

MAD

PROJECT ID: 5939-01-60

WITH: 5940-02-60

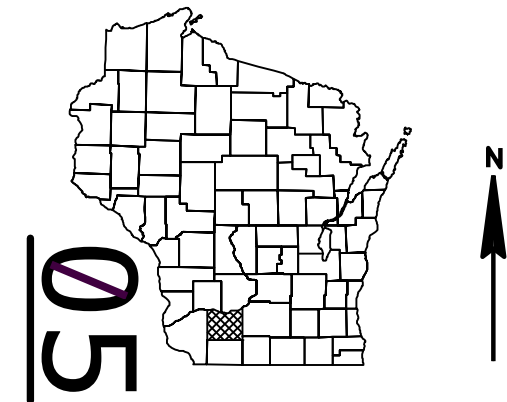
COUNTY: IOWA

APRIL 2021

ORDER OF SHEETS

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

TOTAL SHEETS = 50



DESIGN DESIGNATION

|              |        |   |         |
|--------------|--------|---|---------|
| A.A.D.T.     | (2023) | = | 1,650   |
| A.A.D.T.     | (2043) | = | 2,010   |
| D.H.V.       |        | = | ----    |
| D.D.         |        | = | ----    |
| T.           |        | = | 16.9%   |
| DESIGN SPEED |        | = | 55 MPH  |
| ESALS        |        | = | 580,000 |

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                              |  |

|  |                  |
|--|------------------|
|  | ROCK             |
|  | LABEL            |
|  | ELEVATION        |
|  | CULVERT          |
|  | ELECTRIC         |
|  | FIBER OPTIC      |
|  | GAS              |
|  | SANITARY SEWER   |
|  | STORM SEWER      |
|  | TELEPHONE        |
|  | WATER            |
|  | UTILITY PEDESTAL |
|  | POWER POLE       |
|  | TELEPHONE POLE   |

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

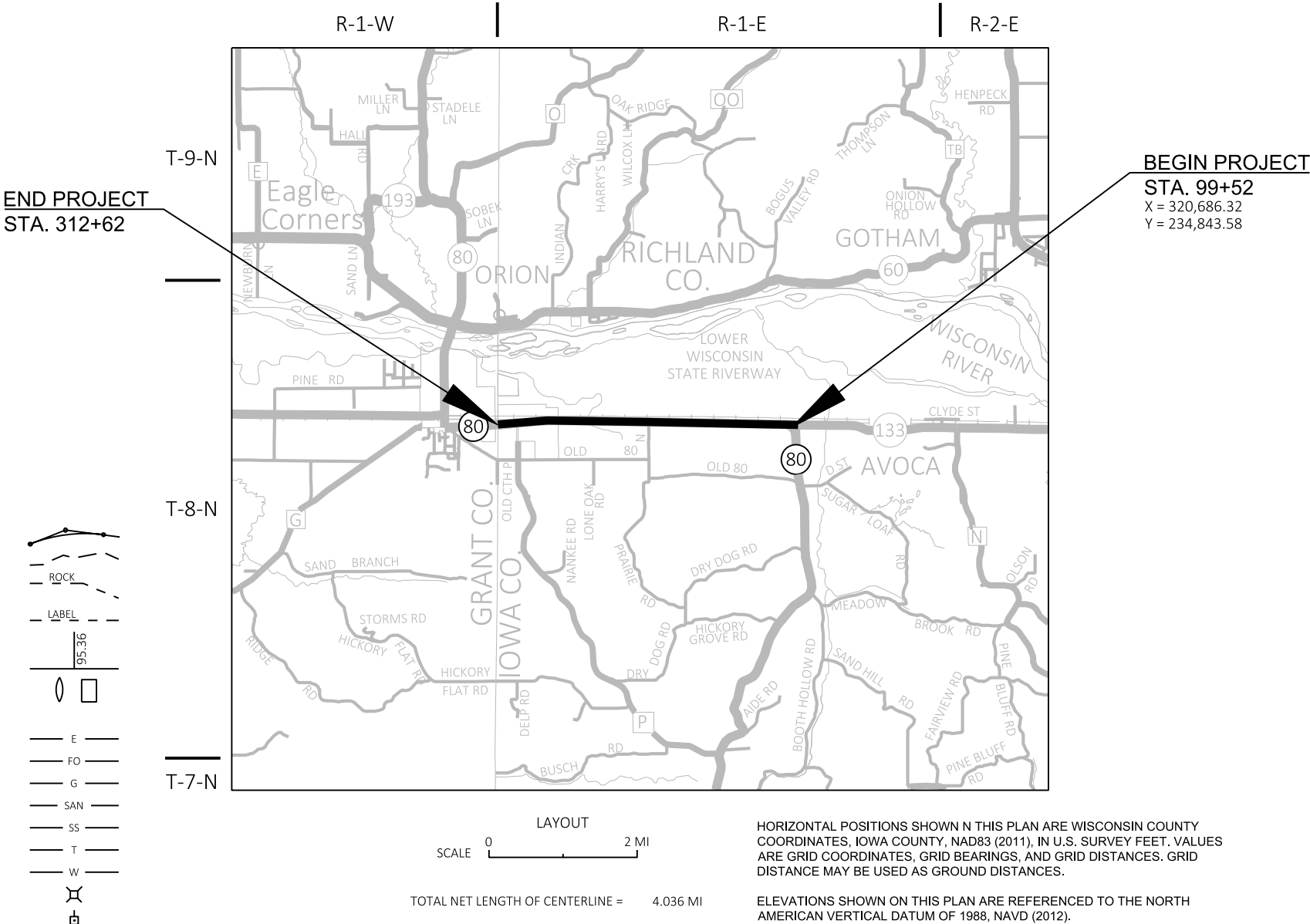
AVOCA - RICHLAND CENTER

STH 133 TO WEST COUNTY LINE

STH 80

IOWA COUNTY

|                      |
|----------------------|
| STATE PROJECT NUMBER |
| 5939-01-60           |



BEGIN PROJECT  
STA. 99+52  
X = 320,686.32  
Y = 234,843.58

END PROJECT  
STA. 312+62

HORIZONTAL POSITIONS SHOWN IN 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.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012).

| STATE PROJECT | FEDERAL PROJECT |          |
|---------------|-----------------|----------|
|               | PROJECT         | CONTRACT |
| 5939-01-60    | WISC 2021272    | 1        |
|               |                 |          |
|               |                 |          |
|               |                 |          |

ORIGINAL PLANS PREPARED BY:

**SA**  
**STRAND**  
ASSOCIATES®  
910 WEST WINGRA DRIVE  
MADISON, WISCONSIN 53715-1943  
(608) 251-4843



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

|                     |                         |
|---------------------|-------------------------|
| PREPARED BY         |                         |
| Surveyor            | STRAND ASSOCIATES, INC. |
| Designer            | STRAND ASSOCIATES, INC. |
| Project Manager     | MAHESH SHRESTHA, P.E.   |
| Regional Examiner   | WISDOT SW REGION        |
| Regional Supervisor | WILLIAM STROBEL, P.E.   |

APPROVED FOR THE DEPARTMENT  
DATE: \_\_\_\_\_  
Mahesh Shrestha  
Digitally signed by Mahesh Shrestha  
Date: 2020.10.23 11:31:54 -05'00'

E

GENERAL NOTES

THE CENTERLINE OF STH 80 IS APPROXIMATELY THE MAINLINE REFERENCE LINE.

DISTURBED AREAS WITHIN THE RIGHT OF WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.

WHEN THE QUANTITY OF BASE AGGREGATE DENSE IS MEASURED FOR PAYMENT IN TONS, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

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

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

ALL EXISTING SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OPERATIONS REQUIRE THEIR REMOVAL OR UNLESS THE ENGINEER APPROVES THEIR REMOVAL.

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, PASSING, OR PARKING LANE.

UTILITY CONTACTS

- \* ALLIANT ENERGY - ELECTRICITY  
MARY MONTGOMERY  
200 FIRST STREET  
CEDAR RAPIDS, IA 52401  
(319) 786-4768  
MARYMONTGOMERY@ALLIANTENERGY.COM

\* CENTURYLINK - COMMUNICATION LINE  
KEVIN ZICKERT  
224 INDUSTRIAL DRIVE  
NORTH PRAIRIE, WI 53153  
(262) 392-5200  
KEVIN.ZICKERT@CENTURYLINK.COM

\* MEDIACOM WISCONSIN LLC -COMMUNICATION LINE  
CRAIG EGGERT  
1240 HIGHWAY 52  
CHATFIELD, MN 55923  
(563) 419-5160  
CEGGERT@MEDIACOMCC.COM

\* MUSCODA UTILITIES - ELECTRICITY  
TROY WARDELL  
P.O. BOX 206  
MUSCODA, WI 53573  
(608) 739-3182  
TWARDELL@WPPIENERGY.ORG
- \* MUSCODA UTILITIES - SEWER  
TROY WARDELL  
P.O. BOX 206  
MUSCODA, WI 53573  
(608) 739-3182  
TWARDELL@WPPIENERGY.ORG

\* MUSCODA UTILITIES - WATER  
TROY WARDELL  
P.O. BOX 206  
MUSCODA, WI 53573  
(608) 739-3182  
TWARDELL@WPPIENERGY.ORG

\* WE ENERGIES - GAS/PETROLEUM  
ADAM MARING  
N3025 14TH AVENUE  
MONROE, WI 53566  
OFFICE: (608) 328-5679  
MOBILE: (608) 426-1715  
ADAM.MARING@WE-ENERGIES.COM

HMA PAVEMENT SUMMARY TABLE

| 2" HMA PAVEMENT (OVERLAY) |           |              |
|---------------------------|-----------|--------------|
| LAYER                     | THICKNESS | HMA TYPE     |
| UPPER LAYER               | 2"        | 4 LT 58-28 S |



Dial 811 or (800)242-8511

www.DiggersHotline.com

\* DENOTES DIGGERS HOTLINE MEMBERS

DNR LIAISON

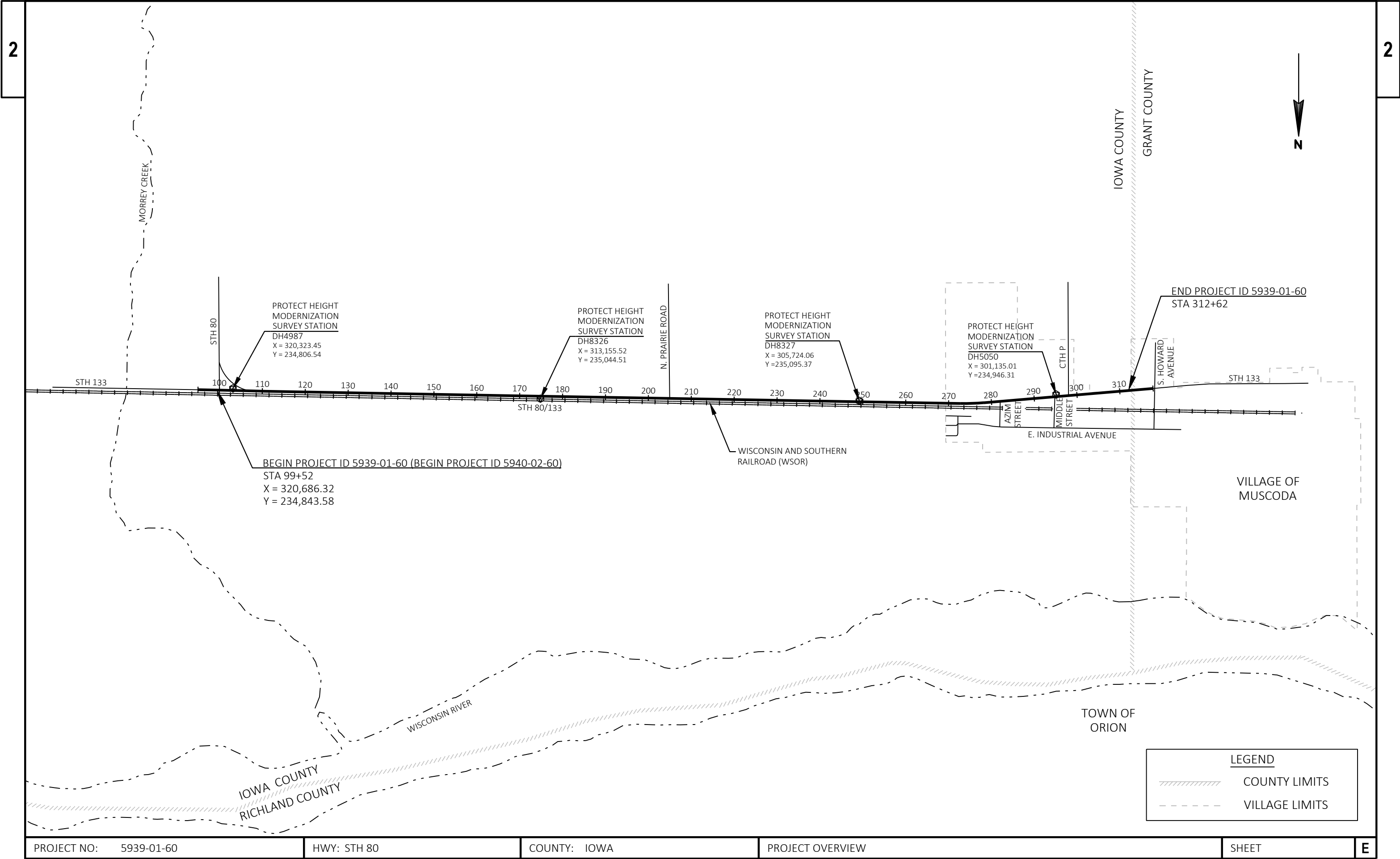
ANDY BARTA  
DNR SOUTH CENTRAL REGION HEADQUARTERS  
3911 FISH HATCHERY ROAD  
FITCHBURG, WI 53711  
(608) 235-2955  
ANDREW.BARTA@WISCONSIN.GOV

WISDOT REGION CONTACT

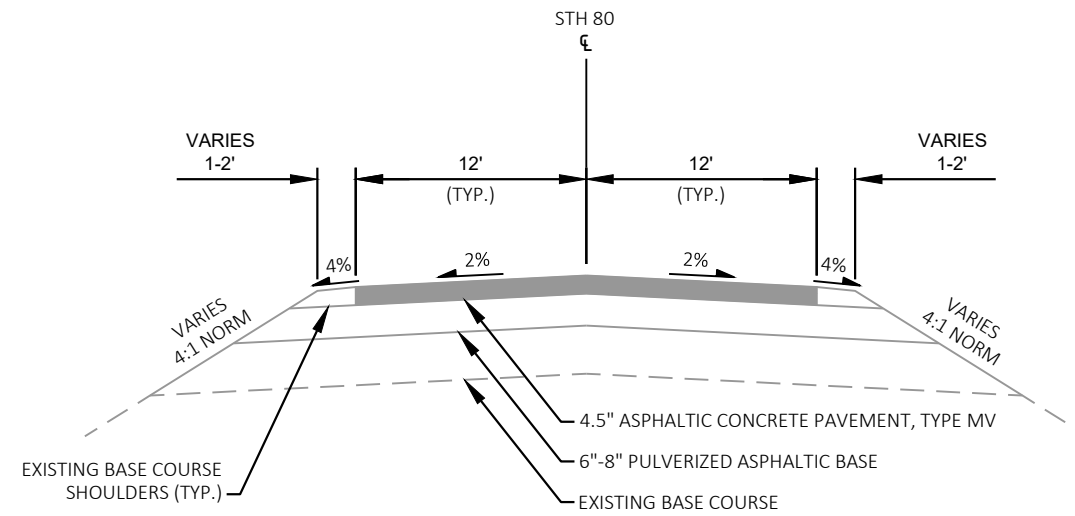
MAHESH SHRESTHA, P.E.  
WISDOT SOUTHWEST REGION  
MADISON OFFICE  
2101 WRIGHT ST.  
MADISON, WI 53704  
(608) 245-2674  
MAHESH.SHRESTHA@DOT.WI.GOV

DESIGN CONSULTANT

KEN SWANSON, P.E.  
STRAND ASSOCIATES, INC.  
910 WEST WINGRA DRIVE  
MADISON, WI 53715  
(608) 251-4843  
KEN.SWANSON@STRAND.COM

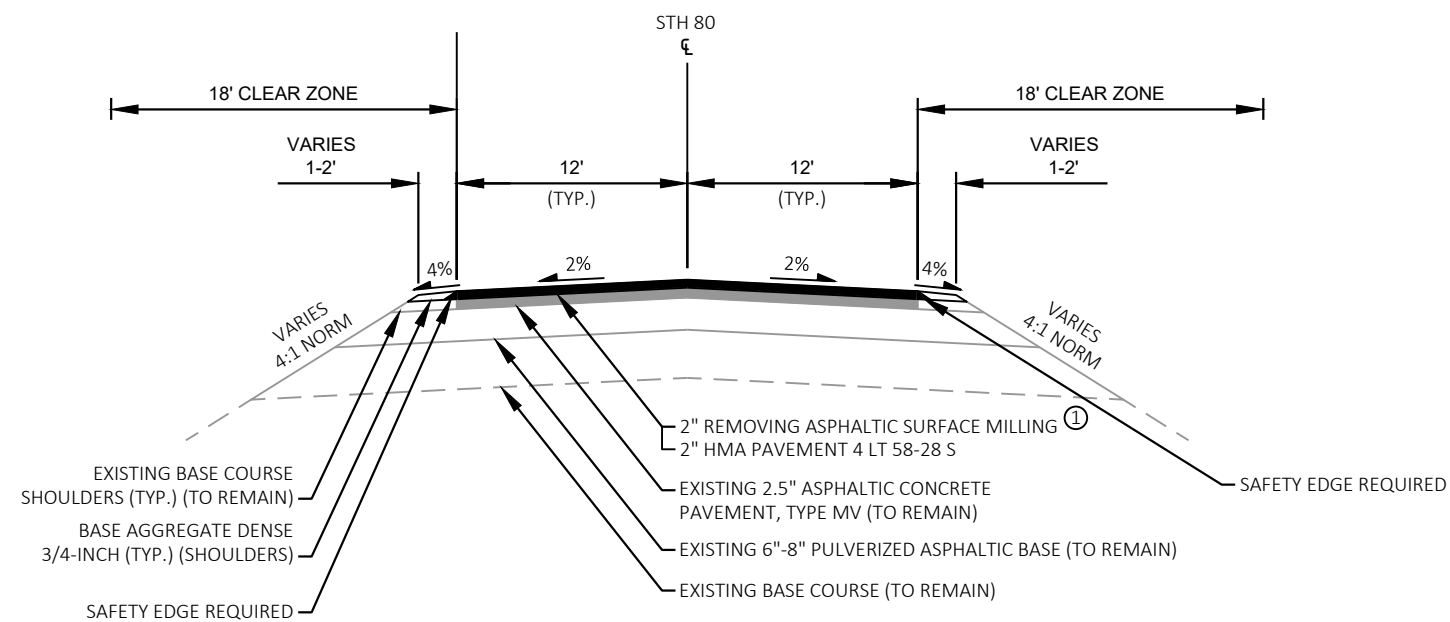


|                        |             |              |                  |       |   |
|------------------------|-------------|--------------|------------------|-------|---|
| PROJECT NO: 5939-01-60 | HWY: STH 80 | COUNTY: IOWA | PROJECT OVERVIEW | SHEET | E |
|------------------------|-------------|--------------|------------------|-------|---|



EXISTING TYPICAL SECTION - STH 80 MAINLINE

STA. 99+52 - STA. 312+62

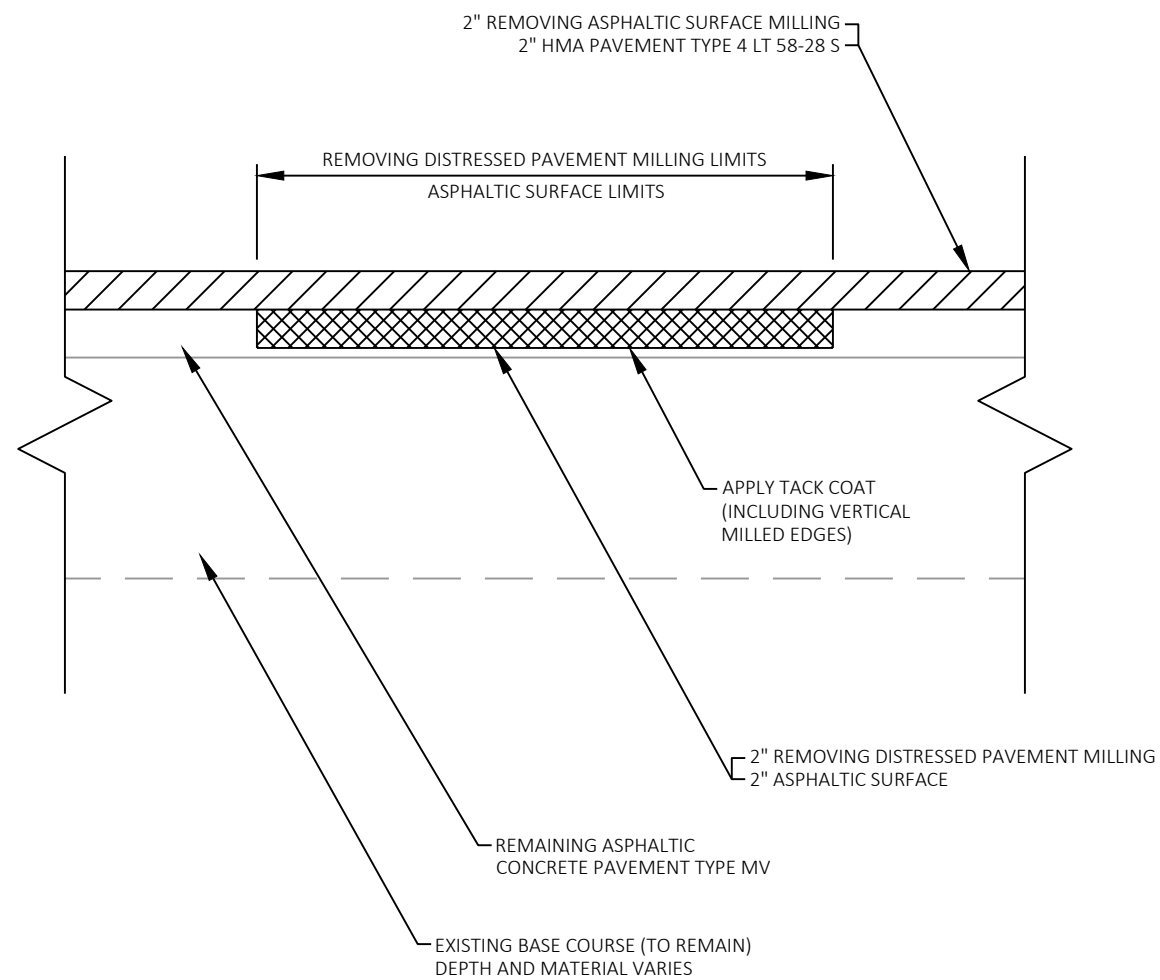


PROPOSED TYPICAL SECTION - STH 80 MAINLINE

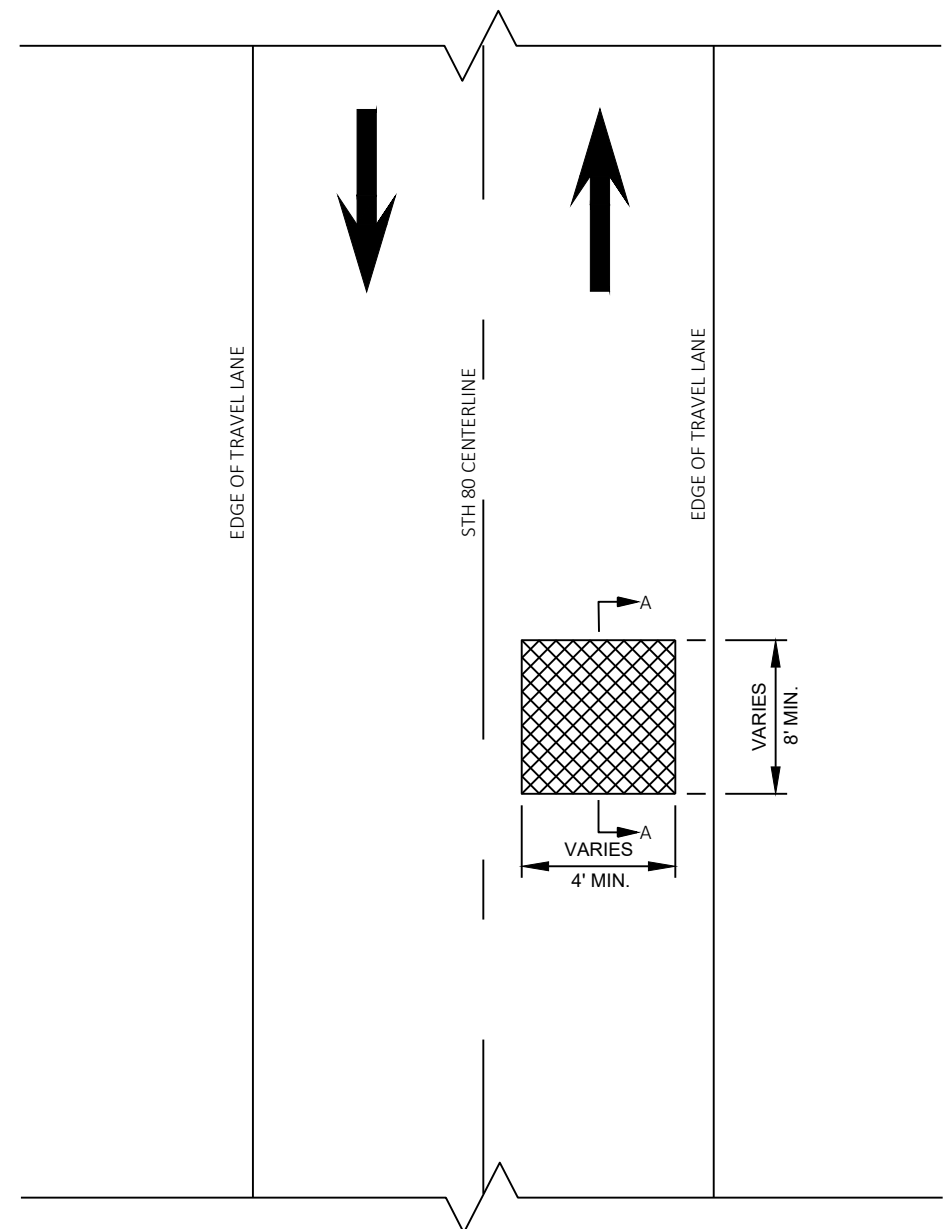
STA. 99+52 - STA. 312+62

① REMOVING DISTRESSED PAVEMENT MILLING REQUIRED AT LOCATIONS DETERMINED BY THE ENGINEER IN THE FIELD. REFER TO CONSTRUCTION DETAILS FOR ADDITIONAL INFORMATION.





SECTION A -A

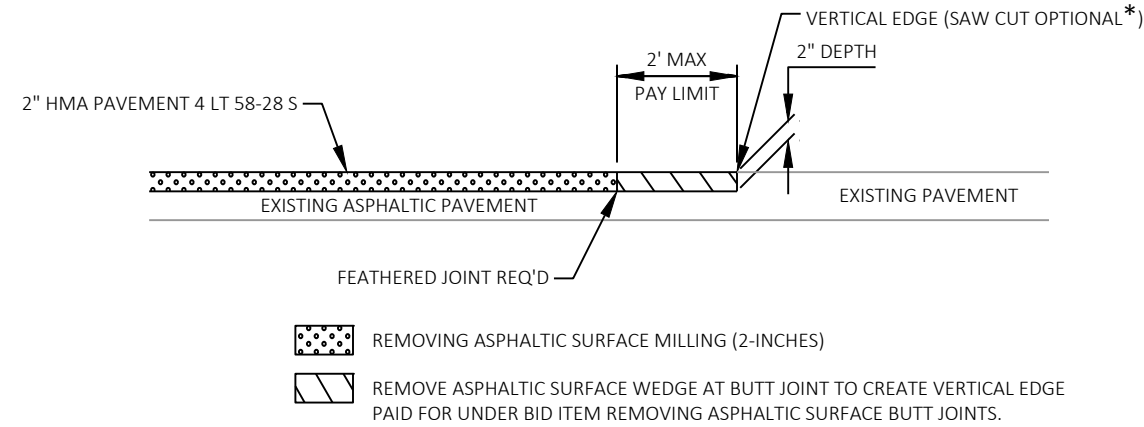


PLAN VIEW

REMOVING DISTRESSED PAVEMENT MILLING

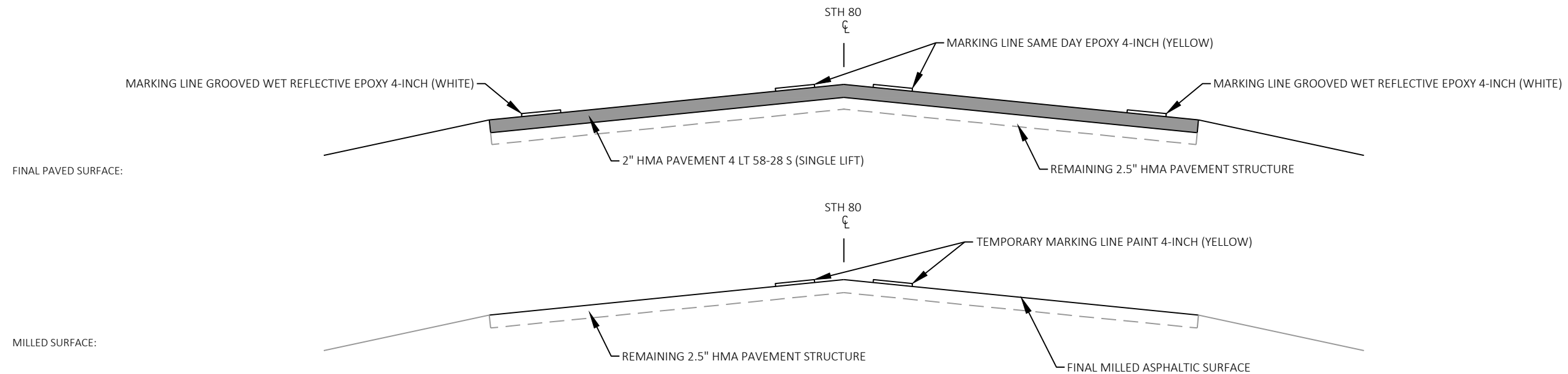
NOTE: EXACT LOCATION AND LIMITS OF REMOVING DISTRESSED PAVEMENT MILLING TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

NOT TO SCALE

REMOVING ASPHALTIC SURFACE BUTT JOINTS DETAIL (NO PROFILE CHANGE)

MAINLINE END PROJECT LIMITS

NOT TO SCALE

PAVEMENT MARKING APPLICATION SEQUENCE DETAIL

NOTE: ALL NEW CENTERLINE PASSING/NO PASSING PAVEMENT MARKING (BEGIN/END) LOCATIONS TO MATCH EXISTING PASSING/NO PASSING MARKING (BEGIN/END) LOCATIONS.

SEE SDD "PAVEMENT MARKING, MAINLINE AND TURN LANES, LONGITUDINAL MARKING (MAINLINE)" FOR ADDITIONAL INFORMATION.

PROJECT NO: 5939-01-60

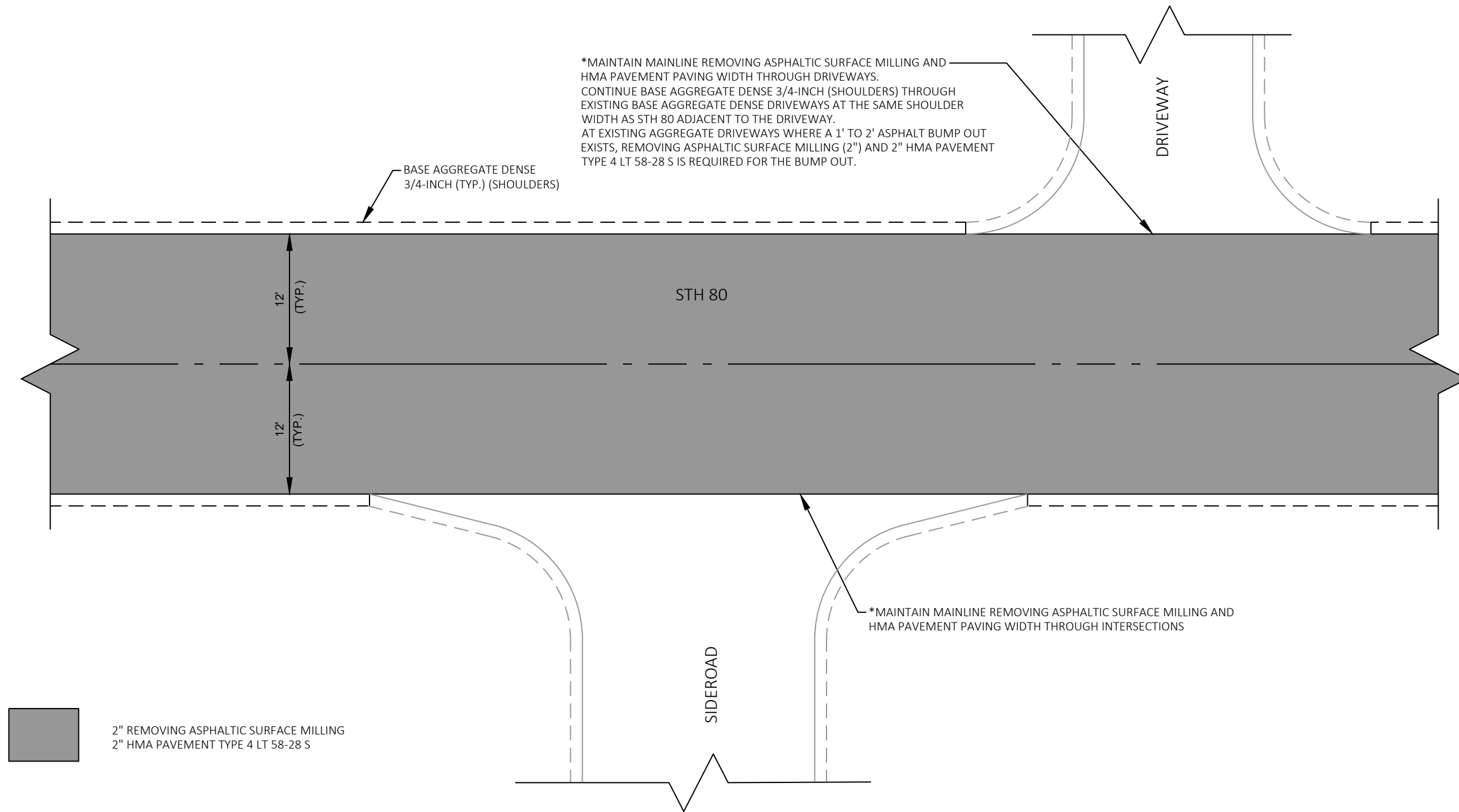
HWY: STH 80

COUNTY: IOWA

CONSTRUCTION DETAILS

SHEET

E



\*NOTE: WHEN APPLYING TACK COAT ON THE MAINLINE MILLED SURFACE, INCLUDE THE VERTICAL MILLED SURFACES ADJACENT TO PAVED SIDEROADS AND DRIVEWAYS.

DETAIL OF REMOVING ASPHALTIC SURFACE MILLING AND HMA PAVEMENT AT INTERSECTIONS AND DRIVEWAYS

## GENERAL NOTES FOR TRAFFIC CONTROL

ALL SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR'S METHODS OR SEQUENCES OF OPERATION.

ROAD MACHINERY, TRUCK ENTRANCE, FLAGMEN AHEAD, ETC., SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED WHEN THE ACTIVITY OR CONDITION DOES NOT EXIST. NO WARNING LIGHT SHALL BE USED WITH A COVERED SIGN.

"WO" SERIES SIGNS ARE "W" SERIES EXCEPT THE BACKGROUND IS ORANGE.

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

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

FOR ADDITIONAL INFORMATION SEE STANDARD DETAIL DRAWINGS:

"TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER

TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC"

"TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"

"MOVING PAVEMENT MARKING OPERATION, TWO-LANE TWO-WAY

ROADWAY"

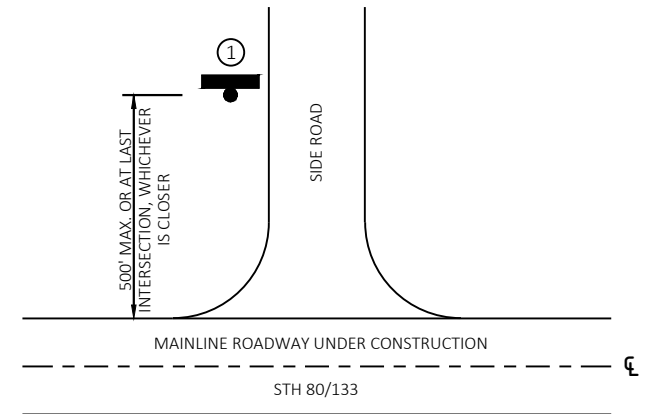
"TRAFFIC CONTROL, DROP-OFF SIGNING"

"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP

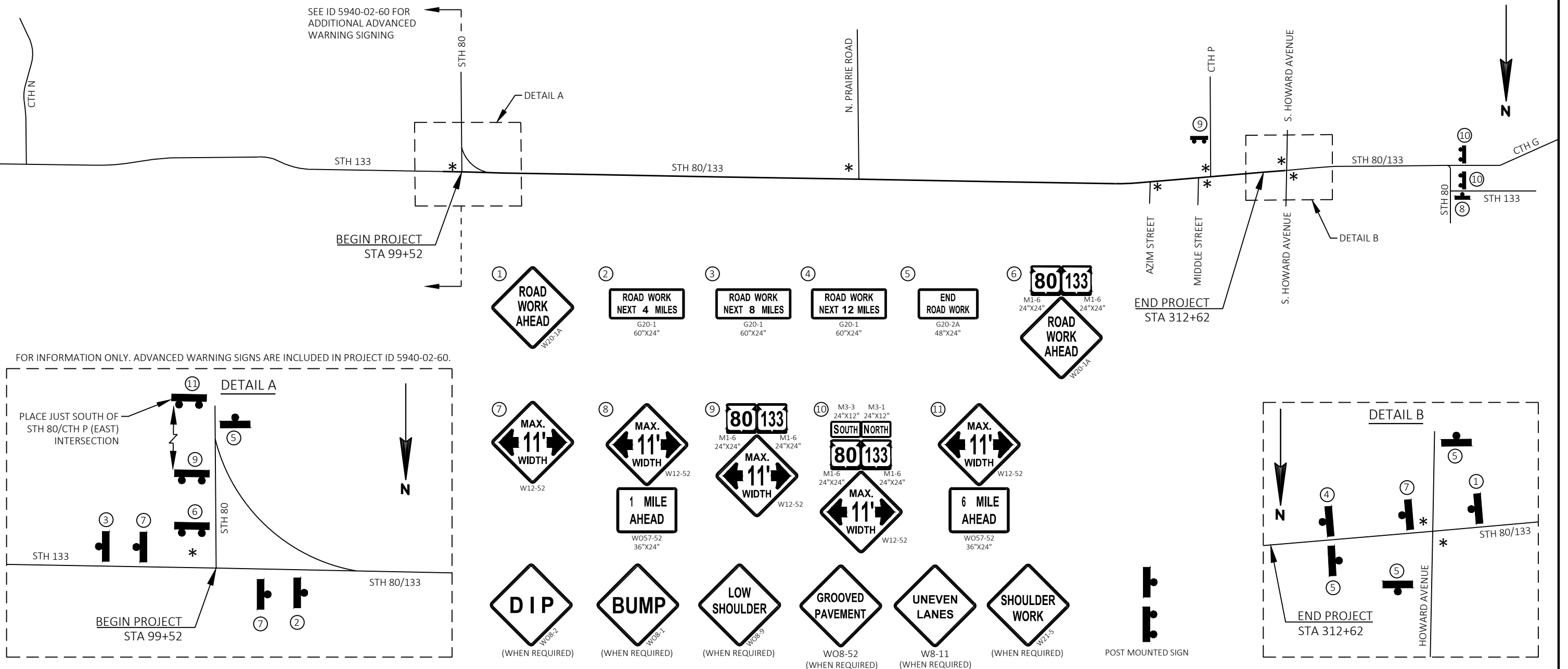
CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET F (TRAFFIC

CONTROL, ADVANCED WIDTH RESTRICTION SIGNING"

"TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES"



\* TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL



PROJECT NO: 5939-01-60

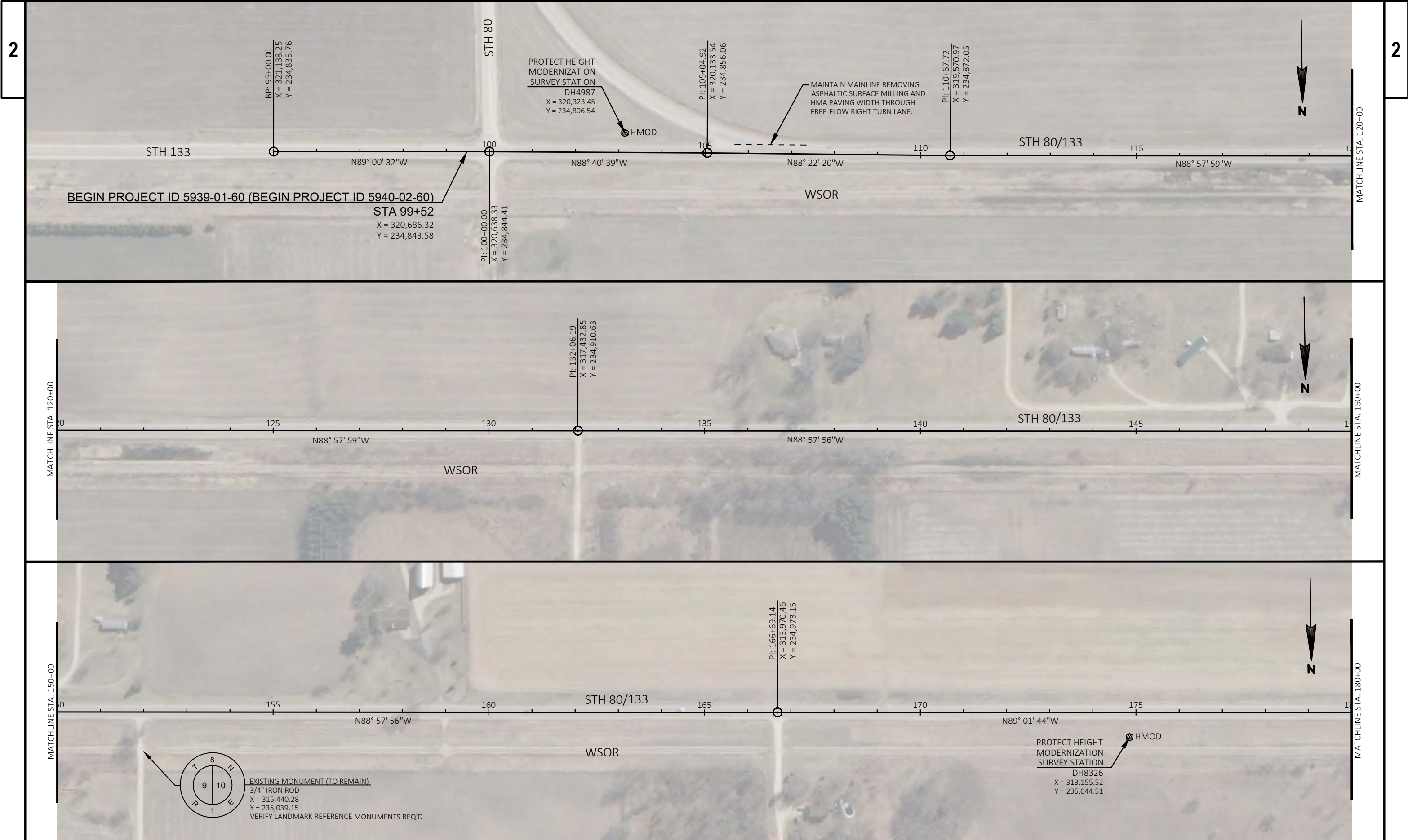
HWY: STH 80

COUNTY: IOWA

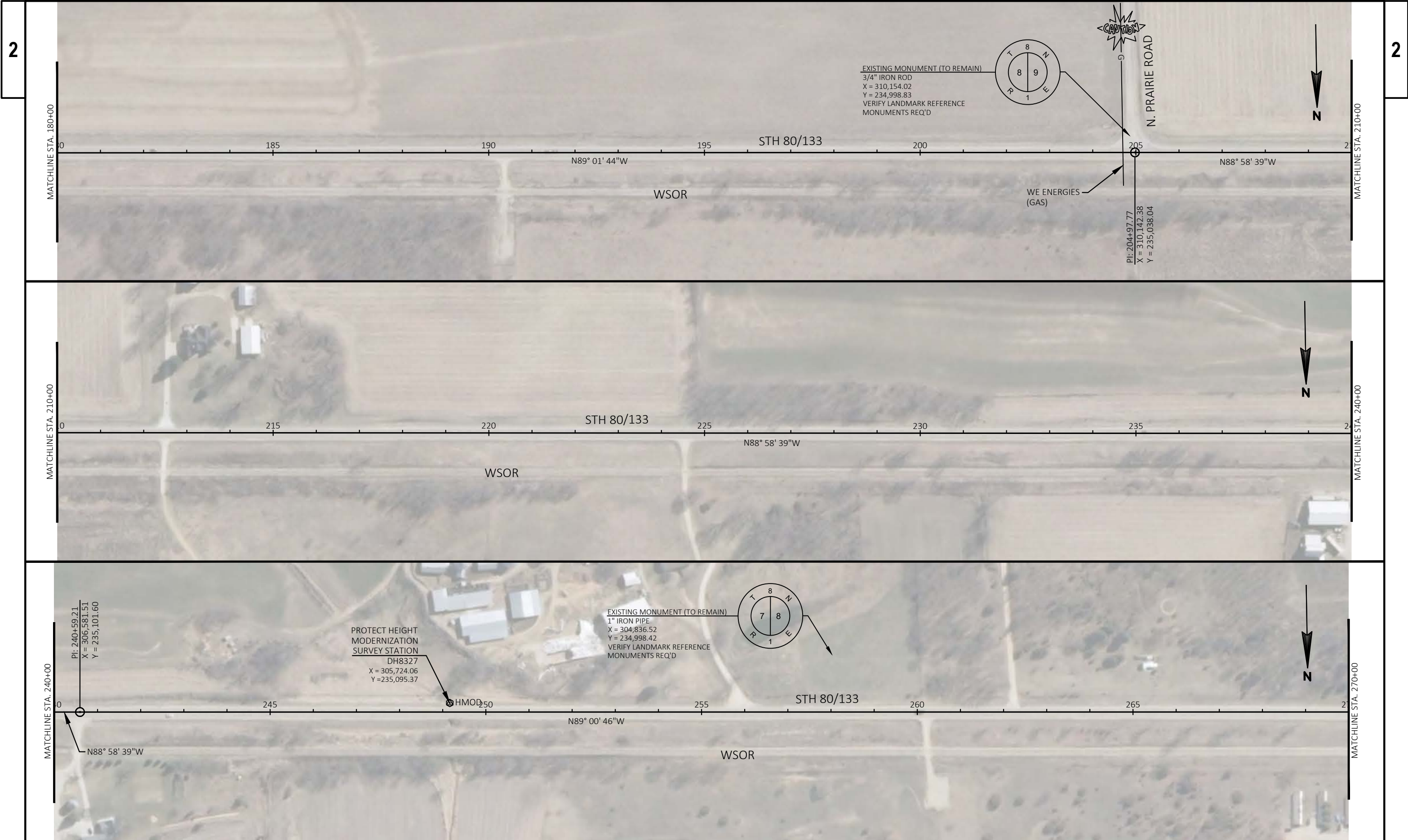
TRAFFIC CONTROL - ADVANCED WARNING AND WIDTH RESTRICTION SIGNING

SHEET

E











Estimate Of Quantities By Plan Sets

| 5939-01-60 |          |                                                                    |      |            |            |
|------------|----------|--------------------------------------------------------------------|------|------------|------------|
| Line       | Item     | Item Description                                                   | Unit | Total      | Qty        |
| 0002       | 204.0115 | Removing Asphaltic Surface Butt Joints                             | SY   | 5.000      | 5.000      |
| 0004       | 204.0120 | Removing Asphaltic Surface Milling                                 | SY   | 56,800.000 | 56,800.000 |
| 0014       | 211.0100 | Prepare Foundation for Asphaltic Paving (project) 01. 5939-01-60   | LS   | 1.000      | 1.000      |
| 0020       | 213.0100 | Finishing Roadway (project) 01. 5939-01-60                         | EACH | 1.000      | 1.000      |
| 0024       | 305.0110 | Base Aggregate Dense 3/4-Inch                                      | TON  | 2,550.000  | 2,550.000  |
| 0028       | 455.0605 | Tack Coat                                                          | GAL  | 4,200.000  | 4,200.000  |
| 0034       | 460.2005 | Incentive Density PWL HMA Pavement                                 | DOL  | 6,440.000  | 6,440.000  |
| 0036       | 460.2007 | Incentive Density HMA Pavement Longitudinal Joints                 | DOL  | 17,050.000 | 17,050.000 |
| 0038       | 460.2010 | Incentive Air Voids HMA Pavement                                   | DOL  | 6,440.000  | 6,440.000  |
| 0040       | 460.5224 | HMA Pavement 4 LT 58-28 S                                          | TON  | 6,440.000  | 6,440.000  |
| 0042       | 465.0105 | Asphaltic Surface                                                  | TON  | 320.000    | 320.000    |
| 0056       | 618.0100 | Maintenance And Repair of Haul Roads (project) 01. 5939-01-60      | EACH | 1.000      | 1.000      |
| 0060       | 619.1000 | Mobilization                                                       | EACH | 0.300      | 0.300      |
| 0062       | 624.0100 | Water                                                              | MGAL | 26.000     | 26.000     |
| 0086       | 642.5201 | Field Office Type C                                                | EACH | 0.500      | 0.500      |
| 0088       | 643.0300 | Traffic Control Drums                                              | DAY  | 250.000    | 250.000    |
| 0096       | 643.0900 | Traffic Control Signs                                              | DAY  | 2,510.000  | 2,510.000  |
| 0104       | 643.5000 | Traffic Control                                                    | EACH | 0.330      | 0.330      |
| 0106       | 646.1040 | Marking Line Grooved Wet Ref Epoxy 4-Inch                          | LF   | 42,000.000 | 42,000.000 |
| 0108       | 646.4520 | Marking Line Same Day Epoxy 4-Inch                                 | LF   | 10,130.000 | 10,130.000 |
| 0110       | 649.0105 | Temporary Marking Line Paint 4-Inch                                | LF   | 6,518.000  | 6,518.000  |
| 0114       | 650.8000 | Construction Staking Resurfacing Reference                         | LF   | 21,300.000 | 21,300.000 |
| 0118       | 650.9910 | Construction Staking Supplemental Control (project) 01. 5939-01-60 | LS   | 1.000      | 1.000      |
| 0126       | 740.0440 | Incentive IRI Ride                                                 | DOL  | 16,147.000 | 16,147.000 |
| 0128       | ASP.1T0A | On-the-Job Training Apprentice at \$5.00/HR                        | HRS  | 2,000.000  | 2,000.000  |
| 0130       | ASP.1T0G | On-the-Job Training Graduate at \$5.00/HR                          | HRS  | 1,320.000  | 1,320.000  |
| 0132       | SPV.0060 | Special 01. Verify Landmark Reference Monuments                    | EACH | 3.000      | 3.000      |
| 0138       | SPV.0180 | Special 01. Removing Distressed Pavement Milling                   | SY   | 2,850.000  | 2,850.000  |



3

3

| REMOVING ASPHALTIC SURFACE |                   |          |             |          |                     |
|----------------------------|-------------------|----------|-------------|----------|---------------------|
|                            |                   |          | SPV.0180.01 |          |                     |
|                            |                   |          | 204.0115    | 204.0120 | REMOVING DISTRESSED |
|                            |                   |          | BUTT JOINTS | MILLING  | PAVEMENT MILLING    |
| CATEGORY                   | STATION - STATION | LOCATION | SY          | SY       | SY                  |
| 0010                       | 99+52 - 205+00    | LT/RT    | ---         | 28,100   | ---                 |
|                            | 205+00 - 312+62   | LT/RT    | 5           | 28,700   | ---                 |
|                            | UNDISTRIBUTED     | LT/RT    | ---         | ---      | 2,850               |
|                            | TOTALS            |          | 5           | 56,800   | 2,850               |

| PREPARE FOUNDATION FOR ASPHALTIC PAVING |                |                   |    |
|-----------------------------------------|----------------|-------------------|----|
| 211.0100                                |                |                   |    |
| CATEGORY                                | PROJECT        | STATION - STATION | LS |
| 0010                                    | 01. 5939-01-60 | 99+52 - 312+62    | 1  |

| FINISHING ROADWAY |                |      |
|-------------------|----------------|------|
| 213.0100          |                |      |
| CATEGORY          | PROJECT        | EACH |
| 0010              | 01. 5939-01-60 | 1    |

| BASE AGGREGATE DENSE 3/4-INCH |                   |       |
|-------------------------------|-------------------|-------|
| 305.0110                      |                   |       |
| CATEGORY                      | STATION - STATION | TON   |
| 0010                          | 99+52 - 205+00    | 1,250 |
|                               | 205+00 - 312+62   | 1,300 |
|                               | TOTAL             | 2,550 |

| ASPHALTIC ITEMS                          |                   |       |     |       |
|------------------------------------------|-------------------|-------|-----|-------|
| 460.5224<br>HMA PAVEMENT<br>4 LT 58-28 S |                   |       |     |       |
| 465.0105<br>ASPHALTIC<br>SURFACE         |                   |       |     |       |
| 455.0605<br>TACK<br>COAT                 |                   |       |     |       |
| CATEGORY                                 | STATION - STATION | TON   | TON | GAL   |
| 0010                                     | 99+52 - 205+00    | 3,190 | --- | 2,000 |
|                                          | 205+00 - 312+62   | 3,250 | --- | 2,000 |
|                                          | (1) UNDISTRIBUTED | ---   | 320 | 200   |
|                                          | TOTALS            | 6,440 | 320 | 4,200 |

| MAINTENANCE AND REPAIR OF HAUL ROADS |                |      |
|--------------------------------------|----------------|------|
| 618.0100                             |                |      |
| CATEGORY                             | PROJECT        | EACH |
| 0010                                 | 01. 5939-01-60 | 1    |

NOTE: HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LB/SY/IN.  
TACK COAT QUANTITY IS BASED ON AN APPLICATION RATE OF 0.07 GAL/SY.  
(1) FOR REMOVING DISTRESSED PAVEMENT MILLING AREAS.

| PWL MIXTURE USE TABLE |                 |             |                             |              |       |           |                                            |                                             |
|-----------------------|-----------------|-------------|-----------------------------|--------------|-------|-----------|--------------------------------------------|---------------------------------------------|
| LOCATION              | STATION         | MIXTURE USE | UNDERLYING SURFACE          | BID ITEM     | TONS  | THICKNESS | QUALITY MANAGEMENT PROGRAM TO BE USED FOR: |                                             |
|                       |                 |             |                             |              |       |           | MIXTURE ACCEPTANCE                         | DENSITY ACCEPTANCE                          |
| 12 FOOT DRIVING LANE  | 99+52 to 312+62 | UPPER LAYER | MILLED EXISTING HMA SURFACE | 4 LT 58-28 S | 6,440 | 2"        | INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010  | INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005 |

| MOBILIZATION |                |      |
|--------------|----------------|------|
| 619.1000     |                |      |
| CATEGORY     | PROJECT        | EACH |
| 0010         | 01. 5939-01-60 | 0.3  |

| WATER FOR BASE COMPACTION |                   |            |
|---------------------------|-------------------|------------|
| 624.0100                  |                   |            |
| CATEGORY                  | STATION - STATION | WATER MGAL |
| 0010                      | 99+52 - 205+00    | 13         |
|                           | 205+00 - 312+62   | 13         |
|                           | TOTAL             | 26         |

| FIELD OFFICE TYPE C |                |      |
|---------------------|----------------|------|
| 642.5201            |                |      |
| CATEGORY            | PROJECT        | EACH |
| 0010                | 01. 5939-01-60 | 0.5  |

TRAFFIC CONTROL AND DETOUR ITEMS

| CATEGORY | STATION                                | DAYS | 643.0300 |     | 643.0900 |       |
|----------|----------------------------------------|------|----------|-----|----------|-------|
|          |                                        |      | TRAFFIC  |     | TRAFFIC  |       |
|          |                                        |      | CONTROL  |     | CONTROL  |       |
|          |                                        |      | DRUMS    |     | SIGNS    |       |
|          |                                        |      | EACH     | DAY | EACH     | DAY   |
| 0010     | ADVANCED WARNING AND WIDTH RESTRICTION | 75   | ---      | --- | 26       | 1,950 |
|          | DROP-OFF AND MILLED SURFACE            | 20   | ---      | --- | 28       | 560   |
|          | UNDISTRIBUTED                          | 25   | 10       | 250 | ---      | ---   |
| TOTALS   |                                        |      | 250      |     | 2,510    |       |

PAVEMENT MARKING ITEMS

| CATEGORY  | STATION - STATION | 646.1040        |  | 646.4520              |  |
|-----------|-------------------|-----------------|--|-----------------------|--|
|           |                   | MARKING LINE    |  | MARKING LINE          |  |
|           |                   | GROOVED WET REF |  | SAME DAY EPOXY 4-INCH |  |
|           |                   | EPOXY 4-INCH    |  | DASHED YELLOW         |  |
|           |                   | WHITE           |  | SOLID                 |  |
|           |                   | LF              |  | YELLOW                |  |
|           |                   | LF              |  | 12.5-FOOT SEG.,       |  |
|           |                   | LF              |  | 37.5-FOOT GAP         |  |
|           |                   | LF              |  | LF                    |  |
| 0010      | 99+52 - 205+00    | 20,800          |  | 1,170                 |  |
|           | 205+00 - 312+62   | 21,200          |  | 3,650                 |  |
| SUBTOTALS |                   | 42,000          |  | 4,820                 |  |
| TOTALS    |                   | 42,000          |  | 10,130                |  |

CONSTRUCTION STAKING SUMMARY

| CATEGORY | STATION - STATION | 650.8000            |  |
|----------|-------------------|---------------------|--|
|          |                   | CONSTRUCTION        |  |
|          |                   | STAKING RESURFACING |  |
|          |                   | REFERENCE           |  |
|          |                   | LF                  |  |
| 0010     | 99+52 - 312+62    | 21,300              |  |

TRAFFIC CONTROL

| CATEGORY | PROJECT        | 643.5000 |
|----------|----------------|----------|
|          |                | EACH     |
| 0010     | 01. 5939-01-60 | 0.33     |

TEMPORARY MARKING LINE PAINT 4-INCH

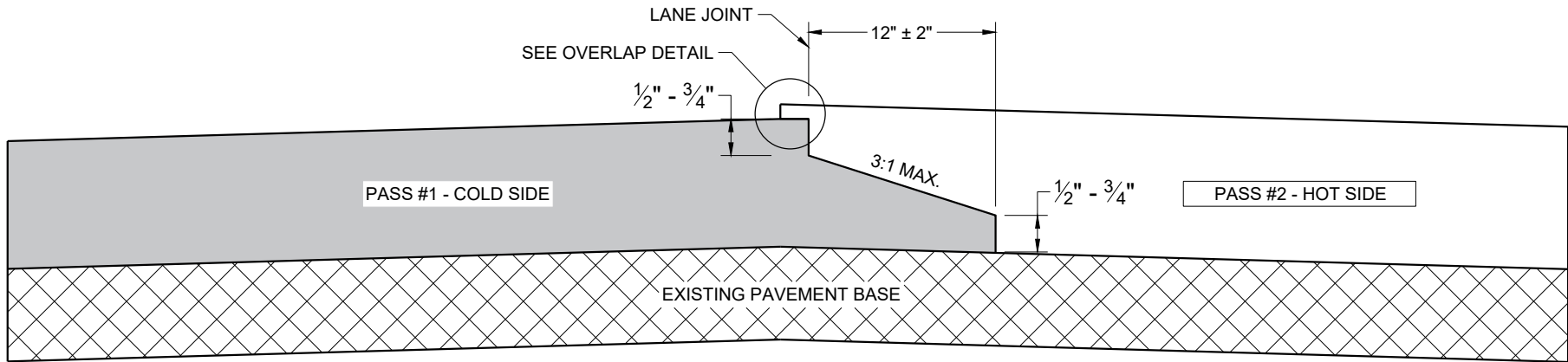
| CATEGORY  | STATION - STATION | 649.0105      |              |
|-----------|-------------------|---------------|--------------|
|           |                   | DASHED YELLOW |              |
|           |                   | SOLID         | 4-FOOT SEG., |
|           |                   | YELLOW        | 46-FOOT GAP  |
|           |                   | LF            | LF           |
| 0010      | 99+52 - 205+00    | 1,170         | 837          |
|           | 205+00 - 312+62   | 3,650         | 861          |
| SUBTOTALS |                   | 4,820         | 1,698        |
| TOTAL     |                   | 6,518         |              |

VERIFY LANDMARK REFERENCE MONUMENTS

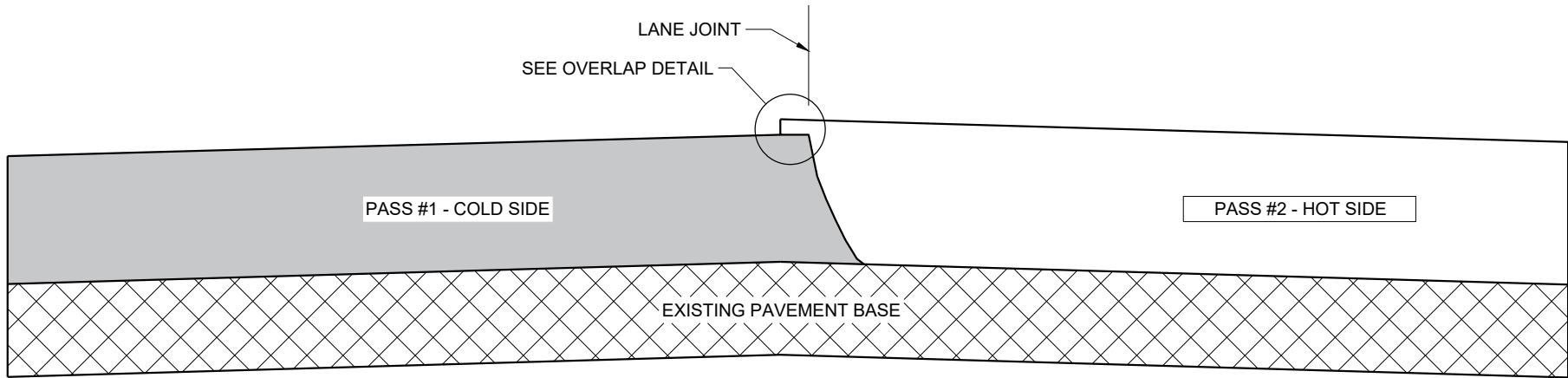
| CATEGORY | STATION | SPV.0060.01 |
|----------|---------|-------------|
|          |         | EACH        |
| 0010     | 152+00  | 1           |
|          | 204+85  | 1           |
|          | 258+02  | 1           |
| TOTAL    |         | 3           |

Standard Detail Drawing List

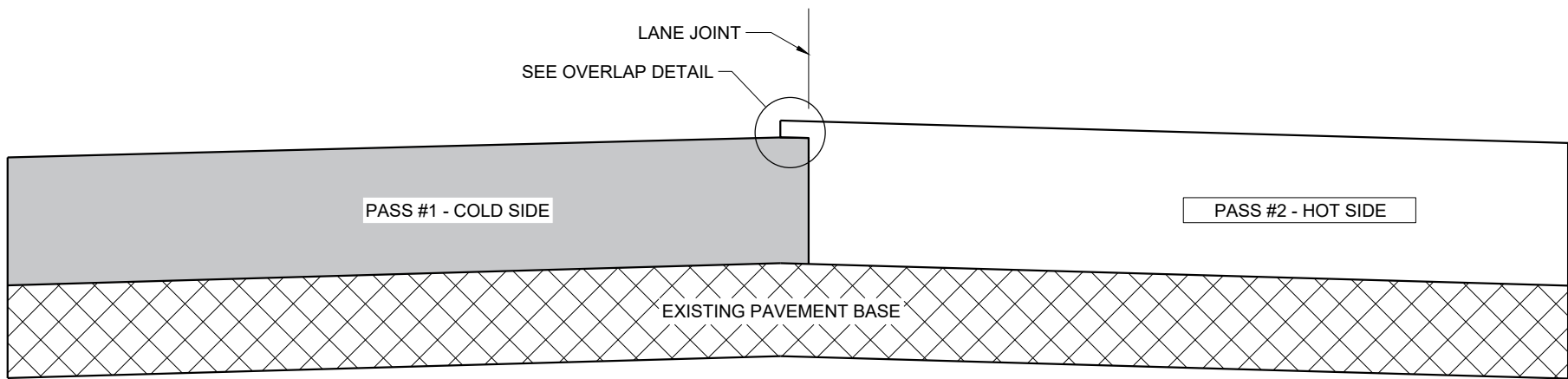
|           |                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------|
| 13C19-03  | HMA LONGITUDINAL JOINTS                                                                            |
| 14B29-01  | SAFETY EDGE                                                                                        |
| 15C02-08F | ADVANCED WIDTH RESTRICTION SIGNING                                                                 |
| 15C04-05  | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC |
| 15C08-20A | LONGITUDINAL MARKING (MAINLINE)                                                                    |
| 15C11-07B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS                                  |
| 15C12-07  | TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION                                           |
| 15C19-06A | MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY                                         |
| 15C35-04A | PAVEMENT MARKING (INTERSECTIONS)                                                                   |
| 15D28-04  | TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY                               |
| 15D38-02A | TEMPORARY TRAFFIC CONTROL SIGN MOUNTING                                                            |
| 15D38-02B | ATTACHMENT OF SIGNS TO POSTS                                                                       |
| 15D39-02  | TRAFFIC CONTROL, DROP-OFF SIGNING                                                                  |
| 15D44-02  | TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES                                          |



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



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

**GENERAL NOTES**

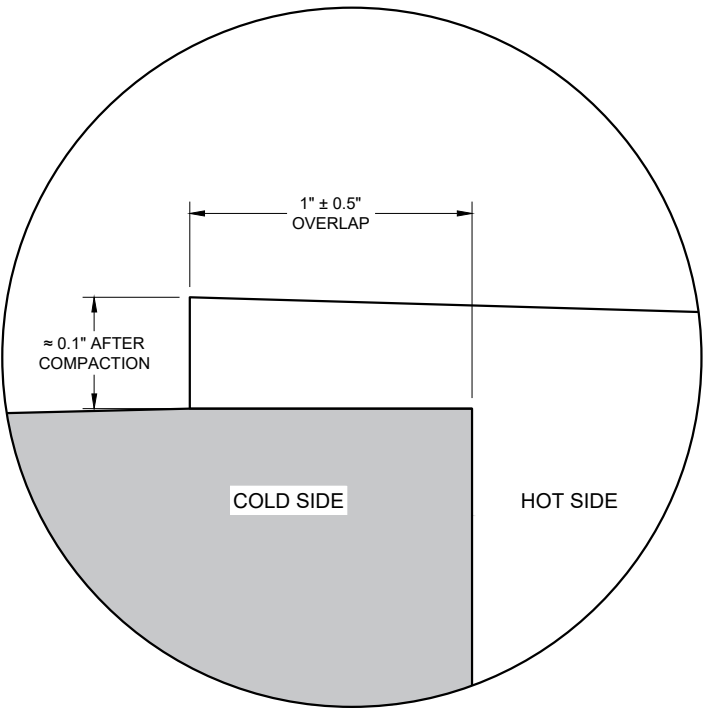
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 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.



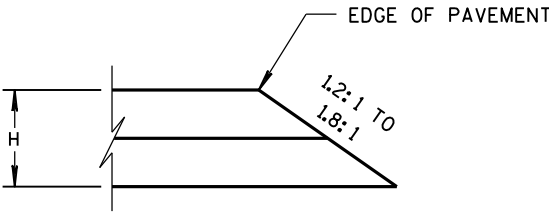
**OVERLAP DETAIL (TYPICAL)**

**HMA LONGITUDINAL JOINTS**

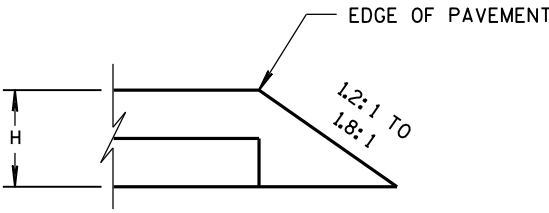
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

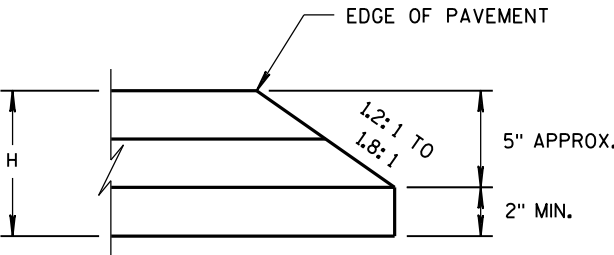
FHWA



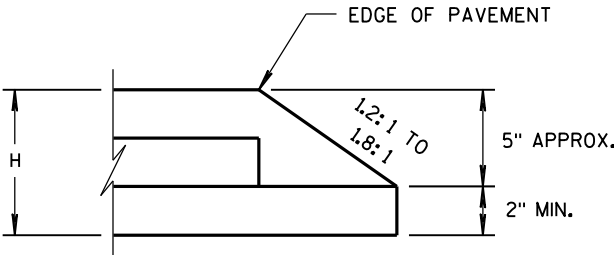
CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER  
FOR H 5" OR LESS

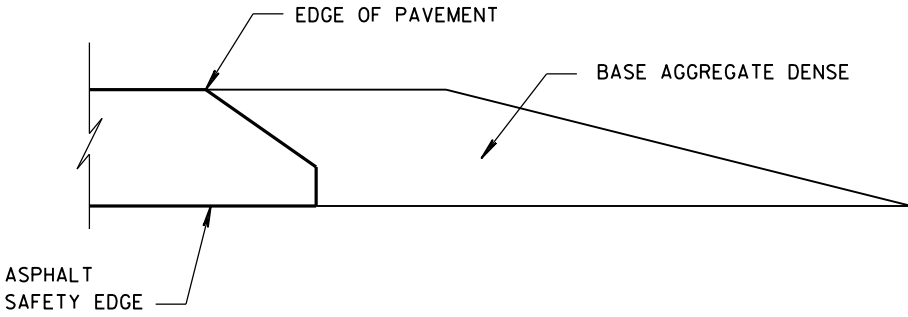


CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER  
FOR H GREATER THAN 5"

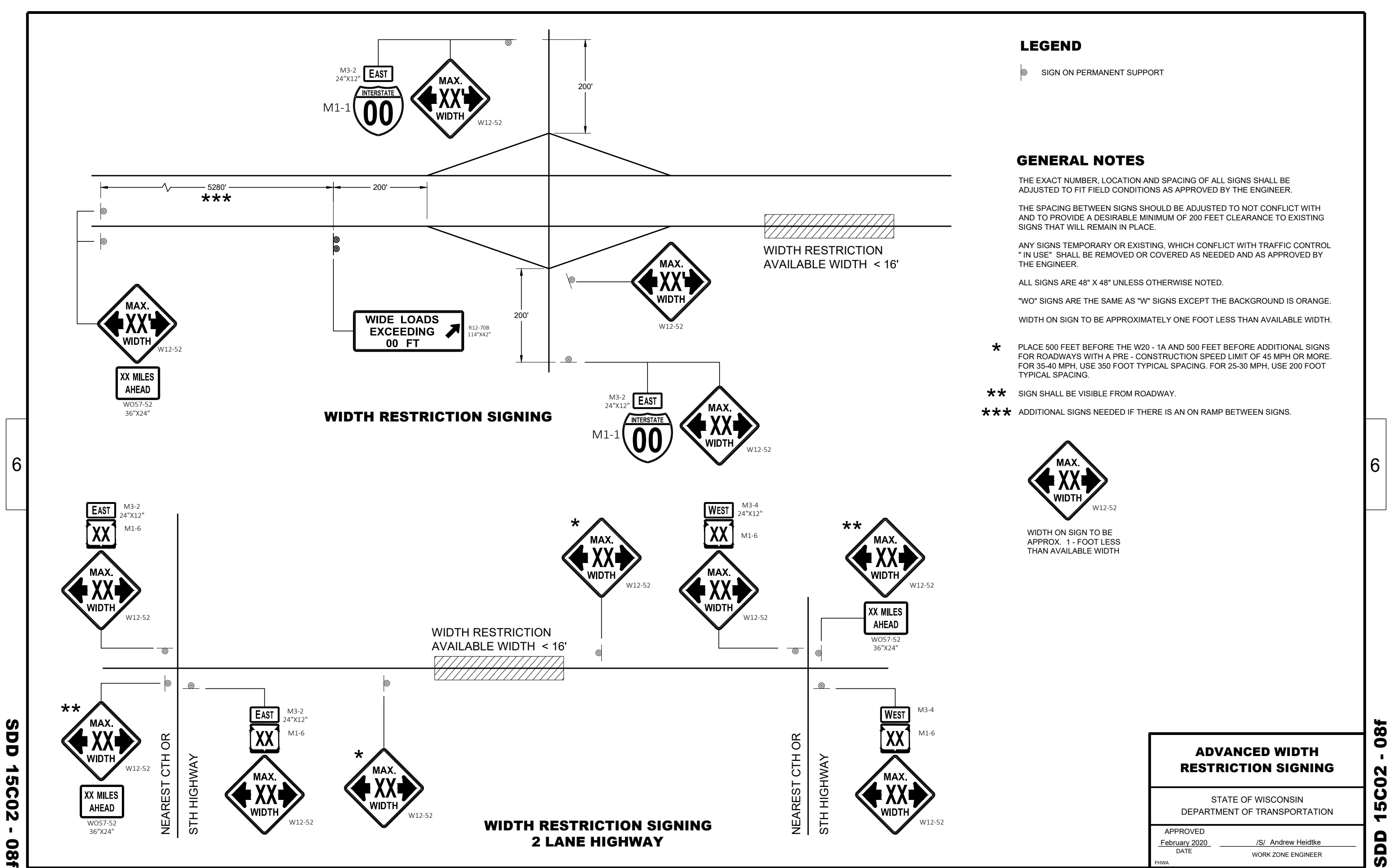
HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

|                                                    |                                                                        |
|----------------------------------------------------|------------------------------------------------------------------------|
| SAFETY EDGE <sub>SM</sub>                          |                                                                        |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                                        |
| APPROVED<br>DATE<br>11/30/2012                     | /S/ Jerry H. Zogg<br>ROADWAY STANDARDS DEVELOPMENT<br>ENGINEER<br>FHWA |





GENERAL NOTES

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

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

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

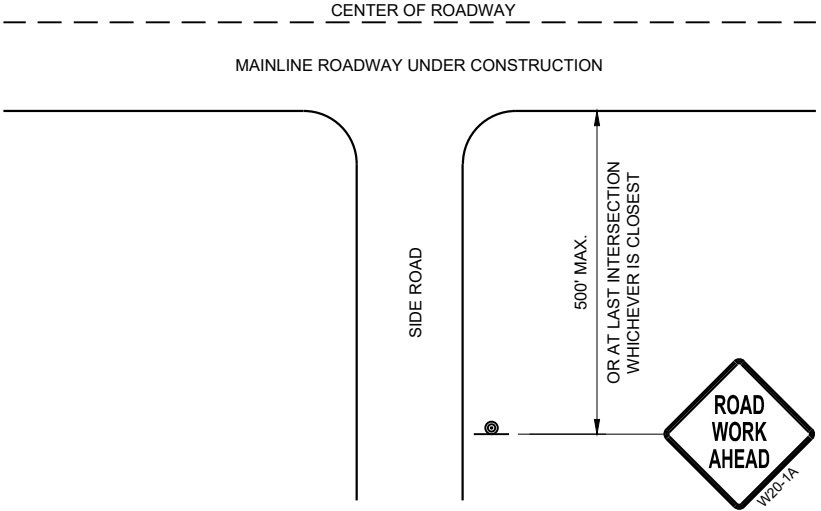
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

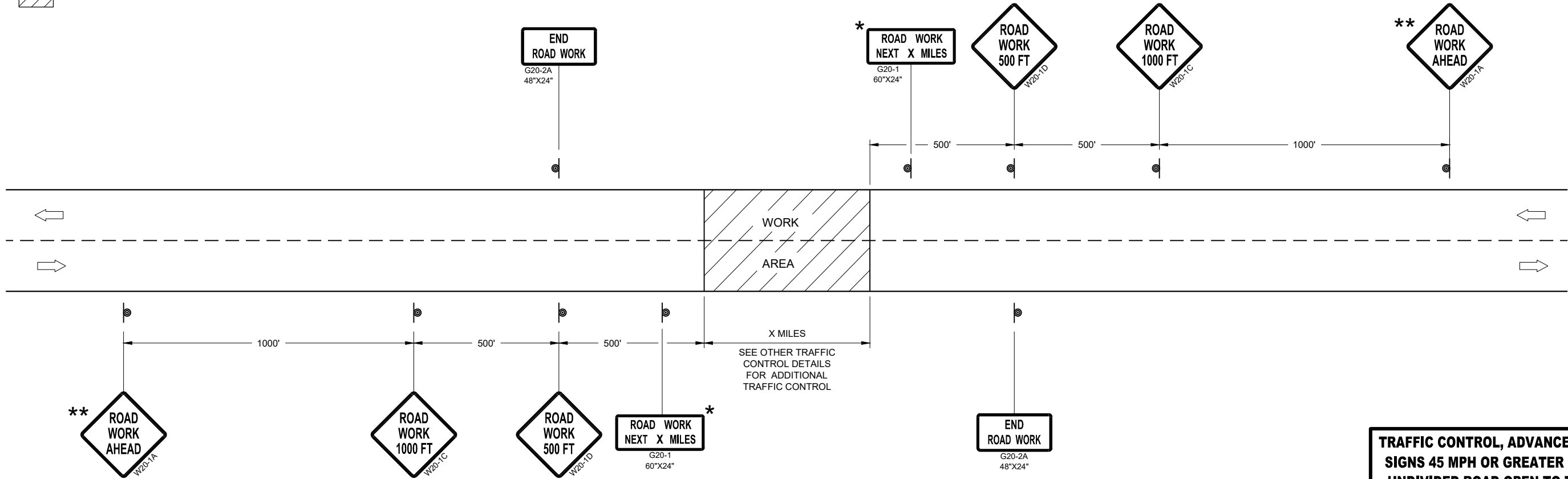
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL

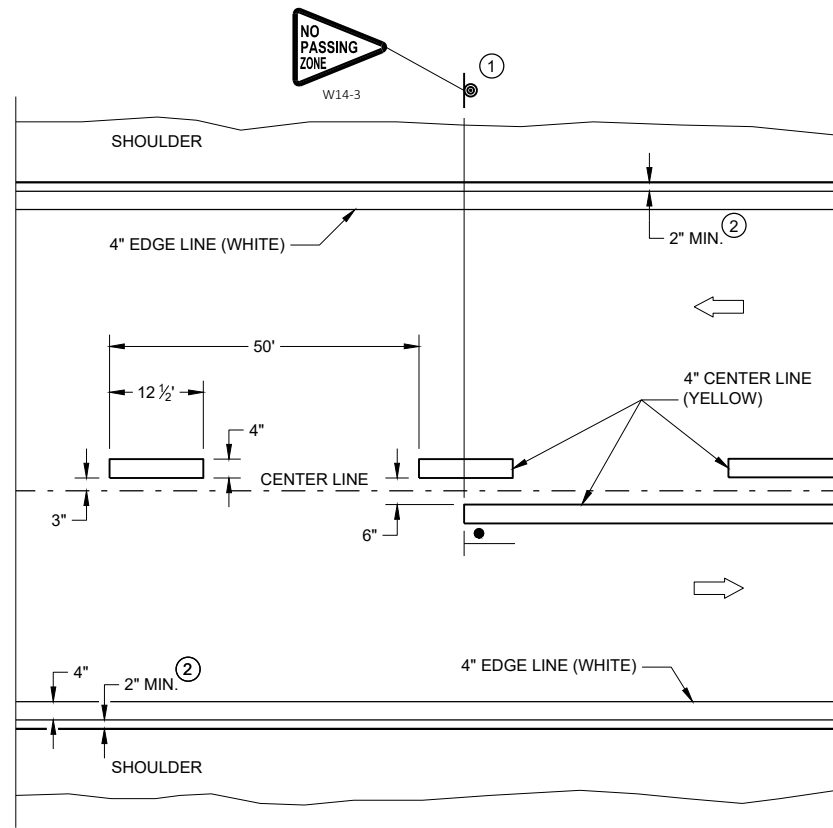


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

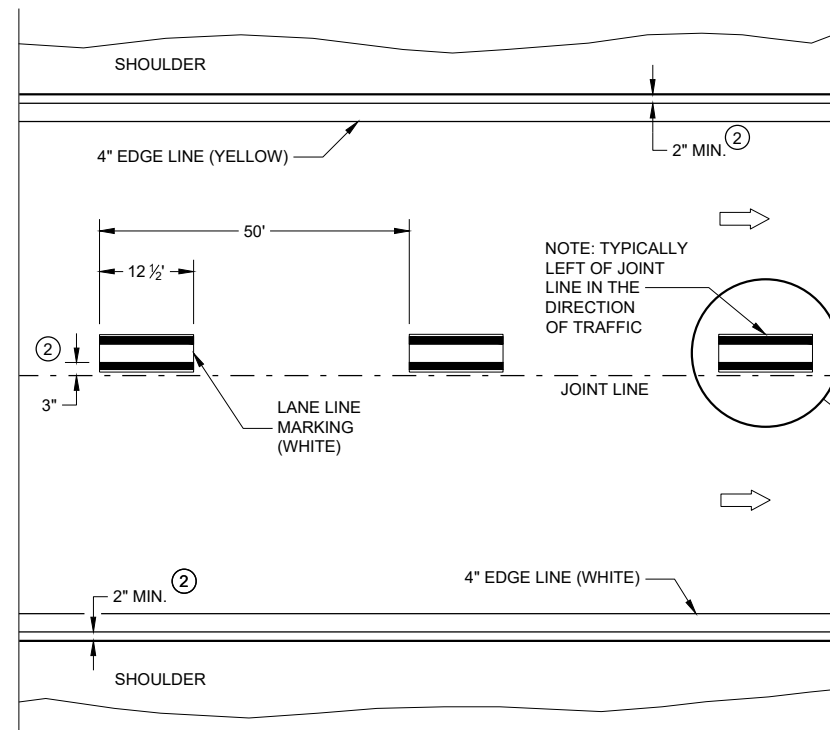
TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 45 MPH OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA

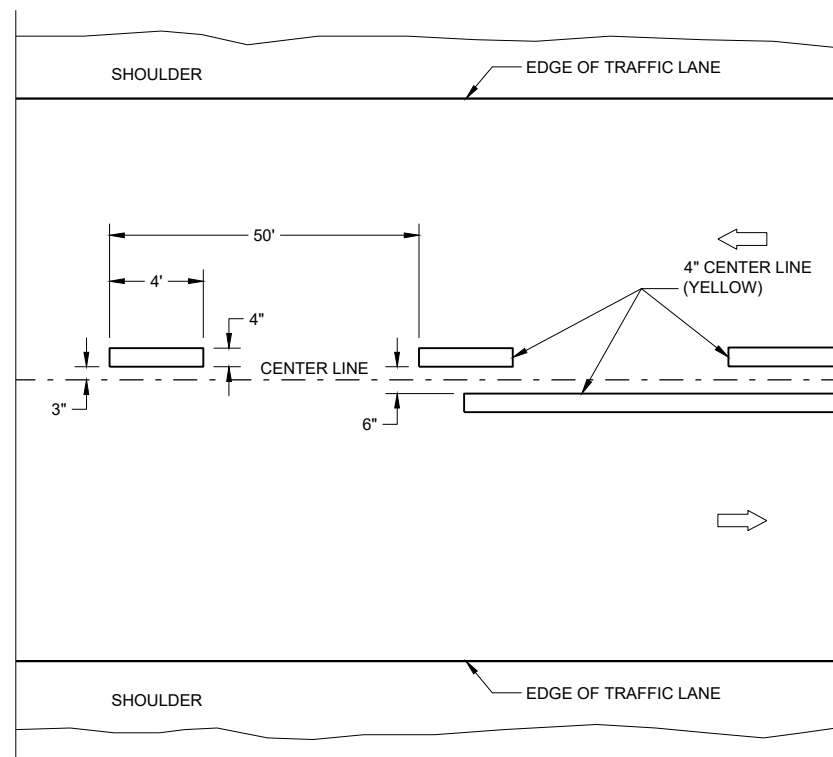


## TWO WAY TRAFFIC

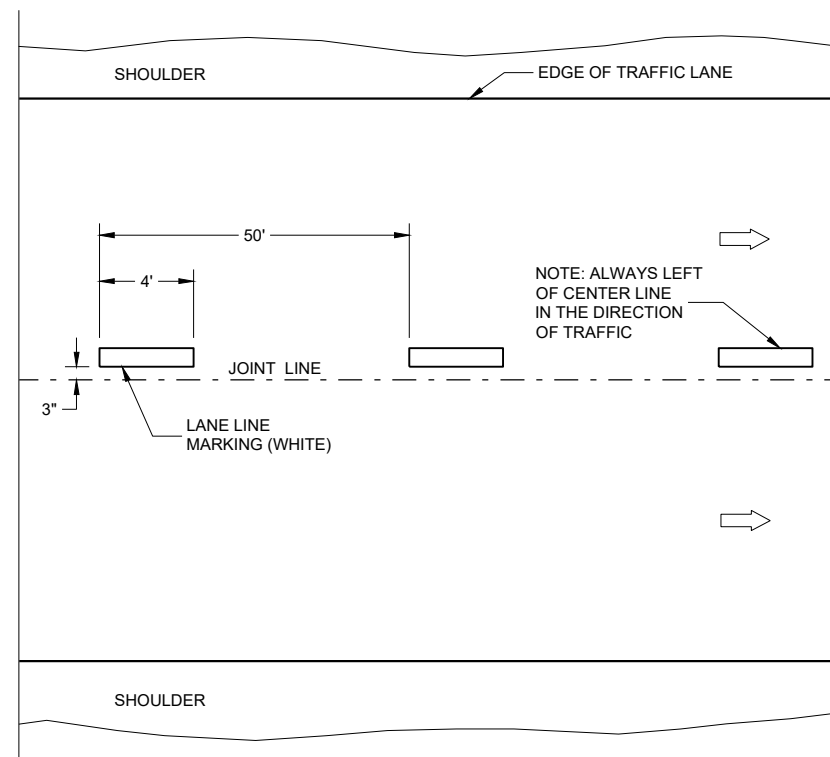


## ONE WAY TRAFFIC

## PERMANENT PAVEMENT MARKING



## TWO WAY TRAFFIC



## ONE WAY TRAFFIC

## TEMPORARY PAVEMENT MARKING

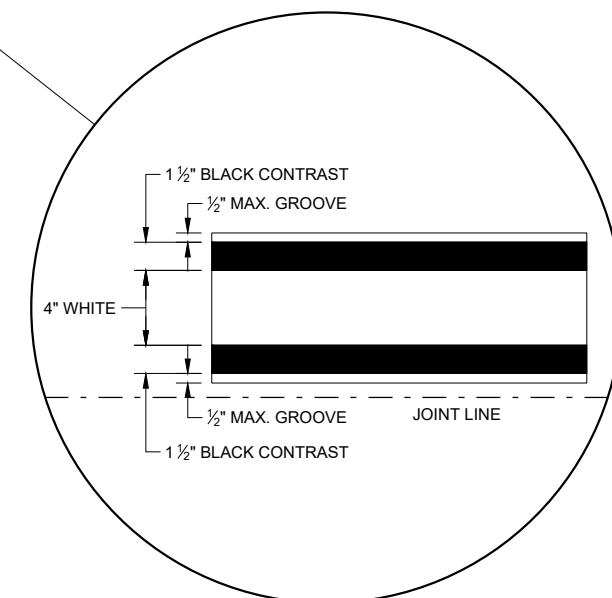
## GENERAL NOTES

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 WITH 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



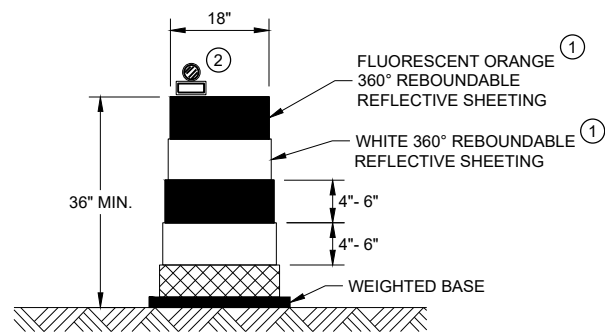
## LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

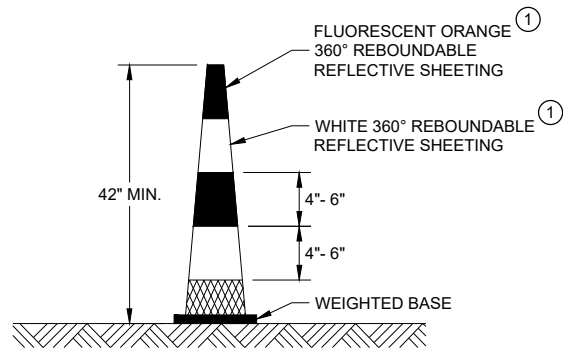
APPROVED  
February 2020  
DATE

/S/ Matthew Rauch  
STATEWIDE SIGNING AND MARKING  
ENGINEER

FHWA

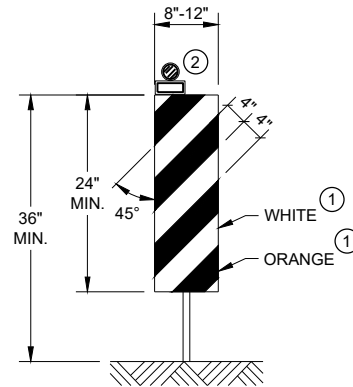


DRUM



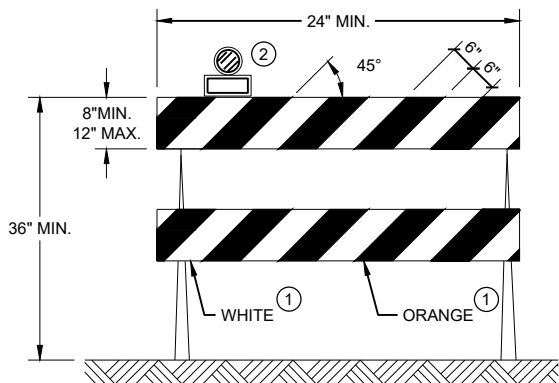
42" CONE

DO NOT USE IN TAPERS  
½ SPACING OF DRUMS



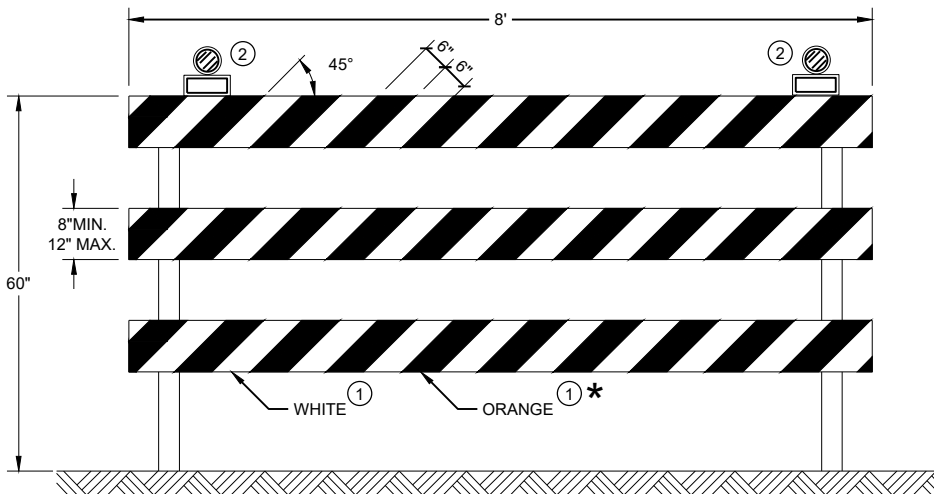
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO  
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES  
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD  
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP  
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

CHANNELIZING DEVICES  
DRUMS, CONES, BARRICADES  
AND VERTICAL PANELS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2017 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

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.

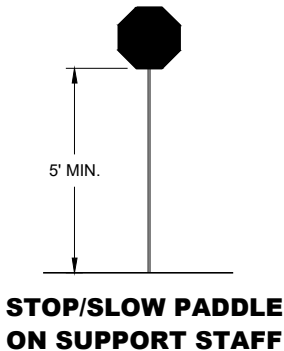
③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR 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.

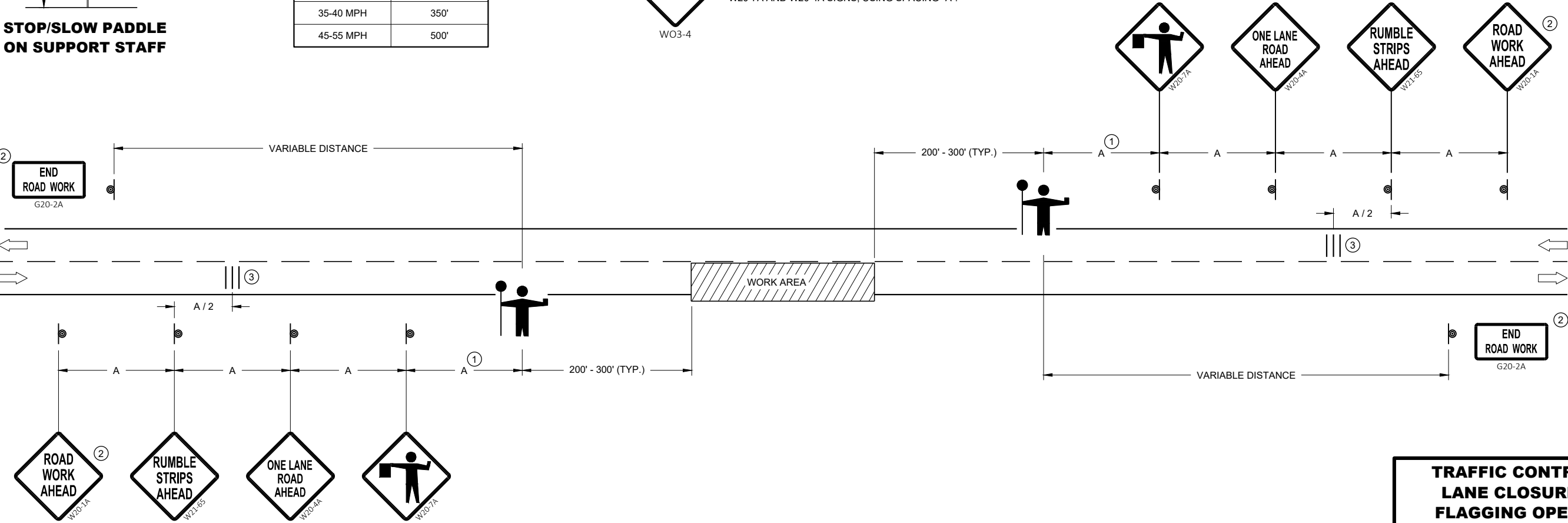


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

| 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".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

**TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

LEGEND

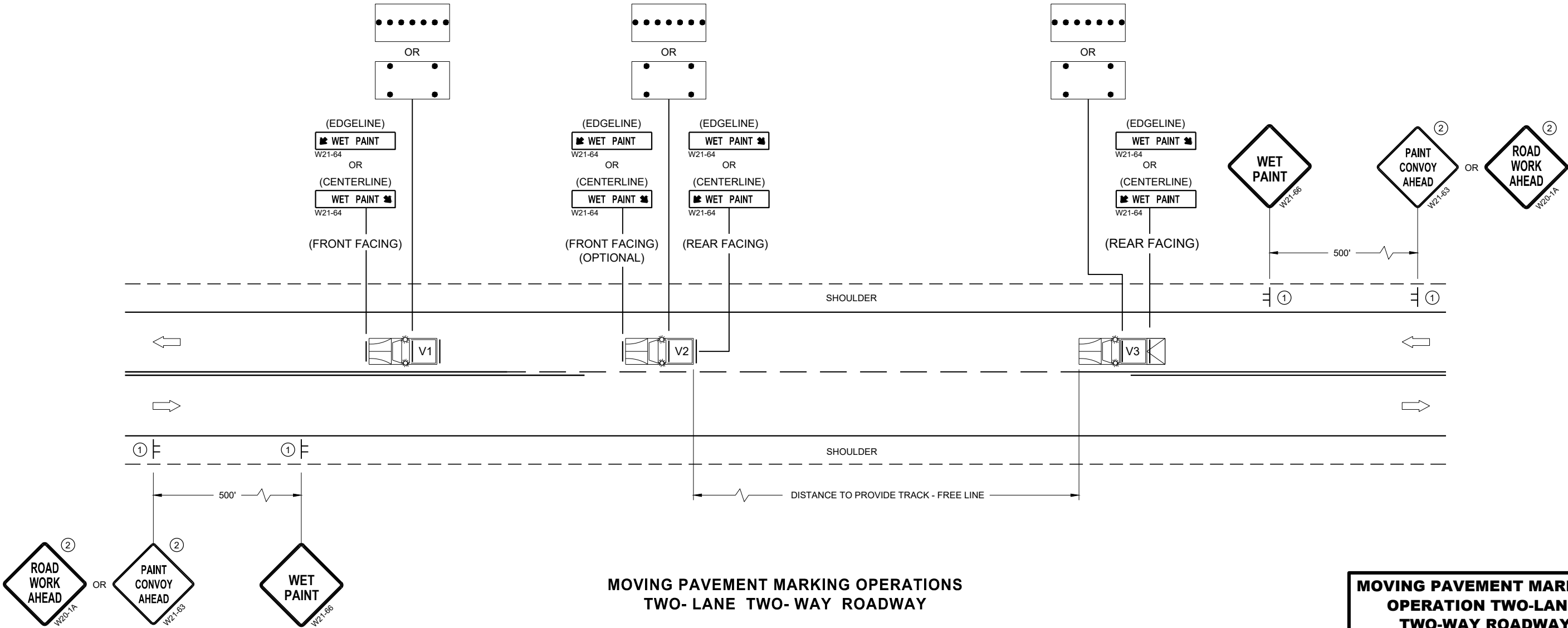
- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

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 18" 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.



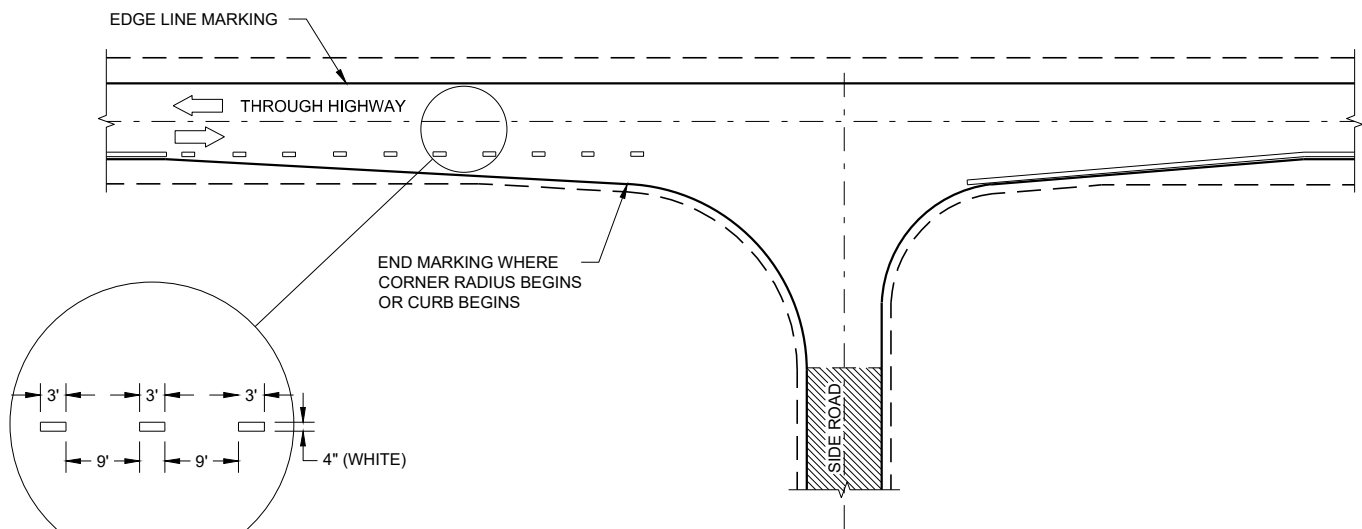
MOVING PAVEMENT MARKING OPERATIONS  
TWO-LANE TWO-WAY ROADWAY

MOVING PAVEMENT MARKING  
OPERATION TWO-LANE  
TWO-WAY ROADWAY

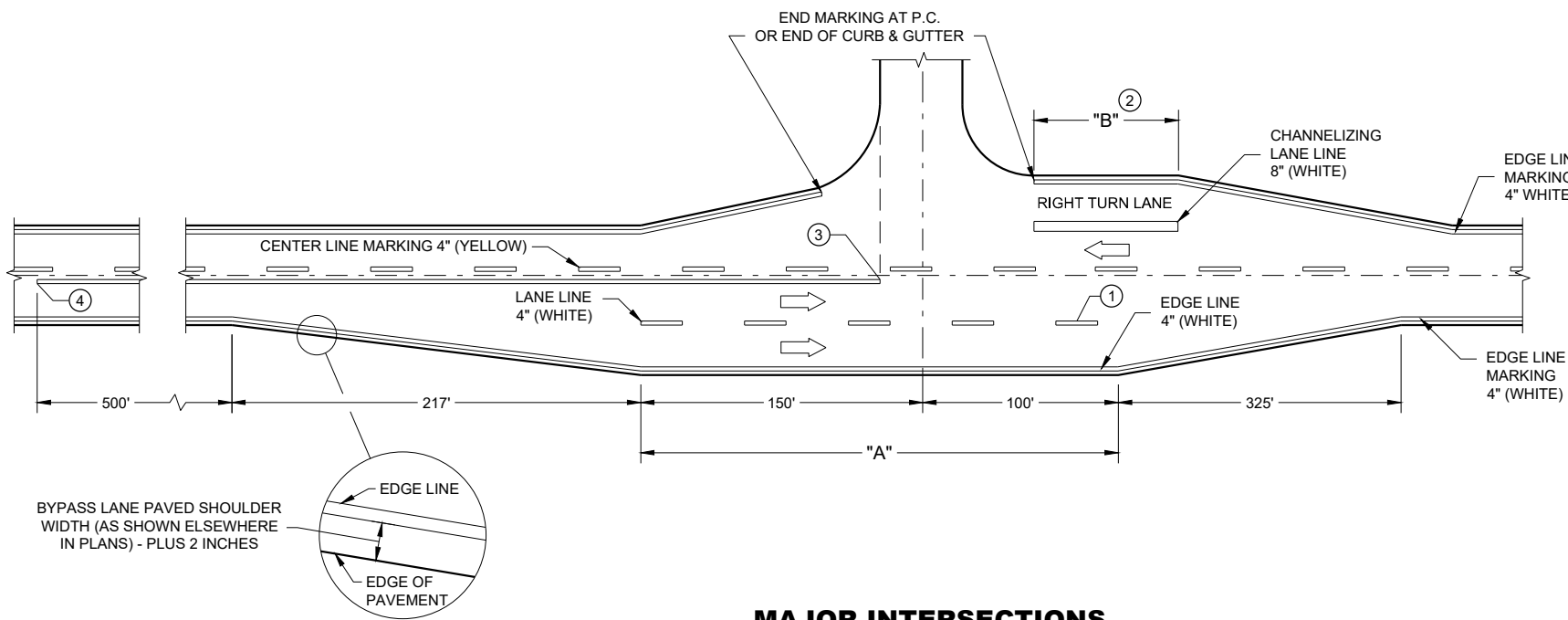
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA





MINOR INTERSECTION



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

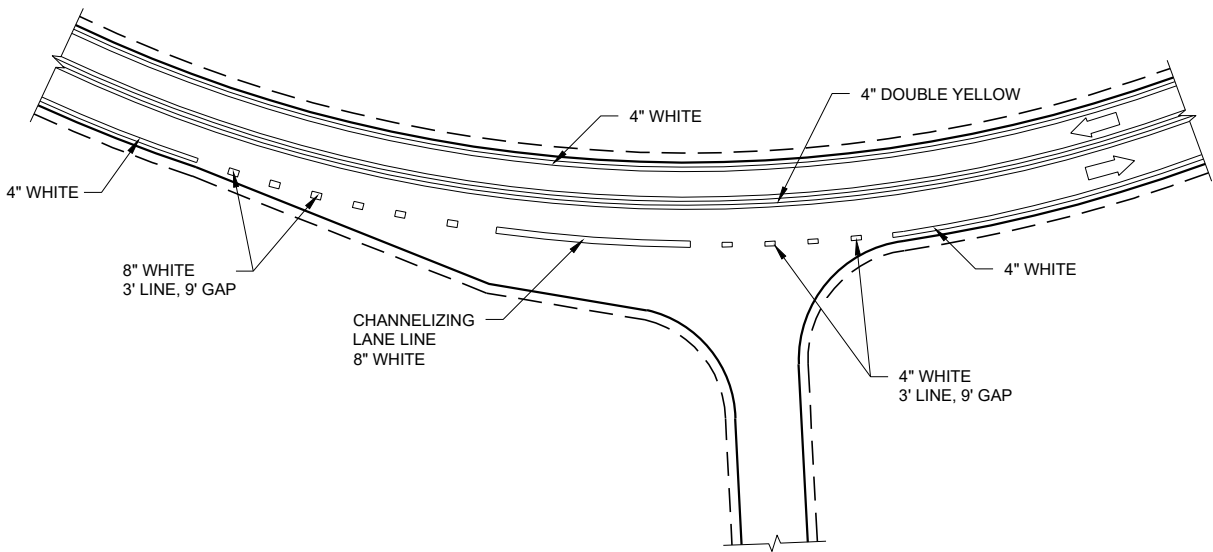
GENERAL NOTES

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.

LEGEND

➡ DIRECTION OF TRAVEL



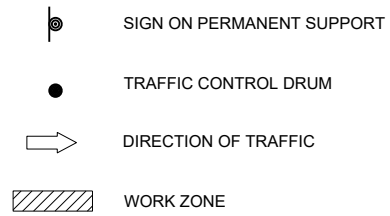
INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING  
(INTERSECTIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



## LEGEND



## GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

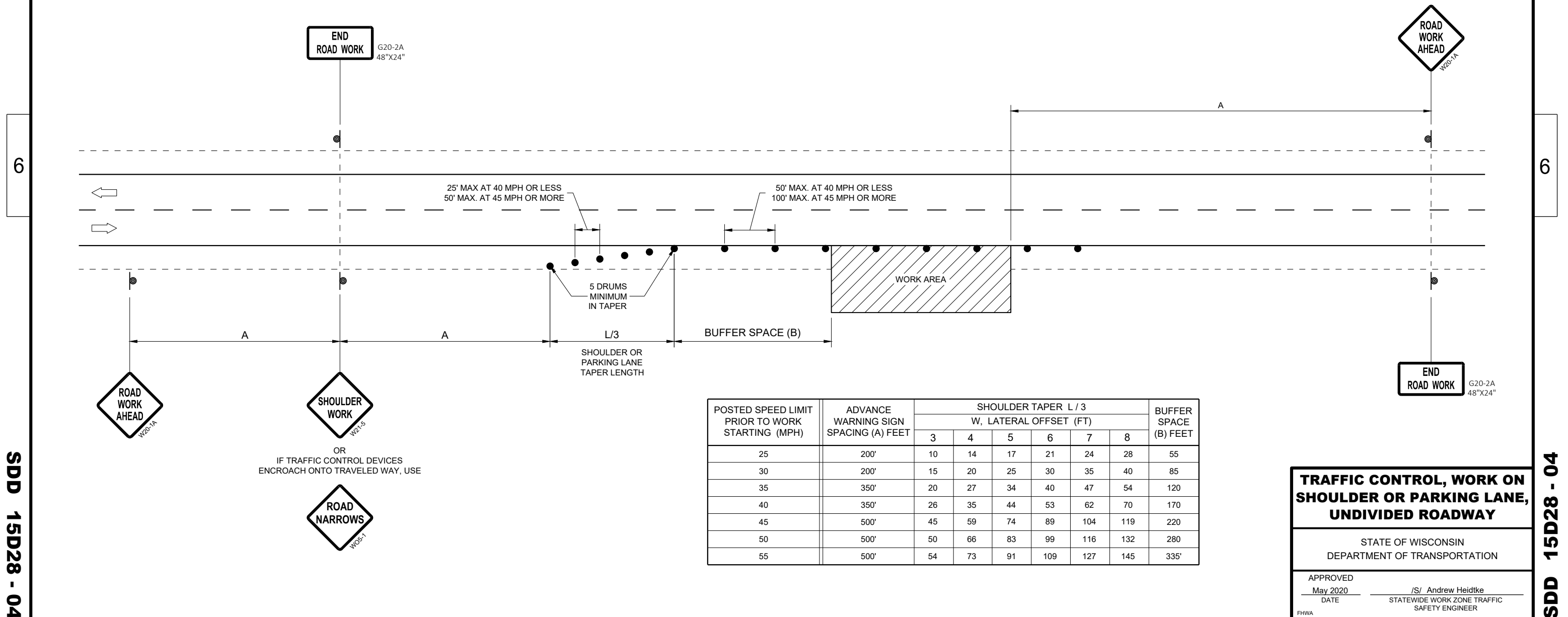
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE"  
SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

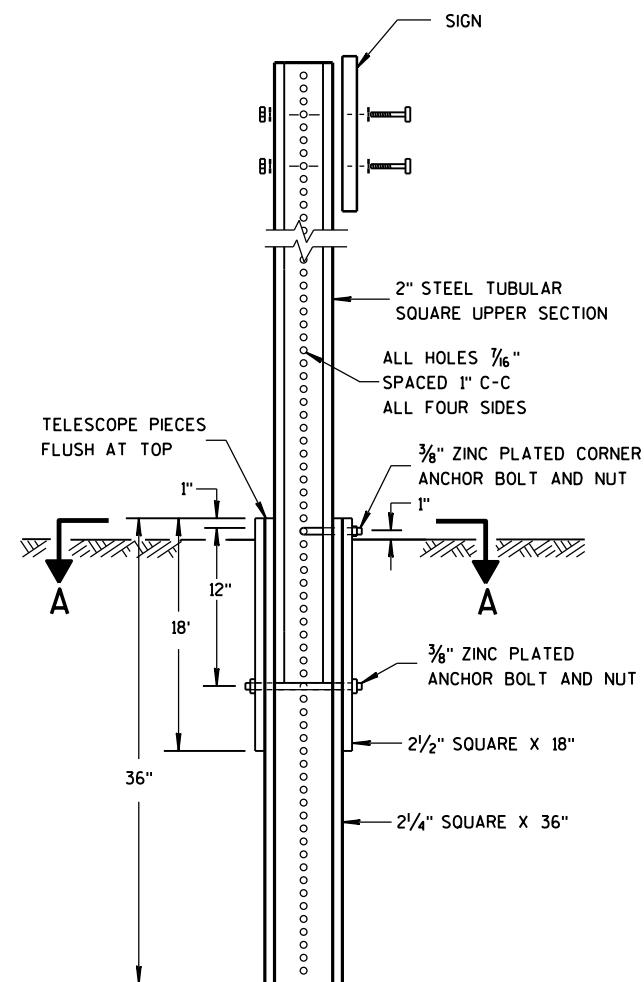
THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



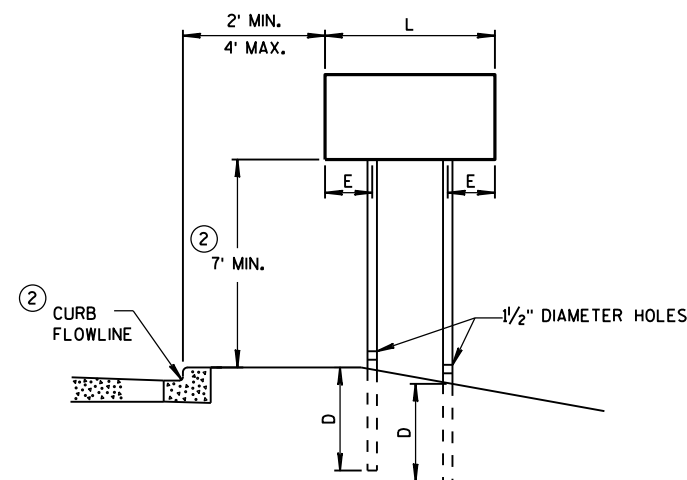
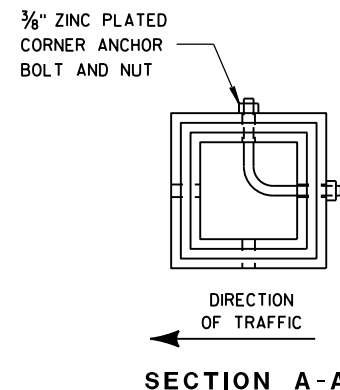


DETAIL OF TUBULAR  
STEEL SIGN POST

TUBULAR STEEL POSTS

| AREA OF SIGN<br>INSTALLATION<br>(SQ. FT.)      | NUMBER OF<br>REQUIRED TUBULAR<br>STEEL POSTS |
|------------------------------------------------|----------------------------------------------|
| 9 OR LESS                                      | 1                                            |
| GREATER THAN 9<br>LESS THAN OR EQUAL<br>TO 18  | 2                                            |
| GREATER THAN 18<br>LESS THAN OR EQUAL<br>TO 27 | 3                                            |

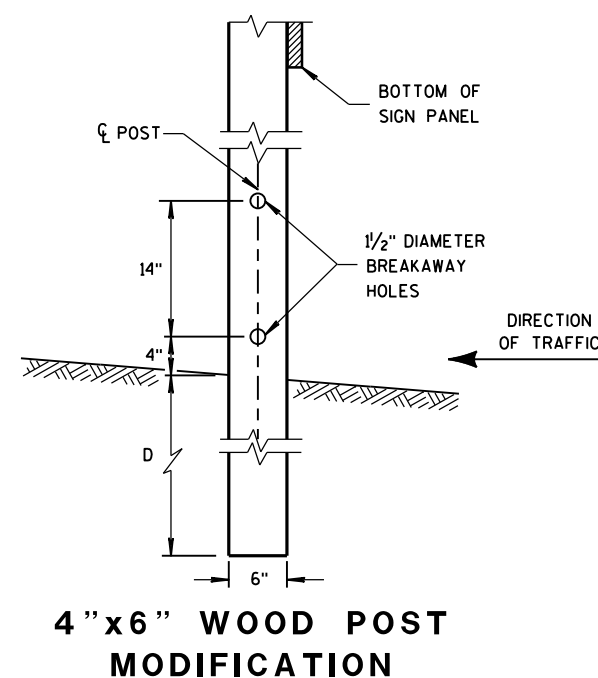
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL  
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).  
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED  
ON TUBULAR STEEL POSTS.



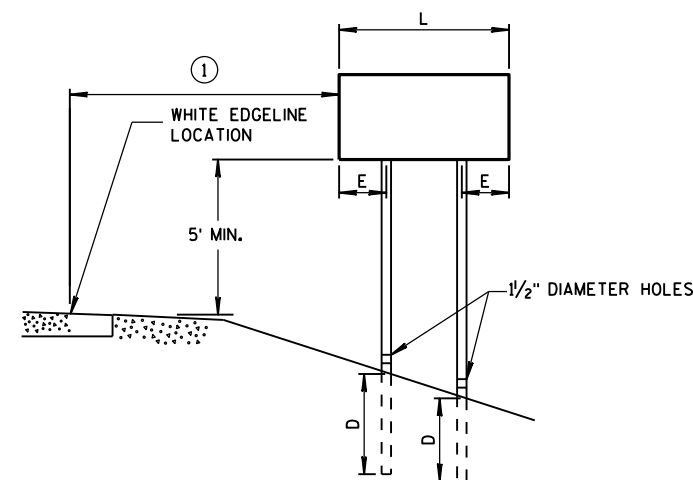
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

| WOOD POST<br>EMBEDMENT DEPTH              |            |
|-------------------------------------------|------------|
| AREA OF SIGN<br>INSTALLATION<br>(SQ. FT.) | D<br>(MIN) |
| 20 OR LESS                                | 4'         |
| GREATER THAN 20                           | 5'         |



4 "x6 " WOOD POST  
MODIFICATION



RURAL AREA

| POST SPACING REQUIREMENTS               |     | NUMBER OF<br>WOOD POSTS<br>REQUIRED |
|-----------------------------------------|-----|-------------------------------------|
| L                                       | E   |                                     |
| 48" OR LESS AND<br>LESS THAN 20 SQ. FT. | -   | 1                                   |
| LESS THAN 60"                           | 12" | 2                                   |
| 60" TO 120"                             | L/5 | 2                                   |
| GREATER THAN 120"<br>LESS THAN 168"     | 12" | 3                                   |
| 168" AND GREATER                        | 12" | 4                                   |

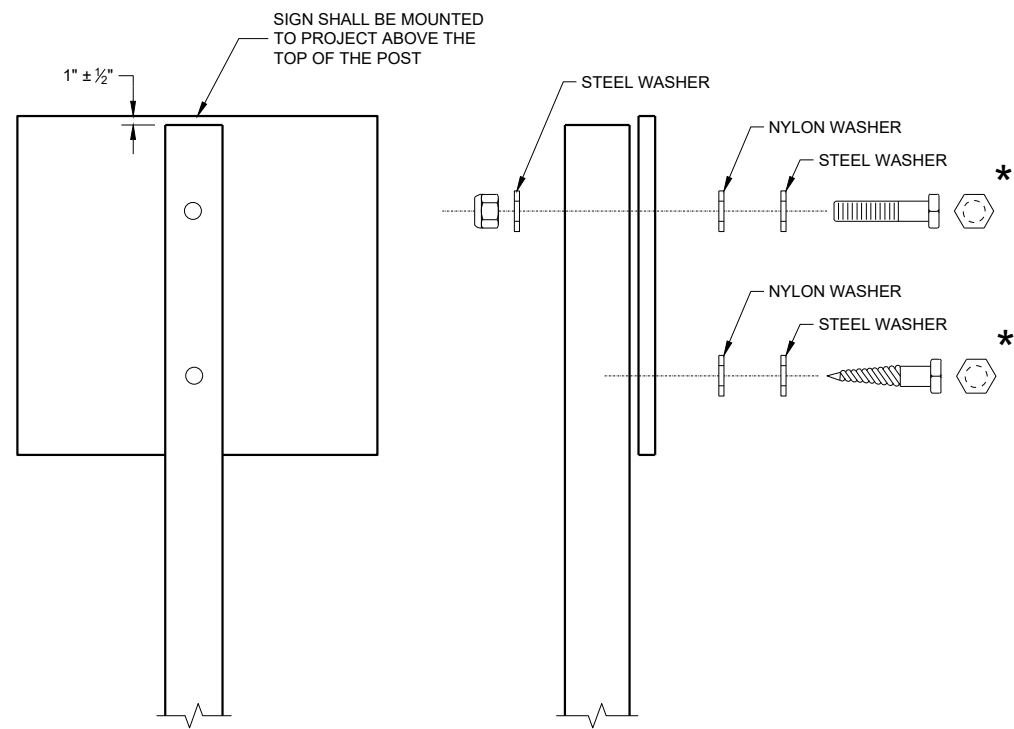
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL  
SIGN MOUNTING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

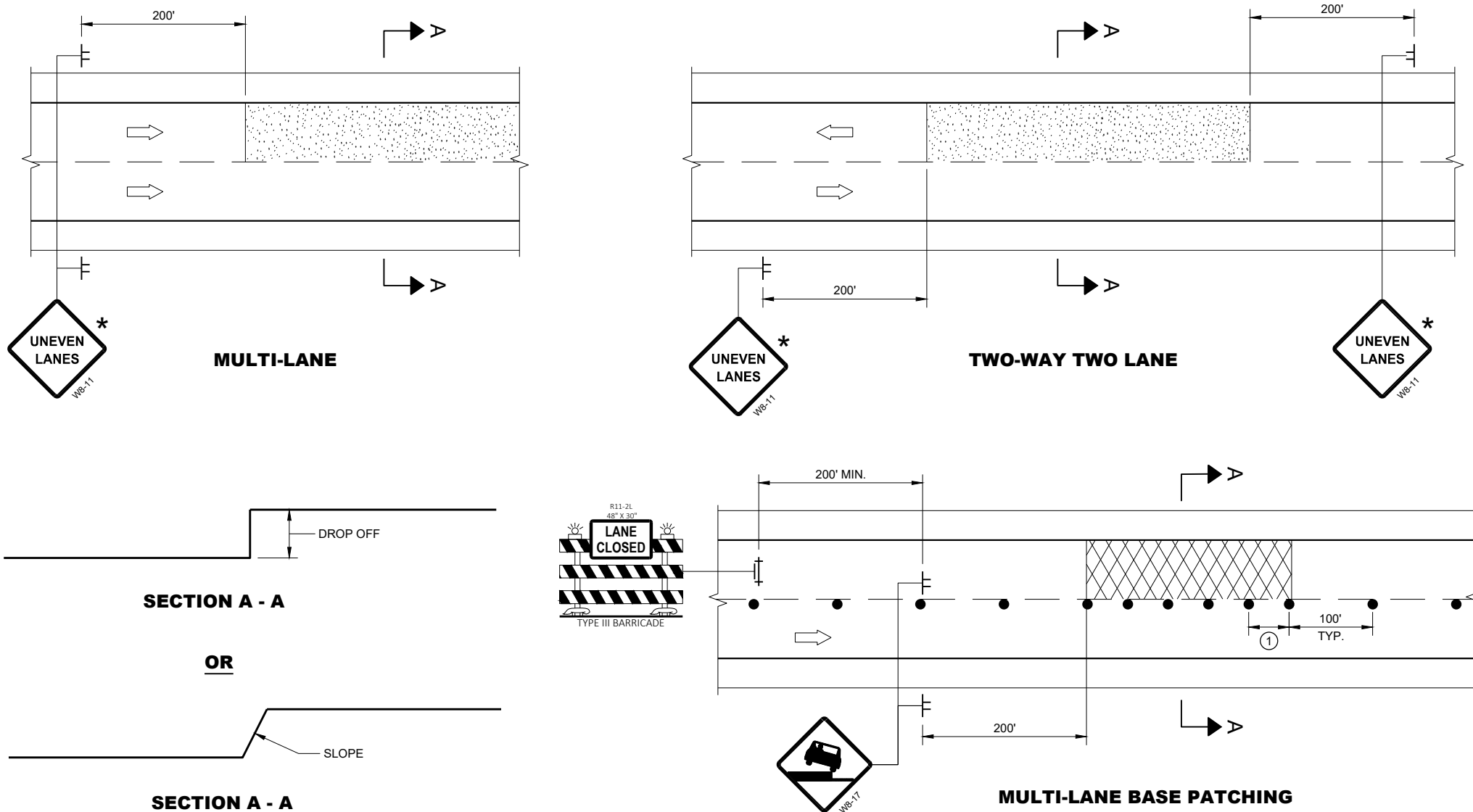
WOOD POST (4" x 6")  
LAG SCREWS - ¾" x 3"  
MACHINE BOLTS - ⅝" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")  
MACHINE BOLTS - ¾" x 3 ¼" LENGTH W/NUTS  
RIVETS - ⅝" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM  
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,  
GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -  
1 ¼" O.D. x ⅜" I.D. x ⅛" STEEL  
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

\* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

|                                                    |                                          |
|----------------------------------------------------|------------------------------------------|
| ATTACHMENT OF SIGNS<br>TO POSTS                    |                                          |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                          |
| APPROVED<br>June 2017<br>DATE                      | /S/ Andrew Heidtke<br>WORK ZONE ENGINEER |
| FHWA                                               |                                          |



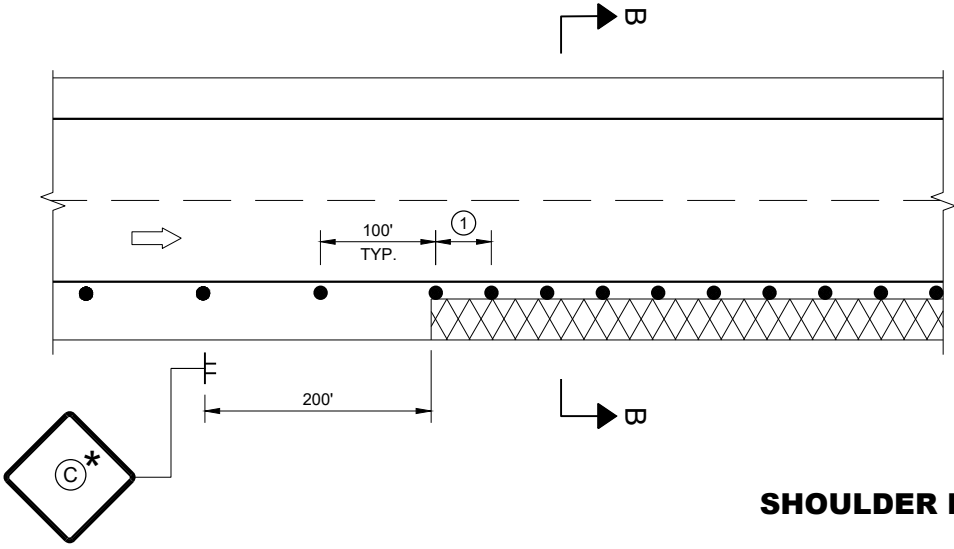
ADJACENT LANE DROP-OFFS

GENERAL NOTES

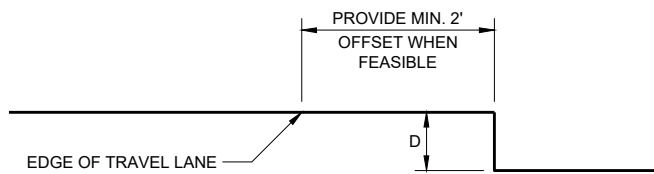
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- \* IF THE DROP-OFF 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



SHOULDER DROP-OFFS



SECTION B - B

| D                                     | SIGN (C)                                                                                            |
|---------------------------------------|-----------------------------------------------------------------------------------------------------|
| < 2" WITH A SLOPE STEEPER THAN 3:1    | LOW SHOULDER<br>WO8-9                                                                               |
| 2" < 6" WITH A SLOPE STEEPER THAN 3:1 | SHOULDER DROP - OFF<br>W8-9A<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

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.

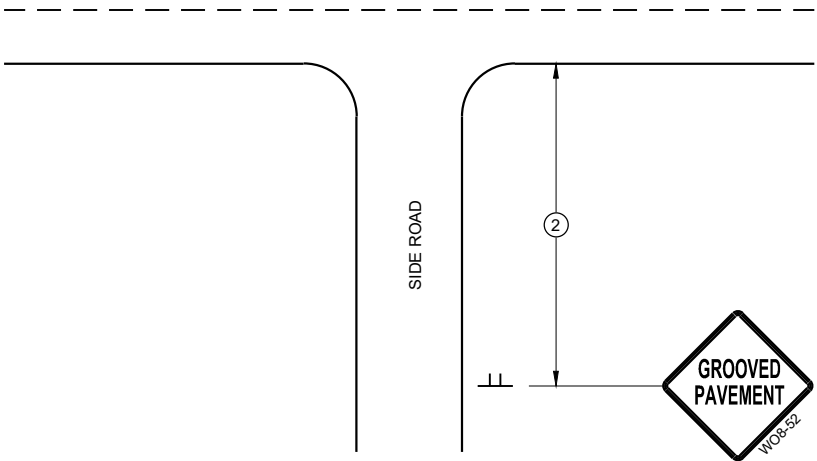
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

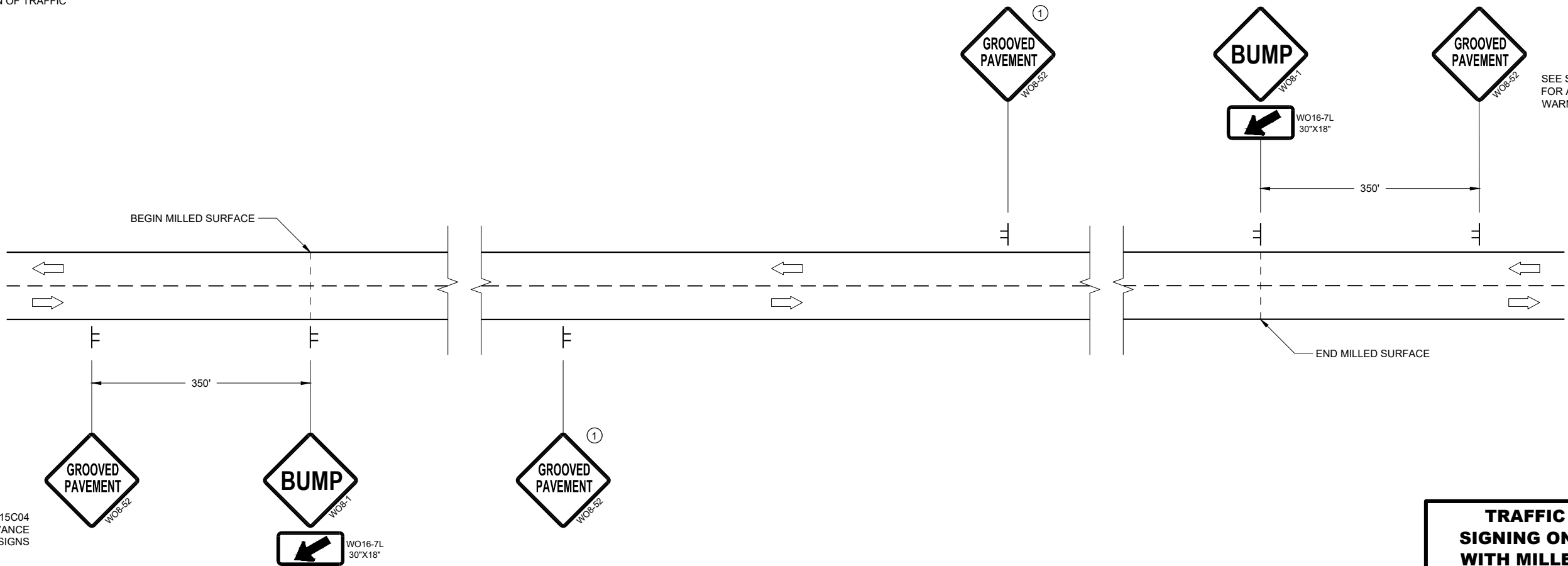
- 1 PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- 2 PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH  
SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

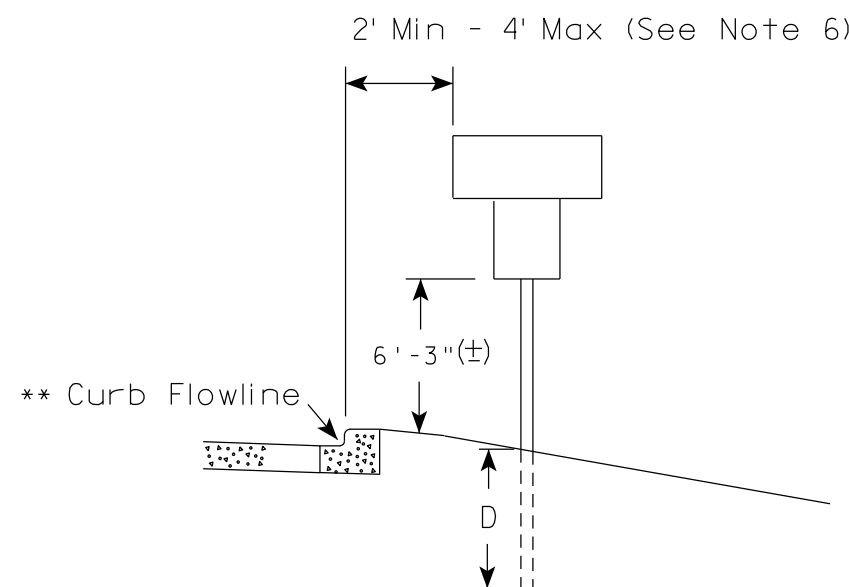
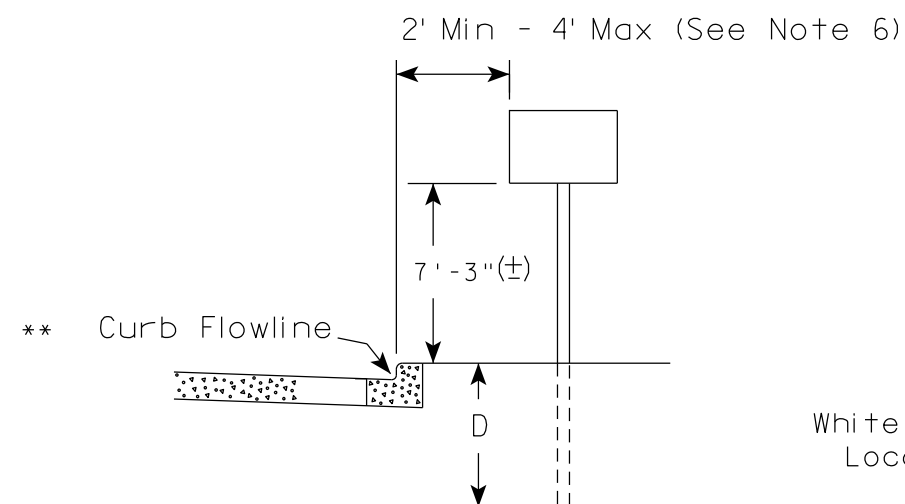
TRAFFIC CONTROL,  
SIGNING ON ROADWAYS  
WITH MILLED SURFACES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

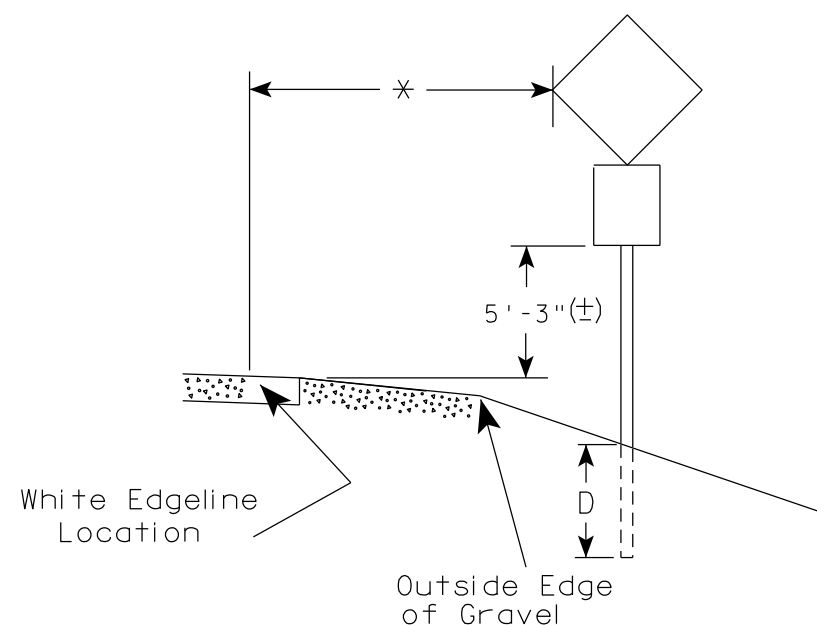
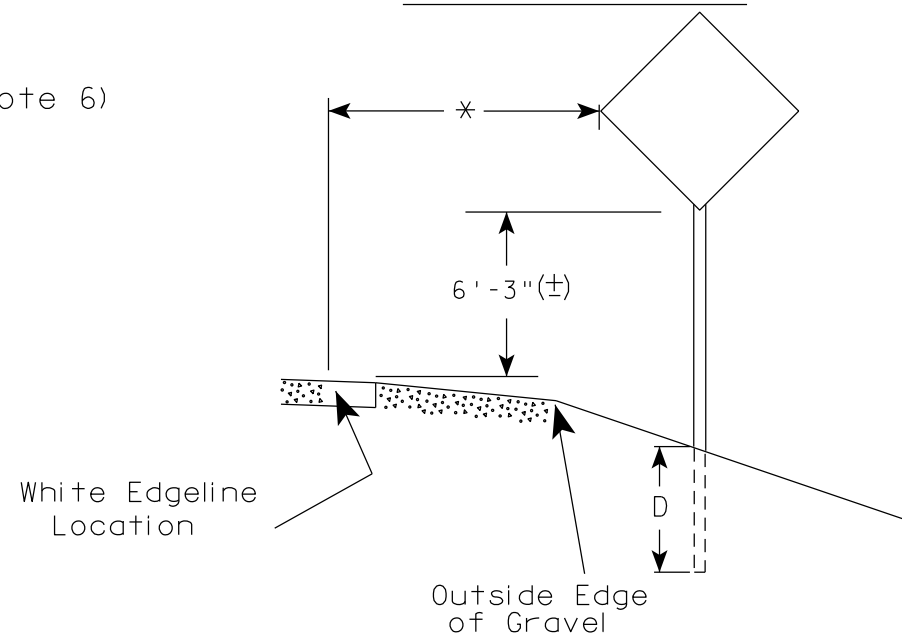
FHWA

# URBAN AREA



✱✱ The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

# RURAL AREA (See Note 2)



✱ 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

## POST EMBEDMENT DEPTH

| Area of Sign Installation<br>( Sq. Ft. ) | D<br>( Min ) |
|------------------------------------------|--------------|
| 20 or Less                               | 4'           |
| Greater than 20                          | 5'           |

## GENERAL NOTES

- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
- For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- The (±) tolerance for mounting height is 3 inches.
- Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

TYPICAL INSTALLATION  
OF PERMANENT TYPE II  
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

PROJECT NO:

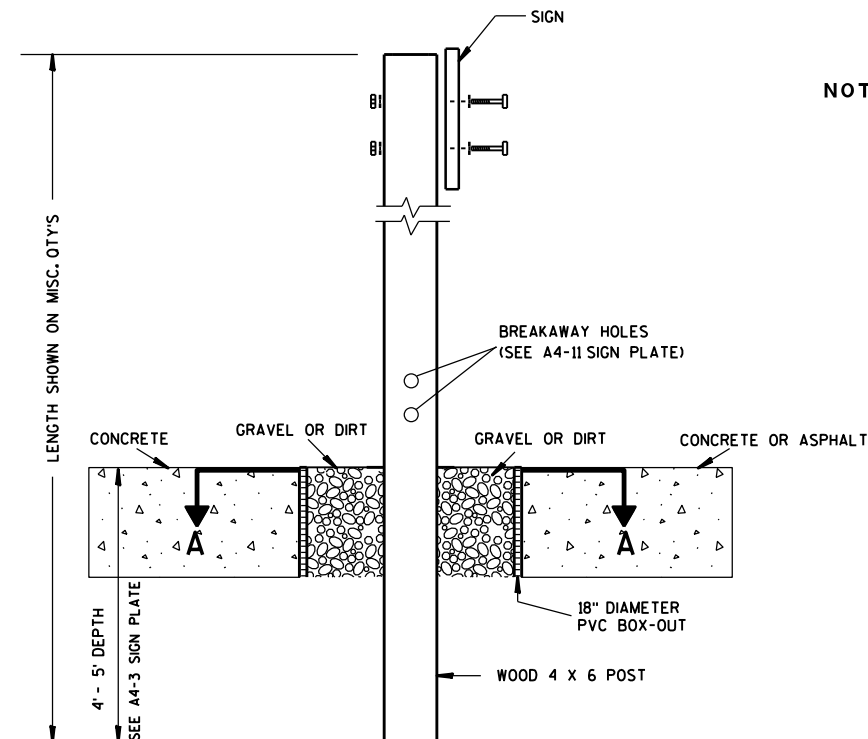
HWY:

COUNTY:

SHEET NO:

E

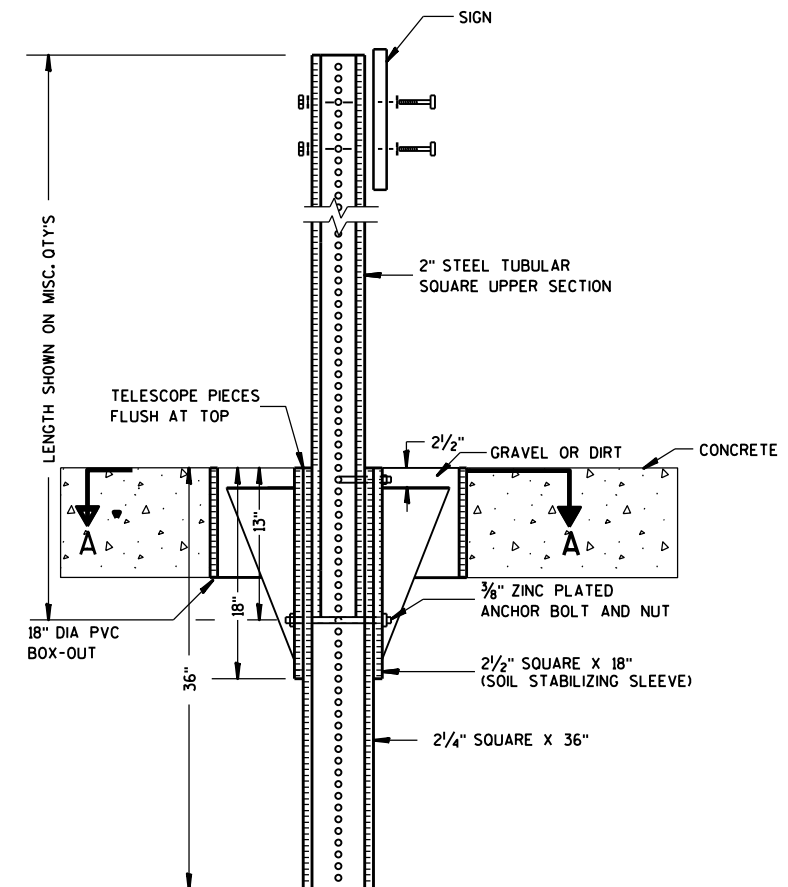




**ELEVATION VIEW**

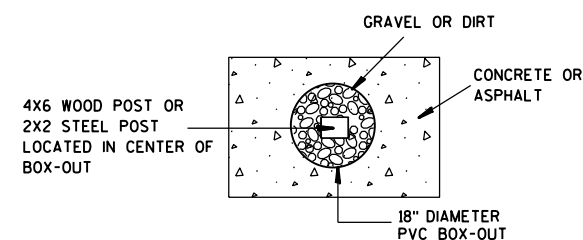
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- NOTES:**
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
  2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
  3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



**ELEVATION VIEW**

**DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT**



**PLAN VIEW**

**FOR NEW CONCRETE/ASPHALT INSTALLATIONS**

**SIGN POST  
BOX-OUTS  
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

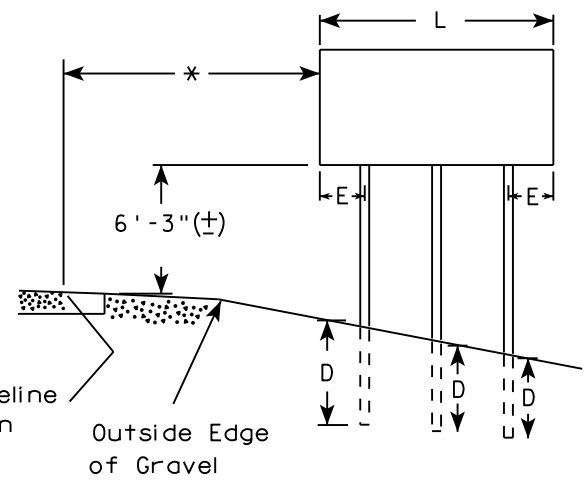
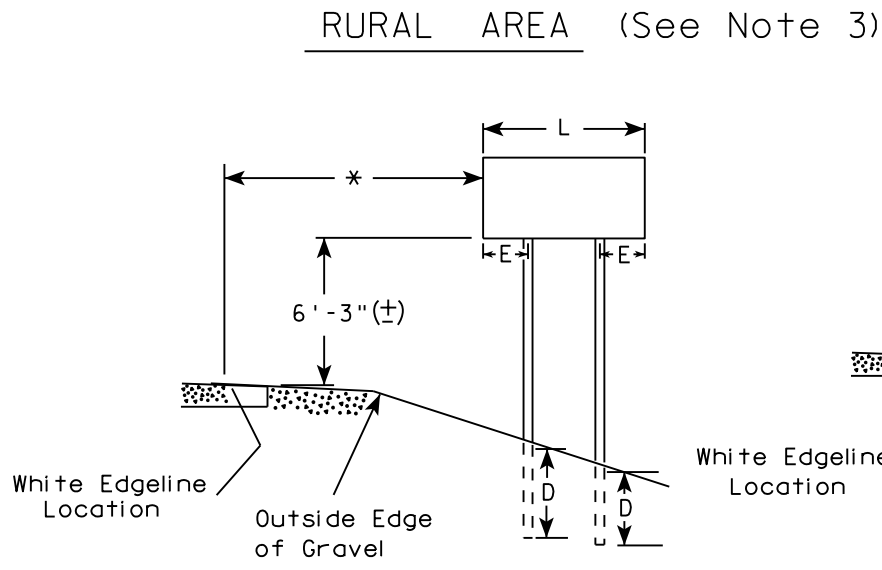
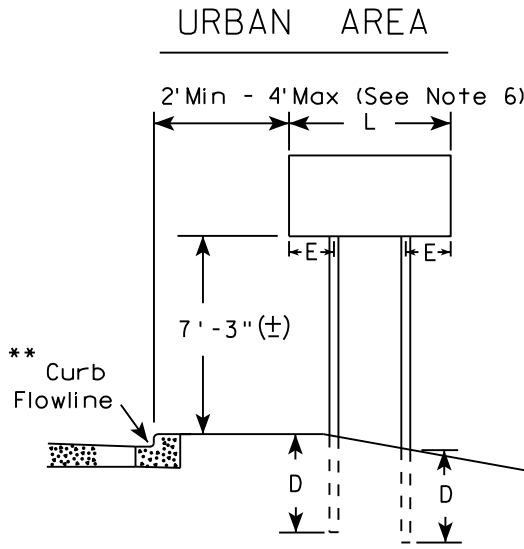
PROJECT NO:

HWY:

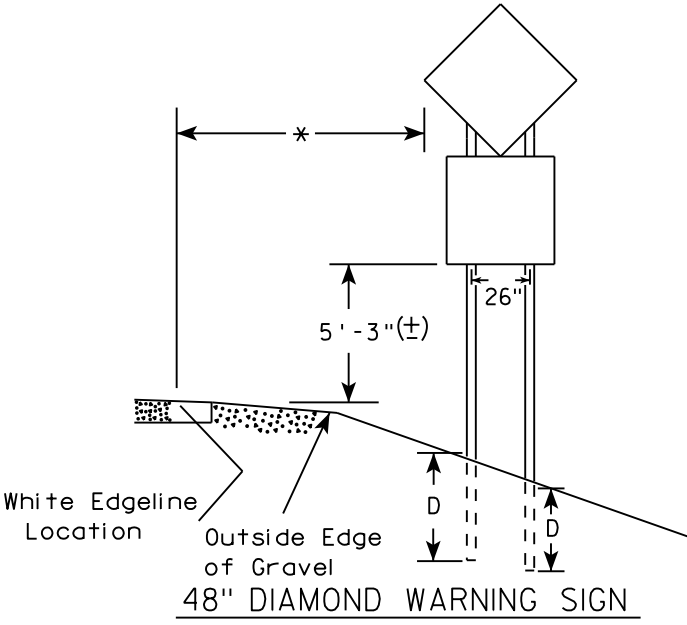
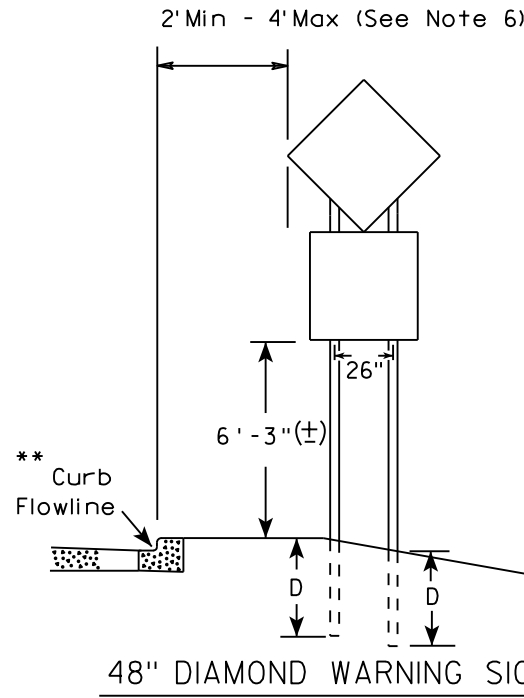
COUNTY:

SHEET NO:

**E**



- GENERAL NOTES**
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
  2. See tables below for required number of posts.
  3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
  4. The (±) tolerance for mounting height is 3 inches.
  5. J-Assemblies are considered to be one sign for mounting height.
  6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
  7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
  8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).



- \* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- \*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- \*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

\*\*\*

| SIGN SHAPE OTHER THAN DIAMOND<br>(TWO POSTS REQUIRED) |     |
|-------------------------------------------------------|-----|
| L                                                     | E   |
| Greater than 48"<br>Less than 60"                     | 12" |
| 60" to 108"                                           | L/5 |

| SIGN SHAPE OTHER THAN DIAMOND<br>(THREE POSTS REQUIRED) |     |
|---------------------------------------------------------|-----|
| L                                                       | E   |
| Greater than 108"<br>to 144"                            | 12" |

POST EMBEDMENT DEPTH

| Area of Sign<br>Installation<br>( Sq. Ft. ) | D<br>( Min ) |
|---------------------------------------------|--------------|
| 20 or Less                                  | 4'           |
| Greater than 20                             | 5'           |

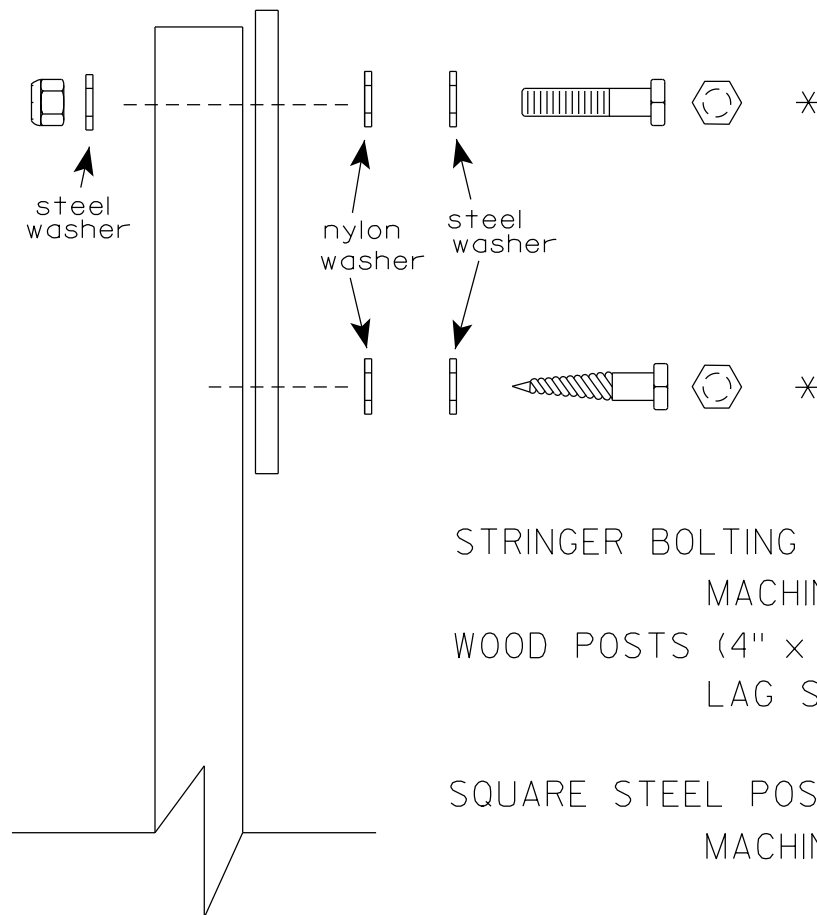
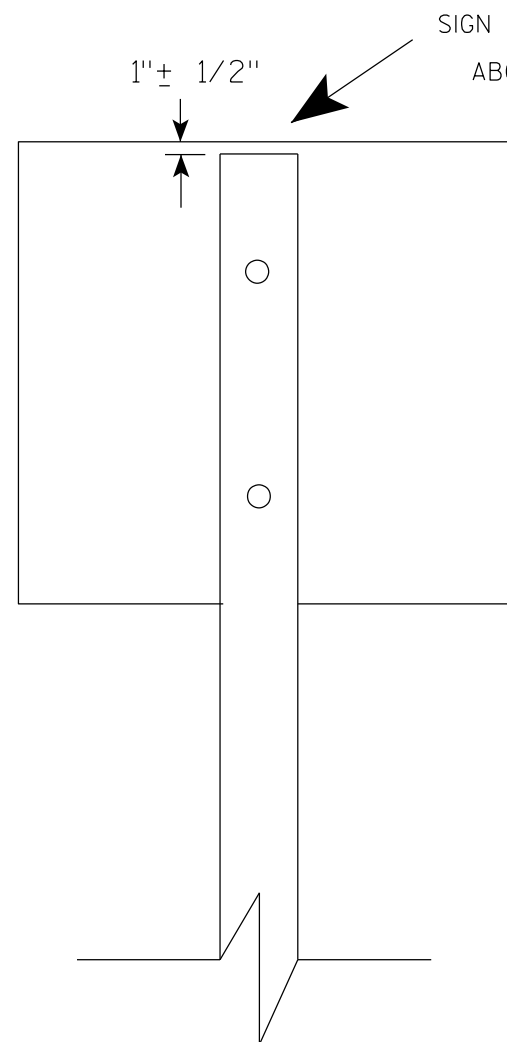
TYPICAL INSTALLATION  
OF TYPE II SIGNS  
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS -  $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS -  $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL
  - 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| ATTACHMENT OF SIGNS<br>TO POSTS  |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>For State Traffic Engineer |
| DATE 4/1/2020                    | PLATE NO. A4-8.9                                      |

**2 1/4 " SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH**

1"

$\frac{1}{8}"$

ALL HOLES  $\frac{7}{16}"$   
SPACED 1" C-C  
ALL FOUR SIDES

4" x 10" x 10 GA. —   
STEEL PLATE (CUT  
AS SHOWN) WELDED  
TO ALL FOUR CORNERS  
OF TELESPAR TUBE

**2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH**

Diagram illustrating the construction of a vertical antenna assembly. The assembly consists of a central vertical structure with a top section labeled "2 1/2\" TELESPAR TUBE". The main body is a "4\" x 10\" x 10 GA. STEEL PLATE (CUT AS SHOWN) WELDED TO ALL FOUR CORNERS OF TELESPAR TUBE". The diagram shows the plate is cut into four trapezoidal sections, each with a top width of 4\" and a bottom width of 3 1/2\". The total height of the assembly is 19\", with a top section of 2 1/2\" and a main section of 10\". The bottom section is 3 1/2\" high.

LENGTH SHOWN ON MISC. QTY'S  
 18" DIA SCHEDULE 40 PVC BOX-OUT  
 TELESCOPE PIECES FLUSH AT TOP  
 36"  
 18"  
 13"  
 2 1/2"  
 2 1/4" SQUARE X 36"  
 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)  
 3/8" ZINC PLATED ANCHOR BOLT AND NUT  
 2 1/2" GRAVEL OR DIRT  
 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT  
 ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES  
 2" STEEL TUBULAR SQUARE UPPER SECTION  
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL  
 SIGN

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES  $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

SIGN

| Area of Sign Installation (Sq. Ft.)      | Number of Required Posts |
|------------------------------------------|--------------------------|
| 9 or less                                | 1                        |
| Greater than 9 less than or equal to 18  | 2                        |
| Greater than 18 less than or equal to 27 | 3                        |

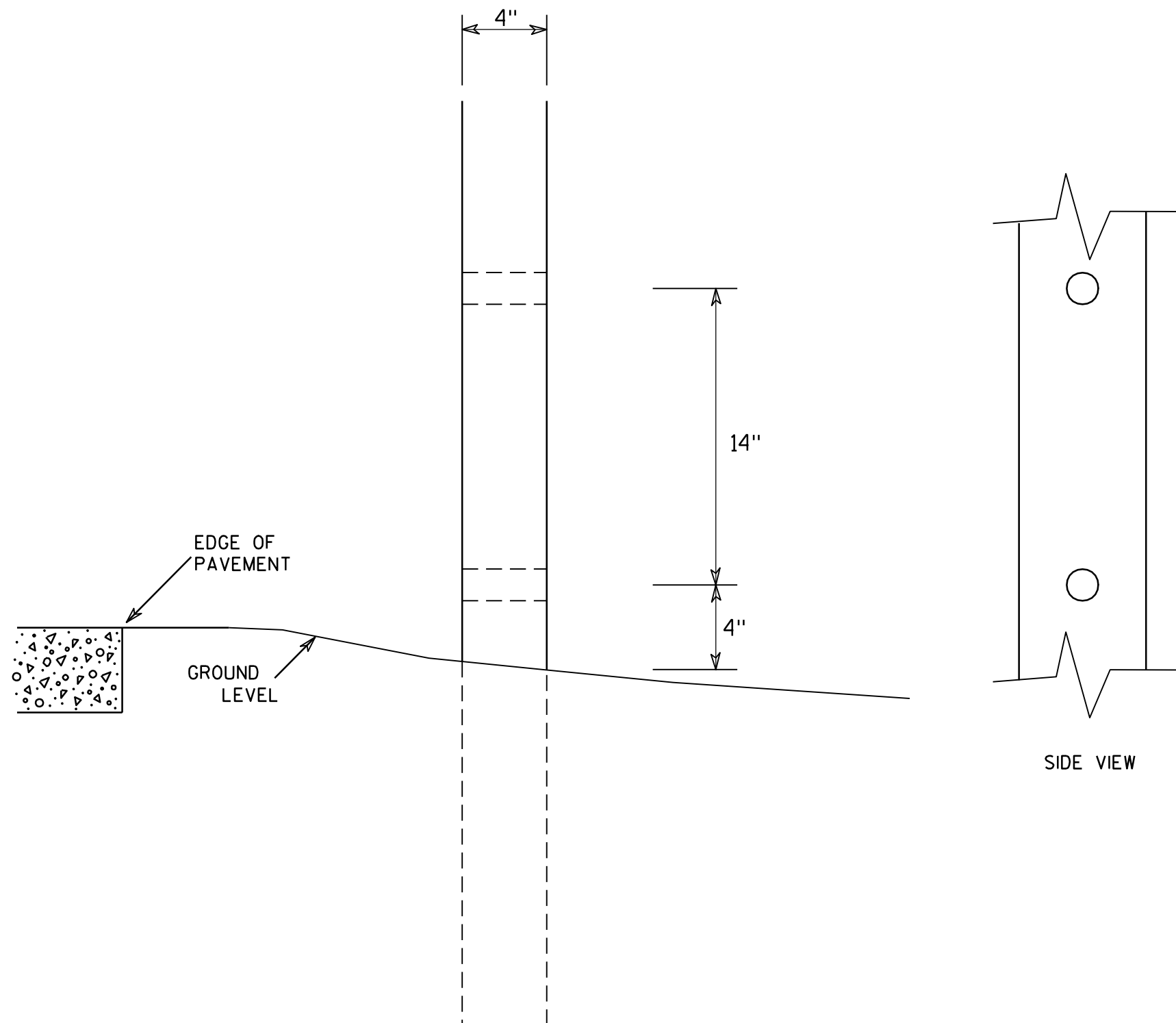
TUBULAR STEEL  
SIGN POST  
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch  
For State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

7



### GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

### 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Chester J. Spang*  
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

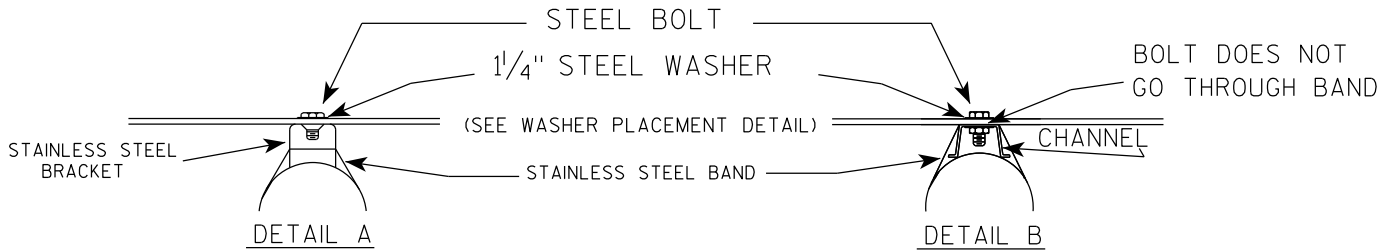
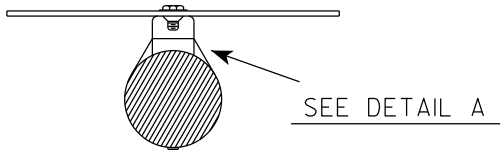
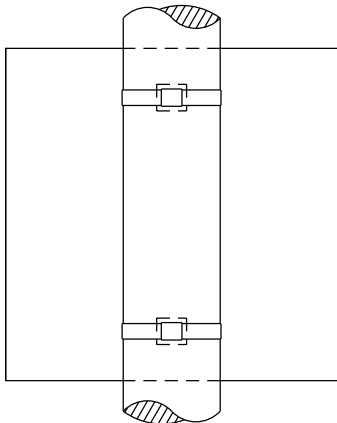
COUNTY:

SHEET NO:

E

BANDING

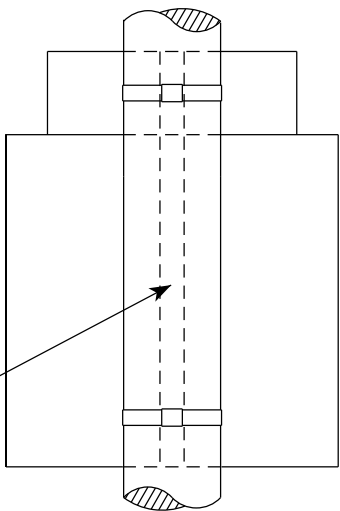
SINGLE SIGN



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be  $\frac{3}{4}$ " in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

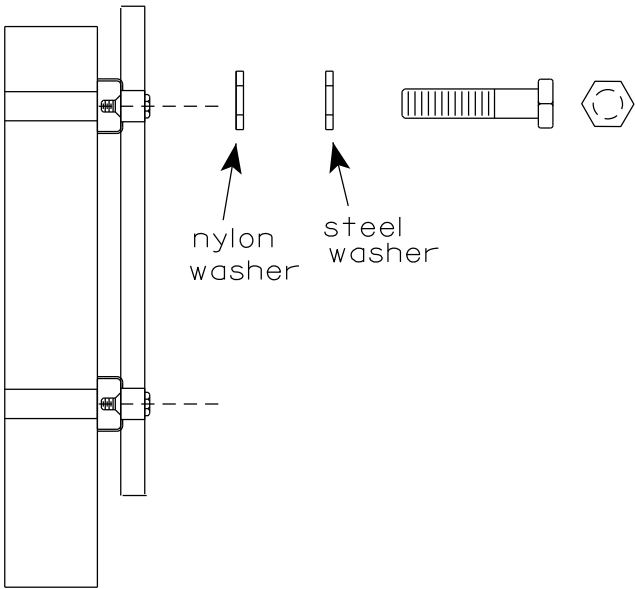
"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET

SEE DETAIL B

WASHER PLACEMENT



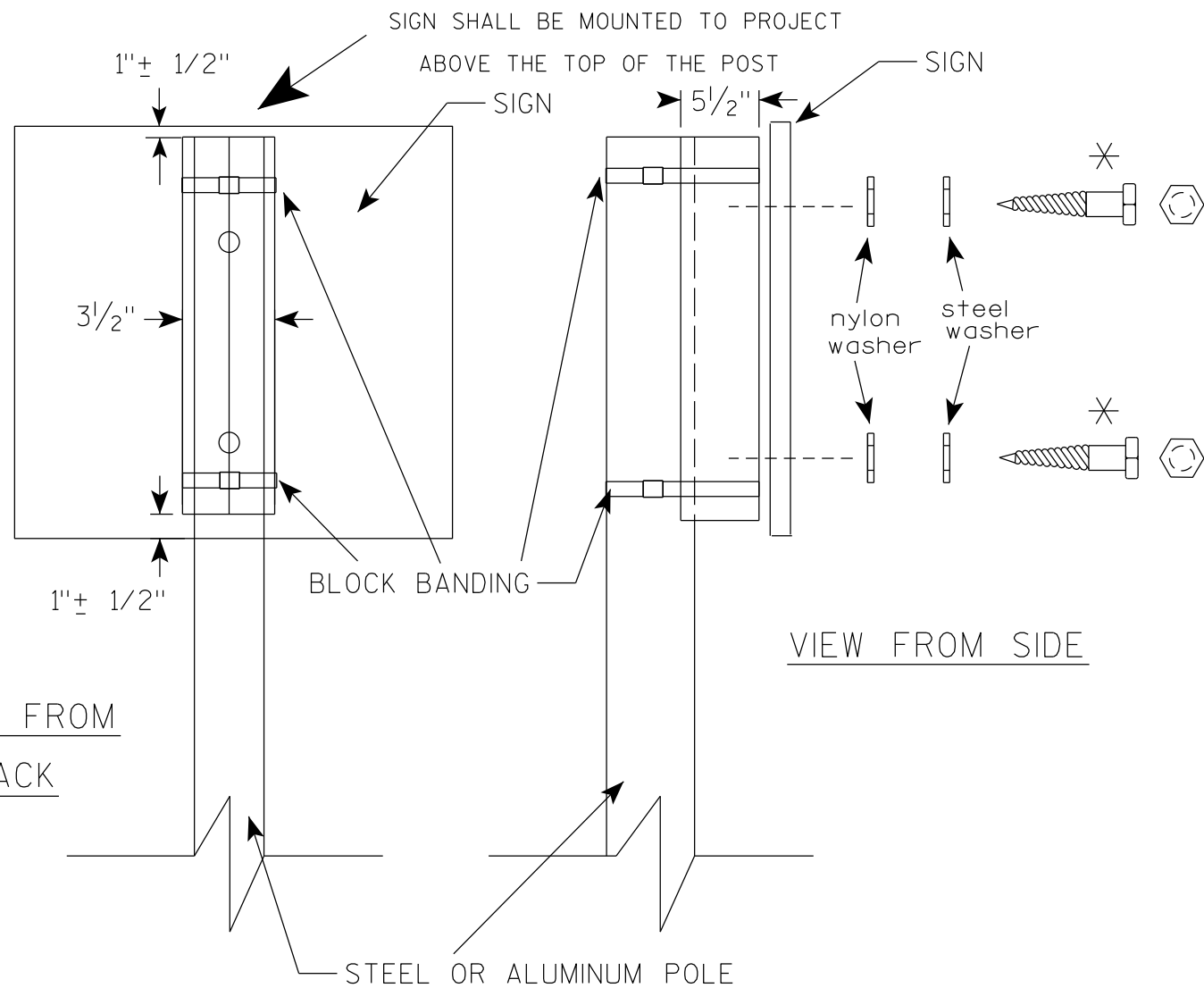
WASHERS (ALL POSTS) -  
1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL  
1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

STANDARD SIGN  
SIGN BANDING DETAILS

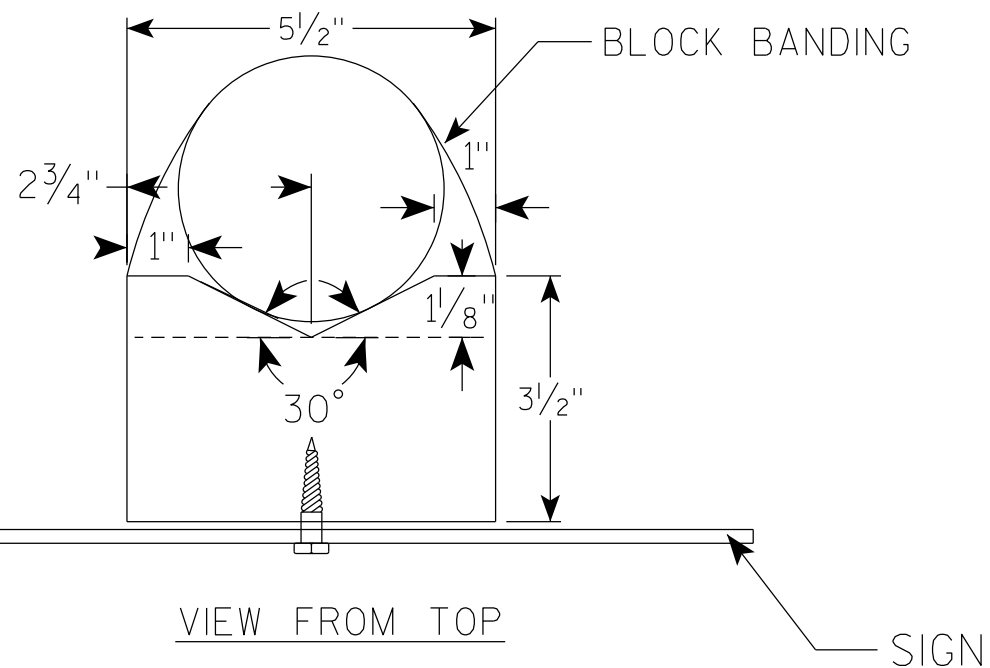
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer  
DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM  
BACK



VIEW FROM SIDE



## GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL,  $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE  $1\frac{1}{4}$ " O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE  $1\frac{1}{4}$ " O.D. X  $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE  $\frac{3}{8}$ " X  $2\frac{1}{2}$ "

BLOCK BANDING DETAIL  
( V-BLOCK OPTION )

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch  
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

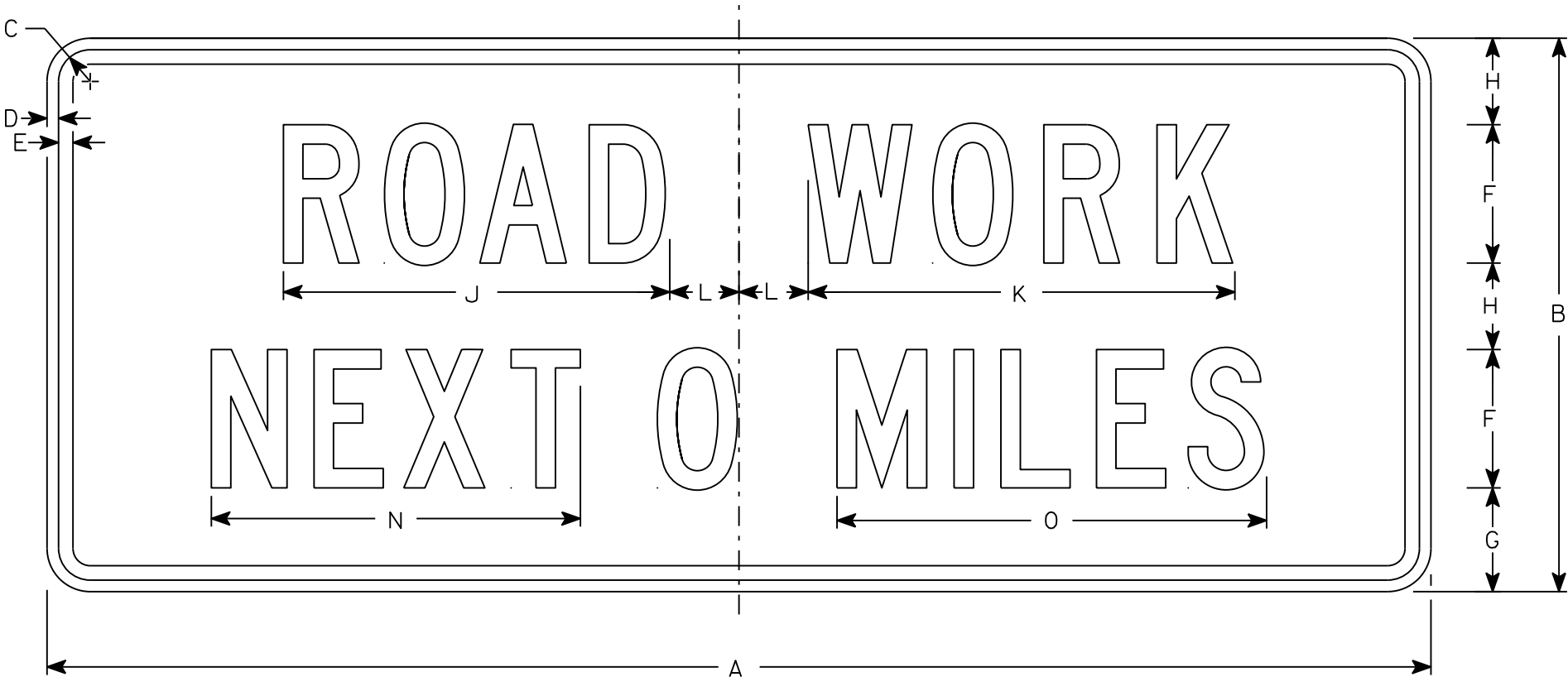
PROJECT NO:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance



G20-1

| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I | J      | K      | L | M | N  | O      | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|---|--------|--------|---|---|----|--------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |       |   |        |        |   |   |    |        |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 60 | 24 | 1 3⁄8 | 1⁄2 | 5⁄8 | 6 | 4 1⁄2 | 3 3⁄4 |   | 16 3⁄4 | 18 1⁄2 | 3 |   | 16 | 18 5⁄8 |   |   |   |   |   |   |   |   |   |   |   | 10              |
| 3    |    |    |       |     |     |   |       |       |   |        |        |   |   |    |        |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    | 60 | 24 | 1 3⁄8 | 1⁄2 | 5⁄8 | 6 | 4 1⁄2 | 3 3⁄4 |   | 16 3⁄4 | 18 1⁄2 | 3 |   | 16 | 18 5⁄8 |   |   |   |   |   |   |   |   |   |   |   | 10              |
| 5    |    |    |       |     |     |   |       |       |   |        |        |   |   |    |        |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
G20-1

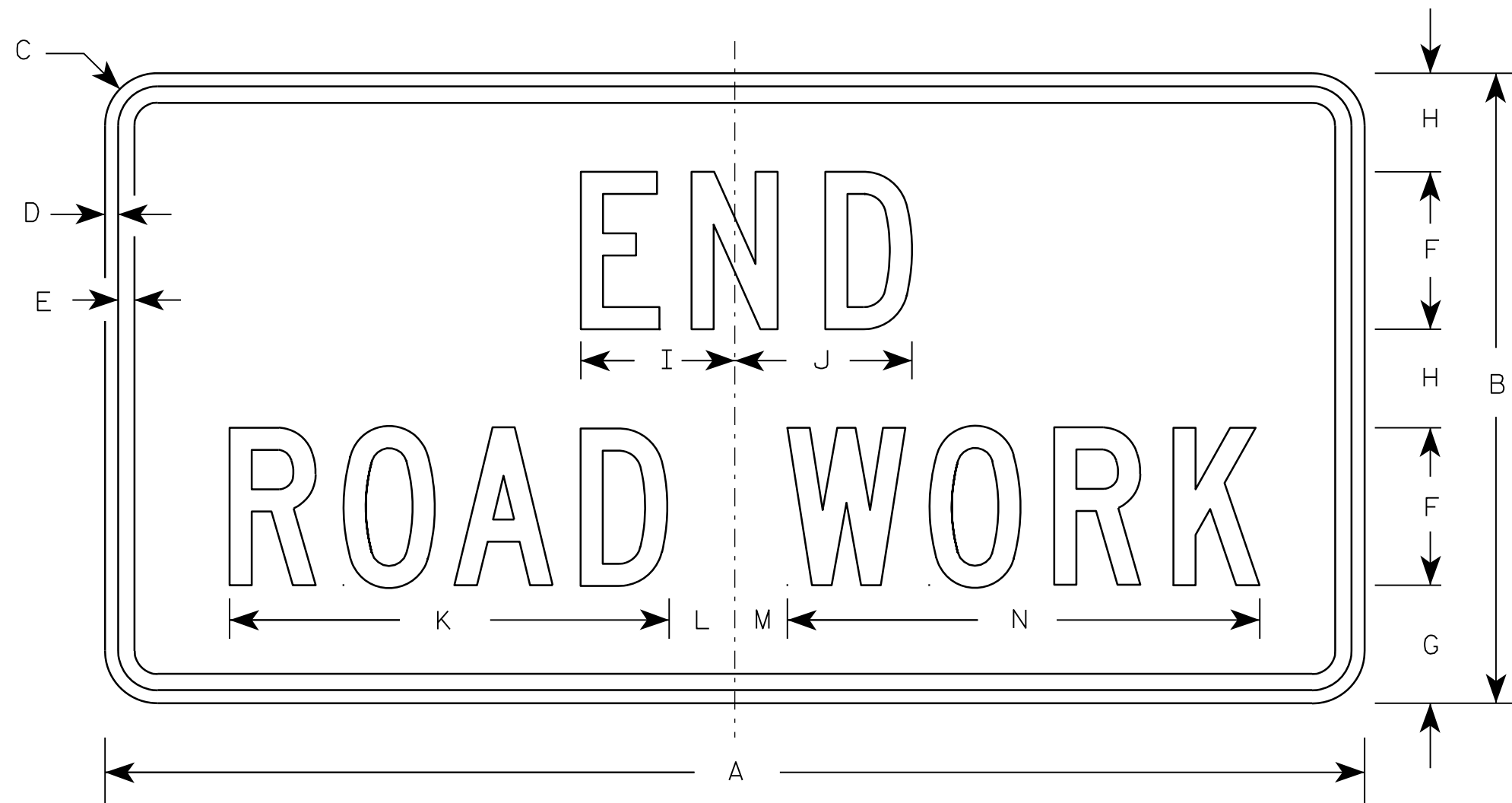
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8



7



G20-2A

Metric equivalent  
for this sign is:

| SIZE |                  |
|------|------------------|
| 1    | 900 mm X 450 mm  |
| 2    | 1200 mm X 600 mm |
| 3    | 1200 mm X 600 mm |
| 4    | 1200 mm X 600 mm |
| 5    | 1200 mm X 600 mm |

| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I     | J     | K      | L     | M     | N      | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. | Area<br>m <sup>2</sup> |
|------|----|----|-------|-----|-----|---|-------|-------|-------|-------|--------|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|------------------------|
| 1    | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 4 | 3 3/4 | 2 1/2 | 4 1/8 | 4 1/8 | 11 1/8 | 2     | 1     | 12 1/8 |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             | 0.41                   |
| 2    | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             | 0.72                   |
| 3    | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             | 0.72                   |
| 4    | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             | 0.72                   |
| 5    | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             | 0.72                   |

NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - Orange  
Message - Black
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

PROJECT NO:

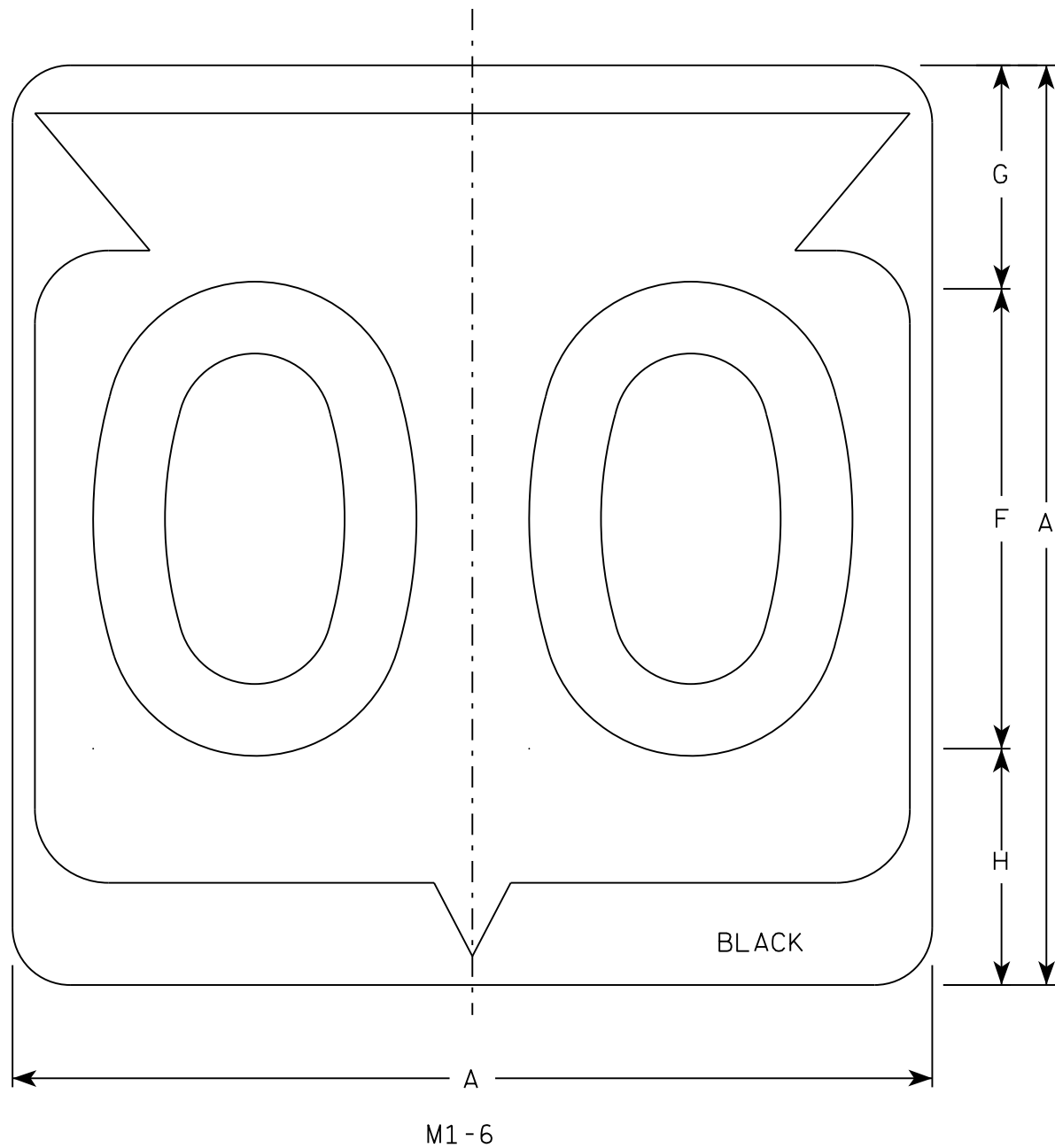
HWY:

COUNTY:

SHEET NO:

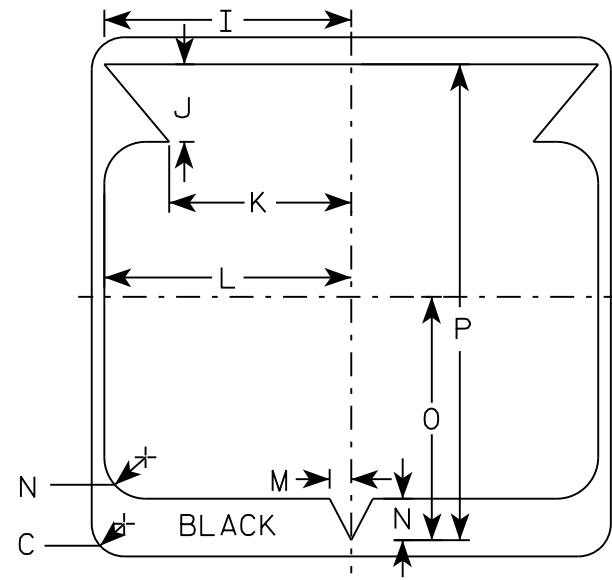
E

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - White  
Message - Black
3. Message Series - D except 3 number signs Series C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

| SIZE | A  | B | C     | D | E | F  | G     | H     | I      | J     | K      | L      | M     | N     | O      | P      | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|---|---|----|-------|-------|--------|-------|--------|--------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |       |   |   |    |       |       |        |       |        |        |       |       |        |        |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 24 |   | 1 1/2 |   |   | 12 | 5 1/2 | 6 1/2 | 10 1/4 | 2 1/2 | 8 7/8  | 11 1/2 | 1     | 1 7/8 | 11 1/4 | 21 7/8 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 3    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   |   |   |   |   |   |   |   |   |   | 9.0             |

|             |      |         |  |           |   |
|-------------|------|---------|--|-----------|---|
| PROJECT NO: | HWY: | COUNTY: |  | SHEET NO: | E |
|-------------|------|---------|--|-----------|---|

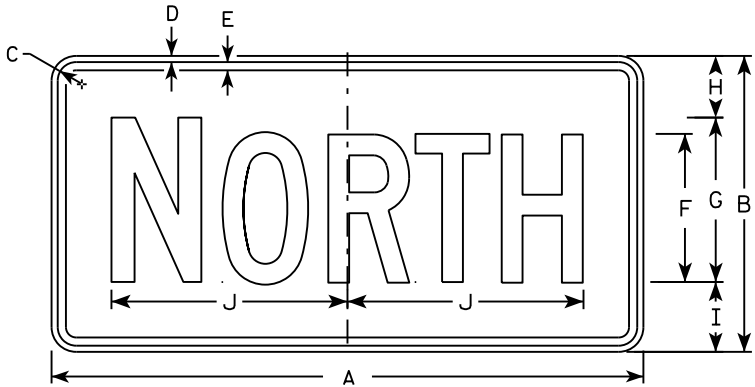
STATE ROUTE MARKER  
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

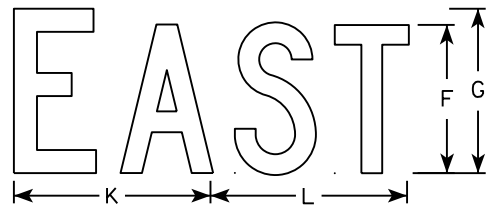
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-6.10

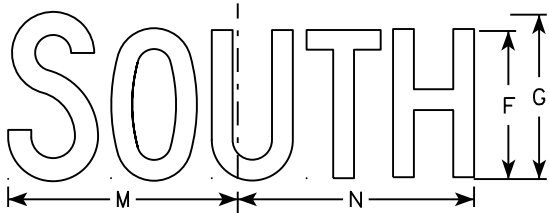




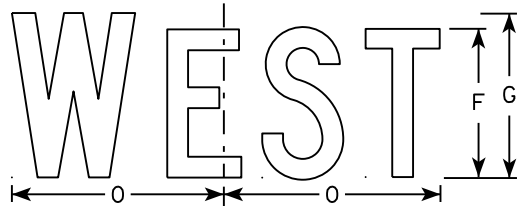
M3-1  
MM3-1  
MP3-1



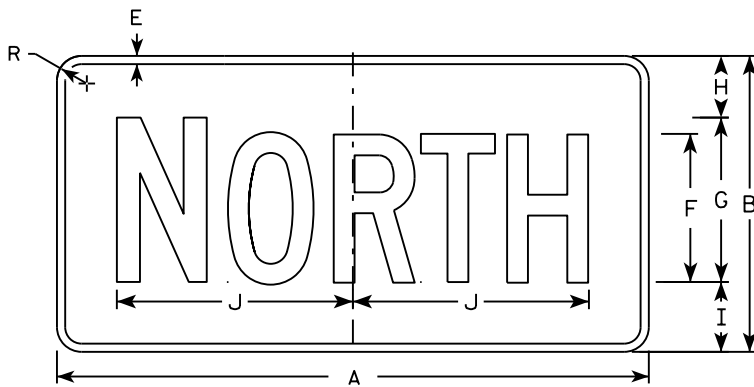
M3-2  
MM3-2  
MP3-2



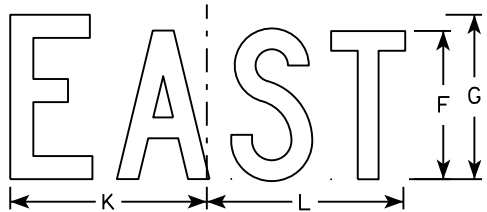
M3-3  
MM3-3  
MP3-3



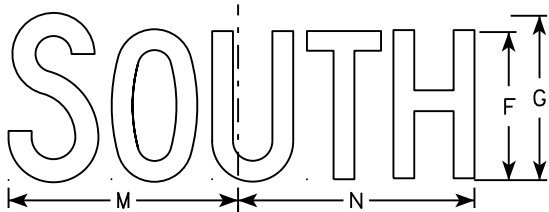
M3-4  
MM3-4  
MP3-4



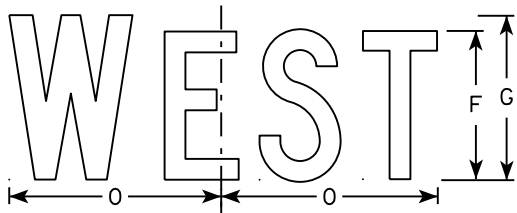
MB3-1  
MK3-1  
MN3-1



MB3-2  
MK3-2  
MN3-2



MB3-3  
MK3-3  
MN3-3



MB3-4  
MK3-4  
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:  
Background - See note 5  
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White  
Message - Black  
MB3-1 thru MB3-4 Background - Blue  
Message - White  
MK3-1 thru MK3-4 Background - Green  
Message - White  
MM3-1 thru MM3-4 Background - White  
Message - Green  
MN3-1 thru MN3-4 Background - Brown  
Message - White  
MP3-1 thru MP3-4 Background - White  
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

| SIZE | A  | B  | C     | D   | E   | F | G  | H     | I     | J      | K     | L      | M      | N      | O     | P | Q | R     | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|-------|-------|--------|-------|--------|--------|--------|-------|---|---|-------|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |    |       |       |        |       |        |        |        |       |   |   |       |   |   |   |   |   |   |   |   |                 |
| 2    | 24 | 12 | 1 1/8 | 3/8 | 3/8 | 6 | 7  | 2 1/4 | 2 3/4 | 10 1/4 | 7 7/8 | 8 3/8  | 10 1/4 | 9 3/4  | 8 3/4 |   |   | 1 1/2 |   |   |   |   |   |   |   |   | 2.00            |
| 3    | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   | 1 1/2 |   |   |   |   |   |   |   |   | 4.5             |
| 4    | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   | 1 1/2 |   |   |   |   |   |   |   |   | 4.5             |
| 5    | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   | 1 1/2 |   |   |   |   |   |   |   |   | 4.5             |

STANDARD SIGNS  
M3-1 thru M3-4  
SERIES

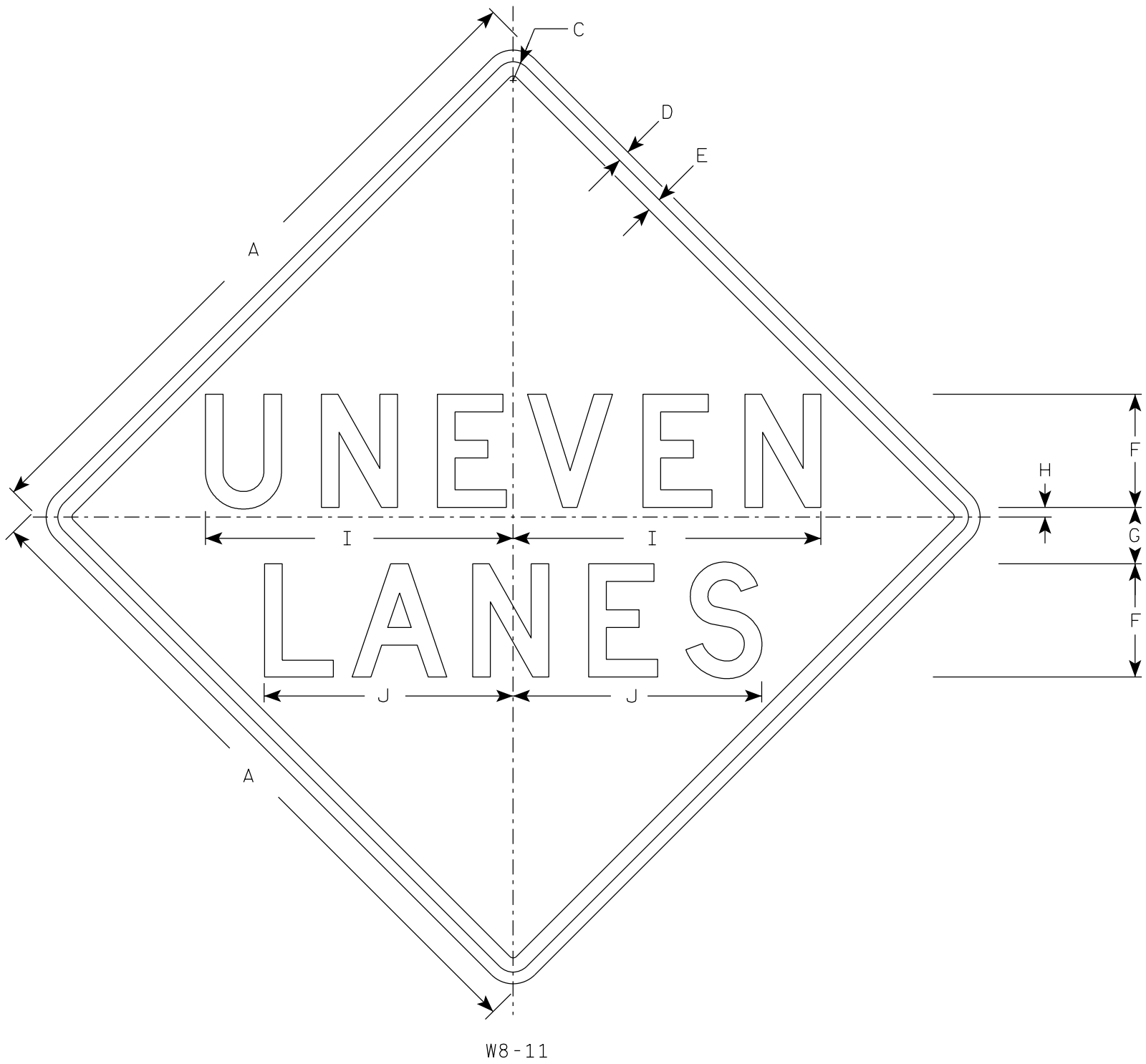
WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

7

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A  | B | C     | D   | E   | F | G | H   | I      | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|---|-----|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 6 | 3 | 1/2 | 16 3/8 | 13 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

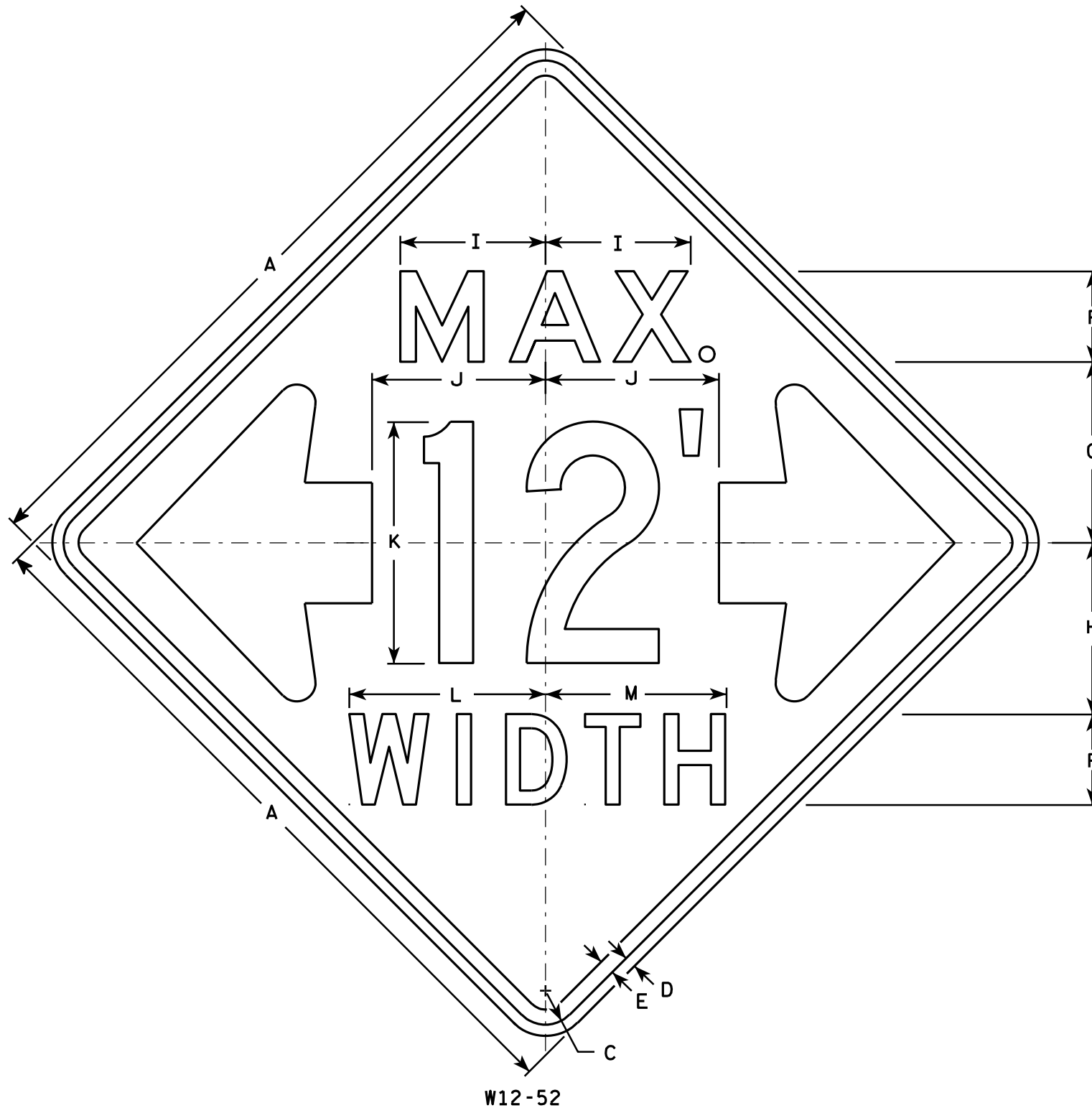
STANDARD SIGN

W8-11

WISCONSIN DEPT OF TRANSPORTATION

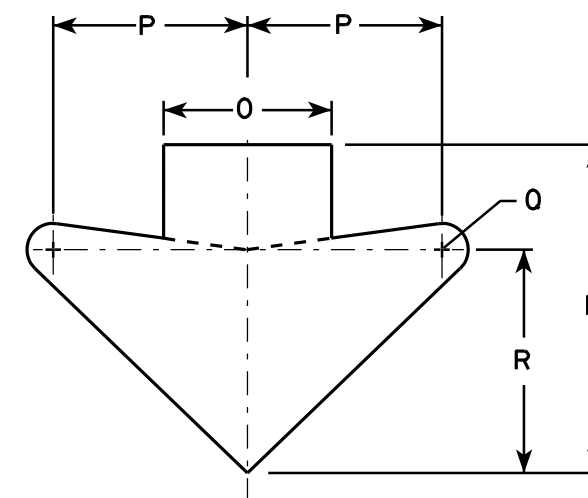
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/20/2020 PLATE NO. W8-11.5



# NOTES

- Sign Is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - Orange  
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- The top line is series E, the numerals are series C, and the bottom line is series D.
- Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

| SIZE | A  | B | C     | D   | E | F | G  | H      | I     | J      | K  | L  | M  | N      | O | P     | Q     | R      | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|---|---|----|--------|-------|--------|----|----|----|--------|---|-------|-------|--------|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |       |     |   |   |    |        |       |        |    |    |    |        |   |       |       |        |   |   |   |   |   |   |   |   |                 |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1 | 6 | 12 | 11 3/8 | 9 5/8 | 11 1/2 | 16 | 13 | 12 | 15 5/8 | 8 | 9 1/4 | 1 1/4 | 10 5/8 |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1 | 6 | 12 | 11 3/8 | 9 5/8 | 11 1/2 | 16 | 13 | 12 | 15 5/8 | 8 | 9 1/4 | 1 1/4 | 10 5/8 |   |   |   |   |   |   |   |   | 16.0            |
| 3    |    |   |       |     |   |   |    |        |       |        |    |    |    |        |   |       |       |        |   |   |   |   |   |   |   |   |                 |
| 4    |    |   |       |     |   |   |    |        |       |        |    |    |    |        |   |       |       |        |   |   |   |   |   |   |   |   |                 |
| 5    |    |   |       |     |   |   |    |        |       |        |    |    |    |        |   |       |       |        |   |   |   |   |   |   |   |   |                 |

## STANDARD SIGN W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO:

HWY:

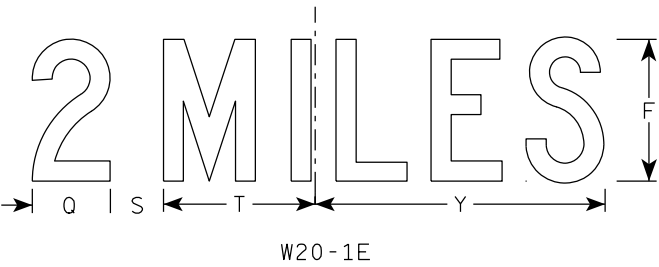
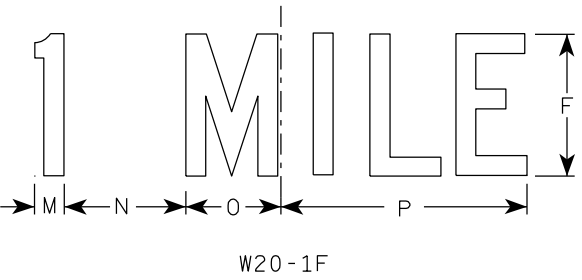
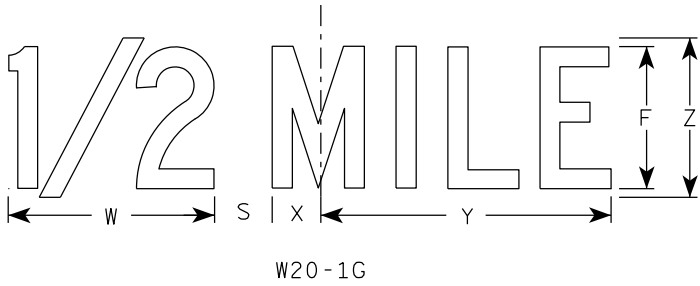
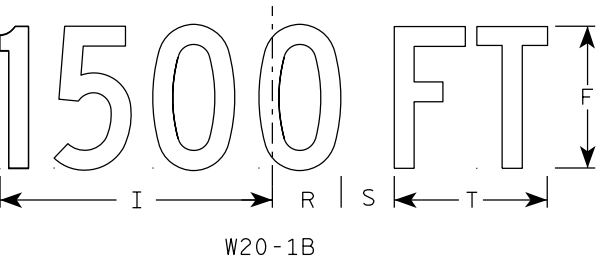
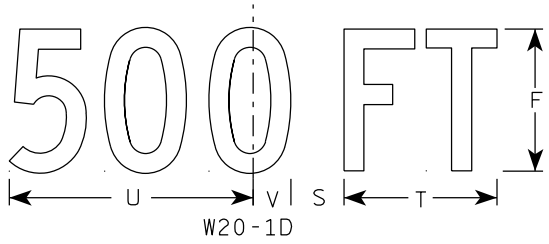
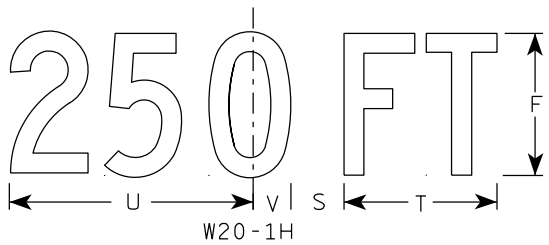
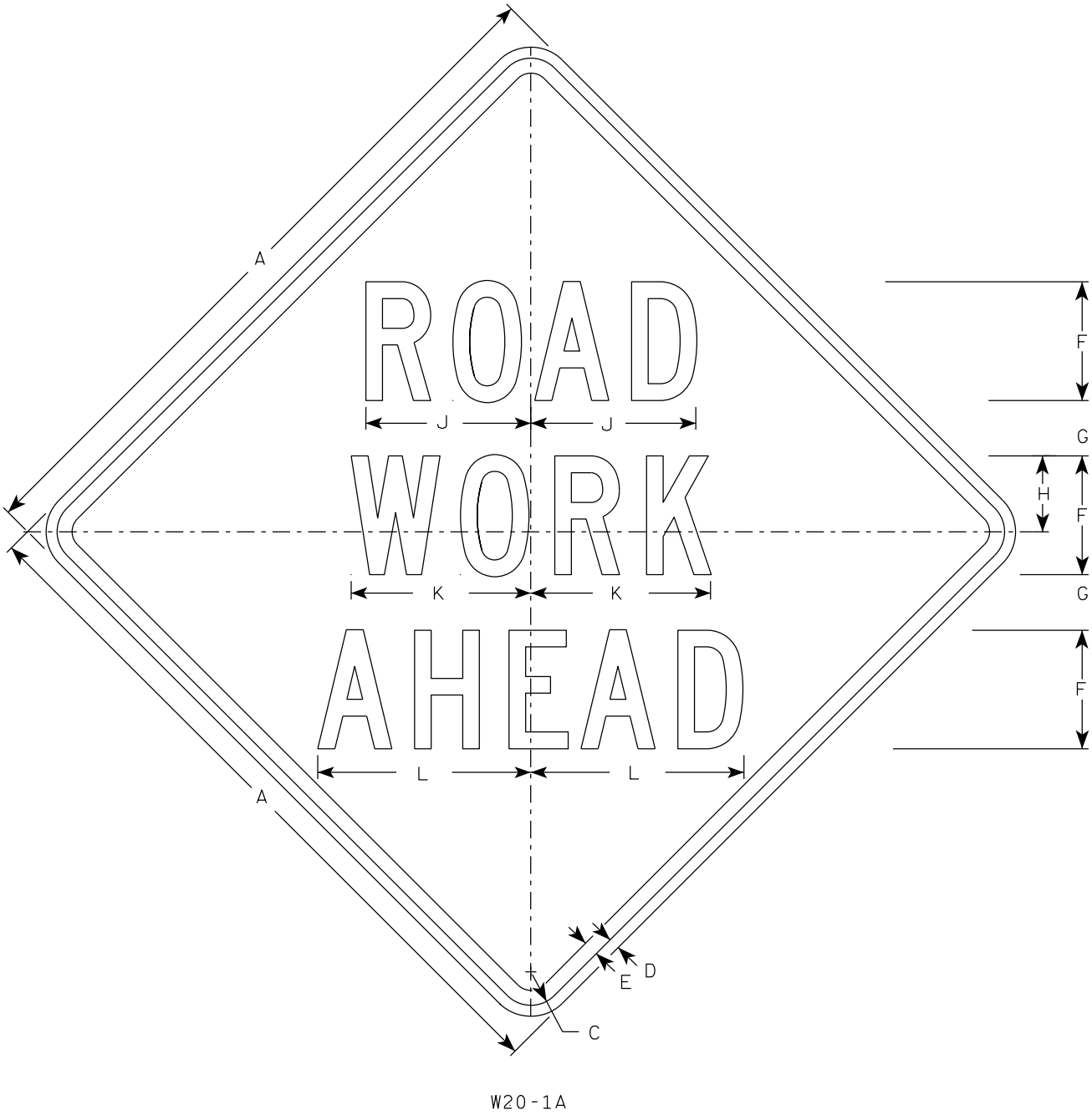
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



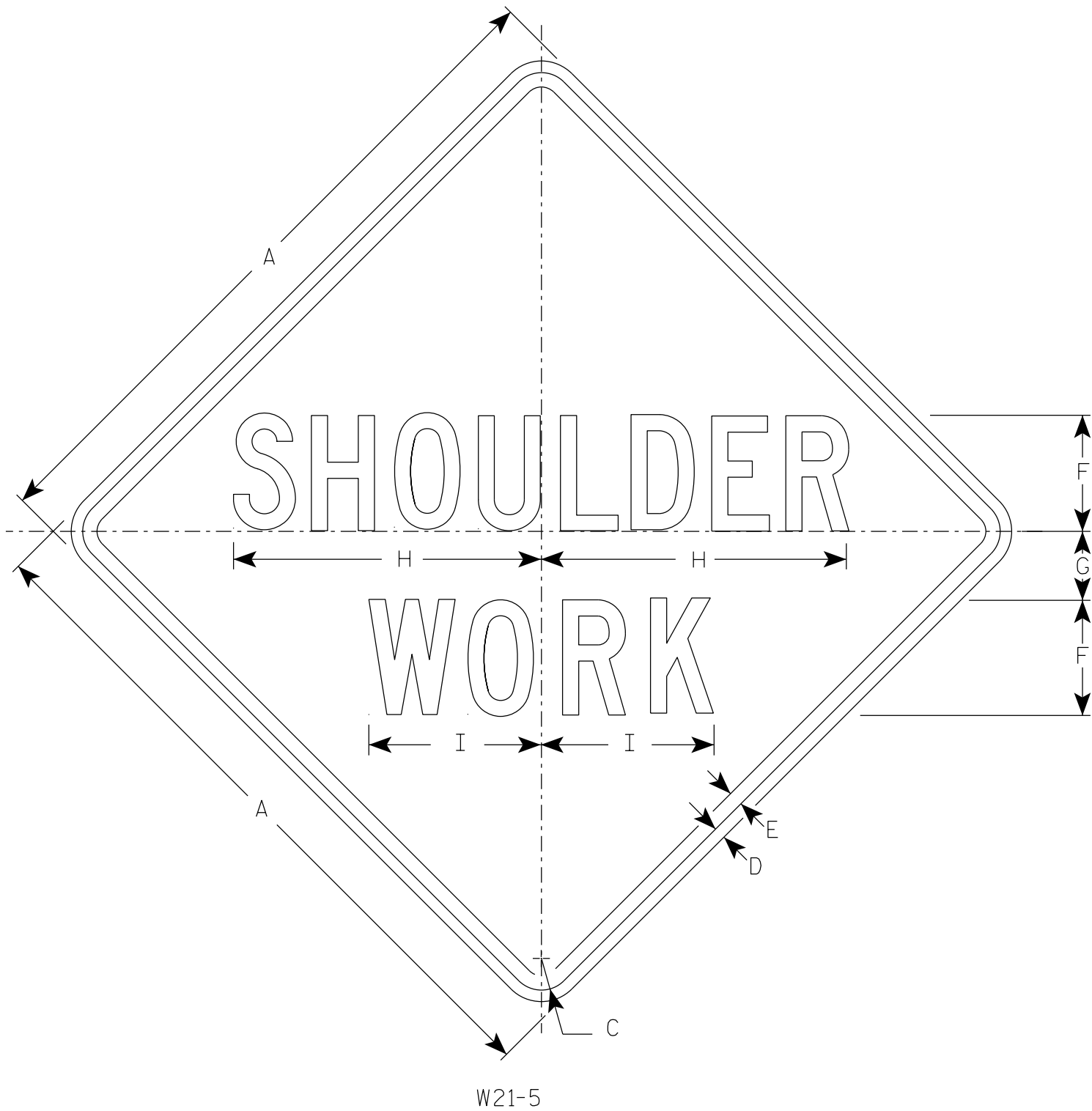
| SIZE | A  | B | C     | D   | E   | F | G     | H     | I      | J      | K      | L      | M     | N     | O     | P      | Q     | R     | S     | T     | U      | V     | W      | X     | Y      | Z | A <sub>req</sub><br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|--------|--------|--------|--------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|--------|-------|--------|---|-----------------------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 5 | 2 5/8 | 3 1/4 | 10 1/8 | 7      | 7 5/8  | 8 7/8  | 1 1/8 | 4 1/2 | 3 1/2 | 9      | 3 1/4 | 2 1/2 | 2 1/4 | 5 5/8 | 9      | 1 3/8 | 8      | 1 3/4 | 10 3/4 | 6 | 9.0                         |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |

STANDARD SIGN  
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A  | B | C     | D   | E   | F | G     | H      | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 6 | 3 1/2 | 16     | 9      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

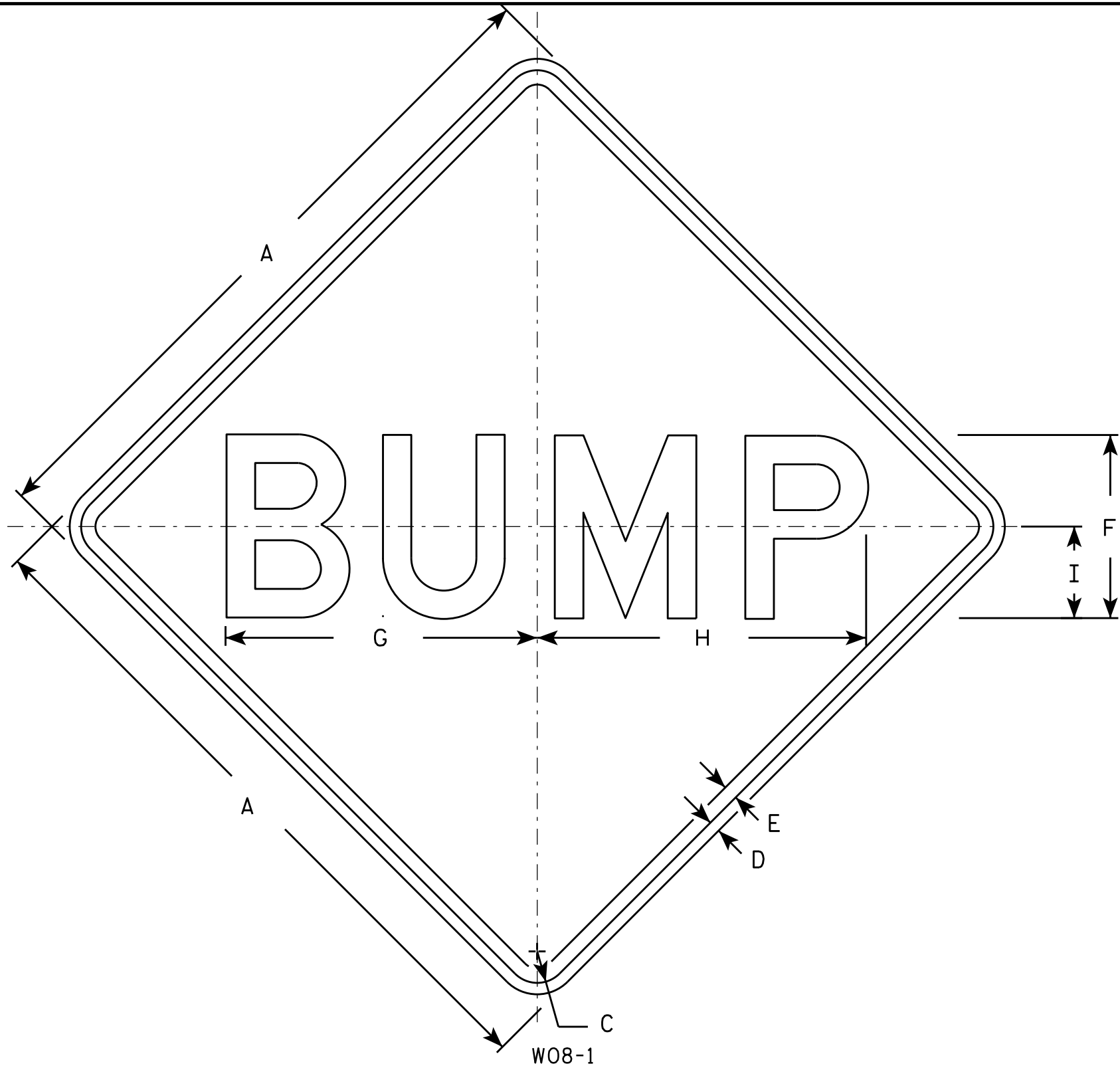
STANDARD SIGN

W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/30/2020 PLATE NO. W21-5.6



NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A  | B | C     | D   | E   | F  | G      | H      | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|----|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 10 | 16 7/8 | 17 7/8 | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 20 3/8 | 21 5/8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 20 3/8 | 21 5/8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 20 3/8 | 21 5/8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 20 3/8 | 21 5/8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 20 3/8 | 21 5/8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN

W08 - 1

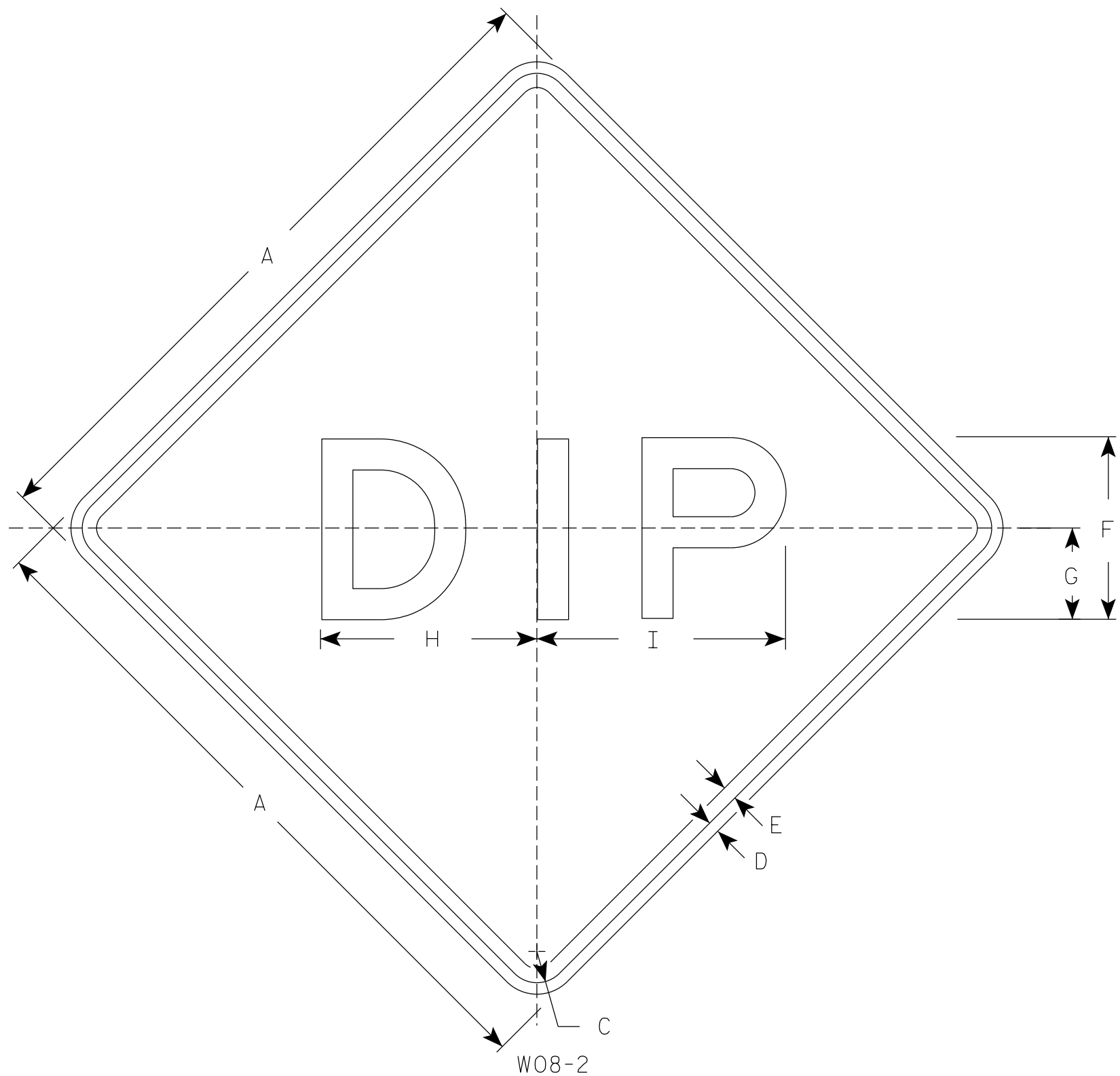
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W08-1.1



7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - E
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

| SIZE | A  | B | C     | D   | E   | F  | G | H      | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|----|---|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 10 | 5 | 11 7/8 | 13 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

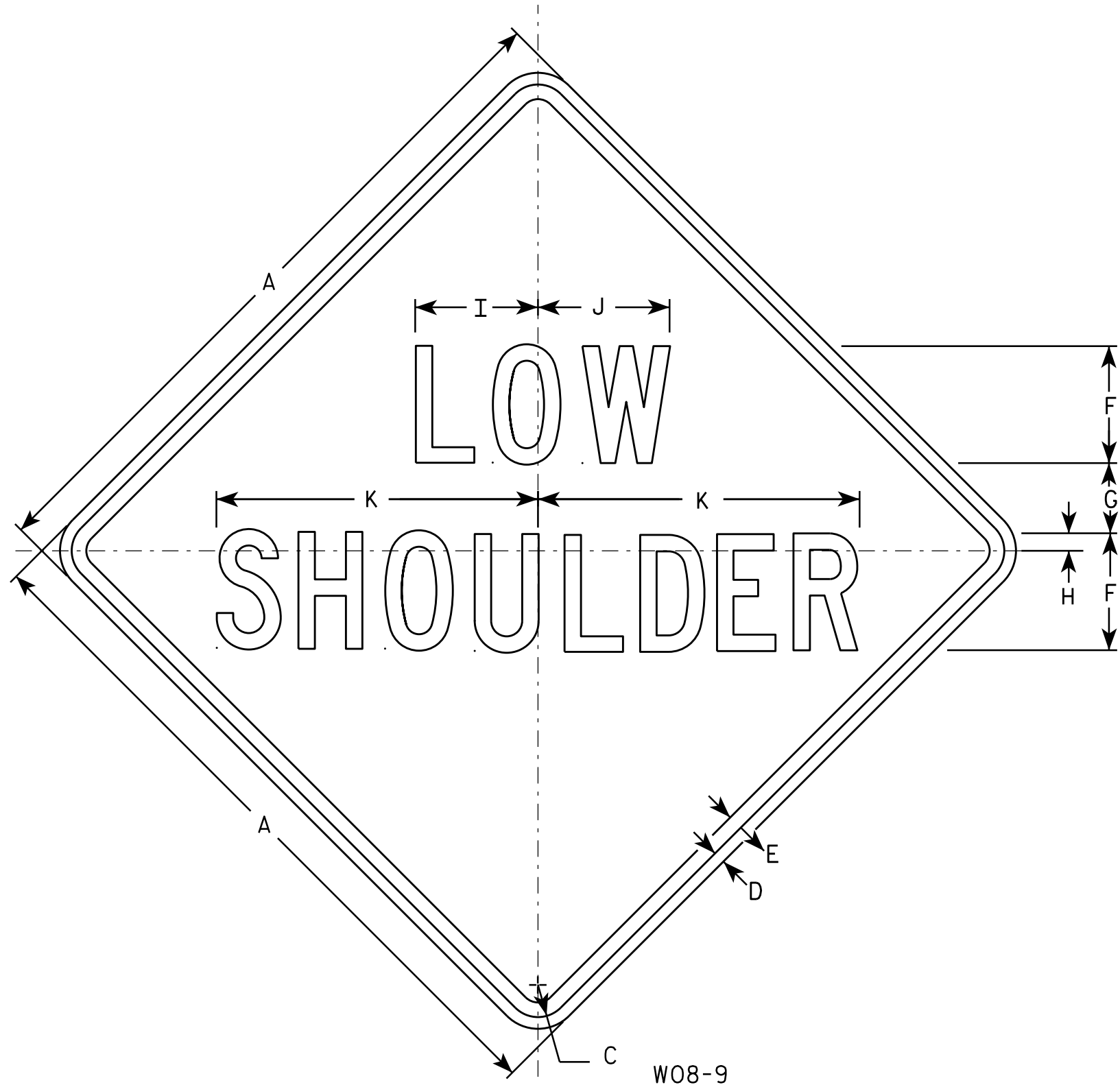
STANDARD SIGN  
W08-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/7/19 PLATE NO. W08-2.2

SHEET NO: E



### NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I     | J     | K      | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 6 | 3 1/2 | 1     | 6 1/4 | 6 3/4 | 16 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

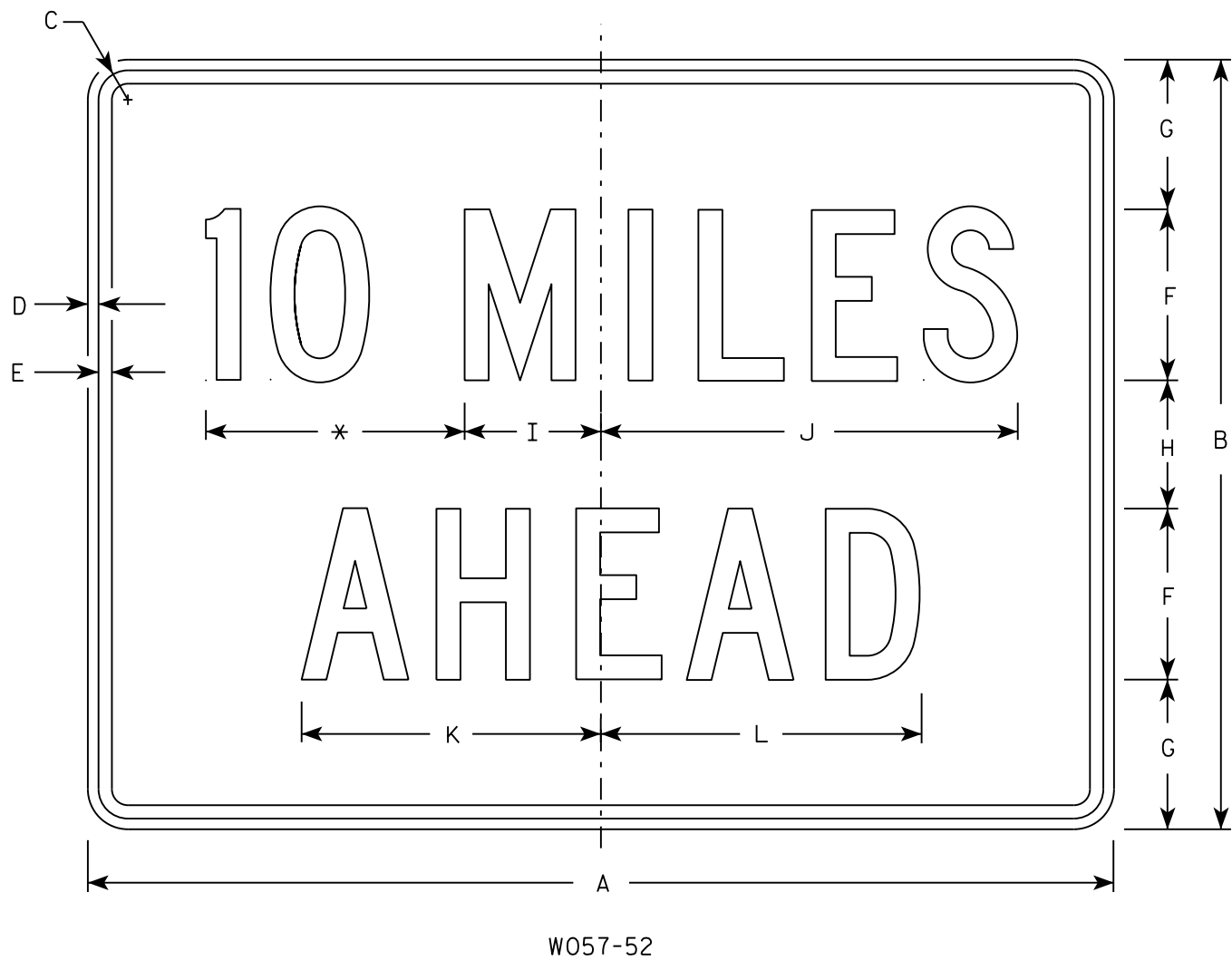
### STANDARD SIGN W08-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

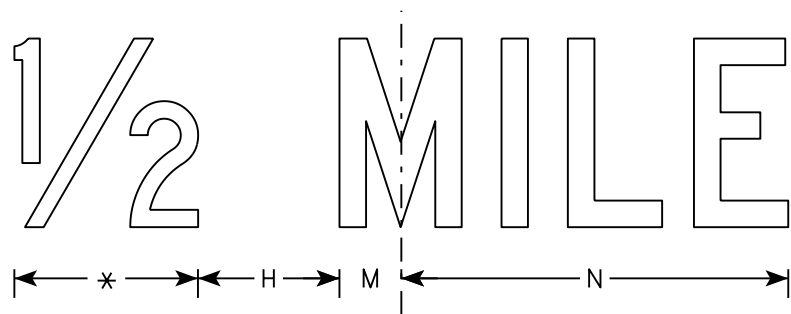
DATE 11/20/13 PLATE NO. W08-9.1





NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.



\* See note 5

| SIZE | A  | B  | C     | D   | E   | F | G     | H | I     | J      | K      | L      | M     | N      | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|---|-------|--------|--------|--------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 | 24 | 1 1/8 | 3/8 | 1/2 | 6 | 4 1/2 | 3 | 4 3/4 | 14 5/8 | 10 5/8 | 11 3/8 | 2     | 12     |   |   |   |   |   |   |   |   |   |   |   |   | 6.0             |
| 2S   | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 2M   | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 3    | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 4    | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 5    | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |

PROJECT NO:

HWY:

COUNTY:

DATE: 3/21/17

PLATE NO: W057-52.2

SHEET NO:

E

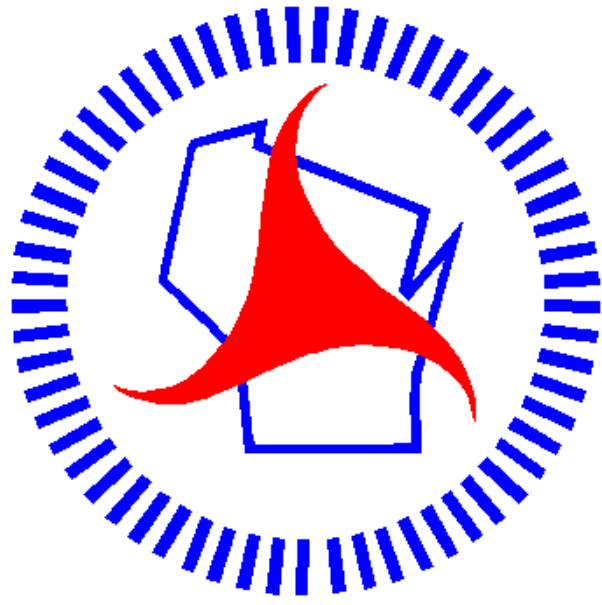
STANDARD SIGN  
W057-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/21/17

PLATE NO. W057-52.2



## *Wisconsin Department of Transportation*

Dedicated people creating transportation solutions  
through innovation and exceptional service.

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

MAD

PROJECT ID: 5940-02-60

WITH: 5939-01-60

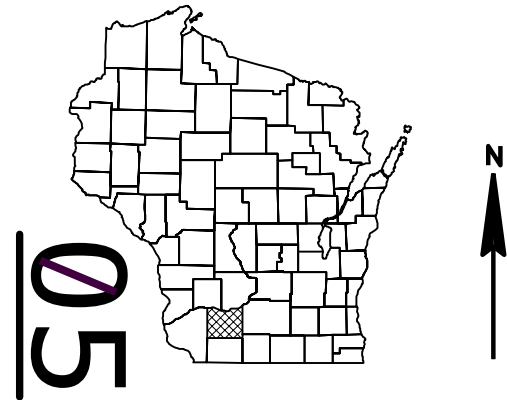
COUNTY: IOWA

APRIL 2021

ORDER OF SHEETS

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

TOTAL SHEETS = 106



DESIGN DESIGNATION

|              |        |   |         |
|--------------|--------|---|---------|
| A.A.D.T.     | (2023) | = | 1,650   |
| A.A.D.T.     | (2043) | = | 2,010   |
| D.H.V.       |        | = | ----    |
| D.D.         |        | = | ----    |
| T.           |        | = | 16.9%   |
| DESIGN SPEED |        | = | 55 MPH  |
| ESALS        |        | = | 580,000 |

CONVENTIONAL SYMBOLS

|                                |  |
|--------------------------------|--|
| <u>PLAN</u>                    |  |
| 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           |  |

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

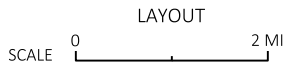
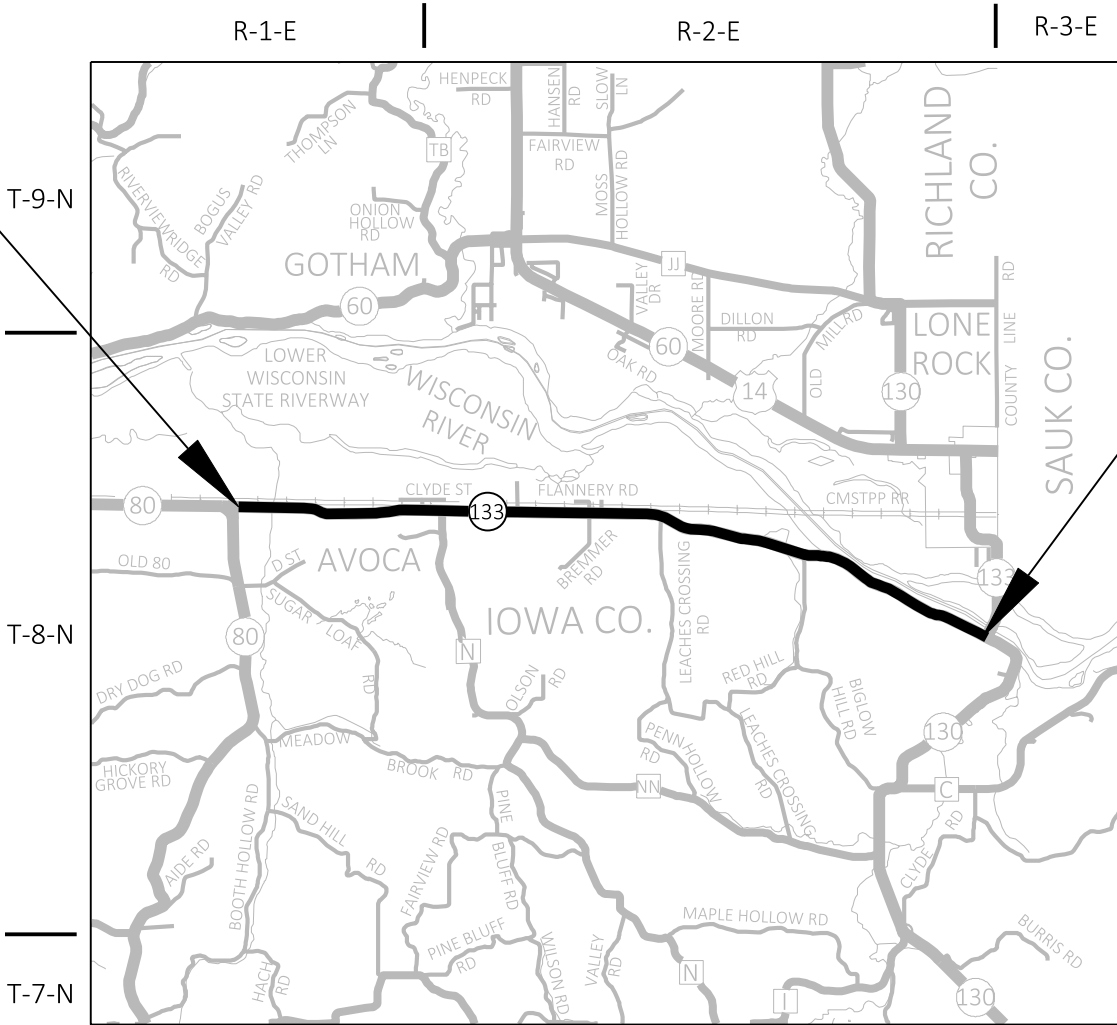
MUSCODA - LONE ROCK

STH 80 TO STH 130

STH 133

IOWA COUNTY

|                      |
|----------------------|
| STATE PROJECT NUMBER |
| 5940-02-60           |



TOTAL NET LENGTH OF CENTERLINE = 8.125 MI

HORIZONTAL POSITIONS SHOWN N 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.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012).

| STATE PROJECT | FEDERAL PROJECT |          |
|---------------|-----------------|----------|
|               | PROJECT         | CONTRACT |
| 5940-02-60    | WISC 2021273    | 1        |
|               |                 |          |
|               |                 |          |

ORIGINAL PLANS PREPARED BY:



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

|                     |                         |
|---------------------|-------------------------|
| PREPARED BY         |                         |
| Surveyor            | STRAND ASSOCIATES, INC. |
| Designer            | STRAND ASSOCIATES, INC. |
| Project Manager     | MAHESH SHRESTHA, P.E.   |
| Regional Examiner   | WISDOT SW REGION        |
| Regional Supervisor | WILLIAM STROBEL, P.E.   |

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

E

GENERAL NOTES

THE CENTERLINE OF STH 133 IS APPROXIMATELY THE MAINLINE REFERENCE LINE.

DISTURBED AREAS WITHIN THE RIGHT OF WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.

WHEN THE QUANTITY OF BASE AGGREGATE DENSE IS MEASURED FOR PAYMENT IN TONS, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

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

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

ALL EXISTING SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OPERATIONS REQUIRE THEIR REMOVAL OR UNLESS THE ENGINEER APPROVES THEIR REMOVAL.

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, PASSING, OR PARKING LANE.

SECTION 2 ORDER OF SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS
- BEAM GUARD LAYOUT DETAILS
- TRAFFIC CONTROL - ADVANCE WARNING SIGNING
- DETOUR ROUTE SIGNING
- PLAN

HMA PAVEMENT SUMMARY TABLE

| 2" HMA PAVEMENT (OVERLAY) |           |              |
|---------------------------|-----------|--------------|
| LAYER                     | THICKNESS | HMA TYPE     |
| UPPER LAYER               | 2"        | 4 LT 58-28 S |

UTILITY CONTACTS

- \* ALLIANT ENERGY - ELECTRICITY  
MARY MONTGOMERY  
200 FIRST STREET  
CEDAR RAPIDS, IA 52401  
(319) 786-4768  
MARYMONTGOMERY@ALLIANTENERGY.COM
- \* CENTURYLINK - COMMUNICATION LINE  
STEVE NELSON  
333 N FRONT STREET  
LA CROSSE, WI 54601  
(608) 796-7033  
STEVE.NELSON@CENTURYLINK.COM
- \* FRONTIER COMMUNICATIONS OF WI LLC.  
RUSS RYAN  
118 DIVISION STREET  
PLYMOUTH, WI 53073  
(920) 583-3275  
RUSSELL.W.RYAN@FTR.COM
- \* VILLAGE OF AVOCA - WATER AND SEWER  
SUSIE ZIEBARTH  
401 WISCONSIN STREET  
P.O. BOX 188  
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(608) 532-6831  
VILAVOCA@MHTC.NET
- \* WE ENERGIES - GAS/PETROLEUM  
ADAM MARING  
N3025 14TH AVENUE  
MONROE, WI 53566  
OFFICE: (608) 328-5679  
MOBILE: (608) 426-1715  
ADAM.MARING@WE-ENERGIES.COM



Dial 811 or (800)242-8511

www.DiggersHotline.com

\* DENOTES DIGGERS HOTLINE MEMBERS

DNR LIAISON

ANDY BARTA  
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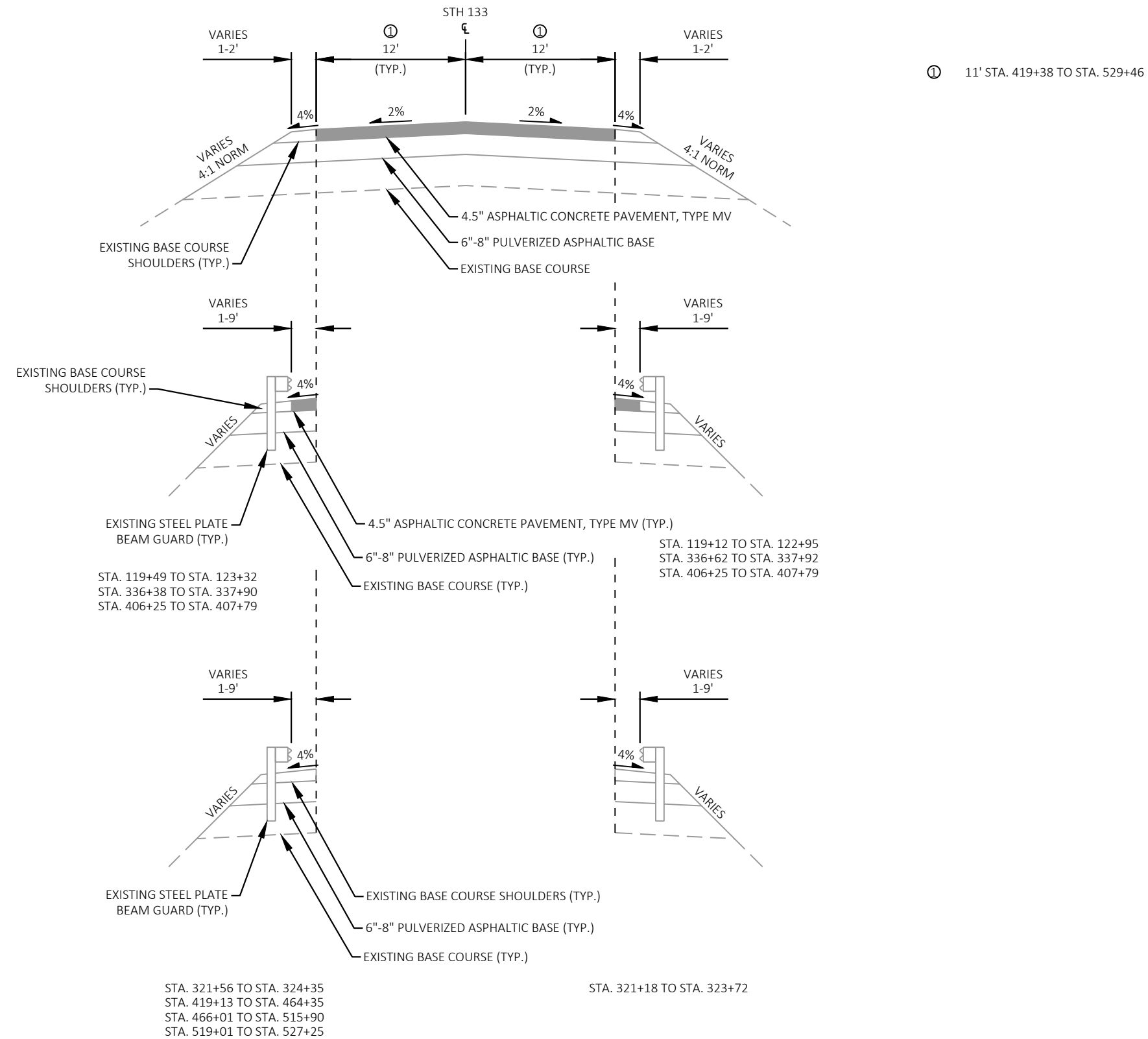
DESIGN CONSULTANT

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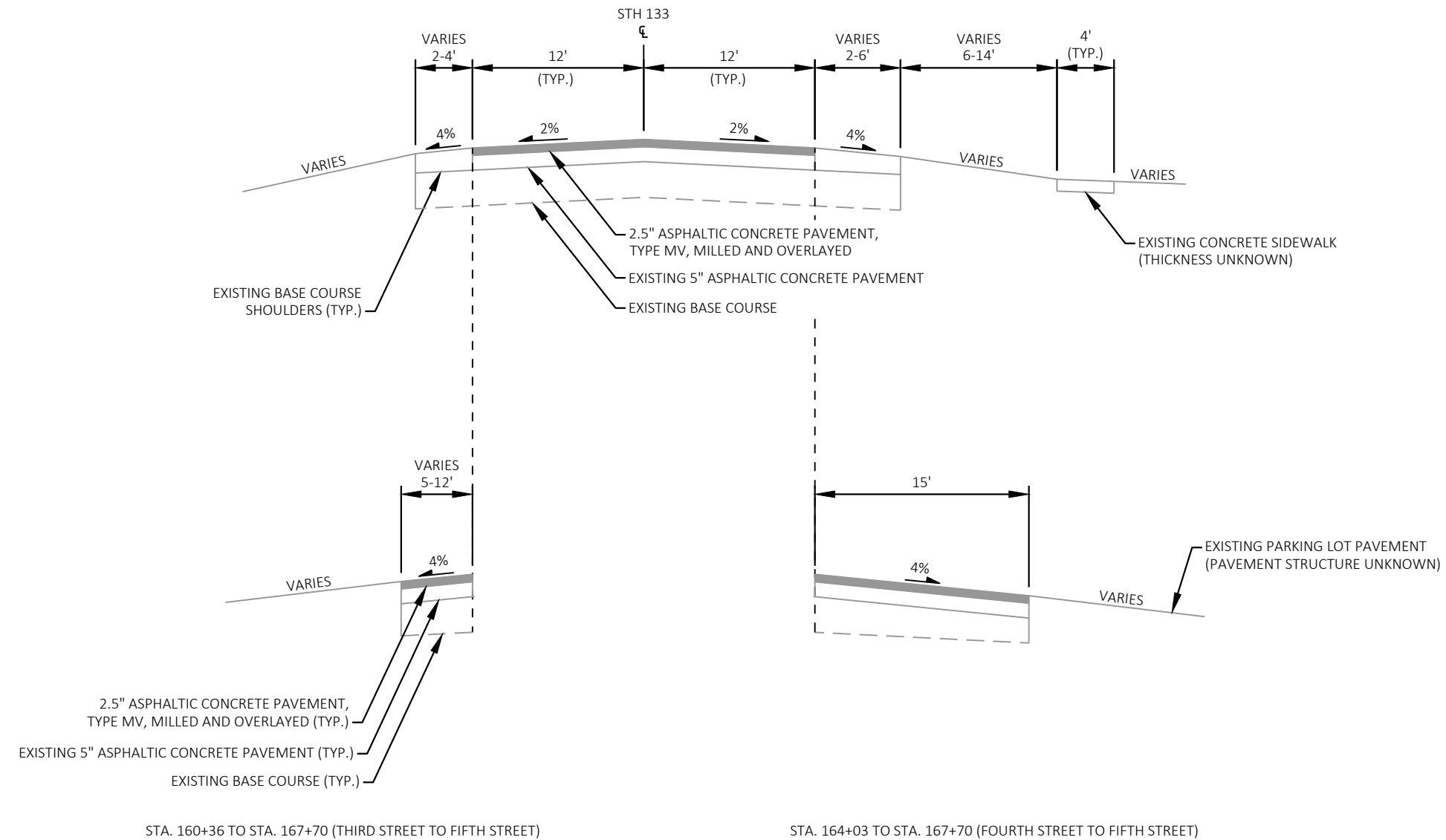


|                        |              |              |                  |       |   |
|------------------------|--------------|--------------|------------------|-------|---|
| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | PROJECT OVERVIEW | SHEET | E |
|------------------------|--------------|--------------|------------------|-------|---|



EXISTING TYPICAL SECTION - STH 133 MAINLINE

STA. 100+48 - STA. 153+00 (STH 80 TO FIRST STREET)  
STA. 175+00 - STA. 529+46 (SEVENTH STREET TO STH 130)



### EXISTING TYPICAL SECTION - STH 133 MAINLINE

STA. 153+00 - STA. 175+00 (FIRST STREET TO SEVENTH STREET)

PROJECT NO: 5940-02-60

HWY: STH 133

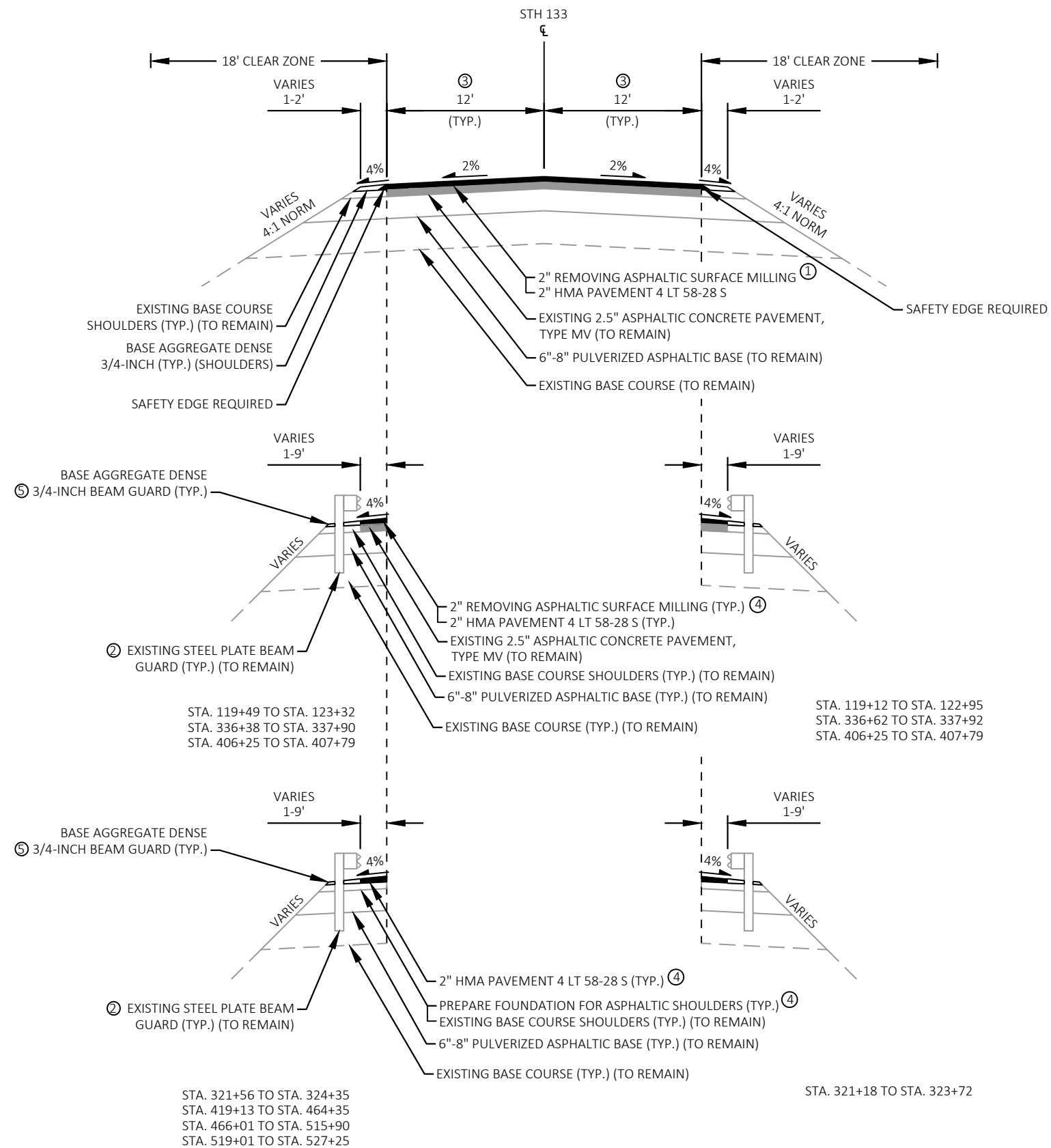
COUNTY: IOWA

TYPICAL SECTIONS

SHEET

E





PROPOSED TYPICAL SECTION - STH 133 MAINLINE

STA. 100+48 - STA. 153+00 (STH 80 TO FIRST STREET)  
STA. 175+00 - STA. 529+46 (SEVENTH STREET TO STH 130)

PROJECT NO: 5940-02-60

HWY: STH 133

COUNTY: IOWA

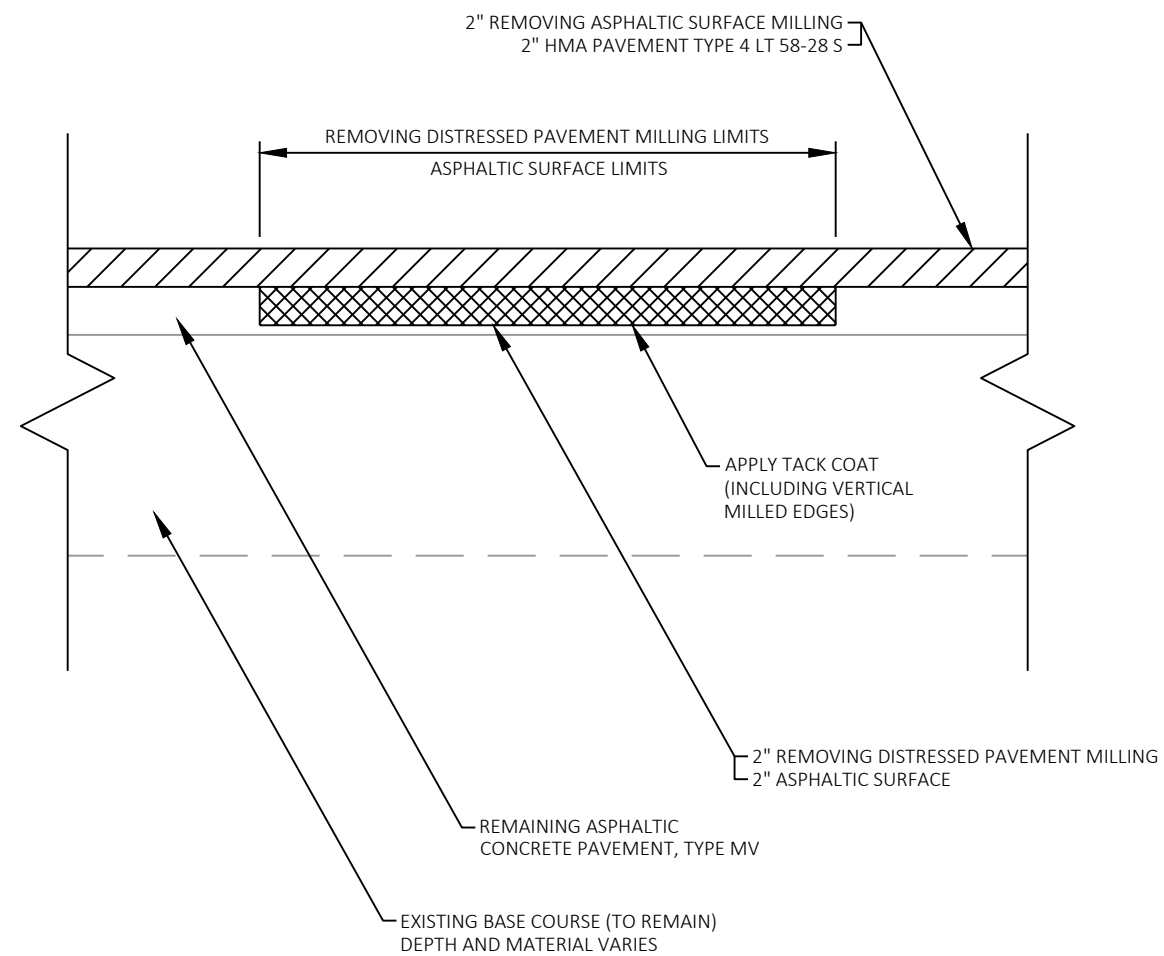
TYPICAL SECTIONS

SHEET

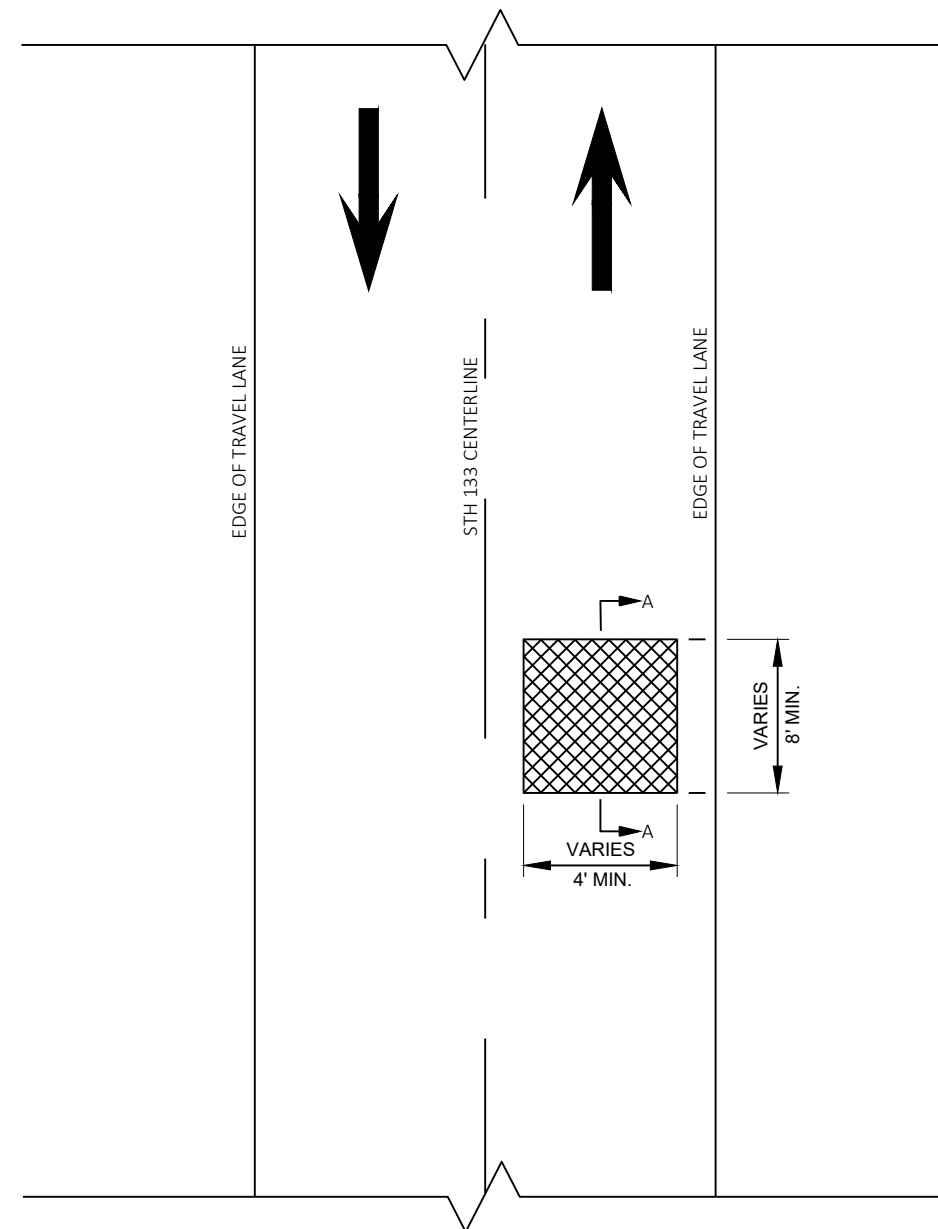
E







SECTION A -A

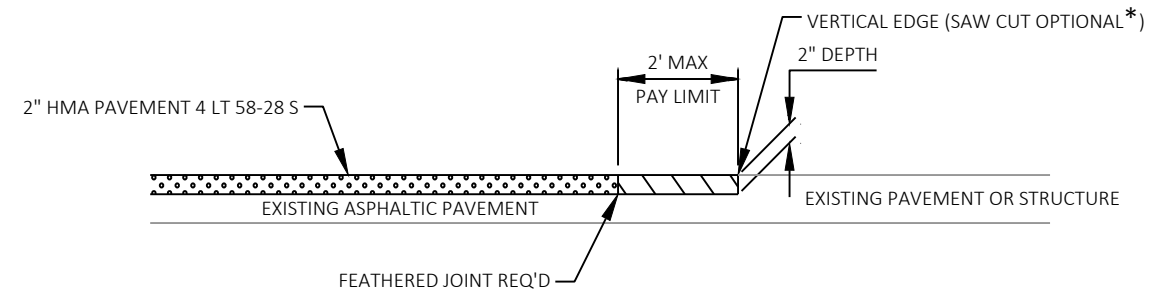


PLAN VIEW

REMOVING DISTRESSED PAVEMENT MILLING

NOTE: EXACT LOCATION AND LIMITS OF REMOVING DISTRESSED  
PAVEMENT MILLING TO BE DETERMINED BY THE  
ENGINEER IN THE FIELD.

NOT TO SCALE



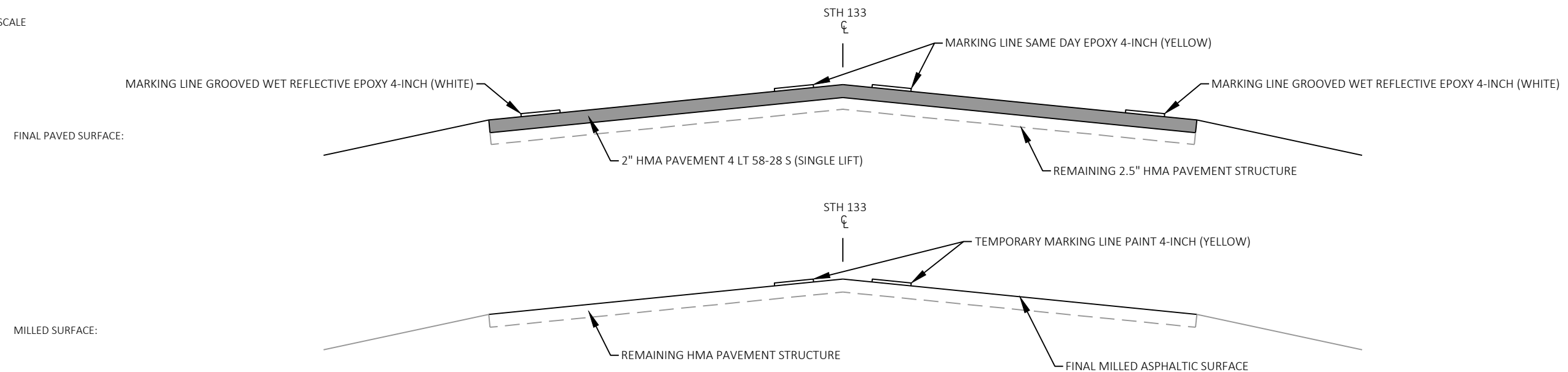
\*NOT PAID FOR SEPARATELY

- REMOVING ASPHALTIC SURFACE MILLING (2-INCHES)
- REMOVE ASPHALTIC SURFACE WEDGE AT BUTT JOINT TO CREATE VERTICAL EDGE  
PAID FOR UNDER BID ITEM REMOVING ASPHALTIC SURFACE BUTT JOINTS.

### REMOVING ASPHALTIC SURFACE BUTT JOINTS DETAIL (NO PROFILE CHANGE)

MAINLINE END PROJECT LIMITS  
STRUCTURE B-25-0005

NOT TO SCALE



### PAVEMENT MARKING APPLICATION SEQUENCE DETAIL

**NOTE:** ALL NEW CENTERLINE PASSING/NO PASSING PAVEMENT MARKING (BEGIN/END) LOCATIONS TO MATCH EXISTING PASSING/NO PASSING MARKING (BEGIN/END) LOCATIONS.

SEE SDD "PAVEMENT MARKING, MAINLINE AND TURN LANES, LONGITUDINAL MARKING (MAINLINE)" FOR ADDITIONAL INFORMATION.

PROJECT NO: 5940-02-60

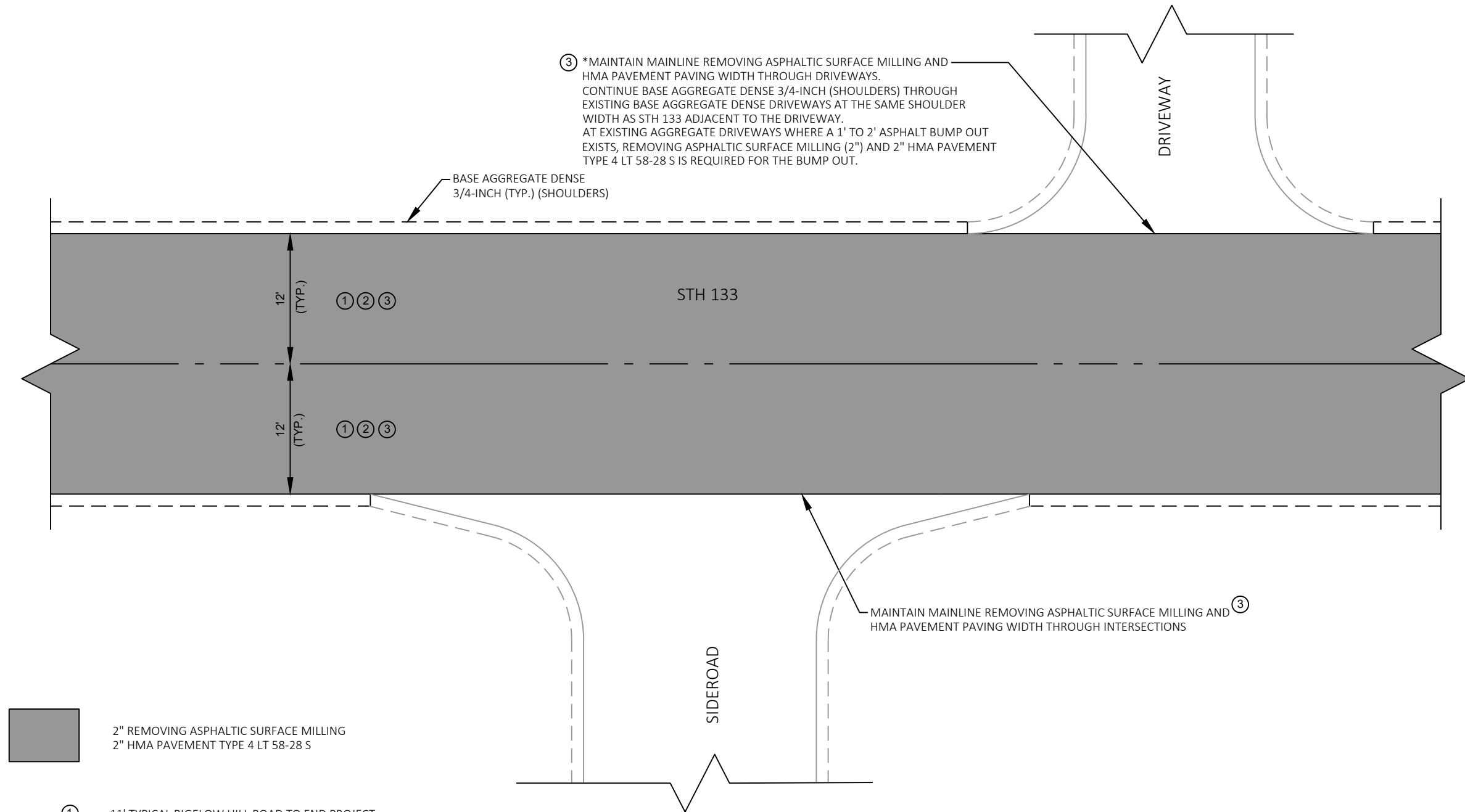
HWY: STH 133

COUNTY: IOWA

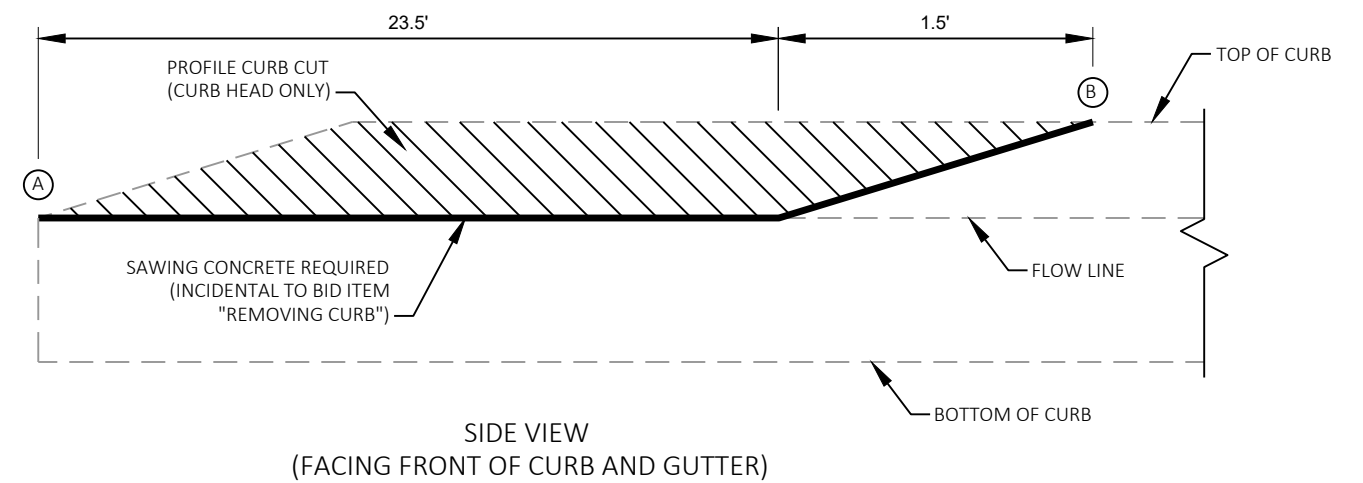
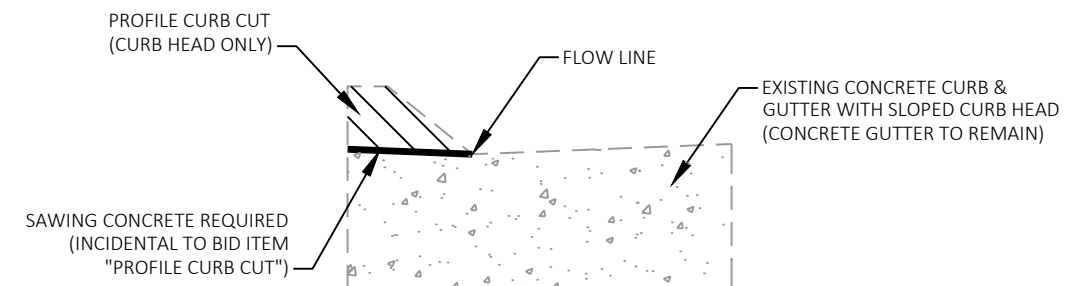
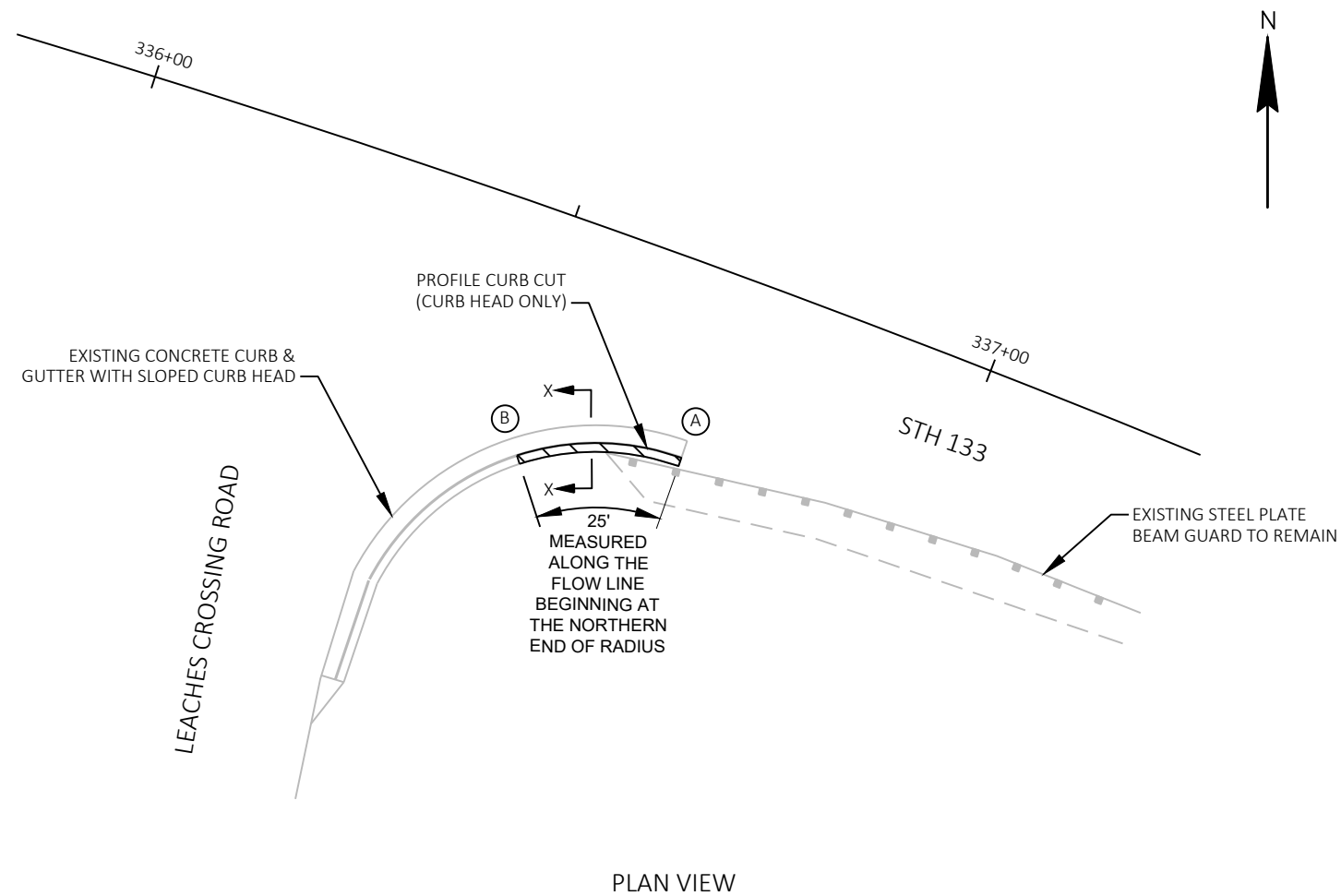
CONSTRUCTION DETAILS

SHEET

E

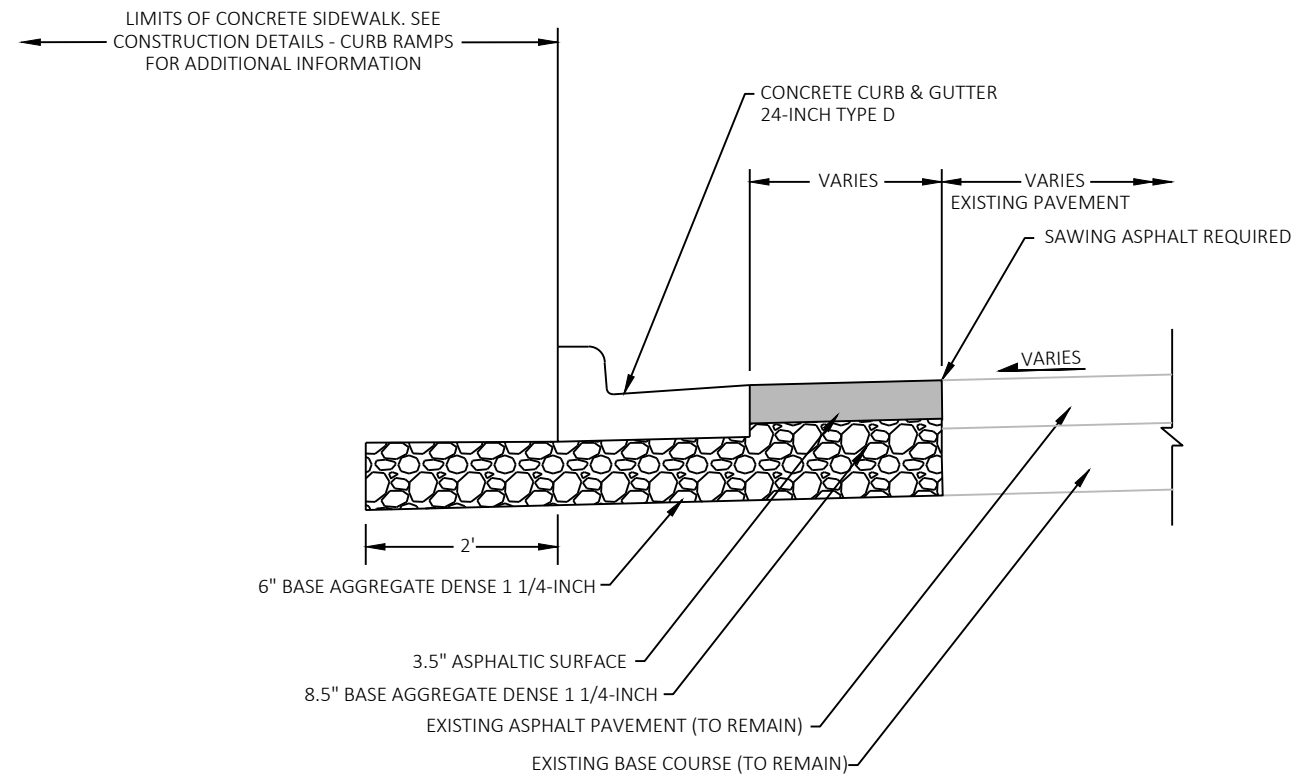


DETAIL OF REMOVING ASPHALTIC SURFACE MILLING AND HMA PAVEMENT AT INTERSECTIONS AND DRIVEWAYS



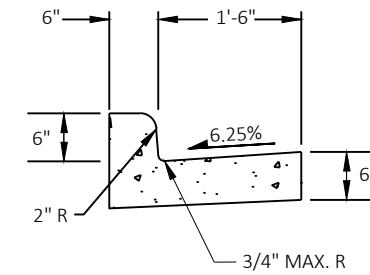
PROFILE CURB CUT DETAIL  
AT EXISTING ENERGY ABSORBING TERMINAL END TO REMAIN (CURB HEAD ONLY)

STA. 336+40 TO STA. 336+71 RT

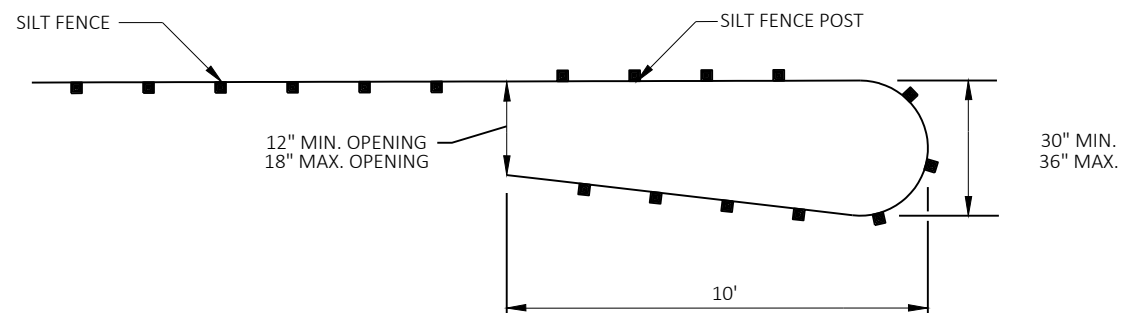


**CONCRETE CURB & GUTTER INSTALLATION DETAIL**  
NORTHEAST AND SOUTHEAST QUADRANTS OF 5TH STREET INTERSECTION

NOTE: SEE STANDARD DETAIL DRAWING "CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES" FOR ADDITIONAL INFORMATION.



**CONCRETE CURB & GUTTER 24-INCH TYPE D**  
NORTHEAST AND SOUTHEAST QUADRANTS OF 5TH STREET INTERSECTION

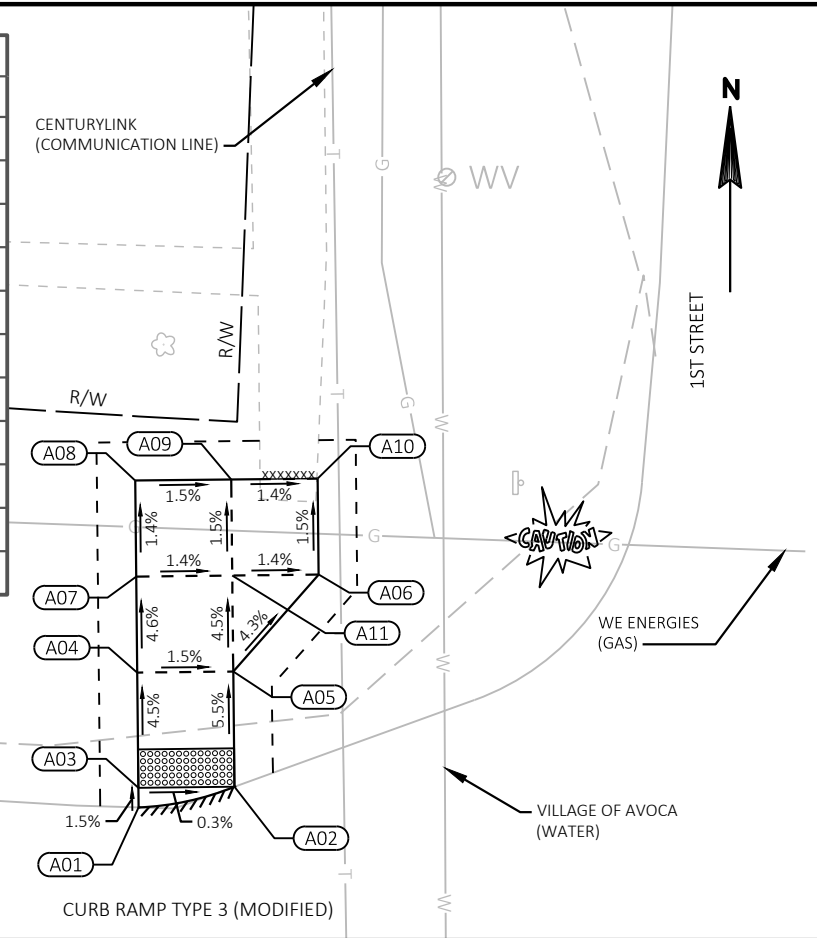


NOTE: PLACE SILT FENCE POSTS FOR THE TURN-AROUND ON THE OUTSIDE THE TURN-AROUND.

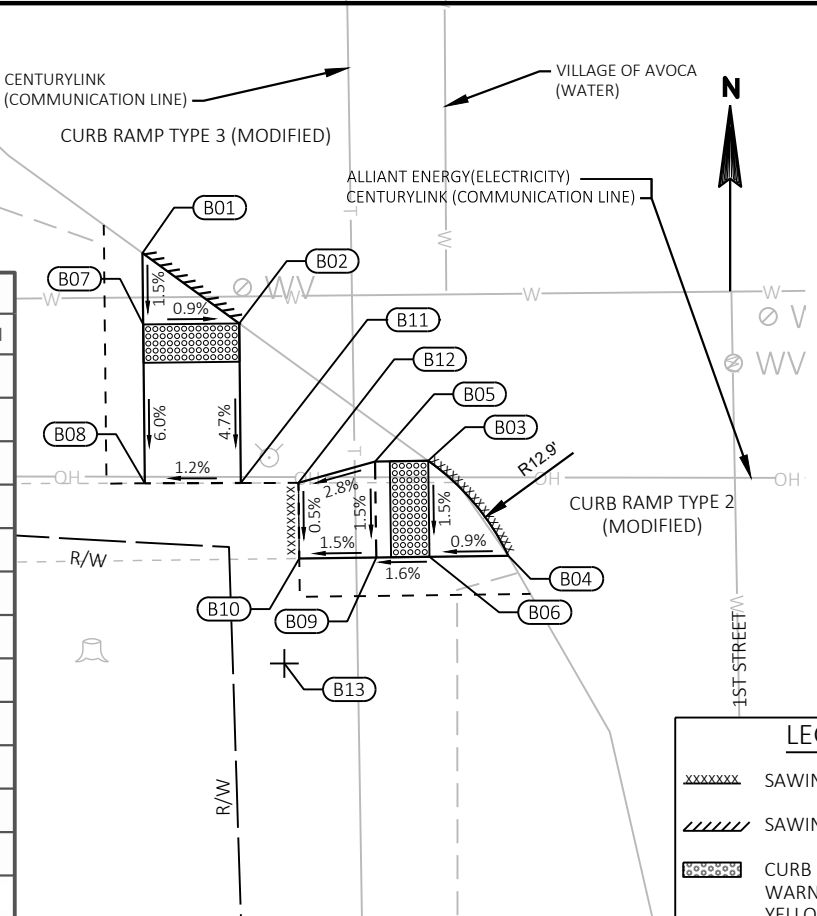
**SILT FENCE TURN-AROUND DETAIL**  
(SEE SPECIAL PROVISIONS ARTICLE "AMPHIBIANS AND REPTILES" FOR ADDITIONAL INFORMATION)



| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| A01                    | 152+61.16 | 12.67' LT | 234,464.17 | 325,845.40 | 699.36    |
| A02                    | 152+66.17 | 14.01' LT | 234,465.25 | 325,850.39 | 699.33    |
| A03                    | 152+61.09 | 13.69' LT | 234,465.20 | 325,845.39 | 699.35    |
| A04                    | 152+60.68 | 19.68' LT | 234,471.20 | 325,845.33 | 699.08    |
| A05                    | 152+65.79 | 20.00' LT | 234,471.25 | 325,850.33 | 699.00    |
| A06                    | 152+70.12 | 25.25' LT | 234,476.30 | 325,854.78 | 698.72    |
| A07                    | 152+60.33 | 24.67' LT | 234,476.20 | 325,845.27 | 698.85    |
| A08                    | 152+59.98 | 29.65' LT | 234,481.19 | 325,845.22 | 698.78    |
| A09                    | 152+65.16 | 29.98' LT | 234,481.25 | 325,850.22 | 698.70    |
| A10                    | 152+69.83 | 30.25' LT | 234,481.30 | 325,854.72 | 698.64    |
| A11                    | 152+65.48 | 24.99' LT | 234,476.25 | 325,850.28 | 698.78    |

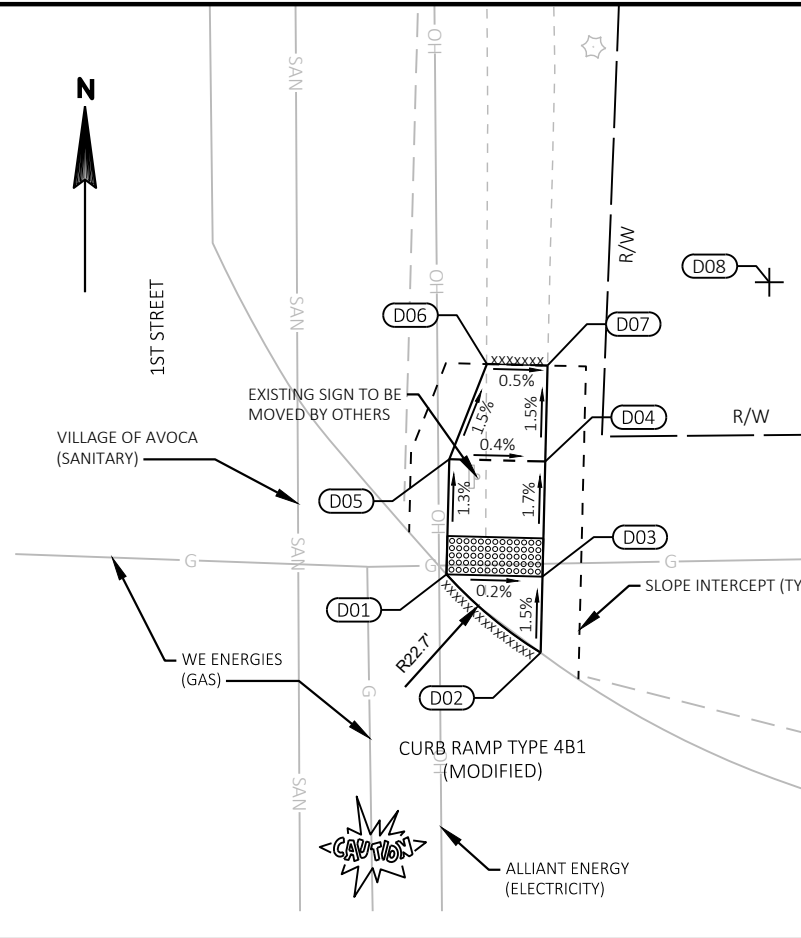


| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| B01                    | 152+63.15 | 17.94' RT | 234,433.50 | 325,845.72 | 699.65    |
| B02                    | 152+68.25 | 21.35' RT | 234,429.83 | 325,850.76 | 699.55    |
| B03                    | 152+78.09 | 28.09' RT | 234,422.68 | 325,860.60 | 699.35    |
| B04                    | 152+82.26 | 32.89' RT | 234,417.73 | 325,864.77 | 699.32    |
| B05                    | 152+75.41 | 28.22' RT | 234,422.64 | 325,857.83 | 699.31    |
| B06                    | 152+78.32 | 33.08' RT | 234,417.68 | 325,860.66 | 699.28    |
| B07                    | 152+63.39 | 21.65' RT | 234,429.78 | 325,845.76 | 699.60    |
| B08                    | 152+63.89 | 29.91' RT | 234,421.51 | 325,845.84 | 699.10    |
| B09                    | 152+75.66 | 33.22' RT | 234,417.64 | 325,857.90 | 699.24    |
| B10                    | 152+71.81 | 33.43' RT | 234,417.59 | 325,853.88 | 699.18    |
| B11                    | 152+68.71 | 29.64' RT | 234,421.53 | 325,850.84 | 699.16    |
| B12                    | 152+71.61 | 29.50' RT | 234,421.53 | 325,853.84 | 699.20    |
| B13                    | 152+71.29 | 38.93' RT | 234,412.13 | 325,853.11 | ---       |

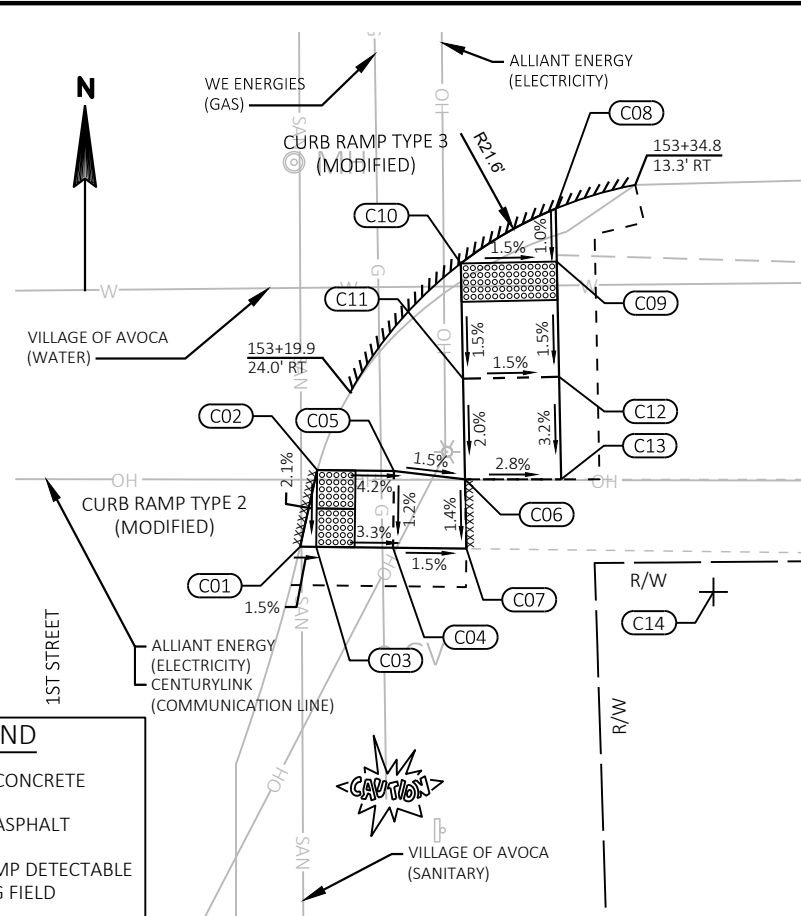


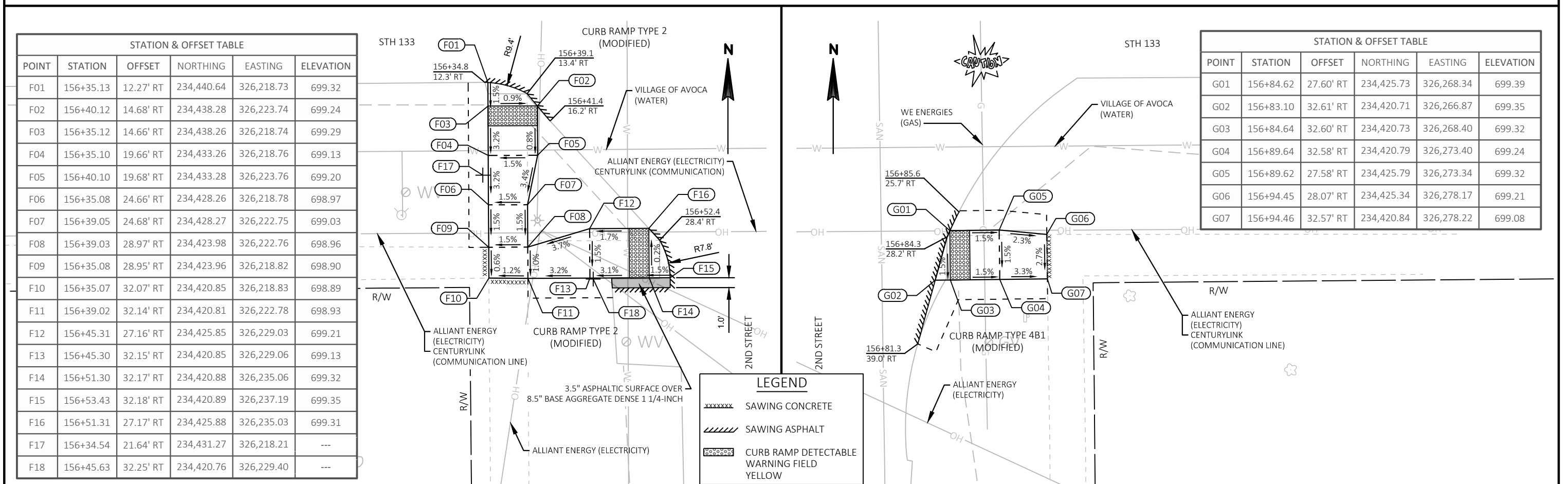
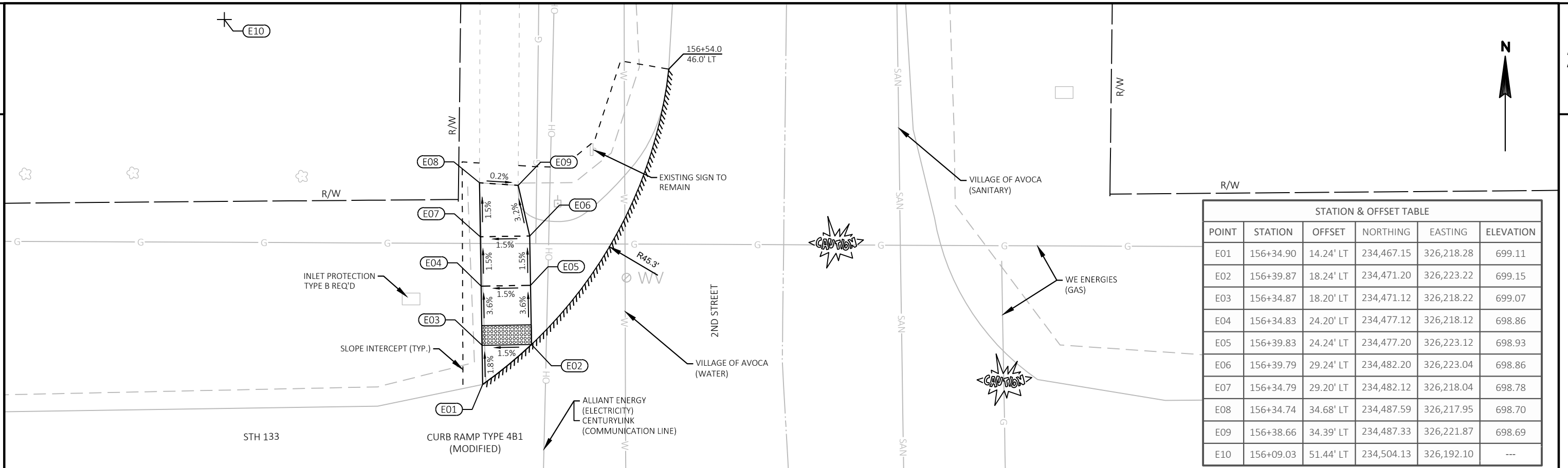
| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| D01                    | 153+25.16 | 25.89' LT | 234,476.23 | 325,908.45 | 698.87    |
| D02                    | 153+30.03 | 21.77' LT | 234,472.15 | 325,913.35 | 698.94    |
| D03                    | 153+30.16 | 25.73' LT | 234,476.11 | 325,913.45 | 698.88    |
| D04                    | 153+30.35 | 31.72' LT | 234,482.11 | 325,913.60 | 698.77    |
| D05                    | 153+25.36 | 31.89' LT | 234,482.23 | 325,908.60 | 698.79    |
| D06                    | 153+27.36 | 36.82' LT | 234,487.19 | 325,910.56 | 698.71    |
| D07                    | 153+30.52 | 36.72' LT | 234,487.11 | 325,913.72 | 698.70    |
| D08                    | 153+42.10 | 40.96' LT | 234,491.45 | 325,925.26 | ---       |

STH 133

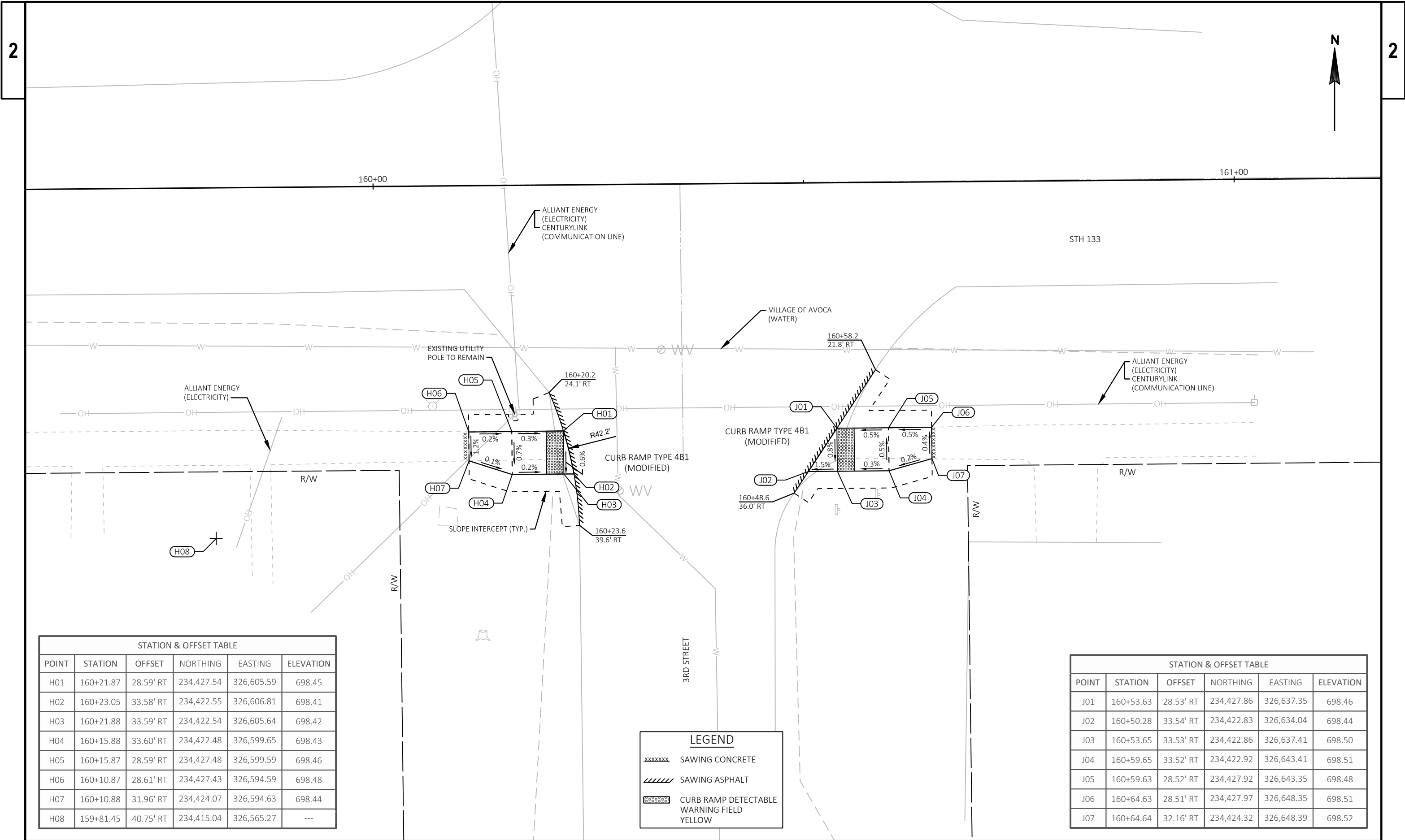


| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| C01                    | 153+17.17 | 32.02' RT | 234,418.26 | 325,900.95 | 699.21    |
| C02                    | 153+18.10 | 28.04' RT | 234,422.25 | 325,901.83 | 699.28    |
| C03                    | 153+18.01 | 32.04' RT | 234,418.25 | 325,901.79 | 699.20    |
| C04                    | 153+22.01 | 32.12' RT | 234,418.20 | 325,905.79 | 699.07    |
| C05                    | 153+22.09 | 28.12' RT | 234,422.20 | 325,905.83 | 699.12    |
| C06                    | 153+25.79 | 28.58' RT | 234,421.77 | 325,909.54 | 699.06    |
| C07                    | 153+25.83 | 32.19' RT | 234,418.16 | 325,909.61 | 699.01    |
| C08                    | 153+30.63 | 14.53' RT | 234,435.86 | 325,914.26 | 699.21    |
| C09                    | 153+30.66 | 17.29' RT | 234,433.11 | 325,914.31 | 699.18    |
| C10                    | 153+25.66 | 17.34' RT | 234,433.00 | 325,909.31 | 699.26    |
| C11                    | 153+25.73 | 23.34' RT | 234,427.01 | 325,909.43 | 699.16    |
| C12                    | 153+30.73 | 23.29' RT | 234,427.10 | 325,914.43 | 699.09    |
| C13                    | 153+30.79 | 28.63' RT | 234,421.76 | 325,914.54 | 698.92    |
| C14                    | 153+38.68 | 34.56' RT | 234,415.90 | 325,922.47 | ---       |



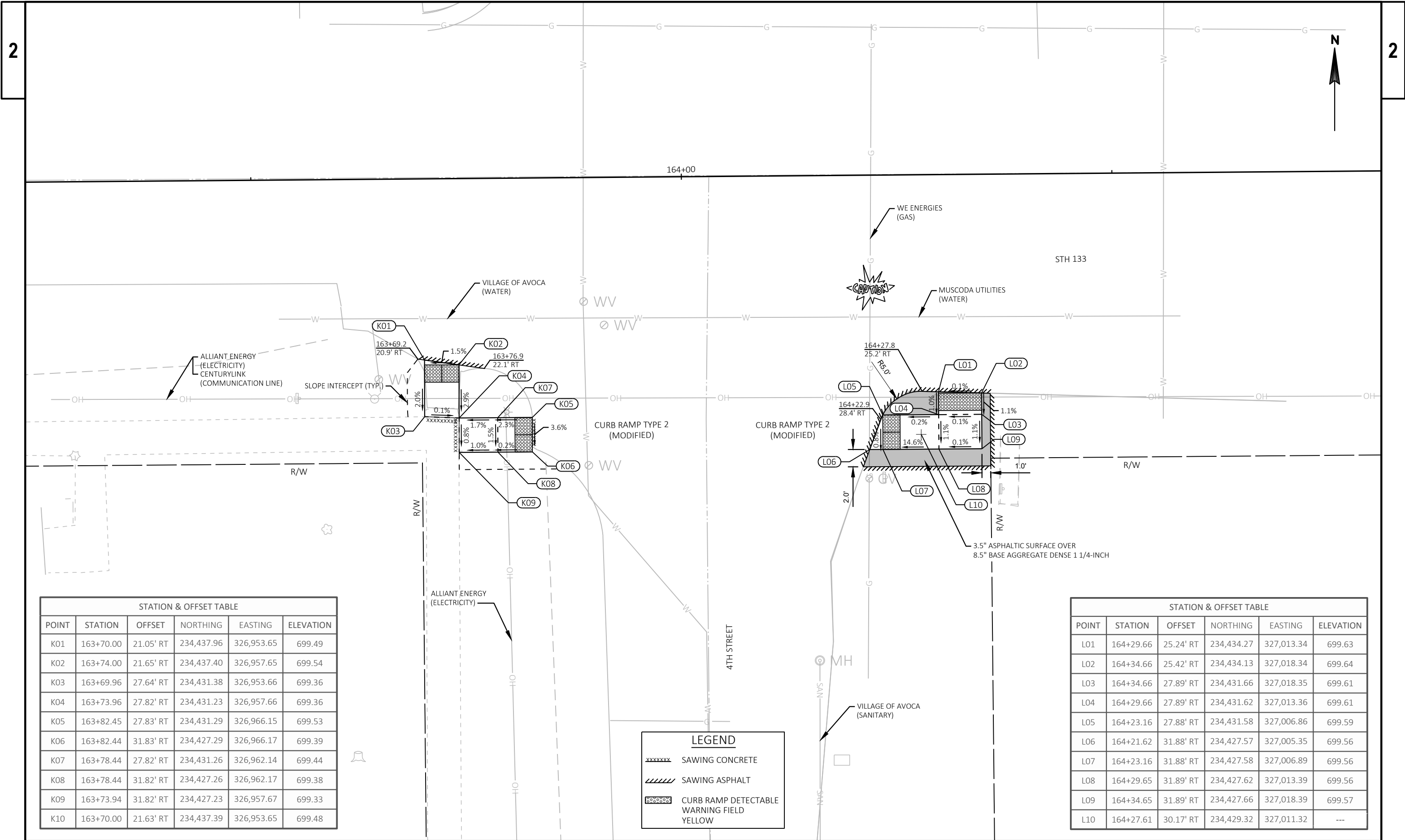






| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| H01                    | 160+21.87 | 28.59' RT | 234,427.54 | 326,605.59 | 698.45    |
| H02                    | 160+23.05 | 33.58' RT | 234,422.55 | 326,606.81 | 698.41    |
| H03                    | 160+21.88 | 33.59' RT | 234,422.54 | 326,605.64 | 698.42    |
| H04                    | 160+15.88 | 33.60' RT | 234,422.48 | 326,599.65 | 698.43    |
| H05                    | 160+15.87 | 28.59' RT | 234,427.48 | 326,599.59 | 698.46    |
| H06                    | 160+10.87 | 28.61' RT | 234,427.43 | 326,594.59 | 698.48    |
| H07                    | 160+10.88 | 31.96' RT | 234,424.07 | 326,594.63 | 698.44    |
| H08                    | 159+81.45 | 40.75' RT | 234,415.04 | 326,565.27 | ---       |

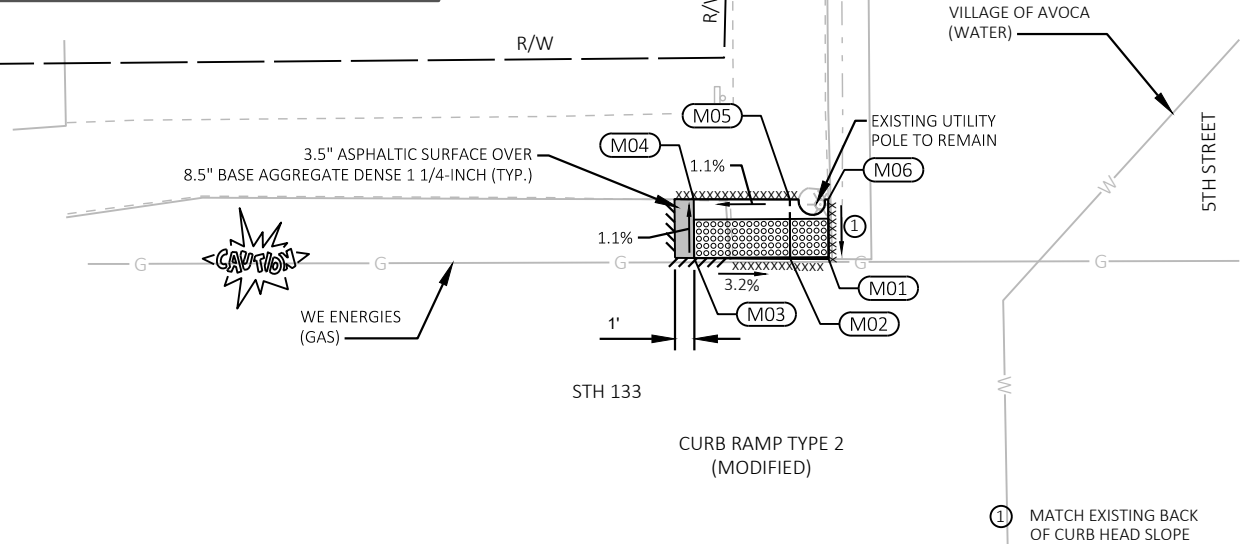
| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| J01                    | 160+53.63 | 28.53' RT | 234,427.86 | 326,637.35 | 698.46    |
| J02                    | 160+50.28 | 33.54' RT | 234,422.83 | 326,634.04 | 698.44    |
| J03                    | 160+53.65 | 33.53' RT | 234,422.86 | 326,637.41 | 698.50    |
| J04                    | 160+59.65 | 33.52' RT | 234,422.92 | 326,643.41 | 698.51    |
| J05                    | 160+59.63 | 28.52' RT | 234,427.92 | 326,643.35 | 698.48    |
| J06                    | 160+64.63 | 28.51' RT | 234,427.97 | 326,648.35 | 698.51    |
| J07                    | 160+64.64 | 32.16' RT | 234,424.32 | 326,648.39 | 698.52    |



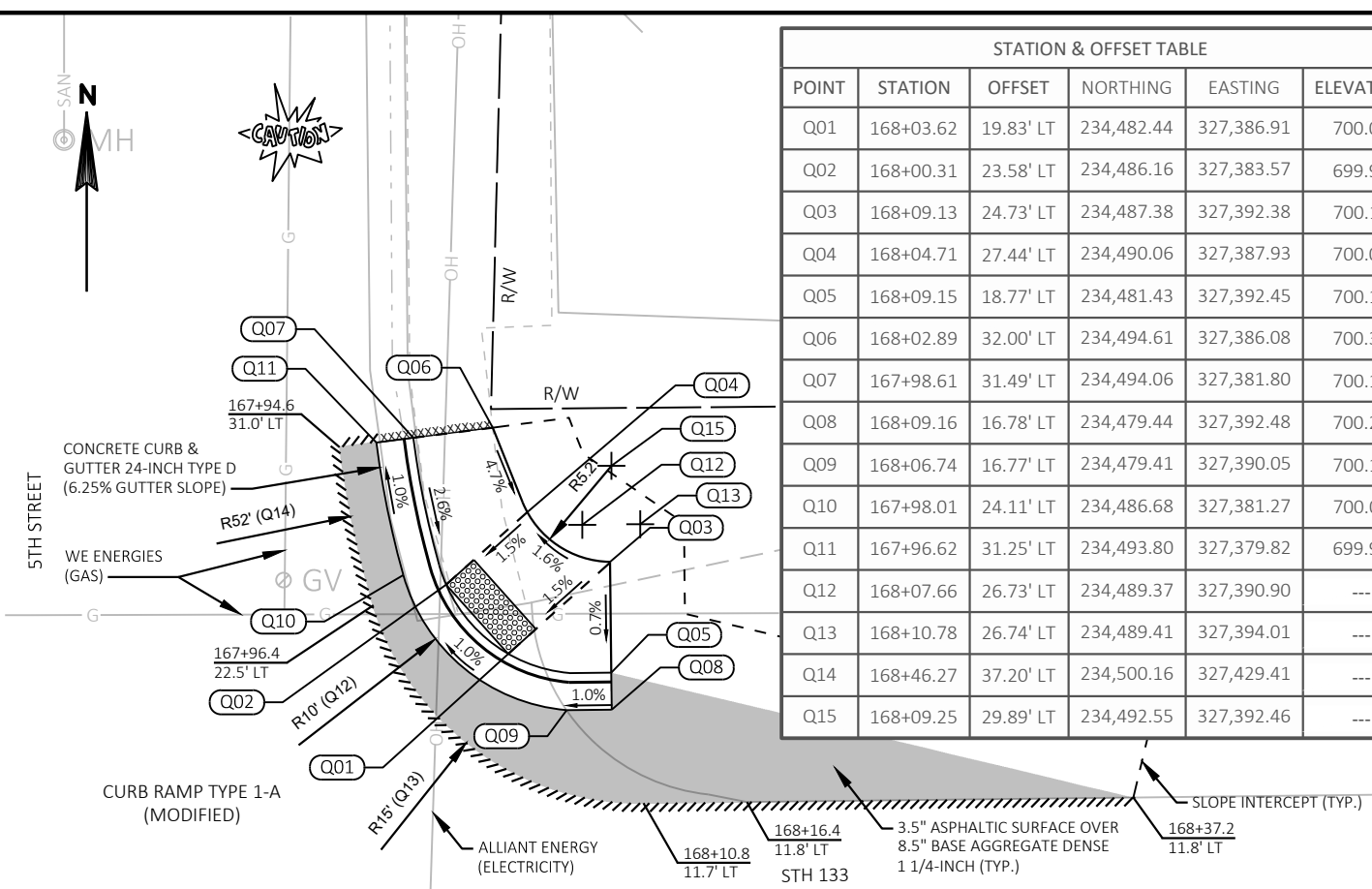
| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| K01                    | 163+70.00 | 21.05' RT | 234,437.96 | 326,953.65 | 699.49    |
| K02                    | 163+74.00 | 21.65' RT | 234,437.40 | 326,957.65 | 699.54    |
| K03                    | 163+69.96 | 27.64' RT | 234,431.38 | 326,953.66 | 699.36    |
| K04                    | 163+73.96 | 27.82' RT | 234,431.23 | 326,957.66 | 699.36    |
| K05                    | 163+82.45 | 27.83' RT | 234,431.29 | 326,966.15 | 699.53    |
| K06                    | 163+82.44 | 31.83' RT | 234,427.29 | 326,966.17 | 699.39    |
| K07                    | 163+78.44 | 27.82' RT | 234,431.26 | 326,962.14 | 699.44    |
| K08                    | 163+78.44 | 31.82' RT | 234,427.26 | 326,962.17 | 699.38    |
| K09                    | 163+73.94 | 31.82' RT | 234,427.23 | 326,957.67 | 699.33    |
| K10                    | 163+70.00 | 21.63' RT | 234,437.39 | 326,953.65 | 699.48    |

| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| L01                    | 164+29.66 | 25.24' RT | 234,434.27 | 327,013.34 | 699.63    |
| L02                    | 164+34.66 | 25.42' RT | 234,434.13 | 327,018.34 | 699.64    |
| L03                    | 164+34.66 | 27.89' RT | 234,431.66 | 327,018.35 | 699.61    |
| L04                    | 164+29.66 | 27.89' RT | 234,431.62 | 327,013.36 | 699.61    |
| L05                    | 164+23.16 | 27.88' RT | 234,431.58 | 327,006.86 | 699.59    |
| L06                    | 164+21.62 | 31.88' RT | 234,427.57 | 327,005.35 | 699.56    |
| L07                    | 164+23.16 | 31.88' RT | 234,427.58 | 327,006.89 | 699.56    |
| L08                    | 164+29.65 | 31.89' RT | 234,427.62 | 327,013.39 | 699.56    |
| L09                    | 164+34.65 | 31.89' RT | 234,427.66 | 327,018.39 | 699.57    |
| L10                    | 164+27.61 | 30.17' RT | 234,429.32 | 327,011.32 | ---       |

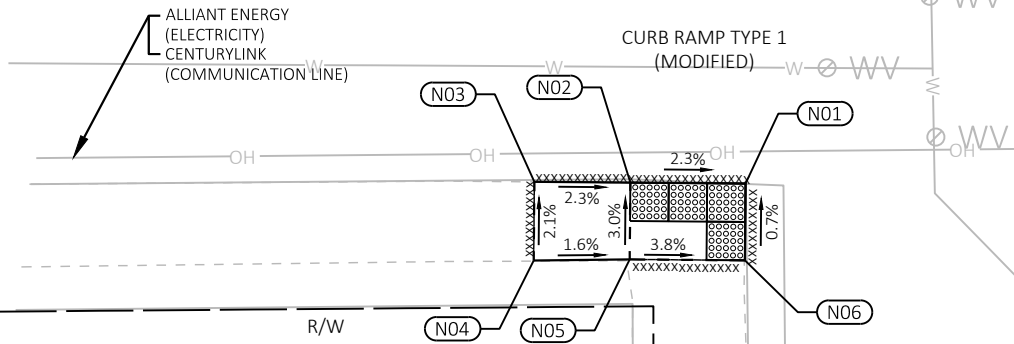
| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| M01                    | 167+42.12 | 22.48' LT | 234,484.58 | 327,325.39 | 699.96    |
| M02                    | 167+40.12 | 22.51' LT | 234,484.59 | 327,323.39 | 700.02    |
| M03                    | 167+35.12 | 22.58' LT | 234,484.63 | 327,318.39 | 700.17    |
| M04                    | 167+35.13 | 25.65' LT | 234,487.69 | 327,318.37 | 700.13    |
| M05                    | 167+40.13 | 25.60' LT | 234,487.68 | 327,323.37 | 700.19    |
| M06                    | 167+42.13 | 25.58' LT | 234,487.68 | 327,325.37 | 700.28    |



| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| Q01                    | 168+03.62 | 19.83' LT | 234,482.44 | 327,386.91 | 700.04    |
| Q02                    | 168+00.31 | 23.58' LT | 234,486.16 | 327,383.57 | 699.98    |
| Q03                    | 168+09.13 | 24.73' LT | 234,487.38 | 327,392.38 | 700.15    |
| Q04                    | 168+04.71 | 27.44' LT | 234,490.06 | 327,387.93 | 700.07    |
| Q05                    | 168+09.15 | 18.77' LT | 234,481.43 | 327,392.45 | 700.11    |
| Q06                    | 168+02.89 | 32.00' LT | 234,494.61 | 327,386.08 | 700.30    |
| Q07                    | 167+98.61 | 31.49' LT | 234,494.06 | 327,381.80 | 700.19    |
| Q08                    | 168+09.16 | 16.78' LT | 234,479.44 | 327,392.48 | 700.20    |
| Q09                    | 168+06.74 | 16.77' LT | 234,479.41 | 327,390.05 | 700.17    |
| Q10                    | 167+98.01 | 24.11' LT | 234,486.68 | 327,381.27 | 700.05    |
| Q11                    | 167+96.62 | 31.25' LT | 234,493.80 | 327,379.82 | 699.98    |
| Q12                    | 168+07.66 | 26.73' LT | 234,489.37 | 327,390.90 | ---       |
| Q13                    | 168+10.78 | 26.74' LT | 234,489.41 | 327,394.01 | ---       |
| Q14                    | 168+46.27 | 37.20' LT | 234,500.16 | 327,429.41 | ---       |
| Q15                    | 168+09.25 | 29.89' LT | 234,492.55 | 327,392.46 | ---       |



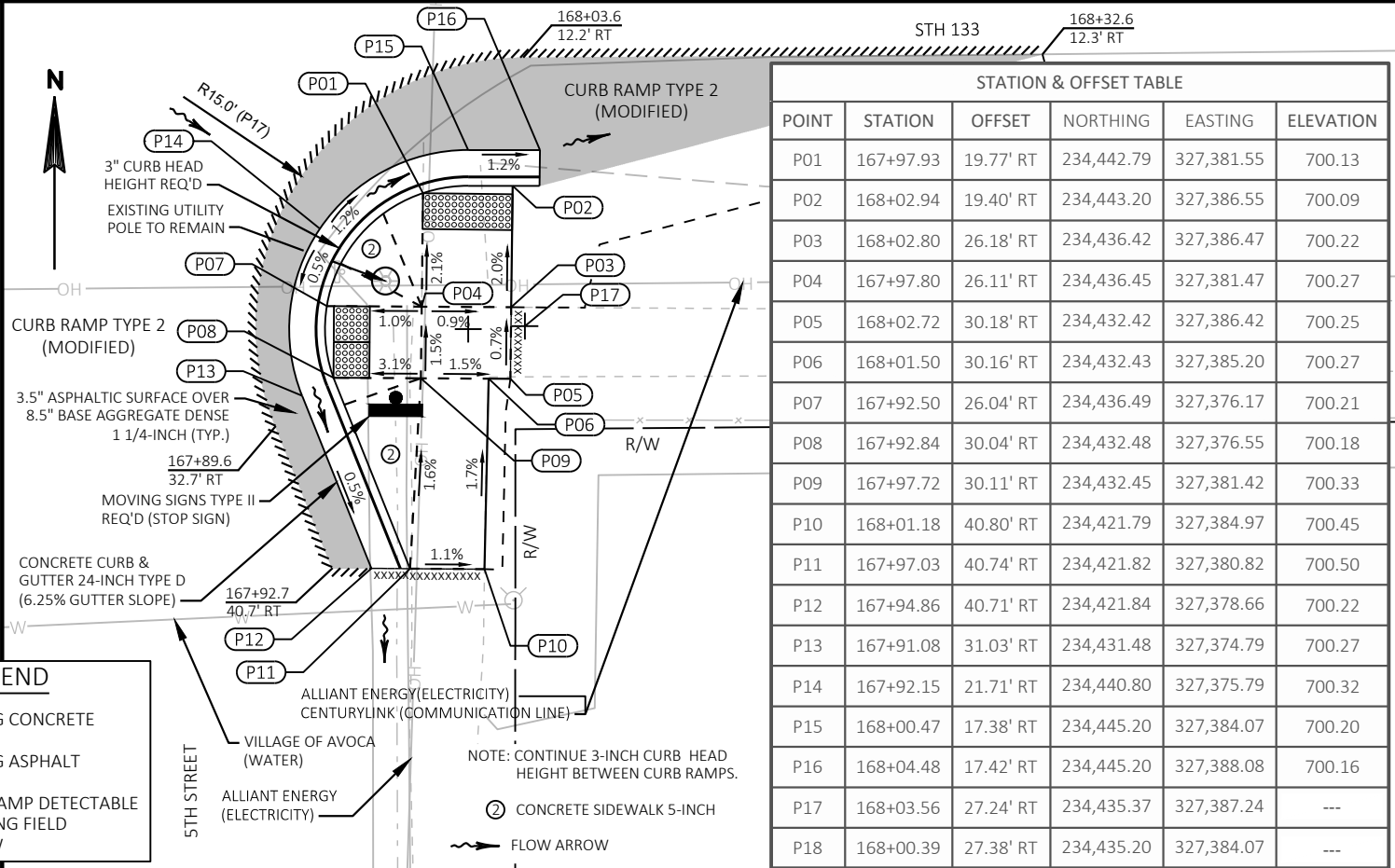
STH 133



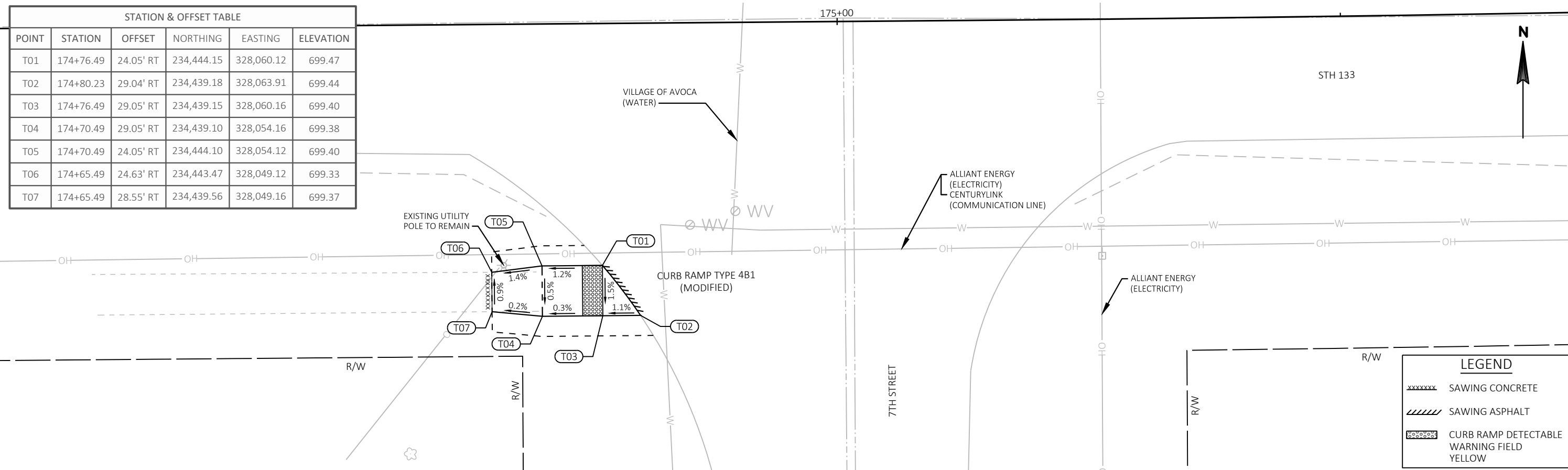
| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| N01                    | 167+41.82 | 26.65' RT | 234,435.45 | 327,325.50 | 700.17    |
| N02                    | 167+35.83 | 26.55' RT | 234,435.50 | 327,319.50 | 700.31    |
| N03                    | 167+30.83 | 26.47' RT | 234,435.54 | 327,314.50 | 700.42    |
| N04                    | 167+30.76 | 30.57' RT | 234,431.44 | 327,314.47 | 700.51    |
| N05                    | 167+35.76 | 30.55' RT | 234,431.50 | 327,319.47 | 700.43    |
| N06                    | 167+41.76 | 30.65' RT | 234,431.45 | 327,325.47 | 700.20    |

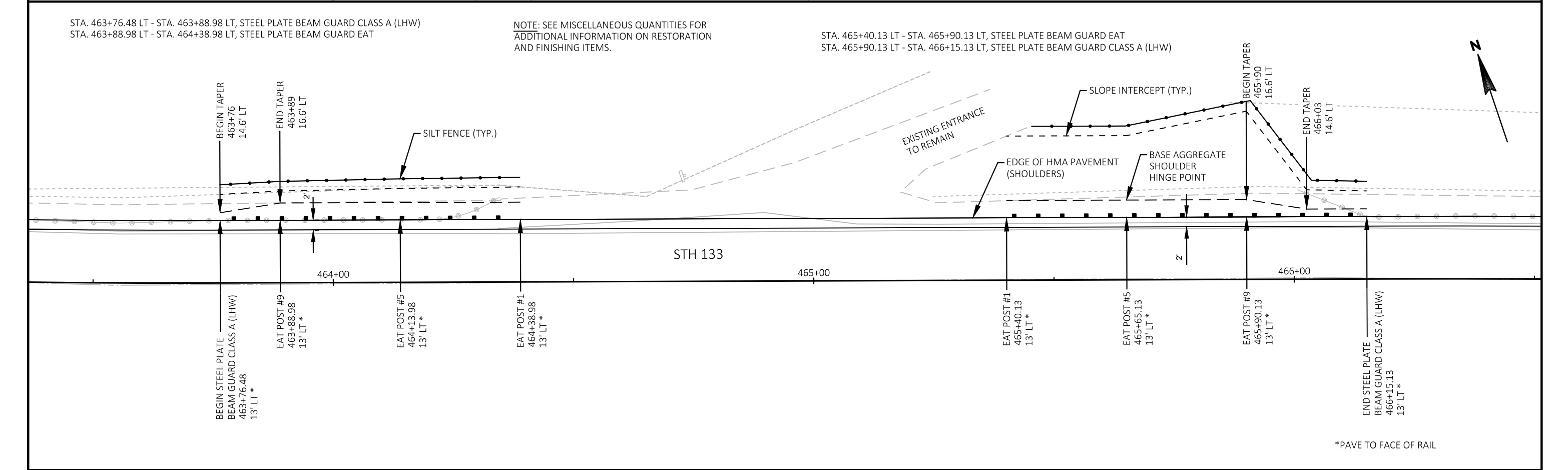
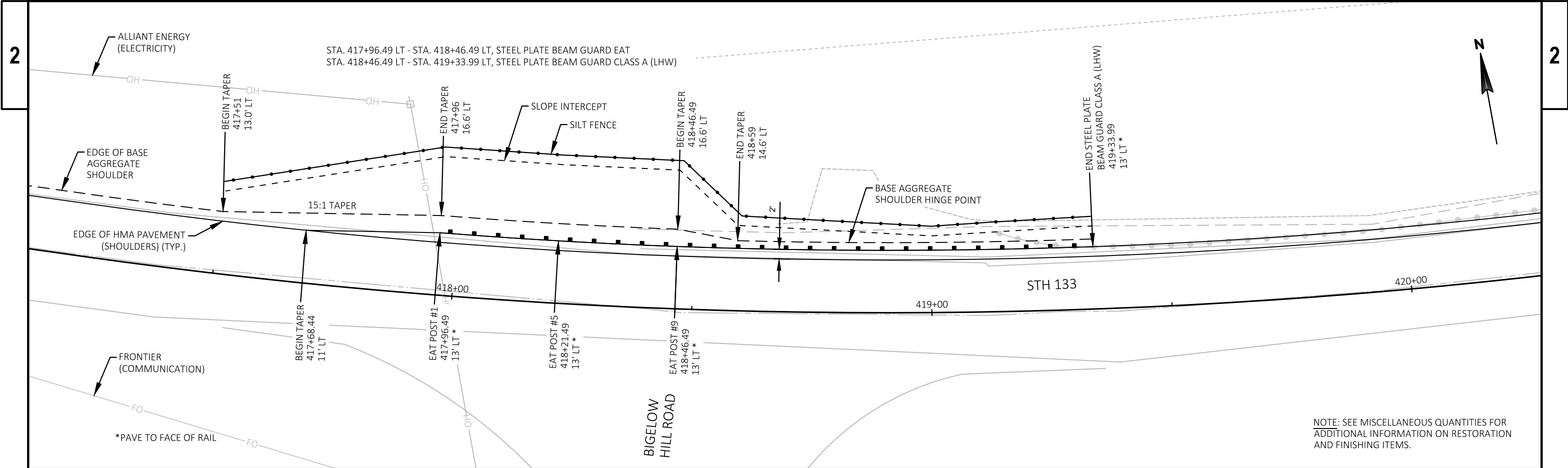
LEGEND

- XXXXXX SAWING CONCRETE
- ////// SAWING ASPHALT
- XXXXXX CURB RAMP DETECTABLE WARNING FIELD YELLOW

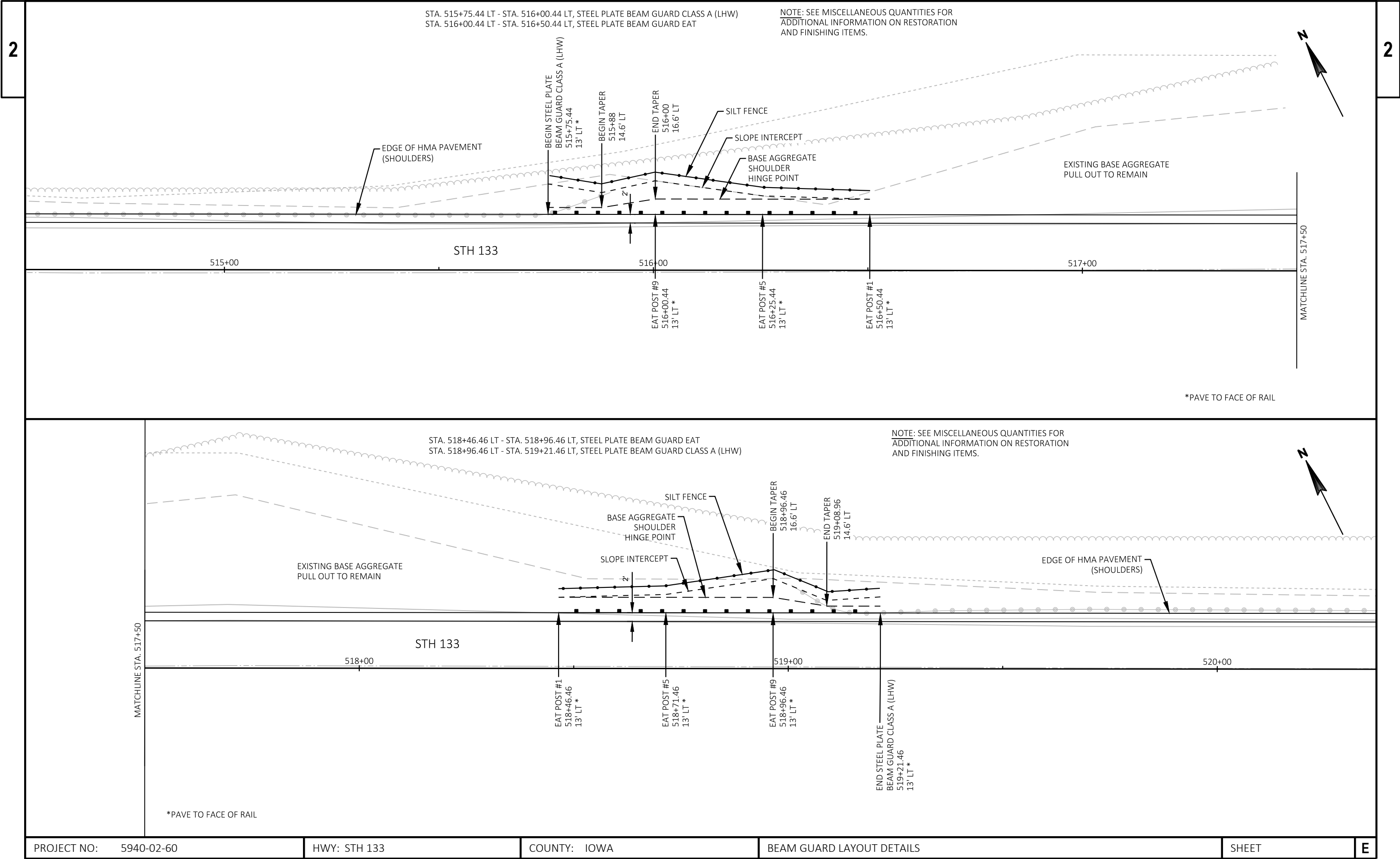


| STATION & OFFSET TABLE |           |           |            |            |           |
|------------------------|-----------|-----------|------------|------------|-----------|
| POINT                  | STATION   | OFFSET    | NORTHING   | EASTING    | ELEVATION |
| P01                    | 167+97.93 | 19.77' RT | 234,442.79 | 327,381.55 | 700.13    |
| P02                    | 168+02.94 | 19.40' RT | 234,443.20 | 327,386.55 | 700.09    |
| P03                    | 168+02.80 | 26.18' RT | 234,436.42 | 327,386.47 | 700.22    |
| P04                    | 167+97.80 | 26.11' RT | 234,436.45 | 327,381.47 | 700.27    |
| P05                    | 168+02.72 | 30.18' RT | 234,432.42 | 327,386.42 | 700.25    |
| P06                    | 168+01.50 | 30.16' RT | 234,432.43 | 327,385.20 | 700.27    |
| P07                    | 167+92.50 | 26.04' RT | 234,436.49 | 327,376.17 | 700.21    |
| P08                    | 167+92.84 | 30.04' RT | 234,432.48 | 327,376.55 | 700.18    |
| P09                    | 167+97.72 | 30.11' RT | 234,432.45 | 327,381.42 | 700.33    |
| P10                    | 168+01.18 | 40.80' RT | 234,421.79 | 327,384.97 | 700.45    |
| P11                    | 167+97.03 | 40.74' RT | 234,421.82 | 327,380.82 | 700.50    |
| P12                    | 167+94.86 | 40.71' RT | 234,421.84 | 327,378.66 | 700.22    |
| P13                    | 167+91.08 | 31.03' RT | 234,431.48 | 327,374.79 | 700.27    |
| P14                    | 167+92.15 | 21.71' RT | 234,440.80 | 327,375.79 | 700.32    |
| P15                    | 168+00.47 | 17.38' RT | 234,445.20 | 327,384.07 | 700.20    |
| P16                    | 168+04.48 | 17.42' RT | 234,445.20 | 327,388.08 | 700.16    |
| P17                    | 168+03.56 | 27.24' RT | 234,435.37 | 327,387.24 | ---       |
| P18                    | 168+00.39 | 27.38' RT | 234,435.20 | 327,384.07 | ---       |





|                        |              |              |                           |       |   |
|------------------------|--------------|--------------|---------------------------|-------|---|
| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | BEAM GUARD LAYOUT DETAILS | SHEET | E |
|------------------------|--------------|--------------|---------------------------|-------|---|





## GENERAL NOTES FOR TRAFFIC CONTROL

ALL SIGN LOCATIONS ARE APPROXIMATE. THE ACTUAL LOCATION WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTOR'S METHODS OR SEQUENCES OF OPERATION.

TEMPORARY OR PERMANENT SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE REMOVED OR COVERED.

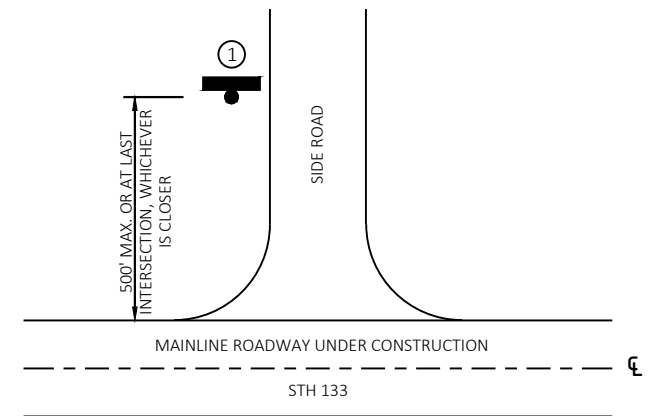
ROAD MACHINERY, TRUCK ENTRANCE, FLAGMEN AHEAD, ETC., SIGNS SHALL BE USED AS NEEDED AND SHALL BE REMOVED OR COVERED WHEN THE ACTIVITY OR CONDITION DOES NOT EXIST. NO WARNING LIGHT SHALL BE USED WITH A COVERED SIGN.

"WO" SERIES SIGNS ARE "W" SERIES EXCEPT THE BACKGROUND IS ORANGE.

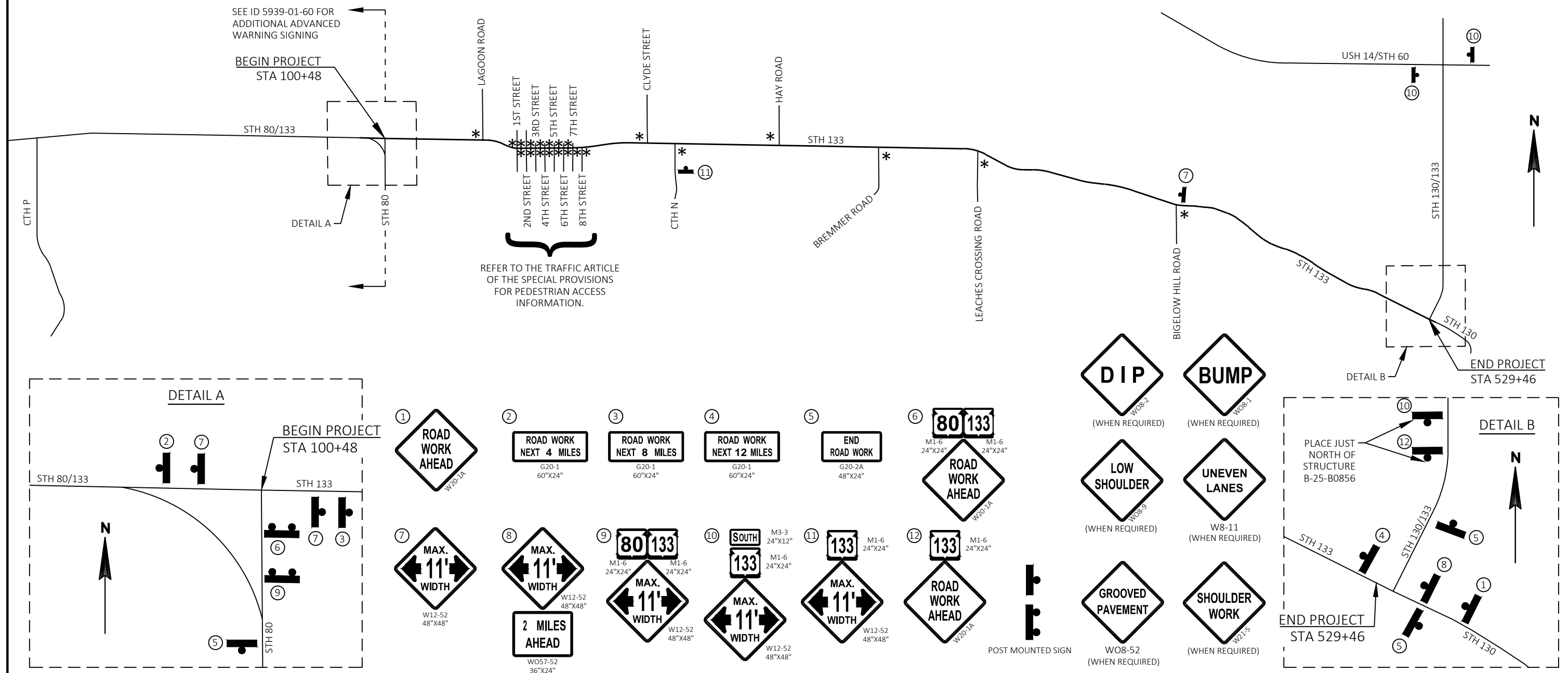
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

FOR ADDITIONAL INFORMATION SEE STANDARD DETAIL DRAWINGS:  
"TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 MPH OR GREATER  
UNDIVIDED ROAD OPEN TO TRAFFIC"  
"TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"  
"MOVING PAVEMENT MARKING OPERATION, TWO-LANE TWO-WAY  
ROADWAY"  
"TRAFFIC CONTROL, DROP-OFF SIGNING"  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP  
CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET F TRAFFIC  
CONTROL, ADVANCED WIDTH RESTRICTION SIGNING"  
"TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES"  
"TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED  
ROADWAY"



\* TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL



PROJECT NO: 5940-02-60

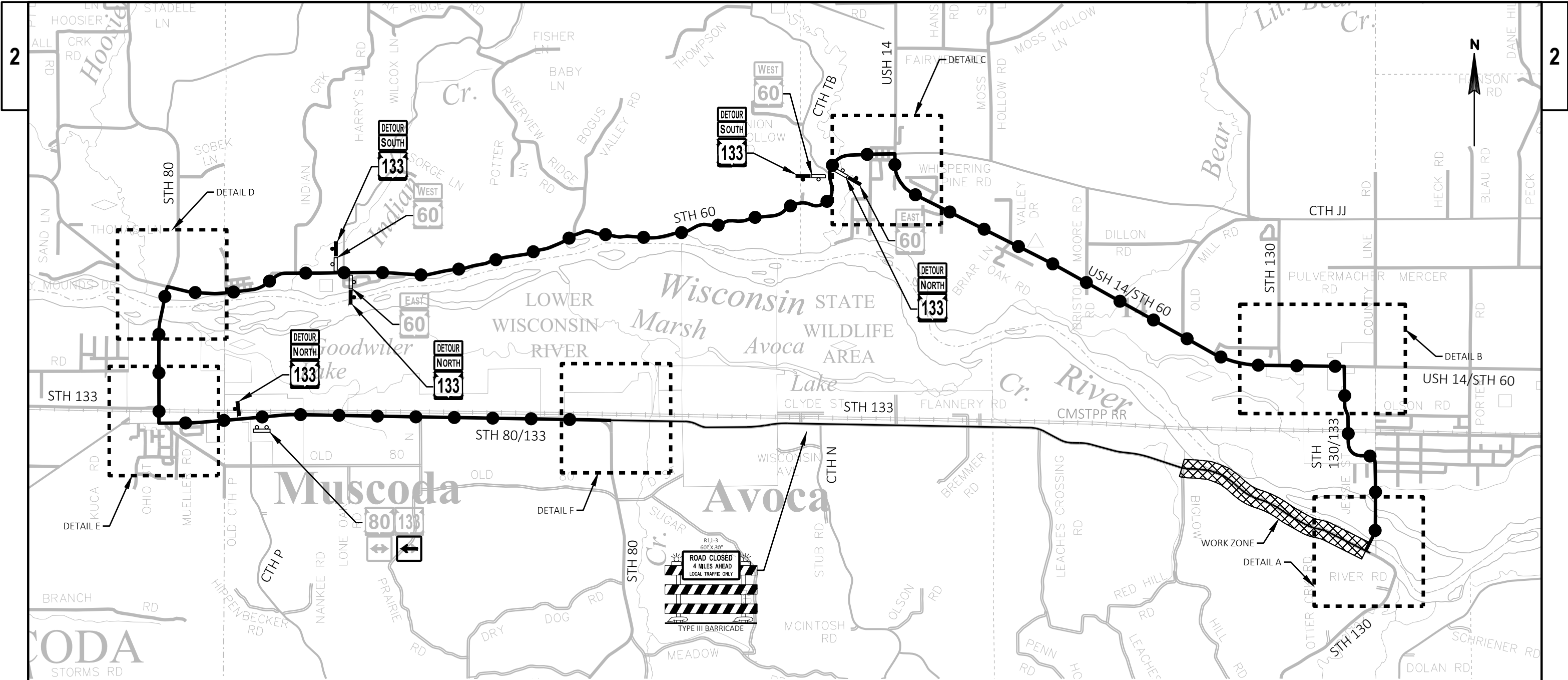
HWY: STH 133

COUNTY: IOWA

TRAFFIC CONTROL - ADVANCED WARNING AND WIDTH RESTRICTION SIGNING

SHEET

E



GENERAL NOTES

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

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

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

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

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

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

SIGN LEGEND

|  |                  |  |                   |
|--|------------------|--|-------------------|
|  | M4-8<br>24"x12"  |  | MO6-1<br>21"x21"  |
|  | M4-8A<br>24"x18" |  | MO6-1<br>21"x21"  |
|  | M3-1<br>24"x12"  |  | MO6-1<br>21"x21"  |
|  | M3-3<br>24"x12"  |  | MO5-1L<br>21"x21" |
|  | M1-6<br>24"x24"  |  | MO5-1R<br>21"x21" |

LEGEND

|  |                                              |
|--|----------------------------------------------|
|  | DETOUR ROUTE                                 |
|  | EXISTING SIGNS AND POSTS TO REMAIN           |
|  | EXISTING SIGNS AND POST TO REMAIN            |
|  | WOOD POST WITH ATTACHED SIGN                 |
|  | WOOD POSTS WITH ATTACHED SIGN                |
|  | EXISTING SIGN (TYP.)                         |
|  | TRAFFIC CONTROL COVERING SIGNS TYPE 2 (TYP.) |

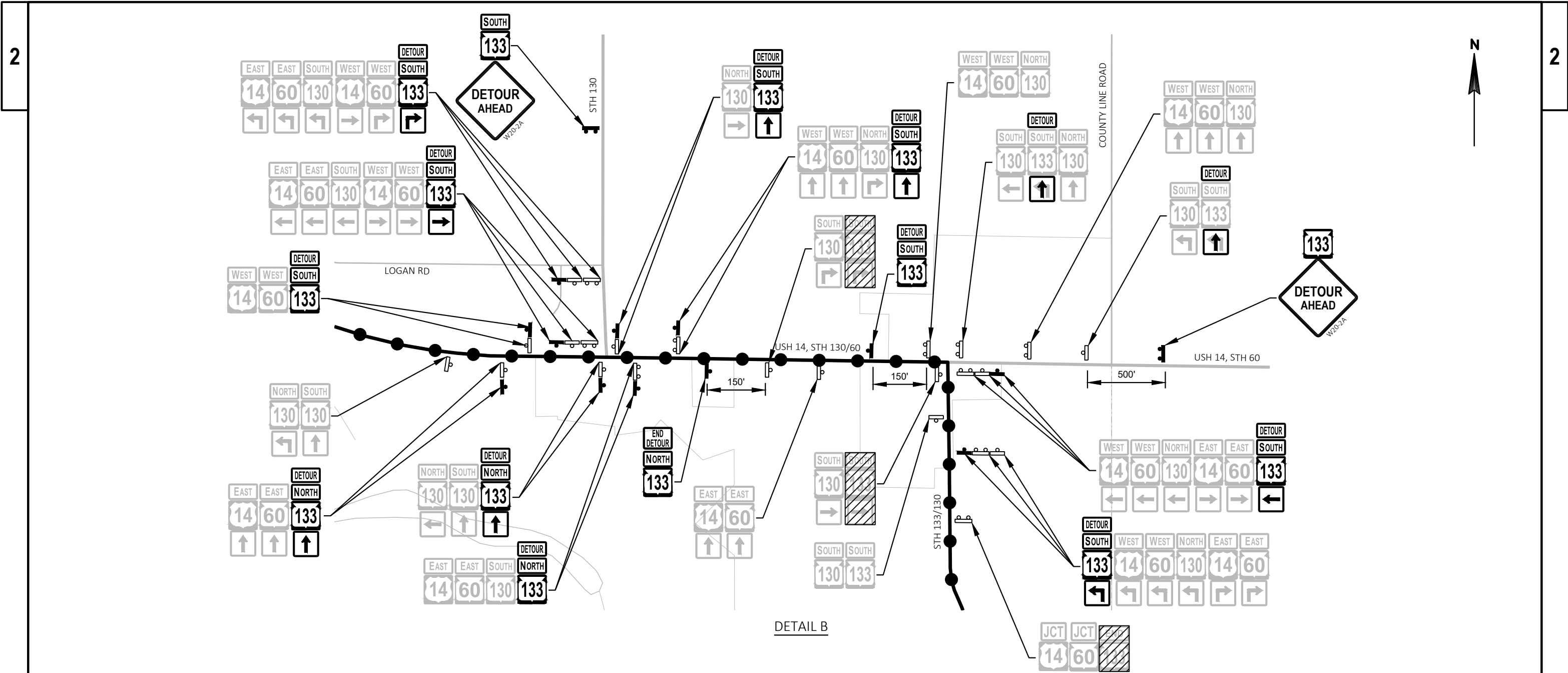
FOR ADDITIONAL INFORMATION SEE STANDARD DETAIL DRAWINGS:  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET A BARRICADES AND SIGNS FOR MAINLINE CLOSURES"  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET B BARRICADES AND SIGNS FOR VARIOUS MAINLINE CLOSURES"  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET C DETOUR SIGNING FOR MAINLINE CLOSURES"





## LEGEND

FOR ADDITIONAL INFORMATION SEE STANDARD DETAIL DRAWINGS:  
 "BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP  
 CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET A BARRICADES  
 AND SIGNS FOR MAINLINE CLOSURES"  
 "BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP  
 CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET B BARRICADES  
 AND SIGNS FOR VARIOUS MAINLINE CLOSURES"  
 "BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP  
 CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET C DETOUR  
 SIGNING FOR MAINLINE CLOSURES"



DETAIL B

GENERAL NOTES

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

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

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

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

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

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

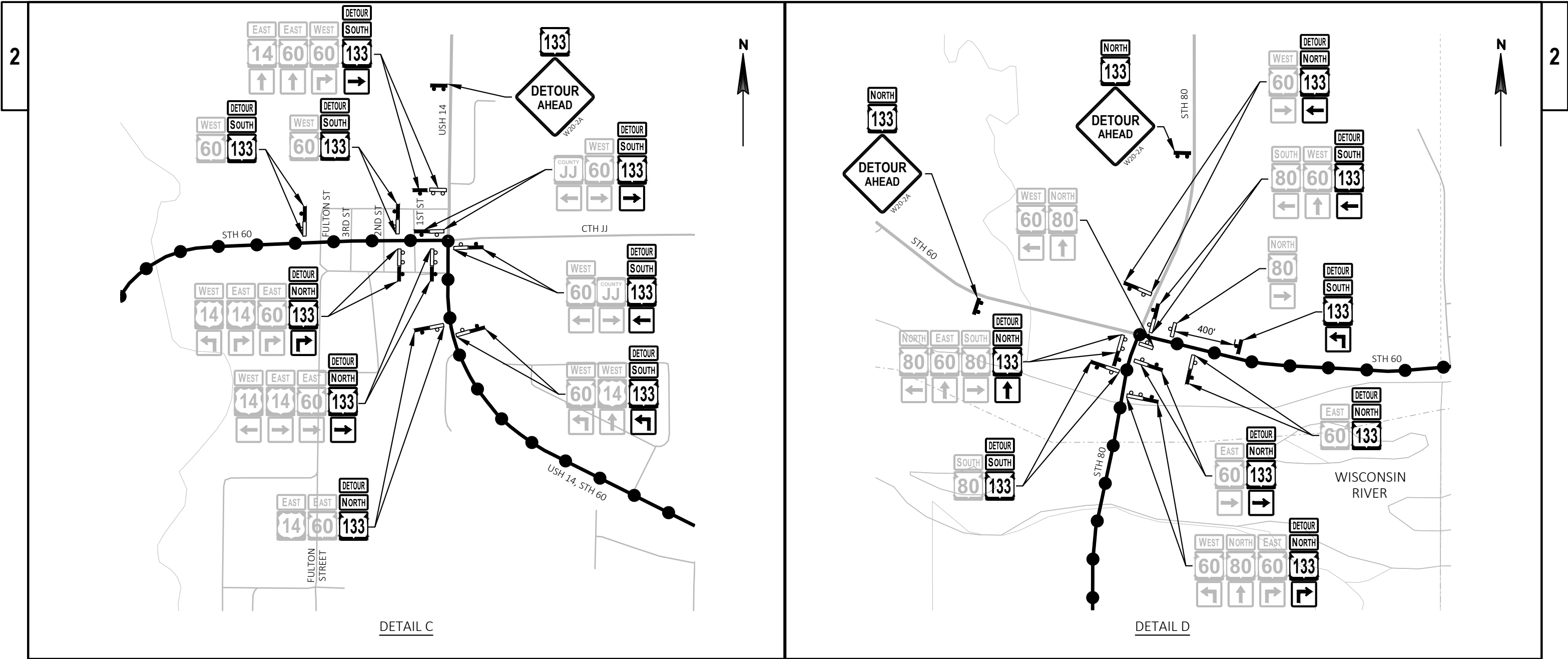
SIGN LEGEND

|  |                  |  |                   |
|--|------------------|--|-------------------|
|  | M4-8<br>24"x12"  |  | MO6-1<br>21"x21"  |
|  | M4-8A<br>24"x18" |  | MO6-1<br>21"x21"  |
|  | M3-1<br>24"x12"  |  | MO6-1<br>21"x21"  |
|  | M3-3<br>24"x12"  |  | MO5-1L<br>21"x21" |
|  | M1-6<br>24"x24"  |  | MO5-1R<br>21"x21" |

LEGEND

|  |                                              |
|--|----------------------------------------------|
|  | DETOUR ROUTE                                 |
|  | EXISTING SIGNS AND POSTS TO REMAIN           |
|  | EXISTING SIGNS AND POST TO REMAIN            |
|  | WOOD POST WITH ATTACHED SIGN                 |
|  | WOOD POSTS WITH ATTACHED SIGN                |
|  | EXISTING SIGN (TYP.)                         |
|  | TRAFFIC CONTROL COVERING SIGNS TYPE 2 (TYP.) |

FOR ADDITIONAL INFORMATION SEE STANDARD DETAIL DRAWINGS:  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET A BARRICADES AND SIGNS FOR MAINLINE CLOSURES"  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET B BARRICADES AND SIGNS FOR VARIOUS MAINLINE CLOSURES"  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET C DETOUR SIGNING FOR MAINLINE CLOSURES"



GENERAL NOTES

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

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

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

SIGN LEGEND

|  |                  |  |                   |
|--|------------------|--|-------------------|
|  | M4-8<br>24"x12"  |  | MO6-1<br>21"x21"  |
|  | M4-8A<br>24"x18" |  | MO6-1<br>21"x21"  |
|  | M3-1<br>24"x12"  |  | MO6-1<br>21"x21"  |
|  | M3-3<br>24"x12"  |  | MO5-1L<br>21"x21" |
|  | M1-6<br>24"x24"  |  | MO5-1R<br>21"x21" |

LEGEND

|  |                                              |
|--|----------------------------------------------|
|  | DETOUR ROUTE                                 |
|  | EXISTING SIGNS AND POSTS TO REMAIN           |
|  | EXISTING SIGNS AND POST TO REMAIN            |
|  | WOOD POST WITH ATTACHED SIGN                 |
|  | WOOD POSTS WITH ATTACHED SIGN                |
|  | EXISTING SIGN (TYP.)                         |
|  | TRAFFIC CONTROL COVERING SIGNS TYPE 2 (TYP.) |

FOR ADDITIONAL INFORMATION SEE STANDARD DETAIL DRAWINGS:  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET A BARRICADES AND SIGNS FOR MAINLINE CLOSURES"  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET B BARRICADES AND SIGNS FOR VARIOUS MAINLINE CLOSURES"  
"BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET C DETOUR SIGNING FOR MAINLINE CLOSURES"



**133** CLOSED  
TO THRU TRAFFIC  
5 MILES AHEAD  
USE DETOUR

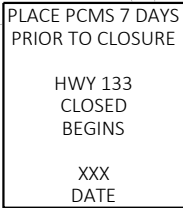
133



**DETOUR  
AHEAD**

120-2A

### DETAIL E



HWY 133  
CLOSED  
BEGINS

XXX  
DATE

DETAIL F

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

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

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

|                                                                                     |                  |
|-------------------------------------------------------------------------------------|------------------|
|  | M4-8<br>24"x12"  |
|  | M4-8A<br>24"x18" |
|  | M3-1<br>24"x12"  |
|  | M3-3<br>24"x12"  |
|  | M1-6<br>24"x24"  |



MO6-1  
21"X21"

MO6-1  
21"X21"

MO6-1  
21"X21"

MO5-1L  
21"X21"

MO5-1R  
21"X21"

DETOUR ROUTE

EXISTING SIGNS AND POST TO REMAIN

### EXISTING SIGNS AND POSTS TO REMAIN

WOOD POST WITH ATTACHED SIGN

WOOD POSTS WITH ATTACHED SIGN

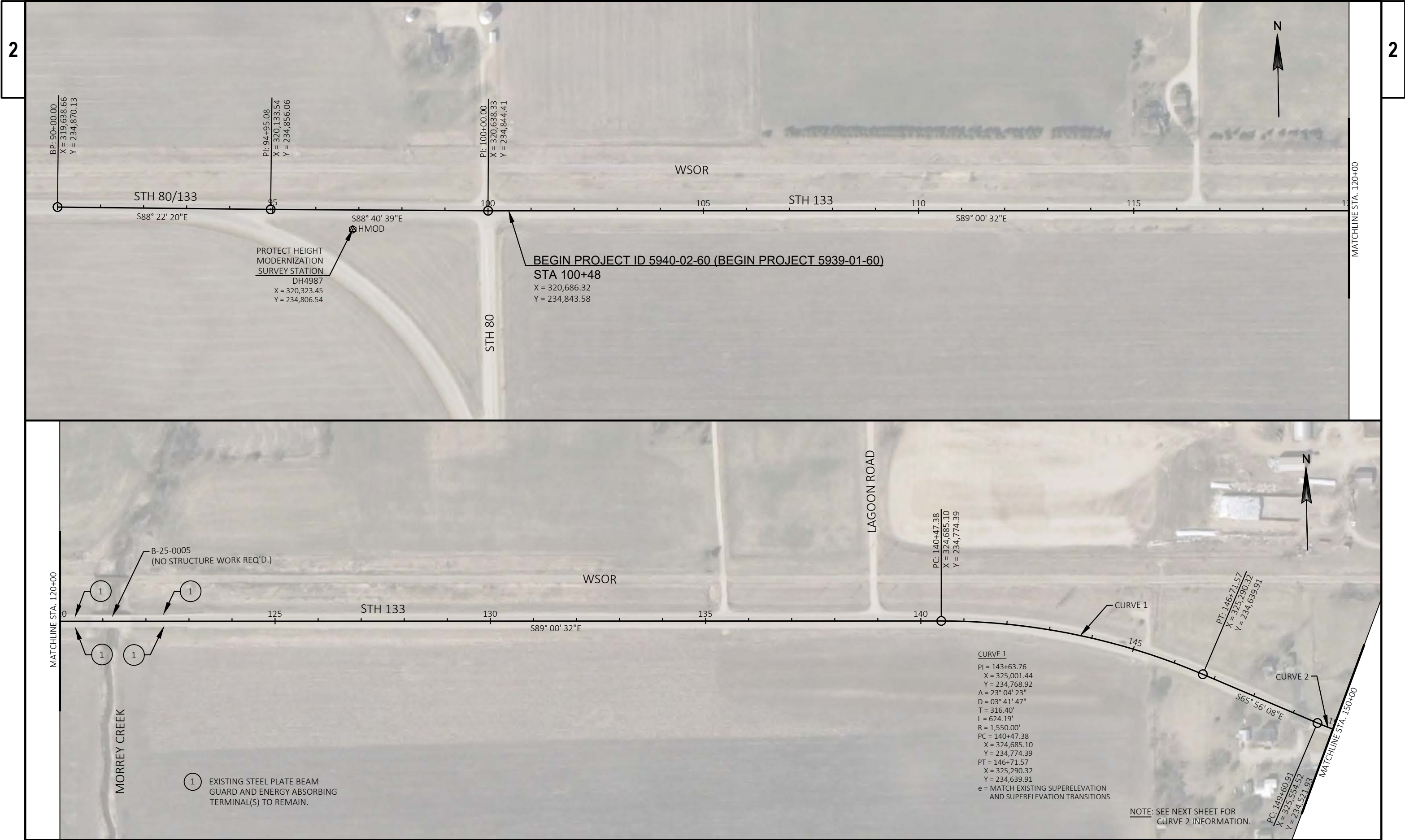
EXISTING SIGN (TYP.)

TRAFFIC CONTROL COVERING SIGNS TYPE 2 (TYP.)

TRAFFIC CONTROL SIGNS PCMS

FOR ADDITIONAL INFORMATION SEE STANDARD DETAIL DRAWINGS:  
 "BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP  
 CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET A BARRICADES  
 AND SIGNS FOR MAINLINE CLOSURES"  
 "BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP  
 CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET B BARRICADES  
 AND SIGNS FOR VARIOUS MAINLINE CLOSURES"  
 "BARRICADES AND SIGNS FOR MAINLINE, DETOUR, ON RAMP, OFF RAMP  
 CLOSURES AND ADVANCED WIDTH RESTRICTIONS - SHEET C DETOUR  
 SINGING FOR MAINLINE CLOSURES"

11



|                        |              |              |      |       |   |
|------------------------|--------------|--------------|------|-------|---|
| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | PLAN | SHEET | E |
|------------------------|--------------|--------------|------|-------|---|





CURVE 2

PI = 151+40.34  
X = 325,718.35  
Y = 234,448.77  
Δ = 24° 32' 23"  
D = 06° 56' 42"  
T = 179.40'  
L = 353.35'  
R = 825.00'  
PC = 149+60.91  
X = 325,554.52  
Y = 234,521.93  
PT = 153+14.26  
X = 325,897.77  
Y = 234,450.25  
e = MATCH EXISTING SUPERELEVATION  
AND SUPERELEVATION TRANSITIONS

CURVE 3

PI = 179+93.42  
X = 328,576.84  
Y = 234,472.48  
Δ = 08° 43' 40"  
D = 00° 54' 34"  
T = 480.80'  
L = 959.68'  
R = 6,300.00'  
PC = 175+12.65  
X = 328,096.08  
Y = 234,468.50  
PT = 184+72.33  
X = 329,051.42  
Y = 234,549.38  
e = MATCH EXISTING SUPERELEVATION  
AND SUPERELEVATION TRANSITIONS

NOTE: REFER TO CURB RAMP DETAILS FOR ADDITIONAL INFORMATION



PT: 184+72.33  
X = 329,051.42  
Y = 234,549.38

PC: 188+06.44  
X = 329,381.22  
Y = 234,602.81

PT: 197+60.78  
X = 330,331.87  
Y = 234,670.84

CURVE 4

PI = 192+84.88  
X = 329,853.50  
Y = 234,679.34  
Δ = 10° 13' 14"  
D = 01° 04' 15"  
T = 478.40'  
L = 954.34'  
R = 5,350.00'  
PC = 188+06.44  
X = 329,381.22  
Y = 234,602.81  
PT = 197+60.78  
X = 330,331.87  
Y = 234,670.84  
e = MATCH EXISTING SUPERELEVATION  
AND SUPERELEVATION TRANSITIONS

 BENCH MARKS

| POINT NO. | STATION | OFFSET | DESCRIPTION     | ELEVATION |
|-----------|---------|--------|-----------------|-----------|
| BM 101    | 152+70  | 26' RT | HYDRANT TOP NUT | 701.62    |
| BM 102    | 156+27  | 26' RT | HYDRANT TOP NUT | 701.70    |
| BM 103    | 160+07  | 26' RT | HYDRANT TOP NUT | 701.28    |
| BM 104    | 163+65  | 26' RT | HYDRANT TOP NUT | 702.22    |
| BM 105    | 167+42  | 35' LT | CHISELED X      | 700.14    |
| BM 106    | 168+03  | 43' RT | HYDRANT TOP NUT | 703.05    |

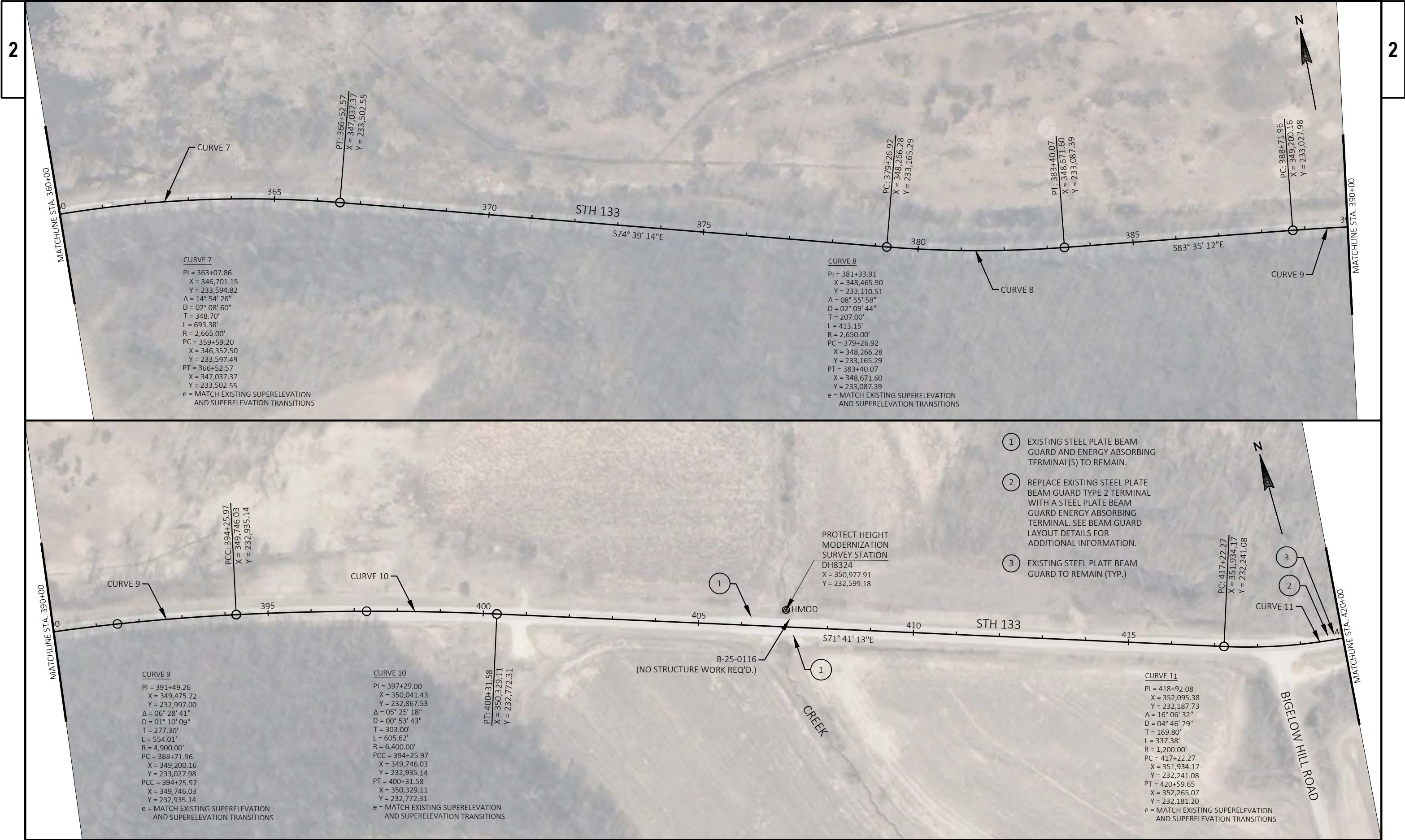




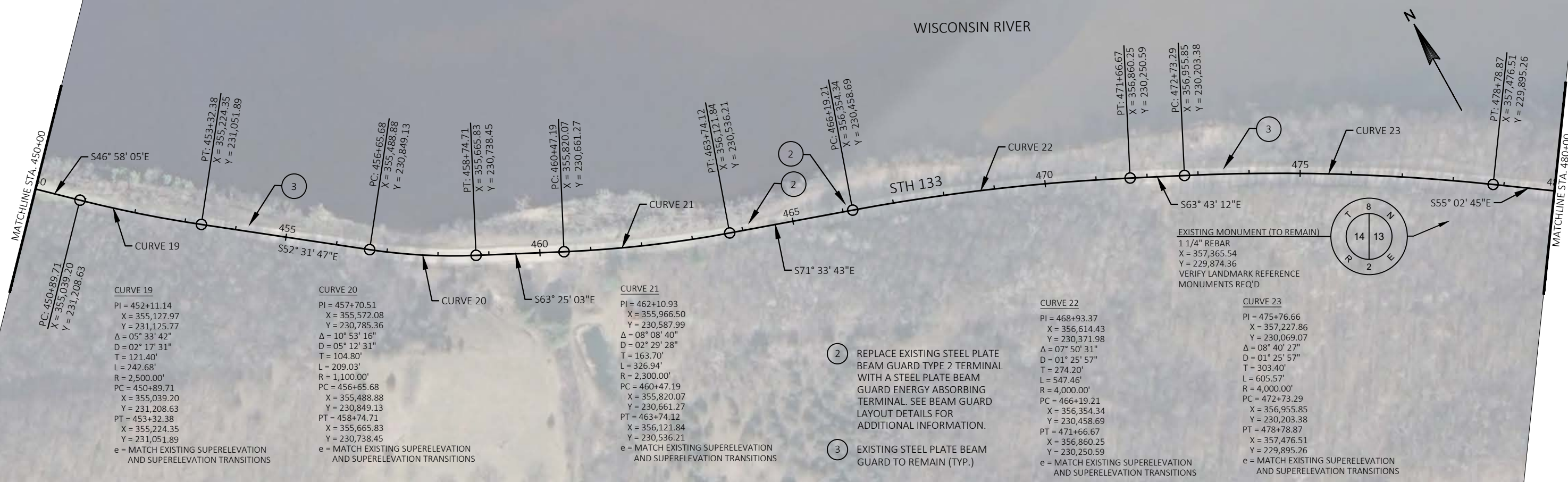




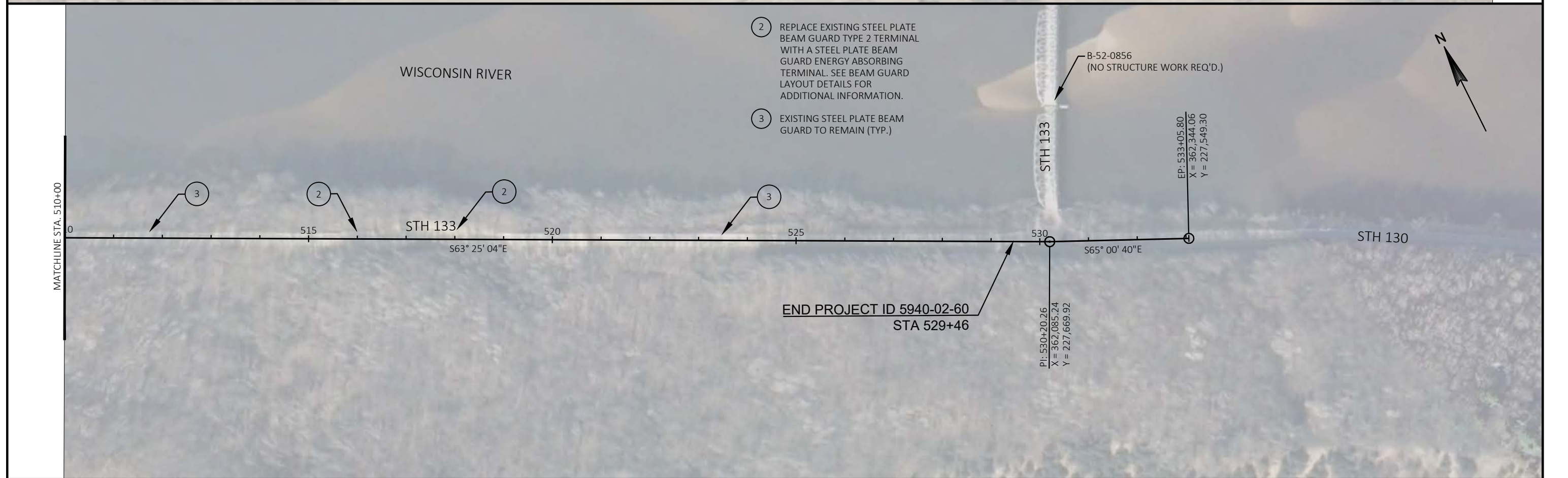












Estimate Of Quantities By Plan Sets

| 5940-02-60 |            |                                                                  |      |             |             |
|------------|------------|------------------------------------------------------------------|------|-------------|-------------|
| Line       | Item       | Item Description                                                 | Unit | Total       | Qty         |
| 0002       | 204.0115   | Removing Asphaltic Surface Butt Joints                           | SY   | 21.000      | 21.000      |
| 0004       | 204.0120   | Removing Asphaltic Surface Milling                               | SY   | 112,500.000 | 112,500.000 |
| 0006       | 204.0150   | Removing Curb & Gutter                                           | LF   | 25.000      | 25.000      |
| 0008       | 204.0155   | Removing Concrete Sidewalk                                       | SY   | 77.000      | 77.000      |
| 0010       | 204.0165   | Removing Guardrail                                               | LF   | 133.000     | 133.000     |
| 0012       | 205.0100   | Excavation Common                                                | CY   | 65.000      | 65.000      |
| 0016       | 211.0100   | Prepare Foundation for Asphaltic Paving (project) 02. 5940-02-60 | LS   | 1.000       | 1.000       |
| 0018       | 211.0400   | Prepare Foundation for Asphaltic Shoulders                       | STA  | 115.000     | 115.000     |
| 0022       | 213.0100   | Finishing Roadway (project) 02. 5940-02-60                       | EACH | 1.000       | 1.000       |
| 0024       | 305.0110   | Base Aggregate Dense 3/4-Inch                                    | TON  | 4,535.000   | 4,535.000   |
| 0026       | 305.0120   | Base Aggregate Dense 1 1/4-Inch                                  | TON  | 30.000      | 30.000      |
| 0028       | 455.0605   | Tack Coat                                                        | GAL  | 9,150.000   | 9,150.000   |
| 0030       | 460.0105.S | HMA Percent Within Limits (PWL) Test Strip Volumetrics           | EACH | 1.000       | 1.000       |
| 0032       | 460.0110.S | HMA Percent Within Limits (PWL) Test Strip Density               | EACH | 1.000       | 1.000       |
| 0034       | 460.2005   | Incentive Density PWL HMA Pavement                               | DOL  | 12,640.000  | 12,640.000  |
| 0036       | 460.2007   | Incentive Density HMA Pavement Longitudinal Joints               | DOL  | 34,320.000  | 34,320.000  |
| 0038       | 460.2010   | Incentive Air Voids HMA Pavement                                 | DOL  | 13,060.000  | 13,060.000  |
| 0040       | 460.5224   | HMA Pavement 4 LT 58-28 S                                        | TON  | 13,060.000  | 13,060.000  |
| 0042       | 465.0105   | Asphaltic Surface                                                | TON  | 1,519.000   | 1,519.000   |
| 0044       | 465.0115   | Asphaltic Surface Detours                                        | TON  | 5.000       | 5.000       |
| 0046       | 602.0410   | Concrete Sidewalk 5-Inch                                         | SF   | 1,379.000   | 1,379.000   |
| 0048       | 602.0505   | Curb Ramp Detectable Warning Field Yellow                        | SF   | 240.000     | 240.000     |
| 0050       | 614.0010   | Barrier System Grading Shaping Finishing                         | EACH | 5.000       | 5.000       |
| 0052       | 614.0305   | Steel Plate Beam Guard Class A                                   | LF   | 176.000     | 176.000     |
| 0054       | 614.0370   | Steel Plate Beam Guard Energy Absorbing Terminal                 | EACH | 5.000       | 5.000       |
| 0058       | 618.0100   | Maintenance And Repair of Haul Roads (project) 02. 5940-02-60    | EACH | 1.000       | 1.000       |
| 0060       | 619.1000   | Mobilization                                                     | EACH | 0.700       | 0.700       |
| 0062       | 624.0100   | Water                                                            | MGAL | 45.000      | 45.000      |
| 0064       | 625.0100   | Topsoil                                                          | SY   | 199.000     | 199.000     |
| 0066       | 627.0200   | Mulching                                                         | SY   | 199.000     | 199.000     |
| 0068       | 628.1504   | Silt Fence                                                       | LF   | 480.000     | 480.000     |
| 0070       | 628.1520   | Silt Fence Maintenance                                           | LF   | 480.000     | 480.000     |
| 0072       | 628.1905   | Mobilizations Erosion Control                                    | EACH | 16.000      | 16.000      |
| 0074       | 628.1910   | Mobilizations Emergency Erosion Control                          | EACH | 4.000       | 4.000       |
| 0076       | 628.7010   | Inlet Protection Type B                                          | EACH | 1.000       | 1.000       |
| 0078       | 629.0210   | Fertilizer Type B                                                | CWT  | 0.160       | 0.160       |
| 0080       | 630.0140   | Seeding Mixture No. 40                                           | LB   | 9.000       | 9.000       |
| 0082       | 630.0500   | Seed Water                                                       | MGAL | 4.800       | 4.800       |

Estimate Of Quantities By Plan Sets

| 5940-02-60 |          |                                                                    |      |            |            |
|------------|----------|--------------------------------------------------------------------|------|------------|------------|
| Line       | Item     | Item Description                                                   | Unit | Total      | Qty        |
| 0084       | 638.2102 | Moving Signs Type II                                               | EACH | 1.000      | 1.000      |
| 0086       | 642.5201 | Field Office Type C                                                | EACH | 0.500      | 0.500      |
| 0088       | 643.0300 | Traffic Control Drums                                              | DAY  | 1,520.000  | 1,520.000  |
| 0090       | 643.0410 | Traffic Control Barricades Type II                                 | DAY  | 230.000    | 230.000    |
| 0092       | 643.0420 | Traffic Control Barricades Type III                                | DAY  | 400.000    | 400.000    |
| 0094       | 643.0705 | Traffic Control Warning Lights Type A                              | DAY  | 780.000    | 780.000    |
| 0096       | 643.0900 | Traffic Control Signs                                              | DAY  | 10,580.000 | 10,580.000 |
| 0098       | 643.0920 | Traffic Control Covering Signs Type II                             | EACH | 33.000     | 33.000     |
| 0100       | 643.1000 | Traffic Control Signs Fixed Message                                | SF   | 28.000     | 28.000     |
| 0102       | 643.1050 | Traffic Control Signs PCMS                                         | DAY  | 14.000     | 14.000     |
| 0104       | 643.5000 | Traffic Control                                                    | EACH | 0.670      | 0.670      |
| 0106       | 646.1040 | Marking Line Grooved Wet Ref Epoxy 4-Inch                          | LF   | 84,303.000 | 84,303.000 |
| 0108       | 646.4520 | Marking Line Same Day Epoxy 4-Inch                                 | LF   | 53,150.000 | 53,150.000 |
| 0110       | 649.0105 | Temporary Marking Line Paint 4-Inch                                | LF   | 48,873.000 | 48,873.000 |
| 0112       | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter                 | LF   | 52.000     | 52.000     |
| 0114       | 650.8000 | Construction Staking Resurfacing Reference                         | LF   | 42,900.000 | 42,900.000 |
| 0116       | 650.9000 | Construction Staking Curb Ramps                                    | EACH | 24.000     | 24.000     |
| 0120       | 650.9910 | Construction Staking Supplemental Control (project) 02. 5940-02-60 | LS   | 1.000      | 1.000      |
| 0122       | 690.0150 | Sawing Asphalt                                                     | LF   | 335.000    | 335.000    |
| 0124       | 690.0250 | Sawing Concrete                                                    | LF   | 133.000    | 133.000    |
| 0126       | 740.0440 | Incentive IRI Ride                                                 | DOL  | 32,498.000 | 32,498.000 |
| 0132       | SPV.0060 | Special 01. Verify Landmark Reference Monuments                    | EACH | 1.000      | 1.000      |
| 0134       | SPV.0090 | Special 01. Concrete Curb & Gutter 24-Inch Type D                  | LF   | 52.000     | 52.000     |
| 0136       | SPV.0090 | Special 02. Profile Curb Cut                                       | LF   | 25.000     | 25.000     |
| 0138       | SPV.0180 | Special 01. Removing Distressed Pavement Milling                   | SY   | 13,500.000 | 13,500.000 |
| 0140       | SPV.0195 | Special 01. Base Aggregate Dense 3/4-Inch Beam Guard               | TON  | 809.000    | 809.000    |

REMOVING ASPHALTIC SURFACE

| CATEGORY | STATION - STATION | LOCATION | 204.0115    | 204.0120 | SPV.0180.01                          |
|----------|-------------------|----------|-------------|----------|--------------------------------------|
|          |                   |          | BUTT JOINTS | MILLING  | REMOVING DISTRESSED PAVEMENT MILLING |
|          |                   |          | SY          | SY       | SY                                   |
| 0010     | 100+48 - 216+00   | LT/RT    | 15          | 30,700   | ---                                  |
|          | 216+00 - 336+00   | LT/RT    | ---         | 32,000   | ---                                  |
|          | 336+00 - 418+50   | LT/RT    | ---         | 22,600   | ---                                  |
|          | 418+50 - 529+46   | LT/RT    | 6           | 27,200   | ---                                  |
|          | UNDISTRIBUTED     | LT/RT    | ---         | ---      | 13,500                               |
|          | TOTALS            |          | 21          | 112,500  | 13,500                               |

CONCRETE CURB & GUTTER

| CATEGORY | LOCATION              | 204.0150      | SPV.0090.01            | SPV.0090.02 | 650.5500                  |
|----------|-----------------------|---------------|------------------------|-------------|---------------------------|
|          |                       | REMOVING      | CONCRETE CURB & GUTTER | PROFILE     | CONSTRUCTION STAKING CURB |
|          |                       | CURB & GUTTER | 24-INCH TYPE D         | CURB CUT    | GUTTER AND CURB & GUTTER  |
|          |                       | LF            | LF                     | LF          | LF                        |
| 0010     | 5TH STREET NE         | 10            | 20                     | ---         | 20                        |
|          | 5TH STREET SE         | 15            | 32                     | ---         | 32                        |
|          | LEACHES CROSSING ROAD | ---           | ---                    | 25          | ---                       |
|          | TOTALS                | 25            | 52                     | 25          | 52                        |

EARTHWORK SUMMARY

| CATEGORY          | LOCATION    | 205.0100             | ( S )                                         | ( 1 )                 |
|-------------------|-------------|----------------------|-----------------------------------------------|-----------------------|
|                   |             | EXCAVATION<br>COMMON | SALVAGED/<br>UNUSABLE<br>PAVEMENT<br>MATERIAL | AVAILABLE<br>MATERIAL |
|                   |             | CY                   | CY                                            | CY                    |
| 0010              | 1ST STREET  | 12                   | 2                                             | 10                    |
|                   | 2ND STREET  | 11                   | 5                                             | 6                     |
|                   | 3RD STREET  | 4                    | 1                                             | 3                     |
|                   | 4TH STREET  | 6                    | 2                                             | 4                     |
|                   | 5TH STREET  | 26                   | 6                                             | 20                    |
|                   | ALLEY       | 4                    | 1                                             | 3                     |
|                   | 7TH STREET  | 2                    | ---                                           | 2                     |
|                   | GRAND TOTAL | 65                   | 17                                            | 48                    |
| TOTAL (PAY ITEMS) |             | 65                   |                                               |                       |

NOTES

1) AVAILABLE MATERIAL = COMMON EXCAVATION - ( S ).

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

|          |                   |          |     | 211.0400 |
|----------|-------------------|----------|-----|----------|
| CATEGORY | STATION - STATION | LOCATION | STA |          |
| 0010     | 216+00 - 336+00   | LT/RT    | 6   |          |
|          | 418+50 - 529+46   | LT/RT    | 109 |          |
|          | TOTAL             |          |     | 115      |

NOTE: REFER TO TYPICAL SECTIONS FOR SPECIFIC LOCATIONS

ASPHALTIC ITEMS

| CATEGORY | STATION - STATION | 460.5224                            | 465.0105                    | 455.0605            |
|----------|-------------------|-------------------------------------|-----------------------------|---------------------|
|          |                   | HMA PAVEMENT<br>4 LT 58-28 S<br>TON | ASPHALTIC<br>SURFACE<br>TON | TACK<br>COAT<br>GAL |
| 0010     | 100+48 - 216+00   | 3,480                               | 9                           | 2,200               |
|          | 216+00 - 336+00   | 3,670                               | ---                         | 2,300               |
|          | 336+00 - 418+50   | 2,550                               | ---                         | 1,600               |
|          | 418+50 - 529+46   | 3,360                               | ---                         | 2,100               |
|          | (1) UNDISTRIBUTED | ---                                 | 1,510                       | 950                 |
| TOTALS   |                   | 13,060                              | 1,519                       | 9,150               |

NOTE: HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LB/SY/IN.  
TACK COAT QUANTITY IS BASED ON AN APPLICATION RATE OF 0.07 GAL/SY.  
(1) FOR REMOVING DISTRESSED PAVEMENT MILLING AREAS.

FINISHING ROADWAY

|          |                |  | 213.0100.01 |
|----------|----------------|--|-------------|
| CATEGORY | PROJECT        |  | EACH        |
| 0010     | 01. 5940-02-60 |  | 1           |

PREPARE FOUNDATION FOR ASPHALTIC PAVING

|          |                |                   |    | 211.0100 |
|----------|----------------|-------------------|----|----------|
| CATEGORY | PROJECT        | STATION - STATION | LS |          |
| 0010     | 01. 5940-02-60 | 100+48 - 419+00   |    | 1        |

ASPHALTIC SURFACE DETOURS

|          |               |  | 465.0115 |
|----------|---------------|--|----------|
| CATEGORY | LOCATION      |  | TON      |
| 0010     | UNDISTRIBUTED |  | 5        |

BASE AGGREGATE DENSE

|          |                                  |   |        |          |            |
|----------|----------------------------------|---|--------|----------|------------|
|          |                                  |   |        | 305.0110 | 305.0120   |
|          |                                  |   |        | 3/4-INCH | 1 1/4-INCH |
| CATEGORY | STATION - STATION                |   |        | TON      | TON        |
| 0010     | 100+48                           | - | 216+00 | 1,300    | 30         |
|          | 216+00                           | - | 336+00 | 1,450    | ---        |
|          | 336+00                           | - | 418+50 | 990      | ---        |
|          | 418+50                           | - | 529+46 | 730      | ---        |
|          | BEAM GUARD REPLACEMENT LOCATIONS |   |        | 65       | ---        |
| TOTALS   |                                  |   | 4,535  | 30       |            |

HMA PAVEMENT PWL ITEMS

|          |                   |  |      | 460.0105.S  | 460.0110.S |
|----------|-------------------|--|------|-------------|------------|
|          |                   |  |      | HMA PWL     | HMA PWL    |
|          |                   |  |      | TEST STRIP  | TEST STRIP |
|          |                   |  |      | VOLUMETRICS | DENSITY    |
| CATEGORY | STATION - STATION |  | EACH | EACH        |            |
| 0010     | 100+48 - 529+46   |  | 1    |             | 1          |

PWL MIXTURE USE TABLE

| LOCATION             | STATION          | MIXTURE USE | UNDERLYING SURFACE          | BID ITEM     | TONS   | THICKNESS | QUALITY MANAGEMENT PROGRAM TO BE USED FOR: |                                                                  |
|----------------------|------------------|-------------|-----------------------------|--------------|--------|-----------|--------------------------------------------|------------------------------------------------------------------|
|                      |                  |             |                             |              |        |           | MIXTURE ACCEPTANCE                         | DENSITY ACCEPTANCE                                               |
| 12 FOOT DRIVING LANE | 100+48 to 529+46 | UPPER LAYER | MILLED EXISTING HMA SURFACE | 4 LT 58-28 S | 12,640 | 2"        | INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010  | INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005                      |
| MGS SHOULDER         | 100+48 to 529+46 | UPPER LAYER | MILLED EXISTING HMA SURFACE | 4 LT 58-28 S | 80     | 2"        | INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010  | ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE |
| MGS SHOULDER         | 100+48 to 529+46 | UPPER LAYER | EXISTING BASE COURSE        | 4 LT 58-28 S | 340    | 2"        | INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010  | ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE |

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| CURB RAMP ITEMS |               |          |          |            |              |
|-----------------|---------------|----------|----------|------------|--------------|
| CATEGORY        | LOCATION      | 204.0155 | 602.0410 | 602.0505   | 650.9000     |
|                 |               | REMOVING | CONCRETE | CURB RAMP  | CONSTRUCTION |
|                 |               | CONCRETE | SIDEWALK | DETECTABLE | STAKING      |
|                 |               | SIDEWALK | 5-INCH   | WARNING    | CURB RAMPS   |
| CATEGORY        | LOCATION      | SY       | SF       | SF         | EACH         |
| 0010            | 1ST STREET    | 13       | 369      | 58         | 6            |
|                 | 2ND STREET    | 19       | 289      | 40         | 4            |
|                 | 3RD STREET    | 8        | 114      | 20         | 2            |
|                 | 4TH STREET    | 4        | 121      | 34         | 4            |
|                 | 5TH STREET    | 23       | 318      | 58         | 5            |
|                 | ALLEY         | 8        | 106      | 20         | 2            |
|                 | 7TH STREET    | 2        | 62       | 10         | 1            |
|                 | UNDISTRIBUTED | ---      | ---      | ---        | ---          |
|                 | TOTALS        | 77       | 1,379    | 240        | 24           |

| STEEL PLATE BEAM GUARD ITEMS |                       |          |           |               |                    |
|------------------------------|-----------------------|----------|-----------|---------------|--------------------|
| CATEGORY                     | STATION - STATION     | LOCATION | 204.0165  | 614.0305      | 614.0370           |
|                              |                       |          | REMOVING  | STEEL PLATE   | STEEL PLATE BEAM   |
|                              |                       |          | GUARDRAIL | BEAM GUARD    | GUARD ENERGY       |
|                              |                       |          | LF        | CLASS A (LHW) | ABSORBING TERMINAL |
| CATEGORY                     | STATION - STATION     | LOCATION | LF        | LF            | EACH               |
| 0010                         | 417+96.49 - 419+33.99 | LT       | 21        | 88            | 1                  |
|                              | 463+76.48 - 464+38.98 | LT       | 59        | 13            | 1                  |
|                              | 465+40.13 - 466+15.13 | LT       | 16        | 25            | 1                  |
|                              | 515+75.44 - 516+50.44 | LT       | 15        | 25            | 1                  |
|                              | 518+46.46 - 519+21.46 | LT       | 22        | 25            | 1                  |
|                              | TOTALS                |          | 133       | 176           | 5                  |

| BARRIER SYSTEM GRADING AND SILT FENCE |                       |          |                 |             |             |    |     |      |    |     |      |   |
|---------------------------------------|-----------------------|----------|-----------------|-------------|-------------|----|-----|------|----|-----|------|---|
| CATEGORY                              | STATION - STATION     | LOCATION | 614.0010        | 628.1504    | 628.1520    | *  | *   | *    | *  | *   | *    | * |
|                                       |                       |          | BARRIER SYSTEM  | SILT        | SILT        |    |     |      |    |     |      |   |
|                                       |                       |          | GRADING SHAPING | FENCE       | FENCE       |    |     |      |    |     |      |   |
|                                       |                       |          | FINISHING       | MAINTENANCE | MAINTENANCE |    |     |      |    |     |      |   |
| CATEGORY                              | STATION - STATION     | LOCATION | EACH            | LF          | LF          | CY | SY  | CWT  | LB | SY  | MGAL |   |
| 0010                                  | 417+96.49 - 419+33.99 | LT       | 1               | 185         | 185         | 13 | 57  | 0.09 | 2  | 57  | 3.1  |   |
|                                       | 463+76.48 - 464+38.98 | LT       | 1               | 65          | 65          | -- | --  | 0.01 | 1  | 20  | 0.5  |   |
|                                       | 465+40.13 - 466+15.13 | LT       | 1               | 80          | 80          | 9  | 58  | 0.06 | 2  | 58  | 2.3  |   |
|                                       | 515+75.44 - 516+50.44 | LT       | 1               | 75          | 75          | -- | --  | 0.01 | 1  | 20  | 0.4  |   |
|                                       | 518+46.46 - 519+21.46 | LT       | 1               | 75          | 75          | -- | --  | 0.01 | 1  | 14  | 0.3  |   |
|                                       | TOTALS                |          | 5               | 480         | 480         | 22 | 115 | 0.18 | 7  | 169 | 6.6  |   |

\* FOR INFORMATION ONLY

| MAINTENANCE AND REPAIR OF HAUL ROADS |                |                  |
|--------------------------------------|----------------|------------------|
| CATEGORY                             | PROJECT        | 618.0100<br>EACH |
| 0010                                 | 01. 5940-02-60 | 1                |

| MOBILIZATION |                |                  |
|--------------|----------------|------------------|
| CATEGORY     | PROJECT        | 619.1000<br>EACH |
| 0010         | 01. 5940-02-60 | 0.7              |

| WATER FOR BASE COMPACTION |                   |                           |
|---------------------------|-------------------|---------------------------|
| CATEGORY                  | STATION - STATION | 624.0100<br>WATER<br>MGAL |
| 0010                      | 100+48 - 216+00   | 13                        |
|                           | 216+00 - 336+00   | 15                        |
|                           | 336+00 - 418+50   | 10                        |
|                           | 418+50 - 529+46   | 7                         |
|                           | TOTAL             | 45                        |

PROJECT NO: 5940-02-60

HWY: STH 133

COUNTY: IOWA

MISCELLANEOUS QUANTITIES

SHEET:

E

FILE NAME : \_\_\_\_\_

PLOT DATE : \_\_\_\_\_

PLOT BY : \_\_\_\_\_

PLOT NAME : \_\_\_\_\_

PLOT SCALE : 1" = 1"

WISDOT/CADDs SHEET 42

3



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| MOBILIZATIONS EROSION CONTROL |                                              |                                                        |
|-------------------------------|----------------------------------------------|--------------------------------------------------------|
|                               | 628.1905<br>MOBILIZATIONS<br>EROSION CONTROL | 628.1910<br>MOBILIZATIONS EMERGENCY<br>EROSION CONTROL |
| CATEGORY                      | EACH                                         | EACH                                                   |
| 0010                          | 16                                           | 4                                                      |
| FIELD OFFICE TYPE C           |                                              |                                                        |
| CATEGORY                      | PROJECT                                      | 642.5201<br>EACH                                       |
| 0010                          | 01. 5940-02-60                               | 0.5                                                    |

| FINISHING ITEMS |               |          |          |            |                |          |
|-----------------|---------------|----------|----------|------------|----------------|----------|
|                 |               | 625.0100 | 627.0200 | 629.0210   | 630.0140       | 630.0500 |
|                 |               | TOPSOIL  | MULCHING | FERTILIZER | SEEDING        | SEED     |
| CATEGORY        | LOCATION      | SY       | SY       | TYPE B     | MIXTURE NO. 40 | WATER    |
|                 |               |          |          | CWT        | LB             | MGAL     |
| 0010            | 1ST STREET    | 37       | 37       | 0.03       | 1              | 0.9      |
|                 | 2ND STREET    | 48       | 48       | 0.03       | 1              | 1.1      |
|                 | 3RD STREET    | 14       | 14       | 0.01       | 1              | 0.4      |
|                 | 4TH STREET    | 9        | 9        | 0.01       | 1              | 0.2      |
|                 | 5TH STREET    | 36       | 36       | 0.03       | 1              | 0.8      |
|                 | ALLEY         | 9        | 9        | 0.01       | 1              | 0.2      |
|                 | 7TH STREET    | 6        | 6        | 0.01       | 1              | 0.2      |
|                 | UNDISTRIBUTED | 40       | 40       | 0.03       | 2              | 1.0      |
|                 | TOTALS        | 199      | 199      | 0.16       | 9              | 4.8      |

| MOVING SIGNS TYPE II    |            |    |                  |
|-------------------------|------------|----|------------------|
| CATEGORY                | LOCATION   |    | 638.2102<br>EACH |
| 0010                    | 5TH STREET |    | 1                |
| INLET PROTECTION TYPE B |            |    |                  |
|                         |            |    | 628.7010<br>EACH |
| 0010                    | 156+27     | LT | 1                |

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| TRAFFIC CONTROL AND DETOUR ITEMS |                                        |      |                                         |       |                                                      |     |                                                       |     |                                                         |     |                                         |        |                                                          |        |      |                                                       |  |                                           |     |
|----------------------------------|----------------------------------------|------|-----------------------------------------|-------|------------------------------------------------------|-----|-------------------------------------------------------|-----|---------------------------------------------------------|-----|-----------------------------------------|--------|----------------------------------------------------------|--------|------|-------------------------------------------------------|--|-------------------------------------------|-----|
|                                  |                                        |      | 643.0300<br>TRAFFIC<br>CONTROL<br>DRUMS |       | 643.0410<br>TRAFFIC CONTROL<br>BARRICADES<br>TYPE II |     | 643.0420<br>TRAFFIC CONTROL<br>BARRICADES<br>TYPE III |     | 643.0705<br>TRAFFIC CONTROL<br>WARNING<br>LIGHTS TYPE A |     | 643.0900<br>TRAFFIC<br>CONTROL<br>SIGNS |        | 643.0920<br>TRAFFIC CONTROL<br>COVERING<br>SIGNS TYPE II |        |      | 643.1000<br>TRAFFIC<br>CONTROL SIGNS<br>FIXED MESSAGE |  | 643.1050<br>TRAFFIC CONTROL<br>SIGNS PCMS |     |
| CATEGORY                         | LOCATION                               | DAYS | EACH                                    | DAY   | EACH                                                 | DAY | EACH                                                  | DAY | EACH                                                    | DAY | EACH                                    | DAY    | NO. SIGNS                                                | CYCLES | EACH | SF                                                    |  | EACH                                      | DAY |
| 0010                             | ADVANCED WARNING AND WIDTH RESTRICTION | 75   | ---                                     | ---   | ---                                                  | --- | ---                                                   | --- | ---                                                     | --- | 53                                      | 3,975  | ---                                                      | ---    | ---  | ---                                                   |  | ---                                       | --- |
|                                  | DROP-OFF AND MILLED SURFACE            | 20   | ---                                     | ---   | ---                                                  | --- | ---                                                   | --- | ---                                                     | --- | 60                                      | 1,200  | ---                                                      | ---    | ---  | ---                                                   |  | ---                                       | --- |
|                                  | DETOUR ROUTE PRE-WARN                  | 7    | 10                                      | 70    | ---                                                  | --- | ---                                                   | --- | ---                                                     | --- | ---                                     | ---    | ---                                                      | ---    | ---  | ---                                                   |  | 2                                         | 14  |
|                                  | DETOUR ROUTE                           | 25   | ---                                     | ---   | ---                                                  | --- | 16                                                    | 400 | 22                                                      | 550 | 207                                     | 5,175  | 33                                                       | 1      | 33   | 28.0                                                  |  | ---                                       | --- |
|                                  | GUARDRAIL REPLACEMENT AREAS            | 14   | 50                                      | 700   | ---                                                  | --- | ---                                                   | --- | ---                                                     | --- | ---                                     | ---    | ---                                                      | ---    | ---  | ---                                                   |  | ---                                       | --- |
|                                  | UNDISTRIBUTED                          | 10   | 75                                      | 750   | 23                                                   | 230 | ---                                                   | --- | 23                                                      | 230 | 23                                      | 230    | ---                                                      | ---    | ---  | ---                                                   |  | ---                                       | --- |
| TOTALS                           |                                        |      |                                         | 1,520 |                                                      | 230 |                                                       | 400 |                                                         | 780 |                                         | 10,580 |                                                          | 33     |      | 28.0                                                  |  | 14                                        |     |

| TRAFFIC CONTROL |                |                    |
|-----------------|----------------|--------------------|
| CATEGORY        | PROJECT        | 5940-02-60<br>EACH |
| 0010            | 01. 5940-02-60 | 0.67               |

| PAVEMENT MARKING ITEMS |                   |                                                       |                                  |                                                |                                        |  |  |
|------------------------|-------------------|-------------------------------------------------------|----------------------------------|------------------------------------------------|----------------------------------------|--|--|
|                        |                   | 646.1040<br>MARKING LINE GROOVED WET REF EPOXY 4-INCH |                                  | 646.4520<br>MARKING LINE SAME DAY EPOXY 4-INCH |                                        |  |  |
|                        |                   | WHITE                                                 | DASHED WHITE                     | SOLID                                          | DASHED YELLOW                          |  |  |
| CATEGORY               | STATION - STATION | LF                                                    | 4-FOOT SEG.,<br>8-FOOT GAP<br>LF | YELLOW<br>LF                                   | 12.5-FOOT SEG.,<br>37.5-FOOT GAP<br>LF |  |  |
| 0010                   | 100+48 216+00     | 21,945                                                | ---                              | 5,845                                          | 2,666                                  |  |  |
|                        | 216+00 336+00     | 23,816                                                | ---                              | 5,788                                          | 2,915                                  |  |  |
|                        | 336+00 - 418+50   | 16,359                                                | 24                               | 13,105                                         | 693                                    |  |  |
|                        | 418+50 - 529+46   | 22,144                                                | 15                               | 22,122                                         | 16                                     |  |  |
| SUBTOTALS              |                   | 84,264                                                | 39                               | 46,860                                         | 6,290                                  |  |  |
| TOTALS                 |                   | 84,303                                                |                                  | 53,150                                         |                                        |  |  |

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TEMPORARY PAVEMENT MARKING ITEMS

|          |                   | 649.0105                            |                             |
|----------|-------------------|-------------------------------------|-----------------------------|
|          |                   | TEMPORARY MARKING LINE PAINT 4-INCH |                             |
| CATEGORY | STATION - STATION | SOLID                               | DASHED YELLOW               |
|          |                   | YELLOW                              | 4-FOOT SEG.,<br>46-FOOT GAP |
|          |                   | LF                                  | LF                          |
| 0010     | 100+48 - 216+00   | 5,845                               | 853                         |
|          | 216+00 - 336+00   | 5,788                               | 933                         |
|          | 336+00 - 418+50   | 13,105                              | 222                         |
|          | 418+50 - 529+46   | 22,122                              | 5                           |
|          | SUBTOTALS         | 46,860                              | 2,013                       |
|          | TOTAL             | 48,873                              |                             |

VERIFY LANDMARK REFERENCE MONUMENTS

| SPV.0060.01<br>EACH |         |   |
|---------------------|---------|---|
| CATEGORY            | STATION |   |
| 0010                | 477+98  | 1 |

CONSTRUCTION STAKING RESURFACING REFERENCE

| 650.8000<br>LF |                   |  |        |
|----------------|-------------------|--|--------|
| CATEGORY       | STATION - STATION |  |        |
| 0010           | 100+48 - 529+46   |  | 42,900 |

BASE AGGREGATE DENSE 3/4-INCH BEAM GUARD

| SPV.0195.01<br>TON |                   |          |  |     |
|--------------------|-------------------|----------|--|-----|
| CATEGORY           | STATION - STATION | LOCATION |  |     |
| 0010               | 119+12 - 122+95   | RT       |  | 25  |
|                    | 119+49 - 123+32   | LT       |  | 25  |
|                    | 336+38 - 337+90   | LT       |  | 10  |
|                    | 336+62 - 337+92   | RT       |  | 9   |
|                    | 406+25 - 407+79   | RT       |  | 10  |
|                    | 406+25 - 407+79   | LT       |  | 10  |
|                    | 321+18 - 323+72   | RT       |  | 15  |
|                    | 321+56 - 324+35   | LT       |  | 20  |
|                    | 419+13 - 464+35   | LT       |  | 300 |
|                    | 466+01 - 515+90   | LT       |  | 330 |
|                    | 519+01 - 527+25   | LT       |  | 55  |
| TOTAL              |                   |          |  | 809 |

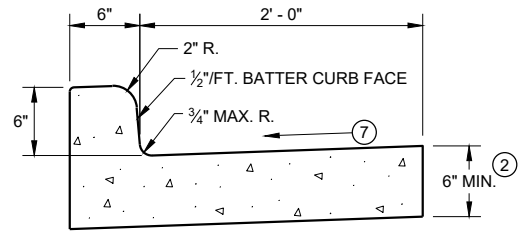
SAWING EXISTING PAVEMENT

| 690.0150<br>SAWING ASPHALT<br>LF |                   |          |  |  | 690.0250<br>SAWING CONCRETE<br>LF |     |
|----------------------------------|-------------------|----------|--|--|-----------------------------------|-----|
| CATEGORY                         | STATION - STATION | LOCATION |  |  |                                   |     |
| 0010                             | 100+48 - 216+00   | LT/RT    |  |  | 335                               | 133 |

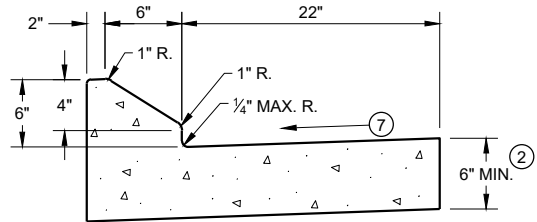
3

Standard Detail Drawing List

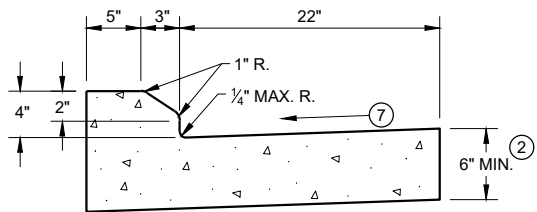
|           |                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------|
| 08D01-21A | CONCRETE CURB & GUTTER                                                                             |
| 08D01-21B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS                                               |
| 08D05-20A | CURB RAMPS TYPES 1 AND 1-A                                                                         |
| 08D05-20B | CURB RAMPS TYPES 2 AND 3                                                                           |
| 08D05-20C | CURB RAMPS TYPES 4A AND 4A1                                                                        |
| 08D05-20D | CURB RAMPS TYPE 4B AND 4B1                                                                         |
| 08D05-20E | CURB RAMPS TYPES 5, 6, 7A, 7B & 8                                                                  |
| 08D05-20F | CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS                                            |
| 08D05-20G | CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES                                        |
| 08E09-06  | SILT FENCE                                                                                         |
| 13C19-03  | HMA LONGITUDINAL JOINTS                                                                            |
| 14B15-11A | STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS                                          |
| 14B15-11B | STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS                                          |
| 14B15-11C | STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS                                         |
| 14B24-09A | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL                                                   |
| 14B24-09B | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL                                                   |
| 14B24-09C | STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL                                                   |
| 14B29-01  | SAFETY EDGE                                                                                        |
| 15C02-08A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES                                                         |
| 15C02-08B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES                                                          |
| 15C02-08C | DETOUR SIGNING FOR MAINLINE CLOSURES                                                               |
| 15C02-08F | ADVANCED WIDTH RESTRICTION SIGNING                                                                 |
| 15C03-05  | BARRICADES AND SIGNS FOR SIDEROAD CLOSURES                                                         |
| 15C04-05  | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC |
| 15C08-20A | LONGITUDINAL MARKING (MAINLINE)                                                                    |
| 15C11-07B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS                                  |
| 15C12-07  | TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION                                           |
| 15C19-06A | MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY                                         |
| 15C35-04A | PAVEMENT MARKING (INTERSECTIONS)                                                                   |
| 15D28-04  | TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY                               |
| 15D38-02A | TEMPORARY TRAFFIC CONTROL SIGN MOUNTING                                                            |
| 15D38-02B | ATTACHMENT OF SIGNS TO POSTS                                                                       |
| 15D39-02  | TRAFFIC CONTROL, DROP-OFF SIGNING                                                                  |
| 15D44-02  | TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES                                          |



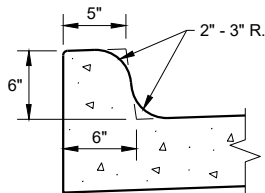
TYPES A<sup>①</sup> & D



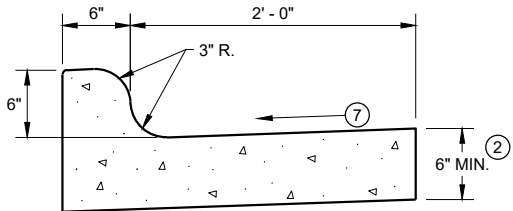
6" SLOPED CURB TYPES G<sup>①</sup> & J



4" SLOPED CURB TYPES G<sup>①</sup> & J

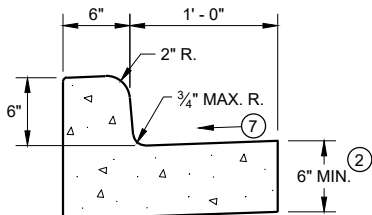


TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)



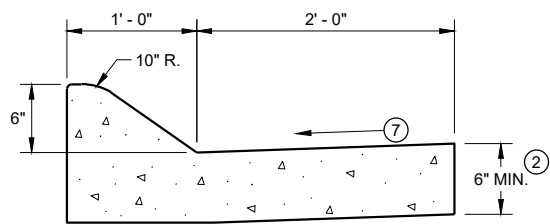
TYPES K<sup>①</sup> & L

CONCRETE CURB AND GUTTER 30"

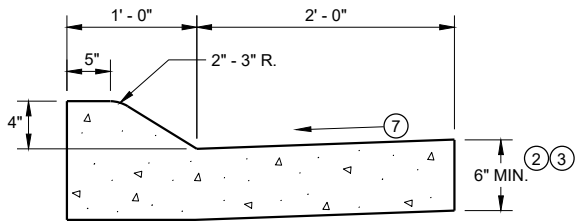


TYPES A<sup>①</sup> & D

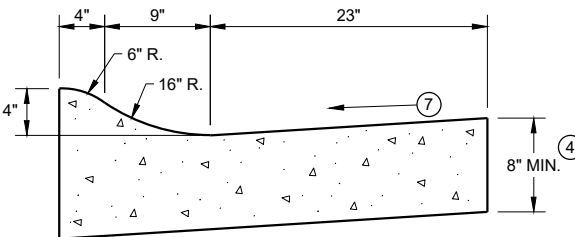
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A<sup>①</sup> & D



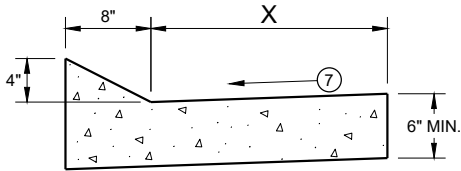
4" SLOPED CURB TYPES A<sup>①</sup> & D



4" SLOPED CURB TYPES R<sup>①</sup> & T<sup>⑤</sup>

CONCRETE CURB AND GUTTER 36"

| TBT & TBTT | X   |
|------------|-----|
| 30"        | 22" |
| 36"        | 28" |

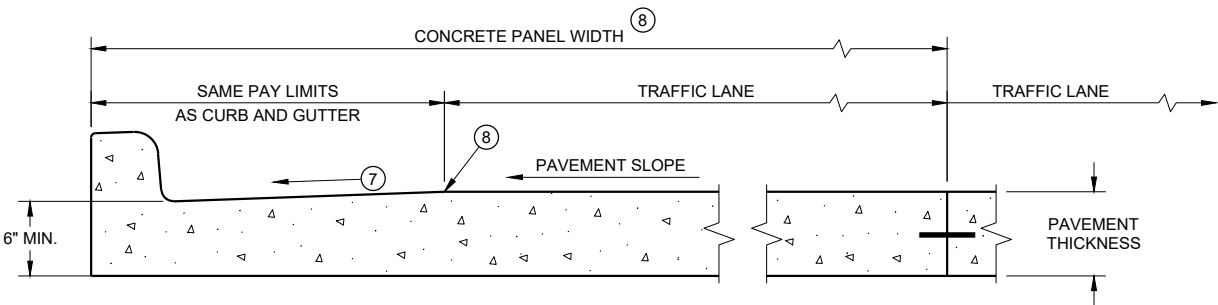


TYPES TBT & TBTT<sup>①</sup>

CONCRETE CURB AND GUTTER

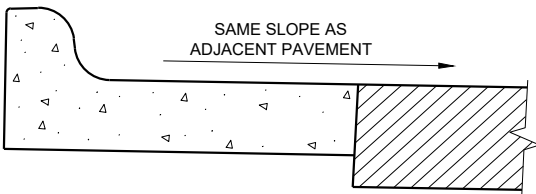
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

| PAVEMENT THICKNESS | MAXIMUM PANEL WIDTH |
|--------------------|---------------------|
| LESS THAN 10"      | 12'                 |
| 10" & ABOVE        | 15'                 |



PARTIAL SECTION OF PAVEMENT \*  
WITH INTEGRAL CURB AND GUTTER

\* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER<sup>⑥</sup>  
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

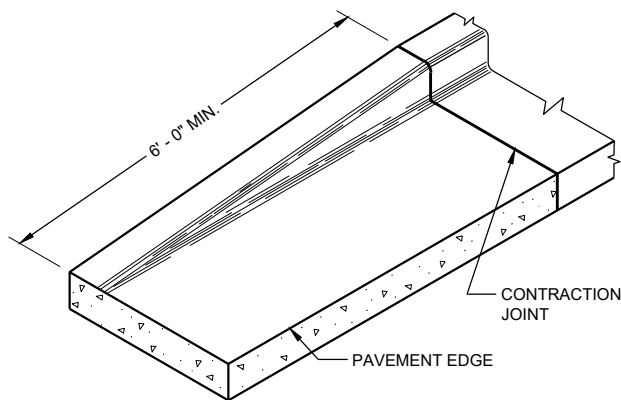
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

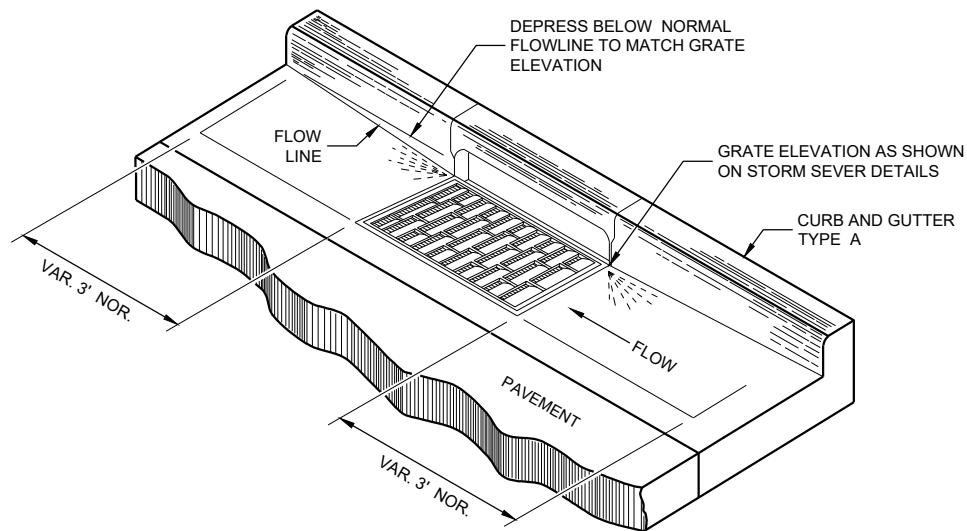
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

CONCRETE CURB AND GUTTER

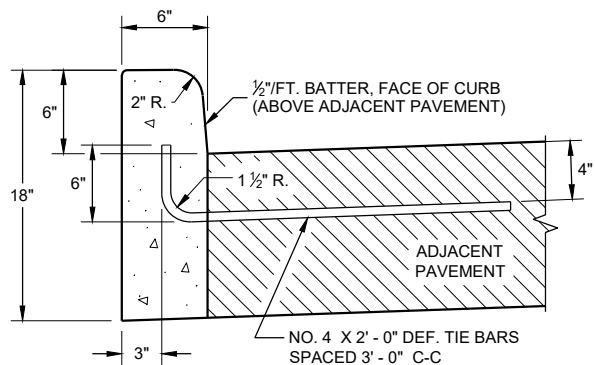
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



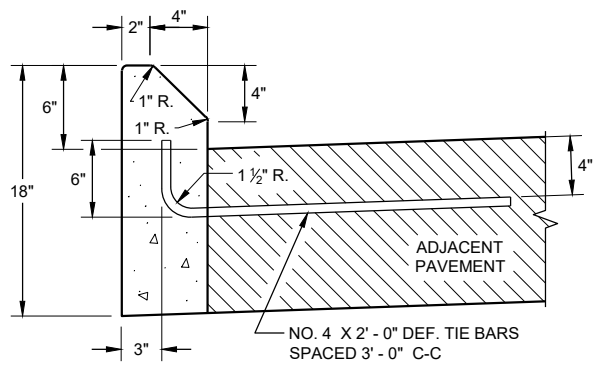
END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS  
(TYPICAL H INLET COVER SHOWN)

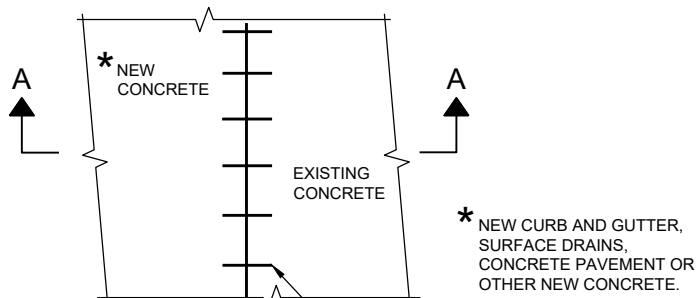


TYPES A<sup>①</sup> & D

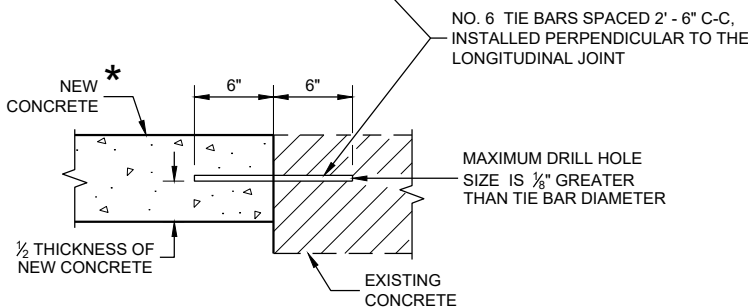


TYPES G<sup>①</sup> & J

CONCRETE CURB



PLAN VIEW



SECTION A - A

TIE BARS DRILLED  
INTO EXISTING PAVEMENT

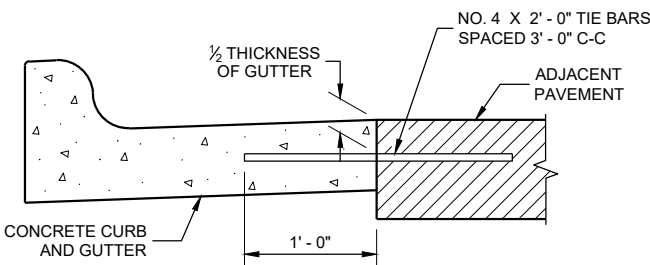
GENERAL NOTES

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

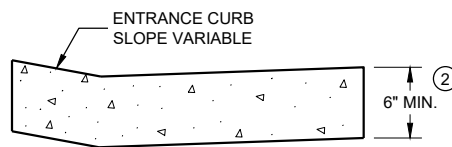
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.



TYPICAL TIE BAR LOCATION<sup>①</sup>



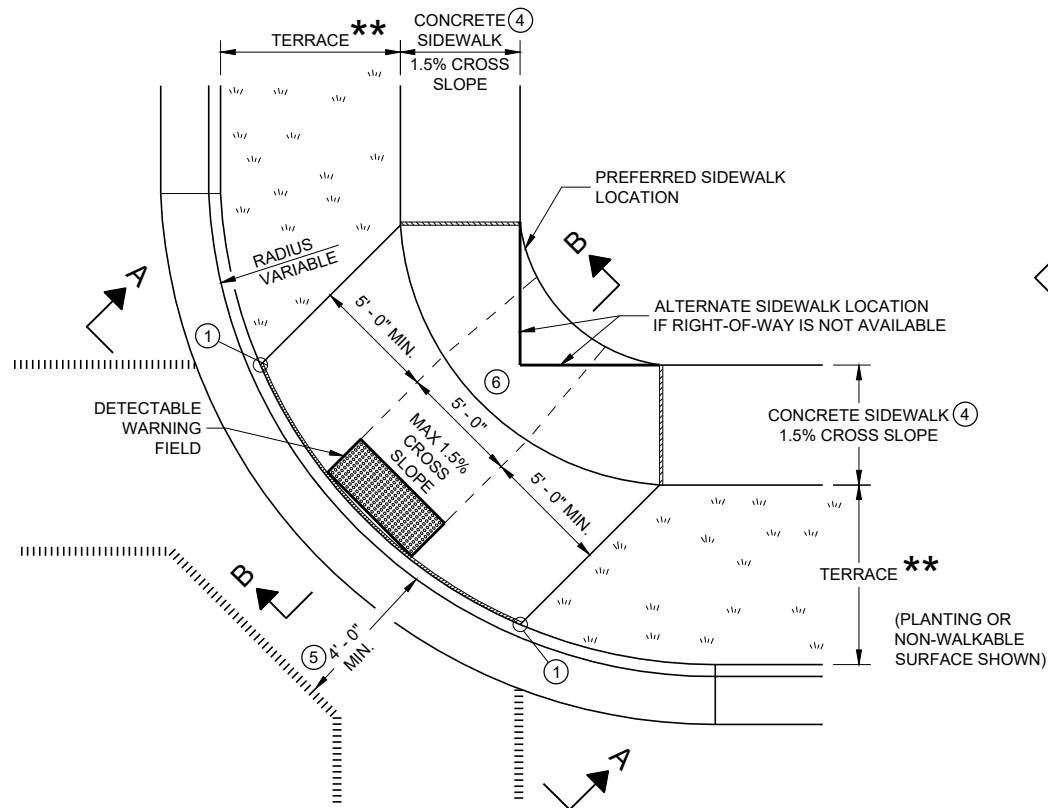
DRIVEWAY ENTRANCE CURB<sup>⑨</sup>  
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES  
AND CURB AND GUTTER  
APPLICATIONS

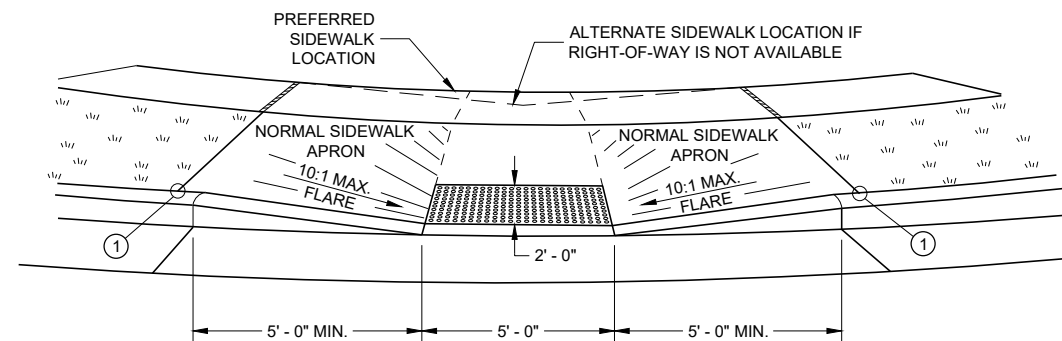
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020  
DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

FHWA

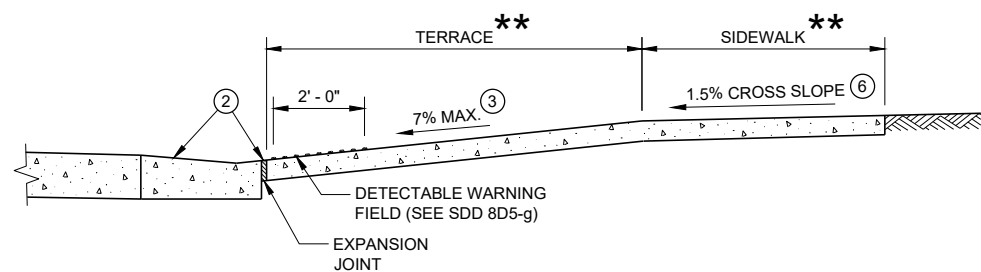


**PLAN VIEW**  
**CURB RAMP TYPE 1**  
**(CENTER OF CORNER RADIUS)**

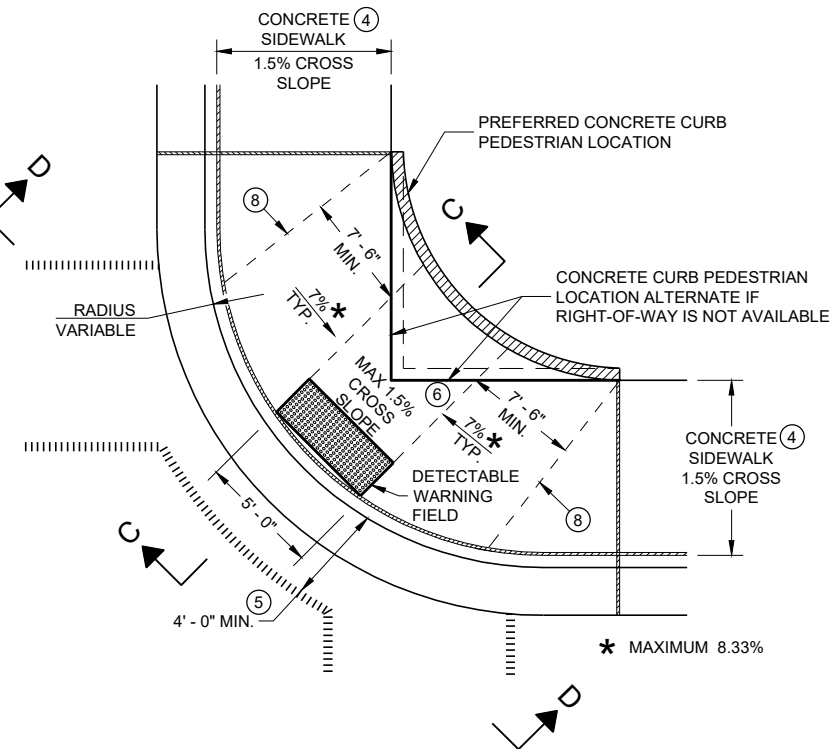


**VIEW A - A FOR TYPE 1**

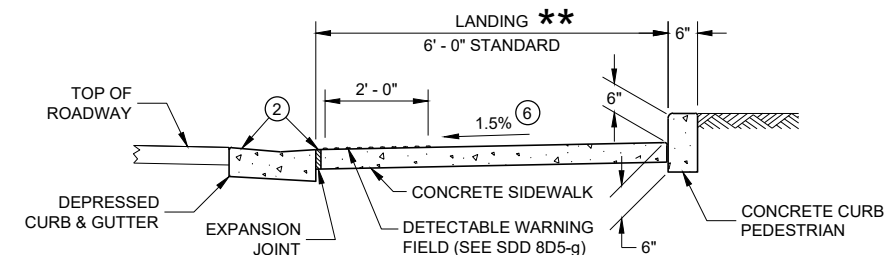
\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS



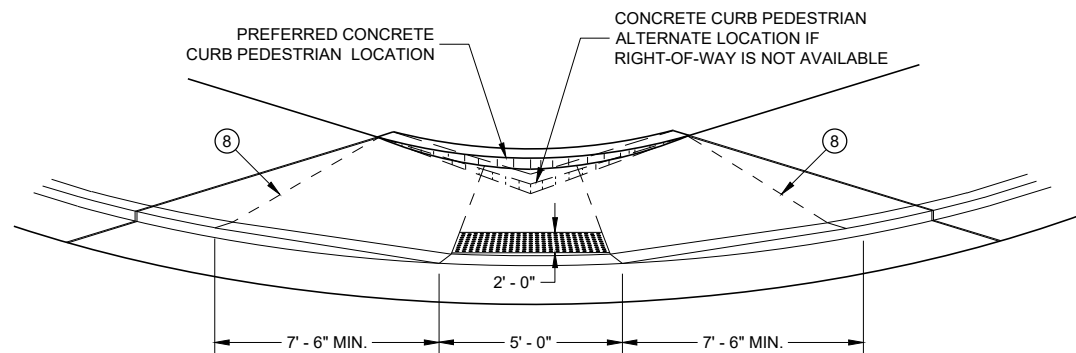
**SECTION B - B FOR TYPE 1**



**PLAN VIEW**  
**CURB RAMP TYPE 1 - A**  
**(NO TERRACE)**



**SECTION C - C FOR TYPE 1 - A**



**VIEW D - D FOR TYPE 1 - A**

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

- THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

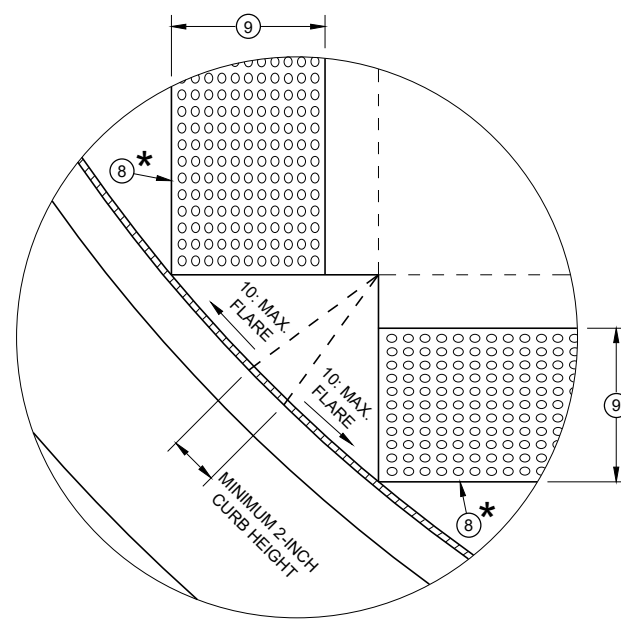
## LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

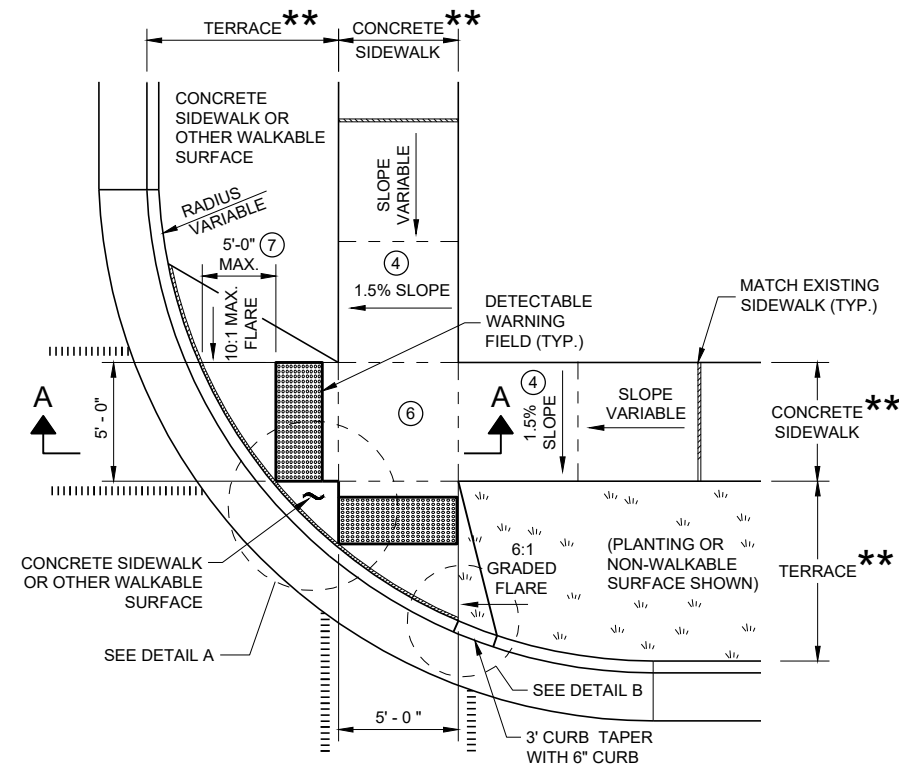
## CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

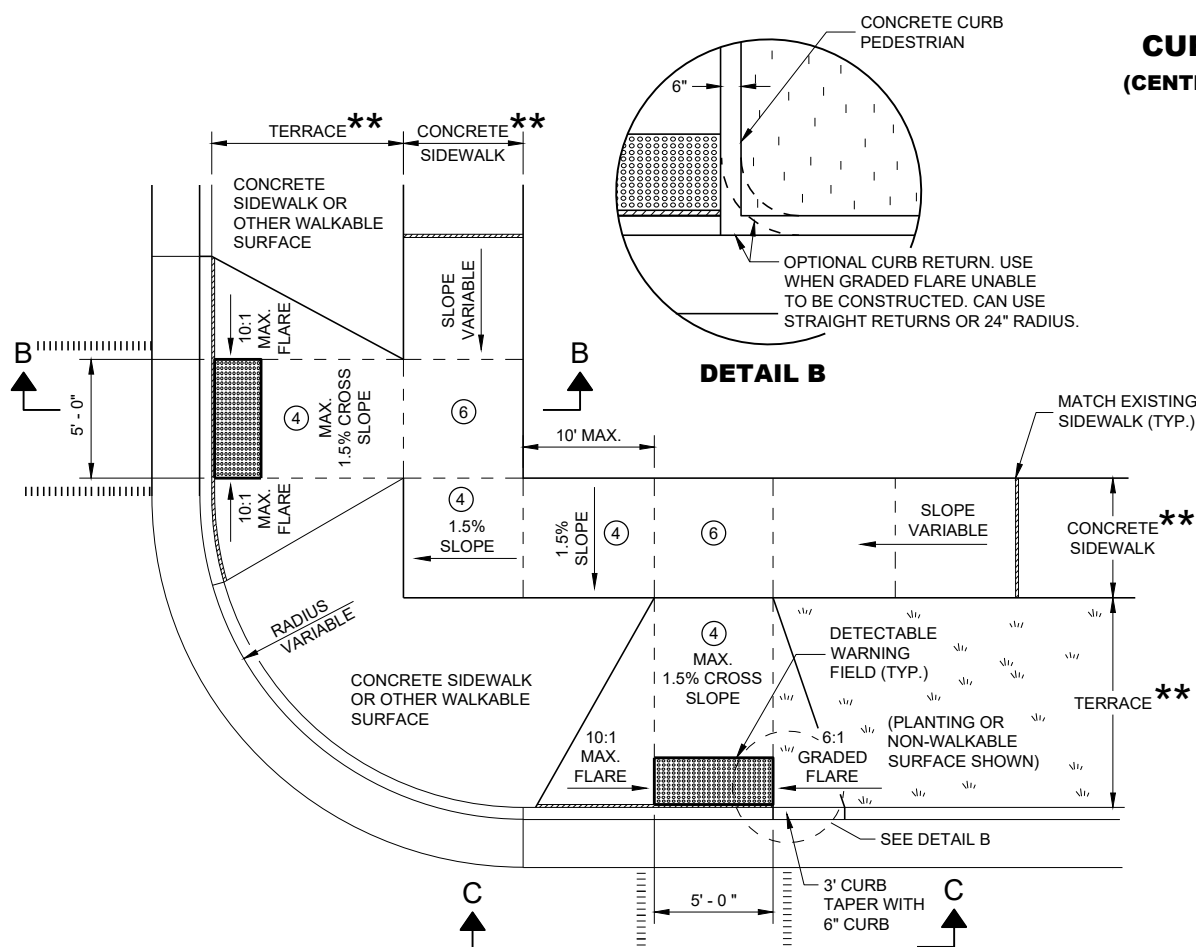




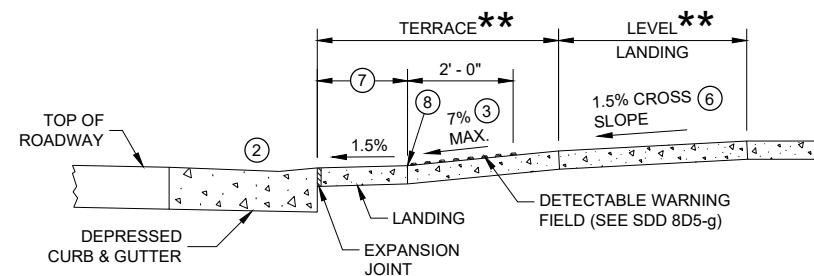
### DETAIL A



**PLAN VIEW**  
**CURB RAMP TYPE 2**  
**(CENTER OF CORNER RADIUS)**



**PLAN VIEW**  
**CURB RAMP TYPE 3**  
**(OUTSIDE OF CROSSWALK AREA)**



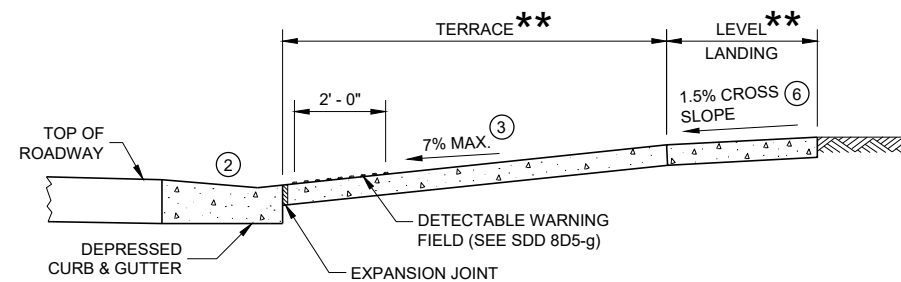
## SECTION A - A FOR TYPE 2

\* MAXIMUM 2.0% SLOPE  
IN ALL DIRECTIONS IN  
FRONT OF GRADE BREAK

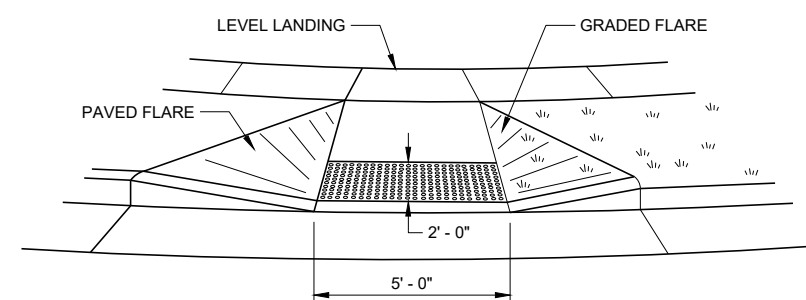
**\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS**

## LEGEND

|                                                                                       |                                    |
|---------------------------------------------------------------------------------------|------------------------------------|
|  | 1/2" EXPANSION JOINT SIDEWALK      |
|  | CONTRACTION JOINT SIDEWALK         |
|  | PAVEMENT MARKING CROSSWALK (WHITE) |



### SECTION B - B FOR TYPE 3



**VIEW C - C FOR TYPE 3**

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

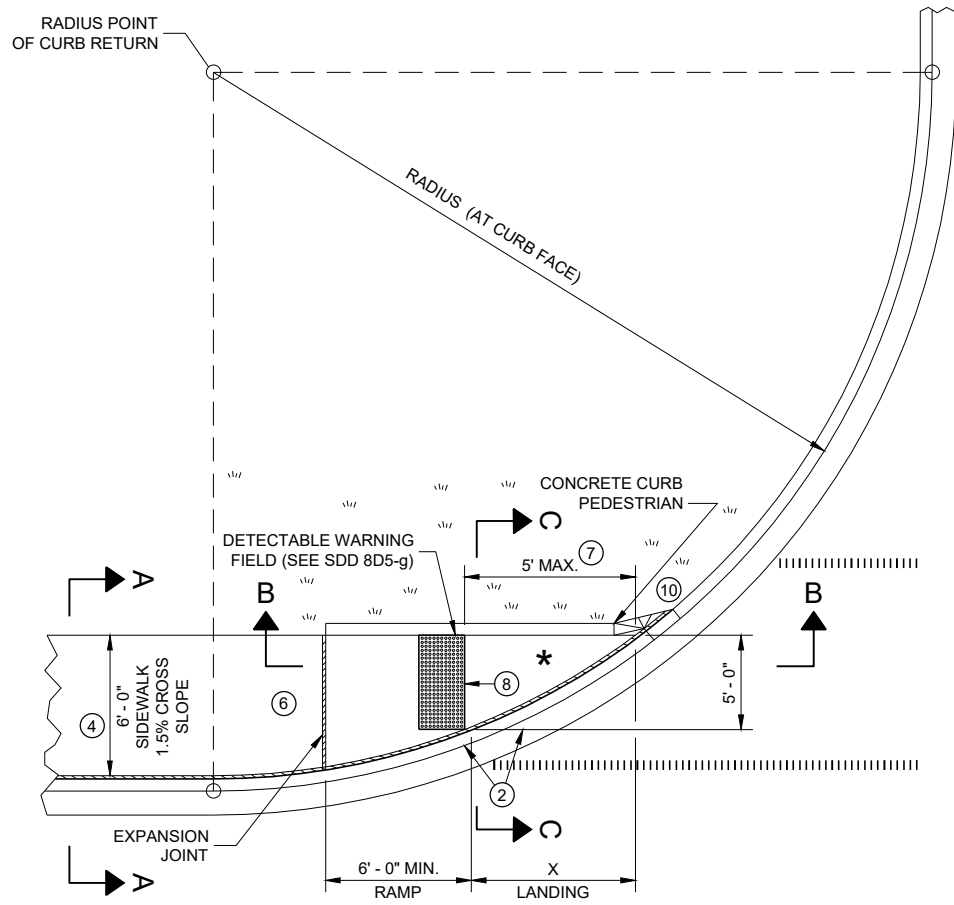
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN  $\frac{1}{4}$  - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
- ④  $\pm 0.5\%$  CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

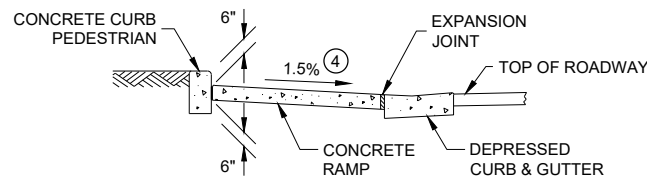
## CURB RAMPS TYPE 2 AND 3

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



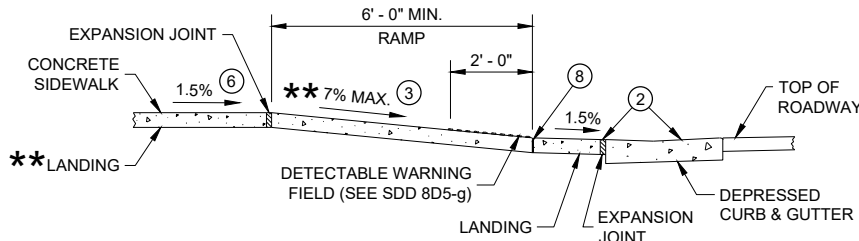


PLAN VIEW  
CURB RAMP TYPE 4A



SECTION C - C FOR TYPE 4A

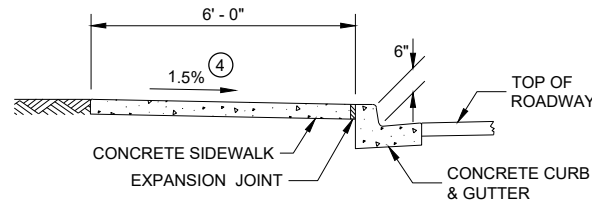
\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK



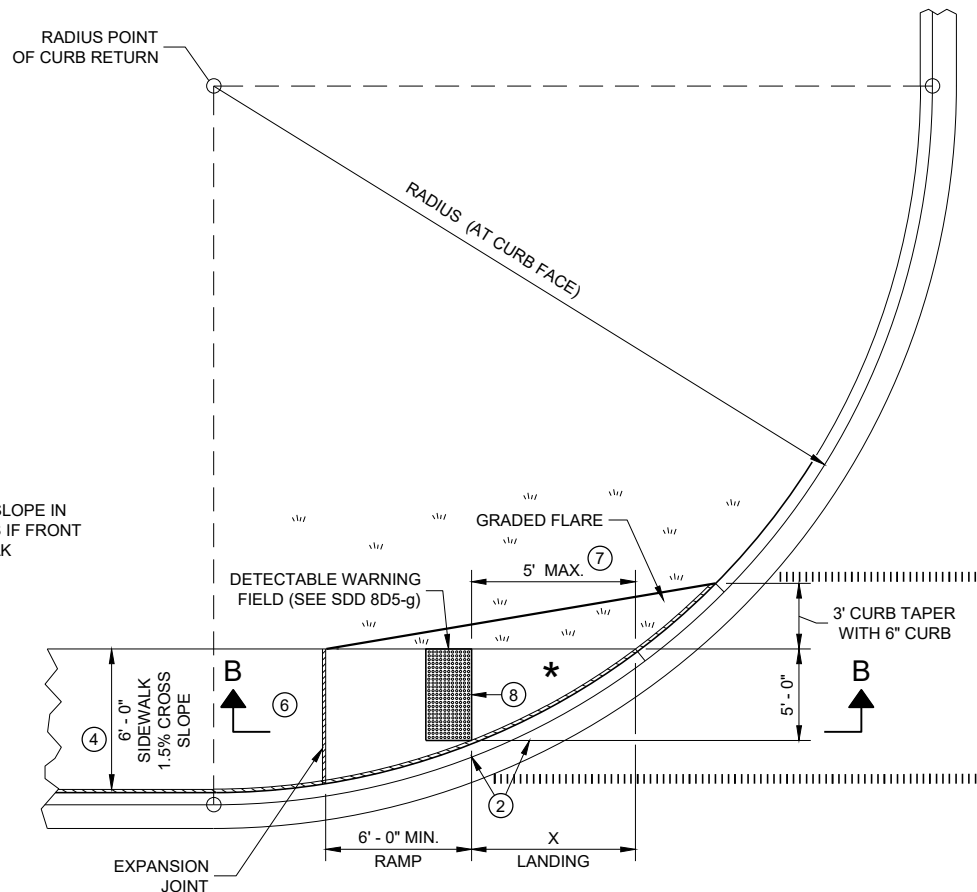
SECTION B - B FOR  
TYPE 4A AND TYPE 4A1

| RADIUS<br>(AT CURB FACE) | X           |
|--------------------------|-------------|
| 10 FEET                  | 4' - 7"     |
| 15 FEET                  | 6' - 5 1/2" |

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A - A FOR TYPE 4A



PLAN VIEW  
CURB RAMP TYPE 4A1

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

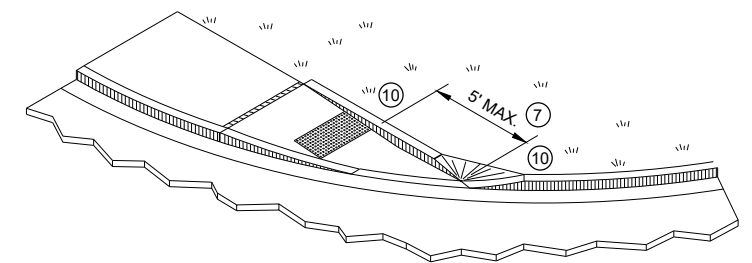
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

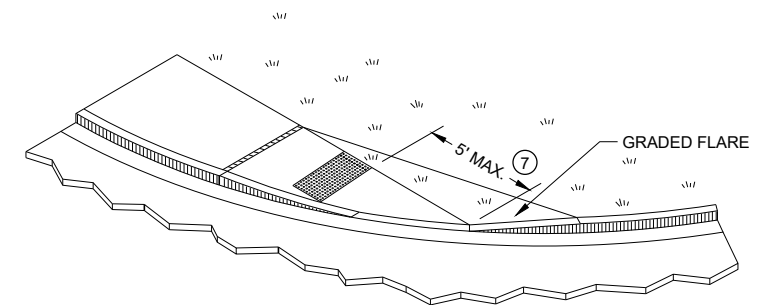
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

## LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



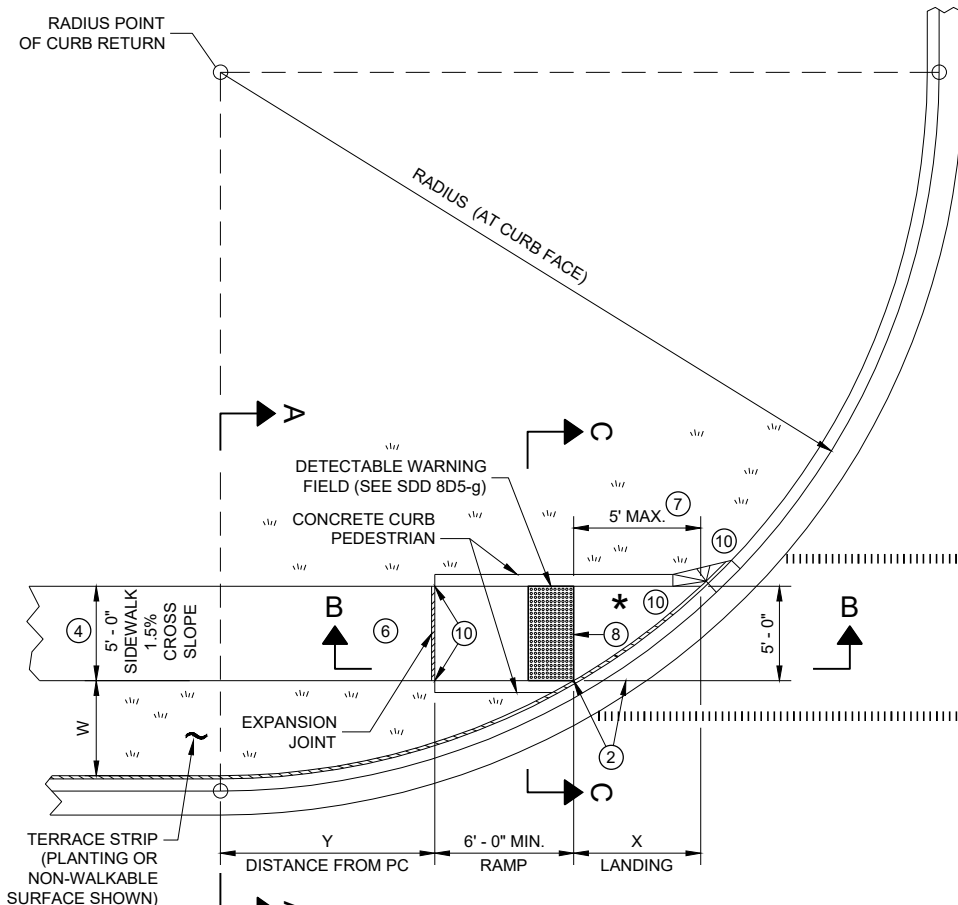
ISOMETRIC VIEW FOR TYPE 4A



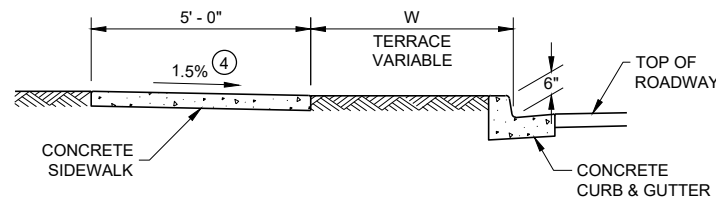
ISOMETRIC VIEW FOR TYPE 4A1

## CURB RAMPS TYPE 4A AND 4A1

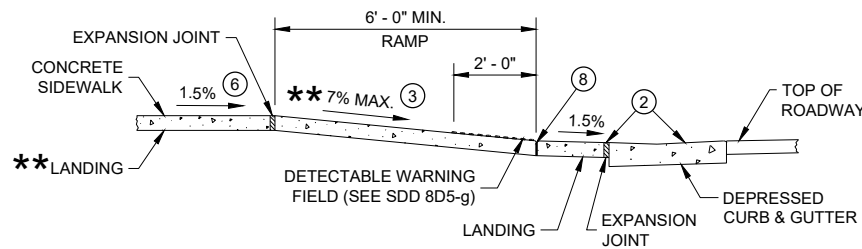
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



PLAN VIEW  
CURB RAMP TYPE 4B



SECTION A - A FOR TYPE 4B



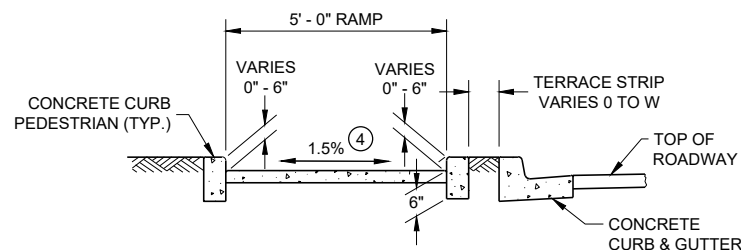
\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B - B FOR  
TYPE 4B AND TYPE 4B1

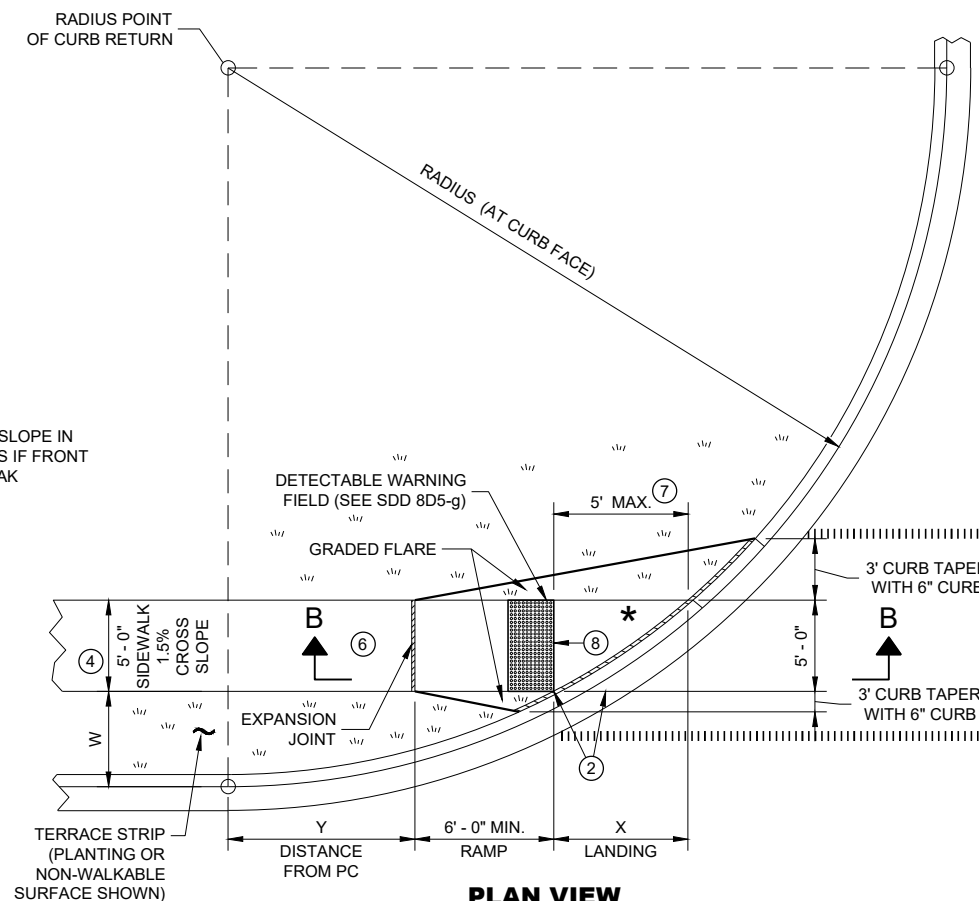
\* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

| RADIUS<br>(AT CURB FACE) | W = 3' - 0"  |             | W = 4' - 0"  |              | W = 5' - 0" |             | W = 6' - 0" |              | W = 7' - 0"  |              | W = 8' - 0" |              | W = 9' - 0" |              | W = 10' - 0" |              |
|--------------------------|--------------|-------------|--------------|--------------|-------------|-------------|-------------|--------------|--------------|--------------|-------------|--------------|-------------|--------------|--------------|--------------|
|                          | X            | Y           | X            | Y            | X           | Y           | X           | Y            | X            | Y            | X           | Y            | X           | Y            | X            | Y            |
| 10 FEET                  | 2' - 10 1/4" | 0' - 5"     | 2' - 1"      | 1' - 4 1/2"  | 1' - 5"     | 2' - 1"     | 0' - 10"    | 2' - 7 1/2"  | 0' - 3 3/4"  | 3' - 0 1/4"  |             |              |             |              |              |              |
| 15 FEET                  | 4' - 6 3/4"  | 2' - 1 3/4" | 3' - 9"      | 3' - 5 3/4"  | 3' - 1 1/4" | 4' - 6"     | 2' - 6 3/4" | 5' - 4 1/2"  | 2' - 1"      | 6' - 1"      | 1' - 8"     | 6' - 8 1/2"  | 1' - 3 1/4" | 7' - 2 1/2"  | 0' - 10 3/4" | 7' - 7 1/4"  |
| 20 FEET                  | 5' - 9 3/4"  | 3' - 6 1/2" | 4' - 11 1/2" | 5' - 1 3/4"  | 4' - 3 1/4" | 6' - 5 1/2" | 3' - 8 3/4" | 7' - 7"      | 3' - 3"      | 8' - 6 1/2"  | 2' - 10"    | 9' - 4 1/2"  | 2' - 5 1/2" | 10' - 1 1/4" | 2' - 1 1/4"  | 10' - 9"     |
| 30 FEET                  |              |             | 6' - 9 1/4"  | 7' - 11 1/4" | 6' - 0 1/4" | 9' - 8"     | 5' - 5"     | 11' - 1 3/4" | 4' - 10 3/4" | 12' - 5 3/4" | 4' - 5 1/2" | 13' - 7 3/4" | 4' - 0 3/4" | 14' - 8 1/2" | 3' - 8 1/2"  | 15' - 8 1/4" |
| 40 FEET                  |              |             |              |              |             |             |             |              | 6' - 1 3/4"  | 15' - 8 1/2" | 5' - 8"     | 17' - 2"     | 5' - 3"     | 18' - 5 3/4" | 4' - 10 3/4" | 19' - 8 1/4" |
| 50 FEET                  |              |             |              |              |             |             |             |              |              |              |             |              |             |              | 5' - 10 1/4" | 23' - 2"     |

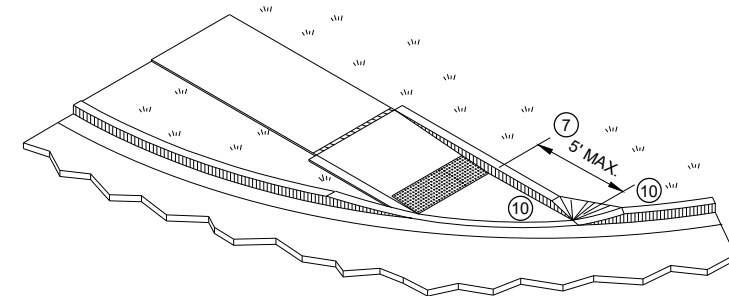
INTERMEDIATE RADII CAN BE INTERPOLATED  
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH  
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



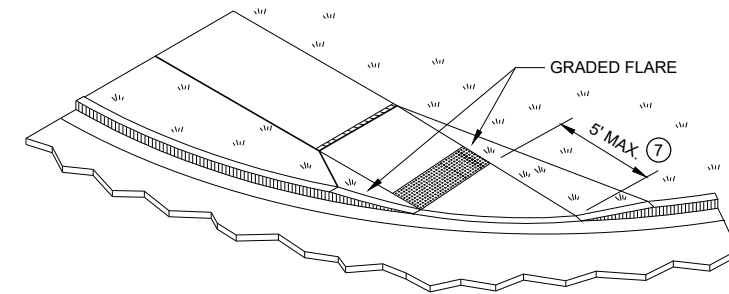
SECTION C - C FOR TYPE 4B



PLAN VIEW  
CURB RAMP TYPE 4B1



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

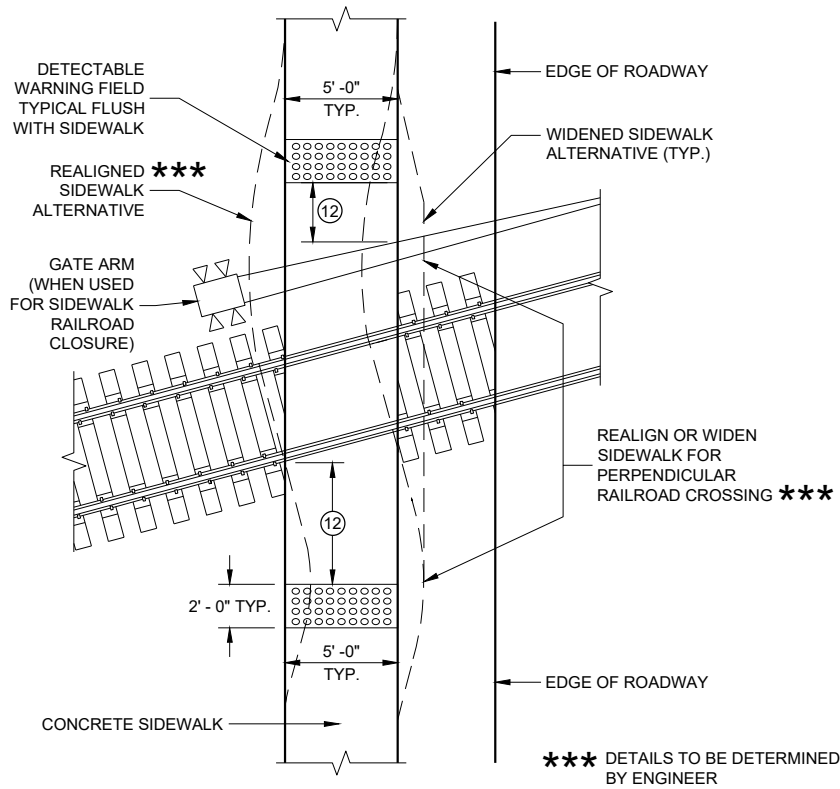
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

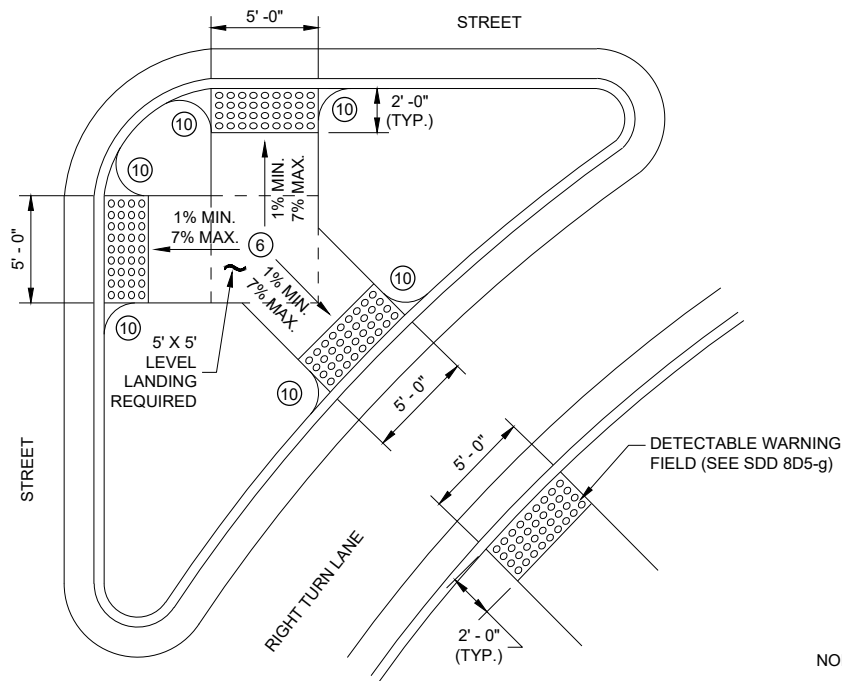
CURB RAMPS  
TYPE 4B AND 4B1

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**CURB RAMP TYPE 8**

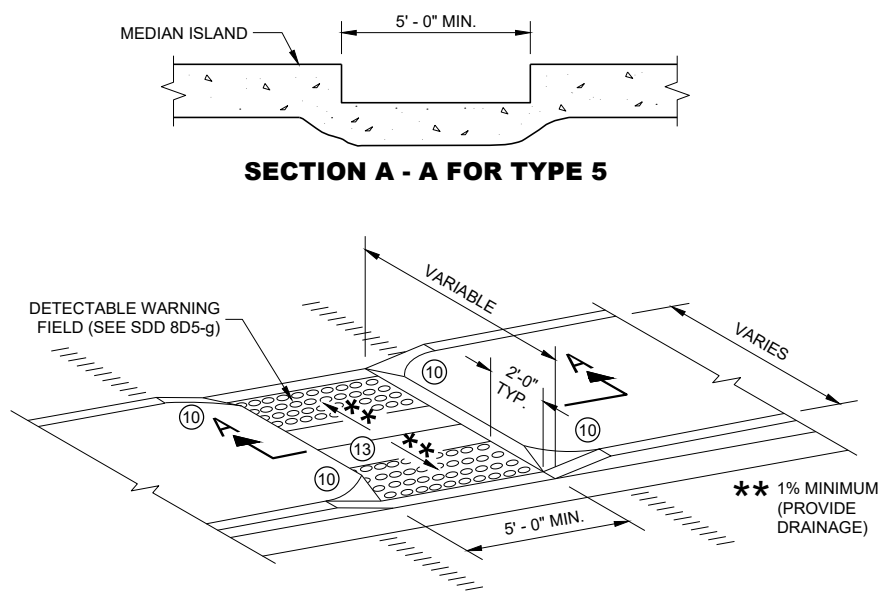
**DETECTABLE WARNINGS AT RAILROAD CROSSING**



**CURB RAMP TYPE 6**

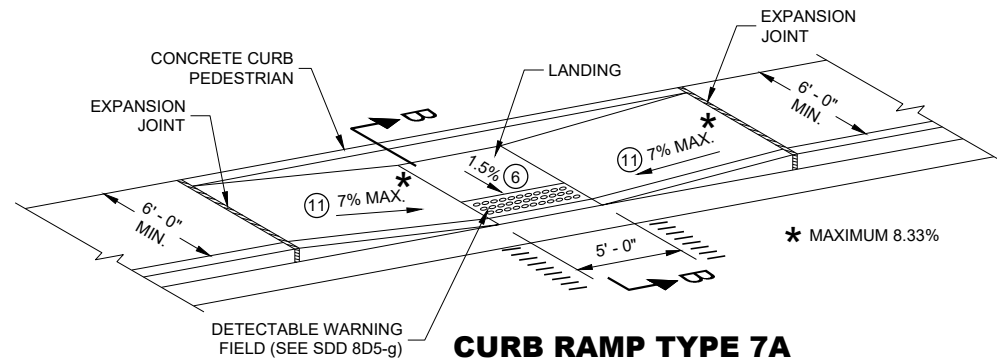
**DETECTABLE WARNING AT ISLANDS**

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS

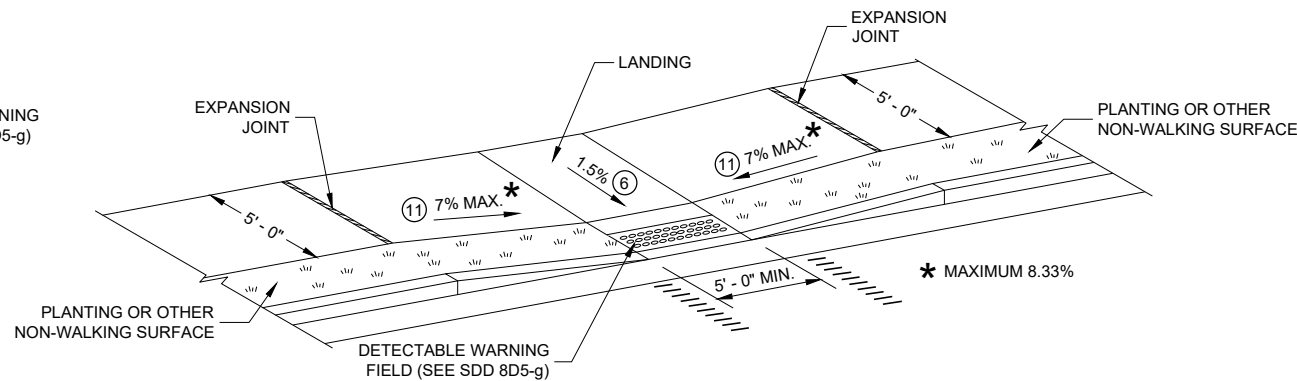


**CURB RAMP TYPE 5**

**MEDIAN ISLAND  
NON-ELEVATED PEDESTRIAN CROSSING**



**CURB RAMP TYPE 7A  
MID BLOCK CROSSING**



**CURB RAMP TYPE 7B  
MID BLOCK CROSSING**

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

**GENERAL NOTES**

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

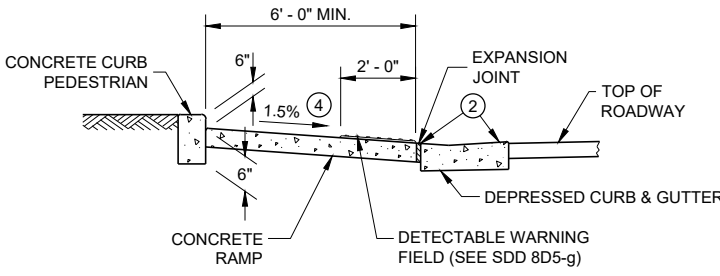
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- (11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- (12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- (13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

**LEGEND**

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

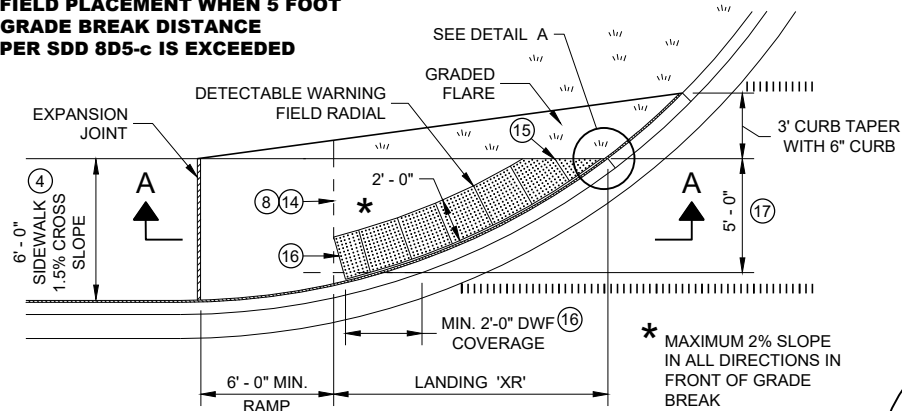


**SECTION B - B FOR TYPE 7A**

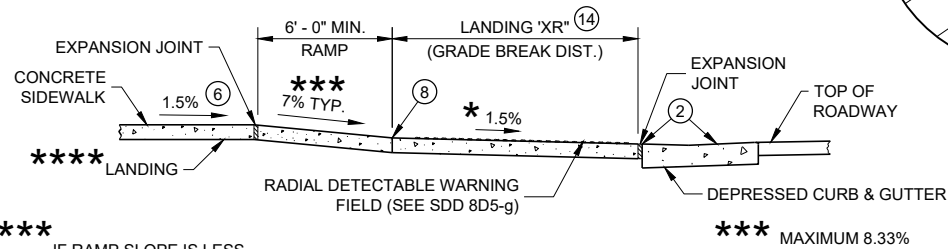
**CURB RAMPS  
TYPE 5, 6, 7A, 7B & 8**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-c IS EXCEEDED**

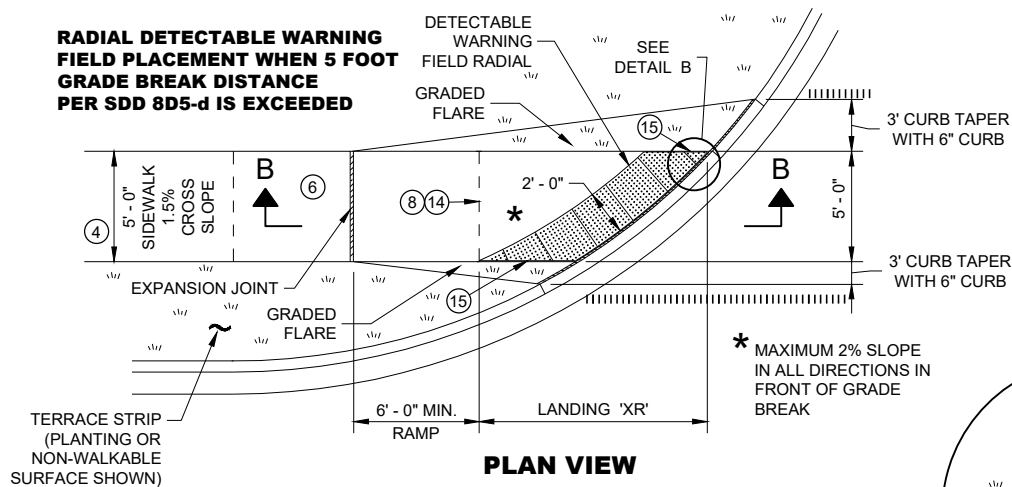


**PLAN VIEW  
CURB RAMP TYPE 4A1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

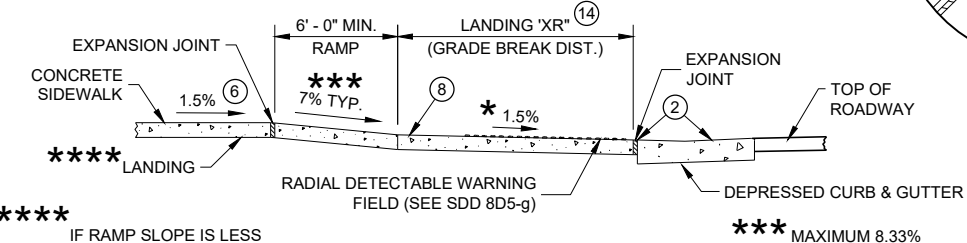


**SECTION A - A FOR TYPE 4A1**

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-d IS EXCEEDED**



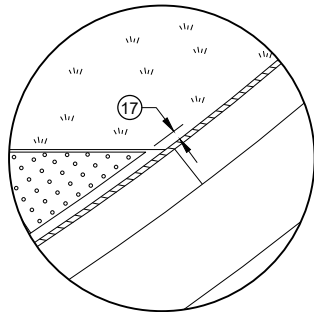
**PLAN VIEW  
CURB RAMP TYPE 4B1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



**SECTION B - B FOR TYPE 4B1**

**LEGEND**

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



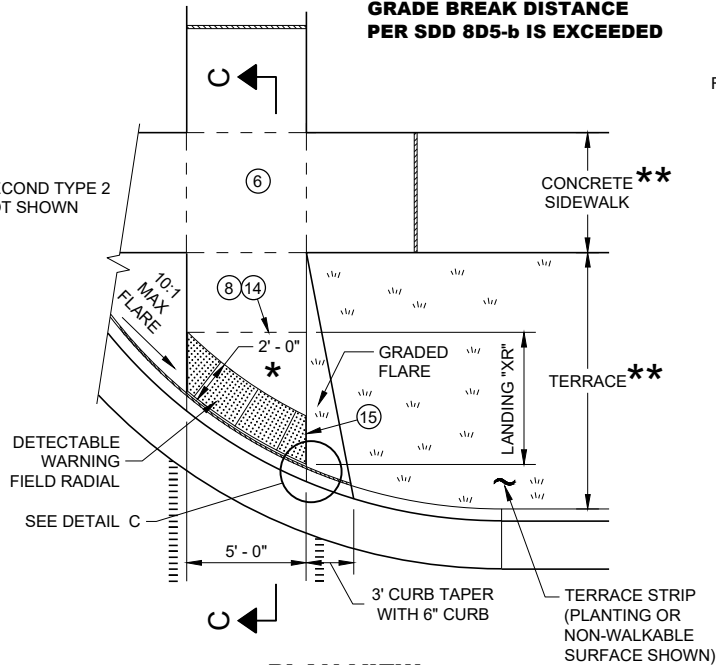
**DETAIL A**

**GENERAL NOTES**

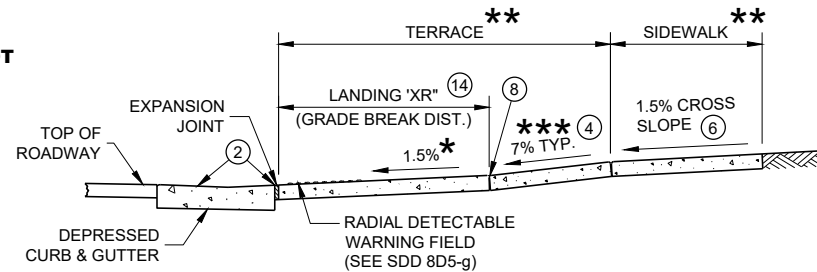
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
  - (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
  - (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
  - (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
  - (8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
  - (14) CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
  - (15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
  - (16) USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
  - (17) A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-b IS EXCEEDED**

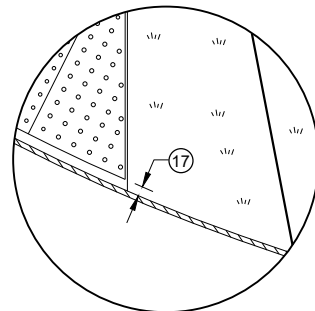
NOTE: SECOND TYPE 2  
RAMP NOT SHOWN



**PLAN VIEW  
CURB RAMP TYPE 2  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)  
(ON LINE WITH SIDEWALK)**



**SECTION C - C FOR TYPE 2**



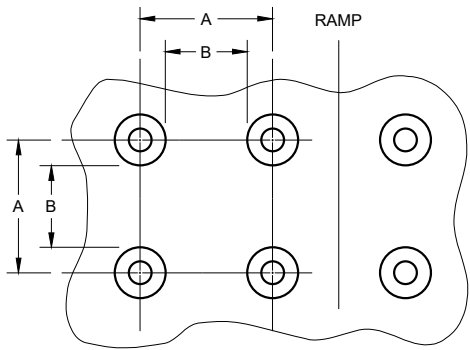
**DETAIL C**

**CURB RAMPS  
RADIAL DETECTABLE WARNING  
FIELD APPLICATIONS**

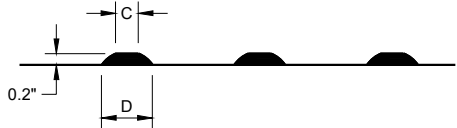
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

|   | MIN.  | MAX. |
|---|-------|------|
| A | 1.6"  | 2.4" |
| B | 0.65" | 1.5" |
| C | *     | *    |
| D | 0.9"  | 1.4" |

\* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

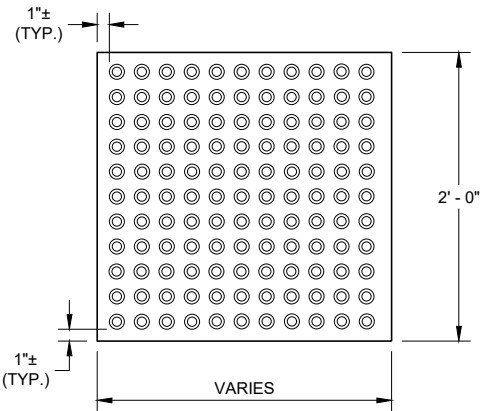


PLAN VIEW

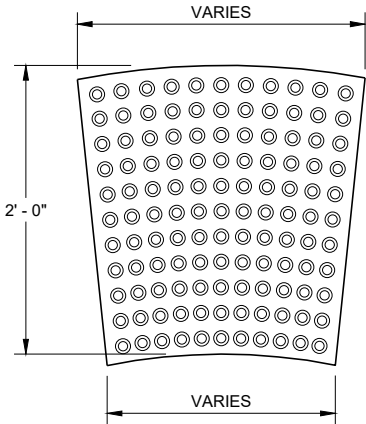


ELEVATION VIEW

TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL

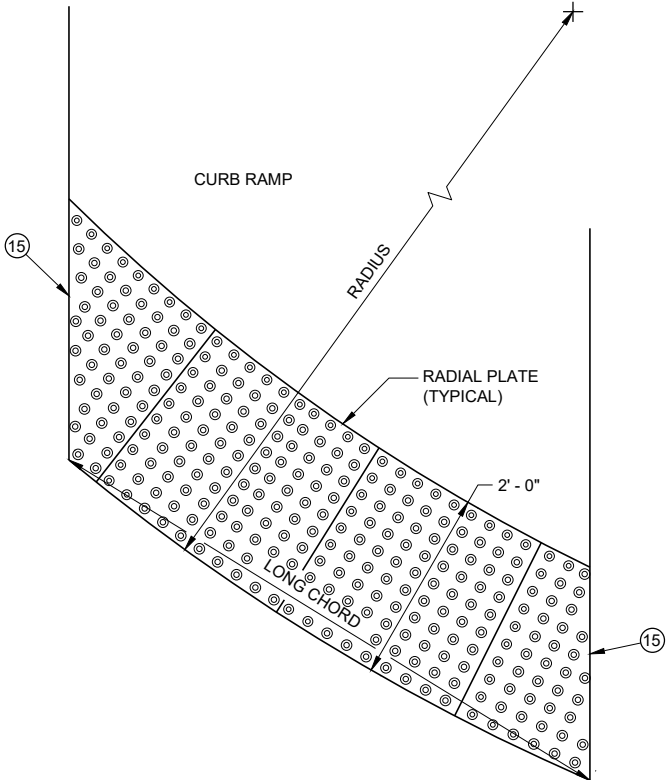


RECTANGULAR  
PLATES



RADIAL  
PLATES

PLAN VIEW  
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW  
RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

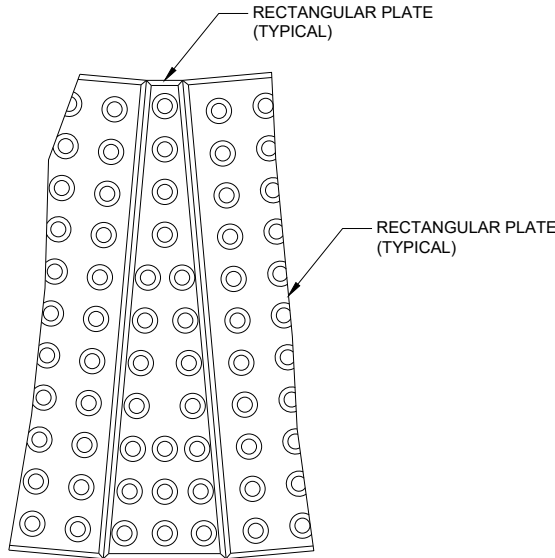
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



PLAN VIEW  
RADIAL WEDGE PLATE  
CONNECTION DETAIL

CURB RAMPS  
RECTANGULAR AND RADIAL  
DETECTABLE WARNING PLATES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

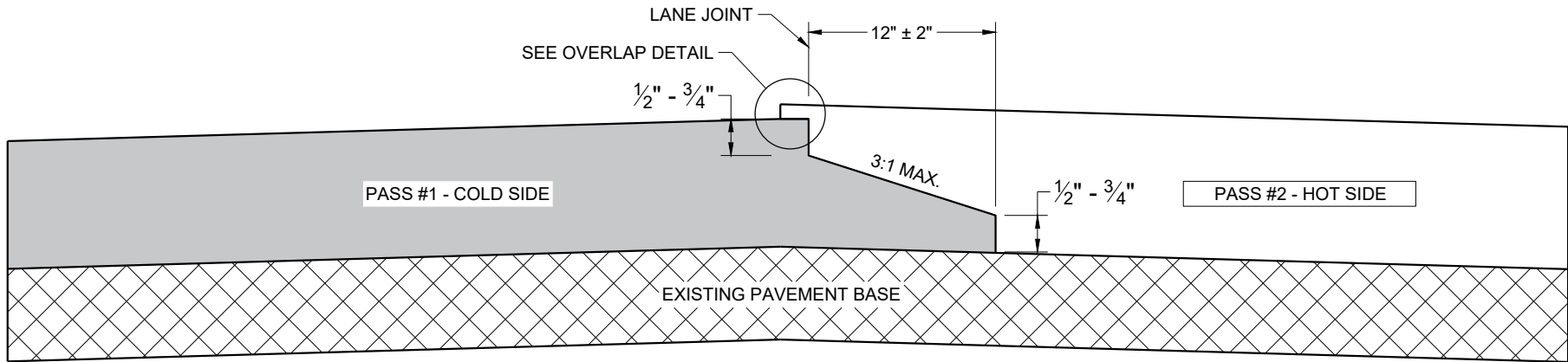
APPROVED  
May 2019 DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR  
FHWA



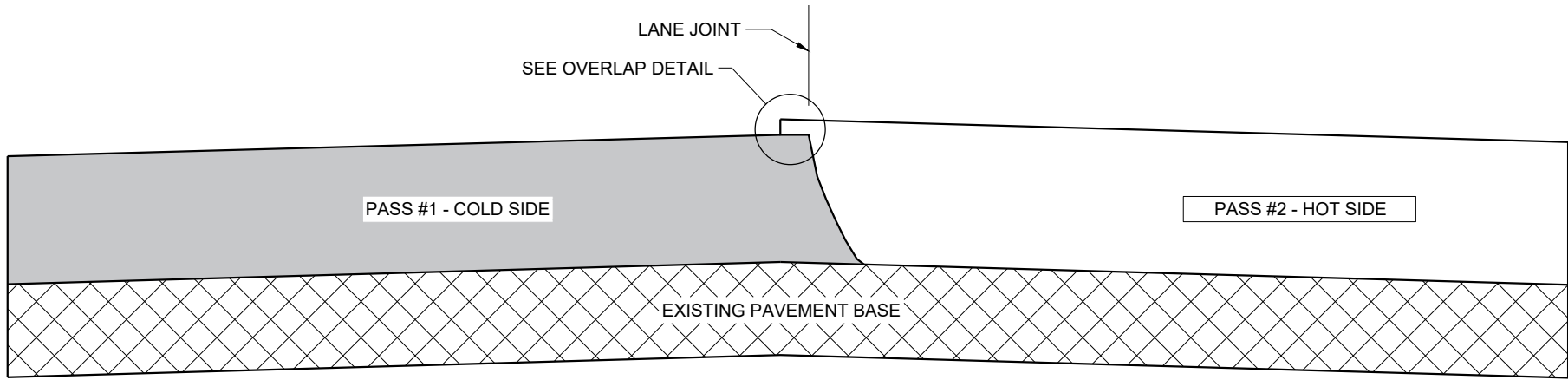
The diagram illustrates the correct installation of a silt fence. A vertical line represents the silt fence. A diagonal line, labeled 'TIEBACK BETWEEN FENCE POST AND ANCHOR', connects the top of the fence to an 'ANCHOR STAKE MIN. 18" LONG' driven into the ground. An arrow labeled 'FLOW DIRECTION' points from left to right, indicating the direction of water flow. The ground is represented by a hatched area. A dashed line indicates the position of the anchor stake.

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

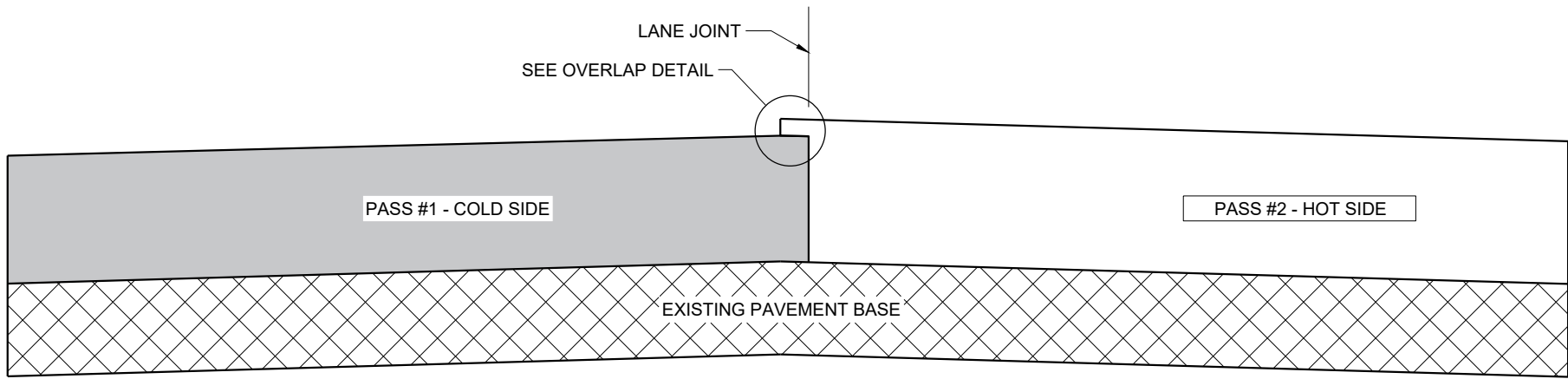




TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)

GENERAL NOTES

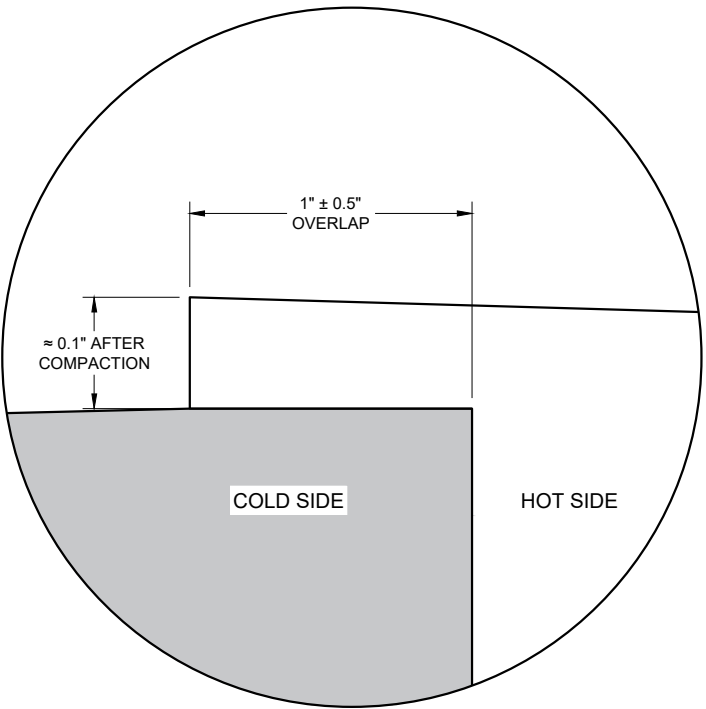
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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



## 6

- S.D.D. 14 B 15-11a**

**S.D.D. 14 B 15-11a**



6



**S.D.D. 14 B 15-11a**



6



6



**S.D.D. 14 B 15-11a**



6

6



6



6



6



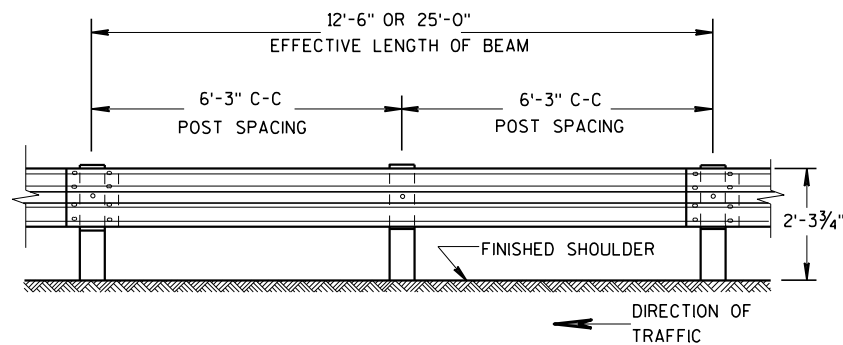
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6

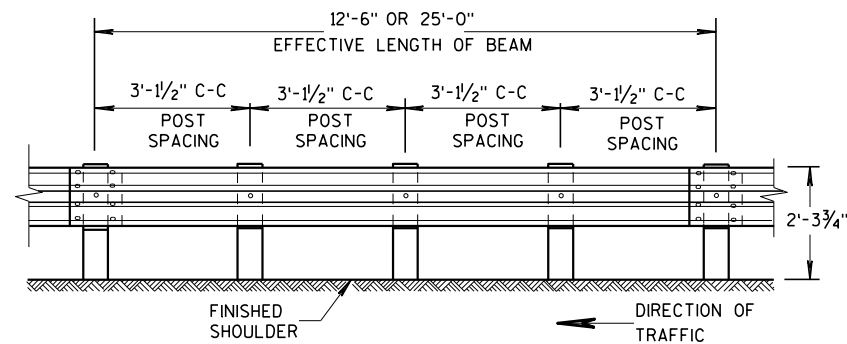
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6

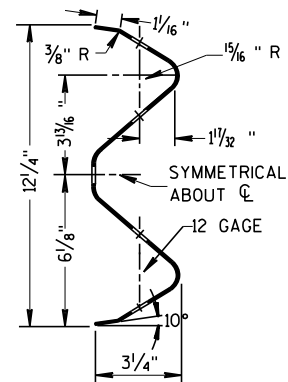


FRONT VIEW

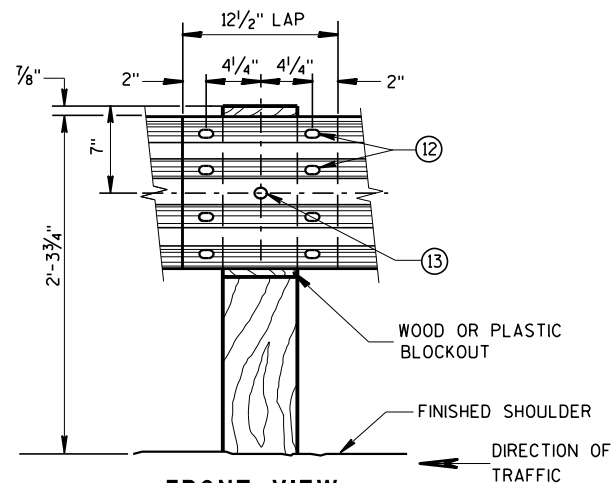
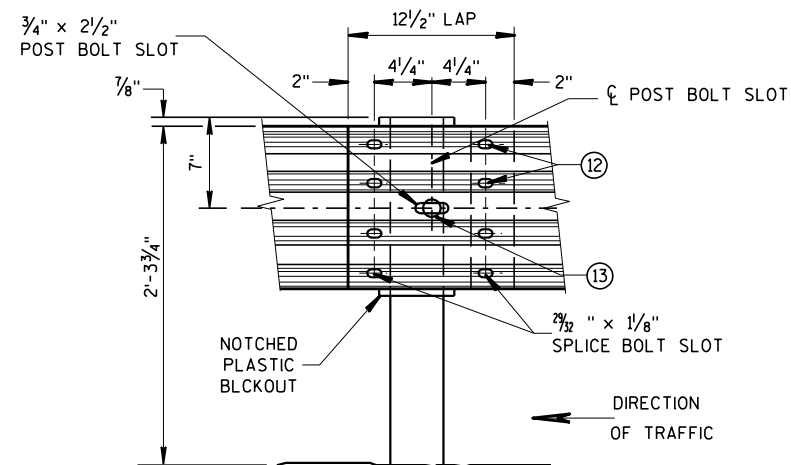
## POST SPACING STANDARD INSTALLATION



FRONT VIEW

POST SPACING FOR LONGER POST  
AT HALF POST SPACING W BEAM (LHW)

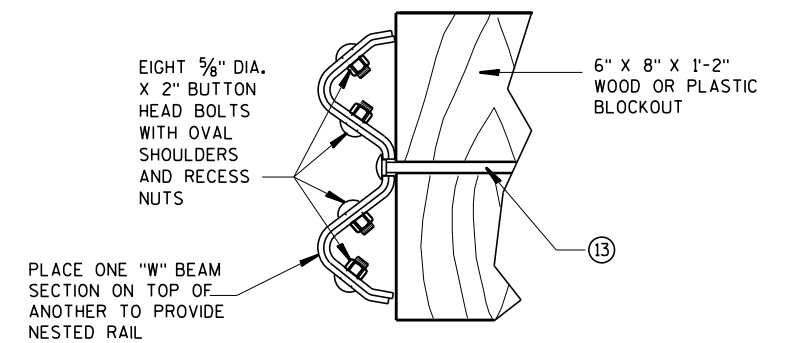
SECTION THRU W BEAM

FRONT VIEW  
BEAM SPLICE AT WOOD POST  
AND POST MOUNTING DETAILFRONT VIEW  
BEAM SPLICE AT STEEL POSTTYPICAL SPLICING DETAILS  
OF STEEL PLATE BEAM GUARD

## GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

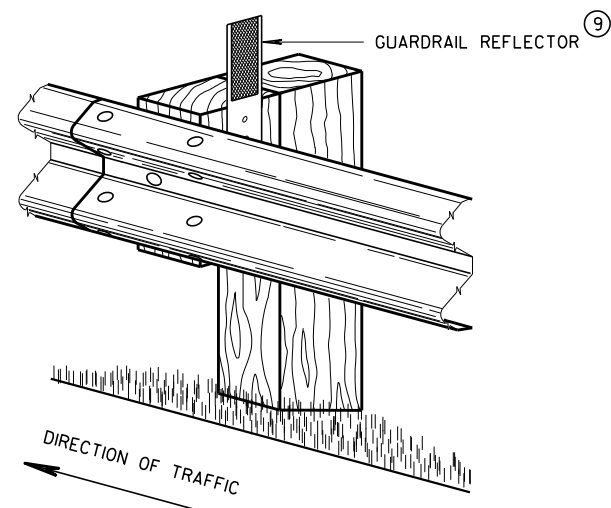
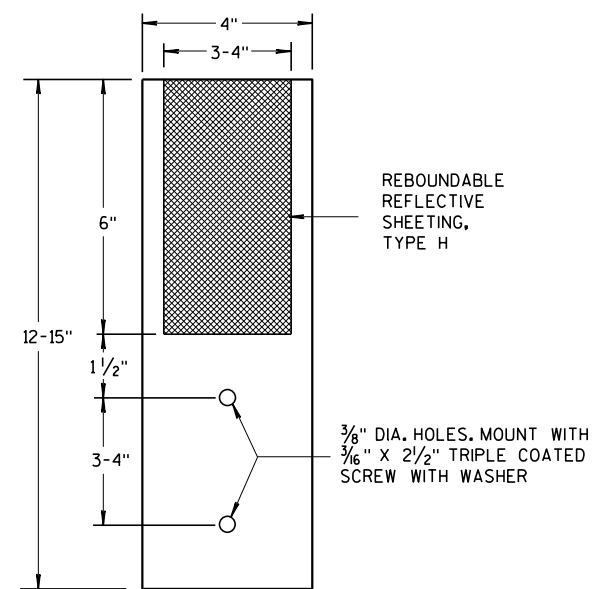
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8"  $\phi$  X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



NESTED W BEAM (NW)

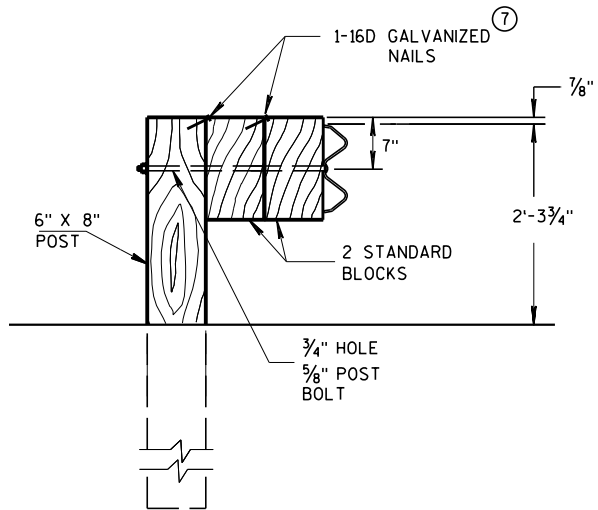
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR  
CONSTRUCTING NESTED W BEAM (NW)

\* USE DOUBLE SIDED WHITE GUARDRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.

4" X 12" GUARDRAIL REFLECTOR DETAIL  
AND TYPICAL INSTALLATION \*

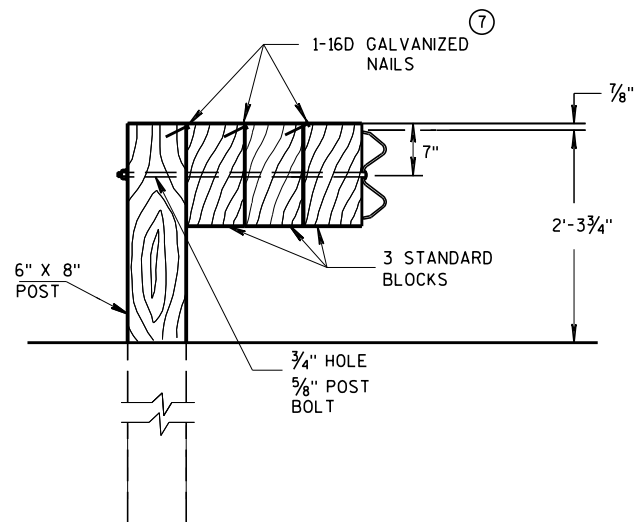
4"x 12" GUARDRAIL REFLECTOR

STEEL PLATE BEAM GUARD,  
CLASS "A",  
INSTALLATION & ELEMENTSSTATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



#### DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS  
WITHIN A BARRIER RUN IS UNLIMITED

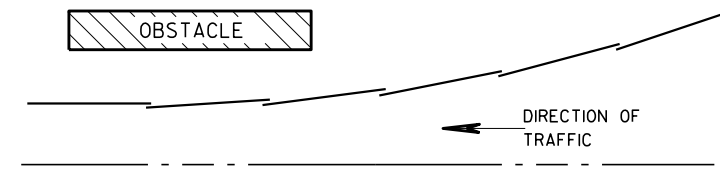


#### DETAIL FOR TRIPLE BLOCKS

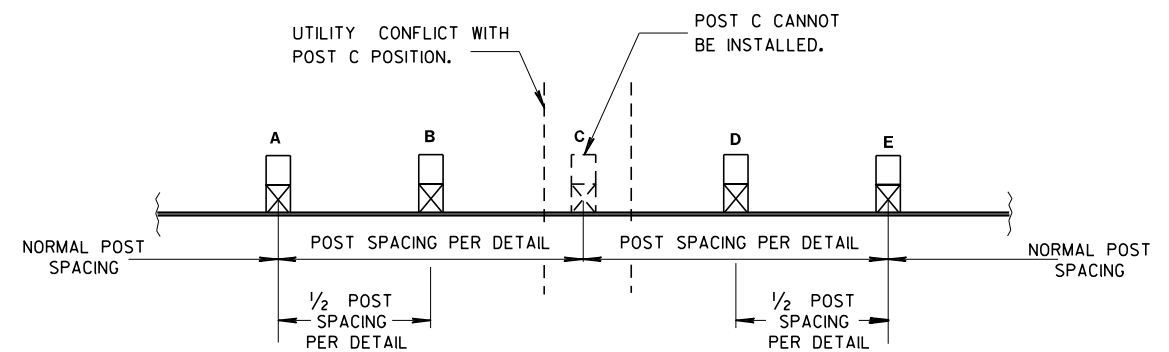
TRIPLE BLOCK DETAIL IS LIMITED TO ONE  
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES  
PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND  
SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION  
DISTANCE OF THE BARRIER.



#### PLAN VIEW BEAM LAPPING DETAIL



#### POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

#### STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017

DATE

FHWA

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR

BILL OF MATERIALS

| NOTE NO. | DESCRIPTION                                                                                                |
|----------|------------------------------------------------------------------------------------------------------------|
| ①        | WOOD BREAKAWAY TERMINAL POST:<br>5 1/2" X 7 1/2" X 3'-9"                                                   |
| ②        | STEEL TUBE<br>TS 8" X 6" X 0.188", 6'-0"                                                                   |
| ④        | WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"                                                                   |
| ⑤        | WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"                                                                        |
| ⑥        | PIPE SLEEVE: 2" X 5 1/2" STANDARD PIPE                                                                     |
| ⑦        | BEARING PLATE                                                                                              |
| ⑧        | BCT CABLE ASSEMBLY                                                                                         |
| ⑨        | CABLE ANCHOR BOX                                                                                           |
| ⑩        | STRUT & YOKE                                                                                               |
| ⑪        | STEEL PLATE BEAM, END PANEL 12 GA.                                                                         |
| ⑫        | STEEL PLATE BEAM: 12 GA. 13'-6 1/2"                                                                        |
| ⑬        | IMPACT HEAD                                                                                                |
| ⑭        | 0.040" ALUMINUM SHEET WITH REFLECTIVE<br>SHEETING TYPE F PER SECTION 637 OF THE<br>STANDARD SPECIFICATIONS |

GENERAL NOTES

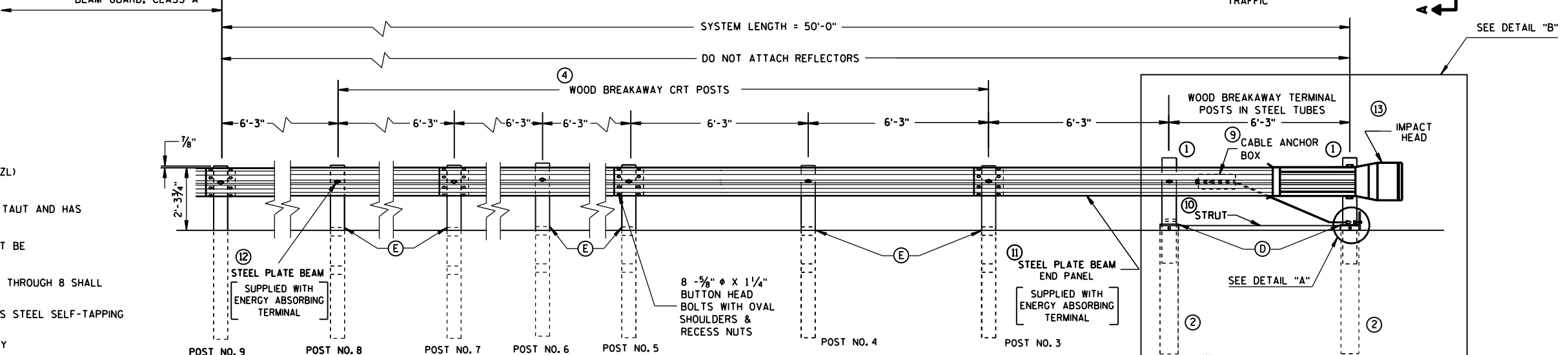
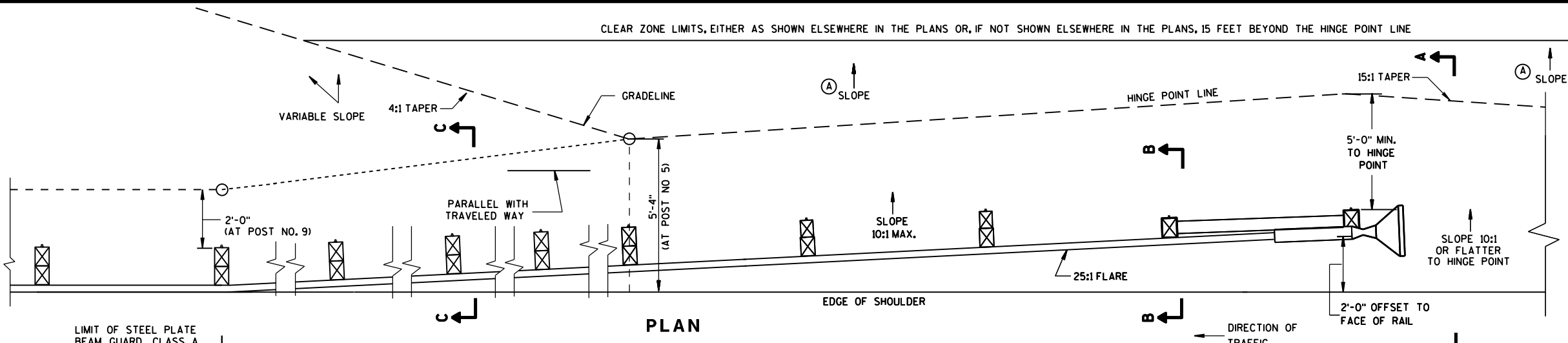
FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE 3/4" ABOVE THE FINISHED GROUND LINE.
- (F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.

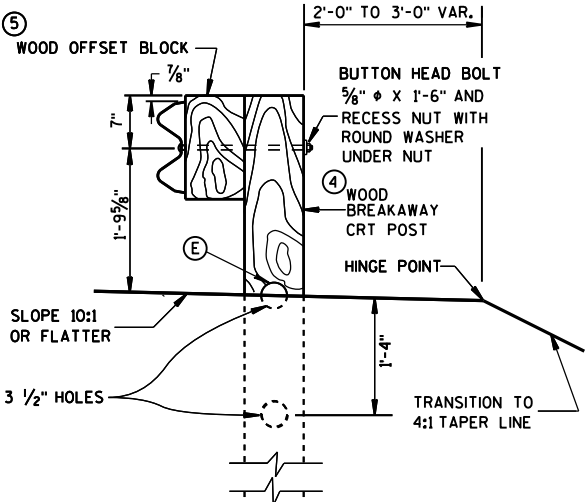
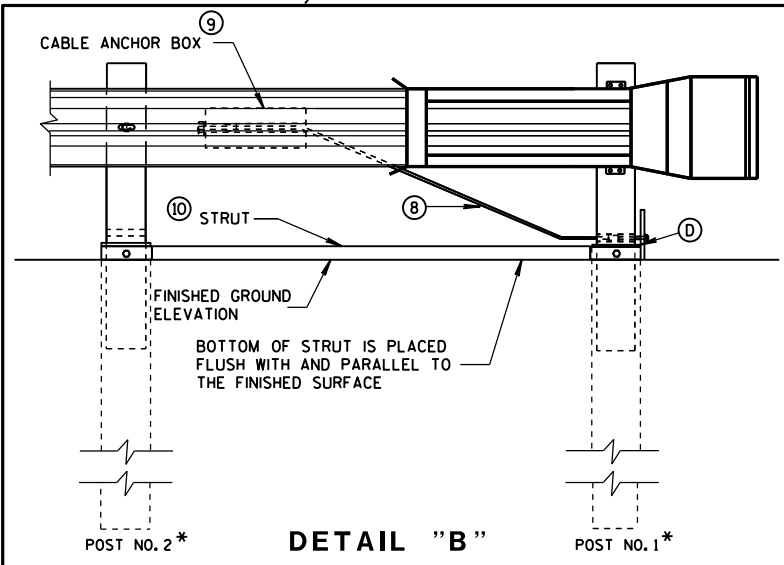
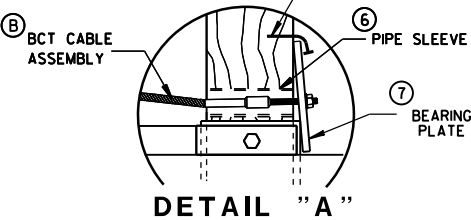
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

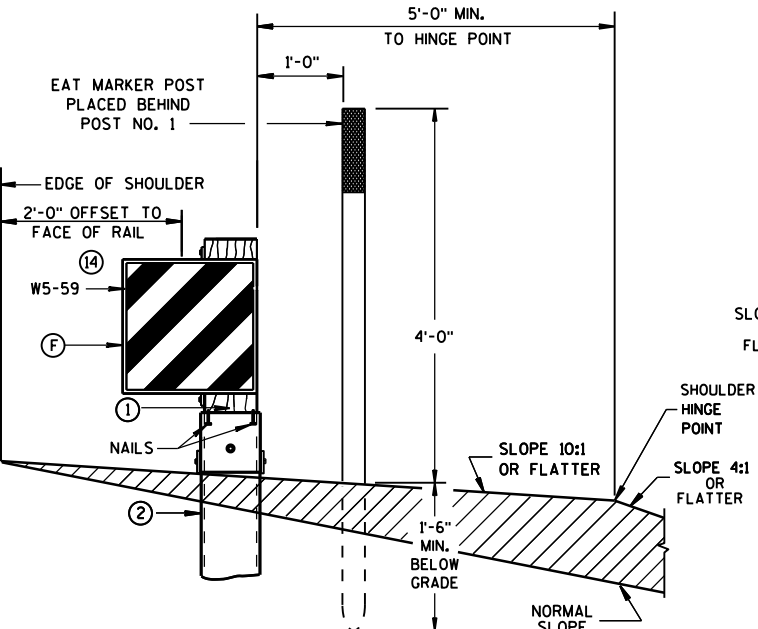
\* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.



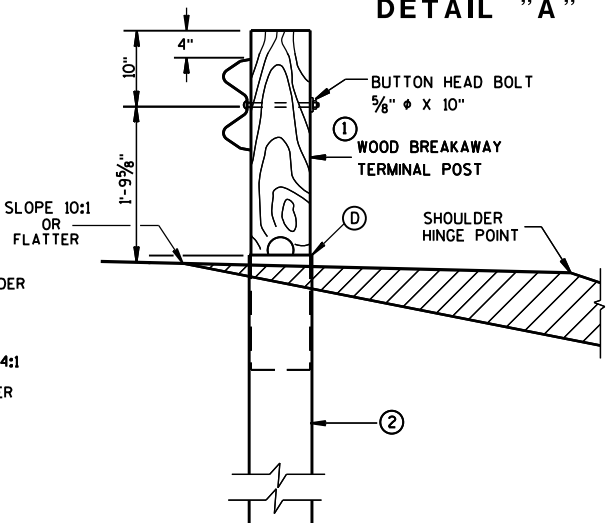
ELEVATION



SECTION C-C  
TYPICAL AT POST NOS. 6, 8



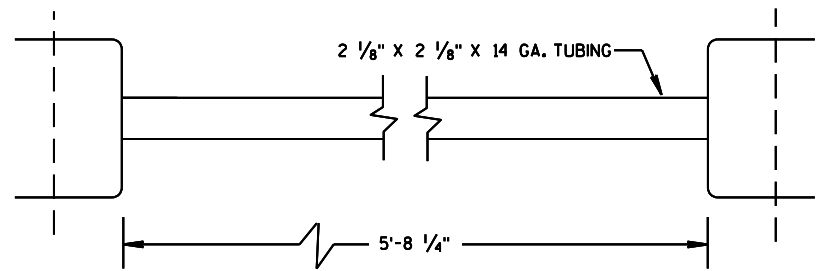
SECTION A-A  
TYPICAL AT POST NO. 1\*



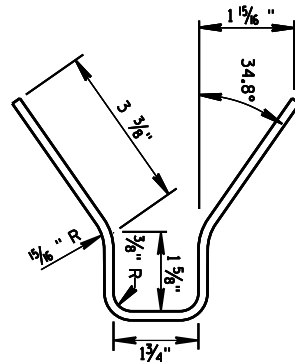
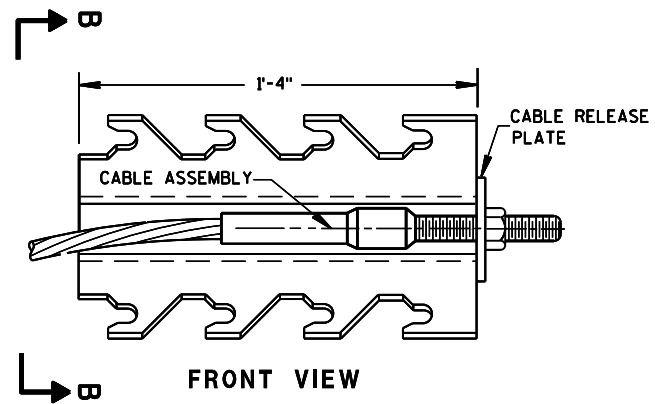
SECTION B-B  
TYPICAL AT POST NO. 2\*

STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL

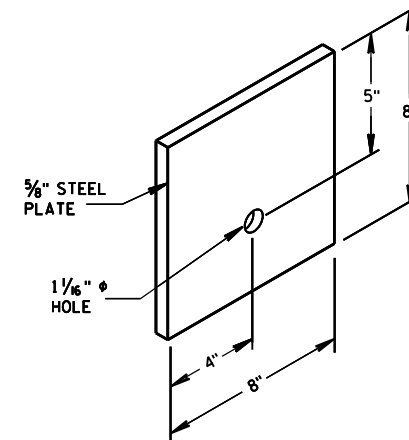
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



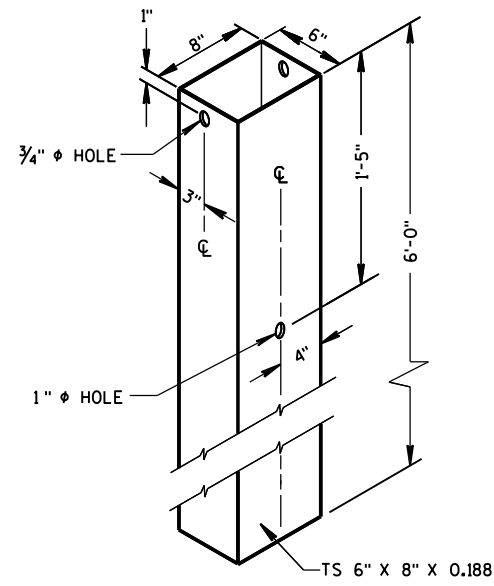
⑩ STRUT DETAIL



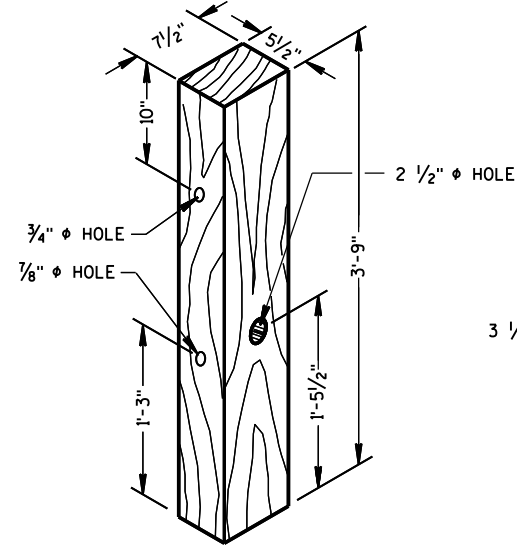
⑨ CABLE ANCHOR BOX



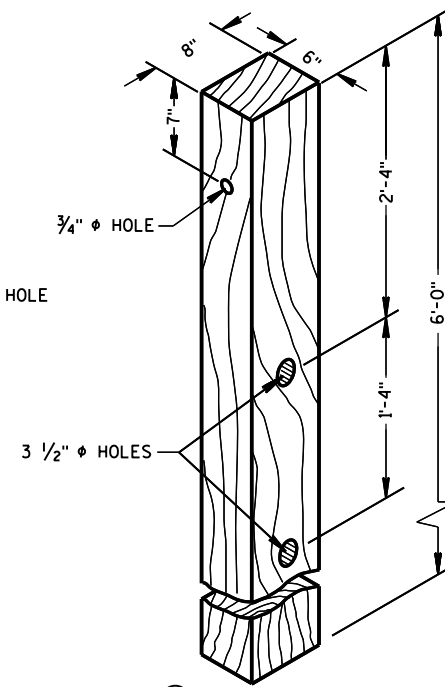
⑦ STEEL BEARING PLATE



② **72" STEEL TUBE**  
(POSTS NO. 1-2)

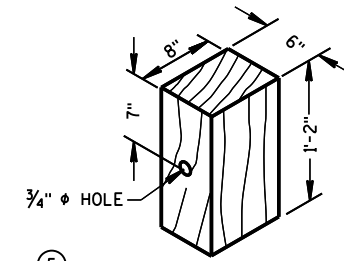


① **TERMINAL POST**



④ **CRT POST**  
(POSTS NO'S 5-8)

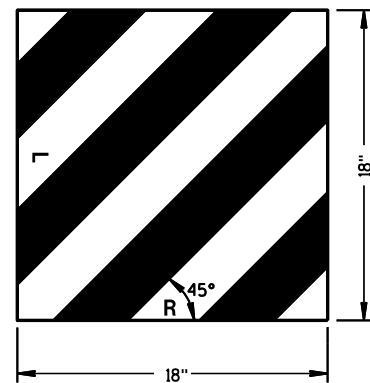
### WOOD BREAKAWAY POSTS



⑤ **WOOD OFFSET BLOCK**  
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

### GENERAL NOTES

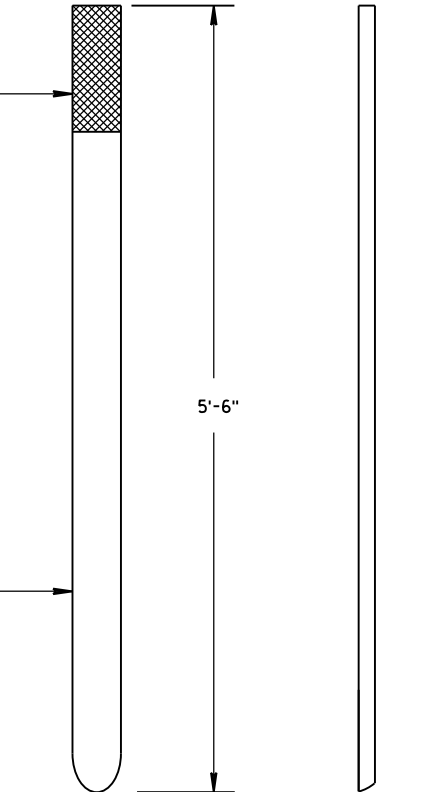
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑭ **REFLECTIVE SHEETING DETAILS**

TYPE H  
YELLOW REFLECTIVE  
SHEETING 3" X 9".  
SEE STANDARD  
SPECIFICATION 637.

E.A.T. MARKER  
POST (YELLOW)  
SEE APPROVED  
PRODUCTS LIST



FRONT VIEW SIDE VIEW

**E.A.T. MARKER POST**

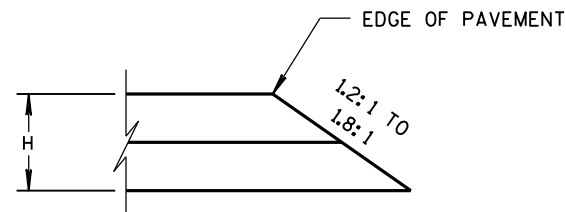
**STEEL PLATE BEAM GUARD  
ENERGY ABSORBING TERMINAL**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

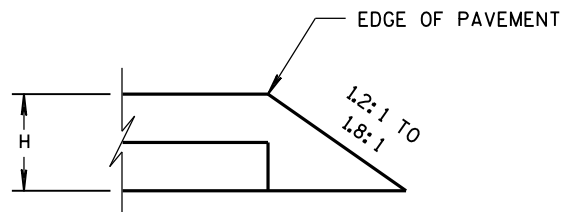
APPROVED  
June 2017  
DATE  
FHWA

/S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
UNIT SUPERVISOR

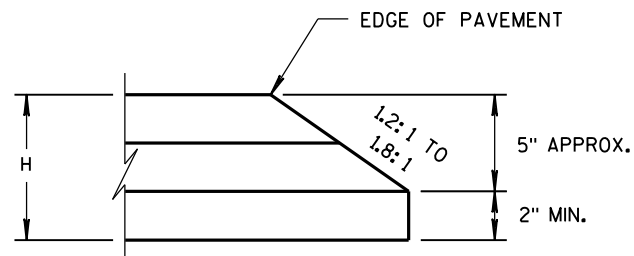




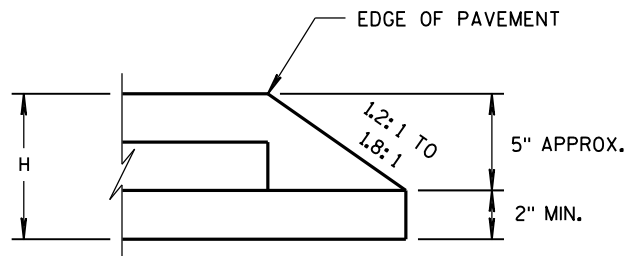
CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER  
FOR H 5" OR LESS

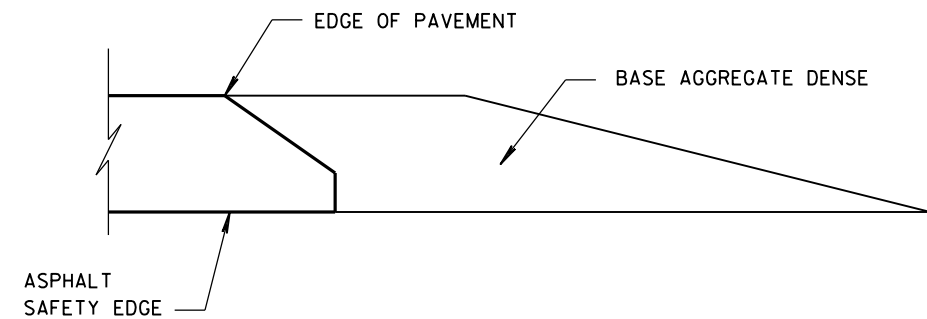


CONSTRUCTED WITH FINAL TWO LAYERS  
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER  
FOR H GREATER THAN 5"

### HMA PAVEMENT AND HMA OVERLAYS



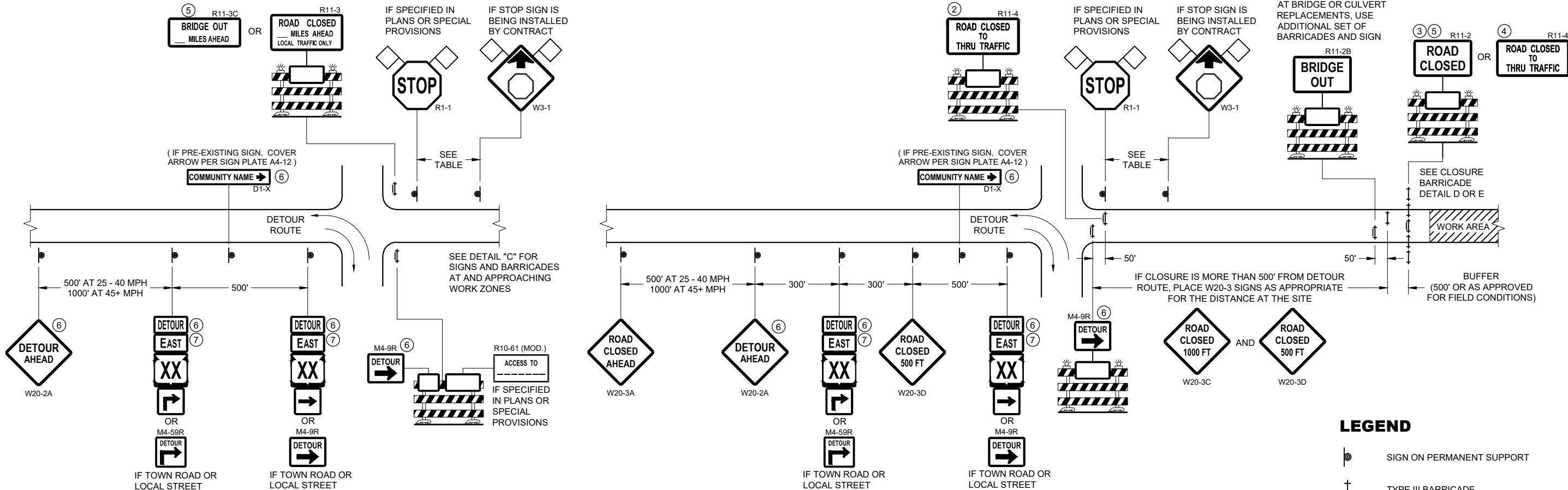
### FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE<sub>SM</sub>

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
11/30/2012  
DATE  
FHWA

/s/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER



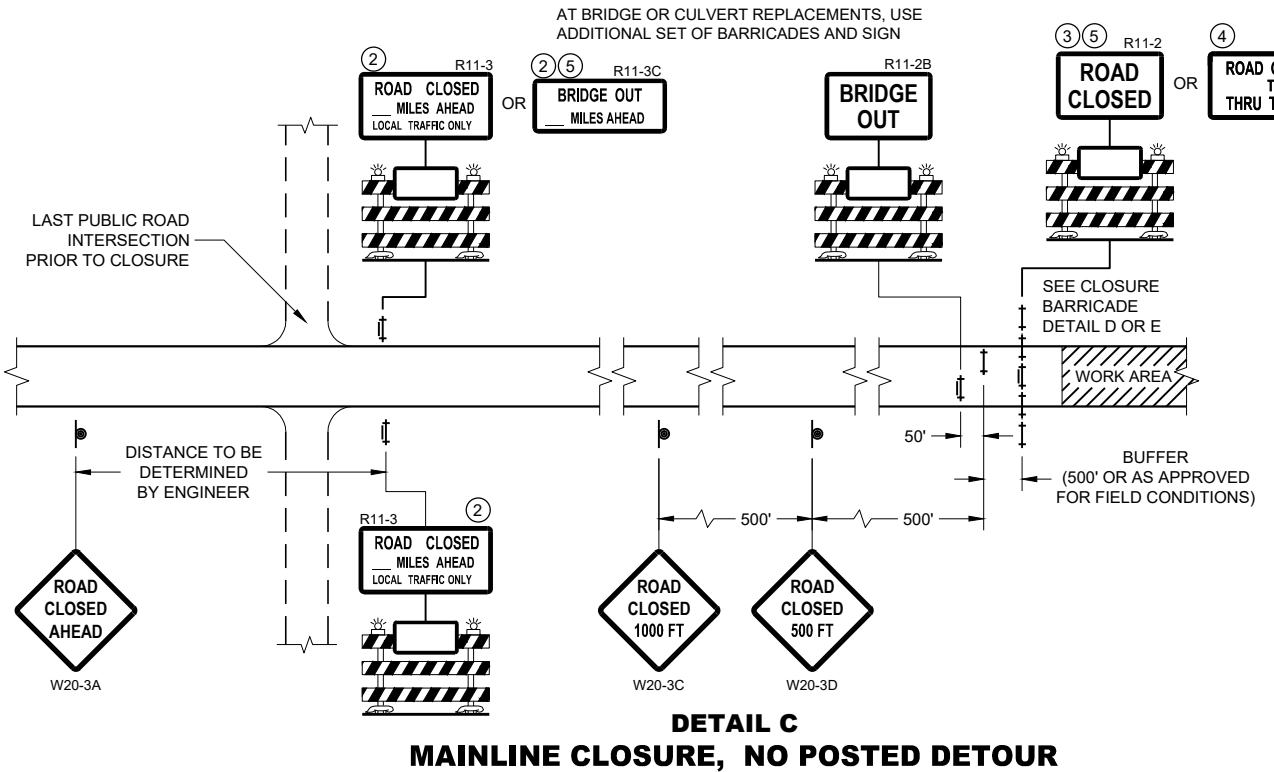
**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

**DETOUR** M4 - 8  
**EAST** M3 - X  
**XX** OR **XX** OR **COUNTY X**  
M1 - 4 M1 - 6 M1 - 5A  
**→** OR **→**  
M05 - 1 M06 - 1

| SPEED LIMIT (MPH) | "STOP AHEAD" ADVANCE WARNING DISTANCE (FT) |
|-------------------|--------------------------------------------|
| 25                | 200                                        |
| 30                | 200                                        |
| 35                | 350                                        |
| 40                | 350                                        |
| 45                | 500                                        |
| 50                | 550                                        |
| 55                | 750                                        |

SEE SDD 15C2-SHEET "b"  
FOR GENERAL NOTES  
AND FOOTNOTES ① THROUGH ⑦



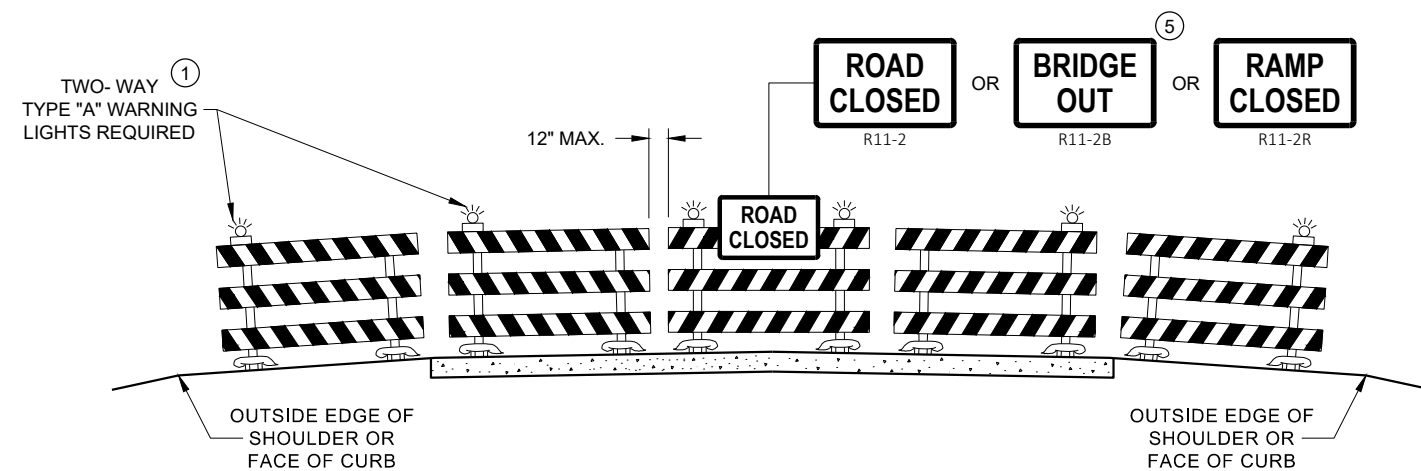
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

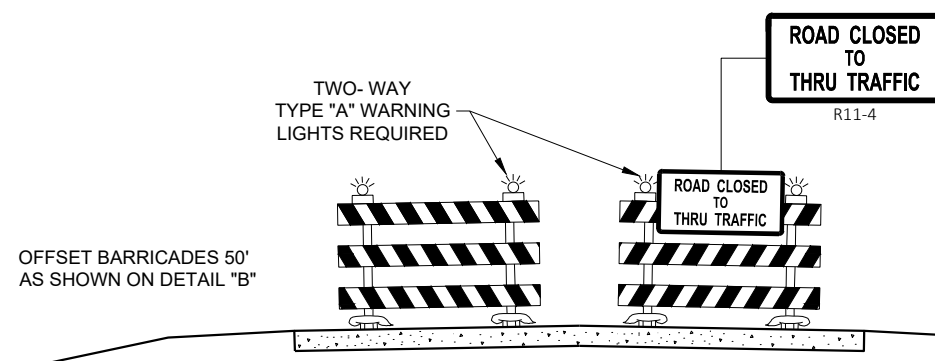
APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA





**DETAIL D**  
**ROAD CLOSURE BARRICADE DETAIL**  
**APPROACH VIEW**



**DETAIL E**  
**LANE CLOSURE BARRICADE DETAIL**  
**APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

## GENERAL NOTES

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

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

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

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11 - 2 SHALL BE 48" X 30"

R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"

M4 - 9 SHALL BE 30" X 24"

M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)

M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)

M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)

MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)

D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

R1 - 1 SHALL BE 36" X 36"

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

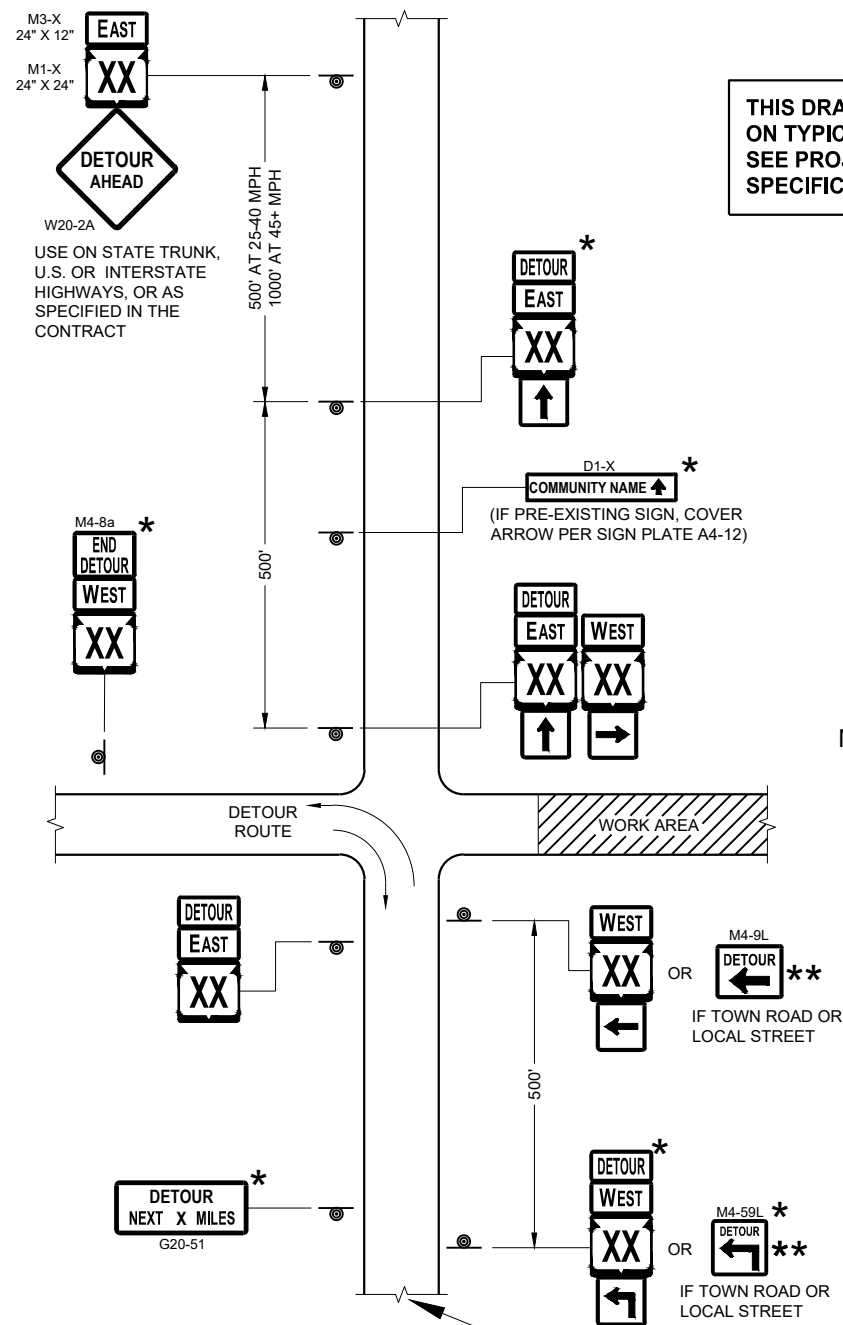
## BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER

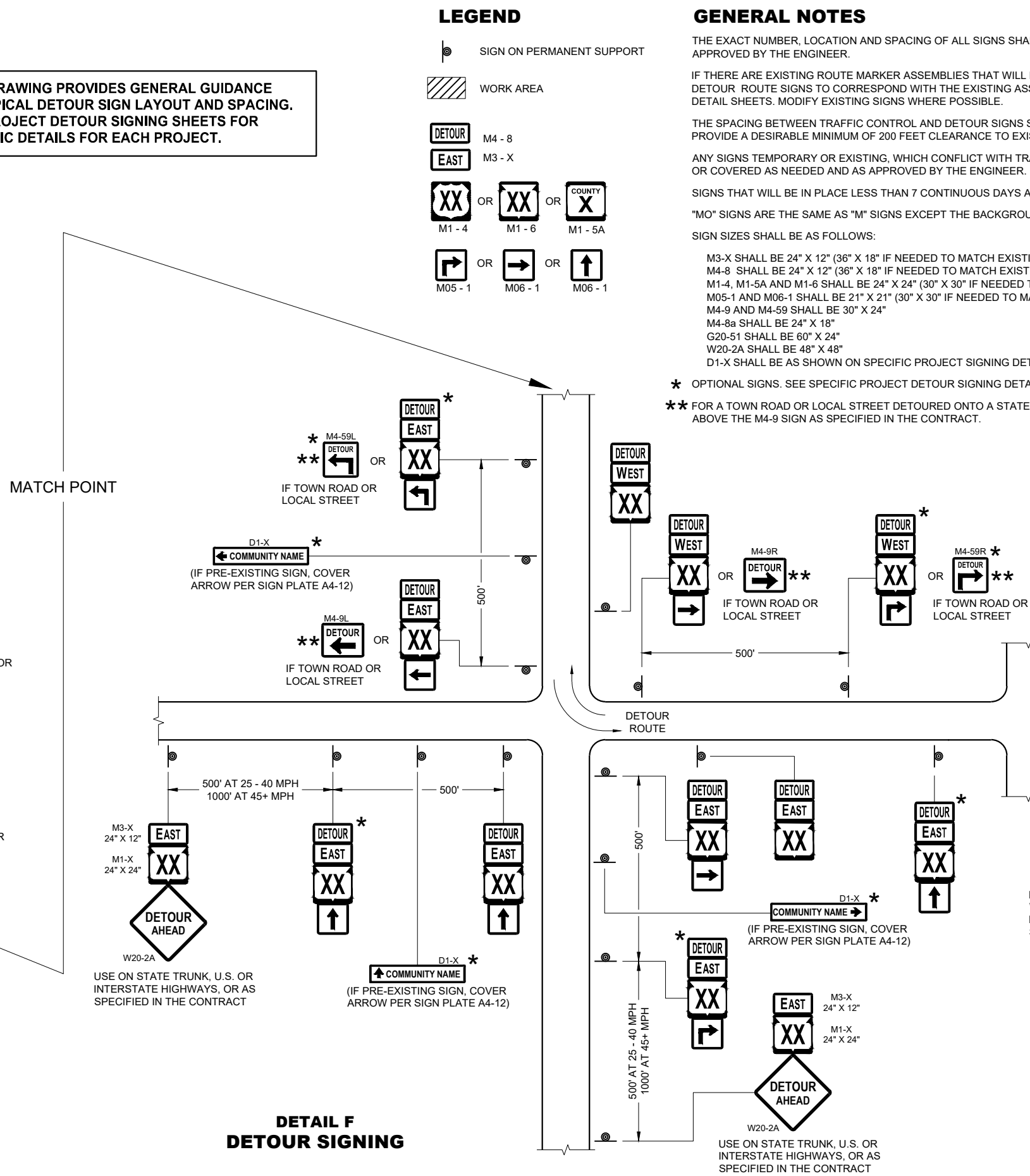
FHWA



**THIS DRAWING PROVIDES GENERAL GUIDANCE  
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.  
SEE PROJECT DETOUR SIGNING SHEETS FOR  
SPECIFIC DETAILS FOR EACH PROJECT.**

SEE SPECIFIC PROJECT DETOUR  
SIGNING DETAIL SHEETS AND  
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

**SDD 15C02 - 08c**



## DETAIL F DETOUR SIGNING

## GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)  
M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)  
M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)  
M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)  
M4-9 AND M4-59 SHALL BE 30" X 24"  
M4-8a SHALL BE 24" X 18"  
G20-51 SHALL BE 60" X 24"  
W20-2A SHALL BE 48" X 48"  
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

\* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

**\*\* FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.**

PLACE SIGNS BEYOND INTERSECTIONS  
WITH STATE OR COUNTY TRUNK  
HIGHWAYS OR AT 4 MILE MAXIMUM  
SPACING (4 BLOCKS IF URBAN AREA)

## DETOUR SIGNING FOR MAINLINE CLOSURES

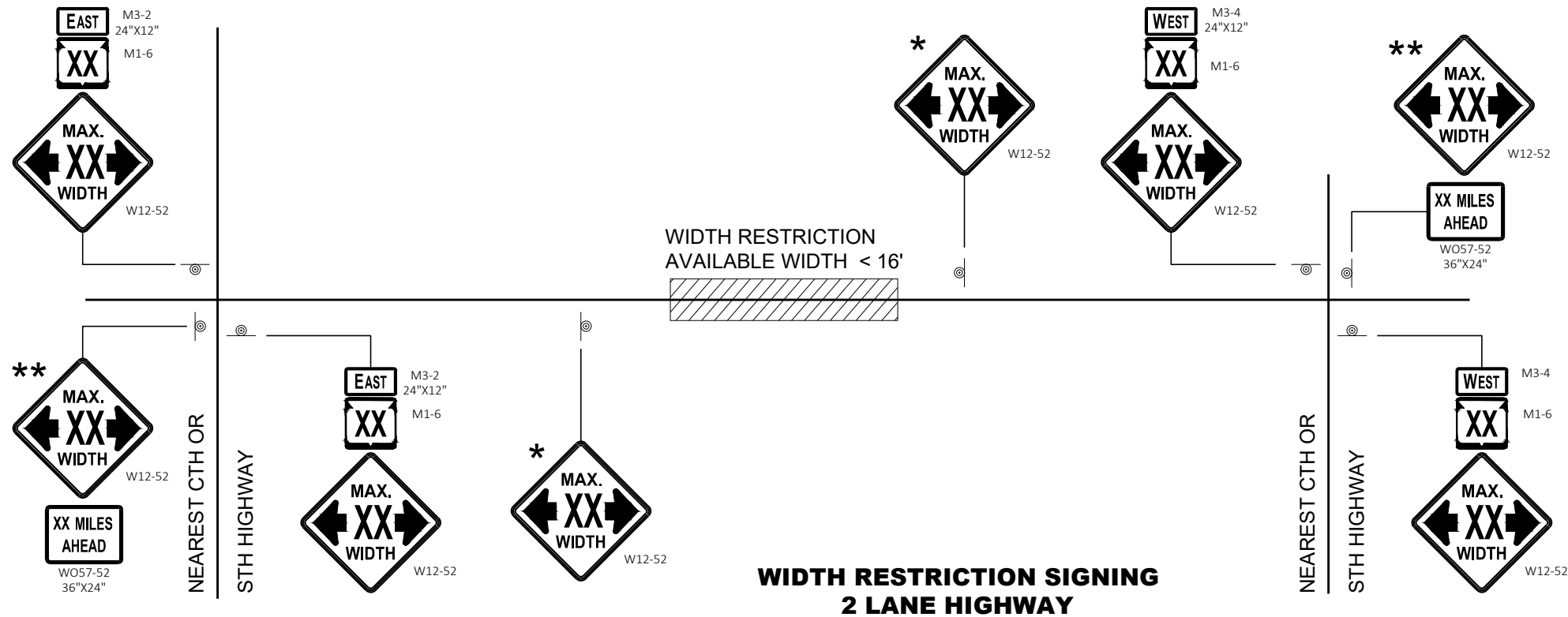
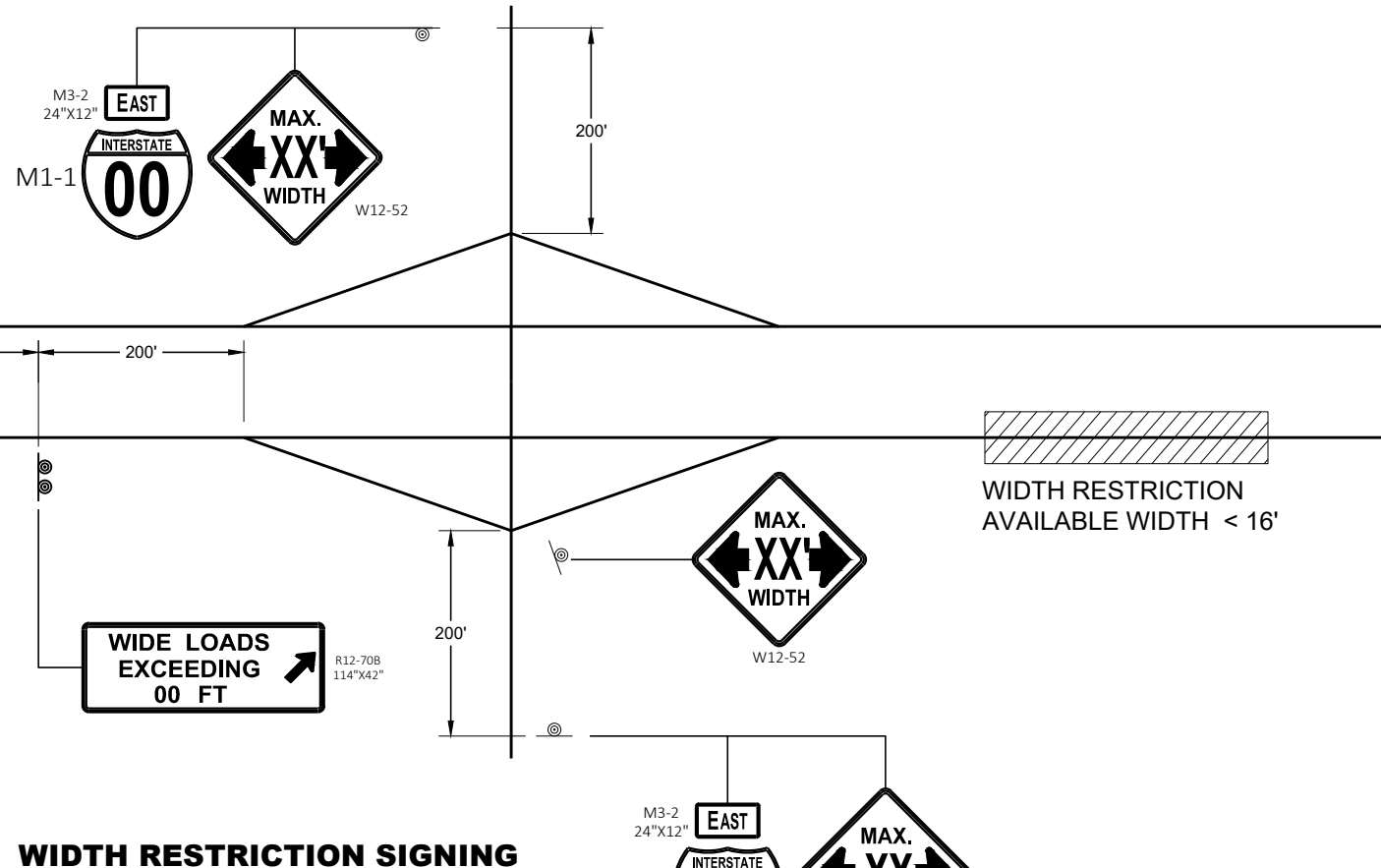
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020  
DATE

/S/ Andrew Heidtke  
WORK ZONE ENGINEER

FHWA

**SDD15C02 - 08c**



## LEGEND

⊙ SIGN ON PERMANENT SUPPORT

## GENERAL NOTES

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

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

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

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

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

WIDTH ON SIGN TO BE APPROXIMATELY ONE FOOT LESS THAN AVAILABLE WIDTH.

\* PLACE 500 FEET BEFORE THE W20 - 1A AND 500 FEET BEFORE ADDITIONAL SIGNS FOR ROADWAYS WITH A PRE - CONSTRUCTION SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350 FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200 FOOT TYPICAL SPACING.

\*\* SIGN SHALL BE VISIBLE FROM ROADWAY.

\*\*\* ADDITIONAL SIGNS NEEDED IF THERE IS AN ON RAMP BETWEEN SIGNS.

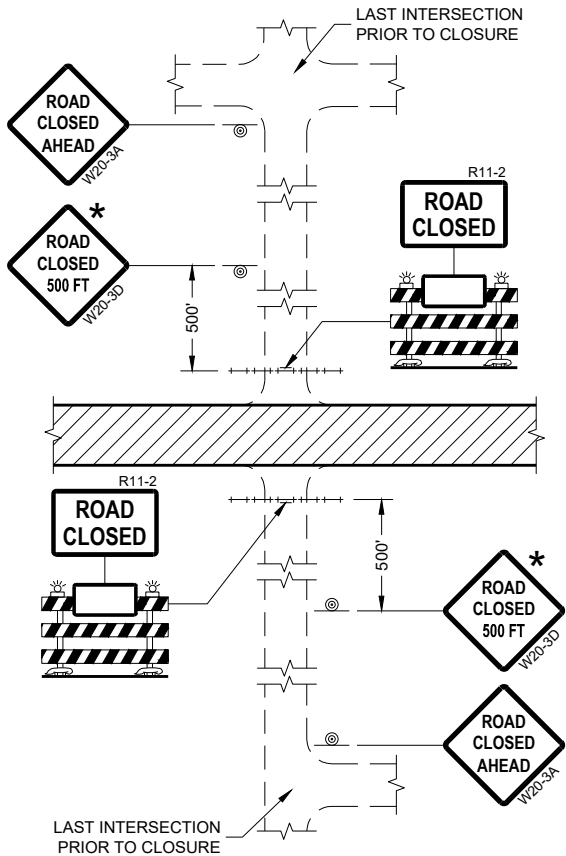


WIDTH ON SIGN TO BE APPROX. 1 - FOOT LESS THAN AVAILABLE WIDTH

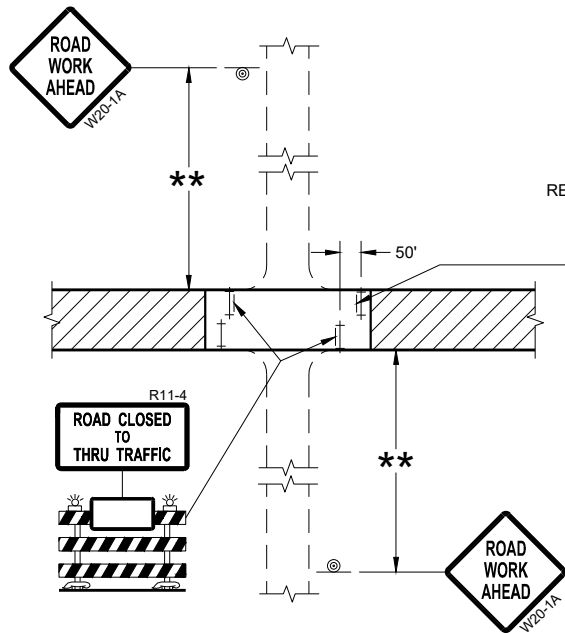
## ADVANCED WIDTH RESTRICTION SIGNING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

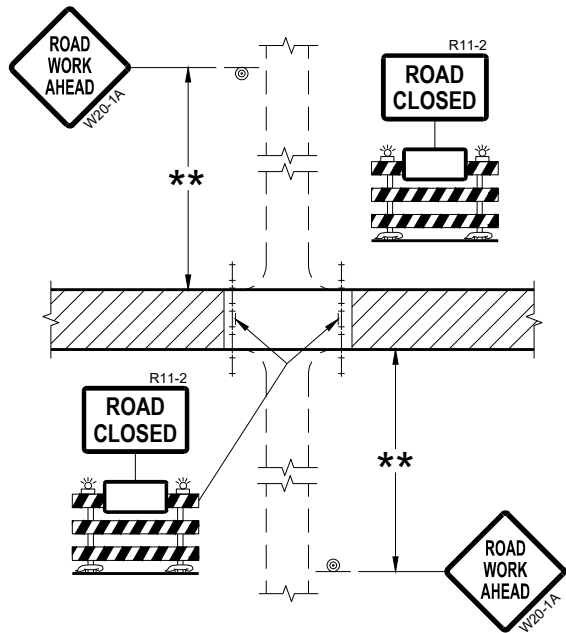
APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



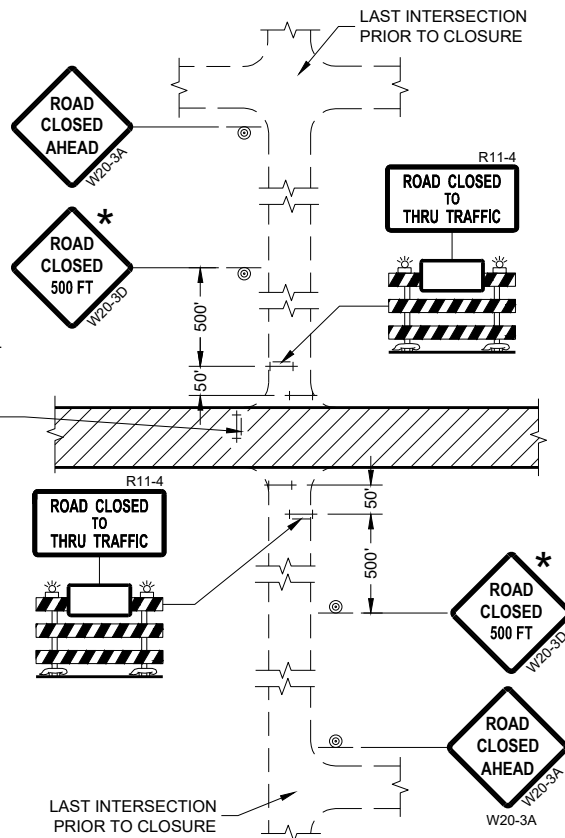
**DETAIL 1**  
(NO ACCESS TO PROJECT)



**DETAIL 3**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)



**DETAIL 2**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
NO ACCESS TO PROJECT)



**DETAIL 4**  
(CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)

### GENERAL NOTES

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

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

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

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:  
R11-2 SHALL BE 48" X 30".  
R11-4 AND R11-3 SHALL BE 60" X 30".

- \* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- \*\* 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

### LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

### BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

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

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

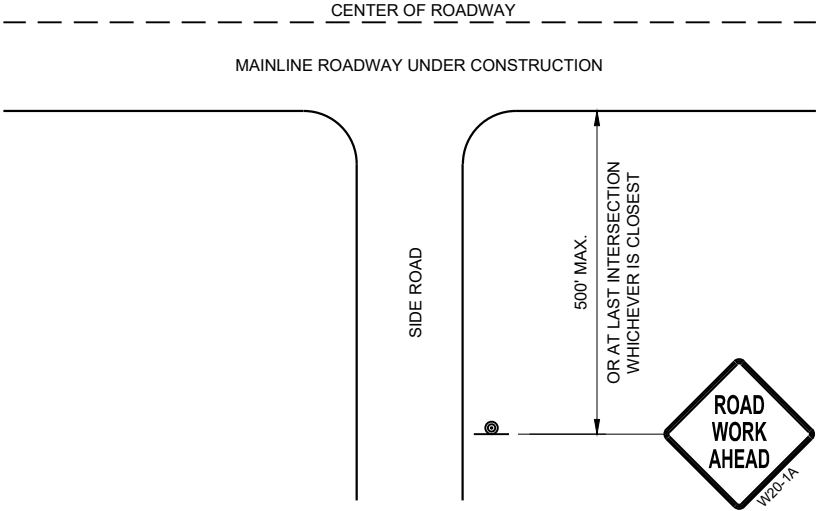
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

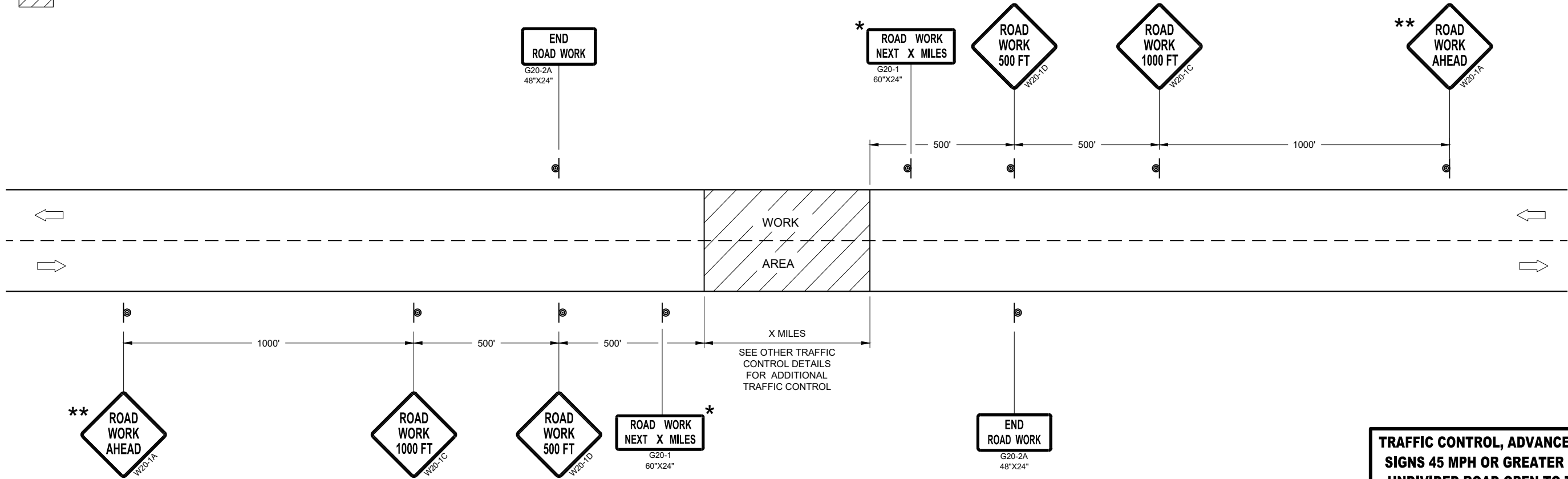
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL

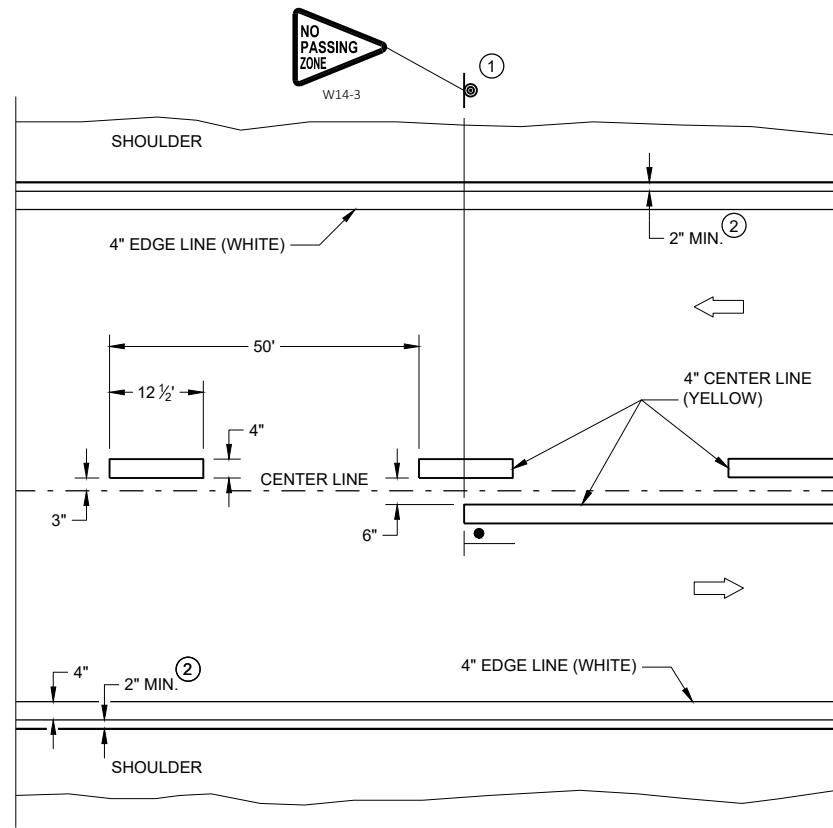


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

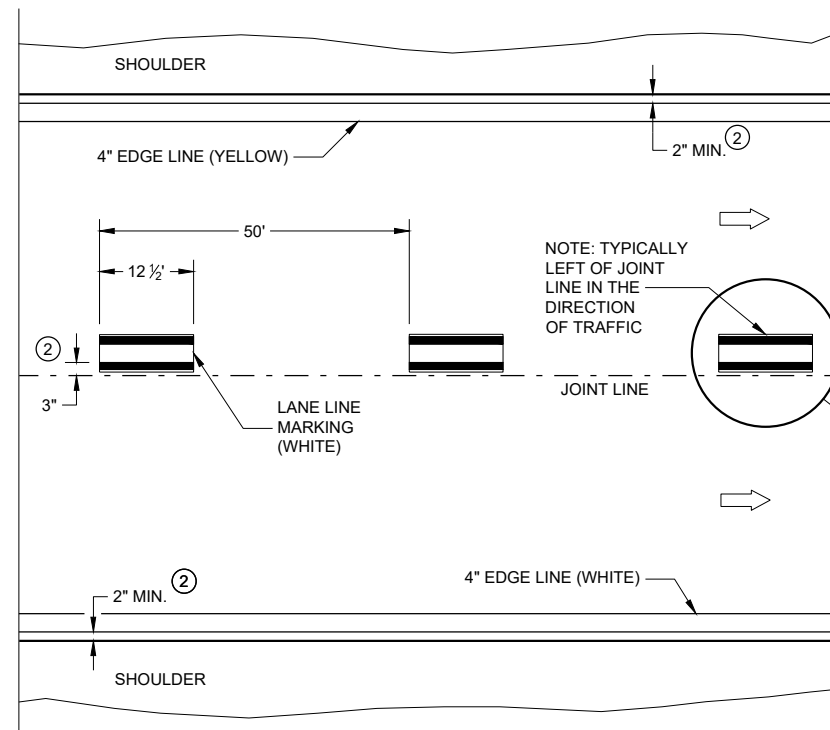
TRAFFIC CONTROL, ADVANCE WARNING  
SIGNS 45 MPH OR GREATER TWO-WAY  
UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA

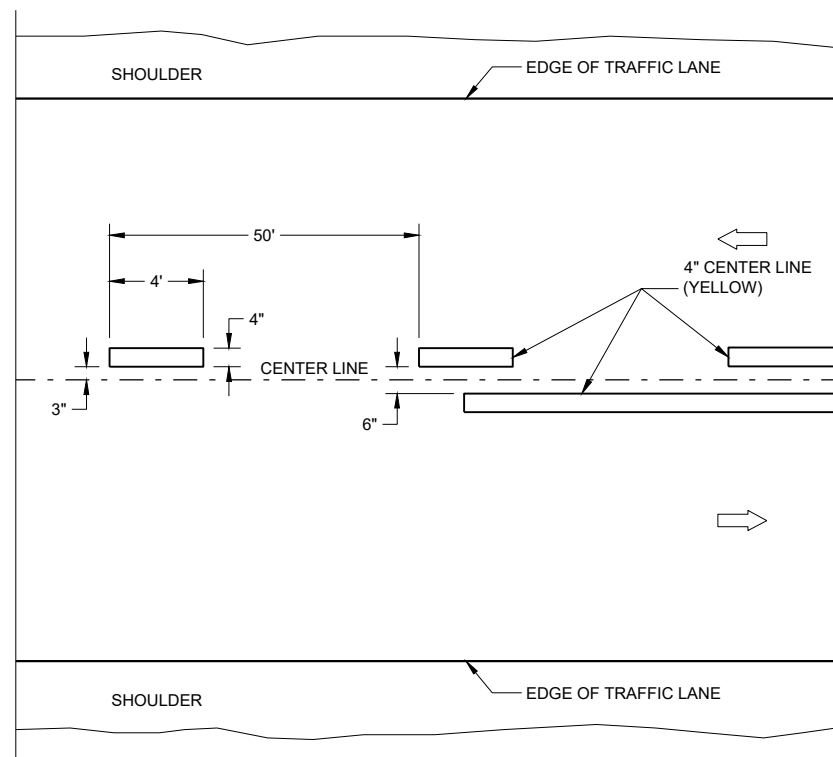


## TWO WAY TRAFFIC

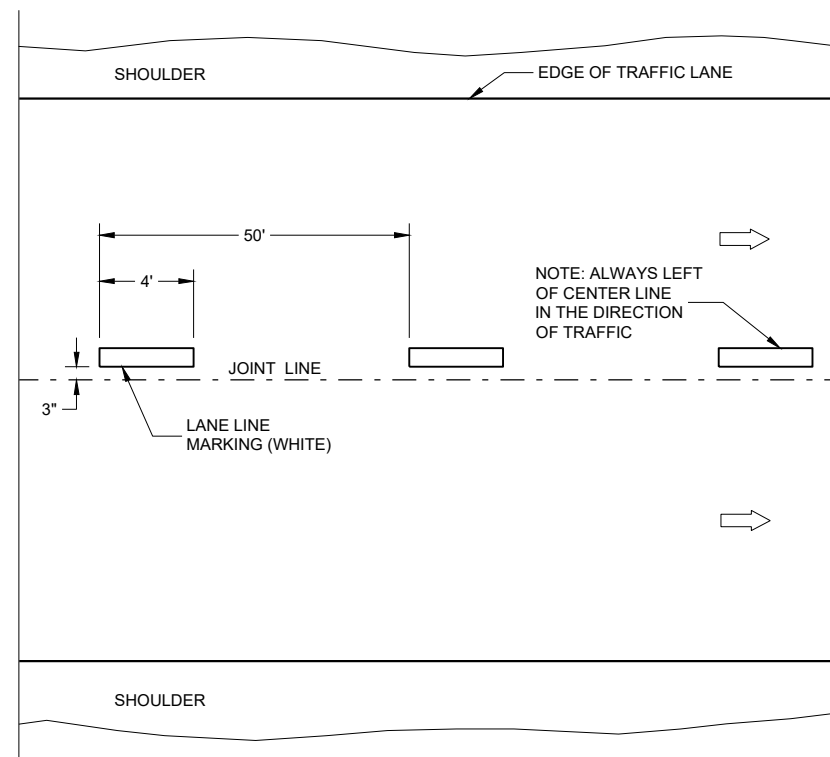


## ONE WAY TRAFFIC

## PERMANENT PAVEMENT MARKING



## TWO WAY TRAFFIC



## ONE WAY TRAFFIC

## TEMPORARY PAVEMENT MARKING

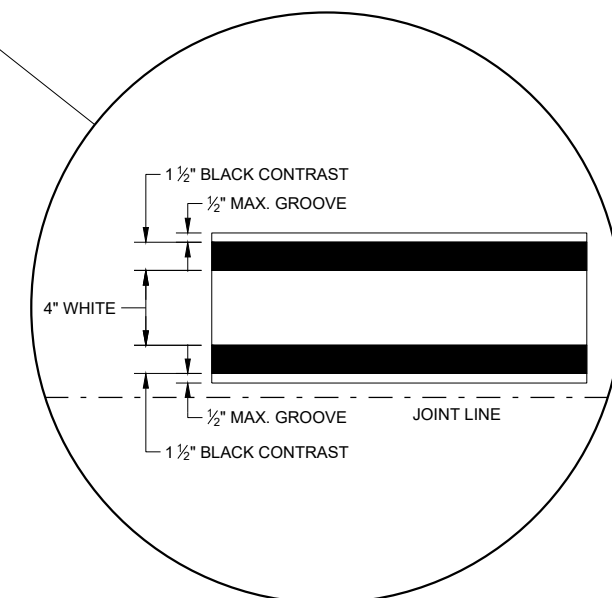
## GENERAL NOTES

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 WITH 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



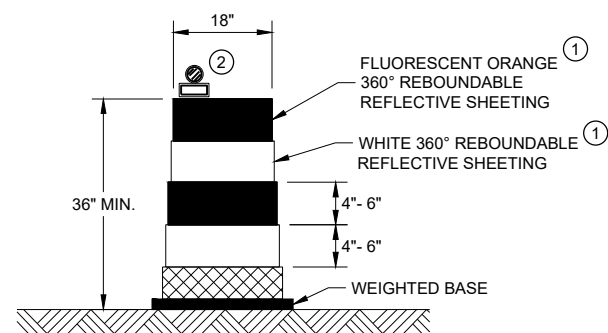
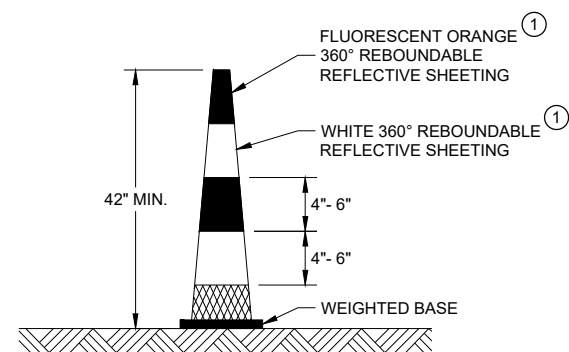
### LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

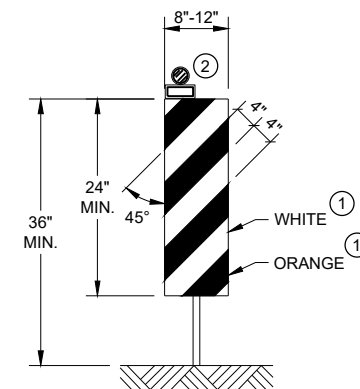
APPROVED  
February 2020  
DATE

/S/ Matthew Rauch  
STATEWIDE SIGNING AND MARKING  
ENGINEER

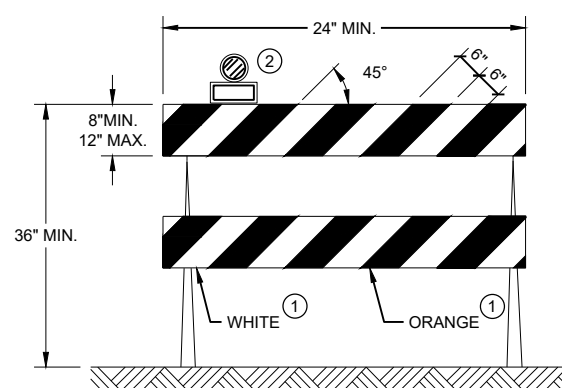


**DRUM****42" CONE**

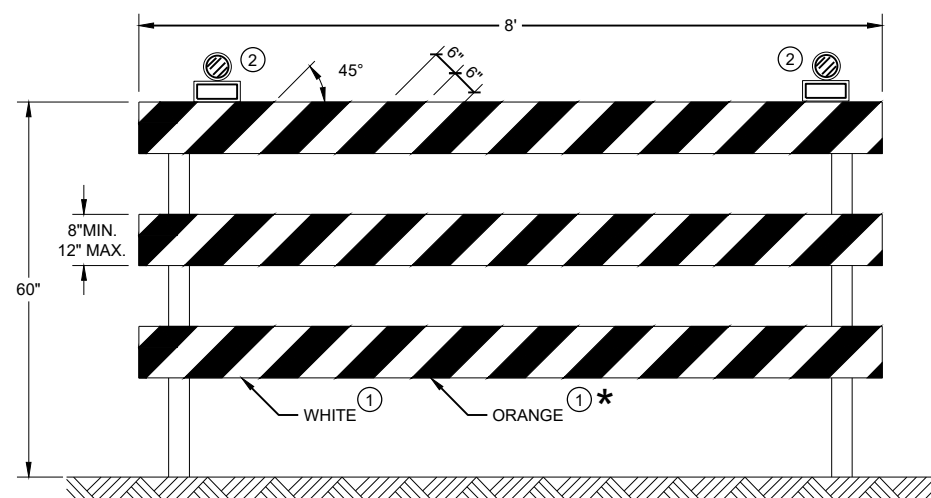
DO NOT USE IN TAPERS  
 $\frac{1}{2}$  SPACING OF DRUMS

**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO  
 THE TRAFFIC SIDE FOR CHANNELIZATION.

**TYPE II BARRICADE**

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES  
 MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD  
 TO THE TRAFFIC SIDE FOR CHANNELIZATION.

**TYPE III BARRICADE**

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP  
 TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**GENERAL NOTES**

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

**CHANNELIZING DEVICES  
 DRUMS, CONES, BARRICADES  
 AND VERTICAL PANELS**

STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

APPROVED  
 June 2017 /S/ Andrew Heidtke  
 DATE WORK ZONE ENGINEER

FHWA

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.

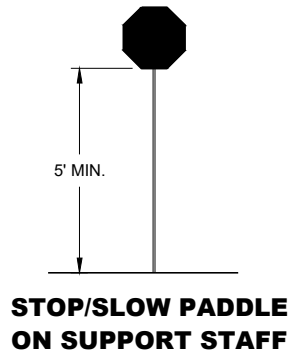
THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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.
- 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.
  - 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.
- EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR 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.

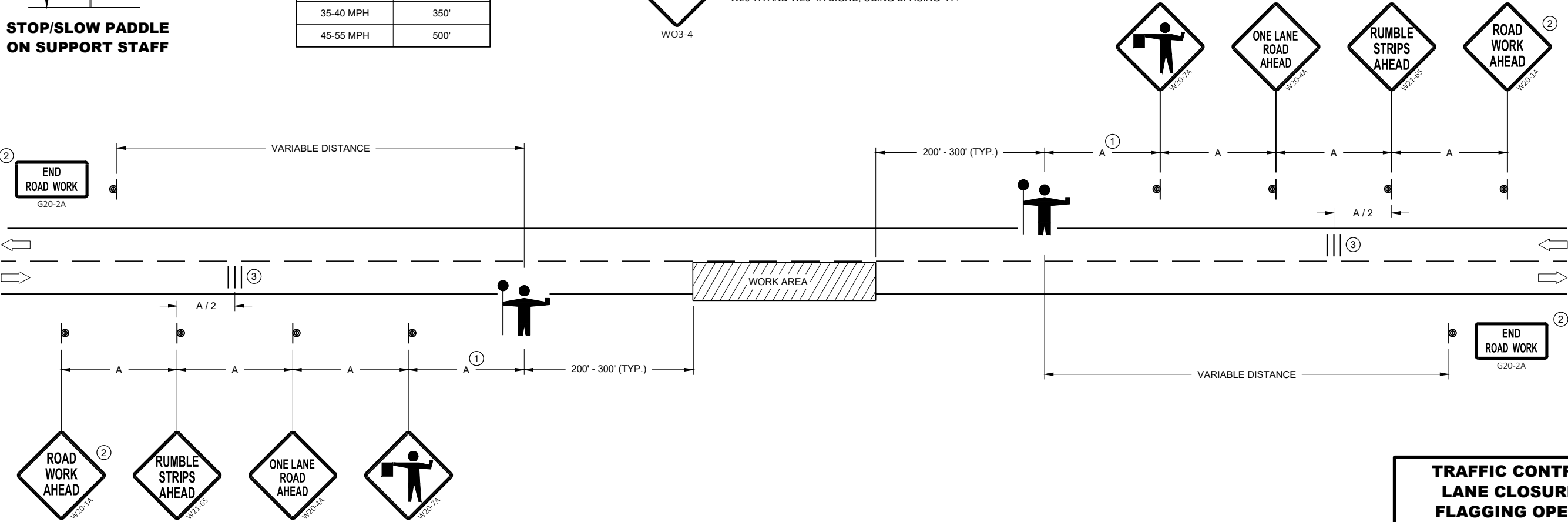


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

| 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".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

**TRAFFIC CONTROL FOR  
LANE CLOSURE WITH  
FLAGGING OPERATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2019 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA



LEGEND

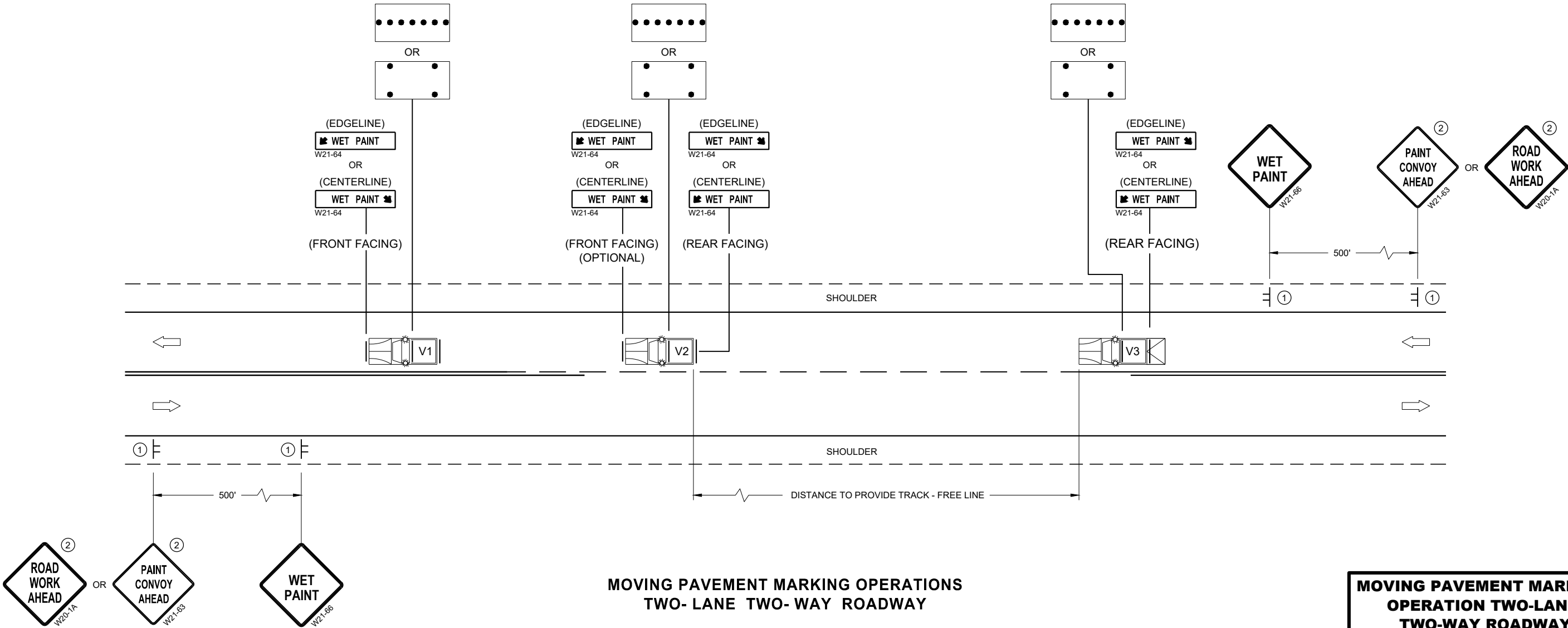
- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

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 18" FOR WET PAVEMENT MARKING .

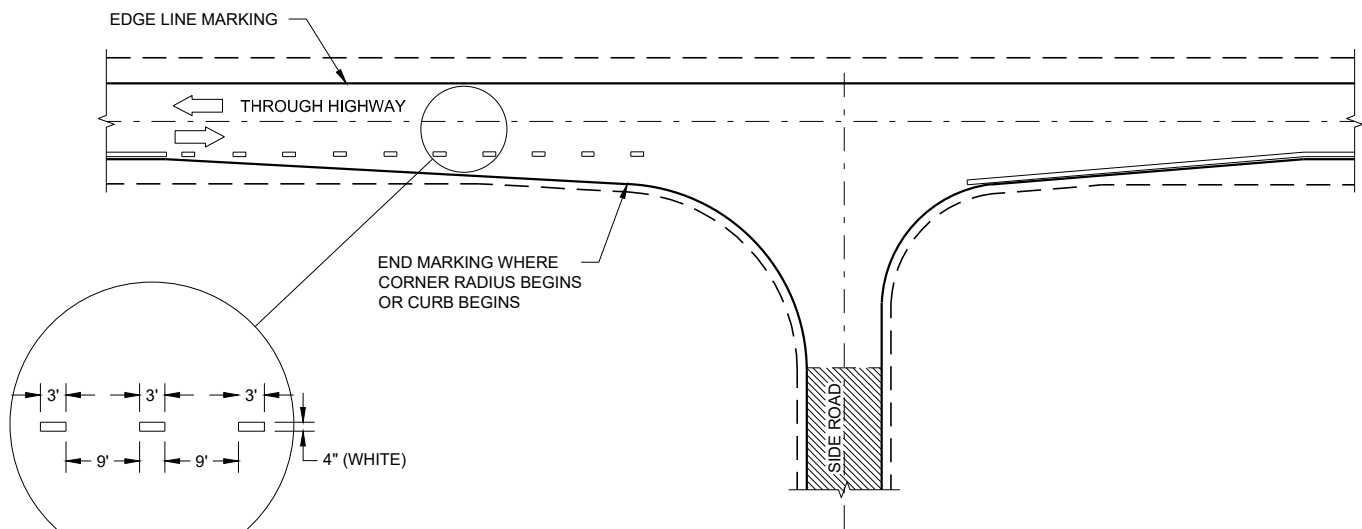
- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.



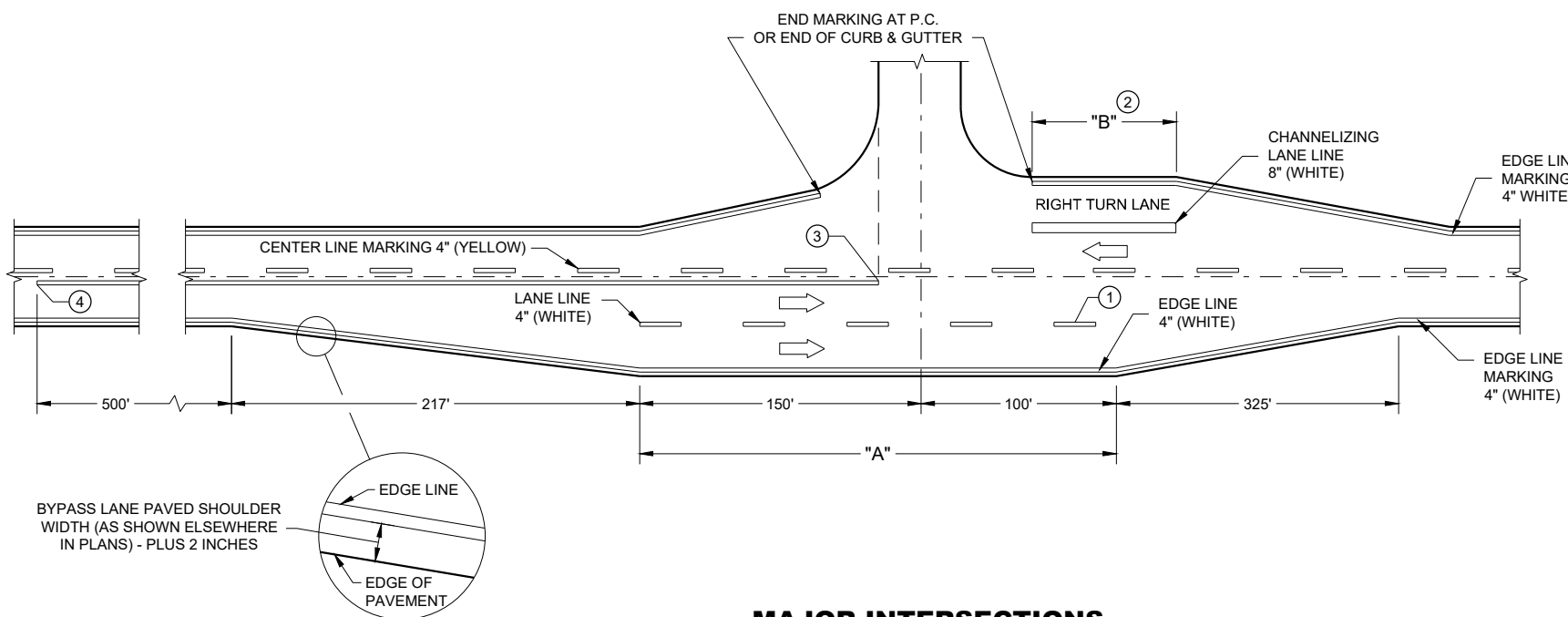
MOVING PAVEMENT MARKING  
OPERATION TWO-LANE  
TWO-WAY ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA



MINOR INTERSECTION



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

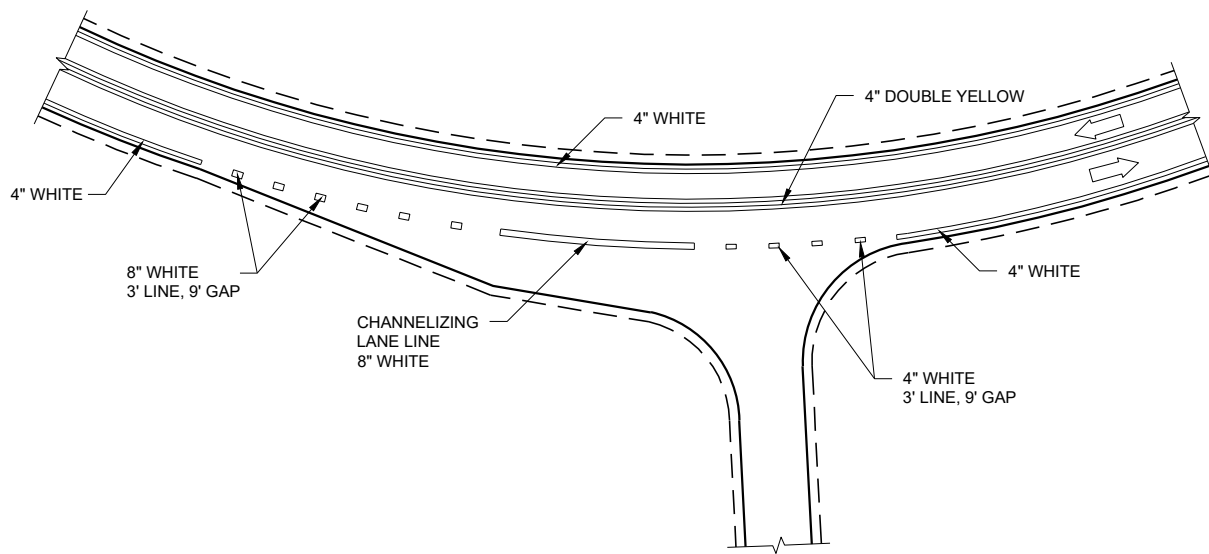
GENERAL NOTES

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.

LEGEND

➡ DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING  
(INTERSECTIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  TRAFFIC CONTROL DRUM
-  DIRECTION OF TRAFFIC
-  WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

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

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

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

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

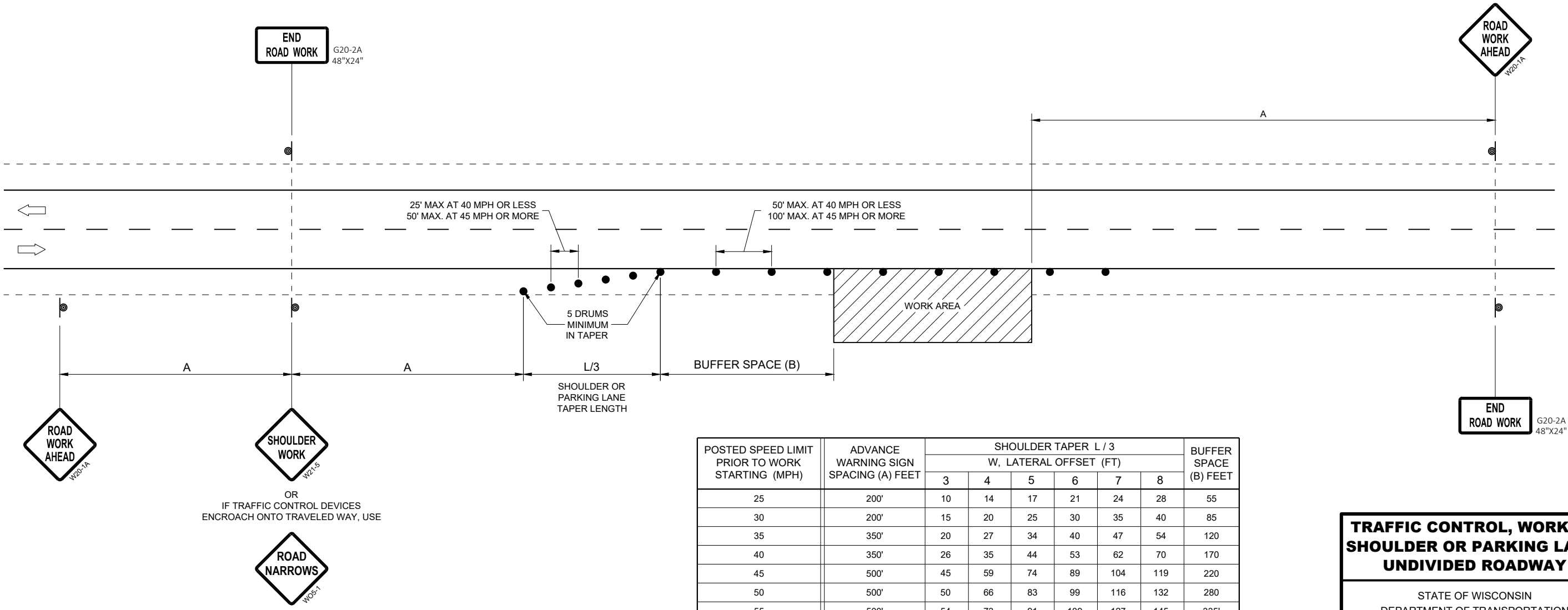
W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

6

6

SDD 15D28 - 04

SDD 15D28 - 04

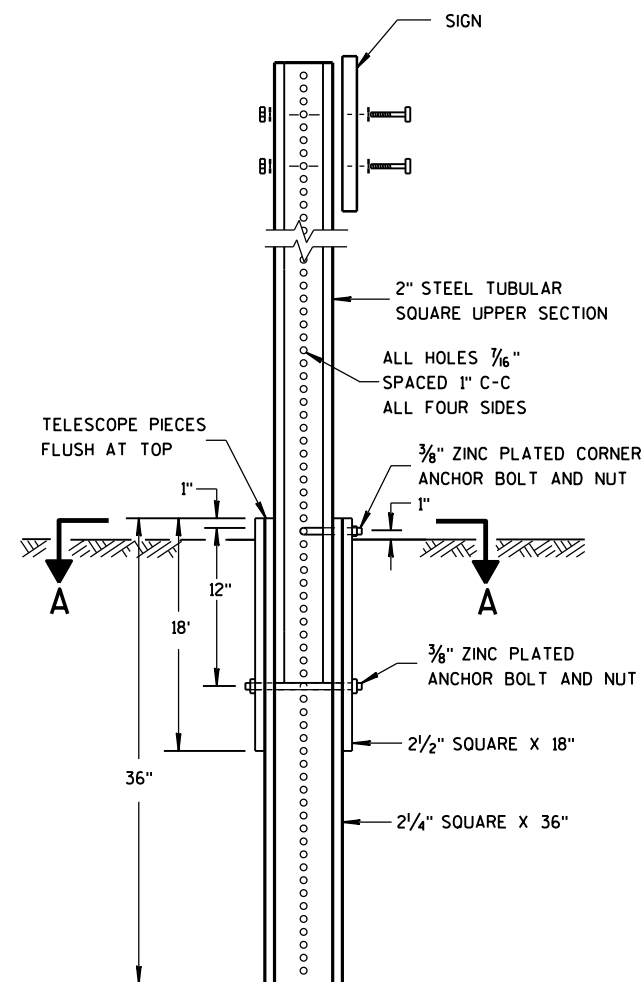


| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | ADVANCE<br>WARNING SIGN<br>SPACING (A) FEET | SHOULDER TAPER L / 3<br>W, LATERAL OFFSET (FT) |    |    |     |     |     | BUFFER<br>SPACE<br>(B) FEET |
|-------------------------------------------------------|---------------------------------------------|------------------------------------------------|----|----|-----|-----|-----|-----------------------------|
|                                                       |                                             | 3                                              | 4  | 5  | 6   | 7   | 8   |                             |
| 25                                                    | 200'                                        | 10                                             | 14 | 17 | 21  | 24  | 28  | 55                          |
| 30                                                    | 200'                                        | 15                                             | 20 | 25 | 30  | 35  | 40  | 85                          |
| 35                                                    | 350'                                        | 20                                             | 27 | 34 | 40  | 47  | 54  | 120                         |
| 40                                                    | 350'                                        | 26                                             | 35 | 44 | 53  | 62  | 70  | 170                         |
| 45                                                    | 500'                                        | 45                                             | 59 | 74 | 89  | 104 | 119 | 220                         |
| 50                                                    | 500'                                        | 50                                             | 66 | 83 | 99  | 116 | 132 | 280                         |
| 55                                                    | 500'                                        | 54                                             | 73 | 91 | 109 | 127 | 145 | 335'                        |

TRAFFIC CONTROL, WORK ON  
SHOULDER OR PARKING LANE,  
UNDIVIDED ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2020 /S/ Andrew Heidtke  
DATE STATEWIDE WORK ZONE TRAFFIC  
SAFETY ENGINEER  
FHWA



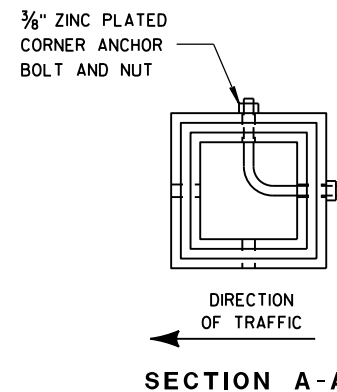
DETAIL OF TUBULAR  
STEEL SIGN POST

TUBULAR STEEL POSTS

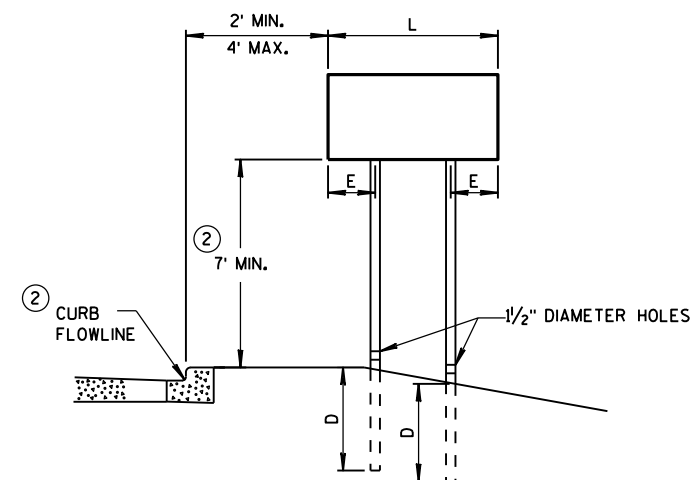
| AREA OF SIGN<br>INSTALLATION<br>(SQ. FT.)      | NUMBER OF<br>REQUIRED TUBULAR<br>STEEL POSTS |
|------------------------------------------------|----------------------------------------------|
| 9 OR LESS                                      | 1                                            |
| GREATER THAN 9<br>LESS THAN OR EQUAL<br>TO 18  | 2                                            |
| GREATER THAN 18<br>LESS THAN OR EQUAL<br>TO 27 | 3                                            |

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL  
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED  
ON TUBULAR STEEL POSTS.



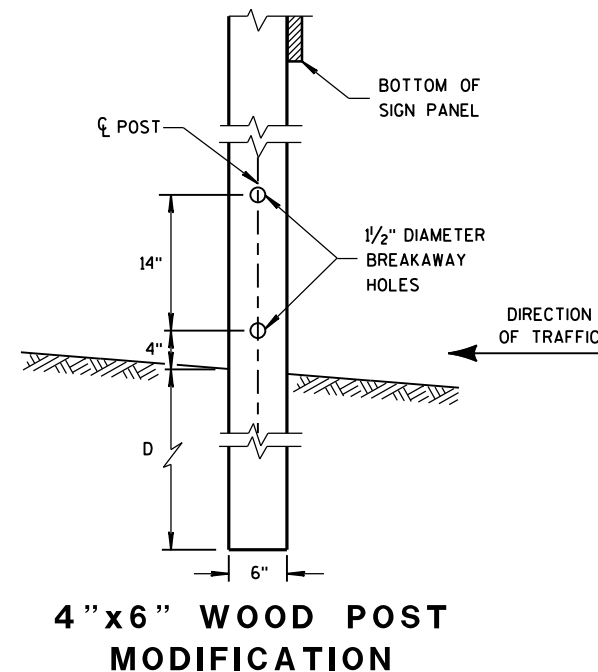
SECTION A-A



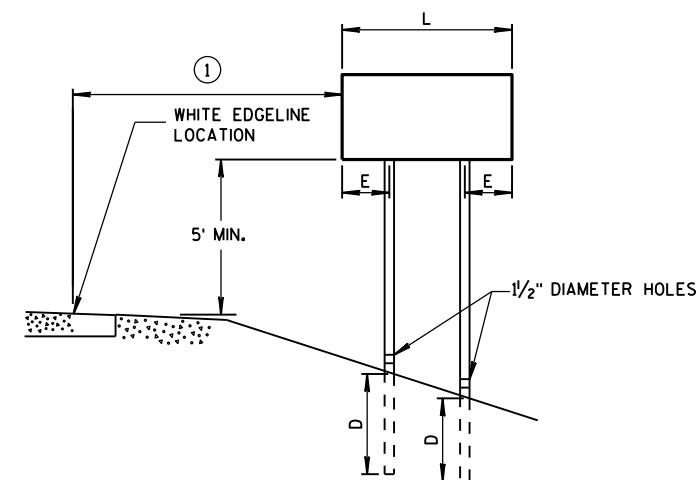
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

| WOOD POST<br>EMBEDMENT DEPTH              |            |
|-------------------------------------------|------------|
| AREA OF SIGN<br>INSTALLATION<br>(SQ. FT.) | D<br>(MIN) |
| 20 OR LESS                                | 4'         |
| GREATER THAN 20                           | 5'         |



4 "x6 " WOOD POST  
MODIFICATION



RURAL AREA

| POST SPACING REQUIREMENTS               |     | NUMBER OF<br>WOOD POSTS<br>REQUIRED |
|-----------------------------------------|-----|-------------------------------------|
| L                                       | E   |                                     |
| 48" OR LESS AND<br>LESS THAN 20 SQ. FT. | -   | 1                                   |
| LESS THAN 60"                           | 12" | 2                                   |
| 60" TO 120"                             | L/5 | 2                                   |
| GREATER THAN 120"<br>LESS THAN 168"     | 12" | 3                                   |
| 168" AND GREATER                        | 12" | 4                                   |

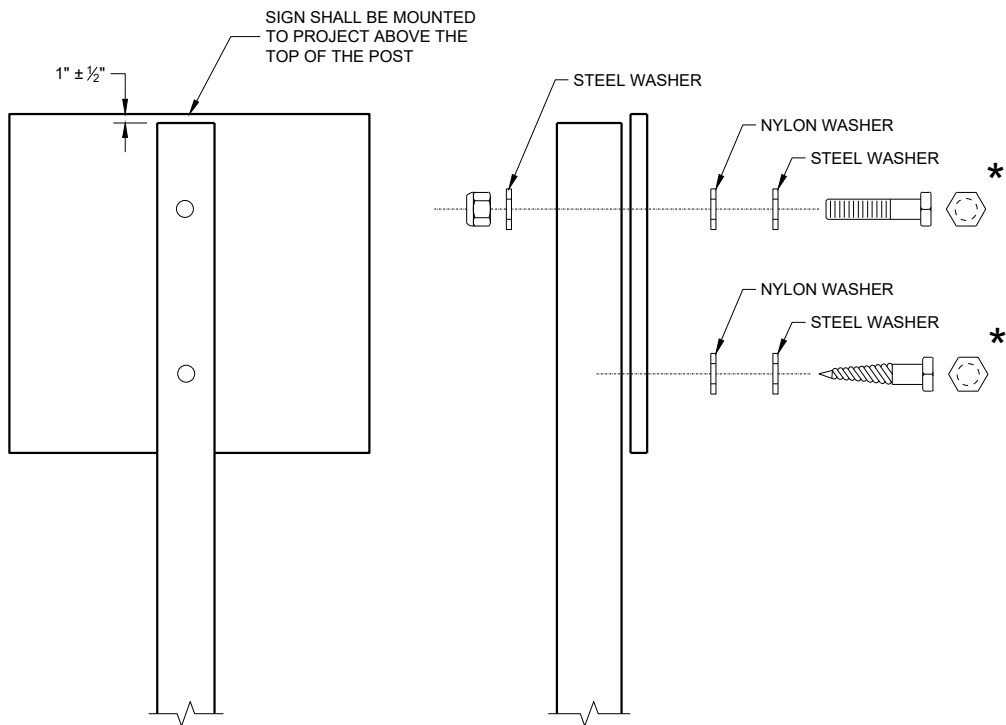
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL  
SIGN MOUNTING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

WOOD POST (4" x 6")  
LAG SCREWS - ⅜" x 3"  
MACHINE BOLTS - ⅝" x 6 ½" OR 7" LENGTH W/NUTS

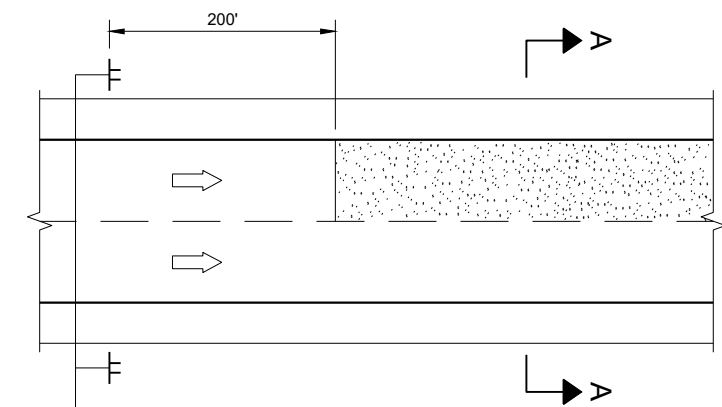
SQUARE STEEL POST (2" x 2")  
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS  
RIVETS - ⅝" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM  
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,  
GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -  
1 ¼" O.D. x ⅜" I.D. x ⅛" STEEL  
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

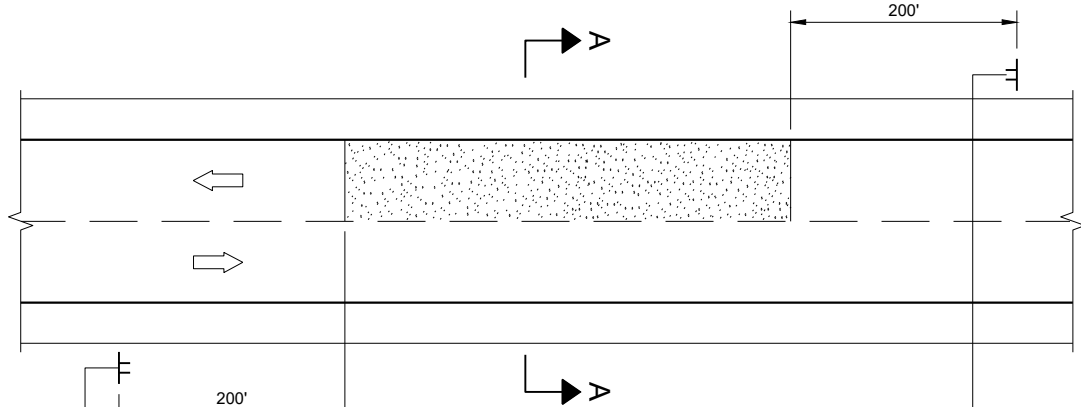
\* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

|                                                    |                                          |
|----------------------------------------------------|------------------------------------------|
| ATTACHMENT OF SIGNS<br>TO POSTS                    |                                          |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                          |
| APPROVED<br>June 2017<br>DATE                      | /S/ Andrew Heidtke<br>WORK ZONE ENGINEER |

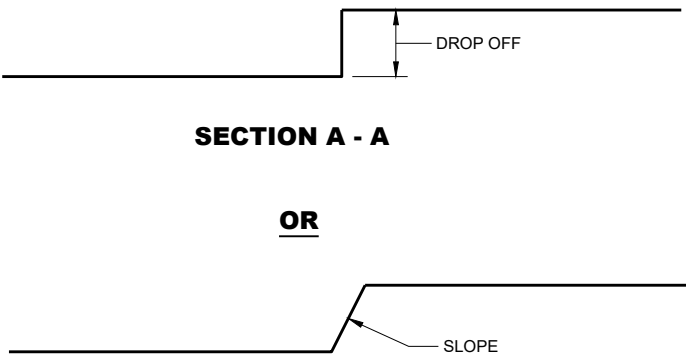
FHWA



MULTI-LANE



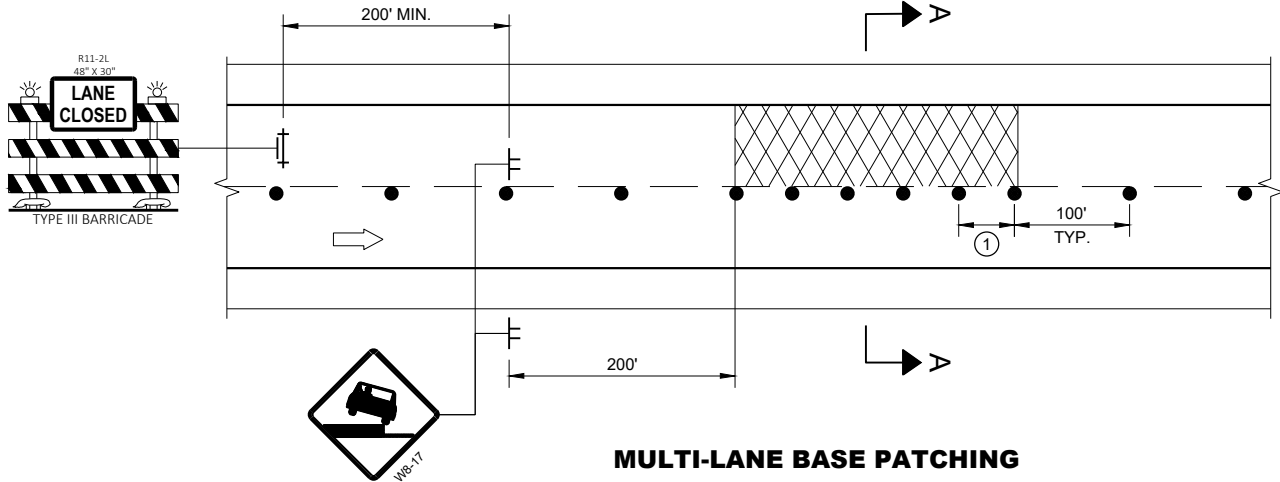
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

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.

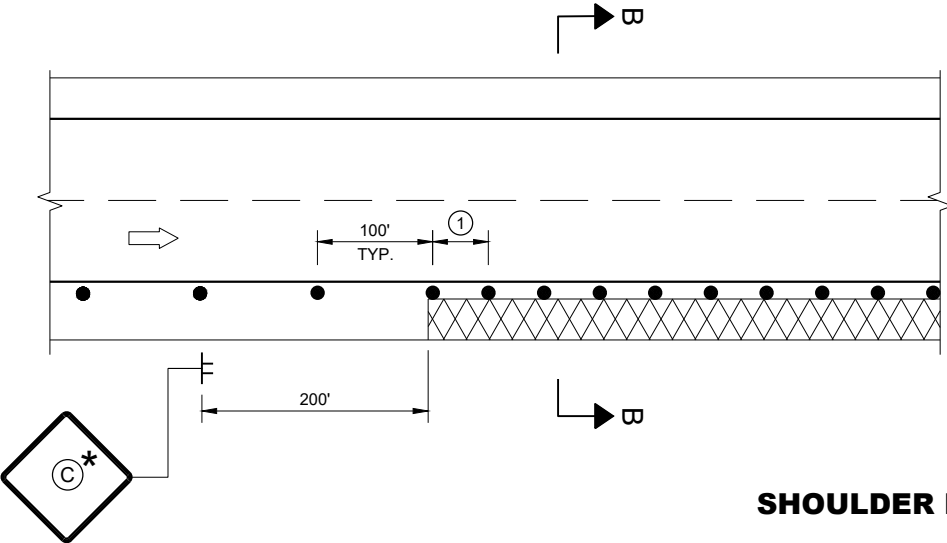
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

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

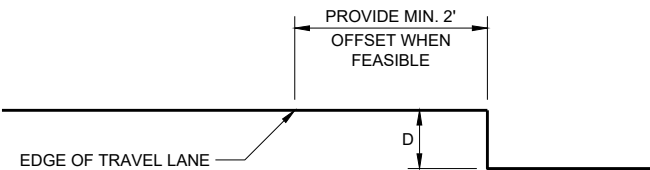
① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

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



SHOULDER DROP-OFFS



SECTION B - B

| D                                     | SIGN (C)                                                                                            |
|---------------------------------------|-----------------------------------------------------------------------------------------------------|
| < 2" WITH A SLOPE STEEPER THAN 3:1    | LOW SHOULDER<br>WO8-9                                                                               |
| 2" < 6" WITH A SLOPE STEEPER THAN 3:1 | SHOULDER DROP - OFF<br>W8-9A<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

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.

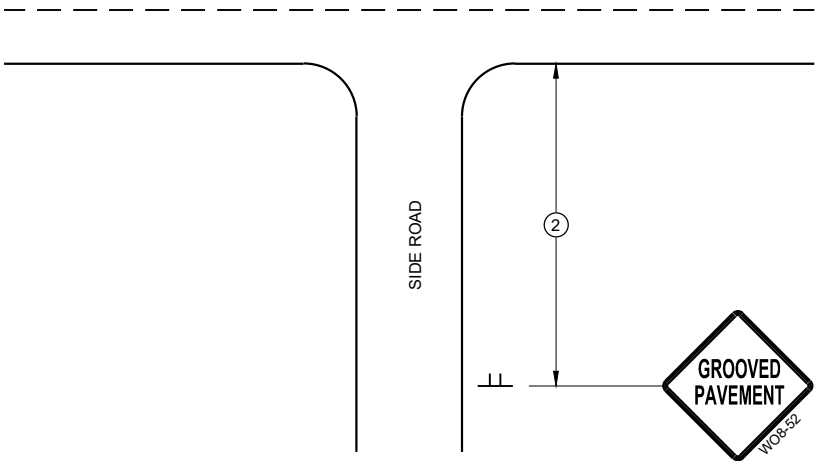
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

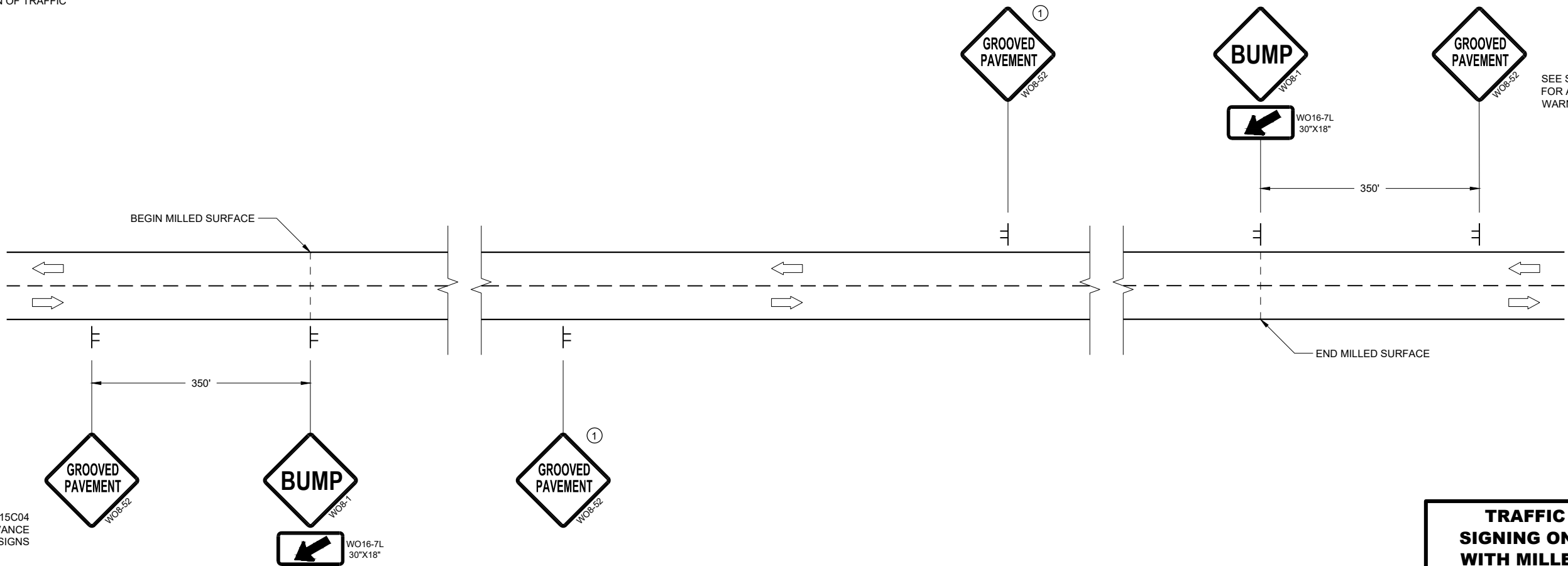
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH  
SIGN DETAIL



SEE SDD15C04  
FOR ADVANCE  
WARNING SIGNS

SEE SDD15C04  
FOR ADVANCE  
WARNING SIGNS

DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL,  
SIGNING ON ROADWAYS  
WITH MILLED SURFACES

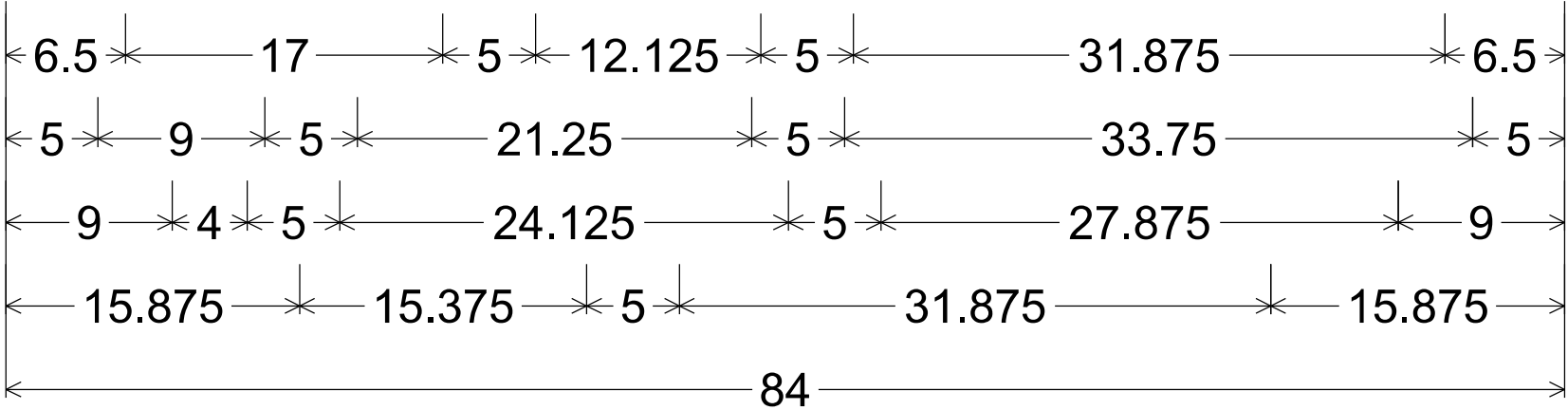
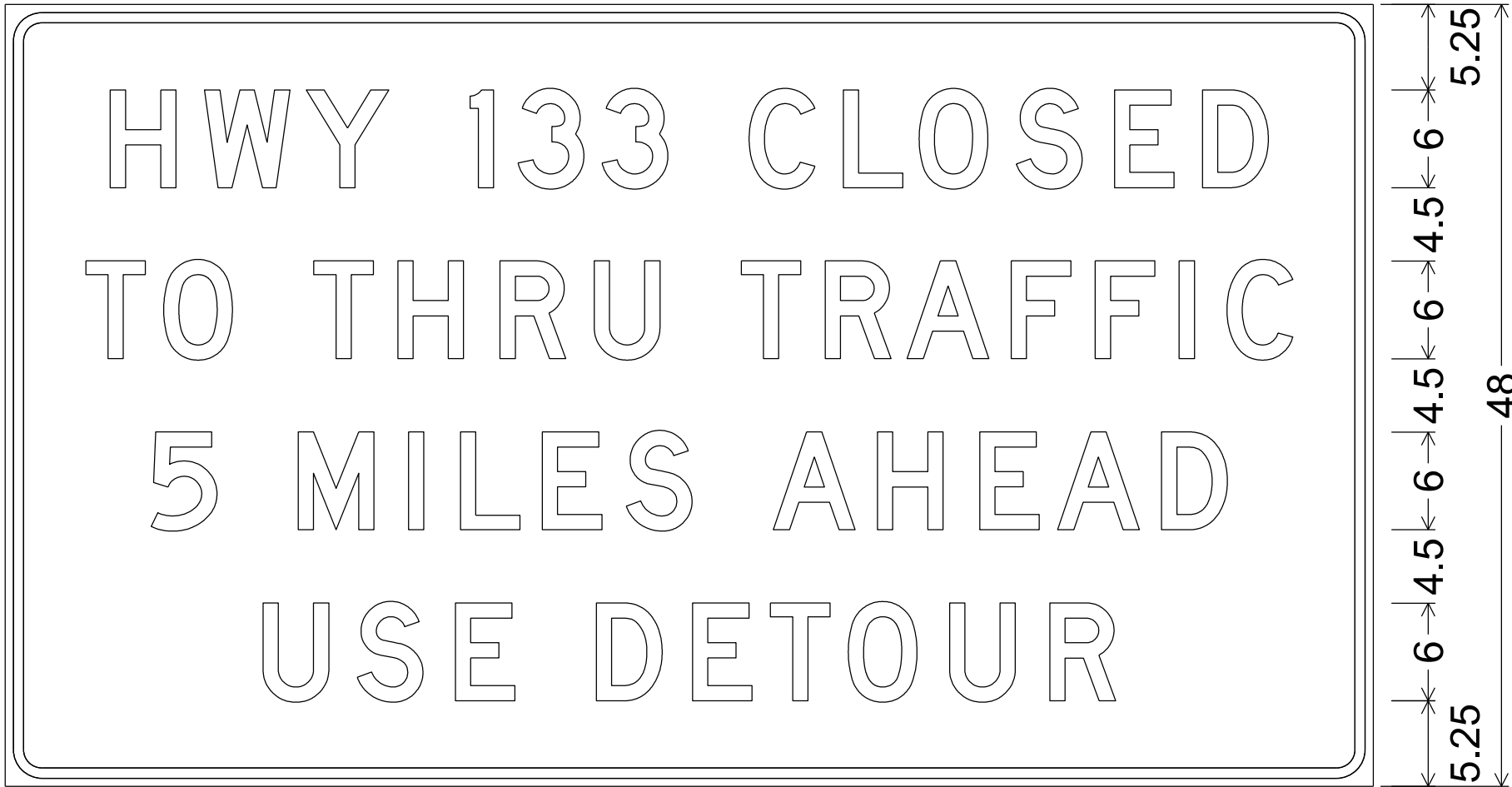
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA

NOTES

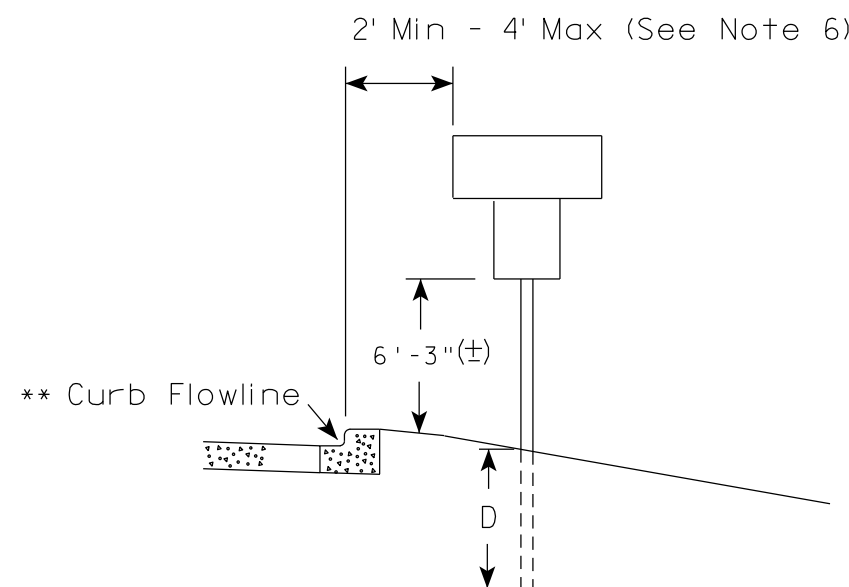
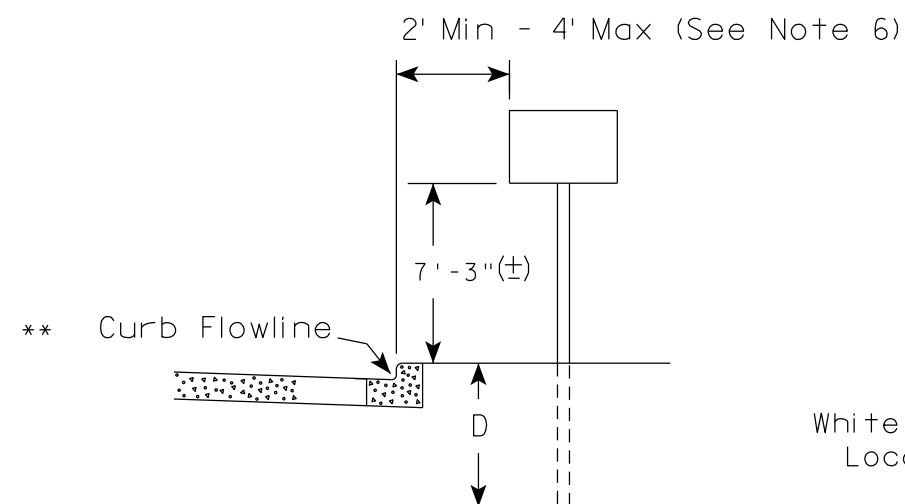
- 1. Fixed Message Sign   Type II- Type F Reflective
- 2. Color:  
    Background - Orange  
    Message    - Black
- 3. Message Series - D



2.250" Radius, 0.625" Border, 0.500" Indent

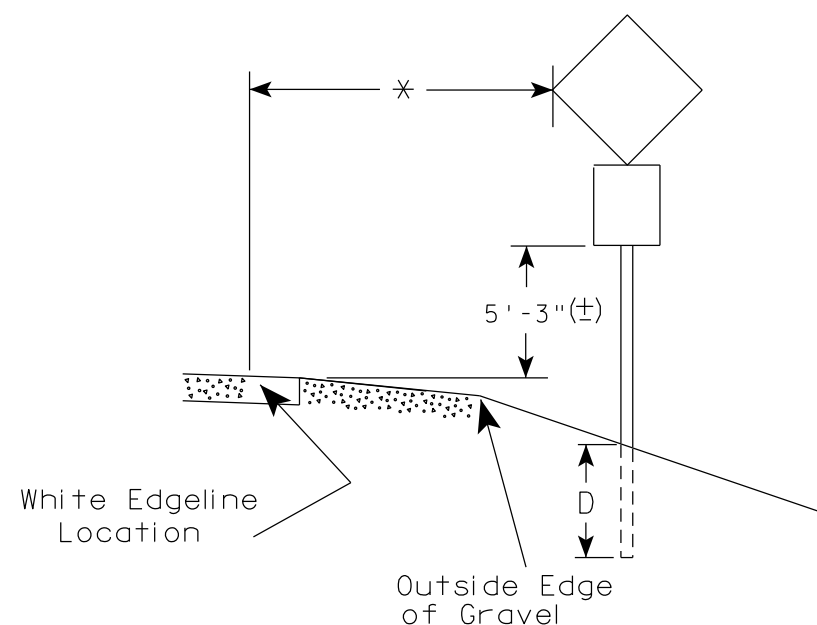
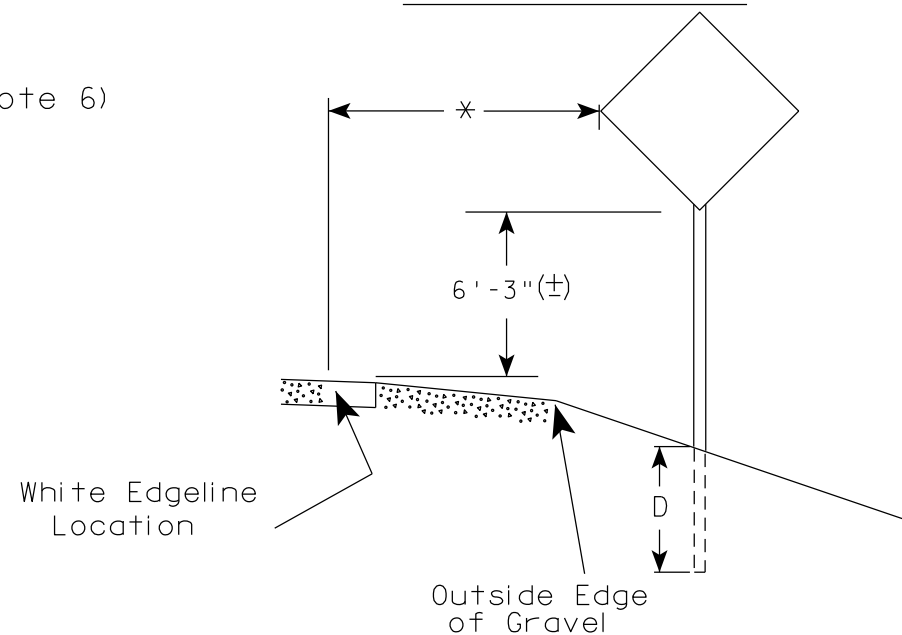


# URBAN AREA



✱✱ The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

# RURAL AREA (See Note 2)



✱ 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

## POST EMBEDMENT DEPTH

| Area of Sign Installation ( Sq. Ft. ) | D ( Min ) |
|---------------------------------------|-----------|
| 20 or Less                            | 4'        |
| Greater than 20                       | 5'        |

## GENERAL NOTES

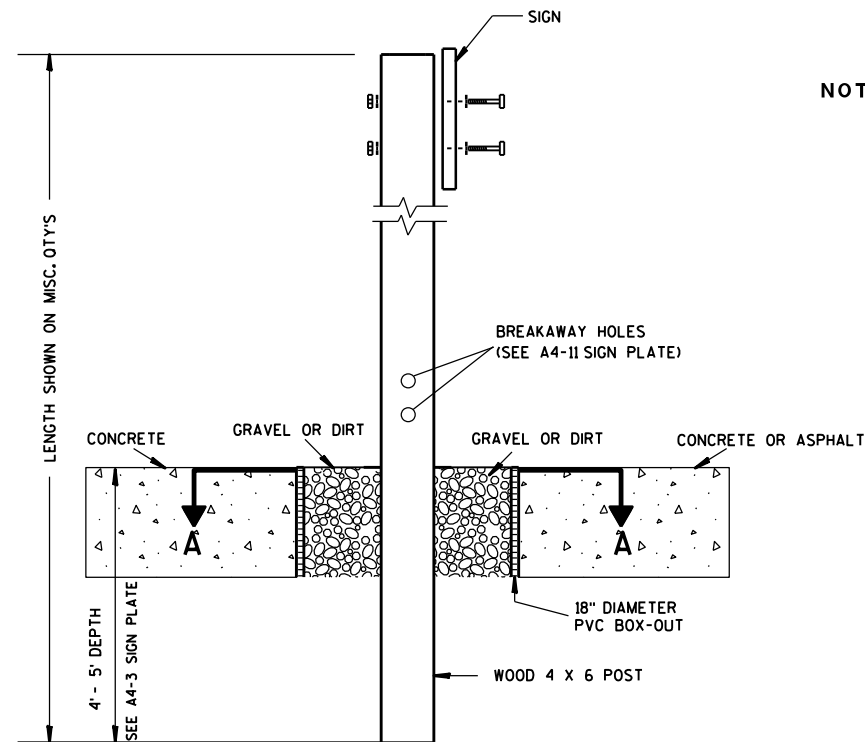
- Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
- If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
- For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
- Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- The (±) tolerance for mounting height is 3 inches.
- Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

TYPICAL INSTALLATION  
OF PERMANENT TYPE II  
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

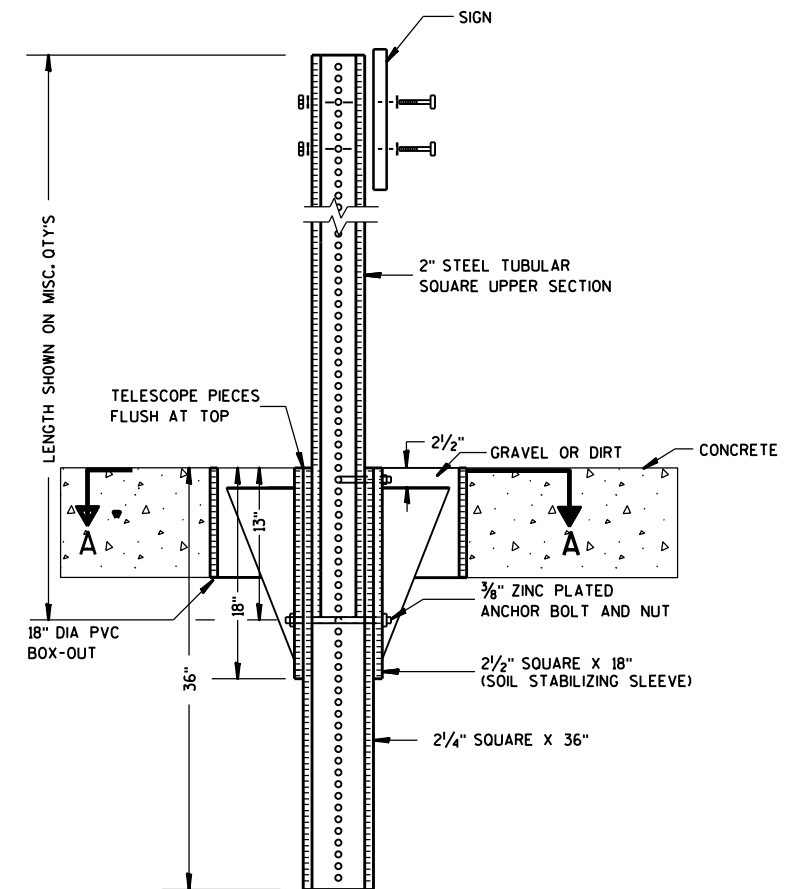
DATE 5/13/2020 PLATE NO. A4-3.22



### ELEVATION VIEW

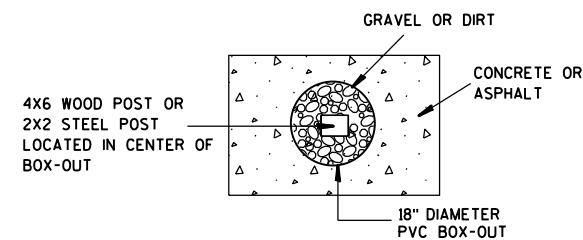
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



### ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



### PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST  
BOX-OUTS  
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

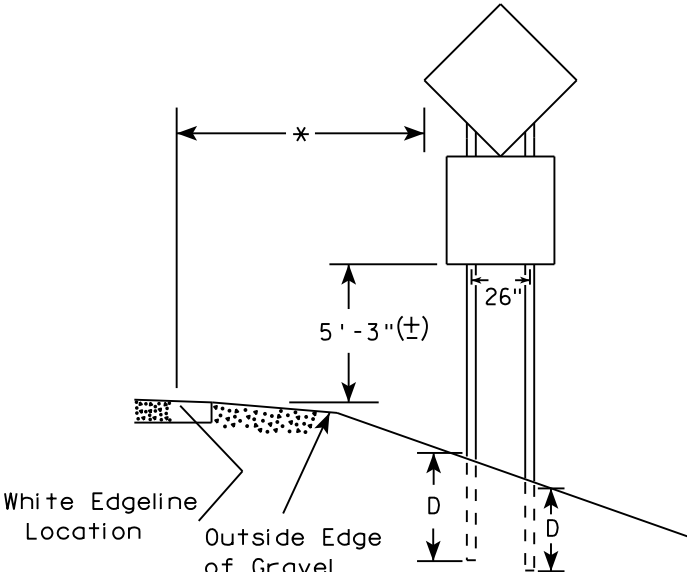
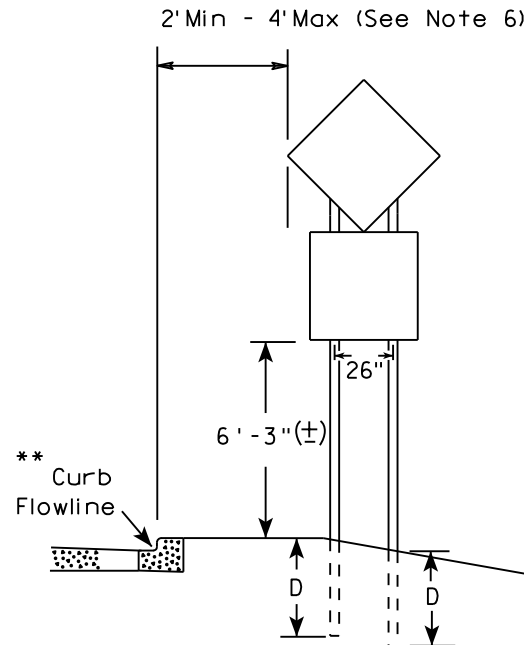
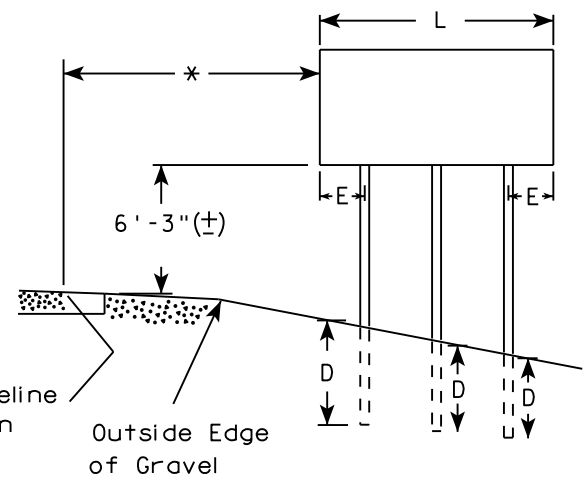
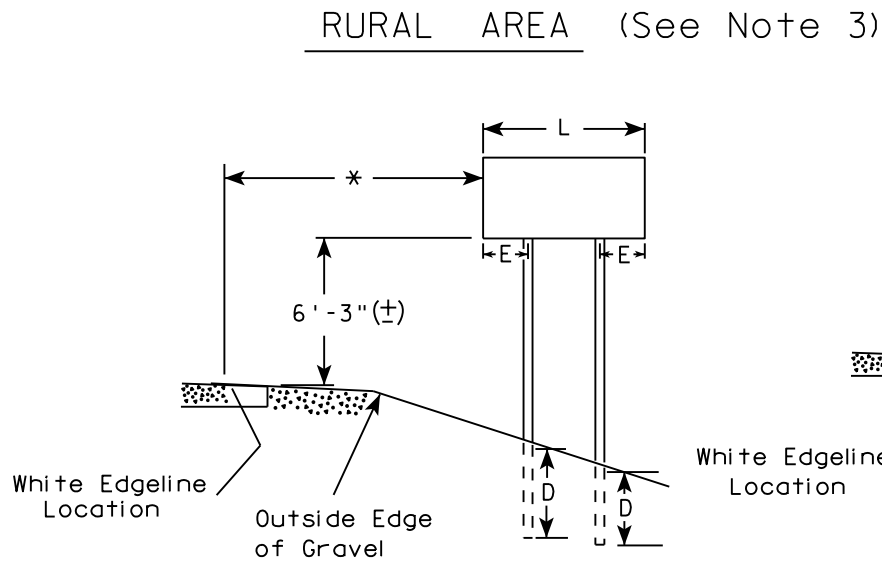
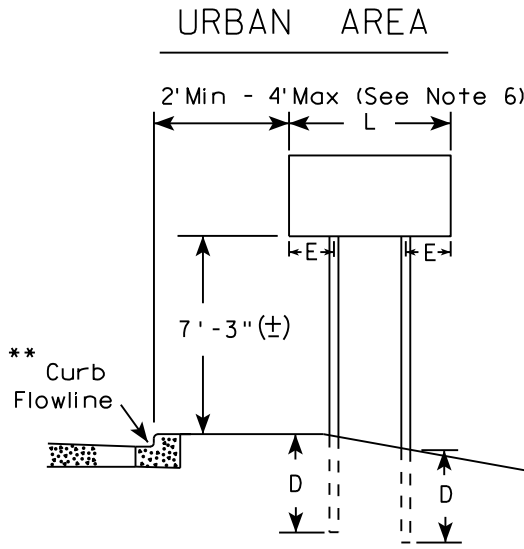
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



\*\*\*

| SIGN SHAPE OTHER THAN DIAMOND<br>(TWO POSTS REQUIRED) |     |
|-------------------------------------------------------|-----|
| L                                                     | E   |
| Greater than 48"<br>Less than 60"                     | 12" |
| 60" to 108"                                           | L/5 |

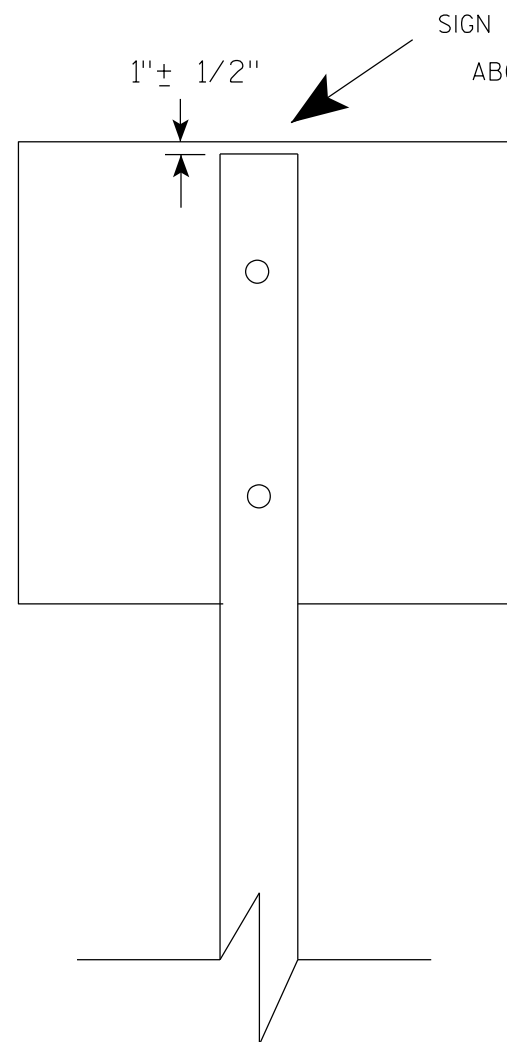
| SIGN SHAPE OTHER THAN DIAMOND<br>(THREE POSTS REQUIRED) |     |
|---------------------------------------------------------|-----|
| L                                                       | E   |
| Greater than 108"<br>to 144"                            | 12" |

| POST EMBEDMENT DEPTH                        |              |
|---------------------------------------------|--------------|
| Area of Sign<br>Installation<br>( Sq. Ft. ) | D<br>( Min ) |
| 20 or Less                                  | 4'           |
| Greater than 20                             | 5'           |

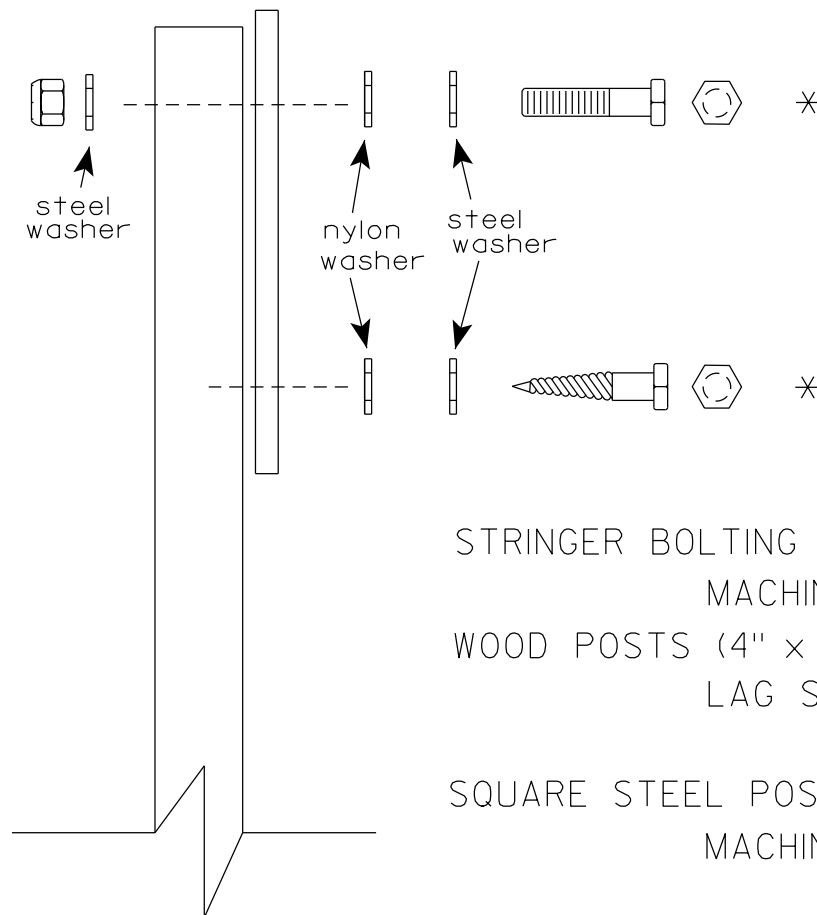
|                                                               |                                                       |
|---------------------------------------------------------------|-------------------------------------------------------|
| TYPICAL INSTALLATION<br>OF TYPE II SIGNS<br>ON MULTIPLE POSTS |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION                              |                                                       |
| APPROVED                                                      | <i>Matthew R. Rauch</i><br>for State Traffic Engineer |
| DATE 8/21/17                                                  | PLATE NO. A4-4.15                                     |

- GENERAL NOTES
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
  2. See tables below for required number of posts.
  3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
  4. The (±) tolerance for mounting height is 3 inches.
  5. J-Assemblies are considered to be one sign for mounting height.
  6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
  7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
  8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

- \* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- \*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- \*\*\* See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.



SIGN SHALL BE MOUNTED TO PROJECT  
ABOVE THE TOP OF THE POST



Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)  
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

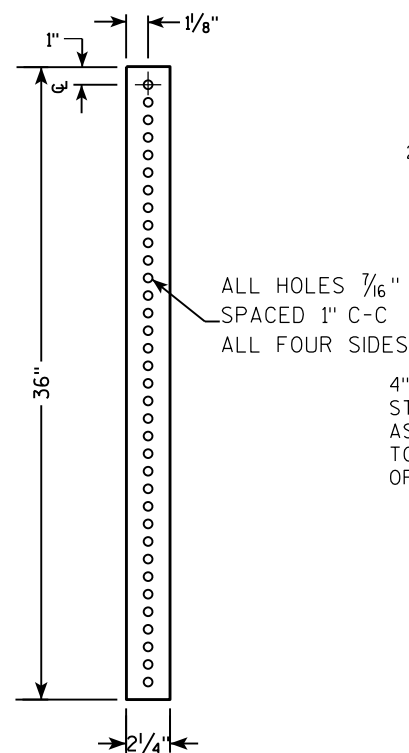
## ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

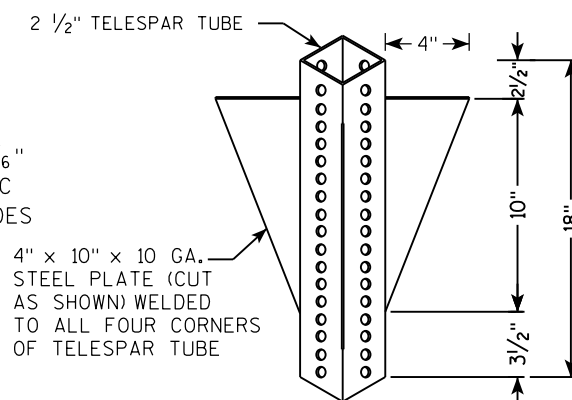
APPROVED Matthew R. Rauch  
For State Traffic Engineer

DATE 4/1/2020 PLATE NO. A4-8.9

**2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH**



**2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH**



TELESCOPE PIECES  
FLUSH AT TOP

18" DIA SCHEDULE  
40 PVC  
BOX-OUT

36"

13"

18"

2 1/2" GRAVEL OR DIRT

3/8" ZINC PLATED  
ANCHOR BOLT AND NUT

2 1/2" SQUARE X 18"  
(SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

2" STEEL TUBULAR  
SQUARE UPPER SECTION

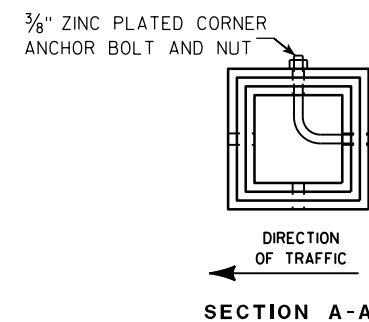
ALL HOLES 7/16"  
SPACED 1" C-C  
ALL FOUR SIDES

SEE SIGN PLATE  
A4-8 FOR BOLT  
WASHER, & NUT  
MATERIAL

SIGN

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- Dimensions:**
  - Overall height: LENGTH SHOWN ON MISC. Q'TYS
  - Top section height: 36"
  - Section below top: 18"
  - Section below that: 12"
- Components and Labels:**
  - SIGN
  - SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
  - 2" STEEL TUBULAR SQUARE UPPER SECTION
  - ALL HOLES  $\frac{7}{16}$ " SPACED 1" C-C
  - ALL FOUR SIDES
  - $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT
  - TELESCOPE PIECES FLUSH AT TOP
  - $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
  - 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
  - 2 1/4" SQUARE X 36"



| Area of Sign Installation (Sq. Ft.)      | Number of Required Posts |
|------------------------------------------|--------------------------|
| 9 or less                                | 1                        |
| Greater than 9 less than or equal to 18  | 2                        |
| Greater than 18 less than or equal to 27 | 3                        |

**Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).**

TUBULAR STEEL  
SIGN POST  
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

PROJECT NO:

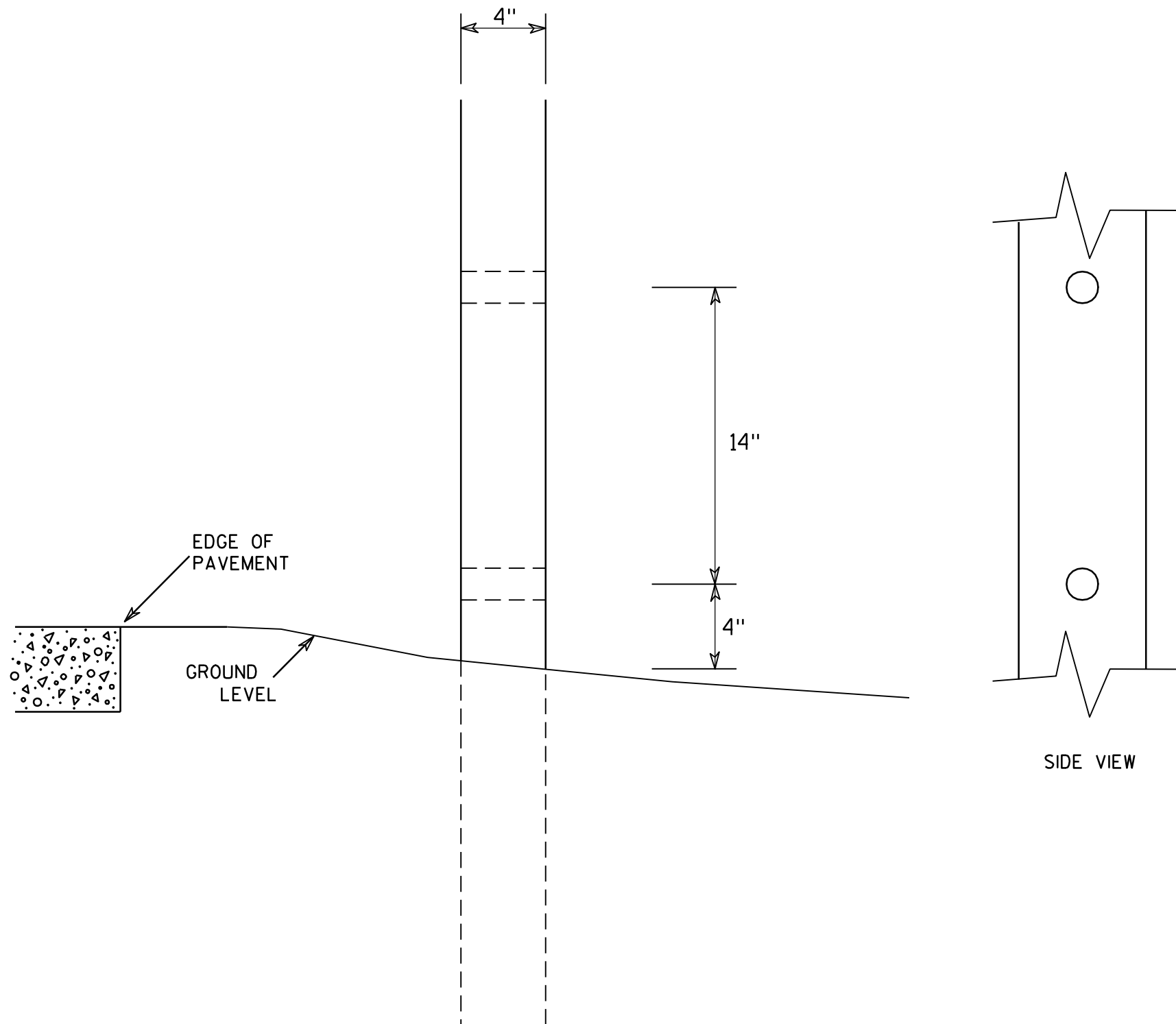
HWY:

COUNTY:

SHEET NO:

**T**

7



### GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

## 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Chester J. Spang*  
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

COUNTY:

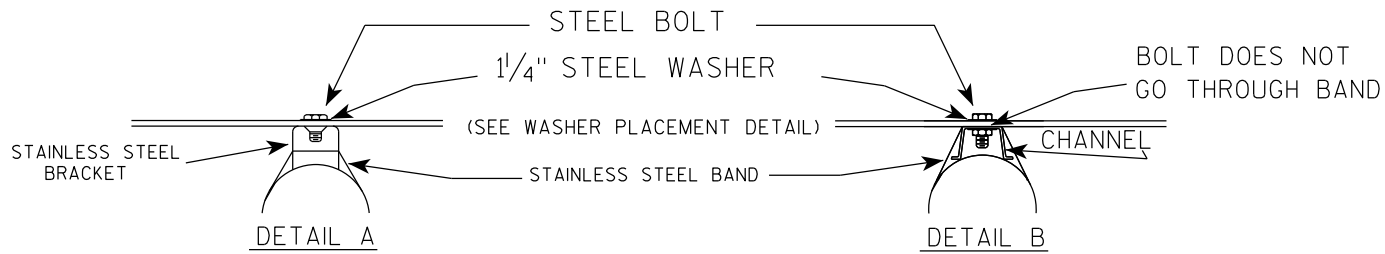
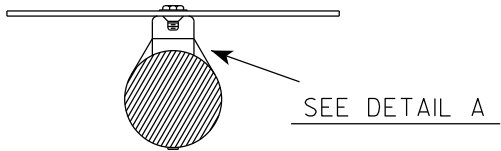
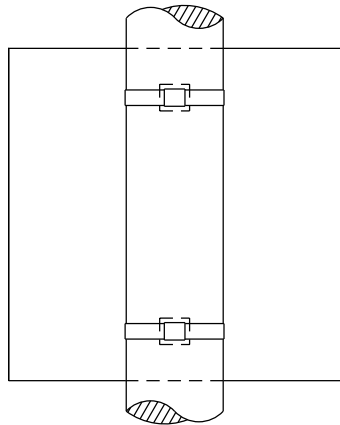
SHEET NO:

E

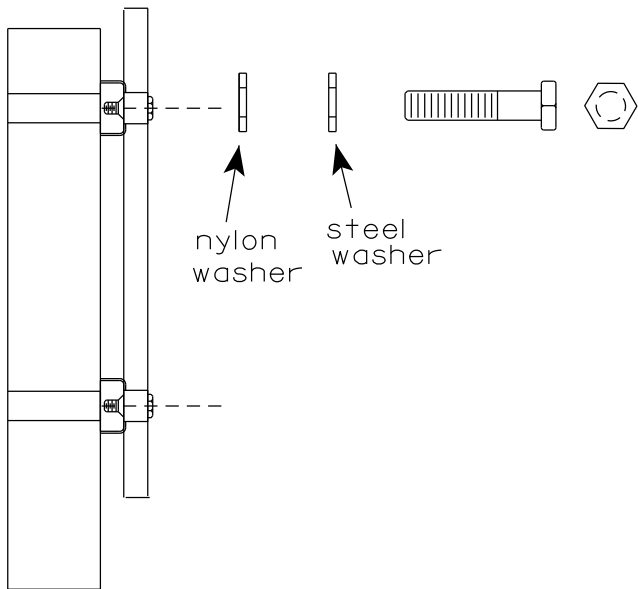


BANDING

SINGLE SIGN



WASHER PLACEMENT

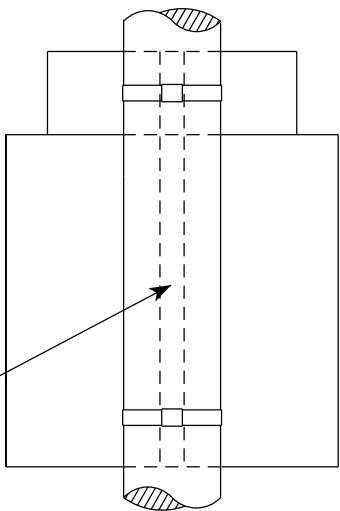


WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

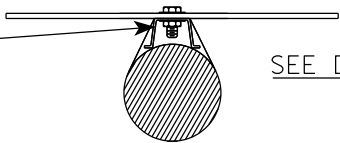
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



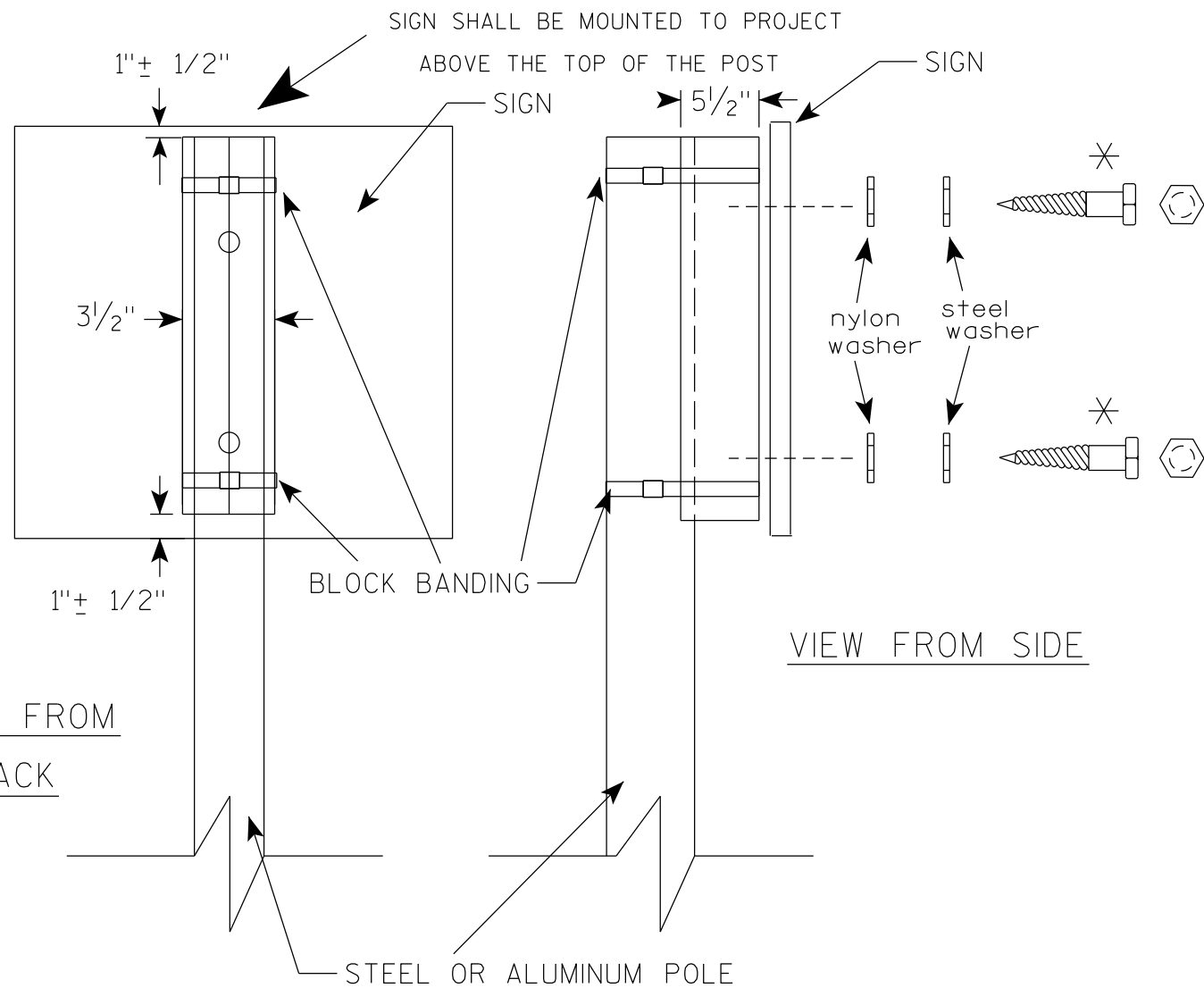
STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

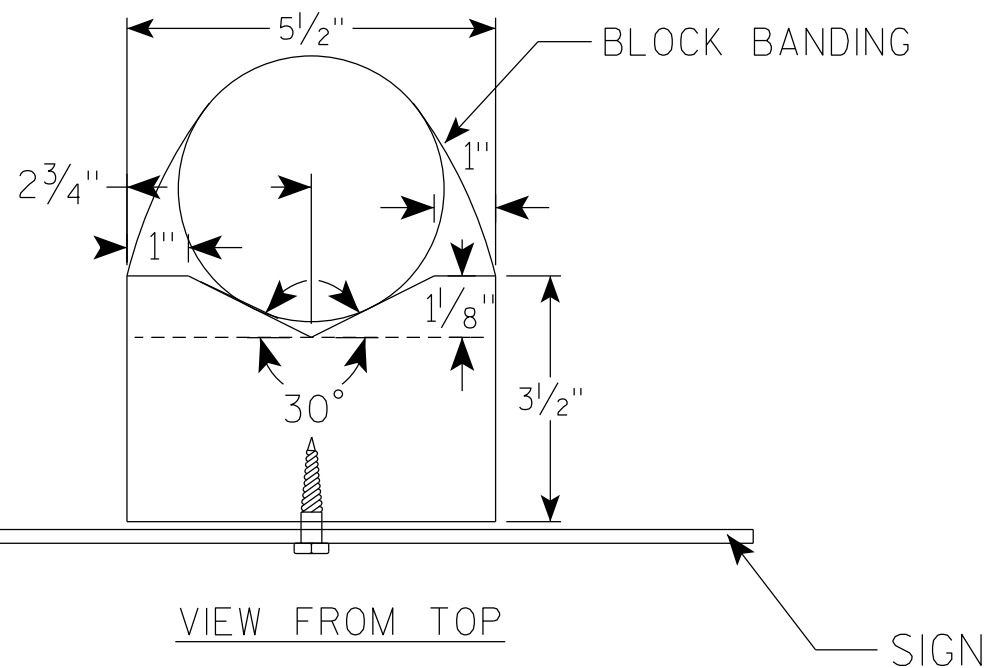
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM  
BACK



VIEW FROM SIDE



## GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL,  $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE  $1\frac{1}{4}$ " O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE  $1\frac{1}{4}$ " O.D. X  $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE  $\frac{3}{8}$ " X  $2\frac{1}{2}$ "

BLOCK BANDING DETAIL  
( V-BLOCK OPTION )

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch  
for State Traffic Engineer

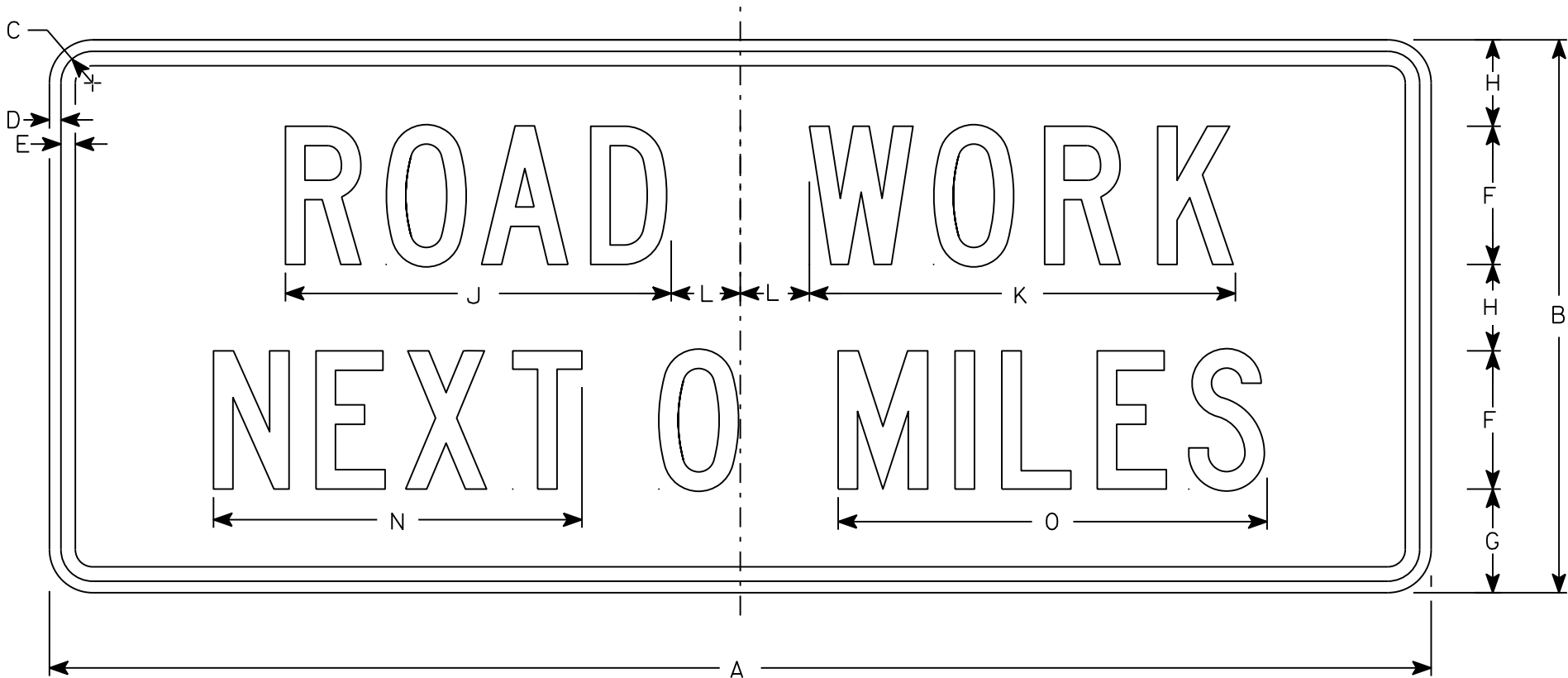
DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO:

SHEET NO:

E





G20-1

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Round distance to nearest whole Mile and substitute appropriate numerals and optically adjust spacing to achieve proper balance

| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I | J      | K      | L | M | N  | O      | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|---|--------|--------|---|---|----|--------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |       |   |        |        |   |   |    |        |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 60 | 24 | 1 3⁄8 | 1⁄2 | 5⁄8 | 6 | 4 1⁄2 | 3 3⁄4 |   | 16 3⁄4 | 18 1⁄2 | 3 |   | 16 | 18 5⁄8 |   |   |   |   |   |   |   |   |   |   |   | 10              |
| 3    |    |    |       |     |     |   |       |       |   |        |        |   |   |    |        |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    | 60 | 24 | 1 3⁄8 | 1⁄2 | 5⁄8 | 6 | 4 1⁄2 | 3 3⁄4 |   | 16 3⁄4 | 18 1⁄2 | 3 |   | 16 | 18 5⁄8 |   |   |   |   |   |   |   |   |   |   |   | 10              |
| 5    |    |    |       |     |     |   |       |       |   |        |        |   |   |    |        |   |   |   |   |   |   |   |   |   |   |   |                 |

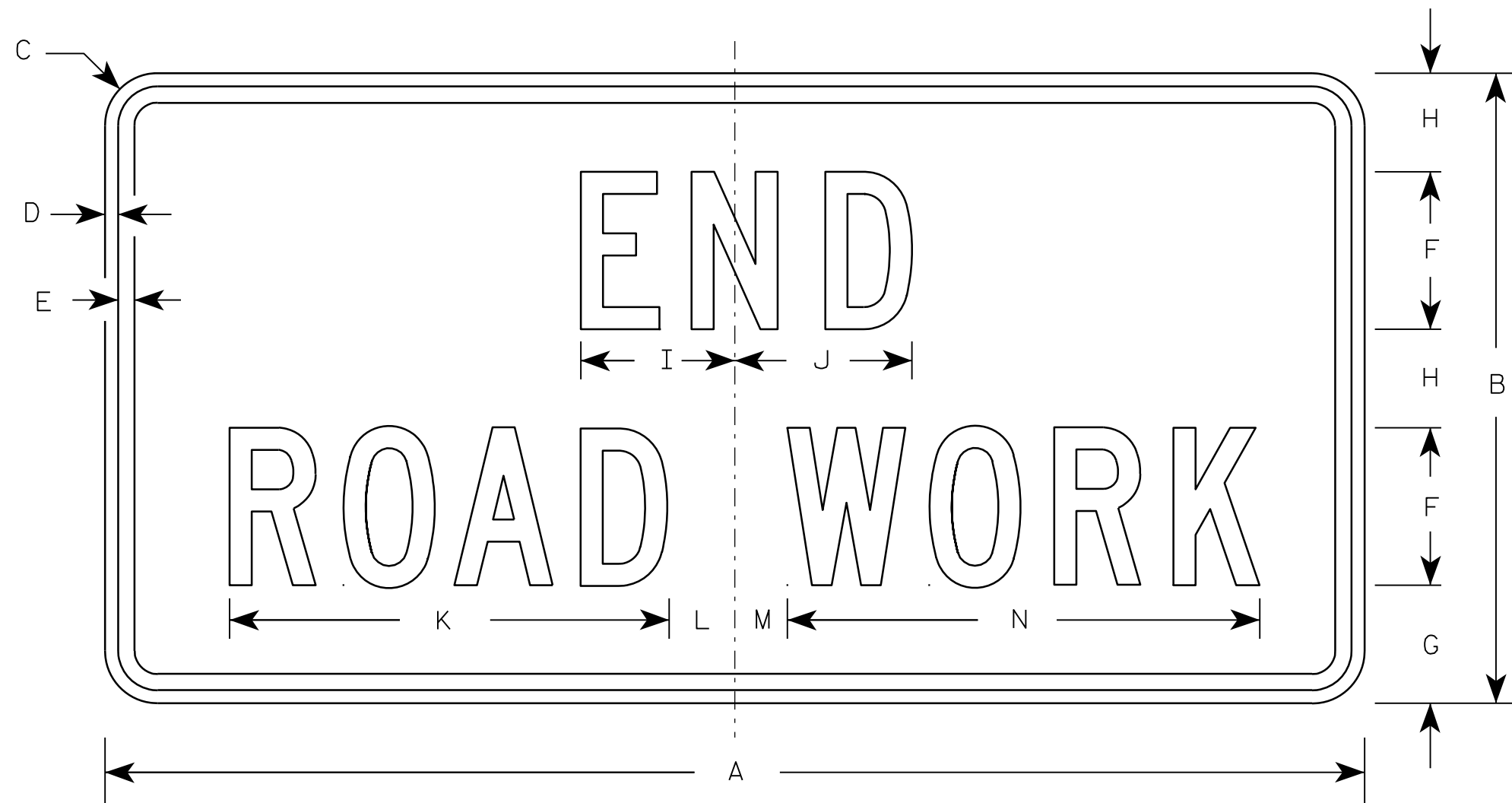
STANDARD SIGN  
G20-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/14/17 PLATE NO. G20-1.8

7



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

Metric equivalent  
for this sign is:

| SIZE |                  |
|------|------------------|
| 1    | 900 mm X 450 mm  |
| 2    | 1200 mm X 600 mm |
| 3    | 1200 mm X 600 mm |
| 4    | 1200 mm X 600 mm |
| 5    | 1200 mm X 600 mm |

| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I     | J     | K      | L     | M     | N      | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. | Area<br>m <sup>2</sup> |
|------|----|----|-------|-----|-----|---|-------|-------|-------|-------|--------|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|------------------------|
| 1    | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 4 | 3 3/4 | 2 1/2 | 4 1/8 | 4 1/8 | 11 1/8 | 2     | 1     | 12 1/8 |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             | 0.41                   |
| 2    | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             | 0.72                   |
| 3    | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             | 0.72                   |
| 4    | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             | 0.72                   |
| 5    | 48 | 24 | 1 1/2 | 1/2 | 5/8 | 6 | 4 1/2 | 3 3/4 | 5 7/8 | 6 3/4 | 16 3/4 | 2 1/2 | 1 3/4 | 18 1/2 |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             | 0.72                   |

STANDARD SIGN  
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

PROJECT NO:

HWY:

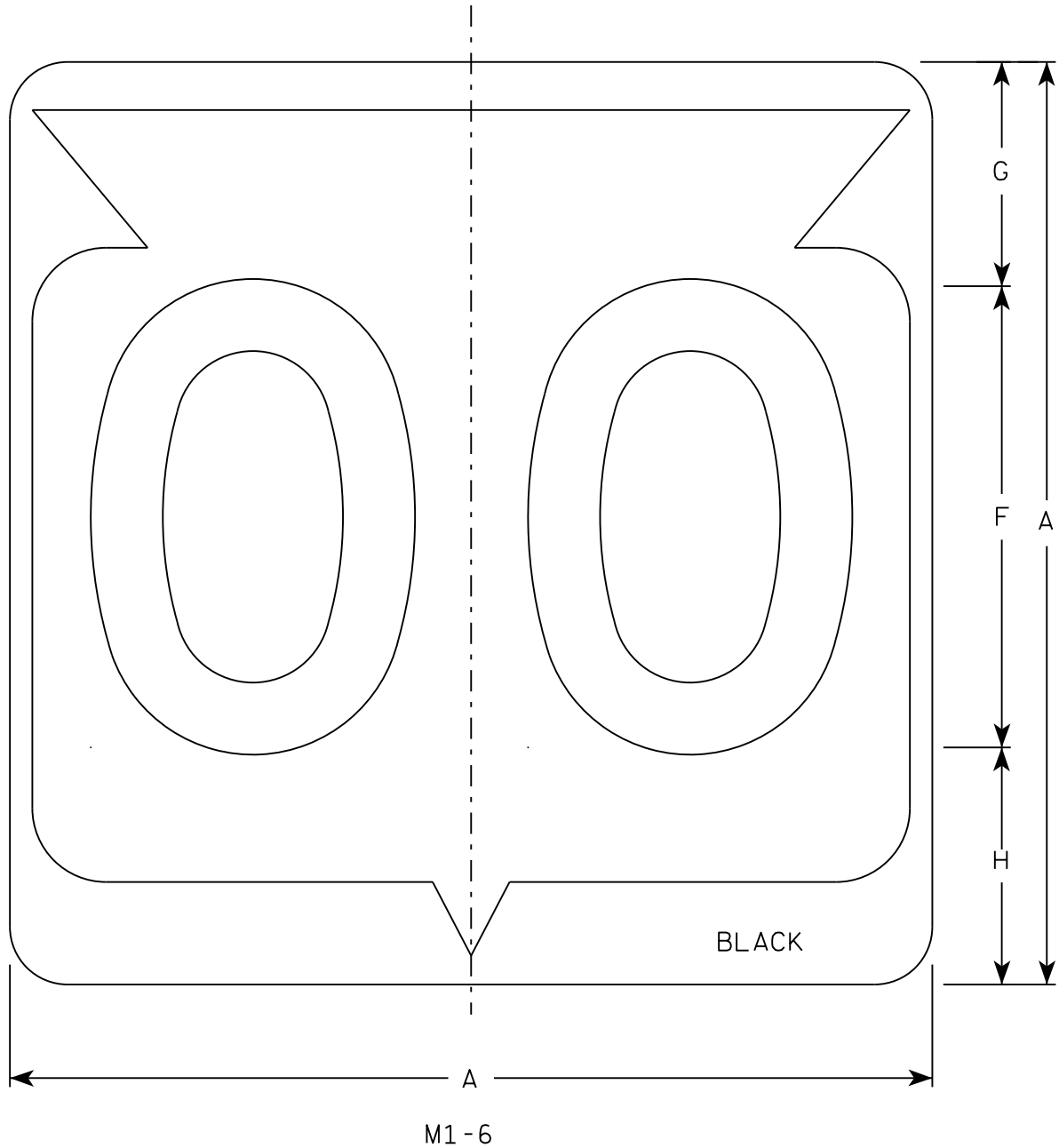
COUNTY:

SHEET NO:

E

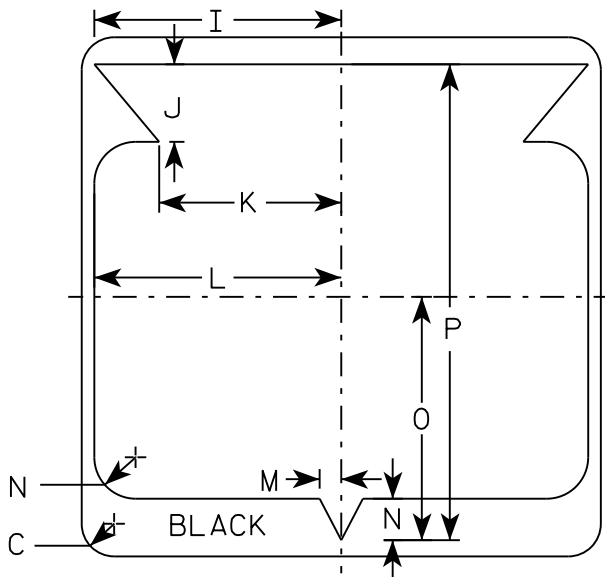
7

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - D except 3 number signs Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



7

| SIZE | A  | B | C     | D | E | F  | G     | H     | I      | J     | K      | L      | M     | N     | O      | P      | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|---|---|----|-------|-------|--------|-------|--------|--------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |       |   |   |    |       |       |        |       |        |        |       |       |        |        |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 24 |   | 1 1/2 |   |   | 12 | 5 1/2 | 6 1/2 | 10 1/4 | 2 1/2 | 8 7/8  | 11 1/2 | 1     | 1 7/8 | 11 1/4 | 21 7/8 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 3    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   |   |   |   |   |   |   |   |   |   | 9.0             |

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

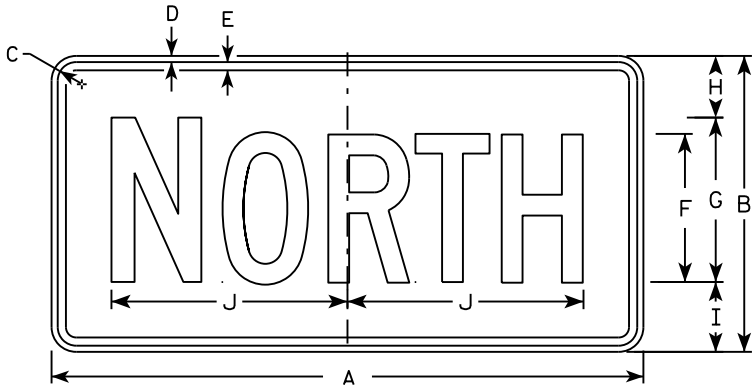
E

STATE ROUTE MARKER  
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

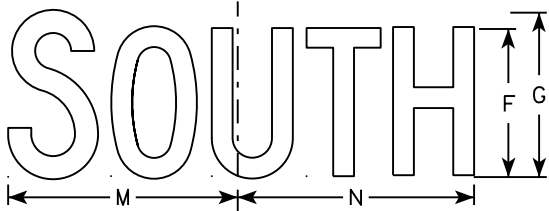
DATE 3/16/18 PLATE NO. M1-6.10



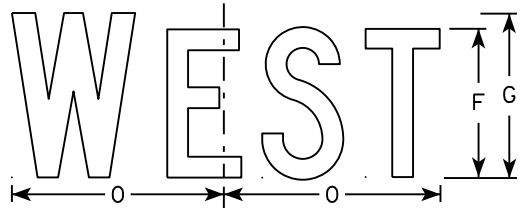
M3-1  
MM3-1  
MP3-1



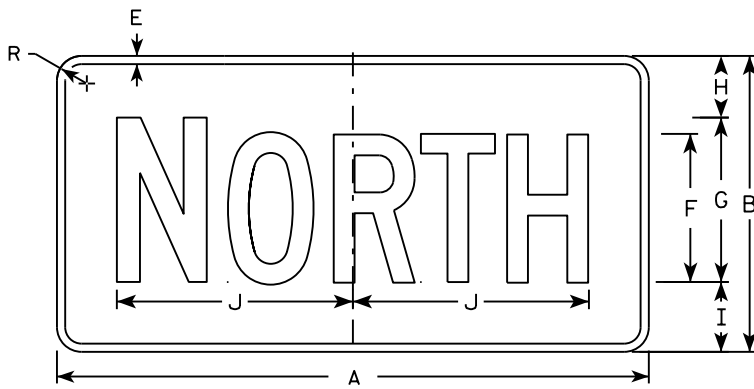
M3-2  
MM3-2  
MP3-2



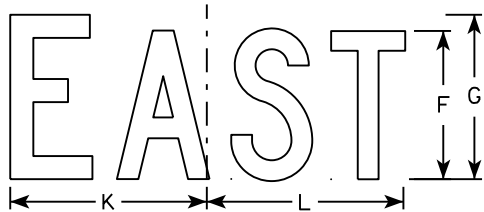
M3-3  
MM3-3  
MP3-3



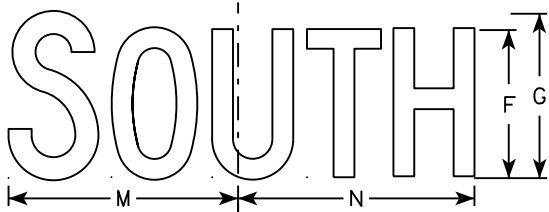
M3-4  
MM3-4  
MP3-4



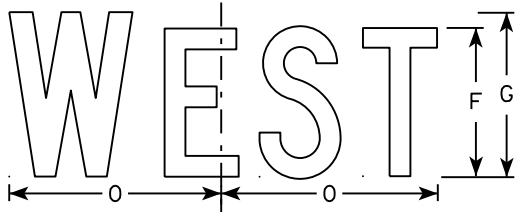
MB3-1  
MK3-1  
MN3-1



MB3-2  
MK3-2  
MN3-2



MB3-3  
MK3-3  
MN3-3



MB3-4  
MK3-4  
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:  
Background - See note 5  
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White  
Message - Black  
MB3-1 thru MB3-4 Background - Blue  
Message - White  
MK3-1 thru MK3-4 Background - Green  
Message - White  
MM3-1 thru MM3-4 Background - White  
Message - Green  
MN3-1 thru MN3-4 Background - Brown  
Message - White  
MP3-1 thru MP3-4 Background - White  
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

| SIZE | A  | B  | C     | D   | E   | F | G  | H     | I     | J      | K     | L      | M      | N      | O     | P | Q | R     | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|-------|-------|--------|-------|--------|--------|--------|-------|---|---|-------|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |    |       |       |        |       |        |        |        |       |   |   |       |   |   |   |   |   |   |   |   |                 |
| 2    | 24 | 12 | 1 1/8 | 3/8 | 3/8 | 6 | 7  | 2 1/4 | 2 3/4 | 10 1/4 | 7 7/8 | 8 3/8  | 10 1/4 | 9 3/4  | 8 3/4 |   |   | 1 1/2 |   |   |   |   |   |   |   |   | 2.00            |
| 3    | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   | 1 1/2 |   |   |   |   |   |   |   |   | 4.5             |
| 4    | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   | 1 1/2 |   |   |   |   |   |   |   |   | 4.5             |
| 5    | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   | 1 1/2 |   |   |   |   |   |   |   |   | 4.5             |

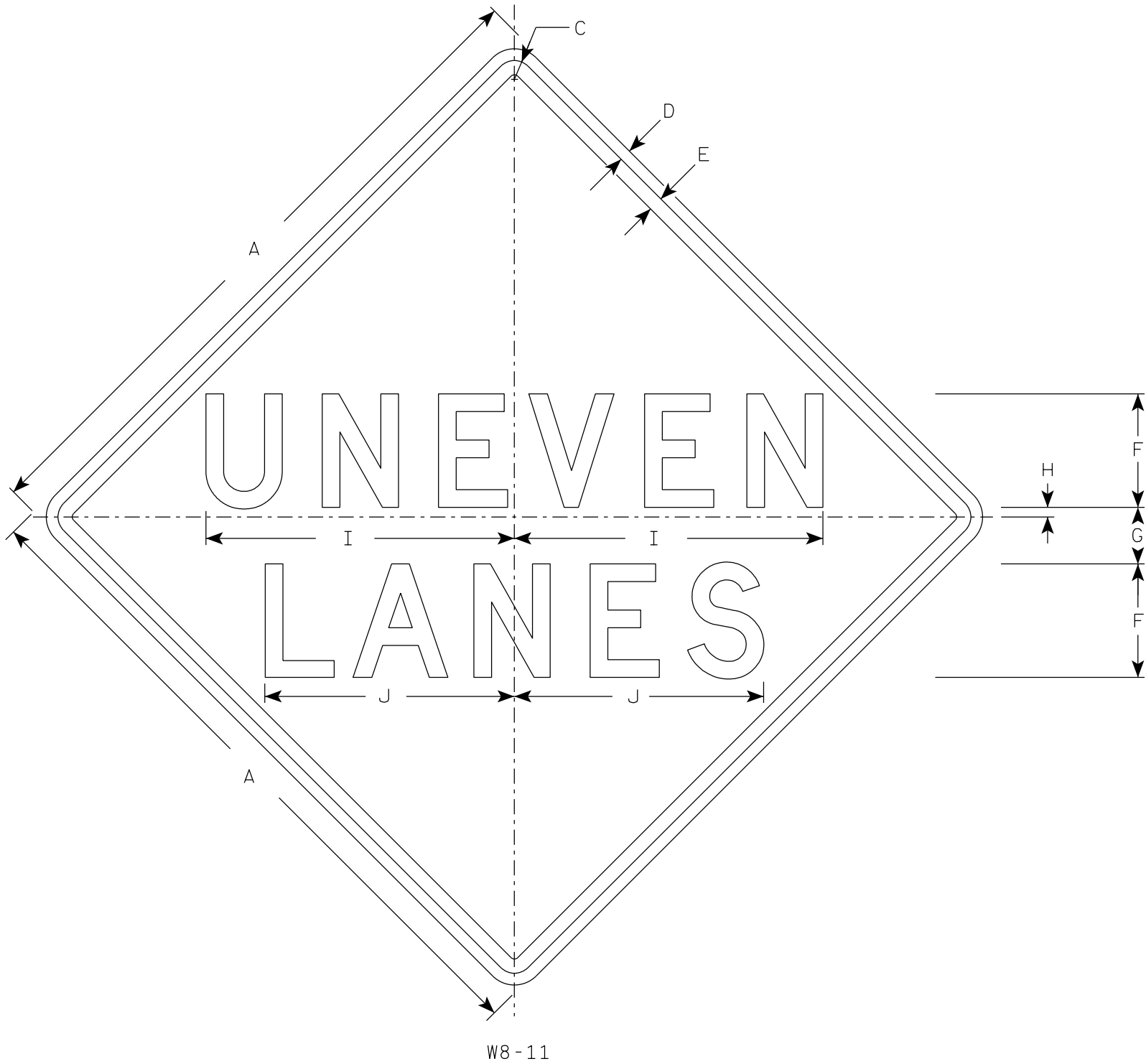
STANDARD SIGNS  
M3-1 thru M3-4  
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

| SIZE | A  | B | C     | D   | E   | F | G | H   | I      | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|---|-----|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 6 | 3 | 1/2 | 16 3/8 | 13 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4 | 1   | 21 3/4 | 17 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

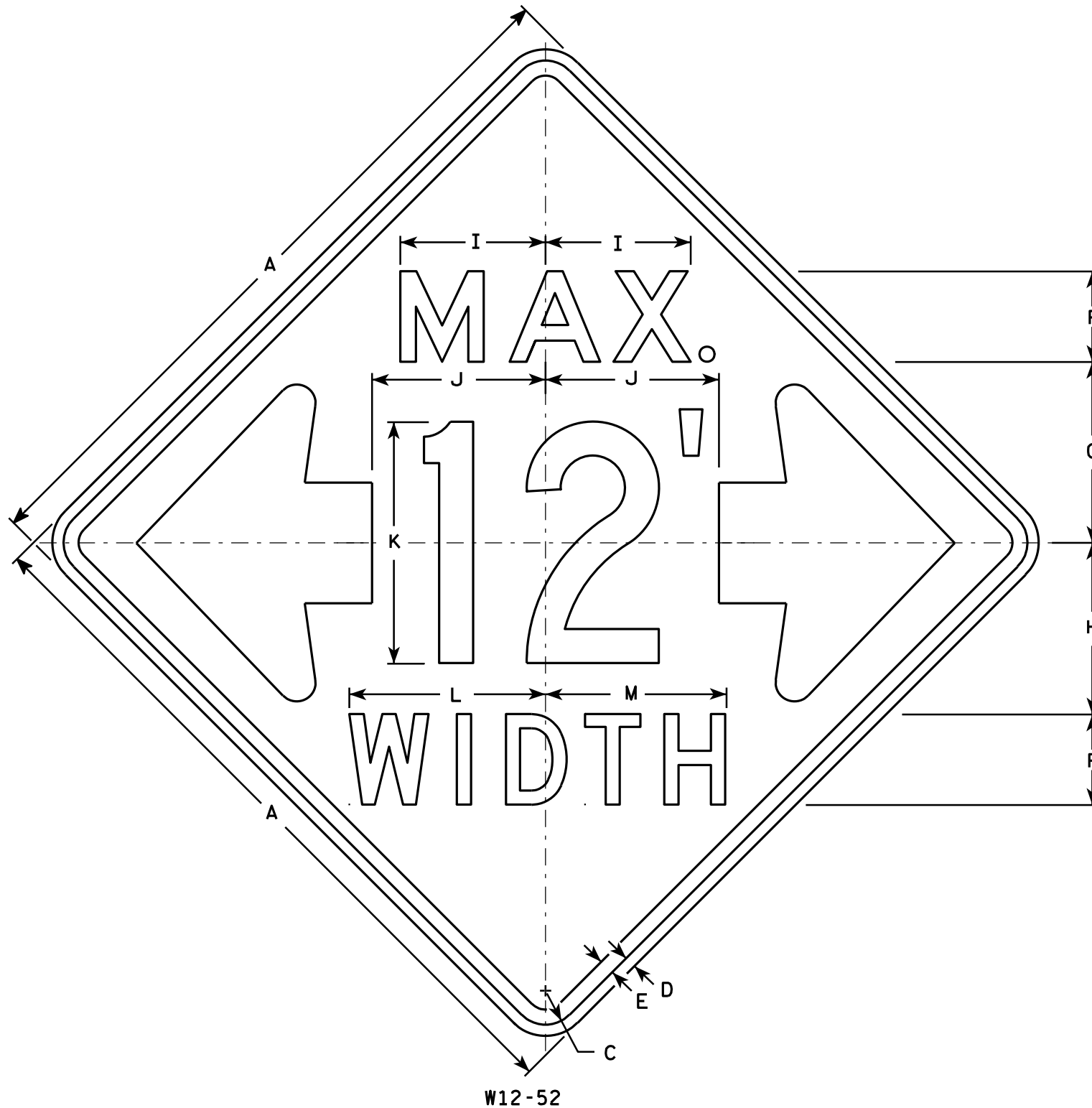
STANDARD SIGN

W8-11

WISCONSIN DEPT OF TRANSPORTATION

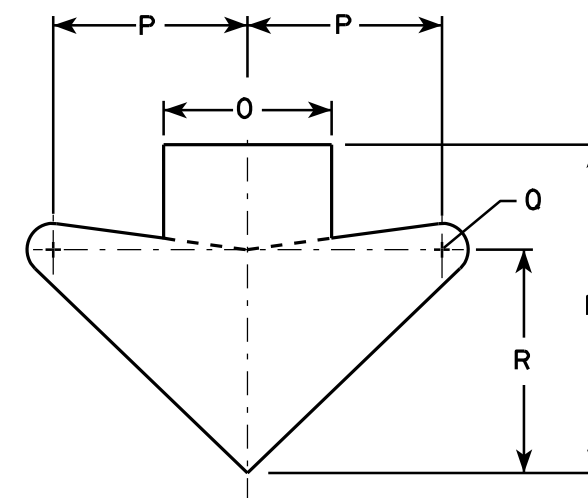
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/20/2020 PLATE NO. W8-11.5



# NOTES

- Sign Is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - Orange  
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- The top line is series E, the numerals are series C, and the bottom line is series D.
- Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

| SIZE | A  | B | C     | D   | E | F | G  | H      | I     | J      | K  | L  | M  | N      | O | P     | Q     | R      | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|---|---|----|--------|-------|--------|----|----|----|--------|---|-------|-------|--------|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |       |     |   |   |    |        |       |        |    |    |    |        |   |       |       |        |   |   |   |   |   |   |   |   |                 |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1 | 6 | 12 | 11 3/8 | 9 5/8 | 11 1/2 | 16 | 13 | 12 | 15 5/8 | 8 | 9 1/4 | 1 1/4 | 10 5/8 |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1 | 6 | 12 | 11 3/8 | 9 5/8 | 11 1/2 | 16 | 13 | 12 | 15 5/8 | 8 | 9 1/4 | 1 1/4 | 10 5/8 |   |   |   |   |   |   |   |   | 16.0            |
| 3    |    |   |       |     |   |   |    |        |       |        |    |    |    |        |   |       |       |        |   |   |   |   |   |   |   |   |                 |
| 4    |    |   |       |     |   |   |    |        |       |        |    |    |    |        |   |       |       |        |   |   |   |   |   |   |   |   |                 |
| 5    |    |   |       |     |   |   |    |        |       |        |    |    |    |        |   |       |       |        |   |   |   |   |   |   |   |   |                 |

## STANDARD SIGN W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
For State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

PROJECT NO:

HWY:

COUNTY:

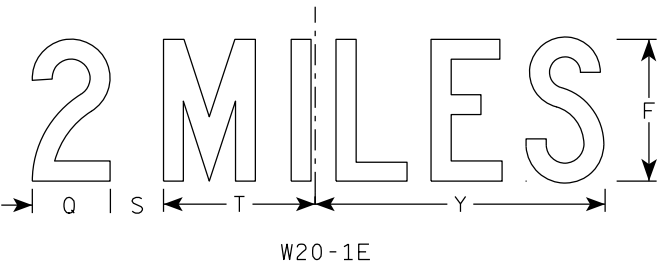
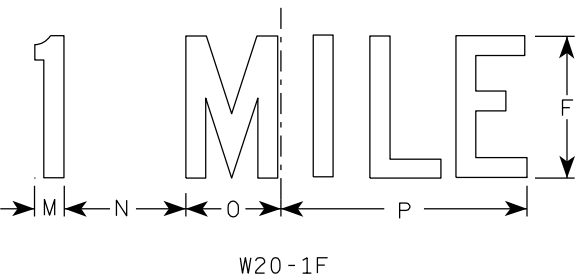
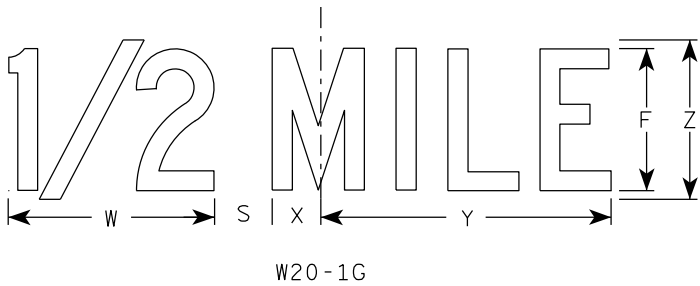
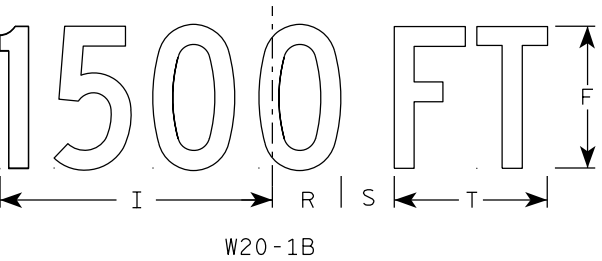
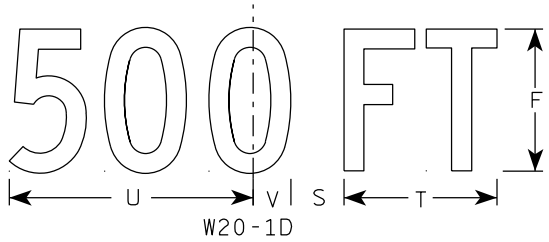
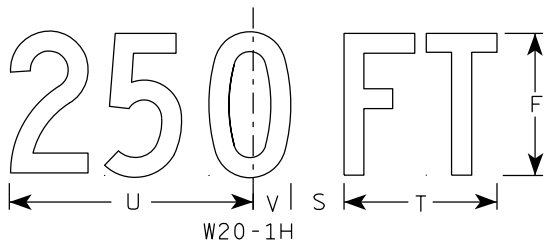
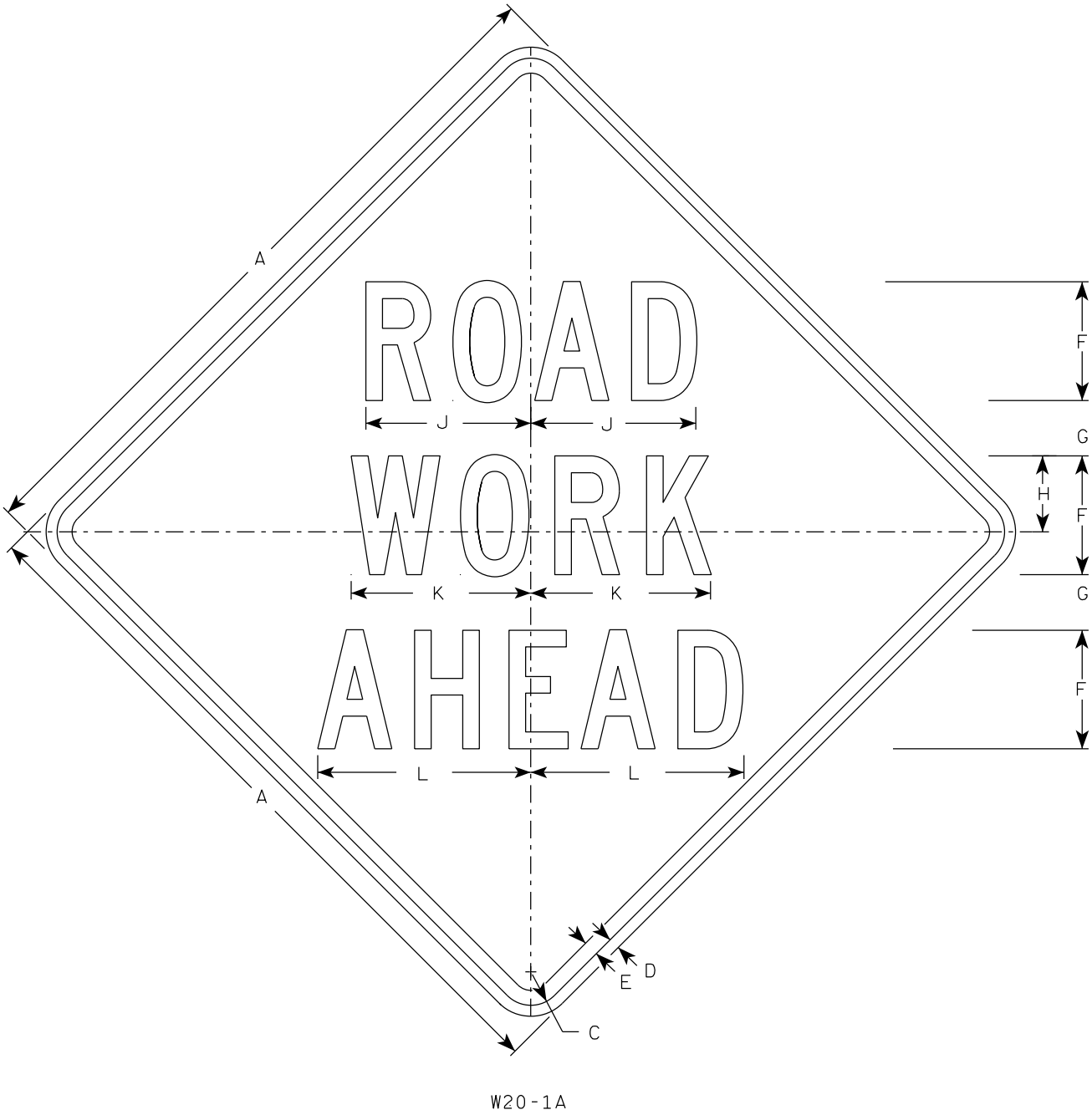
SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



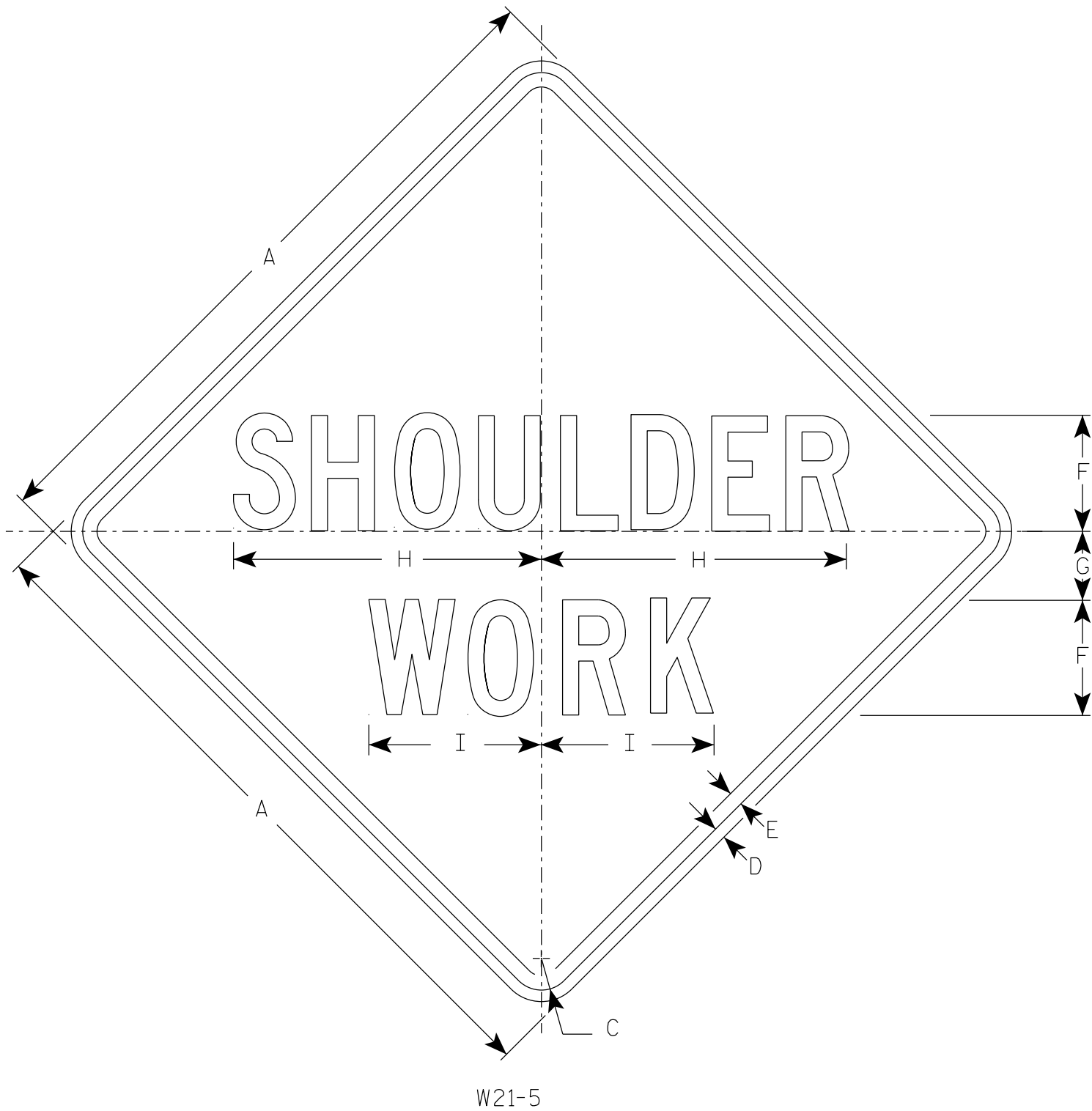
| SIZE | A  | B | C     | D   | E   | F | G     | H     | I      | J      | K      | L      | M     | N     | O     | P      | Q     | R     | S     | T     | U      | V     | W      | X     | Y      | Z | A <sub>req</sub><br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|--------|--------|--------|--------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|--------|-------|--------|---|-----------------------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 5 | 2 5/8 | 3 1/4 | 10 1/8 | 7      | 7 5/8  | 8 7/8  | 1 1/8 | 4 1/2 | 3 1/2 | 9      | 3 1/4 | 2 1/2 | 2 1/4 | 5 5/8 | 9      | 1 3/8 | 8      | 1 3/4 | 10 3/4 | 6 | 9.0                         |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0                        |

STANDARD SIGN  
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A  | B | C     | D   | E   | F | G     | H      | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 6 | 3 1/2 | 16     | 9      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 21 3/8 | 11 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN

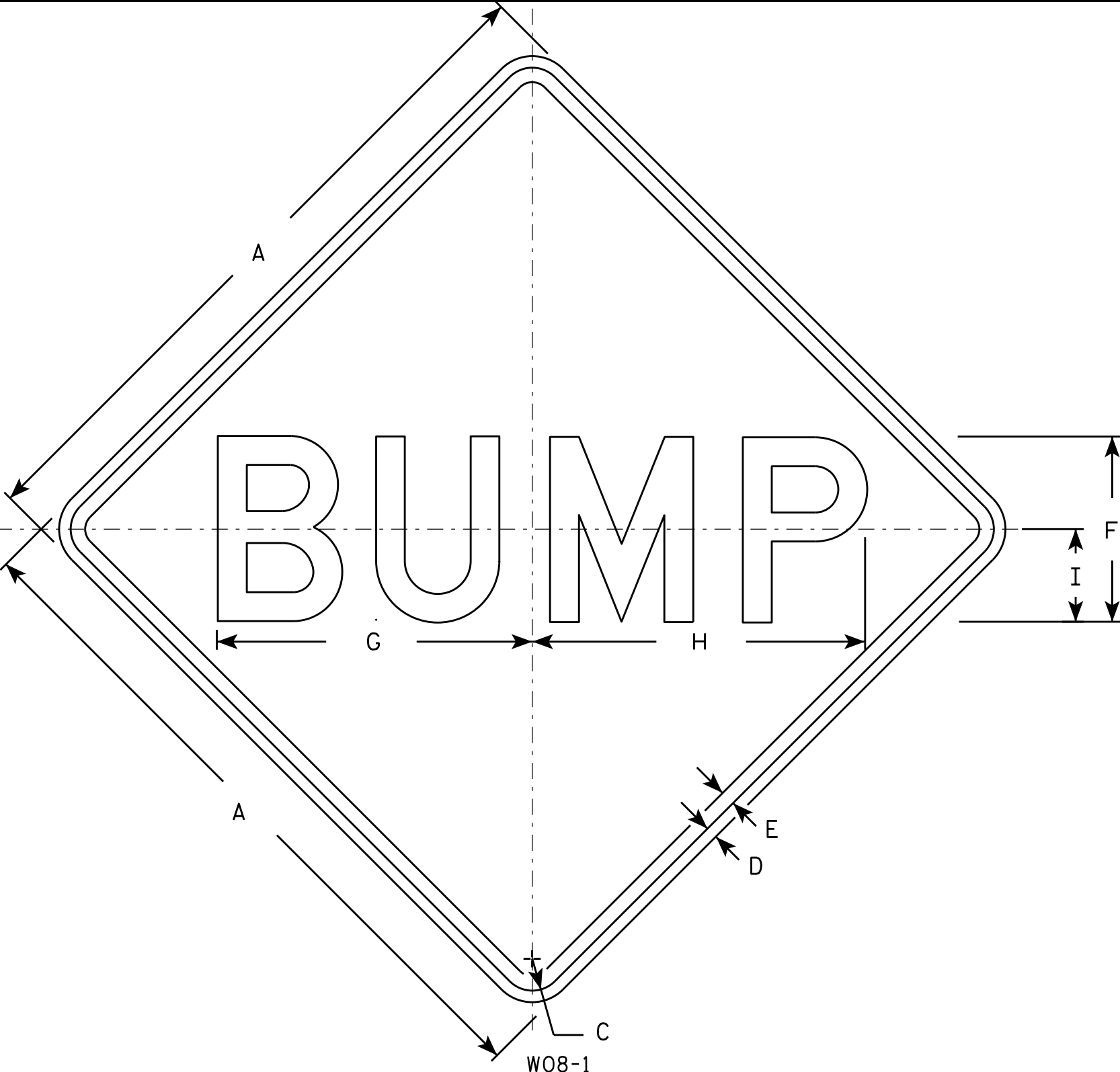
W21-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 4/30/2020 PLATE NO. W21-5.6





NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A  | B | C     | D   | E   | F  | G      | H      | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|----|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5⁄8 | 5⁄8 | 3⁄4 | 10 | 16 7⁄8 | 17 7⁄8 | 5 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1⁄4 | 3⁄4 | 1   | 12 | 20 3⁄8 | 21 5⁄8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1⁄4 | 3⁄4 | 1   | 12 | 20 3⁄8 | 21 5⁄8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1⁄4 | 3⁄4 | 1   | 12 | 20 3⁄8 | 21 5⁄8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1⁄4 | 3⁄4 | 1   | 12 | 20 3⁄8 | 21 5⁄8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1⁄4 | 3⁄4 | 1   | 12 | 20 3⁄8 | 21 5⁄8 | 6 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN

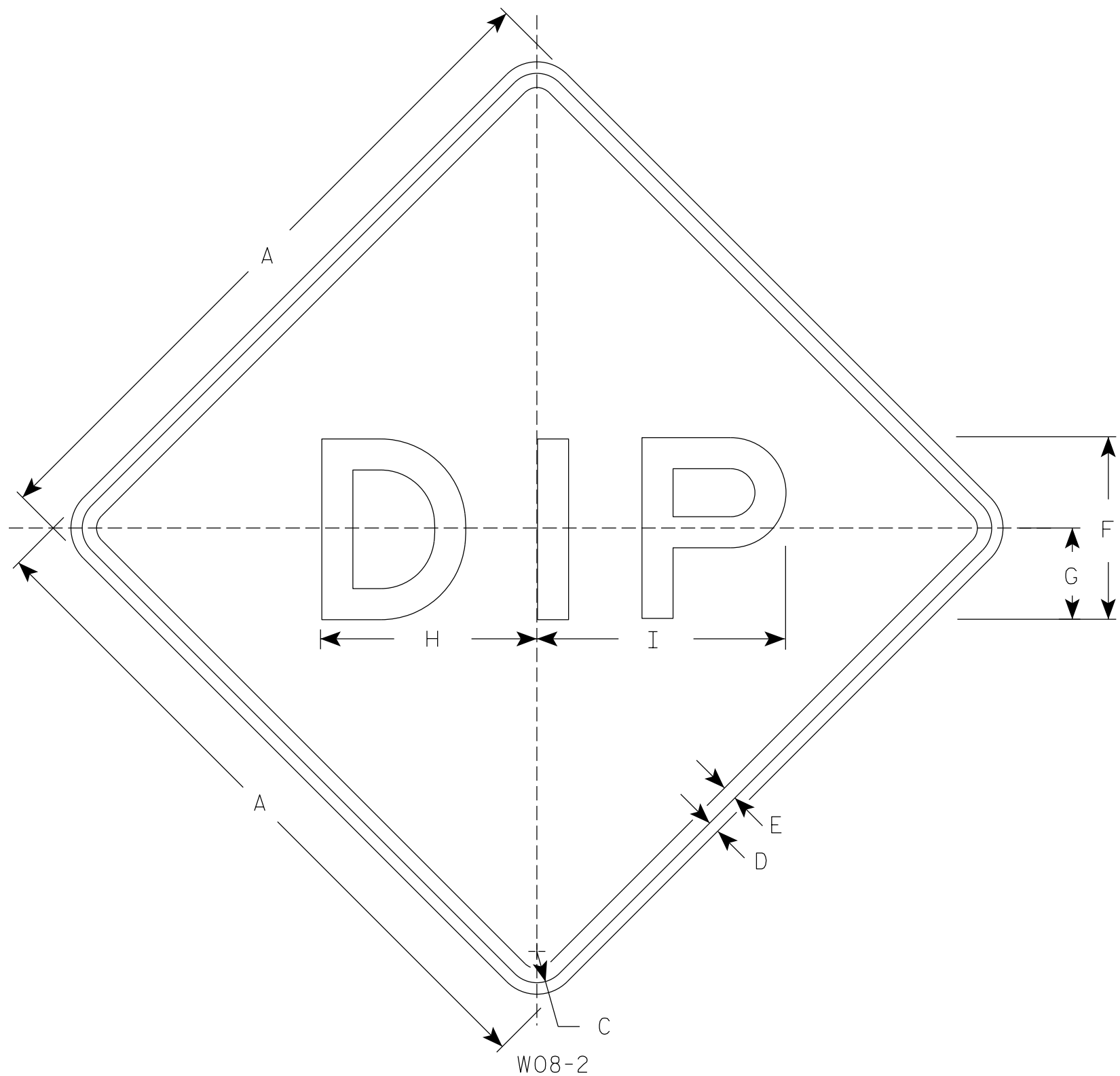
W08 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W08-1.1

7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

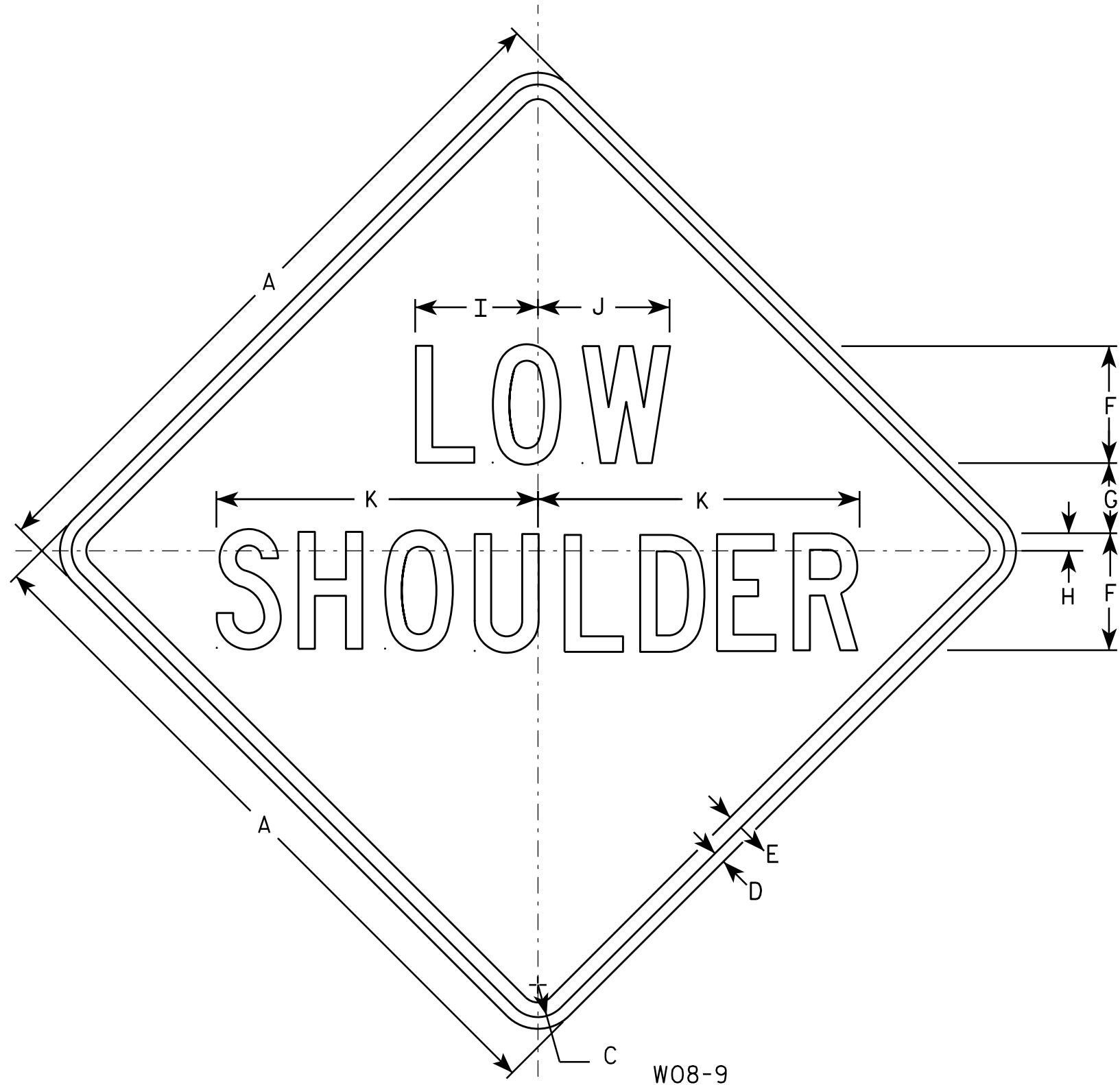
| SIZE | A  | B | C     | D   | E   | F  | G | H      | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|----|---|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 10 | 5 | 11 7/8 | 13 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 12 | 6 | 14 1/4 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN  
W08-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/7/19 PLATE NO. W08-2.2



W08-9

### NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I     | J     | K      | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|-------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 |   | 1 5/8 | 5/8 | 3/4 | 6 | 3 1/2 | 1     | 6 1/4 | 6 3/4 | 16 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2S   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 2M   | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 3    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 5     | 1 1/4 | 8 1/4 | 9     | 21 7/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

### STANDARD SIGN W08-9

WISCONSIN DEPT OF TRANSPORTATION

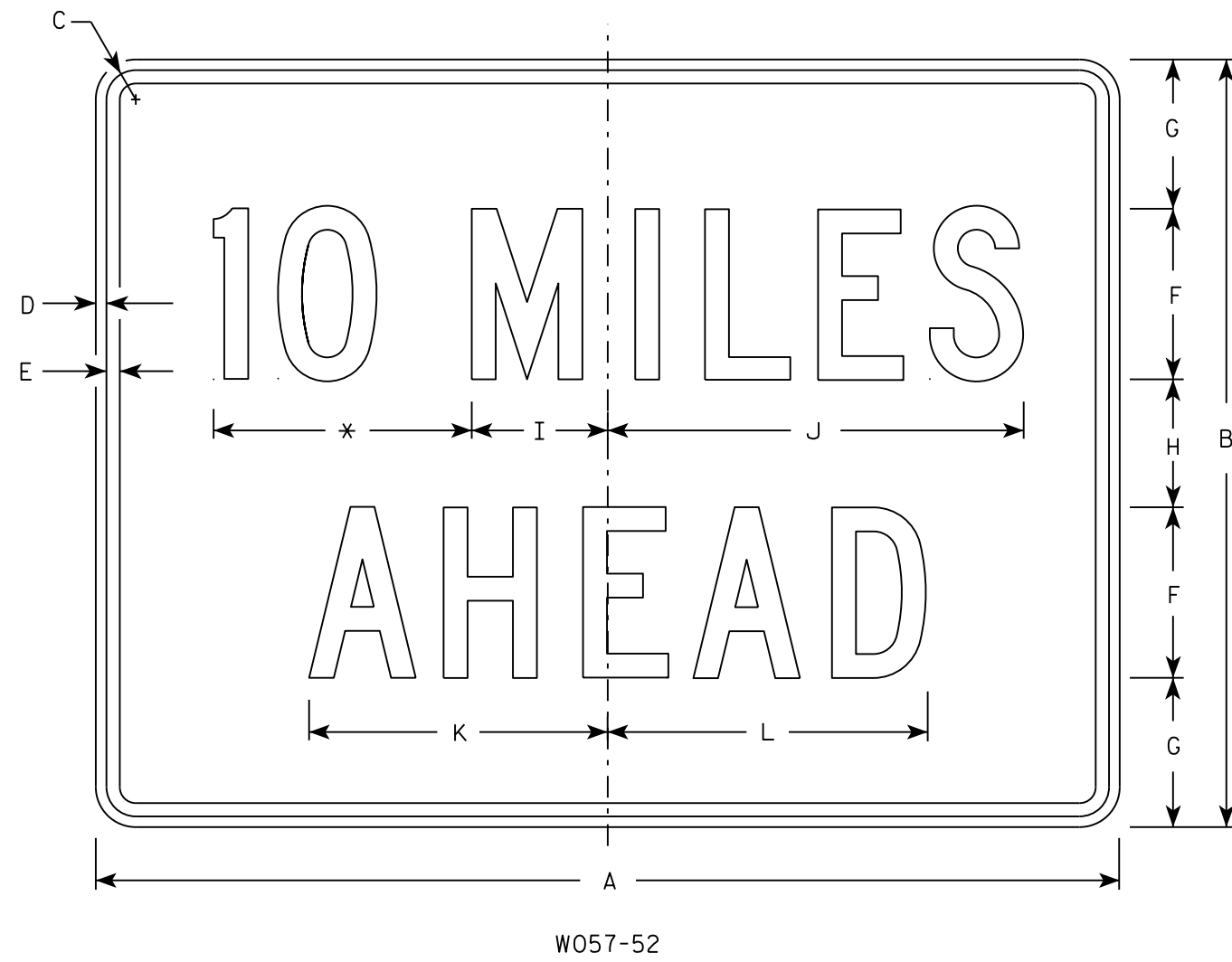
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 11/20/13 PLATE NO. W08-9.1

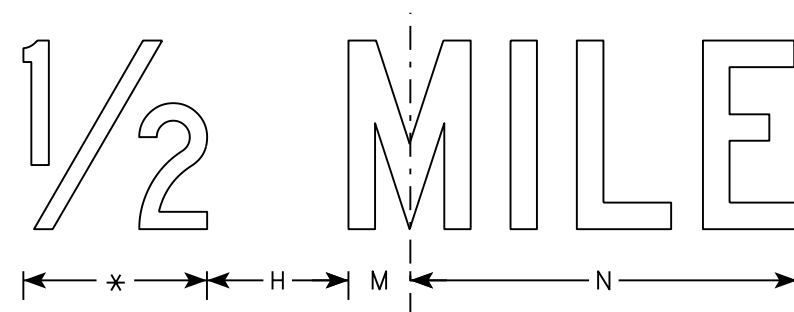
PROJECT NO: HWY: COUNTY: SHEET NO: E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.



W057-52



\* See note 5

| SIZE | A  | B  | C     | D   | E   | F | G     | H | I     | J      | K      | L      | M     | N      | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|---|-------|--------|--------|--------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 | 24 | 1 1/8 | 3/8 | 1/2 | 6 | 4 1/2 | 3 | 4 3/4 | 14 5/8 | 10 5/8 | 11 3/8 | 2     | 12     |   |   |   |   |   |   |   |   |   |   |   |   | 6.0             |
| 2S   | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 2M   | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 3    | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 4    | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 5    | 48 | 36 | 1 3/8 | 1/2 | 5/8 | 8 | 7     | 6 | 6 3/8 | 19 1/2 | 14     | 15     | 2 3/4 | 16 3/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |

STANDARD SIGN

W057-52

WISCONSIN DEPT OF TRANSPORTATION

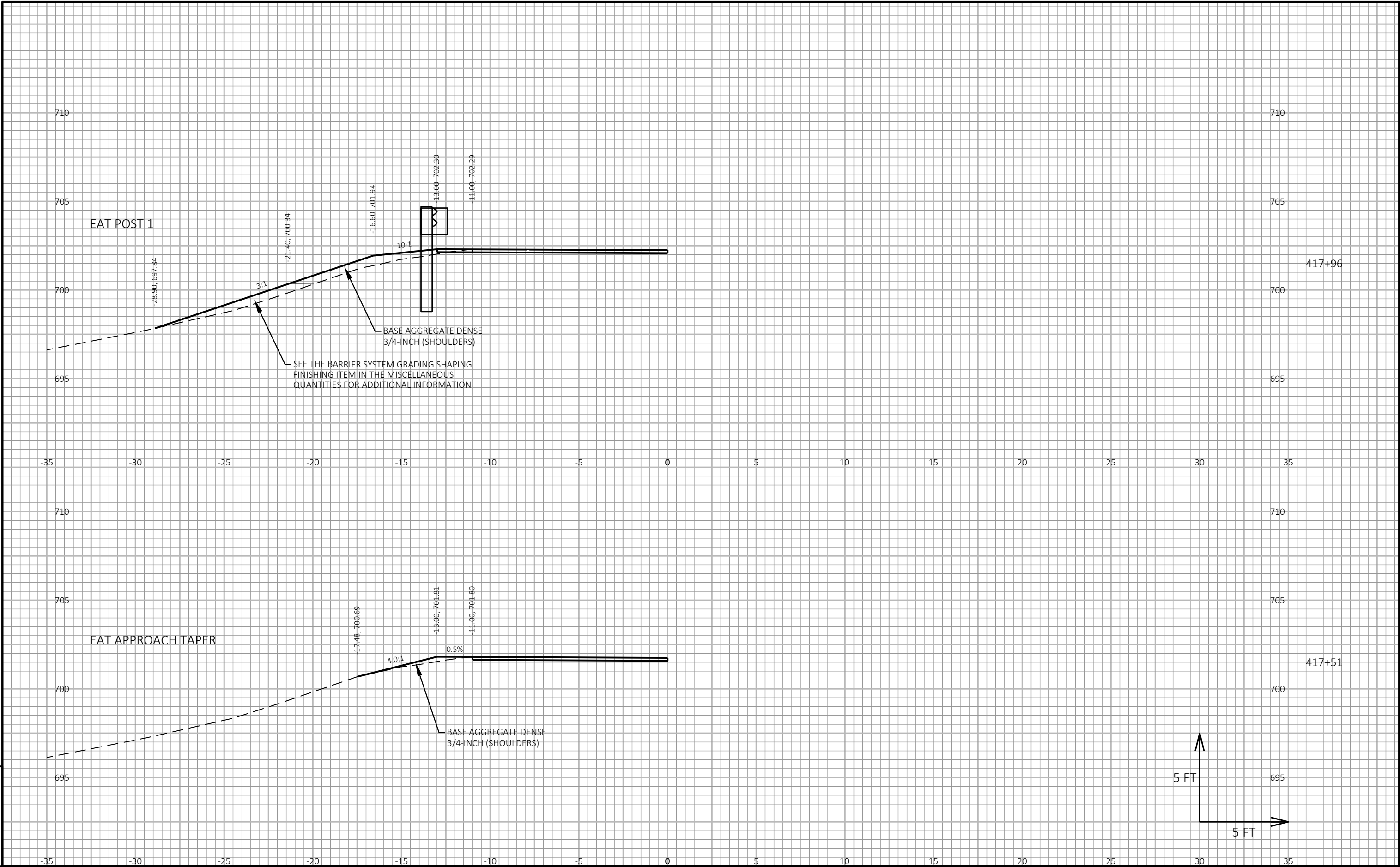
APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/21/17

PLATE NO. W057-52.2

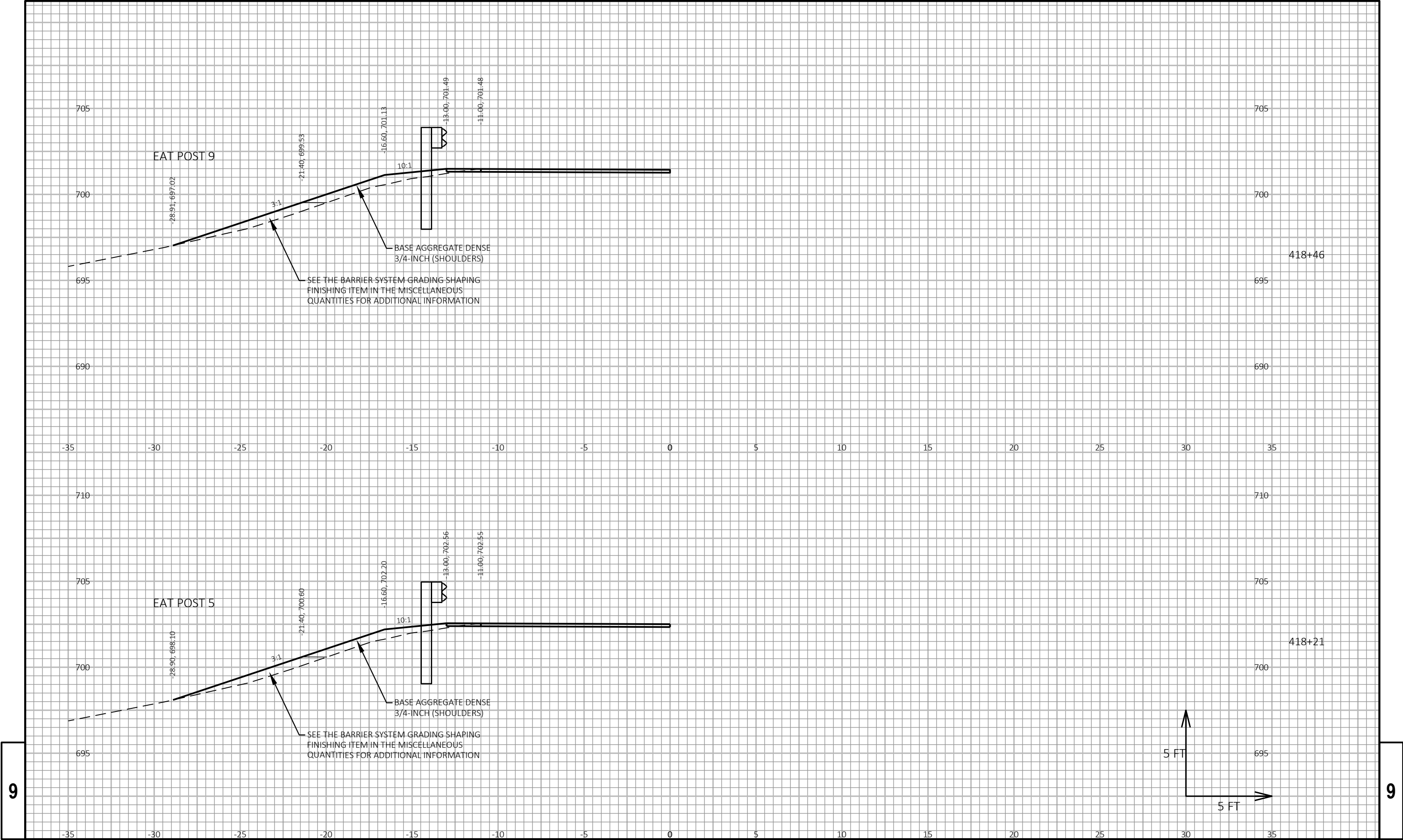
|             |      |         |           |   |
|-------------|------|---------|-----------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: | E |
|-------------|------|---------|-----------|---|



9

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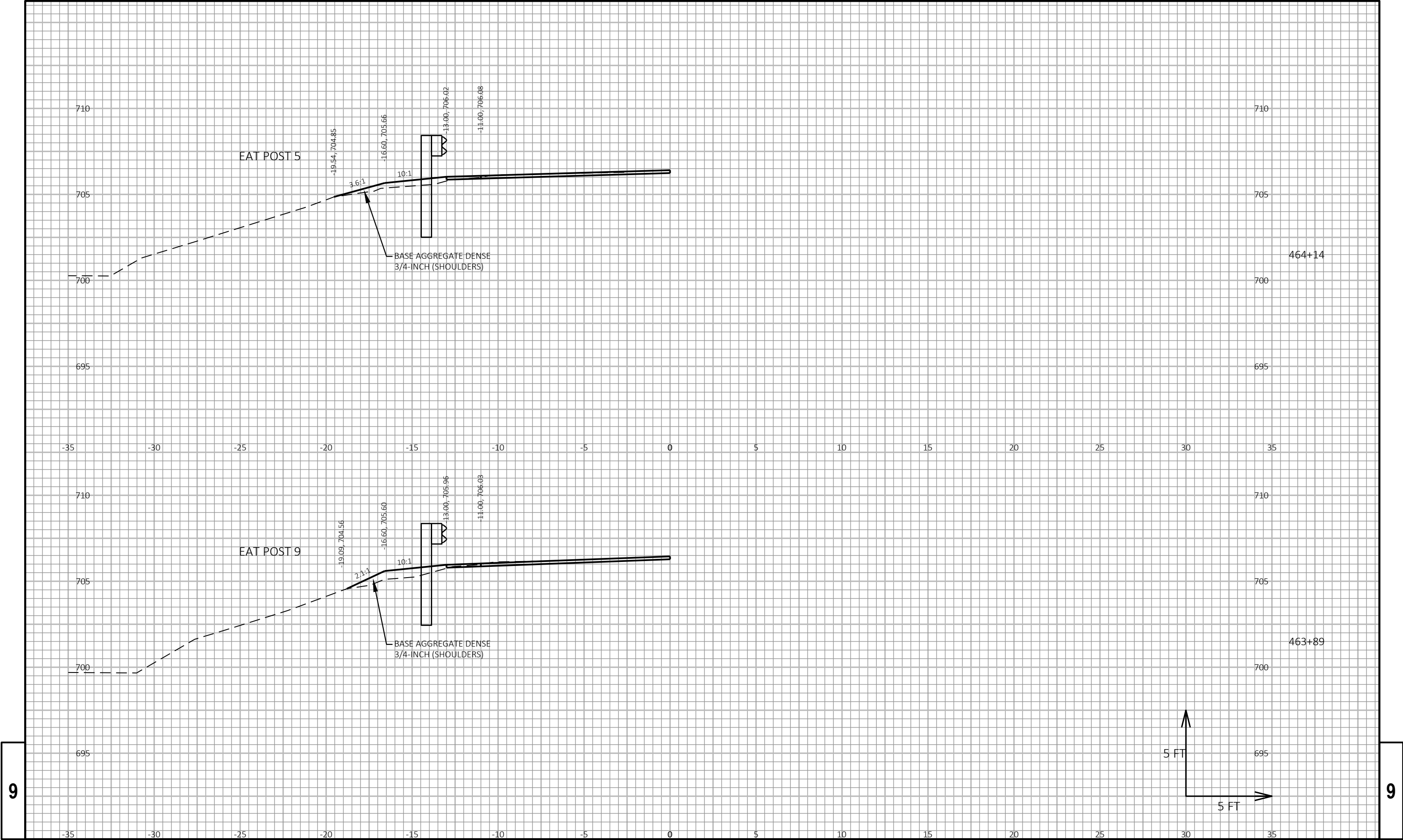
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|------------------------|--------------|--------------|-------------------------|---------|
| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | CROSS SECTIONS: STH 133 | SHEET E |
|------------------------|--------------|--------------|-------------------------|---------|



9

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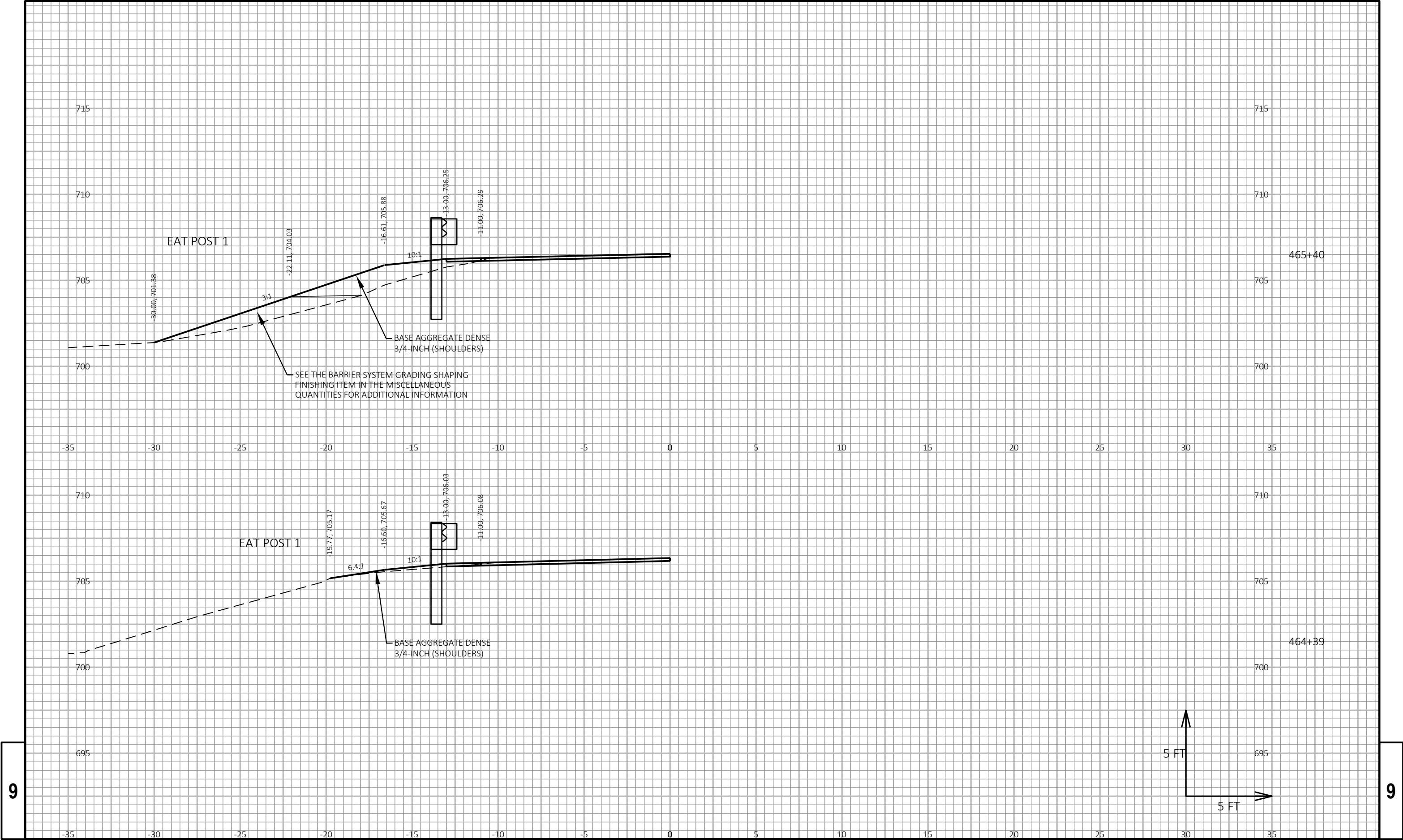




9

9

|                        |              |              |                         |         |
|------------------------|--------------|--------------|-------------------------|---------|
| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | CROSS SECTIONS: STH 133 | SHEET E |
|------------------------|--------------|--------------|-------------------------|---------|

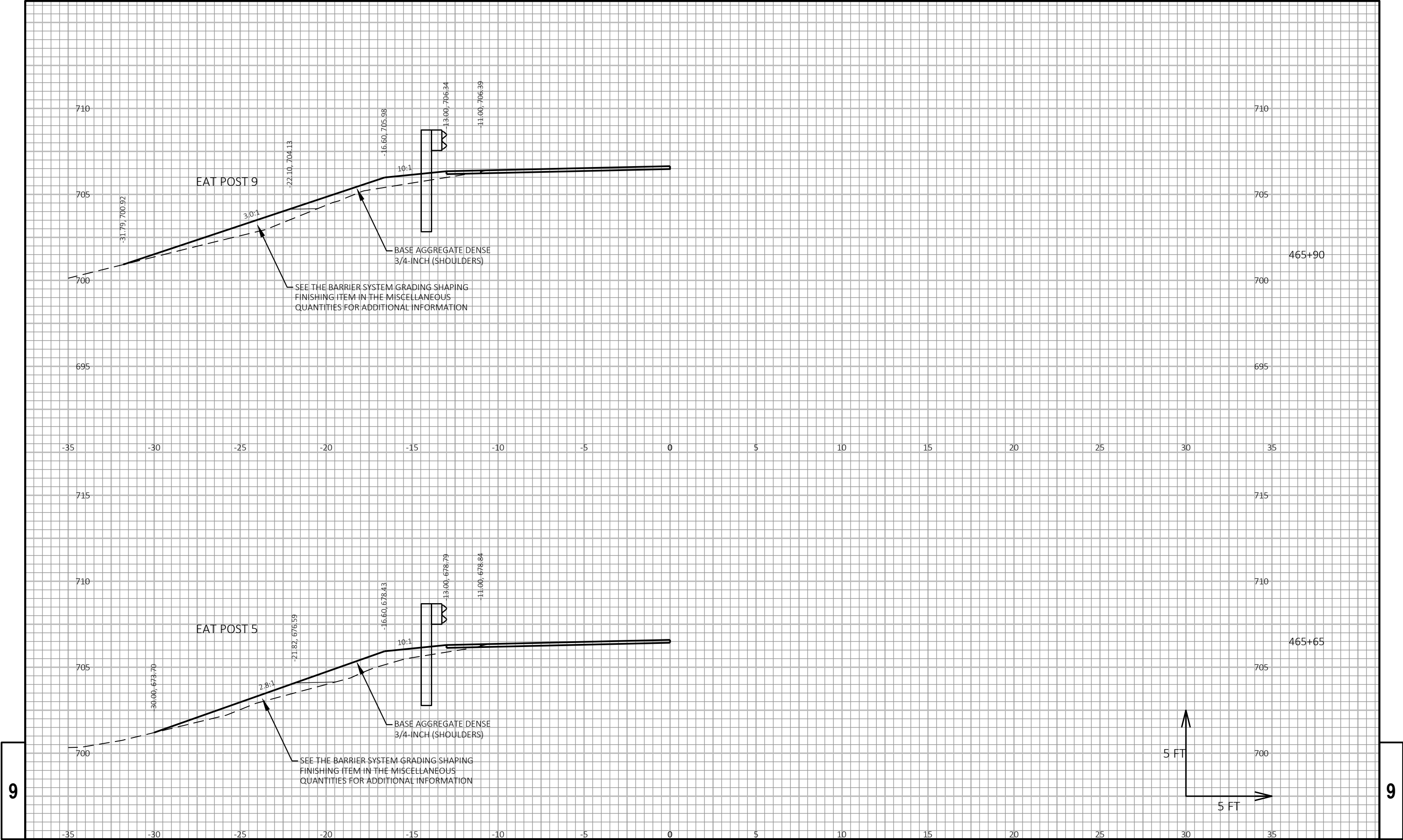


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9

|                        |              |              |                         |         |
|------------------------|--------------|--------------|-------------------------|---------|
| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | CROSS SECTIONS: STH 133 | SHEET E |
|------------------------|--------------|--------------|-------------------------|---------|

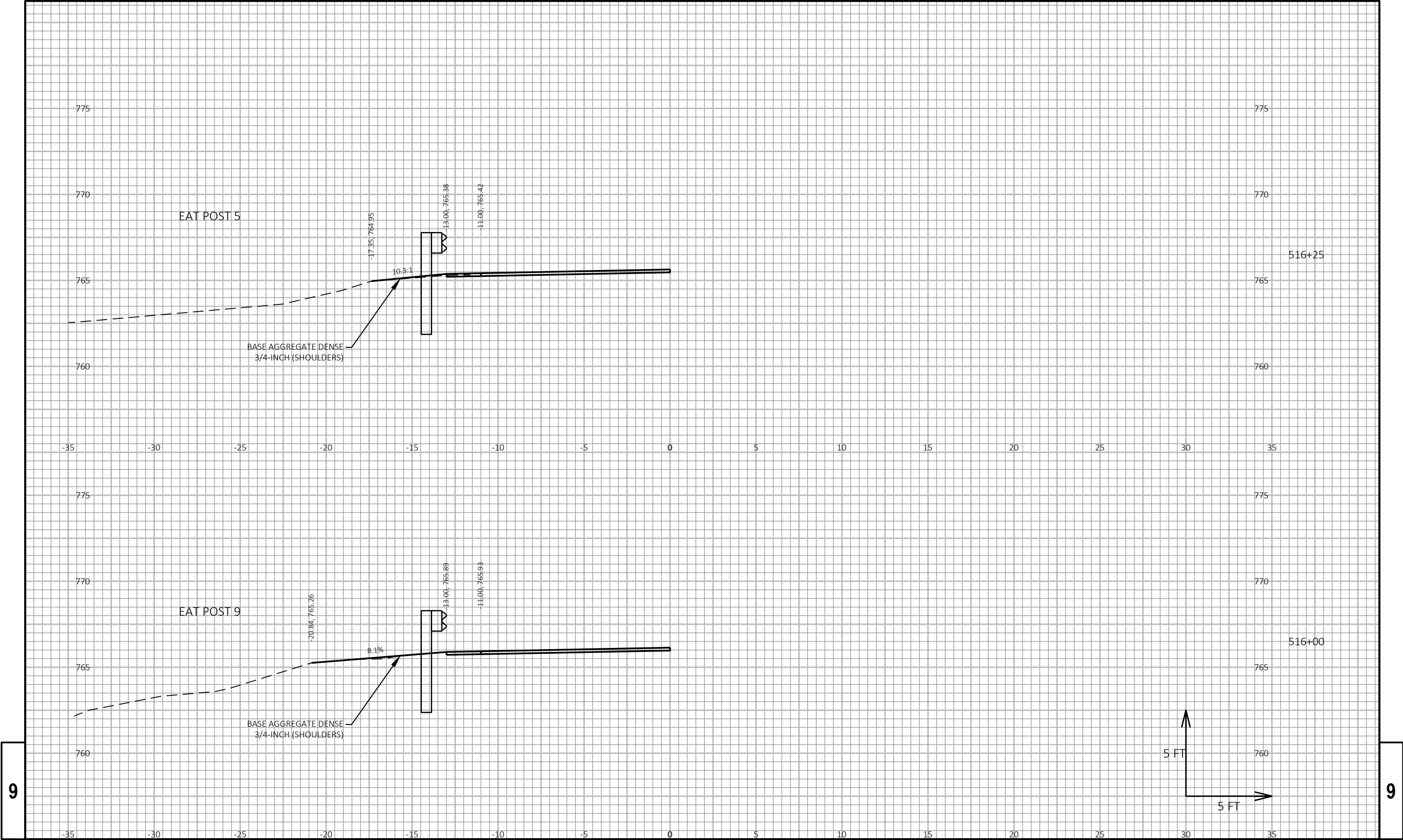




9

9

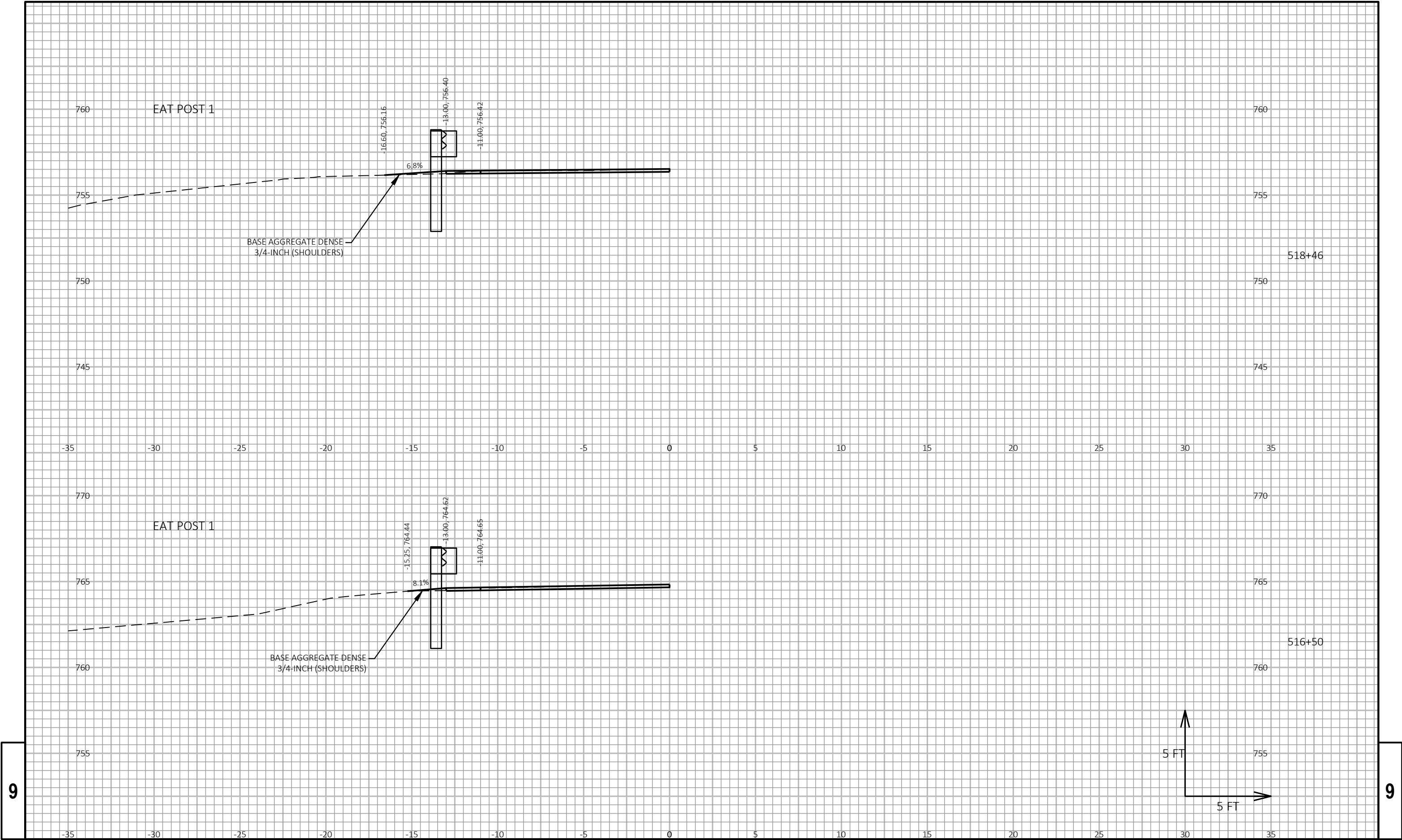
|                        |              |              |                         |         |
|------------------------|--------------|--------------|-------------------------|---------|
| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | CROSS SECTIONS: STH 133 | SHEET E |
|------------------------|--------------|--------------|-------------------------|---------|



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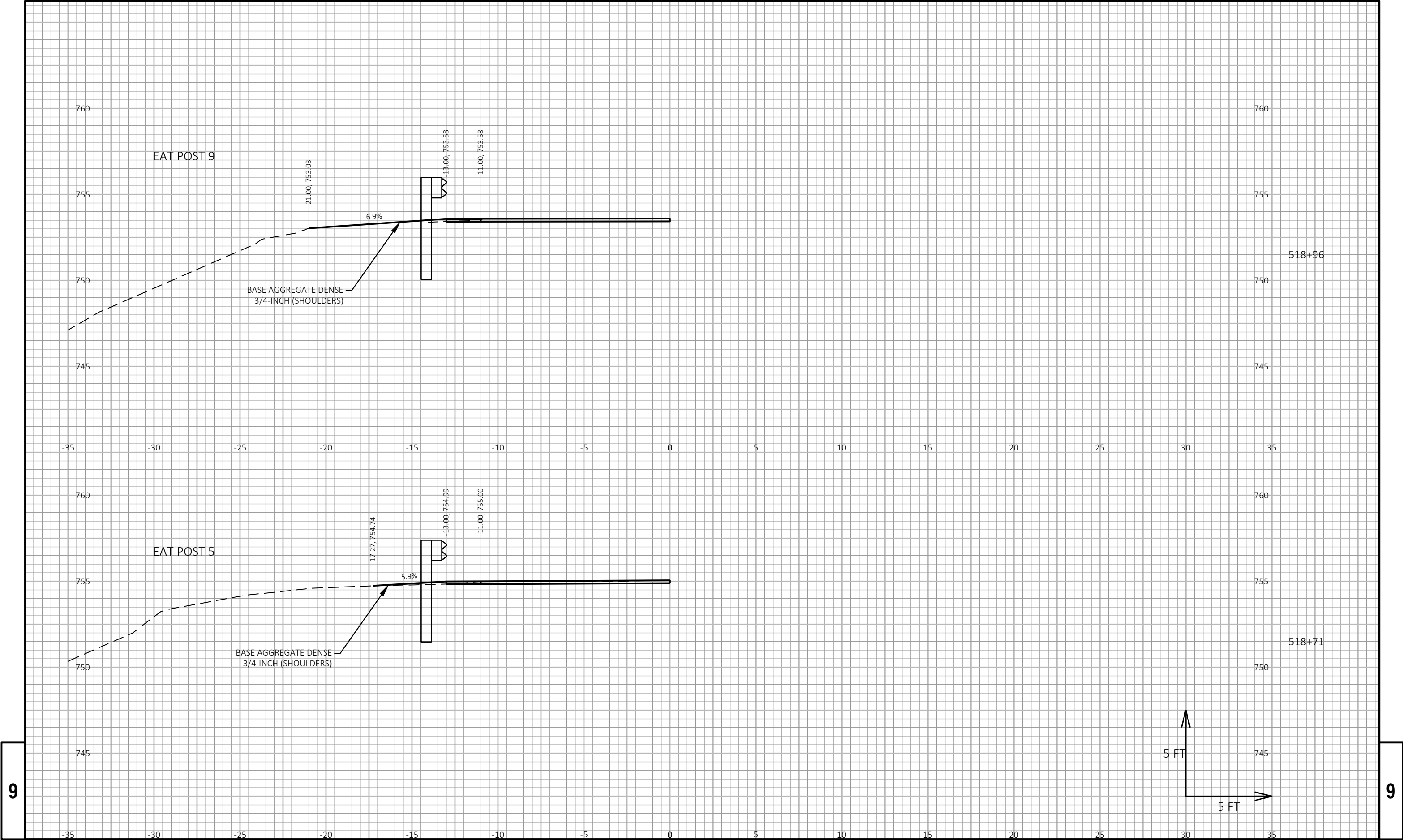
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| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | CROSS SECTIONS: STH 133 | SHEET E |
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| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | CROSS SECTIONS: STH 133 | SHEET E |
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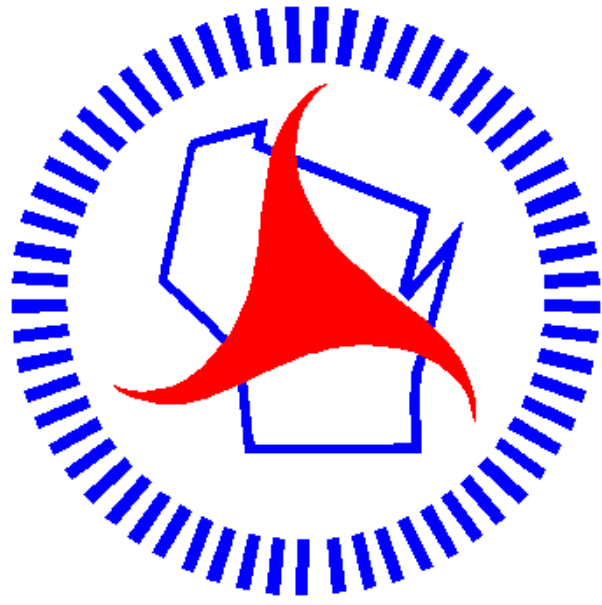


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| PROJECT NO: 5940-02-60 | HWY: STH 133 | COUNTY: IOWA | CROSS SECTIONS: STH 133 | SHEET E |
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## Notes



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