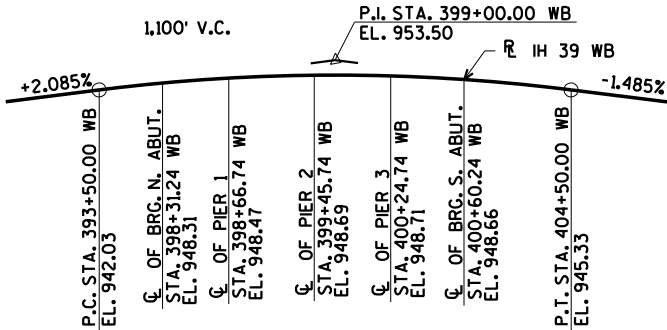
TOTAL ESTIMATED QUANTITIES

| BID ITEM NUMBER | BID ITEMS                                       | UNIT | N. ABUT. | PIER 1 | PIER 2 | PIER 3 | S. ABUT. | SUPER.  | TOTAL       |
|-----------------|-------------------------------------------------|------|----------|--------|--------|--------|----------|---------|-------------|
| 203.0200        | REMOVING OLD STRUCTURE STATION 399+45.74 WB     | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 203.0225.S.02   | DEBRIS CONTAINMENT STRUCTURE B-13-103           | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 206.1000        | EXCAVATION FOR STRUCTURES BRIDGES B-13-103      | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 210.0100        | BACKFILL STRUCTURE                              | CY   | 5        | -----  | -----  | -----  | 5        | -----   | 10          |
| 502.0100        | CONCRETE MASONRY BRIDGES                        | CY   | 14       | -----  | -----  | -----  | 15       | 502     | 531         |
| 502.3100        | EXPANSION DEVICE B-13-103                       | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 502.3200        | PROTECTIVE SURFACE TREATMENT                    | SY   | 15       | -----  | -----  | -----  | 15       | 1,795   | 1,825       |
| 502.5005        | MASONRY ANCHOR TYPE L NO. 5 BARS                | EACH | 182      | -----  | -----  | -----  | 186      | -----   | 368         |
| 505.0605        | BAR STEEL REINFORCEMENT HS COATED BRIDGES       | LB   | 2,510    | -----  | -----  | -----  | 2,600    | 113,530 | 118,640     |
| 509.1500        | CONCRETE SURFACE REPAIR                         | SF   | 50       | 100    | 50     | 100    | 50       | -----   | 350         |
| 516.0500        | RUBBERIZED MEMBRANE WATERPROOFING               | SY   | 15       | -----  | -----  | -----  | 15       | -----   | 30          |
| 517.0900.S.02   | PREPARATION AND COATING OF TOP FLANGES B-13-103 | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
| 604.9015.S      | RESEAL CRUSHED AGGREGATE SLOPE PAVING           | SY   | 260      | -----  | -----  | -----  | 260      | -----   | 520         |
| SPV.0105.02     | FIBER WRAP PIER REINFORCING B-13-103            | LS   | -----    | -----  | -----  | -----  | -----    | -----   | 1           |
|                 |                                                 |      |          |        |        |        |          |         |             |
|                 | NON-BID ITEMS                                   |      |          |        |        |        |          |         |             |
|                 | FILLER                                          | SIZE | -----    | -----  | -----  | -----  | -----    | -----   | 1/2" & 3/4" |
|                 | BRIDGE SEAT PROTECTION                          |      |          |        |        |        |          |         |             |
|                 |                                                 |      |          |        |        |        |          |         |             |

- ALSO REMOVE EXISTING DRAINS THAT WERE PREVIOUSLY PLUGGED WITH CONCRETE.
- UNDISTRIBUTED QUANTITY FOR REPAIRS AS DIRECTED BY THE ENGINEER, IF NECESSARY.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.  
BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.  
THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.  
THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.  
AT ABUTMENTS ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.  
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED TO THE TOP OF DECK AND TOP AND INSIDE FACES OF PARAPETS.  
UTILIZE EXISTING BAR STEEL REINFORCEMENT WHERE SHOWN AND EXTEND 24 BAR DIAMETERS INTO NEW WORK.  
DIMENSIONS ARE BASED ON ORIGINAL PLANS.  
ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1" DEEP SAW CUT.  
ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER FRICTION TYPE HIGH-TENSILE STRENGTH BOLTS UNLESS SHOWN OR NOTED OTHERWISE.  
VARIATIONS TO THE NEW GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.  
THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR.  
ORIGINAL CONSTRUCTION YEAR IS 1961.  
JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.  
APPLY BRIDGE SEAT PROTECTION, AS PER SECTION 502.3.12 OF THE STANDARD SPECIFICATIONS, TO THE TOP SURFACES OF ALL ABUTMENTS AND PIERS BELOW EXPANSION DEVICES.



PROFILE GRADE LINE  
IH 39 WB

BENCH MARK:  
WISDOT ALUM. CAP ON BRIDGE SE WING WALL  
STA. 400+40 WB, 8' LT.  
EL. 950.22

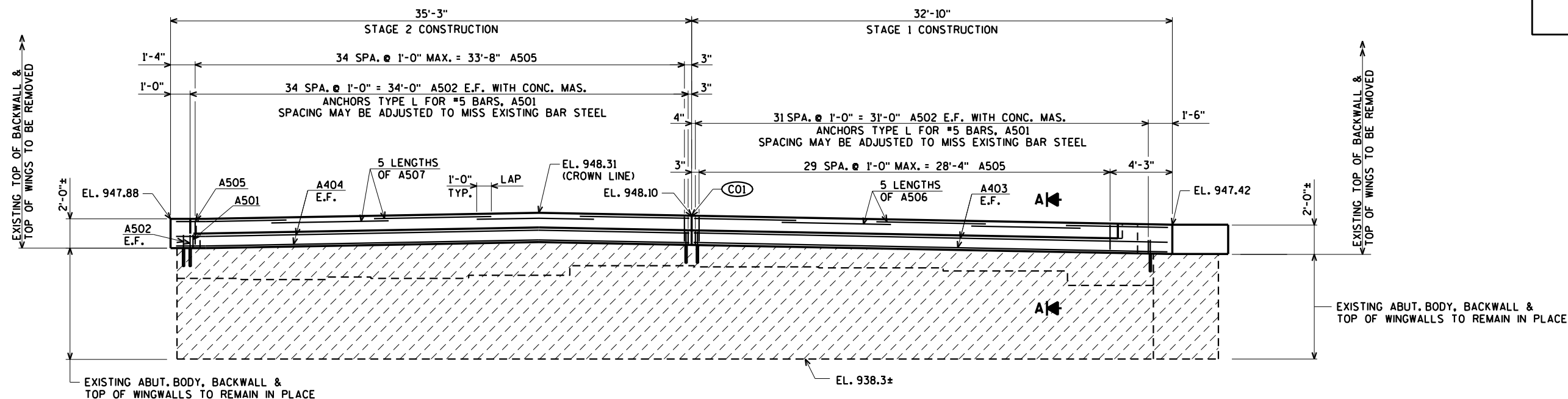
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| NO.                                                | DATE     | REVISION      | BY              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |          |               |                 |
| STRUCTURE B-13-103                                 |          |               |                 |
|                                                    | DRAWN BY | CJM           | PLANS CK'D. AEB |
| QUANTITIES AND NOTES                               |          | SHEET 3 OF 22 |                 |

ORIGINAL PLANS PREPARED BY

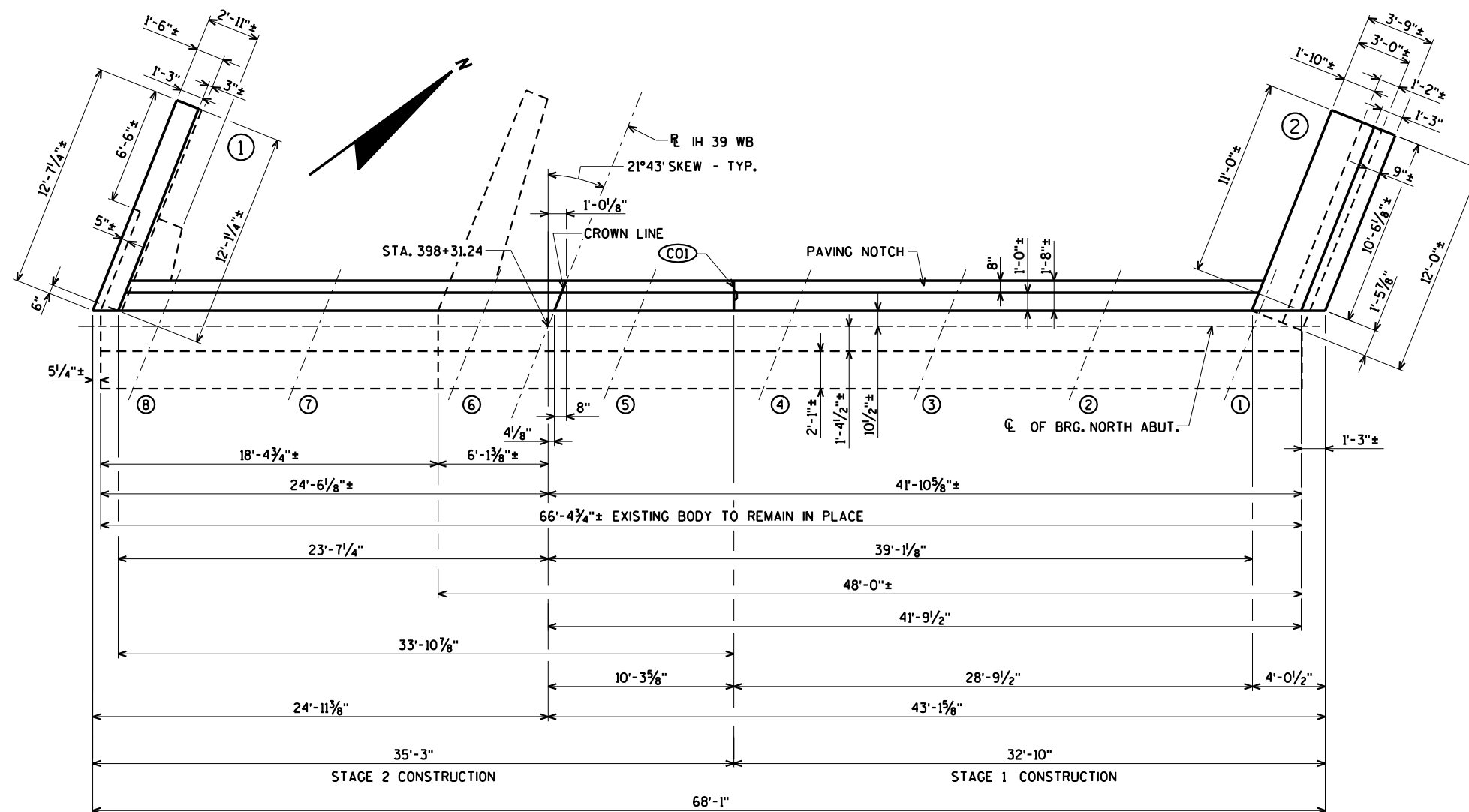
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ecpdf.plt  
B-13-103 gpREHAB.dgn



FOR SECTION "A" SEE SHEET 7



CO1 VERT. CONST. JOINT KEYWAY FORMED BY A BEVELED 2" x 8" WITH A 3/4" 'V' GROOVE ON FRONT FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 5 THRU 7

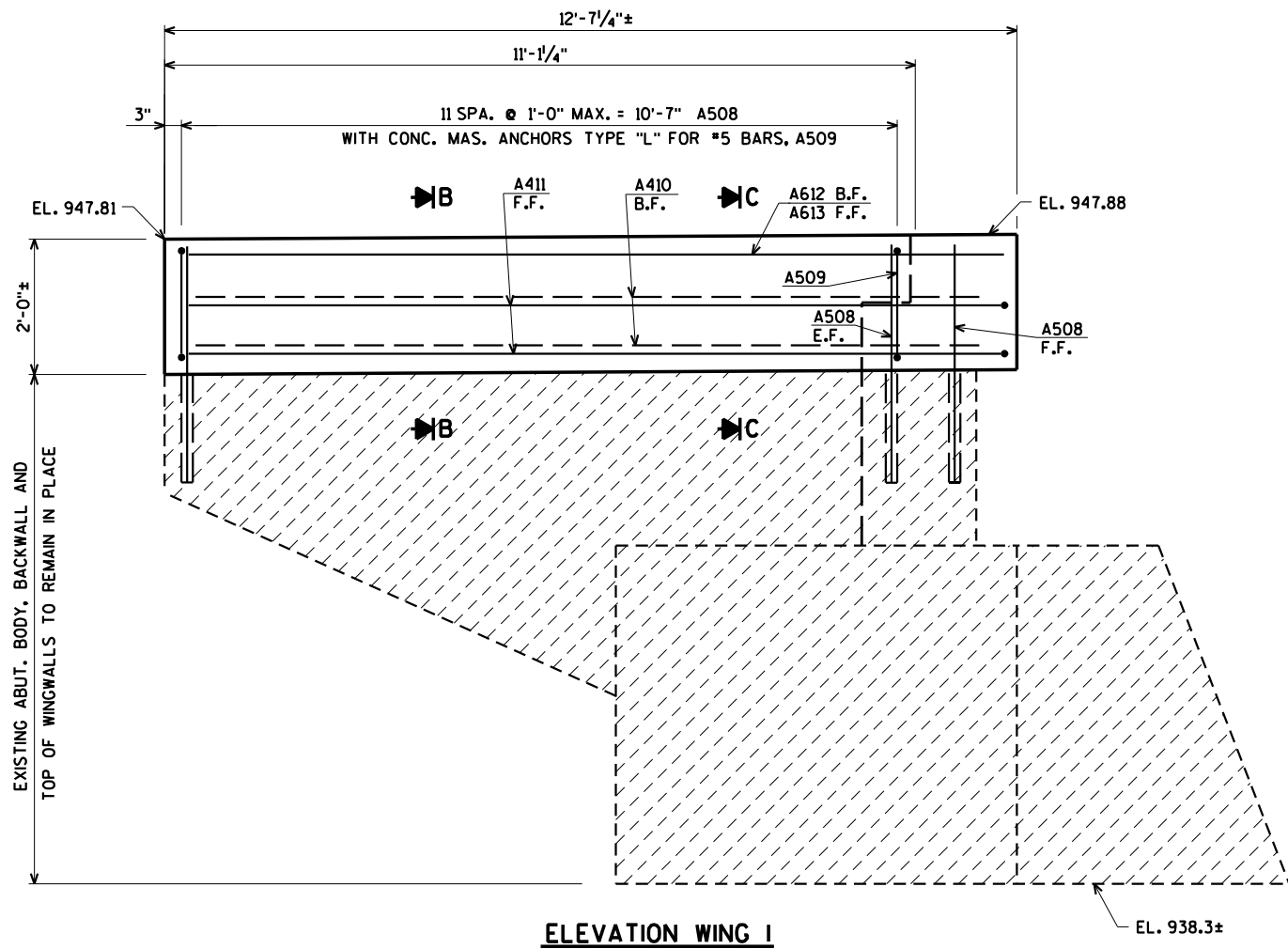
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|----------------------------------------------------|------|---------------|-----------------|
|                                                    |      |               |                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |               |                 |
| STRUCTURE B-13-103                                 |      |               |                 |
| DRAWN BY                                           |      | CLS           | PLANS CK'D. AEB |
| NORTH ABUTMENT                                     |      | SHEET 4 OF 22 |                 |

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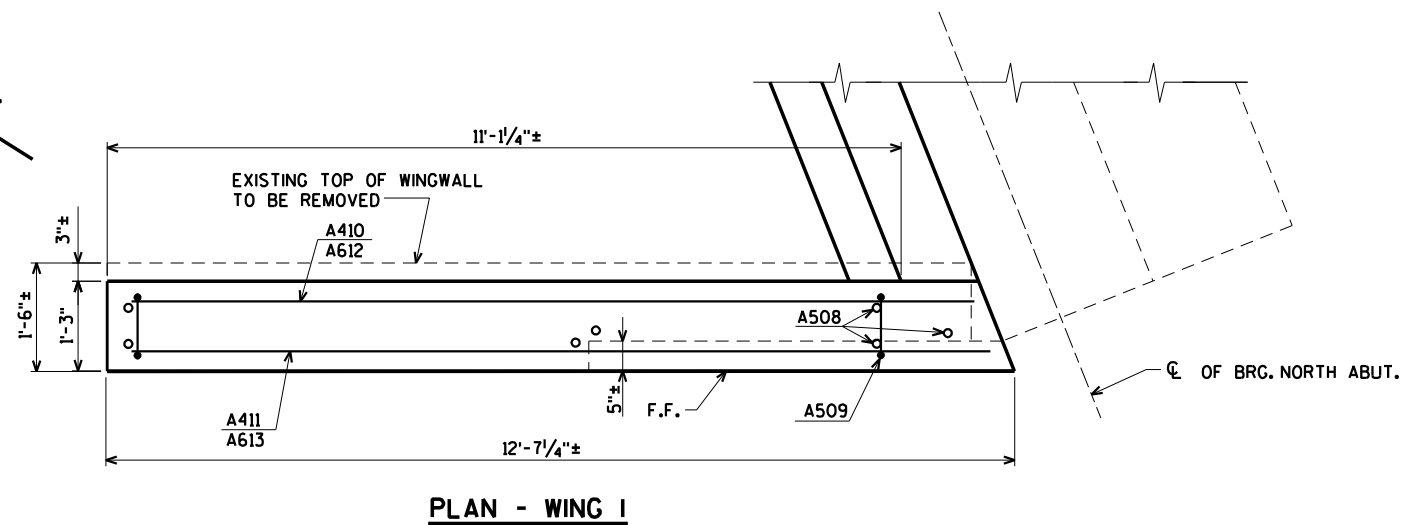
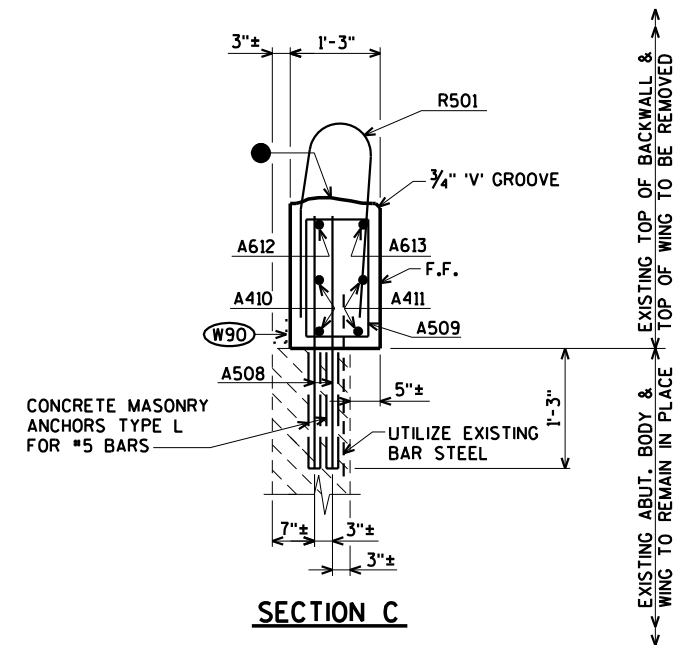
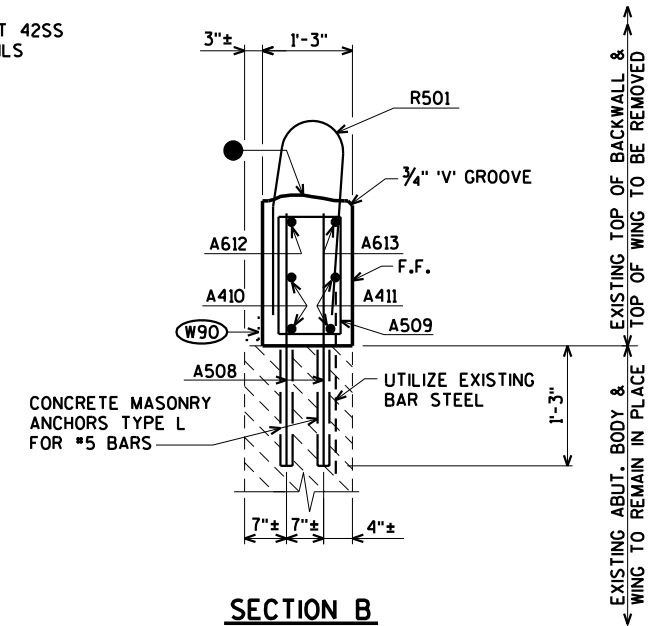
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STATE PROJECT NUMBER

1010-02-79



SINGLE SLOPE PARAPET 42SS  
NOT SHOWN FOR DETAILS  
SEE SHEET 22.



(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

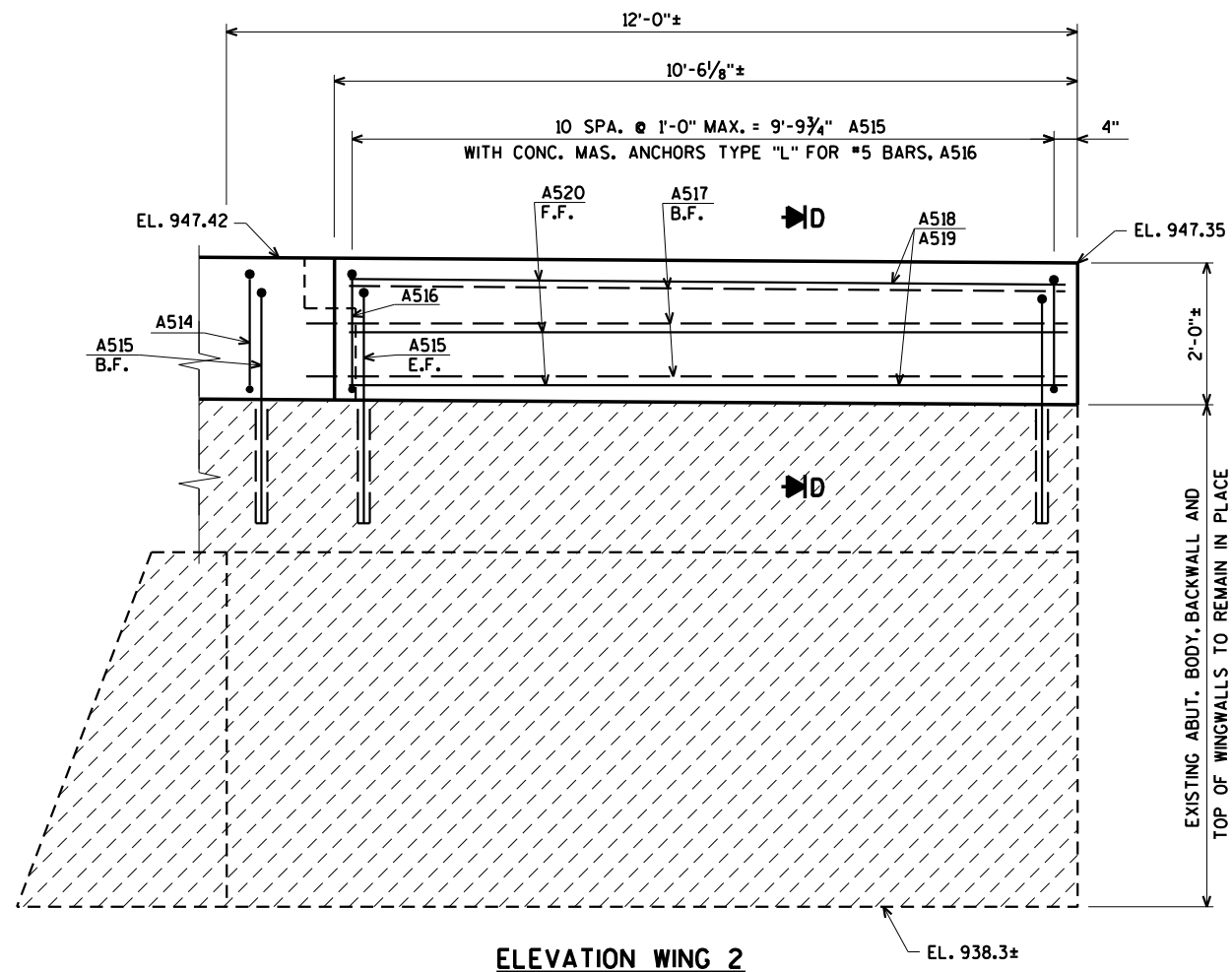
WORK THIS SHEET WITH SHEETS 4, 6 & 7

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
|                                                    |      |          |                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| NORTH ABUTMENT<br>WING 1 DETAILS                   |      |          | SHEET 5 OF 22   |

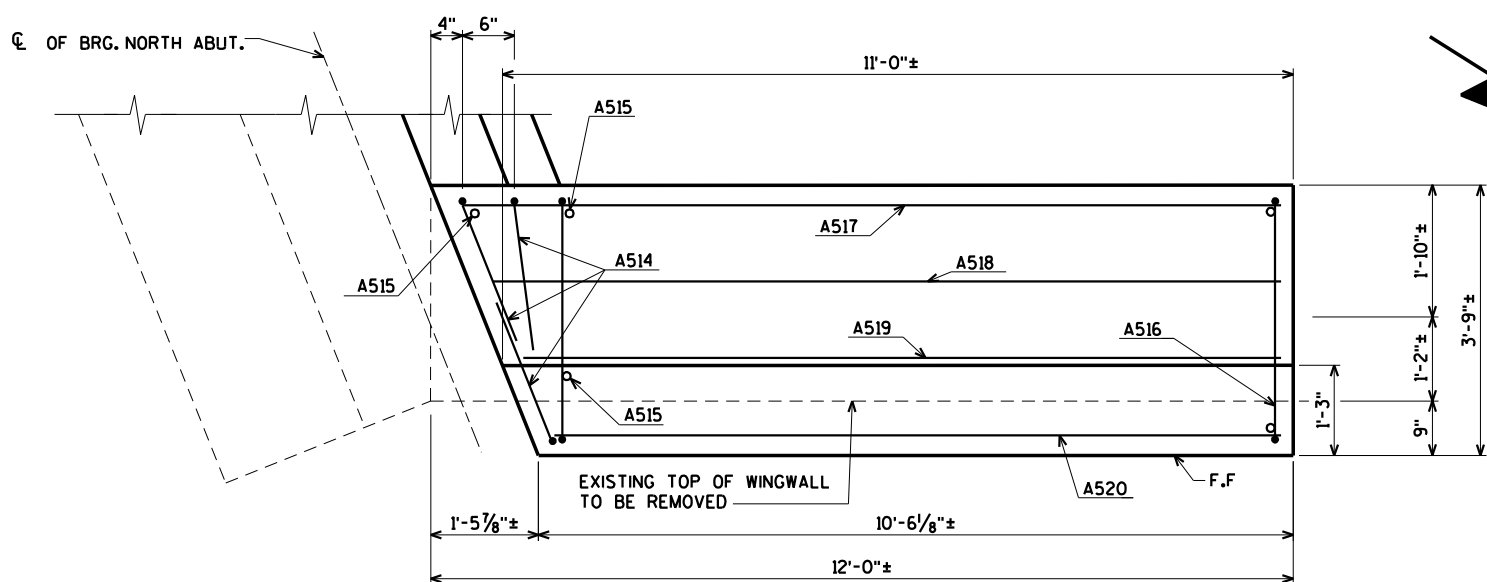
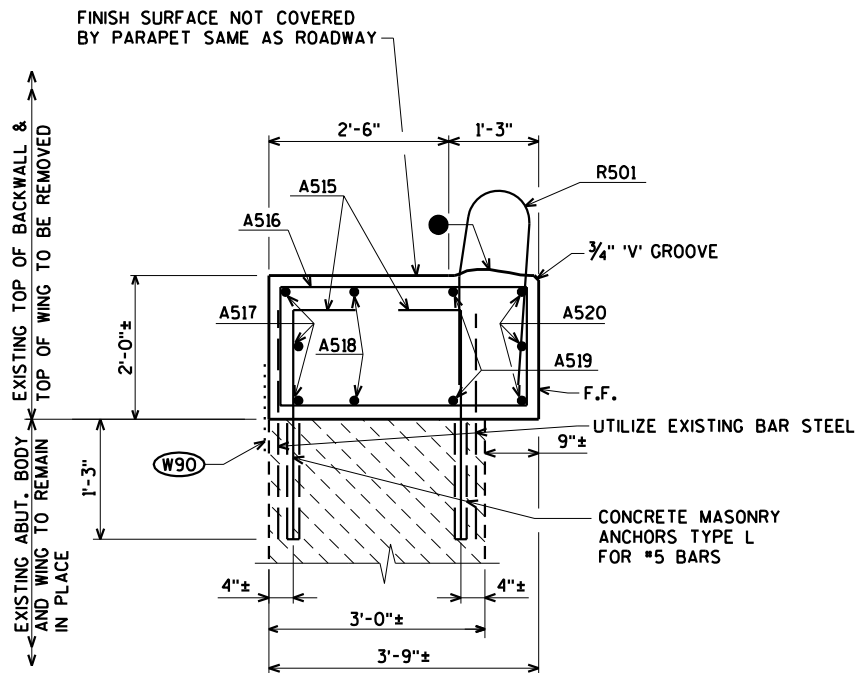
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SINGLE SLOPE PARAPET 42SS  
NOT SHOWN FOR DETAILS  
SEE SHEET 22.



(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

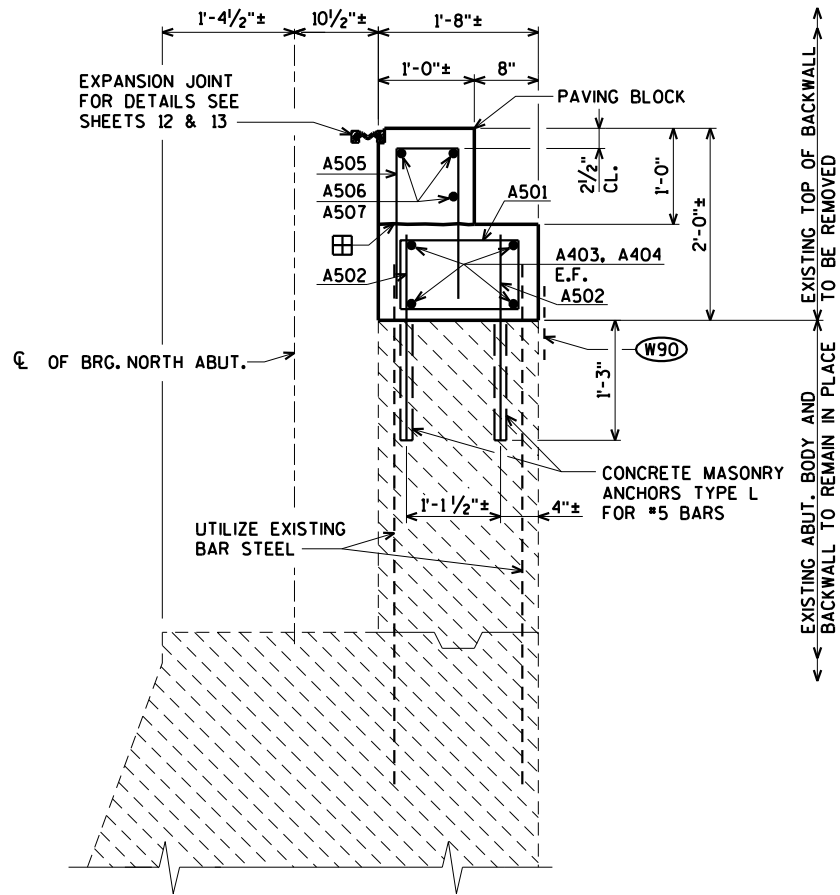
WORK THIS SHEET WITH SHEETS 4, 5 & 7

| NO.                                                | DATE | REVISION    | BY            |
|----------------------------------------------------|------|-------------|---------------|
|                                                    |      |             |               |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |             |               |
| STRUCTURE B-13-103                                 |      |             |               |
| DRAWN BY                                           | CLS  | PLANS CK'D. | AEB           |
| NORTH ABUTMENT<br>WING 2 DETAILS                   |      |             | SHEET 6 OF 22 |

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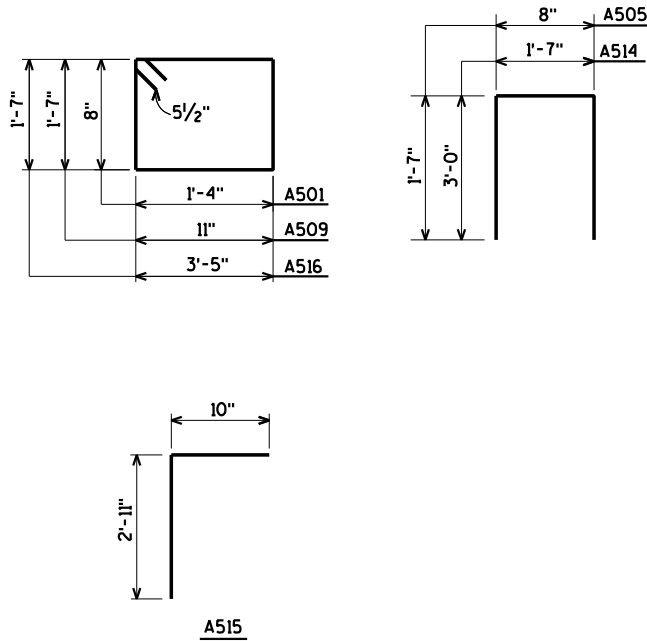
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8



### SECTION A

FOR LOCATION OF SECTION "A"  
SEE SHEET 4



### BILL OF BARS

WEIGHT INCLUDES PARAPET STEEL  
SHOWN ON SHEET 22

| BAR NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED | BAR SERIES | 2,510# COATED                          |
|---------|------------|------------|--------|----------|---------|------------|----------------------------------------|
|         |            |            |        |          |         |            | LOCATION                               |
| A501    | X          | 67         | 4-8    | X        |         |            | BACKWALL VERT. STAGE 1 & 2             |
| A502    | X          | 134        | 2-1    |          |         |            | BACKWALL VERT. DOWELS E.F. STAGE 1 & 2 |
| A403    | X          | 4          | 32-6   |          |         |            | BACKWALL HORIZ. STAGE 1                |
| A404    | X          | 4          | 34-7   |          |         |            | BACKWALL HORIZ. STAGE 2                |
| A505    | X          | 65         | 3-8    | X        |         |            | BACKWALL PAVING BLOCK VERT.            |
| A506    | X          | 15         | 7-4    |          |         |            | PAVING BLOCK HORIZ. STAGE 1            |
| A507    | X          | 15         | 7-11   |          |         |            | PAVING BLOCK HORIZ. STAGE 2            |
| A508    | X          | 25         | 3-1    |          |         |            | WING 1 VERT. DOWELS E.F. STAGE 2       |
| A509    | X          | 12         | 5-8    | X        |         |            | WING 1 VERT. STAGE 2                   |
| A410    | X          | 2          | 10-9   |          |         |            | WING 1 HORIZ. B.F. STAGE 2             |
| A411    | X          | 2          | 12-1   |          |         |            | WING 1 HORIZ. F.F. STAGE 2             |
| A612    | X          | 1          | 10-9   |          |         |            | WING 1 HORIZ. B.F. STAGE 2             |
| A613    | X          | 1          | 12-1   |          |         |            | WING 1 HORIZ. F.F. STAGE 2             |
| A514    | X          | 3          | 7-5    | X        |         |            | WING 2 AT BACKWALL STAGE 1             |
| A515    | X          | 23         | 3-8    | X        |         |            | WING 2 VERT. DOWELS E.F. STAGE 1       |
| A516    | X          | 11         | 10-8   | X        |         |            | WING 2 VERT. STAGE 1                   |
| A517    | X          | 3          | 11-7   |          |         |            | WING 2 HORIZ. B.F. STAGE 1             |
| A518    | X          | 2          | 11-2   |          |         |            | WING 2 HORIZ. STAGE 1                  |
| A519    | X          | 2          | 10-9   |          |         |            | WING 2 HORIZ. STAGE 1                  |
| A520    | X          | 3          | 10-2   |          |         |            | WING 2 HORIZ. F.F. STAGE 1             |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS

(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING  
SEAL ALL HORIZONTAL AND VERTICAL JOINTS  
ON BACK FACE OF ABUTMENT.

CONST. JOINT - POUR CONCRETE ABOVE  
THIS JOINT AFTER SUPERSTRUCTURE IS IN  
PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

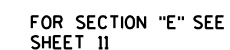
E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 4 THRU 6

|                                                    |      |          |                 |
|----------------------------------------------------|------|----------|-----------------|
| NO.                                                | DATE | REVISION | BY              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| NORTH ABUTMENT<br>DETAILS                          |      |          | SHEET 7 OF 22   |

ORIGINAL PLANS PREPARED BY  
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8



**ELEVATION**  
(LOOKING SOUTH)

Diagram showing the elevation view of a bridge structure, including dimensions and construction stages.

**Dimensions (Left Side):**

- 13'-5 1/8"±
- 12'-0"±
- 1'-5 7/8"±
- 1'-5 3/4"
- 4'-0 1/2"

**Dimensions (Right Side):**

- 2'-11"±
- 1'-6"±
- 3'-0"±
- 1'-0"±
- 12'-0"±
- 11'-10 3/4"±
- 6'-6"±
- 11'-4 3/4"±
- 11'-4"±
- 5'-4"±

**Dimensions (Bottom):**

- 68'-1"
- 42'-5 3/8"
- 47'-4 1/8"
- 33'-6"
- 32'-1 7/8"
- 29'-5 1/2"
- 38'-4 7/8"
- 64'-5 1/4"± EXISTING BODY TO REMAIN IN PLACE
- 6'-4 1/2"±
- 8"-11 3/8"
- 8'-11 3/8"
- 33'-2 1/8"
- 24'-3 1/2"
- 23'-5 5/8"±
- 17'-1 1/8"±
- 25'-2 3/8"±
- 34'-7"
- 25'-7 5/8"

**Construction Stages:**

- STAGE 1 CONSTRUCTION
- STAGE 2 CONSTRUCTION

**Other Labels:**

- PAVING NOTCH
- STA. 400+60.24 WB
- CROWN LINE
- 21°43' SKEW - TYP.
- 1'-0 1/8"
- 1'-0"±
- 1'-8"±
- 8"
- 10'-2"±
- 1'-4 1/2"±
- 2'-1"±
- 40'-11 5/8"
- CL OF BRG. SOUTH ABUT.
- 1'-3"
- 1'-2"±
- 3'-0"±
- 3'-9"±
- 9"±
- 13'-0"±
- 1'-10"±

(C01) VERT. CONST. JOINT KEYWAY FORMED  
BY A BEVELED 2" x 8" WITH  
A 3/4" 'V' GROOVE ON FRONT FACE

E.F. DENOTES EACH FACE

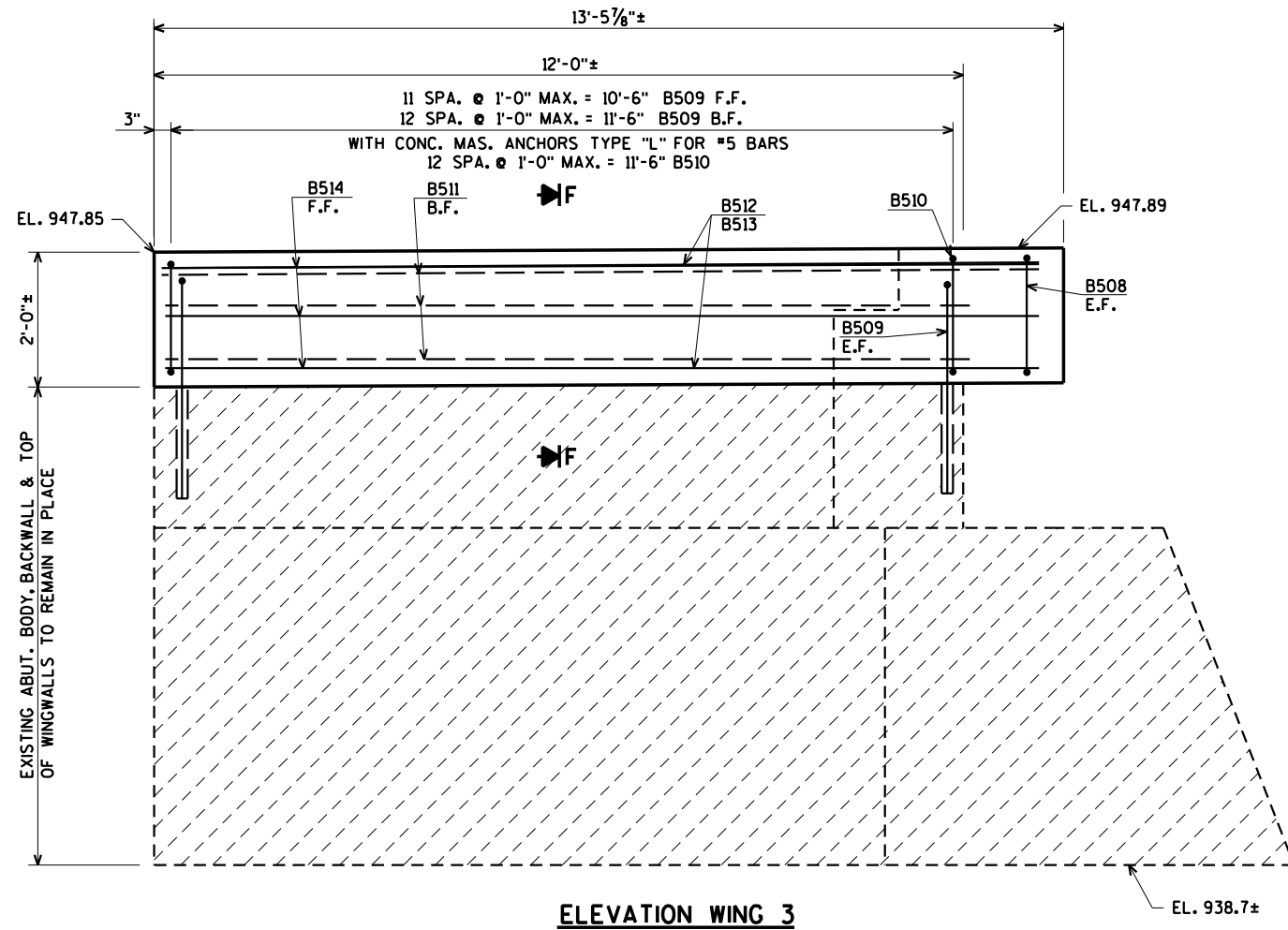
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| NO.                                                | DATE | REVISION      | BY              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |               |                 |
| STRUCTURE B-13-103                                 |      |               |                 |
| DRAWN BY                                           |      | CLS           | PLANS CK'D. AEB |
| SOUTH ABUTMENT                                     |      | SHEET 8 OF 22 |                 |

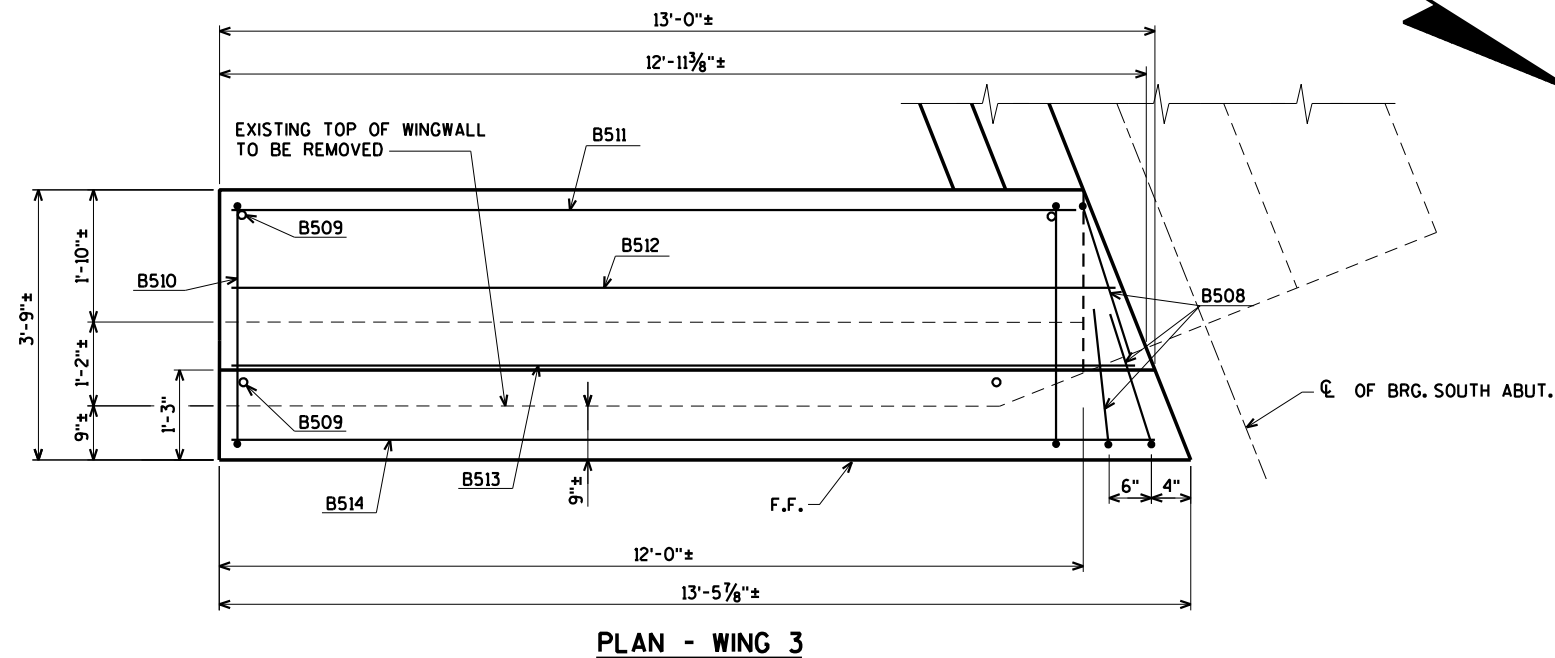
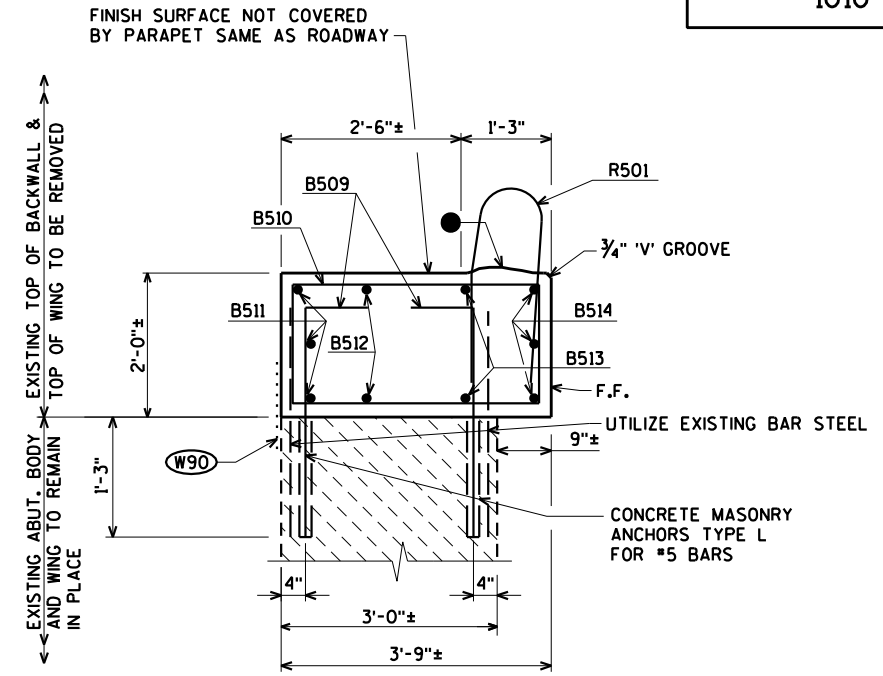
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STATE PROJECT NUMBER

1010-02-79



SINGLE SLOPE PARAPET 42SS  
NOT SHOWN FOR DETAILS  
SEE SHEET 22.



(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 8, 10 & 11

| NO. | DATE | REVISION | BY |
|-----|------|----------|----|
|     |      |          |    |

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**STRUCTURE B-13-103**

DRAWN BY CLS PLANS CK'D. AEB

**SOUTH ABUTMENT  
WING 3 DETAILS**

SHEET 9 OF 22

ORIGINAL PLANS PREPARED BY

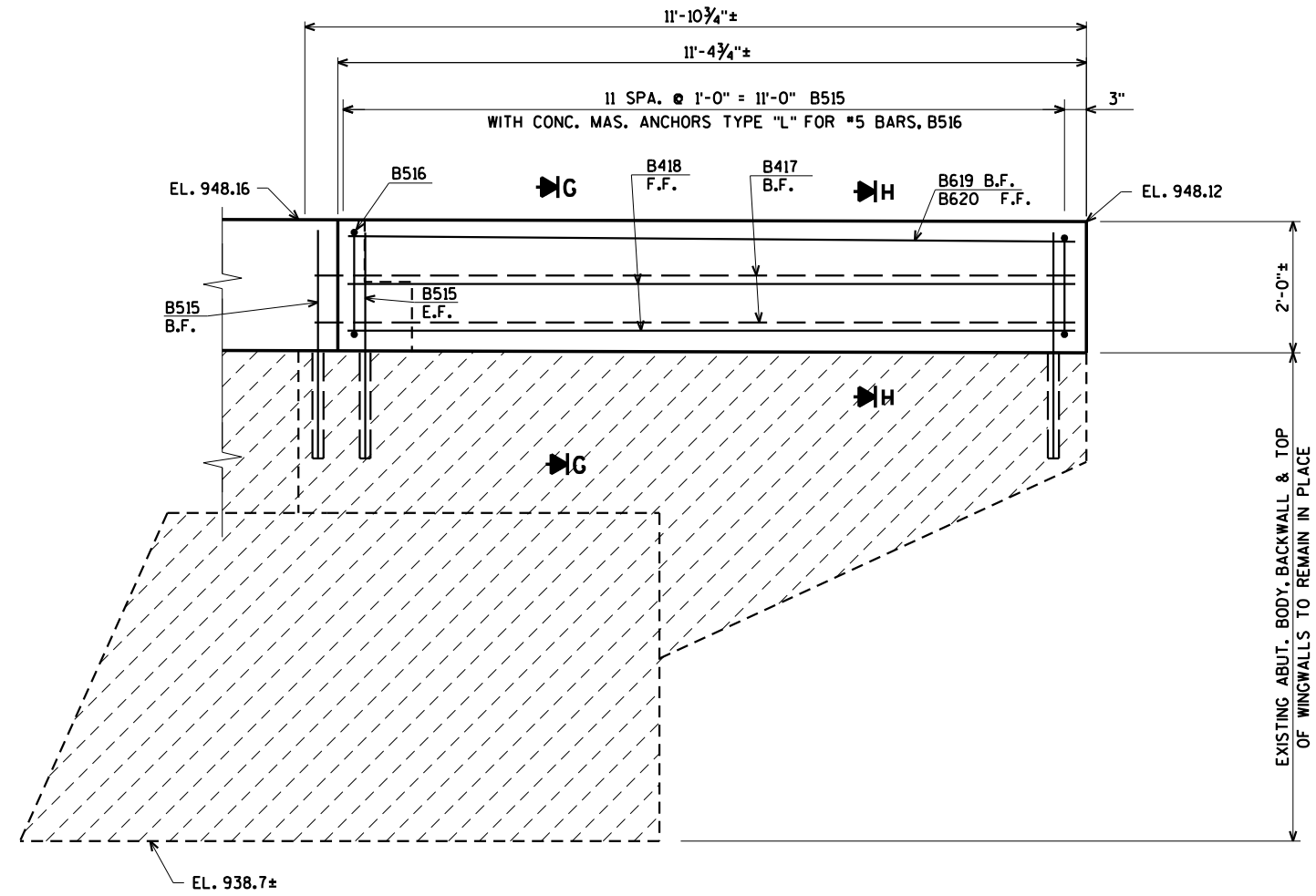
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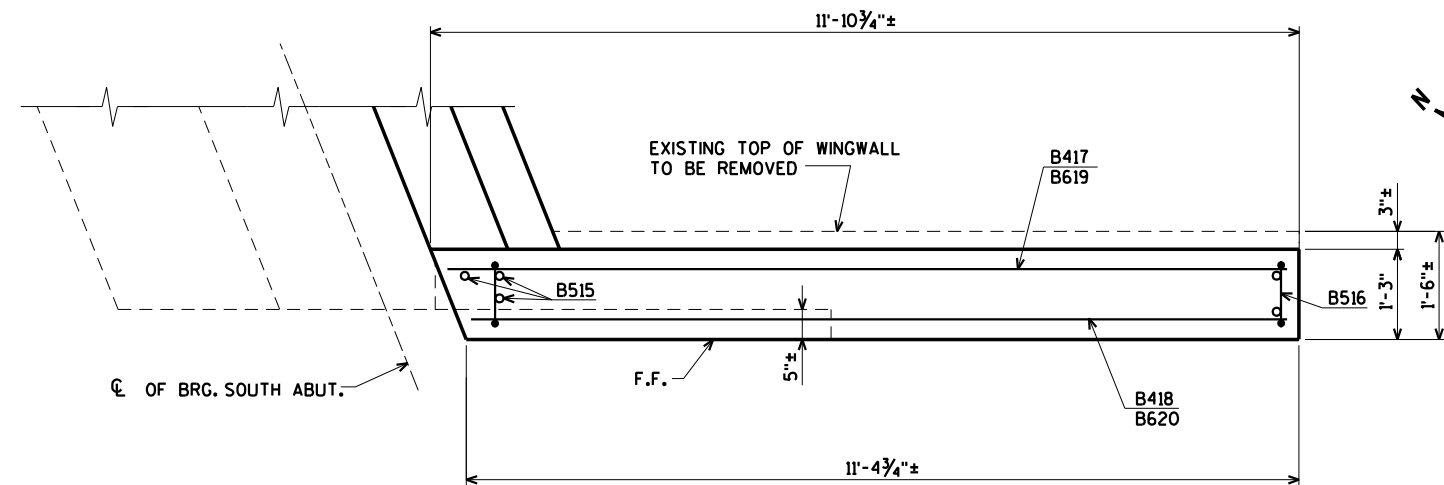
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STATE PROJECT NUMBER

1010-02-79

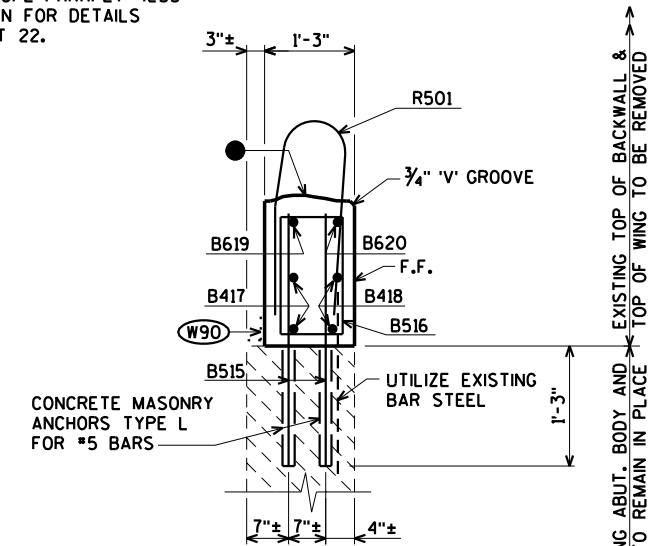


ELEVATION WING 4

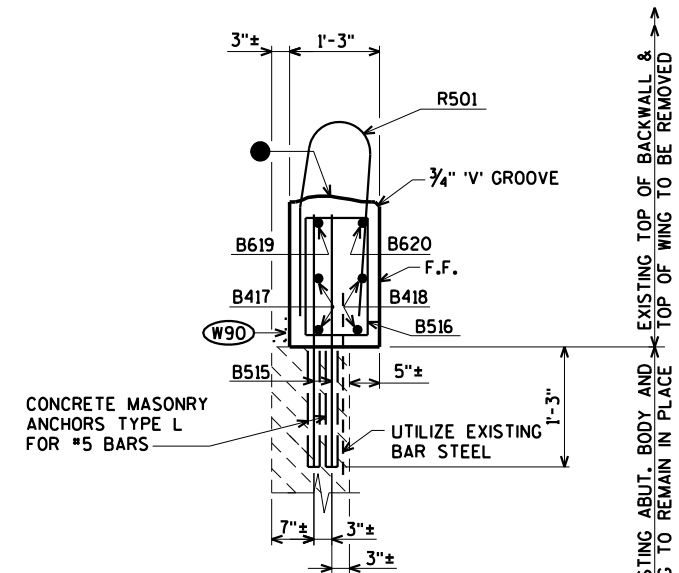


PLAN - WING 4

SINGLE SLOPE PARAPET 42SS  
NOT SHOWN FOR DETAILS  
SEE SHEET 22.



SECTION C



SECTION H

(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING  
SEAL ALL HORIZONTAL AND VERTICAL JOINTS  
ON BACK FACE OF ABUTMENT.

● STRIKE OFF AS SHOWN AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

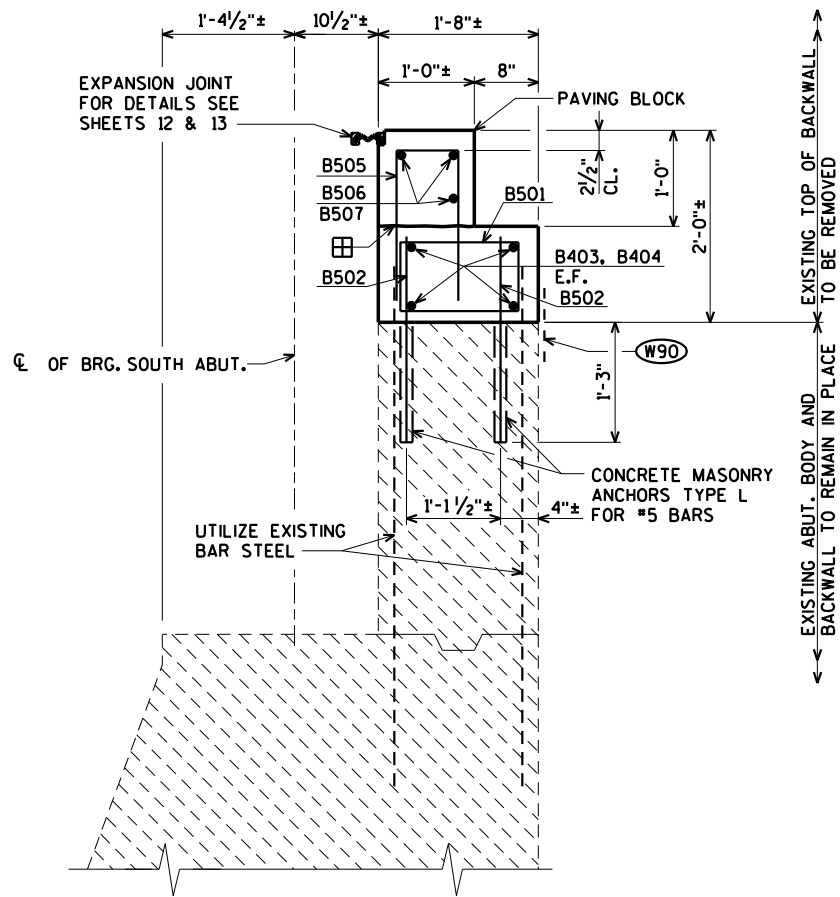
WORK THIS SHEET WITH SHEETS 8, 9, & 11

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
|                                                    |      |          |                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| SOUTH ABUTMENT<br>WING 4 DETAILS                   |      |          | SHEET 10 OF 22  |

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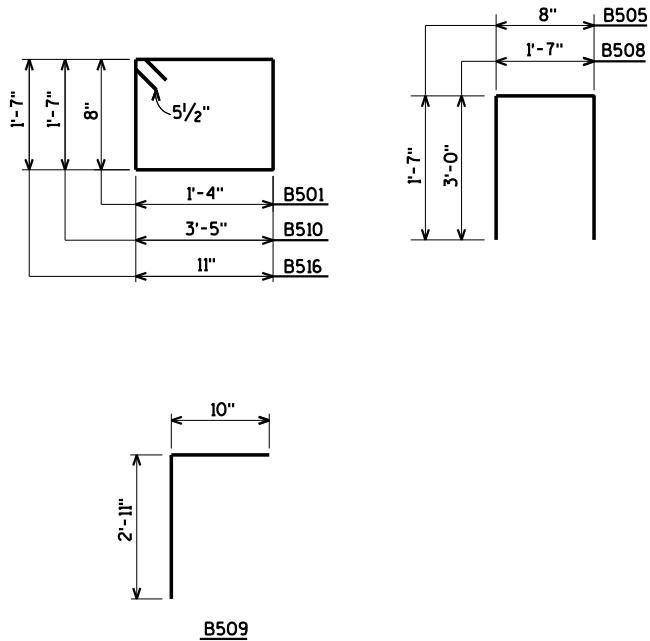
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8



**SECTION E**

FOR LOCATION OF SECTION "E"  
SEE SHEET 8



**BILL OF BARS**

WEIGHT INCLUDES PARAPET STEEL  
SHOWN ON SHEET 22

| BAR NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED | BAR SERIES | 2,600# COATED                          |
|---------|------------|------------|--------|----------|---------|------------|----------------------------------------|
|         |            |            |        |          |         |            | LOCATION                               |
| B501    | X          | 68         | 4-8    | X        |         |            | BACKWALL VERT. STAGE 1 & 2             |
| B502    | X          | 136        | 2-1    |          |         |            | BACKWALL VERT. DOWELS E.F. STAGE 1 & 2 |
| B403    | X          | 4          | 32-6   |          |         |            | BACKWALL HORIZ. STAGE 1                |
| B404    | X          | 4          | 34-3   |          |         |            | BACKWALL HORIZ. STAGE 2                |
| B505    | X          | 64         | 3-8    | X        |         |            | BACKWALL PAVING BLOCK VERT.            |
| B506    | X          | 15         | 7-5    |          |         |            | PAVING BLOCK HORIZ. STAGE 1            |
| B507    | X          | 15         | 7-8    |          |         |            | PAVING BLOCK HORIZ. STAGE 2            |
| B508    | X          | 3          | 7-5    | X        |         |            | WING 3 AT BACKWALL STAGE 1             |
| B509    | X          | 25         | 3-8    | X        |         |            | WING 3 VERT. DOWELS E.F. STAGE 1       |
| B510    | X          | 13         | 10-8   | X        |         |            | WING 3 VERT. STAGE 1                   |
| B511    | X          | 3          | 11-8   |          |         |            | WING 3 HORIZ. B.F. STAGE 1             |
| B512    | X          | 2          | 12-1   |          |         |            | WING 3 HORIZ. STAGE 1                  |
| B513    | X          | 2          | 12-6   |          |         |            | WING 3 HORIZ. STAGE 1                  |
| B514    | X          | 3          | 12-11  |          |         |            | WING 3 HORIZ. F.F. STAGE 1             |
| B515    | X          | 25         | 3-1    |          |         |            | WING 4 VERT. DOWELS E.F. STAGE 2       |
| B516    | X          | 12         | 5-8    | X        |         |            | WING 4 VERT. STAGE 2                   |
| B417    | X          | 2          | 11-6   |          |         |            | WING 4 HORIZ. B.F. STAGE 2             |
| B418    | X          | 2          | 11-0   |          |         |            | WING 4 HORIZ. F.F. STAGE 2             |
| B619    | X          | 1          | 11-6   |          |         |            | WING 4 HORIZ. B.F. STAGE 2             |
| B620    | X          | 1          | 11-0   |          |         |            | WING 4 HORIZ. F.F. STAGE 2             |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |
|         |            |            |        |          |         |            |                                        |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

(W90) 18" RUBBERIZED MEMBRANE WATERPROOFING  
SEAL ALL HORIZONTAL AND VERTICAL JOINTS  
ON BACK FACE OF ABUTMENT.

CONST. JOINT - POUR CONCRETE ABOVE  
THIS JOINT AFTER SUPERSTRUCTURE IS IN  
PLACE. STRIKE OFF AND LEAVE ROUGH.

F.F. DENOTES FRONT FACE

B.F. DENOTES BACK FACE

E.F. DENOTES EACH FACE

WORK THIS SHEET WITH SHEETS 8 THRU 10

|                                                    |      |          |                 |
|----------------------------------------------------|------|----------|-----------------|
| NO.                                                | DATE | REVISION | BY              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| SOUTH ABUTMENT<br>DETAILS                          |      |          | SHEET 11 OF 22  |

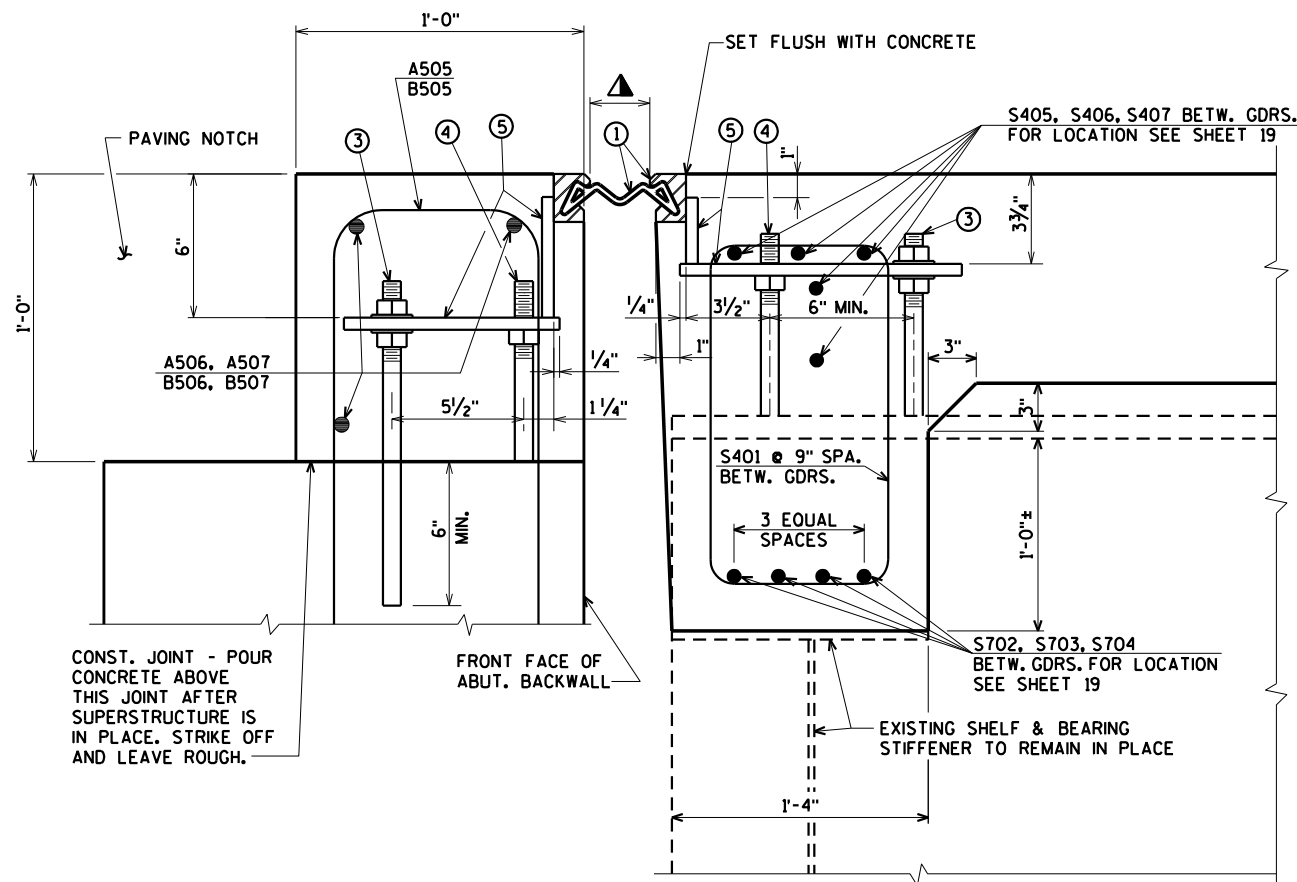
ORIGINAL PLANS PREPARED BY  
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8

\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-103-BRIDGE\B-13-103 exp\jt ABUTS.dgn

STATE PROJECT NUMBER

1010-02-79



### TYPICAL SECTION THRU JOINT

NORMAL TO CL SUBSTRUCTURE

### GENERAL NOTES

ONE FIELD SPlice PERMITTED IN STEEL EXTRUSIONS. IF USED, DETAILS SHALL BE SUBMITTED FOR APPROVAL. NO SPLICING PERMITTED IN NEOPRENE STRIP SEAL.

AFTER FABRICATION, BUT BEFORE SHIPMENT, STRAIGHTEN STEEL EXTRUSIONS SUCH THAT THEY SHALL BE FREE FROM WARP, TWIST & SWEEP.

FABRICATOR SHALL PROVIDE MEANS OF KEEPING GALVANIZED EXTRUSIONS CLEAN & SMOOTH DURING SHIPMENT AND PRIOR TO APPLYING LUBRICANT ADHESIVE FOR NEOPRENE GLAND INSTALLATION.

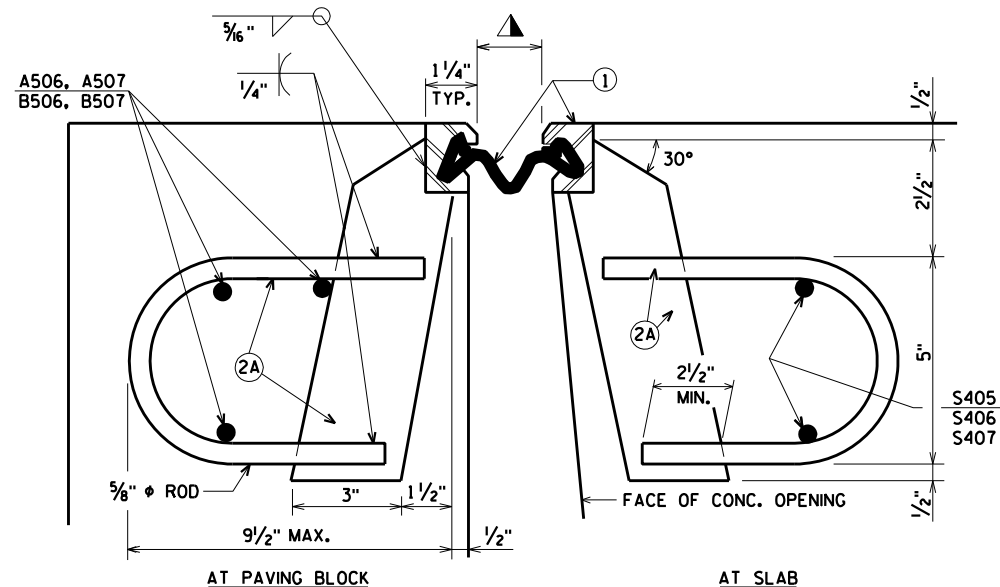
SANDBLAST PLATES & EXTRUSIONS AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMERCIAL BLAST CLEANING". AFTER BLAST CLEANING THE PLATES & EXTRUSIONS SHALL BE HOT DIPPED GALVANIZED.

ANCHOR SYSTEM #8 & #9 SHALL CONFORM TO ASTM A307 & SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 CLASS C & D.

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-13-103".

### LEGEND

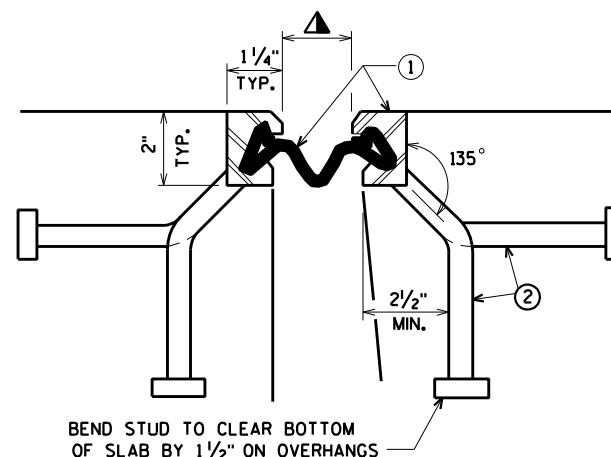
1. NEOPRENE STRIP SEAL (4 - INCH) & STEEL EXTRUSIONS. SET JOINT OPENING AT 1 3/4".
2. STUDS 5/8"  $\phi$  X 6 3/8" LONG AT 6" ALTERNATE CENTERS. WELD TO EXTRUSIONS & BEND AS SHOWN AFTER WELDING.
- 2A. 1/2" THICK ANCHOR PLATE WITH 5/8"  $\phi$  ROD (OR ALTERNATE STRIP SEAL ANCHOR). WELD ROD TO ANCHOR PLATE, WELD ANCHOR PLATE TO #1 AT 1'-6" CTRS. BETWEEN GIRDERS.
3. 3/4"  $\phi$  THREADED ROD WITH 2 NUTS AND PLATE WASHERS. WELD THREADED ROD TO TOP FLANGE OR ATTACH BY BOLTING THRU FLANGE. ON ABUTMENT SIDE GROUT THREADED ROD INTO FIELD DRILLED HOLES IN ABUTMENT BACKWALL AS SHOWN.
4. 3/4"  $\phi$  THREADED ROD WITH NUT. TACK WELD NUT TO NO. 5.
5. FABRICATE SUPPORT FROM 3" X 1/2" BAR AS SHOWN OR EQUIVALENT, ONE PER GIRDER PER SIDE. FIELD OR SHOP WELD TO NO. 1. IF FIELD WELDED, COVER WELDED AREAS WITH EPOXY-COATING MATERIAL. PROVIDE 1 1/2"  $\phi$  HOLE FOR NO. 3 & 1"  $\phi$  HOLE FOR NO. 4.
6. GALVANIZED PLATE 3/8" X 10" X 2'-2" LONG WITH HOLES FOR #7. BEND AS SHOWN.
7. 3/4"  $\phi$  X 1 1/2" STAINLESS STEEL SOCKET FLAT HEAD SCREWS WITH ANTI-SEIZE LUBRICANT. PLACE IN COUNTERSUNK HOLES. RECESS 1/16" BELOW PLATE SURFACE.
8. 3/4"  $\phi$  X 4" GALV. HEX HEAD BOLT, BEND 45°.
9. 3/4"  $\phi$  X 2 1/4" GALV. THREADED COUPLING.
11. 1" X 5" SLOTTED CSK. HOLE FOR #7. PLACE SLOT PARALLEL TO DIRECTION OF MOVEMENT.



### SECTION THRU JOINT

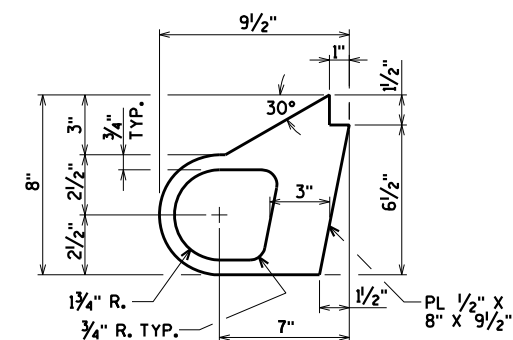
ROADWAY TRAFFIC AREA BETWEEN EXTERIOR GIRDERS.

SYM. ABOUT CL JOINT UNLESS OTHERWISE SHOWN OR NOTED.



### SECTION THRU JOINT

EXTERIOR GIRDER TO EDGE OF SLAB & AT PARAPETS.



### ALTERNATE STRIP SEAL ANCHOR

WORK THIS SHEET WITH SHEET 13

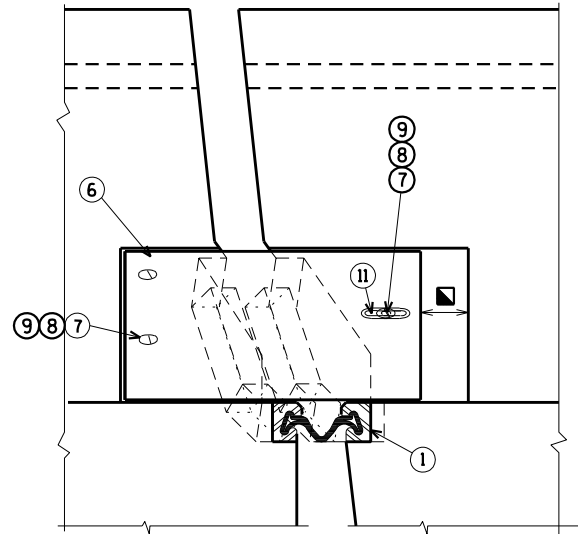
| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| EXPANSION JOINT DETAILS AT ABUTMENTS               |      |          | SHEET 12 OF 22  |

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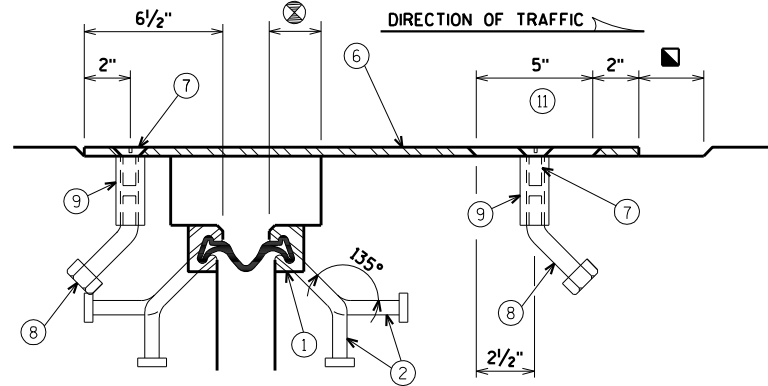
\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-103=BRIDGE+8-13-103 exp\jt ABUTS.dgn

STATE PROJECT NUMBER

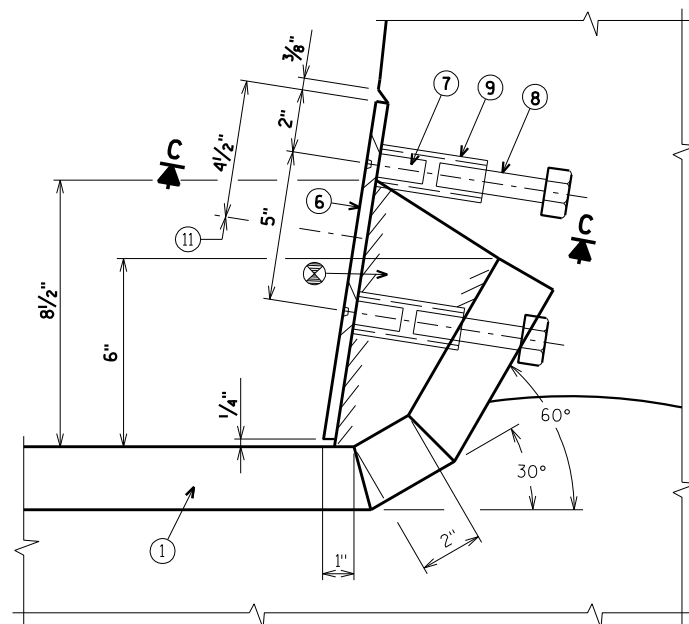
1010-02-79



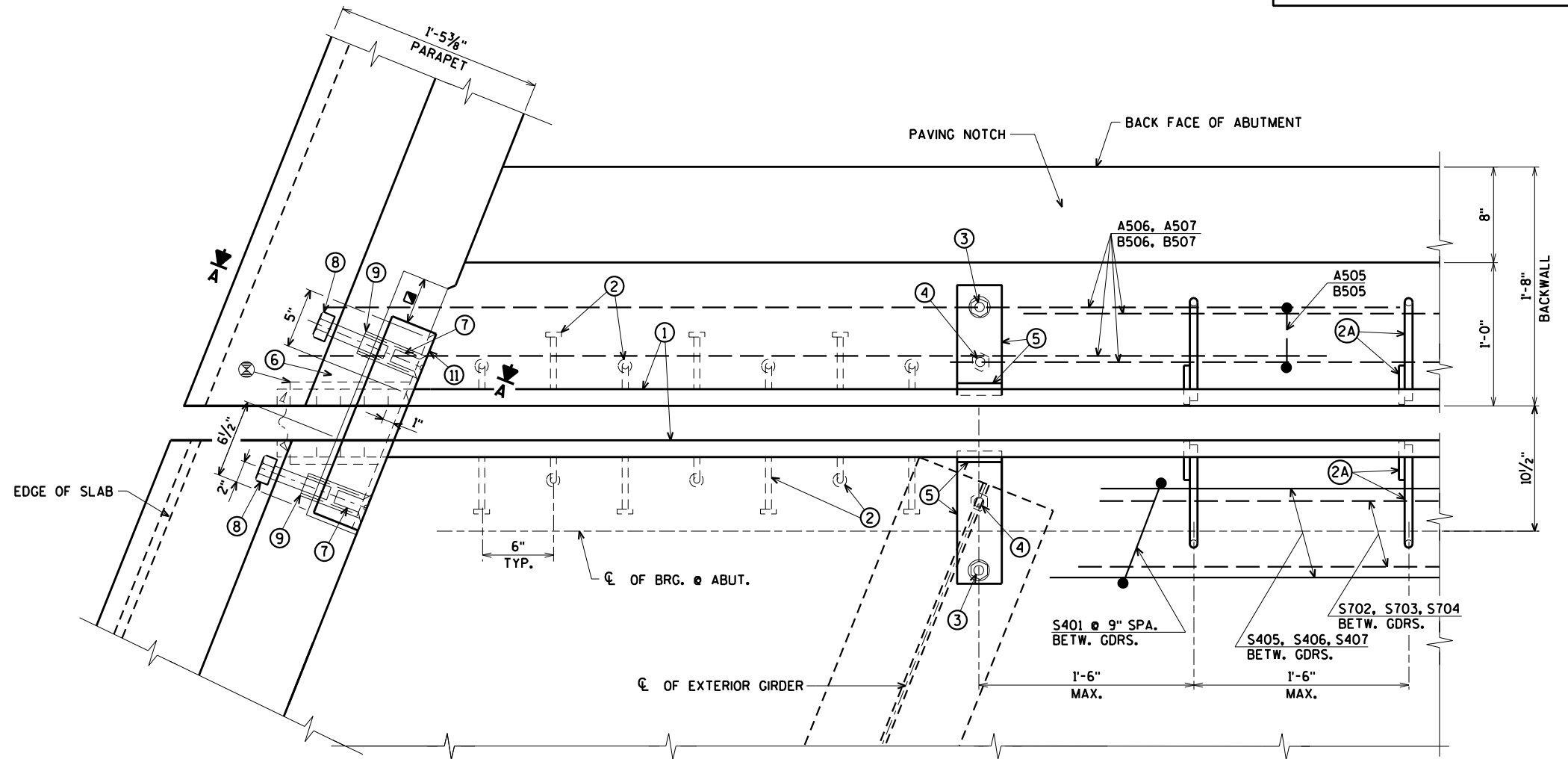
**VIEW OF PARAPET PLATES  
FROM ROADWAY**



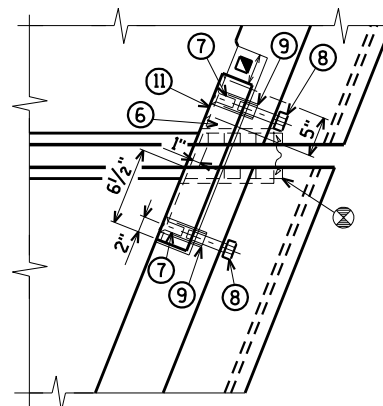
**SECTION C**



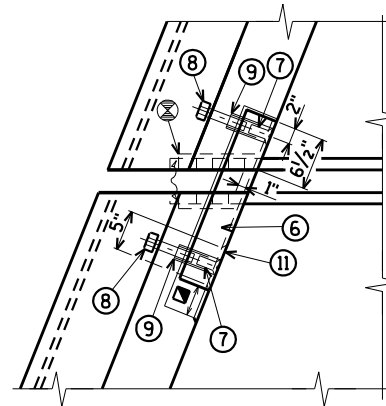
**SECTION A**



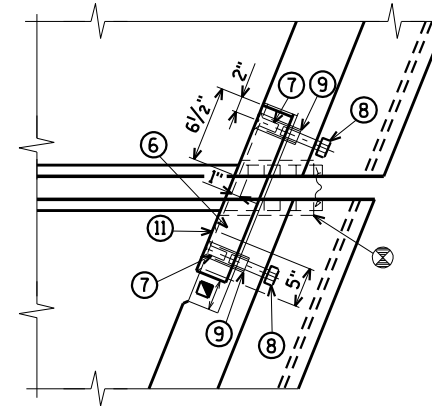
**PART PLAN AT PARAPET  
(WING 1 SHOWN)**



**WING 2**



**WING 3**



**WING 4**

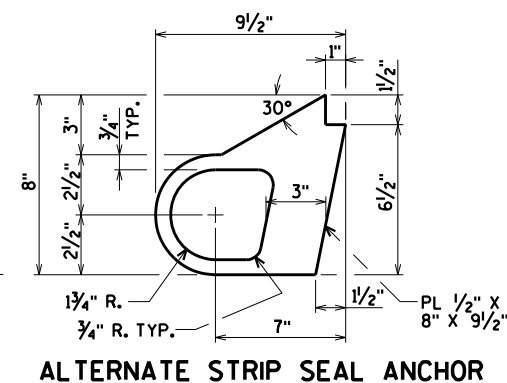
**PART PLANS OF PARAPET PLATES**

- ⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.
- ▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2".

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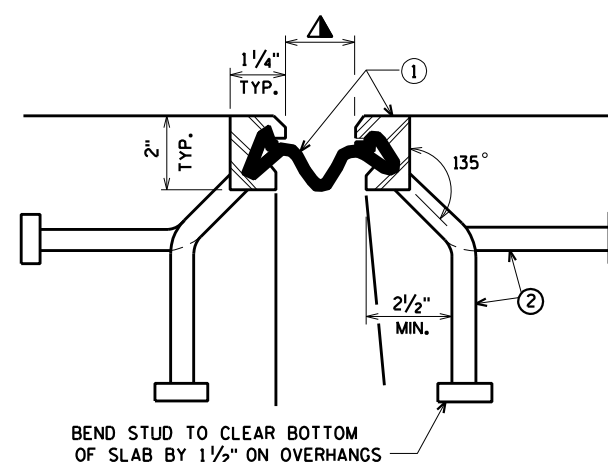
WORK THIS SHEET WITH SHEET 12

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| EXPANSION<br>JOINT DETAILS<br>AT ABUTMENTS         |      |          | SHEET 13 OF 22  |



- ## GENERAL NOTES

STRIP SEAL EXPANSION JOINT ASSEMBLY, INCLUDING ANCHOR STUDS & HARDWARE  
WILL BE PAID FOR AT THE LUMP SUM PRICE BID FOR "EXPANSION DEVICE B-13-103".



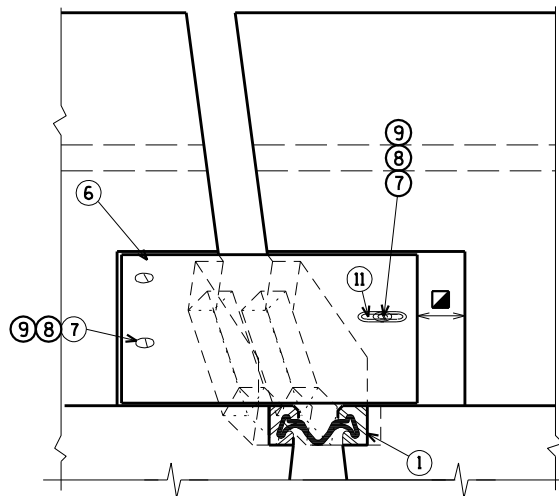
SYM. ABOUT  $\mathbb{C}$  JOINT UNLESS OTHERWISE SHOWN OR NOTED.

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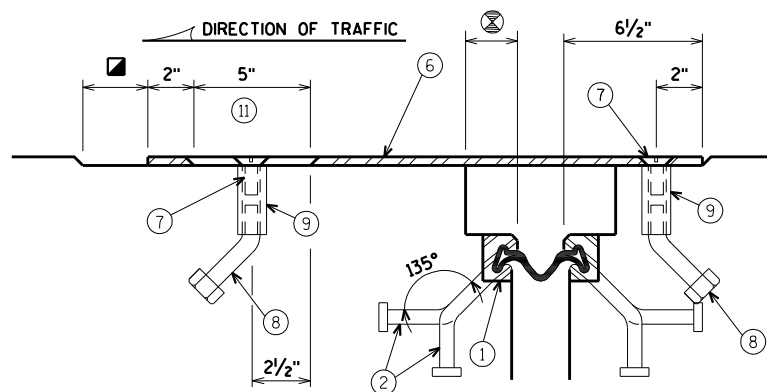
\$PRNAME\$  
U:\141-0647,00 - IH 39 over USH 151-Dane County\B-13-103-BRIDGE\B-13-103 exp\jt PERS.dgn

STATE PROJECT NUMBER

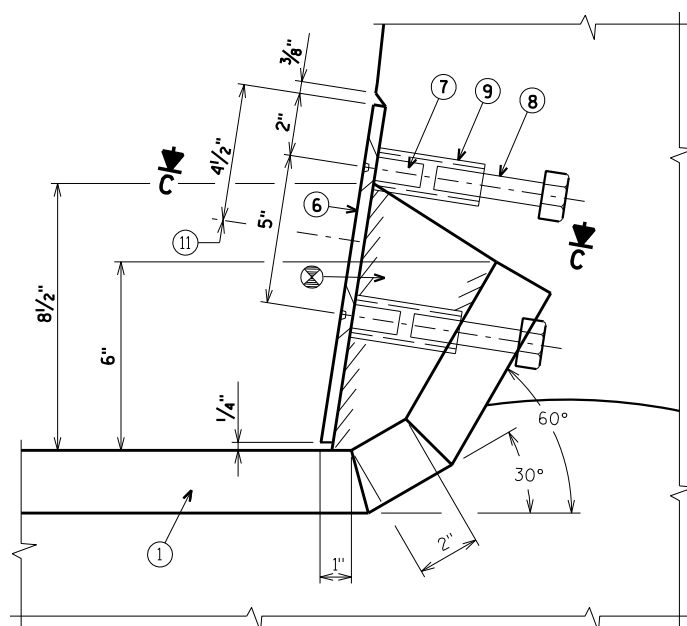
1010-02-79



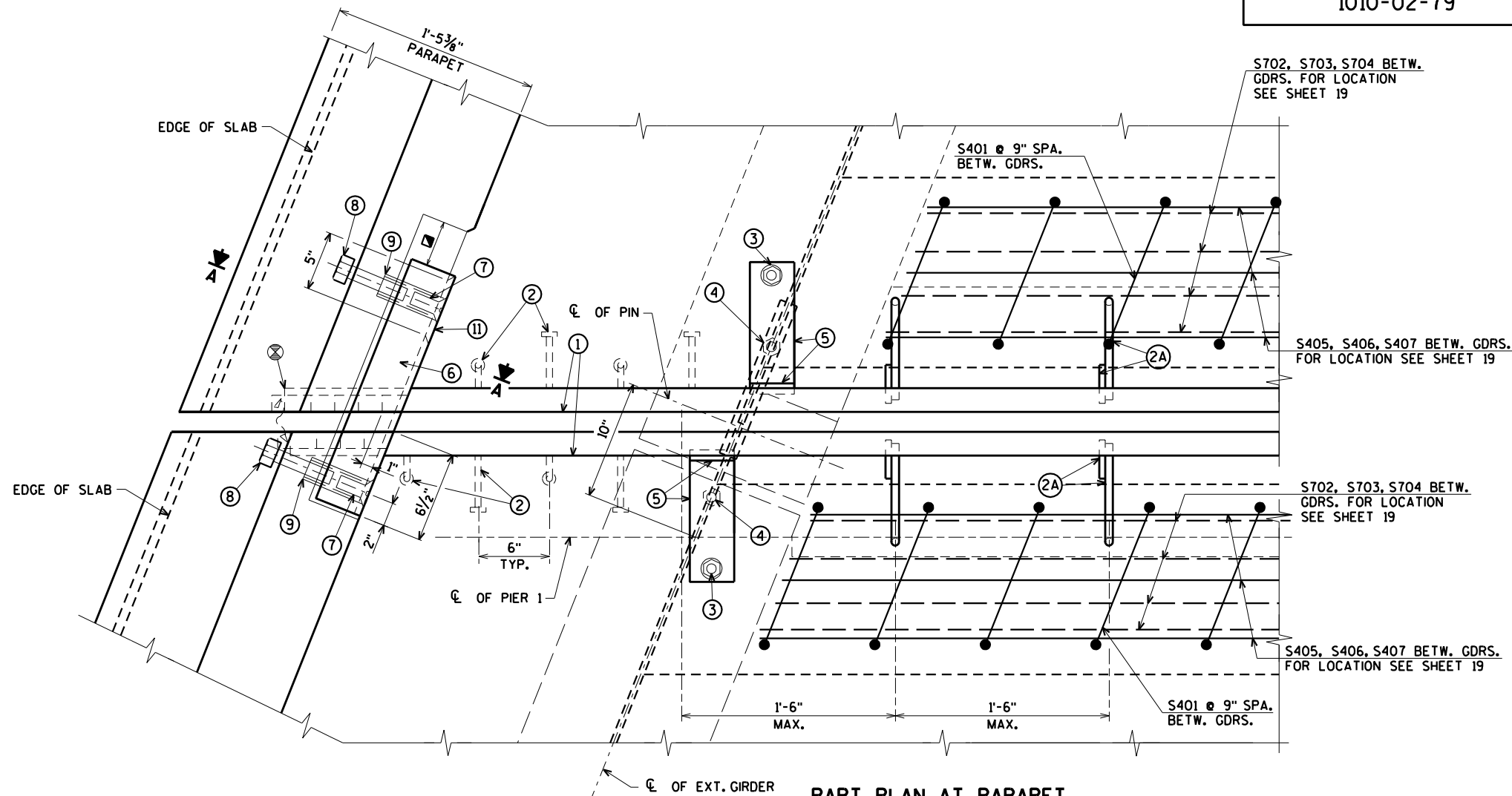
**VIEW OF PARAPET PLATES  
FROM ROADWAY**



**SECTION C**



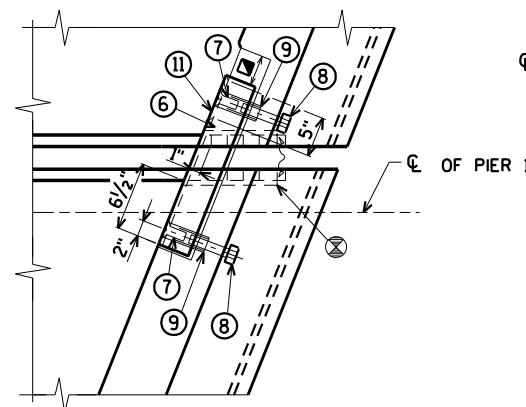
**SECTION A**



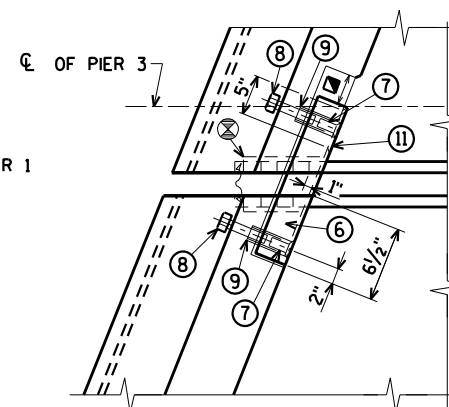
**PART PLAN AT PARAPET  
(WEST SIDE OF PIER 1 SHOWN)**

⊗ BLOCK OUT CONCRETE 2" EACH SIDE OF JOINT OPENING.

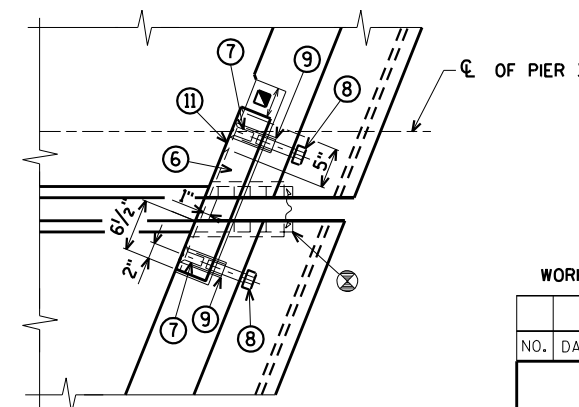
▣ JOINT OPENING DIM. ALONG SKEW PLUS 1/2".



**EAST SIDE OF PIER 1**



**WEST SIDE OF PIER 3**



**EAST SIDE OF PIER 3**

**PART PLANS AT PARAPET PLATES**

ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**  
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WORK THIS SHEET WITH SHEET 14

| NO.                                                | DATE | REVISION    | BY             |
|----------------------------------------------------|------|-------------|----------------|
|                                                    |      |             |                |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |             |                |
| STRUCTURE B-13-103                                 |      |             |                |
| DRAWN BY                                           | CLS  | PLANS CK'D. | AEB            |
| EXPANSION<br>JOINT DETAILS<br>AT PIERS             |      |             | SHEET 15 OF 22 |

\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-103\BRIDGE\B-13-103 deckEL.dgn

8

ELEVATIONS AT TOP OF DECK

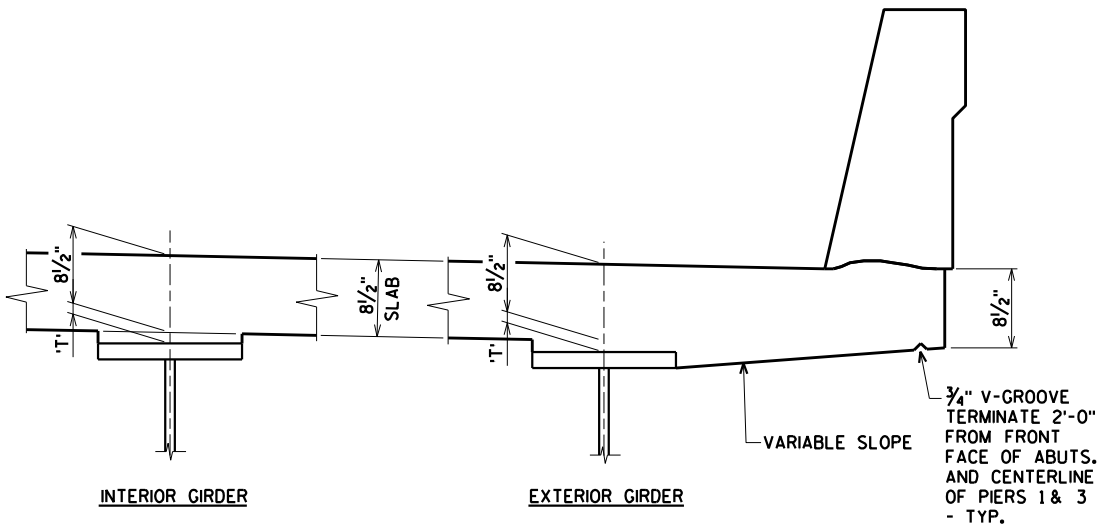
E.O.D. = EDGE OF DECK

| B-13-103 SPAN 1 TOP OF DECK ELEVATIONS |                |         |         |         |         |        |         |        |         |         |        |
|----------------------------------------|----------------|---------|---------|---------|---------|--------|---------|--------|---------|---------|--------|
|                                        | NORTH ABUTMENT | 0.1 Pt. | 0.2 Pt. | 0.3 Pt. | 0.4 Pt. | 0.5Pt. | 0.6 Pt. | 0.7Pt. | 0.8 Pt. | 0.9 Pt. | PIER 1 |
| NORTH E.O.D.                           | 947.42         | 947.44  | 947.46  | 947.48  | 947.50  | 947.52 | 947.54  | 947.56 | 947.57  | 947.59  | 947.61 |
| GIRDER 1                               | 947.50         | 947.52  | 947.54  | 947.56  | 947.57  | 947.59 | 947.61  | 947.63 | 947.65  | 947.66  | 947.68 |
| GIRDER 2                               | 947.67         | 947.69  | 947.71  | 947.73  | 947.75  | 947.77 | 947.79  | 947.80 | 947.82  | 947.84  | 947.85 |
| GIRDER 3                               | 947.85         | 947.87  | 947.89  | 947.91  | 947.93  | 947.94 | 947.96  | 947.98 | 947.99  | 948.01  | 948.03 |
| GIRDER 4                               | 948.03         | 948.05  | 948.07  | 948.08  | 948.10  | 948.12 | 948.14  | 948.15 | 948.17  | 948.19  | 948.20 |
| CONST. JOINT                           | 948.10         | 948.12  | 948.14  | 948.16  | 948.17  | 948.19 | 948.21  | 948.22 | 948.24  | 948.26  | 948.27 |
| GIRDER 5                               | 948.21         | 948.22  | 948.24  | 948.26  | 948.28  | 948.30 | 948.31  | 948.33 | 948.34  | 948.36  | 948.37 |
| REFERENCE LINE                         | 948.31         | 948.32  | 948.34  | 948.36  | 948.38  | 948.39 | 948.41  | 948.43 | 948.44  | 948.46  | 948.47 |
| GIRDER 6                               | 948.24         | 948.26  | 948.28  | 948.30  | 948.31  | 948.33 | 948.35  | 948.36 | 948.38  | 948.39  | 948.41 |
| GIRDER 7                               | 948.09         | 948.11  | 948.13  | 948.15  | 948.16  | 948.18 | 948.20  | 948.21 | 948.23  | 948.24  | 948.25 |
| GIRDER 8                               | 947.95         | 947.96  | 947.98  | 948.00  | 948.01  | 948.03 | 948.04  | 948.06 | 948.07  | 948.09  | 948.10 |
| SOUTH E.O.D.                           | 947.88         | 947.90  | 947.92  | 947.93  | 947.95  | 947.97 | 947.98  | 948.00 | 948.01  | 948.02  | 948.04 |

| B-13-103 SPAN 2 TOP OF DECK ELEVATIONS |        |         |         |         |         |        |         |        |         |         |        |
|----------------------------------------|--------|---------|---------|---------|---------|--------|---------|--------|---------|---------|--------|
|                                        | PIER 1 | 0.1 Pt. | 0.2 Pt. | 0.3 Pt. | 0.4 Pt. | 0.5Pt. | 0.6 Pt. | 0.7Pt. | 0.8 Pt. | 0.9 Pt. | PIER 2 |
| NORTH E.O.D.                           | 947.61 | 947.64  | 947.68  | 947.71  | 947.74  | 947.76 | 947.79  | 947.81 | 947.83  | 947.85  | 947.87 |
| GIRDER 1                               | 947.68 | 947.71  | 947.75  | 947.78  | 947.81  | 947.83 | 947.86  | 947.88 | 947.90  | 947.92  | 947.94 |
| GIRDER 2                               | 947.85 | 947.89  | 947.92  | 947.95  | 947.98  | 948.00 | 948.03  | 948.05 | 948.07  | 948.09  | 948.10 |
| GIRDER 3                               | 948.03 | 948.06  | 948.09  | 948.12  | 948.15  | 948.17 | 948.20  | 948.22 | 948.24  | 948.25  | 948.27 |
| GIRDER 4                               | 948.20 | 948.23  | 948.26  | 948.29  | 948.32  | 948.34 | 948.36  | 948.39 | 948.40  | 948.42  | 948.43 |
| CONST. JOINT                           | 948.27 | 948.30  | 948.33  | 948.36  | 948.39  | 948.41 | 948.43  | 948.45 | 948.47  | 948.49  | 948.50 |
| GIRDER 5                               | 948.37 | 948.41  | 948.43  | 948.46  | 948.49  | 948.51 | 948.53  | 948.55 | 948.57  | 948.59  | 948.60 |
| REFERENCE LINE                         | 948.47 | 948.50  | 948.53  | 948.56  | 948.58  | 948.61 | 948.63  | 948.65 | 948.66  | 948.68  | 948.69 |
| GIRDER 6                               | 948.41 | 948.44  | 948.47  | 948.49  | 948.52  | 948.54 | 948.56  | 948.58 | 948.60  | 948.61  | 948.62 |
| GIRDER 7                               | 948.25 | 948.28  | 948.31  | 948.34  | 948.36  | 948.38 | 948.40  | 948.42 | 948.44  | 948.45  | 948.46 |
| GIRDER 8                               | 948.10 | 948.13  | 948.16  | 948.18  | 948.21  | 948.23 | 948.25  | 948.26 | 948.28  | 948.29  | 948.30 |
| SOUTH E.O.D.                           | 948.04 | 948.07  | 948.09  | 948.12  | 948.14  | 948.16 | 948.18  | 948.20 | 948.21  | 948.22  | 948.23 |

| B-13-103 SPAN 3 TOP OF DECK ELEVATIONS |        |         |         |         |         |        |         |        |         |         |        |
|----------------------------------------|--------|---------|---------|---------|---------|--------|---------|--------|---------|---------|--------|
|                                        | PIER 2 | 0.1 Pt. | 0.2 Pt. | 0.3 Pt. | 0.4 Pt. | 0.5Pt. | 0.6 Pt. | 0.7Pt. | 0.8 Pt. | 0.9 Pt. | PIER 3 |
| NORTH E.O.D.                           | 947.87 | 947.88  | 947.90  | 947.91  | 947.92  | 947.92 | 947.93  | 947.93 | 947.93  | 947.93  | 947.93 |
| GIRDER 1                               | 947.94 | 947.95  | 947.96  | 947.97  | 947.98  | 947.99 | 947.99  | 948.00 | 948.00  | 948.00  | 947.99 |
| GIRDER 2                               | 948.10 | 948.12  | 948.13  | 948.14  | 948.15  | 948.15 | 948.16  | 948.16 | 948.16  | 948.15  | 948.15 |
| GIRDER 3                               | 948.27 | 948.28  | 948.29  | 948.30  | 948.31  | 948.31 | 948.32  | 948.32 | 948.32  | 948.31  | 948.31 |
| GIRDER 4                               | 948.43 | 948.45  | 948.46  | 948.46  | 948.47  | 948.47 | 948.48  | 948.48 | 948.48  | 948.47  | 948.47 |
| CONST. JOINT                           | 948.50 | 948.51  | 948.52  | 948.53  | 948.54  | 948.54 | 948.54  | 948.54 | 948.54  | 948.54  | 948.53 |
| GIRDER 5                               | 948.60 | 948.61  | 948.62  | 948.63  | 948.63  | 948.64 | 948.64  | 948.64 | 948.63  | 948.63  | 948.62 |
| REFERENCE LINE                         | 948.69 | 948.70  | 948.71  | 948.72  | 948.72  | 948.73 | 948.73  | 948.73 | 948.72  | 948.72  | 948.71 |
| GIRDER 6                               | 948.62 | 948.63  | 948.64  | 948.65  | 948.65  | 948.66 | 948.66  | 948.66 | 948.65  | 948.65  | 948.64 |
| GIRDER 7                               | 948.46 | 948.47  | 948.48  | 948.49  | 948.49  | 948.49 | 948.49  | 948.49 | 948.49  | 948.48  | 948.47 |
| GIRDER 8                               | 948.30 | 948.31  | 948.32  | 948.32  | 948.33  | 948.33 | 948.33  | 948.32 | 948.32  | 948.31  | 948.30 |
| SOUTH E.O.D.                           | 948.23 | 948.24  | 948.25  | 948.25  | 948.26  | 948.26 | 948.26  | 948.25 | 948.25  | 948.24  | 948.23 |

| B-13-103 SPAN 4 TOP OF DECK ELEVATIONS |        |         |         |         |         |        |         |        |         |         |                |
|----------------------------------------|--------|---------|---------|---------|---------|--------|---------|--------|---------|---------|----------------|
|                                        | PIER 3 | 0.1 Pt. | 0.2 Pt. | 0.3 Pt. | 0.4 Pt. | 0.5Pt. | 0.6 Pt. | 0.7Pt. | 0.8 Pt. | 0.9 Pt. | SOUTH ABUTMENT |
| NORTH E.O.D.                           | 947.93 | 947.93  | 947.92  | 947.92  | 947.92  | 947.91 | 947.91  | 947.90 | 947.90  | 947.89  | 947.89         |
| GIRDER 1                               | 947.99 | 947.99  | 947.99  | 947.98  | 947.98  | 947.98 | 947.97  | 947.97 | 947.96  | 947.96  | 947.95         |
| GIRDER 2                               | 948.15 | 948.15  | 948.14  | 948.14  | 948.14  | 948.13 | 948.13  | 948.12 | 948.12  | 948.11  | 948.11         |
| GIRDER 3                               | 948.31 | 948.30  | 948.30  | 948.30  | 948.29  | 948.29 | 948.28  | 948.28 | 948.27  | 948.27  | 948.26         |
| GIRDER 4                               | 948.47 | 948.46  | 948.46  | 948.45  | 948.45  | 948.44 | 948.44  | 948.43 | 948.43  | 948.42  | 948.41         |
| CONST. JOINT                           | 948.53 | 948.53  | 948.52  | 948.52  | 948.51  | 948.51 | 948.50  | 948.50 | 948.49  | 948.48  | 948.48         |
| GIRDER 5                               | 948.62 | 948.62  | 948.61  | 948.61  | 948.60  | 948.60 | 948.59  | 948.59 | 948.58  | 948.57  | 948.57         |
| REFERENCE LINE                         | 948.71 | 948.71  | 948.70  | 948.70  | 948.69  | 948.69 | 948.68  | 948.67 | 948.67  | 948.66  | 948.65         |
| GIRDER 6                               | 948.64 | 948.63  | 948.63  | 948.63  | 948.62  | 948.61 | 948.61  | 948.60 | 948.59  | 948.59  | 948.58         |
| GIRDER 7                               | 948.47 | 948.47  | 948.46  | 948.46  | 948.45  | 948.44 | 948.44  | 948.43 | 948.42  | 948.42  | 948.41         |
| GIRDER 8                               | 948.30 | 948.30  | 948.29  | 948.29  | 948.28  | 948.27 | 948.27  | 948.26 | 948.25  | 948.24  | 948.23         |
| SOUTH E.O.D.                           | 948.23 | 948.22  | 948.22  | 948.21  | 948.21  | 948.20 | 948.19  | 948.19 | 948.18  | 948.17  | 948.16         |



SLAB HAUNCH DETAIL

TO DETERMINE 'T': AFTER ALL OF THE EXISTING DECK HAS BEEN REMOVED IN THE CONSTRUCTION STAGE (1 OR 2), ELEVATIONS OF THE TOP OR TOP OF SPLICE PLATES, OR TOP OF COVER PLATES WHICHEVER APPLIES, SHALL BE TAKEN AT CENTERLINE OF BEARINGS, AND AT TENTH POINTS OF EACH SPAN.

TOP OF DECK ELEVATION AT FINAL GRADE  
- TOP OF STEEL ELEVATION AFTER PLACEMENT  
+ CONCRETE ONLY DEFLECTION: DOWNWARD DEFLECTION IS ADDED, UPWARD DEFLECTION IS SUBTRACTED  
- SLAB THICKNESS (8 1/2")

= HAUNCH THICKNESS 'T'

STATE PROJECT NUMBER

1010-02-79

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| DECK ELEVATIONS                                    |      |          | SHEET 16 OF 22  |

ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**  
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com

\$PRFNAME\$ U:\41-0647.00 - IH 39 over USH 151-Dane County±B-13-103±BRIDGE±B-13-103 defl.dgn

| B-13-103 SPAN 1 DEFLECTIONS |               |                   |        |        |        |        |        |        |        |        |        |                |
|-----------------------------|---------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
|                             | DEFLECTION    | ¢ BRG.<br>N. ABUT | 0.1 PT | 0.2 PT | 0.3 PT | 0.4 PT | 0.5 PT | 0.6 PT | 0.7 PT | 0.8 PT | 0.9 PT | ¢ OF<br>PIER 1 |
| GIRDER 1                    | CONCRETE ONLY | 0.0"              | 0.0"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.0"   | 0.0"           |
| GIRDER 2                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 3                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 4                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 5                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 6                    | CONCRETE ONLY | 0.0"              | 0.0"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.0"   | 0.0"           |
| GIRDER 7                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.1"   | 0.1"   | 0.2"   | 0.2"   | 0.2"   | 0.1"   | 0.1"   | 0.1"   | 0.0"           |
| GIRDER 8                    | CONCRETE ONLY | 0.0"              | 0.1"   | 0.1"   | 0.1"   | 0.2"   | 0.2"   | 0.2"   | 0.1"   | 0.1"   | 0.1"   | 0.0"           |

| B-13-103 SPAN 2 DEFLECTIONS |               |                |        |        |        |        |        |        |        |        |        |                |
|-----------------------------|---------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
|                             | DEFLECTION    | ¢ OF<br>PIER 1 | 0.1 PT | 0.2 PT | 0.3 PT | 0.4 PT | 0.5 PT | 0.6 PT | 0.7 PT | 0.8 PT | 0.9 PT | ¢ OF<br>PIER 2 |
| GIRDER 1                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.5"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 2                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.8"   | 0.7"   | 0.4"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 3                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.8"   | 0.7"   | 0.4"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 4                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.8"   | 0.7"   | 0.4"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 5                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.8"   | 0.7"   | 0.4"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 6                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.5"   | 0.2"   | 0.0"   | 0.0"           |
| GIRDER 7                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.8"   | 1.0"   | 1.0"   | 1.0"   | 0.8"   | 0.5"   | 0.2"   | 0.1"   | 0.0"           |
| GIRDER 8                    | CONCRETE ONLY | 0.0"           | 0.4"   | 0.8"   | 1.0"   | 1.0"   | 1.0"   | 0.8"   | 0.5"   | 0.2"   | 0.1"   | 0.0"           |

| B-13-103 SPAN 3 DEFLECTIONS |               |                |        |        |        |        |        |        |        |        |        |                |
|-----------------------------|---------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|
|                             | DEFLECTION    | ¢ OF<br>PIER 2 | 0.1 PT | 0.2 PT | 0.3 PT | 0.4 PT | 0.5 PT | 0.6 PT | 0.7 PT | 0.8 PT | 0.9 PT | ¢ OF<br>PIER 3 |
| GIRDER 1                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.5"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 2                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 3                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 4                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 5                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.4"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 6                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.2"   | 0.5"   | 0.7"   | 0.9"   | 0.9"   | 0.9"   | 0.7"   | 0.4"   | 0.0"           |
| GIRDER 7                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.5"   | 0.8"   | 1.0"   | 1.0"   | 1.0"   | 0.8"   | 0.4"   | 0.0"           |
| GIRDER 8                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.5"   | 0.8"   | 1.0"   | 1.0"   | 1.0"   | 0.8"   | 0.4"   | 0.0"           |

| B-13-103 SPAN 4 DEFLECTIONS |               |                |        |        |        |        |        |        |        |        |        |                   |
|-----------------------------|---------------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------------------|
|                             | DEFLECTION    | ¢ OF<br>PIER 3 | 0.1 PT | 0.2 PT | 0.3 PT | 0.4 PT | 0.5 PT | 0.6 PT | 0.7 PT | 0.8 PT | 0.9 PT | ¢ BRG.<br>S. ABUT |
| GIRDER 1                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.0"   | 0.0"              |
| GIRDER 2                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"              |
| GIRDER 3                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"              |
| GIRDER 4                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"              |
| GIRDER 5                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.2"   | 0.3"   | 0.4"   | 0.4"   | 0.4"   | 0.3"   | 0.2"   | 0.1"   | 0.0"              |
| GIRDER 6                    | CONCRETE ONLY | 0.0"           | 0.0"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.1"   | 0.0"   | 0.0"              |
| GIRDER 7                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.1"   | 0.1"   | 0.2"   | 0.2"   | 0.2"   | 0.1"   | 0.1"   | 0.1"   | 0.0"              |
| GIRDER 8                    | CONCRETE ONLY | 0.0"           | 0.1"   | 0.1"   | 0.1"   | 0.2"   | 0.2"   | 0.2"   | 0.1"   | 0.1"   | 0.1"   | 0.0"              |

NOTE: DEFLECTIONS ARE THEORETICAL AND MAY VARY IN THE FIELD.  
CONCRETE ONLY = CONCRETE DECK DEFLECTION + COMPOSITE DEAD LOAD  
DEFLECTION + DIFFERENTIAL SHRINKAGE DEFLECTION.

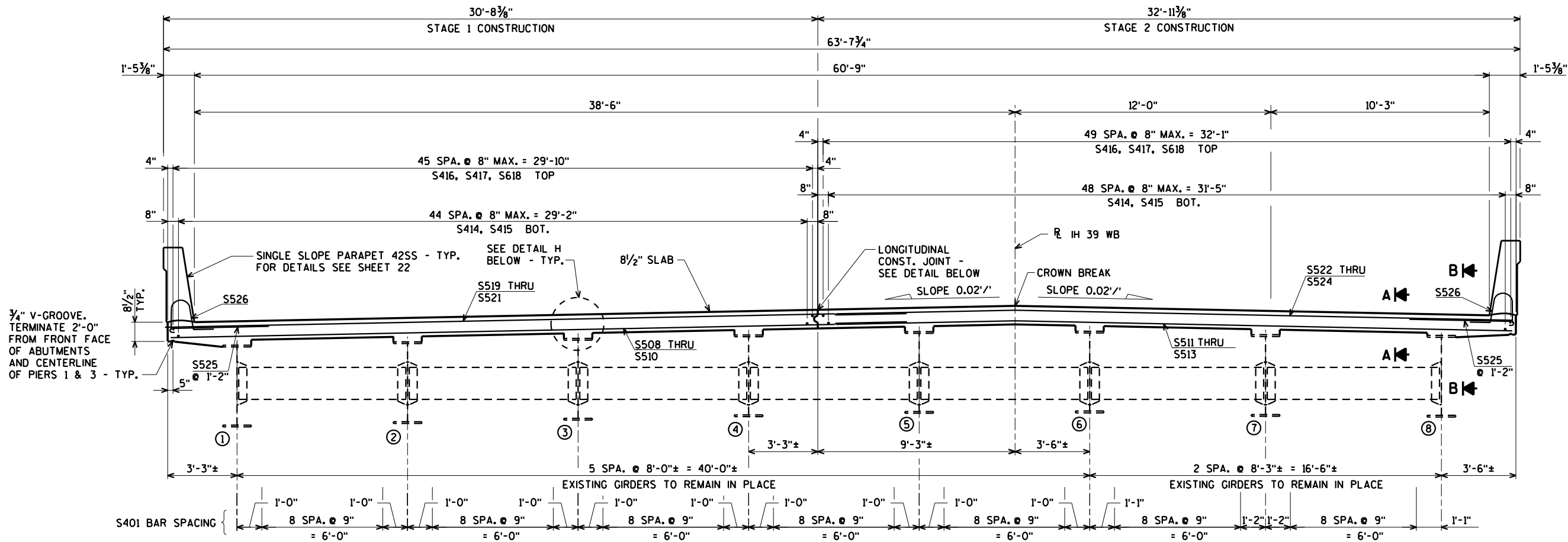
|                                                    |      |                |                    |
|----------------------------------------------------|------|----------------|--------------------|
|                                                    |      |                |                    |
| NO.                                                | DATE | REVISION       | BY                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |                |                    |
| STRUCTURE B-13-103                                 |      |                |                    |
| DRAWN<br>BY                                        |      | CLS            | PLANS<br>CK'D. AEB |
| TABLE OF<br>DEFLECTIONS                            |      | SHEET 17 OF 22 |                    |

ORIGINAL PLANS PREPARED BY

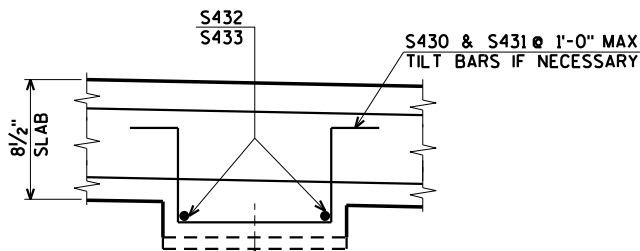
AYRES

ASSOCIATES

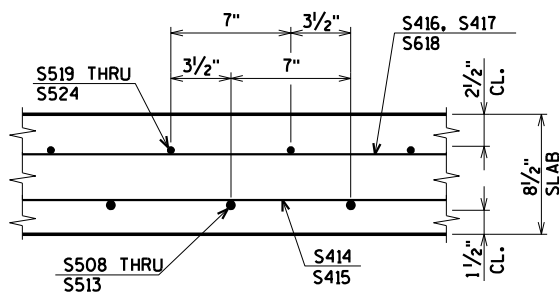
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com



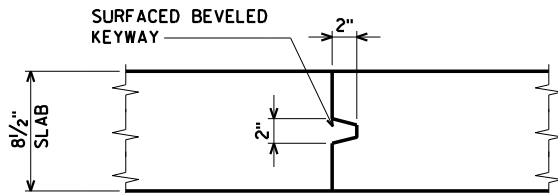
TYPICAL CROSS SECTION THRU DECK  
(LOOKING SOUTH)



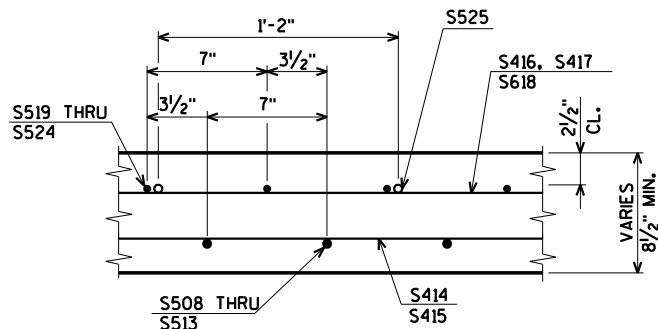
DETAIL H



SECTION A



LONG. CONST. JOINT DETAIL

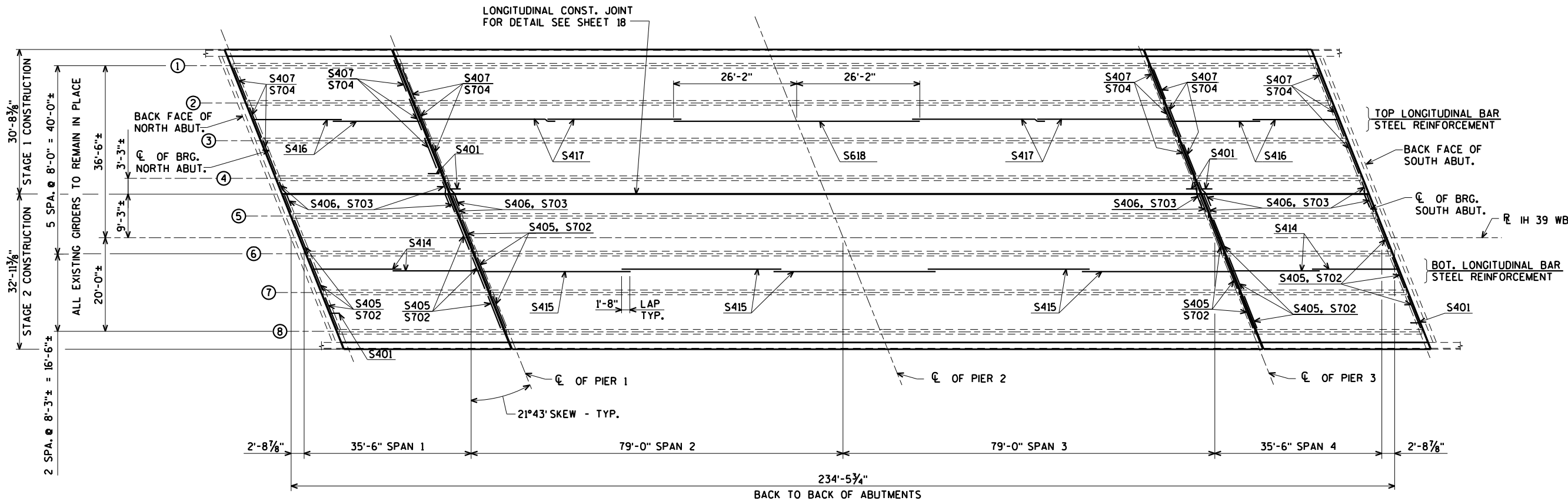


SECTION B

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| SUPERSTRUCTURE                                     |      |          | SHEET 18 OF 22  |

ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**  
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com

\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-103\BRIDGE\B-13-103 super.dgn



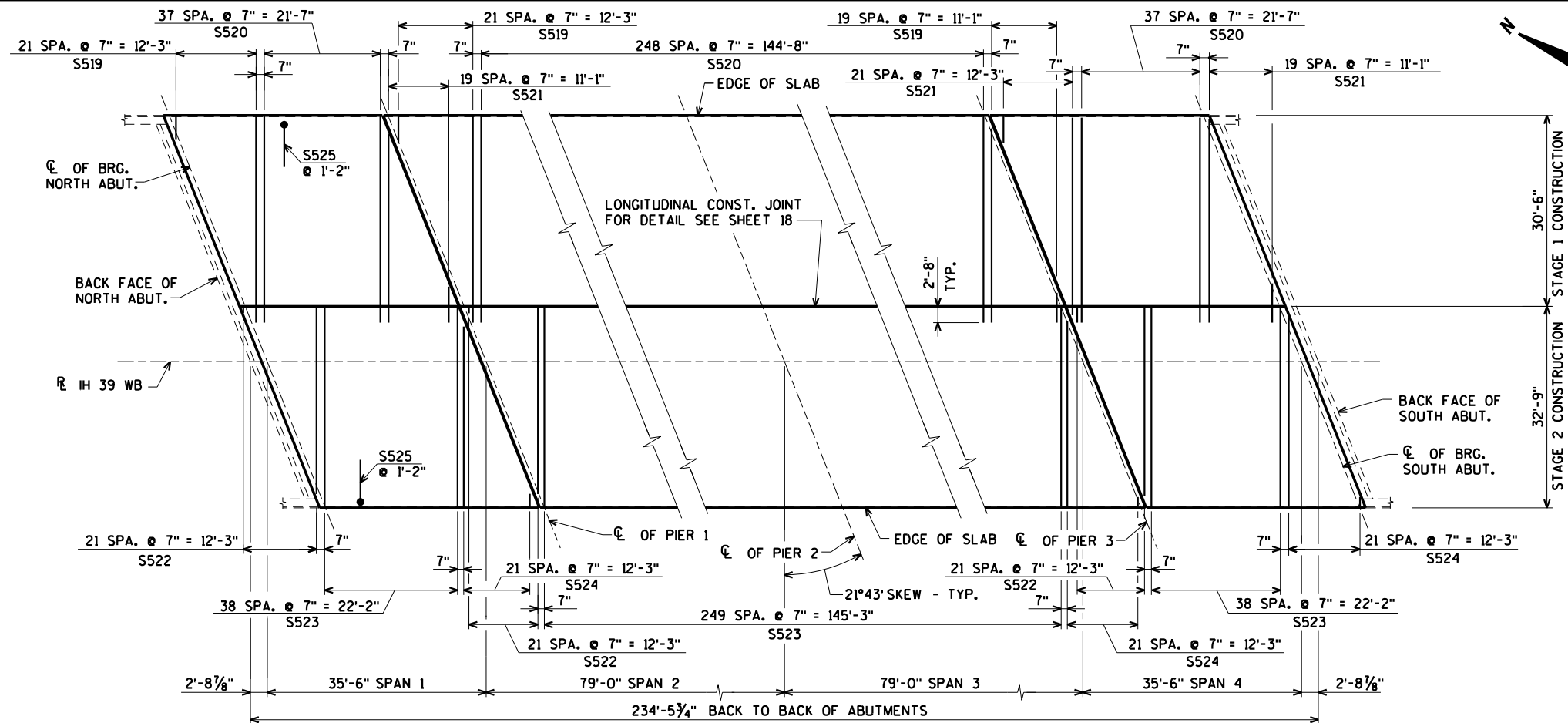
PLAN

|                                                    |      |             |                |
|----------------------------------------------------|------|-------------|----------------|
| NO.                                                | DATE | REVISION    | BY             |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |             |                |
| STRUCTURE B-13-103                                 |      |             |                |
| DRAWN BY                                           | CLS  | PLANS CK'D. | AEB            |
| SUPERSTRUCTURE PLAN                                |      |             | SHEET 19 OF 22 |

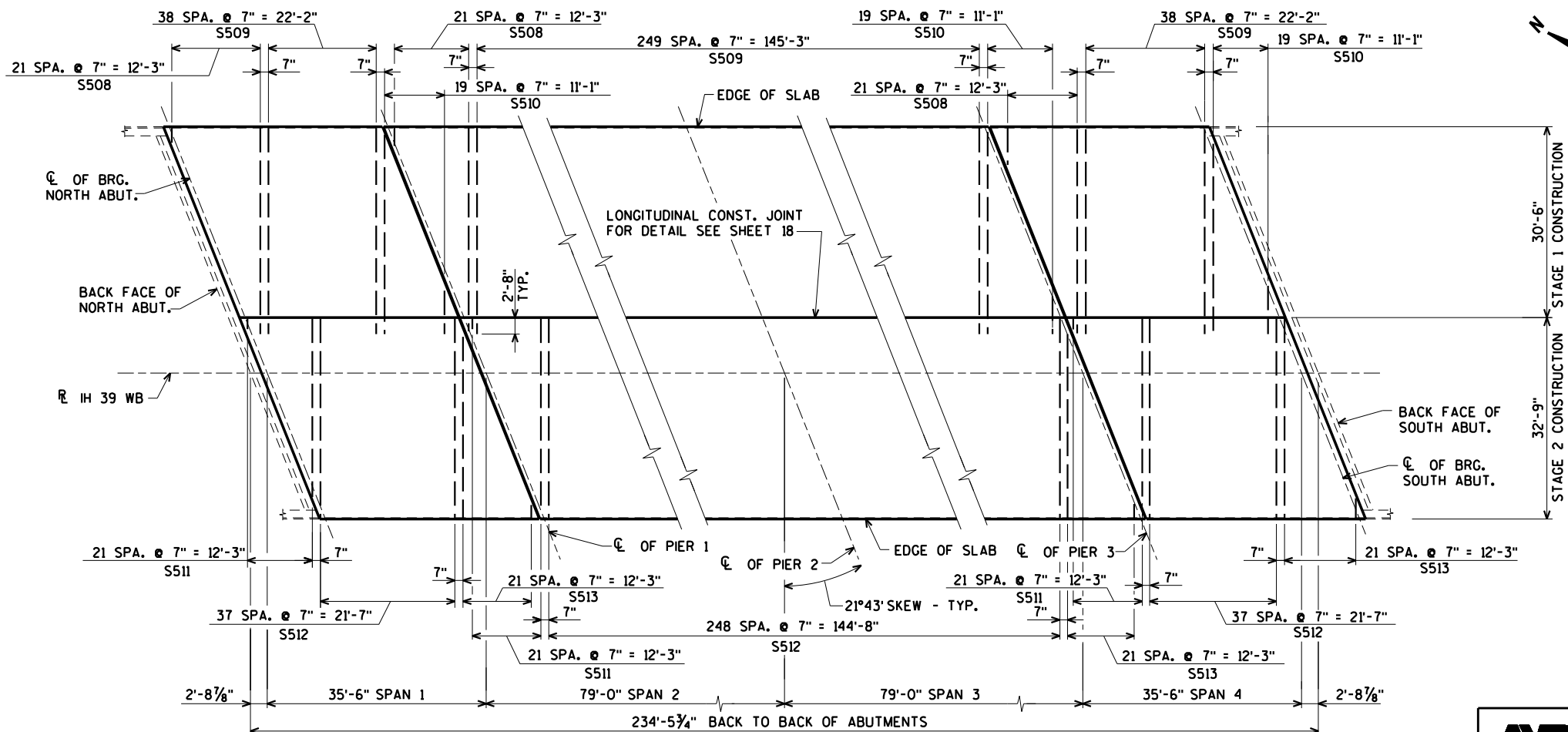
ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**  
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com

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U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-103\BRIDGE\B-13-103 super.dgn

8



TRANSVERSE TOP BAR STEEL LAYOUT



TRANSVERSE BOTTOM BAR STEEL LAYOUT

STATE PROJECT NUMBER

1010-02-79

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
|                                                    |      |          |                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| SUPERSTRUCTURE TRANSVERSE SLAB STEEL LAYOUT        |      |          | SHEET 20 OF 22  |

ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**  
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com

\$PRFNAME\$ U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-103\BRIDGE\B-13-103 super.dgn

8

STATE PROJECT NUMBER

1010-02-79

BILL OF BARS

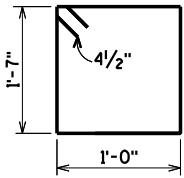
| BAR. NO. | COATED BAR | NO. REQ'D. | LENGTH | BENT BAR | BUNDLED | BAR SERIES | 113,530# COATED                           |
|----------|------------|------------|--------|----------|---------|------------|-------------------------------------------|
|          |            |            |        |          |         |            | LOCATION                                  |
| S401     | X          | 378        | 5-8    | X        |         |            | SLAB DIAPH. @ JOINTS STAGE 1 & 2          |
| S702     | X          | 72         | 7-2    |          |         |            | SLAB DIAPH. @ JOINTS STAGE 2              |
| S703     | X          | 48         | 4-8    |          |         |            | SLAB DIAPH. @ JOINTS STAGE 1 & 2          |
| S704     | X          | 72         | 7-2    |          |         |            | SLAB DIAPH. AT JOINTS STAGE 1             |
| S405     | X          | 90         | 7-2    |          |         |            | SLAB DIAPH. @ JOINTS STAGE 2              |
| S406     | X          | 60         | 4-8    |          |         |            | SLAB DIAPH. @ JOINTS STAGE 1 & 2          |
| S407     | X          | 90         | 7-2    |          |         |            | SLAB DIAPH. AT JOINTS STAGE 1             |
| S508     | X          | 66         | 16-5   |          | ⊗       |            | SLAB TRANS. BOT. STAGE 1                  |
| S509     | X          | 328        | 33-0   |          |         |            | SLAB TRANS. BOT. STAGE 1                  |
| S510     | X          | 60         | 17-7   |          | ⊗       |            | SLAB TRANS. BOT. STAGE 1                  |
| S511     | X          | 66         | 16-8   |          | ⊗       |            | SLAB TRANS. BOT. STAGE 2                  |
| S512     | X          | 325        | 32-5   |          |         |            | SLAB TRANS. BOT. STAGE 2                  |
| S513     | X          | 66         | 16-8   |          | ⊗       |            | SLAB TRANS. BOT. STAGE 2                  |
| S414     | X          | 376        | 18-5   |          |         |            | SLAB LONG. BOT. SPAN 1 & 4 STAGE 1 & 2    |
| S415     | X          | 470        | 33-0   |          |         |            | SLAB LONG. BOT. SPAN 2 & 3 STAGE 1 & 2    |
| S416     | X          | 384        | 18-5   |          |         |            | SLAB LONG. TOP SPAN 1 & 4 STAGE 1 & 2     |
| S417     | X          | 384        | 28-3   |          |         |            | SLAB LONG. TOP SPAN 2 & 3 STAGE 1 & 2     |
| S618     | X          | 96         | 52-4   |          |         |            | SLAB LONG. TOP @ PIER 2 STAGE 1 & 2       |
| S519     | X          | 66         | 17-2   |          | ⊗       |            | SLAB TRANS. TOP STAGE 1                   |
| S520     | X          | 325        | 33-0   |          |         |            | SLAB TRANS. TOP STAGE 1                   |
| S521     | X          | 60         | 18-4   |          | ⊗       |            | SLAB TRANS. TOP STAGE 1                   |
| S522     | X          | 66         | 16-0   |          | ⊗       |            | SLAB TRANS. TOP STAGE 2                   |
| S523     | X          | 328        | 32-5   |          |         |            | SLAB TRANS. TOP STAGE 2                   |
| S524     | X          | 66         | 16-0   |          | ⊗       |            | SLAB TRANS. TOP STAGE 2                   |
| S525     | X          | 390        | 5-6    | X        |         |            | SLAB TRANS. TOP @ PARAPET STAGE 1 & 2     |
| S526     | X          | 692        | 4-5    | X        |         |            | SLAB @ PARAPET VERT. STAGE 1 & 2          |
| S527     | X          | 692        | 6-8    | X        |         |            | PARAPET VERT. STAGE 1 & 2                 |
| S528     | X          | 64         | 18-11  |          |         |            | PARAPET HORIZ. SPAN 1 & 4 STAGE 1 & 2     |
| S529     | X          | 80         | 33-10  |          |         |            | PARAPET HORIZ. SPAN 2 & 3 STAGE 1 & 2     |
| S430     | X          | 280        | 2-7    | X        |         |            | SLAB AT HAUNCH OVER GDRS. 2-5 SPANS 1 & 4 |
| S431     | X          | 1544       | 2-11   | X        |         |            | SLAB AT HAUNCH OVER GDRS. 1-8             |
| S432     | X          | 64         | 18-5   |          |         |            | SLAB AT HAUNCH OVER GDRS. SPANS 1 & 4     |
| S433     | X          | 80         | 33-0   |          |         |            | SLAB AT HAUNCH OVER GDRS. SPANS 2 & 3     |
|          |            |            |        |          |         |            |                                           |
|          |            |            |        |          |         |            |                                           |

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.  
⊗ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

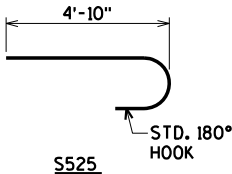
BAR SERIES TABLE

| BAR MARK | NO REQ'D.      | LENGTH           |
|----------|----------------|------------------|
| S508     | 3 SERIES OF 22 | 1'-0" TO 31'-10" |
| S510     | 3 SERIES OF 20 | 3'-8" TO 31'-6"  |
| S511     | 3 SERIES OF 22 | 1'-3" TO 32'-1"  |
| S513     | 3 SERIES OF 22 | 1'-3" TO 32'-1"  |
| S519     | 3 SERIES OF 22 | 1'-9" TO 32'-7"  |
| S521     | 3 SERIES OF 20 | 4'-5" TO 32'-3"  |
| S522     | 3 SERIES OF 22 | 8" TO 31'-4"     |
| S524     | 3 SERIES OF 22 | 8" TO 31'-4"     |

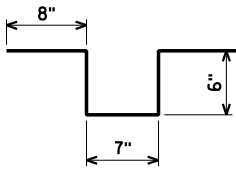
BUNDLE AND TAG EACH SERIES SEPARATELY.



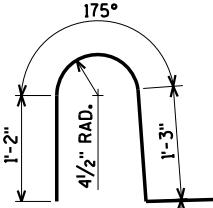
S401



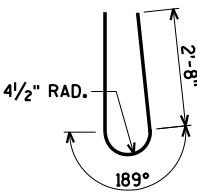
S525



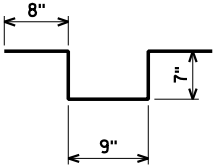
S430



S526



S527



S431

8

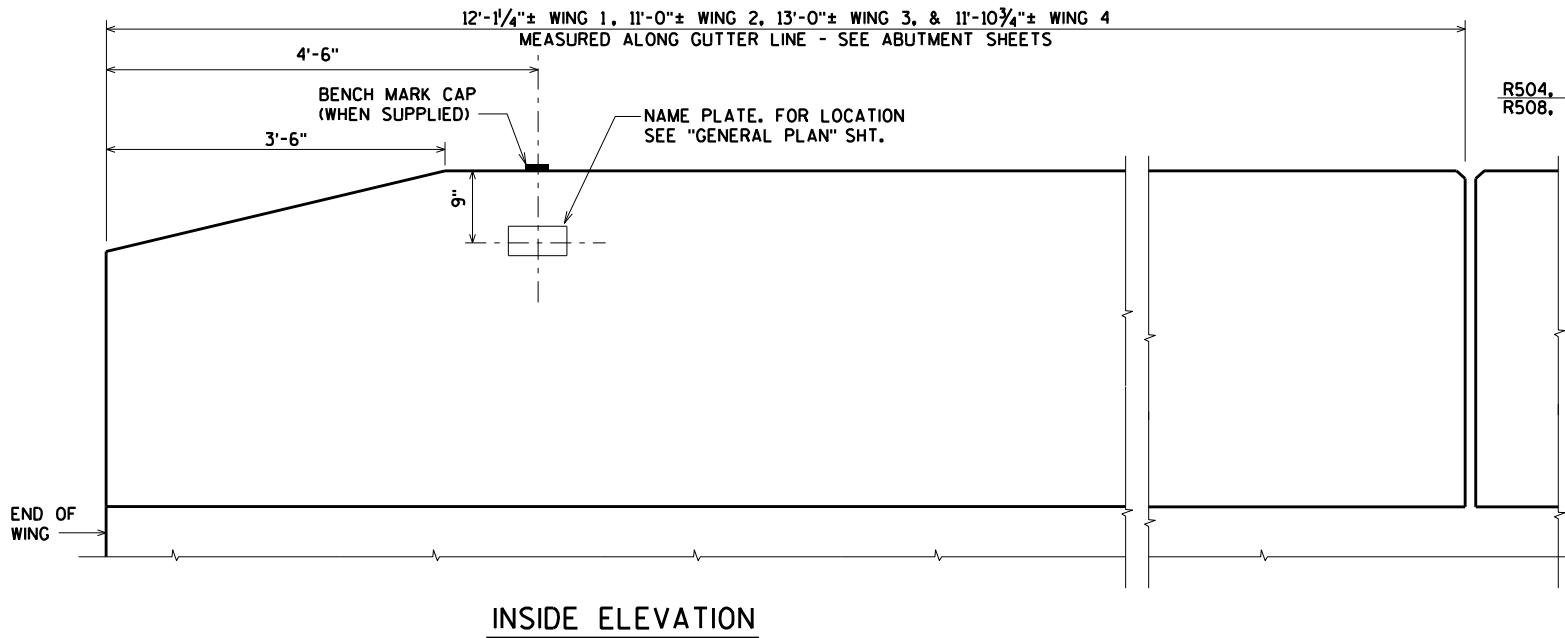
|                                                    |      |          |                 |
|----------------------------------------------------|------|----------|-----------------|
| NO.                                                | DATE | REVISION | BY              |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| SUPERSTRUCTURE<br>BILL OF BARS                     |      |          | SHEET 21 OF 22  |

ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**  
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com

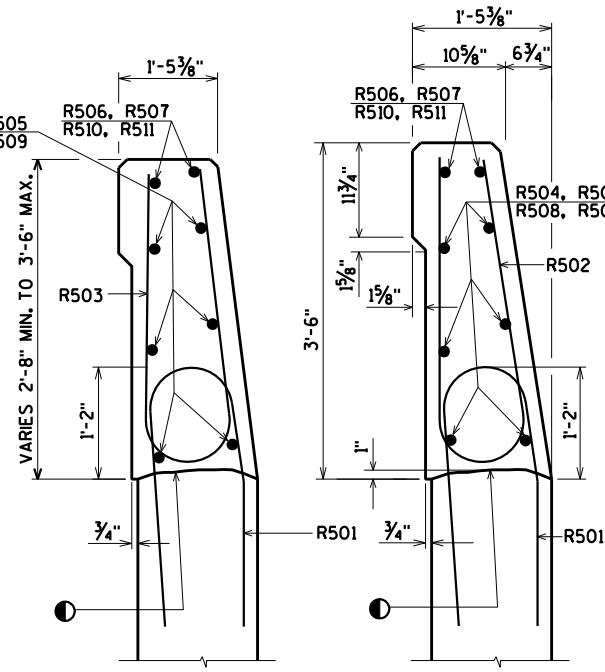
\$PRNAME\$  
U:\41-0647.00 - IH 39 over USH 151-Dane County\B-13-103\BRIDGE\B-13-103 par042SS.dgn

STATE PROJECT NUMBER

1010-02-79



INSIDE ELEVATION



SECTION A

SECTION B

**BILL OF BARS**

FOR ABUTMENT PARAPETS

WEIGHTS INCLUDED IN  
ABUTMENT WEIGHTS  
SHOWN ON SHEETS 3, 7, & 11.

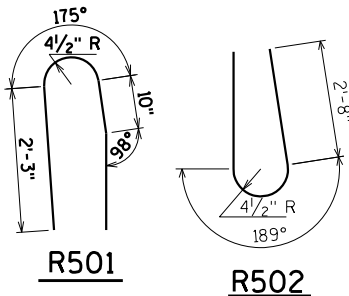
| BAR<br>MARK | COAT | NO. REQ'D.  |             | LENGTH | BENT | BAR<br>SERIES | 660# COATED N. ABUT.<br>710# COATED S. ABUT. |
|-------------|------|-------------|-------------|--------|------|---------------|----------------------------------------------|
|             |      | N.<br>ABUT. | S.<br>ABUT. |        |      |               | LOCATION                                     |
| R501        | X    | 37          | 40          | 5-10   | X    |               | PARAPET VERT.                                |
| R502        | X    | 25          | 28          | 6-8    | X    |               | PARAPET VERT.                                |
| R503        | X    | 12          | 12          | 5-8    | X    | ▲             | PARAPET VERT.                                |
| R504        | X    | 6           | --          | 11-8   |      |               | PARAPET HORIZ. WING 1                        |
| R505        | X    | 6           | --          | 10-7   |      |               | PARAPET HORIZ. WING 2                        |
| R506        | X    | 2           | --          | 11-8   | X    |               | PARAPET HORIZ. WING 1                        |
| R507        | X    | 2           | --          | 10-7   | X    |               | PARAPET HORIZ. WING 2                        |
| R508        | X    | --          | 6           | 12-8   |      |               | PARAPET HORIZ. WING 3                        |
| R509        | X    | --          | 6           | 11-6   |      |               | PARAPET HORIZ. WING 4                        |
| R510        | X    | --          | 2           | 12-8   | X    |               | PARAPET HORIZ. WING 3                        |
| R511        | X    | --          | 2           | 11-6   | X    |               | PARAPET HORIZ. WING 4                        |

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

**BAR SERIES TABLE**

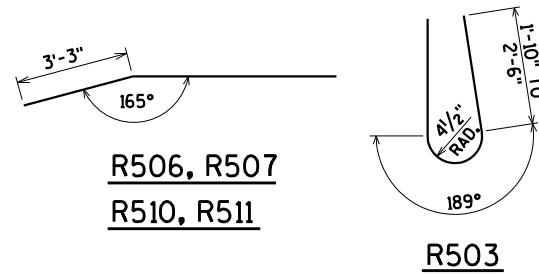
| MARK | NO.<br>REQ'D.    | LENGTH            |
|------|------------------|-------------------|
| R503 | 4 SERIES<br>OF 6 | 5'-0" TO<br>6'-4" |

BUNDLE AND TAG EACH SERIES SEPARATELY.  
SHOWN FOR BOTH ABUTMENTS



R501

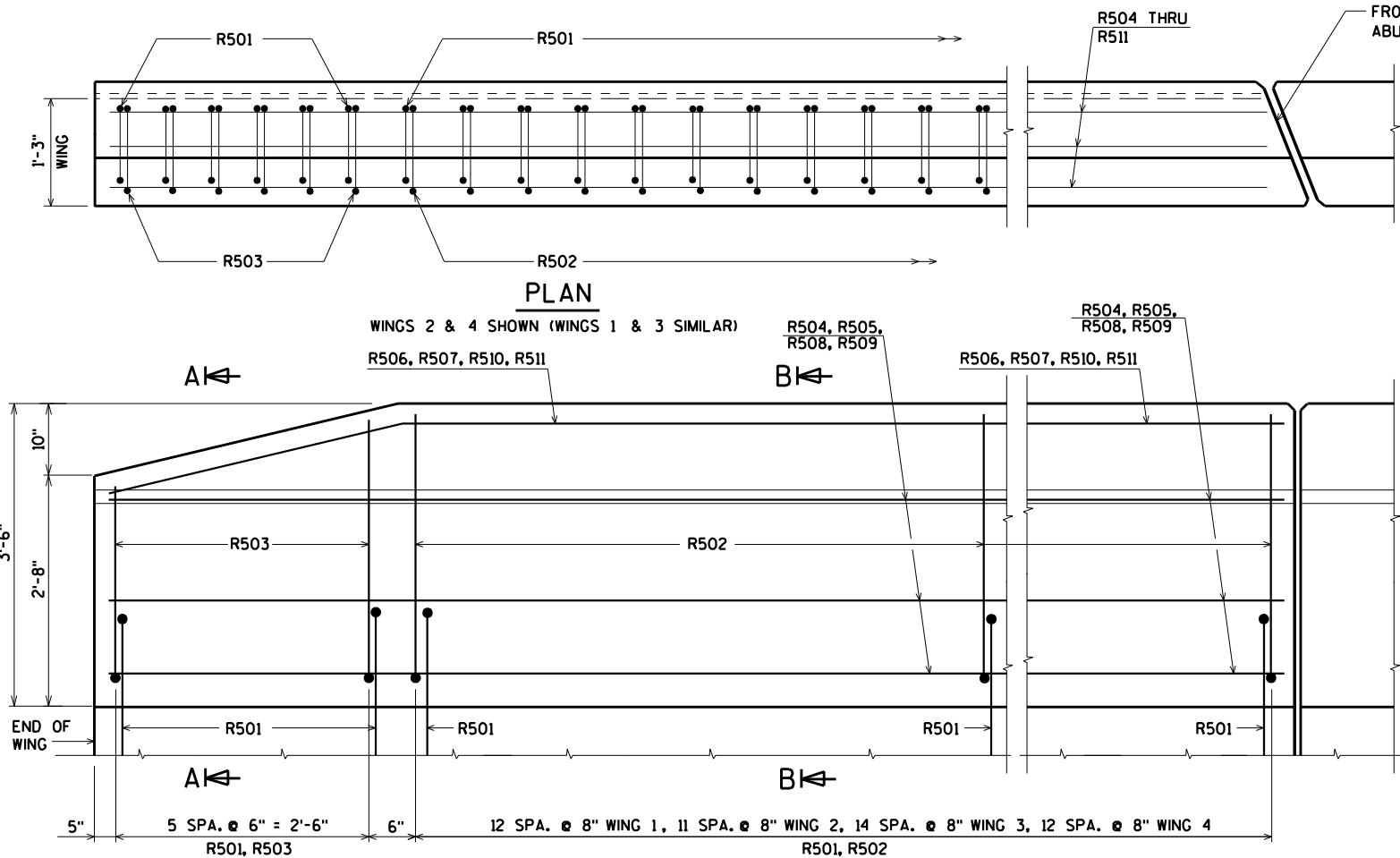
R502



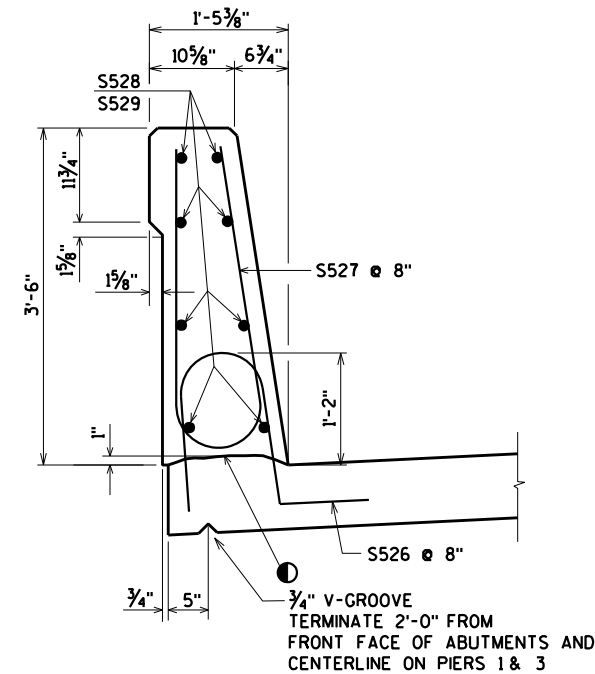
R506, R507  
R510, R511

R503

● CONST. JOINT - STRIKE OFF AS SHOWN.



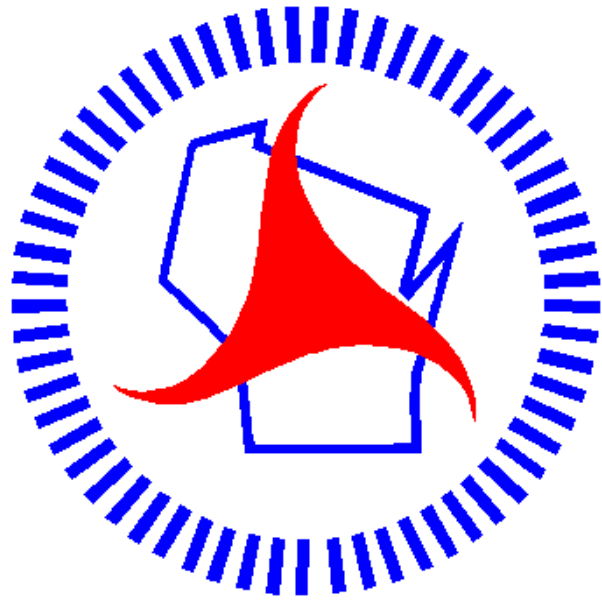
OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE

ORIGINAL PLANS PREPARED BY  
**AYRES ASSOCIATES**  
3433 Oakwood Hills Parkway  
Eau Claire, WI 54701  
www.AyresAssociates.com

| NO.                                                | DATE | REVISION | BY              |
|----------------------------------------------------|------|----------|-----------------|
|                                                    |      |          |                 |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |      |          |                 |
| STRUCTURE B-13-103                                 |      |          |                 |
| DRAWN BY                                           |      | CLS      | PLANS CK'D. AEB |
| SINGLE SLOPE<br>PARAPET 42SS                       |      |          | SHEET 22 OF 22  |



## *Wisconsin Department of Transportation*

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