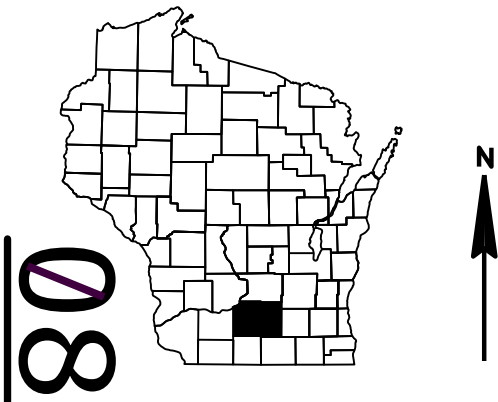


AUGUST 2021

## 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 Plan</del> |
| <del>Section No.</del> | <del>5</del> | <del>Plan and Profile</del>  |
| Section No.            | 6            | Standard Detail Drawings     |
| <del>Section No.</del> | <del>7</del> | <del>Sign Plans</del>        |
| <del>Section No.</del> | <del>8</del> | <del>Structure Plans</del>   |
| Section No.            | 9            | Computer Earthwork Data      |
| Section No.            | 9            | Cross Sections               |

TOTAL SHEETS = 58



## DESIGN DESIGNATION

|              |        |   |           |
|--------------|--------|---|-----------|
| A.A.D.T.     | (2022) | = | 5500      |
| A.A.D.T.     | (2042) | = | 6300      |
| D.H.V.       |        | = | 620       |
| D.D.         |        | = | 50/50     |
| T.           |        | = | 14.8      |
| DESIGN SPEED |        | = | 60 MPH    |
| ESALS        |        | = | 1,400,000 |

## 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<br>(Box or Pipe) |  |
| COMBUSTIBLE FLUIDS                |  |
| MARSH AREA                        |  |
| WOODED OR SHRUB AREA              |  |

## PROFILE

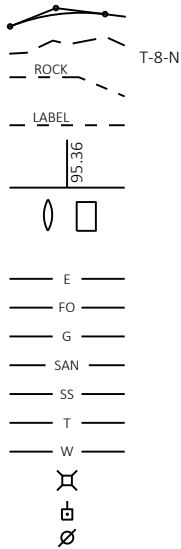
GRADE LINE  
ORIGINAL GROUND  
MARSH OR ROCK PROFILE  
(To be noted as such)  
SPECIAL DITCH

### GRADE ELEVATION

### CULVERT (Profile View)

## UTILITIES

ELECTRIC  
FIBER OPTIC  
GAS  
SANITARY SEWER  
STORM SEWER  
TELEPHONE  
WATER  
UTILITY PEDESTAL  
POWER POLE  
TELEPHONE POLE



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

## PLAN OF PROPOSED IMPROVEMENT

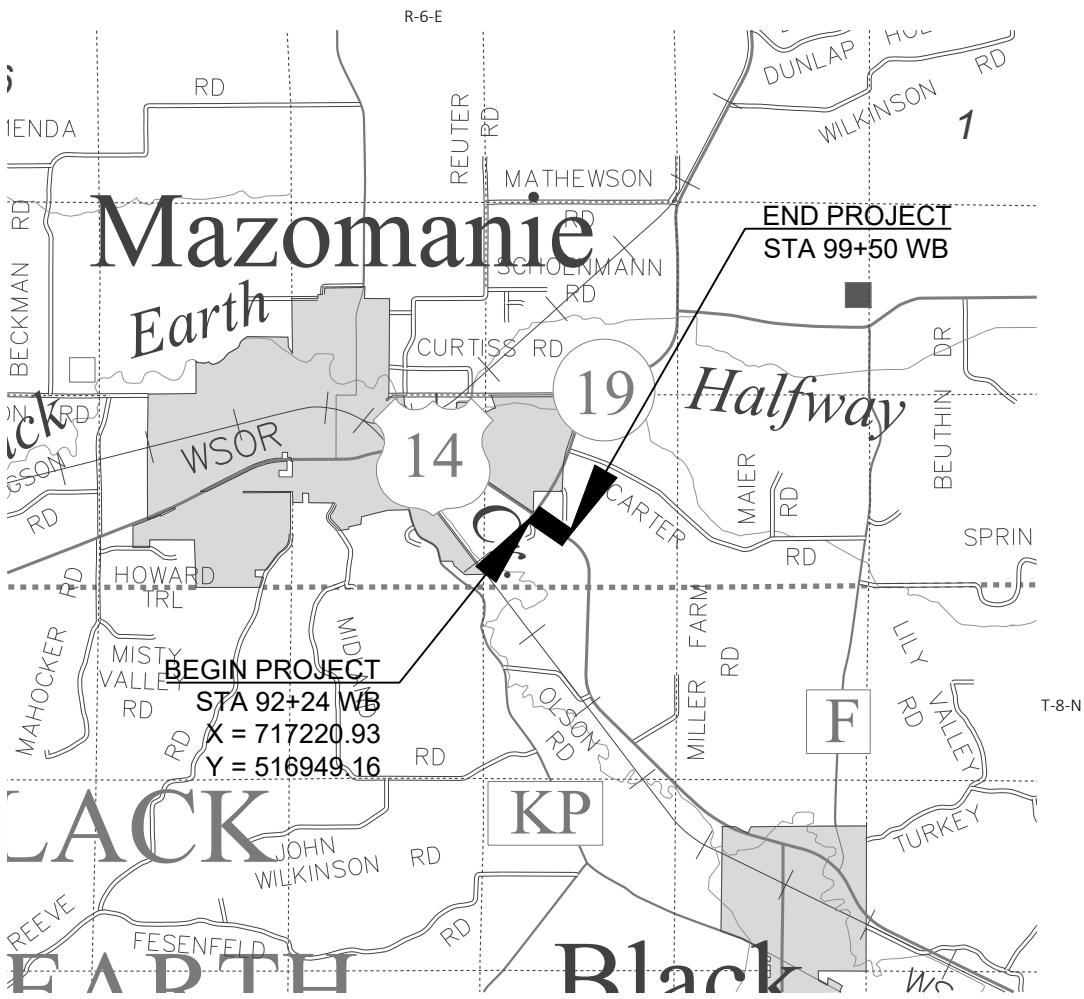
# SPRING GREEN - MADISON

## STH 19/STH 78/WOLF RD INTERSECTION

# USH 14

# DANE COUNTY

|                      |
|----------------------|
| STATE PROJECT NUMBER |
| <b>5310-00-70</b>    |



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.138 MI

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

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

| STATE PROJECT | FEDERAL PROJECT |          |
|---------------|-----------------|----------|
|               | PROJECT         | CONTRACT |
| 5310-00-70    | WISC 2021436    | 1        |
|               |                 |          |
|               |                 |          |
|               |                 |          |

# STATE OF WISCONSIN

## DEPARTMENT OF TRANSPORTATION

---

|                     |                         |
|---------------------|-------------------------|
| PREPARED BY         |                         |
| Surveyor            | SW REGION               |
| Designer            | ADAM SHAW               |
| Project Manager     | AMY COUGHLIN, P.E.      |
| Regional Examiner   | SW REGION               |
| Regional Supervisor | BRENDA SCHOENFELD, P.E. |

APPROVED FOR THE DEPARTMENT

DATE: 4/28/2021 *Amy Coughlin*  
(Signature)

# E

GENERAL NOTES

- 1. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.
- 2. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES.
- 3. 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, BIKE OR PARKING LANE.
- 4. CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.
- 5. THE QUANTITY OF THE ITEMS FOR EROSION PROTECTION INCLUDES AN UNDISTRIBUTED AMOUNT FOR PROTECTION, CONTROL, AND ABATEMENT OF WATER POLLUTION RESULTING FROM SOIL EROSION. THE DISTRIBUTION AND LOCATION OF THESE MATERIALS ARE TO BE DETERMINED BY THE ENGINEER.
- 6. DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND EROSION MAT PLACED AS DIRECTED BY THE ENGINEER.
- 7. APPLY TACK COAT AT A RATE OF 0.05 GAL/SY BETWEEN LAYERS OF HMA PAVEMENT. APPLY TACK COAT AT A RATE OF 0.07 GAL/SY ON MILLED SURFACE.
- 8. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.

ORDER OF SECTION 2 SHEETS

GENERAL NOTES  
PROJECT OVERVIEW  
TYPICAL SECTIONS  
CONSTRUCTION DETAILS  
PLAN DETAILS  
EROSION CONTROL  
MOVING SIGNS  
LIGHTING  
PAVEMENT MARKING  
CONSTRUCTION STAGING - TYPICAL SECTIONS  
TRAFFIC CONTROL DETAILS

STANDARD ABBREVIATIONS

|            |                               |       |                          |
|------------|-------------------------------|-------|--------------------------|
| AC         | ACRE                          | JT.   | JOINT                    |
| AGG        | AGGREGATE                     | LT    | LEFT                     |
| ASPH.      | ASPHALTIC                     | LS    | LUMP SUM                 |
| A.D.T.     | AVERAGE DAILY TRAFFIC         | MGAL  | 1000 GALLONS             |
| A.A.D.T.   | AVERAGE ANNUAL DAILY TRAFFIC  | N.C.  | NORMAL CROWN             |
| BM         | BENCHMARK                     | N     | NORTH                    |
| C/L        | CENTER LINE                   | NB    | NORTHBOUND               |
| CONST.     | CONSTRUCTION                  | PAV'T | PAVEMENT                 |
| CO.        | COUNTY                        | PCC   | PORTLAND CEMENT CONCRETE |
| CABC       | CRUSHED AGGREGATE             | R/L   | REFERENCE LINE           |
|            | BASE COURSE                   | REQ'D | REQUIRED                 |
| CY         | CUBIC YARD                    | RT    | RIGHT                    |
| CP         | CONTROL POINT OR CULVERT PIPE | R/W   | RIGHT OF WAY             |
| C&G        | CURB AND GUTTER               | RD.   | ROAD                     |
| EA         | EACH                          | SHLD. | SHOULDER(S)              |
| E          | EAST                          | S     | SOUTH                    |
| EB         | EASTBOUND                     | SB    | SOUTHBOUND               |
| ELEC.      | ELECTRIC(AL), ELEC. CABLE     | S.F.  | SQUARE FOOT (FEET)       |
| EL., ELEV. | ELEVATION                     | SDD   | STANDARD DETAIL          |
| ESALS      | EQUIVALENT SINGLE AXLE LOADS  | STH   | DRAWINGS                 |
| EXC.       | EXCAVATION                    |       | STATE TRUNK HIGHWAY      |
| EXIST      | EXISTING                      | STA.  | STATION                  |
| FERT.      | FERTILIZER                    | S.E.  | SUPERELEVATION           |
| CWT        | HUNDRED WEIGHT                | T.    | PERCENT TRUCKS           |
| INL        | INLET                         | TEL.  | TELEPHONE                |
| INTER.     | INTERSECTION                  | TEMP. | TEMPORARY                |
| IH         | INTERSTATE HIGHWAY            | TYP   | TYPICAL                  |
|            |                               | W     | WEST                     |
|            |                               | WB    | WESTBOUND                |

WISDOT

DESIGN PROJECT LEADER  
ADAM SHAW  
2101 WRIGHT ST  
MADISON, WI, 53704  
PHONE: (608) 246-5311  
EMAIL: ADAM.SHAW@DOT.WI.GOV

WISDOT

DESIGN PROJECT MANAGER  
AMY COUGHLIN  
2101 WRIGHT ST  
MADISON, WI, 53704  
PHONE: (608) 245-5358  
EMAIL: AMY.COUGHLIN@DOT.WI.GOV

DNR CONTACT

WDNR  
ERIC HEGGELUND  
3911 FISH HATCHERY RD  
FITCHBURG, WI, 53711  
PHONE: (608) 228-7927  
EMAIL: ERIC.HEGGELUND@WISCONSIN.GOV

WISDOT

ELECTRICIAN  
JOHN ERICKSON  
2101 WRIGHT ST  
MADISON, WI 53704  
PHONE: (608) 245-2634  
CELL: (608) 516-6426  
EMAIL: JOHN.ERICKSON@DOT.WI.GOV

UTILITIES

COMMUNICATIONS

AT&T WISCONSIN  
CAROL ANASON  
316 W WASHINGTON AVE  
MADISON, WI, 53701  
PHONE: (608) 252-2385  
EMAIL: CA2624@ATT.COM

ELECTRICITY

ATC MANAGEMENT INC.  
ANTHONY MARCINIAK  
W 234 N 2000 RIDGEVIEW PARKWAY CT  
P.O. BOX 47, WAUKESHA, WI, 53187-0047  
PHONE: (262) 506-6814  
EMAIL: AMARCINIAK@ATCLLC.COM

ELECTRICITY

BLACK EARTH ELECTRIC UTILITY  
SHAWN DILLEY  
714 BLUE MOUNDS ST  
BLACK EARTH, WI, 53515  
PHONE: (608) 767-2561  
EMAIL: SDILLEY@BLACKEARTHWISCONSIN.COM

COMMUNICATIONS

CENTURYLINK  
KEVIN ZICKERT  
224 INDUSTRIAL DR  
NORTH PRAIRIE, WI 53153  
PHONE: (262) 392-5200  
EMAIL: RELOCATIONS@CENTURYLINK.COM

COMMUNICATIONS

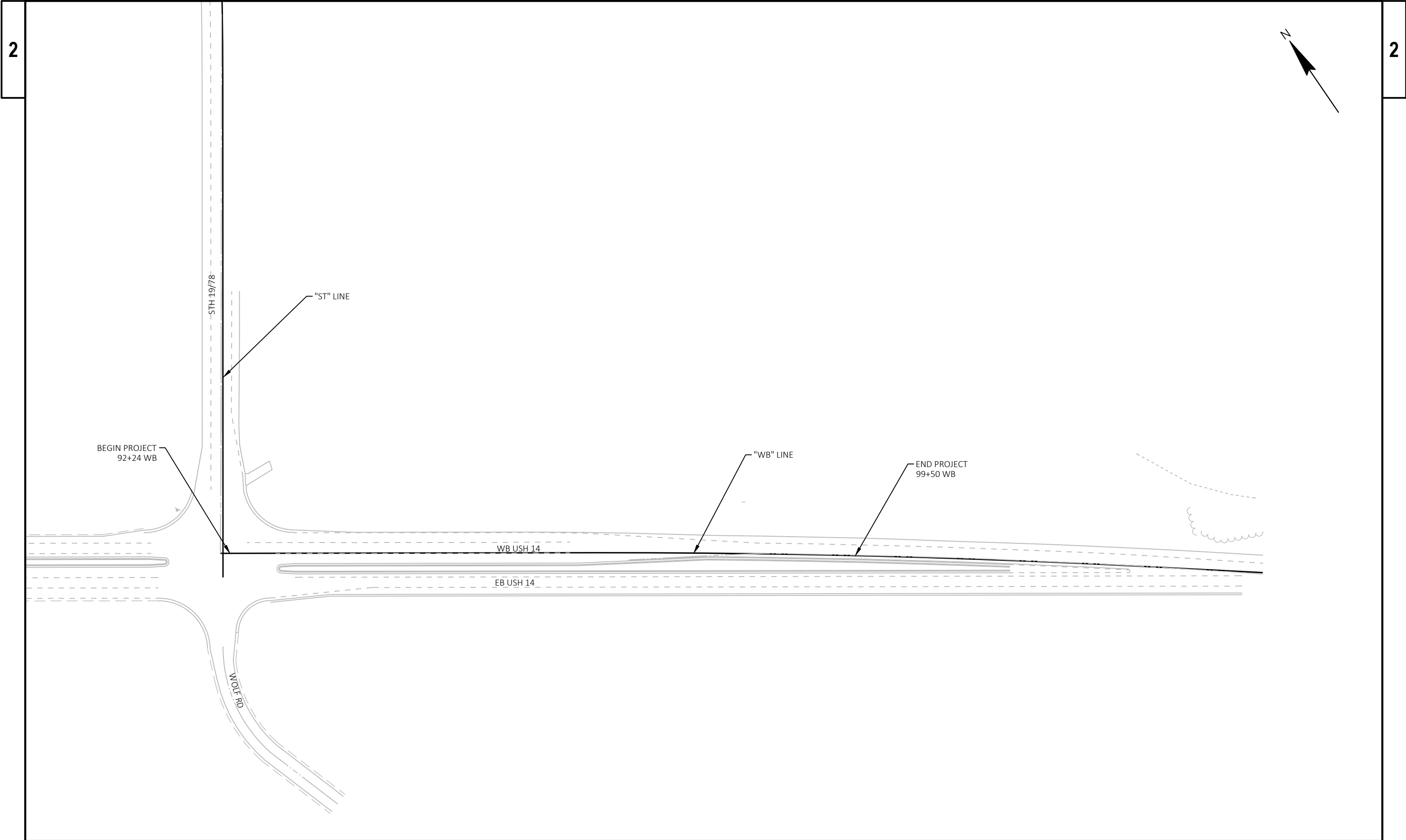
CHARTER COMMUNICATIONS  
LUKAS LACROSSE  
2701 DANIELS ST  
MADISON, WI, 53718  
PHONE: (608) 709-1562  
EMAIL: LUKAS.LACROSSE@CHARTER.COM

GAS/PETROLEUM

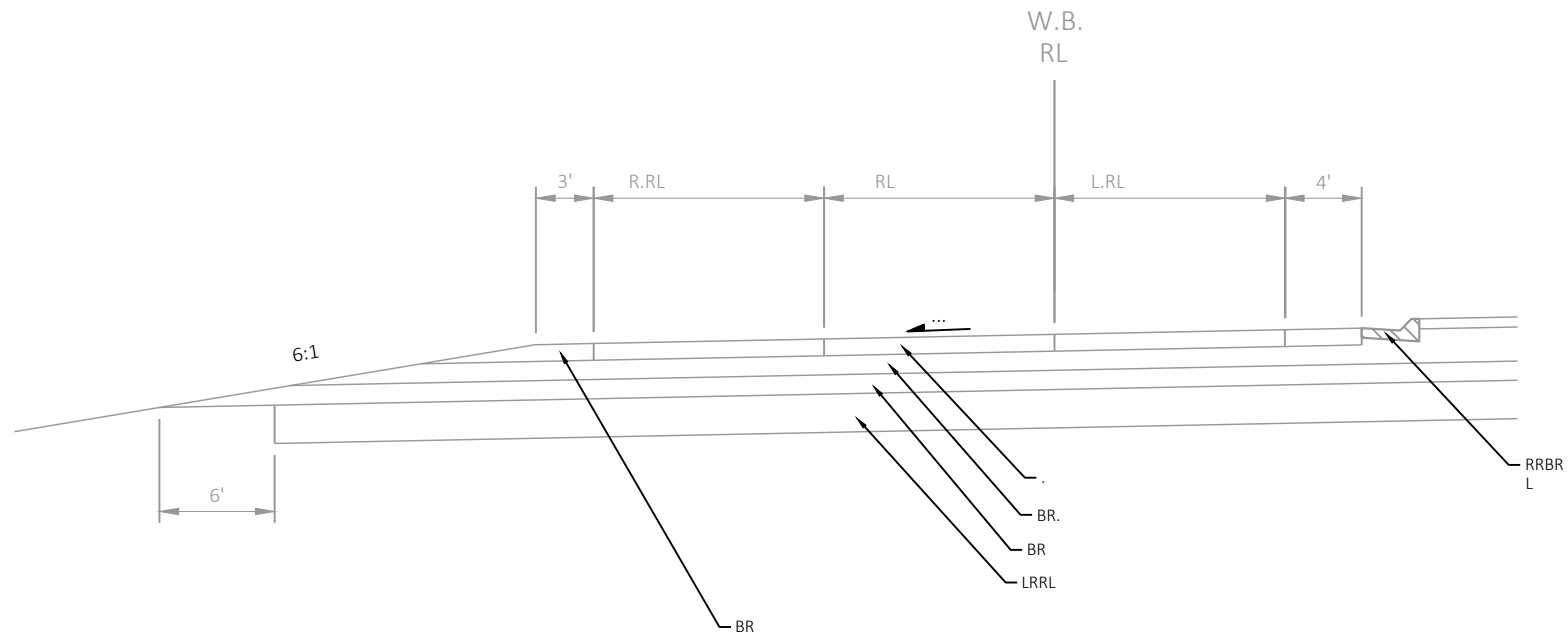
MADISON GAS AND ELECTRIC COMPANY  
JANE ROSSING  
P.O. BOX 1231  
MADISON, WI, 53701-1231  
PHONE: (608) 252-7099  
EMAIL: WORKPLANS@MGE.COM



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

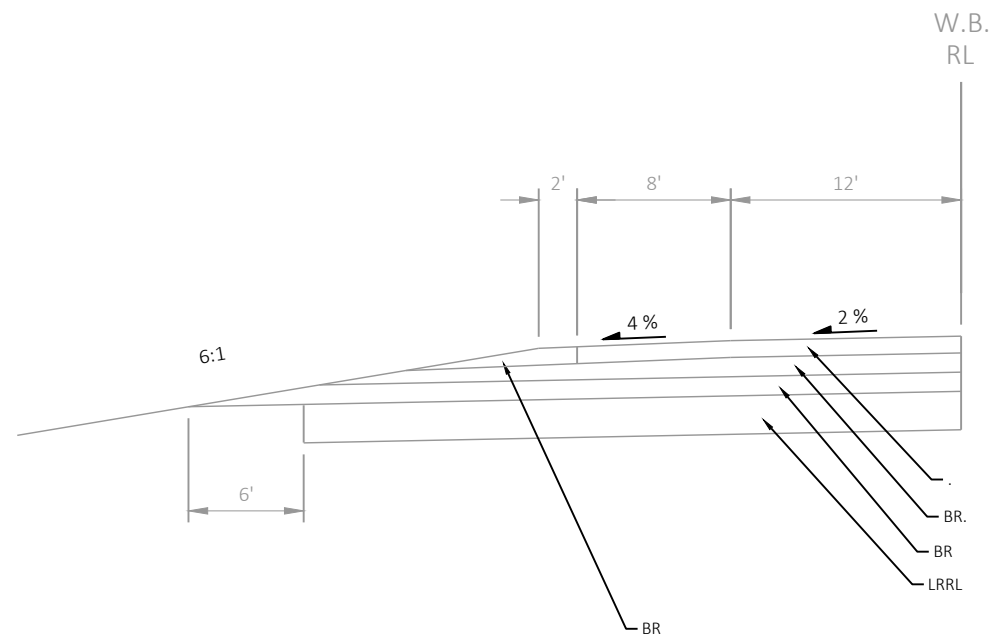


|                        |             |              |                  |       |   |
|------------------------|-------------|--------------|------------------|-------|---|
| PROJECT NO: 5310-00-70 | HWY: USH 14 | COUNTY: DANE | PROJECT OVERVIEW | SHEET | E |
|------------------------|-------------|--------------|------------------|-------|---|



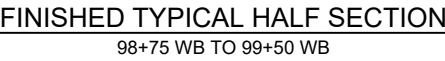
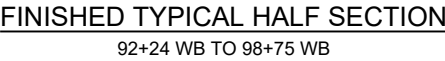
EXISTING TYPICAL HALF SECTION

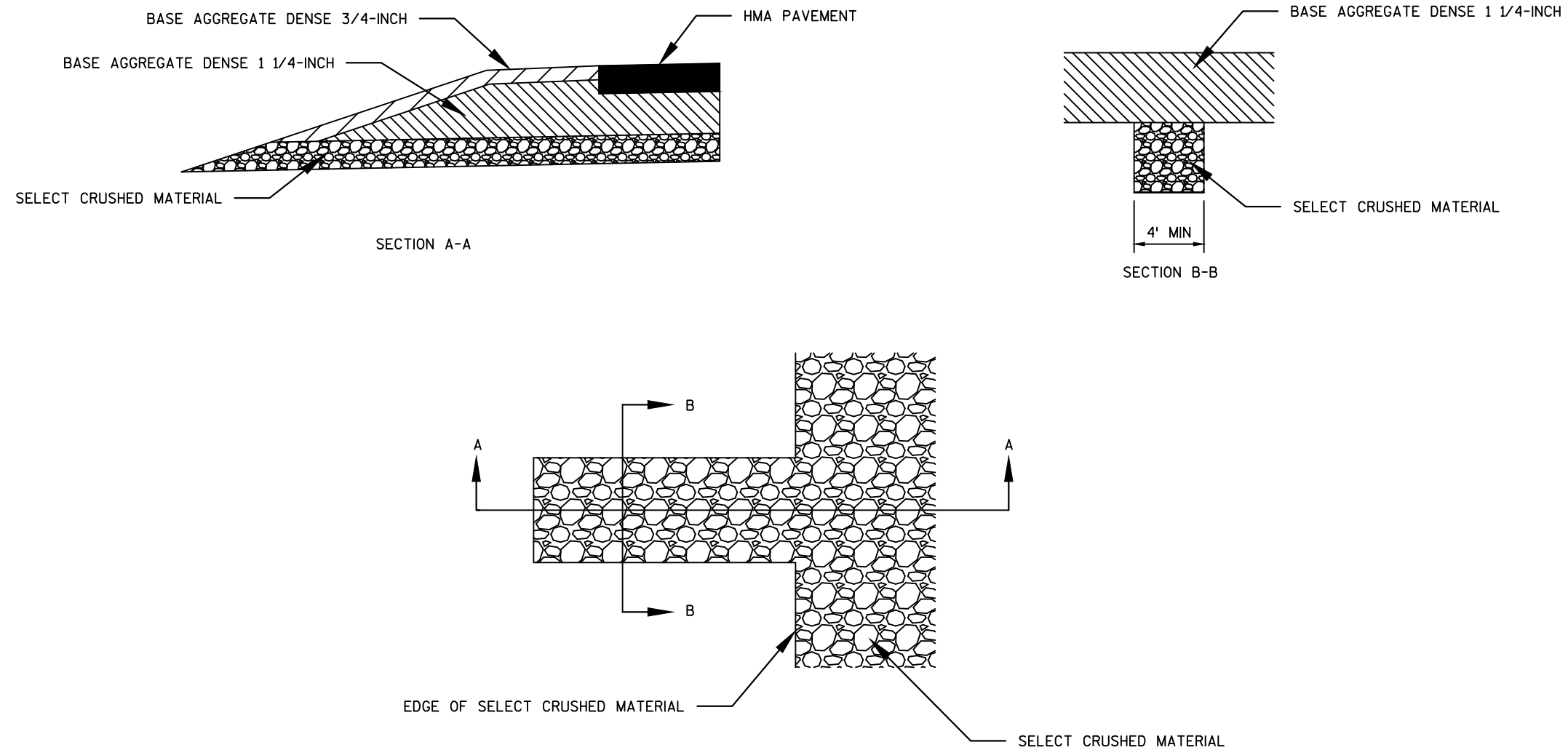
92+24 WB TO 98+38 WB



EXISTING TYPICAL HALF SECTION

98+38 WB TO 99+50 WB

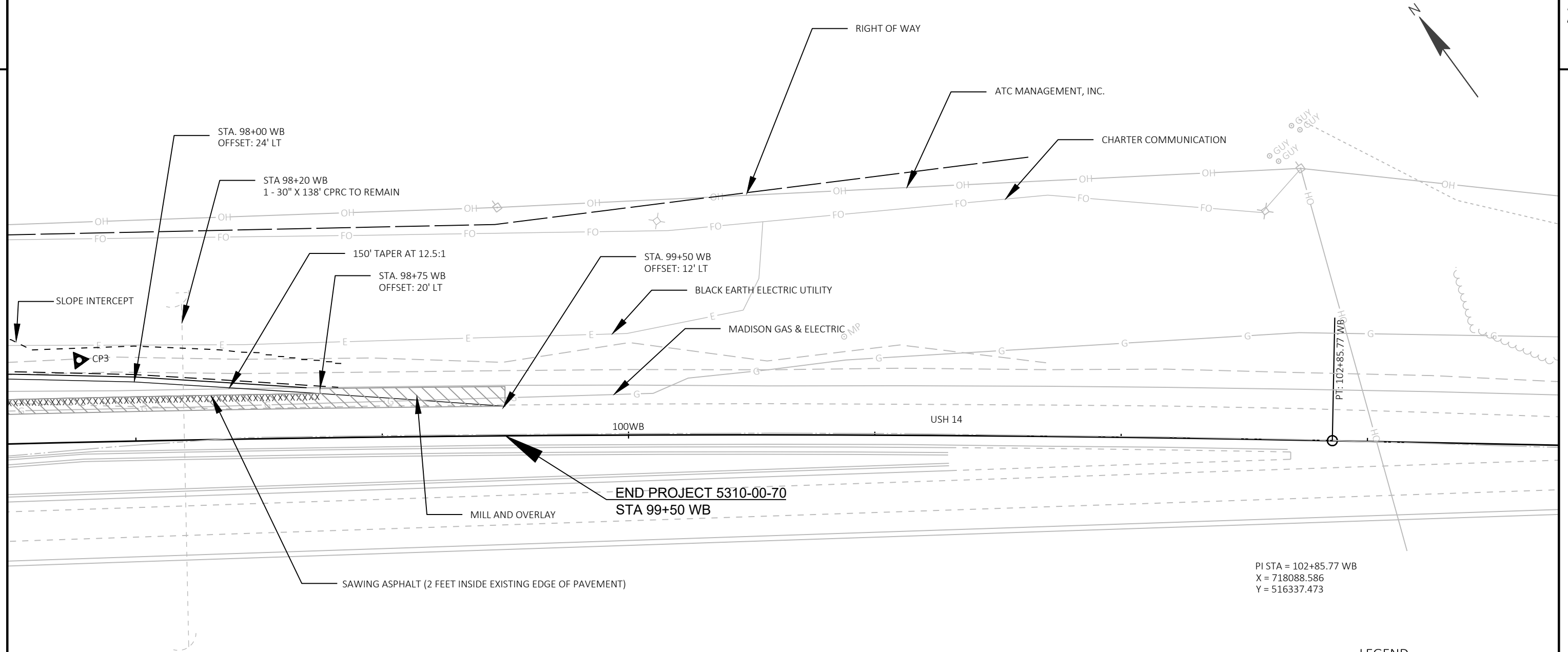






2

2 |



PI STA = 102+85.77 WB  
X = 718088.586  
Y = 516337.473

LEGEND



## MILL AND OVERLAY

PROJECT NO: 5310-00-70

HWY: USH 14

COUNTY: DANE

## PLAN DETAILS

SHEET

3

FILE NAME : C:\USERS\DITAMS\DESKTOP\USH 14 TURN LANE\CIVIL 3D\53100010\SHEETSPLAN\021201-PD.DWG  
LAYOUT NAME - 02

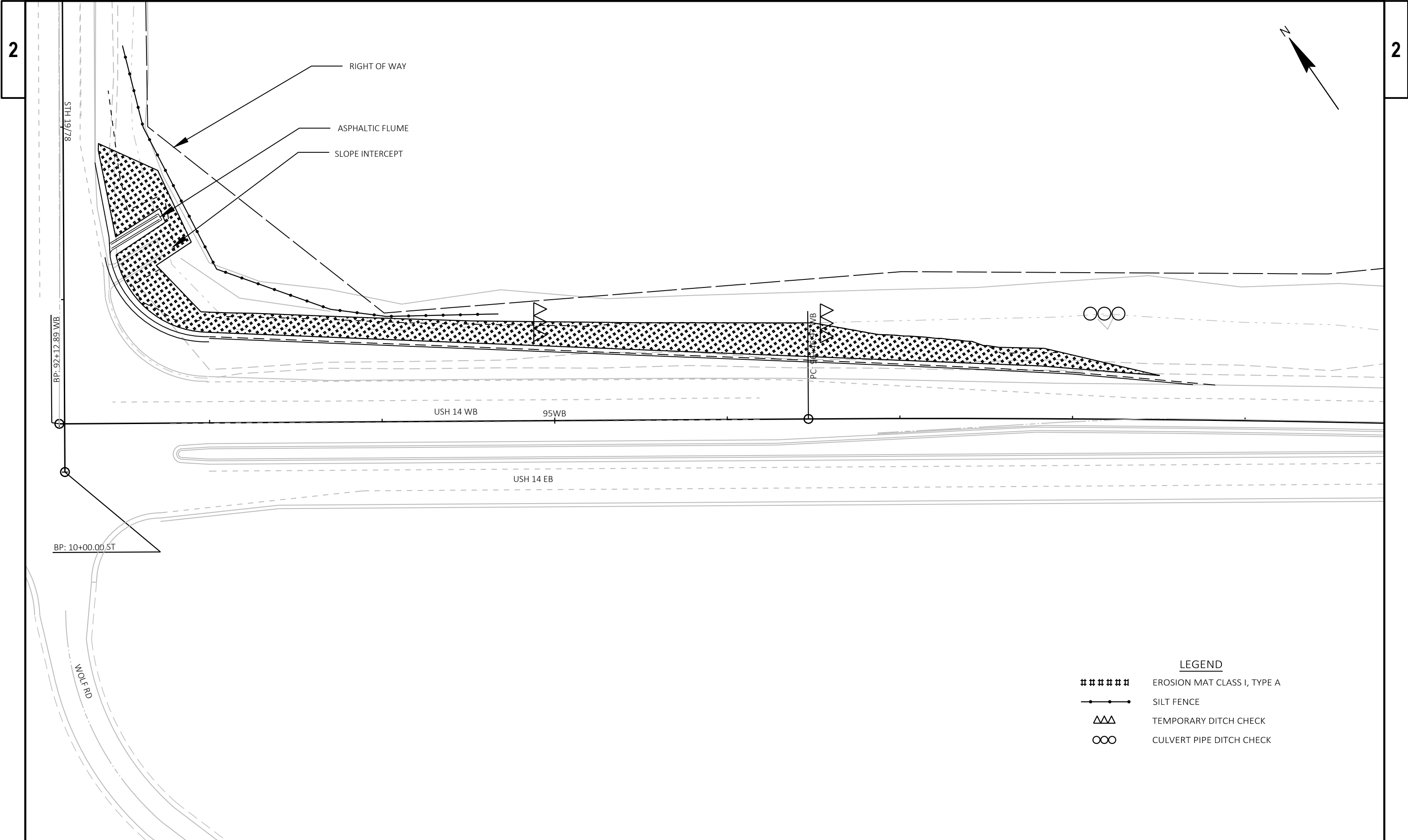
PLOT DATE : 4/28/2021 2:23 PM

PLOT BY : SHAW, ADAM M

PLOT NAME :

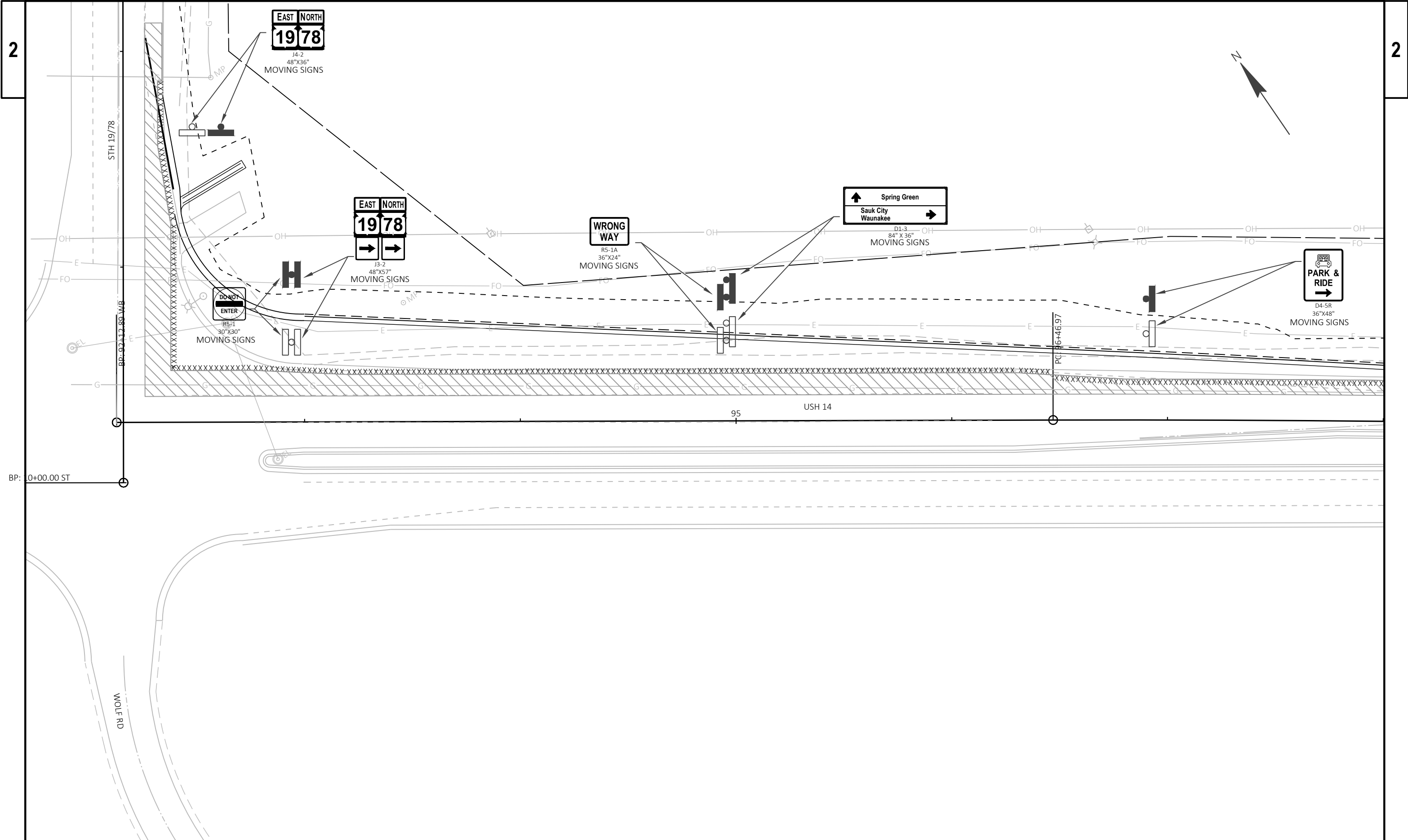
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

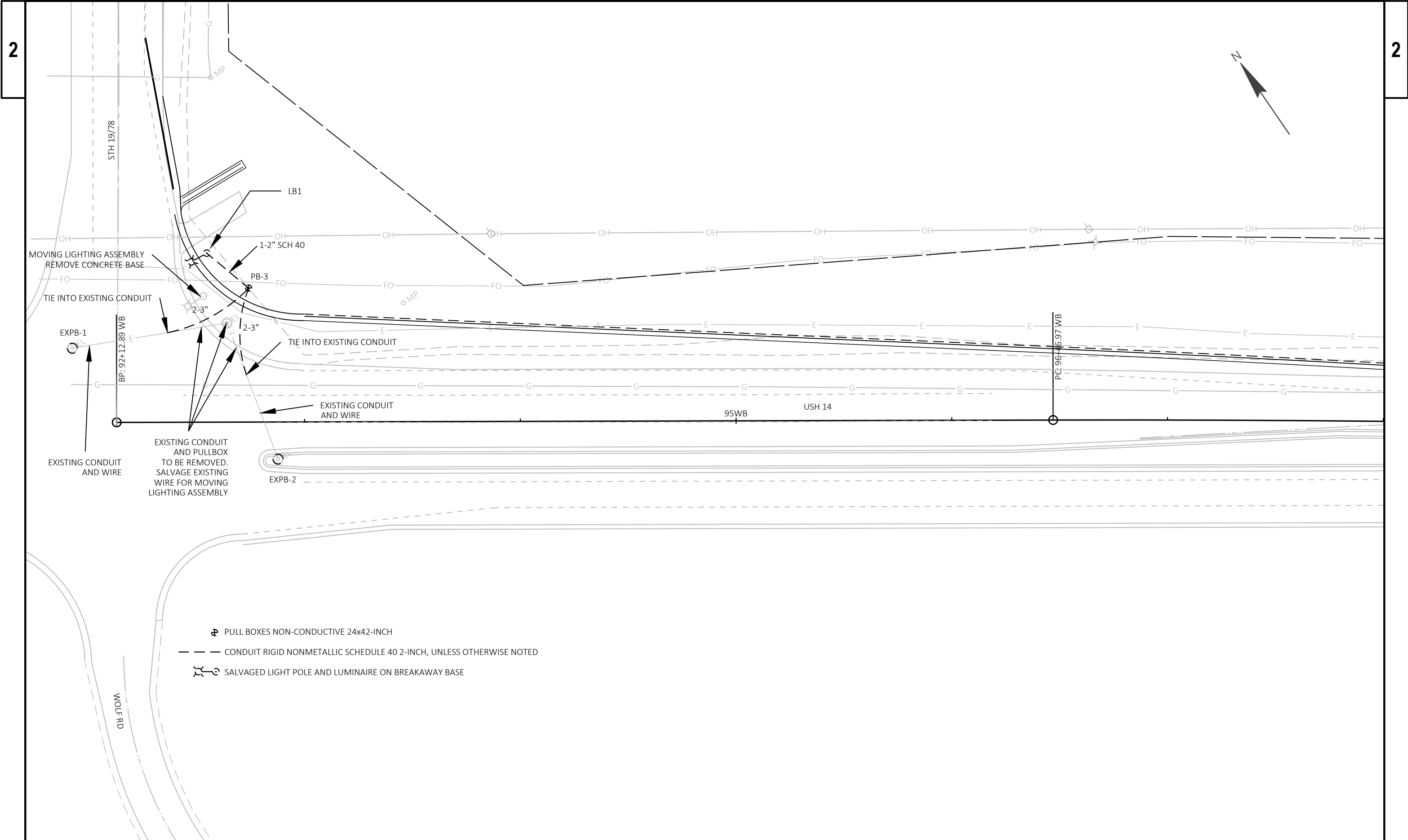


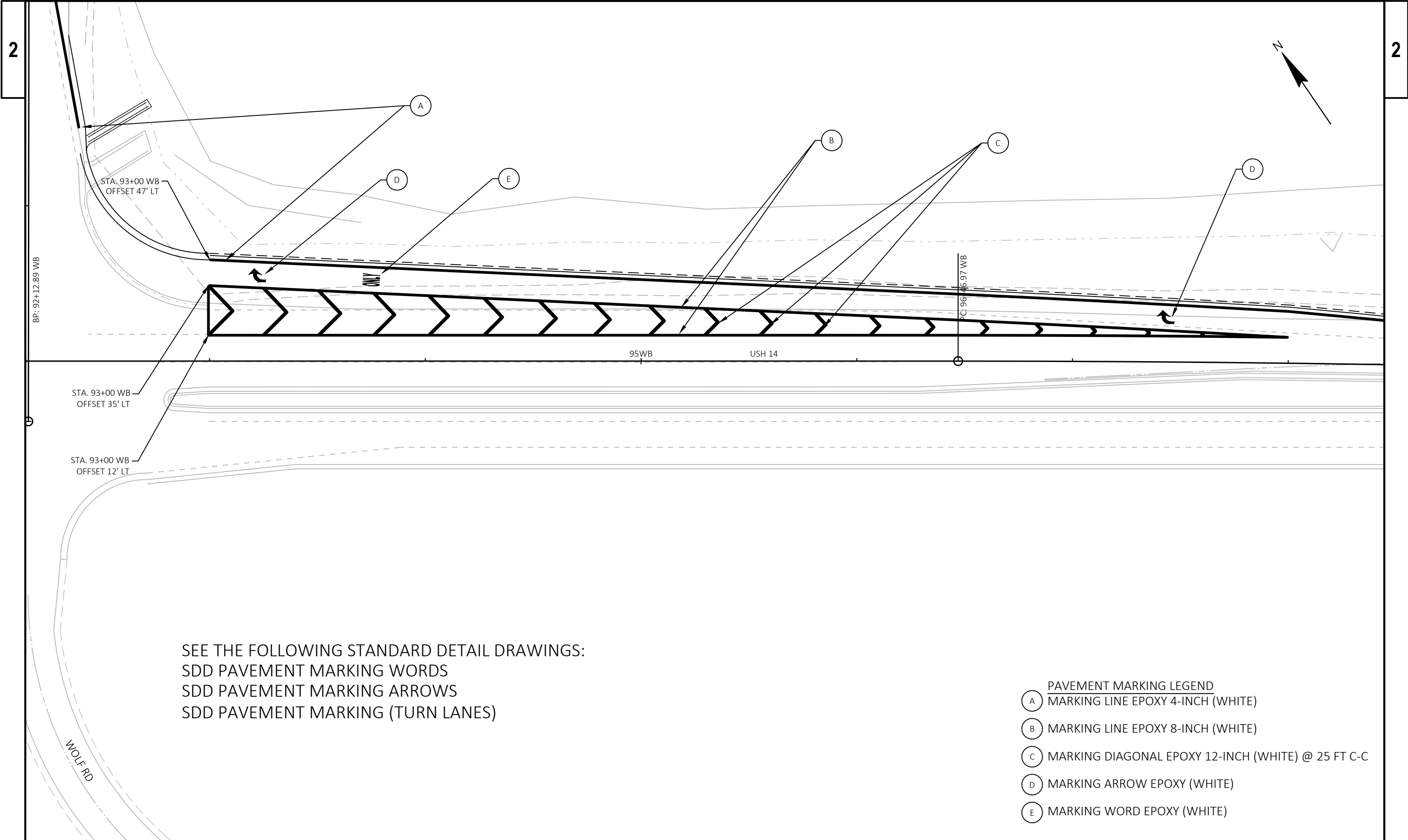
**LEGEND**

|         |                             |
|---------|-----------------------------|
| #####   | EROSION MAT CLASS I, TYPE A |
| —●—●—●— | SILT FENCE                  |
| △△△     | TEMPORARY DITCH CHECK       |
| ○○○     | CULVERT PIPE DITCH CHECK    |



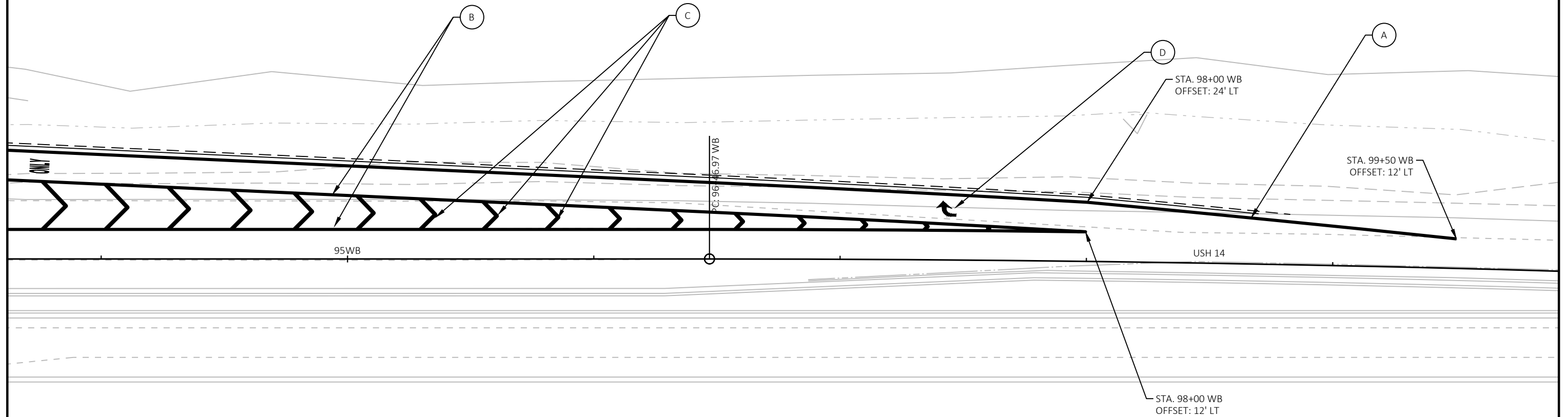
|                        |             |              |              |       |   |
|------------------------|-------------|--------------|--------------|-------|---|
| PROJECT NO: 5310-00-70 | HWY: USH 14 | COUNTY: DANE | MOVING SIGNS | SHEET | E |
|------------------------|-------------|--------------|--------------|-------|---|





SEE THE FOLLOWING STANDARD DETAIL DRAWINGS:  
SDD PAVEMENT MARKING WORDS  
SDD PAVEMENT MARKING ARROWS  
SDD PAVEMENT MARKING (TURN LANES)

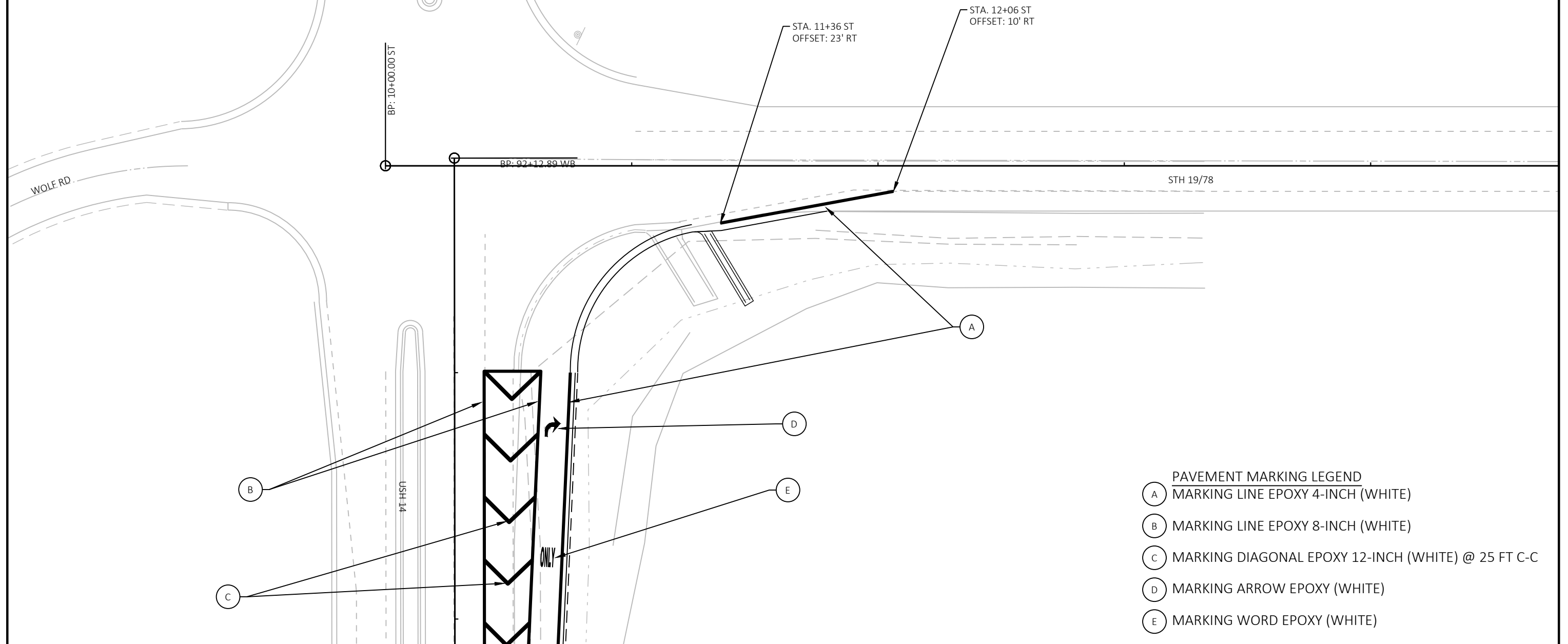
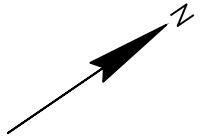
- PAVEMENT MARKING LEGEND
- (A) MARKING LINE EPOXY 4-INCH (WHITE)
  - (B) MARKING LINE EPOXY 8-INCH (WHITE)
  - (C) MARKING DIAGONAL EPOXY 12-INCH (WHITE) @ 25 FT C-C
  - (D) MARKING ARROW EPOXY (WHITE)
  - (E) MARKING WORD EPOXY (WHITE)



SEE THE FOLLOWING STANDARD DETAIL DRAWINGS:  
 SDD PAVEMENT MARKING WORDS  
 SDD PAVEMENT MARKING ARROWS  
 SDD PAVEMENT MARKING (TURN LANES)

- PAVEMENT MARKING LEGEND**
- (A) MARKING LINE EPOXY 4-INCH (WHITE)
  - (B) MARKING LINE EPOXY 8-INCH (WHITE)
  - (C) MARKING DIAGONAL EPOXY 12-INCH(WHITE) @ 25 FT C-C
  - (D) MARKING ARROW EPOXY (WHITE)
  - (E) MARKING WORD EPOXY (WHITE)

SEE THE FOLLOWING STANDARD DETAIL DRAWINGS:  
SDD PAVEMENT MARKING WORDS  
SDD PAVEMENT MARKING ARROWS  
SDD PAVEMENT MARKING (TURN LANES)



- PAVEMENT MARKING LEGEND
- (A) MARKING LINE EPOXY 4-INCH (WHITE)
  - (B) MARKING LINE EPOXY 8-INCH (WHITE)
  - (C) MARKING DIAGONAL EPOXY 12-INCH (WHITE) @ 25 FT C-C
  - (D) MARKING ARROW EPOXY (WHITE)
  - (E) MARKING WORD EPOXY (WHITE)

PROJECT NO: 5310-00-70

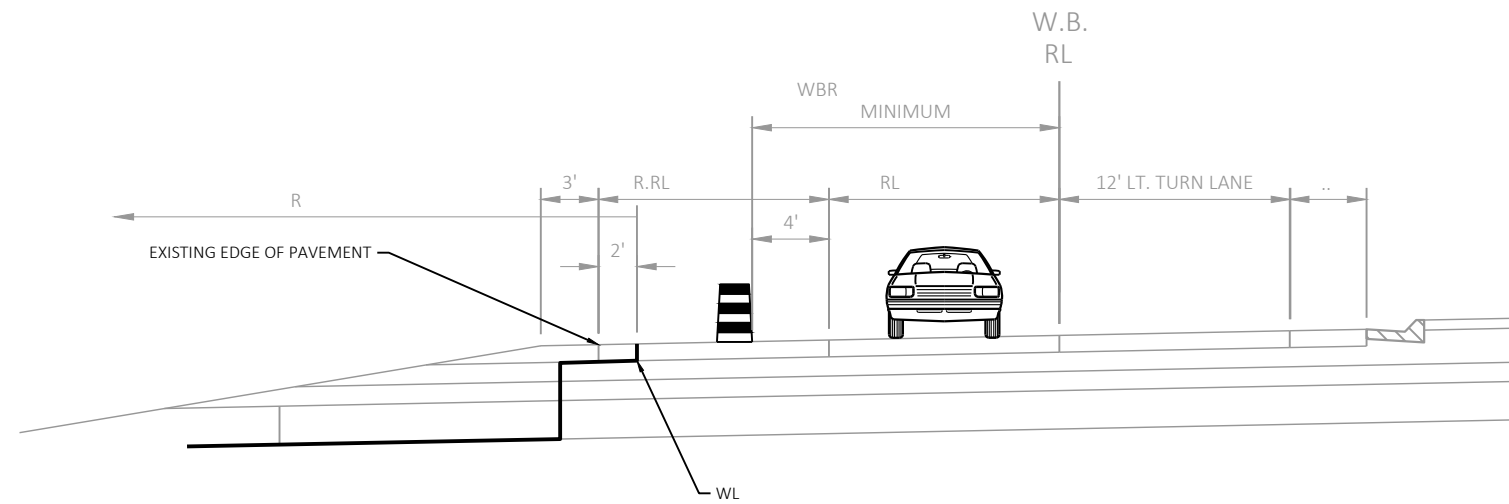
HWY: STH 19/78

COUNTY: DANE

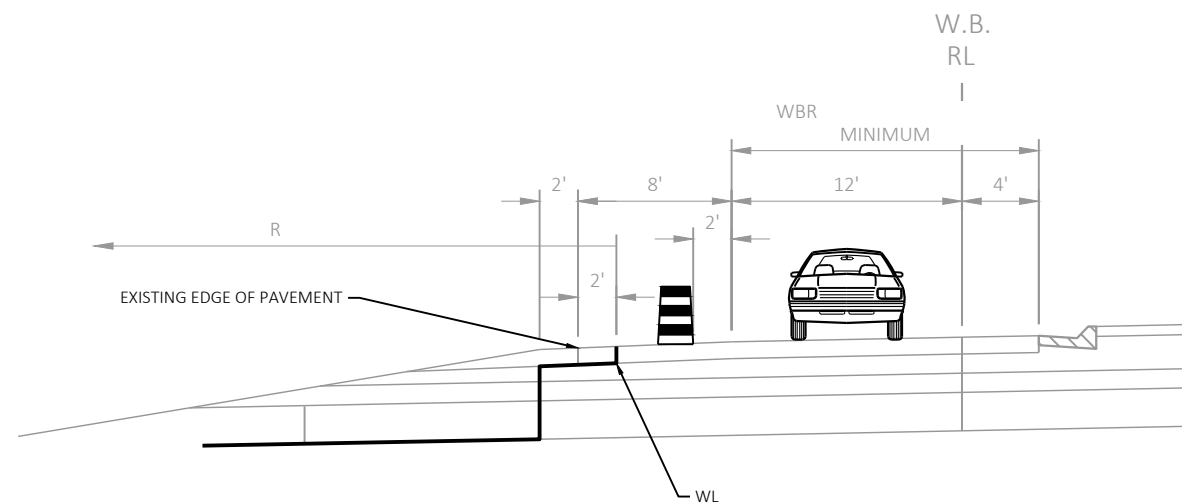
PAVEMENT MARKING

SHEET

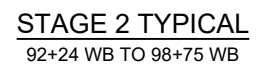
E



**STAGE 1 TYPICAL**  
92+24 WB TO 96+80 WB



**STAGE 1 TYPICAL**  
96+80 WB TO 99+50 WB



```

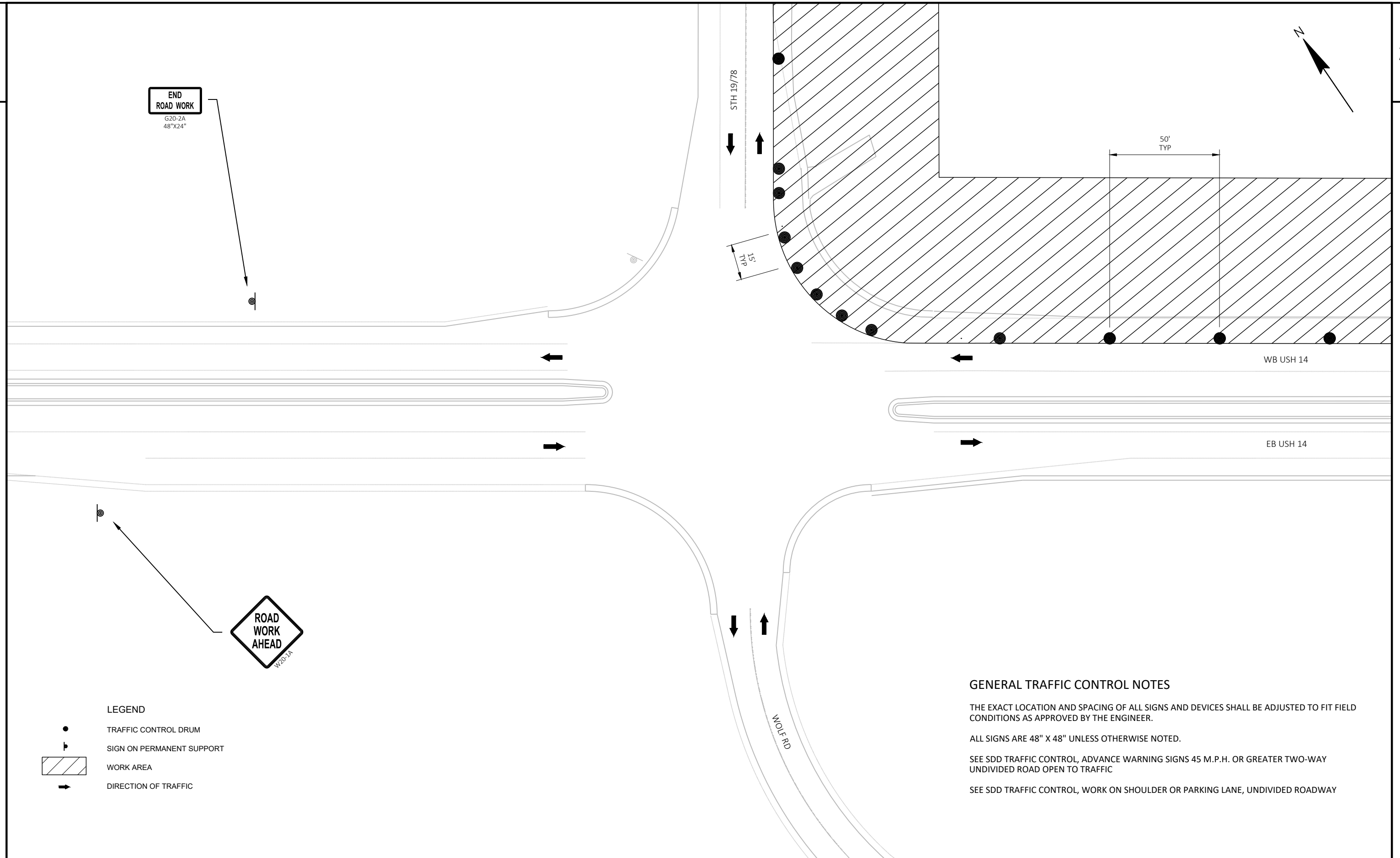
**  RRRLL.RLLB
    LLRRR
    RRLRR
    R.RLR
    BRR.

```



2

2



|             |            |
|-------------|------------|
| PROJECT NO: | 5310-00-70 |
|-------------|------------|

HWY: USH 14

COUNTY: DANE

| TRAFFIC CONTROL DETAILS |  |
|-------------------------|--|
|-------------------------|--|

SHEET

**E**

FILE NAME : C:\USERS\DTAMAS\DESKTOP\USH 14 TURN LANE\CIVIL 3D\53100010\SHEETSPLAN\025100-TC2.DWG  
LAYOUT NAME - 02011

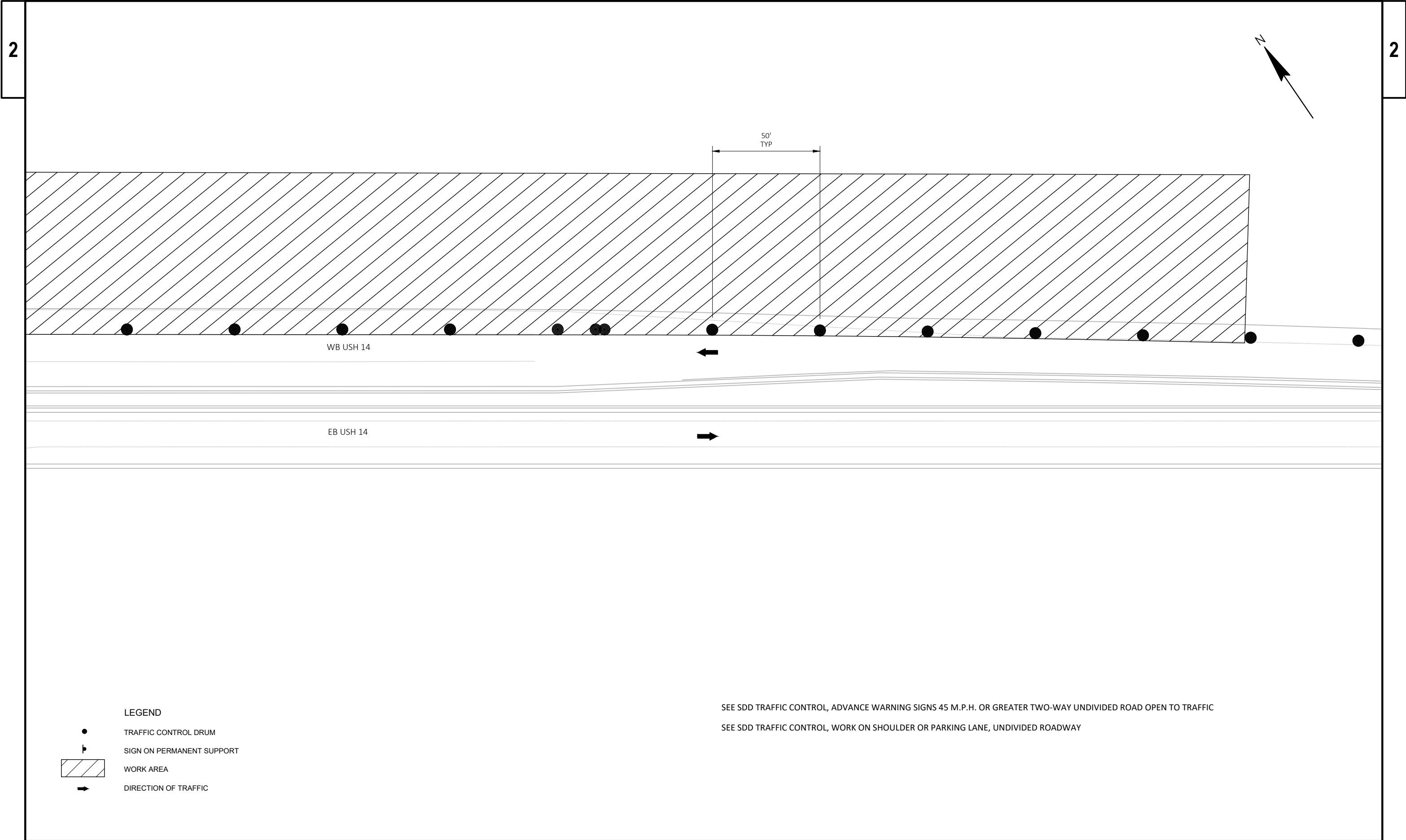
PLOT DATE : 4/27/2021 3:24 PM

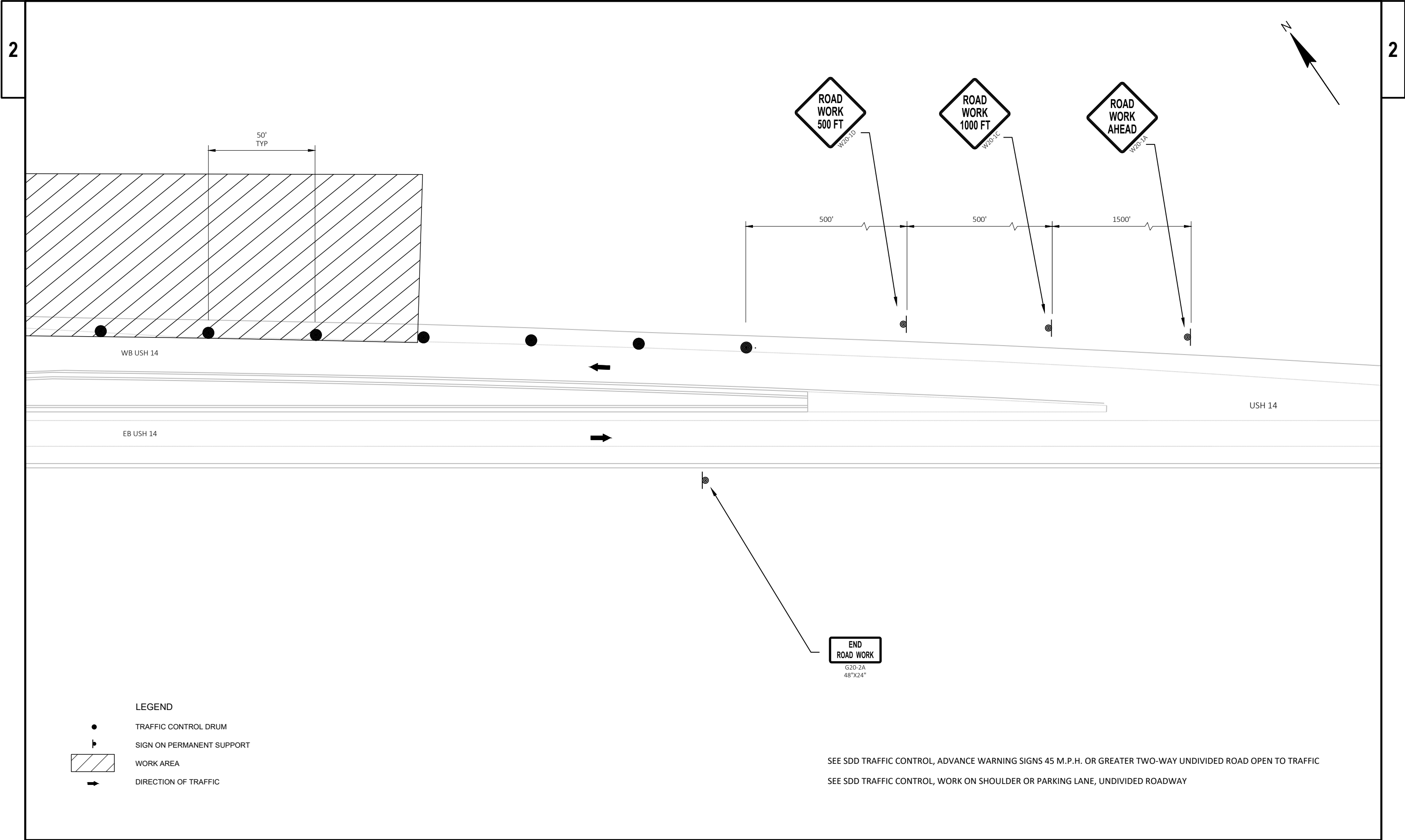
PLOT BY : SHAW, ADAM M

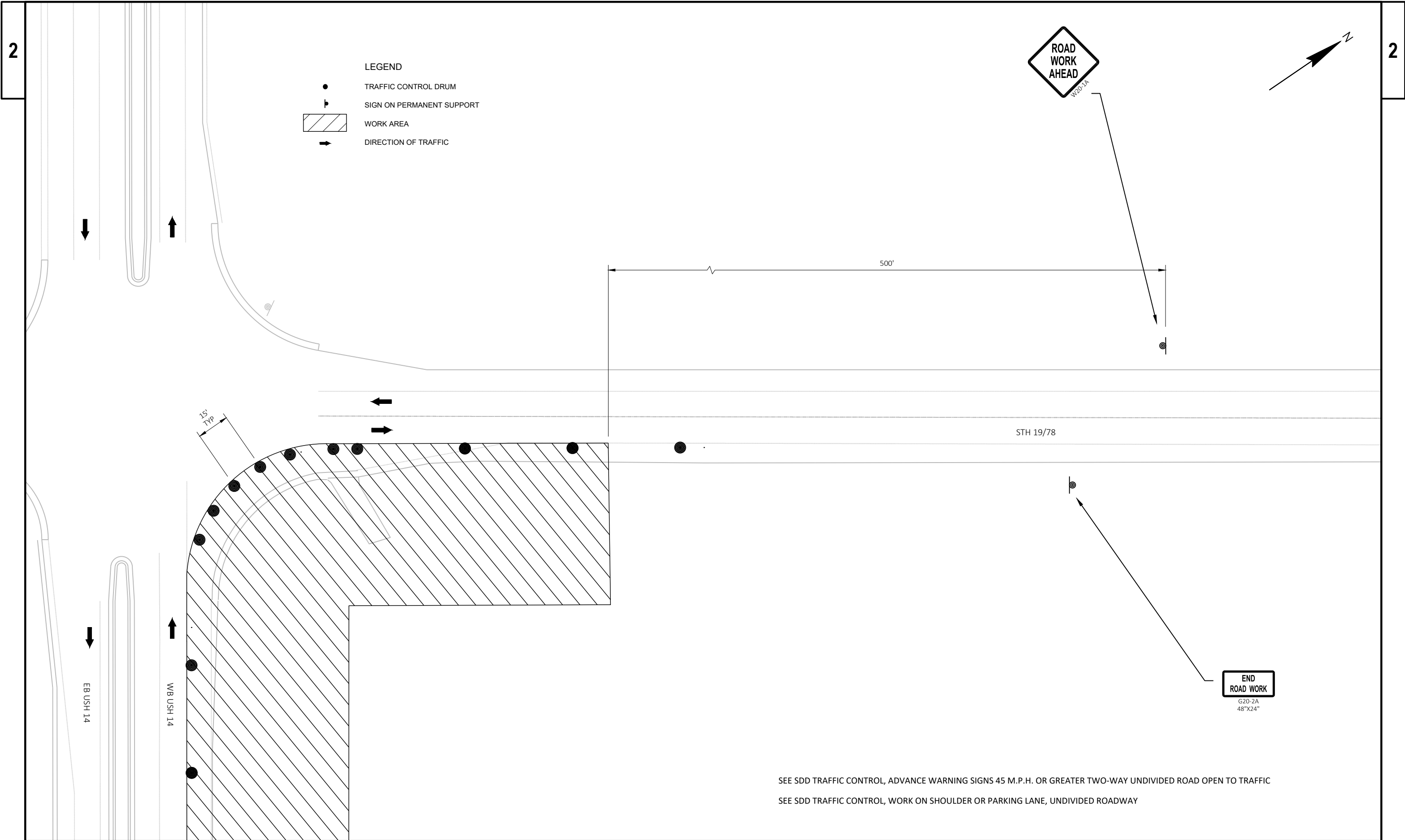
PLOT NAME : \_\_\_\_\_

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42







|                        |                |              |                         |       |   |
|------------------------|----------------|--------------|-------------------------|-------|---|
| PROJECT NO: 5310-00-70 | HWY: STH 19/78 | COUNTY: DANE | TRAFFIC CONTROL DETAILS | SHEET | E |
|------------------------|----------------|--------------|-------------------------|-------|---|

Estimate Of Quantities

5310-00-70

| Line | Item     | Item Description                                              | Unit | Total     | Qty       |
|------|----------|---------------------------------------------------------------|------|-----------|-----------|
| 0002 | 204.0110 | Removing Asphaltic Surface                                    | SY   | 290.000   | 290.000   |
| 0004 | 204.0120 | Removing Asphaltic Surface Milling                            | SY   | 885.000   | 885.000   |
| 0006 | 204.0150 | Removing Curb & Gutter                                        | LF   | 85.000    | 85.000    |
| 0008 | 204.0195 | Removing Concrete Bases                                       | EACH | 1.000     | 1.000     |
| 0010 | 205.0100 | Excavation Common                                             | CY   | 490.000   | 490.000   |
| 0012 | 213.0100 | Finishing Roadway (project) 01. 5310-00-70                    | EACH | 1.000     | 1.000     |
| 0014 | 305.0110 | Base Aggregate Dense 3/4-Inch                                 | TON  | 51.000    | 51.000    |
| 0016 | 305.0120 | Base Aggregate Dense 1 1/4-Inch                               | TON  | 420.000   | 420.000   |
| 0018 | 305.0130 | Base Aggregate Dense 3-Inch                                   | TON  | 460.000   | 460.000   |
| 0020 | 312.0110 | Select Crushed Material                                       | TON  | 660.000   | 660.000   |
| 0022 | 455.0605 | Tack Coat                                                     | GAL  | 187.000   | 187.000   |
| 0024 | 460.2000 | Incentive Density HMA Pavement                                | DOL  | 290.000   | 290.000   |
| 0026 | 460.6224 | HMA Pavement 4 MT 58-28 S                                     | TON  | 453.000   | 453.000   |
| 0028 | 465.0315 | Asphaltic Flumes                                              | SY   | 20.000    | 20.000    |
| 0030 | 601.0553 | Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D           | LF   | 85.000    | 85.000    |
| 0032 | 618.0100 | Maintenance And Repair of Haul Roads (project) 01. 5310-00-70 | EACH | 1.000     | 1.000     |
| 0034 | 619.1000 | Mobilization                                                  | EACH | 1.000     | 1.000     |
| 0036 | 624.0100 | Water                                                         | MGAL | 9.000     | 9.000     |
| 0038 | 625.0500 | Salvaged Topsoil                                              | SY   | 1,450.000 | 1,450.000 |
| 0040 | 628.1504 | Silt Fence                                                    | LF   | 400.000   | 400.000   |
| 0042 | 628.1520 | Silt Fence Maintenance                                        | LF   | 400.000   | 400.000   |
| 0044 | 628.1905 | Mobilizations Erosion Control                                 | EACH | 3.000     | 3.000     |
| 0046 | 628.1910 | Mobilizations Emergency Erosion Control                       | EACH | 1.000     | 1.000     |
| 0048 | 628.2002 | Erosion Mat Class I Type A                                    | SY   | 1,450.000 | 1,450.000 |
| 0050 | 628.7504 | Temporary Ditch Checks                                        | LF   | 20.000    | 20.000    |
| 0052 | 628.7555 | Culvert Pipe Checks                                           | EACH | 5.000     | 5.000     |
| 0054 | 629.0210 | Fertilizer Type B                                             | CWT  | 1.500     | 1.500     |
| 0056 | 630.0130 | Seeding Mixture No. 30                                        | LB   | 38.000    | 38.000    |
| 0058 | 630.0200 | Seeding Temporary                                             | LB   | 19.000    | 19.000    |
| 0060 | 630.0500 | Seed Water                                                    | MGAL | 32.000    | 32.000    |
| 0062 | 634.0616 | Posts Wood 4x6-Inch X 16-FT                                   | EACH | 6.000     | 6.000     |
| 0064 | 638.2102 | Moving Signs Type II                                          | EACH | 6.000     | 6.000     |
| 0066 | 642.5001 | Field Office Type B                                           | EACH | 1.000     | 1.000     |
| 0068 | 643.0300 | Traffic Control Drums                                         | DAY  | 1,000.000 | 1,000.000 |
| 0070 | 643.0900 | Traffic Control Signs                                         | DAY  | 350.000   | 350.000   |
| 0072 | 643.5000 | Traffic Control                                               | EACH | 1.000     | 1.000     |
| 0074 | 646.1020 | Marking Line Epoxy 4-Inch                                     | LF   | 725.000   | 725.000   |
| 0076 | 646.3020 | Marking Line Epoxy 8-Inch                                     | LF   | 1,030.000 | 1,030.000 |
| 0078 | 646.5020 | Marking Arrow Epoxy                                           | EACH | 2.000     | 2.000     |

Estimate Of Quantities

| 5310-00-70 |          |                                                                        |      |           |           |
|------------|----------|------------------------------------------------------------------------|------|-----------|-----------|
| Line       | Item     | Item Description                                                       | Unit | Total     | Qty       |
| 0080       | 646.5120 | Marking Word Epoxy                                                     | EACH | 1.000     | 1.000     |
| 0082       | 646.7120 | Marking Diagonal Epoxy 12-Inch                                         | LF   | 330.000   | 330.000   |
| 0084       | 649.0205 | Temporary Marking Line Paint 8-Inch                                    | LF   | 1,000.000 | 1,000.000 |
| 0086       | 650.4500 | Construction Staking Subgrade                                          | LF   | 800.000   | 800.000   |
| 0088       | 650.5000 | Construction Staking Base                                              | LF   | 800.000   | 800.000   |
| 0090       | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter                     | LF   | 85.000    | 85.000    |
| 0092       | 650.8500 | Construction Staking Electrical Installations (project) 01. 5310-00-70 | LS   | 1.000     | 1.000     |
| 0094       | 650.9910 | Construction Staking Supplemental Control (project) 01. 5310-00-70     | LS   | 1.000     | 1.000     |
| 0096       | 650.9920 | Construction Staking Slope Stakes                                      | LF   | 800.000   | 800.000   |
| 0098       | 652.0225 | Conduit Rigid Nonmetallic Schedule 40 2-Inch                           | LF   | 30.000    | 30.000    |
| 0100       | 652.0235 | Conduit Rigid Nonmetallic Schedule 40 3-Inch                           | LF   | 190.000   | 190.000   |
| 0102       | 653.0164 | Pull Boxes Non-Conductive 24x42-Inch                                   | EACH | 1.000     | 1.000     |
| 0104       | 653.0905 | Removing Pull Boxes                                                    | EACH | 1.000     | 1.000     |
| 0106       | 654.0106 | Concrete Bases Type 6                                                  | EACH | 1.000     | 1.000     |
| 0108       | 655.0610 | Electrical Wire Lighting 12 AWG                                        | LF   | 150.000   | 150.000   |
| 0110       | 657.0205 | Transformer Bases Breakaway 13-15 Inch Bolt Circle                     | EACH | 1.000     | 1.000     |
| 0112       | 690.0150 | Sawing Asphalt                                                         | LF   | 870.000   | 870.000   |
| 0114       | SPV.0060 | Special 01. Moving Lighting Assembly                                   | EACH | 1.000     | 1.000     |

REMOVING CURB & GUTTER

| 204.0150               |          |    |          |          |    |
|------------------------|----------|----|----------|----------|----|
| REMOVING CURB & GUTTER |          |    |          |          |    |
| CATEGORY               | STATION  | TO | STATION  | LOCATION | LF |
| 0010                   | 92+40 WB | -  | 93+00 WB | LT       | 85 |
| TOTAL 0010             |          |    |          |          | 85 |

REMOVING ASPHALTIC SURFACE

| 204.0110                   |         |    |         |          |     | 204.0120                   |
|----------------------------|---------|----|---------|----------|-----|----------------------------|
| REMOVING ASPHALTIC SURFACE |         |    |         |          |     | REMOVING ASPHALTIC SURFACE |
| CATEGORY                   | STATION | TO | STATION | LOCATION | SY  | MILLING                    |
| 0010                       |         | -  |         |          | 290 | 885                        |
| TOTAL 0010                 |         |    |         |          | 290 | 885                        |

EARTHWORK

| 205.0100          |          |    |          |          |     | *                                     |     |     |
|-------------------|----------|----|----------|----------|-----|---------------------------------------|-----|-----|
| EXCAVATION COMMON |          |    |          |          |     | UNEXPANDED FILL                       |     |     |
| CATEGORY          | STATION  | TO | STATION  | LOCATION | CY  | EXPANDED FILL (EXPANSION FACTOR 1.25) |     |     |
| 0010              | 92+24 WB | -  | 99+50 WB | LT       | 490 | 164                                   | 205 | 285 |
| TOTAL 0010        |          |    |          |          | 490 |                                       |     |     |

\* MASS ORDINATE = EXCAVATION COMMON - EXPANDED FILL (POSITIVE QUANTITY INDICATES EXCESS OF MATERIAL)

| BASE AGGREGATE |          |    |          |          |                                      |                                        |                                    |                                |
|----------------|----------|----|----------|----------|--------------------------------------|----------------------------------------|------------------------------------|--------------------------------|
| CATEGORY       | STATION  | TO | STATION  | LOCATION | 305.0110                             | 305.0120                               | 305.0130                           | 312.0110                       |
|                |          |    |          |          | BASE AGGREGATE DENSE 3/4-INCH<br>TON | BASE AGGREGATE DENSE 1 1/4-INCH<br>TON | BASE AGGREGATE DENSE 3-INCH<br>TON | SELECT CRUSHED MATERIAL<br>TON |
| 0010           | 92+24 WB | -  | 99+50 WB | LT       | 51                                   | 420                                    | 460                                | 660                            |
| TOTAL 0010     |          |    |          |          | 51                                   | 420                                    | 460                                | 660                            |

| CONCRETE CURB & GUTTER |          |    |          |          |                                                              |
|------------------------|----------|----|----------|----------|--------------------------------------------------------------|
| CATEGORY               | STATION  | TO | STATION  | LOCATION | 601.0553                                                     |
|                        |          |    |          |          | CONCRETE CURB & GUTTER 4-INCH<br>SLOPED 36-INCH TYPE D<br>LF |
| 0010                   | 92+40 WB | -  | 93+00 WB | LT       | 85                                                           |
| TOTAL 0010             |          |    |          |          | 85                                                           |

| ASPHALT ITEMS |          |    |          |          |                  |                                  |                        |  |
|---------------|----------|----|----------|----------|------------------|----------------------------------|------------------------|--|
| CATEGORY      | STATION  | TO | STATION  | LOCATION | 455.0605         | 460.6224                         | 465.0315               |  |
|               |          |    |          |          | TACK COAT<br>GAL | HMA PAVEMENT 4 MT 58-28 S<br>TON | ASPHALTIC FLUMES<br>SY |  |
| 0010          | 92+24 WB | -  | 99+50 WB | LT       | 187              | 453                              | 20                     |  |
| TOTAL 0010    |          |    |          |          | 187              | 453                              | 20                     |  |

| MOVING LIGHTING ASSEMBLY |          |                |                              |                                                 |                                                 |                                           |                          |                            |                                    |                                                         |                                             |
|--------------------------|----------|----------------|------------------------------|-------------------------------------------------|-------------------------------------------------|-------------------------------------------|--------------------------|----------------------------|------------------------------------|---------------------------------------------------------|---------------------------------------------|
|                          |          |                | 204.0195                     | 652.0225                                        | 652.0235                                        | 653.0164                                  | 653.0905                 | 654.0106                   | 655.0610                           | 657.0205                                                | SPV.0060.01                                 |
|                          |          |                | REMOVING CONCRETE BASES EACH | CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF | CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF | PULL BOXES NON-CONDUCTIVE 24X42-INCH EACH | REMOVING PULL BOXES EACH | CONCRETE BASES TYPE 6 EACH | ELECTRICAL WIRE LIGHTING 12 AWG LF | TRANSFORMER BASES BREAKAWAY 13-15 INCH BOLT CIRCLE EACH | SPECIAL (01. MOVING LIGHTING ASSEMBLY) EACH |
| 0010                     | 92+54 WB | 59' LT         | 1                            | -                                               | -                                               | -                                         | -                        | -                          | -                                  | -                                                       | -                                           |
| 0010                     |          | PB-3 TO LB1    | -                            | 30                                              | -                                               | -                                         | -                        | -                          | -                                  | -                                                       | -                                           |
| 0010                     |          | EXPB-1 TO PB-3 | -                            | -                                               | 100                                             | -                                         | -                        | -                          | -                                  | -                                                       | -                                           |
| 0010                     |          | EXPB-2 TO PB-3 | -                            | -                                               | 90                                              | -                                         | -                        | -                          | -                                  | -                                                       | -                                           |
| 0010                     | 92+74 WB | 63' LT         | -                            | -                                               | -                                               | 1                                         | -                        | -                          | -                                  | -                                                       | -                                           |
| 0010                     | 92+64 WB | 46' LT         | -                            | -                                               | -                                               | -                                         | 1                        | -                          | -                                  | -                                                       | -                                           |
| 0010                     | 92+55 WB | 79' LT         | -                            | -                                               | -                                               | -                                         | -                        | 1                          | -                                  | -                                                       | -                                           |
| 0010                     |          | UNDISTRIBUTED  | -                            | -                                               | -                                               | -                                         | -                        | -                          | 150                                | -                                                       | -                                           |
| 0010                     | 92+55 WB | 79' LT         | -                            | -                                               | -                                               | -                                         | -                        | -                          | -                                  | 1                                                       | 1                                           |
| TOTAL 0010               |          |                | 1                            | 30                                              | 190                                             | 1                                         | 1                        | 1                          | 150                                | 1                                                       | 1                                           |

| MOVING SIGNS |         |    |         |                                  |   |                           |   |
|--------------|---------|----|---------|----------------------------------|---|---------------------------|---|
|              |         |    |         | 634.0616                         |   | 638.2102                  |   |
|              |         |    |         | POSTS WOOD 4X6-INCH X 16-FT EACH |   | MOVING SIGNS TYPE II EACH |   |
| CATEGORY     | STATION | TO | STATION | LOCATION                         |   |                           |   |
| 0010         |         | -  |         |                                  | 6 |                           | 6 |
|              |         |    |         | TOTAL 0010                       | 6 |                           | 6 |

| FINISHING ITEMS |         |    |         |          |                     |                            |                           |
|-----------------|---------|----|---------|----------|---------------------|----------------------------|---------------------------|
|                 |         |    |         |          |                     | 625.0500                   | 628.2002                  |
|                 |         |    |         |          |                     | 629.0210                   | 630.0130                  |
|                 |         |    |         |          |                     | 630.0200                   |                           |
|                 |         |    |         |          |                     | EROSION MAT CLASS I TYPE A |                           |
| CATEGORY        | STATION | TO | STATION | LOCATION | SALVAGED TOPSOIL SY | FERTILIZER TYPE B CWT      | SEEDING MIXTURE NO. 30 LB |
| 0010            | -       |    |         | PROJECT  | 1,450               | 1.5                        | 38                        |
| TOTAL 0010      |         |    |         |          | 1,450               | 1.5                        | 38                        |

| EROSION CONTROL |            |               |                           |                           |                          |
|-----------------|------------|---------------|---------------------------|---------------------------|--------------------------|
| CATEGORY        | LOCATION   | 628.1504      | 628.1520                  | 628.7504                  | 628.7555                 |
|                 |            | SILT FENCE LF | SILT FENCE MAINTENANCE LF | TEMPORARY DITCH CHECKS LF | CULVERT PIPE CHECKS EACH |
| 0010            | PROJECT    | 400           | 400                       | 20                        | 5                        |
|                 | TOTAL 0010 | 400           | 400                       | 20                        | 5                        |

| MOBILIZATIONS EROSION CONTROL |            |                                    |                                              |  |
|-------------------------------|------------|------------------------------------|----------------------------------------------|--|
| CATEGORY                      | LOCATION   | 628.1905                           | 628.1910                                     |  |
|                               |            | MOBILIZATIONS EROSION CONTROL EACH | MOBILIZATIONS EMERGENCY EROSION CONTROL EACH |  |
| 0010                          | PROJECT    | 3                                  | 1                                            |  |
|                               | TOTAL 0010 | 3                                  | 1                                            |  |

| WATER    |            |            |                 |  |
|----------|------------|------------|-----------------|--|
| CATEGORY | LOCATION   | 624.0100   | 630.0500        |  |
|          |            | WATER MGAL | SEED WATER MGAL |  |
| 0010     | PROJECT    | 9          | 32              |  |
|          | TOTAL 0010 | 9          | 32              |  |

TRAFFIC CONTROL

|            |      | 643.0300                     | 643.0900                     |
|------------|------|------------------------------|------------------------------|
| CATEGORY   | DAYS | TRAFFIC CONTROL DRUMS<br>DAY | TRAFFIC CONTROL SIGNS<br>DAY |
| 0010       | 30   | 1,000                        | 350                          |
| TOTAL 0010 |      | 1,000                        | 350                          |

TEMPORARY MARKING

|            |         |    |         |          | 649.0205                                      |
|------------|---------|----|---------|----------|-----------------------------------------------|
| CATEGORY   | STATION | TO | STATION | LOCATION | TEMPORARY MARKING LINE PAINT 8-<br>INCH<br>LF |
| 0010       |         | -  |         |          | 1,000                                         |
| TOTAL 0010 |         |    |         |          | 1,000                                         |

PAVEMENT MARKING

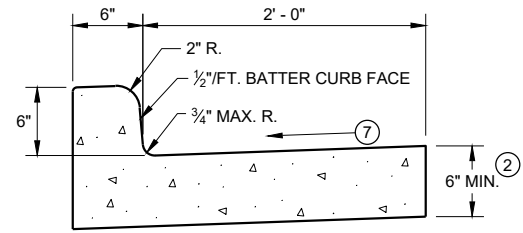
|            |         |    |         |          | 646.1020                            | 646.3020                            | 646.5020                    | 646.5120                   | 646.7120                                |
|------------|---------|----|---------|----------|-------------------------------------|-------------------------------------|-----------------------------|----------------------------|-----------------------------------------|
| CATEGORY   | STATION | TO | STATION | LOCATION | MARKING LINE EPOXY 4-<br>INCH<br>LF | MARKING LINE EPOXY 8-<br>INCH<br>LF | MARKING ARROW EPOXY<br>EACH | MARKING WORD EPOXY<br>EACH | MARKING DIAGONAL EPOXY<br>12-INCH<br>LF |
| 0010       |         | -  |         | PROJECT  | 725                                 | 1,030                               | 2                           | 1                          | 330                                     |
| TOTAL 0010 |         |    |         |          | 725                                 | 1,030                               | 2                           | 1                          | 330                                     |

| CONSTRUCTION STAKING |         |          |         |          |                                        |                                 |                                                             |                                                                               |                                                                                  |                                            |
|----------------------|---------|----------|---------|----------|----------------------------------------|---------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------|--------------------------------------------|
|                      |         | 650.4500 |         | 650.5000 |                                        | 650.5500                        |                                                             | 650.8500.01                                                                   |                                                                                  | 650.9920                                   |
| CATEGORY             | STATION | TO       | STATION | LOCATION | CONSTRUCTION STAKING<br>SUBGRADE<br>LF | CONSTRUCTION STAKING BASE<br>LF | CONSTRUCTION STAKING CURB<br>GUTTER AND CURB & GUTTER<br>LF | CONSTRUCTION STAKING<br>ELECTRICAL INSTALLATIONS<br>(PROJECT) (01. TBD)<br>LS | CONSTRUCTION STAKING<br>SUPPLEMENTAL CONTROL<br>(PROJECT) (01. 5310-00-70)<br>LS | CONSTRUCTION STAKING SLOPE<br>STAKES<br>LF |
| 0010                 |         | -        |         | PROJECT  | 800                                    | 800                             | 85                                                          | 1                                                                             | 1                                                                                | 800                                        |
| TOTAL 0010           |         |          |         |          | 800                                    | 800                             | 85                                                          | 1                                                                             | 1                                                                                | 800                                        |

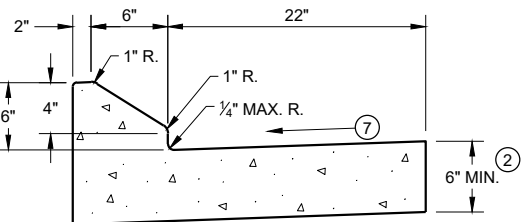
| SAWING ASPHALT |          |    |          |          |                                  |
|----------------|----------|----|----------|----------|----------------------------------|
|                |          |    |          |          | 690.0150<br>SAWING ASPHALT<br>LF |
| CATEGORY       | STATION  | TO | STATION  | LOCATION |                                  |
| 0010           | 92+25 WB | -  | 98+75 WB | LT       | 870                              |
| TOTAL 0010     |          |    |          |          | 870                              |

Standard Detail Drawing List

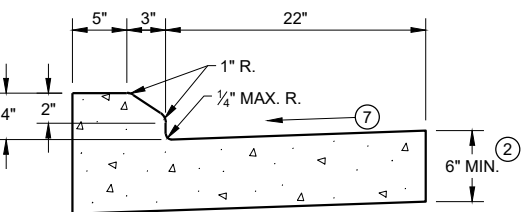
|           |                                                                                                    |
|-----------|----------------------------------------------------------------------------------------------------|
| 08D01-22A | CONCRETE CURB & GUTTER                                                                             |
| 08D01-22B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS                                               |
| 08D04-05  | CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES                                                         |
| 08E08-03  | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS                                    |
| 08E09-06  | SILT FENCE                                                                                         |
| 08E15-01  | CULVERT PIPE CHECK                                                                                 |
| 09B02-10  | CONDUIT                                                                                            |
| 09B04-11  | PULL BOX                                                                                           |
| 09C02-09  | CONCRETE BASES, TYPES 1, 2, 5, & 6                                                                 |
| 09C10-03  | TRANSFORMER BASE FOR 15" BOLT CIRCLE                                                               |
| 09E01-15E | POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 6 (35 FEET)                                                |
| 09E01-15G | HARDWARE DETAILS FOR POLE MOUNTINGS                                                                |
| 09E03-06  | NON-FREEWAY LIGHTING UNIT POLE WIRING                                                              |
| 15C04-05  | TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC |
| 15C07-15B | PAVEMENT MARKING WORDS                                                                             |
| 15C07-15C | PAVEMENT MARKING ARROWS                                                                            |
| 15C08-20C | PAVEMENT MARKING (TURN LANES)                                                                      |
| 15C11-08B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS                                  |
| 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                                          |
| 15D50-01A | TRAFFIC CONTROL, ADDED LANE CLOSURE WITHOUT LANE SHIFT                                             |



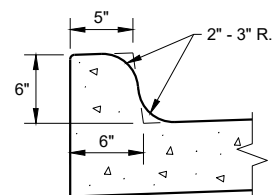
TYPES A<sup>①</sup> & D



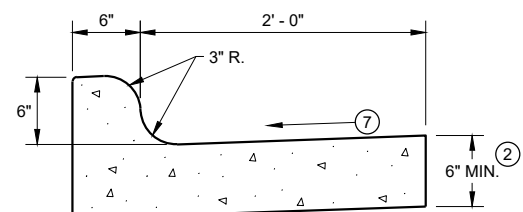
6" SLOPED CURB TYPES G<sup>①</sup> & J



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

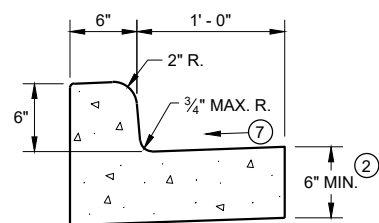


TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)



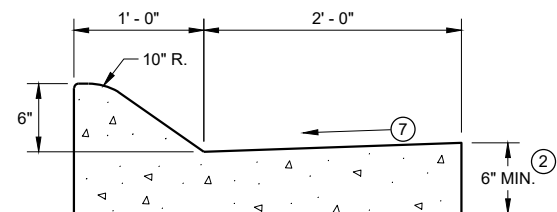
TYPES K<sup>①</sup> & L

CONCRETE CURB AND GUTTER 30"

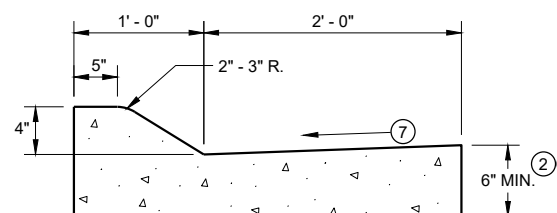


TYPES A<sup>①</sup> & D

CONCRETE CURB AND GUTTER 18"

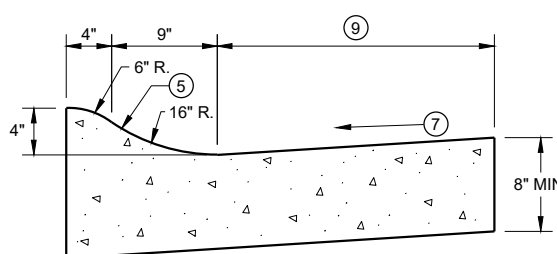


6" SLOPED CURB TYPES A<sup>①</sup> & D



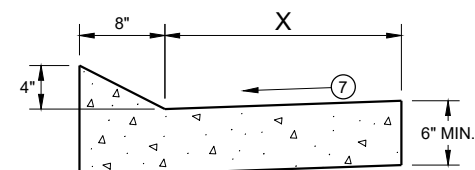
4" SLOPED CURB TYPES A<sup>①</sup> & D

CONCRETE CURB AND GUTTER 36"



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

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

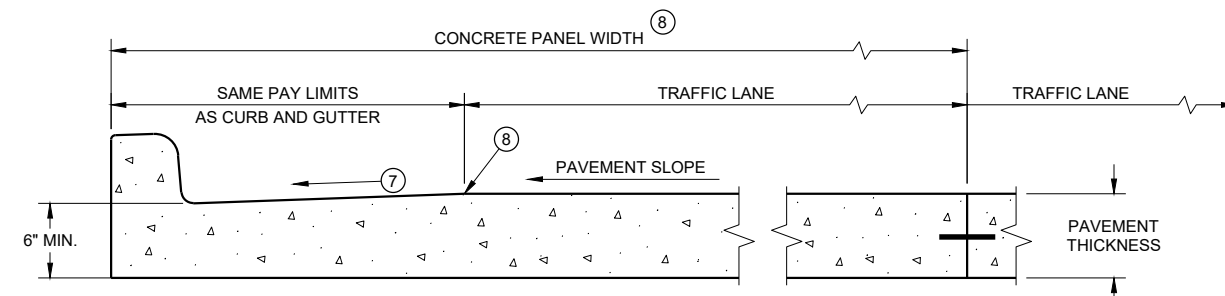


TYPES TBT & TBTT<sup>①</sup>

CONCRETE CURB AND GUTTER

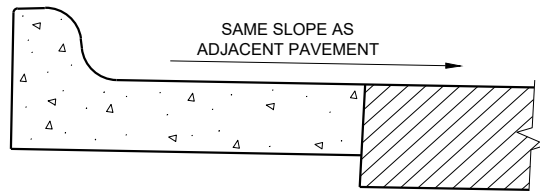
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

| 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.

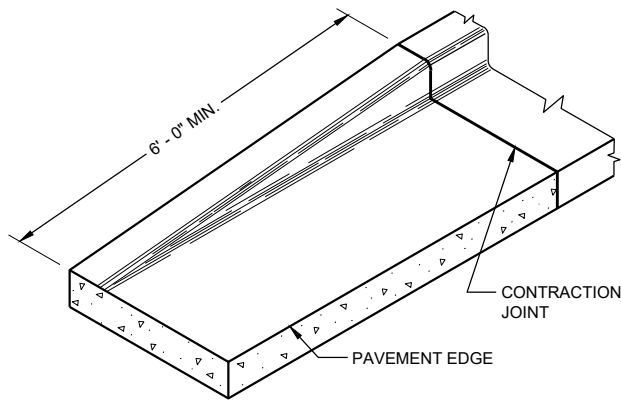
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

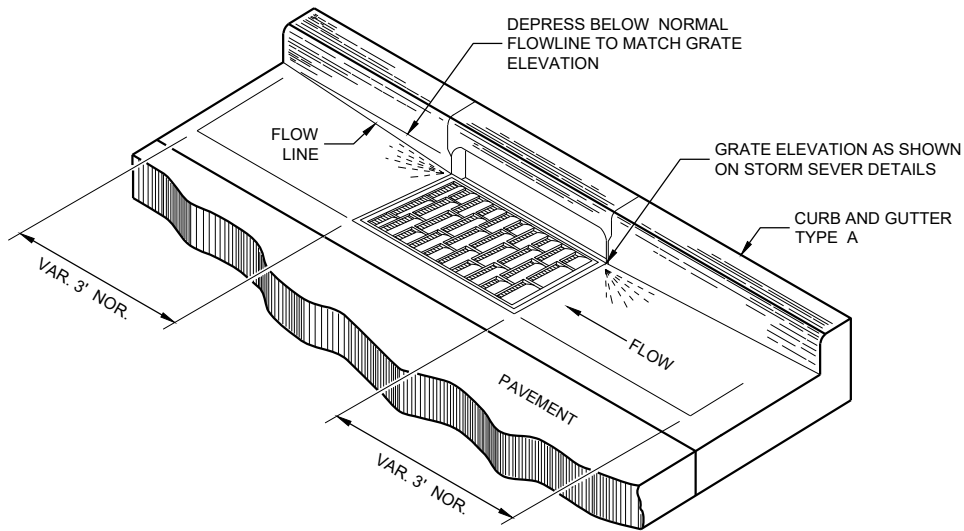
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH 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 UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES 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.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES  
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

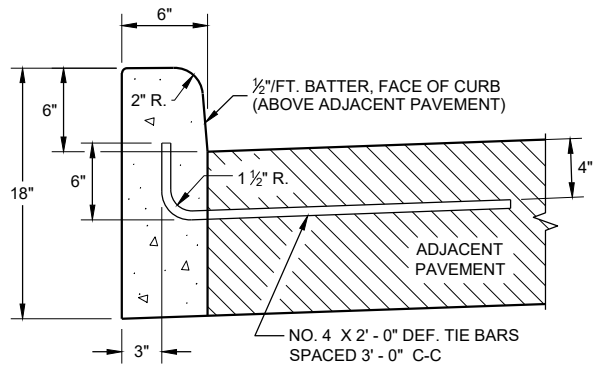
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



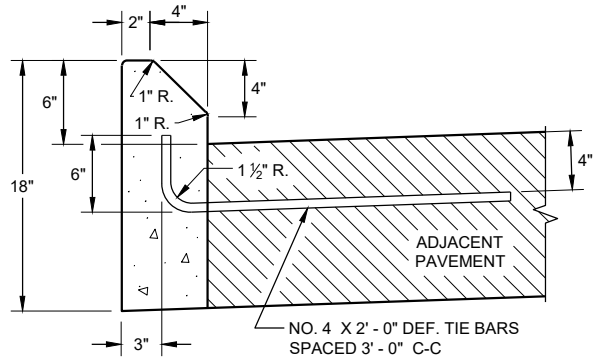
END SECTION CURB AND GUTTER



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

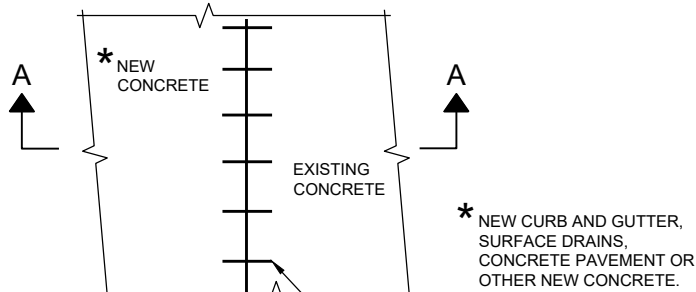


TYPES A<sup>①</sup> & D

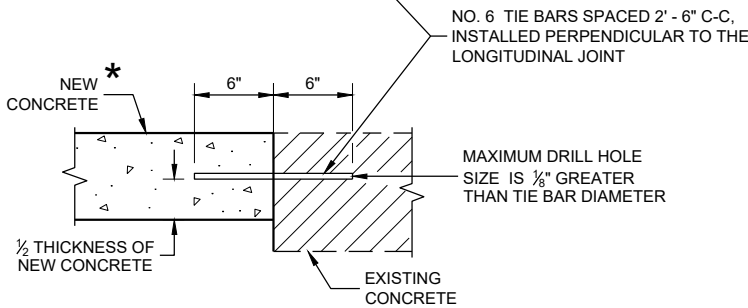


TYPES G<sup>①</sup> & J

CONCRETE CURB



PLAN VIEW



SECTION A - A

TIE BARS DRILLED  
INTO EXISTING PAVEMENT

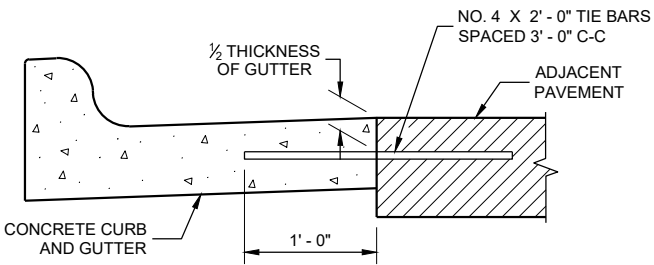
GENERAL NOTES

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

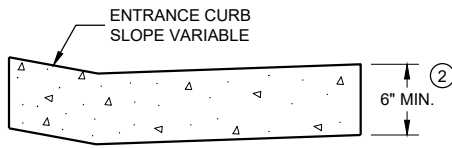
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

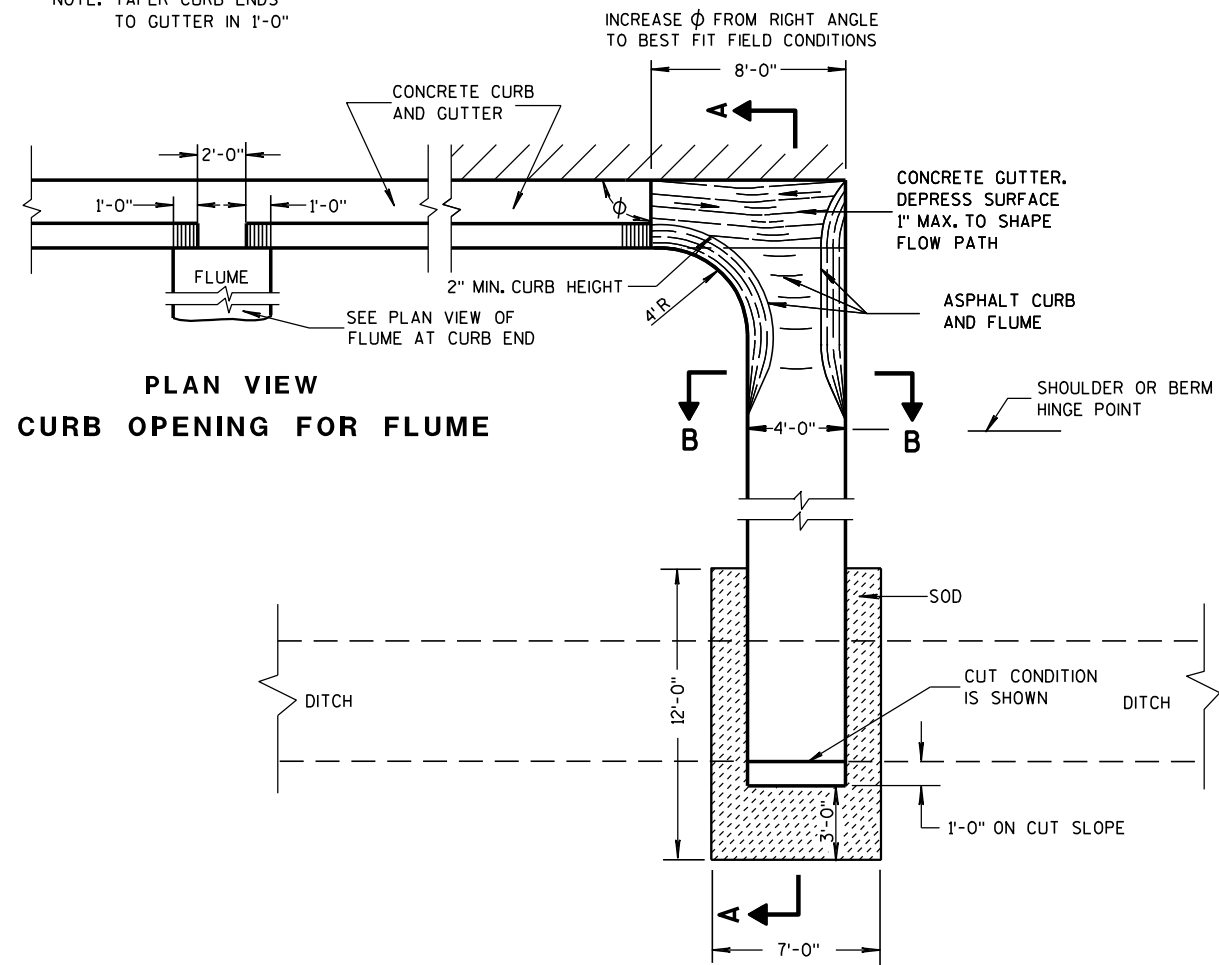
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2021  
DATE /S/ Rodney Taylor  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER

FHWA

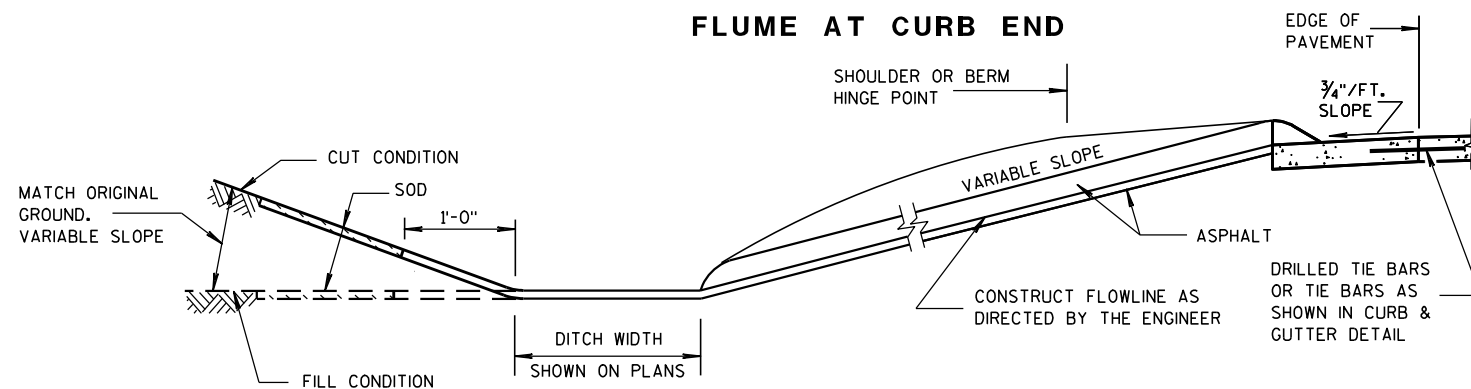
## ASPHALTIC FLUME

NOTE: TAPER CURB ENDS  
TO GUTTER IN 1'-0"

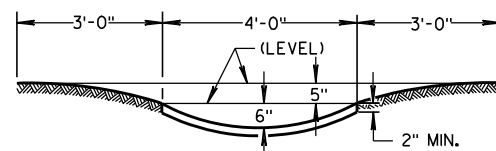


PLAN VIEW  
CURB OPENING FOR FLUME

PLAN VIEW  
FLUME AT CURB END



SECTION A-A



SECTION B-B

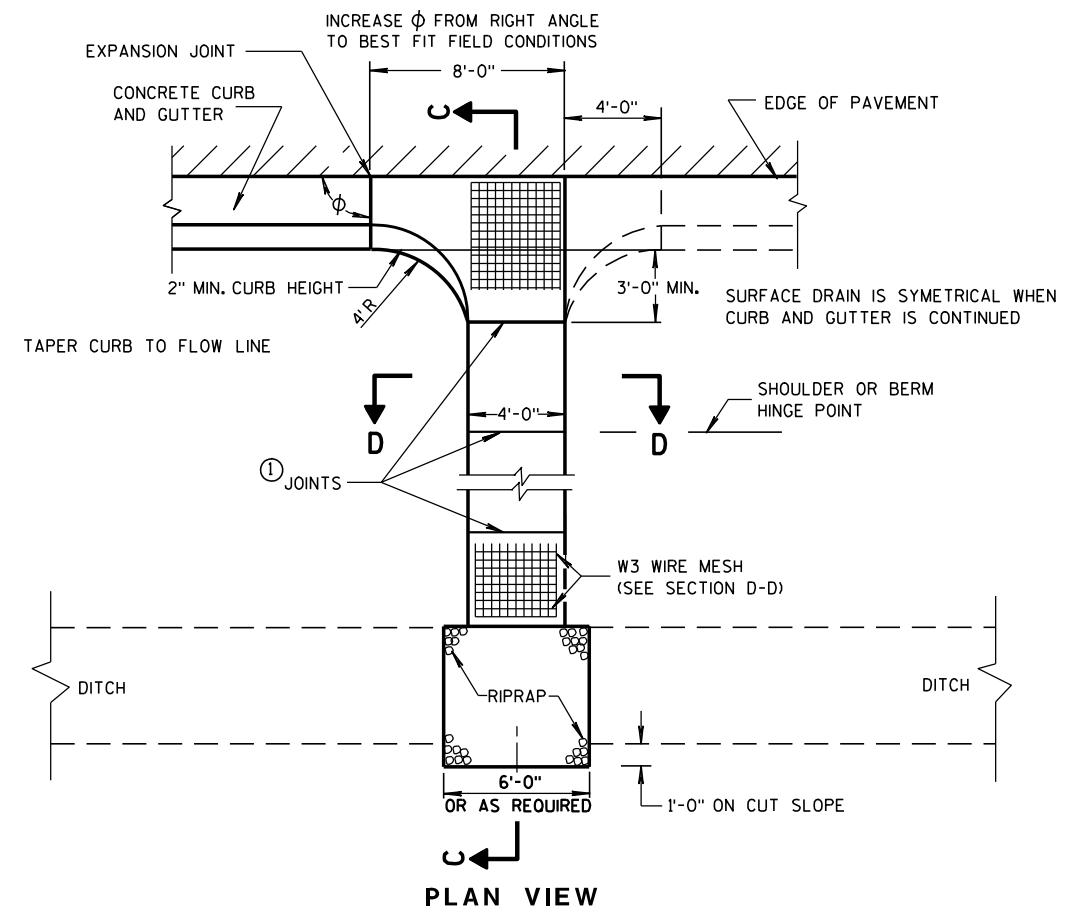
## GENERAL NOTES

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

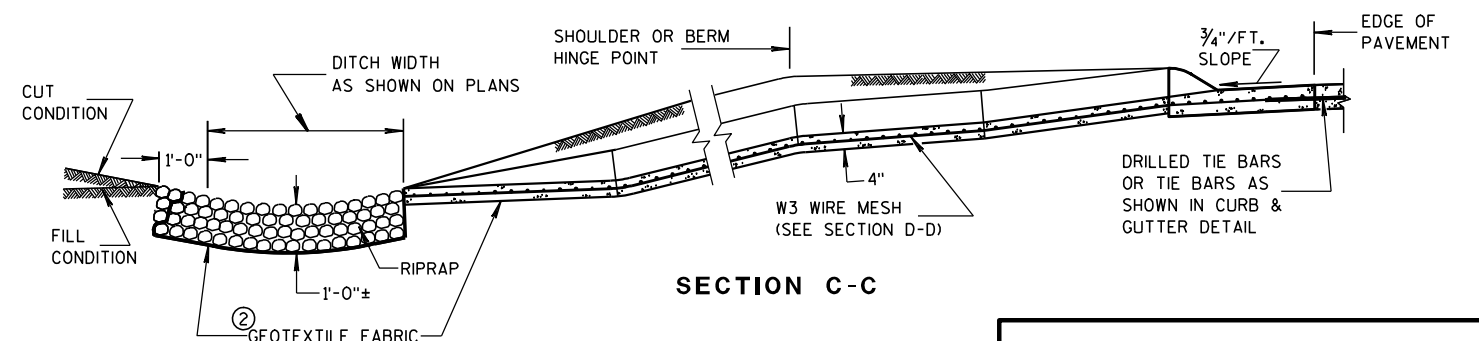
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8 TO 1/4 INCH WIDE BY 1 1/2 INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

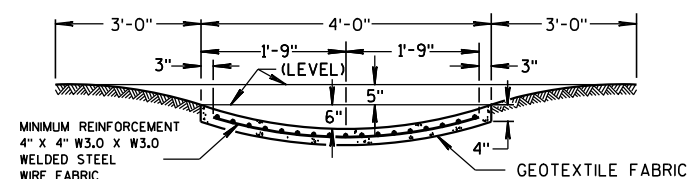
## ③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

## CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

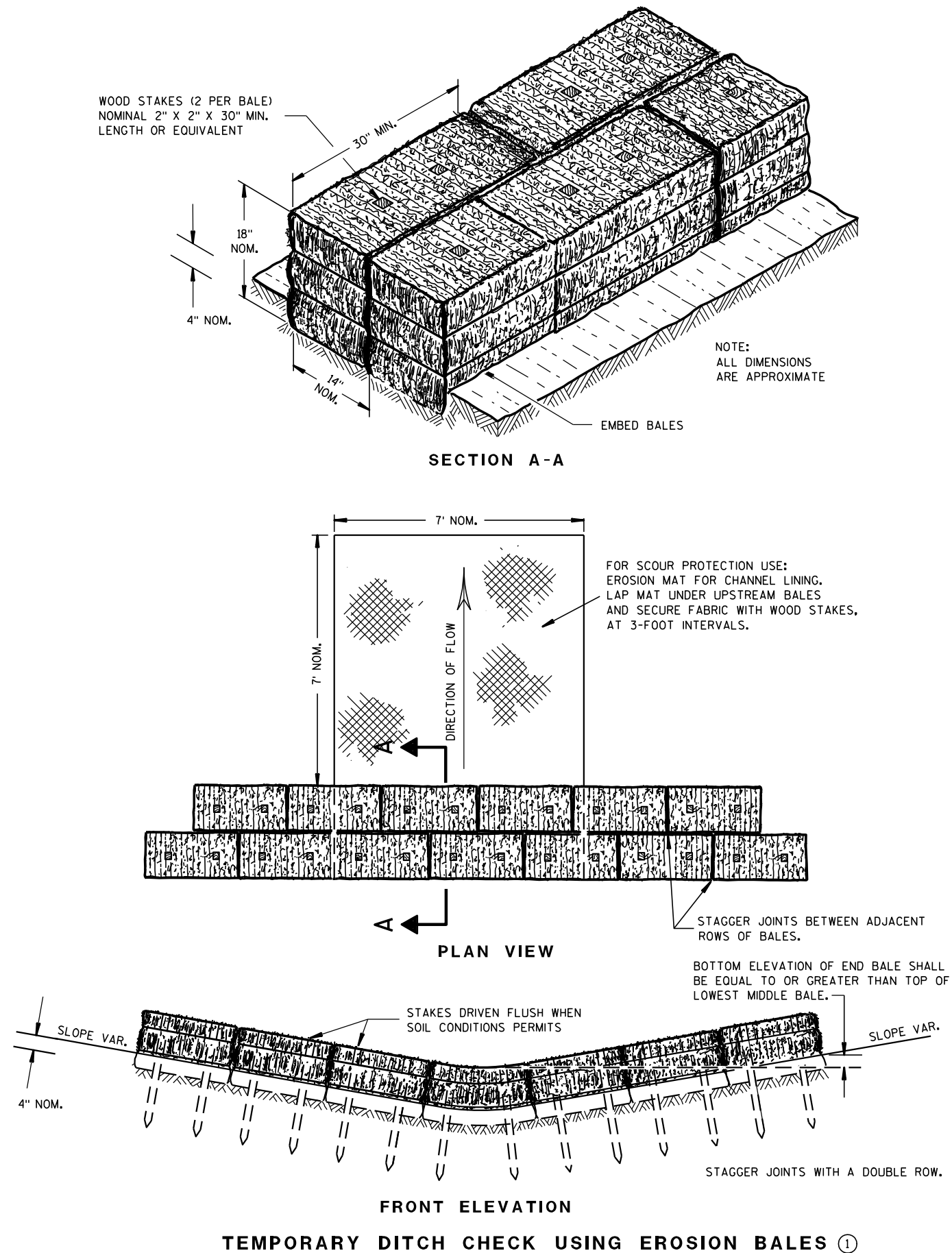
APPROVED

9-4-08

DATE

FHWA

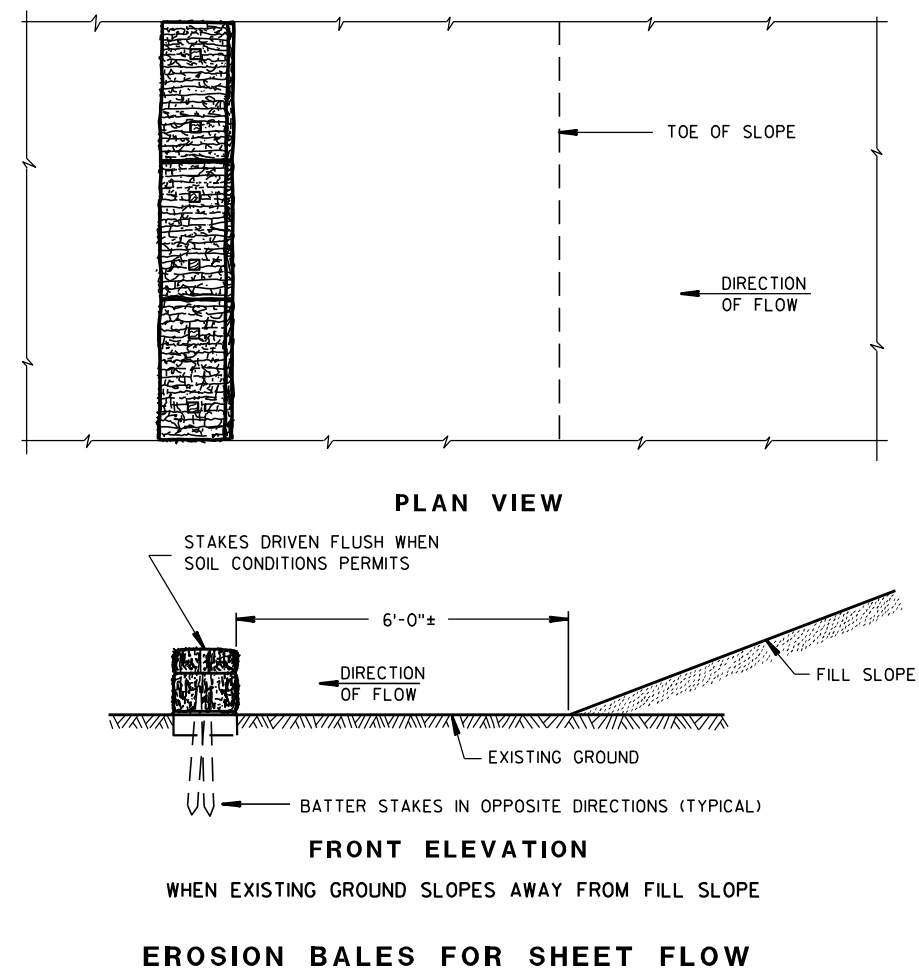
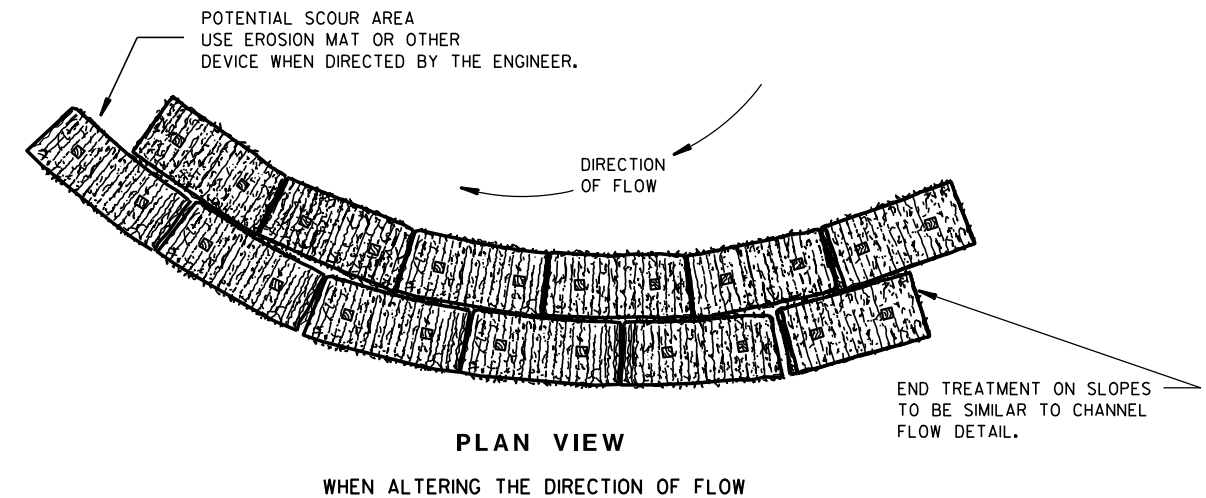
/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT  
ENGINEER



## GENERAL NOTES

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

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

TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

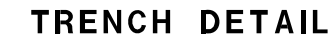
APPROVED

6/04/02  
DATE/S/ Beth Canestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER

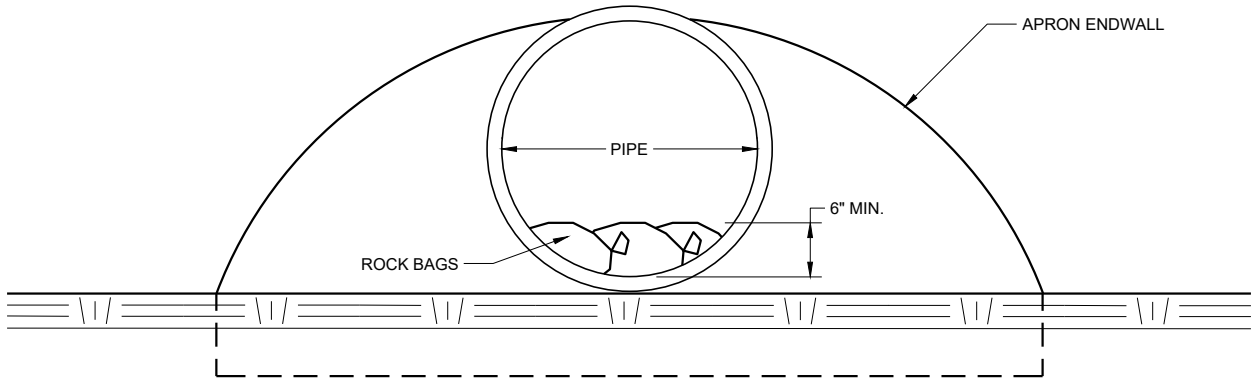
FHWA



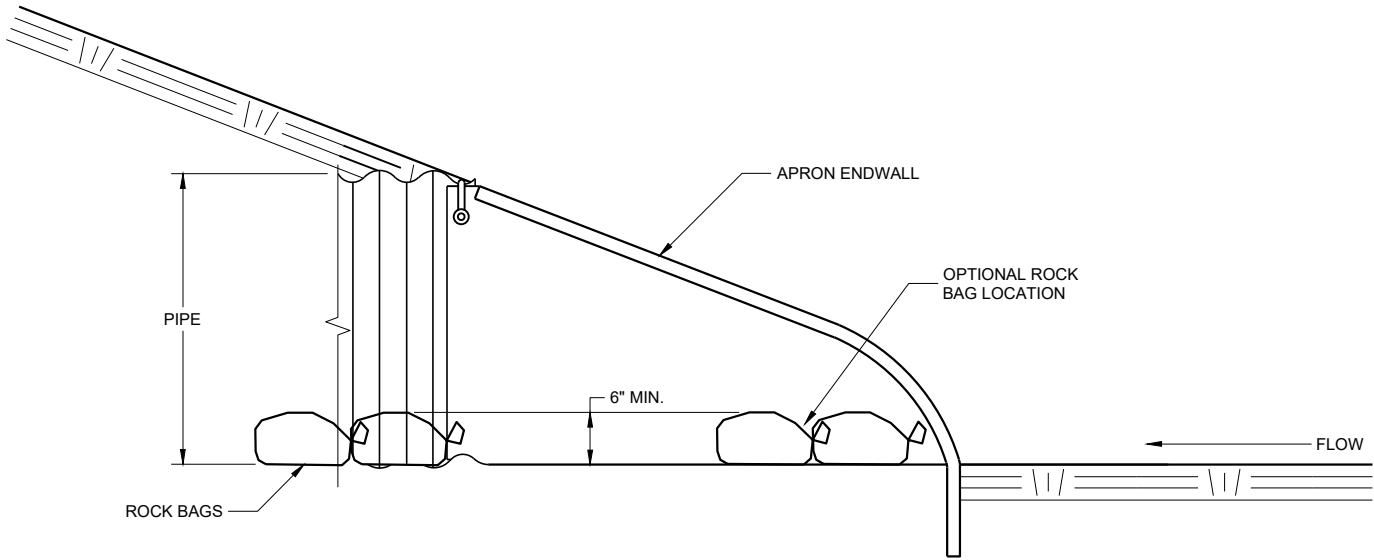
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



|                                                                                               |                                                                                  |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| <p style="text-align: center;"><b>SILT FENCE</b></p>                                          |                                                                                  |
| <p style="text-align: center;"><b>STATE OF WISCONSIN<br/>DEPARTMENT OF TRANSPORTATION</b></p> |                                                                                  |
| <p><b>APPROVED</b></p> <p><u>4-29-05</u></p> <p><u>DATE</u></p>                               | <p><u>/S/ Beth Canestra</u></p> <p><b>CHIEF ROADWAY DEVELOPMENT ENGINEER</b></p> |



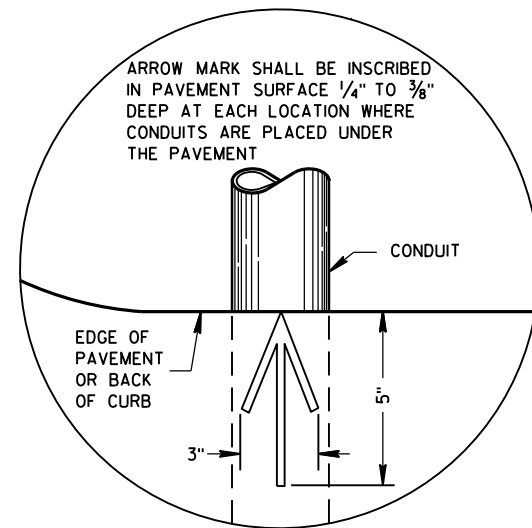
END VIEW



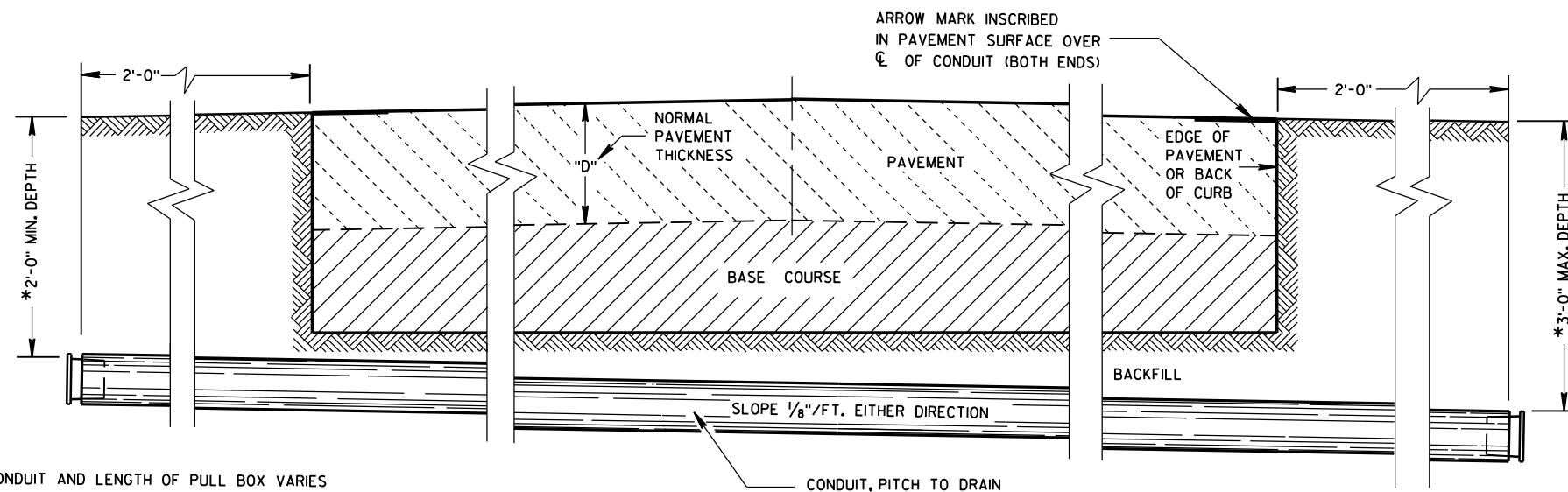
SIDE VIEW

**CULVERT PIPE CHECK**  
(INSTALL ON INLET END ONLY)

|                                                    |                                               |
|----------------------------------------------------|-----------------------------------------------|
| <b>CULVERT PIPE CHECK</b>                          |                                               |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                               |
| APPROVED<br>May 2019<br>DATE                       | /S/ Daniel Schave<br>EROSION CONTROL ENGINEER |
| FHWA                                               |                                               |



PLAN VIEW  
ARROW MARK



SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

\*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

## GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
March, 2017 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

| DIMENSION<br>IN INCHES    |   | CORRUGATED STEEL PIPE |        |        |        |        |        |        |        |        |
|---------------------------|---|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| PIPE DIAMETER<br>(INSIDE) | A | 12                    | 12     | 12     | 18     | 18     | 18     | 24     | 24     | 24     |
| PIPE LENGTH **            | B | 24                    | 30     | 36     | 24     | 30     | 36     | 36     | 42     | 48     |
| WALL THICKNESS            | C | 0.064                 | 0.064  | 0.064  | 0.064  | 0.064  | 0.064  | 0.064  | 0.064  | 0.064  |
| COVER                     | D | 10 1/4                | 10 1/4 | 10 1/4 | 16 1/4 | 16 1/4 | 16 1/4 | 22 1/4 | 22 1/4 | 22 1/4 |
| FRAME                     | E | 14 1/2                | 14 1/2 | 14 1/2 | 20 1/2 | 20 1/2 | 20 1/2 | 26 1/2 | 26 1/2 | 26 1/2 |
| FRAME                     | F | 8 1/2                 | 8 1/2  | 8 1/2  | 14 1/2 | 14 1/2 | 14 1/2 | 20 1/2 | 20 1/2 | 20 1/2 |
| FRAME                     | G | 11 1/2                | 11 1/2 | 11 1/2 | 17 1/2 | 17 1/2 | 17 1/2 | 23 1/2 | 23 1/2 | 23 1/2 |
| WEIGHT IN POUNDS *        |   |                       |        |        |        |        |        |        |        |        |
| FRAME AND COVER           |   | 60                    | 60     | 60     | 110    | 110    | 110    | 155    | 155    | 155    |

\* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

\*\* NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

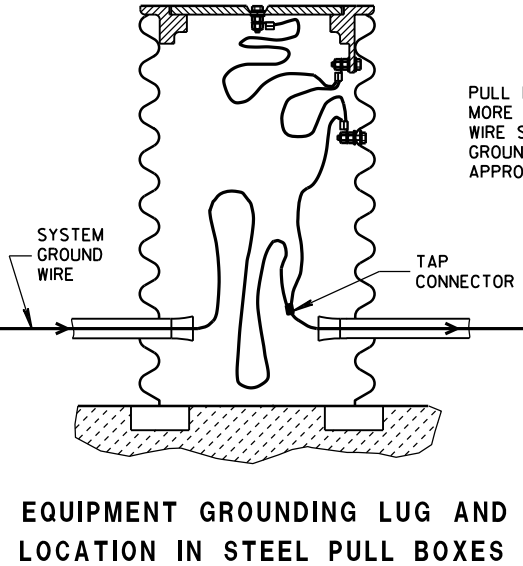
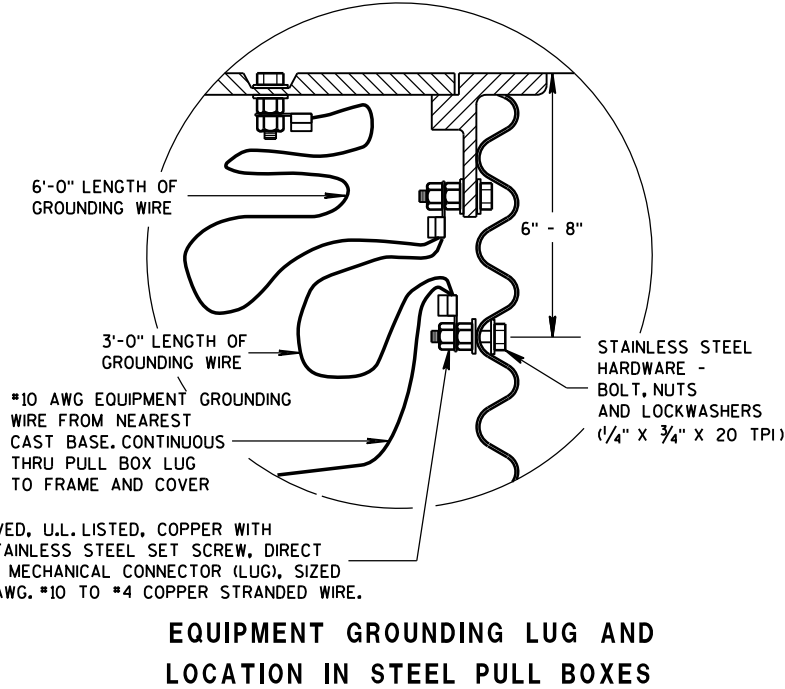
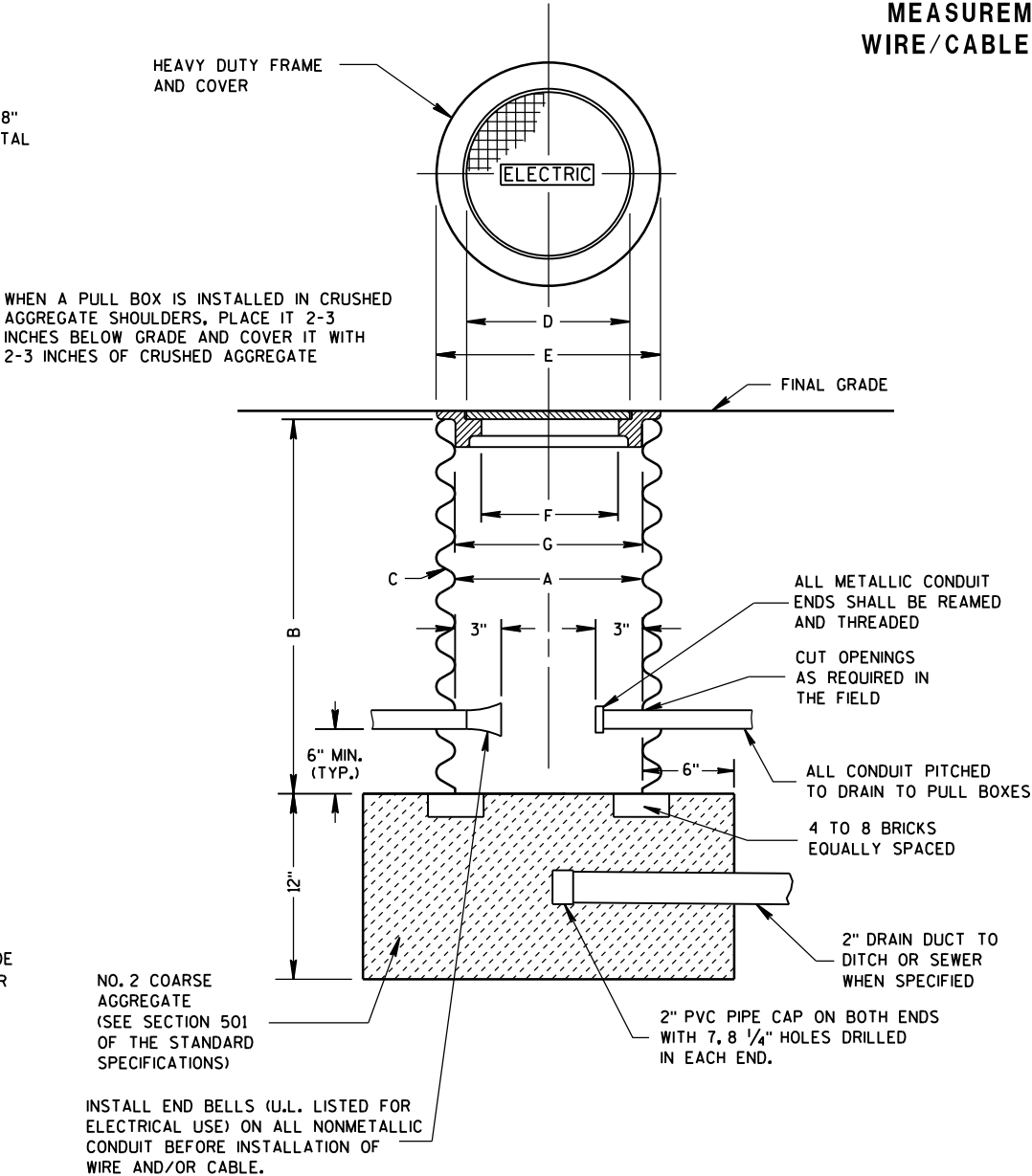
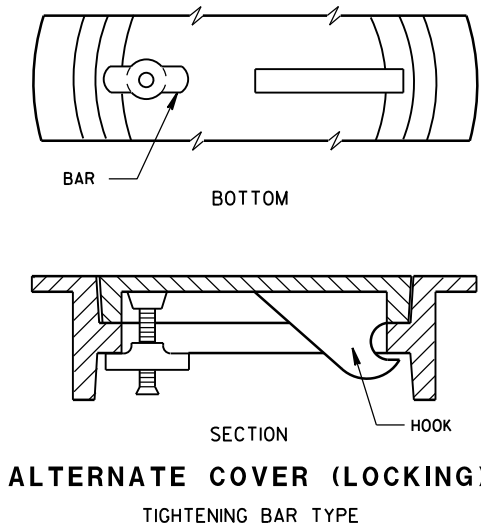
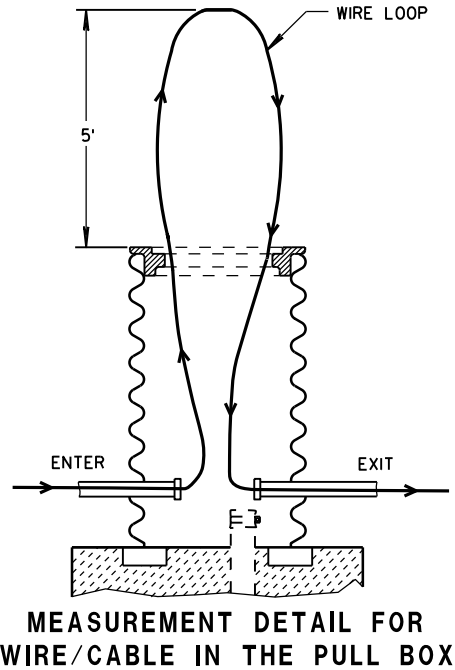
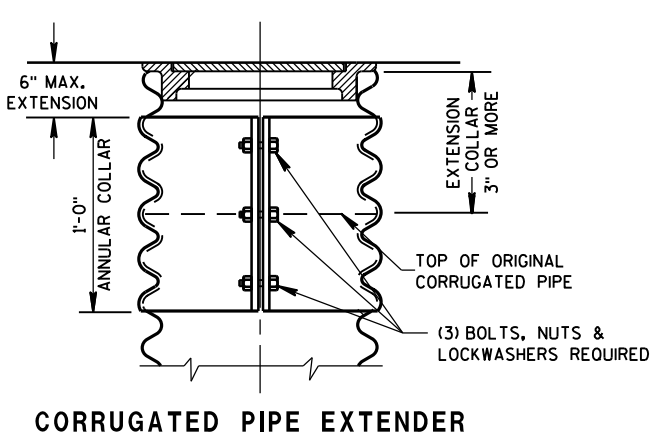
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

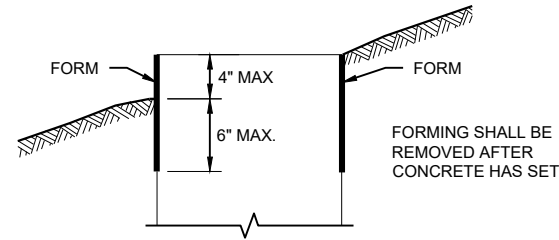
ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



|                                                    |                                                   |
|----------------------------------------------------|---------------------------------------------------|
| PULL BOX                                           |                                                   |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                   |
| APPROVED<br>Sept. 2014<br>DATE                     | /S/ Ahmet Demirbilek<br>STATE ELECTRICAL ENGINEER |
| FHWA                                               |                                                   |

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

| QUANTITY REQUIREMENTS           | CONCRETE BASE TYPE |      |       |
|---------------------------------|--------------------|------|-------|
|                                 | 1                  | 2    | 5 & 6 |
| APPROX. CUBIC YARDS OF CONCRETE | 0.40               | 0.57 | 0.40  |
| LBS. OF HOOP BAR STEEL          | NONE               | 23   | 16    |
| LBS. OF VERTICAL BAR STEEL      | NONE               | 60   | 18    |

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

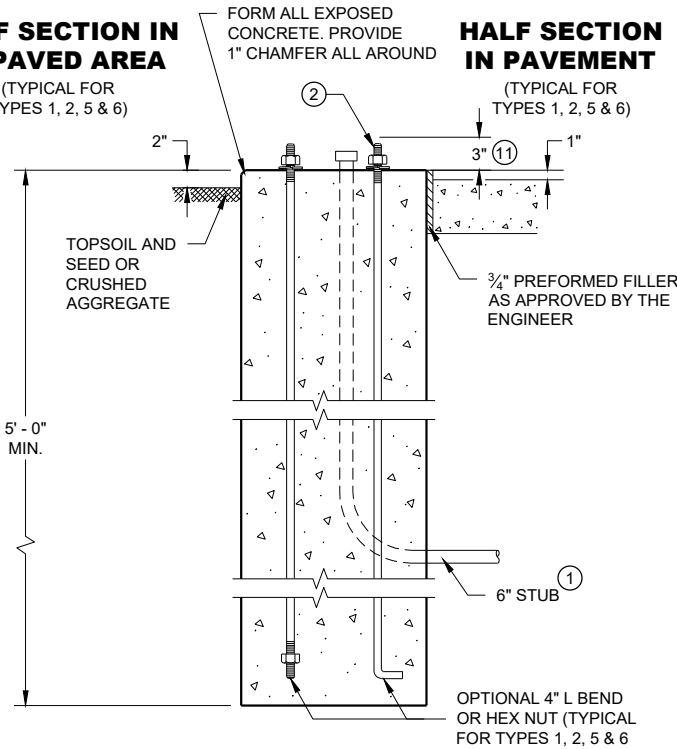
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

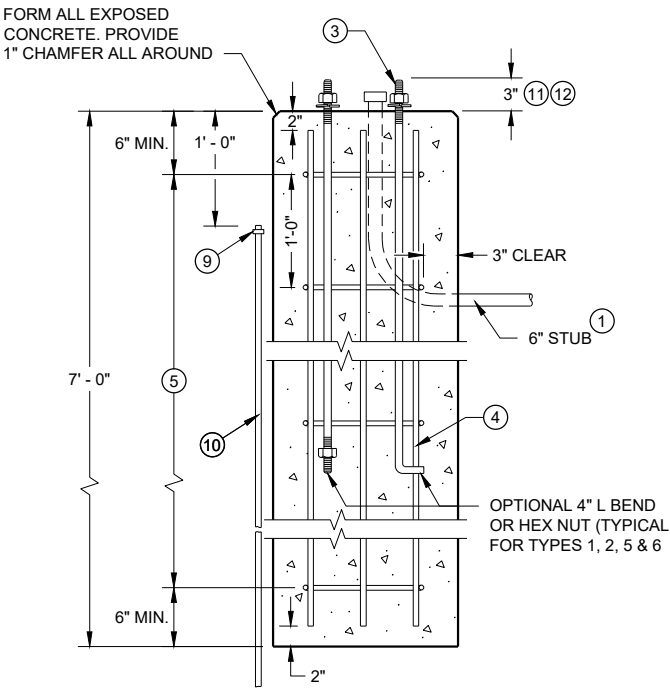
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- 2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- 4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- 5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- 8 (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 9 EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- 10 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- 11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 12 FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA



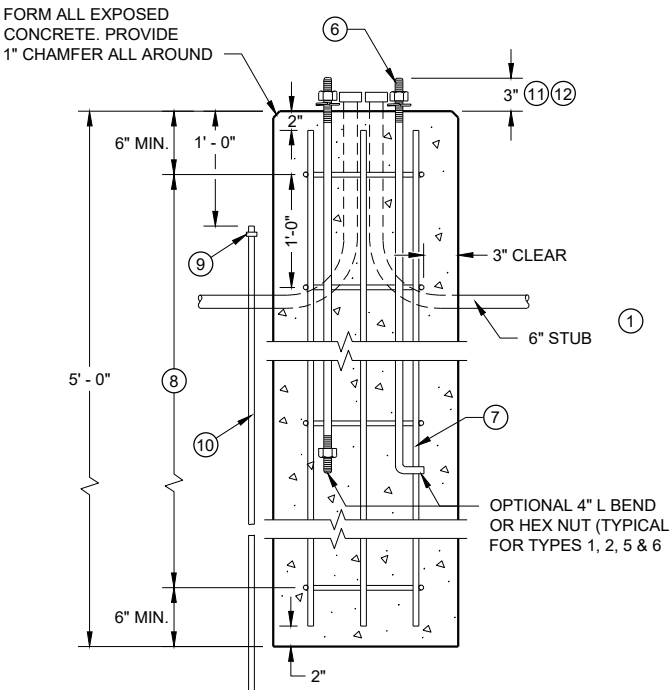
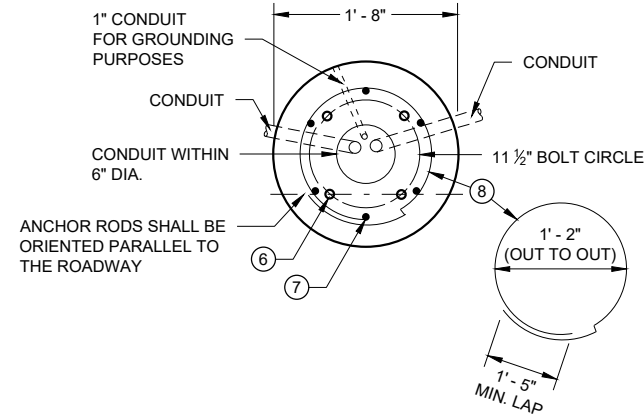
TYPE 1

HALF SECTION IN PAVEMENT

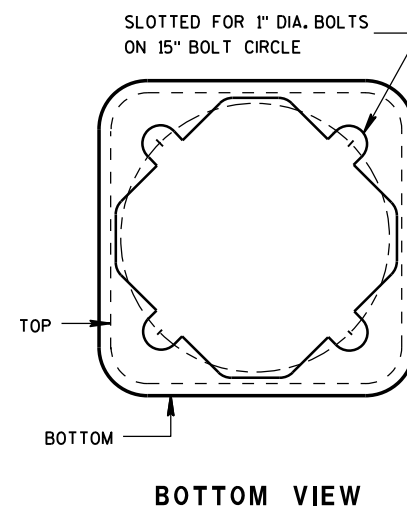
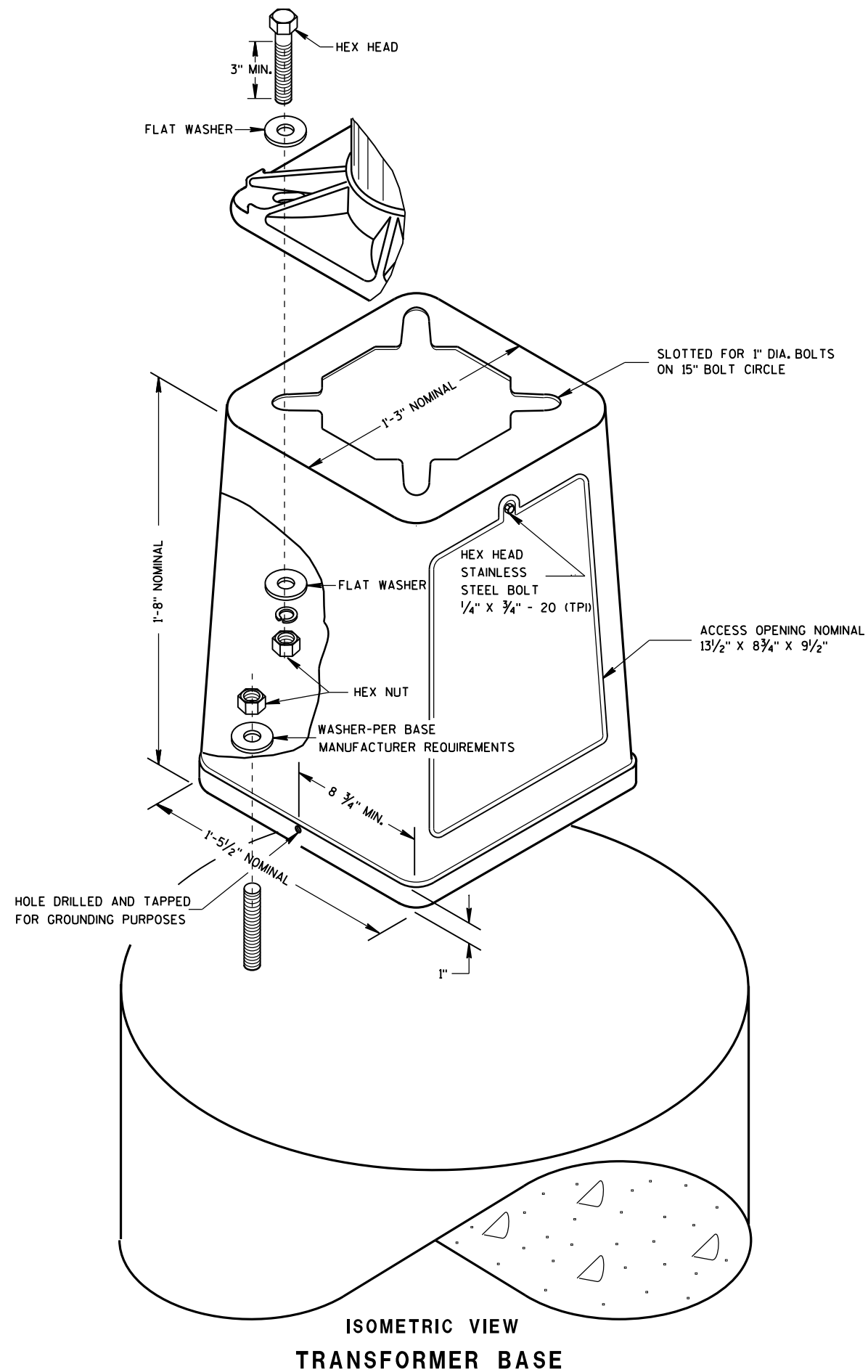


TYPE 2

CONCRETE BASES



TYPE 5 & 6



## GENERAL NOTES

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

BREAKAWAY BASES (WHERE REQUIRED) WILL BE MEASURED AND PAID AS SEPARATE ITEMS OF WORK IN ADDITION TO THE LIGHT POLE.

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 531.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIMS SHALL BE SIZED TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

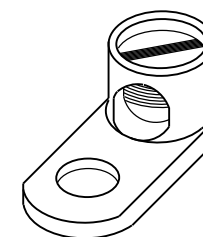
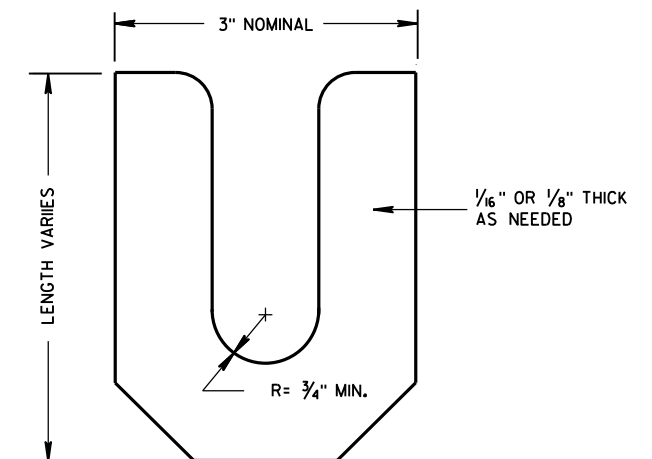
A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE TRANSFORMER BASE.

THE MECHANICAL CONNECTOR (GROUNDING LUG) SHALL BE INSTALLED USING THE TAPPED HOLE PROVIDED BY THE MANUFACTURER. THE MOUNTING BOLT HEXHEAD, NUT, WASHER AND LOCK WASHER SHALL BE STAINLESS STEEL, SIZED TO FIT THE THREADING AND HOLE SIZE, AND BE OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD A GROUNDING LUG MOUNTING HOLE NOT BE PROVIDED, THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" X 3/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE. IT SHALL BE MOUNTED IN THE SAME LOCATION AS IS SHOWN ON THE DRAWING.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, AND LOCK WASHERS, THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

THE ACCESS DOOR SHALL BE MANUFACTURED OF THE SAME MATERIAL AS THE BASE.



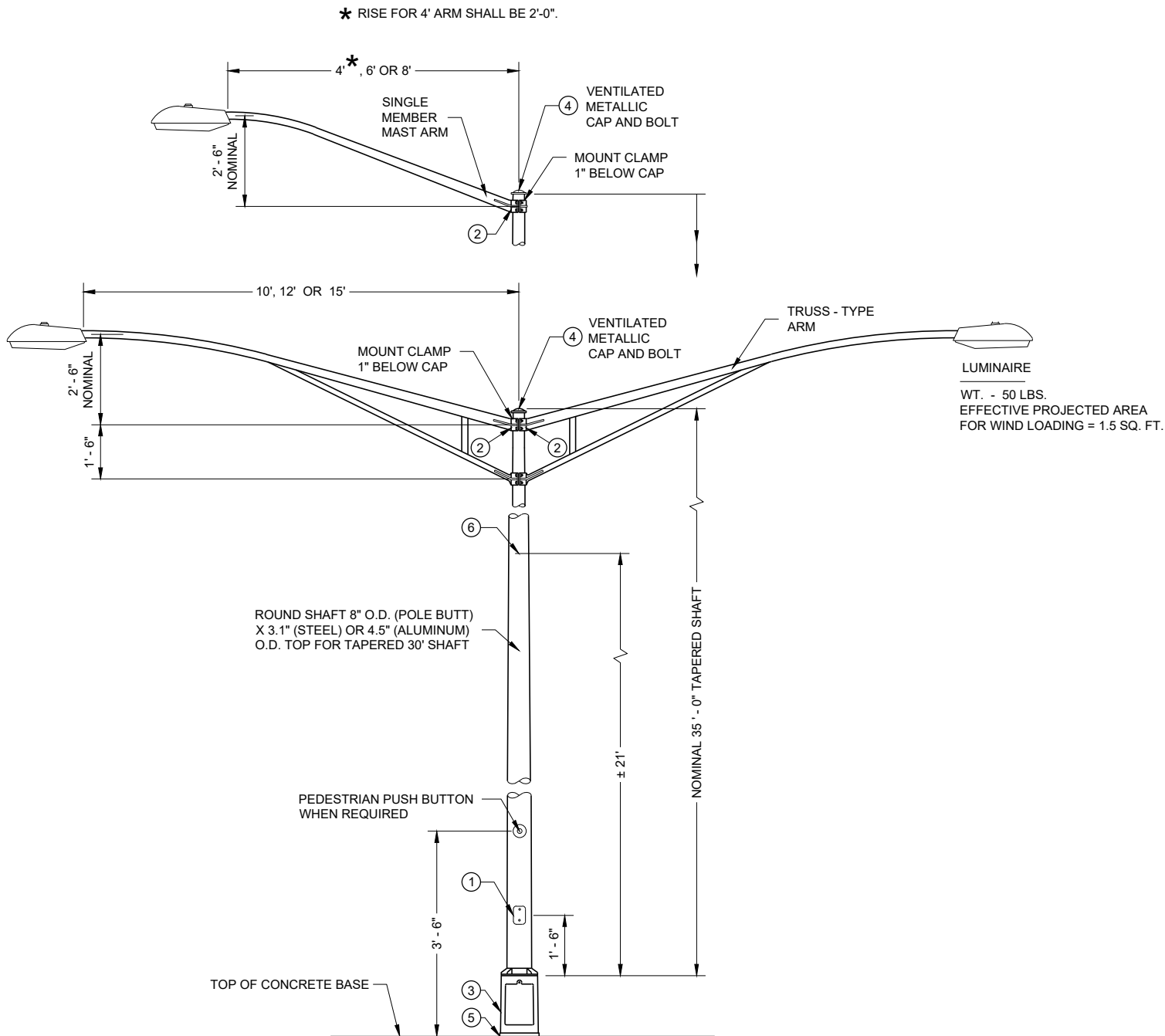
TO BE FURNISHED WITH EACH BASE

**TRANSFORMER BASE  
FOR 15" BOLT CIRCLE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
Sept. 2014  
DATE  
FHWA

/S/ Ahmet Demirbilek  
STATE ELECTRICAL ENGINEER



**TYPE 6 POLE MOUNTING CONFIGURATION  
(MAXIMUM LOAD)  
LIGHTING ONLY**

**GENERAL NOTES**

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

SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

ALL TYPE 6 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 6 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063 - T6 ALUMINUM ALLOY. SLEEVEING INSIDE THE POLE IS NOT ACCEPTABLE.

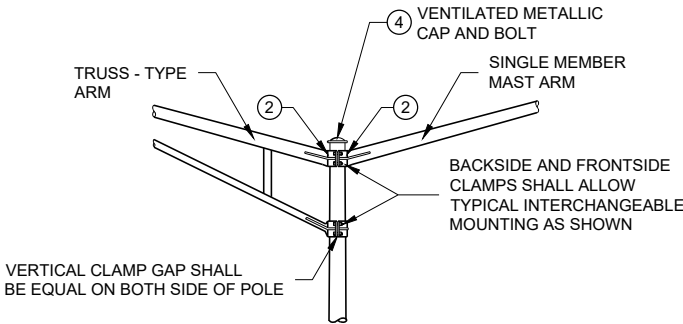
TYPE 6 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.219".

TYPE 6 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (0.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

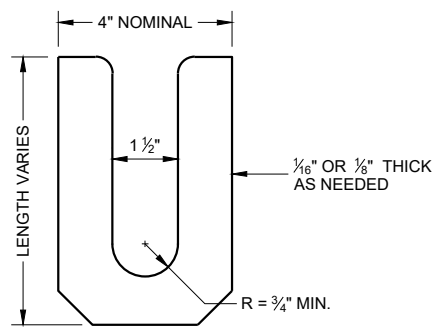
- ① 4" X 6" REINFORCED HANDHOLE AND COVER ASSEMBLY WITH TWO (2) 1/4" X 3/4" - 20 TPI , STAINLESS STEEL, HEX HEAD BOLTS.
- ② GROMMETS. 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.
- ④ FURNISH AND INSTALL VENTILATED, CAST METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- ⑤ SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- ⑥ INTERNAL DUMBBELL - TYPE VIBRATION DAMPER.



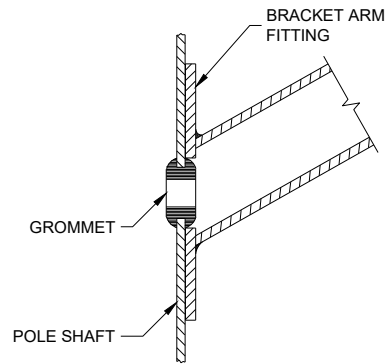
**INTERCHANGEABLE MOUNTING DETAIL**

**POLE MOUNTINGS FOR  
LIGHTING UNITS, TYPE 6  
( 35 FEET )**

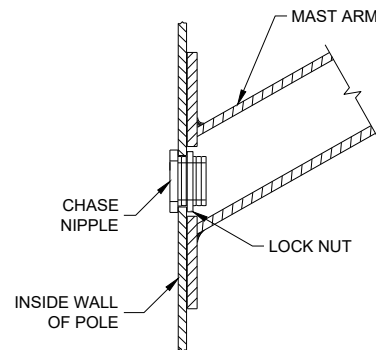
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**LEVELING SHIM**  
SHALL BE ALUMINUM



**TYPICAL APPLICATION OF GROMMET IN POLE SHAFT**



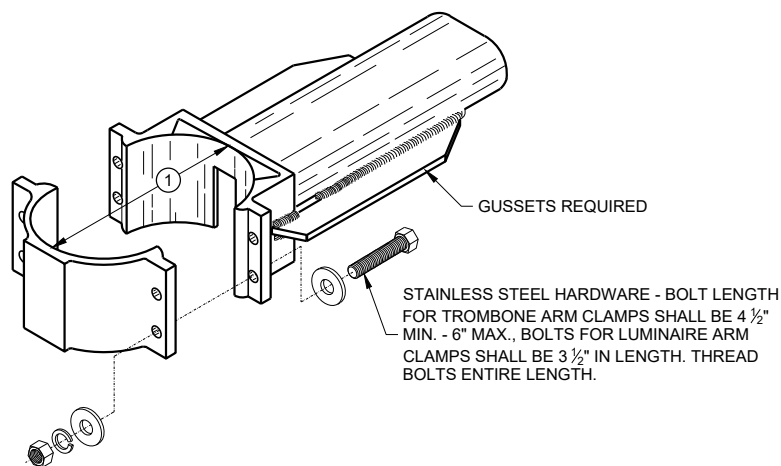
**TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT**

## GENERAL NOTES

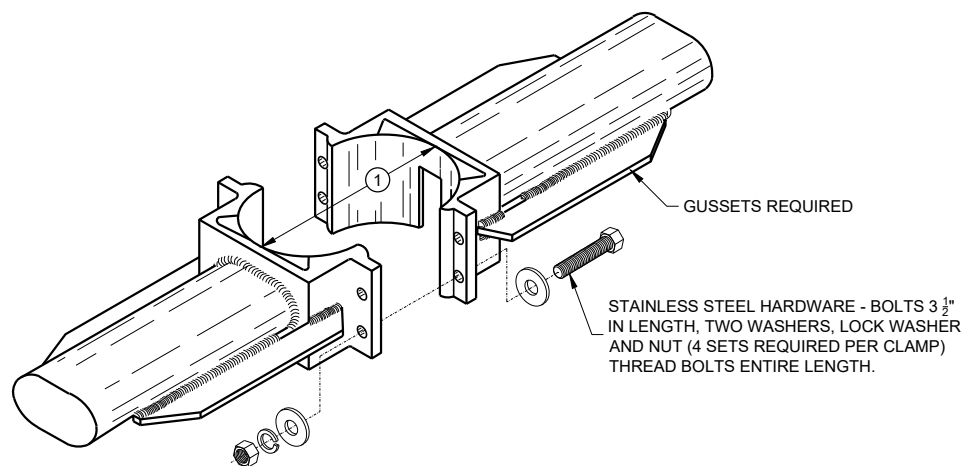
CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

- ① 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP. 6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- ② INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- ③ BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.
- ④ LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

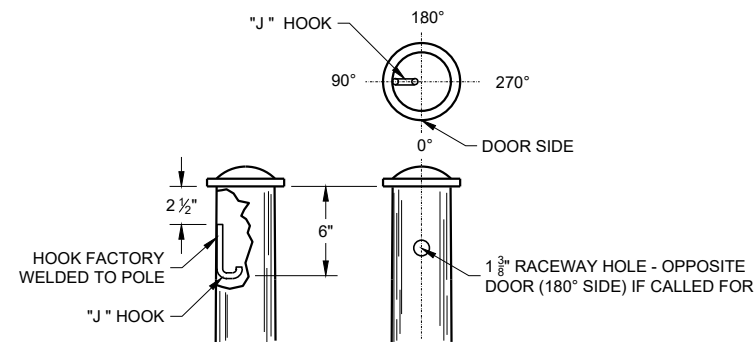
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



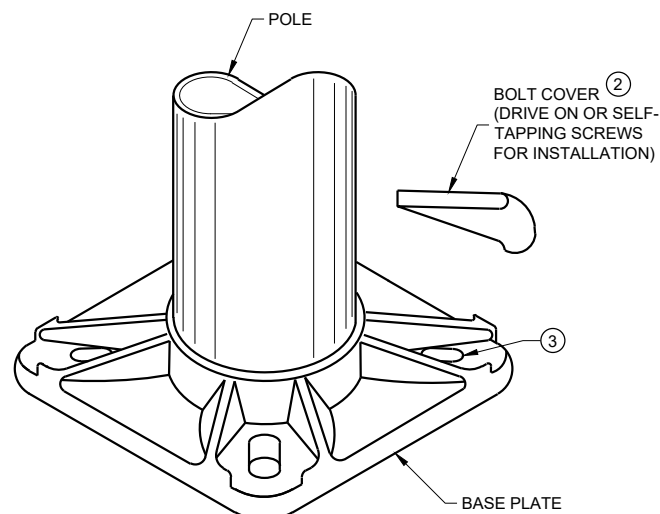
**TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP**



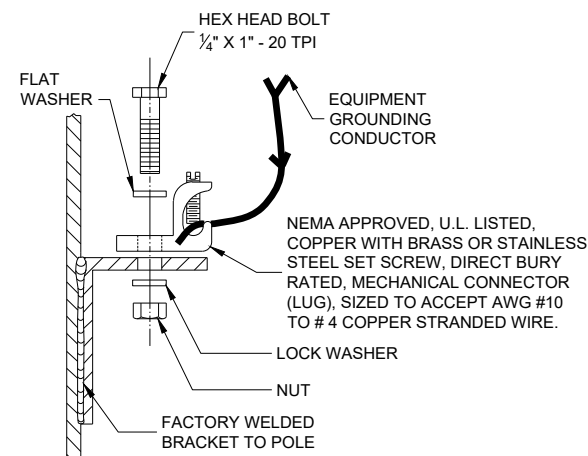
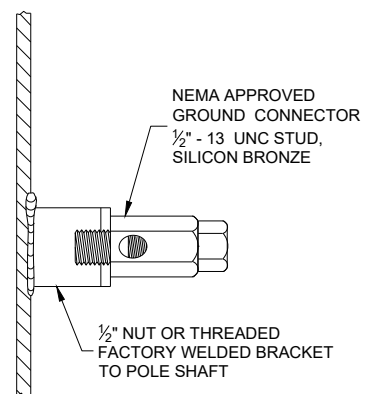
**TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS**



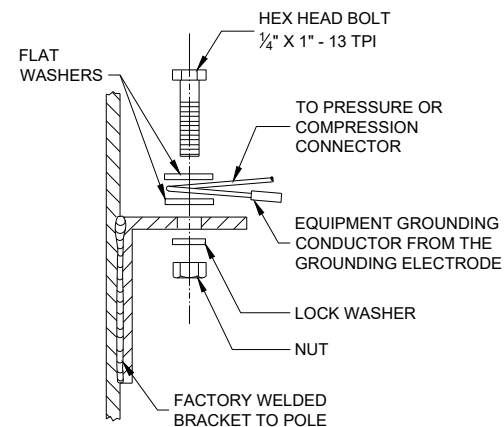
**TYPICAL "J" HOOK LOCATION**



**BASE PLATE**



**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



## HARDWARE DETAILS FOR POLE MOUNTING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

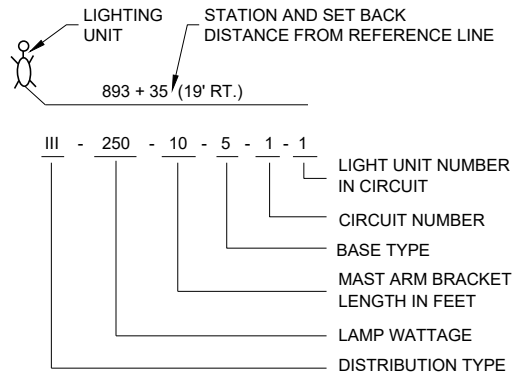
APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

GENERAL NOTES

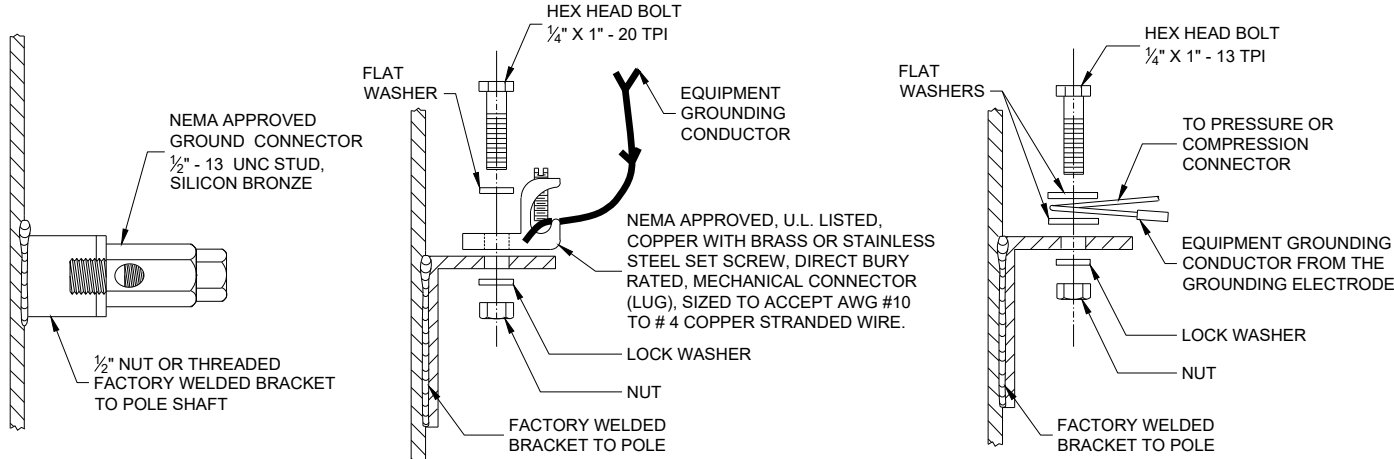
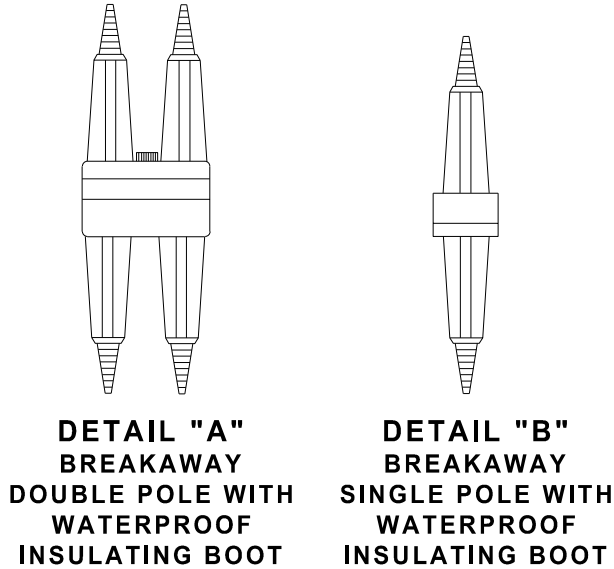
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

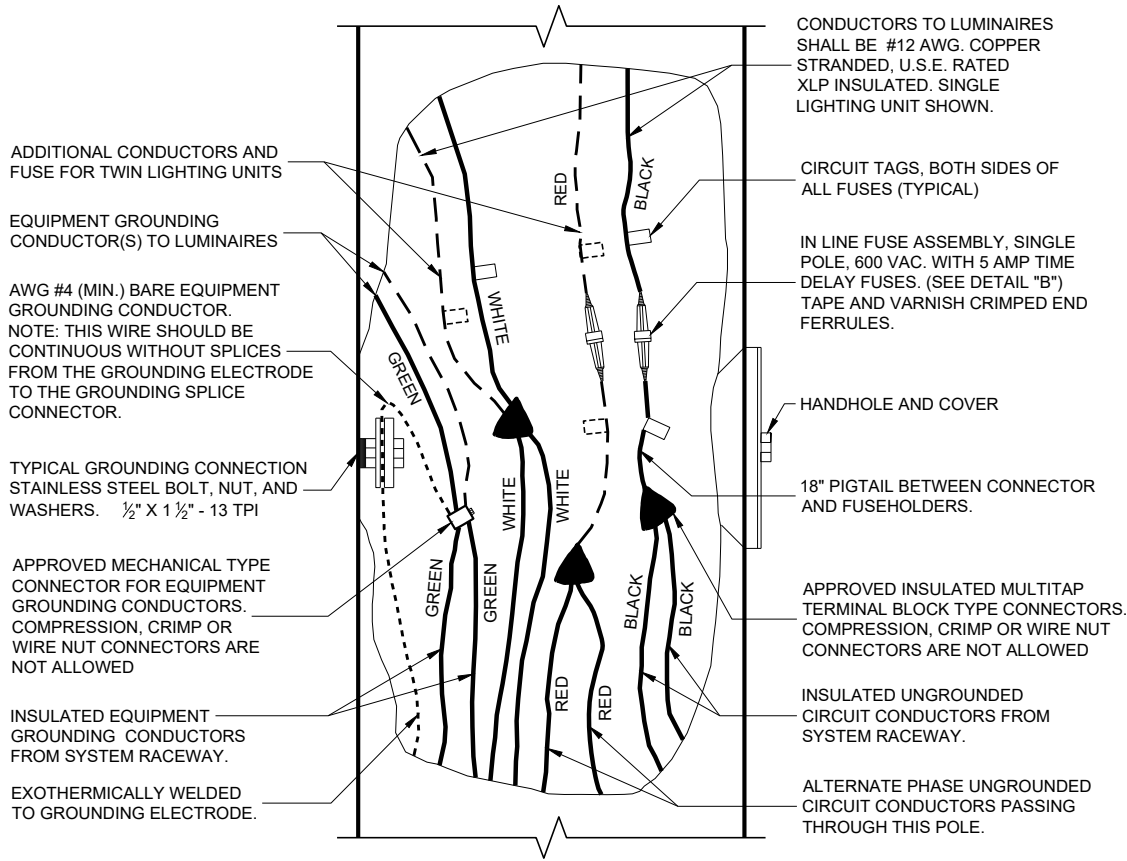


LIGHTING UNIT CODE  
(TYPICAL)



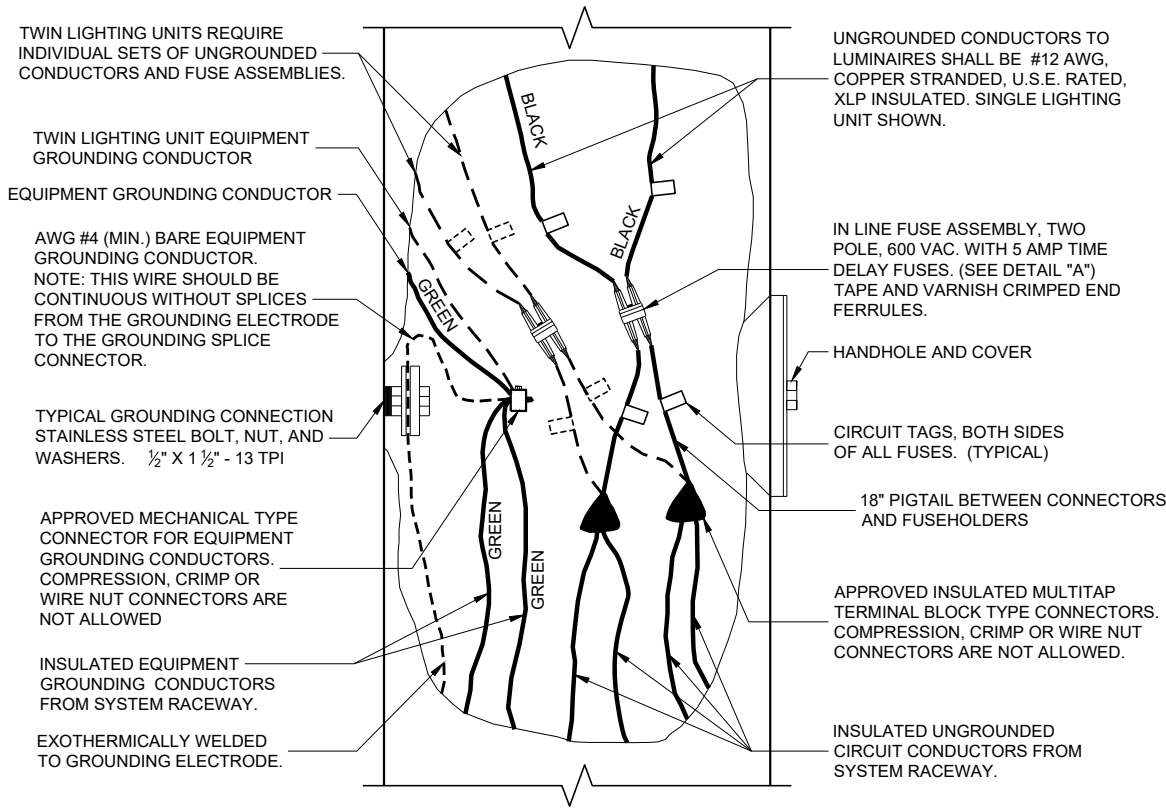
TYPICAL GROUNDING CONNECTIONS  
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

6



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTORS)  
WITH GROUNDING CONDUCTOR AND  
EQUIPMENT GROUNDING CONDUCTOR

6



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS)  
WITH EQUIPMENT GROUNDING CONDUCTOR

NON - FREEWAY LIGHTING UNIT  
POLE WIRING

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2018 /S/ Ahmet Demirbilek  
DATE STATE ELECTRICAL ENGINEER  
FHWA

SDD 09E03 - 06

SDD 09E03 - 06

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.

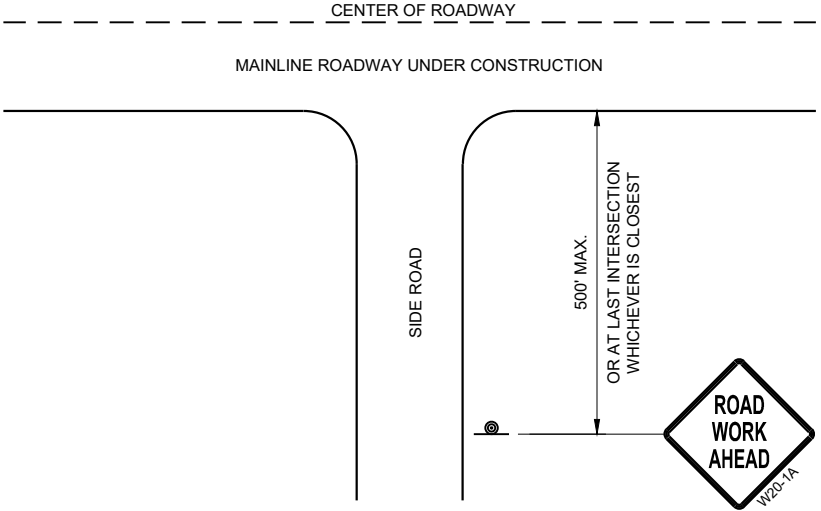
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

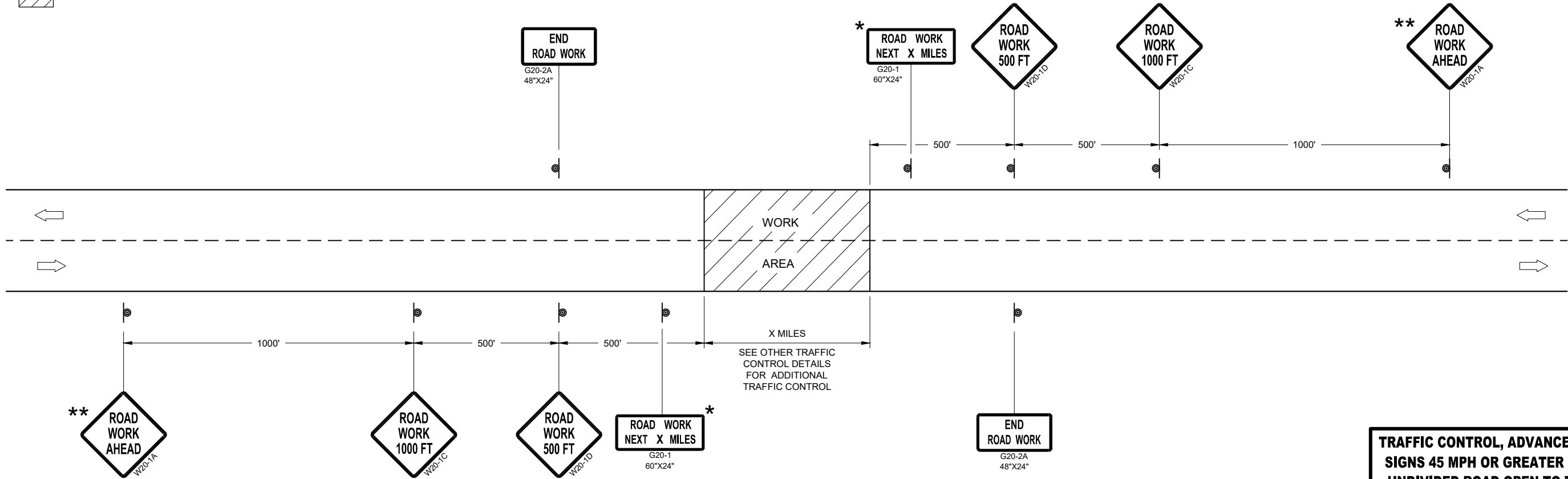
- \* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- \*\* PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH  
WARNING SIGN DETAIL

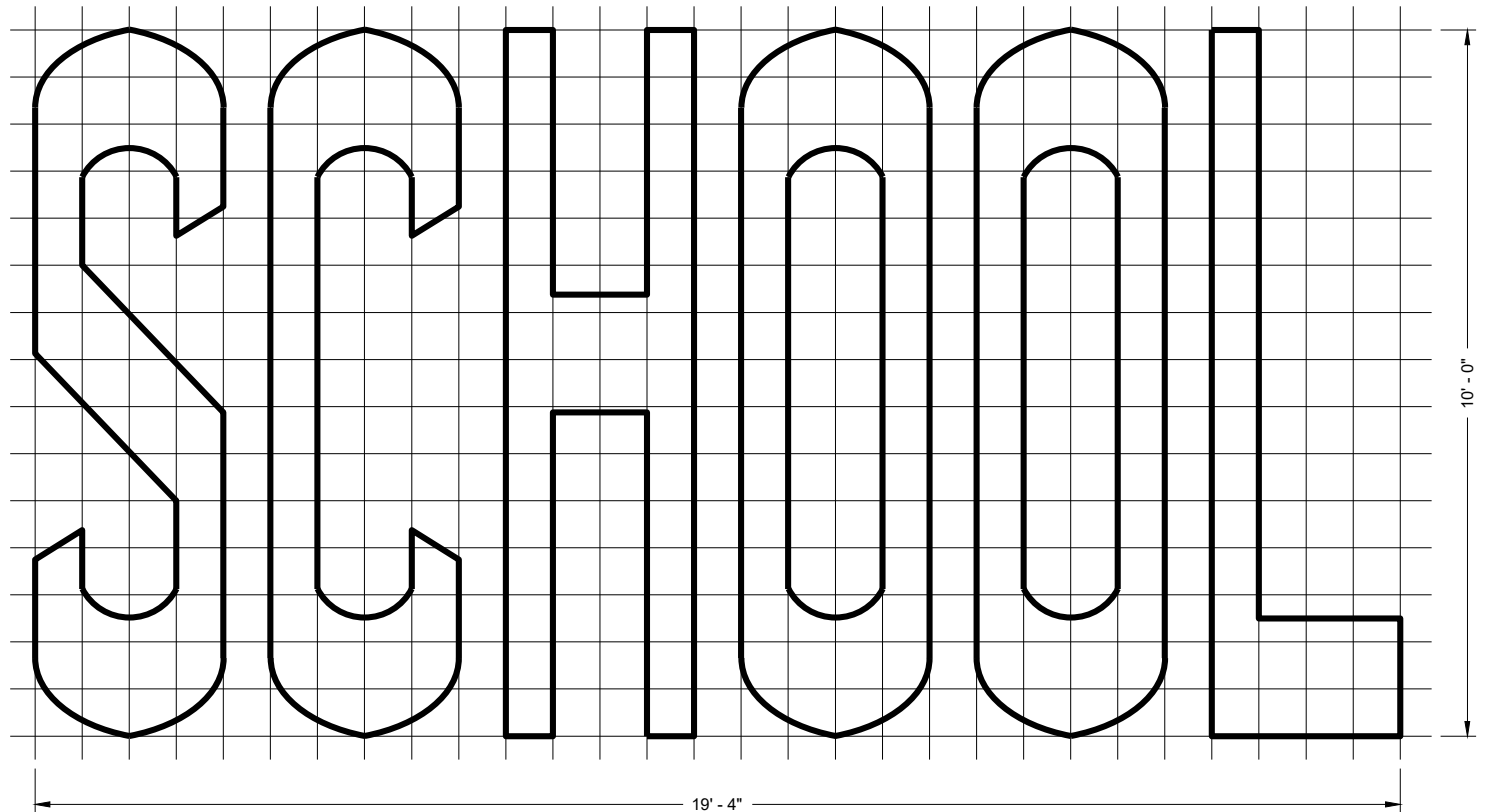
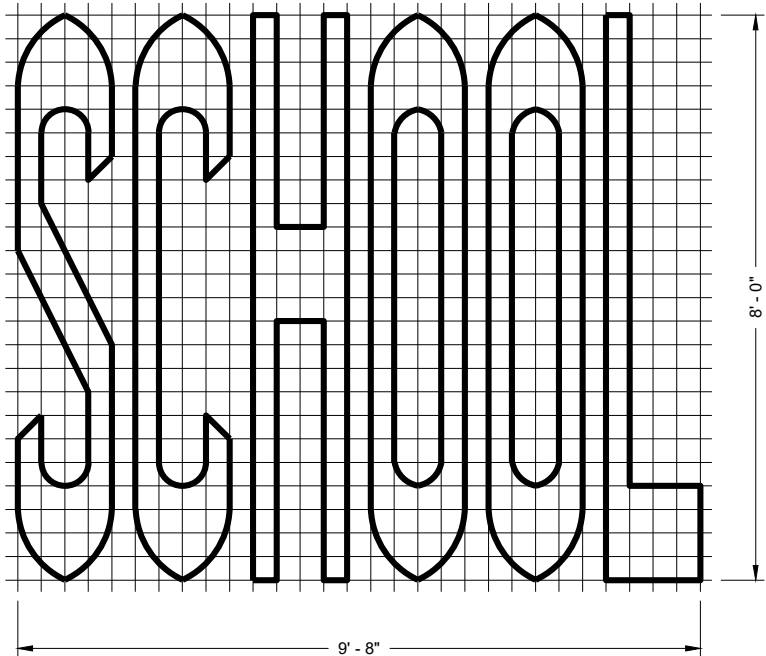
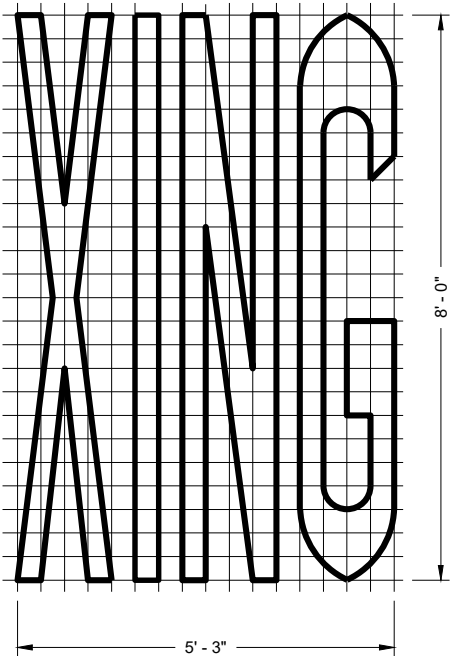
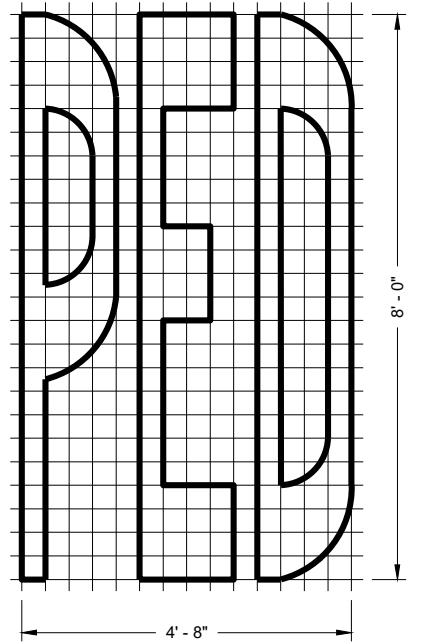
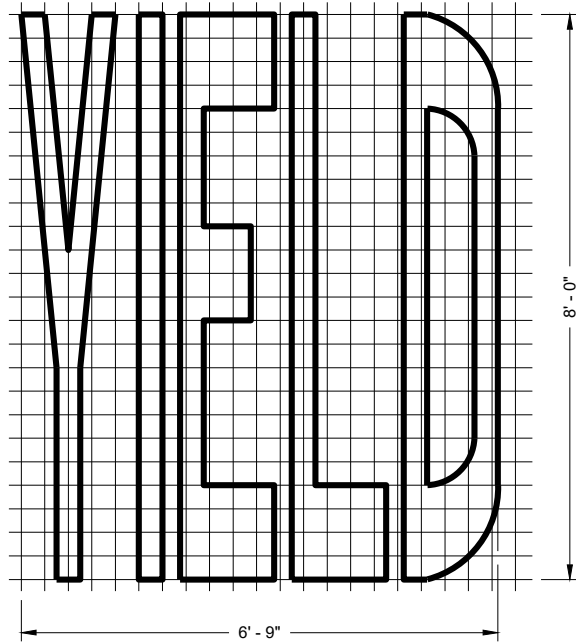
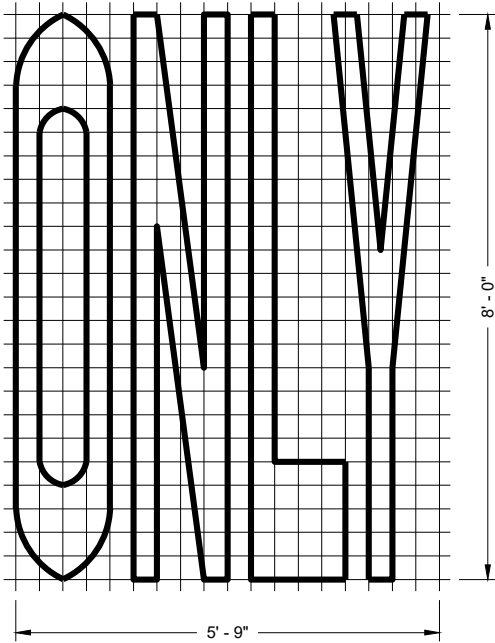
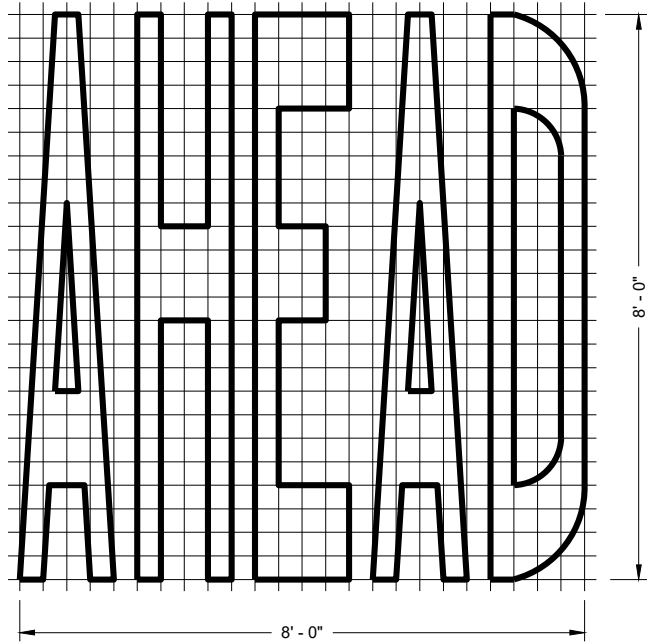
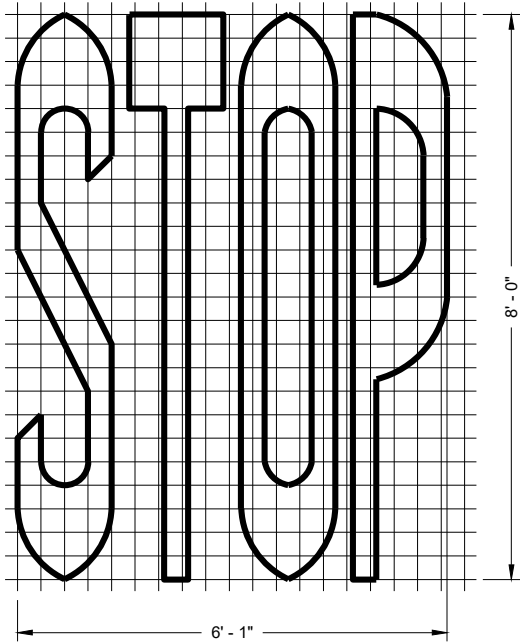


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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



SINGLE LANE

TWO - LANE

#### GENERAL NOTES

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

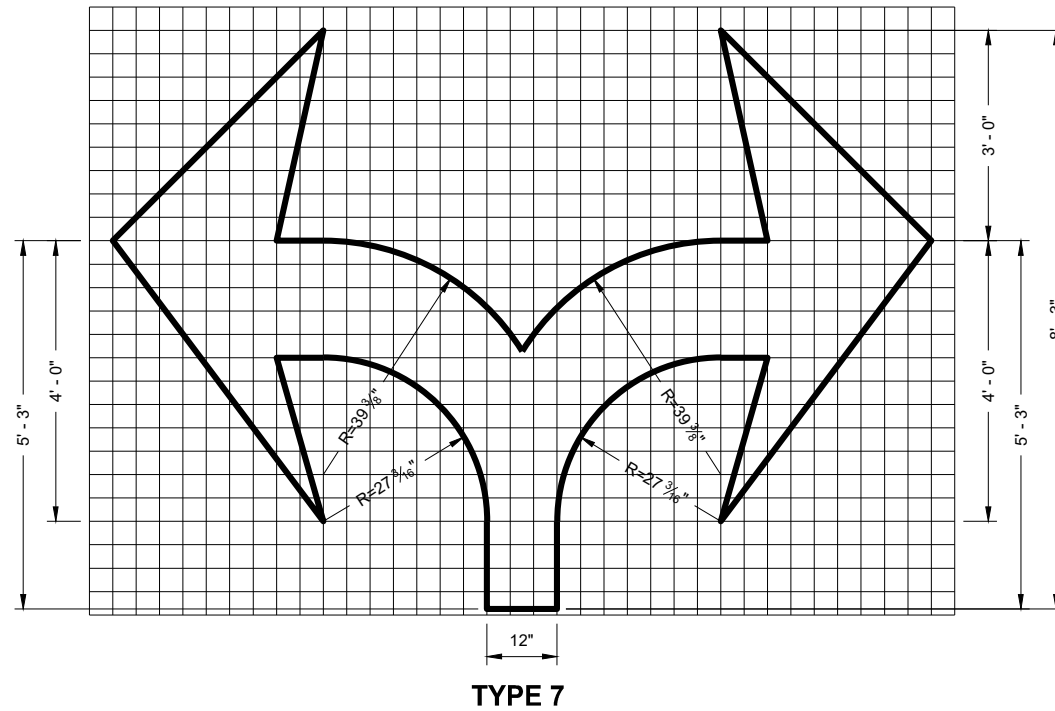
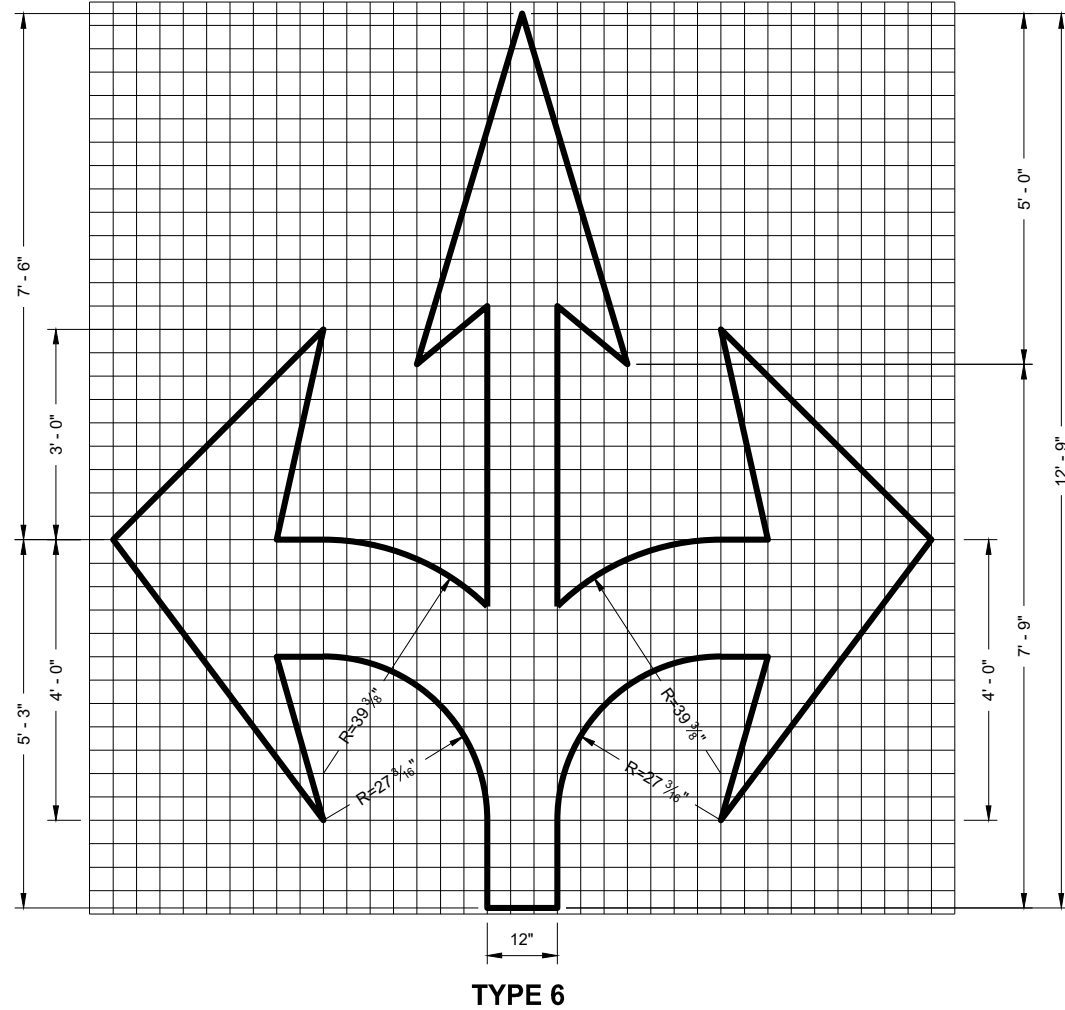
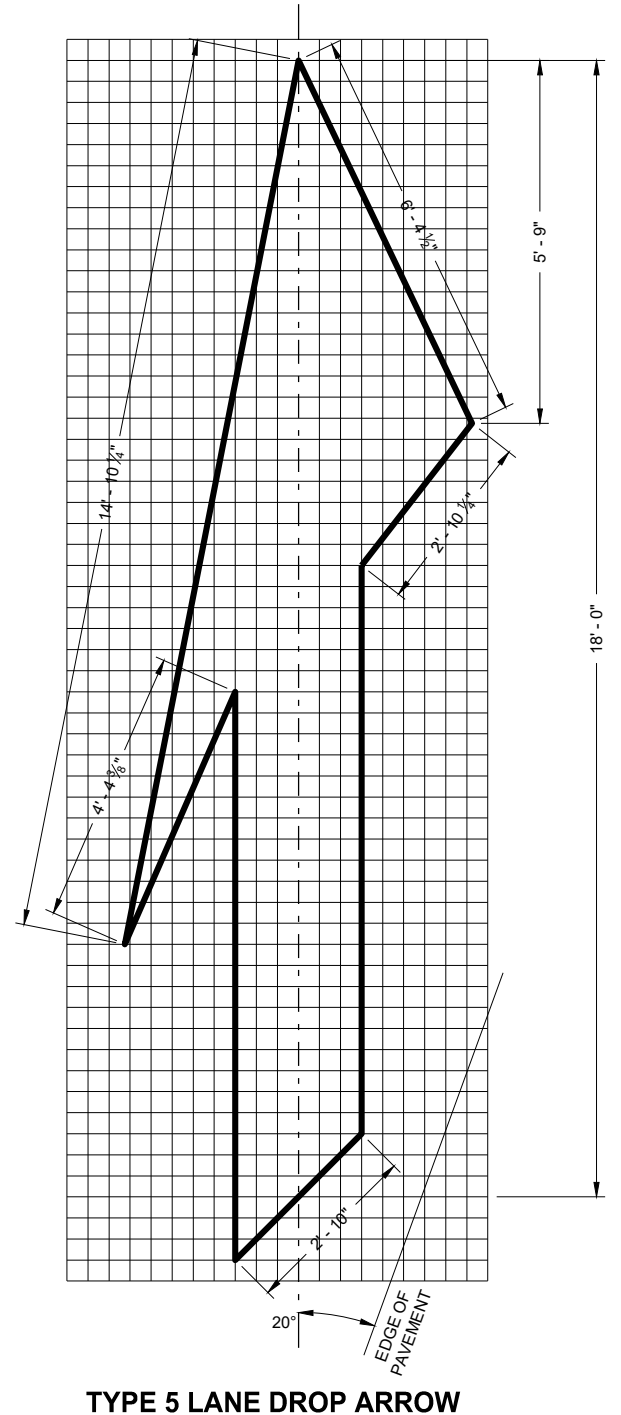
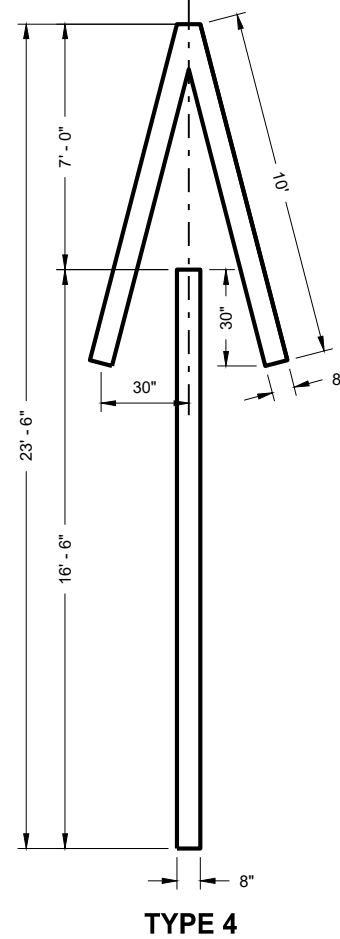
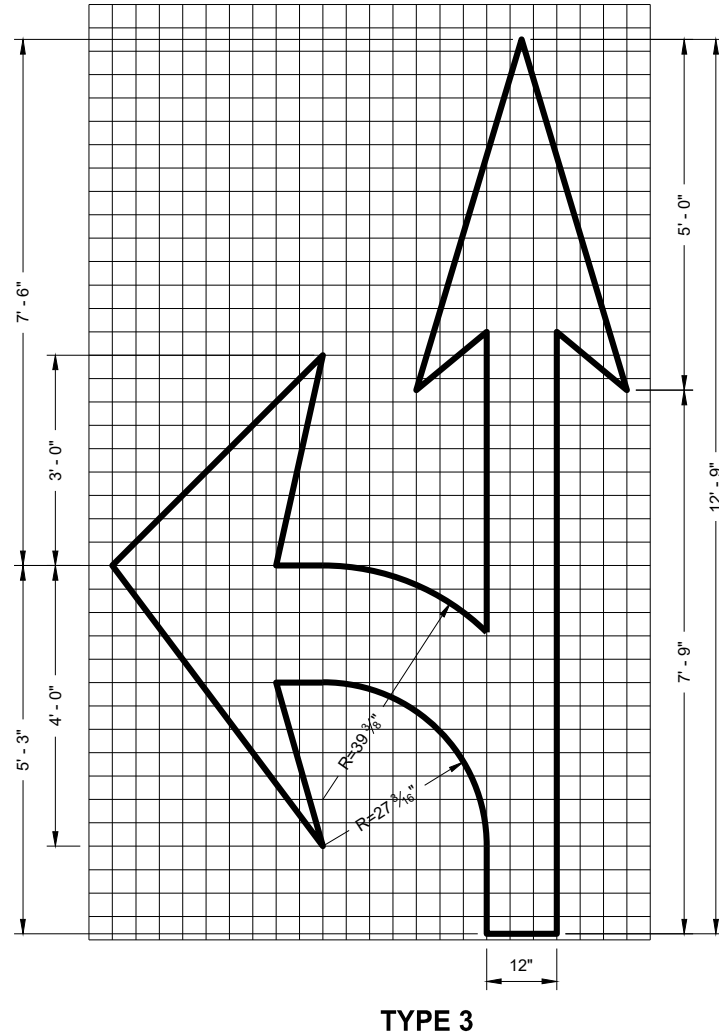
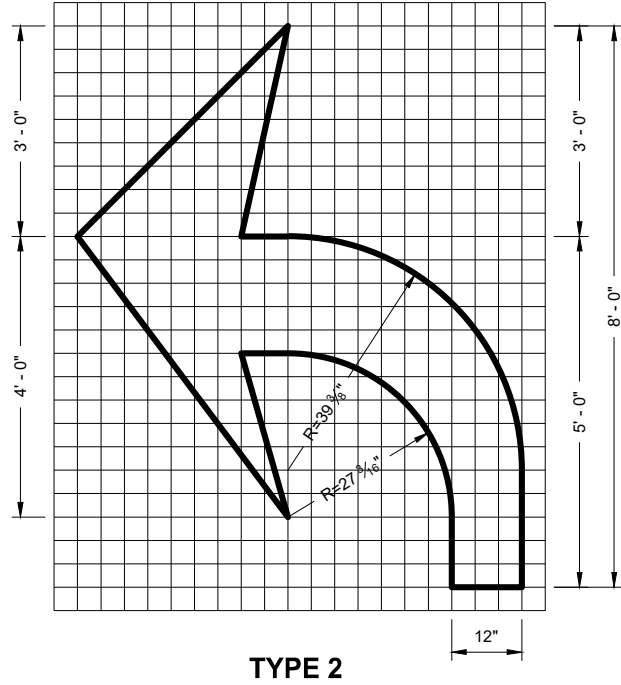
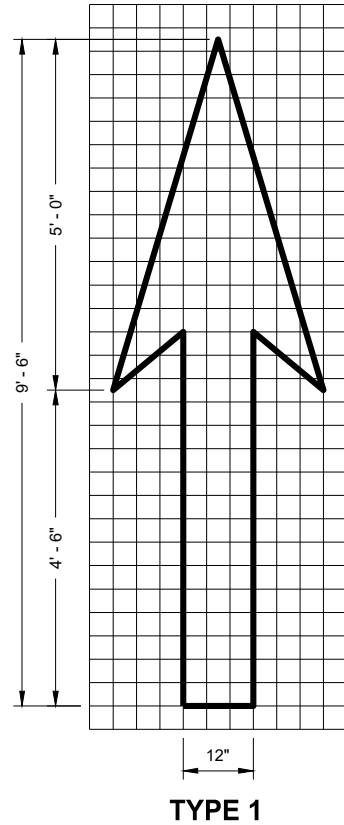
#### PAVEMENT MARKING WORDS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019  
DATE

/S/ Matthew Rauch  
STATE SIGNING AND MARKING  
ENGINEER

FHWA



### GENERAL NOTES

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

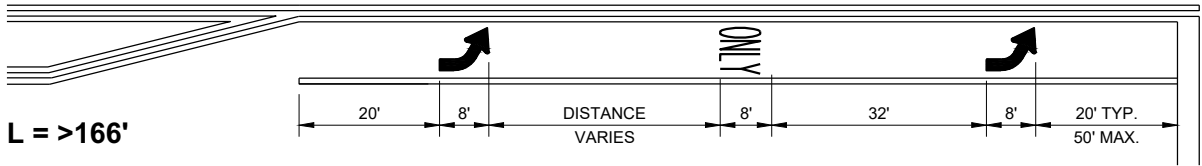
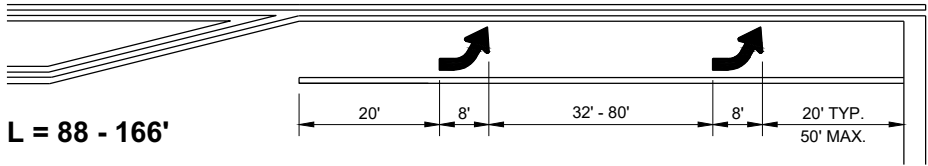
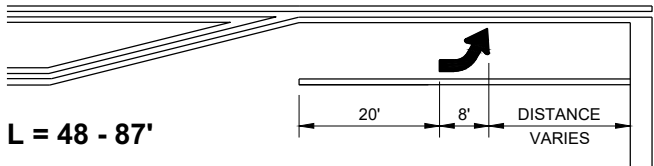
### PAVEMENT MARKING ARROWS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019  
DATE  
/S/ Matthew Rauch  
STATE SIGNING AND MARKING  
ENGINEER  
FHWA

TURN LANE OPTIONS

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



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

GENERAL NOTES

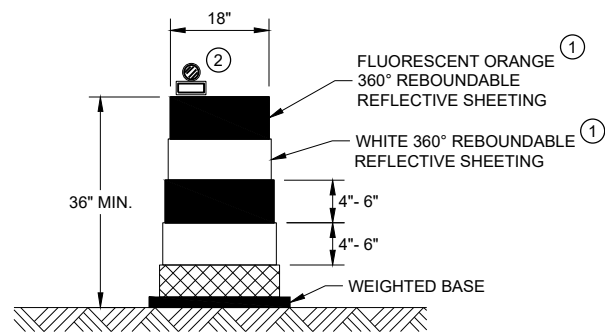
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

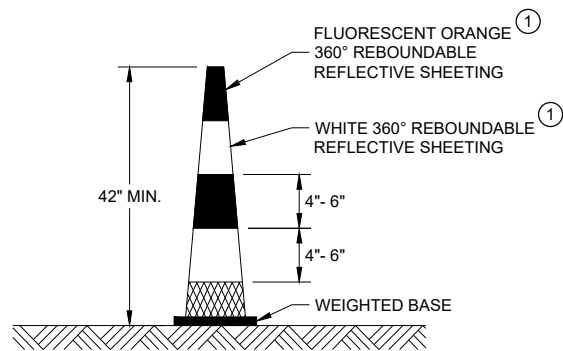
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

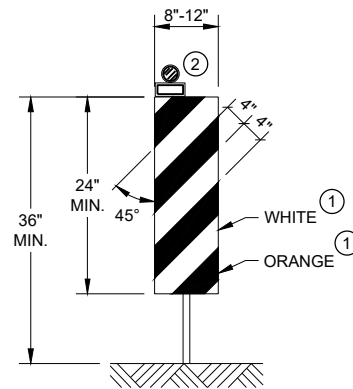


DRUM



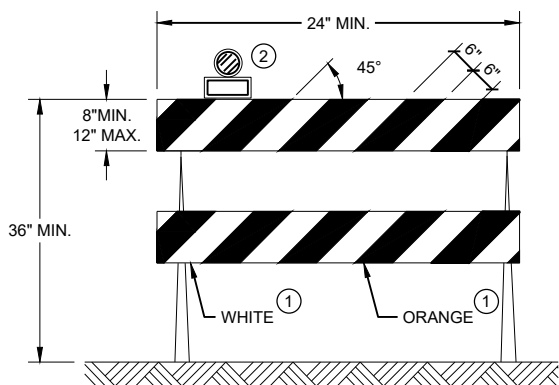
42" CONE

DO NOT USE IN TAPERS  
½ SPACING OF DRUMS



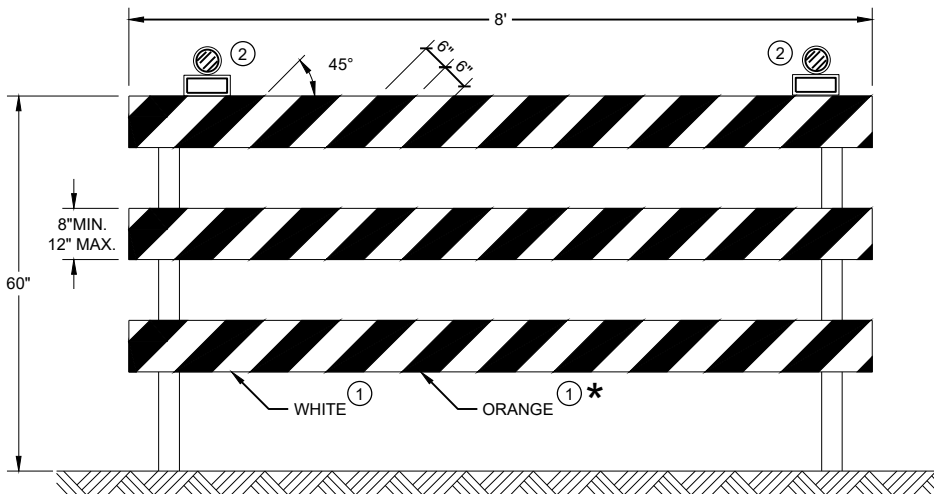
VERTICAL PANEL

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  
November 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

FHWA

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.

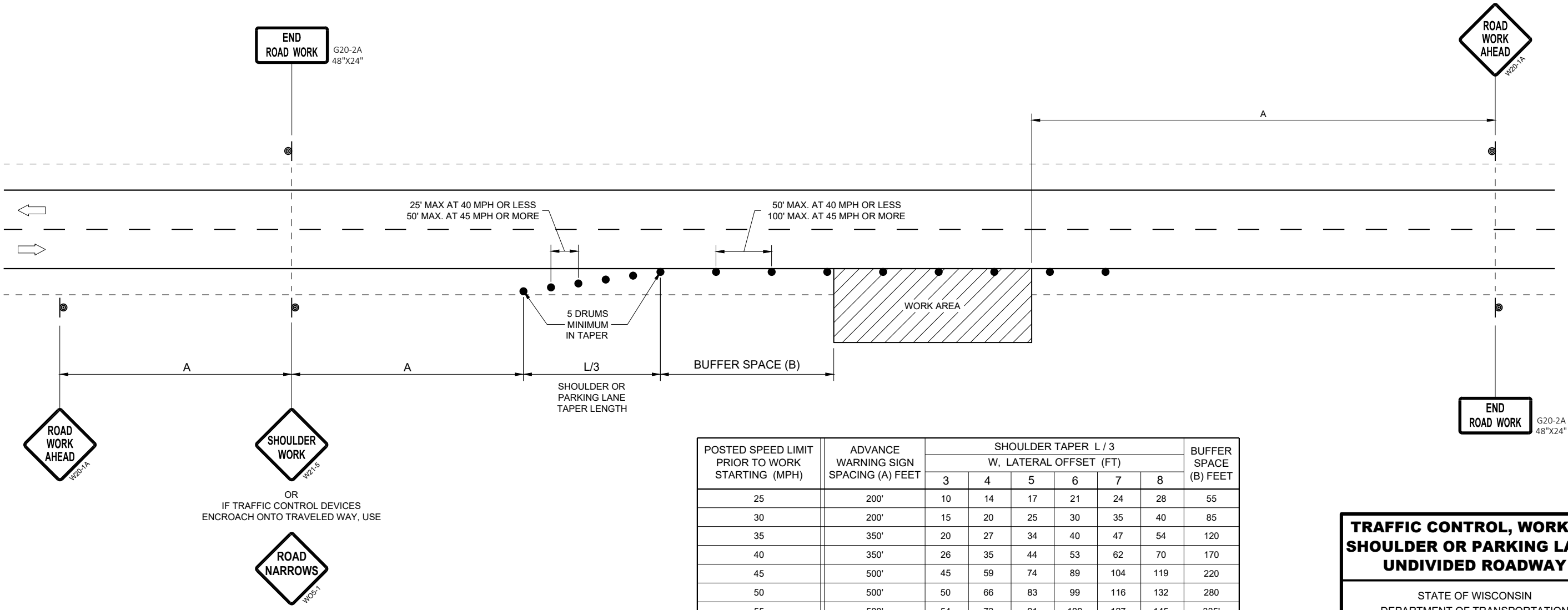
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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



| 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

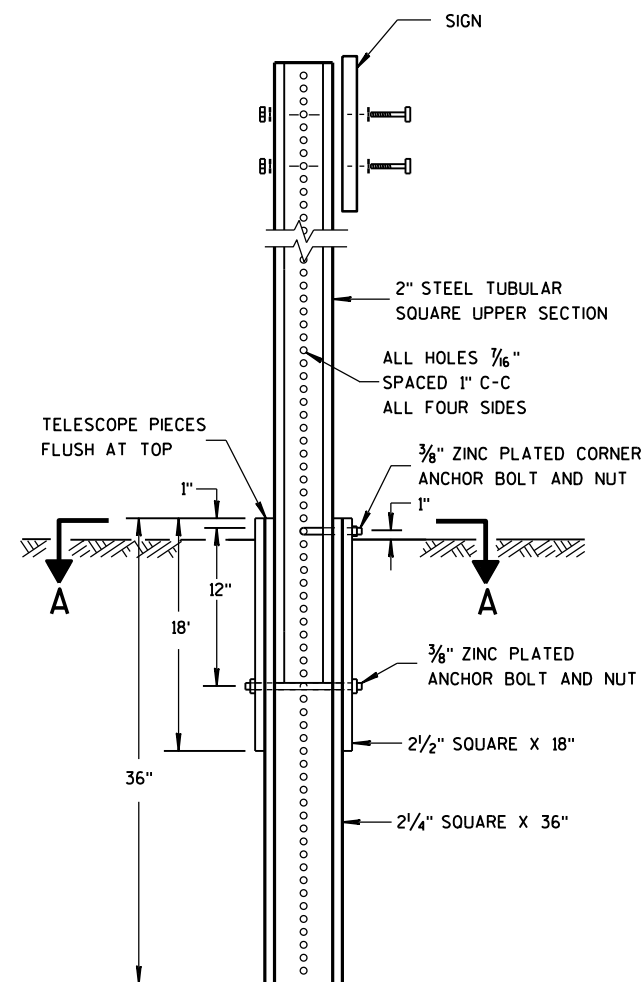
APPROVED  
May 2020  
DATE

/S/ Andrew Heidtke  
STATEWIDE WORK ZONE TRAFFIC  
SAFETY ENGINEER

FHWA

SDD 15D28 - 04

SDD 15D28 - 04

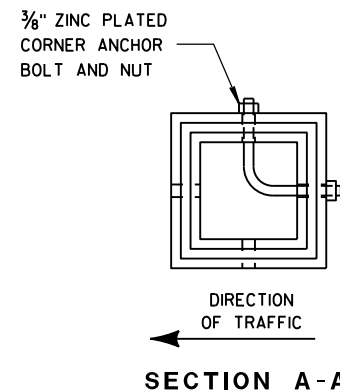


DETAIL OF TUBULAR  
STEEL SIGN POST

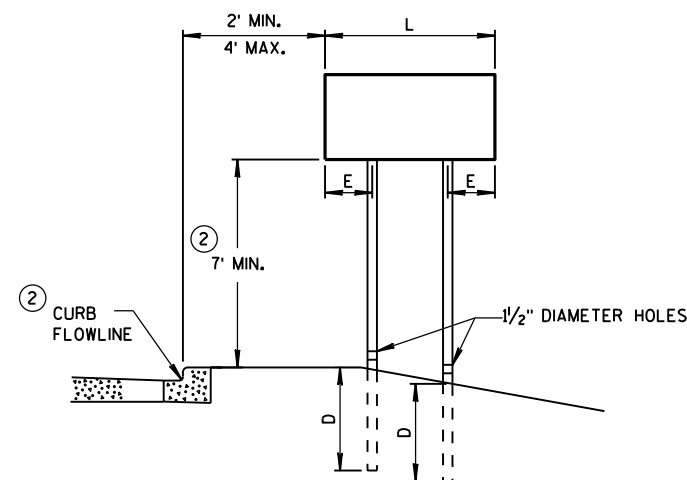
TUBULAR STEEL POSTS

| 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.



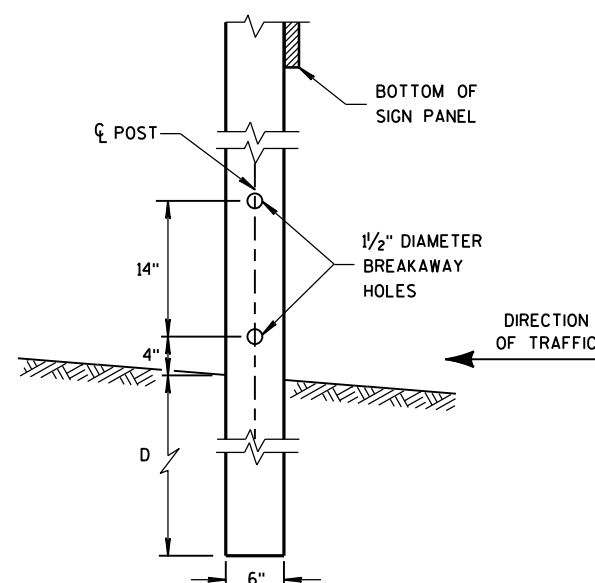
SECTION A-A



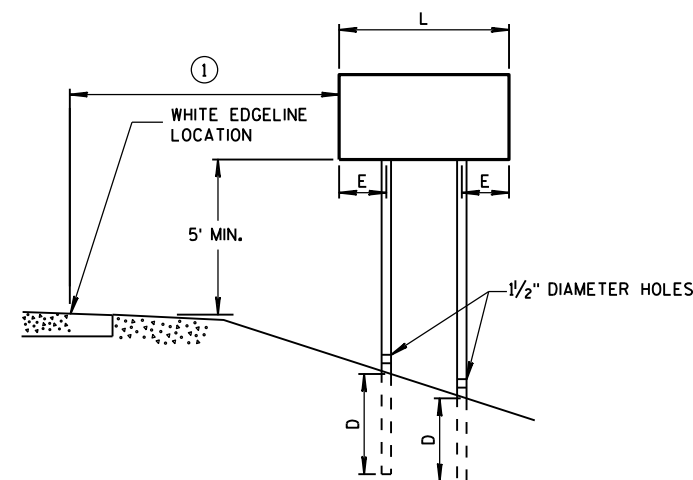
URBAN AREA

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                                   |

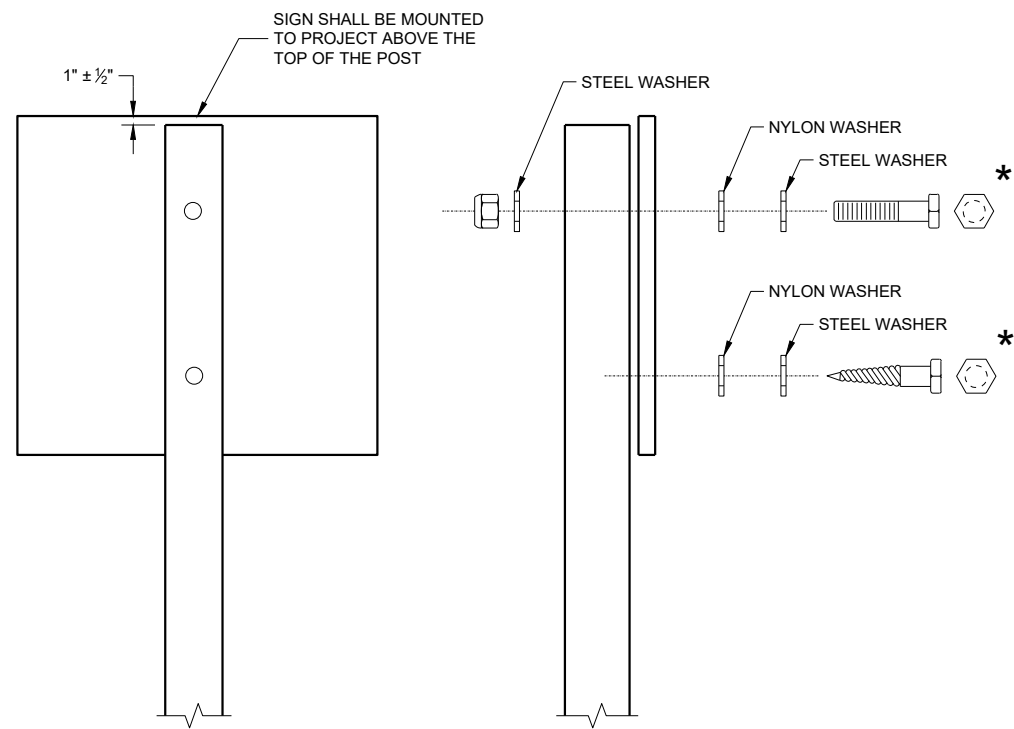
SEE NOTE ③

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.

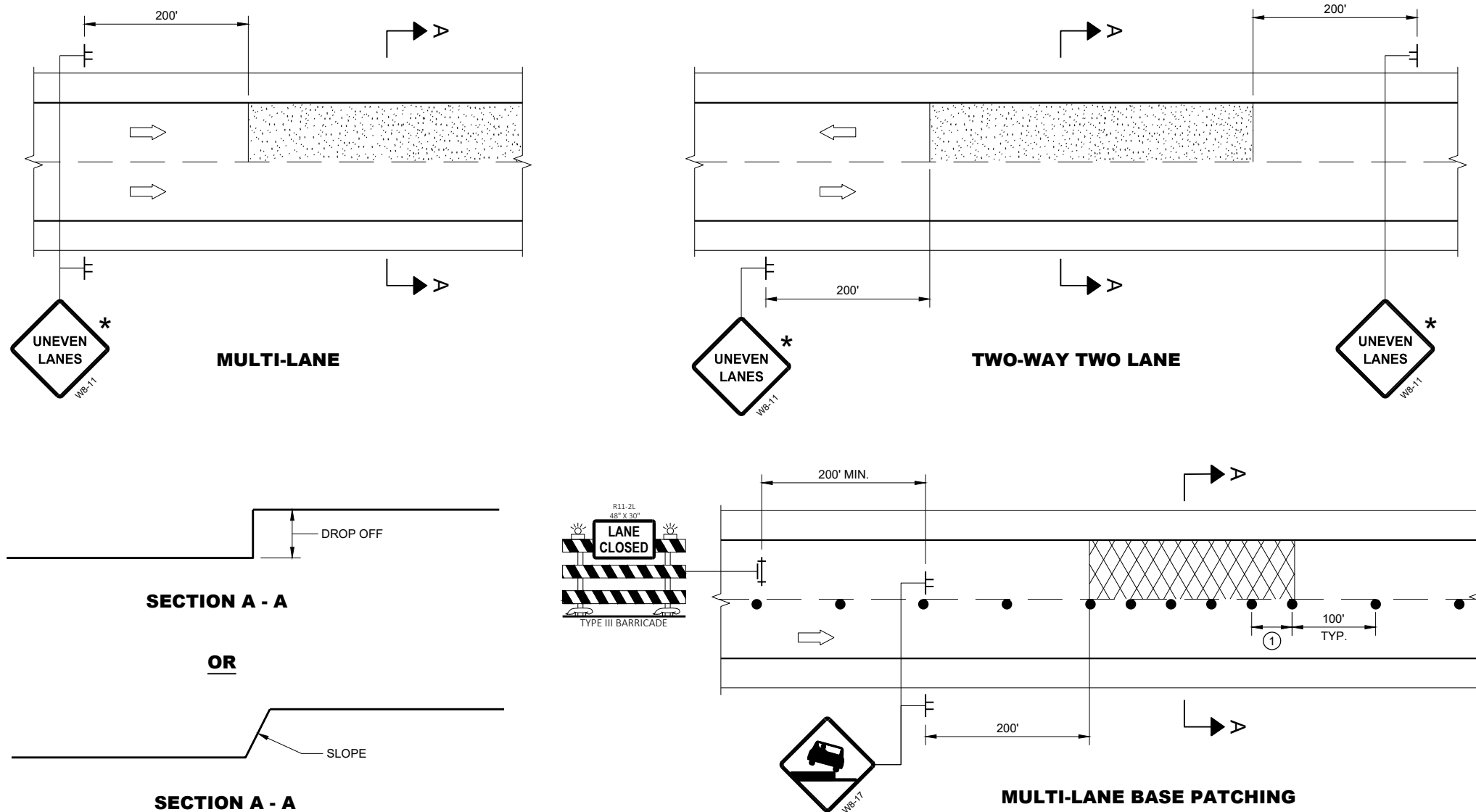
WOOD POST (4" x 6")  
LAG SCREWS - ¾" x 3"  
MACHINE BOLTS - ⅝" x 6 ½" OR 7" LENGTH W/NUTS

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

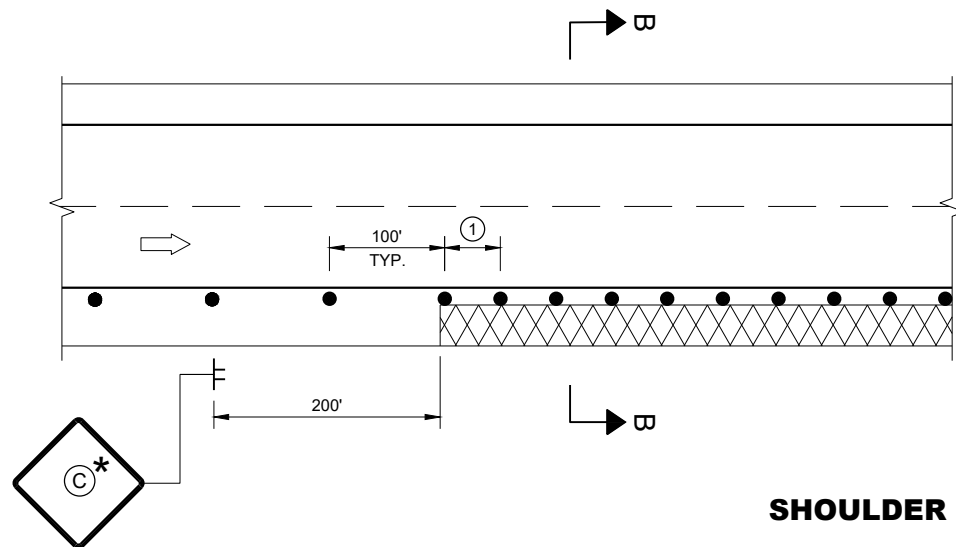
WASHERS (ALL POSTS) -  
1 ¼" O.D. x ⅜" I.D. x ⅛" STEEL  
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

\* 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.

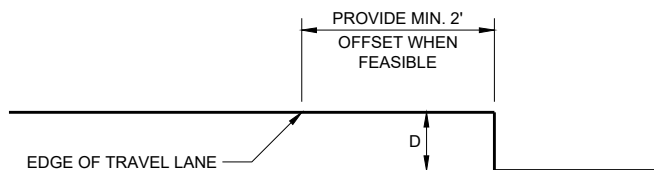
|                                                    |                                          |
|----------------------------------------------------|------------------------------------------|
| ATTACHMENT OF SIGNS<br>TO POSTS                    |                                          |
| STATE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



ADJACENT LANE DROP-OFFS



SHOULDER DROP-OFFS



SECTION B - B

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

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

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.

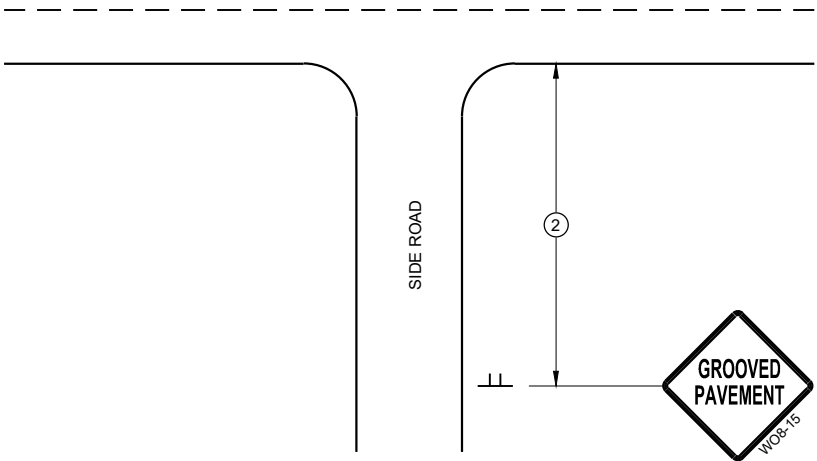
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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.

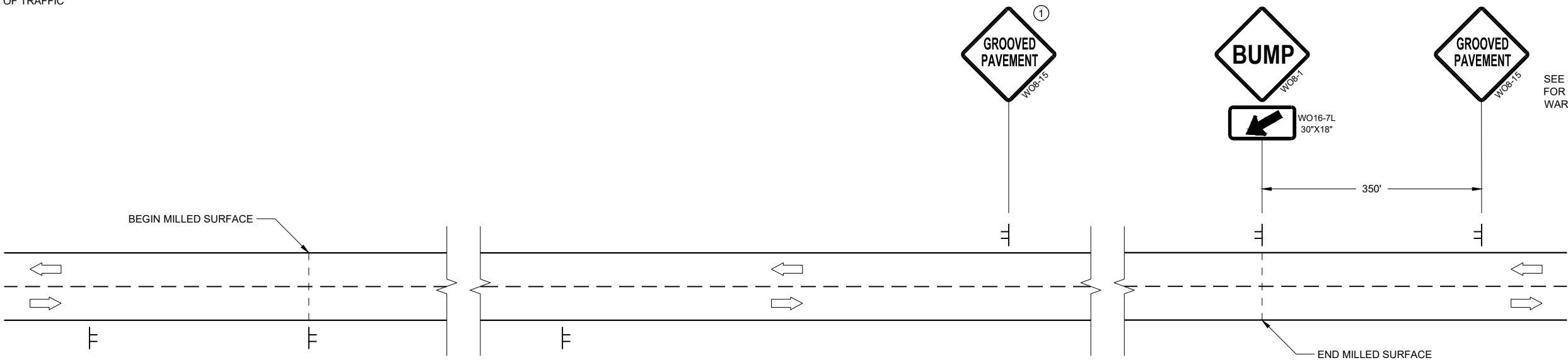
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

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

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA

| POSTED SPEED LIMIT<br>PRIOR TO WORK<br>STARTING (MPH) | ADVANCE<br>WARNING SIGN<br>SPACING (A) FEET | SHIFTING TAPER $L/2$   |    |    |     |     |     |
|-------------------------------------------------------|---------------------------------------------|------------------------|----|----|-----|-----|-----|
|                                                       |                                             | W, LATERAL OFFSET (FT) |    |    |     |     |     |
|                                                       |                                             | 3                      | 4  | 5  | 6   | 7   | 8   |
| 25                                                    | 200                                         | 10                     | 14 | 17 | 21  | 24  | 28  |
| 30                                                    | 200                                         | 15                     | 20 | 25 | 30  | 35  | 40  |
| 35                                                    | 350                                         | 20                     | 27 | 34 | 40  | 47  | 54  |
| 40                                                    | 350                                         | 26                     | 35 | 44 | 53  | 62  | 70  |
| 45                                                    | 500                                         | 45                     | 59 | 74 | 89  | 104 | 119 |
| 50                                                    | 500                                         | 50                     | 66 | 83 | 99  | 116 | 132 |
| 55                                                    | 500                                         | 54                     | 73 | 91 | 109 | 127 | 145 |

GENERAL NOTES

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36"x36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

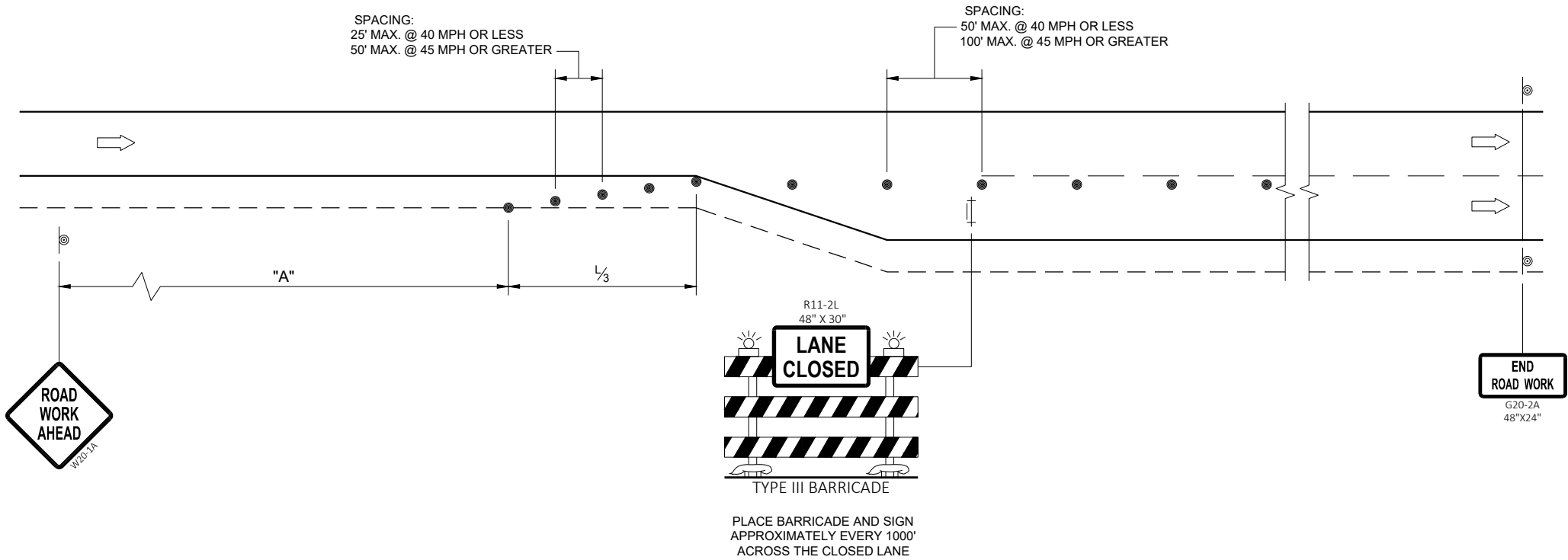
"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

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

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 SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

W20-1 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 WORK IS LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS.



ADDED LANE CLOSURE WITHOUT LANE SHIFT

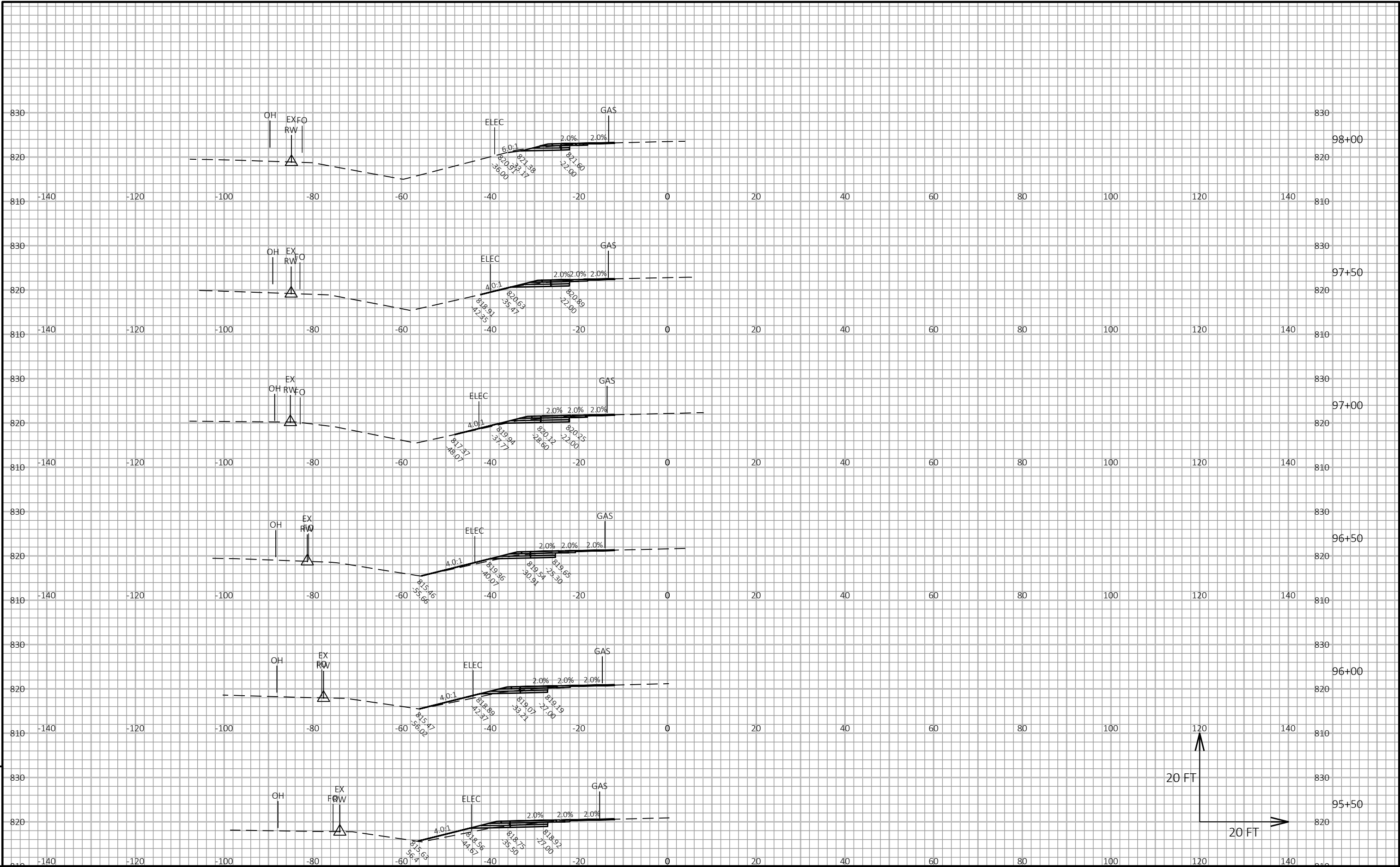
TRAFFIC CONTROL  
ADDED LANE CLOSURE  
WITHOUT LANE SHIFT

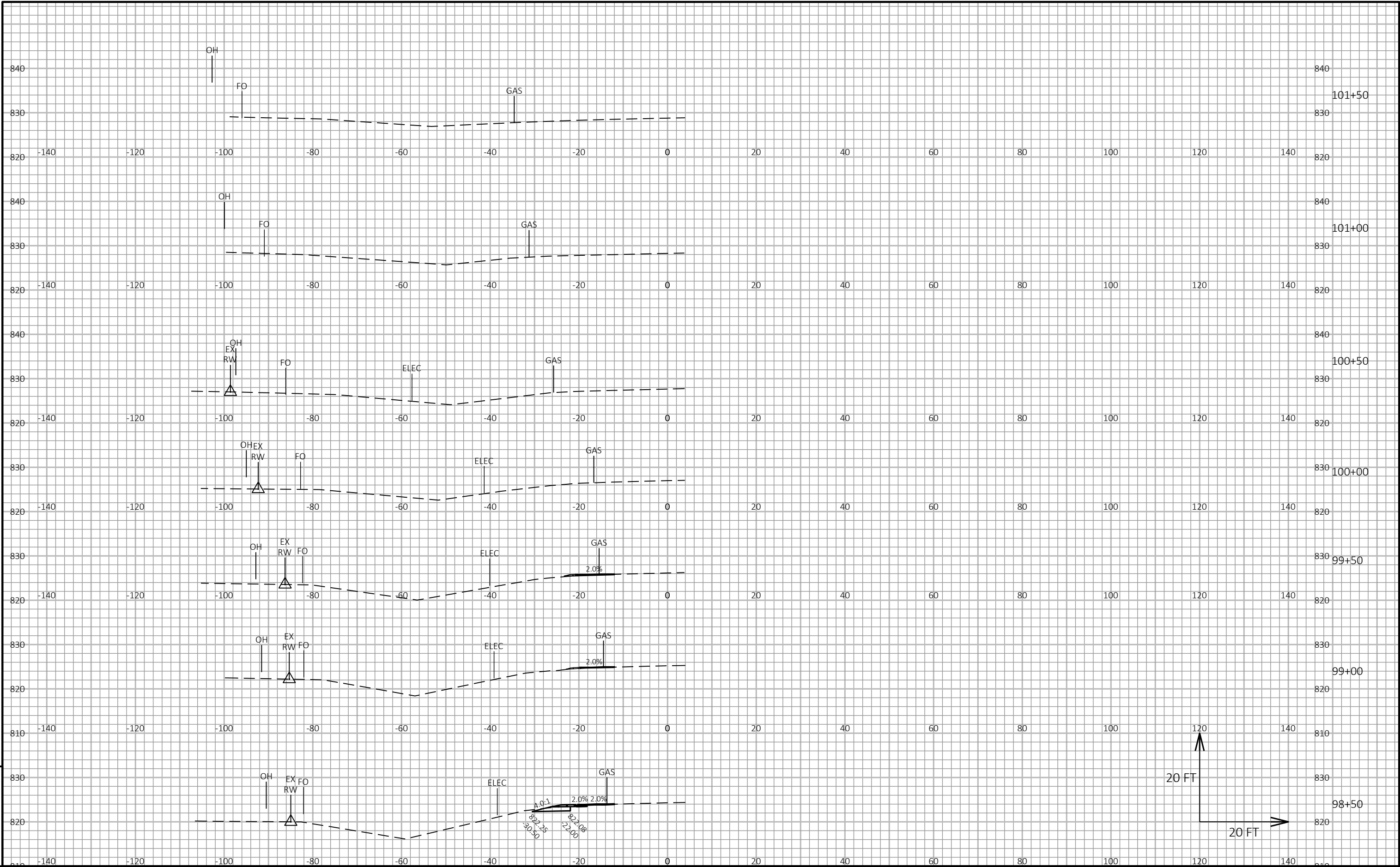
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

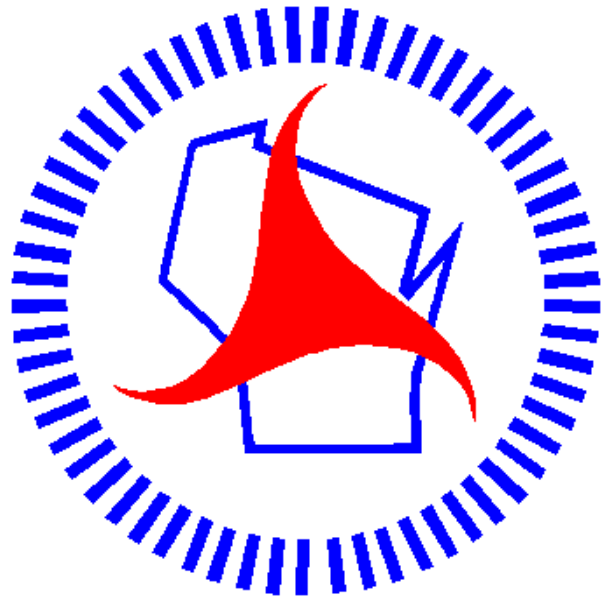
APPROVED  
February 2021 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER  
FHWA

| EARTHWORK SUMMARY                                  |          |           |      |                                      |      |                                  |                    |                  |
|----------------------------------------------------|----------|-----------|------|--------------------------------------|------|----------------------------------|--------------------|------------------|
| WB-LINE - STA. 92+50 TO STA. 99+50                 |          |           |      |                                      |      |                                  |                    |                  |
| STATION                                            | DISTANCE | AREA (SF) |      | INCREMENTAL VOL (CY)<br>(UNADJUSTED) |      | CUMULATIVE VOL (CY) (UNADJUSTED) |                    |                  |
|                                                    |          | CUT       | FILL | CUT                                  | FILL | CUT                              | UNEXPANDED<br>FILL | MASS<br>ORDINATE |
| 92+50                                              |          | 53        | 4    | 0                                    | 0    |                                  |                    |                  |
| 93+00                                              | 50       | 31        | 9    | 78                                   | 12   | 0                                | 12                 | -12              |
| 93+50                                              | 50       | 29        | 17   | 56                                   | 24   | 56                               | 36                 | 20               |
| 94+00                                              | 50       | 23        | 17   | 48                                   | 31   | 104                              | 67                 | 37               |
| 94+50                                              | 50       | 27        | 14   | 46                                   | 29   | 150                              | 96                 | 54               |
| 95+00                                              | 50       | 24        | 9    | 47                                   | 21   | 197                              | 117                | 80               |
| 95+50                                              | 50       | 22        | 9    | 43                                   | 17   | 240                              | 134                | 106              |
| 96+00                                              | 50       | 19        | 5    | 38                                   | 13   | 278                              | 147                | 131              |
| 96+50                                              | 50       | 20        | 5    | 36                                   | 9    | 314                              | 156                | 158              |
| 97+00                                              | 50       | 27        | 2    | 44                                   | 6    | 358                              | 162                | 196              |
| 97+50                                              | 50       | 24        | 0    | 47                                   | 2    | 405                              | 164                | 241              |
| 98+00                                              | 50       | 21        | 0    | 42                                   | 0    | 447                              | 164                | 283              |
| 98+50                                              | 50       | 13        | 0    | 31                                   | 0    | 478                              | 164                | 314              |
| 99+00                                              | 50       | 0         | 0    | 12                                   | 0    | 490                              | 164                | 326              |
| 99+50                                              | 50       | 0         | 0    | 0                                    | 0    | 490                              | 164                | 326              |
| Earthwork values in table have not been expanded.  |          |           |      |                                      |      |                                  |                    |                  |
| Fill Expansion Factor for Common Excavation = 1.25 |          |           |      |                                      |      |                                  |                    |                  |
| See Earthwork in Miscellaneous Quantities.         |          |           |      |                                      |      |                                  |                    |                  |









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

Dedicated people creating transportation solutions through innovation and exceptional service.

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