

SUP
PROJECT ID: 8888-08-76
WITH: N/A

NOVEMBER 2022
ORDER OF SHEETS

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

TOTAL SHEETS = 186



DESIGN DESIGNATION

| | | | |
|--------------|------|---|-----------|
| A.A.D.T. | 2023 | = | 4300 |
| A.A.D.T. | 2043 | = | 4800 |
| D.H.V. | | = | |
| D.D. | | = | 50/50 |
| T. | | = | 13.2% |
| DESIGN SPEED | | = | 50 MPH |
| ESALS | | = | 1,700,000 |

CONVENTIONAL SYMBOLS

| PLAN | |
|--------------------------------|--|
| CORPORATE LIMITS | |
| PROPERTY LINE | |
| LOT LINE | |
| LIMITED HIGHWAY EASEMENT | |
| EXISTING RIGHT OF WAY | |
| PROPOSED OR NEW R/W LINE | |
| SLOPE INTERCEPT | |
| REFERENCE LINE | |
| EXISTING CULVERT | |
| PROPOSED CULVERT (Box or Pipe) | |
| COMBUSTIBLE FLUIDS | |
| MARSH AREA | |
| WOODED OR SHRUB AREA | |
| EXISTING RAILROAD TRACK | |

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

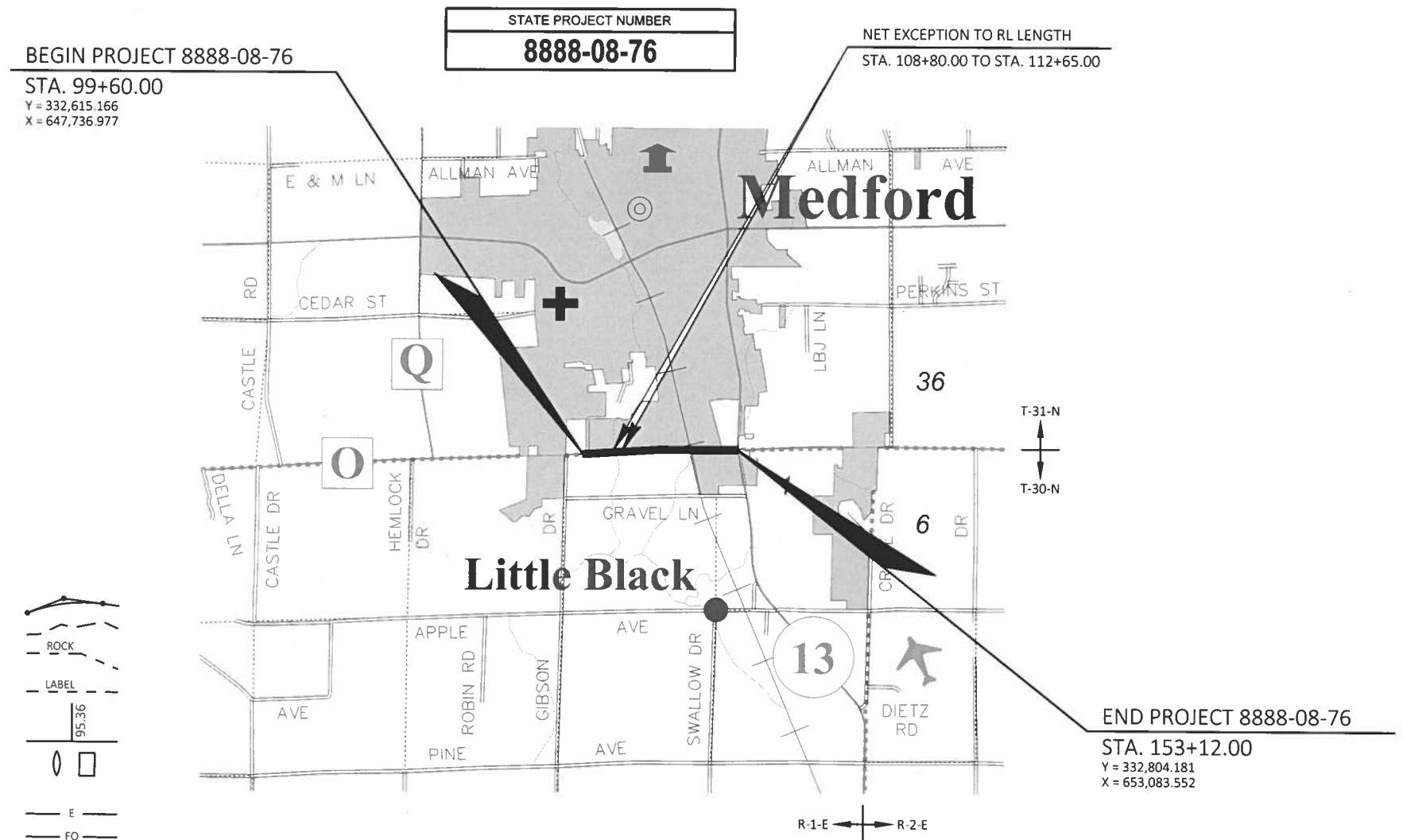
PLAN OF PROPOSED IMPROVEMENT

STH 64 - ECL

(GIBSON ST. TO STH 13)

CTH O

TAYLOR COUNTY



LAYOUT
SCALE 0 1.0 MI
TOTAL NET LENGTH OF CENTERLINE = 0.941 MI

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

| STATE PROJECT | FEDERAL PROJECT | |
|---------------|-----------------|----------|
| | PROJECT | CONTRACT |
| 8888-08-76 | WISC 2023057 | 1 |
| | | |
| | | |
| | | |

ACCEPTED FOR
COUNTY OF TAYLOR
Date: *Hester Bergman*
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY
Mead & Hunt

WISCONSIN
* JAY P. WHEATON *
E-3077D
LA CROSSE, WI
PROFESSIONAL ENGINEER
DATE: 7/27/22
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor: MEAD & HUNT
Designer: MEAD & HUNT
Project Manager: PAULA GROOM, PE
Regional Examiner: TOU YANG, PE
Regional Supervisor: TYLER RONGSTAD, PE

APPROVED FOR THE DEPARTMENT
DATE: 08/01/22
Paula Groom
(Signature)

E

GENERAL NOTES

WHEN THE QUANTITY OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOIL, FERTILIZER TYPE B, SEEDING MIXTURE NO. 20, SEEDING TEMPORARY AND MULCHING OR EROSION MAT URBAN CLASS 1 TYPE B.

BEARINGS SHOWN ON THE PLANS ARE GROUND BEARINGS TO THE NEAREST SECOND.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING PAVEMENTS AT REMOVAL LIMITS.

6-INCH HMA PAVEMENT SHALL BE CONSTRUCTED WITH (2) 2-INCH LOWER LAYERS OF HMA PAVEMENT 4 MT 58-28 S AND A 2-INCH UPPER LAYER OF HMA PAVEMENT 4 MT 58-34 S.

4-INCH HMA PAVEMENT SHALL BE CONSTRUCTED WITH A 2-INCH LOWER LAYER OF HMA PAVEMENT 4 MT 58-28 S AND A 2-INCH UPPER LAYER OF HMA PAVEMENT 4 MT 58-34 S.

FILL EXPANSION OF EARTHWORK AT 25%.

KEEP ALL EQUIPMENT AND MATERIALS OUT OF ADJACENT WETLANDS.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIALS WILL NOT BE PERMITTED IN THE WETLANDS.

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE THE SLOPE INTERCEPTS.

ORDER OF SECTION 2 SHEETS

- TYPICAL SECTIONS
- INTERSECTION DETAILS
- STORM SEWER PLAN
- PIPE UNDERDRAIN
- PAVEMENT MARKING & PERMANENT SIGNING
- TRAFFIC CONTROL
- DETOUR
- ALIGNMENT

STANDARD ABBREVIATIONS

| | | | |
|------|-----------------------|-------|--------------------------------|
| ADT | AVERAGE DAILY TRAFFIC | M/L | MAINLINE |
| AGG | AGGREGATE | NO | NUMBER |
| ASPH | ASPHALTIC | PE | PRIVATE ENTRANCE |
| BM | BENCH MARK | PI | POINT OF INTERSECTION |
| BOC | BACK OF CURB | PL | PROPERTY LINE |
| C&G | CURB AND GUTTER | PP | POWER POLE |
| CE | COMMERCIAL ENTRANCE | QTY | QUANTITY |
| CL | CENTERLINE | RHF | RIGHT-HAND FORWARD |
| COR | CORNER | RT | RIGHT |
| CWT | HUNDREDWEIGHT | R/L | REFERENCE LINE |
| CY | CUBIC YARD | R/W | RIGHT-OF-WAY |
| DHV | DESIGN HOURLY VOLUME | SF | SQUARE FOOT |
| DWY | DRIVEWAY | SHLDR | SHOULDER |
| EL | ELEVATION | SS | STORM SEWER |
| EX | EXISTING | STA | STATION |
| EXC | EXCAVATION | SY | SQUARE YARD |
| FT | FOOT | T | TRUCKS (PERCENT OF) |
| FTG | FOOTING | TEL | TELEPHONE |
| HYD | HYDRANT | TLE | TEMPORARY LIMITED EASEMENT |
| INV | INVERT | TYP | TYPICAL |
| LB | POUND | UG | UNDERGROUND CABLE |
| LF | LINEAR FOOT | VAR | VARIABLE |
| LHF | LEFT-HAND FORWARD | VC | VERTICAL CURVE |
| LS | LUMP SUM | VPC | VERTICAL POINT OF CURVE |
| LT | LEFT | VPI | VERTICAL POINT OF INTERSECTION |
| Mgal | MEGAGALLON | VPT | VERTICAL POINT OF TANGENCY |

CONTACTS

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 JEFFREY.OLSON@TDS TELECOM.COM

CITY OF MEDFORD
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TAYLOR COUNTY ELECTRIC COOPERATIVE
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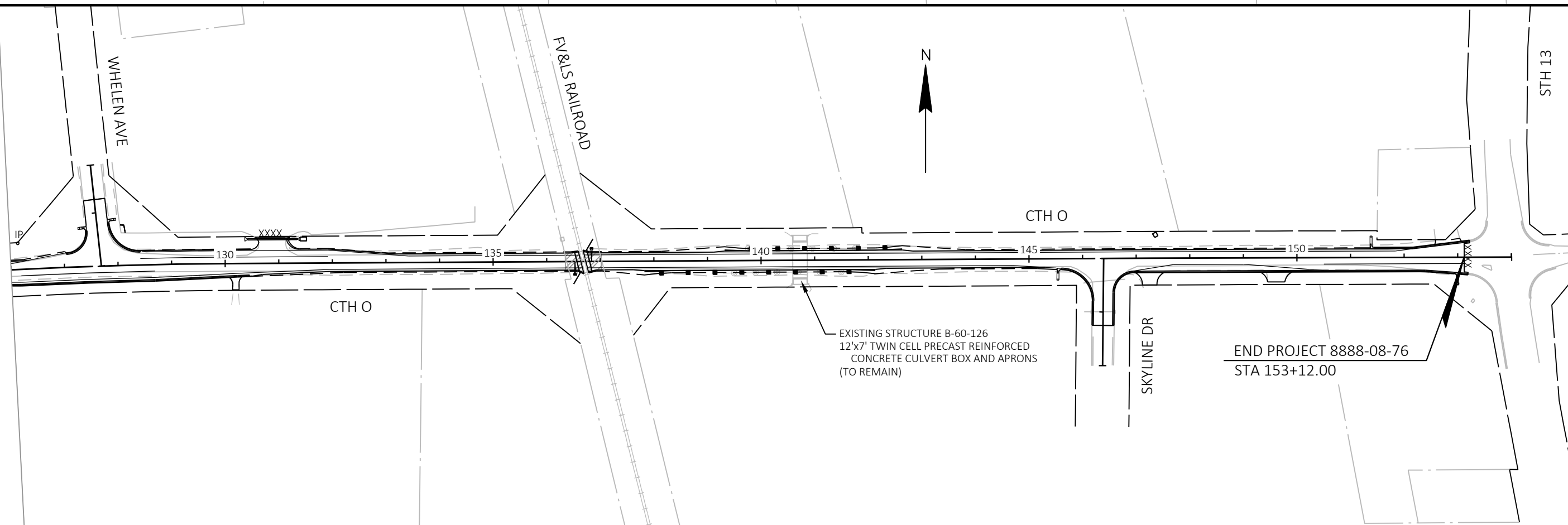
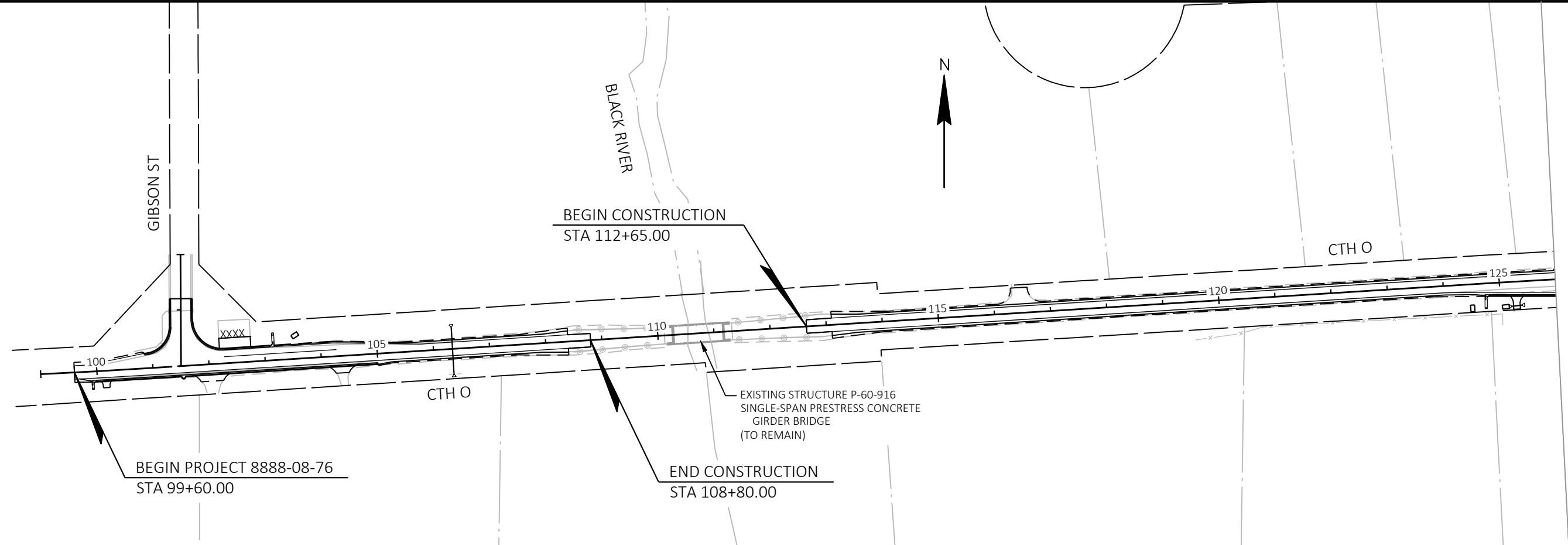
WE ENERGIES - GAS
 MR. TRAVIS KAHL
 1921 8TH STREET
 WISCONSIN RAPIDS, WI 54494
 PHONE: (715) 421-7256
 EMAIL: TRAVIS.KAHL@WE-ENERGIES.COM

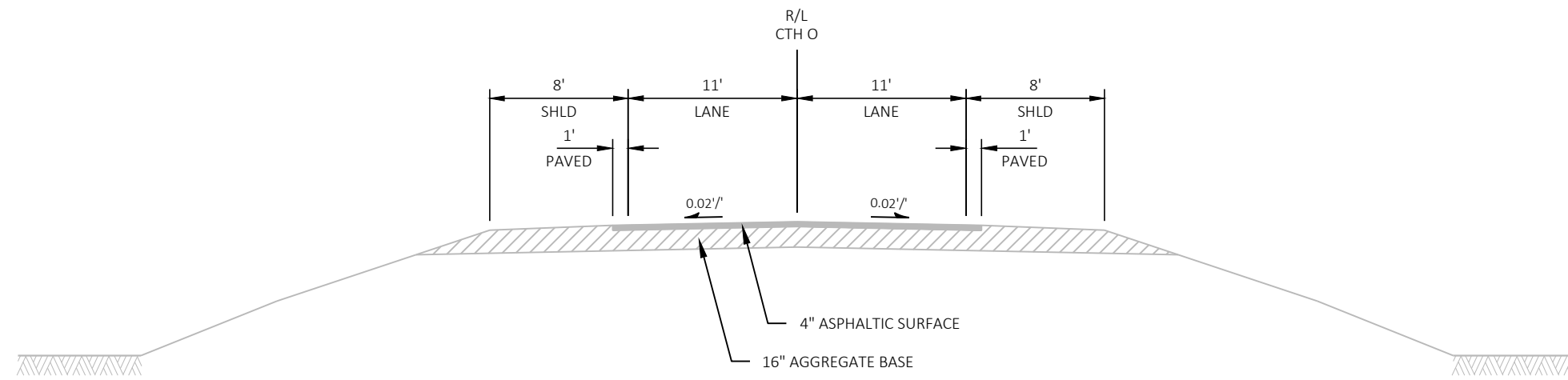
RUNOFF COEFFICIENT TABLE

| | 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 .22 | .16 .30 | .22 .38 | .12 .26 | .20 .34 | .27 .44 | .15 .30 | .24 .37 | .33 .50 | .19 .34 | .28 .41 | .38 .56 |
| MEDIAN STRIP-TURF | .19 .24 | .20 .26 | .24 .30 | .19 .25 | .22 .28 | .26 .33 | .20 .26 | .23 .30 | .30 .37 | .20 .27 | .25 .32 | .30 .40 |
| SIDE SLOPE-TURF | | | .25 .32 | | | .27 .34 | | | .28 .36 | | | .30 .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 = 14.96 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 10.14 ACRES

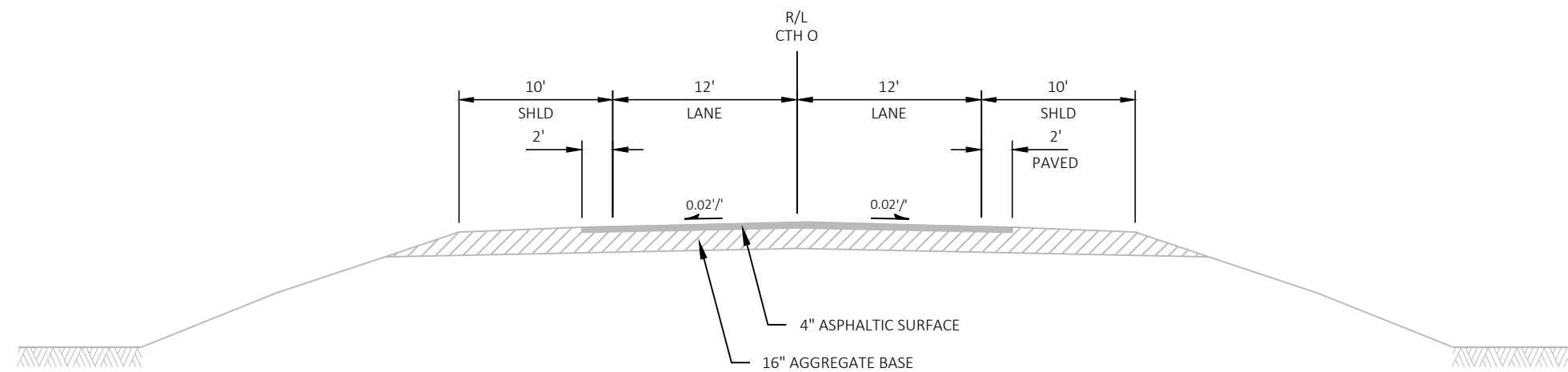






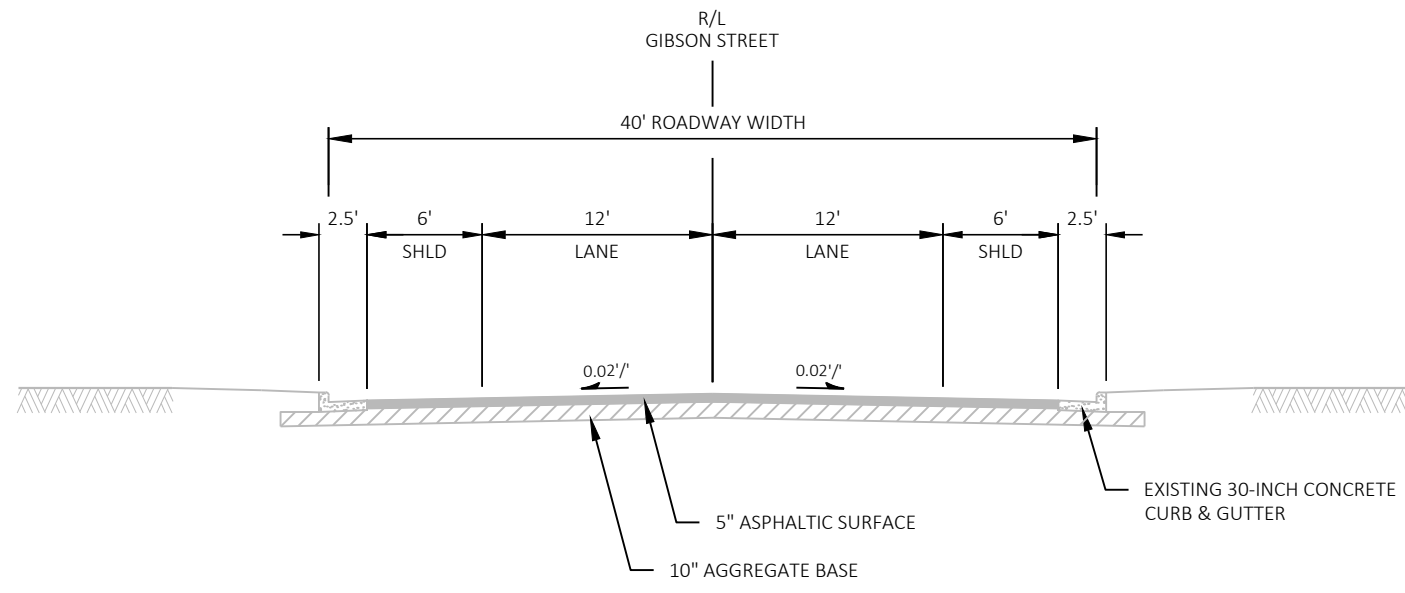
EXISTING TYPICAL SECTION

STA 99+60.00 TO STA 108+80.00
STA 112+65.00 TO STA 127+25.00



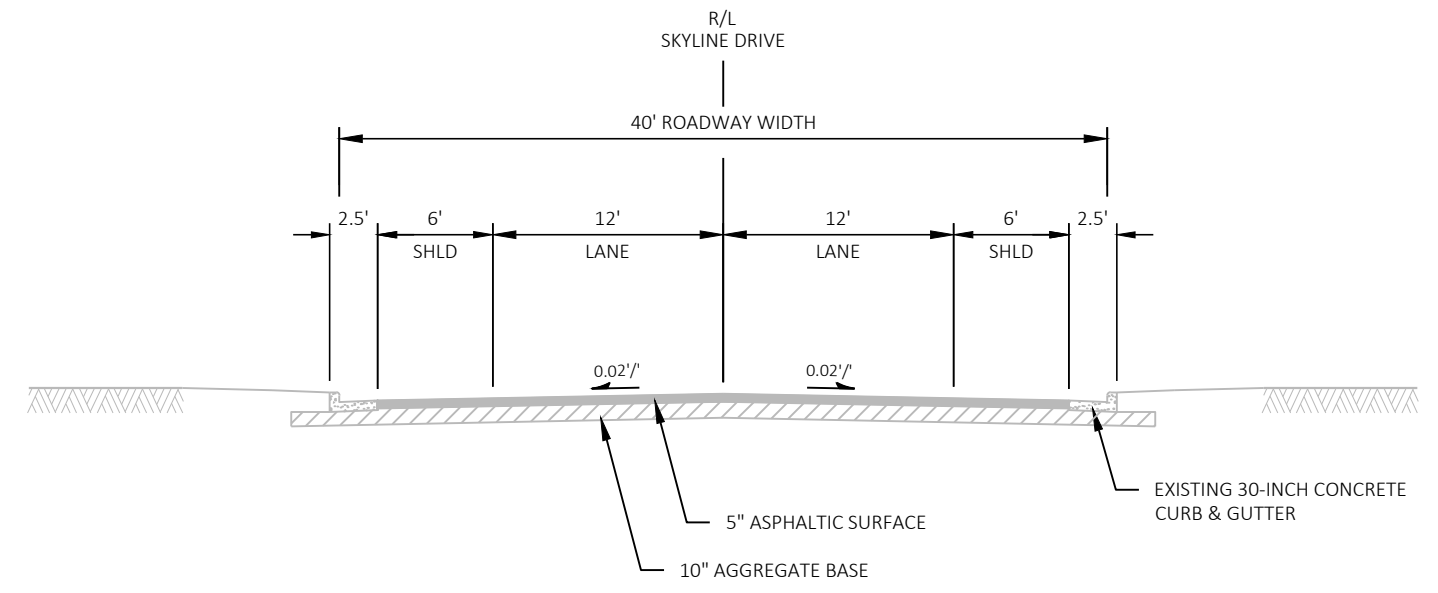
EXISTING TYPICAL SECTION

STA 127+25.00 TO STA 153+12.00



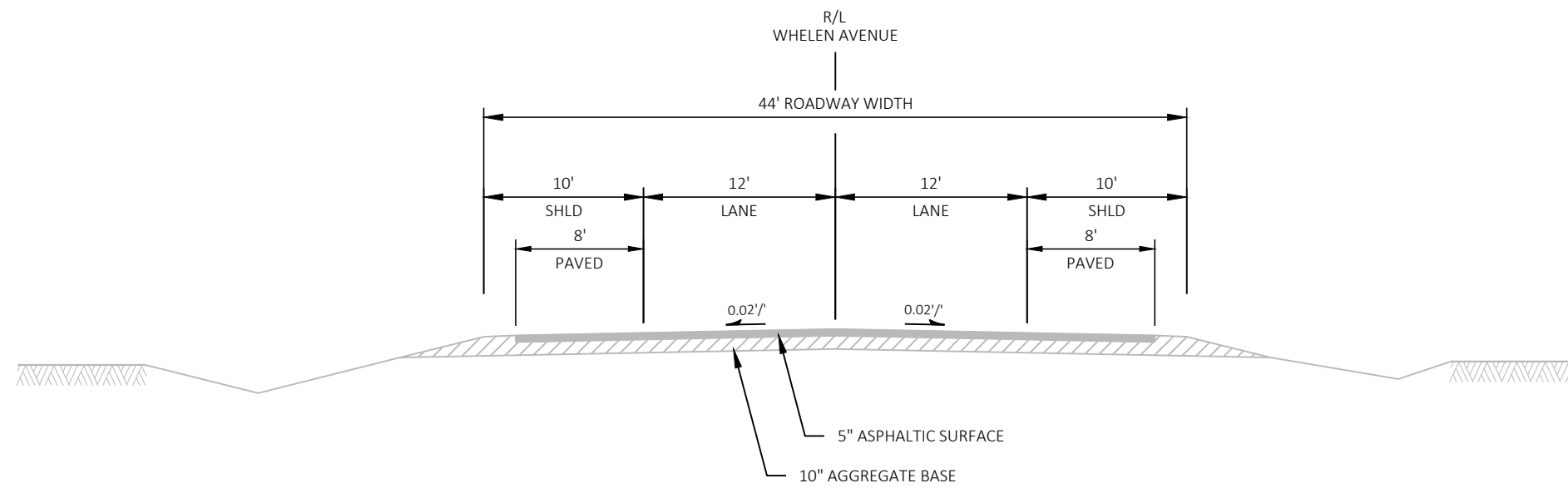
EXISTING TYPICAL SECTION GIBSON STREET

STA 20+83.45 TO STA 21+20.00



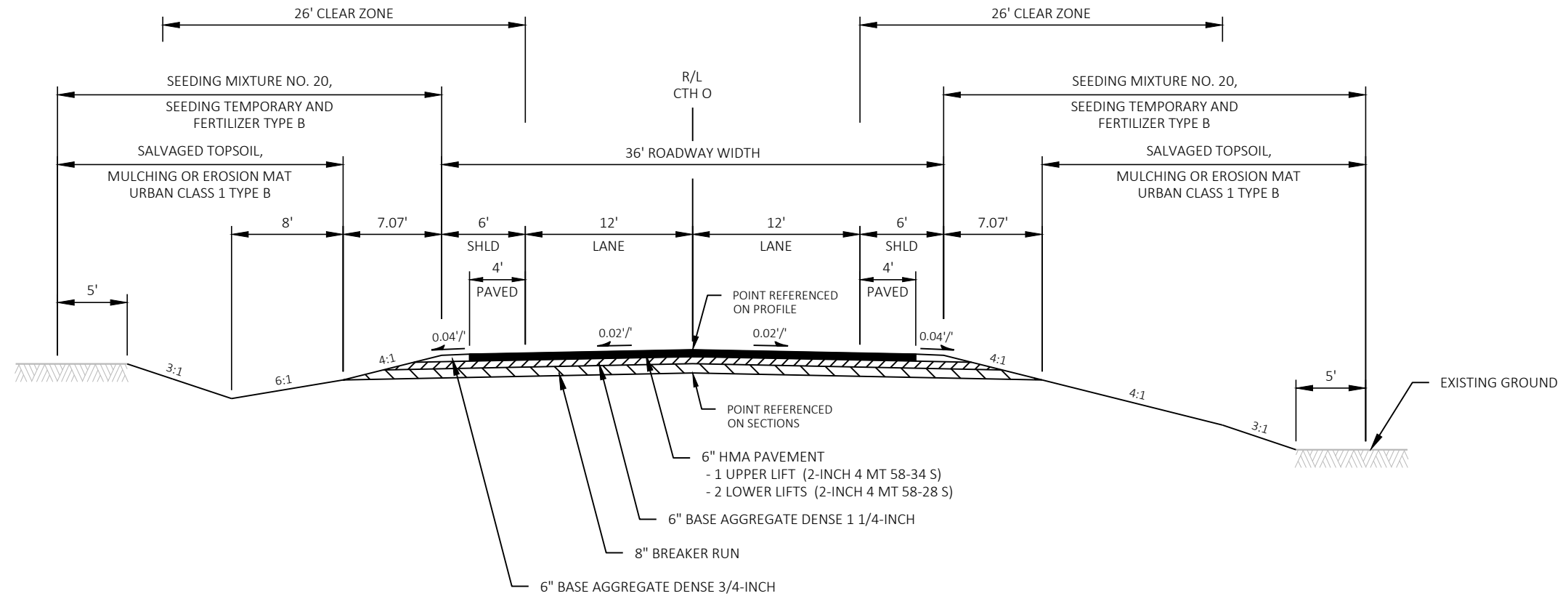
EXISTING TYPICAL SECTION SKYLINE DRIVE

STA 68+75.00 TO STA 69+20.83



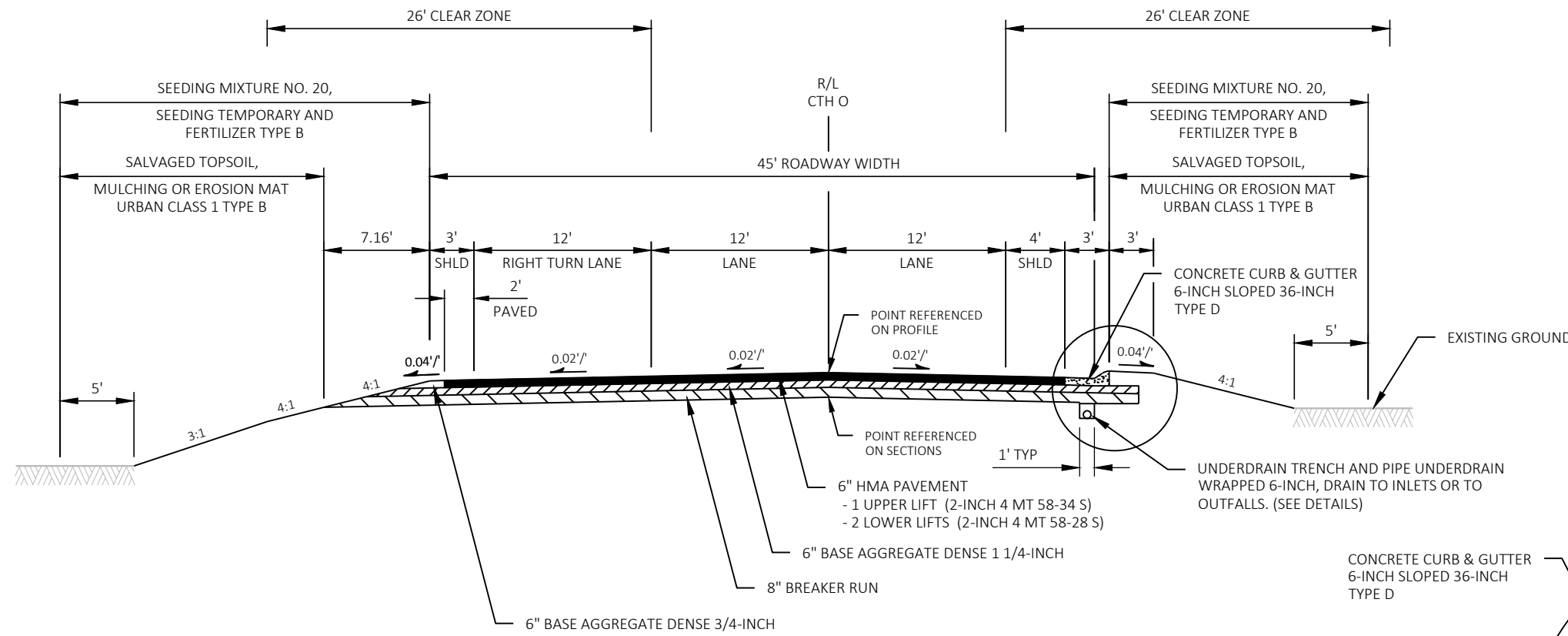
EXISTING TYPICAL SECTION WHELEN AVENUE

STA 30+77.86 TO STA 31+25.00

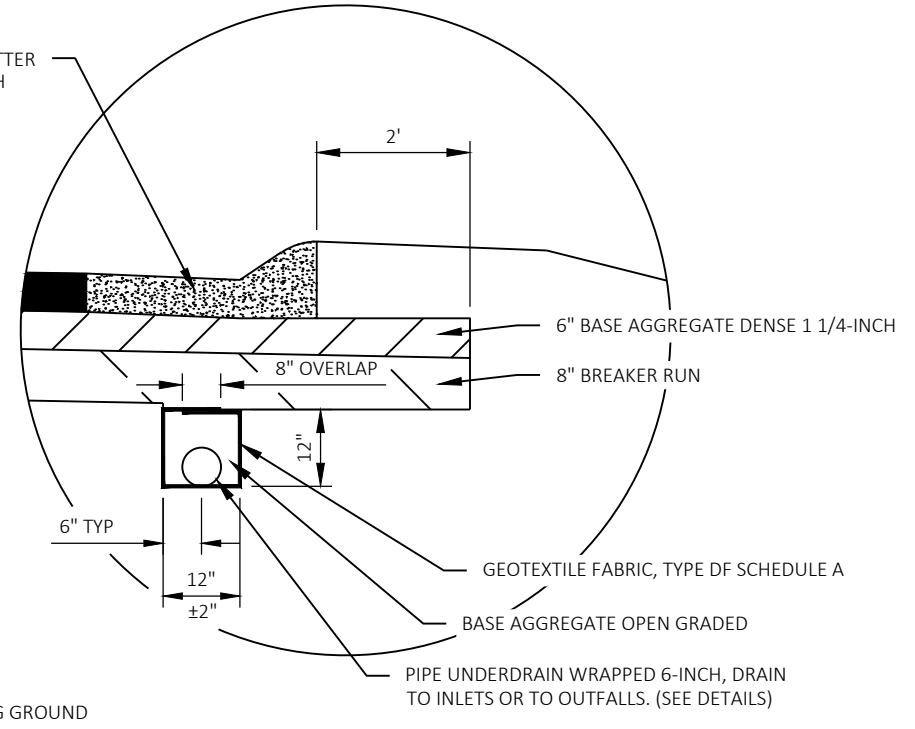


PROPOSED TYPICAL SECTION CTH O

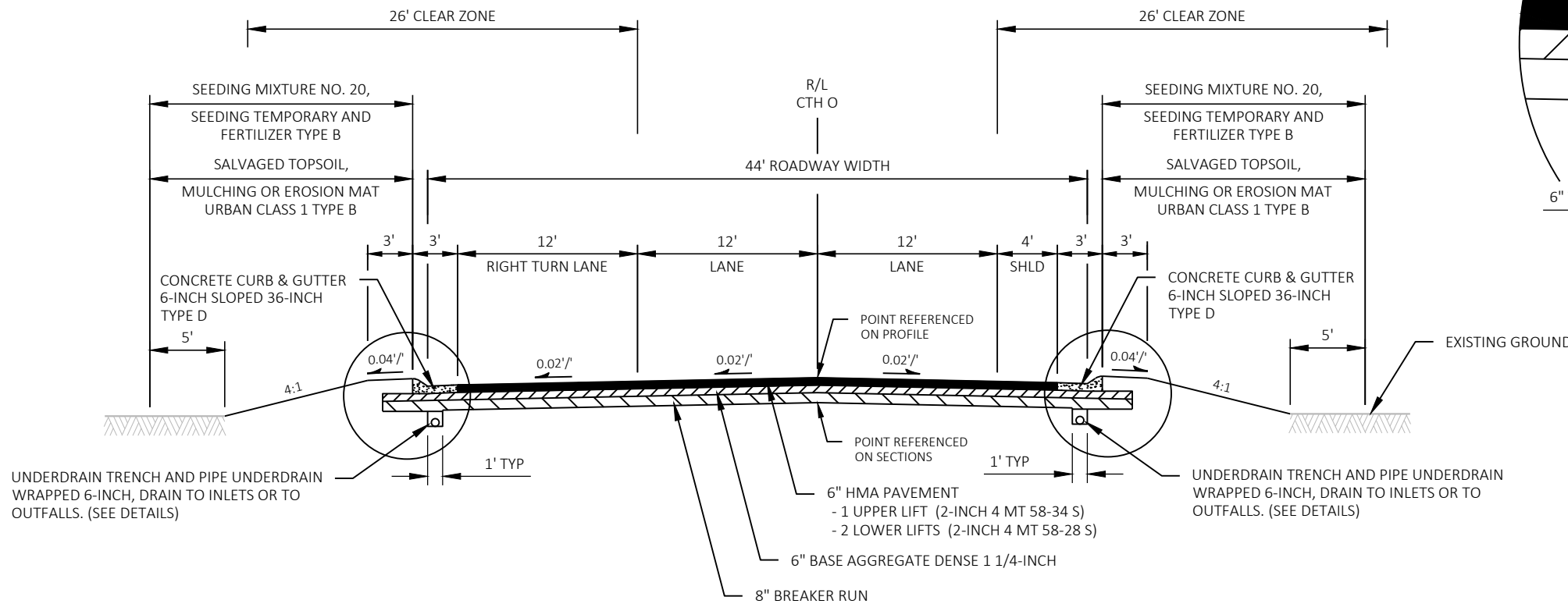
STA 99+60.00 TO STA 99+98.28
 STA 105+00.00 TO STA 108+80.00
 STA 112+65.00 TO STA 124+81.23
 STA 133+42.42.07 TO STA 136+63.67
 STA 136+72.93 TO STA 137+81.97
 STA 142+63.22 TO STA 146+96.21



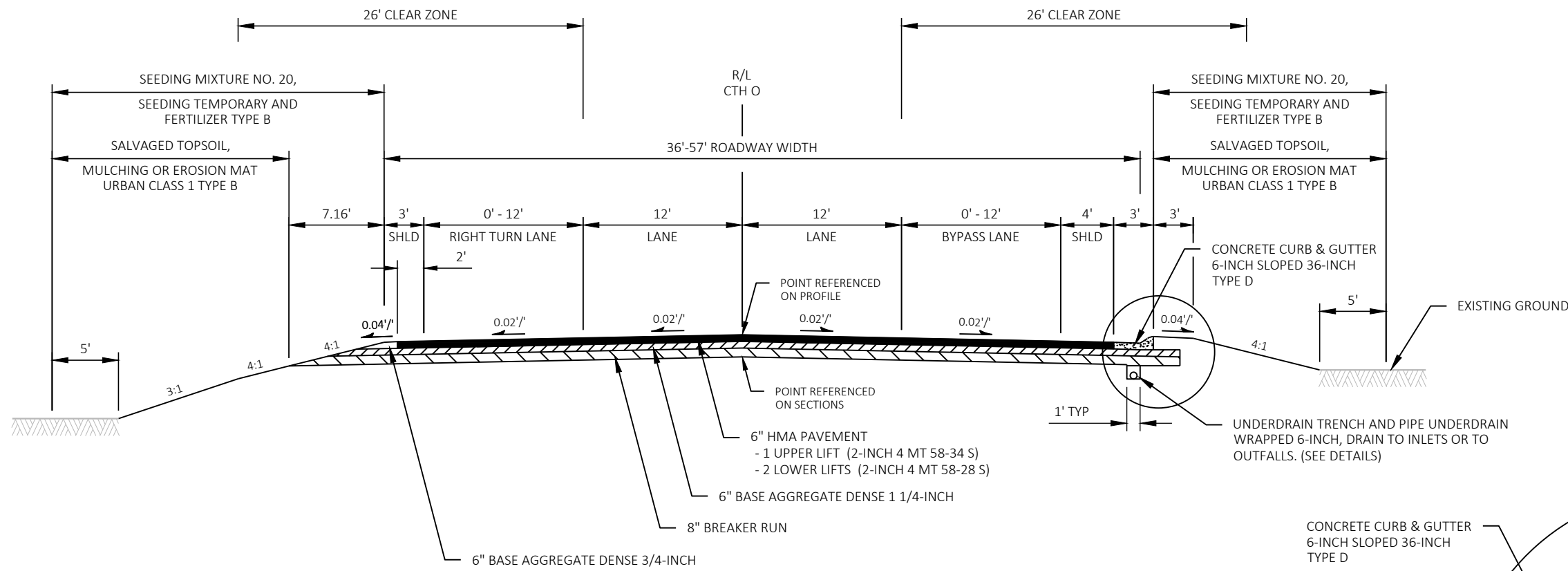
PROPOSED TYPICAL SECTION CTH O
STA 99+98.28 TO STA 102+27.79
STA 103+10.00 TO STA 105+00.00



UNDERDRAIN DETAIL

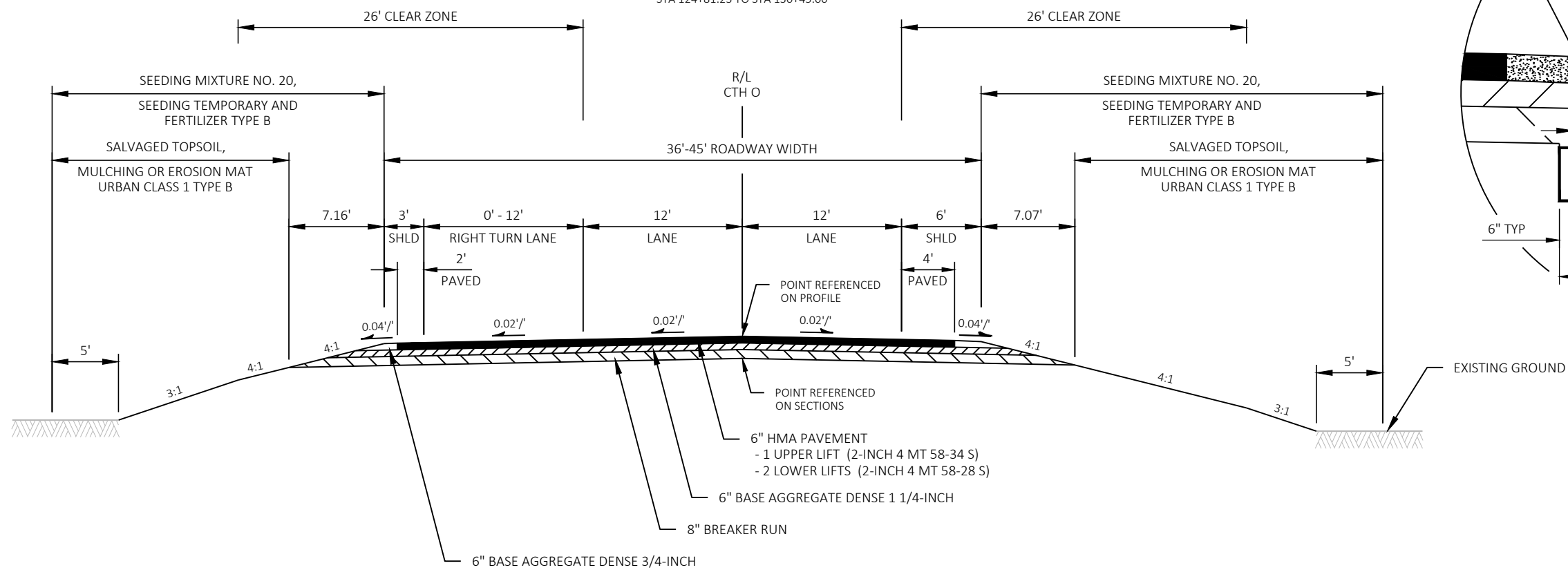


PROPOSED TYPICAL SECTION CTH O
STA 102+27.79 TO STA 103+10.00



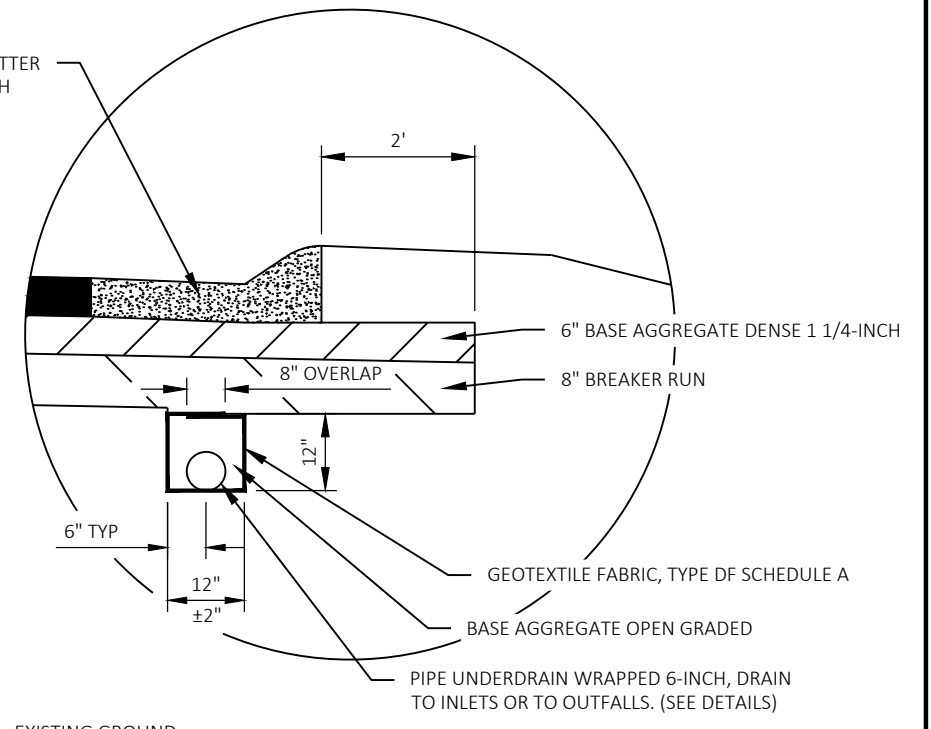
PROPOSED TYPICAL SECTION CTH O

STA 124+81.23 TO STA 130+45.00

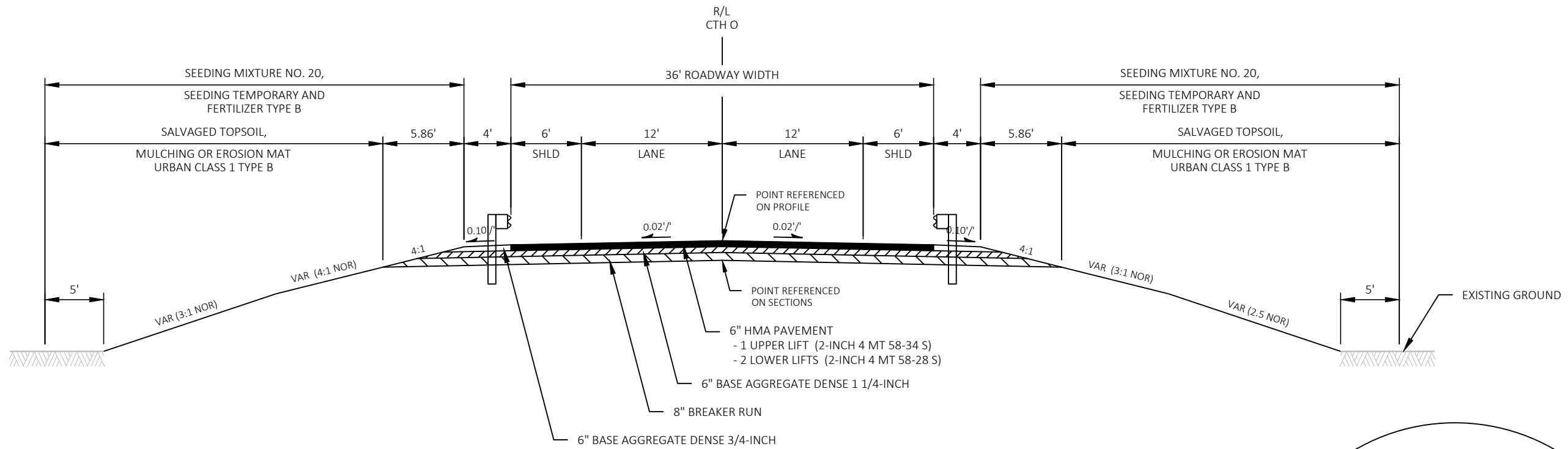


PROPOSED TYPICAL SECTION CTH O

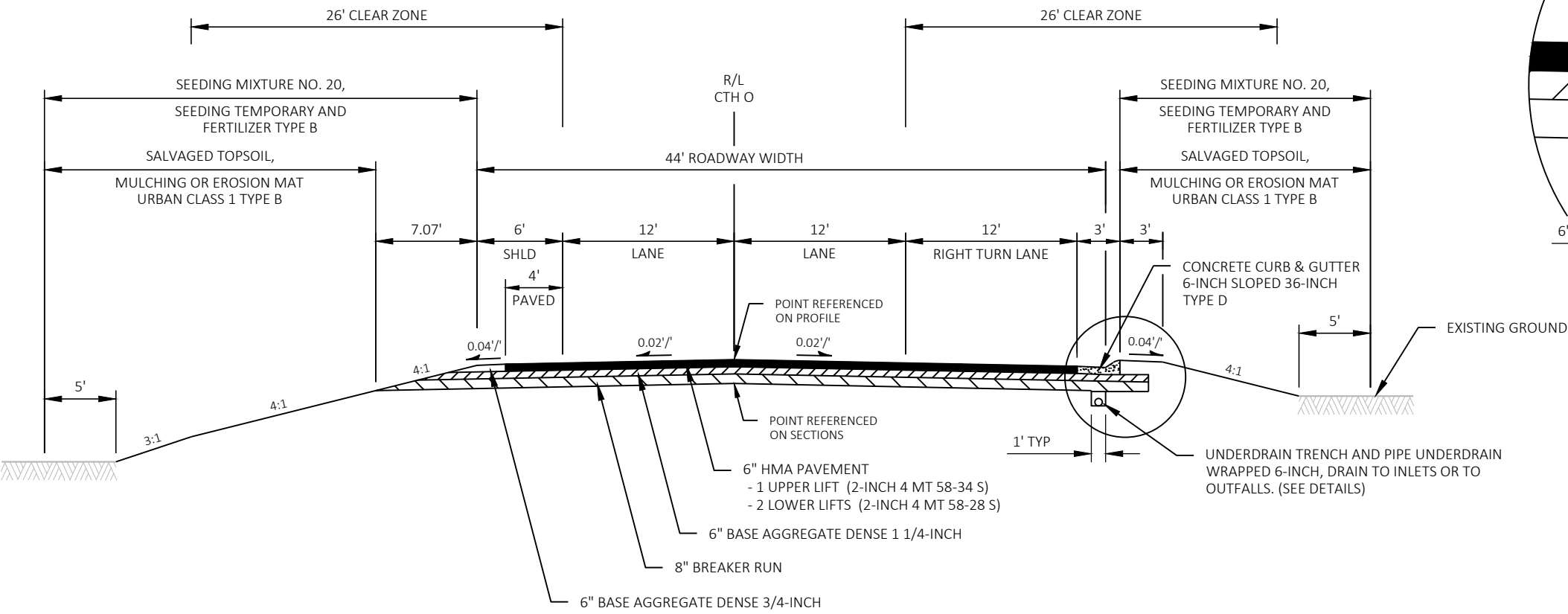
STA 130+45.00 TO STA 133+42.07



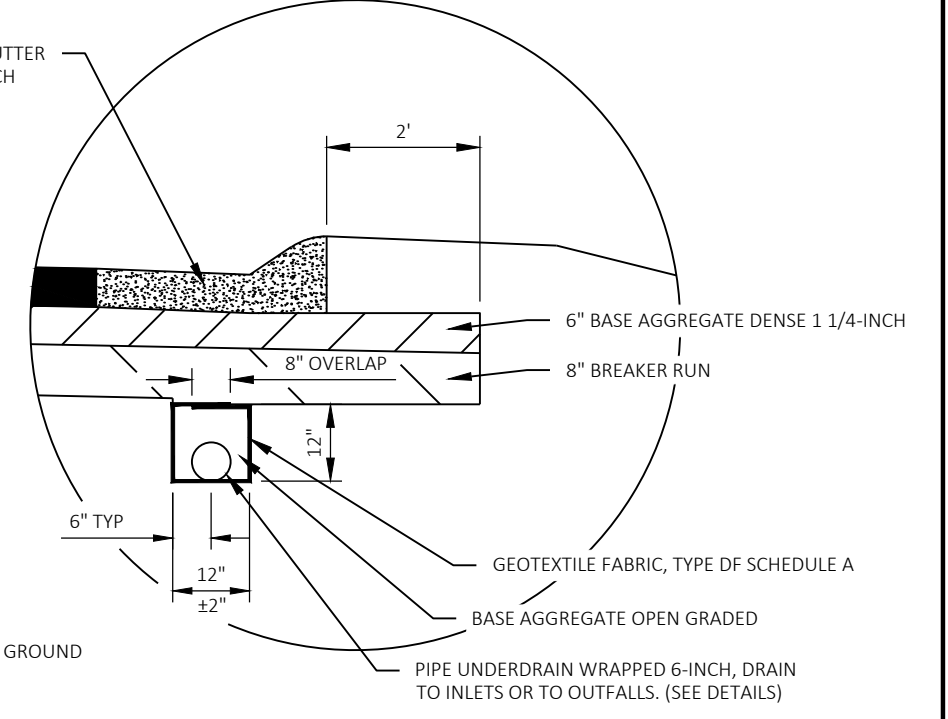
UNDERDRAIN DETAIL



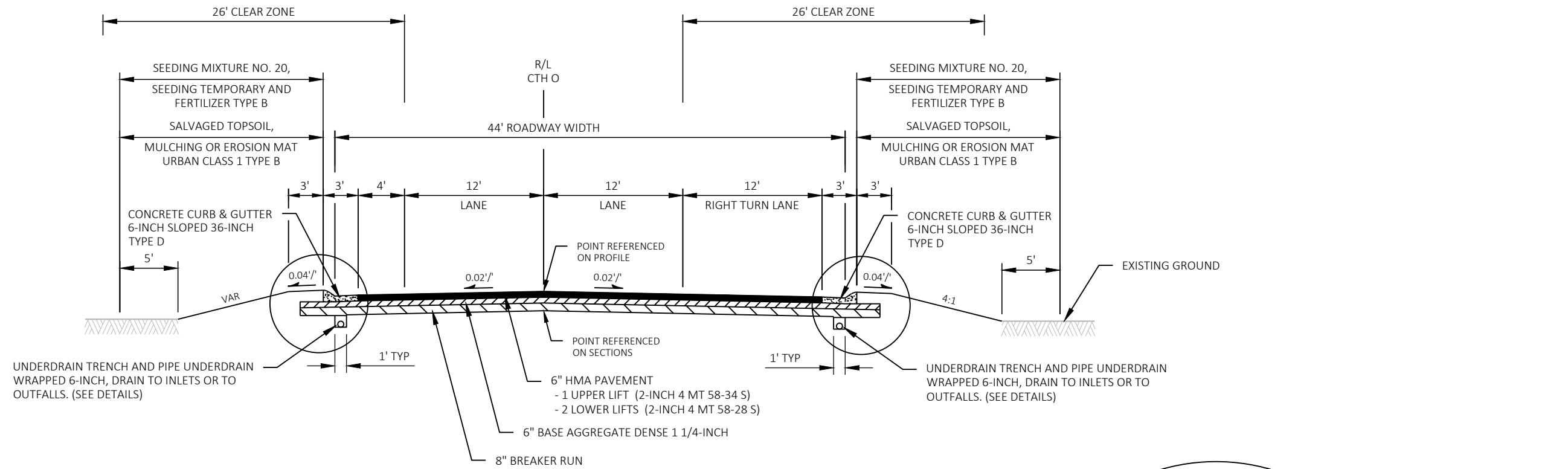
PROPOSED TYPICAL SECTION CTH O
STA 137+81.97 TO STA 142+63.22



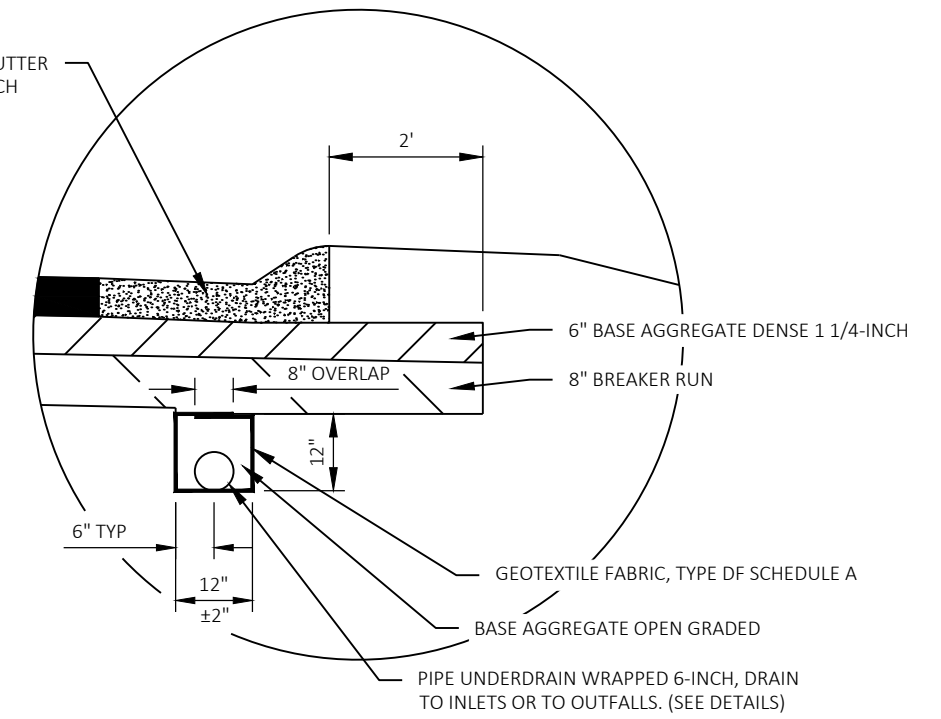
PROPOSED TYPICAL SECTION CTH O
STA 146+96.21 TO STA 151+44.37



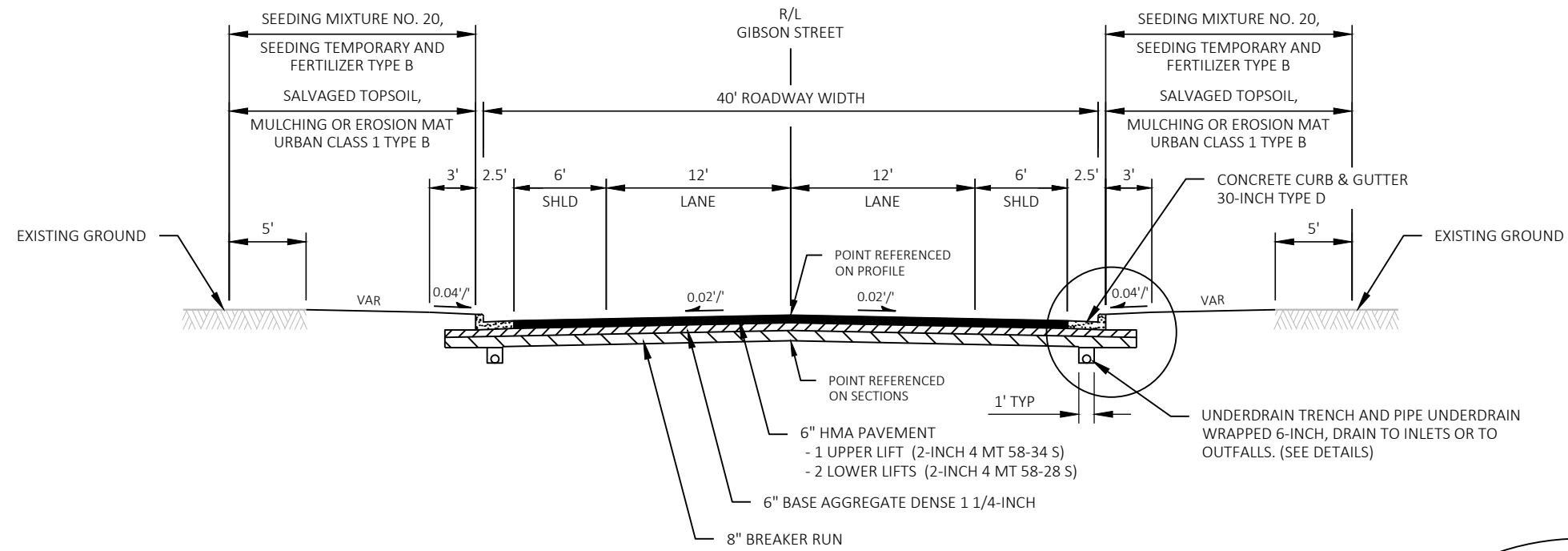
UNDERDRAIN DETAIL



PROPOSED TYPICAL SECTION CTH O
STA 151+44.37 TO STA 153+12.00

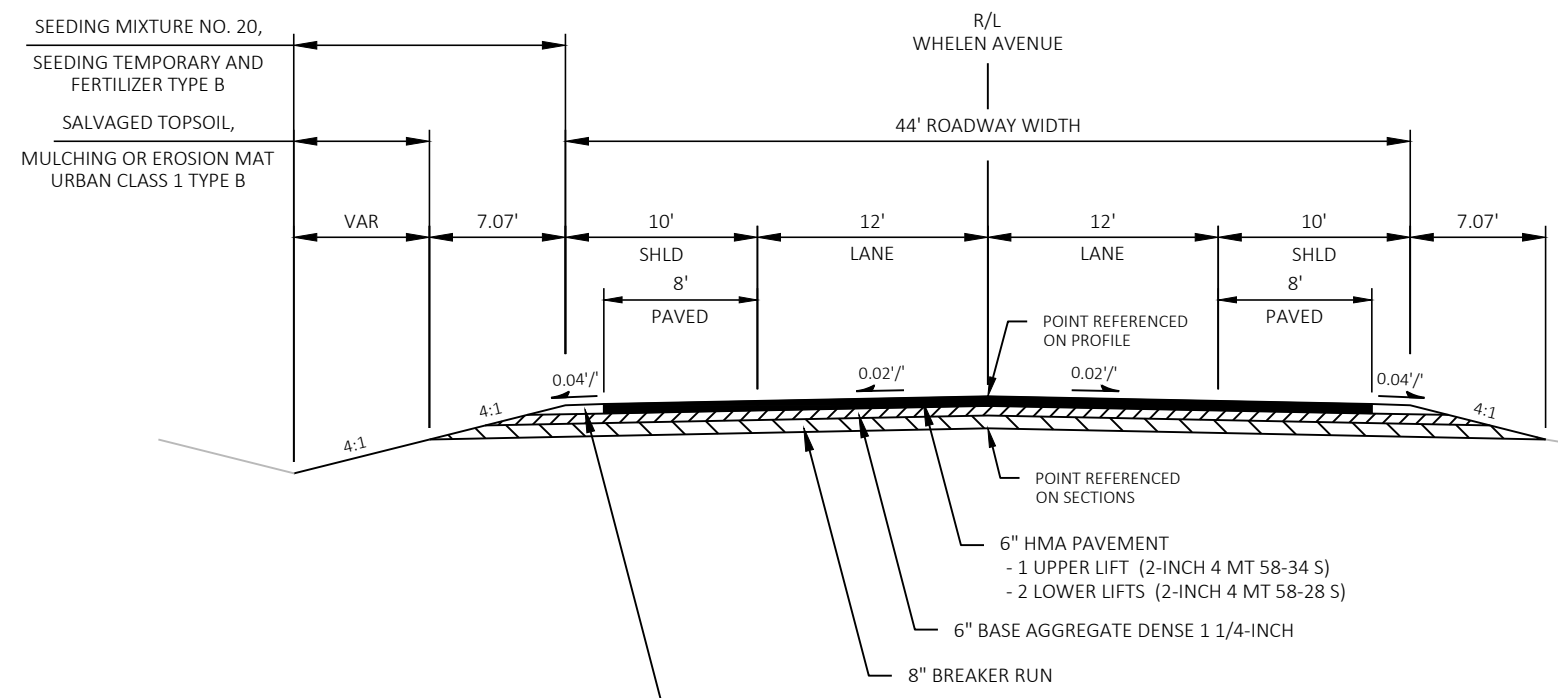


UNDERDRAIN DETAIL



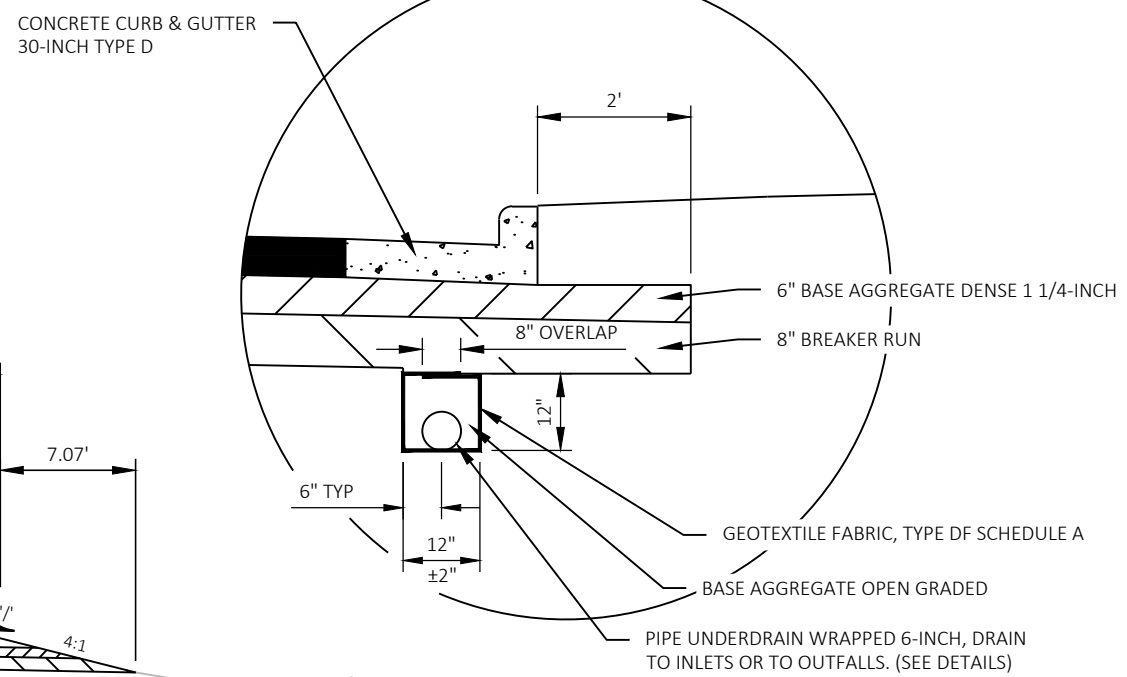
PROPOSED TYPICAL SECTION GIBSON STREET

STA 20+83.45 TO STA 21+20.00

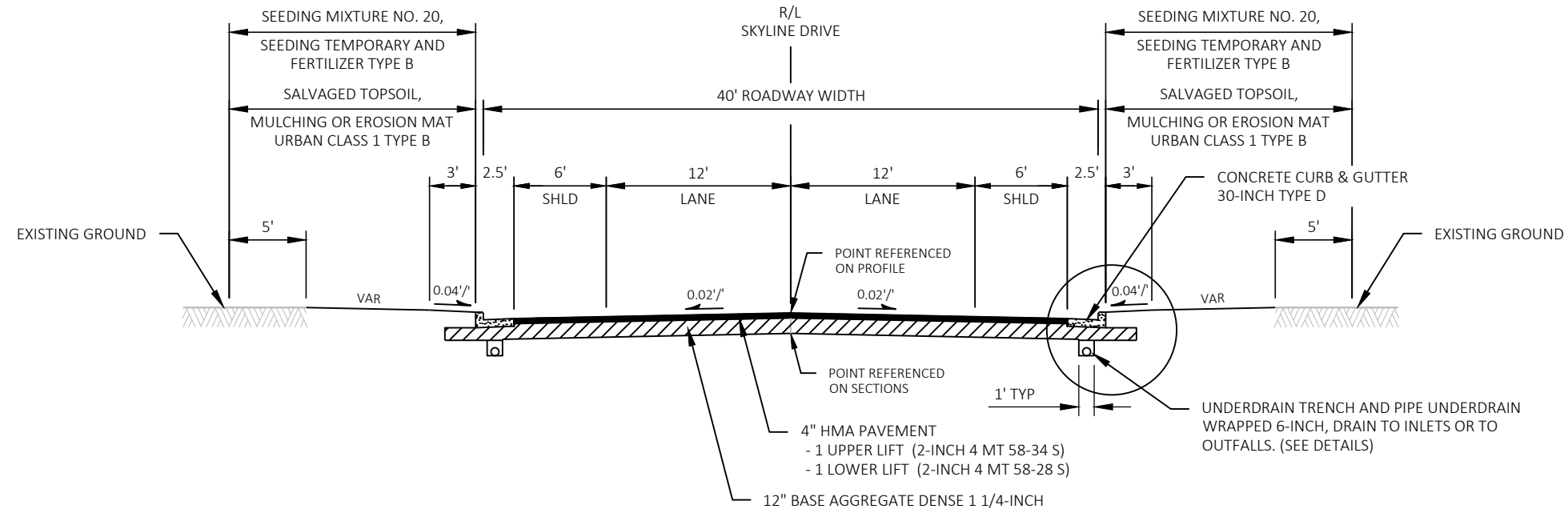


PROPOSED TYPICAL SECTION WHELEN AVENUE

STA 30+77.86 TO STA 31+25.00

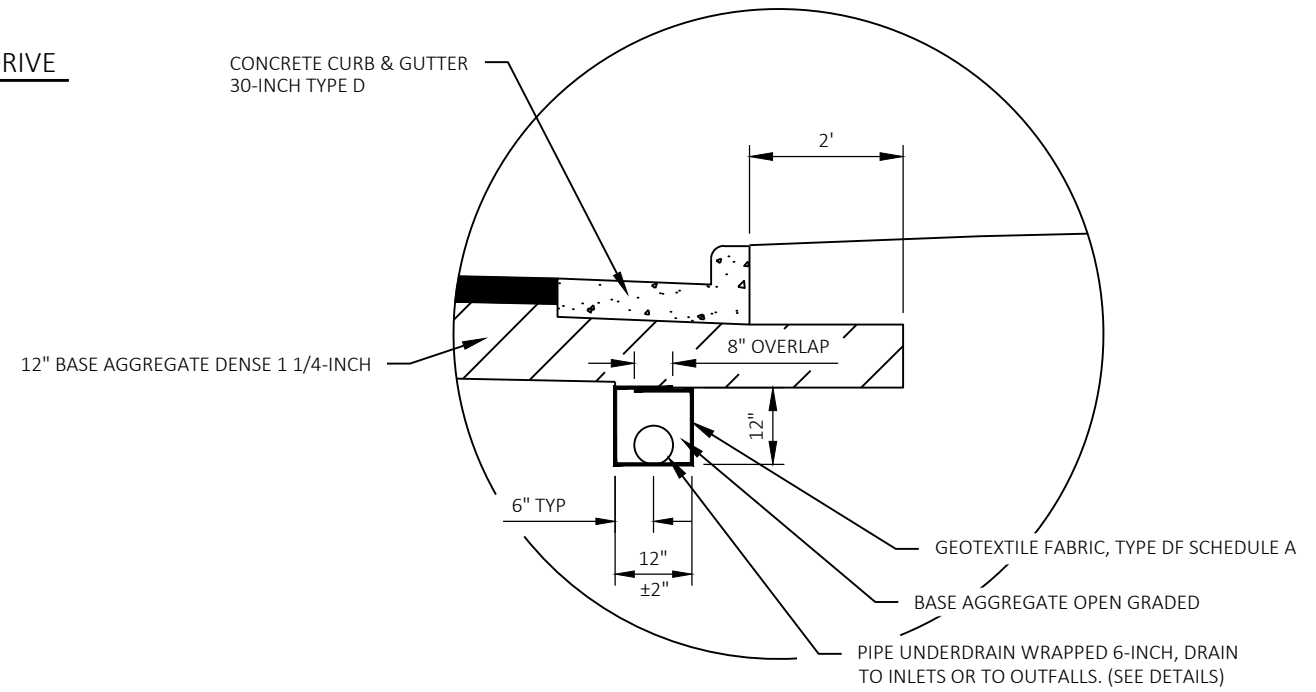


UNDERDRAIN DETAIL

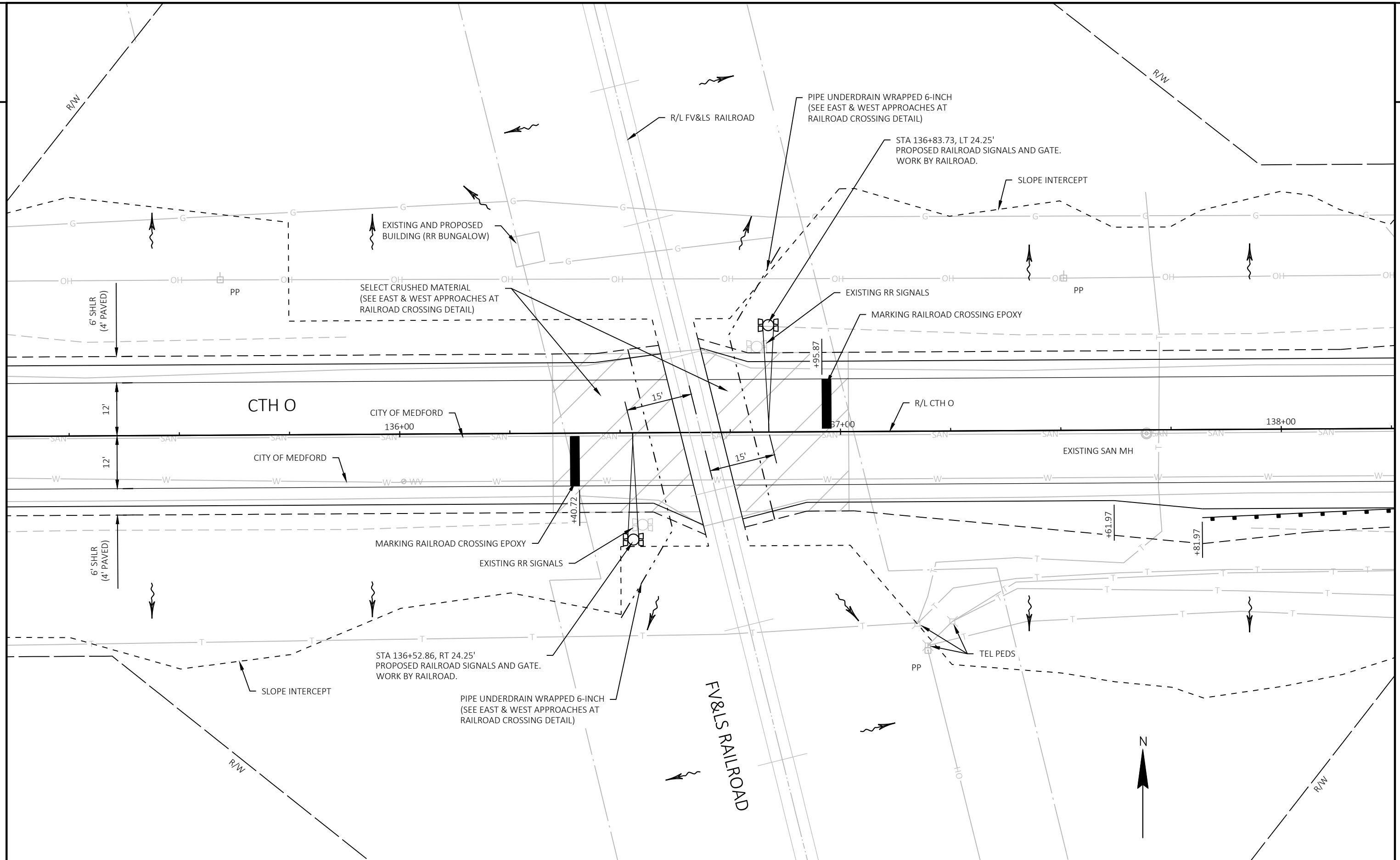


PROPOSED TYPICAL SECTION SKYLINE DRIVE

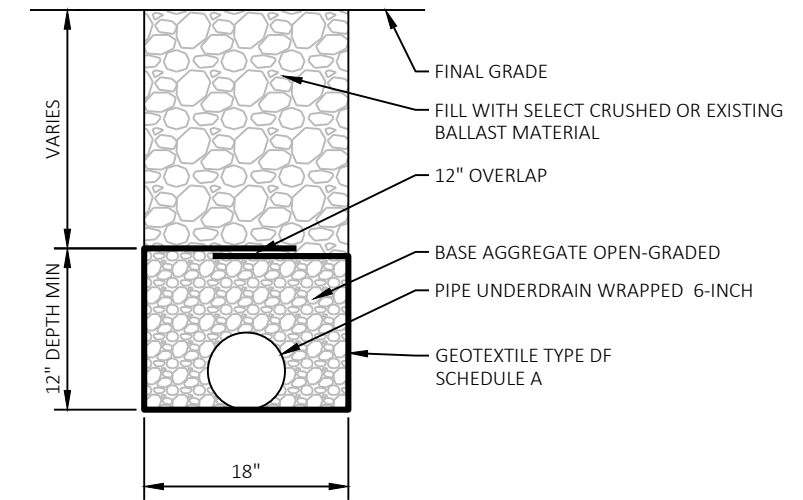
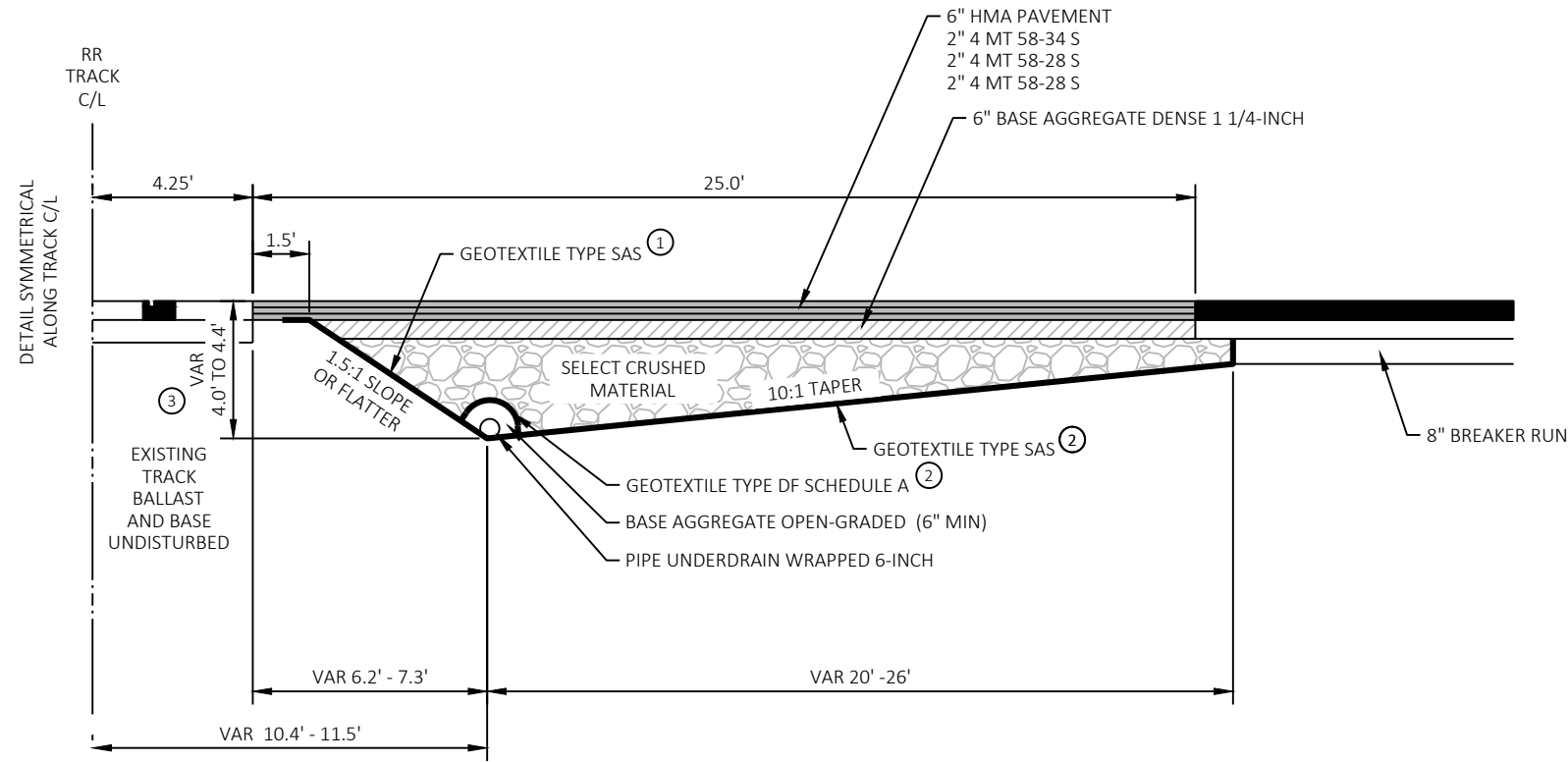
STA 68+75.00 TO STA 69+20.83



UNDERDRAIN DETAIL



| | | | | | |
|------------------------|------------|----------------|--|-------|----------|
| PROJECT NO: 8888-08-76 | HWY: CTH 0 | COUNTY: TAYLOR | CONSTRUCTION DETAILS - RAILROAD CROSSING | SHEET | E |
|------------------------|------------|----------------|--|-------|----------|

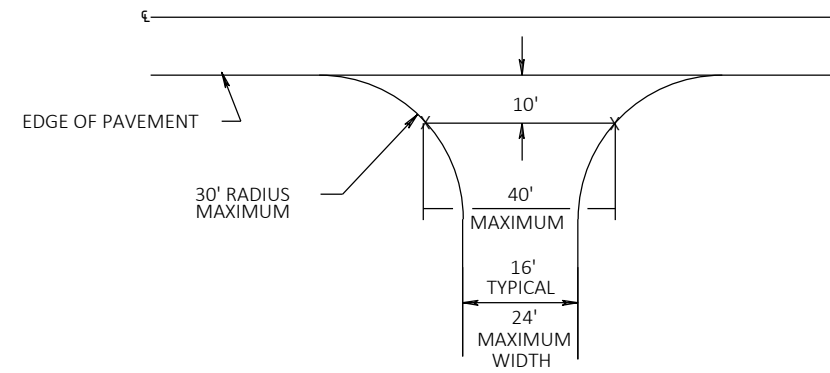


FRENCH DRAIN UNDERDRAIN OUTLET DETAIL

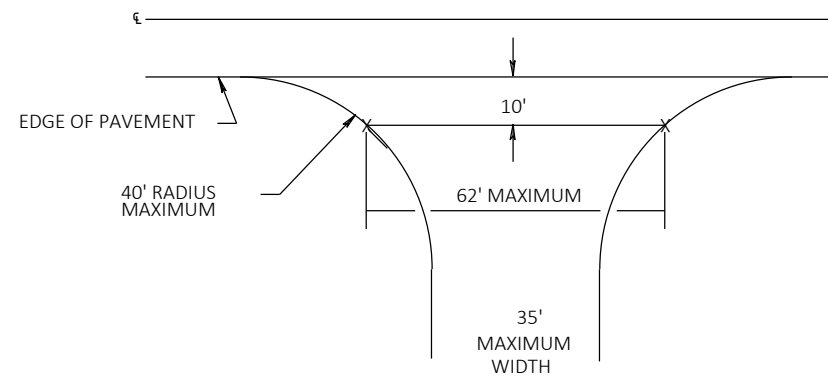
NOTES:

- ① GEOTEXTILE TYPE SAS PLACED IN ORDER TO PROVIDE SEPARATION BETWEEN ROADWAY BASE COURSE AND TRACK BALLAST.
- ② GEOTEXTILE TYPE SAS PLACED TO PROVIDE SEPARATION UNDER THE UNDERDRAIN. GEOTEXTILE TYPE DF SCHEDULE A AND BASE AGGREGATE OPEN-GRADED PLACED TO PROVIDE 6 INCHES OF SEPARATION BETWEEN TOP OF UNDERDRAIN AND SELECT CRUSHED MATERIAL.
- ③ ADJUST DEPTH TO OBTAIN A MINIMUM OF 0.5% SLOPE ALONG UNDERDRAIN.

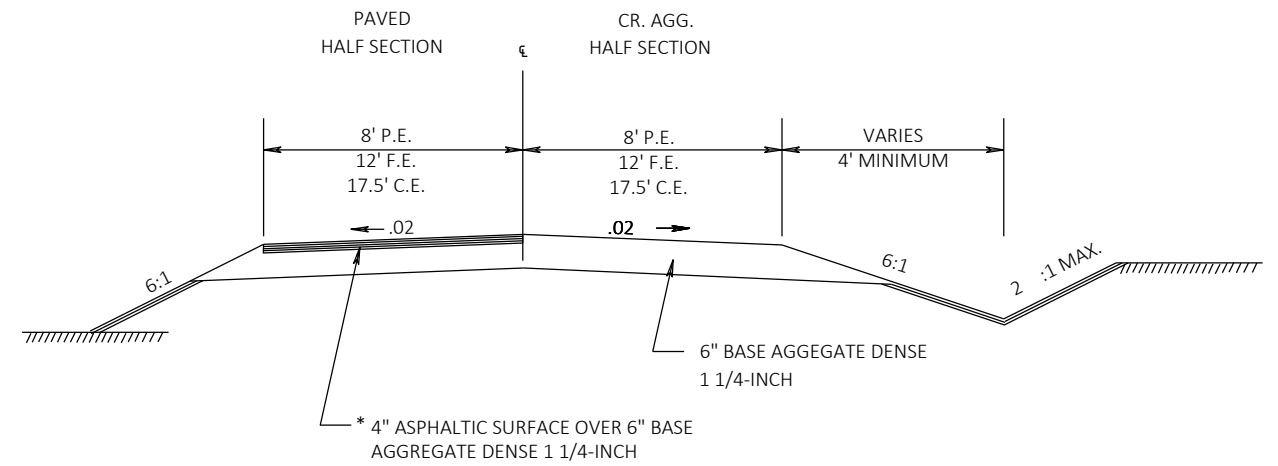
EAST & WEST APPROACHES AT RAILROAD CROSSING



TYPICAL DRIVEWAY DETAIL
(NON-COMMERCIAL RURAL)



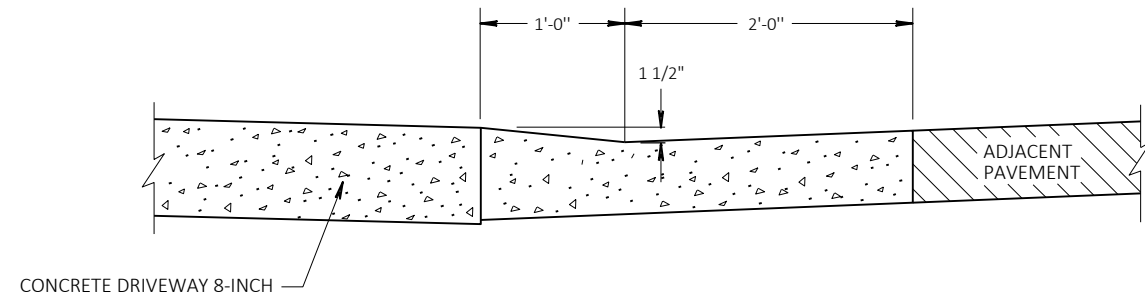
TYPICAL DRIVEWAY DETAIL
(COMMERCIAL RURAL)



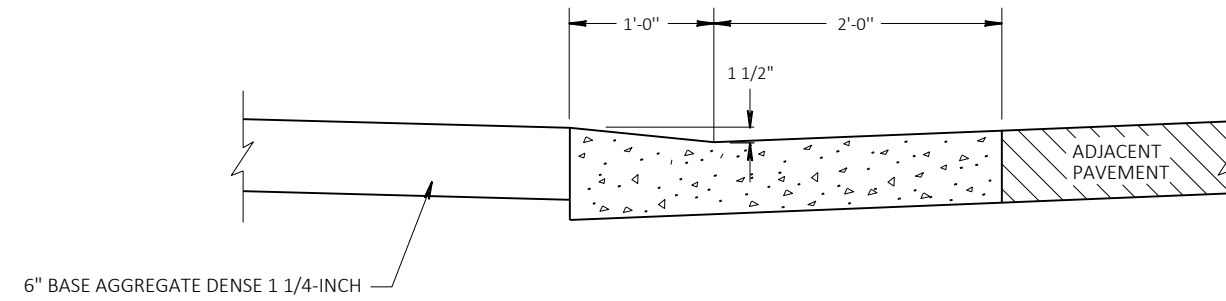
* 4" MINIMUM OR MATCH EXISTING ASPHALT DEPTH IF THICKER. PAID FOR UNDER ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES

TYPICAL SECTION
FOR PRIVATE ENTRANCES

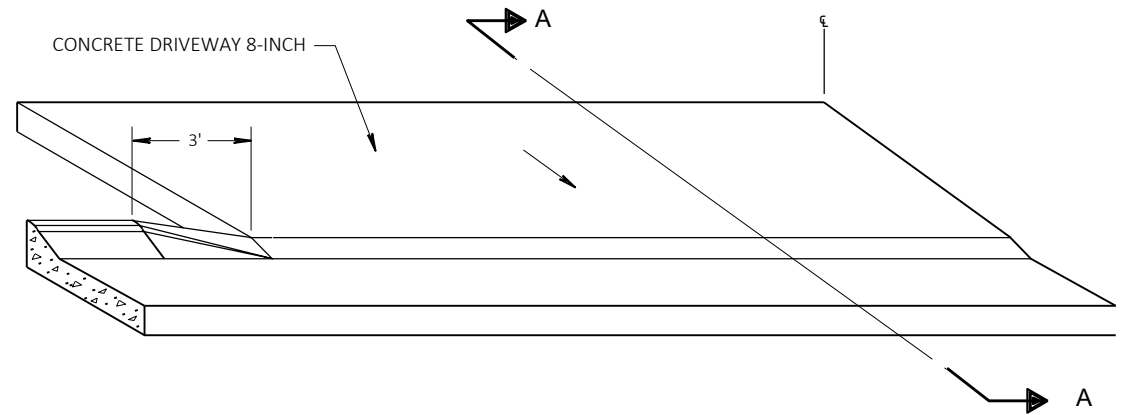
NOTE:
DRIVEWAY PROFILES NOT EXPECTED TO EXCEED 10%. PLACE LOW POINT OF DRIVEWAY PROFILE OVER DITCH FLOW LINE.



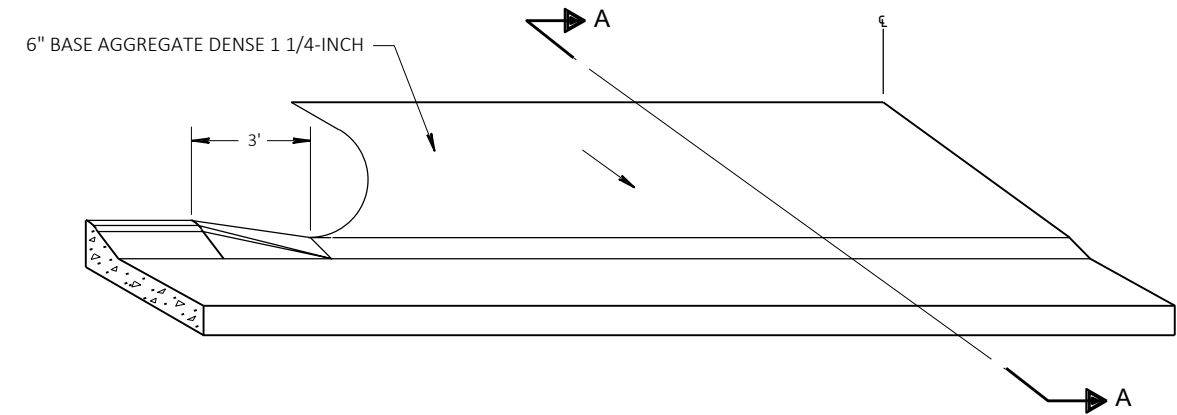
SECTION A-A



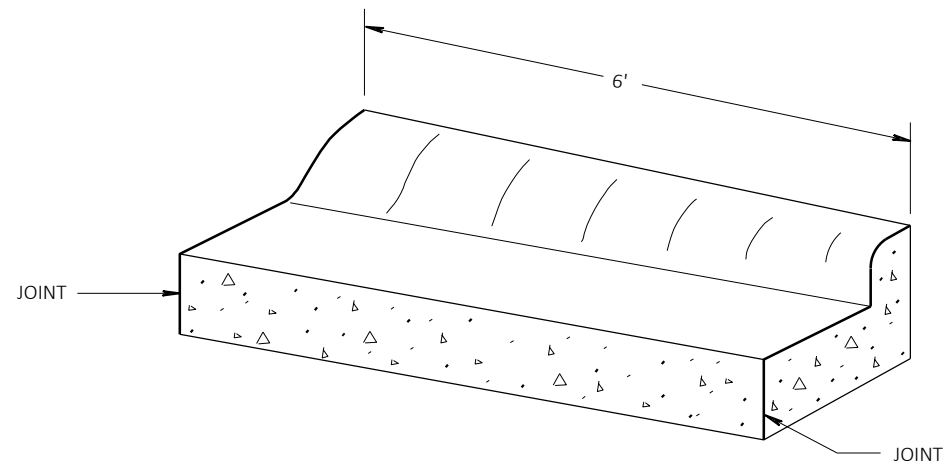
SECTION A-A



COMMERCIAL ENTRANCE (HALF SECTION)
CONCRETE

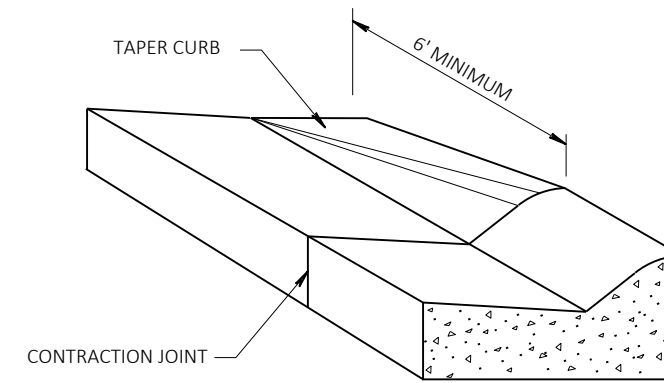


CE\PE\FE ENTRANCE (HALF SECTION)
BASE AGGREGATE DENSE

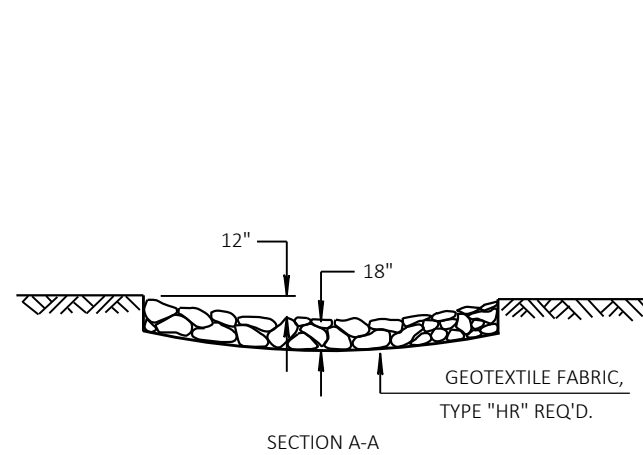


TRANSITION DETAIL

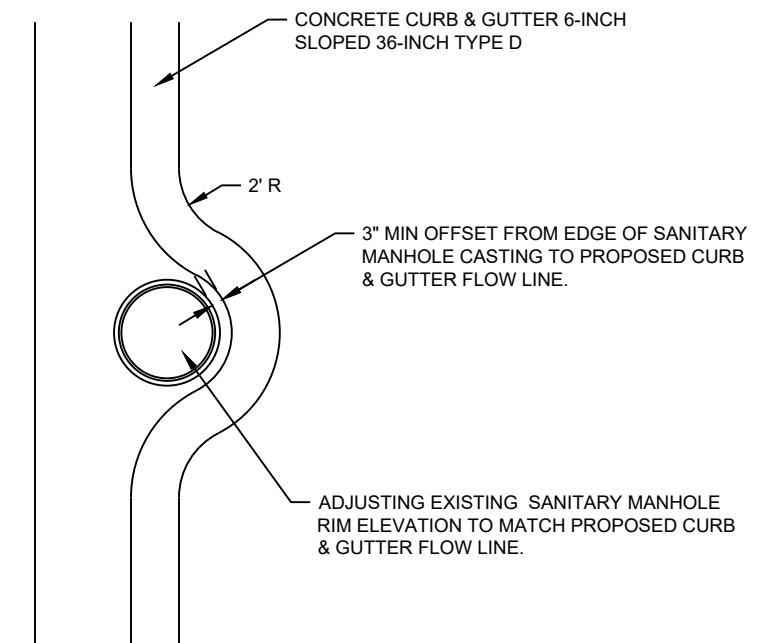
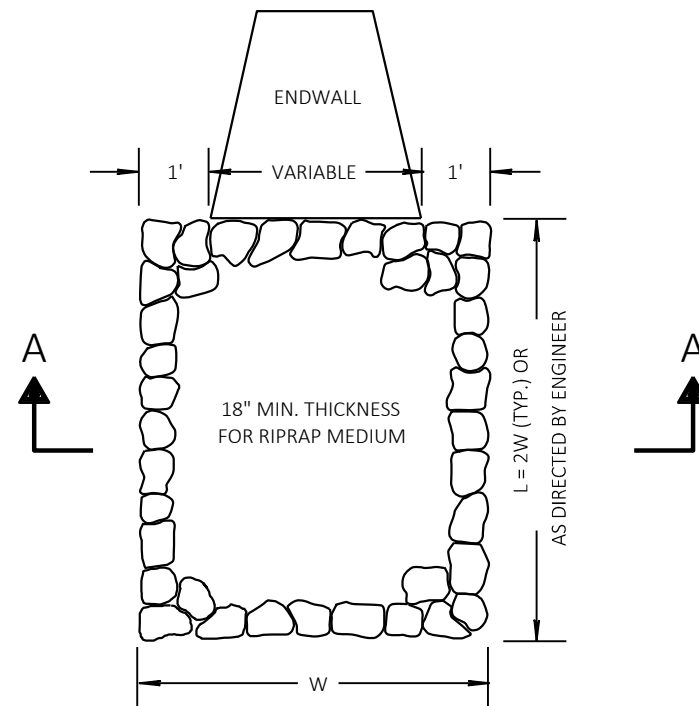
36-INCH TYPE "D" CURB & GUTTER TO 30-INCH TYPE "D" CURB & GUTTER
(TO BE MEASURED & PAID FOR AS 36-INCH CONC. C&G)



DETAIL OF CURB & GUTTER TERMINI

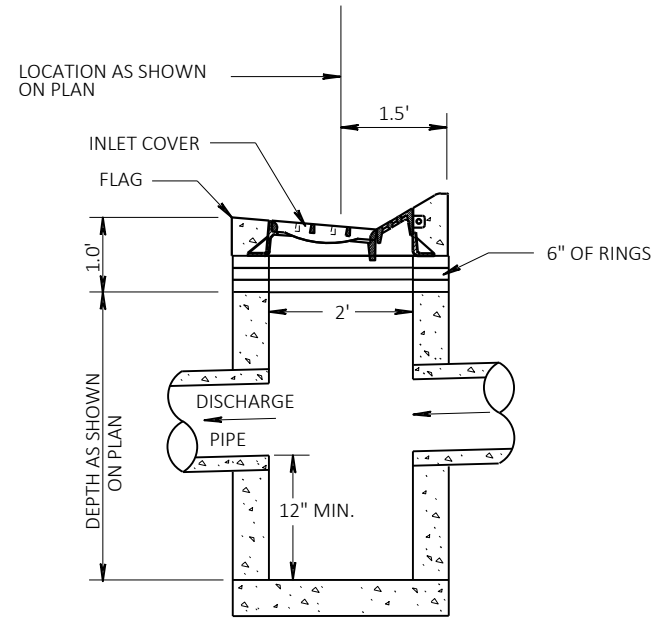


RIPRAP MEDIUM TREATMENT AT CULVERTS



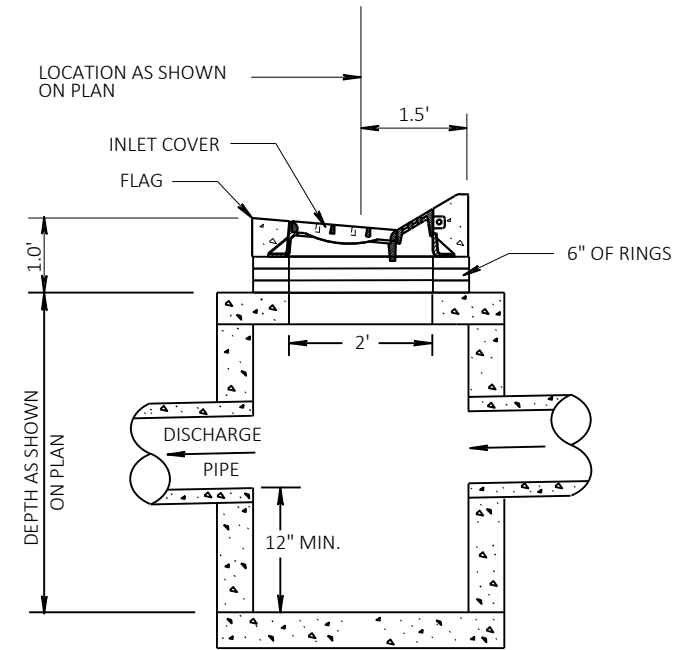
CURB & GUTTER DETAIL AT EXISTING SANITARY MANHOLE

STA 101+54, RT 20'



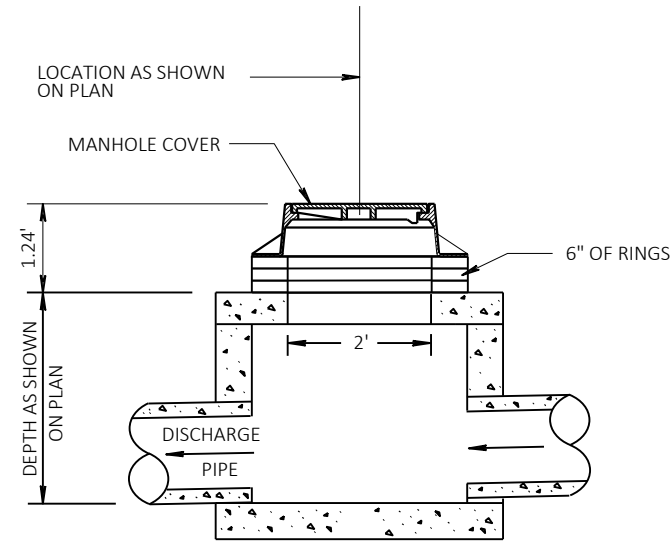
NOTE: DETAILS NOT SHOWN SHALL CONFORM TO STANDARD DETAIL DRAWING FOR CATCH BASINS 2X3-FT

CATCH BASIN 2X3-FT



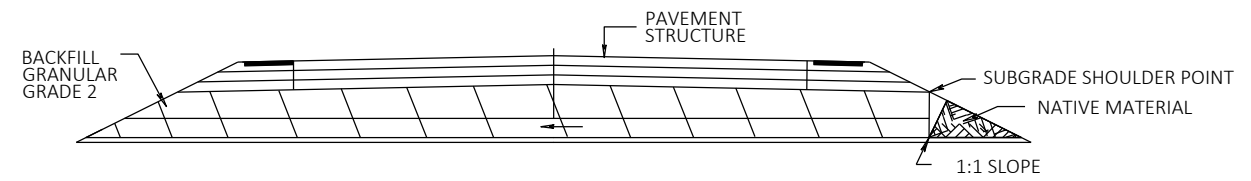
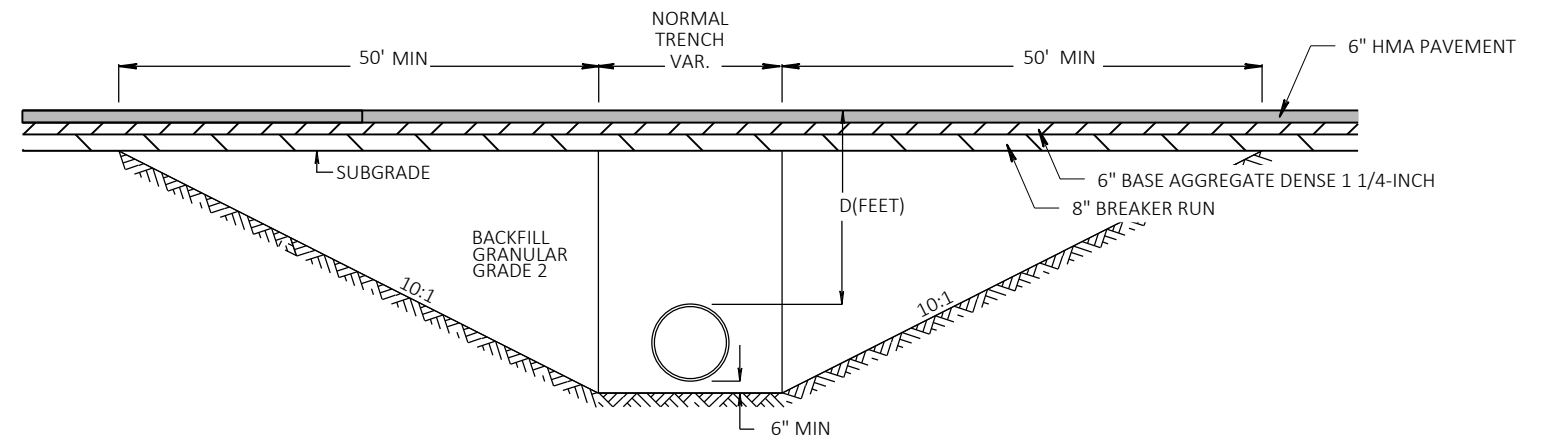
NOTE: DETAILS NOT SHOWN SHALL CONFORM TO STANDARD DETAIL DRAWING FOR CATCH BASINS MANHOLES

CATCH BASIN MANHOLES

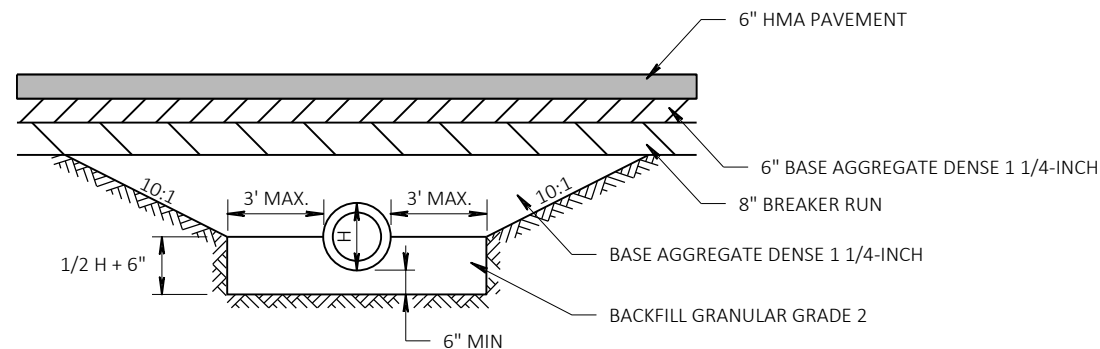


NOTE: DETAILS NOT SHOWN SHALL CONFORM TO STANDARD DETAIL DRAWING FOR STORM MANHOLES

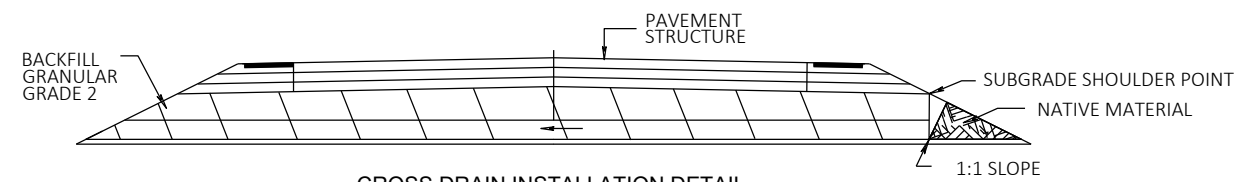
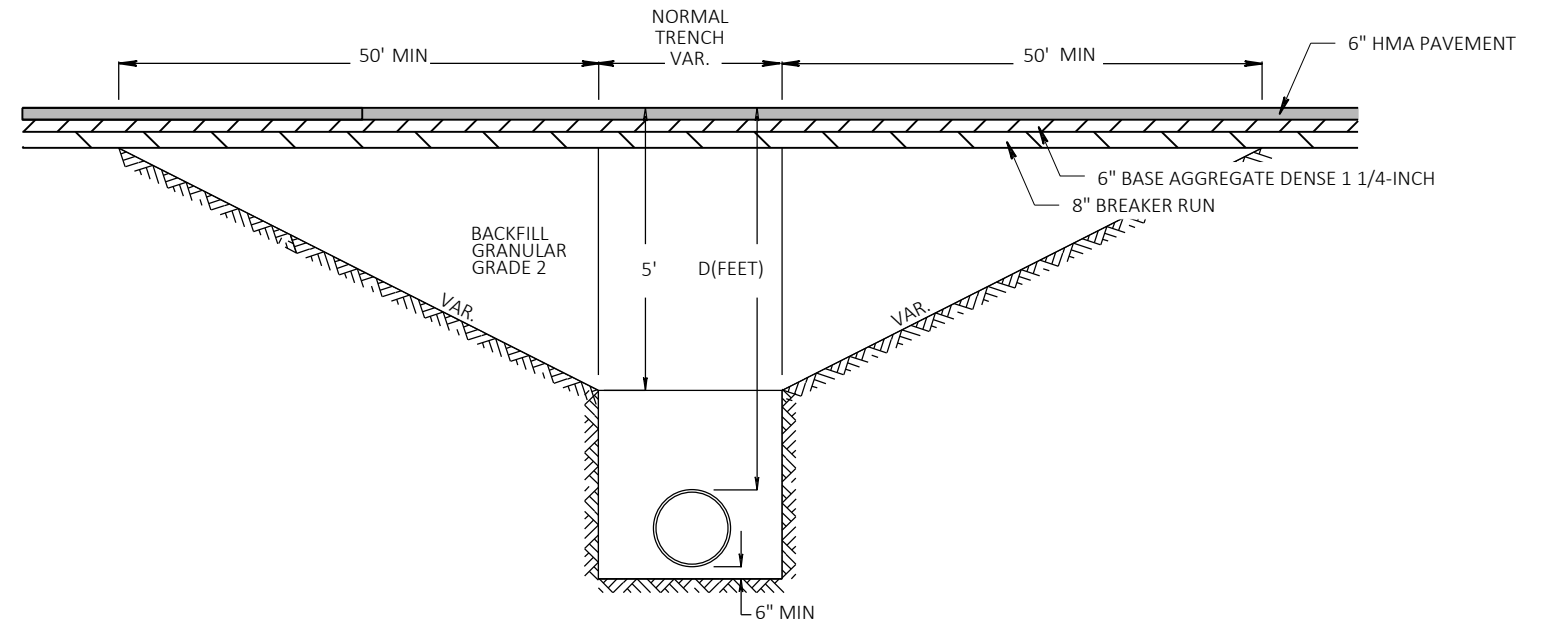
STORM MANHOLES



CROSS DRAIN INSTALLATION DETAIL
FOR $D \leq 5'$



STORM SEWER TRENCH DETAIL
LESS THEN 1' COVER
FROM SUBGRADE



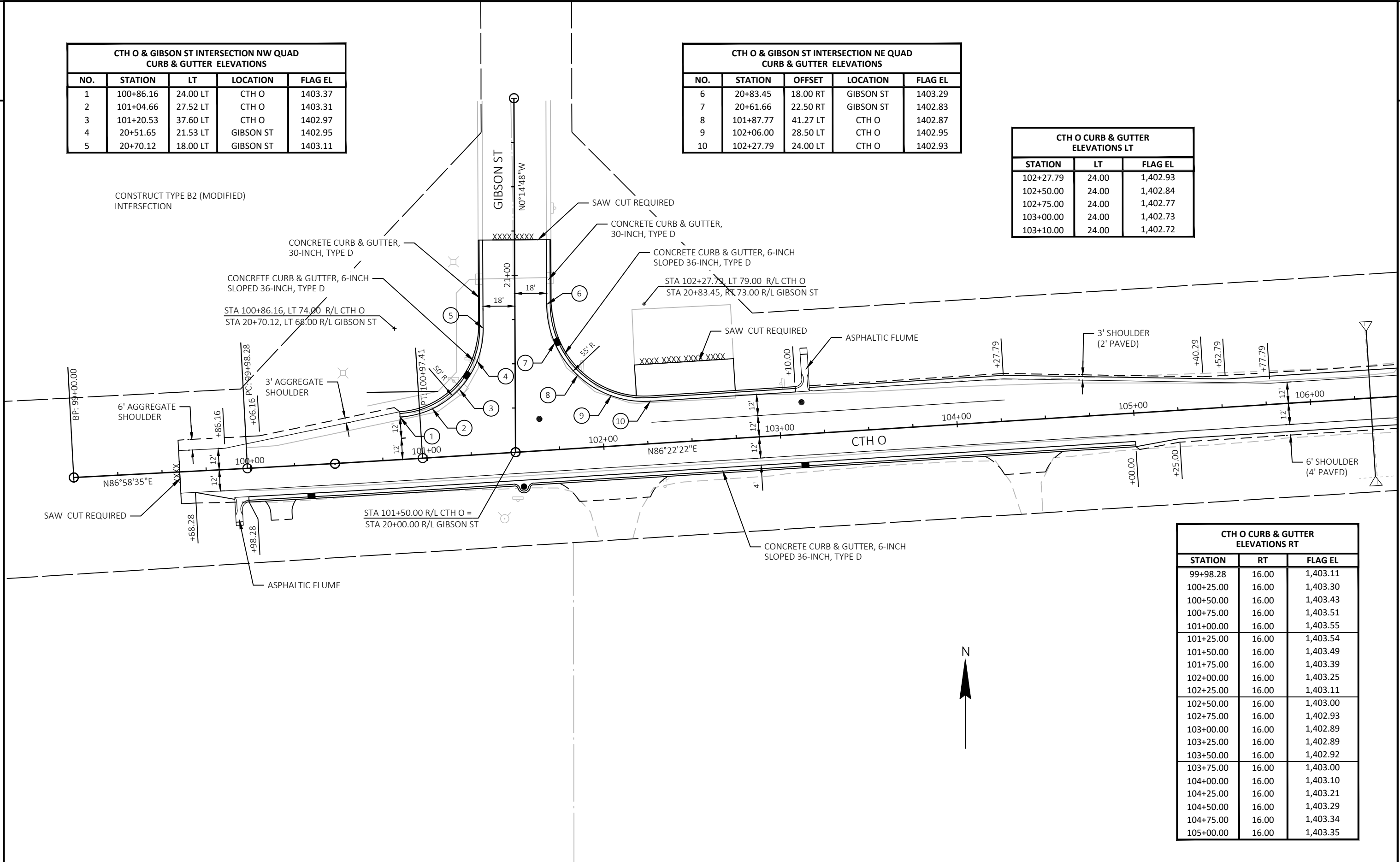
CROSS DRAIN INSTALLATION DETAIL
FOR $D \geq 5'$

| CTH O & GIBSON ST INTERSECTION NW QUAD CURB & GUTTER ELEVATIONS | | | | |
|--|-----------|----------|-----------|---------|
| NO. | STATION | LT | LOCATION | FLAG EL |
| 1 | 100+86.16 | 24.00 LT | CTH O | 1403.37 |
| 2 | 101+04.66 | 27.52 LT | CTH O | 1403.31 |
| 3 | 101+20.53 | 37.60 LT | CTH O | 1402.97 |
| 4 | 20+51.65 | 21.53 LT | GIBSON ST | 1402.95 |
| 5 | 20+70.12 | 18.00 LT | GIBSON ST | 1403.11 |

| CTH O & GIBSON ST INTERSECTION NE QUAD CURB & GUTTER ELEVATIONS | | | | |
|--|-----------|----------|-----------|---------|
| NO. | STATION | OFFSET | LOCATION | FLAG EL |
| 6 | 20+83.45 | 18.00 RT | GIBSON ST | 1403.29 |
| 7 | 20+61.66 | 22.50 RT | GIBSON ST | 1402.83 |
| 8 | 101+87.77 | 41.27 LT | CTH O | 1402.87 |
| 9 | 102+06.00 | 28.50 LT | CTH O | 1402.95 |
| 10 | 102+27.79 | 24.00 LT | CTH O | 1402.93 |

| CTH O CURB & GUTTER ELEVATIONS LT | | |
|--------------------------------------|-------|----------|
| STATION | LT | FLAG EL |
| 102+27.79 | 24.00 | 1,402.93 |
| 102+50.00 | 24.00 | 1,402.84 |
| 102+75.00 | 24.00 | 1,402.77 |
| 103+00.00 | 24.00 | 1,402.73 |
| 103+10.00 | 24.00 | 1,402.72 |

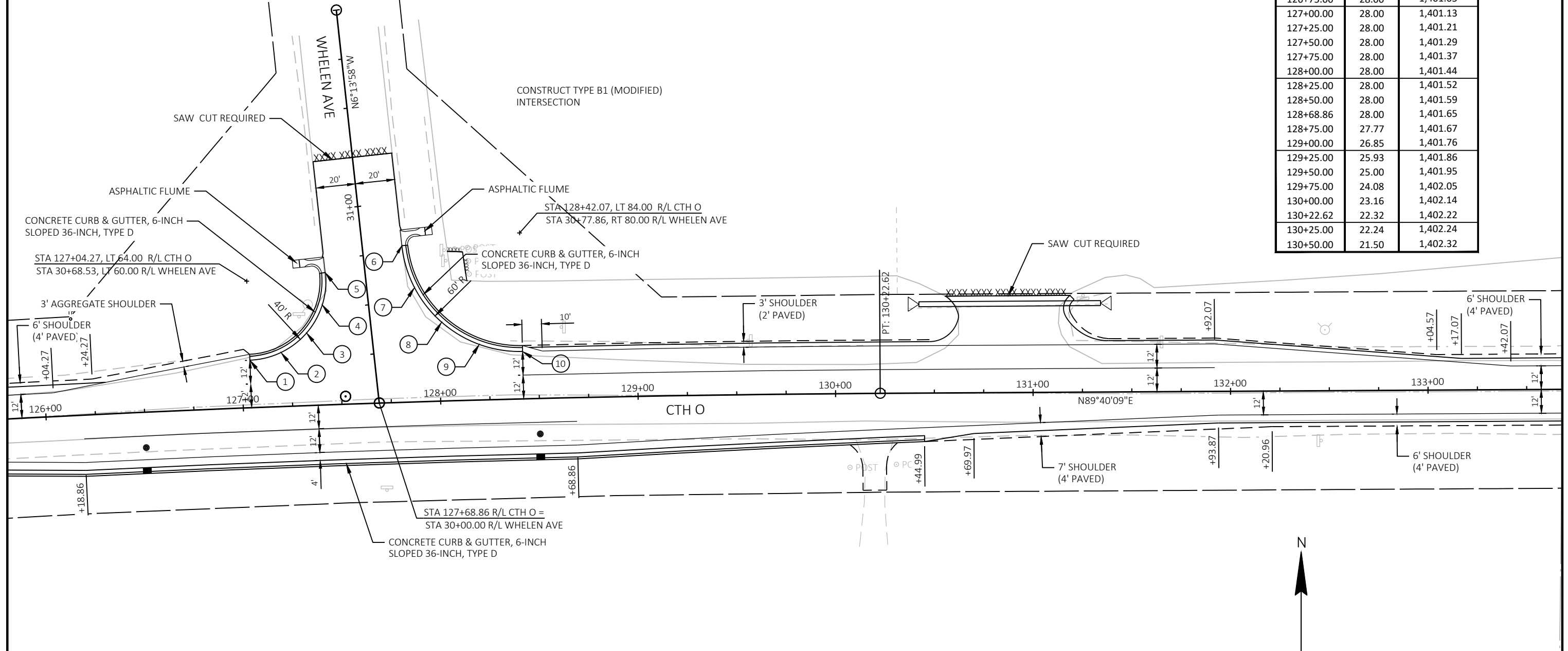
| CTH O CURB & GUTTER ELEVATIONS RT | | |
|--------------------------------------|-------|----------|
| STATION | RT | FLAG EL |
| 99+98.28 | 16.00 | 1,403.11 |
| 100+25.00 | 16.00 | 1,403.30 |
| 100+50.00 | 16.00 | 1,403.43 |
| 100+75.00 | 16.00 | 1,403.51 |
| 101+00.00 | 16.00 | 1,403.55 |
| 101+25.00 | 16.00 | 1,403.54 |
| 101+50.00 | 16.00 | 1,403.49 |
| 101+75.00 | 16.00 | 1,403.39 |
| 102+00.00 | 16.00 | 1,403.25 |
| 102+25.00 | 16.00 | 1,403.11 |
| 102+50.00 | 16.00 | 1,403.00 |
| 102+75.00 | 16.00 | 1,402.93 |
| 103+00.00 | 16.00 | 1,402.89 |
| 103+25.00 | 16.00 | 1,402.89 |
| 103+50.00 | 16.00 | 1,402.92 |
| 103+75.00 | 16.00 | 1,403.00 |
| 104+00.00 | 16.00 | 1,403.10 |
| 104+25.00 | 16.00 | 1,403.21 |
| 104+50.00 | 16.00 | 1,403.29 |
| 104+75.00 | 16.00 | 1,403.34 |
| 105+00.00 | 16.00 | 1,403.35 |



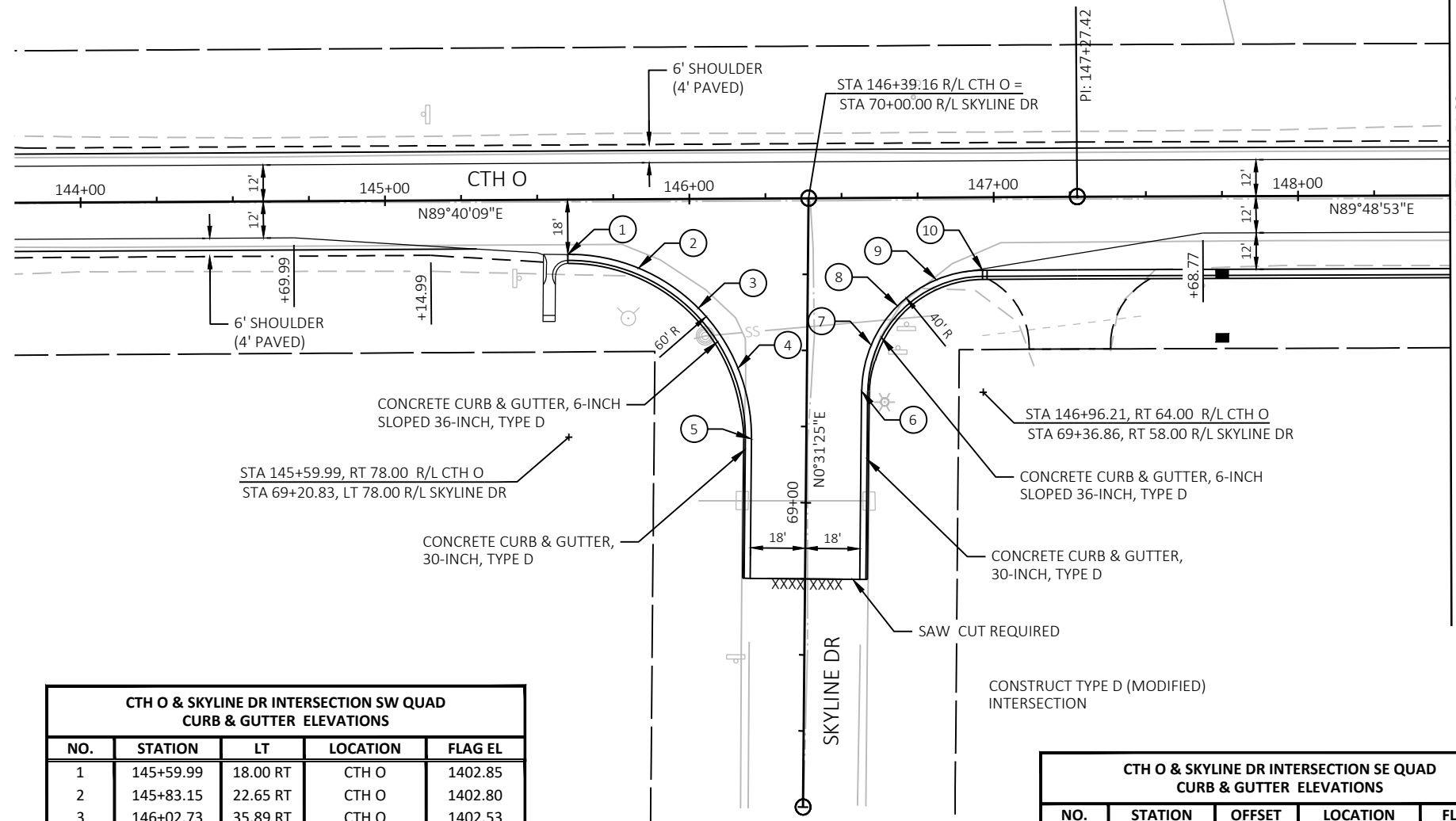
| CTH O & WHELEN AVE INTERSECTION NW QUAD CURB & GUTTER ELEVATIONS | | | | |
|--|-----------|----------|------------|---------|
| NO. | STATION | LT | LOCATION | FLAG EL |
| 1 | 127+04.27 | 24.00 LT | CTH O | 1401.23 |
| 2 | 127+20.17 | 27.33 LT | CTH O | 1401.21 |
| 3 | 127+33.40 | 36.76 LT | CTH O | 1401.01 |
| 4 | 30+52.59 | 23.32 LT | WHELEN AVE | 1400.80 |
| 5 | 30+68.53 | 20.00 LT | WHELEN AVE | 1400.65 |

| CTH O & WHELEN AVE INTERSECTION NE QUAD CURB & GUTTER ELEVATIONS | | | | |
|--|-----------|----------|------------|---------|
| NO. | STATION | OFFSET | LOCATION | FLAG EL |
| 6 | 30+77.86 | 20.00 RT | WHELEN AVE | 1400.60 |
| 7 | 30+56.07 | 24.10 RT | WHELEN AVE | 1400.77 |
| 8 | 128+01.63 | 39.92 LT | CTH O | 1401.07 |
| 9 | 128+20.34 | 28.12 LT | CTH O | 1401.48 |
| 10 | 128+42.07 | 24.00 LT | CTH O | 1401.65 |

| CTH O CURB & GUTTER ELEVATIONS RT | | |
|-----------------------------------|-------|----------|
| STATION | RT | FLAG EL |
| 124+81.23 | 20.39 | 1,400.45 |
| 125+00.00 | 21.43 | 1,400.50 |
| 125+25.00 | 22.81 | 1,400.57 |
| 125+50.00 | 24.19 | 1,400.65 |
| 125+75.00 | 25.57 | 1,400.73 |
| 126+00.00 | 26.96 | 1,400.80 |
| 126+18.86 | 28.00 | 1,400.85 |
| 126+25.00 | 28.00 | 1,400.87 |
| 126+50.00 | 28.00 | 1,400.96 |
| 126+75.00 | 28.00 | 1,401.05 |
| 127+00.00 | 28.00 | 1,401.13 |
| 127+25.00 | 28.00 | 1,401.21 |
| 127+50.00 | 28.00 | 1,401.29 |
| 127+75.00 | 28.00 | 1,401.37 |
| 128+00.00 | 28.00 | 1,401.44 |
| 128+25.00 | 28.00 | 1,401.52 |
| 128+50.00 | 28.00 | 1,401.59 |
| 128+68.86 | 28.00 | 1,401.65 |
| 128+75.00 | 27.77 | 1,401.67 |
| 129+00.00 | 26.85 | 1,401.76 |
| 129+25.00 | 25.93 | 1,401.86 |
| 129+50.00 | 25.00 | 1,401.95 |
| 129+75.00 | 24.08 | 1,402.05 |
| 130+00.00 | 23.16 | 1,402.14 |
| 130+22.62 | 22.32 | 1,402.22 |
| 130+25.00 | 22.24 | 1,402.24 |
| 130+50.00 | 21.50 | 1,402.32 |



| CTH O CURB & GUTTER ELEVATIONS RT | | |
|-----------------------------------|-------|----------|
| STATION | RT | FLAG EL |
| 146+96.21 | 24.00 | 1,403.39 |
| 147+00.00 | 24.00 | 1,403.41 |
| 147+25.00 | 24.00 | 1,402.55 |
| 147+50.00 | 24.00 | 1,403.69 |
| 147+75.00 | 24.00 | 1,403.84 |
| 148+00.00 | 24.00 | 1,403.98 |
| 148+25.00 | 24.00 | 1,404.13 |
| 148+50.00 | 24.00 | 1,404.29 |

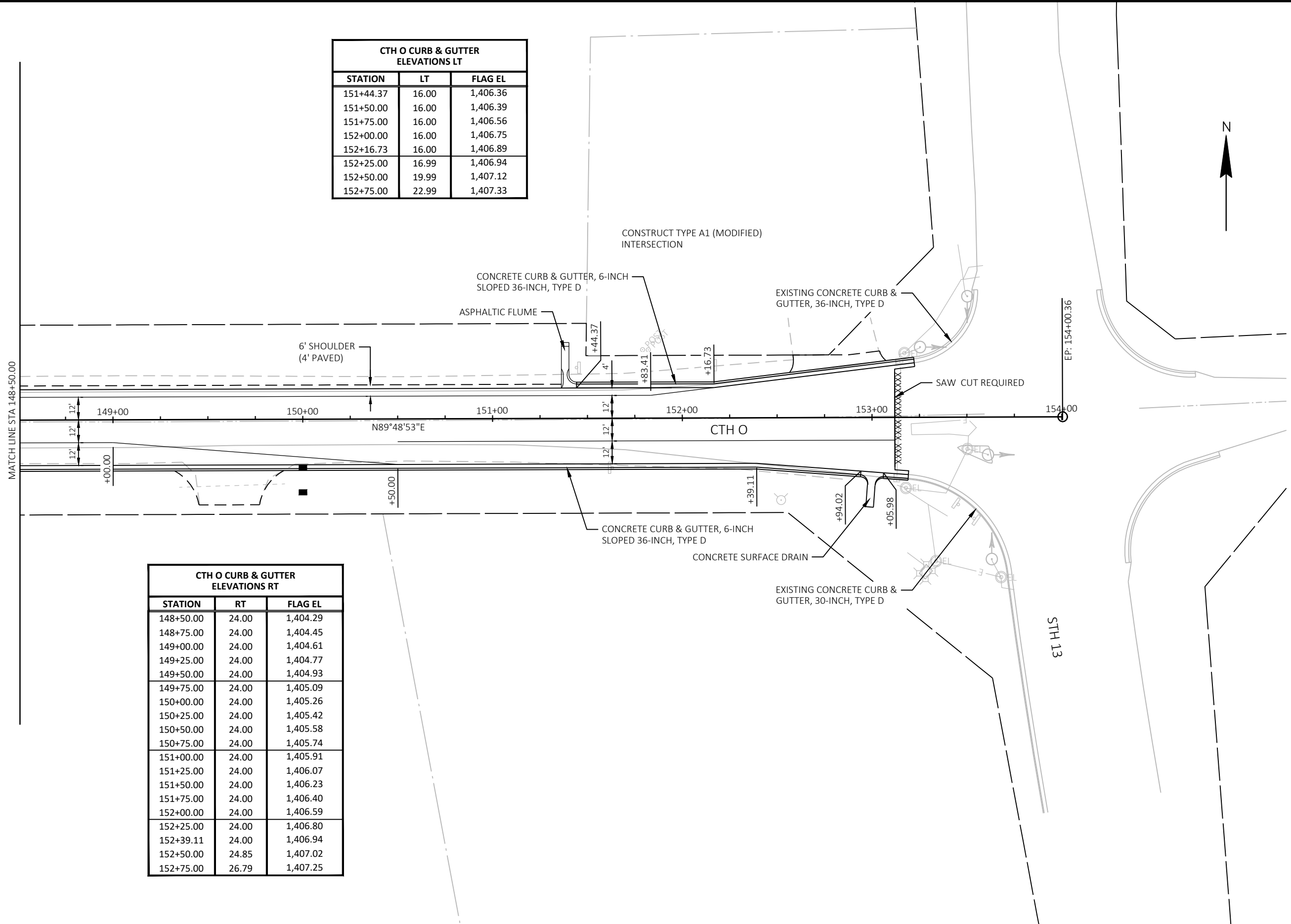


| CTH O & SKYLINE DR INTERSECTION SW QUAD CURB & GUTTER ELEVATIONS | | | | |
|--|-----------|----------|------------|---------|
| NO. | STATION | LT | LOCATION | FLAG EL |
| 1 | 145+59.99 | 18.00 RT | CTH O | 1402.85 |
| 2 | 145+83.15 | 22.65 RT | CTH O | 1402.80 |
| 3 | 146+02.73 | 35.89 RT | CTH O | 1402.53 |
| 4 | 69+44.00 | 22.65 LT | SKYLINE DR | 1402.17 |
| 5 | 69+20.83 | 18.00 LT | SKYLINE DR | 1401.90 |

| CTH O & SKYLINE DR INTERSECTION SE QUAD CURB & GUTTER ELEVATIONS | | | | |
|--|-----------|----------|------------|---------|
| NO. | STATION | OFFSET | LOCATION | FLAG EL |
| 6 | 69+36.86 | 18.00 RT | SKYLINE DR | 1402.04 |
| 7 | 69+52.03 | 20.99 RT | SKYLINE DR | 1402.31 |
| 8 | 146+68.14 | 35.51 RT | CTH O | 1402.77 |
| 9 | 146+81.04 | 26.99 RT | CTH O | 1403.22 |
| 10 | 146+96.21 | 24.00 RT | CTH O | 1403.39 |

| CTH O CURB & GUTTER ELEVATIONS LT | | |
|-----------------------------------|-------|----------|
| STATION | LT | FLAG EL |
| 151+44.37 | 16.00 | 1,406.36 |
| 151+50.00 | 16.00 | 1,406.39 |
| 151+75.00 | 16.00 | 1,406.56 |
| 152+00.00 | 16.00 | 1,406.75 |
| 152+16.73 | 16.00 | 1,406.89 |
| 152+25.00 | 16.99 | 1,406.94 |
| 152+50.00 | 19.99 | 1,407.12 |
| 152+75.00 | 22.99 | 1,407.33 |


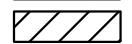
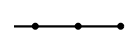
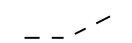




| CTH O CURB & GUTTER ELEVATIONS RT | | |
|-----------------------------------|-------|----------|
| STATION | RT | FLAG EL |
| 148+50.00 | 24.00 | 1,404.29 |
| 148+75.00 | 24.00 | 1,404.45 |
| 149+00.00 | 24.00 | 1,404.61 |
| 149+25.00 | 24.00 | 1,404.77 |
| 149+50.00 | 24.00 | 1,404.93 |
| 149+75.00 | 24.00 | 1,405.09 |
| 150+00.00 | 24.00 | 1,405.26 |
| 150+25.00 | 24.00 | 1,405.42 |
| 150+50.00 | 24.00 | 1,405.58 |
| 150+75.00 | 24.00 | 1,405.74 |
| 151+00.00 | 24.00 | 1,405.91 |
| 151+25.00 | 24.00 | 1,406.07 |
| 151+50.00 | 24.00 | 1,406.23 |
| 151+75.00 | 24.00 | 1,406.40 |
| 152+00.00 | 24.00 | 1,406.59 |
| 152+25.00 | 24.00 | 1,406.80 |
| 152+39.11 | 24.00 | 1,406.94 |
| 152+50.00 | 24.85 | 1,407.02 |
| 152+75.00 | 26.79 | 1,407.25 |



2

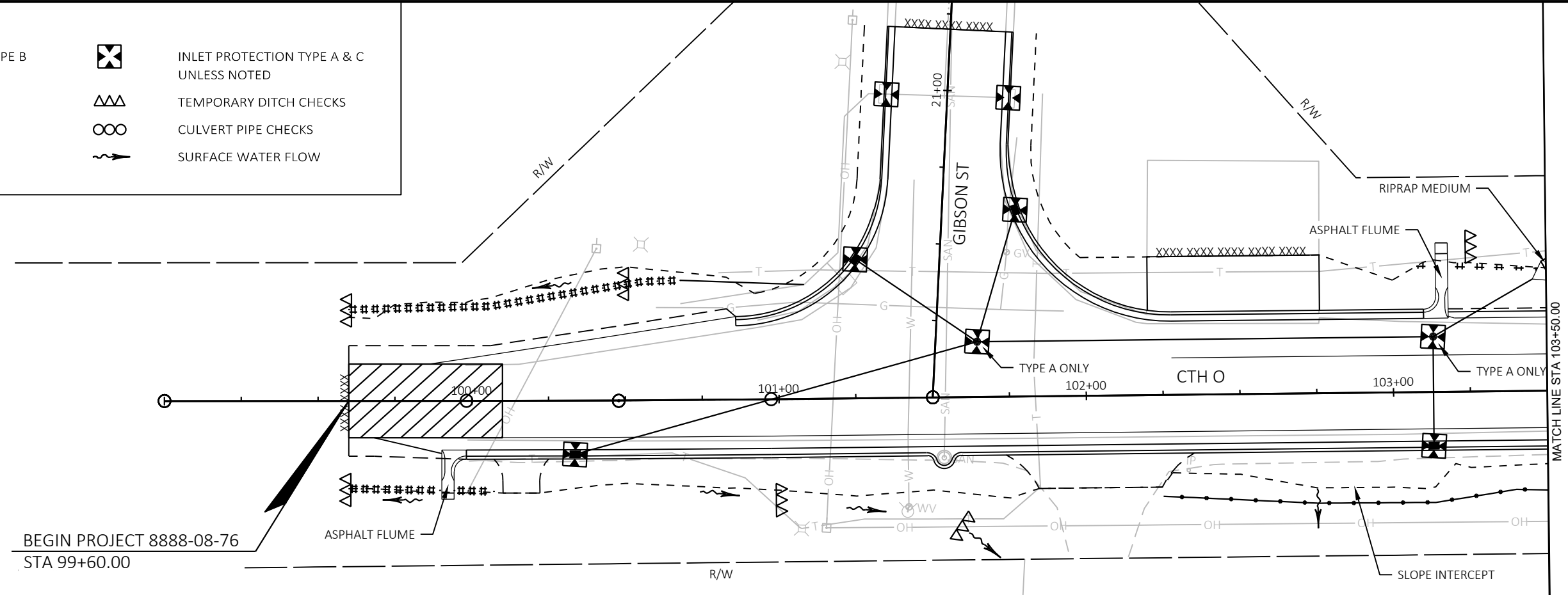
2

LEGEND

- ##### EROSION MAT URBAN CLASS I TYPE B
-  FIELDSTONE RIPRAP LIGHT
-  TRACKING PADS
-  SILT FENCE
-  SLOPE INTERCEPT
-  INLET PROTECTION TYPE A & C UNLESS NOTED
-  TEMPORARY DITCH CHECKS
-  CULVERT PIPE CHECKS
-  SURFACE WATER FLOW



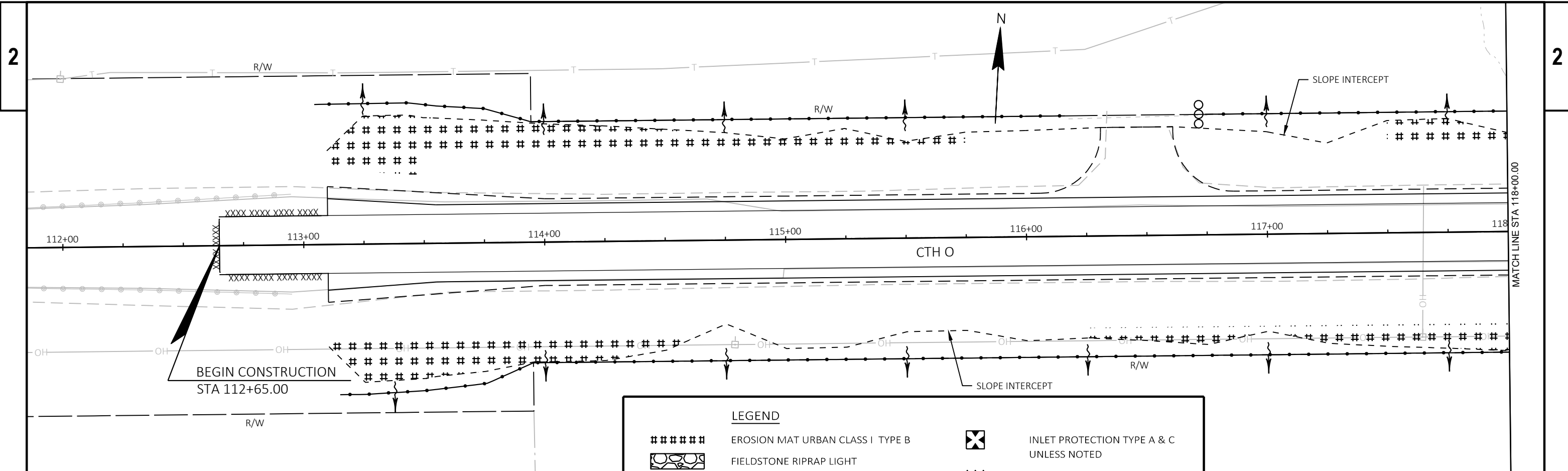
BEGIN PROJECT 8888-08-76
STA 99+60.00



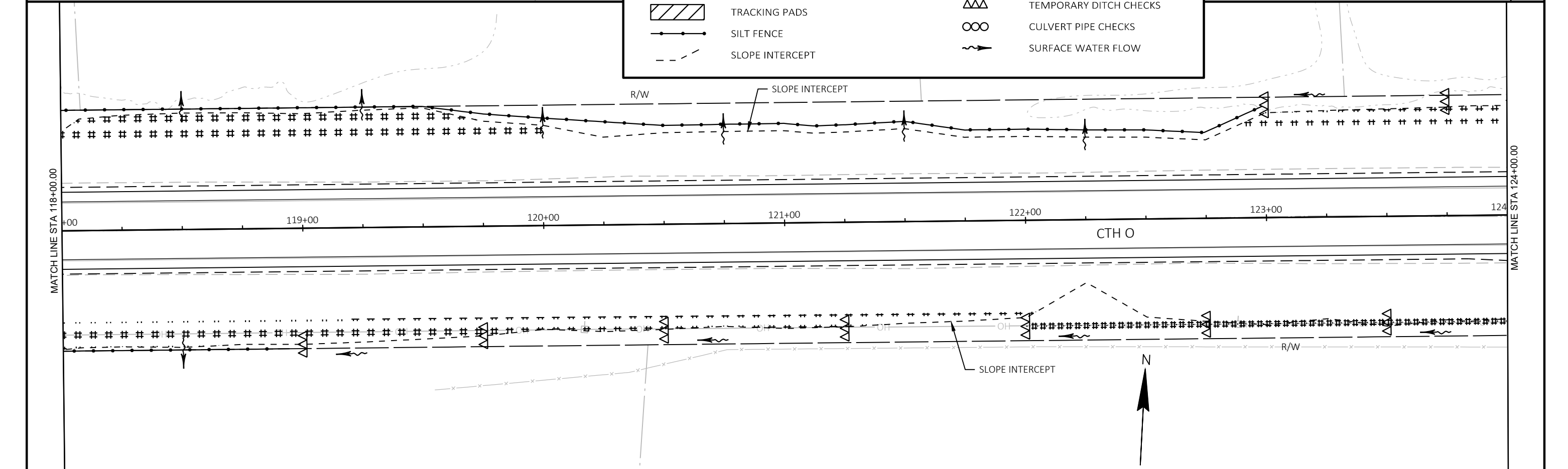
END CONSTRUCTION
STA 108+80.00

MATCH LINE STA 103+50.00

MATCH LINE STA 103+50.00

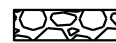
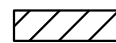
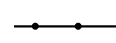
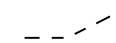






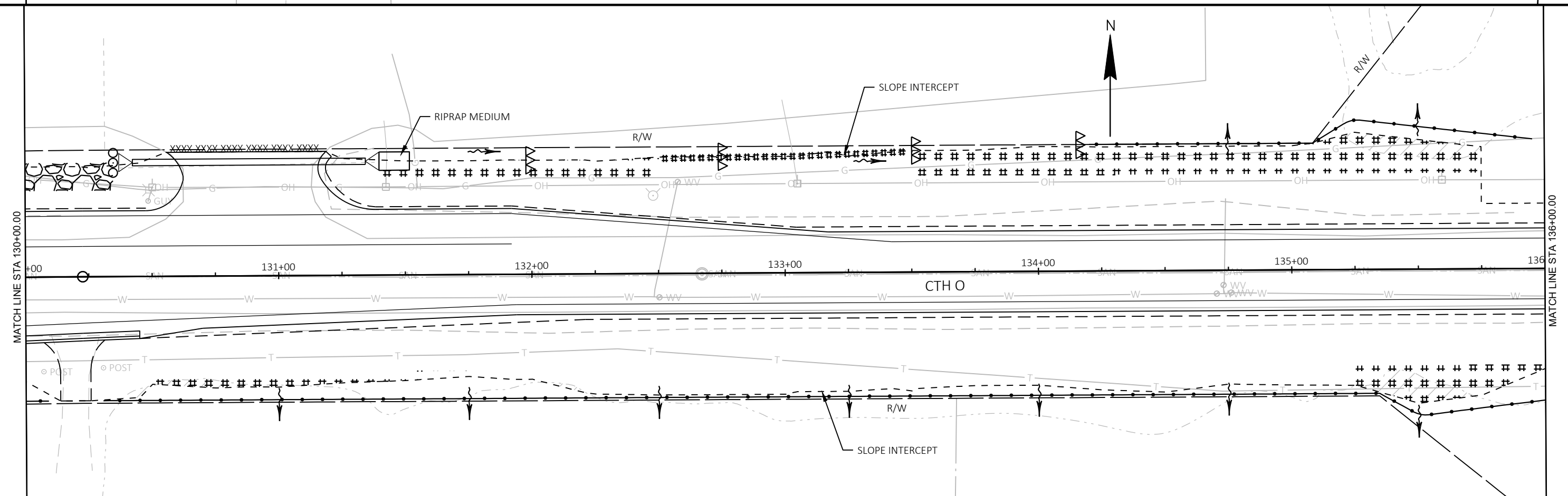
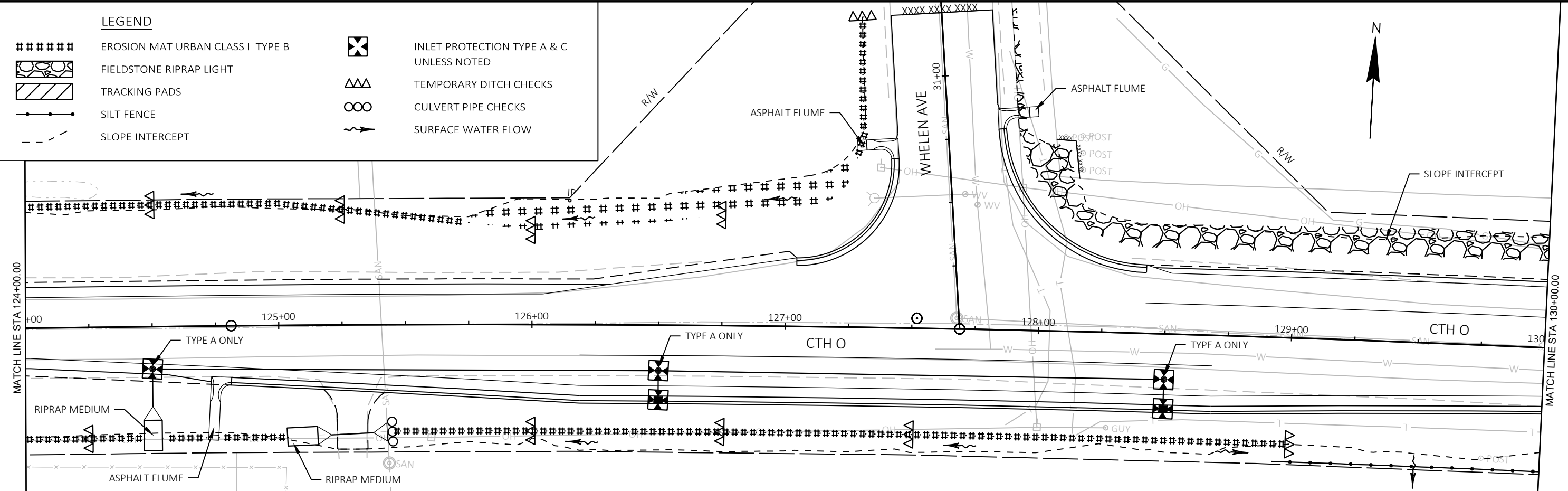
| LEGEND | |
|--------|--|
| ##### | EROSION MAT URBAN CLASS I TYPE B |
| | FIELDSTONE RIPRAP LIGHT |
| | TRACKING PADS |
| | SILT FENCE |
| | SLOPE INTERCEPT |
| | INLET PROTECTION TYPE A & C UNLESS NOTED |
| | TEMPORARY DITCH CHECKS |
| | CULVERT PIPE CHECKS |
| | SURFACE WATER FLOW |

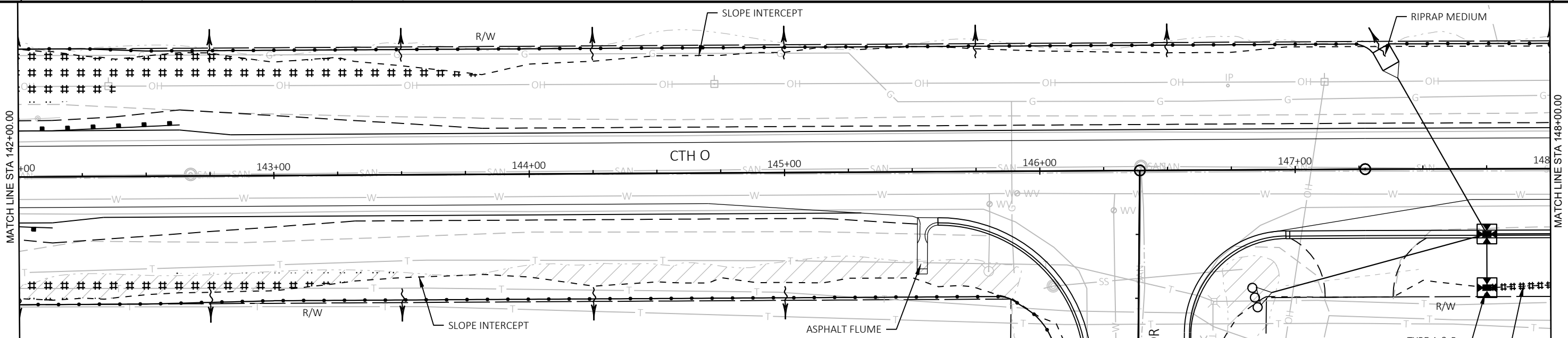
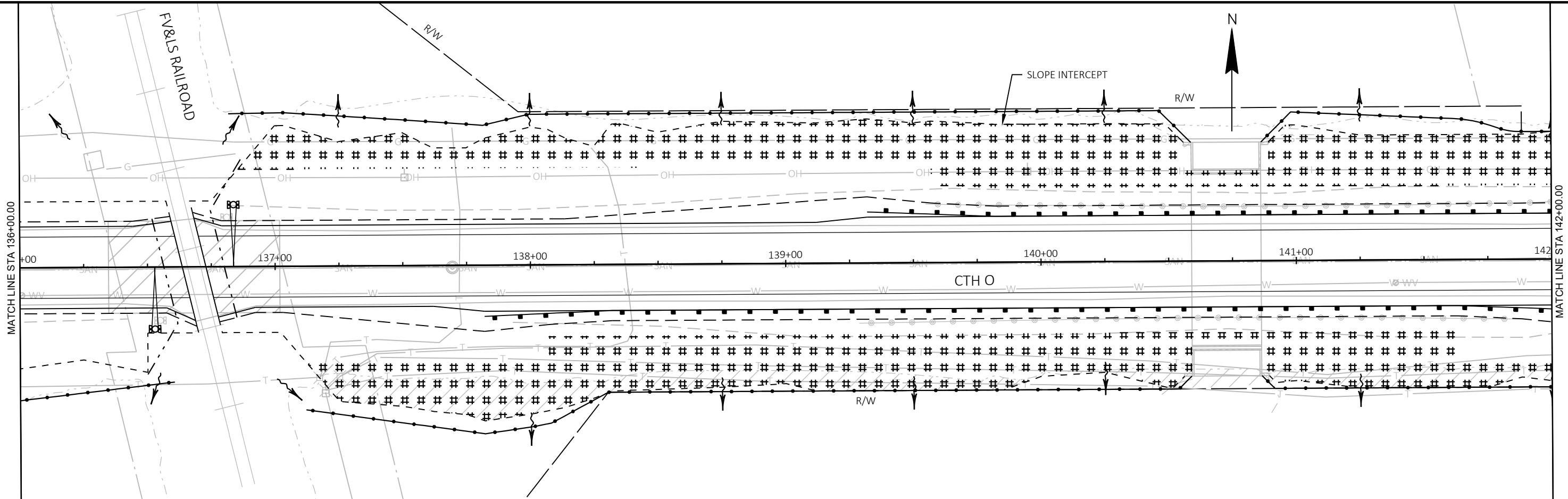


| | | | | | |
|------------------------|------------|----------------|-----------------|-------|---|
| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | EROSION CONTROL | SHEET | E |
|------------------------|------------|----------------|-----------------|-------|---|

LEGEND

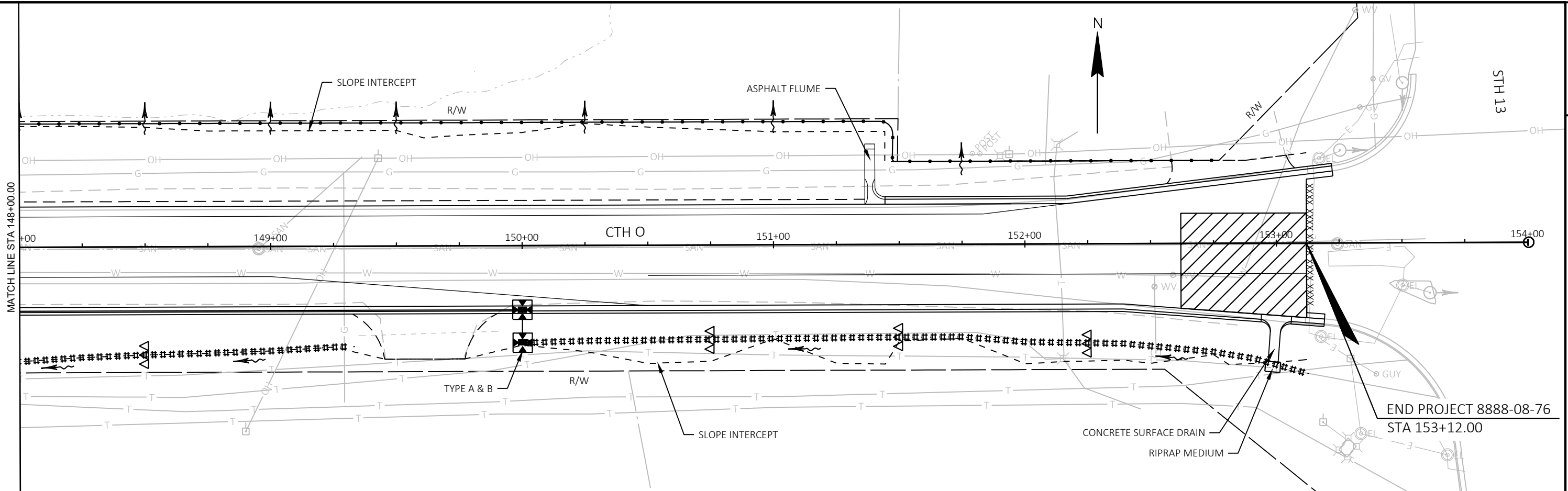
- ##### EROSION MAT URBAN CLASS I TYPE B
-  FIELDSTONE RIPRAP LIGHT
-  TRACKING PADS
-  SILT FENCE
-  SLOPE INTERCEPT
-  INLET PROTECTION TYPE A & C UNLESS NOTED
-  TEMPORARY DITCH CHECKS
-  CULVERT PIPE CHECKS
-  SURFACE WATER FLOW





LEGEND

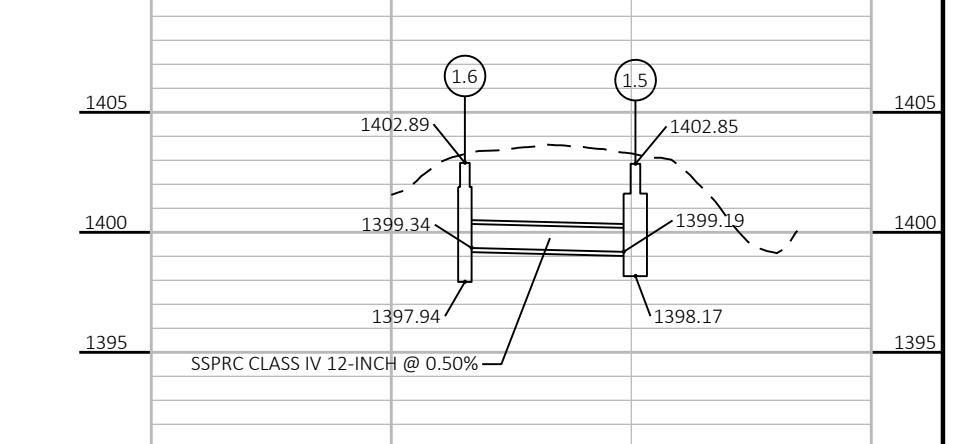
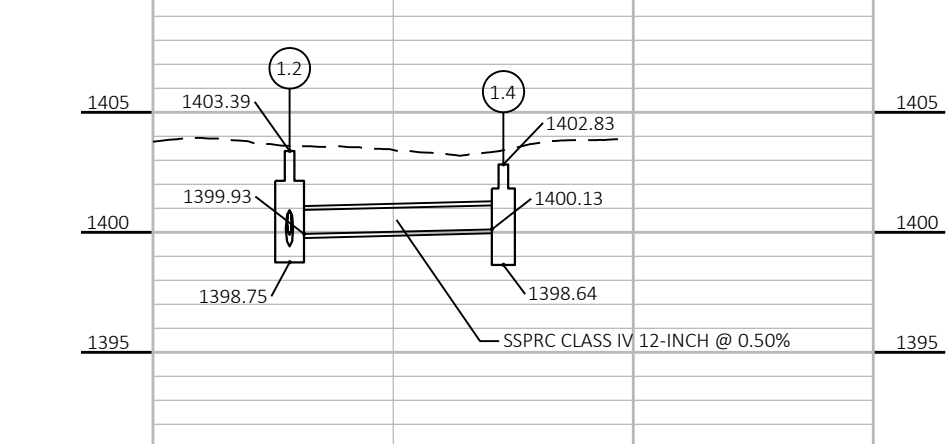
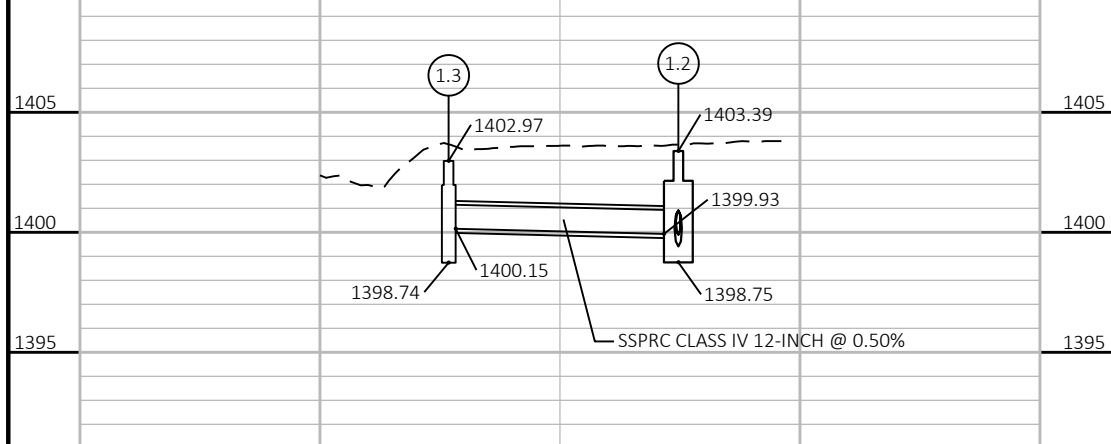
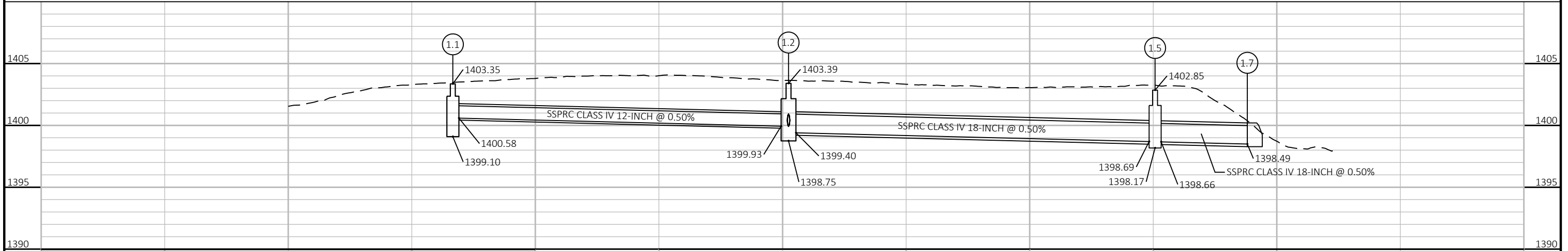
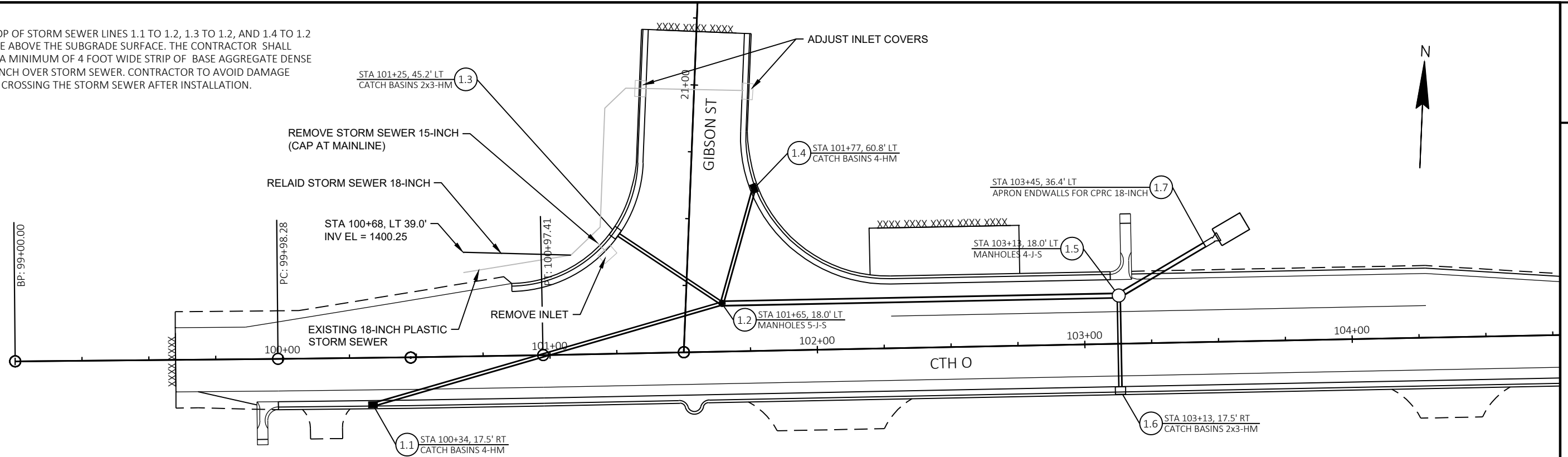
| | | | |
|-------|----------------------------------|----|--|
| ##### | EROSION MAT URBAN CLASS I TYPE B | ⊗ | INLET PROTECTION TYPE A & C UNLESS NOTED |
| ⊘ | FIELDSTONE RIPRAP LIGHT | △△ | TEMPORARY DITCH CHECKS |
| ▨ | TRACKING PADS | ∞ | CULVERT PIPE CHECKS |
| —●— | SILT FENCE | ~ | SURFACE WATER FLOW |
| - - - | SLOPE INTERCEPT | | |

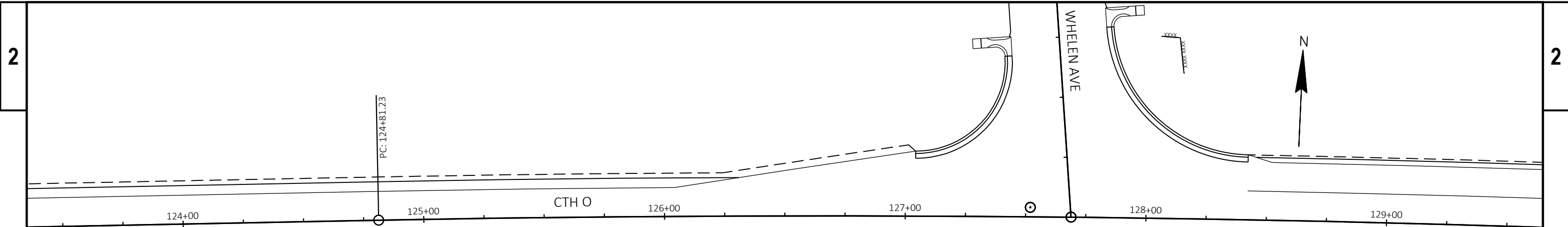


LEGEND

| | | | |
|-------|----------------------------------|--|--|
| ##### | EROSION MAT URBAN CLASS I TYPE B | | INLET PROTECTION TYPE A & C UNLESS NOTED |
| | FIELDSTONE RIPRAP LIGHT | | TEMPORARY DITCH CHECKS |
| | TRACKING PADS | | CULVERT PIPE CHECKS |
| | SILT FENCE | | SURFACE WATER FLOW |
| | SLOPE INTERCEPT | | |

NOTE: THE TOP OF STORM SEWER LINES 1.1 TO 1.2, 1.3 TO 1.2, AND 1.4 TO 1.2 WILL BE ABOVE THE SUBGRADE SURFACE. THE CONTRACTOR SHALL PLACE A MINIMUM OF 4 FOOT WIDE STRIP OF BASE AGGREGATE DENSE 1 1/4-INCH OVER STORM SEWER. CONTRACTOR TO AVOID DAMAGE WHEN CROSSING THE STORM SEWER AFTER INSTALLATION.





STA 124+50, 16.7' RT
MANHOLES 4-J-S

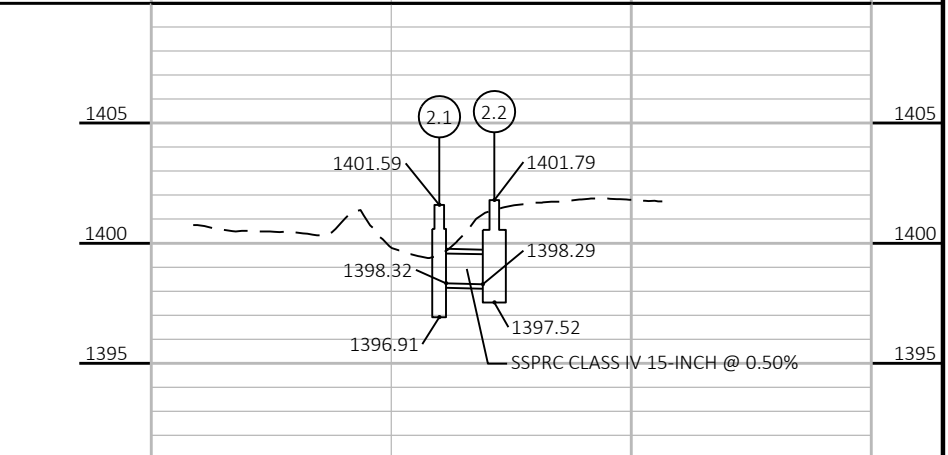
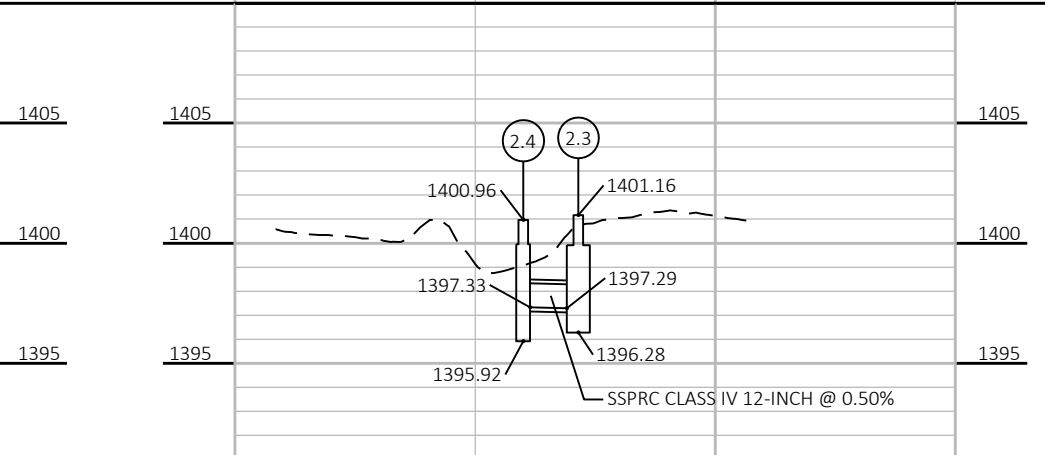
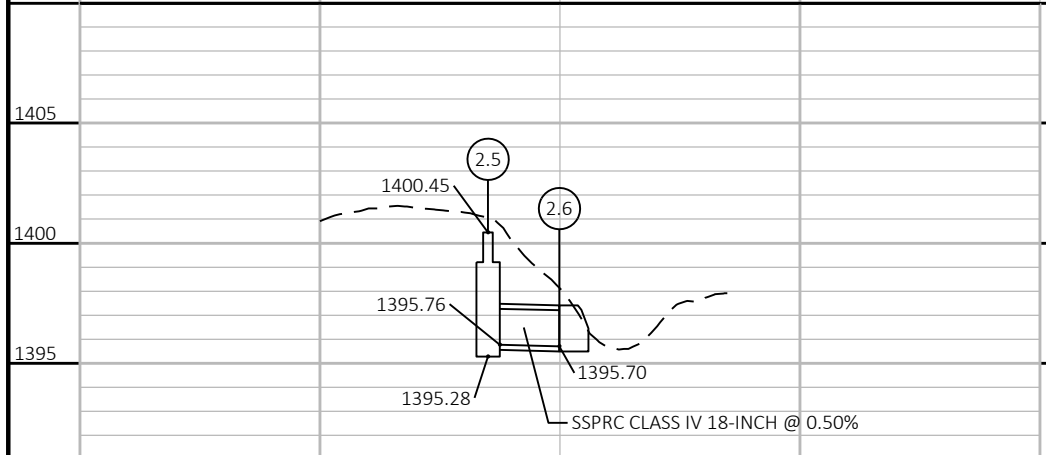
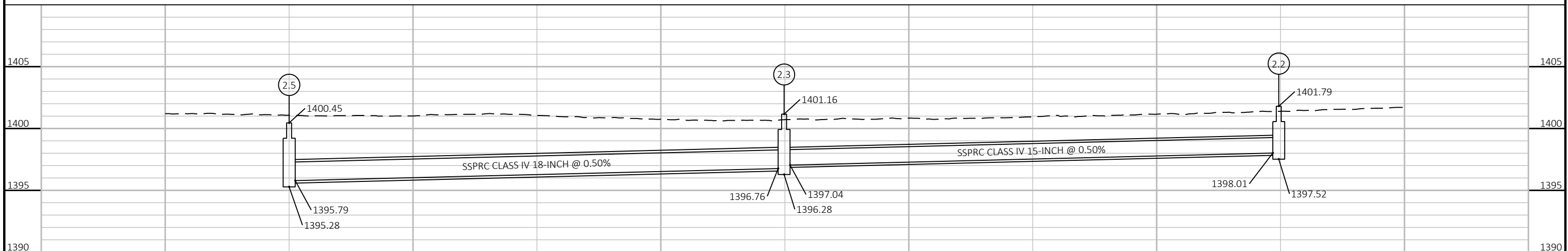
2.6 STA 124+50, 31.5' RT
APRON ENDWALLS FOR CPRC 18-INCH

2.3 STA 126+50, 18.0' RT
MANHOLES 4-J-S

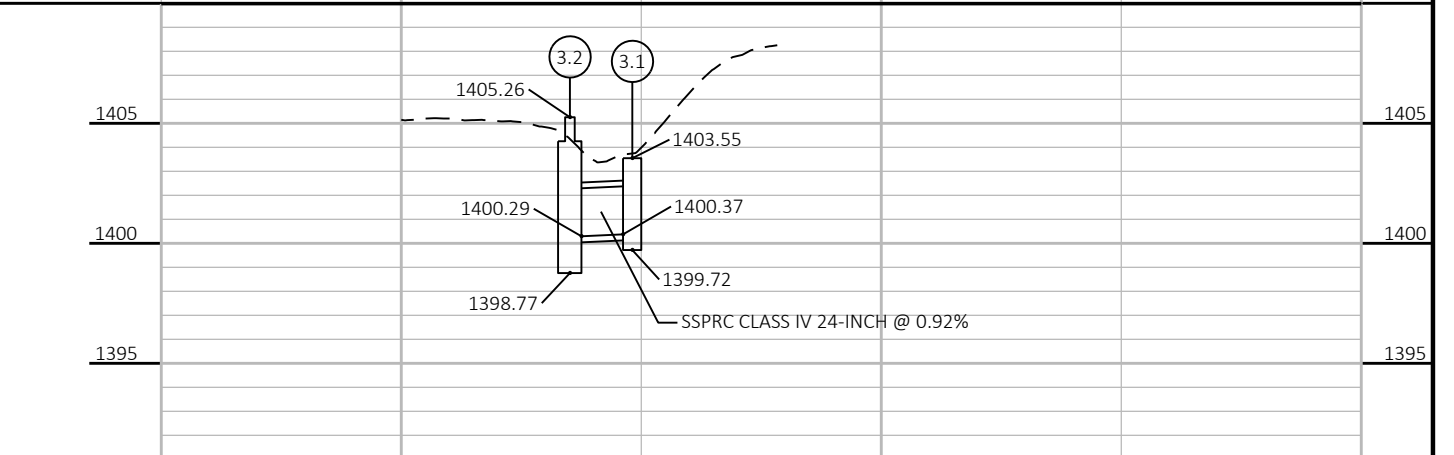
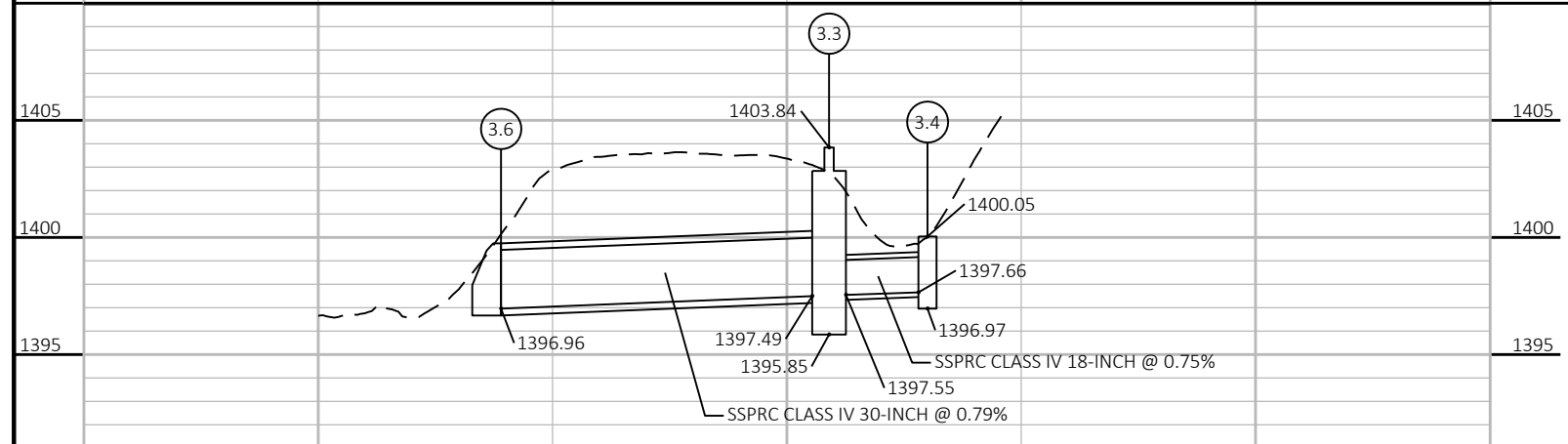
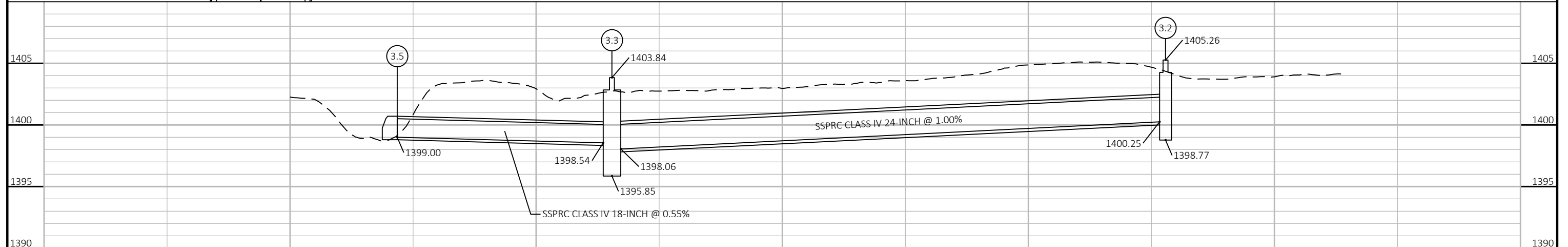
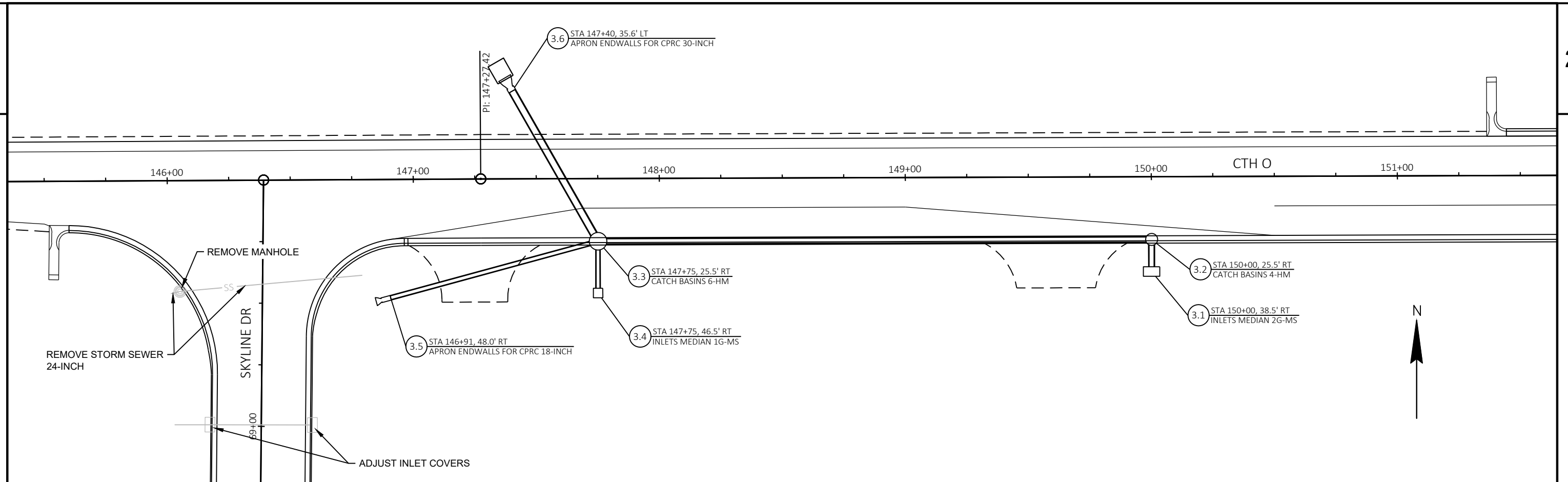
2.4 STA 126+50, 29.5' RT
CATCH BASINS 2x3-HM

2.2 STA 128+50, 18.0' RT
MANHOLES 4-J-S

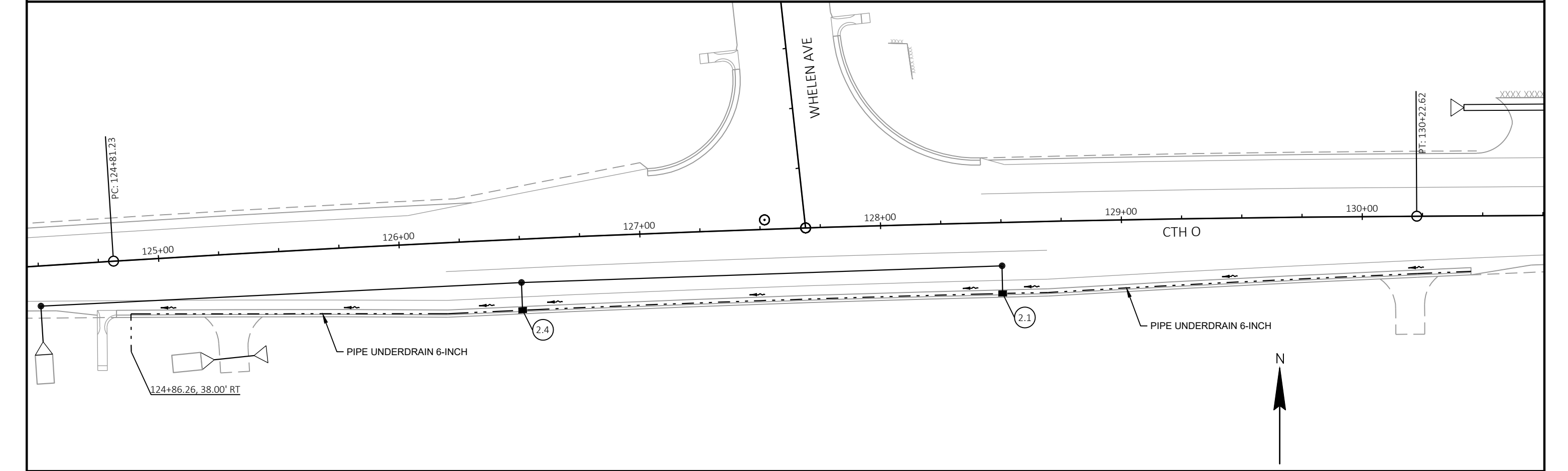
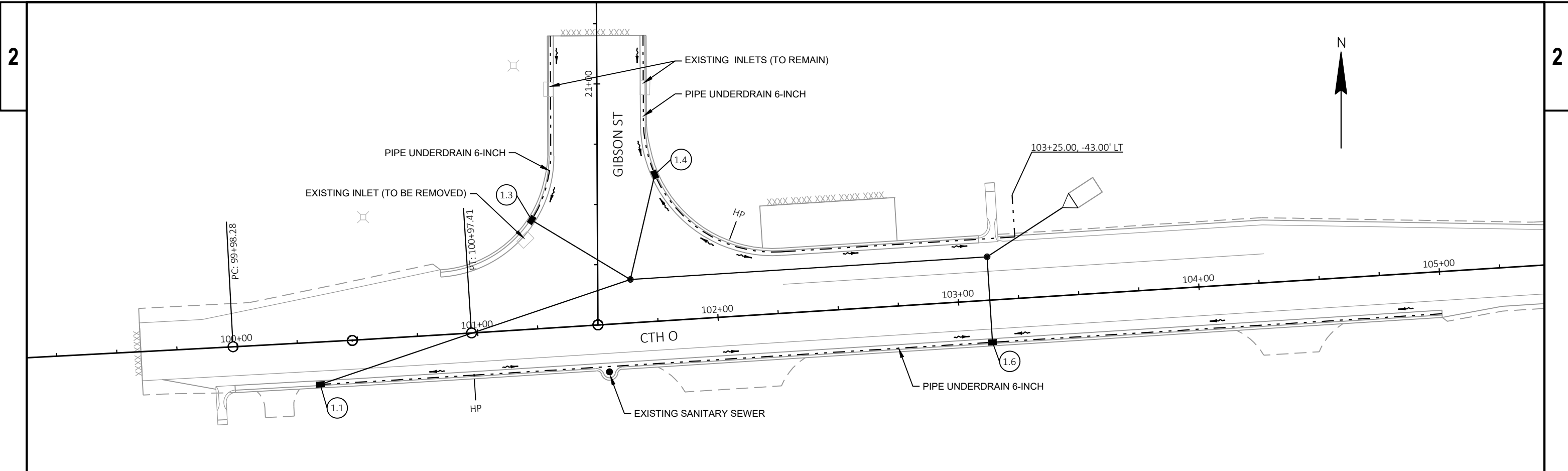
2.1 STA 128+50, 29.5' RT
CATCH BASINS 2x3-HM



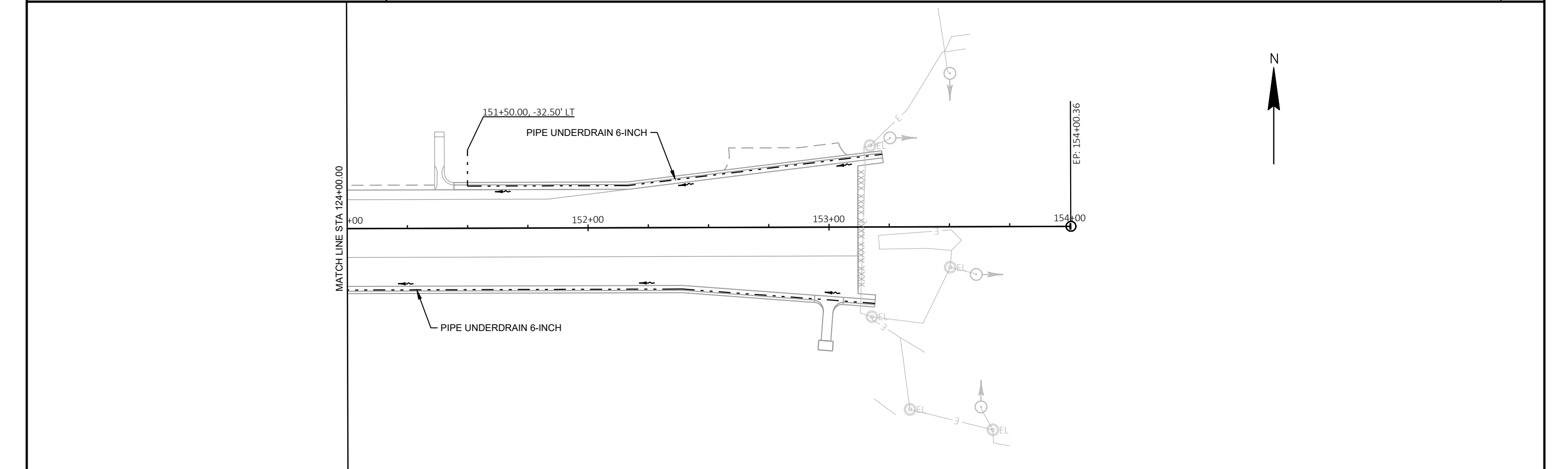
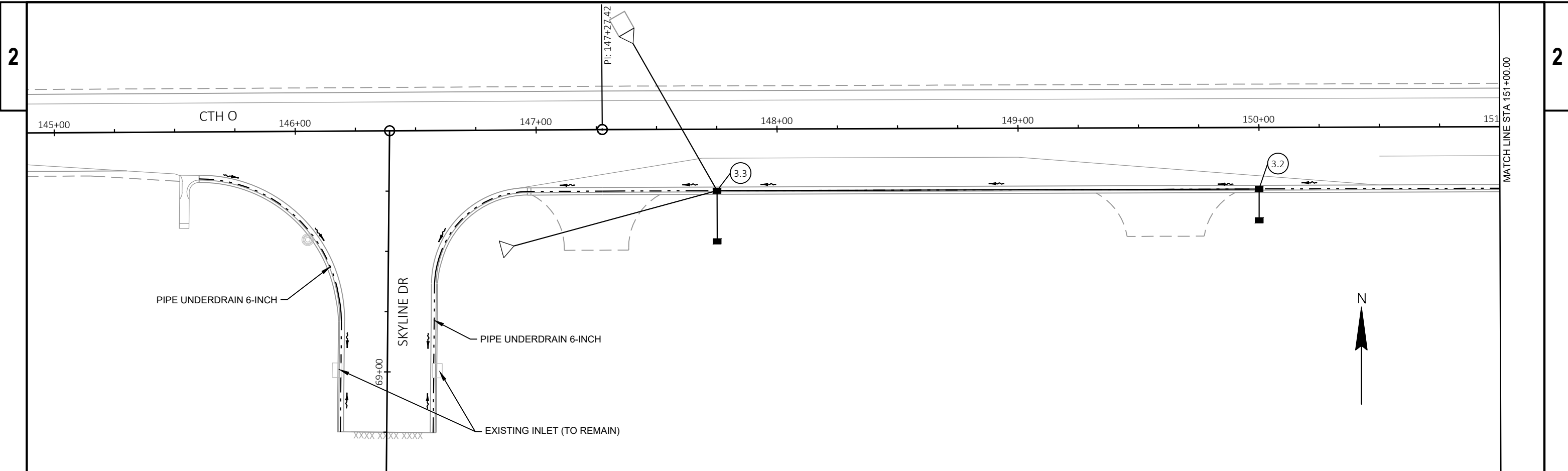
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR STORM SEWER SHEET E



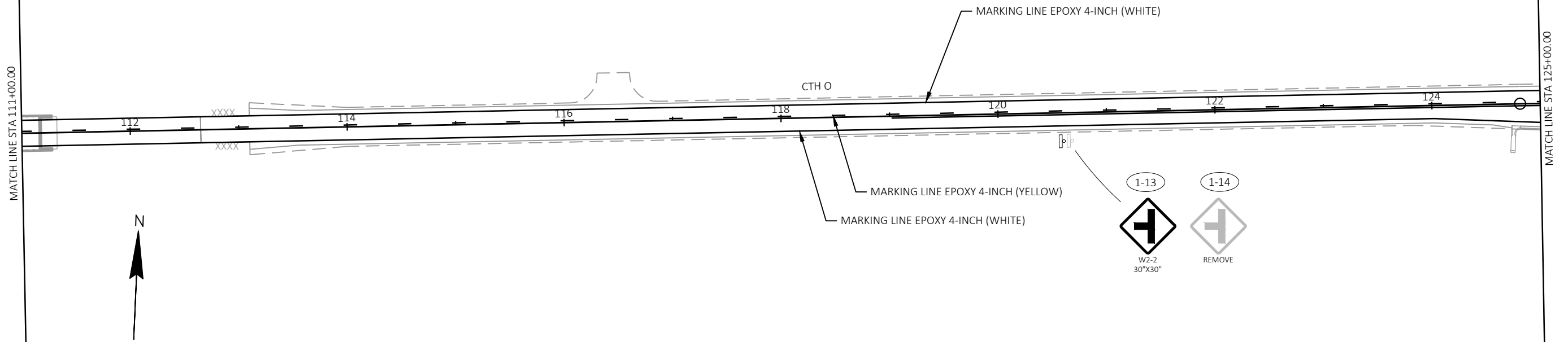
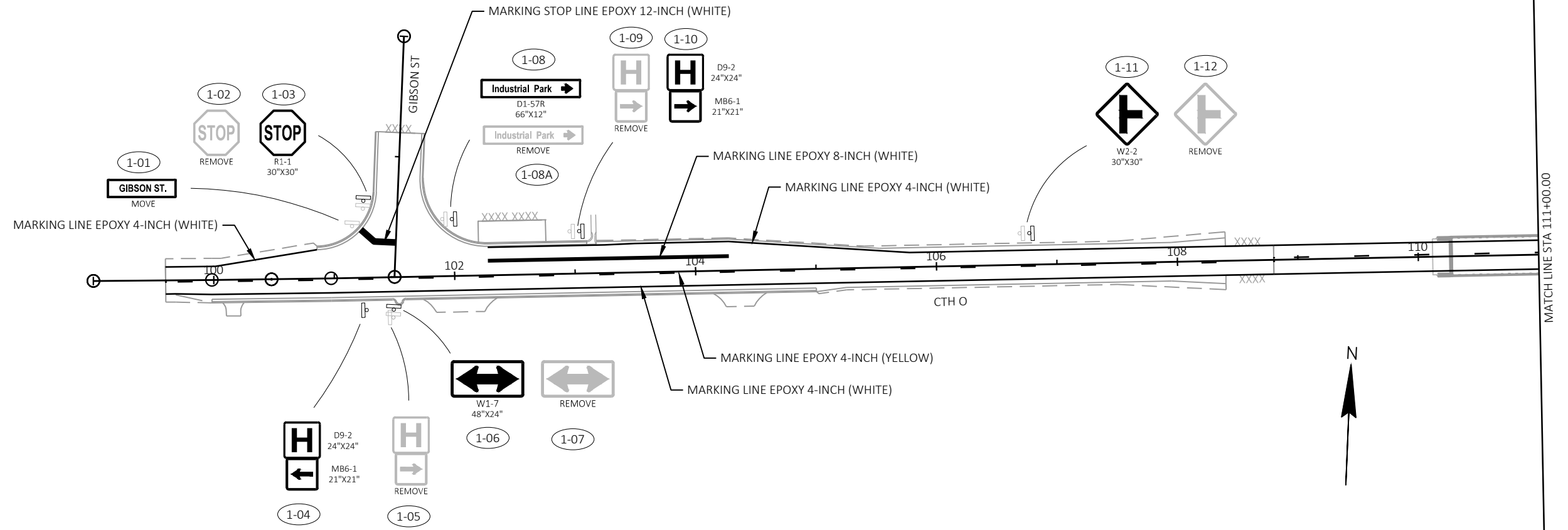
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|------------------------|------------|----------------|-------------|-------|---|
| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | STORM SEWER | SHEET | E |
|------------------------|------------|----------------|-------------|-------|---|

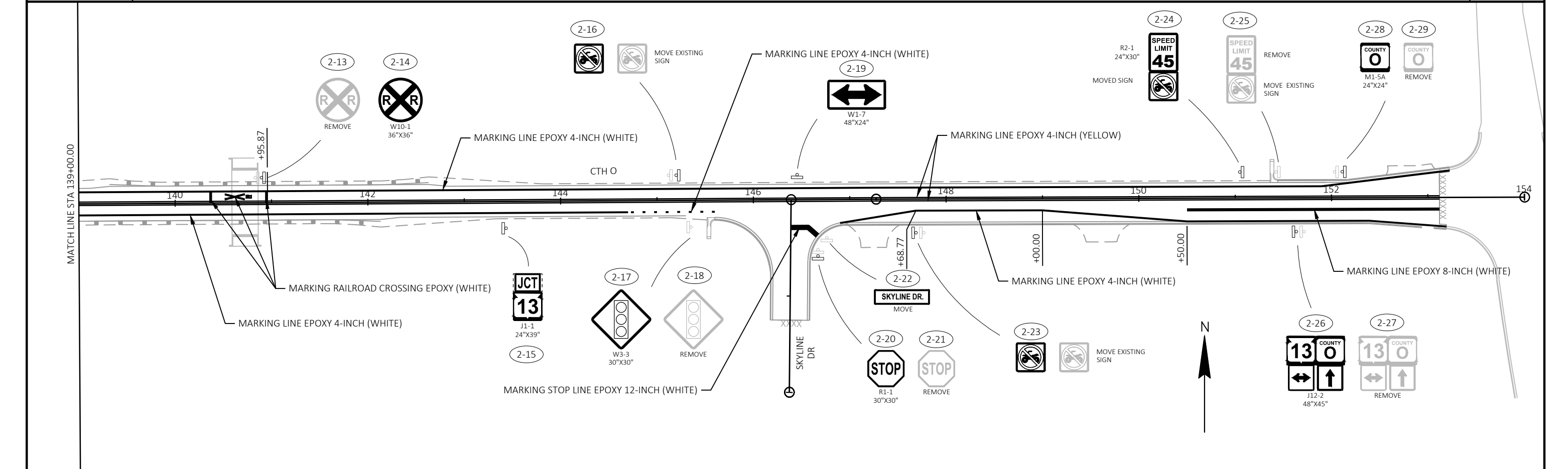
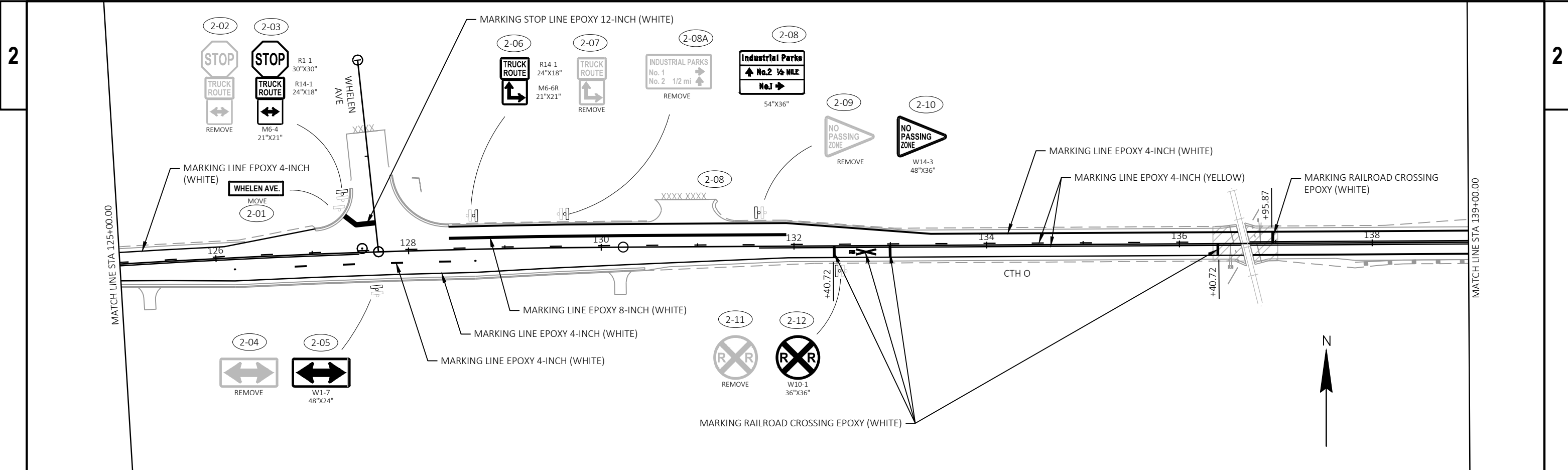


| | | | | | |
|------------------------|------------|----------------|-----------------|-------|---|
| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | PIPE UNDERDRAIN | SHEET | E |
|------------------------|------------|----------------|-----------------|-------|---|



| | | | | | |
|------------------------|------------|----------------|-----------------|-------|----------|
| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | PIPE UNDERDRAIN | SHEET | E |
|------------------------|------------|----------------|-----------------|-------|----------|





GENERAL NOTES FOR CHANGEABLE MESSAGE SIGNS

PCMS = PORTABLE CHANGEABLE MESSAGE BOARD

CONSIDER ROADWAY GEOMETRY WHEN LOCATION MESSAGE SIGNS. PLACE THE SIGNS SO THE DRIVER HAS CLEAR VIEW OF THE SIGN FOR A MINIMUM OF 1,000 FEET. PCMS BOARD LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.

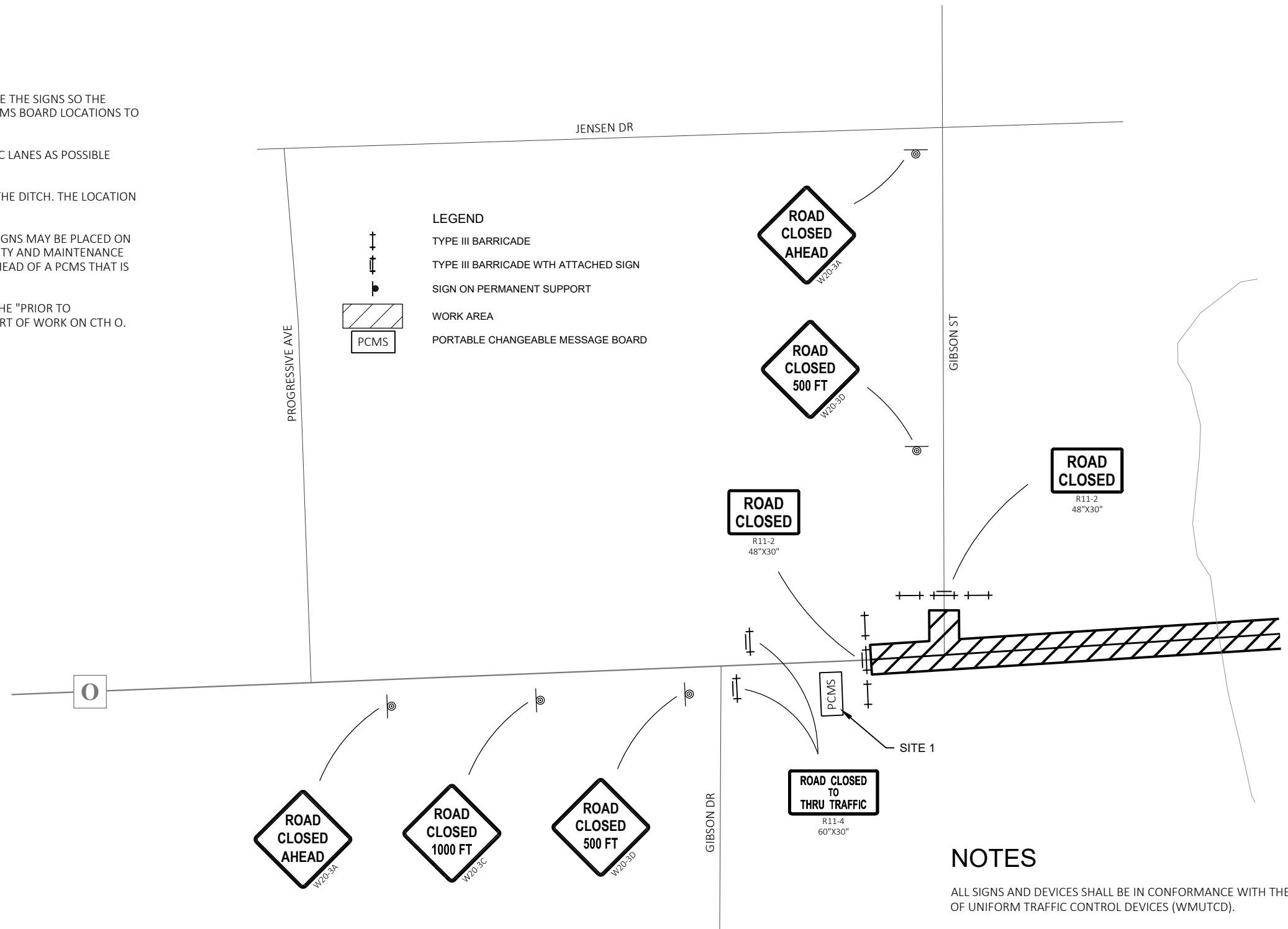
MESSAGE SIGNS SHOULD BE PLACED AS FAR AWAY FROM THE LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY.

IF POSSIBLE, THE SIGNS SHOULD BE PLACED ON THE BACKSLOPE BEYOND THE DITCH. THE LOCATION SHOULD BE AT OR SLIGHTLY ABOVE ELEVATION OF ROADWAY.

WHERE SITE CONDITIONS DO NOT ALLOW FOR BACKSLOPE PLACEMENT, SIGNS MAY BE PLACED ON THE SHOULDERS. THE SITE SHOULD BE VISITED TO ASSURE VISIBILITY, SAFETY AND MAINTENANCE CONSIDERATIONS. A TAPER OF REFLECTIVE DRUMS SHOULD BE PLACED AHEAD OF A PCMS THAT IS PLACED ON THE SHOULDER.

SITE 1 AND SITE 2 MESSAGE SIGNS ARE TO BE IN PLACE AND DISPLAYING THE "PRIOR TO CONSTRUCTION" MESSAGE FOR SEVEN DAYS PRIOR TO THE EXPECTED START OF WORK ON CTH O.

| PCMS SITE NO. | 7 DAYS PRIOR TO DETOUR | |
|---|-------------------------|--------------------|
| | Phase 1 (3 Sec) | Phase 2 (3 Sec) |
| SITE 1 - CTH O EB (WEST OF PROJECT LIMITS) | ROAD CLOSED STARTING | (DAY) (DATE) |
| SITE 2 - CTH O WB (EAST OF PROJECT LIMITS) | ROAD CLOSED STARTING | (DAY) (DATE) |



NOTES

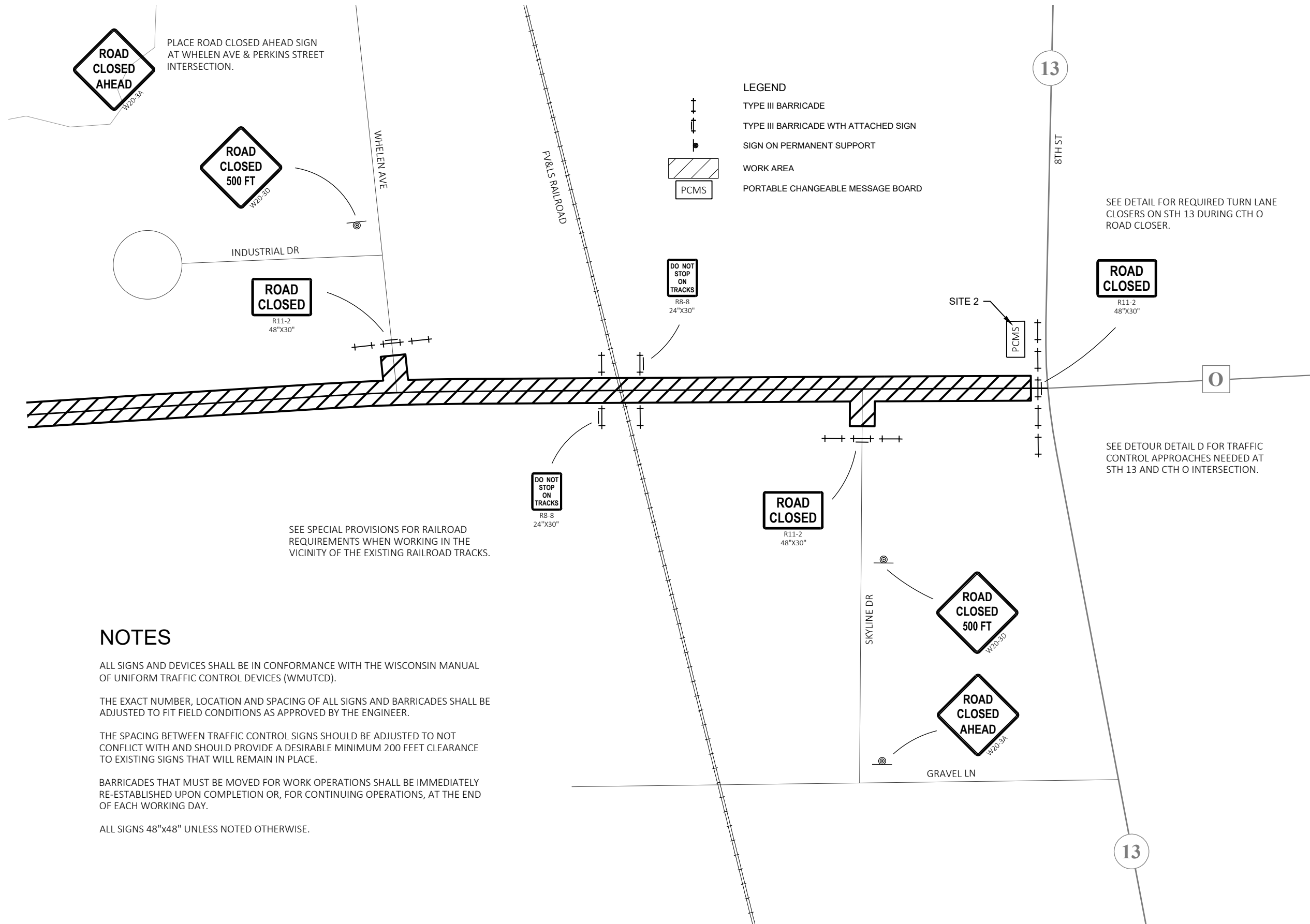
ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD).

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

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

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

ALL SIGNS 48"x48" UNLESS NOTED OTHERWISE.



NOTES

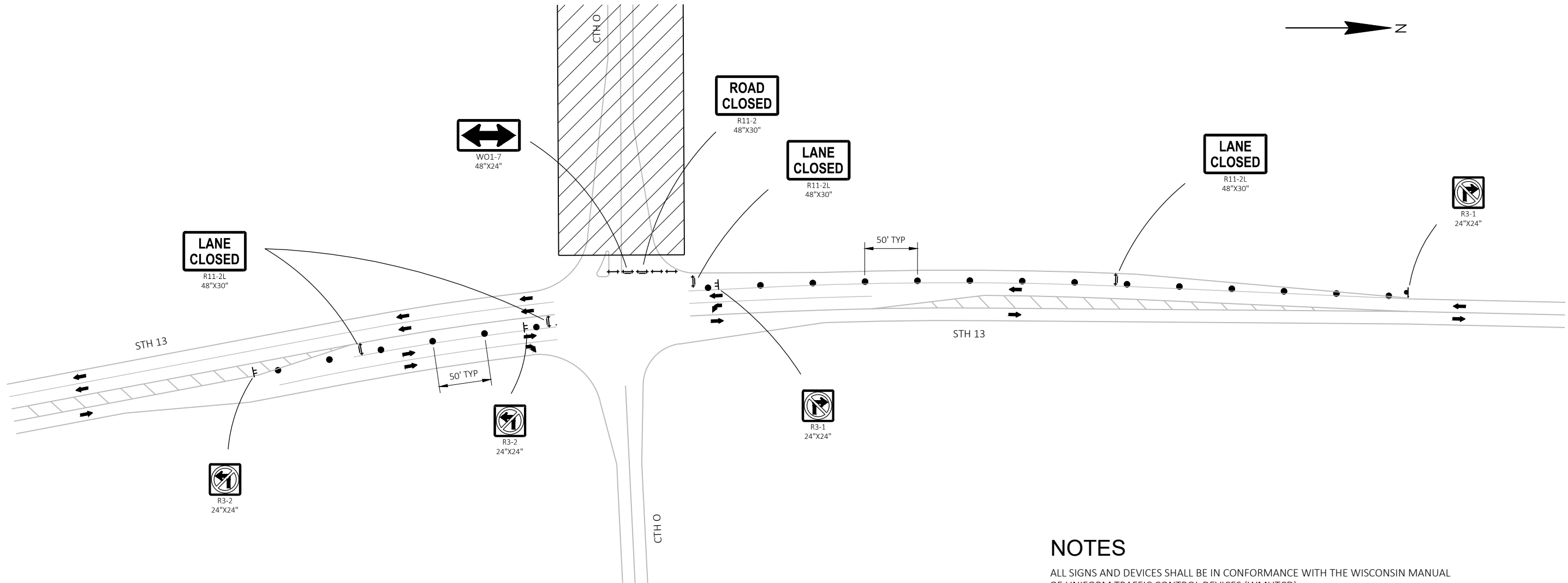
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ALL SIGNS 48"x48" UNLESS NOTED OTHERWISE.



- LEGEND**
- ↑ TYPE III BARRICADE
 - ↑↓ TYPE III BARRICADE WTH ATTACHED SIGN
 - ▶ SIGN ON PERMANENT SUPPORT
 - ⊥ SIGN ON TEMPORARY SUPPORT
 - TRAFFIC CONTROL DRUM
 - DIRECTION OF TRAFFIC
 - ▨ WORK AREA

NOTES

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD).

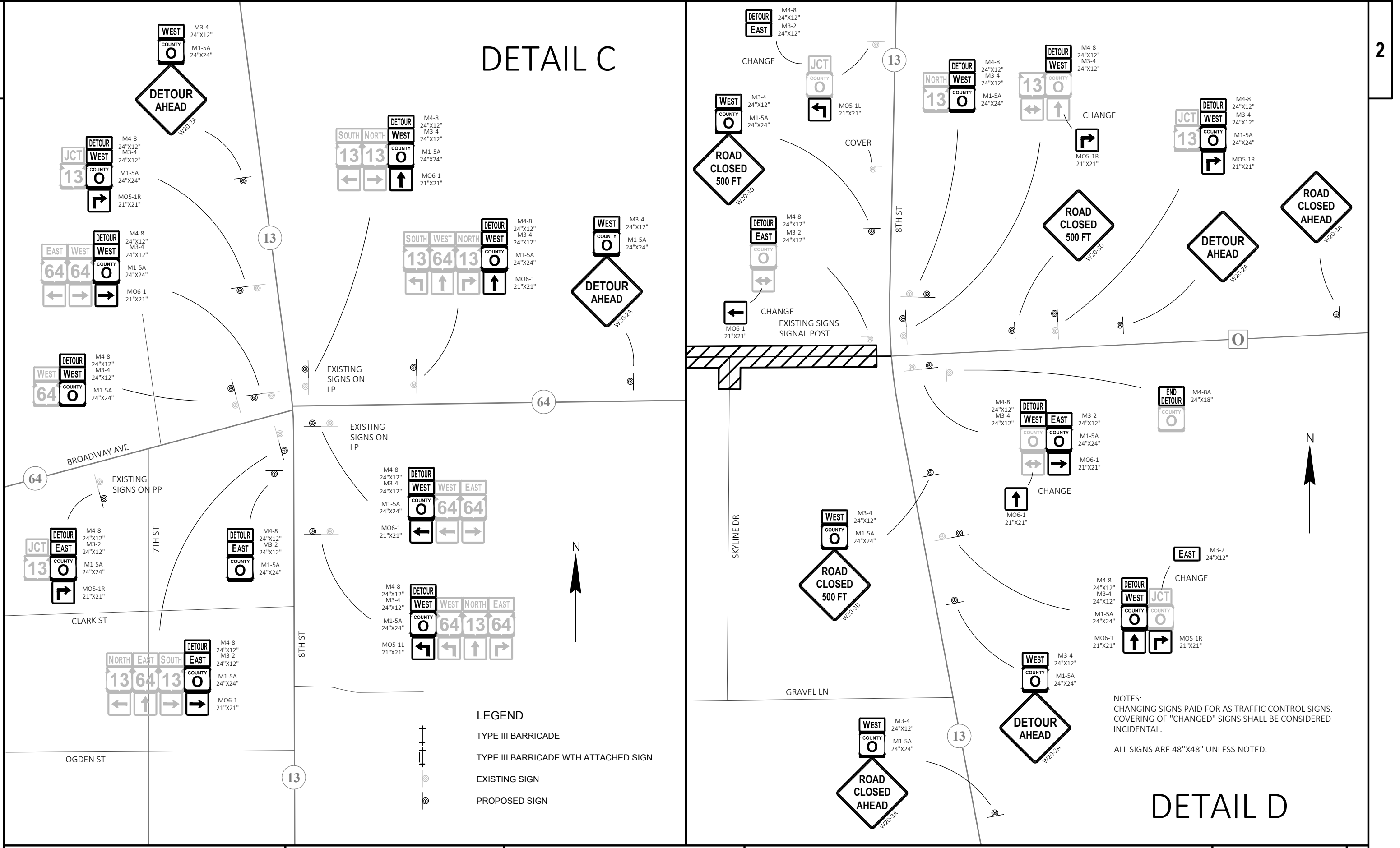
THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

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

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

ALL SIGNS 48"x48" UNLESS NOTED OTHERWISE.

DETAIL C



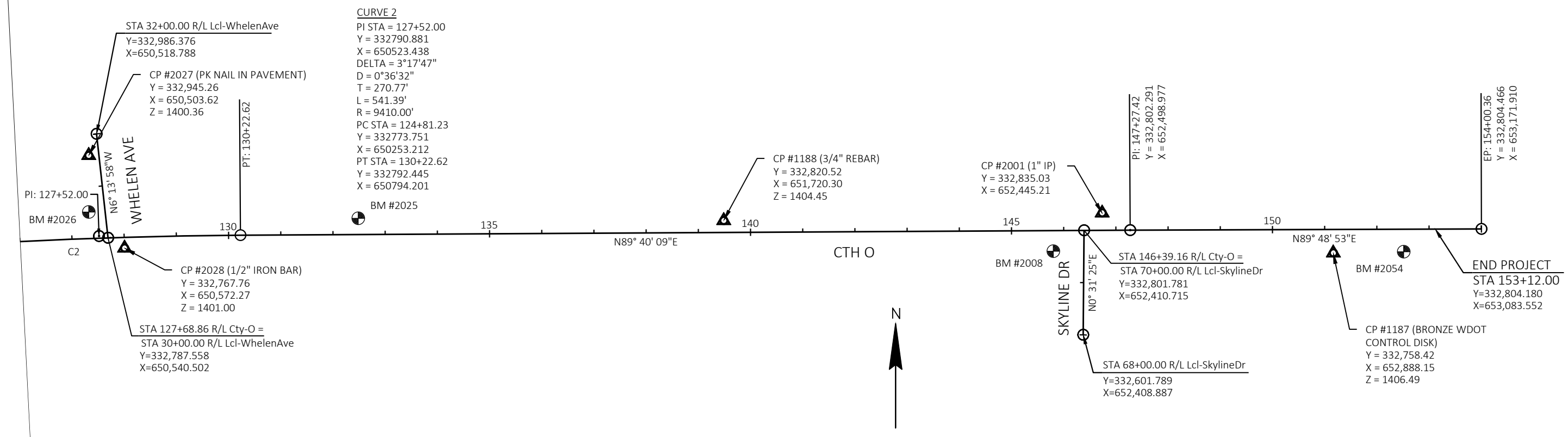
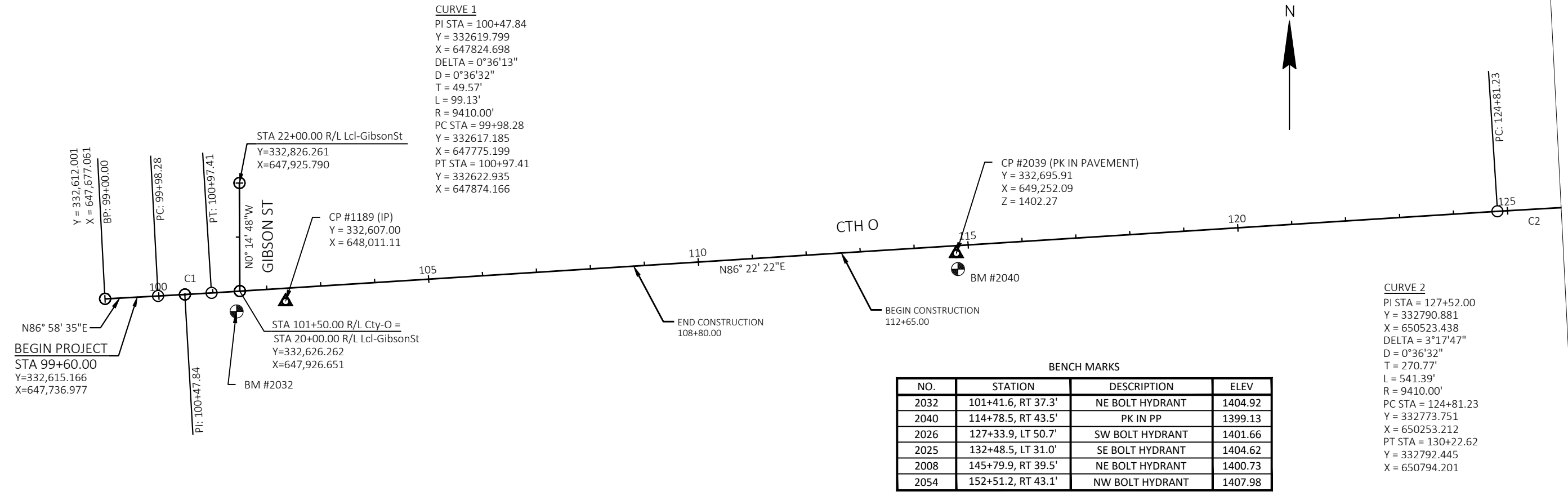
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR DETOUR SHEET E

FILE NAME : X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\027002_DT.DWG PLOT DATE : 7/26/2022 8:08 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN=400 FT WISDOT/CADD SHEET 42

LAYOUT NAME - 03

DETAIL D

NOTES:
 CHANGING SIGNS PAID FOR AS TRAFFIC CONTROL SIGNS.
 COVERING OF "CHANGED" SIGNS SHALL BE CONSIDERED INCIDENTAL.
 ALL SIGNS ARE 48"X48" UNLESS NOTED.



Estimate Of Quantities

8888-08-76

| Line | Item | Item Description | Unit | Total | Qty |
|------|----------|---|------|------------|------------|
| 0002 | 201.0110 | Clearing | SY | 150.000 | 150.000 |
| 0004 | 201.0210 | Grubbing | SY | 150.000 | 150.000 |
| 0006 | 203.0100 | Removing Small Pipe Culverts | EACH | 5.000 | 5.000 |
| 0008 | 204.0100 | Removing Concrete Pavement | SY | 118.000 | 118.000 |
| 0010 | 204.0150 | Removing Curb & Gutter | LF | 402.000 | 402.000 |
| 0012 | 204.0165 | Removing Guardrail | LF | 524.000 | 524.000 |
| 0014 | 204.0210 | Removing Manholes | EACH | 1.000 | 1.000 |
| 0016 | 204.0220 | Removing Inlets | EACH | 1.000 | 1.000 |
| 0018 | 204.0245 | Removing Storm Sewer (size) 15. 15-Inch | LF | 5.000 | 5.000 |
| 0020 | 204.0245 | Removing Storm Sewer (size) 24. 24-Inch | LF | 80.000 | 80.000 |
| 0022 | 204.0280 | Sealing Pipes | EACH | 1.000 | 1.000 |
| 0024 | 205.0100 | Excavation Common | CY | 18,905.000 | 18,905.000 |
| 0026 | 209.2100 | Backfill Granular Grade 2 | CY | 1,050.000 | 1,050.000 |
| 0028 | 213.0100 | Finishing Roadway (project) 01. 8888-08-76 | EACH | 1.000 | 1.000 |
| 0030 | 305.0110 | Base Aggregate Dense 3/4-Inch | TON | 1,130.000 | 1,130.000 |
| 0032 | 305.0120 | Base Aggregate Dense 1 1/4-Inch | TON | 11,125.000 | 11,125.000 |
| 0034 | 310.0110 | Base Aggregate Open-Graded | TON | 175.000 | 175.000 |
| 0036 | 311.0110 | Breaker Run | TON | 12,050.000 | 12,050.000 |
| 0038 | 312.0110 | Select Crushed Material | TON | 215.000 | 215.000 |
| 0040 | 416.0180 | Concrete Driveway 8-Inch | SY | 118.000 | 118.000 |
| 0042 | 416.1010 | Concrete Surface Drains | CY | 2.000 | 2.000 |
| 0044 | 455.0605 | Tack Coat | GAL | 3,063.000 | 3,063.000 |
| 0046 | 460.2000 | Incentive Density HMA Pavement | DOL | 4,710.000 | 4,710.000 |
| 0048 | 460.6224 | HMA Pavement 4 MT 58-28 S | TON | 4,901.000 | 4,901.000 |
| 0050 | 460.6244 | HMA Pavement 4 MT 58-34 S | TON | 2,451.000 | 2,451.000 |
| 0052 | 465.0120 | Asphaltic Surface Driveways and Field Entrances | TON | 35.000 | 35.000 |
| 0054 | 465.0315 | Asphaltic Flumes | SY | 80.000 | 80.000 |
| 0056 | 520.1018 | Apron Endwalls for Culvert Pipe 18-Inch | EACH | 2.000 | 2.000 |
| 0058 | 520.1024 | Apron Endwalls for Culvert Pipe 24-Inch | EACH | 2.000 | 2.000 |
| 0060 | 520.3318 | Culvert Pipe Class III-A 18-Inch | LF | 26.000 | 26.000 |
| 0062 | 520.3324 | Culvert Pipe Class III-A 24-Inch | LF | 92.000 | 92.000 |
| 0064 | 522.0130 | Culvert Pipe Reinforced Concrete Class III 30-Inch | LF | 82.000 | 82.000 |
| 0066 | 522.1018 | Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch | EACH | 3.000 | 3.000 |
| 0068 | 522.1030 | Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch | EACH | 3.000 | 3.000 |
| 0070 | 601.0411 | Concrete Curb & Gutter 30-Inch Type D | LF | 197.000 | 197.000 |
| 0072 | 601.0557 | Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D | LF | 2,408.000 | 2,408.000 |
| 0074 | 606.0200 | Riprap Medium | CY | 32.000 | 32.000 |
| 0076 | 608.0118 | Relaid Storm Sewer 18-Inch | LF | 40.000 | 40.000 |
| 0078 | 608.0412 | Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch | LF | 287.000 | 287.000 |
| 0080 | 608.0415 | Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch | LF | 200.000 | 200.000 |
| 0082 | 608.0418 | Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch | LF | 508.000 | 508.000 |
| 0084 | 608.0424 | Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch | LF | 238.000 | 238.000 |
| 0086 | 608.0430 | Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch | LF | 70.000 | 70.000 |
| 0088 | 611.0535 | Manhole Covers Type J-Special | EACH | 5.000 | 5.000 |
| 0090 | 611.0627 | Inlet Covers Type HM | EACH | 8.000 | 8.000 |
| 0092 | 611.0642 | Inlet Covers Type MS | EACH | 3.000 | 3.000 |
| 0094 | 611.1004 | Catch Basins 4-FT Diameter | EACH | 3.000 | 3.000 |
| 0096 | 611.1006 | Catch Basins 6-FT Diameter | EACH | 1.000 | 1.000 |
| 0098 | 611.1230 | Catch Basins 2x3-FT | EACH | 4.000 | 4.000 |

Estimate Of Quantities

8888-08-76

| Line | Item | Item Description | Unit | Total | Qty |
|------|------------|---|------|------------|------------|
| 0100 | 611.2004 | Manholes 4-FT Diameter | EACH | 4.000 | 4.000 |
| 0102 | 611.2005 | Manholes 5-FT Diameter | EACH | 1.000 | 1.000 |
| 0104 | 611.3901 | Inlets Median 1 Grate | EACH | 1.000 | 1.000 |
| 0106 | 611.3902 | Inlets Median 2 Grate | EACH | 1.000 | 1.000 |
| 0108 | 611.8110 | Adjusting Manhole Covers | EACH | 6.000 | 6.000 |
| 0110 | 611.8115 | Adjusting Inlet Covers | EACH | 4.000 | 4.000 |
| 0112 | 611.8120.S | Cover Plates Temporary | EACH | 11.000 | 11.000 |
| 0114 | 612.0206 | Pipe Underdrain Unperforated 6-Inch | LF | 48.000 | 48.000 |
| 0116 | 612.0406 | Pipe Underdrain Wrapped 6-Inch | LF | 2,488.000 | 2,488.000 |
| 0118 | 612.0806 | Apron Endwalls for Underdrain Reinforced Concrete 6-Inch | EACH | 5.000 | 5.000 |
| 0120 | 614.2300 | MGS Guardrail 3 | LF | 550.000 | 550.000 |
| 0122 | 614.2610 | MGS Guardrail Terminal EAT | EACH | 4.000 | 4.000 |
| 0124 | 618.0100 | Maintenance And Repair of Haul Roads (project) 01. 8888-08-76 | EACH | 1.000 | 1.000 |
| 0126 | 619.1000 | Mobilization | EACH | 1.000 | 1.000 |
| 0128 | 624.0100 | Water | MGAL | 122.000 | 122.000 |
| 0130 | 625.0500 | Salvaged Topsoil | SY | 27,800.000 | 27,800.000 |
| 0132 | 627.0200 | Mulching | SY | 21,450.000 | 21,450.000 |
| 0134 | 628.1504 | Silt Fence | LF | 6,850.000 | 6,850.000 |
| 0136 | 628.1520 | Silt Fence Maintenance | LF | 13,700.000 | 13,700.000 |
| 0138 | 628.1905 | Mobilizations Erosion Control | EACH | 5.000 | 5.000 |
| 0140 | 628.1910 | Mobilizations Emergency Erosion Control | EACH | 4.000 | 4.000 |
| 0142 | 628.2008 | Erosion Mat Urban Class I Type B | SY | 6,350.000 | 6,350.000 |
| 0144 | 628.7005 | Inlet Protection Type A | EACH | 19.000 | 19.000 |
| 0146 | 628.7010 | Inlet Protection Type B | EACH | 2.000 | 2.000 |
| 0148 | 628.7015 | Inlet Protection Type C | EACH | 13.000 | 13.000 |
| 0150 | 628.7504 | Temporary Ditch Checks | LF | 430.000 | 430.000 |
| 0152 | 628.7555 | Culvert Pipe Checks | EACH | 10.000 | 10.000 |
| 0154 | 628.7560 | Tracking Pads | EACH | 2.000 | 2.000 |
| 0156 | 629.0210 | Fertilizer Type B | CWT | 24.000 | 24.000 |
| 0158 | 630.0120 | Seeding Mixture No. 20 | LB | 777.000 | 777.000 |
| 0160 | 630.0200 | Seeding Temporary | LB | 511.000 | 511.000 |
| 0162 | 630.0500 | Seed Water | MGAL | 624.000 | 624.000 |
| 0164 | 633.5200 | Markers Culvert End | EACH | 6.000 | 6.000 |
| 0166 | 634.0614 | Posts Wood 4x6-Inch X 14-FT | EACH | 8.000 | 8.000 |
| 0168 | 634.0616 | Posts Wood 4x6-Inch X 16-FT | EACH | 13.000 | 13.000 |
| 0170 | 634.0618 | Posts Wood 4x6-Inch X 18-FT | EACH | 2.000 | 2.000 |
| 0172 | 637.2210 | Signs Type II Reflective H | SF | 92.160 | 92.160 |
| 0174 | 637.2230 | Signs Type II Reflective F | SF | 62.450 | 62.450 |
| 0176 | 638.2102 | Moving Signs Type II | EACH | 6.000 | 6.000 |
| 0178 | 638.2602 | Removing Signs Type II | EACH | 26.000 | 26.000 |
| 0180 | 638.3000 | Removing Small Sign Supports | EACH | 20.000 | 20.000 |
| 0182 | 642.5001 | Field Office Type B | EACH | 1.000 | 1.000 |
| 0184 | 643.0300 | Traffic Control Drums | DAY | 5,250.000 | 5,250.000 |
| 0186 | 643.0420 | Traffic Control Barricades Type III | DAY | 3,780.000 | 3,780.000 |
| 0188 | 643.0705 | Traffic Control Warning Lights Type A | DAY | 6,720.000 | 6,720.000 |
| 0190 | 643.0900 | Traffic Control Signs | DAY | 18,375.000 | 18,375.000 |
| 0192 | 643.1050 | Traffic Control Signs PCMS | DAY | 14.000 | 14.000 |
| 0194 | 643.5000 | Traffic Control | EACH | 1.000 | 1.000 |
| 0196 | 645.0111 | Geotextile Type DF Schedule A | SY | 1,313.000 | 1,313.000 |

Estimate Of Quantities

8888-08-76

| Line | Item | Item Description | Unit | Total | Qty |
|------|----------|--|------|------------|------------|
| 0198 | 645.0120 | Geotextile Type HR | SY | 421.000 | 421.000 |
| 0200 | 645.0140 | Geotextile Type SAS | SY | 240.000 | 240.000 |
| 0202 | 646.1020 | Marking Line Epoxy 4-Inch | LF | 15,876.000 | 15,876.000 |
| 0204 | 646.3020 | Marking Line Epoxy 8-Inch | LF | 812.000 | 812.000 |
| 0206 | 646.5320 | Marking Railroad Crossings Epoxy | EACH | 2.000 | 2.000 |
| 0208 | 646.5520 | Marking Outfall Epoxy | EACH | 5.000 | 5.000 |
| 0210 | 646.6020 | Marking Stop Line Epoxy 12-Inch | LF | 100.000 | 100.000 |
| 0212 | 650.4000 | Construction Staking Storm Sewer | EACH | 19.000 | 19.000 |
| 0214 | 650.4500 | Construction Staking Subgrade | LF | 5,328.000 | 5,328.000 |
| 0216 | 650.5000 | Construction Staking Base | LF | 5,328.000 | 5,328.000 |
| 0218 | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter | LF | 2,605.000 | 2,605.000 |
| 0220 | 650.6000 | Construction Staking Pipe Culverts | EACH | 1.000 | 1.000 |
| 0222 | 650.9911 | Construction Staking Supplemental Control (project) 01. 8888-08-76 | EACH | 1.000 | 1.000 |
| 0224 | 650.9920 | Construction Staking Slope Stakes | LF | 5,328.000 | 5,328.000 |
| 0226 | 690.0150 | Sawing Asphalt | LF | 625.000 | 625.000 |
| 0228 | 690.0250 | Sawing Concrete | LF | 72.000 | 72.000 |
| 0230 | 740.0440 | Incentive IRI Ride | DOL | 3,765.000 | 3,765.000 |
| 0232 | 801.0117 | Railroad Flagging Reimbursement | DOL | 12,000.000 | 12,000.000 |
| 0234 | ASP.1T0A | On-the-Job Training Apprentice at \$5.00/HR | HRS | 800.000 | 800.000 |
| 0236 | ASP.1T0G | On-the-Job Training Graduate at \$5.00/HR | HRS | 630.000 | 630.000 |
| 0238 | SPV.0035 | Special 01. Fieldstone Riprap Light | CY | 105.000 | 105.000 |
| 0240 | SPV.0060 | Special 01. Connect Drain Tile | EACH | 12.000 | 12.000 |
| 0242 | SPV.0060 | Special 02. Adjusting Water Valve Boxes | EACH | 15.000 | 15.000 |

CLEARING & GRUBBING

| STATION TO STATION | LOCATION | 201.0110 CLEARING SY | 201.0210 GRUBBING SY |
|--------------------|-----------|----------------------------|----------------------------|
| 114+00 - 115+00 | CTH O, LT | 56 | 56 |
| UNDISTRIBUTED | CTH O | 94 | 94 |
| TOTALS | | 150 | 150 |

REMOVING SMALL PIPE CULVERTS

| STATION | LOCATION | 203.0100 REMOVING SMALL PIPE CULVERTS EACH | REMARKS |
|--------------|--------------|--|----------------|
| 106+34 | CTH O | 1 | 10" X 94' POLY |
| 125+29 | CTH O, RT CE | 1 | 18" X 26' CMP |
| 130+87 | CTH O, LT CE | 1 | 24" X 100' CMP |
| 147+25 | CTH O, RT CE | 1 | 24" X 53' CMP |
| 149+61 | CTH O, RT CE | 1 | 24" X 56' CMP |
| TOTAL | | 5 | |

REMOVING PAVEMENT

| STATION | LOCATION | 204.0100 REMOVING CONCRETE PAVEMENT SY |
|--------------|--------------|--|
| 102+50 | CTH O, LT CE | 118 |
| TOTAL | | 118 |

REMOVING CURB & GUTTER

| STATION | TO STATION | LOCATION | 204.0150 REMOVING CURB & GUTTER LF |
|--------------|------------|----------------|---|
| 100+86 | - 101+39 | CTH O, LT | 117 |
| 101+75 | - 102+76 | CTH O, LT | 171 |
| 153+12 | - 153+23 | CTH O, LT | 11 |
| 153+12 | - 153+22 | CTH O, RT | 10 |
| 68+75 | - 69+21 | SKYLINE DR, LT | 46 |
| 68+75 | - 69+22 | SKYLINE DR, RT | 47 |
| TOTAL | | | 402 |

REMOVING GUARDRAIL

| STATION | TO STATION | LOCATION | 204.0165 REMOVING GUARDRAIL LF |
|--------------|------------|-----------|---|
| 139+55 | - 142+17 | CTH O, LT | 262 |
| 139+28 | - 141+90 | CTH O, RT | 262 |
| TOTAL | | | 524 |

REMOVING STORM SEWER

| STATION | LOCATION | 204.0210 REMOVING MANHOLES EACH | 204.0220 REMOVING INLETS EACH | 204.0245.15 REMOVING STORM SEWER 15-INCH LF | 204.0245.24 REMOVING STORM SEWER 24-INCH LF | 204.0280 SEALING PIPES EACH | REMARKS |
|---------------|-----------|--|--|---|---|--------------------------------------|-----------------------------|
| 101+22 | CTH O, LT | - | 1 | 5 | - | 1 | REMOVE INLET AND CAP EX. SS |
| 146+05 | CTH O, RT | 1 | - | - | 80 | - | REMOVE EX. SS SYSTEM |
| TOTALS | | 1 | 1 | 5 | 80 | 1 | |

BACKFILL GRANULAR

| STATION TO STATION | LOCATION | 209.2100 BACKFILL GRANULAR GRADE 2 CY | REMARKS |
|--------------------|---------------------------|---|--------------|
| 100+34 - 103+25 | CTH O & GIBSON ST INTER | 160 | STORM SEWER |
| 106+34 | CTH O, LT & RT | 500 | CULVERT PIPE |
| 125+50 - 128+50 | CTH O & WHELEEN AVE INTER | 170 | STORM SEWER |
| 146+91 - 150+00 | CTH O & SKYLINE DR INTER | 220 | STORM SEWER |
| TOTAL | | 1,050 | |

EARTHWORK SUMMARY

| FROM TO STATION | LOCATION | 205.0100 EXCAVATION COMMON CUT (1) | SALVAGED/ UNUSABLE PAVEMENT MATERIAL | AVAILABLE MATERIAL (2) | UNEXPANDED FILL | EXPANDED FILL (FACTOR 1.25) | MASS ORDINATE +/- (3) | WASTE |
|-----------------|-------------|--|---|------------------------------|--------------------|-----------------------------------|-----------------------------|---------------|
| 99+60 - 108+80 | CTH O | 2,781 | 273 | 2,508 | 191 | 239 | 2,269 | 2,269 |
| 112+65 - 136+64 | CTH O | 10,093 | 756 | 9,337 | 993 | 1,241 | 8,096 | 8,096 |
| 136+73 - 153+12 | CTH O | 4,996 | 565 | 4,431 | 745 | 931 | 3,500 | 3,500 |
| 20+24 - 21+20 | GIBSON ST | 360 | 61 | 299 | 8 | 10 | 289 | 289 |
| 30+24 - 31+25 | WHELEEN AVE | 375 | 63 | 312 | 15 | 19 | 293 | 293 |
| 68+75 - 69+76 | SKYLINE DR | 300 | 64 | 236 | 15 | 19 | 217 | 217 |
| TOTALS | | 18,905 | | | | | TOTAL | 14,664 |

- (1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED
- (2) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (3) THE MASS ORDINATE + OR - QUANTITY CALCULATED. PLUS QUANTITY INDICATES AS EXCESS OF MATERIAL. MINUS INDICATES A SHORTAGE OF MATERIAL.

TOTAL WASTE **14,664**

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

BASE AGGREGATE DENSE

| STATION | TO | STATION | LOCATION | 305.0110 BASE AGGREGATE DENSE 3/4-INCH TON | 305.0120 BASE AGGREGATE DENSE 1-1/4 INCH TON | 311.0110 BREAKER RUN TON | 624.0100 WATER MGAL |
|---------------|----|---------|-------------------------------|--|---|--------------------------------|---------------------------|
| 99+60 | - | 108+80 | CTH O | 145 | 1,760 | 2,250 | 19 |
| 100+34 | - | 103+25 | CTH O & GIBSON ST INTER (SS) | - | 625 | - | 6 |
| 112+65 | - | 136+64 | CTH O | 565 | 4,400 | 5,700 | 49 |
| 124+50 | - | 128+50 | CTH O & WHELEN AVE INTER (SS) | - | 750 | - | 8 |
| 136+73 | - | 153+12 | CTH O | 330 | 3,200 | 4,100 | 35 |
| | | | DRIVEWAYS | 90 | 390 | - | 5 |
| TOTALS | | | | 1,130 | 11,125 | 12,050 | 122 |

SELECT CRUSHED MATERIAL

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

| STATION | TO | STATION | LOCATION | 312.0110 SELECT CRUSHED MATERIAL TON | 645.0140 GEOTEXTILE TYPE SAS SY |
|---------------|----|---------|------------------|--|---|
| 136+35 | - | 137+02 | CTH O - RR X-ING | 215 | 240 |
| TOTALS | | | | 215 | 240 |

FLUMES

CONCRETE DRIVEWAY 8-INCH

| STATION | LOCATION | 416.0180 CONCRETE DRIVEWAY 8-INCH SY |
|--------------|--------------|--|
| 102+50 | CTH O, LT CE | 118 |
| TOTAL | | 118 |

| STATION | LOCATION | 465.0315 ASPHALTIC FLUMES SY | 416.1010 CONCRETE SURFACE DRAINS CY |
|--------------|----------------|---------------------------------------|---|
| 99+92 | CTH O, RT | 8 | - |
| 103+15 | CTH O, LT | 10 | - |
| 124+76 | CTH O, RT | 12 | - |
| 127+04 | CTH O, RT | 8 | - |
| 145+54 | CTH O, RT | 13 | - |
| 151+36 | CTH O, LT | 12 | - |
| 153+00 | CTH O, RT | - | 2 |
| 30+74 | WHELEN AVE, LT | 9 | - |
| 30+84 | WHELEN AVE, RT | 9 | - |
| TOTAL | | 80 | 2 |

ASPHALT SUMMARY

| STATION | TO | STATION | LOCATION | 455.0605 TACK COAT GAL | 460.6224 HMA PAVEMENT 4 MT 58-28 S TON | 460.6244 HMA PAVEMENT 4 MT 58-34 S TON | 465.0120 ASPHALTIC SURFACE DRIVEWAYS & FIELD ENTRANCES TON | REMARKS |
|---------------|----|---------|-----------|---------------------------------|--|--|--|-------------------|
| 99+60 | - | 108+80 | CTH O | 588 | 941 | 471 | - | |
| 112+65 | - | 136+64 | CTH O | 1,458 | 2,333 | 1,166 | - | |
| 136+73 | - | 153+12 | CTH O | 1,017 | 1,627 | 814 | - | |
| 130+62 | - | 131+16 | CTH O, LT | - | - | - | 35 | PLACE AT 4" THICK |
| TOTALS | | | | 3,063 | 4,901 | 2,451 | 35 | |

TACK COAT ESTIMATED AT 0.07 GAL/SY

MGS GUARDRAIL

| STATION | TO | STATION | LOCATION | 614.2300 MGS GUARDRAIL 3 LF | 614.2610 MGS GUARDRAIL TERMINAL EAT EACH |
|---------------|----|---------|-----------|--------------------------------------|---|
| 137+82 | - | 138+35 | CTH O, RT | - | 1 |
| 138+35 | - | 141+60 | CTH O, RT | 325 | - |
| 139+32 | - | 139+85 | CTH O, LT | - | 1 |
| 139+85 | - | 142+10 | CTH O, LT | 225 | - |
| 141+60 | - | 142+13 | CTH O, RT | - | 1 |
| 142+10 | - | 142+63 | CTH O, LT | - | 1 |
| TOTALS | | | | 550 | 4 |

COVER PLATES TEMPORARY

| CATEGORY | STATION | LOCATION | 611.8120.S COVER PLATES TEMPORARY EACH | REMARKS |
|--------------|---------|---------------------|---|-----------------|
| 0020 | 101+54 | CTH O, RT 20' | 1 | SANITARY MH |
| 0020 | 127+67 | CTH O, LT 4' | 1 | SANITARY MH |
| 0020 | 132+67 | CTH O, RT 0' | 1 | SANITARY MH |
| 0020 | 137+70 | CTH O, RT 1' | 1 | SANITARY MH |
| 0020 | 142+67 | CTH O, LT 0' | 1 | SANITARY MH |
| 0020 | 146+40 | CTH O, LT 2' | 1 | SANITARY MH |
| 0020 | 148+95 | CTH O, RT 1' | 1 | SANITARY MH |
| 0010 | 20+99 | GIBSON ST, LT & RT | 2 | EX STORM INLETS |
| 0010 | 69+01 | SKYLINE DR, LT & RT | 2 | EX STORM INLETS |
| TOTAL | | | 11 | |

| STATION | TO | STATION | LOCATION | 612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF | 612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH LF | 612.0806 AEW FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH | 310.0110 BASE AGGREGATE OPEN-GRADED TON | 645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY | SPV.0060.01 CONNECT DRAIN TILE EACH |
|---------------|----|---------|----------------------------|--|---|--|---|---|---|
| 100+34 | - | 105+00 | CTH O, RT | - | 466 | - | 33 | 246 | 2 |
| 20+43 | - | 21+20 | GIBSON ST, LT | - | 77 | - | 5 | 41 | 2 |
| 21+20 | - | 103+25 | GIBSON ST, RT - CTH O, LT | 17 | 218 | 1 | 15 | 115 | 2 |
| 124+87 | - | 130+45 | CTH O, RT | 16 | 558 | 1 | 39 | 295 | 2 |
| | | 136+55 | CTH O - RR XING | - | 62 | 1 | 4 | 33 | - |
| | | 136+82 | CTH O - RR XING | - | 62 | 1 | 4 | 33 | - |
| 68+75 | - | 153+18 | SKYLINE DR, RT - CTH O, RT | - | 735 | - | 52 | 388 | 3 |
| 145+60 | - | 68+75 | CTH O, RT - SKYLINE DR, LT | - | 138 | - | 10 | 73 | 1 |
| 151+50 | - | 153+22 | CTH O, LT | 15 | 172 | 1 | 12 | 91 | - |
| TOTALS | | | | 48 | 2,488 | 5 | 175 | 1,313 | 12 |

CONCRETE CURB AND GUTTER

| STATION | TO | STATION | LOCATION | 601.0557 6-INCH SLOPED 36-INCH TYPE D LF | 601.0411 30-INCH TYPE D LF | 650.5500 CONSTRUCTION STAKING CURB & GUTTER LF |
|---------------|----|---------|----------------------------|---|-------------------------------------|--|
| 99+98 | - | 105+00 | CTH O, RT | 502 | - | 502 |
| 100+86 | - | 20+70 | CTH O, LT - GIBSON ST, LT | 73 | - | 73 |
| 20+70 | - | 21+20 | GIBSON ST, LT | - | 50 | 50 |
| 20+84 | - | 103+10 | GIBSON ST, RT - CTH O, LT | 169 | - | 169 |
| 20+81 | - | 21+20 | GIBSON ST, RT | - | 39 | 39 |
| 124+81 | - | 130+45 | CTH O, RT | 564 | - | 564 |
| 127+04 | - | 30+69 | CTH O, LT - WHELEN AVE, LT | 62 | - | 62 |
| 30+78 | - | 128+42 | WHELEN AVE, RT - CTH O, LT | 86 | - | 86 |
| 145+60 | - | 69+21 | CTH O, RT - SKYLINE DR, LT | 92 | - | 92 |
| 68+75 | - | 69+21 | SKYLINE DR, LT | - | 46 | 46 |
| 68+75 | - | 69+37 | SKYLINE DR, RT - CTH O, RT | - | 62 | 62 |
| 68+75 | - | 153+19 | SKYLINE DR, RT - CTH O, RT | 682 | - | 682 |
| 151+44 | - | 153+22 | CTH O, LT | 178 | - | 178 |
| TOTALS | | | | 2,408 | 197 | 2,605 |

PIPE UNDERDRAIN

| STATION | TO | STATION | LOCATION | 612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH LF | 612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH LF | 612.0806 AEW FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH | 310.0110 BASE AGGREGATE OPEN-GRADED TON | 645.0111 GEOTEXTILE TYPE DF SCHEDULE A SY | SPV.0060.01 CONNECT DRAIN TILE EACH |
|---------------|----|---------|----------------------------|--|---|--|---|---|---|
| 100+34 | - | 105+00 | CTH O, RT | - | 466 | - | 33 | 246 | 2 |
| 20+43 | - | 21+20 | GIBSON ST, LT | - | 77 | - | 5 | 41 | 2 |
| 21+20 | - | 103+25 | GIBSON ST, RT - CTH O, LT | 17 | 218 | 1 | 15 | 115 | 2 |
| 124+87 | - | 130+45 | CTH O, RT | 16 | 558 | 1 | 39 | 295 | 2 |
| | | 136+55 | CTH O - RR XING | - | 62 | 1 | 4 | 33 | - |
| | | 136+82 | CTH O - RR XING | - | 62 | 1 | 4 | 33 | - |
| 68+75 | - | 153+18 | SKYLINE DR, RT - CTH O, RT | - | 735 | - | 52 | 388 | 3 |
| 145+60 | - | 68+75 | CTH O, RT - SKYLINE DR, LT | - | 138 | - | 10 | 73 | 1 |
| 151+50 | - | 153+22 | CTH O, LT | 15 | 172 | 1 | 12 | 91 | - |
| TOTALS | | | | 48 | 2,488 | 5 | 175 | 1,313 | 12 |

PROJECT NO: 8888-08-76

HWY: CTH O

COUNTY: TAYLOR

MISCELLANEOUS QUANTITIES

SHEET

E

ADJUSTING MANHOLE COVERS

| CATEGORY | STATION | LOCATION | 611.8110 ADJUSTING MANHOLE COVERS EACH |
|--------------|---------|---------------|--|
| 0020 | 101+54 | CTH O, RT 20' | 1 |
| 0020 | 127+67 | CTH O, LT 4' | 1 |
| 0020 | 137+70 | CTH O, RT 1' | 1 |
| 0020 | 142+67 | CTH O, LT 0' | 1 |
| 0020 | 146+40 | CTH O, LT 2' | 1 |
| 0020 | 148+95 | CTH O, RT 1' | 1 |
| TOTAL | | | 6 |

ADJUSTING INLET COVERS

| STATION | LOCATION | 611.8115 ADJUSTING INLET COVERS EACH |
|--------------|----------------|--|
| 20+98 | GIBSON ST, LT | 1 |
| 20+98 | GIBSON ST, RT | 1 |
| 69+01 | SKYLINE DR, LT | 1 |
| 69+01 | SKYLINE DR, RT | 1 |
| TOTAL | | 4 |

CULVERT PIPES AND APRON ENDWALLS

| STATION | LOCATIONS | CULVERT PIPE CLASS III-A NON-METAL | | CULVERT PIPE REINFORCED CONCRETE CLASS III | APRON ENDWALLS FOR CULVERT PIPE | | AEW FOR CULVERT PIPE REINFORCED CONCRETE | 650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH |
|---------------|--------------|---------------------------------------|---------------------------|--|------------------------------------|-----------------------------|--|---|
| | | 520.3318 18-INCH LF | 520.3324 24-INCH LF | 522.0130 30-INCH LF | 520.1018 18-INCH EACH | 520.1024 24-INCH EACH | 522.1030* 30-INCH EACH | |
| 106+34 | CTH O | - | - | 82 | - | - | 2 | 1 |
| 125+29 | CTH O, RT CE | 26 | - | - | 2 | - | - | - |
| 130+87 | CTH O, LT CE | - | 92 | - | - | 2 | - | - |
| TOTALS | | 26 | 92 | 82 | 2 | 2 | 2 | 1 |

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER PIPES & APRON ENDWALLS

| FROM STRUCTURE | TO STRUCTURE | INLET ELEV. | OUTLET ELEV. | SLOPE % | STORM SEWER PIPE REINFORCED CONCRETE CLASS IV | | | | | APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE | | 650.4000* CONSTRUCTION STAKING STORM SEWER EACH |
|-------------------|-----------------|----------------|-----------------|---------|--|---------------------------|---------------------------|---------------------------|---------------------------|---|------------------------------|---|
| | | | | | 608.0412 12-INCH LF | 608.0415 15-INCH LF | 608.0418 18-INCH LF | 608.0424 24-INCH LF | 608.0430 30-INCH LF | 522.1018 18-INCH EACH | 522.1030* 30-INCH EACH | |
| 1.1 | 1.2 | 1400.60 | 1399.92 | 0.50% | 136 | - | - | - | - | - | - | - |
| 1.3 | 1.2 | 1400.16 | 1399.92 | 0.50% | 48 | - | - | - | - | - | - | - |
| 1.4 | 1.2 | 1400.14 | 1399.92 | 0.50% | 45 | - | - | - | - | - | - | - |
| 1.2 | 1.5 | 1399.42 | 1398.68 | 0.50% | - | - | 148 | - | - | - | - | - |
| 1.6 | 1.5 | 1399.35 | 1399.18 | 0.50% | 36 | - | - | - | - | - | - | - |
| 1.5 | 1.7 | 1398.68 | 1398.49 | 0.50% | - | - | 37 | - | - | 1 | - | 1 |
| 2.1 | 2.2 | 1398.33 | 1398.27 | 0.50% | 11 | - | - | - | - | - | - | - |
| 2.2 | 2.3 | 1398.02 | 1397.03 | 0.50% | - | 200 | - | - | - | - | - | - |
| 2.4 | 2.3 | 1397.33 | 1397.28 | 0.50% | 11 | - | - | - | - | - | - | - |
| 2.3 | 2.5 | 1396.78 | 1395.78 | 0.50% | - | - | 200 | - | - | - | - | - |
| 2.5 | 2.6 | 1395.77 | 1395.70 | 0.50% | - | - | 15 | - | - | 1 | - | 1 |
| 3.1 | 3.2 | 1400.39 | 1400.27 | 0.92% | - | - | - | 13 | - | - | - | - |
| 3.2 | 3.3 | 1400.27 | 1398.02 | 1.00% | - | - | - | 225 | - | - | - | - |
| 3.4 | 3.3 | 1397.68 | 1397.52 | 0.75% | - | - | 21 | - | - | - | - | - |
| 3.5 | 3.3 | 1399.00 | 1398.52 | 0.55% | - | - | 87 | - | - | 1 | - | 1 |
| 3.3 | 3.6 | 1397.52 | 1396.96 | 0.79% | - | - | - | - | 70 | - | 1 | 1 |
| TOTALS | | | | | 287 | 200 | 508 | 238 | 70 | 3 | 1 | 4 |

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

RELAI D STORM SEWER

| STATION | TO | STATION | LOCATION | 608.0118 RELAI D STORM SEWER LF | REMARK |
|--------------|----|---------|-----------|---|----------------------|
| 100+68 | - | 101+08 | CTH O, LT | 40 | 18-INCH PLASTIC PIPE |
| TOTAL | | | | 40 | |

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

STORM SEWER STRUCTURES

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

| STRUCTURE NUMBER | STATION | OFFSET | RIM ELEV. | INVERT ELEV. | STRUCTURE DEPTH | 611.0535 MANHOLE COVERS TYPE J-S EACH | 611.0627 INLET COVERS TYPE HM EACH | 611.0642 INLET COVERS TYPE MS EACH | 611.1004 CATCH BASINS 4-FT DIA. EACH | 611.1006 CATCH BASINS 6-FT DIA. EACH | 611.1230 CATCH BASINS 2X3-FT EACH | 611.2004 MANHOLES 4-FT DIA. EACH | 611.2005 MANHOLE 5-FT DIA. EACH | 611.3901 INLETS MEDIAN 1 GRATE EACH | 611.3902 INLETS MEDIAN 2 GRATE EACH | 650.4000* CONSTRUCTION STAKING STORM SEWER EACH |
|------------------|---------|----------|-----------|--------------|-----------------|---|--|--|--|--|---|---|--|---|---|---|
| 1.1 | 100+34 | 17.5' RT | 1403.35 | 1400.59 | 2.76 | - | 1 | - | 1 | - | - | - | - | - | - | 1 |
| 1.2 | 101+65 | 18.0' LT | 1403.39 | 1399.40 | 2.95 | 1 | - | - | - | - | - | - | 1 | - | - | 1 |
| 1.3 | 101+25 | 45.2' LT | 1402.97 | 1400.13 | 2.82 | - | 1 | - | - | 1 | - | - | - | - | - | 1 |
| 1.4 | 101+77 | 60.8' LT | 1402.83 | 1400.13 | 2.70 | - | 1 | - | 1 | - | - | - | - | - | - | 1 |
| 1.5 | 103+13 | 18.0' LT | 1402.85 | 1398.66 | 3.16 | 1 | - | - | - | - | 1 | - | - | - | - | 1 |
| 1.6 | 103+13 | 17.5' RT | 1402.89 | 1399.34 | 3.55 | - | 1 | - | - | 1 | - | - | - | - | - | 1 |
| 2.1 | 128+50 | 29.5' RT | 1401.59 | 1398.32 | 3.27 | - | 1 | - | - | 1 | - | - | - | - | - | 1 |
| 2.2 | 128+50 | 18.0' RT | 1401.79 | 1398.01 | 2.73 | 1 | - | - | - | - | 1 | - | - | - | - | 1 |
| 2.3 | 126+50 | 18.0' RT | 1401.16 | 1396.76 | 3.37 | 1 | - | - | - | - | 1 | - | - | - | - | 1 |
| 2.4 | 126+50 | 29.5' RT | 1400.96 | 1397.33 | 3.63 | - | 1 | - | - | 1 | - | - | - | - | - | 1 |
| 2.5 | 124+50 | 16.7' RT | 1400.45 | 1395.76 | 3.65 | 1 | - | - | - | - | 1 | - | - | - | - | 1 |
| 3.1 | 150+00 | 38.5' RT | 1403.55 | 1400.37 | 3.43 | - | - | 2 | - | - | - | - | - | - | 1 | 1 |
| 3.2 | 150+00 | 25.5' RT | 1405.26 | 1400.25 | 5.01 | - | 1 | - | 1 | - | - | - | - | - | - | 1 |
| 3.3 | 147+75 | 25.5' RT | 1403.84 | 1397.49 | 6.35 | - | 1 | - | - | 1 | - | - | - | - | - | 1 |
| 3.4 | 147+75 | 46.5' RT | 1400.05 | 1397.66 | 2.60 | - | - | 1 | - | - | - | - | 1 | - | - | 1 |
| TOTALS | | | | | | 5 | 8 | 3 | 3 | 1 | 4 | 4 | 1 | 1 | 1 | 15 |

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

RIPRAP AND FABRIC

| STATION | LOCATION | 606.0200 RIPRAP MEDIUM CY | SPV.0035.01 FIELDSTONE RIPRAP LIGHT CY | 645.0120 GEOTEXTILE FABRIC TYPE HR SY |
|---------------|------------------|------------------------------------|--|--|
| 103+50 | CTH O, LT | 5 | - | 18 |
| 106+34 | CTH O, RT | 4 | - | 13 |
| 124+50 | CTH O, LT | 5 | - | 18 |
| 125+15 | CTH O, RT | 5 | - | 18 |
| 127+85 | 130+40 CTH O, LT | - | 105 | 310 |
| 131+40 | CTH O, LT | 5 | - | 18 |
| 147+38 | CTH O, LT | 6 | - | 19 |
| 152+99 | CTH O, RT | 2 | - | 7 |
| TOTALS | | 32 | 105 | 421 |

LANDSCAPING ITEMS

| STATION TO | STATION | LOCATION | 625.0500 SALVAGED TOPSOIL SY | 628.2008 EROSION MAT URBAN CLASS I TYPE B SY | 627.0200 MULCHING SY | 629.0210 FERTILIZER TYPE B CWT | 630.0120 SEEDING MIXTURE NO. 20 LB | 630.0200 **SEEDING TEMPORARY LB | 630.0500 SEED WATER MGAL |
|---------------|---------|--------------|---------------------------------------|--|----------------------------|---|--|--|-----------------------------------|
| 99+60 | - | 108+80 CTH O | 2,100 | 400 | 1,700 | 2.4 | 104 | 52 | 47 |
| 112+65 | - | 136+64 CTH O | 9,000 | 2,900 | 6,100 | 8.8 | 379 | 189 | 202 |
| 136+73 | - | 153+12 CTH O | 6,900 | 2,800 | 4,100 | 6.6 | 281 | 141 | 155 |
| WASTE SITE | | | 9,000 | - | 9,000 | 5.7 | - | 122 | 202 |
| UNDISTRIBUTED | | | 800 | 250 | 550 | 0.3 | 14 | 7 | 18 |
| TOTALS | | | 27,800 | 6,350 | 21,450 | 24 | 777 | 511 | 624 |

** SEEDING TEMPORARY AT HALF RATE

SILT FENCE

| STATION TO | STATION | LOCATION | 628.1504 SILT FENCE LF | 628.1520 SILT FENCE MAINTENANCE LF |
|---------------|---------|-----------------------|------------------------------|---|
| 99+60 | - | 108+80 CTH O, LT & RT | 950 | 1900 |
| 112+65 | - | 136+64 CTH O, LT & RT | 2450 | 4900 |
| 136+73 | - | 153+12 CTH O, LT & RT | 2550 | 5100 |
| WASTE SITE | | | 400 | 800 |
| UNDISTRIBUTED | | | 500 | 1000 |
| TOTALS | | | 6,850 | 13,700 |

MARKER CULVERT END

| STATION | LOCATION | 633.5200 MARKER CULVERT END EACH |
|--------------|----------------|---|
| 103+52 | CTH O, LT | 1 |
| 106+34 | CTH O, LT & RT | 2 |
| 124+50 | CTH O, RT | 1 |
| 146+86 | CTH O, LT | 1 |
| 147+37 | CTH O, LT | 1 |
| TOTAL | | 6 |

EROSION CONTROL SUMMARY

| STATION TO | STATION | LOCATION | 628.1905 MOBILIZATIONS EROSION CONTROL EACH | 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH | 628.7005 INLET PROTECTION TYPE A EACH | 628.7010 INLET PROTECTION TYPE B EACH | 628.7015 INLET PROTECTION TYPE C LF | 628.7504 TEMPORARY DITCH CHECKS LF | 628.7555 CULVERT PIPE CHECKS EACH | 628.7560 TRACKING PADS EACH |
|---------------|---------|--------------|---|--|---|---|---|--|---|--------------------------------------|
| 99+60 | - | 108+80 CTH O | - | - | 8 | - | 6 | 80 | 3 | 1 |
| 112+65 | - | 136+64 CTH O | - | - | 5 | - | 3 | 230 | 6 | - |
| 136+73 | - | 153+12 CTH O | - | - | 6 | 2 | 4 | 50 | 1 | 1 |
| UNDISTRIBUTED | | | 5 | 4 | - | - | - | 70 | - | - |
| TOTALS | | | 5 | 4 | 19 | 2 | 13 | 430 | 10 | 2 |

PROJECT NO: 8888-08-76

HWY: CTH O

COUNTY: TAYLOR

MISCELLANEOUS QUANTITIES

SHEET

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| SIGN NO. | STATION | LOCATION | SIGN CODE | MESSAGE | W X H | 634.0614 | 634.0616 | 634.0618 | 637.2210 | 637.2230 | 638.2102 | 638.2602 | 638.3000 | COMMENTS |
|---------------|---------|-----------|-----------|---------------------|-----------|--------------------------------|--------------------------------|--------------------------------|-------------------------------|-------------------------------|-------------------------|------------------------------|------------------------------------|-------------|
| | | | | | | POSTS WOOD 4x6-INCH x 14-FT | POSTS WOOD 4x6-INCH X 16-FT | POSTS WOOD 4X6-INCH X 18-FT | SIGNS TYPE II REFLECTIVE H | SIGNS TYPE II REFLECTIVE F | MOVING SIGNS TYPE II | REMOVING SIGNS TYPE II | REMOVING SMALL SIGN SUPPORTS | |
| | | | | | | EACH | EACH | EACH | SF | SF | EACH | EACH | EACH | |
| 1-01 | 101+14 | CTH O, LT | - | GIBSON ST. | - | - | - | - | - | - | 1 | - | - | STREET SIGN |
| 1-02 | 101+24 | CTH O, LT | - | STOP SIGN | - | - | - | - | - | - | - | 1 | 1 | |
| 1-03 | 101+24 | CTH O, RT | R1-1 | STOP SIGN | 30" X 30" | 1 | - | - | 5.18 | - | - | - | - | |
| 1-04 | 101+26 | CTH O, RT | D9-2 | HOSPITAL/ARROW | 24" X 45" | - | 1 | - | 7.50 | - | - | - | - | |
| 1-05 | 101+49 | CTH O, RT | W1-7 | DOUBLE ARROW | 48" X 24" | 1 | - | - | - | 8.00 | - | - | - | |
| 1-06 | 101+49 | CTH O, RT | - | DOUBLE ARROW | - | - | - | - | - | - | - | 1 | 1 | |
| 1-07 | 101+49 | CTH O, RT | - | HOSPITAL/ARROW | - | - | - | - | - | - | - | 2 | - | |
| 1-08 | 101+90 | CTH O, LT | D1-57R | IND. PARK/ARROW | 66" X 12" | - | 2 | - | 5.50 | - | - | - | - | |
| 1-08A | 101+90 | CTH O, LT | - | IND. PARK/ARROW | - | - | - | - | - | - | - | 1 | 1 | |
| 1-09 | 101+96 | CTH O, LT | - | HOSPITAL/ARROW | - | - | - | - | - | - | - | 2 | 1 | |
| 1-10 | 101+96 | CTH O, LT | D9-2 | HOSPITAL/ARROW | 21" X 45" | - | 1 | - | 7.50 | - | - | - | - | |
| 1-11 | 106+69 | CTH O, LT | W2-2 | TEE INTERSECTION | 30" X 30" | - | 1 | - | - | 6.25 | - | - | - | |
| 1-12 | 106+69 | CTH O, LT | - | TEE INTERSECTION | - | - | - | - | - | - | - | 1 | 1 | |
| 1-13 | 120+68 | CTH O, RT | W2-2 | TEE INTERSECTION | 30" X 30" | - | 1 | - | - | 6.25 | - | - | - | |
| 1-14 | 120+68 | CTH O, RT | - | TEE INTERSECTION | - | - | - | - | - | - | - | 1 | 1 | |
| 2-01 | 127+30 | CTH O, LT | - | WHELEN AVE. | - | - | - | - | - | - | 1 | - | - | STREET SIGN |
| 2-02 | 127+33 | CTH O, LT | - | STOP/TRUCK RT/ARROW | - | - | - | - | - | - | - | 3 | 1 | |
| 2-03 | 127+33 | CTH O, LT | R2-1 | STOP SIGN | 30" X 30" | - | - | 1 | 5.18 | - | - | - | - | |
| 2-03 | 127+33 | CTH O, LT | R14-1 | TRUCK ROUTE | 24" X 18" | - | - | - | 3.00 | - | - | - | - | |
| 2-03 | 127+33 | CTH O, LT | M6-4 | DOUBLE ARROW | 21" X 21" | - | - | - | 3.06 | - | - | 2 | 2 | |
| 2-04 | 127+67 | CTH O, RT | - | DOUBLE ARROW | - | - | - | - | - | - | - | 1 | 1 | |
| 2-05 | 127+67 | CTH O, RT | W1-7 | DOUBLE ARROW | 48" X 24" | 1 | - | - | - | 8.00 | - | - | - | |
| 2-06 | 128+63 | CTH O, LT | R14-1 | TRUCK ROUTE | 24" X 18" | 1 | - | - | 3.00 | - | - | - | - | |
| 2-06 | 128+63 | CTH O, LT | M6-6R | STRAIGHT/RT ARROW | 21" X 21" | - | - | - | 3.06 | - | - | - | - | |
| 2-07 | 128+63 | CTH O, LT | - | TRUCK RT/ARROW | - | - | - | - | - | - | - | 2 | 1 | |
| 2-08 | 129+56 | CTH O, LT | - | IND. PARK/ARROW | 54" X 36" | - | 2 | - | 13.50 | - | - | - | - | |
| 2-08A | 129+56 | CTH O, LT | - | IND. PARK/ARROW | - | - | - | - | - | - | - | 1 | 1 | |
| 2-09 | 131+64 | CTH O, LT | - | NO PASSING ZONE | - | - | - | - | - | - | - | 1 | 1 | |
| 2-10 | 131+64 | CTH O, LT | W14-3 | NO PASSING ZONE | 48" X 36" | 1 | - | - | - | 5.56 | - | - | - | |
| 2-11 | 132+46 | CTH O, RT | - | RAILROAD X-ING | - | - | - | - | - | - | - | 1 | 1 | |
| 2-12 | 132+46 | CTH O, RT | W10-1 | RAILROAD X-ING | 36" X 36" | - | 1 | - | - | 7.07 | - | - | - | |
| 2-13 | 140+90 | CTH O, LT | - | RAILROAD X-ING | - | - | - | - | - | - | - | 1 | 1 | |
| 2-14 | 140+90 | CTH O, LT | W10-1 | RAILROAD X-ING | 36" X 36" | - | 1 | - | - | 7.07 | - | - | - | |
| 2-15 | 143+42 | CTH O, RT | J1-1 | JUNCTION STH 13 | 24" X 39" | - | 1 | - | 6.50 | - | - | - | - | |
| 2-16 | 145+20 | CTH O, LT | - | NO ATV'S | - | - | - | - | - | - | 1 | - | - | |
| 2-17 | 145+35 | CTH O, RT | W3-3 | SIGNAL AHEAD | 30" X 30" | - | 1 | - | - | 6.25 | - | - | - | |
| 2-18 | 145+35 | CTH O, RT | - | SIGNAL AHEAD | - | - | - | - | - | - | - | 1 | 1 | |
| 2-19 | 146+45 | CTH O, LT | W1-7 | DOUBLE ARROW | 48" X 24" | 1 | - | - | - | 8.00 | - | - | - | |
| 2-20 | 146+67 | CTH O, RT | R1-1 | STOP SIGN | 30" X 30" | 1 | - | - | 5.18 | - | - | - | - | |
| 2-21 | 146+67 | CTH O, RT | - | STOP SIGN | - | - | - | - | - | - | - | 1 | 1 | |
| 2-22 | 146+76 | CTH O, RT | - | SKYLINE DR. | - | - | - | - | - | - | 1 | - | - | STREET SIGN |
| 2-23 | 147+67 | CTH O, RT | - | NO ATV'S | - | - | - | - | - | - | 1 | - | - | |
| 2-24 | 151+05 | CTH O, LT | R2-1 | 45 MPH SPEED LIMIT | 24" X 30" | - | 1 | - | 5.00 | - | - | - | - | |
| 2-24 | 151+05 | CTH O, LT | - | NO ATV'S | - | - | - | - | - | - | 1 | - | - | |
| 2-25 | 151+45 | CTH O, LT | - | 45 MPH SPEED LIMIT | - | - | - | - | - | - | - | 1 | 1 | |
| 2-26 | 151+63 | CTH O, RT | J12-2 | STH 13/CTH O/ARROWS | 48" X 45" | - | - | 1 | 15.00 | - | - | - | - | |
| 2-27 | 151+65 | CTH O, RT | - | STH 13/CTH O/ARROWS | - | - | - | - | - | - | - | 1 | 1 | |
| 2-28 | 152+04 | CTH O, LT | M1-5A | CTH O | 24" X 24" | 1 | - | - | 4.00 | - | - | - | - | |
| 2-29 | 152+04 | CTH O, LT | - | CTH O | - | - | - | - | - | - | - | 1 | 1 | |
| TOTALS | | | | | | 8 | 13 | 2 | 92.16 | 62.45 | 6 | 26 | 20 | |

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

PROJECT NO: 8888-08-76

HWY: CTH O

COUNTY: TAYLOR

MISCELLANEOUS QUANTITIES

SHEET

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TRAFFIC CONTROL ITEMS

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED.

| PROJECT | TRAFFIC CONTROL DRUMS EACH | 643.0300 TRAFFIC CONTROL DRUMS DAY | TRAFFIC CONTROL BARRICADES TYPE III EACH | 643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY | TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH | 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY | TRAFFIC CONTROL SIGNS EACH | 643.0900 TRAFFIC CONTROL SIGNS DAY | TRAFFIC CONTROL SIGNS PCMS EACH | 643.1050 TRAFFIC CONTROL SIGNS PCMS DAY | 643.5000 TRAFFIC CONTROL EACH | REMARKS |
|---------------|----------------------------|------------------------------------|--|--|--|--|----------------------------|------------------------------------|---------------------------------|---|-------------------------------|----------|
| 8888-08-76 | 50 | 5,250 | 34 | 3,570 | 60 | 6,300 | 31 | 3,255 | - | - | 1 | 105 DAYS |
| DETOUR | - | - | 2 | 210 | 4 | 420 | 144 | 15,120 | 2 | 14 | - | 105 DAYS |
| TOTALS | | 5,250 | | 3,780 | | 6,720 | | 18,375 | | 14 | 1 | |

PAVEMENT MARKING ITEMS

| STATION | - | STATION | LOCATION | 646.1020 MARKING LINE EXPOXY 4-INCH | | 646.3020 MARKING LINE EPOXY 8-INCH | 646.5320 MARKING RAILROAD CROSSING EPOXY | 646.5520 MARKING OUTFALL EPOXY | 646.6020 MARKING STOP LINE EPOXY 12-INCH | REMARKS |
|---------------|---|---------|-----------------|-------------------------------------|-----------|------------------------------------|--|--------------------------------|--|---------------------|
| | | | | WHITE LF | YELLOW LF | | | | | |
| 99+60 | - | 152+12 | CTH O, LT & RT | 10233 | - | - | - | - | - | EDGE LINE WHITE |
| 99+60 | - | 119+00 | CTH O | - | 485 | - | - | - | - | PASSING |
| 102+28 | - | 104+28 | CTH , LT | - | - | 200 | - | - | - | TURN LANE |
| | | 103+25 | CTH O, LT | - | - | - | - | 1 | - | |
| 119+00 | - | 127+50 | CTH O | - | 1063 | - | - | - | - | WB PASSING ONLY |
| | | 124+86 | CTH O, RT | - | - | - | - | 1 | - | |
| 126+19 | - | 128+69 | CTH O, RT | 63 | - | - | - | - | - | BYPASS LANE |
| 127+50 | - | 131+64 | CTH O | - | 104 | - | - | - | - | PASSING |
| 128+42 | - | 131+92 | CTH O, LT | - | - | 350 | - | - | - | TURN LANE |
| 131+64 | - | 136+64 | CTH O | - | 625 | - | - | - | - | WB PASSING ONLY |
| 132+41 | - | 136+41 | CTH O, RT | - | - | - | 1 | - | - | |
| | | 136+55 | CTH O, RR X-ING | - | - | - | - | 1 | - | RR X-ING UNDERDRAIN |
| | | 136+82 | CTH O, RR X-ING | - | - | - | - | 1 | - | RR X-ING UNDERDRAIN |
| 136+73 | - | 153+25 | CTH O | - | 3304 | - | - | - | - | DOUBLE YELLOW |
| 136+96 | - | 140+96 | CTH O, LT | - | - | - | 1 | - | - | |
| 150+50 | - | 153+12 | CTH O, RT | - | - | 262 | - | - | - | TURN LANE |
| | | 151+50 | CTH O, LT | - | - | - | - | 1 | - | |
| 20+00 | - | 21+20 | GIBSON ST. | - | - | - | - | - | 33 | |
| 30+00 | - | 31+25 | WHELEN AVE. | - | - | - | - | - | 35 | |
| 68+75 | - | 70+00 | SKYLINE DR. | - | - | - | - | - | 32 | |
| TOTALS | | | | 15,876 | | 812 | 2 | 5 | 100 | |

ADJUSTING WATER VALVE BOXES

SPV.0060.02
ADJUSTING
WATER VALVE
BOXES

CONSTRUCTION STAKING

| STATION | TO | STATION | LOCATION | 650.4500 CONSTRUCTION STAKING SUBGRADE | | 650.5000 CONSTRUCTION STAKING BASE | | 650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) | | 650.9920 CONSTRUCTION STAKING SLOPE STAKES | |
|----------------|----|---------|-------------|--|--------------|------------------------------------|----------|--|--------------|--|----------|
| | | | | LF | LF | LF | LF | LS | LF | | |
| 99+60 | - | 108+80 | CTH O | 920 | 920 | - | - | - | 920 | - | - |
| 112+65 | - | 136+64 | CTH O | 2,399 | 2,399 | - | - | - | 2,399 | - | - |
| 136+73 | - | 153+12 | CTH O | 1,639 | 1,639 | - | - | - | 1,639 | - | - |
| 20+00 | - | 21+20 | GIBSON ST. | 120 | 120 | - | - | - | 120 | - | - |
| 30+00 | - | 31+25 | WHELEN AVE. | 125 | 125 | 1 | - | - | 125 | - | - |
| 68+75 | - | 70+00 | SKYLINE DR. | 125 | 125 | - | - | - | 125 | - | - |
| PROJECT | | | | - | - | - | - | - | - | - | - |
| TOTALS | | | | 5,328 | 5,328 | 1 | - | - | 5,328 | - | - |

SAWING

| STATION | LOCATION | 690.0150 SAWING ASPHALT | | 690.0250 SAWING CONCRETE | |
|---------------|-------------------|-------------------------|-----------|--------------------------|----------|
| | | LF | LF | LF | LF |
| 99+60 | CTH O | 24 | - | - | - |
| 21+20 | GIBSON ST. | 36 | 5 | - | - |
| 102+48 | CTH O, LT CE | - | 56 | - | - |
| 108+80 | CTH O | 118 | - | - | - |
| 112+65 | CTH O | 128 | - | - | - |
| 31+25 | WHELEN AVE. | 40 | - | - | - |
| 128+12 | CTH O, LT PARKING | 23 | - | - | - |
| 130+88 | CTH O, LT CE | 65 | - | - | - |
| 136+64 | CTH O | 40 | - | - | - |
| 136+73 | CTH O | 40 | - | - | - |
| 68+75 | SKYLINE DR. | 36 | 5 | - | - |
| 153+12 | CTH O | 75 | 6 | - | - |
| TOTALS | | 625 | 72 | - | - |

| CATEGORY | STATION | LOCATION | EACH |
|--------------|---------|--------------------|-----------|
| 0020 | 101+42 | CTH O, RT 36' | 1 |
| 0020 | 30+53 | WHELEN AVE, RT 5' | 1 |
| 0020 | 30+48 | WHELEN AVE, RT 10' | 1 |
| 0020 | 132+50 | CTH O, RT 10' | 1 |
| 0020 | 132+58 | CTH O, LT 36' | 1 |
| 0020 | 134+70 | CTH O, RT 9' | 1 |
| 0020 | 134+73 | CTH O, RT 6' | 1 |
| 0020 | 134+76 | CTH O, RT 9' | 1 |
| 0020 | 136+01 | CTH O, RT 11' | 1 |
| 0020 | 141+39 | CTH O, RT 9' | 1 |
| 0020 | 145+80 | CTH O, RT 13' | 1 |
| 0020 | 145+91 | CTH O, RT 9' | 1 |
| 0020 | 146+29 | CTH O, RT 16' | 1 |
| 0020 | 152+51 | CTH O, RT 17' | 1 |
| 0020 | 152+59 | CTH O, RT 13' | 1 |
| TOTAL | | | 15 |

PROJECT NO: 8888-08-76

HWY: CTH O

COUNTY: TAYLOR

MISCELLANEOUS QUANTITIES

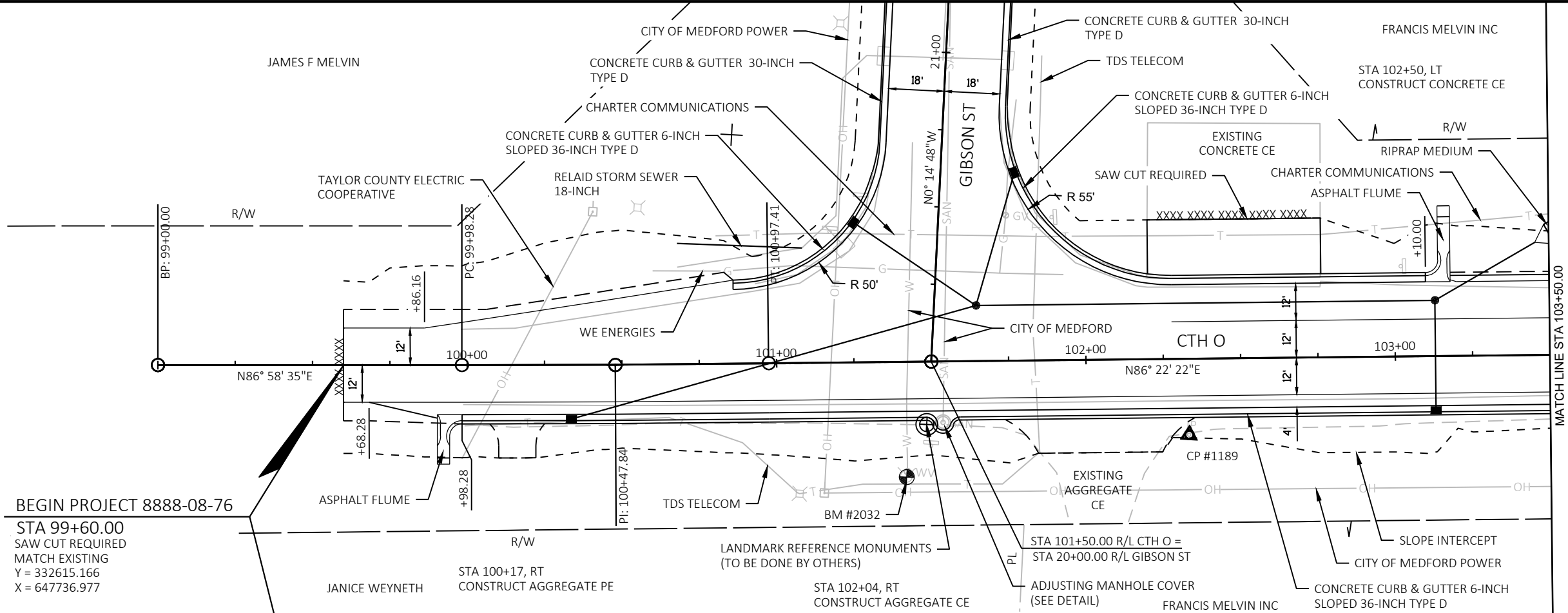
SHEET

E

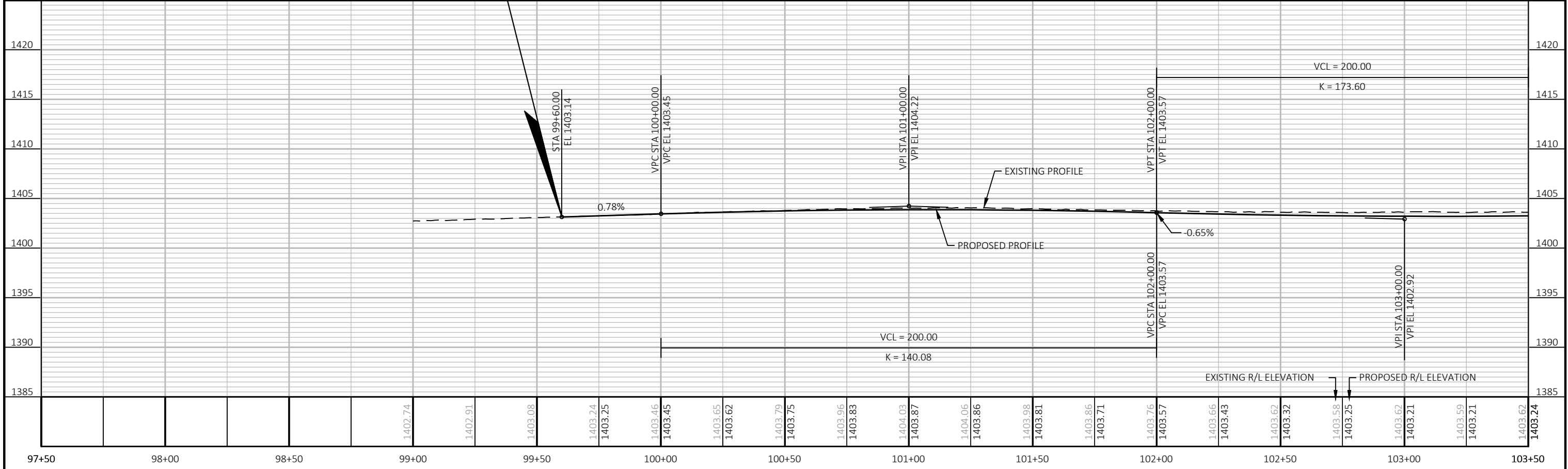


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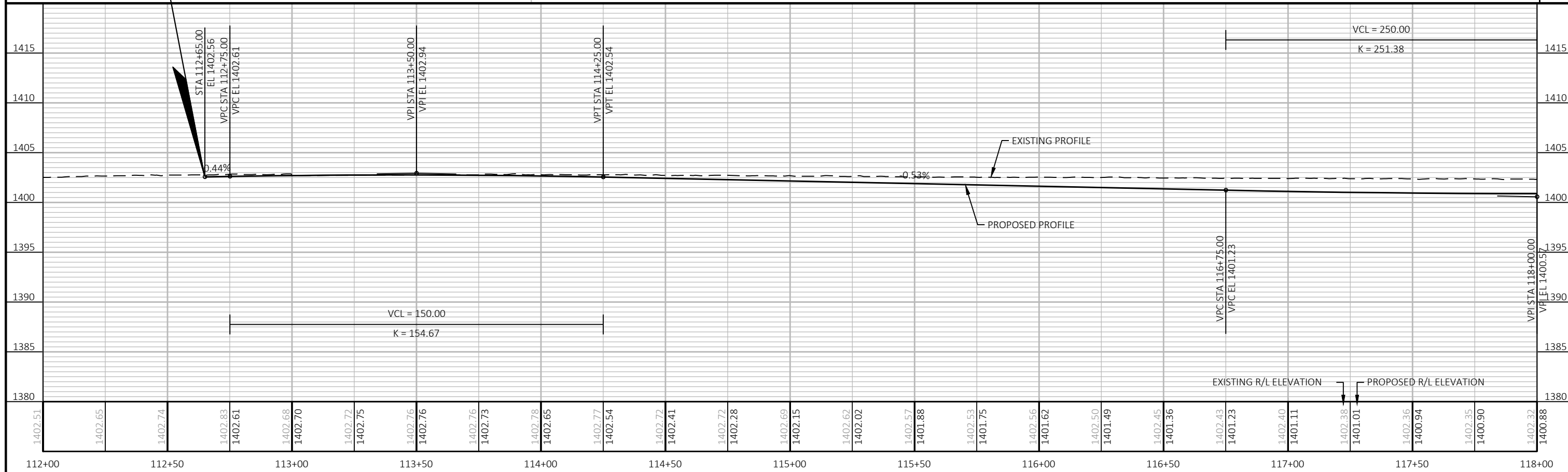
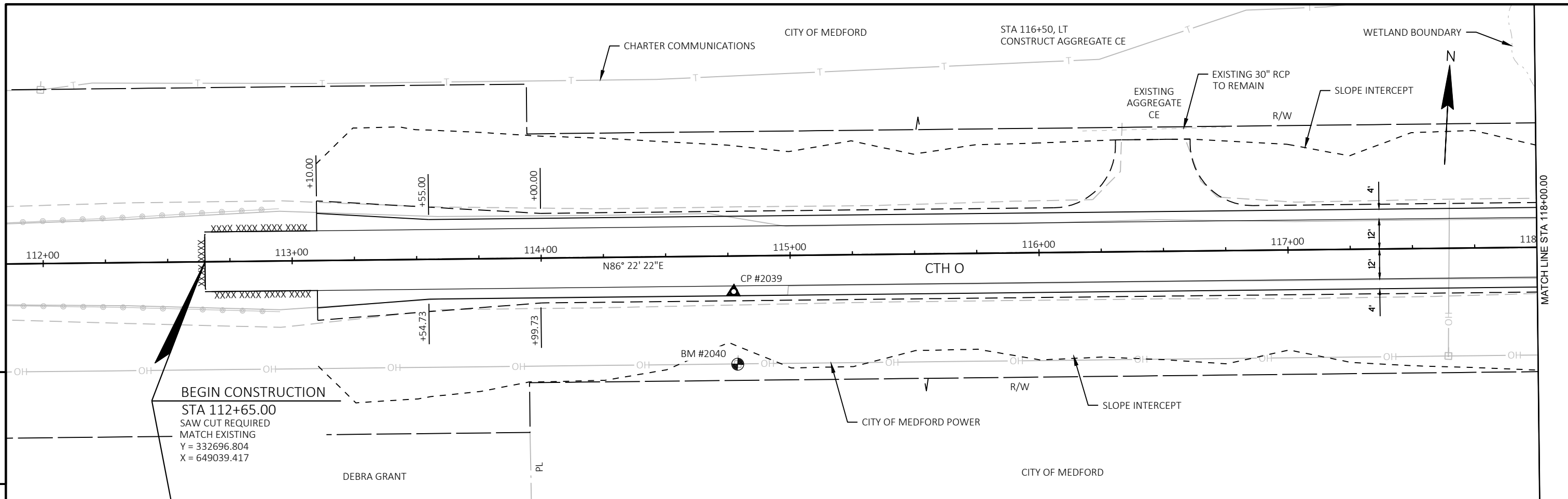


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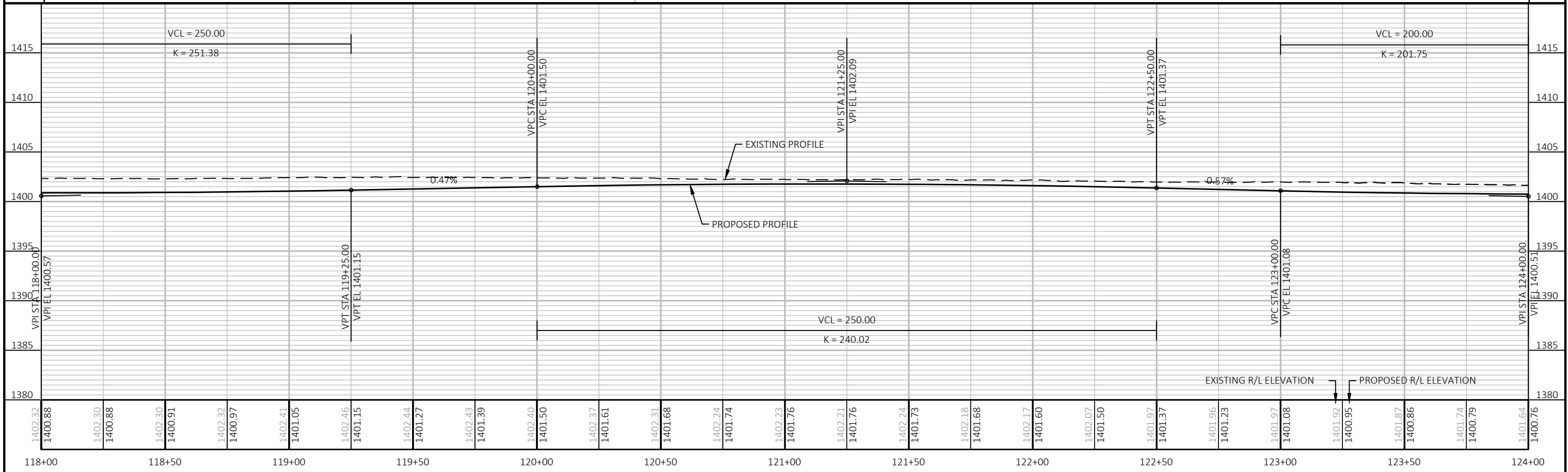
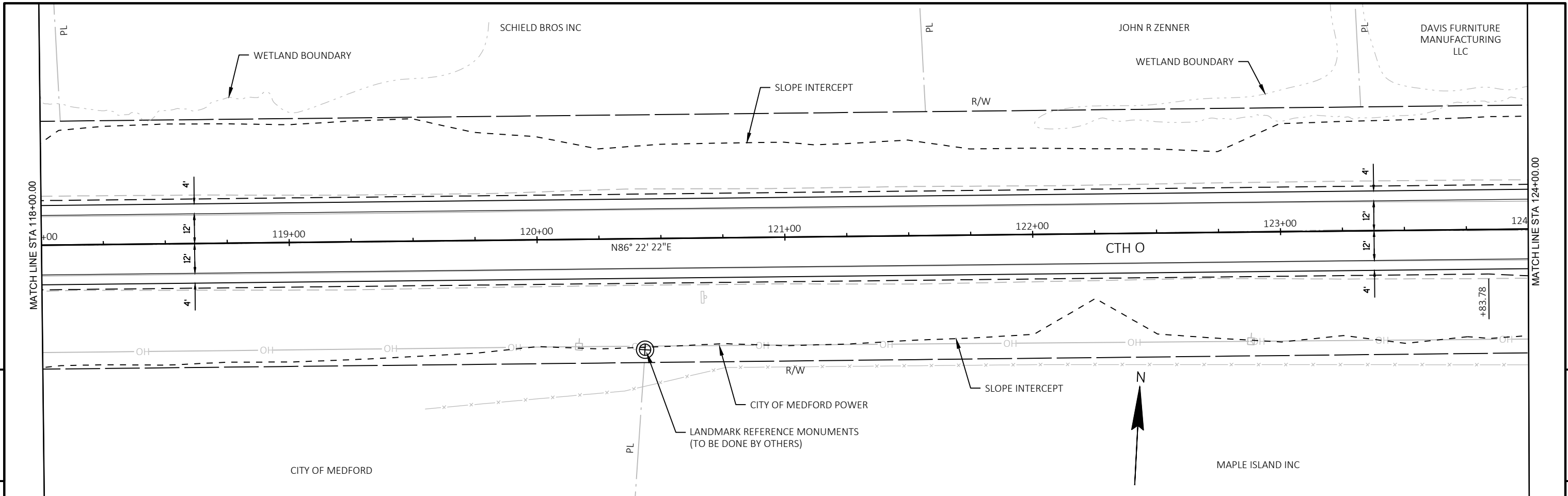


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|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 97+50 | 98+00 | 98+50 | 99+00 | 99+50 | 100+00 | 100+50 | 101+00 | 101+50 | 102+00 | 102+50 | 103+00 | 103+50 |
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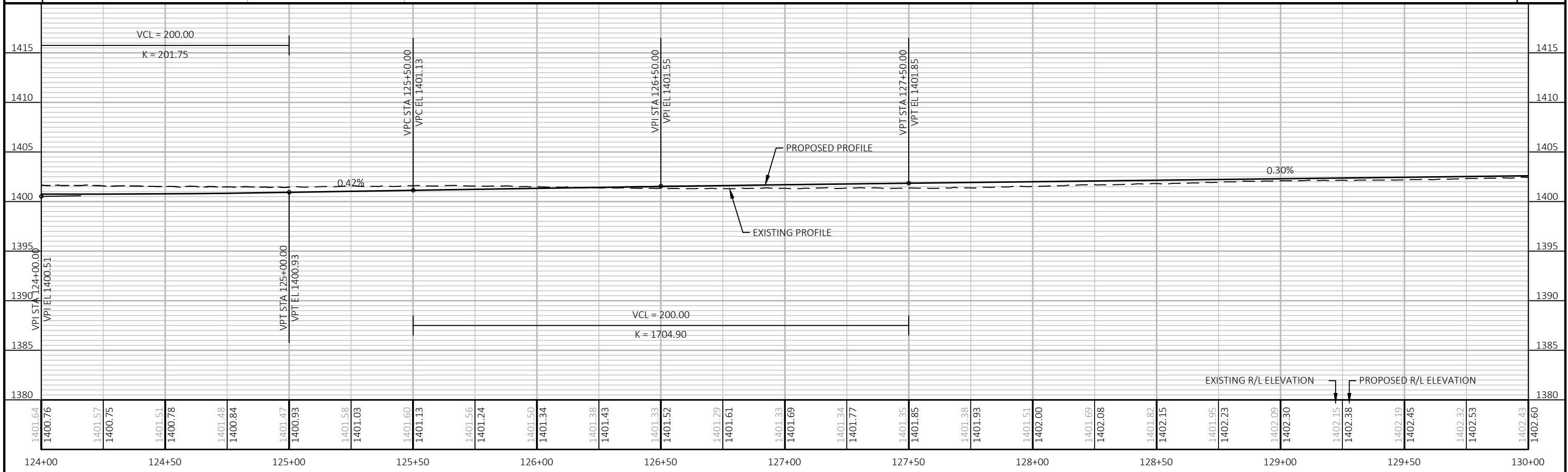
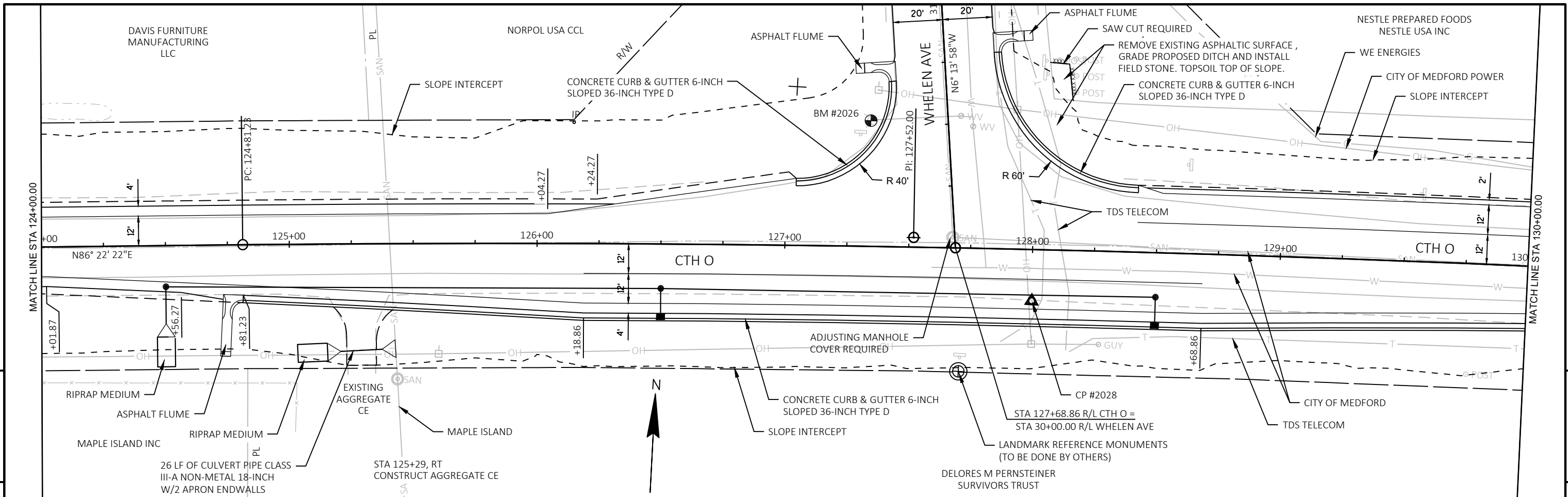
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR PLAN AND PROFILE: MAINLINE SHEET: E



| | | | |
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| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | PLAN AND PROFILE: MAINLINE |
| SHEET | | | E |

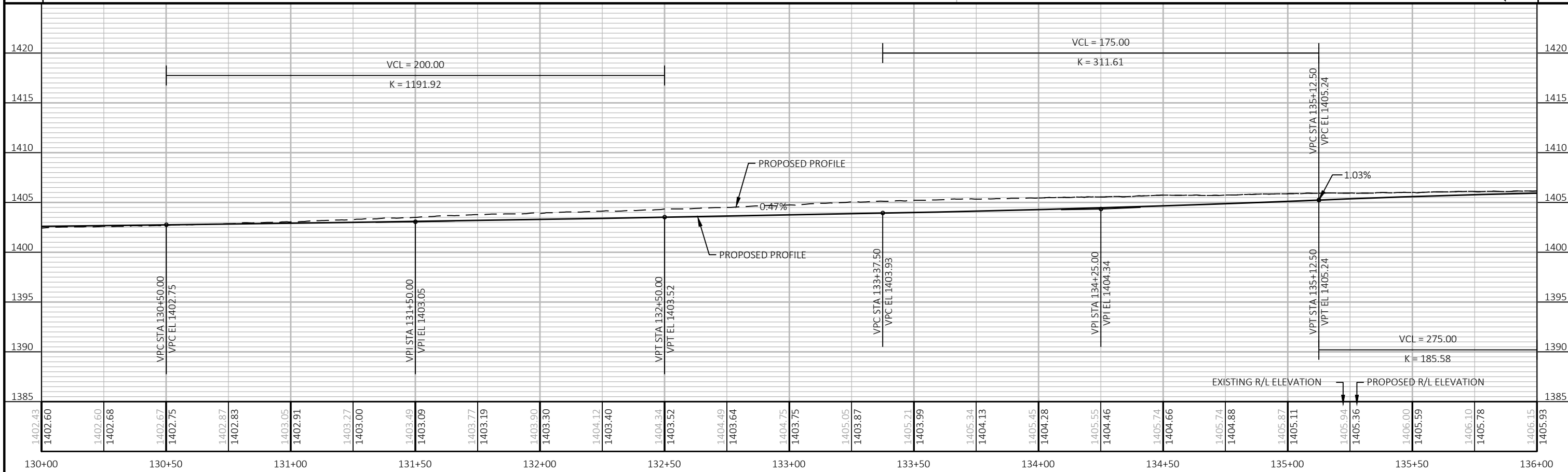
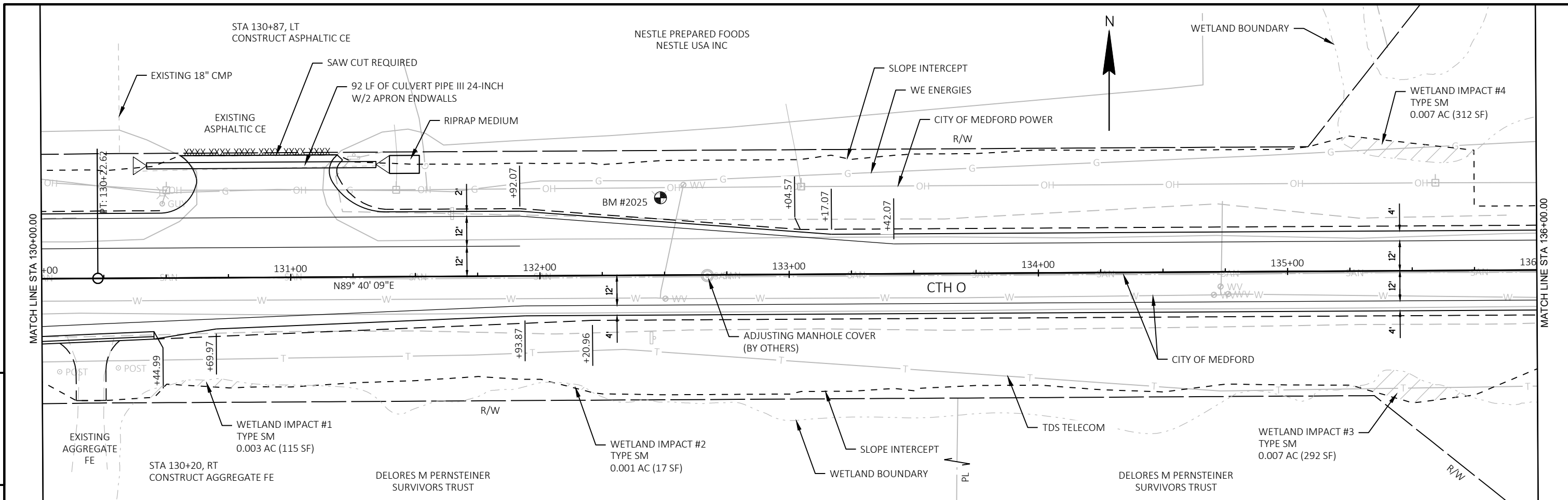


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| PROJECT NO: | 8888-08-76 | HWY: | CTH O | COUNTY: | TAYLOR | PLAN AND PROFILE: | MAINLINE | SHEET | 5 |
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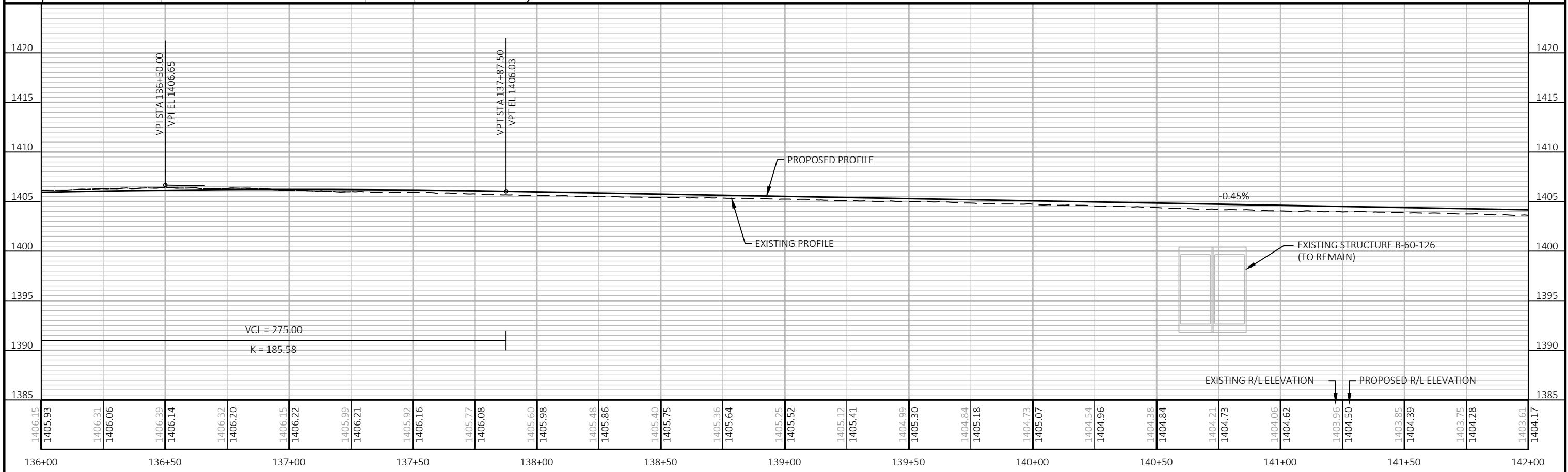
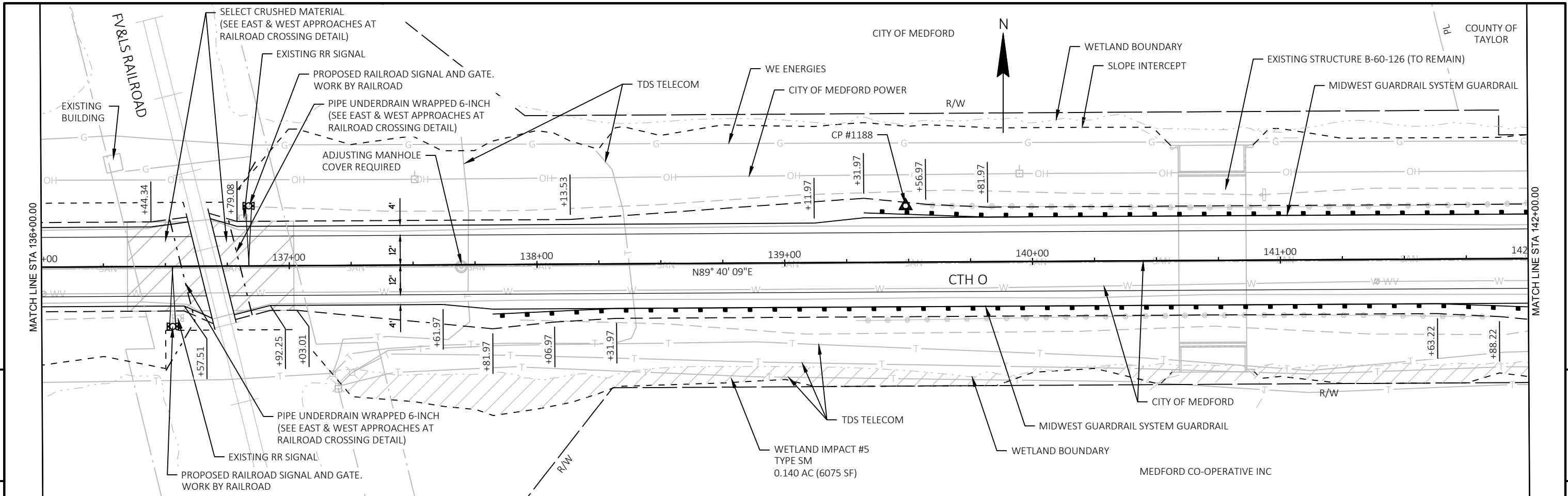


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|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1401.64 | 1400.76 | 1401.57 | 1400.75 | 1401.51 | 1400.78 | 1401.48 | 1400.84 | 1401.47 | 1400.93 | 1401.58 | 1401.03 | 1401.60 | 1401.13 | 1401.56 | 1401.24 | 1401.50 | 1401.34 | 1401.38 | 1401.43 | 1401.33 | 1401.52 | 1401.29 | 1401.61 | 1401.33 | 1401.69 | 1401.34 | 1401.77 | 1401.35 | 1401.85 | 1401.38 | 1401.93 | 1401.51 | 1402.00 | 1401.69 | 1402.08 | 1401.82 | 1402.15 | 1401.95 | 1402.23 | 1402.09 | 1402.30 | 1402.15 | 1402.38 | 1402.19 | 1402.45 | 1402.32 | 1402.53 | 1402.43 | 1402.60 |
| 124+00 | 124+50 | 125+00 | 125+50 | 126+00 | 126+50 | 127+00 | 127+50 | 128+00 | 128+50 | 129+00 | 129+50 | 130+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

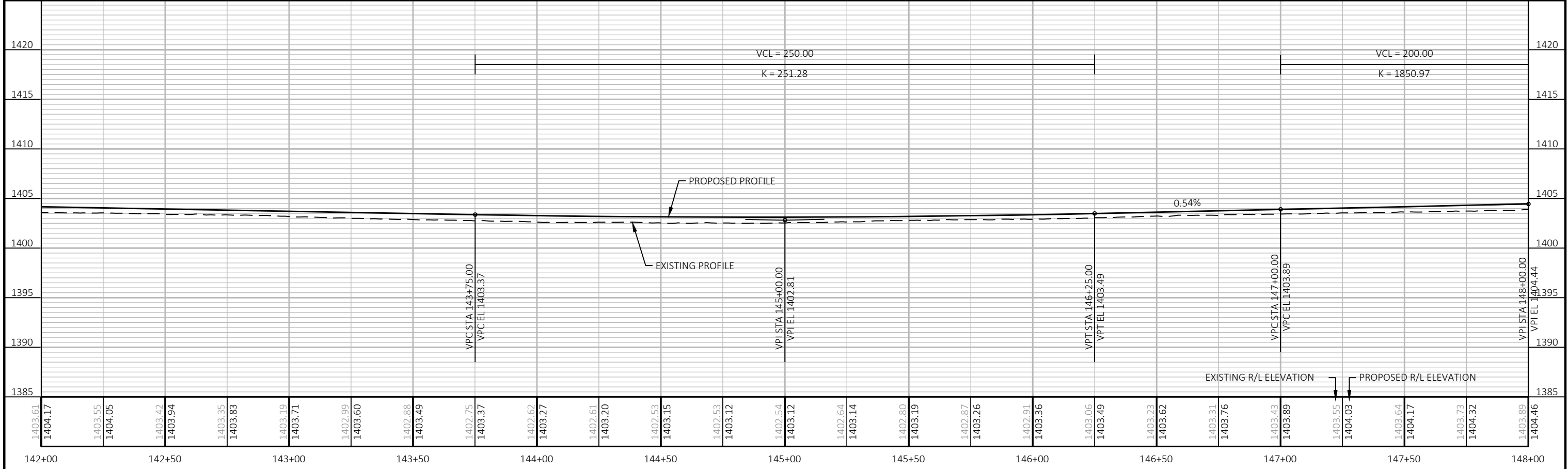
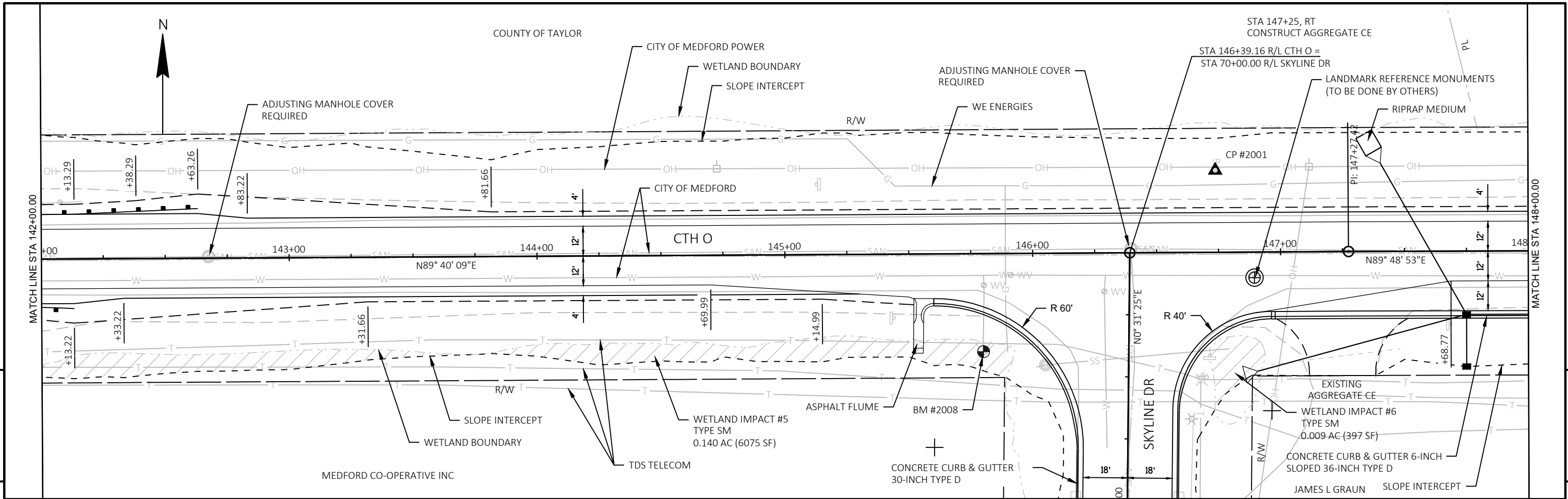
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR PLAN AND PROFILE: MAINLINE SHEET: E



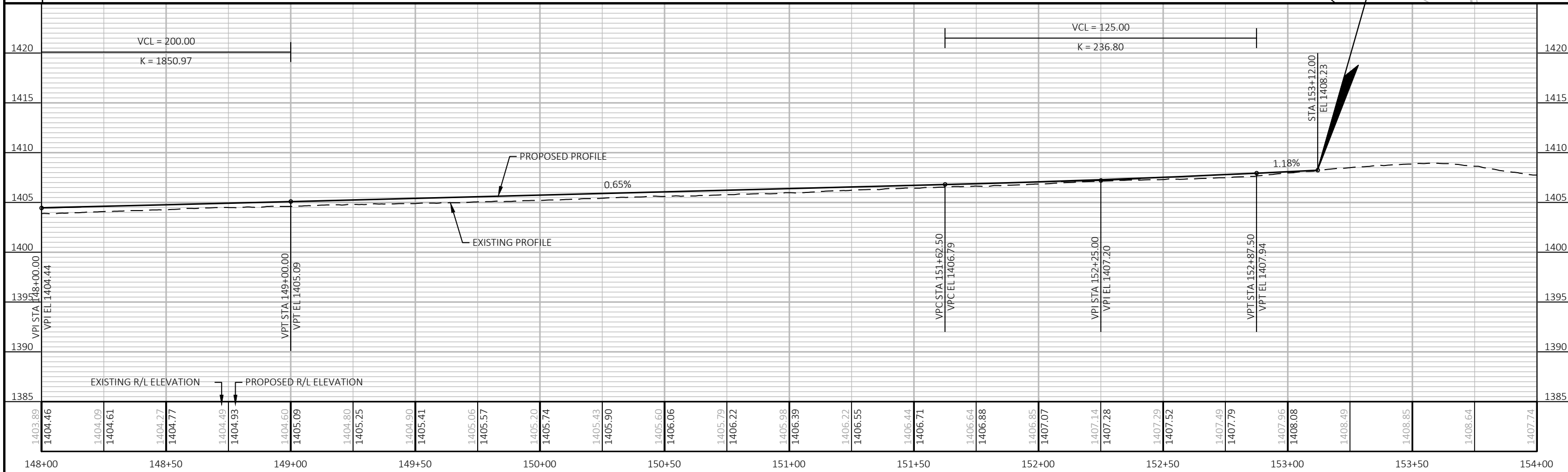
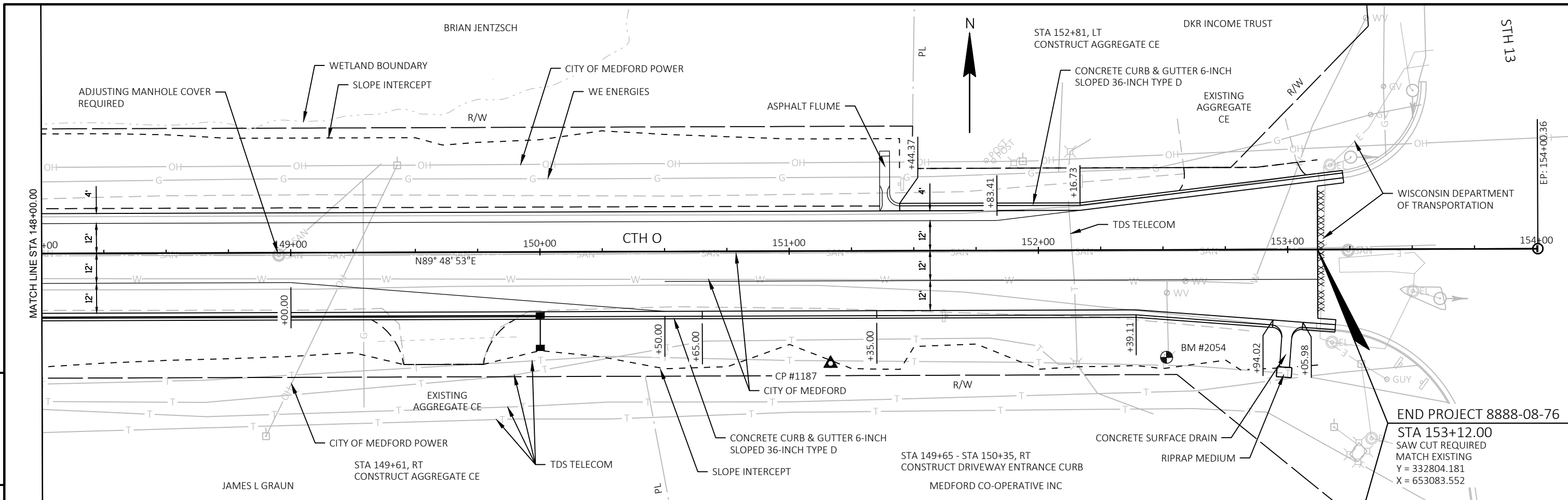
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| PROJECT NO: | 8888-08-76 | HWY: | CTH O | COUNTY: | TAYLOR | PLAN AND PROFILE: | MAINLINE | SHEET | E |
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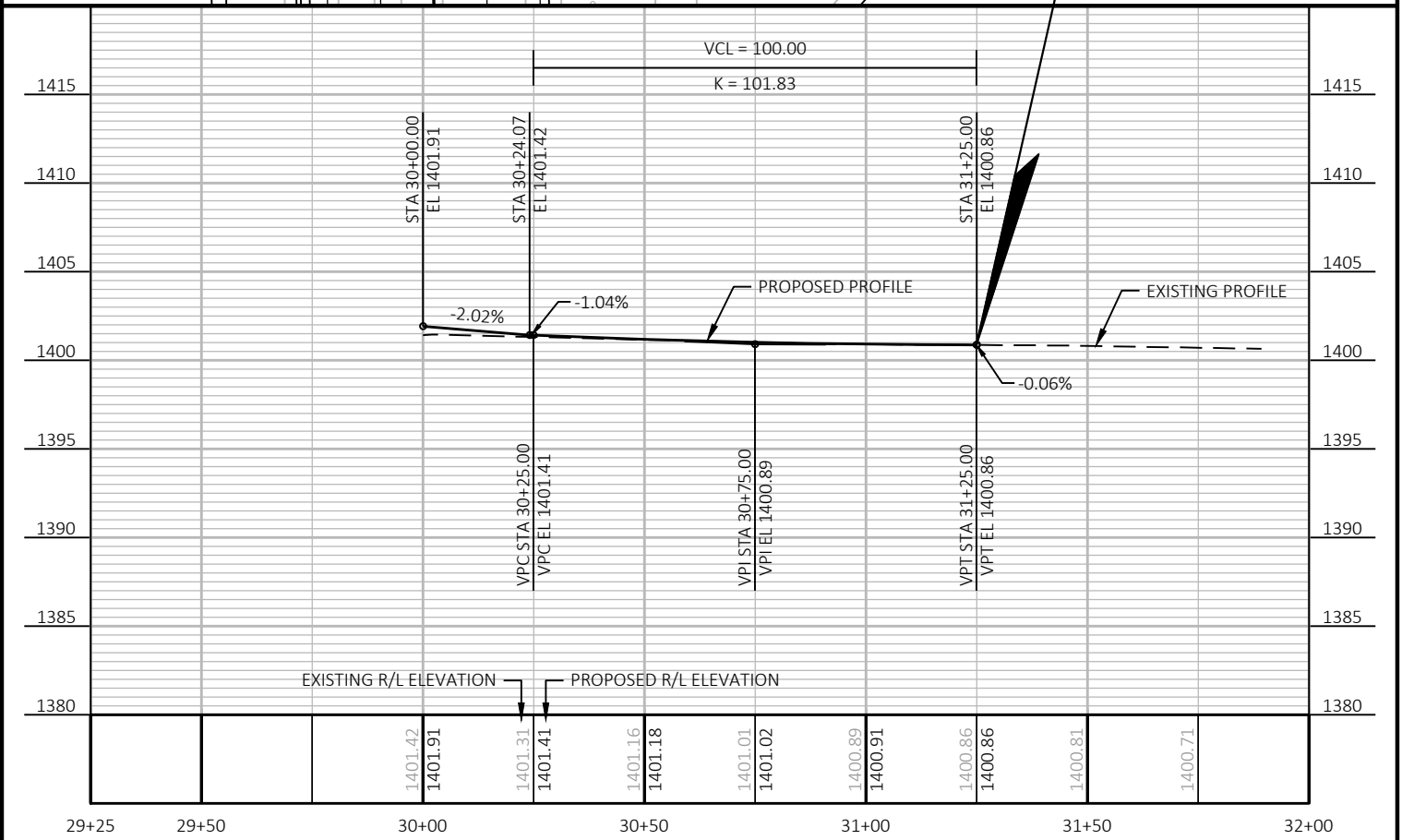
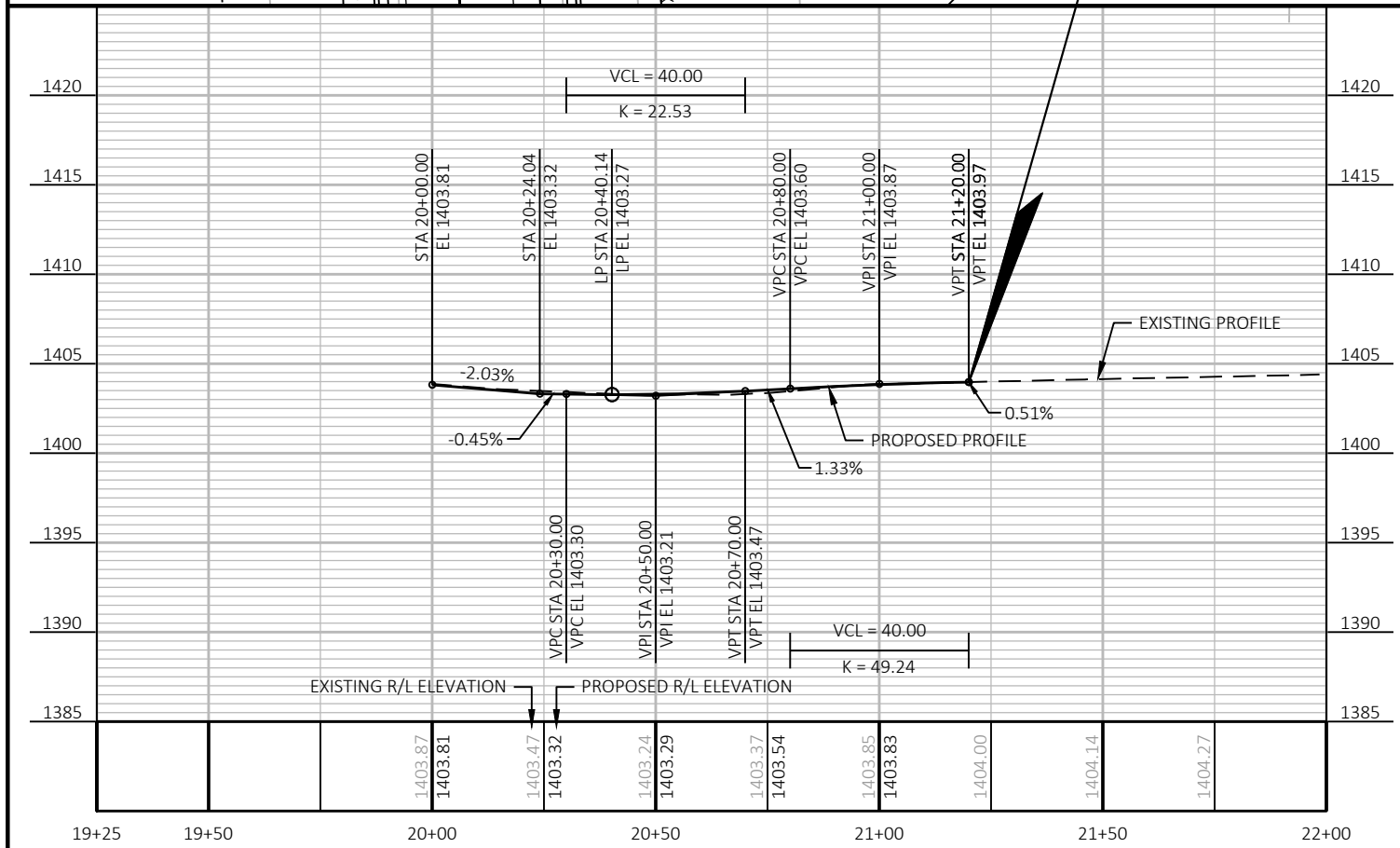
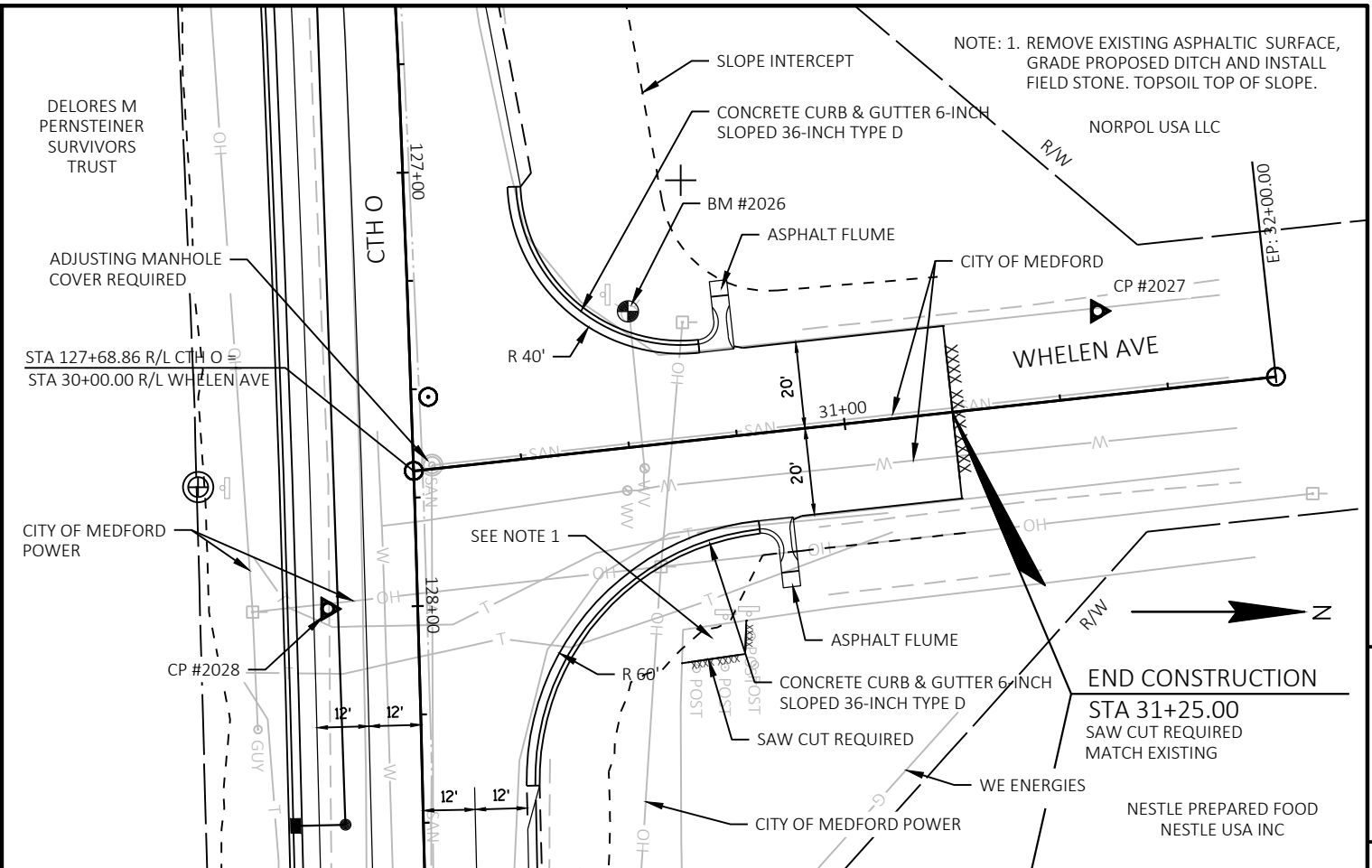
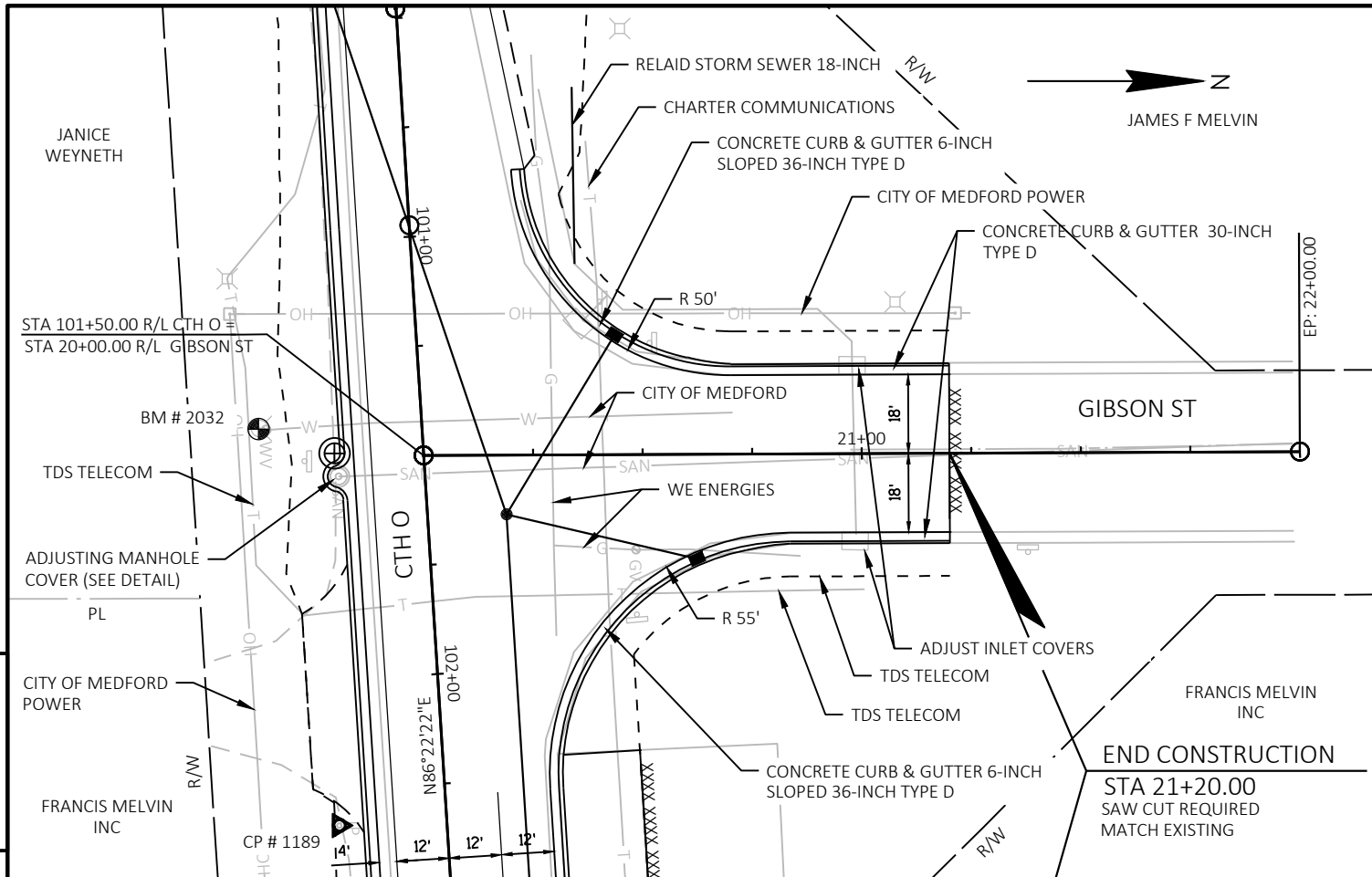
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|------------------------|------------|----------------|----------------------------|-------|---|
| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | PLAN AND PROFILE: MAINLINE | SHEET | E |
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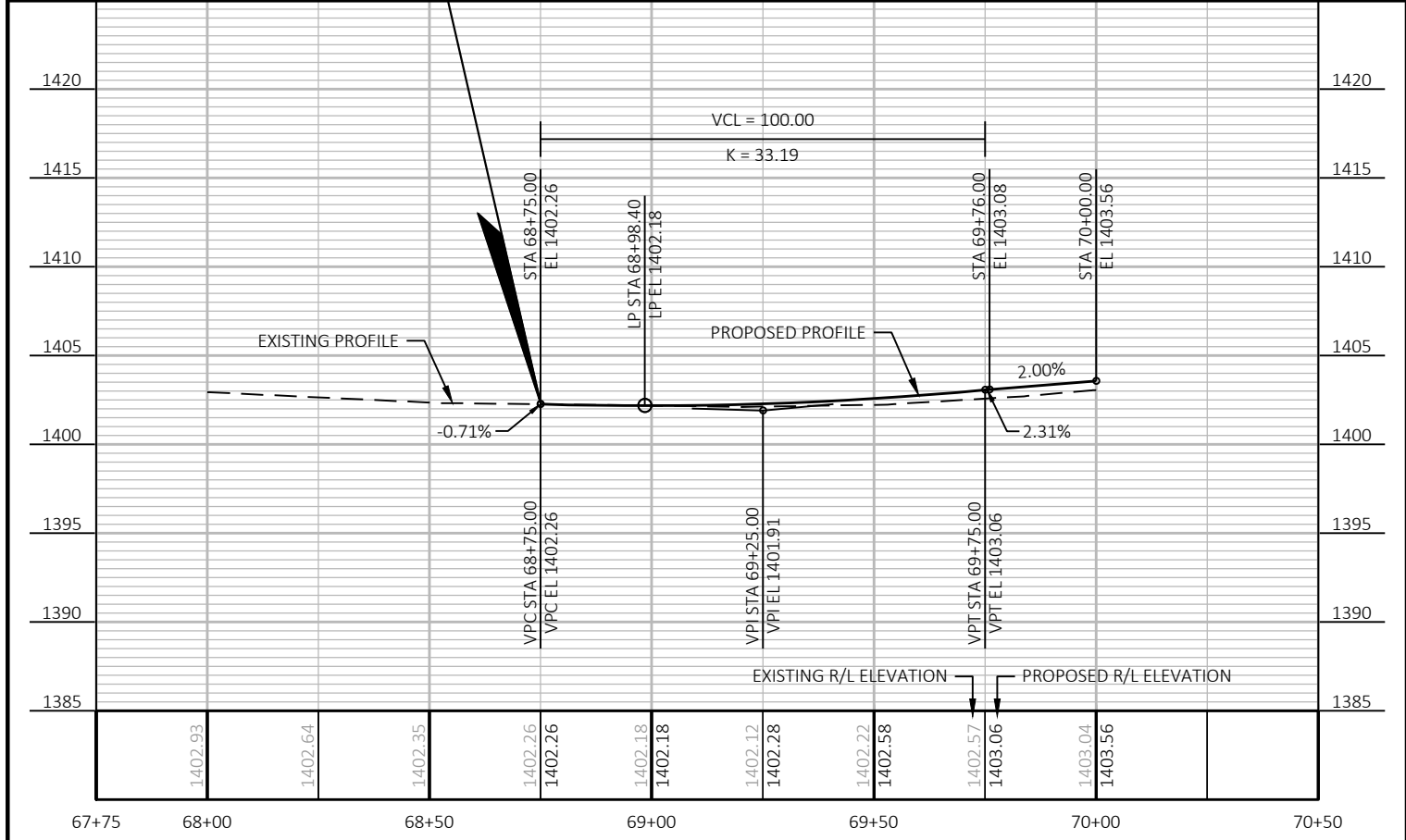
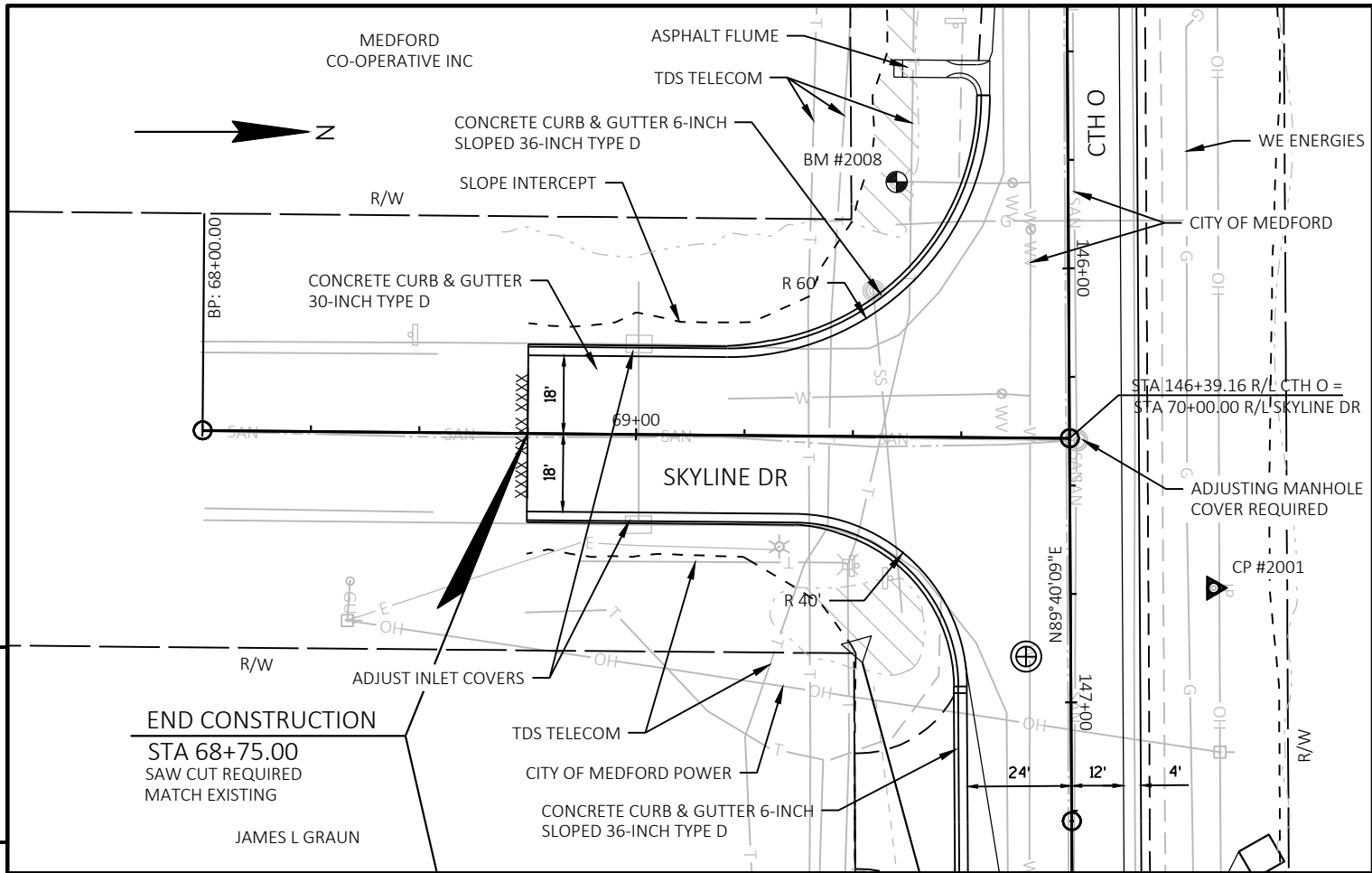
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| PROJECT NO: | 8888-08-76 | HWY: | CTH O | COUNTY: | TAYLOR | PLAN AND PROFILE: | MAINLINE | SHEET | 5 |
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| PROJECT NO: | 8888-08-76 | HWY: | CTH O | COUNTY: | TAYLOR | PLAN AND PROFILE: | MAINLINE | SHEET | E |
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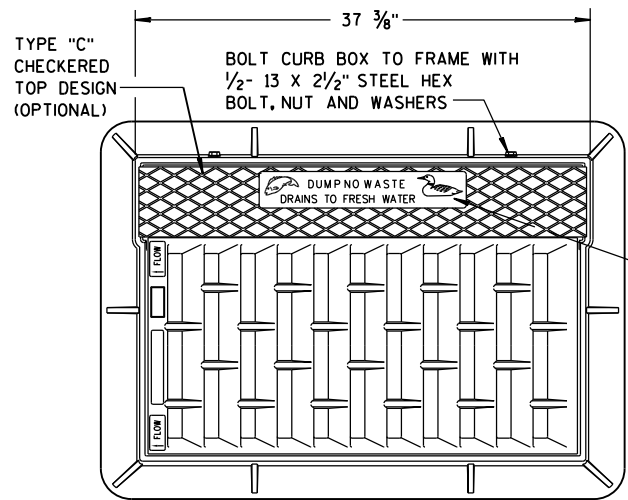
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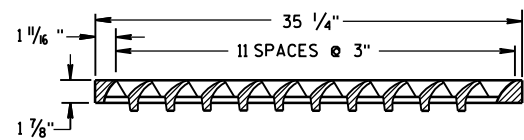
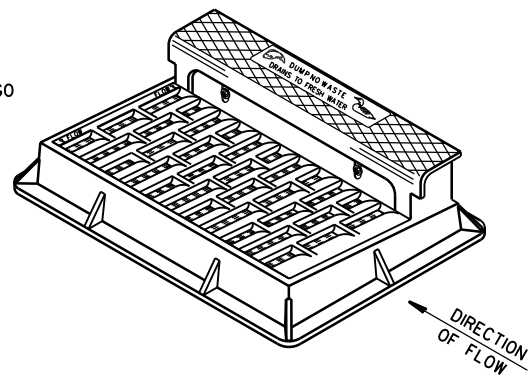
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR PLAN AND PROFILE: SKYLINE DR SHEET: **E**

Standard Detail Drawing List

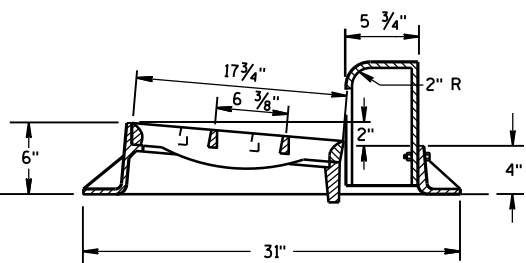
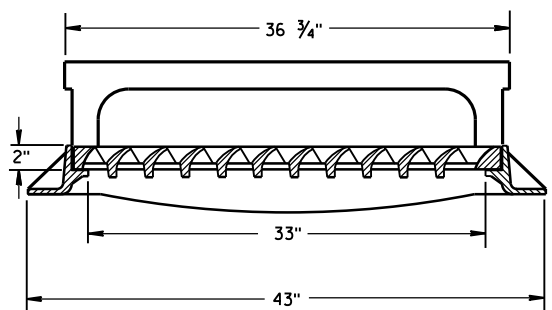
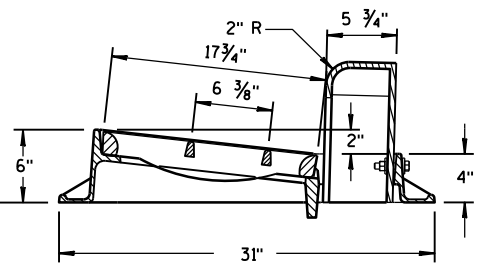
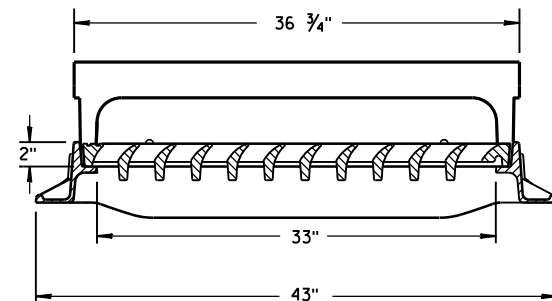
| | |
|-----------|---|
| 08A05-19A | INLET COVERS TYPE A, H, A-S, H-S & Z |
| 08A05-19B | INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM |
| 08A05-19C | INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S |
| 08A05-19D | INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M |
| 08A08-02 | CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER |
| 08A09-02 | CATCH BASINS 2X3-FT AND 2.5X3-FT |
| 08C08-02 | INLETS MEDIAN 1 AND 2 GRATE |
| 08D01-22A | CONCRETE CURB & GUTTER |
| 08D01-22B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS |
| 08D04-06 | CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES |
| 08D15-05A | EDGEDRAIN OUTLET AND OUTFALL MARKERS |
| 08D15-05B | EDGEDRAIN AND BASE AGGREGATE OPEN GRADED |
| 08D15-05C | EDGEDRAIN AND BASE AGGREGATE OPEN GRADED |
| 08D16-11 | CONCRETE GUTTER, CURB AND GUTTER AND PAVEMENT TIES |
| 08D17-06 | MANHOLES, MANHOLE & INLET COVERS |
| 08D20-01 | DRIVEWAYS WITH CURB & GUTTER RETURNS |
| 08D21-01 | DRIVEWAYS WITHOUT CURB & GUTTER |
| 08E08-03 | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS |
| 08E09-06 | SILT FENCE |
| 08E10-02 | INLET PROTECTION TYPE A, B, C AND D |
| 08E14-01 | TRACKING PAD |
| 08E15-01 | CULVERT PIPE CHECK |
| 08F01-11 | APRON ENDWALLS FOR CULVERT PIPE |
| 08F04-08 | JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL |
| 08F06-04 | REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN |
| 08F07-05 | STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS |
| 08F08-02 | STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS |
| 09A01-13A | AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE |
| 09A01-13B | AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2" |
| 14B42-07A | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07B | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07C | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B42-07D | MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL |
| 14B44-04A | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04B | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 14B44-04C | MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS) |
| 15A03-02A | FLEXIBLE MARKER POST FOR CULVERT END |
| 15A03-02B | FLEXIBLE MARKER POST FOR CULVERT END |
| 15C02-08A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES |
| 15C02-08B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES |
| 15C02-08C | DETOUR SIGNING FOR MAINLINE CLOSURES |
| 15C08-21A | LONGITUDINAL MARKING (MAINLINE) |
| 15C08-21C | PAVEMENT MARKING (TURN LANES) |
| 15C08-21D | PAVEMENT MARKING (TURN LANES) |
| 15C09-12A | SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS |
| 15C11-09B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS |
| 15C33-04 | STOP LINE AND CROSSWALK PAVEMENT MARKING |
| 15C35-04A | PAVEMENT MARKING (INTERSECTIONS) |
| 16A01-07 | LANDMARK REFERENCE MONUMENTS AND COVERS |



**NOTE:
GRATE IS REVERSIBLE.**

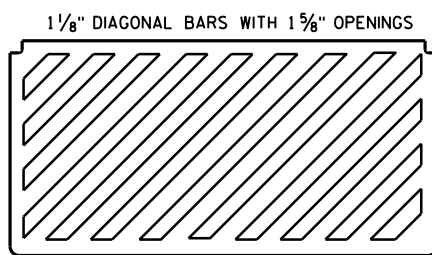


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

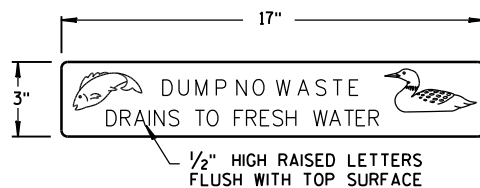


TYPE "H"

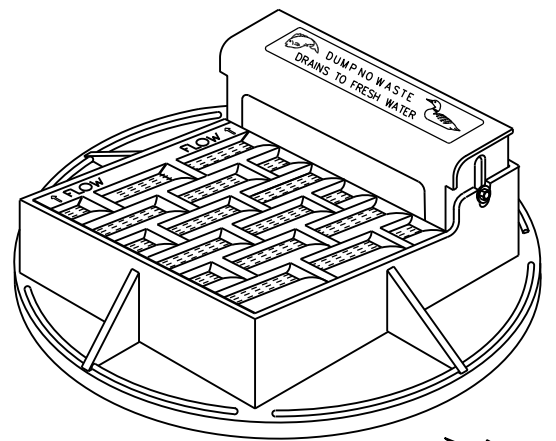
NOTE: EITHER CASTING IS ACCEPTABLE



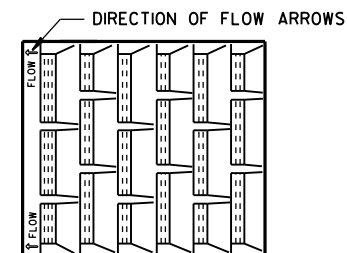
**SPECIAL GRATE FOR
TYPE "H" COVER**
(MEASURES 35 1/4" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL

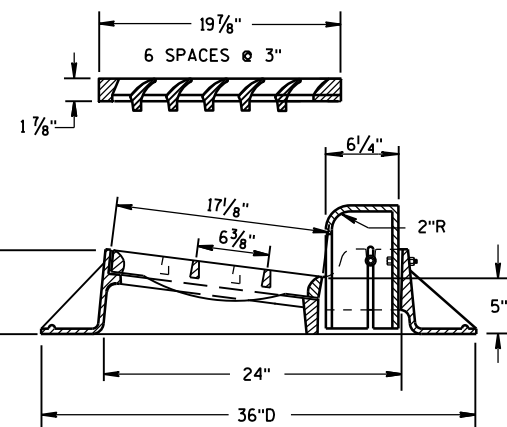
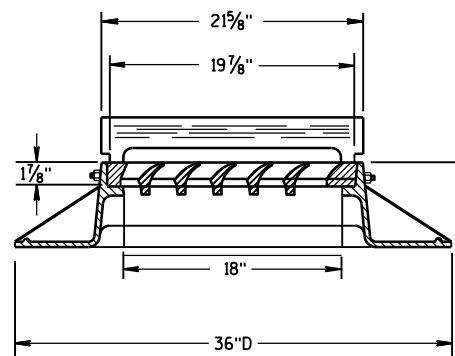


**NOTE:
GRATE IS REVERSIBLE.**

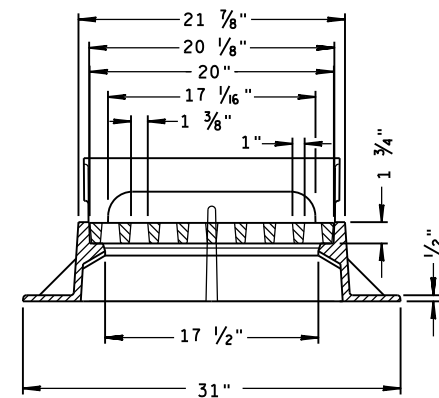
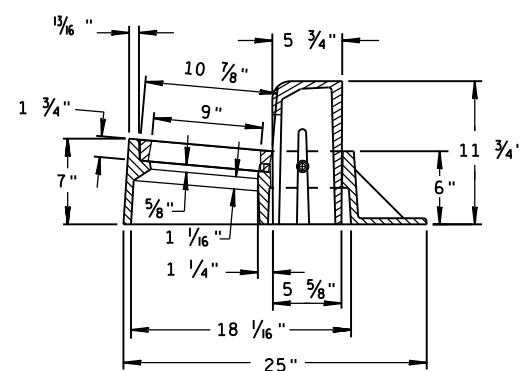


**1" DIAGONAL BARS
WITH 1 1/2" OPENINGS**

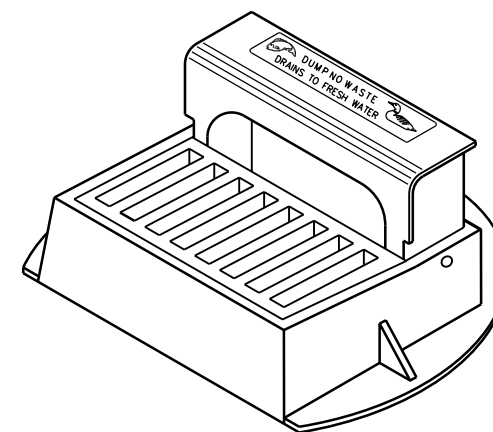
**SPECIAL GRATE FOR
TYPE "A" COVER**
(MEASURES 19 3/4" X 17" X 1 1/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



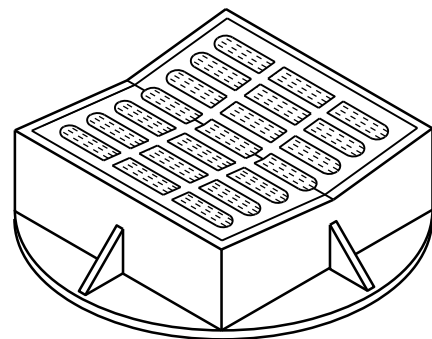
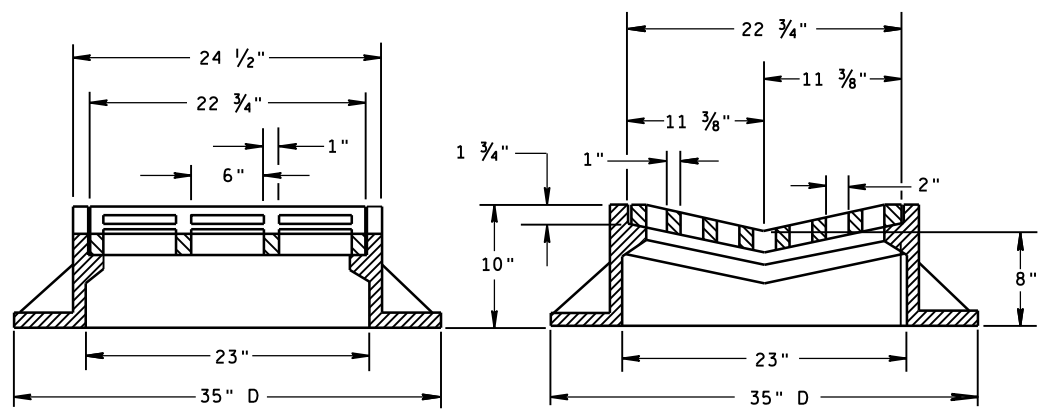
TYPE "Z"



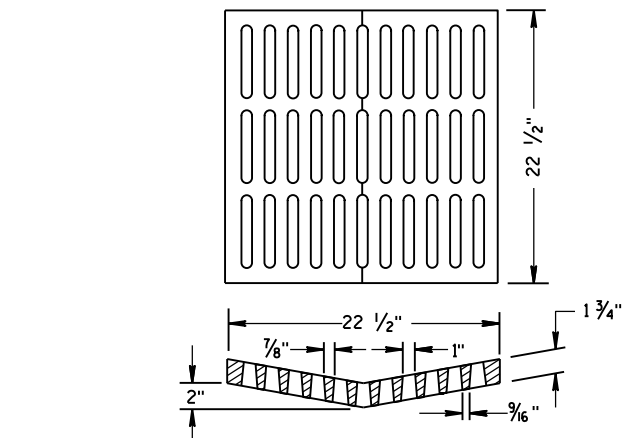
**INLET COVERS
TYPE A, H, A-S, H-S & Z**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED
DATE: 11-27-13
DATE: /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

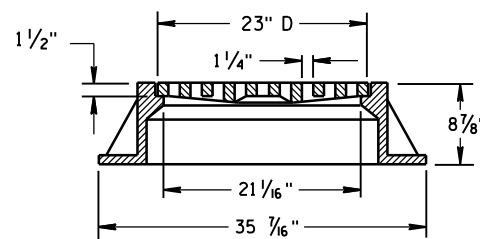
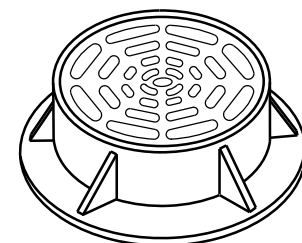
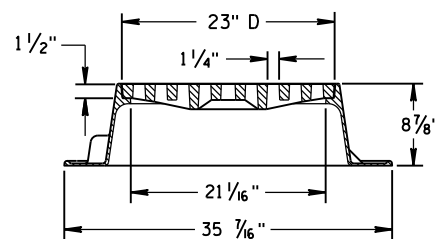
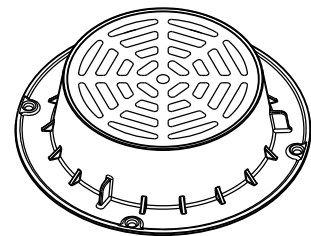


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

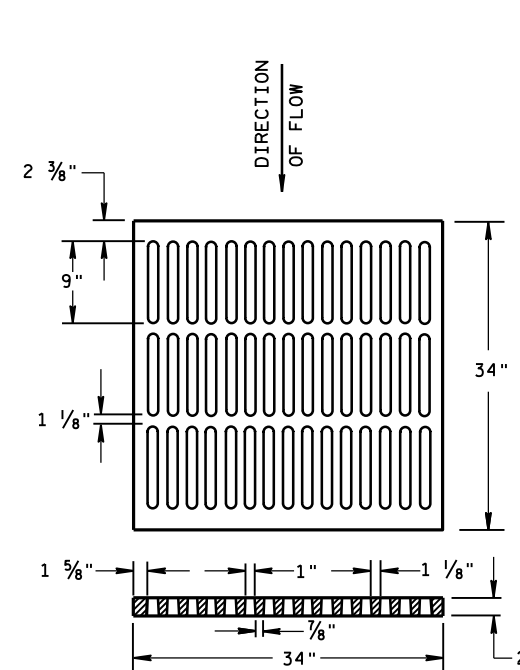
NOTE: EITHER CASTING IS ACCEPTABLE

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.

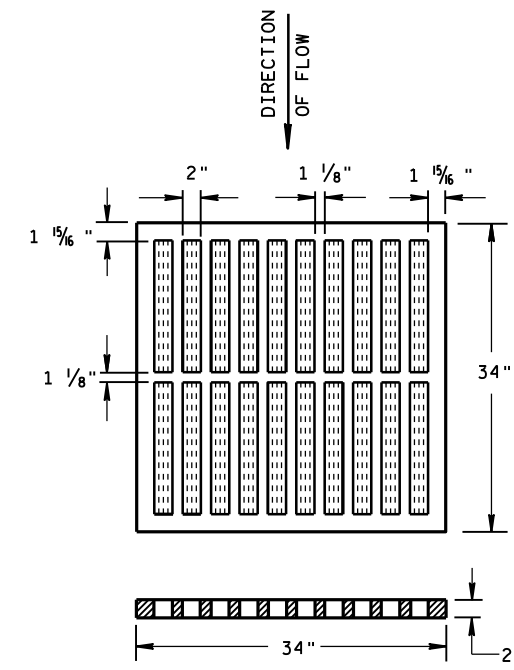
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



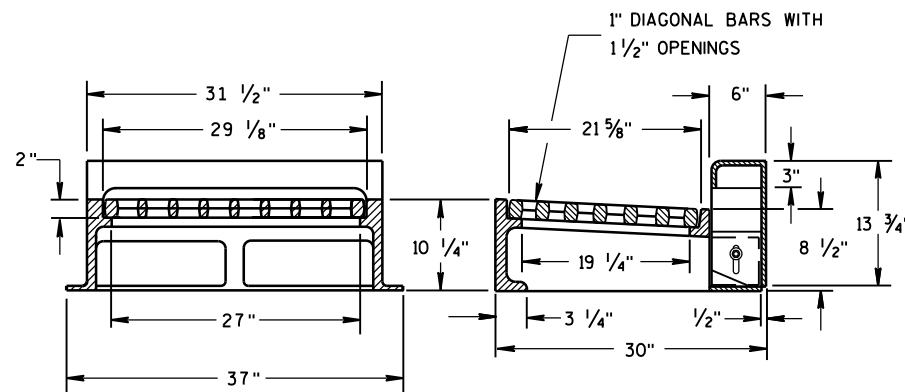
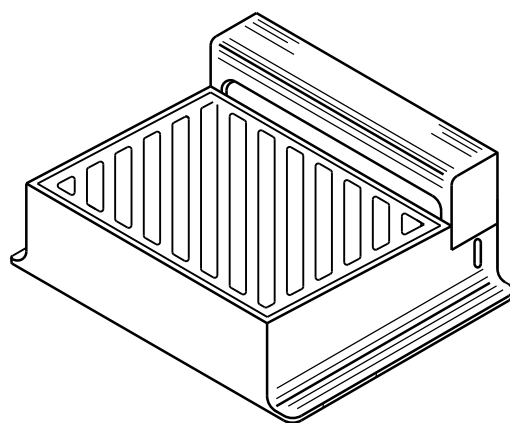
ALTERNATIVE TYPE "MS"

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



TYPE "MS"

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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

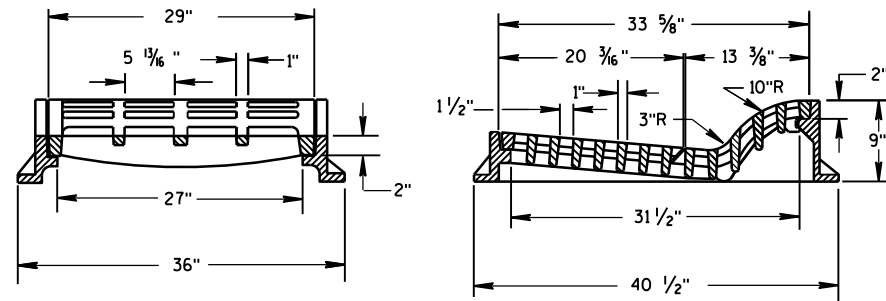
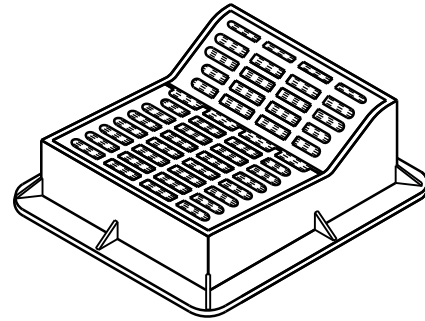
DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.

DIRECTION OF FLOW

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 11/27/2013 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



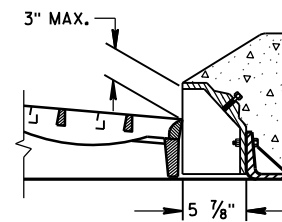
TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

GENERAL NOTES

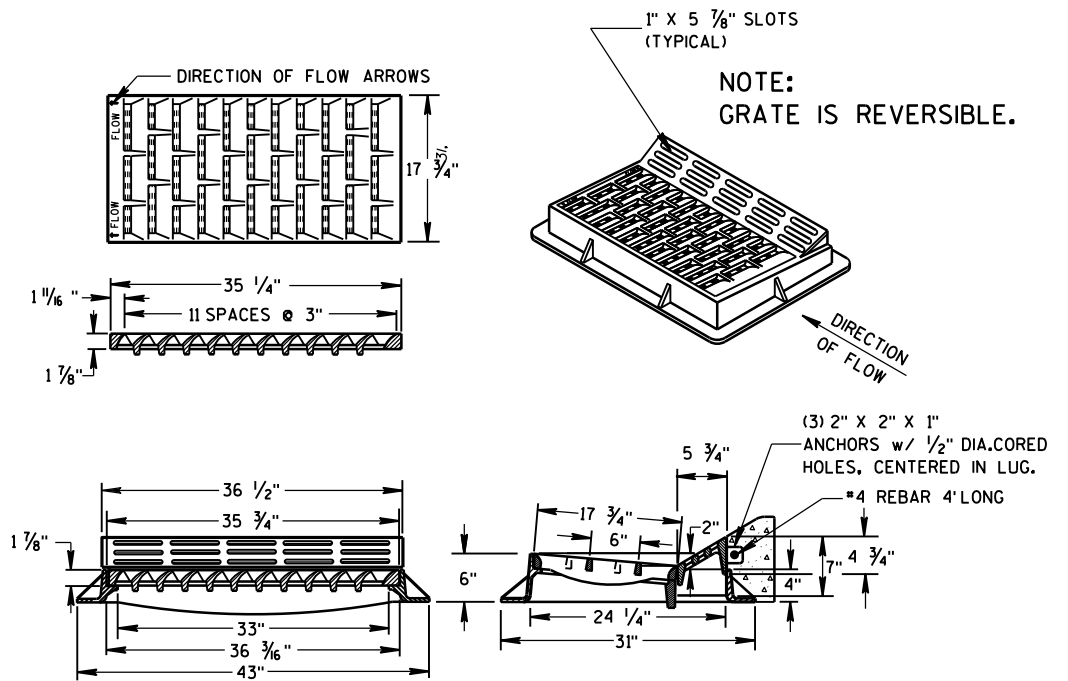
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH NOTED AS TYPE HM-GJ ON DRAINAGE TABLE



TYPE "HM"

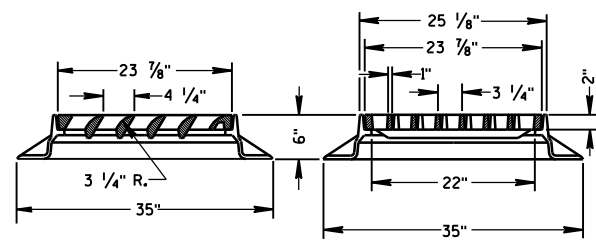
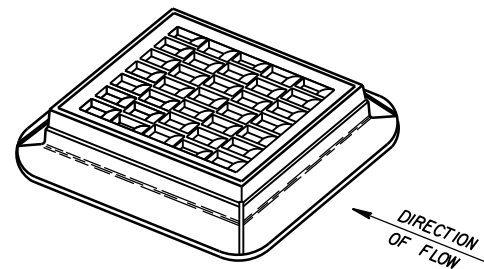
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM" COVER NOTED AS TYPE HM-S ON DRAINAGE TABLE

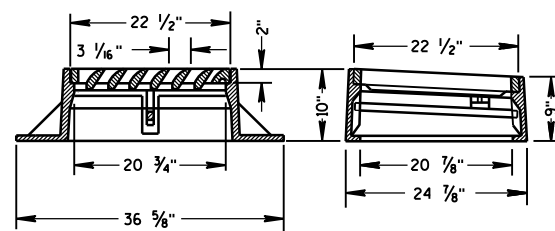
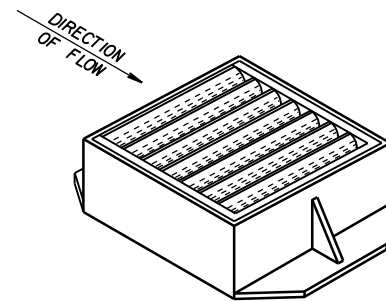
NOTE: SPECIAL GRATE FOR THE TYPE "H" COVER MAY ALSO BE USED FOR THE TYPE "HM-GJ" COVER NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

6

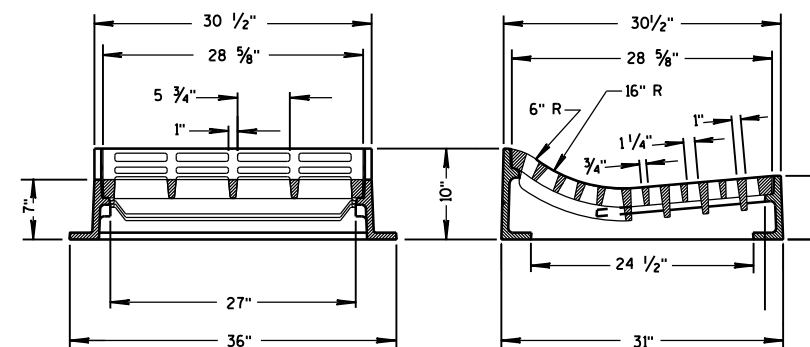
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TYPE "S"

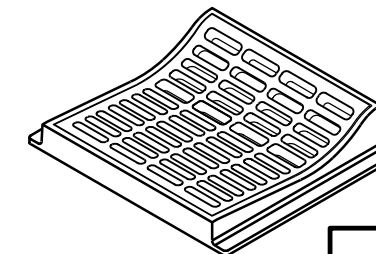


TYPE "V"



TYPE "T"

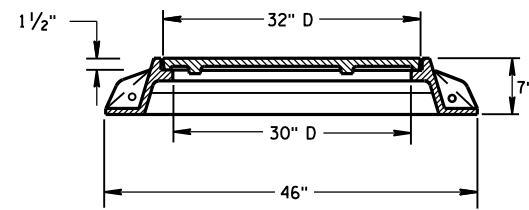
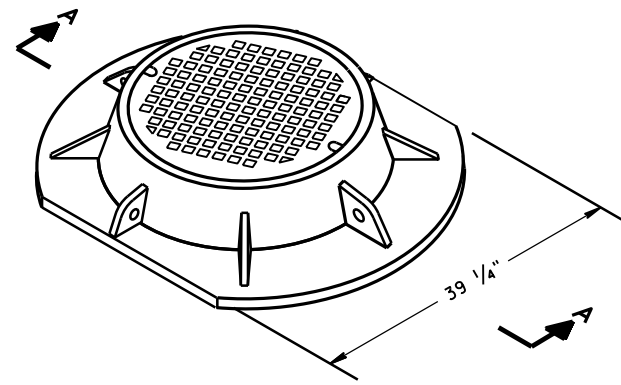
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



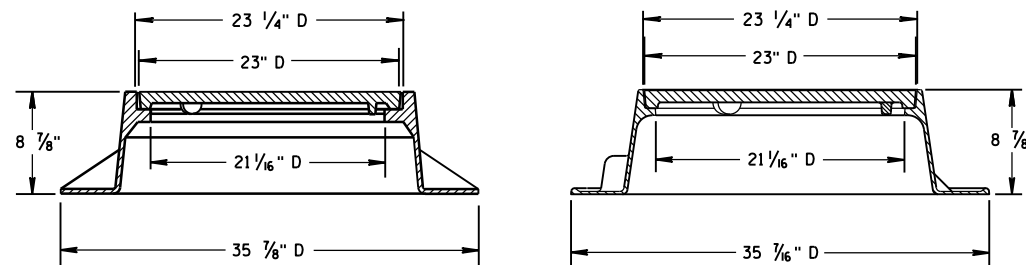
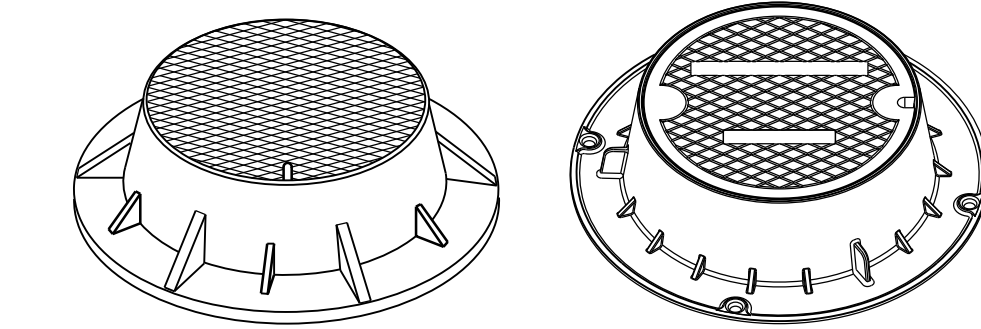
INLET COVERS
TYPE F, HM, HM-S, S, T, V,
HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 DATE /s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



SECTION A-A
TYPE "K"



TYPE "J"

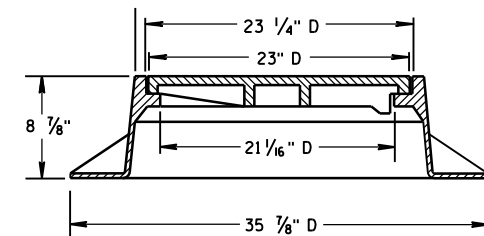
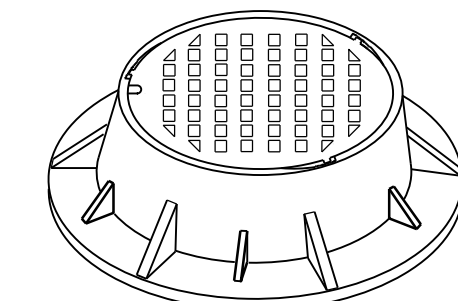
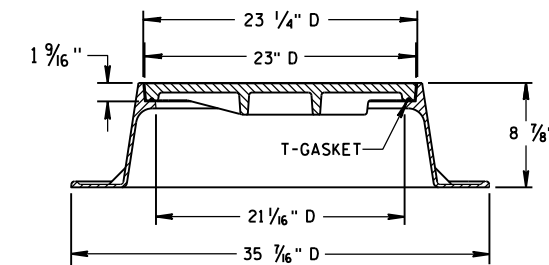
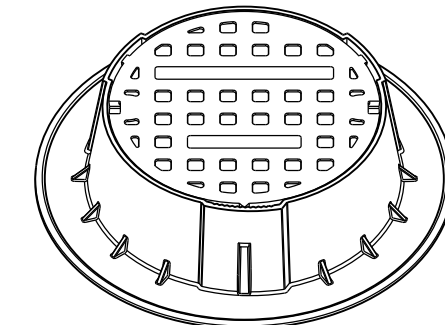
NOTE: EITHER CASTING IS ACCEPTABLE

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 MANHOLE 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.



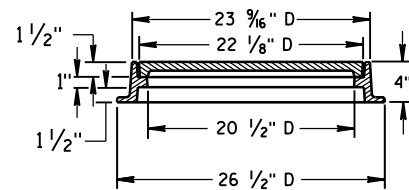
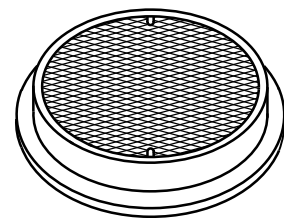
TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

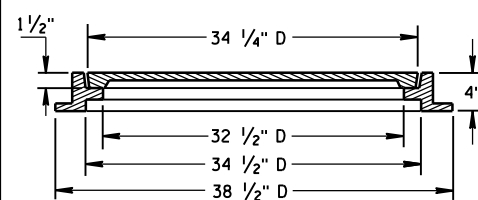
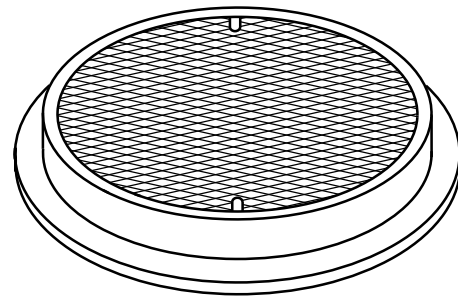
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

NOTE: EITHER CASTING IS ACCEPTABLE

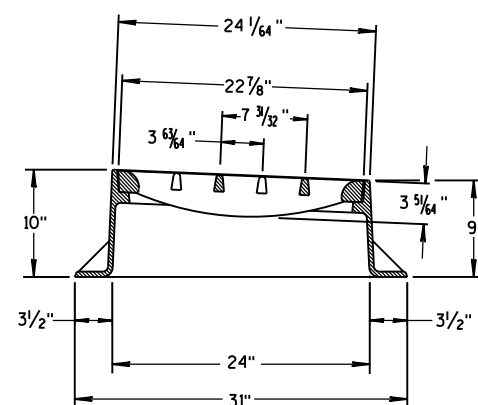
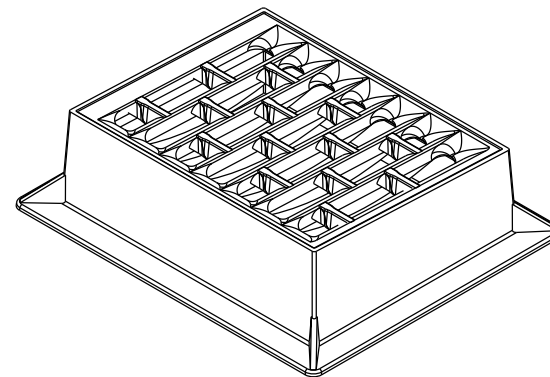
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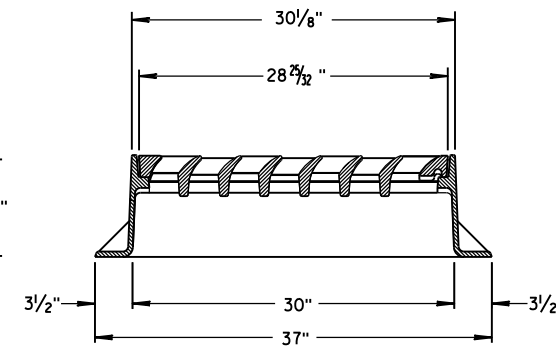
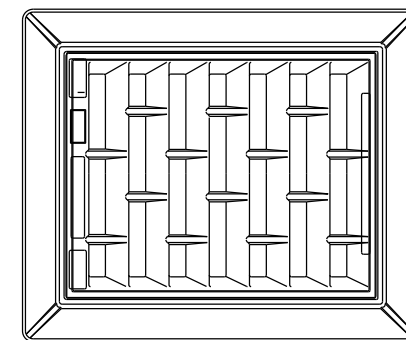
TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"



6

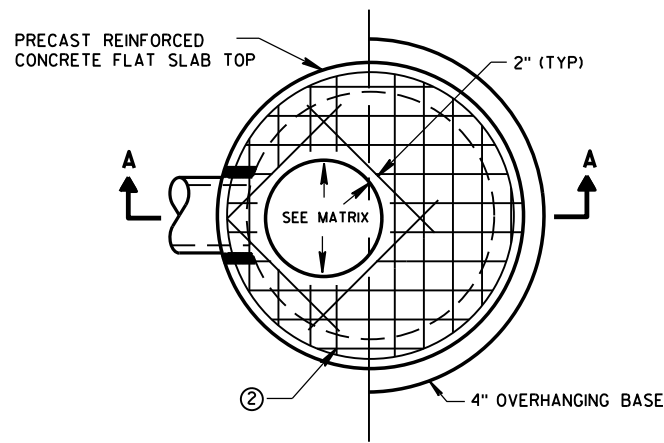
S.D.D. 8 A 5-19d

S.D.D. 8 A 5-19d

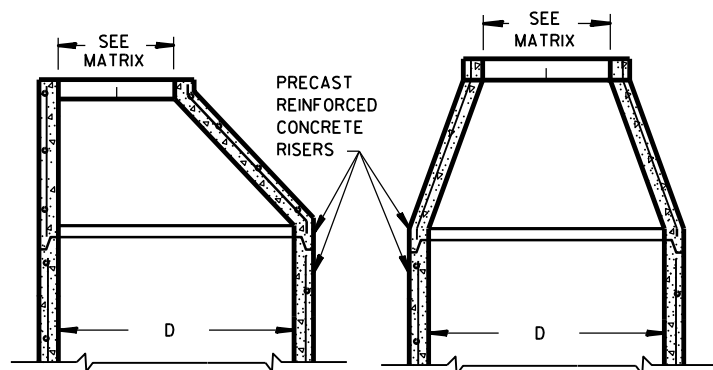
INLET COVER TYPE BW
MANHOLE COVERS, TYPE K,
J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA

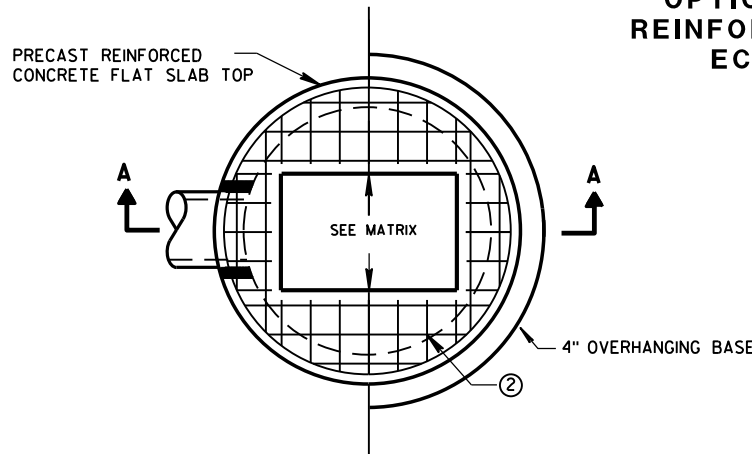


PLAN VIEW CIRCULAR OPENING

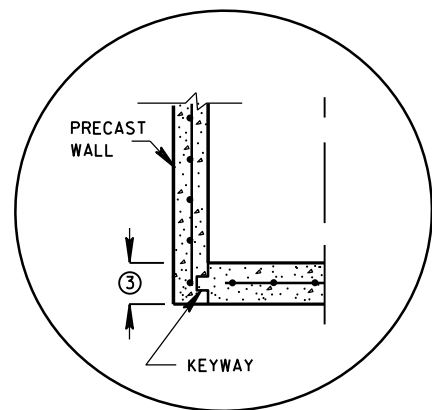


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

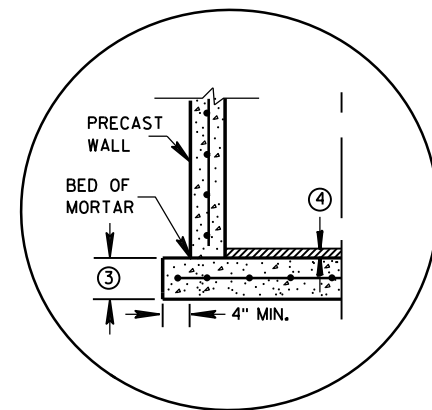
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



PLAN VIEW RECTANGULAR OPENING

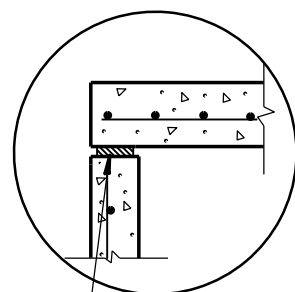


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

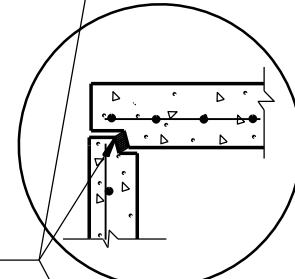


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

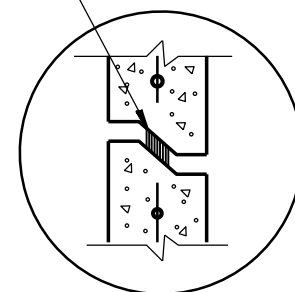
DETAIL "A"



TOP WITH PLAIN END JOINT

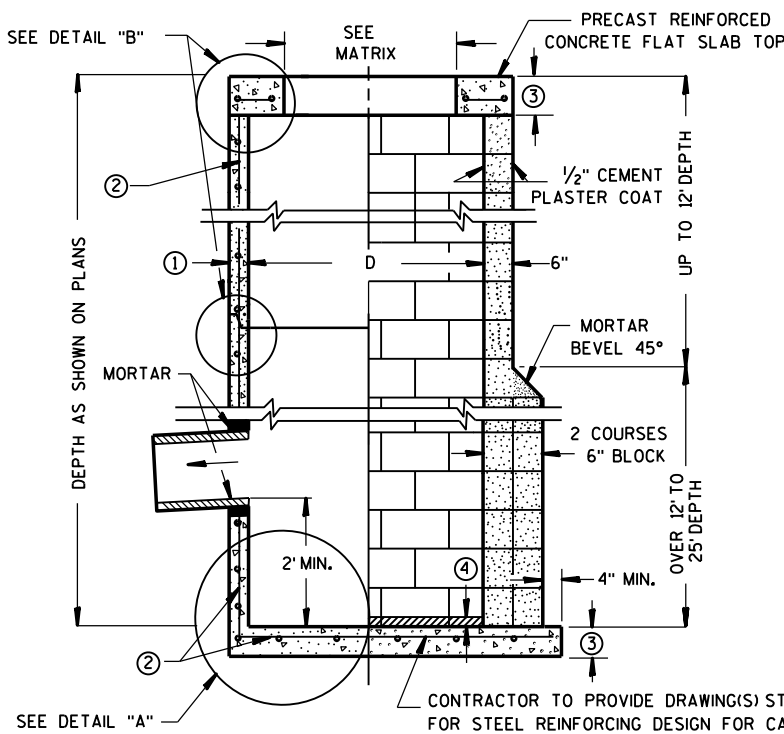


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

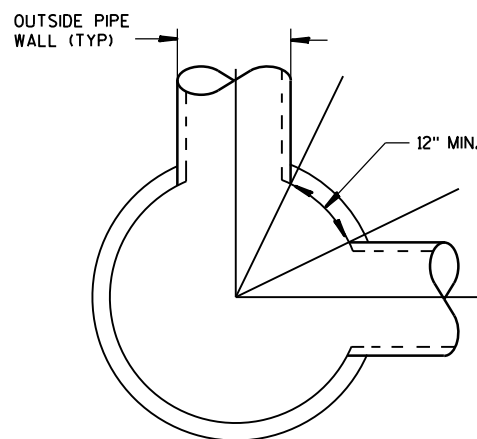


SECTION A-A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

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



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 FOUNDATION 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.

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 SEPARATE 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 OPENING SIZE (FT) | 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 | | X |
| 4-FT- 6-FT | 2X2 | X | X | | | | | X | | X | | |
| | 2X2.5 | | | X | | | | X | X | X | X | |
| | 2 DIA. | | | | X | | | | | | | X |
| | 2X3 | | | | | | X | | | | | |
| | 2.5X3 | | | | | | | | | | | |

PIPE MATRIX

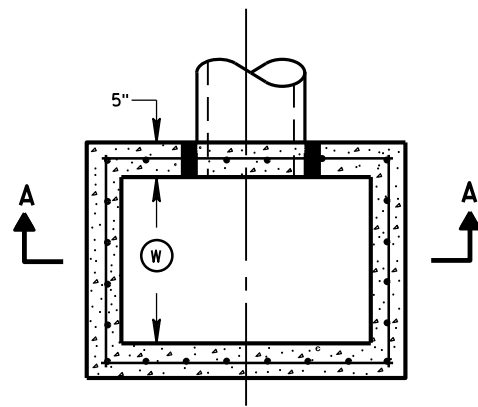
| CATCH BASIN SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|------------------|--|---------------------|
| | 180° SEPARATION (IN) | 90° SEPARATION (IN) |
| 3-FT | 15 | 12 |
| 4-FT | 24 | 18 |
| 5-FT | 36 | 24 |
| 6-FT | 42 | 30 |

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

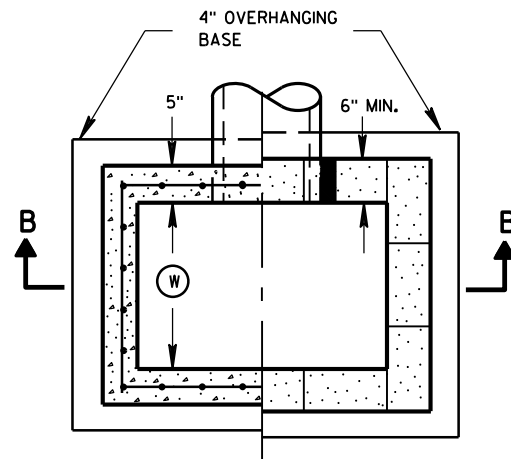
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sep 1, 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

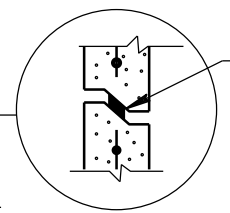
CATCH BASINS 3-FT, 4-FT, 5-FT AND 6-FT DIAMETER



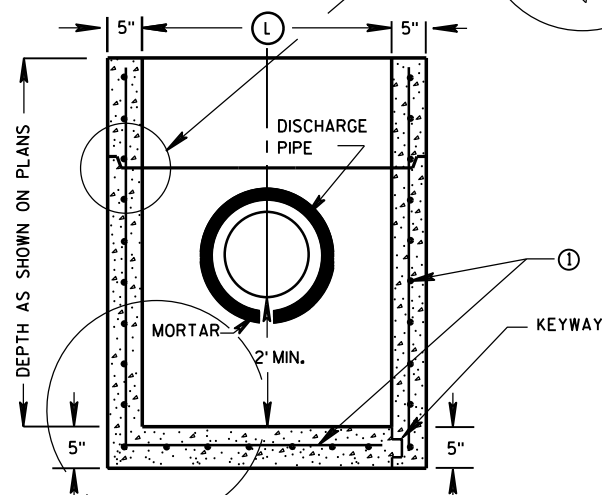
PLAN VIEW



PLAN VIEW

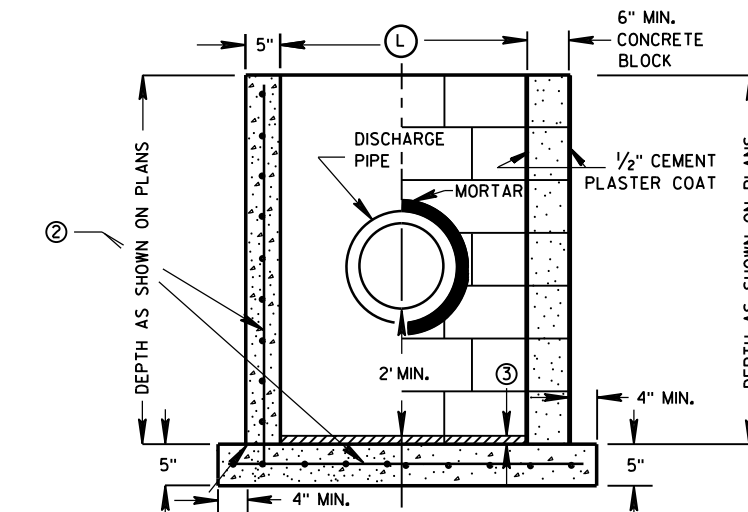


RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

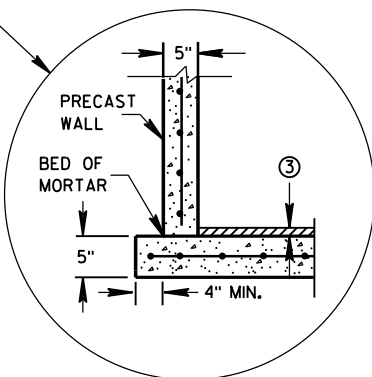
SECTION A-A



CAST-IN-PLACE REINFORCED CONCRETE

CONCRETE BLOCK ON CAST-IN-PLACE WITH PRECAST REINFORCED CONCRETE BASE ①

SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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 PRECAST CATCH BASIN 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 FOUNDATION 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 SEPARATE PRECAST BASE IS PROVIDED.

OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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.

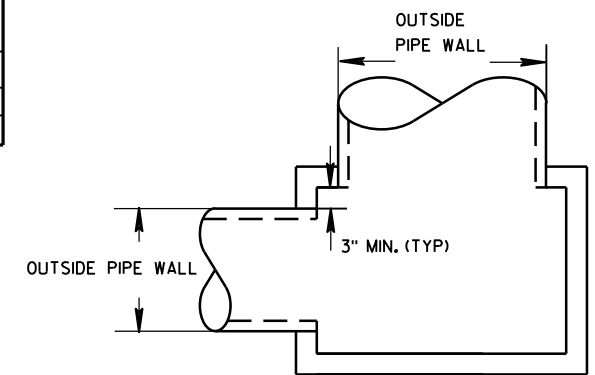
- ① FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.
- ③ 1" CONCRETE KEY POURED AFTER INSTALLATION. 2" SUMP MEASURED FROM TOP OF KEY.

CATCH BASIN COVER MATRIX

| CATCH BASIN SIZE | INLET COVER TYPE | | F | ALL H'S |
|------------------|------------------|-----------------|---|---------|
| | WIDTH (W) (FT) | LENGTH (L) (FT) | | |
| 2X3-FT | 2 | 3 | | X |
| 2.5X3-FT | 2.5 | 3 | X | |

PIPE MATRIX

| CATCH BASIN SIZE | MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES | |
|------------------|--|-------------|
| | WIDTH (IN) | LENGTH (IN) |
| 2X3-FT | 12 | 24 |
| 2.5X3-FT | 18 | 24 |

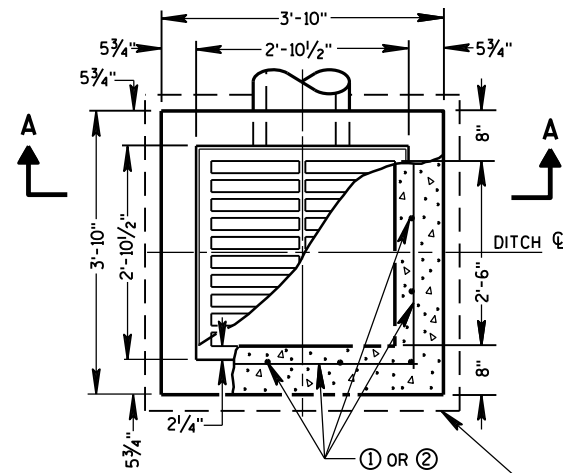


DETAIL "A"

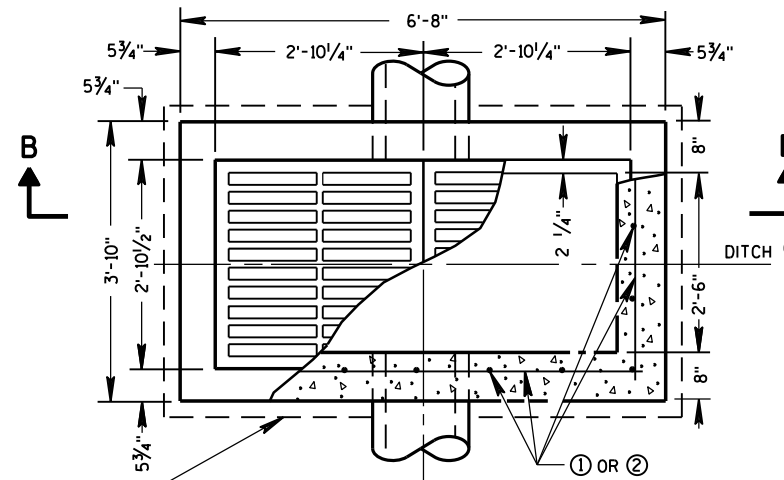
CATCH BASINS 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: Sept., 2016 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

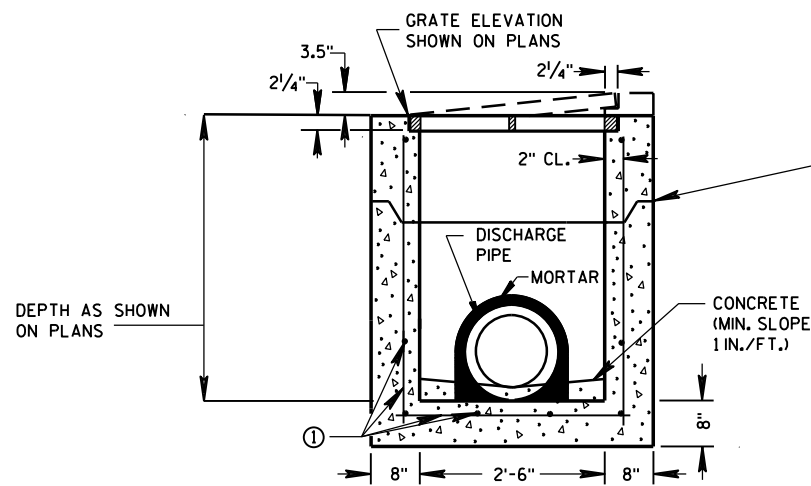


PLAN VIEW

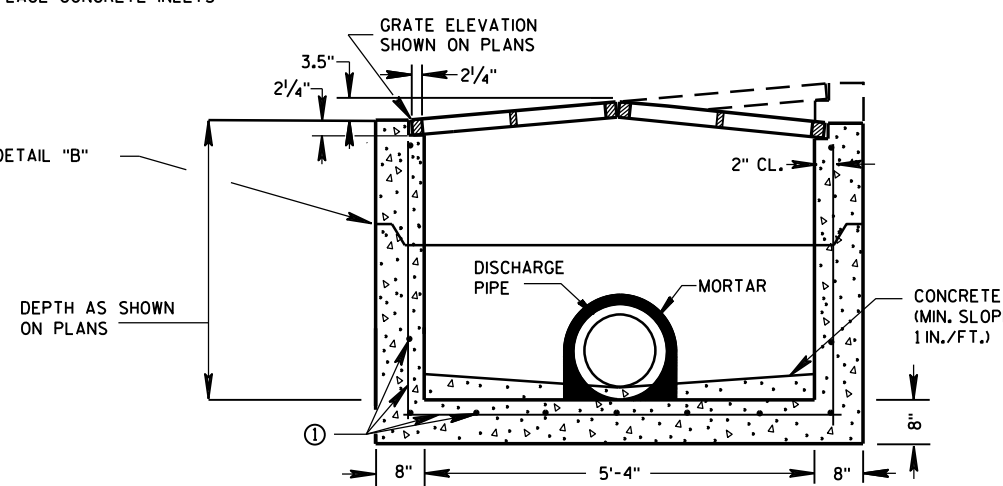


PLAN VIEW

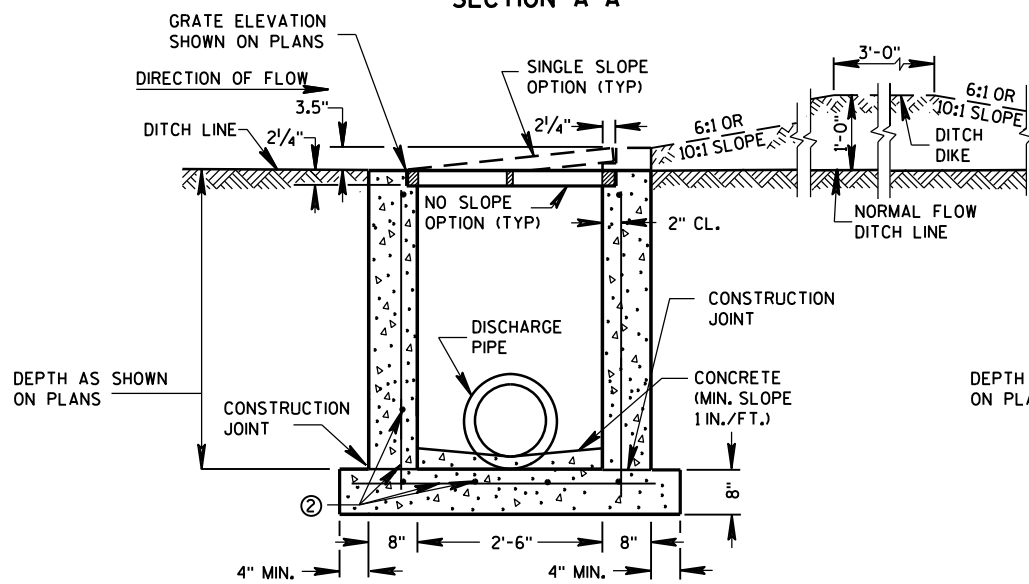
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



PRECAST REINFORCED CONCRETE SECTION A-A

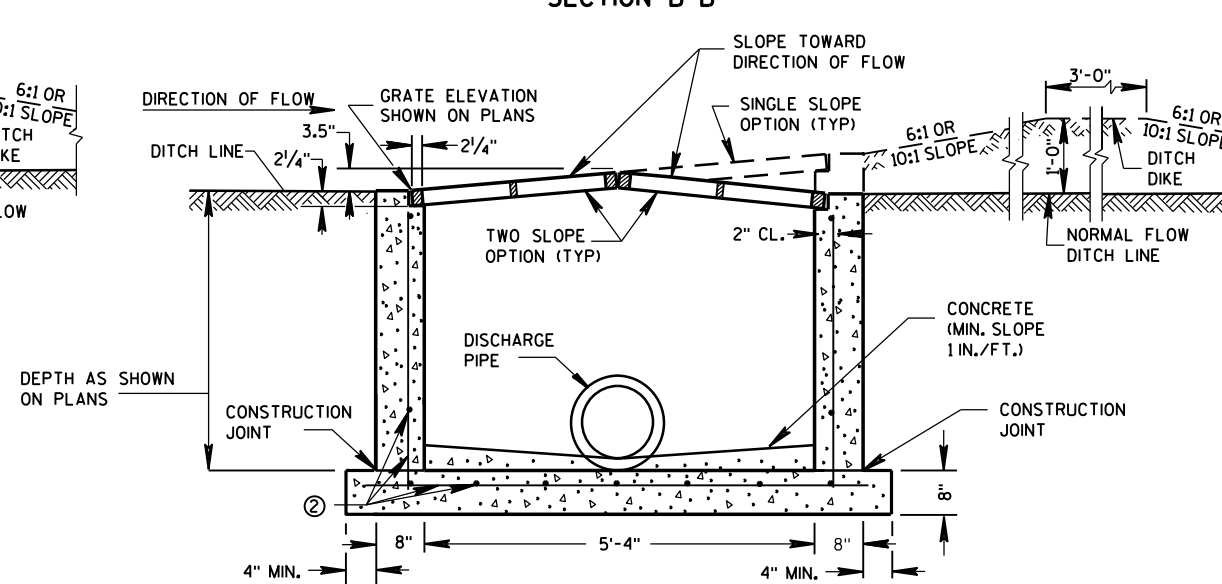


PRECAST REINFORCED CONCRETE SECTION B-B



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. BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION 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.

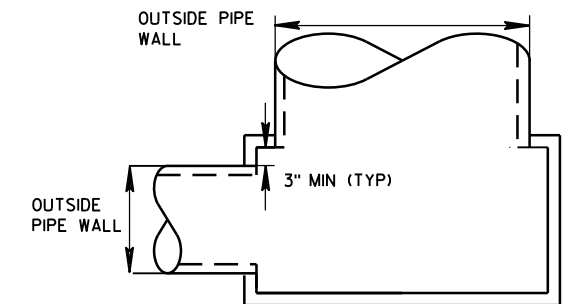
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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.

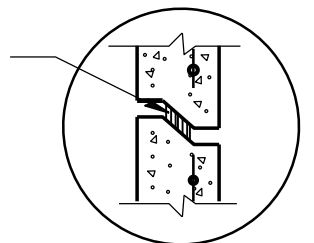
PIPE MATRIX

| 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)

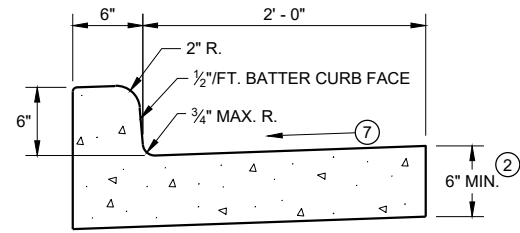


DETAIL "B"

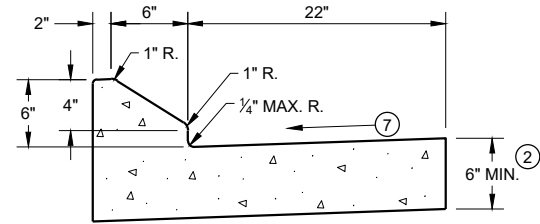
INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

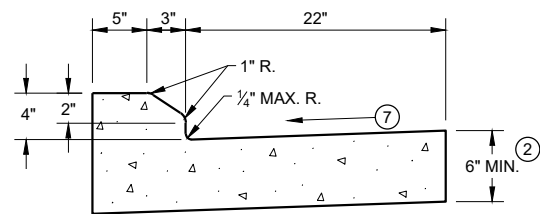
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



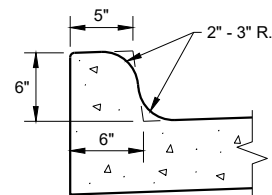
TYPES A^① & D



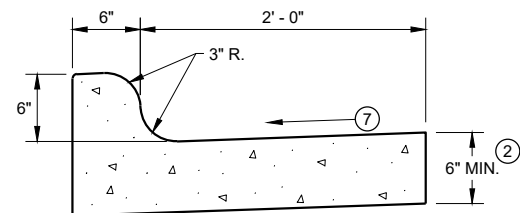
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

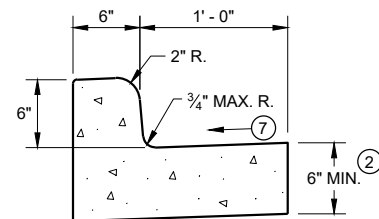


TYPES K^① & L
(OPTIONAL CURB SHAPE)



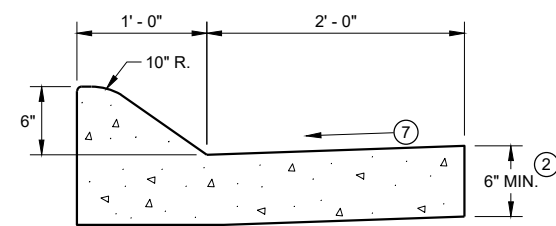
TYPES K^① & L

CONCRETE CURB AND GUTTER 30"

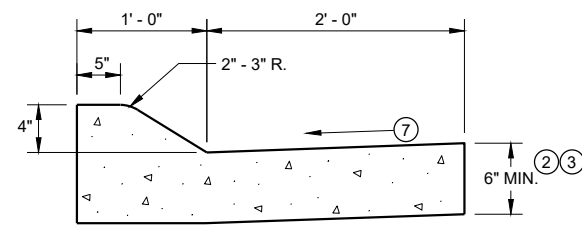


TYPES A^① & D

CONCRETE CURB AND GUTTER 18"

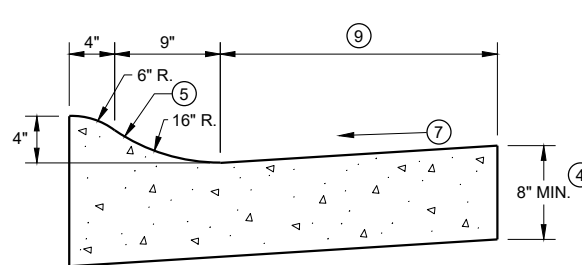


6" SLOPED CURB TYPES A^① & D



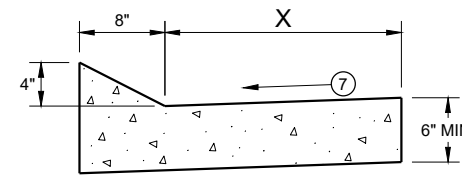
4" SLOPED CURB TYPES A^① & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R^① & T

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

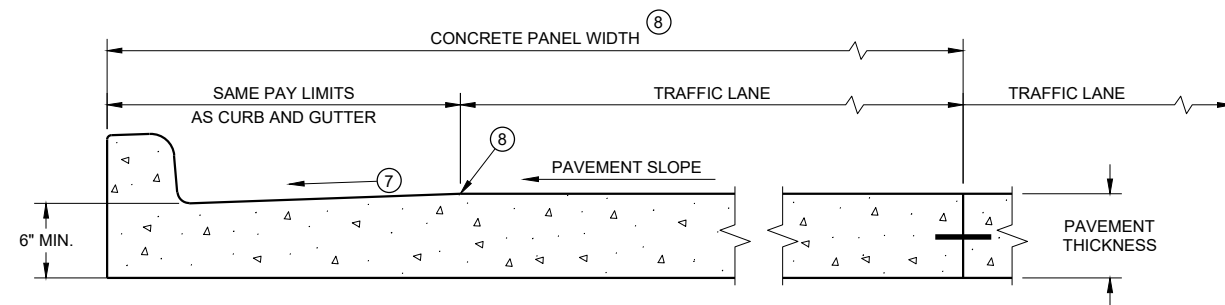


TYPES TBT & TBTT^①

CONCRETE CURB AND GUTTER

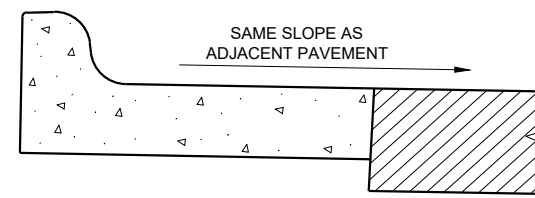
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

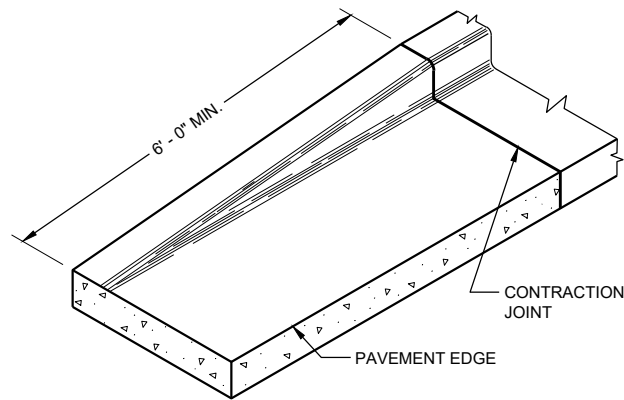
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

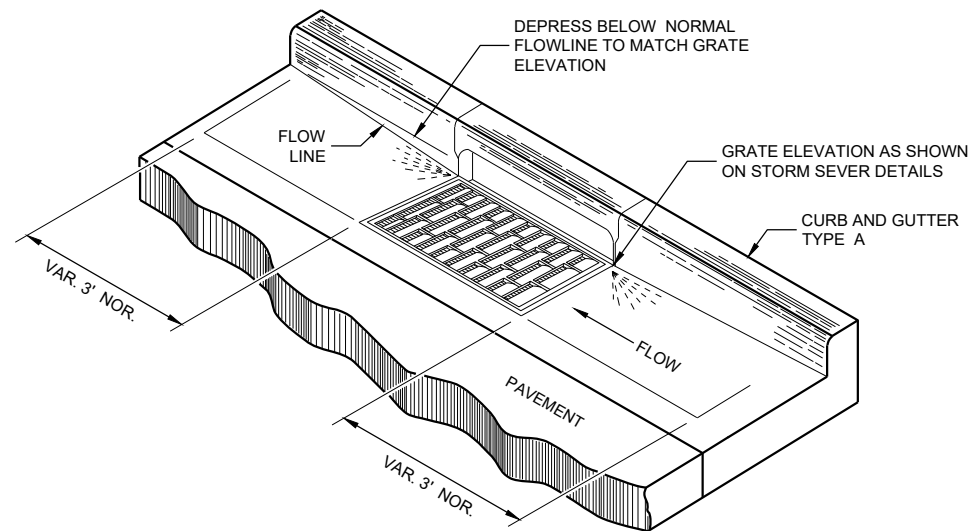
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES



END SECTION CURB AND GUTTER



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

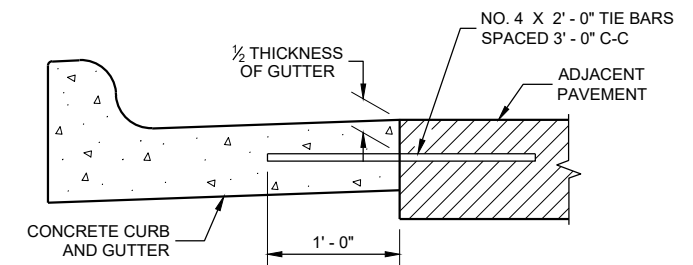
GENERAL NOTES

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

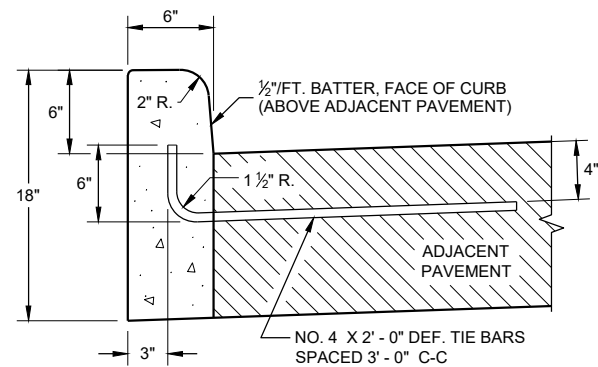
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

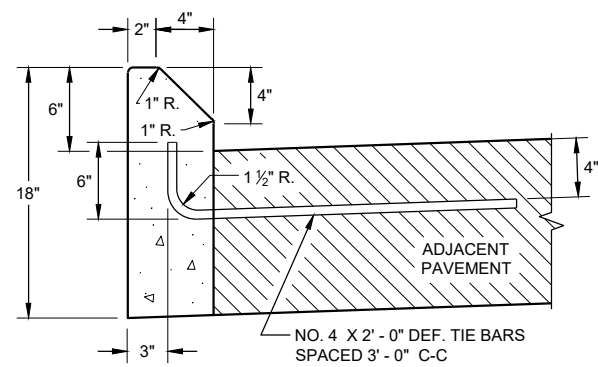
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL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



TYPICAL TIE BAR LOCATION ①

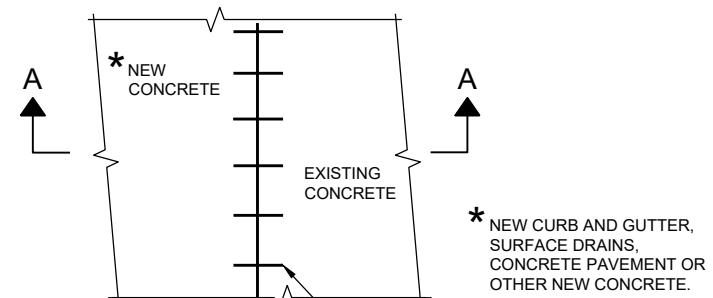


TYPES A ① & D

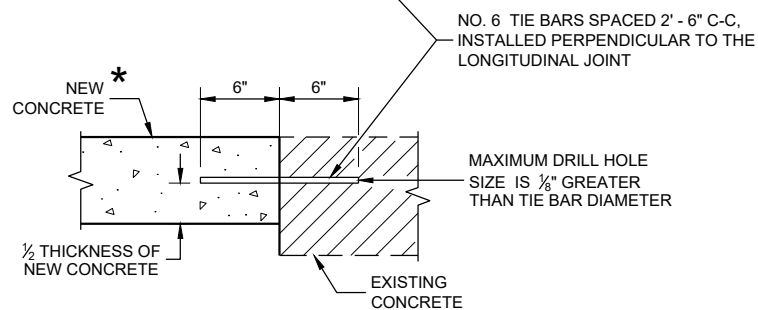


TYPES G ① & J

CONCRETE CURB

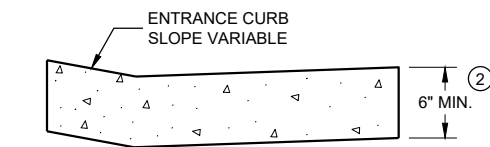


PLAN VIEW



SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



DRIVEWAY ENTRANCE CURB ⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

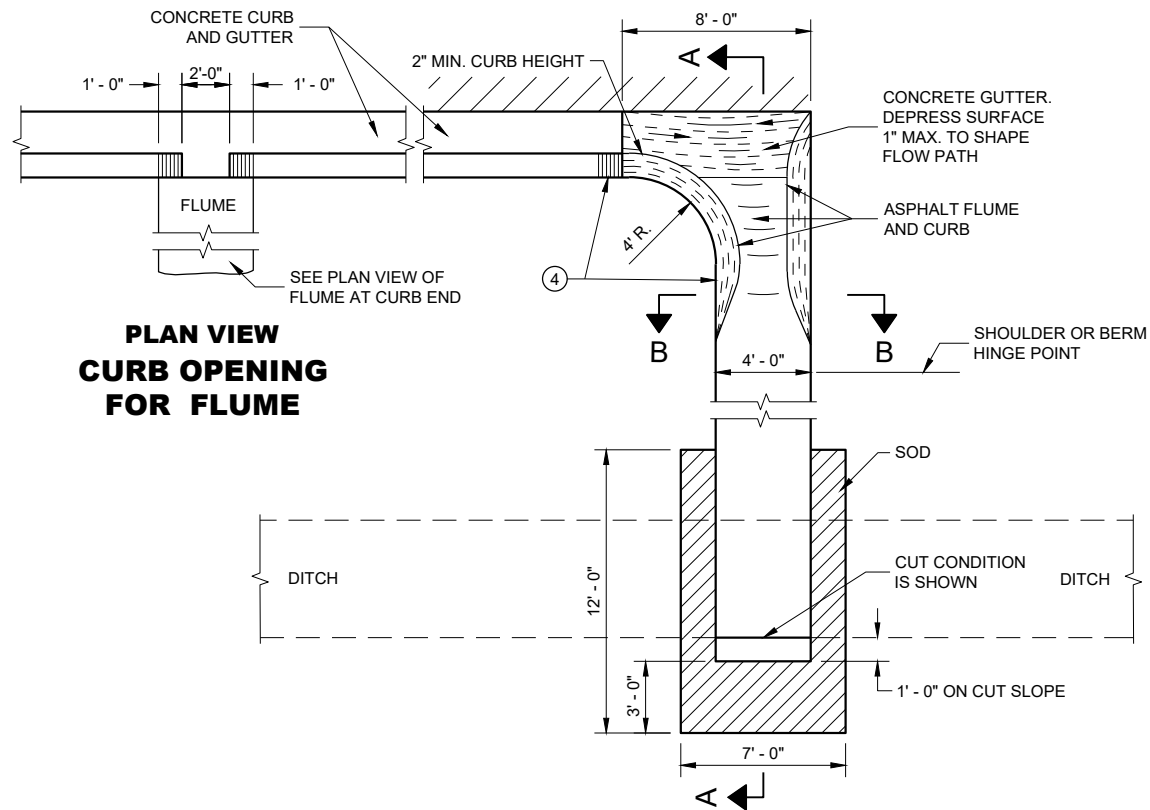
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

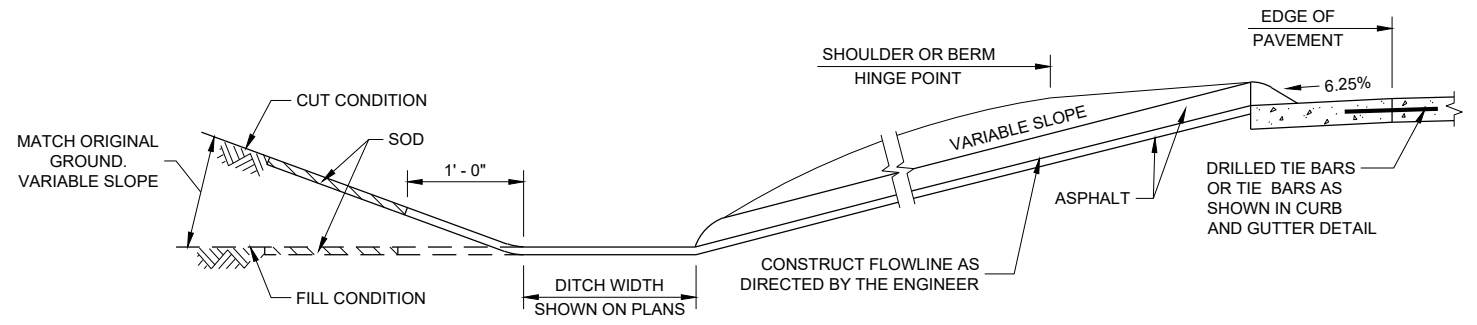
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

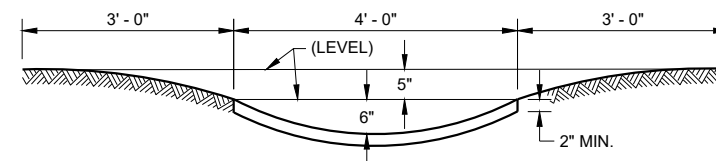
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

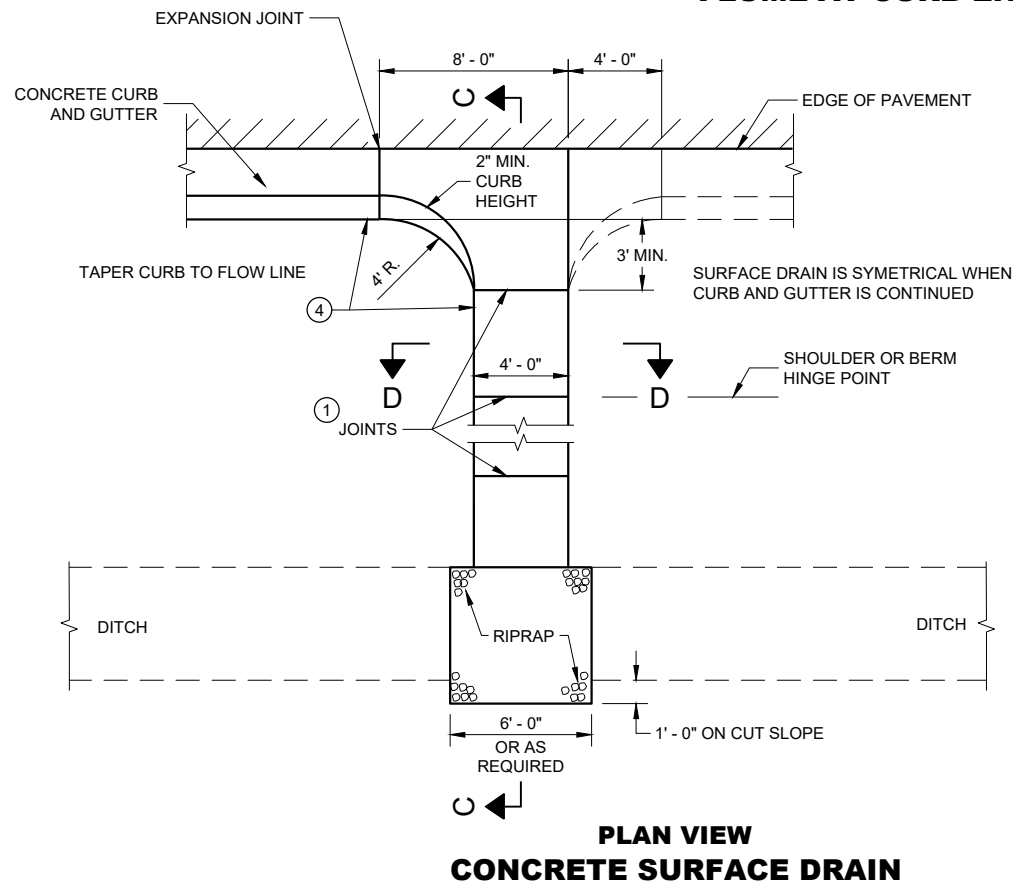
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



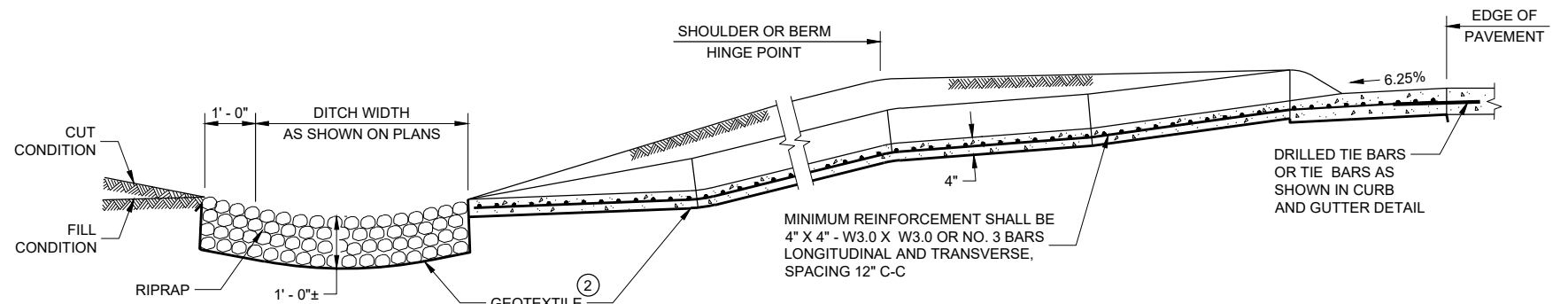
SECTION A - A



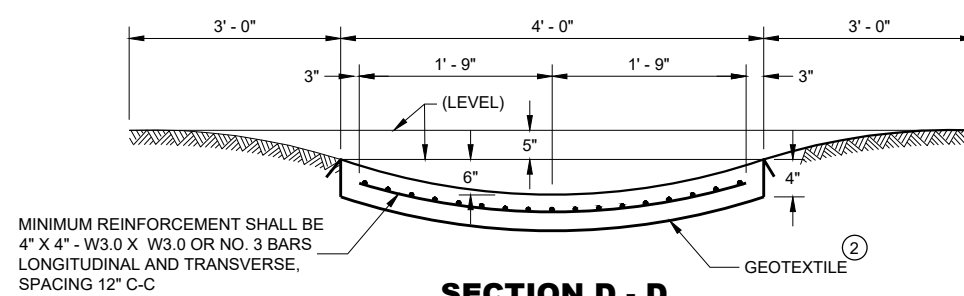
SECTION B - B



**PLAN VIEW
CONCRETE SURFACE DRAIN**



SECTION C - C



SECTION D - D

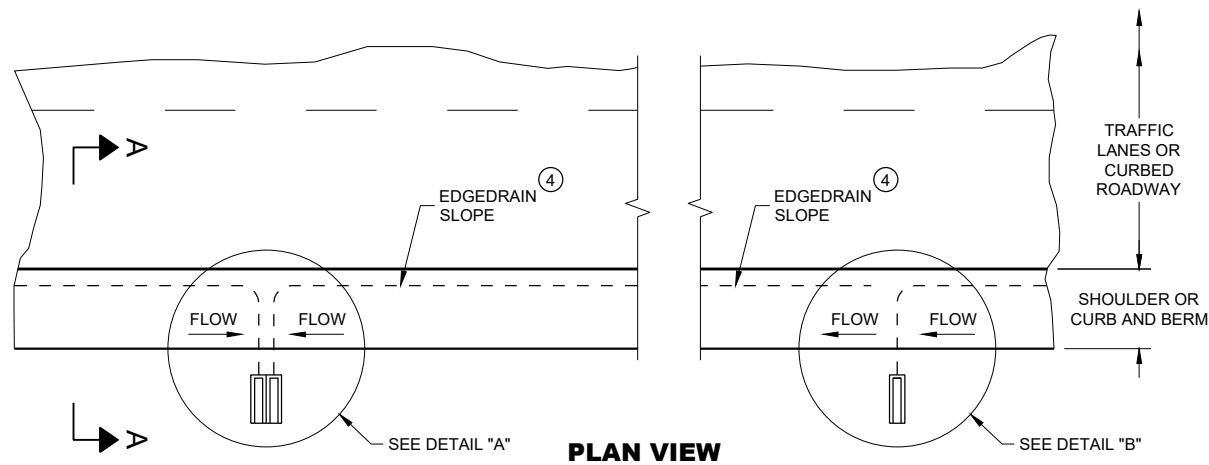
MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

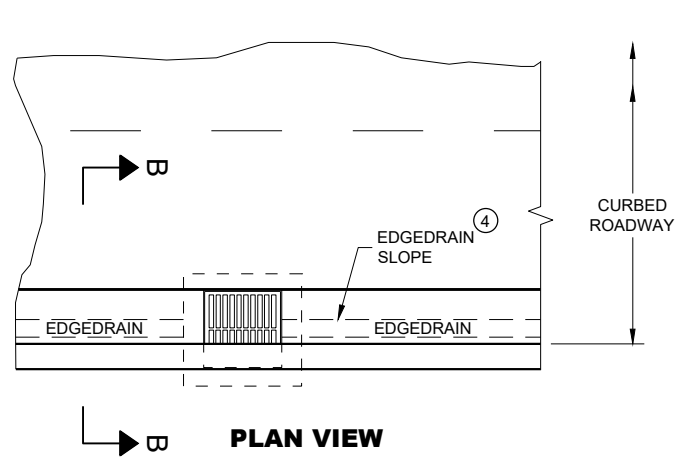
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



**ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN CONNECTS TO ROADSIDE) ②**



**ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)**

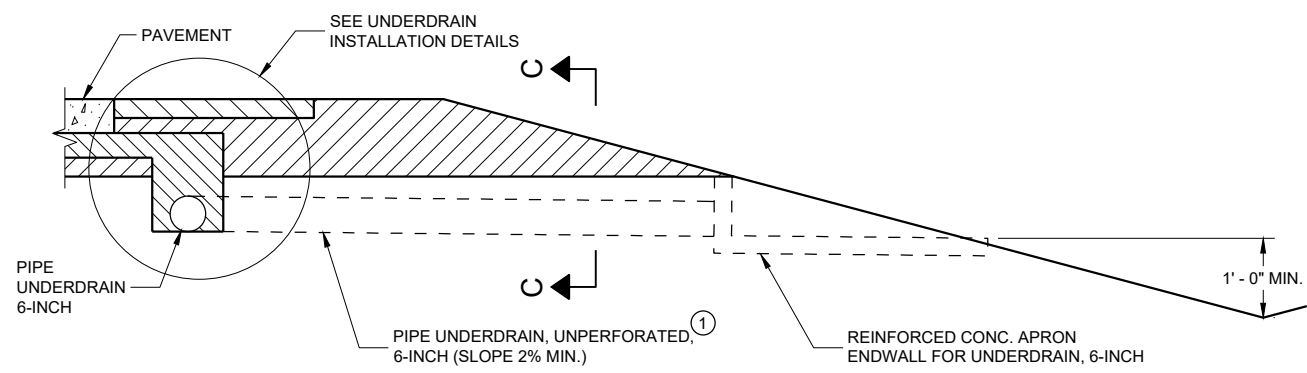
GENERAL NOTES

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.

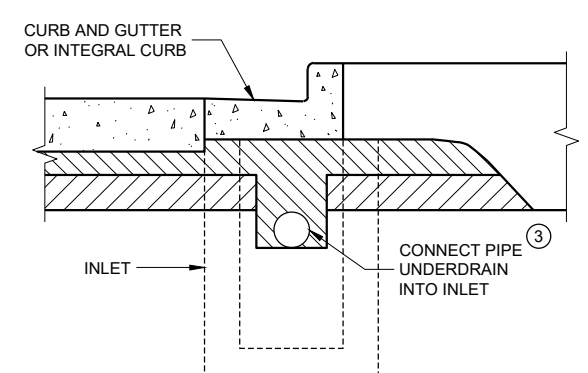
- ① UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

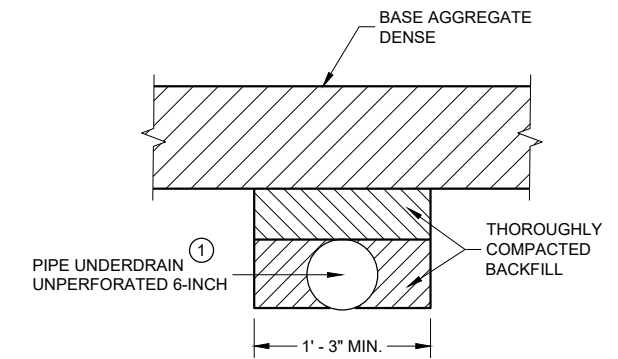
TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.
- ② MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.
- ③ EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.
- ④ EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



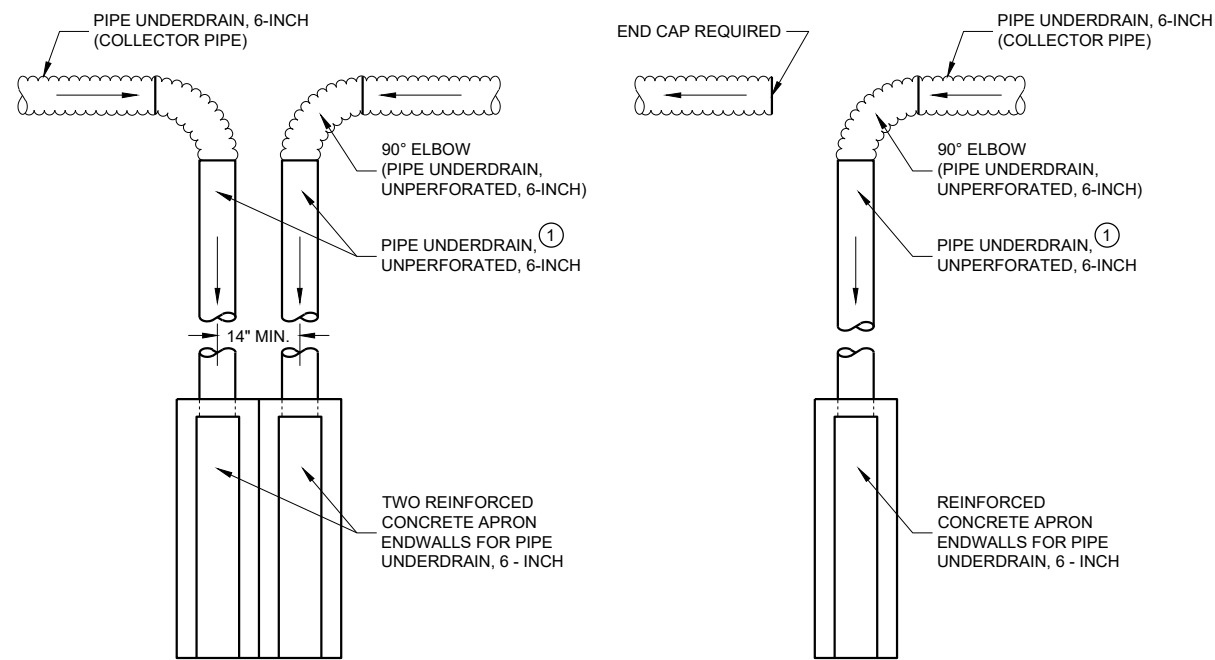
**SECTION A - A
RURAL CROSS SECTION**



**SECTION B - B
URBAN CROSS SECTION**



**SECTION C - C
TRENCH FOR OUTFALL PIPE**



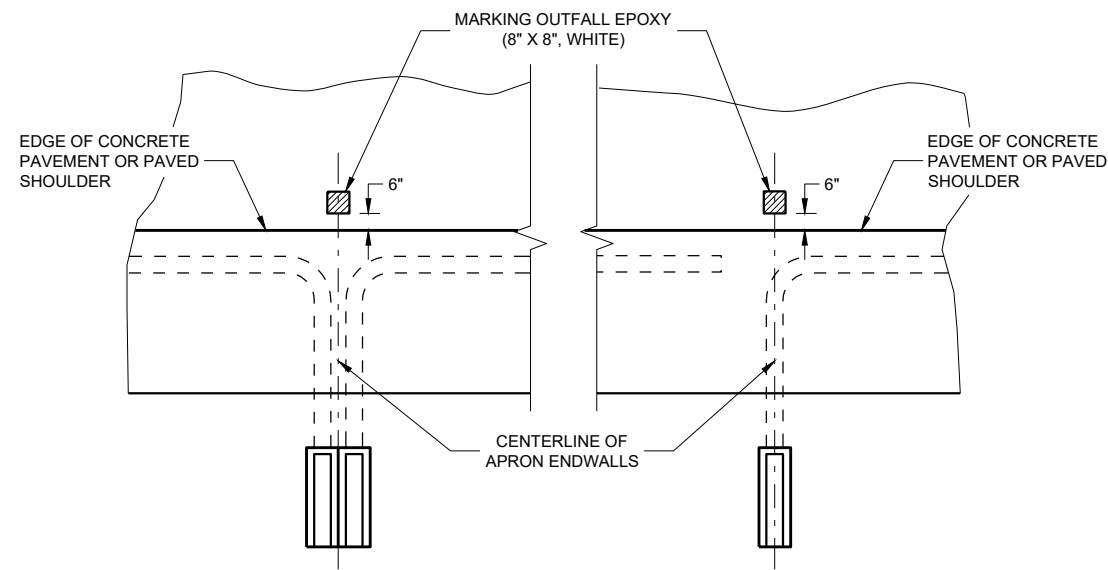
DETAIL "A"

TO BE USED AT LOW POINT LOCATIONS

DETAIL "B"

TO BE USED AT INTERMEDIATE LOCATIONS

TYPICAL DRAIN OUT DETAILS



PAVEMENT MARKINGS FOR OUTFALL MARKERS

**EDGEDRAIN OUTLET
AND OUTFALL MARKERS**

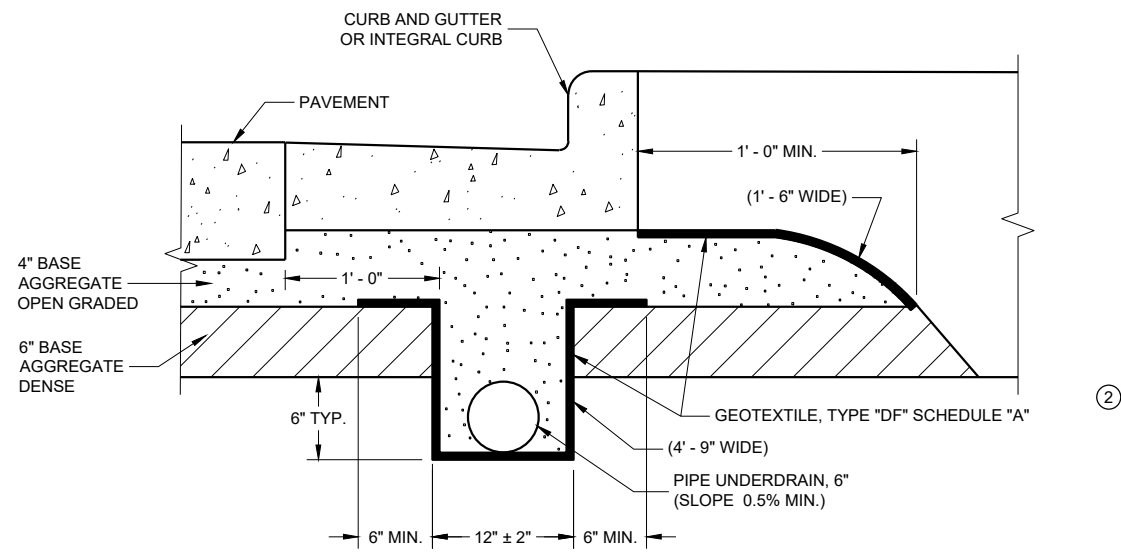
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

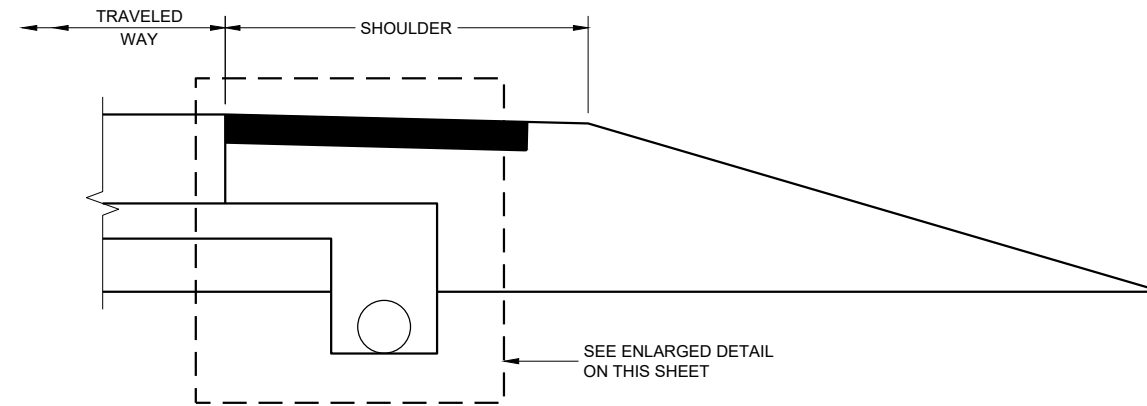
THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.

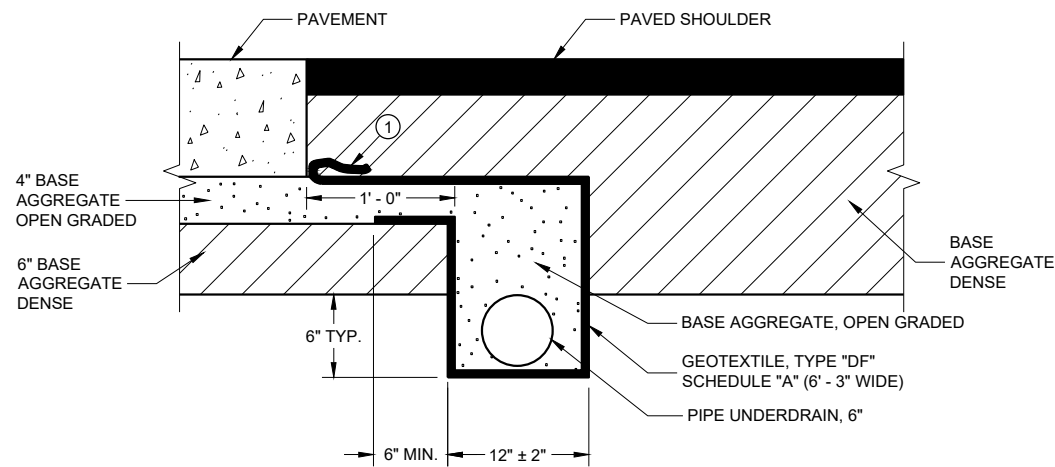
- ① FOLD OVER EXCESS GEOTEXTILE AT THIS LOCATION.
- ② TOTAL GEOTEXTILE WIDTH IS 6'-3" FOR PAYMENT.



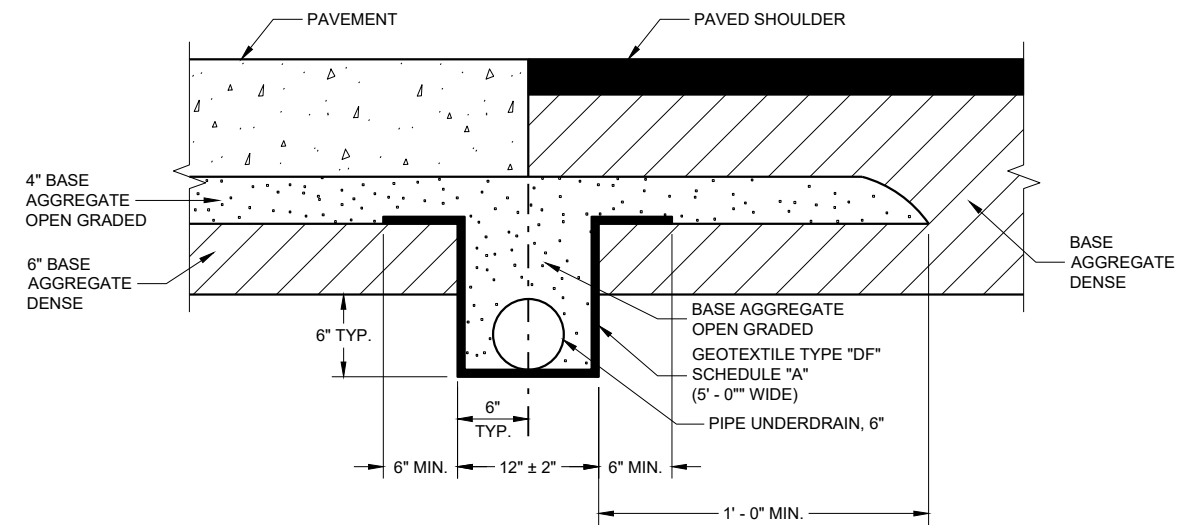
EGEDRAIN IN URBAN ROADWAY



RURAL CROSS SECTION



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)



PRE-PAVING INSTALLATION ALTERNATIVE

EGEDRAIN IN RURAL ROADWAY

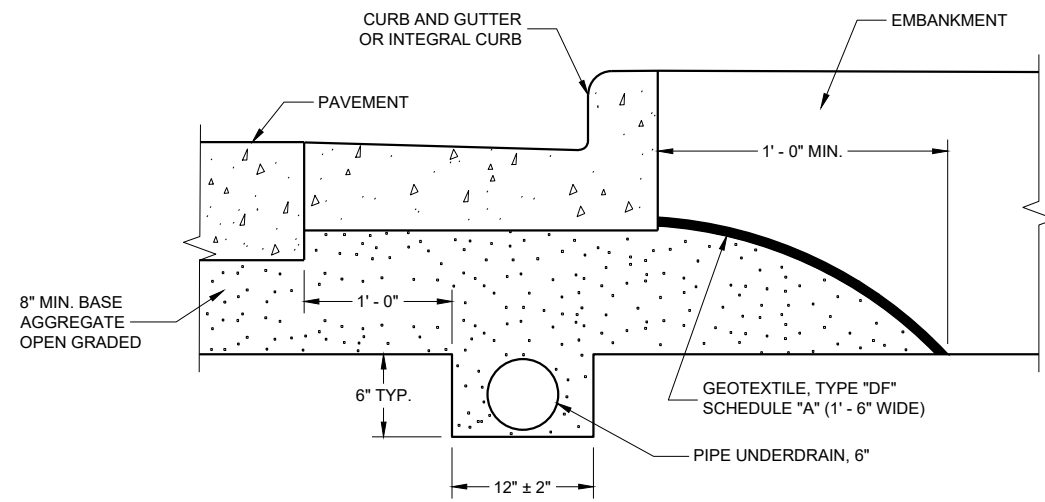
**EGEDRAIN AND BASE
AGGREGATE OPEN GRADED**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

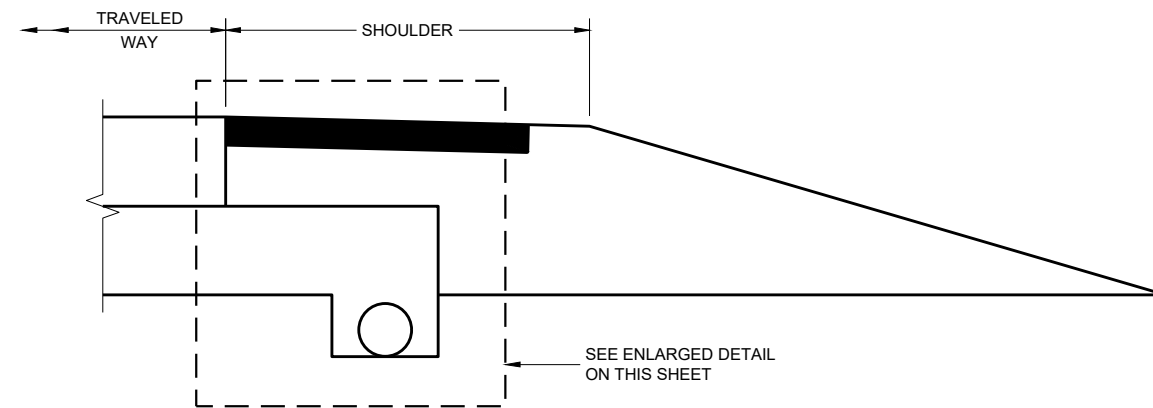
GENERAL NOTES

THE DIMENSIONS SHOWN ON THE TYPICAL CROSS SECTIONS WILL GOVERN IN THE EVENT THERE IS A CONFLICT WITH THE DETAILS SHOWN ON THIS DRAWING.

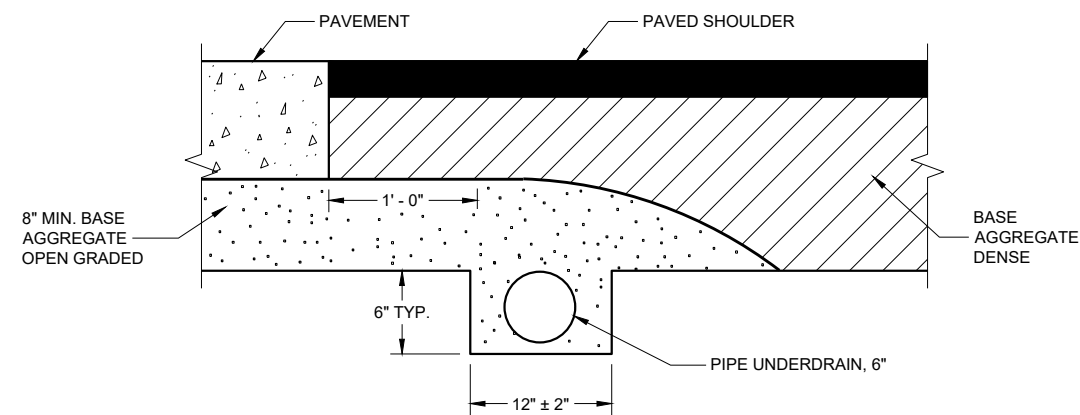
PIPE UNDERDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF THE ROADWAY.



EDGEDRAIN IN URBAN ROADWAY

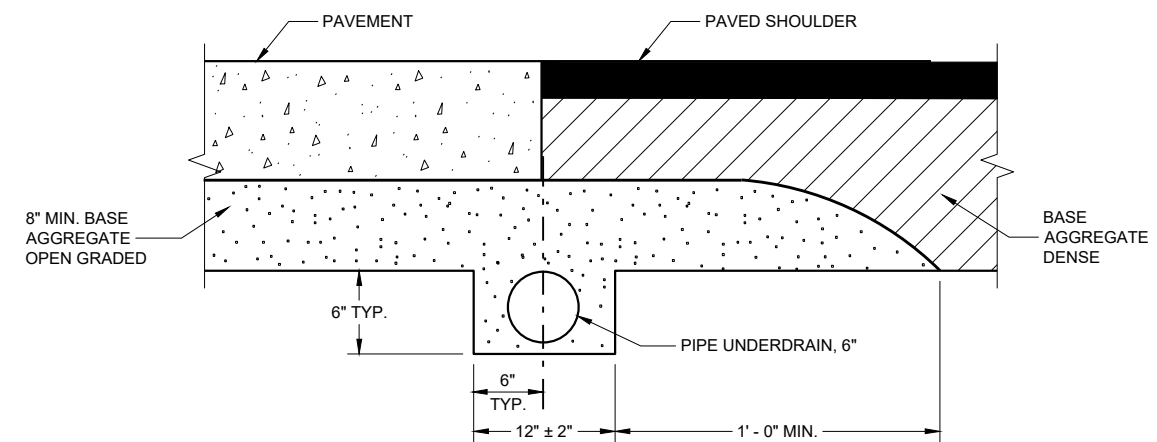


RURAL CROSS SECTION



POST PAVING INSTALLATION
(QUANTITIES ARE BASED ON THIS DETAIL)

EDGEDRAIN IN RURAL ROADWAY



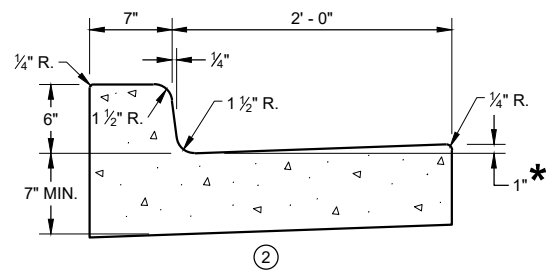
PRE-PAVING INSTALLATION ALTERNATIVE

EDGEDRAIN AND BASE AGGREGATE OPEN GRADED

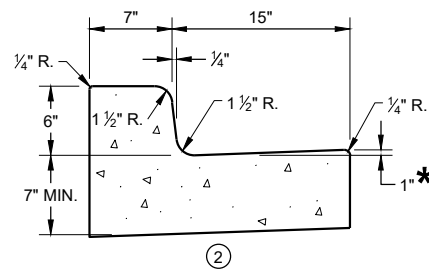
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
September 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR

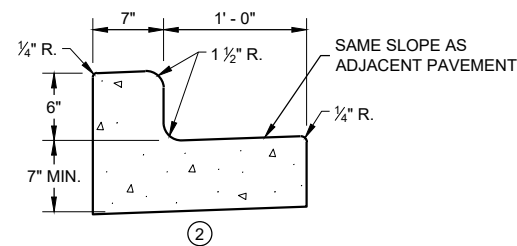
FHWA



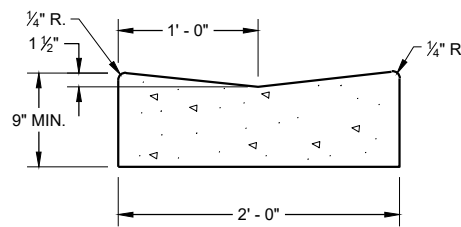
CONCRETE CURB AND GUTTER 31" ①



CONCRETE CURB AND GUTTER 22" ①

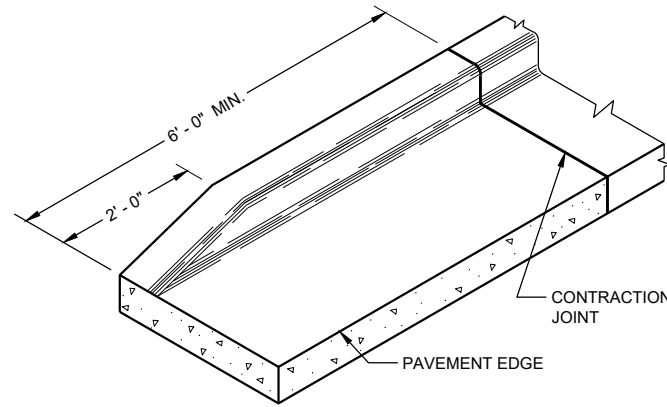


CONCRETE CURB AND GUTTER 19" ①

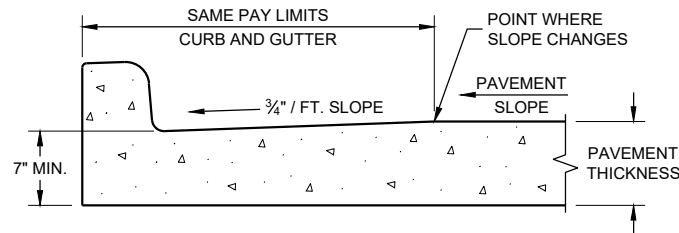


CONCRETE GUTTER 24" ①

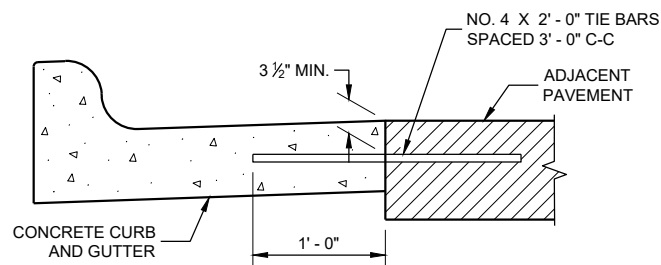
* TO BE MEASURED TO A MAXIMUM OF 3" WHERE DRAINAGE PROBLEMS EXIST.



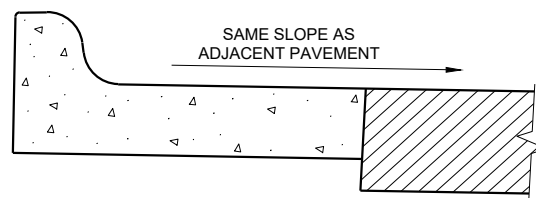
END SECTION CURB AND GUTTER



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER



TYPICAL TIE BAR LOCATION ①



HIGH SIDE SECTION ③
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

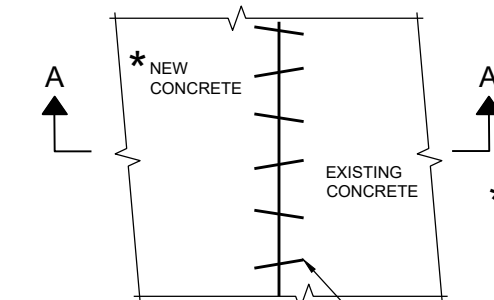
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

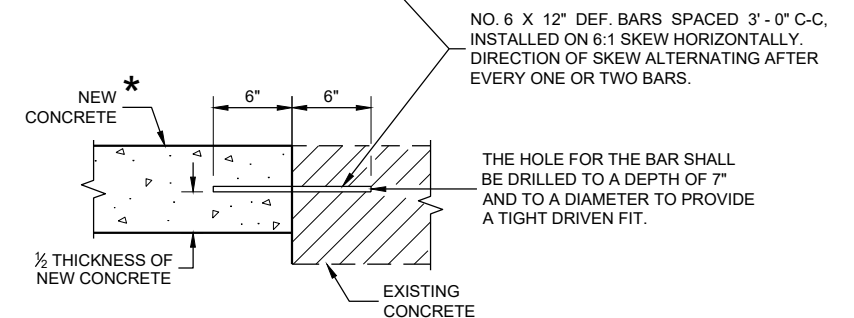
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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

- ① WHEN PLACED ADJACENT TO NEW CONCRETE, TIE BARS ARE REQUIRED FOR CURB AND GUTTER 31", 22", 19" AND CONCRETE GUTTER 24".
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 7" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLANS



PLAN VIEW

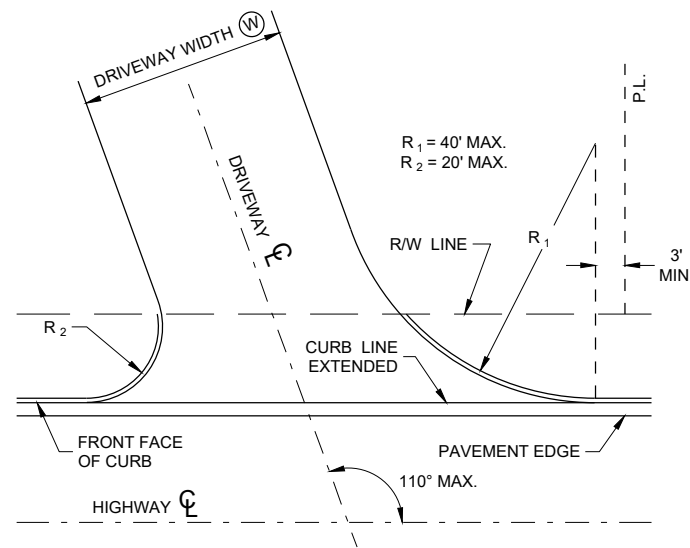
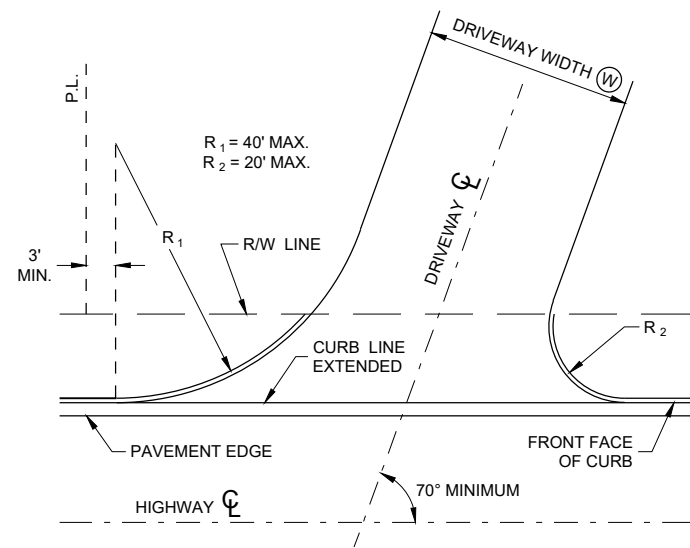


**SECTION A - A
PAVEMENT TIES**

**CONCRETE GUTTER,
CURB AND GUTTER AND
PAVEMENT TIES**
(For Optional use in Milwaukee Co. Only)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

GENERAL NOTES

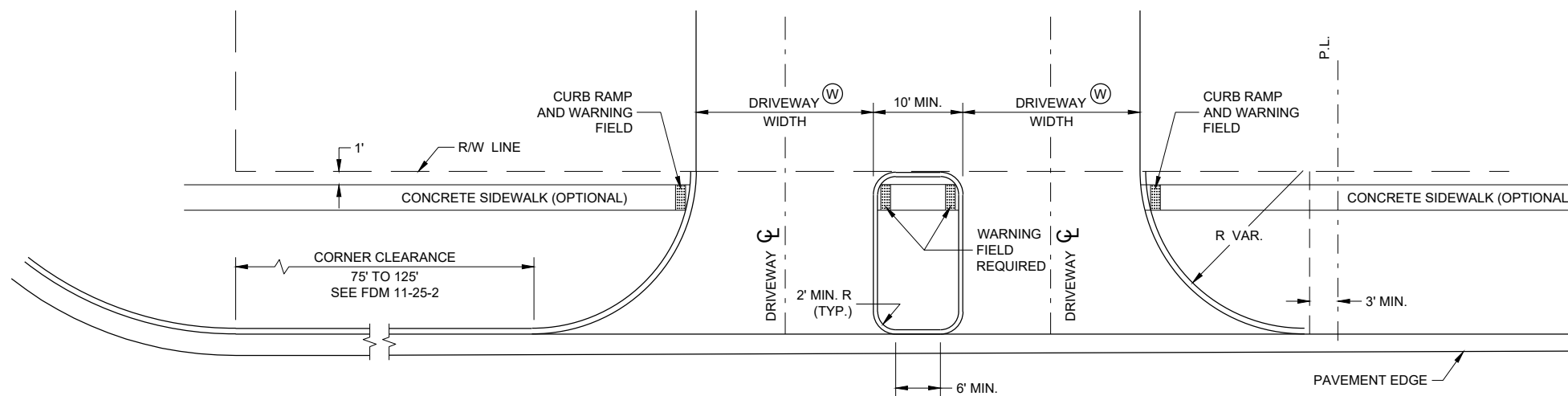
A MAXIMUM RADIUS OF 10 FEET SHALL BE USED FOR NON-COMMERCIAL PRIVATE ENTRANCES. RADII FOR COMMERCIAL DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER BASED ON TRAFFIC AND DRIVEWAY PERMIT RESTRICTIONS.

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

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

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

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



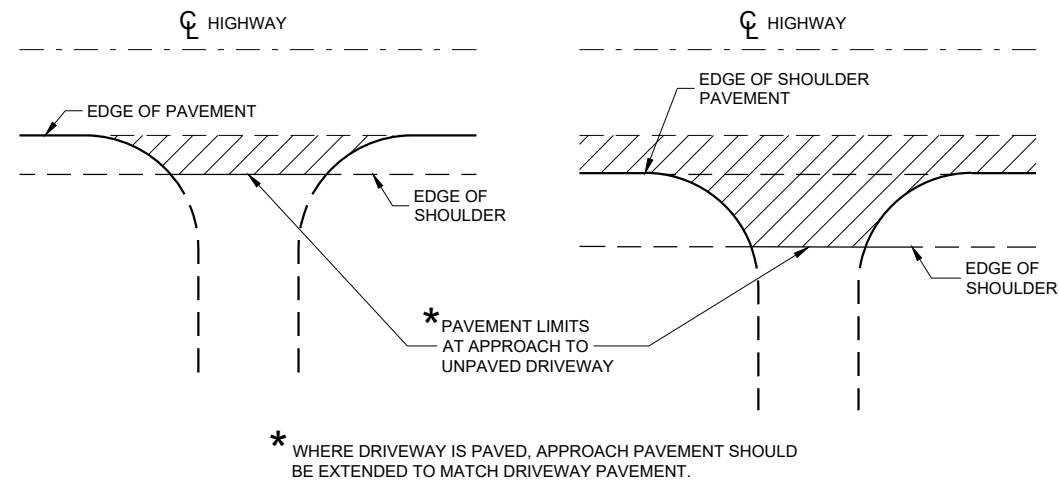
**DRIVEWAY LOCATION AND SPACING DETAILS
SIDEWALK SHOWN**

**DRIVEWAYS WITH
CURB AND GUTTER
RETURNS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

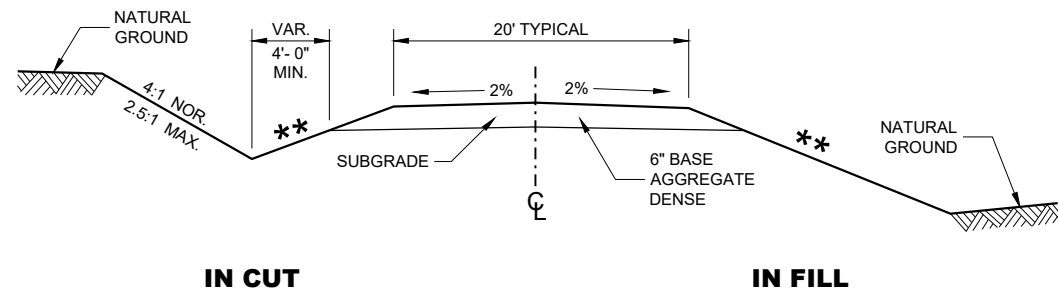
FHWA



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

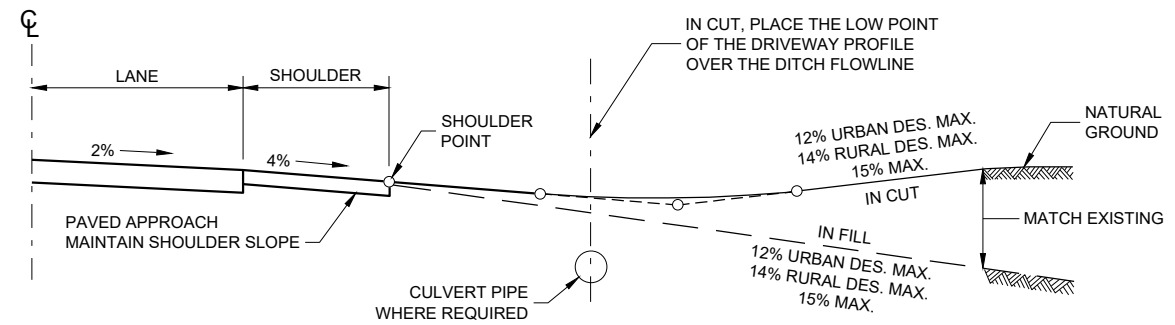
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



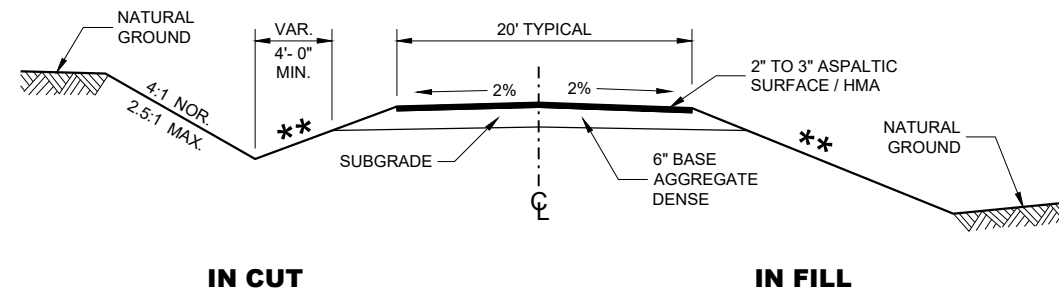
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

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

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



TYPICAL DRIVEWAY PROFILES



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

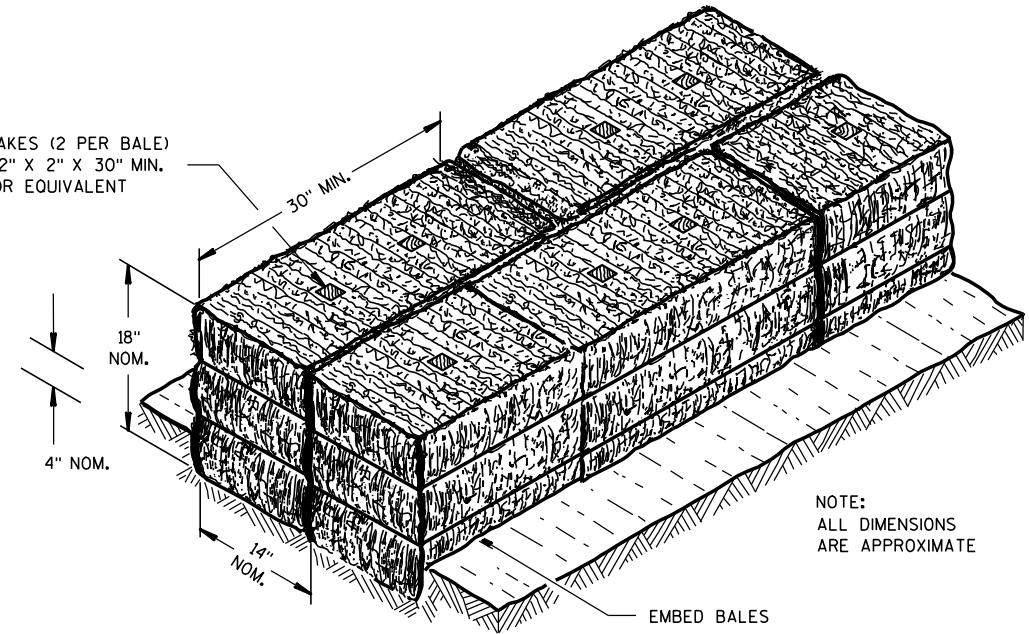
DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

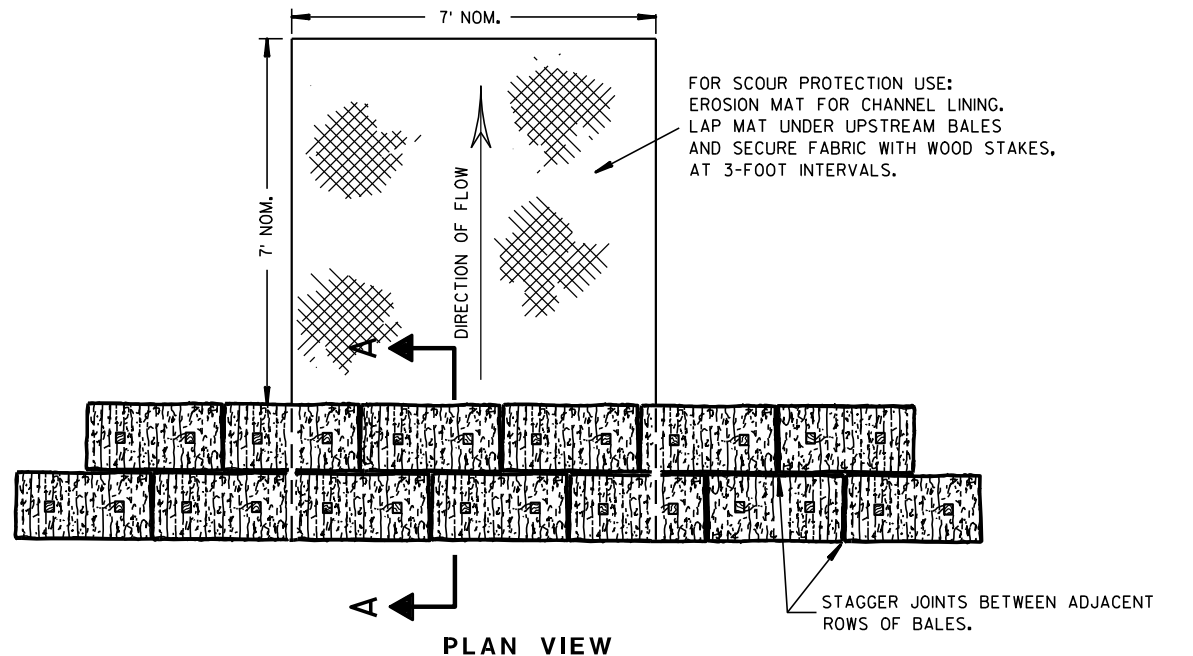
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

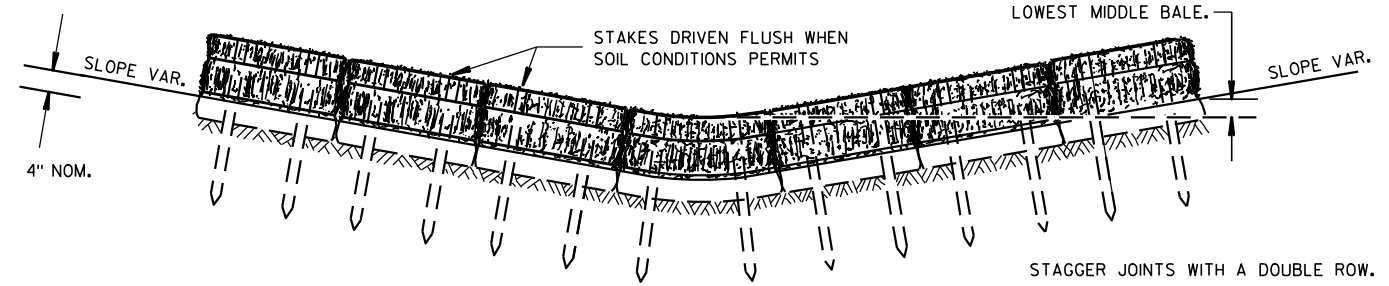
EMBED BALES

SECTION A-A



PLAN VIEW

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



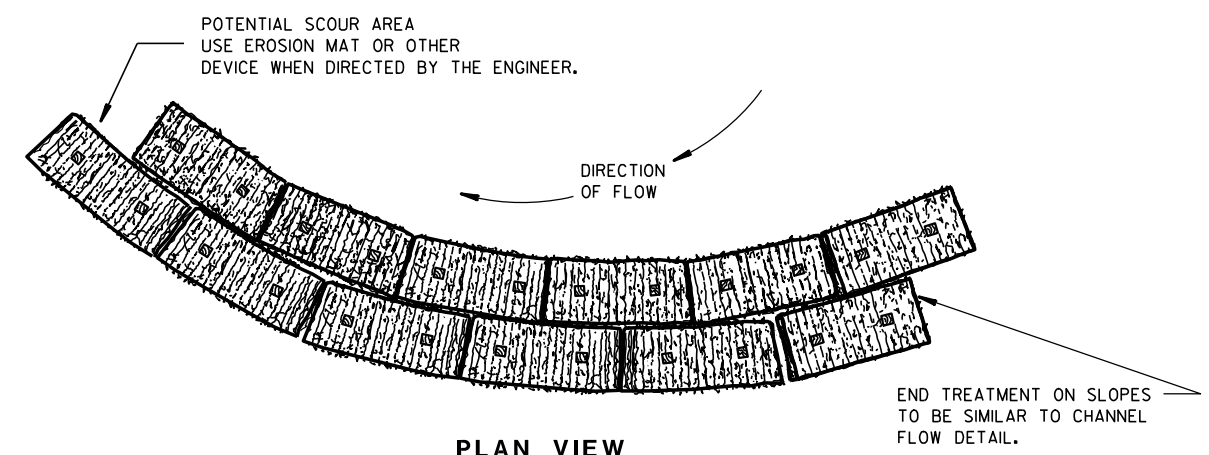
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

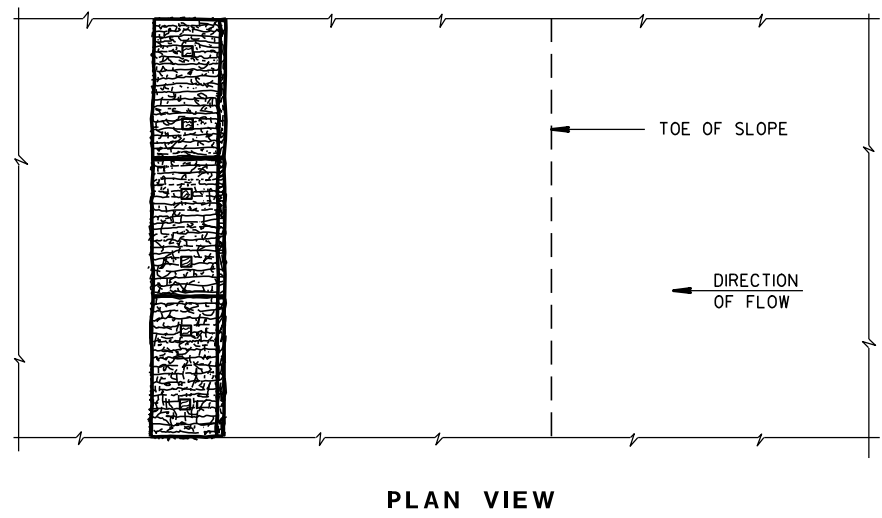
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- 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.

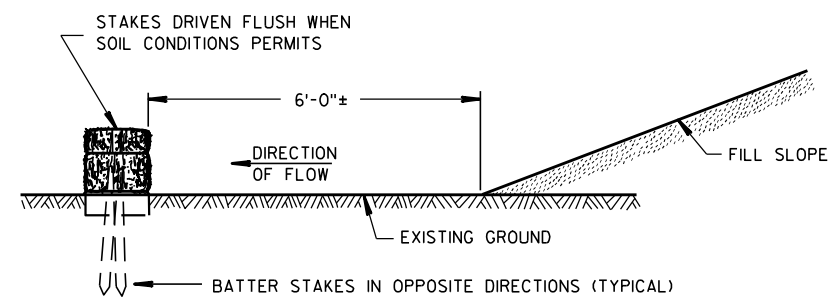


PLAN VIEW

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 /S/ Beth Canestra
 DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
 FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

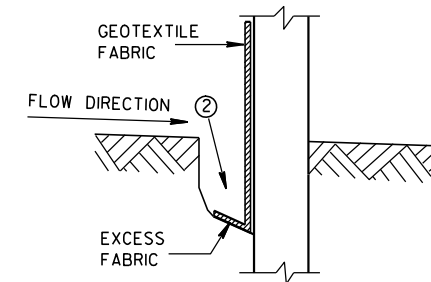


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

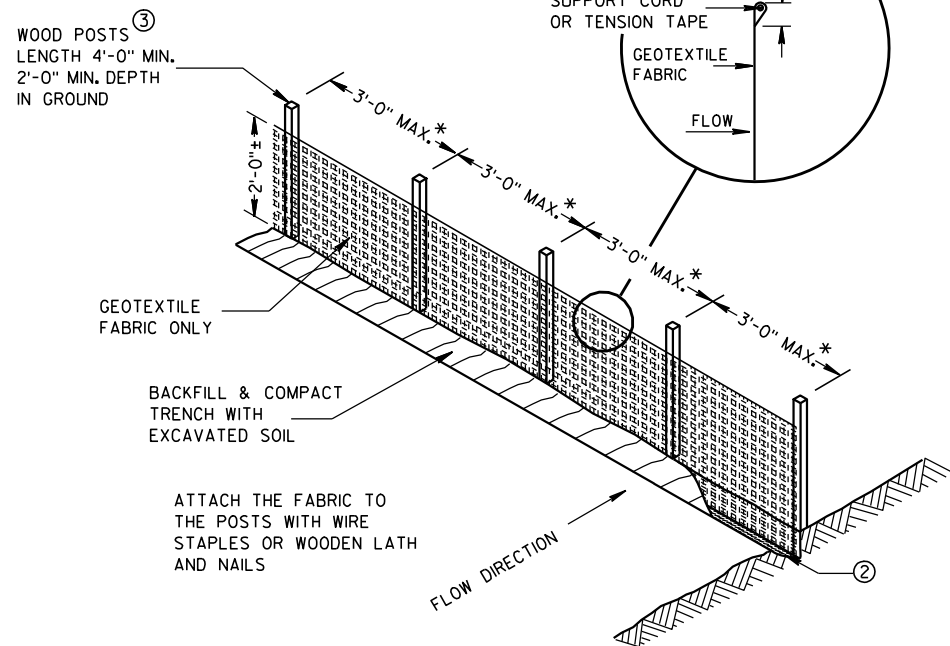
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" 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.



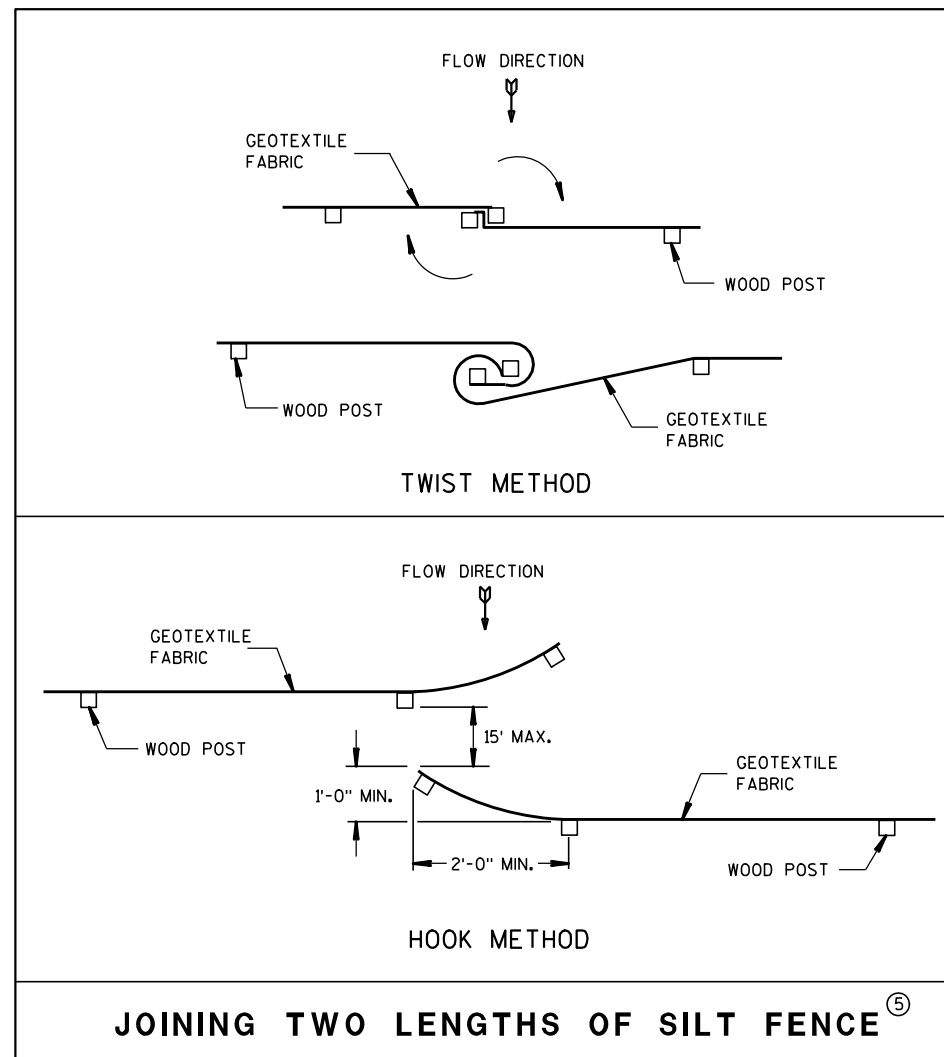
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

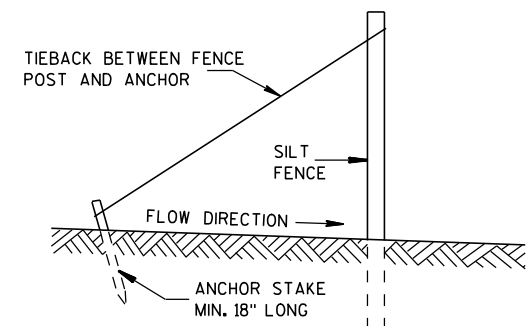


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

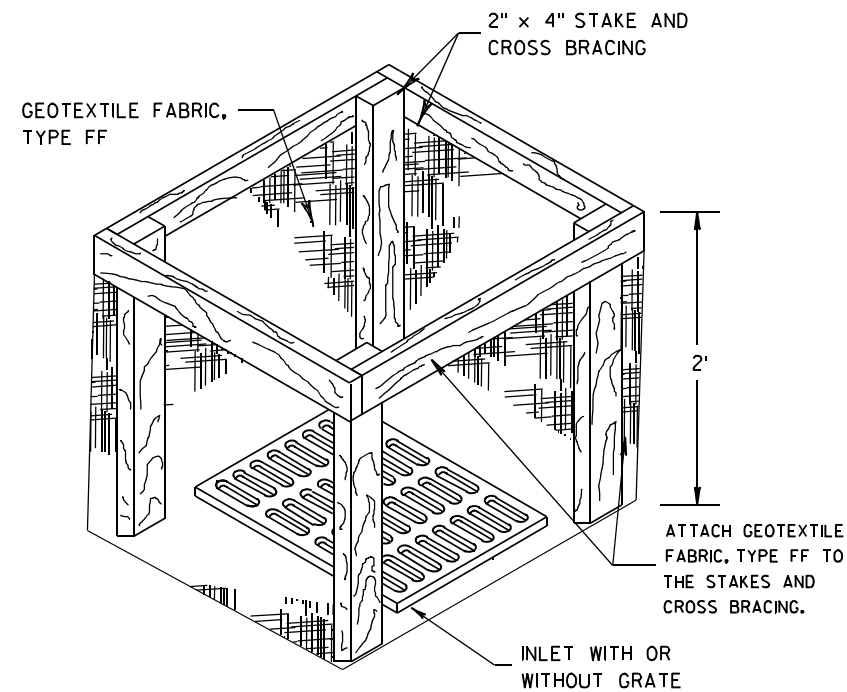
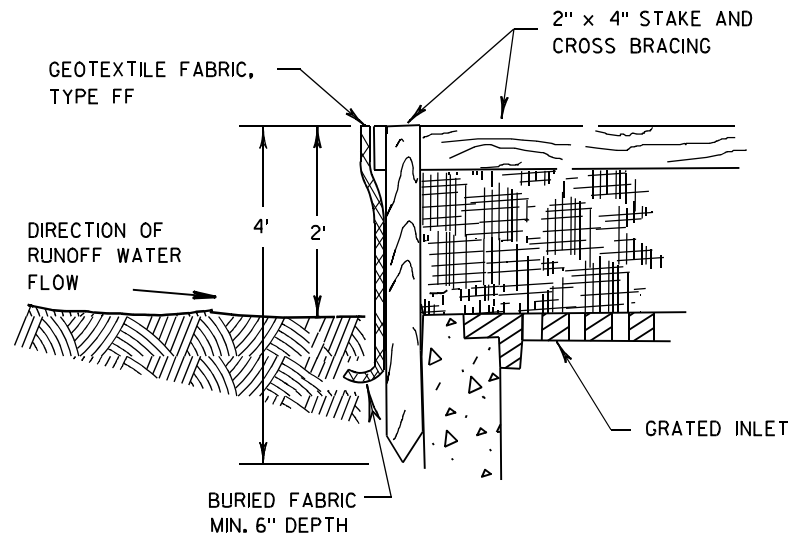


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



INLET PROTECTION, TYPE A

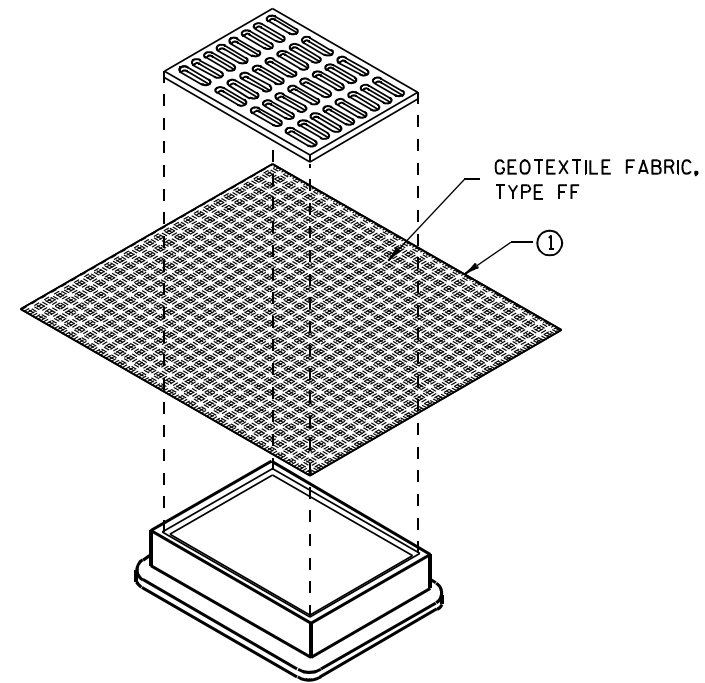
GENERAL NOTES

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.

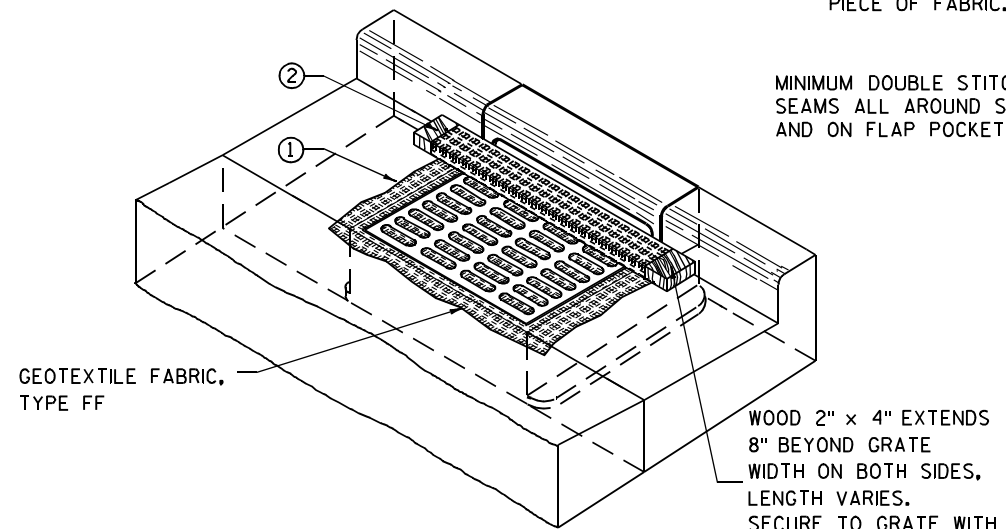
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.

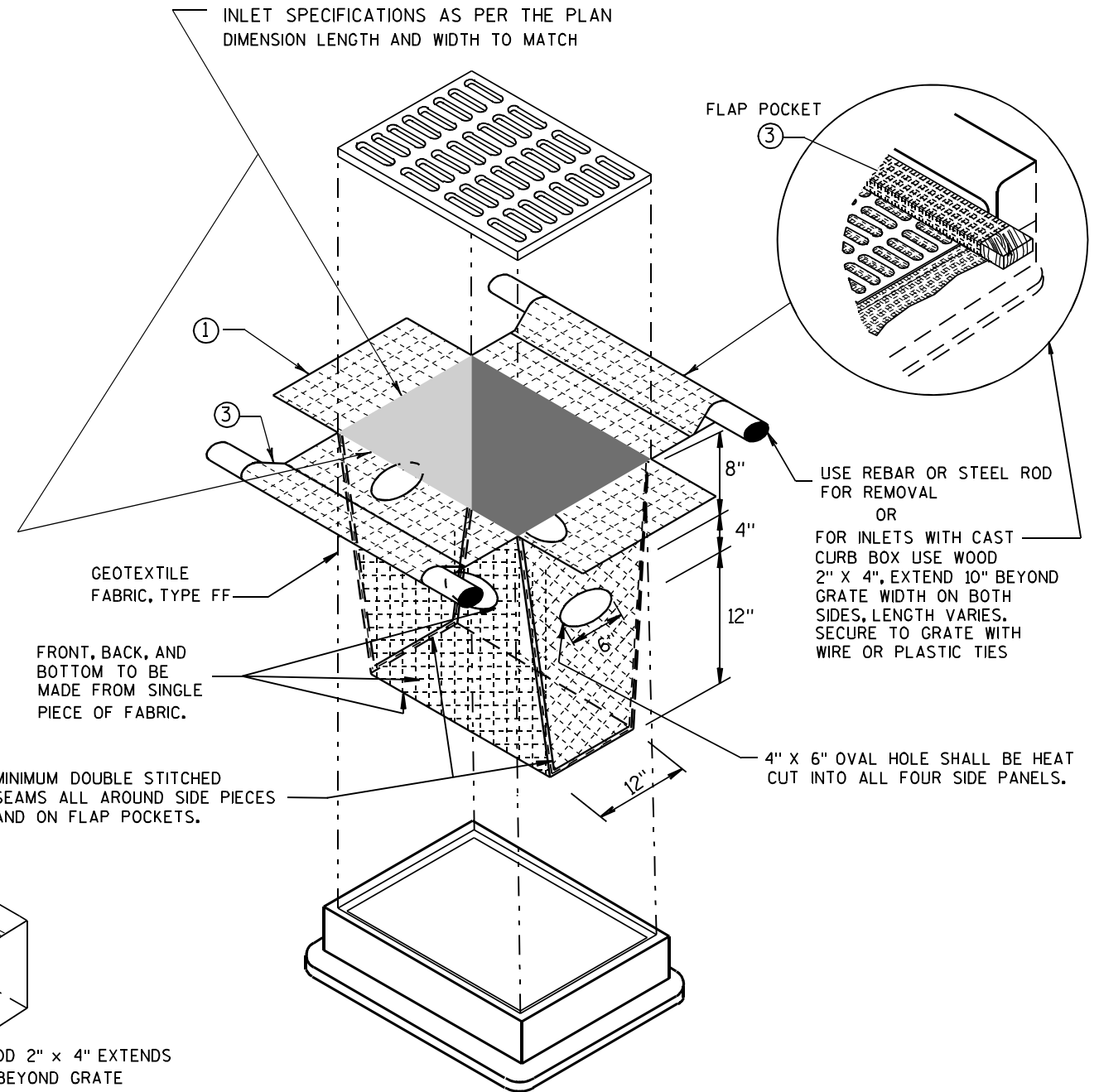
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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)

| | |
|--|---|
| INLET PROTECTION TYPE A, B, C, AND D | |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED 10/16/02 DATE | /s/ Beth Conestra CHIEF ROADWAY DEVELOPMENT ENGINEER |
| FHWA | |

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

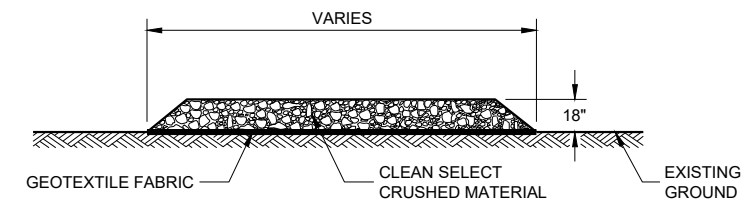
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

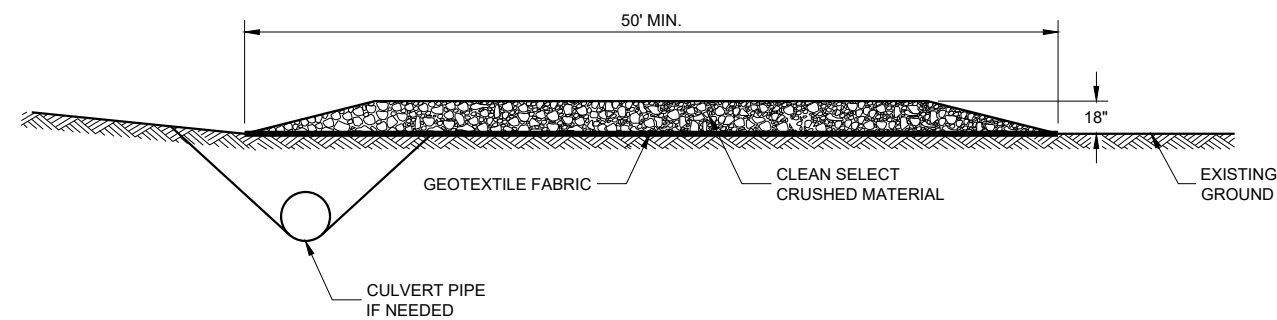
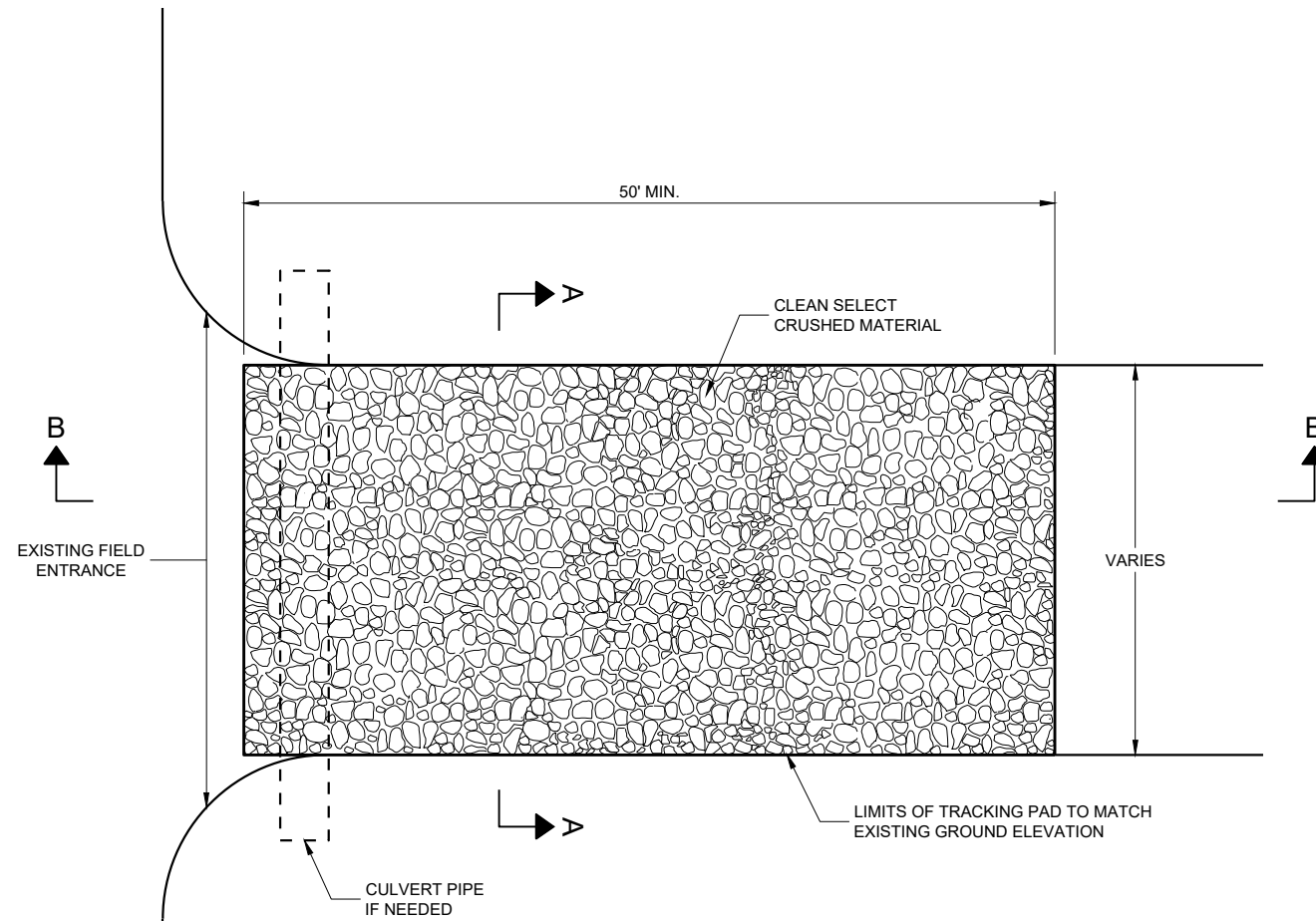
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A



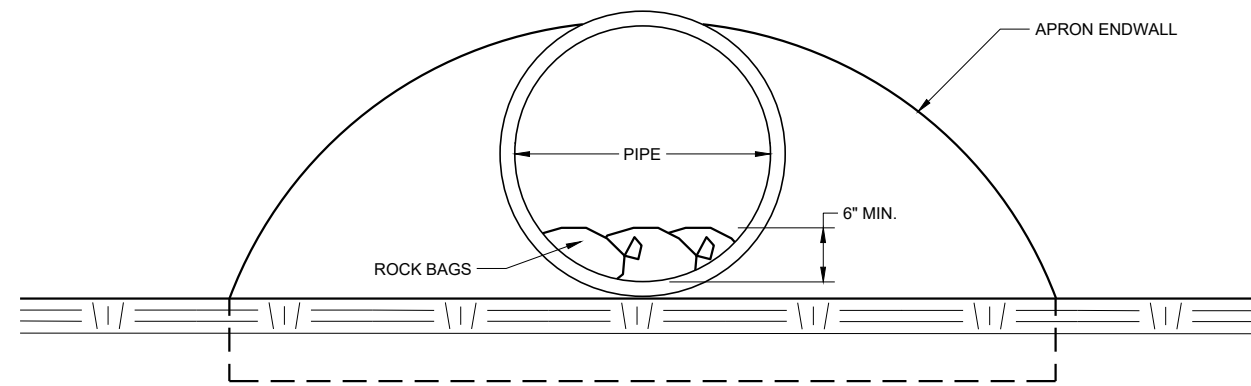
SECTION B - B

TRACKING PAD

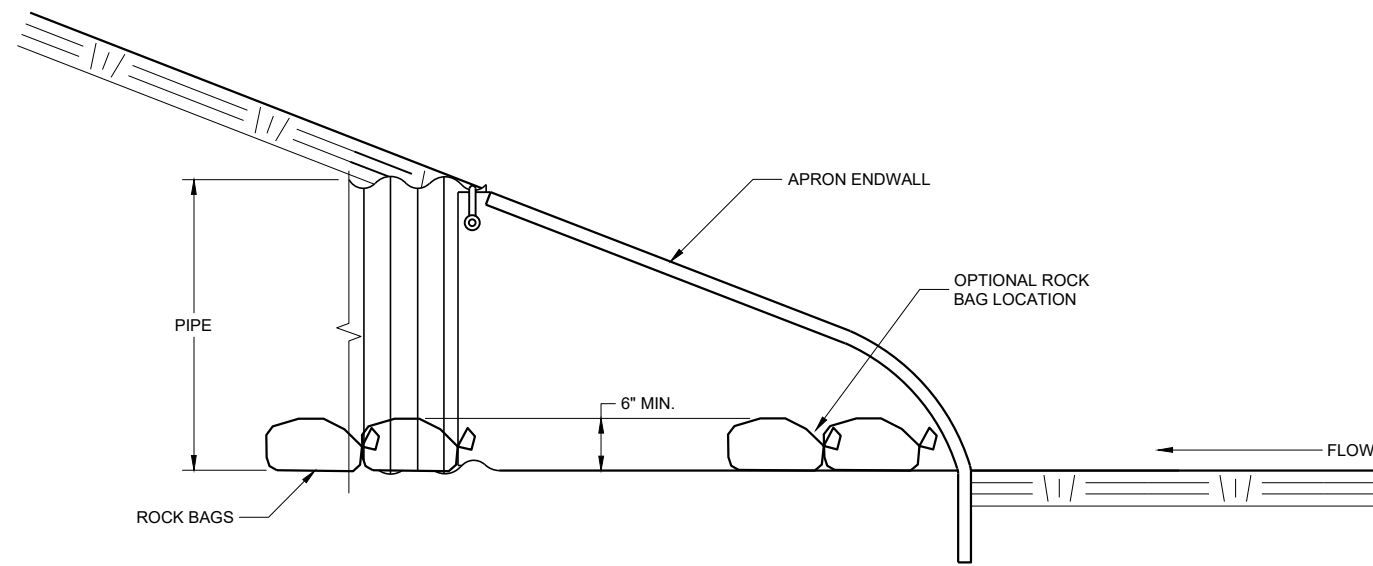
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



END VIEW



SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Daniel Schave
DATE EROSION CONTROL ENGINEER

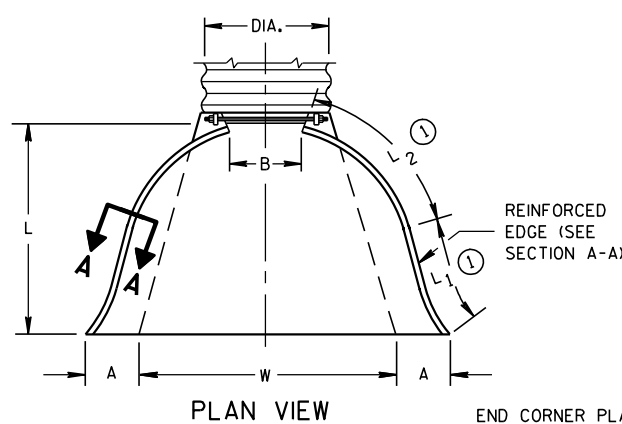
FHWA

| METAL APRON ENDWALLS | | | | | | | | | | | |
|----------------------|----------------------|-------|---------------------|----------|---------|-------------|----|--------|---------|---------------|-------|
| PIPE DIA. (IN.) | MIN. THICK. (Inches) | | DIMENSIONS (Inches) | | | | | | | APPROX. SLOPE | BODY |
| | STEEL | ALUM. | A (±1") | B (MAX.) | H (±1") | L (±1 1/2") | L1 | L2 | W (±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. |

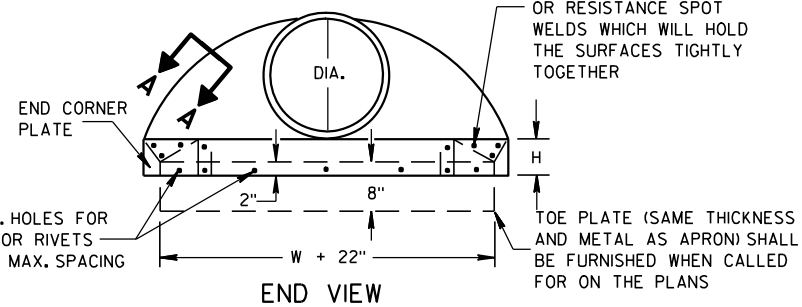
* EXCEPT CENTER PANEL SEE GENERAL NOTES

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

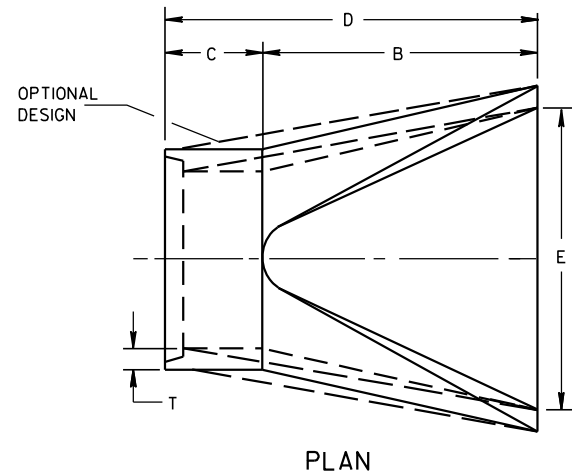
* MINIMUM
** MAXIMUM



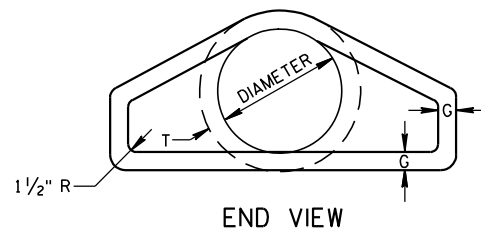
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



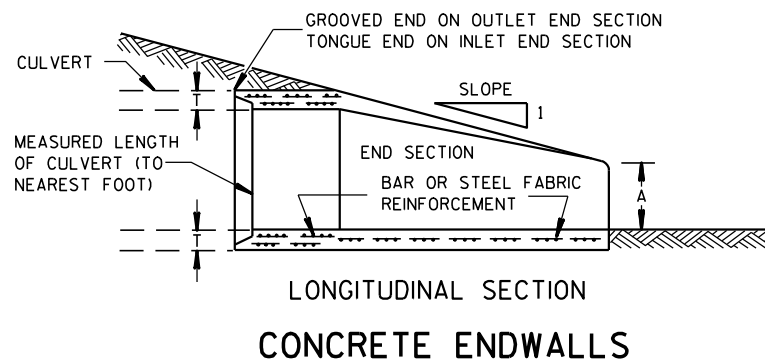
SIDE ELEVATION
METAL ENDWALLS



PLAN

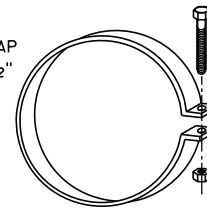


END VIEW

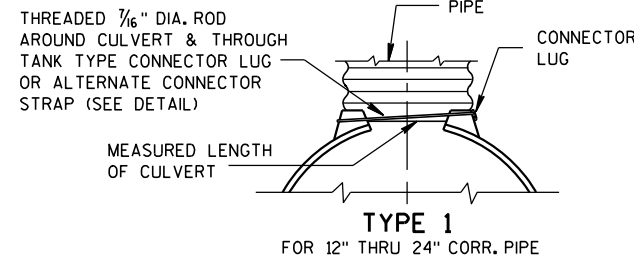


LONGITUDINAL SECTION
CONCRETE ENDWALLS

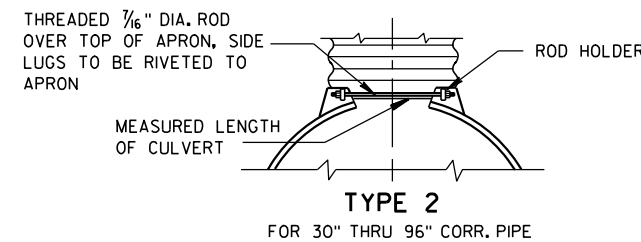
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



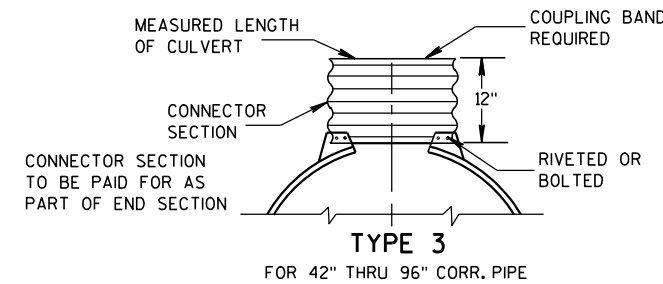
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



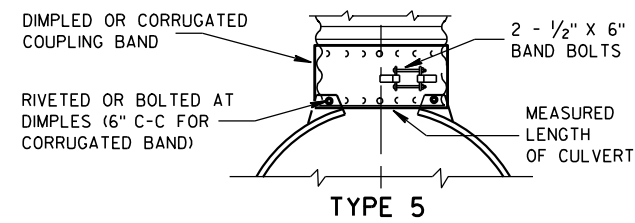
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

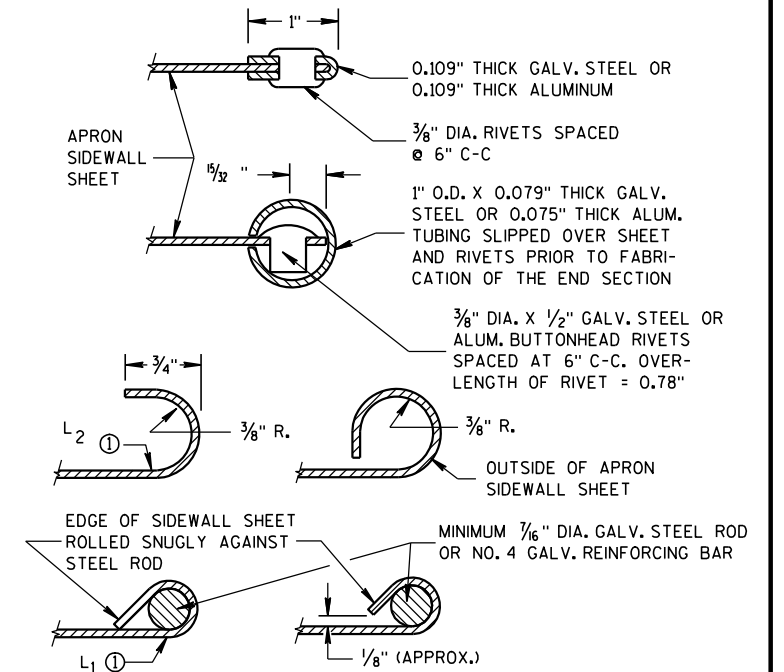
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VICE 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.

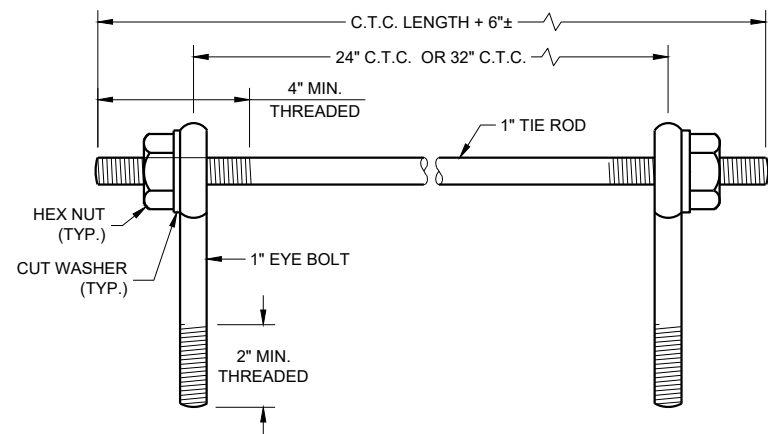
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

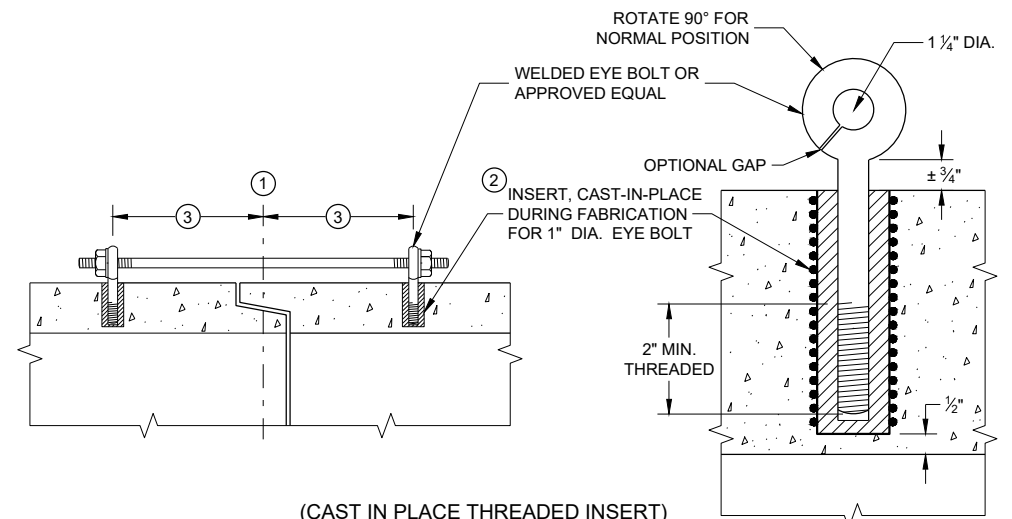
APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



EYE BOLTS AND TIE ROD
EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

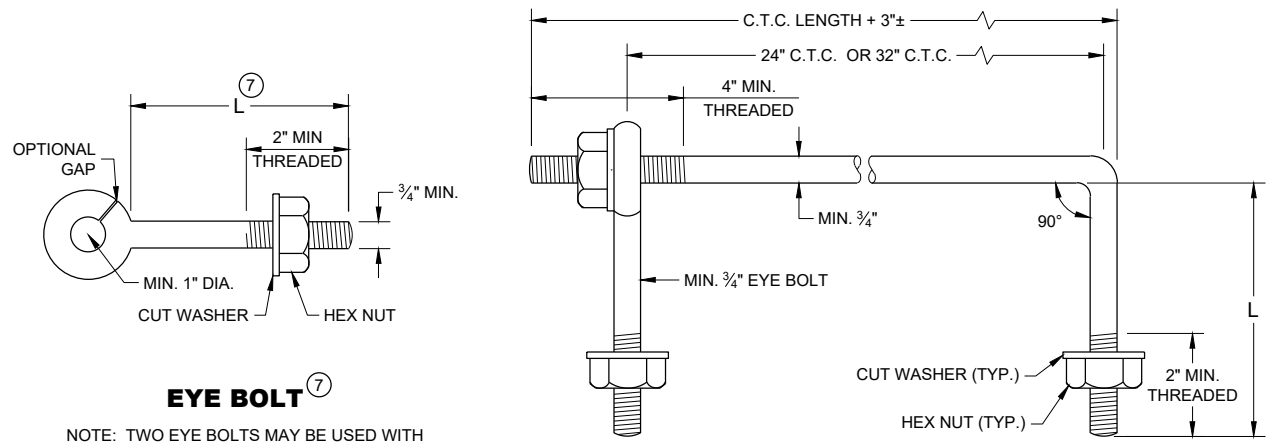
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

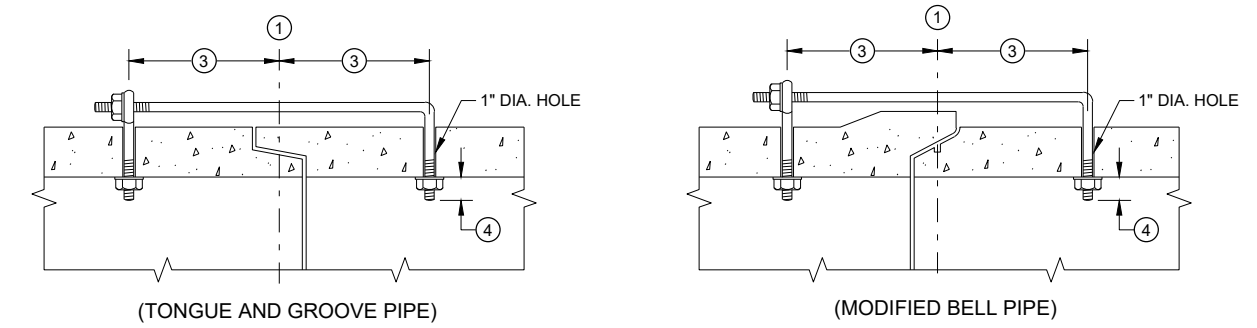
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- ⑦ EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.



EYE BOLT AND TIE ROD

EYE BOLT
 NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



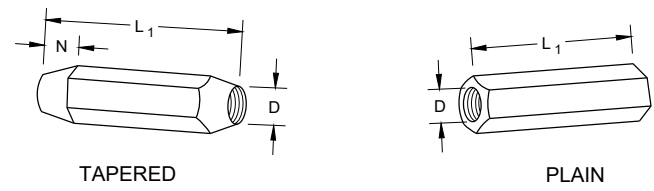
LONGITUDINAL SECTION
 (JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

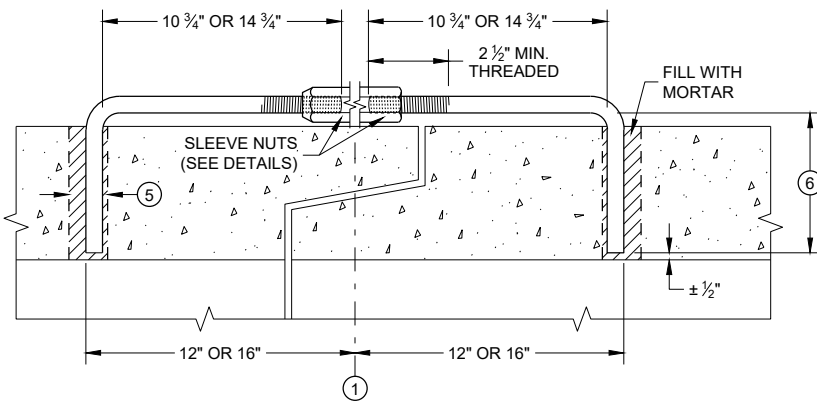
ADJUSTABLE TIE ROD TABLE

| PIPE DIAMETER | TIE ROD DIAMETER | D | L ₁ | N |
|---------------|------------------|-----|----------------|--------|
| 12 - 60 | 5/8 | 5/8 | 5 | 1/2 |
| 66 - 84 | 3/4 | 3/4 | 5 | 1/2 |
| 90 - 144 | 1 | 1 | 7 | 1 1/16 |

DIMENSIONS SHOWN ARE IN INCHES

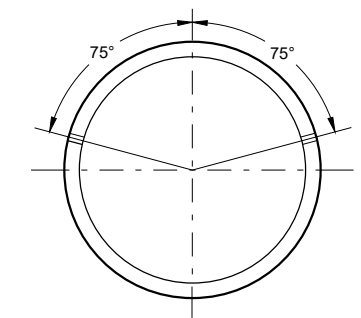


RIGHT AND LEFT THREADS SLEEVE NUTS



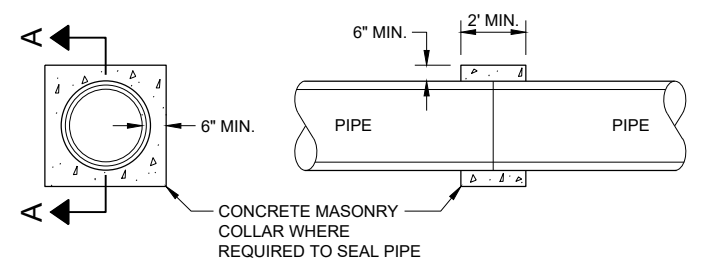
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A - A
CONCRETE COLLAR DETAIL

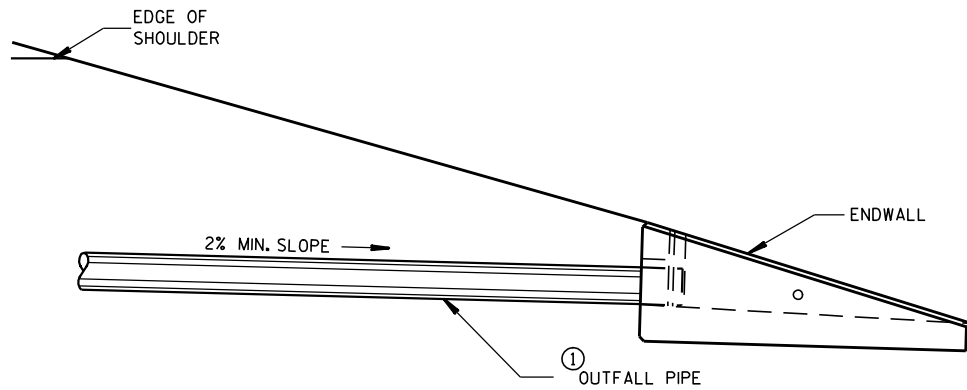
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 November 2021 /S/ Rodney Taylor
 DATE ROADWAY STANDARDS DEVELOPMENT
 ENGINEER
 FHWA

| DIMENSIONS IN INCHES | | | | | | | | | | | |
|----------------------|---|----|-------|----|----|----|----|----|-------|-------|---|
| PIPE DIA. | A | B | C | D | E | F | G | H | J | L | Z |
| **4 | 6 | 12 | 5 1/4 | 9 | 8 | 32 | 36 | 11 | 2 3/8 | 6 1/2 | 4 |
| 6 | 8 | 14 | 7 1/4 | 11 | 10 | 42 | 44 | 13 | 3 5/8 | 8 1/2 | 6 |

** APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



INSTALLATION DETAIL

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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

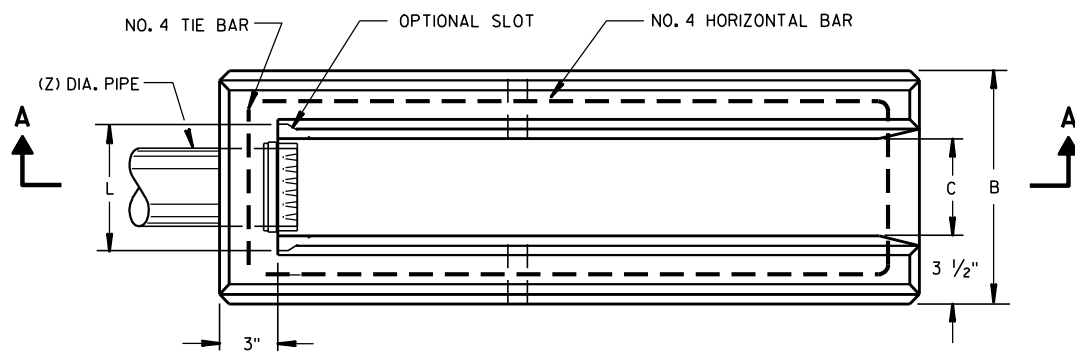
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

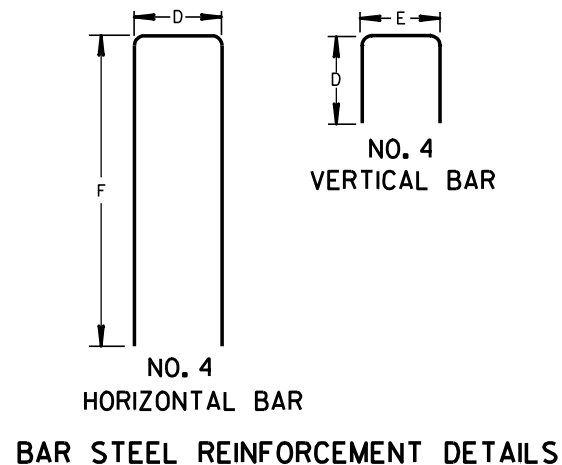
① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

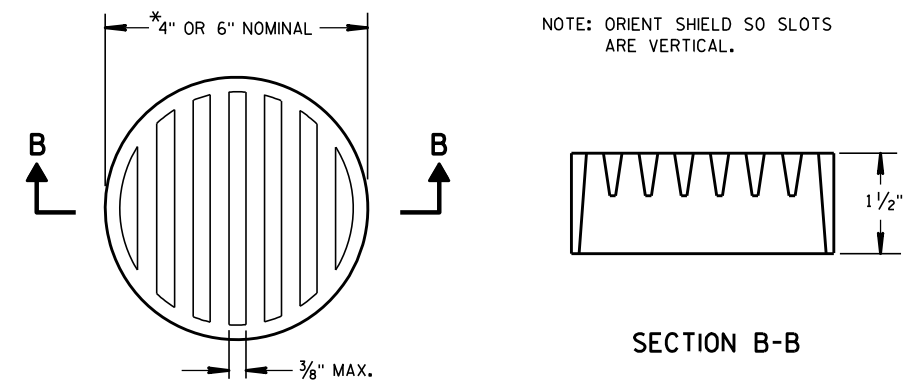
② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



PLAN VIEW

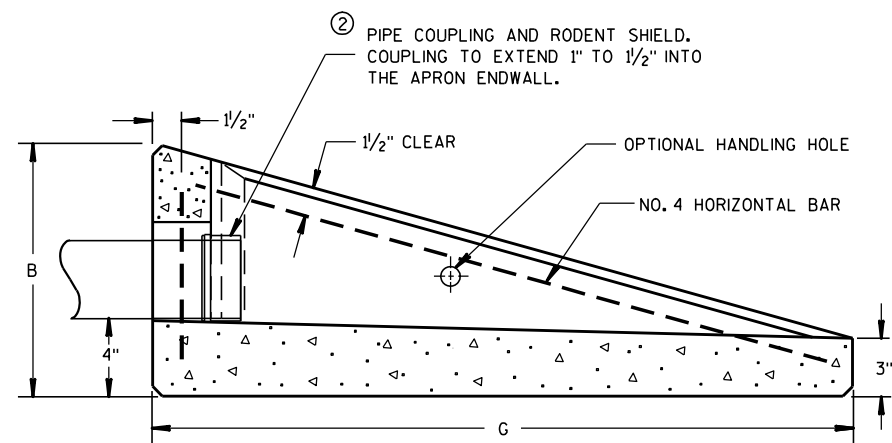


BAR STEEL REINFORCEMENT DETAILS



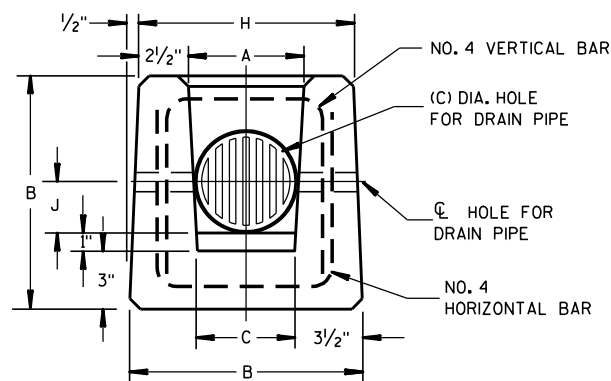
② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION A-A

CONCRETE APRON ENDWALL FOR UNDERDRAIN



END VIEW

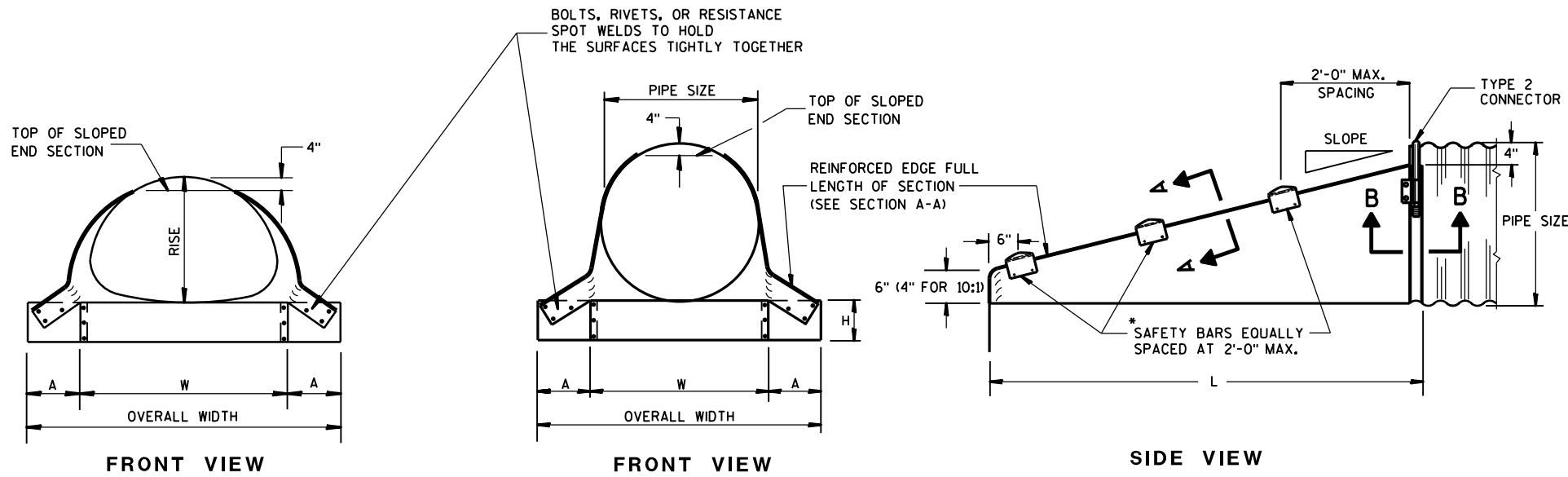
**REINFORCED
CONCRETE APRON ENDWALL
FOR PIPE UNDERDRAIN**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/10/98 /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



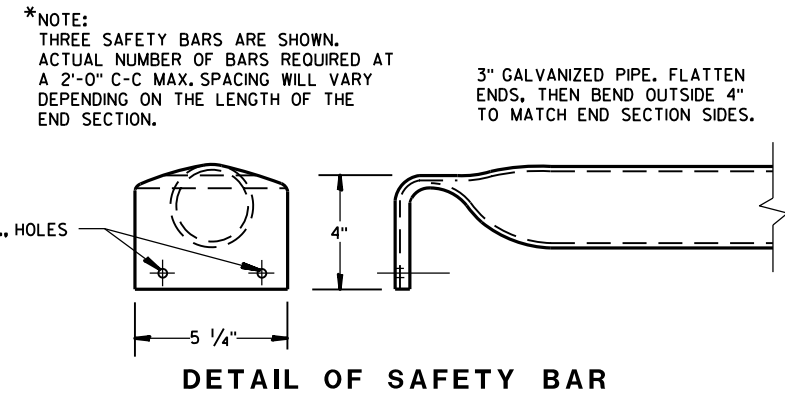
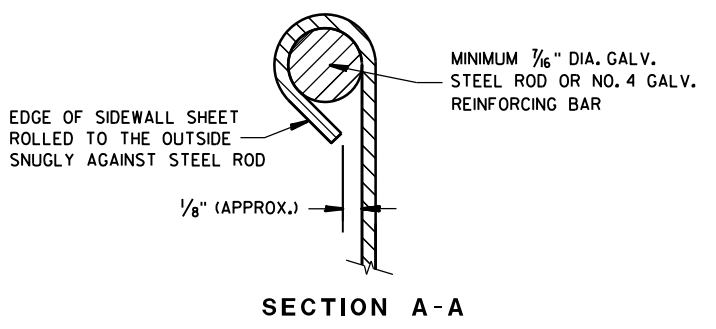
GENERAL NOTES

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.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

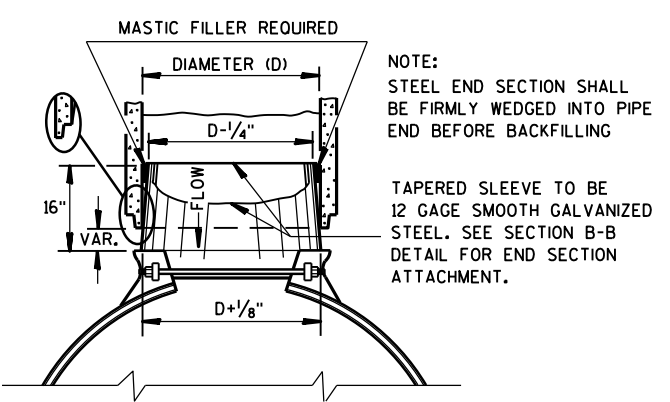
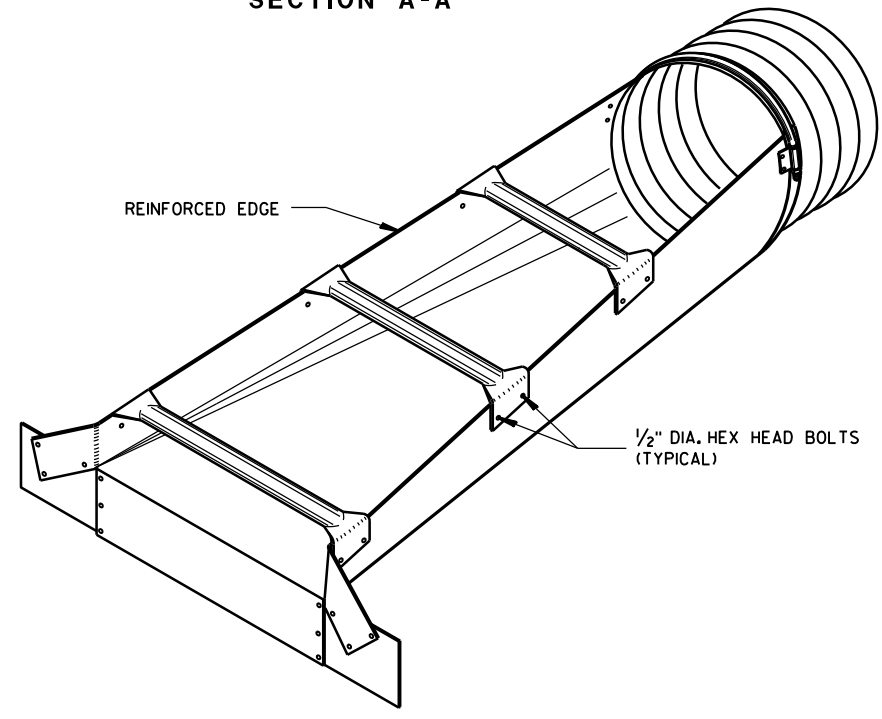
SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

| STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS | | | | | | | | | | | |
|--|----------------------|---------------------|----|----|---------------|--------------|---------------|-------|---------------|-------|---------------|
| PIPE DIA. (IN.) | MIN. THICK. (Inches) | DIMENSIONS (Inches) | | | | L DIMENSIONS | | | | | |
| | | A | H | W | OVERALL WIDTH | SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES |
| 15 | .064 | 8 | 6 | 21 | 37 | 4:1 | 20 | 6:1 | 30 | 10:1 | 70 |
| 18 | .064 | 8 | 6 | 24 | 40 | 4:1 | 32 | 6:1 | 48 | 10:1 | 100 |
| 21 | .064 | 8 | 6 | 27 | 43 | 4:1 | 44 | 6:1 | 66 | 10:1 | 130 |
| 24 | .064 | 8 | 6 | 30 | 46 | 4:1 | 56 | 6:1 | 84 | 10:1 | 160 |
| 30 | .109 | 12 | 9 | 36 | 60 | 4:1 | 80 | 6:1 | 120 | 10:1 | 220 |
| 36 | .109 | 12 | 9 | 42 | 66 | 4:1 | 104 | 6:1 | 156 | 10:1 | 280 |
| 42 | .109 | 16 | 12 | 48 | 80 | 4:1 | 128 | 6:1 | 192 | — | — |
| 48 | .109 | 16 | 12 | 54 | 86 | 4:1 | 152 | 6:1 | 228 | — | — |
| 54 | .109 | 16 | 12 | 60 | 92 | 4:1 | 176 | 6:1 | 264 | — | — |
| 60 | .109 | 16 | 12 | 66 | 98 | 4:1 | 200 | 6:1 | 300 | — | — |



| STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS | | | | | | | | | | | | | |
|---|----------|------|------------------------|---------------------|----|----|---------------|--------------|---------------|-------|---------------|--------|---------------|
| EQUIV. DIA. (Inches) | (Inches) | | MIN. THICK. (Inches) ① | DIMENSIONS (Inches) | | | | L DIMENSIONS | | | | | |
| | SPAN | RISE | | A | H | W | OVERALL WIDTH | SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES |
| 15 | 17 | 13 | .064 * | 7 | 6 | 30 | 44 | 4:1 | 19 | 6:1 | 30 | 10:1 ② | 70 |
| 18 | 21 | 15 | .064 * | 8 | 6 | 27 | 43 | 4:1 | 20 | 6:1 | 30 | 10:1 | 70 |
| 21 | 24 | 18 | .064 * | 8 | 6 | 30 | 46 | 4:1 | 32 | 6:1 | 48 | 10:1 | 100 |
| 24 | 28 | 20 | .064 * | 8 | 6 | 34 | 50 | 4:1 | 40 | 6:1 | 60 | 10:1 | 120 |
| 30 | 35 | 24 | .079 * | 12 | 9 | 41 | 65 | 4:1 | 56 | 6:1 | 84 | 10:1 | 160 |
| 36 | 42 | 29 | .109 * | 12 | 9 | 48 | 72 | 4:1 | 76 | 6:1 | 114 | 10:1 | 210 |
| 42 | 49 | 33 | .109 | 16 | 12 | 55 | 87 | 4:1 | 92 | 6:1 | 138 | — | — |
| 48 | 57 | 38 | .109 | 16 | 12 | 63 | 95 | 4:1 | 112 | 6:1 | 168 | — | — |
| 54 | 64 | 43 | .109 | 16 | 12 | 70 | 102 | 4:1 | 132 | 6:1 | 198 | — | — |

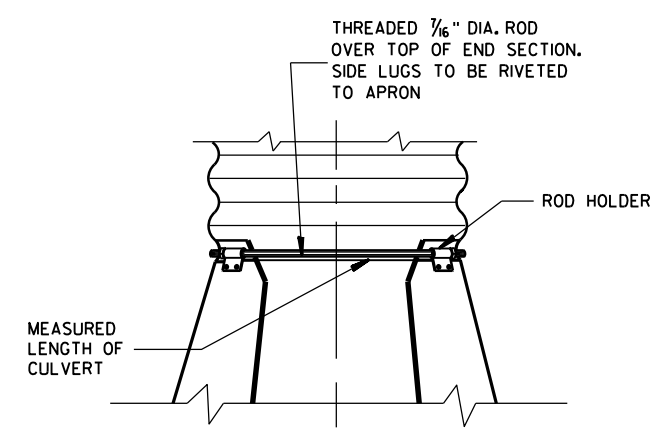
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
 ② ACTUAL SLOPE GREATER THAN 10:1.



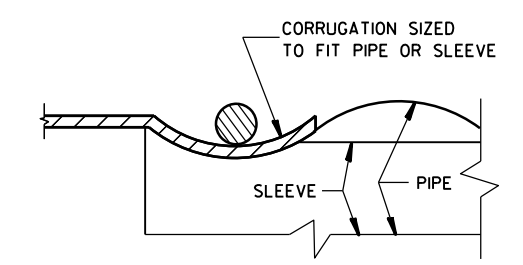
STEEL ADAPTER SLEEVE FOR CONCRETE PIPE

NOTE: STEEL END SECTION SHALL BE FIRMLY WEDGED INTO PIPE END BEFORE BACKFILLING

TAPERED SLEEVE TO BE 12 GAGE SMOOTH GALVANIZED STEEL. SEE SECTION B-B DETAIL FOR END SECTION ATTACHMENT.



TYPE 2 CONNECTION DETAIL



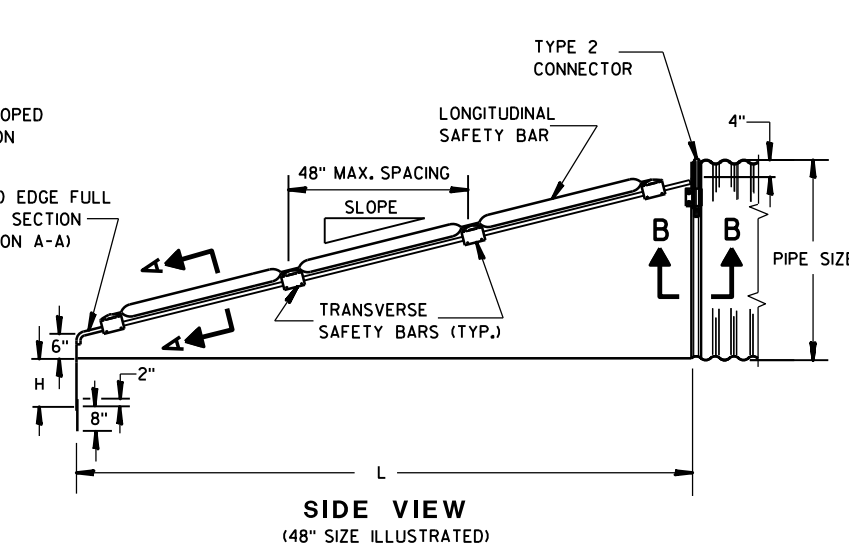
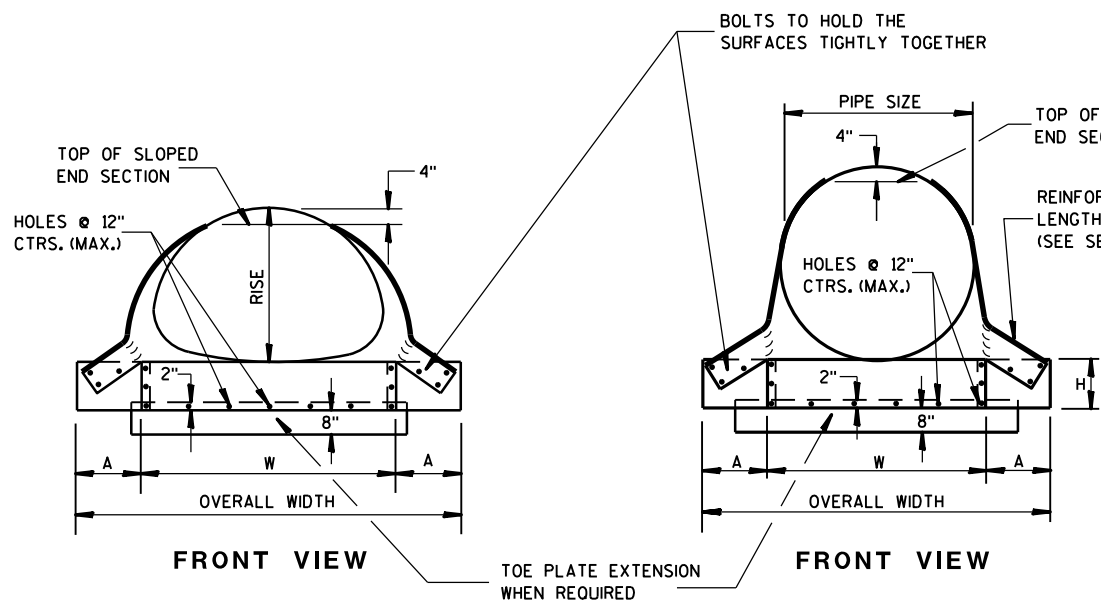
SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 9/14/2012 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



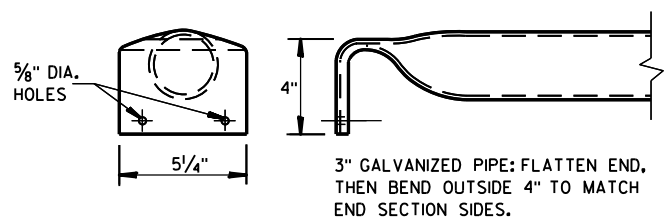
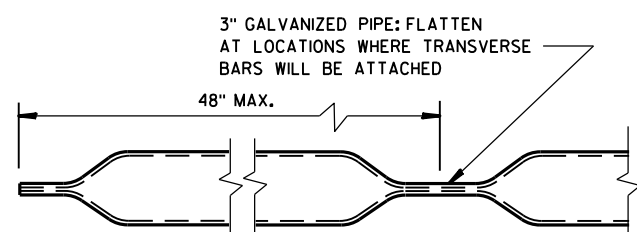
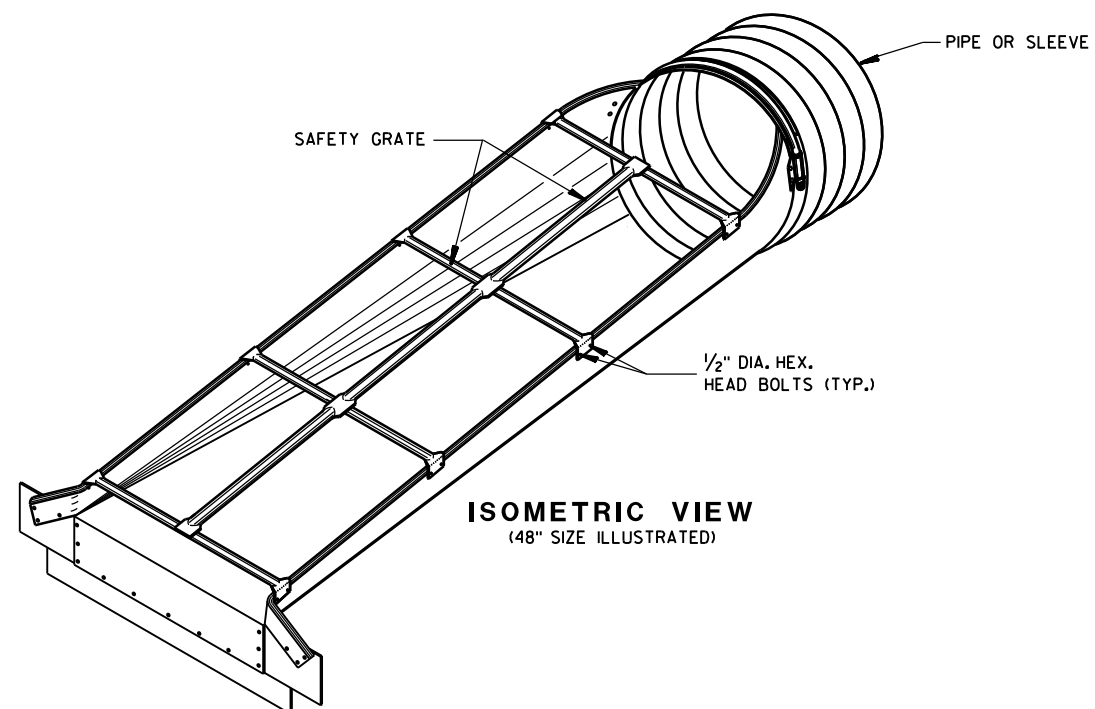
GENERAL NOTES

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

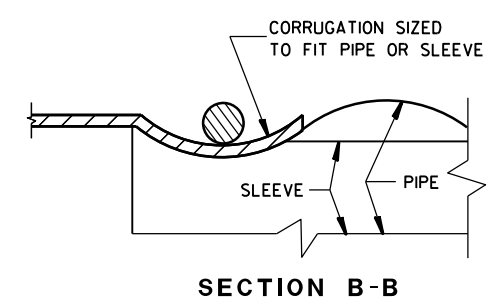
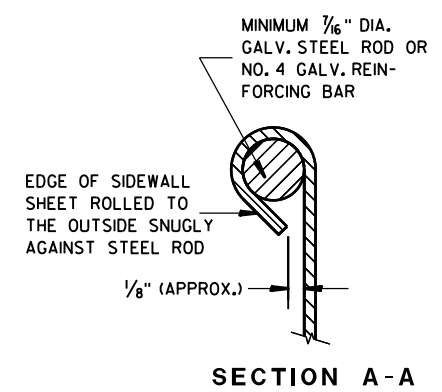
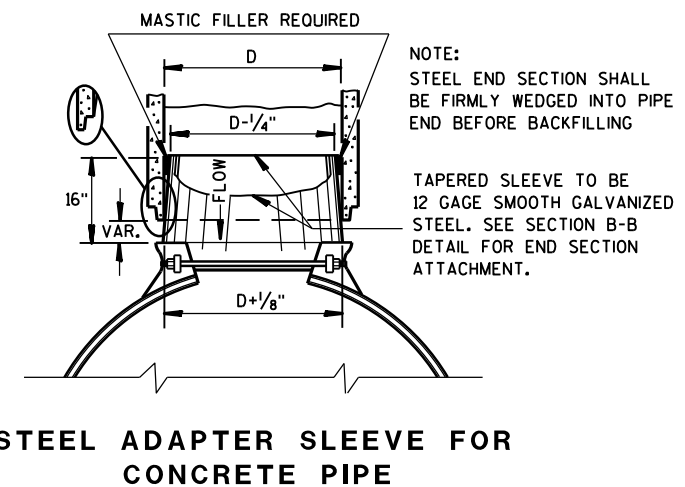
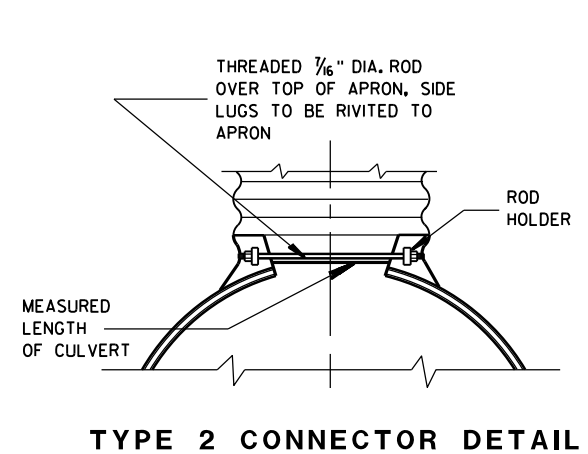
SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

| STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS | | | | | | | | | | |
|--|-----------------|------|---------------------|----|----|---------------|--------------|---------------|-------|---------------|
| PIPE DIA. (IN.) | MIN. THICK. IN. | GAGE | DIMENSIONS (inches) | | | | L DIMENSIONS | | | |
| | | | A | H | W | OVERALL WIDTH | SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES |
| 36 | .109 | 12 | 12 | 9 | 42 | 66 | 4:1 | 104 | 6:1 | 156 |
| 42 | .109 | 12 | 16 | 12 | 48 | 80 | 4:1 | 128 | 6:1 | 192 |
| 48 | .109 | 12 | 16 | 12 | 54 | 86 | 4:1 | 152 | 6:1 | 228 |
| 54 | .109 | 12 | 16 | 12 | 60 | 92 | 4:1 | 176 | 6:1 | 264 |
| 60 | .109 | 12 | 16 | 12 | 66 | 98 | 4:1 | 200 | 6:1 | 300 |



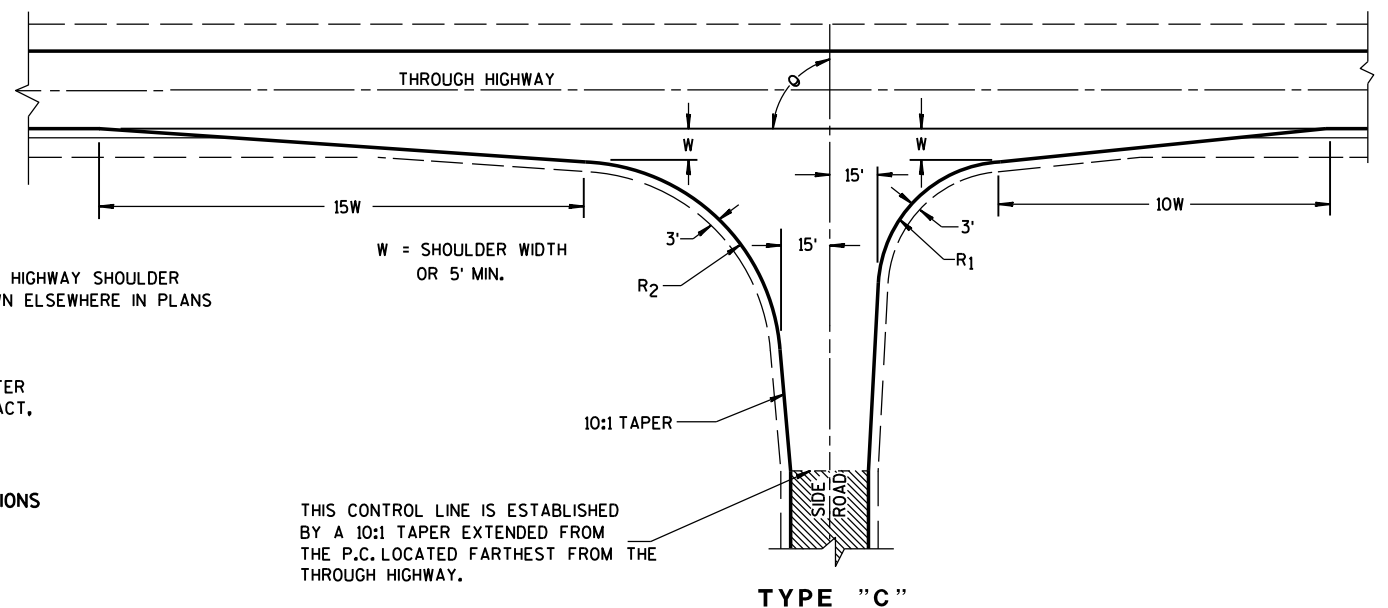
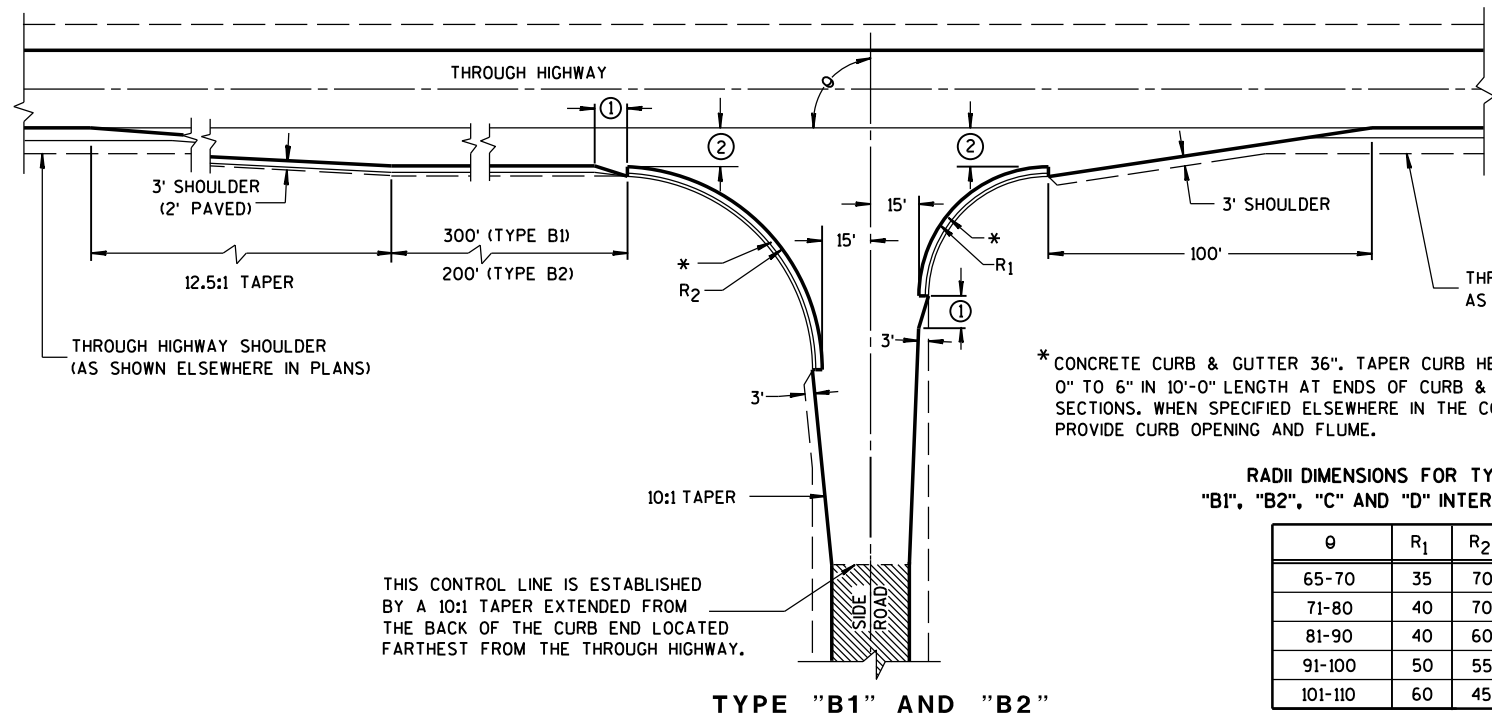
| STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS | | | | | | | | | | | | |
|--|--------|------|-----------------|------|---------------------|----|----|---------------|--------------|---------------|-------|---------------|
| EQUIV. DIA. (IN.) | INCHES | | MIN. THICK. IN. | GAGE | DIMENSIONS (inches) | | | | L DIMENSIONS | | | |
| | SPAN | RISE | | | A | H | W | OVERALL WIDTH | SLOPE | LENGTH INCHES | SLOPE | LENGTH INCHES |
| 30 | 35 | 24 | .079 | 14 | 12 | 9 | 41 | 65 | 4:1 | 56 | 6:1 | 84 |
| 36 | 42 | 29 | .109 | 12 | 12 | 9 | 48 | 72 | 4:1 | 76 | 6:1 | 114 |
| 42 | 49 | 33 | .109 | 12 | 16 | 12 | 55 | 87 | 4:1 | 92 | 6:1 | 138 |
| 48 | 57 | 38 | .109 | 12 | 16 | 12 | 63 | 95 | 4:1 | 112 | 6:1 | 168 |
| 54 | 64 | 43 | .109 | 12 | 16 | 12 | 70 | 102 | 4:1 | 132 | 6:1 | 198 |
| 60 | 71 | 47 | .109 | 12 | 16 | 12 | 77 | 109 | 4:1 | 148 | 6:1 | 222 |



STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 6/5/2012 /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER



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.

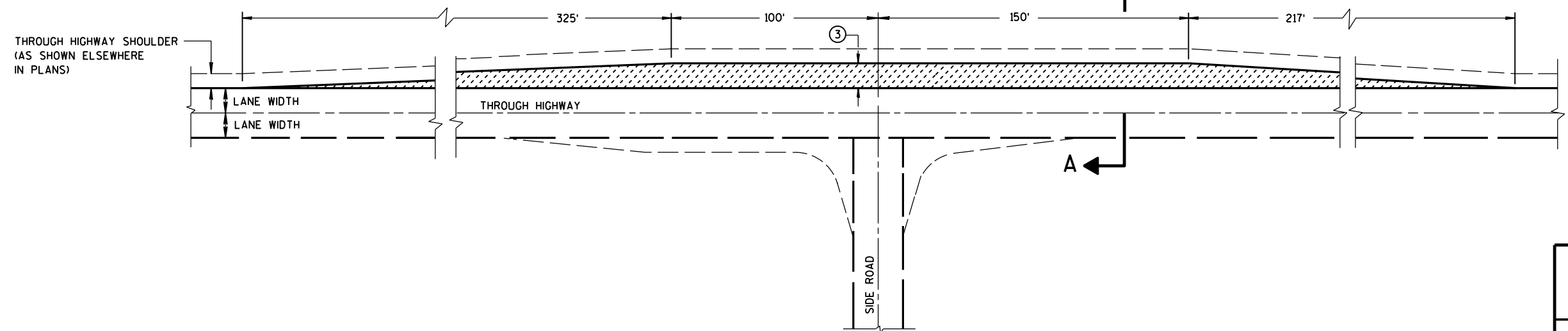
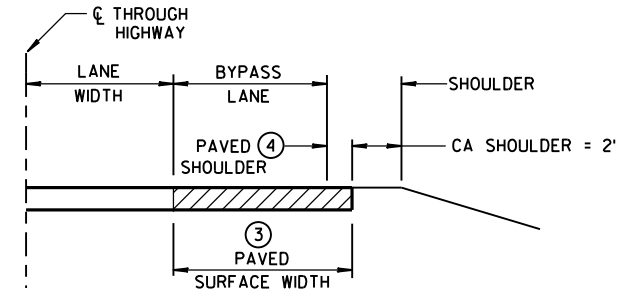
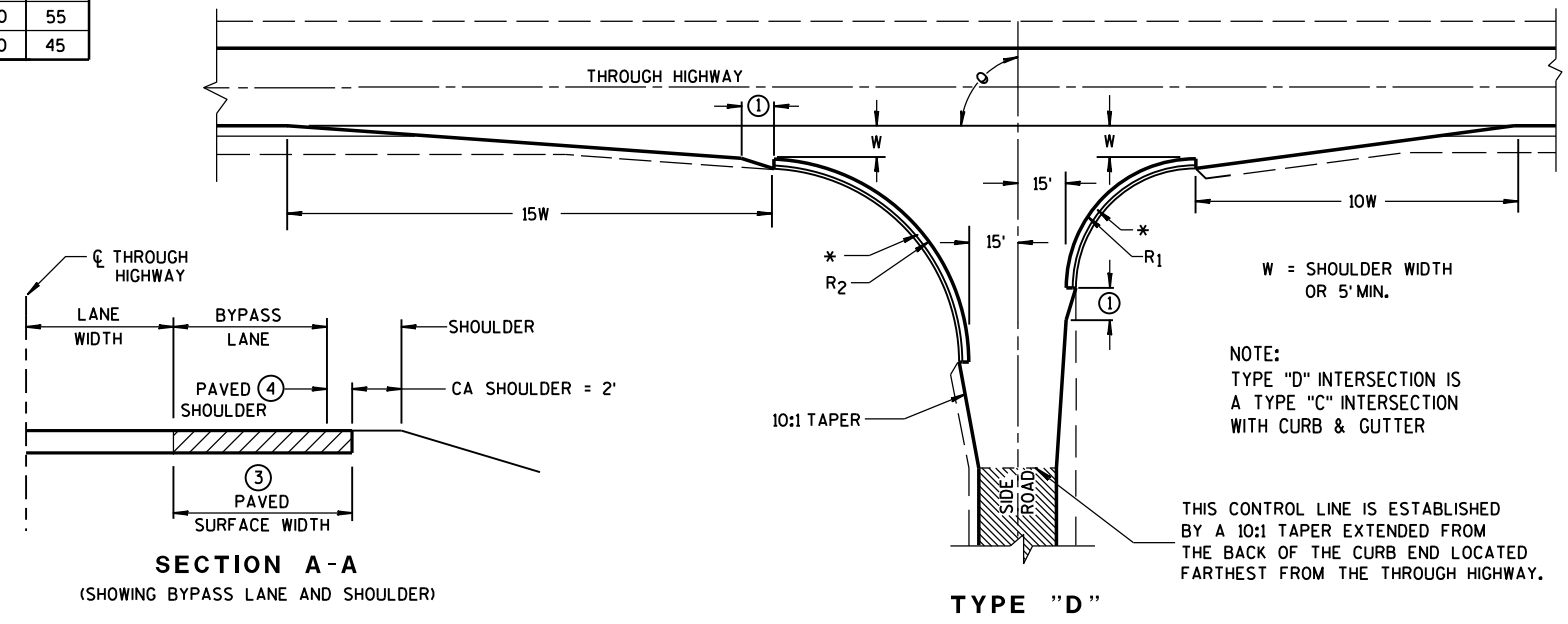
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

EXISTING PAVED SURFACE

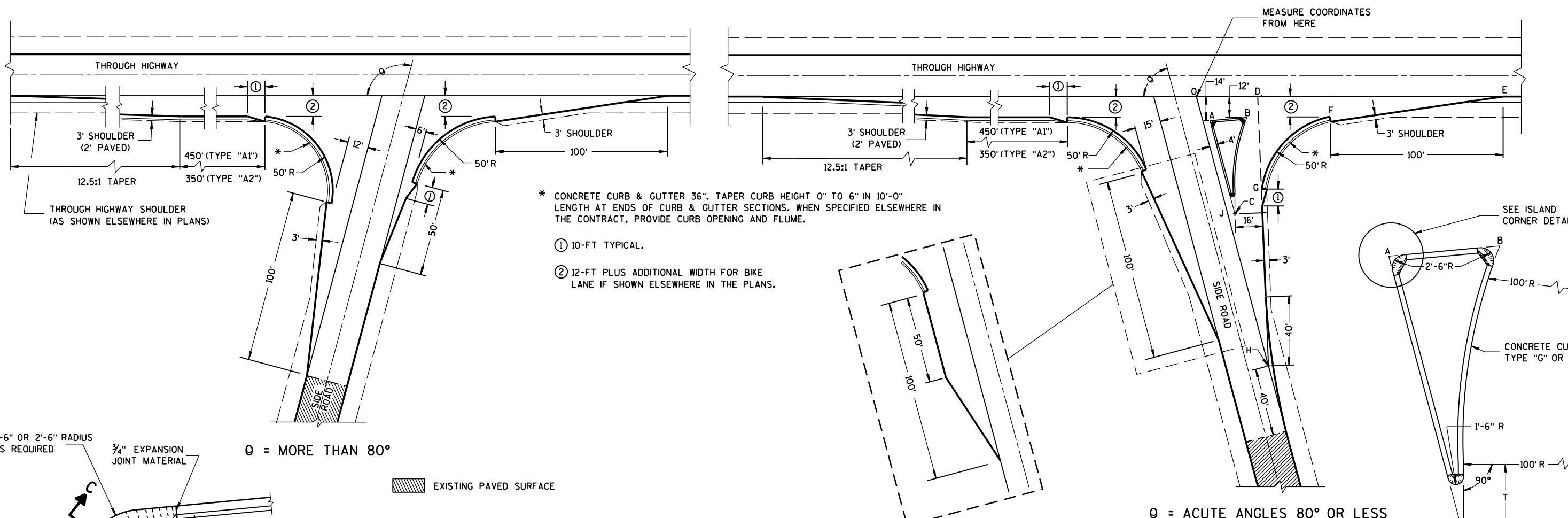
BYPASS LANE

- 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 CPNCRETE = 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.



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

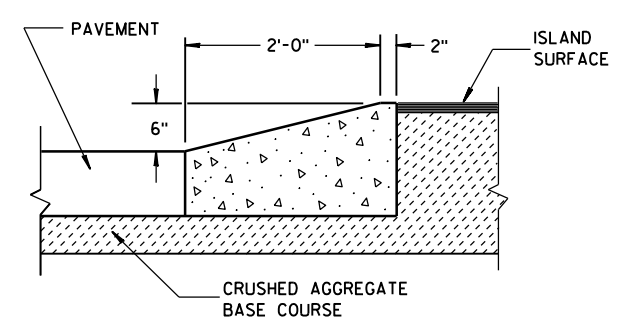
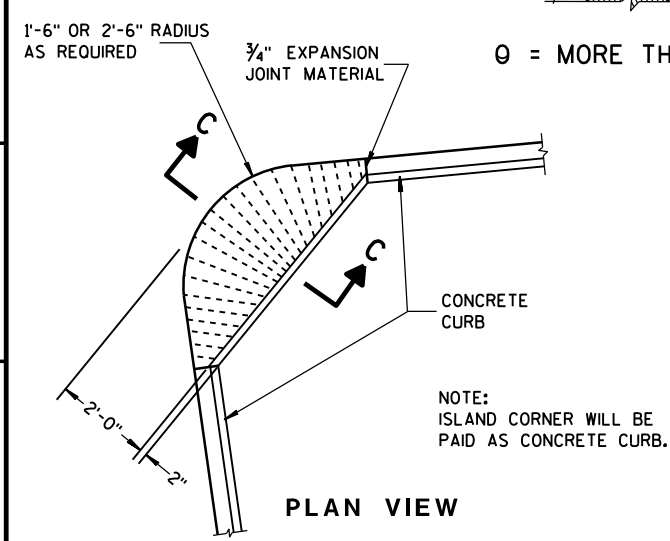


SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 θ = ACUTE ANGLES 70° OR LESS

TABLE OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES
 (INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

| ANGLE θ DEGREES | COORDINATES IN FEET (MEASURED FROM POINT "O") | | | | | | | | LENGTH IN FEET | | | | |
|-----------------|---|------|------|------|-------|-------|------|------|----------------|------|------|------|-------|
| | A | B | C | D | E | F | G | H | AB | AC | T | OJ | OH |
| 60 | 12.7 | 44.9 | 46.4 | 41.9 | 205.0 | 104.6 | 64.0 | 85.0 | 32.3 | 67.4 | 4.9 | 85.9 | 169.9 |
| 65 | 10.9 | 39.0 | 37.8 | 39.4 | 196.1 | 95.7 | 54.1 | 70.5 | 28.2 | 63.6 | 8.5 | 80.9 | 166.9 |
| 70 | 9.4 | 33.9 | 29.8 | 37.4 | 188.3 | 87.8 | 45.6 | 56.1 | 24.6 | 59.7 | 11.5 | 76.1 | 164.1 |
| 75 | 7.9 | 29.3 | 22.3 | 35.7 | 181.2 | 80.7 | 38.2 | 41.8 | 21.5 | 55.8 | 13.8 | 71.4 | 161.4 |
| 80 | 6.5 | 25.4 | 15.6 | 34.4 | 174.8 | 74.4 | 31.8 | 27.6 | 18.9 | 52.0 | 15.6 | 66.9 | 158.9 |

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS



ISLAND CORNER DETAIL
 (TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

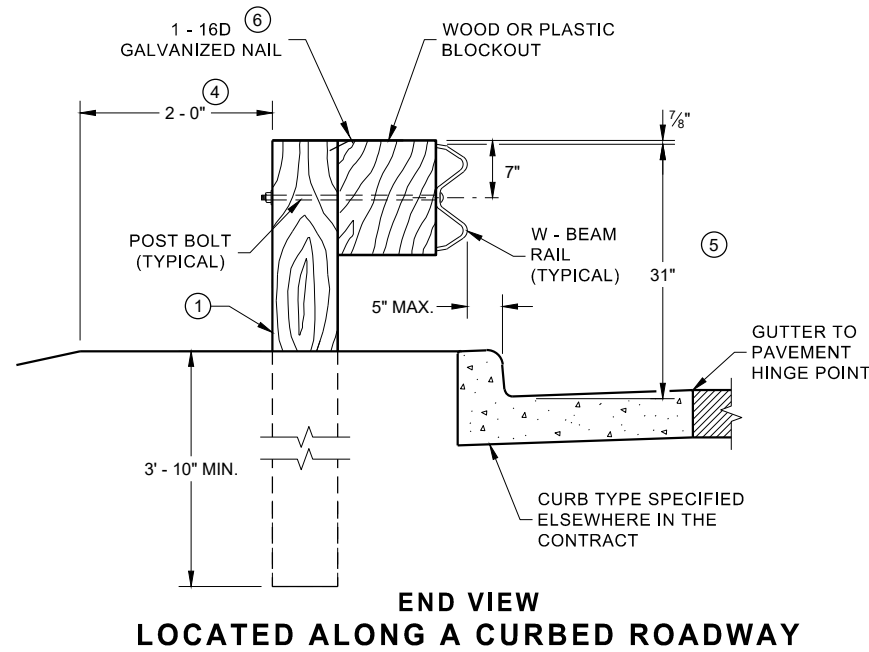
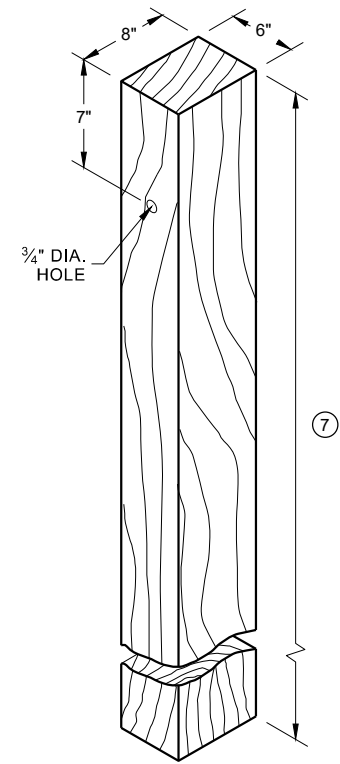
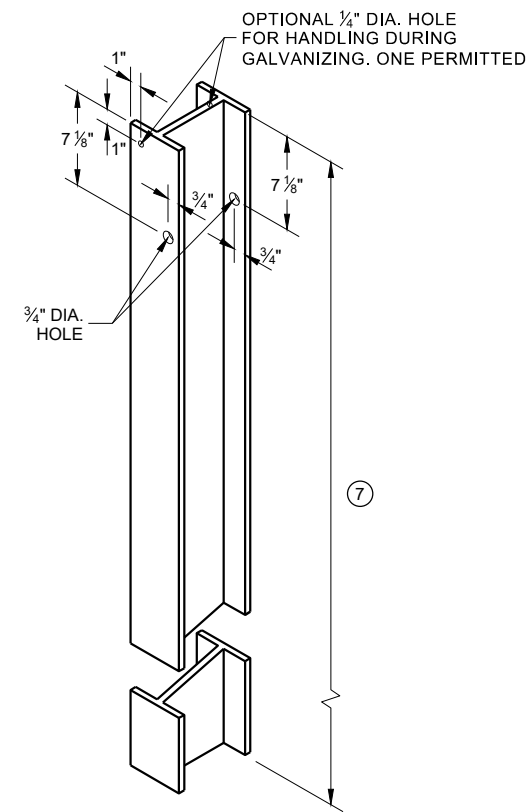
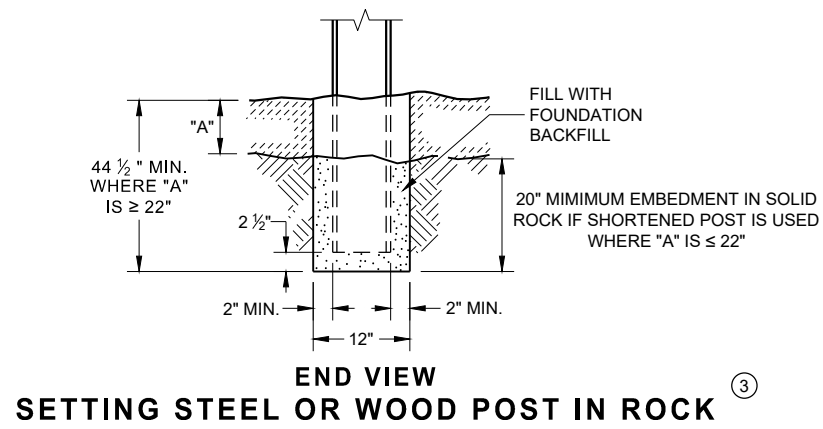
APPROVED 12/18/12 /S/ Jerry H. Zogg
 DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

S.D.D. 9 A 1-13b

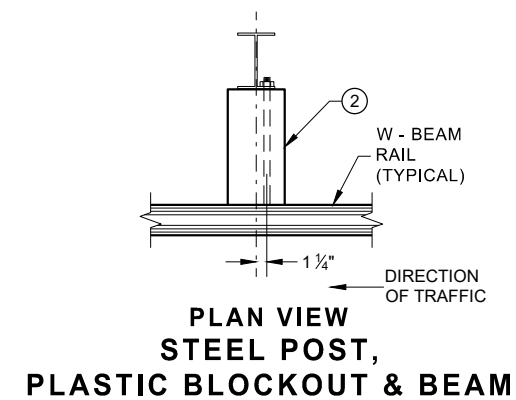
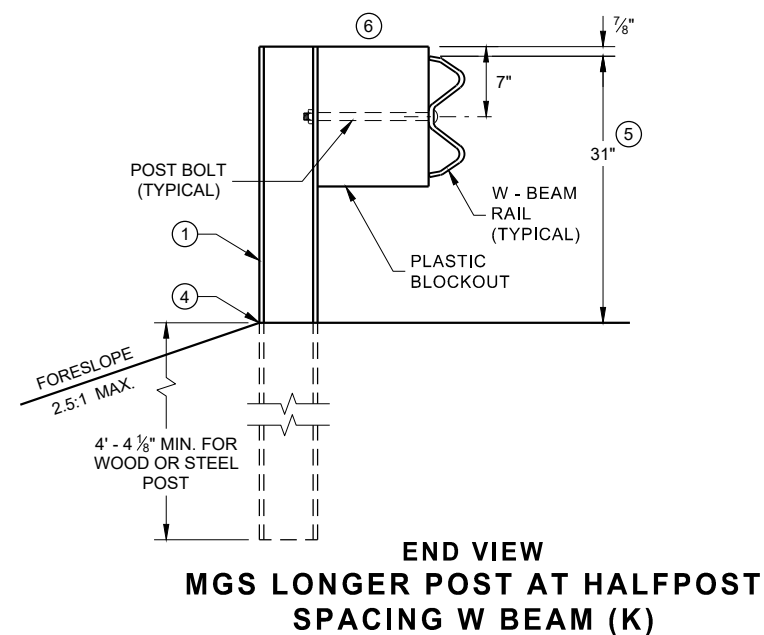
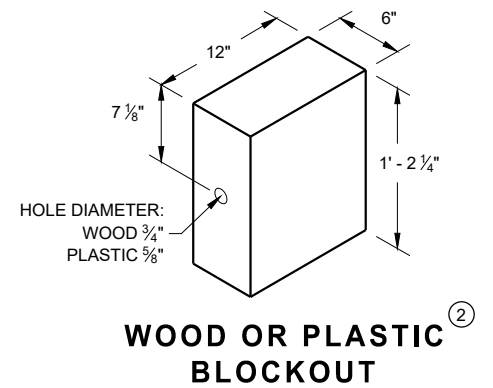
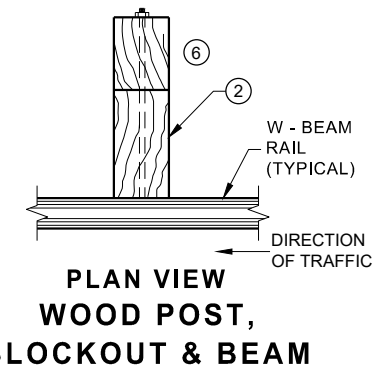
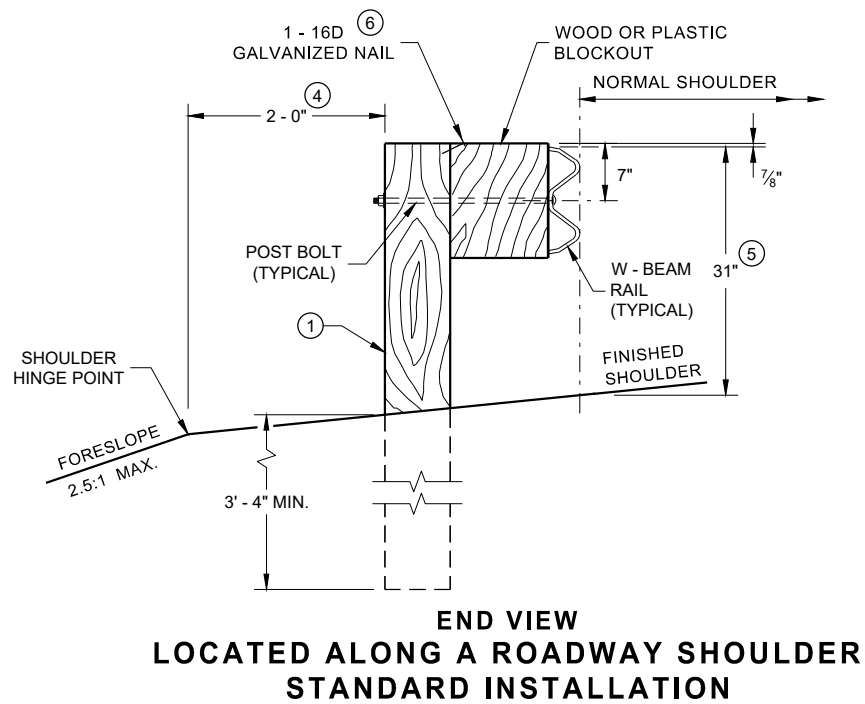
S.D.D. 9 A 1-13b

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0". TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



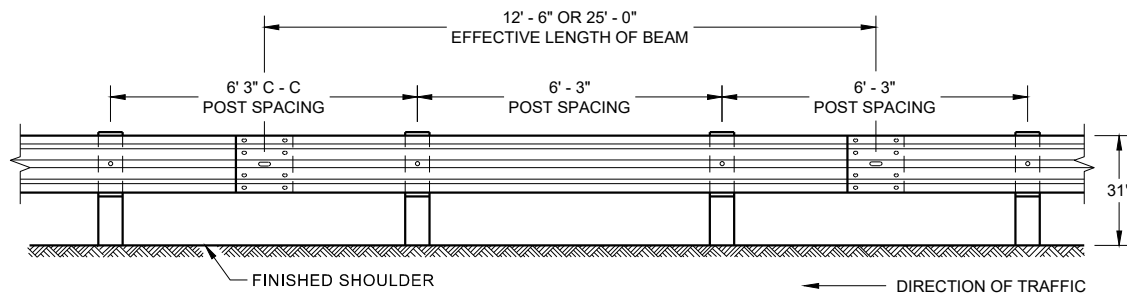
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) ①

WOOD POST (6" X 8") NOMINAL ①

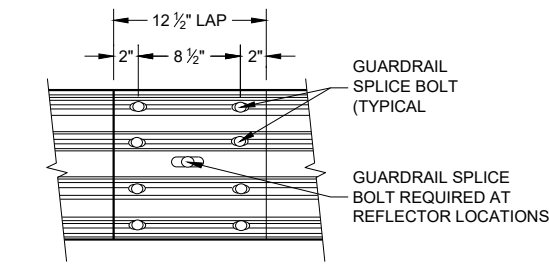


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



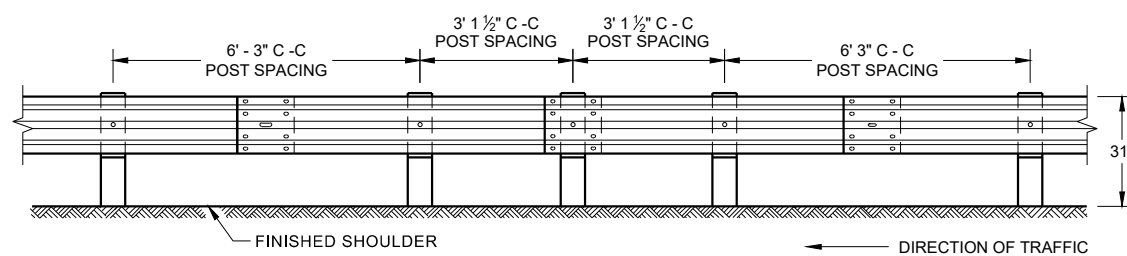
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



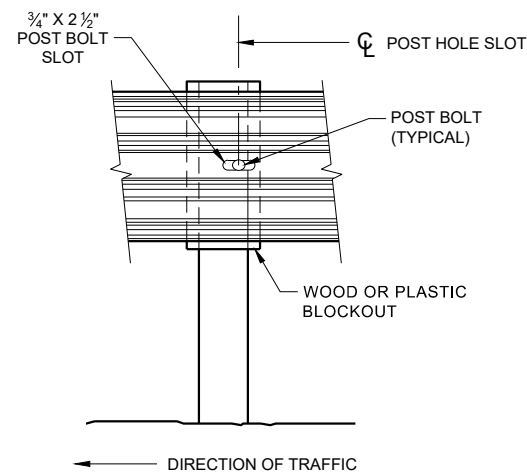
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

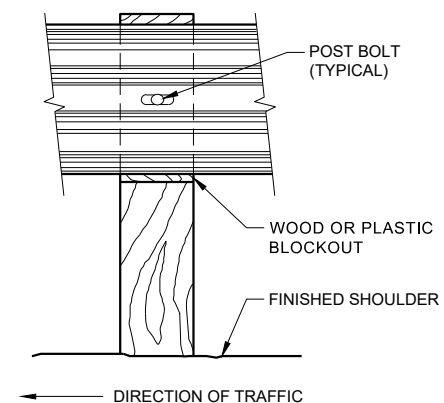
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



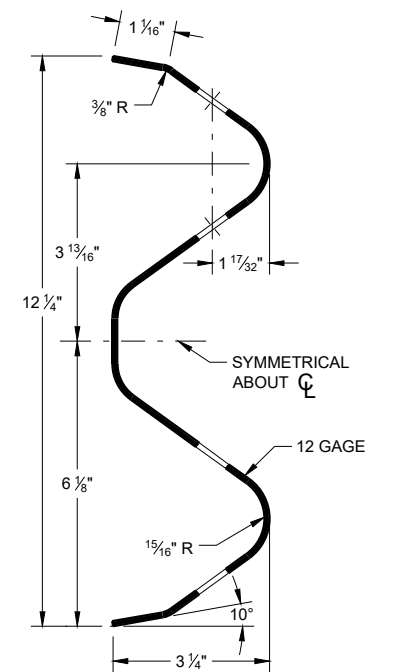
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



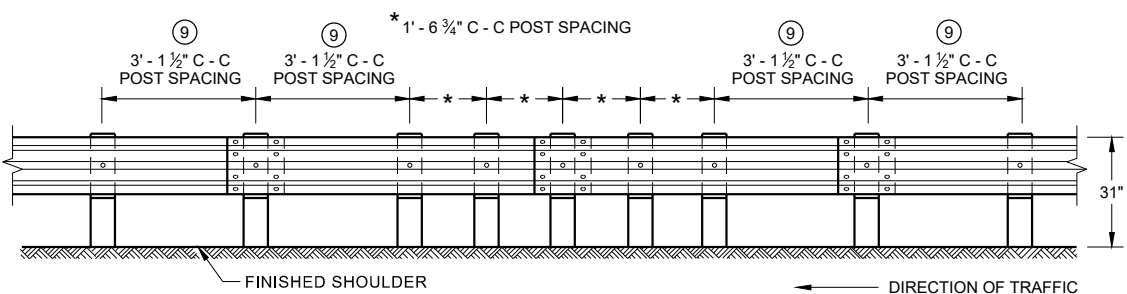
FRONT VIEW AT STEEL POST



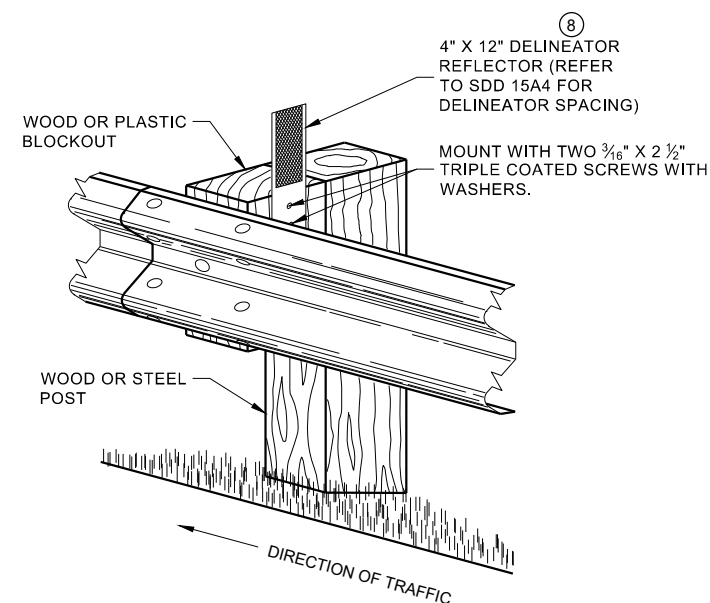
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



**FRONT VIEW
QUARTER POST SPACING (QS)**



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

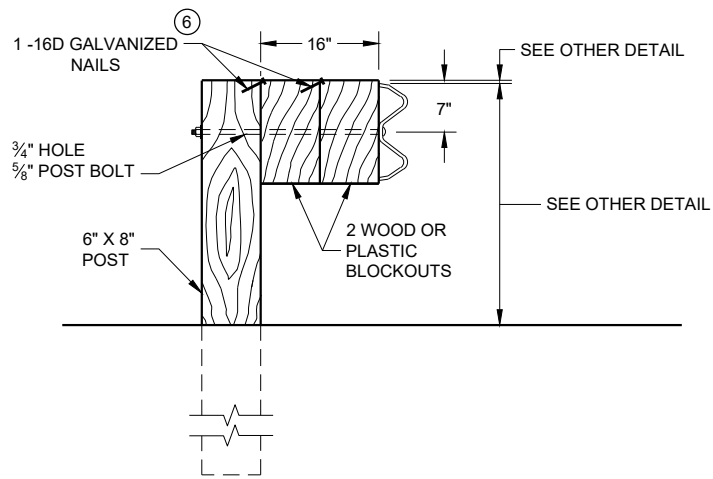
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

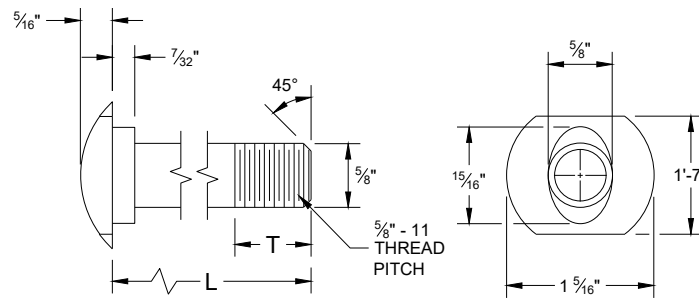


DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

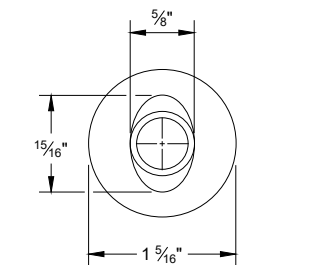
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

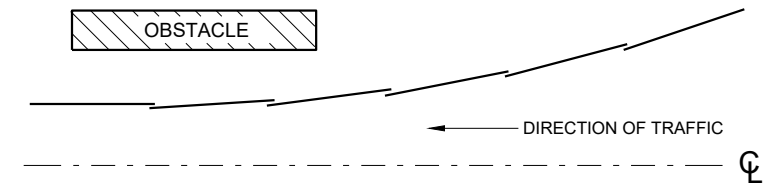


POST BOLT TABLE

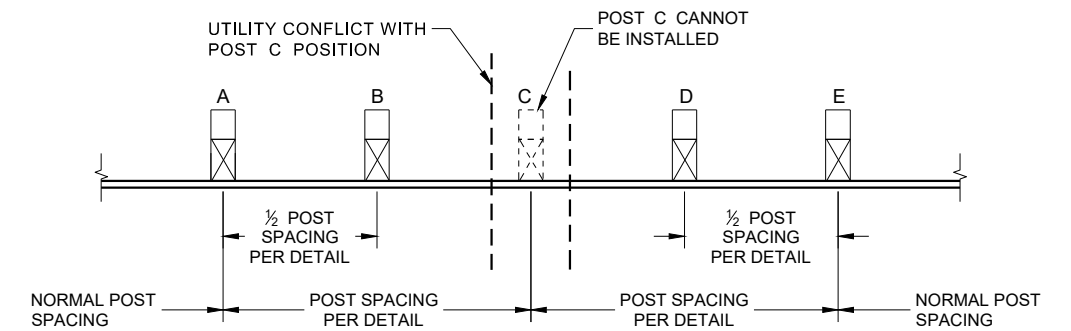
| L | T (MIN.) |
|--------|----------|
| 1 1/4" | 1 1/8" |
| 2" | 1 3/4" |
| 10" | 4" |
| 14" | 4 1/16" |
| 18" | 4" |
| 21" | 4 1/16" |
| 25" | 4" |



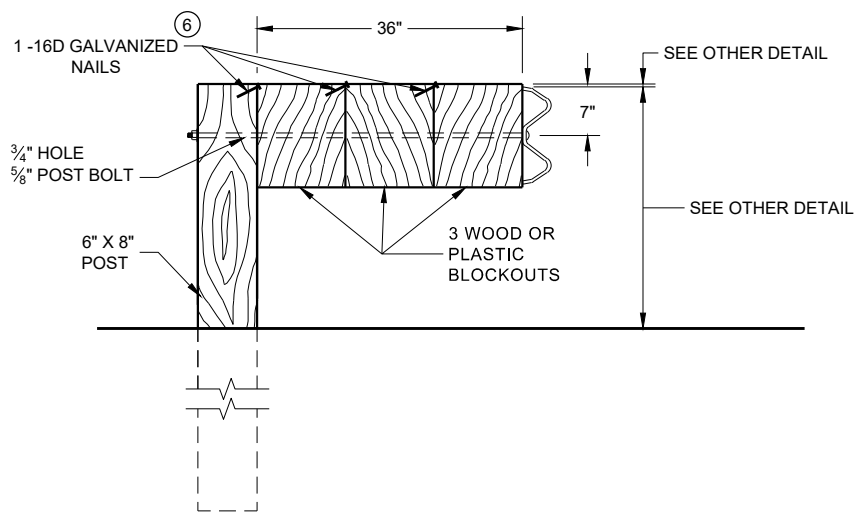
ALTERNATE BOLT HEAD



**PLAN VIEW
BEAM LAPPING DETAIL**

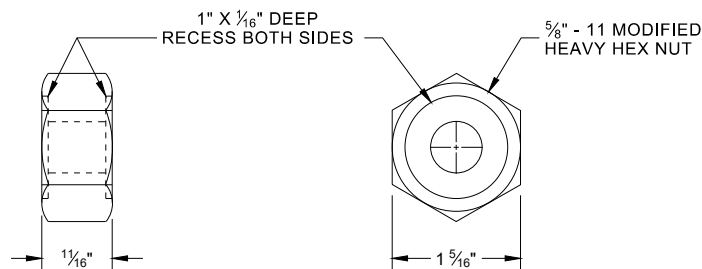


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

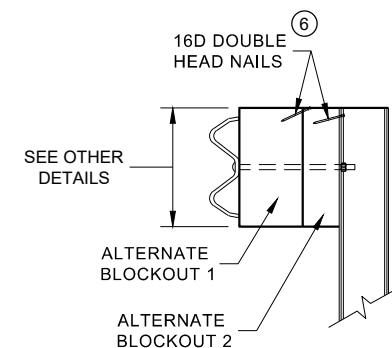


DETAIL FOR 36" BLOCKOUT DEPTH

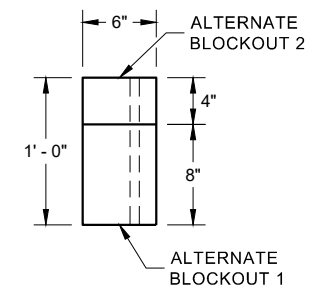
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



**POST BOLT, SPLICE BOLT
AND RECESS NUT**



SIDE VIEW



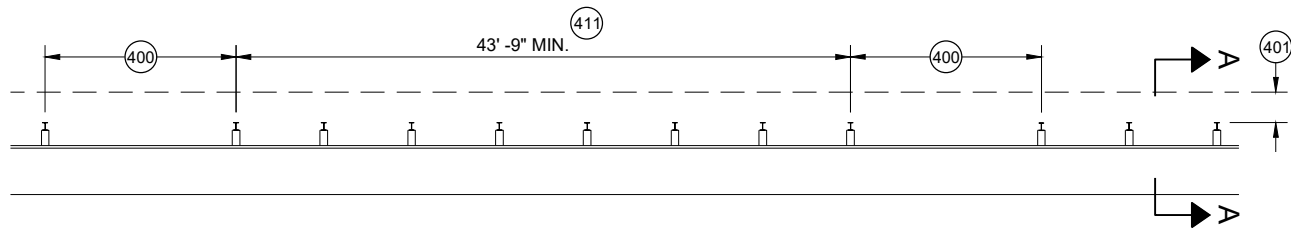
PLAN VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**

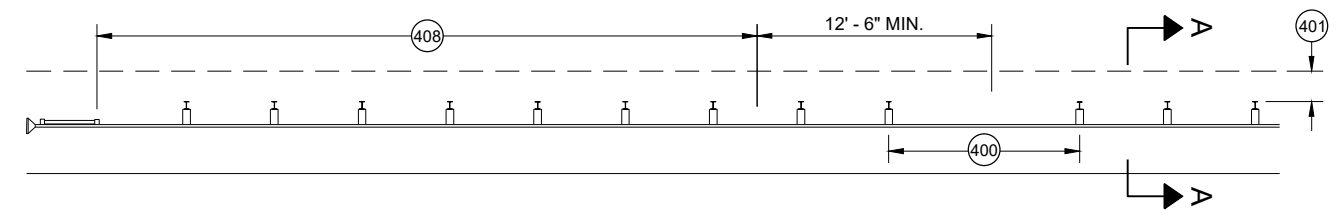
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

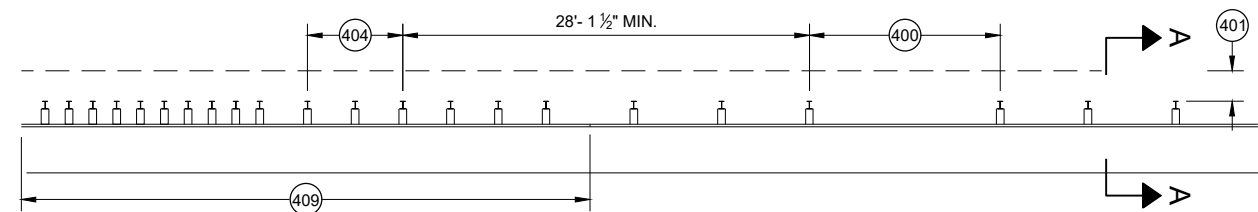
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



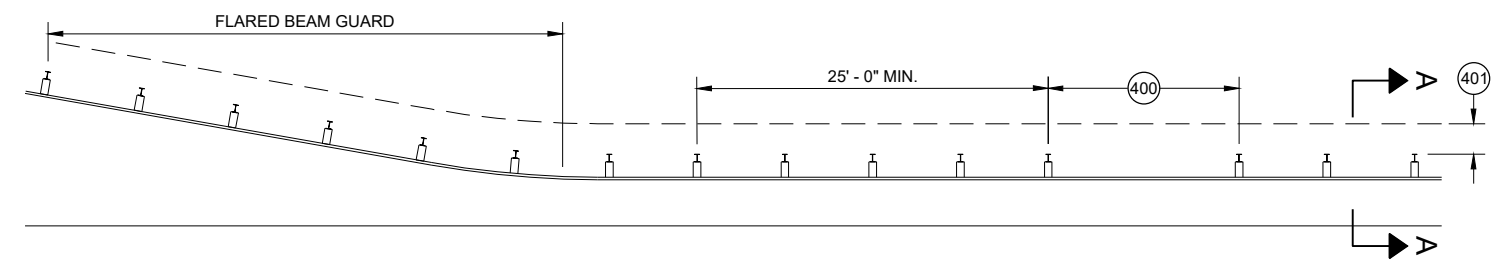
MISSING POST IN MGS GUARDRAIL



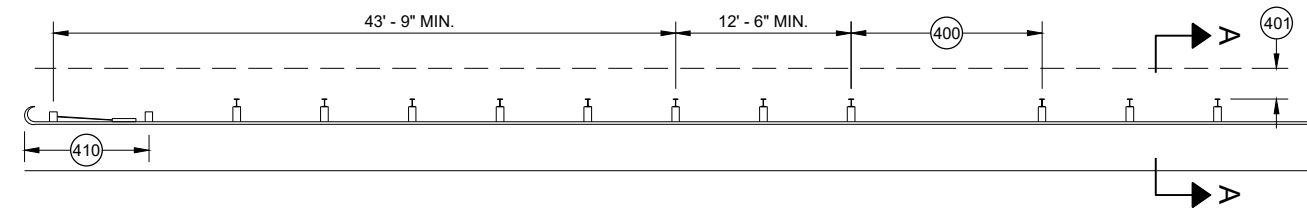
MISSING POST IN MGS GUARDRAIL NEAR EAT



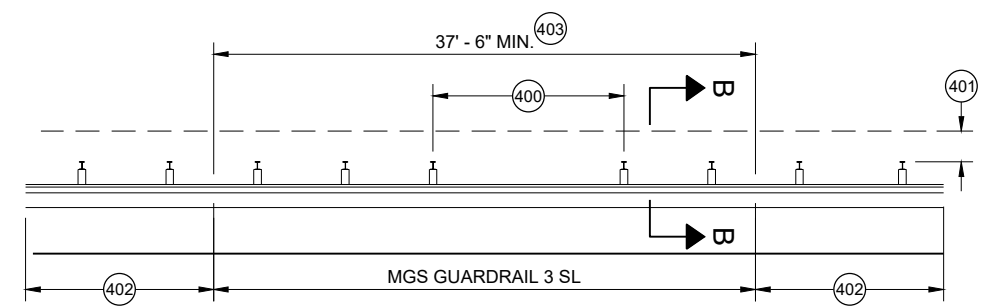
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

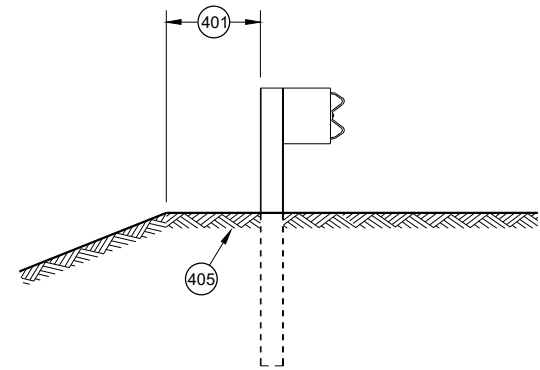


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

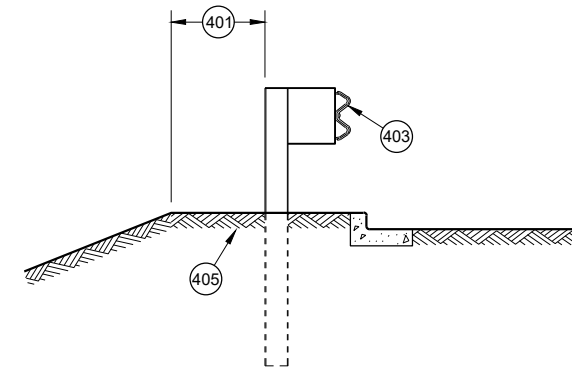


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- 400 MAX SPAN 12' - 6"
- 401 2' MIN.
- 402 MGS GUARDRAIL 3
- 403 NESTING BEAM GUARD
- 404 ASYMMETRIC TRANSITION
- 405 SOIL WELL DRAINED AND COMPACTED
- 406 SEE OTHER DRAWINGS IN THIS SDD
- 407 SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- 408 SEE SDD 14B44
- 409 SEE SDD 14B45
- 410 SEE SDD 14B47
- 411 MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

| | |
|---|---|
| MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL | |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED May 2021 DATE | /S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR |
| <small>FHWA</small> | |

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
 - (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
 - (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
 - (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
 - (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.
- DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

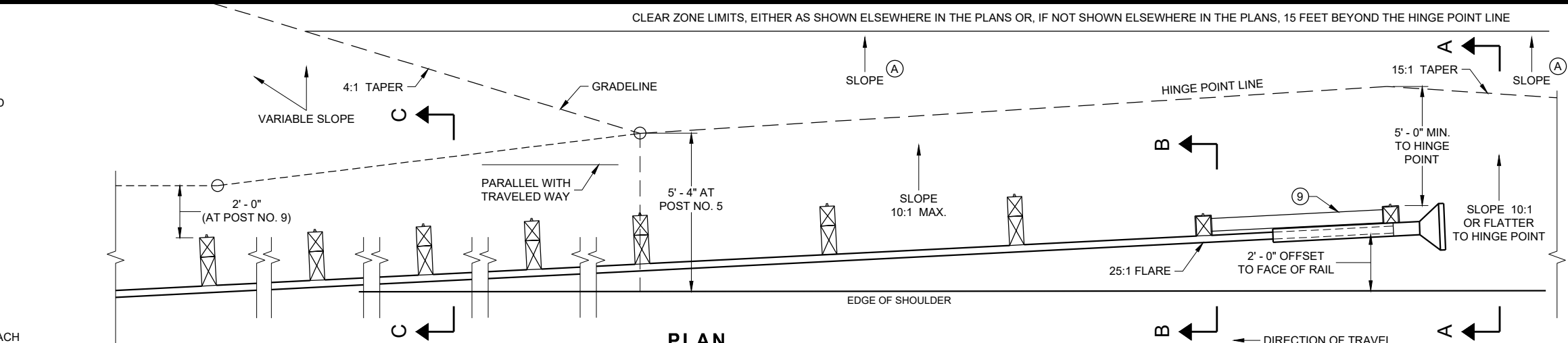
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

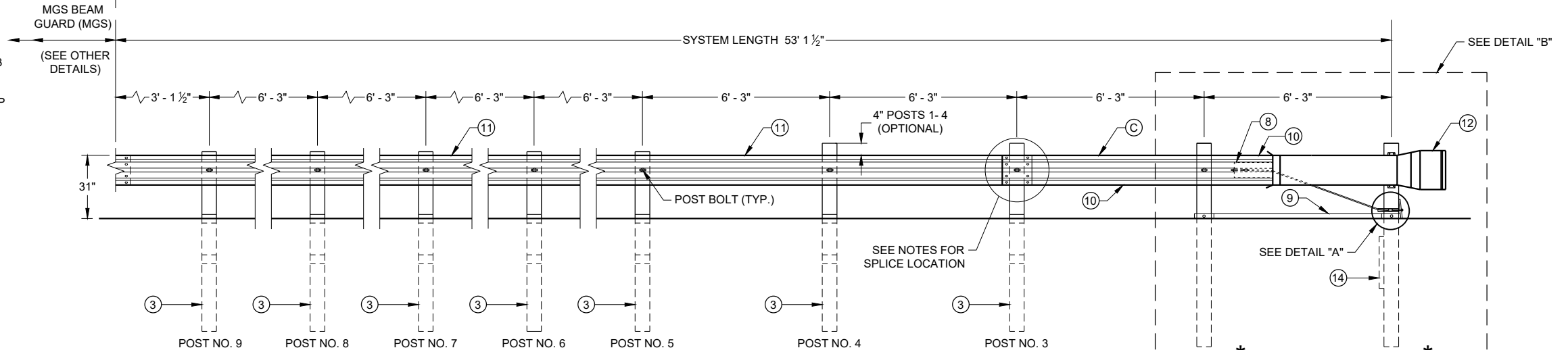
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

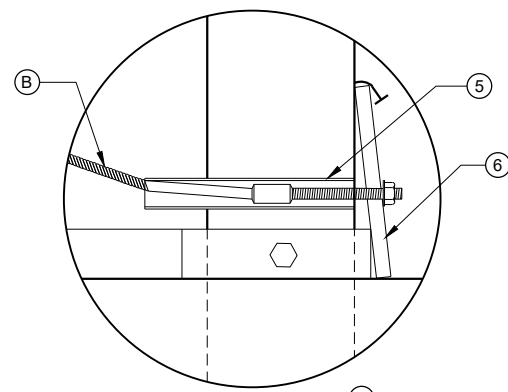
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



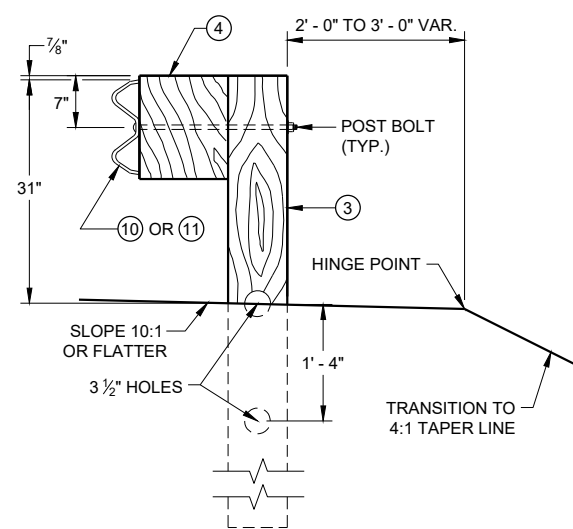
PLAN



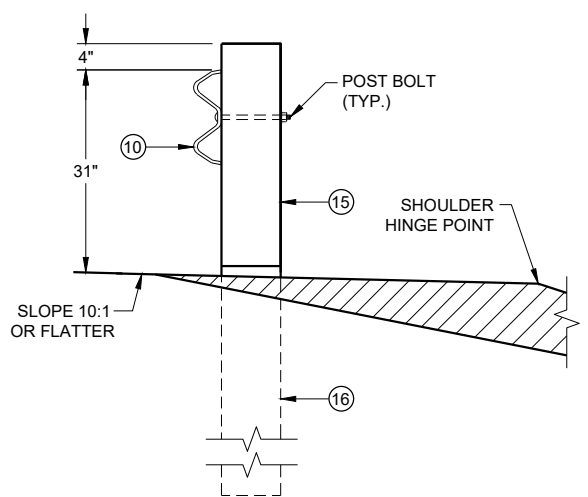
ELEVATION



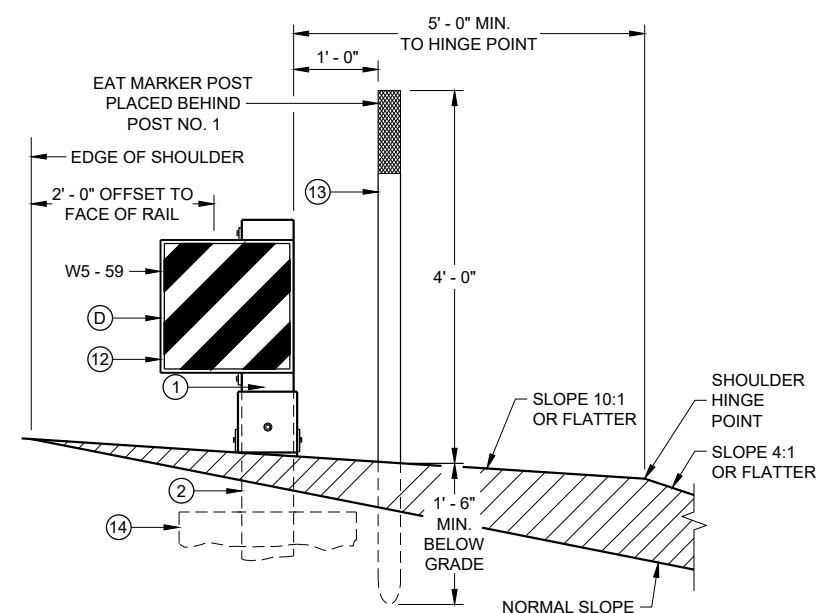
DETAIL "A"



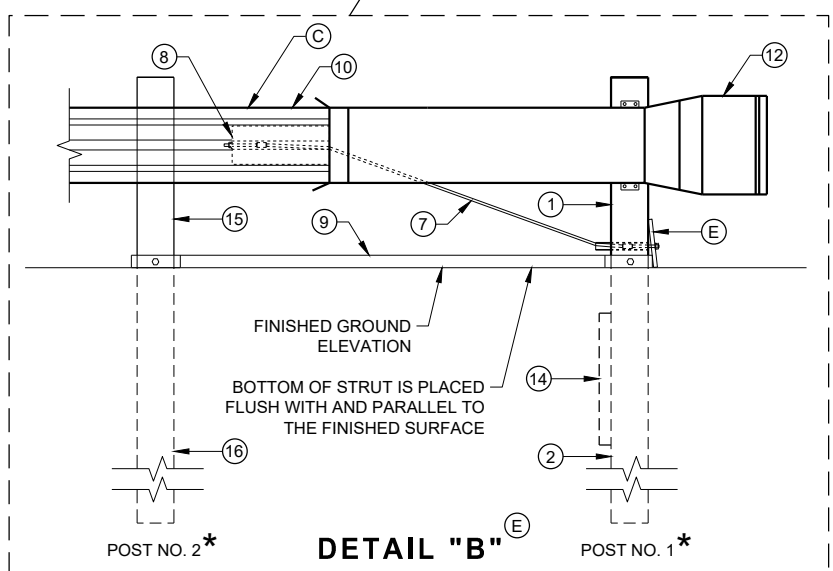
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



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



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



DETAIL "B"

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

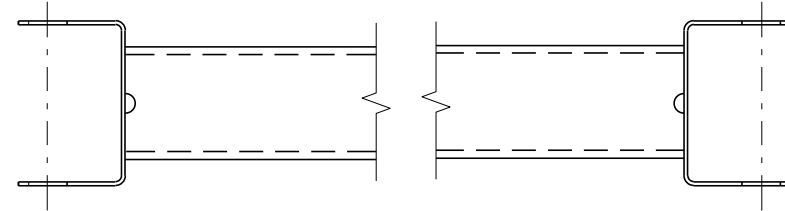
6

SDD 14B44 - 04a

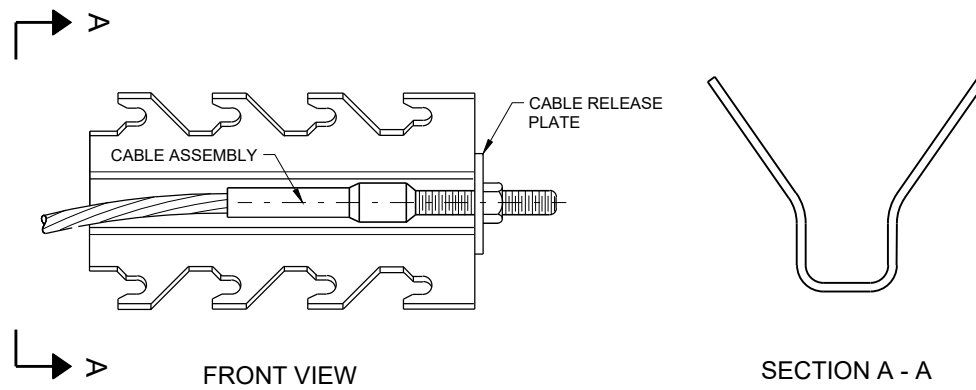
SDD 14B44 - 04a

BILL OF MATERIALS

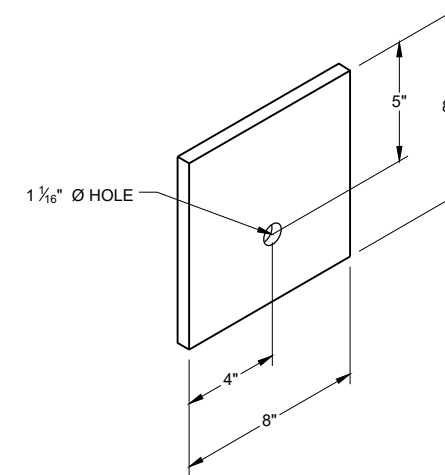
| PART NO. | DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION. |
|----------|--|
| ① | UPPER POST NO. 1 6" X 6" TUBE |
| ② | LOWER POST NO. 1 |
| ③ | WOOD CRT |
| ④ | WOOD BLOCKOUT |
| ⑤ | PIPE SLEEVE |
| ⑥ | BEARING PLATE |
| ⑦ | BCT CABLE ASSEMBLY |
| ⑧ | ANCHOR CABLE BOX |
| ⑨ | GROUND STRUT |
| ⑩ | PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG. |
| ⑪ | STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH. |
| ⑫ | IMPACT HEAD |
| ⑬ | EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST) |
| ⑭ | SOIL PLATE |
| ⑮ | UPPER POST NO. 2 |
| ⑯ | LOWER POST NO. 2 |



GENERIC GROUND STRUT ⑨ ⑤



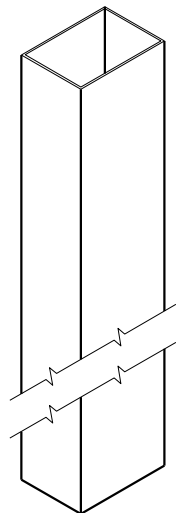
GENERIC ANCHOR CABLE BOX ⑨ ⑤



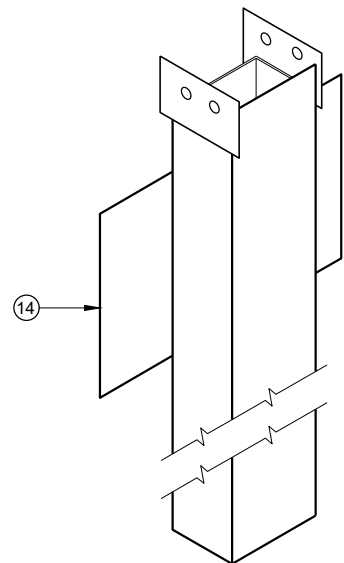
BEARING PLATE ⑥ ⑤

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

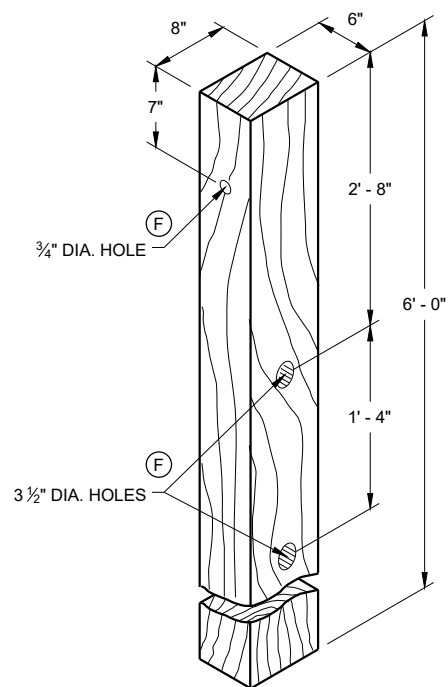
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



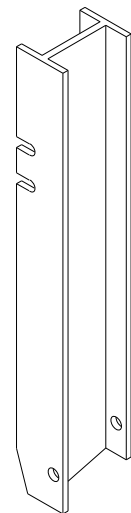
UPPER POST NO. 1 ⁽¹⁾ (E)



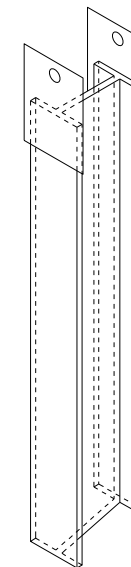
LOWER POST NO. 1 ⁽²⁾ (E)



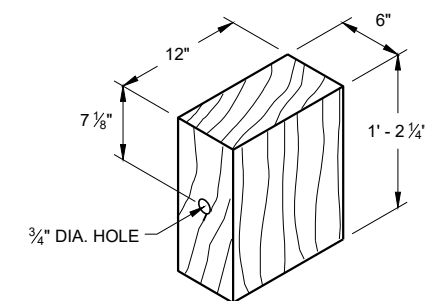
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

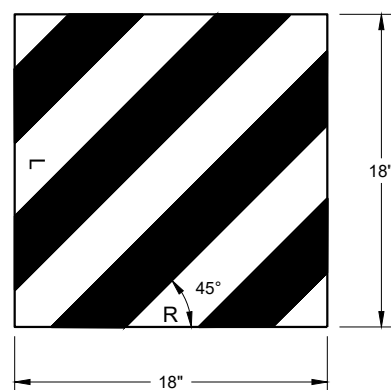


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

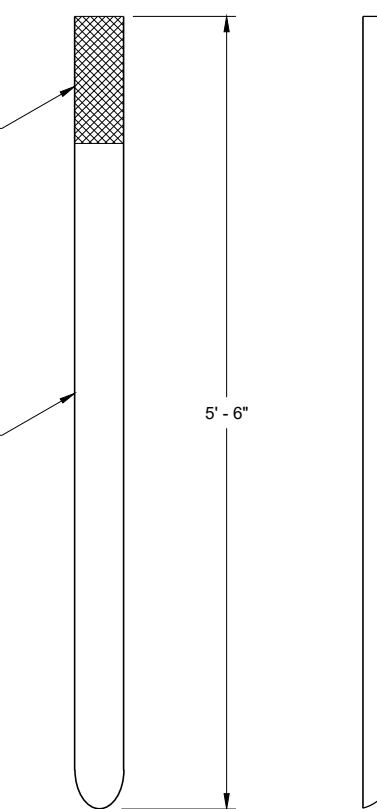
6



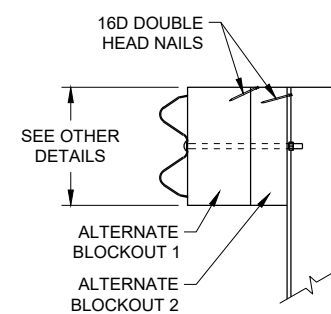
W5 - 59
REFLECTIVE SHEETING DETAIL ^(E)

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

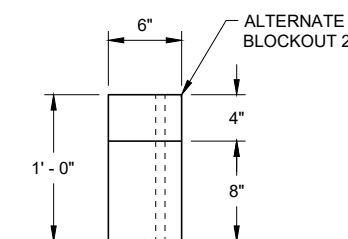
E.A.T. MARKER
POST (YELLOW)



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

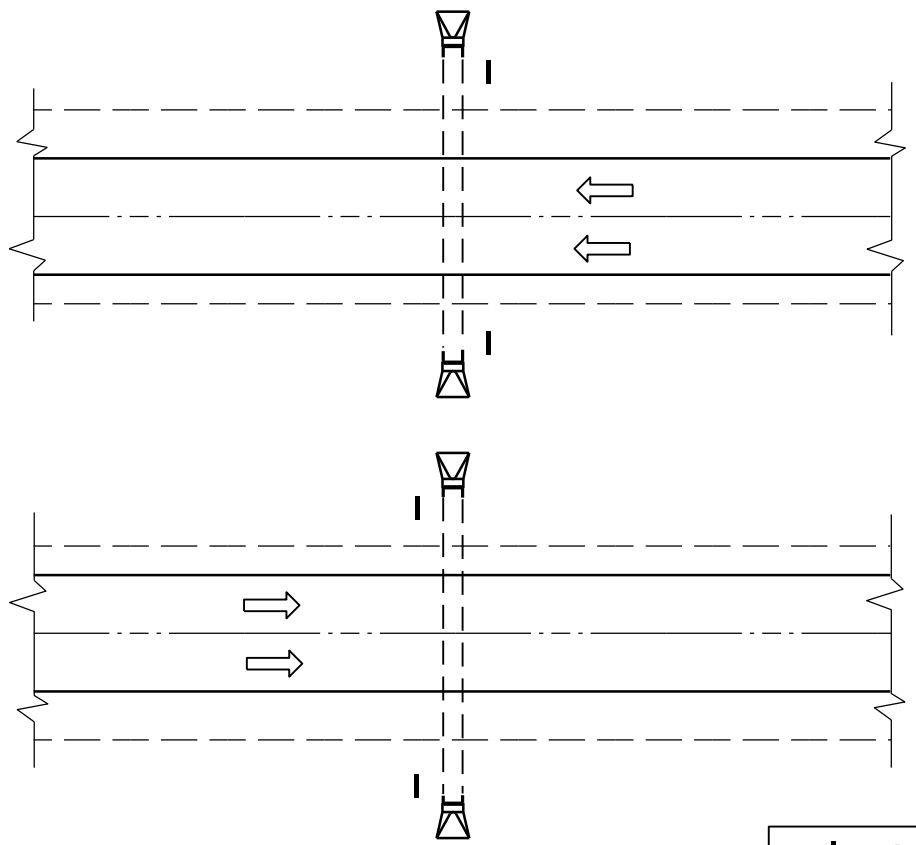
SDD 14B44 - 04c

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

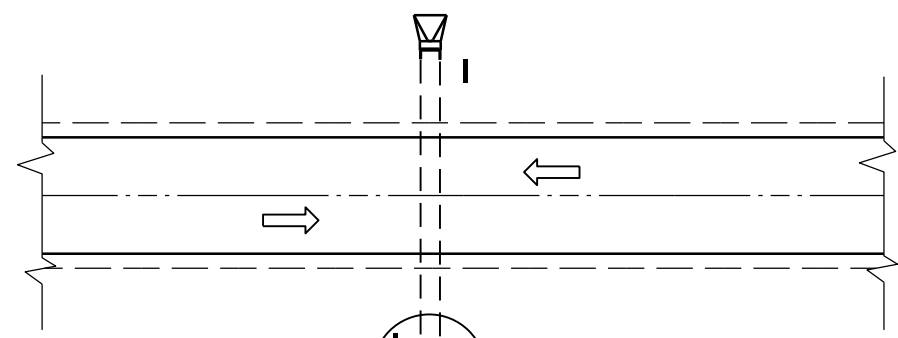
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

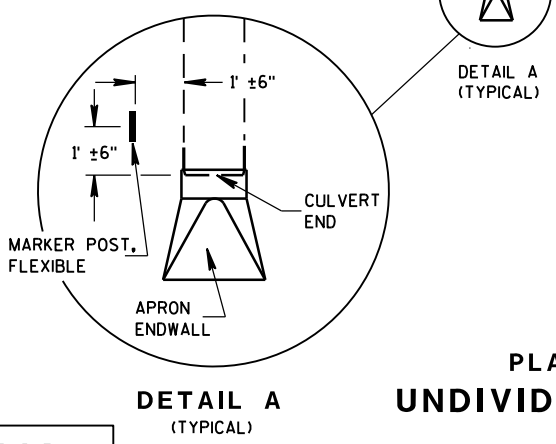
FHWA



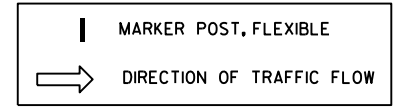
PLAN VIEW
DIVIDED HIGHWAY



PLAN VIEW
UNDIVIDED HIGHWAY



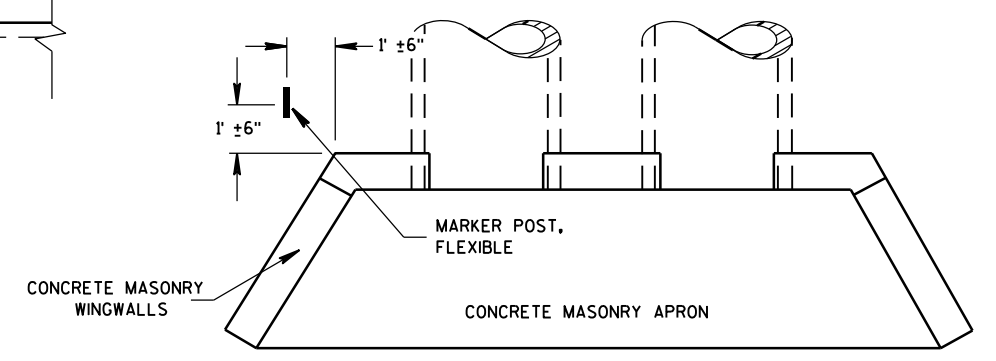
DETAIL A
(TYPICAL)



FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

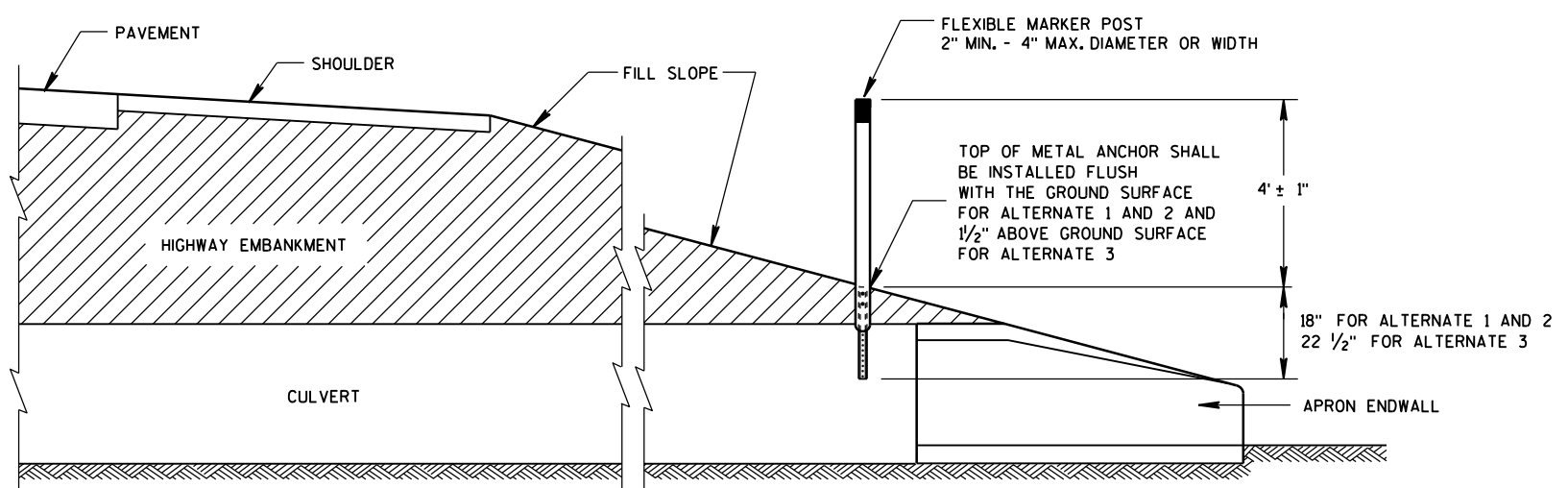
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH

6

6



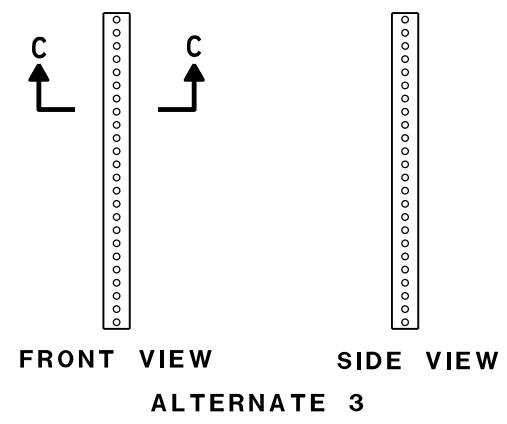
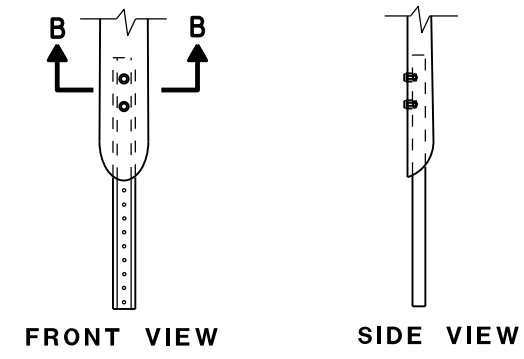
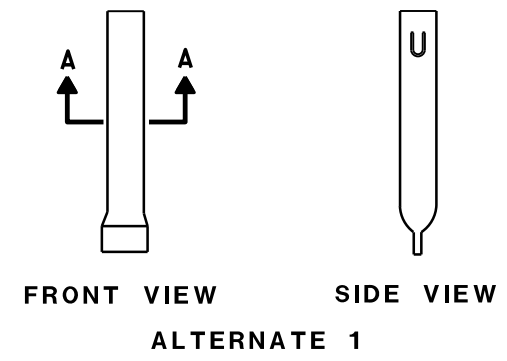
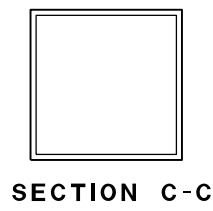
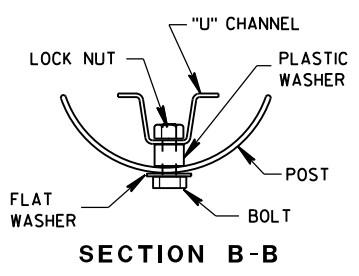
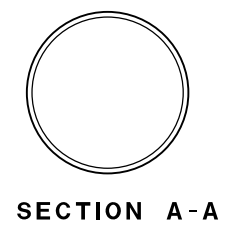
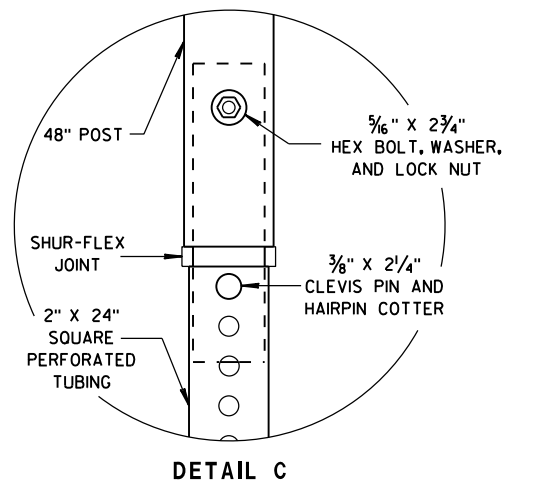
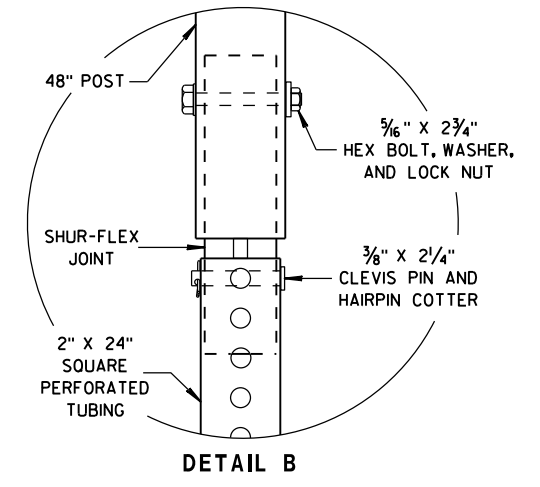
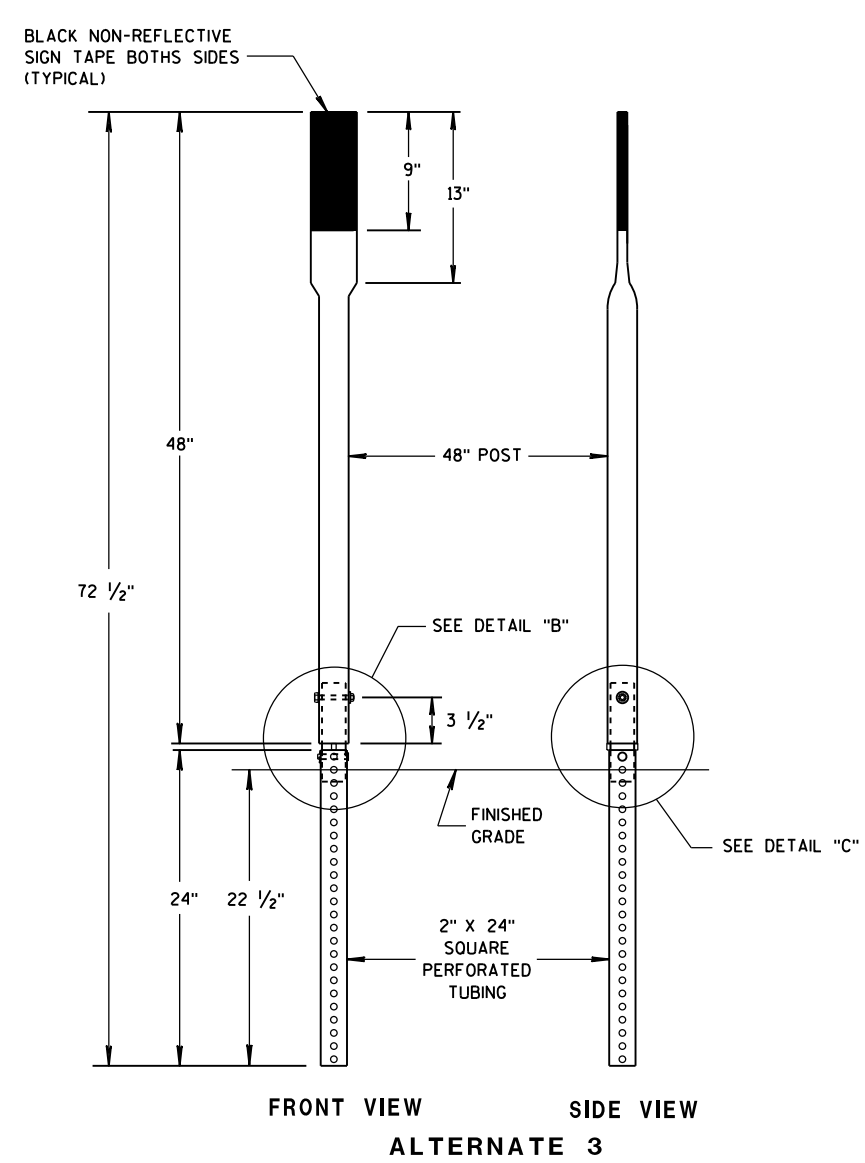
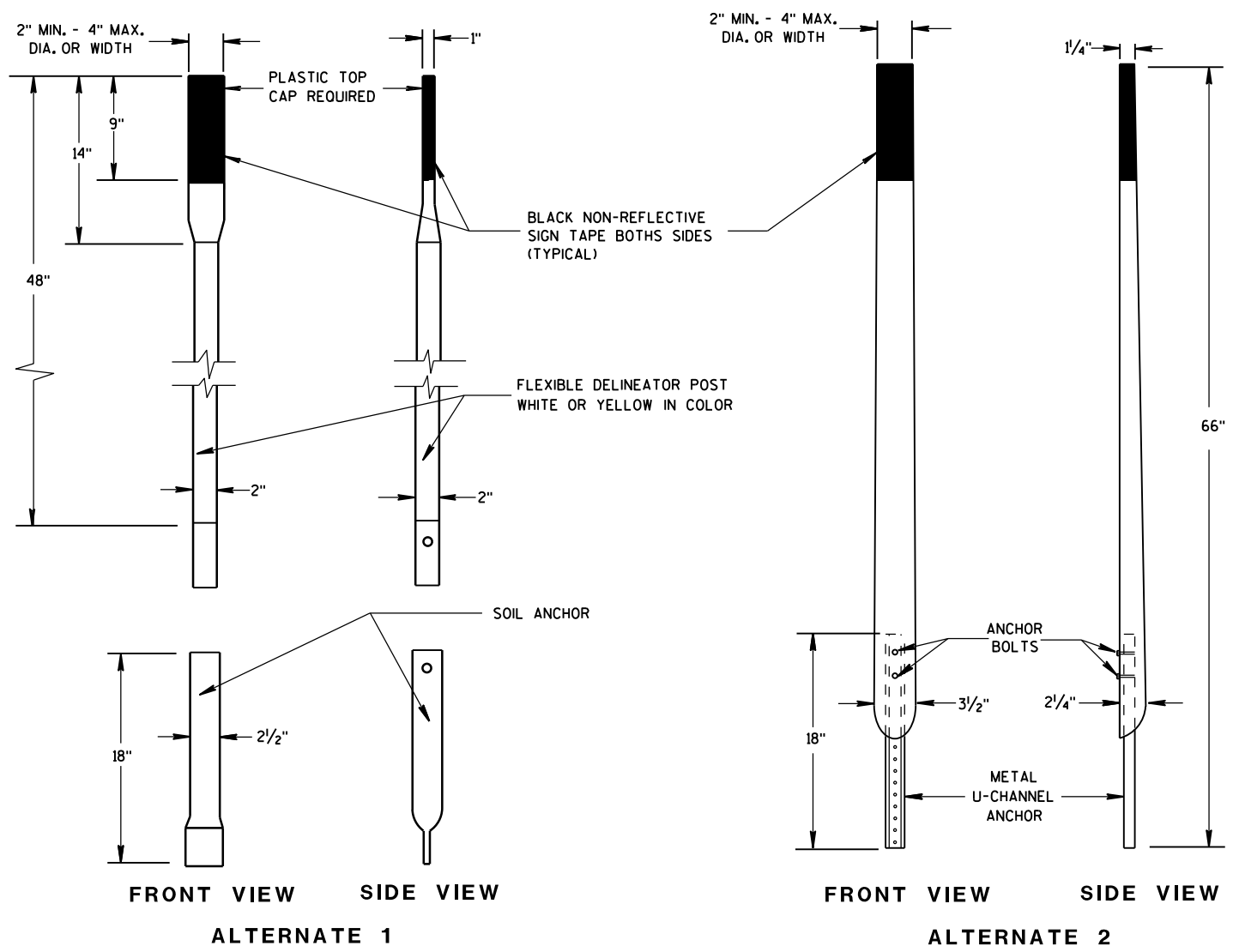
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

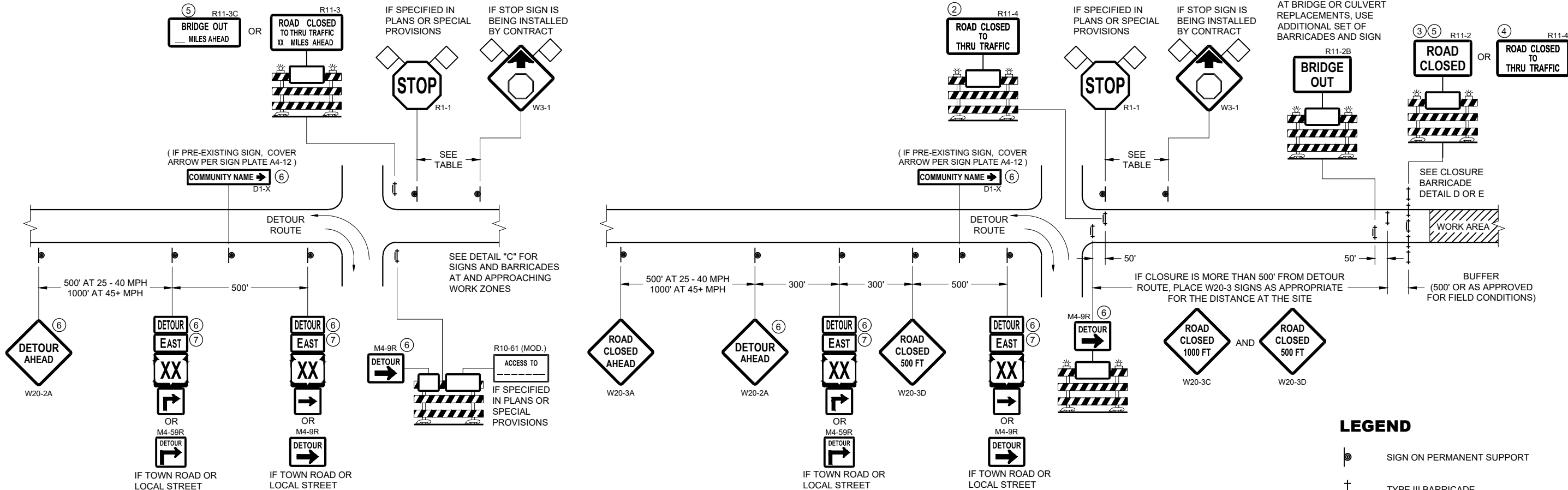
S.D.D. 15 A 3-2a

S.D.D. 15 A 3-2a



FLEXIBLE MARKER POST ANCHORS

| | |
|--|---|
| FLEXIBLE MARKER POST FOR CULVERT END | |
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED 10/1/2012 DATE | /S/ Travis Feltes STATE TRAFFIC ENGINEER OF DESIGN |
| FHWA | |



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

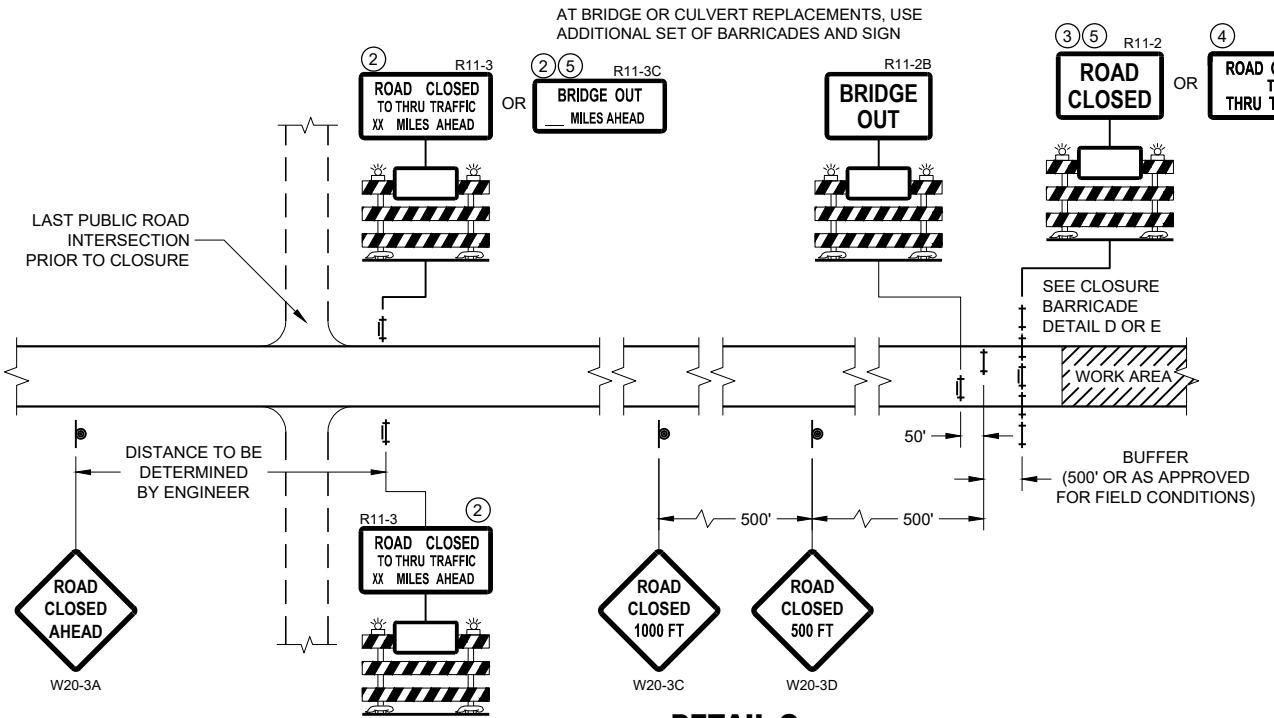
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

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

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



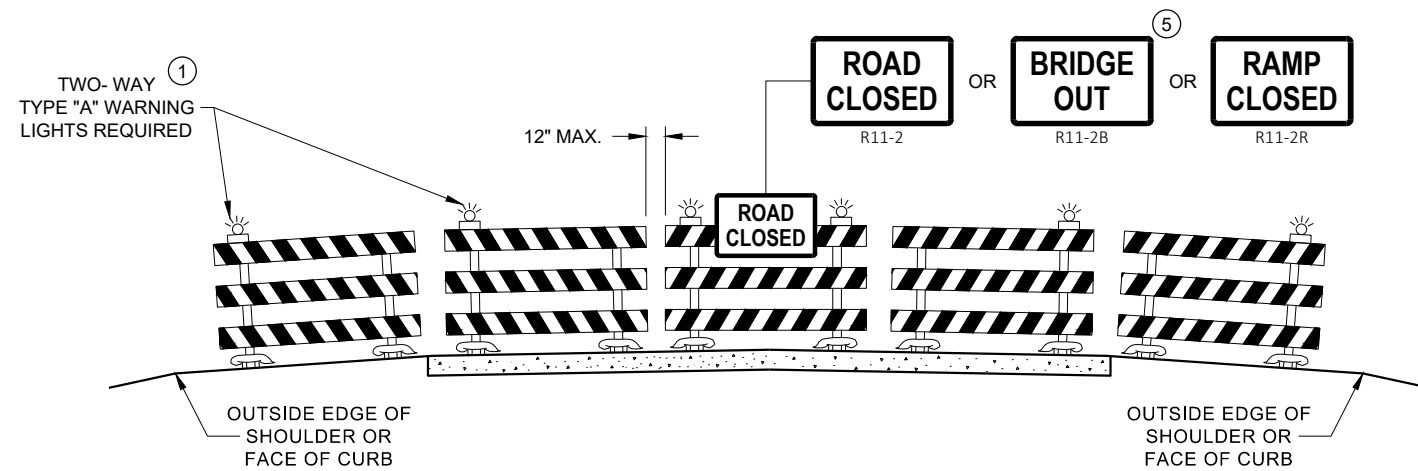
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

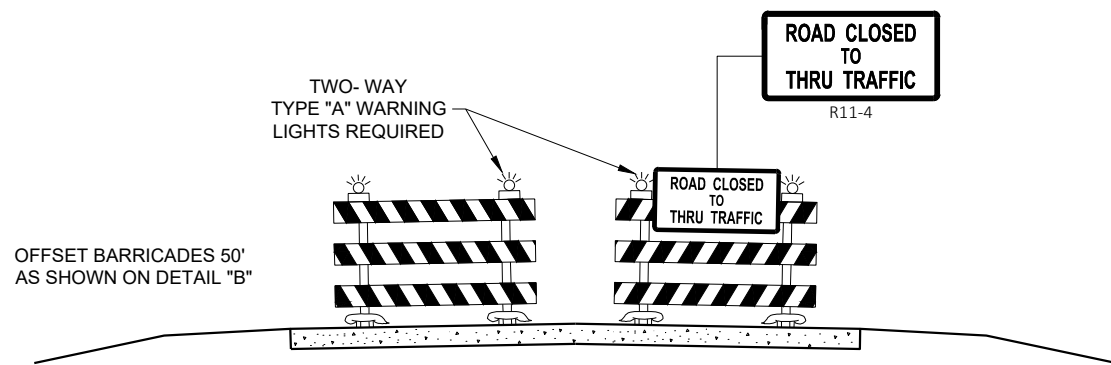
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



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

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

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

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

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

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

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

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

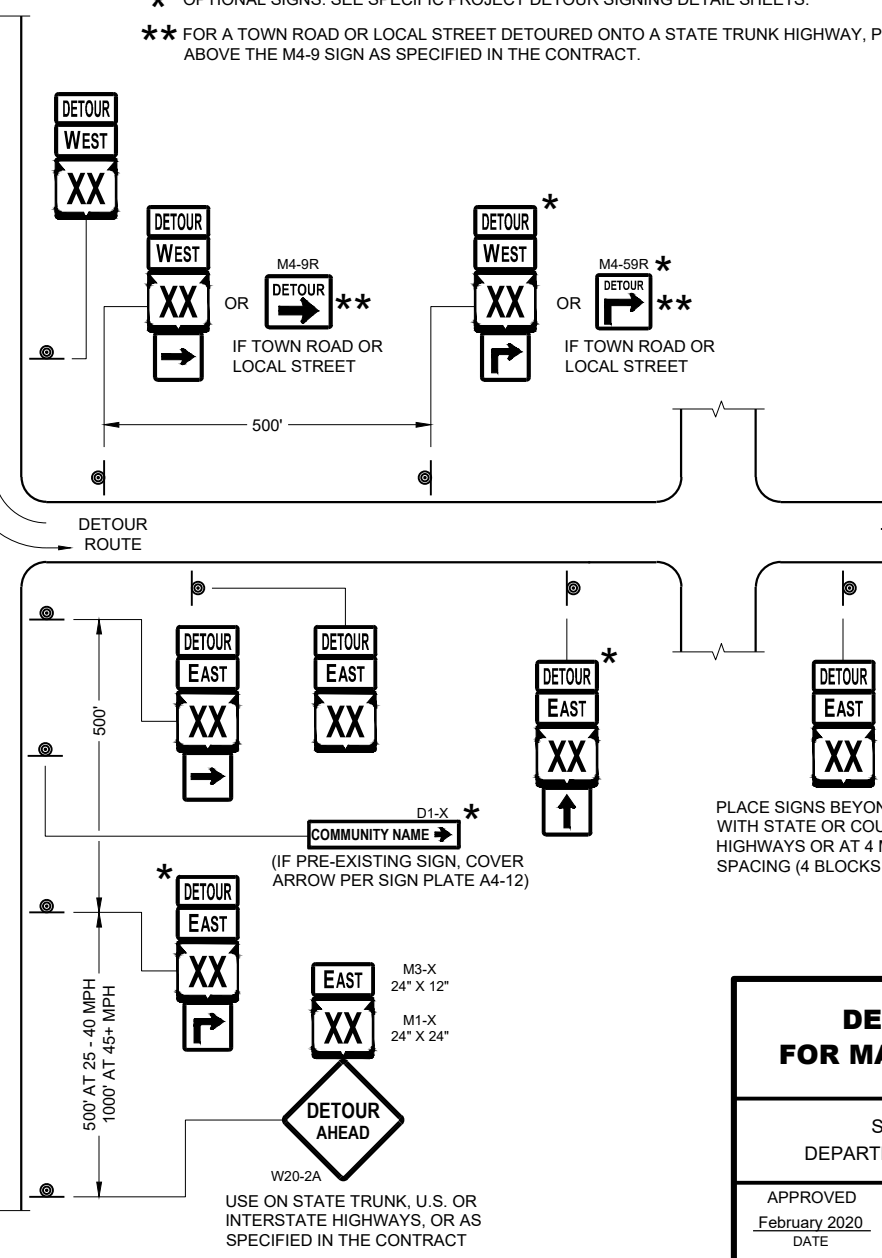
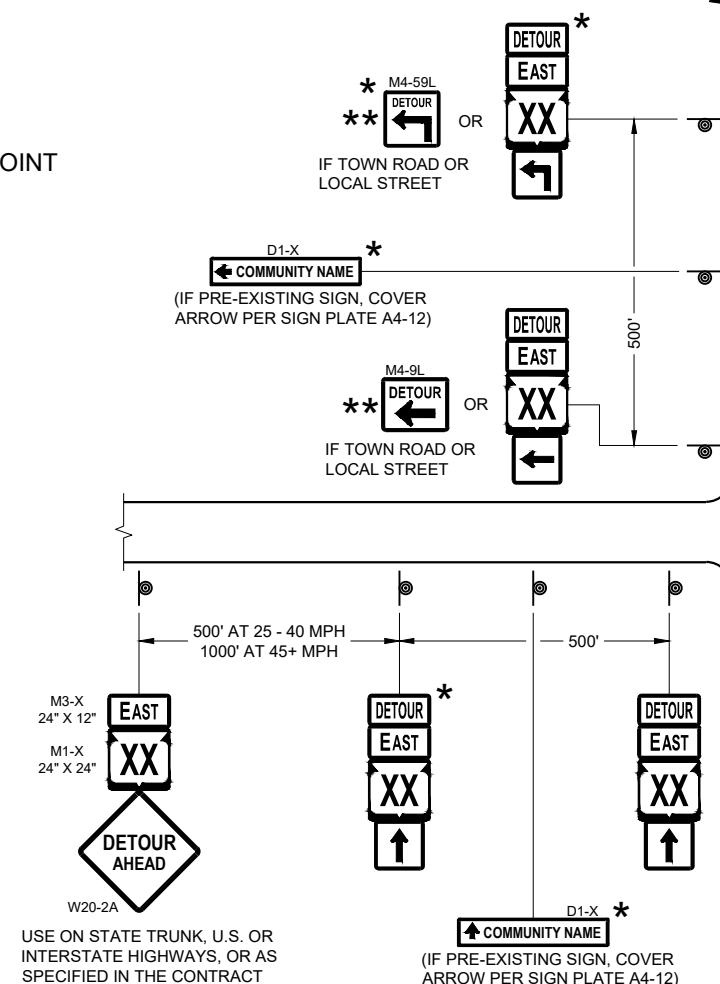
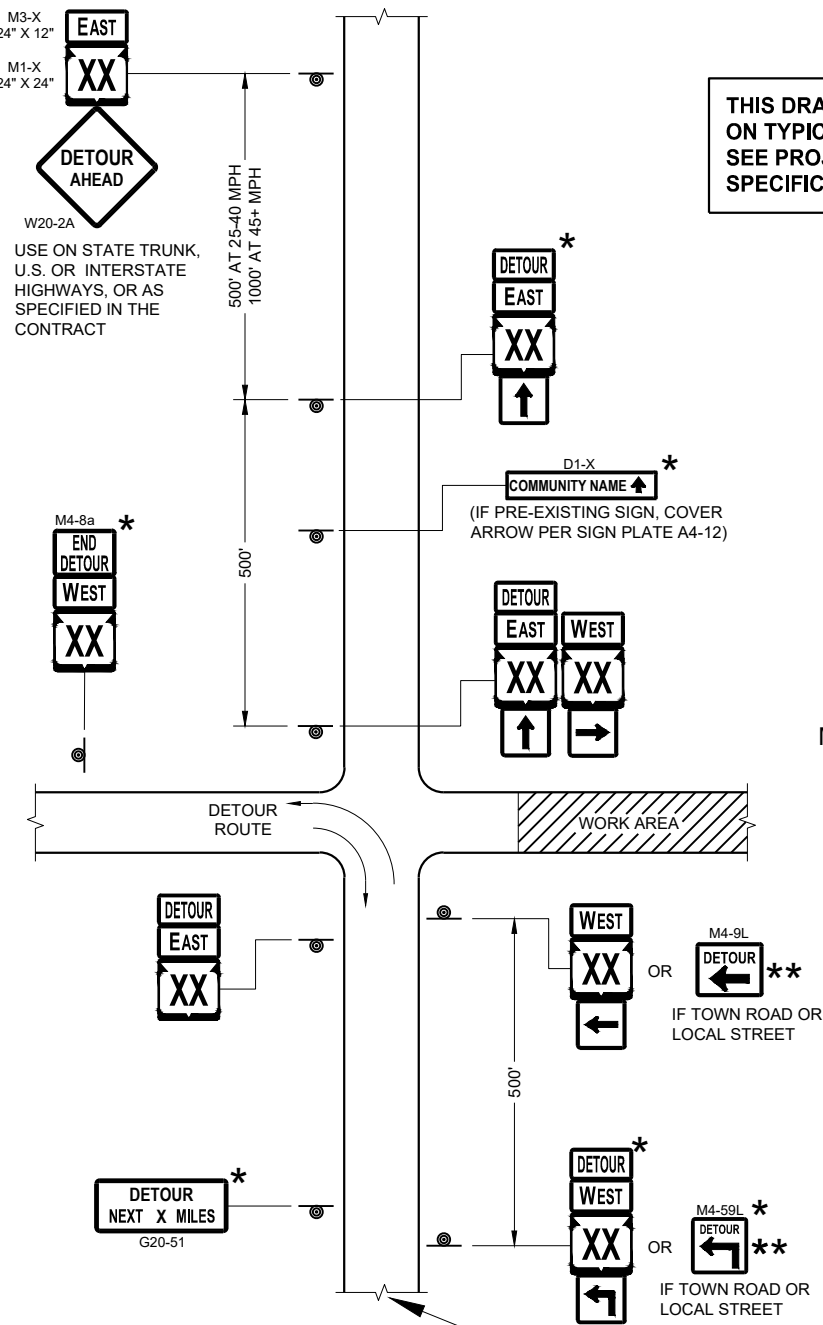
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING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

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

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



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




| DETOUR SIGNING FOR MAINLINE CLOSURES | |
|--|--|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED February 2020 DATE | /S/ Andrew Heidtke WORK ZONE ENGINEER |
| FHWA | |

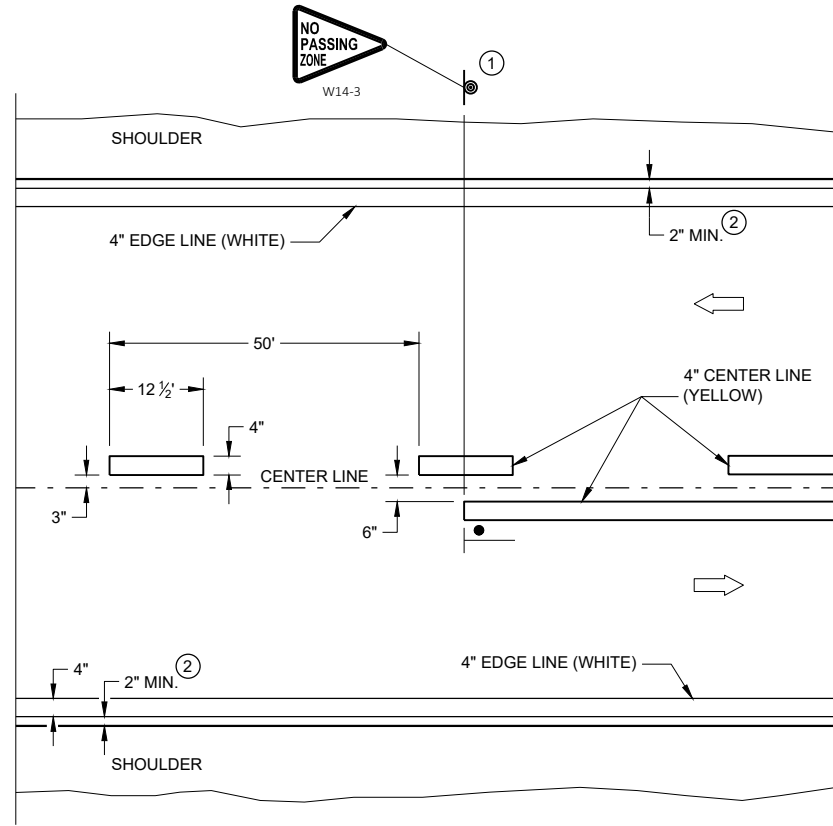
GENERAL NOTES

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

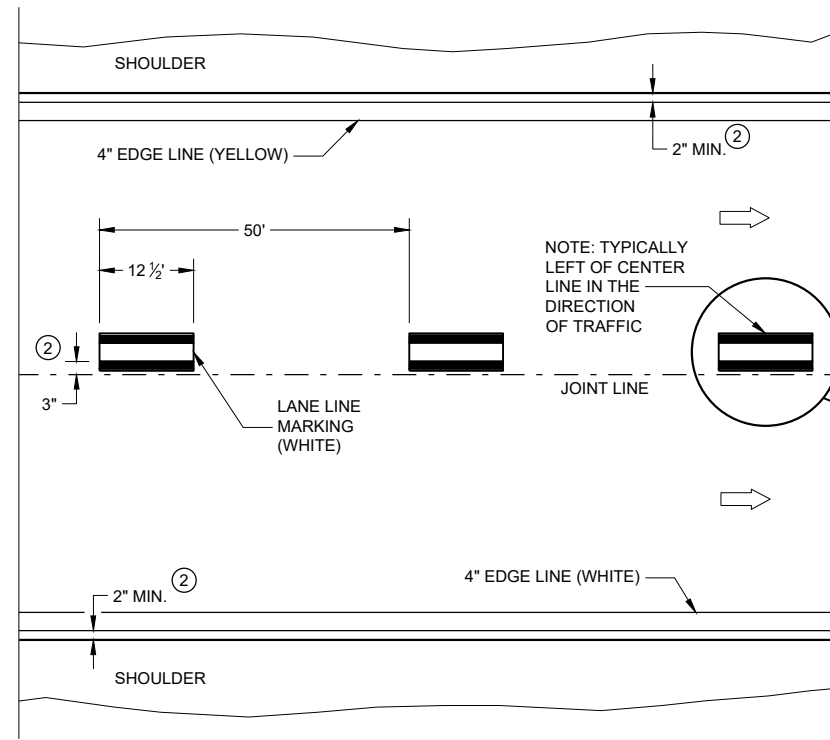
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

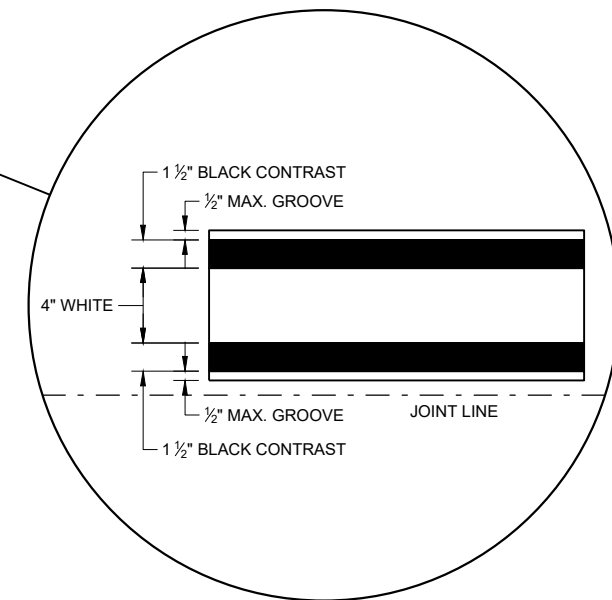


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



PERMANENT LONGITUDINAL PAVEMENT MARKINGS

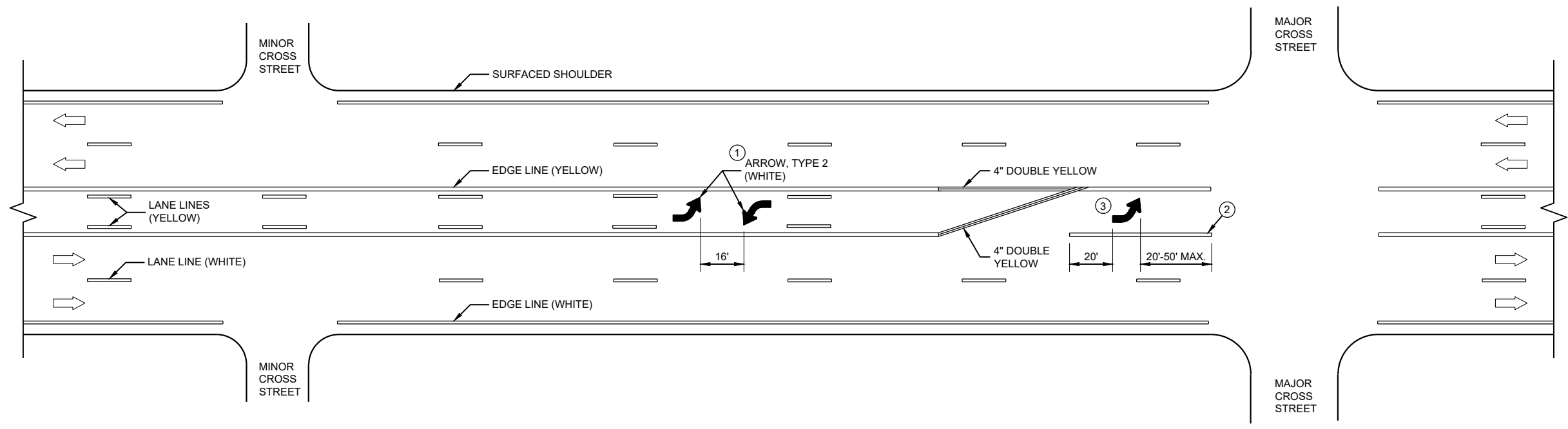
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

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

➡ DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

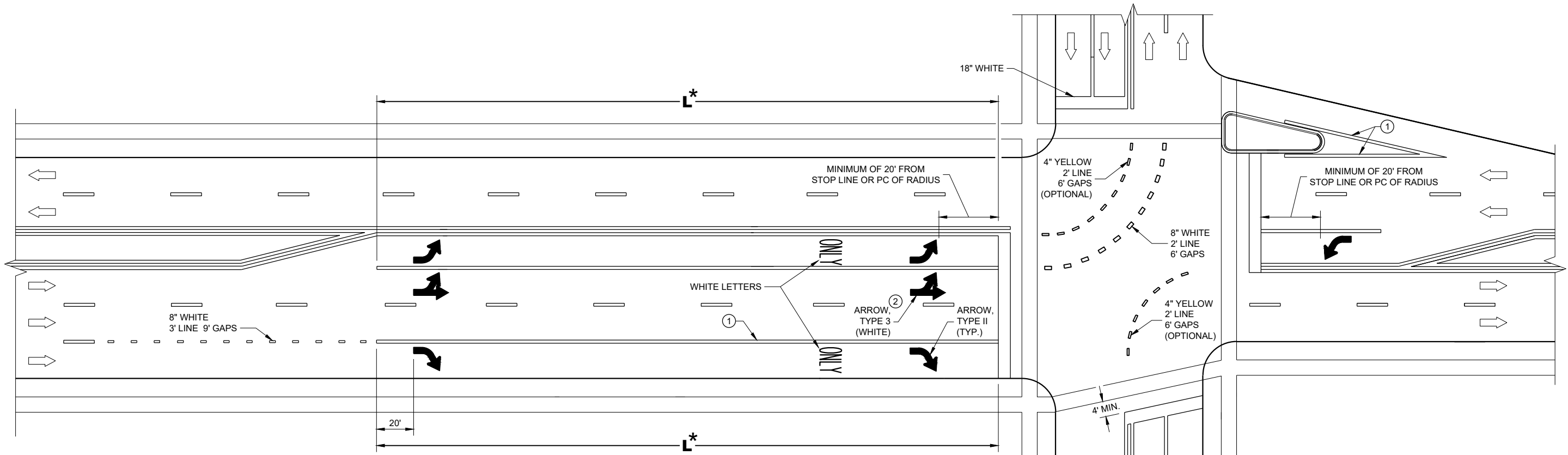
6

6

SDD 15C08 - 21c

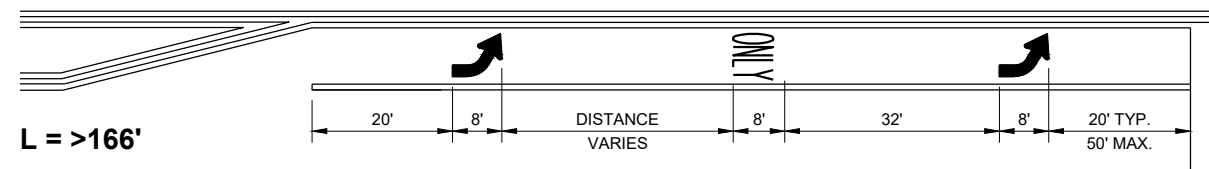
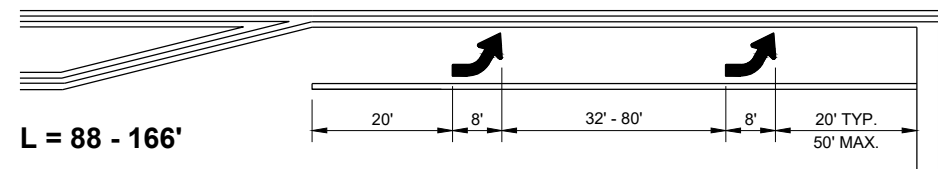
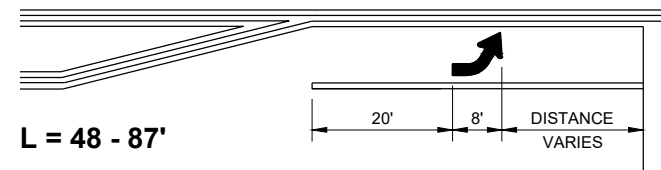
SDD 15C08 - 21c

| |
|--|
| <p>PAVEMENT MARKING (TURN LANES)</p> |
| <p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p> |



TURN LANE OPTIONS

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



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

GENERAL NOTES

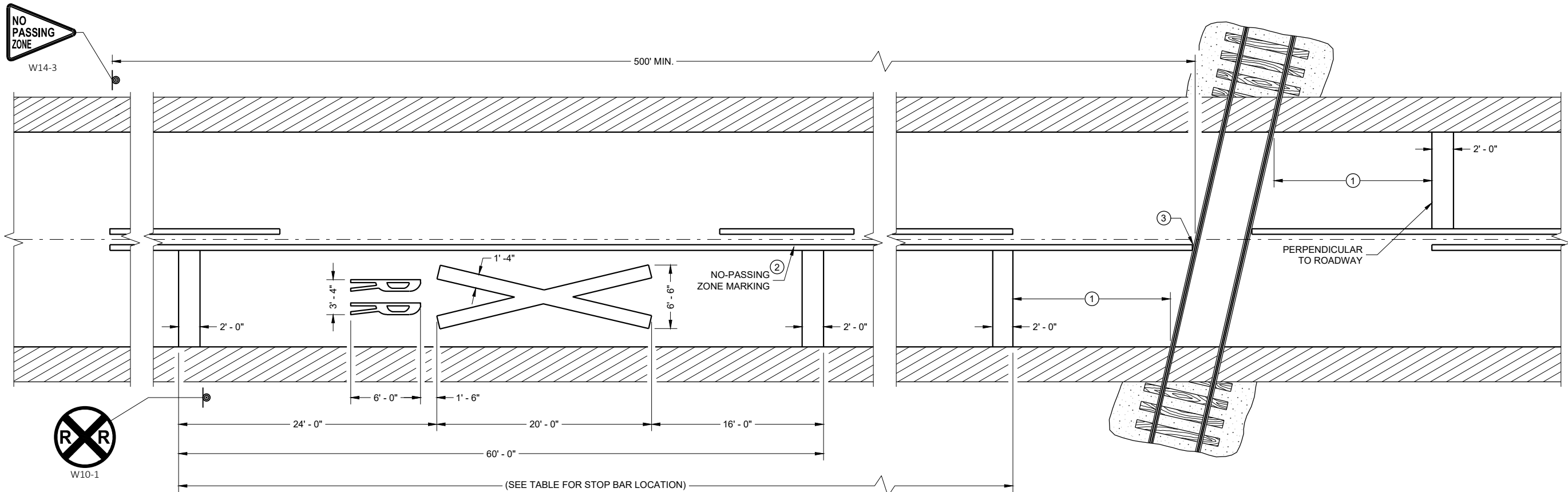
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

➡ DIRECTION OF TRAFFIC

L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PAVEMENT MARKING

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

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.

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.

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

TRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

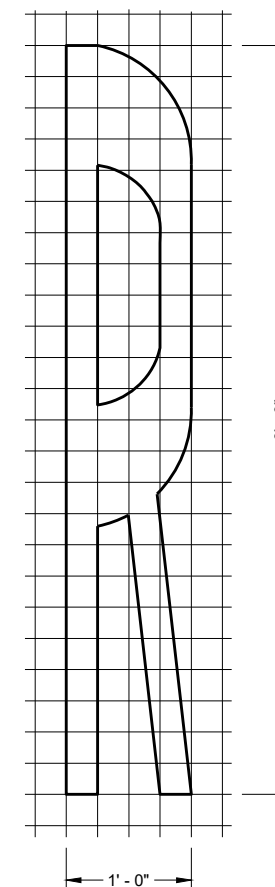
- ① MINIMUM 8' FROM ANY RAILROAD WARNING DEVICES (SIGNAL, GATES, ETC.) OR 25' FROM THE NEAREST RAIL, WHICHEVER DISTANCE IS GREATER.
- ② 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
- ③ FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

DISTANCE TABLE

TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

| 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' |

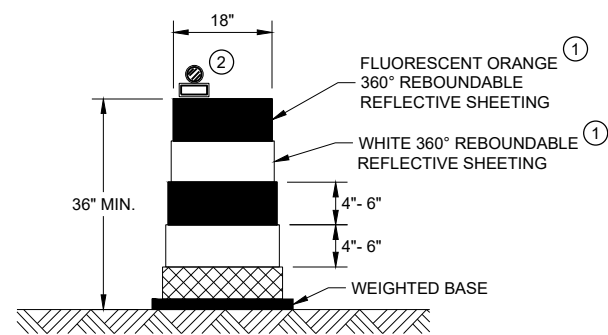
* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSED PROXIMITY OF DRIVEWAYS, BRIDGES, SIDE ROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.



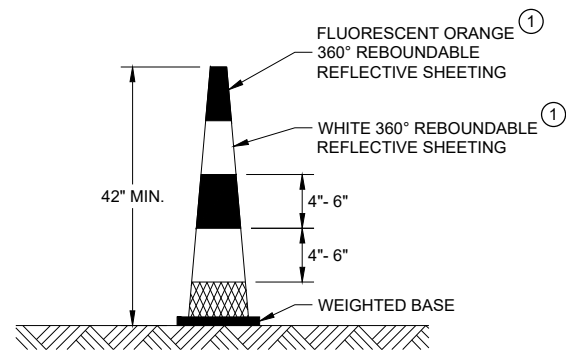
SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD - HIGHWAY GRADE CROSSINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER

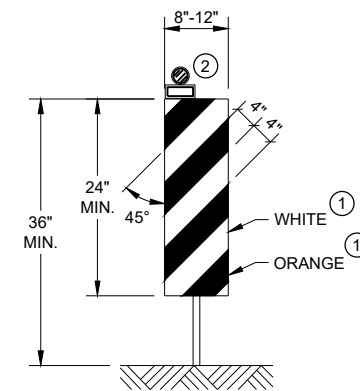


DRUM



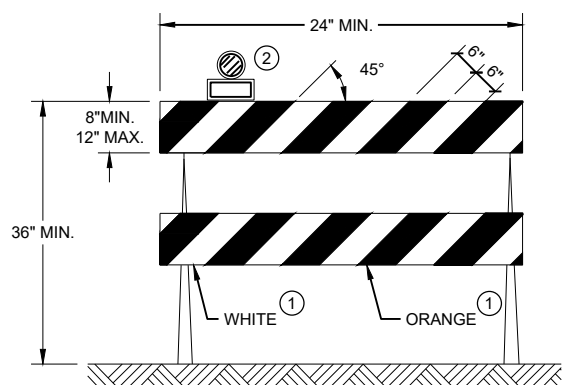
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



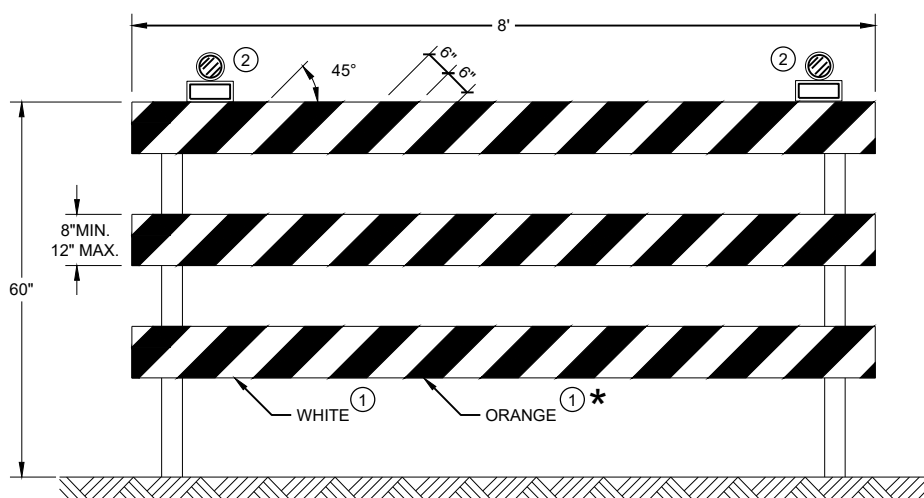
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

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

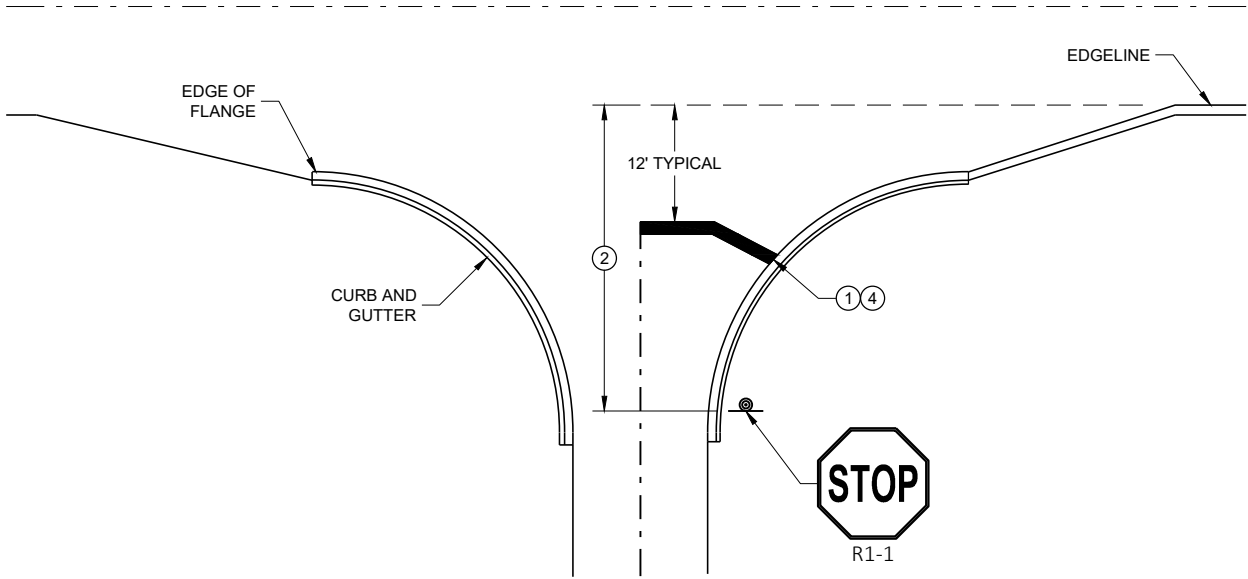
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

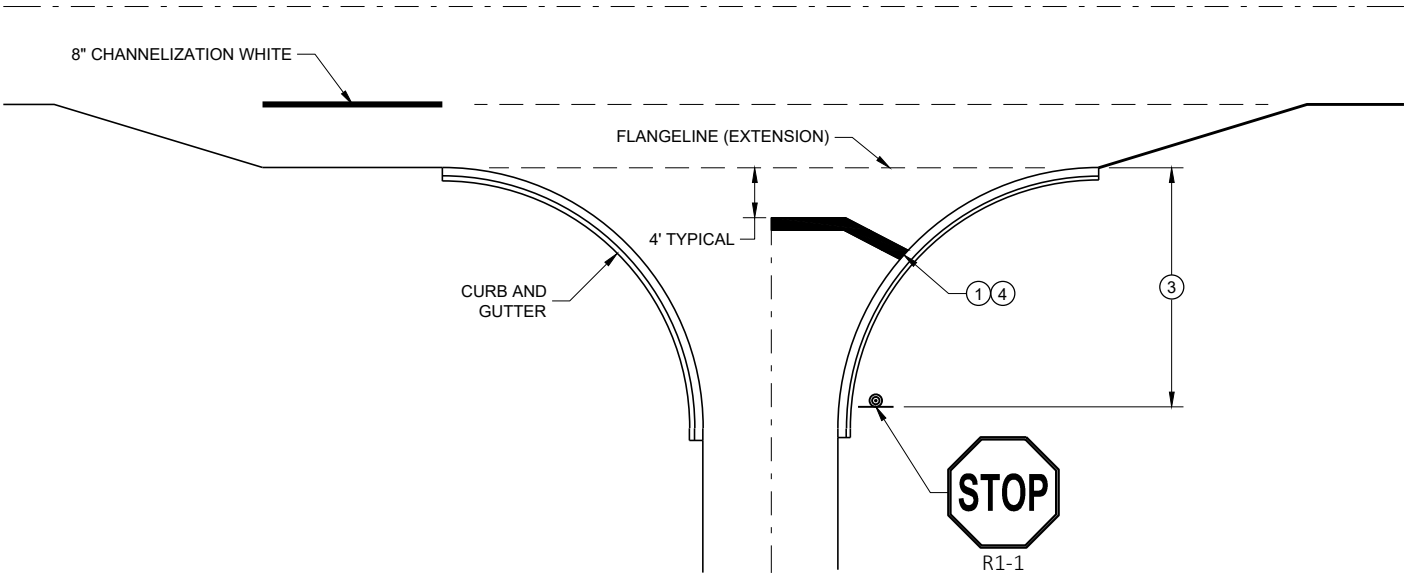
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

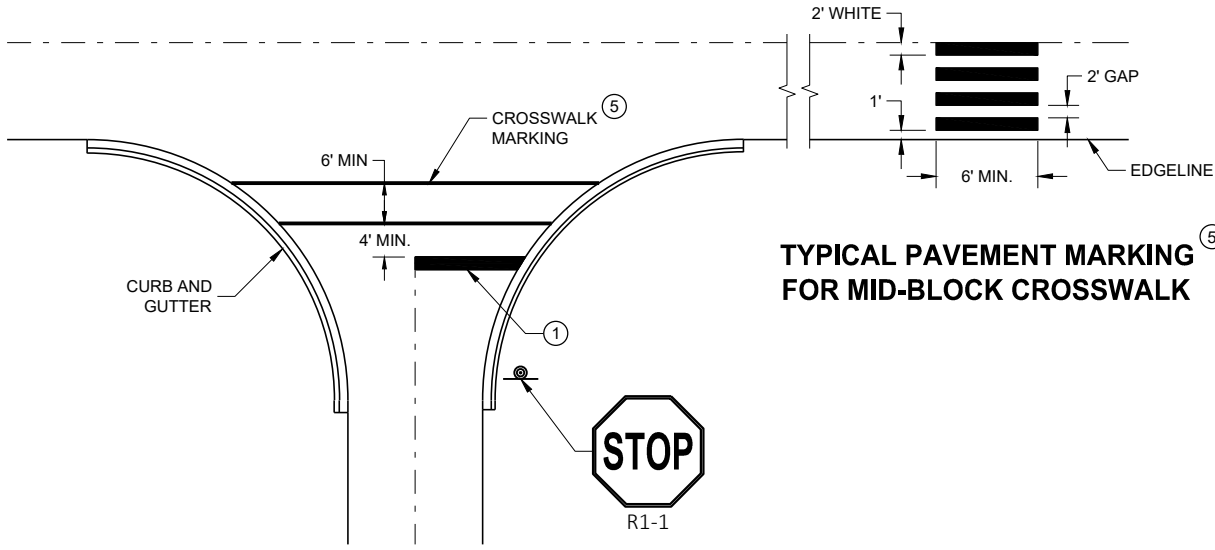
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



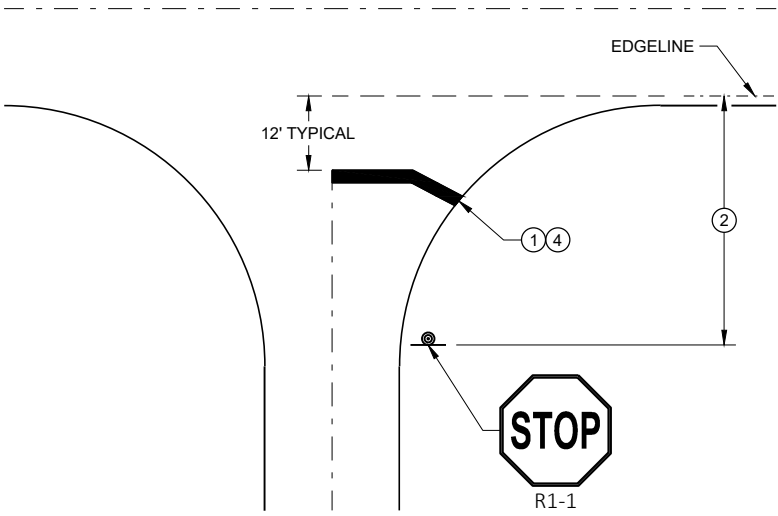
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

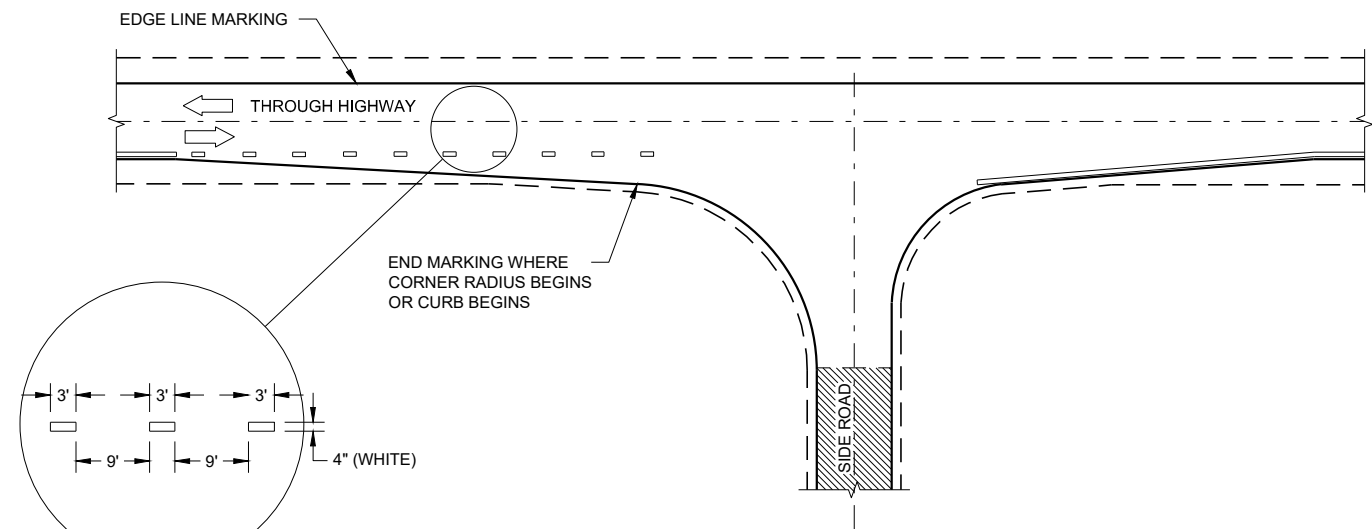
GENERAL NOTES

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

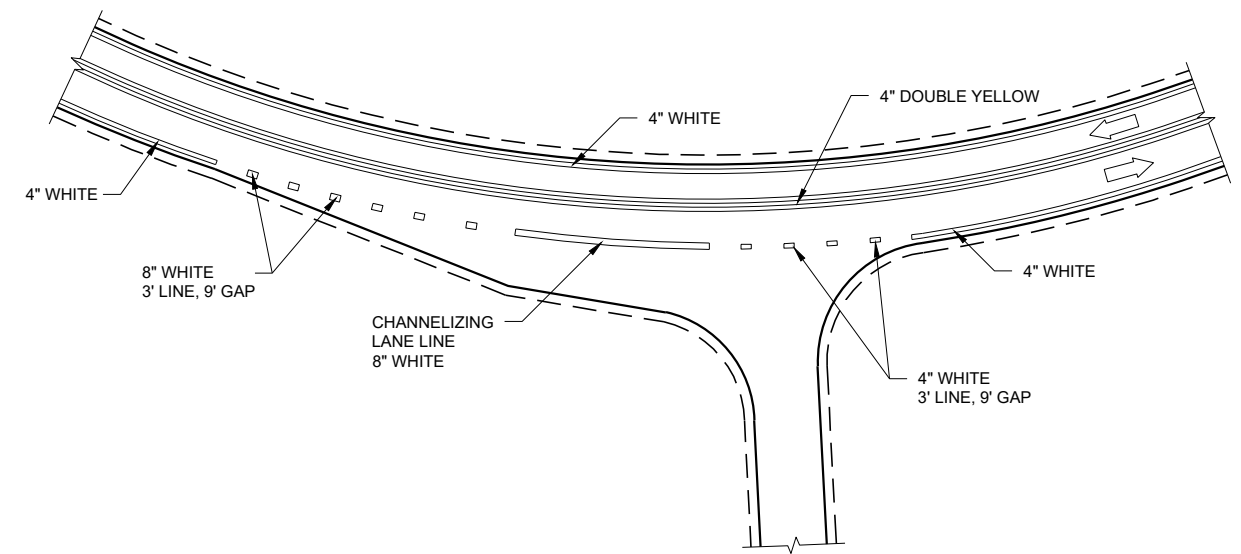
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

LEGEND

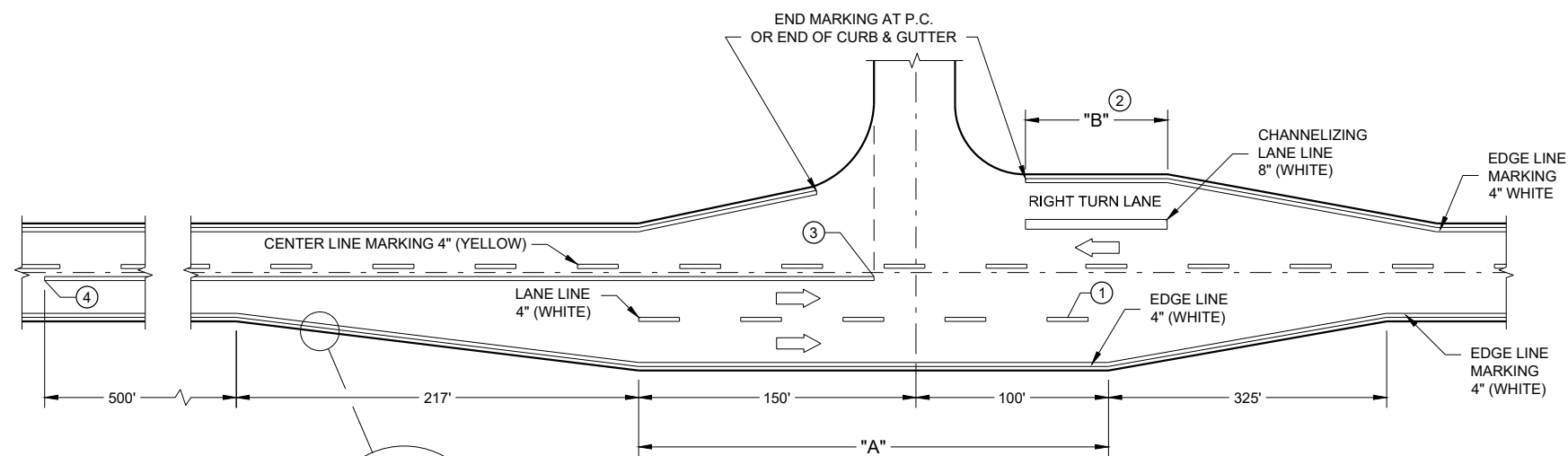
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION



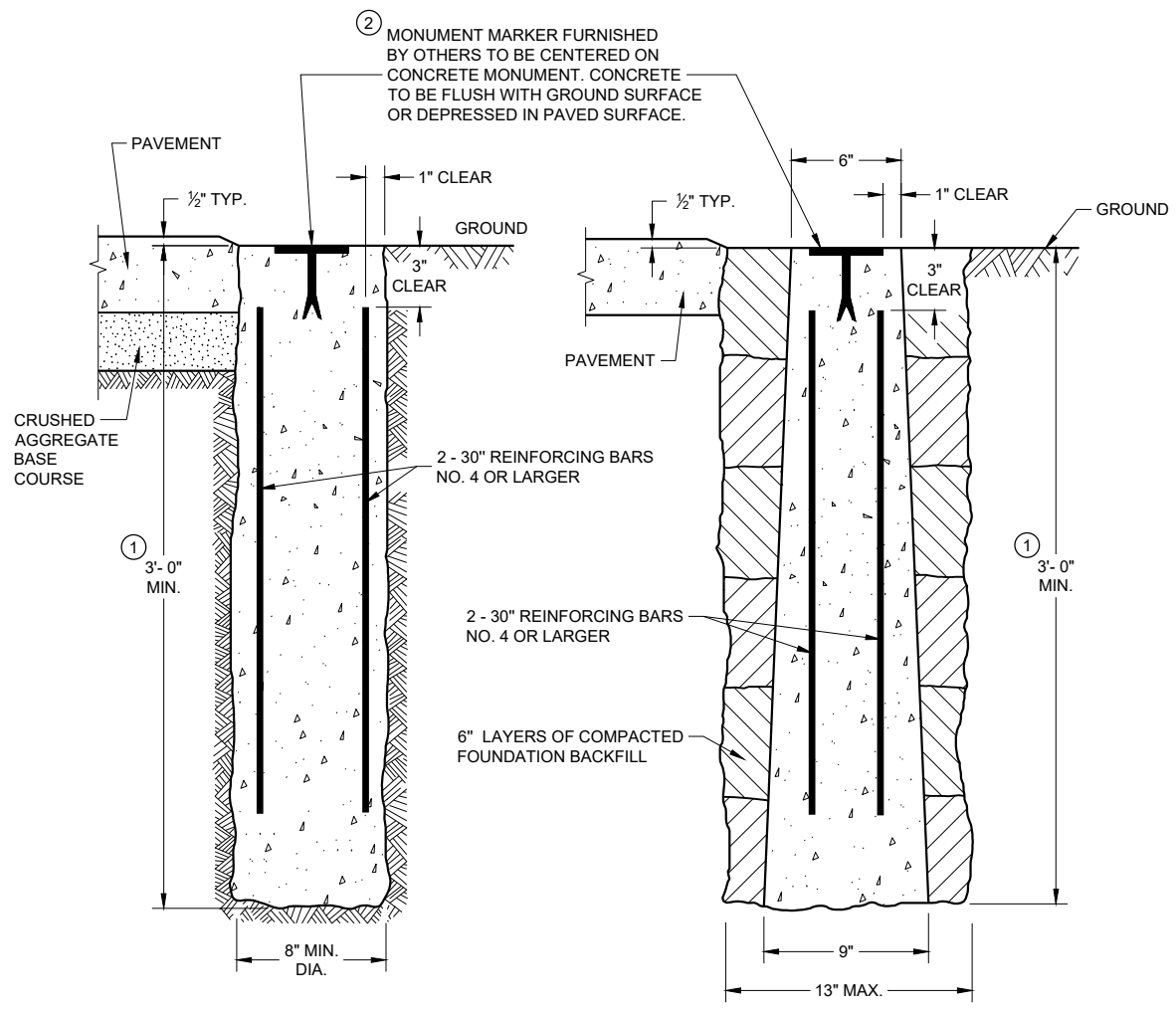
INTERSECTION ON OUTSIDE OF CURVE



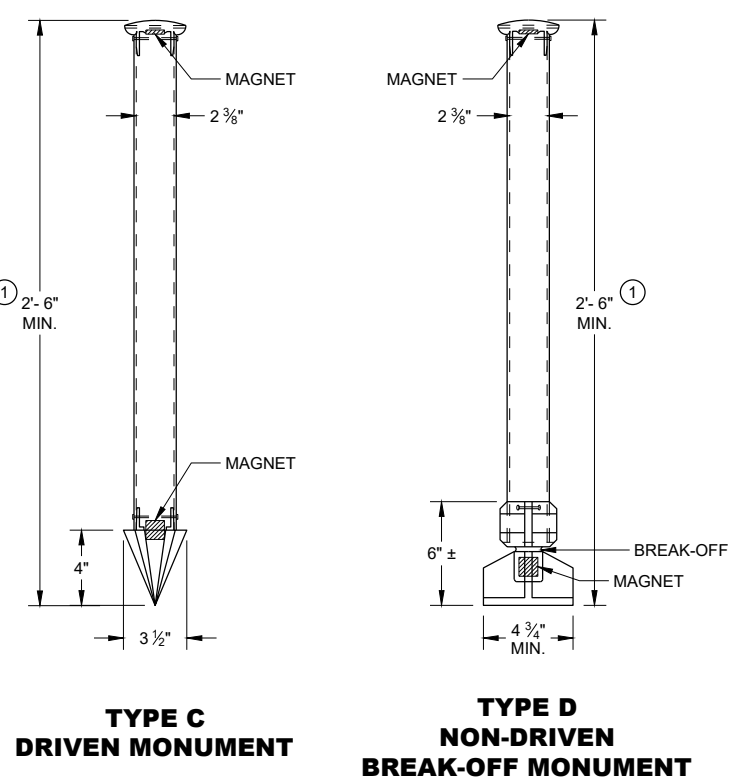
**MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CAST-IN-PLACE
PRECAST
CONCRETE MONUMENTS
TYPE A**



**TYPE C
DRIVEN MONUMENT**
**TYPE D
NON-DRIVEN
BREAK-OFF MONUMENT**
**ALUMINUM MONUMENTS
(INCLUDES MARKER)**

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.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

PERMANENT MAGNETS SHALL BE INSERTED NEAR THE TOP AND BOTTOM OF ALL ALUMINUM MONUMENTS SO THE MONUMENT CAN EASILY BE DETECTED BY A METAL DETECTOR.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

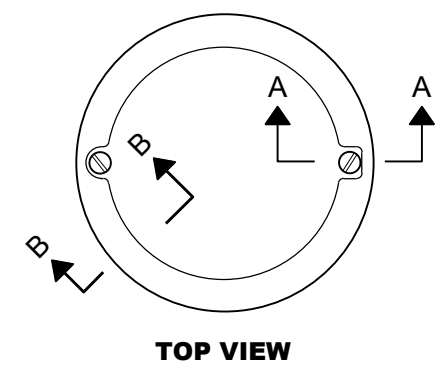
MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

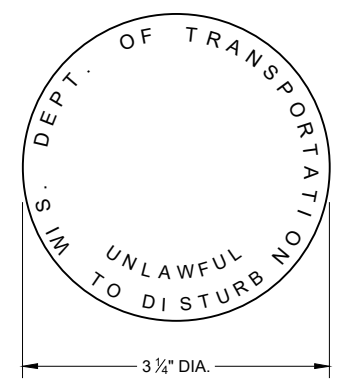
THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

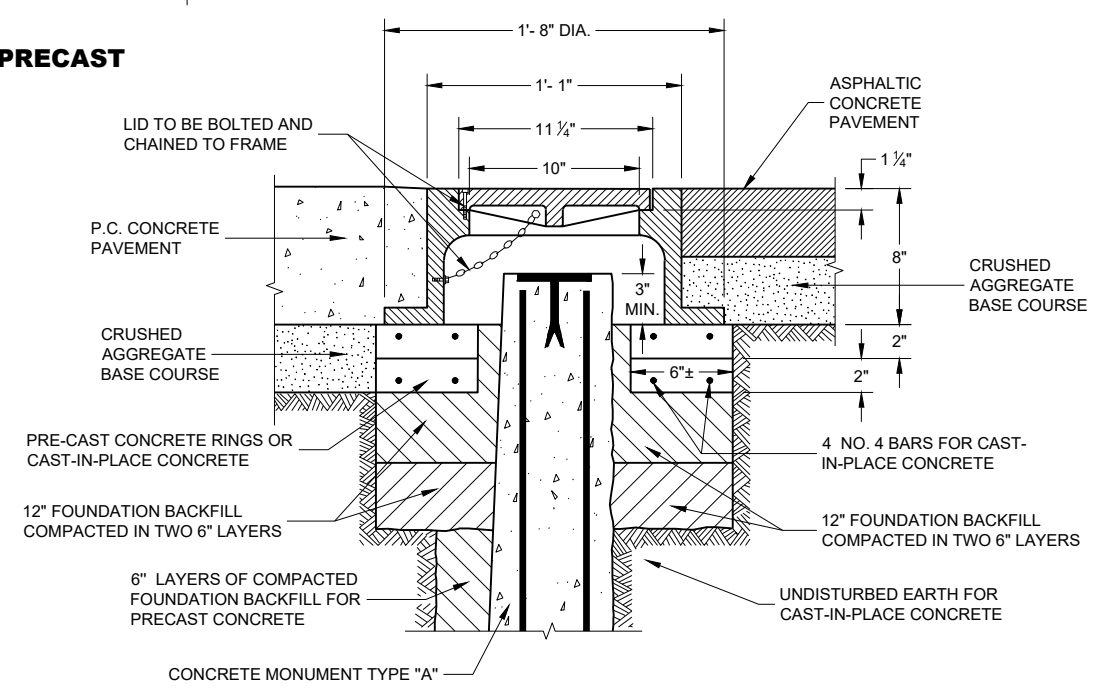
- ① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.
- ② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WISDOT MARKER.



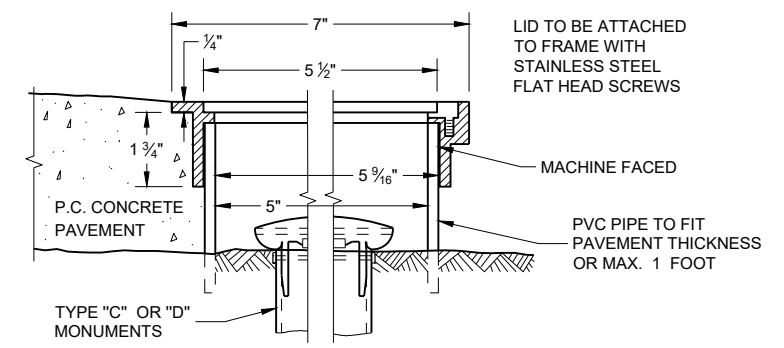
TOP VIEW



② **WIS DOT MONUMENT MARKER LOGO**
FOR TYPES "A", "C" & "D"

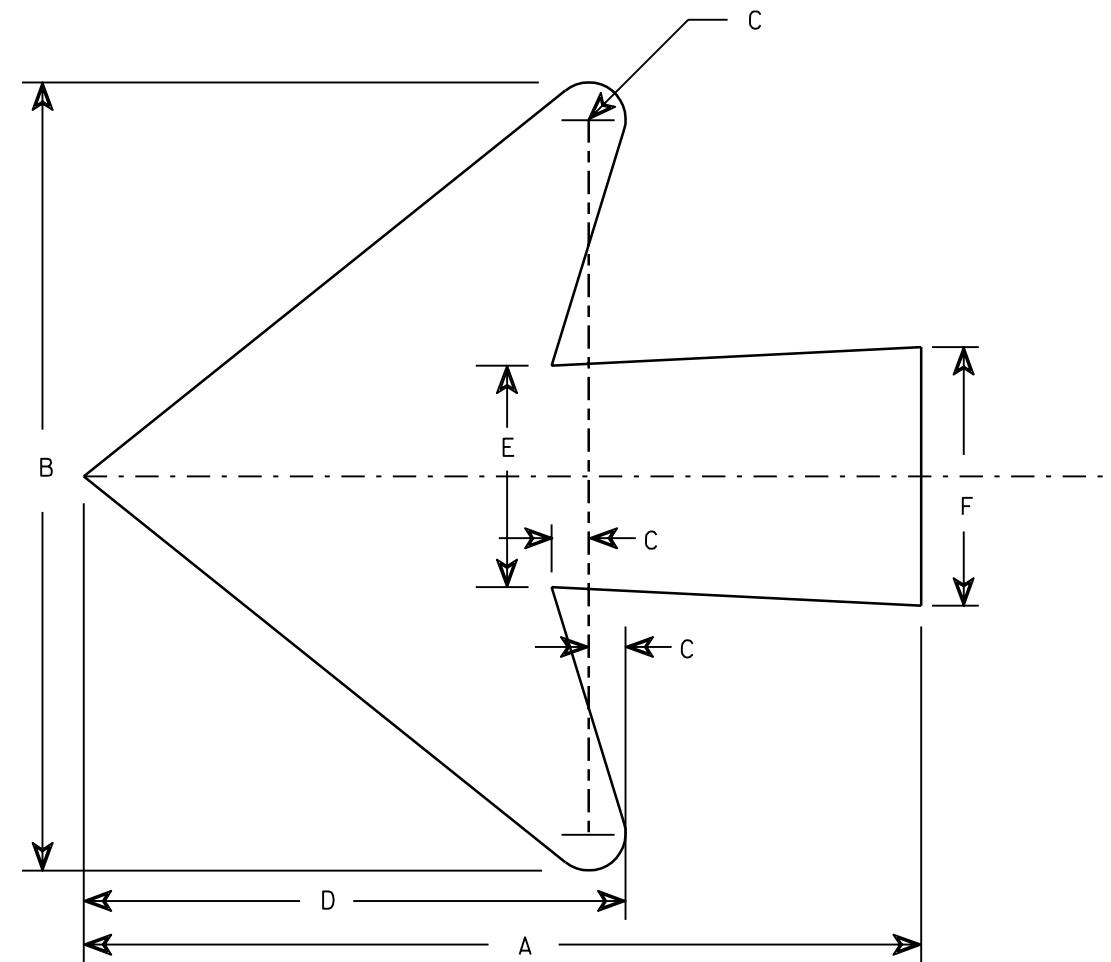
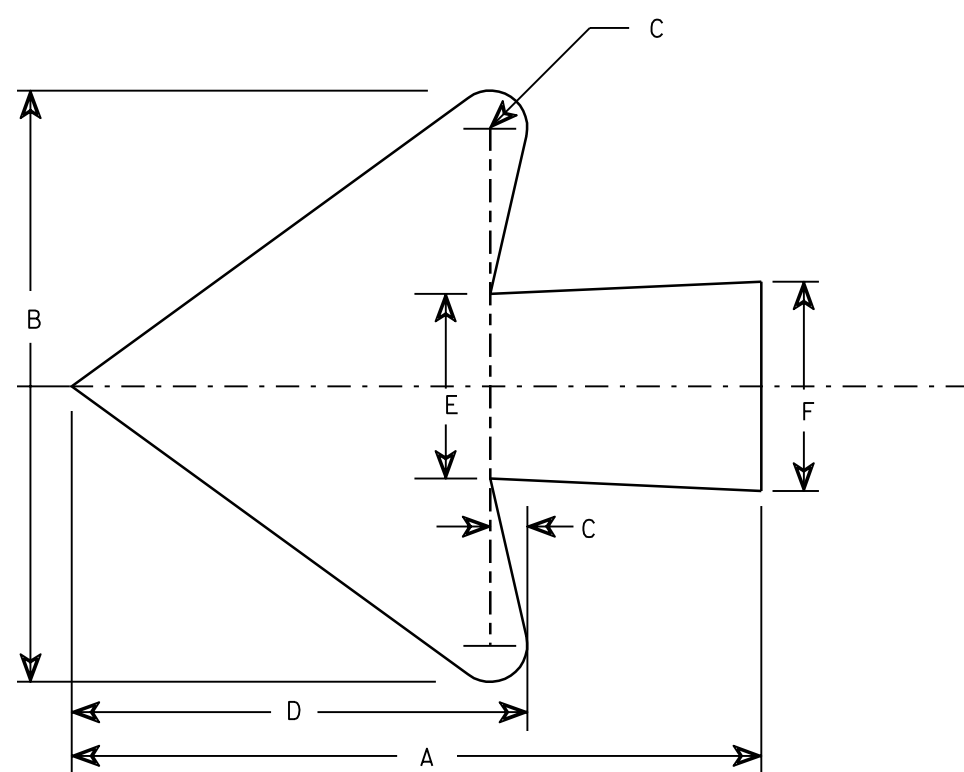


CAST IRON MONUMENT COVER
(APPROXIMATE WEIGHT 95 LBS)



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

| LANDMARK REFERENCE MONUMENTS AND COVERS | |
|--|---|
| STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION | |
| APPROVED March 2018 DATE | /s/ Raymond A. Kumapayil CHIEF SURVEYING AND MAPPING ENGINEER |
| FHWA | |



| Lower Case Copy Size | Right or Left | A | | B | C | D | E | F |
|----------------------|---------------|----------|----------|---|-----|-------|-------|-------|
| | | * 2 Town | * 3 Town | | | | | |
| 3 3/4 Series C | 7 | 11 | 18 | 6 | 3/8 | 4 5/8 | 1 7/8 | 2 1/8 |

* Indicates Ahead and Tilt for 2 & 3 Town applications.

| Lower Case Copy Size | Right or Left | A | | B | C | D | E | F |
|----------------------|---------------|----------|----------|--------|-----|-------|-------|-------|
| | | * 2 Town | * 3 Town | | | | | |
| 4 1/2 Series D&E | 8 1/2 | 11 | 18 | 8 | 3/8 | 5 1/2 | 2 1/4 | 2 5/8 |
| 6 Series D&E | 12 | 18 | 24 | 10 3/4 | 1/2 | 7 3/8 | 3 1/4 | 3 1/2 |
| 8 Series E | 15 1/2 | 24 | 30 | 14 1/4 | 3/4 | 9 3/4 | 4 1/4 | 4 1/2 |

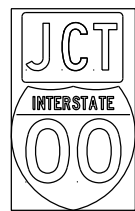
* Indicates Ahead and Tilt for 2 & 3 Town applications.

STANDARD ARROWS
FOR D1 GUIDE SIGNS
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Chester J Spang*
for State Traffic Engineer
DATE 8/10/92 PLATE NO. A1-2.3

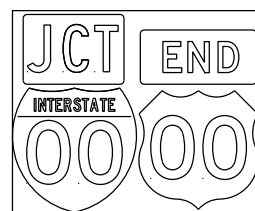
7

7

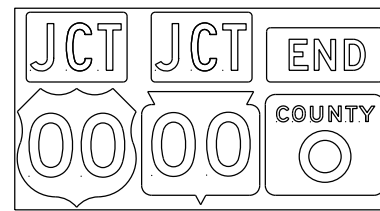
TYPICAL ASSEMBLIES



J1-1



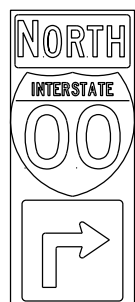
J1-2



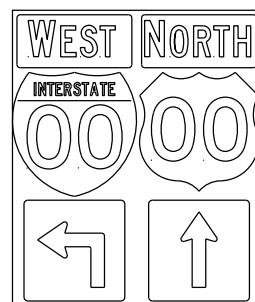
J1-3



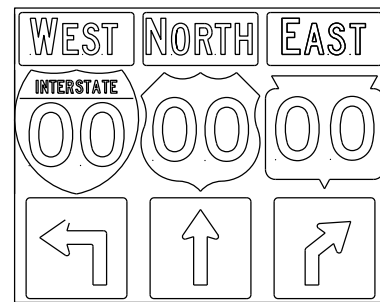
JR1-1



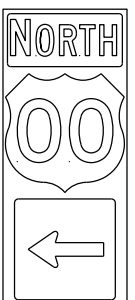
J2-1



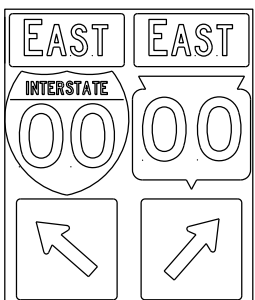
J2-2



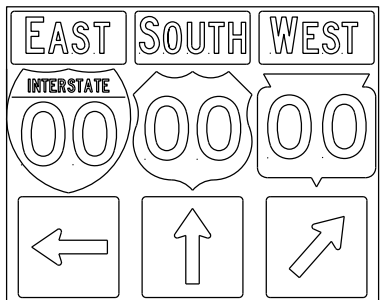
J2-3



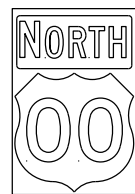
J3-1



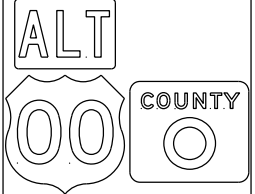
J3-2



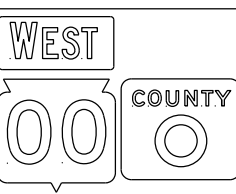
J3-3



J4-1



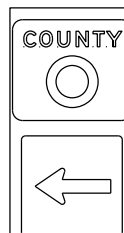
J4-2



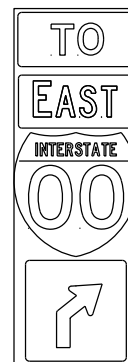
J4-2



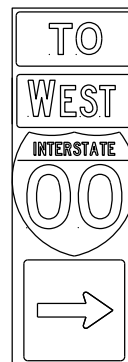
J12-1



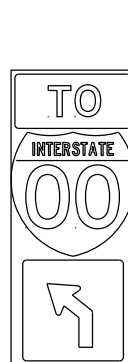
J13-1



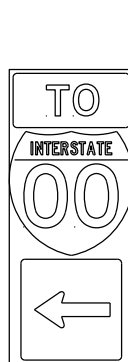
J32-1



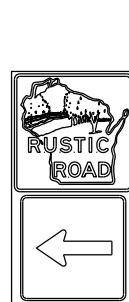
J33-1



J22-1



J23-1



JR13-1



JR23-1

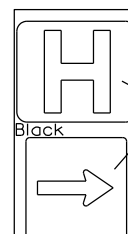


JR99-1



JV

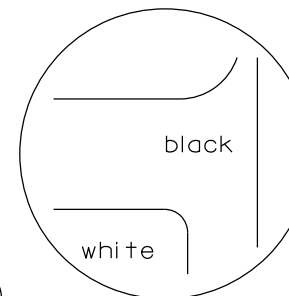
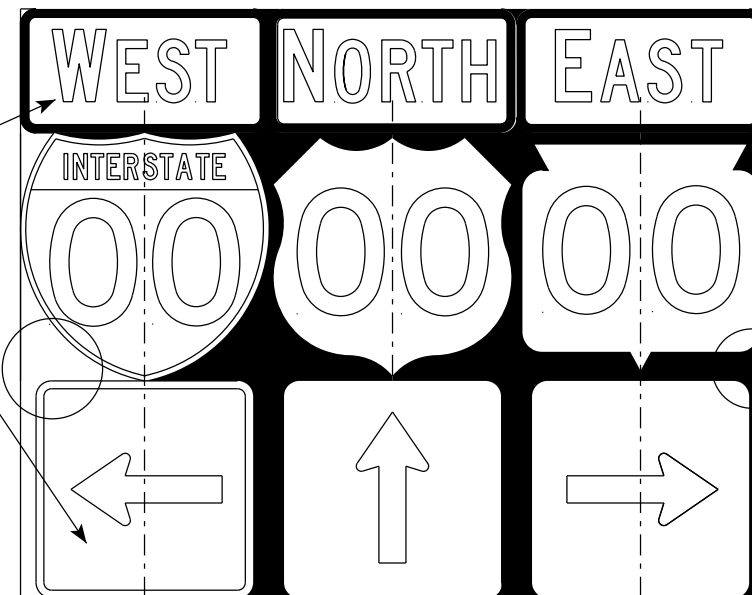
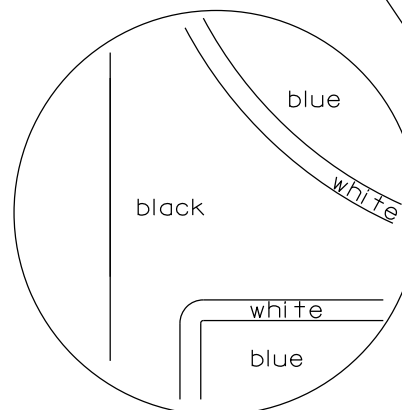
(Typical Vertical J-Assembly See Note 10 and 11)



JH-1

Blue Background

blue background with interstate



black background

NOTES

- Signs are Type II - Type H Reflective
- Color:
 - Background - Black Non-reflective
 - Message - see Note 5
- Message Series - See Note 5
- Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an MI-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- All Vertical J Assemblies are given a Sign Code of JV
- For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 3/18/21

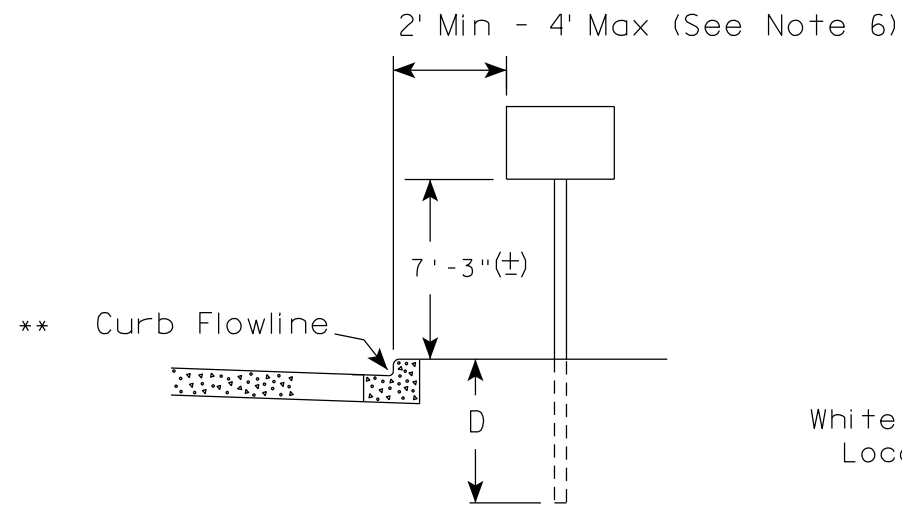
PLATE NO. A2-1S.9

PROJECT NO:

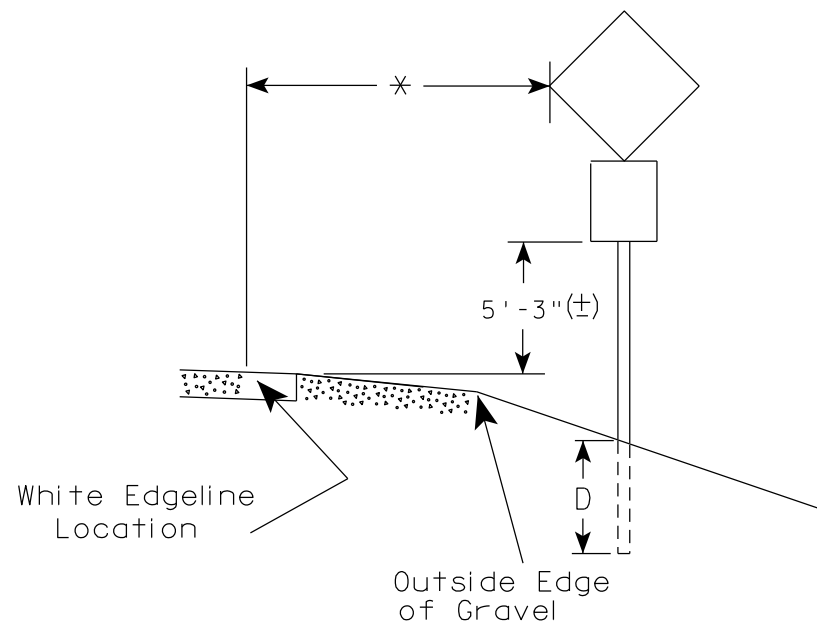
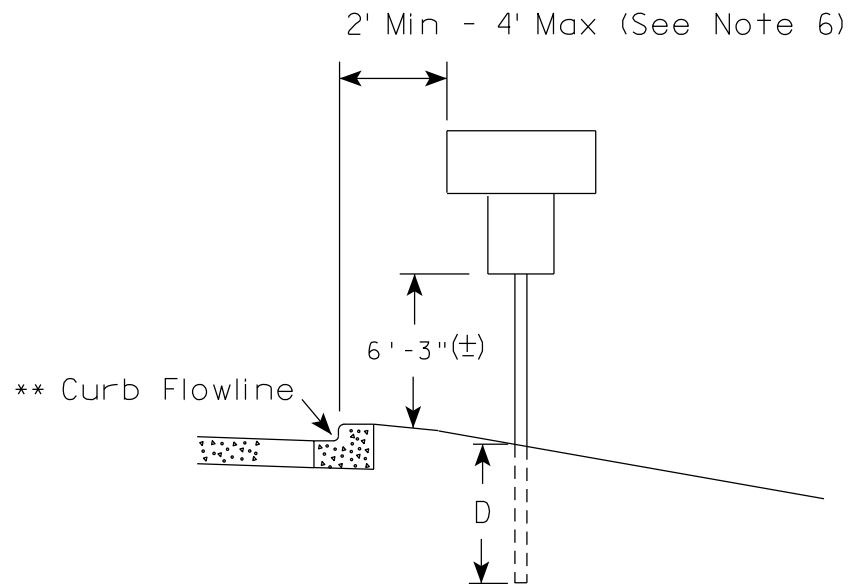
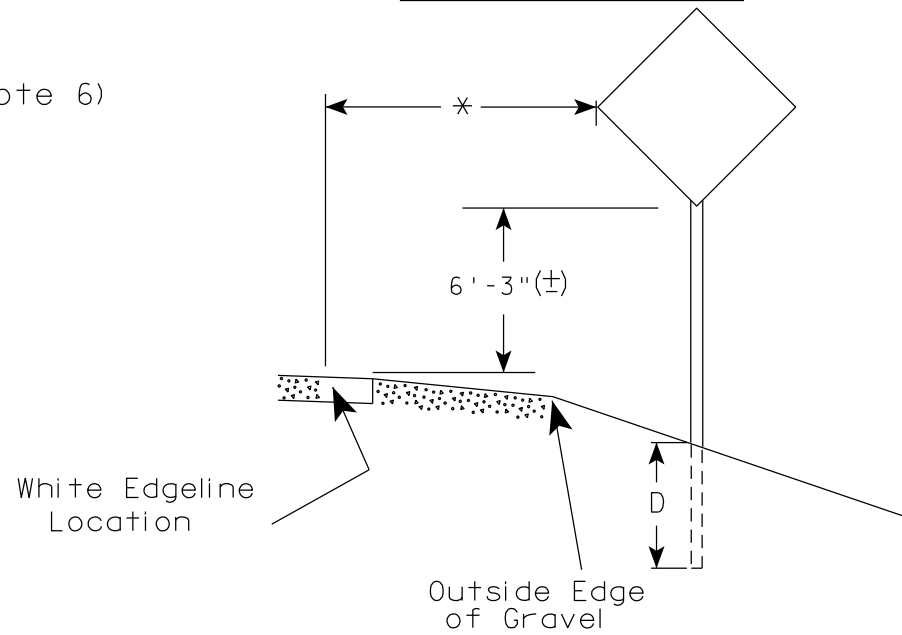
SHEET NO:

E

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

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

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

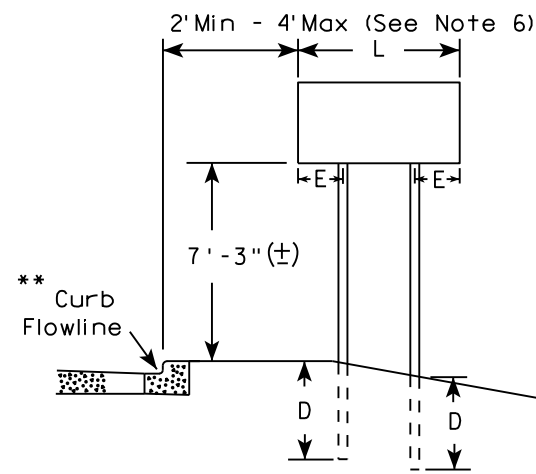
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

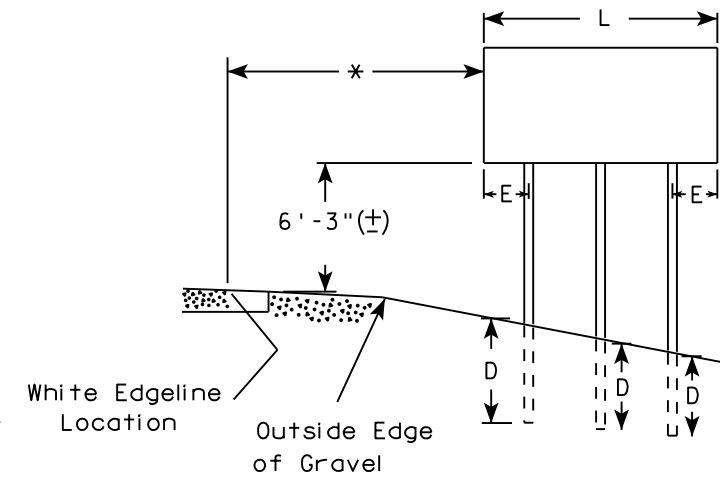
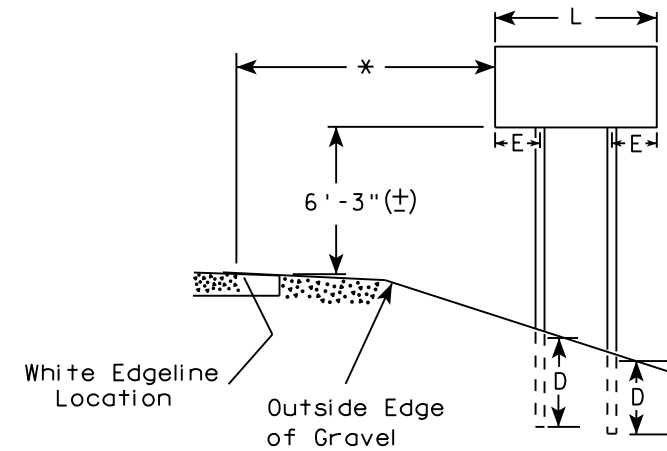
GENERAL NOTES

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

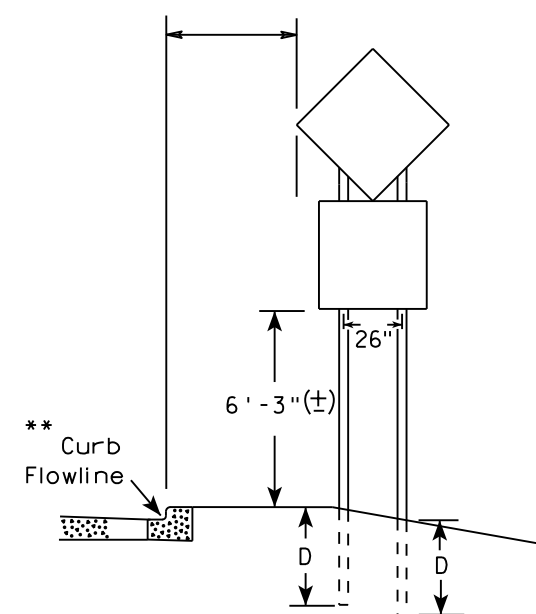
URBAN AREA



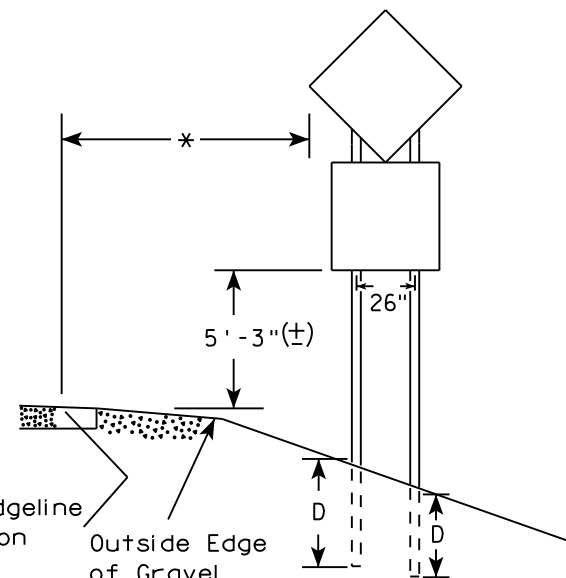
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

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

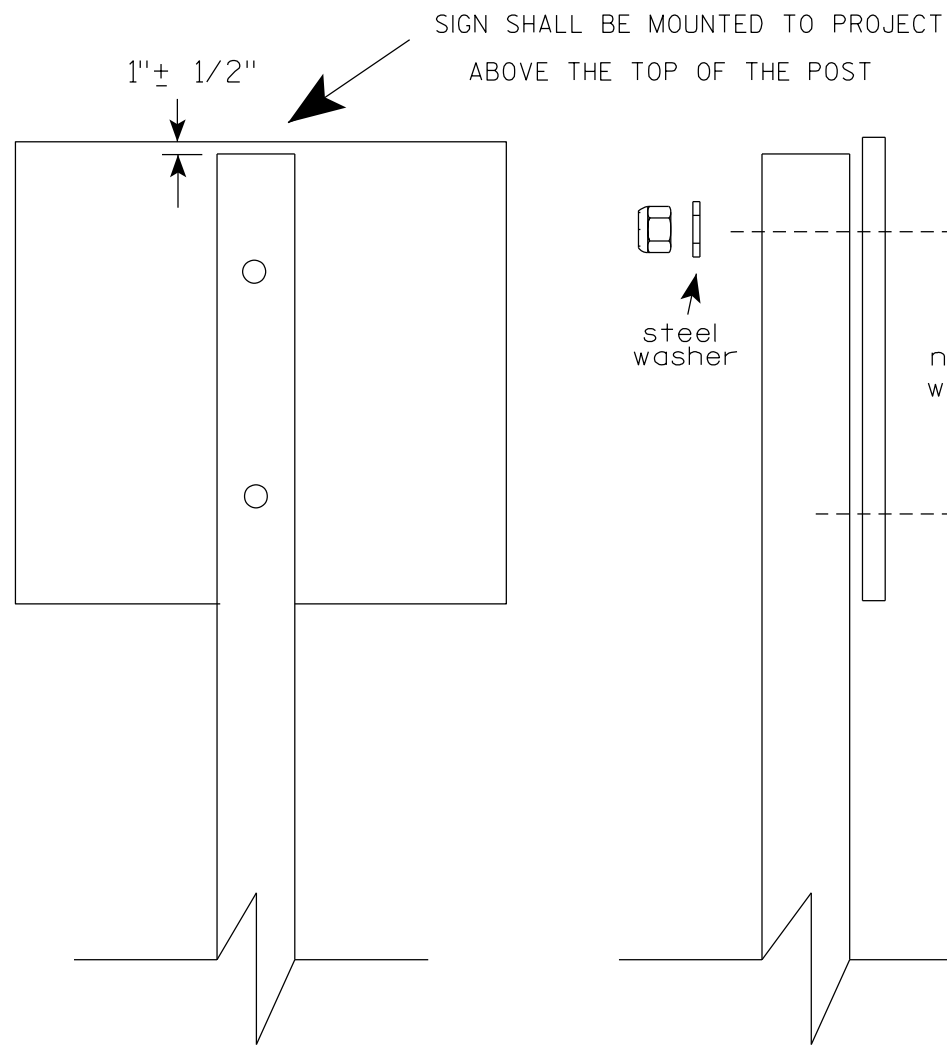
| SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED) | |
|--|-----|
| L | E |
| Greater than 108" to 144" | 12" |

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 For State Traffic Engineer
 DATE 8/21/17 PLATE NO. A4-4.15



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

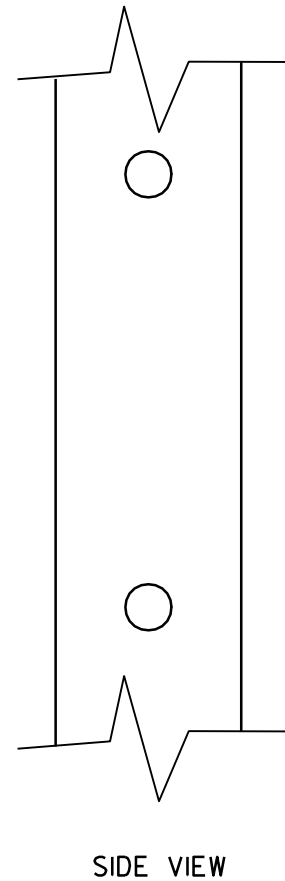
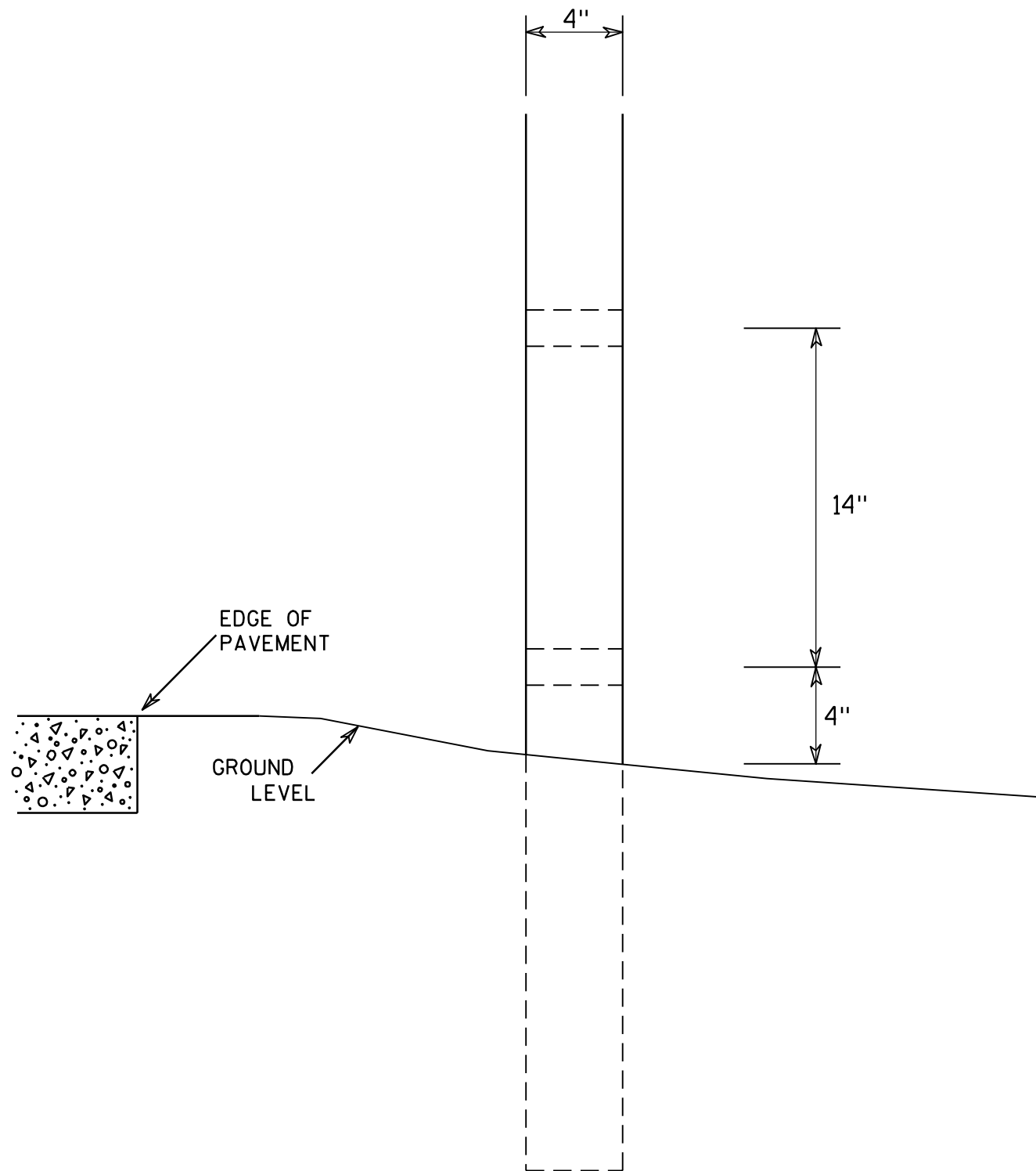
- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

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



GENERAL NOTES

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

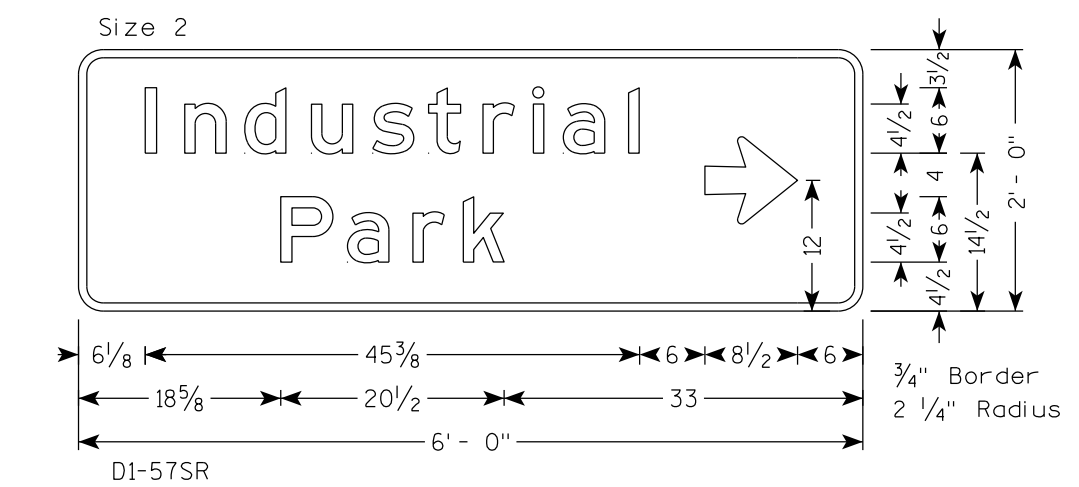
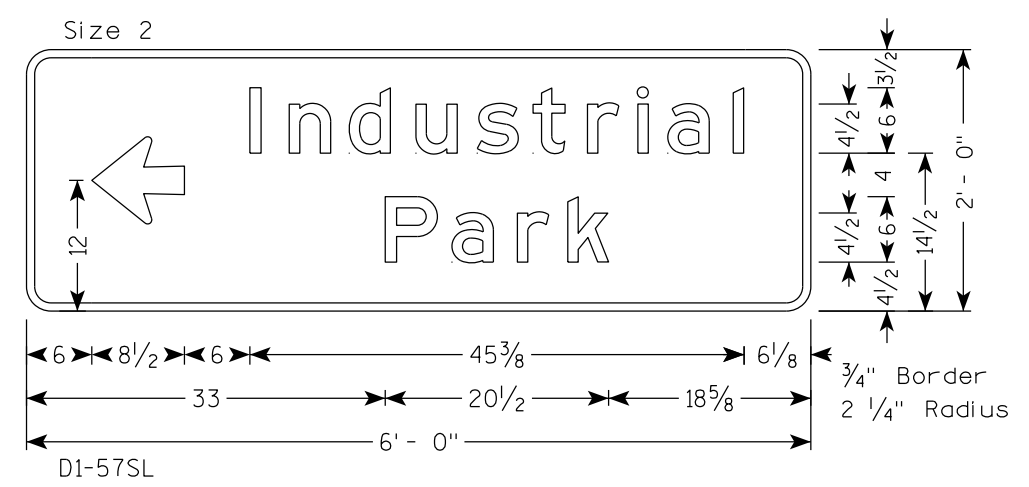
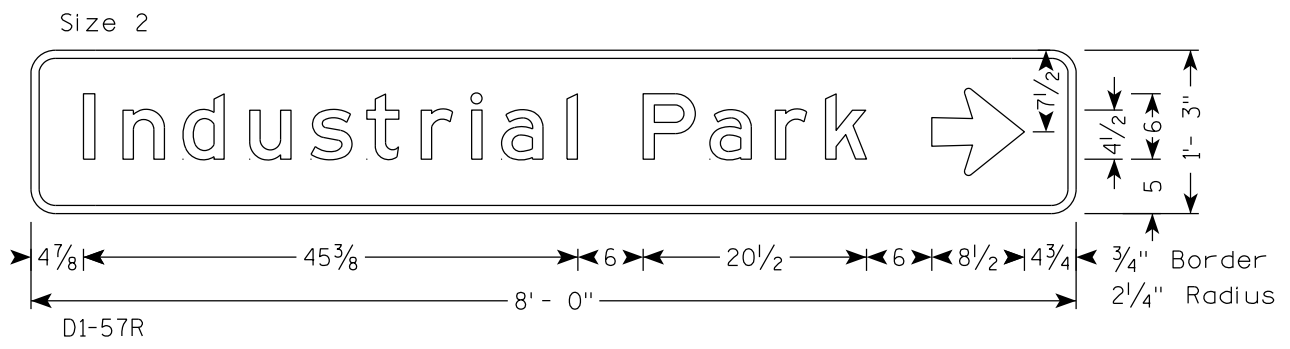
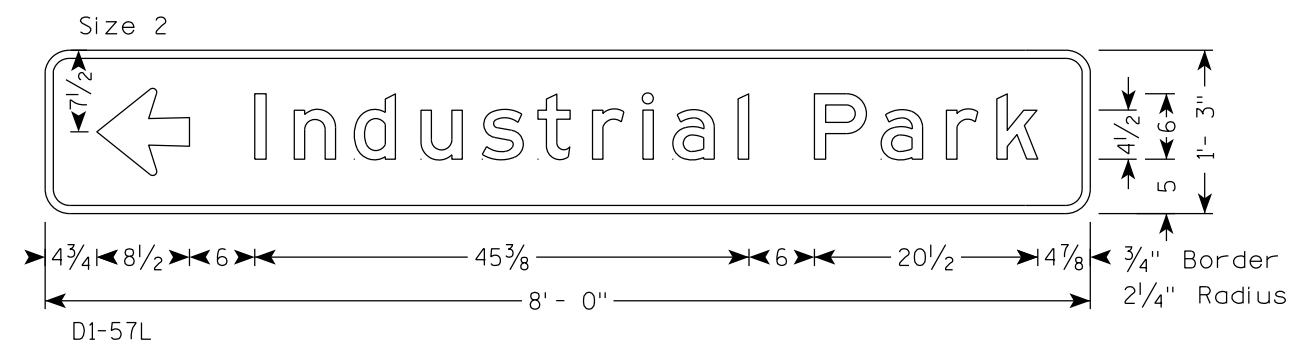
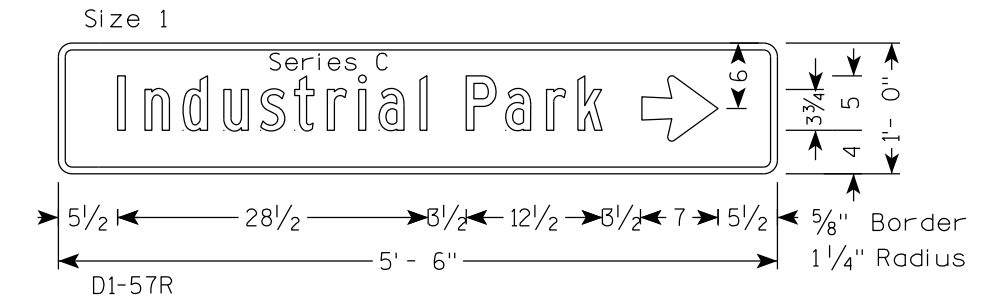
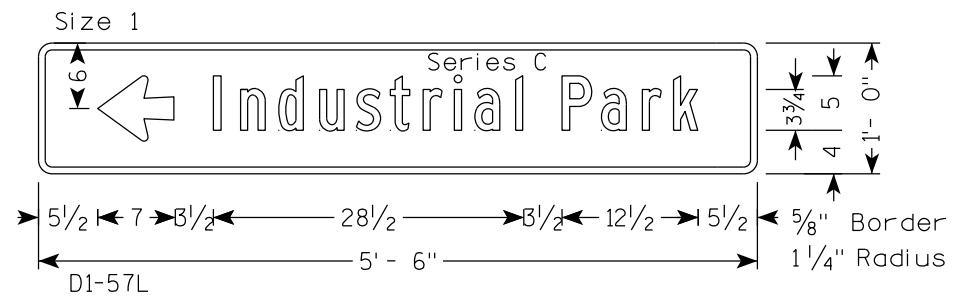
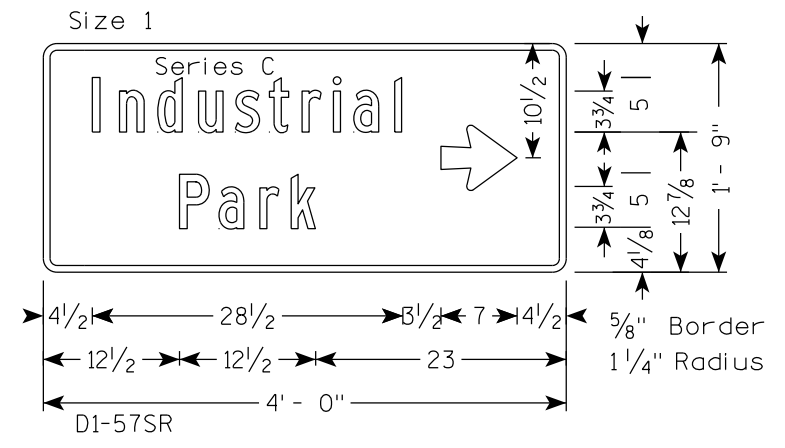
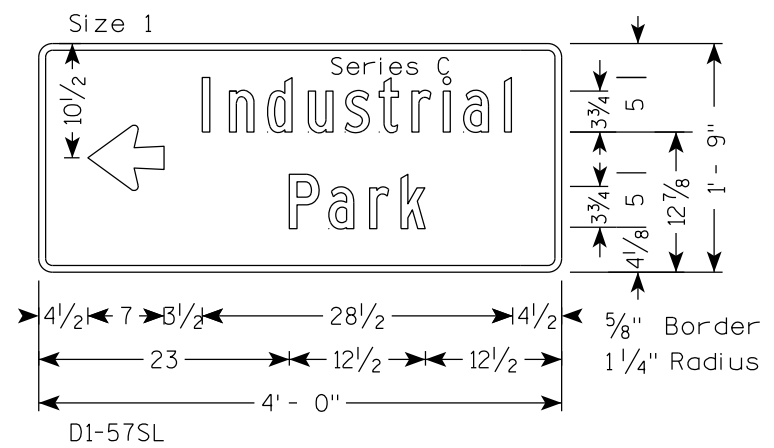
7

7

| | |
|--|---|
| 4 X 6 WOOD POST MODIFICATIONS | |
| <i>WISCONSIN DEPT OF TRANSPORTATION</i> | |
| APPROVED | <i>Chester J. Spang</i> for State Traffic Engineer |
| DATE <u>3/27/97</u> | PLATE NO. <u>A4-11.2</u> |

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - Green
Message - White
3. Message Series - E except as noted



TYPICAL STANDARD
D1-57L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

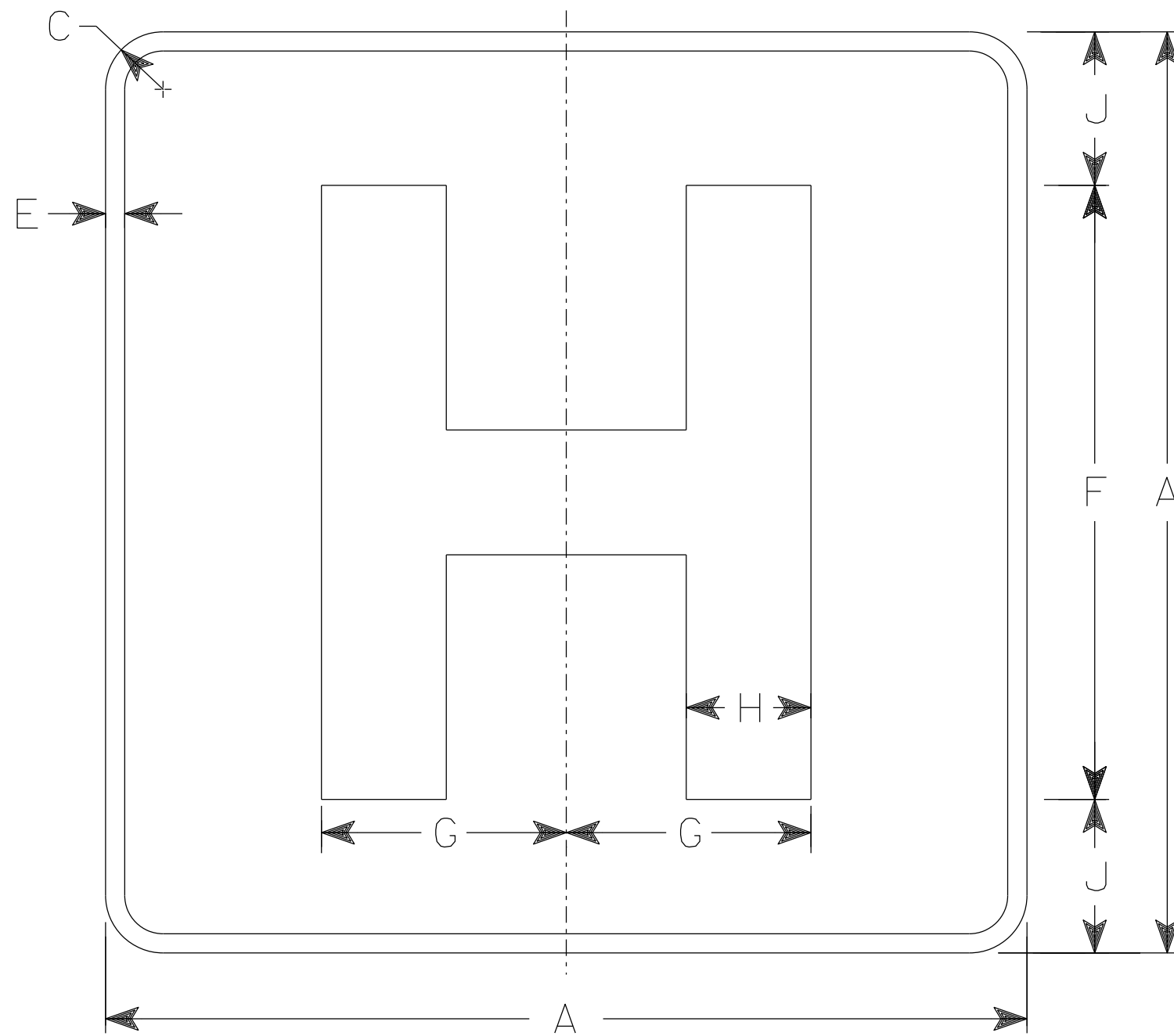
DATE 1/19/21 PLATE NO. D1-57.2

7

7

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - Blue
Message - White
3. Message Series - E Modified
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.



D9-2

| 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 sq. ft. |
|------|----|---|-------|---|-----|----|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1 | 18 | | 1 1/8 | | 1/2 | 12 | 4 3/4 | 2 3/8 | | 3 | | | | | | | | | | | | | | | | | 2.25 |
| 2S | 24 | | 1 1/2 | | 1/2 | 16 | 6 3/8 | 3 1/4 | | 4 | | | | | | | | | | | | | | | | | 4.0 |
| 2M | 24 | | 1 1/2 | | 1/2 | 16 | 6 3/8 | 3 1/4 | | 4 | | | | | | | | | | | | | | | | | 4.0 |
| 3 | 36 | | 2 1/4 | | 3/4 | 24 | 9 1/2 | 4 7/8 | | 6 | | | | | | | | | | | | | | | | | 9.0 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
D9-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

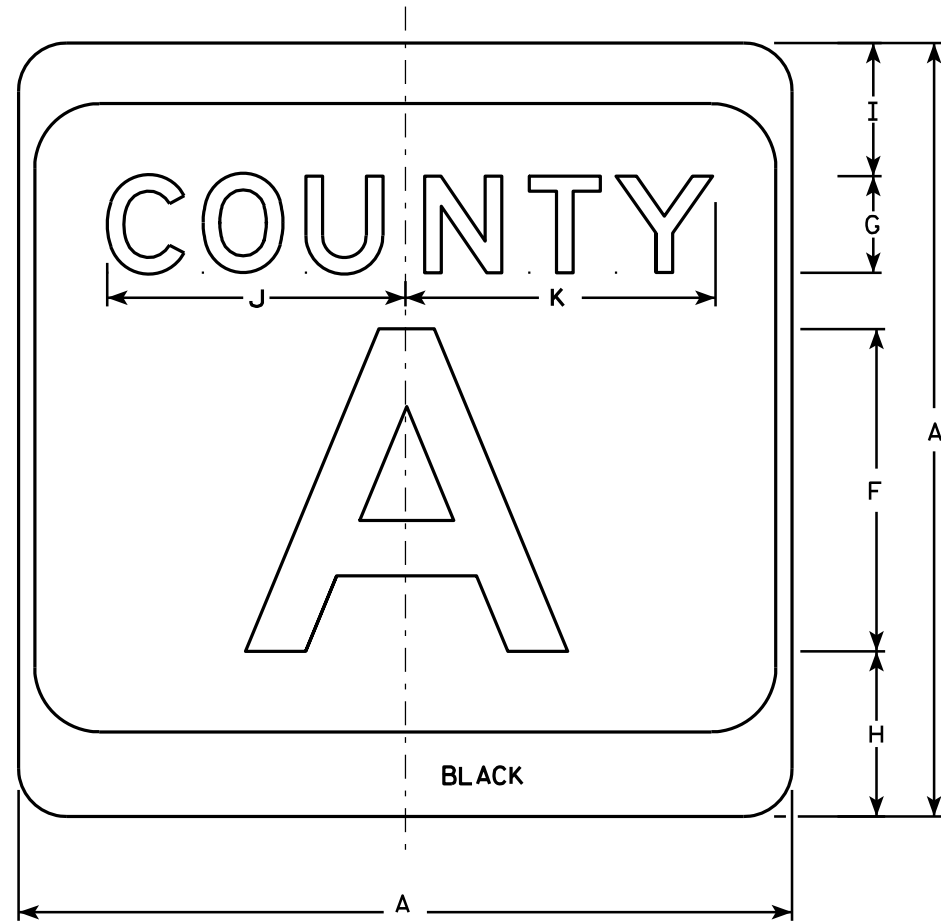
DATE 1/28/21 PLATE NO. D9-2.5

7

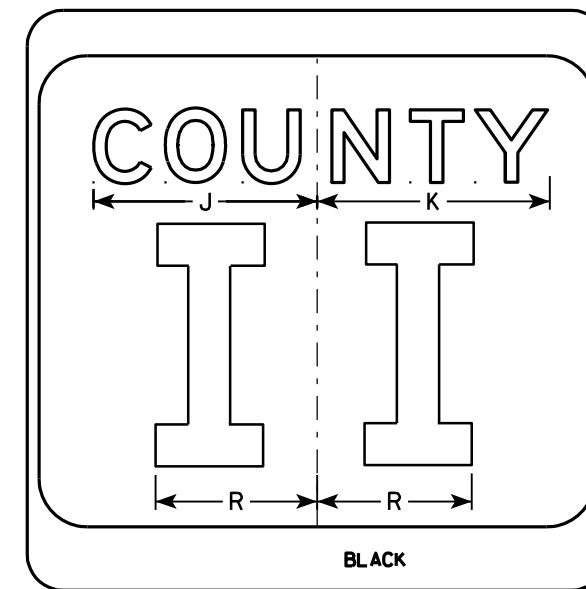
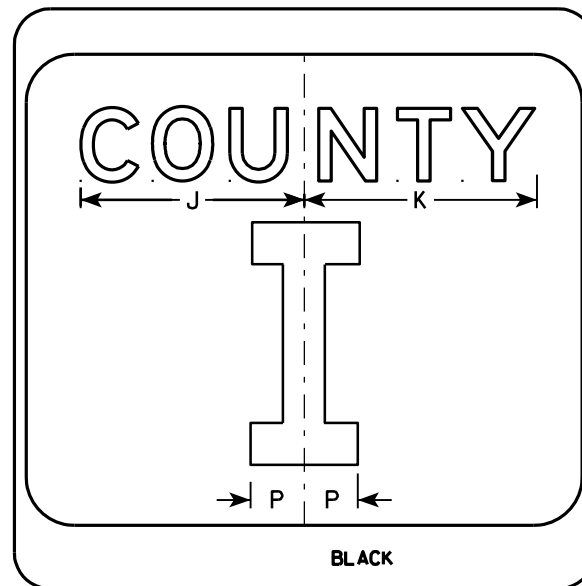
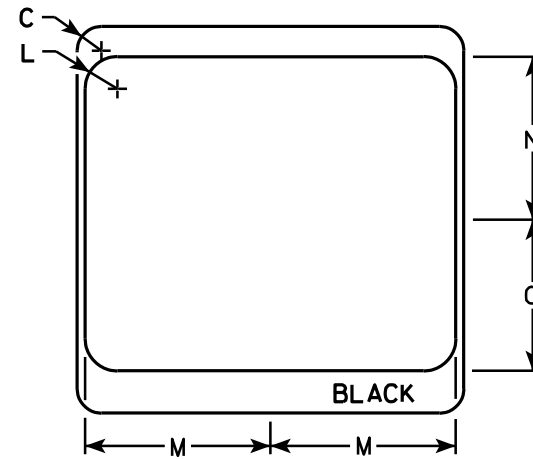
7

NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
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. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



M1-5A



7

7

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|---|-------|---|---|----|---|-------|-------|--------|--------|---|--------|--------|-------|-------|---|-------|---|---|---|---|---|---|---|---|--------------|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 24 | | 1 1/2 | | | 10 | 3 | 5 1/8 | 4 1/8 | 9 1/4 | 9 5/8 | 2 | 11 1/2 | 10 1/8 | 9 3/8 | 2 1/4 | | 6 5/8 | | | | | | | | | 4.0 |
| 3 | 36 | | 2 1/4 | | | 16 | 4 | 7 5/8 | 5 5/8 | 12 1/4 | 12 7/8 | 3 | 17 1/8 | 15 1/4 | 14 | 3 3/8 | | 10 | | | | | | | | | 9.0 |
| 4 | 36 | | 2 1/4 | | | 16 | 4 | 7 5/8 | 5 5/8 | 12 1/4 | 12 7/8 | 3 | 17 1/8 | 15 1/4 | 14 | 3 3/8 | | 10 | | | | | | | | | 9.0 |
| 5 | 36 | | 2 1/4 | | | 16 | 4 | 7 5/8 | 5 5/8 | 12 1/4 | 12 7/8 | 3 | 17 1/8 | 15 1/4 | 14 | 3 3/8 | | 10 | | | | | | | | | 9.0 |

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

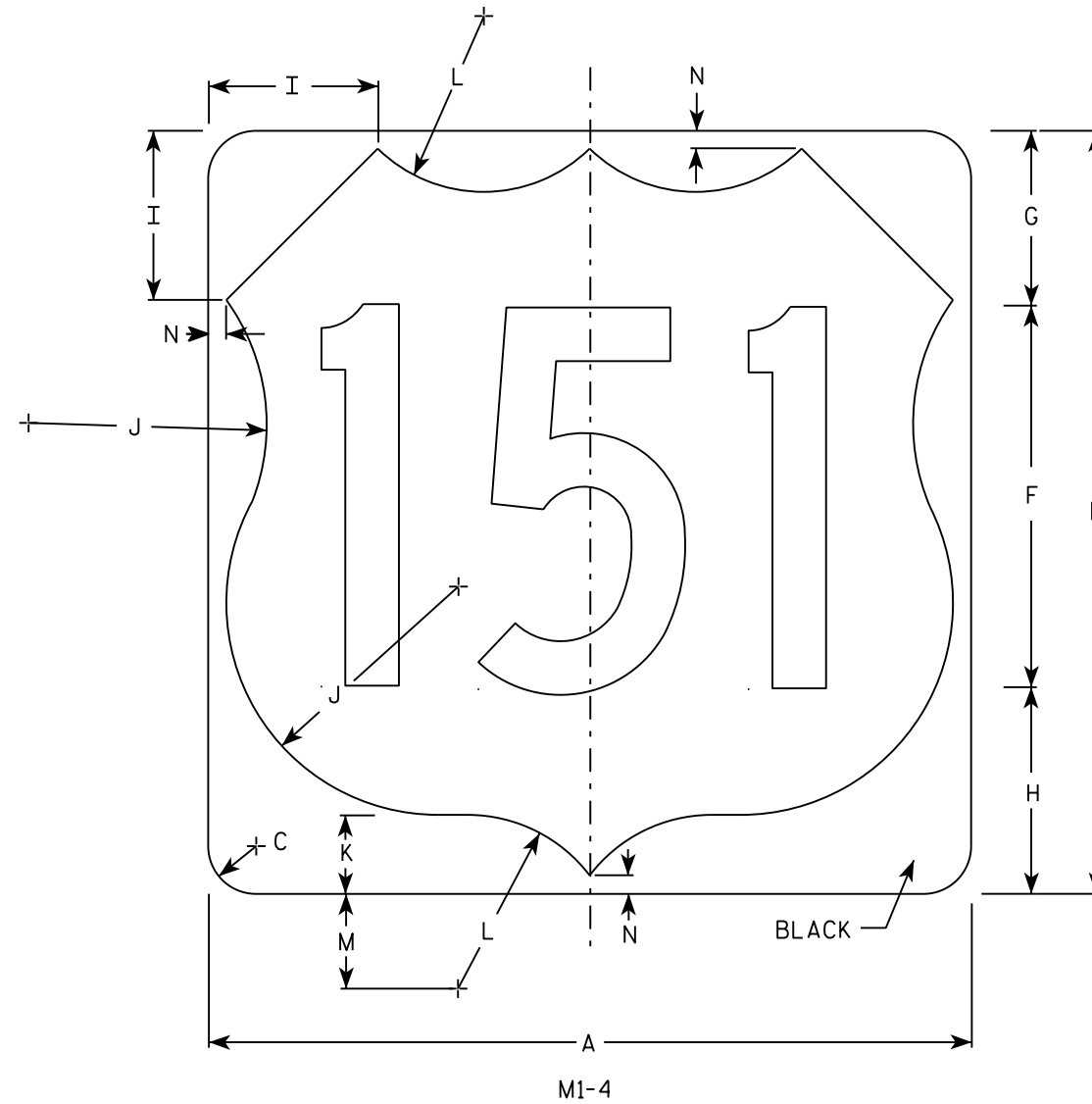
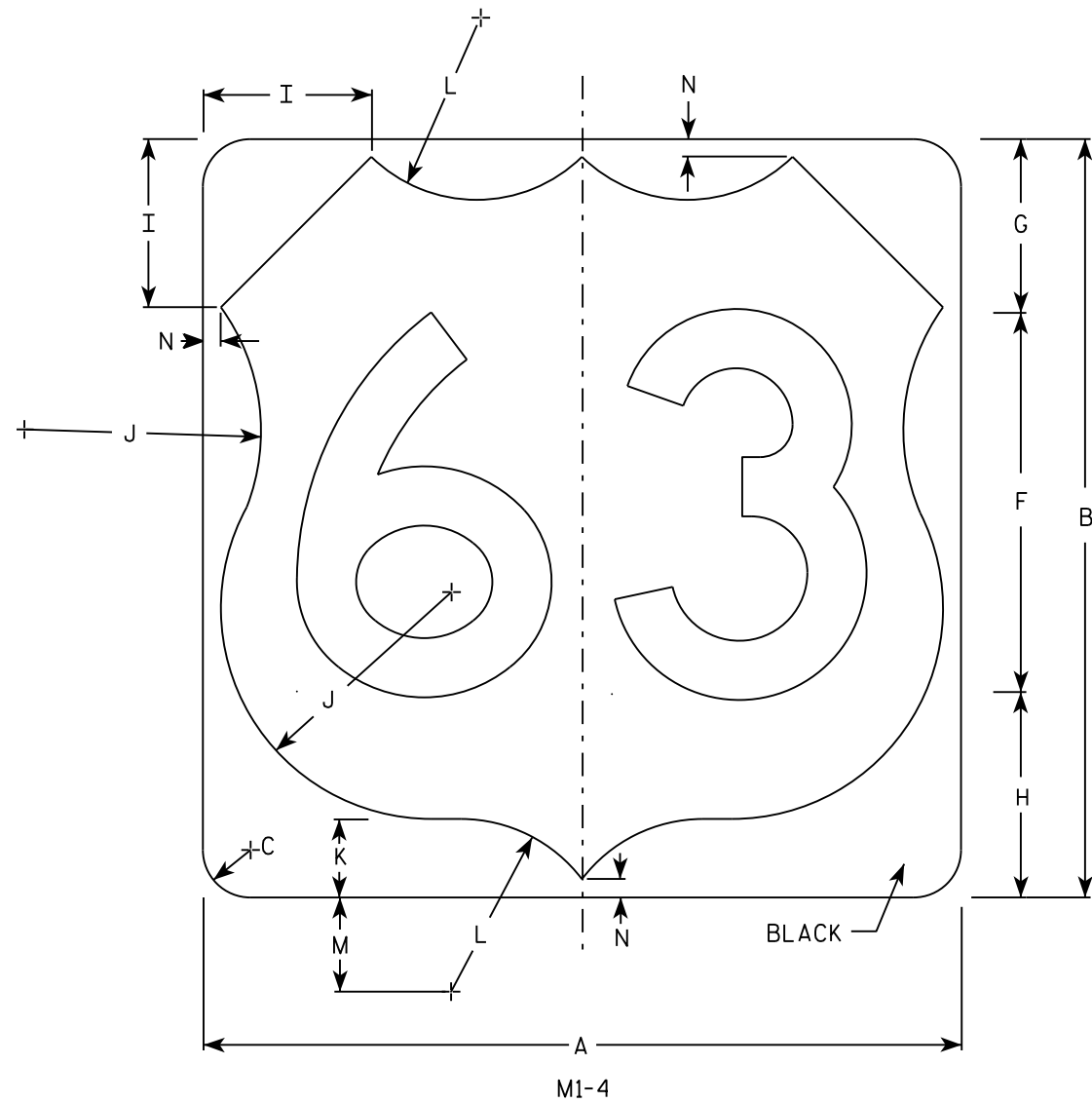
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 9/27/11 PLATE NO. MI-5A.8

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

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



7

7

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

USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

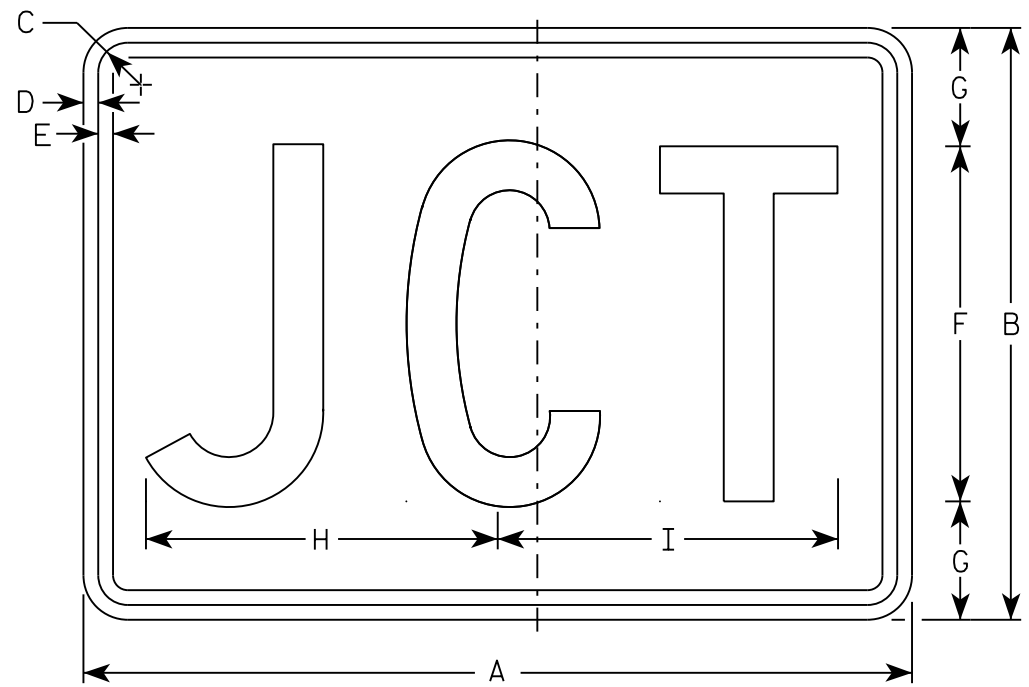
APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 3/16/18 PLATE NO. M1-4.10

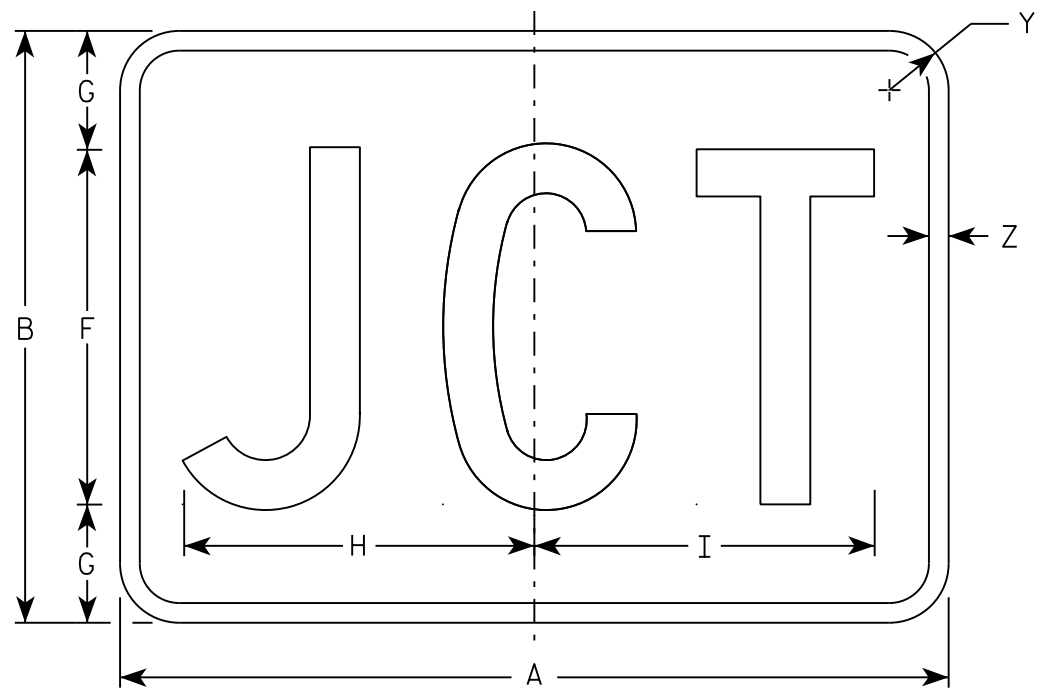
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**

NOTES

1. Sign is Type II - Type H
2. Color:
 - Background - See note 5
 - Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
 Message - Black
 MB2-1 Background - Blue
 Message - White
 MK2-1 Background - Green
 Message - White
 MM2-1 Background - White
 Message - Green
 MN2-1 Background - Brown
 Message - White
 MP2-1 Background - White
 Message - Blue
 MR2-1 Background - Brown
 Message - Yellow



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

7

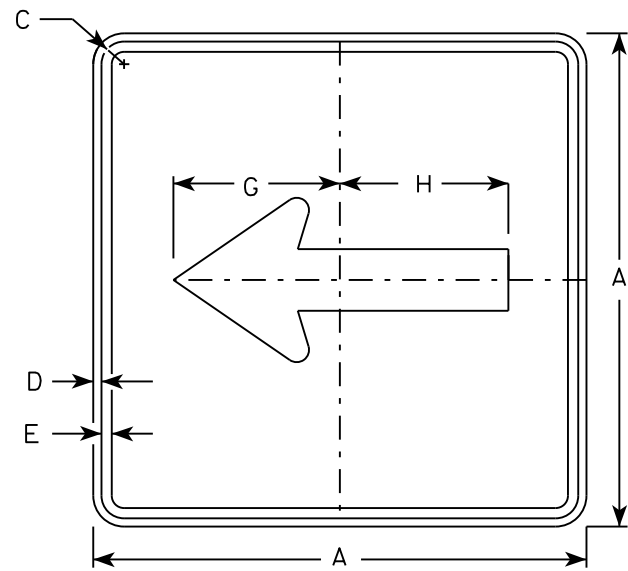
| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|----|-------|-----|-----|----|---|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|-----|-----------------|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 21 | 15 | 1 1/8 | 3/8 | 3/8 | 9 | 3 | 8 7/8 | 8 5/8 | | | | | | | | | | | | | | | | 1 1/2 | 1/2 | 2.20 |
| 3 | 30 | 21 | 1 1/8 | 3/8 | 3/8 | 13 | 4 | 12 7/8 | 12 3/8 | | | | | | | | | | | | | | | | 1 1/2 | 1/2 | 4.40 |
| 4 | 30 | 21 | 1 1/8 | 3/8 | 3/8 | 13 | 4 | 12 7/8 | 12 3/8 | | | | | | | | | | | | | | | | 1 1/2 | 1/2 | 4.40 |
| 5 | 30 | 21 | 1 1/8 | 3/8 | 3/8 | 13 | 4 | 12 7/8 | 12 3/8 | | | | | | | | | | | | | | | | 1 1/2 | 1/2 | 4.40 |

STANDARD SIGN
M2-1

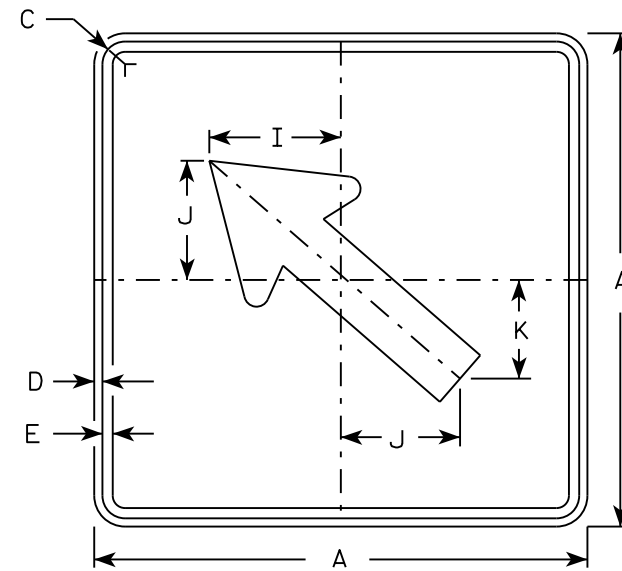
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

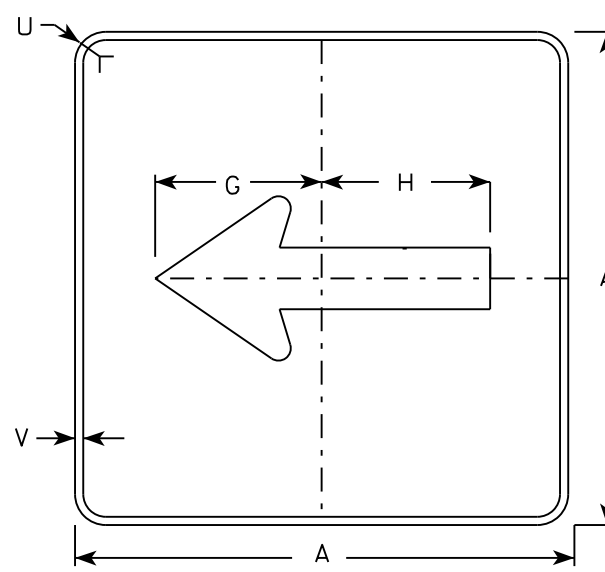
DATE 10/15/15 PLATE NO. M2-1.12



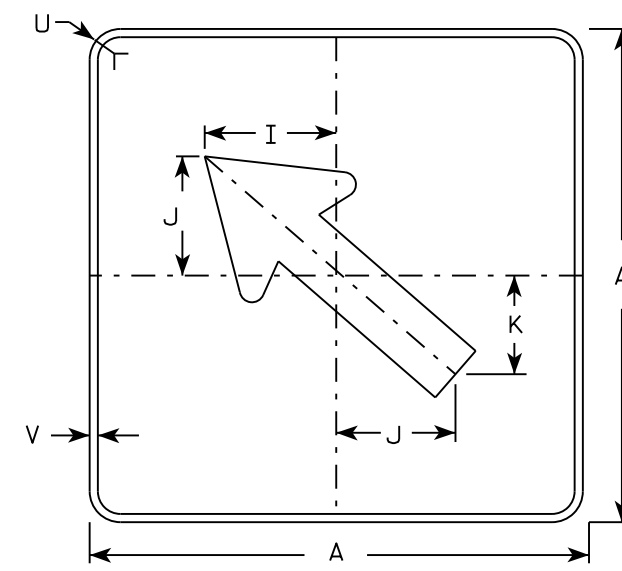
M6-1
MM6-1
M06-1
MP6-1



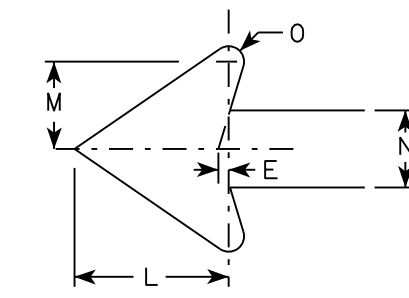
M6-2
MM6-2
M06-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1



MB6-2
MK6-2
MN6-2
MR6-2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 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.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

7

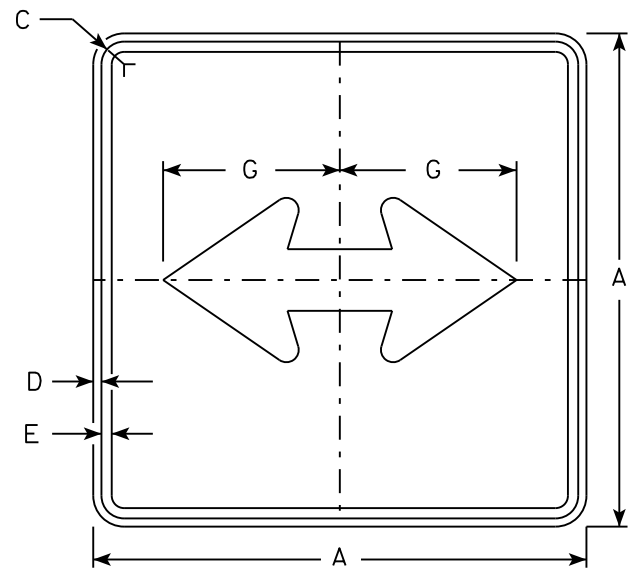
| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|---|-------|-----|-----|---|--------|--------|-------|-------|-------|-------|-------|-------|-----|---|---|---|---|---|-------|-----|---|---|---|---|--------------|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 21 | | 1 1/8 | 3/8 | 3/8 | | 7 1/2 | 7 1/8 | 5 5/8 | 5 | 4 1/4 | 5 1/4 | 3 | 2 5/8 | 1/2 | | | | | | 1 1/2 | 1/2 | | | | | 3.06 |
| 3 | 30 | | 1 3/8 | 1/2 | 5/8 | | 10 3/4 | 10 1/4 | 8 | 7 1/4 | 6 | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | 1 7/8 | 1/2 | | | | | 6.25 |
| 4 | 30 | | 1 3/8 | 1/2 | 5/8 | | 10 3/4 | 10 1/4 | 8 | 7 1/4 | 6 | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | 1 7/8 | 1/2 | | | | | 6.25 |
| 5 | 30 | | 1 3/8 | 1/2 | 5/8 | | 10 3/4 | 10 1/4 | 8 | 7 1/4 | 6 | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | 1 7/8 | 1/2 | | | | | 6.25 |

STANDARD SIGN
M6-1 & M6-2
SERIES

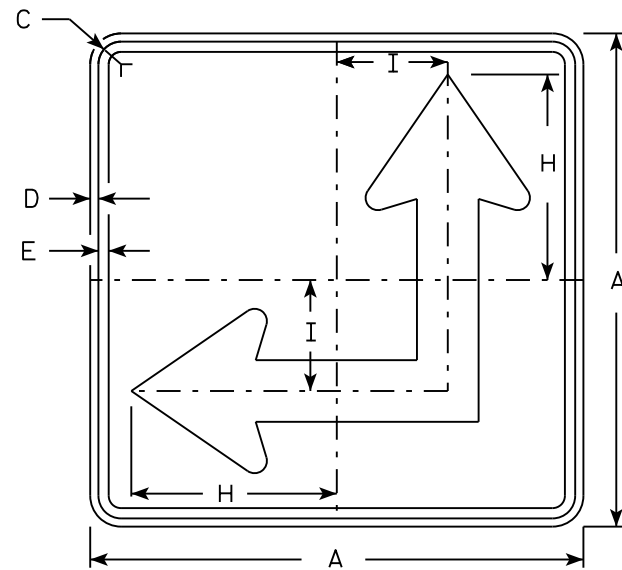
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

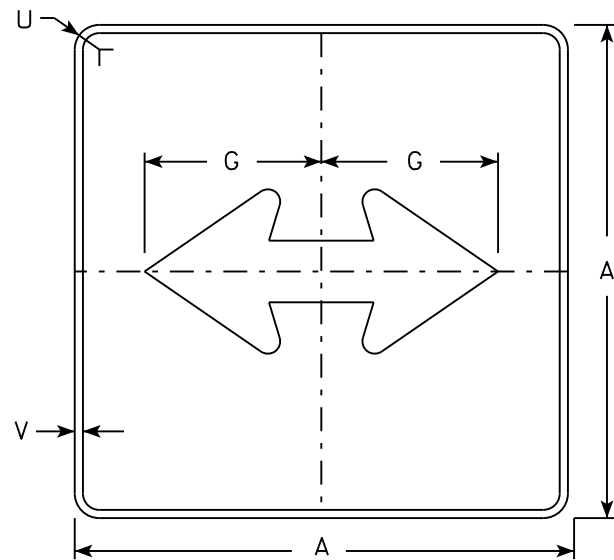
DATE 10/15/15 PLATE NO. M6-1.15



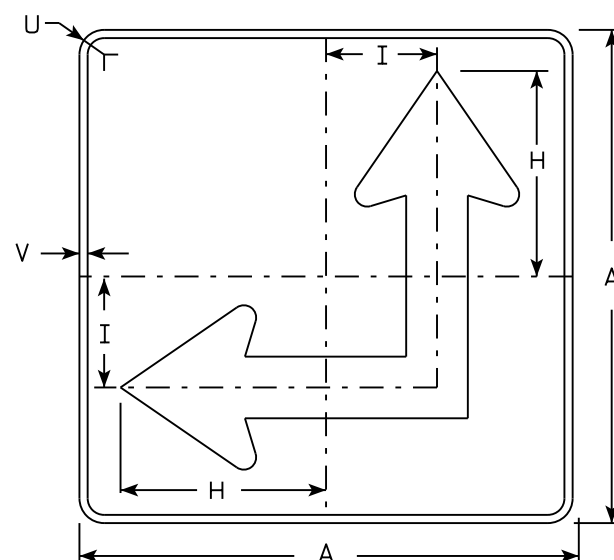
M6-4
MM6-4
M06-4
MP6-4



M6-6
MM6-6
M06-6
MP6-6



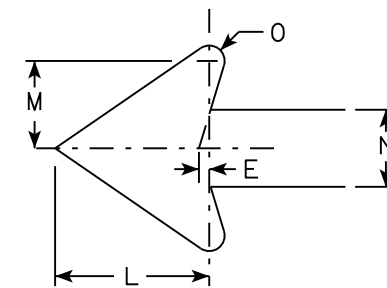
MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6

NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See Note 4
Message - See Note 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.
- M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
M06-4 and M06-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
- M6-6R same as M6-6L except arrow points ahead and right.



7

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|---|-------|-----|-----|---|--------|--------|-------|---|---|-------|-------|-------|-----|---|---|---|---|---|-------|-----|---|---|---|---|--------------|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 21 | | 1 1/8 | 3/8 | 3/8 | | 7 1/2 | 8 3/4 | 4 1/4 | | | 5 1/4 | 3 | 2 5/8 | 1/2 | | | | | | 1 1/2 | 1/2 | | | | | 3.06 |
| 3 | 30 | | 1 3/8 | 1/2 | 5/8 | | 10 3/4 | 12 1/2 | 6 3/4 | | | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | 1 7/8 | 1/2 | | | | | 6.25 |
| 4 | 30 | | 1 3/8 | 1/2 | 5/8 | | 10 3/4 | 12 1/2 | 6 3/4 | | | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | 1 7/8 | 1/2 | | | | | 6.25 |
| 5 | 30 | | 1 3/8 | 1/2 | 5/8 | | 10 3/4 | 12 1/2 | 6 3/4 | | | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 | | | | | | 1 7/8 | 1/2 | | | | | 6.25 |

STANDARD SIGN
M6-4 & M6-6
SERIES

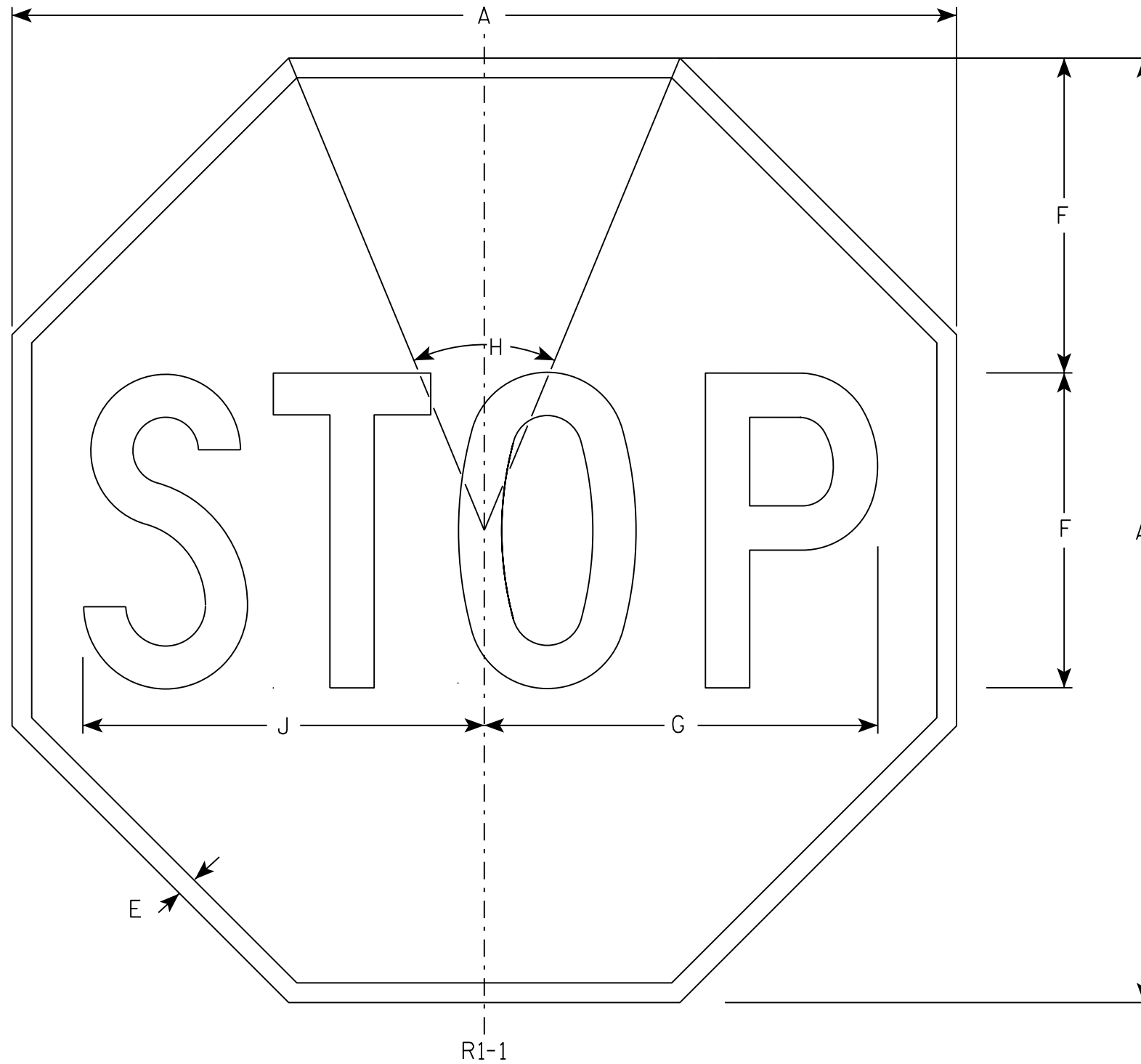
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10

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 sq. ft. |
|------|----|---|---|---|-----|----|--------|-----|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1 | 30 | | | | 5/8 | 10 | 12 1/2 | 45° | | 12 3/4 | | | | | | | | | | | | | | | | | 5.18 |
| 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 |

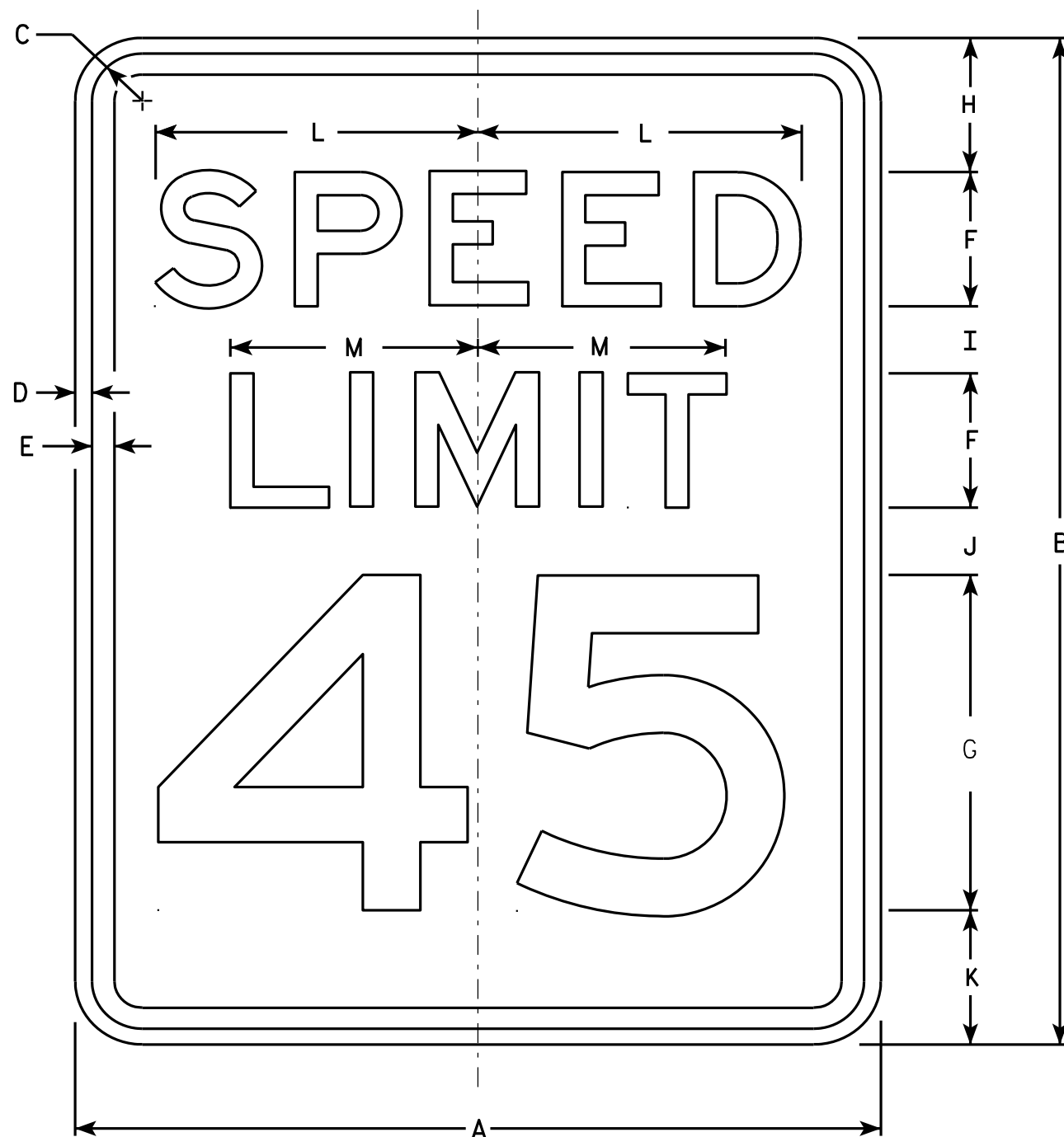
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



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.

7

7

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area 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 |

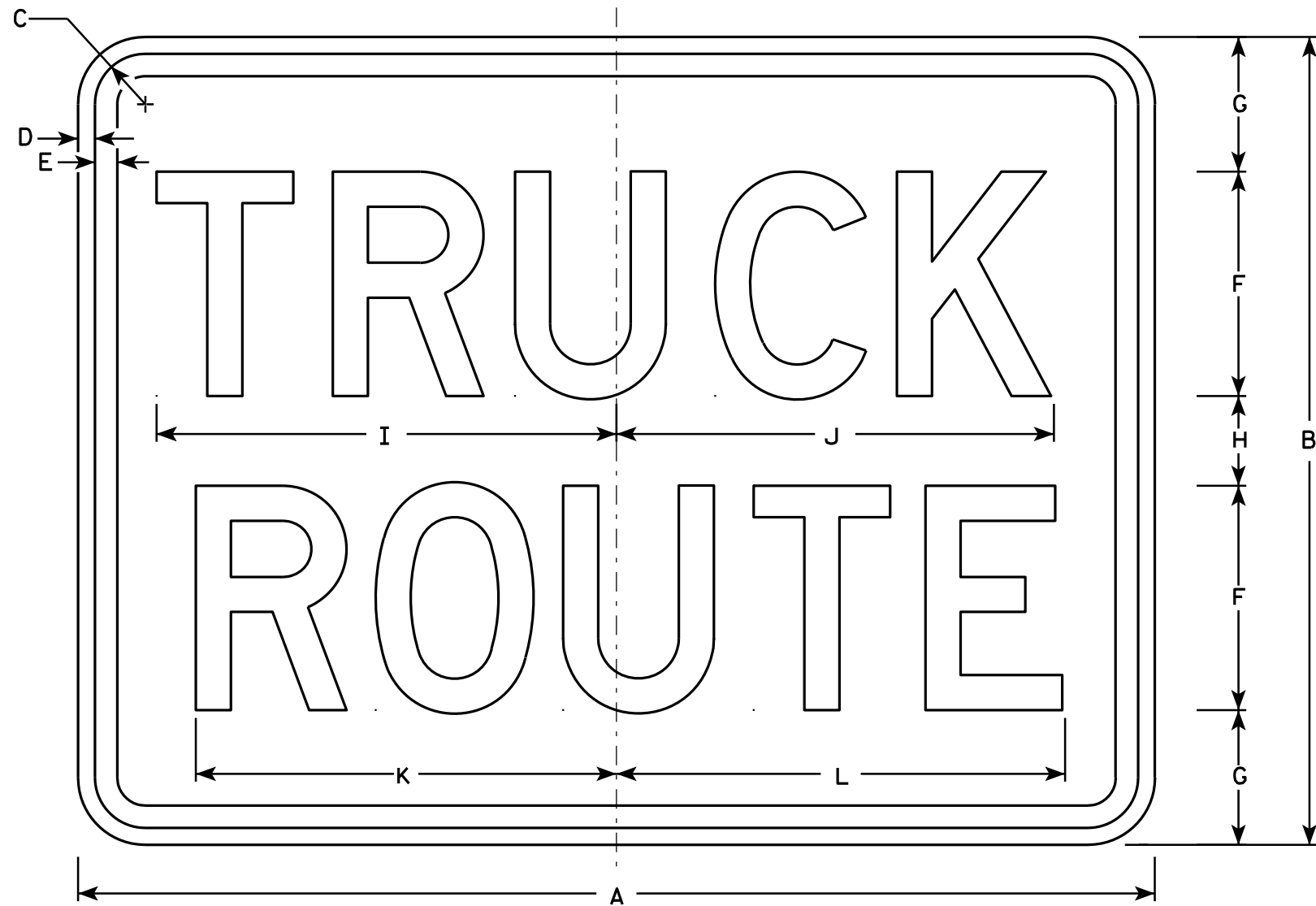
STANDARD SIGN
R2-1

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: _____ E



R14-1

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 - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

7

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|----|-------|-----|-----|---|---|---|--------|--------|--------|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 24 | 18 | 1 1/8 | 3/8 | 1/2 | 5 | 3 | 2 | 10 1/4 | 9 3/4 | 9 3/8 | 10 | | | | | | | | | | | | | | | 3.0 |
| 2 | 24 | 18 | 1 1/8 | 3/8 | 1/2 | 5 | 3 | 2 | 10 1/4 | 9 3/4 | 9 3/8 | 10 | | | | | | | | | | | | | | | 3.0 |
| 3 | 30 | 24 | 1 1/8 | 3/8 | 1/2 | 6 | 4 | 4 | 12 1/4 | 11 3/4 | 11 1/4 | 12 | | | | | | | | | | | | | | | 5.0 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
R14-1

WISCONSIN DEPT OF TRANSPORTATION

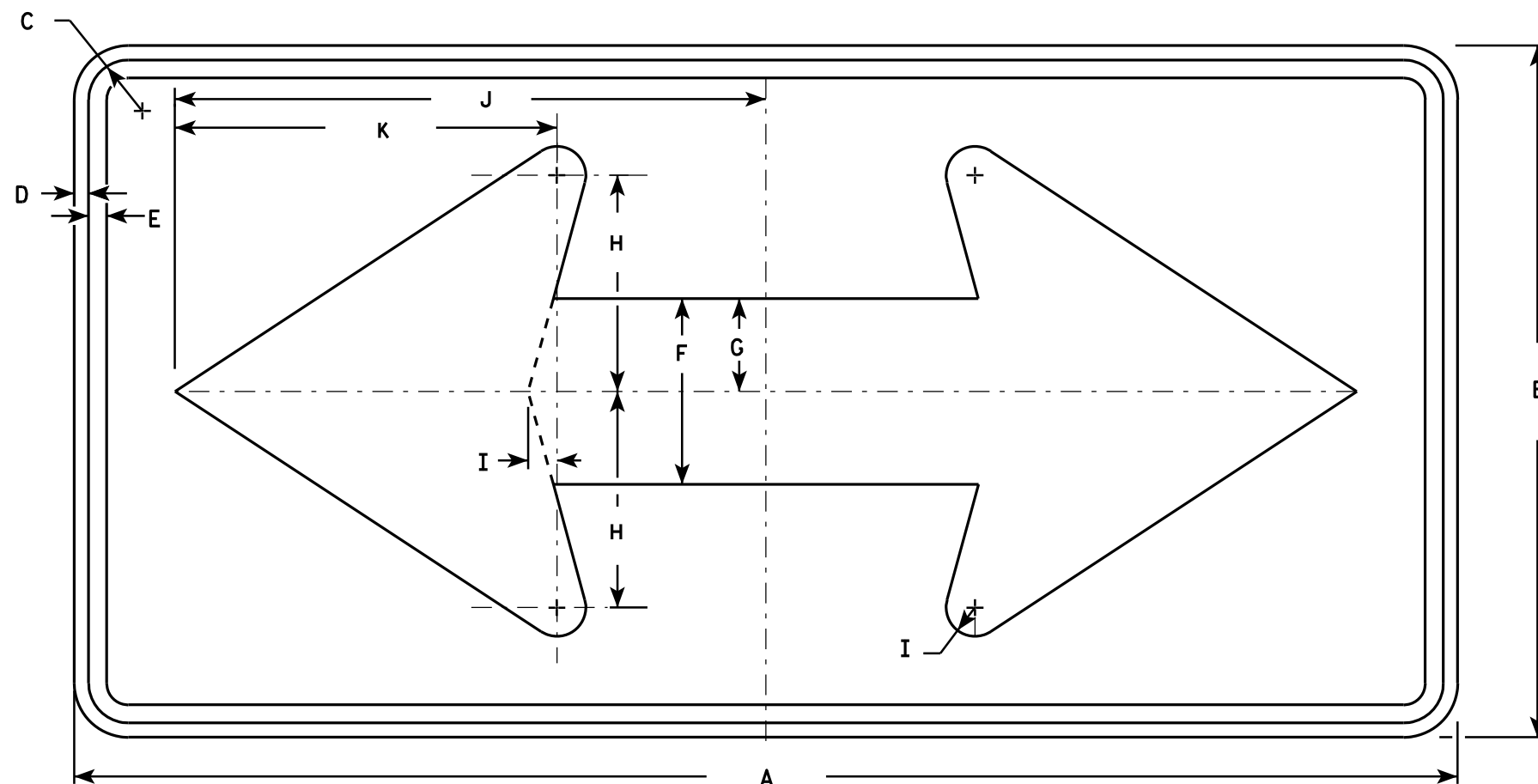
APPROVED *Matthew R. Raush*
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R14-1.6

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

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



W1-7

7

7

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|----|-------|-----|-----|-------|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1 | 36 | 18 | 1 1/8 | 3/8 | 1/2 | 5 | 2 1/2 | 5 3/4 | 3/4 | 15 5/8 | 10 1/8 | | | | | | | | | | | | | | | | 4.5 |
| 2S | 48 | 24 | 1 3/8 | 1/2 | 5/8 | 6 1/2 | 3 1/4 | 7 1/2 | 1 | 20 1/2 | 13 1/4 | | | | | | | | | | | | | | | | 8.0 |
| 2M | 48 | 24 | 1 3/8 | 1/2 | 5/8 | 6 1/2 | 3 1/4 | 7 1/2 | 1 | 20 1/2 | 13 1/4 | | | | | | | | | | | | | | | | 8.0 |
| 3 | 60 | 30 | 1 3/8 | 1/2 | 5/8 | 8 | 4 | 9 1/4 | 1 1/4 | 25 3/8 | 16 1/4 | | | | | | | | | | | | | | | | 12.5 |
| 4 | 60 | 30 | 1 3/8 | 1/2 | 5/8 | 8 | 4 | 9 1/4 | 1 1/4 | 25 3/8 | 16 1/4 | | | | | | | | | | | | | | | | 12.5 |
| 5 | 96 | 48 | 2 1/4 | 3/4 | 1 | 13 | 6 1/2 | 15 | 2 | 41 | 26 1/2 | | | | | | | | | | | | | | | | 32.0 |

STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

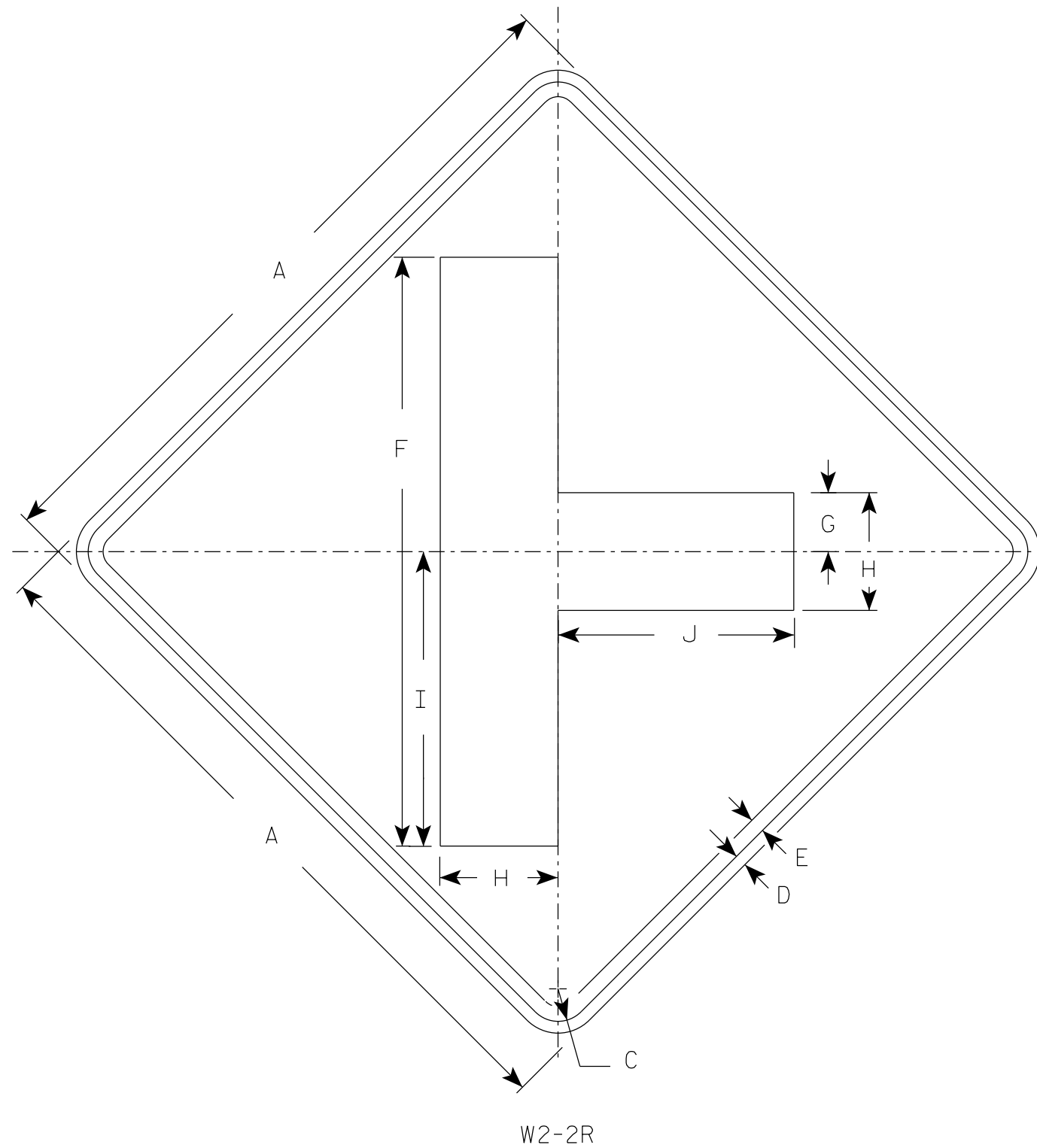
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-7.7

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. W2-2L same as W2-2R but is rotated 180° when mounted.



7

7

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|---|-------|-----|-----|----|-------|---|--------|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1 | 24 | | 1 1/8 | 3/8 | 1/2 | 20 | 2 | 4 | 10 | 8 | | | | | | | | | | | | | | | | | 4.0 |
| 2S | 30 | | 1 3/8 | 1/2 | 5/8 | 25 | 2 1/2 | 5 | 12 1/2 | 10 | | | | | | | | | | | | | | | | | 6.25 |
| 2M | 30 | | 1 3/8 | 1/2 | 5/8 | 25 | 2 1/2 | 5 | 12 1/2 | 10 | | | | | | | | | | | | | | | | | 6.25 |
| 3 | 36 | | 1 5/8 | 5/8 | 3/4 | 30 | 3 | 6 | 15 | 12 | | | | | | | | | | | | | | | | | 9.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | 40 | 4 | 8 | 20 | 16 | | | | | | | | | | | | | | | | | 16.0 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

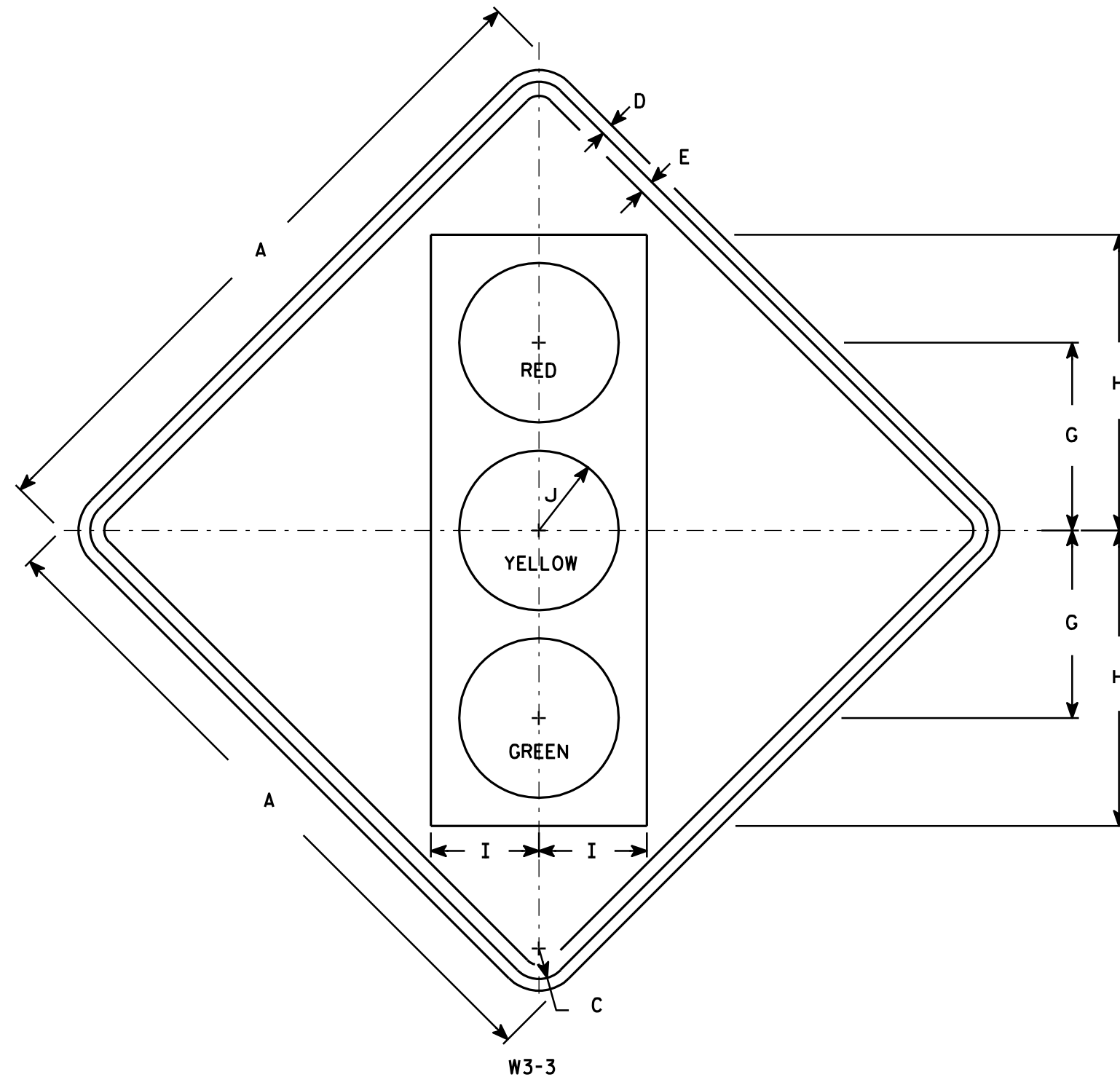
STANDARD SIGN
W2-2 L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 11/18/2021 PLATE NO. W2-2.7

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **E**



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - See Note 4
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.
4. Symbol and border are non-reflective black.
Top circle - Type H ReflectORIZED Red
Center circle - Same as background
Bottom circle - Type H ReflectORIZED Green

7

7

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area sq. ft. |
|------|----|---|-------|-----|-----|---|--------|--------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1 | 30 | | 1 3/8 | 1/2 | 5/8 | | 8 3/4 | 13 3/4 | 5 | 3 3/4 | | | | | | | | | | | | | | | | | 6.25 |
| 2S | 36 | | 1 5/8 | 5/8 | 3/4 | | 10 | 15 3/4 | 5 3/4 | 4 1/4 | | | | | | | | | | | | | | | | | 9.0 |
| 2M | 36 | | 1 5/8 | 5/8 | 3/4 | | 10 | 15 3/4 | 5 3/4 | 4 1/4 | | | | | | | | | | | | | | | | | 9.0 |
| 3 | 36 | | 1 5/8 | 5/8 | 3/4 | | 10 | 15 3/4 | 5 3/4 | 4 1/4 | | | | | | | | | | | | | | | | | 9.0 |
| 4 | 48 | | 2 1/4 | 3/4 | 1 | | 12 1/2 | 20 | 7 1/2 | 5 | | | | | | | | | | | | | | | | | 16.0 |
| 5 | 48 | | 2 1/4 | 3/4 | 1 | | 12 1/2 | 20 | 7 1/2 | 5 | | | | | | | | | | | | | | | | | 16.0 |

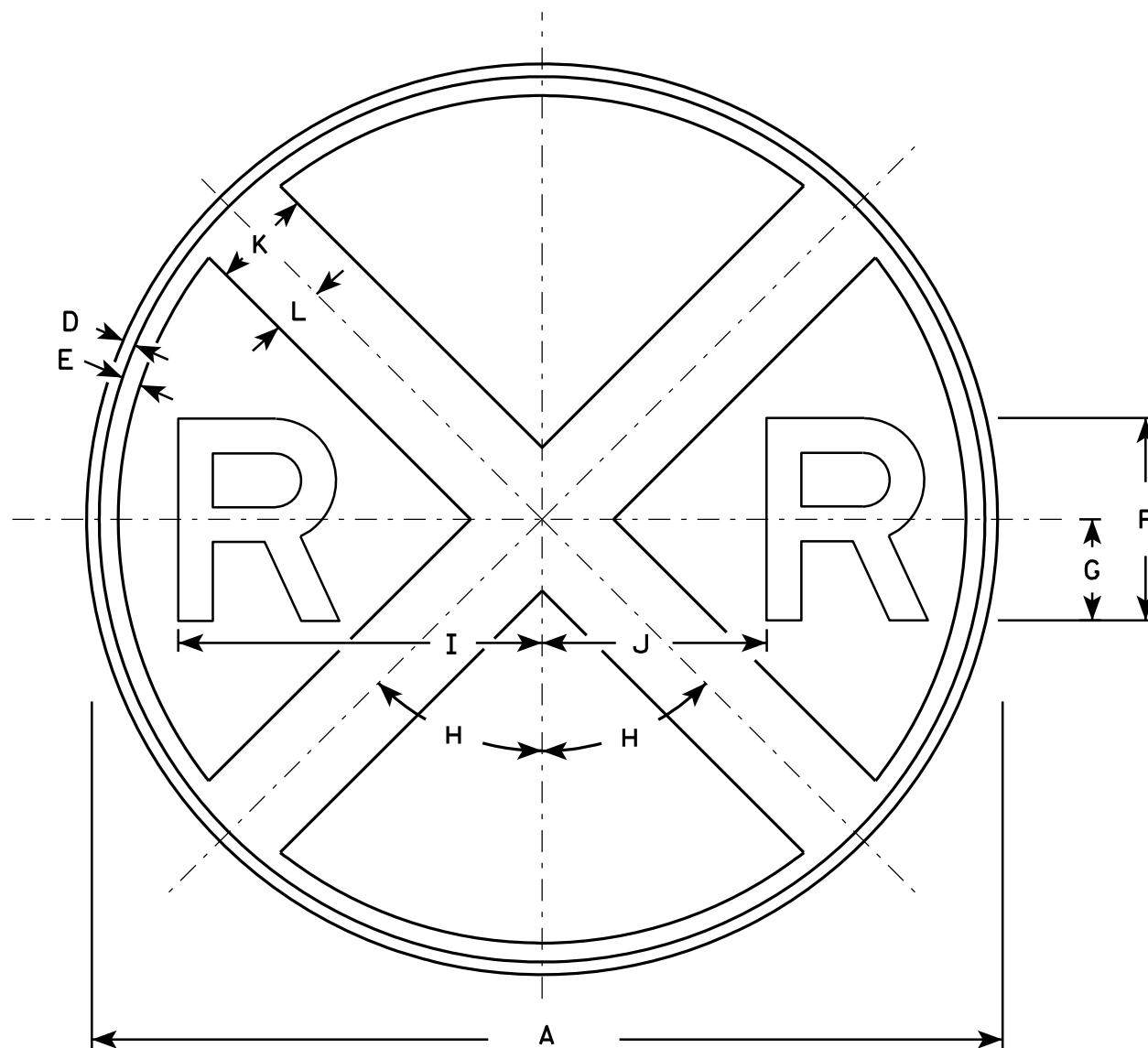
STANDARD SIGN
W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-3.11

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ **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

7

7

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area 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 | | | | | | | | | | | | | | | 12.57 |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
W10-1

WISCONSIN DEPT OF TRANSPORTATION

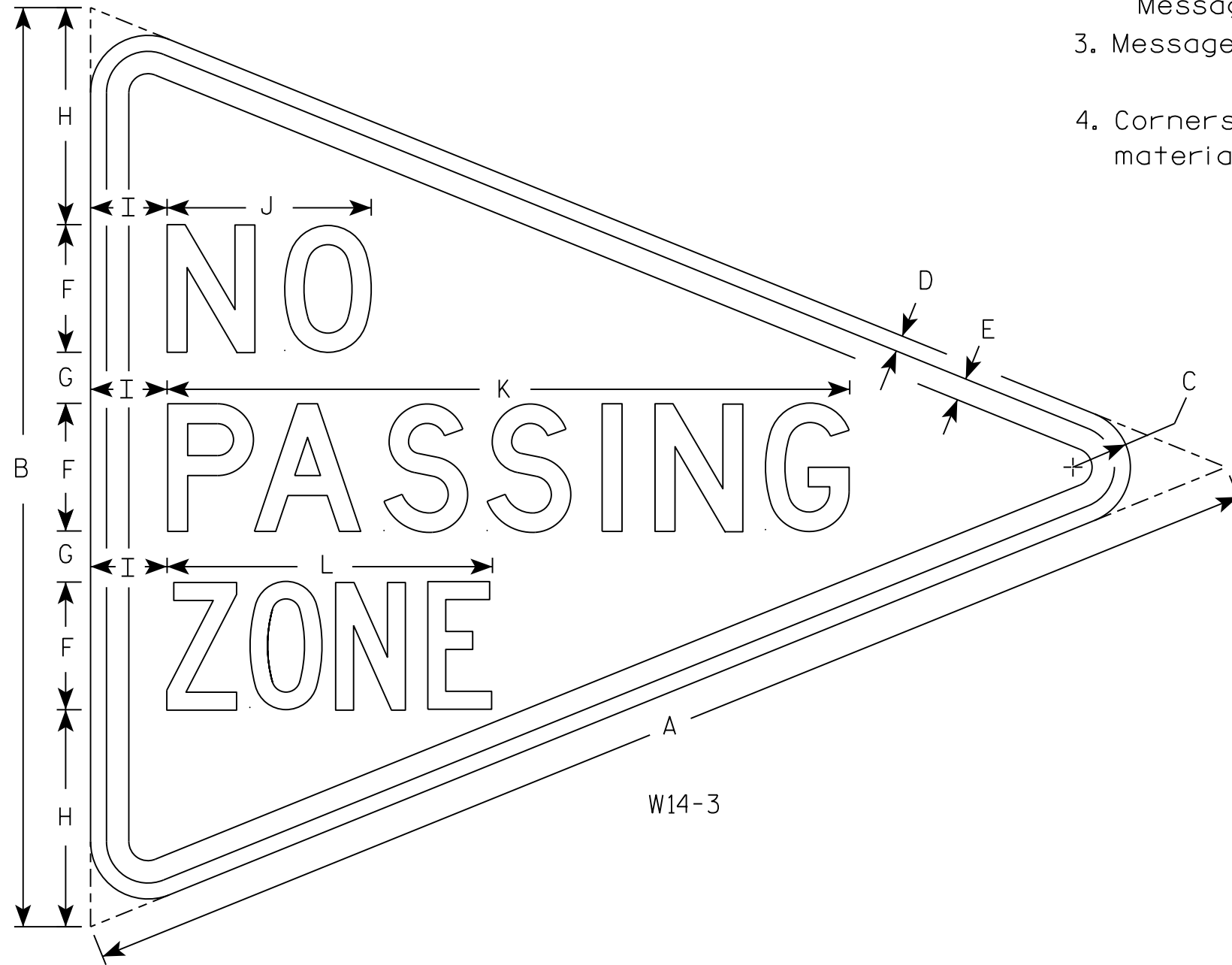
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W10-1.8

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. Message Series - Lines 1 and 2 are Series D.
Line 3 is series C.
4. Corners and borders shall be rounded on all base materials for this sign.



7

7

| SIZE | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area 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 | | | | | | | | | | | | | | | 5.56 |
| 2M | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

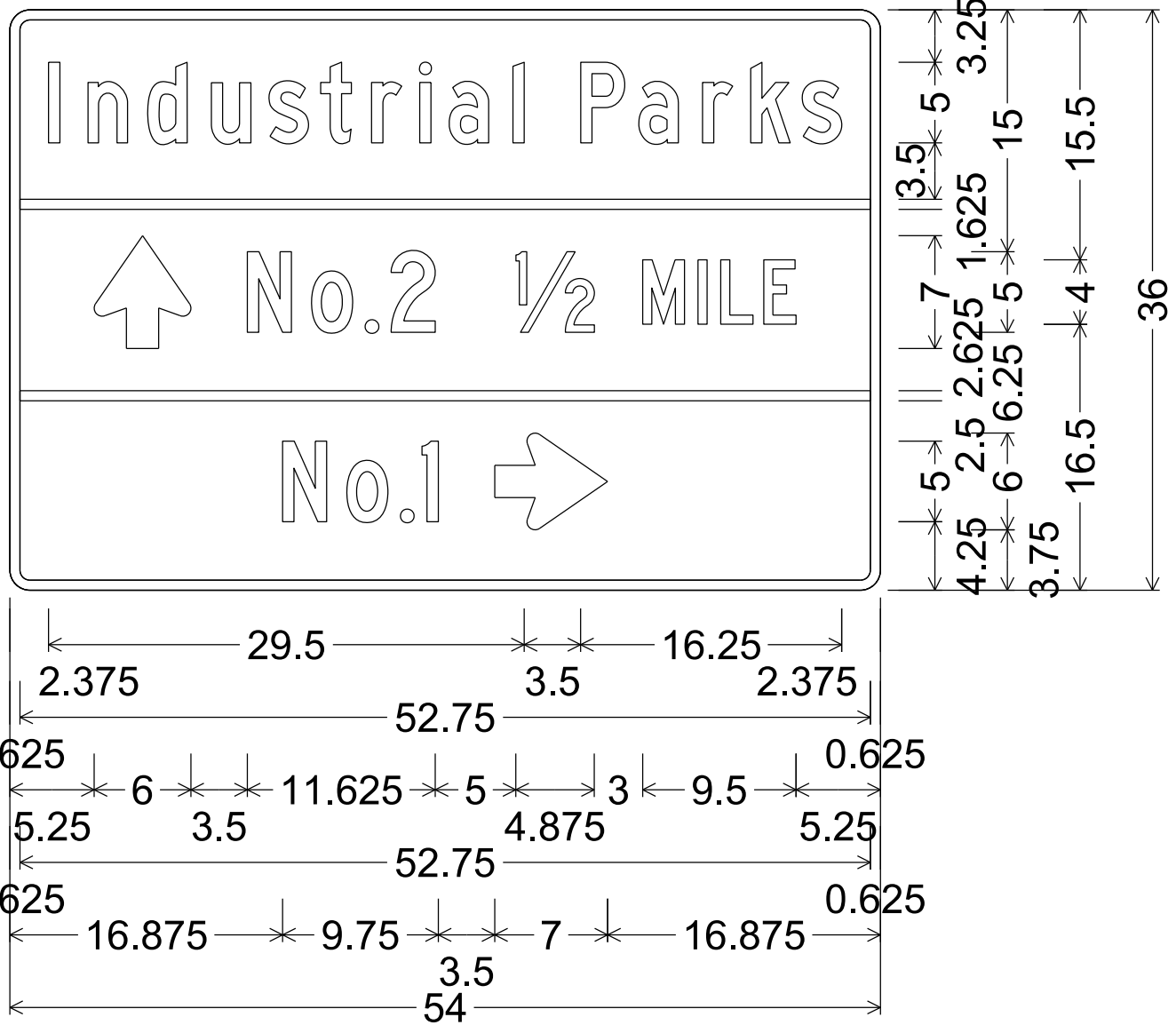
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
 Background - Green
 Message - White
3. Message Series - C



SP; 1.250" Radius, 0.625" Border

7

7

CTH 0 STA 99+60 TO STA 108+80

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---------|-----------|--|------|-----------------------------------|--|--------|---------------------|---------------|---------------|
| | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | EXPANDED FILL | MASS ORDINATE |
| | | | | NOTE 1 | NOTE 2 | NOTE 3 | NOTE 1 | 1.25 | NOTE 4 |
| 99+60 | 77.3 | 8.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100+00 | 72.6 | 8.0 | 2.0 | 111 | 12 | 1 | 111 | 2 | 97 |
| 100+16 | 72.9 | 8.0 | 2.2 | 43 | 5 | 1 | 154 | 3 | 134 |
| 100+50 | 79.8 | 8.0 | 7.9 | 96 | 10 | 6 | 250 | 11 | 212 |
| 101+00 | 80.9 | 8.0 | 5.2 | 149 | 15 | 12 | 399 | 27 | 331 |
| 101+50 | 79.8 | 8.0 | 7.2 | 149 | 15 | 11 | 548 | 41 | 451 |
| 102+00 | 80.7 | 8.0 | 0.2 | 149 | 15 | 7 | 696 | 49 | 576 |
| 102+50 | 91.9 | 8.0 | 1.6 | 160 | 15 | 2 | 856 | 52 | 719 |
| 103+00 | 98.8 | 8.0 | 5.2 | 177 | 15 | 6 | 1033 | 59 | 873 |
| 103+50 | 102.5 | 8.0 | 1.6 | 186 | 15 | 6 | 1219 | 67 | 1036 |
| 104+00 | 93.3 | 8.0 | 9.8 | 181 | 15 | 11 | 1401 | 80 | 1190 |
| 104+28 | 88.9 | 8.0 | 15.4 | 94 | 8 | 13 | 1495 | 97 | 1260 |
| 104+37 | 87.5 | 8.0 | 13.9 | 29 | 3 | 5 | 1524 | 103 | 1280 |
| 104+50 | 85.3 | 8.0 | 15.5 | 42 | 4 | 7 | 1566 | 112 | 1309 |
| 105+00 | 70.5 | 8.0 | 18.2 | 144 | 15 | 31 | 1710 | 151 | 1400 |
| 105+40 | 66.2 | 8.0 | 4.9 | 101 | 12 | 17 | 1812 | 172 | 1468 |
| 105+53 | 66.2 | 8.0 | 2.9 | 32 | 4 | 2 | 1843 | 174 | 1493 |
| 106+00 | 83.7 | 8.0 | 3.2 | 130 | 14 | 5 | 1974 | 181 | 1603 |
| 106+34 | 88.8 | 8.0 | 11.8 | 109 | 10 | 9 | 2083 | 193 | 1690 |
| 106+50 | 89.7 | 8.0 | 9.8 | 53 | 5 | 6 | 2135 | 201 | 1730 |
| 107+00 | 84.7 | 8.0 | 0.0 | 161 | 15 | 9 | 2297 | 212 | 1865 |
| 107+50 | 81.7 | 8.0 | 0.0 | 154 | 15 | 0 | 2451 | 212 | 2005 |
| 108+00 | 79.4 | 8.0 | 13.0 | 149 | 15 | 12 | 2600 | 227 | 2124 |
| 108+40 | 91.6 | 8.0 | 0.0 | 127 | 12 | 10 | 2727 | 239 | 2227 |
| 108+40 | 36.7 | 8.0 | 0.0 | 0 | 0 | 0 | 2727 | 239 | 2227 |
| 108+80 | 36.7 | 8.0 | 0.0 | 54 | 12 | 0 | 2781 | 239 | 2269 |
| | | | | 2781 | 273 | 191 | | | |

NOTES:

- 1 - CUT (SALVAGE/UNUSABLE MATERIAL INCLUDED.)
- 2 - SALVAGE/UNUSABLE PAVEMENT MATERIAL. (THIS DOES NOT SHOW UP IN THE CROSS SECTIONS.)
- 3 - FILL (DOES NOT INCLUDE UNUSABLE PAVEMENT VOLUME.)
- 4 - THE MASS ORDINATE + OF - QUANTITIES CALCULATED. PLUS QUANTITIES AS EXCESS OF MATERIAL. MINUS A SHORTAGE OF MATERIAL

NO MARSH OR EBS IS ANTICIPATED.

CTH O STA 112+65 TO STA 136+64

| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---------|-----------|-------------------------------------|------|-----------------------------------|-------------------------------------|--------|---------------------|---------------|--------------|
| | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | EXPANDED FILL | MASS ORDNATE |
| | | | | NOTE 1 | NOTE 2 | NOTE 3 | 1.00 NOTE 1 | 1.25 | NOTE 4 |
| 112+65 | 36.7 | 8.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 113+10 | 36.7 | 8.0 | 0.0 | 61 | 13 | 0 | 61 | 0 | 48 |
| 113+10 | 83.3 | 8.0 | 0.0 | 0 | 0 | 0 | 61 | 0 | 48 |
| 113+50 | 69.0 | 8.0 | 65.5 | 113 | 12 | 49 | 174 | 61 | 88 |
| 114+00 | 74.5 | 8.0 | 32.5 | 133 | 15 | 91 | 307 | 174 | 93 |
| 114+50 | 84.5 | 8.0 | 15.2 | 147 | 15 | 44 | 454 | 229 | 170 |
| 115+00 | 97.7 | 8.0 | 0.0 | 169 | 15 | 14 | 623 | 247 | 306 |
| 115+50 | 101.8 | 8.0 | 1.6 | 185 | 15 | 1 | 808 | 249 | 474 |
| 116+00 | 121.8 | 8.0 | 0.0 | 207 | 15 | 1 | 1015 | 251 | 665 |
| 116+50 | 137.1 | 8.0 | 1.3 | 240 | 15 | 1 | 1254 | 252 | 888 |
| 117+00 | 137.2 | 8.0 | 1.2 | 254 | 15 | 2 | 1508 | 255 | 1124 |
| 117+50 | 153.3 | 8.0 | 6.1 | 269 | 15 | 7 | 1777 | 263 | 1370 |
| 118+00 | 136.6 | 8.0 | 20.4 | 268 | 15 | 25 | 2046 | 294 | 1593 |
| 118+50 | 130.1 | 8.0 | 41.8 | 247 | 15 | 58 | 2293 | 366 | 1753 |
| 119+00 | 133.8 | 8.0 | 19.7 | 244 | 15 | 57 | 2537 | 437 | 1912 |
| 119+50 | 120.9 | 8.0 | 17.4 | 236 | 15 | 34 | 2773 | 480 | 2090 |
| 120+00 | 106.7 | 8.0 | 10.1 | 211 | 15 | 25 | 2984 | 512 | 2254 |
| 120+50 | 97.8 | 8.0 | 15.1 | 189 | 15 | 23 | 3173 | 541 | 2399 |
| 121+00 | 87.5 | 8.0 | 21.5 | 172 | 15 | 34 | 3345 | 584 | 2514 |
| 121+50 | 90.3 | 8.0 | 11.3 | 165 | 15 | 30 | 3509 | 622 | 2625 |
| 122+00 | 92.0 | 8.0 | 5.5 | 169 | 15 | 16 | 3678 | 641 | 2760 |
| 122+50 | 95.6 | 8.0 | 3.7 | 174 | 15 | 9 | 3852 | 652 | 2908 |
| 123+00 | 124.9 | 8.0 | 0.0 | 204 | 15 | 3 | 4056 | 656 | 3093 |
| 123+50 | 142.8 | 8.0 | 0.0 | 248 | 15 | 0 | 4304 | 656 | 3326 |
| 124+00 | 138.4 | 8.0 | 0.0 | 260 | 15 | 0 | 4564 | 656 | 3572 |
| 124+50 | 131.1 | 8.0 | 0.0 | 250 | 15 | 0 | 4814 | 656 | 3807 |
| 125+00 | 119.3 | 8.0 | 17.8 | 232 | 15 | 16 | 5045 | 677 | 4003 |
| 125+29 | 124.2 | 8.0 | 0.0 | 131 | 9 | 10 | 5176 | 688 | 4113 |
| 125+50 | 104.3 | 8.0 | 18.8 | 89 | 6 | 7 | 5265 | 698 | 4187 |
| 126+00 | 85.9 | 8.0 | 28.3 | 176 | 15 | 44 | 5441 | 752 | 4294 |
| 126+50 | 72.5 | 8.0 | 20.1 | 147 | 15 | 45 | 5588 | 808 | 4369 |
| 127+00 | 91.9 | 8.0 | 21.8 | 152 | 15 | 39 | 5740 | 857 | 4458 |
| 127+50 | 64.2 | 9.3 | 12.4 | 145 | 16 | 32 | 5885 | 896 | 4547 |
| 128+00 | 62.5 | 9.3 | 15.8 | 117 | 17 | 26 | 6002 | 929 | 4615 |
| 128+50 | 91.0 | 9.3 | 15.6 | 142 | 17 | 29 | 6144 | 965 | 4703 |
| 129+00 | 85.8 | 9.3 | 16.5 | 164 | 17 | 30 | 6308 | 1002 | 4813 |
| 129+50 | 79.4 | 9.3 | 27.3 | 153 | 17 | 41 | 6461 | 1053 | 4898 |
| 130+00 | 85.1 | 9.3 | 21.1 | 152 | 17 | 45 | 6613 | 1109 | 4977 |
| 130+20 | 88.6 | 9.3 | 6.0 | 64 | 7 | 10 | 6677 | 1122 | 5022 |
| 130+50 | 91.7 | 9.3 | 11.0 | 100 | 10 | 9 | 6778 | 1133 | 5100 |
| 130+87 | 103.7 | 9.3 | 11.2 | 134 | 13 | 15 | 6911 | 1152 | 5202 |
| 131+00 | 105.8 | 9.3 | 9.6 | 50 | 4 | 5 | 6962 | 1159 | 5241 |
| 131+50 | 117.1 | 9.3 | 5.6 | 206 | 17 | 14 | 7168 | 1176 | 5413 |
| 132+00 | 134.6 | 9.3 | 5.1 | 233 | 17 | 10 | 7401 | 1189 | 5616 |
| 132+50 | 157.7 | 9.3 | 0.0 | 271 | 17 | 5 | 7672 | 1195 | 5864 |
| 133+00 | 189.0 | 9.3 | 0.0 | 321 | 17 | 0 | 7993 | 1195 | 6168 |
| 133+50 | 190.8 | 9.3 | 0.6 | 352 | 17 | 1 | 8345 | 1195 | 6502 |
| 134+00 | 194.4 | 9.3 | 0.0 | 357 | 17 | 1 | 8701 | 1196 | 6840 |
| 134+50 | 189.5 | 9.3 | 0.0 | 355 | 17 | 0 | 9057 | 1196 | 7179 |
| 135+00 | 157.6 | 9.3 | 0.0 | 321 | 17 | 0 | 9378 | 1196 | 7483 |
| 135+50 | 121.9 | 9.3 | 18.7 | 259 | 17 | 17 | 9637 | 1218 | 7703 |
| 136+00 | 104.7 | 9.3 | 0.0 | 210 | 17 | 17 | 9847 | 1239 | 7874 |
| 136+50 | 107.7 | 9.3 | 0.0 | 197 | 17 | 0 | 10043 | 1239 | 8053 |
| 136+64 | 85.0 | 9.3 | 7.0 | 50 | 5 | 2 | 10093 | 1242 | 8096 |
| | | | | 10093 | 756 | 993 | | | |

9

9

PROJECT NO: 8888-08-76

HWY: CTH O

COUNTY: TAYLOR

EARTHWORK QUANTITIES

SHEET

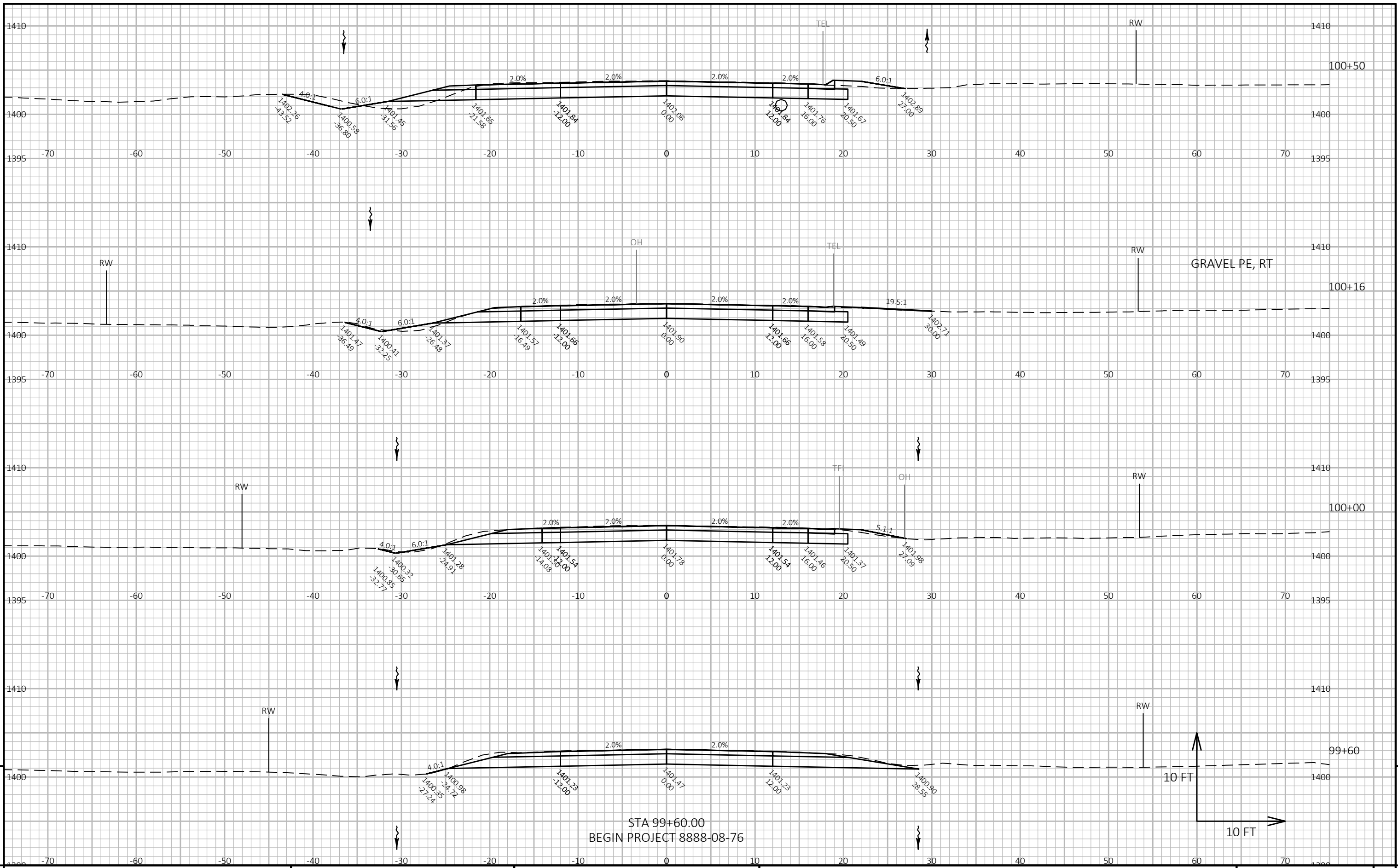
E

CTH O STA 136+73 TO STA 153+12

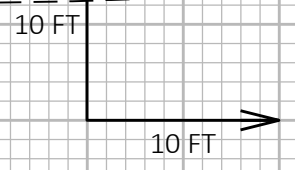
| STATION | AREA (SF) | | | INCREMENTAL VOL (CY) (UNADJUSTED) | | | CUMULATIVE VOL (CY) | | |
|---------|-----------|-------------------------------------|------|-----------------------------------|-------------------------------------|--------|---------------------|---------------|--------------|
| | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | SALVAGED/UNUSABLE PAVEMENT MATERIAL | FILL | CUT | EXPANDED FILL | MASS ORDNATE |
| | | | | NOTE 1 | NOTE 2 | NOTE 3 | 1.00 | 1.25 | NOTE 4 |
| | | | | | | | NOTE 1 | | |
| 136+73 | 85.0 | 9.3 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 137+00 | 90.1 | 9.3 | 7.0 | 88 | 9 | 7 | 88 | 9 | 70 |
| 137+03 | 88.6 | 9.3 | 6.3 | 10 | 1 | 1 | 97 | 10 | 77 |
| 137+50 | 85.8 | 9.3 | 35.1 | 152 | 16 | 36 | 249 | 55 | 168 |
| 137+62 | 80.1 | 9.3 | 38.9 | 37 | 4 | 16 | 286 | 75 | 180 |
| 137+82 | 76.2 | 9.3 | 66.9 | 58 | 7 | 39 | 344 | 124 | 182 |
| 138+00 | 74.5 | 9.3 | 50.8 | 50 | 6 | 39 | 394 | 173 | 177 |
| 138+07 | 76.1 | 9.3 | 44.6 | 20 | 2 | 12 | 414 | 189 | 179 |
| 138+14 | 82.1 | 9.3 | 37.6 | 21 | 2 | 11 | 434 | 202 | 184 |
| 138+32 | 94.3 | 9.3 | 6.3 | 59 | 6 | 15 | 493 | 220 | 218 |
| 138+50 | 94.0 | 9.3 | 6.3 | 63 | 6 | 4 | 556 | 226 | 269 |
| 139+00 | 107.2 | 9.3 | 14.8 | 186 | 17 | 20 | 742 | 250 | 414 |
| 139+12 | 112.3 | 9.3 | 9.1 | 49 | 4 | 5 | 791 | 257 | 452 |
| 139+32 | 124.3 | 9.3 | 8.0 | 88 | 7 | 6 | 879 | 265 | 525 |
| 139+50 | 125.6 | 9.3 | 4.1 | 83 | 6 | 4 | 962 | 270 | 597 |
| 139+57 | 134.4 | 9.3 | 2.1 | 34 | 2 | 1 | 996 | 271 | 627 |
| 139+82 | 140.1 | 9.3 | 0.0 | 127 | 9 | 1 | 1123 | 272 | 744 |
| 140+00 | 122.1 | 9.3 | 0.0 | 87 | 6 | 0 | 1210 | 272 | 826 |
| 140+50 | 81.7 | 9.3 | 20.4 | 189 | 17 | 19 | 1399 | 295 | 973 |
| 141+00 | 82.4 | 9.3 | 13.0 | 152 | 17 | 31 | 1551 | 334 | 1069 |
| 141+50 | 127.0 | 9.3 | 0.0 | 194 | 17 | 12 | 1745 | 349 | 1231 |
| 141+63 | 129.0 | 9.3 | 0.0 | 62 | 4 | 0 | 1806 | 349 | 1288 |
| 141+88 | 106.6 | 9.3 | 0.0 | 109 | 9 | 0 | 1915 | 349 | 1389 |
| 142+00 | 98.8 | 9.3 | 2.2 | 46 | 4 | 0 | 1961 | 350 | 1430 |
| 142+13 | 92.8 | 9.3 | 6.3 | 46 | 4 | 2 | 2007 | 352 | 1469 |
| 142+33 | 78.9 | 9.3 | 9.5 | 64 | 7 | 6 | 2071 | 360 | 1518 |
| 142+38 | 78.1 | 9.3 | 9.9 | 15 | 2 | 2 | 2085 | 362 | 1529 |
| 142+50 | 73.0 | 9.3 | 12.0 | 34 | 4 | 5 | 2119 | 368 | 1552 |
| 142+63 | 70.7 | 9.3 | 15.9 | 35 | 4 | 7 | 2153 | 376 | 1574 |
| 142+83 | 70.8 | 9.3 | 9.9 | 52 | 7 | 10 | 2206 | 388 | 1607 |
| 143+00 | 69.5 | 9.3 | 7.4 | 44 | 6 | 5 | 2250 | 395 | 1639 |
| 143+32 | 55.5 | 9.3 | 8.3 | 74 | 11 | 9 | 2324 | 407 | 1690 |
| 143+50 | 50.3 | 9.3 | 5.3 | 35 | 6 | 5 | 2359 | 412 | 1714 |
| 143+82 | 52.0 | 9.3 | 1.8 | 61 | 11 | 4 | 2420 | 418 | 1758 |
| 144+00 | 54.5 | 9.3 | 0.4 | 36 | 6 | 1 | 2455 | 419 | 1786 |
| 144+50 | 71.1 | 9.3 | 0.0 | 116 | 17 | 0 | 2572 | 419 | 1885 |
| 145+00 | 80.1 | 9.3 | 0.0 | 140 | 17 | 0 | 2712 | 419 | 2008 |
| 145+50 | 93.1 | 9.3 | 0.0 | 160 | 17 | 0 | 2872 | 419 | 2151 |
| 146+00 | 61.8 | 9.3 | 0.0 | 143 | 17 | 0 | 3015 | 419 | 2277 |
| 146+50 | 65.6 | 9.3 | 0.0 | 118 | 17 | 0 | 3133 | 419 | 2378 |
| 147+00 | 83.6 | 9.3 | 1.9 | 138 | 17 | 2 | 3272 | 421 | 2497 |
| 147+25 | 70.1 | 9.3 | 3.2 | 71 | 9 | 2 | 3343 | 424 | 2556 |
| 147+50 | 65.9 | 9.3 | 11.5 | 63 | 9 | 7 | 3406 | 433 | 2602 |
| 148+00 | 69.2 | 9.3 | 35.7 | 125 | 17 | 44 | 3531 | 487 | 2655 |
| 148+50 | 71.5 | 9.3 | 30.8 | 130 | 17 | 62 | 3661 | 564 | 2691 |
| 149+00 | 77.6 | 9.3 | 24.8 | 138 | 17 | 51 | 3799 | 629 | 2748 |
| 149+50 | 82.3 | 9.3 | 0.0 | 148 | 17 | 23 | 3947 | 657 | 2850 |
| 149+61 | 79.3 | 9.3 | 0.0 | 33 | 4 | 0 | 3980 | 657 | 2879 |
| 150+00 | 71.3 | 9.3 | 12.2 | 109 | 13 | 9 | 4089 | 668 | 2963 |
| 150+50 | 72.6 | 9.3 | 18.7 | 133 | 17 | 29 | 4222 | 704 | 3044 |
| 151+00 | 88.0 | 9.3 | 19.1 | 149 | 17 | 35 | 4371 | 748 | 3131 |
| 151+50 | 60.0 | 9.3 | 22.8 | 137 | 17 | 39 | 4508 | 796 | 3203 |
| 152+00 | 72.7 | 9.3 | 18.9 | 123 | 17 | 39 | 4631 | 845 | 3260 |
| 152+50 | 84.0 | 9.3 | 21.1 | 145 | 17 | 37 | 4776 | 891 | 3342 |
| 152+81 | 92.1 | 9.3 | 14.4 | 101 | 11 | 20 | 4877 | 916 | 3407 |
| 153+00 | 106.6 | 9.3 | 10.1 | 70 | 7 | 9 | 4947 | 927 | 3459 |
| 153+12 | 113.4 | 9.3 | 5.6 | 49 | 4 | 3 | 4996 | 932 | 3500 |
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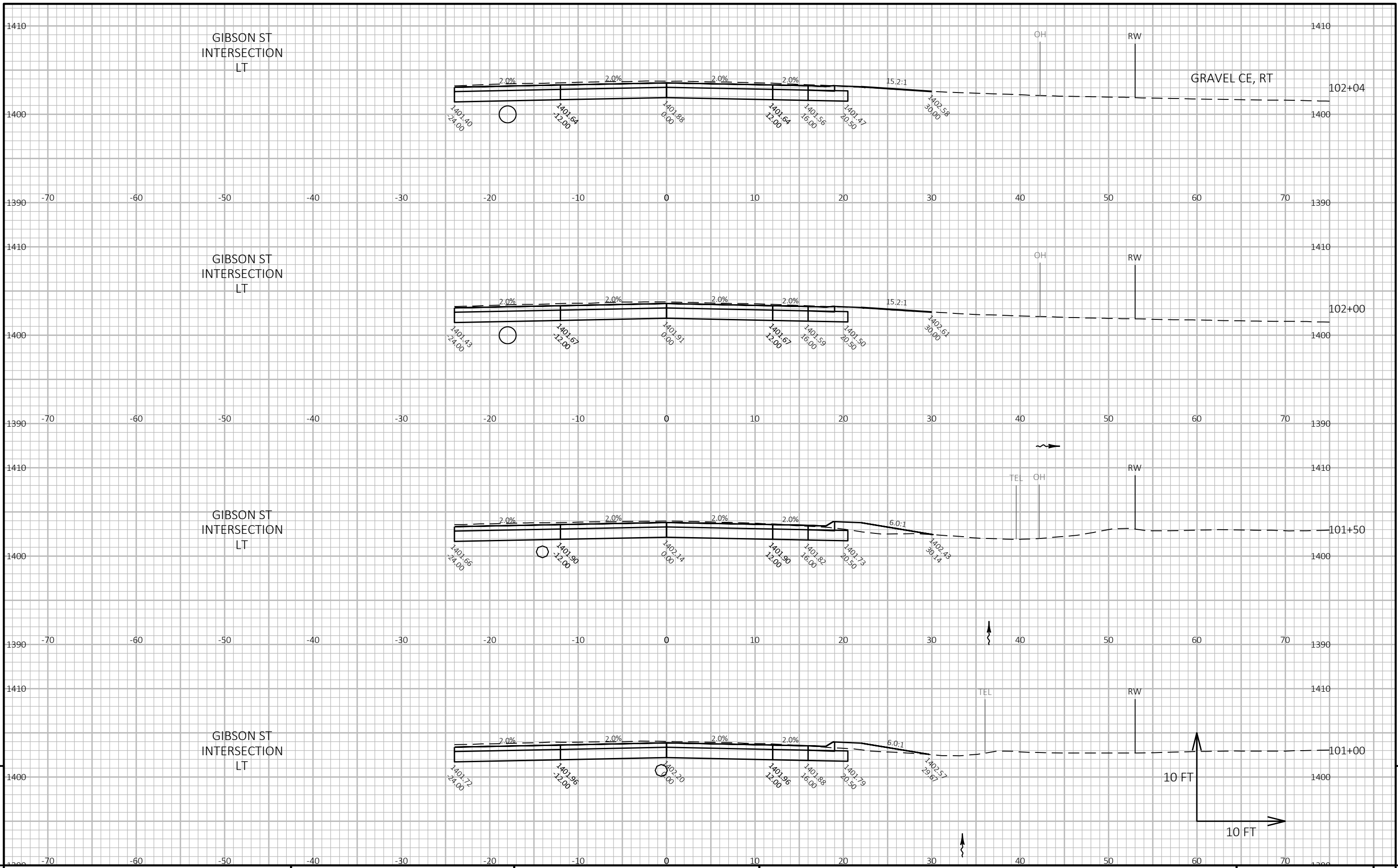
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 BEGIN PROJECT 8888-08-76





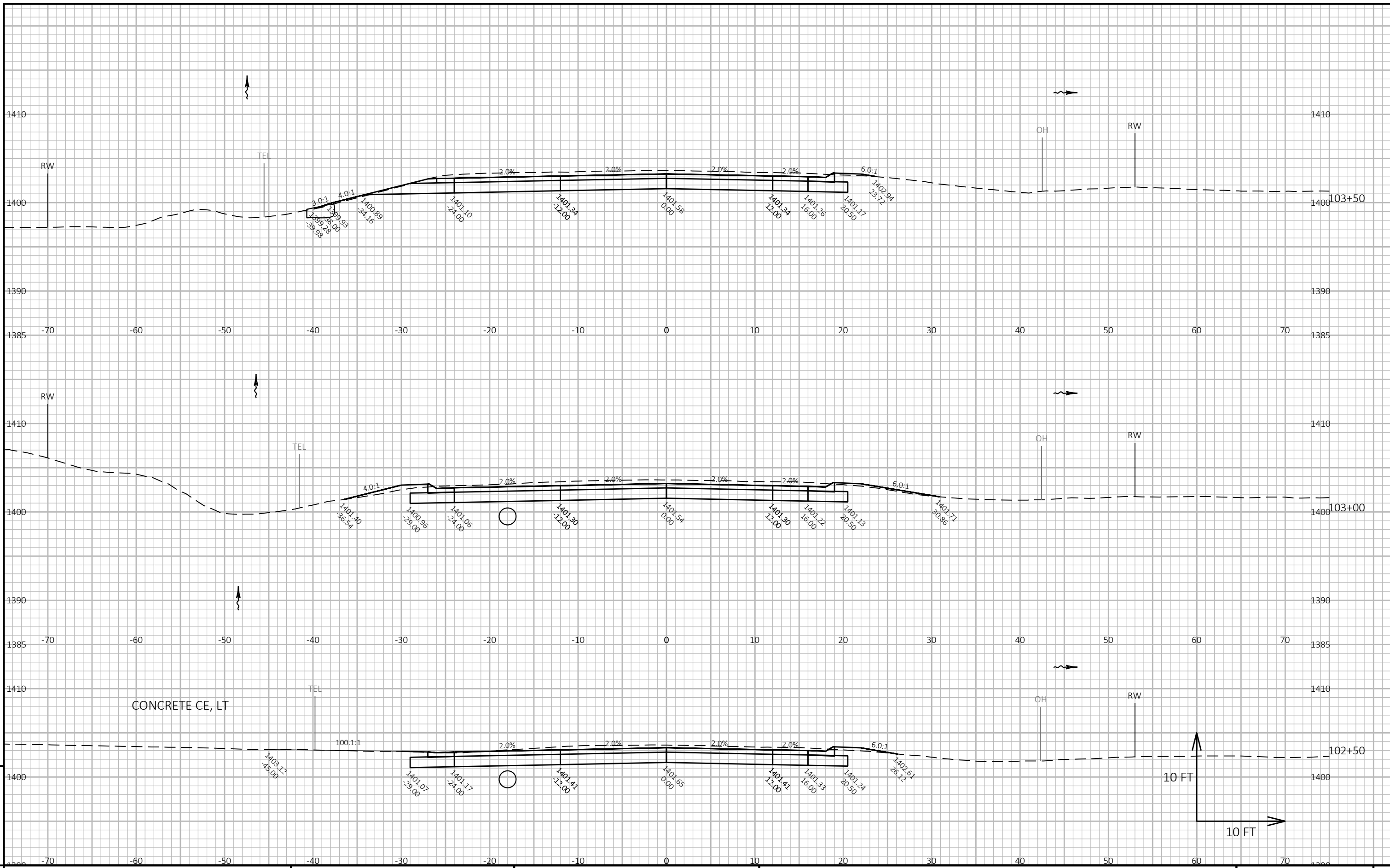
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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET E

FILE NAME : X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090101_XS.DWG PLOT DATE : 6/13/2022 11:18 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

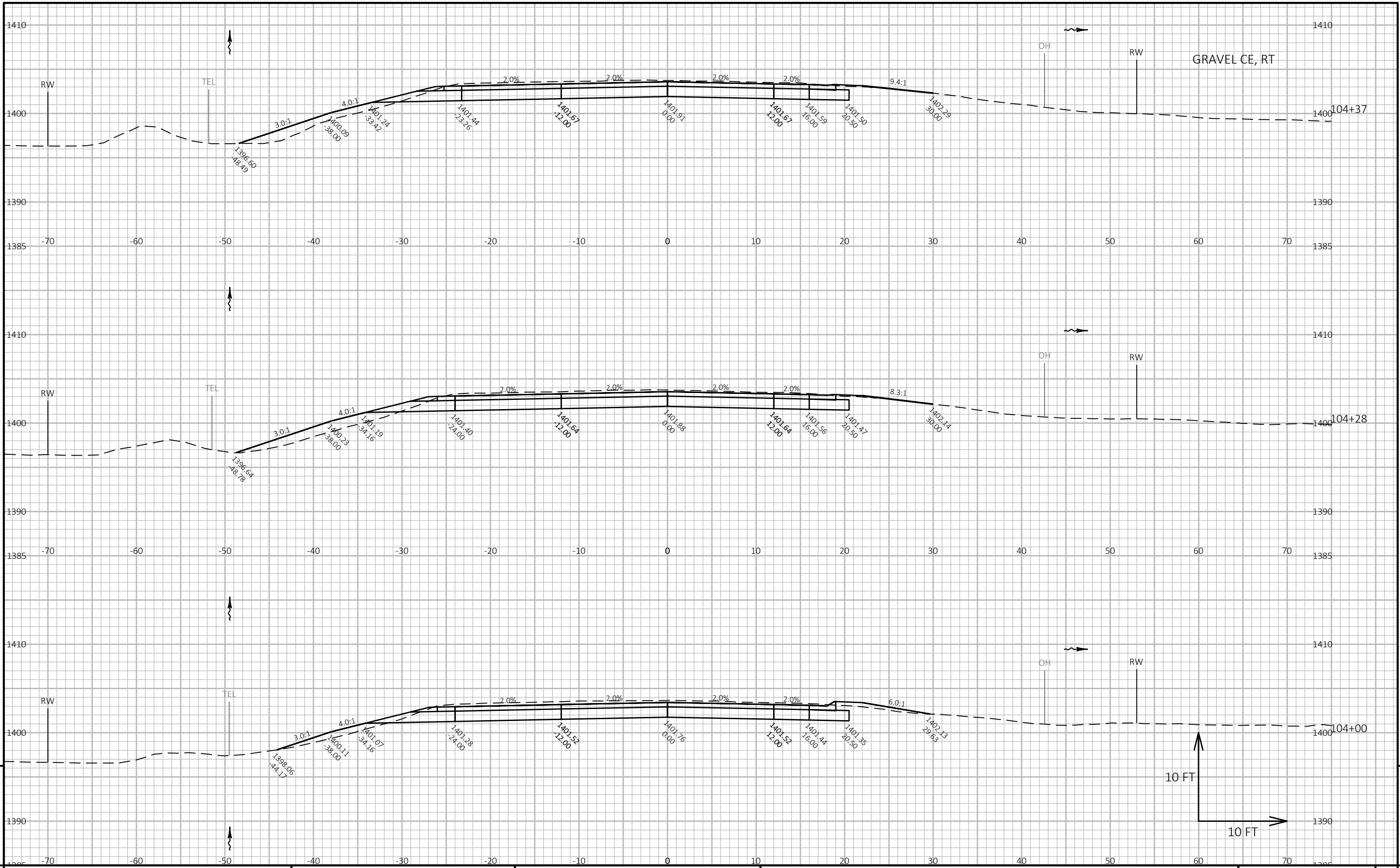
LAYOUT NAME - 02



PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9

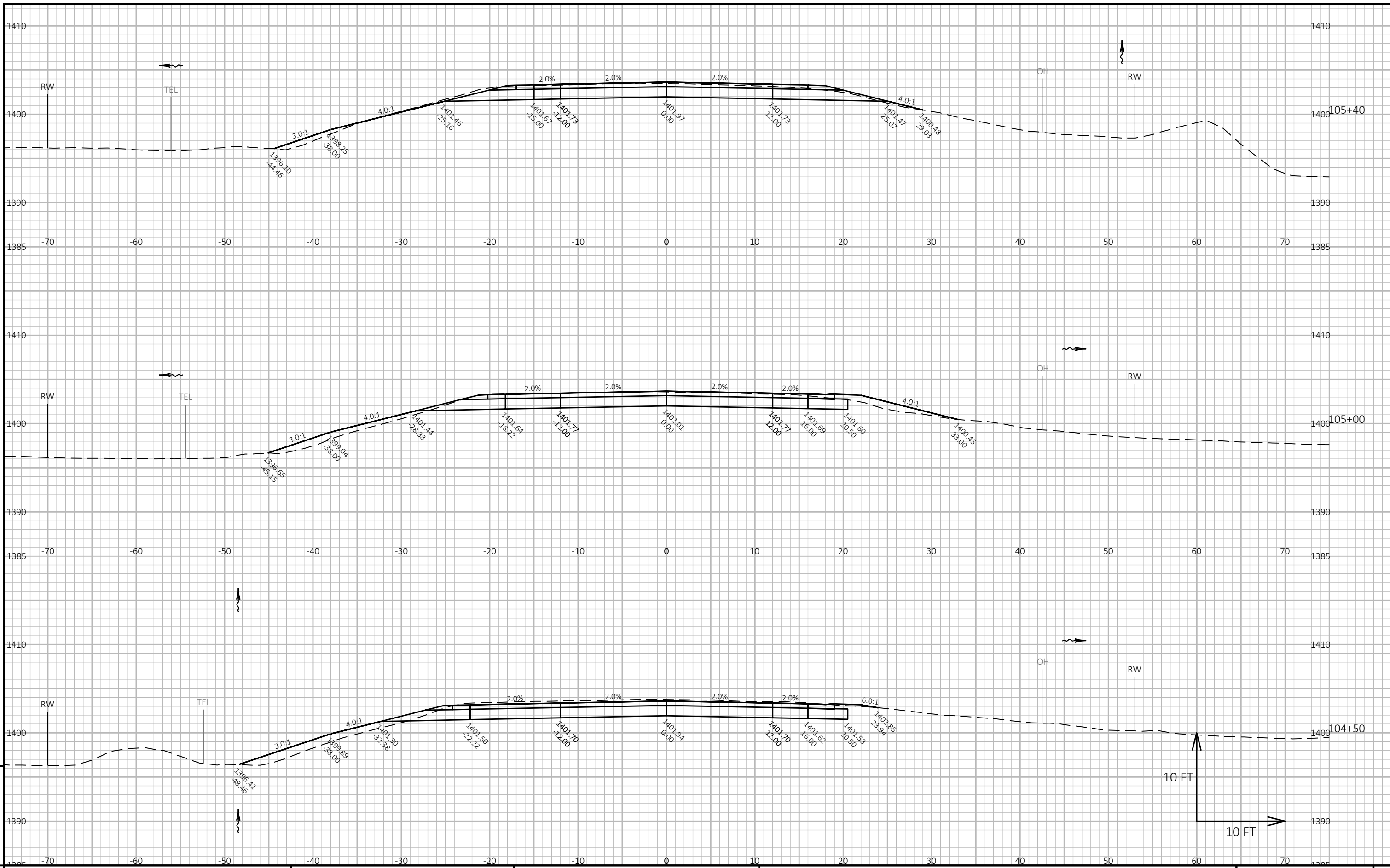
FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090101_XS.DWG PLOT DATE: 6/13/2022 11:19 AM PLOT BY: JEFF BREU PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME: -03



PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9

FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090101_XS.DWG PLOT DATE: 6/13/2022 11:19 AM PLOT BY: JEFF BREU PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 8888-08-76

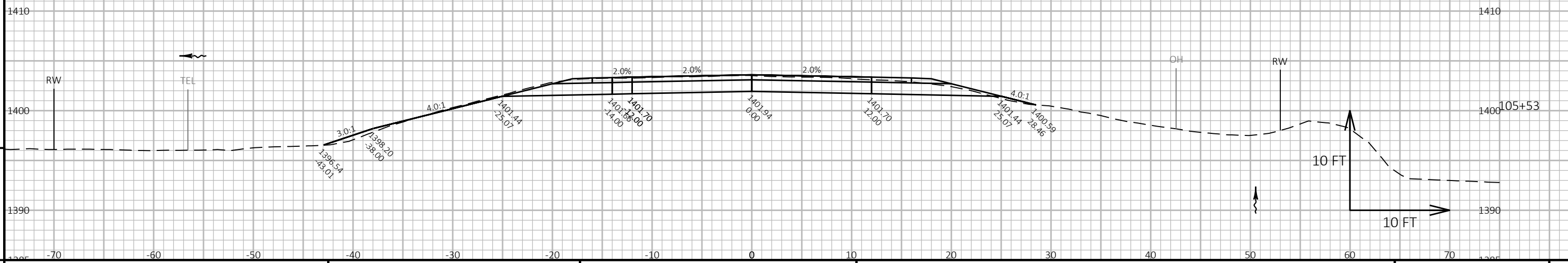
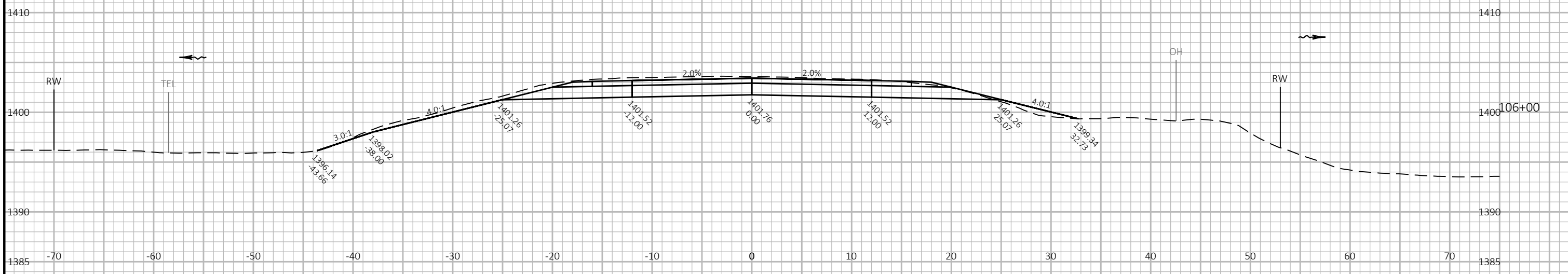
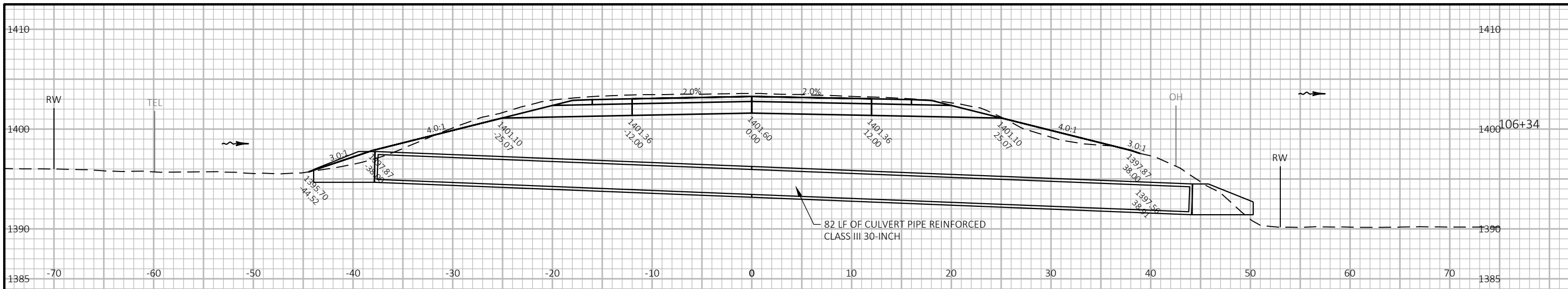
HWY: CTH O

COUNTY: TAYLOR

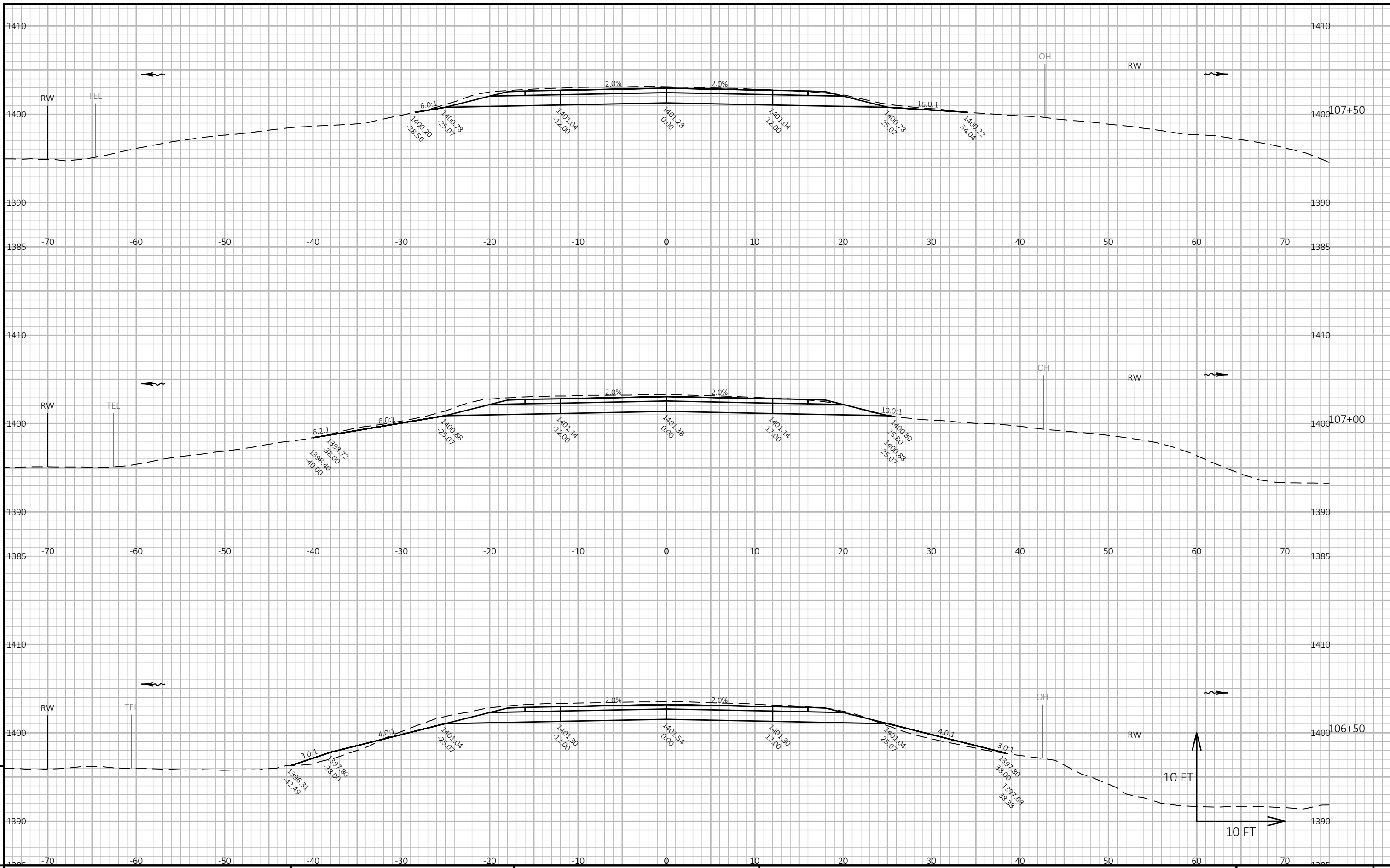
CROSS SECTIONS: MAINLINE

SHEET

E



PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



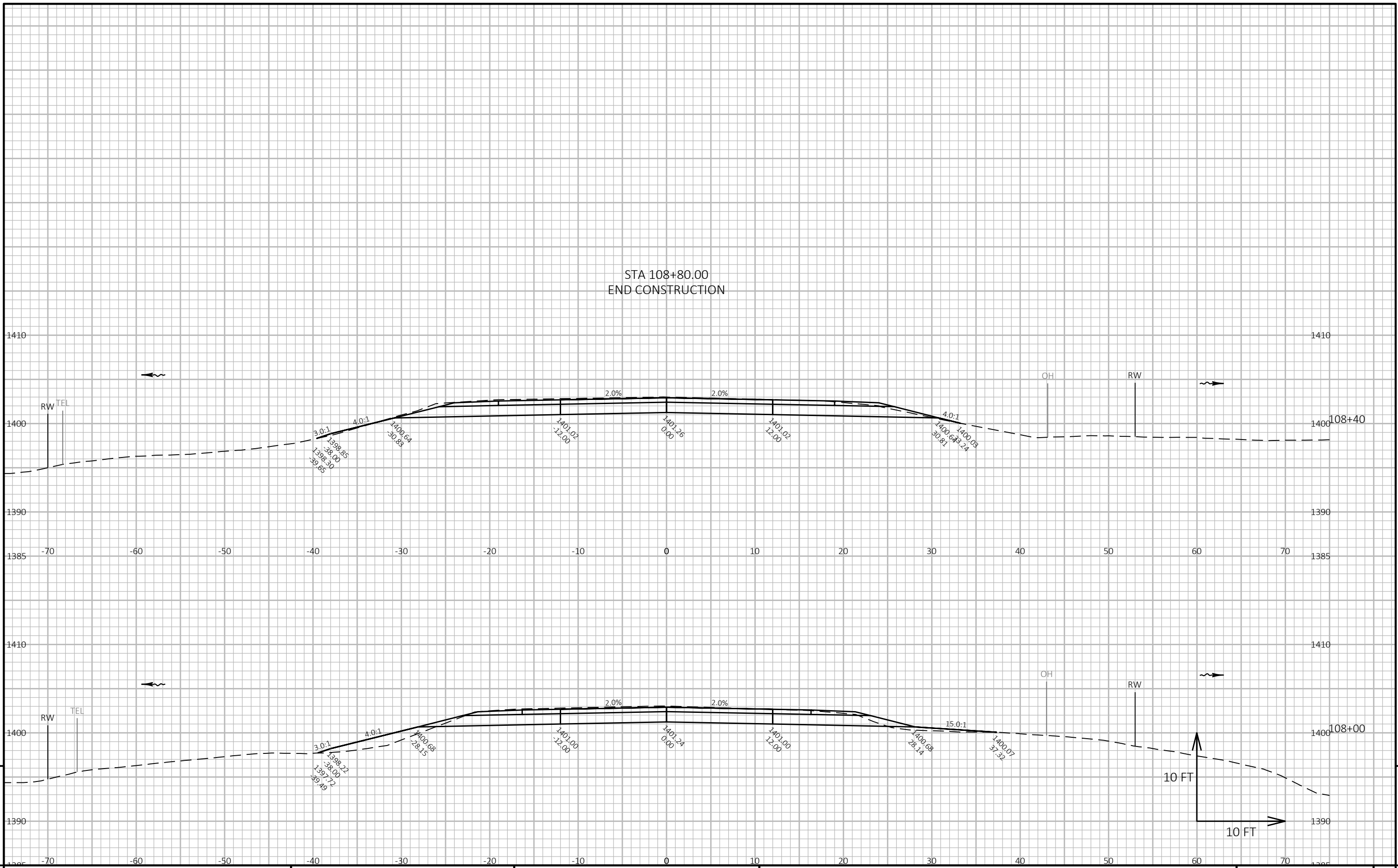
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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET E

FILE NAME : X:\3224200\200348.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090101_XS.DWG PLOT DATE : 6/13/2022 11:20 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 07



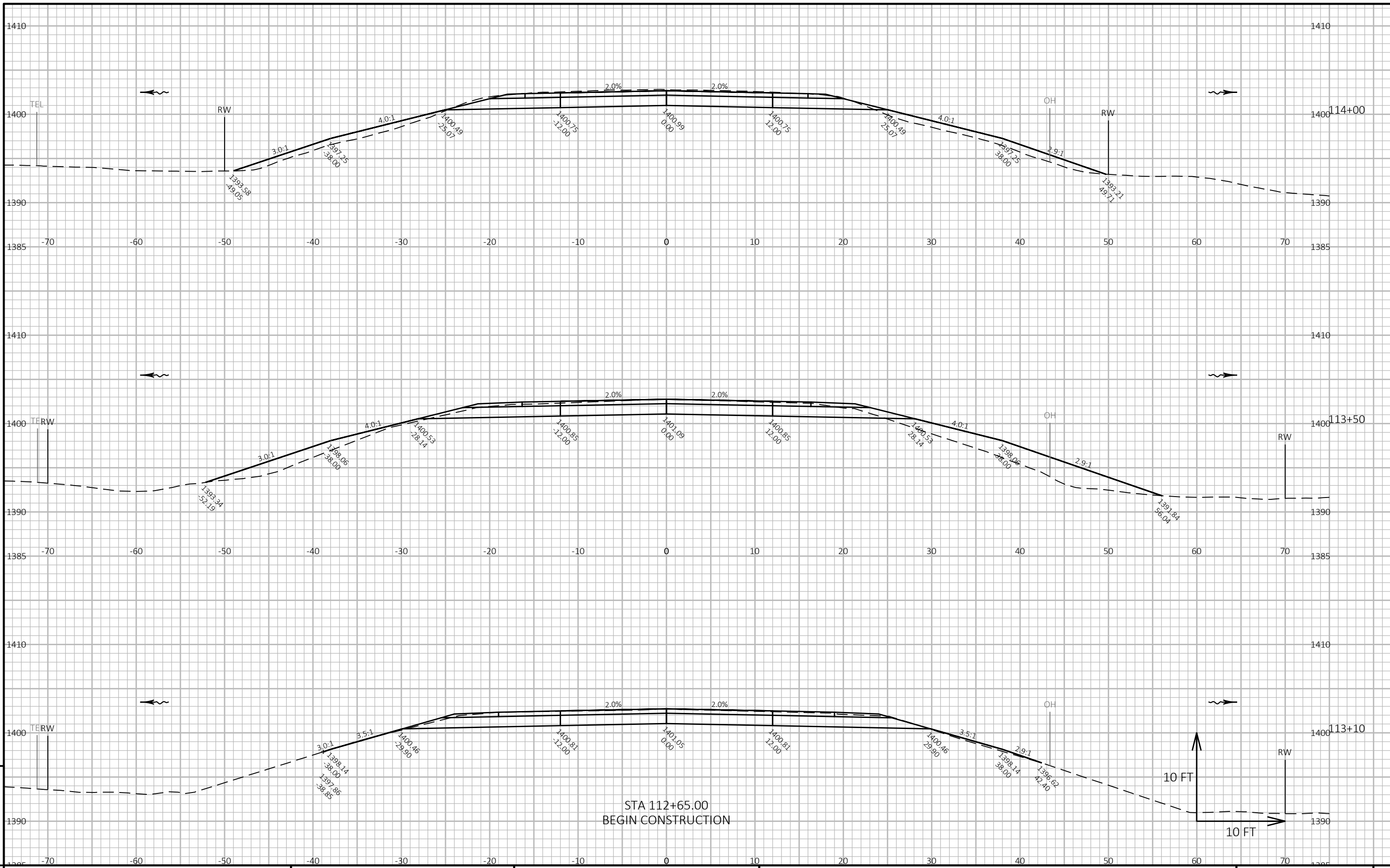
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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET E

FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090101_XS.DWG PLOT DATE: 6/13/2022 11:20 AM PLOT BY: JEFF BREU PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

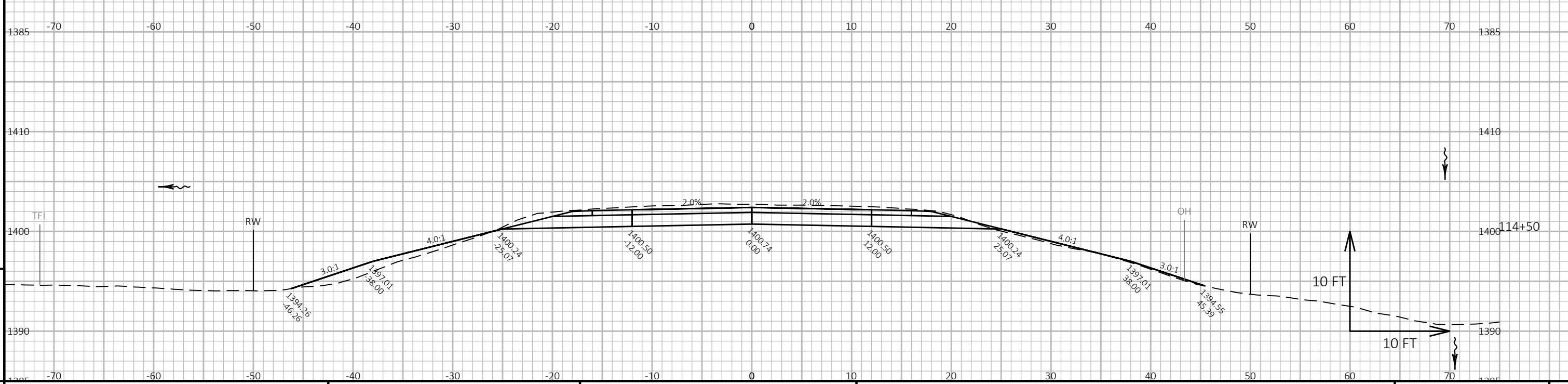
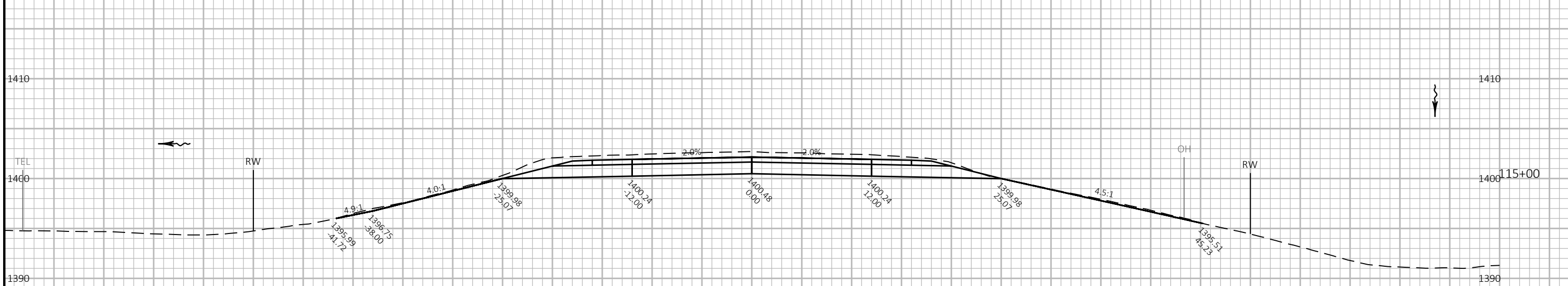
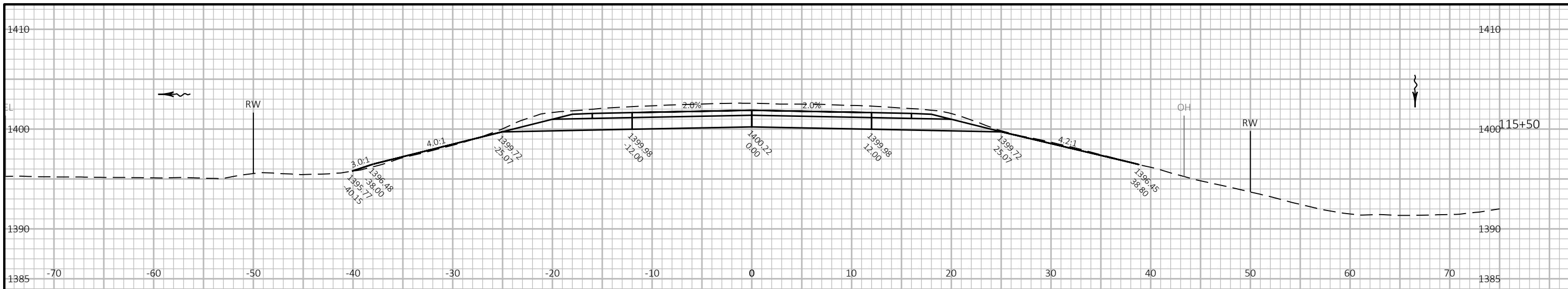
LAYOUT NAME - 08



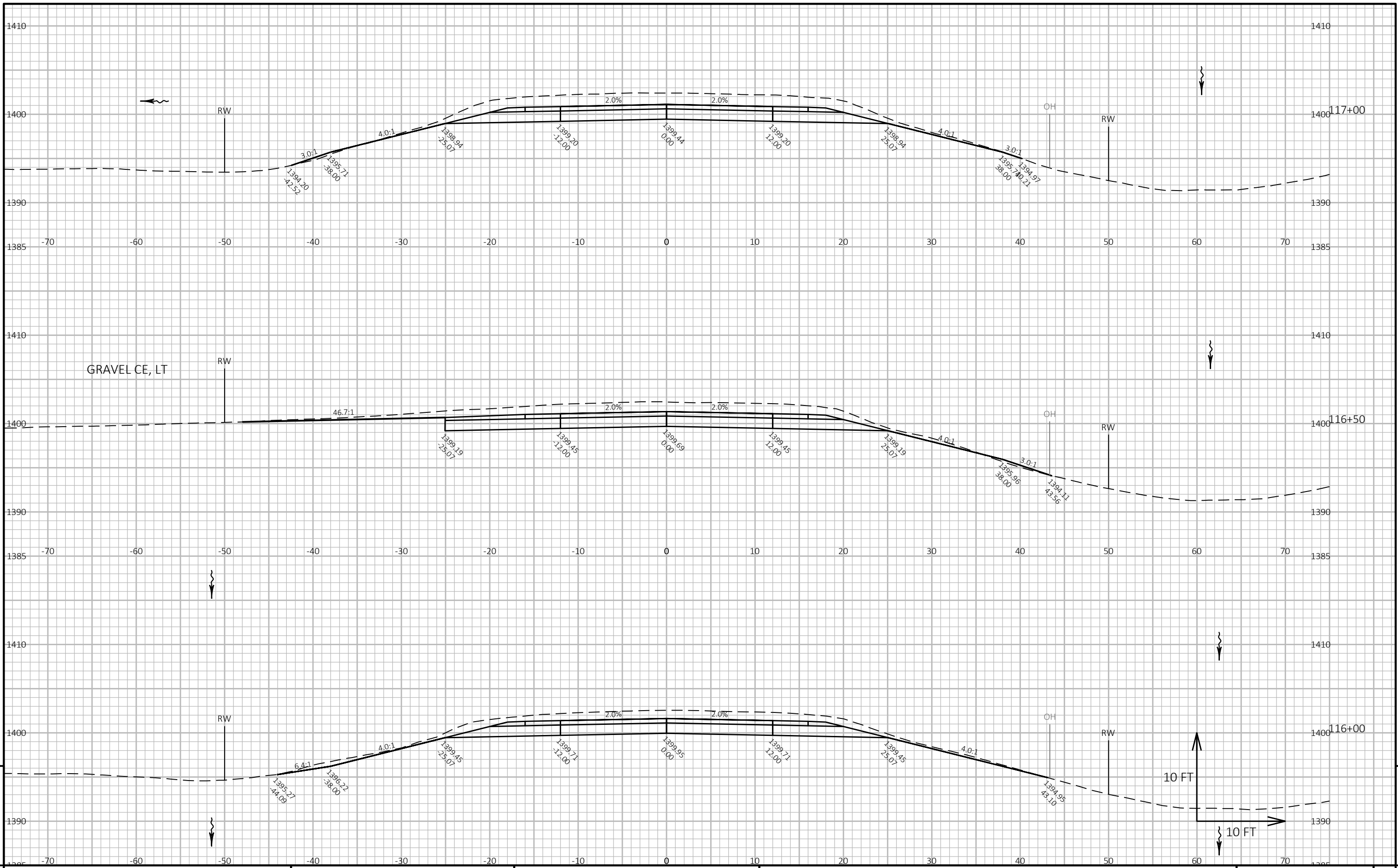
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| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | CROSS SECTIONS: MAINLINE | SHEET | E |
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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



PROJECT NO: 8888-08-76

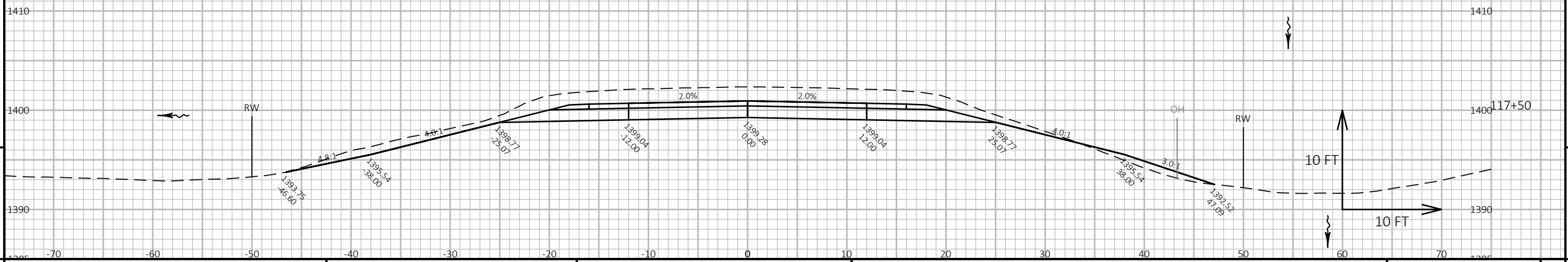
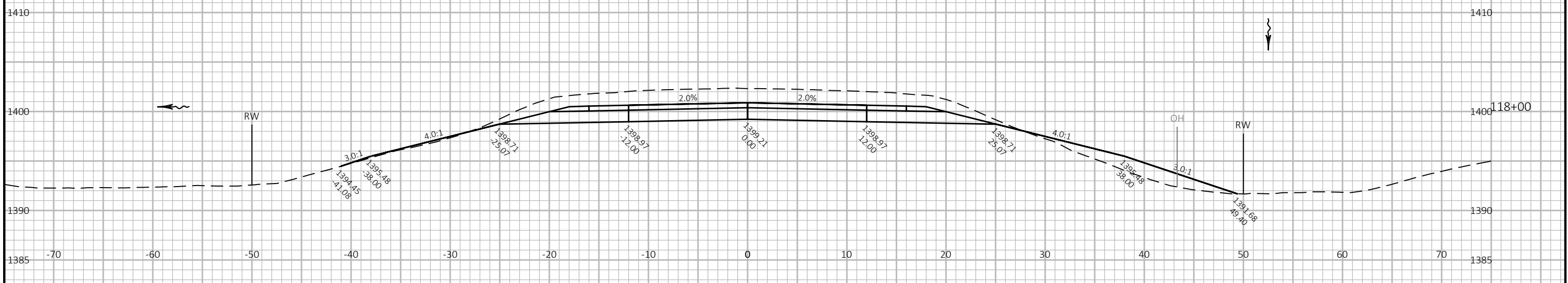
HWY: CTH O

COUNTY: TAYLOR

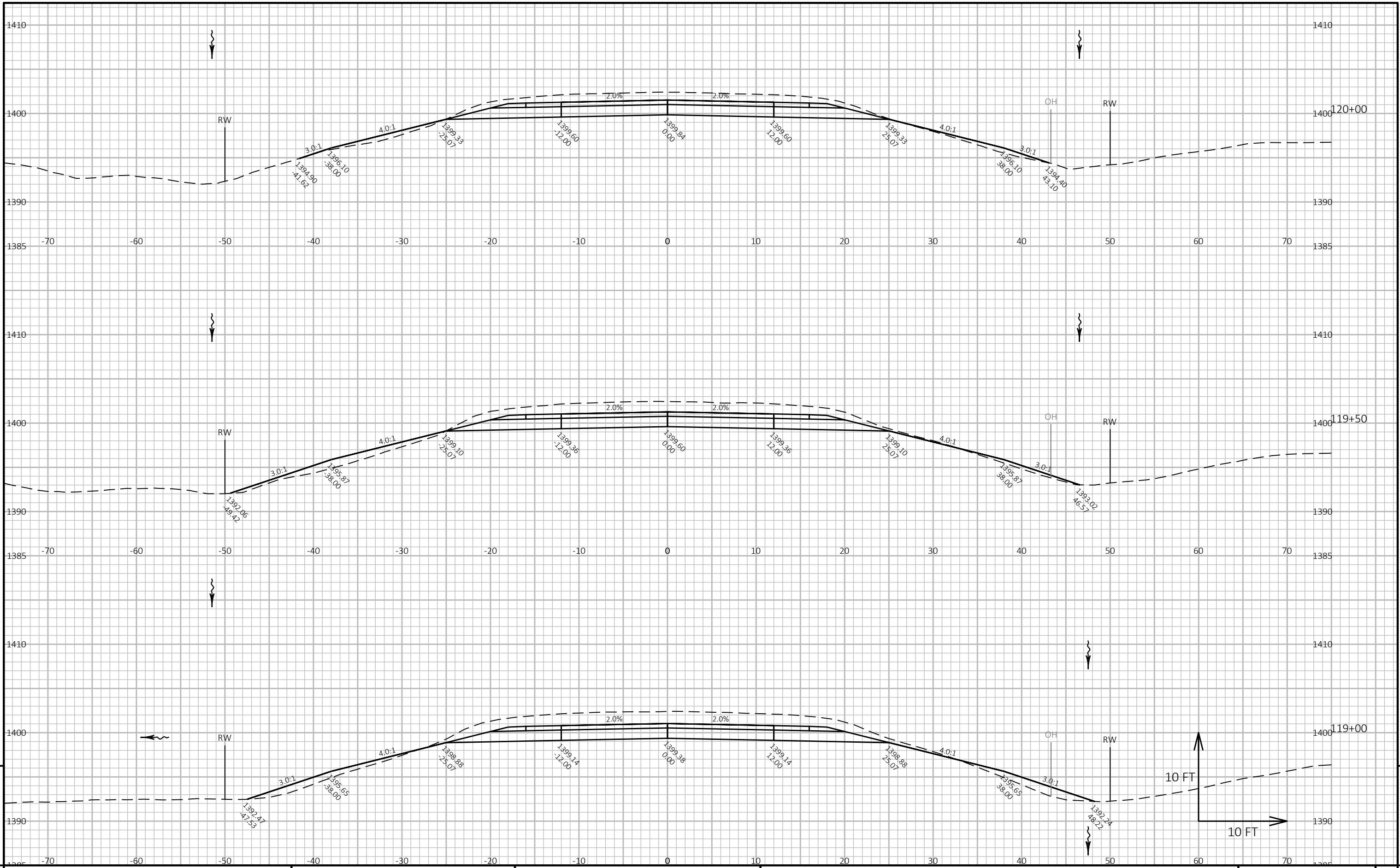
CROSS SECTIONS: MAINLINE

SHEET

E



PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



PROJECT NO: 8888-08-76

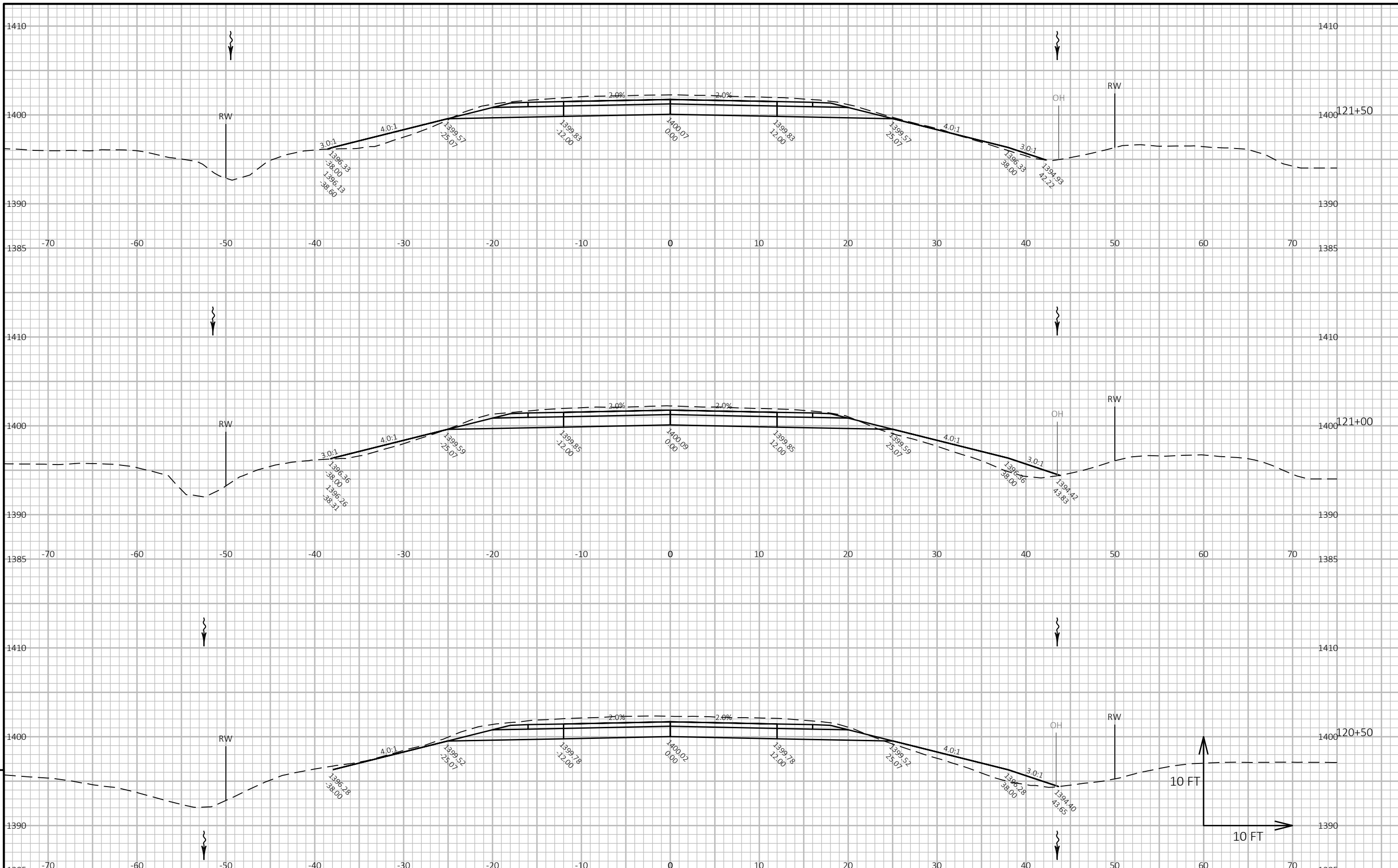
HWY: CTH O

COUNTY: TAYLOR

CROSS SECTIONS: MAINLINE

SHEET

E



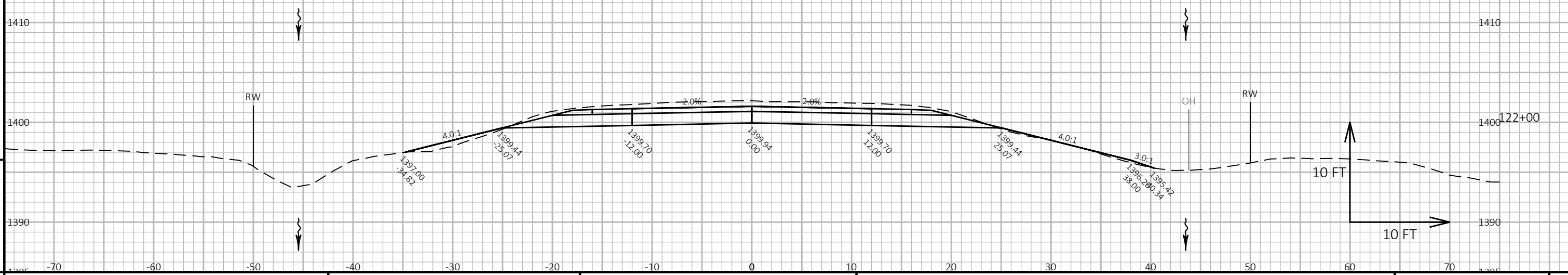
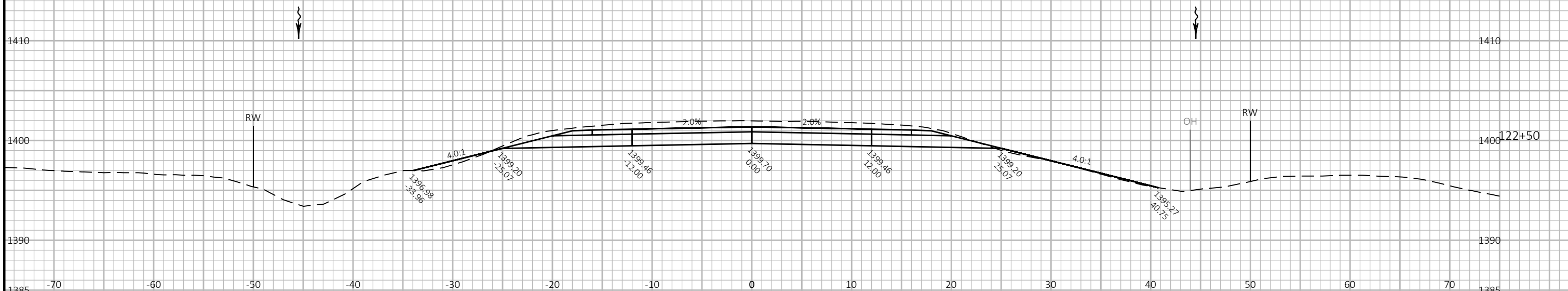
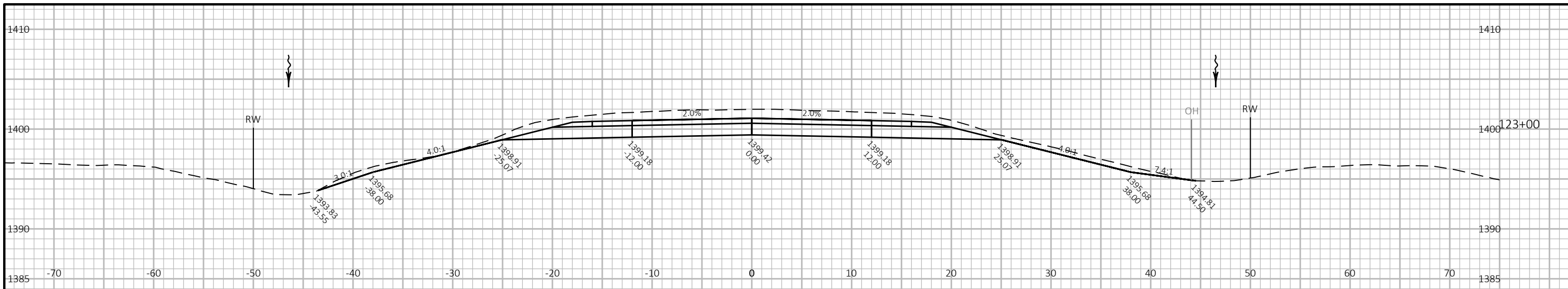
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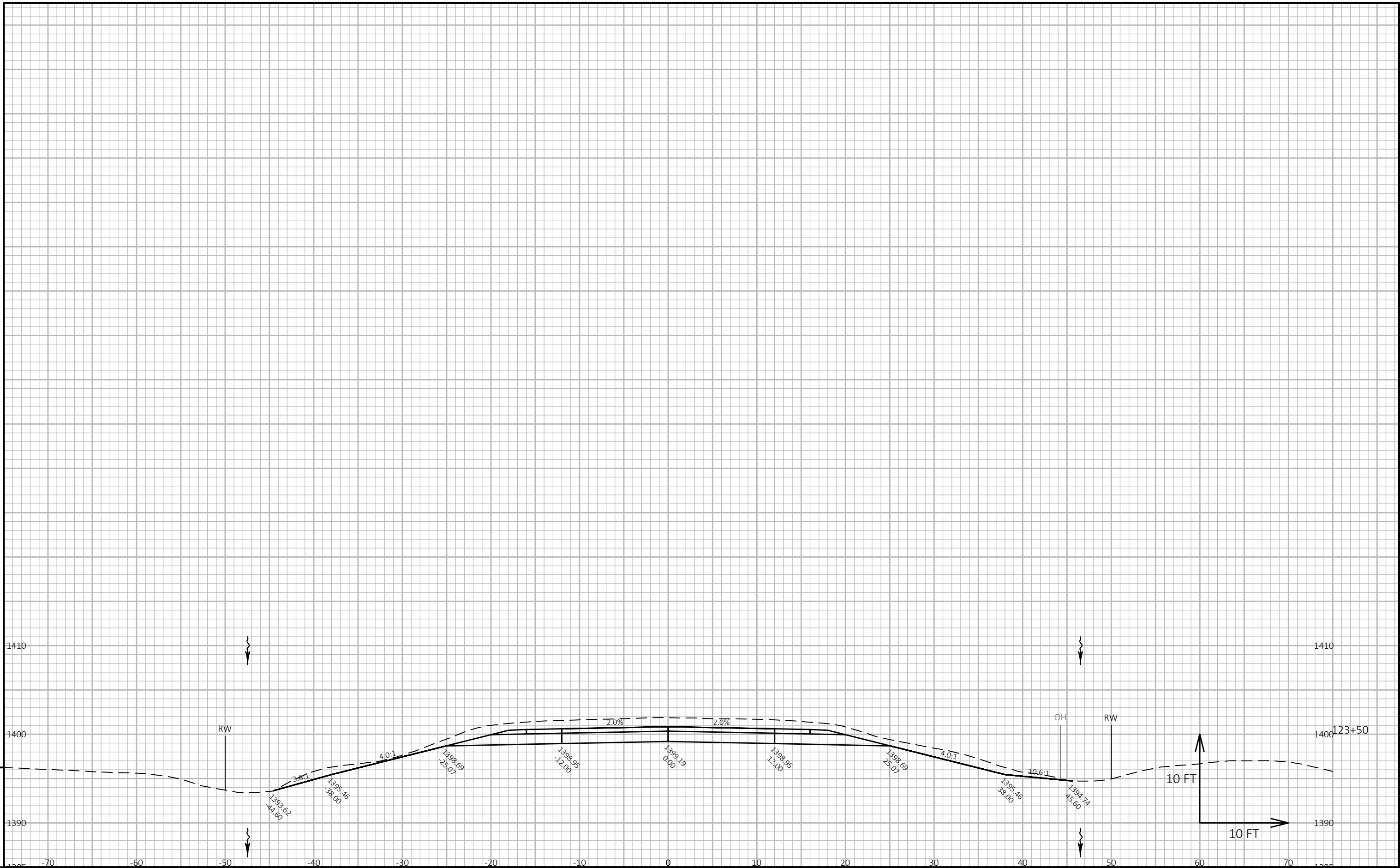
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET E

FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090110_XS.DWG PLOT DATE: 6/13/2022 11:27 AM PLOT BY: JEFF BREU PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 15



PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



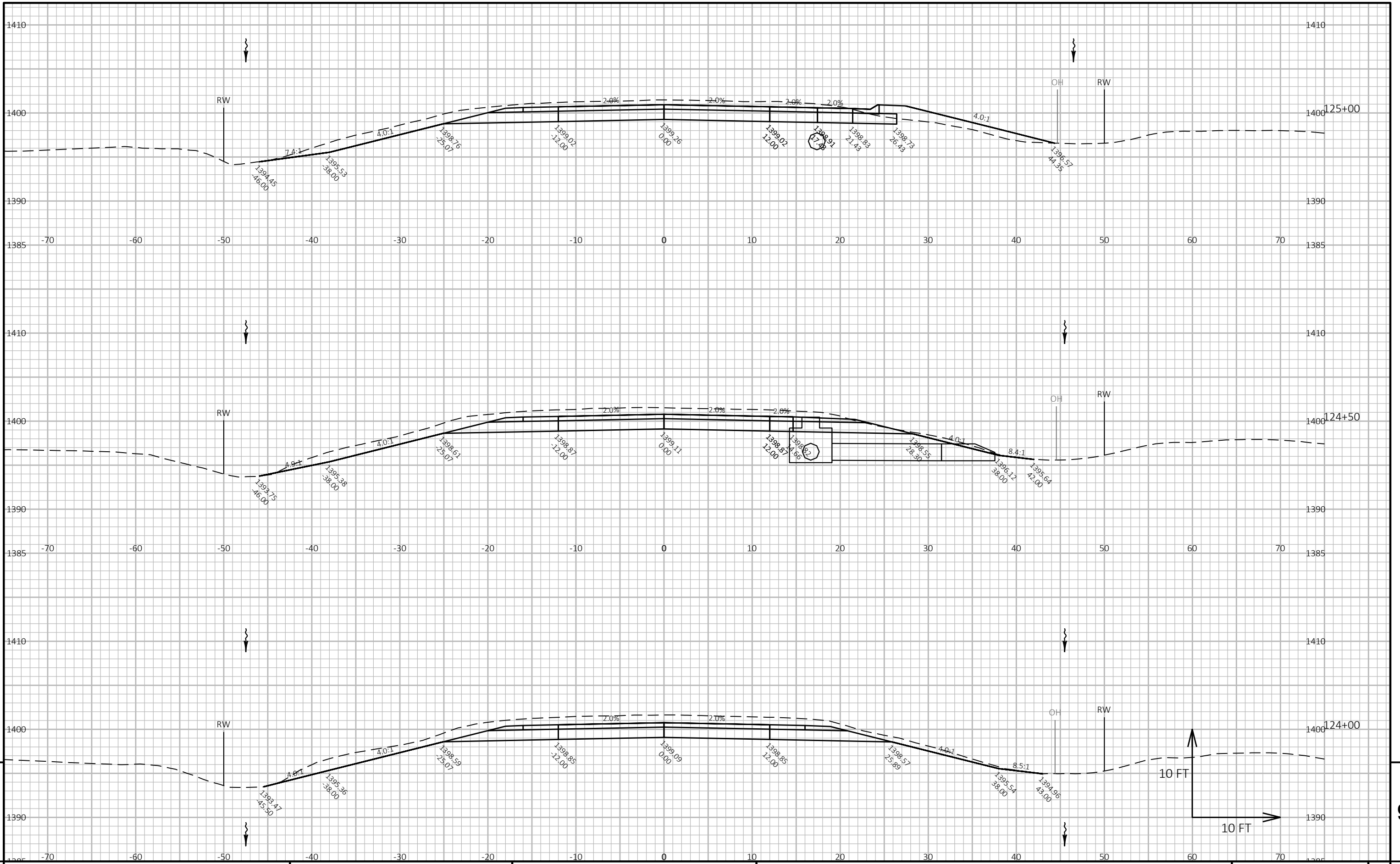
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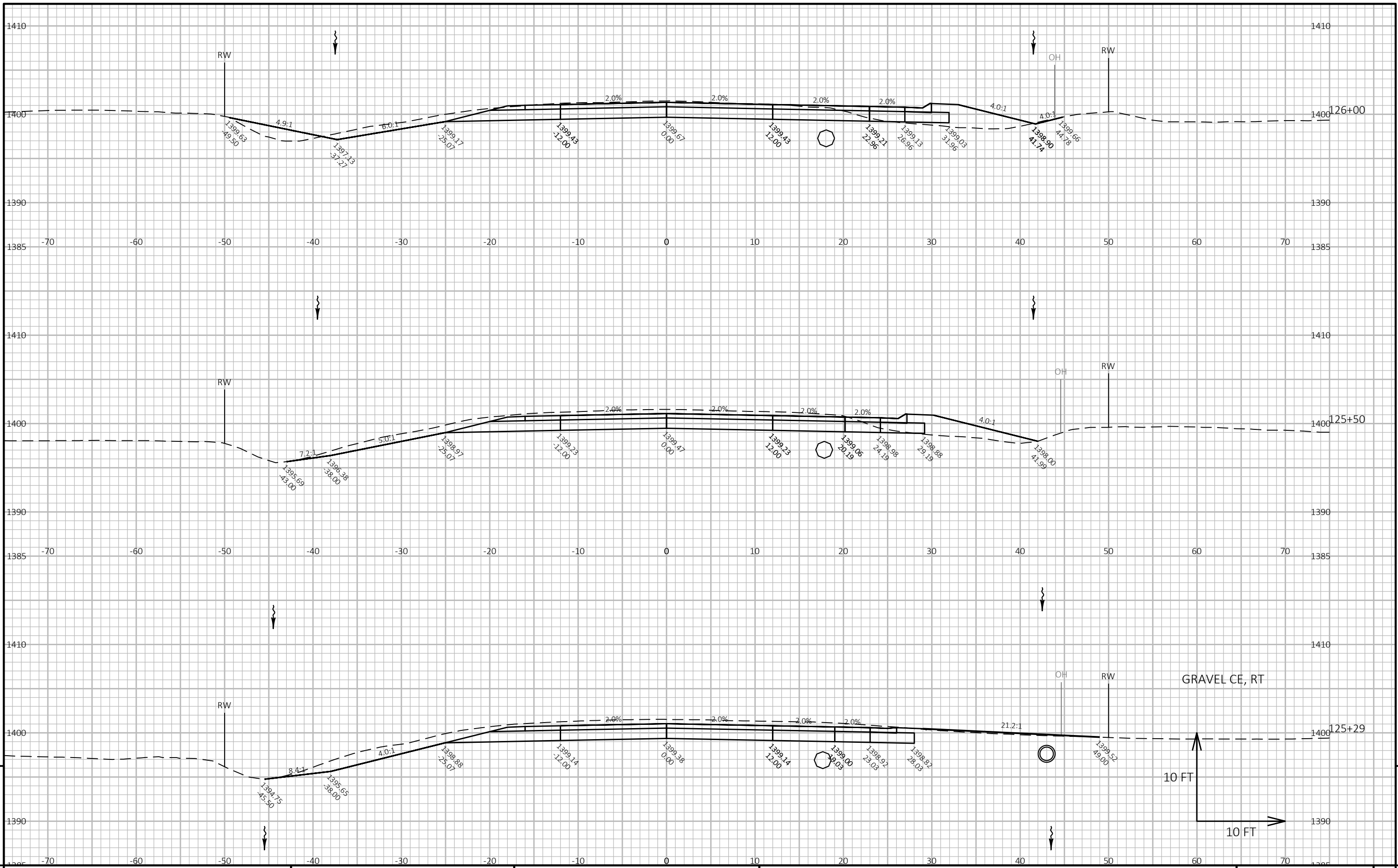
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|------------------------|------------|----------------|--------------------------|-------|---|
| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | CROSS SECTIONS: MAINLINE | SHEET | E |
|------------------------|------------|----------------|--------------------------|-------|---|

FILE NAME : X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090110_XS.DWG PLOT DATE : 6/13/2022 11:27 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 17



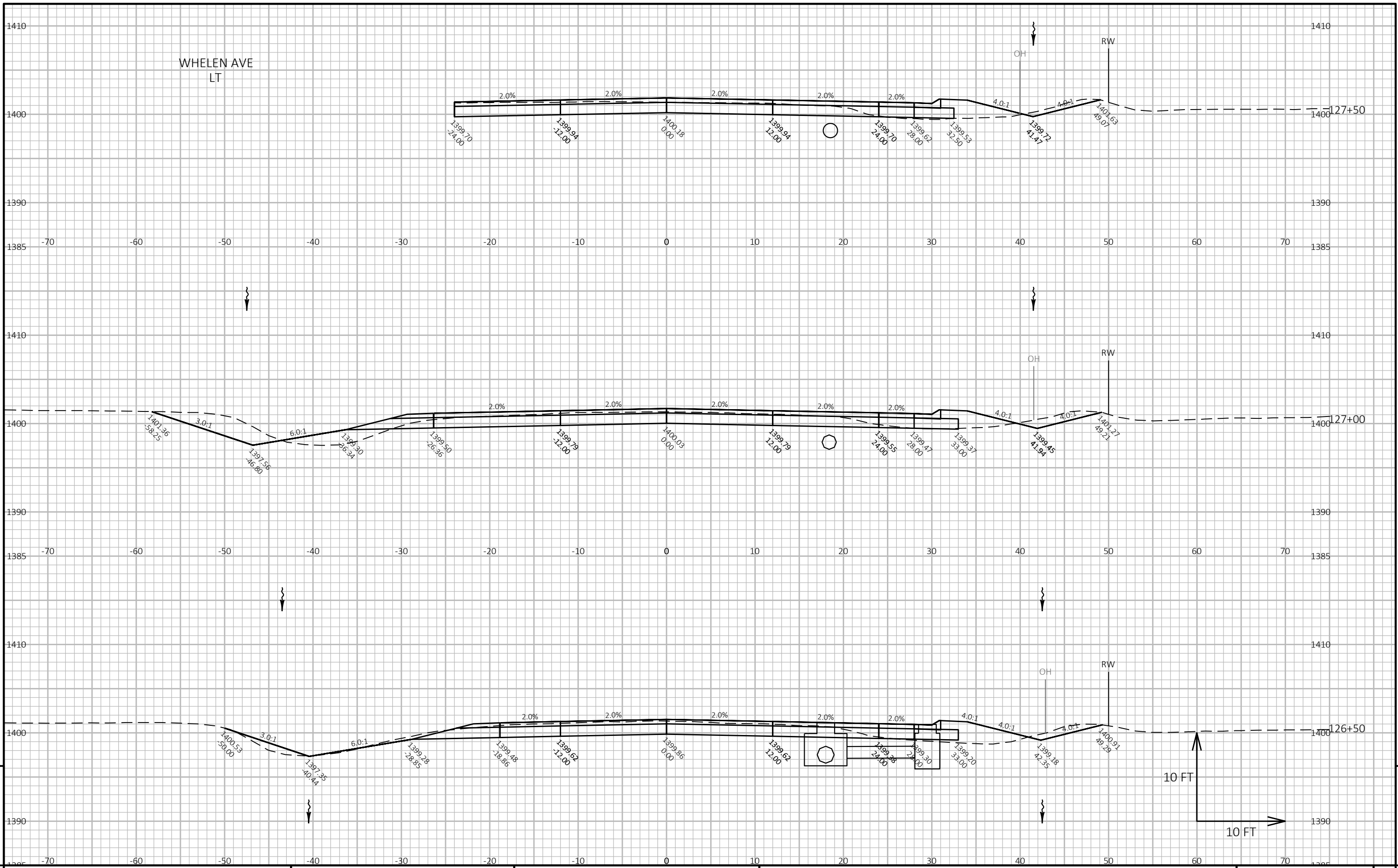
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9

FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090120_XS.DWG PLOT DATE: 6/13/2022 1:57 PM PLOT BY: JEFF BREU PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 21



PROJECT NO: 8888-08-76

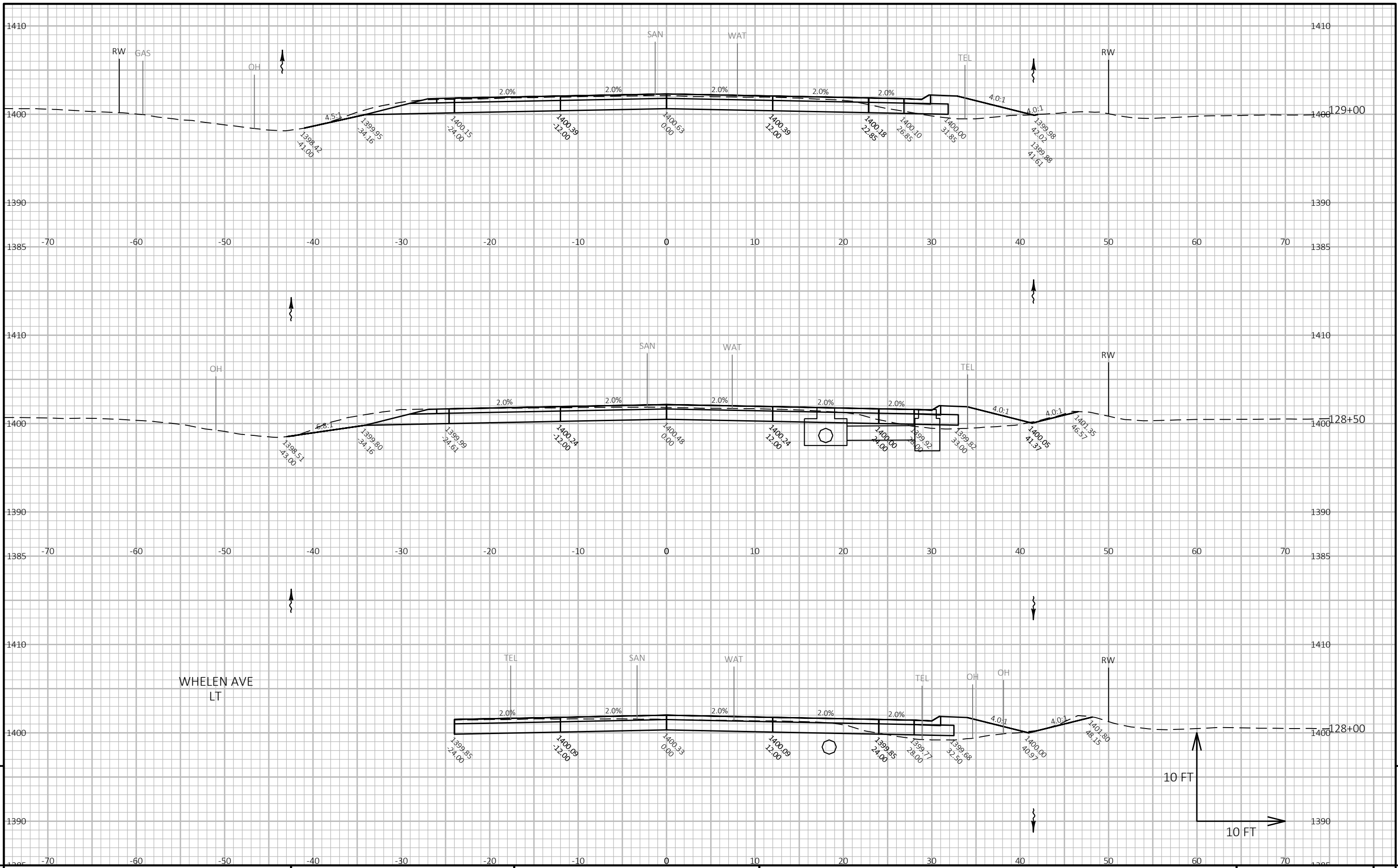
HWY: CTH O

COUNTY: TAYLOR

CROSS SECTIONS: MAINLINE

SHEET

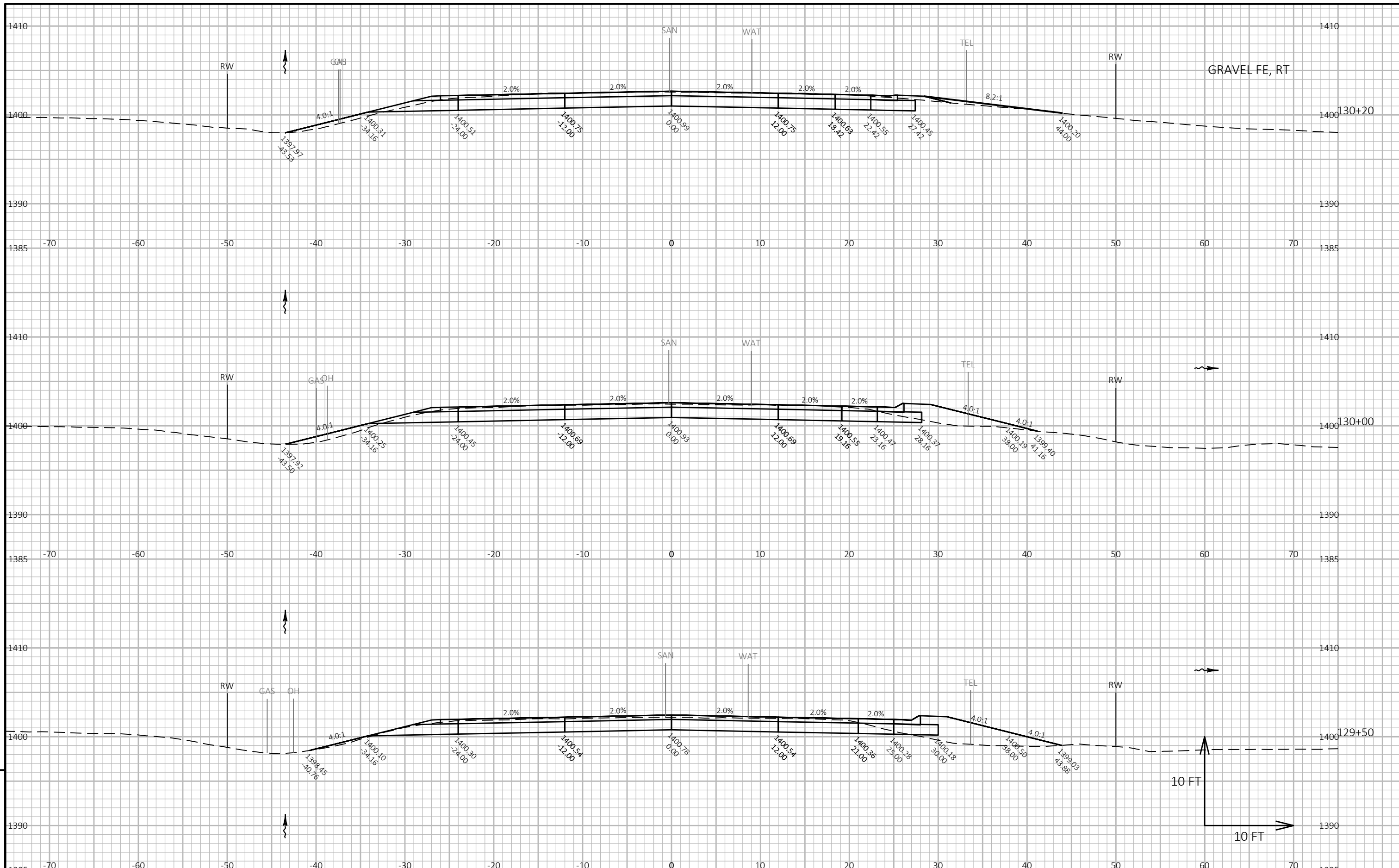
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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9

FILE NAME : X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090120_XS.DWG PLOT DATE : 6/13/2022 1:58 PM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 8888-08-76

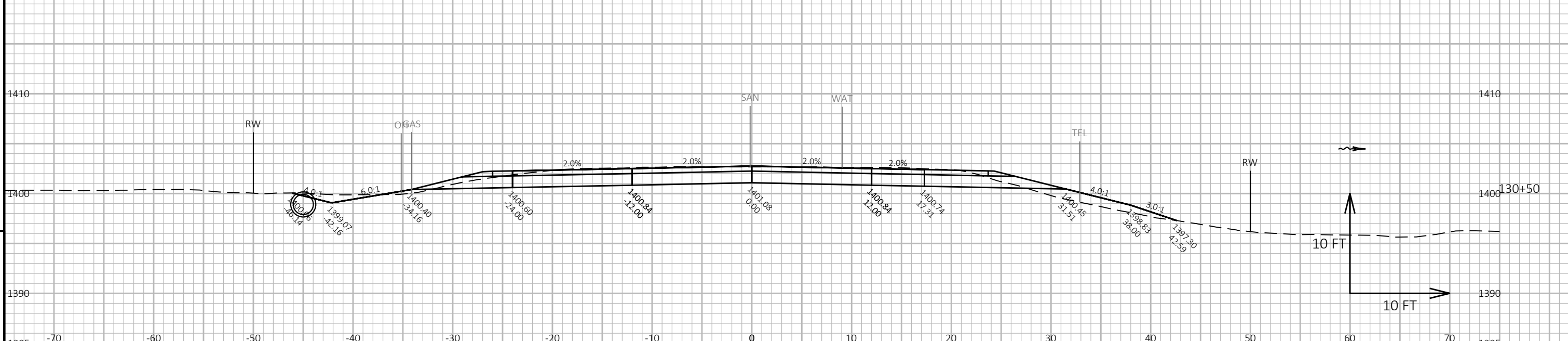
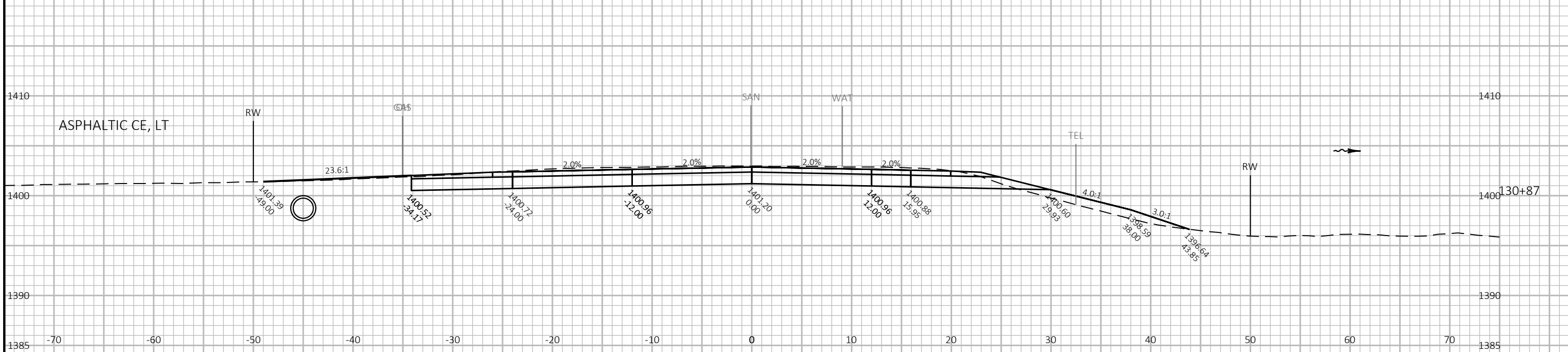
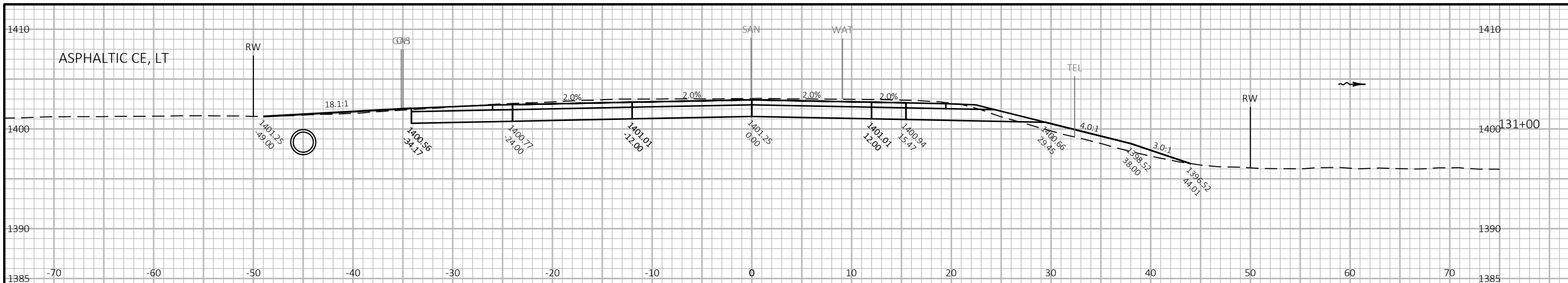
HWY: CTH O

COUNTY: TAYLOR

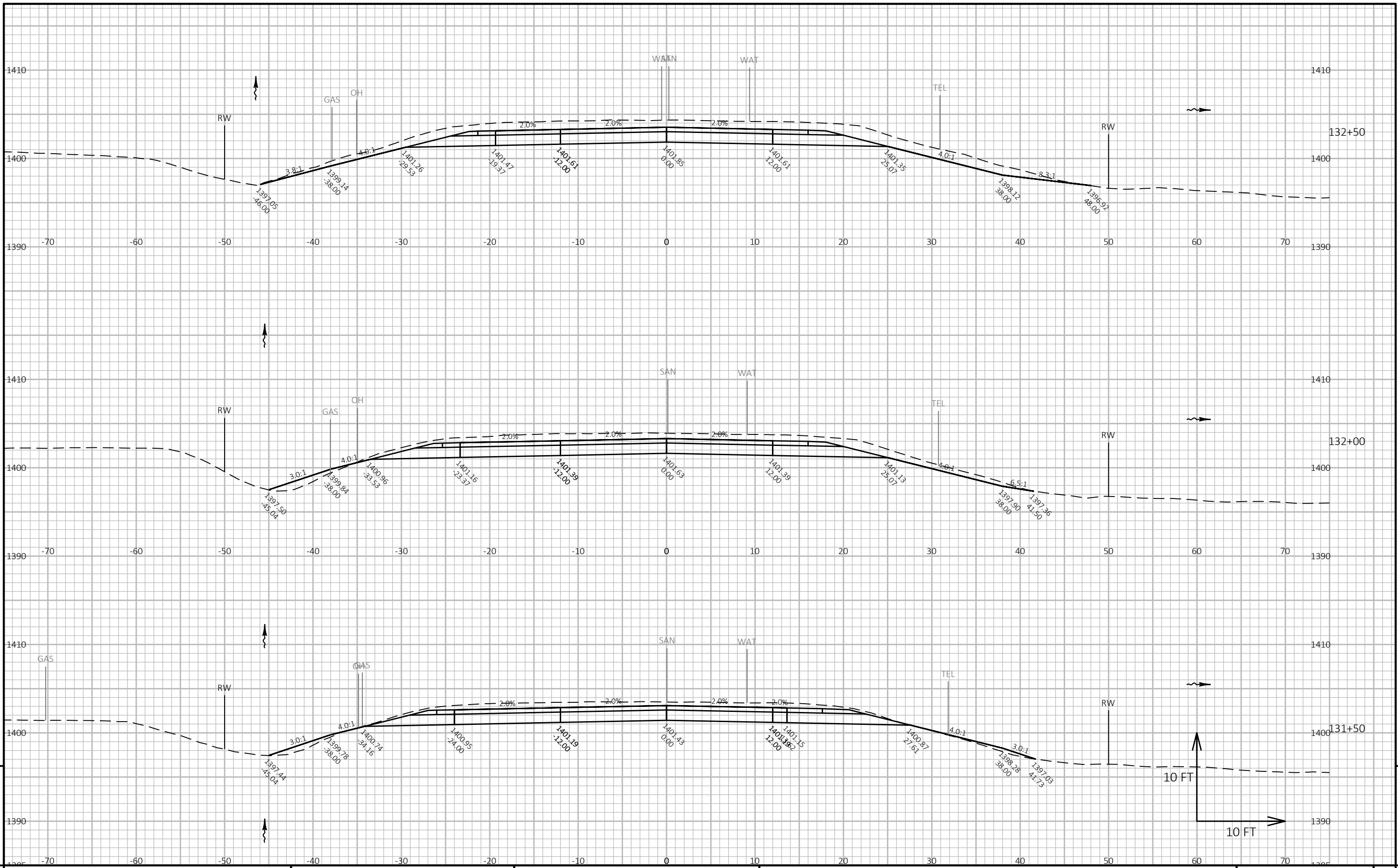
CROSS SECTIONS: MAINLINE

SHEET

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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



PROJECT NO: 8888-08-76

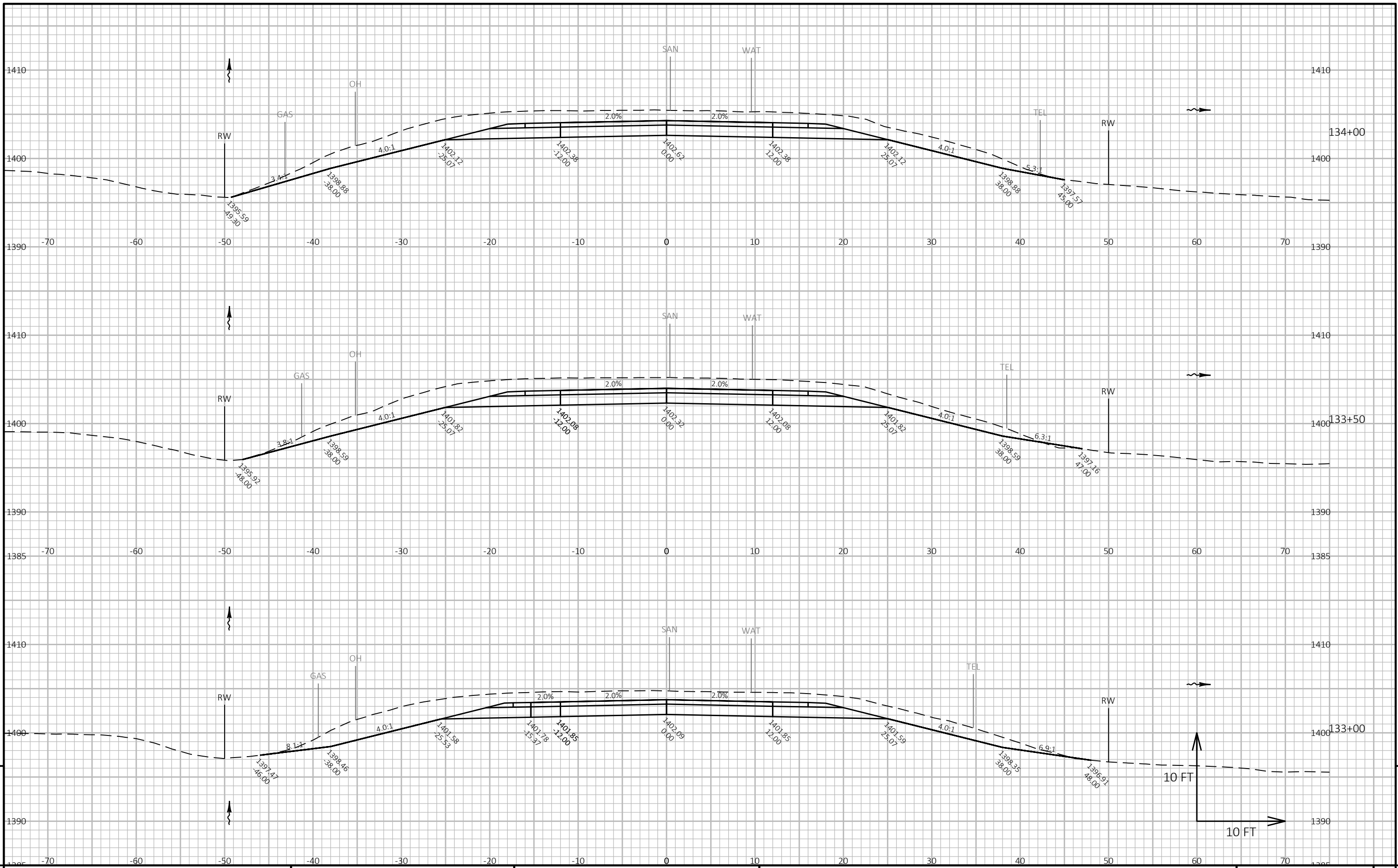
HWY: CTH O

COUNTY: TAYLOR

CROSS SECTIONS: MAINLINE

SHEET

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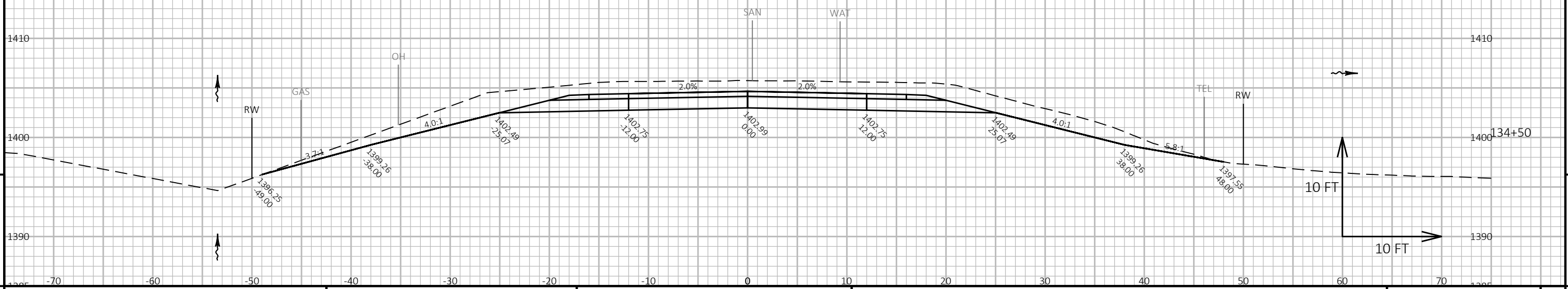
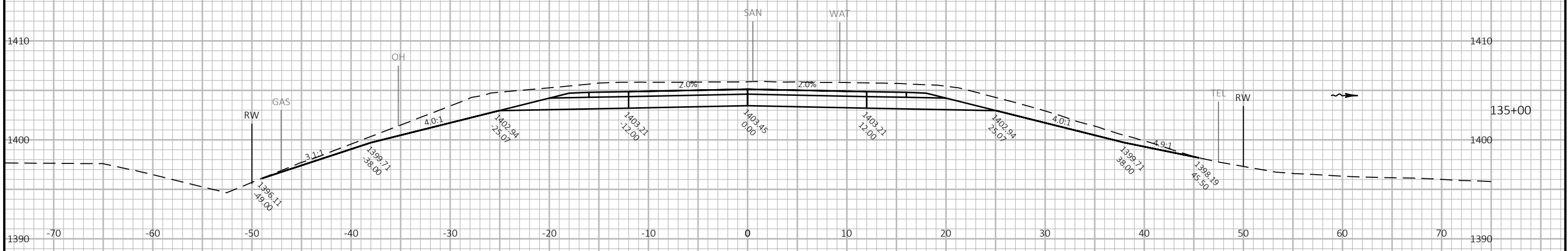
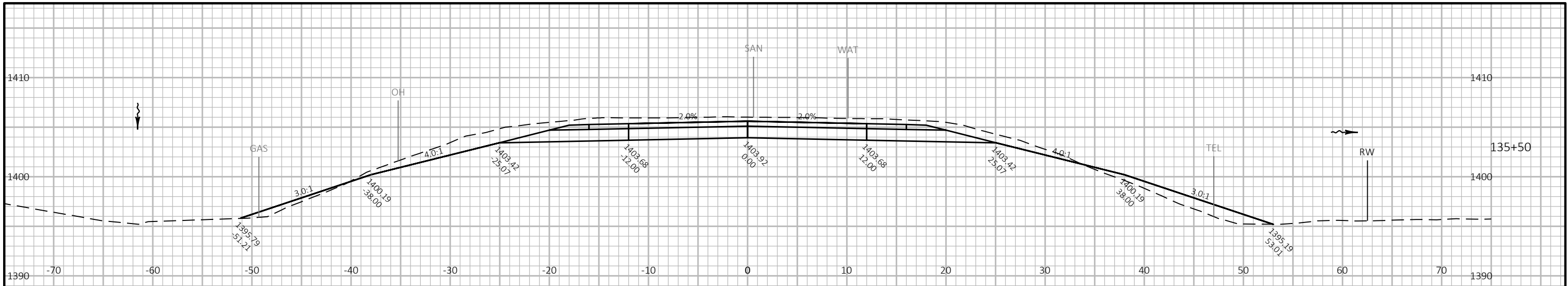
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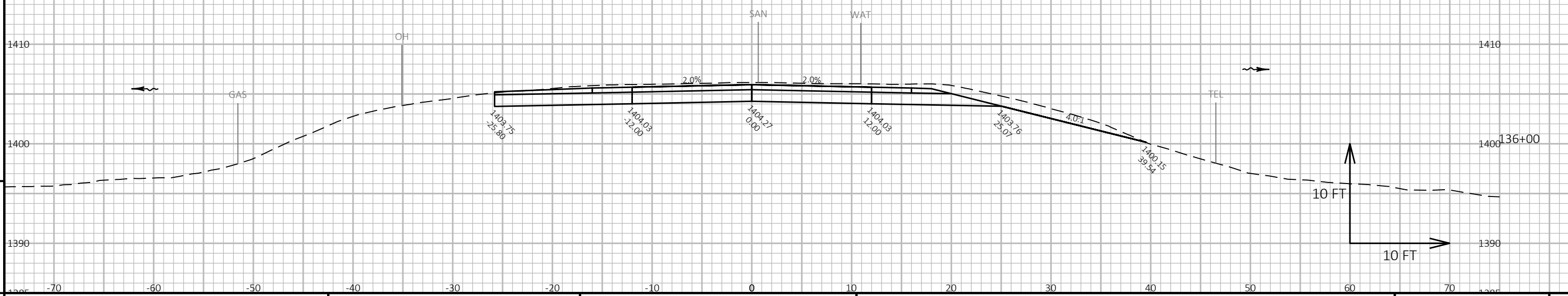
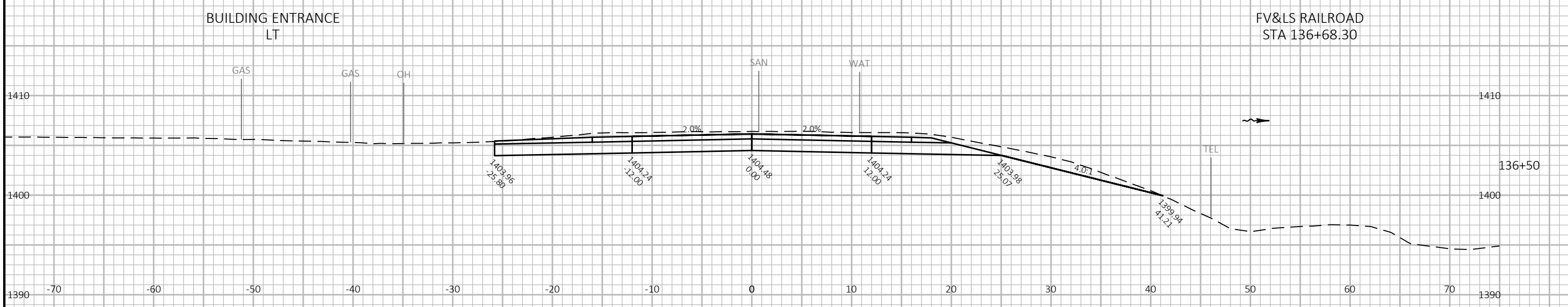
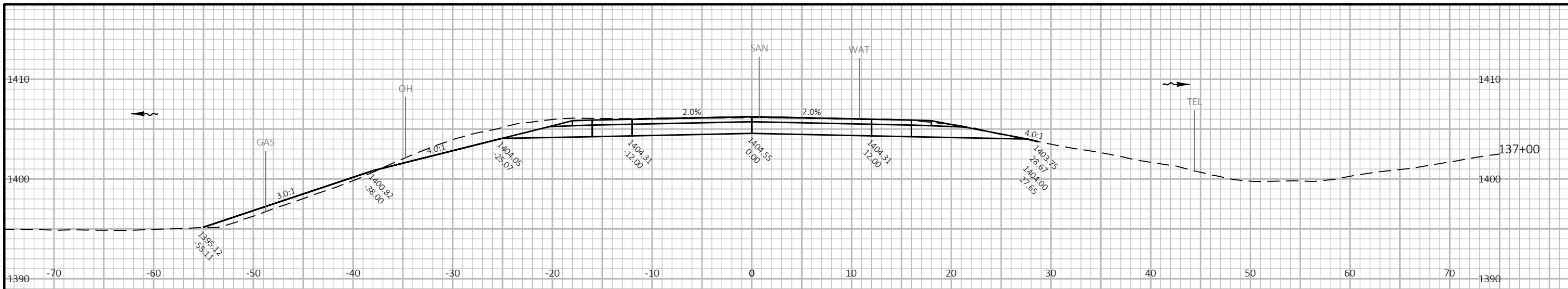
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET E

FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090120_XS.DWG PLOT DATE: 6/13/2022 11:35 AM PLOT BY: JEFF BREU PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

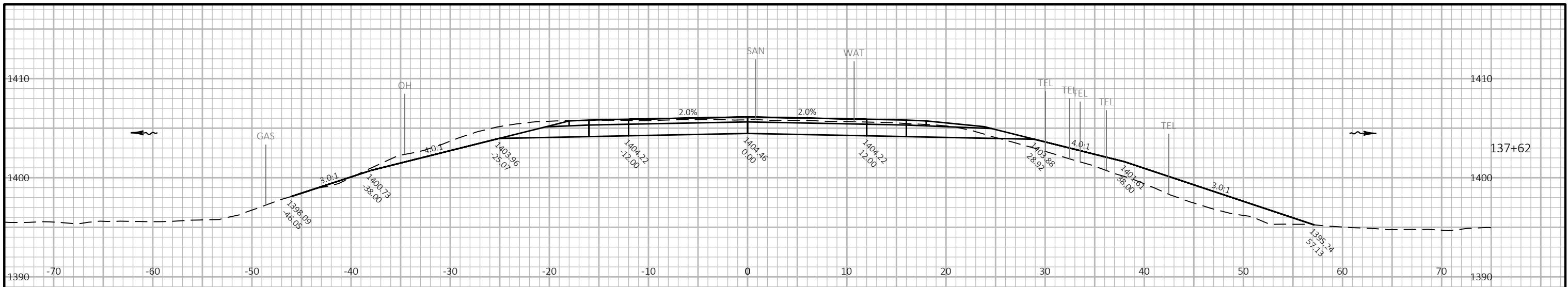
LAYOUT NAME - 27



PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



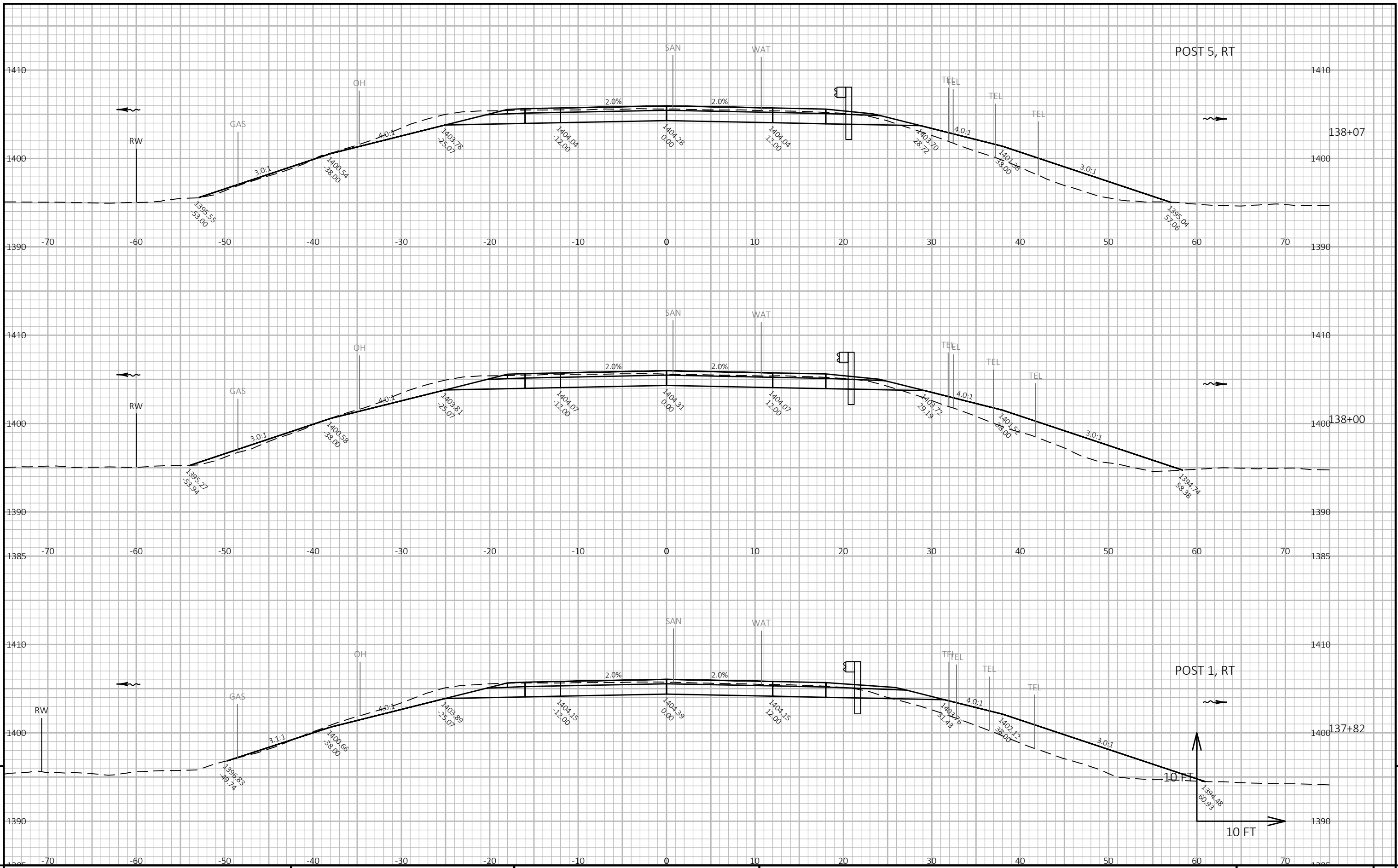
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



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|------------------------|------------|----------------|--------------------------|-------|
| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | CROSS SECTIONS: MAINLINE | SHEET |
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PROJECT NO: 8888-08-76

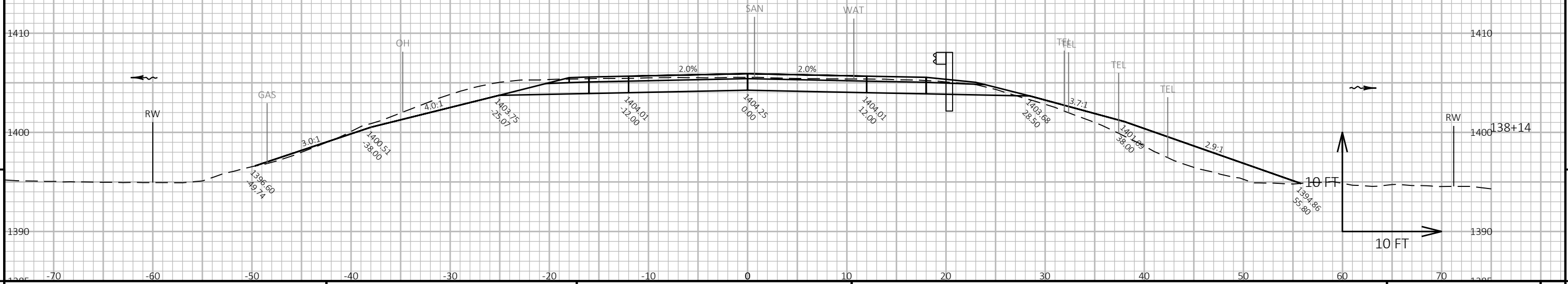
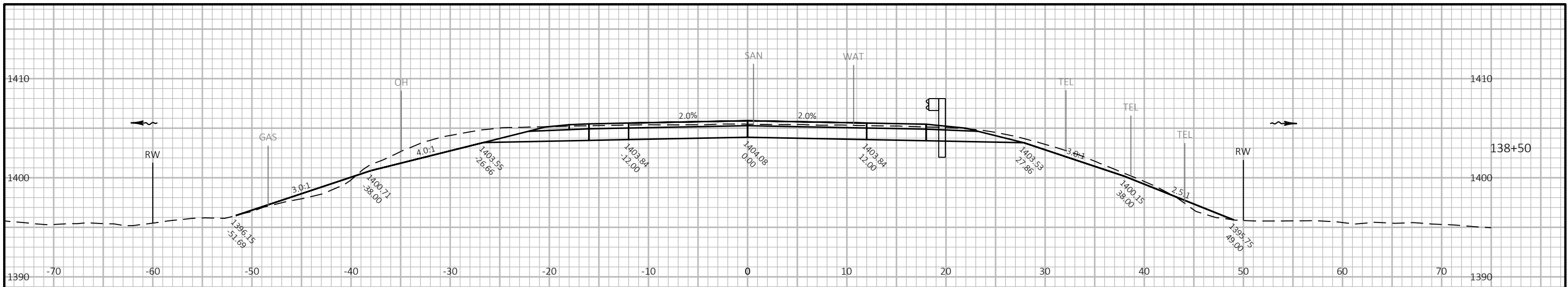
HWY: CTH O

COUNTY: TAYLOR

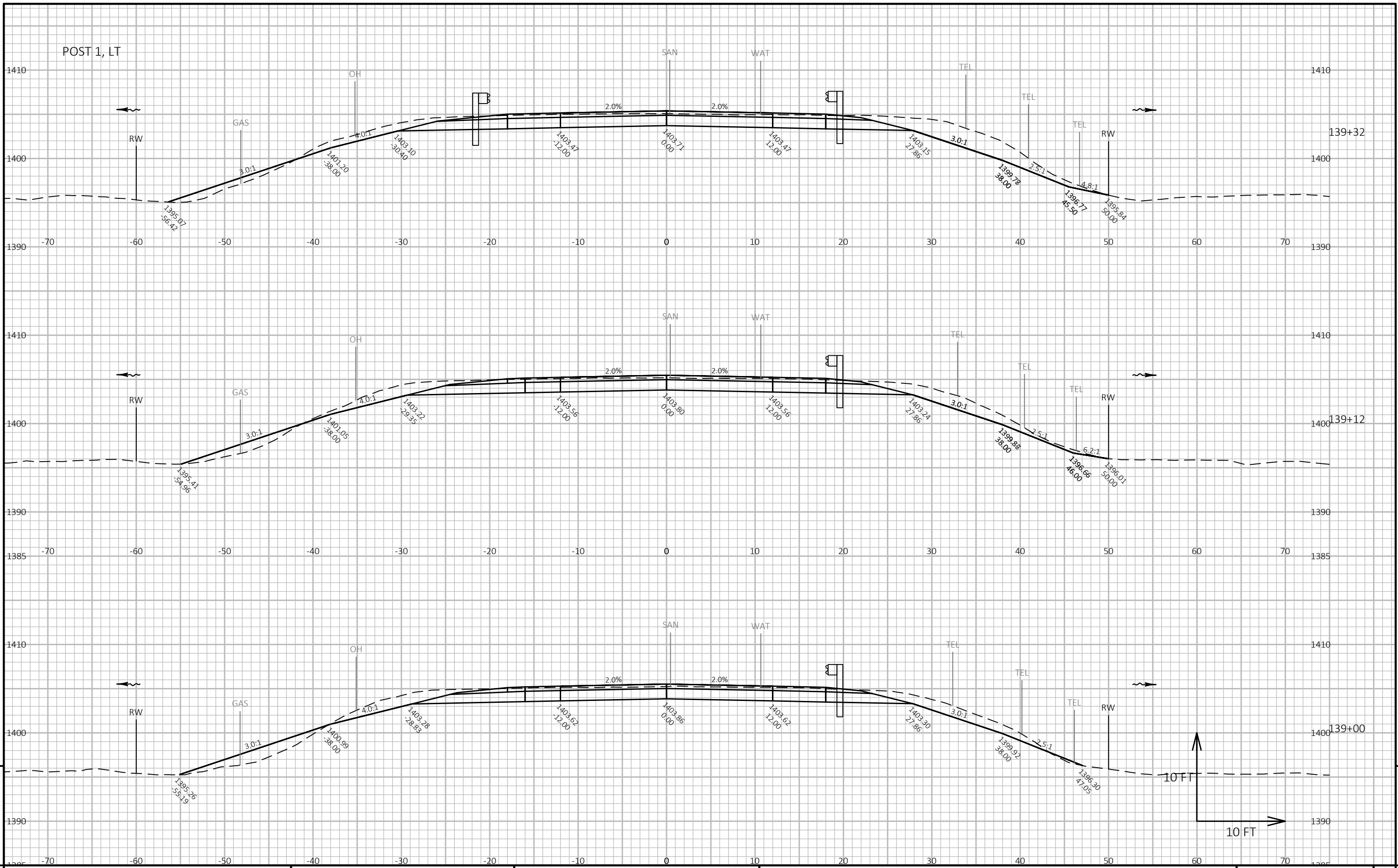
CROSS SECTIONS: MAINLINE

SHEET

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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



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PROJECT NO: 8888-08-76

HWY: CTH O

COUNTY: TAYLOR

CROSS SECTIONS: MAINLINE

SHEET

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FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090140_XS.DWG
LAYOUT NAME - 44

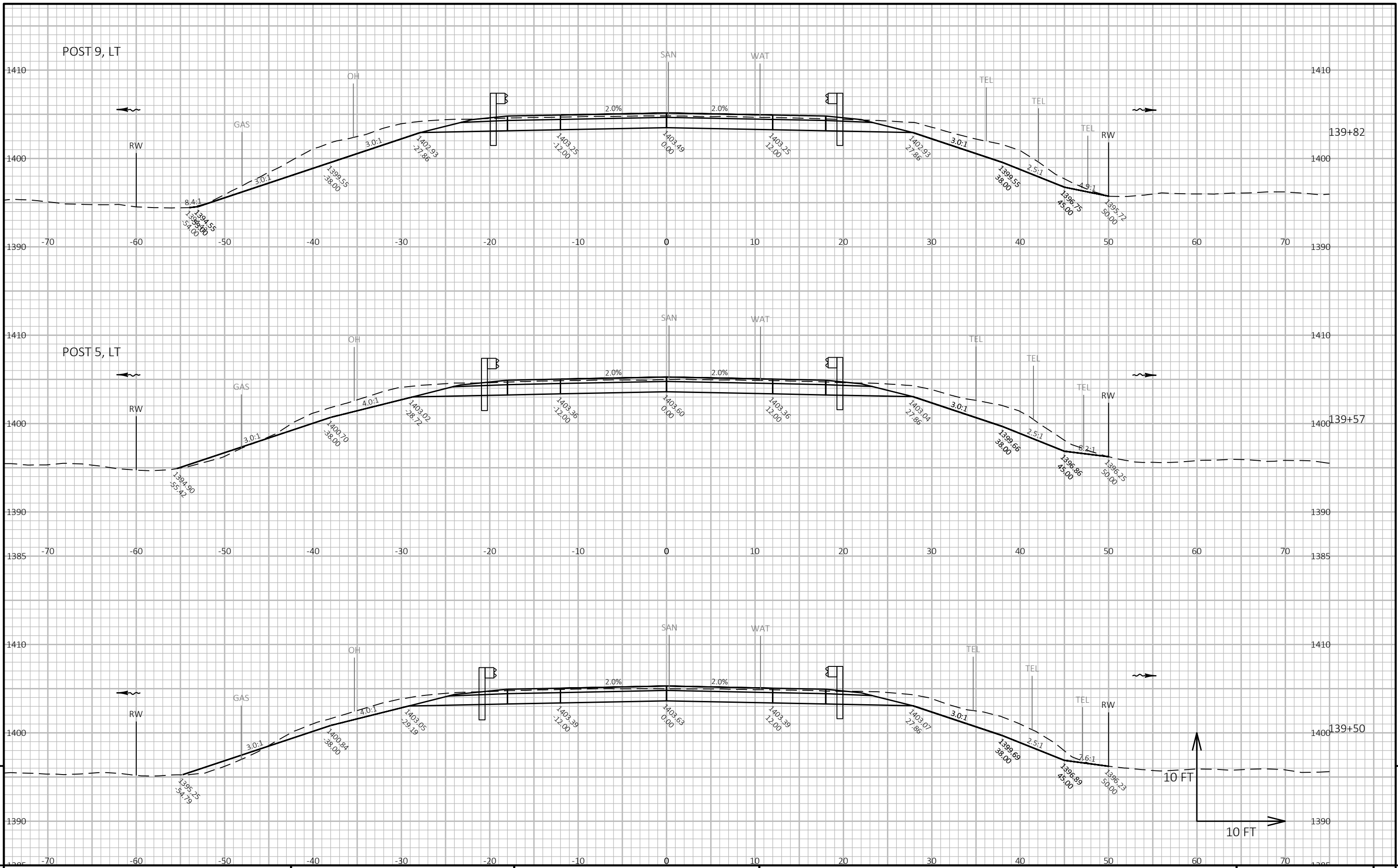
PLOT DATE: 6/13/2022 11:41 AM

PLOT BY: JEFF BREU

PLOT NAME:

PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

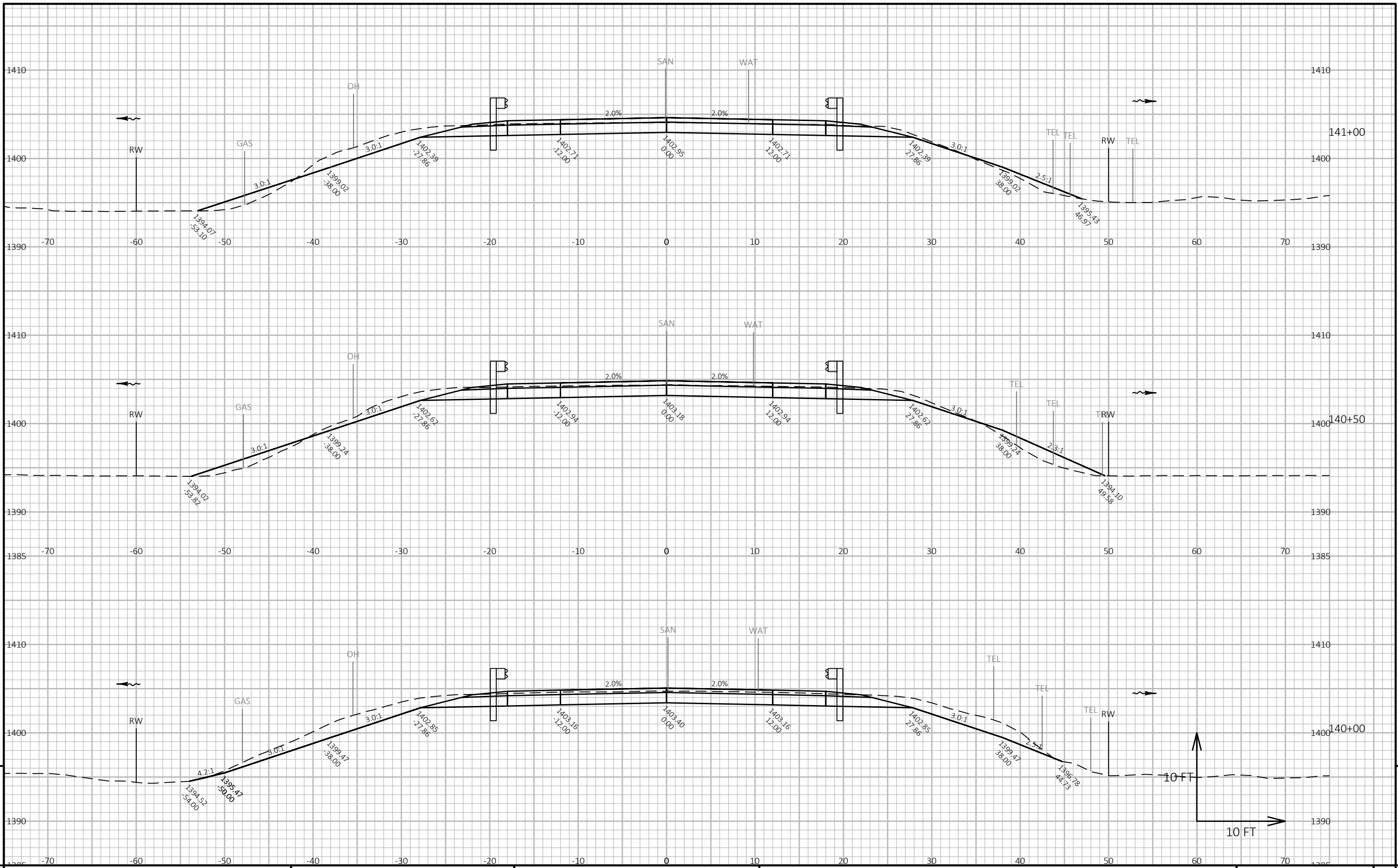
WISDOT/CADD SHEET 49



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| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | CROSS SECTIONS: MAINLINE | SHEET | E |
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FILE NAME : X:\3224200\200348.01\TECH\CAD\XXXXXXX\6\SHEETSPLAN\090140_XS.DWG PLOT DATE : 6/13/2022 11:41 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 45



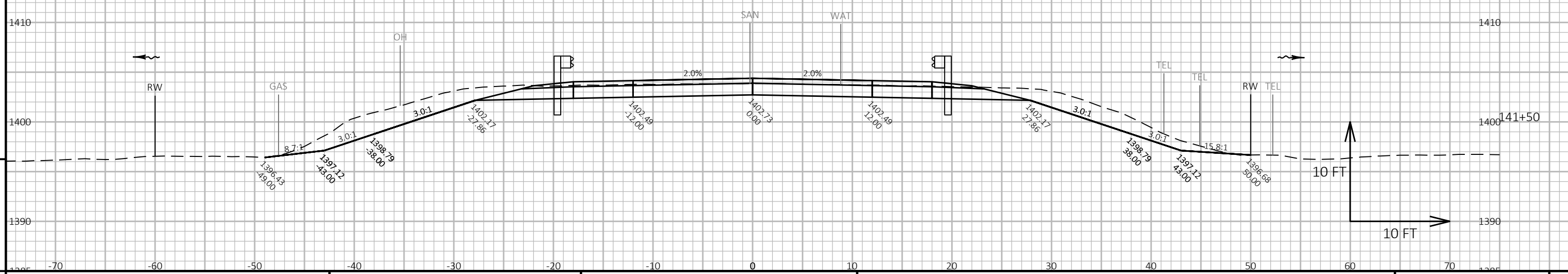
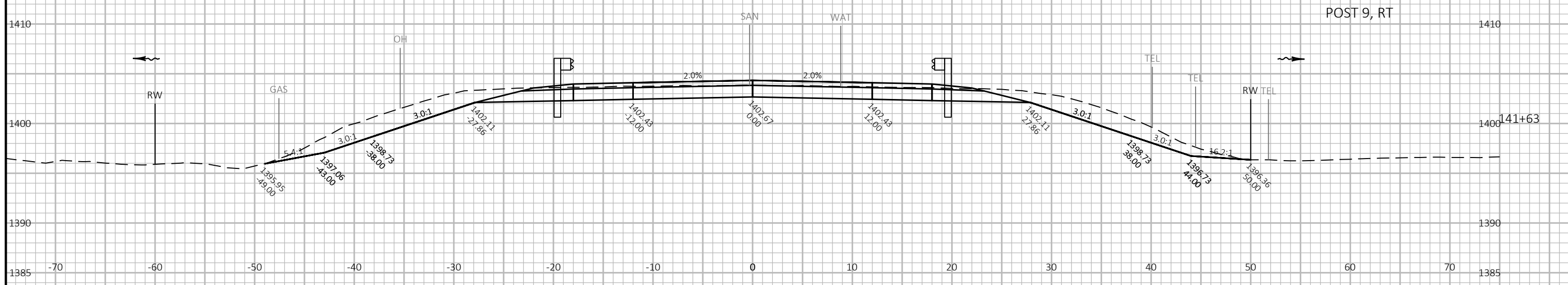
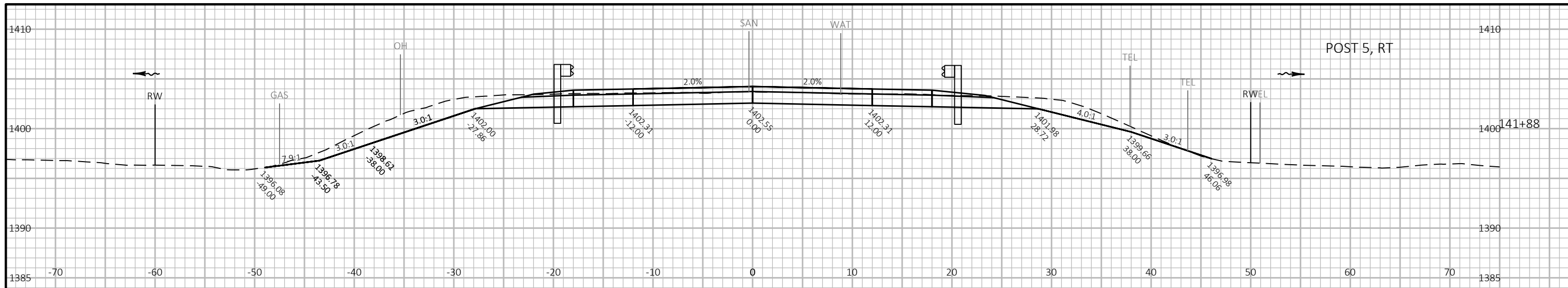
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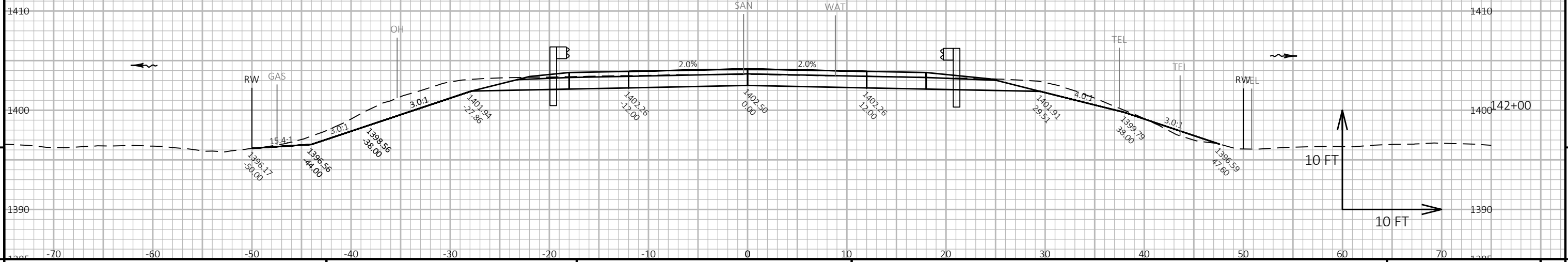
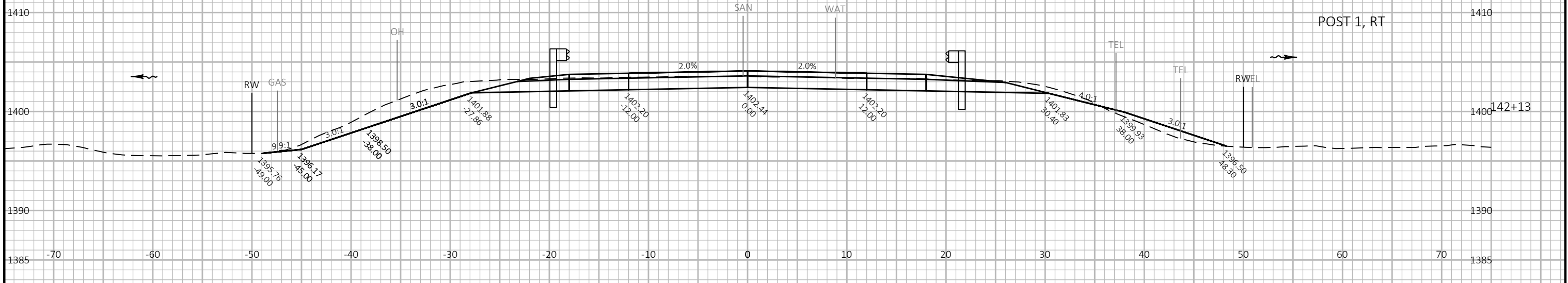
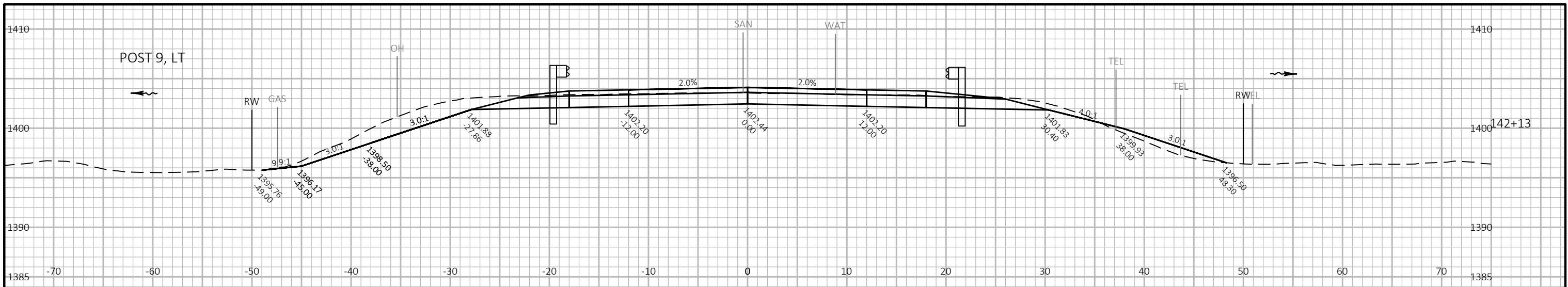
PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET E

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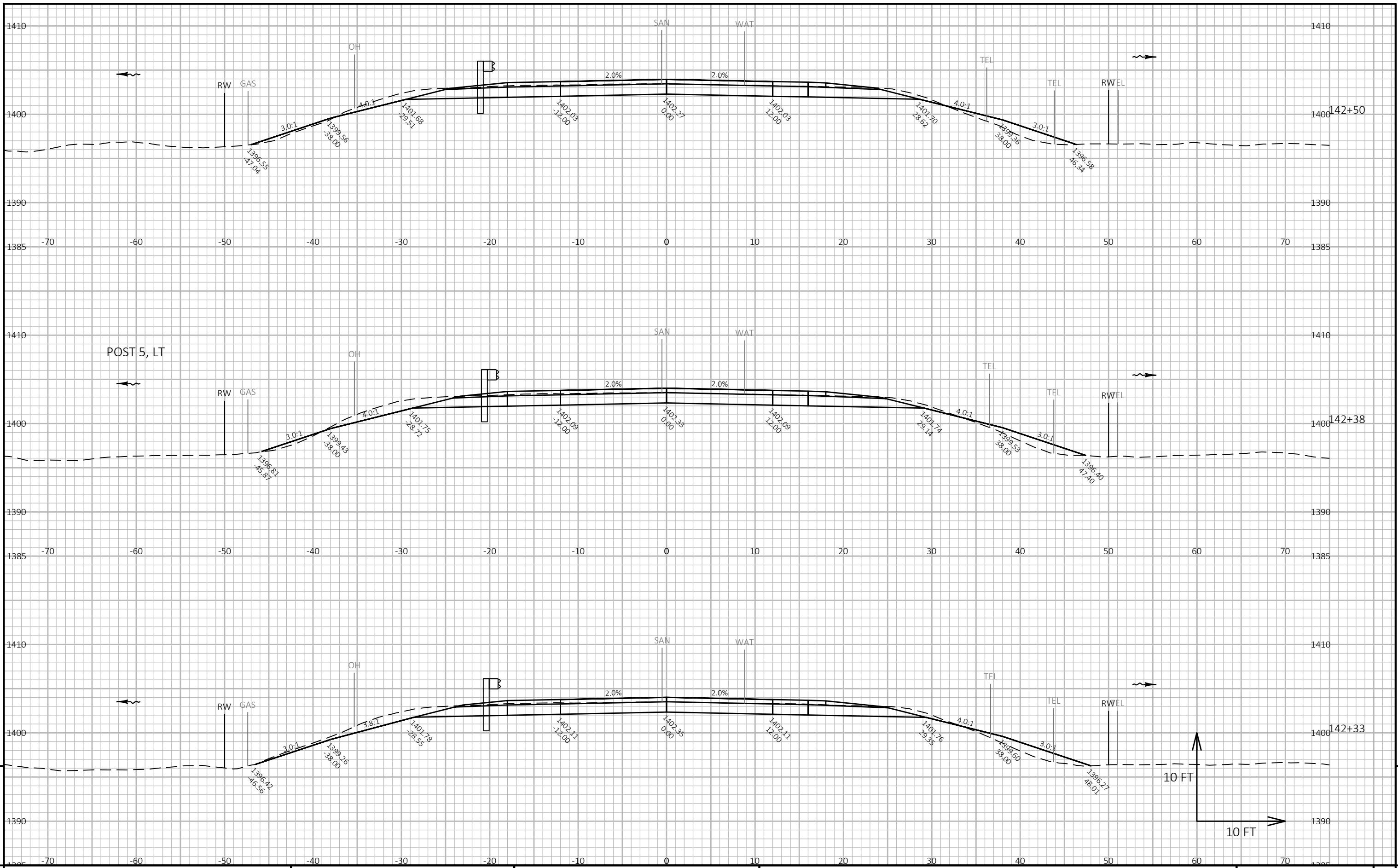
LAYOUT NAME - 46



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|------------------------|------------|----------------|--------------------------|---------|
| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | CROSS SECTIONS: MAINLINE | SHEET 9 |
|------------------------|------------|----------------|--------------------------|---------|



PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9



PROJECT NO: 8888-08-76

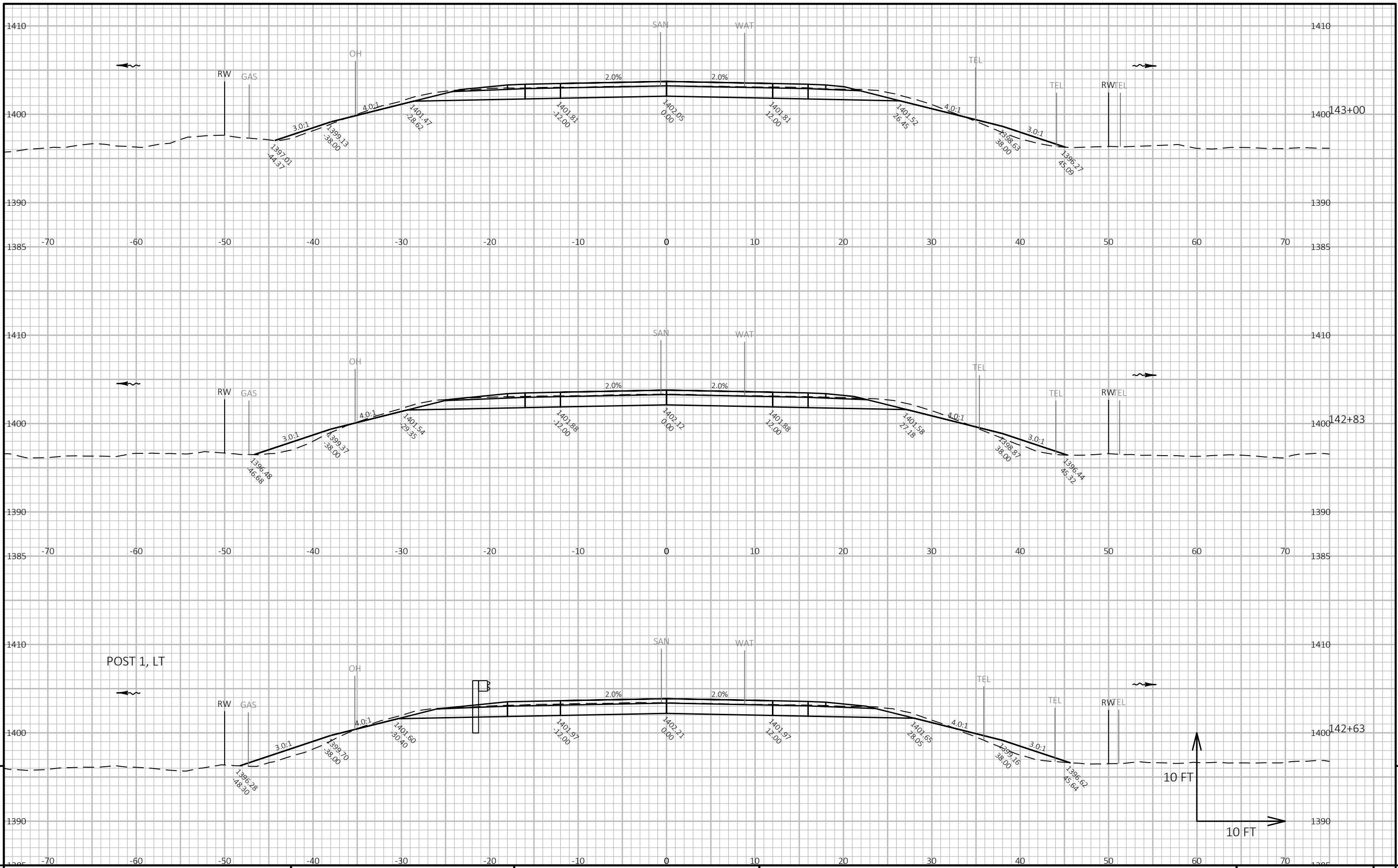
HWY: CTH O

COUNTY: TAYLOR

CROSS SECTIONS: MAINLINE

SHEET

E



PROJECT NO: 8888-08-76

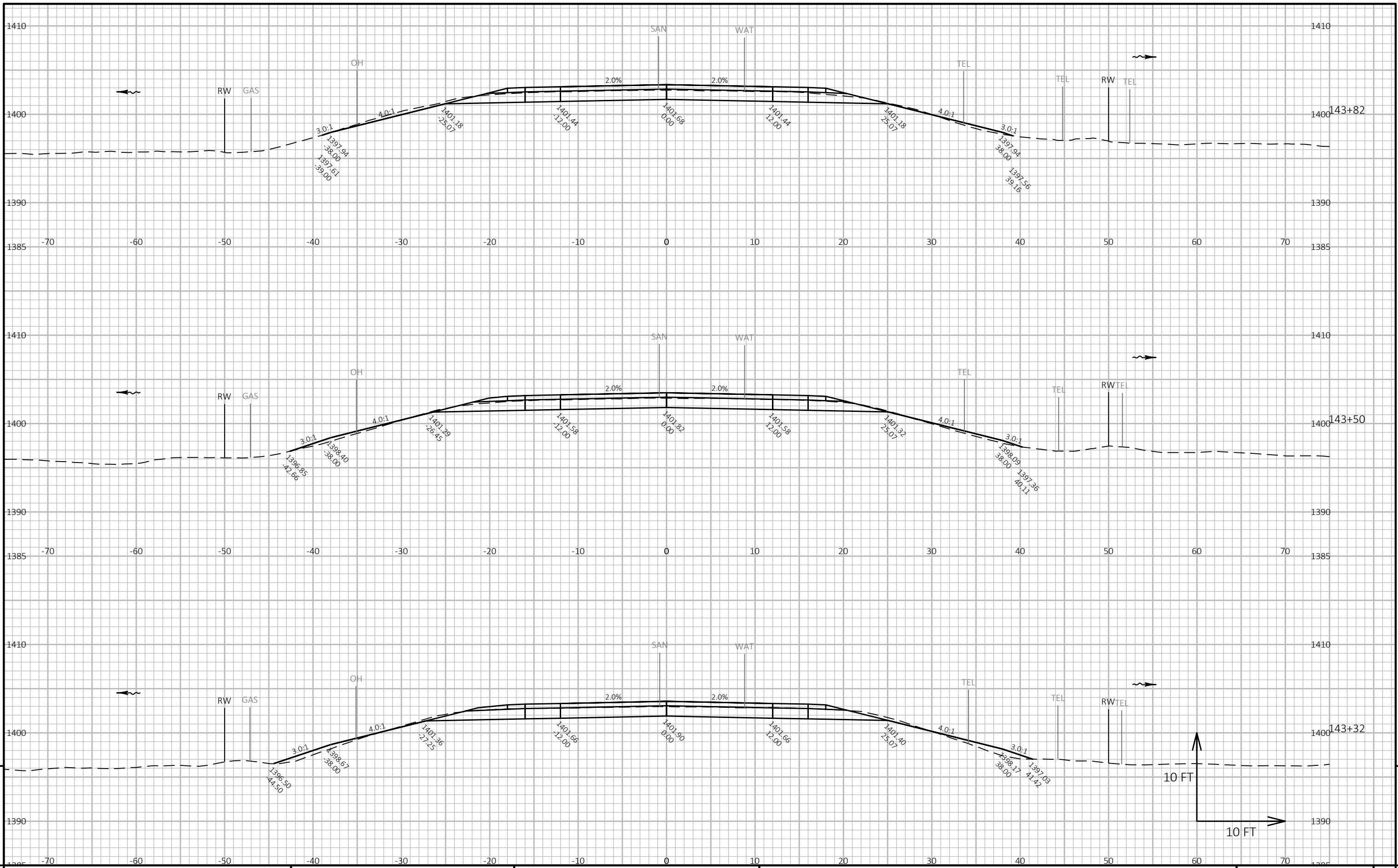
HWY: CTH O

COUNTY: TAYLOR

CROSS SECTIONS: MAINLINE

SHEET

E



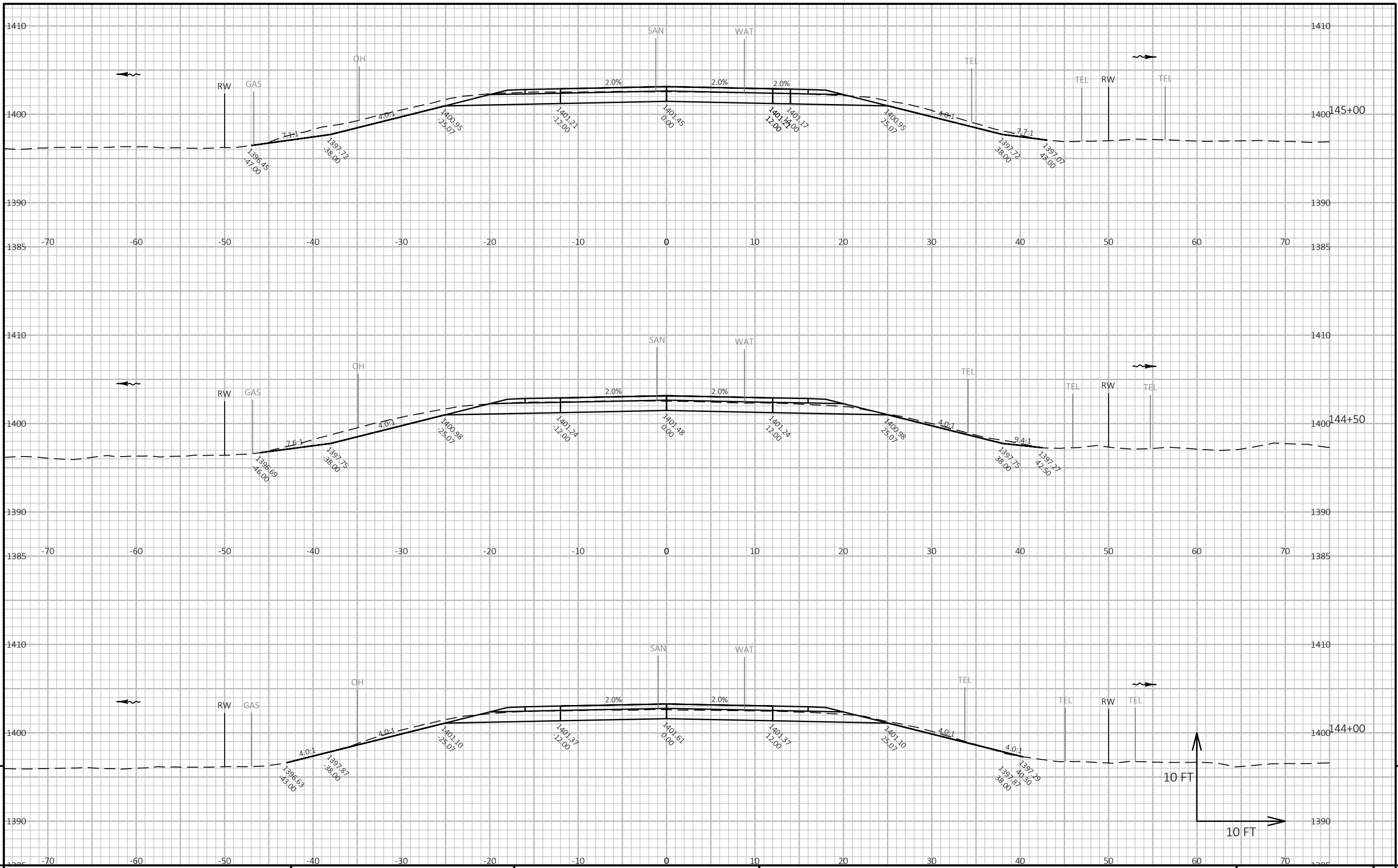
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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET E

FILE NAME : X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090140_XS.DWG PLOT DATE : 6/13/2022 2:09 PM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 51



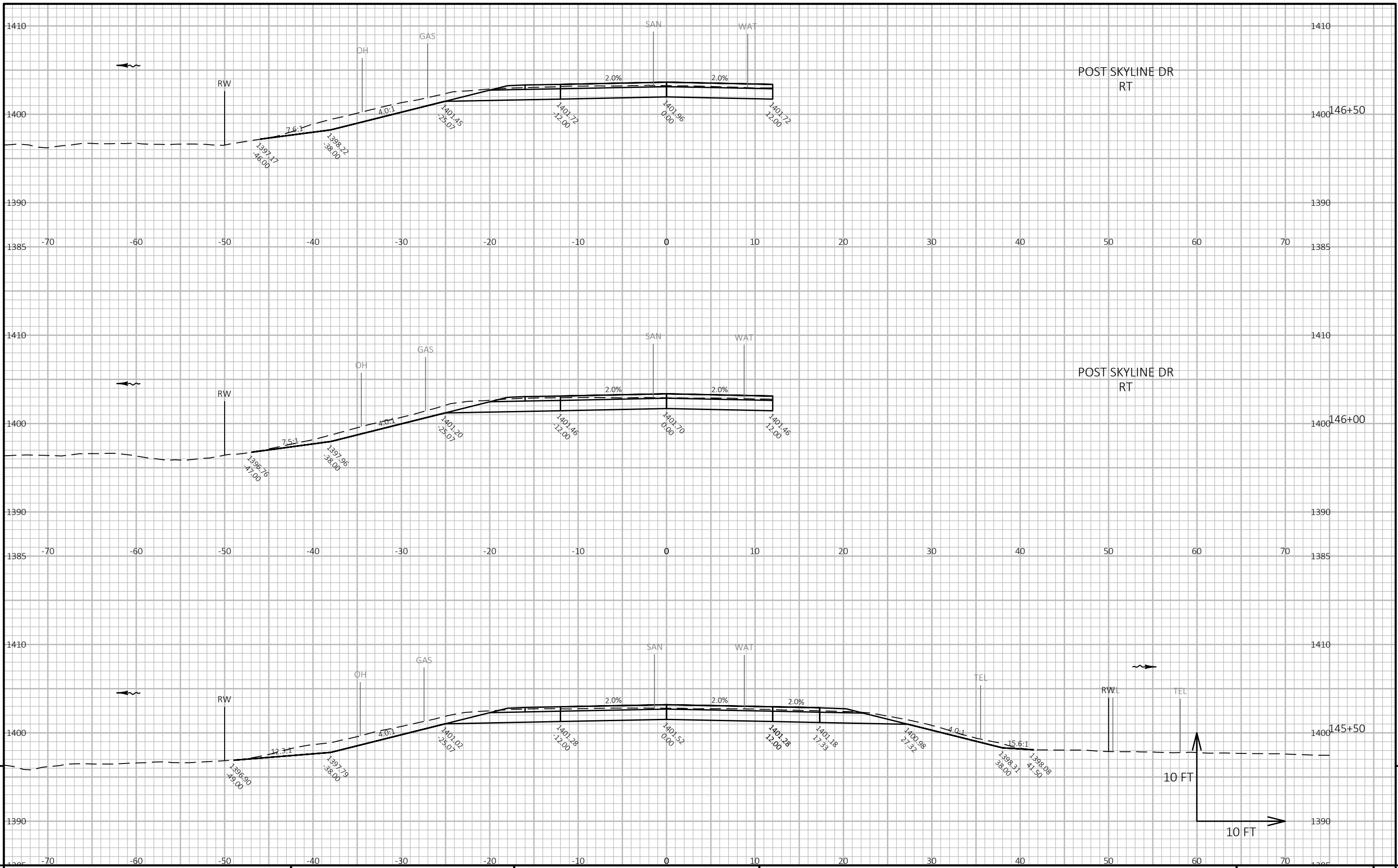
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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET E

FILE NAME : X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090140_XS.DWG PLOT DATE : 6/13/2022 11:43 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

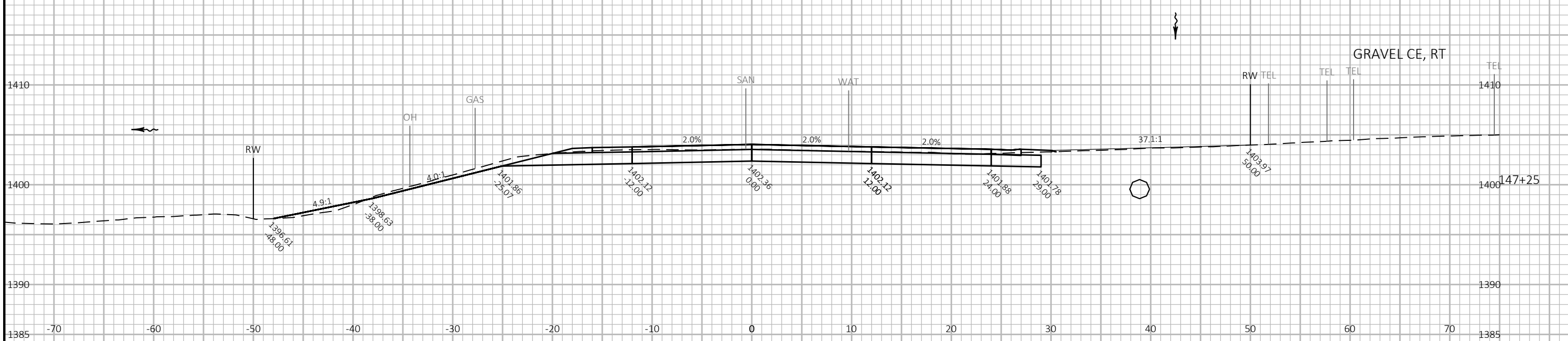
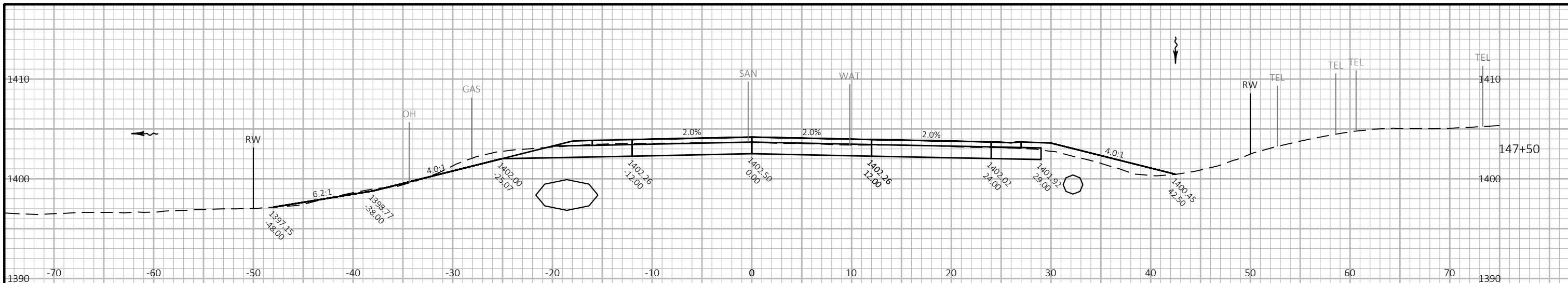
LAYOUT NAME - 52



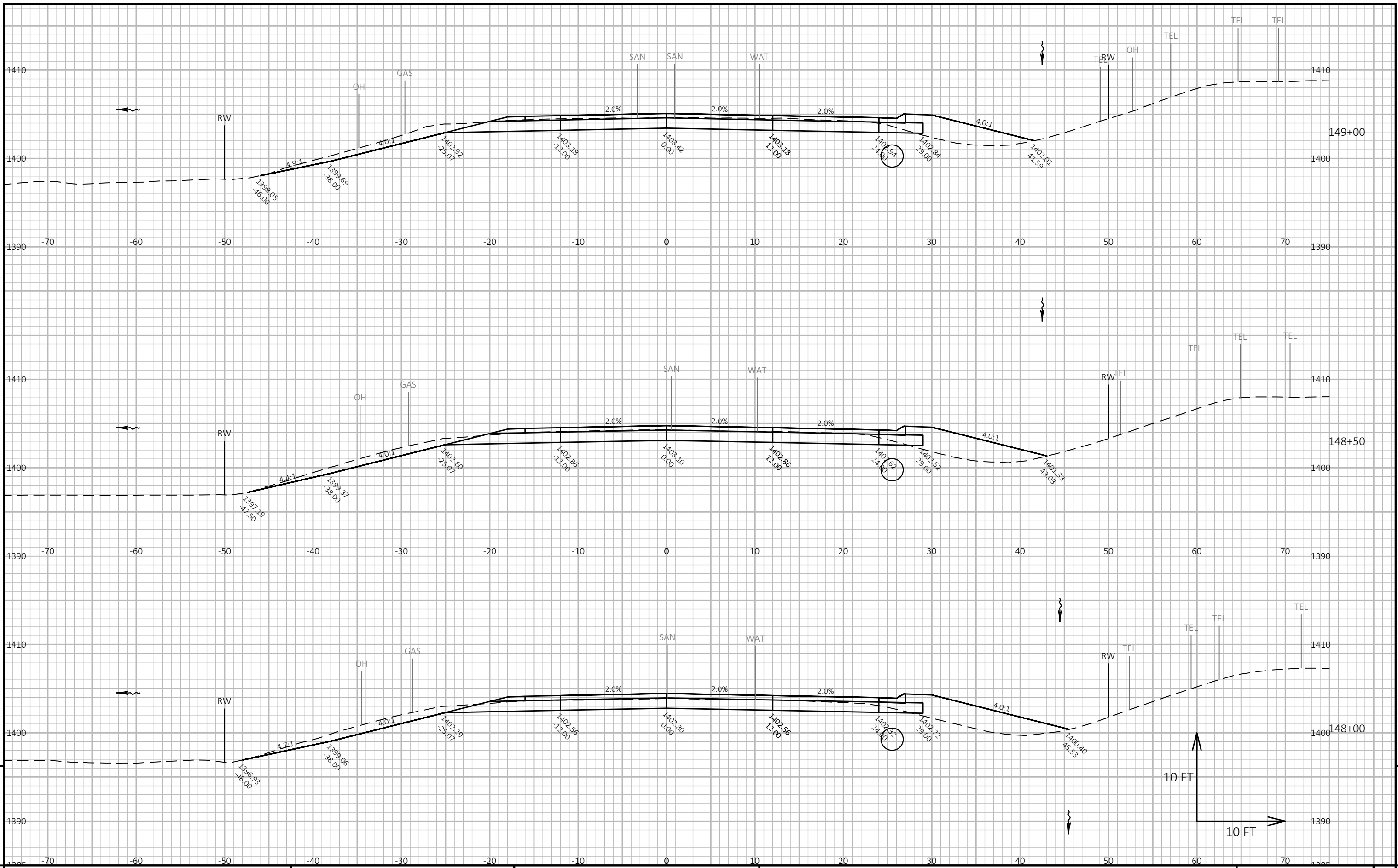
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| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | CROSS SECTIONS: MAINLINE | SHEET | E |
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| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | CROSS SECTIONS: MAINLINE | SHEET 9 |
|------------------------|------------|----------------|--------------------------|---------|



PROJECT NO: 8888-08-76

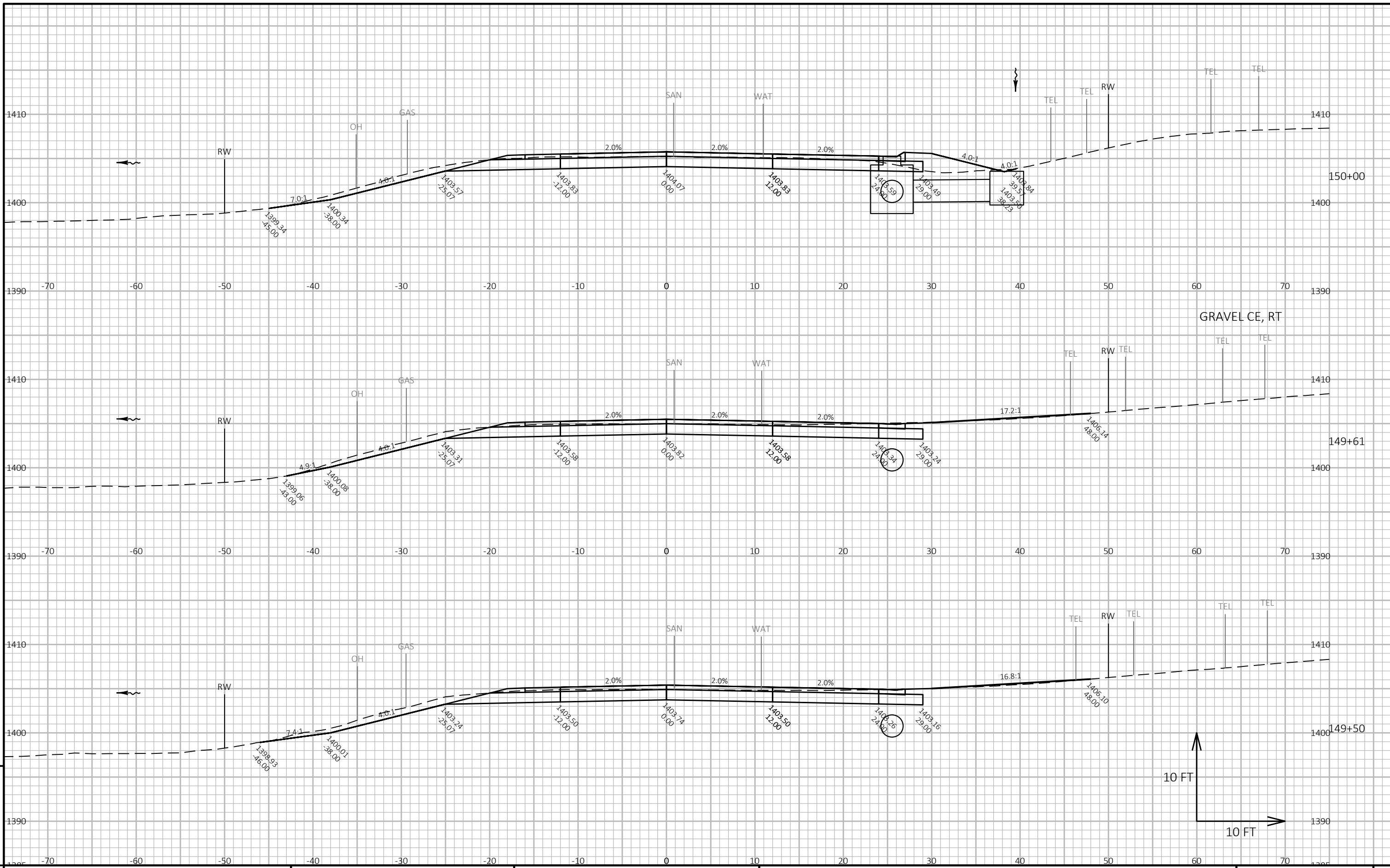
HWY: CTH O

COUNTY: TAYLOR

CROSS SECTIONS: MAINLINE

SHEET

E



PROJECT NO: 8888-08-76

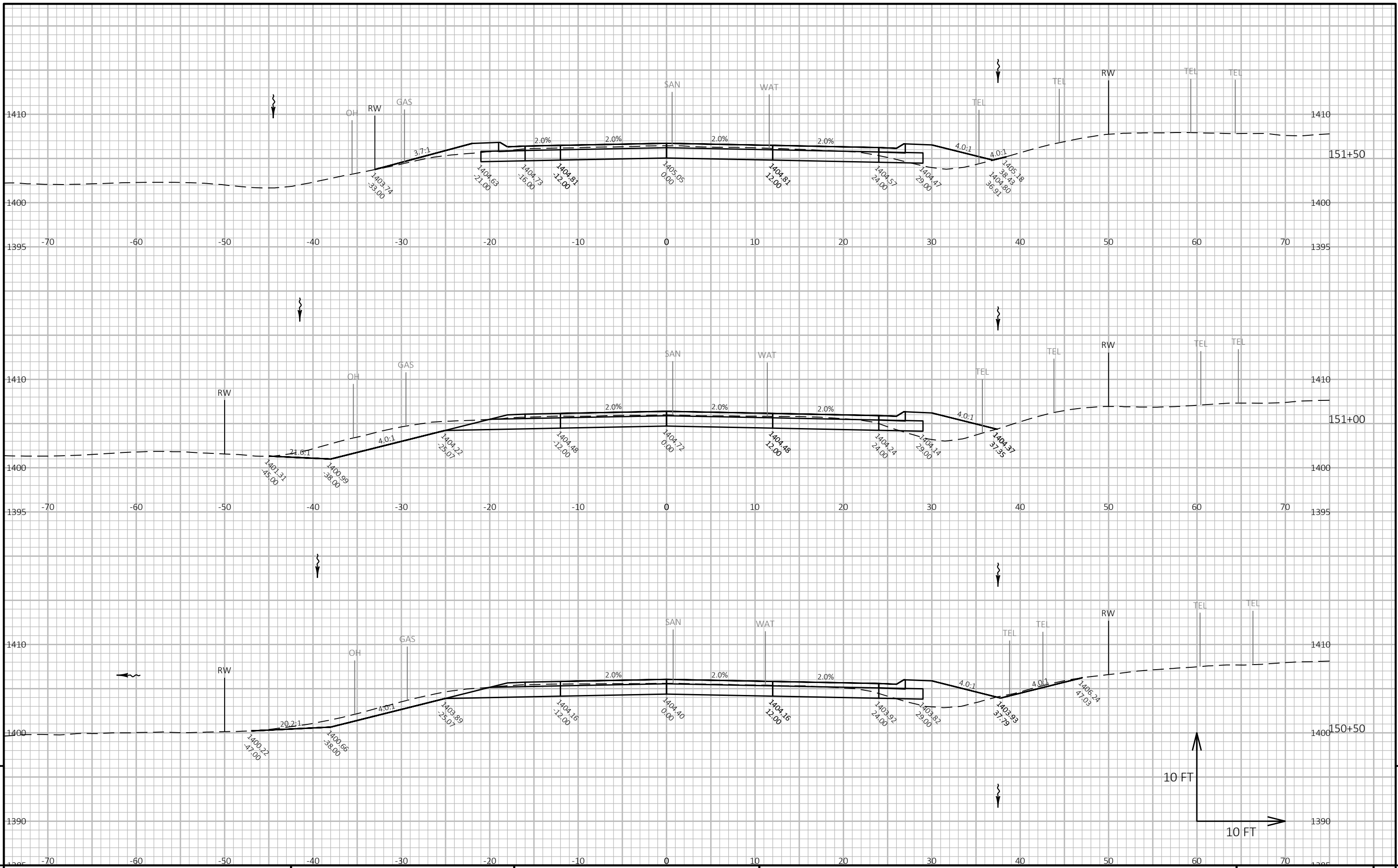
HWY: CTH O

COUNTY: TAYLOR

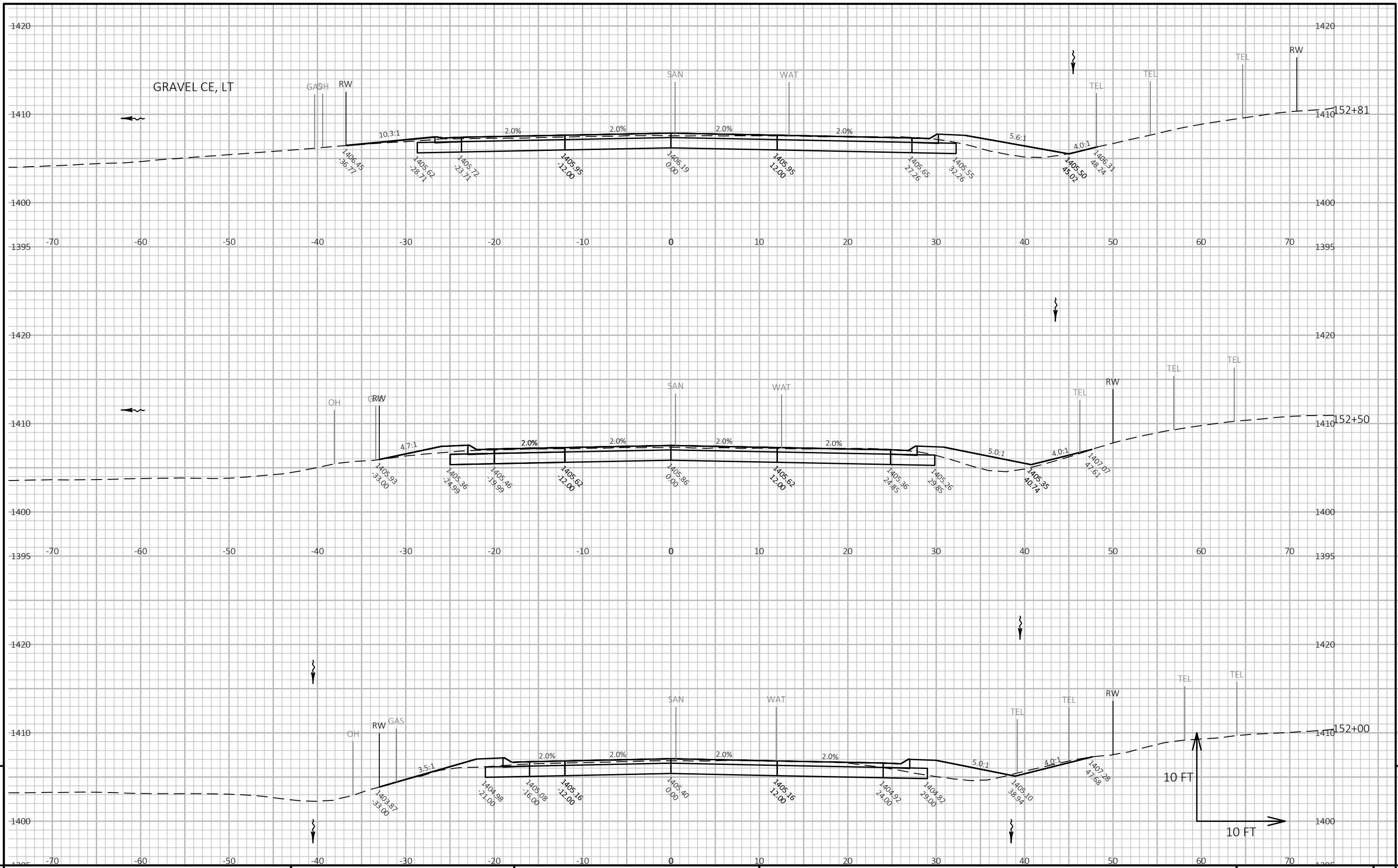
CROSS SECTIONS: MAINLINE

SHEET

E



PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9

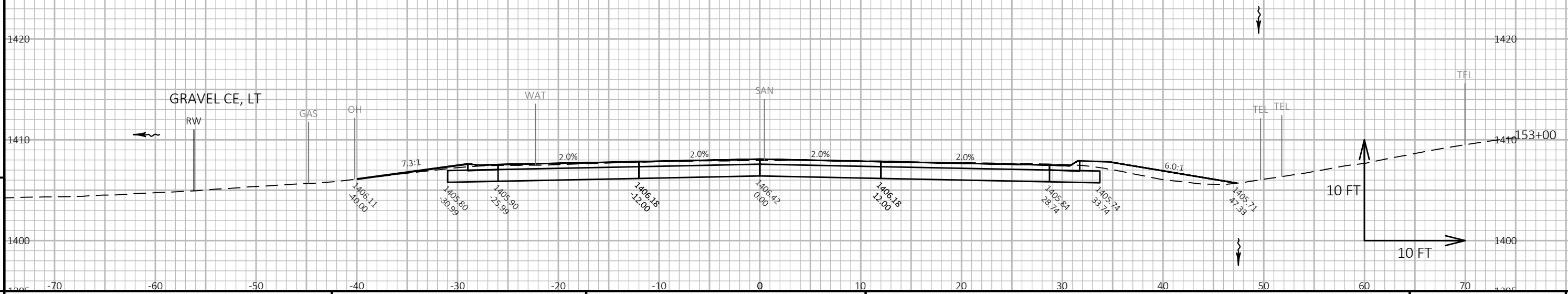
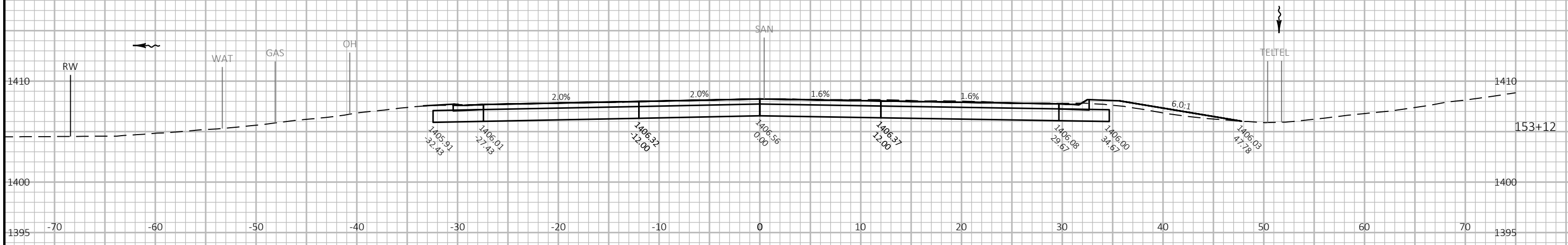


PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: MAINLINE SHEET 9

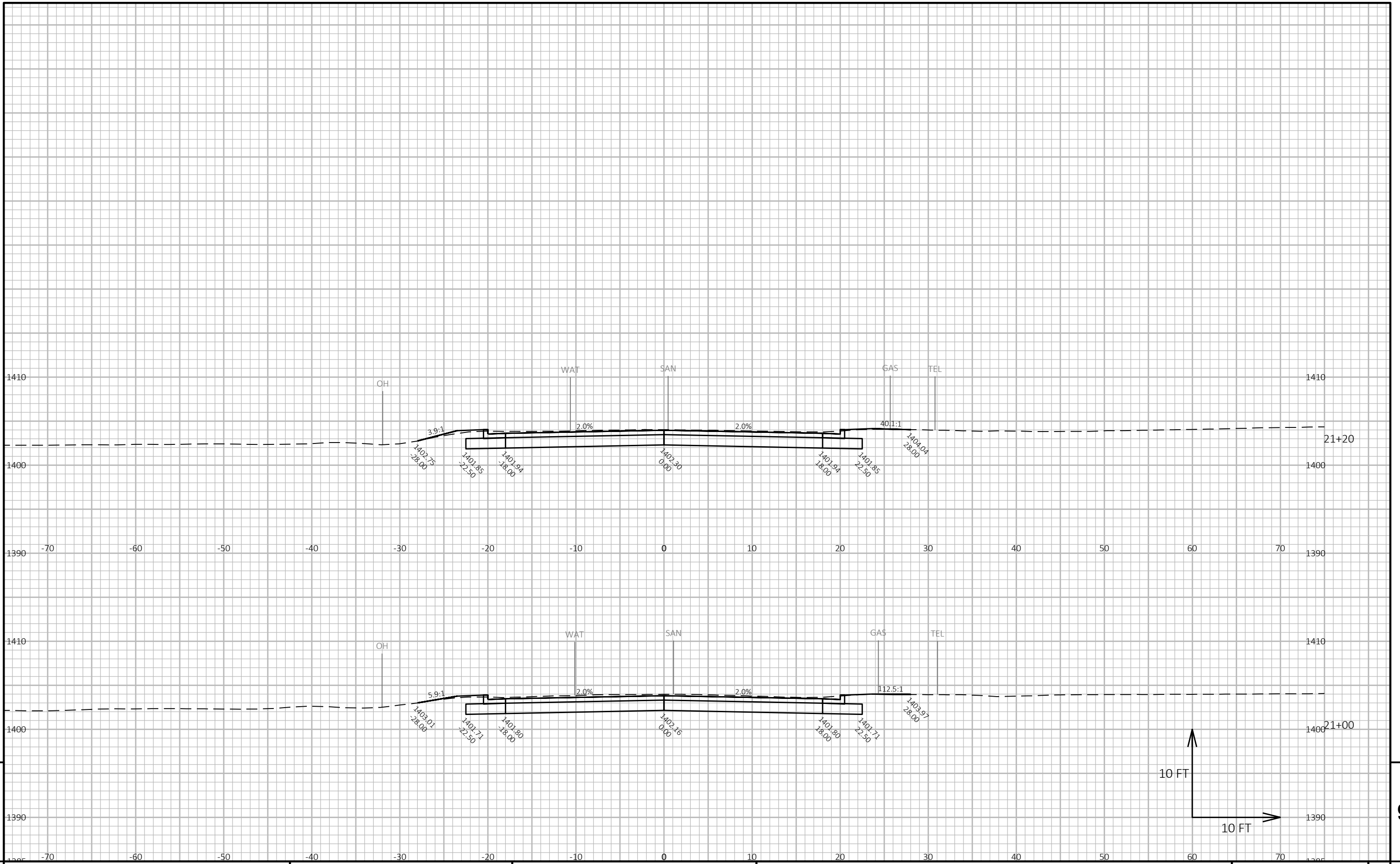
FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090140_XS.DWG PLOT DATE: 6/13/2022 11:49 AM PLOT BY: JEFF BREU PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 58

STA 153+12.00
END PROJECT 8888-08-76



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|------------------------|------------|----------------|--------------------------|-------|---|
| PROJECT NO: 8888-08-76 | HWY: CTH O | COUNTY: TAYLOR | CROSS SECTIONS: MAINLINE | SHEET | E |
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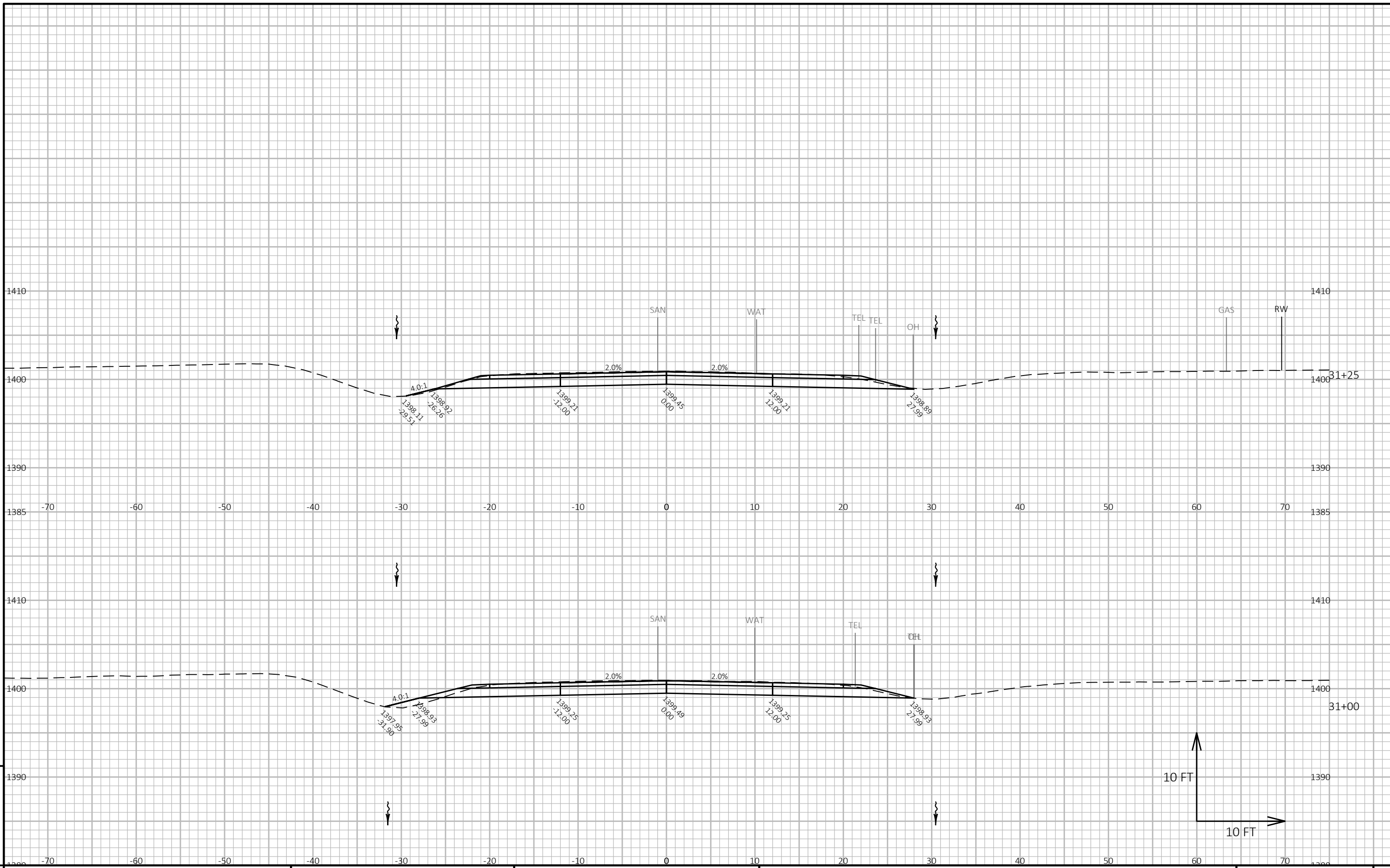
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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: GIBSON ST SHEET E

FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090101_XS.DWG PLOT DATE: 6/13/2022 11:22 AM PLOT BY: JEFF BREU PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 70

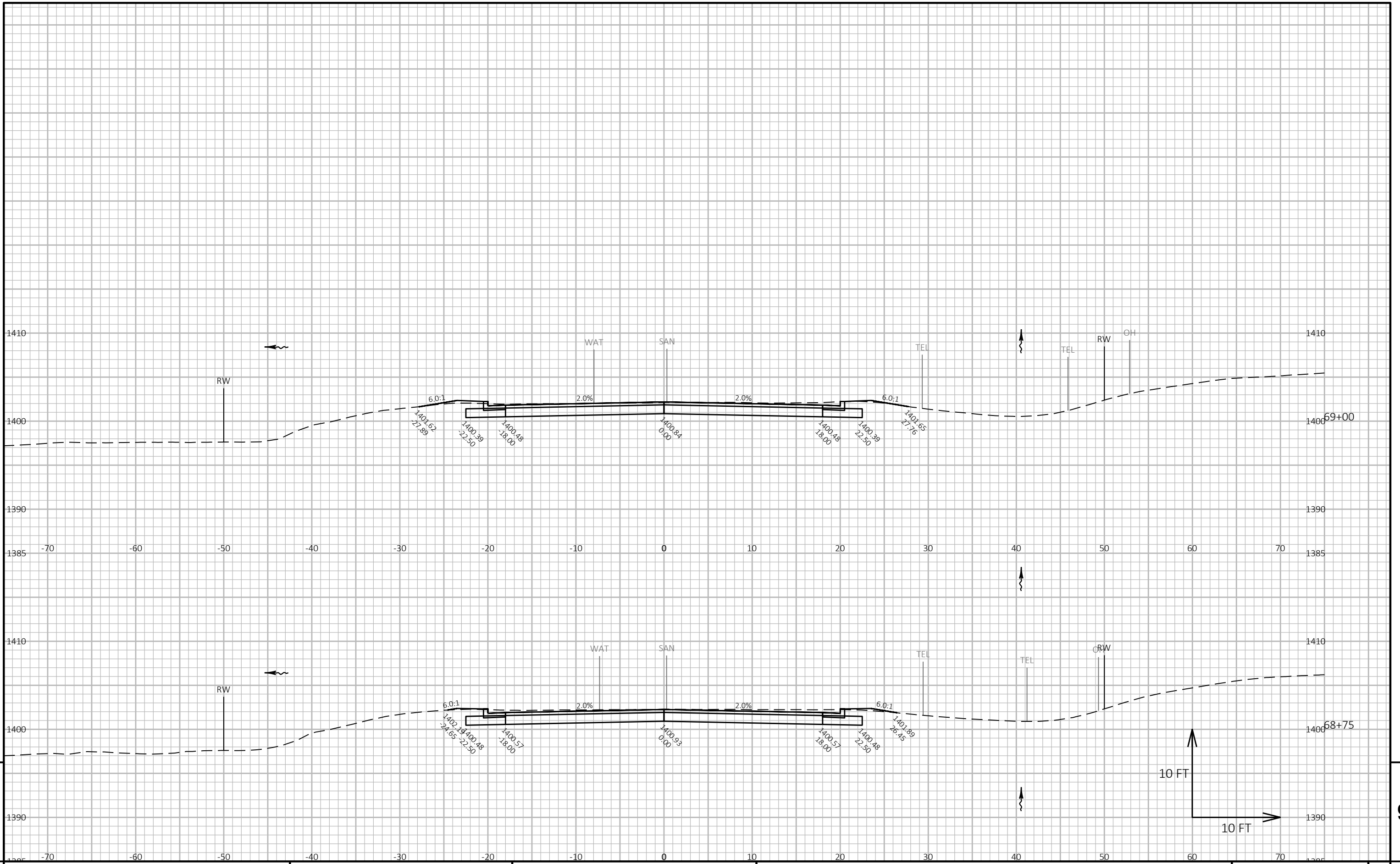


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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: WHELEN AVE SHEET E

FILE NAME: X:\3224200\200348.01\TECH\CAD\XXXXXXXX\SHEETSPLAN\090120_XS.DWG PLOT DATE: 6/13/2022 11:35 AM PLOT BY: JEFF BREU PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



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PROJECT NO: 8888-08-76 HWY: CTH O COUNTY: TAYLOR CROSS SECTIONS: SKYLINE DR SHEET E

FILE NAME : X:\3224200\200348.01\TECH\CAD\XXXXXXX\SHEETSPLAN\090140_XS.DWG PLOT DATE : 6/13/2022 11:50 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



Wisconsin Department of Transportation

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