

PROJECT ID: 6580-08-71  
WITH:

COUNTY: SHAWANO

| ORDER OF SHEETS |   |                              |
|-----------------|---|------------------------------|
| Section No.     | 1 | Title                        |
| Section No.     | 2 | Typical Sections and Details |
| Section No.     | 3 | Estimate of Quantities       |
| Section No.     | 3 | Miscellaneous Quantities     |
| Section No.     | 5 | Plan                         |
| Section No.     | 6 | Standard Detail Drawings     |
| Section No.     | 7 | Sign Plates                  |
| Section No.     | 8 | Structure Plans              |

TOTAL SHEETS = 166

STATE OF WISCONSIN

DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CLINTONVILLE - STH 29

ROBLEY ROAD - LESSOR NAVARINO ROAD

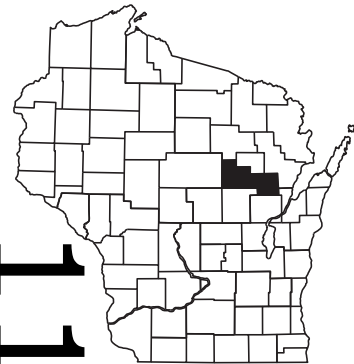
STH 156

SHAWANO COUNTY

| STATE PROJECT | FEDERAL PROJECT |          |
|---------------|-----------------|----------|
|               | PROJECT         | CONTRACT |
| 6580-08-71    |                 |          |
|               |                 |          |
|               |                 |          |
|               |                 |          |

STATE PROJECT NUMBER

6580-08-71



DESIGN DESIGNATION

|               |   |         |
|---------------|---|---------|
| A.A.D.T. 2013 | = | 1600    |
| A.A.D.T. 2033 | = | 1970    |
| D.H.V. 2033   | = | 223     |
| D.D.          | = | 60/40   |
| T.            | = | 10.7    |
| DESIGN SPEED  | = | 35      |
| ESALS         | = | 500,000 |

CONVENTIONAL SYMBOLS

|                    |         |
|--------------------|---------|
| PLAN               |         |
| CORPORATE LIMITS   |         |
| REFERENCE LINE     |         |
| COMBUSTIBLE FLUIDS |         |
| UTILITIES          |         |
| ELECTRIC           | — E —   |
| FIBER OPTIC        | — FO —  |
| GAS                | — G —   |
| SANITARY SEWER     | — SAN — |
| STORM SEWER        | — SS —  |
| TELEPHONE          | — T —   |
| WATER              | — W —   |
| UTILITY PEDESTAL   |         |
| POWER POLE         |         |
| TELEPHONE POLE     |         |

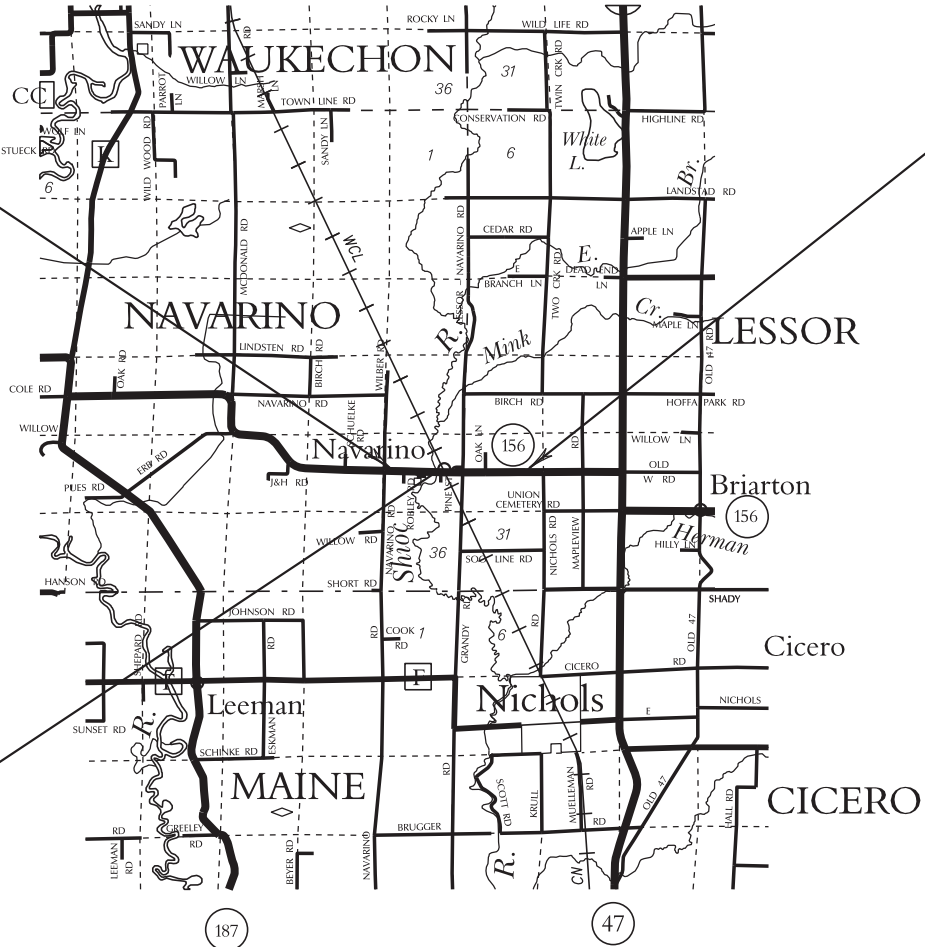
BEGIN PROJECT 6580-08-71  
STA. 255+25 STH 156

X=887,921.799  
Y=209,794.838

END PROJECT 6580-08-71  
STA. 293+60 STH 156

X=891,753.895  
Y=209,651.028

EXCEPTION TO NET C/L LENGTH  
STA. 276+42 - STA. 277+21  
STRUCTURE B-58-0124



LAYOUT  
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.711 MI.

Coordinates on this plan are referenced to the Wisconsin County  
Coordinate System (WCCS), SHAWANO COUNTY, NAD 1983 (91).  
Elevations shown on this plan are referenced to the  
North American Vertical Datum of 1988 NAVD 88 (91).

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

|                     |                     |
|---------------------|---------------------|
| PREPARED BY         |                     |
| Surveyor            | WISDOT              |
| Designer            | ANTHONY W. SANTILLI |
| Project Manager     | RICHARD A. SIMON    |
| Regional Examiner   | CHERYL L. SIMON     |
| Regional Supervisor | ANNA M. WISNER      |

APPROVED FOR THE DEPARTMENT  
DATE: 8/1/13

E

GENERAL NOTES

- 1. WHEN THE QUANTITY OF BASE AGGREGATE DENSE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL DEPTH WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL BY THE ENGINEER IN THE FIELD.
- 2. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
- 3. DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED WITH SEED, FERTILIZER AND EROSION MAT AS DIRECTED BY THE ENGINEER.
- 4. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- 5. PERMANENT SIGNING STATIONING WAS CALCULATED FROM THE PHOTOLOG AND MAY BE PLUS OR MINUS 50 FEET.
- 6. A CONSTRUCTION PERMIT HAS BEEN OBTAINED FOR THE WORK TO REMOVE, CONSTRUCT A DRIVEWAY. CONTACT DOT FOR A COPY OF THE PERMIT.
- 7. ALL CURB RADII ARE TO EDGE OF PAVEMENT

TRANS 220 UTILITY CONTACTS

ANDY HALVERSON  
TDS TELECOM-COMMUNICATION LINE  
1140 W WASHINGTON AVE.  
P.O. BOX 248  
CLEVELAND, WI. 53015-0248  
920-693-8125

JAMES JASKOLSKI  
FRONTIER COMMUNICATIONS OF WI LLC - COMMUNICATIONS LINE  
26 WEST 12TH ST  
CLINTONVILLE, WI 54929  
715-823-1227

LORI BUTRY  
WISCONSIN PUBLIC SERVICE CORPORATION- GAS/PETROLEUM  
700 N ADAMS STREET.  
P.O. BOX 19001  
GREEN BAY, WI. 54307-9001  
920-433-1703  
LAButry@integrysgroup.com

DENNIS HAAG  
CENTURYLINK-COMMUNICATION LINE  
144 N PEARL STREET.  
P.O. BOX 70  
BERLIN, WI. 54923  
920-361-0040  
dennis.haag@centurylink.com

DAN SANDE  
WE ENERGIES-ELECTRICITY  
333 W EVERETTE ST, A299  
MILWAUKEE, WI. 53203  
414-221-4578  
Dan.Sande@we-energies.com

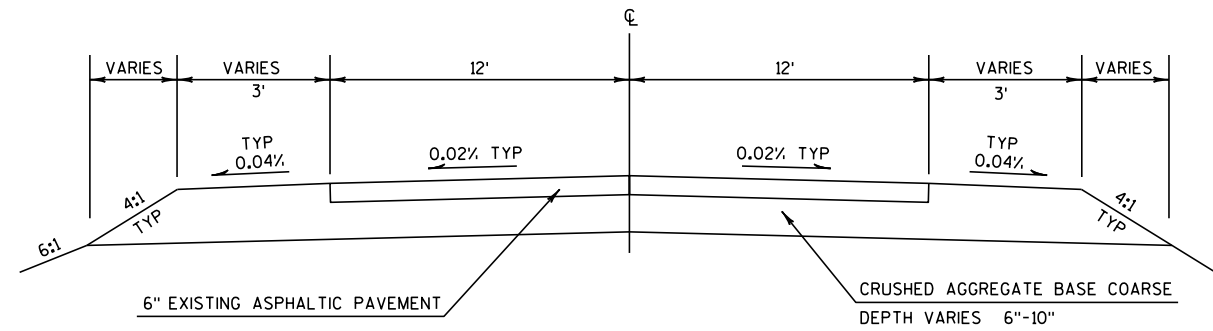
DIGGERSHOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com

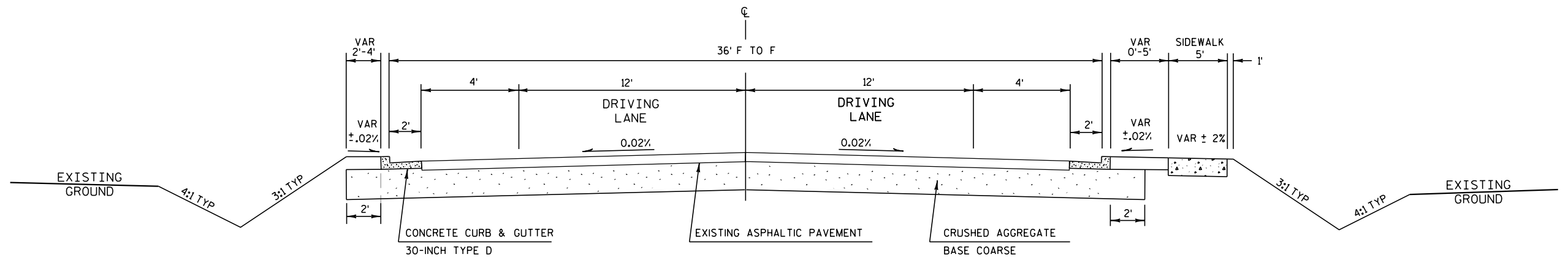
WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2984 SHAWANO AVENUE  
GREENBAY, WI. 54313  
JAMES DOPERALSKI  
TELE: 920-662-5119



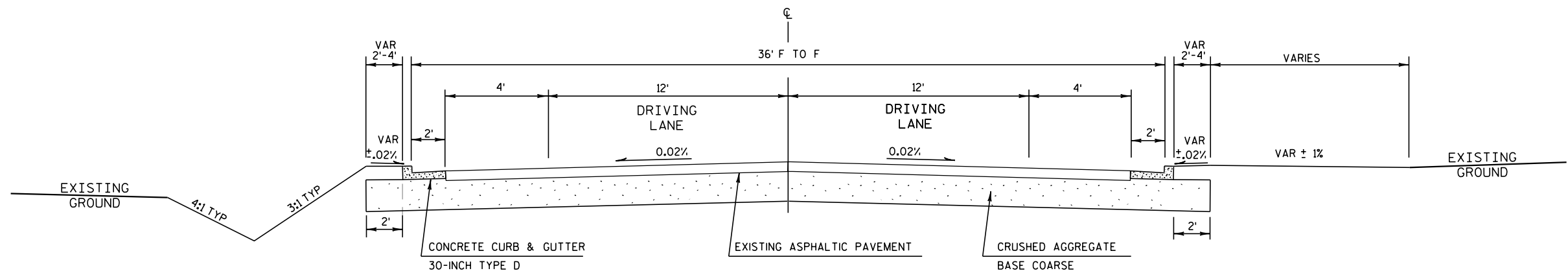
**EXISTING TYPICAL SECTION**

STA 255+25 - STA 275+25  
STA 279+48 - STA 293+60



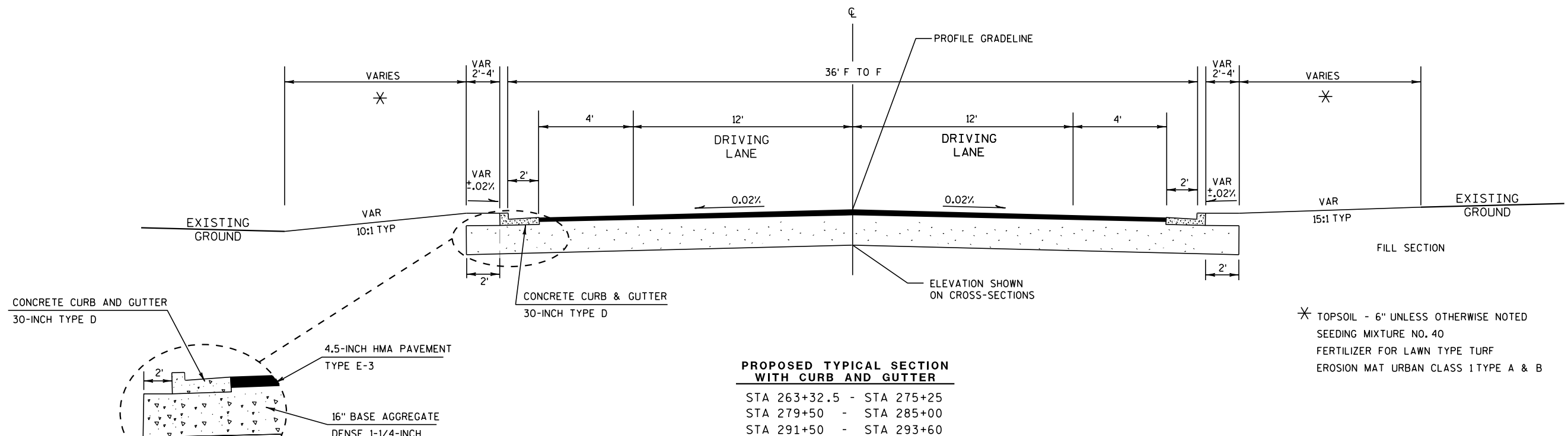
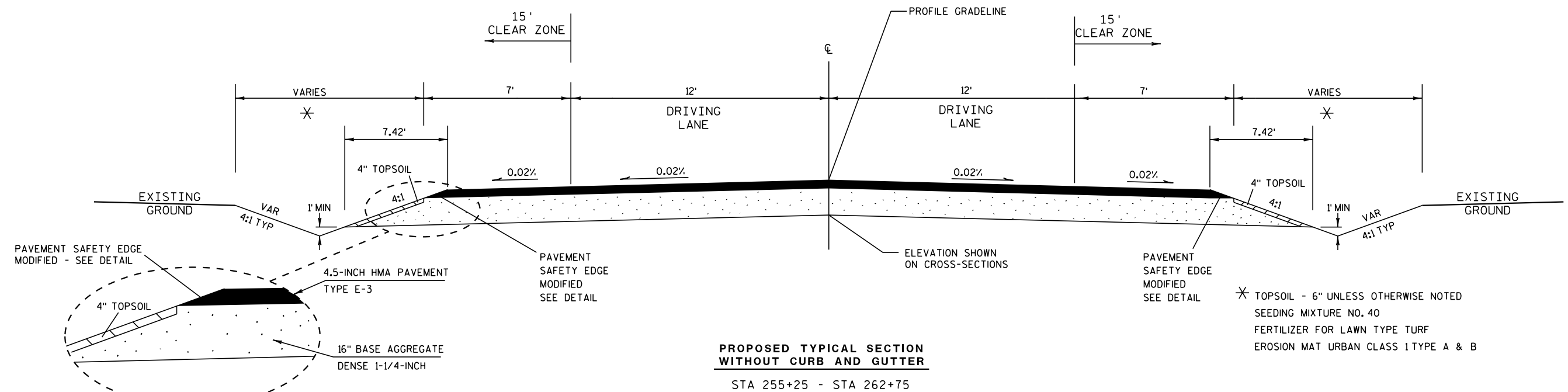
**EXISTING TYPICAL SECTION**

STA 275+25 - STA 276+42  
STA 277+21 - STA 278+15



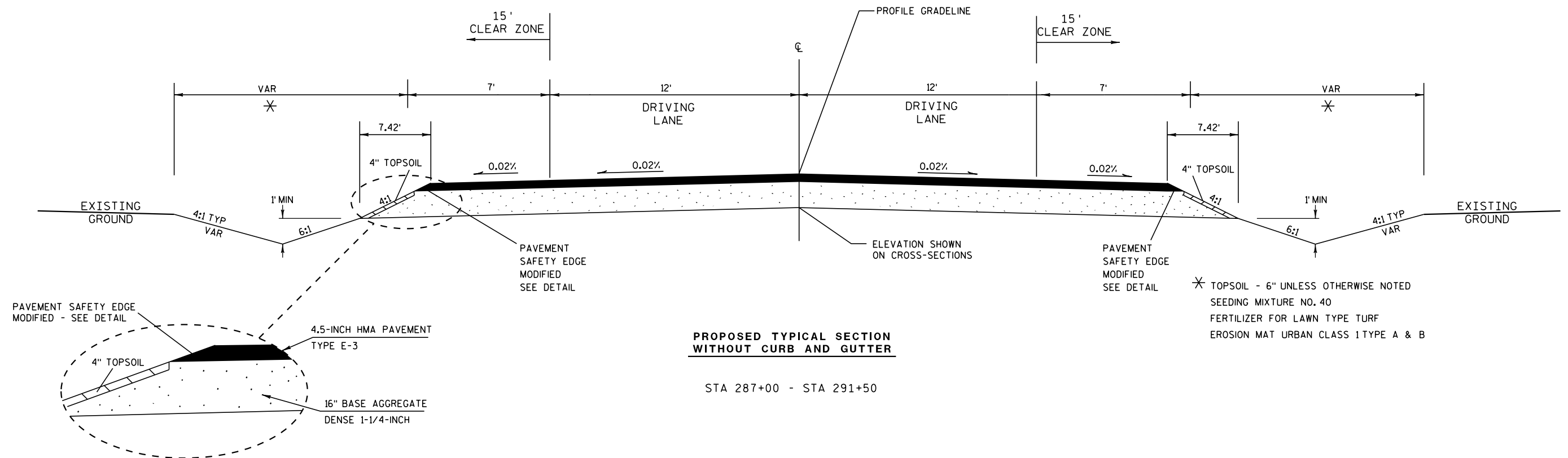
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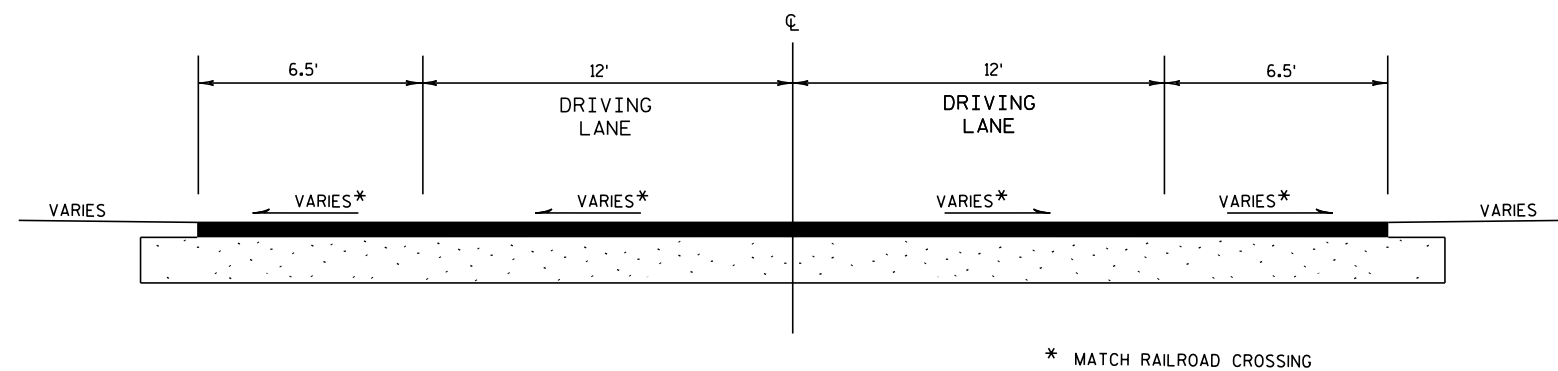
STA 278+15 - STA 279+50



2

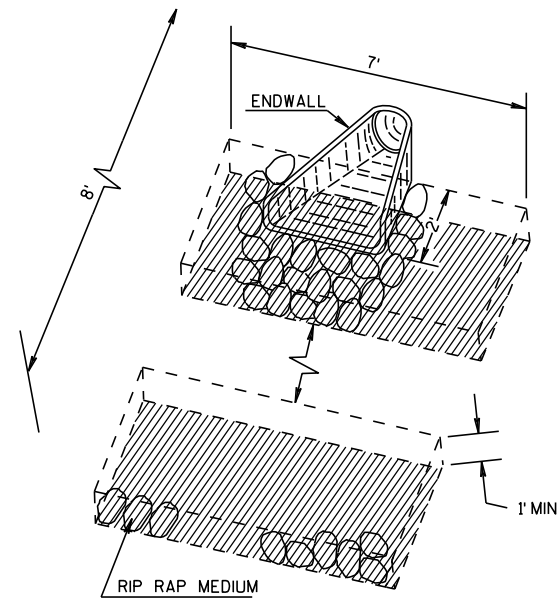






**PROPOSED TYPICAL SECTION  
AT RAILROAD CROSSING**

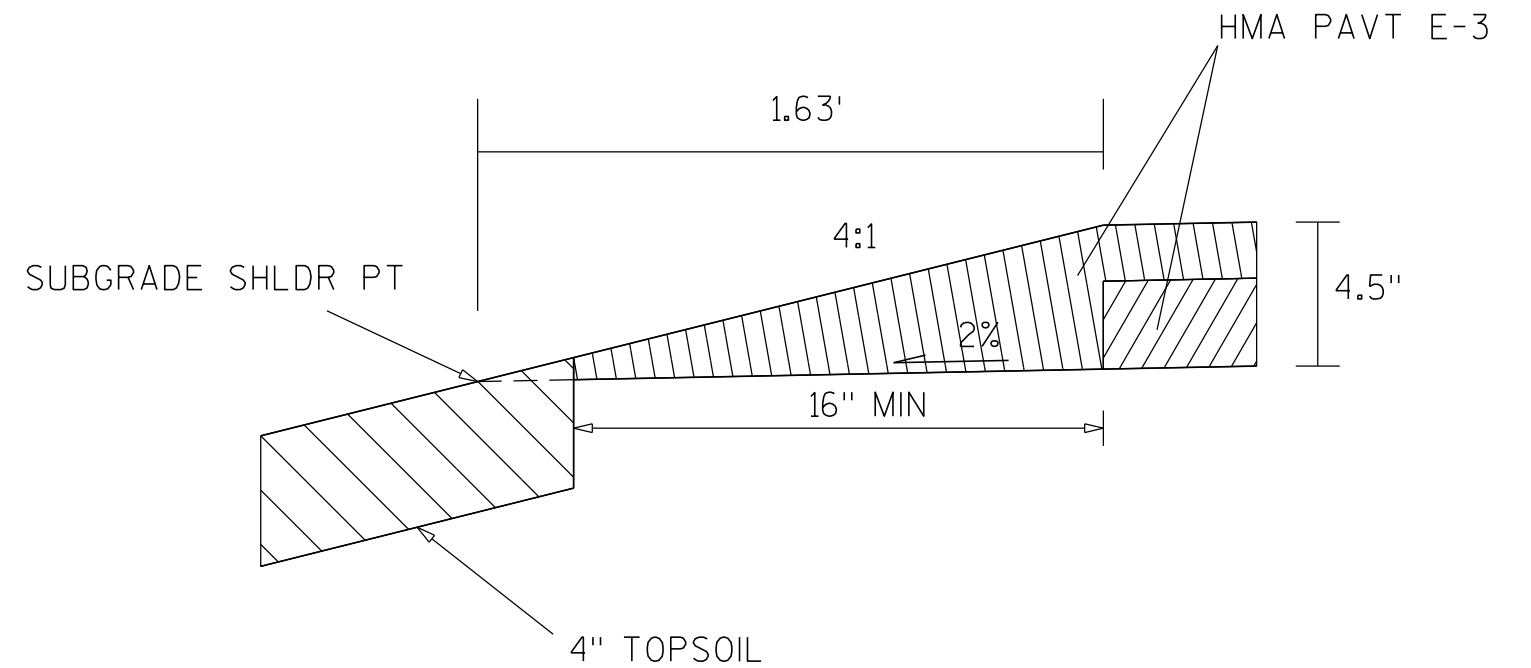
STA 281+93 - STA 282+15



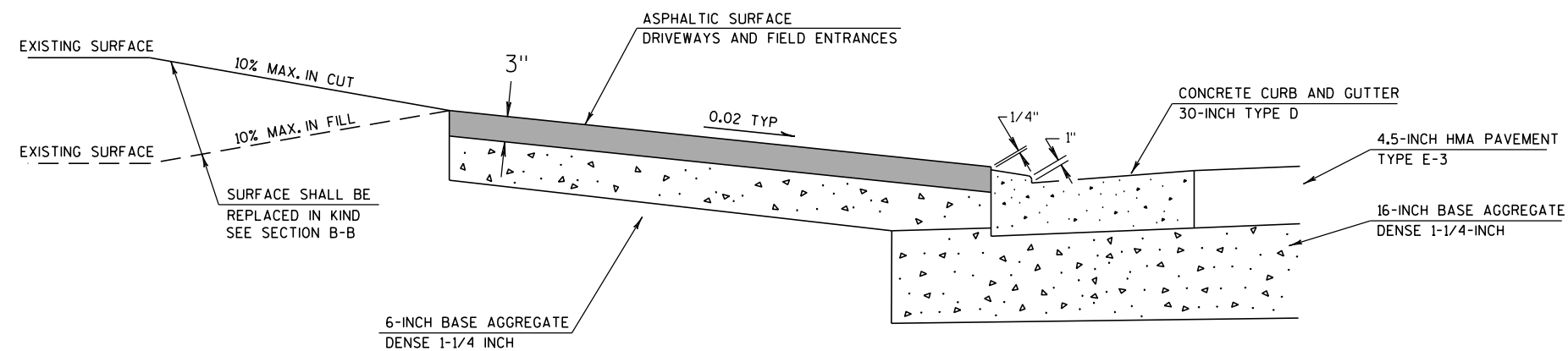
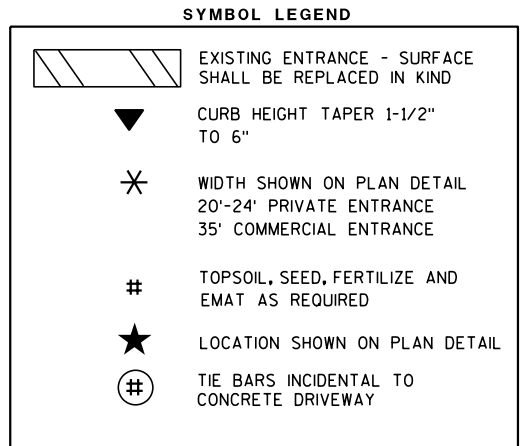
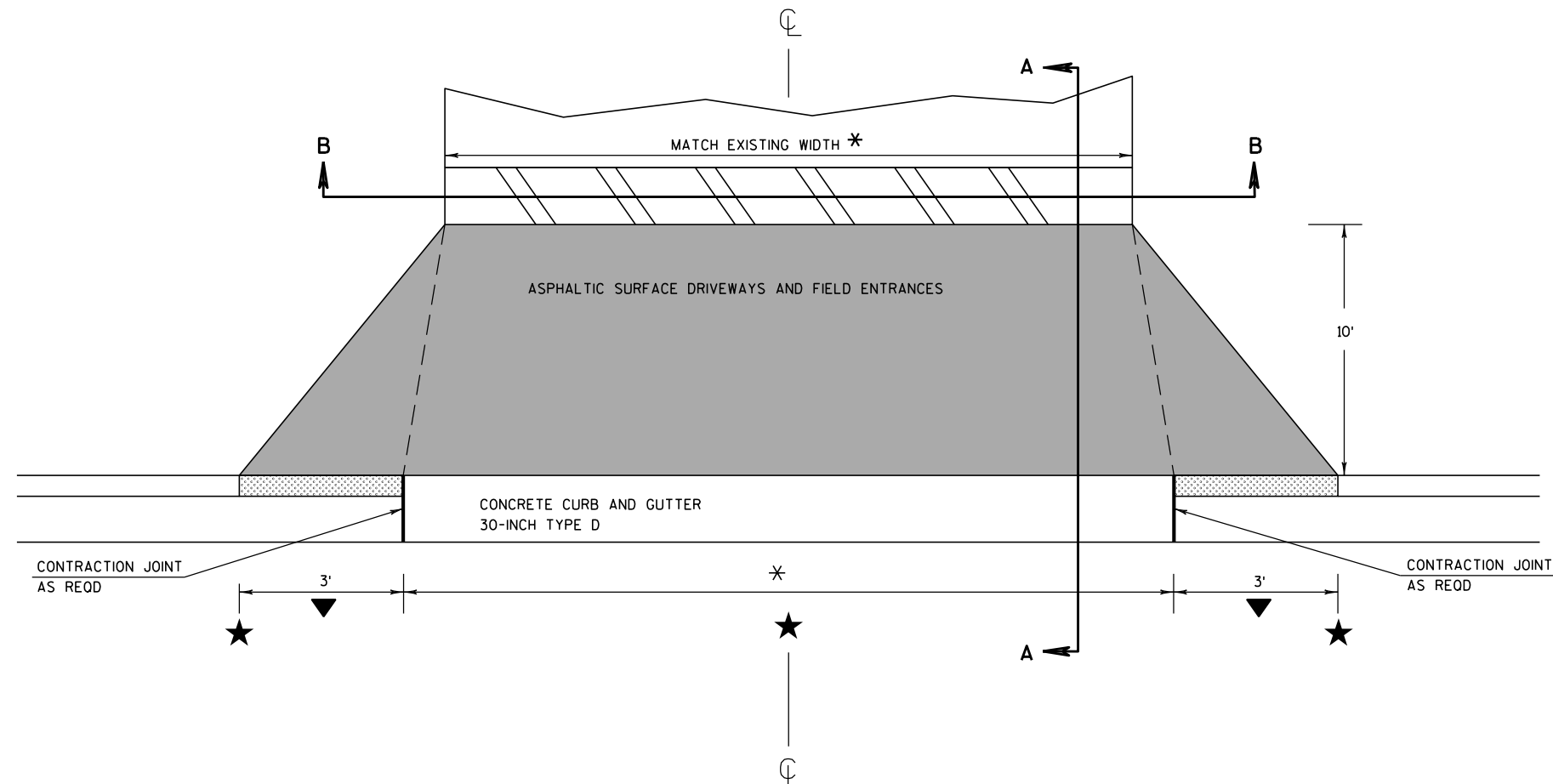
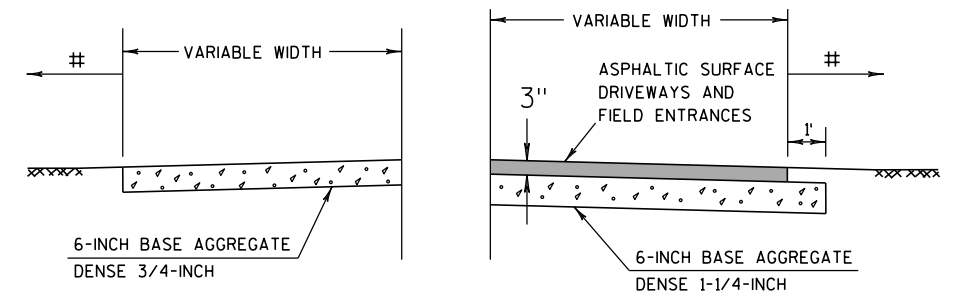
**KEY**  
 GEOTEXTILE FABRIC,  
 TYPE HR

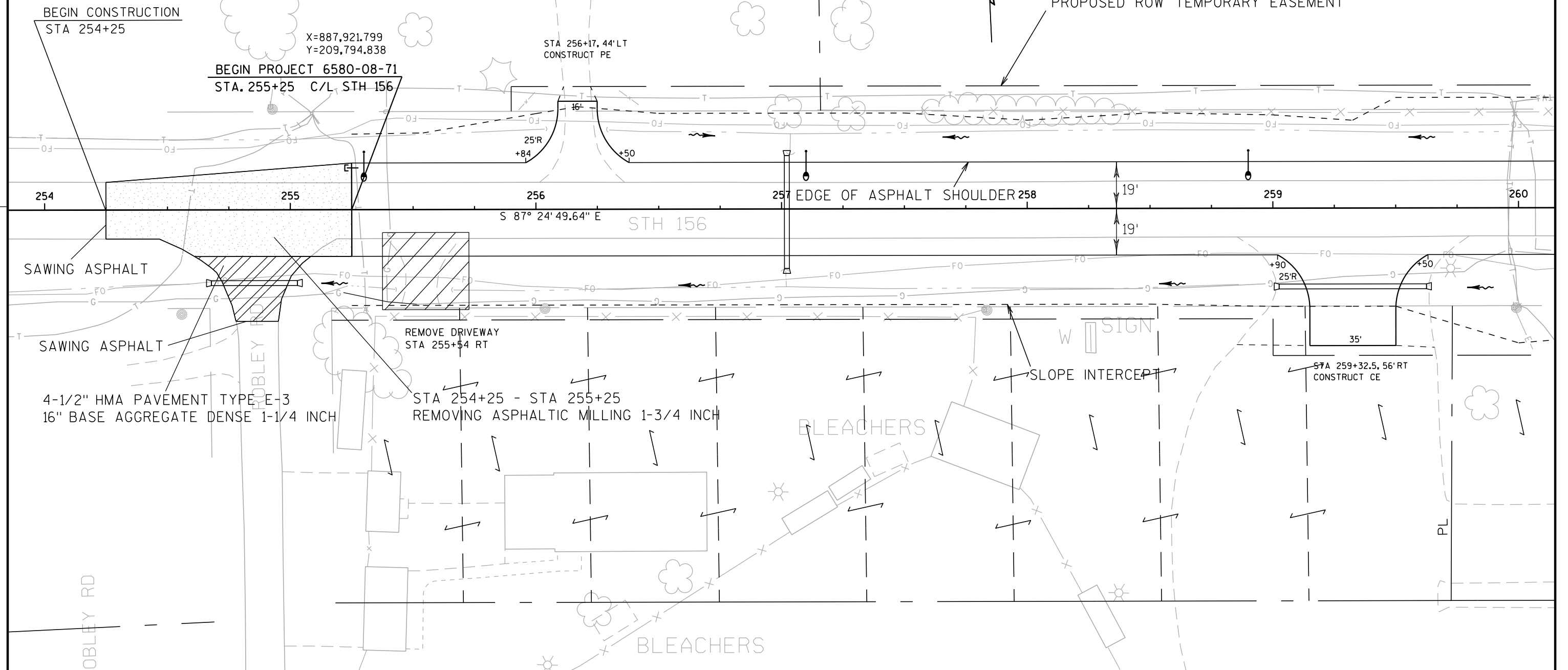
### STORM SEWER OUTFALL DETAIL

OF1  
 OF2



### SAFETY EDGE (MODIFIED)

**SECTION A-A****SECTION B-B**



PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

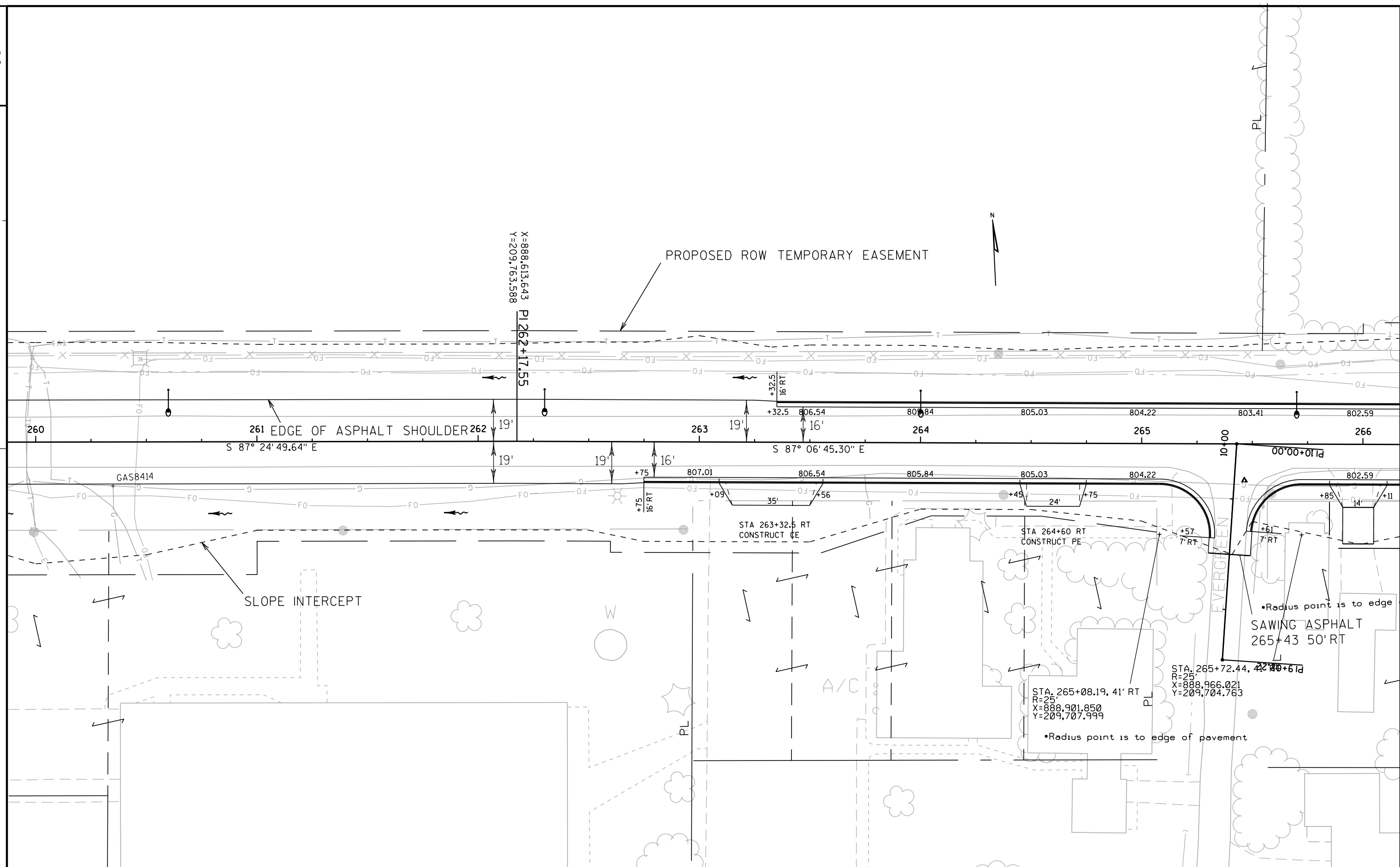
PLAN DETAIL

SHEET

E

2

2



|             |            |
|-------------|------------|
| PROJECT NO: | 6580-08-71 |
|-------------|------------|

|      |         |
|------|---------|
| HWY: | STH 156 |
|------|---------|

COUNTY: SHAWANO

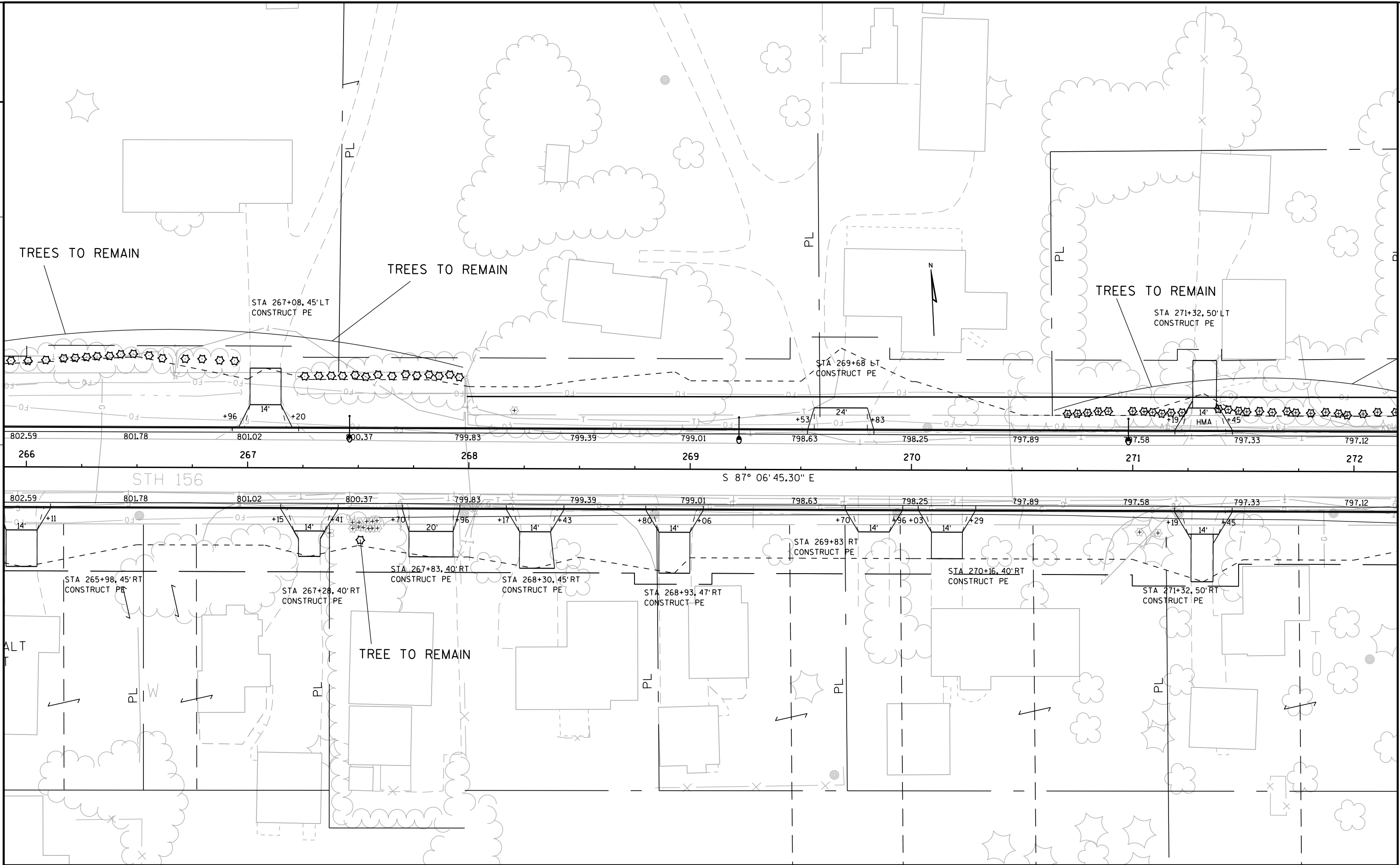
PLAN DETAIL

SHEET

E

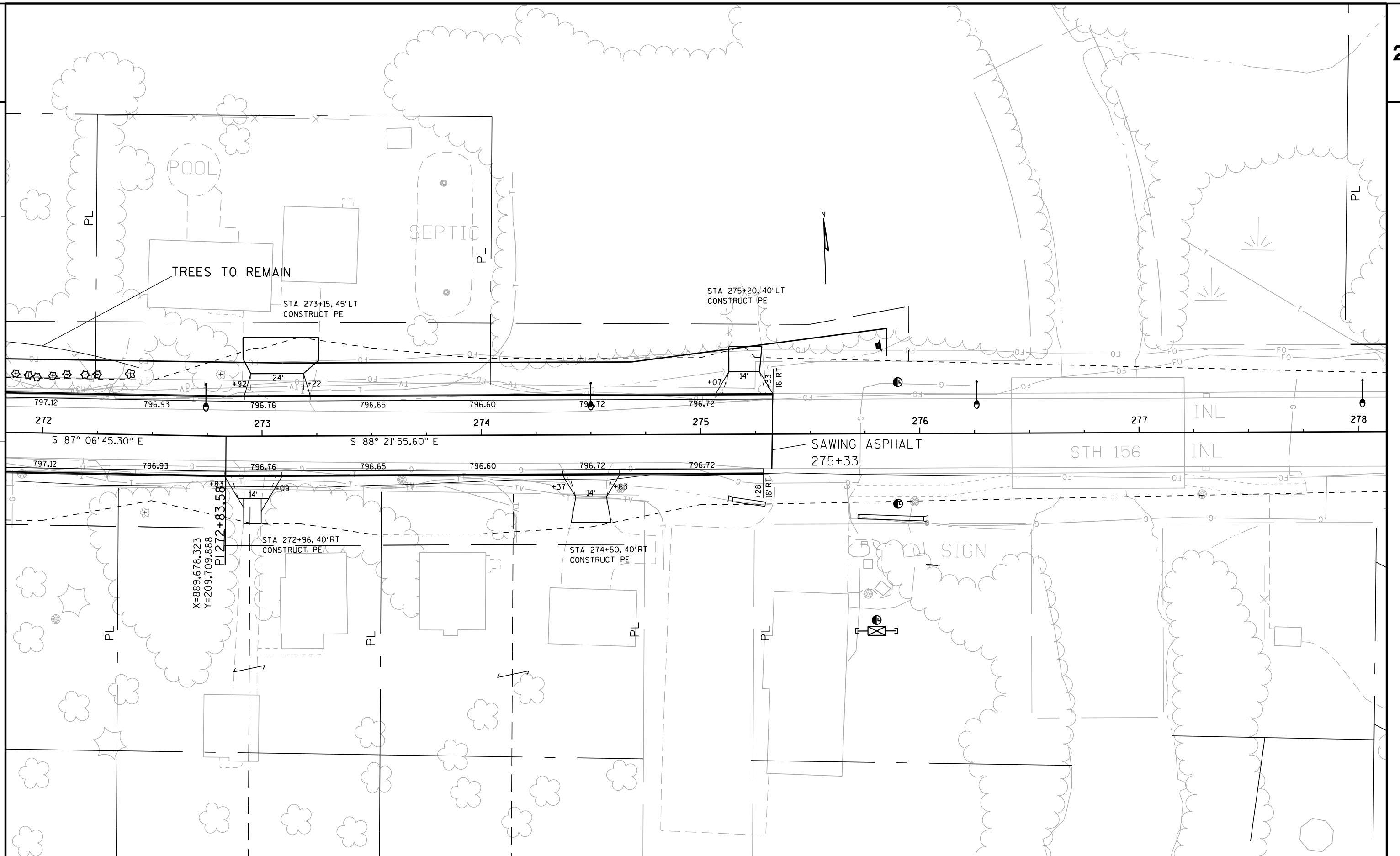
2

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PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

PLAN DETAIL

SHEET

E

FILE NAME : N:\pds\project\1d\6580-08-00\_STH\_156\_Robley-Lessor Navar.ino\cadd\021204\_pd.dgn

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PLOT BY : dotgub

PLOT NAME :

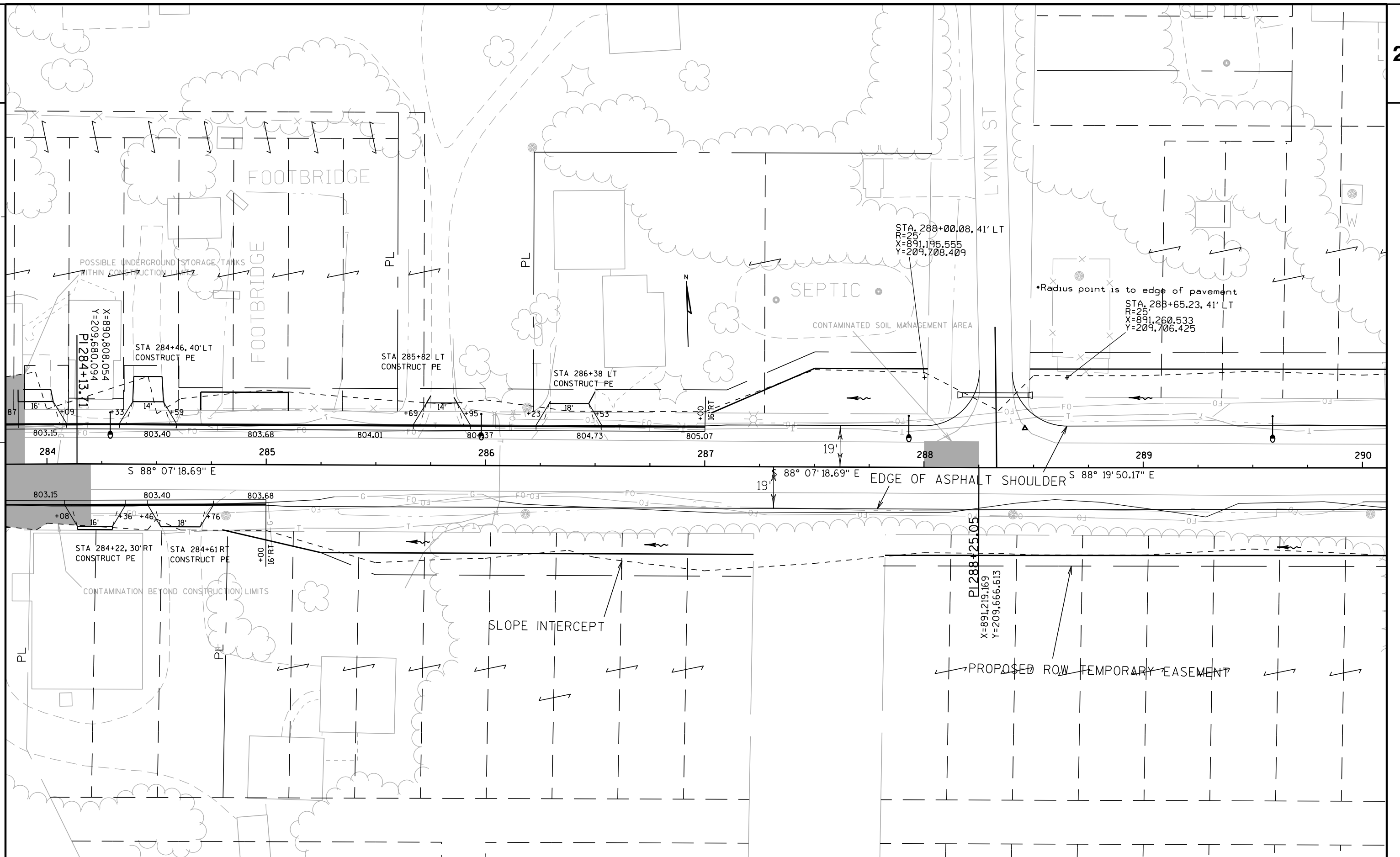
PLOT SCALE : 40:1

WISDOT/CADD SHEET 42



2

2



PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

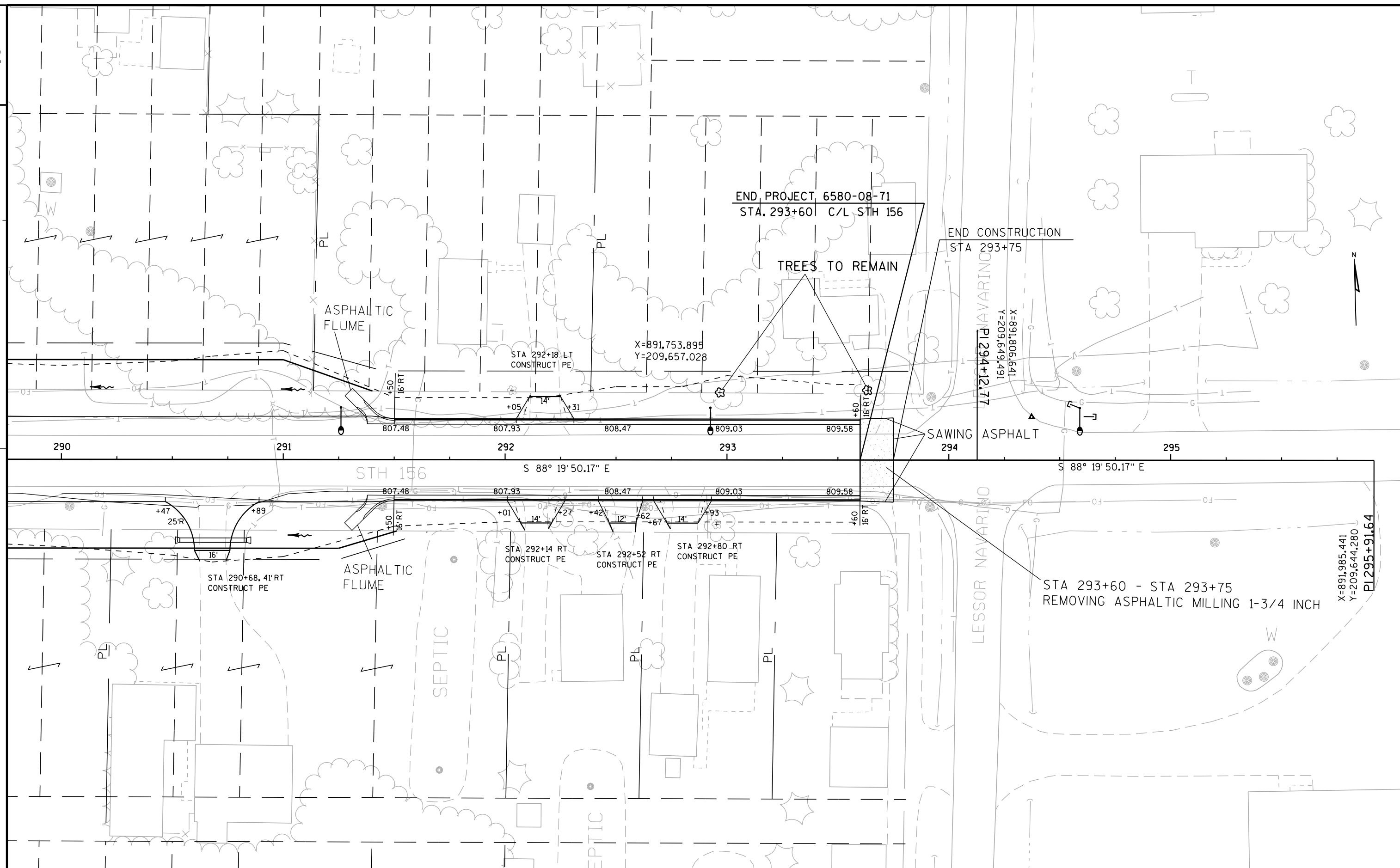
PLAN DETAIL

SHEET

E

2

2



PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

PLAN DETAIL

SHEET

E

FILE NAME : N:\pds\project\_1d\6580-08-00\_STH\_156\_Robley-Lessor Navarino\cadd\021207\_pd.dgn

PLOT DATE : 13-NOV-2013 17:44

PLOT BY : dotgub

PLOT NAME :

PLOT SCALE : 40:1

WISDOT/CADD SHEET 42

| LEGEND     |                           |
|------------|---------------------------|
|            | EMAT URBAN CLASS I TYPE A |
|            | EMAT URBAN CLASS I TYPE B |
| SILT FENCE |                           |
|            | INLET PROTECTION TYPE A   |
|            | INLET PROTECTION TYPE B   |
|            | INLET PROTECTION TYPE C   |
|            | RIPRAP MEDIUM             |
|            | PERMITTED WETLAND         |

BEGIN CONSTRUCTION  
STA 254+25

BEGIN PROJECT 6580-08-71  
STA. 255+25 C/L STH 156

PROPOSED ROW TEMPORARY EASEMENT

254

255

256

257

EDGE OF ASPHALT SHOULDER 258

259

260

STH 156

W SIGN

SLOPE INTERCEPT

ROBLEY RD

ROBLEY RD

PROJECT NO: 6580-08-71

HWY: STH 156

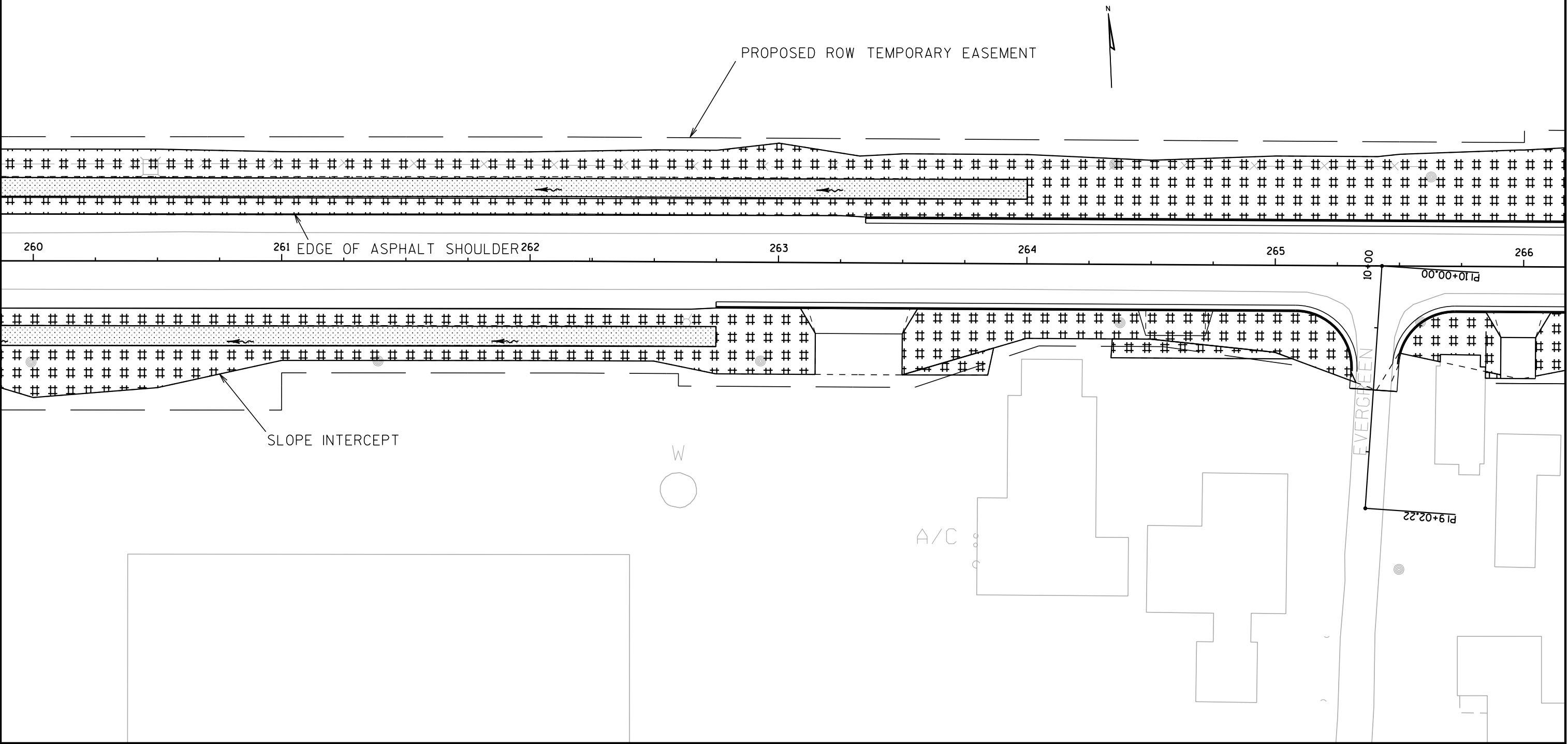
COUNTY: SHAWANO

EROSION CONTROL

SHEET

E

| LEGEND     |                           |
|------------|---------------------------|
|            | EMAT URBAN CLASS I TYPE A |
|            | EMAT URBAN CLASS I TYPE B |
| SILT FENCE |                           |
|            | INLET PROTECTION TYPE A   |
|            | INLET PROTECTION TYPE B   |
|            | INLET PROTECTION TYPE C   |
|            | RIPRAP MEDIUM             |
|            | PERMITTED WETLAND         |



LEGEND

###

EMAT URBAN CLASS I TYPE A

EMAT URBAN CLASS I TYPE B

SILT FENCE

A

INLET PROTECTION TYPE A

B

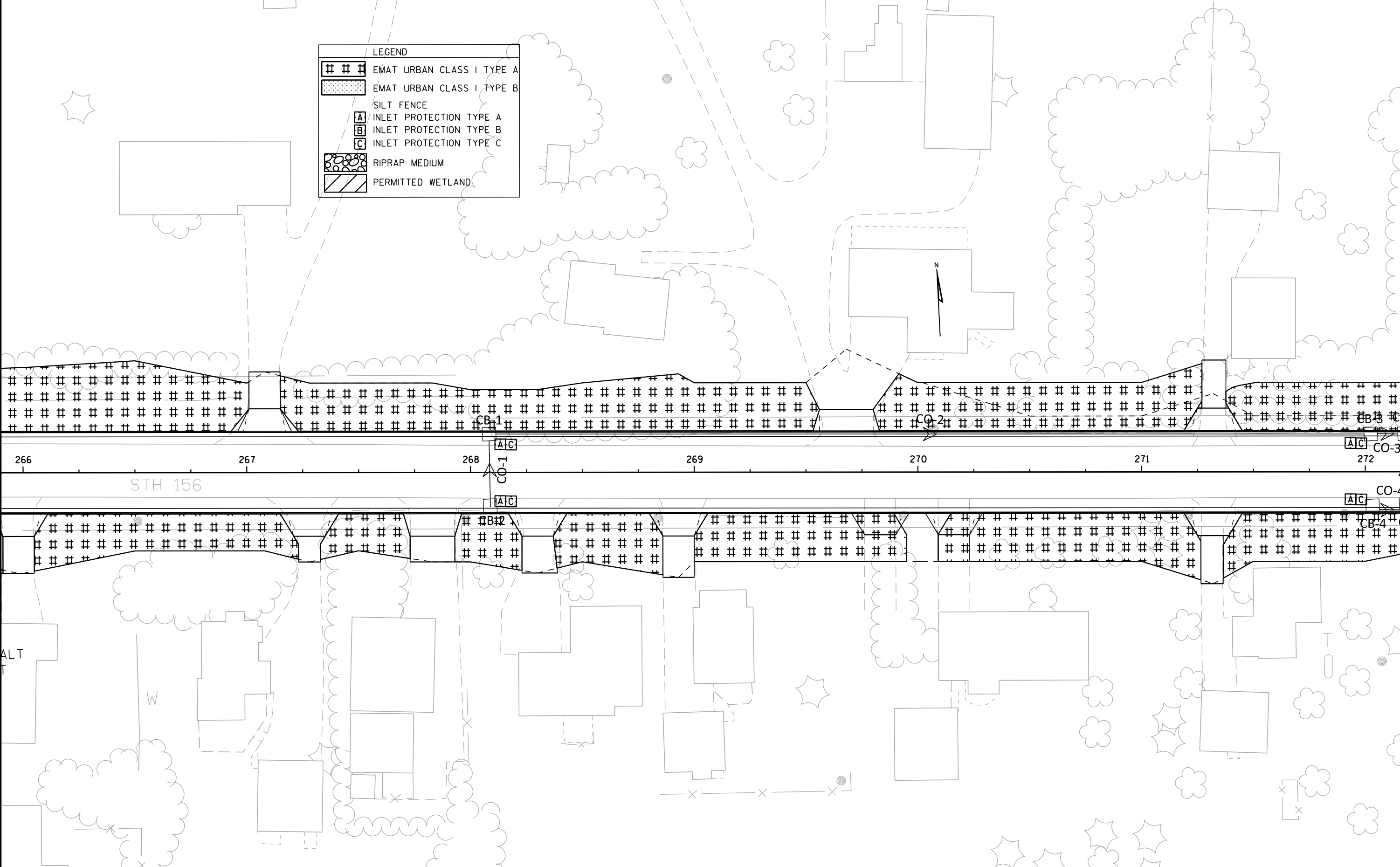
INLET PROTECTION TYPE B

C

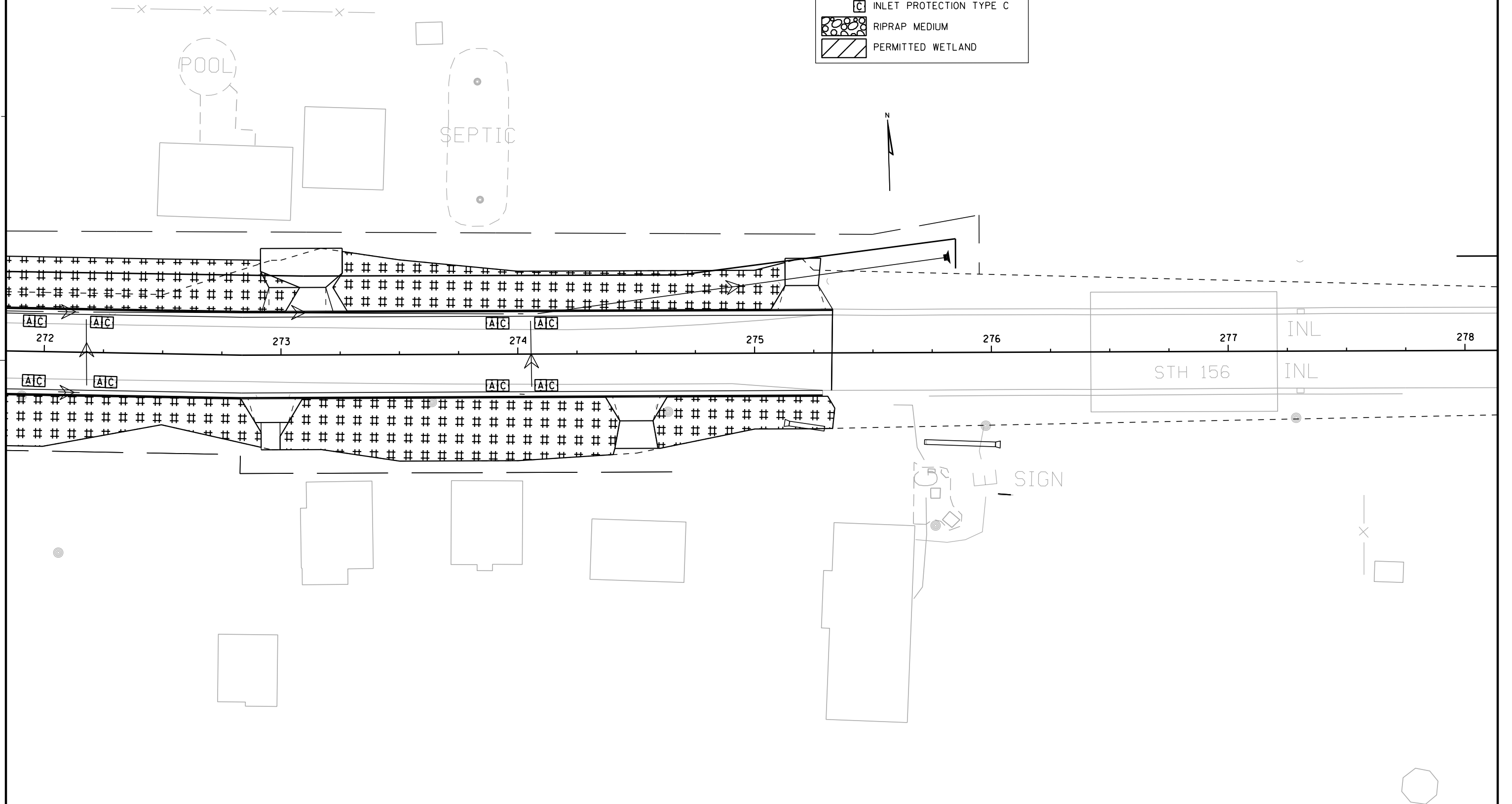
INLET PROTECTION TYPE C

RIPRAP MEDIUM

PERMITTED WETLAND



| LEGEND     |                           |
|------------|---------------------------|
|            | EMAT URBAN CLASS I TYPE A |
|            | EMAT URBAN CLASS I TYPE B |
| SILT FENCE |                           |
|            | INLET PROTECTION TYPE A   |
|            | INLET PROTECTION TYPE B   |
|            | INLET PROTECTION TYPE C   |
|            | RIPRAP MEDIUM             |
|            | PERMITTED WETLAND         |



LEGEND

###

EMAT URBAN CLASS I TYPE A

EMAT URBAN CLASS I TYPE B

SILT FENCE

A

INLET PROTECTION TYPE A

B

INLET PROTECTION TYPE B

C

INLET PROTECTION TYPE C

RIPRAP MEDIUM

PERMITTED WETLAND

APRON ENDWALL W/PIPE GRATE  
STA 278+25 33' LT  
OF-2

APRON ENDWALL W/PIPE GRATE  
STA 282+00 40' LT  
OF-3

278 279 280 281 282 283 284

STH 156  
CO-29

SIGN

PI 99+52.63

PI 279+55.64

CB-15

PI 99+00.73

CB-17

CB-18

CB-19

CB-20

CB-21

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CB-308

CB-309

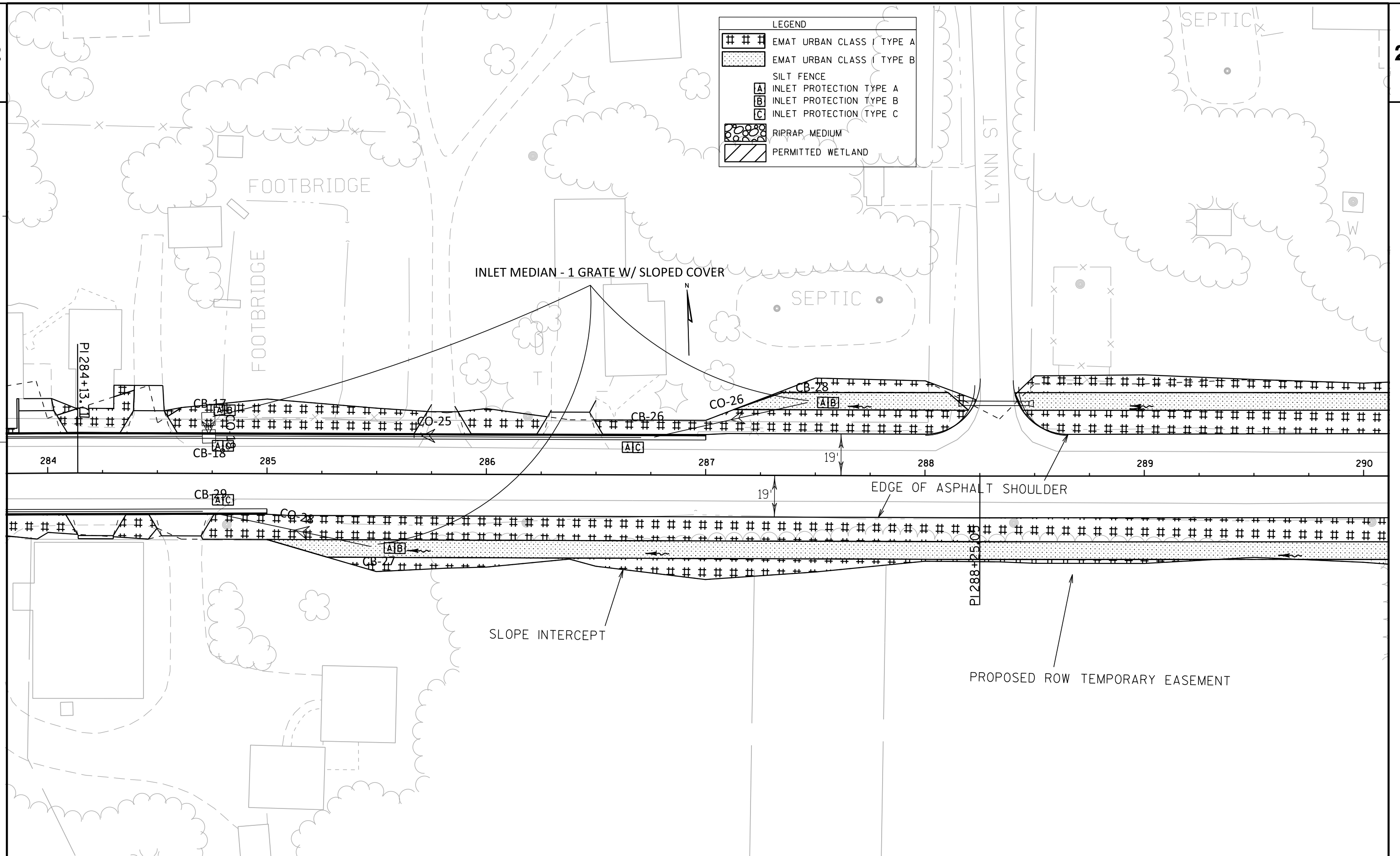
CB-310

CB-311

CB-312

2

2



PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

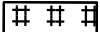
EROSION CONTROL

SHEET

E

2

2

| LEGEND                                                                              |                           |
|-------------------------------------------------------------------------------------|---------------------------|
|  | EMAT URBAN CLASS I TYPE A |
|  | EMAT URBAN CLASS I TYPE B |
| SILT FENCE                                                                          |                           |
|  | INLET PROTECTION TYPE A   |
|  | INLET PROTECTION TYPE B   |
|  | INLET PROTECTION TYPE C   |
|  | RIPRAP MEDIUM             |
|  | PERMITTED WETLAND         |

END CONSTRUCTION  
STA 293+75

END PROJECT 6580-08-71  
STA. 293+60 C/L STH 156

ASPHALTIC  
FLUME

ASPHALTIC  
FLUME

STH 156

SEPTIC

SEPTIC

LESSOR NAVARINO

PI 295+91.64

PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

EROSION CONTROL

SHEET

E

FILE NAME : N:\pds\project\1d\6580-08-00\_STH\_156\_Robley-Lessor Navarino\cadd\022007\_ec.dgn

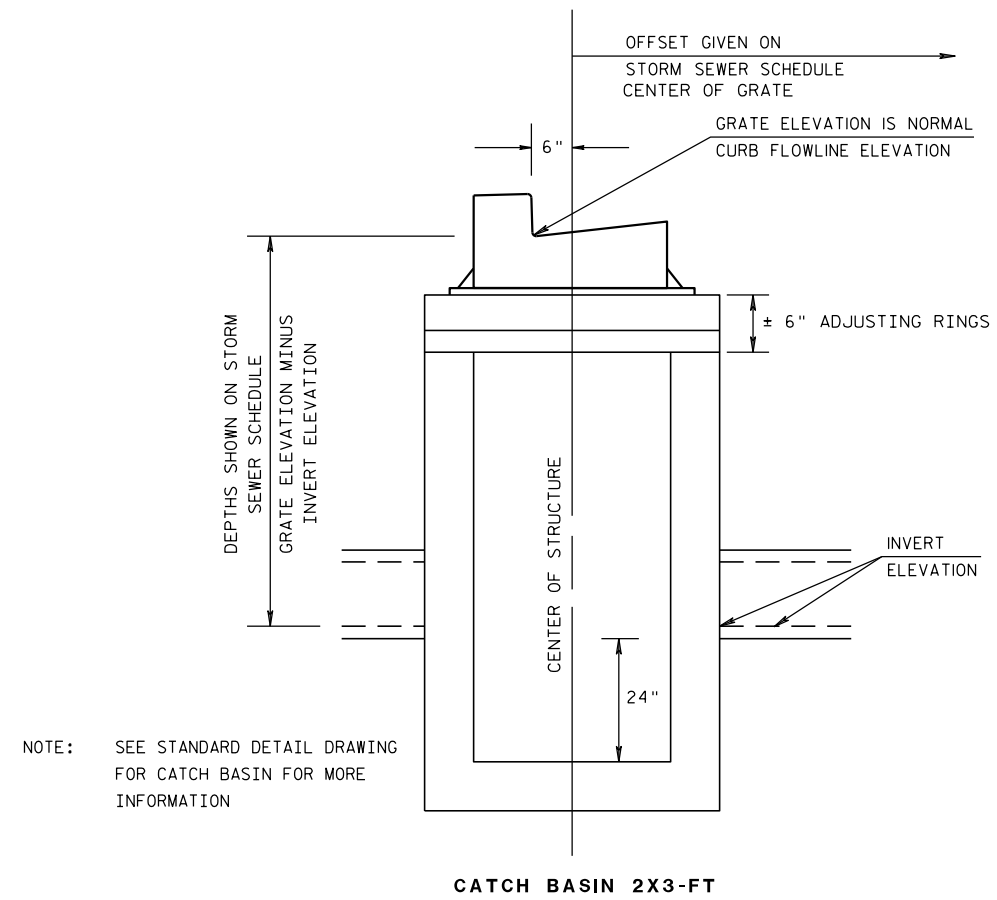
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PLOT BY : dotgvb

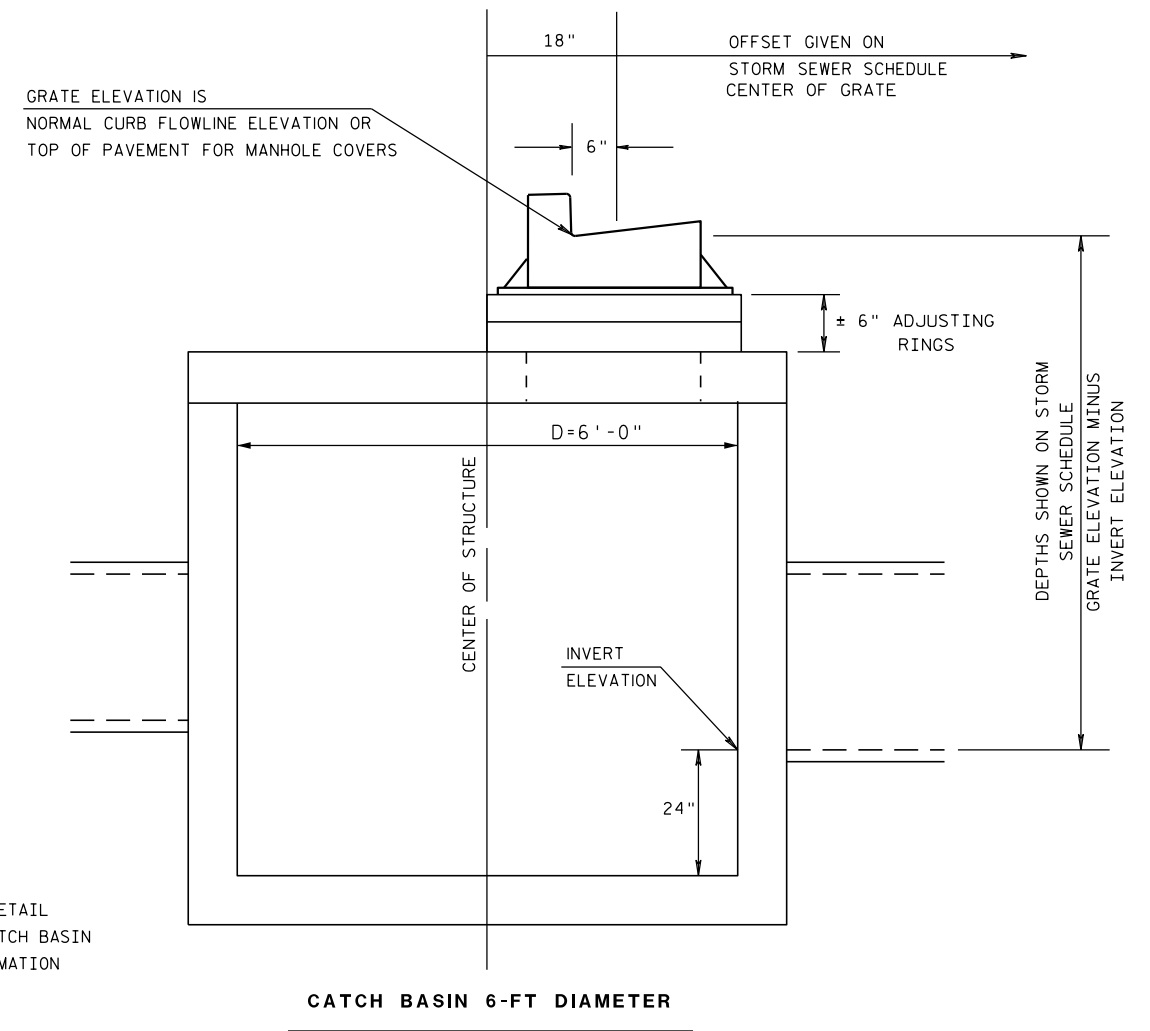
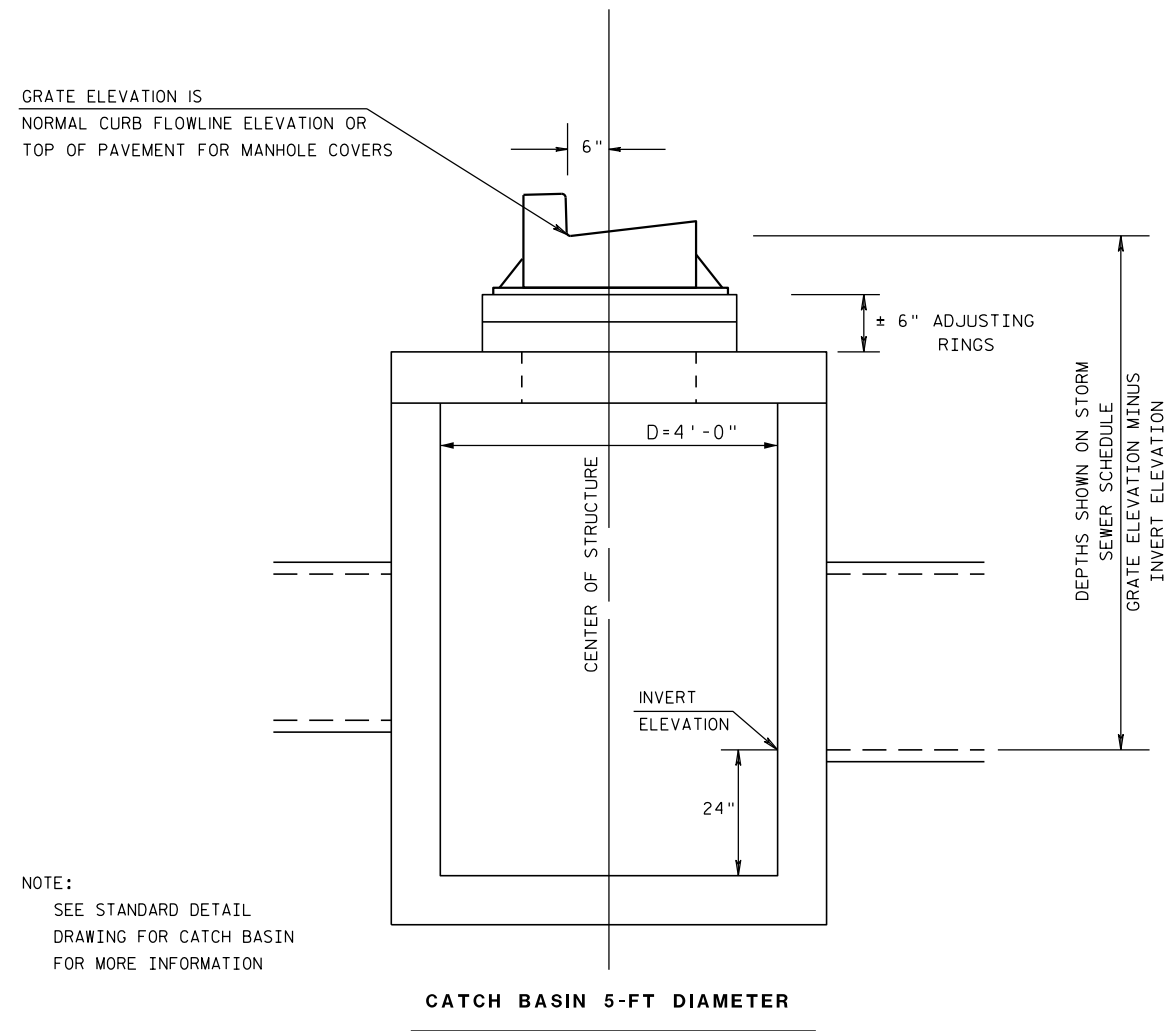
PLOT NAME :

PLOT SCALE : 40:1

WISDOT/CADD SHEET 42



ELEVATION AND LAYOUT DETAIL

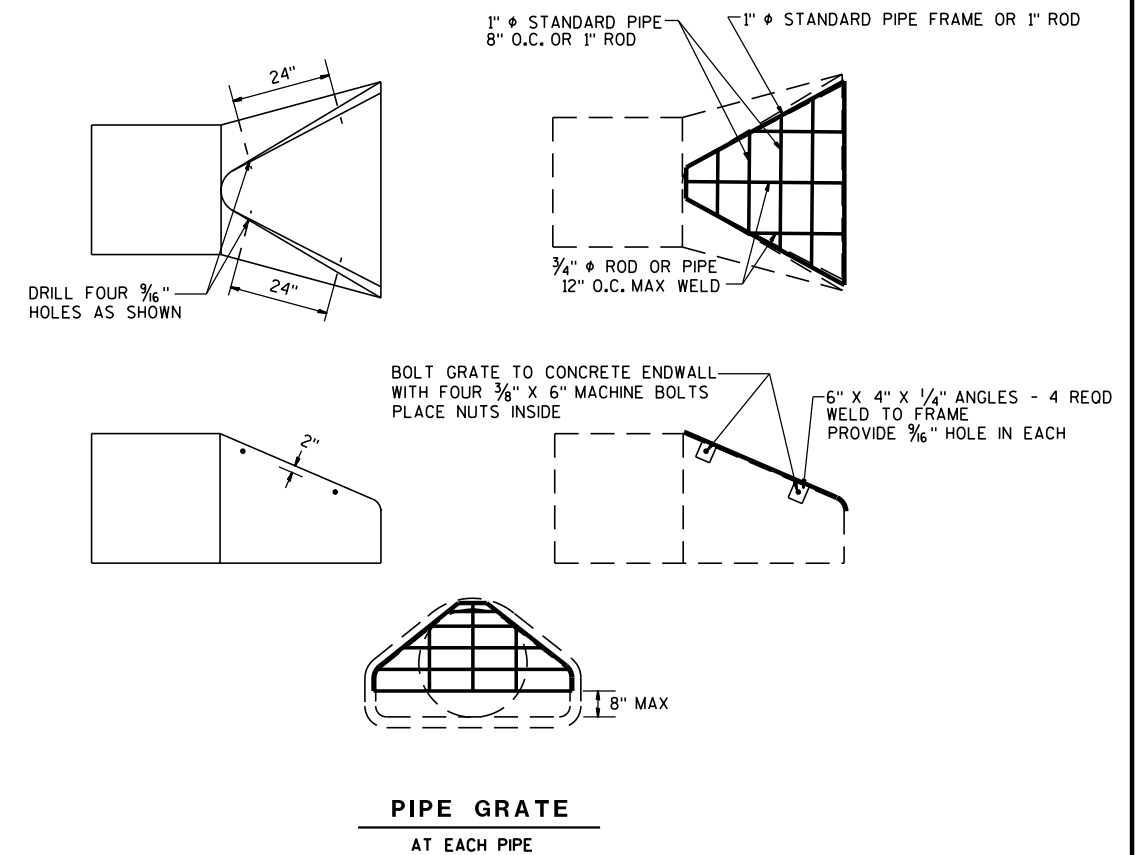
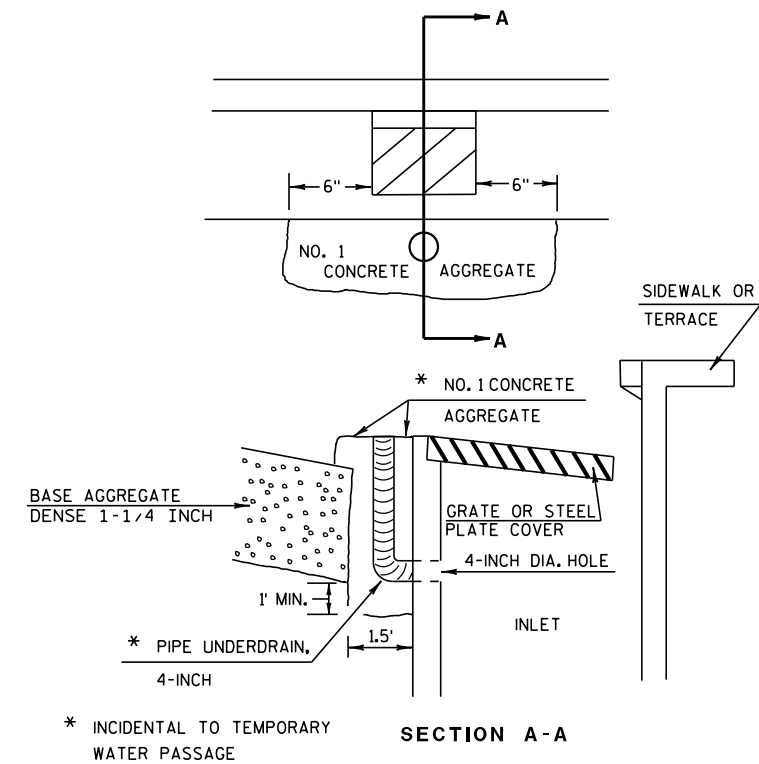


### ELEVATION AND LAYOUT DETAIL

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

TOTAL PROJECT AREA = 11.3 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 6.4 ACRES

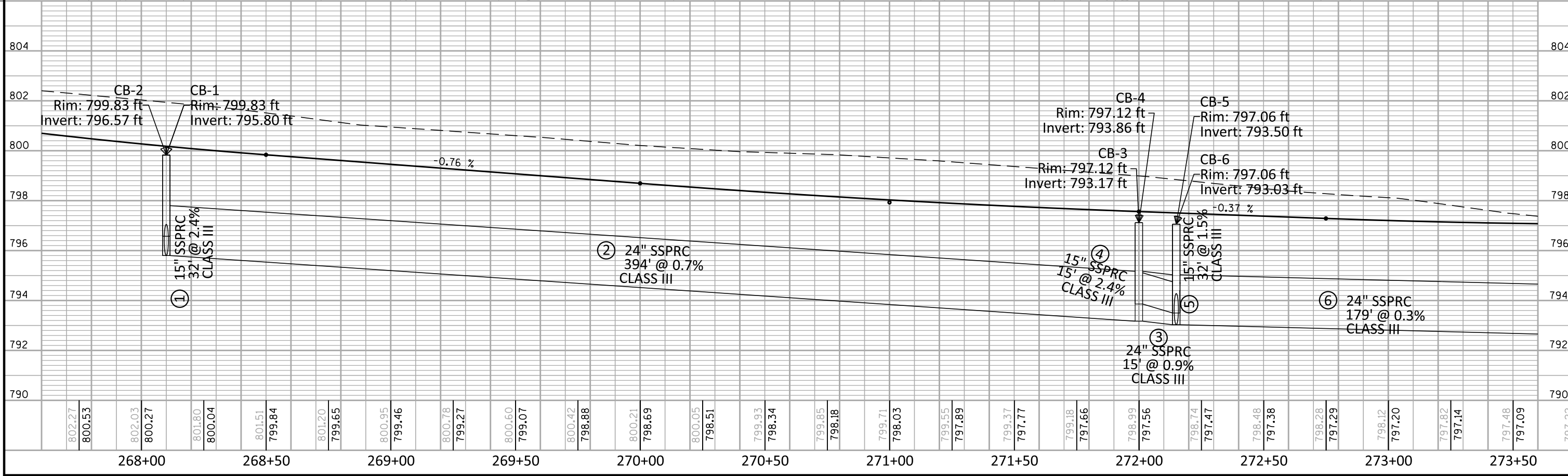
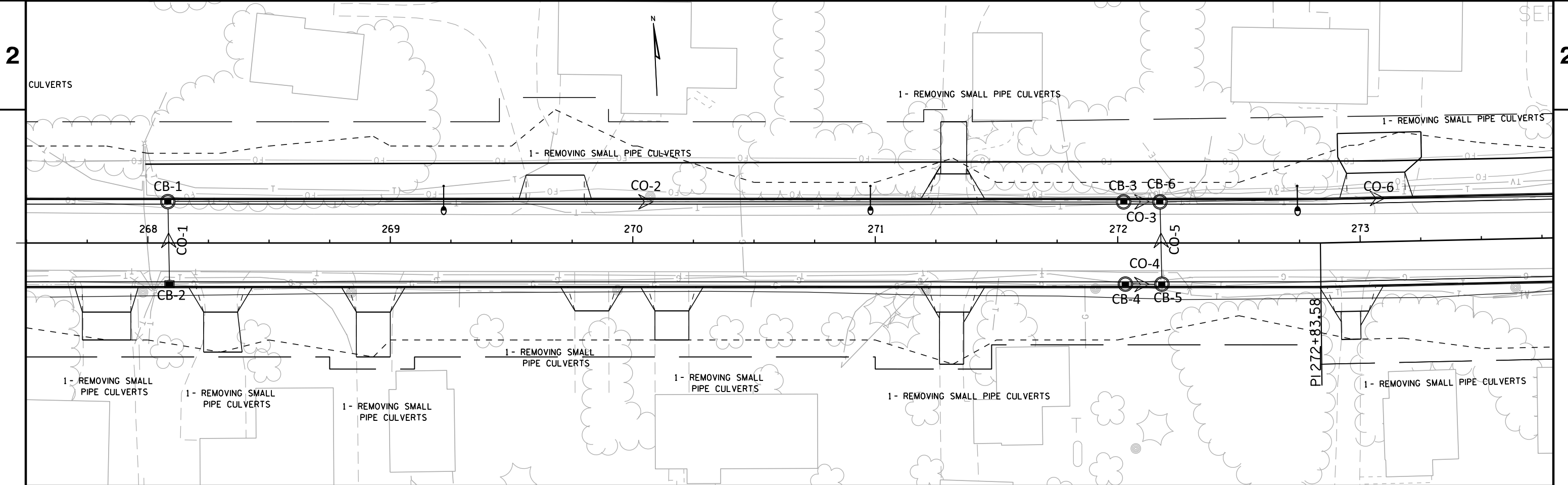


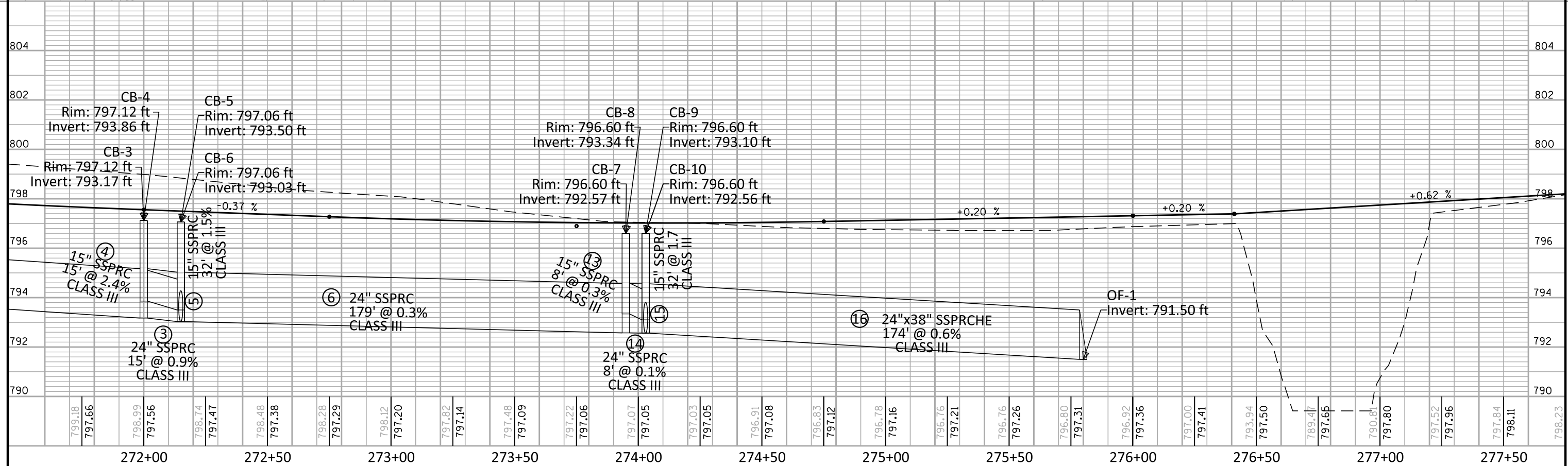
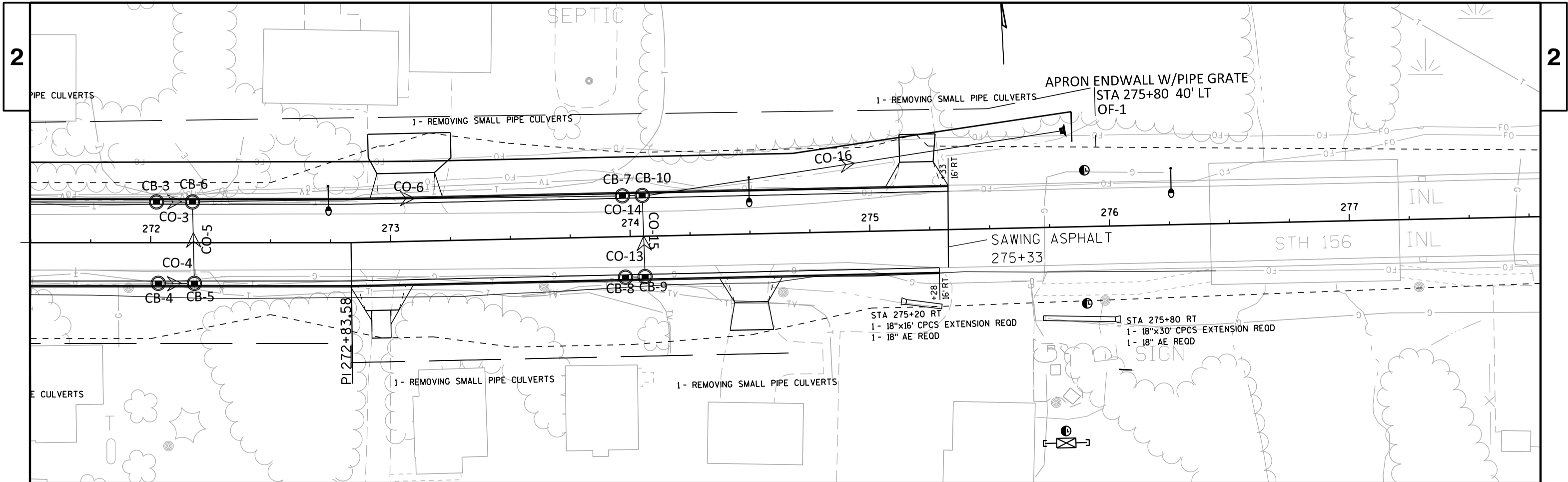
STORM SEWER INFORMATION

| INLETS, MANHOLES AND CATCH BASINS |               |           |                        |                   |               |                     |             |                           |              |
|-----------------------------------|---------------|-----------|------------------------|-------------------|---------------|---------------------|-------------|---------------------------|--------------|
| STRUCTURE<br>NUMBER               | STATION: ***  | LOCATION: | CATCH<br>BASIN<br>TYPE | INLET<br>TYPE     | COVER<br>TYPE | *<br>GRATE<br>ELEV. | **<br>DEPTH | TEMP.<br>WATER<br>PASSAGE | REMARKS:     |
| CB-1                              | 268+10 18' LT | STH 156   | 5-FT                   |                   | H             | 799.83              | 7.11        |                           |              |
| CB-2                              | 268+10 18' RT | STH 156   | 2X3                    |                   | H             | 799.83              | 7.11        |                           |              |
| CB-3                              | 272+00 18' LT | STH 156   | 5-FT                   |                   | H             | 797.12              | 5.07        |                           |              |
| CB-4                              | 272+00 18' RT | STH 156   | 5-FT                   |                   | H             | 797.12              | 4.95        |                           |              |
| CB-5                              | 272+15 18' RT | STH 156   | 5-FT                   |                   | H             | 797.06              | 4.94        |                           |              |
| CB-6                              | 272+15 18' LT | STH 156   | 5-FT                   |                   | H             | 797.06              | 5.04        |                           |              |
| CB-7                              | 273+95 18' LT | STH 156   | 5-FT                   |                   | HS            | 796.60              | 4.88        |                           |              |
| CB-8                              | 273+95 18' RT | STH 156   | 5-FT                   |                   | HS            | 796.60              | 4.76        |                           |              |
| CB-9                              | 274+03 18' RT | STH 156   | 5-FT                   |                   | HS            | 796.60              | 4.79        |                           |              |
| CB-10                             | 274+03 18' LT | STH 156   | 5-FT                   |                   | HS            | 796.60              | 4.89        |                           |              |
| CB-15                             | 279+85 21' RT | STH 156   | 2X3                    |                   | H             | 799.46              | 4.88        |                           |              |
| CB-16                             | 279+85 18' LT | STH 156   | 2X3                    |                   | H             | 799.46              | 4.99        |                           |              |
| CB-17                             | 284+75 25' LT | STH 156   |                        | Median<br>1 Grate | MS            | 802.48              | 3.15        |                           | Sloped Cover |
| CB-18                             | 284+75 18' LT | STH 156   | 5-FT                   |                   | H             | 803.55              | 4.23        |                           |              |
| CB-19                             | 282+38 18' LT | STH 156   | 5-FT                   |                   | H-D           | 802.41              | 3.47        |                           |              |
| CB-20                             | 282+30 18' LT | STH 156   | 6-FT                   |                   | H-D           | 802.41              | 3.48        |                           |              |
| CB-21                             | 282+30 18' RT | STH 156   | 5-FT                   |                   | H             | 802.41              | 3.42        |                           |              |
| CB-26                             | 286+75 18' LT | STH 156   | 5-FT                   |                   | H             | 804.91              | 5.35        |                           |              |
| CB-27                             | 285+50 33' RT | STH 156   |                        | Median<br>1 Grate | MS            | 800.90              | 1.24        |                           | Sloped Cover |
| CB-28                             | 287+50 33' LT | STH 156   |                        | Median<br>1 Grate | MS            | 802.31              | 2.66        |                           | Sloped Cover |
| CB-29                             | 284+75 18' RT | STH 156   | 5-FT                   |                   | H-D           | 803.55              | 4.03        |                           |              |
|                                   |               |           |                        |                   |               |                     |             |                           |              |
|                                   |               |           |                        |                   |               |                     |             |                           |              |
|                                   |               |           |                        |                   |               |                     |             |                           |              |
|                                   |               |           |                        |                   |               |                     |             |                           |              |
|                                   |               |           |                        |                   |               |                     |             |                           |              |

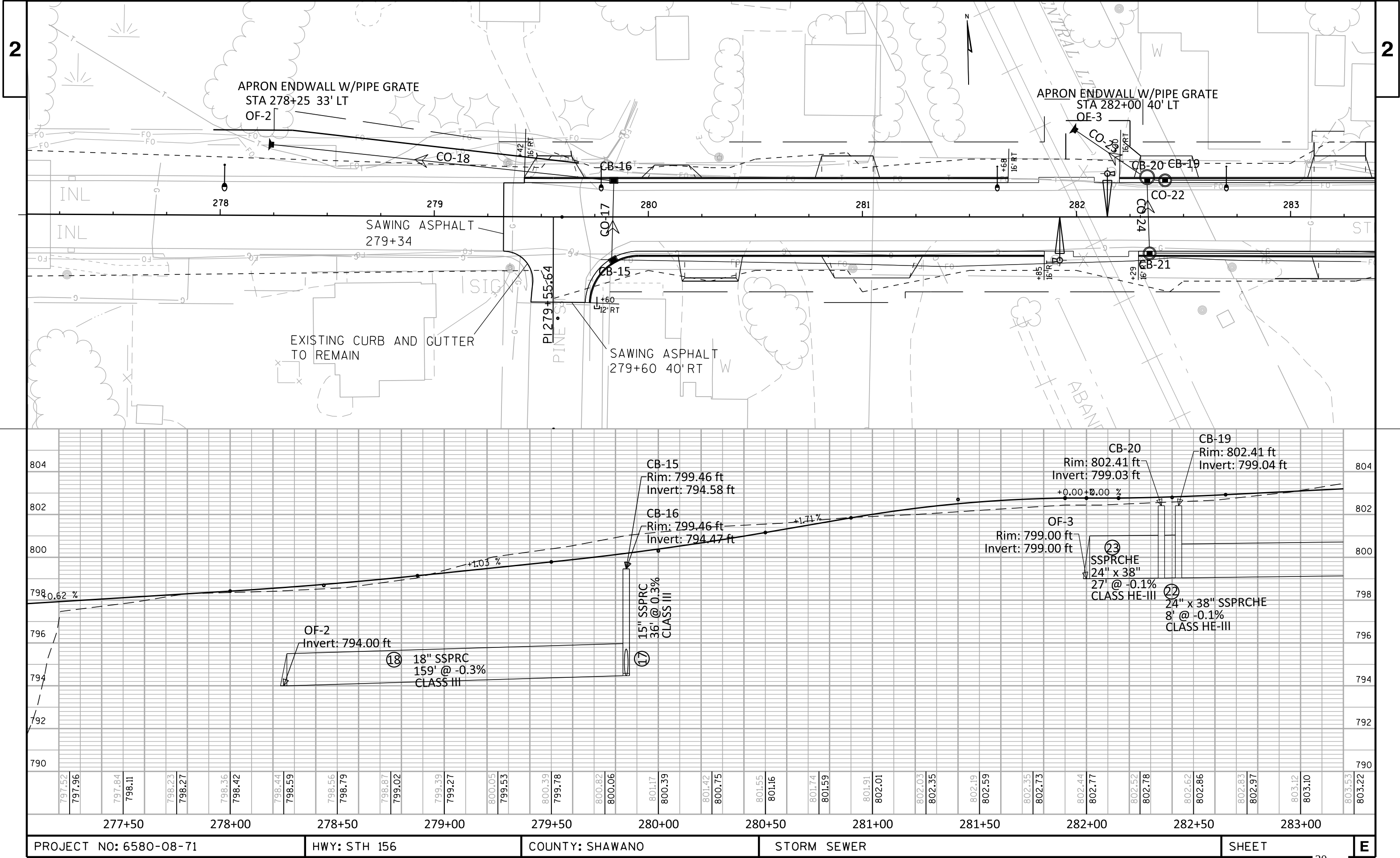
| STORM SEWER    |          |       |                     |           |               |                        |            |                        |                                  |
|----------------|----------|-------|---------------------|-----------|---------------|------------------------|------------|------------------------|----------------------------------|
| PIPE<br>NUMBER | LOCATION |       | INVERT<br>ELEVATION |           | SIZE<br>(IN.) | ****<br>LENGTH<br>(FT) | GRADE<br>% | TYPE &<br>CLASS        | REMARKS:                         |
|                | FROM     | TO    | INLET               | DISCHARGE |               |                        |            |                        |                                  |
| C0-28          | CB-27    | CB-29 | 799.52              | 799.66    | 14X23         | 77                     | -0.20      | SSP RC<br>CLASS HE-IV  |                                  |
| C0-29          | CB-29    | CB-21 | 799.09              | 799.52    | 19X30         | 239                    | -0.20      | SSP RC<br>CLASS HE-IV  |                                  |
| C0-24          | CB-21    | CB-20 | 799.09              | 799.03    | 14X23         | 32                     | 0.20       | SSP RC<br>CLASS HE-IV  |                                  |
| C0-26          | CB-28    | CB-26 | 799.56              | 799.65    | 19X30         | 76                     | -0.10      | SSP RC<br>CLASS HE-IV  |                                  |
| C0-25          | CB-26    | CB-28 | 799.32              | 799.56    | 19X30         | 200                    | -0.10      | SSP RC<br>CLASS HE-IV  |                                  |
| C0-19          | CB-17    | CB-18 | 799.33              | 799.32    | 14X23         | 8                      | 0.10       | SSP RC<br>CLASS HE-IV  |                                  |
| C0-20          | CB-18    | CB-19 | 799.32              | 799.04    | 19X30         | 232                    | 0.10       | SSP RC<br>CLASS HE-IV  |                                  |
| C0-22          | CB-19    | CB-20 | 799.04              | 799.03    | 24X38         | 8                      | 0.10       | SSP RC<br>CLASS HE-III |                                  |
| C0-23          | CB-20    | OF-3  | 799.03              | 799.00    | 24X38         | 27                     | 0.10       | SSP RC<br>CLASS HE-III | apron endwall<br>with pipe grate |
| C0-17          | CB-15    | CB-16 | 794.58              | 794.47    | 15            | 36                     | 0.30       | SSP RC<br>CLASS III    |                                  |
| C0-18          | CB-16    | OF-2  | 794.47              | 794.00    | 18            | 159                    | 0.30       | SSP RC<br>CLASS III    | apron endwall<br>with pipe grate |
| C0-13          | CB-8     | CB-9  | 791.84              | 791.81    | 15            | 8                      | 0.40       | SSP RC<br>CLASS III    |                                  |
| C0-15          | CB-9     | CB-10 | 791.81              | 791.71    | 15            | 32                     | 0.30       | SSP RC<br>CLASS III    |                                  |
| C0-4           | CB-4     | CB-5  | 792.17              | 792.12    | 15            | 15                     | 0.30       | SSP RC<br>CLASS III    |                                  |
| C0-5           | CB-5     | CB-6  | 792.12              | 792.02    | 15            | 32                     | 0.30       | SSP RC<br>CLASS III    |                                  |
| C0-1           | CB-1     | CB-2  | 792.72              | 792.82    | 15            | 32                     | -0.30      | SSP RC<br>CLASS III    |                                  |
| C0-2           | CB-1     | CB-3  | 792.72              | 792.05    | 24            | 394                    | 0.20       | SSP RC<br>CLASS III    |                                  |
| C0-3           | CB-3     | CB-6  | 792.05              | 792.02    | 24            | 15                     | 0.20       | SSP RC<br>CLASS III    |                                  |
| C0-6           | CB-6     | CB-7  | 792.02              | 791.72    | 24            | 179                    | 0.20       | SSP RC<br>CLASS III    |                                  |
| C0-14          | CB-7     | CB-10 | 791.72              | 791.71    | 24            | 8                      | 0.10       | SSP RC<br>CLASS III    |                                  |
| C0-16          | CB-10    | OF-1  | 791.71              | 791.50    | 24X38         | 174                    | 0.10       | SSP RC<br>CLASS HE-III | apron endwall<br>with pipe grate |
|                |          |       |                     |           |               |                        |            |                        |                                  |
|                |          |       |                     |           |               |                        |            |                        |                                  |
|                |          |       |                     |           |               |                        |            |                        |                                  |

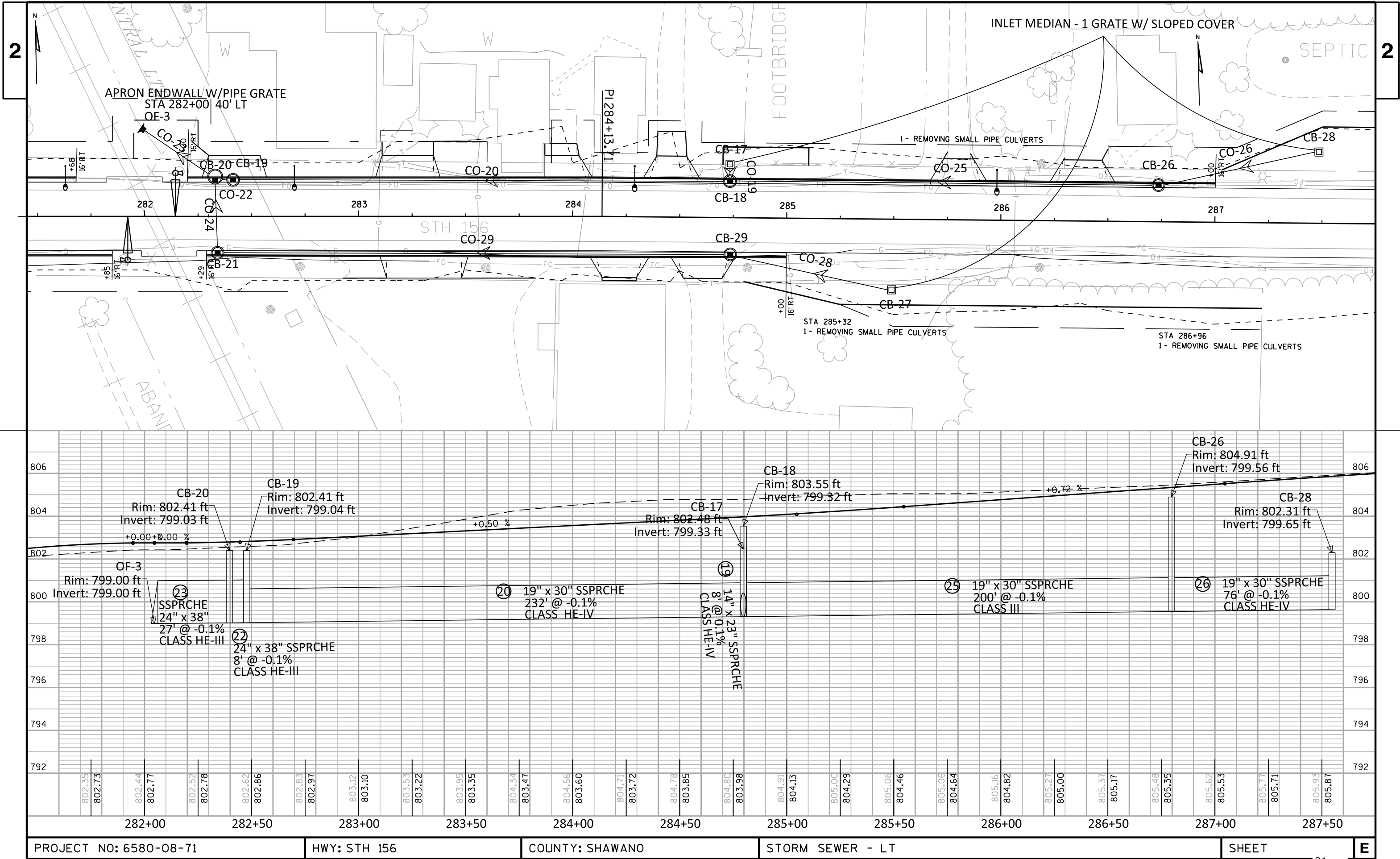
\* GRATE ELEVATION IS NORMAL CURB FLOWLINE ELEVATION OR  
TOP OF PAVEMENT FOR MANHOLE COVERS  
\*\* DEPTH IS FROM GRATE ELEVATION TO INVERT ELEVATION  
\*\*\* OFFSET DISTANCE IS TO THE FLOWLINE  
\*\*\*\* LENGTH INCLUDES APRON ENDWALLS

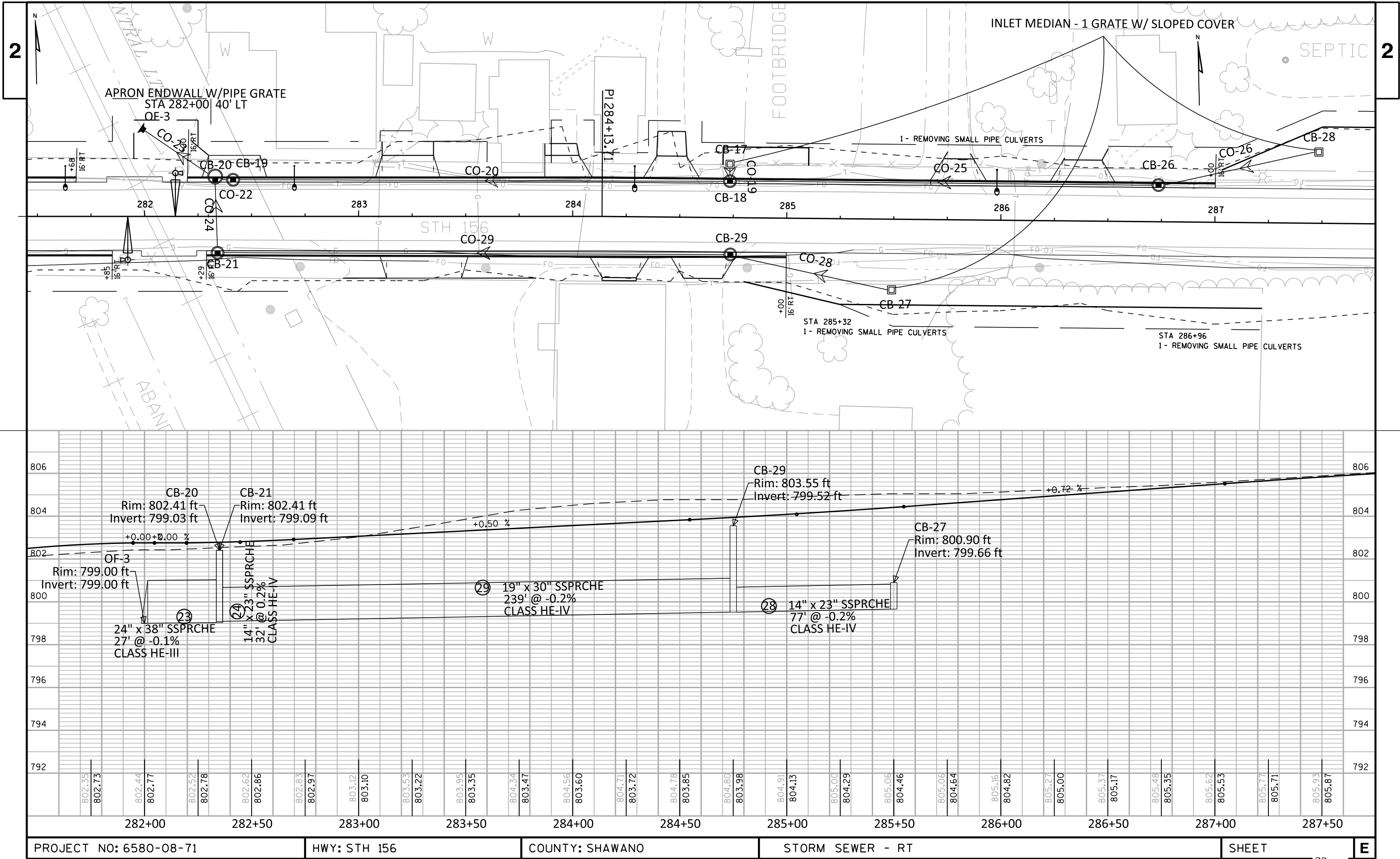




|                        |  |  |              |  |  |                 |  |  |             |  |  |       |  |  |   |  |
|------------------------|--|--|--------------|--|--|-----------------|--|--|-------------|--|--|-------|--|--|---|--|
| PROJECT NO: 6580-08-71 |  |  | HWY: STH 156 |  |  | COUNTY: SHAWANO |  |  | STORM SEWER |  |  | SHEET |  |  | E |  |
|------------------------|--|--|--------------|--|--|-----------------|--|--|-------------|--|--|-------|--|--|---|--|







BEGIN CONSTRUCTION

STA 254+25

BEGIN PROJECT 6580-08-71  
STA. 255+25 C/L STH 156

254

255

256

257

258

259

260

STH 156

ROBLEY RD

BLEACHERS

BLEACHERS

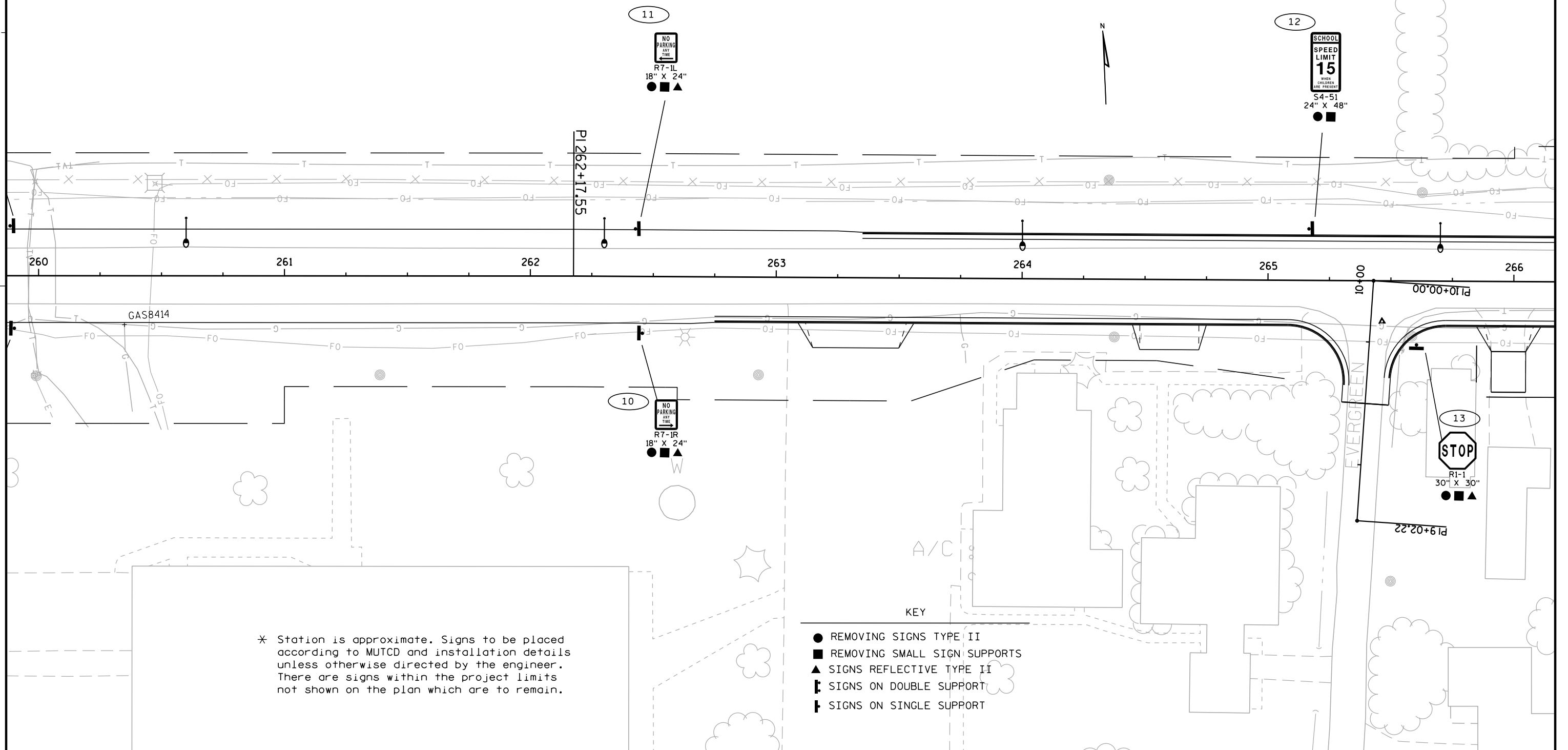
\* Station is approximate. Signs to be placed according to MUTCD and installation details unless otherwise directed by the engineer. There are signs within the project limits not shown on the plan which are to remain.

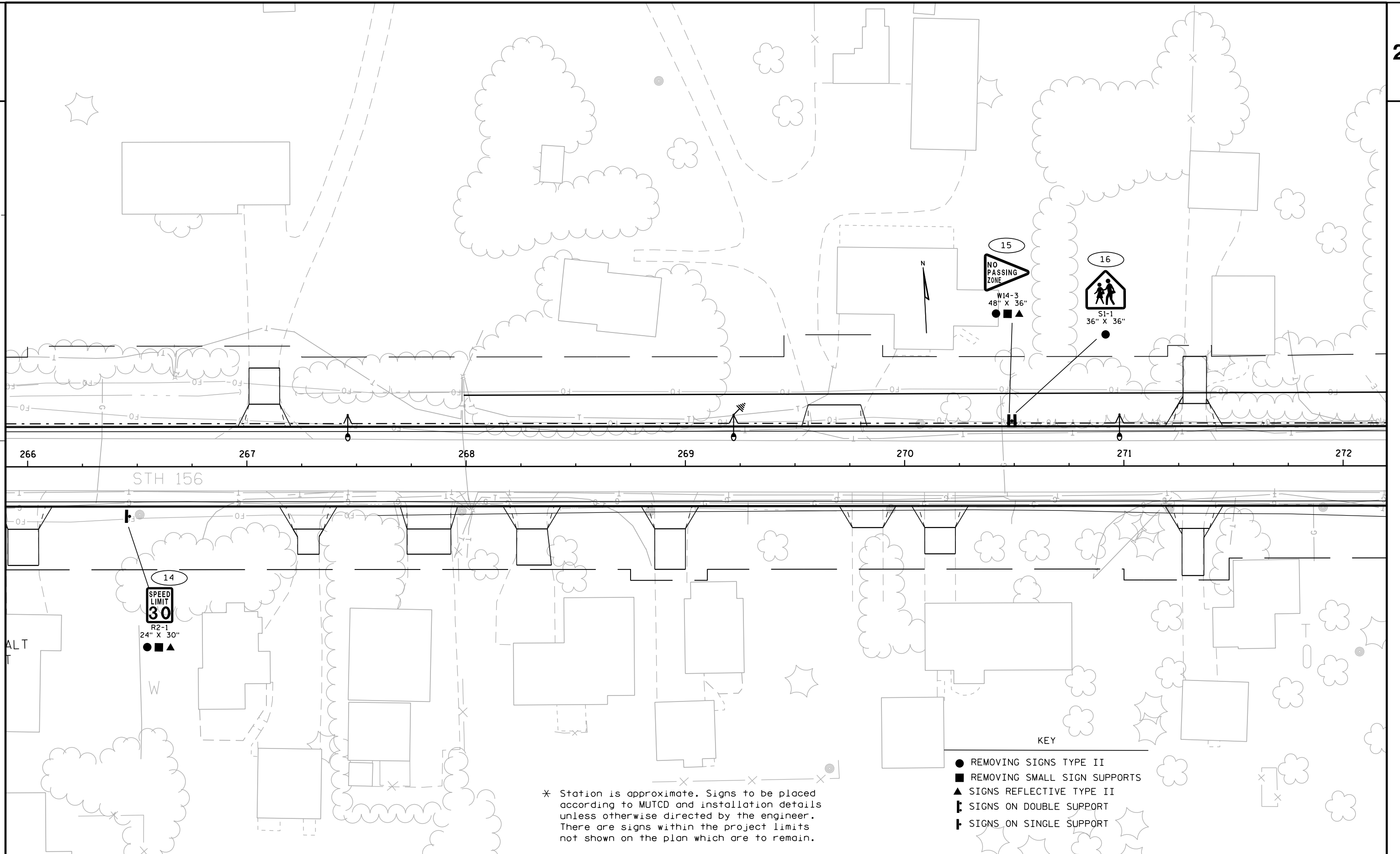
S1-1  
36" X 36"

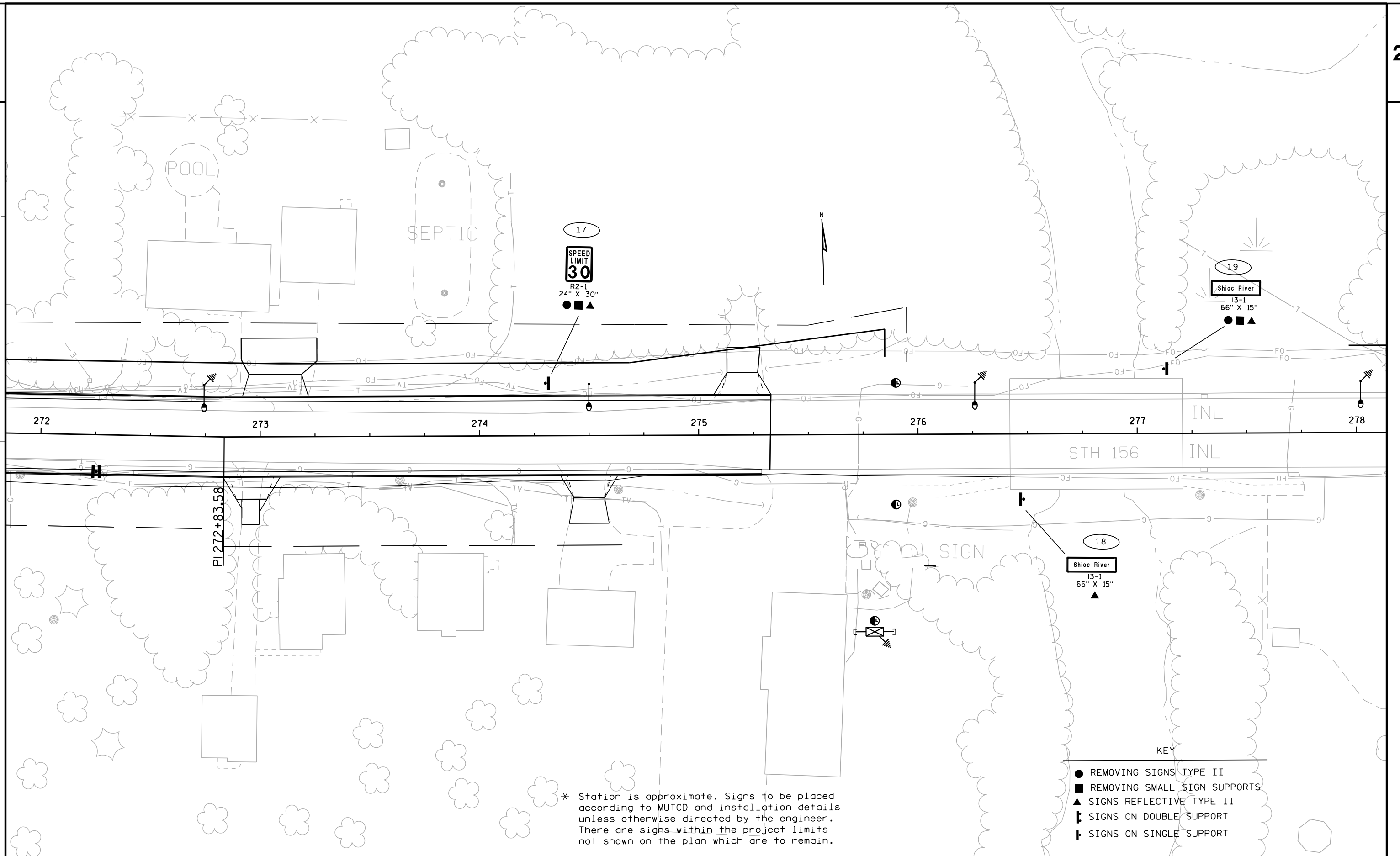
STA 252+55 RT

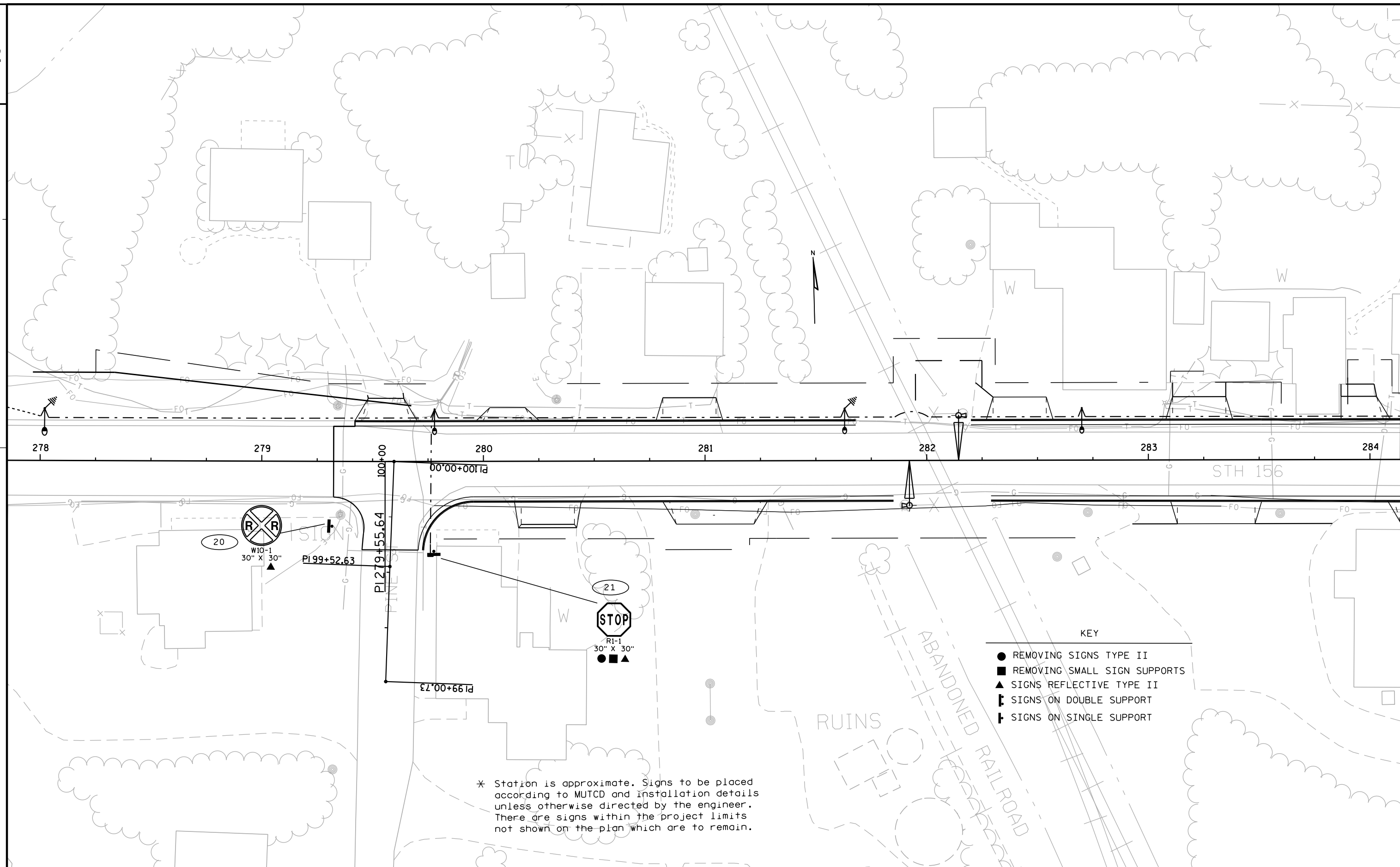
S4-51  
24" X 48"R7-1D  
18" X 24"R7-1D  
18" X 24"

- KEY
- REMOVING SIGNS TYPE II
  - REMOVING SMALL SIGN SUPPORTS
  - ▲ SIGNS REFLECTIVE TYPE II
  - ⌋ SIGNS ON DOUBLE SUPPORT
  - ⌋ SIGNS ON SINGLE SUPPORT









\* Station is approximate. Signs to be placed according to MUTCD and installation details unless otherwise directed by the engineer. There are signs within the project limits not shown on the plan which are to remain.

PROJECT NO: 6580-08-71

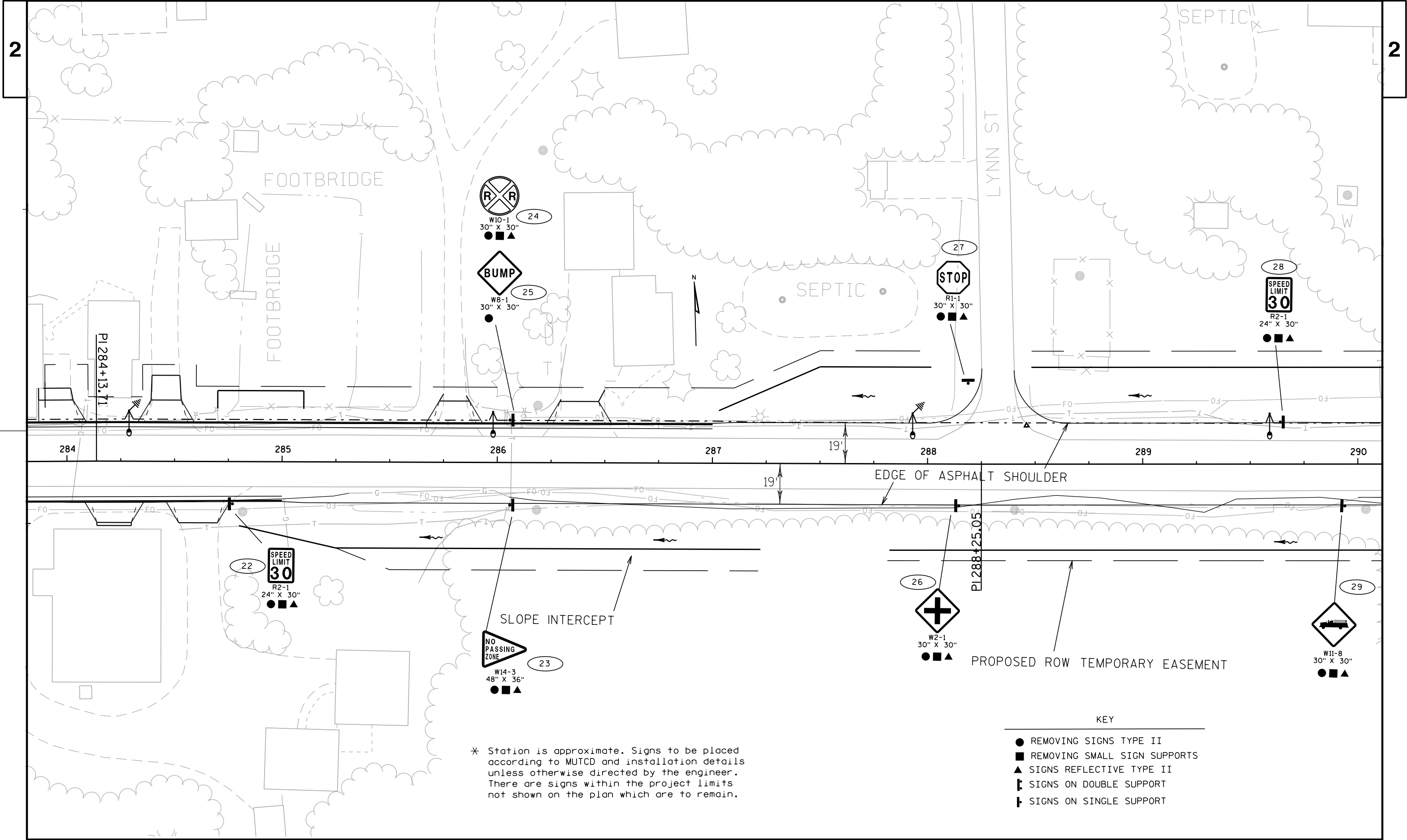
HWY: STH 156

COUNTY: SHAWANO

PERMANENT SIGNING

SHEET

E

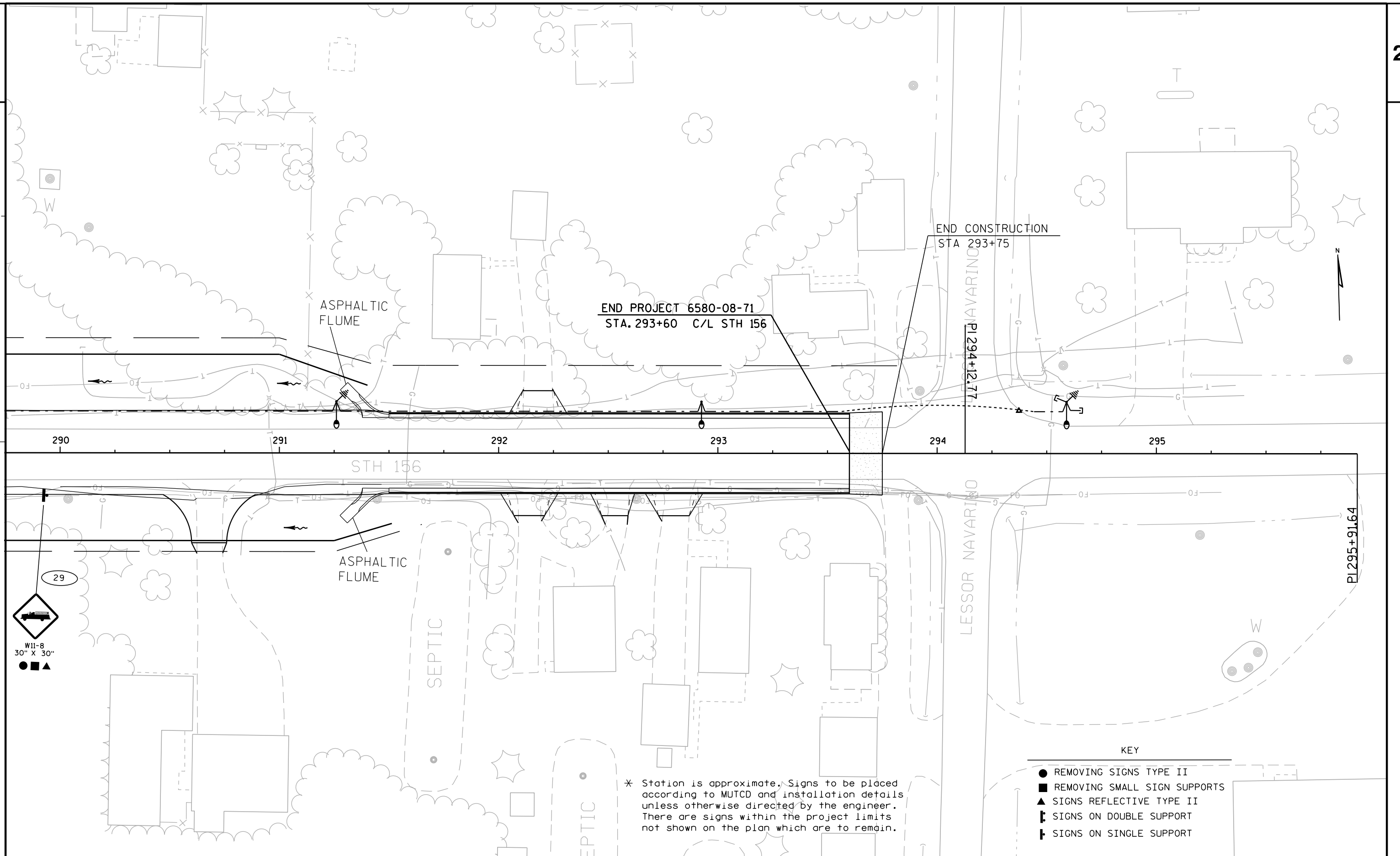


\* Station is approximate. Signs to be placed according to MUTCD and installation details unless otherwise directed by the engineer. There are signs within the project limits not shown on the plan which are to remain.

- KEY
- REMOVING SIGNS TYPE II
  - REMOVING SMALL SIGN SUPPORTS
  - ▲ SIGNS REFLECTIVE TYPE II
  - ⌋ SIGNS ON DOUBLE SUPPORT
  - ⌋ SIGNS ON SINGLE SUPPORT

2

2



PROJECT NO: 6580-08-71

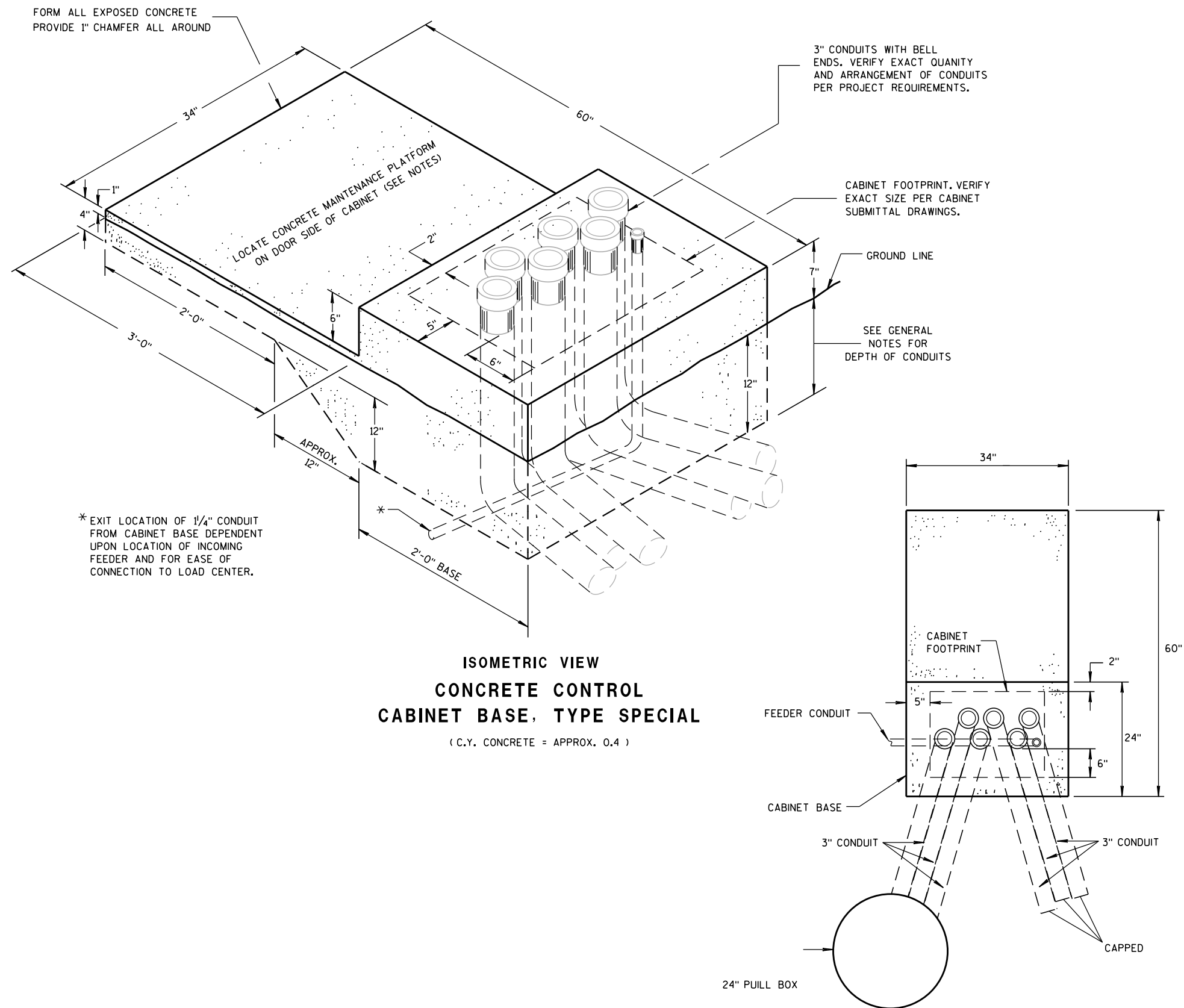
HWY: STH 156

COUNTY: SHAWANO

PERMANENT SIGNING

SHEET

E



## GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

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

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

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.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

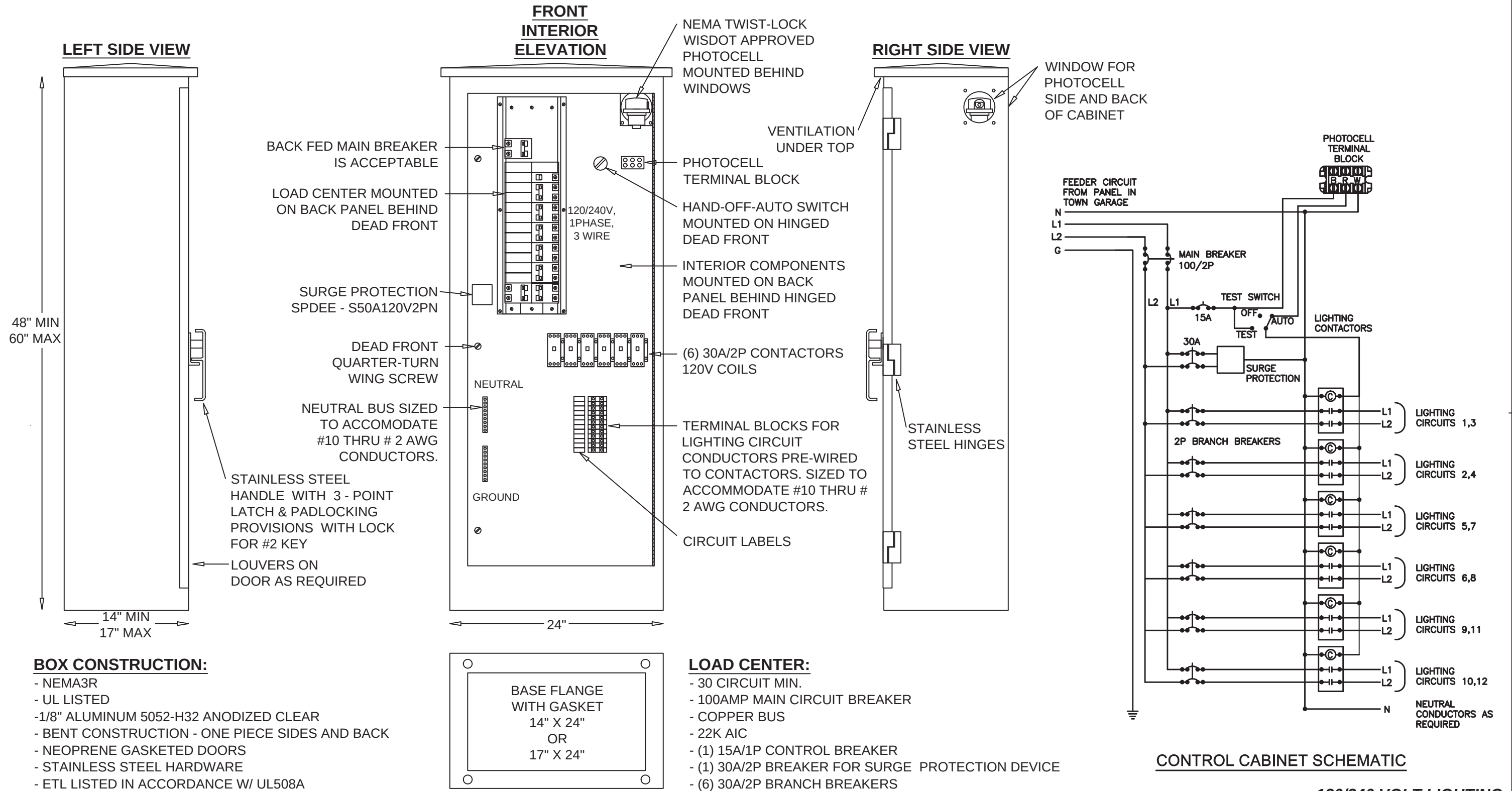
PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

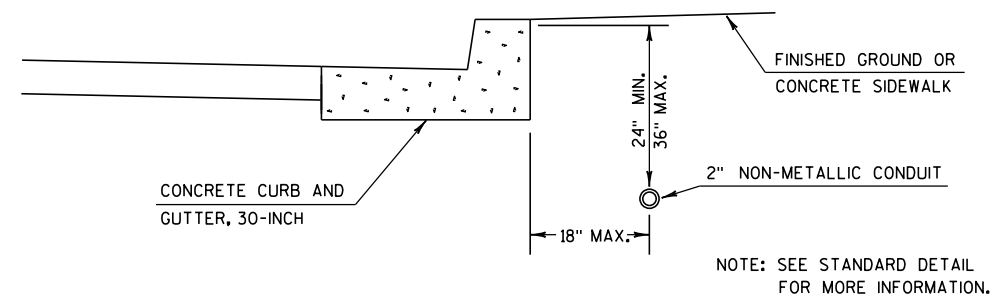
ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

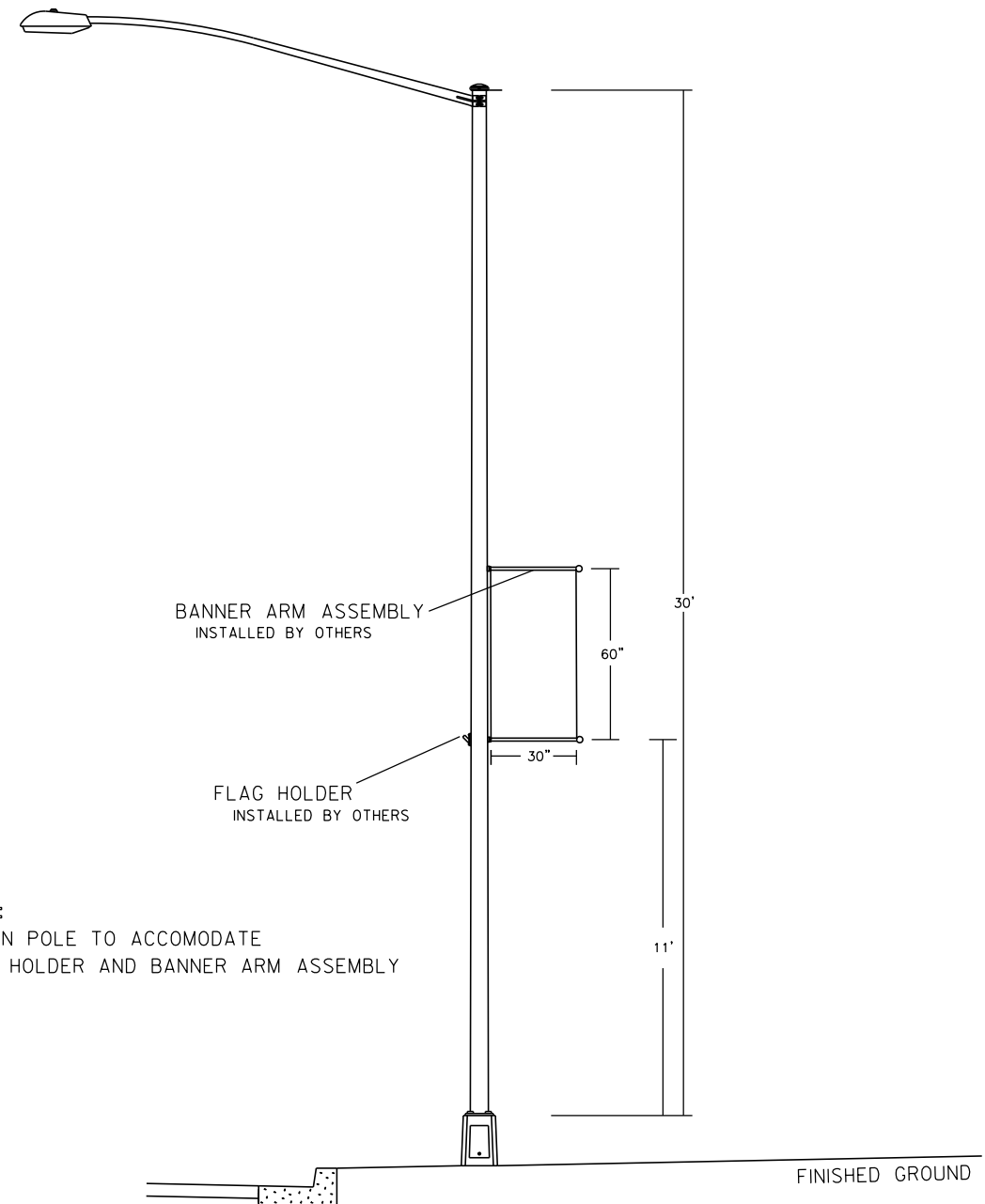
CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.



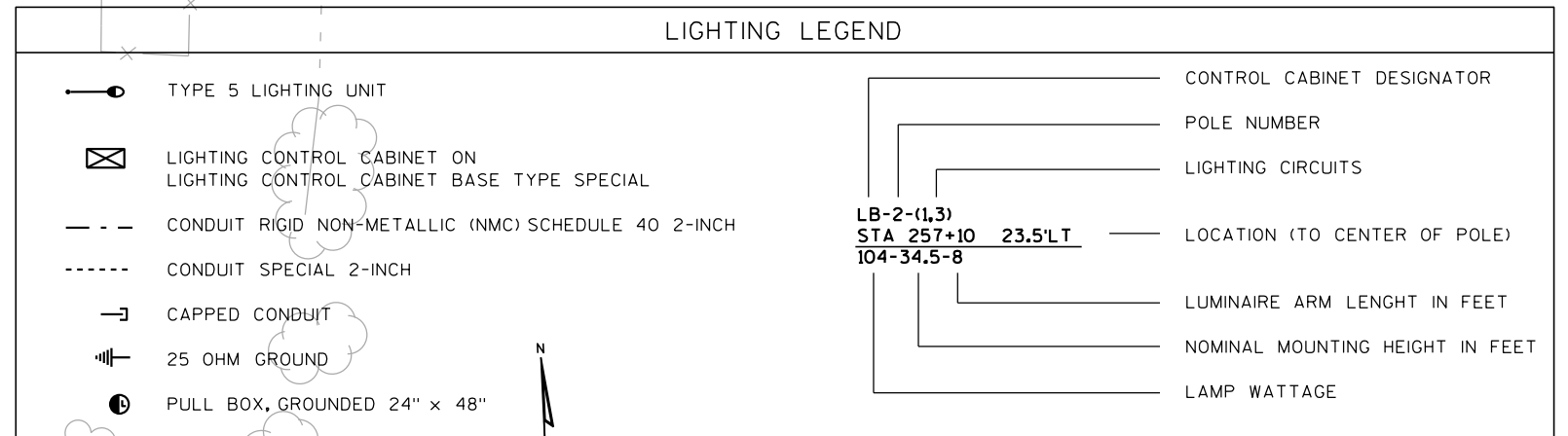


**CONDUIT LOCATION DETAIL**



**ACCESSORY DETAIL FOR LIGHT POLE**

POLES, TYPE 5 ALUMINUM



BEGIN CONSTRUCTION  
STA 254+25

BEGIN PROJECT 6580-08-71  
STA. 255+25 C/L STH 156

LB-1-(1,3)  
STA 255+30 23.5'LT  
104-34.5-8

LB-2-(1,3)  
STA 257+10 23.5'LT  
104-34.5-8

LB-3-(1,3)  
STA 258+90 23.5'LT  
104-34.5-8

STH 156

ROBLEY RD

W SIGN

BLEACHERS

BLEACHERS

PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

LIGHTING PLAN

SHEET

E

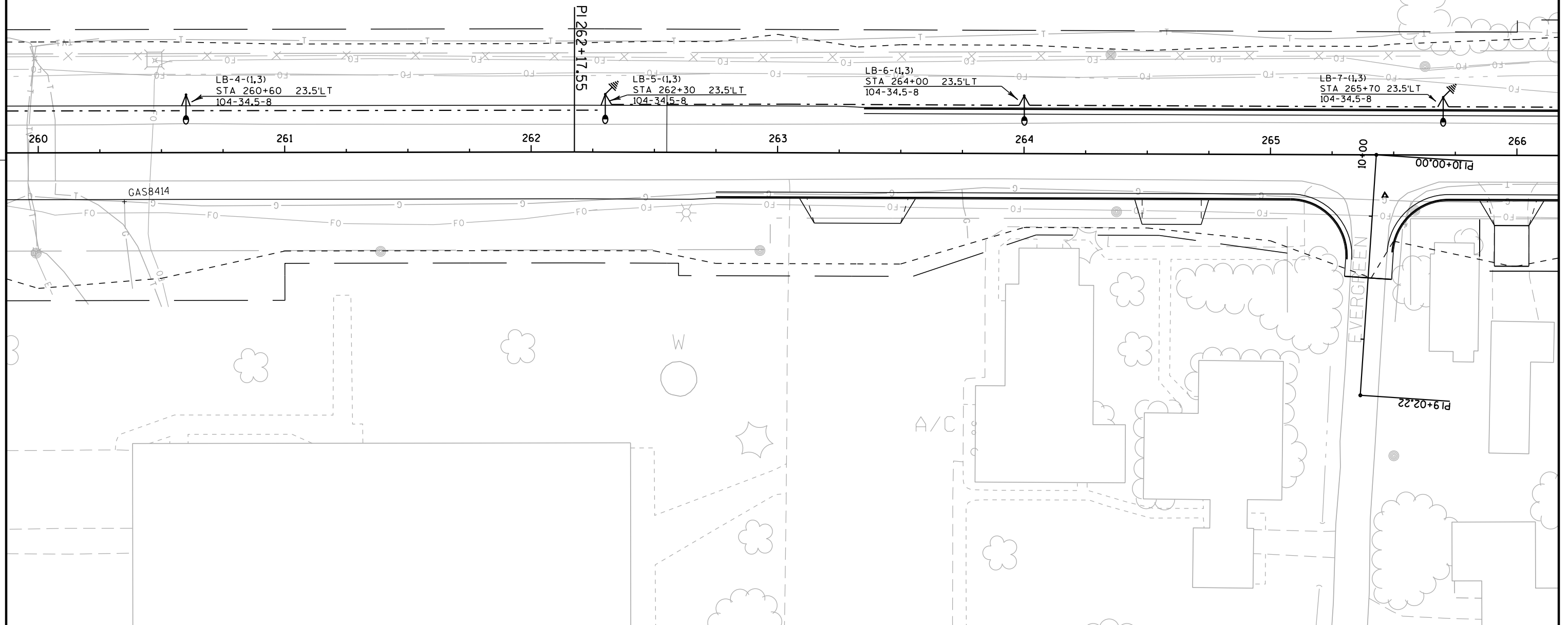
## LIGHTING LEGEND

- TYPE 5 LIGHTING UNIT
- LIGHTING CONTROL CABINET ON  
LIGHTING CONTROL CABINET BASE TYPE SPECIAL
- CONDUIT RIGID NON-METALLIC (NMC) SCHEDULE 40 2-INCH
- CONDUIT SPECIAL 2-INCH
- CAPPED CONDUIT
- 25 OHM GROUND
- PULL BOX, GROUNDED 24" x 48"

- CONTROL CABINET DESIGNATOR
- POLE NUMBER
- LIGHTING CIRCUITS
- LOCATION (TO CENTER OF POLE)
- LUMINAIRE ARM LENGTH IN FEET
- NOMINAL MOUNTING HEIGHT IN FEET
- LAMP WATTAGE

LB-2-(1,3)  
STA 257+10 23.5'LT  
104-34.5-8

N



PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

LIGHTING PLAN

SHEET

E

## LIGHTING LEGEND

- |                                                                                   |                                                                        |                                                                                     |                                 |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------|
|  | TYPE 5 LIGHTING UNIT                                                   |  | CONTROL CABINET DESIGNATOR      |
|  | LIGHTING CONTROL CABINET ON LIGHTING CONTROL CABINET BASE TYPE SPECIAL |  | POLE NUMBER                     |
|  | CONDUIT RIGID NON-METALLIC (NMC) SCHEDULE 40 2-INCH                    |  | LIGHTING CIRCUITS               |
|  | CONDUIT SPECIAL 2-INCH                                                 |  | LOCATION (TO CENTER OF POLE)    |
|  | CAPPED CONDUIT                                                         |  | LUMINAIRE ARM LENGTH IN FEET    |
|  | 25 OHM GROUND                                                          |  | NOMINAL MOUNTING HEIGHT IN FEET |
|  | PULL BOX, GROUNDED 24" x 48"                                           |  | LAMP WATTAGE                    |

LB-2-(1,3)  
STA 257+10 23.5'LT  
104-34.5-8

CONTROL CABINET DESIGNATOR

POLE NUMBER

LIGHTING CIRCUITS

LOCATION (TO CENTER OF POLE)

LUMINAIRE ARM LENGTH IN FEET

NOMINAL MOUNTING HEIGHT IN FEET

LAMP WATTAGE

STA 267+08, 45'LT  
CONSTRUCT PE  
1- REMOVING SMALL PIPE CULVERTS

STA 271+32, 50'LT  
CONSTRUCT PE  
1- REMOVING SMALL PIPE CULVERTS

BAD HMA  
STA 269+68 LT  
CONSTRUCT PE  
1- REMOVING SMALL PIPE CULVERTS

LB-10-(1,3)  
STA 270+98 23.5'LT  
104-34.5-8

CONCRETE

LB-9-(1,3)  
STA 269+22 23.5'LT  
104-34.5-8

LB-8-(1,3)  
STA 267+46 23.5'LT  
104-34.5-8

266

267

268

269

270

271

272

STH 156

BAD  
STA 265+98, 45'RT  
CONSTRUCT PE

STA 267+28, 40'RT  
CONSTRUCT PE

STA 267+83, 40'RT  
CONSTRUCT PE  
1- REMOVING SMALL  
PIPE CULVERTS

STA 268+30, 45'RT  
CONSTRUCT PE  
1- REMOVING SMALL  
PIPE CULVERTS

STA 268+93, 47'RT  
CONSTRUCT PE  
1- REMOVING SMALL  
PIPE CULVERTS

STA 269+83 RT  
CONSTRUCT PE  
1- REMOVING SMALL  
PIPE CULVERTS

STA 270+16, 40'RT  
CONSTRUCT PE  
1- REMOVING SMALL  
PIPE CULVERTS

STA 271+32, 50'RT  
CONSTRUCT PE  
1- REMOVING SMALL PIPE CULVERTS

2

2

## LIGHTING LEGEND

TYPE 5 LIGHTING UNIT

LIGHTING CONTROL CABINET ON  
LIGHTING CONTROL CABINET BASE TYPE SPECIAL

CONDUIT RIGID NON-METALLIC (NMC) SCHEDULE 40 2-INCH



CONDUIT SPECIAL 2-INCH



CAPPED CONDUIT



25 OHM GROUND



PULL BOX, GROUNDED 24" x 48"

CONTROL CABINET DESIGNATOR

POLE NUMBER

LIGHTING CIRCUITS

LOCATION (TO CENTER OF POLE)

LUMINAIRE ARM LENGTH IN FEET

NOMINAL MOUNTING HEIGHT IN FEET

LAMP WATTAGE

LB-2-(1,3)  
STA 257+10 23.5'LT  
104-34.5-8LB-12-(1,3)  
STA 274+50 23.5'LT  
104-34.5-8LB-13-(2,4)  
STA 276+26 23.5'LT  
104-34.5-8LB-14-(2,4)  
STA 278+02 23.5'LT  
104-34.5-8LB-11-(1,3)  
STA 272+74 23.5'LT  
104-34.5-8

272

273

274

275

276

277

278

STH 156

INL

INL

PI 272+83.58

CONDUIT  
SPECIAL 2-INCHLPB-1  
STA 275+90 23.5'LTLPB-2  
STA 275+90 32'RTLPB-3  
STA 275+80 85'RTSTA 275+80 90'RT  
LIGHTING CONTROL CABINET

PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

LIGHTING PLAN

SHEET

E

FILE NAME : N:\pds\project\_id\6580-08-00\_STH\_156\_Robley-Lessor Navar.ino\cadd\023504-1p.dgn

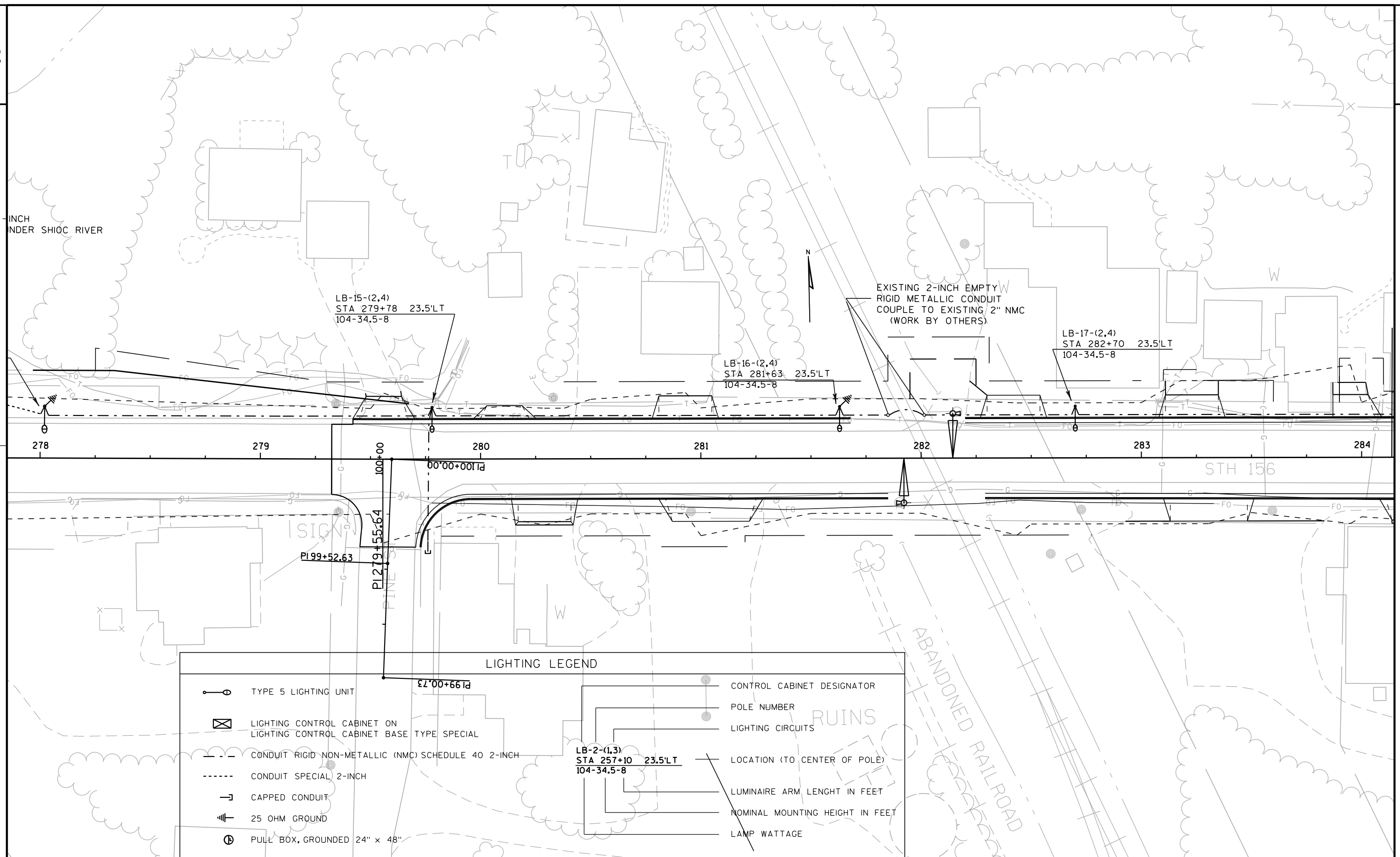
PLOT DATE : 13-NOV-2013 17:45

PLOT BY : dotgvb

PLOT NAME :

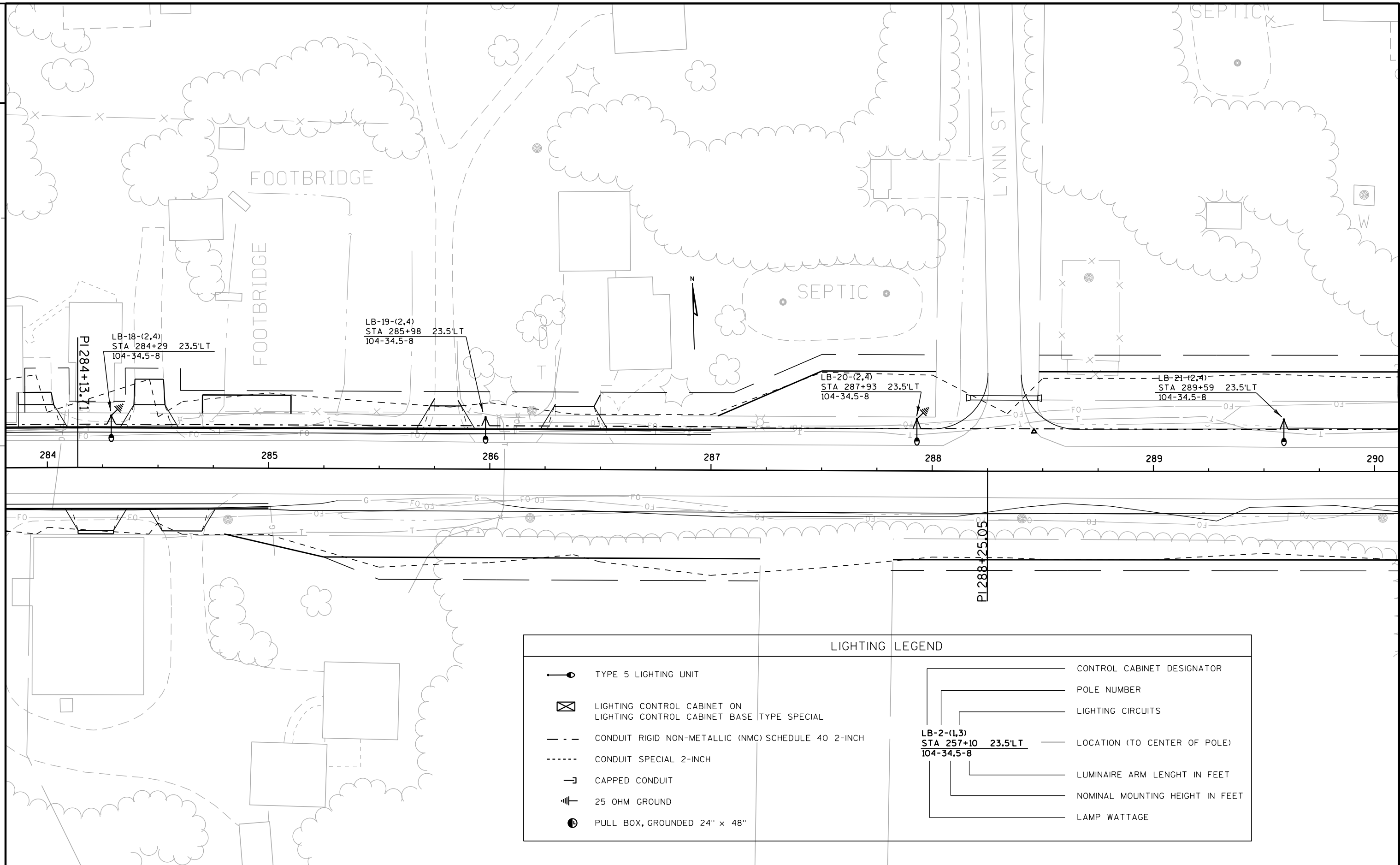
PLOT SCALE : 40:1

WISDOT/CADD SHEET 42



2

2



2

2

## LIGHTING LEGEND

- TYPE 5 LIGHTING UNIT
- ⊠ LIGHTING CONTROL CABINET ON LIGHTING CONTROL CABINET BASE TYPE SPECIAL
- - - CONDUIT RIGID NON-METALLIC (NMC) SCHEDULE 40 2-INCH
- ..... CONDUIT SPECIAL 2-INCH
- └┐ CAPPED CONDUIT
- ⏏ 25 OHM GROUND
- Ⓢ PULL BOX, GROUNDED 24" x 48"

- LB-2-(1,3) STA 257+10 23.5'LT 104-34.5-8
- CONTROL CABINET DESIGNATOR
- POLE NUMBER
- LIGHTING CIRCUITS
- LOCATION (TO CENTER OF POLE)
- LUMINAIRE ARM LENGTH IN FEET
- NOMINAL MOUNTING HEIGHT IN FEET
- LAMP WATTAGE

END PROJECT 6580-08-71  
STA. 293+60 C/L STH 156

END CONSTRUCTION  
STA 293+75

ASPHALTIC  
STA 291+26 23.5'LT  
104-34.5-8

LB-23-(2,4)  
STA 292+92.5 23.5'LT  
104-34.5-8

LB-24-(2,4)  
STA 294+59 23.5'LT  
104-34.5-8

CONDUIT SPECIAL 2-INCH  
DIRECTIONAL BORE UNDER  
DRIVEWAY & LESSOR NAVARINO RD

290 291 292 293 294 295

STH 156

ASPHALTIC  
FLUME

SEPTIC

SEPTIC

LESSOR NAVARINO

PI 295+91.64

PROJECT NO: 6580-08-71

HWY: STH 156

COUNTY: SHAWANO

LIGHTING PLAN

SHEET

E



W20-2  
(48"x48")

EAST

M3-2  
(30"x15")

WEST

M3-4  
(30"x15")

DETOUR

M4-8  
(30"x15")

156

M01-6  
(36"x36")

↑

M06-1  
(30"x30")

↙

M05-1L  
(30"x30")

↘

M05-1R  
(30"x30")

END

M04-6  
(24"x12")



W20-2B  
(48"x48")



W20-2D  
(48"x48")



W20-3A  
(48"x48")

ROAD  
CLOSED  
AHEAD

# LEGEND

POST MOUNTED SIGN

SIGN ON 2 POSTS



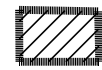
COVER SIGN



M06-1L  
(30"x30")



M06-1R  
(30"x30")



PROJECT  
LIMITS

AS DIRECTED BY ENGINEER



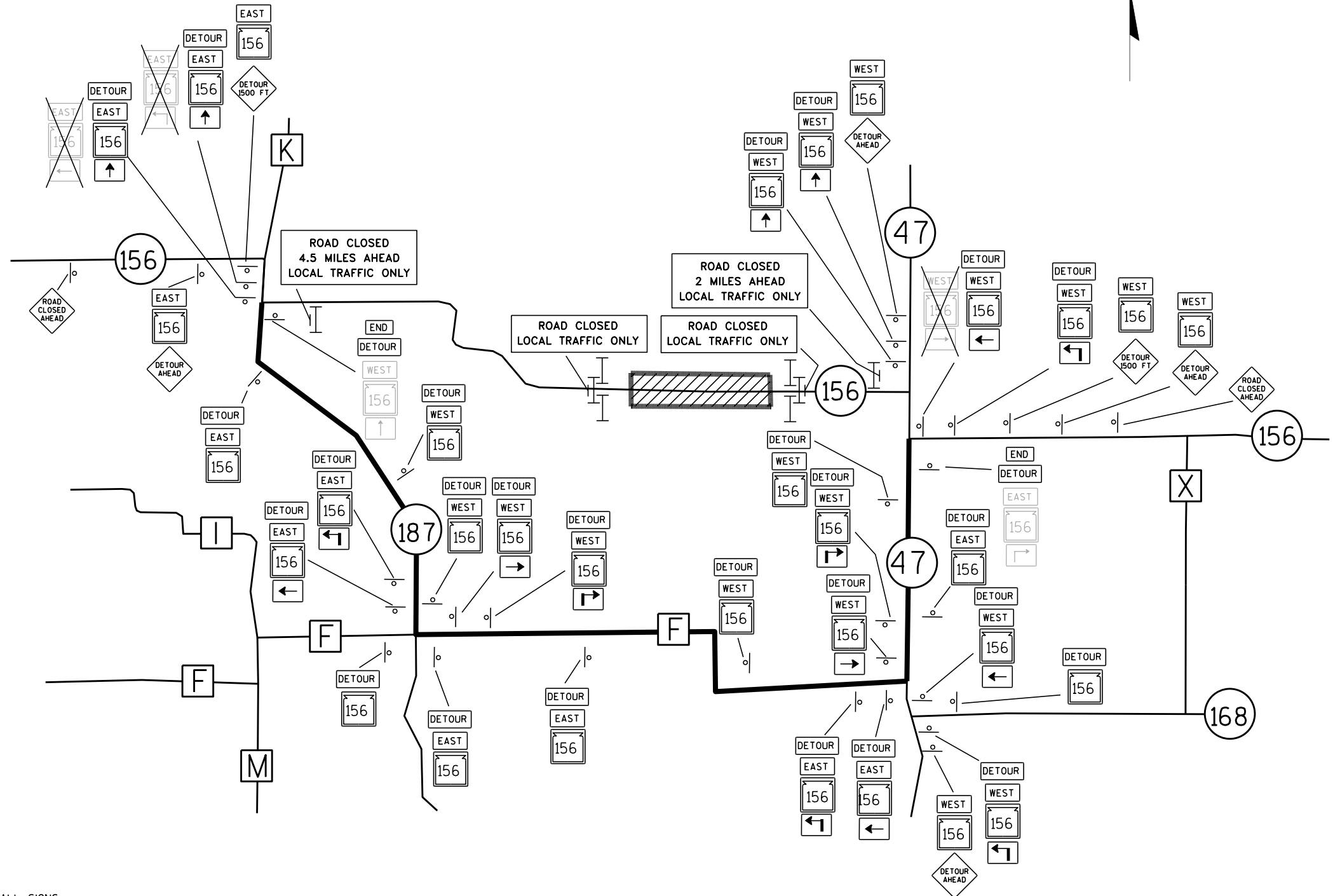
W14-3  
48" X 36"

| KEY |                              |
|-----|------------------------------|
|     | PROPOSED SIGN                |
|     | TYPE III BARRICADE           |
|     | TYPE III BARRICADE WITH SIGN |
|     | WORK AREA                    |

## NOTES

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

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



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| DATE 02DEC13 |            | E S T I M A T E O F Q U A N T I T I E S                                                    |      |            |            |
|--------------|------------|--------------------------------------------------------------------------------------------|------|------------|------------|
| LINE         |            |                                                                                            |      | 6580-08-71 |            |
| NUMBER       | ITEM       | ITEM DESCRIPTION                                                                           | UNIT | TOTAL      | QUANTITY   |
| 0010         | 201.0105   | CLEARING                                                                                   | STA  | 5.000      | 5.000      |
| 0020         | 201.0205   | GRUBBING                                                                                   | STA  | 5.000      | 5.000      |
| 0030         | 203.0100   | REMOVING SMALL PIPE CULVERTS                                                               | EACH | 25.000     | 25.000     |
| 0040         | 204.0120   | REMOVING ASPHALTIC SURFACE MILLING                                                         | SY   | 340.000    | 340.000    |
| 0050         | 204.0150   | REMOVING CURB & GUTTER                                                                     | LF   | 50.000     | 50.000     |
|              |            |                                                                                            |      |            |            |
| 0060         | 205.0100   | EXCAVATION COMMON                                                                          | CY   | 11,941.000 | 11,941.000 |
| 0070         | 211.0100   | PREPARE FOUNDATION FOR ASPHALTIC PAVING<br>(PROJECT) 01. 6580-08-71                        | LS   | 1.000      | 1.000      |
| 0080         | 211.0500   | PREPARE FOUNDATION FOR BASE AGGREGATE                                                      | STA  | 34.000     | 34.000     |
| 0090         | 213.0100   | FINISHING ROADWAY (PROJECT) 01.<br>6580-08-71                                              | EACH | 1.000      | 1.000      |
| 0100         | 305.0110   | BASE AGGREGATE DENSE 3/4-INCH                                                              | TON  | 420.000    | 420.000    |
|              |            |                                                                                            |      |            |            |
| 0110         | 305.0120   | BASE AGGREGATE DENSE 1 1/4-INCH                                                            | TON  | 13,300.000 | 13,300.000 |
| 0120         | 440.4410.S | INCENTIVE IRI RIDE                                                                         | DOL  | 2,844.000  | 2,844.000  |
| 0130         | 455.0105   | ASPHALTIC MATERIAL PG58-28                                                                 | TON  | 183.000    | 183.000    |
| 0140         | 455.0605   | TACK COAT                                                                                  | GAL  | 323.000    | 323.000    |
| 0150         | 460.1103   | HMA PAVEMENT TYPE E-3                                                                      | TON  | 3,321.000  | 3,321.000  |
|              |            |                                                                                            |      |            |            |
| 0160         | 460.2000   | INCENTIVE DENSITY HMA PAVEMENT                                                             | DOL  | 2,130.000  | 2,130.000  |
| 0170         | 465.0120   | ASPHALTIC SURFACE DRIVEWAYS AND FIELD<br>ENTRANCES                                         | TON  | 190.000    | 190.000    |
| 0180         | 465.0315   | ASPHALTIC FLUMES                                                                           | SY   | 20.000     | 20.000     |
| 0190         | 521.0118   | CULVERT PIPE CORRUGATED STEEL 18-INCH                                                      | LF   | 136.000    | 136.000    |
| 0200         | 521.1018   | APRON ENDWALLS FOR CULVERT PIPE STEEL<br>18-INCH                                           | EACH | 6.000      | 6.000      |
|              |            |                                                                                            |      |            |            |
| 0210         | 522.0124   | CULVERT PIPE REINFORCED CONCRETE CLASS<br>III 24-INCH                                      | LF   | 111.000    | 111.000    |
| 0220         | 522.1018   | APRON ENDWALLS FOR CULVERT PIPE<br>REINFORCED CONCRETE 18-INCH                             | EACH | 1.000      | 1.000      |
| 0230         | 522.1024   | APRON ENDWALLS FOR CULVERT PIPE<br>REINFORCED CONCRETE 24-INCH                             | EACH | 6.000      | 6.000      |
| 0240         | 523.0524   | APRON ENDWALLS FOR CULVERT PIPE<br>REINFORCED CONCRETE HORIZONTAL<br>ELLIPTICAL 24X38-INCH | EACH | 2.000      | 2.000      |
| 0250         | 601.0411   | CONCRETE CURB & GUTTER 30-INCH TYPE D                                                      | LF   | 4,138.000  | 4,138.000  |
|              |            |                                                                                            |      |            |            |
| 0260         | 606.0200   | RIPRAP MEDIUM                                                                              | CY   | 5.000      | 5.000      |
| 0270         | 608.0315   | STORM SEWER PIPE REINFORCED CONCRETE<br>CLASS III 15-INCH                                  | LF   | 155.000    | 155.000    |
| 0280         | 608.0318   | STORM SEWER PIPE REINFORCED CONCRETE<br>CLASS III 18-INCH                                  | LF   | 159.000    | 159.000    |
| 0290         | 608.0324   | STORM SEWER PIPE REINFORCED CONCRETE<br>CLASS III 24-INCH                                  | LF   | 596.000    | 596.000    |
| 0300         | 610.0124   | STORM SEWER PIPE REINFORCED CONCRETE<br>HORIZONTAL ELLIPTICAL CLASS HE-III<br>24X38-INCH   | LF   | 209.000    | 209.000    |
|              |            |                                                                                            |      |            |            |
| 0310         | 610.0414   | STORM SEWER PIPE REINFORCED CONCRETE<br>HORIZONTAL ELLIPTICAL CLASS HE-IV<br>14X23-INCH    | LF   | 117.000    | 117.000    |
| 0320         | 610.0419   | STORM SEWER PIPE REINFORCED CONCRETE<br>HORIZONTAL ELLIPTICAL CLASS HE-IV<br>19X30-INCH    | LF   | 747.000    | 747.000    |
| 0330         | 611.0624   | INLET COVERS TYPE H                                                                        | EACH | 11.000     | 11.000     |
| 0340         | 611.0639   | INLET COVERS TYPE H-S                                                                      | EACH | 4.000      | 4.000      |
| 0350         | 611.0645   | INLET COVERS TYPE MS-A                                                                     | EACH | 3.000      | 3.000      |
|              |            |                                                                                            |      |            |            |
| 0360         | 611.1005   | CATCH BASINS 5-FT DIAMETER                                                                 | EACH | 14.000     | 14.000     |
| 0370         | 611.1006   | CATCH BASINS 6-FT DIAMETER                                                                 | EACH | 1.000      | 1.000      |
| 0380         | 611.1230   | CATCH BASINS 2X3-FT                                                                        | EACH | 3.000      | 3.000      |
| 0390         | 611.3901   | INLETS MEDIAN 1 GRATE                                                                      | EACH | 3.000      | 3.000      |

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| DATE 02DEC13 |            | E S T I M A T E O F Q U A N T I T I E S                                   |      |            |            |
|--------------|------------|---------------------------------------------------------------------------|------|------------|------------|
| LINE         |            |                                                                           |      | 6580-08-71 |            |
| NUMBER       | ITEM       | ITEM DESCRIPTION                                                          | UNIT | TOTAL      | QUANTITY   |
| 0400         | 611.9800.S | PIPE GRATES                                                               | EACH | 3.000      | 3.000      |
| 0410         | 618.0100   | MAINTENANCE AND REPAIR OF HAUL ROADS<br>(PROJECT) 01. 6580-08-71          | EACH | 1.000      | 1.000      |
| 0420         | 619.1000   | MOBILIZATION                                                              | EACH | 1.000      | 1.000      |
| 0430         | 624.0100   | WATER                                                                     | MGAL | 1,100.000  | 1,100.000  |
| 0440         | 625.0100   | TOPSOIL                                                                   | SY   | 14,300.000 | 14,300.000 |
| 0450         | 628.1504   | SILT FENCE                                                                | LF   | 370.000    | 370.000    |
| 0460         | 628.1520   | SILT FENCE MAINTENANCE                                                    | LF   | 370.000    | 370.000    |
| 0470         | 628.1905   | MOBILIZATIONS EROSION CONTROL                                             | EACH | 3.000      | 3.000      |
| 0480         | 628.1910   | MOBILIZATIONS EMERGENCY EROSION CONTROL                                   | EACH | 2.000      | 2.000      |
| 0490         | 628.2006   | EROSION MAT URBAN CLASS I TYPE A                                          | SY   | 10,550.000 | 10,550.000 |
| 0500         | 628.2008   | EROSION MAT URBAN CLASS I TYPE B                                          | SY   | 2,250.000  | 2,250.000  |
| 0510         | 628.7005   | INLET PROTECTION TYPE A                                                   | EACH | 21.000     | 21.000     |
| 0520         | 628.7010   | INLET PROTECTION TYPE B                                                   | EACH | 3.000      | 3.000      |
| 0530         | 628.7015   | INLET PROTECTION TYPE C                                                   | EACH | 18.000     | 18.000     |
| 0540         | 628.7504   | TEMPORARY DITCH CHECKS                                                    | LF   | 200.000    | 200.000    |
| 0550         | 630.0140   | SEEDING MIXTURE NO. 40                                                    | LB   | 255.000    | 255.000    |
| 0560         | 633.5200   | MARKERS CULVERT END                                                       | EACH | 7.000      | 7.000      |
| 0570         | 634.0616   | POSTS WOOD 4X6-INCH X 16-FT                                               | EACH | 23.000     | 23.000     |
| 0580         | 637.2210   | SIGNS TYPE II REFLECTIVE H                                                | SF   | 78.550     | 78.550     |
| 0590         | 637.2230   | SIGNS TYPE II REFLECTIVE F                                                | SF   | 36.750     | 36.750     |
| 0600         | 638.2602   | REMOVING SIGNS TYPE II                                                    | EACH | 25.000     | 25.000     |
| 0610         | 638.3000   | REMOVING SMALL SIGN SUPPORTS                                              | EACH | 22.000     | 22.000     |
| 0620         | 642.5001   | FIELD OFFICE TYPE B                                                       | EACH | 1.000      | 1.000      |
| 0630         | 643.0100   | TRAFFIC CONTROL (PROJECT) 01. 6580-08-71                                  | EACH | 1.000      | 1.000      |
| 0640         | 643.0300   | TRAFFIC CONTROL DRUMS                                                     | DAY  | 200.000    | 200.000    |
| 0650         | 643.0420   | TRAFFIC CONTROL BARRICADES TYPE III                                       | DAY  | 2,400.000  | 2,400.000  |
| 0660         | 643.0715   | TRAFFIC CONTROL WARNING LIGHTS TYPE C                                     | DAY  | 2,550.000  | 2,550.000  |
| 0670         | 643.0900   | TRAFFIC CONTROL SIGNS                                                     | DAY  | 3,375.000  | 3,375.000  |
| 0680         | 643.2000   | TRAFFIC CONTROL DETOUR (PROJECT) 01.<br>6580-08-71                        | EACH | 1.000      | 1.000      |
| 0690         | 643.3000   | TRAFFIC CONTROL DETOUR SIGNS                                              | DAY  | 7,950.000  | 7,950.000  |
| 0700         | 645.0120   | GEOTEXTILE FABRIC TYPE HR                                                 | SY   | 12.000     | 12.000     |
| 0710         | 646.0106   | PAVEMENT MARKING EPOXY 4-INCH                                             | LF   | 14,940.000 | 14,940.000 |
| 0720         | 647.0110   | PAVEMENT MARKING RAILROAD CROSSINGS<br>EPOXY                              | EACH | 2.000      | 2.000      |
| 0730         | 650.4000   | CONSTRUCTION STAKING STORM SEWER                                          | EACH | 24.000     | 24.000     |
| 0740         | 650.4500   | CONSTRUCTION STAKING SUBGRADE                                             | LF   | 3,410.000  | 3,410.000  |
| 0750         | 650.5000   | CONSTRUCTION STAKING BASE                                                 | LF   | 3,410.000  | 3,410.000  |
| 0760         | 650.5500   | CONSTRUCTION STAKING CURB GUTTER AND<br>CURB & GUTTER                     | LF   | 4,138.000  | 4,138.000  |
| 0770         | 650.6000   | CONSTRUCTION STAKING PIPE CULVERTS                                        | EACH | 4.000      | 4.000      |
| 0780         | 650.8500   | CONSTRUCTION STAKING ELECTRICAL<br>INSTALLATIONS (PROJECT) 01. 6580-08-71 | LS   | 1.000      | 1.000      |
| 0790         | 650.9910   | CONSTRUCTION STAKING SUPPLEMENTAL<br>CONTROL (PROJECT) 01. 6580-08-71     | LS   | 1.000      | 1.000      |
| 0800         | 652.0225   | CONDUIT RIGID NONMETALLIC SCHEDULE 40<br>2-INCH                           | LF   | 4,155.000  | 4,155.000  |
| 0810         | 652.0605   | CONDUIT SPECIAL 2-INCH                                                    | LF   | 575.000    | 575.000    |
| 0820         | 653.0145   | PULL BOXES STEEL 24X48-INCH                                               | EACH | 3.000      | 3.000      |
| 0830         | 654.0105   | CONCRETE BASES TYPE 5                                                     | EACH | 24.000     | 24.000     |
| 0840         | 655.0610   | ELECTRICAL WIRE LIGHTING 12 AWG                                           | LF   | 3,120.000  | 3,120.000  |
| 0850         | 655.0625   | ELECTRICAL WIRE LIGHTING 6 AWG                                            | LF   | 15,590.000 | 15,590.000 |

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|              |          |                                         |      |         |            |
|--------------|----------|-----------------------------------------|------|---------|------------|
| DATE 02DEC13 |          | E S T I M A T E O F Q U A N T I T I E S |      |         |            |
| LINE         |          |                                         |      |         | 6580-08-71 |
| NUMBER       | ITEM     | ITEM DESCRIPTION                        | UNIT | TOTAL   | QUANTITY   |
| 0860         | 657.0255 | TRANSFORMER BASES BREAKAWAY 11 1/2-INCH | EACH | 24.000  | 24.000     |
|              |          | BOLT CIRCLE                             |      |         |            |
| 0870         | 657.0322 | POLES TYPE 5-ALUMINUM                   | EACH | 24.000  | 24.000     |
| 0880         | 657.0615 | LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH | EACH | 24.000  | 24.000     |
|              |          | CLAMP 8-FT                              |      |         |            |
| 0890         | 690.0150 | SAWING ASPHALT                          | LF   | 592.000 | 592.000    |
| 0900         | 690.0250 | SAWING CONCRETE                         | LF   | 62.000  | 62.000     |
|              |          |                                         |      |         |            |
| 0910         | SPV.0030 | SPECIAL 01. FERTILIZER FOR LAWN TYPE    | CWT  | 9.000   | 9.000      |
|              |          | TURF                                    |      |         |            |
| 0920         | SPV.0035 | SPECIAL 01. EXCAVATING, HAULING AND     | CY   | 30.000  | 30.000     |
|              |          | TEMPORARY STOCKPILING OF LEAD           |      |         |            |
|              |          | CONTAMINATED SOIL                       |      |         |            |
| 0930         | SPV.0060 | SPECIAL 01. INLET COVER TYPE H-D        | EACH | 3.000   | 3.000      |
| 0940         | SPV.0060 | SPECIAL 02. LIGHTING CONTROL CABINET    | EACH | 1.000   | 1.000      |
|              |          | BASE TYPE SPECIAL                       |      |         |            |
| 0950         | SPV.0060 | SPECIAL 03. LIGHTING CONTROL CABINET    | EACH | 1.000   | 1.000      |
|              |          |                                         |      |         |            |
| 0960         | SPV.0060 | SPECIAL 04. FURNISHED LIGHT POLE        | EACH | 4.000   | 4.000      |
|              |          | ASSEMBLY                                |      |         |            |
| 0970         | SPV.0060 | SPECIAL 05. LED LUMINARIES              | EACH | 24.000  | 24.000     |
| 0980         | SPV.0060 | SPECIAL 06. TEMPORARY WATER PASSAGE     | EACH | 18.000  | 18.000     |
| 0990         | SPV.0120 | SPECIAL 01. WATER FOR SEEDED AREAS      | MGAL | 320.000 | 320.000    |

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| Division         | From / To Station | Location | Common Excavation (1) (item # 205.0100) |                    | Available Material (5) | Unexpanded Fill | Expanded Fill (13) | Mass Ordinate + / - (14) | Waste  | Comment: |
|------------------|-------------------|----------|-----------------------------------------|--------------------|------------------------|-----------------|--------------------|--------------------------|--------|----------|
|                  |                   |          | Cut (2)                                 | EBS Excavation (3) |                        |                 | Factor 1.25        |                          |        |          |
| 1                | 255+00-293+60     | STH 156  | 11,941                                  | 0                  | 11,941                 | 1,099           | 1,374              | 10,567                   | 10,567 |          |
| Grand Total      |                   |          | 11,941                                  | 0                  | 11,941                 | 1,099           | 1,374              | 10,567                   | 0      |          |
| Total Common Exc |                   |          | 11,941                                  |                    |                        |                 |                    |                          |        |          |

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
- 5) Available Material = Cut - Salvaged/Unusuable Pavement Material
- 13) Expanded Fill. Factor = 1.25
- Depending on selections:
- Expanded Fill = (Unexpanded Fill - Rock \* Rock Factor - Reduced Marsh - Reduced EBS) \* Fill Factor

Or

Expanded Fill = (Unexpanded Fill - Rock \* Rock Factor - Reduced EBS) \* Fill Factor

Or

Expanded Fill = (Unexpanded Fill - Rock \* Rock Factor - Reduced Marsh) \* Fill Factor

Or

Expanded Fill = (Unexpanded Fill - Rock \* Rock Factor) \* Fill Factor
- 14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

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CLEARING & GRUBBING

|                 |          | 201.0105 | 201.0205 |         |
|-----------------|----------|----------|----------|---------|
|                 |          | CLEARING | GRUBBING |         |
| STATION         | LOCATION | STATIONS | STATIONS | REMARKS |
| 268+00 - 269+00 | LT       | 1        | 1        |         |
| 286+00 - 290+00 | RT       | 4        | 4        |         |
|                 | TOTALS   | 5        | 5        |         |

REMOVING CURB & GUTTER

|                   |          | 204.0150 |         |
|-------------------|----------|----------|---------|
| STATION - STATION | LOCATION | LF       | REMARKS |
| UNDISTRIBUTED     | MAINLINE | 50       |         |
|                   | TOTAL    | 50       |         |

PREPARE FOUNDATION FOR ASPHALTIC PAVING (6580-08-70)

|                   |          | 211.0100 |         |
|-------------------|----------|----------|---------|
| STATION - STATION | LOCATION | LS       | REMARKS |
| 255+75 - 293+60   | PROJECT  | 1        |         |
|                   | TOTAL    | 1        |         |

REMOVING SMALL PIPE CULVERTS

|         |          | 203.0100 |           |
|---------|----------|----------|-----------|
| STATION | LOCATION | EACH     | REMARKS   |
| 255+54  | RT       | 1        | 15 " CMCP |
| 256+17  | LT       | 1        | 15 " CMCP |
| 257+02  | MAINLINE | 1        | 24" CMCP  |
| 267+08  | LT       | 1        | 15 " CMCP |
| 267+83  | RT       | 1        | 15 " CMCP |
| 268+30  | RT       | 1        | 15 " CMCP |
| 268+93  | RT       | 1        | 15 " CMCP |
| 269+68  | LT       | 1        | 15 " CMCP |
| 269+83  | RT       | 1        | 15 " CMCP |
| 270+16  | RT       | 1        | 15 " CMCP |
| 271+32  | LT       | 1        | 15 " CMCP |
| 271+32  | RT       | 1        | 15 " CMCP |
| 272+96  | RT       | 1        | 15 " CMCP |
| 273+15  | LT       | 1        | 15 " CMCP |
| 274+50  | RT       | 1        | 15 " CMCP |
| 275+20  | LT       | 1        | 15 " CMCP |
| 285+32  | MAINLINE | 1        | 24" CMCP  |
| 285+82  | LT       | 1        | 15 " CMCP |
| 286+96  | MAINLINE | 1        | 24:CMCP   |
| 289+24  | MAINLINE | 1        | 24" CMCP  |
| 290+68  | RT       | 1        | 15 " CMCP |
| 292+14  | RT       | 1        | 15 " CMCP |
| 292+18  | LT       | 1        | 15 " CMCP |
| 292+52  | RT       | 1        | 15 " CMCP |
| 292+80  | RT       | 1        | 15 " CMCP |
|         | TOTAL    | 25       |           |

REMOVING ASPHALTIC SURFACE MILLING

|                   |          | 204.0120 |         |
|-------------------|----------|----------|---------|
| STATION - STATION | LOCATION | SY       | REMARKS |
| 254+25 - 255+25   | MAINLINE | 300      |         |
| 293+60 - 293+75   | MAINLINE | 40       |         |
|                   | TOTAL    | 340      |         |

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| PREPARE FOUNDATION FOR BASE AGGREGATE |          |                     |                        |
|---------------------------------------|----------|---------------------|------------------------|
| STATION - STATION                     | LOCATION | 211.0500<br>STATION | REMARKS                |
| 255+25 - 275+25                       | MAINLINE | 20                  | INCLUDES INTERSECTIONS |
| 279+50 - 293+60                       | MAINLINE | 14                  | INCLUDES INTERSECTIONS |
| TOTAL                                 |          | 34                  |                        |

| HMA PAVEMENT TYPE & ASPHALTIC MATERIAL |          |                                                |                                                     |         |
|----------------------------------------|----------|------------------------------------------------|-----------------------------------------------------|---------|
| STATION - STATION                      | LOCATION | 460.1103<br>HMA<br>PAVEMENT<br>TYPE E-3<br>TON | 455.0105<br>ASPHALTIC<br>MATERIAL<br>PG58-28<br>TON | REMARKS |
| 255+75 - 262+75                        | MAINLINE | 765                                            | 42.0                                                |         |
| 262+75 - 263+32.5                      | MAINLINE | 60                                             | 3.0                                                 |         |
| 263+32.5 - 275+25                      | MAINLINE | 1100                                           | 60.0                                                |         |
| 279+80 - 285+50                        | MAINLINE | 525                                            | 29.0                                                |         |
| 285+50 - 287+00                        | MAINLINE | 150                                            | 8.0                                                 |         |
| 287+00 - 291+50                        | MAINLINE | 490                                            | 27.0                                                |         |
| 291+50 - 293+60                        | MAINLINE | 195                                            | 11.0                                                |         |
| EVERGREEN RD                           | RT       | 12                                             | 1.0                                                 |         |
| PINE LN                                | RT       | 12                                             | 1.0                                                 |         |
| LYNN RD                                | LT       | 12                                             | 1.0                                                 |         |
| TOTALS                                 |          | 3321                                           | 183.0                                               |         |

| TACK COAT         |          |                     |         |
|-------------------|----------|---------------------|---------|
| STATION - STATION | LOCATION | 455.0605<br>GALLONS | REMARKS |
| 255+75 - 262+75   | MAINLINE | 75                  |         |
| 262+75 - 263+32.5 | MAINLINE | 5                   |         |
| 263+32.5 - 275+25 | MAINLINE | 105                 |         |
| 279+80 - 285+50   | MAINLINE | 50                  |         |
| 285+50 - 287+00   | MAINLINE | 15                  |         |
| 287+00 - 291+50   | MAINLINE | 50                  |         |
| 291+50 - 293+60   | MAINLINE | 20                  |         |
| EVERGREEN RD      | RT       | 1                   |         |
| PINE LN           | RT       | 1                   |         |
| LYNN RD           | LT       | 1                   |         |
| TOTAL             |          | 323                 |         |

| ASPHALTIC FLUMES  |          |                |
|-------------------|----------|----------------|
| STATION - STATION | LOCATION | 204.0150<br>LF |
| 291+50            | 18' RT   | 10             |
| 291+50            | 18' LT   | 10             |
| TOTAL             |          | 20             |

| WATER             |          |                  |         |
|-------------------|----------|------------------|---------|
| STATION - STATION | LOCATION | 624.0100<br>MGAL | REMARKS |
| 255+75 - 262+75   | MAINLINE | 250              |         |
| 262+75 - 263+32.5 | MAINLINE | 150              |         |
| 263+32.5 - 275+25 | MAINLINE | 25               |         |
| 279+80 - 285+50   | MAINLINE | 25               |         |
| 285+50 - 287+00   | MAINLINE | 50               |         |
| 287+00 - 291+50   | MAINLINE | 500              |         |
| 291+50 - 293+60   | MAINLINE | 100              |         |
| TOTAL             |          | 1100             |         |

| BASE AGGREGATE DENSE |          |                             |                               |
|----------------------|----------|-----------------------------|-------------------------------|
| STATION - STATION    | LOCATION | 305.0110<br>3/4-INCH<br>TON | 305.0120<br>1 1/4-INCH<br>TON |
| 255+75 - 262+75      | MAINLINE |                             | 2650                          |
| 262+75 - 263+32.5    | MAINLINE |                             | 225                           |
| 263+32.5 - 275+25    | MAINLINE |                             | 4850                          |
| 279+80 - 285+50      | MAINLINE |                             | 2300                          |
| 285+50 - 287+00      | MAINLINE |                             | 600                           |
| 287+00 - 291+50      | MAINLINE |                             | 1700                          |
| 291+50 - 293+60      | MAINLINE |                             | 850                           |
| EVERGREEN RD         | RT       |                             | 60                            |
| PINE LN              | RT       |                             | 60                            |
| LYNN RD              | LT       |                             | 40                            |
| 256+17               | LT       | 40                          |                               |
| 259+32.5             | RT       | 70                          |                               |
| 265+98               | RT       | 20                          |                               |
| 267+08               | LT       | 25                          |                               |
| 267+83               | RT       | 20                          |                               |
| 268+30               | RT       | 20                          |                               |
| 269+68               | LT       | 10                          |                               |
| 269+83               | RT       | 10                          |                               |
| 273+07               | LT       | 35                          |                               |
| 275+20               | LT       | 20                          |                               |
| 280+11               | LT       | 10                          |                               |
| 280+29               | RT       | 10                          |                               |
| 280+93               | LT       | 10                          |                               |
| 283+30.5             | RT       | 15                          |                               |
| 284+22               | RT       | 10                          |                               |
| 284+46               | LT       | 20                          |                               |
| 284+61               | RT       | 10                          |                               |
| 285+82               | LT       | 5                           |                               |
| 286+38               | LT       | 10                          |                               |
| 290+68               | RT       | 35                          |                               |
| 292+14               | RT       | 5                           |                               |
| 292+18               | LT       | 5                           |                               |
| 292+52               | RT       | 5                           |                               |
| TOTALS               |          | 420                         | 13300                         |

3

3

3

| CROSS DRAINS & SIDE ROAD CULVERT PIPES |          |              |           |                |           |                     |          |            |            |          |             |                |
|----------------------------------------|----------|--------------|-----------|----------------|-----------|---------------------|----------|------------|------------|----------|-------------|----------------|
| STATION                                | LOCATION | 521.0118     | MINIMUM   | 521.1018       | 522.0124  | APRON ENDWALLS      |          |            | 611.9800.S | 606.0200 | 633.5200    | REMARKS        |
|                                        |          | CULVERT PIPE |           | APRON ENDWALLS | CRCP      | FOR CULVERT PIPE RC |          |            | PIPE       | RIPRAP   | MARKERS     |                |
|                                        |          | CORRUGATED   | THICKNESS | FOR CULVERT    | CLASS III | 522.1018            | 522.1024 | 523.0524   | GRATES     | MEDIUM   | CULVERT END |                |
|                                        |          | STEEL        |           | PIPE STEEL     | 24-INCH   | 18-INCH             | 24-INCH  | 24X38-INCH |            |          |             |                |
|                                        |          | 18-INCH      |           | 18-INCH        | LF        | EACH                | EACH     | EACH       | EACH       | CY       | EACH        |                |
| 254+80                                 | RT       | ---          | ---       | ---            | 35        | ---                 | 2        | ---        | ---        | ---      | ---         |                |
| 257+02                                 | MAINLINE | ---          | ---       | ---            | 46        | ---                 | 2        | ---        | ---        | ---      | 2           |                |
| 259+32.5                               | RT       | 60           | 0.064     | 2              | ---       | ---                 | ---      | ---        | ---        | ---      |             | CE             |
| 275+20                                 | RT       | 16           | 0.064     | 1              | ---       | ---                 | ---      | ---        | ---        | ---      | ---         | PE - EXTENSION |
| 275+80                                 | RT       | 30           | 0.064     | 1              | ---       | ---                 | ---      | ---        | ---        | ---      | ---         | PE - EXTENSION |
| 275+80                                 | LT       | ---          | ---       | ---            | ---       | ---                 | ---      | 1          | 1          | 2.5      | 1           |                |
| 278+25                                 | LT       | ---          | ---       | ---            | ---       | 1                   | ---      | ---        | 1          | 2.5      | 1           |                |
| 282+00                                 | LT       | ---          | ---       | ---            | ---       | ---                 | ---      | 1          | 1          | ---      | 1           |                |
| 288+31                                 | LT       | ---          | ---       | ---            | 30        | ---                 | 2        | ---        | ---        | ---      | 2           |                |
| 290+68                                 | RT       | 30           | ---       | 2              | ---       | ---                 | ---      | ---        | ---        | ---      | ---         | PE             |
| TOTALS                                 |          | 136          |           | 6              | 111       | 1                   | 6        | 2          | 3          | 5        | 7           |                |

| ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES |          |                 |         |
|-------------------------------------------------|----------|-----------------|---------|
| STATION                                         | LOCATION | 465.0120<br>TON | REMARKS |
| 263+32.5                                        | RT       | 12              | CE      |
| 264+60                                          | RT       | 8               | PE      |
| 267+28                                          | RT       | 12              | PE      |
| 268+93                                          | RT       | 17              | PE      |
| 269+68                                          | LT       | 8               | PE      |
| 270+16                                          | RT       | 15              | PE      |
| 271+32                                          | RT       | 18              | PE      |
| 271+32                                          | LT       | 18              | PE      |
| 272+96                                          | RT       | 13              | PE      |
| 274+50                                          | RT       | 14              | PE      |
| 279+56                                          | LT       | 6               | PE      |
| 281+04.5                                        | RT       | 20              | CE      |
| 282+42                                          | LT       | 8               | PE      |
| 283+23                                          | LT       | 9               | PE      |
| 283+95                                          | LT       | 9               | PE      |
| 292+80                                          | RT       | 6               | PE      |
| TOTAL                                           |          | 190             |         |

| TOPSOIL, MULCHING, FERTILIZER, AND SEEDING |          |                     |                                                     |                                                     |                                                    |                                          |                                             |
|--------------------------------------------|----------|---------------------|-----------------------------------------------------|-----------------------------------------------------|----------------------------------------------------|------------------------------------------|---------------------------------------------|
|                                            |          | 625.0100<br>TOPSOIL | 628.2008<br>EROSION MAT<br>URBAN<br>CLASS 1, TYPE B | 628.2006<br>EROSION MAT<br>URBAN<br>CLASS 1, TYPE A | SPV.0030.01<br>FERTILIZER<br>FOR LAWN<br>TYPE TURF | 630.0140<br>SEEDING<br>MIXTURE<br>NO. 40 | SPV.0120.01<br>WATER FOR<br>SEEDED<br>AREAS |
| STATION - STATION                          | LOCATION | SY                  | SY                                                  | SY                                                  | CWT                                                | LB                                       | MGAL                                        |
| 256+00 - 275+25                            | LT       | 4900                |                                                     | 3000                                                | 3.1                                                | 90                                       | 110                                         |
| 256+00 - 275+25                            | RT       | 4400                |                                                     | 3000                                                | 2.8                                                | 80                                       | 99                                          |
| 279+50 - 293+60                            | LT       | 2000                |                                                     | 2000                                                | 1.3                                                | 35                                       | 45                                          |
| 279+50 - 293+60                            | RT       | 2300                |                                                     | 2000                                                | 1.4                                                | 40                                       | 51                                          |
| DITCH BOTTOMS                              |          |                     | 2250                                                |                                                     |                                                    |                                          |                                             |
| UNDISTRBUTED                               |          | 700                 |                                                     | 550                                                 | 0.4                                                | 10                                       | 15                                          |
| TOTALS                                     |          | 14300               | 2250                                                | 10550                                               | 9.0                                                | 255                                      | 320                                         |

| PAVEMENT MARKING EPOXY |             |           |            |            |
|------------------------|-------------|-----------|------------|------------|
| STATION - STATION      | LOCATION    | 646.0106  | 646.0106   | 647.0110   |
|                        |             | 4-INCH    | 4-INCH     | PAVEMENT   |
|                        |             | EDGE LINE | NO PASSING | MARKING RR |
|                        |             | WHITE     | YELLOW     | EPOXY      |
|                        |             | LF        | LF         | EACH       |
|                        |             |           |            |            |
| 255+25 - 293+60        | MAINLINE    | 7470      | 7470       | --         |
| 279+50 - 284+50        | RR CROSSING | --        | --         | 2          |
| SUB TOTALS             |             | 7470      | 7470       | 2          |
| PROJECT TOTAL          |             | 14940     |            |            |

INLET PROTECTION

| STATION | LOCATION | 628.7005       | 628.7010       | 628.7015       |
|---------|----------|----------------|----------------|----------------|
|         |          | TYPE A<br>EACH | TYPE B<br>EACH | TYPE C<br>EACH |
| 268+10  | LT       | 1              | --             | 1              |
| 268+10  | RT       | 1              | --             | 1              |
| 272+00  | LT       | 1              | --             | 1              |
| 272+00  | RT       | 1              | --             | 1              |
| 272+15  | RT       | 1              | --             | 1              |
| 272+15  | LT       | 1              | --             | 1              |
| 273+95  | LT       | 1              | --             | 1              |
| 273+95  | RT       | 1              | --             | 1              |
| 274+03  | RT       | 1              | --             | 1              |
| 274+03  | LT       | 1              | --             | 1              |
| 279+85  | RT       | 1              | --             | 1              |
| 279+85  | LT       | 1              | --             | 1              |
| 284+75  | LT       | 1              | 1              | --             |
| 284+75  | LT       | 1              | --             | 1              |
| 282+38  | LT       | 1              | --             | 1              |
| 282+30  | LT       | 1              | --             | 1              |
| 282+30  | RT       | 1              | --             | 1              |
| 286+75  | LT       | 1              | --             | 1              |
| 285+50  | RT       | 1              | 1              | --             |
| 287+50  | LT       | 1              | 1              | --             |
| 284+75  | RT       | 1              | --             | 1              |
| TOTALS  |          | 21             | 3              | 18             |

CONCRETE CURB & GUTTER

| STATION - STATION | LOCATION | 601.0411<br>30-INCH<br>TYPE D | REMARKS     |
|-------------------|----------|-------------------------------|-------------|
|                   |          | LF                            |             |
| 262+75 - 265+30   | RT       | 275                           |             |
| 263+32 - 275+25   | LT       | 1193                          |             |
| 265+50 - 275+25   | RT       | 995                           |             |
| 279+50 - 285+00   | LT       | 525                           | RR CROSSING |
| 279+65 - 285+00   | RT       | 530                           | RR CROSSING |
| 285+00 - 287+00   | LT       | 200                           |             |
| 291+50 - 294+60   | LT       | 210                           |             |
| 291+50 - 294+60   | RT       | 210                           |             |
| TOTAL             |          | 4138                          |             |

EROSION CONTROL

| STATION         | LOCATION | 628.1504<br>SILT FENCE | 628.1520<br>MAINTENANCE | 628.7504<br>TEMP. DITCH<br>CHECKS | REMARKS |
|-----------------|----------|------------------------|-------------------------|-----------------------------------|---------|
|                 |          | LF                     | LF                      | LF                                |         |
| 292+25 - 293+60 | RT       | 135                    | 135                     | --                                |         |
| 292+25 - 293+60 | LT       | 135                    | 135                     | --                                |         |
| UNDISTRIBUTED   |          | 100                    | 100                     | 200                               |         |
| TOTALS          |          | 370                    | 370                     | 200                               |         |

| STORM SEWER PIPE REINFORCED CONCRETE |         |           |           |           |            |            |            |
|--------------------------------------|---------|-----------|-----------|-----------|------------|------------|------------|
|                                      |         | 608.0315  | 608.0318  | 608.0324  | 610.0414   | 610.0419   | 610.0124   |
|                                      |         | 15-INCH   | 18-INCH   | 24-INCH   | 14X23-INCH | 19X30-INCH | 24X38-INCH |
|                                      |         | CLASS III | CLASS III | CLASS III | CLASS IV   | CLASS IV   | CLASS III  |
| STR                                  | - STR   | LF        | LF        | LF        | LF         | LF         | LF         |
| CB1                                  | - CB2   | 32        | ---       | ---       | ---        | ---        | ---        |
| CB1                                  | - CB3   | ---       | ---       | 394       | ---        | ---        | ---        |
| CB3                                  | - CB6   | ---       | ---       | 15        | ---        | ---        | ---        |
| CB4                                  | - CB5   | 15        | ---       | ---       | ---        | ---        | ---        |
| CB5                                  | - CB6   | 32        | ---       | ---       | ---        | ---        | ---        |
| CB6                                  | - CB7   | ---       | ---       | 179       | ---        | ---        | ---        |
| CB8                                  | - CB9   | 8         | ---       | ---       | ---        | ---        | ---        |
| CB9                                  | - CB10  | 32        | ---       | ---       | ---        | ---        | ---        |
| CB7                                  | - CB10  | ---       | ---       | 8         | ---        | ---        | ---        |
| CB10                                 | - OF1   | ---       | ---       | ---       | ---        | ---        | 174        |
| CB15                                 | - CB16  | 36        | ---       | ---       | ---        | ---        | ---        |
| CB16                                 | - OF2   | ---       | 159       | ---       | ---        | ---        | ---        |
| CB20                                 | - OF3   | ---       | ---       | ---       | ---        | ---        | 27         |
| CB21                                 | - CB20  | ---       | ---       | ---       | 32         | ---        | ---        |
| CB19                                 | - CB 20 | ---       | ---       | ---       | ---        | ---        | 8          |
| CB18                                 | - CB19  | ---       | ---       | ---       | ---        | 232        | ---        |
| CB17                                 | - CB18  | ---       | ---       | ---       | 8          | ---        | ---        |
| CB26                                 | - CB18  | ---       | ---       | ---       | ---        | 200        | ---        |
| CB28                                 | - CB26  | ---       | ---       | ---       | ---        | 76         | ---        |
| CB27                                 | - CB29  | ---       | ---       | ---       | 77         | ---        | ---        |
| CB29                                 | - CB21  | ---       | ---       | ---       | ---        | 239        | ---        |
| TOTALS                               |         | 155       | 159       | 596       | 117        | 747        | 209        |

| MOBILIZATIONS EROSION CONTROL |      |               |               |
|-------------------------------|------|---------------|---------------|
|                               |      | 628.1905      | 628.1910      |
|                               |      | MOBILIZATIONS | MOBILIZATIONS |
|                               |      | EROSION       | EMERGENCY     |
|                               |      | CONTROL       | EROSION       |
|                               |      |               | CONTROL       |
| STATION - STATION             | EACH | EACH          | REMARKS       |
| PROJECT                       | 3    | 2             |               |
| TOTALS                        | 3    | 2             |               |

| GEOTEXTILE PABRIC TYPE HR |          |          |         |
|---------------------------|----------|----------|---------|
|                           |          | 645.0120 |         |
| STATION - STATION         | LOCATION | SY       | REMARKS |
| 275+80                    | 40' LT   | 6        |         |
| 278+25                    | 33' LT   | 6        |         |
| TOTAL                     |          | 12       |         |

| EXCAVATING, HAULING AND TEMPOARY STOCKPILING OF LEAD CONTAMINATED SOIL |          |             |         |
|------------------------------------------------------------------------|----------|-------------|---------|
|                                                                        |          | SPV.0035.01 |         |
| STATION - STATION                                                      | LOCATION | CY          | REMARKS |
| 288+00 - 288+25                                                        | LT       | 30          |         |
| TOTAL                                                                  |          | 30          |         |

STORM SEWER STRUCTURES

| STATION LOCATION |    | STR NO. | 611.3901               | 611.1005              | 611.1006              | 611.1230       | SPV.0060.06           | INLET COVERS      |                |                  |                  |
|------------------|----|---------|------------------------|-----------------------|-----------------------|----------------|-----------------------|-------------------|----------------|------------------|------------------|
|                  |    |         | INLETS                 | CATCH BASINS          | CATCH BASINS          | CATCH BASINS   | TEMPORARY             | 611.0645          | 611.0624       | 611.0639         | SPV.0060.01      |
|                  |    |         | Median 1 Grate<br>EACH | 5-FT DIAMETER<br>EACH | 6-FT DIAMETER<br>EACH | 2X3-FT<br>EACH | WATER PASSAGE<br>EACH | TYPE MS-A<br>EACH | TYPE H<br>EACH | TYPE H-S<br>EACH | TYPE H-D<br>EACH |
| 268+10           | LT | CB 1    | ---                    | 1                     | ---                   | ---            | 1                     | ---               | 1              | ---              | ---              |
| 268+10           | RT | CB 2    | ---                    | ---                   | ---                   | 1              | 1                     | ---               | 1              | ---              | ---              |
| 272+00           | LT | CB 3    | ---                    | 1                     | ---                   | ---            | 1                     | ---               | 1              | ---              | ---              |
| 272+00           | RT | CB 4    | ---                    | 1                     | ---                   | ---            | 1                     | ---               | 1              | ---              | ---              |
| 272+15           | RT | CB 5    | ---                    | 1                     | ---                   | ---            | 1                     | ---               | 1              | ---              | ---              |
| 272+15           | LT | CB 6    | ---                    | 1                     | ---                   | ---            | 1                     | ---               | 1              | ---              | ---              |
| 273+95           | LT | CB 7    | ---                    | 1                     | ---                   | ---            | 1                     | ---               | ---            | 1                | ---              |
| 273+95           | RT | CB 8    | ---                    | 1                     | ---                   | ---            | 1                     | ---               | ---            | 1                | ---              |
| 274+03           | RT | CB 9    | ---                    | 1                     | ---                   | ---            | 1                     | ---               | ---            | 1                | ---              |
| 274+03           | LT | CB 10   | ---                    | 1                     | ---                   | ---            | 1                     | ---               | ---            | 1                | ---              |
| 279+85           | RT | CB 15   | ---                    | ---                   | ---                   | 1              | 1                     | ---               | 1              | ---              | ---              |
| 279+85           | LT | CB 16   | ---                    | ---                   | ---                   | 1              | 1                     | ---               | 1              | ---              | ---              |
| 284+75           | LT | CB 17   | 1                      | ---                   | ---                   | ---            | ---                   | 1                 | ---            | ---              | ---              |
| 284+75           | LT | CB 18   | ---                    | 1                     | ---                   | ---            | 1                     | ---               | 1              | ---              | ---              |
| 282+38           | LT | CB 19   | ---                    | 1                     | ---                   | ---            | 1                     | ---               | ---            | ---              | 1                |
| 282+30           | LT | CB 20   | ---                    | ---                   | 1                     | ---            | 1                     | ---               | ---            | ---              | 1                |
| 282+30           | RT | CB 21   | ---                    | 1                     | ---                   | ---            | 1                     | ---               | 1              | ---              | ---              |
| 286+75           | LT | CB 26   | ---                    | 1                     | ---                   | ---            | 1                     | ---               | 1              | ---              | ---              |
| 285+50           | RT | CB 27   | 1                      | ---                   | ---                   | ---            | ---                   | 1                 | ---            | ---              | ---              |
| 287+50           | LT | CB 28   | 1                      | ---                   | ---                   | ---            | ---                   | 1                 | ---            | ---              | ---              |
| 284+75           | RT | CB 29   | ---                    | 1                     | ---                   | ---            | 1                     | ---               | ---            | ---              | 1                |
| TOTALS           |    |         | 3                      | 14                    | 1                     | 3              | 18                    | 3                 | 11             | 4                | 3                |

TRAFFIC CONTROL

|         | 643.0100 | 643.2000 |          | 643.0420   | 643.0715 |          | 643.3000 |
|---------|----------|----------|----------|------------|----------|----------|----------|
|         | TRAFFIC  | TRAFFIC  |          | BARRICADES | WARNING  |          | DETOUR   |
|         | CONTROL  | CONTROL  |          | TYPE III   | LIGHTS   |          | SIGNS    |
|         | PROJECT  | PROJECT  | 643.0300 | TYPE III   | TYPE C   | 643.0900 | SIGNS    |
|         | EACH     | EACH     | DRUMS    | TYPE III   | TYPE C   | SIGNS    | DAY      |
|         | EACH     | EACH     | DAYS     | DAYS       | DAYS     | DAYS     | DAY      |
| PROJECT | 1        | --       | 200      | 2400       | 2550     | 3375     | --       |
| DETOUR  | --       | 1        | --       | --         | --       | --       | 7950     |
| TOTALS  | 1        | 1        | 200      | 2400       | 2550     | 3375     | 7950     |

Assume 75 Calender Days  
Project Traffic control based on SDD 15C2-4b - 5 barricades  
Project Traffic control based on SDD 15C3-1 - Detail 4 - 4 sideroads  
Project Traffic control based on SDD 15C2-4a - Detail A - 3 intersections minus signage included on detour page.

SIGN LISTING

| SIGN NO. | STATION | LOCATION | SIGN CODE | MESSAGE                                             | SIZE      | 638.2602                             | 638.3000                                   | POSTS WOOD                           | 637.2230                               | 637.2210                               |
|----------|---------|----------|-----------|-----------------------------------------------------|-----------|--------------------------------------|--------------------------------------------|--------------------------------------|----------------------------------------|----------------------------------------|
|          |         |          |           |                                                     |           | REMOVING<br>SIGNS<br>TYPE II<br>EACH | REMOVING<br>SMALL SIGN<br>SUPPORTS<br>EACH | 4" X 6"<br>634.0616<br>16-FT<br>EACH | SIGNS<br>REFLECTIVE H<br>TYPE II<br>SF | SIGNS<br>REFLECTIVE F<br>TYPE II<br>SF |
| 1        | 252+55  | RT       | S1-1      | SCHOOL ZONE                                         | ---       | 1                                    | 1                                          | ---                                  | ---                                    | ---                                    |
| 2        | 256+20  | RT       | S4-51     | SCHOOL SPEED LIMIT 15 MPH WHEN CHILDREN ARE PRESENT | ---       | 1                                    | 1                                          | ---                                  | ---                                    | ---                                    |
| 3        | 256+60  | LT       | W14-3     | NO PASSING ZONE                                     | 48" X 36" | 1                                    | 1                                          | 1                                    | ---                                    | 6.00                                   |
| 4        | 256+60  | LT       | R7-1R     | NO PARKING ANY TIME W/ RT ARROW                     | ---       | 1                                    | ---                                        | ---                                  | ---                                    | ---                                    |
| 5        | 257+30  | LT       | R7-1R     | NO PARKING ANY TIME W/ RT ARROW                     | 18" X 24" | ---                                  | ---                                        | 1                                    | 3.00                                   | ---                                    |
| 6        | 257+40  | RT       | R7-1D     | NO PARKING ANY TIME W/ DOUBLE ARROW                 | 18" X 24" | 1                                    | 1                                          | 1                                    | 3.00                                   | ---                                    |
| 7        | 258+25  | LT       | R2-1      | SPEED LIMIT 30 MPH                                  | 24" X 30" | 1                                    | 1                                          | 1                                    | 5.00                                   | ---                                    |
| 8        | 259+85  | RT       | R7-1D     | NO PARKING ANY TIME W/ DOUBLE ARROW                 | 18" X 24" | 1                                    | 1                                          | 1                                    | 3.00                                   | ---                                    |
| 9        | 259+85  | LT       | R7-1D     | NO PARKING ANY TIME W/ DOUBLE ARROW                 | 18" X 24" | 1                                    | 1                                          | 1                                    | 3.00                                   | ---                                    |
| 10       | 262+45  | RT       | R7-1R     | NO PARKING ANY TIME W/ RT ARROW                     | 18" X 24" | 1                                    | 1                                          | 1                                    | 3.00                                   | ---                                    |
| 11       | 262+45  | LT       | R7-1L     | NO PARKING ANY TIME W/ LT ARROW                     | 18" X 24" | 1                                    | 1                                          | 1                                    | 3.00                                   | ---                                    |
| 12       | 265+20  | LT       | S4-51     | SCHOOL SPEED LIMIT 15 MPH WHEN CHILDREN ARE PRESENT | ---       | 1                                    | 1                                          | ---                                  | ---                                    | ---                                    |
| 13       | 265+60  | RT       | R1-1      | STOP                                                | 30" X 30" | 1                                    | 1                                          | 1                                    | 5.18                                   | ---                                    |
| 14       | 266+48  | RT       | R2-1      | SPEED LIMIT 30 MPH                                  | 24" X 30" | 1                                    | 1                                          | 1                                    | 5.00                                   | ---                                    |
| 15       | 270+49  | LT       | W14-3     | NO PASSING ZONE                                     | 48" X 36" | 1                                    | 1                                          | 1                                    | ---                                    | 6.00                                   |
| 16       | 270+49  | LT       | S1-1      | SCHOOL ZONE                                         | ---       | 1                                    | ---                                        | ---                                  | ---                                    | ---                                    |
| 17       | 274+30  | LT       | R2-1      | SPEED LIMIT 30 MPH                                  | 24" X 30" | 1                                    | 1                                          | 1                                    | 5.00                                   | ---                                    |
| 18       | 276+45  | RT       | I3-1      | SHIOC RIVER                                         | 66" X 15" | ---                                  | ---                                        | 1                                    | 6.88                                   | ---                                    |
| 19       | 277+15  | LT       | I3-1      | SHIOC RIVER                                         | 66" X 15" | 1                                    | 1                                          | 1                                    | 6.88                                   | ---                                    |
| 20       | 279+30  | RT       | W10-1     | RAILROAD CROSSING                                   | 30" X 30" | ---                                  | ---                                        | 1                                    | ---                                    | 6.25                                   |
| 21       | 279+75  | RT       | R1-1      | STOP                                                | 30" X 30" | 1                                    | 1                                          | 1                                    | 5.18                                   | ---                                    |
| 22       | 284+77  | RT       | R2-1      | SPEED LIMIT 30 MPH                                  | 24" X 30" | 1                                    | 1                                          | 1                                    | 5.00                                   | ---                                    |
| 23       | 286+00  | RT       | W14-3     | NO PASSING ZONE                                     | 48" X 36" | 1                                    | 1                                          | 1                                    | ---                                    | 6.00                                   |
| 24       | 286+05  | LT       | W10-1     | RAILROAD CROSSING                                   | 30" X 30" | ---                                  | ---                                        | 1                                    | ---                                    | 6.25                                   |
| 25       | 286+05  | LT       | W8-1      | BUMP                                                | ---       | 1                                    | ---                                        | ---                                  | ---                                    | ---                                    |
| 26       | 288+15  | RT       | W2-1      | CROSS ROAD SYMBOL                                   | 30" X 30" | 1                                    | 1                                          | 1                                    | 6.25                                   | ---                                    |
| 27       | 288+15  | LT       | R1-1      | STOP                                                | 30" X 30" | 1                                    | 1                                          | 1                                    | 5.18                                   | ---                                    |
| 28       | 289+62  | LT       | R2-1      | SPEED LIMIT 30 MPH                                  | 24" X 30" | 1                                    | 1                                          | 1                                    | 5.00                                   | ---                                    |
| 29       | 289+90  | RT       | W11-8     | FIRE TRUCK CROSSING                                 | 30" X 30" | 1                                    | 1                                          | 1                                    | ---                                    | 6.25                                   |
| TOTALS   |         |          |           |                                                     |           | 25                                   | 22                                         | 23                                   | 78.55                                  | 36.75                                  |

| CONSTRUCTION STAKING |     |                                              |                            |                        |                                    |                                      |
|----------------------|-----|----------------------------------------------|----------------------------|------------------------|------------------------------------|--------------------------------------|
| STATION - STATION    |     | 650.4000<br>STORM<br>SEWER<br>SYSTEM<br>EACH | 650.4500<br>SUBGRADE<br>LF | 650.5000<br>BASE<br>LF | 650.5500<br>CURB &<br>GUTTER<br>LF | 650.6000<br>PIPE<br>CULVERTS<br>EACH |
| 255+25 - 275+25      |     | ---                                          | 2000                       | 2000                   | 2463                               | ---                                  |
| 279+50 - 293+60      |     | ---                                          | 1410                       | 1410                   | 1675                               | ---                                  |
| 268+10               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 268+10               | RT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 272+00               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 272+00               | RT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 272+15               | RT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 272+15               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 273+95               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 273+95               | RT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 274+03               | RT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 274+03               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 279+85               | RT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 279+85               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 284+75               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 284+75               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 282+38               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 282+30               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 282+30               | RT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 286+75               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 285+50               | RT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 287+50               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 284+75               | RT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 275+80               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 275+80               | RT  | ---                                          | ---                        | ---                    | ---                                | 1                                    |
| 278+25               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 282+00               | LT  | 1                                            | ---                        | ---                    | ---                                | ---                                  |
| 254+80               | RT  | ---                                          | ---                        | ---                    | ---                                | 1                                    |
| 257+02               | --- | ---                                          | ---                        | ---                    | ---                                | 1                                    |
| 259+32.5             | RT  | ---                                          | ---                        | ---                    | ---                                | 1                                    |
|                      |     | 24                                           | 3410                       | 3410                   | 4138                               | 4                                    |

| SAWING       |          |                           |                            |         |
|--------------|----------|---------------------------|----------------------------|---------|
| STATION      | LOCATION | 690.0150<br>ASPHALT<br>LF | 690.0250<br>CONCRETE<br>LF | REMARKS |
| 254+25       | MAINLINE | 24                        | --                         |         |
| 275+25       | MAINLINE | 24                        | 6                          | CURB    |
| 279+40       | MAINLINE | 24                        | 6                          | CURB    |
| 293+70       | MAINLINE | 24                        | --                         |         |
| ROBLEY ROAD  | RT       | 60                        | --                         |         |
| EVERGREEN RD | RT       | 20                        | --                         |         |
| PINE LN      | RT       | 20                        | --                         |         |
| LYNN RD      | LT       | 20                        | --                         |         |
| 256+17       | LT       | 16                        | --                         | PE      |
| 263+32.5     | RT       | 75                        | --                         | CE      |
| 267+28       | RT       | 10                        | --                         | PE      |
| 267+83       | RT       | 20                        | --                         | PE      |
| 268+30       | RT       | 14                        | --                         | PE      |
| 268+93       | RT       | 14                        | --                         | PE      |
| 269+68       | LT       | 12                        | --                         | PE      |
| 270+02       | LT       | 14                        | --                         | PE      |
| 271+32       | RT       | 11                        | --                         | PE      |
| 271+32       | LT       | 11                        | --                         | PE      |
| 272+96       | RT       | 11                        | --                         | PE      |
| 273+17       | LT       | --                        | 26                         | PE      |
| 274+50       | RT       | 18                        | --                         | PE      |
| 279+56       | LT       | 16                        | --                         | PE      |
| 280+00       | RT       | 30                        | --                         | SI      |
| 280+11       | LT       | 16                        | --                         | PE      |
| 280+93       | LT       | --                        | 24                         | PE      |
| 282+42       | LT       | 50                        | --                         | SI & CE |
| 283+23       | LT       | 24                        | --                         | PE      |
| 292+80       | RT       | 14                        | --                         | PE      |
| TOTAL        |          | 592                       | 62                         |         |

STREET LIGHTING

|           |          |         | 654.0105<br>CONCRETE<br>BASES<br>TYPE 5 | 655.0610<br>ELECTRICAL<br>WIRE LIGHTING<br>#12 AWG | 657.0255<br>TRANSFORMER<br>BASES<br>BREAKAWAY<br>11 1/2-INCH<br>CIRCLE | 657.0322<br>POLES<br>TYPE 5<br>ALUMINUM | 657.0615<br>LUMINAIRE<br>ARMS<br>SINGLE MEMBER<br>4 1/2 INCH CLAMP<br>8-FOOT | SPV .0060.01<br>LED<br>LUMINAIRES | SPV .0060.04<br>FURNISHED<br>LIGHT<br>POLE<br>ASSEMBLY | LIGHT<br>BASE |
|-----------|----------|---------|-----------------------------------------|----------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------|------------------------------------------------------------------------------|-----------------------------------|--------------------------------------------------------|---------------|
| STATION   | LOCATION |         | EACH                                    | LF<br>(3 WIRES)                                    | EACH                                                                   | EACH                                    | EACH                                                                         | EACH                              | EACH                                                   |               |
| 255+30    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB1-(1,3)     |
| 257+15    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB2-(1,3)     |
| 258+90    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB3-(1,3)     |
| 260+60    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB4-(1,3)     |
| 262+30    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB5-(1,3)     |
| 264+00    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB6-(1,3)     |
| 265+70    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB7-(1,3)     |
| 267+46    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB8-(1,3)     |
| 269+22    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB9-(1,3)     |
| 270+98    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB10-(1,3)    |
| 272+74    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB11-(1,3)    |
| 274+50    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB12-(1,3)    |
| 276+26    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB13-(2,4)    |
| 278+02    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB14-(2,4)    |
| 279+78    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB15-(2,4)    |
| 281+63    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB16-(2,4)    |
| 282+70    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB17-(2,4)    |
| 284+29    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB18-(2,4)    |
| 285+98    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB19-(2,4)    |
| 287+93    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB20-(2,4)    |
| 289+59    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB21-(2,4)    |
| 291+26    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB22-(2,4)    |
| 292+92.50 | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB23-(2,4)    |
| 294+59    | 23.5' LT | STH 156 | 1                                       | 130                                                | 1                                                                      | 1                                       | 1                                                                            | 1                                 |                                                        | LB24-(2,4)    |
| TOWN      |          | STH 156 |                                         |                                                    |                                                                        |                                         |                                                                              |                                   | 4                                                      |               |
| TOTAL     |          |         | 24                                      | 3,120                                              | 24                                                                     | 24                                      | 24                                                                           | 24                                | 4                                                      |               |

PULLBOXES

|         |          | 653.0145<br>PULL BOXES<br>STEEL<br>24x48 INCH |      |  | REMARKS |
|---------|----------|-----------------------------------------------|------|--|---------|
| STATION | LOCATION |                                               | EACH |  |         |
| 275+90  | 23.5' LT | STH 156                                       | 1    |  | LPB-1   |
| 275+90  | 32.0' RT | STH 156                                       | 1    |  | LPB-2   |
| 275+80  | 85.0' RT | STH 156                                       | 1    |  | LPB-3   |
| TOTALS  |          |                                               | 3    |  |         |

LIGHTING CABINET

|         |          | SPV.0060.02<br>LIGHTING<br>CONTROL<br>CABINET BASE<br>TYPE SPECIAL | SPV.0060.03<br>LIGHTING<br>CONTROL<br>CABINET |
|---------|----------|--------------------------------------------------------------------|-----------------------------------------------|
| STATION | LOCATION | EACH                                                               | EACH                                          |
| 275+80  | 90' RT   | 1                                                                  | 1                                             |
| TOTALS  |          | 1                                                                  | 1                                             |

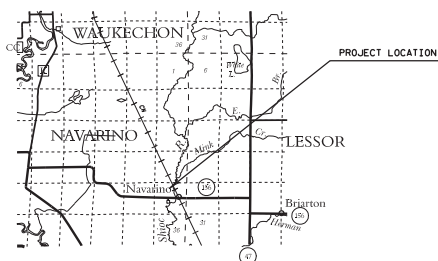
CONDUIT AND WIRE

|         |    |         |          | 652.0225<br>CONDUIT<br>RIGID<br>NONMETALLIC<br>SCHEDULE 40<br>2-INCH | 652.0605<br>CONDUIT<br>SPECIAL<br>2-INCH | 655.0625<br>ELECTRICAL<br>WIRE<br>LIGHTING<br>6 AWG | NUMBER<br>WIRES | CIRCUIT<br>NUMBER | Remarks     |
|---------|----|---------|----------|----------------------------------------------------------------------|------------------------------------------|-----------------------------------------------------|-----------------|-------------------|-------------|
| STATION | to | STATION | LOCATION | LF                                                                   | LF                                       | LF                                                  |                 |                   |             |
| 255+30  | -  | 257+10  | LT       | 200                                                                  |                                          | 660                                                 | 3               | (1,3)             | LB1 - LB2   |
| 257+10  | -  | 258+90  | LT       | 200                                                                  |                                          | 660                                                 | 3               | (1,3)             | LB2 - LB3   |
| 258+90  | -  | 260+60  | LT       | 190                                                                  |                                          | 630                                                 | 3               | (1,3)             | LB3 - LB4   |
| 260+60  | -  | 262+30  | LT       | 190                                                                  |                                          | 630                                                 | 3               | (1,3)             | LB4 - LB5   |
| 262+30  | -  | 264+00  | LT       | 190                                                                  |                                          | 630                                                 | 3               | (1,3)             | LB5 -LB6    |
| 264+00  | -  | 265+70  | LT       | 190                                                                  |                                          | 630                                                 | 3               | (1,3)             | LB6 - LB7   |
| 265+70  | -  | 267+46  | LT       | 196                                                                  |                                          | 648                                                 | 3               | (1,3)             | LB7 - LB8   |
| 267+46  | -  | 269+22  | LT       | 196                                                                  |                                          | 648                                                 | 3               | (1,3)             | LB8 - LB9   |
| 269+22  | -  | 270+98  | LT       | 196                                                                  |                                          | 648                                                 | 3               | (1,3)             | LB9 - LB10  |
| 270+98  | -  | 272+74  | LT       | 196                                                                  |                                          | 648                                                 | 3               | (1,3)             | LB10 - LB11 |
| 272+74  | -  | 274+50  | LT       | 196                                                                  |                                          | 648                                                 | 3               | (1,3)             | LB11 - LB12 |
| 274+50  | -  | 275+90  | LT       | 150                                                                  |                                          | 510                                                 | 3               | (1,3)             | LB12 - LPB1 |
| 275+90  | -  | 275+90  | LT       |                                                                      | 55                                       | 225                                                 | 3               | (1,3)             | LPB1 - LPB2 |
| 275+90  | -  | 275+80  | RT       |                                                                      | 60                                       | 240                                                 | 3               | (1,3)             | LPB2 - LPB3 |
| 275+80  | -  | 275+90  | RT       |                                                                      | 60                                       | 240                                                 | 3               | (2,4)             | LPB3 - LPB2 |
| 275+90  |    | 275+90  | RT       |                                                                      | 55                                       | 225                                                 | 3               | (2,4)             | LPB2 - LPB1 |
| 275+90  | -  | 276+26  | LT       | 56                                                                   |                                          | 228                                                 | 3               | (2,4)             | LPB1 - LB13 |
| 276+26  | -  | 278+02  | LT       |                                                                      | 220                                      | 720                                                 | 3               | (2,4)             | LB13 - LB14 |
| 278+02  | -  | 279+78  | LT       | 196                                                                  |                                          | 648                                                 | 3               | (2,4)             | LB14 - LB15 |
| 279+78  | -  | 278+78  | LT       | 73                                                                   |                                          |                                                     |                 | (2,4)             | LB15-FUTURE |
| 279+78  | -  | 281+63  | LT       | 205                                                                  |                                          | 675                                                 | 3               | (2,4)             | LB15 - LB16 |
| 281+63  | -  | 282+70  | LT       | 127                                                                  |                                          | 441                                                 | 3               | (2,4)             | LB16 - LB17 |
| 282+70  | -  | 284+29  | LT       | 179                                                                  |                                          | 597                                                 | 3               | (2,4)             | LB17 - LB18 |
| 284+29  | -  | 285+98  | LT       | 189                                                                  |                                          | 627                                                 | 3               | (2,4)             | LB18 - LB19 |
| 285+98  | -  | 287+93  | LT       | 215                                                                  |                                          | 705                                                 | 3               | (2,4)             | LB19 - LB20 |
| 287+93  | -  | 289+59  | LT       | 186                                                                  |                                          | 618                                                 | 3               | (2,4)             | LB20 - LB21 |
| 289+59  | -  | 291+26  | LT       | 187                                                                  |                                          | 621                                                 | 3               | (2,4)             | LB21 - LB22 |
| 291+26  | -  | 292+93  | LT       | 187                                                                  |                                          | 620                                                 | 3               | (2,4)             | LB22 - LB23 |
| 292+93  | -  | 294+59  | LT       | 65                                                                   | 125                                      | 570                                                 | 3               | (2,4)             | LB23 - LB24 |
| TOTALS  |    |         |          | 4,155                                                                | 575                                      | 15,590                                              |                 |                   |             |

GN

## SCHEDULE OF LANDS &amp; INTERESTS REQUIRED

| SEE ALSO PLAT | OWNER NUMBER | OWNER                                     | INTEREST REQUIRED | FEE SO.FT. | T.L.E. SO.FT. | P.L.E. SO.FT. |
|---------------|--------------|-------------------------------------------|-------------------|------------|---------------|---------------|
|               | 1            | JAMES D. GORDON & ANGELA GORDON           | TLE               | -          | 1262          | -             |
| 4.02          | 2            | WILLIAM S. WROBLESKI & SARAH W. WROBLESKI | TLE               | -          | 8279          | -             |
|               | 3            | GERALD M. SCHWAMER                        | TLE               | -          | 1985          | -             |
|               | 4            | TOWN OF NAVARINO                          | TLE               | -          | 3385          | -             |
|               | 5            | CHAD A. GREGORSON & PAULA GREGORSON       | TLE               | -          | 3809          | -             |
|               | 6            | SAINT LAWRENCE CONGREGATION OF NAVARINO   | TLE               | -          | 3002          | -             |
|               | 7            | RUTH A. SCHROEDER                         | TLE               | -          | 1450          | -             |
|               | 8            | DAVID RICHTER & SALLY RICHTER             | TLE               | -          | 1807          | -             |
|               | 9            | GARY W. KRATZKE                           | TLE               | -          | 1305          | -             |



## TRANSPORTATION PROJECT PLAT NO: 6580-08-21 - 4.01

THAT PART OF LOT 1 OF CSM 1661, WITHIN AND INCLUDING PART OF THE SE 1/4 OF THE NW 1/4, SECTION 25; AND LOTS 1 THRU 9 OF BLOCK 1 AND BLOCK 2 OF P.F. DOLANS ADDITION TO GALESBURG; AND LOTS 1 THRU 4, AND 6 THRU 9 OF P.F. DOLANS PLAT OF GALESBURG ALL IN THE NE 1/4 OF THE SW 1/4, SECTION 25, TOWNSHIP 25 NORTH, RANGE 16 EAST, TOWN OF NAVARINO, SHAWANO COUNTY, WISCONSIN

RELOCATION ORDER STH 156, SHAWANO COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

RESERVED FOR REGISTER OF DEEDS  
PROJECT NUMBER 6580-08-21-4.01  
AMENDMENT NO:

| R/W COURSE TABLE |          |               |          |
|------------------|----------|---------------|----------|
| FROM             | TO       | BEARING       | DISTANCE |
| SIXT2021         | RW201    | N 89°20'46" W | 25.01'   |
| RW201            | IP2017   | N 01°55'10" E | 63.21'   |
| IP2017           | RW202    | N 87°26'28" W | 17.22'   |
| RW202            | RW203    | N 02°35'10" E | 40.12'   |
| RW203            | RW204    | N 02°35'10" E | 39.88'   |
| RW204            | RW205    | S 87°26'28" E | 76.76'   |
| RW205            | RW206    | S 87°26'28" E | 578.75'  |
| RW206            | RW208    | S 02°10'22" W | 43.57'   |
| RW208            | RW209    | S 02°10'22" W | 25.23'   |
| RW209            | RW210    | N 87°15'46" W | 240.25'  |
| RW210            | RW211    | S 02°34'35" W | 38.78'   |
| RW211            | RW212    | N 89°21'17" W | 50.03'   |
| RW212            | RW213    | N 02°34'35" E | 40.61'   |
| RW213            | RW214    | N 87°15'46" W | 209.78'  |
| RW214            | RW215    | S 02°44'14" W | 12.76'   |
| RW215            | RW216    | N 87°26'28" W | 780.22'  |
| RW216            | RW217    | S 01°55'10" W | 61.56'   |
| RW217            | SIXT2021 | N 89°21'17" W | 24.51'   |

| FILE STATION/OFFSET TABLE |           |          |                         |
|---------------------------|-----------|----------|-------------------------|
| POINT                     | STATION   | OFFSET   | COORDINATES             |
| FILE "A"                  |           |          |                         |
| TLE101                    | 255+90.00 | 39.95' L | Y 209831.81 X 887988.54 |
| TLE102                    | 255+90.00 | 50.00' L | Y 209841.85 X 887988.99 |
| TLE103                    | 262+17.55 | 50.00' L | Y 209813.52 X 888616.16 |
| TLE104                    | 266+00.00 | 50.00' L | Y 209794.26 X 888998.13 |
| TLE105                    | 266+00.00 | 55.00' L | Y 209799.25 X 888998.38 |
| TLE106                    | 267+25.00 | 55.00' L | Y 209792.97 X 889123.22 |
| TLE107                    | 267+25.00 | 50.00' L | Y 209787.96 X 889122.97 |
| TLE117                    | 267+96.21 | 50.00' L | Y 209784.38 X 889134.09 |
| FILE "B"                  |           |          |                         |
| TLE201                    | 255+16.78 | 45.00' R | Y 209750.26 X 887911.56 |
| TLE202                    | 259+00.00 | 45.00' R | Y 209730.71 X 888344.34 |
| TLE203                    | 259+00.00 | 60.00' R | Y 209715.72 X 888343.66 |
| TLE205                    | 261+00.00 | 45.00' R | Y 209723.94 X 888494.18 |
| TLE204                    | 261+00.00 | 60.00' R | Y 209708.95 X 888493.51 |
| TLE206                    | 262+17.31 | 45.00' R | Y 209718.66 X 888611.38 |
| TLE207                    | 262+60.00 | 45.00' R | Y 209716.51 X 888653.77 |
| TLE208                    | 262+60.00 | 50.00' R | Y 209711.51 X 888653.52 |
| TLE209                    | 263+55.00 | 50.00' R | Y 209706.73 X 888748.40 |
| TLE210                    | 264+05.00 | 33.00' R | Y 209721.18 X 888799.19 |
| TLE211                    | 264+55.00 | 33.00' R | Y 209718.67 X 888849.13 |
| TLE212                    | 265+06.98 | 40.00' R | Y 209709.06 X 888900.69 |
| FILE "C"                  |           |          |                         |
| TLE214                    | 265+85.00 | 47.00' R | Y 209698.14 X 888978.26 |
| TLE213                    | 265+85.00 | 26.09' R | Y 209719.02 X 888979.31 |
| TLE226                    | 267+97.42 | 47.00' R | Y 209687.44 X 889190.41 |

| R/W STATION/OFFSET & COORDINATE TABLE |           |          |   |            |   |           |
|---------------------------------------|-----------|----------|---|------------|---|-----------|
| POINT                                 | STATION   | OFFSET   |   | COORDINATE |   |           |
| RW204                                 | 254+50.00 | 39.88'L  | Y | 209838.06  | X | 887848.68 |
| RW202                                 | 254+50.00 | 40.12'R  | Y | 209758.14  | X | 887845.07 |
| RW201                                 | 254+67.95 | 103.31'R | Y | 209694.20  | X | 887860.15 |
| RW216                                 | 255+16.72 | 40.09'R  | Y | 209755.17  | X | 887911.72 |
| RW217                                 | 255+17.44 | 101.64'R | Y | 209693.64  | X | 887909.66 |
| RW214                                 | 262+97.12 | 26.54'R  | Y | 209733.07  | X | 888691.77 |
| RW215                                 | 262+97.15 | 39.30'R  | Y | 209720.33  | X | 888691.16 |
| RW213                                 | 265+06.90 | 25.99'R  | Y | 209723.06  | X | 888901.32 |
| RW212                                 | 265+07.12 | 66.60'R  | Y | 209682.49  | X | 888899.49 |
| RW210                                 | 265+56.90 | 25.86'R  | Y | 209720.67  | X | 888951.26 |
| RW211                                 | 265+57.11 | 64.64'R  | Y | 209681.93  | X | 888949.52 |
| RW209                                 | 267+97.15 | 25.23'R  | Y | 209709.19  | X | 889191.23 |

| EXISTING MONUMENTS |             |                         |
|--------------------|-------------|-------------------------|
| POINT              | DESCRIPTION | COORDINATES             |
| IP2017             | 1" IP       | Y 209757.38 X 887862.27 |
| IP2018             | 1" IP       | Y 209629.43 X 887857.98 |
| IP2010             | 1" IP       | Y 209571.86 X 889186.08 |
| IP2011             | 1" IP       | Y 209733.42 X 889192.00 |
| IP2013             | 1" IP       | Y 209788.58 X 888952.18 |
| IP2014             | 2" IP       | Y 209725.55 X 888918.72 |
| IP2015             | 1" IP       | Y 209826.17 X 888114.56 |
| IP2016             | 1" IP       | Y 209836.10 X 887889.57 |
| IP2024             | 1" IP       | Y 209711.69 X 889131.29 |
| R2025              | REBAR       | Y 209720.72 X 888951.26 |
| IP2026             | 1" IP       | Y 209708.78 X 889191.20 |

## UTILITY INTERESTS REQUIRED

| OWNER NUMBER | OWNER                      | INTEREST REQUIRED |
|--------------|----------------------------|-------------------|
| 101          | BONDUEL TELEPHONE CO., LLC | RELEASE OF RIGHTS |
| 102          | WE ENERGIES                | RELEASE OF RIGHTS |

SEC116  
COUNTY RECORDS  
N 1/4 COR.  
Y=212284.934  
X=889288.956

SE-NW

TOWN OF NAVARINO  
FORMERLY GALESBURG

NE-SW

## RESERVE FOR CLAUSES AND NOTE INFORMATION

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS AND ARE REFERENCED TO THE US PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

AREAS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

COORDINATES AS SHOWN ARE NOT INTENDED TO BE USED FOR RETRACEMENT PURPOSES AND MUST BE VERIFIED WITH THE COUNTY SURVEY DEPARTMENT.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, SHAWANO COUNTY, NAD 83 (1993) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING RIGHT OF WAY WAS ACQUIRED FROM PROJECT(S): S04160, P.F. DOLANS PLAT TO GALESBURG, P.F. DOLANS ADDITION TO GALESBURG, CSM 1661, CSM 3432

RIGHT OF WAY REFERENCE LINE MAY NOT BE THE SAME AS THE CONSTRUCTION REFERENCE LINE.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE TO PREVENT EROSION OF THE SOIL. ALL TLES ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO DEPARTMENT OF TRANSPORTATION.

## CONVENTIONAL ABBREVIATIONS AND SYMBOLS

|                            |        |                          |       |
|----------------------------|--------|--------------------------|-------|
| ACCESS POINT               | AP     | SECTION CORNER           | SC    |
| ACCESS RIGHTS              | AR     | (MATERIAL AS NOTED)      |       |
| ACRES                      | AC     | SET R/W MONUMENT W/CAP   | W/CAP |
| CHORD BEARING              | CH BRG | (3/4" BAR X 18"          |       |
| CHORD DISTANCE             | CH DIS | 1.13 LBS/FT)             |       |
| DEED                       | DD     | POINT OF INTERSECTION    | POI   |
| DOCUMENT                   | DOC    | PROPOSED R/W             |       |
| EAST BOUND                 | EB     | BOUNDARY POINT           |       |
| GAS VALVE                  | GV     |                          |       |
| INLET                      | IL     |                          |       |
| LENGTH OF CURVE            | LH     | CORPORATE LIMITS         |       |
| MANHOLE                    | MON    | EXISTING R/W             |       |
| NORTH BOUND                | NB     | SECTION LINE             |       |
| PAGE                       | PG     | QUARTER LINE             |       |
| PERMANENT                  | PERM   | SIXTEENTH LINE           |       |
| PERMANENT LIMITED EASEMENT | PLE    | PROPOSED OR NEW R/W LINE |       |
| PRIVATE DRIVEWAY           | PD     | PROPOSED EASEMENT LINE   |       |
| PROPERTY LINE              | PL     |                          |       |
| RADIUS                     | RD     |                          |       |
| REFERENCE LINE             | RL     | PARCEL NUMBER            | 00    |
| REMAINING                  | REM    | UTILITY NUMBER           | 000   |
| RIGHT OF WAY               | R/W    |                          |       |
| SECTION LINE               | SL     |                          |       |
| FOUND IRON PIPE            | IP     |                          |       |
| STATION                    | STA    |                          |       |
| TEMPORARY LIMITED EASEMENT | TLE    |                          |       |
| TIE POINT                  | TP     |                          |       |
| VOLUME                     | VOL    |                          |       |
| ADJOINING LANDS            | ADJ    |                          |       |
| WITH SAME OWNER            | WSO    |                          |       |
| PARALLEL TO LINE           | PL     |                          |       |
| BUILDING TO BE RAZED       | BRZ    |                          |       |
| FEE ACQUISITION            | FA     |                          |       |

|                            |        |                          |       |
|----------------------------|--------|--------------------------|-------|
| ACCESS POINT               | AP     | SECTION CORNER           | SC    |
| ACCESS RIGHTS              | AR     | (MATERIAL AS NOTED)      |       |
| ACRES                      | AC     | SET R/W MONUMENT W/CAP   | W/CAP |
| CHORD BEARING              | CH BRG | (3/4" BAR X 18"          |       |
| CHORD DISTANCE             | CH DIS | 1.13 LBS/FT)             |       |
| DEED                       | DD     | POINT OF INTERSECTION    | POI   |
| DOCUMENT                   | DOC    | PROPOSED R/W             |       |
| EAST BOUND                 | EB     | BOUNDARY POINT           |       |
| GAS VALVE                  | GV     |                          |       |
| INLET                      | IL     |                          |       |
| LENGTH OF CURVE            | LH     | CORPORATE LIMITS         |       |
| MANHOLE                    | MON    | EXISTING R/W             |       |
| NORTH BOUND                | NB     | SECTION LINE             |       |
| PAGE                       | PG     | QUARTER LINE             |       |
| PERMANENT                  | PERM   | SIXTEENTH LINE           |       |
| PERMANENT LIMITED EASEMENT | PLE    | PROPOSED OR NEW R/W LINE |       |
| PRIVATE DRIVEWAY           | PD     | PROPOSED EASEMENT LINE   |       |
| PROPERTY LINE              | PL     |                          |       |
| RADIUS                     | RD     |                          |       |
| REFERENCE LINE             | RL     | PARCEL NUMBER            | 00    |
| REMAINING                  | REM    | UTILITY NUMBER           | 000   |
| RIGHT OF WAY               | R/W    |                          |       |
| SECTION LINE               | SL     |                          |       |
| FOUND IRON PIPE            | IP     |                          |       |
| STATION                    | STA    |                          |       |
| TEMPORARY LIMITED EASEMENT | TLE    |                          |       |
| TIE POINT                  | TP     |                          |       |
| VOLUME                     | VOL    |                          |       |
| ADJOINING LANDS            | ADJ    |                          |       |
| WITH SAME OWNER            | WSO    |                          |       |
| PARALLEL TO LINE           | PL     |                          |       |
| BUILDING TO BE RAZED       | BRZ    |                          |       |
| FEE ACQUISITION            | FA     |                          |       |

|                            |        |                          |       |
|----------------------------|--------|--------------------------|-------|
| ACCESS POINT               | AP     | SECTION CORNER           | SC    |
| ACCESS RIGHTS              | AR     | (MATERIAL AS NOTED)      |       |
| ACRES                      | AC     | SET R/W MONUMENT W/CAP   | W/CAP |
| CHORD BEARING              | CH BRG | (3/4" BAR X 18"          |       |
| CHORD DISTANCE             | CH DIS | 1.13 LBS/FT)             |       |
| DEED                       | DD     | POINT OF INTERSECTION    | POI   |
| DOCUMENT                   | DOC    | PROPOSED R/W             |       |
| EAST BOUND                 | EB     | BOUNDARY POINT           |       |
| GAS VALVE                  | GV     |                          |       |
| INLET                      | IL     |                          |       |
| LENGTH OF CURVE            | LH     | CORPORATE LIMITS         |       |
| MANHOLE                    | MON    | EXISTING R/W             |       |
| NORTH BOUND                | NB     | SECTION LINE             |       |
| PAGE                       | PG     | QUARTER LINE             |       |
| PERMANENT                  | PERM   | SIXTEENTH LINE           |       |
| PERMANENT LIMITED EASEMENT | PLE    | PROPOSED OR NEW R/W LINE |       |
| PRIVATE DRIVEWAY           | PD     | PROPOSED EASEMENT LINE   |       |
| PROPERTY LINE              | PL     |                          |       |
| RADIUS                     | RD     |                          |       |
| REFERENCE LINE             | RL     | PARCEL NUMBER            | 00    |
| REMAINING                  | REM    | UTILITY NUMBER           | 000   |
| RIGHT OF WAY               | R/W    |                          |       |
| SECTION LINE               | SL     |                          |       |
| FOUND IRON PIPE            | IP     |                          |       |
| STATION                    | STA    |                          |       |
| TEMPORARY LIMITED EASEMENT | TLE    |                          |       |
| TIE POINT                  | TP     |                          |       |
| VOLUME                     | VOL    |                          |       |
| ADJOINING LANDS            | ADJ    |                          |       |
| WITH SAME OWNER            | WSO    |                          |       |
| PARALLEL TO LINE           | PL     |                          |       |
| BUILDING TO BE RAZED       | BRZ    |                          |       |
| FEE ACQUISITION            | FA     |                          |       |

SCALE, FEET

0 50 100



HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095, WISCONSIN STATUTES. THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF

JEFFREY T. BROCK  
PRINTED NAME  
SIGNATURE  
DATE 1-29-2013

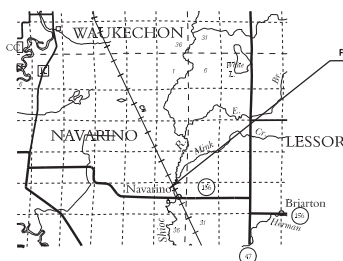
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

BRENT STELLA  
PRINTED NAME  
SIGNATURE  
DATE 1-29-2013

GN

## SCHEDULE OF LANDS &amp; INTERESTS REQUIRED

| SEE ALSO PLAT | OWNER NUMBER | OWNER                                     | INTEREST REQUIRED | FEE SO.FT. | T.L.E. SO.FT. | P.L.E. SO.FT. |
|---------------|--------------|-------------------------------------------|-------------------|------------|---------------|---------------|
|               | 1            | JAMES D. GORDON & ANGELA GORDON           | TLE               | -          | 1262          | -             |
| 4.02          | 2            | WILLIAM S. WROBLESKI & SARAH W. WROBLESKI | TLE               | -          | 8279          | -             |
|               | 3            | GERALD M. SCHWAMER                        | TLE               | -          | 1985          | -             |
|               | 4            | TOWN OF NAVARINO                          | TLE               | -          | 3385          | -             |
|               | 5            | CHAD A. GREGGSON & PAULA GREGGSON         | TLE               | -          | 3809          | -             |
|               | 6            | SAINT LAWRENCE CONGREGATION OF NAVARINO   | TLE               | -          | 3002          | -             |
|               | 7            | RUTH A. SCHROEDER                         | TLE               | -          | 1450          | -             |
|               | 8            | DAVID RICHTER & SALLY RICHTER             | TLE               | -          | 1807          | -             |
|               | 9            | GARY W. KRATZKE                           | TLE               | -          | 1305          | -             |



## TRANSPORTATION PROJECT PLAT NO: 6580-08-21 - 4.01 AMENDMENT 1

AMENDS AND ADDS UTILITY INTEREST TABLE FOR UTILITY OWNER NUMBERS 101 AND 102

THAT PART OF LOT 1 OF CSM 1661, WITHIN AND INCLUDING PART OF THE SE1/4 OF THE NW1/4, SECTION 25; AND LOTS 1 THRU 9 OF BLOCK 1 AND BLOCK 2 OF P.F. DOLANS ADDITION TO GALESBURG; AND LOTS 1 THRU 4, AND 6 THRU 9 OF P.F. DOLANS PLAT OF GALESBURG ALL IN THE NE1/4 OF THE SW1/4, SECTION 25, TOWNSHIP 25 NORTH, RANGE 16 EAST, TOWN OF NAVARINO, SHAWANO COUNTY, WISCONSIN

RELOCATION ORDER STH 156, SHAWANO COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAY OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

DOC # 691351  
Recorded  
May 23, 2013 3:07 PM  
AMY DILLENBURG  
REGISTER OF DEEDS  
SHAWANO COUNTY  
Fee Amount: \$25.00  
Slide 8-309

RESERVED FOR REGISTER OF DEEDS  
PROJECT NUMBER 6580-08-21-4.01  
AMENDMENT NO: 1

SEC116  
COUNTY RECORDS  
N 1/4 COR.  
Y=212284.934  
X=889288.956

## UTILITY INTERESTS REQUIRED

| OWNER NUMBER | OWNER                      | INTEREST REQUIRED |
|--------------|----------------------------|-------------------|
| 101          | BONDUEL TELEPHONE CO., LLC | RELEASE OF RIGHTS |
| 102          | WE ENERGIES                | RELEASE OF RIGHTS |

## UTILITY INTEREST TABLE

| UTILITY | INTEREST TYPE         | PARCEL |
|---------|-----------------------|--------|
| 101     | NO EASEMENT OF RECORD | 1      |
|         | NO EASEMENT OF RECORD | 2      |
|         | NO EASEMENT OF RECORD | 3      |
|         | NO EASEMENT OF RECORD | 4      |
| 102     | NO EASEMENT OF RECORD | 4      |
|         | NO EASEMENT OF RECORD | 5      |

SE-NW

TOWN OF NAVARINO  
FORMERLY GALESBURG

NE-SW

## RESERVE FOR CLAUSES AND NOTE INFORMATION

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS AND ARE REFERENCED TO THE US PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

AREAS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

COORDINATES AS SHOWN ARE NOT INTENDED TO BE USED FOR RETRACEMENT PURPOSES AND MUST BE VERIFIED WITH THE COUNTY SURVEY DEPARTMENT.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, SHAWANO COUNTY, NAD 83 (1993) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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EXISTING RIGHT OF WAY WAS ACQUIRED FROM PROJECT(S): S04160, P.F. DOLANS PLAT TO GALESBURG, P.F. DOLANS ADDITION TO GALESBURG, CSM 1661, CSM 3432

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## CONVENTIONAL ABBREVIATIONS AND SYMBOLS

|                            |         |                          |       |
|----------------------------|---------|--------------------------|-------|
| ACCESS POINT               | AP      | SECTION CORNER           | SC    |
| ACCESS RIGHTS              | AR      | (WATERIAL AS NOTED)      |       |
| ACRES                      | AC      | SET R/W MONUMENT W/CAP   | W/CAP |
| CHORD BEARING              | CH BRG  | (3/4" BAR x 18"          |       |
| CHORD DISTANCE             | CH DIS  | 1.13 LBS/FT)             |       |
| DEED                       | DD      | POINT OF INTERSECTION    | POI   |
| DOCUMENT                   | DOC     | PROPOSED R/W             | PRW   |
| EAST BOUND                 | EB      | BOUNDARY POINT           | BP    |
| GAS VALVE                  | GV      | CORPORATE LIMITS         | CL    |
| INLET                      | IL      | EXISTING R/W             | ERW   |
| LENGTH OF CURVE            | L       | SECTION LINE             | SL    |
| MANHOLE                    | MH      | QUARTER LINE             | QL    |
| MONUMENT                   | MON     | SIXTEENTH LINE           | SLN   |
| NORTH BOUND                | NB      | PROPOSED OR NEW R/W LINE | PRW   |
| PAGE                       | PG      | PROPOSED EASEMENT LINE   | PEL   |
| PERMANENT                  | PERM    | PARCEL NUMBER            | 00    |
| PERMANENT LIMITED EASEMENT | PLME    | UTILITY NUMBER           | 000   |
| PRIVATE DRIVEWAY           | PD      |                          |       |
| PROPERTY LINE              | PL      |                          |       |
| RADIUS                     | R       |                          |       |
| REFERENCE LINE             | RL      |                          |       |
| REMAINING                  | REM     |                          |       |
| RIGHT OF WAY               | R/W     |                          |       |
| SECTION                    | SEC     |                          |       |
| SECTION LINE               | SL      |                          |       |
| FOUND IRON PIPE            | IP      |                          |       |
| STATION                    | STA     |                          |       |
| TEMPORARY LIMITED EASEMENT | TLE     |                          |       |
| TIE POINT                  | TP      |                          |       |
| VOLUME                     | VOL     |                          |       |
| ADJOINING LANDS            | ADJ     |                          |       |
| WITH SAME OWNER            | WSO     |                          |       |
| PARALLEL TO LINE           | PL      |                          |       |
| BUILDING TO BE RAZED       | BR      |                          |       |
| FEE ACQUISITION            | FA      |                          |       |
|                            | VARIOUS |                          |       |

## COMPENSABLE

POWER POLE  
TELEPHONE POLE  
SIGN  
TELEPHONE PEDESTAL

## NON-COMPENSABLE

FIBER OPTIC LINE  
TELEPHONE LINE  
BURIED GAS LINE  
SANITARY SEWER LINE  
BURIED WATER LINE  
BURIED ELECTRIC LINE  
OVERHEAD ELECTRIC LINE

SCALE, FEET

0 50 100

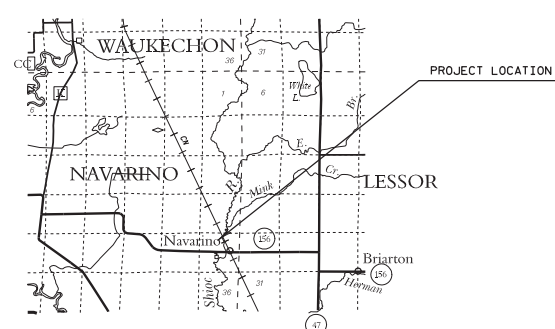
TRANSPORTATION PROJECT PLAT NO: 6580-08-21- 4.02  
THAT PART OF THE SW1/4 OF THE NE1/4, AND LOTS 1 AND 2 OF BLOCK 1, LOTS 1 THRU 8  
OF BLOCK 2, AND VACATED VANGS STREET; VANGS ADDITION TO THE VILLAGE  
OF CALESBURG, WITHIN AND INCLUDING PART OF UNPLATTED LANDS IN THE NW1/4 OF  
THE SE1/4 AND THE SW1/4 OF THE NE1/4 SECTION 25, TOWNSHIP 25 NORTH, RANGE 16 EAST,  
TOWN OF NAVARINO, SHAWANO COUNTY, WISCONSIN

RELOCATION ORDER STH 156, SHAWANO COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

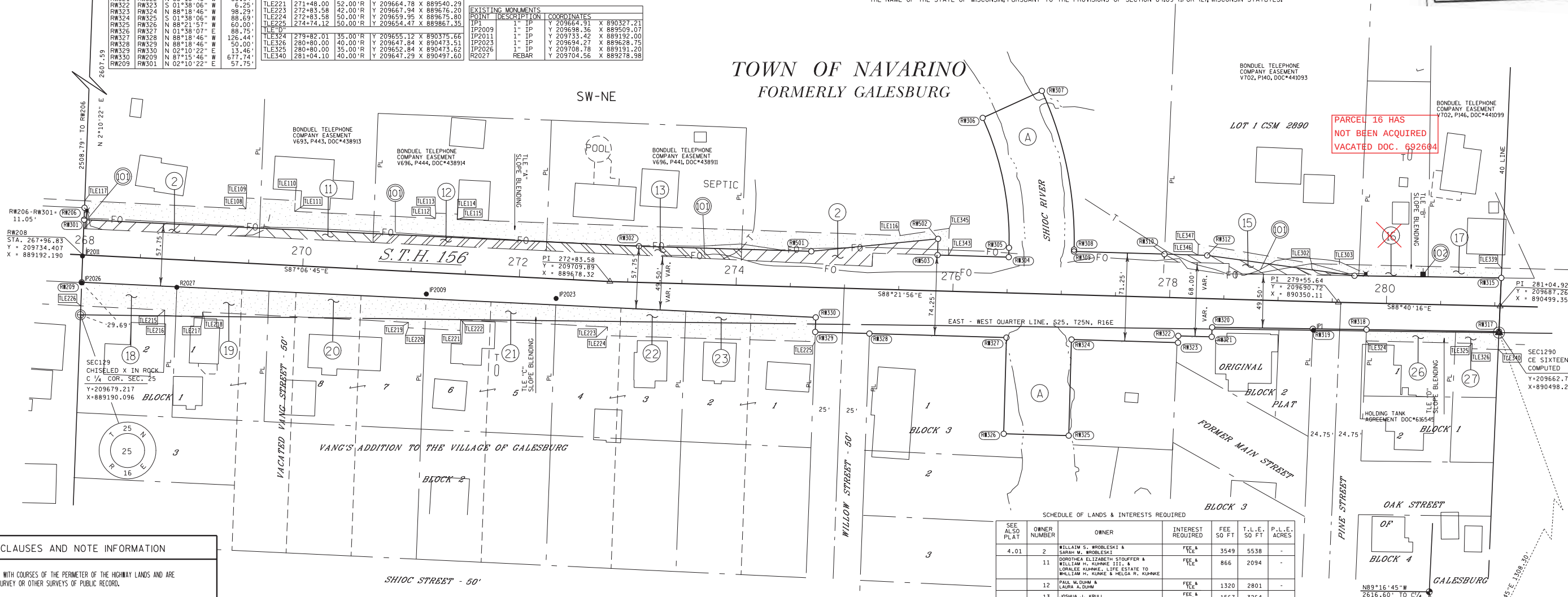
TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.



| R/W CURVE TABLE                       |         |               |           |         | LINE STATION OFFSET TABLE                                                                |              |        |                         |  |
|---------------------------------------|---------|---------------|-----------|---------|------------------------------------------------------------------------------------------|--------------|--------|-------------------------|--|
| R/W                                   | STATION | RADIUS        | DELTA     | LENGTH  | POINT                                                                                    | STATION      | OFFSET | COORDINATES             |  |
| RW305                                 | RW306   | 270.00'       | 26°10'03" | 123.31' | LINE#1                                                                                   |              |        |                         |  |
| RW307                                 | RW308   | 330.00'       | 26°10'03" | 150.71' | LINE#1                                                                                   | 267.96+21.00 | 50.00' | Y 209784.37 X 889194.09 |  |
| R/W CURVE TABLE                       |         |               |           |         | LINE108                                                                                  | 269.45+00.00 | 60.00' | Y 209776.88 X 889343.19 |  |
| FROM                                  | TO      | BEARING       | DISTANCE  |         | LINE110 <td>269.90+00.00</td> <td>50.00'</td> <td>Y 209784.60 X 889388.14</td> <td></td> | 269.90+00.00 | 50.00' | Y 209784.60 X 889388.14 |  |
| RW301                                 | RW302   | S 87°15'46" E | 512.32'   |         | LINE111 <td>269.90+00.00</td> <td>50.00'</td> <td>Y 209774.61 X 889387.63</td> <td></td> | 269.90+00.00 | 50.00' | Y 209774.61 X 889387.63 |  |
| RW302                                 | RW303   | S 7°15'12" E  | 119.44'   |         | LINE112 <td>271.20+00.00</td> <td>50.00'</td> <td>Y 209782.27 X 889392.45</td> <td></td> | 271.20+00.00 | 50.00' | Y 209782.27 X 889392.45 |  |
| RW303                                 | RW304   | N 84°22'44" E | 155.44'   |         | LINE113 <td>271.20+00.00</td> <td>55.00'</td> <td>Y 209773.06 X 889517.72</td> <td></td> | 271.20+00.00 | 55.00' | Y 209773.06 X 889517.72 |  |
| RW502                                 | RW503   | S 1°38'04" W  | 14.94'    |         | LINE115 <td>271.40+00.00</td> <td>50.00'</td> <td>Y 209767.06 X 889357.34</td> <td></td> | 271.40+00.00 | 50.00' | Y 209767.06 X 889357.34 |  |
| RW503                                 | RW504   | S 88°18'53" W | 65.64'    |         | LINE116 <td>275.50+00.00</td> <td>50.00'</td> <td>Y 209712.05 X 889314.14</td> <td></td> | 275.50+00.00 | 50.00' | Y 209712.05 X 889314.14 |  |
| RW505                                 | RW506   | N 8°39'32" E  | 83.92'    |         | LINE117 <td>275.50+00.00</td> <td>50.00'</td> <td>Y 209752.27 X 889496.06</td> <td></td> | 275.50+00.00 | 50.00' | Y 209752.27 X 889496.06 |  |
| RW505                                 | RW506   | N 11°26'56" W | 122.24'   |         | LINE345 <td>275.95+00.00</td> <td>38.00'</td> <td>Y 209758.98 X 889917.22</td> <td></td> | 275.95+00.00 | 38.00' | Y 209758.98 X 889917.22 |  |
| SEE CURVE TABLE FOR CURVE INFORMATION |         |               |           |         | LINE345 <td>275.95+00.00</td> <td>33.00'</td> <td>Y 209734.04 X 889990.56</td> <td></td> | 275.95+00.00 | 33.00' | Y 209734.04 X 889990.56 |  |
| RW307                                 | RW308   | N 65°07'12" E | 60.12'    |         | LINE346 <td>278.25+00.00</td> <td>39.84'</td> <td>Y 209734.26 X 890220.66</td> <td></td> | 278.25+00.00 | 39.84' | Y 209734.26 X 890220.66 |  |
| RW307                                 | RW308   | N 2°26'53" E  | 149.41'   |         | LINE347 <td>278.25+00.00</td> <td>50.00'</td> <td>Y 209744.42 X 890220.95</td> <td></td> | 278.25+00.00 | 50.00' | Y 209744.42 X 890220.95 |  |
| SEE CURVE TABLE FOR CURVE INFORMATION |         |               |           |         | LINE348 <td>278.25+00.00</td> <td>50.00'</td> <td>Y 209681.07 X 890325.48</td> <td></td> | 278.25+00.00 | 50.00' | Y 209681.07 X 890325.48 |  |
| RW308                                 | RW309   | S 01°38'14" W | 1.68'     |         | LINE303 <td>279.55+00.00</td> <td>35.00'</td> <td>Y 209725.70 X 890351.51</td> <td></td> | 279.55+00.00 | 35.00' | Y 209725.70 X 890351.51 |  |
| RW309                                 | RW504   | S 88°18'53" W | 83.48'    |         | LINE339 <td>281.05+09.35</td> <td>35.00'</td> <td>Y 209722.23 X 890500.83</td> <td></td> | 281.05+09.35 | 35.00' | Y 209722.23 X 890500.83 |  |
| RW310                                 | RW504   | S 88°18'46" W | 83.48'    |         |                                                                                          |              |        |                         |  |
| RW504                                 | RW505   | S 82°08'04" W | 137.10'   |         |                                                                                          |              |        |                         |  |
| RW315                                 | RW316   | S 02°27'47" W | 35.10'    |         | LINE126                                                                                  | 267.97+42.00 | 47.00' | Y 209687.44 X 889190.41 |  |
| RW315                                 | RW316   | S 02°27'47" W | 35.10'    |         | LINE125                                                                                  | 268.75+00.00 | 47.00' | Y 209683.53 X 889267.89 |  |
| RW316                                 | RW317   | S 02°27'47" W | 24.52'    |         | LINE126                                                                                  | 268.75+00.00 | 52.00' | Y 209678.54 X 889302.45 |  |
| RW317                                 | RW318   | S 08°40'38" W | 49.52'    |         | LINE127                                                                                  | 269.10+00.00 | 52.00' | Y 209676.77 X 889302.60 |  |
| RW318                                 | RW319   | S 89°09'04" W | 49.52'    |         | LINE129                                                                                  | 271.40+00.00 | 52.00' | Y 209672.20 X 889492.61 |  |
| RW319                                 | RW320   | N 89°09'04" W | 92.85'    |         | LINE220                                                                                  | 271.40+00.00 | 52.00' | Y 209667.20 X 889492.35 |  |
| RW320                                 | RW321   | S 02°28'13" W | 8.84'     |         | LINE222                                                                                  | 271.40+00.00 | 52.00' | Y 209674.07 X 889540.80 |  |
| RW322                                 | RW323   | S 01°38'06" W | 68.69'    |         | LINE221                                                                                  | 271.40+00.00 | 52.00' | Y 209664.78 X 889540.29 |  |
| RW322                                 | RW323   | S 01°38'06" W | 6.25'     |         | LINE223                                                                                  | 272.83+58.42 | 52.00' | Y 209667.94 X 889676.20 |  |
| RW323                                 | RW324   | S 88°18'46" W | 98.29'    |         | LINE225                                                                                  | 274.72+12.50 | 50.00' | Y 209654.47 X 889667.35 |  |
| RW324                                 | RW325   | S 01°38'06" W | 68.69'    |         | LINE225                                                                                  | 274.72+12.50 | 50.00' | Y 209654.47 X 889667.35 |  |
| RW325                                 | RW326   | S 01°38'07" E | 88.75'    |         | LINE226                                                                                  | 279.82+00.01 | 35.00' | Y 209655.12 X 890375.66 |  |
| RW326                                 | RW327   | S 01°38'07" E | 88.75'    |         | LINE226                                                                                  | 2            |        |                         |  |
| RW327                                 | RW328   | N 88°18'46" W | 126.44'   |         | LINE226                                                                                  | 280.80+00.00 | 35.00' | Y 209652.84 X 890473.62 |  |
| RW328                                 | RW329   | N 88°18'46" W | 126.44'   |         | LINE325                                                                                  | 280.80+00.00 | 35.00' | Y 209652.84 X 890473.62 |  |
| RW329                                 | RW330   | N 02°10'22" E | 13.46'    |         | LINE340                                                                                  | 281.04+00.00 | 40.00' | Y 209647.29 X 890497.60 |  |
| RW330                                 | RW331   | N 87°15'46" E | 677.74'   |         |                                                                                          |              |        |                         |  |
| RW330                                 | RW331   | N 02°10'22" E | 57.75'    |         |                                                                                          |              |        |                         |  |

| EXISTING MONUMENTS |             | COORDINATES |             |
|--------------------|-------------|-------------|-------------|
| POINT              | DESCRIPTION |             |             |
| IP1                | 1" IP       | Y 209664.91 | X 890327.21 |
| IP2009             | 1" IP       | Y 209698.36 | X 889509.07 |
| IP2011             | 1" IP       | Y 209733.42 | X 889192.00 |
| IP2023             | 1" IP       | Y 209694.27 | X 889628.75 |
| IP2026             | 1" IP       | Y 209708.78 | X 889191.20 |
| R2027              | REBAR       | Y 209704.56 | X 889278.98 |



| SEE ALSO PLAT | OWNER NUMBER  | OWNER                                                                                                                 | INTEREST REQUIRED | FE \$O FT      | T.L.E. \$O FT | P.L.E., ACRES |
|---------------|---------------|-----------------------------------------------------------------------------------------------------------------------|-------------------|----------------|---------------|---------------|
| 4.01          | 2             | WILLIAM S. WROBLESKI & SARAH M. WROBLESKI                                                                             | FE & TLE          | 3549           | 5538          | -             |
|               | 11            | DOROTHEA ELIZABETH STOFFER & WILLIAM H. KURME III.; A LORALEE KURME, LIFE ESTATE TO WILLIAM H. KURME & MELBA K. KURME | FE & TLE          | 866            | 2094          | -             |
|               | 12            | PAUL M. DUHM & LAURA A. DUHM                                                                                          | FE & TLE          | 1320           | 2801          | -             |
|               | 13            | JOSHUA J. KRULL                                                                                                       | FE & TLE          | 1567           | 3264          | -             |
|               | 15            | DAVID HILLSBERG                                                                                                       | FE & TLE          | 1223           | 1144          | -             |
|               | <del>16</del> | <del>BONDUCE TELEPHONE COMPANY</del>                                                                                  | <del>TLE</del>    | <del>627</del> | <del>-</del>  | <del>-</del>  |
| 4.03          | 17            | ROBERT J. FIGLINSKI & MARIE A. FIGLINSKI                                                                              | TLE               | -              | 628           | -             |
|               | 18            | PATRICK A. GARNEY                                                                                                     | TLE               | -              | 1974          | -             |
|               | 19            | JASON A. TABULE & DIANA TABULE                                                                                        | TLE               | -              | 2004          | -             |
|               | 20            | SCOTT J. RENDEL & CHRISTINE RENDEL                                                                                    | TLE               | -              | 3329          | -             |
|               | 21            | BONITA DABLER                                                                                                         | TLE               | -              | 2453          | -             |
|               | 22            | NANCY CARPENTER                                                                                                       | TLE               | -              | 2866          | -             |
|               | 23            | EDWARD T. HARBATH & CONNIE M. HARBATH                                                                                 | TLE               | -              | 2824          | -             |
|               | 26            | MARK B. PEETERS & TERRI A. PEETERS                                                                                    | TLE               | -              | 889           | -             |
|               | 27            | DAVID A. SCHONOVER                                                                                                    | TLE               | -              | 574           | -             |

| R/W STATION OFFSET AND COORDINATE TABLE |             |          |             |             |
|-----------------------------------------|-------------|----------|-------------|-------------|
| POINT                                   | STATION     | OFFSET   | COORDINATES |             |
| RW301                                   | 267.96+4.3  | 32.52 L  | Y 207666.91 | X 889193.23 |
| RW302                                   | 267.96+1.15 | 32.52 L  | Y 207666.91 | X 889193.23 |
| RW302                                   | 273.09+4.8  | 33.30 L  | Y 207242.44 | X 887005.16 |
| RW303                                   | 274.68+5.0  | 33.16 L  | Y 207377.76 | X 889684.11 |
| RW304                                   | 275.24+4.0  | 33.16 L  | Y 207377.76 | X 889684.11 |
| RW330                                   | 274.74+3.3  | 57.63 R  | Y 207676.83 | X 889688.20 |
| RW328                                   | 275.24+2.0  | 41.14 L  | Y 206661.90 | X 889917.67 |
| RW302                                   | 275.24+6.6  | 33.16 L  | Y 207377.76 | X 889684.11 |
| RW503                                   | 275.85+0.0  | 33.00 L  | Y 207374.34 | X 889880.56 |
| RW326                                   | 276.50+6.4  | 130.00 R | Y 206569.47 | X 890041.52 |
| RW326                                   | 276.50+6.4  | 130.00 R | Y 206569.47 | X 890041.52 |
| RW327                                   | 276.50+6.4  | 130.00 R | Y 206568.18 | X 890044.05 |
| RW325                                   | 277.10+10.6 | 130.00 R | Y 206567.76 | X 890101.50 |
| RW325                                   | 277.10+10.6 | 130.00 R | Y 206567.76 | X 890101.50 |
| RW324                                   | 277.10+10.6 | 131.31 R | Y 206566.41 | X 890104.03 |
| RW321                                   | 277.94+10.3 | 39.16 R  | Y 206355.17 | X 890189.77 |
| RW319                                   | 278.10+10.3 | 39.16 R  | Y 206355.17 | X 890189.77 |
| RW322                                   | 278.08+9.3  | 35.85 R  | Y 206359.77 | X 890202.45 |
| RW504                                   | 278.33+5.9  | 36.83 R  | Y 206344.01 | X 890222.45 |
| RW318                                   | 278.33+5.9  | 36.83 R  | Y 206344.01 | X 890222.45 |
| RW327                                   | 278.33+9.9  | 39.34 R  | Y 206667.69 | X 890233.76 |
| RW317                                   | 279.32+6.8  | 25.06 R  | Y 206666.31 | X 890326.60 |
| RW317                                   | 279.32+6.8  | 25.06 R  | Y 206666.31 | X 890326.60 |
| RW318                                   | 278.82+2.2  | 24.53 R  | Y 206665.58 | X 890376.11 |
| RW318                                   | 278.82+2.2  | 24.53 R  | Y 206665.58 | X 890376.11 |
| RW316                                   | 280.04+9.2  | 25.01 L  | Y 206662.76 | X 890459.45 |
| RW315                                   | 280.04+9.2  | 25.01 L  | Y 206662.76 | X 890459.45 |
| RW351                                   | 281.05+4.3  | 26.01 L  | Y 207313.24 | X 890900.36 |

| OWNER NUMBER | OWNER                     | INTEREST REQUIRED |
|--------------|---------------------------|-------------------|
| 101          | BONDUEL TELEPHONE CO. LLC | RELEASE OF RIGHTS |
| 102          | WE ENERGIES               | RELEASE OF RIGHTS |

I HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095,  
WISCONSIN STATUTES. THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF

|                  |                         |           |
|------------------|-------------------------|-----------|
| JEFFREY T. BROCK | <i>Jeffrey T. Brock</i> | 1-29-2013 |
| PRINTED NAME     | SIGNATURE               | DATE      |

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN  
DEPARTMENT OF TRANSPORTATION

|              |                       |           |
|--------------|-----------------------|-----------|
| BRENT STELLA | <i>Brent L Stella</i> | 1-29-2013 |
| PRINTED NAME | SIGNATURE             | E         |

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RESERVE FOR CLAUSES AND NOTE INFORMATION

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS AND ARE REFERENCED TO THE US PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

AREAS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

COORDINATES AS SHOWN ARE NOT INTENDED TO BE USED FOR RETRACEMENT PURPOSES AND MUST BE VERIFIED WITH THE COUNTY SURVEY DEPARTMENT.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, SHAWANO COUNTY, NAD 83 (1999) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING RIGHT OF WAY IS BASED ON: 6580-09-21, DJ 3788, VANGS ADDITION TO THE VILLAGE OF GALESBURG,  
THE ORIGINAL PLAT OF GALESBURG, CSM 2890

RIGHT OF WAY REFERENCE LINE MAY NOT BE THE SAME AS THE CONSTRUCTION REFERENCE LINE.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE TO PREVENT EROSION OF THE SOIL. ALL TLEs ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN. TLEs OBTAINED IN SOME AREAS OF THIS PLAT ARE TO THE FACE OF BUILDINGS, BUILDINGS WILL NOT BE ADVERSELY AFFECTED.

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO DEPARTMENT OF TRANSPORTATION.

### CONVENTIONAL ABBREVIATIONS AND SYMBOLS

ACCESS POINT  
ACCESS RIGHTS  
ACCESS  
CHORD BEARING  
CHORD DISTANCE  
CHORD  
DEED  
DOCUMENT  
EAST BOUND  
FACE VALVE  
INLET  
LENGTH OF CURVE  
MANHOLE  
MONUMENT  
NORTH SOUND  
PAGE  
PERMANENT  
PERMANENT LIMITED EASEMENT  
PRIVATE DRIVEWAY  
PROPERTY LINE  
RADIUS  
REFERENCE LINE  
REMAINING  
RIGHT OF WAY  
SECTION  
SECTION LINE  
FOUND FROM PIPE  
STATION  
TEMPORARY LIMITED EASEMENT  
TIE POINT  
VOLUME  
ADJOINING LANDS  
WITH SAME OWNER  
PARALLEL TO LINE  
BUILDING TO BE RAZED  
FEE ACQUISITION

AP  
BR  
AC  
CH BRG  
CH DLS  
DOC  
EB  
GV  
L  
M  
MC  
MON  
NB  
PC  
PERM  
PL  
RAD  
REC  
R/W  
S  
IP  
STA  
TLE  
DEI  
VOL

SECTION CORNER  
(MATERIAL AS NOTED)  
SET R/W MONUMENT W/C  
0/4 " 1.13 LB X 18"  
1.13 LB X 18"

POINT OF INTERSECTION  
PROPOSED R/W  
BOUNDARY POINT  
CORPORATE LIMITS  
EXISTING R/W  
SECTION LINE  
QUARTER LINE  
SIXTEENTH LINE  
PROPOSED OR NEW R/W  
PROPOSED EASEMENT LINE

PARCEL NUMBER

UTILITY NUMBER

PROPERTY LINE  
LOT, TIE AND OTHER M  
DASHED LINE  
ACCESS RESTRICTED  
(By Previous Acquisi  
(Control)  
(By Acquisition)  
NO ACCESS  
(By Statutory Authori  
LIMITED EASEMENT  
(Temporary or Perman

00'

WARRORS

Figure 1 illustrates standard symbols for utility lines, categorized into COMPENSABLE and NON-COMPENSABLE.

**COMPENSABLE:**

- PRWOOD: Represented by a series of parallel diagonal lines.
- POWER POLE: Represented by a vertical line with a crossbar.
- TELEPHONE POLE: Represented by a vertical line with a crossbar.
- SIGN: Represented by a vertical line with a crossbar and a small square.
- TELEPHONE PEDESTAL: Represented by a vertical line with a crossbar and a small square.

**NON-COMPENSABLE:**

- F0: Represented by a horizontal line with a crossbar.
- T: Represented by a horizontal line with a crossbar.
- G: Represented by a horizontal line with a crossbar.
- SAN: Represented by a horizontal line with a crossbar.
- E: Represented by a horizontal line with a crossbar.
- OH: Represented by a horizontal line with a crossbar.

NW-SE

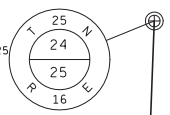
SCALE, FEET

0 50 100

GN



SEC116  
COUNTY RECORDS  
N 1/4 COR. SEC. 25  
Y=212284.934  
X=889288.956



## UTILITY INTEREST TABLE

| UTILITY | INTEREST TYPE         | PARCEL |
|---------|-----------------------|--------|
| 101     | NO EASEMENT OF RECORD | 2      |
|         | V.696, P.443          | 11     |
|         | V.696, P.444          | 12     |
|         | V.696, P.441          | 13     |
|         | V.702, P.140          | 15     |
|         | V.702, P.146          | 17     |
| 102     | NO EASEMENT OF RECORD | 15     |
|         | NO EASEMENT OF RECORD | 16     |

| R/W CURVE TABLE |       |         |           |         |
|-----------------|-------|---------|-----------|---------|
| FROM            | TO    | RAIUS   | DELTA     | LENGTH  |
| RW305           | RW306 | 270.00' | 26°10'01" | 123.31' |
| RW307           | RW308 | 330.00' | 26°10'03" | 150.71' |

| R/W COURSE TABLE |       |               |          |  |
|------------------|-------|---------------|----------|--|
| FROM             | TO    | BEARING       | DISTANCE |  |
| RW301            | RW302 | S 87°15'46" E | 512.32'  |  |
| RW302            | RW303 | S 88°18'53" E | 159.02'  |  |
| RW303            | RW304 | N 84°22'34" E | 117.44'  |  |
| RW304            | RW305 | N 1°38'04" E  | 14.94'   |  |
| RW305            | RW306 | S 88°18'53" E | 65.64'   |  |
| RW306            | RW307 | N 01°38'14" W | 8.62'    |  |
| RW307            | RW308 | N 11°26'56" W | 127.24'  |  |

SEE CURVE TABLE FOR CURVE INFORMATION

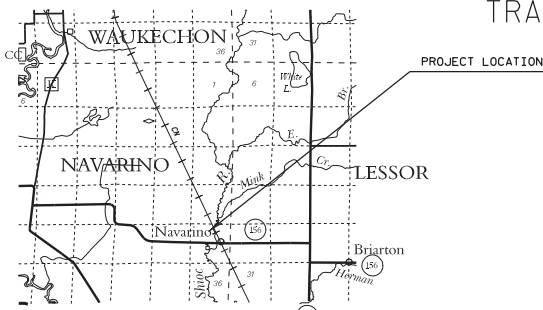
|       |       |               |         |  |
|-------|-------|---------------|---------|--|
| RW306 | RW307 | N 65°28'08" E | 60.00'  |  |
| RW307 | RW308 | S 11°26'53" E | 149.41' |  |

SEE CURVE TABLE FOR CURVE INFORMATION

|       |       |               |         |  |
|-------|-------|---------------|---------|--|
| RW308 | RW309 | S 01°38'14" W | 1.68'   |  |
| RW309 | RW310 | S 88°18'46" W | 85.46'  |  |
| RW310 | RW311 | S 88°18'46" W | 39.48'  |  |
| RW311 | RW312 | S 89°09'04" E | 135.44' |  |
| RW312 | RW313 | S 02°27'47" W | 26.01'  |  |
| RW313 | RW314 | S 02°27'47" W | 24.52'  |  |
| RW314 | RW315 | N 88°40'38" W | 122.21' |  |
| RW315 | RW316 | N 89°09'04" W | 49.52'  |  |
| RW316 | RW317 | S 02°27'47" W | 92.85'  |  |
| RW317 | RW318 | N 88°40'38" W | 8.84'   |  |
| RW318 | RW319 | N 89°09'04" W | 30.94'  |  |
| RW319 | RW320 | S 02°28'13" W | 3.94'   |  |
| RW320 | RW321 | S 01°38'06" W | 6.25'   |  |
| RW321 | RW322 | S 01°38'06" W | 98.29'  |  |
| RW322 | RW323 | S 01°38'06" W | 88.59'  |  |
| RW323 | RW324 | S 01°38'06" W | 60.00'  |  |
| RW324 | RW325 | S 01°38'06" W | 88.75'  |  |
| RW325 | RW326 | S 01°38'06" W | 126.44' |  |
| RW326 | RW327 | S 01°38'06" W | 50.00'  |  |
| RW327 | RW328 | S 01°38'06" W | 13.46'  |  |
| RW328 | RW329 | S 01°38'06" W | 67.74'  |  |
| RW329 | RW330 | S 01°38'06" W | 57.75'  |  |
| RW330 | RW331 | S 01°38'06" W |         |  |
| RW331 | RW332 | S 01°38'06" W |         |  |
| RW332 | RW333 | S 01°38'06" W |         |  |
| RW333 | RW334 | S 01°38'06" W |         |  |
| RW334 | RW335 | S 01°38'06" W |         |  |
| RW335 | RW336 | S 01°38'06" W |         |  |
| RW336 | RW337 | S 01°38'06" W |         |  |
| RW337 | RW338 | S 01°38'06" W |         |  |
| RW338 | RW339 | S 01°38'06" W |         |  |
| RW339 | RW340 | S 01°38'06" W |         |  |

| TILE STATION OFFSET TABLE |           |         |             |             |
|---------------------------|-----------|---------|-------------|-------------|
| POINT                     | STATION   | OFFSET  | COORDINATES |             |
| TLE107                    | 267+96.21 | 50.00'L | Y 209784.37 | X 889194.09 |
| TLE108                    | 269+90.00 | 60.00'L | Y 209776.88 | X 889342.69 |
| TLE109                    | 269+90.00 | 60.00'L | Y 209786.87 | X 889343.19 |
| TLE110                    | 271+20.00 | 55.00'L | Y 209784.60 | X 889381.14 |
| TLE111                    | 269+90.00 | 50.00'L | Y 209774.61 | X 889387.63 |
| TLE112                    | 271+20.00 | 50.00'L | Y 209768.06 | X 889517.47 |
| TLE113                    | 271+20.00 | 55.00'L | Y 209773.06 | X 889517.72 |
| TLE114                    | 271+20.00 | 55.00'L | Y 209767.06 | X 889537.44 |
| TLE115                    | 271+20.00 | 55.00'L | Y 209772.05 | X 889537.69 |
| TLE116                    | 271+20.00 | 55.00'L | Y 209752.27 | X 889946.06 |
| TLE117                    | 271+20.00 | 58.00'L | Y 209758.98 | X 889991.27 |
| TLE118                    | 271+20.00 | 58.00'L | Y 209734.04 | X 889990.56 |
| TLE119                    | 271+20.00 | 58.00'L | Y 209734.26 | X 890220.66 |
| TLE120                    | 271+20.00 | 58.00'L | Y 209744.42 | X 890220.95 |
| TLE121                    | 271+20.00 | 58.00'L | Y 209726.44 | X 890325.48 |
| TLE122                    | 271+20.00 | 58.00'L | Y 209725.70 | X 890351.11 |
| TLE123                    | 271+20.00 | 58.00'L | Y 209722.23 | X 890500.83 |
| TLE124                    | 271+20.00 | 58.00'L | Y 209734.26 | X 890220.66 |
| TLE125                    | 271+20.00 | 58.00'L | Y 209683.53 | X 889267.89 |
| TLE126                    | 271+20.00 | 58.00'L | Y 209678.54 | X 889267.64 |
| TLE127                    | 271+20.00 | 58.00'L | Y 209681.77 | X 889302.85 |
| TLE128                    | 271+20.00 | 58.00'L | Y 209676.77 | X 889302.60 |
| TLE129                    | 271+20.00 | 58.00'L | Y 209672.20 | X 889492.61 |
| TLE130                    | 271+20.00 | 58.00'L | Y 209667.20 | X 889492.35 |
| TLE131                    | 271+20.00 | 58.00'L | Y 209674.77 | X 889540.80 |
| TLE132                    | 271+20.00 | 58.00'L | Y 209664.78 | X 889540.29 |
| TLE133                    | 271+20.00 | 58.00'L | Y 209667.94 | X 889676.20 |
| TLE134                    | 271+20.00 | 58.00'L | Y 209659.95 | X 889675.80 |
| TLE135                    | 271+20.00 | 58.00'L | Y 209654.47 | X 889667.35 |
| TLE136                    | 271+20.00 | 58.00'L | Y 209655.12 | X 890375.66 |
| TLE137                    | 271+20.00 | 58.00'L | Y 209647.84 | X 890473.51 |
| TLE138                    | 271+20.00 | 58.00'L | Y 209652.84 | X 890473.62 |
| TLE139                    | 271+20.00 | 58.00'L | Y 209647.29 | X 890497.60 |
| TLE140                    | 271+20.00 | 58.00'L | Y 209647.29 | X 890497.60 |

| EXISTING MONUMENTS |             |             |             |  |
|--------------------|-------------|-------------|-------------|--|
| POINT              | DESCRIPTION | COORDINATES |             |  |
| IP1                | 1" IP       | Y 209664.91 | X 890327.21 |  |
| IP2009             | 1" IP       | Y 209698.36 | X 889509.07 |  |
| IP2011             | 1" IP       | Y 209733.42 | X 889192.00 |  |
| IP2023             | 1" IP       | Y 209694.27 | X 889628.75 |  |
| IP2026             | 1" IP       | Y 209708.78 | X 889191.20 |  |
| R2027              | REBAR       | Y 209704.56 | X 889278.98 |  |



## TRANSPORTATION PROJECT PLAT NO: 6580-08-21- 4.02 AMENDMENT 1

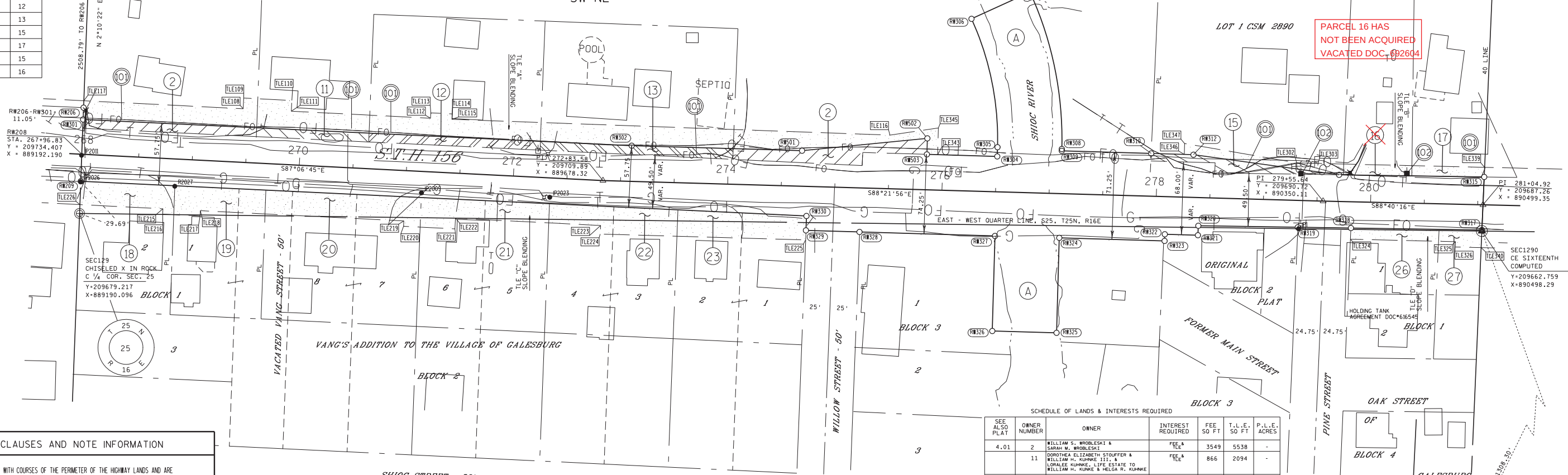
AMENDS AND ADDS UTILITY INTEREST TABLE FOR UTILITY OWNER NUMBERS 101 AND 102

THAT PART OF THE SW1/4 OF THE NE1/4, AND LOTS 1 AND 2 OF BLOCK 1, LOTS 1 THRU 8 OF BLOCK 2, AND VACATED VANGS STREET; VANGS ADDITION TO THE VILLAGE OF GALESBURG, WITHIN AND INCLUDING PART OF UNPLATTED LANDS IN THE NW1/4 OF THE SE1/4 AND THE SW1/4 OF THE NE1/4 SECTION 25, TOWNSHIP 25 NORTH, RANGE 16 EAST, TOWN OF NAVARINO, SHAWANO COUNTY, WISCONSIN

RELOCATION ORDER STH 156, SHAWANO COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:  
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAY OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.  
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

TOWN OF NAVARINO  
FORMERLY GALESBURG

## RESERVE FOR CLAUSES AND NOTE INFORMATION

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS AND ARE REFERENCED TO THE US PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

AREAS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

COORDINATES AS SHOWN ARE NOT INTENDED TO BE USED FOR RETRACEMENT PURPOSES AND MUST BE VERIFIED WITH THE COUNTY SURVEY DEPARTMENT.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, SHAWANO COUNTY, NAD 83 (1993) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING RIGHT OF WAY IS BASED ON 6580-09-2L DJ 3788, VANGS ADDITION TO THE VILLAGE OF GALESBURG, THE ORIGINAL PLAT OF GALESBURG, CSM 2890

RIGHT OF WAY REFERENCE LINE MAY NOT BE THE SAME AS THE CONSTRUCTION REFERENCE LINE.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE TO PREVENT EROSION OF THE SOIL. ALL TLES ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN. TLES OBTAINED IN SOME AREAS OF THIS PLAT ARE TO THE FACE OF BUILDINGS, BUILDINGS WILL NOT BE ADVERSELY AFFECTED.

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO DEPARTMENT OF TRANSPORTATION.

## CONVENTIONAL ABBREVIATIONS AND SYMBOLS

|                            |        |                          |     |
|----------------------------|--------|--------------------------|-----|
| ACCESS POINT               | AP     | SECTION CORNER           | SC  |
| ACCESS RIGHTS              | AR     | (MATERIAL AS NOTED)      |     |
| CHORD BEARING              | CH BRG | SET R/W MONUMENT W/CAP   |     |
| CHORD DISTANCE             | CH DIS | (3/4" BAR X 18"          |     |
|                            |        | 1.13 LBS/FT)             |     |
| DOCUMENT                   | DOC    | POINT OF INTERSECTION    | POI |
| EAST BOUND                 | EB     | PROPOSED R/W             |     |
| EXISTING VALVE             | EV     | BOUNDARY POINT           |     |
| INLET                      | IN     | CORPORATE LIMITS         |     |
| LENGTH OF CURVE            | LC     | EXISTING R/W             |     |
| MONUMENT                   | MON    | SECTION LINE             |     |
| NORTH BOUND                | NB     | SIXTEENTH LINE           |     |
| PAGE                       | PG     | PROPOSED OR NEW R/W LINE |     |
| PERMANENT                  | PERM   | PROPOSED EASEMENT LINE   |     |
| PERMANENT LIMITED EASEMENT | PLEM   |                          |     |
| PRIVATE DRIVEWAY           | PD     |                          |     |
| PROPERTY LINE              | PL     |                          |     |
| RAIUS                      | RAI    |                          |     |
| REFERENCE LINE             | REF    |                          |     |
| REMAINING                  | REM    |                          |     |
| RIGHT OF WAY               | R/W    |                          |     |
| SECTION LINE               | SL     |                          |     |
| FOUND IRON PIPE            | IP     |                          |     |
| STATION                    | STA    |                          |     |
| TEMPORARY LIMITED EASEMENT | TLEM   |                          |     |
| TIE POINT                  | TP     |                          |     |
| VOLUME                     | VOL    |                          |     |
| ADJOINING LANDS            | ADJ    |                          |     |
| WITH SAME OWNER            | W/SE   |                          |     |
| PARALLEL TO LINE           | PL     |                          |     |
| BUILDING TO BE RAZED       | BRZ    |                          |     |
| FEE ACQUISITION            | FA     |                          |     |

|                            |        |                          |     |
|----------------------------|--------|--------------------------|-----|
| ACCESS POINT               | AP     | SECTION CORNER           | SC  |
| ACCESS RIGHTS              | AR     | (MATERIAL AS NOTED)      |     |
| CHORD BEARING              | CH BRG | SET R/W MONUMENT W/CAP   |     |
| CHORD DISTANCE             | CH DIS | (3/4" BAR X 18"          |     |
|                            |        | 1.13 LBS/FT)             |     |
| DOCUMENT                   | DOC    | POINT OF INTERSECTION    | POI |
| EAST BOUND                 | EB     | PROPOSED R/W             |     |
| EXISTING VALVE             | EV     | BOUNDARY POINT           |     |
| INLET                      | IN     | CORPORATE LIMITS         |     |
| LENGTH OF CURVE            | LC     | EXISTING R/W             |     |
| MONUMENT                   | MON    | SECTION LINE             |     |
| NORTH BOUND                | NB     | SIXTEENTH LINE           |     |
| PAGE                       | PG     | PROPOSED OR NEW R/W LINE |     |
| PERMANENT                  | PERM   | PROPOSED EASEMENT LINE   |     |
| PERMANENT LIMITED EASEMENT | PLEM   |                          |     |
| PRIVATE DRIVEWAY           | PD     |                          |     |
| PROPERTY LINE              | PL     |                          |     |
| RAIUS                      | RAI    |                          |     |
| REFERENCE LINE             | REF    |                          |     |
| REMAINING                  | REM    |                          |     |
| RIGHT OF WAY               | R/W    |                          |     |
| SECTION LINE               | SL     |                          |     |
| FOUND IRON PIPE            | IP     |                          |     |
| STATION                    | STA    |                          |     |
| TEMPORARY LIMITED EASEMENT | TLEM   |                          |     |
| TIE POINT                  | TP     |                          |     |
| VOLUME                     | VOL    |                          |     |
| ADJOINING LANDS            | ADJ    |                          |     |
| WITH SAME OWNER            | W/SE   |                          |     |
| PARALLEL TO LINE           | PL     |                          |     |
| BUILDING TO BE RAZED       | BRZ    |                          |     |
| FEE ACQUISITION            | FA     |                          |     |

NW-SE

COMPENSABLE NON-COMPENSABLE

|                    |     |                        |     |
|--------------------|-----|------------------------|-----|
| POWER POLE         | PP  | FIBER OPTIC LINE       | FO  |
| TELEPHONE POLE     | TP  | TELEPHONE LINE         | T   |
| STION              | ST  | BURIED GAS LINE        | G   |
| TELEPHONE PEDESTAL | TPD | SANITARY SEWER LINE    | SAN |
|                    |     | BURIED WATER LINE      | W   |
|                    |     | BURIED ELECTRIC LINE   | E   |
|                    |     | OVERHEAD ELECTRIC LINE | OH  |

| R/W STATION OFFSET AND COORDINATE TABLE |           |          |             |             |
|-----------------------------------------|-----------|----------|-------------|-------------|
| POINT                                   | STATION   | OFFSET   | COORDINATES |             |
| RW301                                   | 267+96.43 | 52.52'L  | Y 209766.91 | X 889193.42 |
| RW209                                   | 267+97.15 | 25.23'R  | Y 209709.19 | X 889191.23 |
| RW302                                   | 273+09.48 | 33.30'L  | Y 209742.44 | X 889705.16 |
| RW501                                   | 274+06.50 | 33.16'L  | Y 209737.76 | X 889664.11 |
| RW329                                   | 274+74.20 | 41.09'R  | Y 209663.38 | X 889867.69 |
| RW330                                   | 274+74.33 | 27.63'R  | Y 209676.83 | X 889868.20 |
| RW328                                   | 275+24.20 | 41.14'R  | Y 209661.90 | X 889917.67 |
| RW502                                   | 275+85.00 | 48.00'L  | Y 209749.27 | X 889980.99 |
| RW503                                   | 275+85.00 | 33.06'L  | Y 209734.34 | X 889980.56 |
| RW326                                   | 276+50.64 | 130.00'R | Y 209669.47 | X 890041.52 |
| RW327                                   | 276+50.64 | 41.25'R  | Y 209658.18 | X 890044.05 |
| RW328                                   | 277+10.64 | 130.00'R | Y 209667.76 | X 890111.50 |
| RW309                                   | 277+10.64 | 39.94'L  | Y 209737.63 | X 890106.35 |
| RW324                                   | 277+10.64 | 41.31'R  | Y 209656.41 | X 890104.03 |
| RW310                                   | 277+10.64 | 39.96'L  | Y 209735.17 | X 890189.77 |
| RW323                                   | 278+08.93 | 41.40'R  | Y 209653.52 | X 890202.27 |
| RW322                                   | 278+08.93 | 35.15'R  | Y 209659.77 | X 890202.45 |
| RW504                                   | 278+33.58 | 39.83'L  | Y 209734.01 | X 890229.23 |
| RW321                                   | 278+39.87 | 35.18'R  | Y 209658.86 | X 890233.38 |
| RW320                                   | 278+39.99 | 26.34'R  | Y 209667.69 | X 890233.76 |
| RW319                                   | 279+32.64 | 25.06'R  | Y 209666.31 | X 890326.60 |
| RW505                                   | 279+70.00 | 24.87'L  | Y 209715.25 | X 890365.04 |
| RW318                                   | 279+82.22 | 24.53'R  | Y 209665.58 | X 890376.11 |
| RW317                                   | 281+04.43 | 24.51'R  | Y 209662.76 | X 890498.29 |
| RW316                                   | 281+04.92 | 00.00'R  | Y 209727.26 | X 890499.36 |
| RW315                                   | 281+05.43 | 26.01'L  | Y 209713.24 | X 890500.46 |

SCALE, FEET



## SCHEDULE OF LANDS &amp; INTERESTS REQUIRED

| SEE ALSO PLAT | OWNER NUMBER  | OWNER                                                                                                                | INTEREST REQUIRED | FEET SO FT   | T.L.E. SO FT   | P.L.E. ACRES |
|---------------|---------------|----------------------------------------------------------------------------------------------------------------------|-------------------|--------------|----------------|--------------|
| 4.01          | 2             | WILLIAM S. WROBLESKI & SARAH M. WROBLESKI                                                                            | FEET & TLE        | 3549         | 5538           | -            |
|               | 11            | JOHNIEA ELIZABETH STOFFER & WILLIAM H. KURME III, & LORRALEE KURME, LIFE ESTATE TO WILLIAM H. KURME & MELBA R. KURME | FEET & TLE        | 866          | 2094           | -            |
|               | 12            | PAUL W. DUM & LAURA A. DUM                                                                                           | FEET & TLE        | 1320         | 2801           | -            |
|               | 13            | JOSHUA J. KRULL                                                                                                      | FEET & TLE        | 1567         | 3264           | -            |
| 4.03          | 15            | DAVID HILLSBERG                                                                                                      | FEET & TLE        | 1223         | 1144           | -            |
|               | <del>16</del> | <del>BONDELL TELEPHONE COMPANY</del>                                                                                 | <del>TLE</del>    | <del>-</del> | <del>827</del> | <del>-</del> |
|               | 17            | ROBERT J. FOLGINSKY & MARIE A. FOLGINSKY                                                                             | TLE               | -            | 628            | -            |
|               | 18            | PATRICK A. GARNY                                                                                                     | TLE               | -            | 1974           | -            |
|               | 19            | JASON J. TAUDEL & DIANA L. TAUDEL                                                                                    | TLE               | -            | 2004           | -            |
|               | 20            | SCOTT J. REINDEL & CHRISTINE REINDEL                                                                                 | TLE               | -            | 3329           | -            |
|               | 21            | BONITA DABBLER                                                                                                       | TLE               | -            | 2453           | -            |
|               | 22            | NANCY CARPENTER                                                                                                      | TLE               | -            | 2686           | -            |
|               | 23            | EDWARD T. HARBATH & CONNIE W. HARBATH                                                                                | TLE               | -            | 2824           | -            |
|               | 26            | MARR B. PETERS & TERRIE A. PETERS                                                                                    | TLE               | -            | 889            | -            |
|               | 27            | DAVID A. SCHOENBER                                                                                                   | TLE               | -            | 574            | -            |

| LINE  | POINT | STATION   | OFFSET | FILE | COORDINATES             |
|-------|-------|-----------|--------|------|-------------------------|
| LE    | A     |           |        |      |                         |
| LE341 |       | 281-05.59 | 35.00  | L    | Y 209722.45 X 890500.88 |
| LE342 |       | 281-05.85 | 35.00  | L    | Y 209720.39 X 890500.88 |
| LE343 |       | 281-05.89 | 55.00  | L    | Y 209470.38 X 890580.68 |
| LE344 |       | 281-05.91 | 55.00  | L    | Y 209470.38 X 890580.68 |
| LE345 |       | 282-31.00 | 55.00  | L    | Y 209739.32 X 890626.65 |
| LE304 |       | 283-10.00 | 35.00  | L    | Y 209717.49 X 890705.18 |
| LE305 |       | 283-10.00 | 40.00  | L    | Y 209722.49 X 890705.30 |
| LE306 |       | 283-10.00 | 40.00  | L    | Y 209717.44 X 890720.11 |
| LE307 |       | 283-25.00 | 40.00  | L    | Y 209722.14 X 890720.30 |
| LE393 |       | 283-60.00 | 25.29  | L    | Y 209706.62 X 890754.99 |
| LE394 |       | 283-60.00 | 25.29  | L    | Y 209706.62 X 890754.99 |
| LE309 |       | 283-90.00 | 45.00  | L    | Y 209725.63 X 890785.35 |
| LE308 |       | 283-90.00 | 24.97  | L    | Y 209705.61 X 890784.93 |
| LE307 |       | 284-00.00 | 35.00  | L    | Y 209717.44 X 890720.11 |
| LE311 |       | 284-10.00 | 30.00  | L    | Y 209710.17 X 890805.04 |
| LE314 |       | 284-35.00 | 45.00  | L    | Y 209724.37 X 890830.81 |
| LE313 |       | 284-40.00 | 30.00  | L    | Y 209709.58 X 890830.32 |
| LE315 |       | 284-60.00 | 35.00  | L    | Y 209713.56 X 890855.47 |
| LE316 |       | 284-60.00 | 35.00  | L    | Y 209713.56 X 890855.47 |
| LE317 |       | 287-10.00 | 35.00  | L    | Y 209705.37 X 891105.33 |
| LE318 |       | 287-10.00 | 35.00  | L    | Y 209705.37 X 891105.33 |
| LE319 |       | 288-01.78 | 52.50  | L    | Y 209719.85 X 891197.64 |

TO THE  
INTER  
TO



[illegible]

TRANSPORTATION P  
AMENDS AND ADDS UTILITY  
THAT PART OF LOTS 1 THRU  
BLOCK 10F OF THE PLAT OF C  
THE NE 1/4; AND LOTS 4 T  
GALESBURG, AND LOTS 1TH  
WITHIN AND INCLUDING THE  
RANGE 16 EAST, TOWN OF N  
RELOCATION ORDER STH 1  
TO PROPERLY ESTABLISH LAY OUT, WIDEN  
THE STATE OF WISCONSIN DEPARTMENT OF  
INTERESTS OR RIGHTS IN LANDS FOR THE



AMENDS AND ADDS UTILITY INTEREST TABLE FOR UTILITY OWNER NUMBER 101

THAT PART OF LOTS 1 THRU 12 OF THE NEUFELD & DIX PLAT OF GALESBURG, LOTS 1 THRU 19 OF BLOCK 1 OF THE PLAT OF CLARKES ADDITION TO GALESBURG, WITHIN AND INCLUDING THE SE1/4 OF THE NE 1/4; AND LOTS 4 THRU 11 OF BLOCK 1 OF SHAWANO ABSTRACT COMPANY'S ADDITION TO GALESBURG, AND LOTS 1 THRU 12 OF BLOCK 1 OF THE PLAT OF LARKINS ADDITION TO GALESBURG WITHIN AND INCLUDING THE NE1/4 OF THE SE1/4, ALL IN SECTION 25, TOWNSHIP 25 NORTH, RANGE 16 EAST, TOWN OF NAVARINO, SHAWANO COUNTY, WISCONSIN

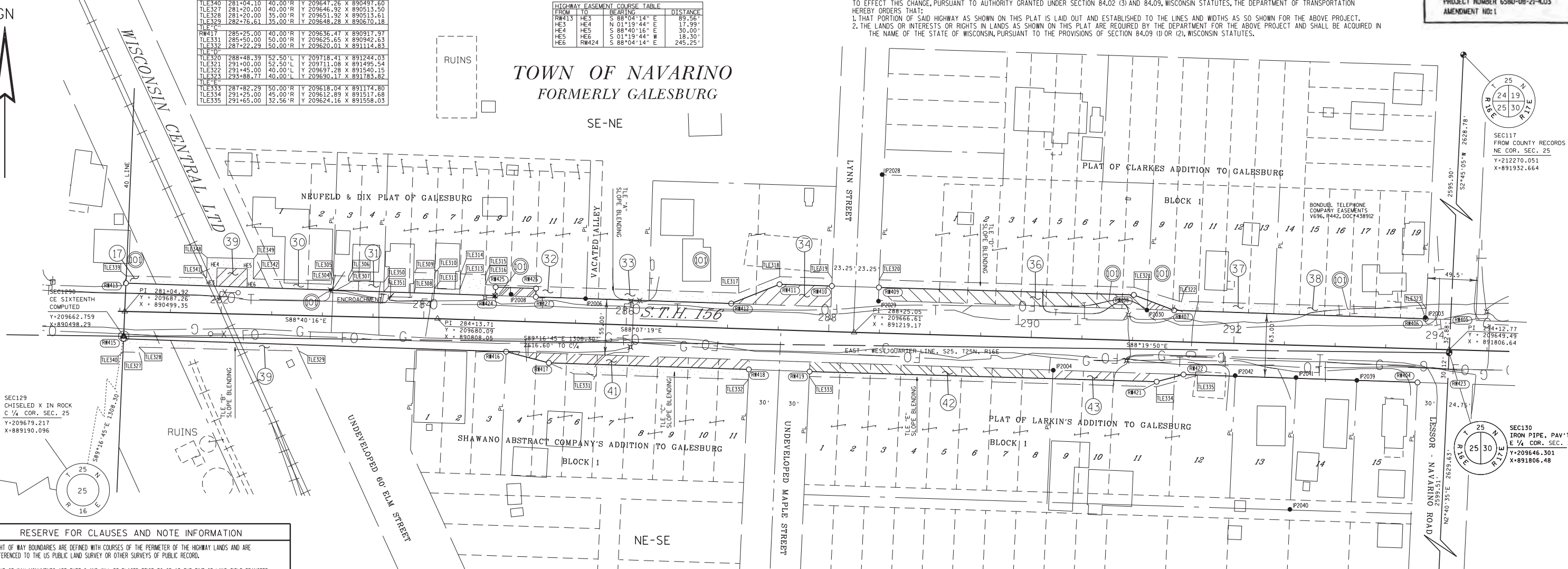
RELOCATION ORDER STH 156, SHAWANO COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:

2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

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

RESERVE FOR CLAUSES AND NOTE INFORMATION

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS AND ARE REFERENCED TO THE US PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

HT OF WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER

AS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATELY DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

COORDINATES AS SHOWN ARE NOT INTENDED TO BE USED FOR RETRACEMENT PURPOSES AND MUST BE VERIFIED WITH THE COUNTY SURVEY DEPARTMENT.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, SHAWANO COUNTY, NAD 83 (1990) IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

STING RIGHT OF WAY IS BASED ON NEUFELD & DIX PLAT OF GALESBURG, SHAWANO ABSTRACT COMPANY'S ADDITION TO GALESBURG, PLAT OF LARKINS' ADDITION TO GALESBURG, AND PLAT OF CLARKE'S ADDITION OF GALESBURG.

RIGHT OF WAY REFERENCE LINE MAY NOT BE THE SAME AS THE CONSTRUCTION REFERENCE LINE.

HIGHWAY EASEMENT IS AN EASEMENT FOR HIGHWAY PURPOSES, AS LONG AS SO USED, INCLUDING THE RIGHT TO MAINTAIN, REPAIR, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE.

TEMPORARY LIMITED EASEMENT) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF REMOVAL AND EGRESS AS LONG AS REQUIRED TO SUCH PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION. SUCH EQUIPMENT MAY BE NECESSARY OR DESIRABLE TO PREVENT EROSION OF THE SOIL. ALL EGRESS SHALL TAKE AT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE TO PREVENT EROSION OF THE SOIL. ALL EGRESS SHALL TAKE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN. EGRESS OBTAINED IN SOME AREAS OF THIS PLAT ARE TO THE FACE OF BUILDINGS, BUILDINGS WILL NOT BE ADVERSELY AFFECTED.

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO DEPARTMENT OF TRANSPORTATION.

## CONVENTIONAL ABBREVIATIONS AND SYMBOLS

|                            |                           |
|----------------------------|---------------------------|
| AP                         | SECTION CORNER            |
| ACCESS RIGHTS              | (MATERIAL AS NOTED)       |
| APOR                       | SET R/W MONUMENT W/C      |
| CHORD BEARING              | (3/4" BAR X 18"           |
| CHORD DISTANCE             | 1.13 LBS/FT)              |
| DEED                       | POINT OF INTERSECTION     |
| DOCUMENT                   | PROPOSED R/W              |
| EAST BOUND                 | BOUNDARY POINT            |
| GAS VALVE                  | EXISTING R/W              |
| INLET                      | SECTION LINE              |
| MANHOLE                    | QUARTER LINE              |
| LENGTH OF CURVE            | SIXTEEN (16) FT           |
| MON                        | PROPOSED OR NEW R/W       |
| MON                        | PROPOSED EASEMENT L       |
| NC                         | CORPORATE LIMITS          |
| PG                         | EXISTING R/W              |
| PEFM                       | SECTION LINE              |
| PERMANENT LIMITED EASEMENT | QUARTER LINE              |
| PRIVATE DRIVEWAY           | SIXTEEN (16) FT           |
| PD                         | PROPOSED OR NEW R/W       |
| RADIUS                     | PROPOSED EASEMENT L       |
| REFERENCE LINE             | PARCEL NUMBER             |
| REMAINING                  | UTILITY NUMBER            |
| RIGHT OF WAY               | PROPERTY LINE             |
| SECTION                    | LOT, TIE AND OTHER M      |
| SECTION LINE               | DASHED LINES              |
| FOUND IRON PIPE            | ACCESS RESTRICTED         |
| STATION                    | (By Previous Acquisition) |
| TEMPORARY LIMITED EASEMENT | (Control)                 |
| TIE POINT                  | ACCESS RESTRICTED         |
| VOLUME                     | (By Acquisition)          |
| ADJOINING LANDS            | NO ACCESS                 |
| WITH SAME OWNER            | (By Statutory Authority)  |
| PARALLEL TO LINE           | LIMITED EASEMENT          |
|                            | (Temporary or Permanent)  |

| UTILITY INTERESTS REQUIRED |                           |                      |
|----------------------------|---------------------------|----------------------|
| OWNER<br>NUMBER            | OWNER                     | INTEREST<br>REQUIRED |
| 101                        | BONDUEL TELEPHONE CO. LLC | RELEASE<br>OF RIGHTS |
|                            |                           |                      |

| UTILITY INTEREST TABLE |                          |        |
|------------------------|--------------------------|--------|
| UTILITY                | INTEREST TYPE            | PARCEL |
| 101                    | V.702, P.146             | 17     |
|                        | NO EASEMENT<br>OF RECORD | 30     |
|                        | NO EASEMENT<br>OF RECORD | 32     |
|                        | V.702, P.147             | 34     |
|                        | V.696, P.104             | 36     |
|                        | V.696, P.657             | 37     |
|                        | V.696, P.657<br>LOT 9    | 37     |
|                        | V.696, P.442             | 38     |

| SCHEDULE OF LANDS & INTERESTS REQUIRED |              |                                                                           |                   |           |              |                        |
|----------------------------------------|--------------|---------------------------------------------------------------------------|-------------------|-----------|--------------|------------------------|
| SEE ALSO PLAT                          | OWNER NUMBER | OWNER                                                                     | INTEREST REQUIRED | FEE SQ FT | T.L.E. SQ FT | HIGHWAY EASEMENT SQ FT |
| 4.02                                   | 17           | ROBERT J. FIOLENSKI, SR & MARIE A. FIOLENSKI                              | TLE               | -         | 201          | -                      |
|                                        | 20           | LOW R. HILLIKER & HANCO L. HILLIKER, VENDORS HERDICK FAMILY TRUST, VENDEE | TLE               | -         | 577          | -                      |
|                                        | 31           | TERRENCE D. ANVELINK & JULIE A. ANVELINK                                  | TLE               | -         | 547          | -                      |
|                                        | 32           | TUNAS TAVERN LLC                                                          | FEE & TLE         | 334       | 1745         | -                      |
|                                        | 33           | HARLEY L. KOPITSKE & DONNA J. KOPITSKE                                    | TLE               | -         | 647          | -                      |
|                                        | 34           | JAMIE T. SHORT                                                            | FEE & TLE         | 1545      | 1604         | -                      |
|                                        | 36           | WILLIAM C. PEETERS & MARY E. PEETERS                                      | FEE & TLE         | 3513      | 1998         | -                      |
|                                        | 37           | HARLO HILLSBERG                                                           | FEE & TLE         | 121       | 1169         | -                      |
|                                        | 38           | FERN C. ECHTNER                                                           | TLE               | -         | 1480         | -                      |
|                                        | 39           | WISCONSIN CENTRAL LIMITED                                                 | FEE & TLE         | -         | 1630         | 544                    |
|                                        | 41           | BETTY J. HILLSBERG & FERN C. ECHTNER                                      | FEE & TLE         | 2087      | 1849         | -                      |
|                                        | 42           | GARY B. WILBER & JACQUELINE WILBER                                        | FEE & TLE         | 2160      | 1175         | -                      |
|                                        | 43           | STACY HARTLAREN                                                           | FEE & TLE         | 949       | 673          | -                      |

| EXISTING MONUMENTS |             |             |             |
|--------------------|-------------|-------------|-------------|
| POINT              | DESCRIPTION | COORDINATES |             |
| IP2003             | ANGLE IRON  | Y 209681.19 | X 891783.10 |
| IP2004             | ORANGE CAP  | Y 209629.25 | X 891415.86 |
| IP2006             | 1" IP       | Y 209699.87 | X 890954.21 |
| IP2008             | 1" IP       | Y 209704.17 | X 890880.65 |
| IP2020             | 1" IP       | Y 209822.34 | X 891246.87 |
| IP2028             | REBAR       | Y 209697.39 | X 891243.33 |
| IP2030             | 1" IP       | Y 209688.59 | X 891508.26 |
| IP2039             | 1" IP       | Y 209619.23 | X 891715.42 |
| IP2041             | 1" IP       | Y 209622.01 | X 891655.40 |
| IP2042             | 1" IP       | Y 209623.96 | X 891595.35 |
| IP2043             | 1" IP       | Y 209638.42 | X 891145.75 |

I HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095,  
WISCONSIN STATUTES. THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF

JEFFREY T. BROCK  
PRINTED NAME

*Jeffrey T. Brock*  
SIGNATURE

5-21-2013  
DATE

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN  
DEPARTMENT OF TRANSPORTATION

BRENT STELLA  
PRINTED NAME

*Brent I. Stella*  
SIGNATURE

5-21-2013  
E

70

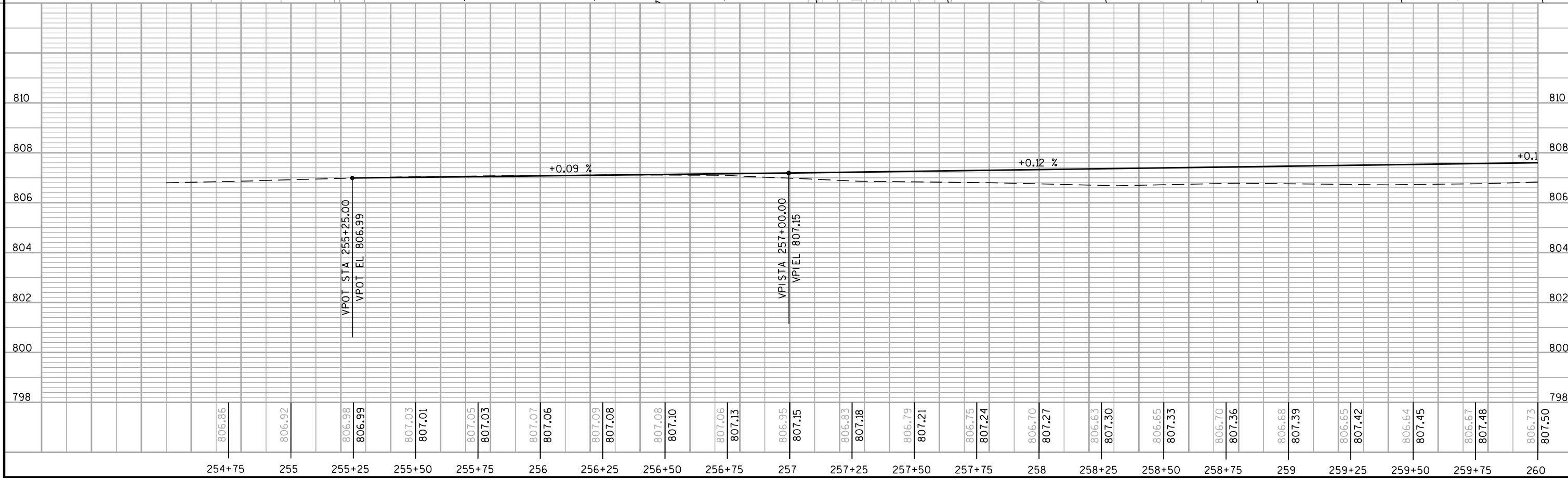
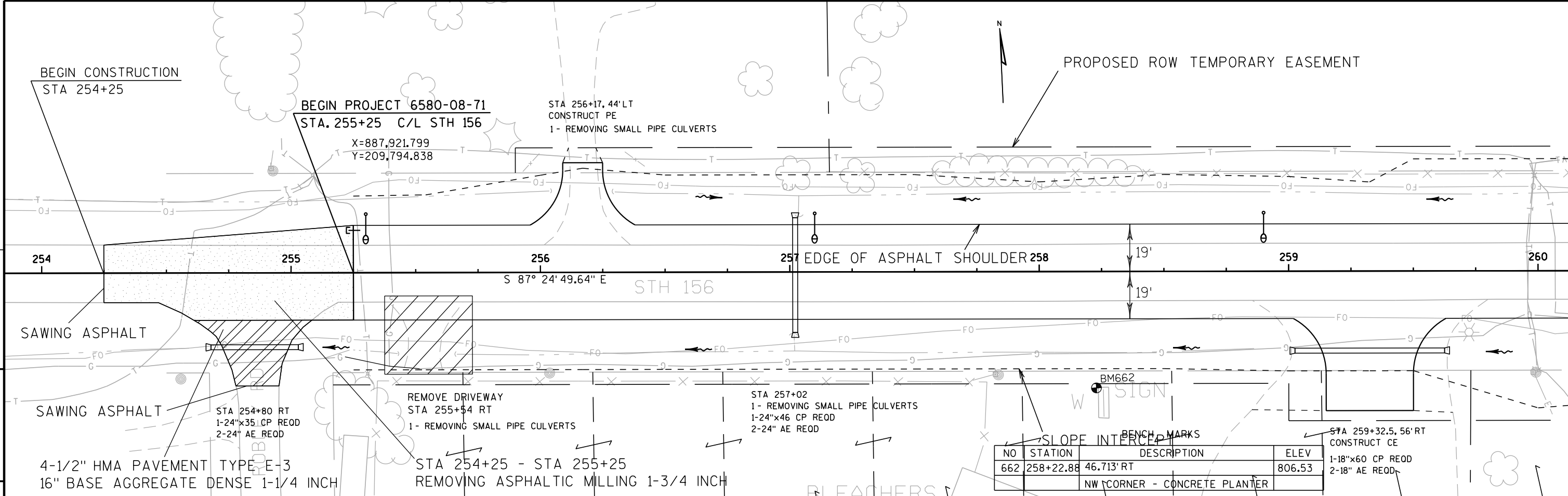
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APPRAISAL PLAT DATE : 4/18/2013

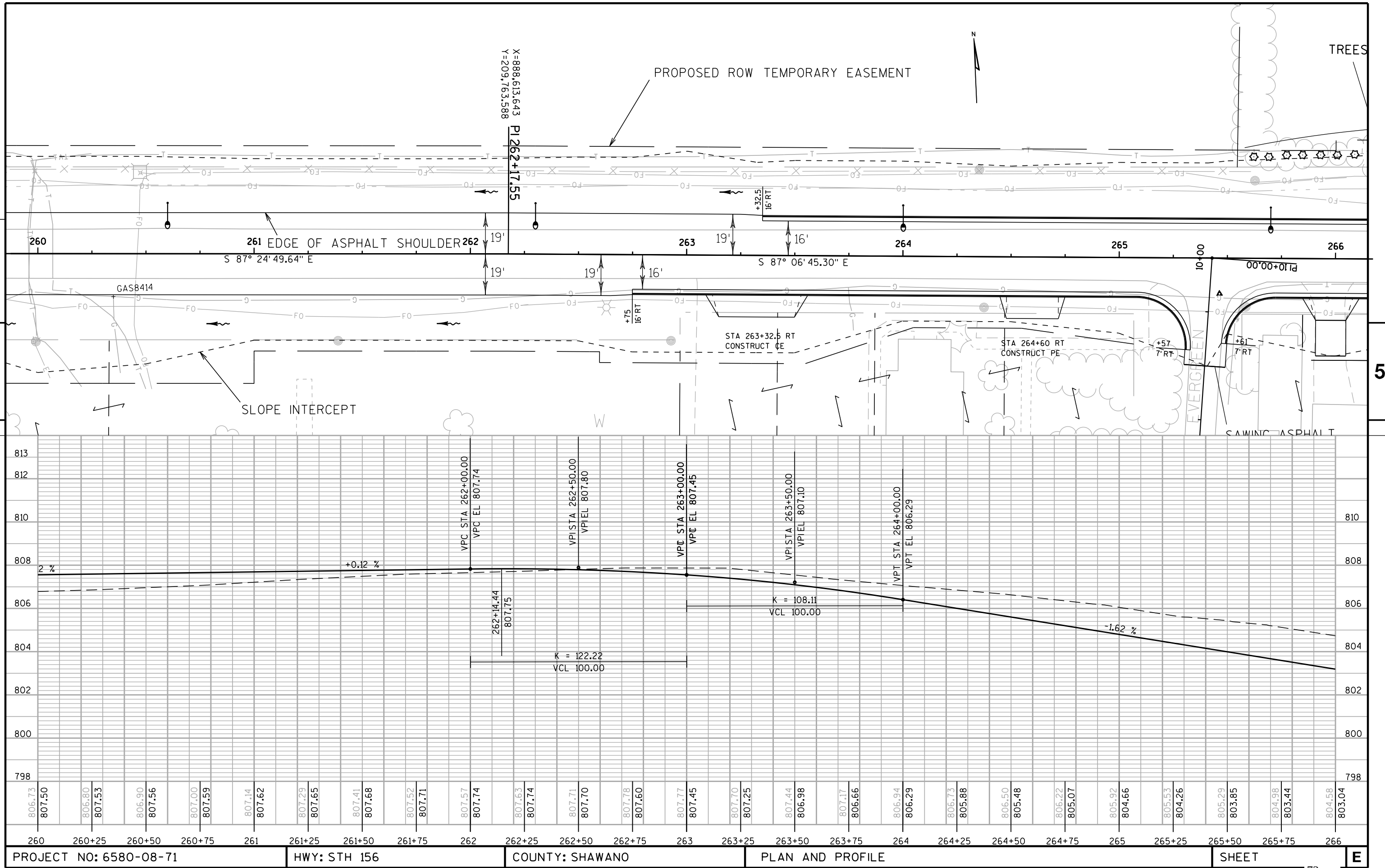
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PLOT BY : dITJXE

PLOT NAME :

PLOT SCALE : 50.000000:1.000000





PROJECT NO: 6580-08-71

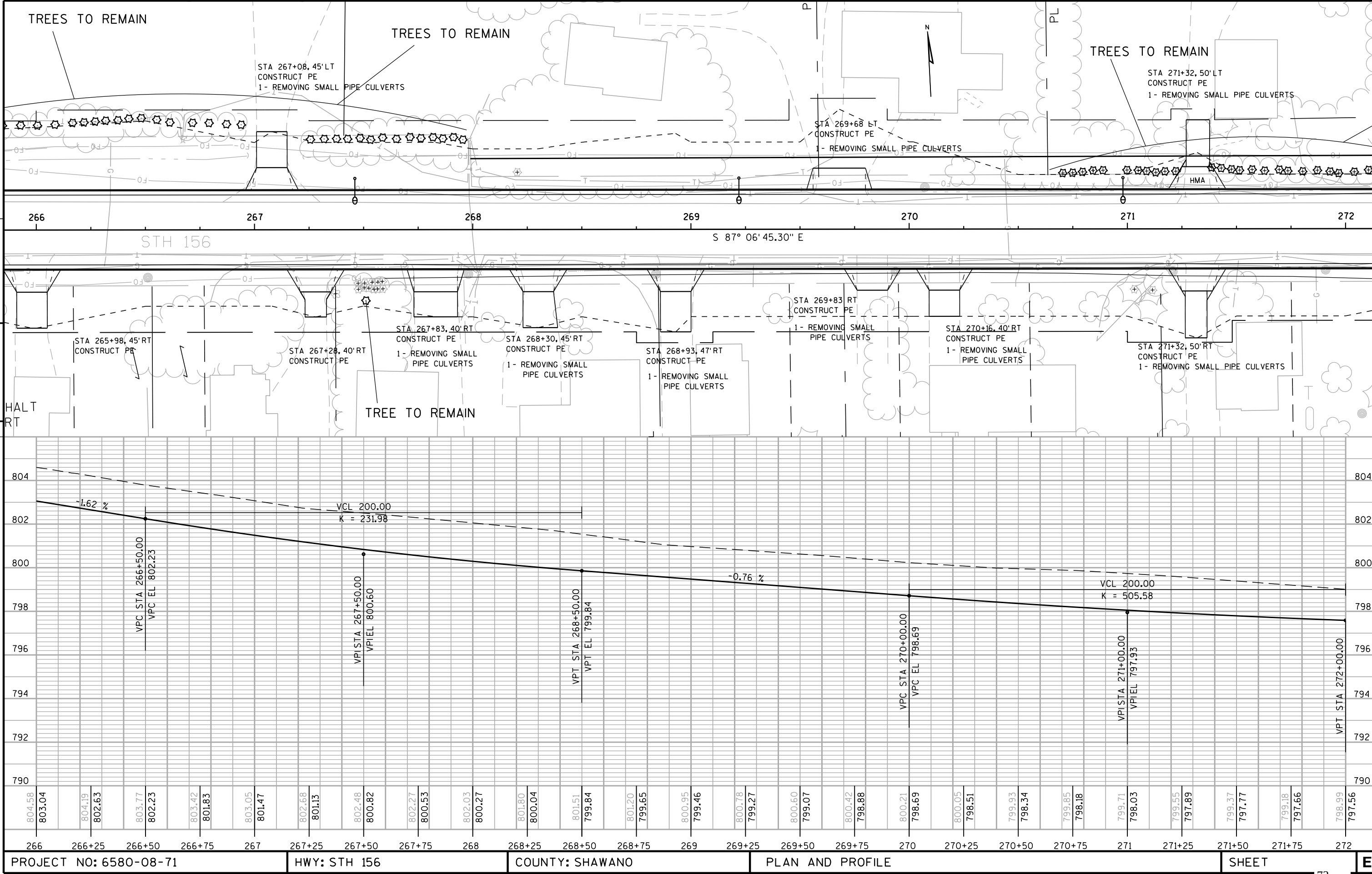
HWY: STH 156

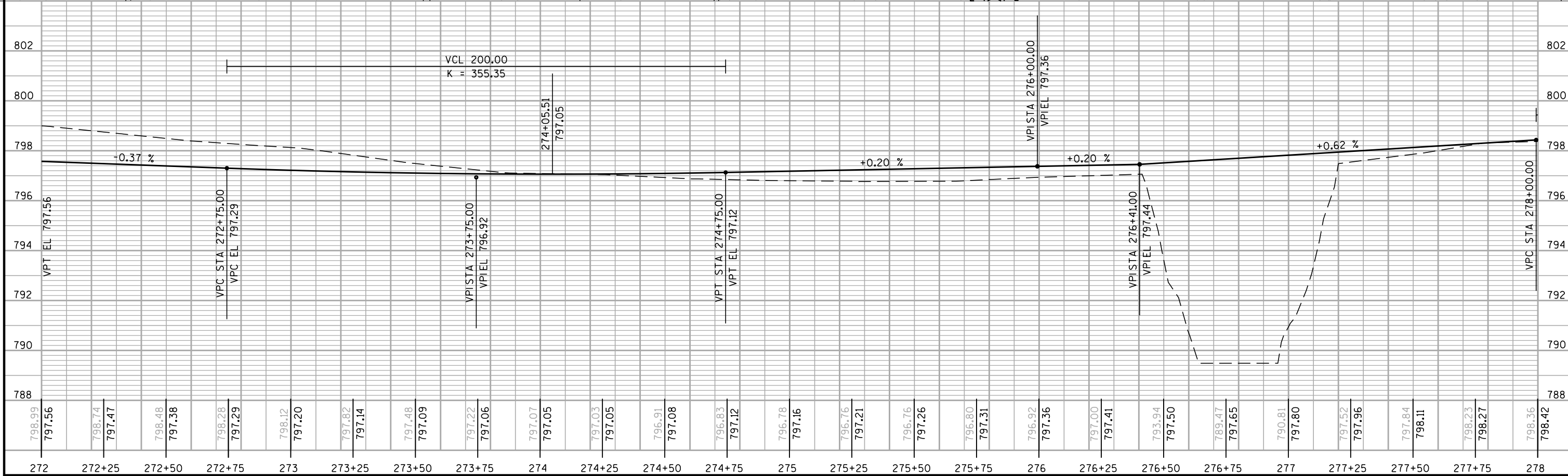
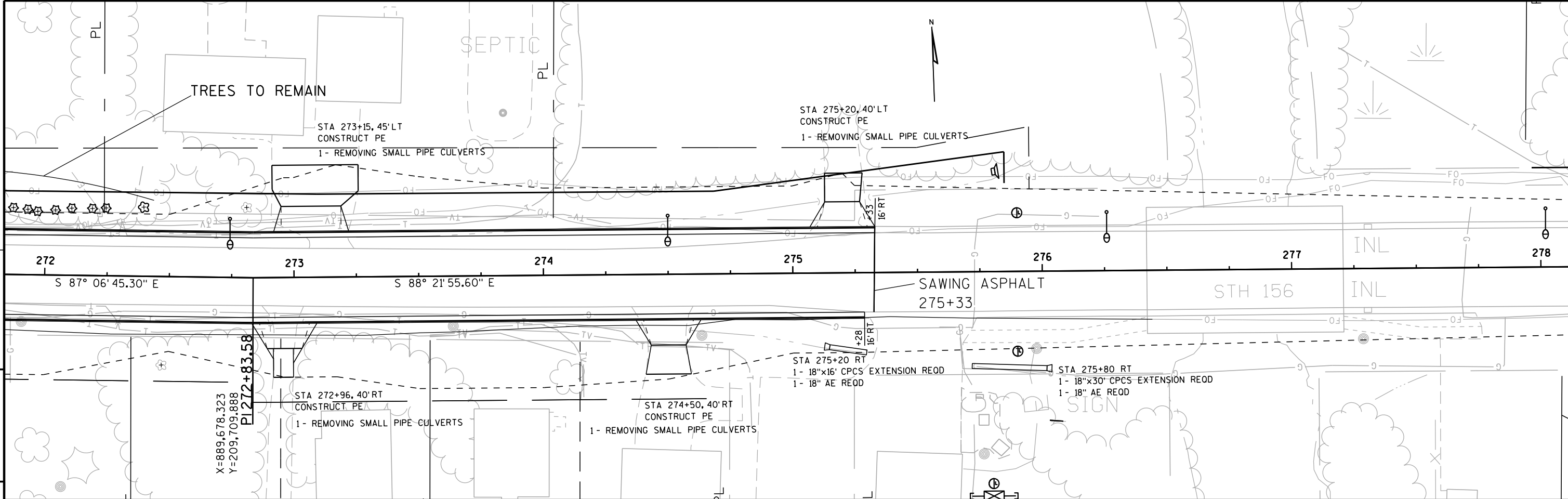
COUNTY: SHAWANO

PLAN AND PROFILE

SHEET

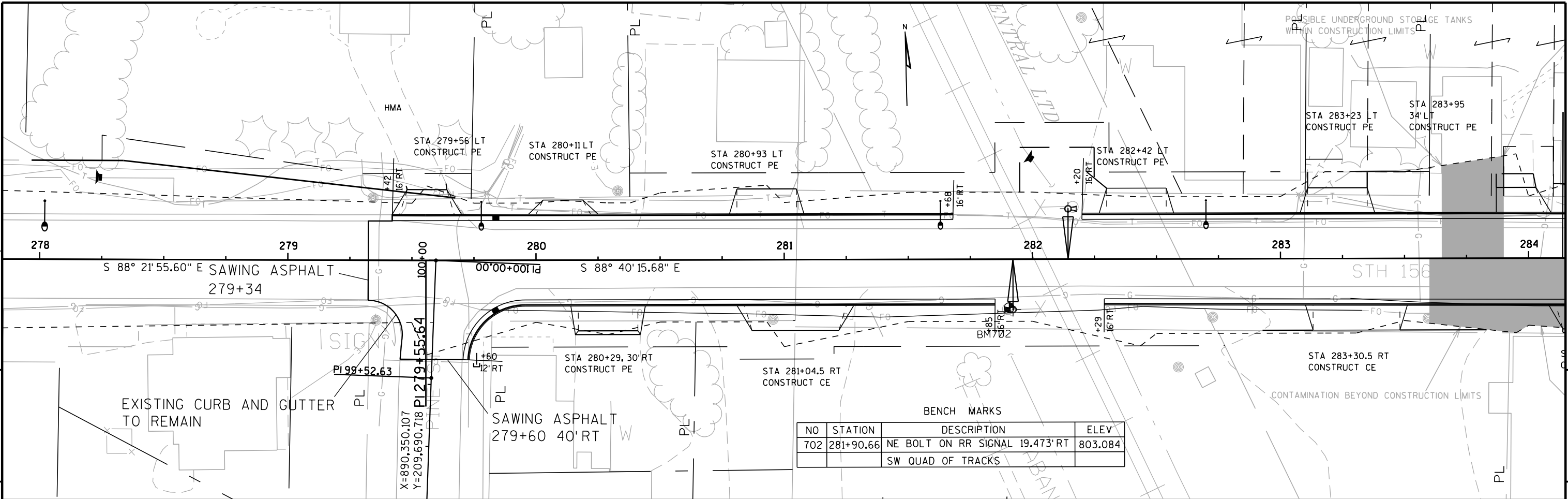
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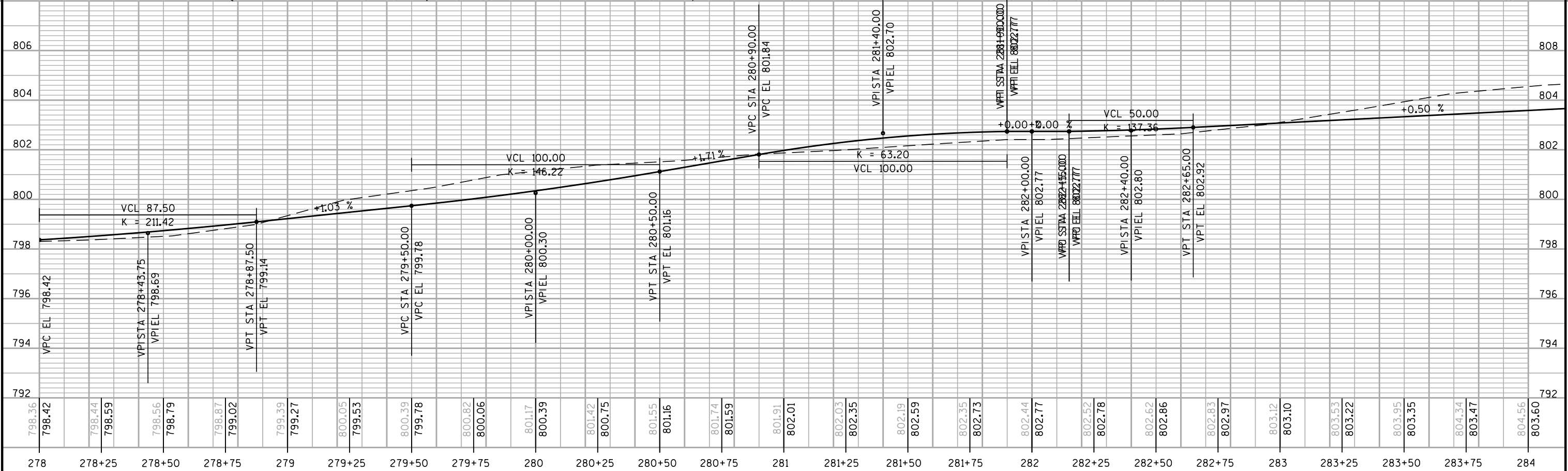


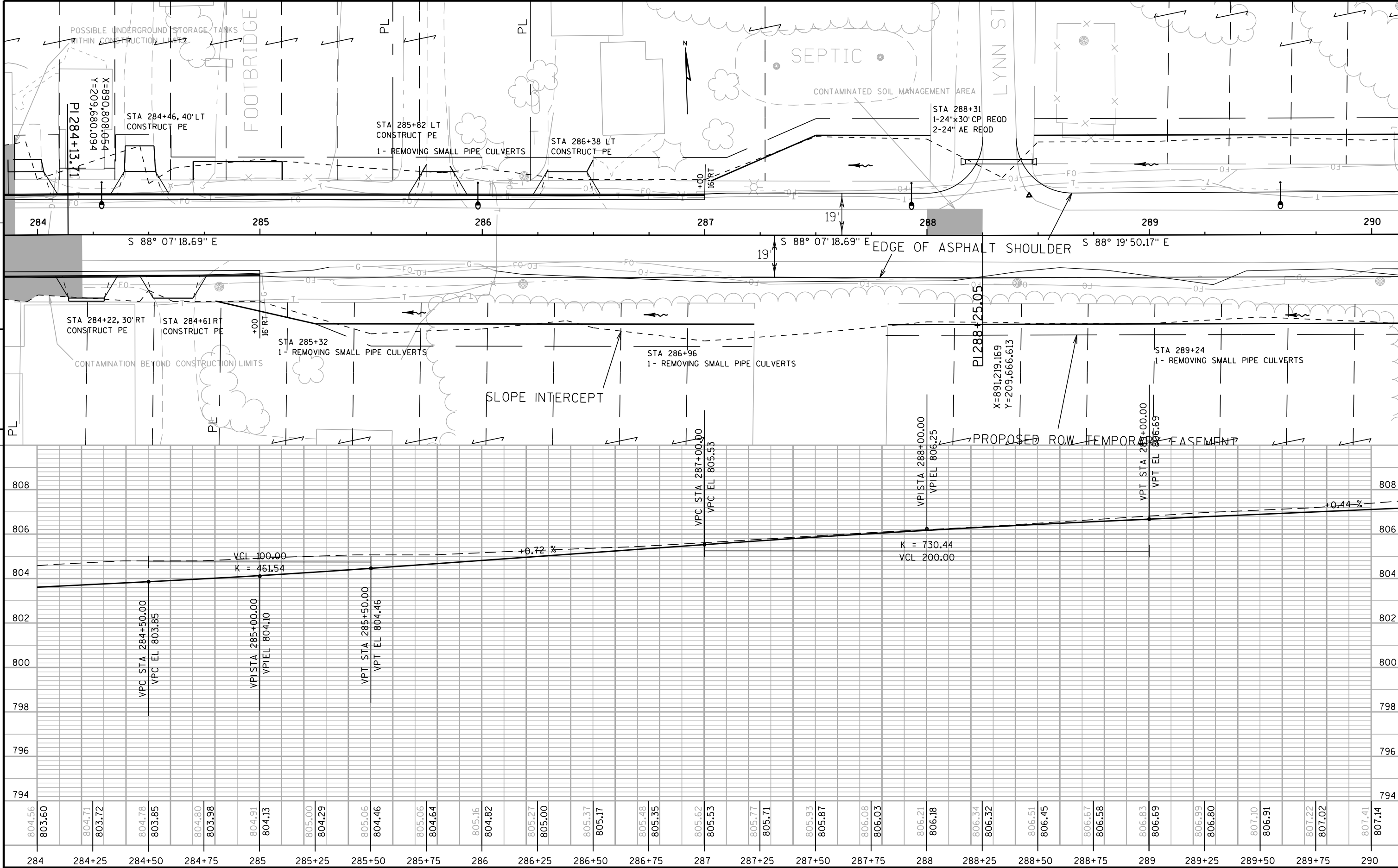
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|------------------------|--|--|--|--|--------------|--|--|--|--|-----------------|--|--|--|--|------------------|--|--|--|--|-------|--|--|--|--|---|--|--|--|--|
| PROJECT NO: 6580-08-71 |  |  |  |  | HWY: STH 156 |  |  |  |  | COUNTY: SHAWANO |  |  |  |  | PLAN AND PROFILE |  |  |  |  | SHEET |  |  |  |  | E |  |  |  |  |
|------------------------|--|--|--|--|--------------|--|--|--|--|-----------------|--|--|--|--|------------------|--|--|--|--|-------|--|--|--|--|---|--|--|--|--|

5



5





PROJECT NO: 6580-08-71

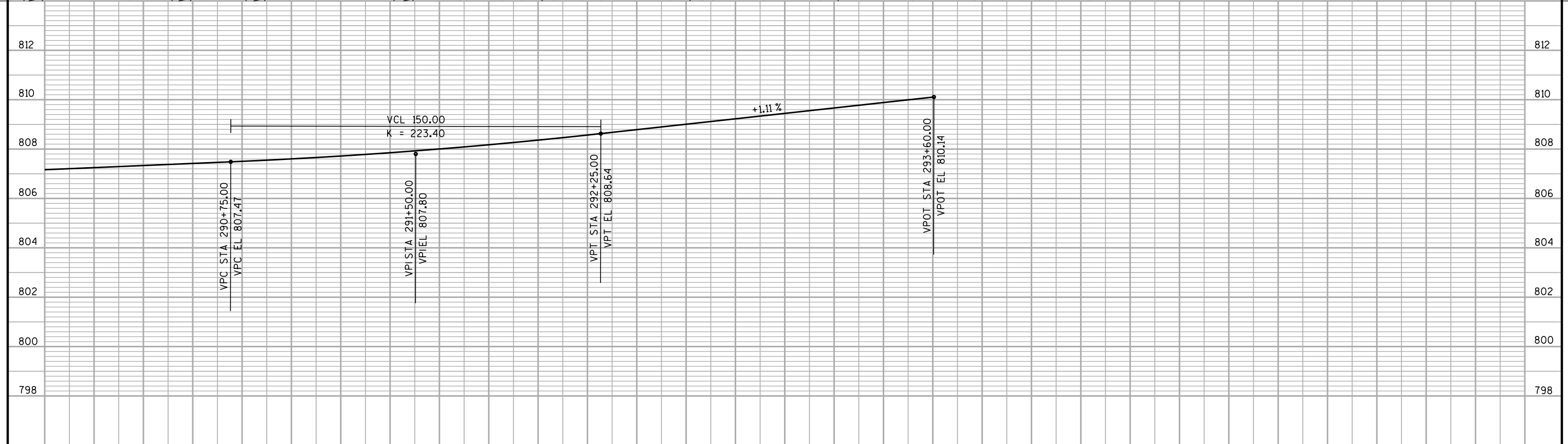
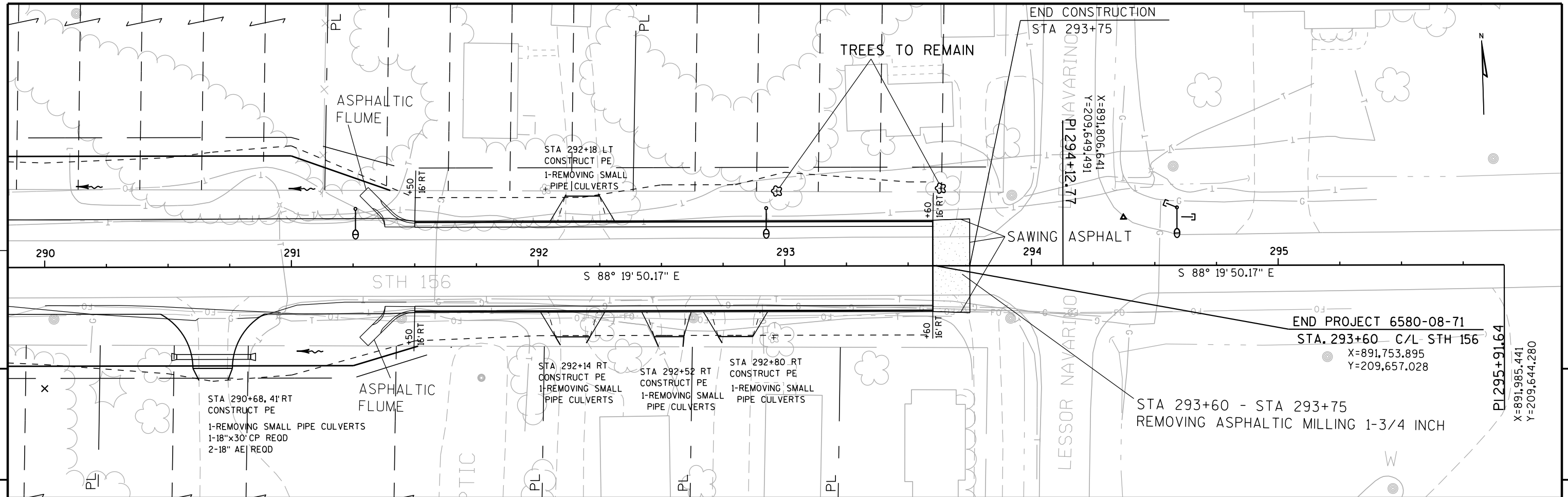
HWY: STH 156

COUNTY: SHAWANO

PLAN AND PROFILE

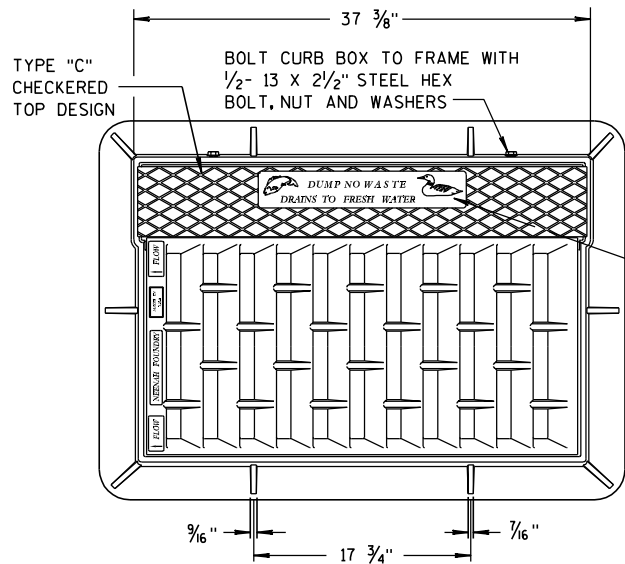
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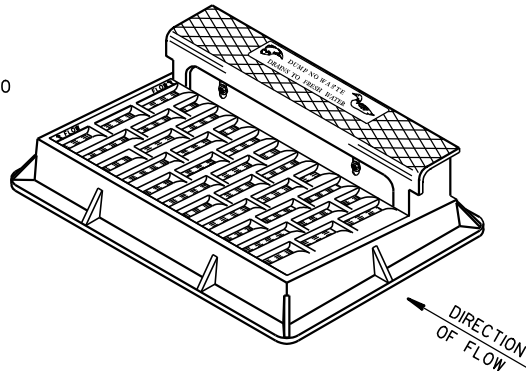


Standard Detail Drawing List

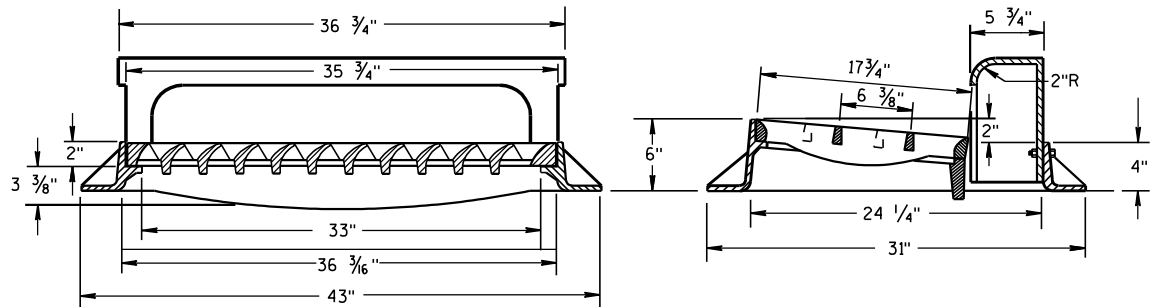
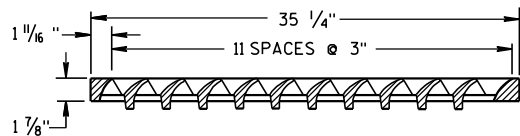
|           |                                                                                               |
|-----------|-----------------------------------------------------------------------------------------------|
| 08A05-18A | INLET COVERS TYPE A, H, A-S, & H-S                                                            |
| 08A05-18B | INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM                                                   |
| 08A08-01  | CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER                                               |
| 08C07-01  | INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT                                                  |
| 08C08-01  | INLETS MEDIAN 1 AND 2 GRATE                                                                   |
| 08D01-17  | CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES                                              |
| 08D04-05  | CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES                                                    |
| 08E08-03  | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS                               |
| 08E09-06  | SILT FENCE                                                                                    |
| 08E10-02  | INLET PROTECTION TYPE A, B, C AND D                                                           |
| 08F01-11  | APRON ENDWALLS FOR CULVERT PIPE                                                               |
| 08F02-01  | APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE                                              |
| 08F04-07  | JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL                                       |
| 09A01-13A | AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE |
| 09B02-07  | CONDUIT                                                                                       |
| 09B04-10  | PULL BOX                                                                                      |
| 09C02-06  | CONCRETE BASES, TYPES 1, 2 & 5                                                                |
| 09C03-03  | TRANSFORMER/PEDESTAL BASES                                                                    |
| 09C05-07  | CONCRETE CONTROL CABINET BASES                                                                |
| 09E01-12D | POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)                                           |
| 09E01-12G | HARDWARE DETAILS FOR POLE MOUNTINGS                                                           |
| 09E03-04  | NON-FREEWAY LIGHTING UNIT POLE WIRING                                                         |
| 13B01-10  | PAVEMENT DETAILS FOR RAILROAD APPROACH                                                        |
| 15A03-02A | FLEXIBLE MARKER POST FOR CULVERT END                                                          |
| 15C02-04A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES                                                    |
| 15C02-04B | BARRICADES AND SIGNS FOR MAINLINE CLOSURES                                                    |
| 15C02-04C | DETOUR SIGNING FOR MAINLINE CLOSURES                                                          |
| 15C02-05A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES                                                    |
| 15C03-01  | BARRICADES AND SIGNS FOR SIDEROAD CLOSURES                                                    |
| 15C08-16A | PAVEMENT MARKING (MAINLINE)                                                                   |
| 15C09-09A | SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS                     |



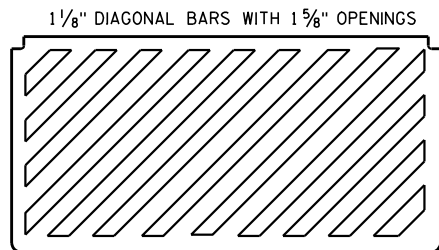
NOTE:  
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

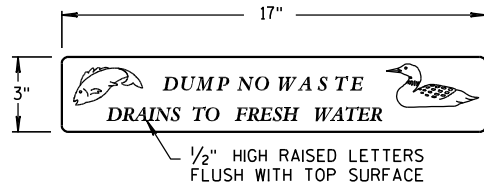


**TYPE "H"**  
(APPROXIMATE WEIGHT 441 LBS.)  
FRAME..... 181 LBS.  
GRATE..... 146 LBS.  
CURB BOX..... 114 LBS.

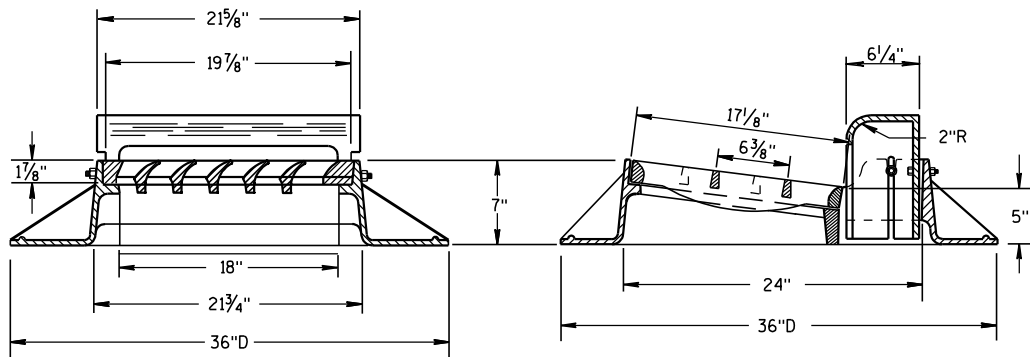
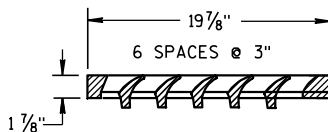
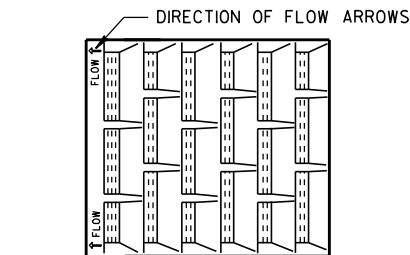


**SPECIAL GRATE FOR TYPE "H" COVER**

(MEASURES 35 1/4" X 17 3/4" X 2")  
(APPROXIMATE WEIGHT 159 LBS.)  
GRATE..... 159 LBS.  
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



**LOGO DETAIL**



**TYPE "A"**

(APPROXIMATE WEIGHT 340 LBS.)  
FRAME..... 185 LBS.  
GRATE..... 71 LBS.  
CURB BOX..... 84 LBS.

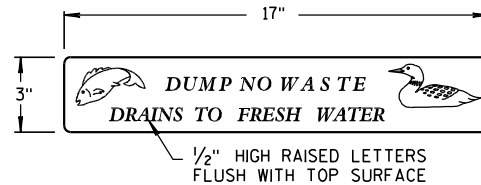
**GENERAL NOTES**

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

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

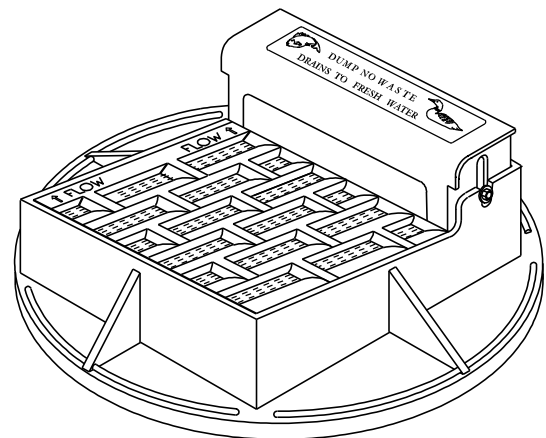
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



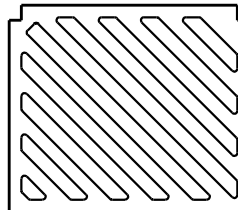
**LOGO DETAIL**

NOTE:  
GRATE IS REVERSIBLE.



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

1" DIAGONAL BARS WITH 1 1/2" OPENINGS



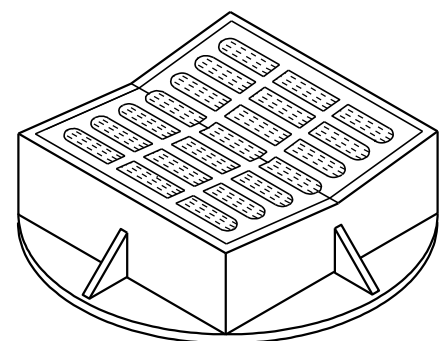
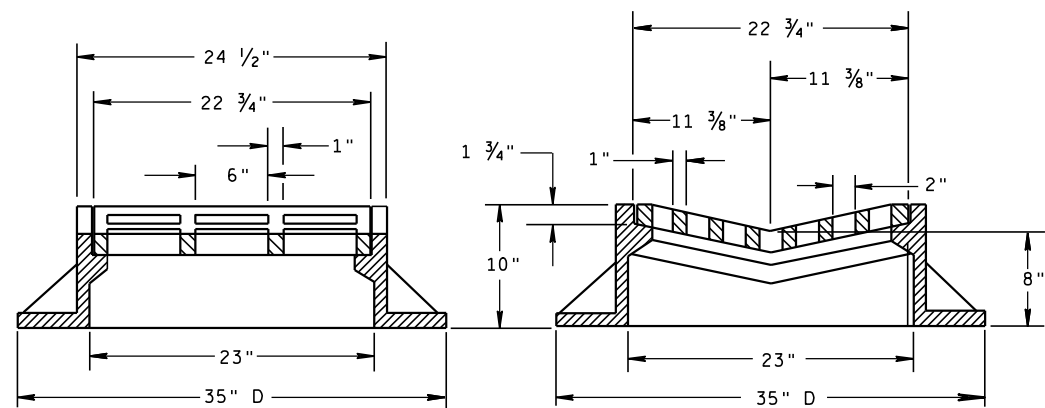
**SPECIAL GRATE FOR TYPE "A" COVER**

(MEASURES 19 3/4" X 17" X 1 7/8")  
GRATE..... 84 LBS.  
(NOTED AS TYPE A-S ON DRAINAGE TABLE)

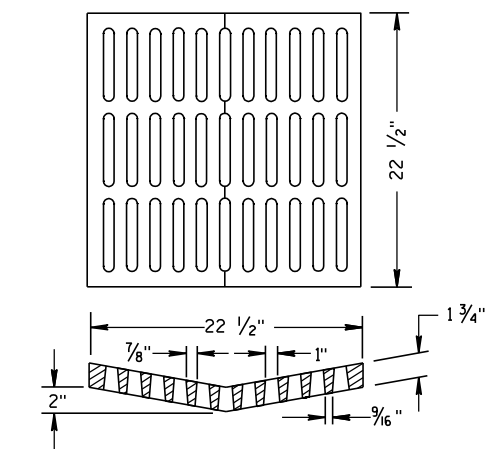
**INLET COVERS  
TYPE A, H, A-S, & H-S**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
6/5/2012 DATE /S/ Jerry H. Zoon ROADWAY STANDARDS 79 ENGINEER  
FHWA



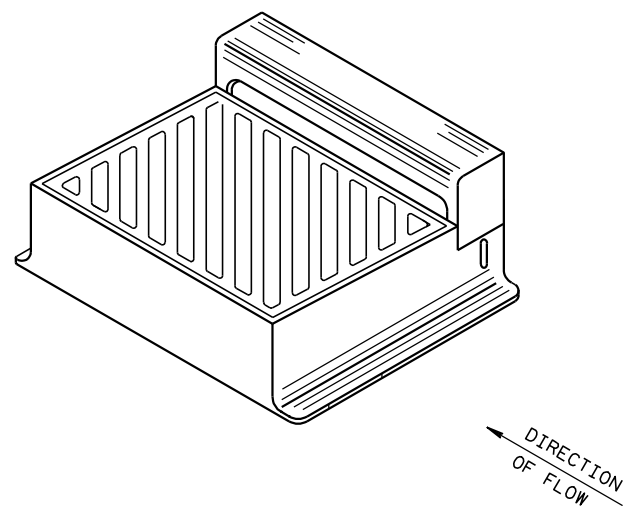
**TYPE "B"**  
(APPROXIMATE WEIGHT 405 LBS.)  
FRAME..... 294 LBS.  
GRATE..... 111 LBS.



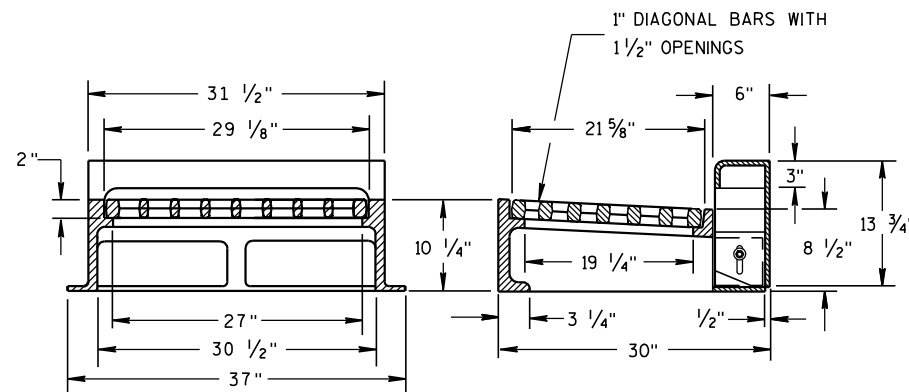
**ALTERNATIVE GRATE FOR  
TYPE "B" COVER**

(APPROXIMATE GRATE WEIGHT 134 LBS.)

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



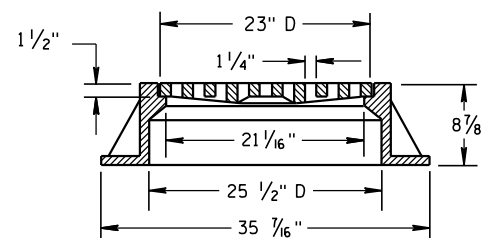
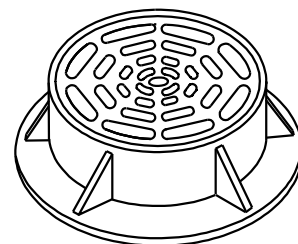
DIAGONAL SLOTS, SHALL BE ORIENTED  
TO THE DIRECTION OF FLOW AS ILLUSTRATED.  
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

**TYPE "WM"**  
(APPROXIMATE WEIGHT 648 LBS.)

FRAME..... 355 LBS.  
GRATE..... 156 LBS.  
CURB BOX..... 137 LBS.



**TYPE "C"**  
(APPROXIMATE WEIGHT 259 LBS.)

FRAME..... 152 LBS.  
GRATE..... 107 LBS.

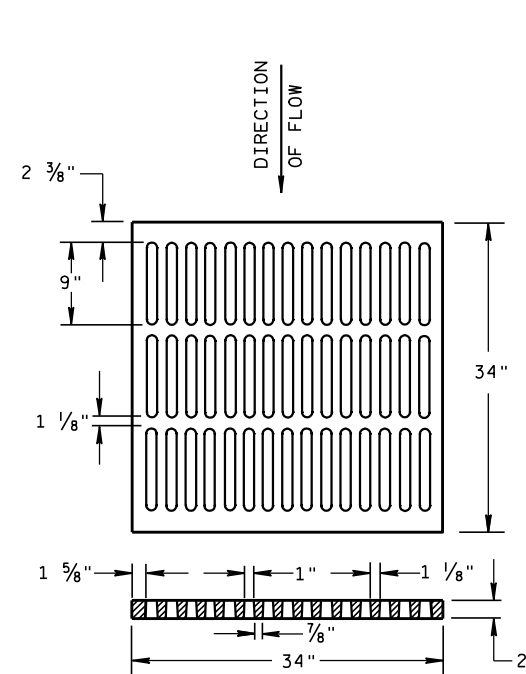
## GENERAL NOTES

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

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

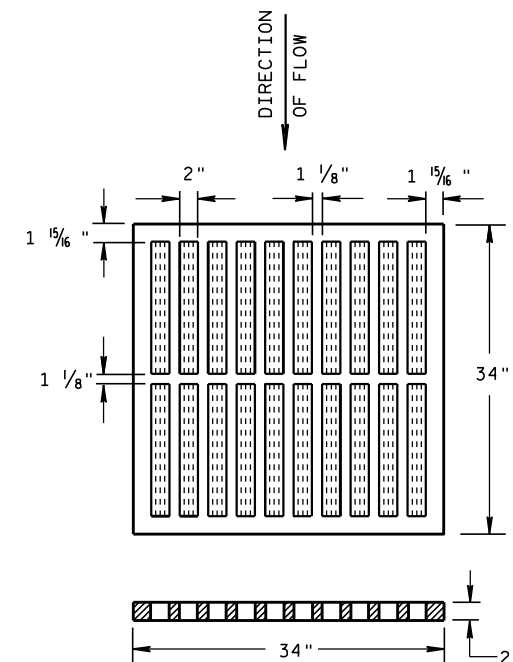
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



**ALTERNATIVE TYPE "MS"**  
(APPROXIMATE GRATE WEIGHT 329 LBS.)

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



**TYPE "MS"**  
(APPROXIMATE GRATE WEIGHT 268 LBS.)

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

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012

DATE

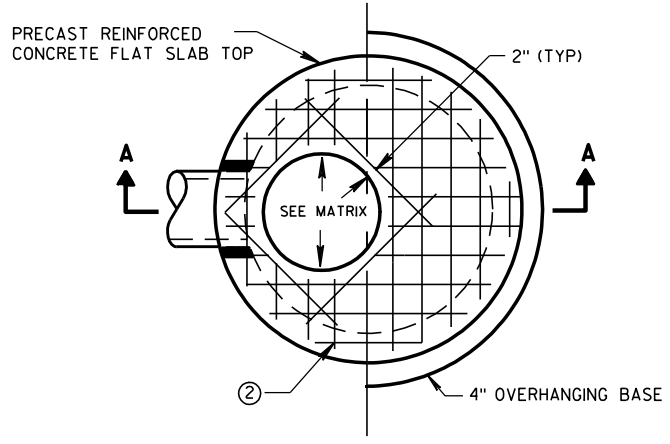
FHWA

/S/ Jerry H. Zapp

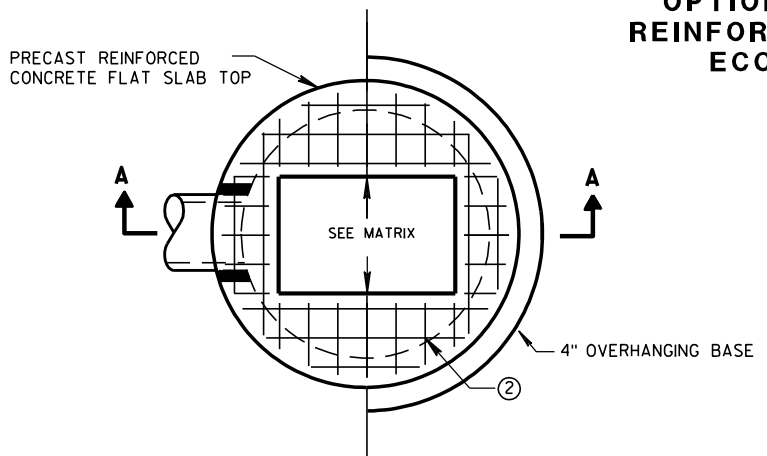
ROADWAY STANDARDS 80

ENGINEER

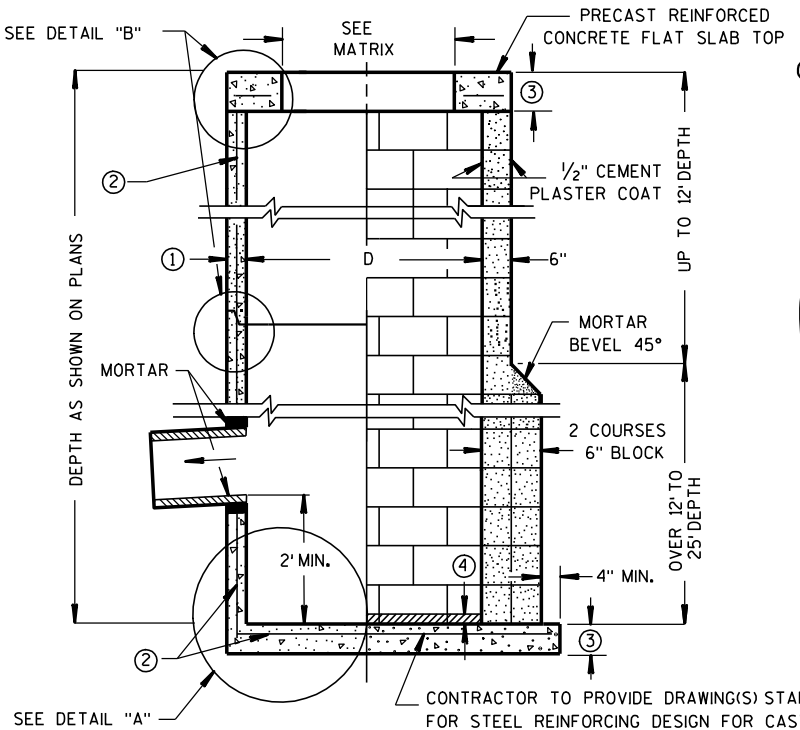
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PLAN VIEW CIRCULAR OPENING

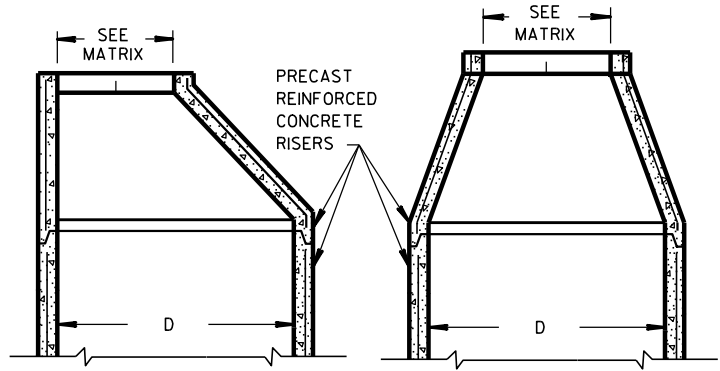


PLAN VIEW RECTANGULAR OPENING



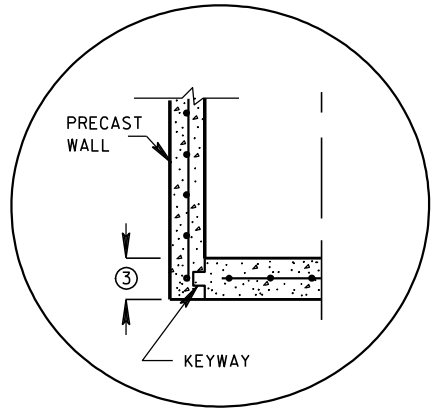
SECTION A-A

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

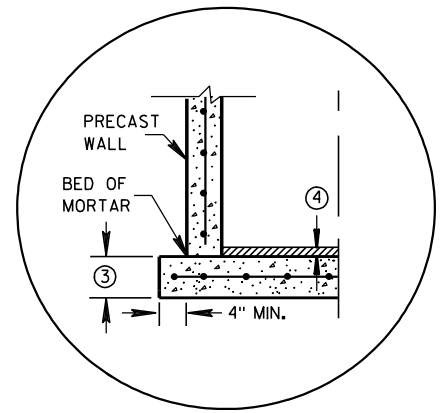


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

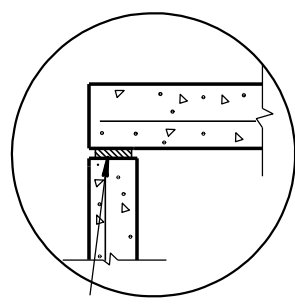


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

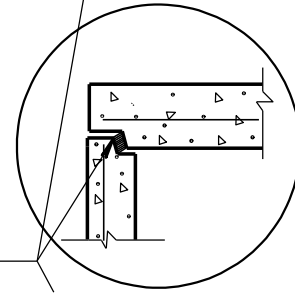


SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

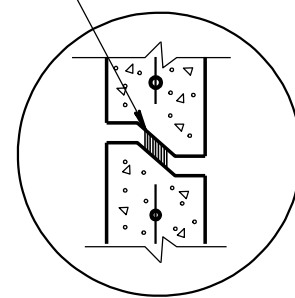
DETAIL "A"



TOP WITH PLAIN END JOINT

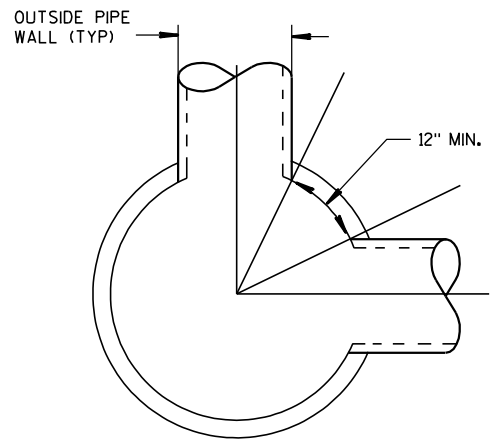


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST CATCH BASIN UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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

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

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

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

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

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

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

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

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

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

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

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

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

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

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT AND 7 INCHES FOR 6-FT DIAMETER PRECAST CATCH BASINS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".
- ④ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

**CATCH BASIN COVER OPENING MATRIX**

| CATCH BASIN SIZE | INLET COVER TYPE | ALL A'S | ALL B'S | BW | C | F | ALL H'S | S | T | V | WM | Z |
|------------------|------------------|---------|---------|----|---|---|---------|---|---|---|----|---|
| 3-FT             | 2X2              | X       | X       |    |   |   |         | X |   | X |    |   |
|                  | 2 DIA.           |         |         |    | X |   |         |   |   |   |    | X |
|                  | 2X2              | X       | X       |    |   |   |         | X |   | X |    |   |
| 4-FT-6-FT        | 2X2.5            |         |         | X  |   |   |         | X | X | X | X  |   |
|                  | 2 DIA.           |         |         |    | X |   |         |   |   |   |    | X |
|                  | 2X3              |         |         |    |   |   | X       |   |   |   |    |   |
|                  | 2.5X3            |         |         |    |   | X |         |   |   |   |    |   |

**PIPE MATRIX**

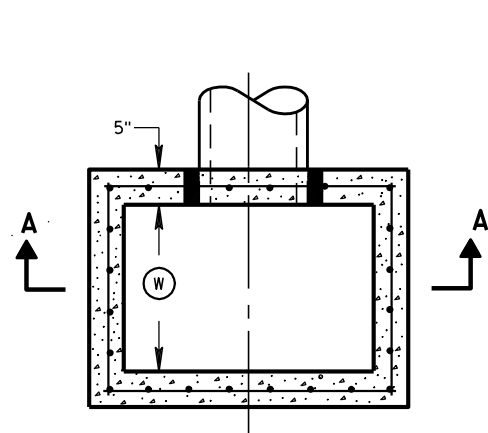
| CATCH BASIN SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES |                     |
|------------------|--------------------------------------------|---------------------|
|                  | 180° SEPARATION (IN)                       | 90° SEPARATION (IN) |
| 3-FT             | 15                                         | 12                  |
| 4-FT             | 24                                         | 18                  |
| 5-FT             | 36                                         | 24                  |
| 6-FT             | 42                                         | 30                  |

**CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER**

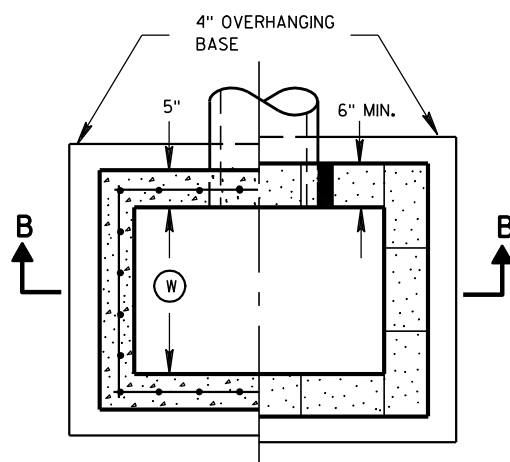
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
6/5/2012 DATE  
/S/ Jerry H. Zopp ENGINEER  
FHWA ROADWAY STANDARDS 81

**CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER**

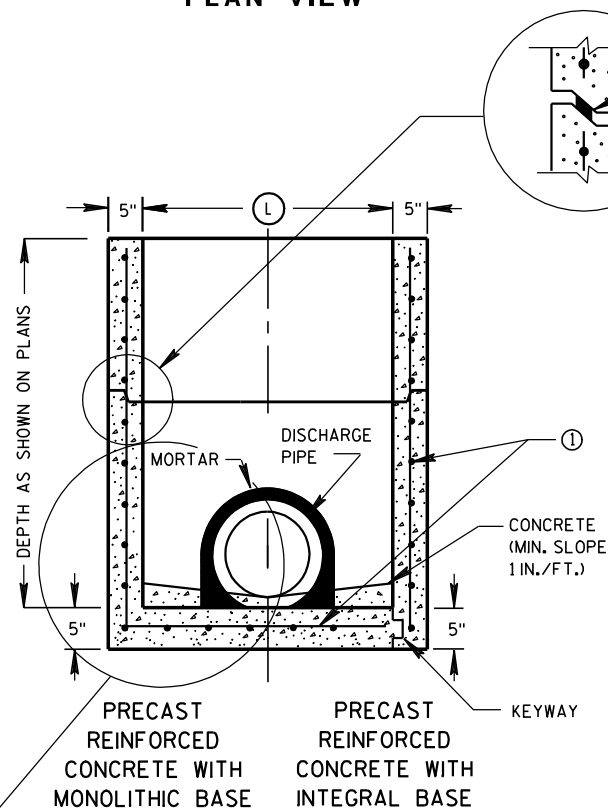


PLAN VIEW

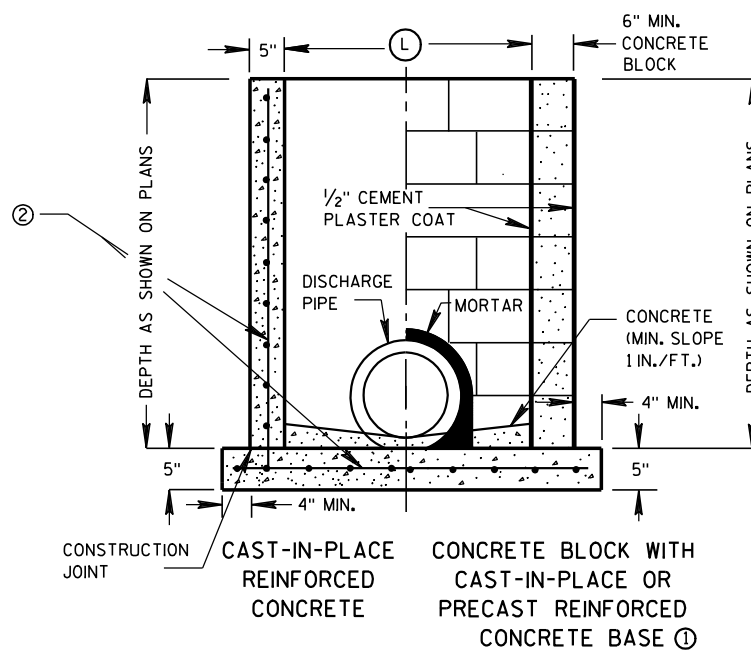


PLAN VIEW

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



SECTION A-A



SECTION B-B

SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

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

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

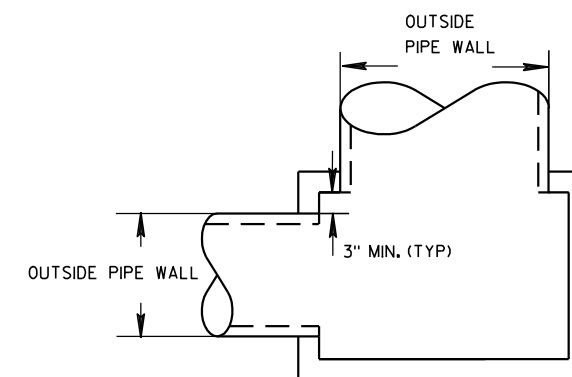
- FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

## INLET COVER MATRIX

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

## PIPE MATRIX

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

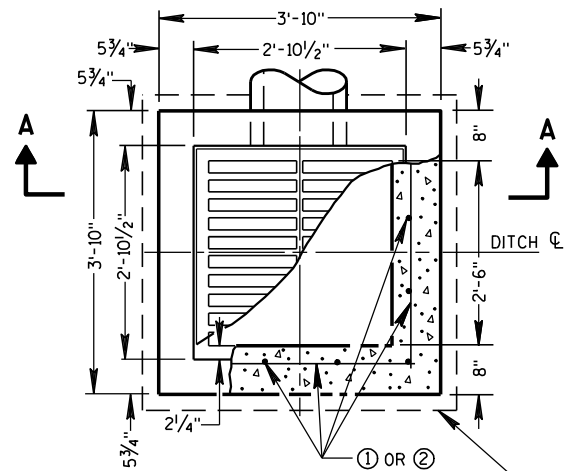


DETAIL "A"

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

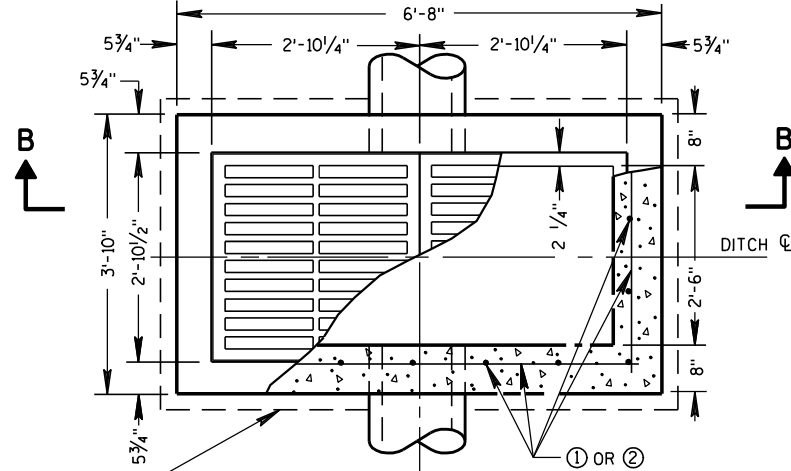
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
DATE 6/5/2012  
FHW  
/S/ Jerry H. Zoaa  
ROADWAY STANDARDS D 82  
ENGINEER  
IT

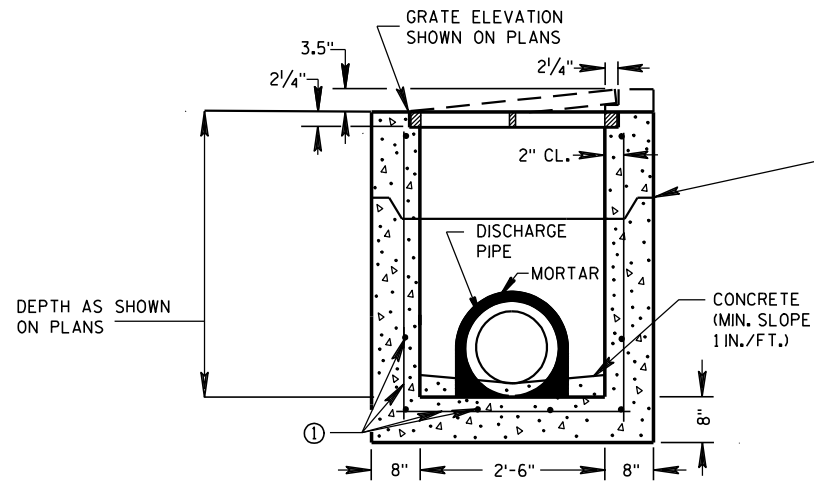


PLAN VIEW

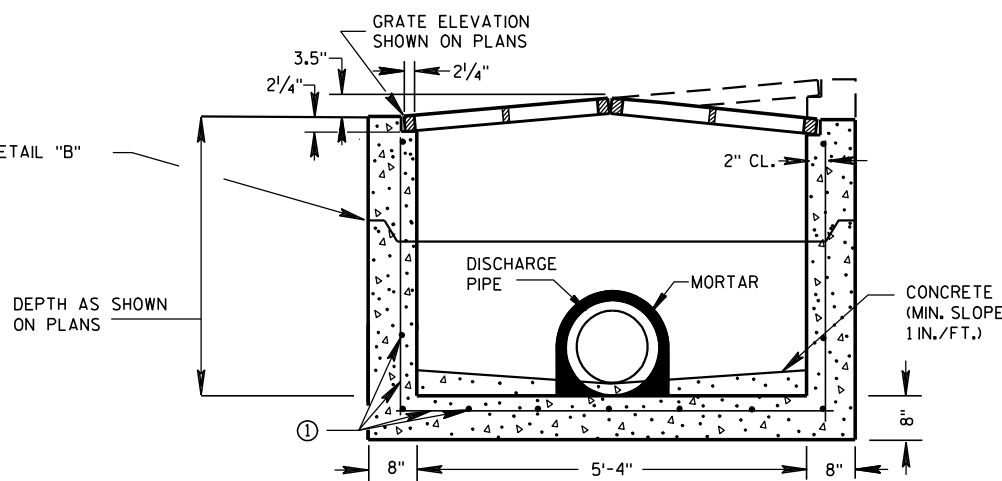
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



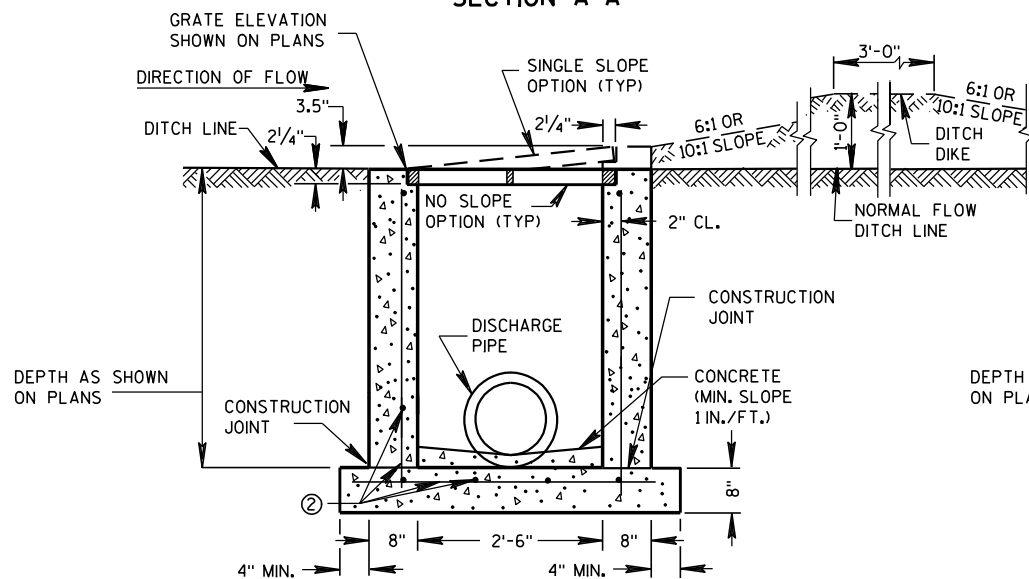
PLAN VIEW



PRECAST REINFORCED CONCRETE SECTION A-A

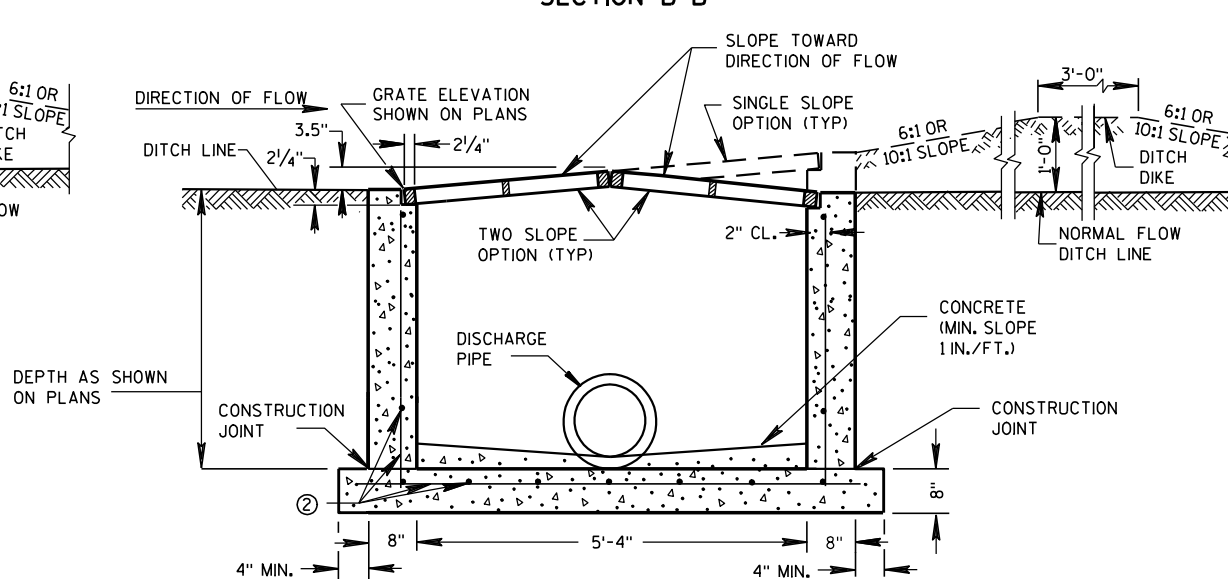


PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A

INLETS MEDIAN 1 GRATE



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 2 GRATE

### GENERAL NOTES

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

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

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

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

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

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

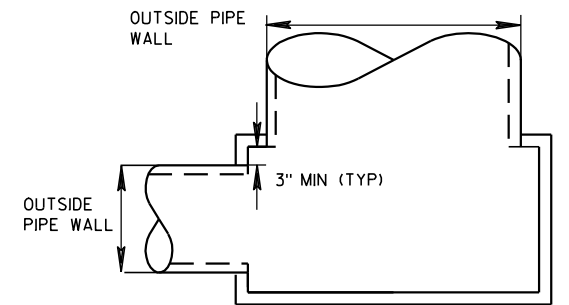
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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

- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

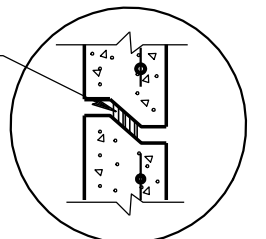
### PIPE MATRIX

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



DETAIL "A"

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



DETAIL "B"

### INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012

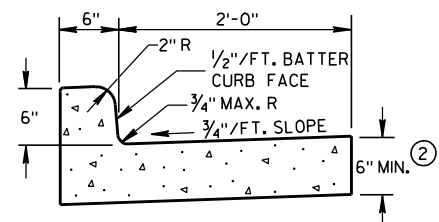
DATE

FHWA

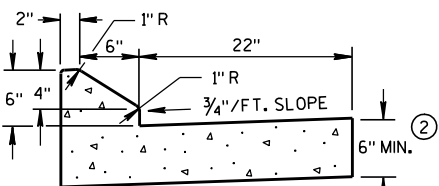
/s/ Jerry H. Zoon

ROADWAY STANDARDS ENGINEER

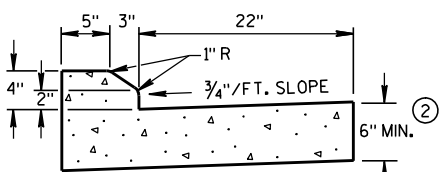
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TYPES A &amp; D ①

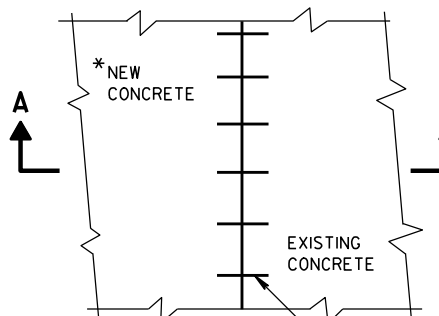


6" SLOPED CURB TYPES G &amp; J ①



4" SLOPED CURB TYPES G &amp; J ①

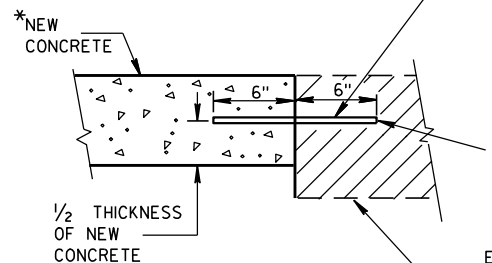
CONCRETE CURB &amp; GUTTER 30"



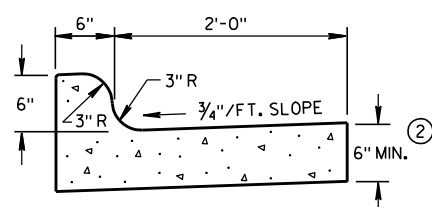
PLAN VIEW

\* NEW CURB & GUTTER,  
SURFACE DRAINS,  
CONCRETE PAVEMENT  
OR OTHER NEW CONCRETE.

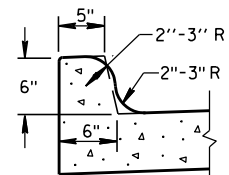
NO. 6 TIE BARS SPACED 2'-6" C-C,  
INSTALLED PERPENDICULAR  
TO THE LONGITUDINAL JOINT.



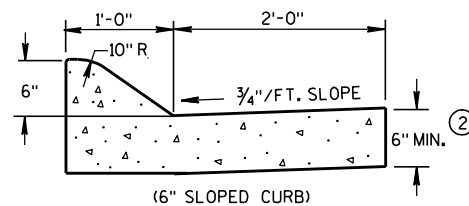
SECTION A-A  
TIE BARS DRILLED  
INTO EXISTING PAVEMENT



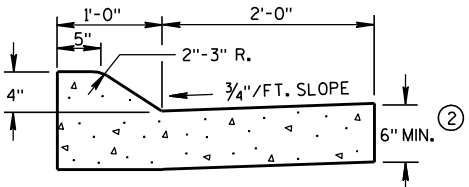
TYPES K &amp; L ①



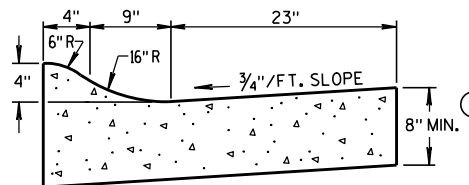
OPTIONAL CURB SHAPE  
FOR TYPES K & L ①



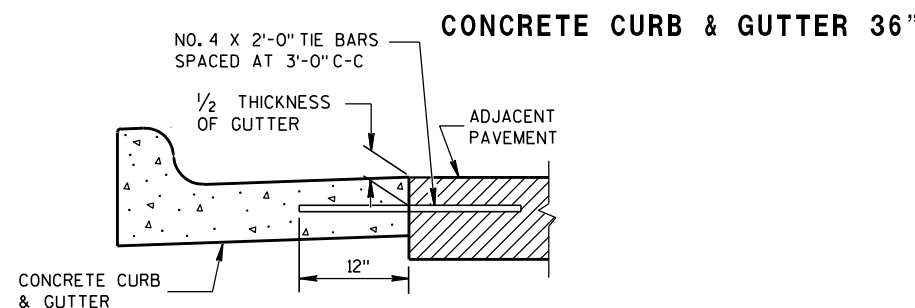
(6" SLOPED CURB)



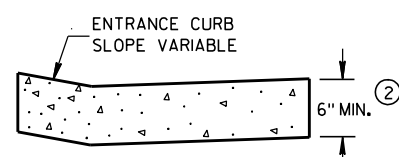
TYPES A &amp; D ①



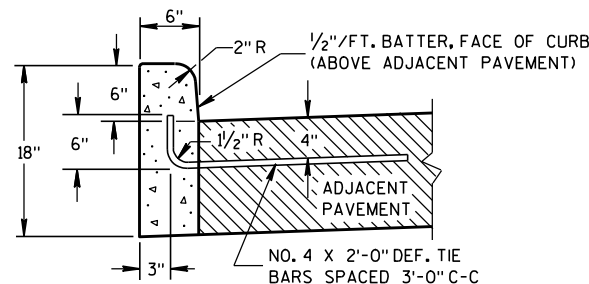
4" SLOPED CURB TYPES R &amp; T ① ④



TYPICAL TIE BAR LOCATION ①

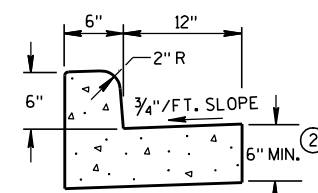


DRIVEWAY ENTRANCE CURB  
(WHEN DIRECTED BY THE ENGINEER)

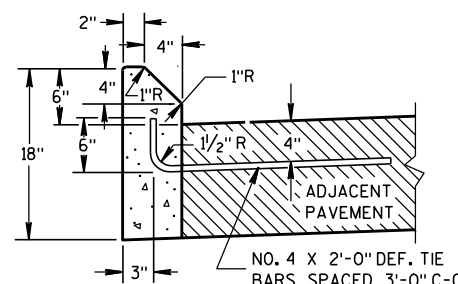


TYPES A &amp; D ①

CONCRETE CURB



TYPES A & D  
CONCRETE CURB & GUTTER 18"



TYPES G &amp; J ①

## GENERAL NOTES

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

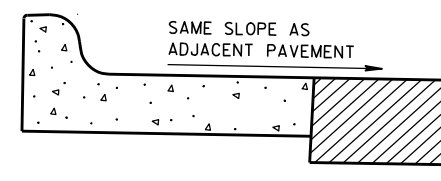
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

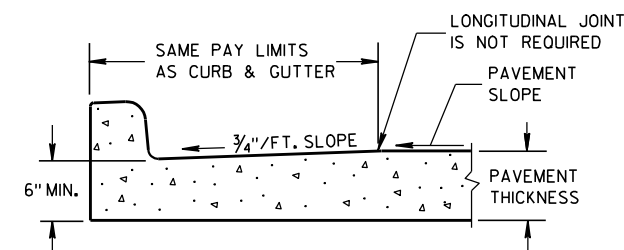
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

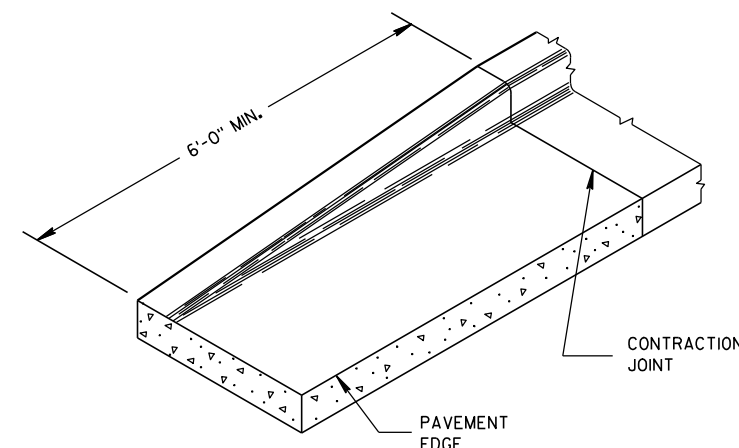
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



REVERSE SLOPE GUTTER ⑤  
(TYPICAL FOR ALL CURB & GUTTER TYPES)



PARTIAL SECTION OF PAVEMENT  
WITH INTEGRAL CURB & GUTTER



END SECTION CURB &amp; GUTTER

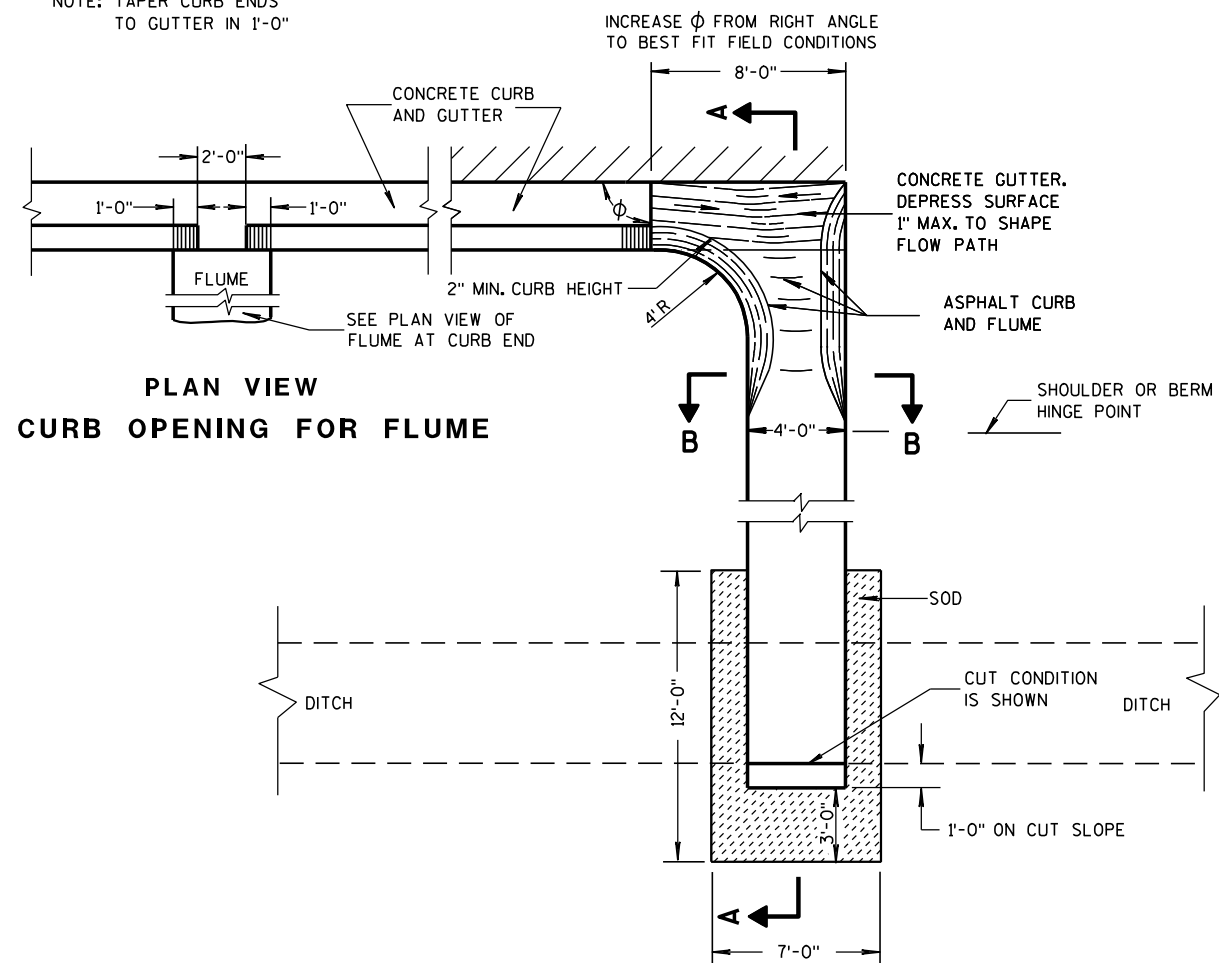
CONCRETE CURB, CONCRETE  
CURB & GUTTER AND TIES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
9/4/08 /S/ Jerry H. 7444  
DATE ROADWAY STANDARDS 84 ENT  
FHWA ENGINEER

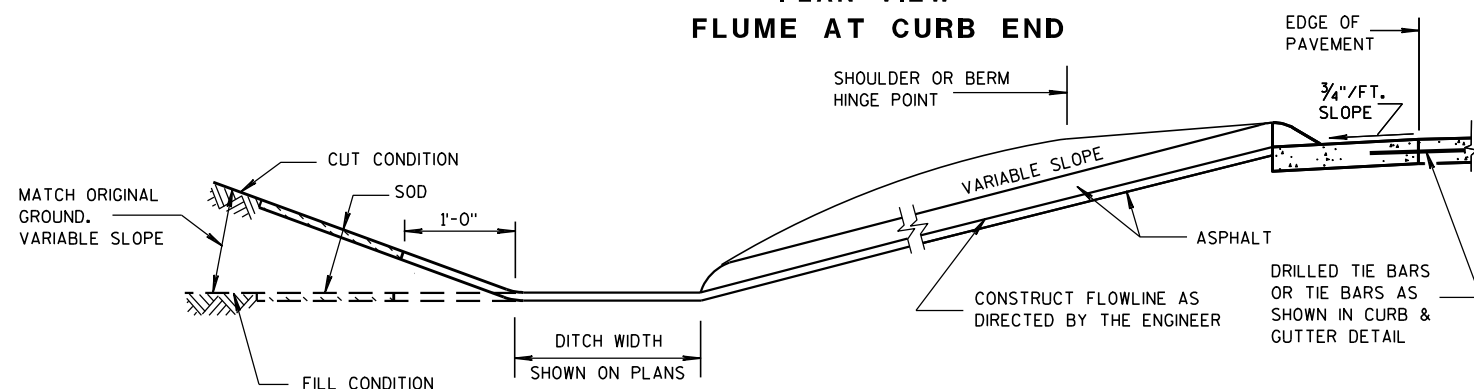
## ASPHALTIC FLUME

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

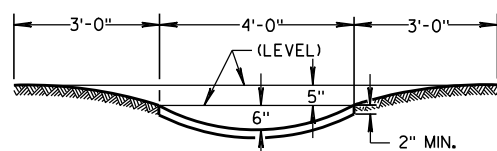


PLAN VIEW  
CURB OPENING FOR FLUME

PLAN VIEW  
FLUME AT CURB END



SECTION A-A



SECTION B-B

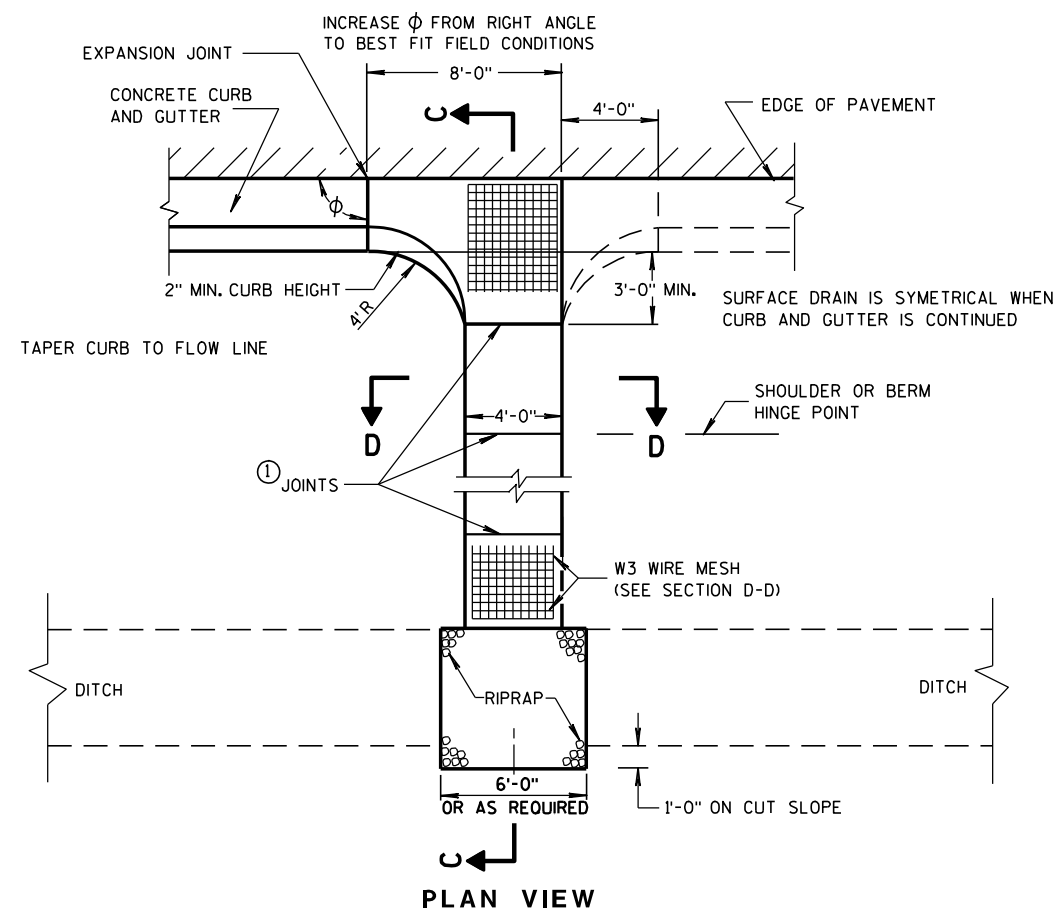
## GENERAL NOTES

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

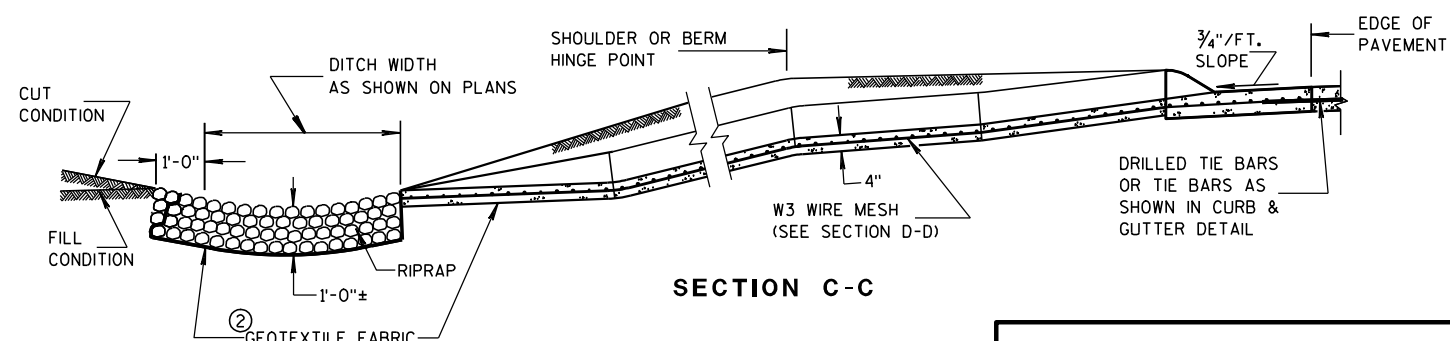
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- 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

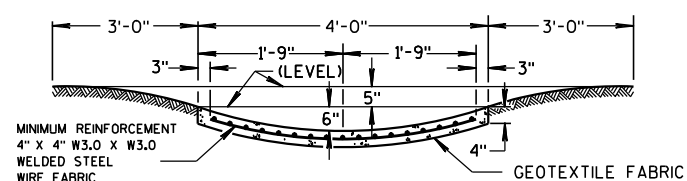
## ③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



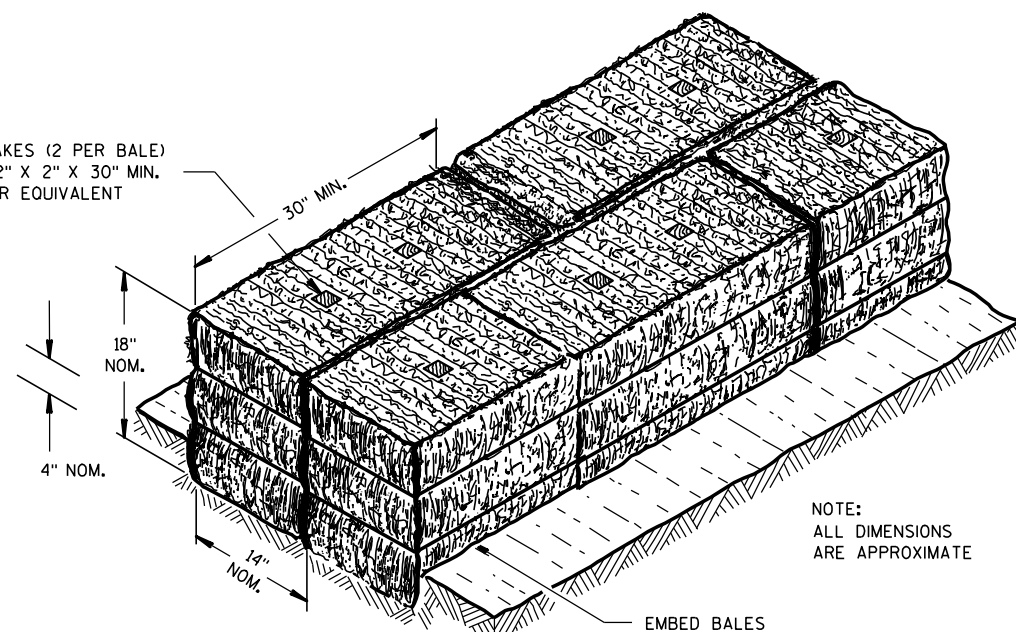
SECTION D-D

## CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
9-4-08 /S/ Jerry H. 7000  
DATE ROADWAY STANDARDS 85 MENT  
FHWA ENGINEER

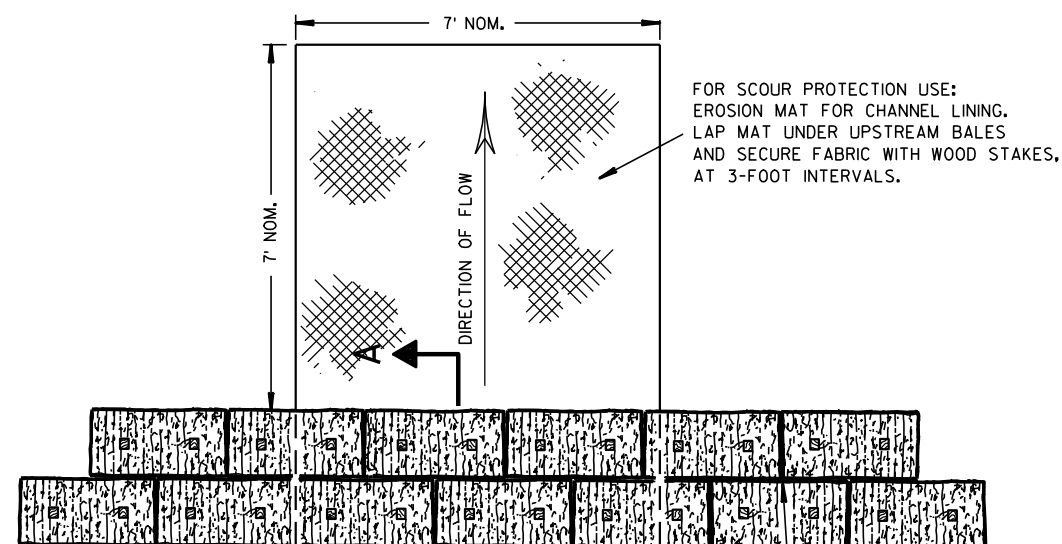
WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

EMBED BALES

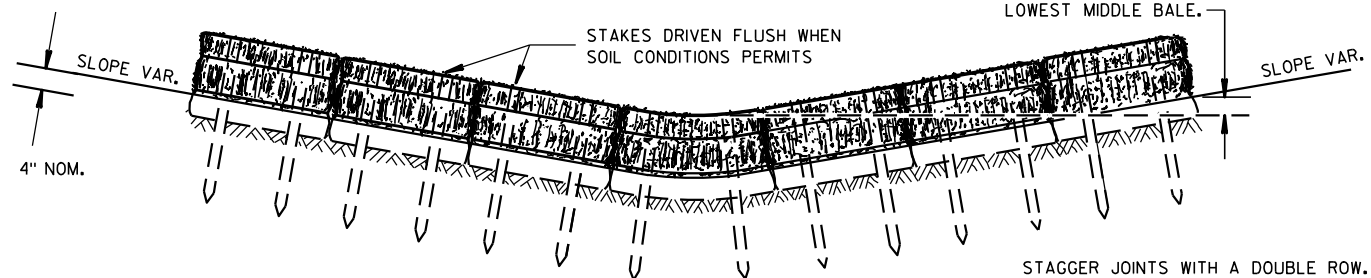
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL  
BE EQUAL TO OR GREATER THAN TOP OF  
LOWEST MIDDLE BALE.



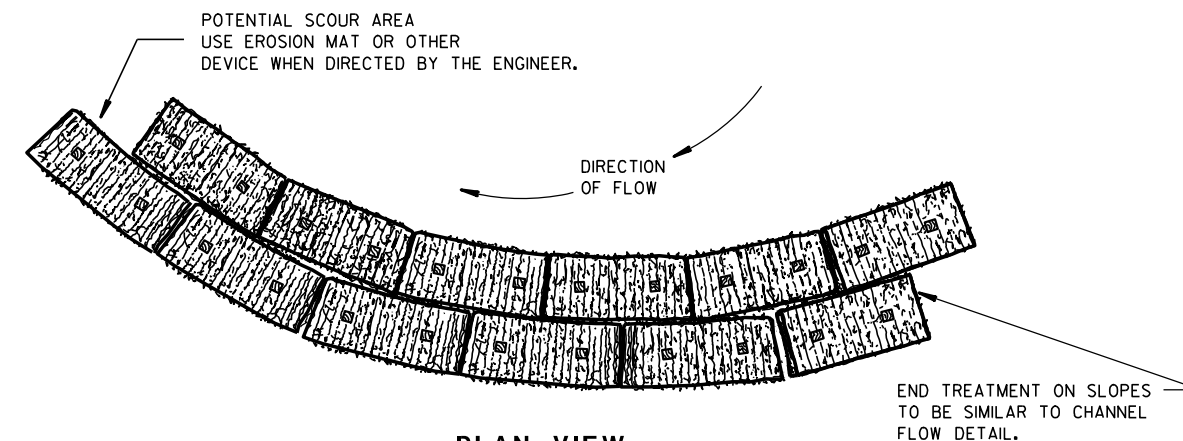
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

## GENERAL NOTES

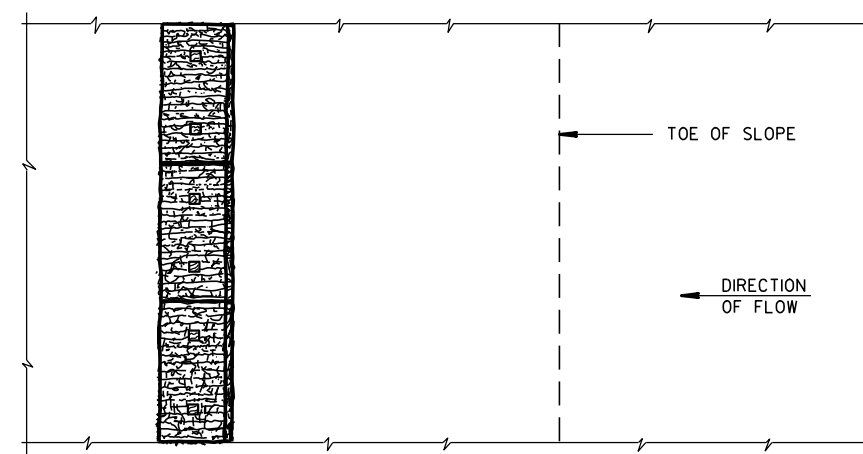
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

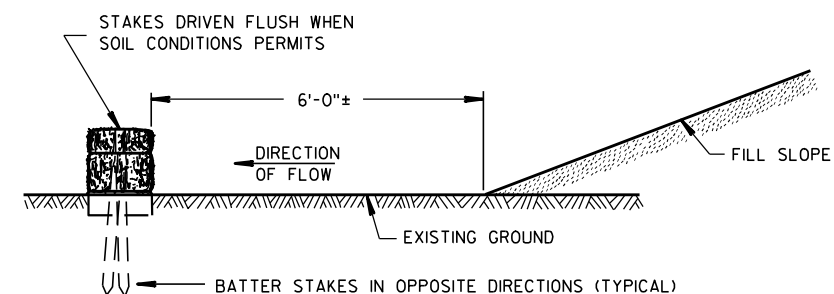


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

## TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02  
DATE

/S/ Beth Connors  
CHIEF ROADWAY DEVELOPER 86  
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.

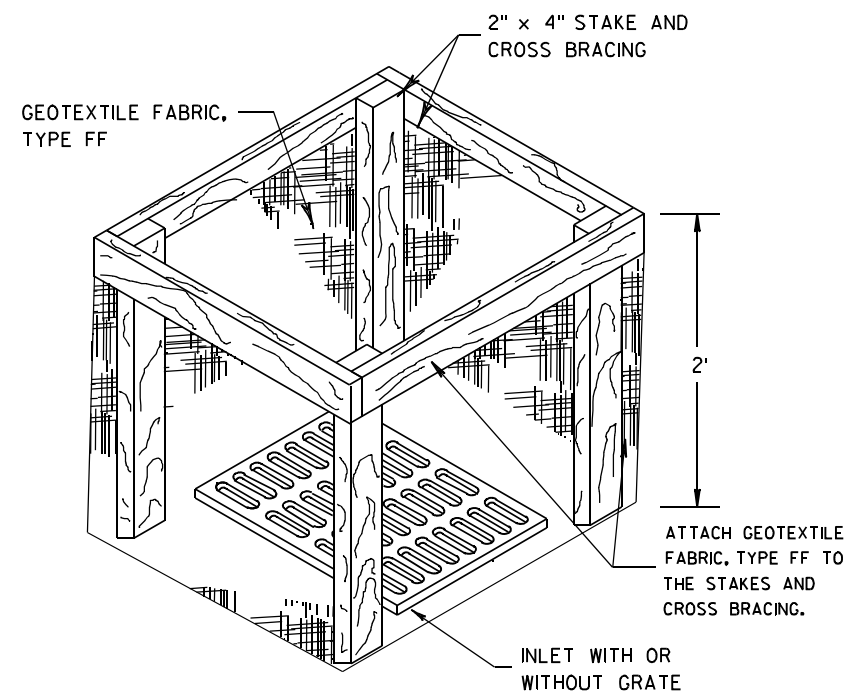
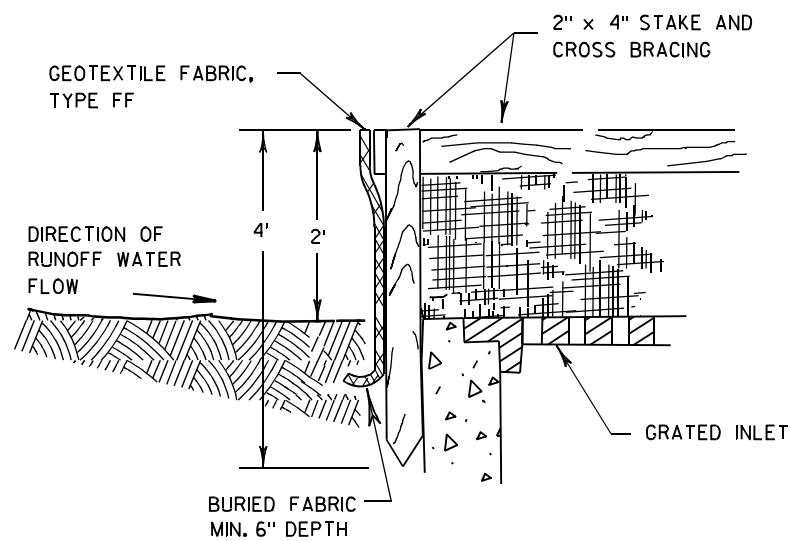


SILT FENCE

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

FHWA



**INLET PROTECTION, TYPE A**

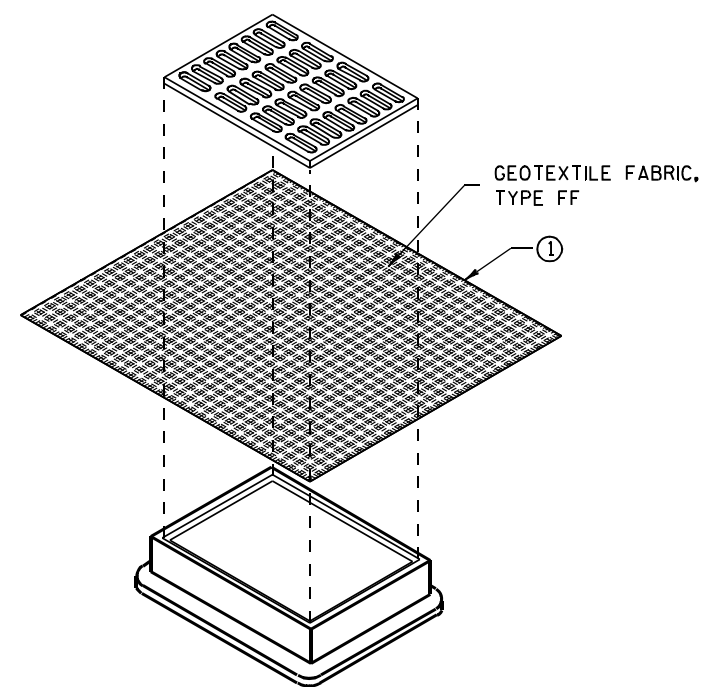
**GENERAL NOTES**

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

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

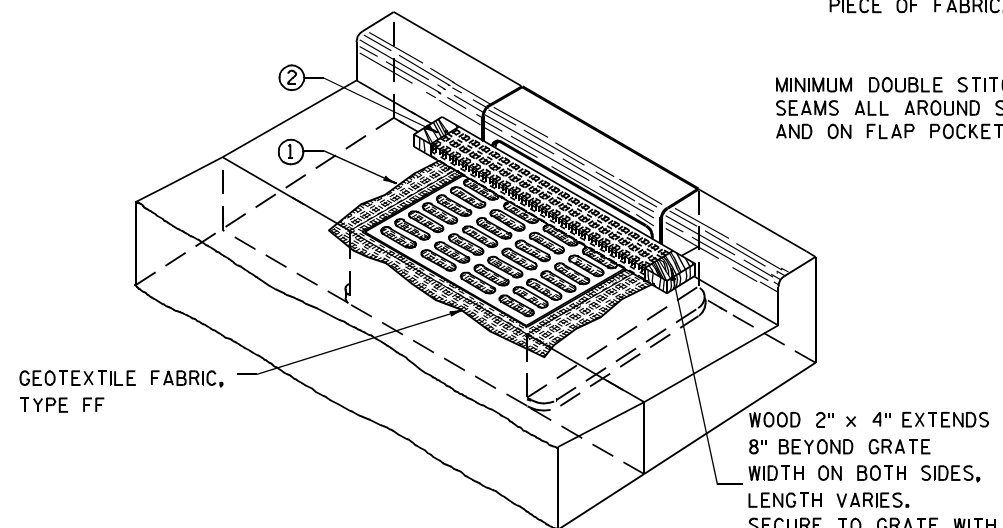
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



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

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



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

**INSTALLATION NOTES**

**TYPE B & C**

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

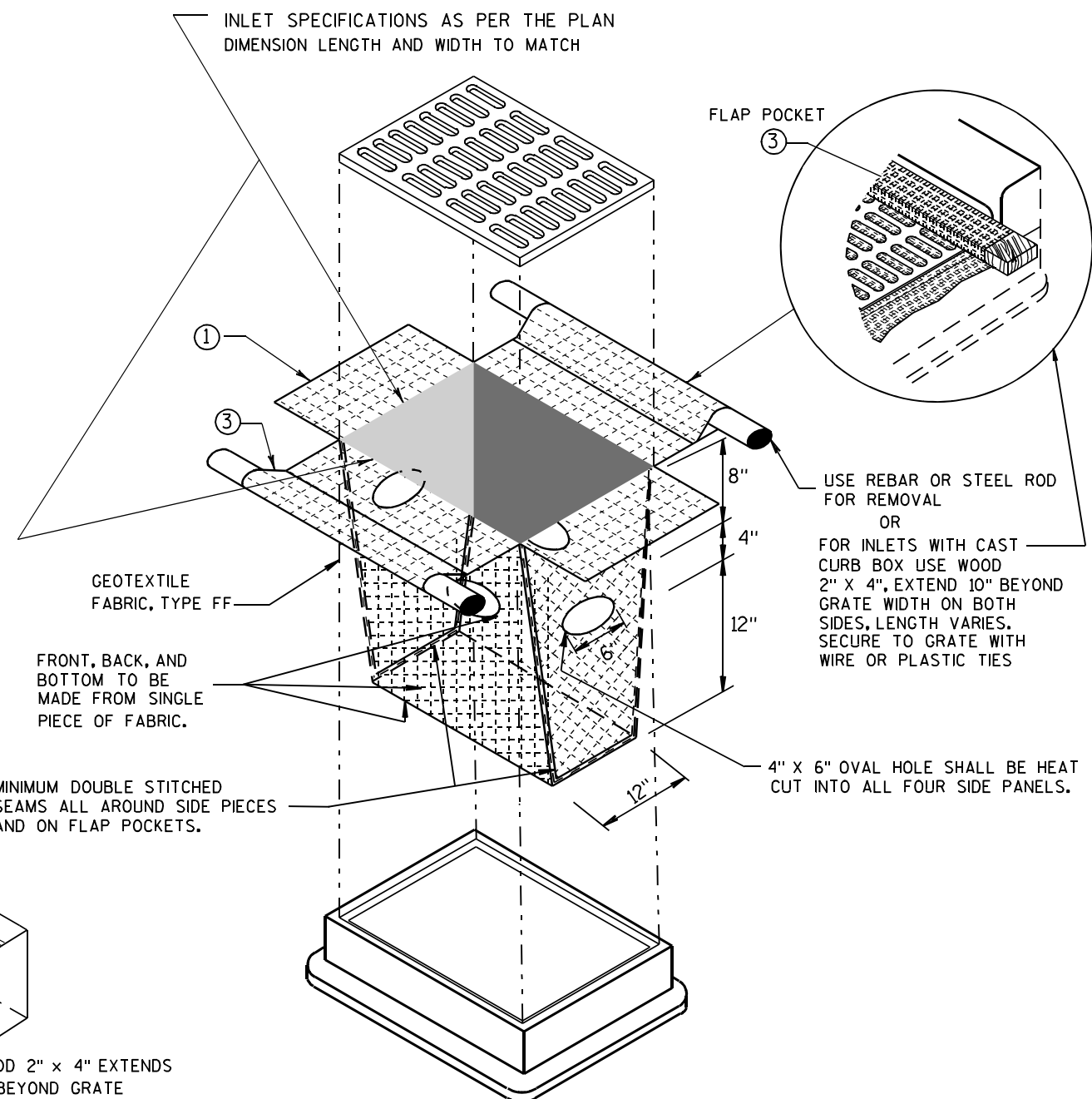
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

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

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

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



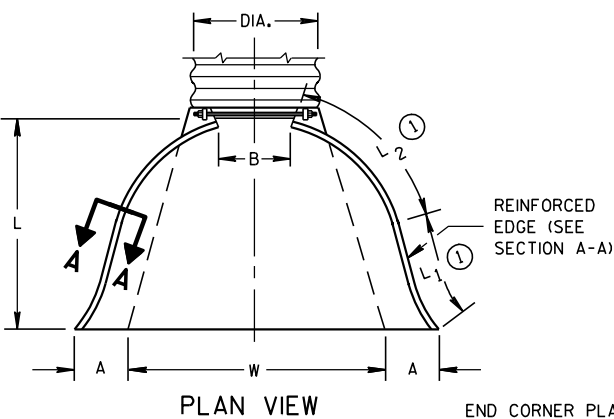
**INLET PROTECTION, TYPE D**

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

|                                                            |                                                               |
|------------------------------------------------------------|---------------------------------------------------------------|
| <b>INLET PROTECTION<br/>TYPE A, B, C, AND D</b>            |                                                               |
| <b>STATE OF WISCONSIN<br/>DEPARTMENT OF TRANSPORTATION</b> |                                                               |
| APPROVED<br>10/16/02<br>DATE                               | /S/ Beth Connolly<br>88<br>CHIEF ROADWAY DEVELOPMENT ENGINEER |
| FHWA                                                       |                                                               |

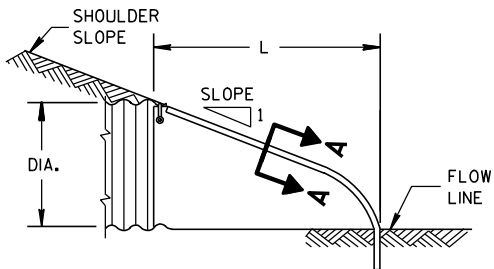
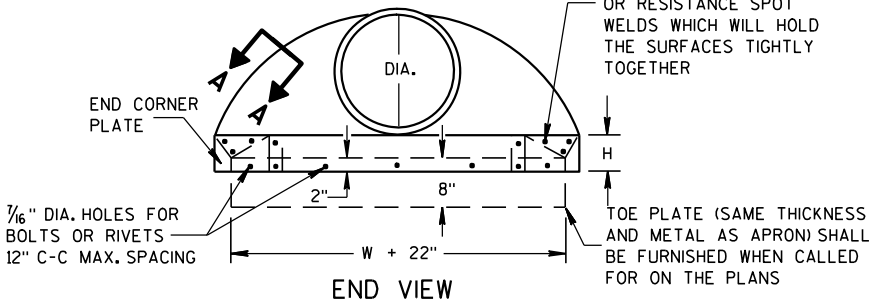
| METAL APRON ENDWALLS |                         |       |                     |             |            |                |                     |                     |            |                  |       |  |
|----------------------|-------------------------|-------|---------------------|-------------|------------|----------------|---------------------|------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

\* EXCEPT CENTER PANEL  
SEE GENERAL NOTES



END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

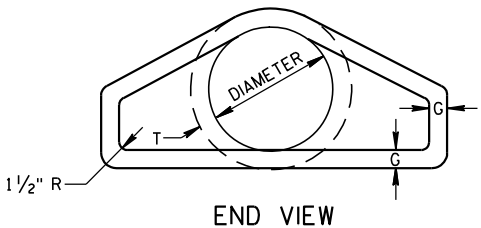
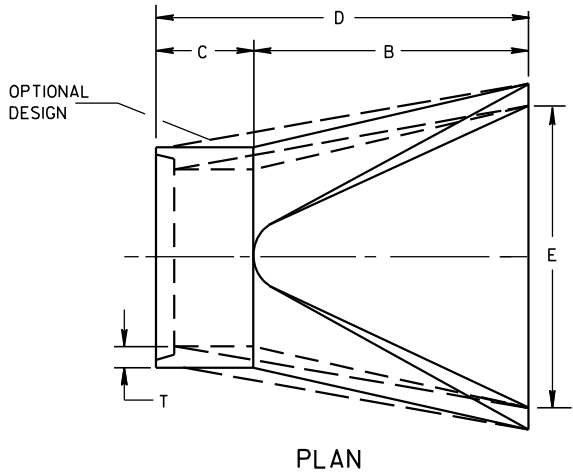
TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS



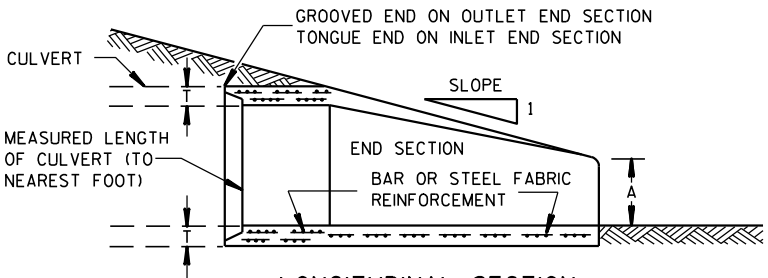
SIDE ELEVATION  
METAL ENDWALLS

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

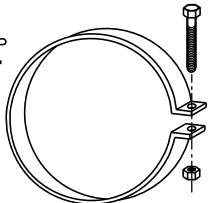
\* MINIMUM  
\*\* MAXIMUM



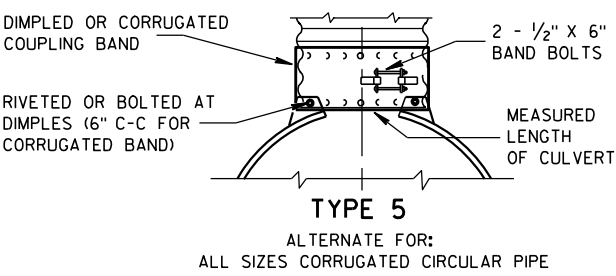
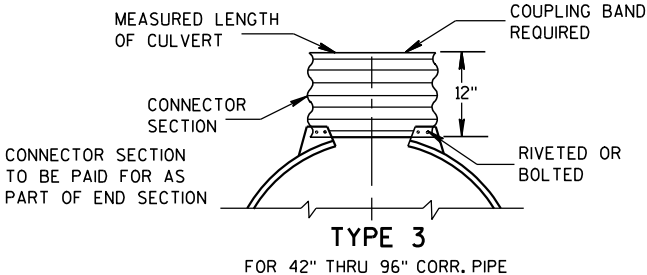
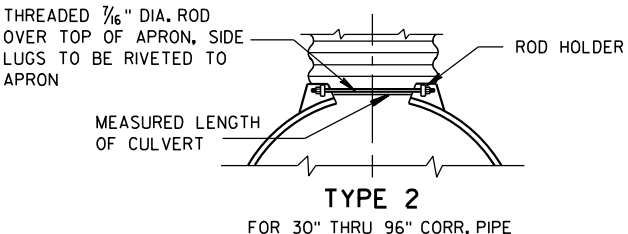
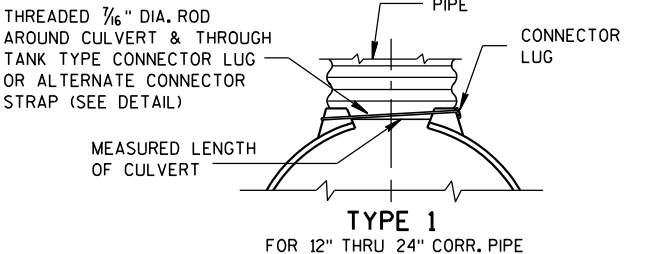
LONGITUDINAL SECTION  
CONCRETE ENDWALLS



1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION  
END SECTION CONNECTOR STRAP



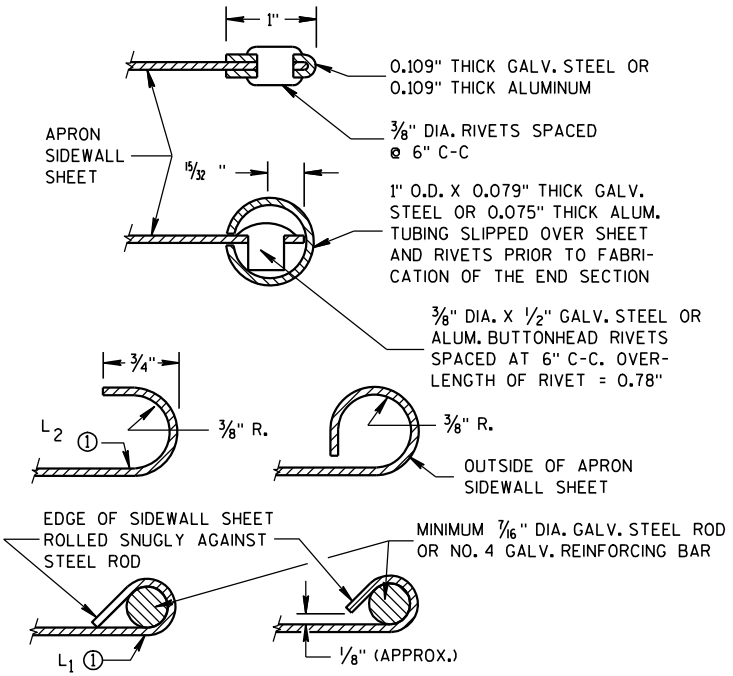
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

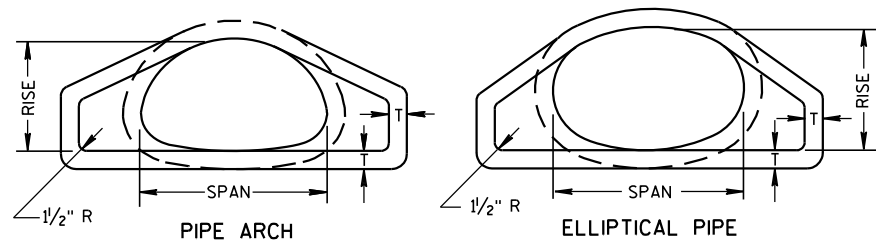
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

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

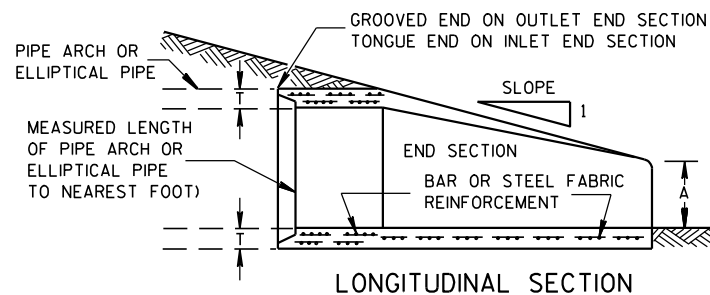
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

| APRON ENDWALLS FOR CULVERT PIPE                    |                                                 |      |  |
|----------------------------------------------------|-------------------------------------------------|------|--|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                 |      |  |
| APPROVED<br>11/30/94<br>DATE                       | /S/ Rory L. Rhin...<br>CHIEF ROADWAY DEVELOP 89 | NEER |  |
| FHWA                                               |                                                 |      |  |

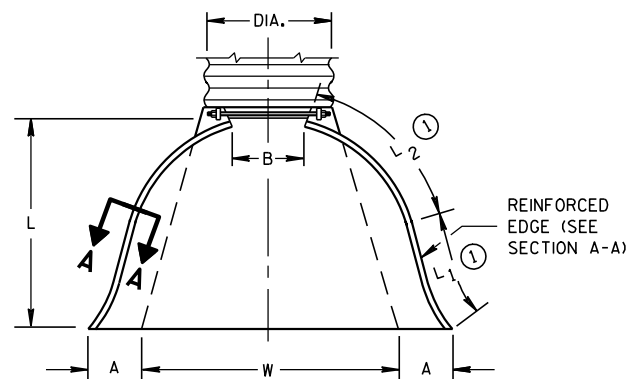


END VIEW



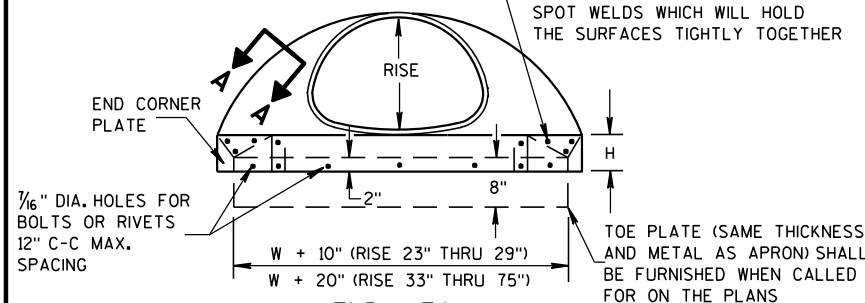
LONGITUDINAL SECTION

## CONCRETE ENDWALLS

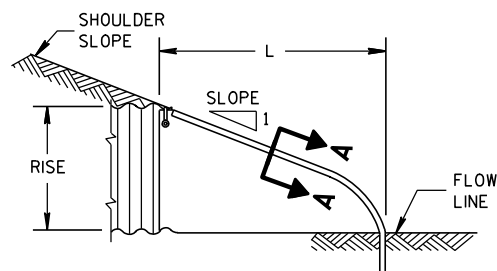
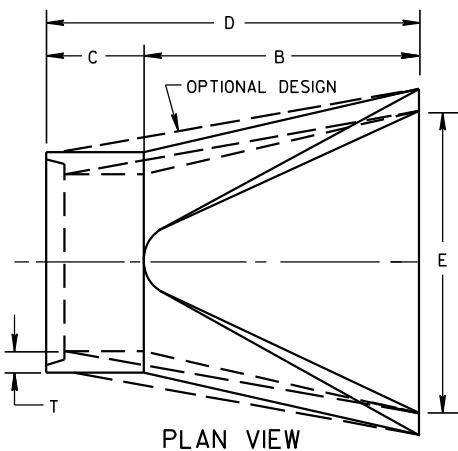


PLAN VIEW

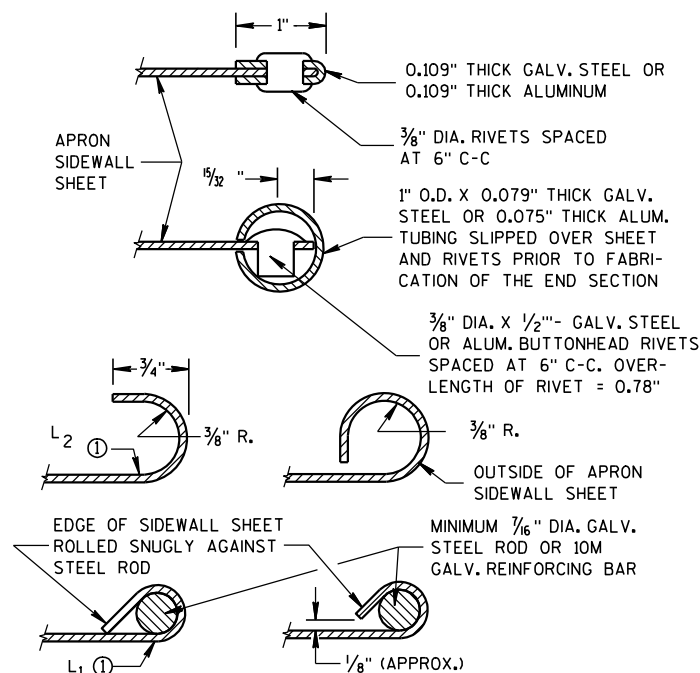
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



END VIEW

SIDE ELEVATION  
METAL ENDWALLS

PLAN VIEW



SECTION A-A

| 2- 2 <sup>2</sup> / <sub>3</sub> " x 1 <sup>1</sup> / <sub>2</sub> " CORRUGATIONS |          |      |                         |       |                     |             |            |                                         |                     |                                |            |                                    |       |
|-----------------------------------------------------------------------------------|----------|------|-------------------------|-------|---------------------|-------------|------------|-----------------------------------------|---------------------|--------------------------------|------------|------------------------------------|-------|
| EQUIV.<br>DIA.<br>(Inches)                                                        | (Inches) |      | MIN. THICK.<br>(Inches) |       | DIMENSIONS (Inches) |             |            |                                         |                     |                                |            | APPROX.<br>SLOPE                   | BODY  |
|                                                                                   | SPAN     | RISE | STEEL                   | ALUM. | A<br>(±1")          | B<br>(MAX.) | H<br>(±1") | L<br>(±1 <sup>1</sup> / <sub>2</sub> ") | L <sub>1</sub><br>① | L <sub>2</sub><br>①            | W<br>(±2") |                                    |       |
| 15                                                                                | 17       | 13   | .064                    | .060  | 7                   | 9           | 6          | 19                                      | 14                  | 16                             | 30         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 18                                                                                | 21       | 15   | .064                    | .060  | 7                   | 10          | 6          | 23                                      | 14                  | 19 <sup>3</sup> / <sub>8</sub> | 36         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 21                                                                                | 24       | 18   | .064                    | .060  | 8                   | 12          | 6          | 28                                      | 18                  | 21 <sup>3</sup> / <sub>4</sub> | 42         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 24                                                                                | 28       | 20   | .064                    | .060  | 9                   | 14          | 6          | 32                                      | 18                  | 27 <sup>1</sup> / <sub>2</sub> | 48         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 30                                                                                | 35       | 24   | .079                    | .075  | 10                  | 16          | 6          | 39                                      | 18                  | 37 <sup>5</sup> / <sub>8</sub> | 60         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 36                                                                                | 42       | 29   | .079                    | .075  | 12                  | 18          | 8          | 46                                      | 24                  | 45 <sup>3</sup> / <sub>8</sub> | 75         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 42                                                                                | 49       | 33   | .109                    | .105  | 13                  | 21          | 9          | 53                                      | 24                  | 54 <sup>3</sup> / <sub>4</sub> | 85         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 2 Pc. |
| 48                                                                                | 57       | 38   | .109                    | .105  | 18                  | 26          | 12         | 63                                      | 24                  | 68                             | 90         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 3 Pc. |
| 54                                                                                | 64       | 43   | .109                    | .105  | 18                  | 30          | 12         | 70                                      | 24                  | 72 <sup>3</sup> / <sub>4</sub> | 102        | 2 <sup>1</sup> / <sub>4</sub> to 1 | 3 Pc. |
| 60                                                                                | 71       | 47   | .109*                   | .105* | 18                  | 33          | 12         | 77                                      | 30                  | 82 <sup>1</sup> / <sub>4</sub> | 114        | 2 <sup>1</sup> / <sub>4</sub> to 1 | 3 Pc. |
| 66                                                                                | 77       | 52   | .109*                   | .105* | 18                  | 36          | 12         | 77                                      | —                   | —                              | 126        | 2 to 1                             | 3 Pc. |
| 72                                                                                | 83       | 57   | .109*                   | .105* | 18                  | 39          | 12         | 77                                      | —                   | —                              | 138        | 2 to 1                             | 3 Pc. |

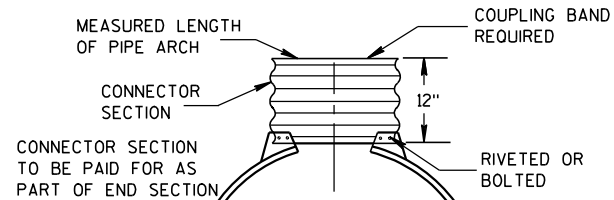
| 3" X 1" CORRUGATIONS       |          |      |                         |       |                     |             |            |                |                     |                     |            |                  |       |
|----------------------------|----------|------|-------------------------|-------|---------------------|-------------|------------|----------------|---------------------|---------------------|------------|------------------|-------|
| EQUIV.<br>DIA.<br>(Inches) | (Inches) |      | MIN. THICK.<br>(Inches) |       | DIMENSIONS (Inches) |             |            |                |                     |                     |            | APPROX.<br>SLOPE | BODY  |
|                            | SPAN     | RISE | STEEL                   | ALUM. | A<br>(±1")          | B<br>(MAX.) | H<br>(±1") | L<br>(±1 1/2") | L <sub>1</sub><br>① | L <sub>2</sub><br>① | W<br>(±2") |                  |       |
| 48                         | 53       | 41   | .109                    | .105  | 18                  | 26          | 12         | 63             | 24                  | 72¾                 | 90         | 2½ to 1          | 2 Pc. |
| 54                         | 60       | 46   | .109                    | .105  | 18                  | 30          | 12         | 70             | 30                  | 82¼                 | 102        | 2 to 1           | 2 Pc. |
| 60                         | 66       | 51   | .109*                   | .105* | 18                  | 33          | 12         | 77             | —                   | —                   | 114        | 1½ to 1          | 3 Pc. |
| 66                         | 73       | 55   | .109*                   | .105* | 18                  | 36          | 12         | 77             | —                   | —                   | 126        | 1½ to 1          | 3 Pc. |
| 72                         | 81       | 59   | .109*                   | .105* | 18                  | 39          | 12         | 77             | —                   | —                   | 138        | 2 to 1           | 3 Pc. |
| 78                         | 87       | 63   | .109*                   | .105* | 22                  | 38          | 12         | 77             | —                   | —                   | 148        | 1½ to 1          | 3 Pc. |
| 84                         | 95       | 67   | .109*                   | .105* | 22                  | 34          | 12         | 77             | —                   | —                   | 162        | 1½ to 1          | 3 Pc. |
| 90                         | 103      | 71   | .109*                   | .105* | 22                  | 38          | 12         | 77             | —                   | —                   | 174        | 1½ to 1          | 3 Pc. |
| 96                         | 112      | 75   | .109*                   | .105* | 24                  | 40          | 12         | 77             | —                   | —                   | 174        | 1½ to 1          | 3 Pc. |

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

\* EXCEPT CENTER PANEL  
SEE GENERAL NOTES

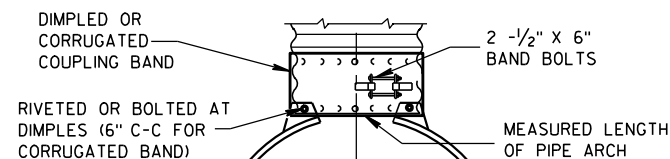
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,  
AND CORRUGATED BAND FITS INSIDE ENDWALL.

## CONNECTION DETAILS

## REINFORCED CONCRETE PIPE ARCH

| EQUIV. DIA. (Inches) | DIMENSIONS (Inches) |         |       |         |    |    |     |     | APPROX. SLOPE |
|----------------------|---------------------|---------|-------|---------|----|----|-----|-----|---------------|
|                      | ** SPAN             | ** RISE | T     | A       | B  | C  | D   | E   |               |
| 24                   | 29                  | 18      | 3     | 8 1/2   | 39 | 33 | 72  | 48  | 3 to 1        |
| 30                   | 36                  | 22      | 3 1/2 | 9 1/2   | 50 | 46 | 96  | 60  | 3 to 1        |
| 36                   | 44                  | 27      | 4     | 11 1/8  | 60 | 36 | 96  | 72  | 3 to 1        |
| 42                   | 51                  | 31      | 4 1/2 | 15 1/16 | 60 | 36 | 96  | 78  | 3 to 1        |
| 48                   | 58                  | 36      | 5     | 21      | 60 | 36 | 96  | 84  | 3 to 1        |
| 54                   | 65                  | 40      | 5 1/2 | 25 1/2  | 60 | 36 | 96  | 90  | 3 to 1        |
| 60                   | 73                  | 45      | 6     | 31      | 60 | 36 | 96  | 96  | 3 to 1        |
| 72                   | 88                  | 54      | 7     | 31      | 60 | 39 | 99  | 120 | 2 to 1        |
| 84                   | 102                 | 62      | 8     | 28 1/2  | 83 | 19 | 102 | 144 | 2 to 1        |

## REINFORCED CONCRETE ELLIPTICAL PIPE

| EQUIV. DIA. (Inches) | DIMENSIONS (Inches) |         |       |        |    |    |    |    | APPROX. SLOPE |
|----------------------|---------------------|---------|-------|--------|----|----|----|----|---------------|
|                      | ** SPAN             | ** RISE | T     | A      | B  | C  | D  | E  |               |
| 24                   | 30                  | 19      | 3 1/4 | 8 1/2  | 39 | 33 | 72 | 48 | 3 to 1        |
| 30                   | 38                  | 24      | 3 3/4 | 9 1/2  | 54 | 18 | 72 | 60 | 3 to 1        |
| 36                   | 45                  | 29      | 4 1/2 | 11 1/8 | 60 | 24 | 84 | 72 | 2 1/2 to 1    |
| 42                   | 53                  | 34      | 5     | 15 1/4 | 60 | 36 | 96 | 78 | 2 1/2 to 1    |
| 48                   | 60                  | 38      | 5 1/2 | 21     | 60 | 36 | 96 | 84 | 2 1/2 to 1    |
| 54                   | 68                  | 43      | 6     | 25 1/2 | 60 | 36 | 96 | 90 | 2 1/2 to 1    |
| 60                   | 76                  | 48      | 6 1/2 | 30     | 60 | 36 | 96 | 96 | 2 1/2 to 1    |

\*\*NOMINAL SIZE

## GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR  
PIPE ARCH AND  
ELLIPTICAL PIPESTATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94

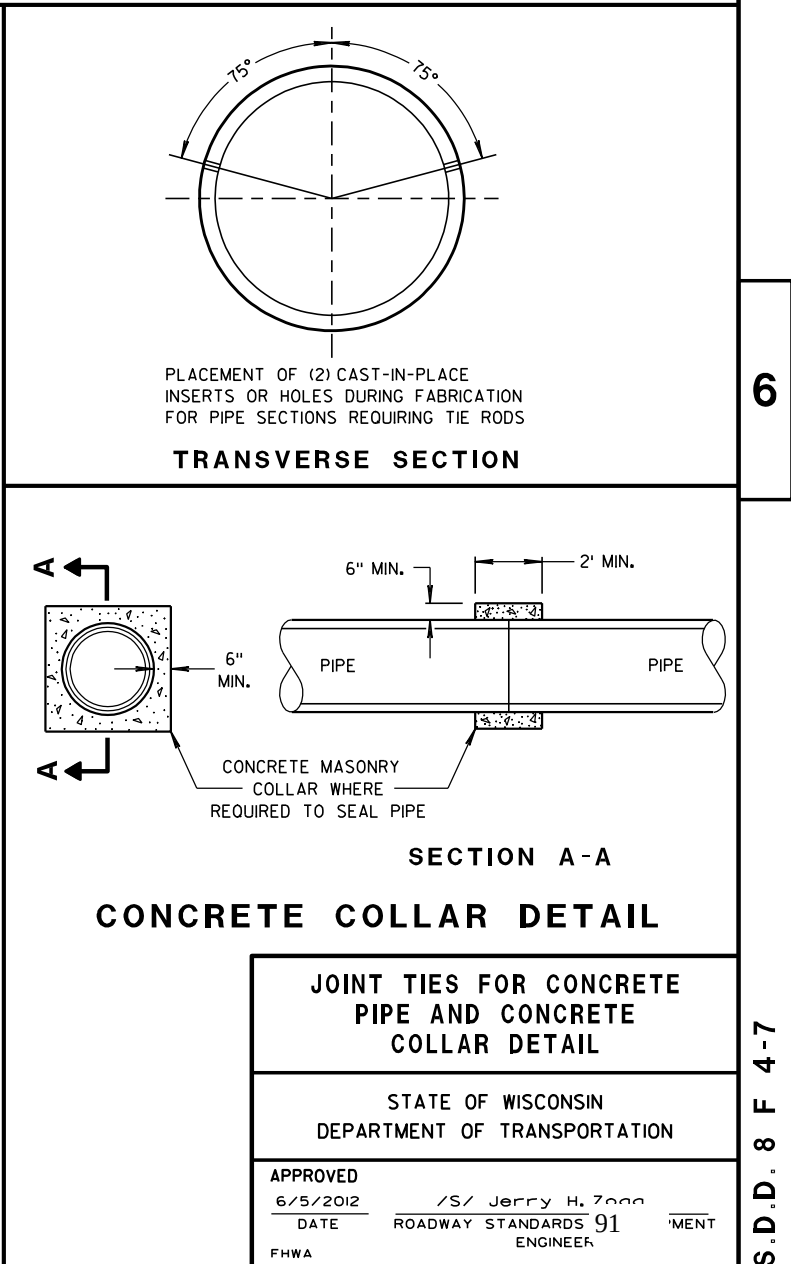
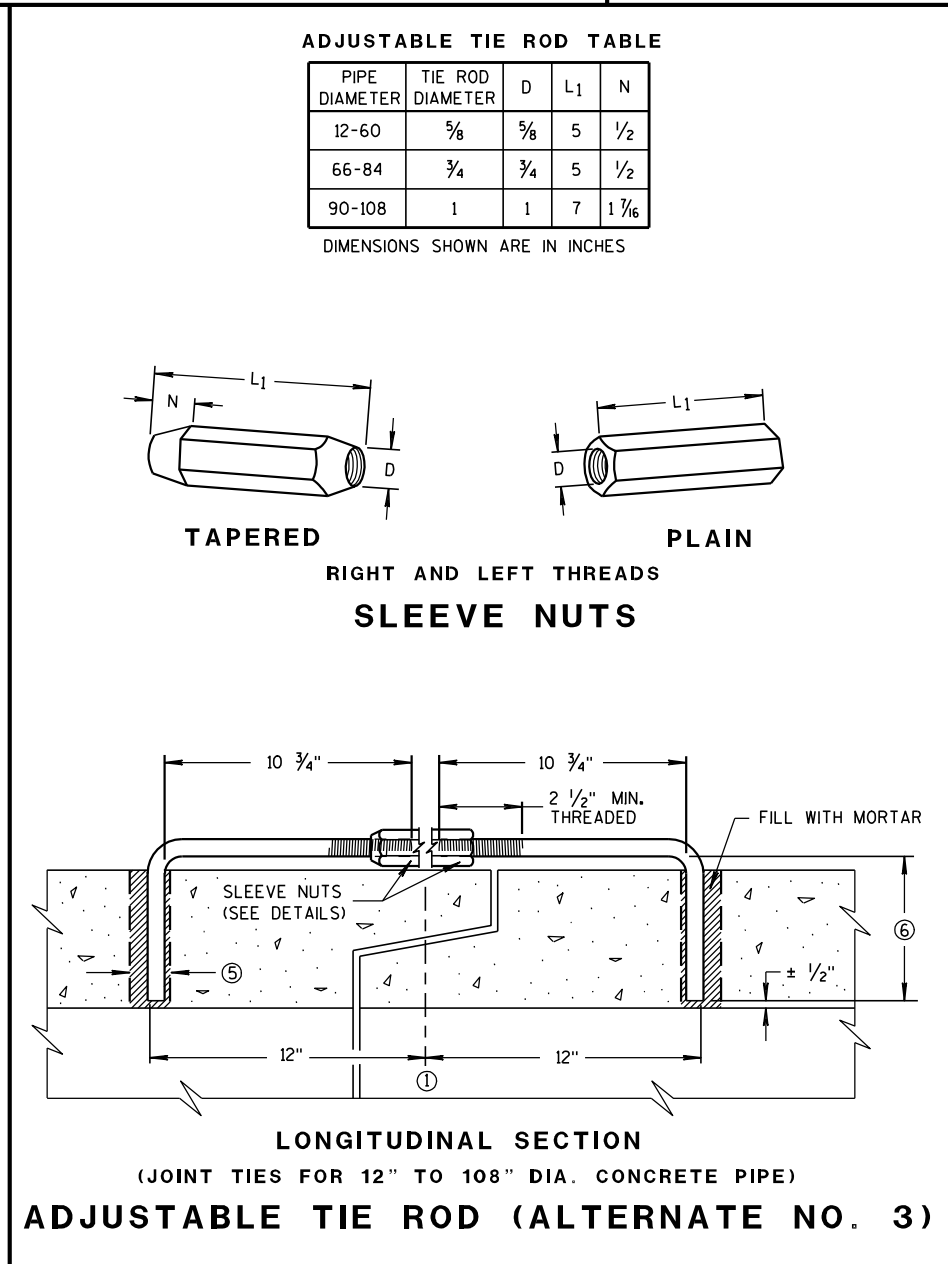
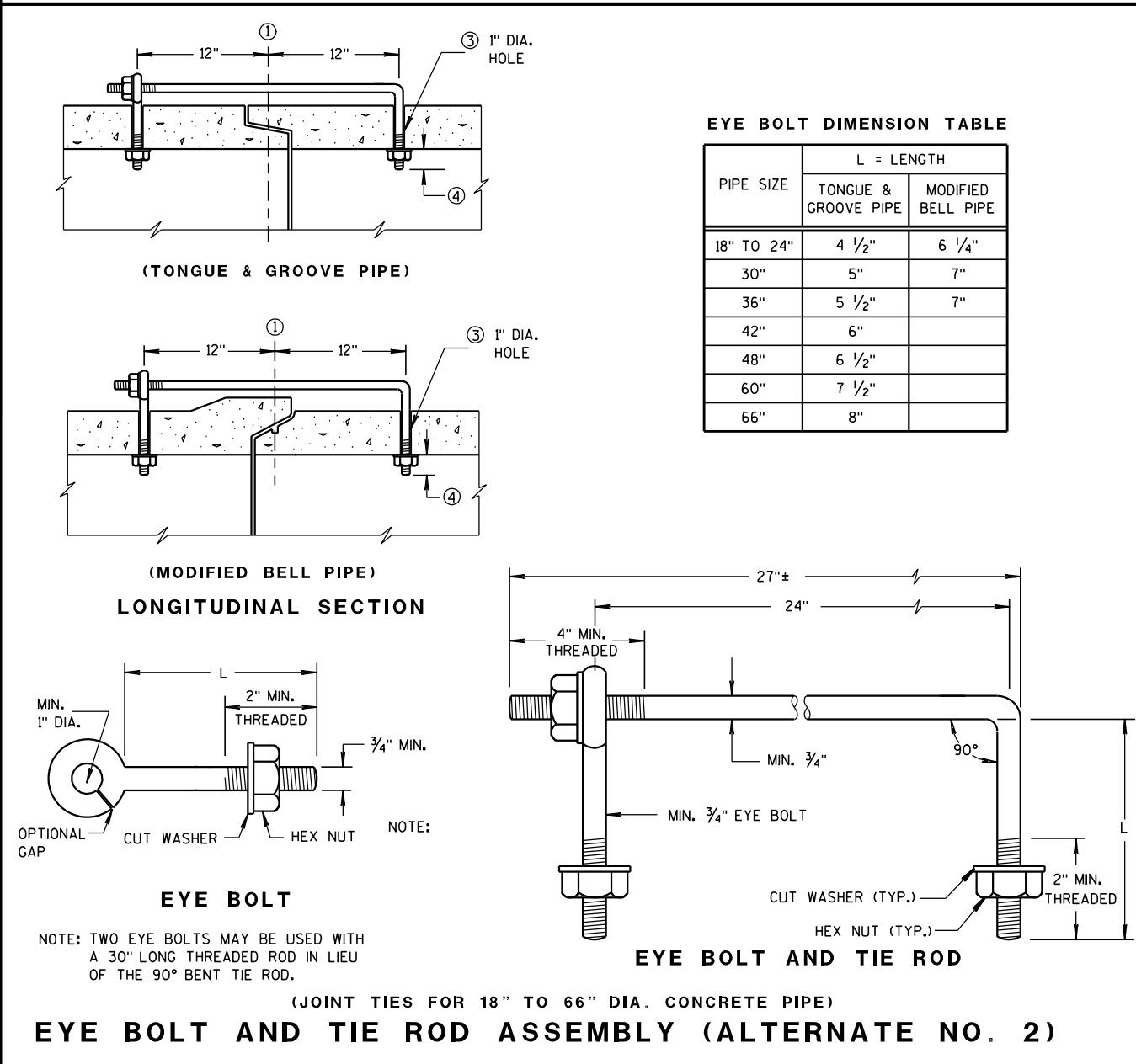
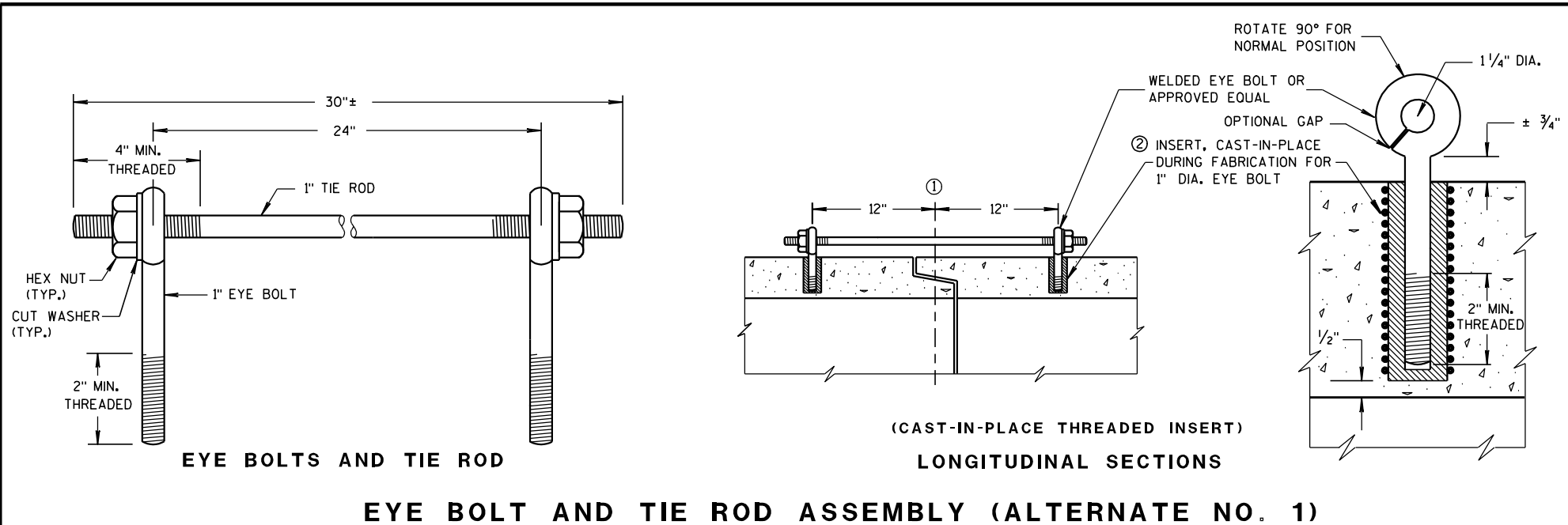
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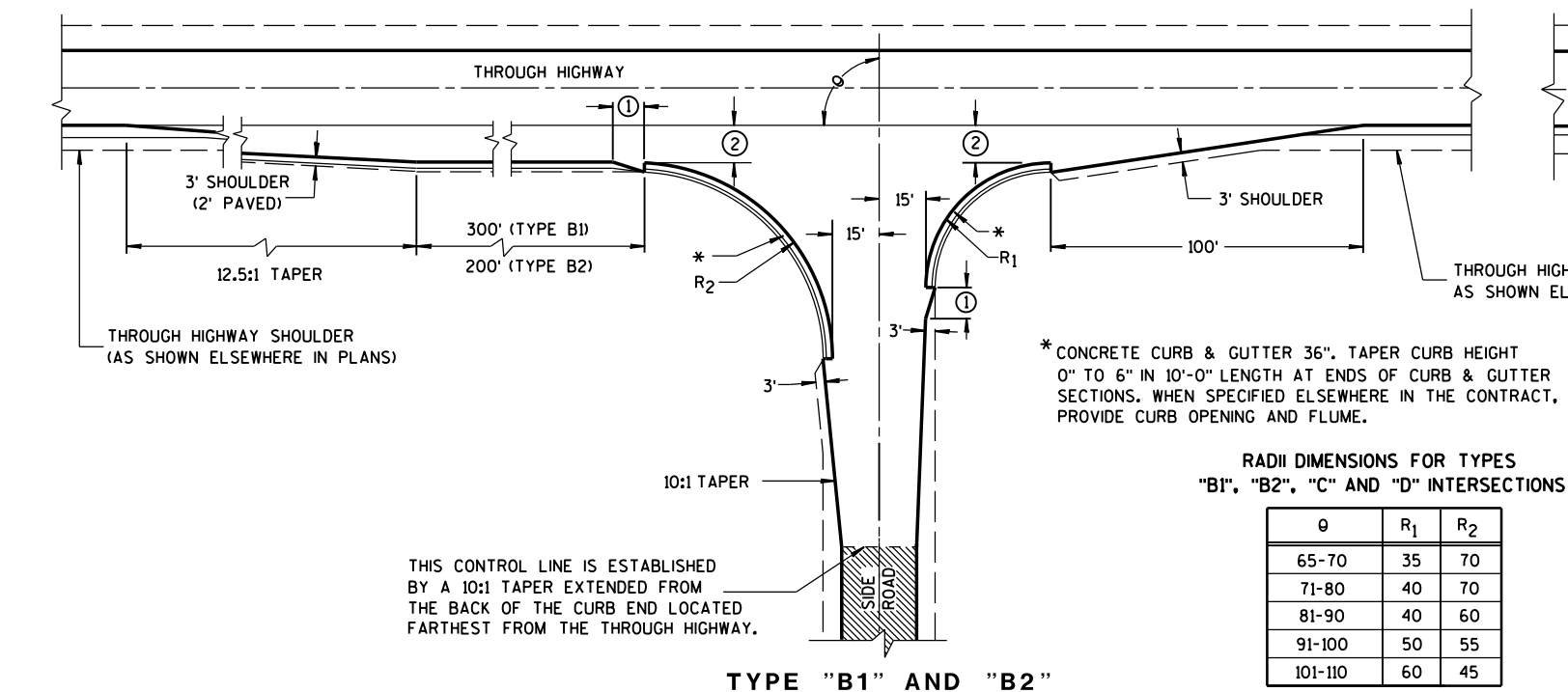
/S/ Rory L. Rhinehart

CHIEF ROADWAY DEVELOPER

ENGINEER

FHWA





## GENERAL NOTES

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

### SIDE ROAD SURFACING NOTE

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

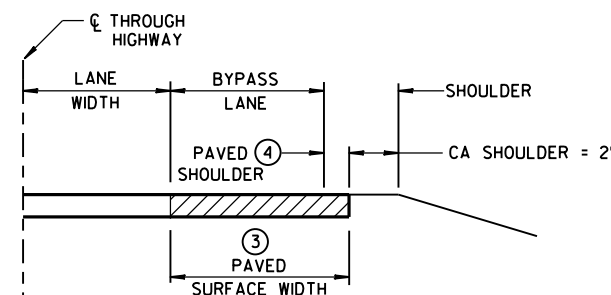
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

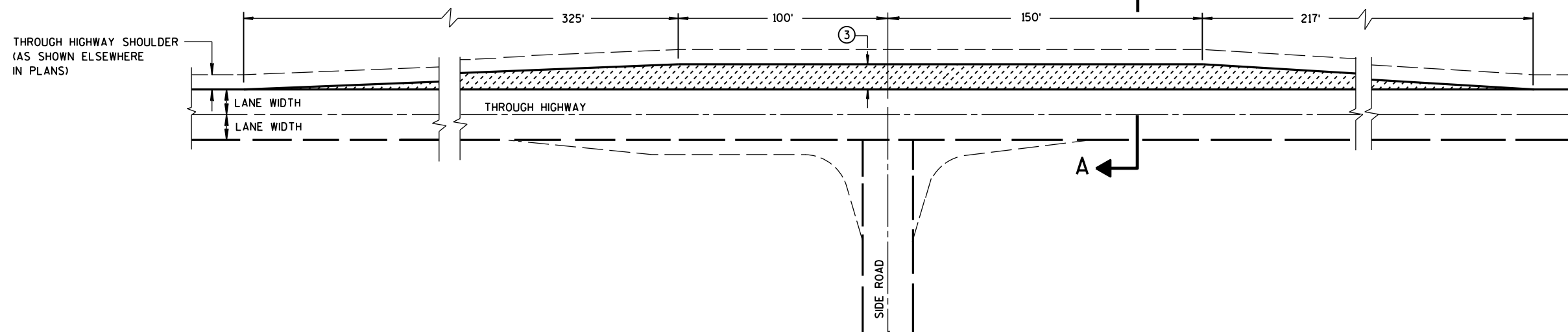
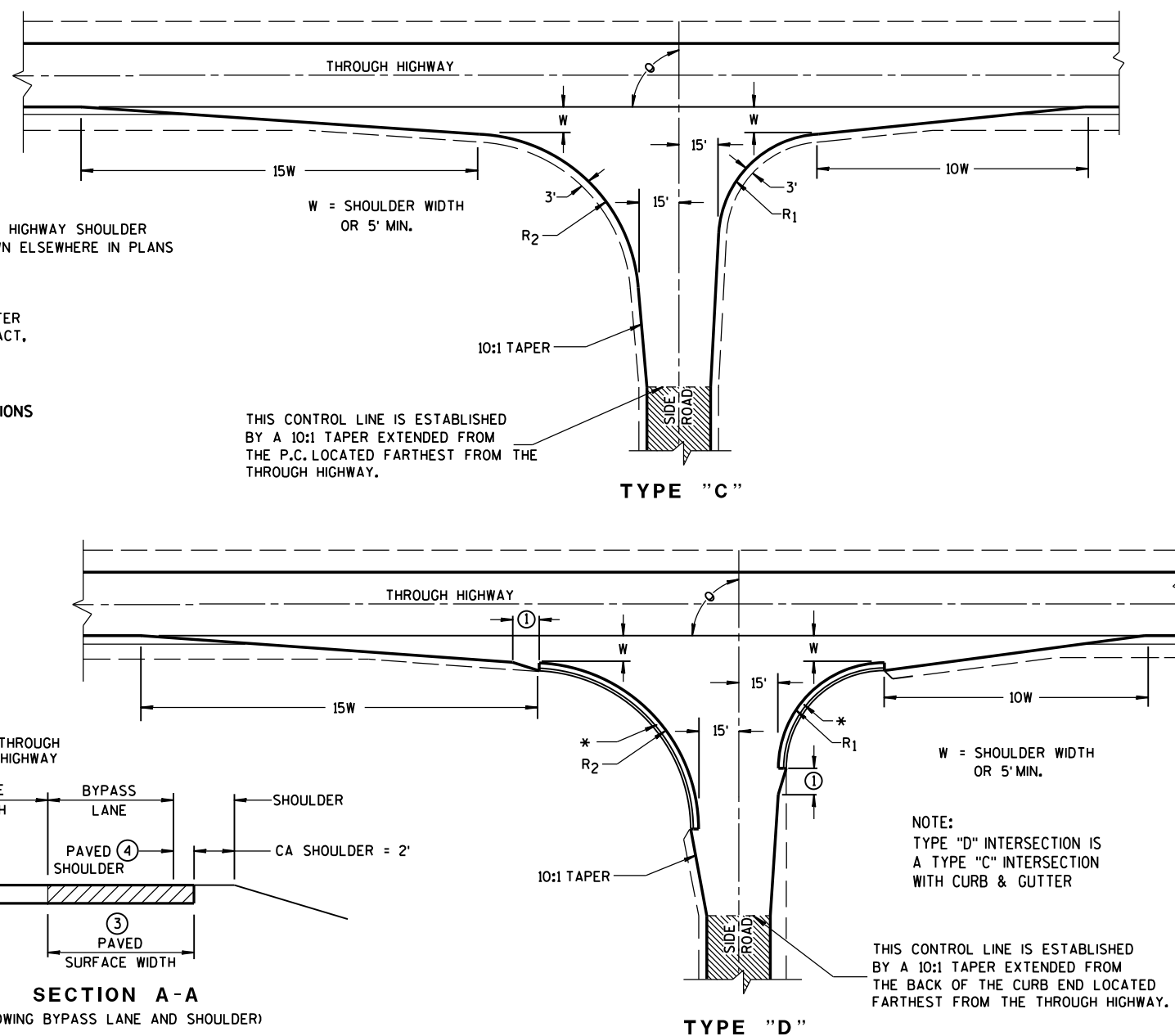
EXISTING PAVED SURFACE

BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT\*\* PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.
- \*\*10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE  
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.  
-PC CONCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.



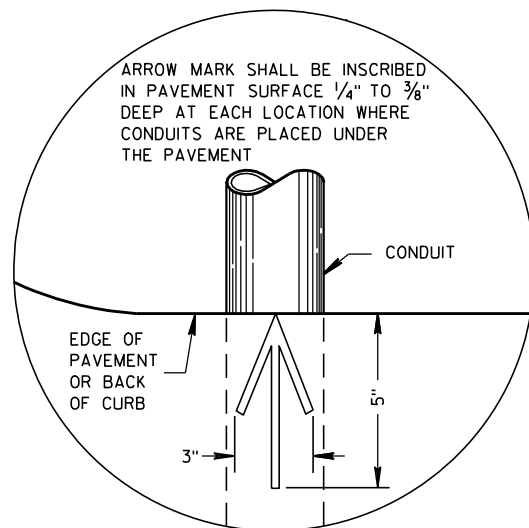
SECTION A-A  
(SHOWING BYPASS LANE AND SHOULDER)



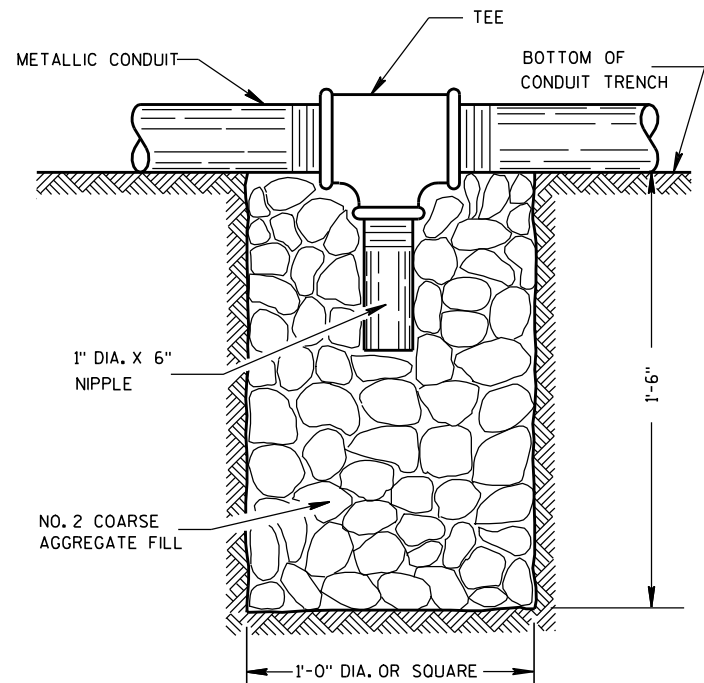
TEE INTERSECTION BYPASS LANE DETAIL

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

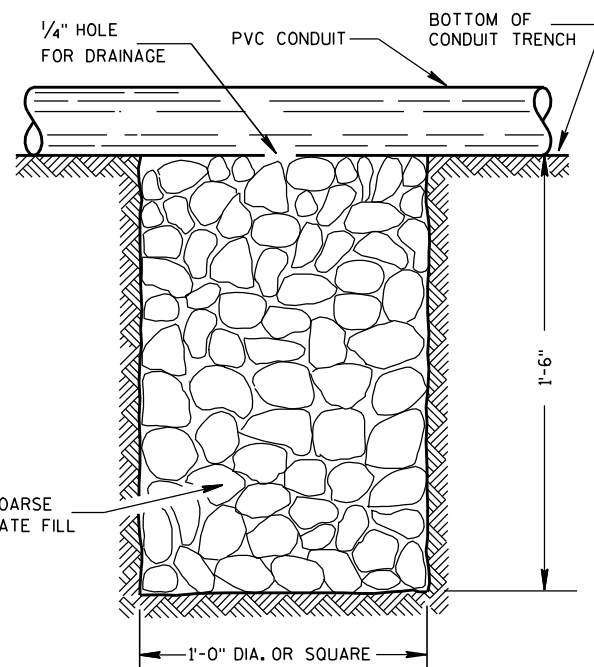


PLAN VIEW  
ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

## 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 EMERSON 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.

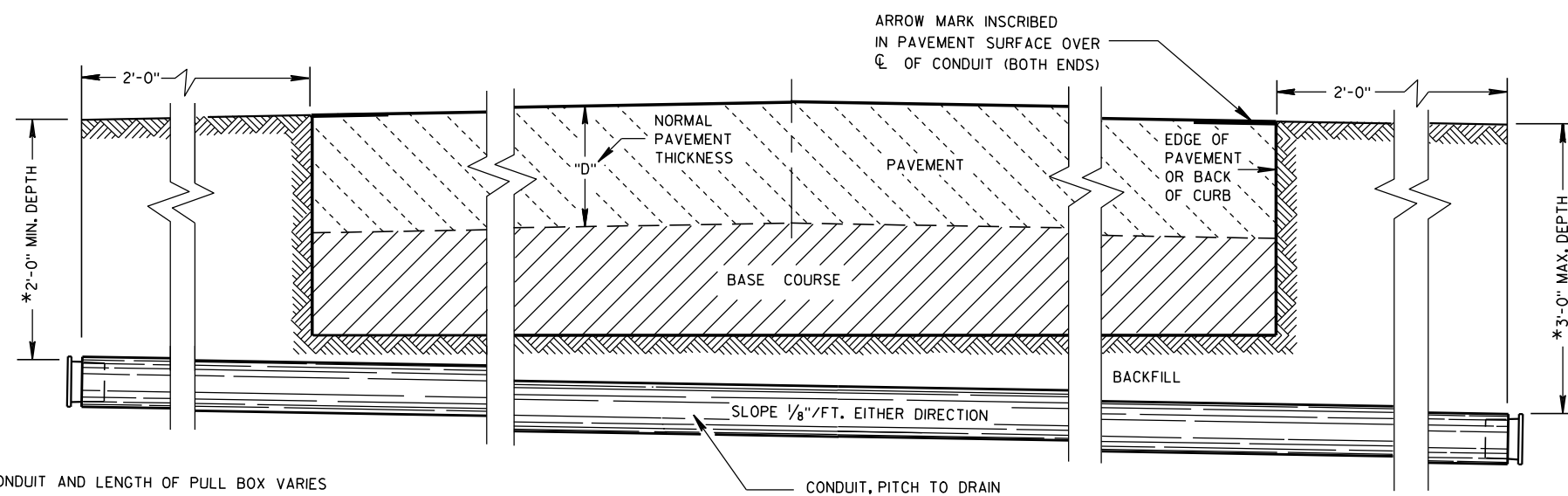
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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.).

POLY ROPE OR A PULL 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.



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

SIDE ELEVATION  
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

## CONDUIT

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

10/23/03

DATE

FHWA

/S/ Balu Ananthanarayanan  
STATE ELECTRICAL ENGINEER

HWYS

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

| DIMENSION IN INCHES    |   | CORRUGATED STEEL PIPE |        |        |        |        |        |        |        |        |
|------------------------|---|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| PIPE DIAMETER (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.

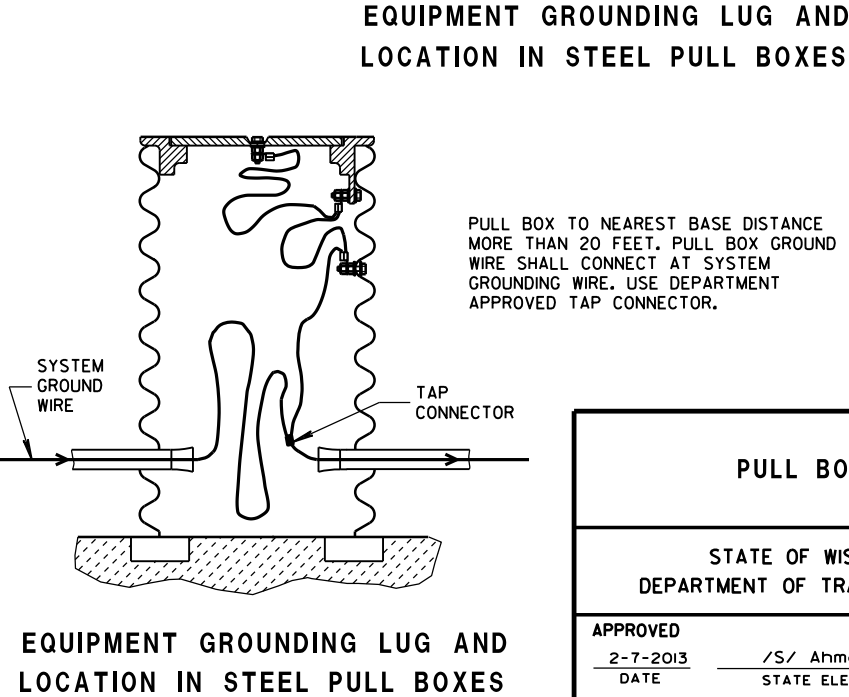
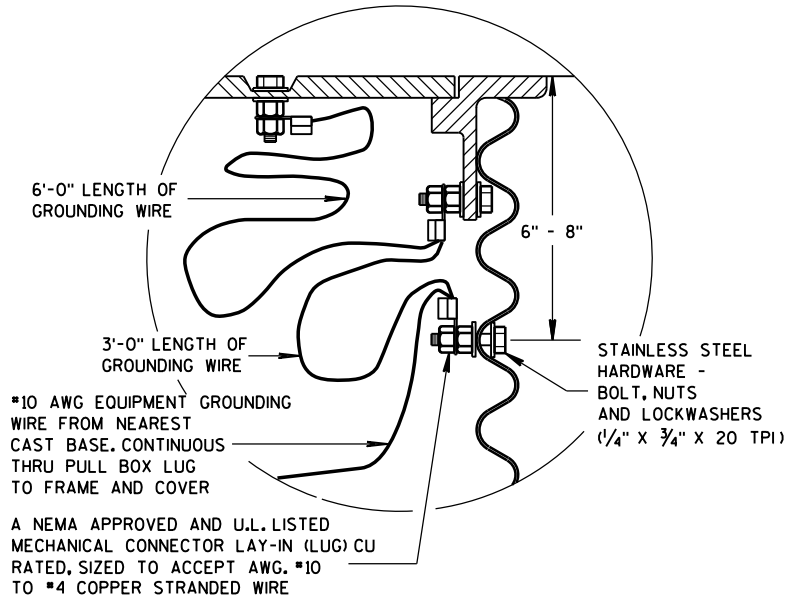
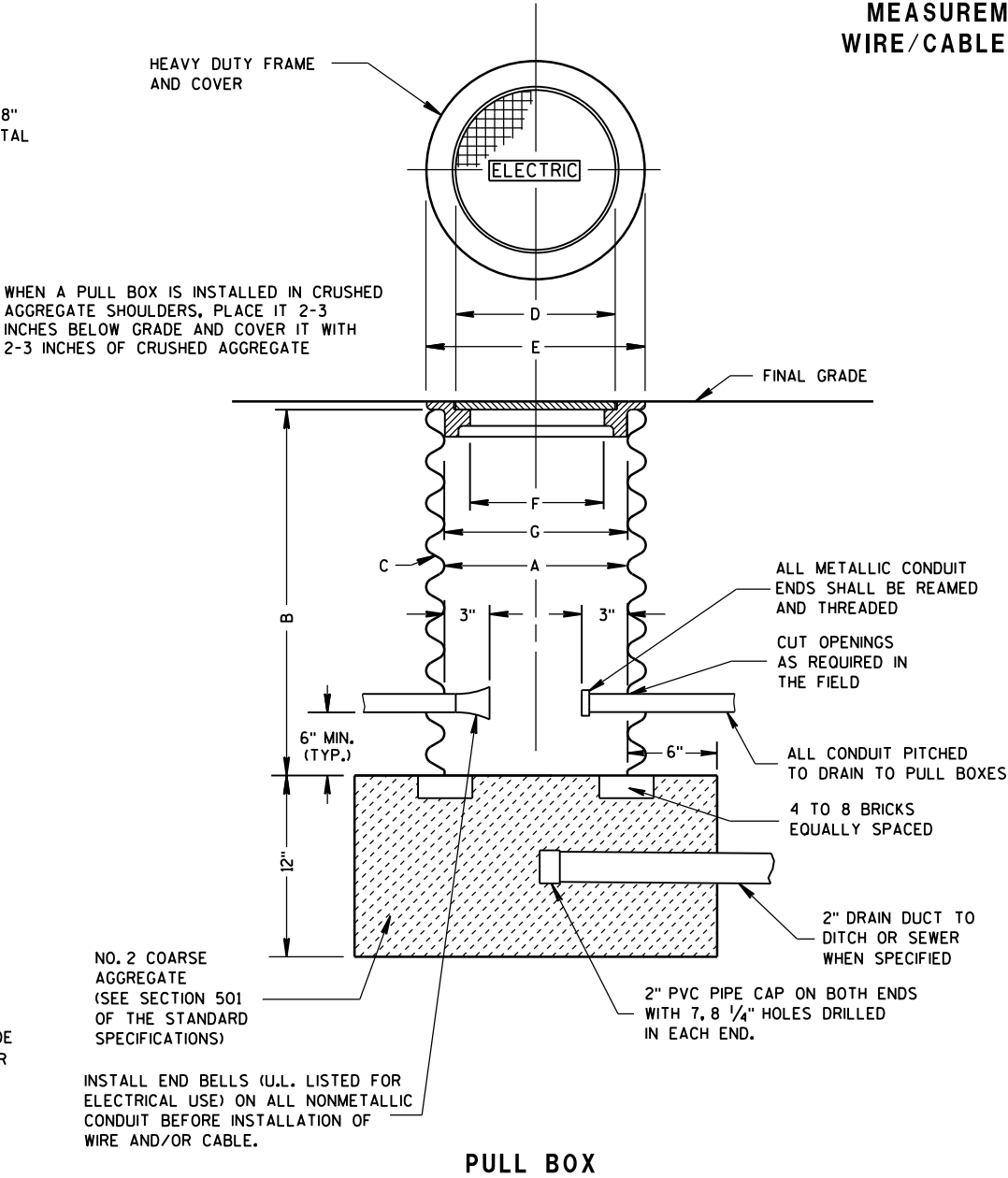
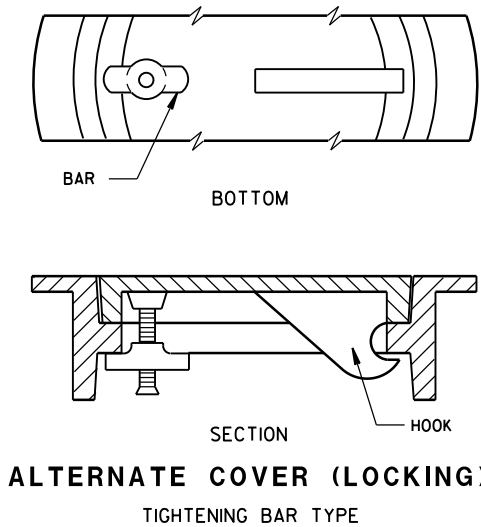
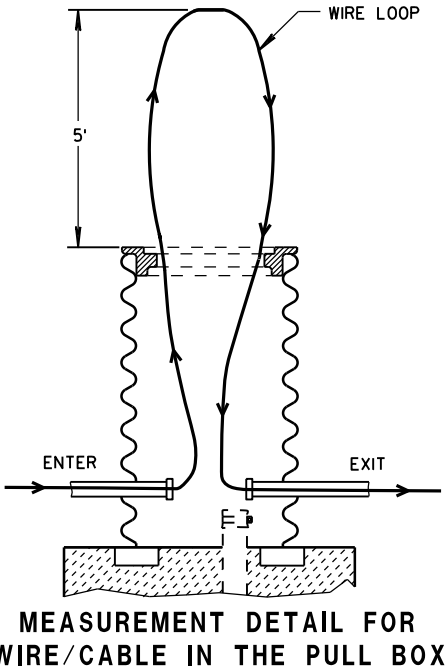
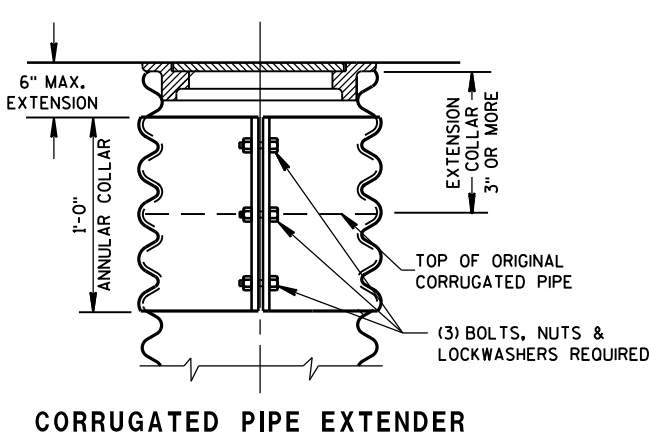
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

GROUNDING LUGS ARE NOT REQUIRED IN PULL BOXES WHEN VOLTAGES OF LESS THAN 50 VOLTS AC ARE THE ONLY VOLTAGES ENCOUNTERED IN THE BOXES.

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

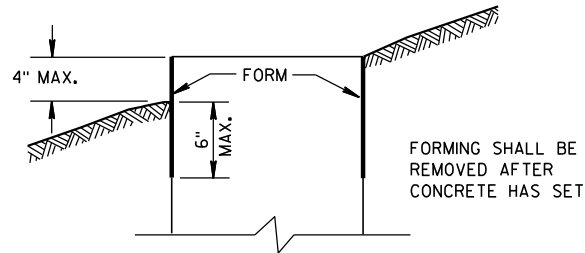
S.D.D. 9B2, "CONDUIT", APPLIES TO THIS DRAWING.

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>2-7-2013<br>DATE                       | /S/ Ahmet Demirbilek<br>STATE ELECTRICAL 94 |
| 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    |
| 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   |

### GENERAL NOTES

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 AS 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.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X 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 NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

### GENERAL NOTES (CONTINUED)

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

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

WHEN REQUIRED TO CONNECT NONMETALLIC 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 AND TYPE 5 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES 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 AND 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-449, OR ASTM A-687 (GRADE 105).

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

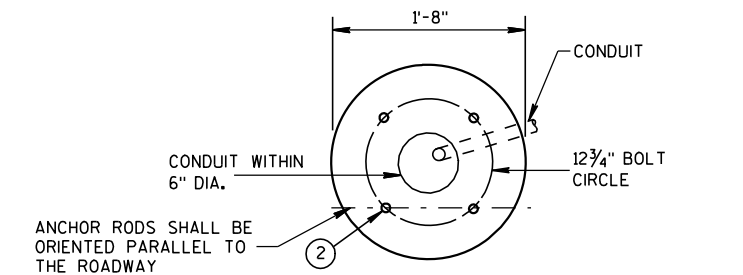
WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

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.

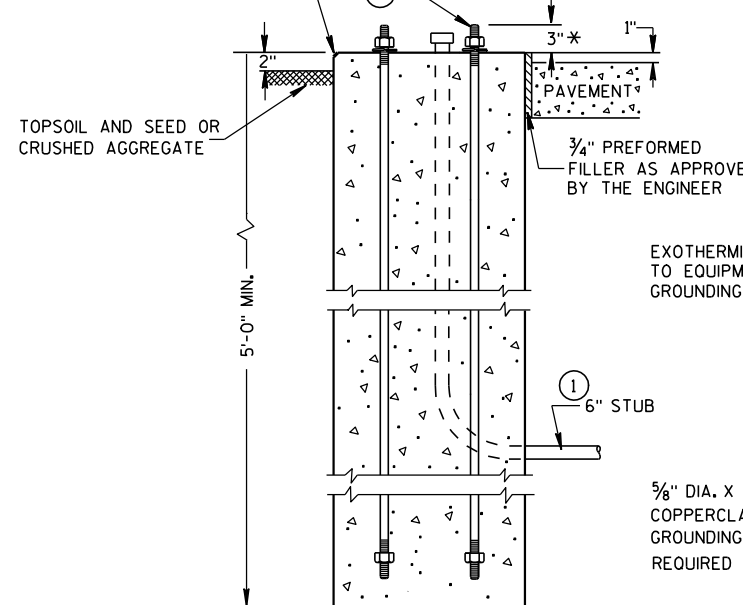
BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

- 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 BY 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.

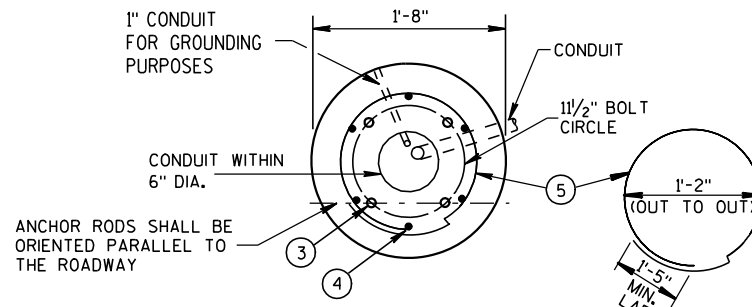


FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

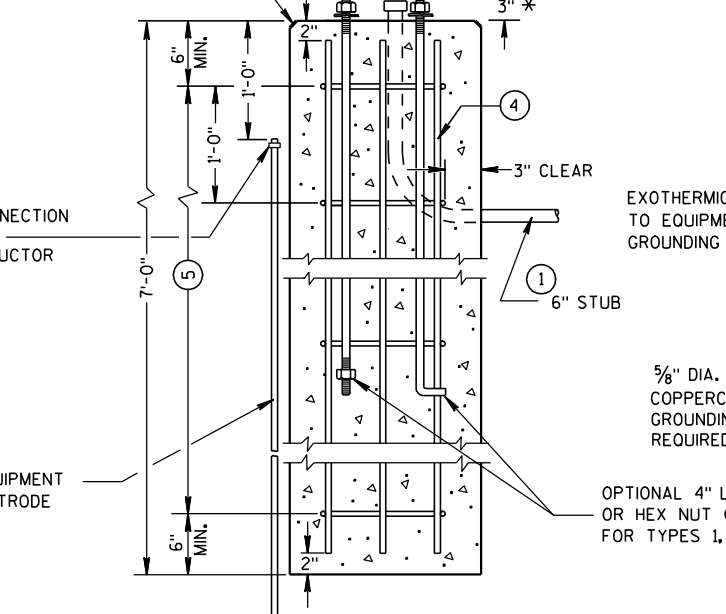
### HALF SECTION IN UNPAVED AREA (TYPICAL FOR TYPES 1, 2 & 5)



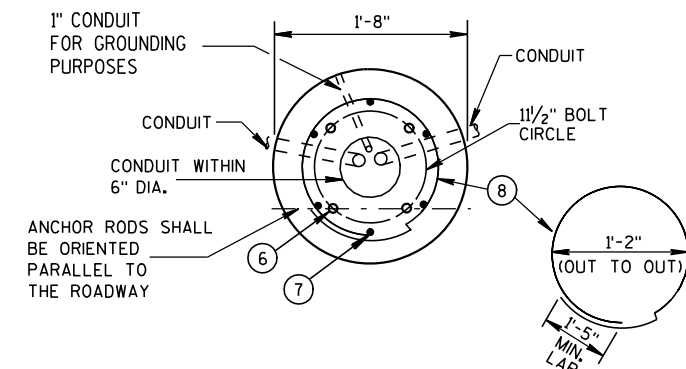
TYPE 1



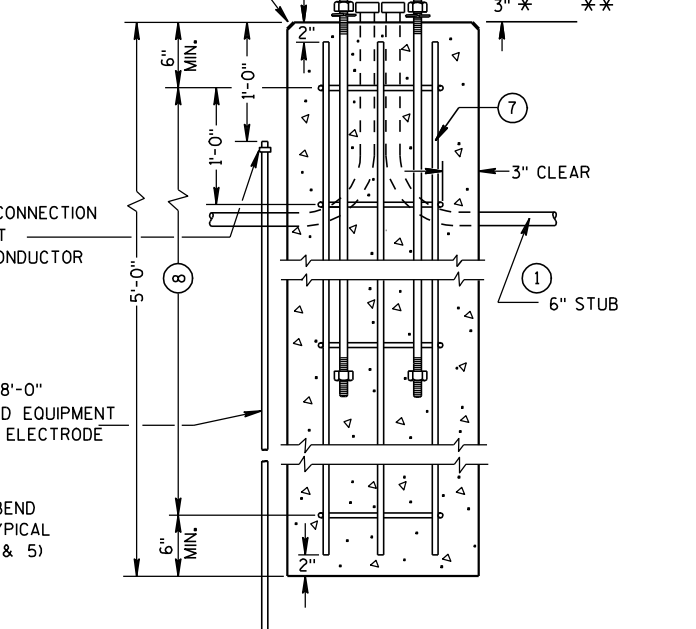
FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 2



FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5

### CONCRETE BASES

\* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

\*\* FOR NONBREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

### CONCRETE BASES, TYPES 1, 2 & 5

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

3/3/10

DATE

FHWA

/S/ Joanna L. Bush

STATE ELECTRICAL ENGR 95

HWYS

GENERAL NOTES

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

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 641.2.2 OF THE STANDARD SPECIFICATIONS, ASTM A-325, (92,000 YIELD) HEAVY HEX NUT AND BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, CLASS C.

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

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

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED AND U.L. LISTED MECHANICAL CONNECTOR (LUG) AL/CU RATED AND SIZED TO ACCEPT #10 AWG STRANDED WIRE, SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

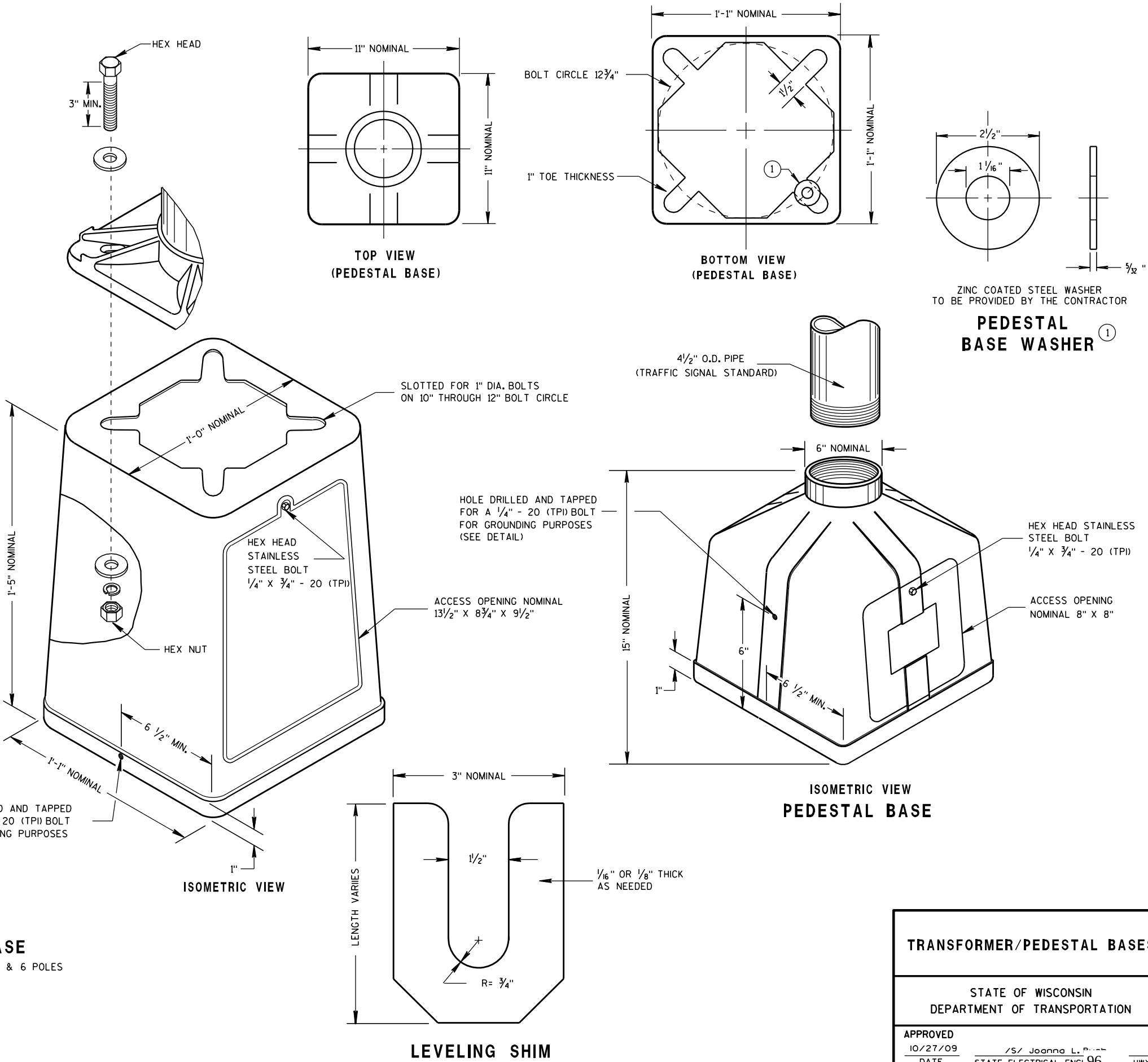
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

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

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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



TYPICAL MECHANICAL CONNECTOR LUG  
TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE  
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

ISOMETRIC VIEW  
PEDESTAL BASE

LEVELING SHIM

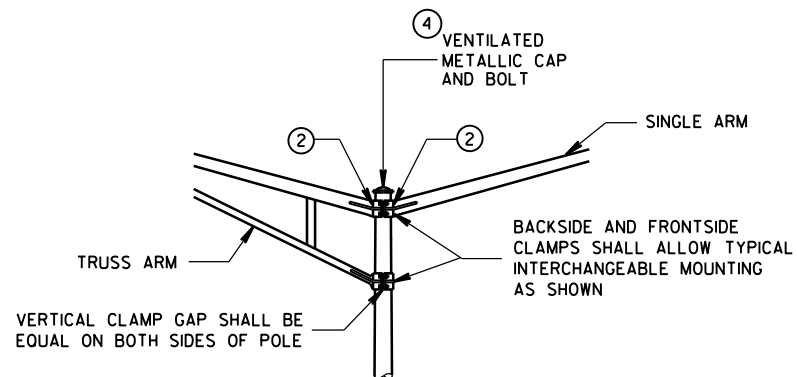
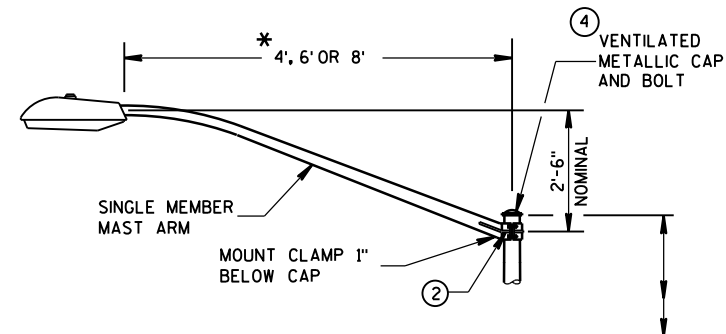
TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

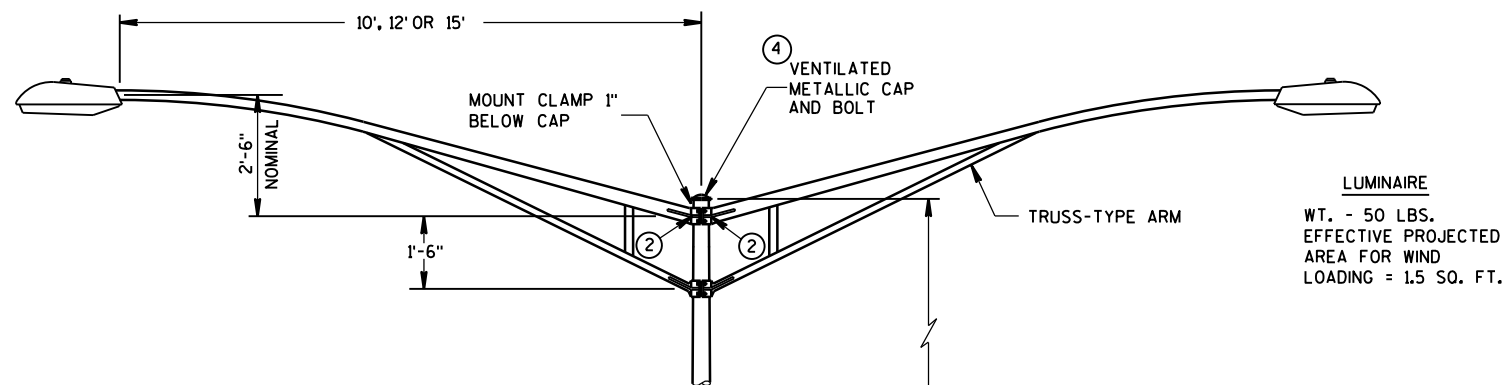
APPROVED  
10/27/09  
DATE  
/S/ Joanna L. P...  
STATE ELECTRICAL ENGR 96  
HWYS  
FHWA



\* RISE FOR 4' ARM SHALL BE 2'-0".

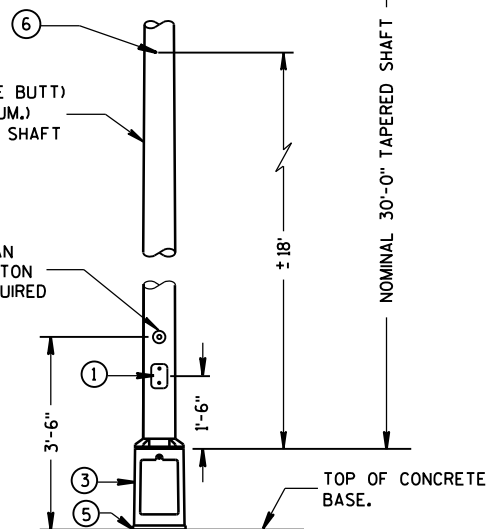


INTERCHANGEABLE MOUNTING DETAIL



ROUND SHAFT 8" O.D. (POLE BUTT)  
X 3.8" (STEEL) OR 4.5" (ALUM.)  
O.D. TOP FOR TAPERED 30' SHAFT

PEDESTRIAN  
PUSH BUTTON  
WHEN REQUIRED



TYPE 5 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.

ALL TYPE 5 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 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

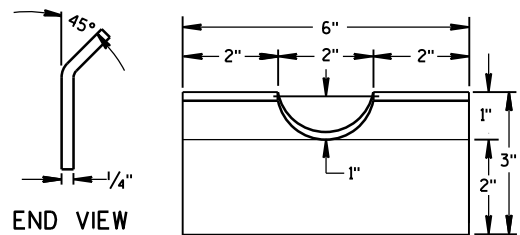
THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL  $2\frac{3}{8}$  INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

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

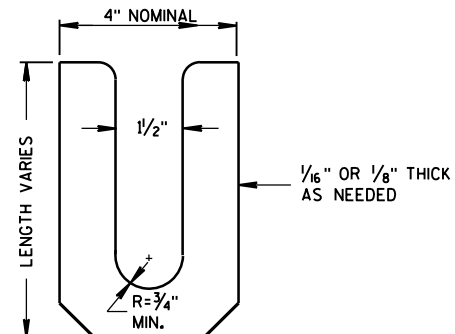
- ① 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO)  $\frac{1}{4}$ " x  $\frac{3}{4}$ " - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- ② GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR  $1\frac{1}{8}$ " HOLE IN POLE SHAFT FOR WIRING.
- ③ CAST ALUMINUM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

POLE MONTINGS FOR  
LIGHTING UNITS, TYPE 5  
(30 FEET)

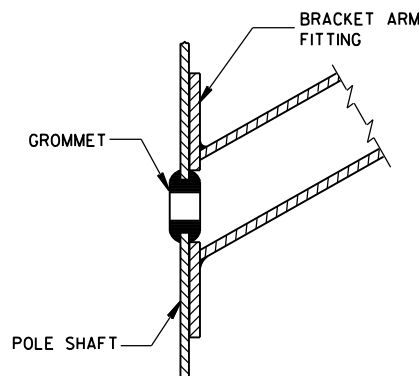
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



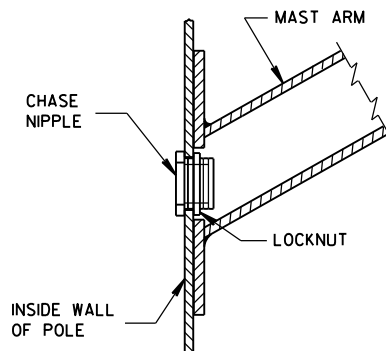
FRONT VIEW  
RECTANGULAR CLAMP SHIM  
(4 TO A SET)



LEVELING SHIM  
SHALL BE ALUMINUM



TYPICAL APPLICATION OF  
GROMMET IN POLE SHAFT

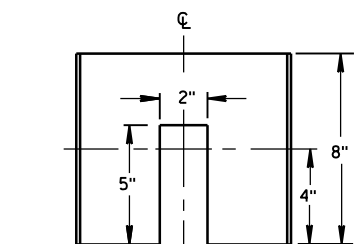
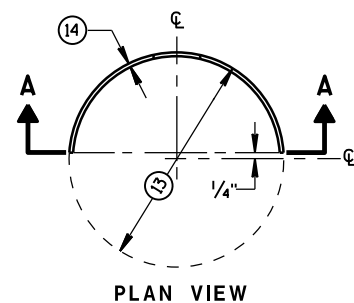


TYPICAL APPLICATION OF  
CHASE NIPPLE IN POLE SHAFT

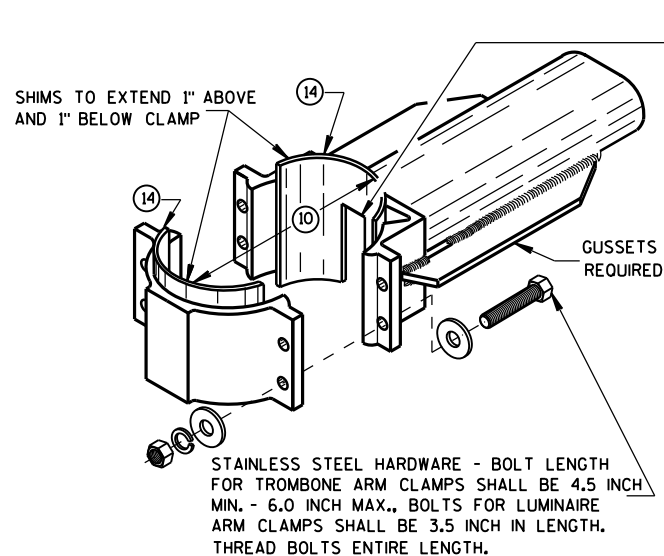
## GENERAL NOTES

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.

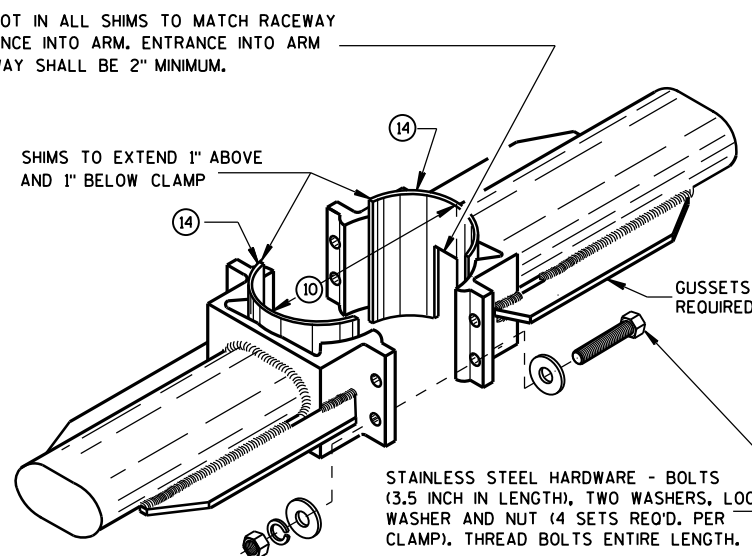
- 10 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.  
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.
- 11 INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)
- 12 BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT  
CIRCLE USING 1" DIAMETER ANCHOR RODS.
- 13 OUTSIDE SHIM DIAMETER - (4.5" O.D. FOR LUMINAIRE MAST ARM)  
(6.625" O.D. FOR TROMBONE MAST ARM)
- 14 VARIABLE SHIM THICKNESS - (0.10", 0.25", 0.35", 0.53" OR 0.70")  
SHIM THICKNESS FOR TROMBONE MAST ARMS MAY BE TYPICALLY 0.25", 0.35",  
0.53" OR 0.70".  
SHIM THICKNESS FOR LUMINAIRE MAST ARMS MAY BE TYPICALLY 0.10",  
0.25" OR 0.35".  
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.  
SHIM THICKNESS SHALL BE IMPRESSED INTO EACH SHIM. NUMERALS  
SHALL BE 1/4" HIGH AND LEGIBLE.  
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS  
TO THE ENGINEER FOR APPROVAL.
- 15 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.



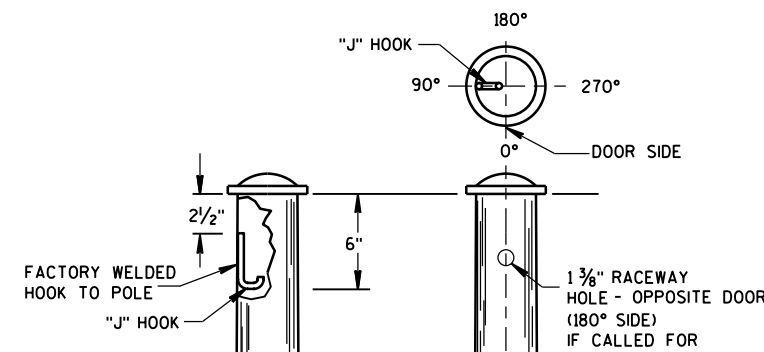
SECTION A-A  
CIRCULAR CLAMP SHIM  
(2 TO A SET)



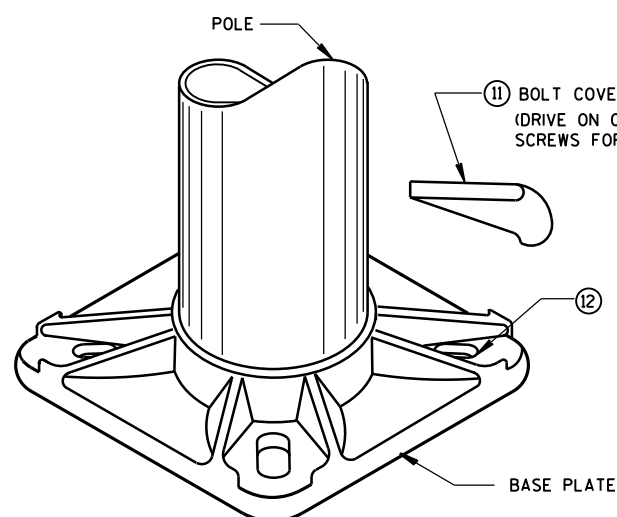
TYPICAL TROMBONE MAST ARM AND SINGLE  
LUMINAIRE MAST ARM MOUNTING CLAMP



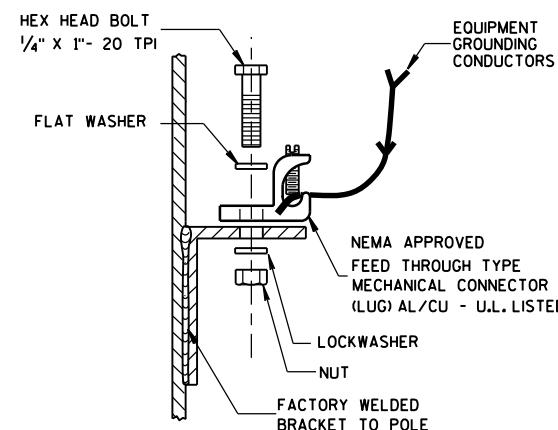
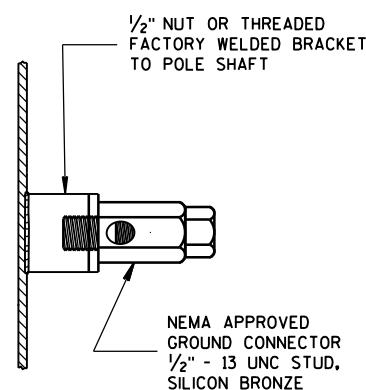
TYPICAL LUMINAIRE MAST ARM  
(DOUBLE) MOUNTING BRACKETS



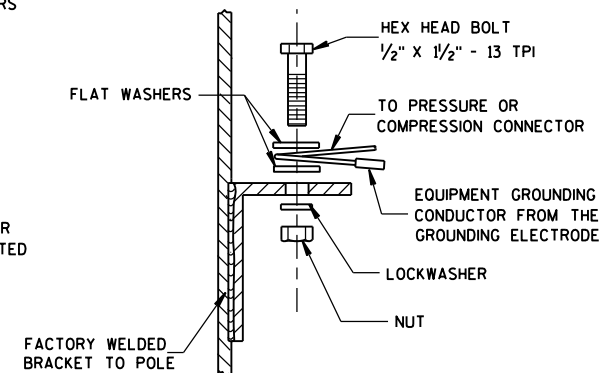
TYPICAL "J" HOOK LOCATION



BASE PLATE



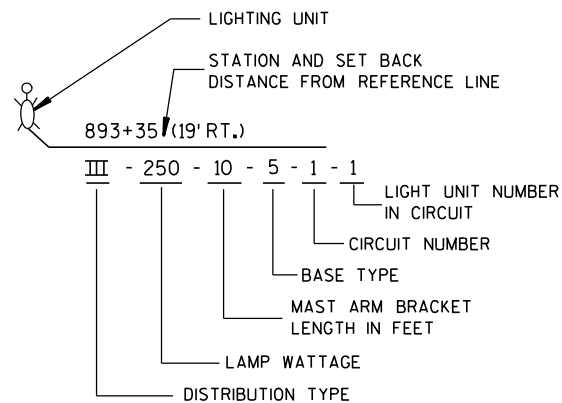
TYPICAL GROUNDING CONNECTIONS  
NUT, BOLT AND WASHERS SHALL  
BE STAINLESS STEEL



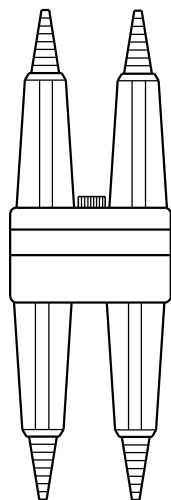
## HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

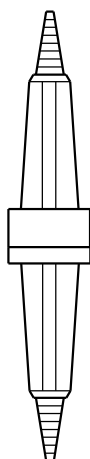
APPROVED  
2/7/2013  
DATE  
/S/ Ahmet Demirbilek  
STATE ELECTRICAL 99  
FHWA



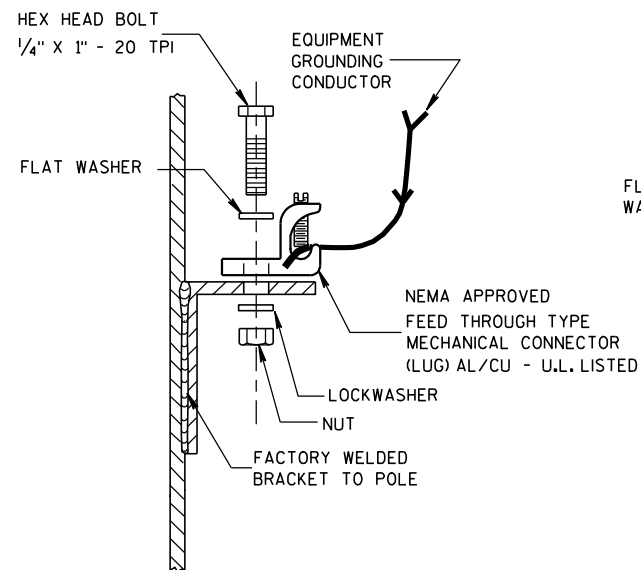
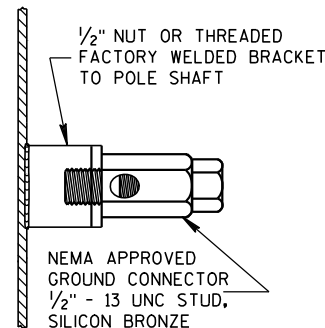
**LIGHTING UNIT CODE**  
(TYPICAL)



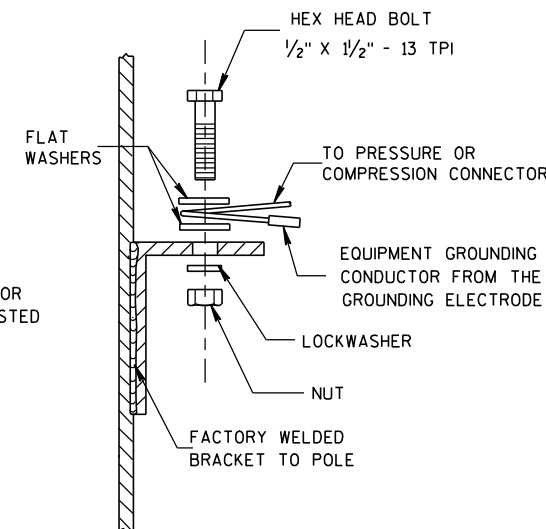
**DETAIL "A"**  
**BREAKAWY**  
**DOUBLE POLE WITH**  
**WATERPROOF**  
**INSULATING BOOT**



**DETAIL "B"**  
**BREAKAWY**  
**SINGLE POLE WITH**  
**WATERPROOF**  
**INSULATING BOOT**



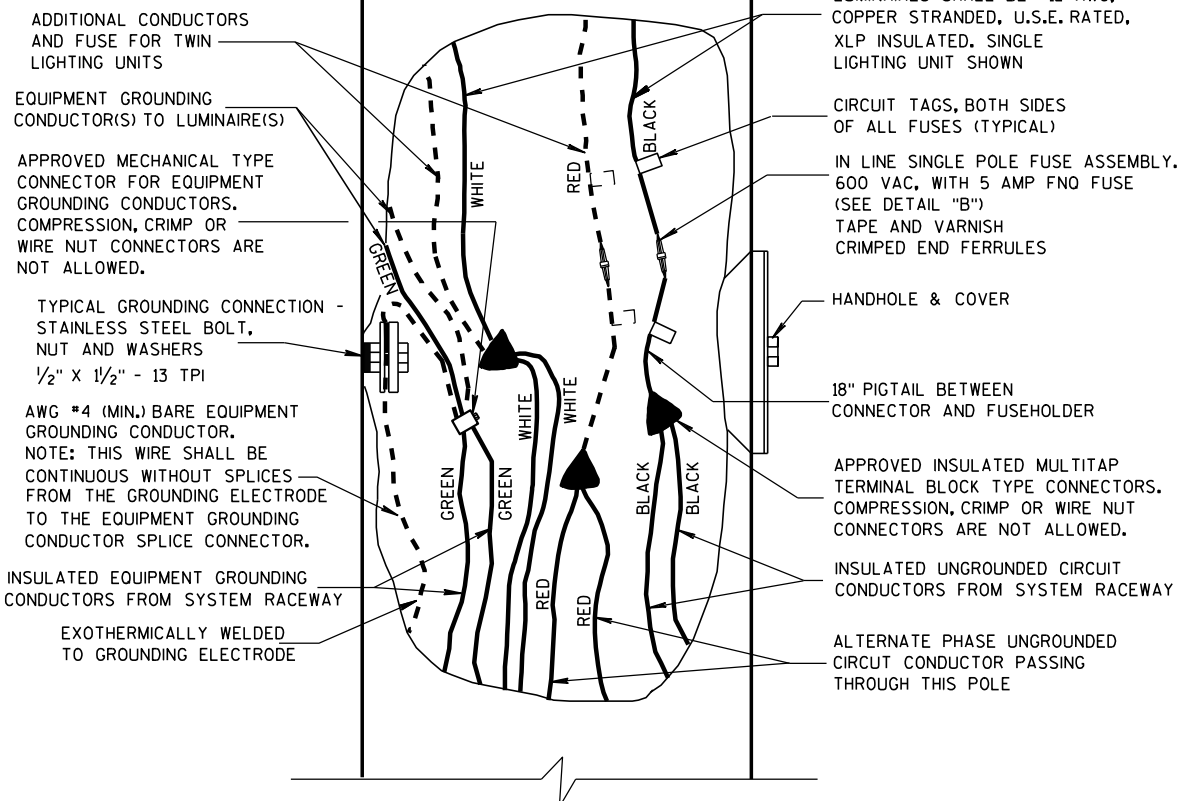
**TYPICAL GROUNDING CONNECTIONS**  
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



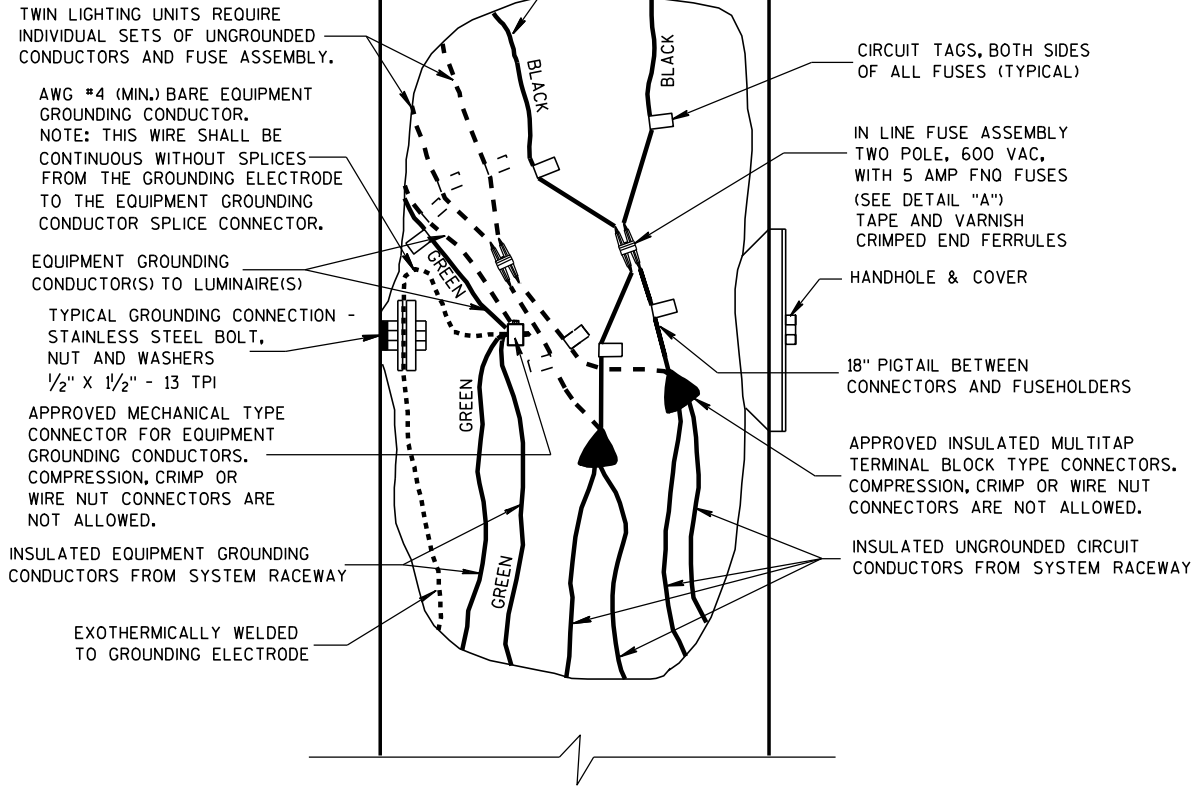
UNGROUND CONDUCTORS TO LUMINAIRES SHALL BE #12 AWG, COPPER STRANDED, U.S.E. RATED, XLP INSULATED. SINGLE LIGHTING UNIT SHOWN

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.  
THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 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.



**3 WIRE - 120, 240 OR 480 VAC (UNGROUND CONDUCTOR)**  
**WITH GROUNDED CONDUCTOR AND**  
**WITH EQUIPMENT GROUNDING CONDUCTOR**

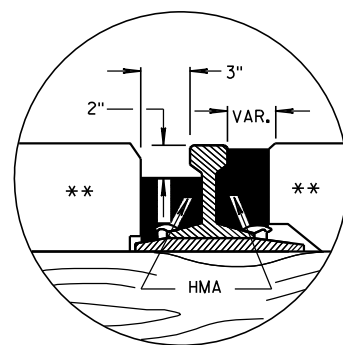
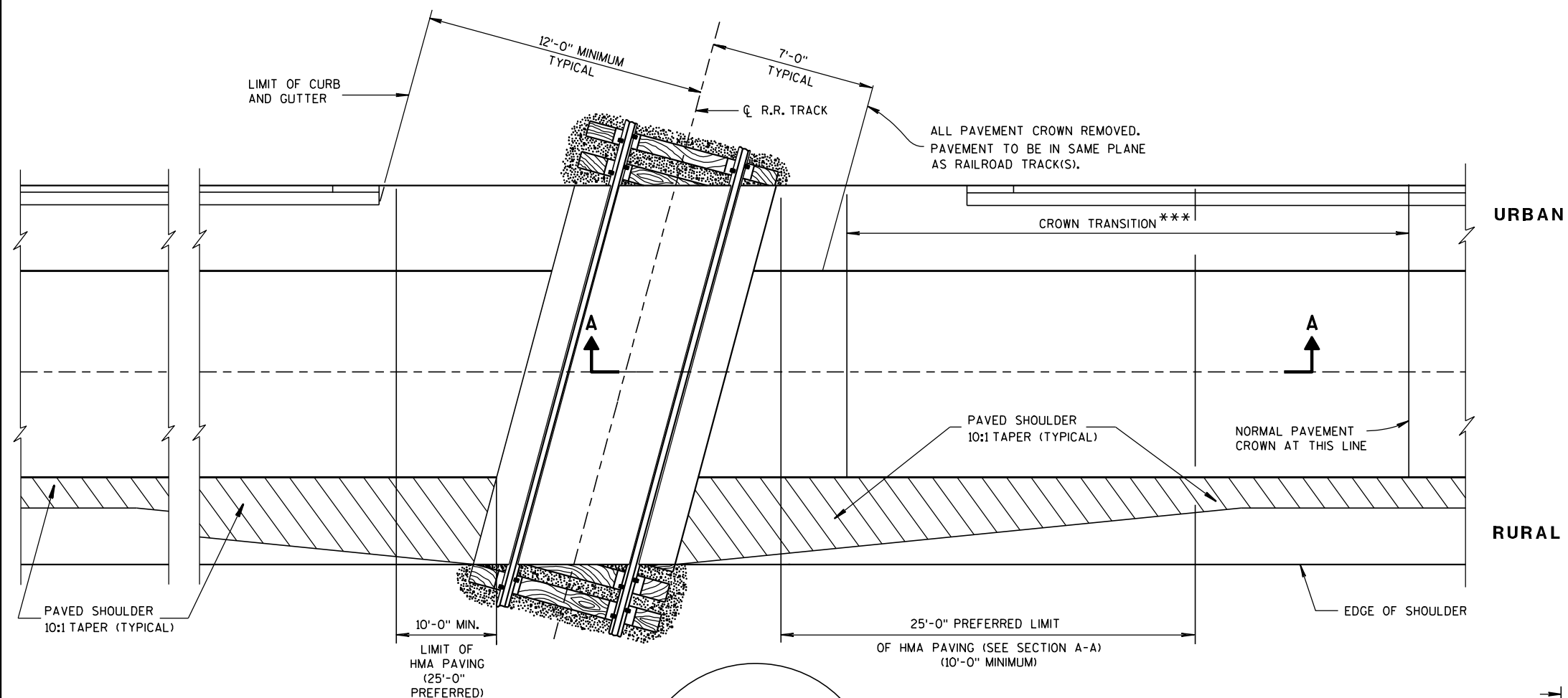


**2 WIRE - 240 OR 480 VAC (UNGROUND CONDUCTORS)**  
**WITH EQUIPMENT GROUNDING CONDUCTOR**

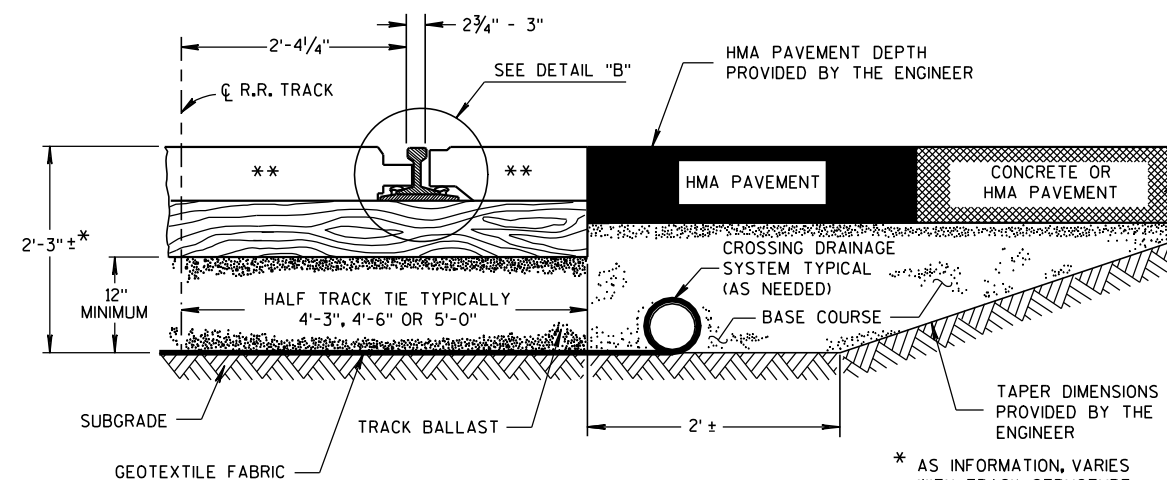
**NON-FREWAY LIGHTING UNIT**  
**POLE WIRING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

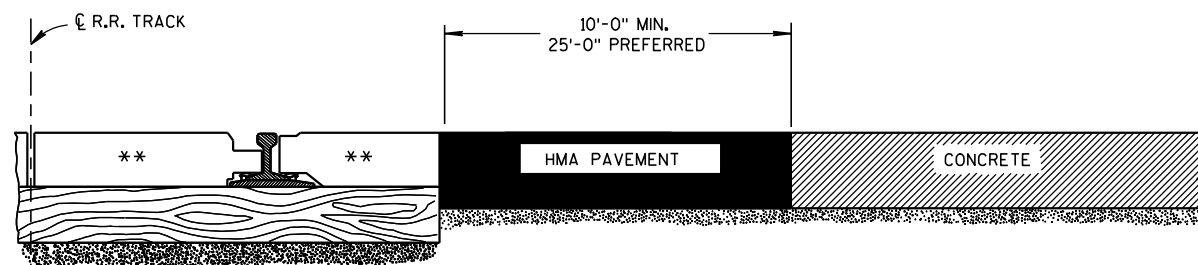
APPROVED  
3/2/2011 /S/ Thomas J. Gossion  
DATE STATE ELECTRICAL ENGI 100 HWYS  
FHWA



**DETAIL B**  
**HMA FLANGEWAY**  
**AND FIELD FILLERS**



**TYPICAL HALF SECTION**



**SECTION A-A**  
**CONCRETE PAVEMENT APPROACH**



**SECTION A-A**  
**HMA PAVEMENT APPROACH**

**EXAMPLES OF PAVEMENT APPROACHES**

## 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.

TIMBER, CONCRETE OR RUBBER CROSSING SURFACE MATERIAL, RAILS, TIES, BALLAST, GEOTEXTILE FABRIC AND CROSSING DRAINAGE SYSTEM BY OTHERS UNLESS OTHERWISE PROVIDED.

HMA PAVEMENT APPROACHES AND HMA PAVEMENT CROSSING SURFACES TO BE PLACED BY CONTRACTOR UNLESS OTHERWISE PROVIDED.

HMA FLANGEWAY AND FIELD FILLERS TO BE PLACED AND THOROUGHLY HAND COMPACTED BY THE CONTRACTOR WHEN NOT PROVIDED BY OTHERS. SEE DETAIL B. HMA FILLERS NOT REQUIRED WHEN RUBBER FILLERS ARE PROVIDED.

HMA PAVEMENT SHALL BE ROLLED PARALLEL TO THE TRACK.

\*\* CROSSING SURFACE MAY BE TIMBER, RUBBER, CONCRETE, HMA PAVEMENT OR A COMBINATION OF SUCH MATERIALS.

\*\*\* CROWN TRANSITION LENGTH SHOWN ELSEWHERE IN THE PLAN.

## PAVEMENT DETAILS FOR RAILROAD APPROACH

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

8-28-09

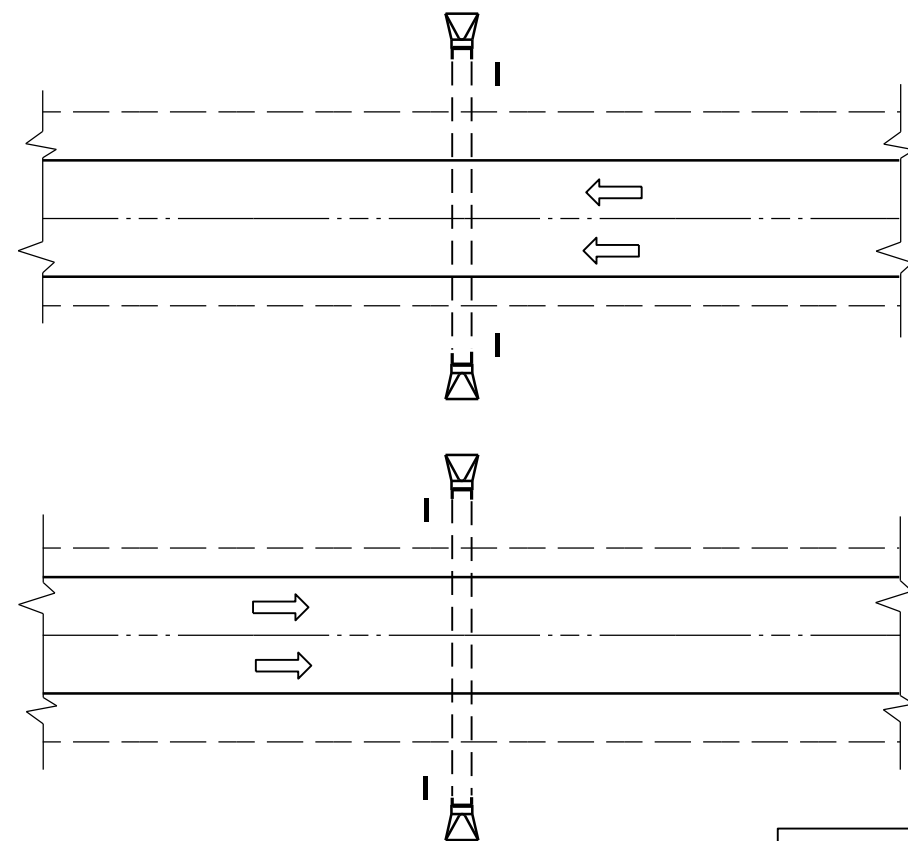
DATE

FHWA

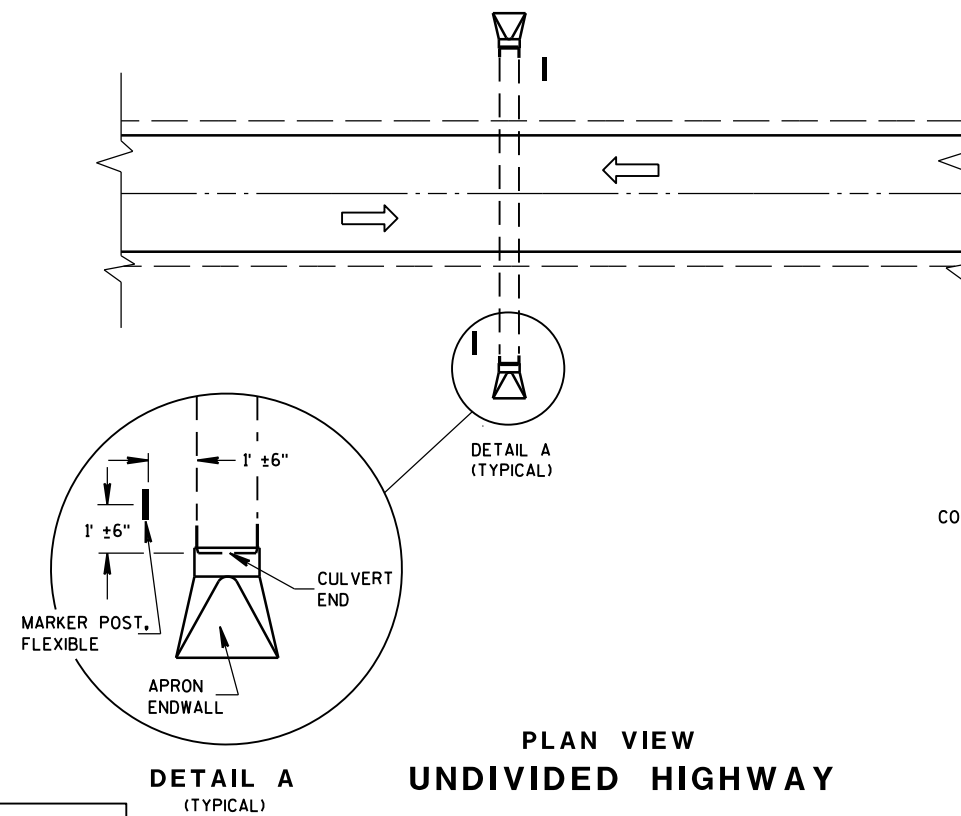
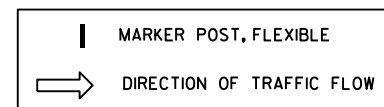
/S/ Ronald E. Adams

CHIEF, RAILROADS & HIGHWAYS DIVISION

101



PLAN VIEW  
DIVIDED HIGHWAY

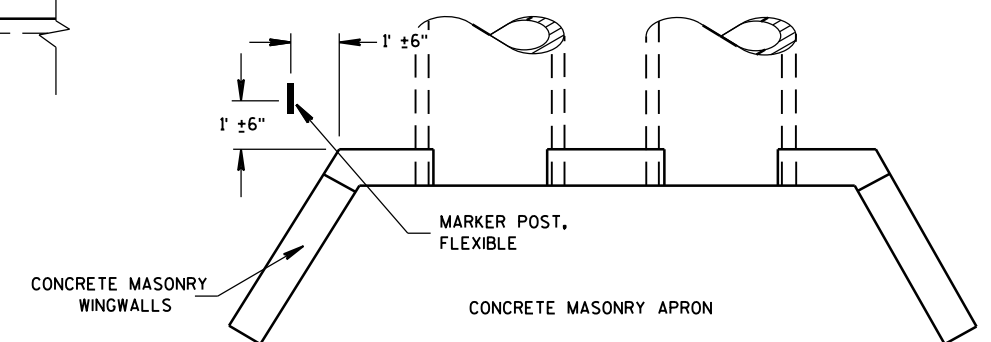


PLAN VIEW  
UNDIVIDED HIGHWAY

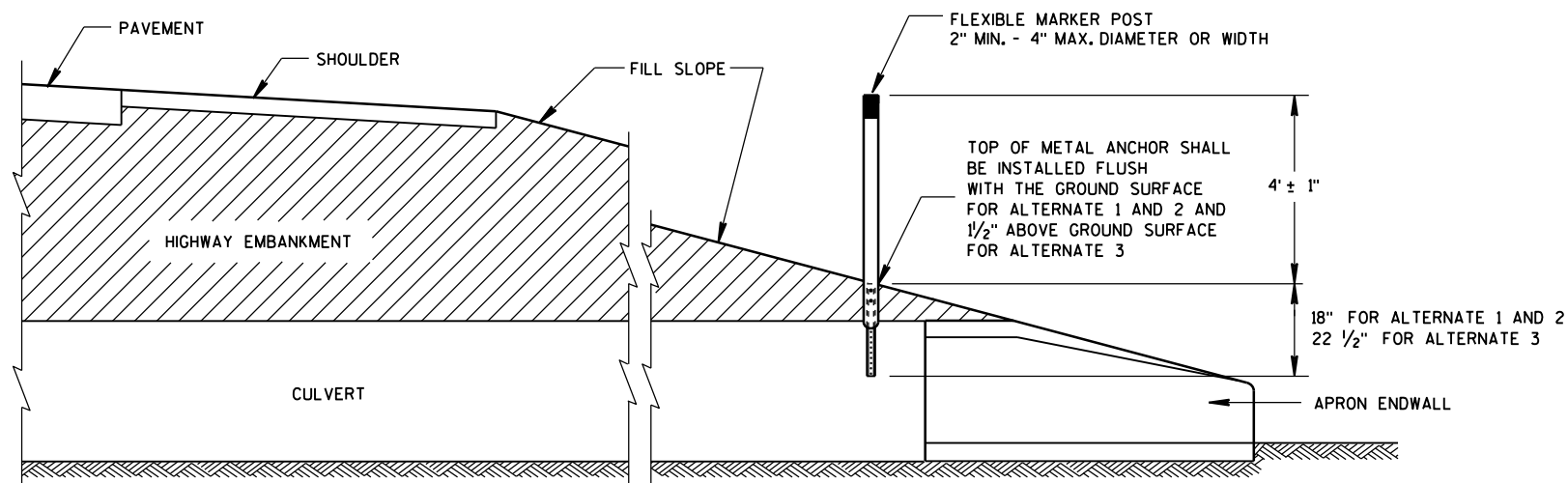
### FLEXIBLE MARKER POST LOCATION

### 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.



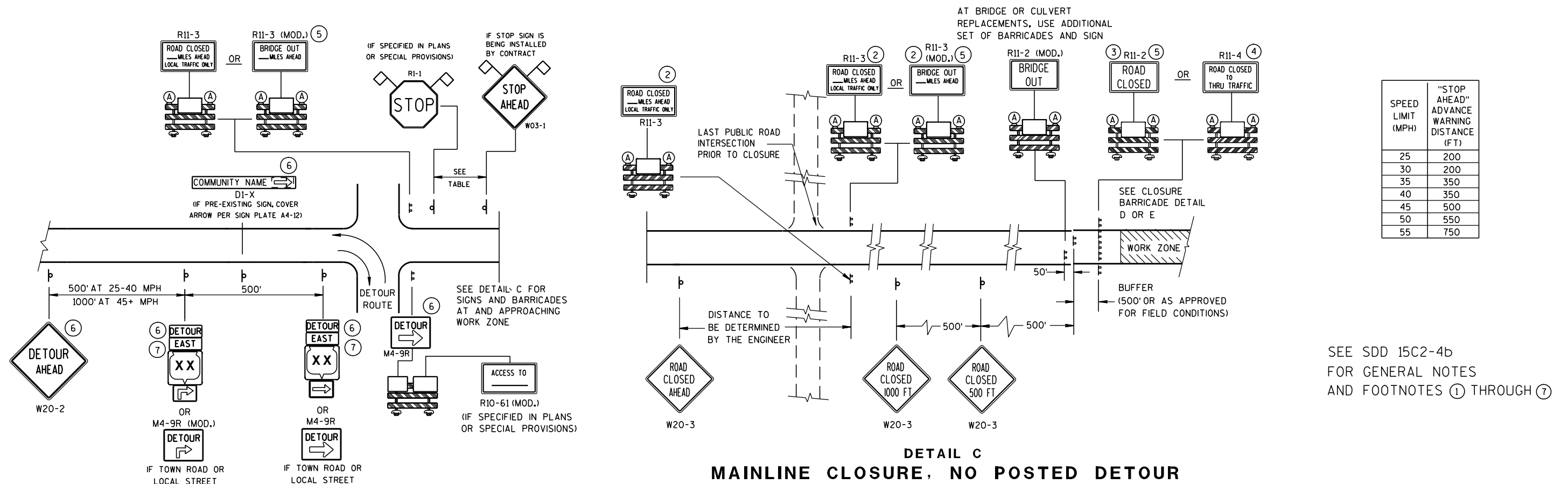
PLAN VIEW  
CONCRETE MASONRY ENDWALLS FOR  
CULVERT PIPE AND PIPE ARCH

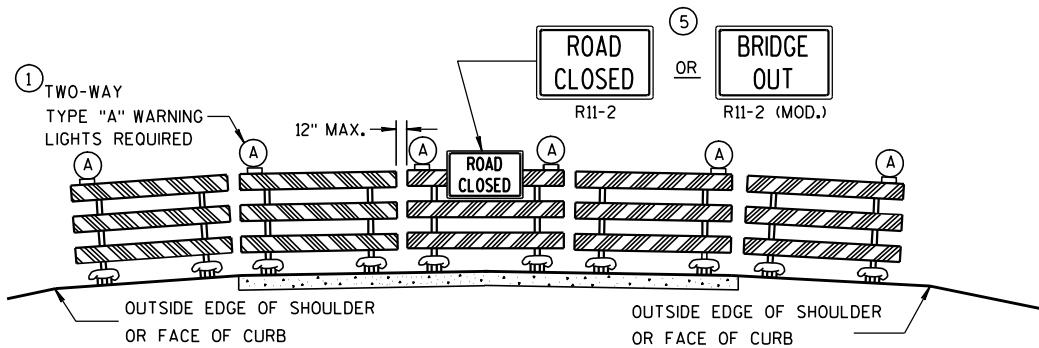


CROSS SECTION  
FLEXIBLE MARKER POST

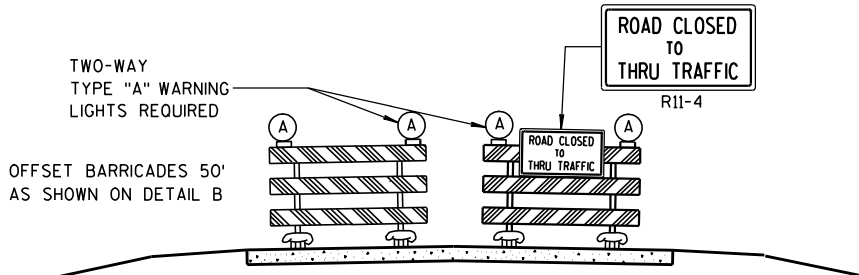
FLEXIBLE MARKER POST  
FOR CULVERT END

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 102





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



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

SEE SDD 15C2-4a FOR LEGEND

**GENERAL NOTES**

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

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

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

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

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

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

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

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

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

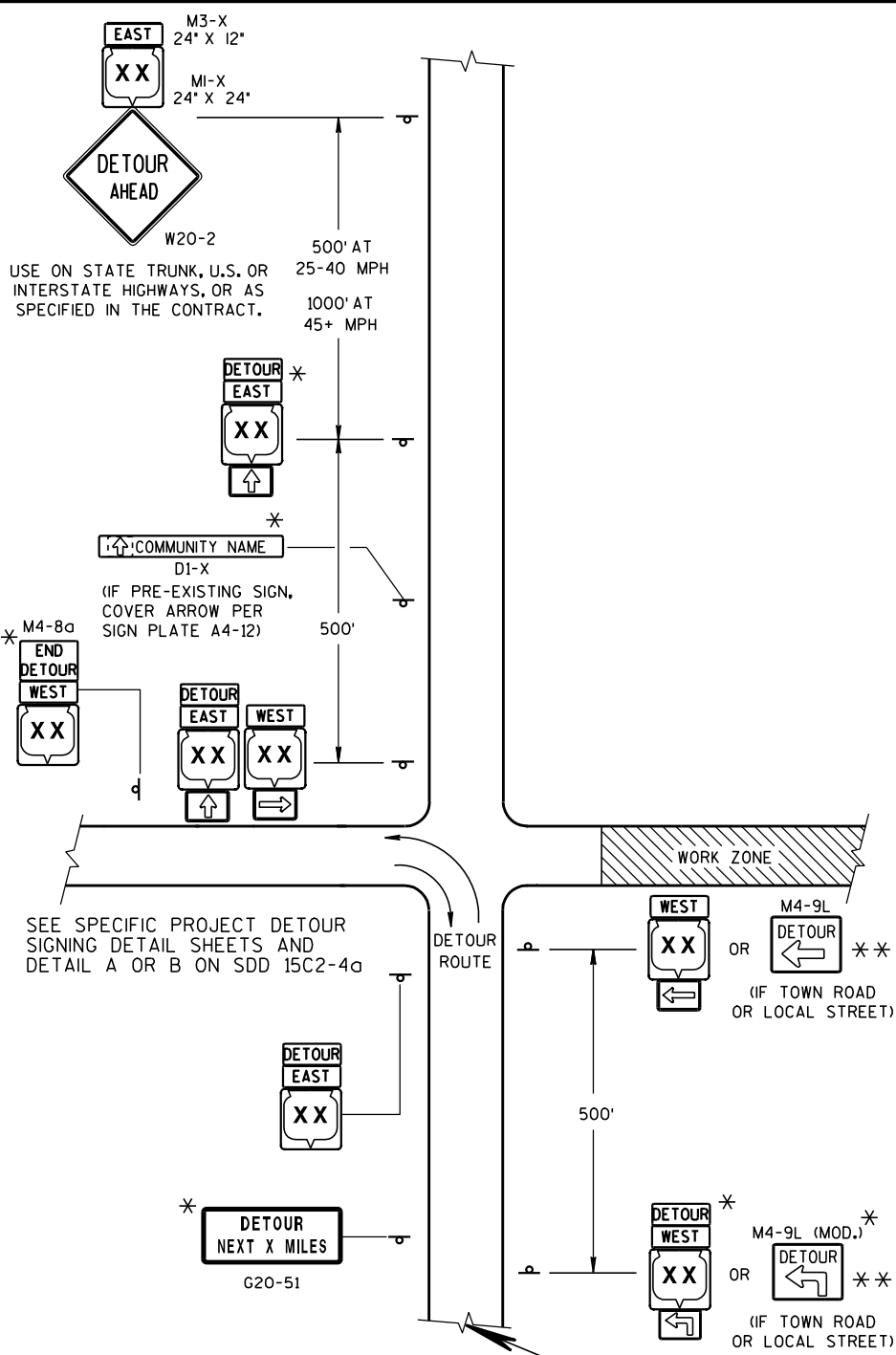
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

| BARRICADES AND SIGNS<br>FOR<br>MAINLINE CLOSURES   |                                        |                 |
|----------------------------------------------------|----------------------------------------|-----------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                        |                 |
| APPROVED                                           |                                        |                 |
| 9/16/03<br>DATE                                    | /S/ Thomas N. N<br>CHIEF SIGNS AND MAR | 104<br>ENGINEER |
| FHWA                                               |                                        |                 |



**LEGEND**

POST MOUNTED SIGN

WORK ZONE

DETOUR EAST M4-8 M3-X

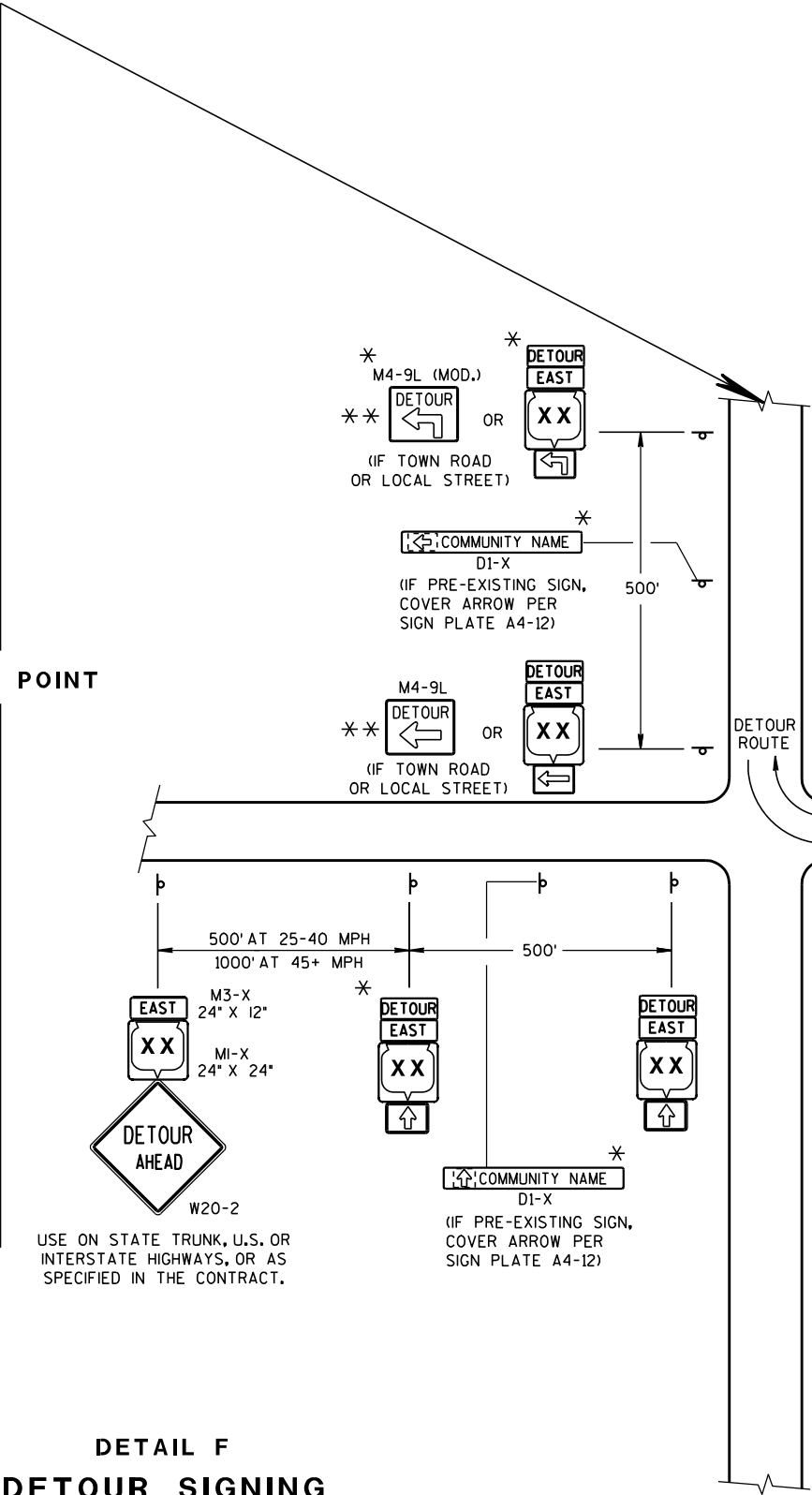
M1-4 OR COUNTY M1-5A OR M1-6

M05-1 OR M06-1 OR M06-1

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

MATCH POINT

DETAIL F  
DETOUR SIGNING



**GENERAL NOTES**

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

M3-X AND M4-8 SHALL BE 24" X 12", (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

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

M05-1 AND M06-1 SHALL BE 21" X 21", (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-9 SHALL BE 30" X 24".

M4-8a SHALL BE 24" X 18".

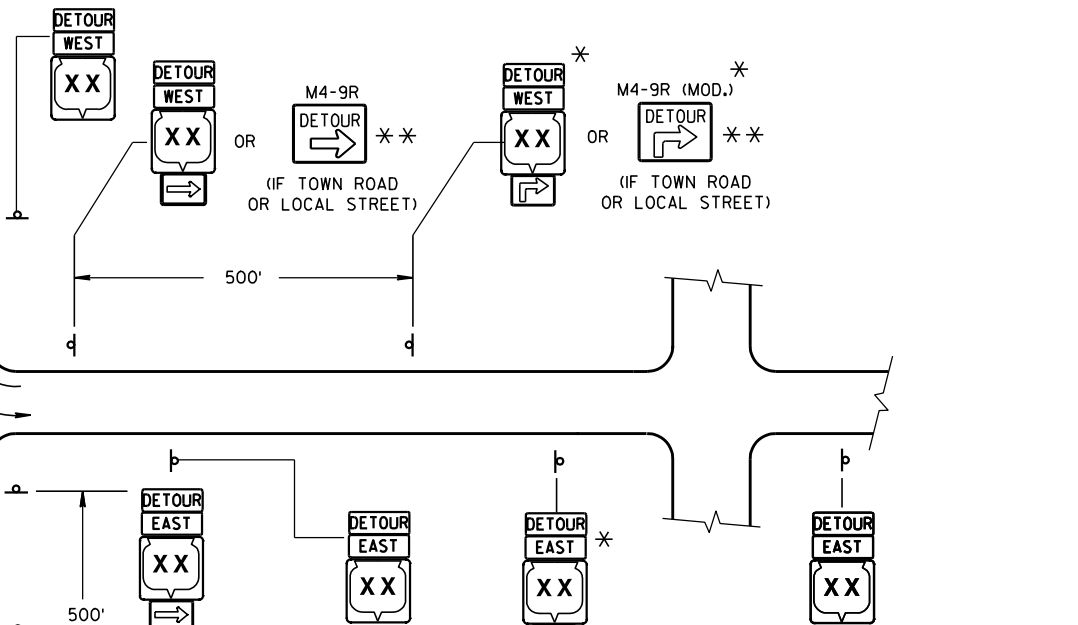
G20-51 SHALL BE 60" X 24".

W20-2 SHALL BE 48" X 48".

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

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

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

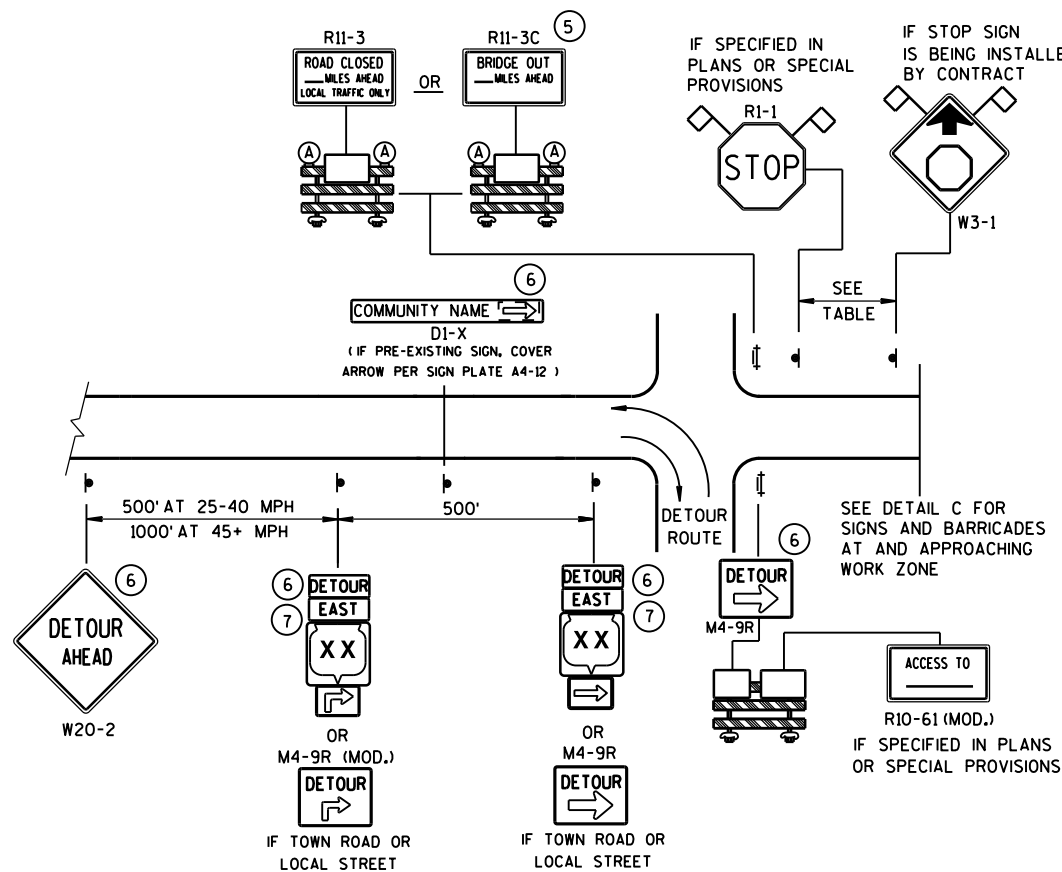


PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA.)

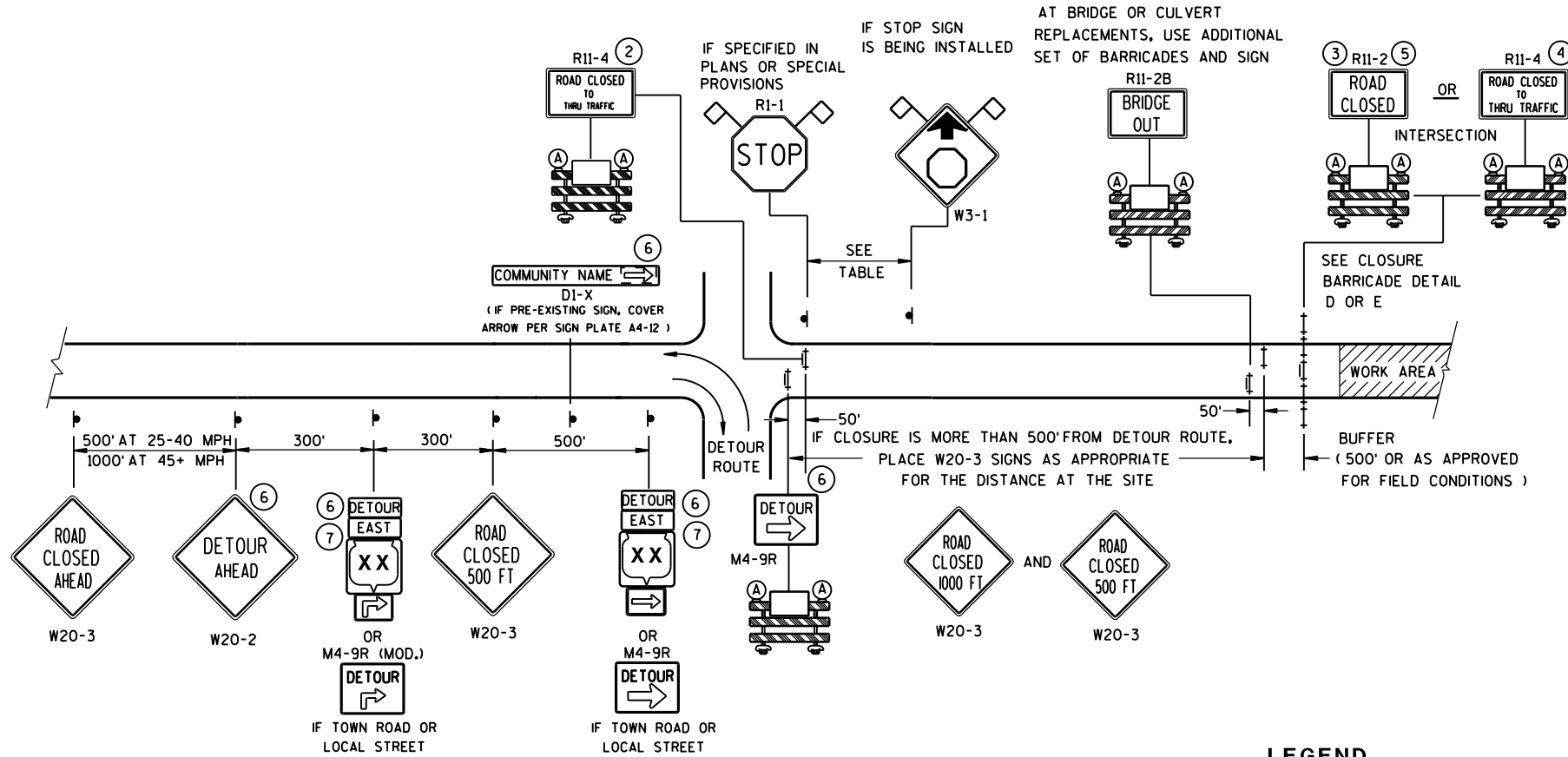
**DETOUR SIGNING FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

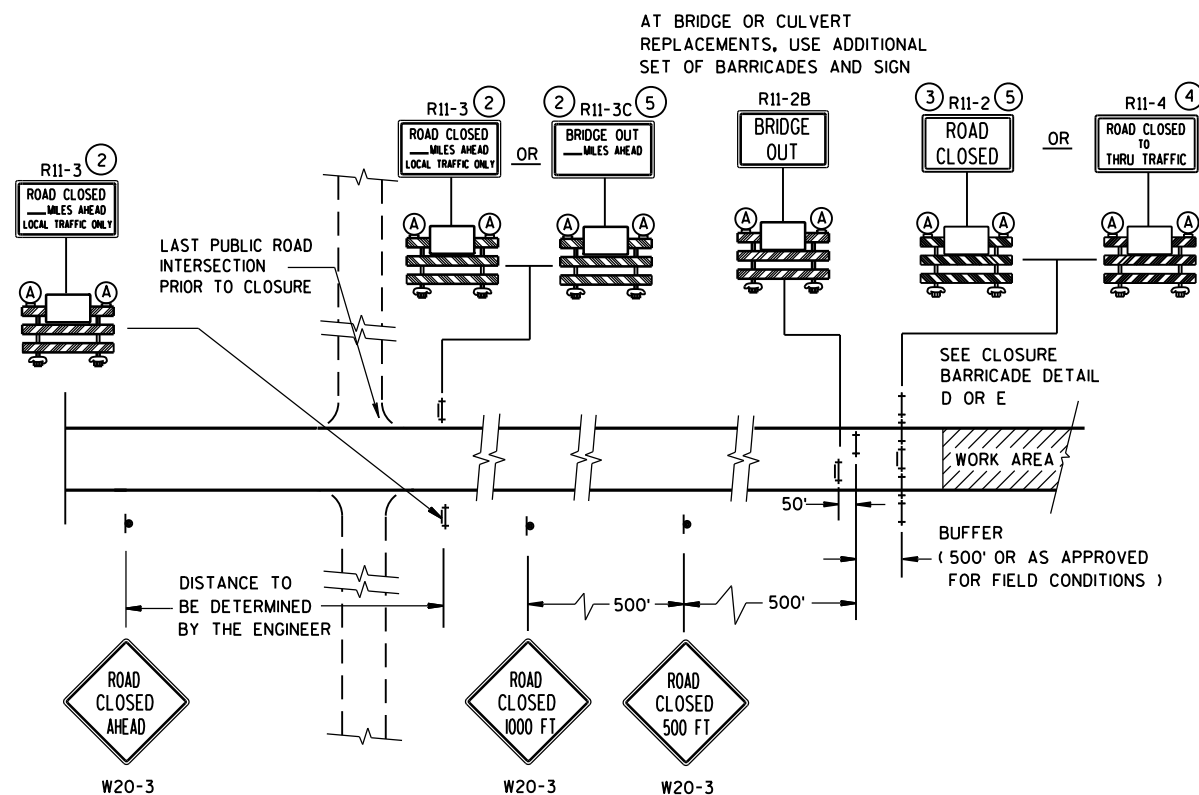
APPROVED  
9-16-03 DATE /S/ Thomas N. N... CHIEF SIGNS AND MAR 105 INEER  
FHWA



**DETAIL A**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



**DETAIL B**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

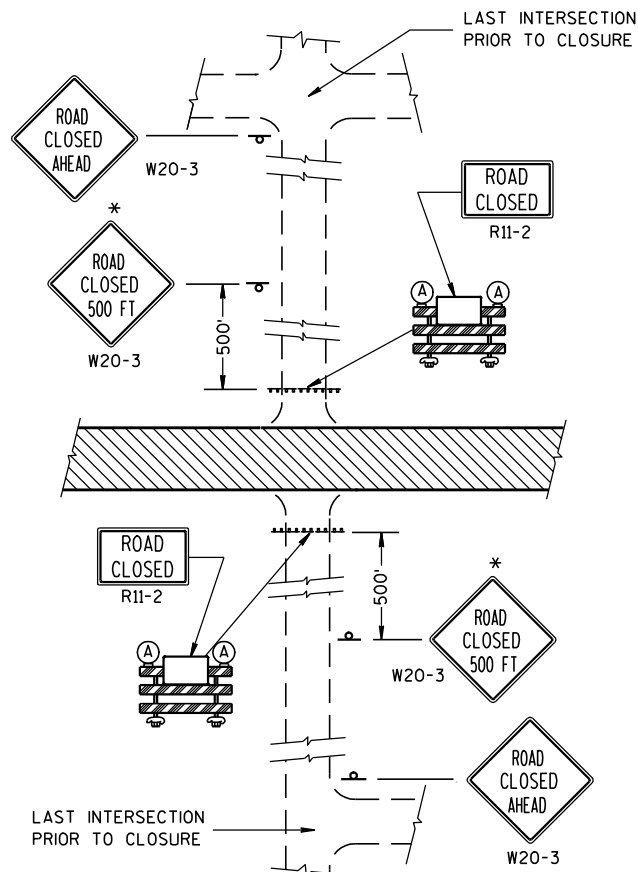


**DETAIL C**  
**MAINLINE CLOSURE, NO POSTED DETOUR**

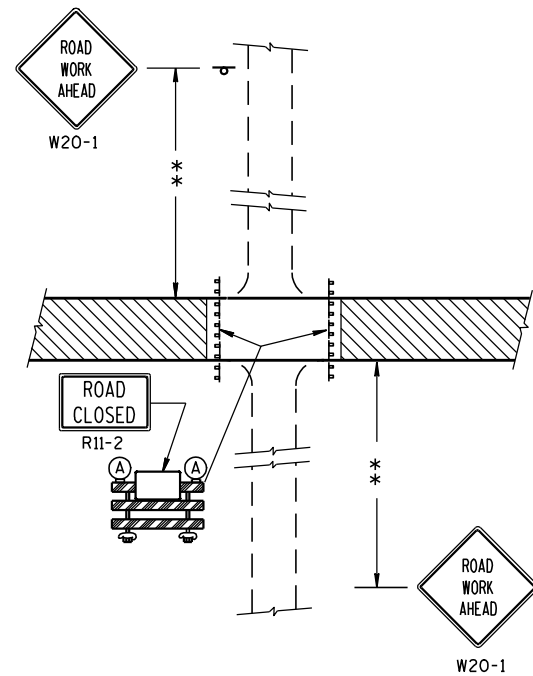
| SPEED LIMIT (MPH) | "STOP AHEAD" ADVANCE WARNING DISTANCE (FT) |
|-------------------|--------------------------------------------|
| 25                | 200                                        |
| 30                | 200                                        |
| 35                | 350       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

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

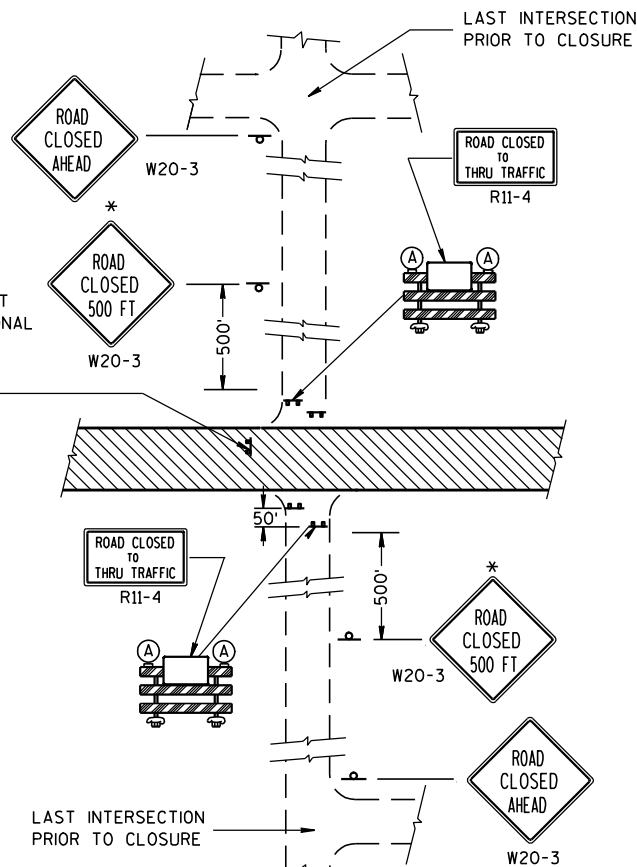
|                                                    |                                               |       |
|----------------------------------------------------|-----------------------------------------------|-------|
| <b>BARRICADES AND SIGNS FOR MAINLINE CLOSURES</b>  |                                               |       |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                               |       |
| 8/2013<br>DATE                                     | /S/ Travis Feltes<br>STATE TRAFFIC ENGINE 106 | ESIGN |
| FHWA                                               |                                               |       |



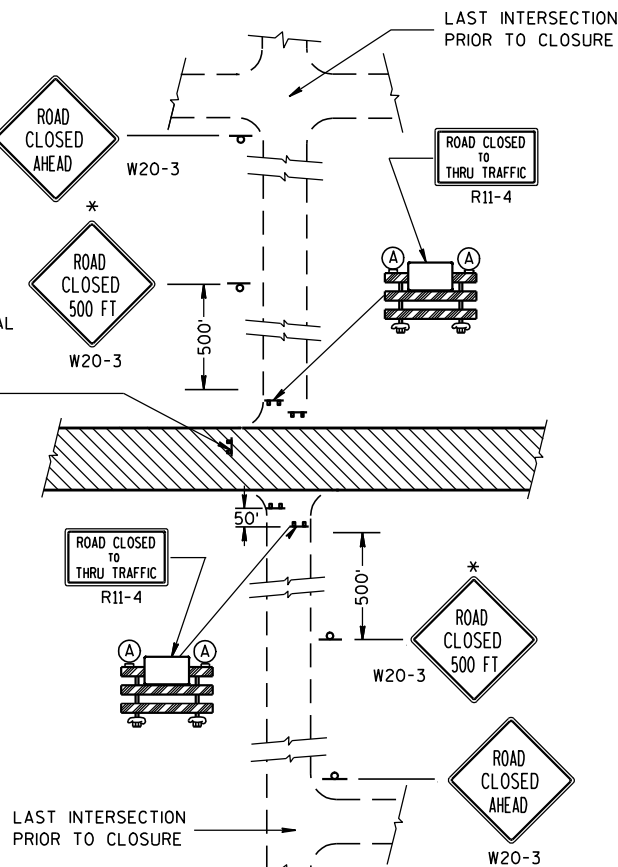
**DETAIL 1**  
(NO ACCESS TO PROJECT)



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



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



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

**GENERAL NOTES**

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

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

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

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

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

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

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

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

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

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

R11-2 SHALL BE 48" X 30".

R11-4 AND R11-3 SHALL BE 60" X 30".

\*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

\*\*500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

**LEGEND**

⌋ POST MOUNTED WARNING SIGN

⌋ TYPE III BARRICADES

Ⓐ TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)

▨ WORK AREA

**BARRICADES AND SIGNS  
FOR  
SIDEROAD CLOSURES**

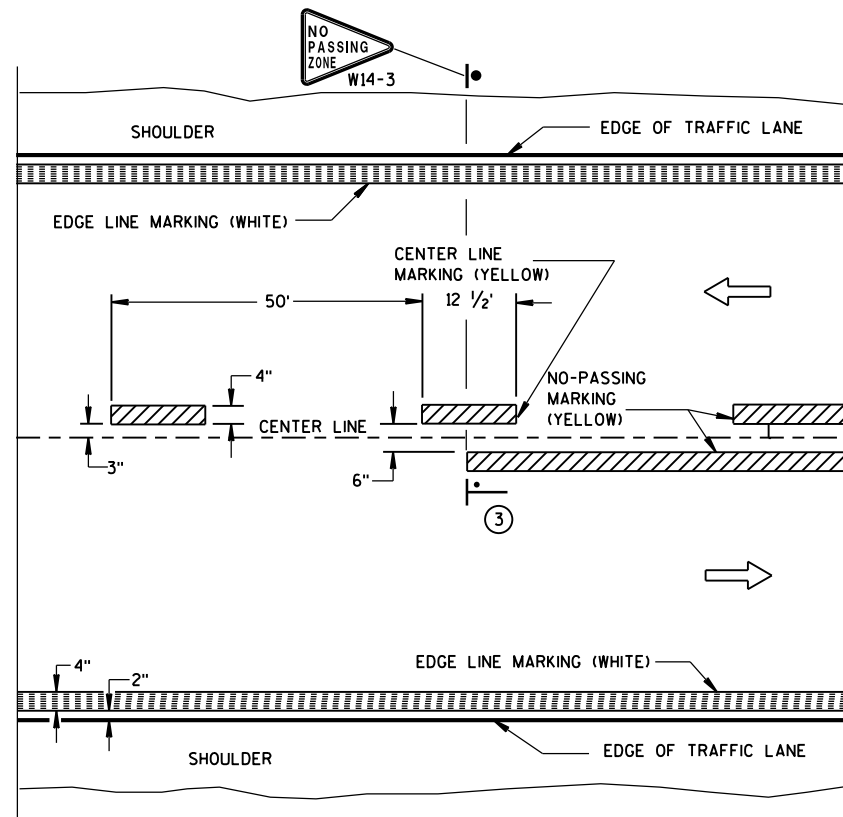
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

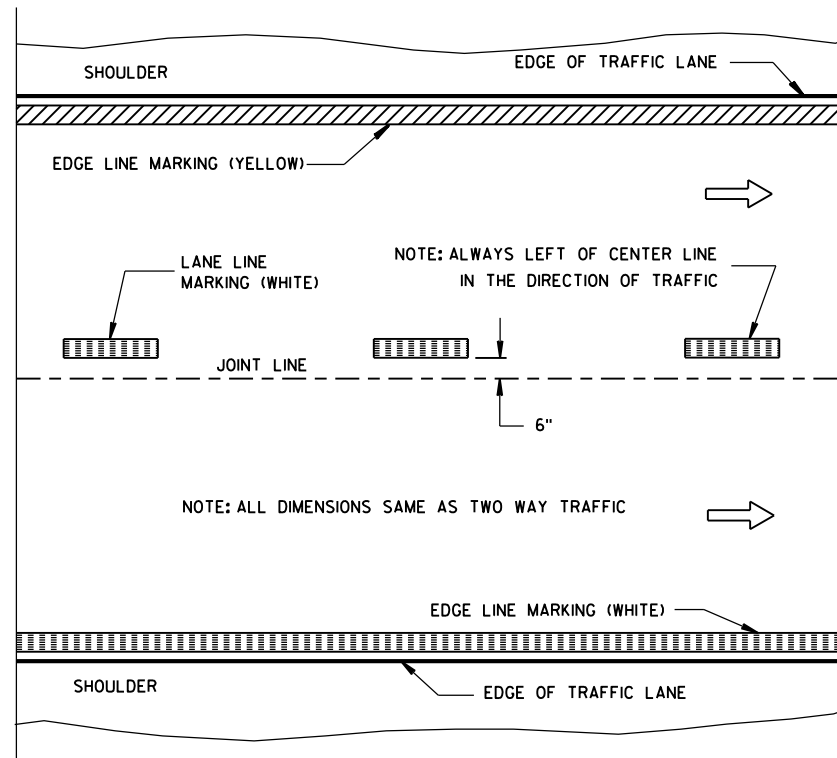
9-16-03  
DATE

/S/ Thomas N. N...  
CHIEF SIGNS AND MAR 107 INEER

FHWA

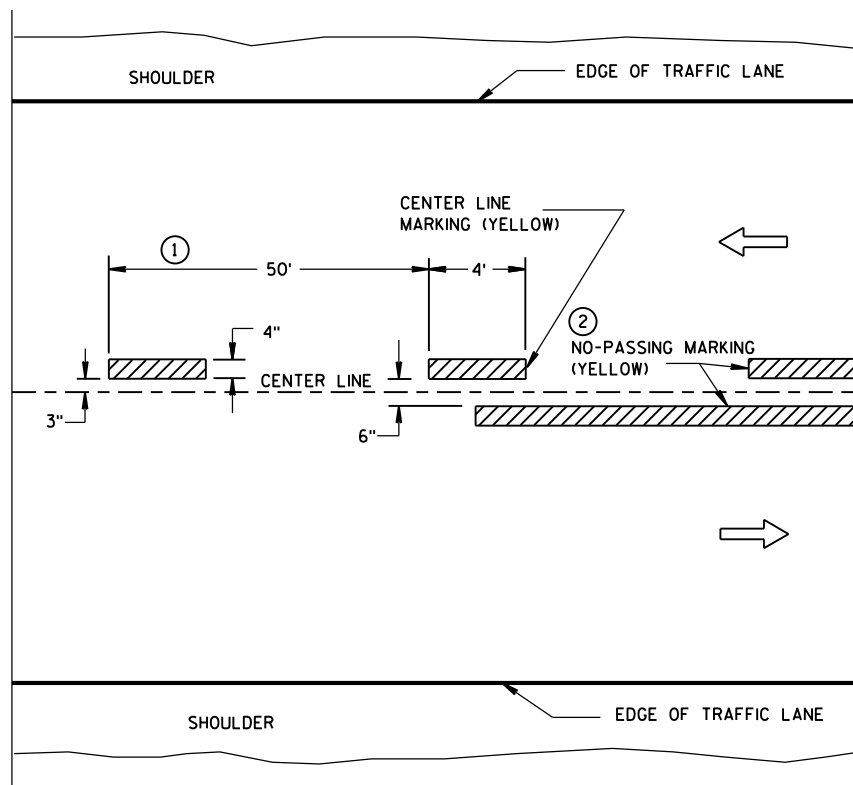


TWO WAY TRAFFIC

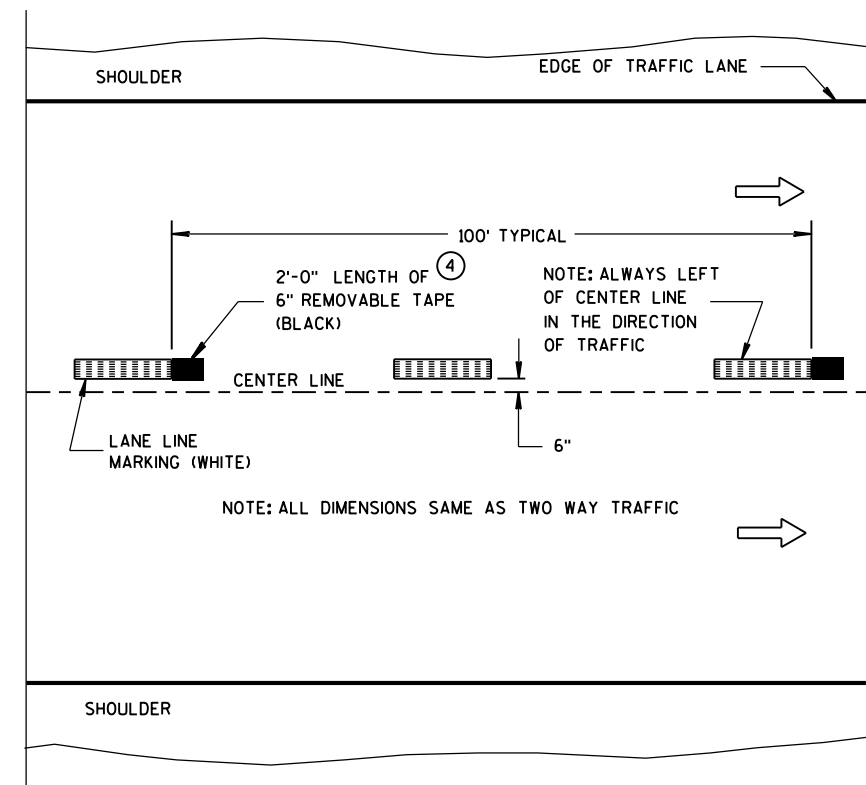


ONE WAY TRAFFIC

## PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

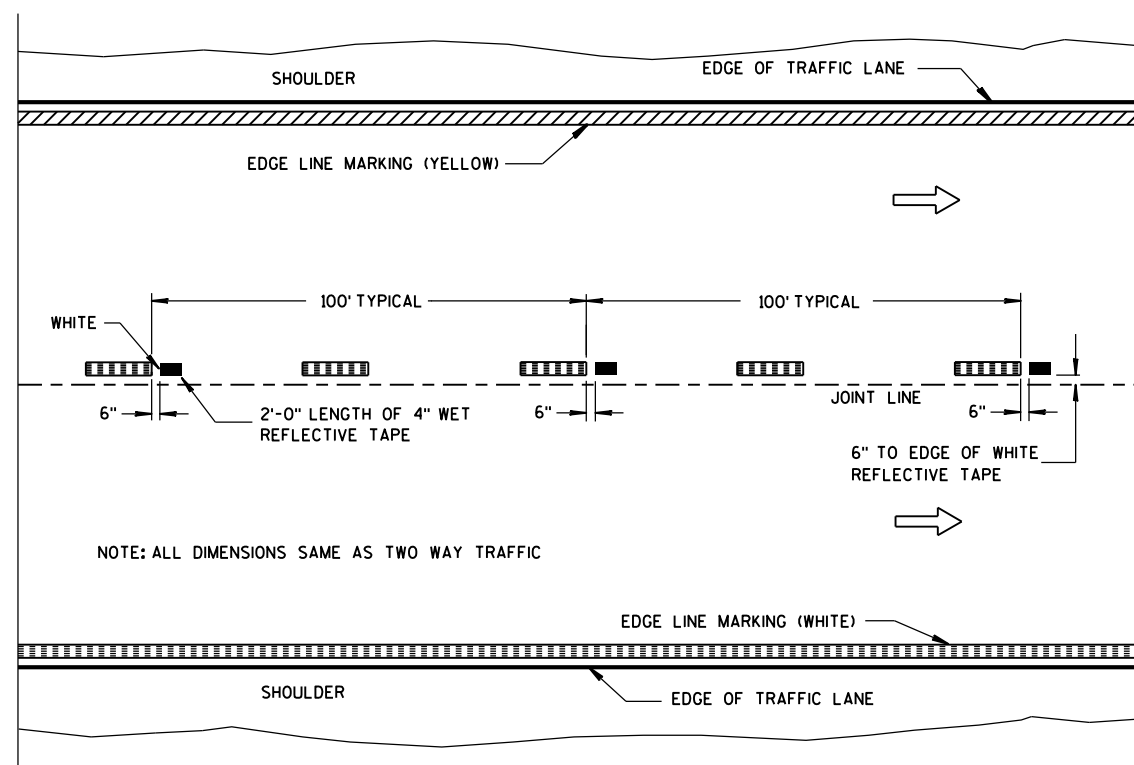
## GENERAL NOTES

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

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

## NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



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

## LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING  
(MAINLINE)

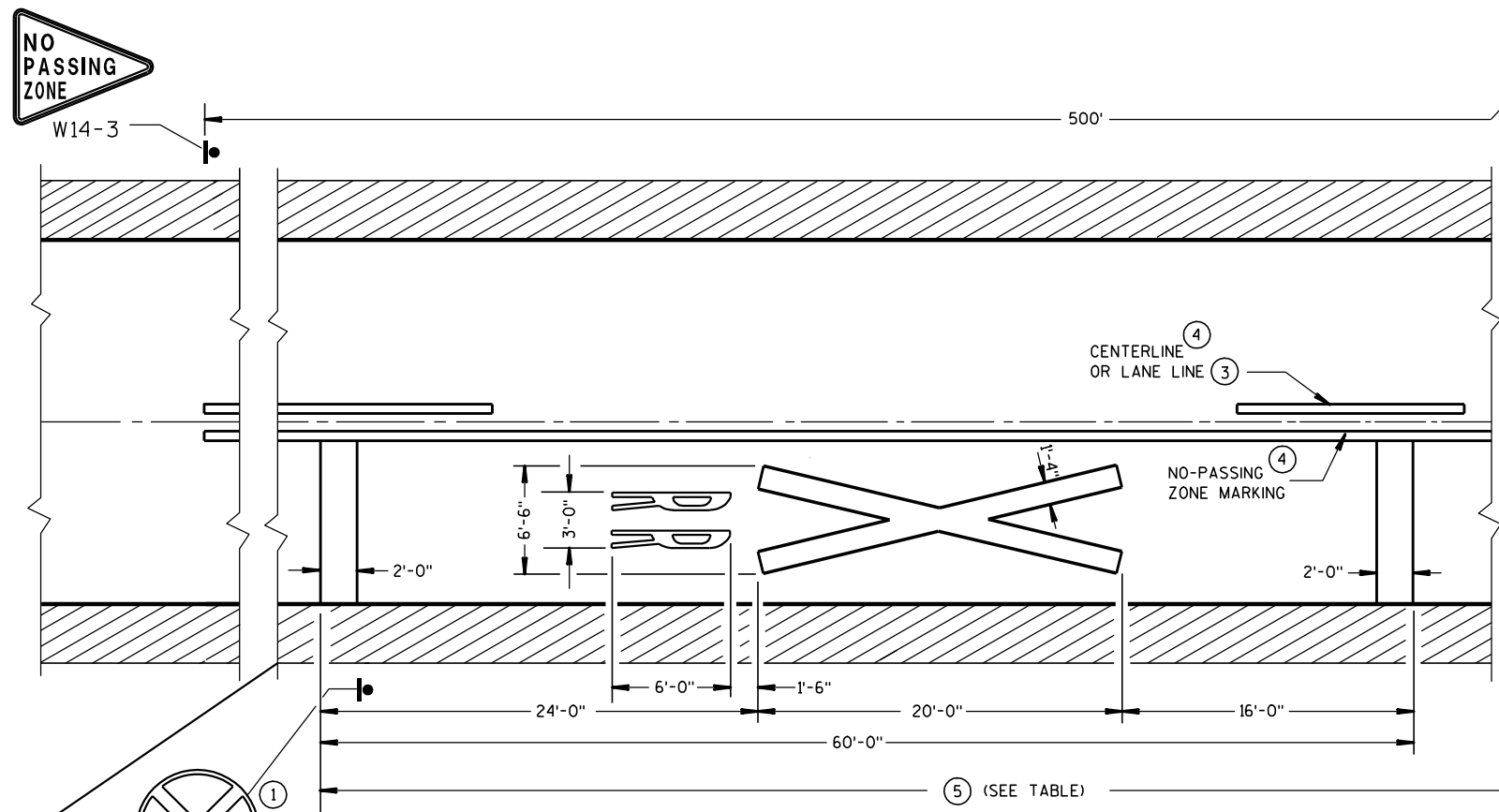
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

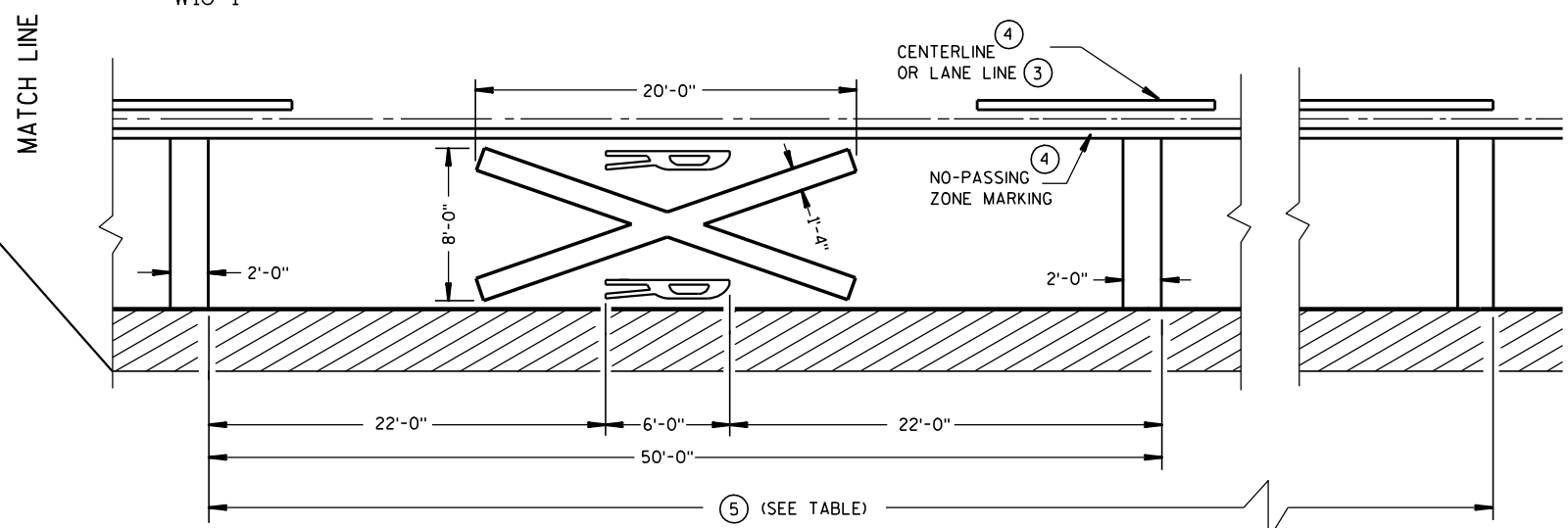
5-13-2013  
DATE

FHWA

/S/ Travis Feltes  
STATE TRAFFIC E 108



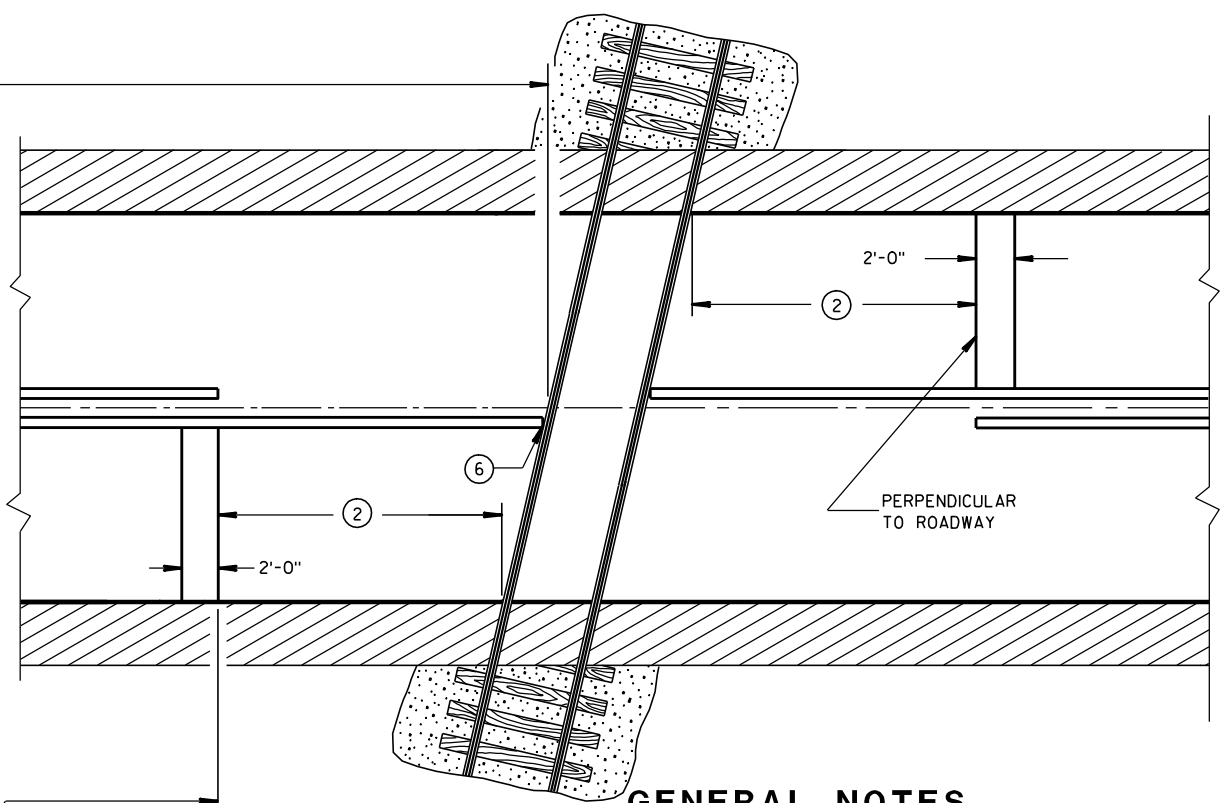
PREFERRED PAVEMENT MARKING



ALTERNATE PAVEMENT MARKING

| Posted Speed (M.P.H.) | Dimension Range (Feet) |
|-----------------------|------------------------|
| 25                    | 150*- 250              |
| 30                    | 200*- 300              |
| 35                    | 250*- 450              |
| 40                    | 300*- 500              |
| 45                    | 400*- 650              |
| 50                    | 550*- 800              |
| 55                    | 750*- 1000             |
| 60                    | 1000*- 1250            |
| 65                    | 1000*- 1250            |

\* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSE PROXIMITY OF DRIVEWAYS, BRIDGES, SIDEROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.



GENERAL NOTES

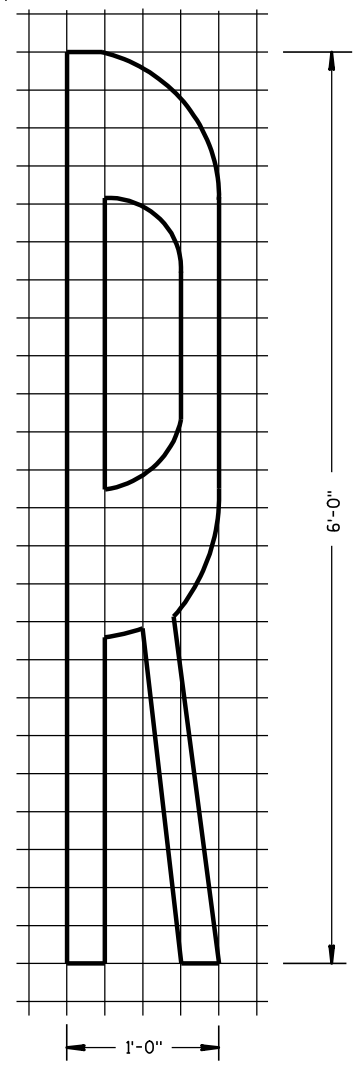
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A THREE-LANE ROADWAY SHOULD BE MARKED WITH A CENTERLINE FOR TWO-LANE APPROACH OPERATION ON THE APPROACH TO A CROSSING.

ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE. ALL LETTERS AND SYMBOLS SHALL BE IN CONFORMANCE WITH THE "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" (ADOPTED BY THE FEDERAL HIGHWAY ADMINISTRATION).

CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.

- ① A PORTION OF THE PAVEMENT MARKING SYMBOL SHOULD BE DIRECTLY OPPOSITE THE ADVANCE WARNING SIGN (W10-1).
- ② MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNALS, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
- ③ REFLECTIVE WHITE.
- ④ REFLECTIVE YELLOW 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
- ⑤ TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- ⑥ FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

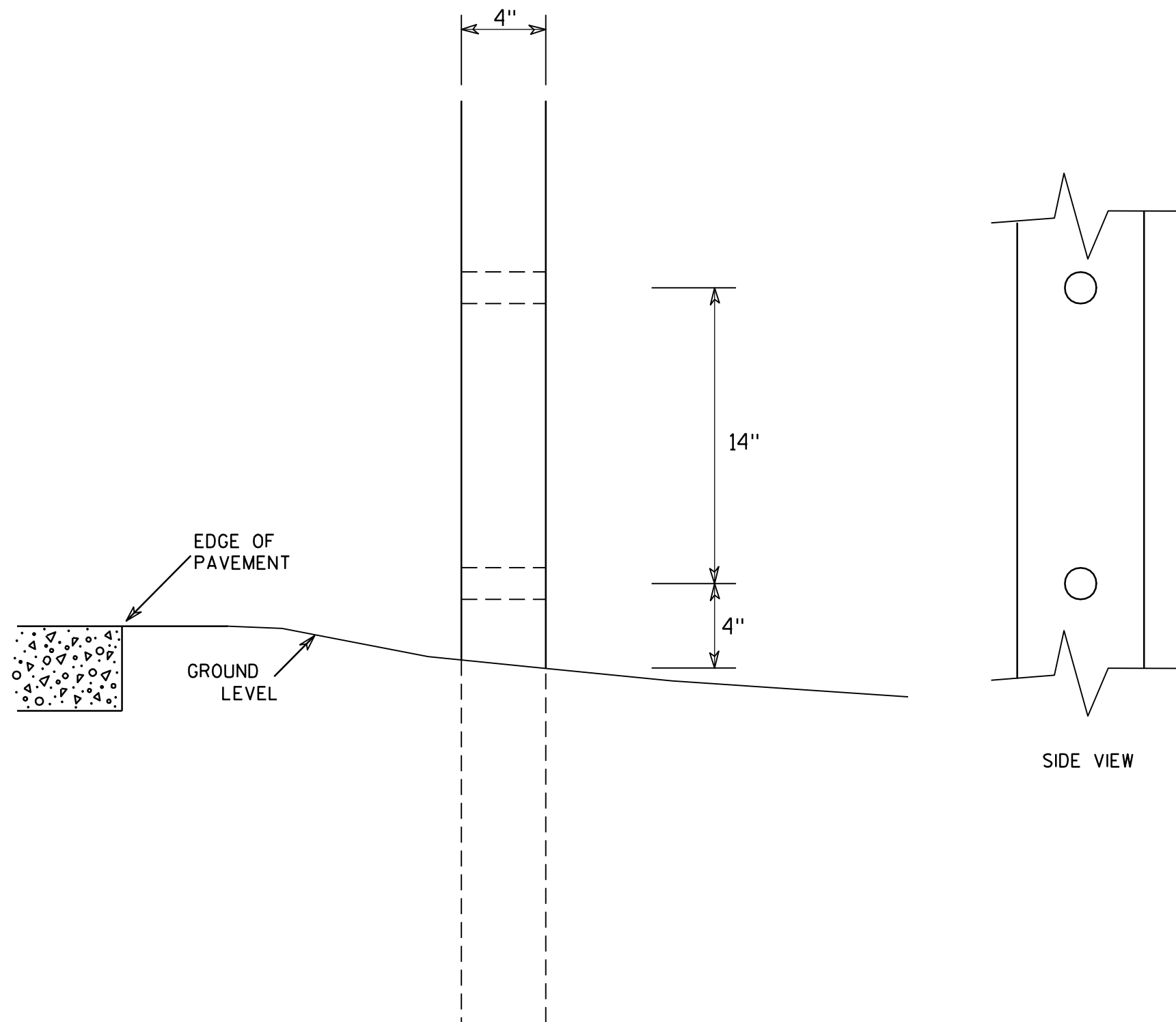


SIGNING AND PAVEMENT MARKING  
DETAILS FOR RAILROAD-HIGHWAY  
GRADE CROSSINGS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
1-9-2012 /S/ Thomas N. [Signature]  
DATE STATE TRAFFIC ENGINEER 109 DESIGN  
FHWA

7

GENERAL NOTES

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

7

# 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Chester J. Spang*  
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

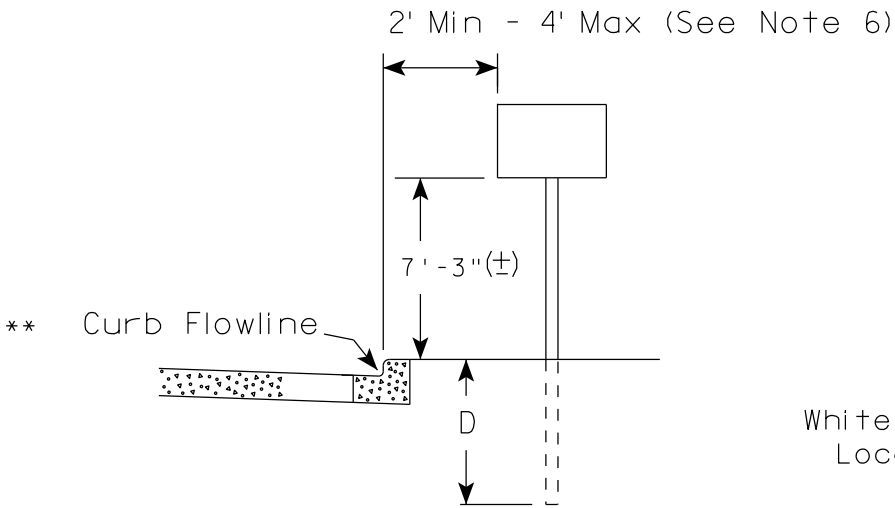
HWY:

COUNTY:

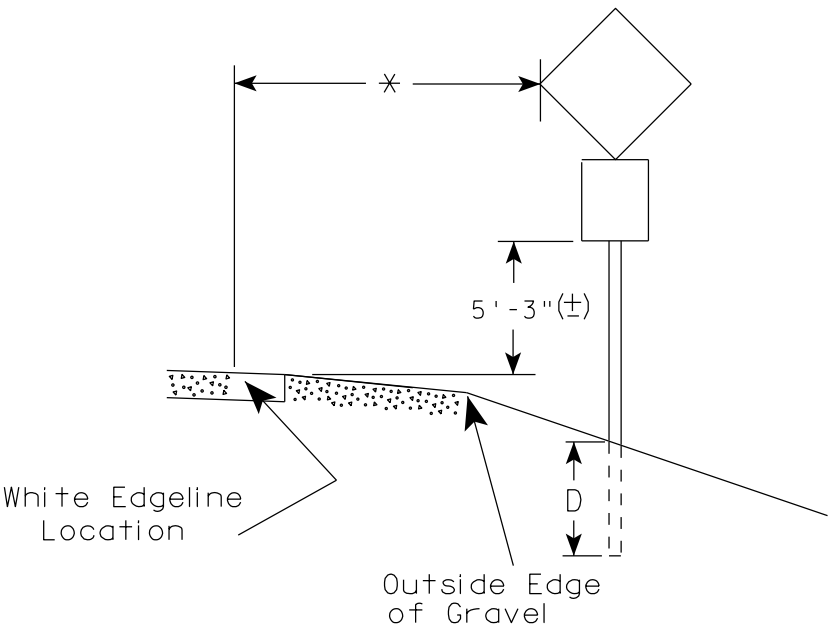
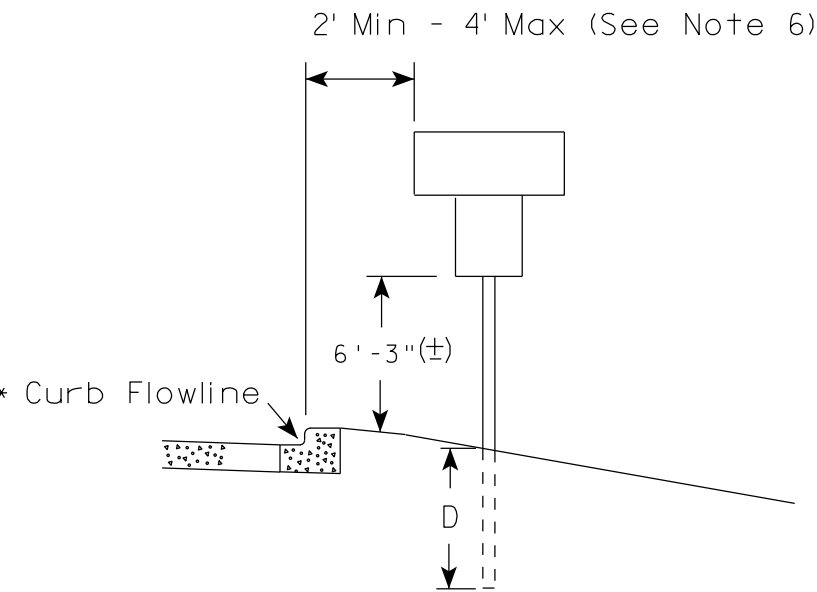
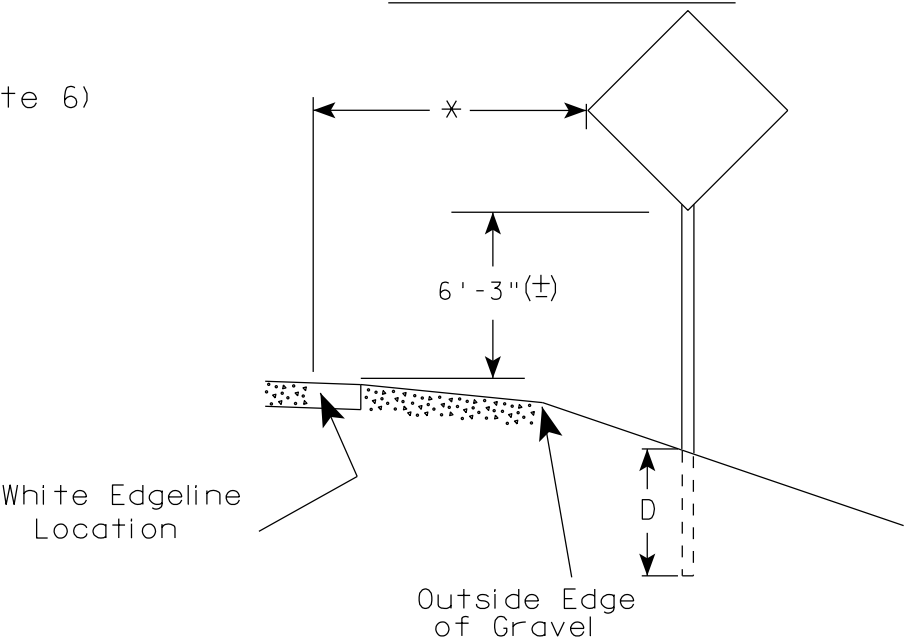
SHEET NO: 110

E

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series) & End of Rod Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (+).

POST EMBEDMENT DEPTH

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

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

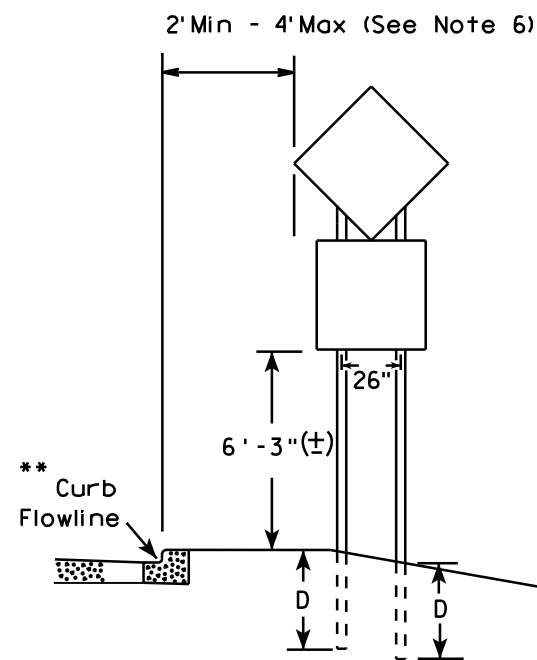
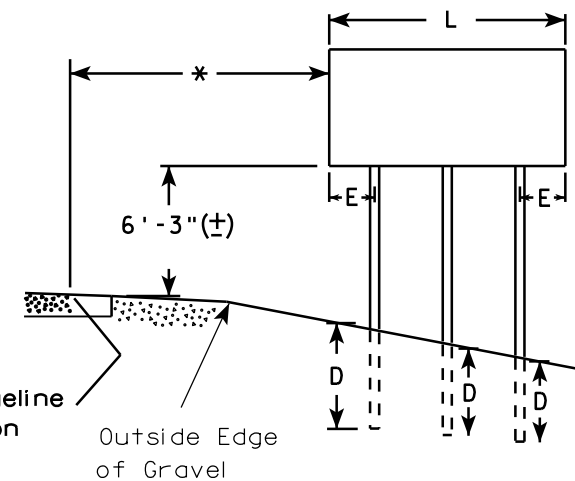
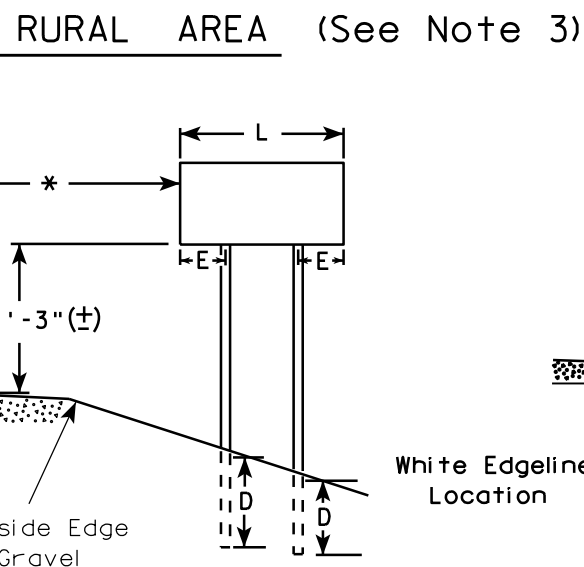
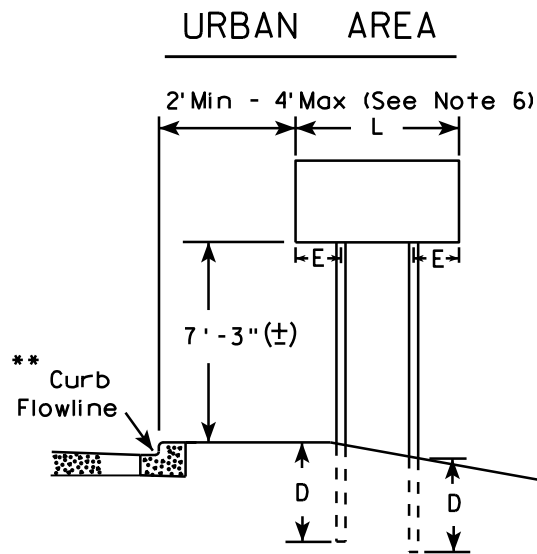
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION  
OF PERMANENT TYPE II  
SIGNS ON SINGLE POSTS

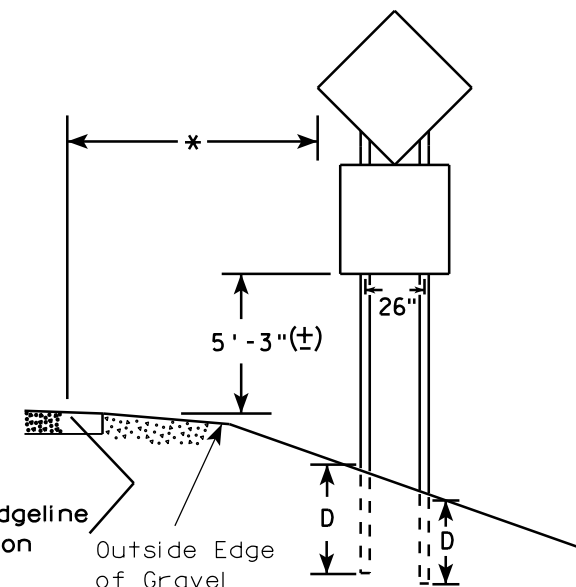
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

- GENERAL NOTES**
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
  2. See tables below for required number of posts.
  3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
  4. The (±) tolerance for mounting height is 3 inches.
  5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
  6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
  7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
  8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

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

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

\*\*\* See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

\*\*\*

| SIGN SHAPE OTHER THAN DIAMOND<br>(TWO POSTS REQUIRED) |     |
|-------------------------------------------------------|-----|
| L                                                     | E   |
| Greater than 48"<br>Less than 60"                     | 12" |
| 60" to 120"                                           | L/5 |

| SIGN SHAPE OTHER THAN DIAMOND<br>(THREE POSTS REQUIRED) |     |
|---------------------------------------------------------|-----|
| L                                                       | E   |
| Greater than 120"<br>less than 168"                     | 12" |

| SIGN SHAPE OTHER THAN DIAMOND<br>(FOUR POSTS REQUIRED) |     |
|--------------------------------------------------------|-----|
| L                                                      | E   |
| 168" and greater                                       | 12" |

POST EMBEDMENT DEPTH

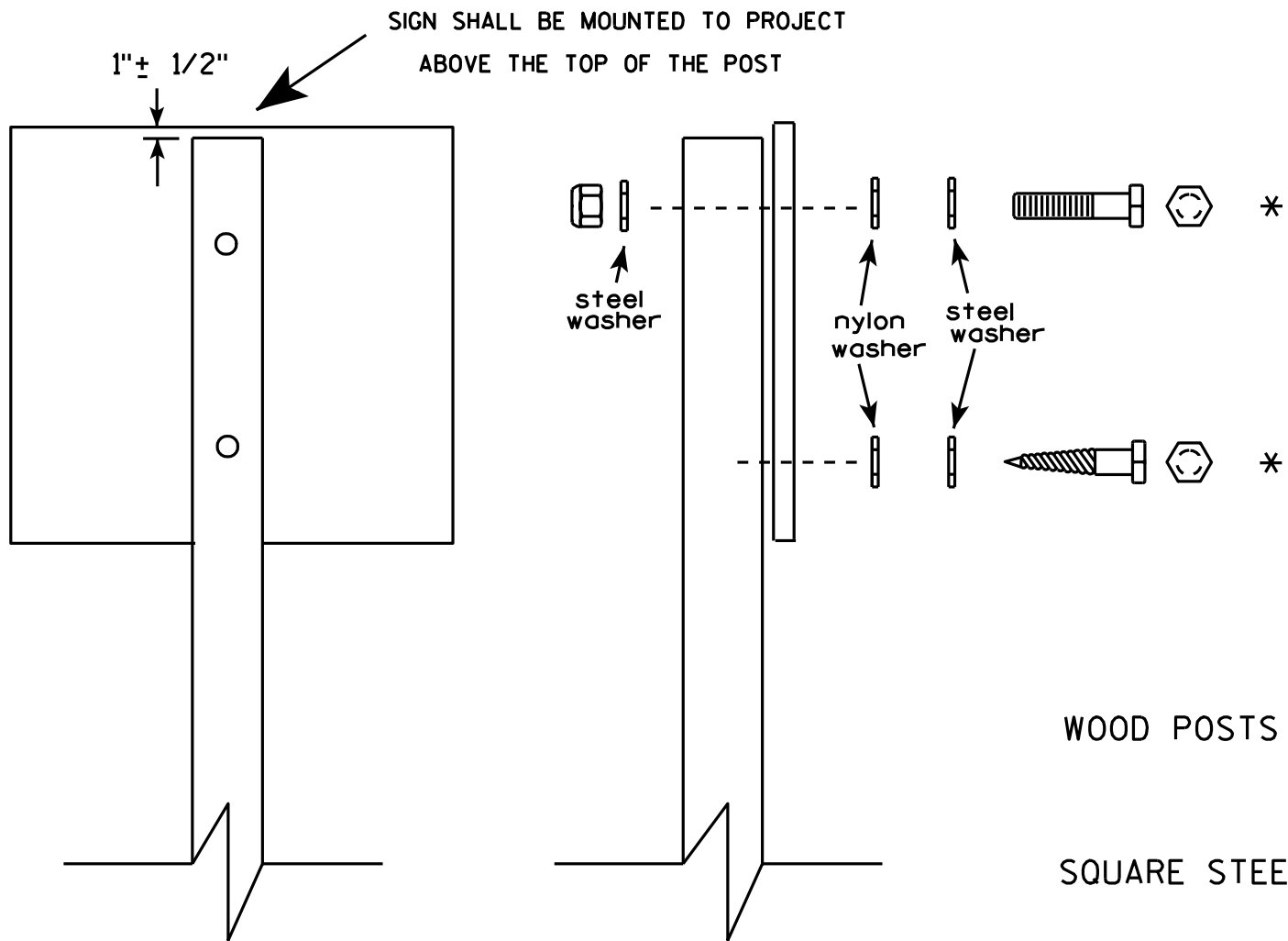
| Area of Sign<br>Installation<br>( Sq. Ft. ) | D<br>( Min ) |
|---------------------------------------------|--------------|
| 20 or Less                                  | 4'           |
| Greater than 20                             | 5'           |

TYPICAL INSTALLATION  
OF TYPE II SIGNS  
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 9/30/13 PLATE NO. 112 12

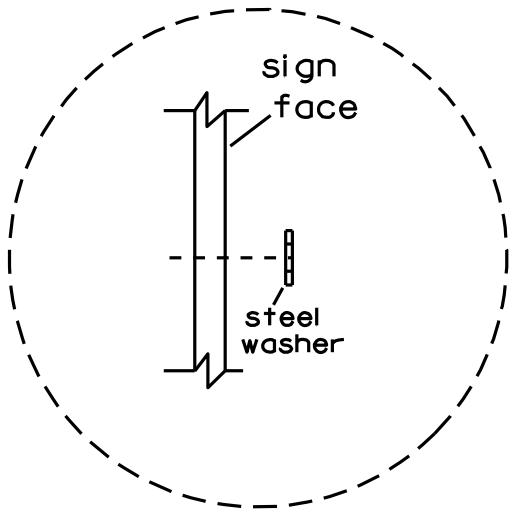


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

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

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

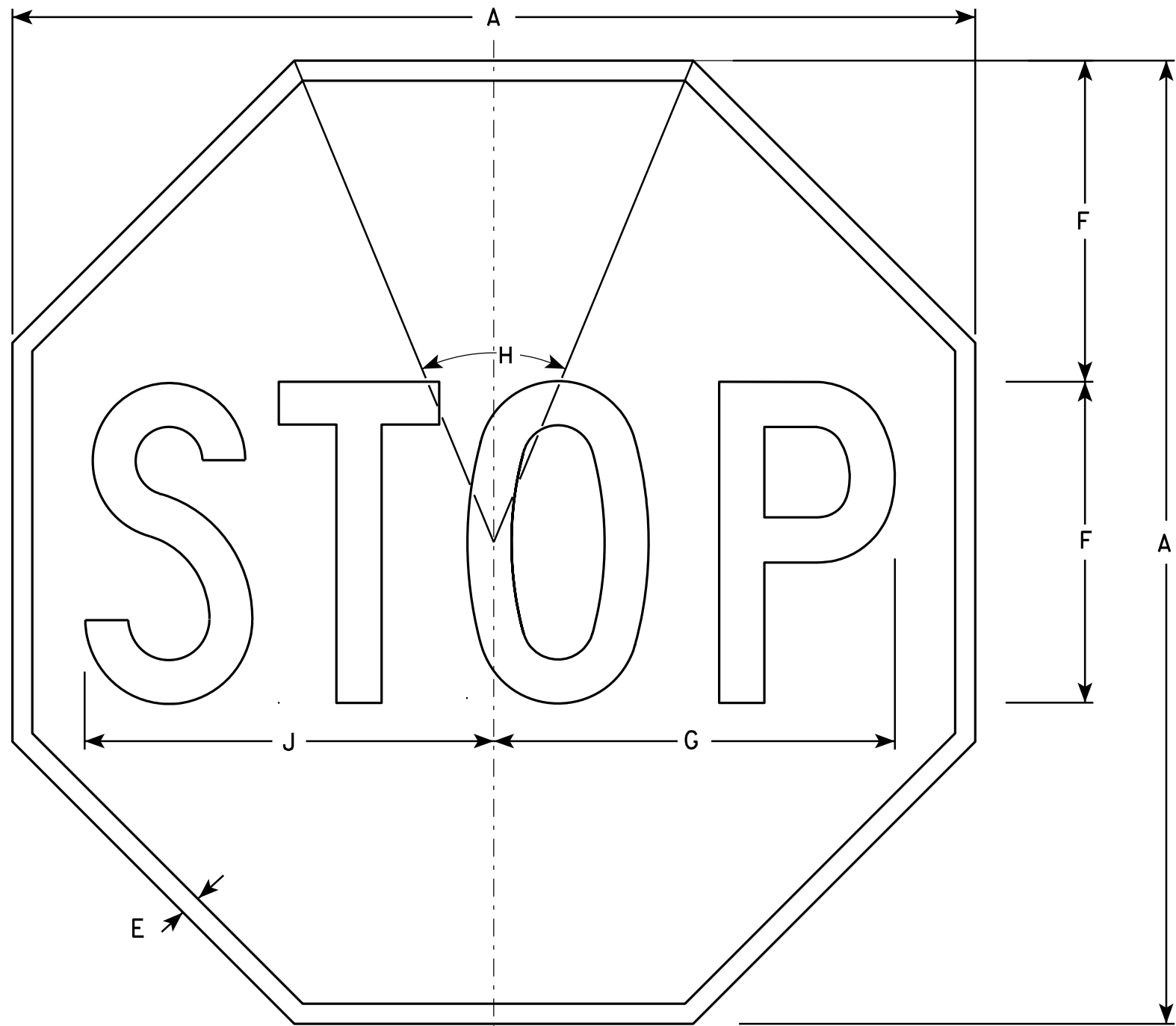
- WOOD POSTS (4" x 4" or 4" x 6")  
LAG SCREWS - 3/8" X 3"  
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")  
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts  
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

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

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| ATTACHMENT OF SIGNS<br>TO POSTS  |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>For State Traffic Engineer |
| DATE 3/23/10                     | PLATE NO. A4-8.7                                      |



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:  
Background - Red  
Message - White
- 3. Message Series - C

R1-1

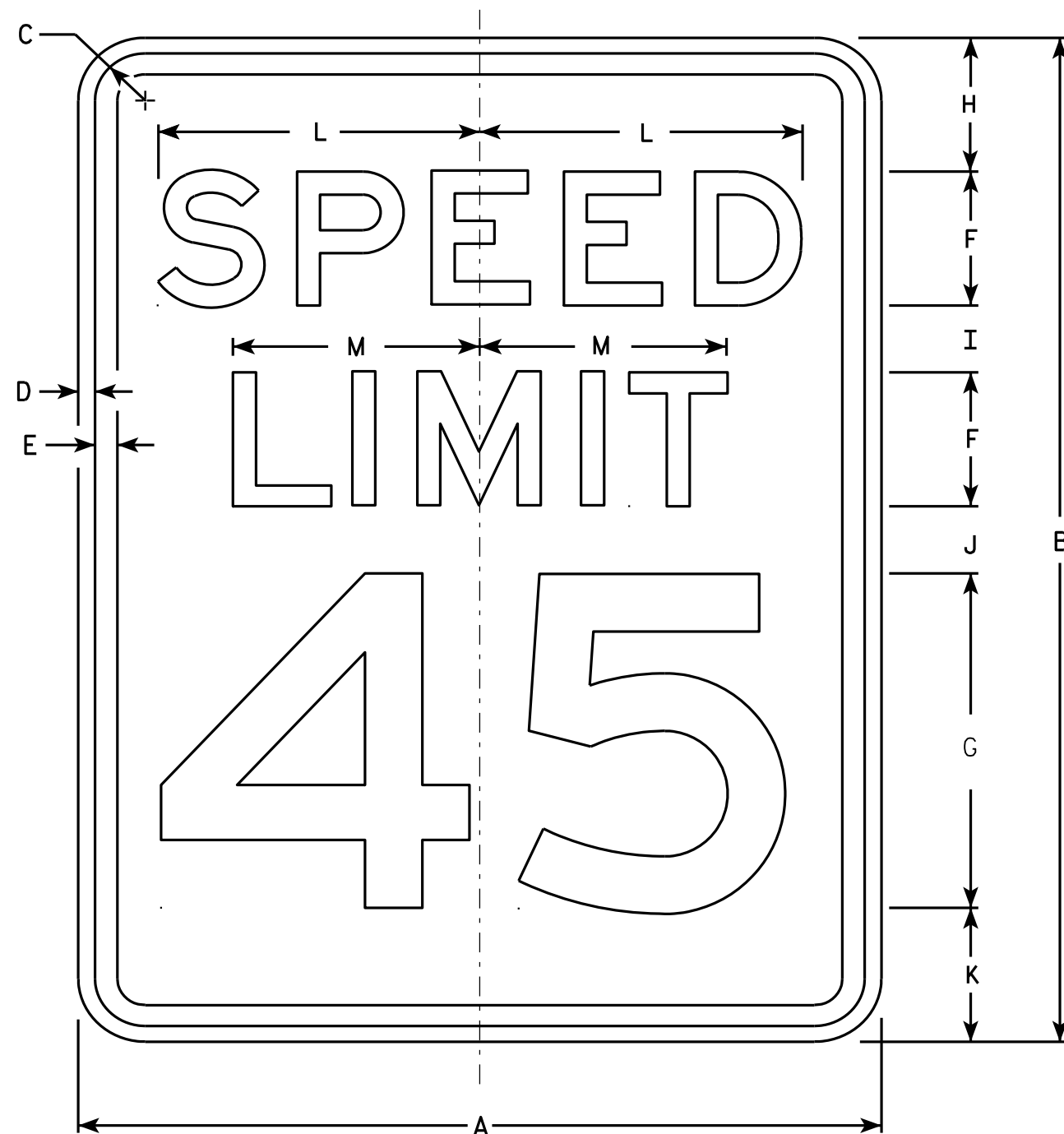
| SIZE | A  | B | C | D | E   | F  | G      | H   | I | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|---|---|-----|----|--------|-----|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   |   |   | 3/8 | 8  | 10     | 45° |   | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.31            |
| 2S   | 30 |   |   |   | 5/8 | 10 | 12 1/2 | 45° |   | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.18            |
| 2M   | 36 |   |   |   | 3/4 | 12 | 15     | 45° |   | 15 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.46            |
| 3    | 36 |   |   |   | 3/4 | 12 | 15     | 45° |   | 15 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.46            |
| 4    | 48 |   |   |   | 1   | 16 | 20     | 45° |   | 20 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 13.25           |
| 5    | 48 |   |   |   | 1   | 16 | 20     | 45° |   | 20 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 13.25           |
| 6    | 18 |   |   |   | 3/8 | 6  | 7 3/4  | 45° |   | 7 3/4  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1.86            |
| 7    | 12 |   |   |   | 1/4 | 4  | 5      | 45° |   | 5 1/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 0.78            |

STANDARD SIGN  
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12



R2-1

### NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

| SIZE | A  | B  | C     | D   | E   | F | G  | H | I     | J     | K     | L      | M      | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|---|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 18 | 24 | 1 1/8 | 3/8 | 1/2 | 3 | 8  | 3 | 2     | 2     | 3     | 7 1/4  | 5 1/2  |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 2S   | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 4 | 10 | 3 | 2 1/4 | 3 3/8 | 3 3/8 | 9 5/8  | 7 3/8  |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 2M   | 30 | 36 | 1 3/8 | 1/2 | 5/8 | 5 | 12 | 5 | 2 1/2 | 2 1/2 | 4     | 12     | 9 1/4  |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.5             |
| 3    | 36 | 48 | 1 3/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5     | 5     | 6     | 14 3/8 | 11     |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 4    | 36 | 48 | 1 3/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5     | 5     | 6     | 14 3/8 | 11     |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 5    | 48 | 60 | 2 1/4 | 3/4 | 1   | 8 | 20 | 6 | 4 1/2 | 6 3/4 | 6 3/4 | 19 1/4 | 14 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   | 20.0            |

### STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 115

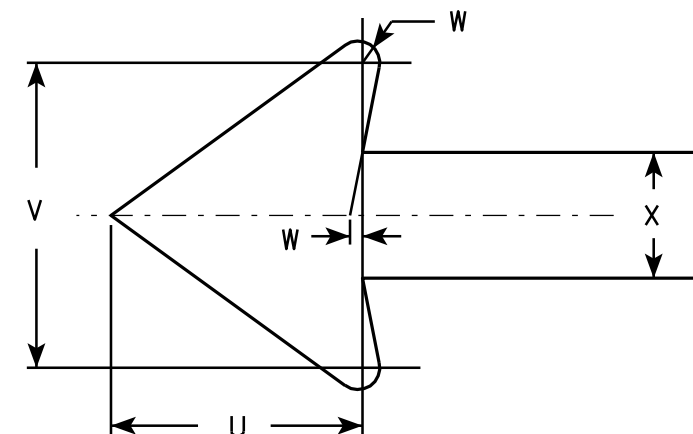
E



R7-1

### NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)  
R7-1L (left arrow)  
R7-1R (right arrow)



| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I     | J     | K     | L     | M     | N     | O     | P     | Q     | R     | S     | T     | U     | V     | W   | X     | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|---|---|-----------------|
| 1    | 12 | 18 | 1 1/8 | 3/8 | 3/8 | 3 | 1 7/8 | 2     | 7/8   | 5/8   | 1 1/2 | 2 1/2 | 2     | 2     | 4 7/8 | 4 7/8 | 2 1/4 | 2 1/8 | 2 1/2 | 3 7/8 | 1 1/2 | 1 3/4 | 1/8 | 3/4   |   |   | 1.5             |
| 2S   | 18 | 24 | 1 1/8 | 3/8 | 1/2 | 4 | 2 1/2 | 2 1/2 | 1 1/4 | 1     | 2     | 3 1/4 | 2 3/4 | 2 5/8 | 7 1/8 | 7     | 2 3/4 | 2 5/8 | 3 1/8 | 5 7/8 | 2 1/4 | 2 5/8 | 1/4 | 1 1/8 |   |   | 3.0             |
| 2M   | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 5 | 3     | 3     | 2     | 1 1/4 | 2 1/2 | 4     | 3 1/4 | 3 3/8 | 9 1/4 | 9 1/4 | 3 1/4 | 3 1/4 | 3 3/4 | 7 3/4 | 3     | 3 1/2 | 1/4 | 1 1/2 |   |   | 5.0             |
| 3    | 24 | 30 | 1 1/8 | 3/8 | 1/2 | 5 | 3     | 3     | 2     | 1 1/4 | 2 1/2 | 4     | 3 1/4 | 3 3/8 | 9 1/4 | 9 1/4 | 3 1/4 | 3 1/4 | 3 3/4 | 7 3/4 | 3     | 3 1/2 | 1/4 | 1 1/2 |   |   | 5.0             |
| 4    |    |    |       |     |     |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |       |   |   |                 |
| 5    |    |    |       |     |     |   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |     |       |   |   |                 |

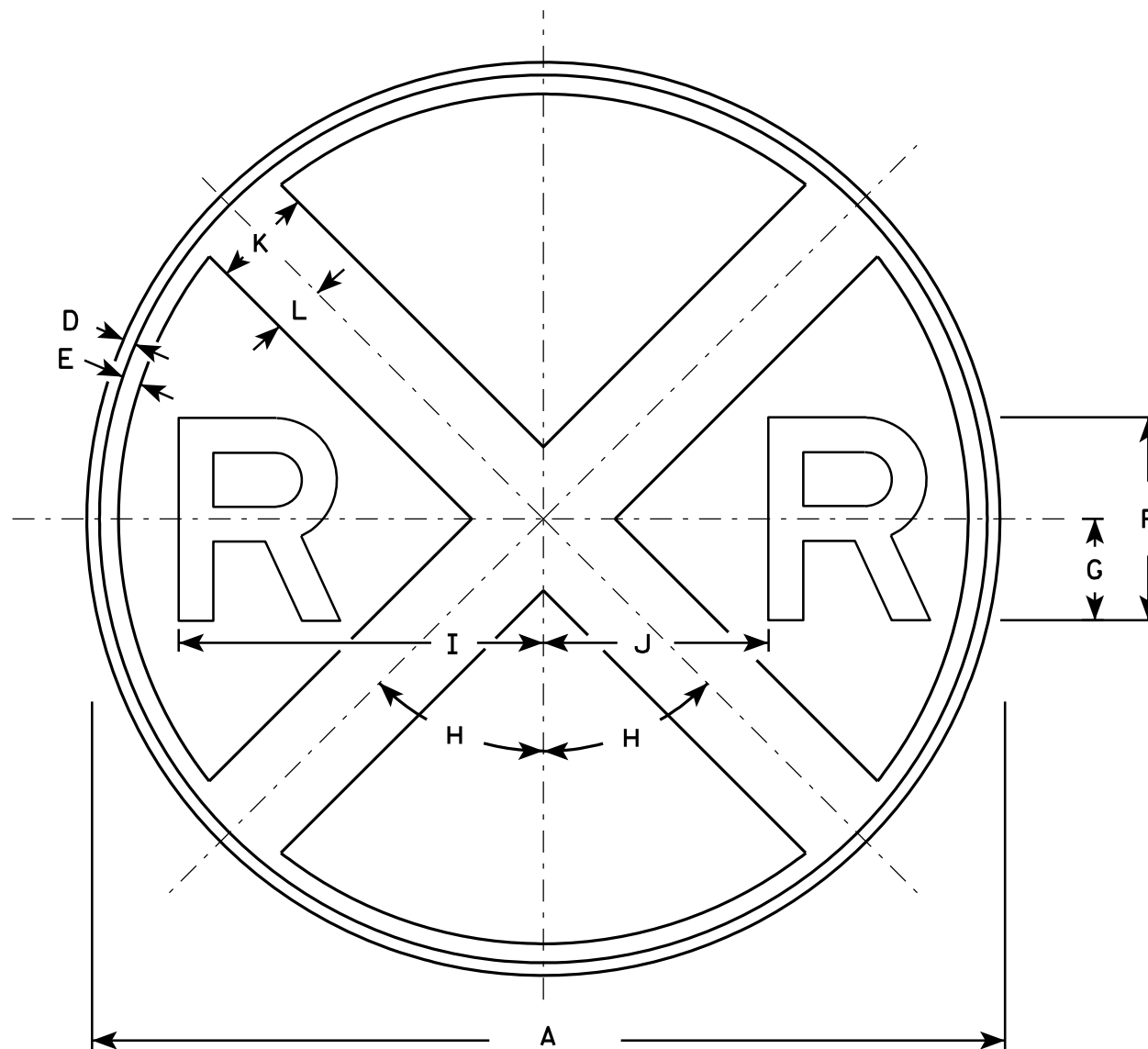
### STANDARD SIGN R7-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: HWY: COUNTY: SHEET NO: 116 E



W10-1

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Yellow  
Message - Black
3. Message Series - E

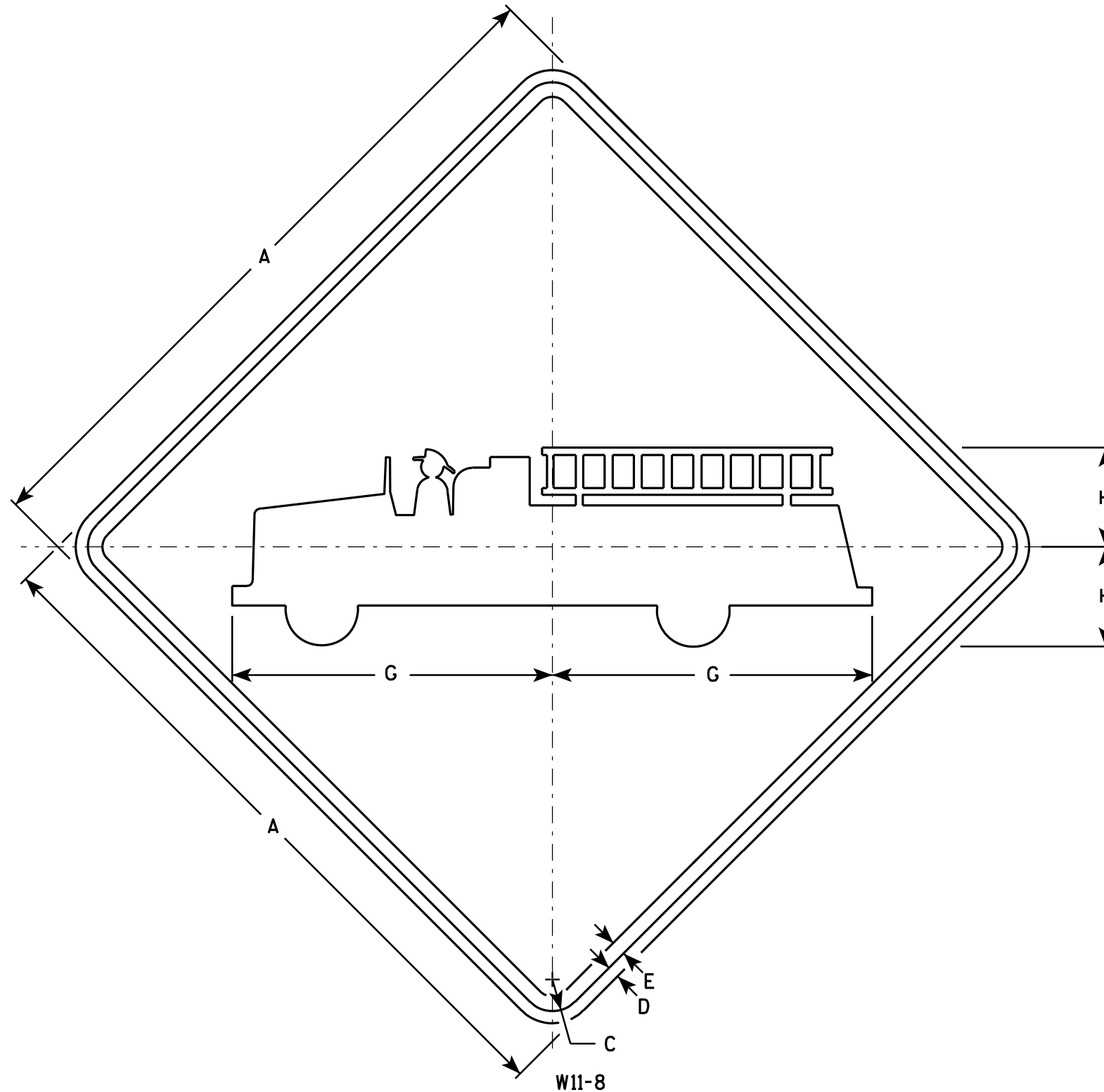
| SIZE | A  | B | C | D   | E     | F  | G     | H   | I      | J      | K | L     | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|---|-----|-------|----|-------|-----|--------|--------|---|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   |   | 3⁄8 | 5⁄8   | 7  | 3 1⁄2 | 45° | 12 3⁄8 | 7 1⁄8  | 3 | 1 1⁄2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.91            |
| 2S   | 36 |   |   | 5⁄8 | 3⁄4   | 8  | 4     | 45° | 14 3⁄8 | 8 5⁄8  | 4 | 2     |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.07            |
| 2M   | 36 |   |   | 5⁄8 | 3⁄4   | 8  | 4     | 45° | 14 3⁄8 | 8 5⁄8  | 4 | 2     |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.07            |
| 3    |    |   |   |     |       |    |       |     |        |        |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    | 48 |   |   | 3⁄4 | 1 1⁄4 | 10 | 5     | 45° | 18 3⁄8 | 11 5⁄8 | 5 | 2 1⁄2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 5    |    |   |   |     |       |    |       |     |        |        |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
W10-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer  
DATE 3/13/13 PLATE NO. W10-1.8

PROJECT NO: HWY: COUNTY: SHEET NO: 117 E



# NOTES

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

W11-8

| SIZE | A  | B | C     | D   | E   | F | G      | H     | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/8 | 3/8 | 1/2 |   | 11     | 3 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 30 |   | 1 3/8 | 1/2 | 5/8 |   | 13 3/4 | 4 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2M   | 30 |   | 1 3/8 | 1/2 | 5/8 |   | 13 3/4 | 4 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 3    | 36 |   | 1 5/8 | 5/8 | 3/4 |   | 16 1/2 | 5 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   |   | 22     | 7     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    |    |   |       |     |     |   |        |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

## STANDARD SIGN W11-8

WISCONSIN DEPT OF TRANSPORTATION

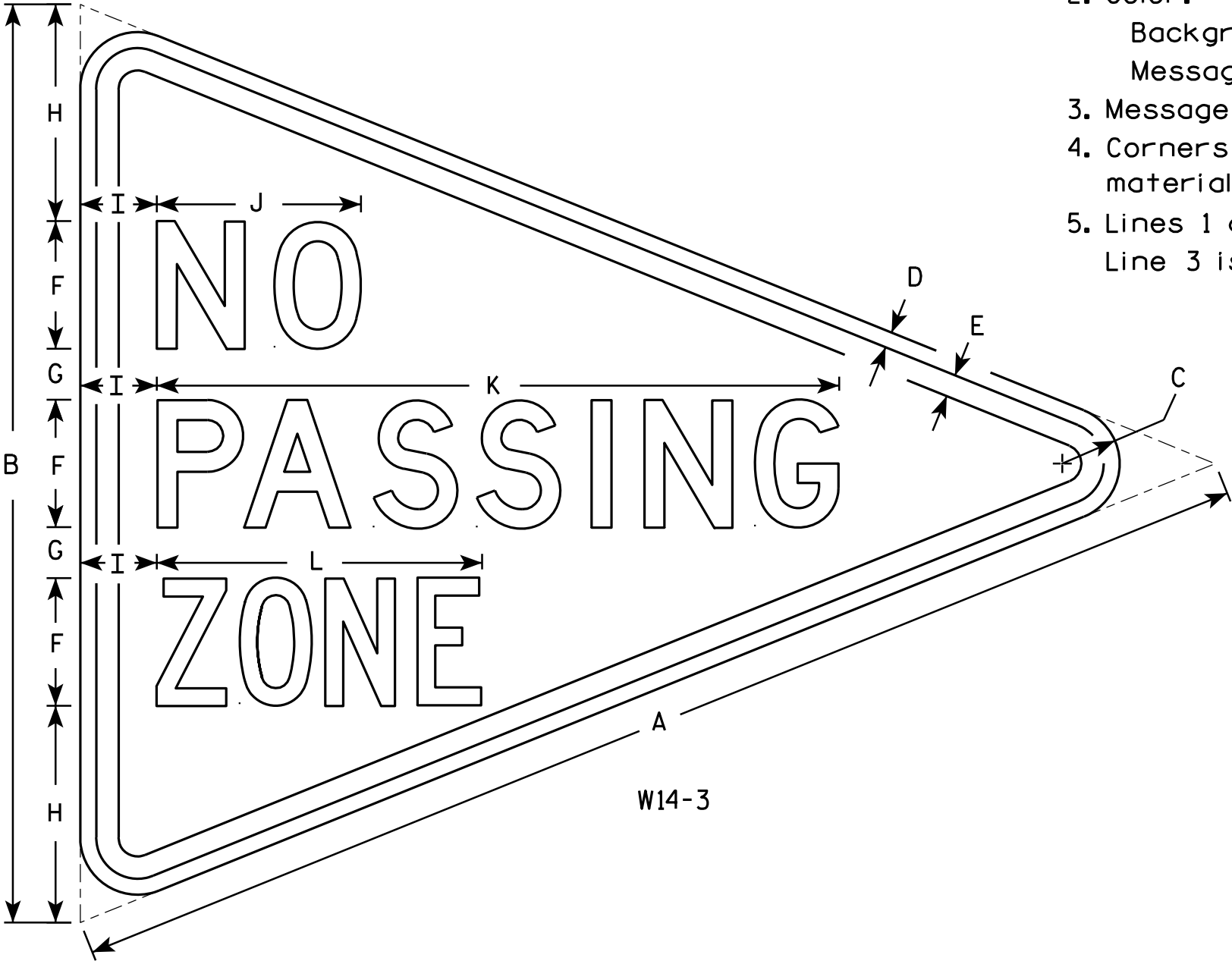
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer  
DATE 3/13/13 PLATE NO. W11-8.7

PROJECT NO:

SHEET NO: 118

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:  
Background - Yellow  
Message - Black
- 3. Message Series - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.  
Line 3 is series C.



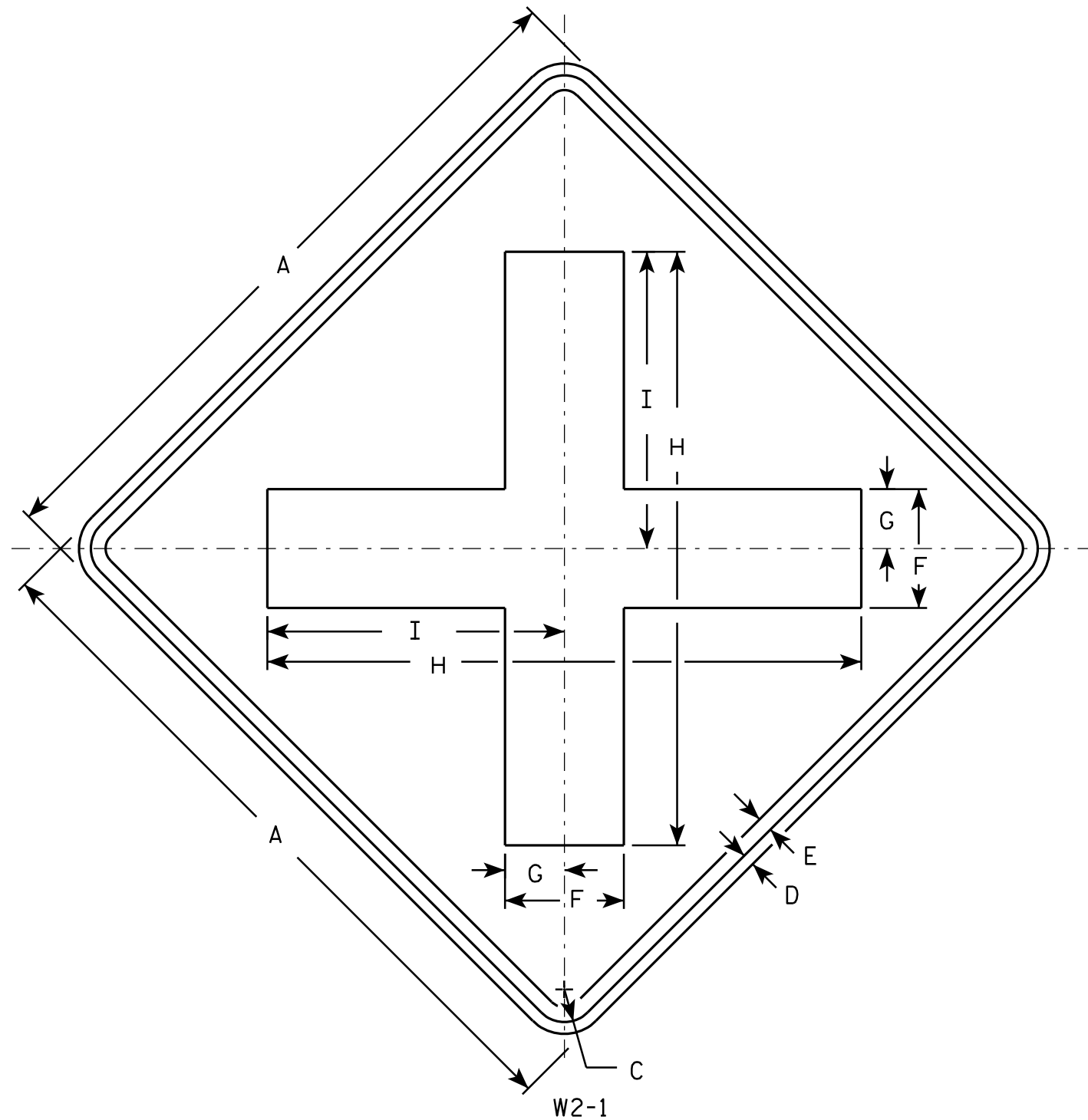
| SIZE | A  | B  | C     | D   | E     | F | G | H     | I | J      | K      | L      | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-------|---|---|-------|---|--------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |       |   |   |       |   |        |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 48 | 36 | 2 1/4 | 5/8 | 7/8   | 5 | 2 | 8 1/2 | 3 | 8      | 26 3/4 | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.0             |
| 2M   | 48 | 36 | 2 1/4 | 5/8 | 7/8   | 5 | 2 | 8 1/2 | 3 | 8      | 26 3/4 | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.0             |
| 3    | 64 | 48 | 3     | 3/4 | 1 1/4 | 6 | 3 | 12    | 4 | 10 3/4 | 33 5/8 | 16 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 10.7            |
| 4    |    |    |       |     |       |   |   |       |   |        |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |       |   |   |       |   |        |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9



### NOTES

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

| SIZE | A  | B | C     | D   | E   | F | G     | H  | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|----|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/8 | 3/8 | 1/2 | 4 | 2     | 20 | 10     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 30 |   | 1 3/8 | 1/2 | 5/8 | 5 | 2 1/2 | 25 | 12 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2M   | 30 |   | 1 3/8 | 1/2 | 5/8 | 5 | 2 1/2 | 25 | 12 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 3    | 36 |   | 1 5/8 | 5/8 | 3/4 | 6 | 3     | 30 | 15     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 2 1/4 | 3/4 | 1   | 8 | 4     | 40 | 20     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    |    |   |       |     |     |   |       |    |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

### STANDARD SIGN W2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-1.9

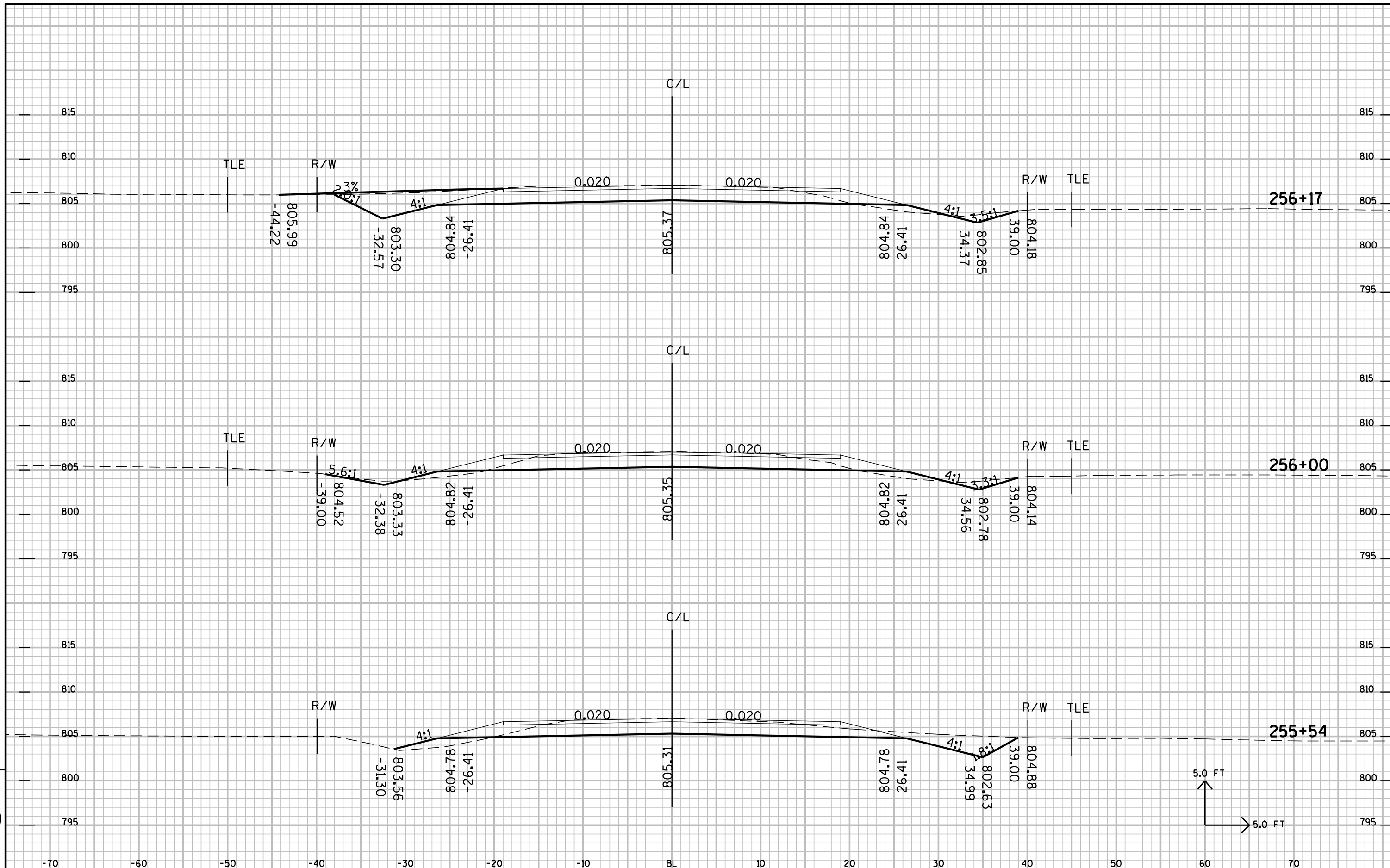
PROJECT NO: HWY: COUNTY: SHEET NO: 120 E

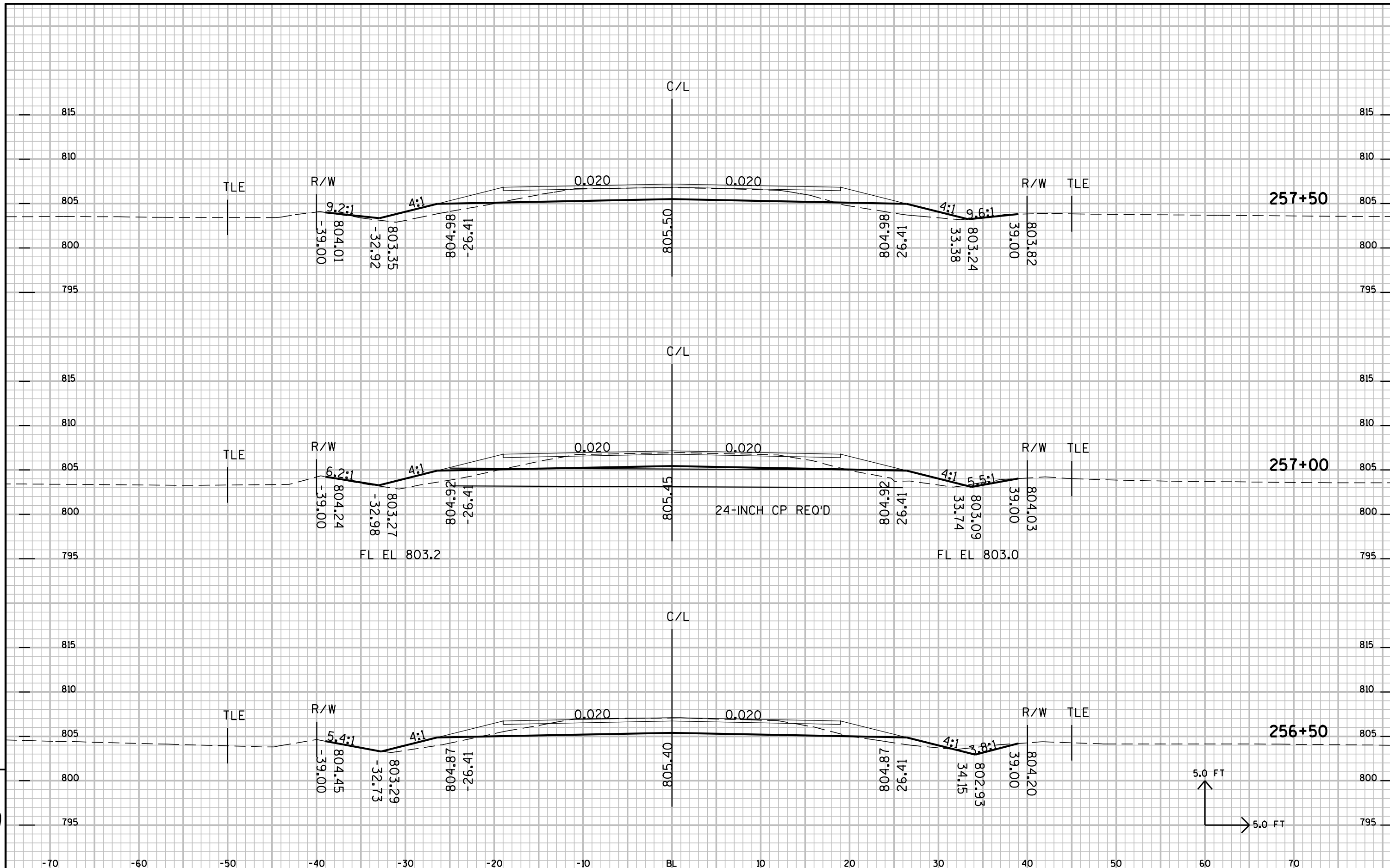
| STATION   | Distance | AREA (SF) |      | Incremental Vol (CY) (Unadjusted) |                | Cumulative Vol (CY)   |                       | Mass Ordinate |
|-----------|----------|-----------|------|-----------------------------------|----------------|-----------------------|-----------------------|---------------|
|           |          | Cut       | Fill | Cut<br>Note 1                     | Fill<br>Note 3 | Cut<br>1.00<br>Note 1 | Expanded Fill<br>1.25 |               |
| 255+00.00 |          | 0         | 0    |                                   |                |                       |                       |               |
| 255+25.00 | 25       | 65        | 9    | 30                                | 4              | 30                    | 5                     | 24.89         |
| 255+50.00 | 25       | 81        | 7    | 67                                | 7              | 97                    | 14                    | 83.29         |
| 255+54.00 | 4        | 81        | 7    | 12                                | 1              | 109                   | 15                    | 94.04         |
| 256+00.00 | 46       | 65        | 7    | 124                               | 12             | 233                   | 30                    | 203.11        |
| 256+17.00 | 17       | 99        | 7    | 51                                | 5              | 284                   | 36                    | 248.70        |
| 256+50.00 | 33       | 59        | 11   | 96                                | 11             | 381                   | 49                    | 331.51        |
| 257+00.00 | 50       | 49        | 20   | 100                               | 29             | 481                   | 85                    | 395.54        |
| 257+50.00 | 50       | 42        | 21   | 83                                | 38             | 564                   | 133                   | 431.27        |
| 258+00.00 | 50       | 36        | 25   | 71                                | 42             | 635                   | 186                   | 449.70        |
| 258+50.00 | 50       | 30        | 28   | 61                                | 49             | 696                   | 247                   | 449.63        |
| 259+00.00 | 50       | 33        | 19   | 59                                | 44             | 755                   | 301                   | 453.57        |
| 259+32.50 | 33       | 34        | 50   | 40                                | 42             | 795                   | 354                   | 441.89        |
| 259+50.00 | 18       | 36        | 14   | 23                                | 21             | 818                   | 379                   | 438.84        |
| 260+00.00 | 50       | 31        | 29   | 62                                | 39             | 880                   | 428                   | 451.93        |
| 260+50.00 | 50       | 32        | 20   | 59                                | 45             | 939                   | 484                   | 454.47        |
| 261+00.00 | 50       | 40        | 9    | 67                                | 26             | 1,006                 | 517                   | 488.53        |
| 261+50.00 | 50       | 61        | 6    | 94                                | 14             | 1,100                 | 534                   | 565.05        |
| 262+00.00 | 50       | 79        | 3    | 130                               | 8              | 1,229                 | 545                   | 684.43        |
| 262+50.00 | 50       | 87        | 1    | 154                               | 4              | 1,384                 | 549                   | 834.27        |
| 262+75.00 | 25       | 70        | 14   | 73                                | 7              | 1,456                 | 558                   | 898.28        |
| 263+00.00 | 25       | 79        | 13   | 69                                | 13             | 1,525                 | 574                   | 951.26        |
| 263+32.50 | 33       | 84        | 12   | 98                                | 15             | 1,623                 | 593                   | 1,030.07      |
| 263+50.00 | 18       | 86        | 17   | 55                                | 9              | 1,678                 | 604                   | 1,073.57      |
| 264+00.00 | 50       | 97        | 10   | 170                               | 24             | 1,848                 | 635                   | 1,213.20      |
| 264+50.00 | 50       | 111       | 23   | 193                               | 30             | 2,041                 | 672                   | 1,368.46      |
| 265+00.00 | 50       | 123       | 16   | 217                               | 36             | 2,258                 | 717                   | 1,540.36      |
| 265+41.00 | 41       | 192       | 18   | 240                               | 26             | 2,498                 | 750                   | 1,747.52      |
| 265+50.00 | 9        | 130       | 18   | 54                                | 6              | 2,551                 | 758                   | 1,793.59      |
| 265+98.00 | 48       | 149       | 19   | 248                               | 33             | 2,799                 | 799                   | 1,999.52      |
| 266+00.00 | 2        | 144       | 18   | 11                                | 1              | 2,810                 | 801                   | 2,008.63      |
| 266+50.00 | 50       | 135       | 14   | 258                               | 29             | 3,067                 | 838                   | 2,229.38      |
| 267+00.00 | 50       | 157       | 0    | 270                               | 13             | 3,337                 | 854                   | 2,483.43      |
| 267+08.00 | 8        | 164       | 0    | 47                                | 0              | 3,385                 | 854                   | 2,530.91      |
| 267+28.00 | 20       | 148       | 2    | 115                               | 1              | 3,500                 | 855                   | 2,645.09      |
| 267+50.00 | 22       | 142       | 4    | 118                               | 2              | 3,618                 | 858                   | 2,760.22      |
| 267+83.00 | 33       | 154       | 3    | 181                               | 4              | 3,799                 | 863                   | 2,936.37      |
| 268+00.00 | 17       | 134       | 1    | 91                                | 1              | 3,890                 | 864                   | 3,025.27      |
| 268+30.00 | 30       | 163       | 0    | 165                               | 1              | 4,054                 | 865                   | 3,189.18      |
| 268+50.00 | 20       | 152       | 0    | 117                               | 0              | 4,171                 | 865                   | 3,305.90      |
| 268+93.00 | 43       | 178       | 0    | 263                               | 0              | 4,434                 | 865                   | 3,568.86      |
| 269+00.00 | 7        | 163       | 0    | 44                                | 0              | 4,478                 | 865                   | 3,613.03      |
| 269+50.00 | 50       | 130       | 0    | 271                               | 0              | 4,750                 | 865                   | 3,884.12      |
| 269+68.00 | 18       | 154       | 0    | 95                                | 0              | 4,844                 | 865                   | 3,978.62      |
| 270+00.00 | 32       | 136       | 0    | 172                               | 0              | 5,016                 | 865                   | 4,150.51      |

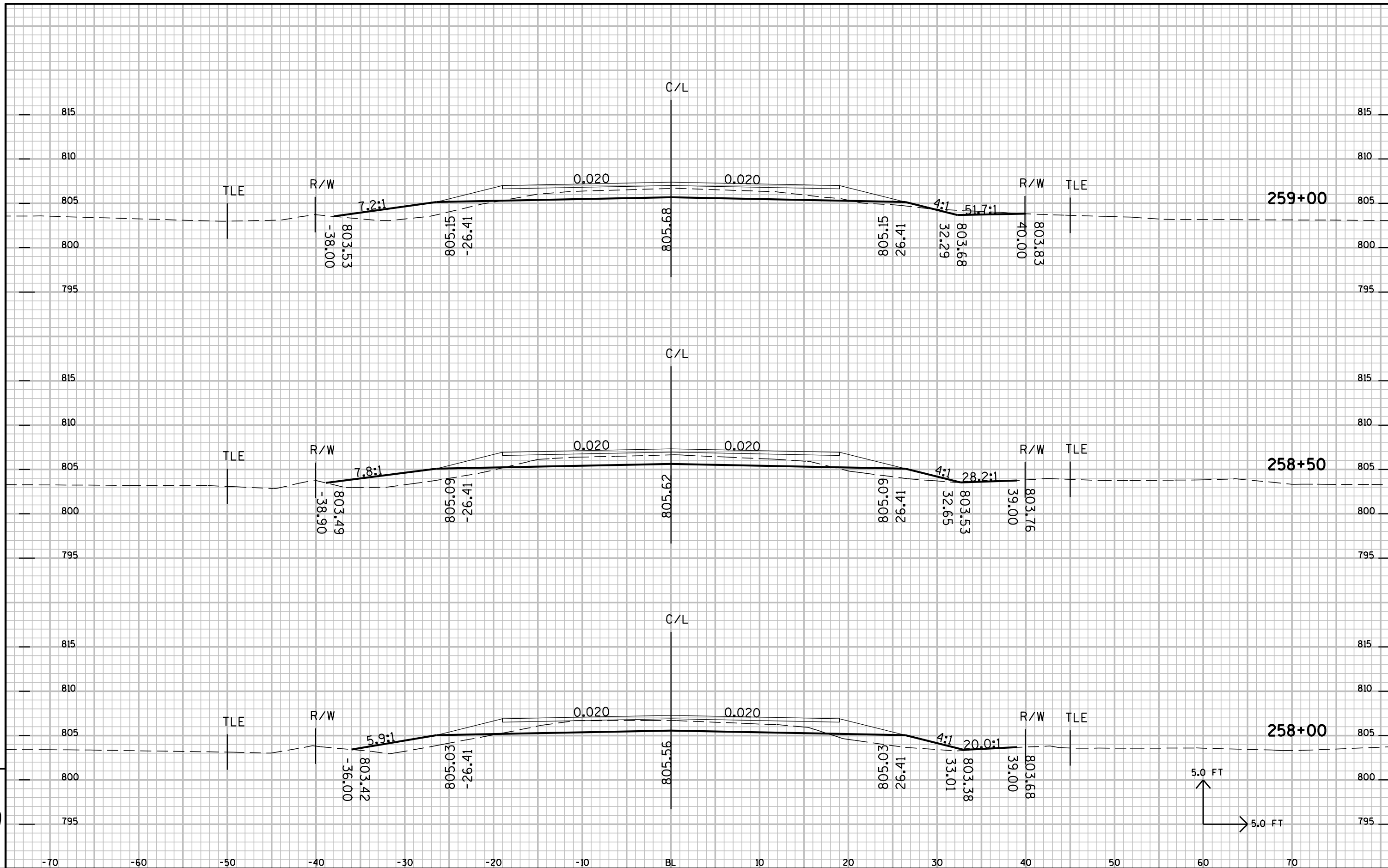
| STATION   | Distance | AREA (SF) |      | Incremental Vol (CY) (Unadjusted) |                | Cumulative Vol (CY)   |                       | Mass Ordinate |
|-----------|----------|-----------|------|-----------------------------------|----------------|-----------------------|-----------------------|---------------|
|           |          | Cut       | Fill | Cut<br>Note 1                     | Fill<br>Note 3 | Cut<br>1.00<br>Note 1 | Expanded Fill<br>1.25 |               |
|           |          |           |      |                                   |                |                       |                       |               |
| 270+02.00 | 2        | 141       | 0    | 10                                | 0              | 5,026                 | 865                   | 4,160.79      |
| 270+50.00 | 48       | 133       | 0    | 244                               | 0              | 5,270                 | 865                   | 4,404.31      |
| 271+00.00 | 50       | 135       | 0    | 248                               | 0              | 5,517                 | 866                   | 4,651.62      |
| 271+32.00 | 32       | 175       | 0    | 183                               | 0              | 5,701                 | 866                   | 4,834.79      |
| 271+50.00 | 18       | 140       | 0    | 105                               | 0              | 5,806                 | 866                   | 4,939.83      |
| 272+00.00 | 50       | 123       | 0    | 244                               | 0              | 6,050                 | 866                   | 5,184.00      |
| 272+50.00 | 50       | 102       | 2    | 209                               | 2              | 6,258                 | 868                   | 5,390.61      |
| 272+96.00 | 46       | 110       | 0    | 180                               | 1              | 6,439                 | 870                   | 5,569.20      |
| 273+00.00 | 4        | 105       | 2    | 16                                | 0              | 6,455                 | 870                   | 5,584.90      |
| 273+17.00 | 17       | 101       | 6    | 65                                | 3              | 6,520                 | 873                   | 5,646.43      |
| 273+50.00 | 33       | 71        | 19   | 105                               | 16             | 6,625                 | 893                   | 5,731.86      |
| 274+00.00 | 50       | 58        | 24   | 119                               | 40             | 6,743                 | 943                   | 5,800.39      |
| 274+50.00 | 50       | 56        | 31   | 105                               | 51             | 6,848                 | 1,006                 | 5,842.06      |
| 275+00.00 | 50       | 51        | 44   | 99                                | 69             | 6,947                 | 1,093                 | 5,854.28      |
| 275+20.00 | 20       | 47        | 18   | 36                                | 23             | 6,984                 | 1,122                 | 5,861.58      |
| 275+25.00 | 5        | 45        | 21   | 8                                 | 4              | 6,992                 | 1,127                 | 5,865.50      |
| 275+50.00 | 25       | 0         | 0    | 21                                | 10             | 7,013                 | 1,139                 | 5,874.06      |
| 276+00.00 | 50       | 0         | 0    | 0                                 | 0              | 7,013                 | 1,139                 | 5,874.05      |
| 276+50.00 | 50       | 0         | 0    | 0                                 | 0              | 7,013                 | 1,139                 | 5,874.05      |
| 277+00.00 | 50       | 0         | 0    | 0                                 | 0              | 7,013                 | 1,139                 | 5,874.05      |
| 277+50.00 | 50       | 0         | 0    | 0                                 | 0              | 7,013                 | 1,139                 | 5,874.05      |
| 278+00.00 | 50       | 0         | 0    | 0                                 | 0              | 7,013                 | 1,139                 | 5,874.05      |
| 278+50.00 | 50       | 0         | 0    | 0                                 | 0              | 7,013                 | 1,139                 | 5,874.05      |
| 279+00.00 | 50       | 0         | 0    | 0                                 | 0              | 7,013                 | 1,139                 | 5,874.05      |
| 279+50.00 | 50       | 93        | 0    | 86                                | 0              | 7,099                 | 1,139                 | 5,960.38      |
| 279+56.00 | 6        | 130       | 0    | 25                                | 0              | 7,124                 | 1,139                 | 5,985.15      |
| 279+75.00 | 19       | 101       | 0    | 81                                | 0              | 7,205                 | 1,139                 | 6,066.21      |
| 280+00.00 | 25       | 100       | 0    | 93                                | 0              | 7,298                 | 1,139                 | 6,158.88      |
| 280+11.00 | 11       | 99        | 0    | 40                                | 0              | 7,338                 | 1,139                 | 6,199.26      |
| 280+29.00 | 18       | 97        | 0    | 65                                | 0              | 7,403                 | 1,139                 | 6,264.45      |
| 280+38.00 | 9        | 93        | 0    | 32                                | 0              | 7,435                 | 1,139                 | 6,296.01      |
| 280+50.00 | 12       | 86        | 1    | 40                                | 0              | 7,475                 | 1,139                 | 6,335.55      |
| 280+93.00 | 43       | 66        | 2    | 121                               | 2              | 7,595                 | 1,141                 | 6,454.09      |
| 281+00.00 | 7        | 63        | 4    | 17                                | 1              | 7,612                 | 1,142                 | 6,469.69      |
| 281+50.00 | 50       | 53        | 7    | 107                               | 11             | 7,719                 | 1,156                 | 6,563.63      |
| 281+90.00 | 40       | 53        | 7    | 79                                | 10             | 7,798                 | 1,169                 | 6,629.61      |
| 281+90.01 | 0        | 0         | 0    | 0                                 | 0              | 7,798                 | 1,169                 | 6,629.62      |
| 282+00.00 | 10       | 0         | 0    | 0                                 | 0              | 7,798                 | 1,169                 | 6,629.62      |
| 282+14.99 | 15       | 0         | 0    | 0                                 | 0              | 7,798                 | 1,169                 | 6,629.62      |
| 282+15.00 | 0        | 66        | 8    | 0                                 | 0              | 7,798                 | 1,169                 | 6,629.63      |
| 282+43.50 | 29       | 66        | 8    | 70                                | 8              | 7,868                 | 1,179                 | 6,689.65      |
| 282+50.00 | 7        | 68        | 4    | 16                                | 1              | 7,884                 | 1,180                 | 6,704.08      |
| 283+00.00 | 50       | 82        | 3    | 138                               | 7              | 8,023                 | 1,189                 | 6,834.22      |
| 283+18.00 | 18       | 92        | 2    | 58                                | 2              | 8,081                 | 1,191                 | 6,889.64      |
| 283+30.50 | 13       | 95        | 0    | 43                                | 1              | 8,124                 | 1,192                 | 6,932.21      |
| 283+50.00 | 20       | 95        | 0    | 69                                | 0              | 8,193                 | 1,192                 | 7,001.05      |

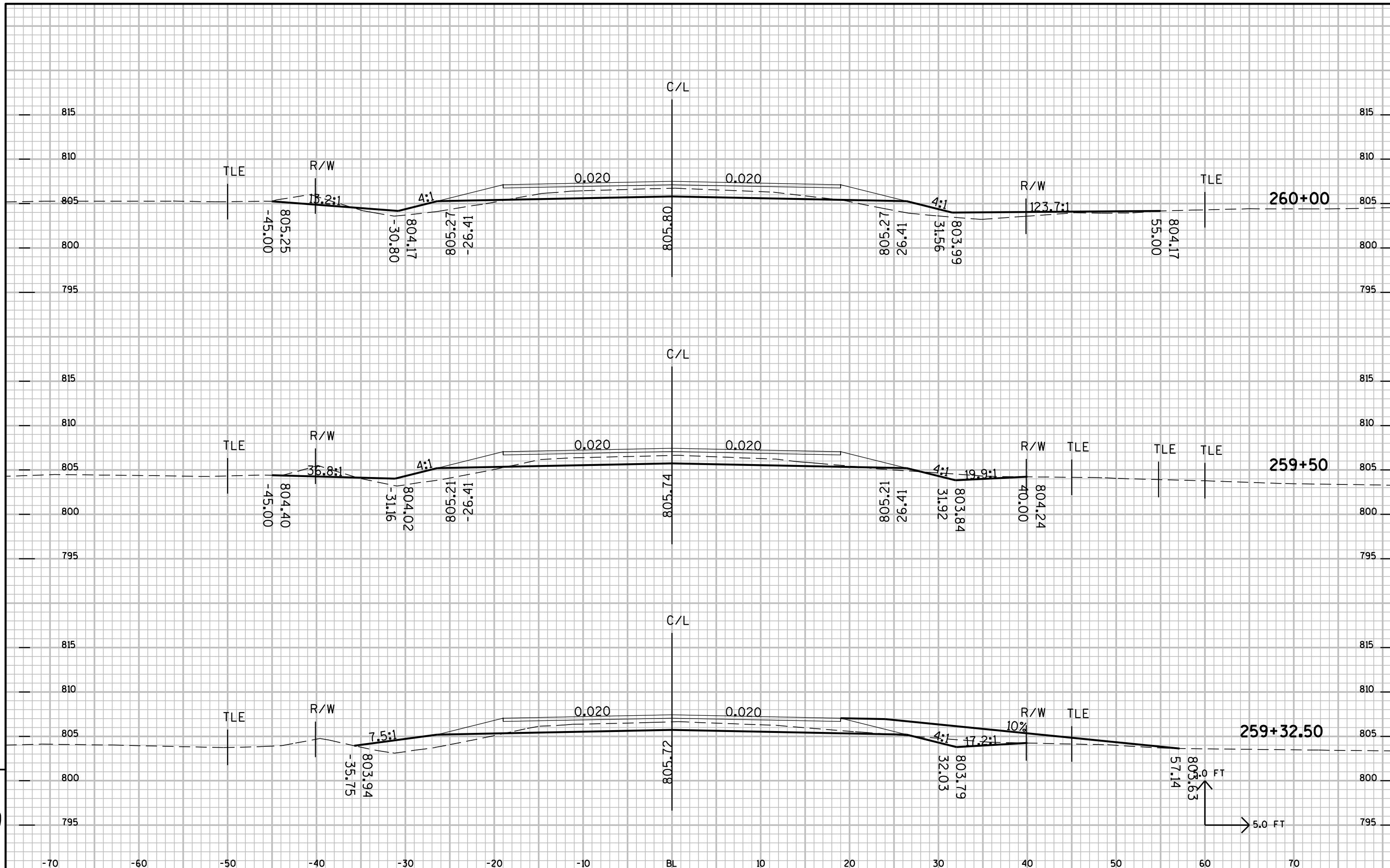
| STATION   | Distance | AREA (SF) |      | Incremental Vol (CY) (Unadjusted) |                | Cumulative Vol (CY)   | Expanded Fill<br>1.25 | Mass Ordinate<br>Note 8 |
|-----------|----------|-----------|------|-----------------------------------|----------------|-----------------------|-----------------------|-------------------------|
|           |          | Cut       | Fill | Cut<br>Note 1                     | Fill<br>Note 3 | Cut<br>1.00<br>Note 1 |                       |                         |
| 283+95.00 | 45       | 115       | 0    | 176                               | 0              | 8,368                 | 1,192                 | 7,176.75                |
| 284+00.00 | 5        | 113       | 0    | 21                                | 0              | 8,390                 | 1,192                 | 7,197.88                |
| 284+46.00 | 46       | 114       | 0    | 193                               | 0              | 8,583                 | 1,192                 | 7,390.75                |
| 284+50.00 | 4        | 107       | 0    | 16                                | 0              | 8,599                 | 1,192                 | 7,407.07                |
| 284+61.00 | 11       | 108       | 1    | 44                                | 0              | 8,643                 | 1,192                 | 7,450.52                |
| 284+75.00 | 14       | 105       | 9    | 55                                | 3              | 8,698                 | 1,195                 | 7,502.27                |
| 285+00.00 | 25       | 97        | 18   | 94                                | 12             | 8,791                 | 1,211                 | 7,580.27                |
| 285+50.00 | 50       | 109       | 10   | 191                               | 25             | 8,983                 | 1,243                 | 7,740.02                |
| 285+82.00 | 32       | 94        | 0    | 121                               | 6              | 9,103                 | 1,250                 | 7,853.37                |
| 286+00.00 | 18       | 84        | 6    | 60                                | 2              | 9,163                 | 1,252                 | 7,910.47                |
| 286+38.00 | 38       | 89        | 0    | 122                               | 4              | 9,285                 | 1,257                 | 8,027.40                |
| 286+50.00 | 12       | 107       | 0    | 44                                | 0              | 9,328                 | 1,257                 | 8,070.86                |
| 287+00.00 | 50       | 119       | 1    | 210                               | 1              | 9,538                 | 1,259                 | 8,279.13                |
| 287+50.00 | 50       | 120       | 0    | 222                               | 1              | 9,760                 | 1,260                 | 8,500.14                |
| 288+00.00 | 50       | 98        | 0    | 202                               | 0              | 9,962                 | 1,260                 | 8,702.06                |
| 288+34.00 | 34       | 88        | 0    | 117                               | 0              | 10,079                | 1,260                 | 8,818.95                |
| 288+50.00 | 16       | 108       | 0    | 58                                | 0              | 10,137                | 1,260                 | 8,877.11                |
| 289+00.00 | 50       | 113       | 0    | 205                               | 0              | 10,342                | 1,260                 | 9,081.39                |
| 289+50.00 | 50       | 84        | 2    | 182                               | 2              | 10,524                | 1,263                 | 9,261.14                |
| 290+00.00 | 50       | 91        | 0    | 162                               | 2              | 10,687                | 1,266                 | 9,420.74                |
| 290+50.00 | 50       | 135       | 0    | 209                               | 0              | 10,896                | 1,266                 | 9,629.41                |
| 290+68.00 | 18       | 130       | 0    | 88                                | 0              | 10,984                | 1,266                 | 9,717.86                |
| 291+00.00 | 32       | 182       | 0    | 185                               | 0              | 11,169                | 1,266                 | 9,902.83                |
| 291+50.00 | 50       | 83        | 5    | 245                               | 4              | 11,414                | 1,272                 | 10,142.59               |
| 292+00.00 | 50       | 81        | 4    | 152                               | 8              | 11,567                | 1,282                 | 10,284.83               |
| 292+14.00 | 14       | 86        | 1    | 43                                | 1              | 11,610                | 1,283                 | 10,326.73               |
| 292+18.00 | 4        | 86        | 2    | 13                                | 0              | 11,623                | 1,284                 | 10,339.24               |
| 292+50.00 | 32       | 68        | 9    | 91                                | 6              | 11,714                | 1,292                 | 10,422.38               |
| 292+52.00 | 2        | 68        | 8    | 5                                 | 1              | 11,719                | 1,292                 | 10,426.59               |
| 292+80.00 | 28       | 60        | 11   | 66                                | 10             | 11,785                | 1,305                 | 10,480.49               |
| 293+00.00 | 20       | 53        | 22   | 42                                | 12             | 11,827                | 1,320                 | 10,507.41               |
| 293+50.00 | 50       | 50        | 18   | 95                                | 37             | 11,922                | 1,366                 | 10,556.41               |
| 293+60.00 | 10       | 50        | 17   | 18                                | 7              | 11,941                | 1,374                 | 10,566.58               |

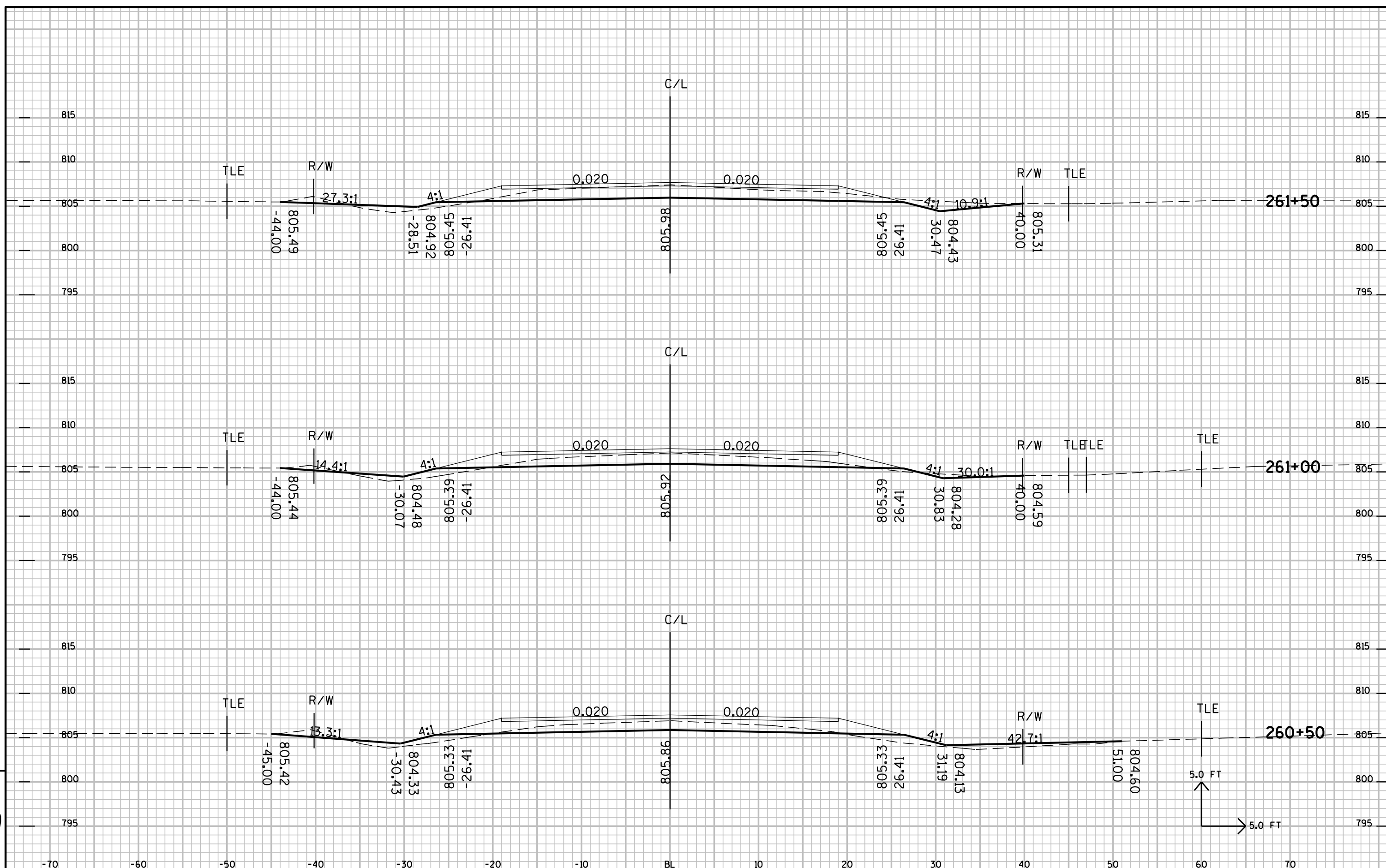


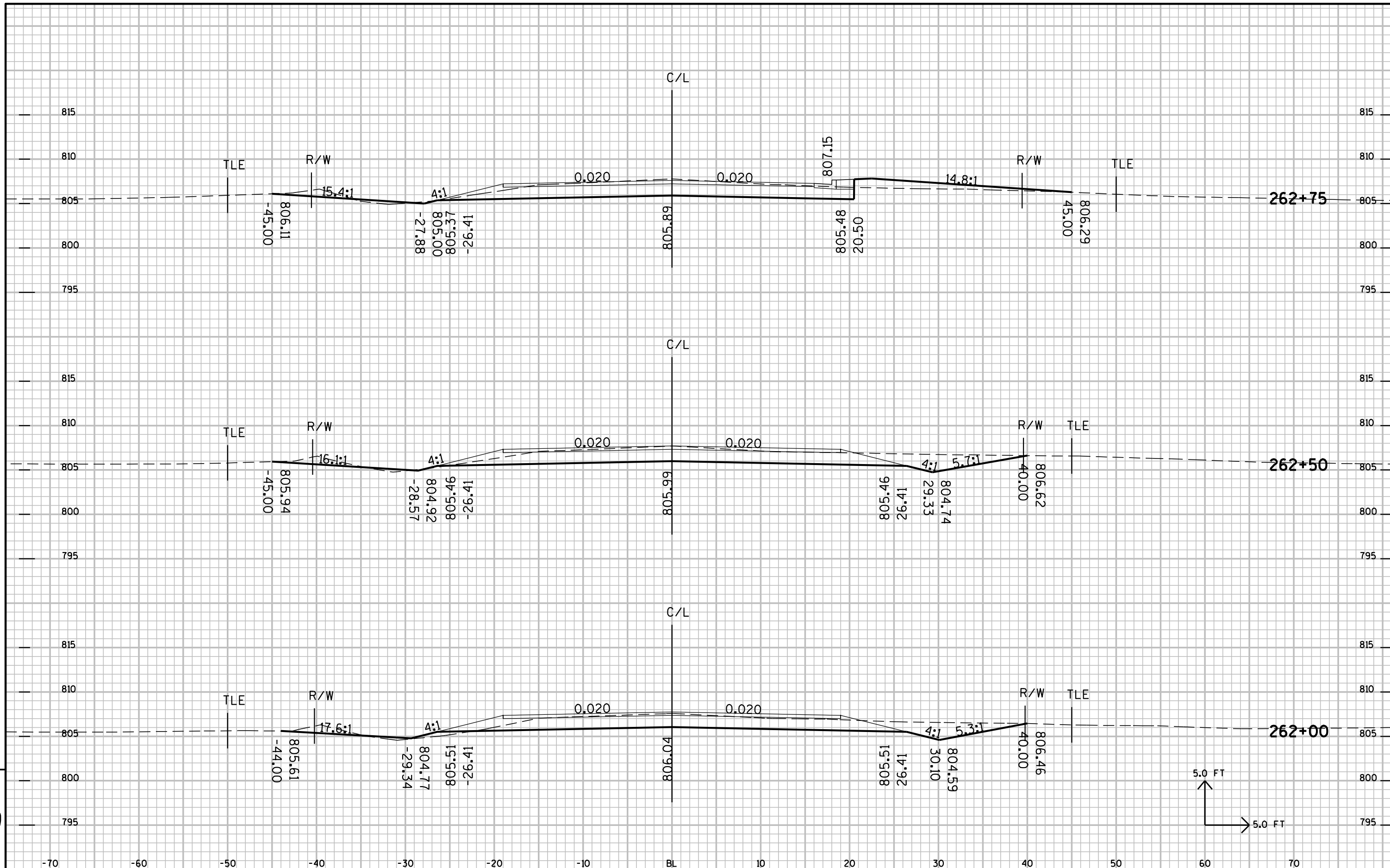


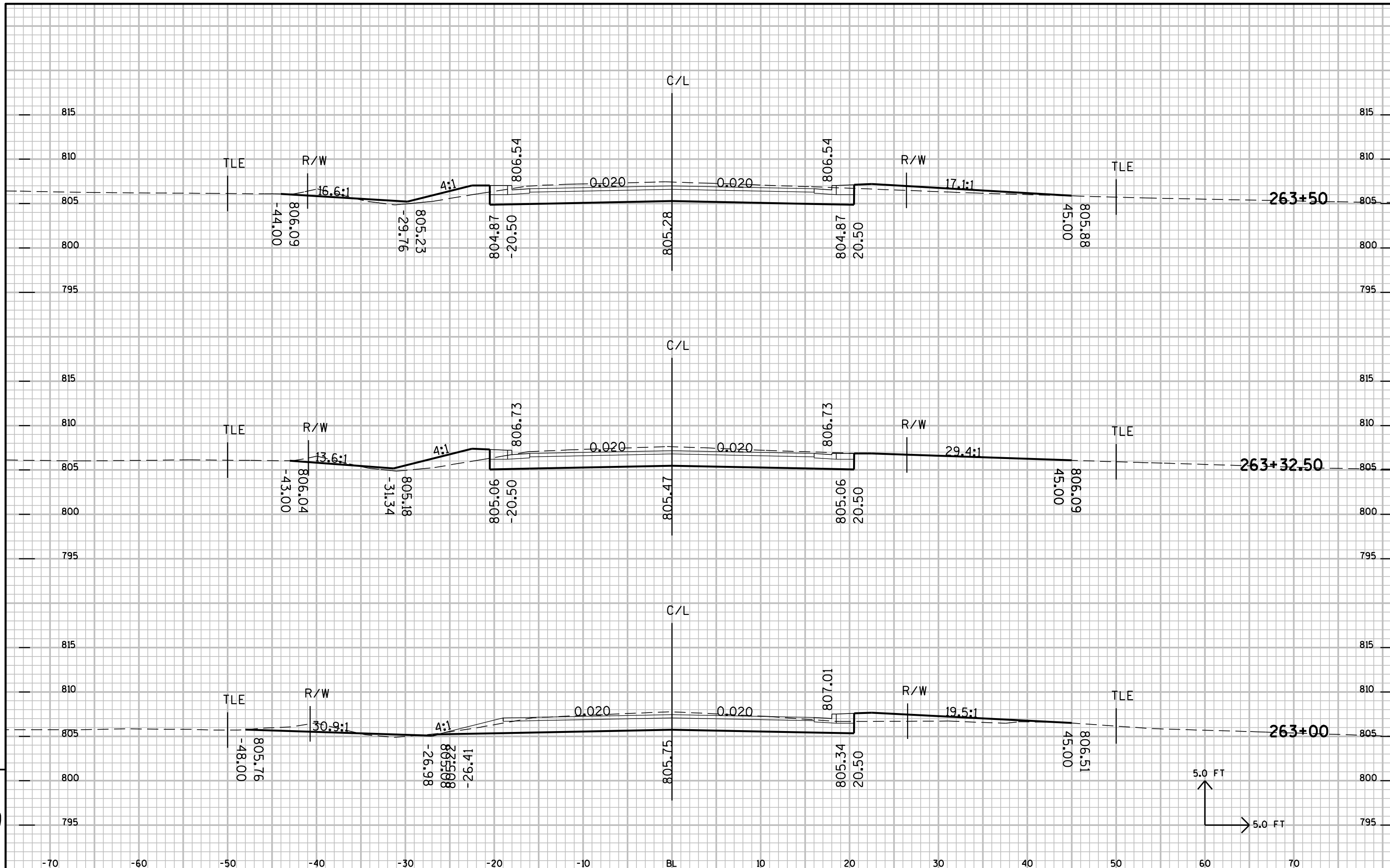


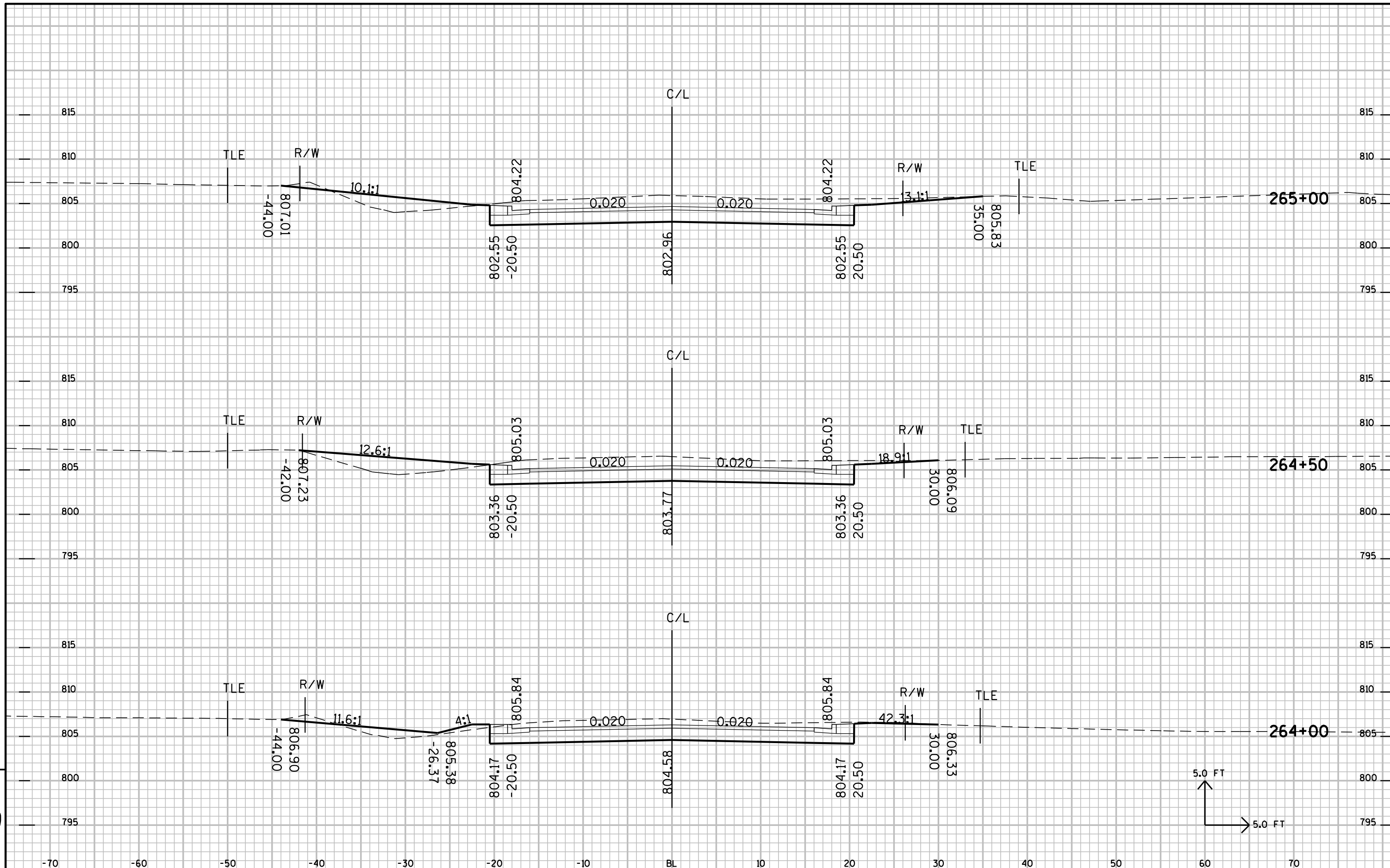


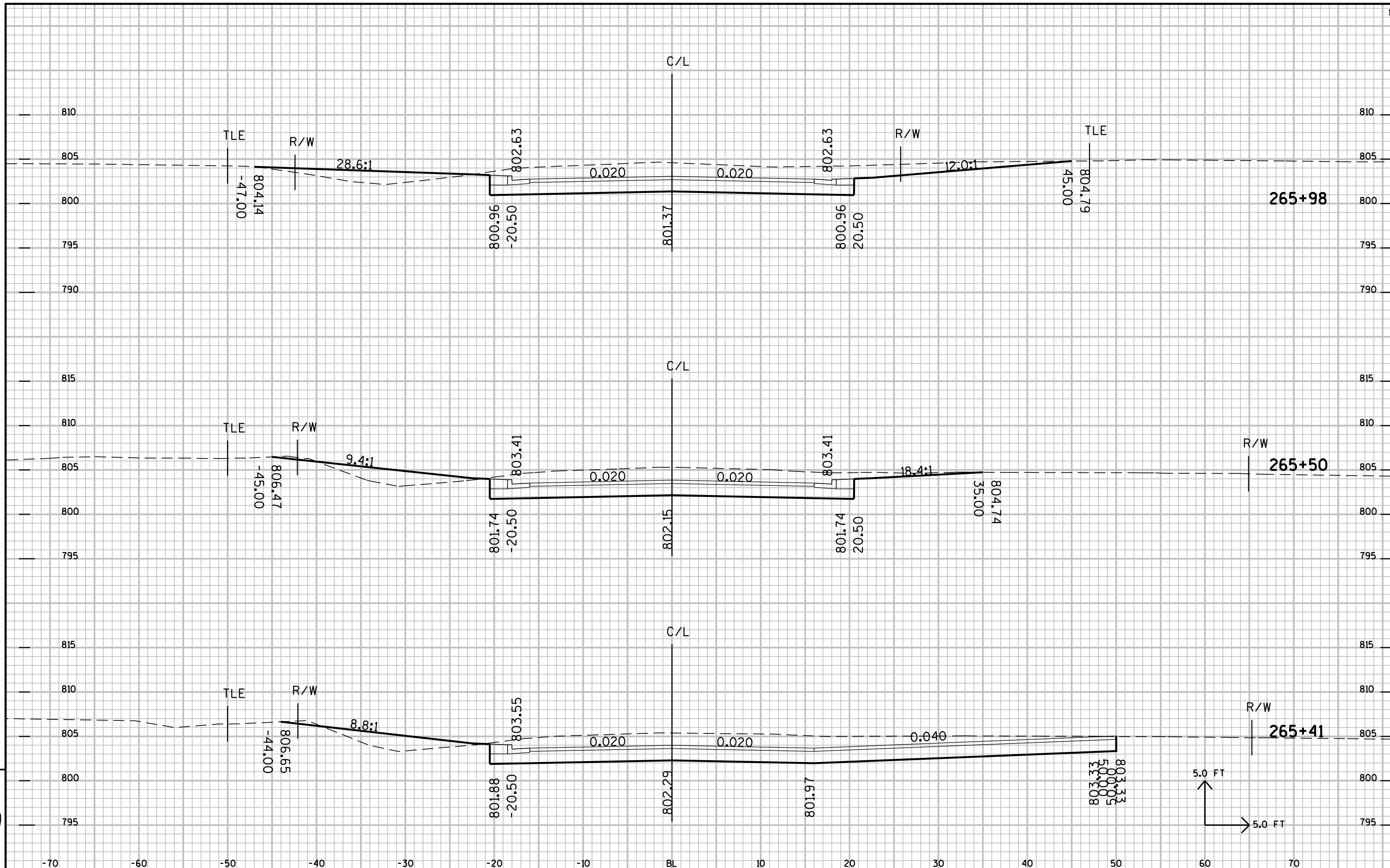


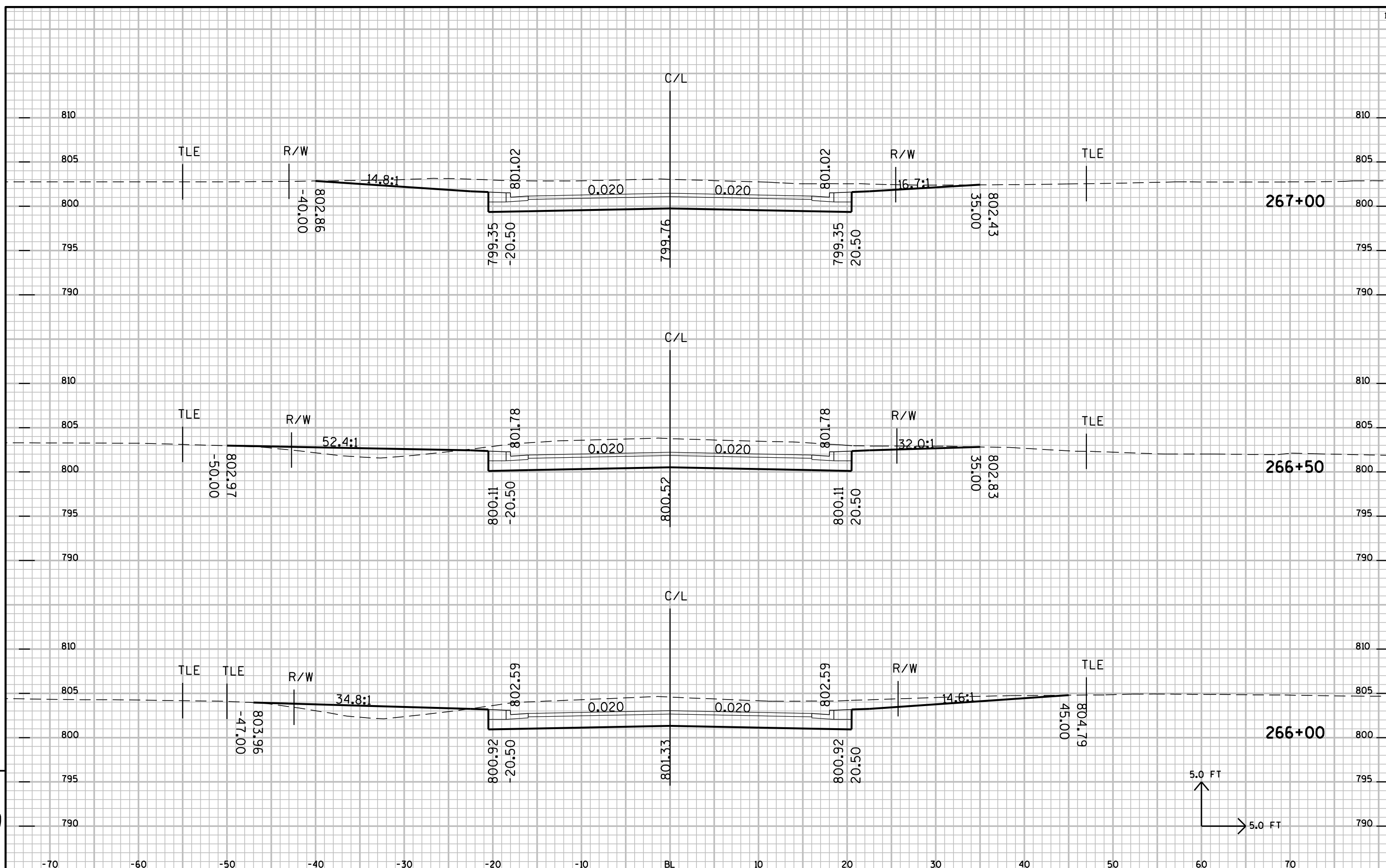


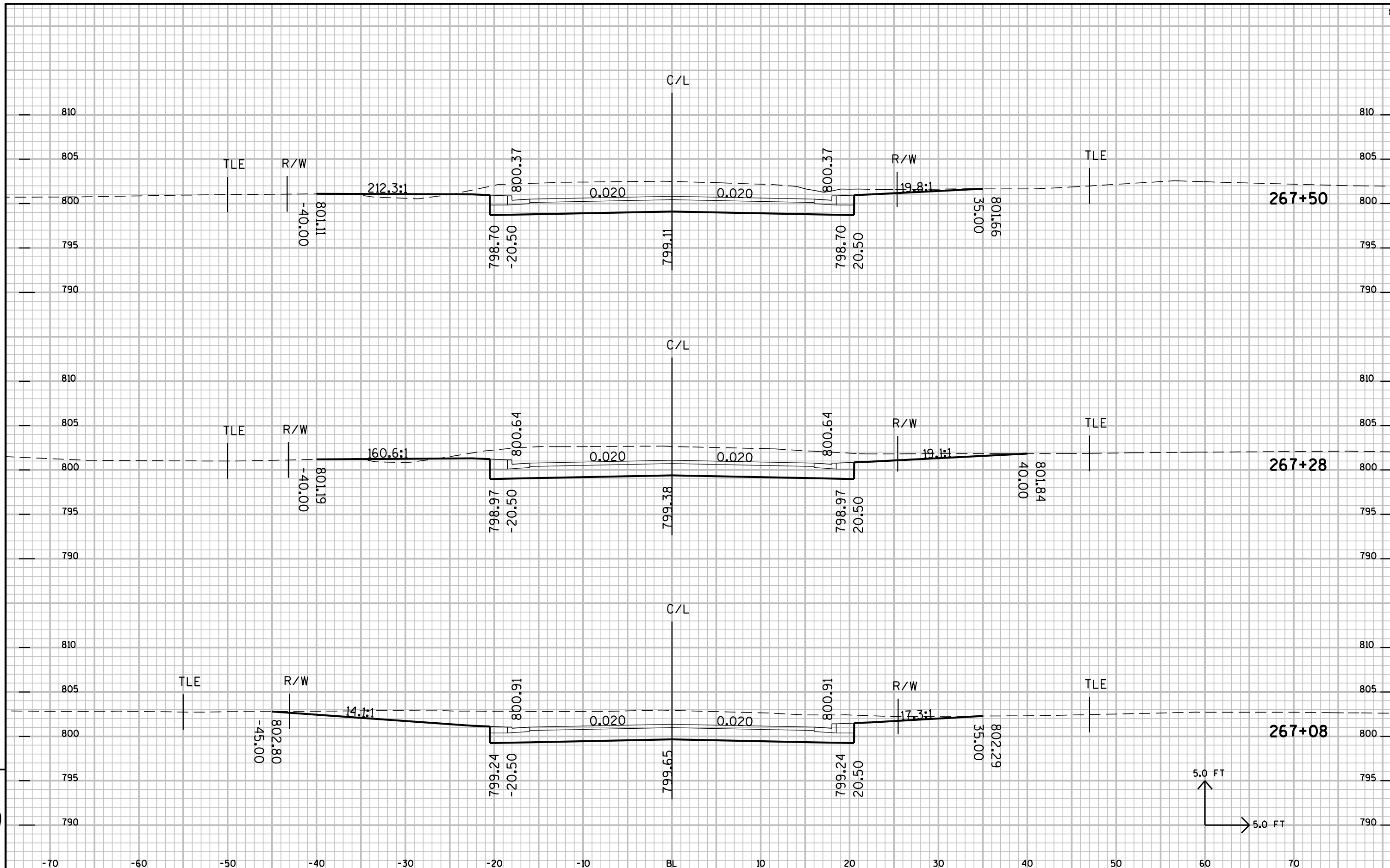


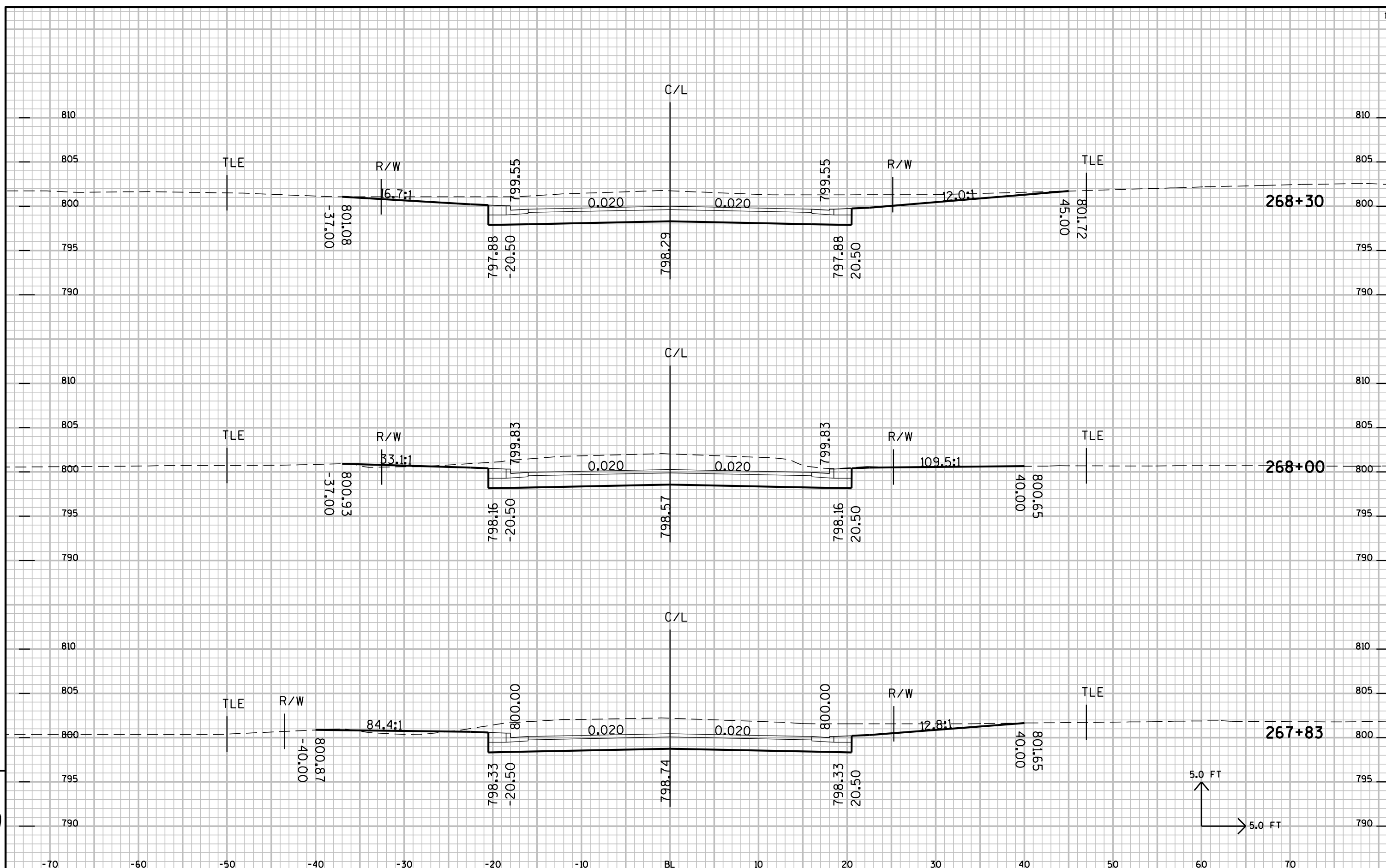


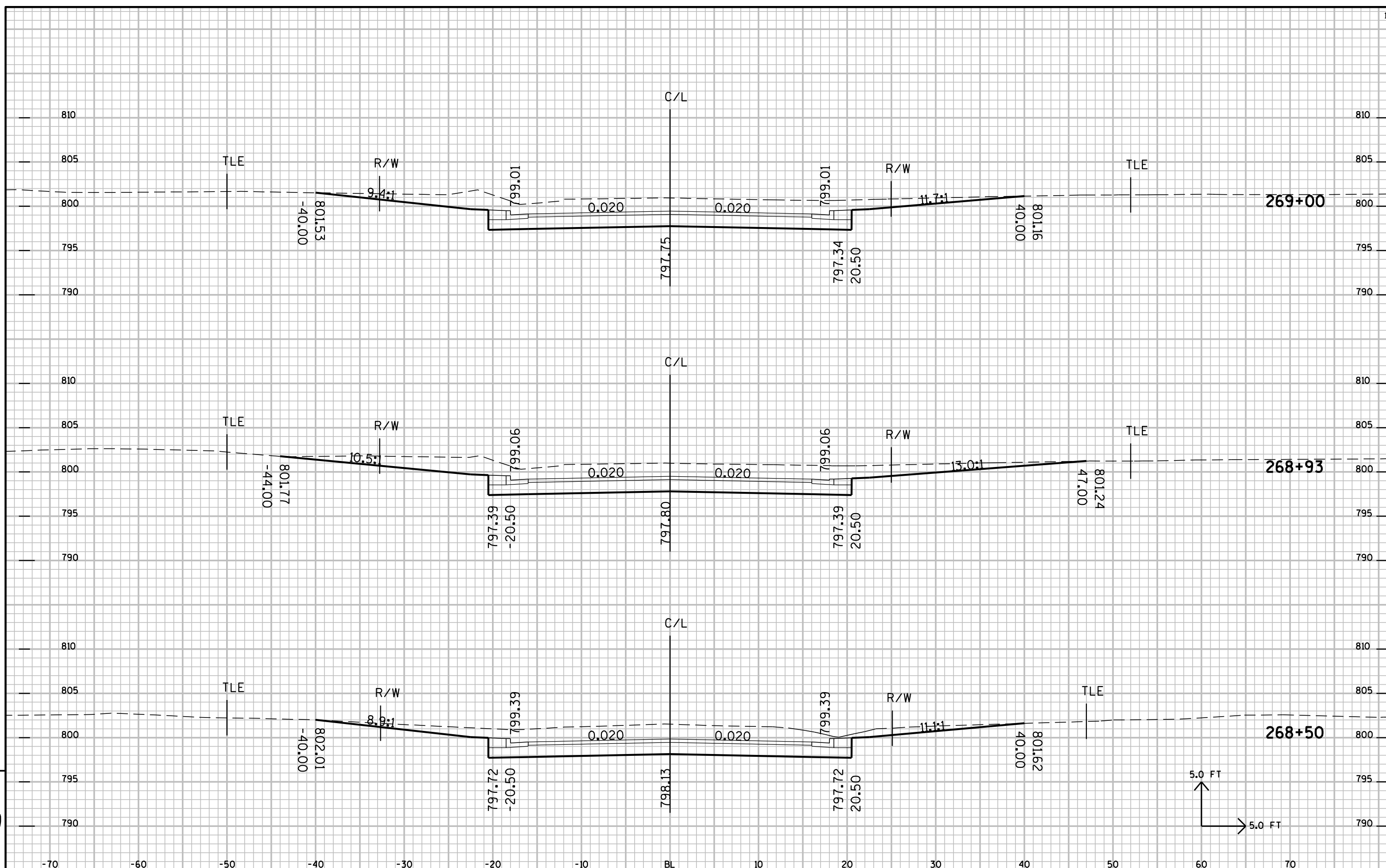


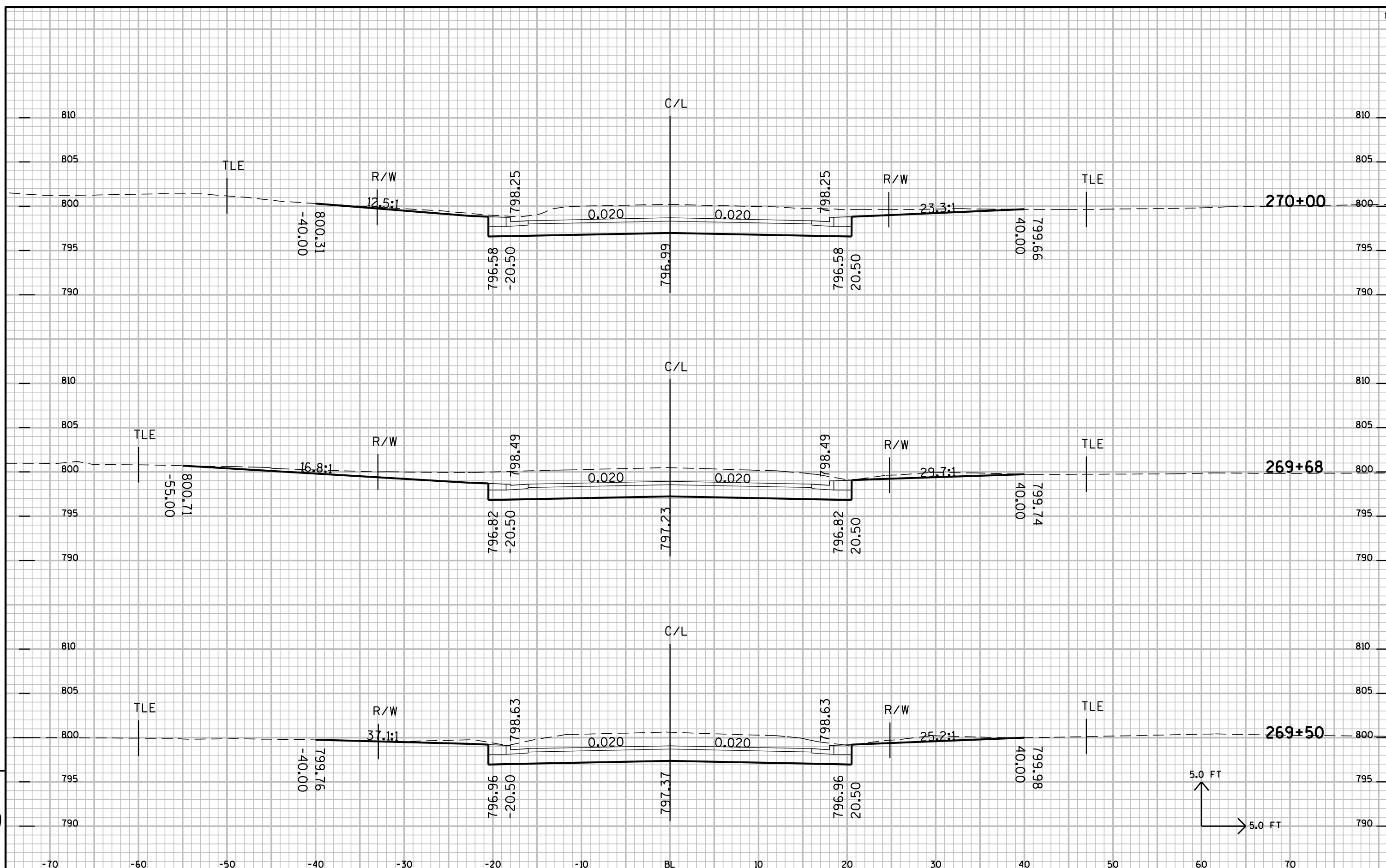


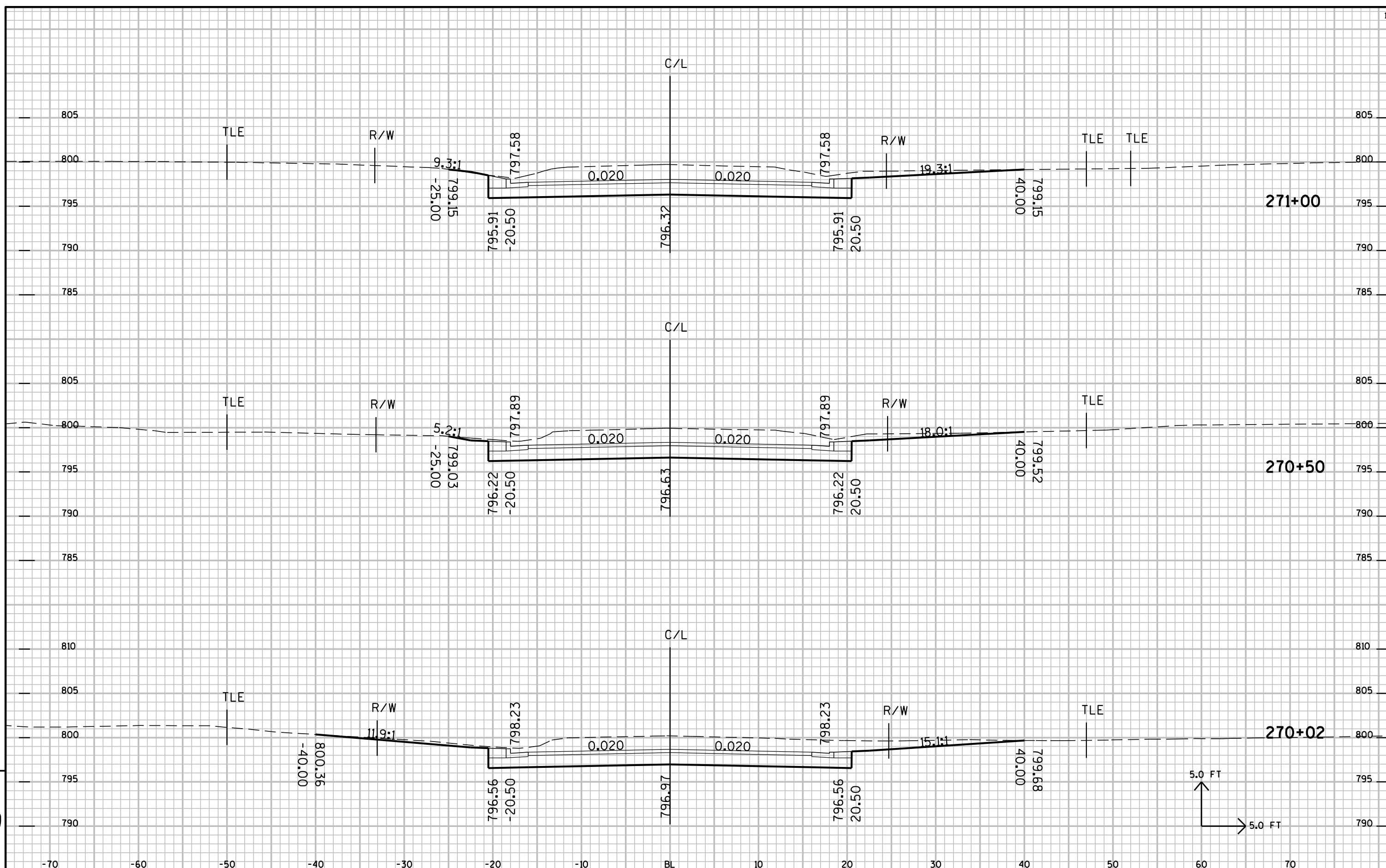


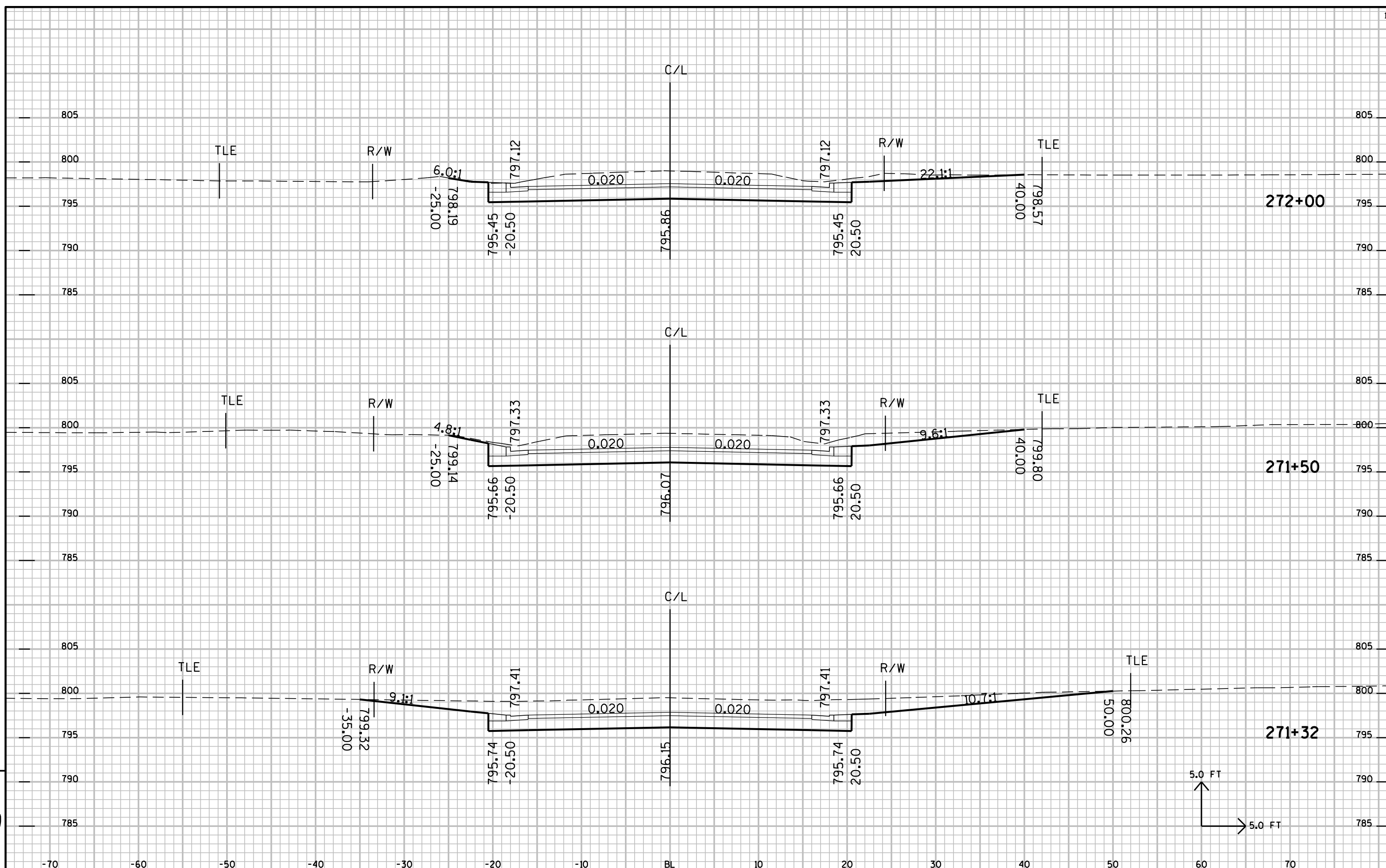


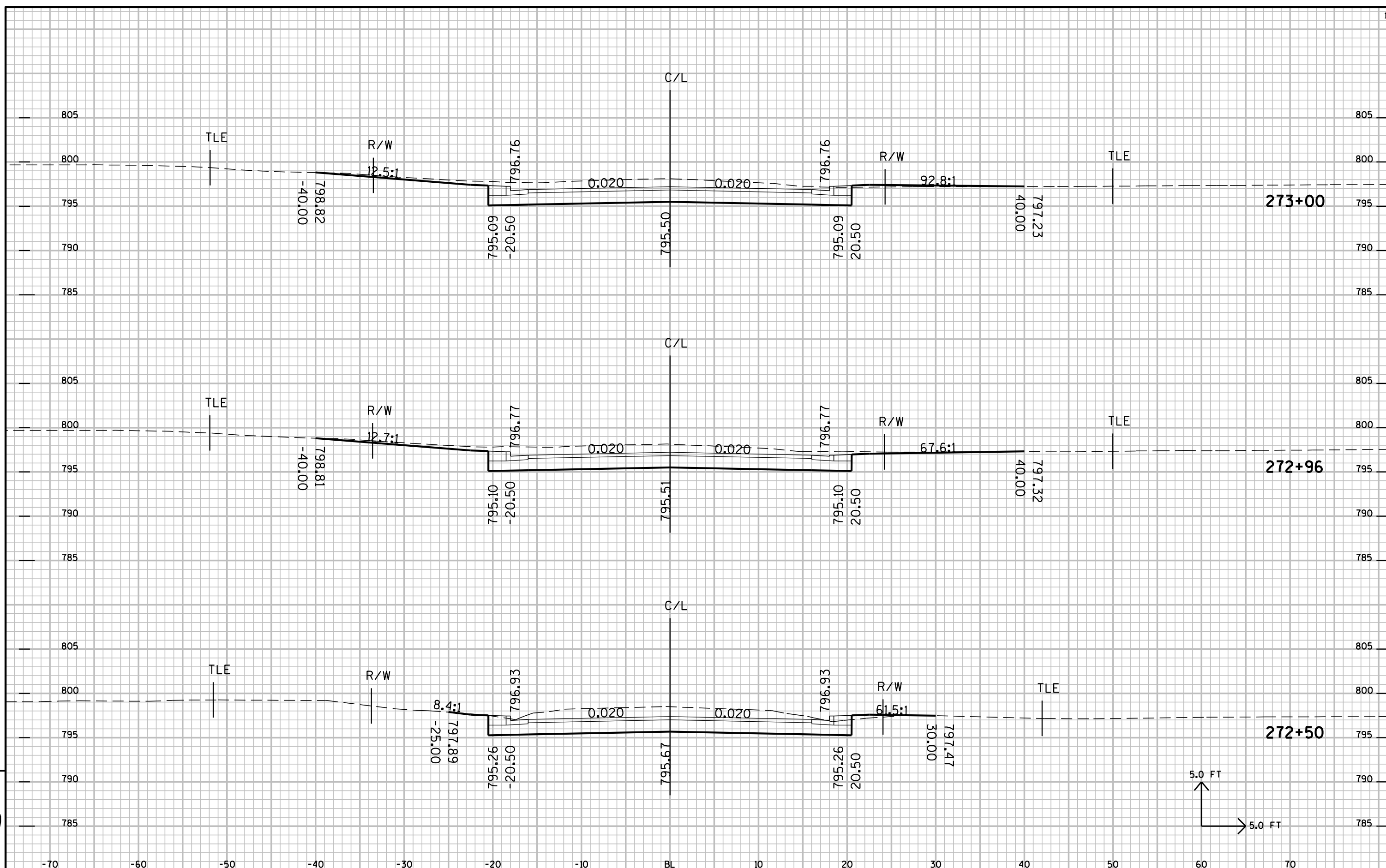


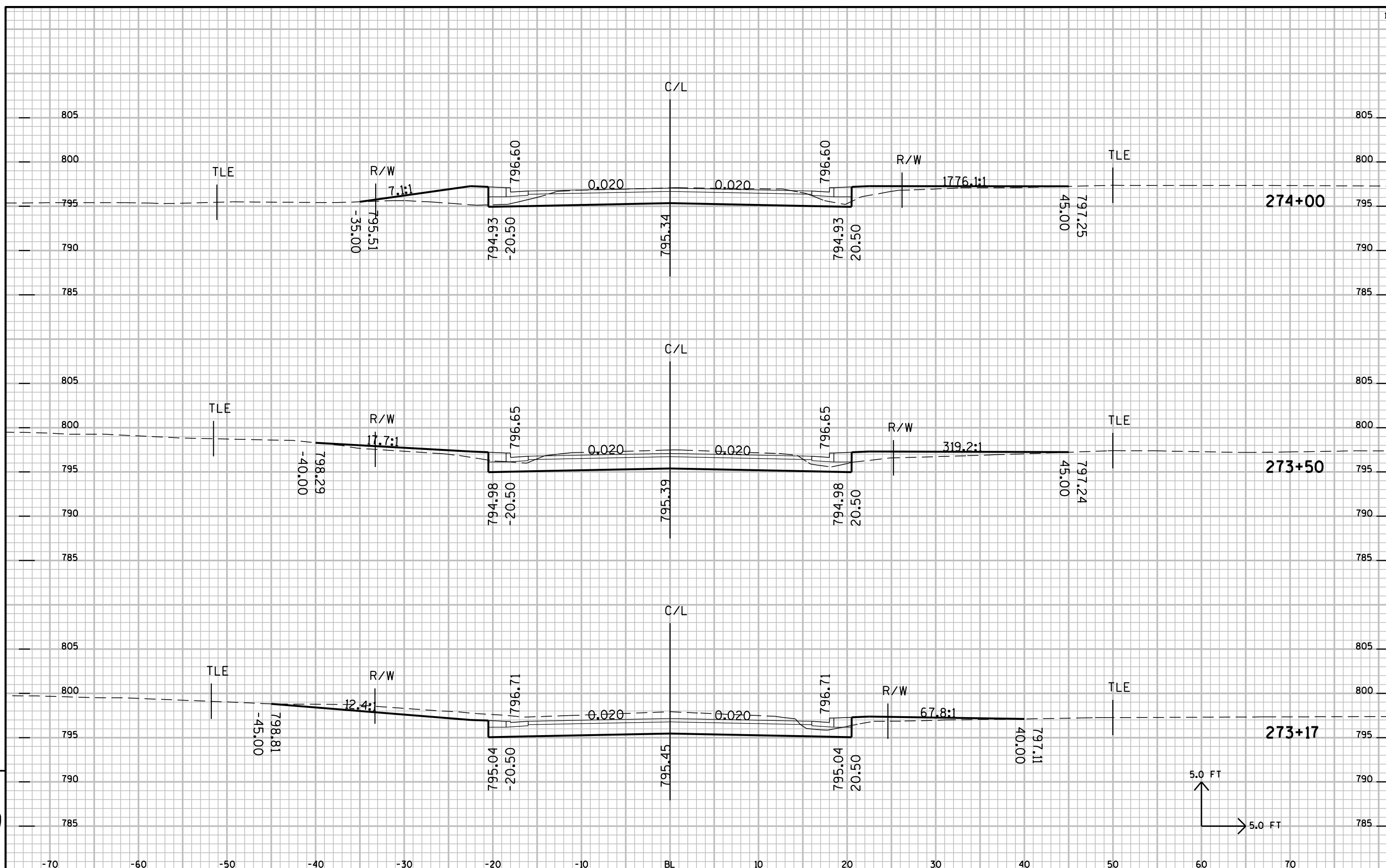


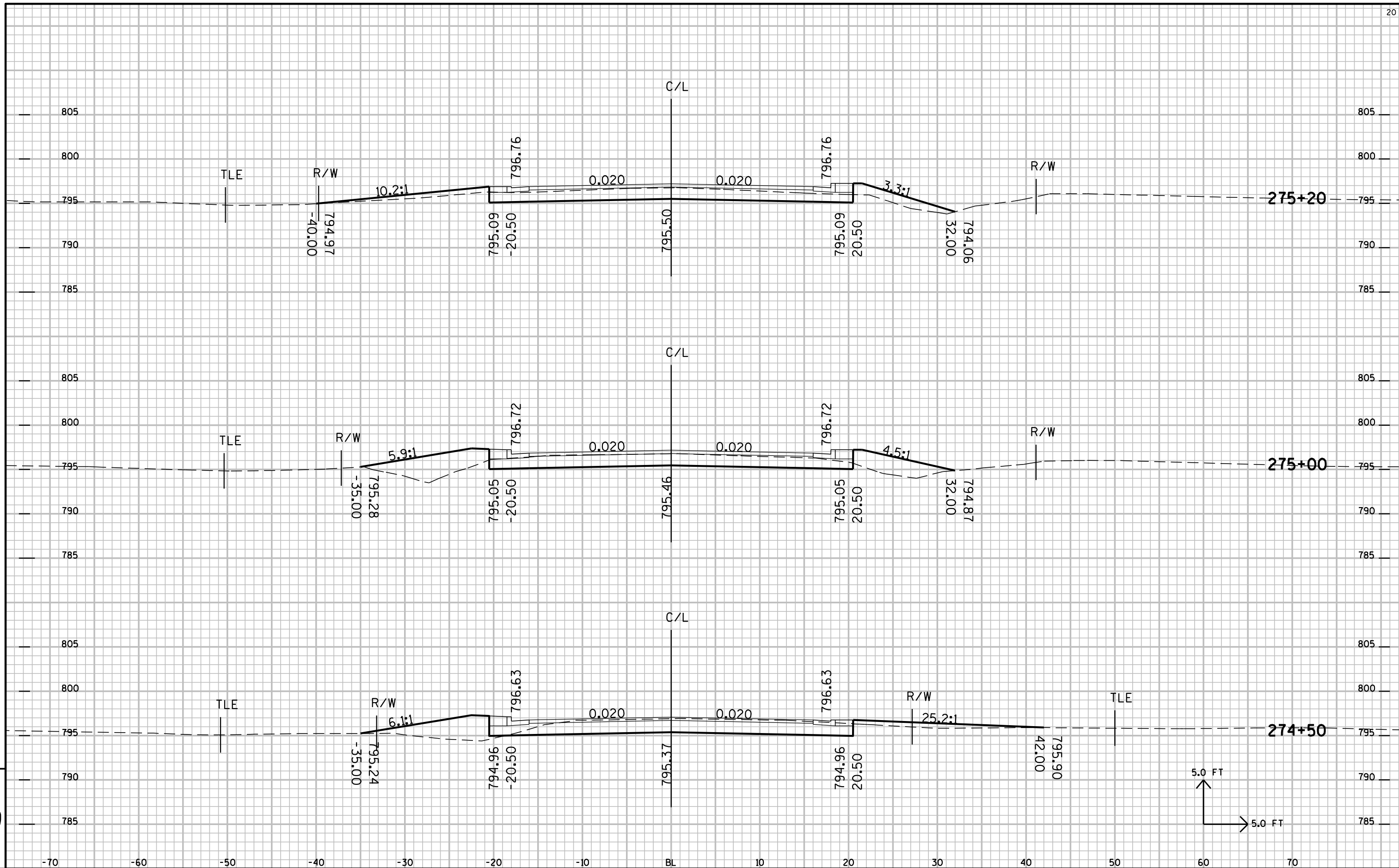


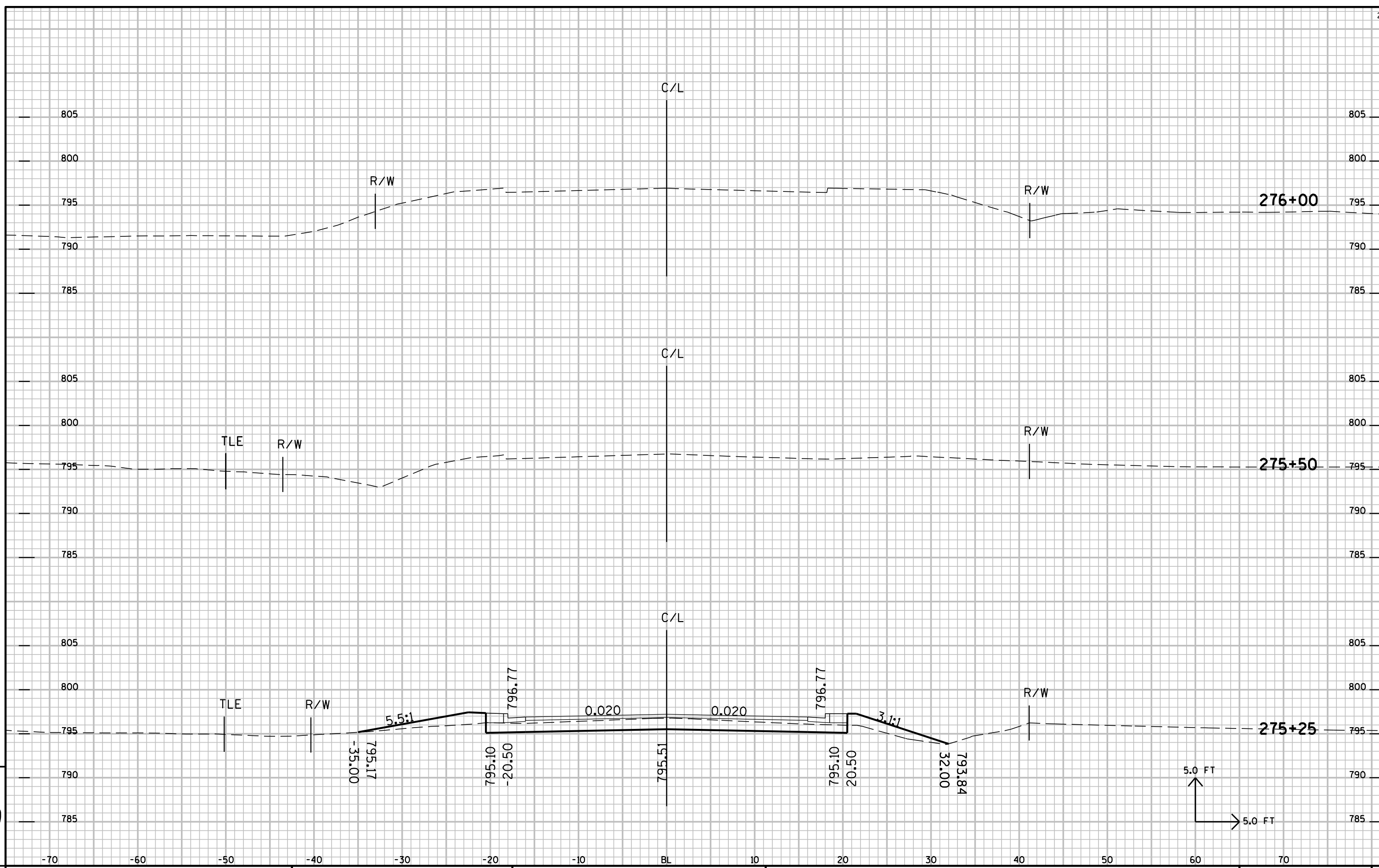


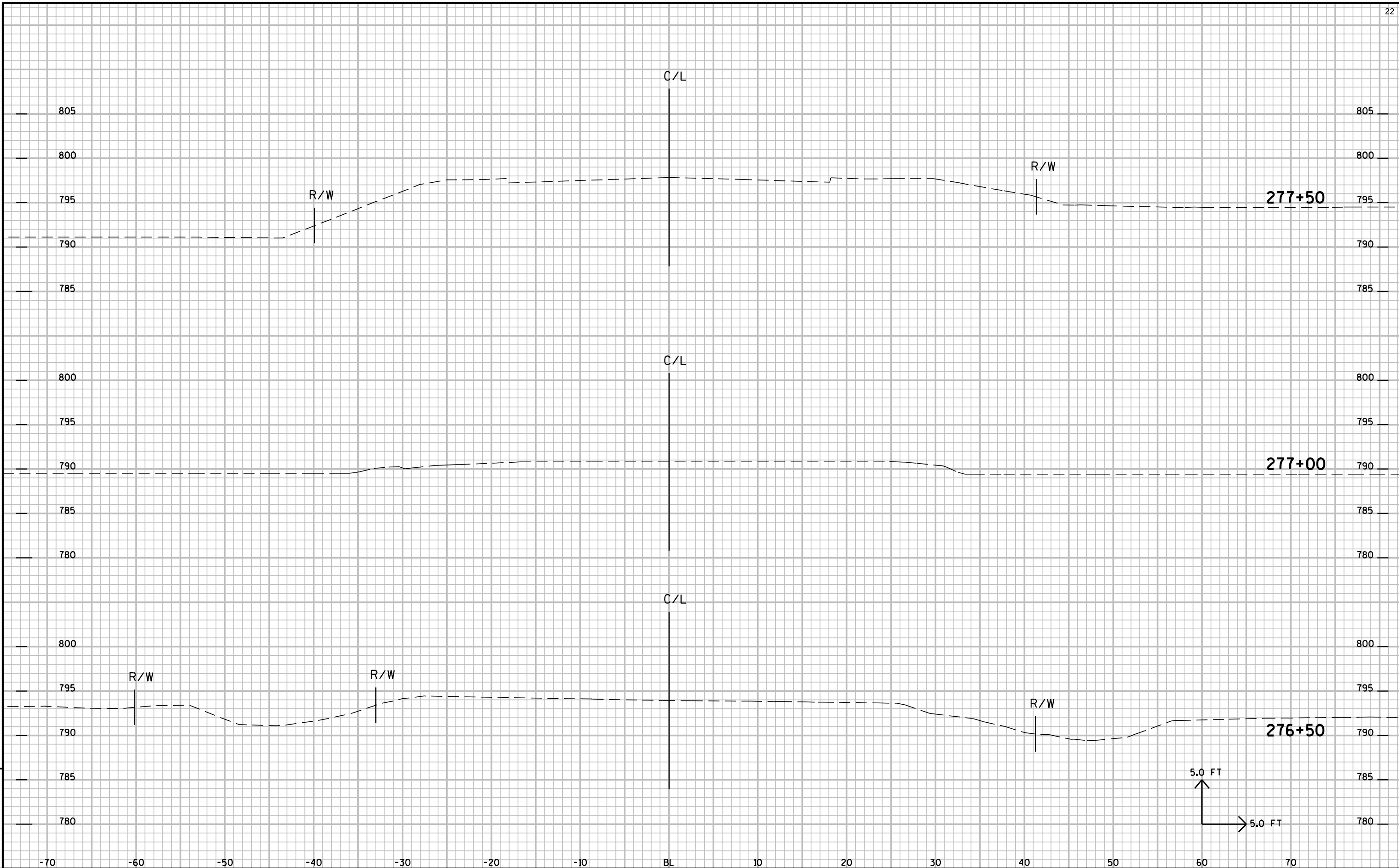


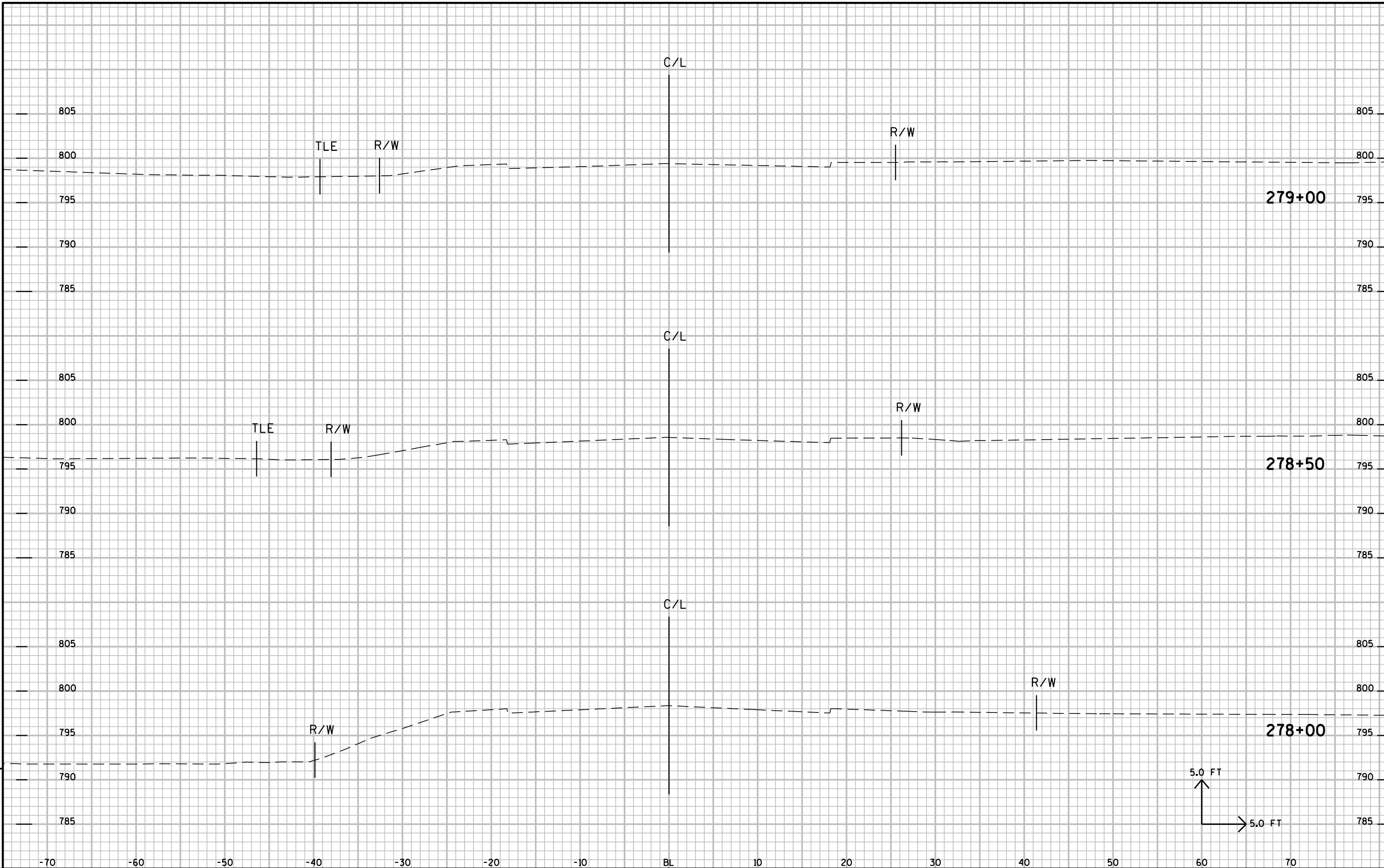


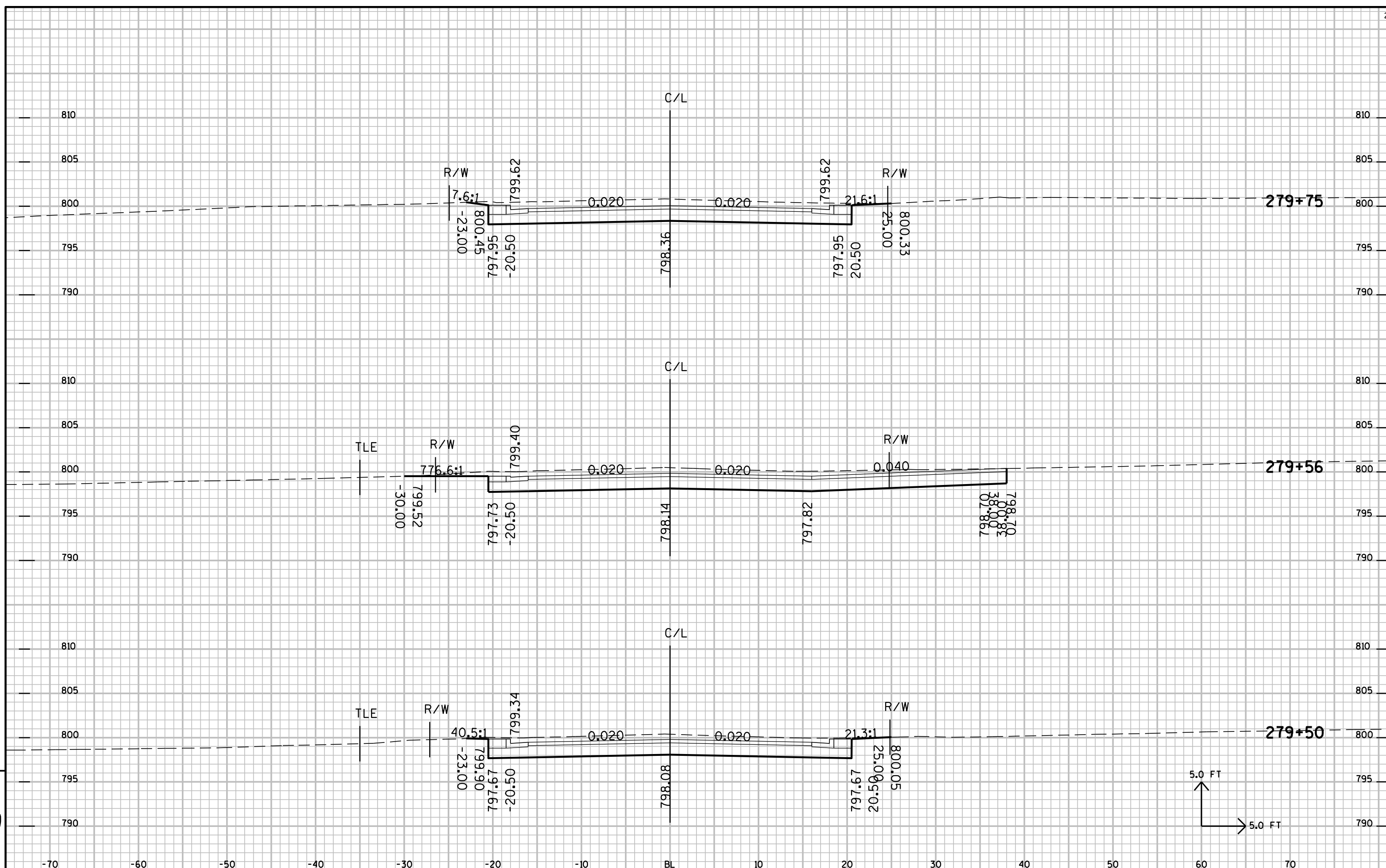


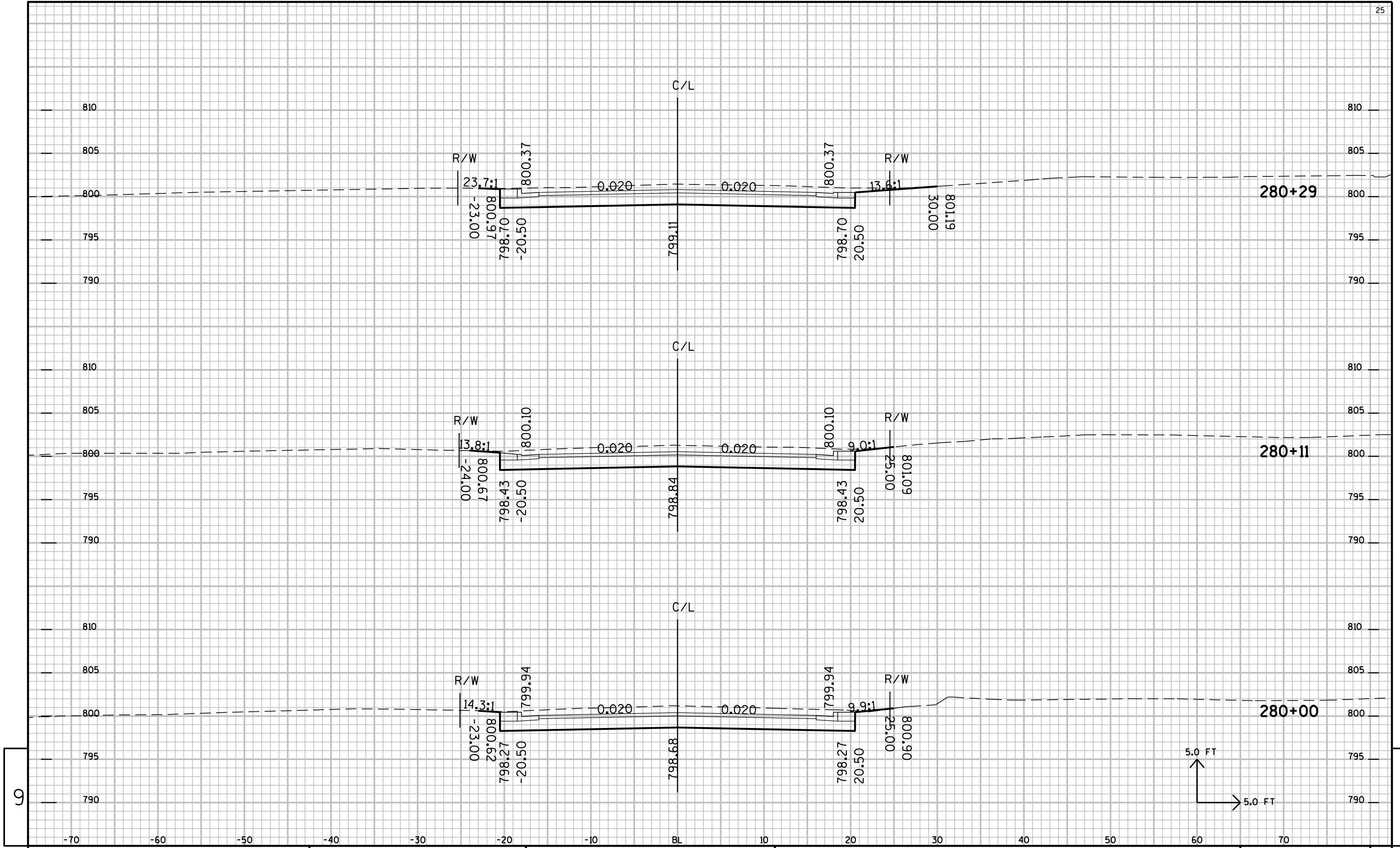


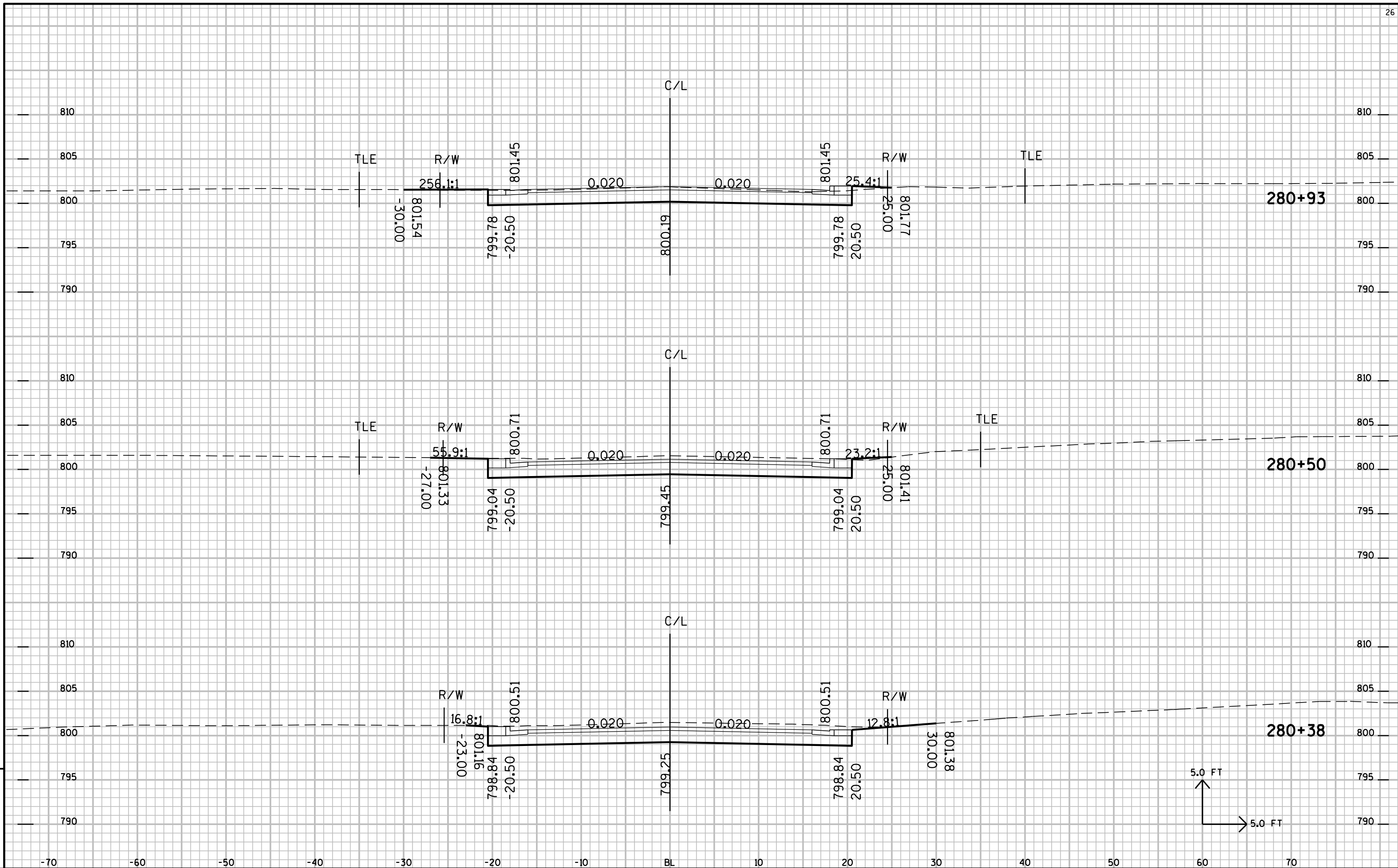


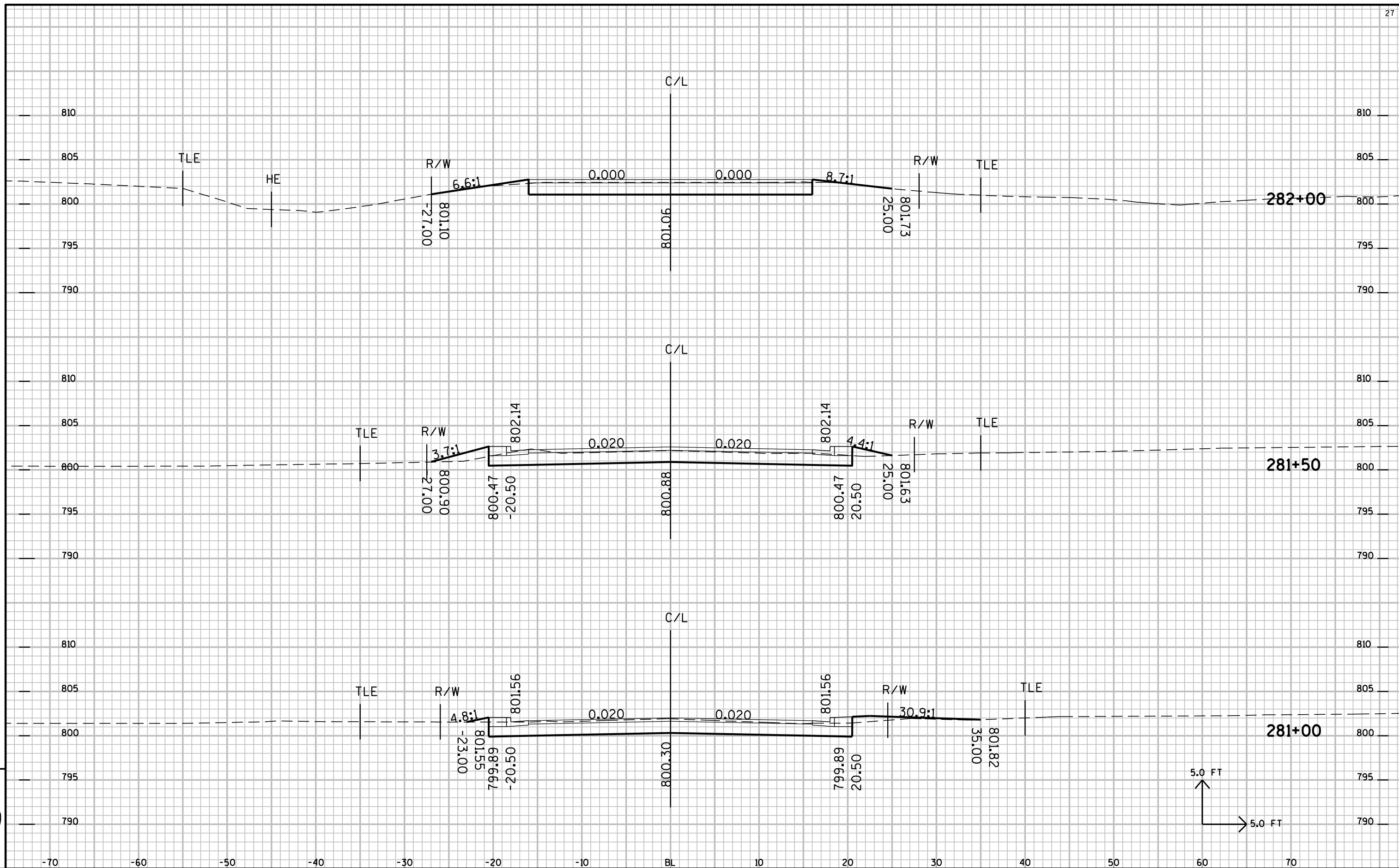


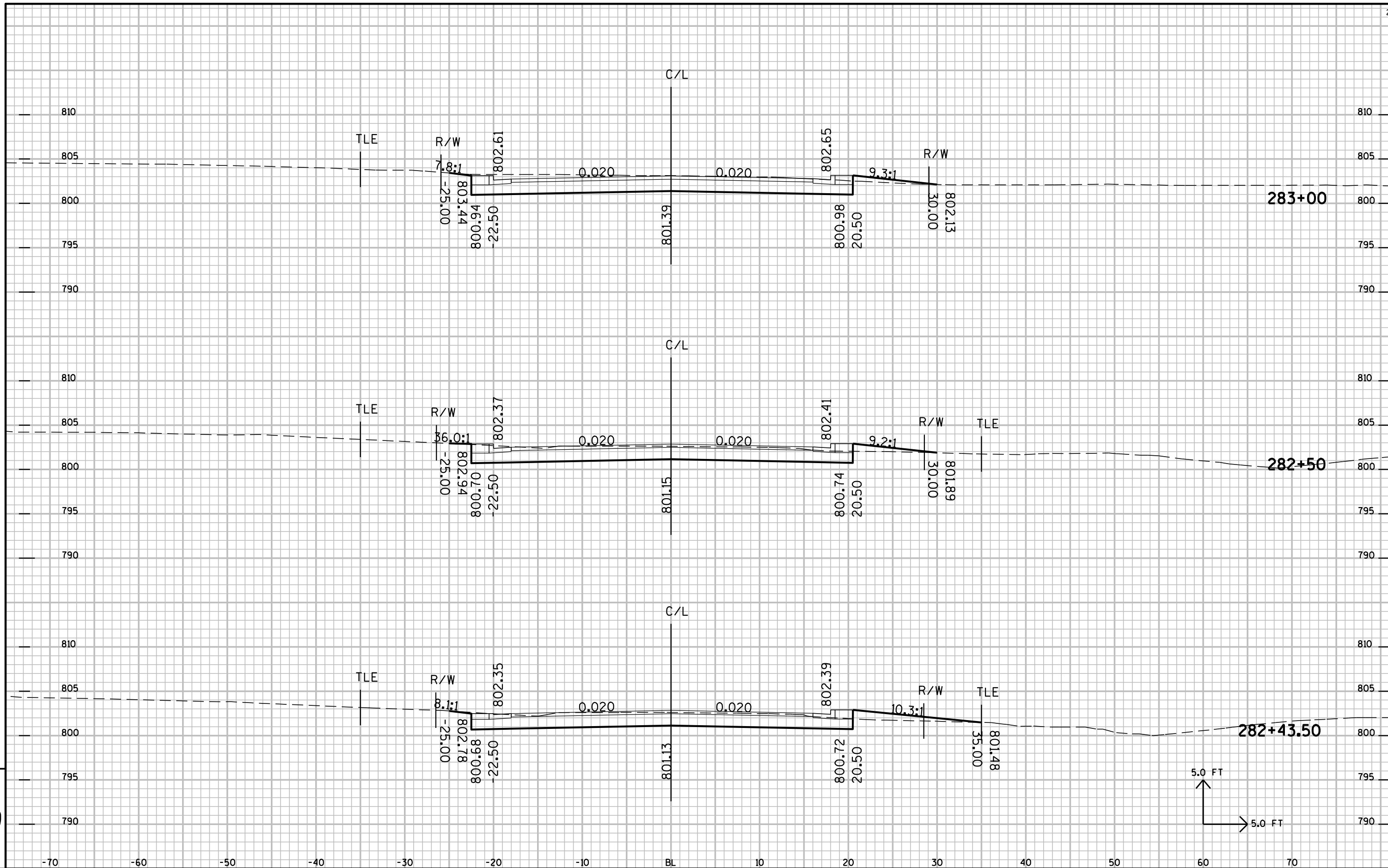


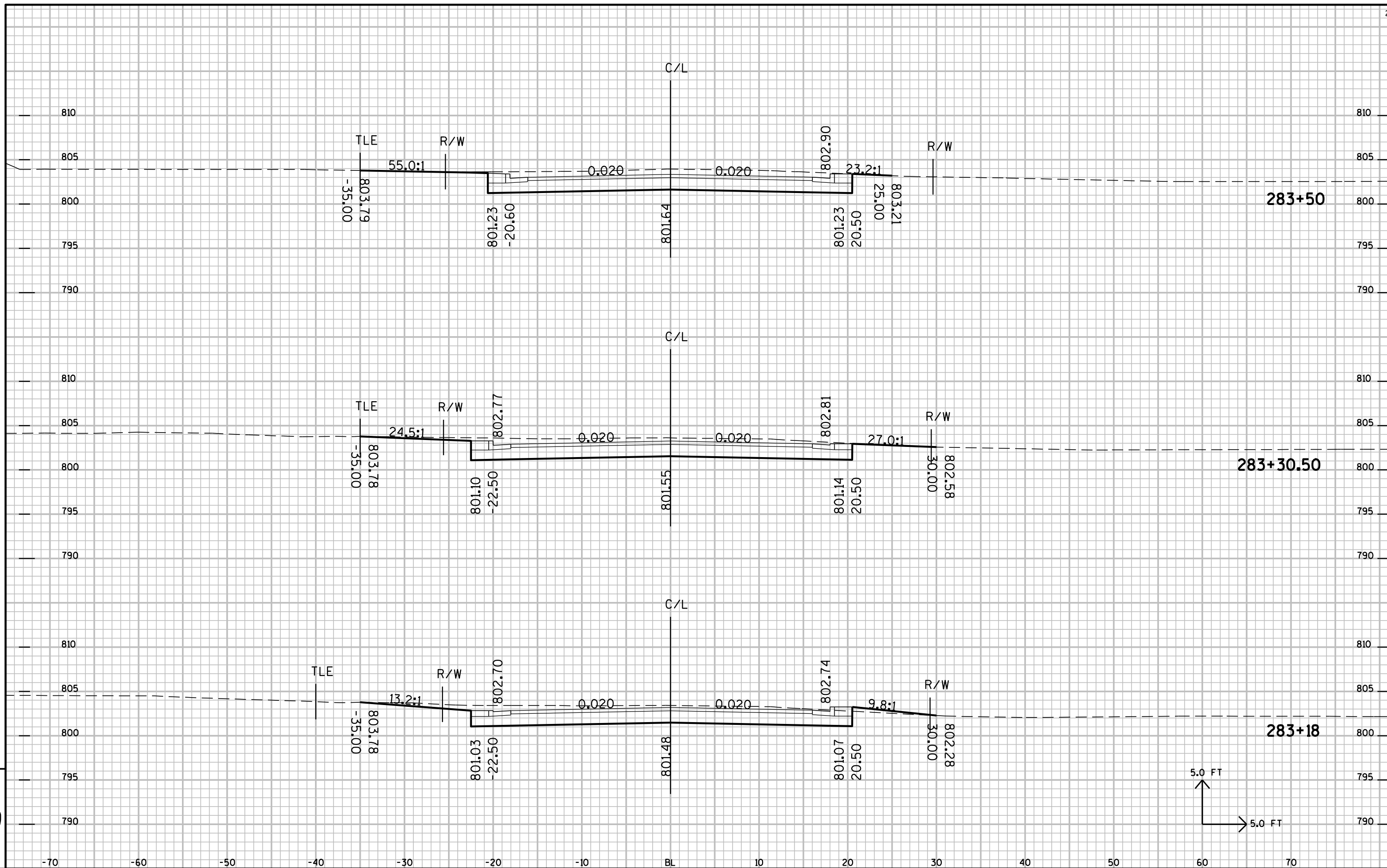


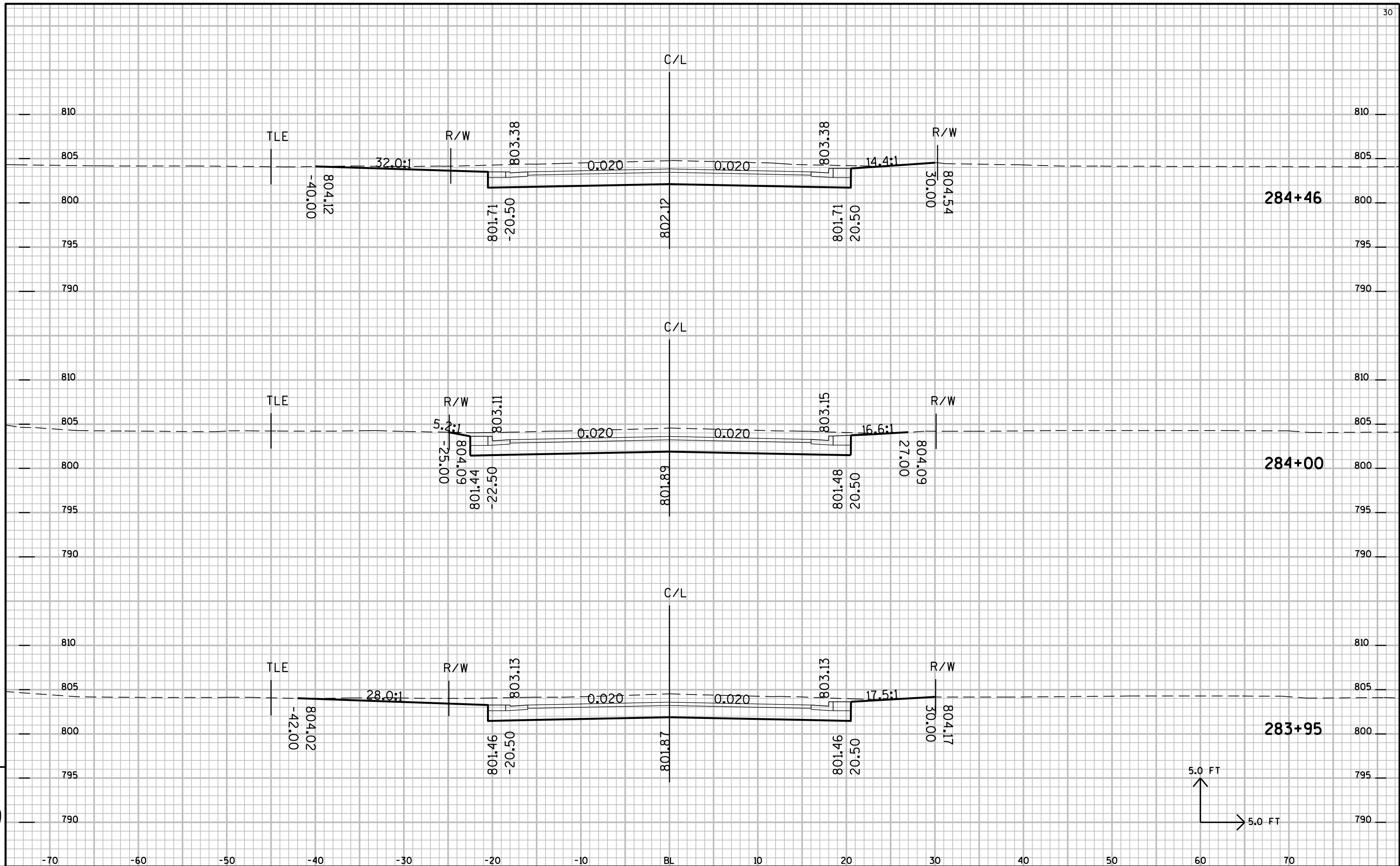


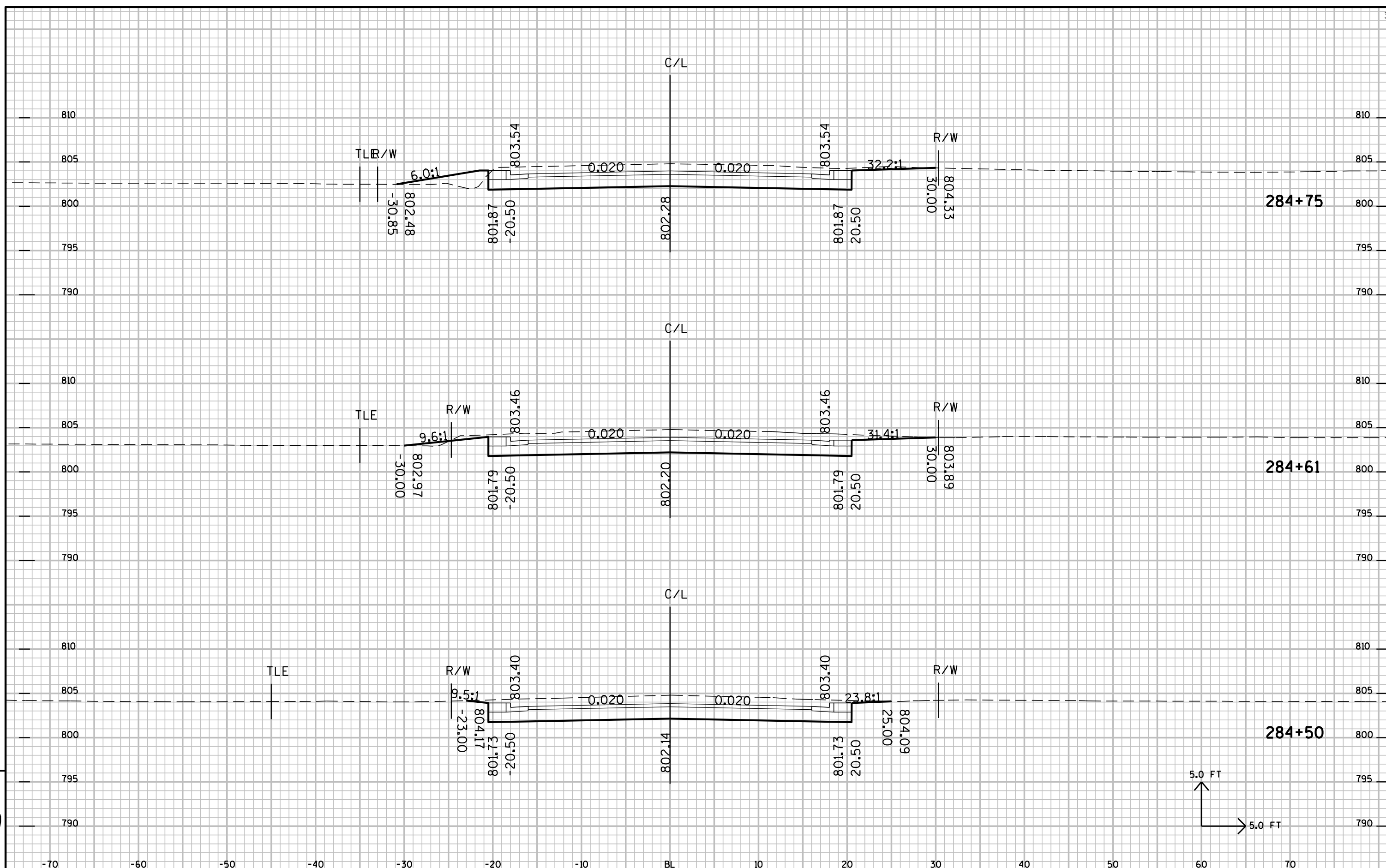




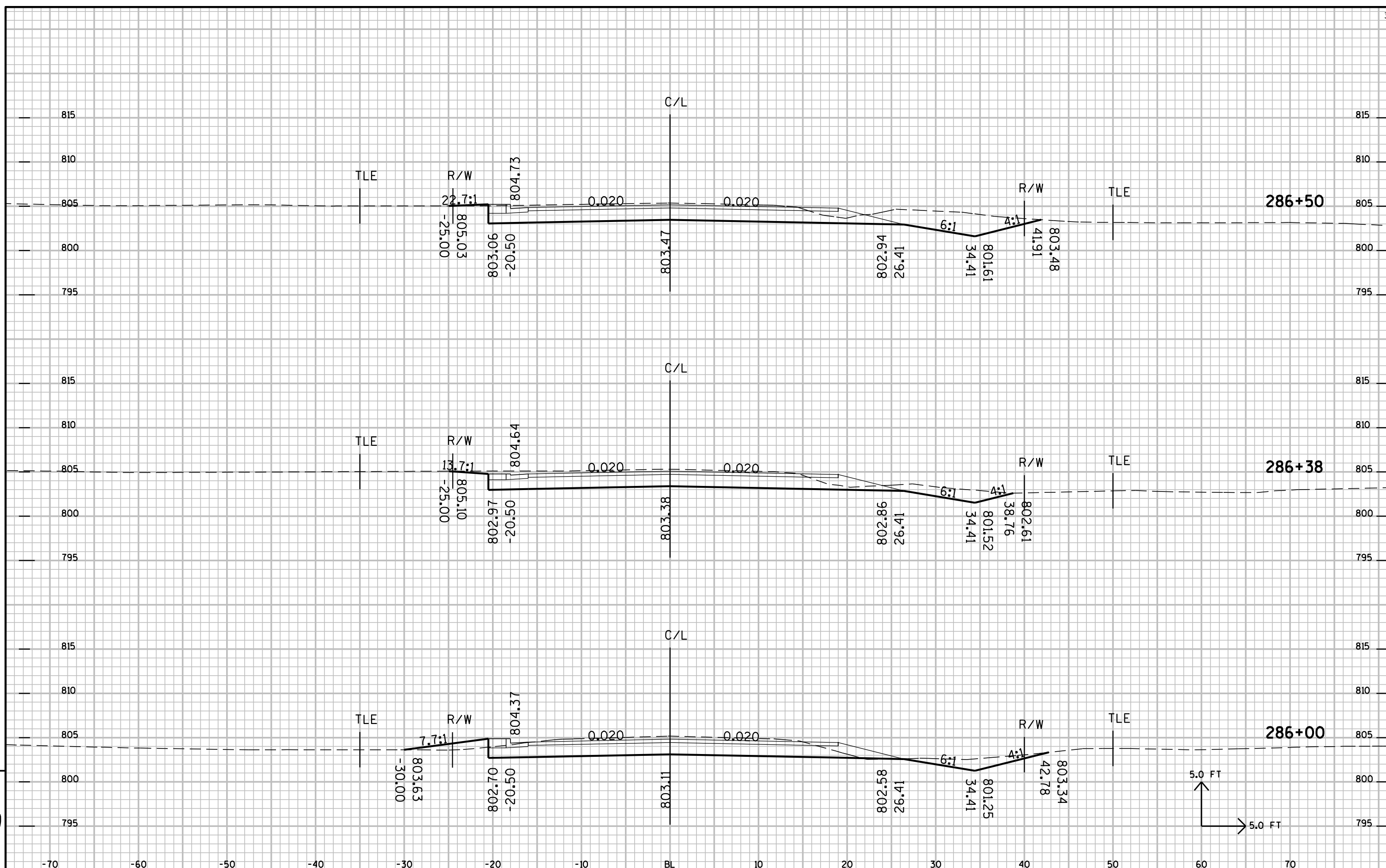


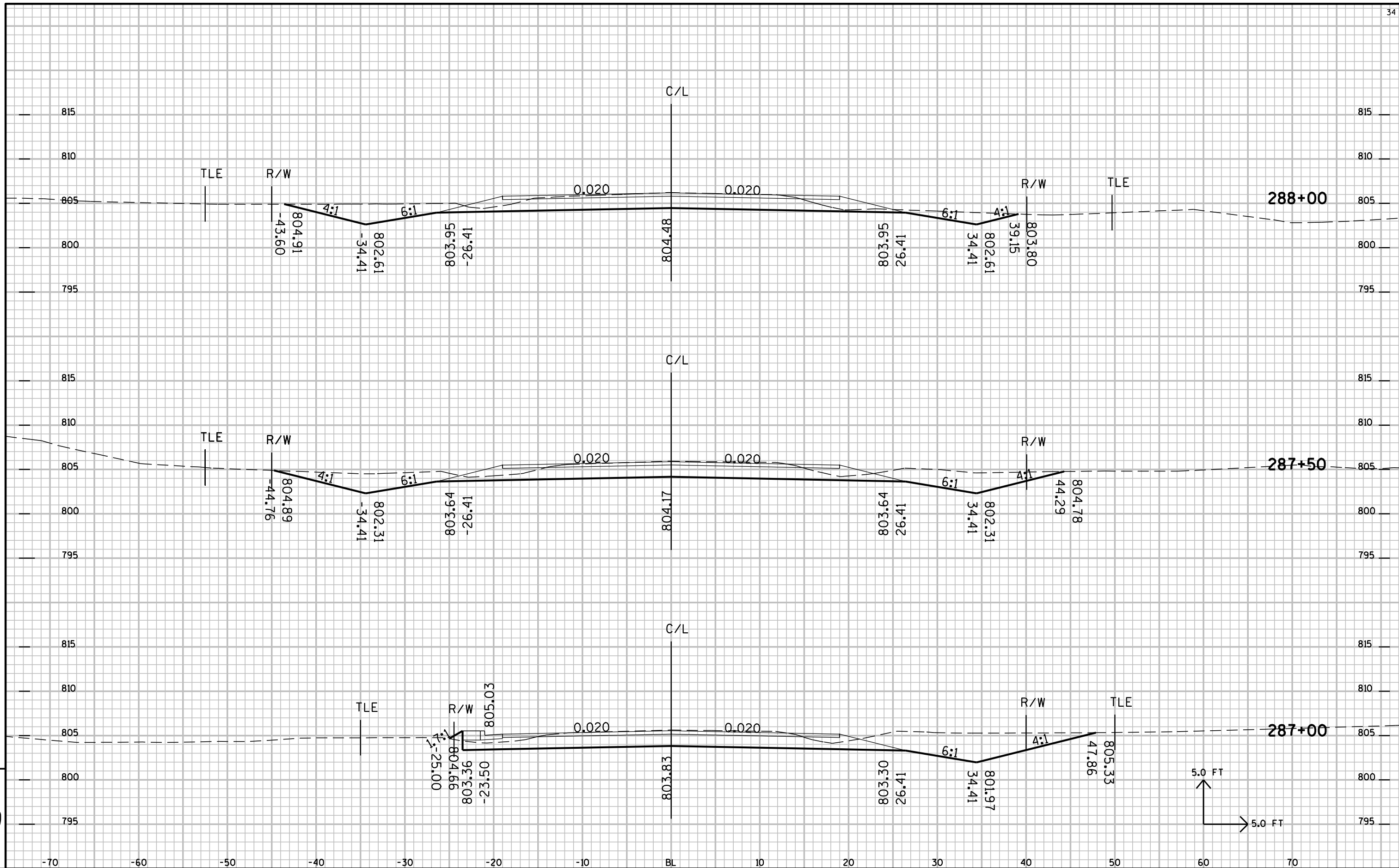


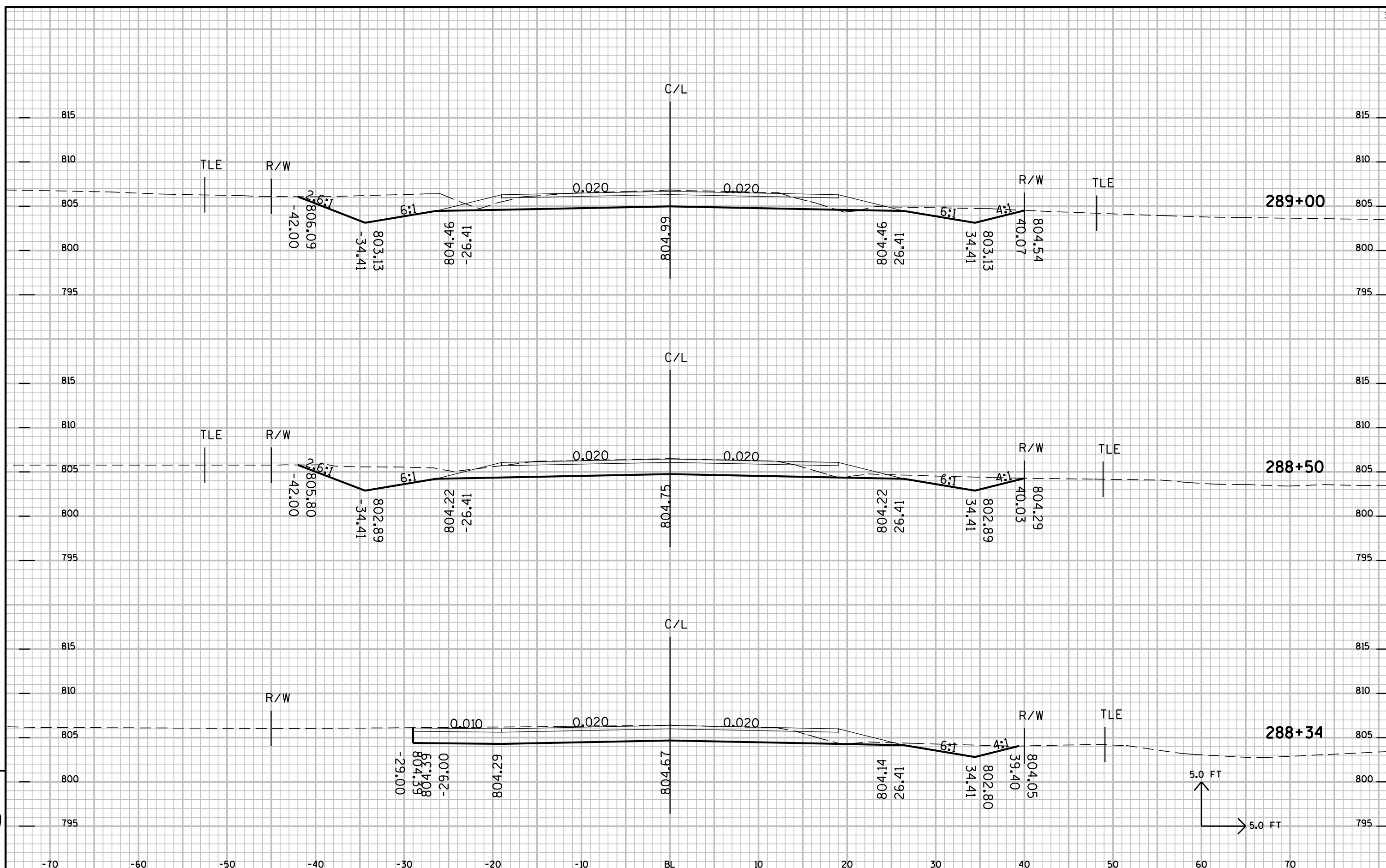


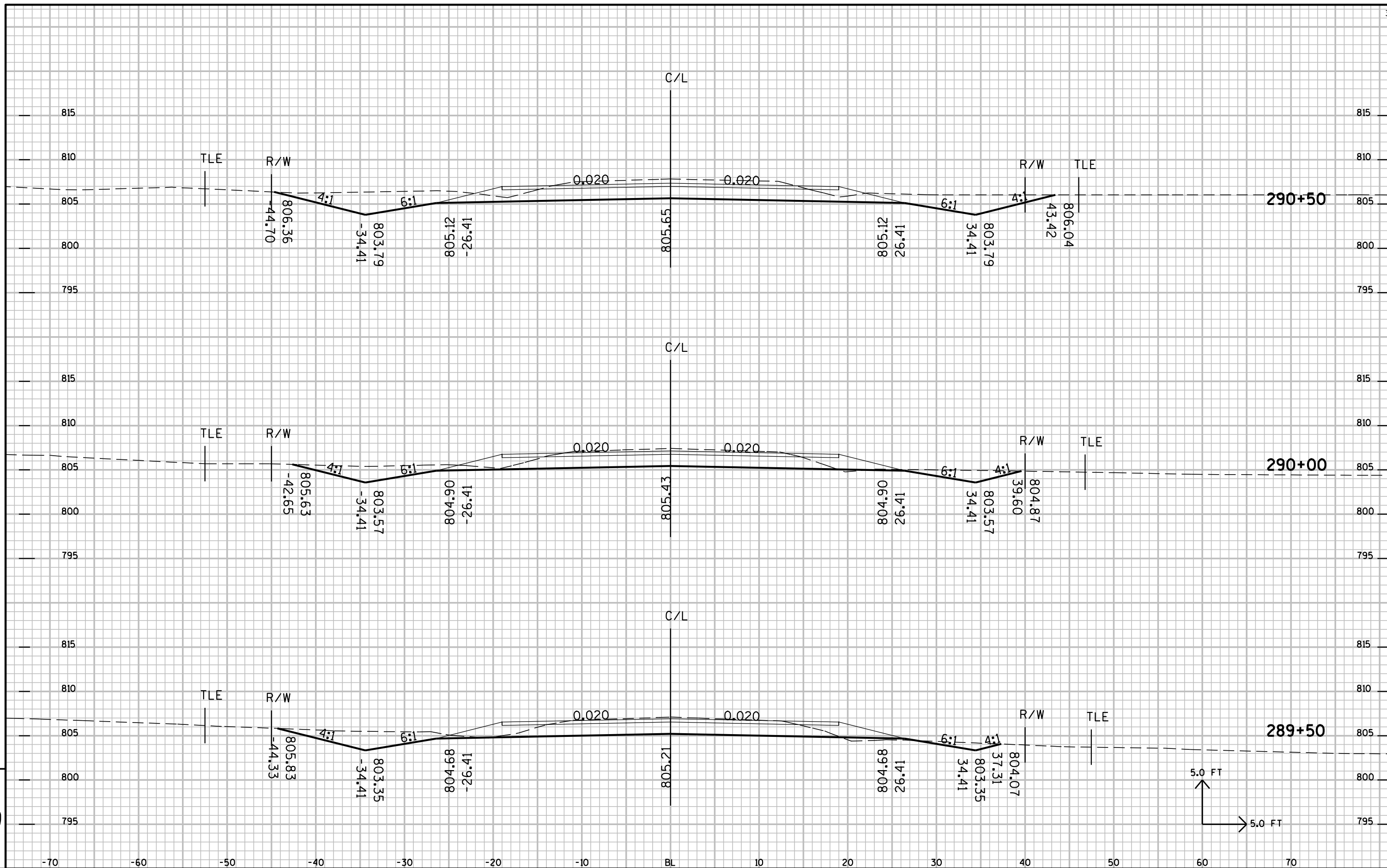


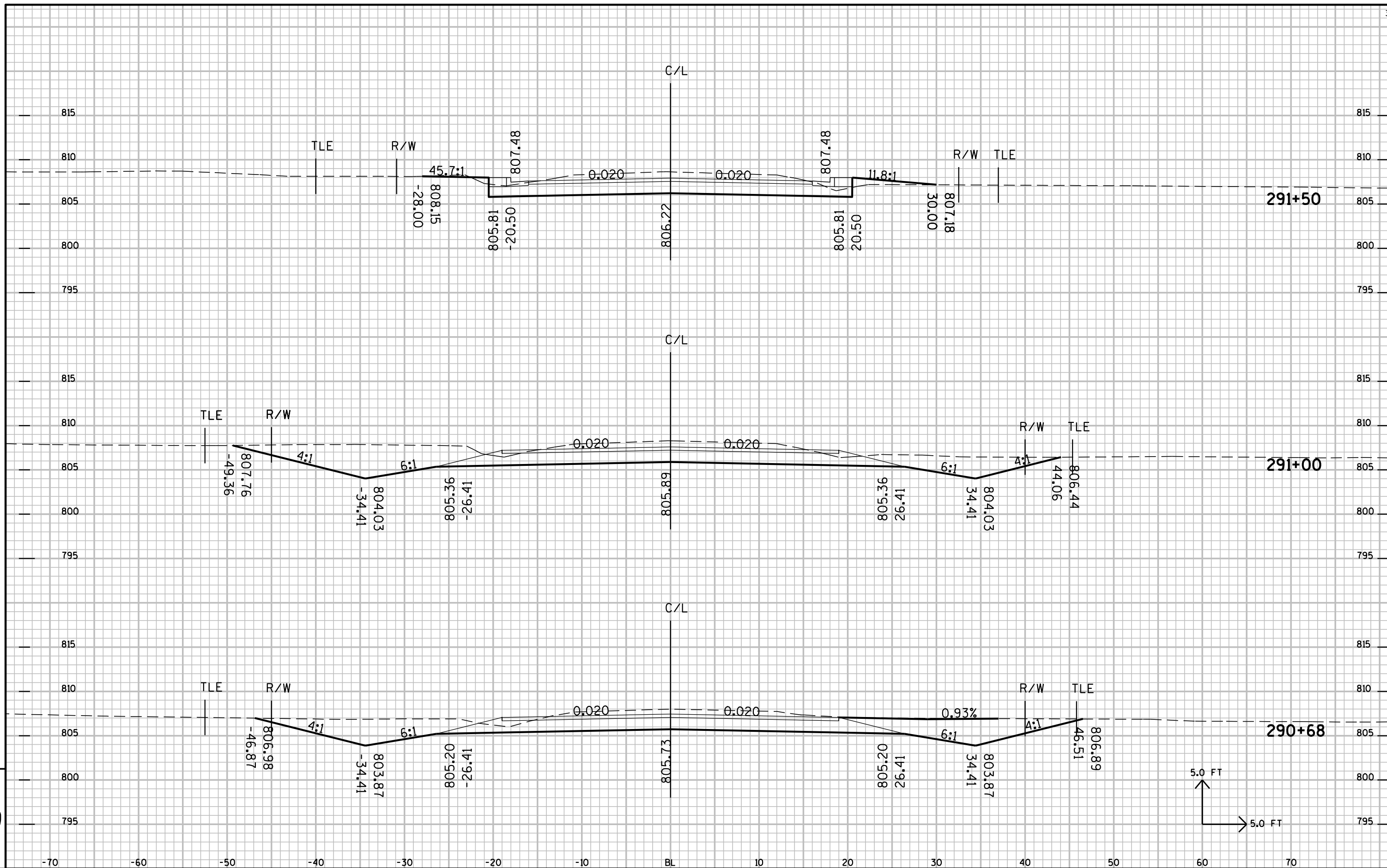


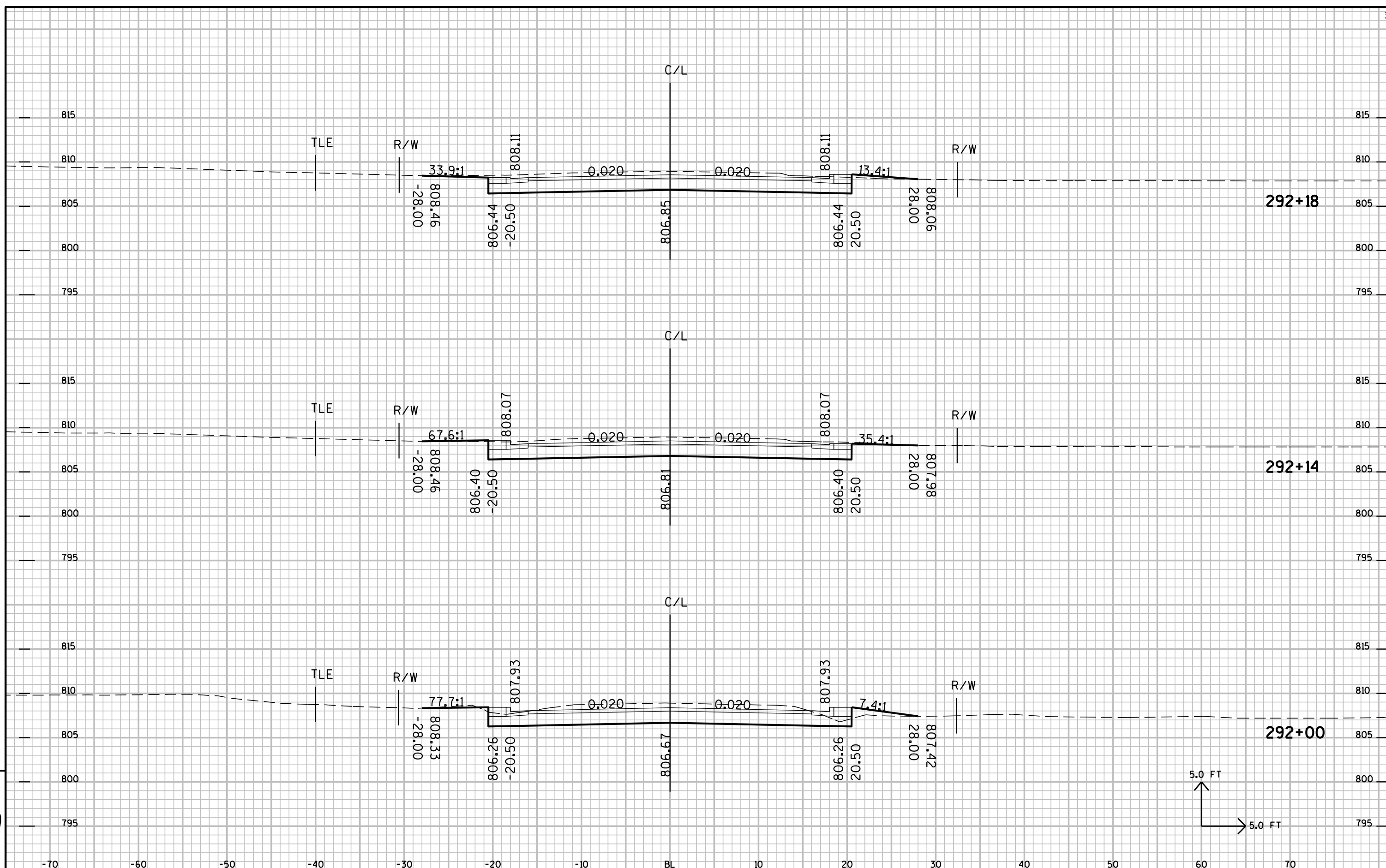


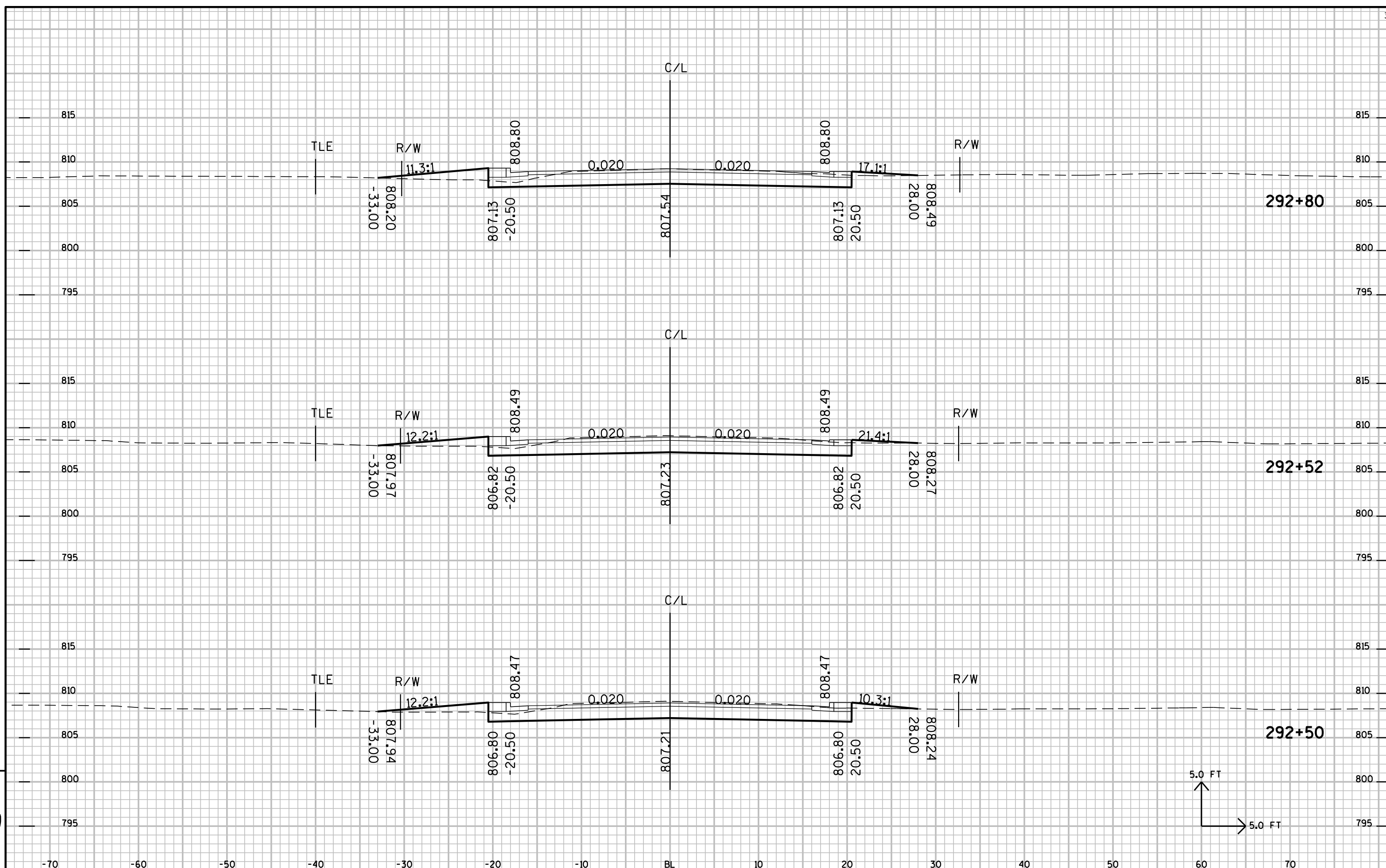


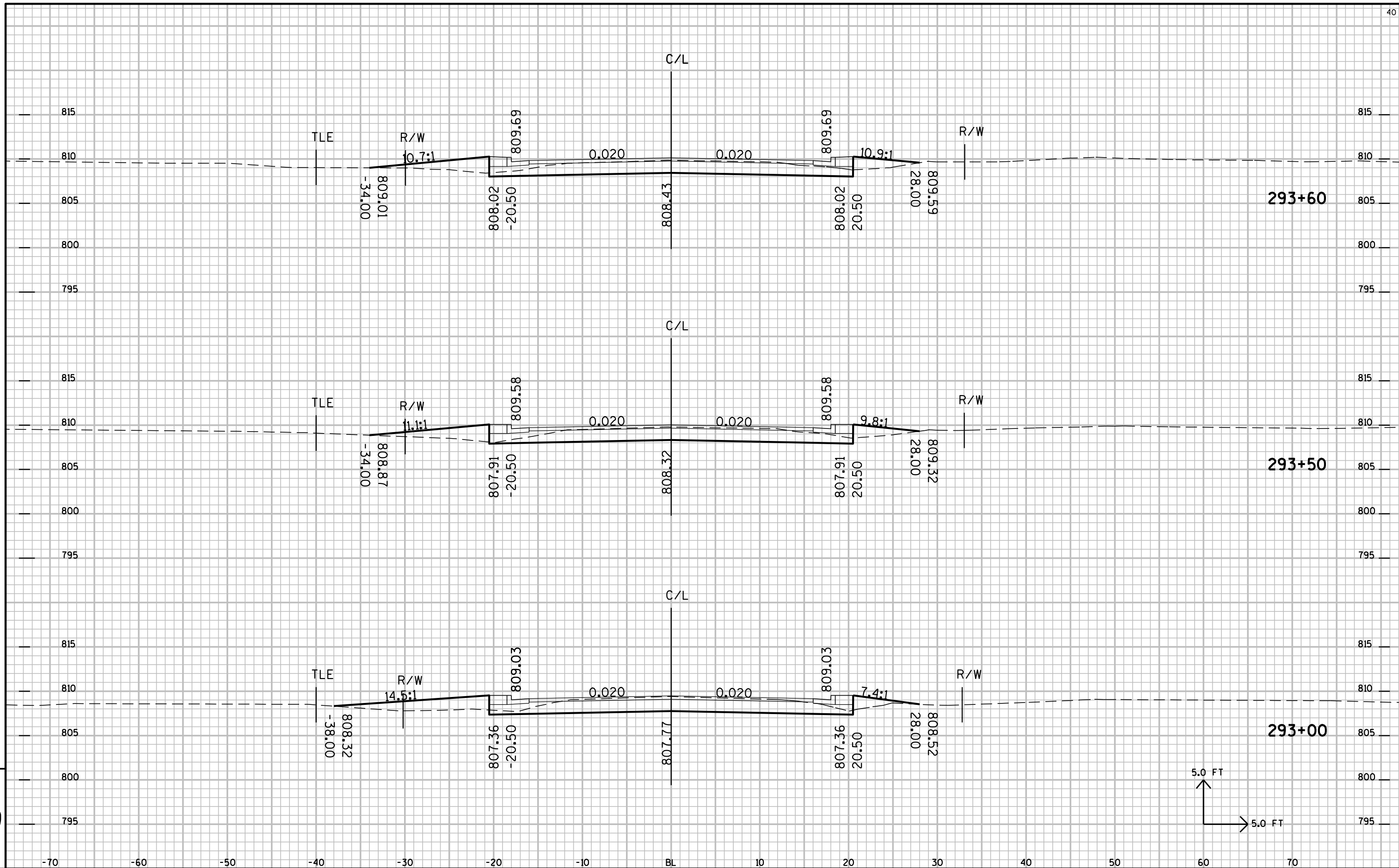






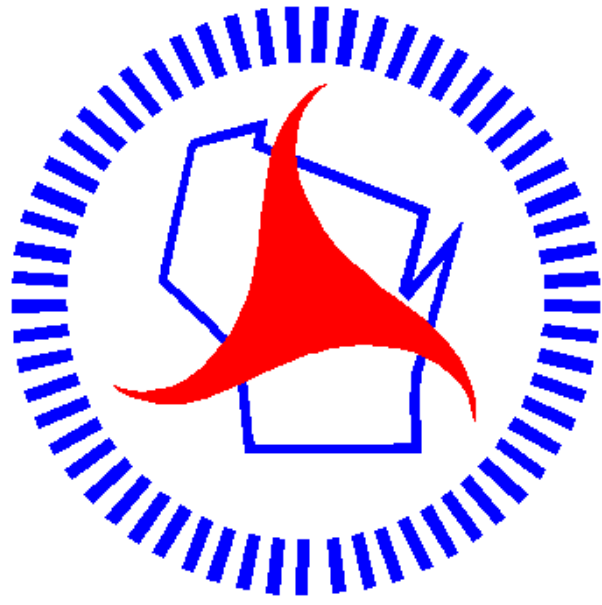








## Notes



## *Wisconsin Department of Transportation*

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