

MAD

MARCH 2023

PROJECT ID:  
WITH: N/A

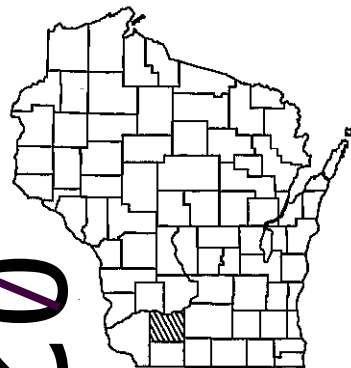
1640-00-63

COUNTY:  
IOWA

ORDER OF SHEETS

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

TOTAL SHEETS = 44



DESIGN DESIGNATION

|                 |   |                                       |
|-----------------|---|---------------------------------------|
| A.A.D.T. (2026) | = | 8,200                                 |
| A.A.D.T. (2046) | = | 8,500                                 |
| D.H.V. (2046)   | = | 551                                   |
| D.D.            | = | 60/40                                 |
| T.              | = | 20.4%                                 |
| DESIGN SPEED    | = | 55 MPH (STA. 100+55.45 - STA. 445+48) |
| ESALS           | = | 45 MPH (STA. 445+48 - STA. 446+02.39) |
|                 |   | 3,100,000                             |

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           |  |

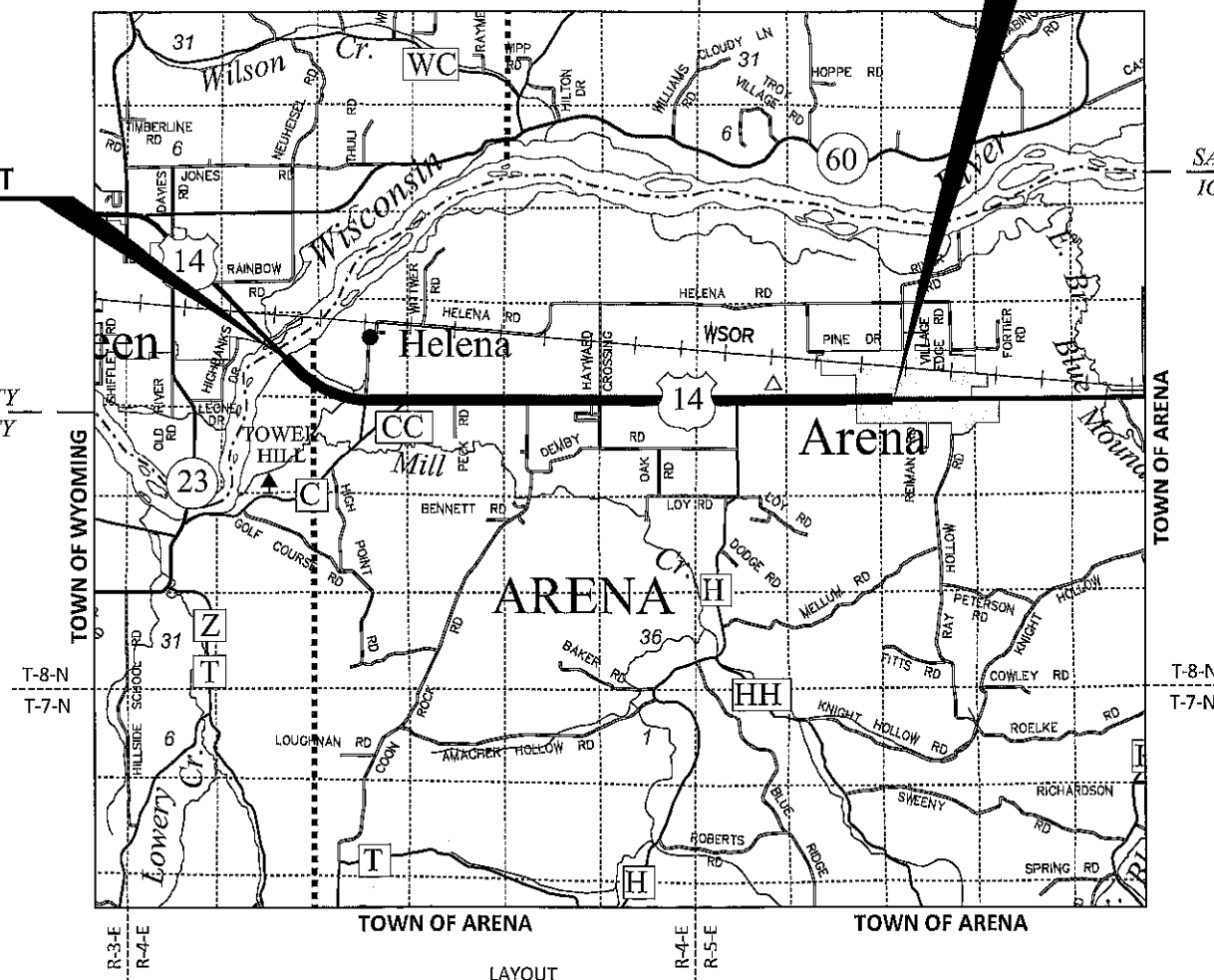
|   |  |
|---|--|
| PROFILE                                     |  |
| GRADE LINE                                  |  |
| ORIGINAL GROUND                             |  |
| MARSH OR ROCK PROFILE (To be noted as such) |  |
| SPECIAL DITCH                               |  |
| GRADE ELEVATION          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

BEGIN PROJECT  
STA. 100+55.45  
Y=229,283.28  
X=403,212.52

SAUK COUNTY  
IOWA COUNTY

END PROJECT  
STA. 446+02.39

SAUK COUNTY  
IOWA COUNTY



LAYOUT  
SCALE 0 2 MI  
TOTAL NET LENGTH OF CENTERLINE = 6.543 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, IOWA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCE MAY BE USED AS GROUND DISTANCES.

ELEVATION SHOWN ON THIS PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88 (2012).

STATE PROJECT

1640-00-63

FEDERAL PROJECT

PROJECT

WISC 2023280

CONTRACT

1

ORIGINAL PLANS PREPARED BY

**JEWELL**  
associates engineers, inc  
Engineers - Architects - Surveyors



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY

|                     |                                   |
|---------------------|-----------------------------------|
| Surveyor            | JEWELL ASSOCIATES ENGINEERS, INC. |
| Designer            | JEWELL ASSOCIATES ENGINEERS, INC. |
| Project Manager     | MAHESH SHRESTHA, P.E.             |
| Regional Examiner   | SW REGION                         |
| Regional Supervisor | MARC SCHWEIGER, P.E.              |

APPROVED FOR THE DEPARTMENT  
DATE: \_\_\_\_\_  
Mahesh Shrestha  
(Signature)

E

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EROSION CONTROL ITEMS IN THE MISC. QUAN. ARE SUGGESTED. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. MAINTAIN EROSION CONTROL ITEMS UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY. PROTECT WETLANDS AND OTHER WATERWAYS THAT ARE PRESENT WITHIN THE PROJECT LIMITS.

EXISTING SHOULDER AGGREGATE SHALL BE INCORPORATED INTO THE NEW SHOULDERS UNLESS OTHERWISE DIRECTED BY THE ENGINEER IN THE FIELD.

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A VERTICAL EDGE MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

HMA PAVEMENT QUANTITIES WERE CALCULATED USING 112 LB/SY/IN.

2.5-INCHES OF HMA PAVEMENT SHALL BE CONSTRUCTED WITH A SINGLE 2.5-INCH LAYER OF HMA PAVEMENT 4 MT 58-28 S.

PAVING LIMITS AT INTERSECTIONS ARE TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES, COMMERCIAL, AND FIELD ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

APPLY TACK COAT TO MILLED SURFACE PRIOR TO PLACEMENT OF HMA PAVEMENT AT A RATE OF 0.07 GAL/SY.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, OR PASSING LANE.

THE LOW SIDE SHOULDER SLOPE ON SUPERELEVATED SECTIONS EQUALS THE SUPERELEVATION WHEN THE SUPERELEVATION IS GREATER THAN 0.04 FT./FT. IF THE SUPERELEVATION IS LESS THAN OR EQUALS 0.04 FT./FT., THEN THE LOW SIDE SHOULDER SLOPE IS 0.04 FT./FT. THE HIGH SIDE SHOULDER SLOPE ON THE SUPERELEVATED SECTION EQUALS THE SUPERELEVATION.

CURVE DATA IS BASED ON THE ARC DEFINITION.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, ALL SIGNS RELATING TO THIS OPERATION SHALL BE COVERED OR REMOVED AND FACILITY RESTORED TO NORMAL OPERATIONS.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

IF THERE ARE UTILITY CONFLICTS WITH SIGNS OR OTHER WORK UNDER THIS PROJECT, THE CONTRACTOR WILL WORK AROUND THE UTILITY FACILITIES.

A 20 FT. VERTICAL CLEARANCE IS REQUIRED FROM HIGHEST POINT ON THE PAVEMENT SURFACE TO THE LOWEST POINT OF THE OBSTACLE.

CONTRACTOR TO PROTECT DH8322 AND OM1175 GPS AND KEEP CONSTRUCTION EQUIPMENT AT LEAST 10 FEET AWAY FROM DH8322 AND OM1175 GPS.

ENSURE THAT DH8322 AND OM1175 GPS ARE NOT DISTURBED, BUMPED, OR MOVED DURING THE DURATION OF THE PROJECT. NOTIFY JACOB ROCKWEILER IMMEDIATELY IF DH8322 AND OM1175 GPS ARE DISTURBED, BUMPED OR MOVED DURING CONSTRUCTION OPERATIONS.

JACOB ROCKWEILER, P.E., WISCONSIN HEIGHT MODERNIZATION PROGRAM MANAGER WITH THE WISCONSIN DEPARTMENT OF TRANSPORTATION WHOSE PHONE NUMBER IS (608) 516-6362 AND EMAIL IS JACOB.ROCKWEILER@DOT.WI.GOV.

MILL AND PAVE ADJACENT TO MONUMENT WITHOUT DAMAGING THE MONUMENT.

ADJUST SHOULDER SLOPE FROM STA. 138+27 - STA. 142+43, RT. TO ACHIEVE ALLOWABLE GUARDRAIL HEIGHT RANGE 27.75" - 32". THE EXISTING GUARDRAIL HEIGHT MEASURES 27" - 28" AND NEEDS TO BE ADJUSTED BY 0.75". SHOULDER SLOPE ADJUSTMENTS ARE REQUIRED BETWEEN THE EDGE OF THE DRIVING LANE AND FACE OF GUARDRAIL FROM STA. 138+27 - STA. 142+43, RT. ALL WORK REQUIRED TO ACHIEVE DESIRED GUARDRAIL HEIGHT IS PAID FOR UNDER THE HMA PAVEMENT 4 MT 58-28 S BID ITEM.

ADJUST SHOULDER SLOPE FROM STA. 420+62 - STA. 423+29, RT. AND STA. 421+34 - STA. 422+52, LT. TO ACHIEVE ALLOWABLE GUARDRAIL HEIGHT RANGE 27.75" - 32". THE EXISTING GUARDRAIL HEIGHT MEASURES 28.5" - 33.5" AND 29.5" - 33" RESPECTIVELY AND NEEDS TO BE ADJUSTED TO MEET THE ALLOWABLE GUARDRAIL HEIGHT RANGE OF 27.75" - 32". SHOULDER SLOPE ADJUSTMENTS ARE REQUIRED BETWEEN 15' FROM THE USH 14 FINISHED C/L TO THE FACE OF GUARDRAIL FROM STA. 420+62 - STA. 423+29, RT. AND STA. 421+34 - STA. 422+52, LT. ALL WORK REQUIRED TO ACHIEVE DESIRED GUARDRAIL HEIGHT IS PAID FOR UNDER THE HMA PAVEMENT 4 MT 58-28 S BID ITEM.

CONTACTS

WISCONSIN DEPARTMENT OF TRANSPORTATION:

WisDOT PROJECT MANAGER  
2101 WRIGHT STREET  
MADISON, WI 53704  
ATTN: MAHESH SHRESTHA, P.E.  
PH: (608) 245-2674  
EMAIL: Mahesh.Shrestha@dot.wi.gov

DESIGN CONSULTANT:

JEWELL ASSOCIATES ENGINEERS, INC.  
560 SUNRISE DRIVE  
SPRING GREEN, WI 53588  
ATTN: ELLERY SCHAFFER, P.E.  
PH: (608) 459-6027  
CELL: (608) 341-8159  
EMAIL: ellery.schaffer@jewellassoc.com

WDNR LIAISON:

STATE OF WISCONSIN  
DNR SOUTH CENTRAL REGION HQ  
3911 FISH HATCHERY ROAD  
FITCHBURG, WI 53711  
ATTN: ERIC HEGGELUND  
CELL: (608) 228-7927  
EMAIL: eric.heggelund@wisconsin.gov

UTILITIES

ELECTRICITY

ALLIANT ENERGY  
ATTN: MATT HOSLER  
900 PRAIRIE LANE  
SPRING GREEN, WI 53588  
CELL: (608) 963-3655  
EMAIL: matthewhosler@alliantenergy.com

GAS/PETROLEUM

MADISON GAS & ELECTRIC  
ATTN: SHAUN ENDRES  
133 S BLAIR STREET  
MADISON, WI 53788  
OFFICE: (608) 252-7224  
CELL: (608) 213-6708  
EMAIL: sendres@mge.com

WATER

VILLAGE OF ARENA  
ATTN: MIKE SCHMIDT  
345 WEST STREET  
P.O. BOX 131  
ARENA, WI 53503  
OFFICE: (608) 459-5838  
EMAIL: publicworks@villageofarena.net

COMMUNICATION LINE

CHARTER COMMUNICATIONS  
ATTN: STEVE HEGGE  
2701 DANIELS STREET  
MADISON, WI 53718  
OFFICE: (608) 576-2613  
EMAIL: steve.hegge@charter.com

FRONTIER COMMUNICATIONS

ATTN: JERRY MOORE  
2222 W WISCONSIN STREET  
PORTAGE, WI 53901  
OFFICE: (608) 742-9507  
CELL: (608) 346-0353  
EMAIL: jerald.r.moore@ftr.com

CONTROL POINTS

| NO. | STA.   | DESCRIPTION          | Y          | X          | Z      |
|-----|--------|----------------------|------------|------------|--------|
| 1   | 160+24 | ¾" I.R.S., 34.2' RT. | 226,969.95 | 408,491.62 | 717.82 |
| 2   | 272+52 | ¾" I.R.S., 40.5' LT. | 227,061.26 | 419,720.30 | 724.32 |
| 3   | 391+77 | ¾" I.R.S., 40.5' LT. | 227,068.20 | 431,644.44 | 735.84 |

ORDER OF SECTION 2 SHEETS:

- WRITTEN MATERIAL
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- PLAN DETAILS

LIST OF STANDARD ABBREVIATIONS

|             |                              |           |                                  |             |                            |
|-------------|------------------------------|-----------|----------------------------------|-------------|----------------------------|
| ABUT        | Abutment                     | INV       | Invert                           | RDWY        | Roadway                    |
| AC          | Acre                         | IP        | Iron Pipe or Pin                 | SALV        | Salvaged                   |
| AGG         | Aggregate                    | IRS       | Iron Rod Set                     | SAN S       | Sanitary Sewer             |
| AH          | Ahead                        | JT        | Joint                            | SEC         | Section                    |
| <           | Angle                        | JCT       | Junction                         | SHLDR       | Shoulder                   |
| ASPH        | Asphaltic                    | LHF       | Left-Hand Forward                | SHR         | Shrinkage                  |
| AVG         | Average                      | L         | Length of Curve                  | SW          | Sidewalk                   |
| ADT         | Average Daily Traffic        | LIN FT    | Linear Foot                      | S           | South                      |
| BAD         | Base Aggregate Dense         | or LF     |                                  | SQ          | Square                     |
| BK          | Back                         | LC        | Long Chord of Curve              | SF or SQ FT | Square Feet                |
| BF          | Back Face                    | MH        | Manhole                          | SV or SQ YD | Square Yard                |
| BM          | Bench Mark                   | MB        | Mailbox                          | STD         | Standard                   |
| BR          | Bridge                       | ML or M/L | Match Line                       | SDD         | Standard Detail Drawings   |
| C or C/L    | Center Line                  | N         | North                            | STH         | State Trunk Highways       |
| CC          | Center to Center             | Y         | North Grid Coordinate            | STA         | Station                    |
| C.E.        | Commercial Entrance          | OD        | Outside Diameter                 | SS          | Storm Sewer                |
| CTH         | County Trunk Highway         | PLE       | Permanent Limited Easement       | SG          | Subgrade                   |
| CR          | Creek                        | PT        | Point                            | SE          | Superelevation             |
| CR          | Crushed                      | PC        | Point of Curvature               | SL or S/L   | Survey Line                |
| CY or CU YD | Cubic Yard                   | PI        | Point of Intersection            | SV          | Septic Vent                |
| CP          | Culvert Pipe                 | PRC       | Point of Reverse Curvature       | T           | Tangent                    |
| C & G       | Curb and Gutter              |           |                                  | TEL         | Telephone                  |
| D           | Degree of Curve              | PT        | Point of Tangency                | TEMP        | Temporary                  |
| DHV         | Design Hour Volume           | POC       | Point On Curve                   | TI          | Temporary Interest         |
| DIA         | Diameter                     | POT       | Point on Tangent                 | TLE         | Temporary Limited Easement |
| E           | East                         | PVC       | Polyvinyl Chloride               |             | Ton                        |
| X           | East Grid Coordinate         | PCC       | Portland Cement Concrete         | t           | Town                       |
| ELEC        | Electric (al)                |           | Pound                            | T or TN     | TRANS                      |
| EL or ELEV  | Elevation                    | LB        | Pounds Per Square Inch           | TRANS       | Transition                 |
| ESALS       | Equivalent Single Axle Loads | PSI       | Private Entrance                 | TL or T/L   | Transit Line               |
|             |                              | P.E.      | Radius                           | T           | Trucks (percent of)        |
| EBS         | Excavation Below Subgrade    | R         | Railroad                         | TYP         | Typical                    |
|             |                              | RR        | Range                            | UNCL        | Unclassified               |
| FF          | Face to Face                 | R         | Reference Line                   | UG          | Underground Cable          |
| F.E.        | Field Entrance               | RL or R/L | Reference Point                  | USH         | United States Highway      |
| F           | Fill                         | RP        | Reinforced Concrete Culvert Pipe | VAR         | Variable                   |
| FG          | Finished Grade               | RCCP      | Required                         | V           | Velocity or Design Speed   |
| FL or F/L   | Flow Line                    |           | Residence or Residential         | VERT        | Vertical                   |
| FT          | Foot                         | REQD      | Retaining Wall                   | VC          | Vertical Curve             |
| FTG         | Footing                      | RES       | Right                            | VOL         | Volume                     |
| GN          | Grid North                   | RW        | Right-Hand Forward               | WM          | Water Main                 |
| HT          | Height                       | RT        | Right-of-Way                     | WV          | Water Valve                |
| CWT         | Hundredweight                | RHF       | Road                             | W           | West                       |
| HYD         | Hydrant                      | R/W       | River                            | WB          | Westbound                  |
| INL         | Inlet                        | RD        |                                  | YD          | Yard                       |
| ID          | Inside Diameter              | R         |                                  |             |                            |

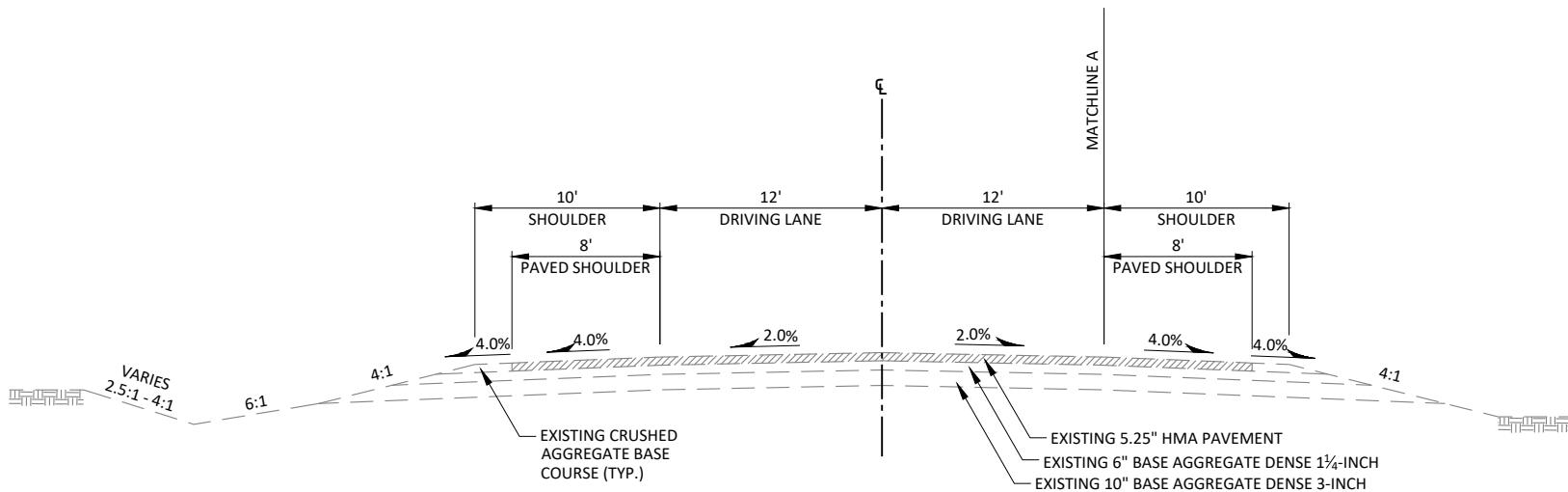
SOIL BORING TABLE

| STATION | OFFSET   | HMA LAYER 1 (INCH) | LAYER 2 MATERIAL        | LAYER 2 THICKNESS (INCH) | OTHER MATERIAL BELOW LAYER 2 IN 5-FT AUGER BORINGS |
|---------|----------|--------------------|-------------------------|--------------------------|--|
| 114+81  | 6' RT.   | 5.875              | RECYCLED ASPHALT        |                          |  |
| 130+12  | 9' RT.   | 6.50               | BASE                    | 22.5                     | 3'+ SAND   |
| 145+96  | 12' RT.  | 5.50               | RECYCLED ASPHALT        |                          |  |
| 166+03  | 6' LT.   | 9.25               | RECYCLED ASPHALT        |                          |  |
| 177+64  | 9' RT.   | 9.75               | RUBBALIZED CONCRETE     | 7.0                      | 3'+ SAND   |
| 200+87  | 12' LT.  | 6.13               | RECYCLED ASPHALT        |                          |  |
| 215+66  | 6' LT.   | 6.13               | RECYCLED ASPHALT        |                          |  |
| 233+08  | 9' LT.   | 9.00               | RUBBALIZED CONCRETE     | 7.5                      | 3.5' SAND  |
| 252+62  | 12' RT.  | 6.30               | BASE                    |                          |  |
| 263+71  | 18' RT.  | 5.75               | BASE                    |                          |  |
| 269+51  | 6' LT.   | 10.00              | RUBBALIZED CONCRETE     | 7.5                      | 3.5' SAND  |
| 289+58  | 9' RT.   | 11.50              | RUBBALIZED CONCRETE     | 8.5                      |  |
| 298+03  | 12' LT.  | 8.13               | RECYCLED ASPHALT        |                          | 3.5' SAND  |
| 313+87  | 18' LT.  | 4.63               | BASE                    |                          |  |
| 322+31  | 6' RT.   | 11.00              | RUBBALIZED CONCRETE     | 6.5                      | 3.5' SAND  |
| 340+27  | 9.5' LT. | 8.25               | RUBBALIZED CONCRETE     |                          |  |
| 358+22  | 12' RT.  | 9.50               | RECYCLED ASPHALT        |                          |  |
| 426+86  | 6' LT.   | 10.00              | RUBBALIZED CONCRETE     | 6.0                      | 3.5' SAND  |
| 393+07  | 9' RT.   | 7.50               | INTACT RECYCLED ASPHALT | 2.5                      | CONCRETE   |
| 409+43  | 12' LT.  | 8.00               | INTACT RECYCLED ASPHALT | 2.75                     |  |
| 424+75  | 6' RT.   | 10.50              | RUBBALIZED CONCRETE     | 6.0                      | 3.5' SAND  |
| 434+78  | 9' LT.   | 9.25               | RUBBALIZED CONCRETE     | 8.0                      | 3.5' SAND  |



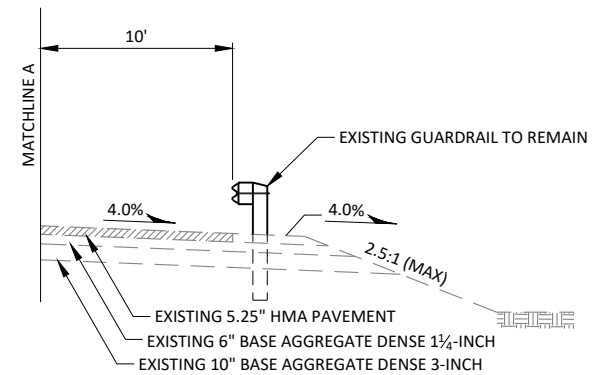






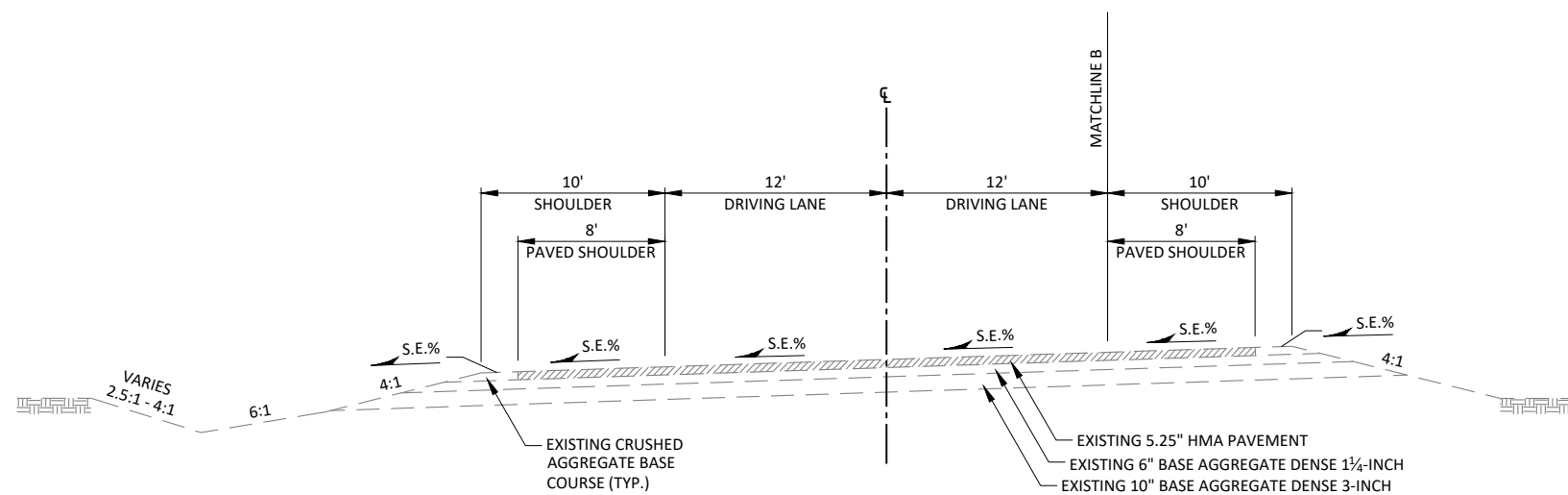
**TYPICAL EXISTING SECTION**

STA. 100+55.45 - STA. 106+85



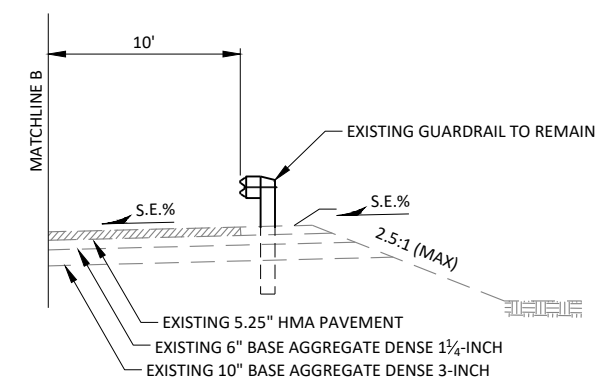
**TYPICAL PARTIAL EXISTING SECTION**

STA. 100+55.45 - STA. 101+92, RT.  
STA. 100+55.45 - STA. 102+92, LT.



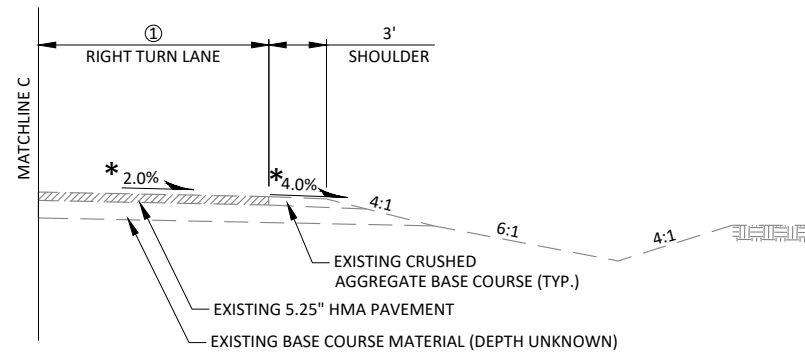
**TYPICAL EXISTING SUPERELEVATED SECTION**

STA. 106+85 - STA. 144+83



**TYPICAL PARTIAL EXISTING SECTION**

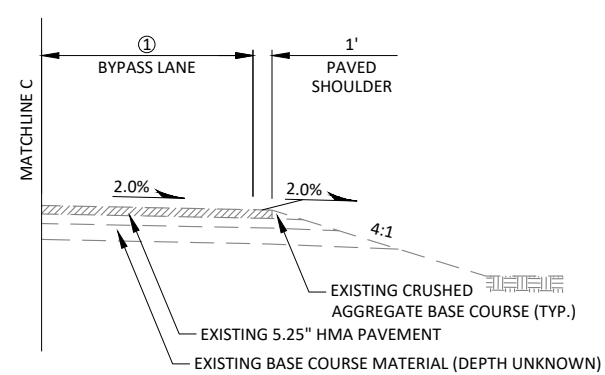
STA. 138+27 - STA. 142+43, RT.



### TYPICAL PARTIAL EXISTING SECTION

- \* STA. 146+74 - STA. 152+71, RT.
- \* STA. 149+91 - STA. 155+38, LT.
- STA. 168+90 - STA. 174+50, RT.
- STA. 276+05 - STA. 281+78, RT.
- STA. 351+17 - STA. 358+05, RT.
- \* STA. 146+74 - STA. 152+71, RT. - S.E.%
- STA. 149+91 - STA. 155+38, LT. - S.E.%

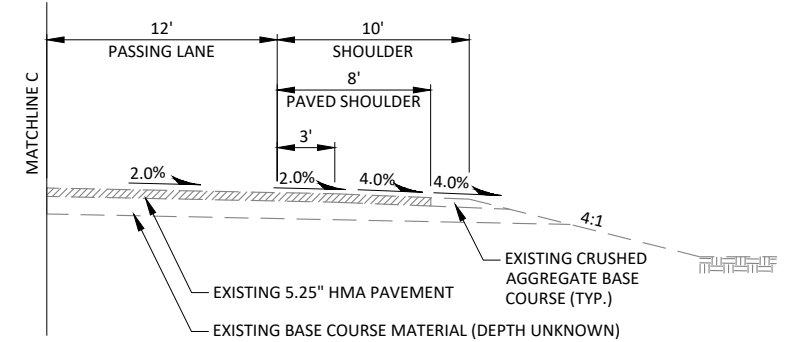
①  
FT.  
12  
12  
11  
12  
12



### TYPICAL PARTIAL EXISTING SECTION

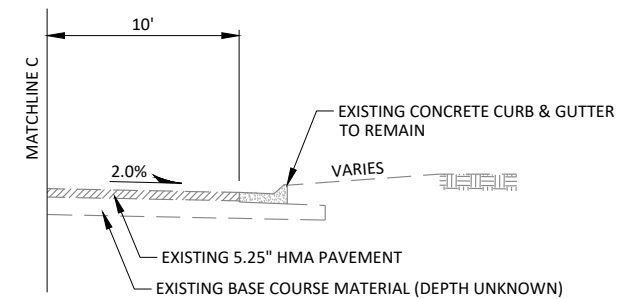
STA. 170+23 - STA. 176+49, LT.  
STA. 441+57 - STA. 446+02.39, RT.

①  
FT.  
11  
11  
12



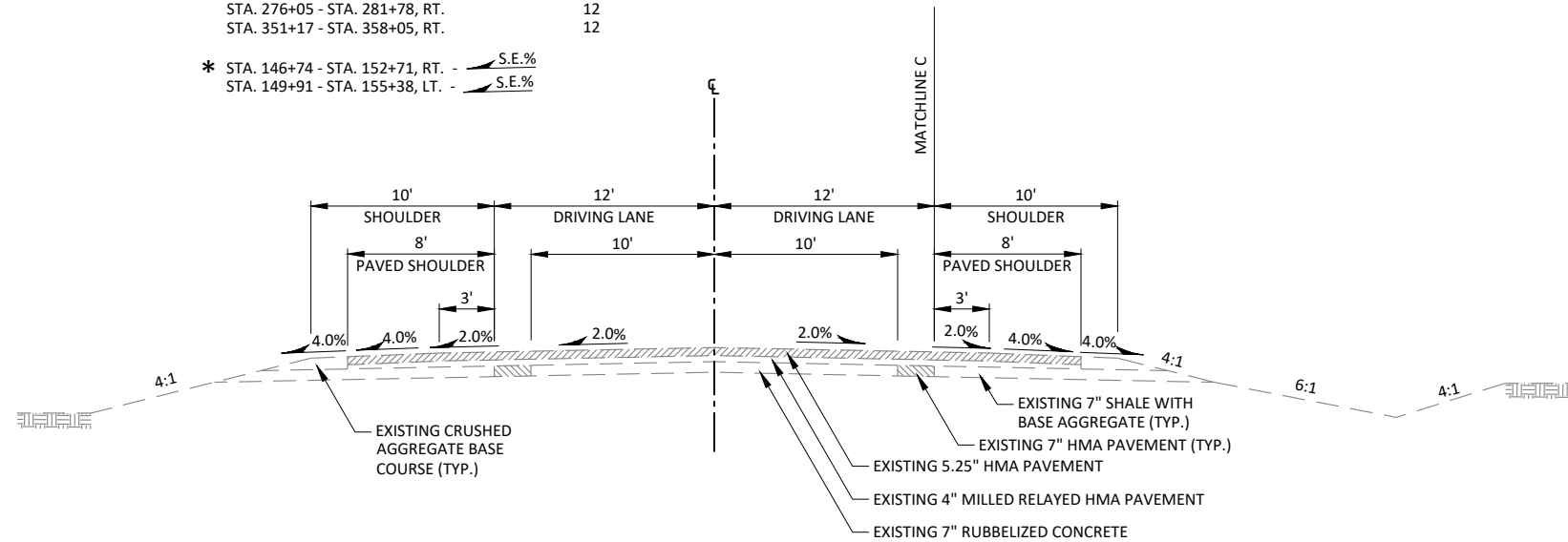
### TYPICAL PARTIAL EXISTING SECTION

STA. 245+60 - STA. 298+70, RT.  
STA. 298+70 - STA. 365+29, LT.



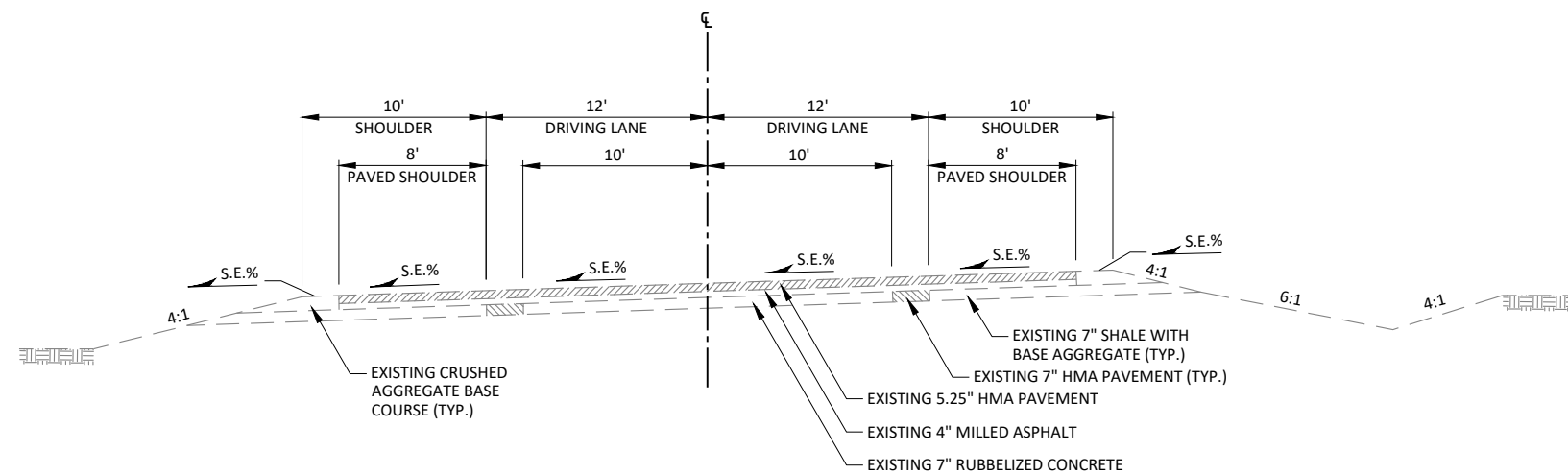
### TYPICAL PARTIAL EXISTING SECTION

STA. 392+90 - STA. 396+11, RT.



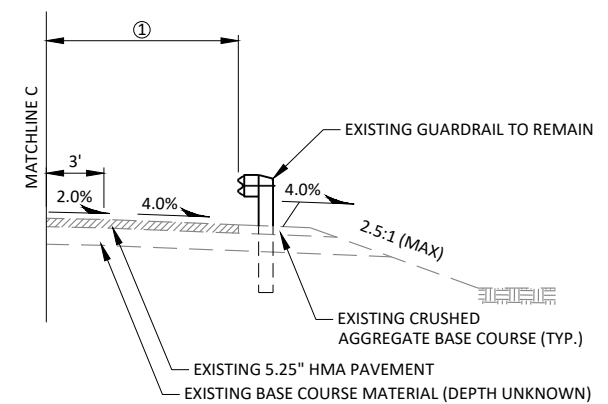
### TYPICAL EXISTING SECTION

STA. 156+09 - STA. 446+02.39



### TYPICAL EXISTING SUPERELEVATED SECTION

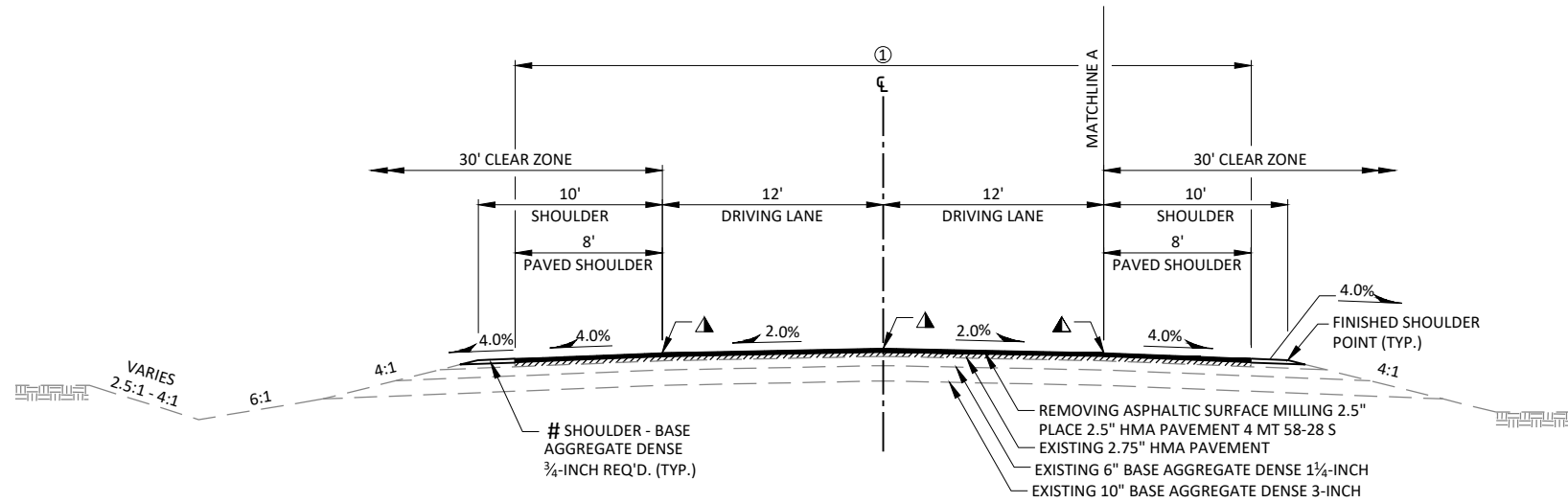
STA. 144+83 - STA. 156+09



### TYPICAL PARTIAL EXISTING SECTION

STA. 420+62 - STA. 423+29, RT.  
STA. 421+34 - STA. 422+52, LT.

①  
FT.  
11  
12



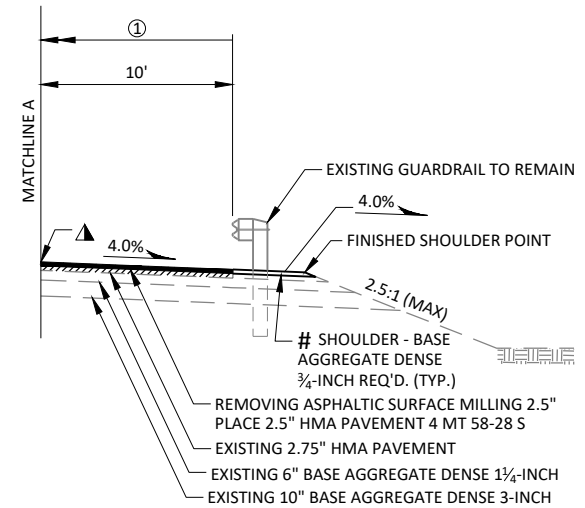
SUPERELEVATION TABLE-CURVE 1

| STATION             | LEFT(%) | RIGHT(%) |
|---------------------|---------|----------|
| 106+85              | 2.0     | 2.0      |
| 107+00              | 2.0     | 1.5      |
| 107+41              | 2.0     | 0.0      |
| 107+50              | 2.0     | 0.3      |
| 107+97              | 2.0     | 2.0      |
| 108+00              | 2.1     | 2.1      |
| 108+28              | 3.1     | 3.1      |
| FULL SUPERELEVATION |         |          |
| 154+66              | 3.1     | 3.1      |
| 154+97              | 2.0     | 2.0      |
| 155+00              | 2.0     | 1.9      |
| 155+50              | 2.0     | 0.1      |
| 155+53              | 2.0     | 0.0      |
| 156+00              | 2.0     | 1.7      |
| 156+09              | 2.0     | 2.0      |

TYPICAL FINISHED SECTION

STA. 100+55.45 - STA. 106+85

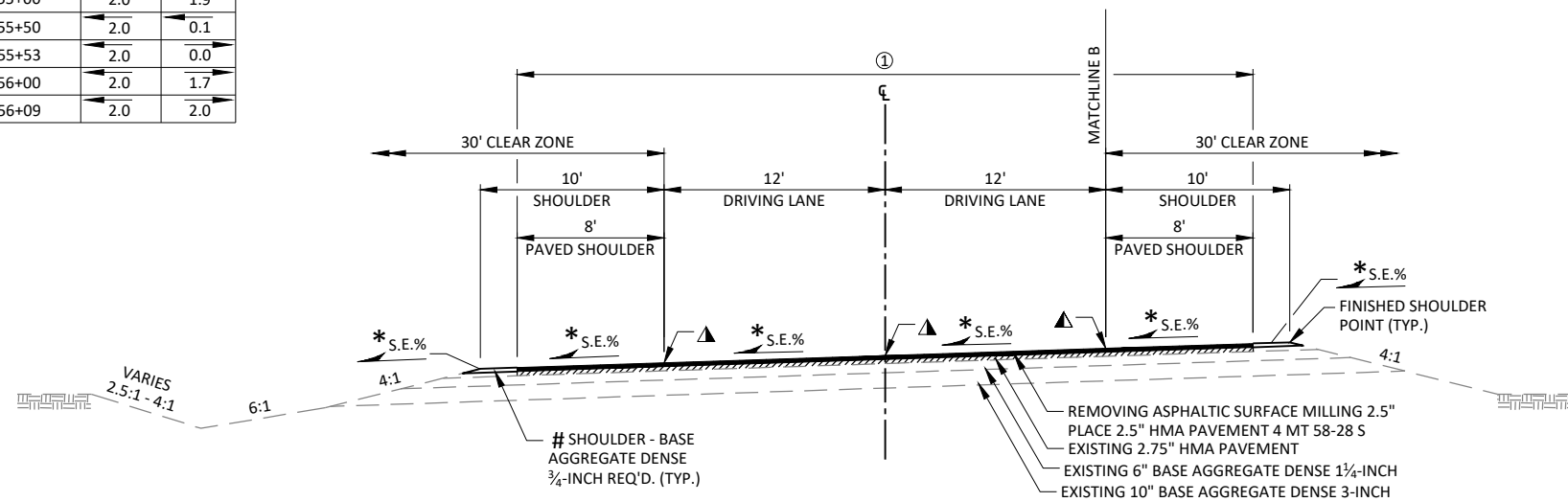
- ▲ ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL AND ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL REQ'D. SEE MISCELLANEOUS QUANTITIES AND STANDARD DETAIL DRAWINGS FOR DETAILS.
- ① PREPARE FOUNDATION FOR ASPHALTIC PAVING
- # INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE 3/4-INCH



TYPICAL PARTIAL FINISHED SECTION

STA. 100+55.45 - STA. 101+92, RT.  
STA. 100+55.45 - STA. 102+92, LT.

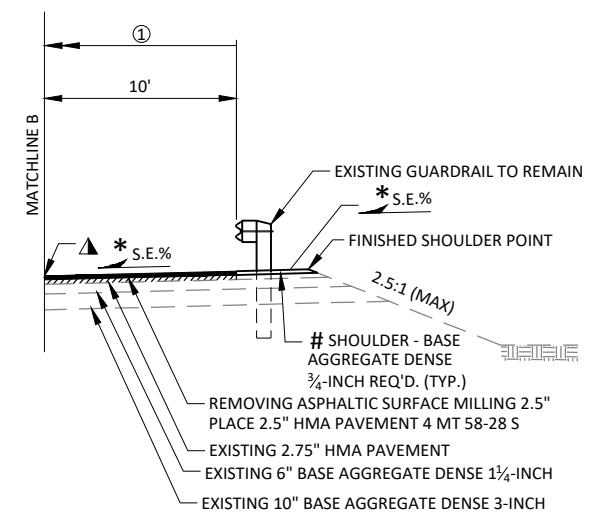
- ① PREPARE FOUNDATION FOR ASPHALTIC PAVING
- # INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE 3/4-INCH



TYPICAL FINISHED SUPERELEVATED SECTION

STA. 106+85 - STA. 144+83

- \* SEE SUPERELEVATION TABLE
- ▲ ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL AND ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL REQ'D. SEE MISCELLANEOUS QUANTITIES AND STANDARD DETAIL DRAWINGS FOR DETAILS.
- ① PREPARE FOUNDATION FOR ASPHALTIC PAVING
- # INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE 3/4-INCH

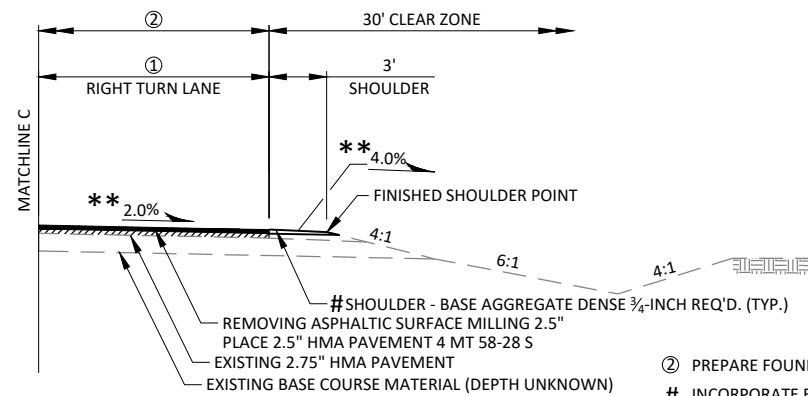


TYPICAL PARTIAL FINISHED SECTION

STA. 138+27 - STA. 142+43, RT.

- ① PREPARE FOUNDATION FOR ASPHALTIC PAVING
- # INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE 3/4-INCH



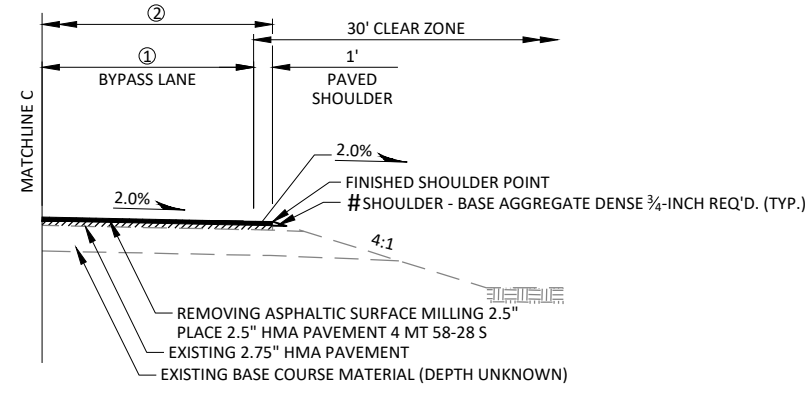


TYPICAL PARTIAL FINISHED SECTION

\*\* STA. 146+74 - STA. 152+71, RT.  
\*\* STA. 149+91 - STA. 155+38, LT.  
STA. 168+90 - STA. 174+50, RT.  
STA. 276+05 - STA. 281+78, RT.  
STA. 351+17 - STA. 358+05, RT.

\*\* STA. 146+74 - STA. 152+71, RT. - S.E.%  
STA. 149+91 - STA. 155+38, LT. - S.E.%

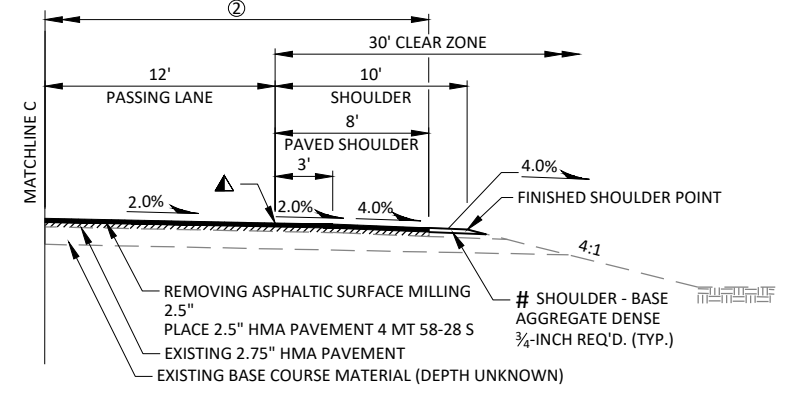
- ① FT. 12  
12  
11  
12  
12
- ② PREPARE FOUNDATION FOR ASPHALTIC PAVING  
# INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE ¾-INCH



TYPICAL PARTIAL FINISHED SECTION

STA. 170+23 - STA. 176+49, LT.  
STA. 441+57 - STA. 446+02.39, RT.

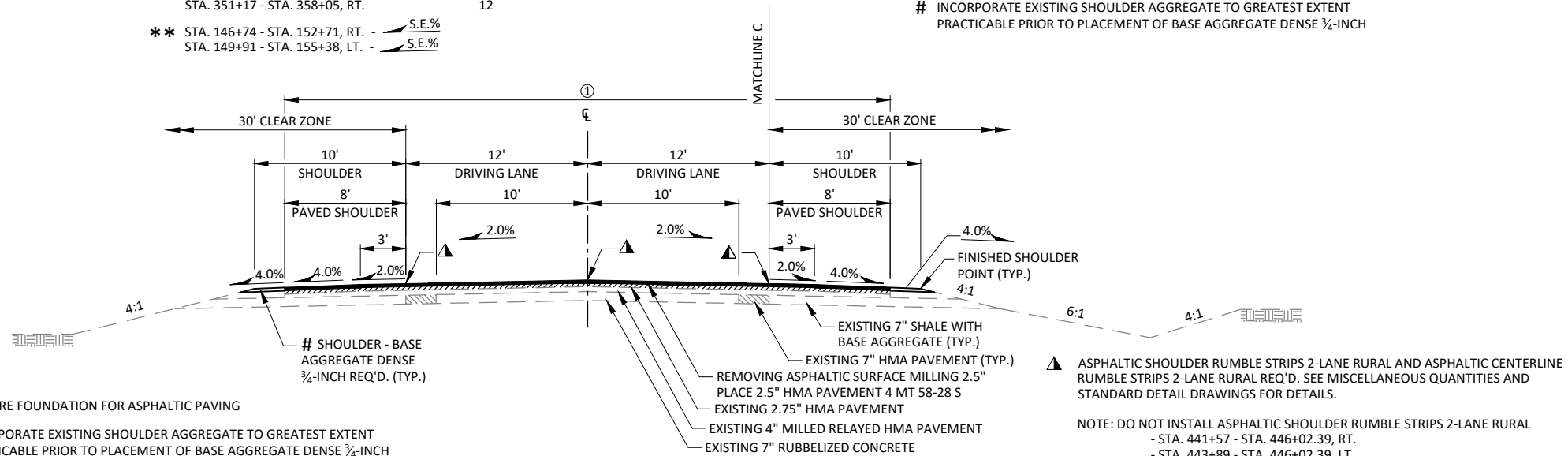
- ① FT. 11  
12
- ② PREPARE FOUNDATION FOR ASPHALTIC PAVING  
# INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE ¾-INCH



TYPICAL PARTIAL FINISHED SECTION

STA. 245+60 - STA. 298+70, RT.  
STA. 298+70 - STA. 365+29, LT.

- ② PREPARE FOUNDATION FOR ASPHALTIC PAVING  
# INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE ¾-INCH



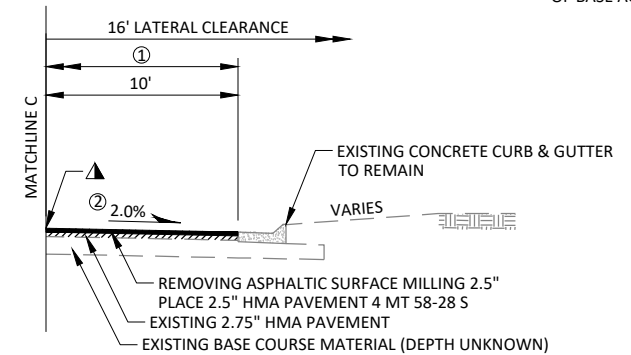
TYPICAL FINISHED SECTION

STA. 156+09 - STA. 446+02.39

- ① PREPARE FOUNDATION FOR ASPHALTIC PAVING  
# INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE ¾-INCH

▲ ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL AND ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL REQ'D. SEE MISCELLANEOUS QUANTITIES AND STANDARD DETAIL DRAWINGS FOR DETAILS.

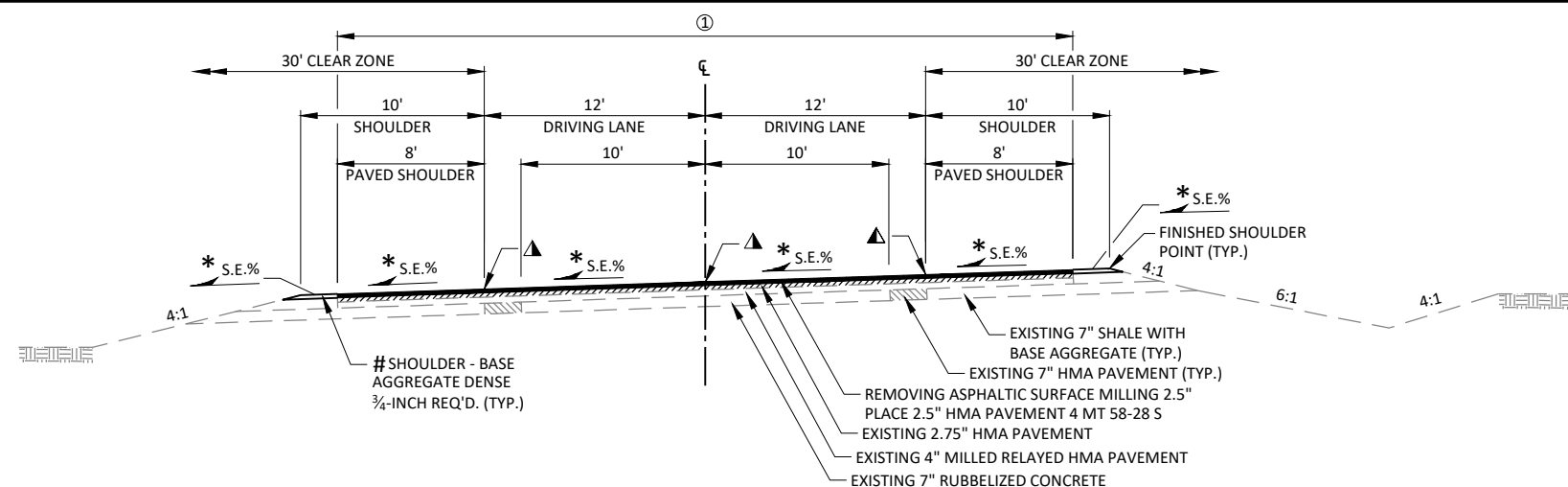
NOTE: DO NOT INSTALL ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL  
- STA. 441+57 - STA. 446+02.39, RT.  
- STA. 443+89 - STA. 446+02.39, LT.  
DO NOT INSTALL ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL  
- STA. 443+89 - STA. 446+02.39



TYPICAL PARTIAL FINISHED SECTION

STA. 392+90 - STA. 396+11, RT.

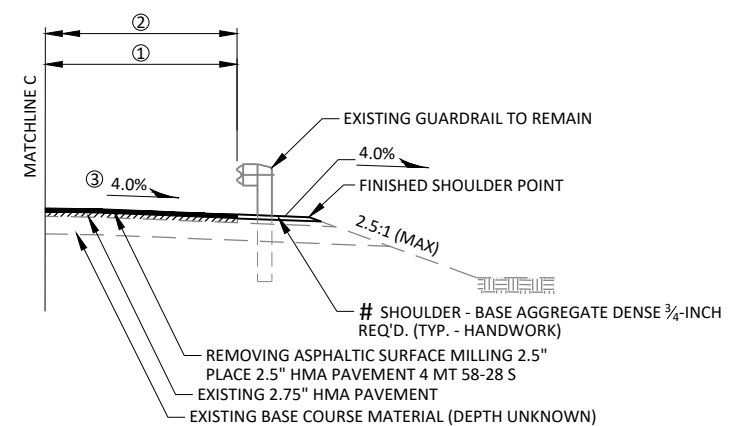
- ① PREPARE FOUNDATION FOR ASPHALTIC PAVING  
② 2.0% (ASSUMED) - MATCH EXISTING



TYPICAL FINISHED SUPERELEVATED SECTION

STA. 144+83 - STA. 156+09

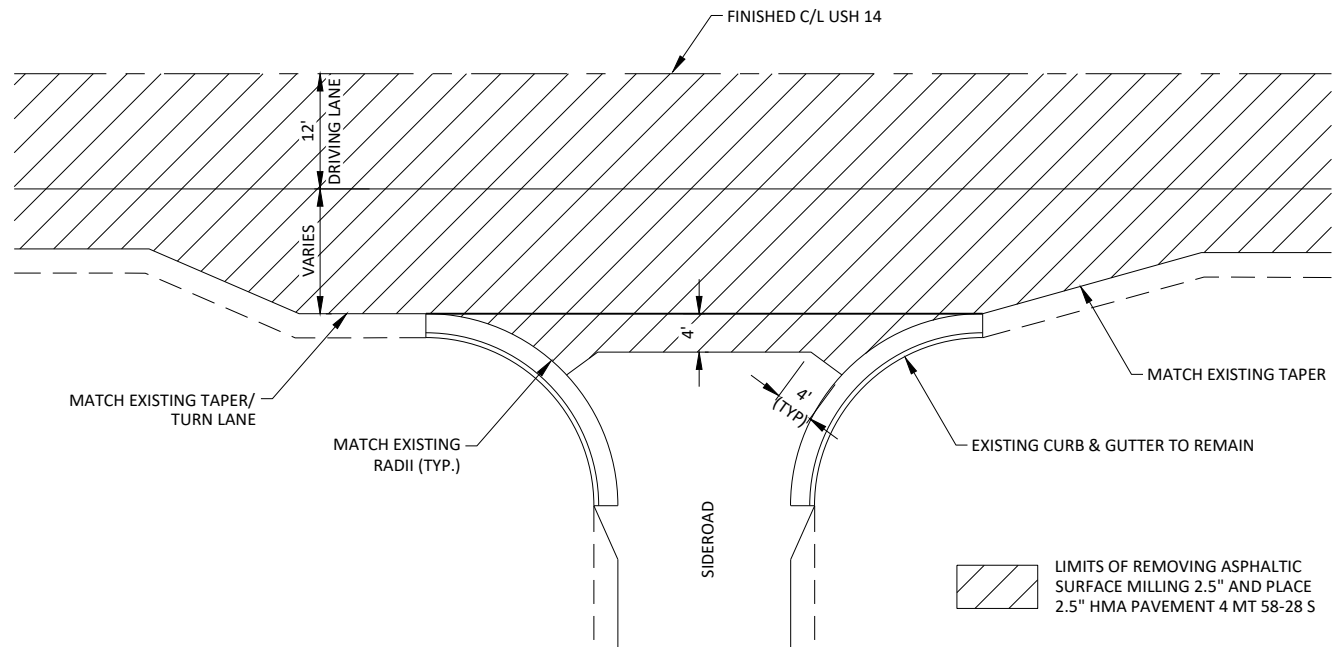
- \* SEE SUPERELEVATION TABLE  
▲ ASPHALTIC SHOULDER RUMBLE STRIPS 2-LANE RURAL AND ASPHALTIC CENTERLINE RUMBLE STRIPS 2-LANE RURAL REQ'D. SEE MISCELLANEOUS QUANTITIES AND STANDARD DETAIL DRAWINGS FOR DETAILS.  
① PREPARE FOUNDATION FOR ASPHALTIC PAVING  
# INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE ¾-INCH



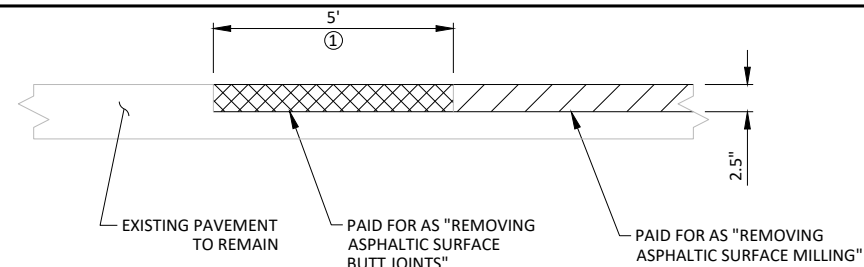
TYPICAL PARTIAL FINISHED SECTION

STA. 420+62 - STA. 423+29, RT.  
STA. 421+34 - STA. 422+52, LT.

- ① FT. 11  
12
- ② PREPARE FOUNDATION FOR ASPHALTIC PAVING  
③ 4.0% (ASSUMED) - MATCH EXISTING  
# INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICABLE PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE ¾-INCH

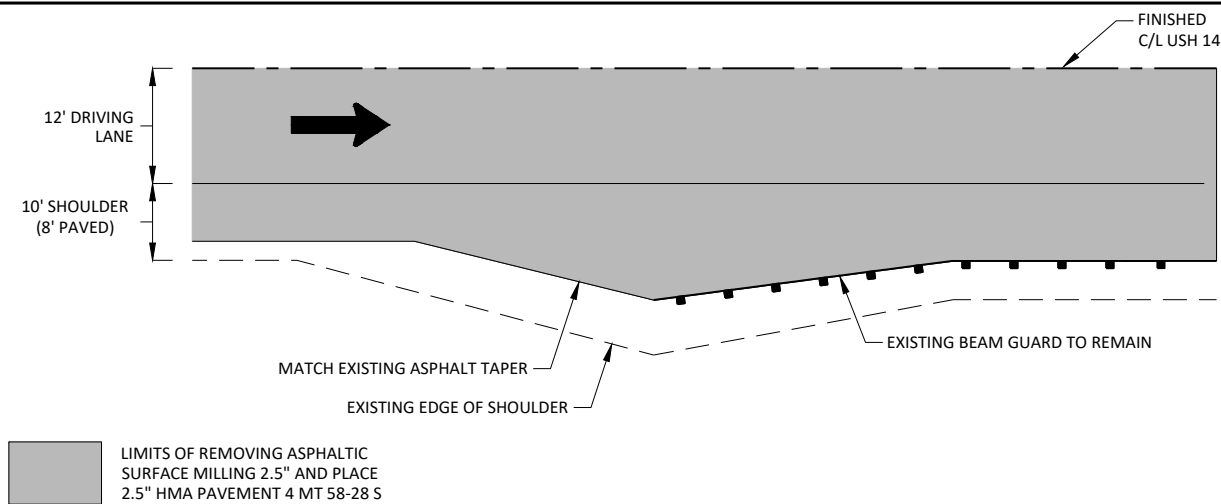
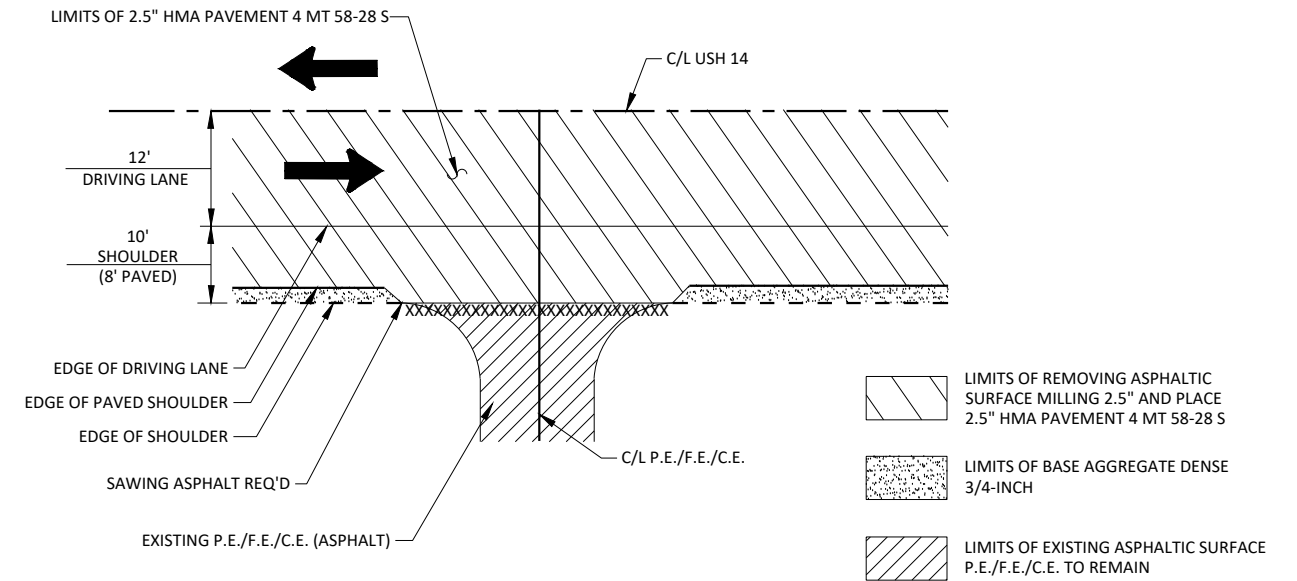
**TYPICAL RURAL SIDEROAD DETAIL WITH CURB & GUTTER**

CTH CC W SAWLE ROAD HAYWARD CROSSING (NORTH)  
HELENA ROAD COON ROCK ROAD CTH H  
CTH C HAYWARD CROSSING (SOUTH) WEST STREET  
OAK STREET

**REMOVING ASPHALTIC SURFACE BUTT JOINTS DETAIL**

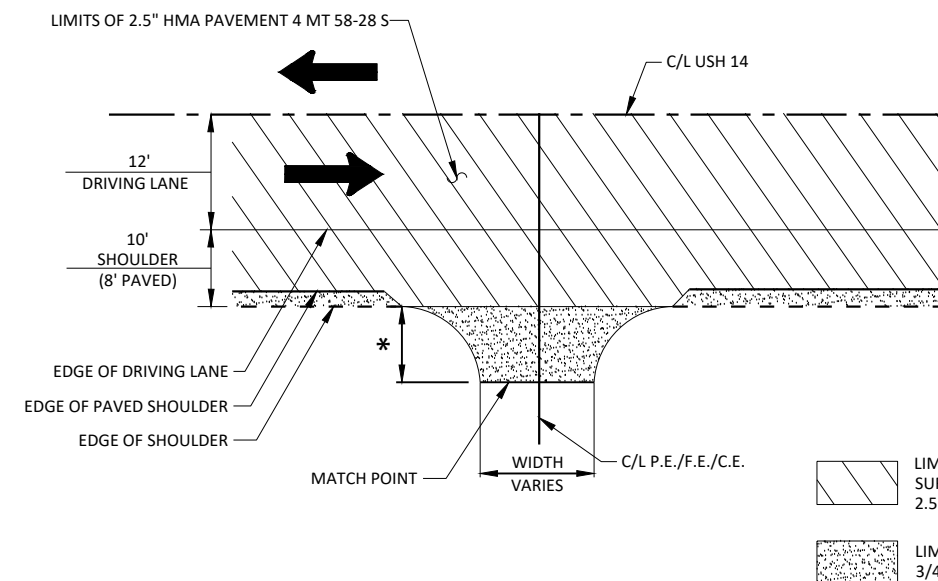
CTH CC W SAWLE ROAD HAYWARD CROSSING (NORTH)  
HELENA ROAD COON ROCK ROAD CTH H  
CTH C HAYWARD CROSSING (SOUTH) WEST STREET  
OAK STREET

① LIMITS OF REMOVING ASPHALTIC SURFACE BUTT JOINTS REQ'D.

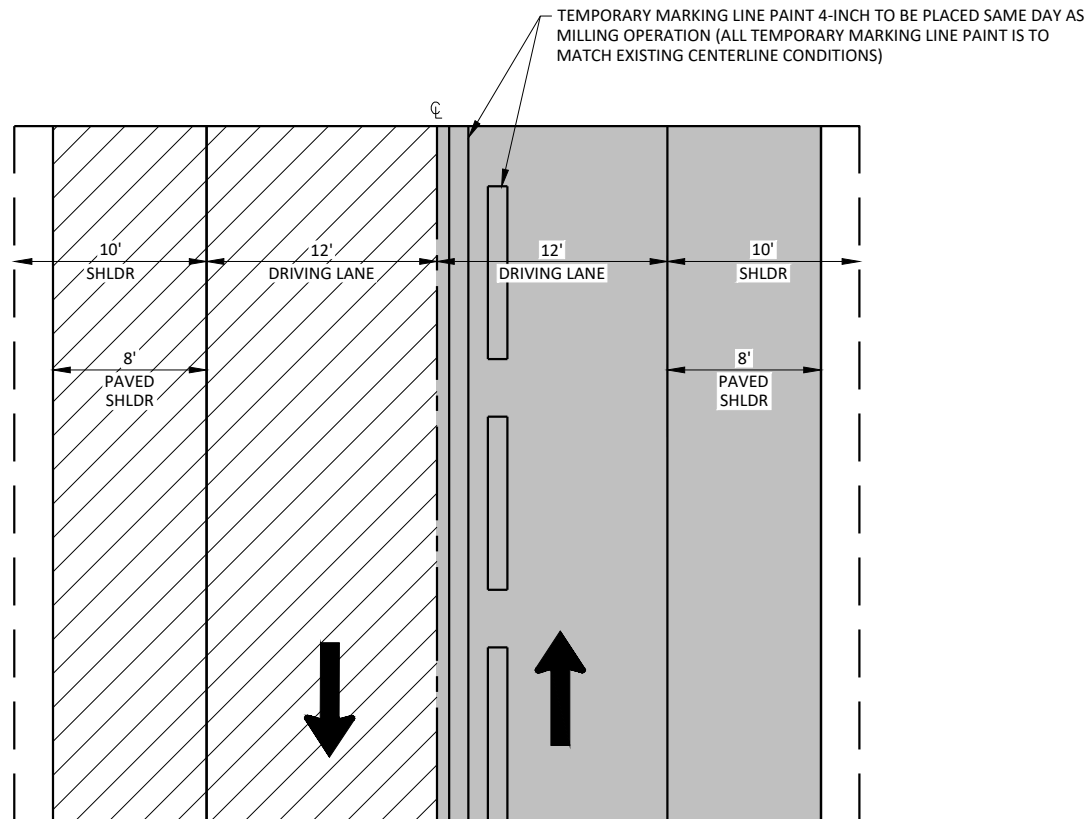
**BEAM GUARD PAVING DETAIL****P.E./F.E./C.E. (EXISTING ASPHALT)  
DRIVEWAY DETAIL-RURAL**

NOTE: EXISTING ASPHALT DRIVEWAY LOCATED AT STA. 393+87, RT. (LOCATED BEHIND BACK OF EXISTING CURB & GUTTER TO REMAIN) TO REMAIN. SEE TYPICAL FINISHED SECTIONS FOR FURTHER INFORMATION.

NOTE: EXISTING CONCRETE DRIVEWAY LOCATED AT STA. 395+48, RT. (LOCATED BEHIND BACK OF EXISTING CURB & GUTTER TO REMAIN) TO REMAIN. SEE TYPICAL FINISHED SECTIONS FOR FURTHER INFORMATION.

**P.E./F.E./C.E. (EXISTING B.A.D.)  
DRIVEWAY DETAIL-RURAL**

\* REPLACE IN KIND TO THE RADIUS POINTS OF EACH DRIVEWAY

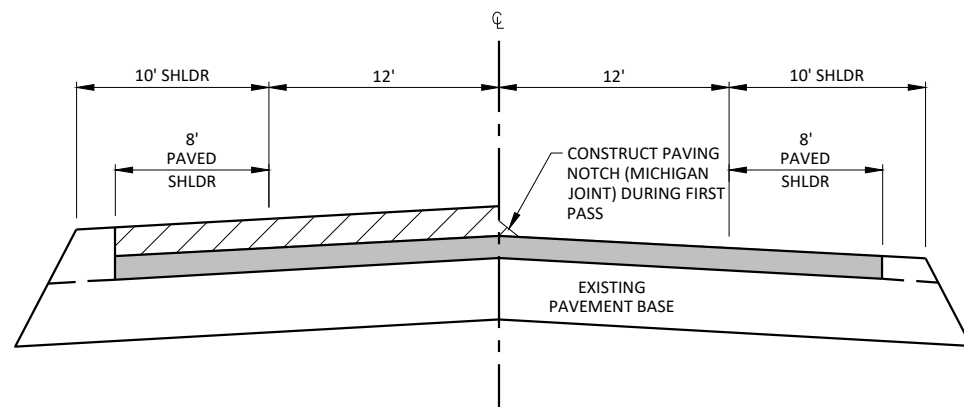


PLAN VIEW

EXISTING ASPHALTIC SURFACE TO REMAIN (MILLED SURFACE)

FIRST PASS 2.5" HMA PAVEMENT  
4 MT 58-28 S PAVING LIMITS

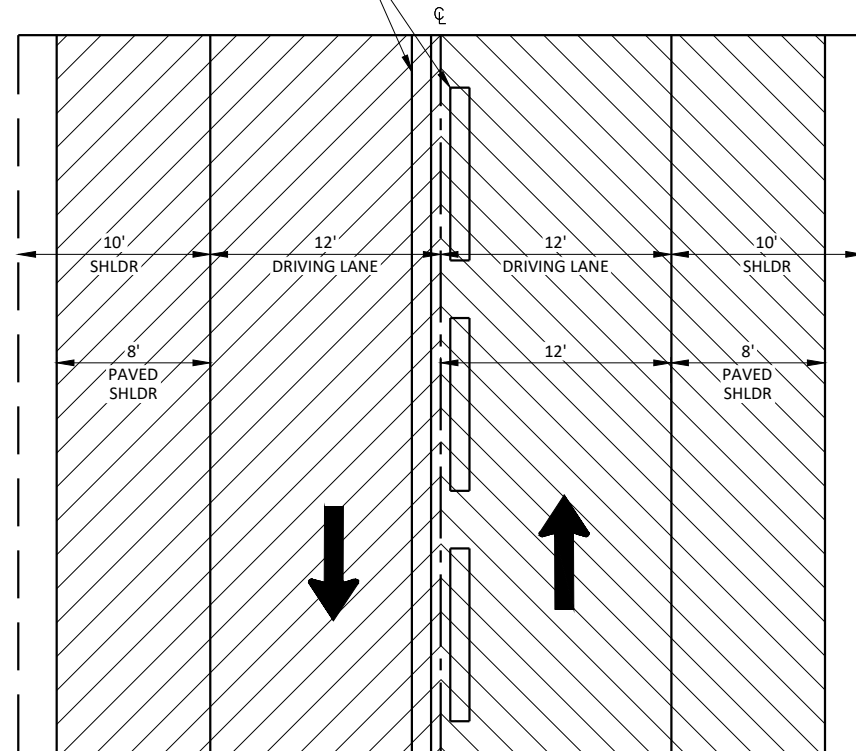
NOTE: PLACE TEMPORARY MARKING LINE PAINT 4-INCH (SEE STANDARD DETAIL DRAWING LONGITUDINAL MARKING (MAINLINE) AND PAVEMENT MARKING (INTERSECTIONS) FOR PAVEMENT MARKING LAYOUT)



CROSS SECTION VIEW

FIRST PASS DETAIL

TEMPORARY MARKING LINE EPOXY 4-INCH TO BE PLACED SAME DAY AS PAVING OPERATION.



PLAN VIEW

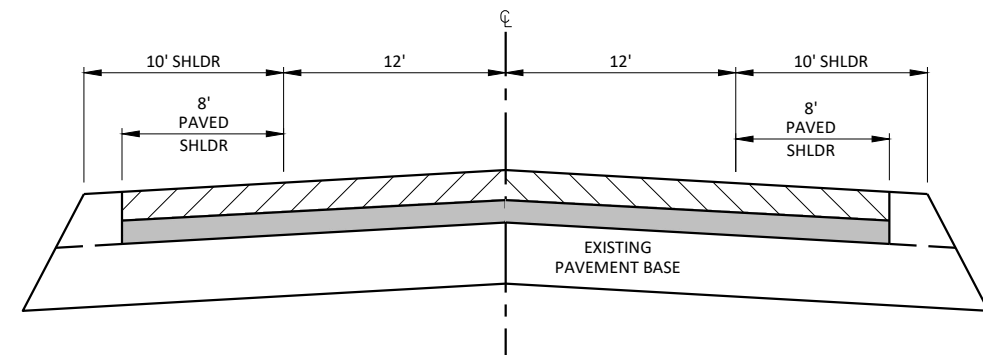
FIRST PASS 2.5" HMA PAVEMENT  
4 MT 58-28 S PAVING LIMITS

SECOND PASS 2.5" HMA PAVEMENT  
4 MT 58-28 S PAVING LIMITS

NOTE: LOCATING NO PASSING ZONES REQUIRED PRIOR TO PLACEMENT OF TEMPORARY MARKING LINE EPOXY 4-INCH.

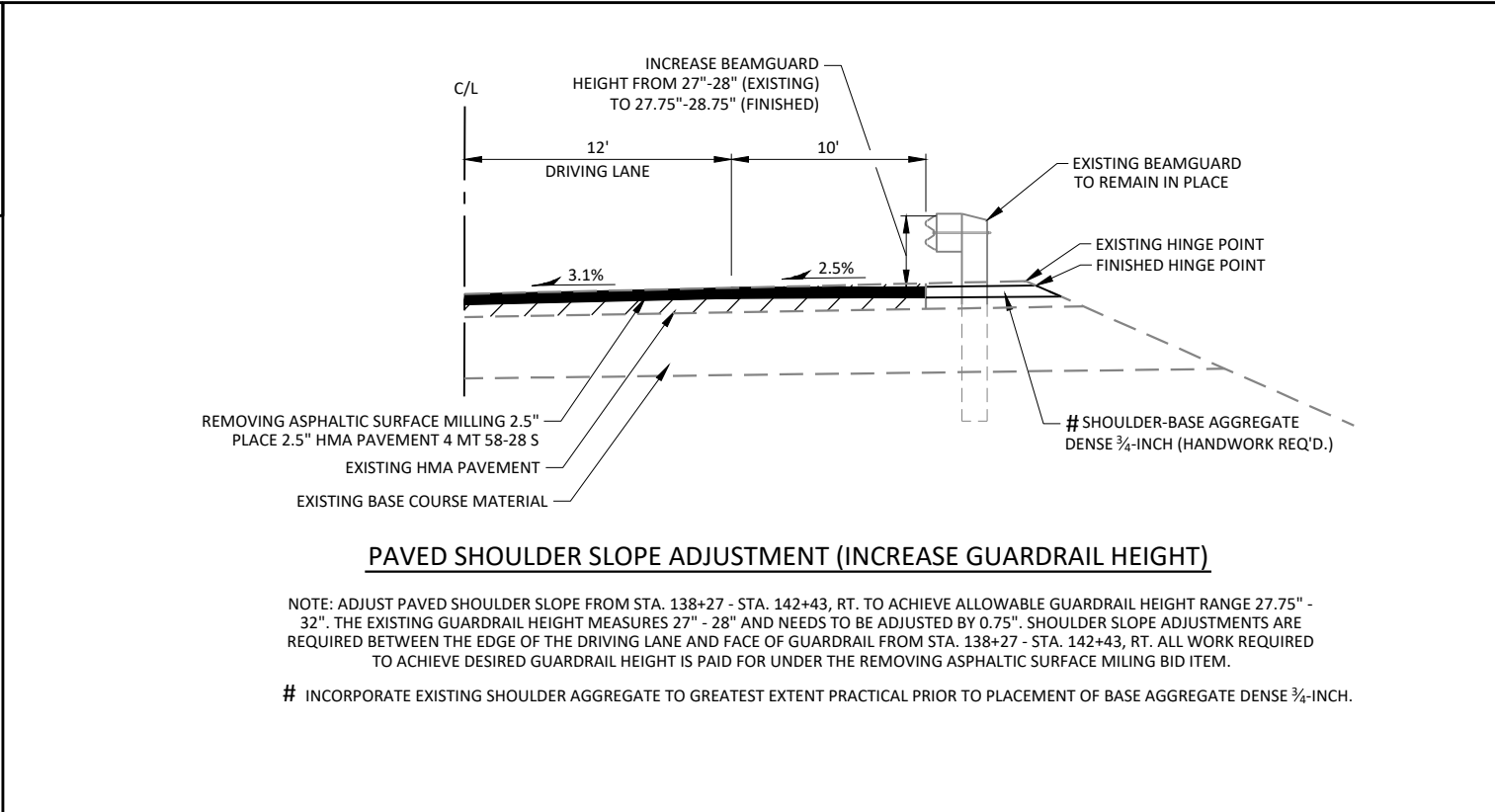
PLACE ASPHALTIC CENTERLINE RUMBLE STRIPS  
2-LANE RURAL

PLACE MARKING LINE SAME DAY EPOXY 4-INCH (SEE STANDARD DETAIL DRAWING LONGITUDINAL MARKING (MAINLINE) AND PAVEMENT MARKING (INTERSECTIONS) FOR PAVEMENT MARKING LAYOUT)



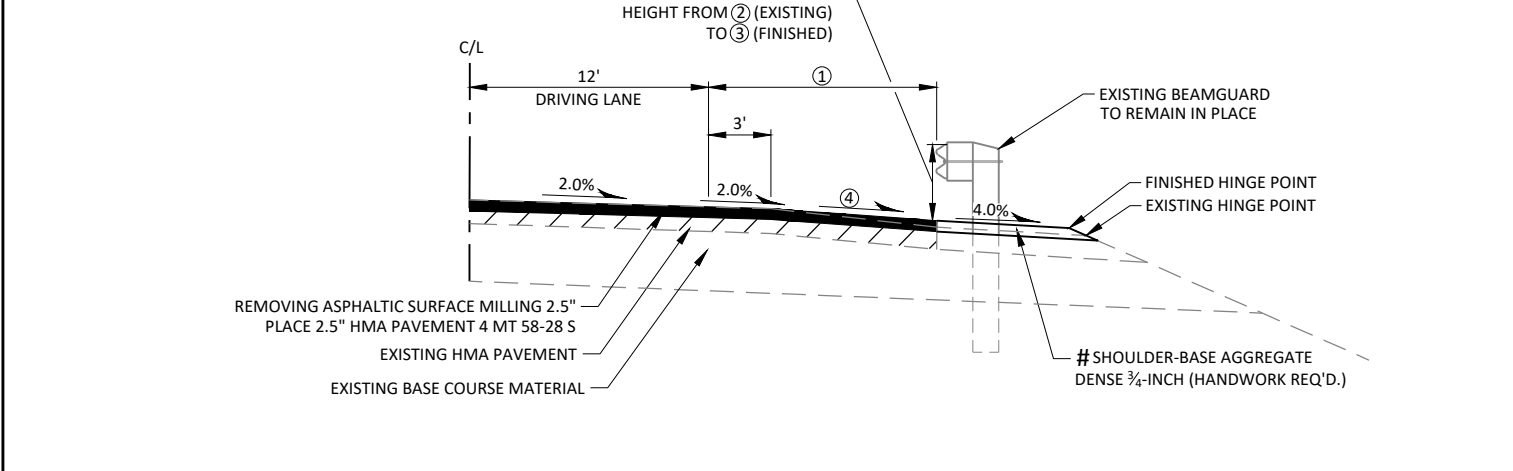
CROSS SECTION VIEW

SECOND PASS DETAIL



|  |
|--|
|  |
|--|

REDUCE BEAMGUARD 

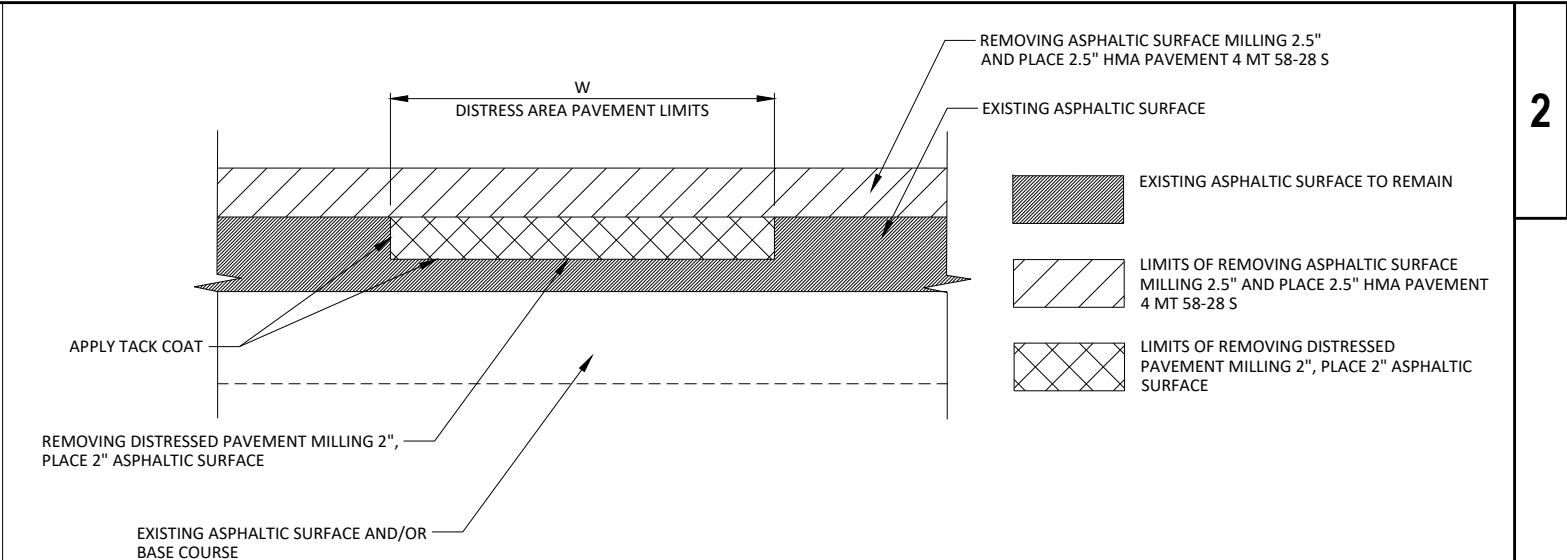


PAVED SHOULDER SLOPE ADJUSTMENT (REDUCE GUARDRAIL HEIGHT)

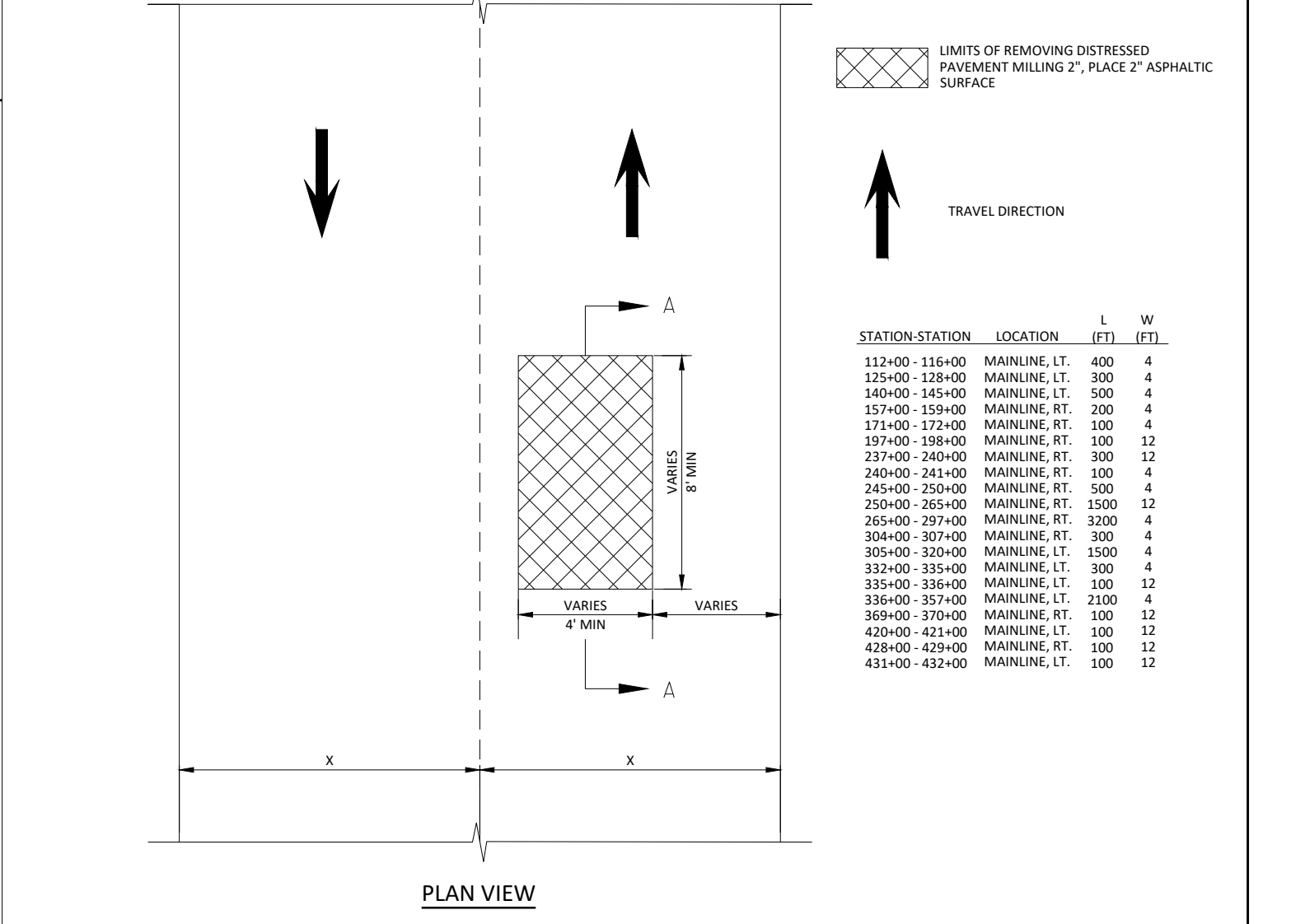
| STA. - STA.     | LOCATION      | ①<br>(FT.) | ②<br>EXISTING BEAM GUARD<br>HEIGHT PRIOR TO CROSS | REMARKS          | ③<br>EXISTING BEAM GUARD<br>HEIGHT POST CROSS | ④<br>SLOPE      |                  |
|-----------------|---------------|------------|---|------------------|---|-----------------|------------------|
|                 |               |            | <u>SLOPE ADJUSTMENT</u>                           |                  | <u>SLOPE ADJUSTMENT</u>                       | <u>EXISTING</u> | <u>FINISHED</u>  |
| 420+62 - 423+29 | MAINLINE, RT. | 11         | 28.5" - 33.5"                                     | REDUCE 0" - 1.5" | 28.5" - 32"                                   | 4.0%            | VARIES 2.4%-4.0% |
| 421+34 - 422+52 | MAINLINE, LT. | 12         | 29.5" - 33"                                       | REDUCE 0" - 1"   | 29.5" - 32"                                   | 4.0%            | VARIES 3.0%-4.0% |

NOTE: ADJUST PAVED SHOULDER SLOPE FROM STA. 420+62 - STA. 423+29, RT. AND STA. 421+34 - STA. 422+52, LT. TO ACHIEVE ALLOWABLE GUARDRAIL HEIGHT RANGE 27.75" - 32". THE EXISTING GUARDRAIL HEIGHT MEASURES 28.5" - 33.5" AND 29.5" - 33" RESPECTIVELY AND NEEDS TO BE ADJUSTED TO MEET THE ALLOWABLE GUARDRAIL HEIGHT RANGE OF 27.75" - 32". SHOULDER SLOPE ADJUSTMENTS ARE REQUIRED BETWEEN 15' FROM THE USH 14 FINISHED C/L TO THE FACE OF GUARDRAIL FROM STA. 420+62 - STA. 423+29, RT. AND STA. 421+34 - STA. 422+52, LT. ALL WORK REQUIRED TO ACHIEVE DESIRED GUARDRAIL HEIGHT IS PAID FOR UNDER THE REMOVING ASPHALTIC SURFACE MILLING BID ITEM.

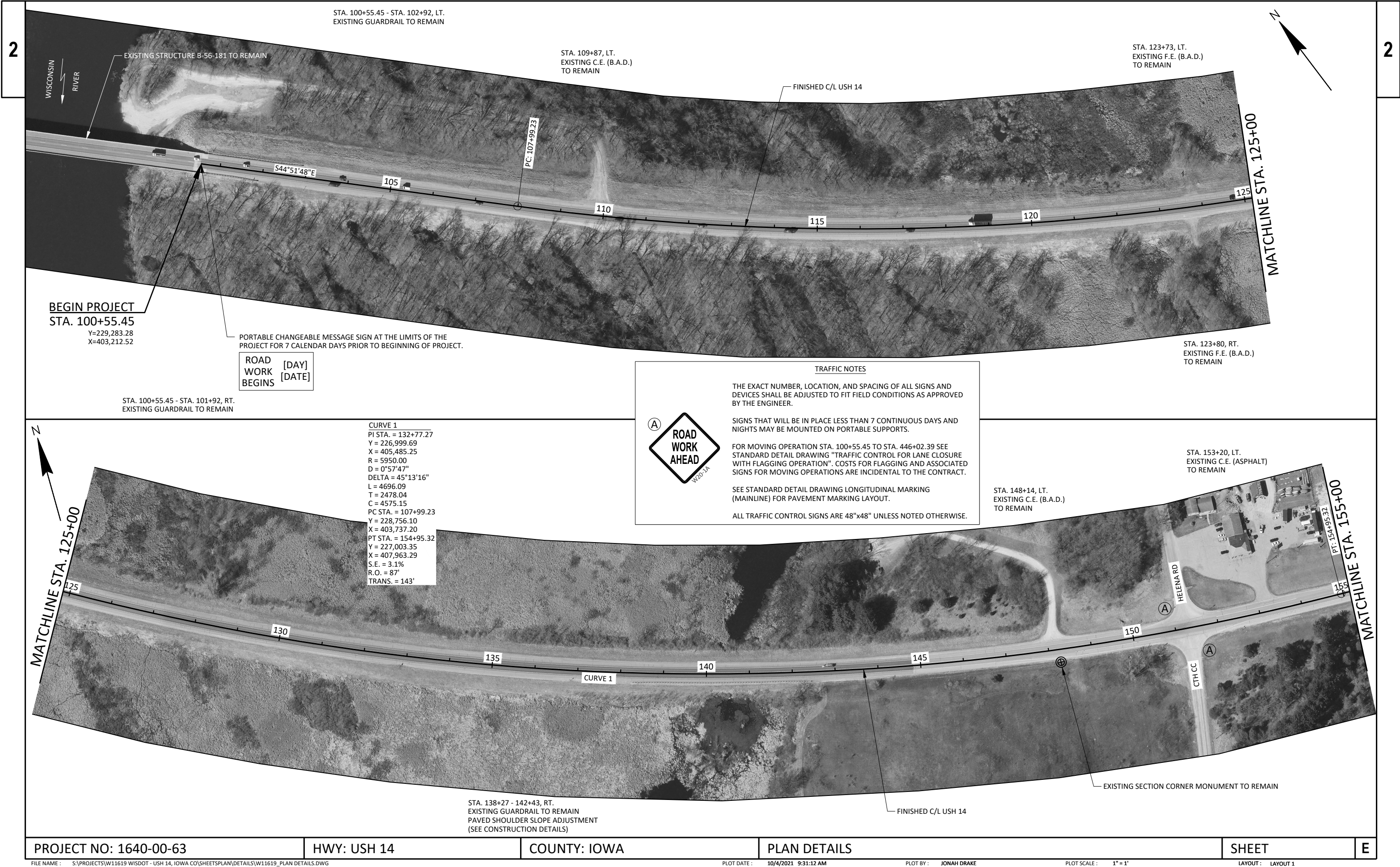
**# INCORPORATE EXISTING SHOULDER AGGREGATE TO GREATEST EXTENT PRACTICAL PRIOR TO PLACEMENT OF BASE AGGREGATE DENSE ¾-INCH.**

[illegible]

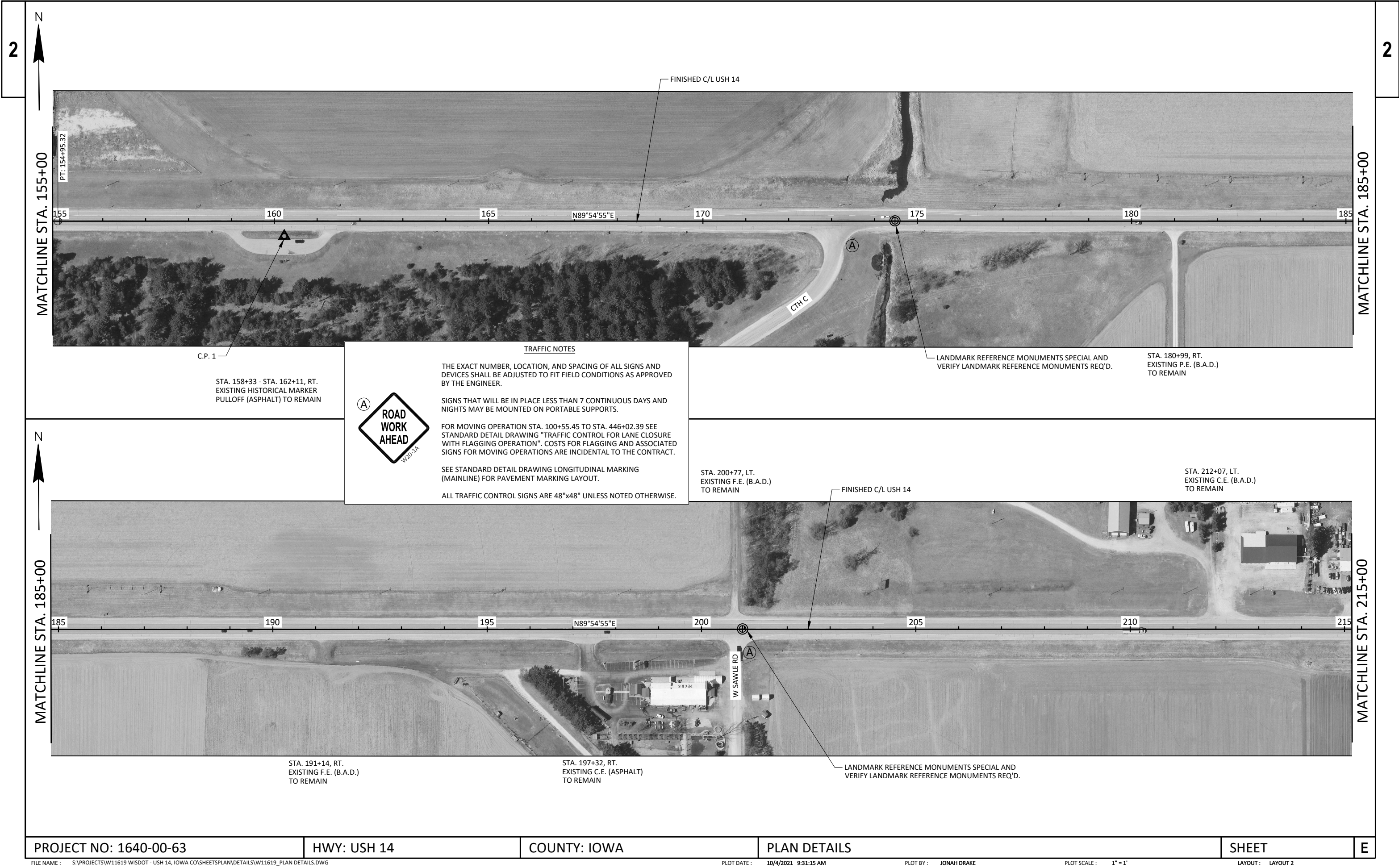
REMOVING DISTRESSED PAVEMENT MILLING  
SECTION A-A



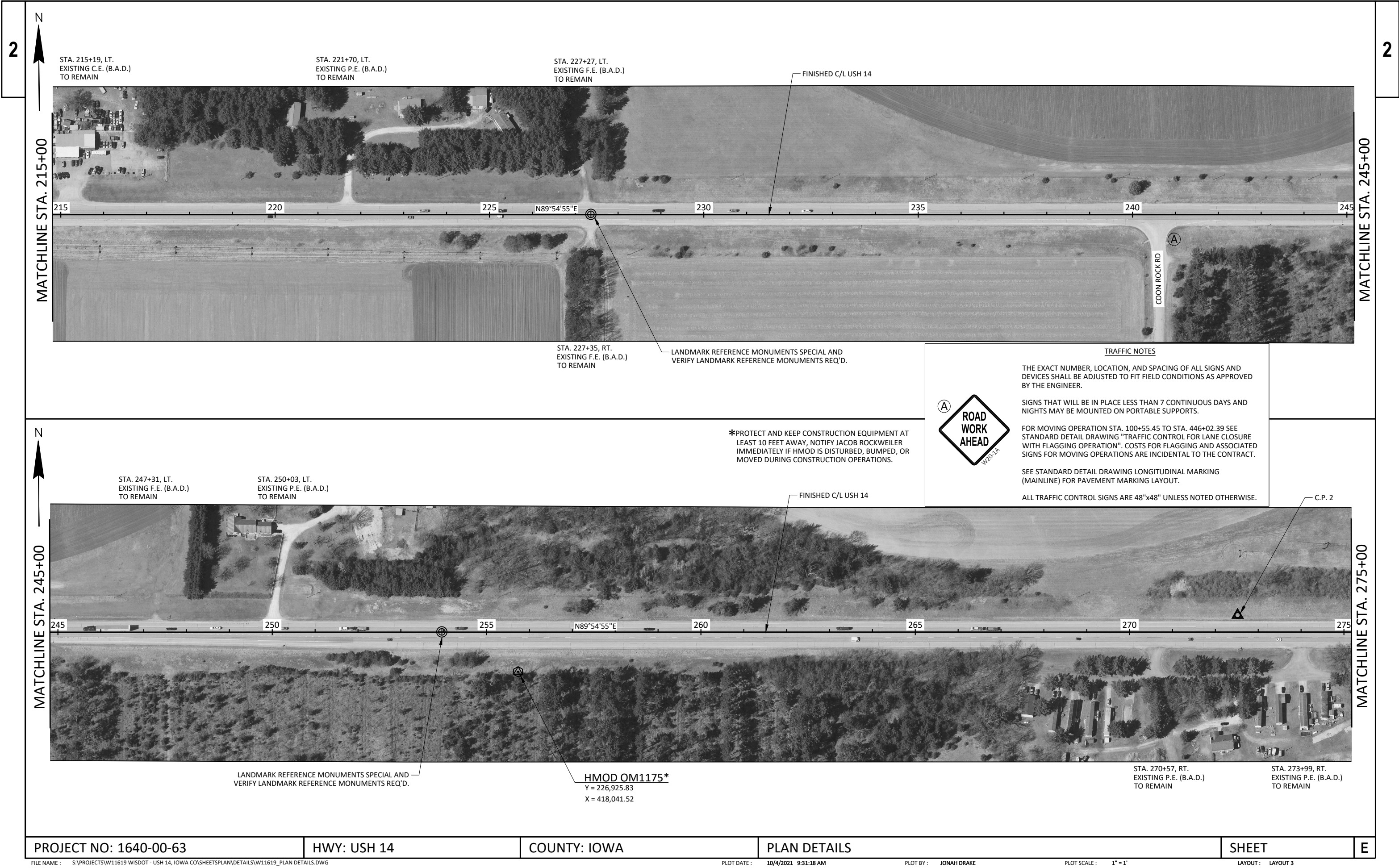














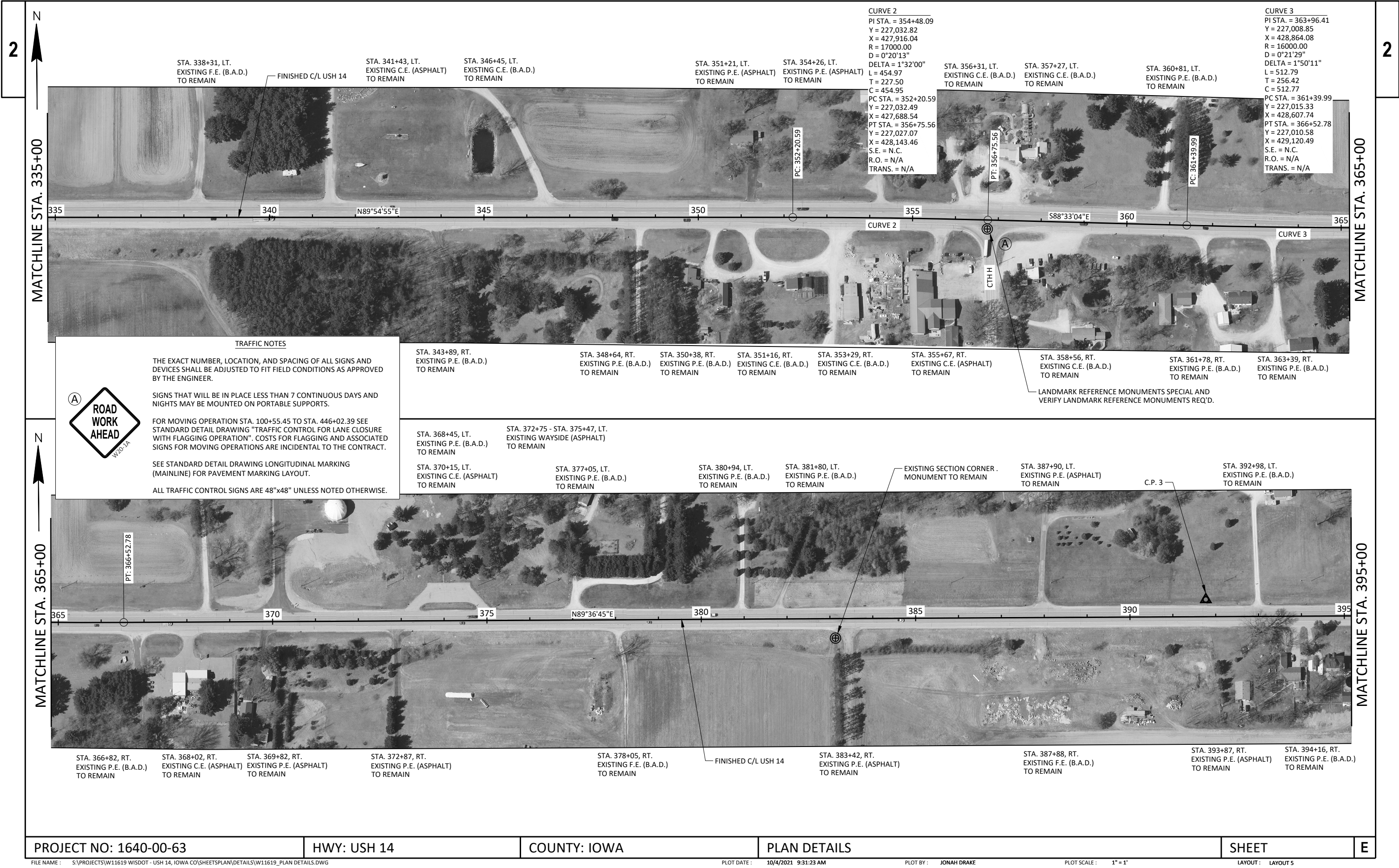


ALL TRAFFIC CONTROL SIGNS ARE 48"x48" UNLESS NOTED OTHERWISE.

STA. 333+92, LT.  
EXISTING P.E. (ASPHALT)  
TO REMAIN

STA. 334+10, RT.  
EXISTING F.E. (B.A.D.)  
TO REMAIN









## Estimate Of Quantities

1640-00-63

| Line | Item       | Item Description   | Unit | Total       | Qty         |
|------|------------|--|------|-------------|-------------|
| 0002 | 204.0115   | Removing Asphaltic Surface Butt Joints                             | SY   | 510.000     | 510.000     |
| 0004 | 204.0120   | Removing Asphaltic Surface Milling                                 | SY   | 178,000.000 | 178,000.000 |
| 0006 | 211.0101   | Prepare Foundation for Asphaltic Paving (project) 01. 1640-00-63   | EACH | 1.000       | 1.000       |
| 0008 | 213.0100   | Finishing Roadway (project) 01. 1640-00-63                         | EACH | 1.000       | 1.000       |
| 0010 | 305.0110   | Base Aggregate Dense 3/4-Inch                                      | TON  | 3,100.000   | 3,100.000   |
| 0012 | 455.0605   | Tack Coat  | GAL  | 13,125.000  | 13,125.000  |
| 0014 | 460.0105.S | HMA Percent Within Limits (PWL) Test Strip Volumetrics             | EACH | 1.000       | 1.000       |
| 0016 | 460.0110.S | HMA Percent Within Limits (PWL) Test Strip Density                 | EACH | 1.000       | 1.000       |
| 0018 | 460.2005   | Incentive Density PWL HMA Pavement                                 | DOL  | 14,450.000  | 14,450.000  |
| 0020 | 460.2007   | Incentive Density HMA Pavement Longitudinal Joints                 | DOL  | 17,280.000  | 17,280.000  |
| 0022 | 460.2010   | Incentive Air Voids HMA Pavement                                   | DOL  | 24,950.000  | 24,950.000  |
| 0024 | 460.6224   | HMA Pavement 4 MT 58-28 S  | TON  | 24,950.000  | 24,950.000  |
| 0026 | 465.0105   | Asphaltic Surface  | TON  | 850.000     | 850.000     |
| 0028 | 465.0425   | Asphaltic Shoulder Rumble Strips 2-Lane Rural                      | LF   | 59,900.000  | 59,900.000  |
| 0030 | 465.0475   | Asphalt Centerline Rumble Strips 2-Lane Rural                      | LF   | 29,150.000  | 29,150.000  |
| 0032 | 618.0100   | Maintenance And Repair of Haul Roads (project) 01. 1640-00-63      | EACH | 1.000       | 1.000       |
| 0034 | 619.1000   | Mobilization   | EACH | 1.000       | 1.000       |
| 0036 | 624.0100   | Water  | MGAL | 47.000      | 47.000      |
| 0038 | 642.5001   | Field Office Type B  | EACH | 1.000       | 1.000       |
| 0040 | 643.0300   | Traffic Control Drums  | DAY  | 250.000     | 250.000     |
| 0042 | 643.0900   | Traffic Control Signs  | DAY  | 1,560.000   | 1,560.000   |
| 0044 | 643.1050   | Traffic Control Signs PCMS   | DAY  | 14.000      | 14.000      |
| 0046 | 643.3105   | Temporary Marking Line Paint 4-Inch                                | LF   | 28,920.000  | 28,920.000  |
| 0048 | 643.3120   | Temporary Marking Line Epoxy 4-Inch                                | LF   | 28,920.000  | 28,920.000  |
| 0050 | 643.5000   | Traffic Control  | EACH | 1.000       | 1.000       |
| 0052 | 646.1040   | Marking Line Grooved Wet Ref Epoxy 4-Inch                          | LF   | 70,370.000  | 70,370.000  |
| 0054 | 646.3040   | Marking Line Grooved Wet Ref Epoxy 8-Inch                          | LF   | 1,150.000   | 1,150.000   |
| 0056 | 646.4520   | Marking Line Same Day Epoxy 4-Inch                                 | LF   | 38,250.000  | 38,250.000  |
| 0058 | 648.0100   | Locating No-Passing Zones  | MI   | 6.550       | 6.550       |
| 0060 | 650.8000   | Construction Staking Resurfacing Reference                         | LF   | 34,550.000  | 34,550.000  |
| 0062 | 650.9911   | Construction Staking Supplemental Control (project) 01. 1640-00-63 | EACH | 1.000       | 1.000       |
| 0064 | 690.0150   | Sawing Asphalt   | LF   | 1,100.000   | 1,100.000   |
| 0066 | 740.0440   | Incentive IRI Ride   | DOL  | 29,360.000  | 29,360.000  |
| 0068 | ASP.1T0A   | On-the-Job Training Apprentice at \$5.00/HR                        | HRS  | 2,000.000   | 2,000.000   |
| 0070 | ASP.1T0G   | On-the-Job Training Graduate at \$5.00/HR                          | HRS  | 1,320.000   | 1,320.000   |
| 0072 | SPV.0060   | Special 01. Landmark Reference Monuments Special                   | EACH | 8.000       | 8.000       |
| 0074 | SPV.0060   | Special 02. Verify Landmark Reference Monuments                    | EACH | 8.000       | 8.000       |
| 0076 | SPV.0180   | Special 01. Removing Distressed Pavement Milling                   | SY   | 7,500.000   | 7,500.000   |

| REMOVING PAVEMENT BUTT JOINTS |               |      |                          |
|-------------------------------|---------------|------|--------------------------|
| 204.0115                      |               |      |                          |
| STATION - STATION             | LOCATION      | (SY) | COMMENTS                 |
| 100+55.45 - 100+60.45         | MAINLINE      | 25   | BEGIN PROJECT            |
| 150+92 - 151+64               | MAINLINE, RT. | 50   | CTH CC                   |
| 150+96 - 151+65               | MAINLINE, LT. | 50   | HELENA RD.               |
| 172+55 - 173+45               | MAINLINE, RT. | 55   | CTH C                    |
| 200+55 - 201+08               | MAINLINE, RT. | 35   | W. SWALE RD.             |
| 240+12 - 240+90               | MAINLINE, RT. | 45   | COON ROCK RD.            |
| 279+80 - 280+57               | MAINLINE, RT. | 50   | HAYWARD CROSSING (SOUTH) |
| 280+25 - 280+95               | MAINLINE, LT. | 45   | HAYWARD CROSSING (NORTH) |
| 365+35 - 357+12               | MAINLINE, RT. | 40   | CTH H                    |
| 435+07 - 435+72               | MAINLINE, LT. | 40   | WEST ST.                 |
| 444+90 - 445+60               | MAINLINE, LT. | 45   | OAK ST.                  |
| 445+97.39 - 445+97.39         | MAINLINE      | 30   | END PROJECT              |
| TOTAL=                        |               | 510  |                          |

| REMOVING ASPHALTIC SURFACE MILLING |           |         |  |
|------------------------------------|-----------|---------|--|
| 204.0120                           |           |         |  |
| STATION - STATION                  | LOCATION  | (SY)    |  |
| 100+60.45 - 106+85                 | MAINLINE  | 3,040   |  |
| 106+85 - 144+83                    | MAINLINE  | 17,480  |  |
| 144+83 - 156+09                    | MAINLINE  | 5,700   |  |
| 156+09 - 446+02.39                 | MAINLINE  | 149,940 |  |
| -                                  | SIDEROADS | 1,840   |  |
| TOTAL =                            |           | 178,000 |  |

| PREPARE FOUNDATION FOR ASPHALTIC PAVING |          |        |  |
|---|----------|--------|--|
| 211.0101                                |          |        |  |
| STATION - STATION                       | LOCATION | (EACH) |  |
| 100+55.45 - 100+60.45                   | MAINLINE | 1      |  |
| TOTAL =                                 |          | 1      |  |

| BASE AGGREGATE DENSE  |                |       |  |
|-----------------------|----------------|-------|--|
| 305.0110              |                |       |  |
| STATION - STATION     | LOCATION       | (TON) |  |
| 100+55.45 - 446+02.39 | MAINLINE       | 2,900 |  |
| -                     | P.E./F.E./C.E. | 100   |  |
| -                     | UNDISTRIBUTED  | 100   |  |
| TOTALS =              |                | 3,100 |  |

| HMA PAVEMENT       |               |          |              |           |                     | PWL MIXTURE USE TABLE |  |  |  |
|--------------------|---------------|----------|--------------|-----------|---------------------|-----------------------|--|--|--|
|                    |               | 455.0605 | 460.6224     | 465.0105  | SPV.0180.01         |                       |  |  |  |
|                    |               | TACK     | HMA PAVEMENT | ASPHALTIC | REMOVING DISTRESSED |                       |  |  |  |
|                    |               | COAT     | 4MT58-28S    | SURFACE   | PAVEMENT MILLING    |                       |  |  |  |
| STATION - STATION  | LOCATION      | (GAL)    | (TON)        | (TON)     | (SY)                |                       |  |  |  |
| 100+55.45 - 106+85 | MAINLINE      | 214      | 426          | -         | -                   |                       |  |  |  |
| 106+85 - 144+83    | MAINLINE      | 1,234    | 2,456        | -         | -                   |                       |  |  |  |
| 144+83 - 156+09    | MAINLINE      | 401      | 798          | -         | -                   |                       |  |  |  |
| 156+09 - 446+02.39 | MAINLINE      | 10,621   | 21,012       | -         | -                   |                       |  |  |  |
| 112+00 - 116+00    | MAINLINE, LT. | 13       | -            | 20        | 180                 |                       |  |  |  |
| 125+00 - 128+00    | MAINLINE, LT. | 9        | -            | 15        | 135                 |                       |  |  |  |
| 140+00 - 145+00    | MAINLINE, LT. | 16       | -            | 25        | 225                 |                       |  |  |  |
| 157+00 - 159+00    | MAINLINE, RT. | 6        | -            | 10        | 90                  |                       |  |  |  |
| 171+00 - 172+00    | MAINLINE, RT. | 3        | -            | 5         | 45                  |                       |  |  |  |
| 197+00 - 198+00    | MAINLINE, RT. | 9        | -            | 15        | 135                 |                       |  |  |  |
| 237+00 - 240+00    | MAINLINE, RT. | 28       | -            | 45        | 400                 |                       |  |  |  |
| 240+00 - 241+00    | MAINLINE, RT. | 3        | -            | 5         | 45                  |                       |  |  |  |
| 245+00 - 250+00    | MAINLINE, RT. | 16       | -            | 25        | 225                 |                       |  |  |  |
| 250+00 - 265+00    | MAINLINE, RT. | 142      | -            | 230       | 2,025               |                       |  |  |  |
| 265+00 - 297+00    | MAINLINE, RT. | 100      | -            | 165       | 1,425               |                       |  |  |  |
| 304+00 - 307+00    | MAINLINE, RT. | 9        | -            | 15        | 135                 |                       |  |  |  |
| 305+00 - 320+00    | MAINLINE, LT. | 47       | -            | 75        | 670                 |                       |  |  |  |
| 332+00 - 335+00    | MAINLINE, LT. | 9        | -            | 15        | 135                 |                       |  |  |  |
| 335+00 - 336+00    | MAINLINE, LT. | 9        | -            | 15        | 135                 |                       |  |  |  |
| 336+00 - 357+00    | MAINLINE, LT. | 67       | -            | 110       | 955                 |                       |  |  |  |
| 369+00 - 370+00    | MAINLINE, RT. | 9        | -            | 15        | 135                 |                       |  |  |  |
| 420+00 - 421+00    | MAINLINE, LT. | 9        | -            | 15        | 135                 |                       |  |  |  |
| 428+00 - 429+00    | MAINLINE, RT. | 9        | -            | 15        | 135                 |                       |  |  |  |
| 431+00 - 432+00    | MAINLINE, LT. | 9        | -            | 15        | 135                 |                       |  |  |  |
| -                  | SIDEROADS     | 130      | 258          | -         | -                   |                       |  |  |  |
| TOTAL =            |               | 13,125   | 24,950       | 850       | 7,500               |                       |  |  |  |

The following acceptance criteria are applicable for this project:

| LOCATION                                   | STATION               | MIXTURE USE | UNDERLYING SURFACE          | BID ITEM     | TONS   | THICKNESS | QUALITY MANAGEMENT PROGRAM TO BE USED FOR:    |  |
|--|-----------------------|-------------|-----------------------------|--------------|--------|-----------|---|--|
|  |                       |             |                             |              |        |           | MIXTURE ACCEPTANCE                            | DENSITY ACCEPTANCE   |
| 12 foot Driving Lanes & Passing Lanes      | 100+55.45 - 446+02.39 | Upper Layer | Milled Existing HMA Surface | 4 MT 58-28 S | 14,450 | 2.5"      | PWL Incentive Air Voids HMA Pavement 460.2010 | Incentive Density PWL HMA Pavement 460.2005                          |
| Shoulders, Bypass Lanes, & Righ Turn Lanes | 100+55.45 - 446+02.39 | Upper Layer | Milled Existing HMA Surface | 4 MT 58-28 S | 10,500 | 2.5"      | PWL Incentive Air Voids HMA Pavement 460.2010 | Acceptance testing by the department; Not eligible for the incentive |

| ASPHALTIC RUMBLE STRIPS                 |               |                              |                                |          |
|---|---------------|------------------------------|--------------------------------|----------|
| ASPHALTIC RUMBLE STRIPS<br>2-LANE RURAL |               |                              |                                |          |
| STATION - STATION                       | LOCATION      | 465.0425<br>SHOULDER<br>(LF) | 465.0475<br>CENTERLINE<br>(LF) | COMMENTS |
| 100+55.45 - 441+57                      | MAINLINE, RT. | 28,750                       | -                              | TYPE 1   |
| 100+55.45 - 443+89                      | MAINLINE, LT. | 31,150                       | -                              | TYPE 1   |
| 100+55.45 - 443+89                      | MAINLINE      | -                            | 29,150                         | -        |
| TOTALS =                                |               | 59,900                       | 29,150                         |          |

| WATER      |                    |
|------------|--------------------|
| PROJECT    | 624.0100<br>(MGAL) |
| 1640-00-63 | 47                 |
| TOTAL =    | 47                 |

| TRAFFIC CONTROL          |                             |                             |                            |  |
|--------------------------|-----------------------------|-----------------------------|----------------------------|--|
|                          | 643.0300<br>DRUMS<br>(DAYS) | 643.0900<br>SIGNS<br>(DAYS) | 643.1050<br>PCMS<br>(DAYS) | 643.5000<br>TRAFFIC<br>CONTROL<br>(EACH) |
| PROJECT                  | -                           | -                           | 14                         | 1  |
| MAINLINE                 | -                           | 360                         | -                          | -  |
| HELENA RD                | -                           | 120                         | -                          | -  |
| CTH CC                   | -                           | 120                         | -                          | -  |
| CTH C                    | -                           | 120                         | -                          | -  |
| W SAWLE RD               | -                           | 120                         | -                          | -  |
| COON ROCK RD             | -                           | 120                         | -                          | -  |
| HAYWARD CROSSING (NORTH) | -                           | 120                         | -                          | -  |
| HAYWARD CROSSING (SOUTH) | -                           | 120                         | -                          | -  |
| CTH H                    | -                           | 120                         | -                          | -  |
| WEST ST                  | -                           | 120                         | -                          | -  |
| OAK ST                   | -                           | 120                         | -                          | -  |
| UNDISTRIBUTED            | 250                         | -                           | -                          | -  |
| TOTALS =                 | 250                         | 1,560                       | 14                         | 1  |



PAVEMENT MARKING

| STATION - STATION     | LOCATION        | DESCRIPTION              | 646.1040                                     |                             |                          | 646.3040                                     |  | 646.4520                              |                              | 643.3105                               |                           | 643.3120                               |                           |
|-----------------------|-----------------|--------------------------|--|-----------------------------|--------------------------|--|--|---------------------------------------|------------------------------|--|---------------------------|--|---------------------------|
|                       |                 |                          | MARKING LINE GROOVED<br>WET REF EPOXY 4-INCH |                             |                          | MARKING LINE GROOVED<br>WET REF EPOXY 8-INCH |  | MARKING LINE SAME DAY<br>EPOXY 4-INCH |                              | TEMPORARY MARKING<br>LINE PAINT 4-INCH |                           | TEMPORARY MARKING<br>LINE EPOXY 4-INCH |                           |
|                       |                 |                          | WHITE<br>SOLID<br>(LF)                       | WHITE<br>12.5' SKIP<br>(LF) | WHITE<br>3' SKIP<br>(LF) | WHITE<br>SOLID<br>(LF)                       |  | YELLOW<br>SOLID<br>(LF)               | YELLOW<br>12.5' SKIP<br>(LF) | YELLOW<br>SOLID<br>(LF)                | YELLOW<br>4' SKIP<br>(LF) | YELLOW<br>SOLID<br>(LF)                | YELLOW<br>4' SKIP<br>(LF) |
| 100+55.45 - 101+78    | MAINLINE        | PASSING                  | -  | -                           | -                        | -  |  | -                                     | 31                           | -                                      | 10                        | -                                      | 10                        |
| 101+78 - 112+95       | MAINLINE        | WB PASSING ONLY          | -  | -                           | -                        | -  |  | 1,117                                 | 280                          | 1,117                                  | 90                        | 1,117                                  | 90                        |
| 112+95 - 147+94       | MAINLINE        | DOUBLE YELLOW            | -  | -                           | -                        | -  |  | 6,998                                 | -                            | 6,998                                  | -                         | 6,998                                  | -                         |
| 147+94 - 158+52       | MAINLINE        | EB PASSING ONLY          | -  | -                           | -                        | -  |  | 1,058                                 | 265                          | 1,058                                  | 85                        | 1,058                                  | 85                        |
| 158+52 - 170+00       | MAINLINE        | PASSING                  | -  | -                           | -                        | -  |  | -                                     | 287                          | -                                      | 92                        | -                                      | 92                        |
| 170+00 - 182+45       | MAINLINE        | EB PASSING ONLY          | -  | -                           | -                        | -  |  | 1,245                                 | 312                          | 1,245                                  | 100                       | 1,245                                  | 100                       |
| 182+45 - 240+48       | MAINLINE        | PASSING                  | -  | -                           | -                        | -  |  | -                                     | 1,451                        | -                                      | 465                       | -                                      | 465                       |
| 240+48 - 258+33       | MAINLINE        | WB PASSING ONLY          | -  | -                           | -                        | -  |  | 1,785                                 | 447                          | 1,785                                  | 143                       | 1,785                                  | 143                       |
| 258+33 - 267+76       | MAINLINE        | DOUBLE YELLOW            | -  | -                           | -                        | -  |  | 1,886                                 | -                            | 1,886                                  | -                         | 1,886                                  | -                         |
| 267+76 - 286+05       | MAINLINE        | WB PASSING ONLY          | -  | -                           | -                        | -  |  | 1,829                                 | 458                          | 1,829                                  | 147                       | 1,829                                  | 147                       |
| 286+05 - 299+16       | MAINLINE        | DOUBLE YELLOW            | -  | -                           | -                        | -  |  | 2,622                                 | -                            | 2,622                                  | -                         | 2,622                                  | -                         |
| 299+16 - 370+56       | MAINLINE        | EB PASSING ONLY          | -  | -                           | -                        | -  |  | 7,140                                 | 1,785                        | 7,140                                  | 573                       | 7,140                                  | 573                       |
| 370+56 - 436+75       | MAINLINE        | PASSING                  | -  | -                           | -                        | -  |  | -                                     | 1,655                        | -                                      | 532                       | -                                      | 532                       |
| 436+75 - 446+02.39    | MAINLINE        | WB PASSING ONLY          | -  | -                           | -                        | -  |  | 928                                   | 231                          | 928                                    | 75                        | 928                                    | 75                        |
| 148+60 - 150+60       | MAINLINE, RT    | RIGHT TURN LANE          | -  | -                           | -                        | 200  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| 151+99 - 153+99       | MAINLINE, LT    | RIGHT TURN LANE          | -  | -                           | -                        | 200  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| 170+32 - 172+32       | MAINLINE, RT    | RIGHT TURN LANE          | -  | -                           | -                        | 200  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| 245+60 - 298+70       | MAINLINE, RT    | PASSING LANE             | -  | 883                         | 145                      | -  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| 277+56 - 279+56       | MAINLINE, RT.   | RIGHT TURN LANE          | -  | -                           | -                        | 200  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| 298+70 - 365+29       | MAINLINE, LT    | PASSING LANE             | -  | 1,205                       | 163                      | -  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| 352+54 - 356+04       | MAINLINE, RT.   | RIGHT TURN LANE          | -  | -                           | -                        | -  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| 172+40 - 174+55       | MAINLINE, LT    | BYPASS LANE              | -  | 62                          | -                        | 350  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| 443+58 - 446+02.39    | MAINLINE, RT    | BYPASS LANE              | -  | 62                          | -                        | -  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| 100+55.45 - 446+02.39 | MAINLINE        | WHITE EDGELINES          | 67,850                                       | -                           | -                        | -  |  | -                                     | -                            | -                                      | -                         | -                                      | -                         |
| -                     | UNDISTRIBUTED * | LOCATING NO PASSING ZONE | -  | -                           | -                        | -  |  | 4,440                                 | -                            | -                                      | -                         | -                                      | -                         |
| SUBTOTALS =           |                 |                          | 67,850                                       | 2,212                       | 308                      | 1,150  |  | 31,048                                | 7,202                        | 26,608                                 | 2,312                     | 26,608                                 | 2,312                     |
| TOTALS =              |                 |                          |  | 70,370                      |                          | 1,150  |  | 38,250                                |                              | 28,920                                 |                           | 28,920                                 |                           |

\* ADDITIONAL QUANTITY FOR POSSIBLE CLOSING OF EXISTING PASSING ZONES LOCATED OUTSIDE OF PROJECT LIMITS (USE ONLY IF REQUIRED)

LOCATING NO PASSING ZONES

| STATION - STATION     | LOCATION | 648.0100<br>(MI) |
|-----------------------|----------|------------------|
| 100+55.45 - 446+02.39 | MAINLINE | 6.55             |
| TOTAL =               |          | 6.55             |

CONSTRUCTION STAKING

| STATION - STATION     | LOCATION | 650.8000                         | 650.9911   |
|-----------------------|----------|----------------------------------|--|
|                       |          | RESURFACING<br>REFERENCE<br>(LF) | SUPPLEMENTAL CONTROL<br>01. 1640-00-63<br>(EACH) |
| 100+55.45 - 446+02.39 | MAINLINE | 34,550                           | -  |
| -                     | PROJECT  | -                                | 1  |
| TOTALS =              |          | 34,550                           | 1  |

SAWING ASPHALT

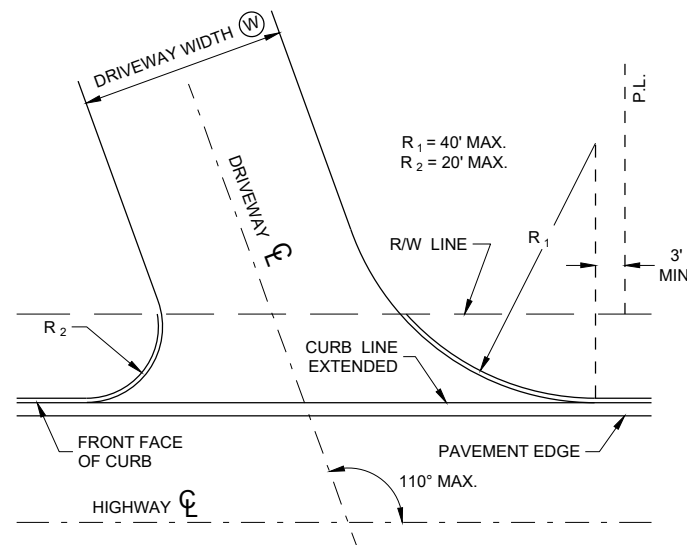
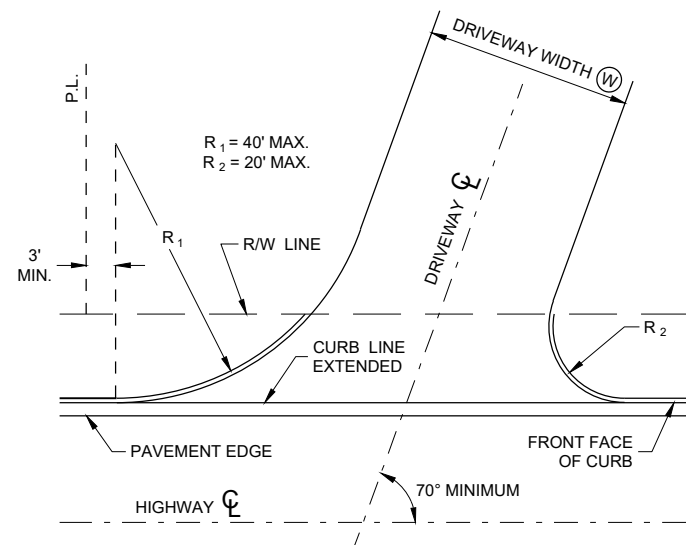
| STATION - STATION | LOCATION                 | 690.0150<br>(LF) |
|-------------------|--------------------------|------------------|
| 153+20            | CE, LT.                  | 76               |
| 158+33 - 162+11   | HIST MARKER PULLOFF, RT. | 100              |
| 197+32            | CE, RT.                  | 115              |
| 333+92            | PE, LT.                  | 63               |
| 341+43            | CE, LT.                  | 57               |
| 351+21            | PE, LT.                  | 34               |
| 354+26            | PE, LT.                  | 46               |
| 355+67            | CE, RT.                  | 55               |
| 368+02            | CE, RT.                  | 73               |
| 369+82            | PE, RT.                  | 65               |
| 370+15            | CE, LT.                  | 139              |
| 372+87            | PE, RT.                  | 40               |
| 372+75 - 375+47   | WAYSIDE, LT.             | 85               |
| 383+42            | PE, RT.                  | 82               |
| 387+90            | PE, LT.                  | 70               |
| TOTAL =           |                          | 1,100            |

LANDMARK REFERENCE MONUMENTS

| STATION  | LOCATION           | SPV.0060.01                                       | SPV.0060.02                                      |
|----------|--------------------|---|--|
|          |                    | LANDMARK REFERENCE<br>MONUMENTS SPECIAL<br>(EACH) | VERIFY LANDMARK<br>REFERENCE MONUMENTS<br>(EACH) |
| 174+48   | MAINLINE, 0.6' LT. | 1   | 1  |
| 200+96   | MAINLINE, 0.7' LT. | 1   | 1  |
| 227+37   | MAINLINE, 0.7' LT. | 1   | 1  |
| 253+96   | MAINLINE, 0.5' LT. | 1   | 1  |
| 280+55   | MAINLINE, 0.2' LT. | 1   | 1  |
| 307+15   | MAINLINE, 6' LT.   | 1   | 1  |
| 333+96   | MAINLINE, 12' LT.  | 1   | 1  |
| 356+75   | MAINLINE, 21' RT.  | 1   | 1  |
| TOTALS = |                    | 8   | 8  |

Standard Detail Drawing List

|           |   |
|-----------|---|
| 08D20-01  | DRIVEWAYS WITH CURB & GUTTER RETURNS  |
| 08D21-01  | DRIVEWAYS WITHOUT CURB & GUTTER   |
| 08D22-01  | DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL                                    |
| 09A01-13A | AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE |
| 13A10-02A | 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING   |
| 13A10-02B | 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING   |
| 13A10-02C | 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING   |
| 13A10-02D | 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING   |
| 13A11-03A | 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING  |
| 13A11-03B | 2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING  |
| 13C19-03  | HMA LONGITUDINAL JOINTS   |
| 15C08-22A | LONGITUDINAL MARKING (MAINLINE)   |
| 15C08-22C | PAVEMENT MARKING (TURN LANES)   |
| 15C08-22D | PAVEMENT MARKING (TURN LANES)   |
| 15C12-09A | TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION                                      |
| 15C19-07A | MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY                                    |
| 15C35-05A | PAVEMENT MARKING (INTERSECTIONS)  |
| 15C35-05B | PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)                                   |
| 15C35-05C | PAVEMENT MARKING AND SIGNING (CLIMBING LANE & PASSING LANE)                                   |
| 15D39-02  | TRAFFIC CONTROL, DROP-OFF SIGNING   |
| 15D44-02  | TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES                                     |
| 16A01-07  | LANDMARK REFERENCE MONUMENTS AND COVERS   |



**SKewed DRIVEWAY DETAILS  
(COMMERCIAL AND NON-COMMERCIAL)  
SIDEWALK NOT SHOWN**

## GENERAL NOTES

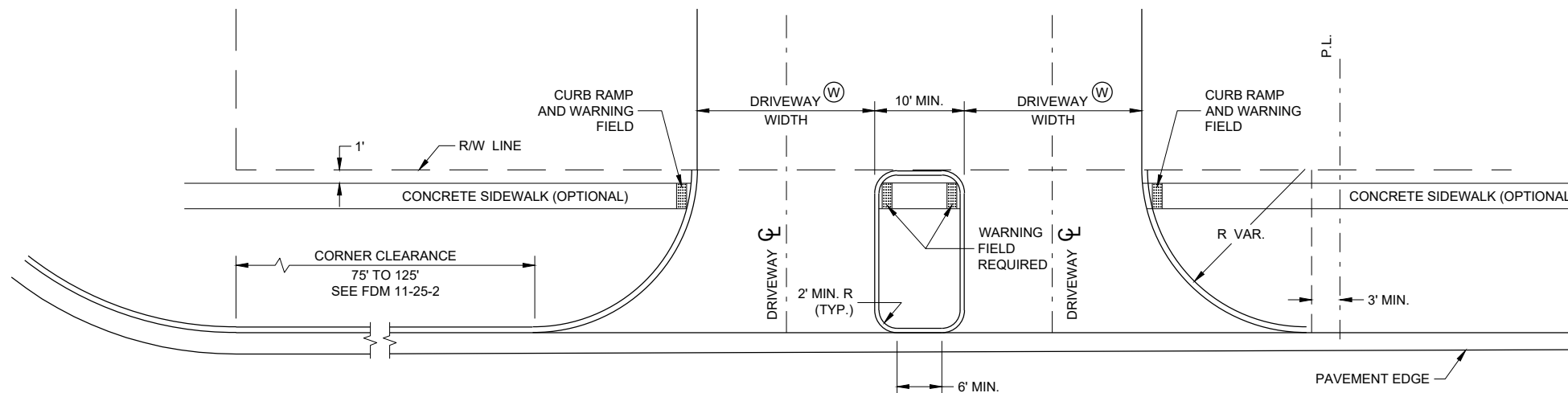
A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

THE MINIMUM ANGLE OF INTERSECTION BETWEEN THE DRIVEWAY AND HIGHWAY CENTERLINES SHALL BE 70°.

ALL CURVILINEAR PRIVATE ENTRANCE OUTLINES SHALL BE CONTAINED WITHIN THE HIGHWAY R/W.

NO DRIVEWAY SHALL BE BUILT WITHIN 3 FEET OF THE PROPERTY LINE EXCEPT FOR EXISTING JOINT DRIVEWAY SHARED BY TWO OWNERS.

(W) : 12' MIN. - 24' MAX. RESIDENTIAL AND  
NON-COMMERCIAL (PE & FE)  
16' MIN. - 35' MAX. COMMERCIAL (CE)



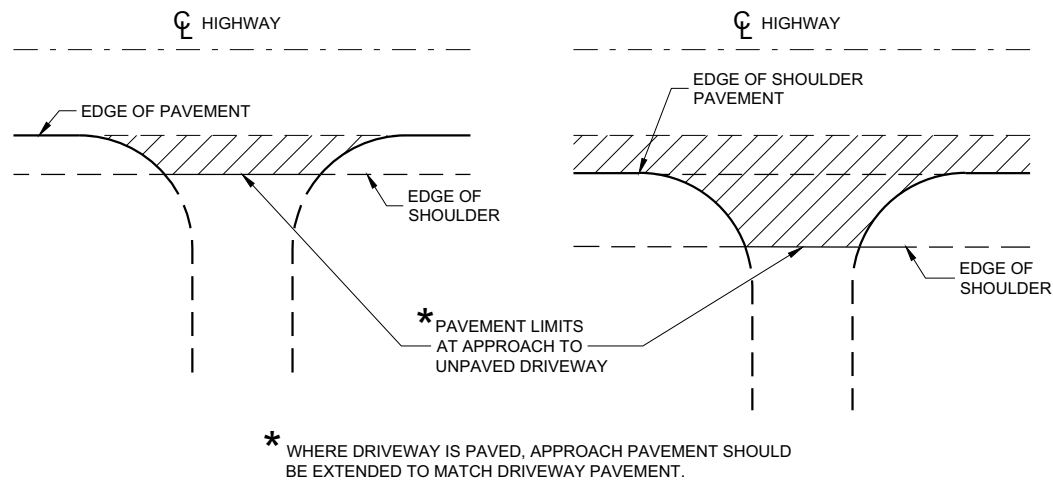
**DRIVEWAY LOCATION AND SPACING DETAILS  
SIDEWALK SHOWN**

## DRIVEWAYS WITH CURB AND GUTTER RETURNS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
00-00-00  
DATE  
/S/ <AUTHOR>  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

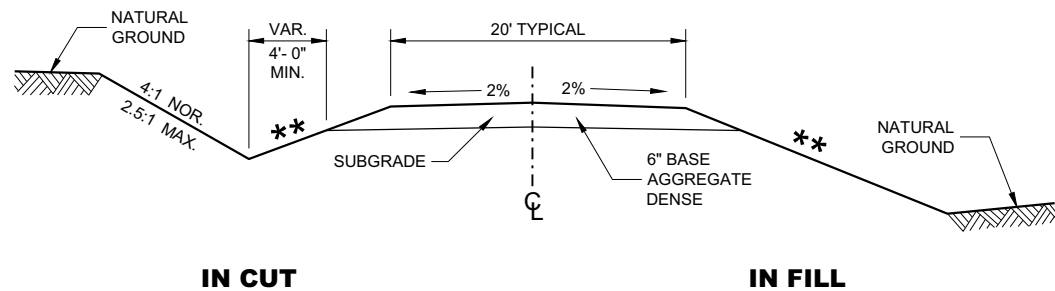
FHWA



**PLAN VIEW**  
(UNPAVED SHOULDER ON HIGHWAY)

**PLAN VIEW**  
(PAVED SHOULDER ON HIGHWAY)

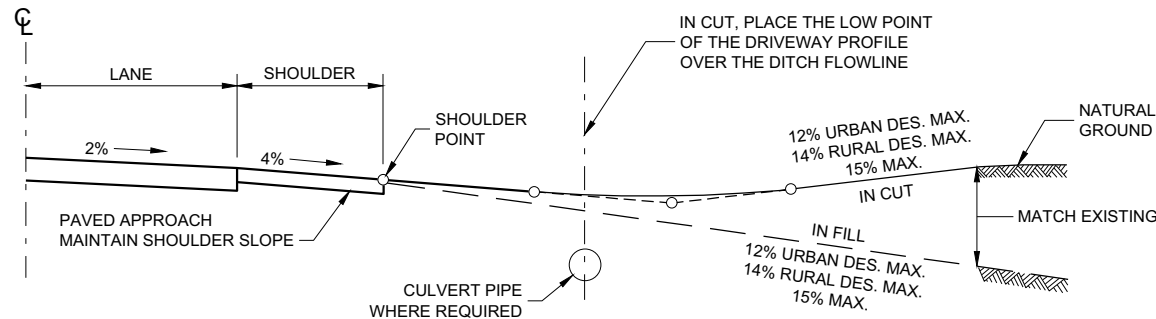
**RURAL DRIVEWAY INTERSECTION DETAIL  
(NO CURB AND GUTTER OR SIDEWALK)**



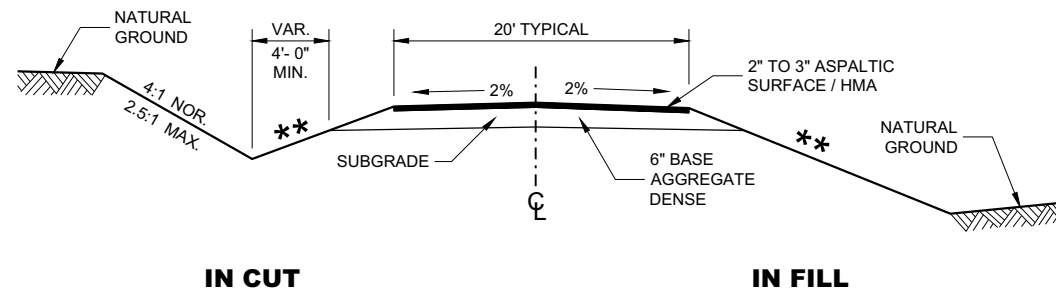
**TYPICAL CROSS SECTION FOR  
PRIVATE DRIVE OR FIELD ENTRANCE  
AGGREGATE SURFACE**

**\*\*** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

| POSTED SPEED<br>MPH | MAX.<br>SLOPE |
|---------------------|---------------|
| <35                 | 4:1           |
| ≥ 35 TO < 60        | 6:1           |
| ≥60                 | 10:1          |



**TYPICAL DRIVEWAY PROFILES**



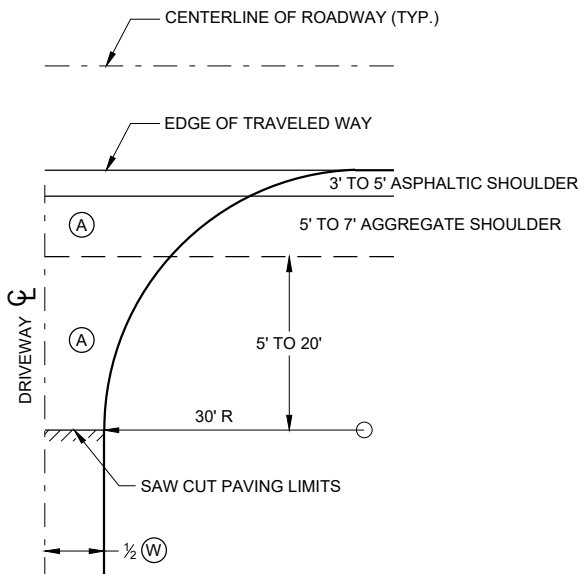
**TYPICAL CROSS SECTION FOR  
PRIVATE DRIVE OR FIELD ENTRANCE  
ASPHALTIC SURFACE**

**DRIVEWAYS WITHOUT  
CURB AND GUTTER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

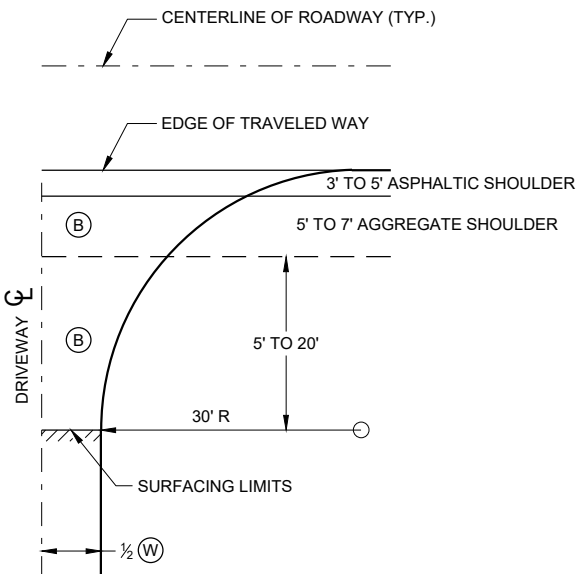
APPROVED  
December 2017  
DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR  
FHWA



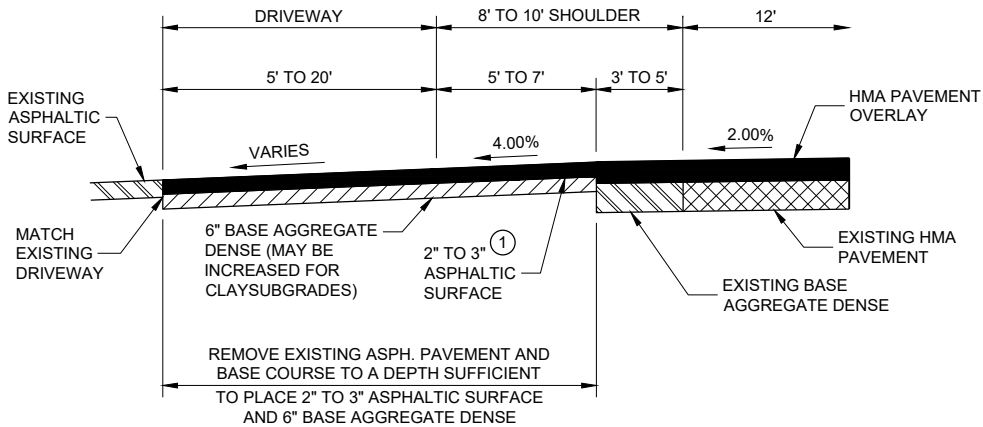


**PLAN VIEW  
HALF SECTION**

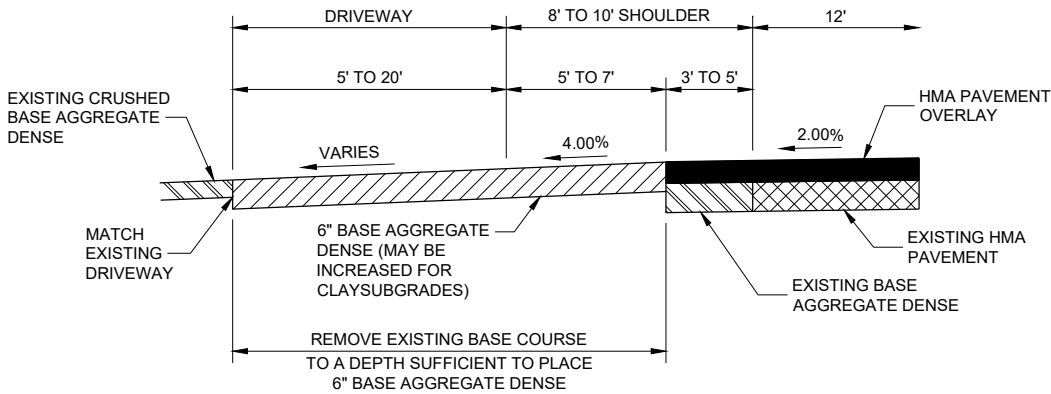
- (A) : PAID FOR AS ASPHALTIC SURFACE DRIVEWAYS  
AND FIELD ENTRANCES. (TON)
- (B) : PAID FOR AS BASE AGGREGATE DENSE 1 1/4" (TON)
- (W) : DRIVEWAY WIDTH 16' MIN. - 24' MAX.



**PLAN VIEW  
HALF SECTION**



**PROFILE VIEW  
RURAL ENTRANCE  
WITH ASPHALTIC SURFACE  
RESURFACING PROJECTS**



**PROFILE VIEW  
RURAL ENTRANCE  
WITH AGGREGATE SURFACE  
6" BASE AGGREGATE DENSE  
RESURFACING PROJECTS**

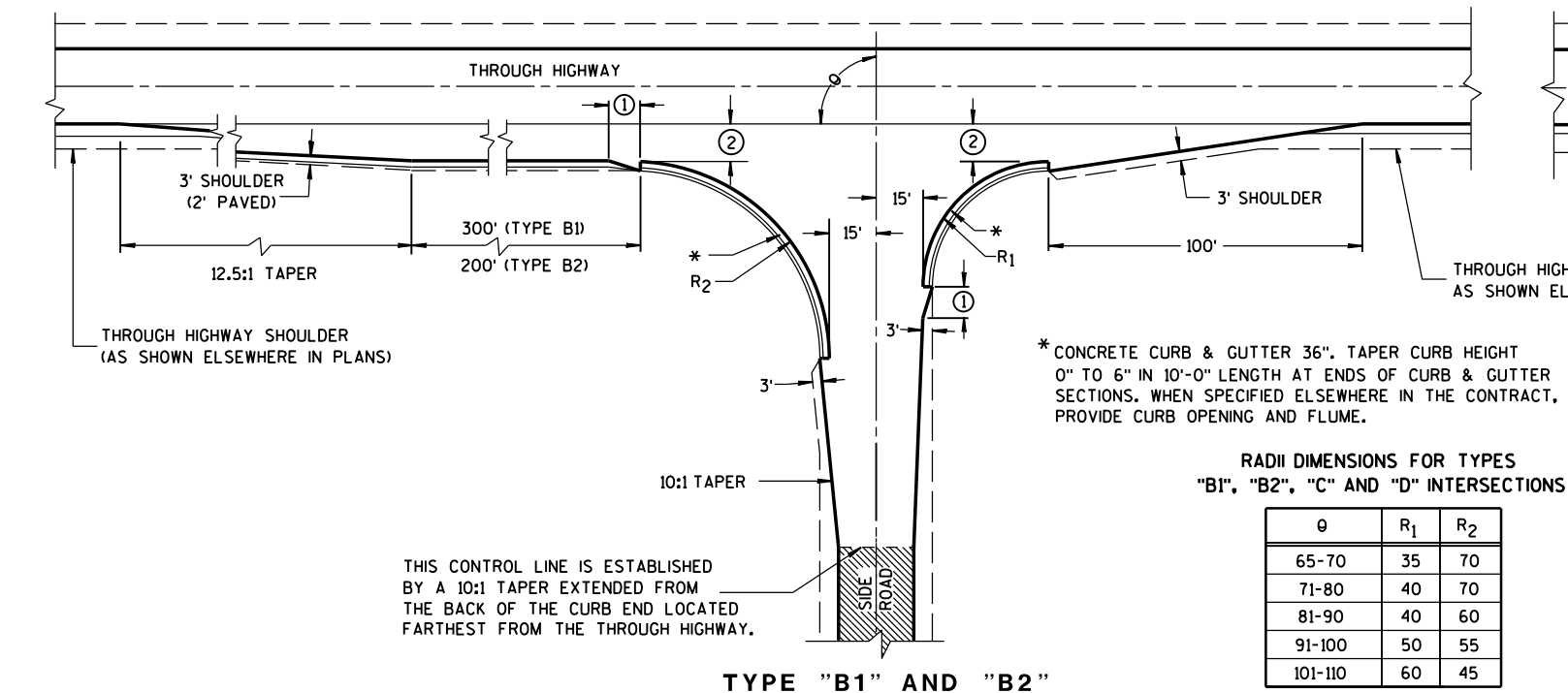
**GENERAL NOTES**

- ① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS  
BASED ON TYPE OF USAGE AND LOADINGS.

**DRIVEWAYS WITHOUT CURB  
AND GUTTER RESURFACING  
PROJECTS RURAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
December 2016 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
ENGINEER  
FHWA



RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

| θ       | R <sub>1</sub> | R <sub>2</sub> |
|---------|----------------|----------------|
| 65-70   | 35             | 70             |
| 71-80   | 40             | 70             |
| 81-90   | 40             | 60             |
| 91-100  | 50             | 55             |
| 101-110 | 60             | 45             |

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

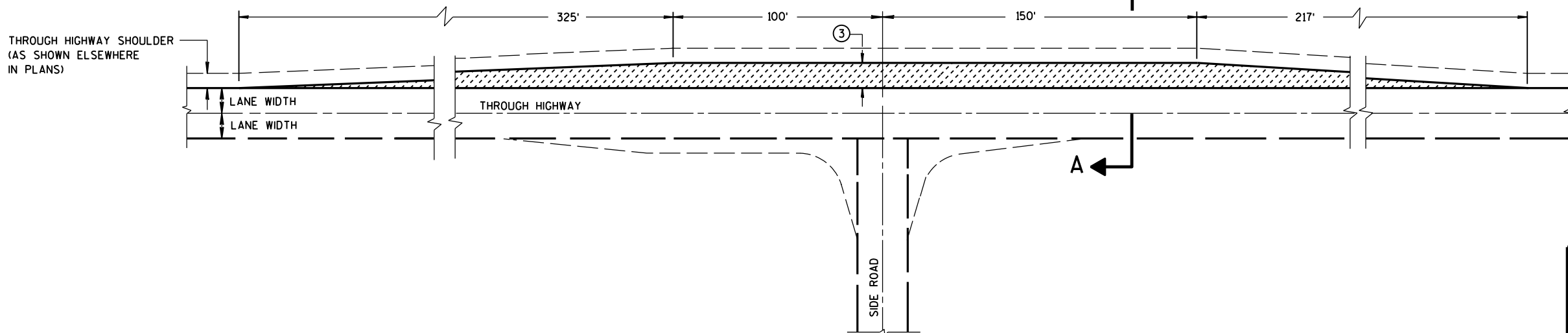
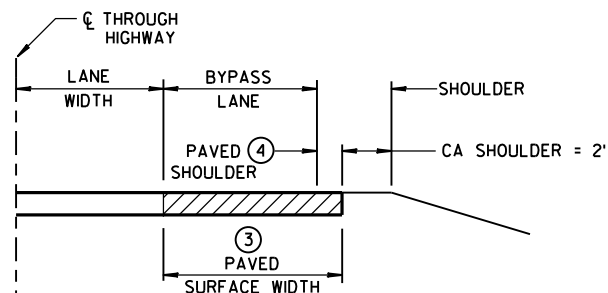
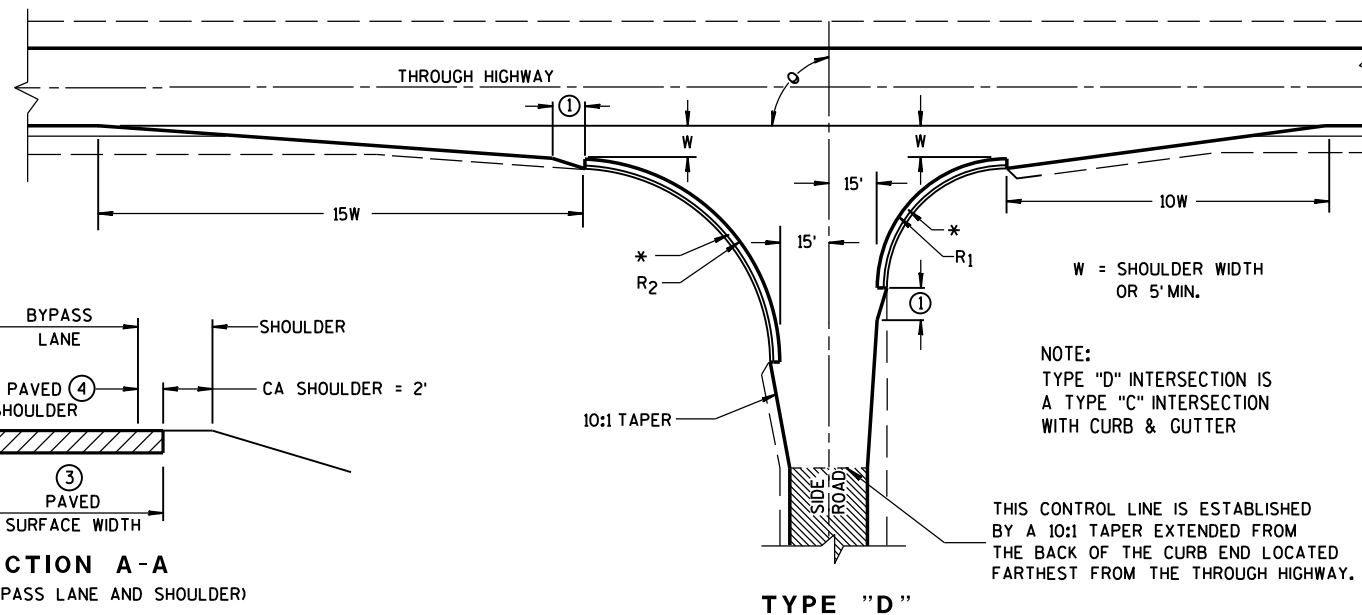
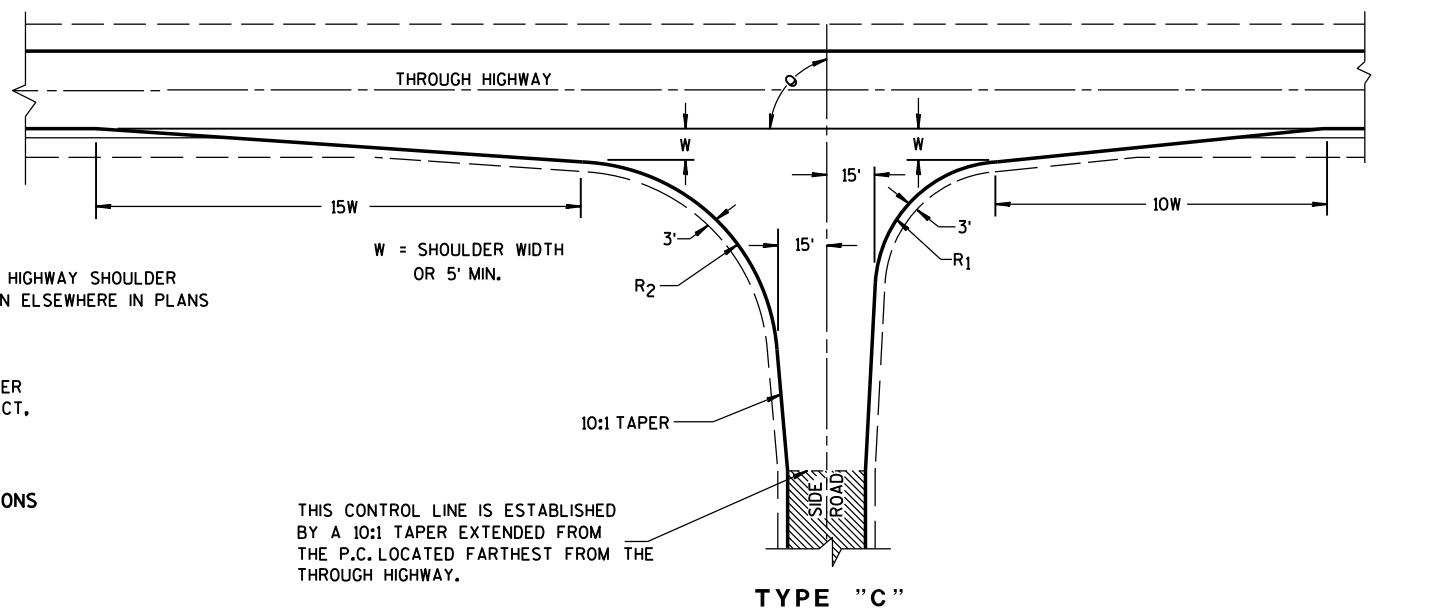
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

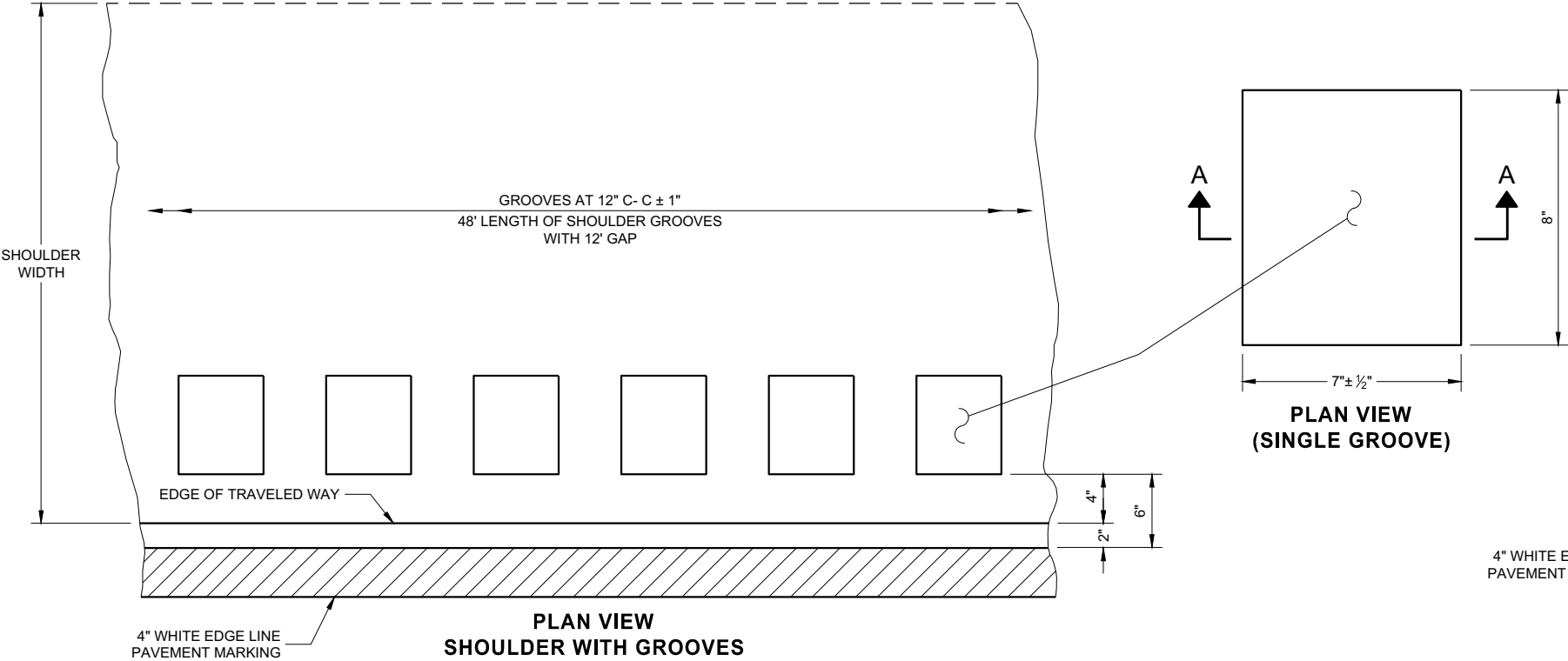
- 10-FT TYPICAL.
- 12-FT\*\* PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.  
  
\*\*10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE  
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.  
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



TEE INTERSECTION BYPASS LANE DETAIL

AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



6

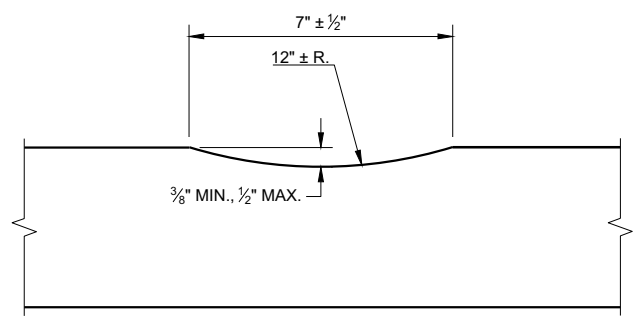
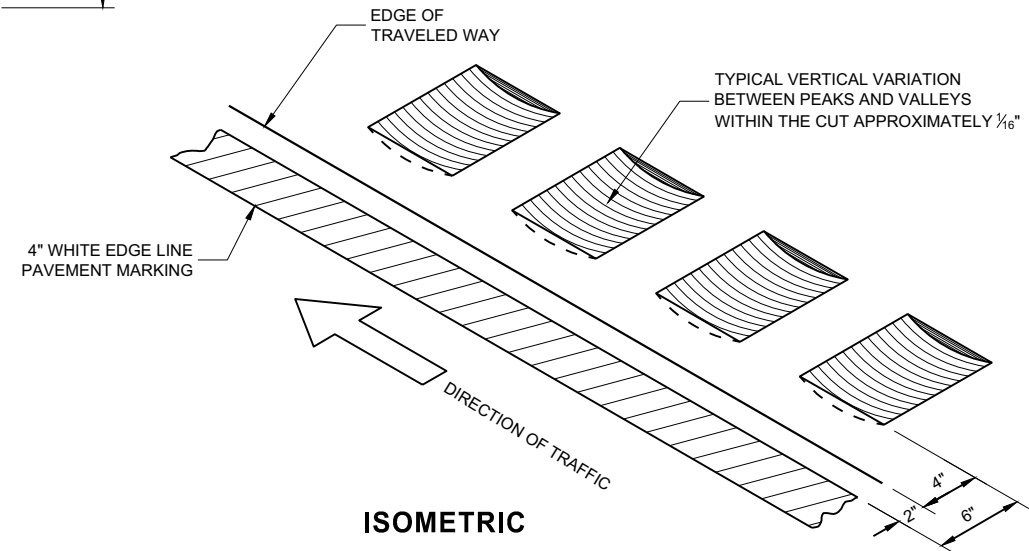
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



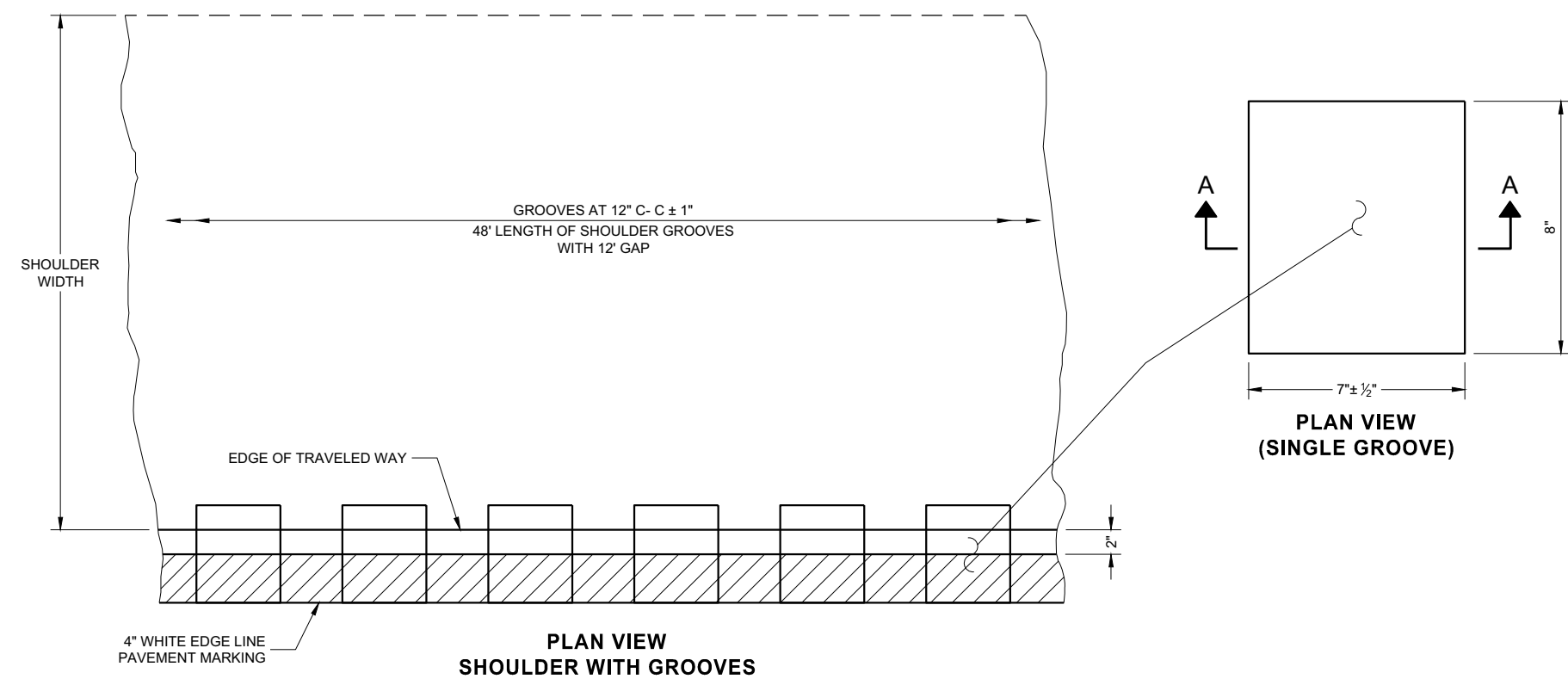
SECTION A - A

6

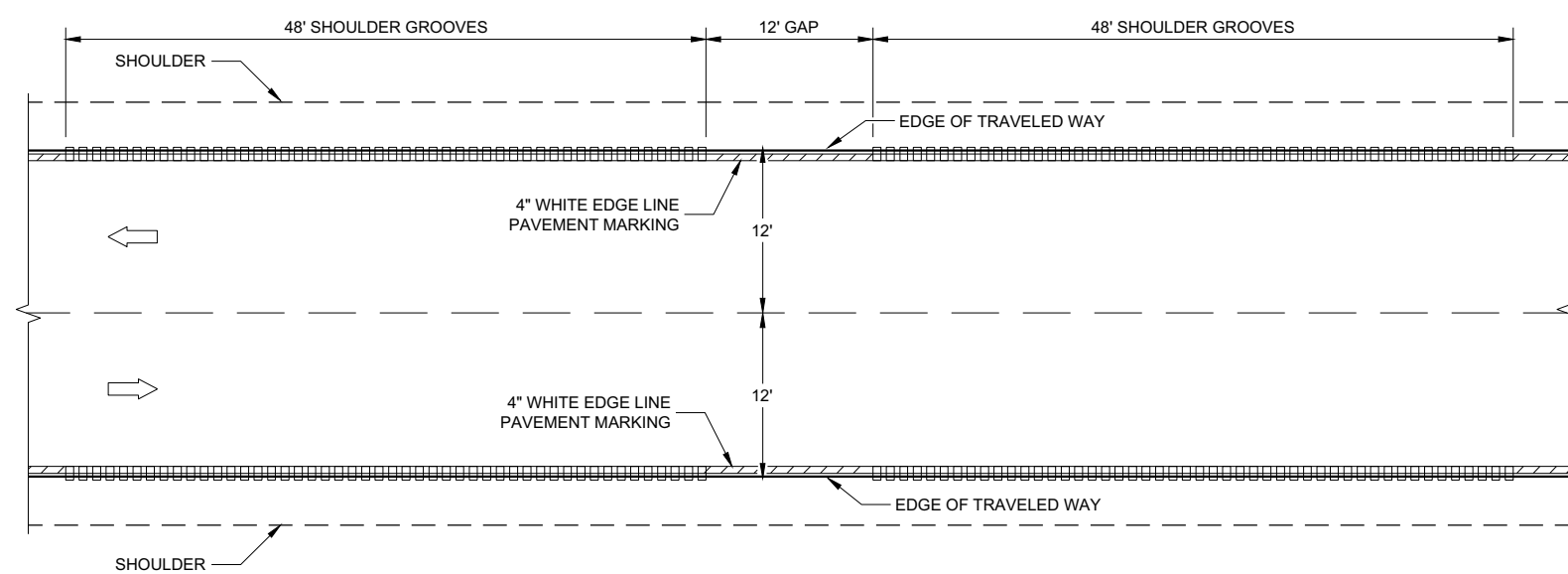
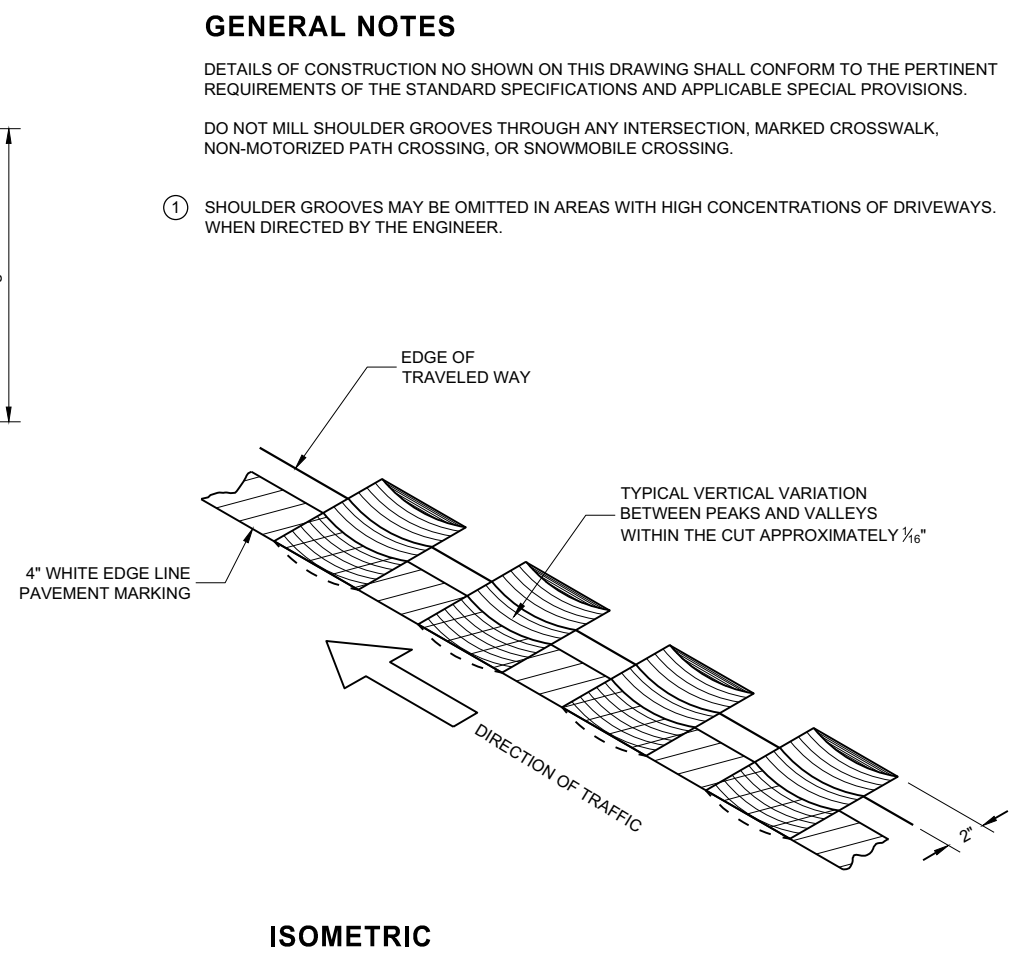
TYPE 1  
2 - LANE SHOULDER RUMBLE STRIP

2-LANE RURAL SHOULDER  
RUMBLE STRIP, MILLING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



### PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP



**TYPE 2**  
**2 - LANE SHOULDER RUMBLE STRIP**

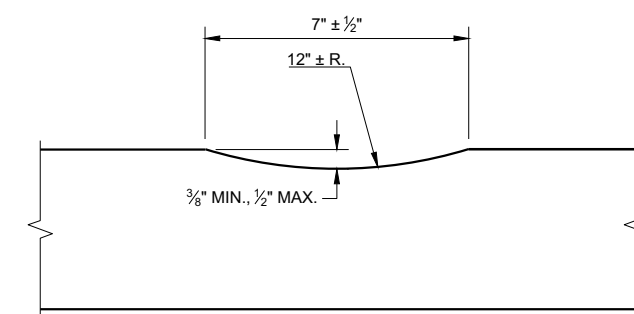
## GENERAL NOTES

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

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

## ISOMETRIC

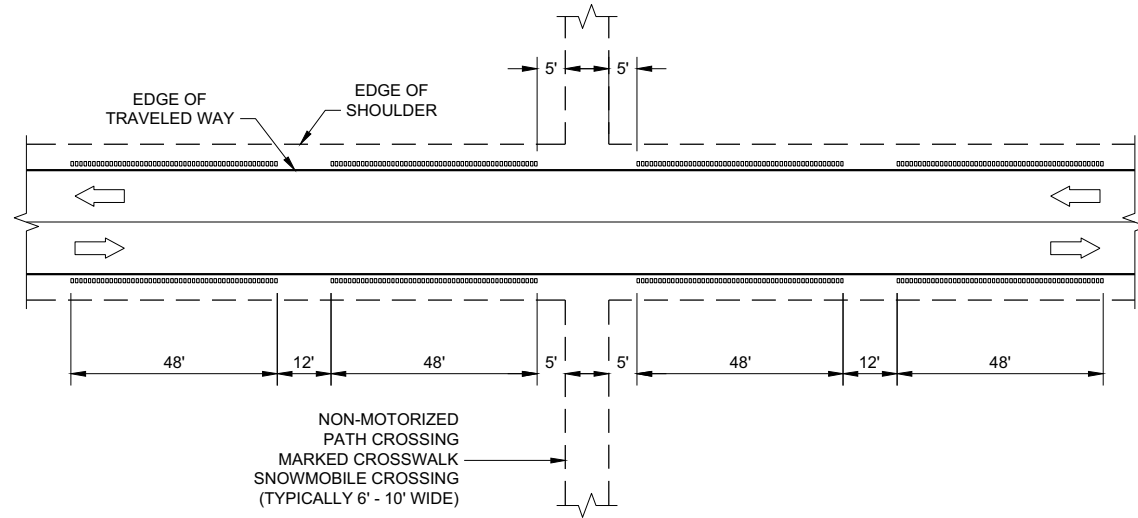


**SECTION A - A**

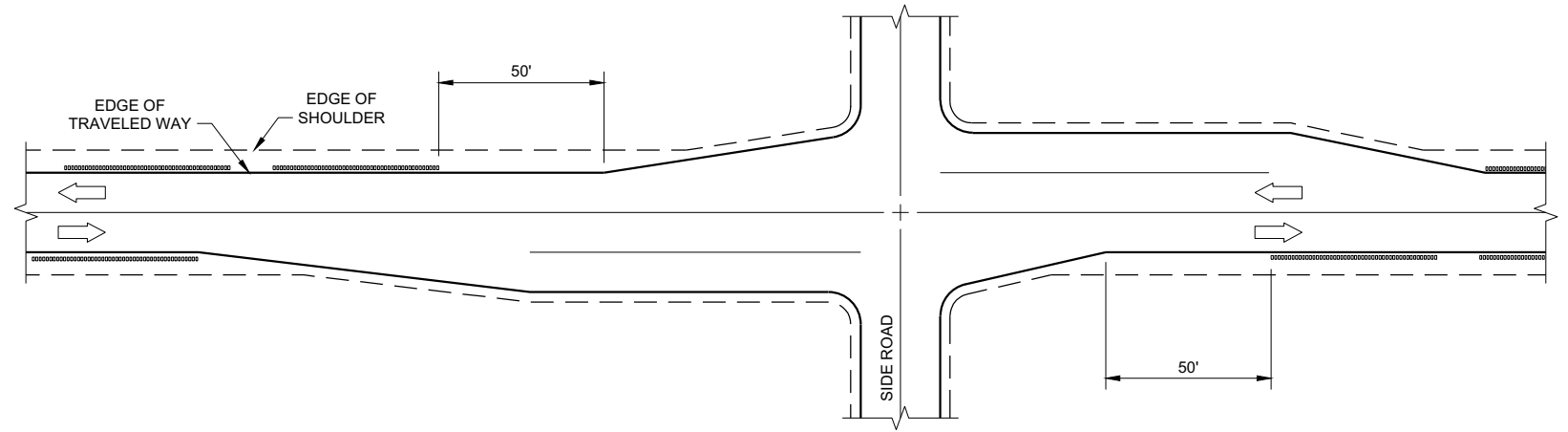
## 2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

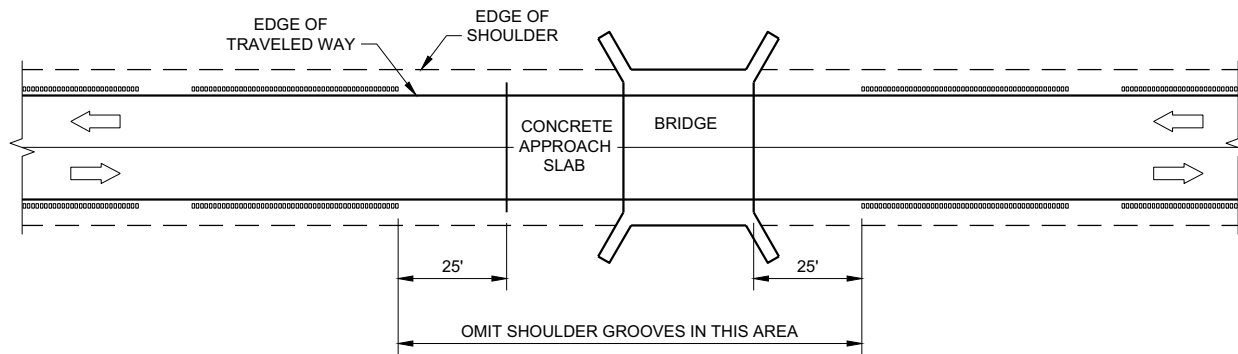




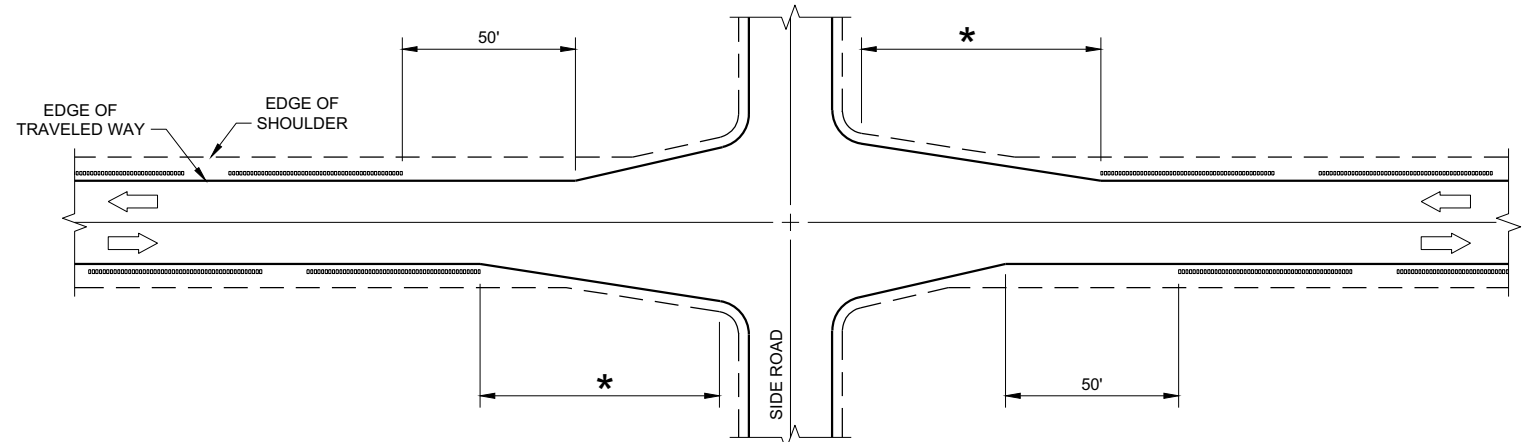
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



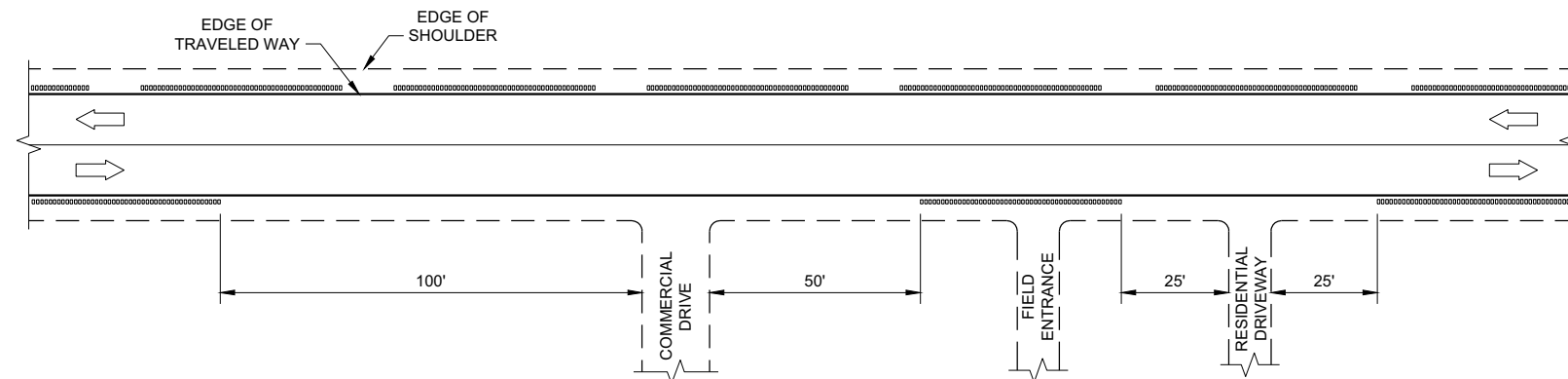
SHOULDER GROOVES AT RIGHT TURN LANE



SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT INTERSECTIONS WITH APPROACH TAPER



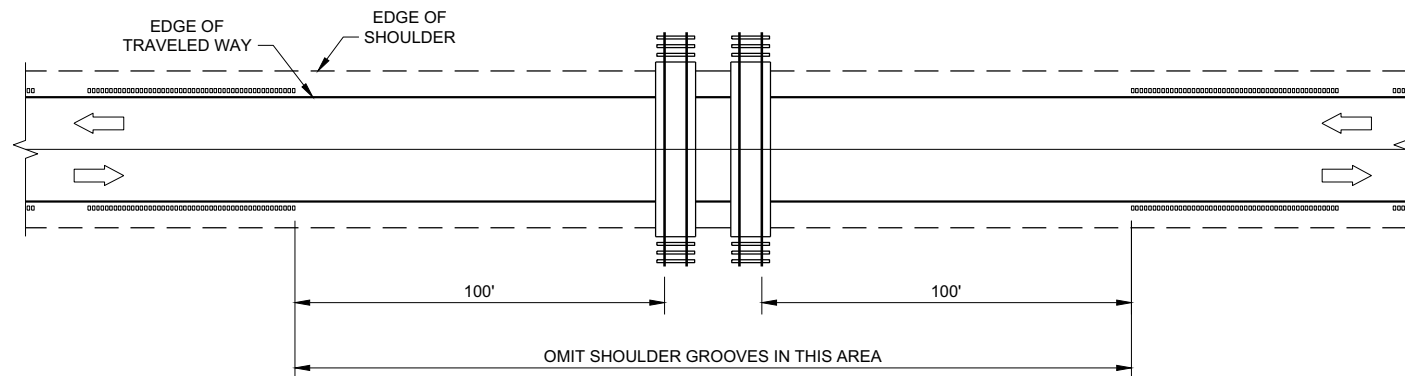
SHOULDER GROOVES AT DRIVEWAYS<sup>①</sup>

### GENERAL NOTES

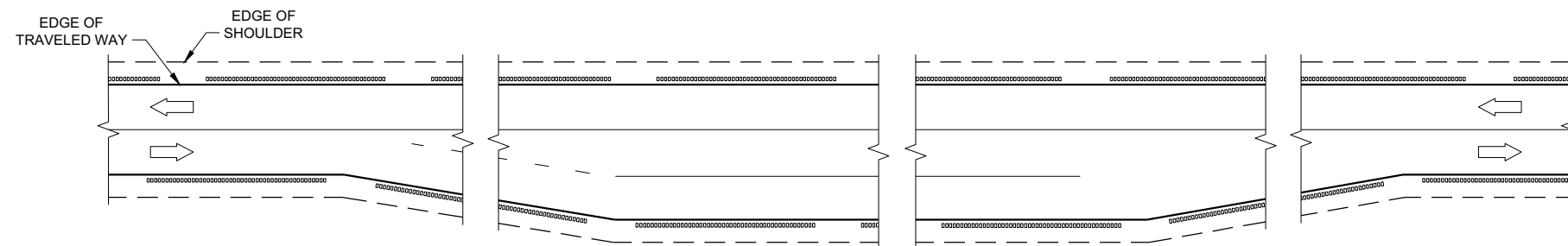
- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.

**2-LANE RURAL SHOULDER  
RUMBLE STRIP, MILLING**

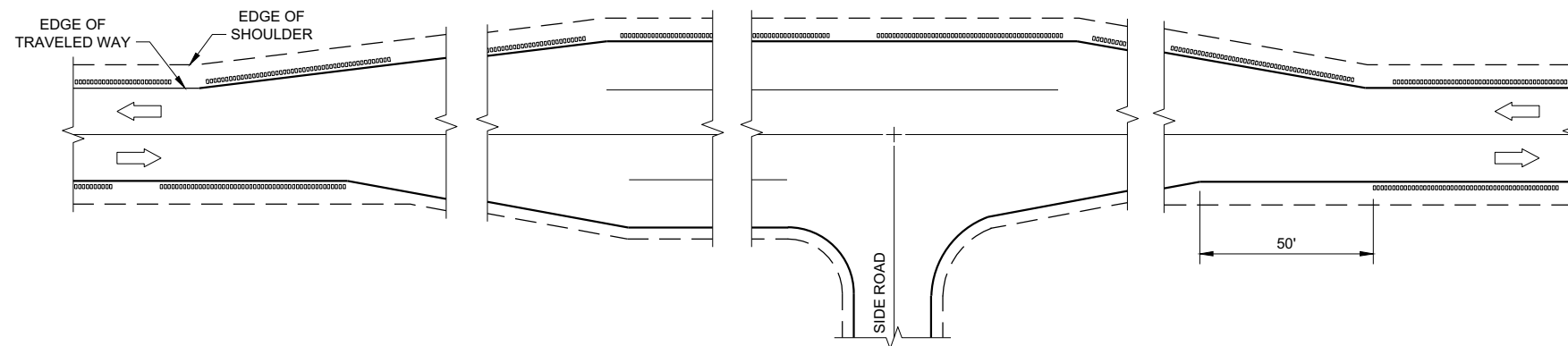
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT PASSING AND CLIMBING LANES



SHOULDER GROOVES AT BYPASS LANES

**2-LANE RURAL SHOULDER  
RUMBLE STRIP, MILLING**

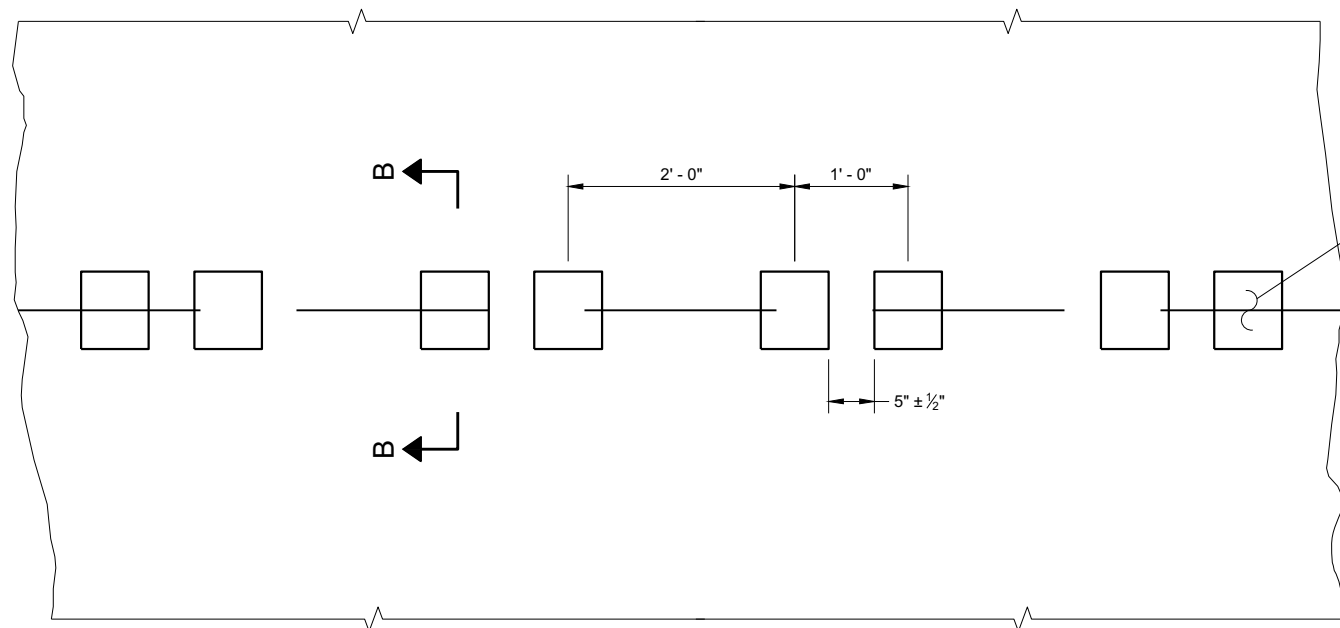
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018  
DATE

FHWA

/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

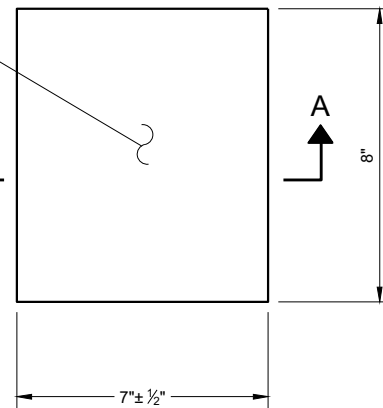


PLAN VIEW  
SHOULDER WITH GROOVES

6

6

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP



PLAN VIEW  
(SINGLE GROOVE)

GENERAL NOTES

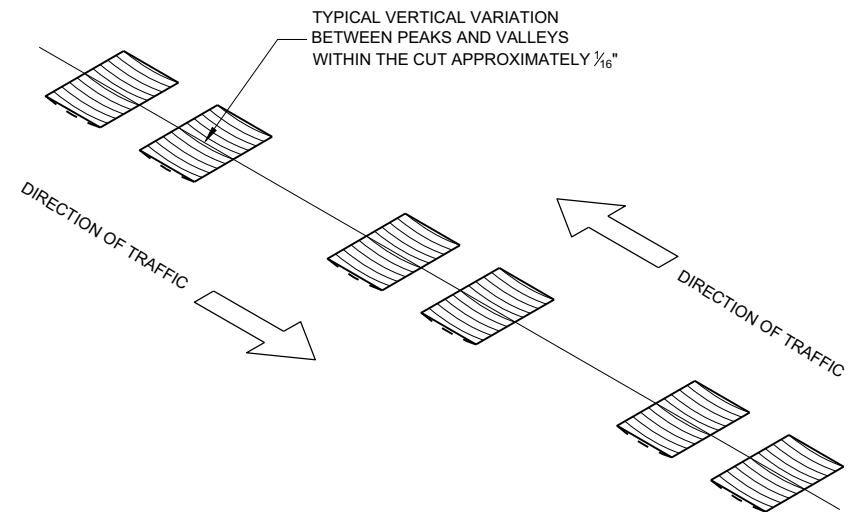
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

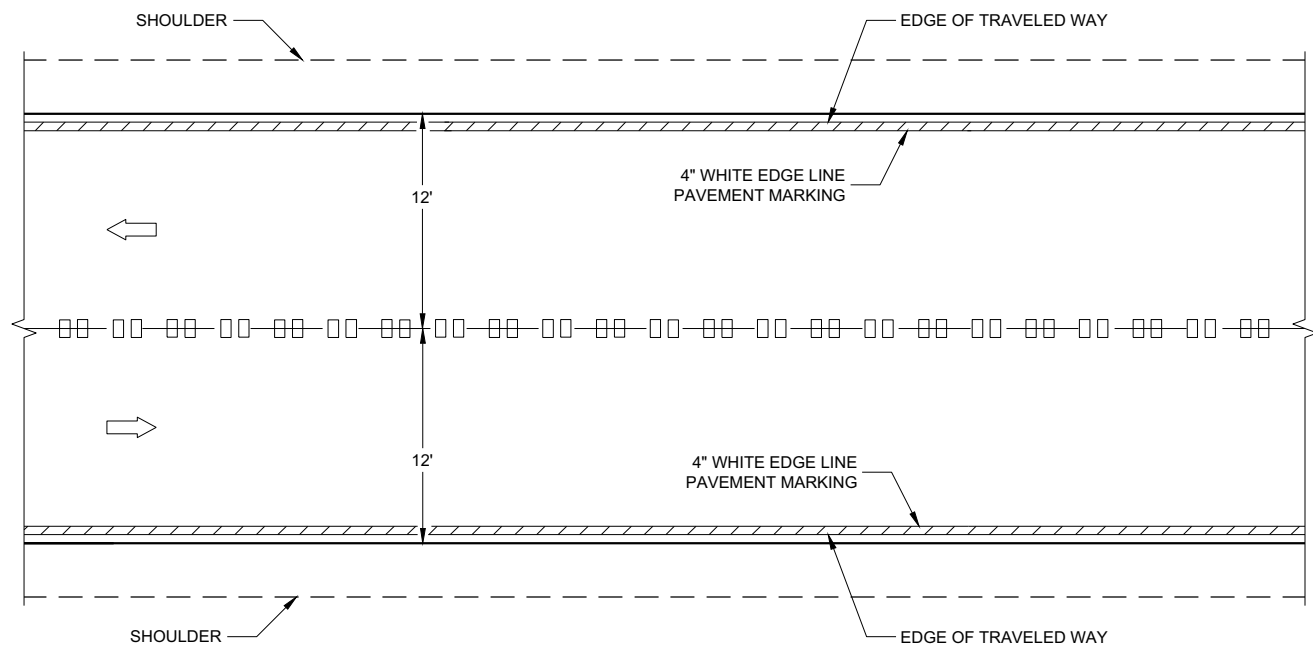
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

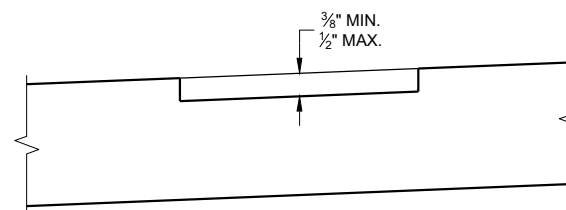
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



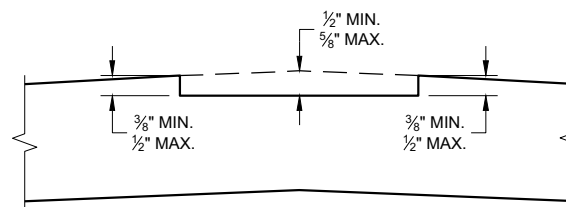
ISOMETRIC



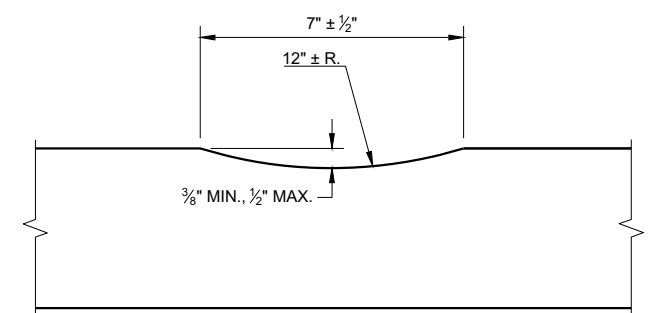
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B  
SUPERELEVATED ROADWAY



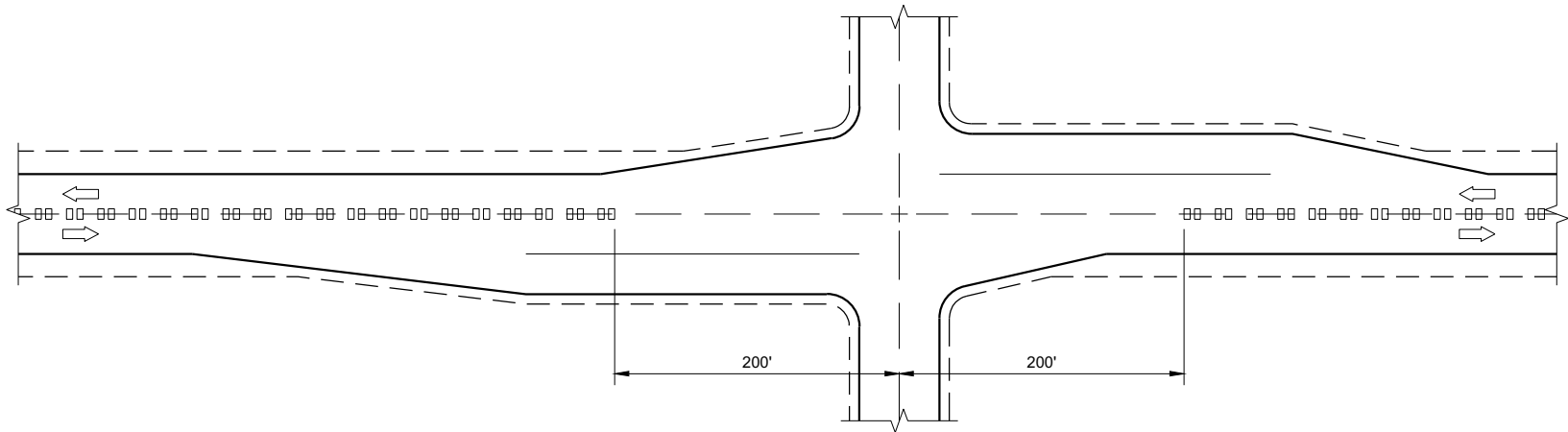
SECTION B - B  
CROWNED ROADWAY



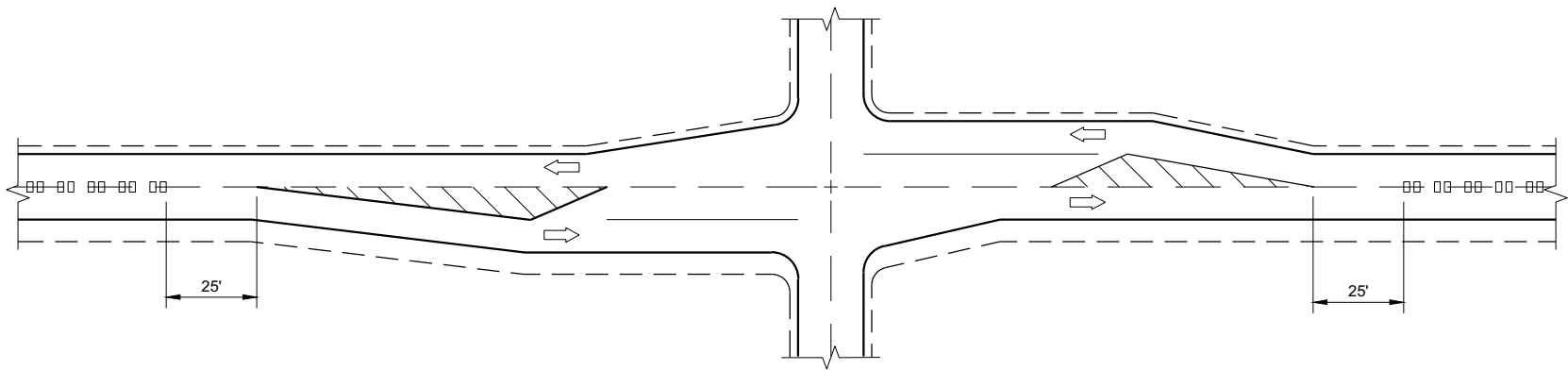
SECTION A - A

2-LANE RURAL  
CENTER LINE RUMBLE STRIP,  
MILLING

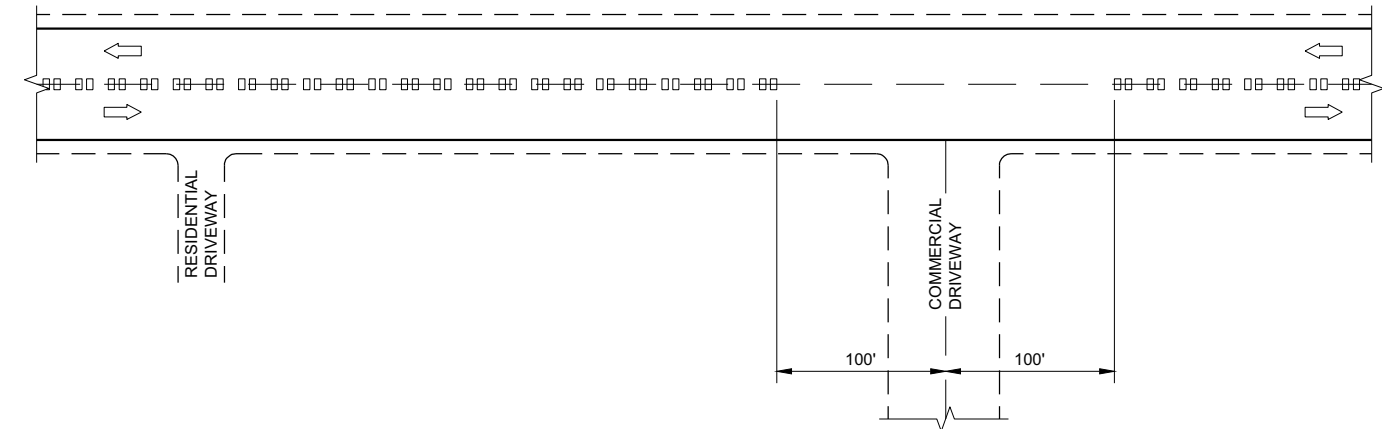
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



CENTERLINE GROOVES AT INTERSECTIONS



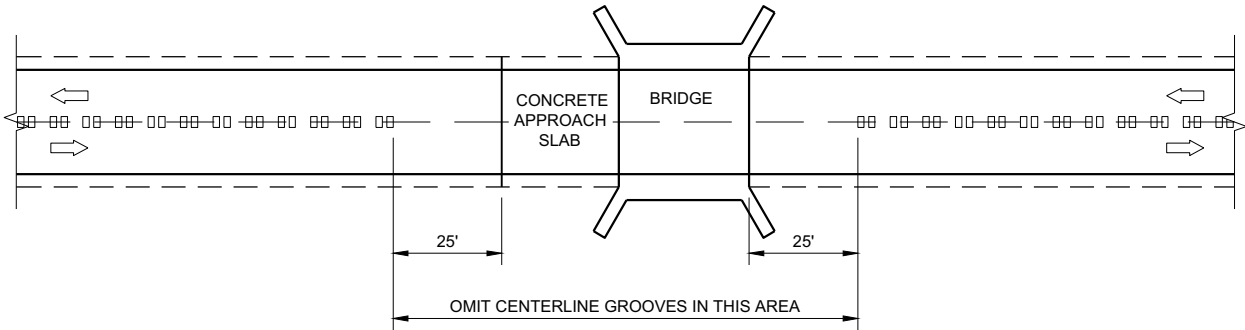
CENTERLINE GROOVES AT INTERSECTIONS  
(WITH LEFT TURN LANES)



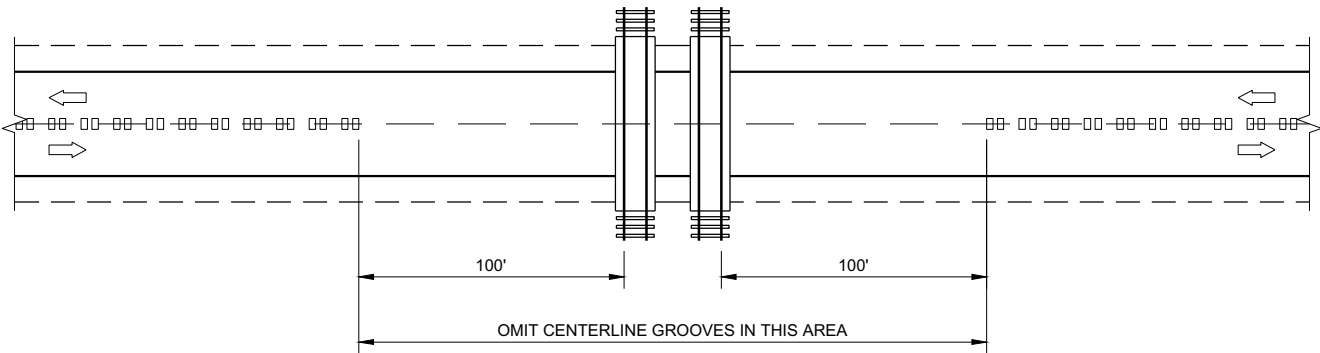
CENTERLINE GROOVES AT DRIVEWAYS<sup>①</sup>

GENERAL NOTES

- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

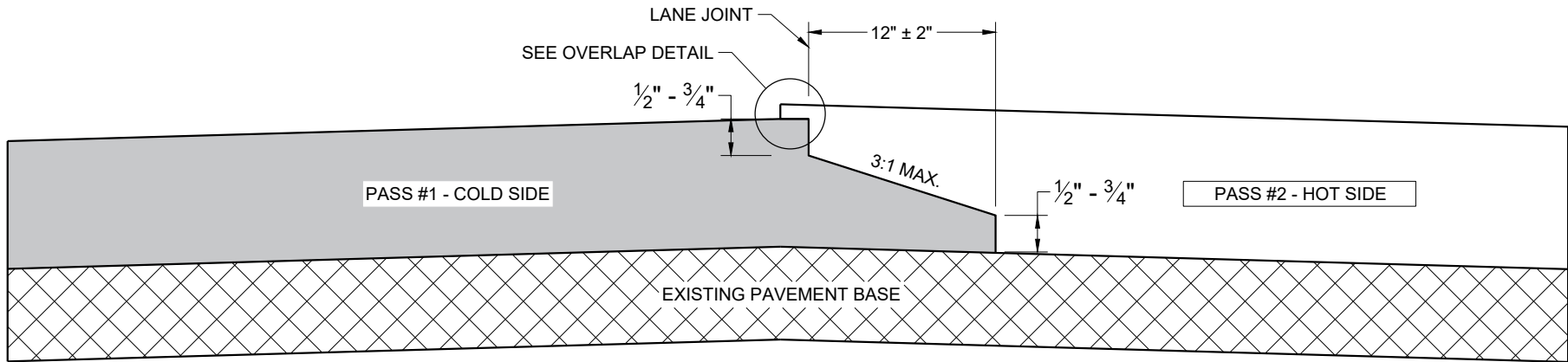
2-LANE RURAL  
CENTERLINE RUMBLE STRIP,  
MILLING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

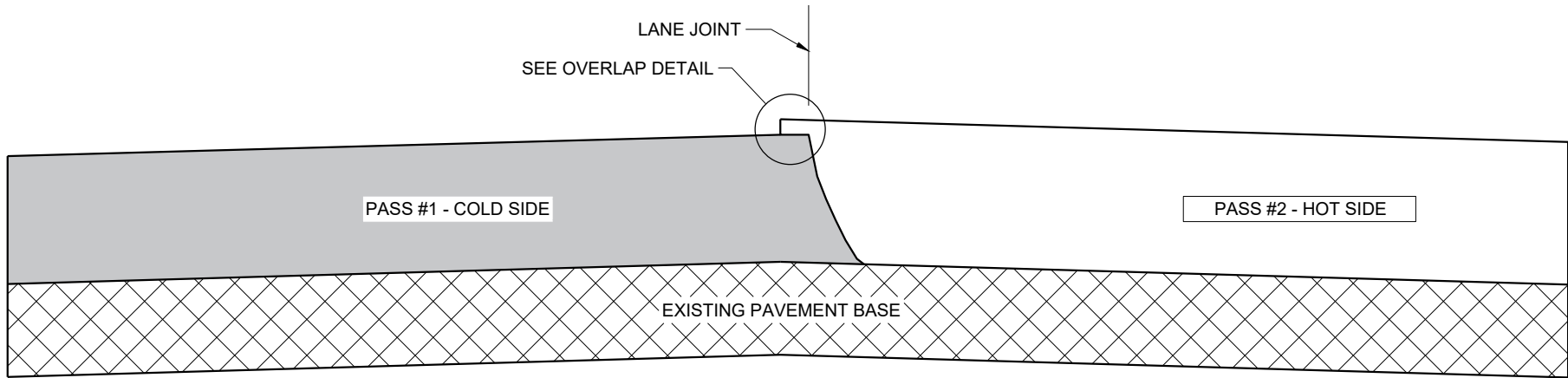
APPROVED  
7/2018  
DATE  
/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

FHWA

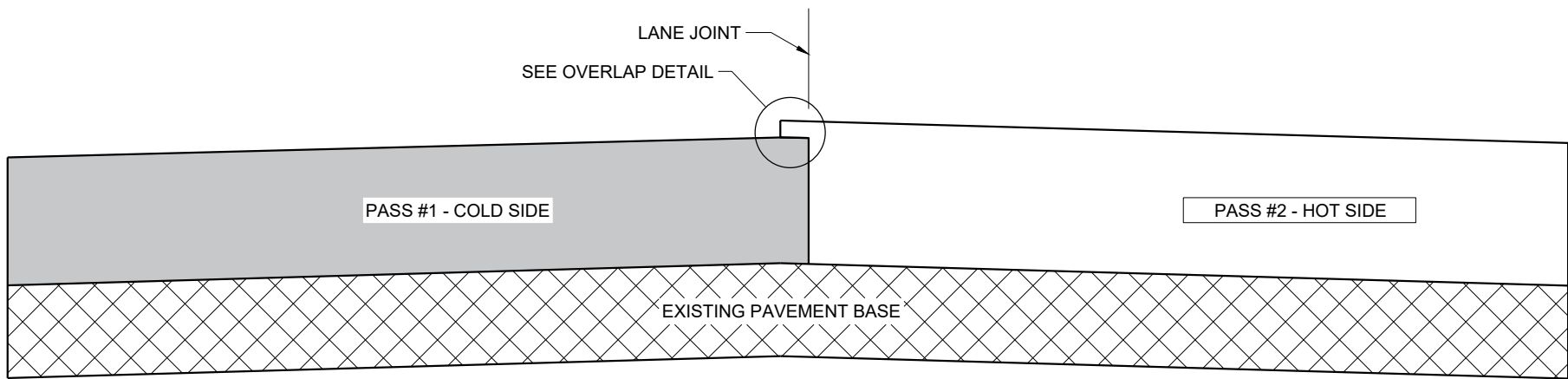




**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

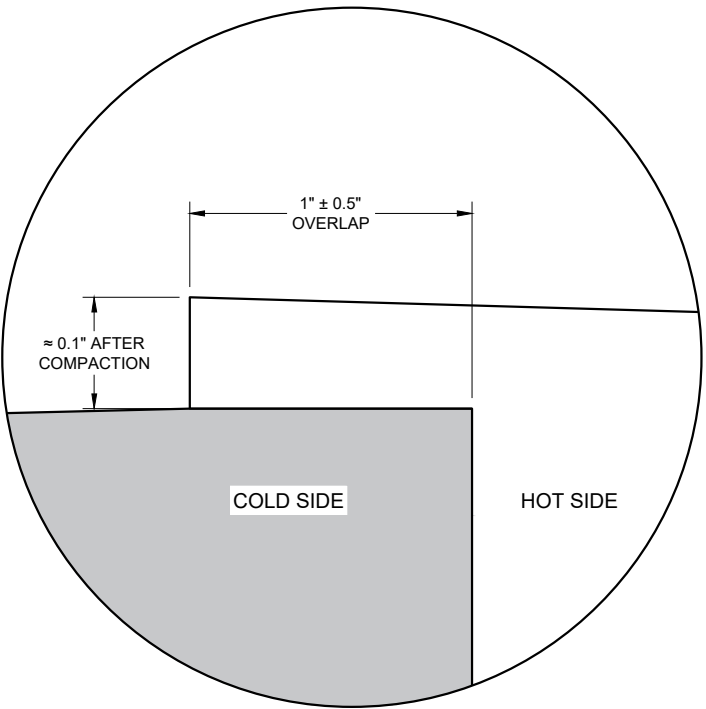
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY  $0.1"$  AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO  $2"$  FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.

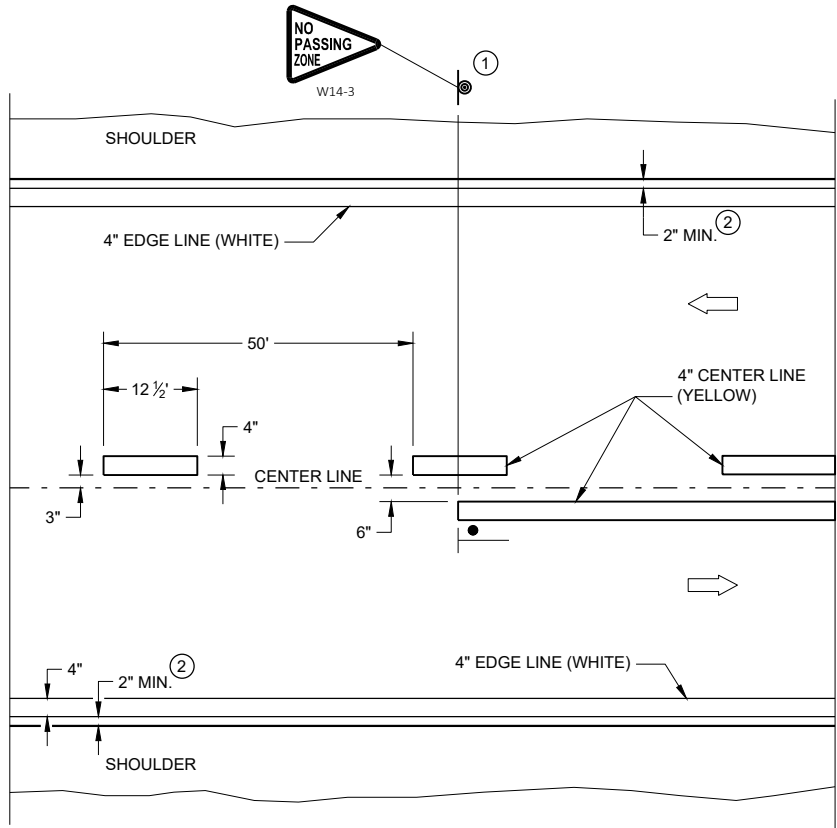


**OVERLAP DETAIL (TYPICAL)**

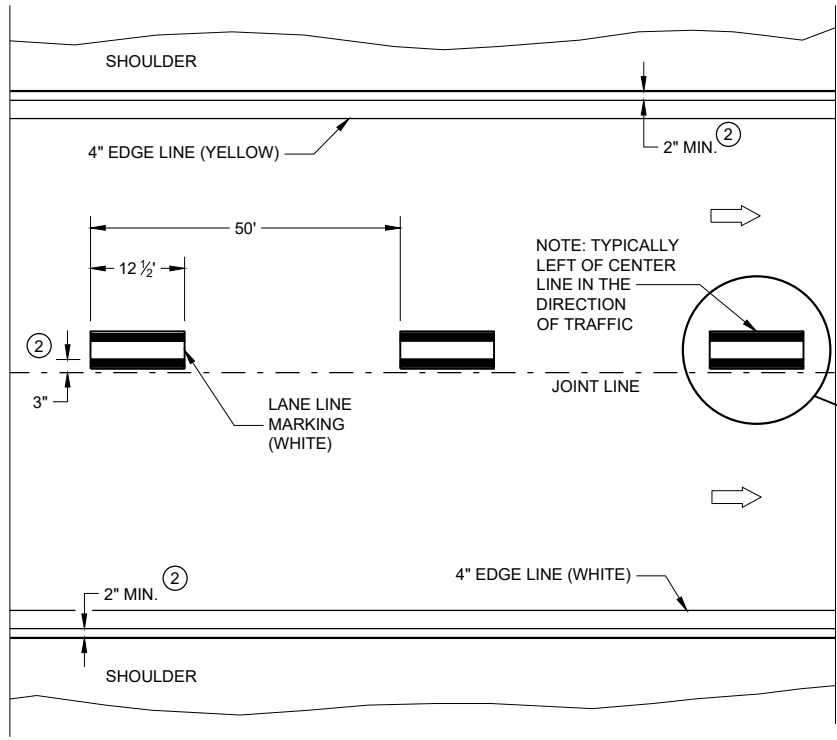
**HMA LONGITUDINAL JOINTS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2020 /S/ Steven Hefel  
DATE HMA PAVEMENT ENGINEER  
FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

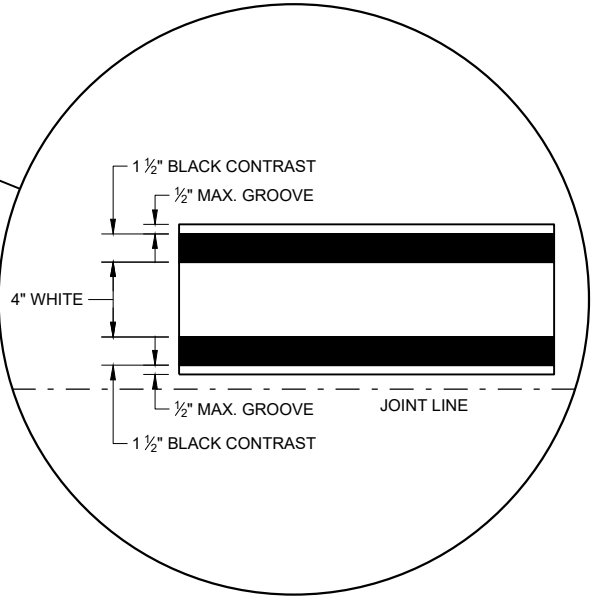
GENERAL NOTES

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

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

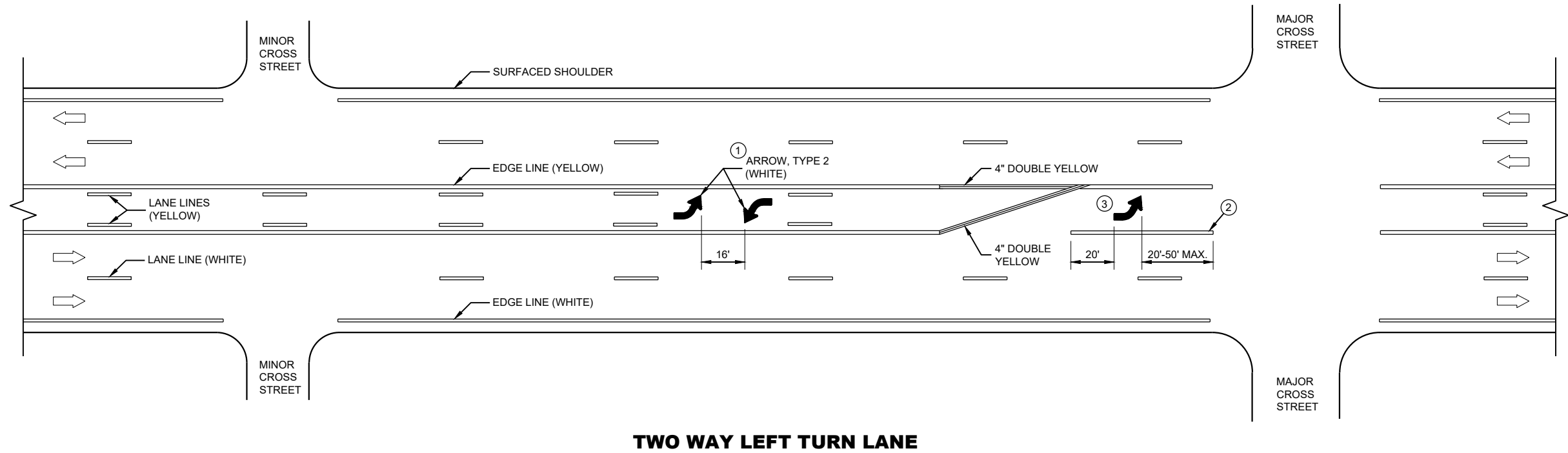


PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2022  
DATE  
/S/ Jeannie Silver  
STATEWIDE SIGNING AND MARKING  
ENGINEER

FHWA



**GENERAL NOTES**

- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 8" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

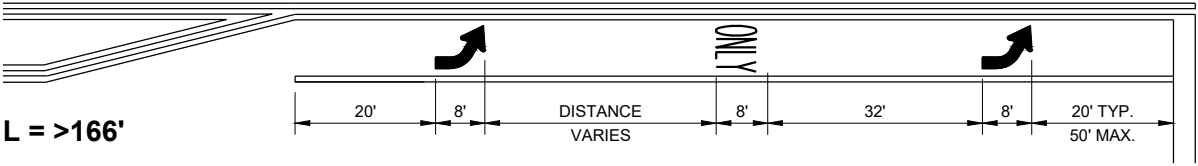
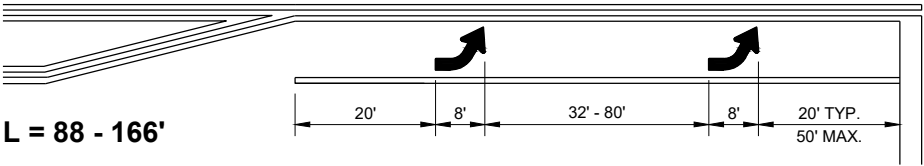
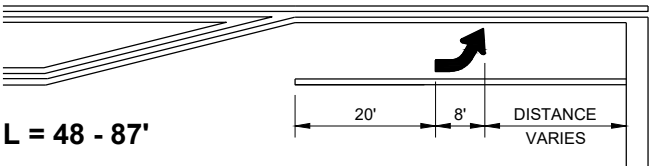
➡ DIRECTION OF TRAFFIC

**PAVEMENT MARKING  
(TURN LANES)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

TURN LANE OPTIONS

LENGTH OF TURN BAY ( **L** ) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



\*(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.






➡ DIRECTION OF TRAFFIC

**L** = LENGTH OF TURN BAY

PAVEMENT MARKING  
(TURN LANES)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR 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.

FLAGGING

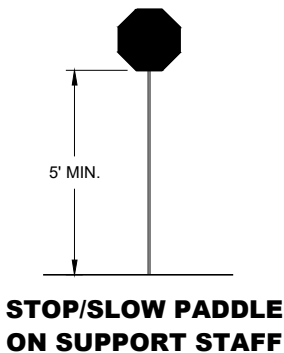
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

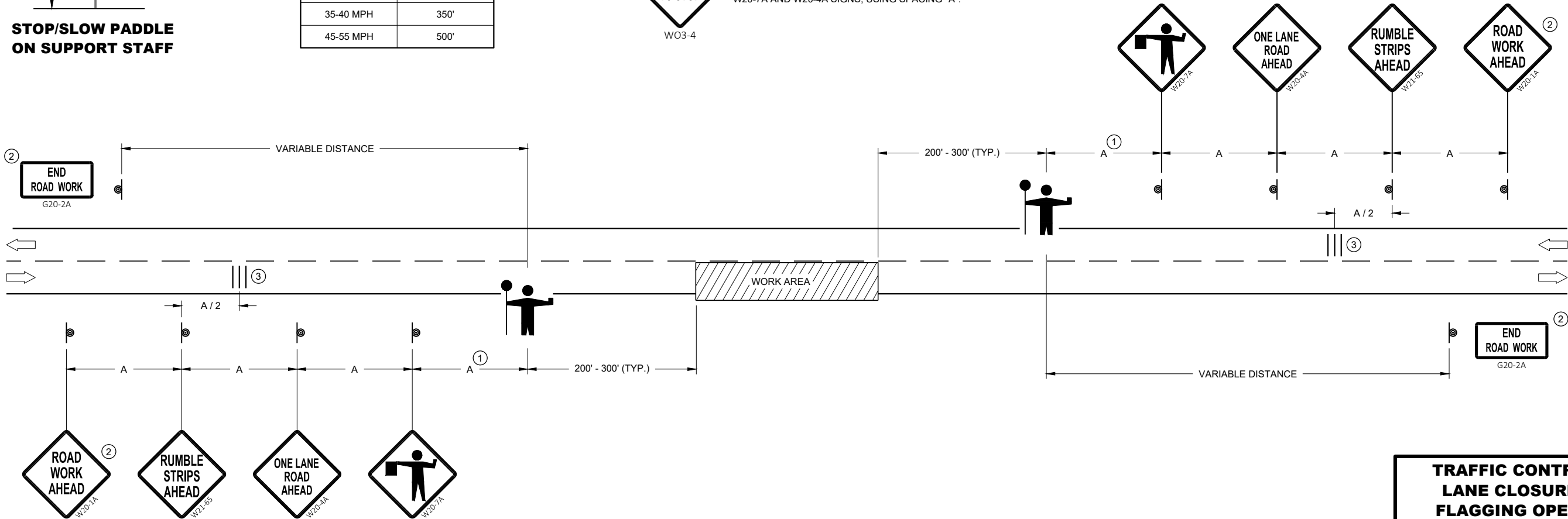


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

| SPEED LIMIT | SPACING "A" |
|-------------|-------------|
| 25-30 MPH   | 200'        |
| 35-40 MPH   | 350'        |
| 45-55 MPH   | 500'        |







USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



|   |  |
|---|--|
| <b>TRAFFIC CONTROL FOR<br/>LANE CLOSURE WITH<br/>FLAGGING OPERATION</b> |  |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                      |  |
| APPROVED<br>May 2022<br>DATE  | /S/ Andrew Heidtke<br>WORK ZONE ENGINEER |
| FHWA  |  |



LEGEND

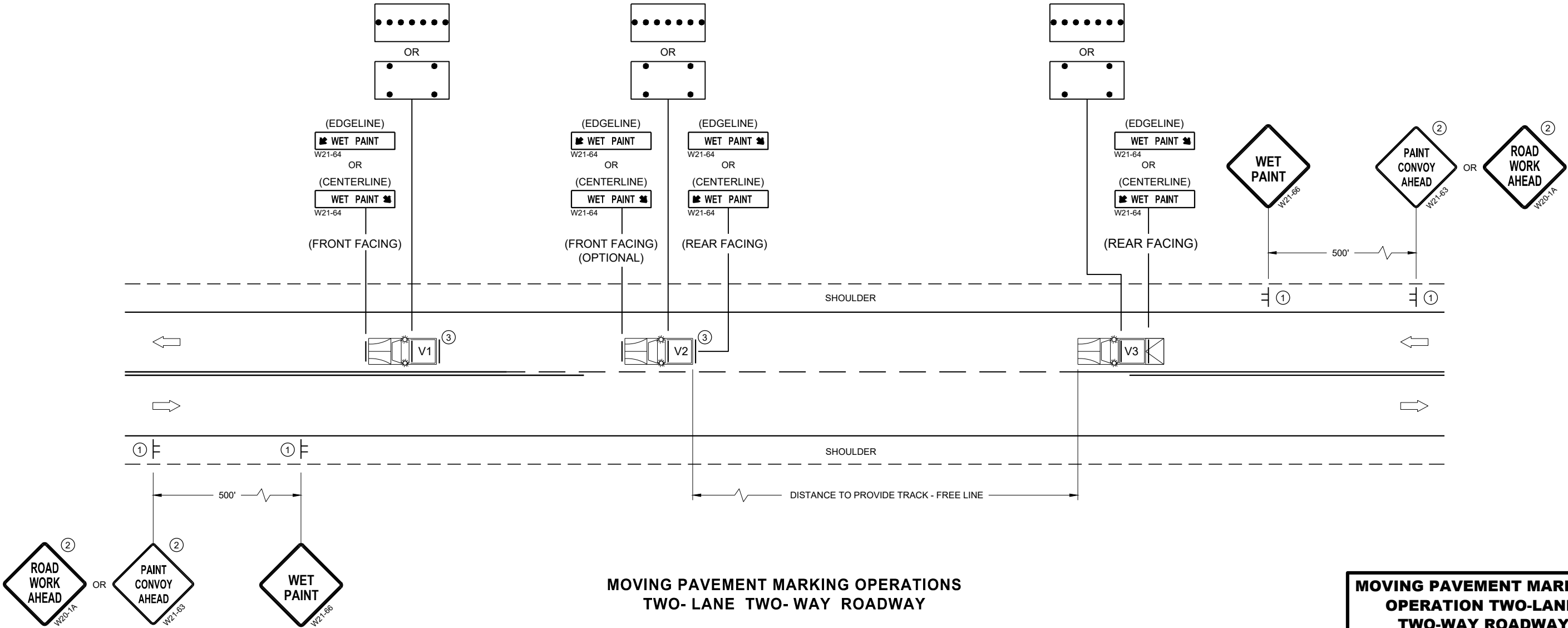
- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.
- DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

- WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.
- CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.
- CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

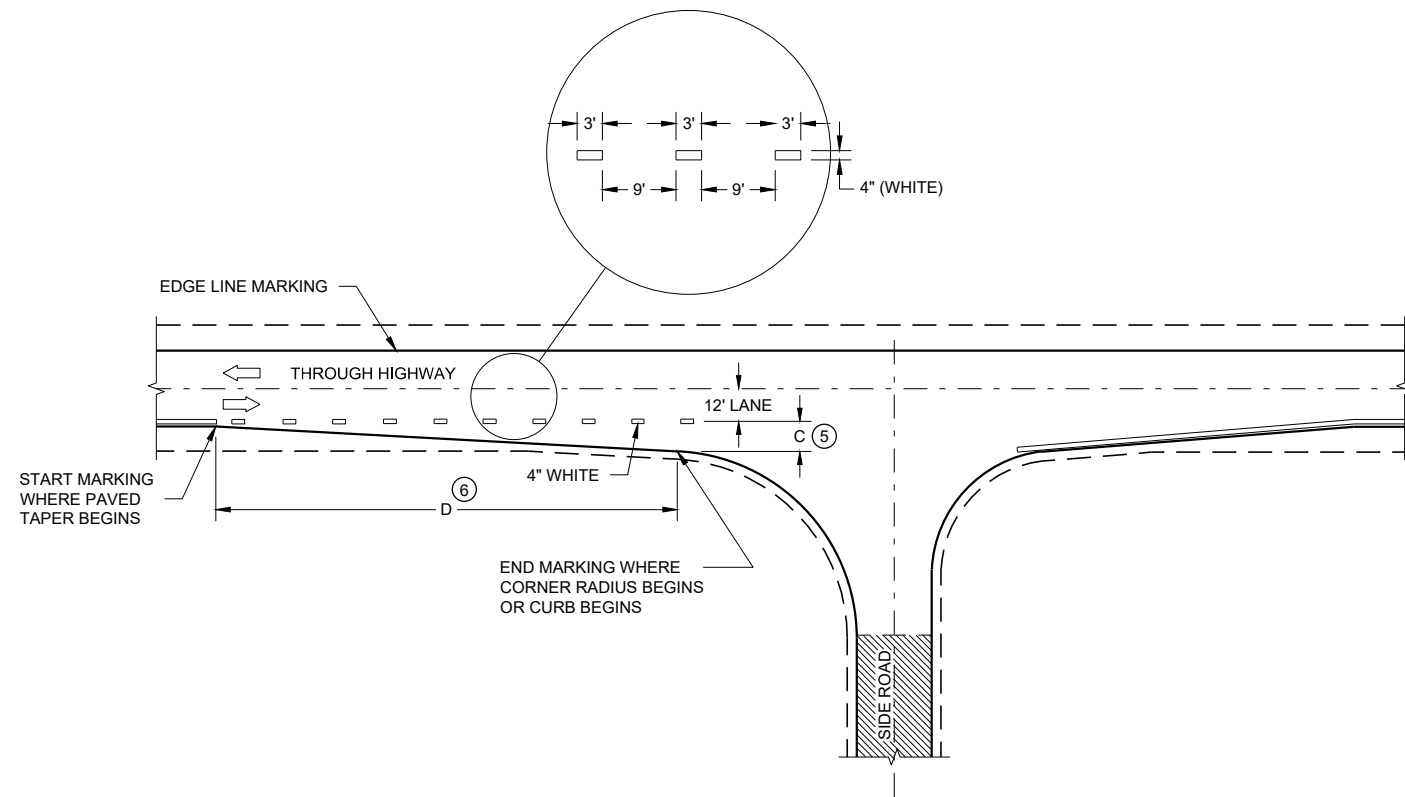


MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY

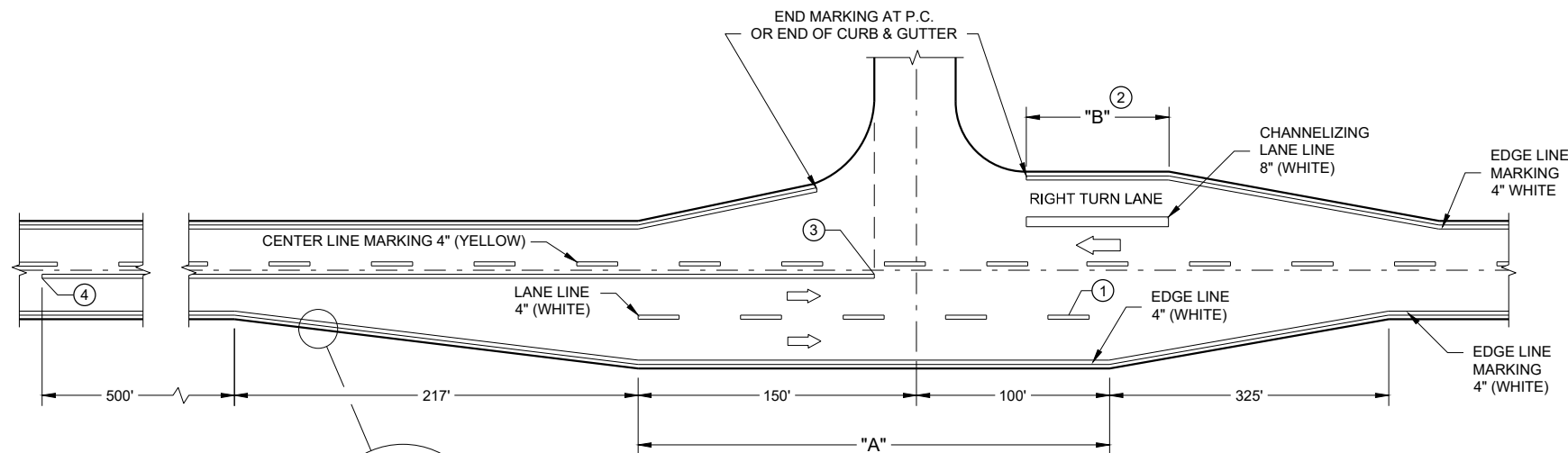
MOVING PAVEMENT MARKING  
OPERATION TWO-LANE  
TWO-WAY ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



MINOR INTERSECTION



MAJOR INTERSECTIONS  
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

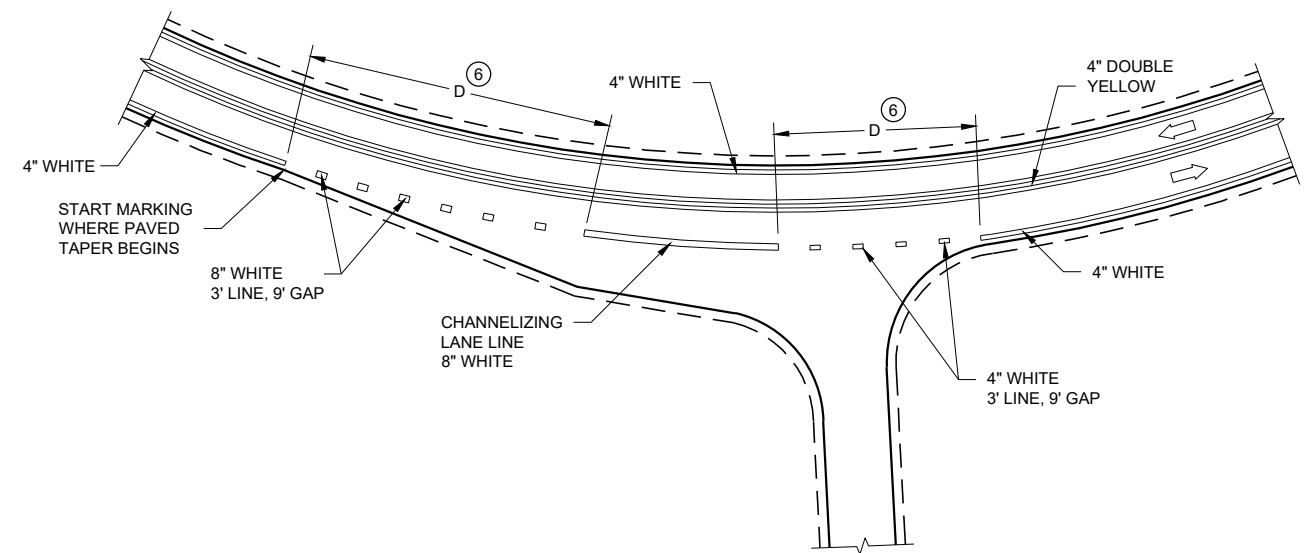
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

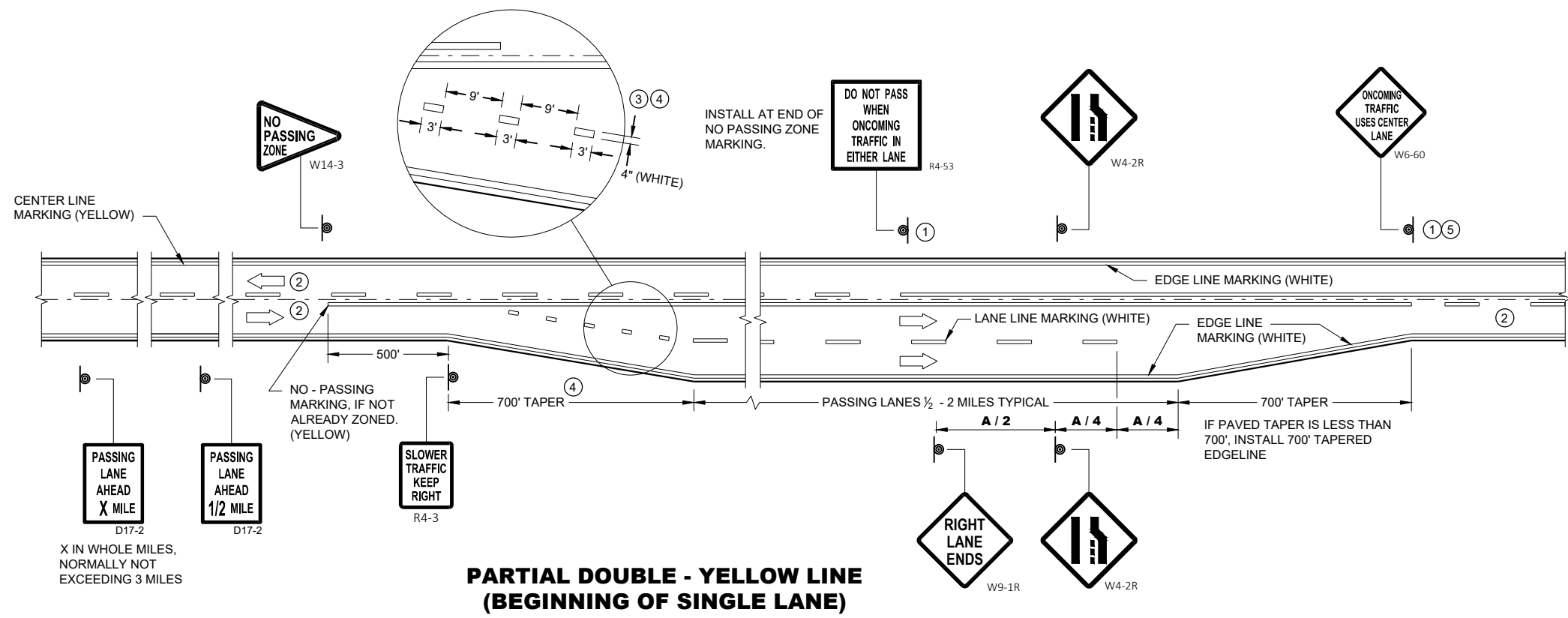
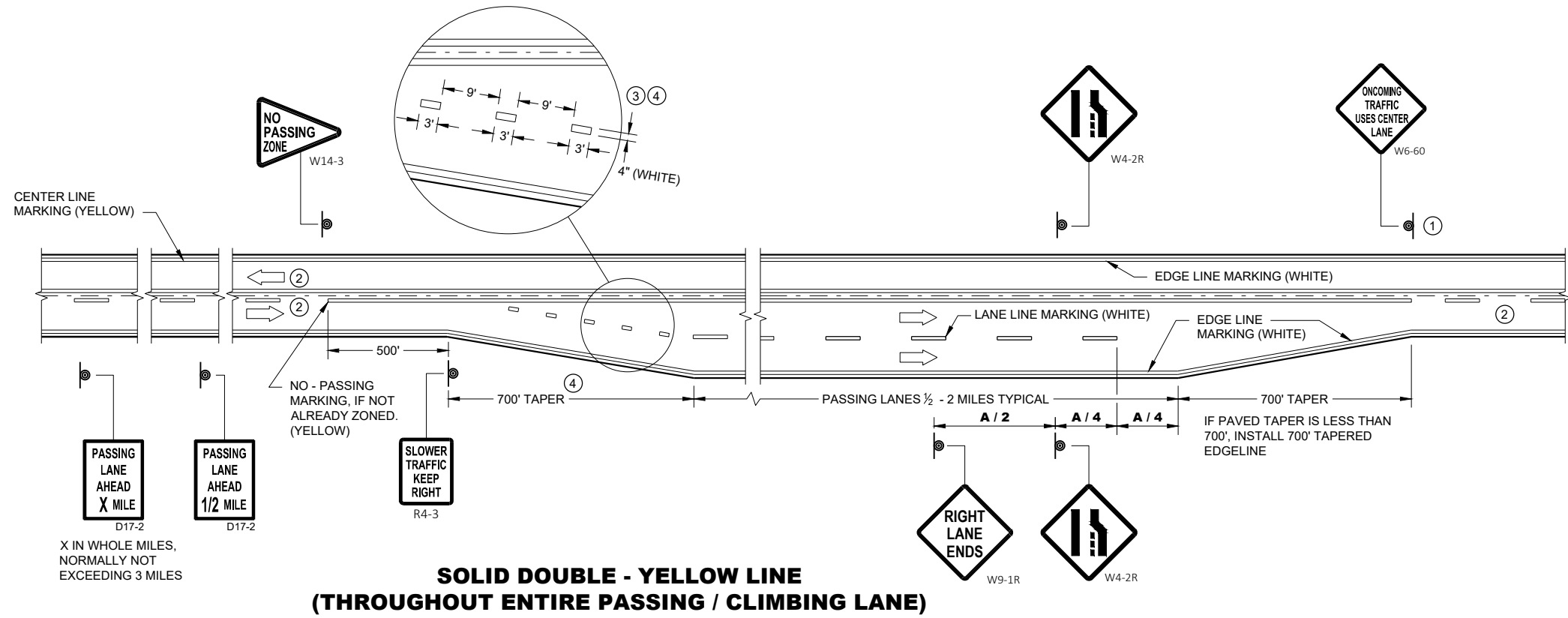
➡ DIRECTION OF TRAVEL

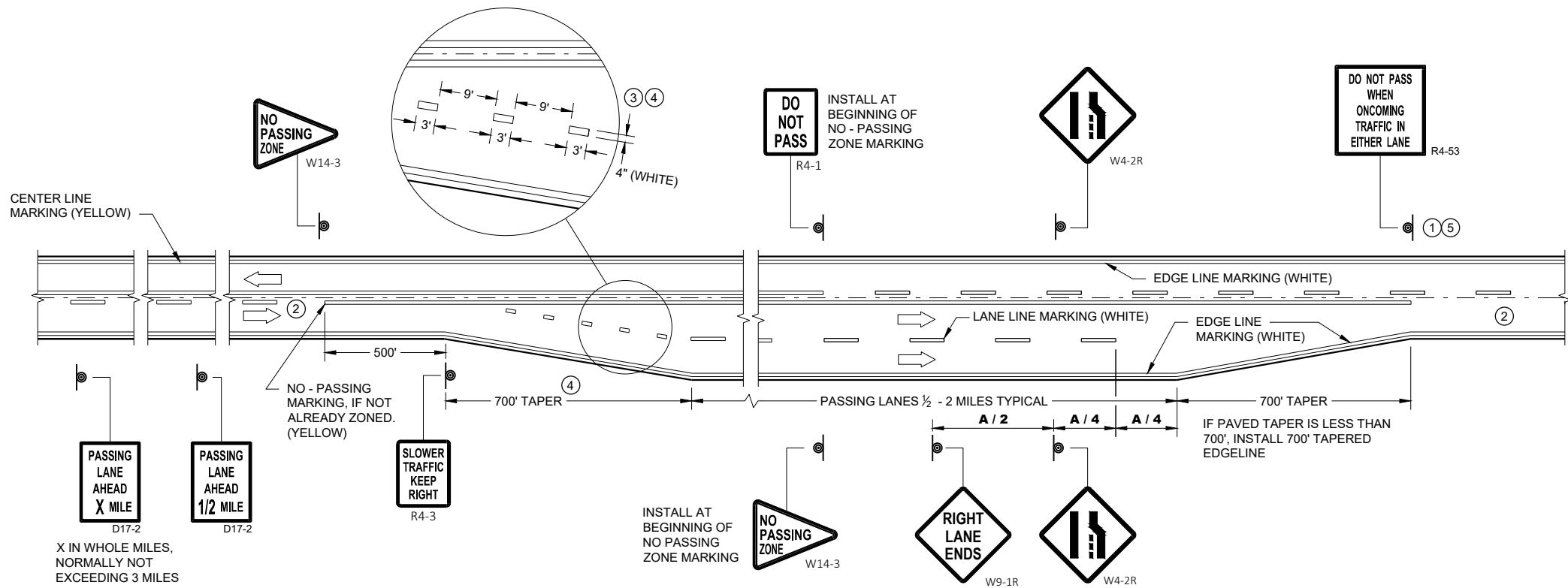


INTERSECTION ON OUTSIDE OF CURVE

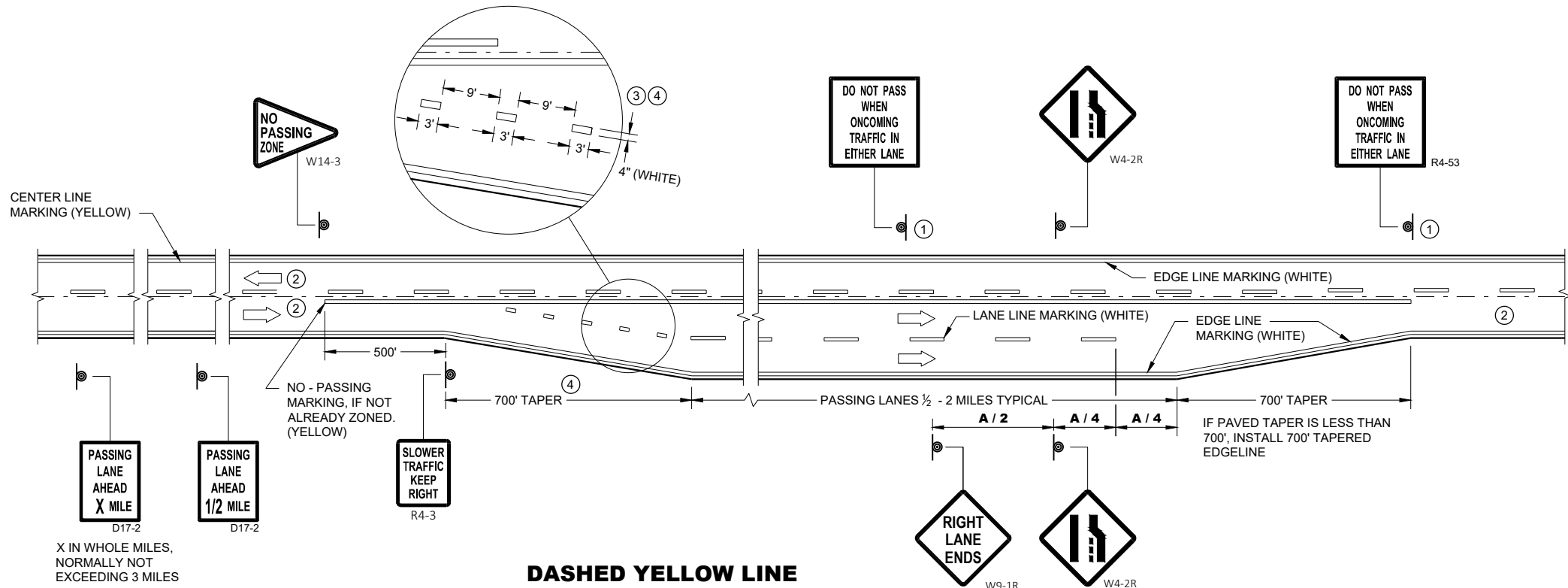
PAVEMENT MARKING  
(INTERSECTIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION






**SOLID DOUBLE - YELLOW LINE  
(END OF SINGLE LANE)**



**DASHED YELLOW LINE  
(THROUGHOUT SINGLE LANE)**

**GENERAL NOTES**

- ① SIGN SHALL BE REPEATED AT 1 MILE INCREMENTS OR AT THE DISCRETION OF THE REGIONAL TRAFFIC ENGINEER.
- ② THERE MAY BE SOLID YELLOW ON THE CENTERLINE DUE TO SIGHT CONDITIONS.
- ③ THE TAPER LENGTH OF THE DOTTED LINE PAVEMENT MARKING SHALL BE 700 FEET, 3' LINE, 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ④ WHEN THE ENTRANCE TAPER IS LESS THAN 700 FEET OR THE SHOULDER WIDTH IN THE PASSING / CLIMBING LANE IS LESS THAN THE ADJACENT HIGHWAY, DO NOT INSTALL DOTTED LINE PAVEMENT MARKING.
- ⑤ REPEAT EVERY ONE MILE UP UNTIL NO PASSING ZONE.

ARROW SYMBOL (  ) SHOWS DIRECTION OF TRAVEL

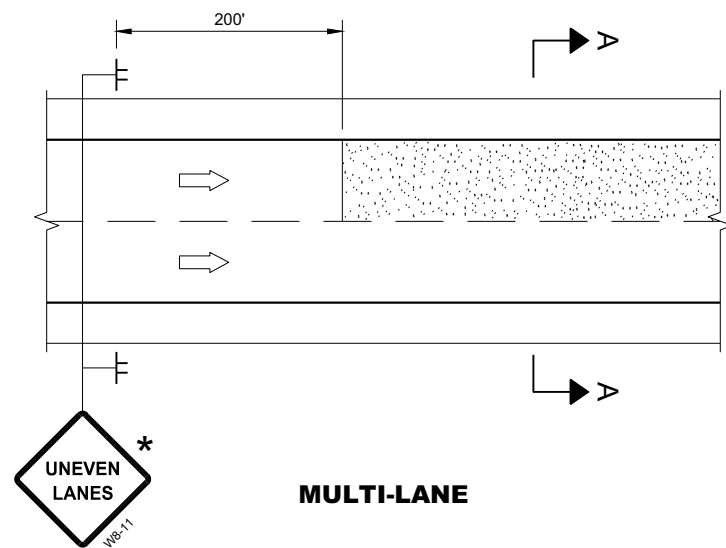
**DISTANCE TABLE**

| POSTED OR 85th PERCENTILE SPEED | DISTANCE "A" |
|---------------------------------|--------------|
| 45                              | 775          |
| 50                              | 885          |
| 55                              | 990          |

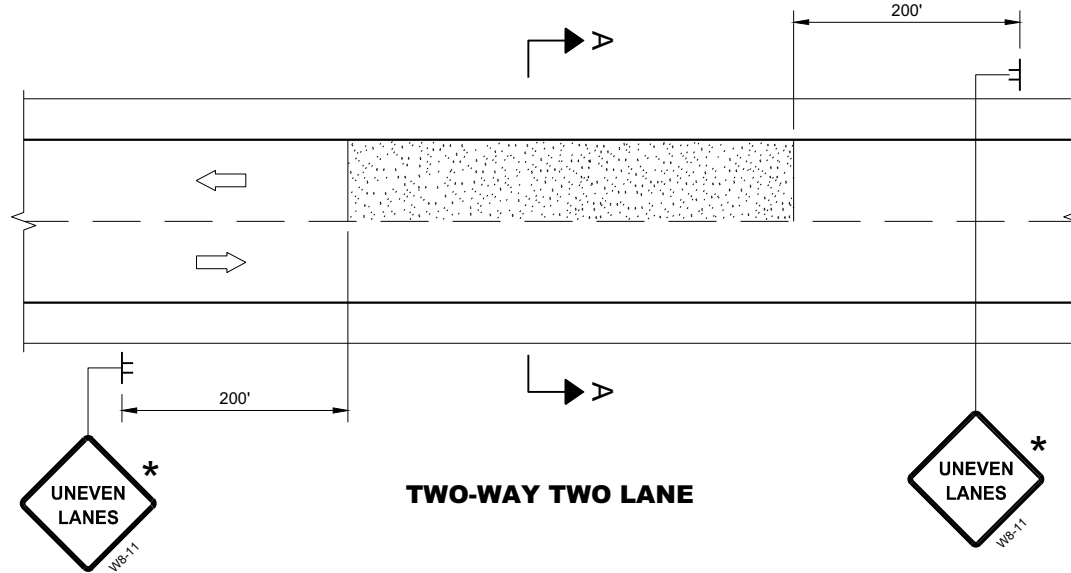
**PAVEMNET MARKING & SIGNING  
(CLIMBING LANE & PASSING LANE)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

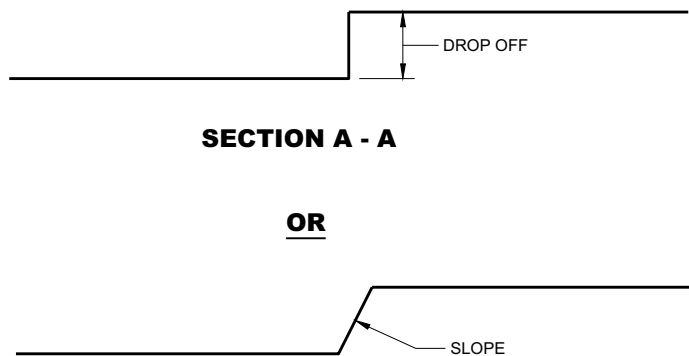
APPROVED  
May 2022  
DATE  
/S/ Jeannie Silver  
STATE SIGNING AND MARKING  
ENGINEER  
FHWA



MULTI-LANE



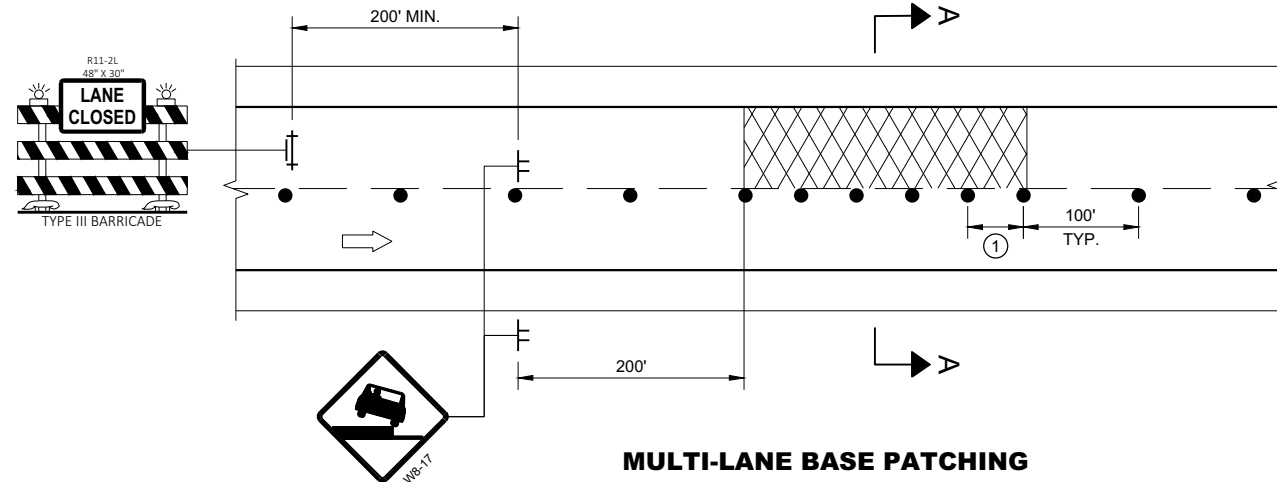
TWO-WAY TWO LANE



SECTION A - A

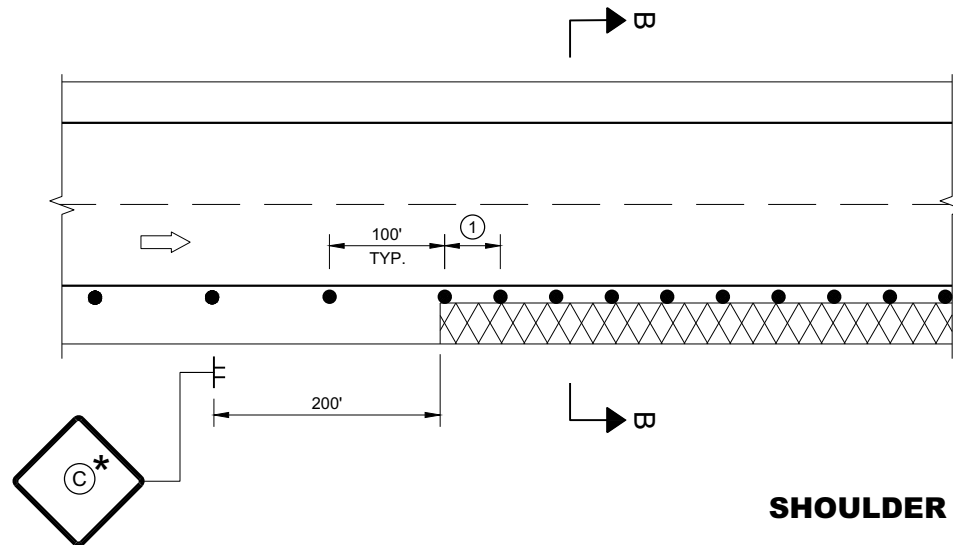
OR

SECTION A - A

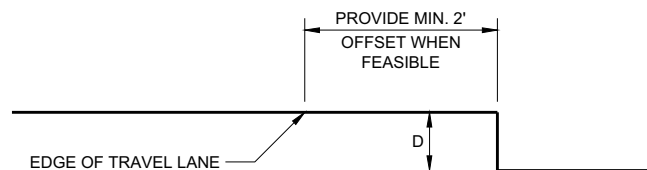


MULTI-LANE BASE PATCHING



ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

| D                                     | SIGN (C)  |
|---------------------------------------|---|
| < 2" WITH A SLOPE STEEPER THAN 3:1    | <br>WO8-9  |
| 2" < 6" WITH A SLOPE STEEPER THAN 3:1 | <br>WB-9A<br>PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT |

**TRAFFIC CONTROL,  
DROP-OFF SIGNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

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








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

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

\* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  TRAFFIC CONTROL DRUM
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  TYPE "A" WARNING LIGHT (FLASHING)
-  DIRECTION OF TRAFFIC
-  WORK AREA WITH DROP-OFF
-  MILLED SURFACE



GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

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



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

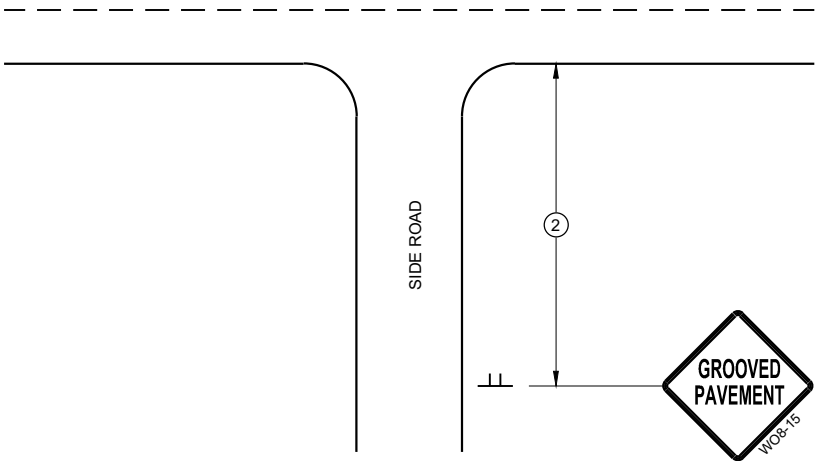
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

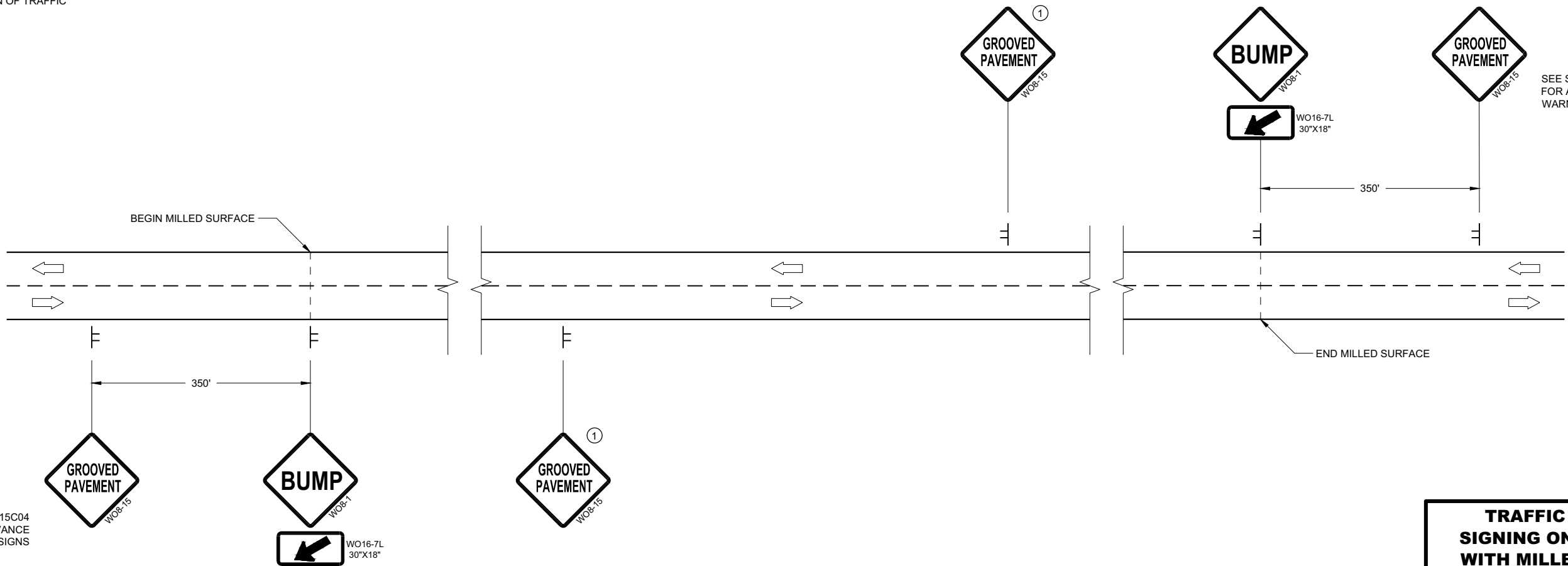
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH  
SIGN DETAIL



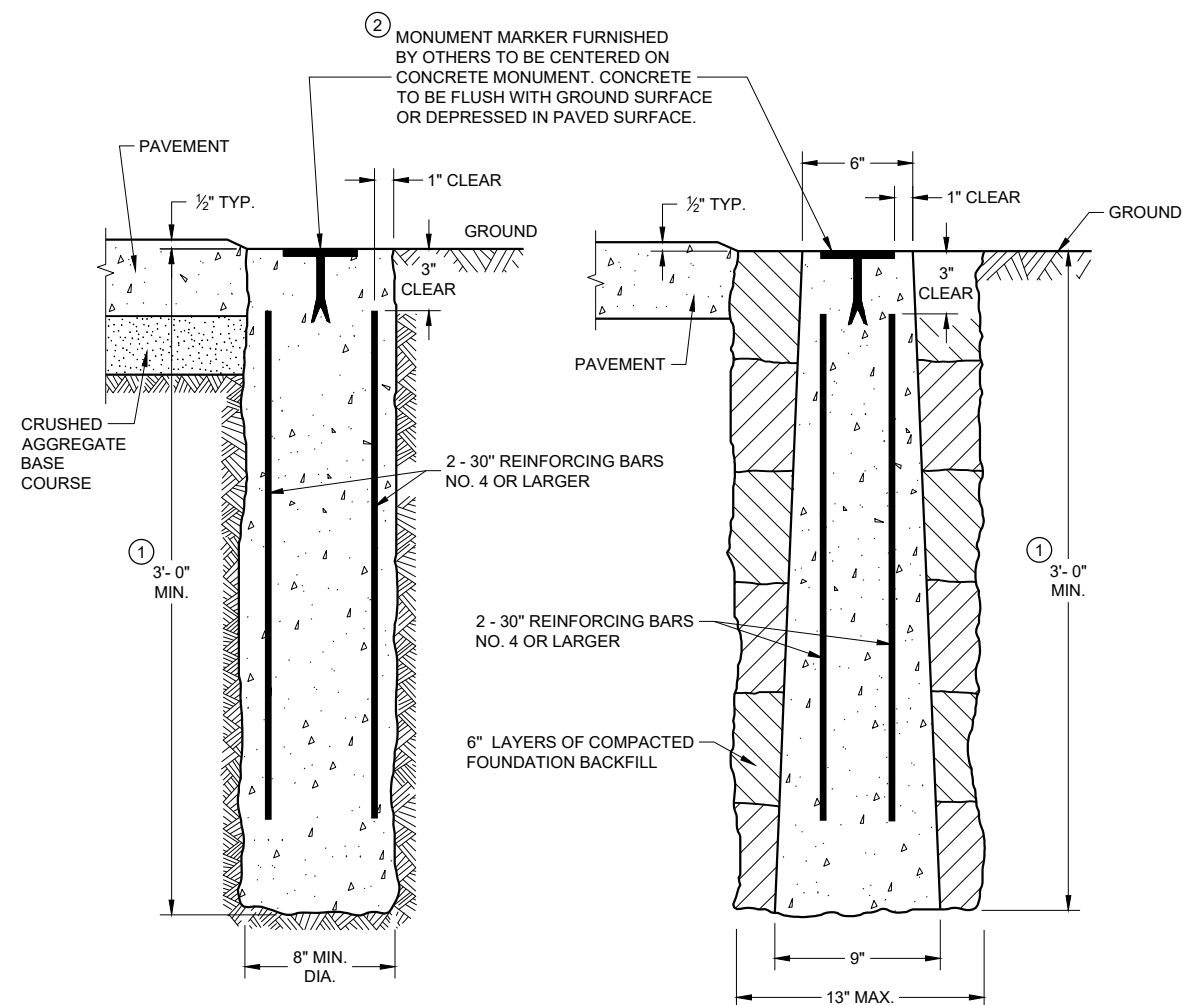
DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL,  
SIGNING ON ROADWAYS  
WITH MILLED SURFACES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

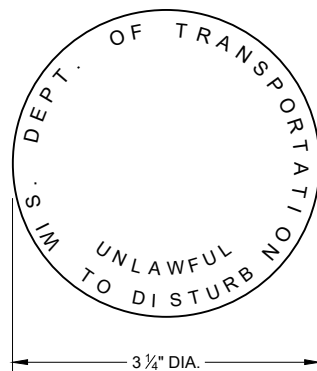
FHWA



## CAST-IN-PLACE

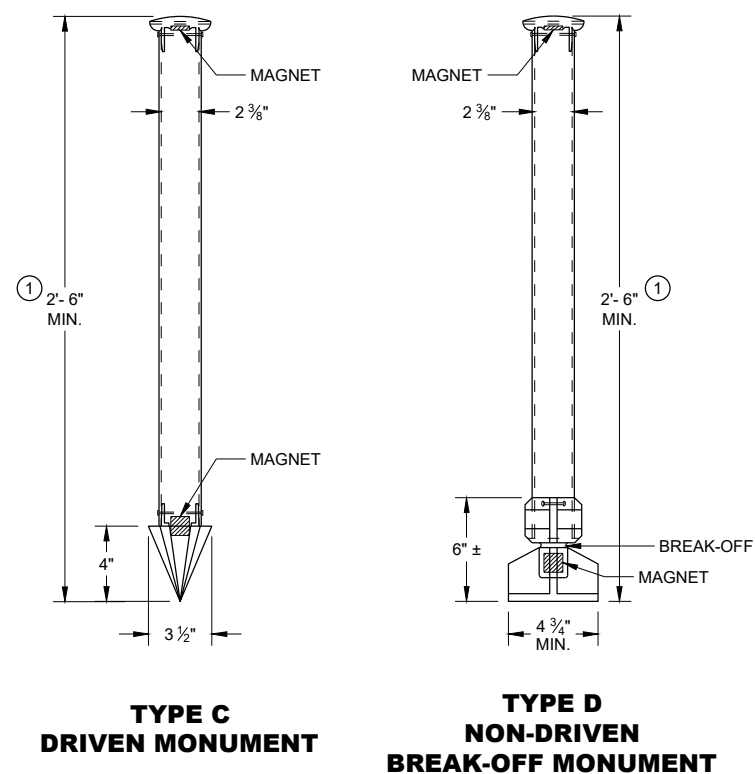
## CONCRETE MONUMENTS

### TYPE A



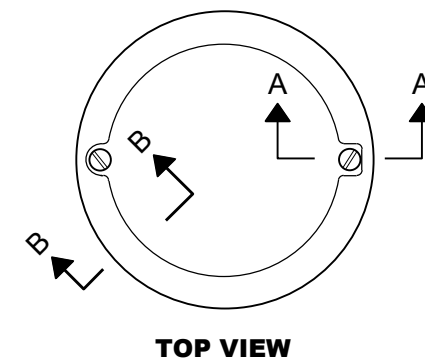
② **WIS DOT MONUMENT  
MARKER LOGO**

FOR TYPES "A", "C" & "D"

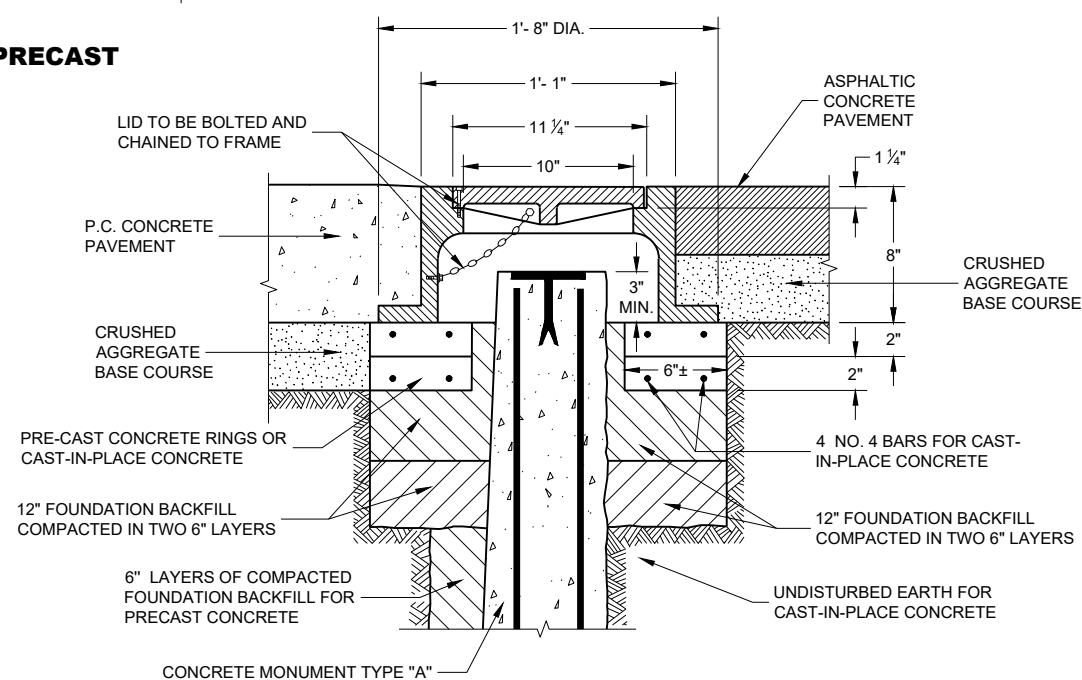


## ALUMINUM MONUMENTS

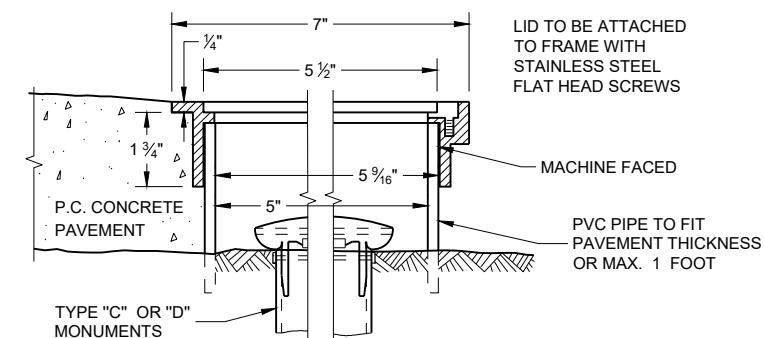
(INCLUDES MARKER)



### TOP VIEW



**CAST IRON MONUMENT COVER**  
(APPROXIMATE WEIGHT 95 LBS)



**SECTION B-B**                      **SECTION A-A**  
**ALUMINUM MONUMENT COVER**  
 (APPROXIMATE WEIGHT 2 LBS)  
 (FOR CONCRETE PAVEMENT ONLY)

## LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March 2018 /S/ Raymond A. Kumapayi  
DATE CHIEF SURVEYING AND MAPPING  
ENGINEER

## Notes



## ***Wisconsin Department of Transportation***

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