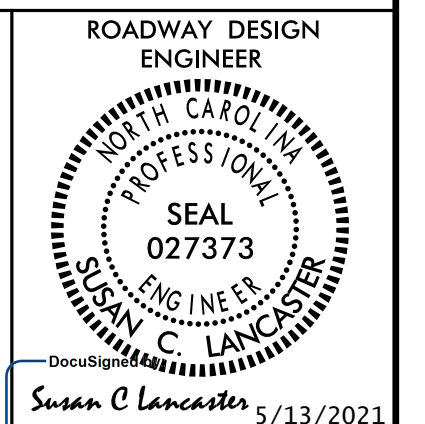


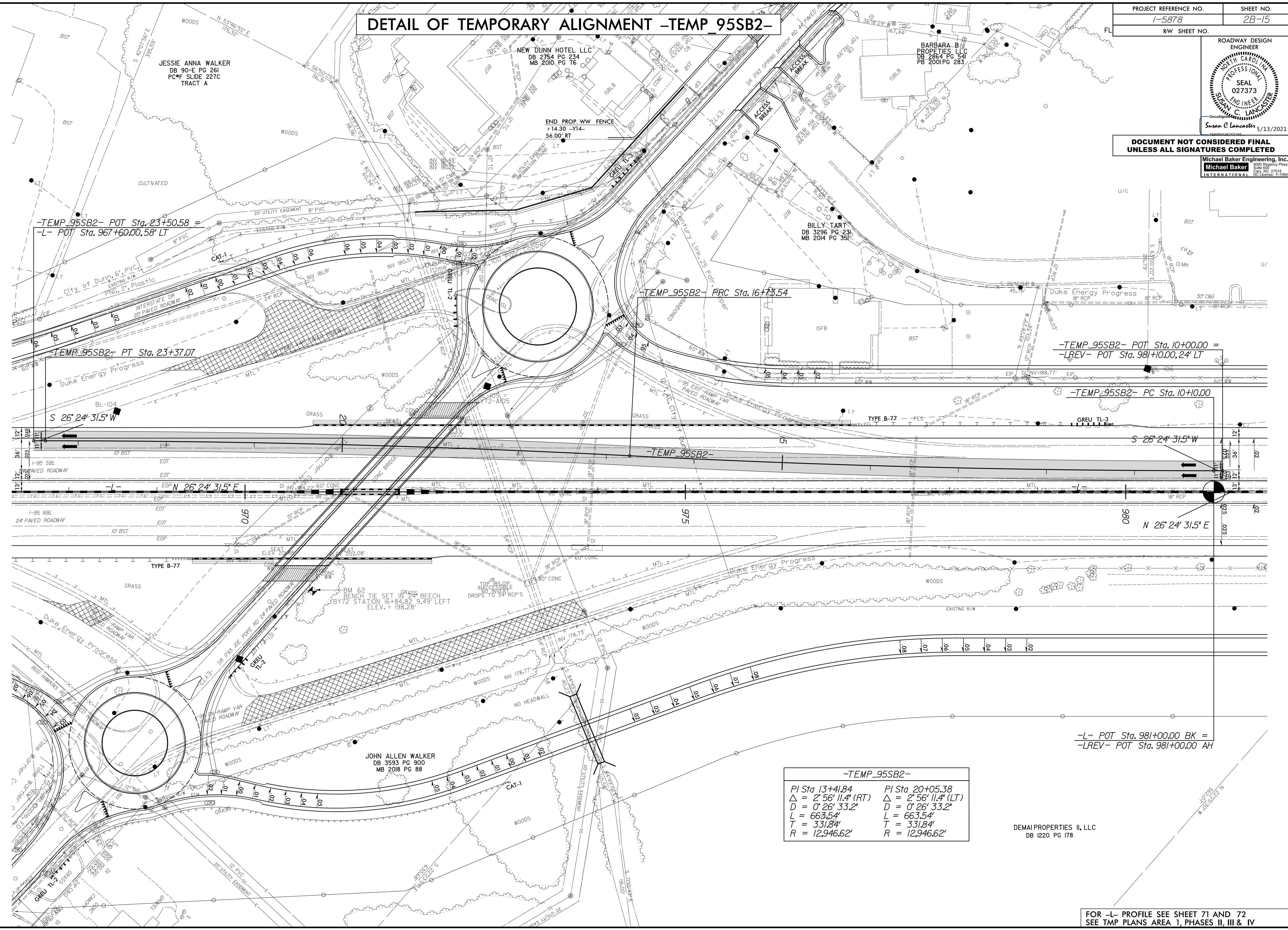
DETAIL OF TEMPORARY ALIGNMENT -TEMP 95SB2-

| | |
|---------------------------------|--------------------|
| PROJECT REFERENCE NO. 1-5878 | SHEET NO. 2B-15 |
| RW SHEET NO. | |



**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

Michael Baker Engineering, Inc.
6000 Biological Pkwy
Suite 600
Cary, NC 27518
NC License: F-1084



| -TEMP_95SB2- | |
|--------------------------------|--------------------------------|
| PI Sta 13+41.84 | PI Sta 20+05.38 |
| $\Delta = 2' 56'' 11.4'' (RT)$ | $\Delta = 2' 56'' 11.4'' (LT)$ |
| $D = 0' 26'' 33.2''$ | $D = 0' 26'' 33.2''$ |
| $L = 663.54'$ | $L = 663.54'$ |
| $T = 331.84'$ | $T = 331.84'$ |
| $R = 12,946.62'$ | $R = 12,946.62'$ |

DEMAI PROPERTIES II, LLC
DB 1220 PG 178

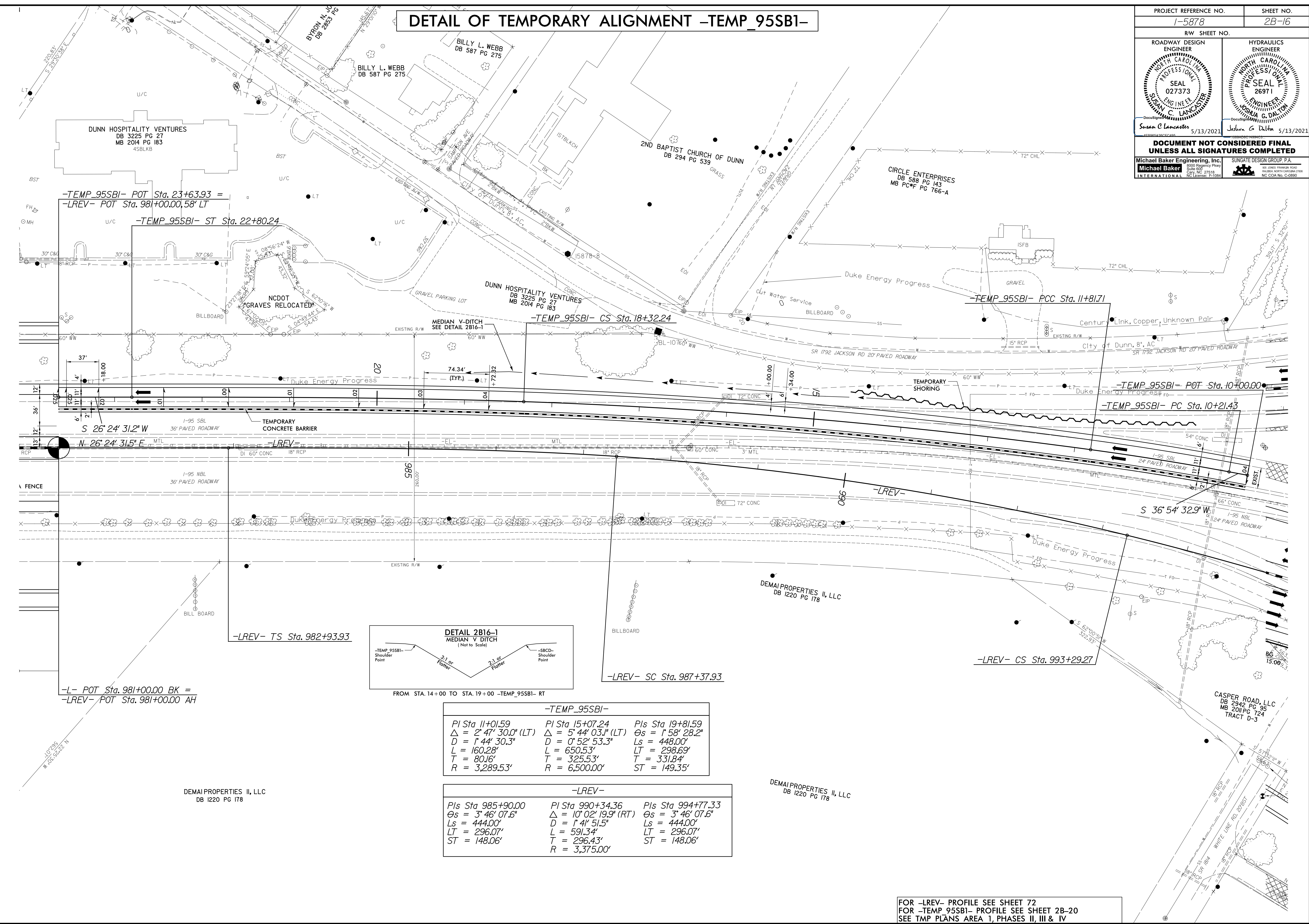
-L- POT Sta. 981+00.00 BK =
-LREV- POT Sta. 981+00.00 AH

FOR -L- PROFILE SEE SHEET 71 AND 72
SEE TMP PLANS AREA 1, PHASES II, III & IV

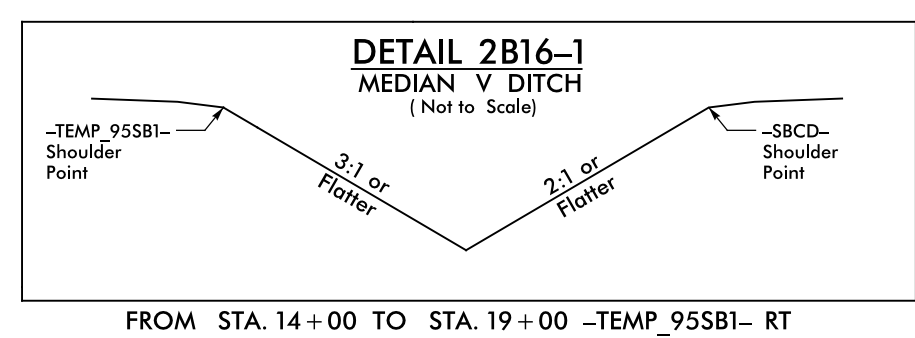
5/14/2021
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 R:\P\13-MAY-2021\16:02:06 6B_Rdy_PSH_2B-15_TC.dgn

DETAIL OF TEMPORARY ALIGNMENT -TEMP_95SB1-

| | |
|--|---|
| PROJECT REFERENCE NO. 1-5878 | SHEET NO. 2B-16 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER SUNGATE DESIGN GROUP, P.A. SEAL 027373 SUNNY C. LANCASTER | HYDRAULICS ENGINEER SUNGATE DESIGN GROUP, P.A. SEAL 26971 JOSHUA G. DALTON |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Michael Baker Engineering, Inc. INTERNATIONAL | SUNGATE DESIGN GROUP, P.A. |



REVISIONS



| -TEMP_95SB1- | | |
|------------------------------------|------------------------------------|---------------------------------|
| PI Sta 11+01.59 | PI Sta 15+07.24 | PIs Sta 19+81.59 |
| $\Delta = 2^\circ 47' 30.0''$ (LT) | $\Delta = 5^\circ 44' 03.1''$ (LT) | $\Theta_s = 1^\circ 58' 28.2''$ |
| $D = 1^\circ 44' 30.3''$ | $D = 0^\circ 52' 53.3''$ | $L_s = 448.00'$ |
| $L = 160.28'$ | $L = 650.53'$ | $LT = 298.69'$ |
| $T = 80.16'$ | $T = 325.53'$ | $T = 331.84'$ |
| $R = 3,289.53'$ | $R = 6,500.00'$ | $ST = 149.35'$ |

| -LREV- | | |
|---------------------------------|-------------------------------------|---------------------------------|
| PIs Sta 985+90.00 | PI Sta 990+34.36 | PIs Sta 994+77.33 |
| $\Theta_s = 3^\circ 46' 07.6''$ | $\Delta = 10^\circ 02' 19.9''$ (RT) | $\Theta_s = 3^\circ 46' 07.6''$ |
| $L_s = 444.00'$ | $D = 1^\circ 41' 51.5''$ | $L_s = 444.00'$ |
| $LT = 296.07'$ | $L = 591.34'$ | $LT = 296.07'$ |
| $ST = 148.06'$ | $T = 296.43'$ | $ST = 148.06'$ |
| | $R = 3,375.00'$ | |

FOR -LREV- PROFILE SEE SHEET 72
FOR -TEMP_95SB1- PROFILE SEE SHEET 2B-20
SEE TMP PLANS AREA 1, PHASES II, III & IV

8/17/99
11-MAR-2021 09:11
I:\VARS\2021\09\11-59866B-Rdy_PSH-2B-16-TC.dgn
SUNGATE DESIGN GROUP, P.A.

DEMAI PROPERTIES II, LLC
DB 1220 PG 178

DEMAI PROPERTIES II, LLC
DB 1220 PG 178

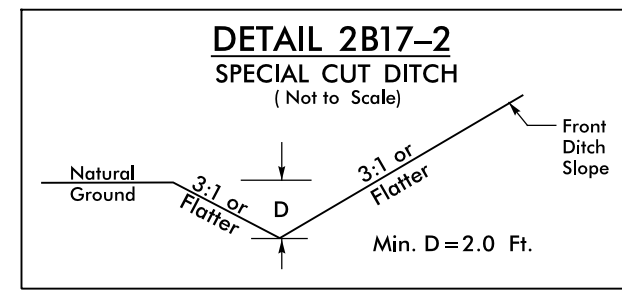
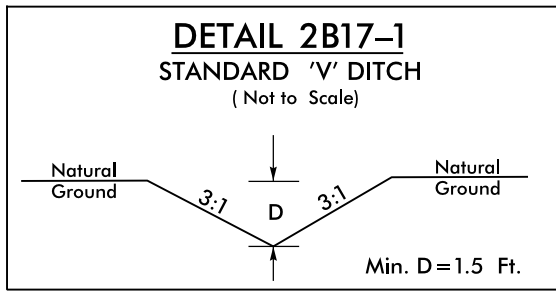
CASPER ROAD, LLC
DB 2942 PG 95
MB 2011 PG 724
TRACT D-3

| | | | |
|--|--|--|--|
| PROJECT REFERENCE NO. I-5878 | | SHEET NO. 2B-17 | |
| RW SHEET NO. | | HYDRAULICS ENGINEER | |
| ROADWAY DESIGN ENGINEER | | SEAL 26971 | |
| | | | |
| Susan C. Lancaster 5/13/2021 | | Joshua G. Dalton 5/13/2021 | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | |
| Michael Baker Engineering, Inc. 1000 Rindgeberry Place Cary, NC 27513 INTERNATIONAL | | SUNGATE DESIGN GROUP, P.A. 200 ZONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27601 NC COA No. C-48890 | |

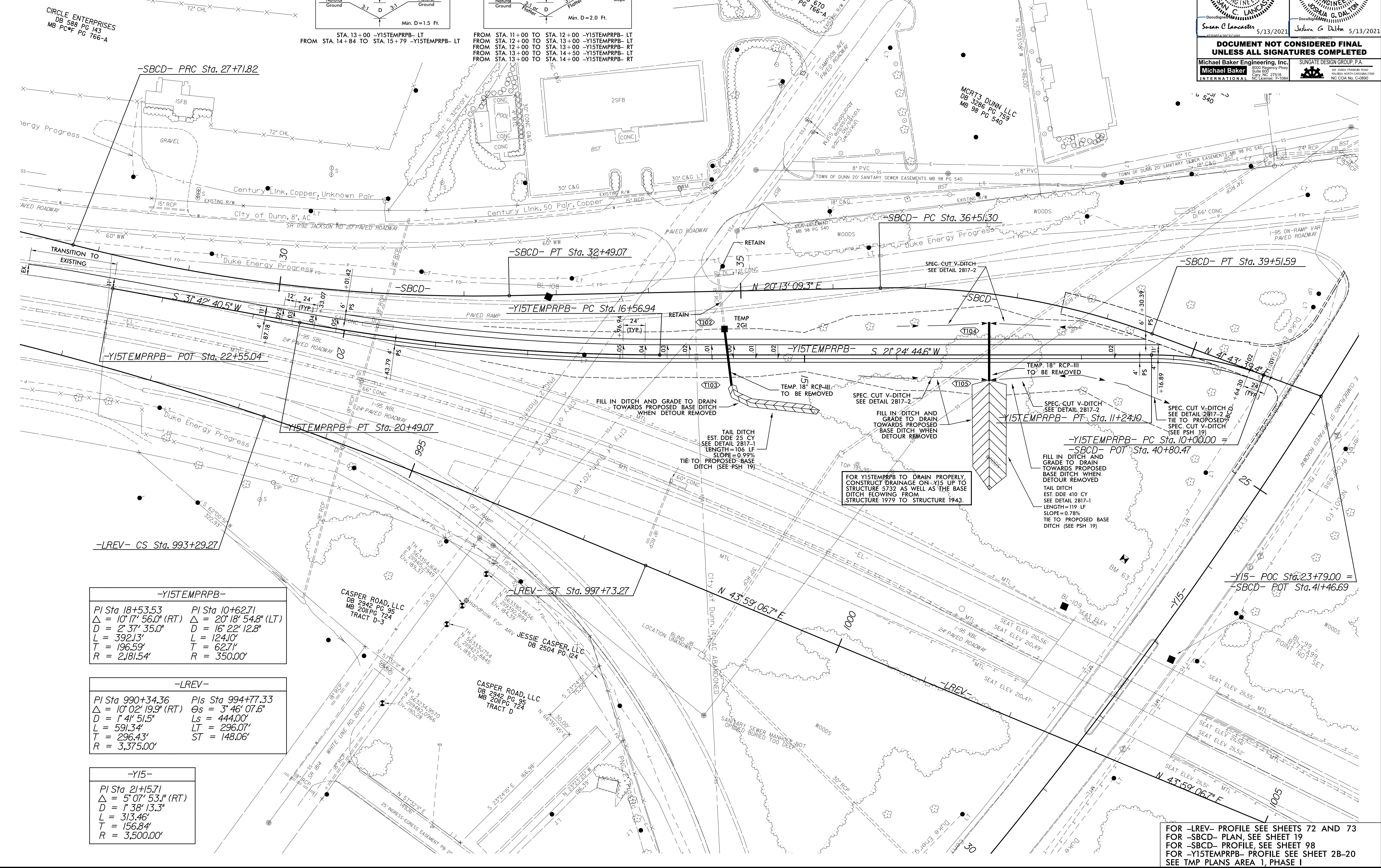
DETAIL OF TEMPORARY ALIGNMENT -Y15TEMPRPB-

-SBCD-

| | |
|---|--|
| PI Sta 25+73.87 Δ = 9° 02' 24.4" (RT) D = 3' 22' 13.2" L = 268.23' T = 134.39' R = 1,700.00' | PI Sta 31+44.59 Δ = 15° 43' 21.5" (LT) D = 3' 22' 13.2" L = 466.50' T = 234.72' R = 1,700.00' |
|---|--|



FROM STA. 11+00 TO STA. 12+00 -Y15TEMPRPB- LT
FROM STA. 12+00 TO STA. 13+00 -Y15TEMPRPB- LT
FROM STA. 12+00 TO STA. 13+00 -Y15TEMPRPB- RT
FROM STA. 13+00 TO STA. 14+50 -Y15TEMPRPB- LT
FROM STA. 13+00 TO STA. 14+00 -Y15TEMPRPB- RT



-Y15TEMPRPB-

| | |
|--|--|
| PI Sta 18+53.53 Δ = 10° 17' 56.0" (RT) D = 2' 37' 35.0" L = 392.13' T = 196.59' R = 2,181.54' | PI Sta 10+62.71 Δ = 20° 18' 54.8" (LT) D = 16' 22' 12.8" L = 124.10' T = 62.71' R = 350.00' |
|--|--|

-LREV-

| | |
|---|--|
| PI Sta 990+34.36 Δ = 10° 02' 19.9" (RT) D = 1' 41' 51.5" L = 591.34' T = 296.43' R = 3,375.00' | PIs Sta 994+77.33 Δs = 3' 46' 07.6" Ls = 444.00' LT = 296.07' ST = 148.06' |
|---|--|

-Y15-

| |
|--|
| PI Sta 21+5.71 Δ = 5° 07' 53.1" (RT) D = 1' 38' 13.3" L = 313.46' T = 156.84' R = 3,500.00' |
|--|

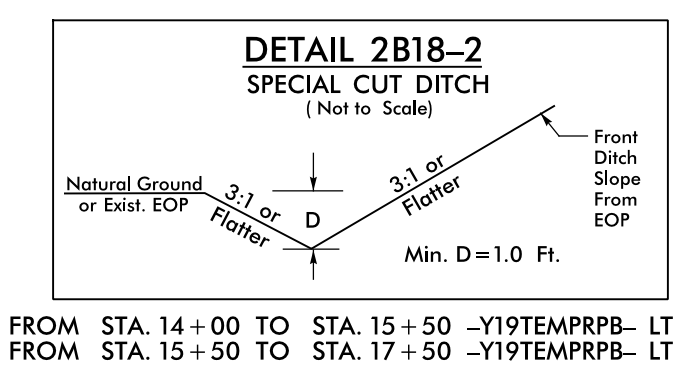
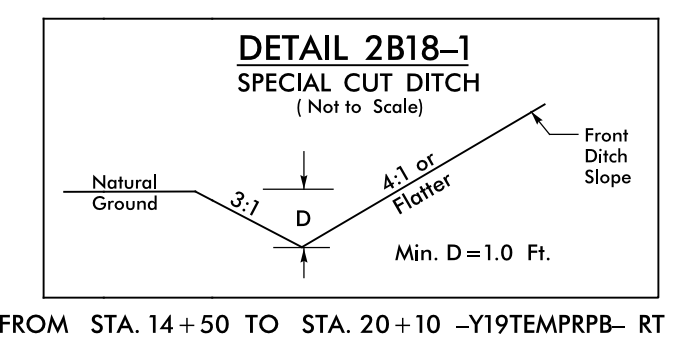
REVISIONS

I:\MAR-2021\09\11-59866B-Rdy_PSH-2B-17-TC.dgn

FOR -LREV- PROFILE SEE SHEETS 72 AND 73
FOR -SBCD- PLAN, SEE SHEET 19
FOR -SBCD- PROFILE, SEE SHEET 98
FOR -Y15TEMPRPB- PROFILE SEE SHEET 2B-20
SEE TMP PLANS AREA 1, PHASE I

DETAIL OF TEMPORARY ALIGNMENT -Y19TEMPRPB-

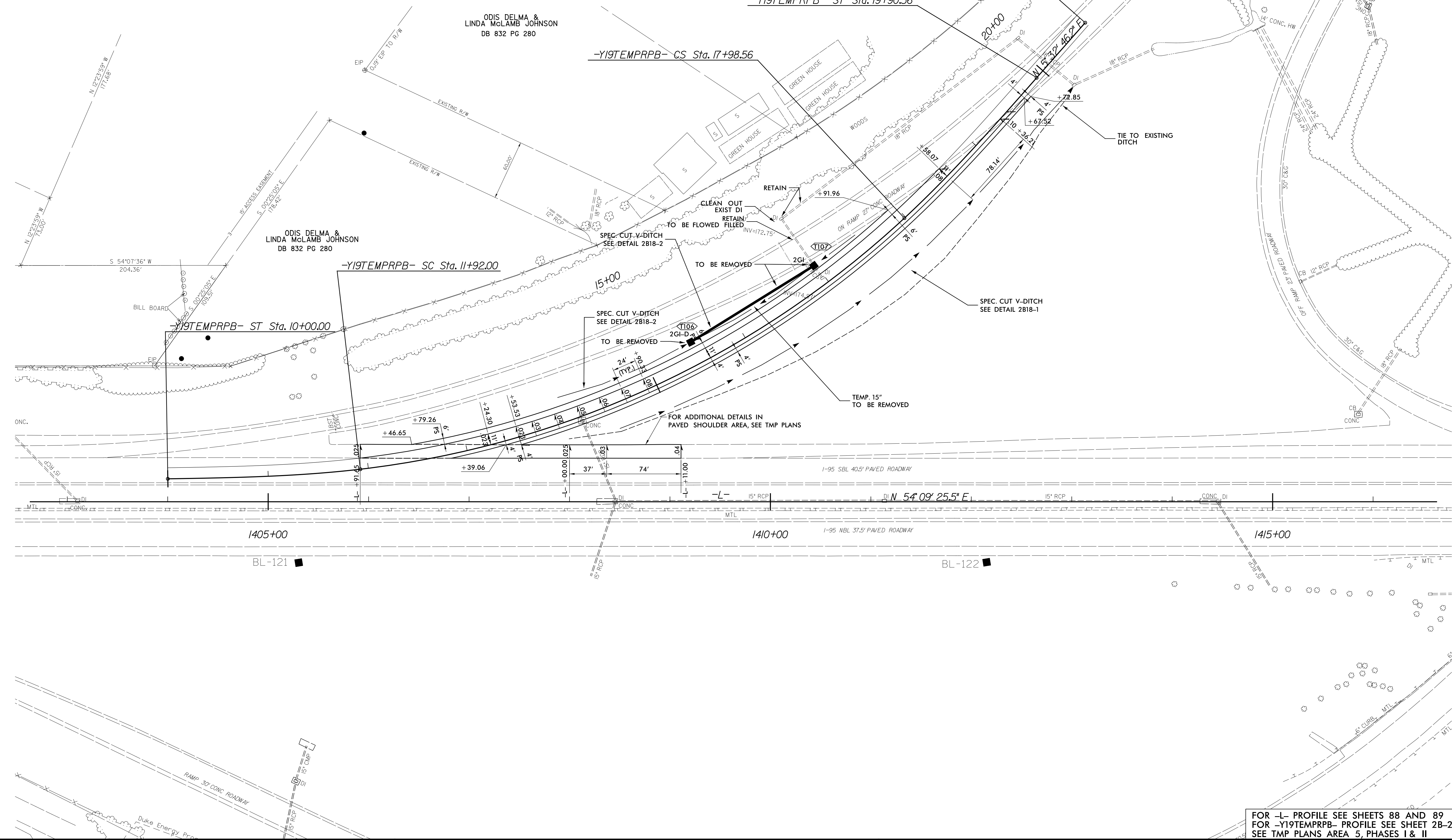
| -Y19TEMPRPB- | | |
|---------------------------------|-------------------------------------|---------------------------------|
| PIs Sta 11+28.07 | PI Sta 15+05.79 | PIs Sta 18+62.63 |
| $\Theta_s = 5^\circ 43' 46.5''$ | $\Delta = 36^\circ 12' 06.0''$ (LT) | $\Theta_s = 5^\circ 43' 46.5''$ |
| $L_s = 192.00'$ | $D = 5^\circ 58' 05.9''$ | $L_s = 192.00'$ |
| $LT = 128.07'$ | $L = 606.56'$ | $LT = 128.07'$ |
| $ST = 64.06'$ | $T = 313.79'$ | $ST = 64.06'$ |
| | $R = 960.00'$ | |



END CONSTRUCTION
 -Y19TEMPRPB- POT Sta. 20+63.74 =
 -EY1_RPB- POT Sta. 21+26.68, 9' LT.
 $\Delta = 3^\circ 00' 00.0''$

| | |
|---|--|
| PROJECT REFERENCE NO. I-5986B | SHEET NO. 2B-18 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER SUNNY C. LANCASTER SEAL 027373 5/13/2021 | HYDRAULICS ENGINEER JOSHUA G. DALTON SEAL 26971 5/13/2021 |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Michael Baker Engineering, Inc. INTERNATIONAL | SUNGATE DESIGN GROUP, P.A. |

REVISIONS



FOR -L- PROFILE SEE SHEETS 88 AND 89
 FOR -Y19TEMPRPB- PROFILE SEE SHEET 2B-21
 SEE TMP PLANS AREA 5, PHASES I & II

03-APR-2021 07:17
 I-5986B_Rdy_PSH_2B-18_TC.dgn

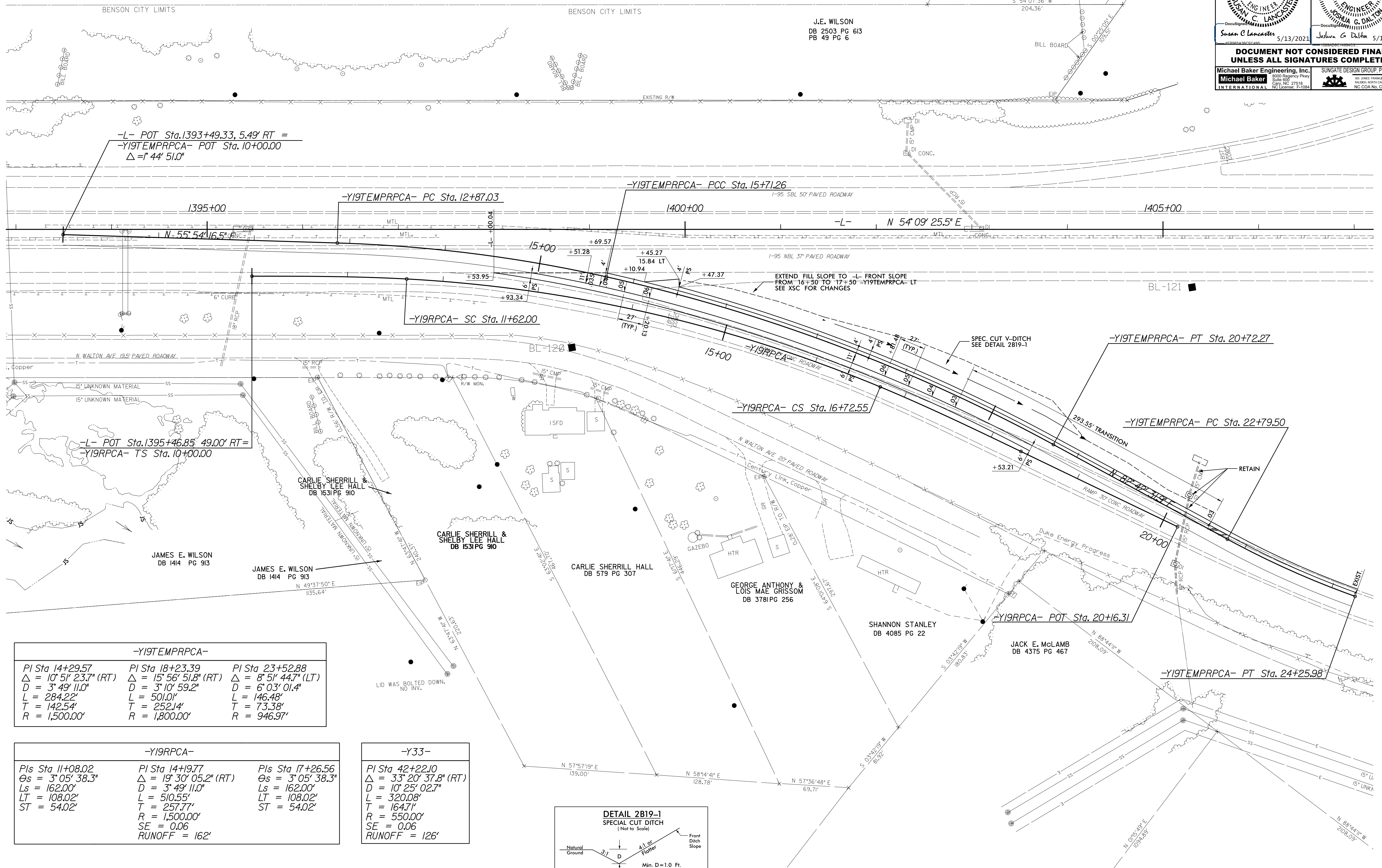
8/17/19

DETAIL OF TEMPORARY ALIGNMENT -Y19TEMPRPCA-

J.E. WILSON
DB 2503 PG 613
PB 49 PG 6

J.E. WILSON
DB 2503 PG 613
PB 49 PG 6

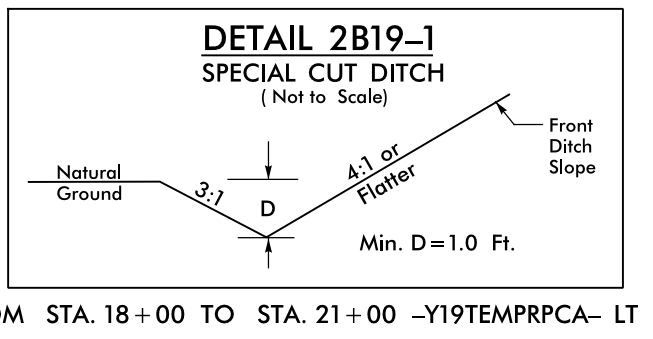
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| PROJECT REFERENCE NO. I-5986B | | SHEET NO. 2B-19 | |
| RW SHEET NO. | | | |
| ROADWAY DESIGN ENGINEER | | HYDRAULICS ENGINEER | |
| | | | |
| Susan C. Lancaster 5/13/2021 | | Joshua G. Dalton 5/13/2021 | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | | | |
| | | | |



| -Y19TEMPRPCA- | | |
|-------------------------------|-------------------------------|------------------------------|
| PI Sta 14+29.57 | PI Sta 18+23.39 | PI Sta 23+52.88 |
| $\Delta = 10' 51" 23.7" (RT)$ | $\Delta = 15' 56" 51.8" (RT)$ | $\Delta = 8' 51" 44.7" (LT)$ |
| $D = 3' 49" 11.0"$ | $D = 3' 10" 59.2"$ | $D = 6' 03" 01.4"$ |
| $L = 284.22'$ | $L = 501.0'$ | $L = 146.48'$ |
| $T = 142.54'$ | $T = 252.14'$ | $T = 73.38'$ |
| $R = 1,500.00'$ | $R = 1,800.00'$ | $R = 946.97'$ |

| -Y19RPCA- | | |
|---------------------------|-------------------------------|---------------------------|
| PIs Sta 11+08.02 | PI Sta 14+19.77 | PIs Sta 17+26.56 |
| $\Theta_s = 3' 05" 38.3"$ | $\Delta = 19' 30" 05.2" (RT)$ | $\Theta_s = 3' 05" 38.3"$ |
| $L_s = 162.00'$ | $D = 3' 49" 11.0"$ | $L_s = 162.00'$ |
| $LT = 108.02'$ | $L = 510.55'$ | $LT = 108.02'$ |
| $ST = 54.02'$ | $T = 257.77'$ | $ST = 54.02'$ |
| | $R = 1,500.00'$ | |
| | $SE = 0.06$ | |
| | $RUNOFF = 162'$ | |

| -Y33- |
|-------------------------------|
| PI Sta 42+22.10 |
| $\Delta = 33' 20" 37.8" (RT)$ |
| $D = 10' 25" 02.7"$ |
| $L = 320.08'$ |
| $T = 164.71'$ |
| $R = 550.00'$ |
| $SE = 0.06$ |
| $RUNOFF = 126'$ |



FOR STA. 18+00 TO STA. 21+00 -Y19TEMPRPCA- LT

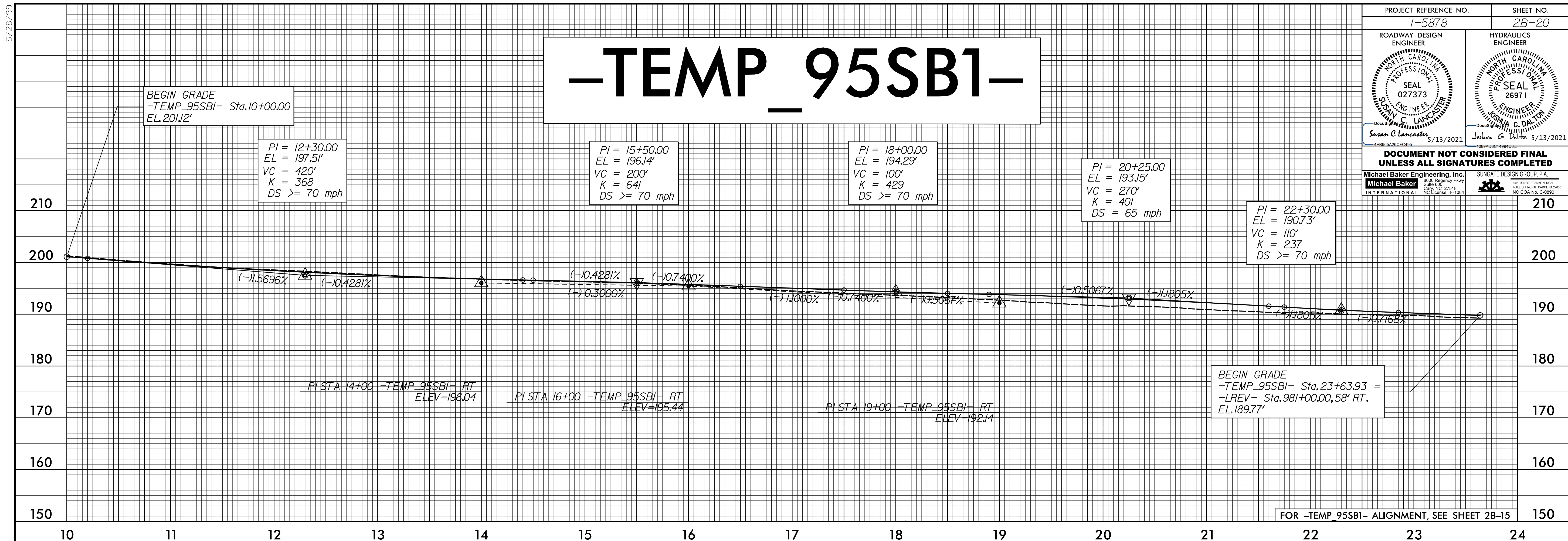
REVISIONS

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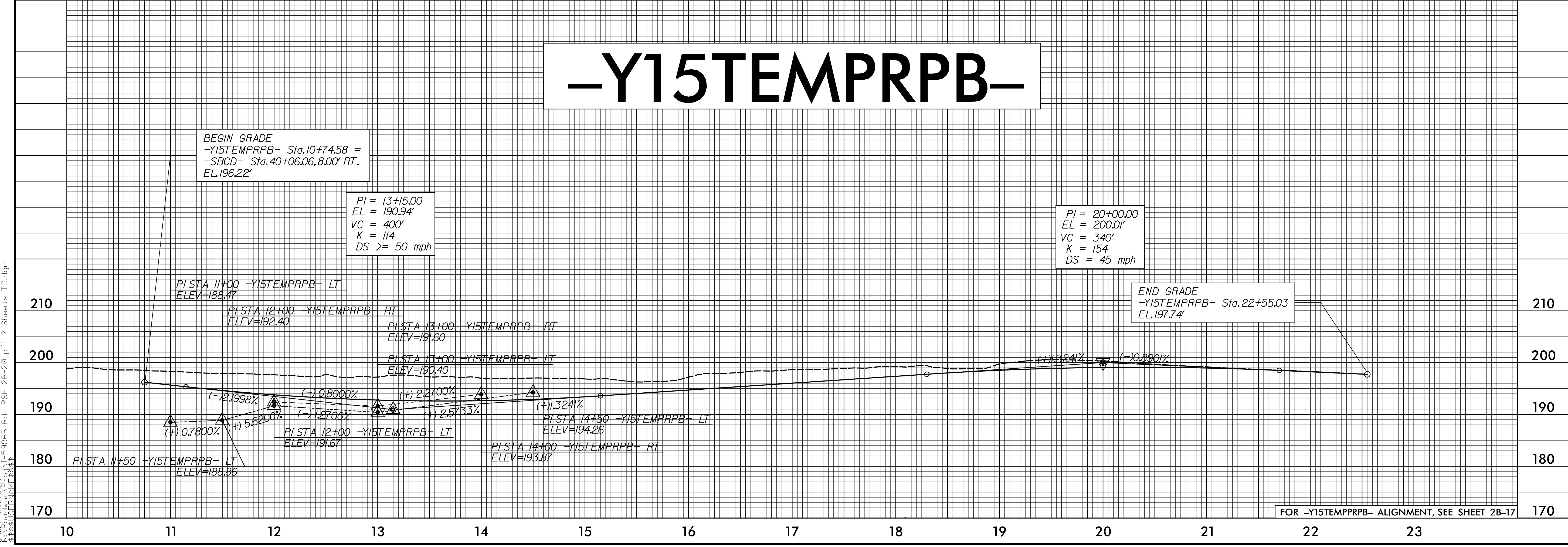
FOR -L- PROFILE SEE SHEETS 88 AND 89
FOR -Y19TEMPRPCA- PROFILE SEE SHEET 2B-21
SEE TMP PLANS AREA 5, PHASES IV & V

| | |
|--|---|
| PROJECT REFERENCE NO. 1-5878 | SHEET NO. 2B-20 |
| ROADWAY DESIGN ENGINEER SUSAN C. LANCASTER SEAL 027373 5/13/2021 | HYDRAULICS ENGINEER JOSHUA G. DILTON PROFESSIONAL SEAL 26971 5/13/2021 |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Michael Baker Engineering, Inc. 8000 Regency Parkway Cary, NC 27518 NC License: F-10884 | SUNGATE DESIGN GROUP, P.A. 800 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27608 NC CDR No. C-2890 |

-TEMP_95SB1-



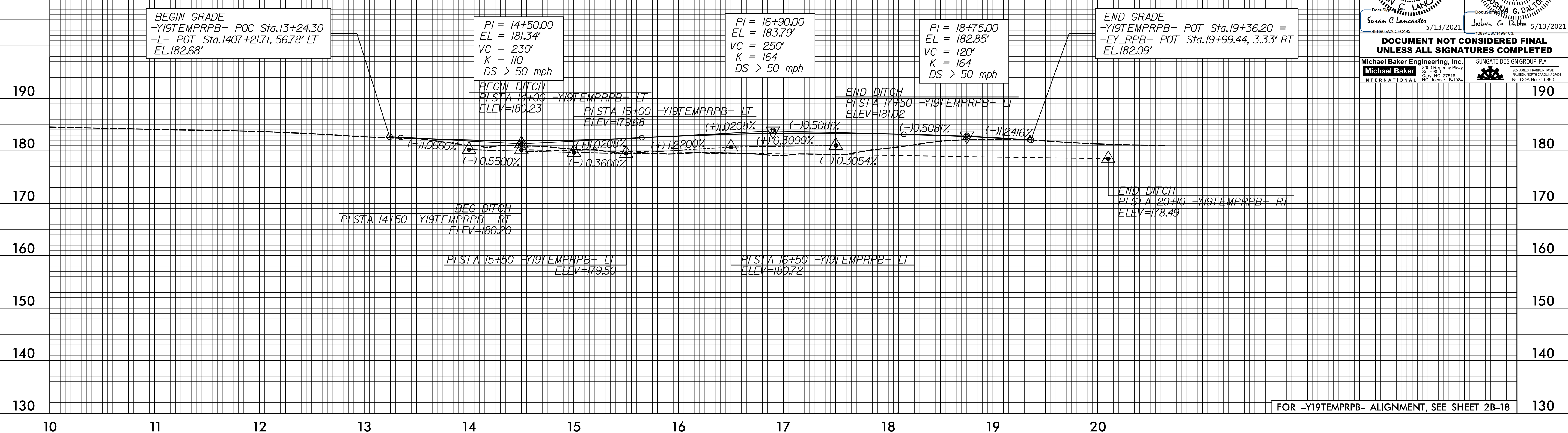
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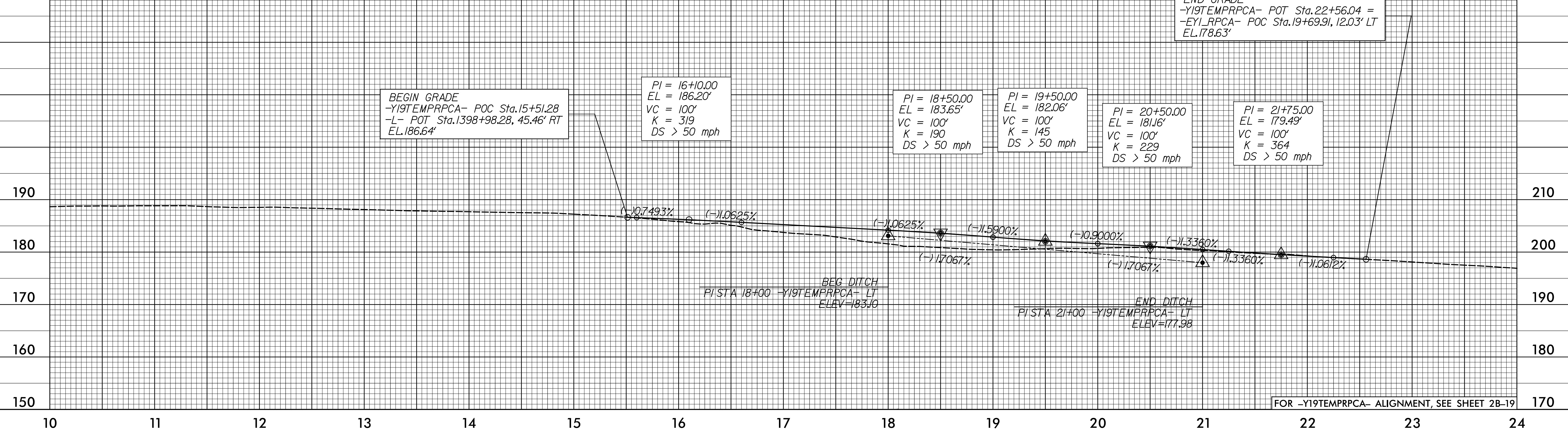
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| | |
|--|---|
| PROJECT REFERENCE NO. 1-5986B | SHEET NO. 2B-21 |
| ROADWAY DESIGN ENGINEER SUSAN C. LANCASTER SEAL 027373 5/13/2021 | HYDRAULICS ENGINEER JESHA G. DALTON SEAL 26971 5/13/2021 |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Michael Baker Engineering, Inc. 8000 Regency Park Suite 600 Cary, NC 27518 NC License: E-10884 | SUNGATE DESIGN GROUP, P.A. 100 JONES FRANKLIN ROAD RALEIGH, NORTH CAROLINA 27608 NC CDR No. C-2890 |

-Y19TEMPRPB-



-Y19TEMPRPCA-

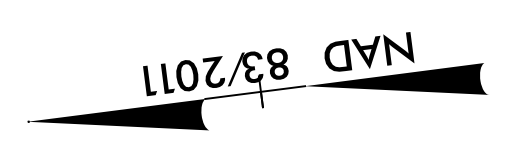


5/28/21

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DETAIL OF GUARDRAIL PLACEMENT FOR I-40 MM 324 EB DMS SIGN

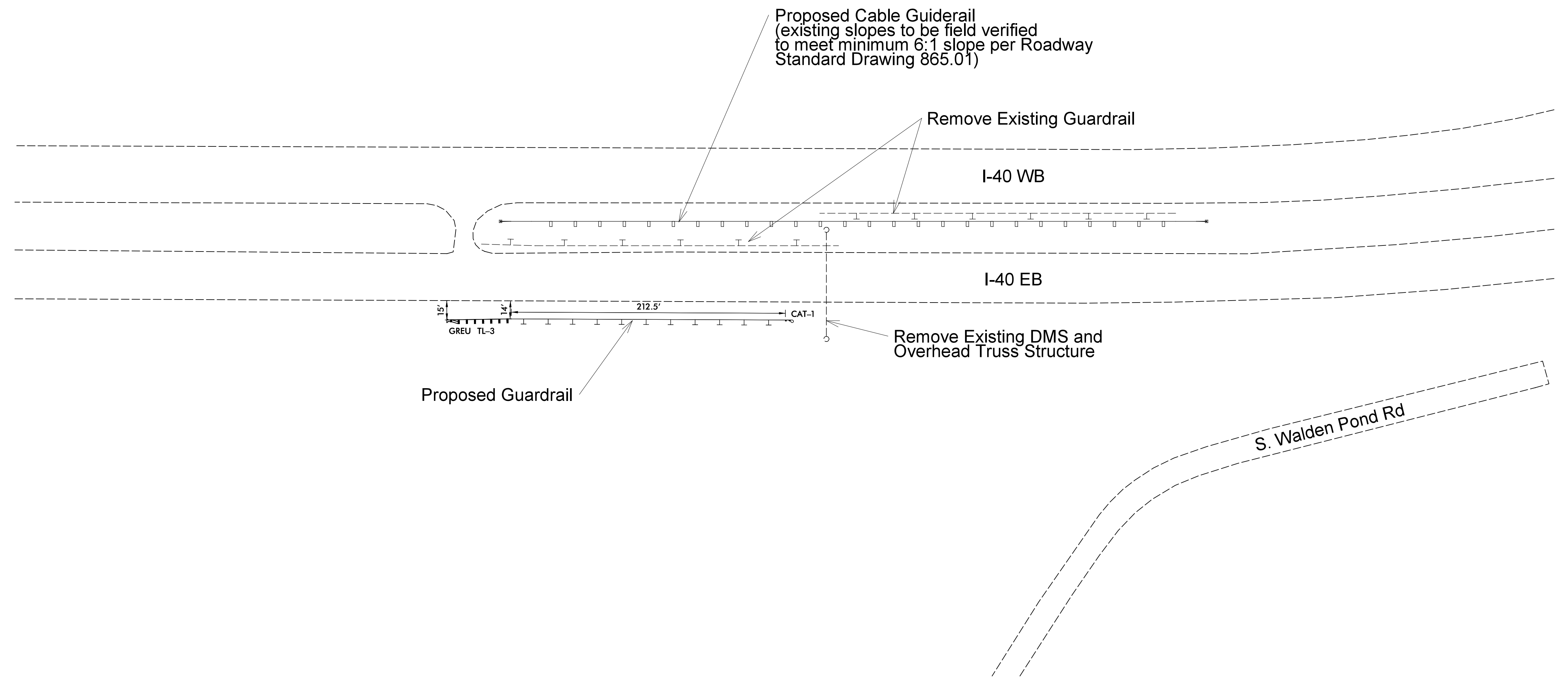
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| PROJECT REFERENCE NO. I-5986B | SHEET NO. 2B-22 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER SEAL 027373 SUSAN C. LANCASTER SUSAN C. LANCASTER S/13/2021 | |



**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL

REVISIONS



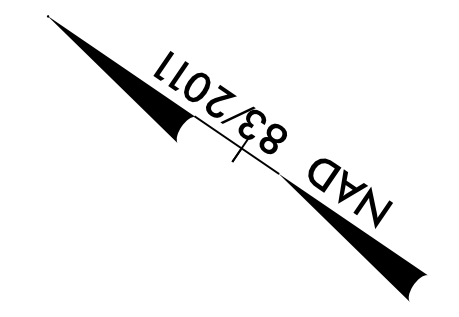
8/17/99

13 MAY 2021 15:55
 P:\11-5986B_Rdy_psh_2B-22.dgn
 S:\SUSAN LANCASTER

8/17/99

DETAIL OF GUARDRAIL PLACEMENT FOR I-40 MM 331 WB DMS SIGN

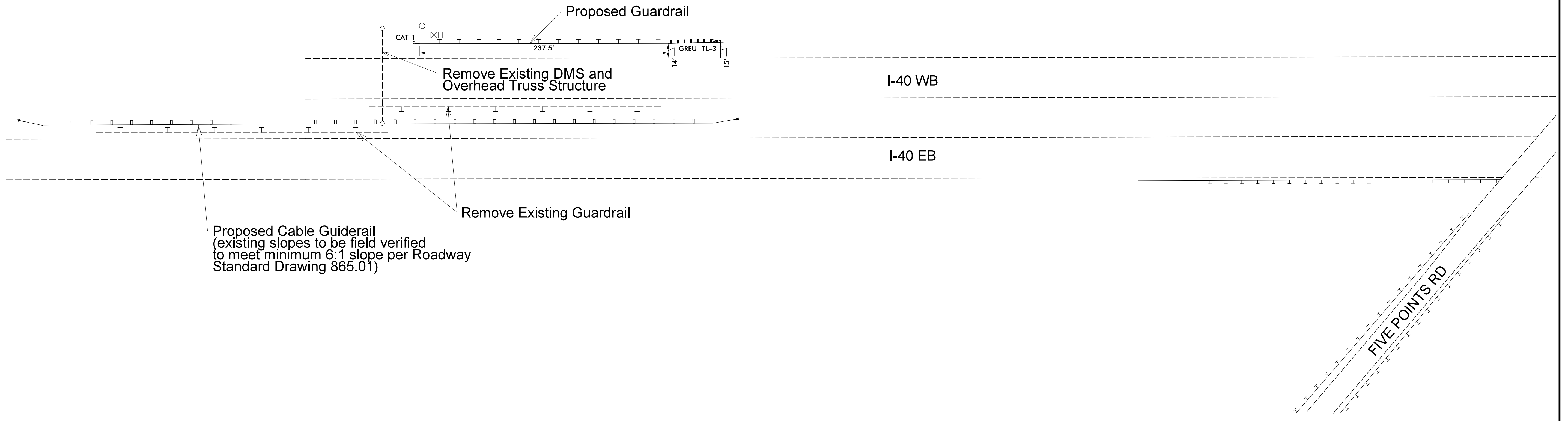
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| PROJECT REFERENCE NO. I-5986B | SHEET NO. 2B-23 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER | |
| | |
| Susan C. Lancaster 5/13/2021 | |



**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

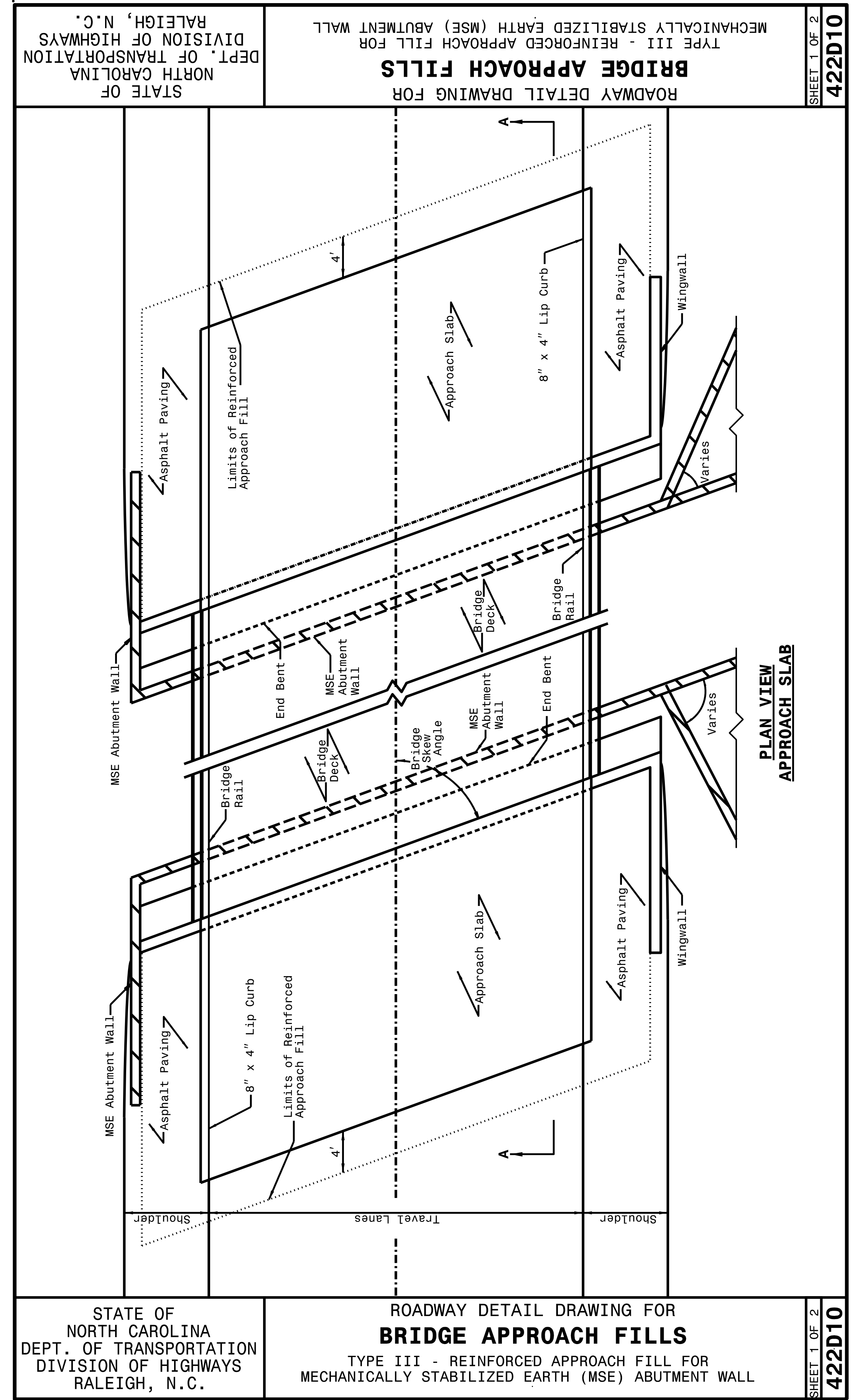
Michael Baker Engineering, Inc.
Michael Baker INTERNATIONAL

REVISIONS



Proposed Cable Guiderail
(existing slopes to be field verified
to meet minimum 6:1 slope per Roadway
Standard Drawing 865.01)

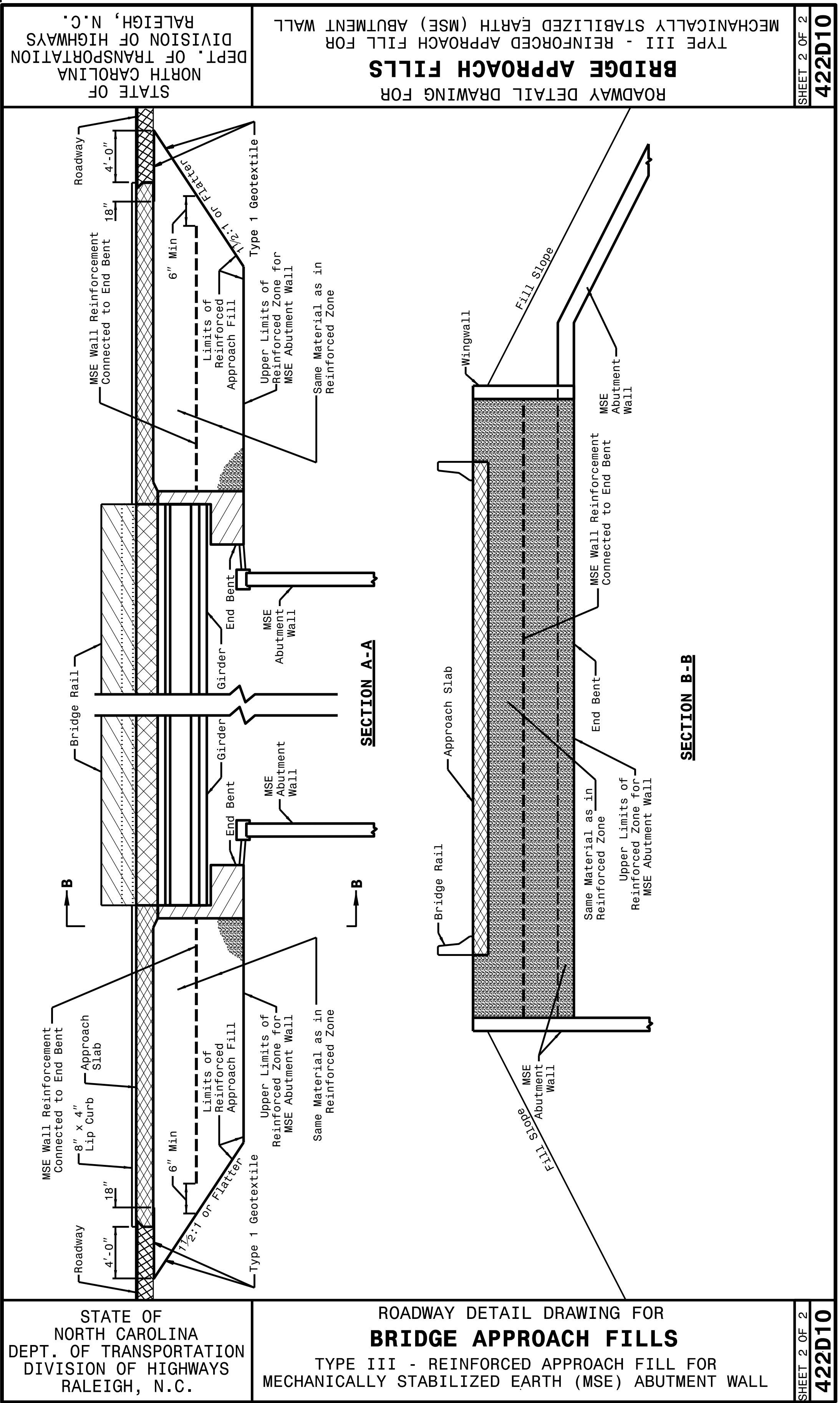
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
TYPE III - REINFORCED APPROACH FILL FOR
MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT WALL

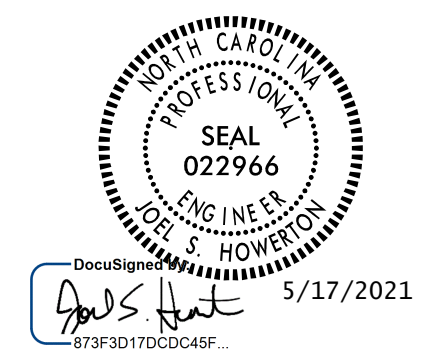
SHEET 1 OF 2
422D10



STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
TYPE III - REINFORCED APPROACH FILL FOR
MECHANICALLY STABILIZED EARTH (MSE) ABUTMENT WALL

SHEET 2 OF 2
422D10



**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

**CONTRACTS STANDARDS
AND DEVELOPMENT UNIT**
Office 919-707-6950 FAX 919-250-4119

**TYPE III
REINFORCED
APPROACH FILLS**

ORIGINAL BY: K. A. KEMPF DATE: JULY 2017
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.: 2018 standard drawings\division 422d10.dgn

I4-DEC-2017 10:36 S:\Contracts\Special Details\Standard Drawings\Division 8\0862d0301.dgn Jhowerton AT_CSD-292595

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE

ELEVATION

PLAN VIEW

NOTE:

- **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.
- SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
- MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
- LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
- SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

ELEVATION

PLAN VIEW

NOTE:

- **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.
- SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
- MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
- LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
- SEE SHEET 3 FOR POST SECTIONS 1 THRU 9.

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR STRUCTURE ANCHOR UNITS GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

GUARDRAIL ANCHOR UNIT, TYPE III FOR ATTACHMENT TO RAIL ON BRIDGE - SUB REGIONAL TIER

DocuSigned by:

 5/14/2021

CONTRACT STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

SEE TITLE BLOCK

ORIGINAL BY: J. HOWERTON DATE: 06-22-12

MODIFIED BY: DATE:

CHECKED BY: DATE:

FILE SPEC.: DATE:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SHEET 1 OF 7 862D03

SHEET 1 OF 7 862D03

SHEET 2 OF 7 862D03

SHEET 2 OF 7 862D03

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

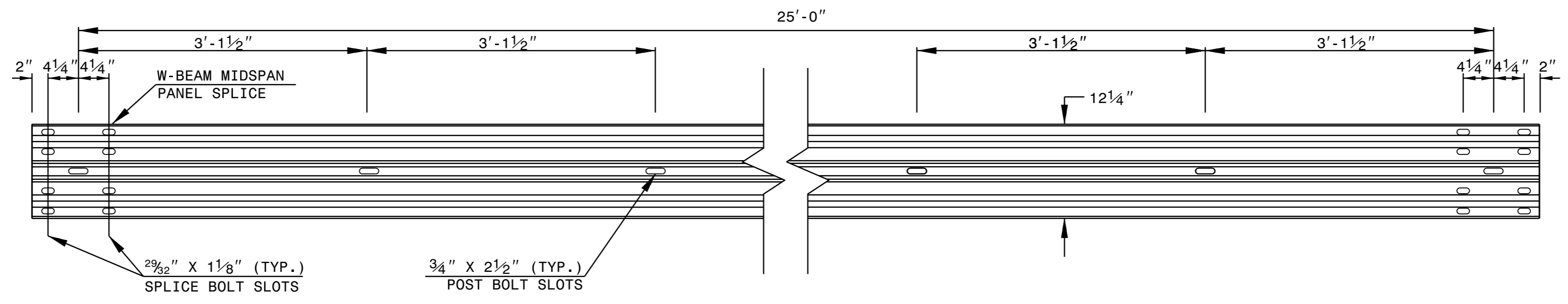
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET 6 OF 8
862D02

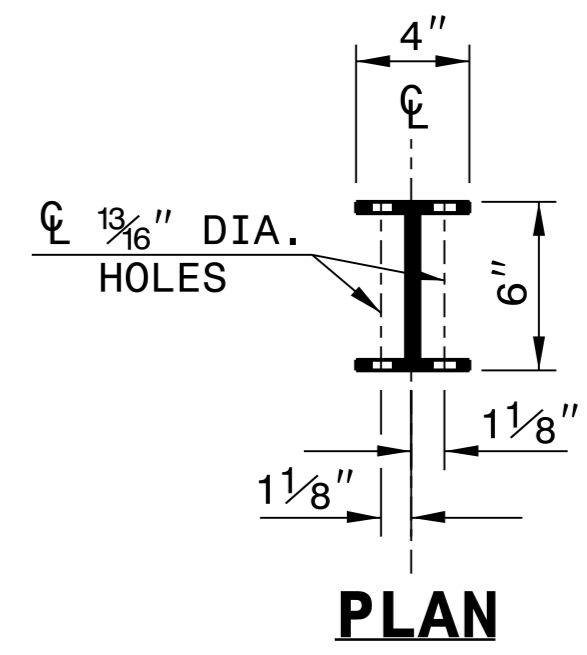
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

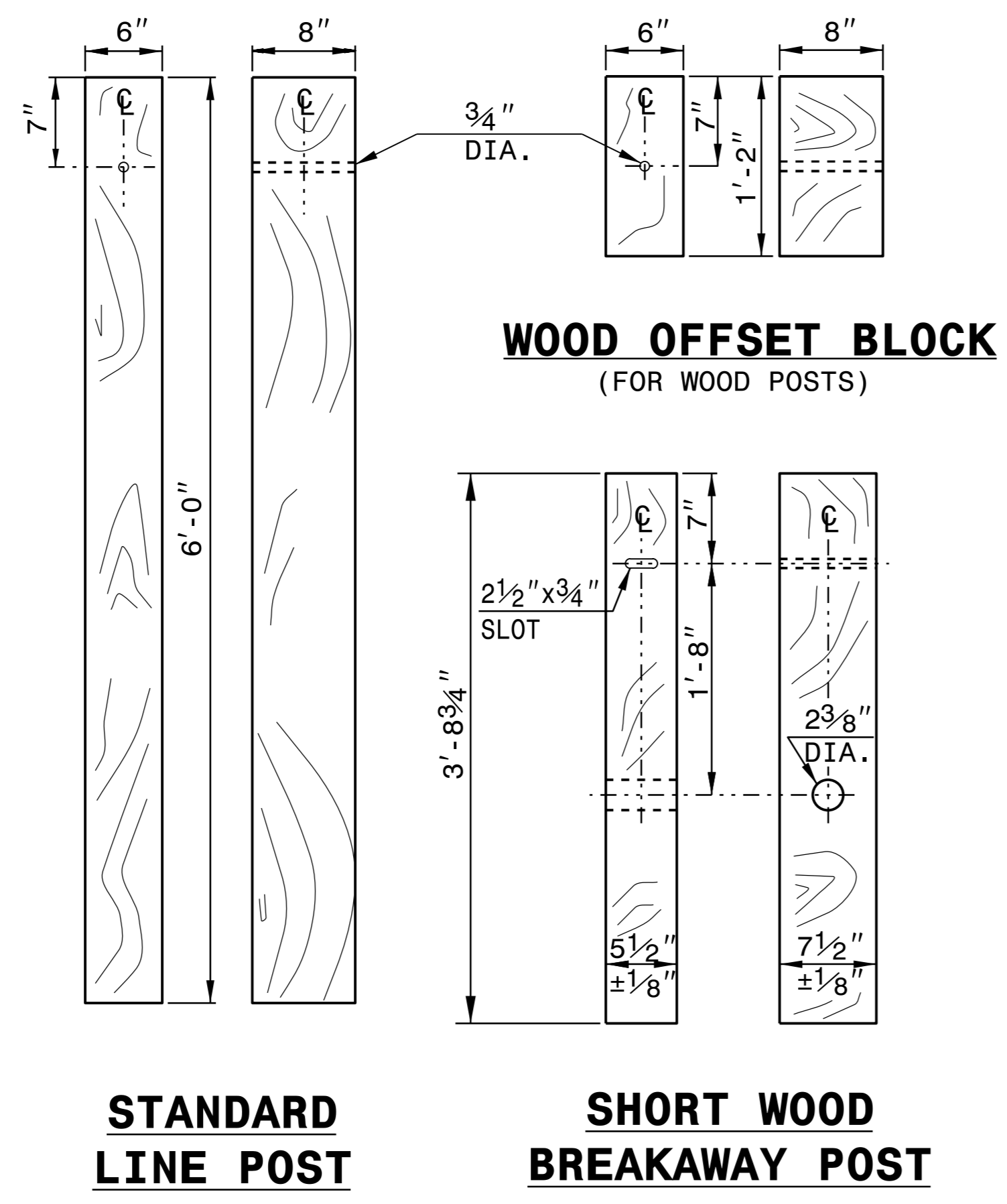
SHEET 6 OF 8
862D02



STANDARD W-BEAM GUARDRAIL

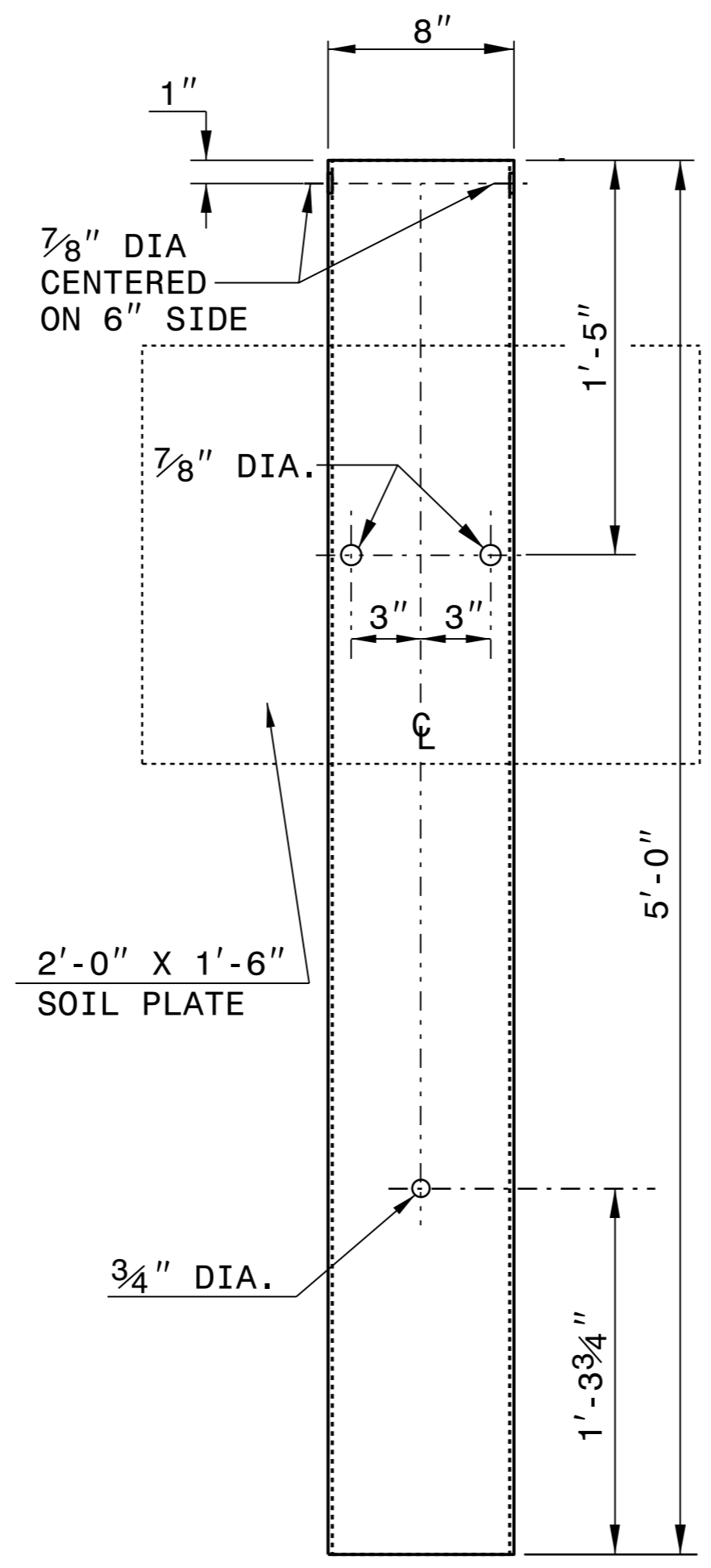


PLAN

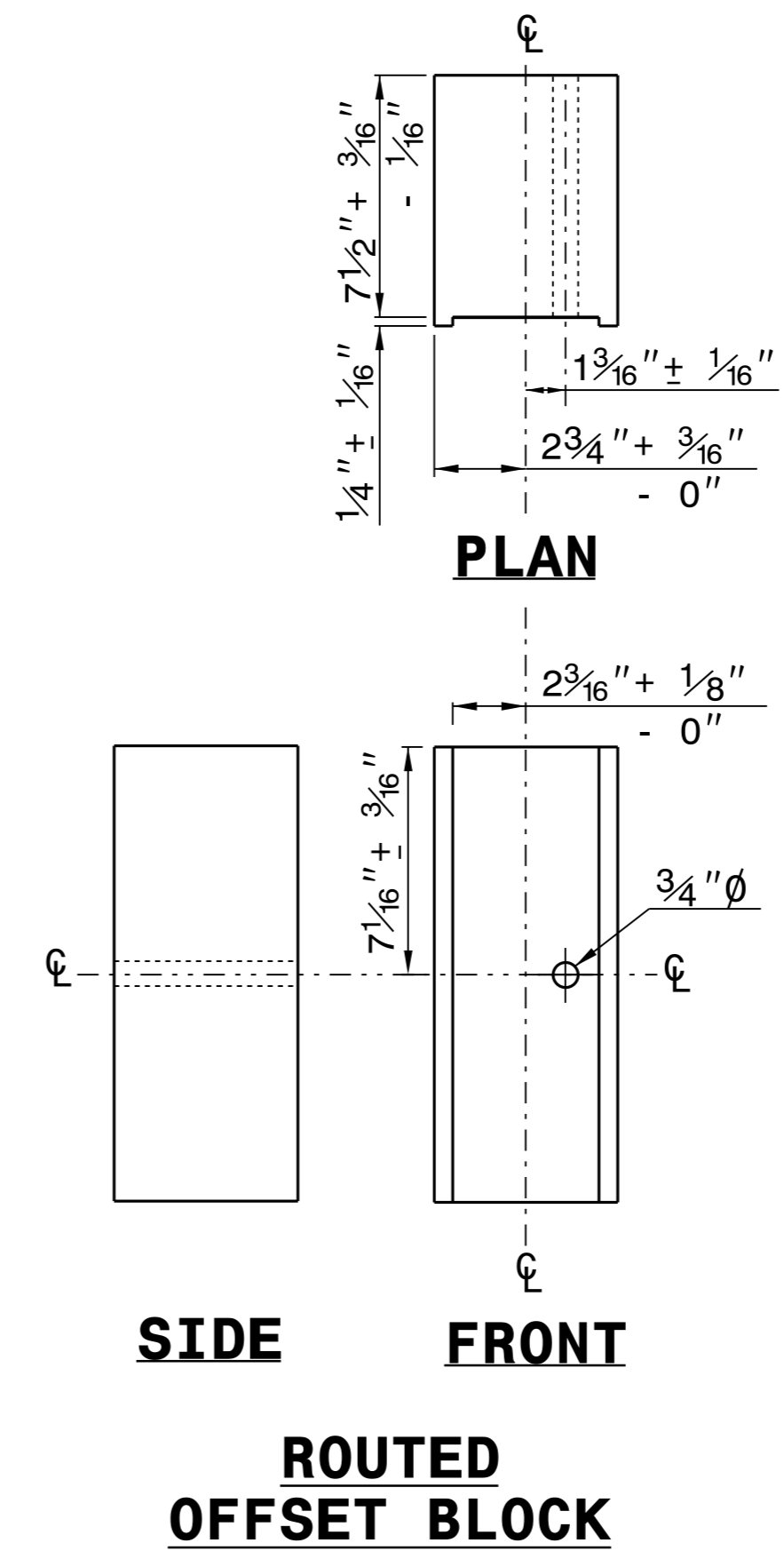


STANDARD LINE POST

SHORT WOOD BREAKAWAY POST



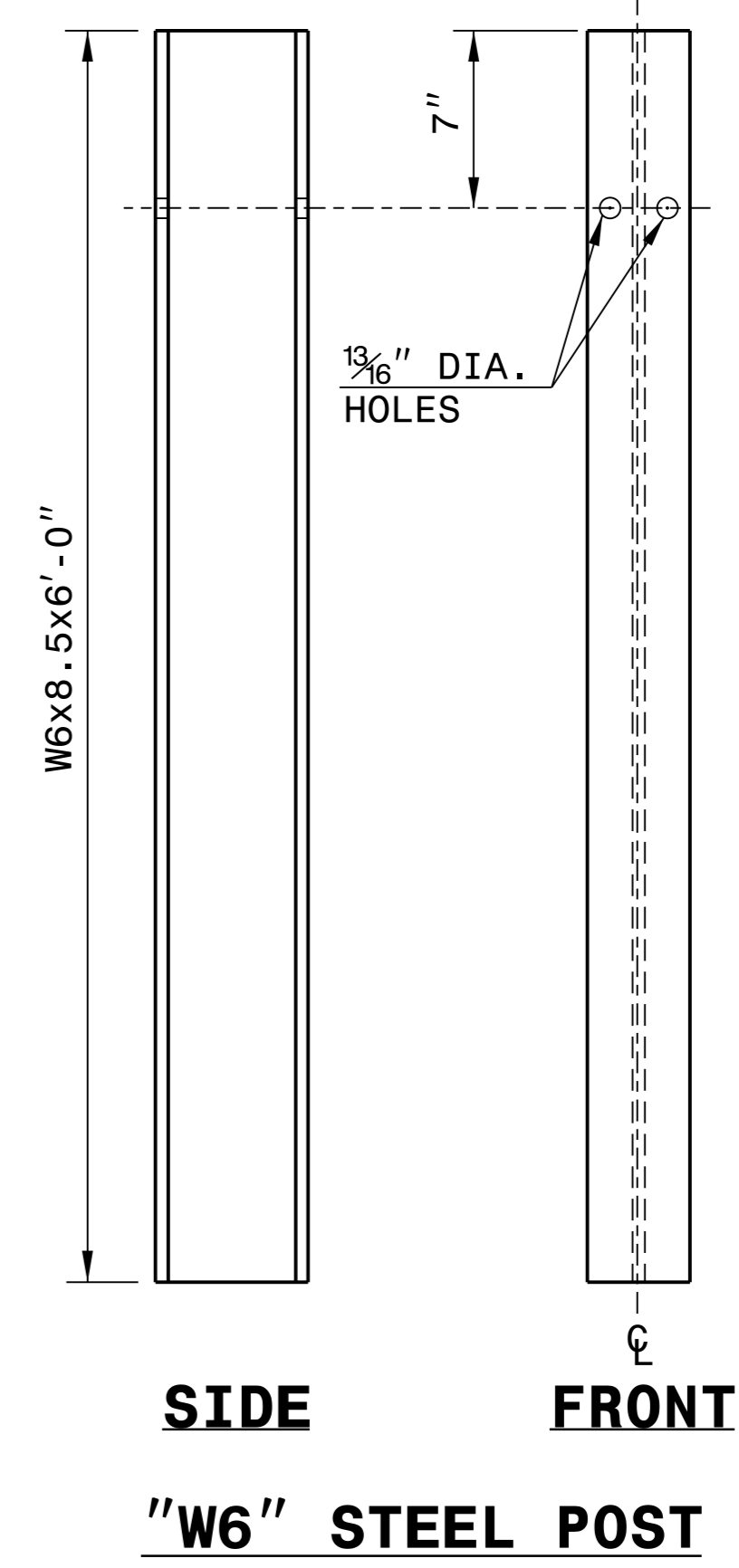
STEEL TUBE
TS 6"x8"x0.1875"



SIDE

FRONT

ROUTED OFFSET BLOCK

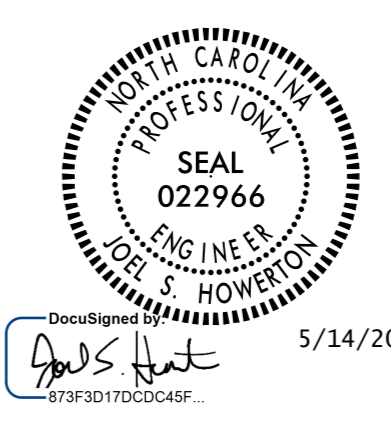


SIDE

FRONT

"W6" STEEL POST

SYSTEM PARTS



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SEE TITLE BLOCK

| | |
|--------------------------|----------------|
| ORIGINAL BY: J. HOWERTON | DATE: 3-7-2018 |
| MODIFIED BY: | DATE: |
| CHECKED BY: | DATE: |
| FILE SPEC.: | |

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STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

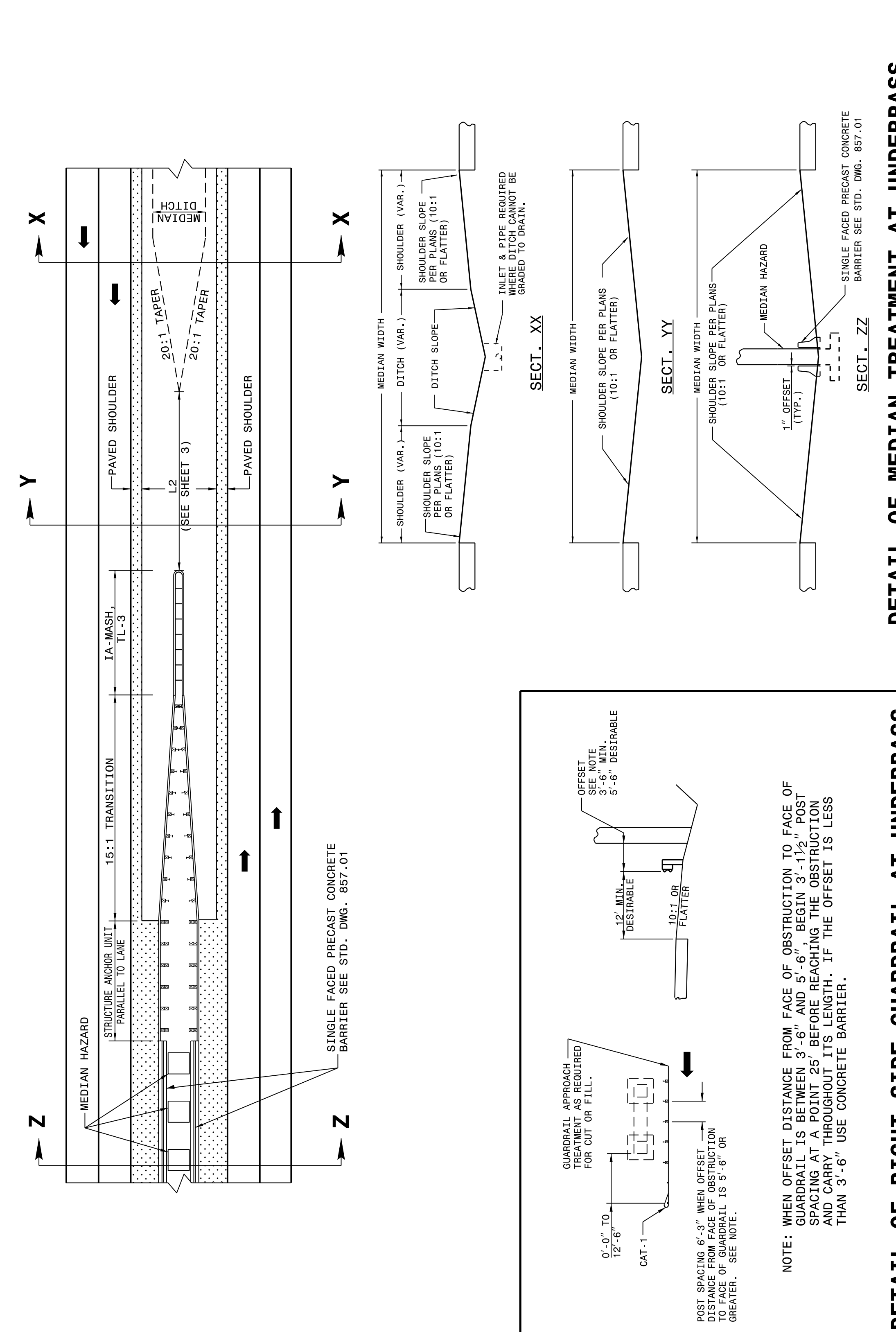
ROADWAY DETAIL DRAWING FOR GUARDRAIL PLACEMENT

SHEET 1 OF 11 862D01

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR GUARDRAIL PLACEMENT

SHEET 1 OF 11 862D01



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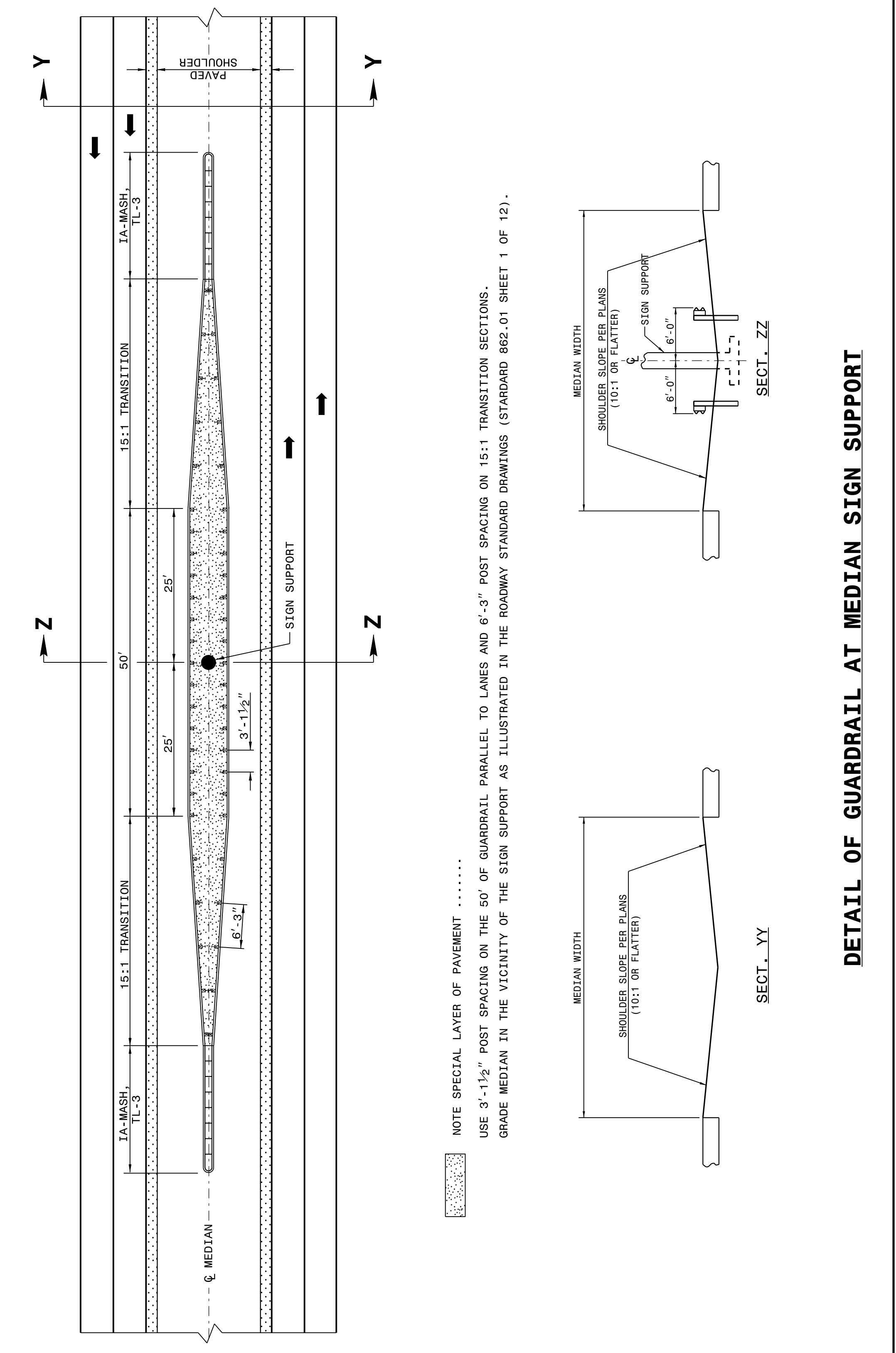
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SHEET 2 OF 11 862D01

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR GUARDRAIL PLACEMENT

SHEET 2 OF 11 862D01

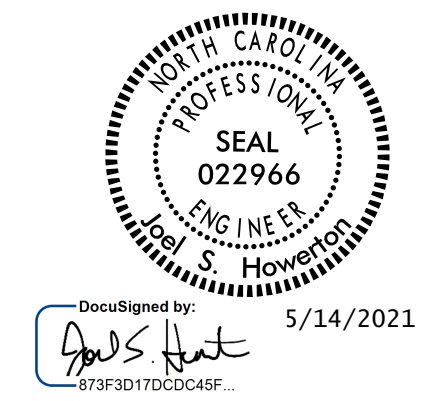


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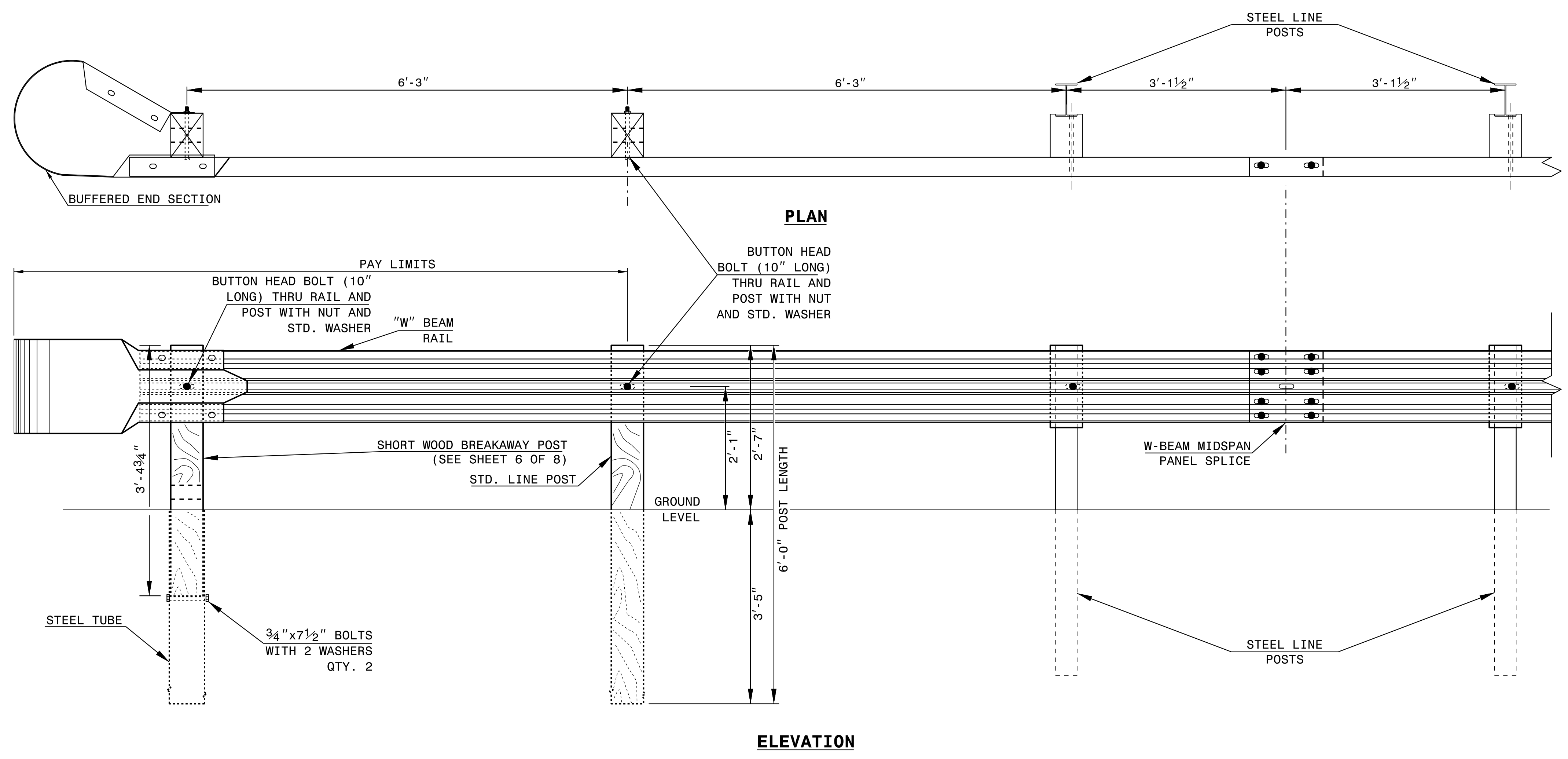
ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET OF

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
GUARDRAIL INSTALLATION

SHEET OF



TRAILING END UNIT ASSEMBLY
A.T. - 1 SYSTEM



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| A.T. - 1 SYSTEM | |
| ORIGINAL BY: _____ | DATE: _____ |
| MODIFIED BY: _____ | DATE: _____ |
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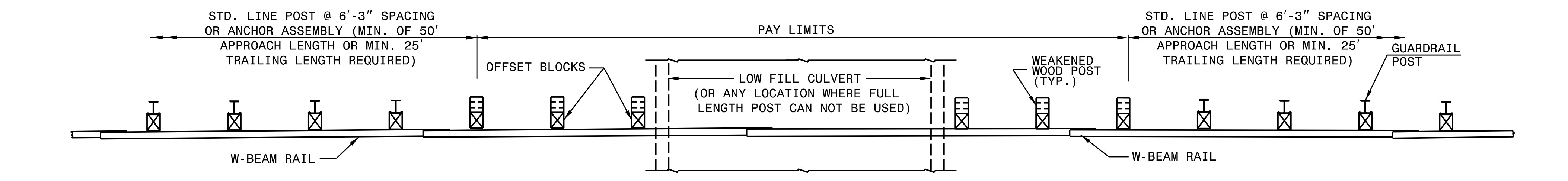
SPECIAL DETAIL FOR
GUARDRAIL PLACEMENT
25'-0" CLEAR SPAN

SHEET - OF -
862D01

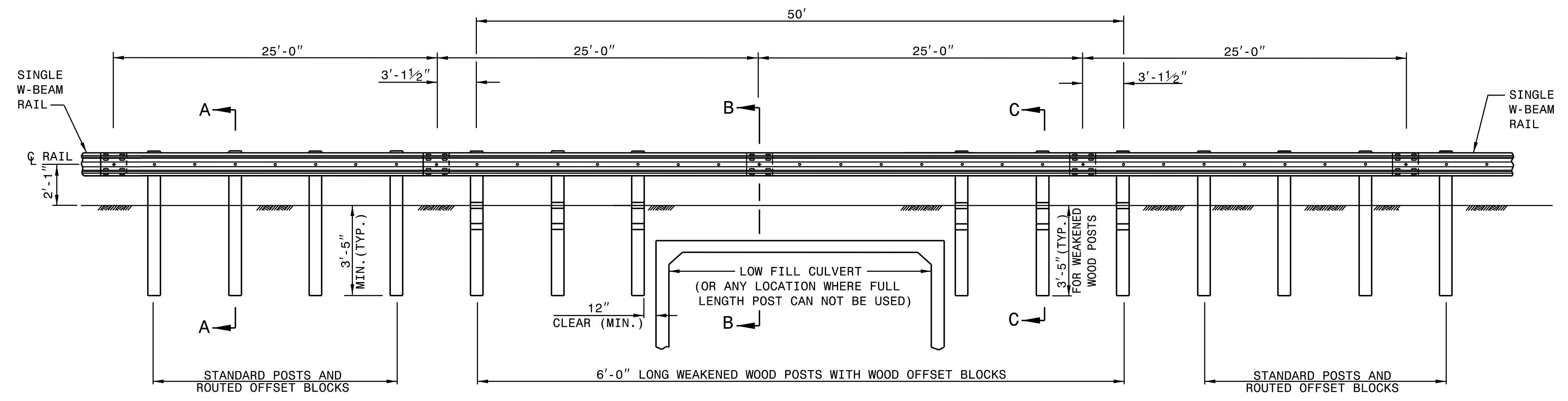
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

SPECIAL DETAIL FOR
GUARDRAIL PLACEMENT
25'-0" CLEAR SPAN

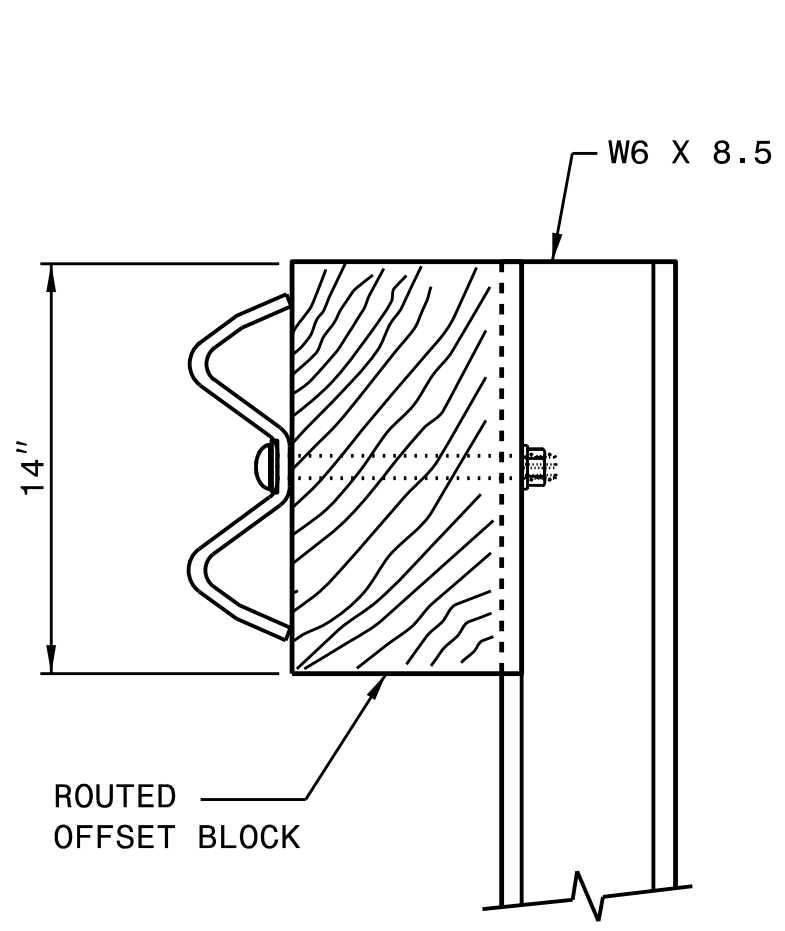
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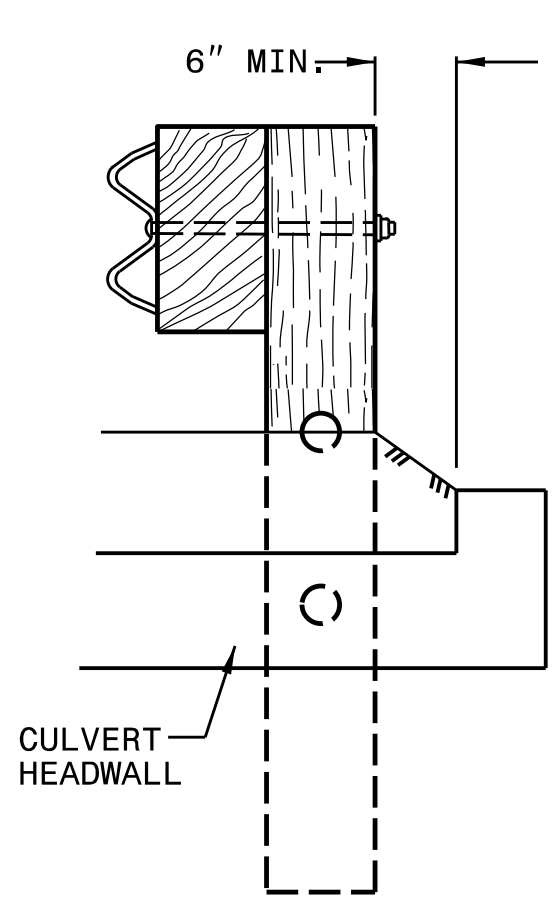
PLAN



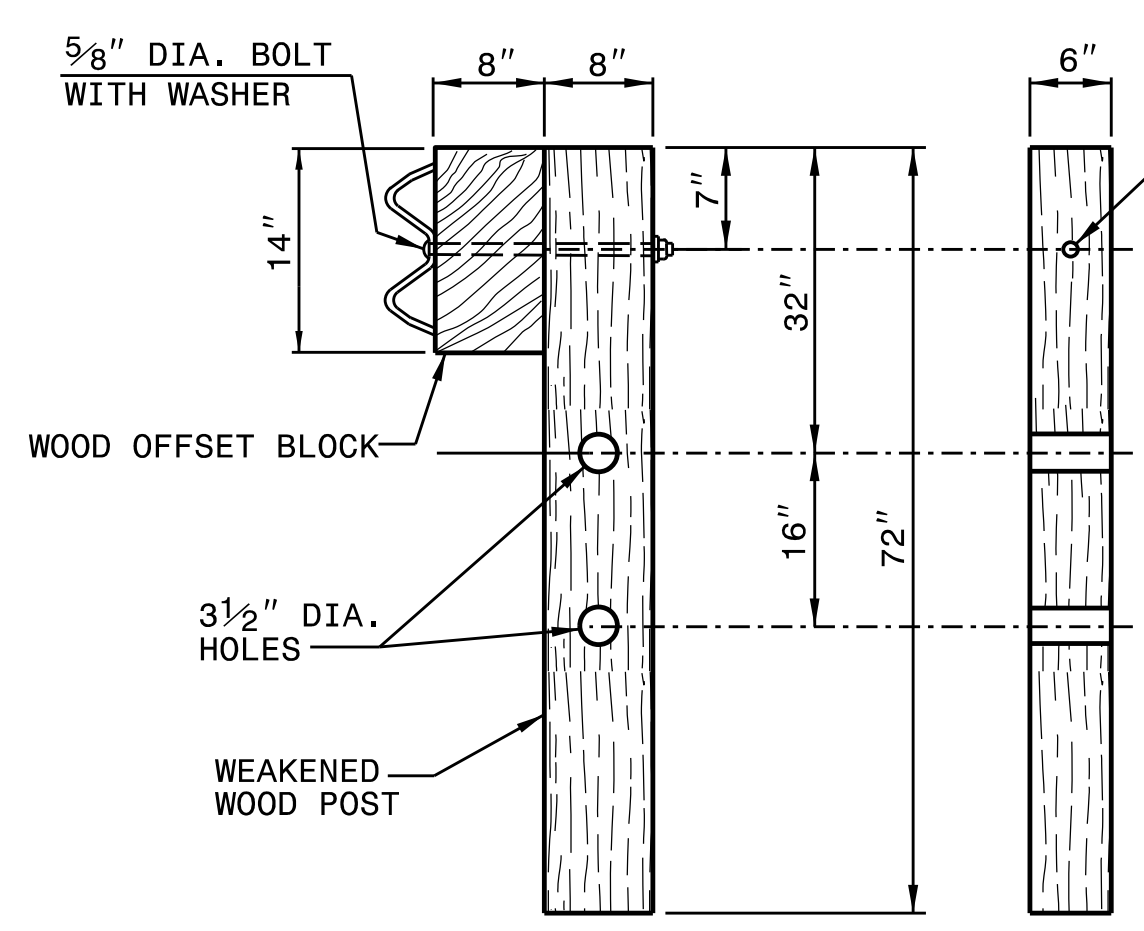
**ELEVATION
25'-0" GUARDRAIL SPAN**



SECTION A-A



SECTION B-B



**SECTION C-C FRONT
WEAKENED WOOD POST**

- GENERAL NOTES:
 1. LAP RAIL IN THE DIRECTION OF TRAFFIC FLOW.
 2. SEE ROADWAY PLANS FOR LOCATIONS AND CONTINUATION OF RAIL OR END SECTIONS.
 3. MINIMUM DISTANCE OF 5 FEET BEHIND THE GUARDRAIL SHOULD BE CLEAR OF ANY FIXED-OBJECT HAZARDS THAT COULD SNAG AN IMPACTING VEHICLE.

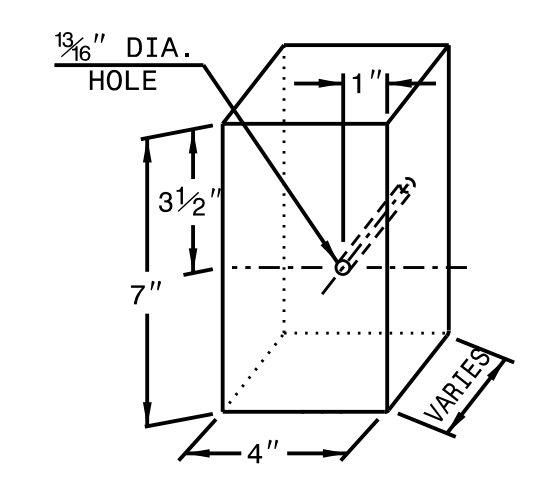
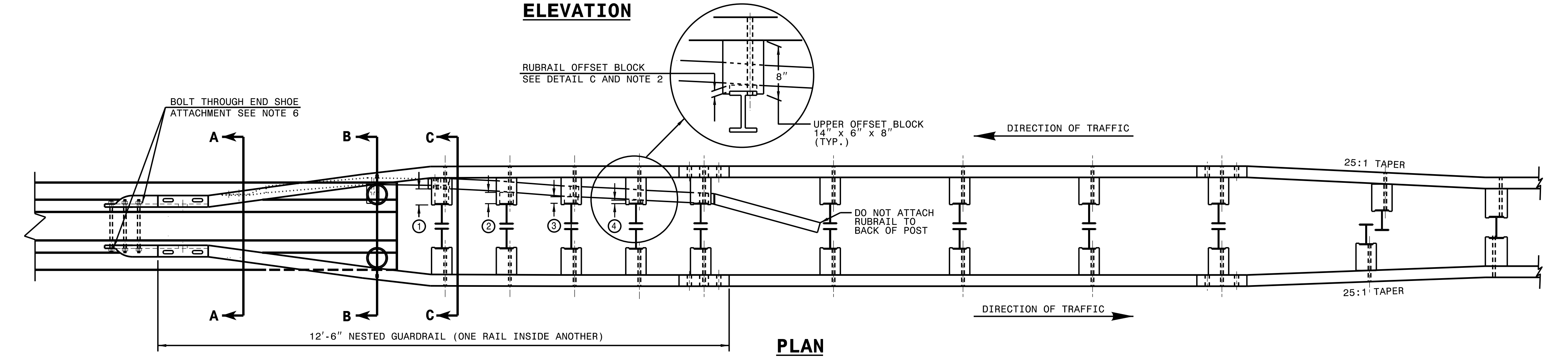
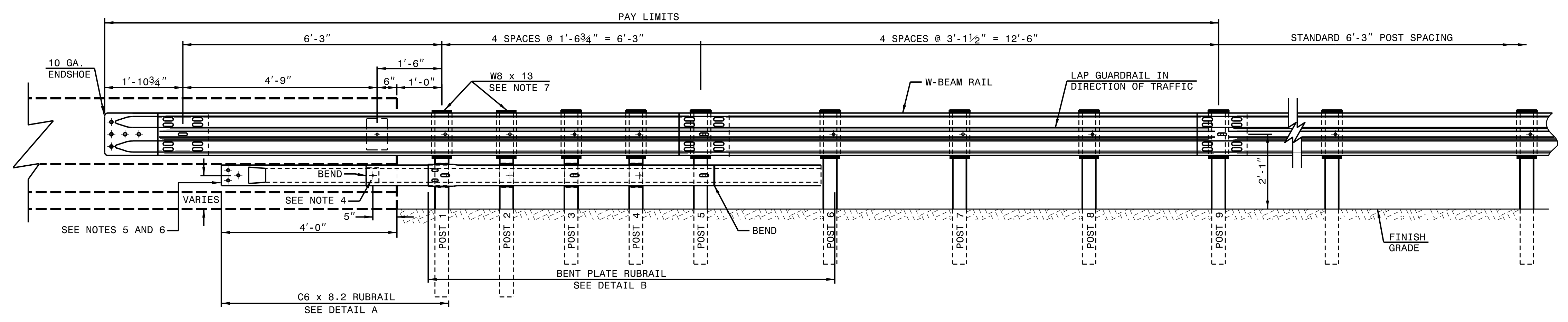
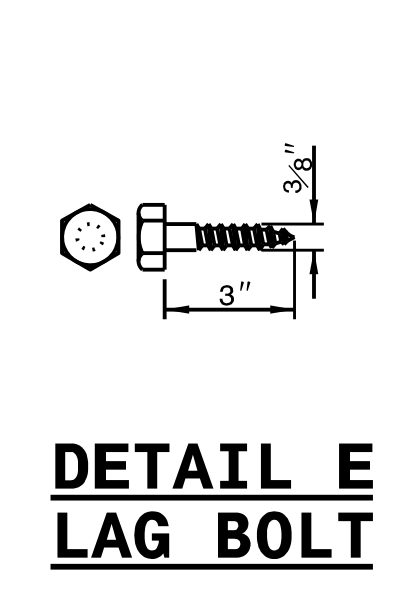
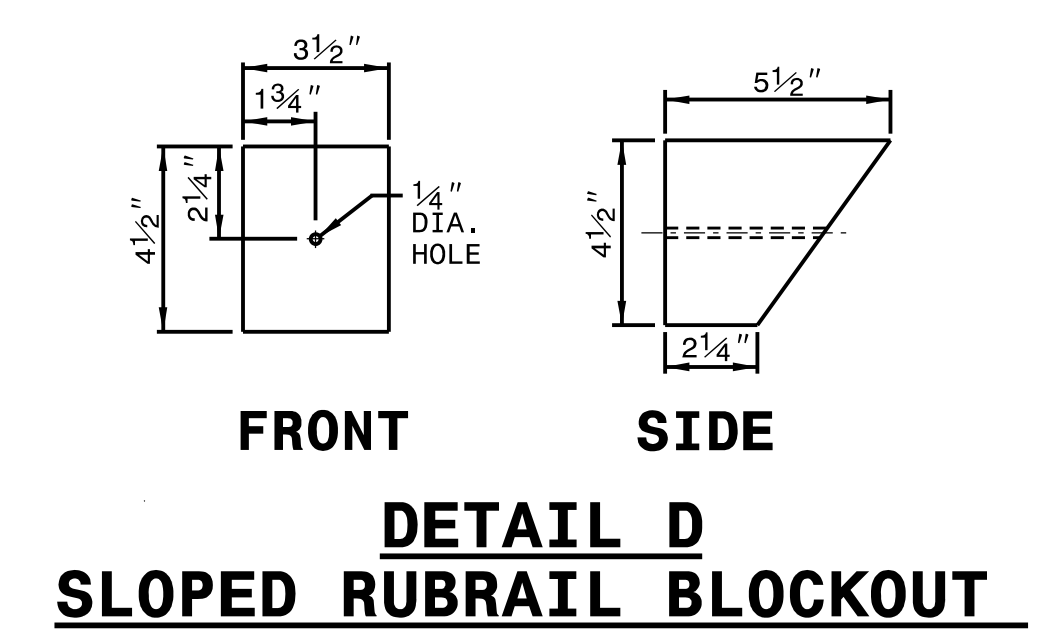
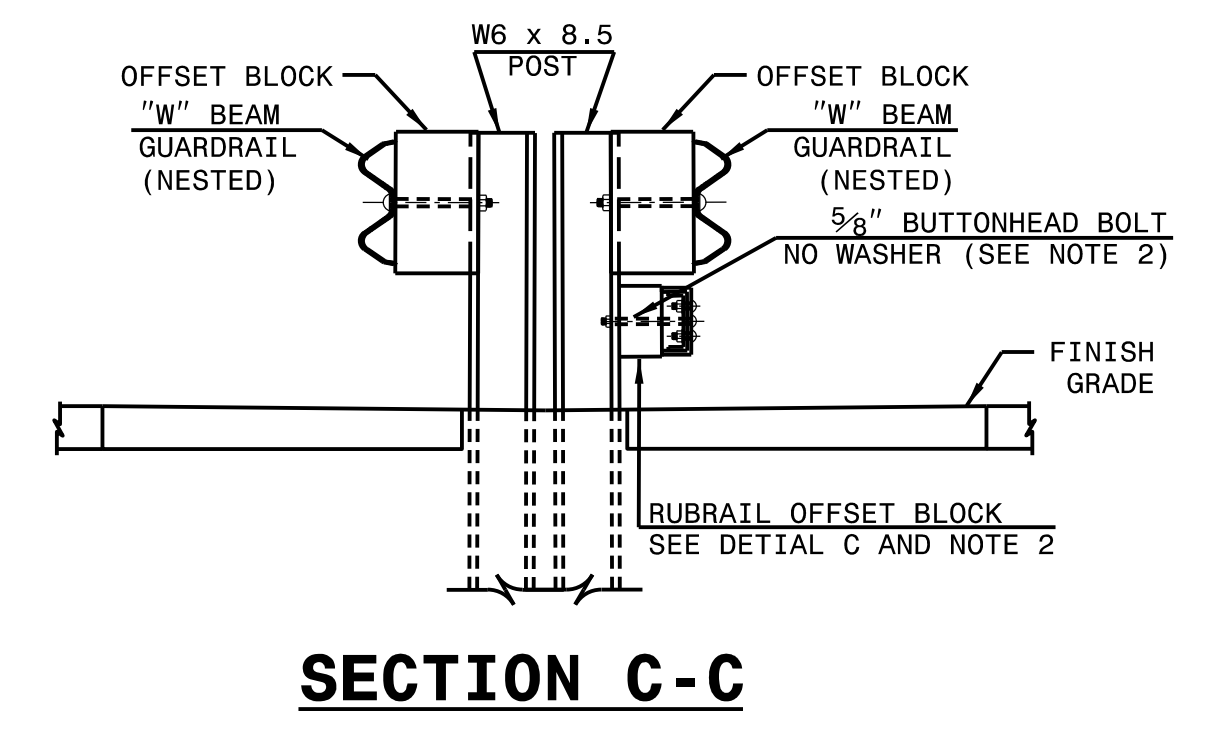
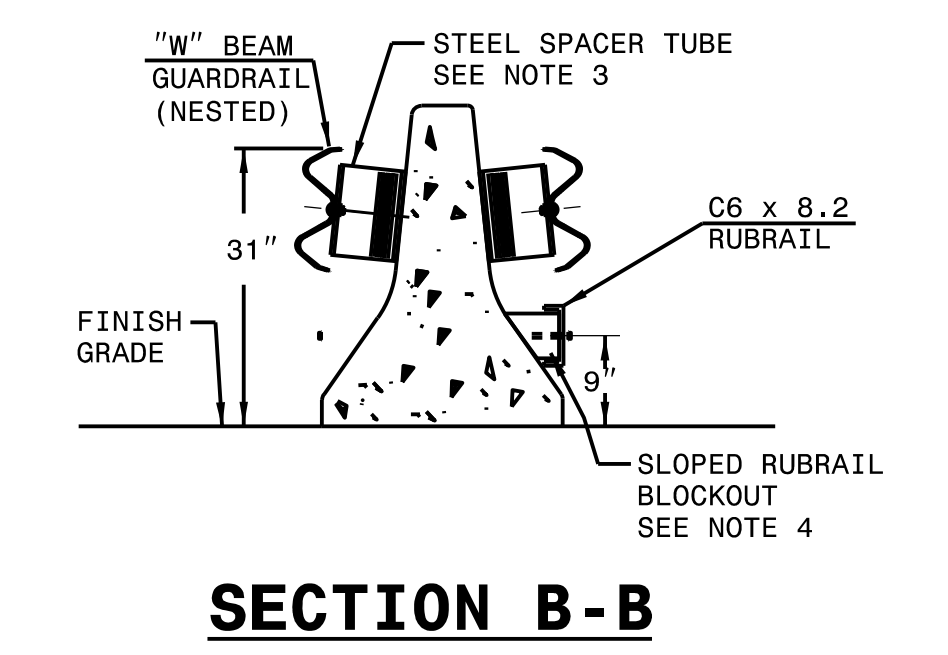
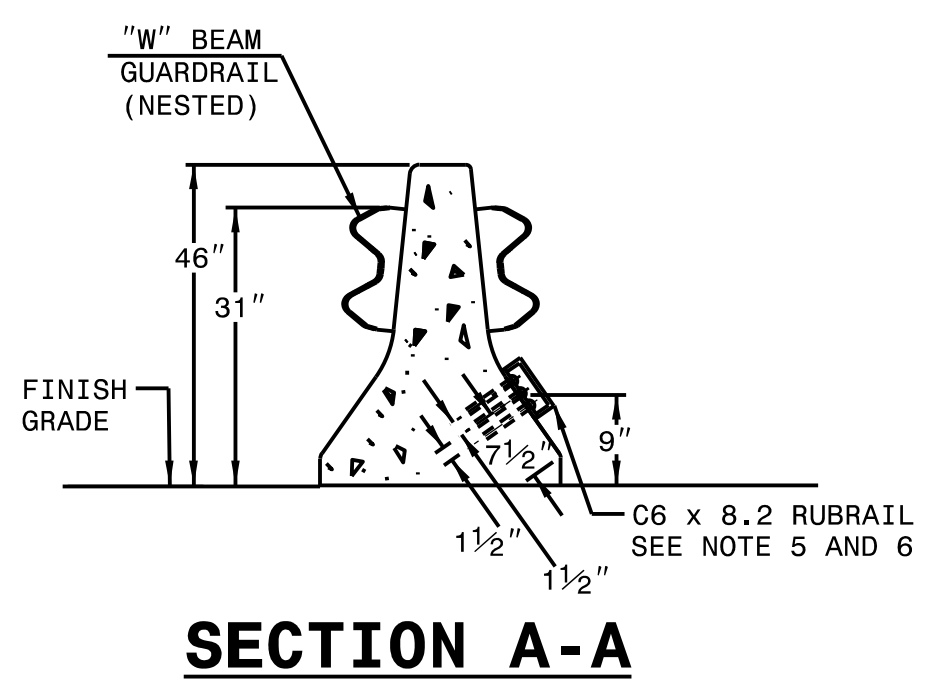


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25'-0" CLEAR SPAN GUARDRAIL PLACEMENT

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: _____ DATE: _____
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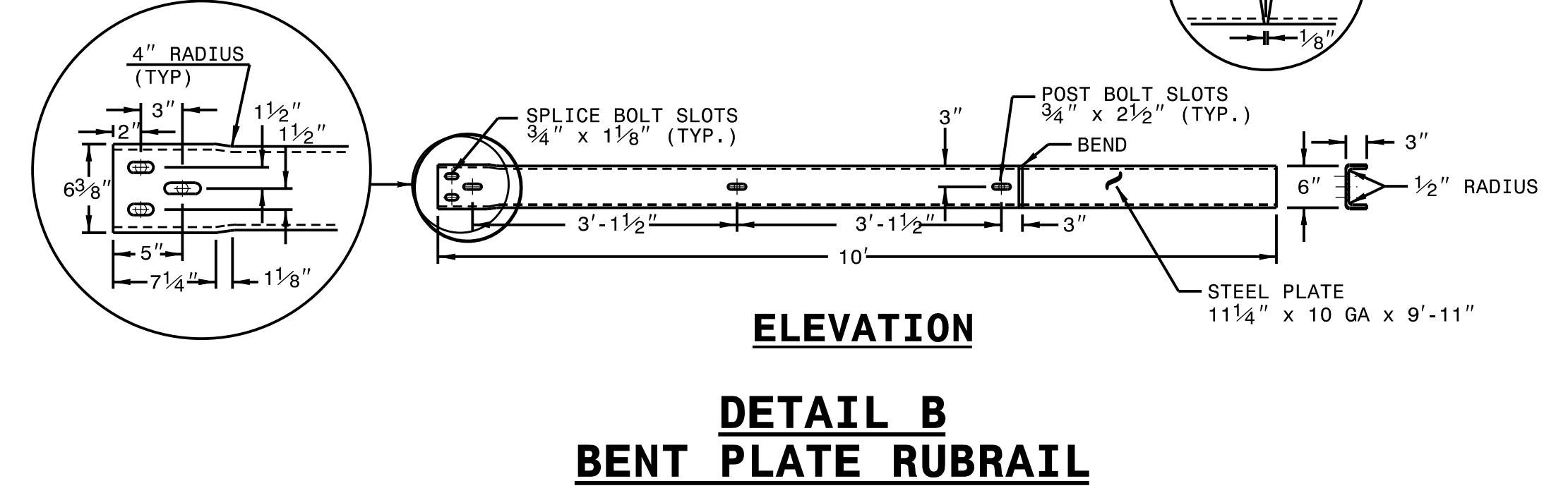
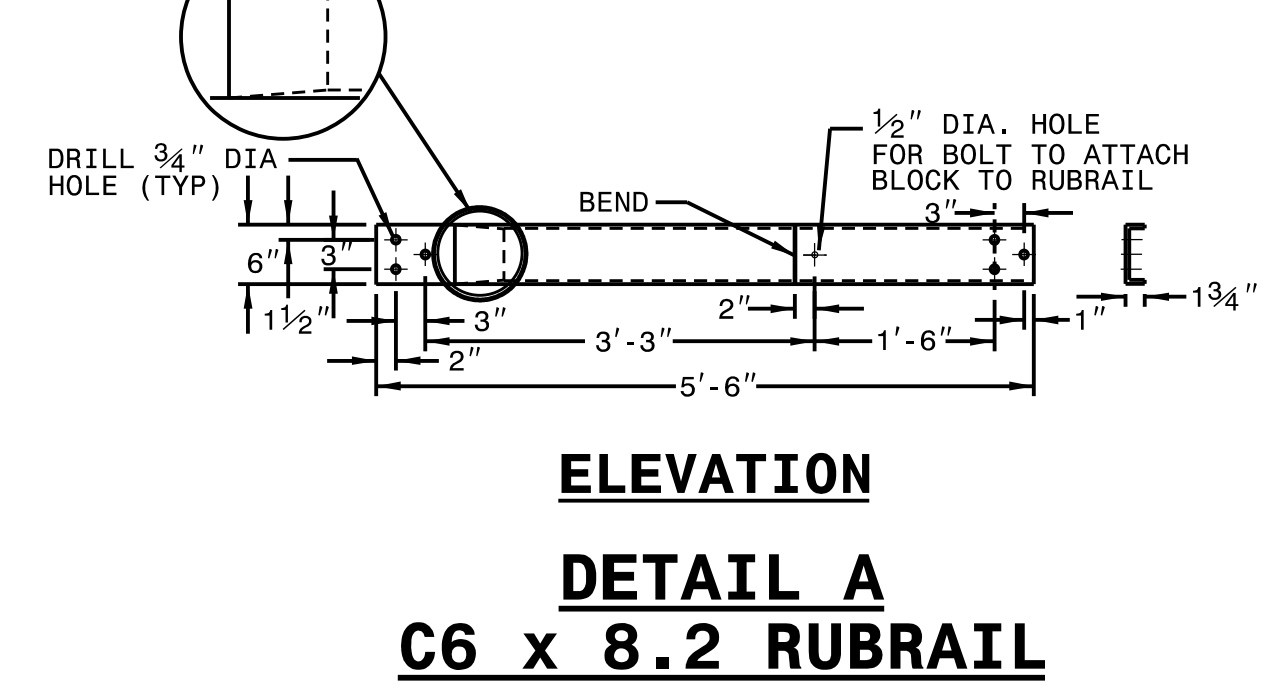
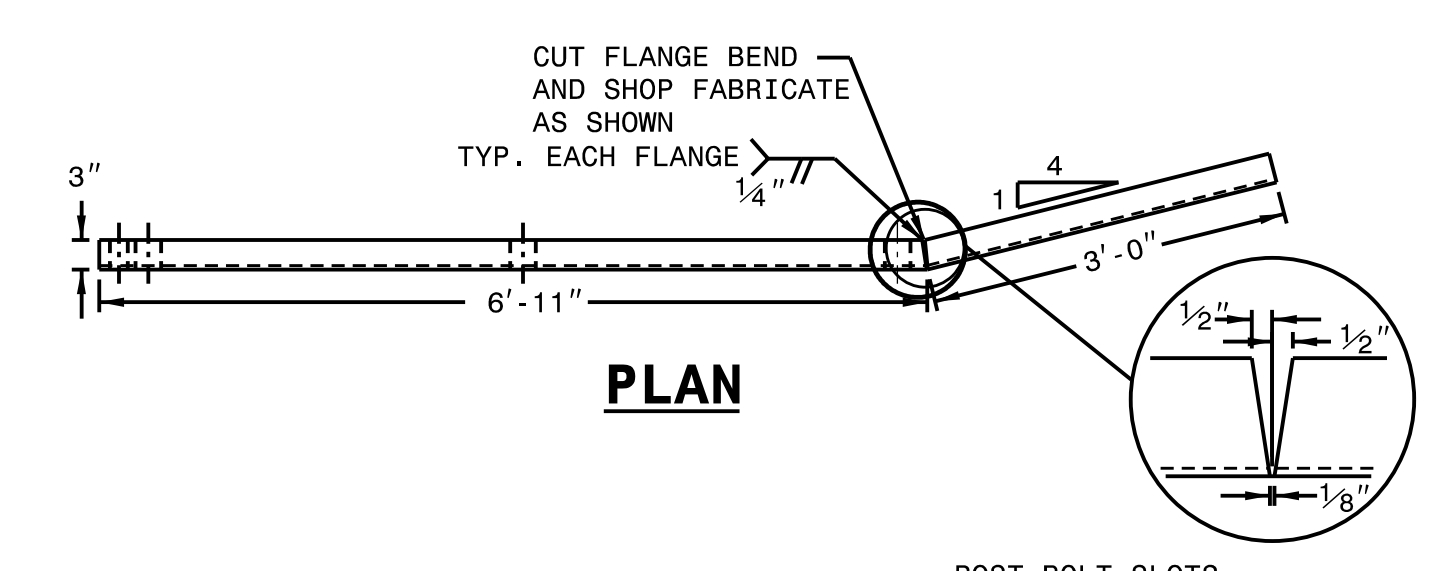
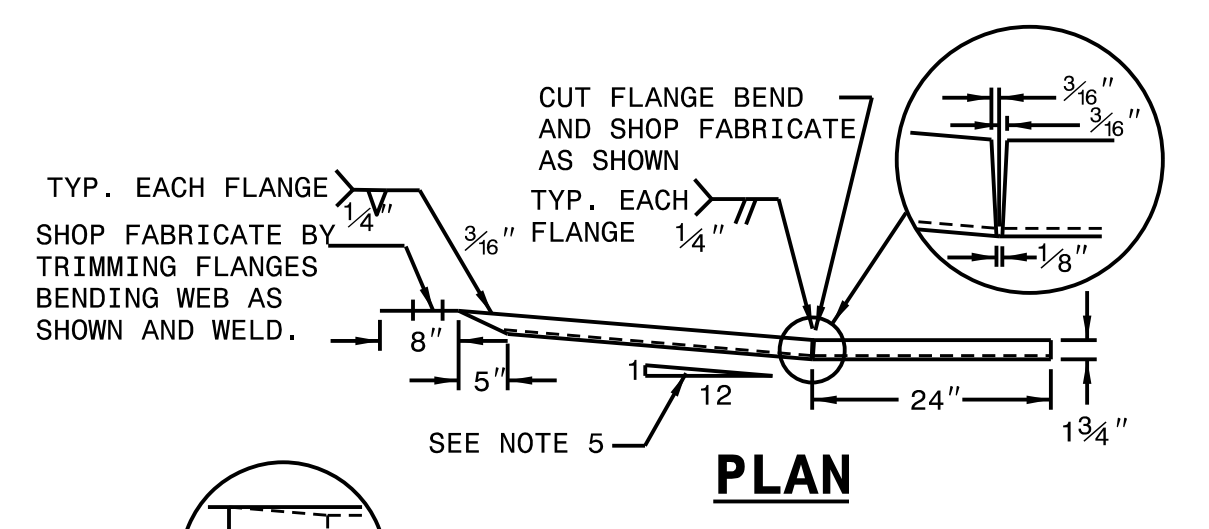


| POST | THICKNESS | BOLT LENGTH |
|------|-----------|-------------|
| 1 | 4 1/4" | 9" |
| 2 | 3 1/4" | 5" * |
| 3 | 2" | 6" |
| 4 | 1" | 3" * |

* BOLTS FOR POSTS 2 AND 4 ARE USED TO ATTACH BLOCK TO POST. RUBRAIL NOT ATTACHED TO BLOCK.

**DETAIL C
RUBRAIL BLOCKOUT**

- GENERAL NOTES:**
- APPROACH END OF ANCHOR UNIT HAS RUBRAIL. POSTS 1 THROUGH 5 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKOUTS AND/OR RUBRAIL.
 - RUBRAIL BLOCKOUTS LOCATED ON POSTS 1 THROUGH 4 ARE OFFSET DRILLED AND SECURED WITH 3/8" BUTTONHEAD BOLTS (SEE CHART FOR BOLT LENGTHS). SECURE RUBRAIL AND BLOCKOUTS TO POSTS 2 AND 4. SECURE RUBRAIL AND BLOCKOUTS TO POSTS 1 AND 3. RUBRAIL IS SECURED TO POST 5 WITH A 5/8" x 4 1/2" BUTTONHEAD BOLT. RUBRAIL IS FLARED TO BACK OF POST 6 AND NOT SECURED.
 - STEEL SPACER TUBE IS A SCHEDULE 40 GALVANIZED PIPE 6" INSIDE DIAMETER x 9" LONG. ATTACH TUBE TO GUARDRAIL ONLY WITH 5/8" x 1 1/4" LONG BUTTONHEAD BOLT AND RECTANGULAR PLATE WASHER.
 - SEE DETAIL D FOR SLOPED RUBRAIL BLOCKOUT. BLOCKOUT IS ATTACHED TO RAIL ELEMENT ONLY. USE 3/8" x 3" LAG BOLT WITH FLAT WASHER.
 - SHOP FABRICATE THE C6X8.2 RUBRAIL END TO BE CONSISTENT WITH THE SLOPE OF THE JERSEY SHAPE AND ATTACH FLUSH WITH THE SLOPED TOE OF THE BARRIER.
 - ANCHORAGE:
 - AT NEW OR EXISTING BARRIERS, RUBRAIL SHALL BE ANCHORED USING THREE 5/8" x 6" CHEMICALLY ANCHORED BOLTS WITH WASHERS. MAXIMUM PROJECTION FOR BOLTS SHALL BE 1/2".
 - AT NEW OR EXISTING BARRIERS, THE W-BEAM END SHOE SHALL BE ANCHORED USING FIVE 7/8" CHEMICALLY ANCHORED THREADED RODS WITH NUTS AND WASHERS. MAXIMUM PROJECTION FOR THREADED RODS SHALL BE 1/2". THE W-BEAM END SHOE SHALL BE INSTALLED BEHIND THE NESTED W-BEAM ELEMENTS.
 - POSTS 1 AND 2 ARE 7'-6" LONG. ALL OTHER POSTS IN THE ANCHOR UNIT ARE 6'-0".



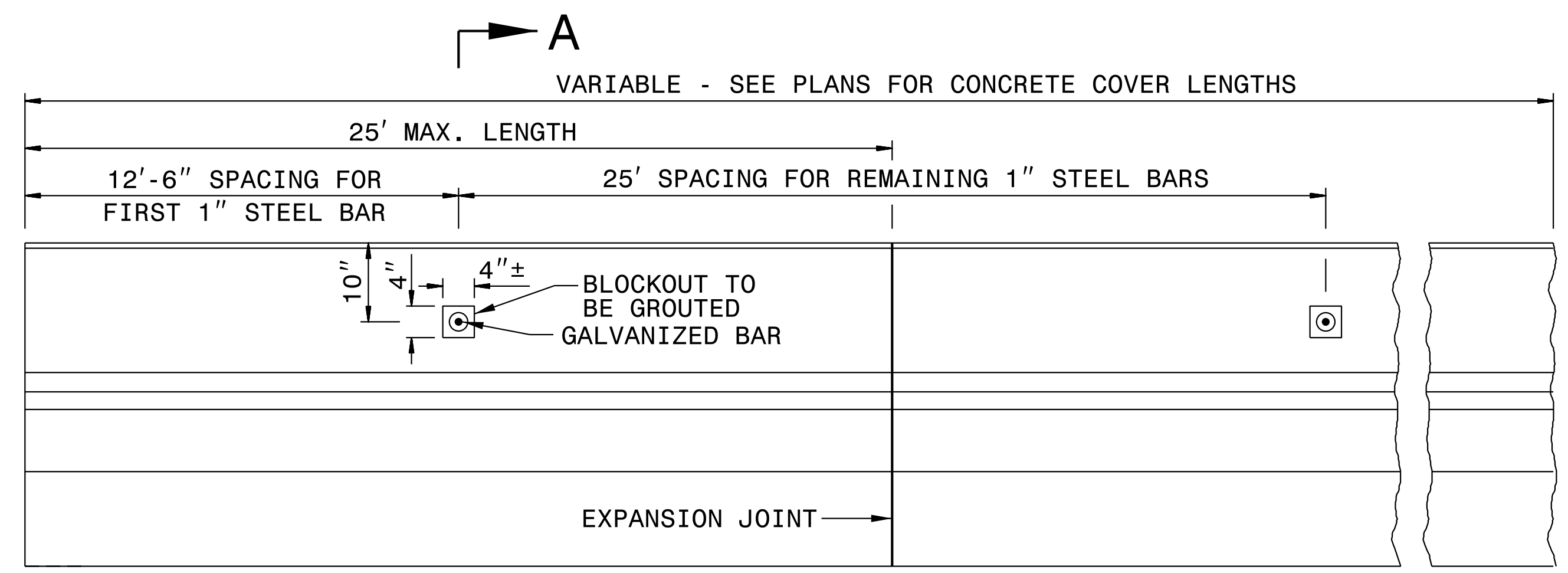
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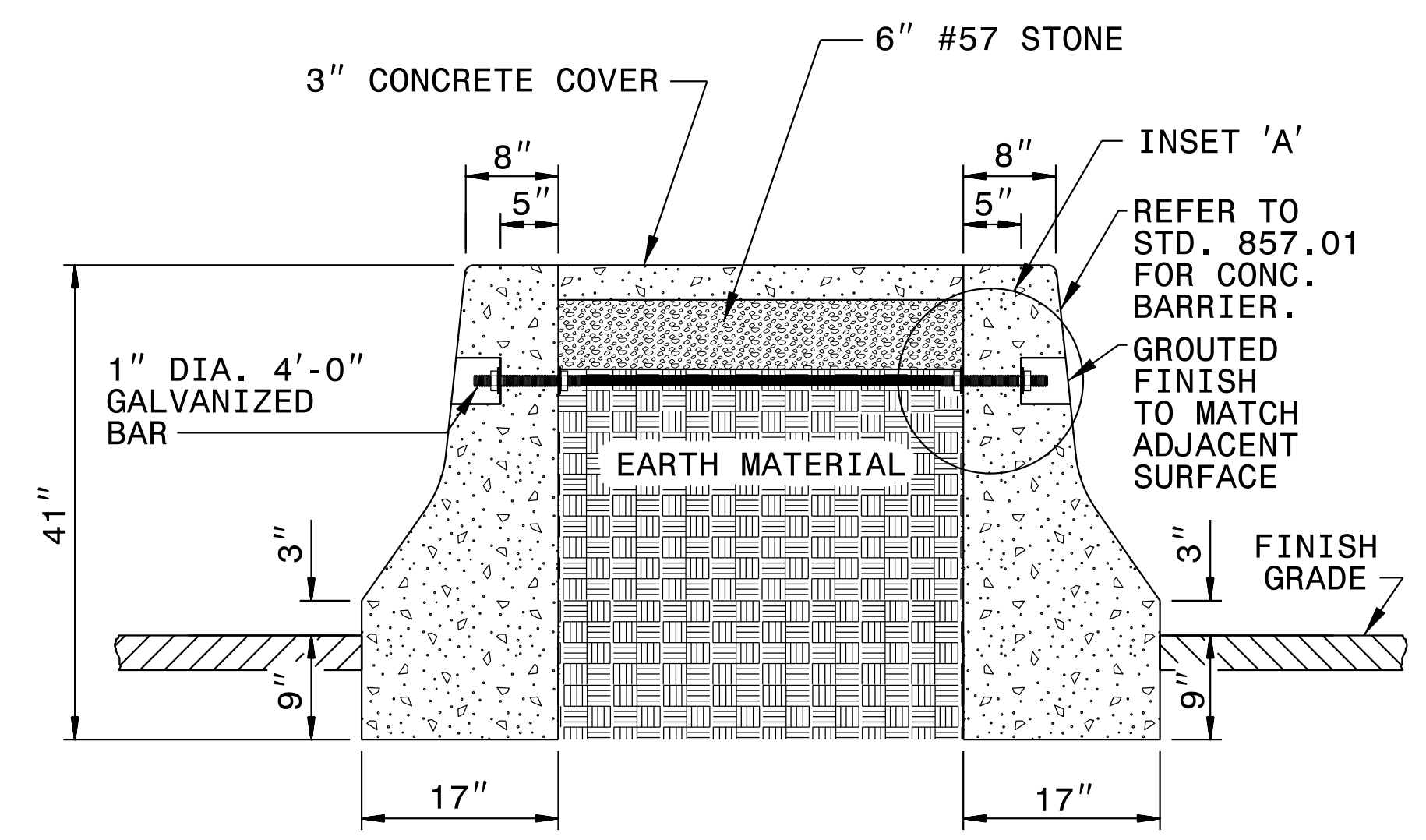
GUARDRAIL ANCHOR UNIT MODIFIED B-77 TYING TO CONCRETE BARRIER

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 MODIFIED BY: DATE: _____
 CHECKED BY: DATE: _____
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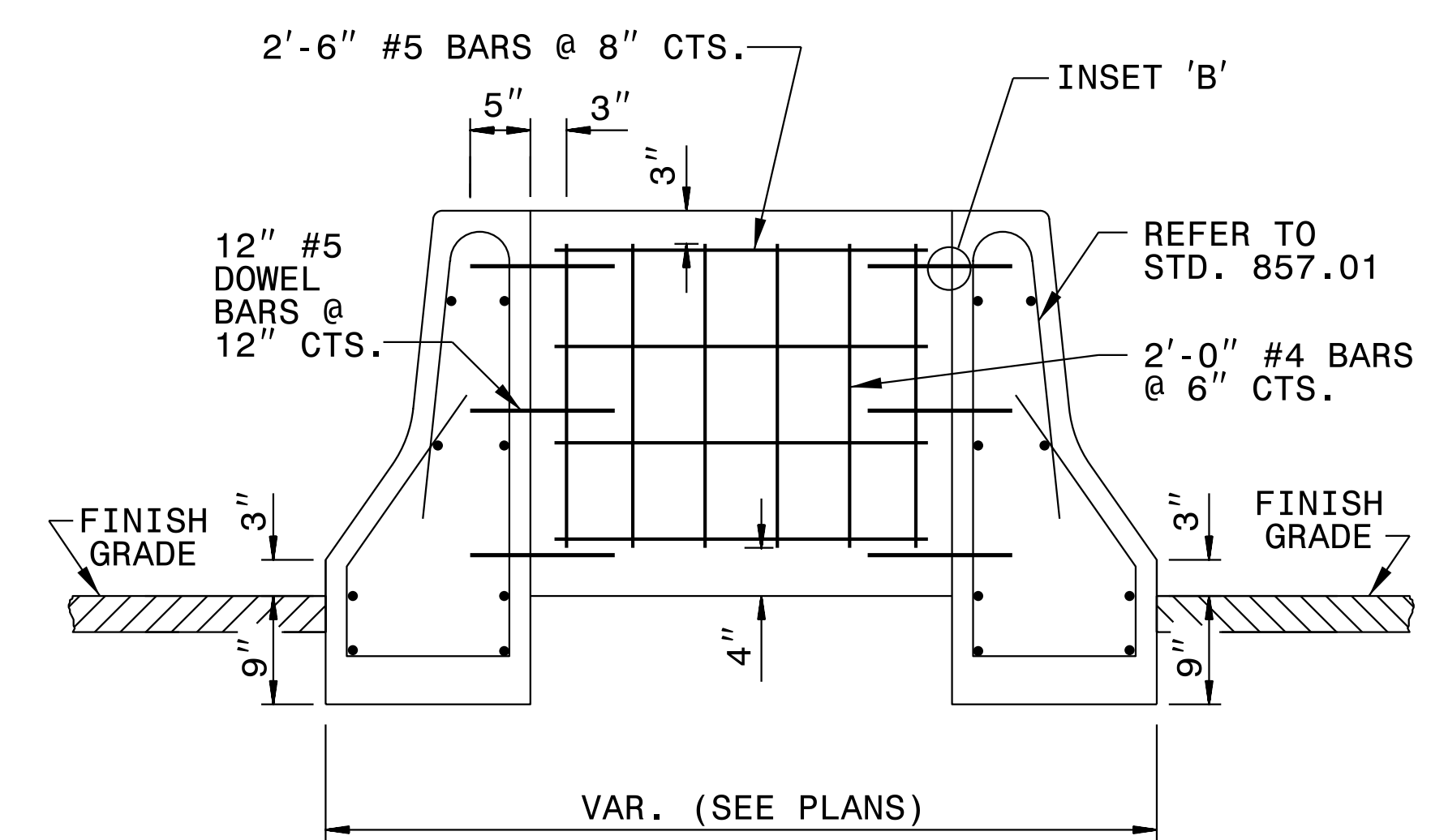
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 \$\$\$\$\$\$STANDARD\$\$\$\$\$
 \$\$\$\$\$\$CONSTRUCTION\$\$\$\$\$
 \$\$\$\$\$\$PERMITS\$\$\$\$\$
 \$\$\$\$\$\$DESIGN\$\$\$\$\$
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 \$\$\$\$\$\$REVISIONS\$\$\$\$\$
 \$\$\$\$\$\$DATE\$\$\$\$\$



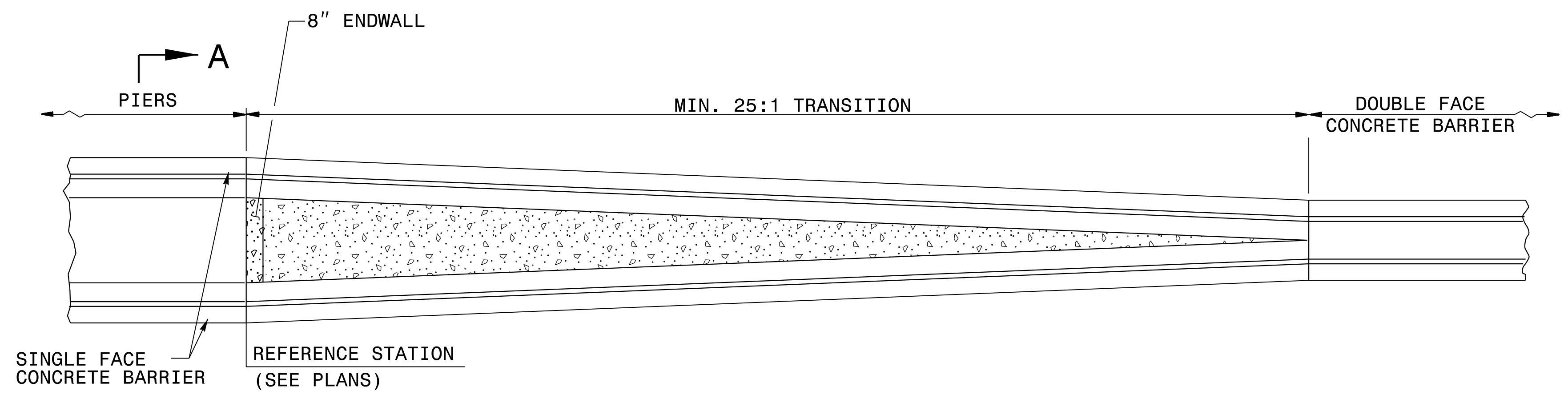
ELEVATION



SECTION 'A-A'



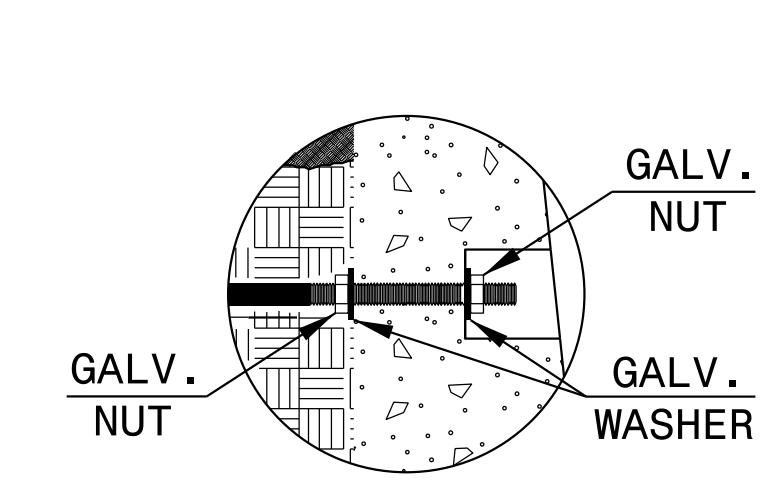
ENDWALL



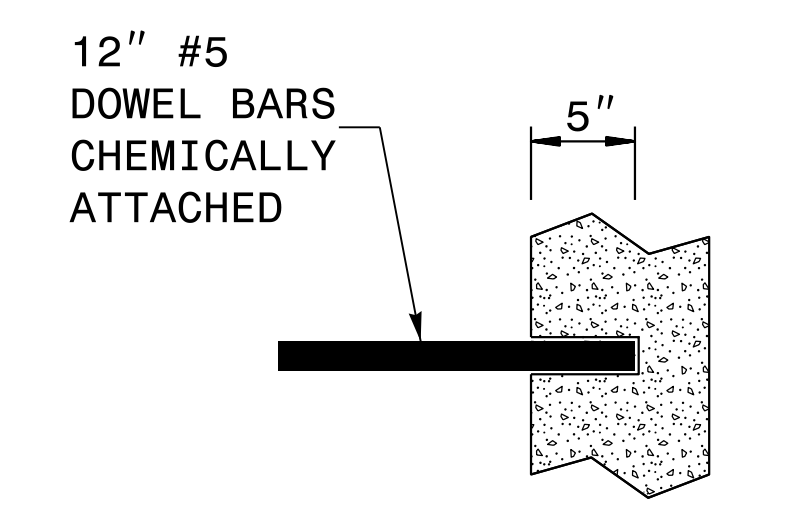
TRANSITION FROM SINGLE FACE RAIL TO DOUBLE FACE CONCRETE MEDIAN BARRIER

GENERAL NOTES:

- USE CLASS 'AA' CONCRETE TO CONSTRUCT CONCRETE BARRIER TRANSITION.
- USE CLASS 'B' CONCRETE TO CONSTRUCT CONCRETE COVER.
- SEAL ALL EXPANSION JOINTS WITH JOINT FILLER (SEE SECTION 1028 OF THE SPECIFICATIONS).
- SUBMIT ALTERNATIVE METHODS FOR STEEL FABRICATION FOR REVIEW.
- REFER TO PLANS AND TYPICAL SECTION FOR CONCRETE COVER LOCATIONS.
- USE AN APPROVED BONDING SYSTEM IN ACCORDANCE WITH SECTION 1081-1, TYPE 3A OF THE STANDARD SPECIFICATIONS.
- DRILL ANCHOR HOLES WITH A PNEUMATIC DRILL UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- DRILL ANCHOR HOLES IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- REMOVE ALL DEBRIS, CHIPS, DUST, GREASE, OIL AND OTHER FOREIGN MATTER FROM THE ANCHOR HOLES PRIOR TO THE APPLICATION OF THE ADHEIVE BONDING SYSTEM.
- BARRIER TRANSITION LOCATED AS FIELD CONDITIONS DICTATE AND AS DIRECTED BY THE ENGINEER.

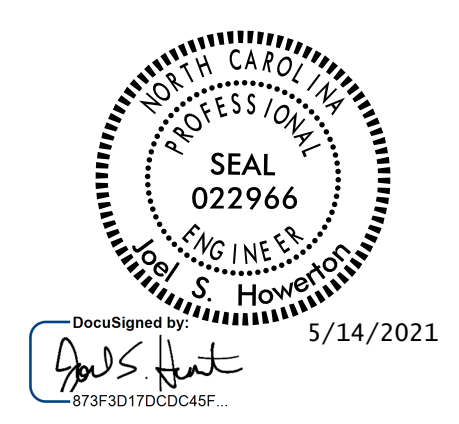


INSET 'A'



INSET 'B'

09-OCT-2019 09:23 S:\Contracts\Contractors\Special_Details\verticalword\usr\details\stand\tranbarrier.dgn J:\power\ton AT_CSD-232595



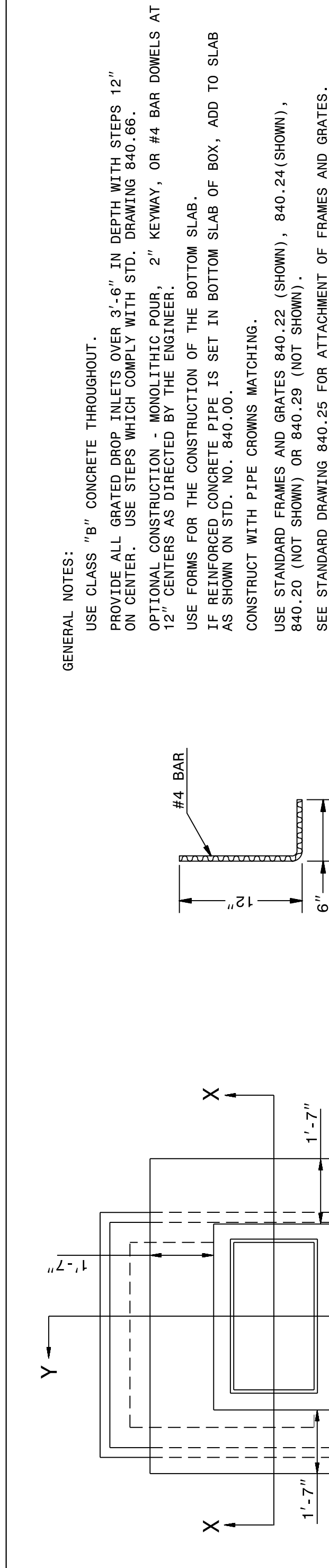
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| MEDIAN HAZARD PROTECTION AND BARRIER TRANSITION | |
| ORIGINAL BY: T.S. Spell | DATE: 2-14-00 |
| MODIFIED BY: | DATE: |
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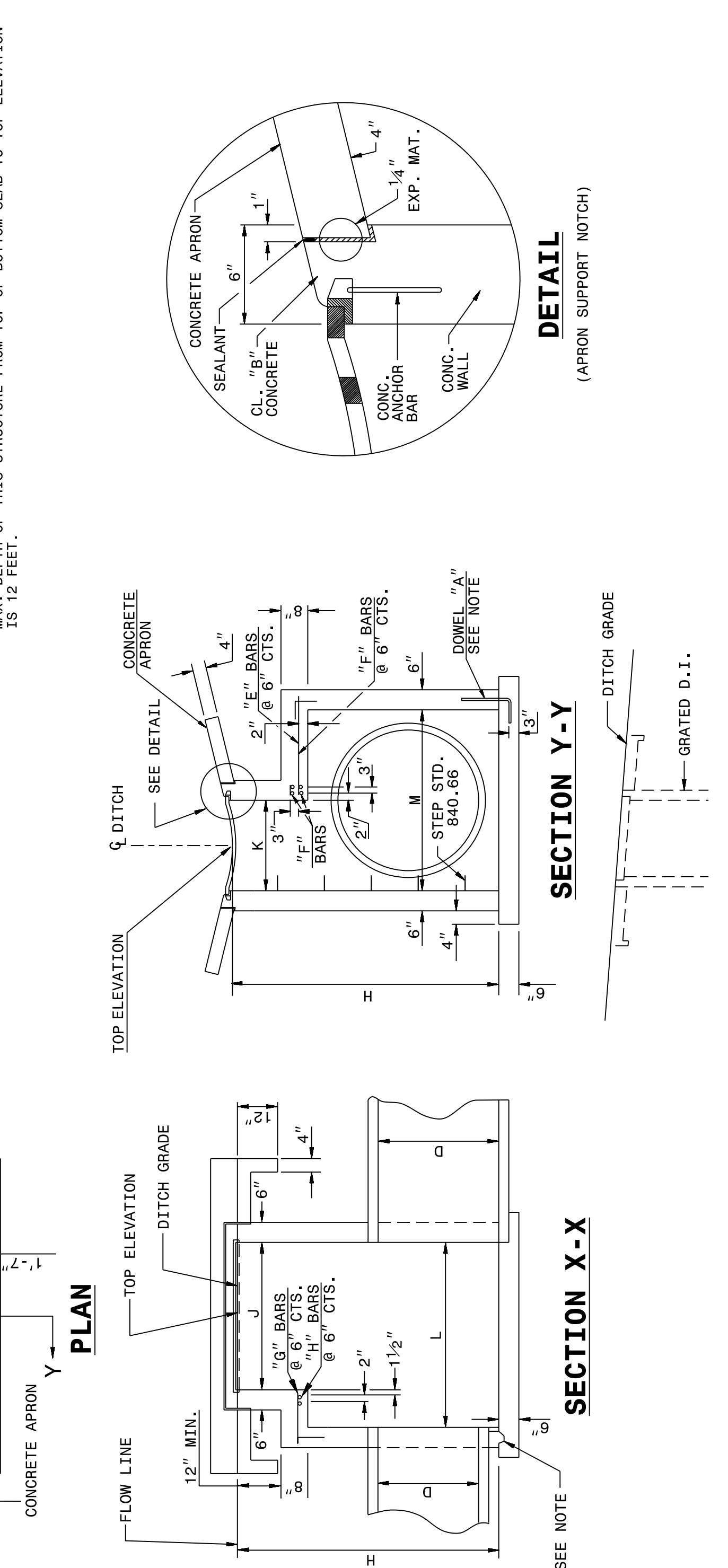
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ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

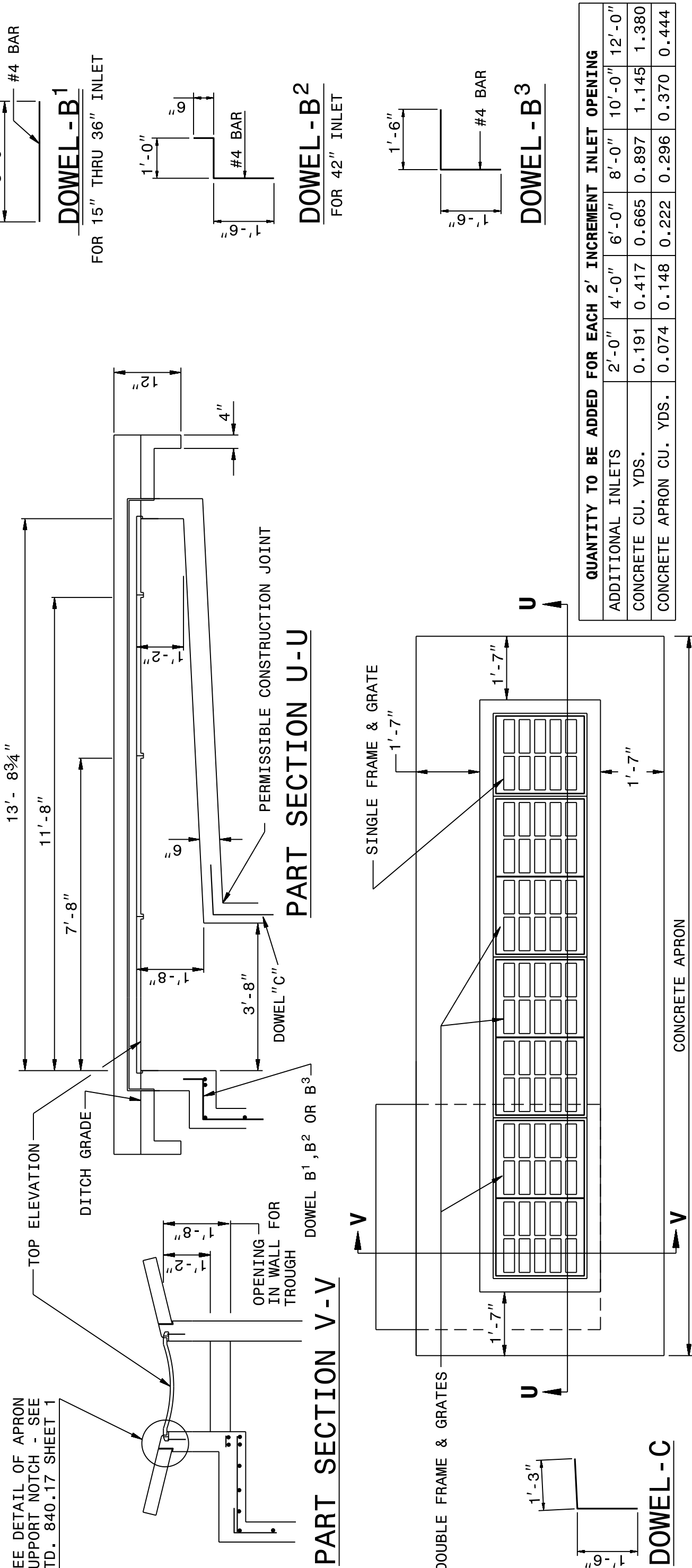
SHEET 1 OF 2 840d17



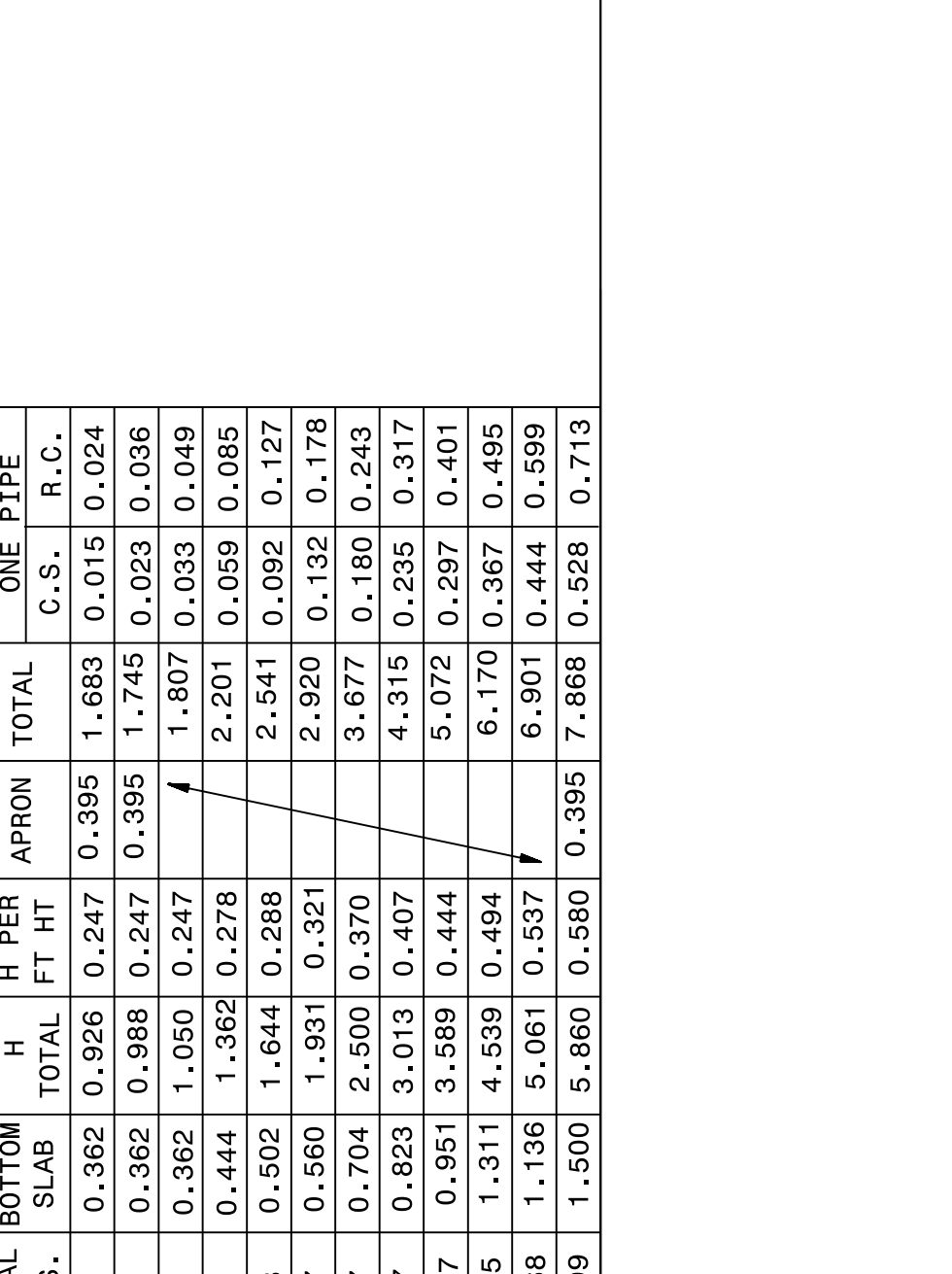
SECTION X-X



SECTION Y-Y



DETAIL



SECTION Y-Y



SECTION Y-Y

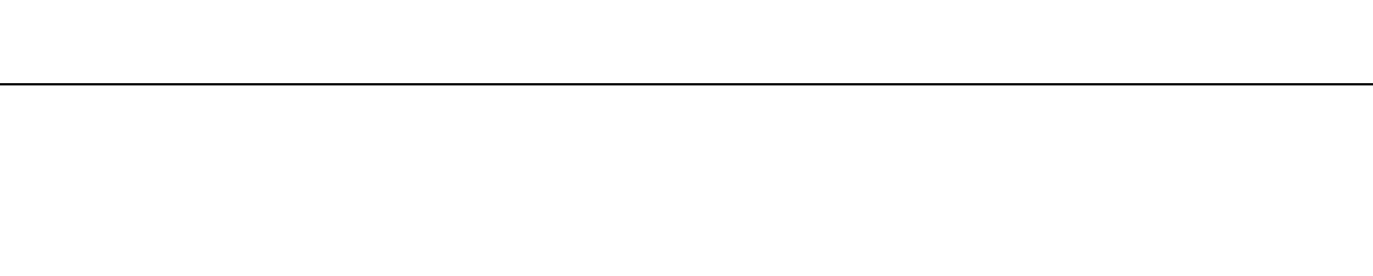
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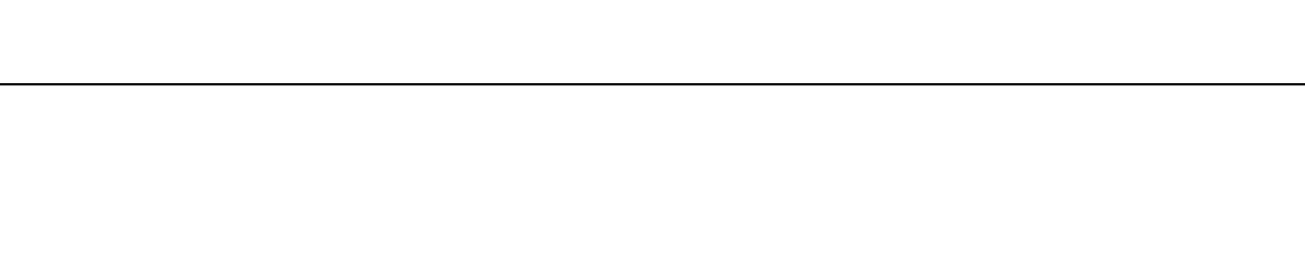
SHEET 1 OF 2 840d17

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL GRATED DROP INLETS OVER 3'-6" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
 CONSTRUCT WITH PIPE CROWNS MATCHING.
 USE STANDARD FRAMES AND GRATES 840.22 (SHOWN), 840.24 (SHOWN), 840.20 (NOT SHOWN) OR 840.29 (NOT SHOWN).
 SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES.
 CHAMFER ALL EXPOSED CORNERS 1".
 DRAWING NOT TO SCALE.
 MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 12 FEET.

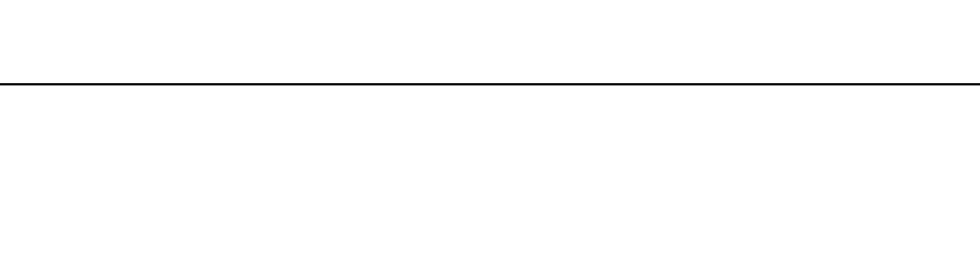
DOWEL - A



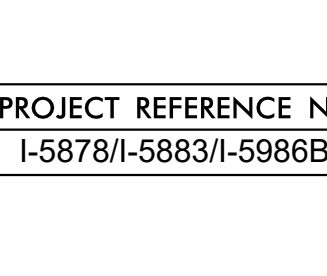
DOWEL - B



DOWEL - C



DOWEL - B

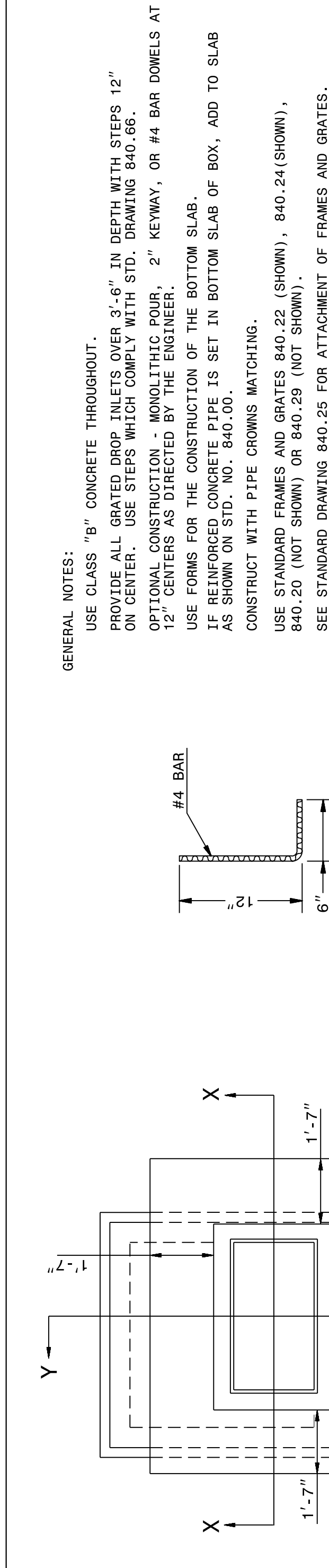


DOWEL - B

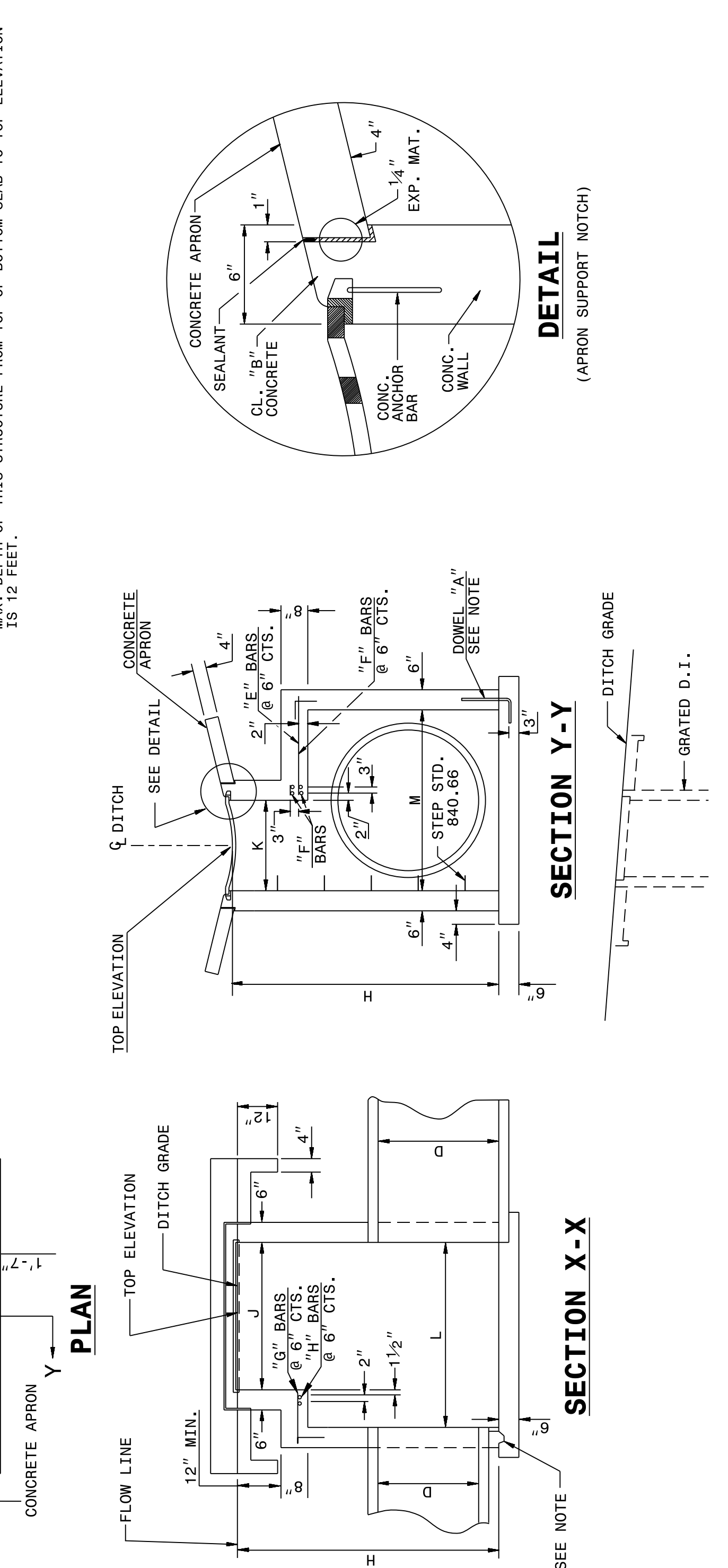
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ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

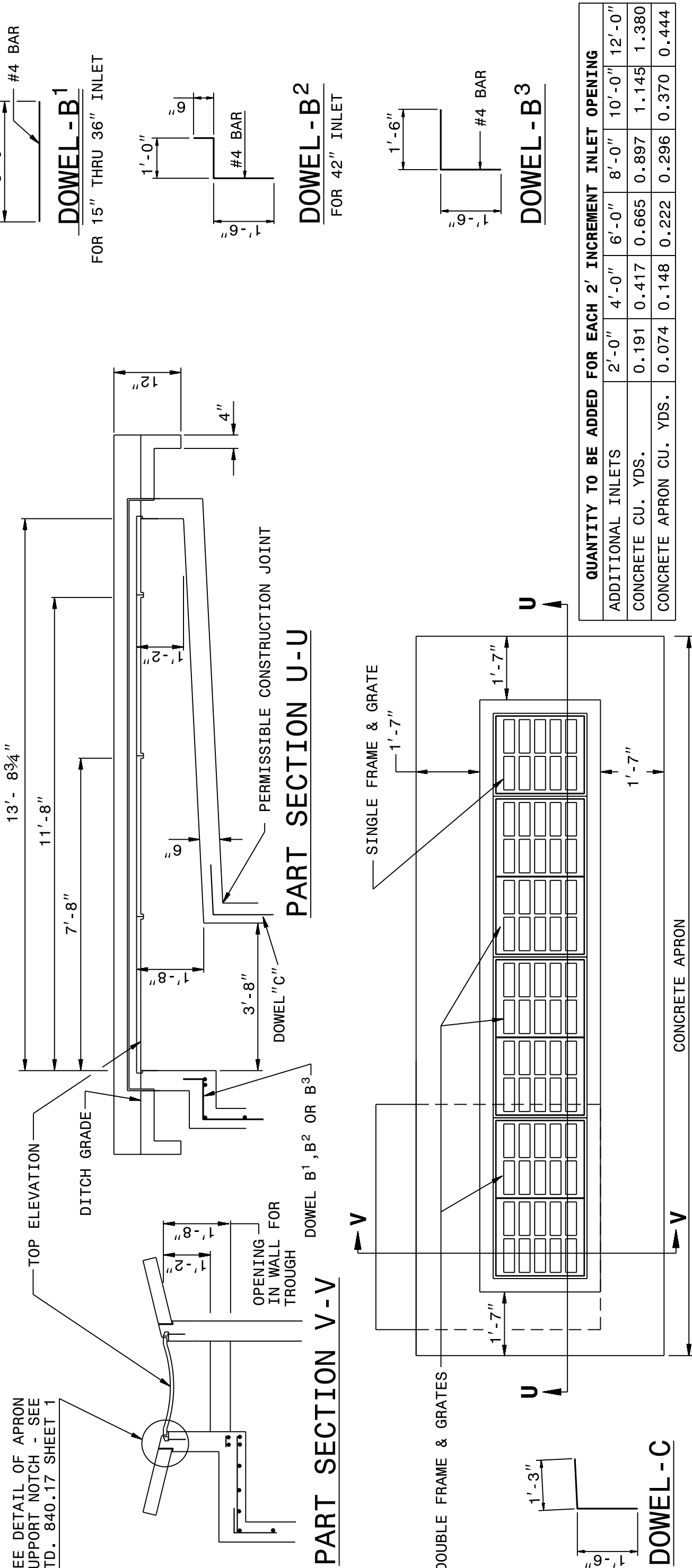
SHEET 2 OF 2 840d17



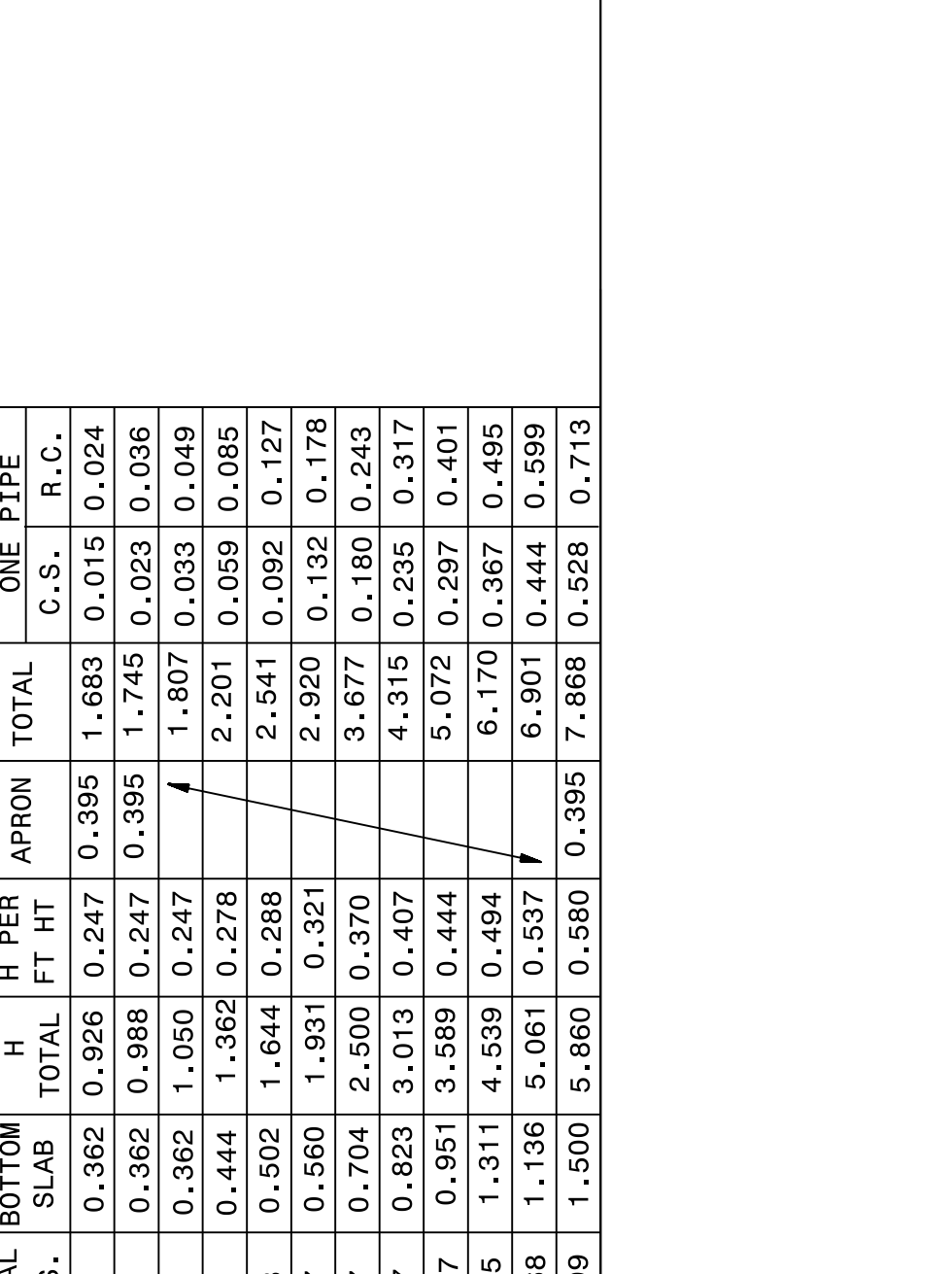
SECTION X-X



SECTION Y-Y



DETAIL



SECTION Y-Y



SECTION Y-Y

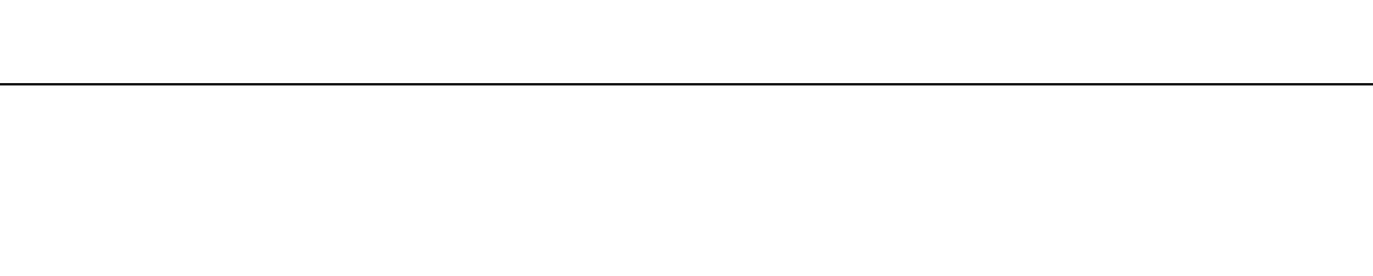
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ENGLISH DETAIL DRAWING FOR CONCRETE GRATED DROP INLET TYPE 'A' MINIMUM DEPTH 12" THRU 72" PIPE

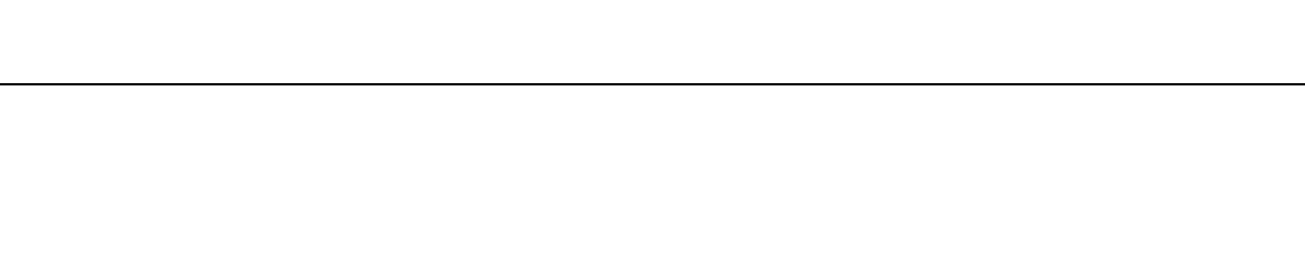
SHEET 2 OF 2 840d17

GENERAL NOTES:
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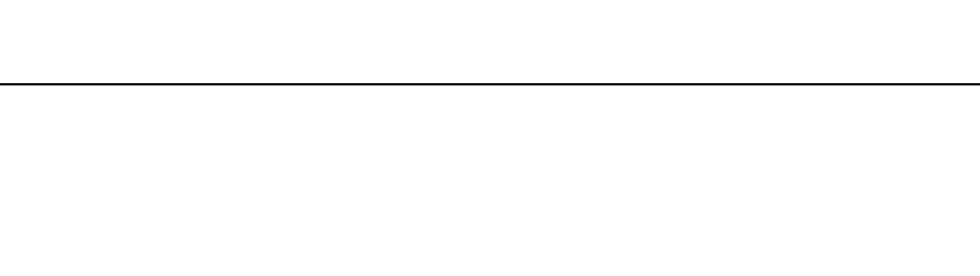
DOWEL - A



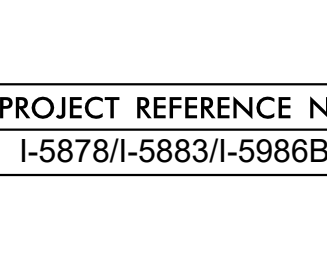
DOWEL - B



DOWEL - C



DOWEL - B



DOWEL - B

I:\SEP-2017\1155\portraits\Special Details\Jhowerton\840d17 Minimum Depth Type A.dgn
 Jhowerton At CSD 2/25/2015

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 Office 919-707-6950 FAX 919-250-4119
SEE TITLE BLOCK
 ORIGINAL BY: J. Howerton DATE: 1/22/14
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.: jhowerton\minimum depth type A.dgn



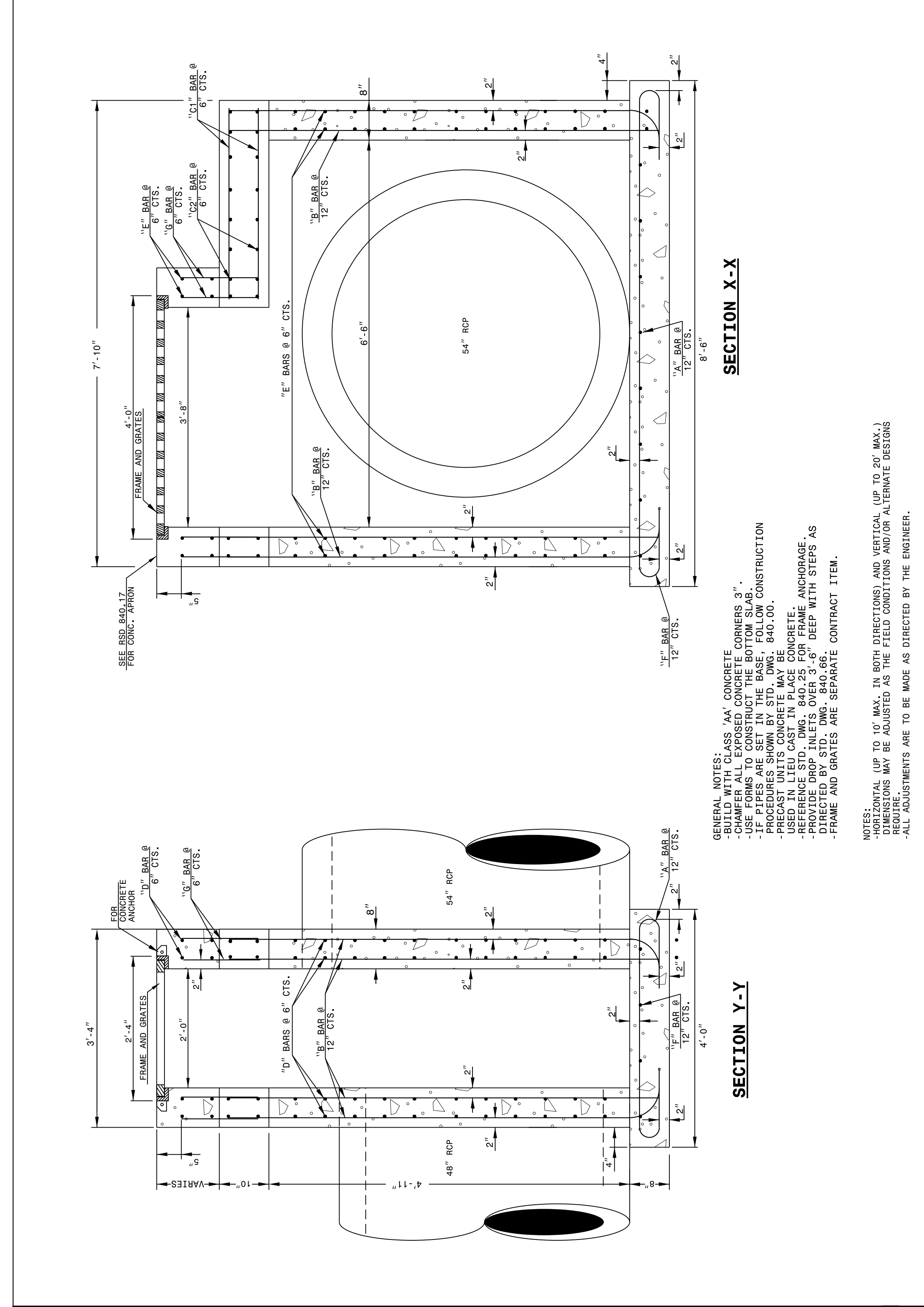
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

I3-AUG-2018 09:00 S:\Contracts\Contractors\Special Details\Jhewerton\840d35 TB01 Up to 54in.dgn Jhewerton AT_CSD-292595

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR TRAFFIC BEARING GRATED INLET FOR PIPES UP TO 54"

SHEET 1 OF 2
840D35



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

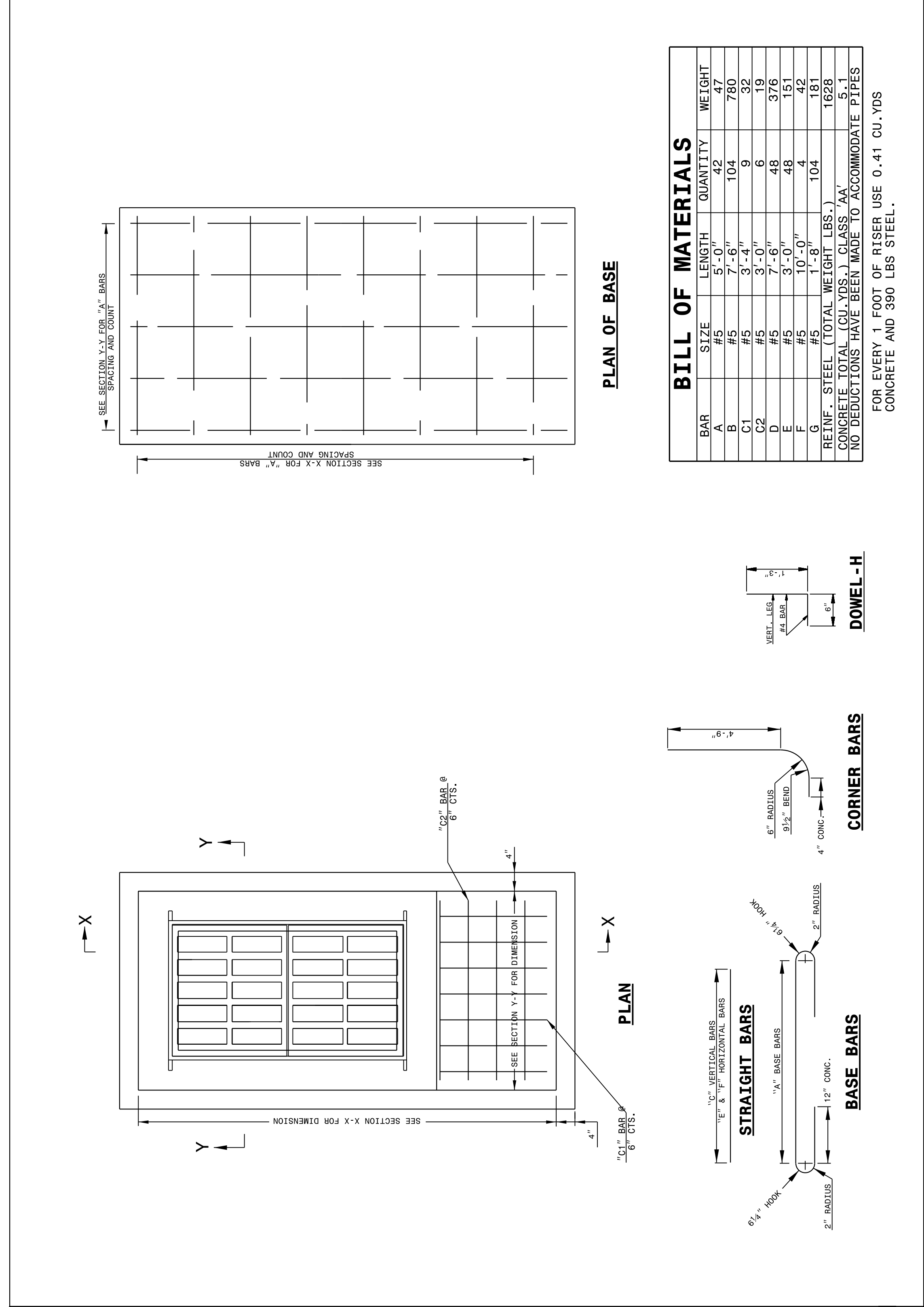
ENGLISH DETAIL DRAWING FOR TRAFFIC BEARING GRATED INLET FOR PIPES UP TO 54"

SHEET 1 OF 2
840D35

STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR TRAFFIC BEARING GRATED INLET FOR PIPES UP TO 54"

SHEET 2 OF 2
840D35



STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR TRAFFIC BEARING GRATED INLET FOR PIPES UP TO 54"

SHEET 2 OF 2
840D35

SECTION X-X

GENERAL NOTES:
 -BUILD WITH CLASS 'AA' CONCRETE
 -CHAMFER ALL EXPOSED CONCRETE CORNERS 3".
 -USE FORMS TO CONSTRUCT THE BOTTOM SLAB.
 -PIPE ANCHORS IN THE BASE, FOLLOW CONSTRUCTION PRACTICES SHOWN IN THE BASE, DRAWING 840.00.
 -PRECAST UNITS CONCRETE MAY BE USED IN LIEU CAST IN PLACE CONCRETE.
 -REFERENCE STD. DWG. 840.25 FOR FRAME ANCHORAGE.
 -FRAME ANCHORS SHALL BE 6" DEEP WITH STEPS AS DIRECTED BY STD. DWG. 840.66.
 -FRAME AND GRATES ARE SEPARATE CONTRACT ITEM.

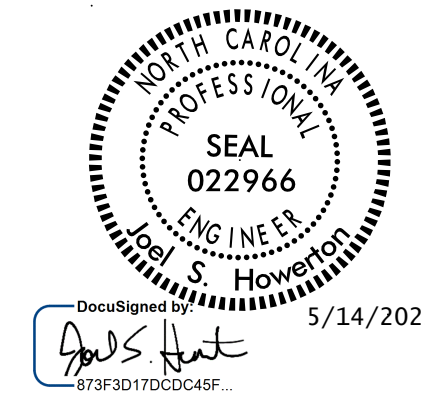
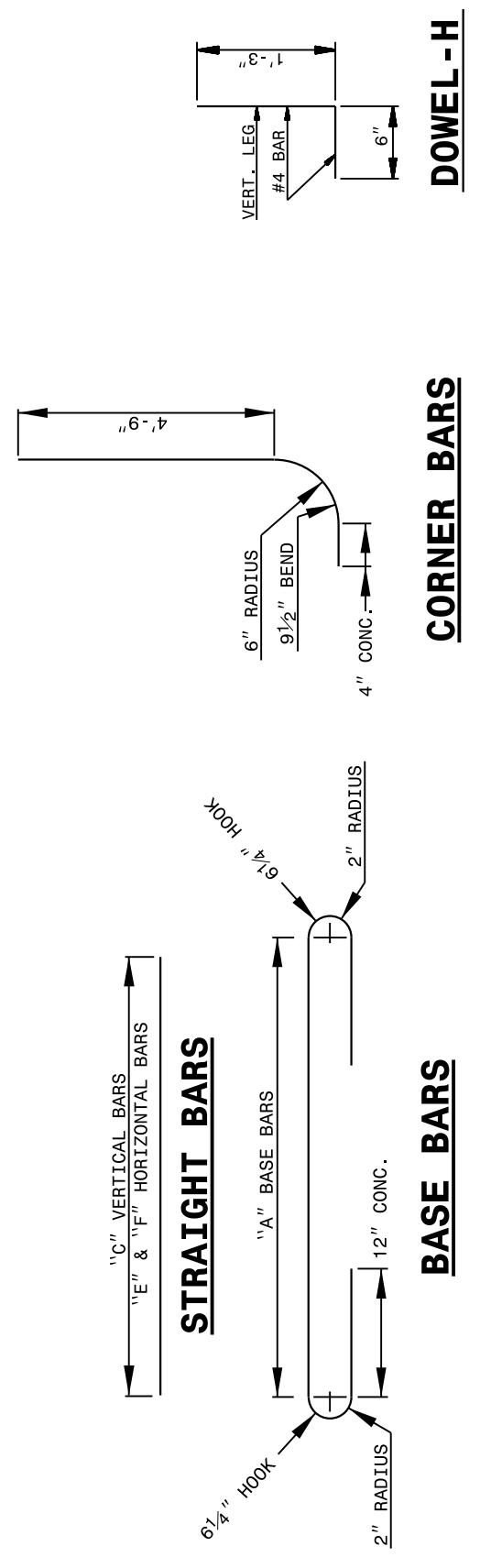
NOTES:
 -HORIZONTAL UP TO 10' MAX. IN BOTH DIRECTIONS AND VERTICAL (UP TO 20' MAX.) DIMENSIONS MAY BE ADJUSTED AS THE FIELD CONDITIONS AND/OR ALTERNATE DESIGNS REQUIRE.
 -ALL ADJUSTMENTS ARE TO BE MADE AS DIRECTED BY THE ENGINEER.

SECTION Y-Y

BILL OF MATERIALS

| BAR | SIZE | LENGTH | QUANTITY | WEIGHT |
|---|------|--------|----------|--------|
| A | #12 | 5'-0" | 42 | 47 |
| B | #12 | 7'-6" | 104 | 780 |
| C1 | #12 | 3'-0" | 6 | 32 |
| C2 | #12 | 3'-0" | 48 | 178 |
| D | #12 | 3'-0" | 48 | 178 |
| E | #12 | 3'-0" | 48 | 178 |
| F | #12 | 3'-0" | 48 | 178 |
| G | #12 | 3'-0" | 48 | 178 |
| H | #12 | 3'-0" | 48 | 178 |
| I | #12 | 3'-0" | 48 | 178 |
| J | #12 | 3'-0" | 48 | 178 |
| K | #12 | 3'-0" | 48 | 178 |
| L | #12 | 3'-0" | 48 | 178 |
| M | #12 | 3'-0" | 48 | 178 |
| N | #12 | 3'-0" | 48 | 178 |
| O | #12 | 3'-0" | 48 | 178 |
| P | #12 | 3'-0" | 48 | 178 |
| Q | #12 | 3'-0" | 48 | 178 |
| R | #12 | 3'-0" | 48 | 178 |
| S | #12 | 3'-0" | 48 | 178 |
| T | #12 | 3'-0" | 48 | 178 |
| U | #12 | 3'-0" | 48 | 178 |
| V | #12 | 3'-0" | 48 | 178 |
| W | #12 | 3'-0" | 48 | 178 |
| X | #12 | 3'-0" | 48 | 178 |
| Y | #12 | 3'-0" | 48 | 178 |
| Z | #12 | 3'-0" | 48 | 178 |
| REIN. STEEL (TOTAL WEIGHT LBS.) | | | 104 | 1626 |
| CONCRETE (TOTAL CU. YDS.) CLASS 'AA' | | | 5.1 | |
| NO DEDUCTIONS HAVE BEEN MADE TO ACCOMMODATE PIPES | | | | |

FOR EVERY 1 FOOT OF RISER USE 0.41 CU. YDS CONCRETE AND 390 LBS STEEL.



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CONTRACT STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: K. KEMPF DATE: 03-03-2015
 MODIFIED BY: DATE:
 CHECKED BY: DATE:
 FILE SPEC.: jhewerton/840d35 TB01 Up to 54in.dgn

01-MAR-2018 07:39
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CONCRETE MEDIAN DROP INLET TYPE 'A'
EXTRA DEPTH OVER 12' TO 25'
12" THRU 72" PIPE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CONCRETE MEDIAN DROP INLET TYPE 'A'
EXTRA DEPTH OVER 12' TO 25'
12" THRU 72" PIPE

SHEET 1 OF 2
840D17

GENERAL NOTES:

- USE CLASS "B" CONCRETE THROUGHOUT.
- PROVIDE DROP INLETS WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
- OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
- USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
- IF REINFORCED CONCRETE PIPE IS SET IN BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD. NO. 840.00.
- WHEN PAYMENT FOR THE DROP INLET IS MADE ON A PER EACH BASIS, THE CONCRETE APRON WILL BE CONSIDERED PART OF THE DROP INLET.
- CONSTRUCT WITH PIPE CROWNS MATCHING.
- USE STANDARD FRAMES AND GRATES 840.22 (SHOWN), 840.24 (SHOWN), 840.20, 840.29, AND 840.33.
- SEE STANDARD DRAWING 840.25 FOR ATTACHMENT OF FRAMES AND GRATES NOT SHOWN.
- CHAMFER ALL EXPOSED CORNERS 1".
- DRAWING NOT TO SCALE.
- MAX. DEPTH OF THIS STRUCTURE FROM TOP OF BOTTOM SLAB TO TOP ELEVATION IS 25 FEET.

PLAN

SECTION X-X

SECTION Y-Y

DETAIL
(APRON SUPPORT NOTCH)

DOWEL - A

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CONCRETE MEDIAN DROP INLET TYPE 'A'
EXTRA DEPTH OVER 12' TO 25'
12" THRU 72" PIPE

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CONCRETE MEDIAN DROP INLET TYPE 'A'
EXTRA DEPTH OVER 12' TO 25'
12" THRU 72" PIPE

SHEET 2 OF 2
840D17

PART SECTION U-U

PART SECTION V-V

DOWEL - B1
FOR 15" THRU 36" INLET

DOWEL - B2
FOR 42" INLET

DOWEL - B3

MIN. DIMENSIONS AND QUANTITIES FOR CONCRETE GRATED DROP INLET (BASED ON MIN. HEIGHT, H)

| PIPE D | DIMENSIONS OF APRON | | | REINFORCING STEEL - NO. 4 BARS | | | | CU YDS CONC. IN BOX | | | DEDUCTIONS FOR ONE PIPE | | | | |
|--------|---------------------|---------|----------|--------------------------------|-------------------|------------|------------|---------------------|----------|-------------|-------------------------|-------|-------|-------|-------|
| | SPAN J | WIDTH K | HEIGHT L | NO. BARS E | LENGTH NO. BARS F | NO. BARS G | NO. BARS H | TOTAL SLAB LBS. | H PER FT | APRON TOTAL | C.S. | R.C. | | | |
| 12" | 3'-8" | 2'-0" | 3'-8" | 8 | 3'-8" | 8 | 4'-9" | 27 | 0.362 | 0.926 | 0.247 | 0.395 | 1.683 | 0.015 | 0.024 |
| 15" | 3'-8" | 2'-0" | 3'-8" | 8 | 3'-8" | 8 | 4'-9" | 27 | 0.362 | 0.988 | 0.247 | 0.395 | 1.745 | 0.023 | 0.036 |
| 18" | 3'-8" | 2'-0" | 3'-8" | 8 | 3'-8" | 8 | 4'-9" | 27 | 0.362 | 1.050 | 0.247 | 0.395 | 1.807 | 0.033 | 0.049 |
| 24" | 3'-8" | 2'-0" | 3'-8" | 8 | 3'-8" | 8 | 4'-9" | 27 | 0.362 | 1.362 | 0.278 | 0.395 | 2.201 | 0.059 | 0.085 |
| 30" | 3'-8" | 2'-0" | 3'-8" | 8 | 3'-8" | 8 | 4'-9" | 27 | 0.362 | 1.644 | 0.288 | 0.395 | 2.541 | 0.092 | 0.127 |
| 36" | 3'-8" | 2'-0" | 3'-8" | 8 | 3'-8" | 8 | 4'-9" | 27 | 0.362 | 1.931 | 0.321 | 0.395 | 2.920 | 0.132 | 0.178 |
| 42" | 3'-8" | 2'-0" | 3'-8" | 10 | 3'-11" | 9 | 5'-7" | 67 | 0.704 | 2.500 | 0.370 | 0.395 | 3.677 | 0.180 | 0.243 |
| 48" | 3'-8" | 2'-0" | 3'-8" | 11 | 3'-7" | 10 | 6'-1" | 87 | 0.823 | 3.013 | 0.407 | 0.395 | 4.315 | 0.235 | 0.317 |
| 54" | 3'-8" | 2'-0" | 3'-8" | 12 | 4'-1" | 11 | 6'-7" | 107 | 0.951 | 3.589 | 0.444 | 0.395 | 5.072 | 0.297 | 0.401 |
| 60" | 3'-8" | 2'-0" | 3'-8" | 13 | 4'-9" | 12 | 7'-3" | 135 | 1.311 | 4.539 | 0.494 | 0.395 | 6.170 | 0.367 | 0.495 |
| 66" | 3'-8" | 2'-0" | 3'-8" | 14 | 5'-4" | 14 | 7'-10" | 188 | 1.136 | 5.061 | 0.537 | 0.395 | 6.901 | 0.444 | 0.599 |
| 72" | 3'-8" | 2'-0" | 3'-8" | 15 | 5'-11" | 15 | 8'-5" | 199 | 1.500 | 5.860 | 0.560 | 0.395 | 7.868 | 0.528 | 0.713 |

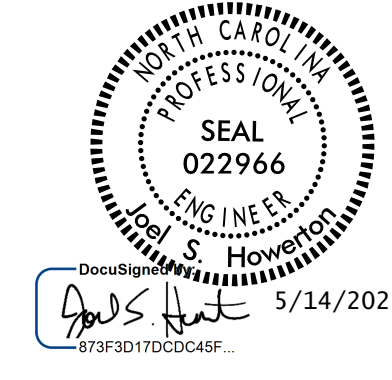
QUANTITY TO BE ADDED FOR EACH 2' INCREMENT INLET OPENING

| ADDITIONAL INLETS | 2'-0" | 4'-0" | 6'-0" | 8'-0" | 10'-0" | 12'-0" |
|-------------------------|-------|-------|-------|-------|--------|--------|
| CONCRETE CU. YDS. | 0.191 | 0.417 | 0.665 | 0.897 | 1.145 | 1.380 |
| CONCRETE APRON CU. YDS. | 0.074 | 0.148 | 0.222 | 0.296 | 0.370 | 0.444 |

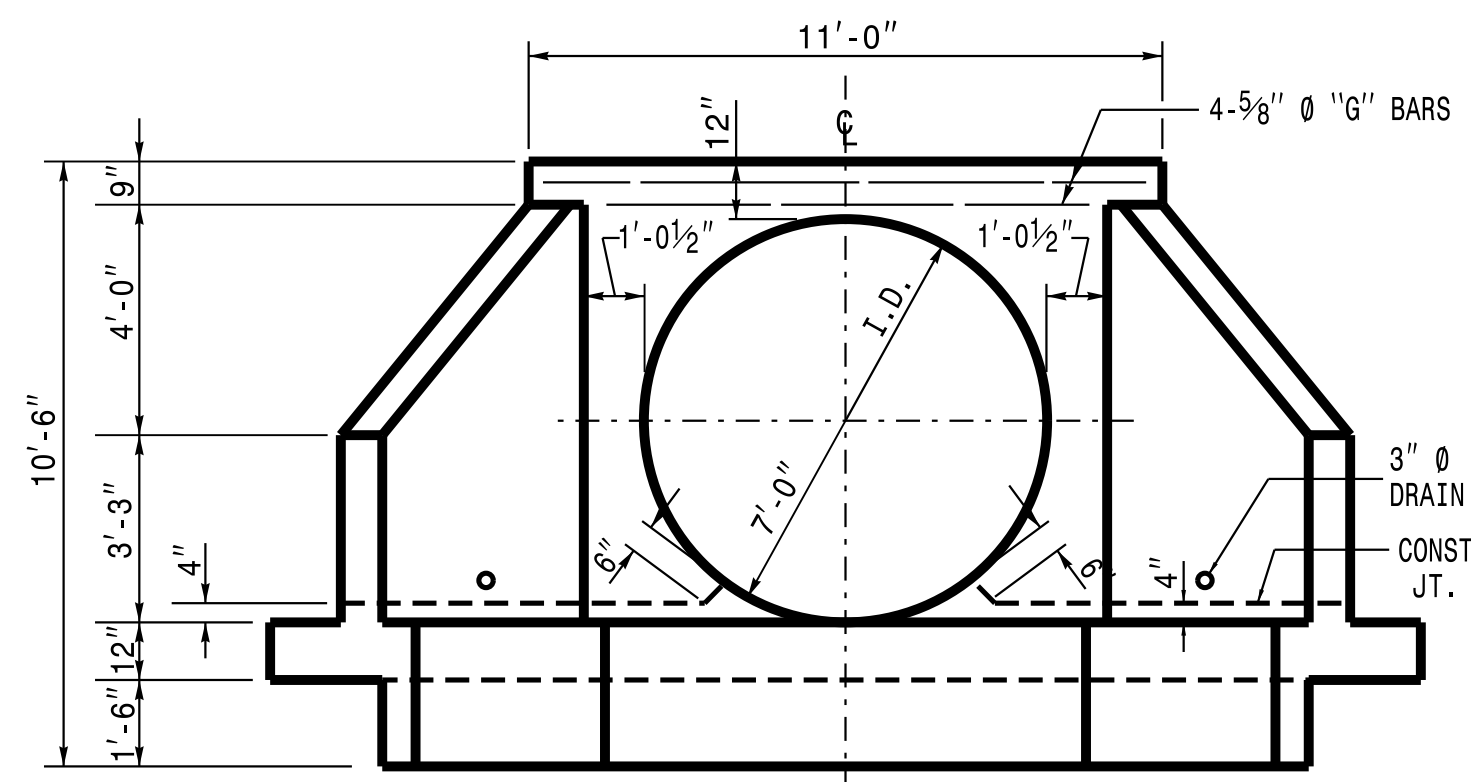
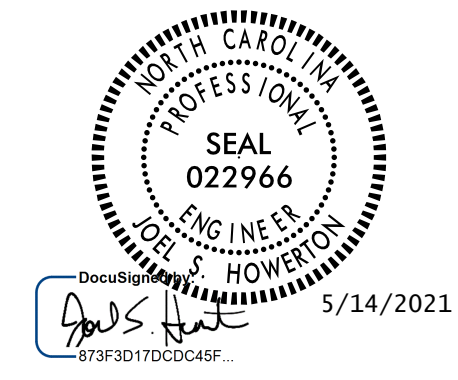
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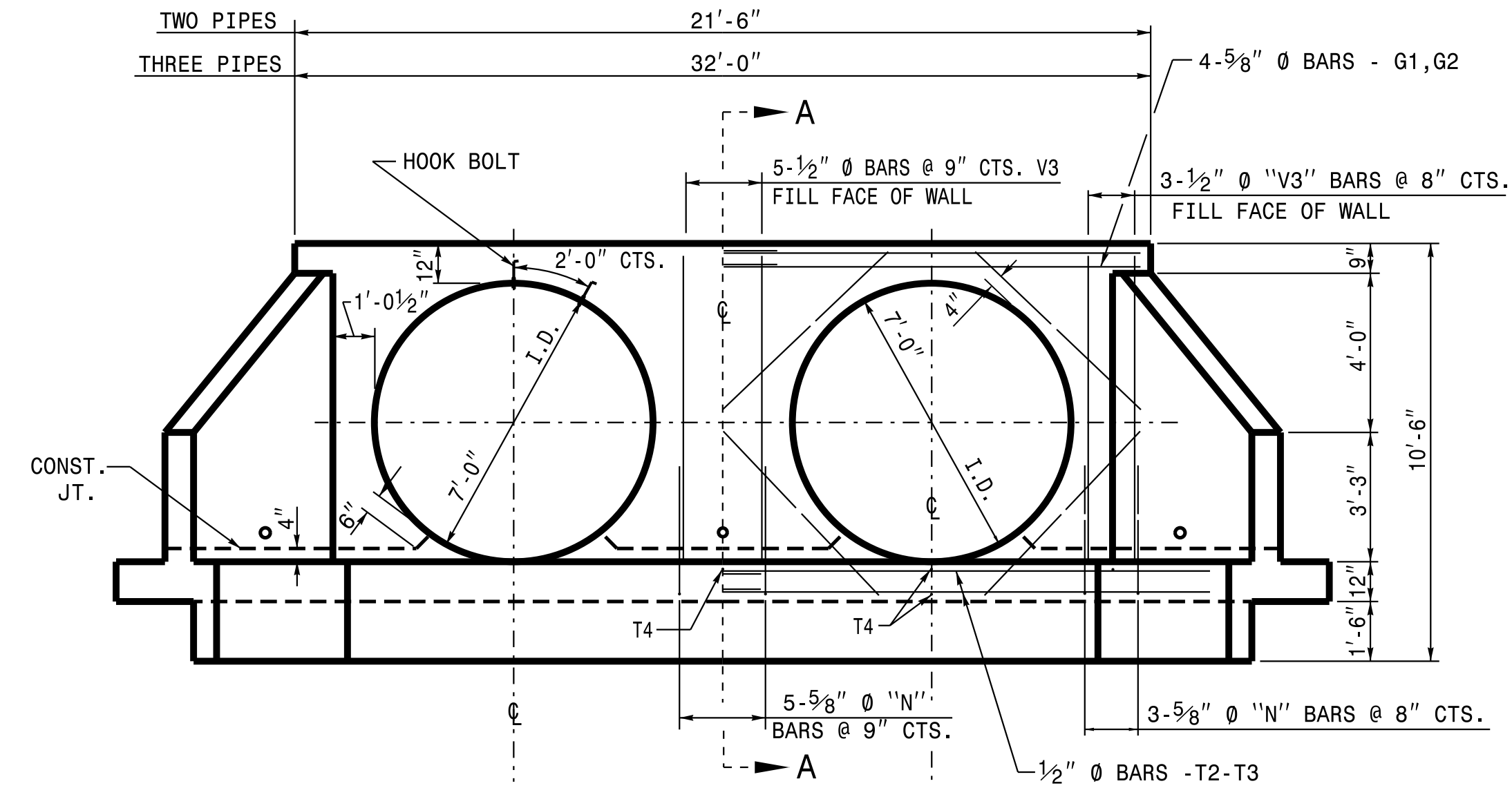
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 MODIFIED BY: K.A. KEMPF DATE: 07-06-09
 CHECKED BY: _____ DATE: _____
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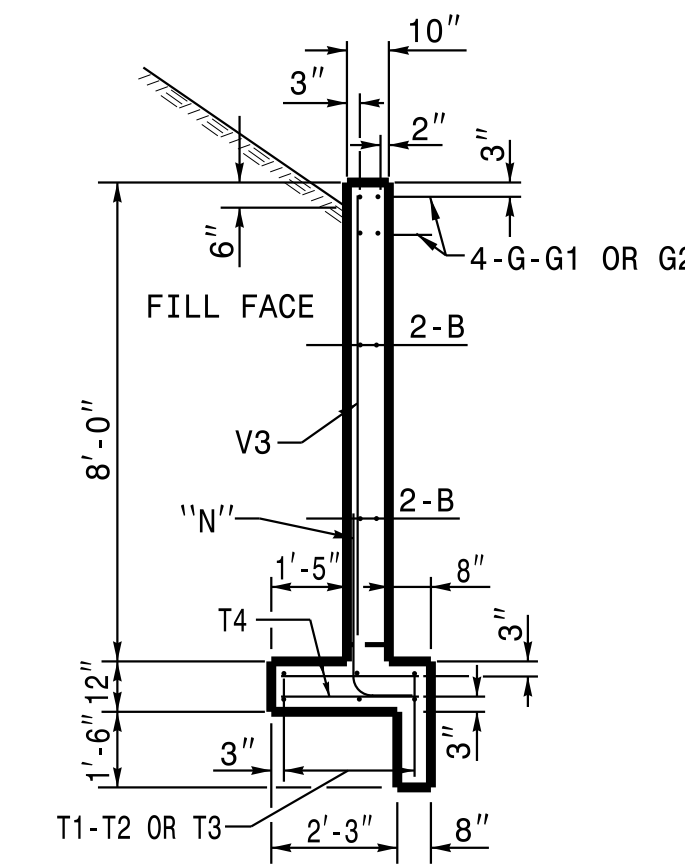
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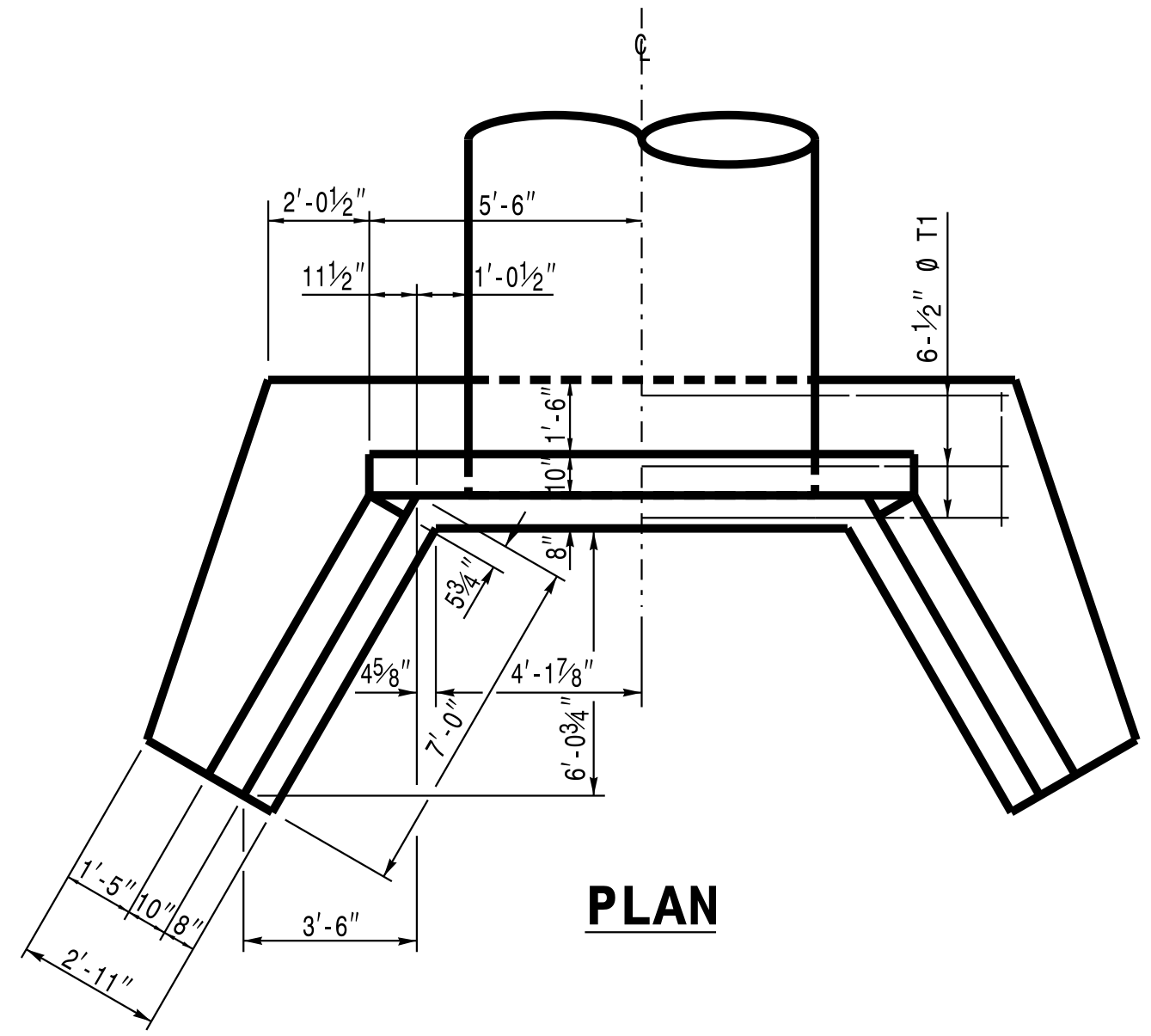
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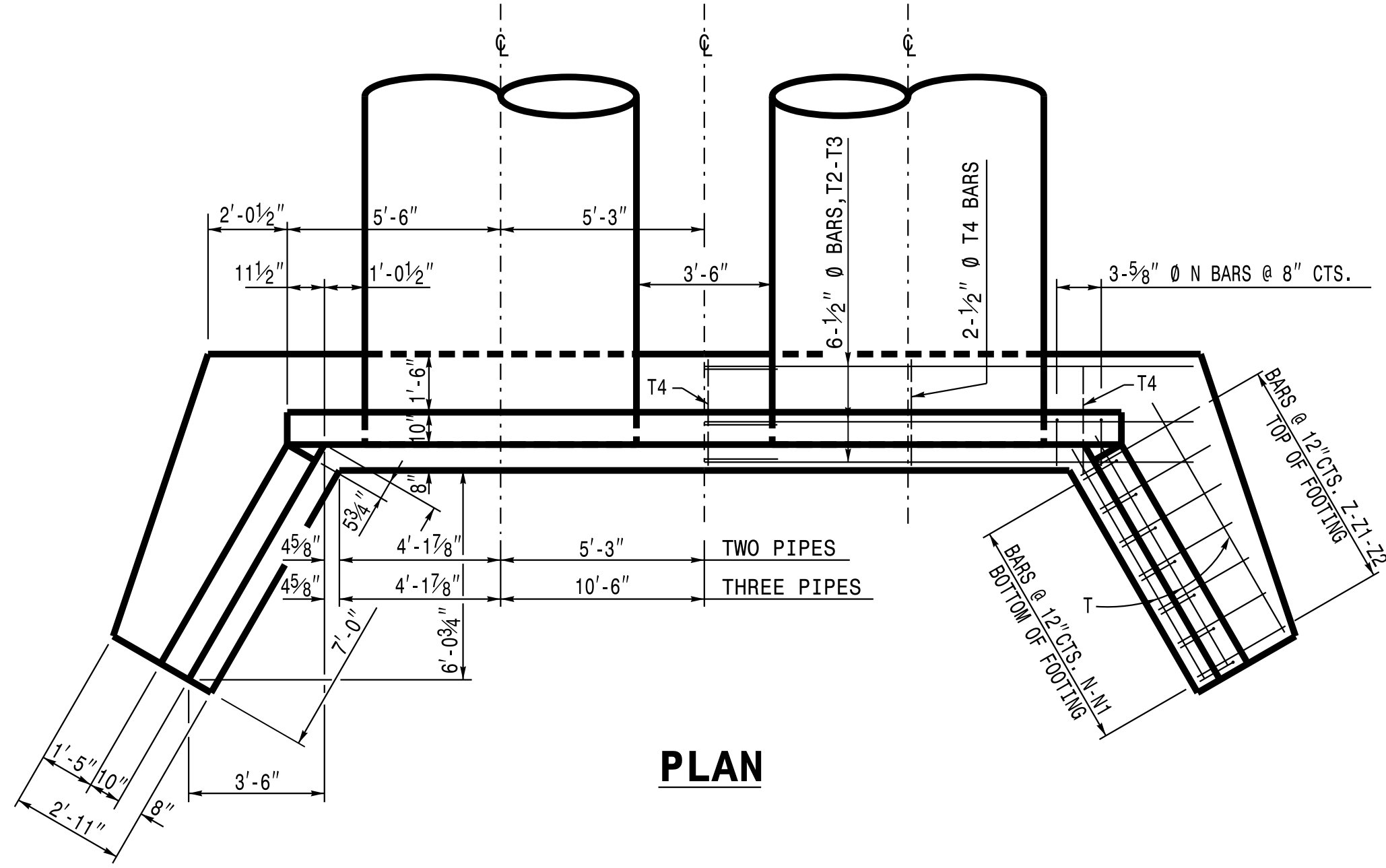
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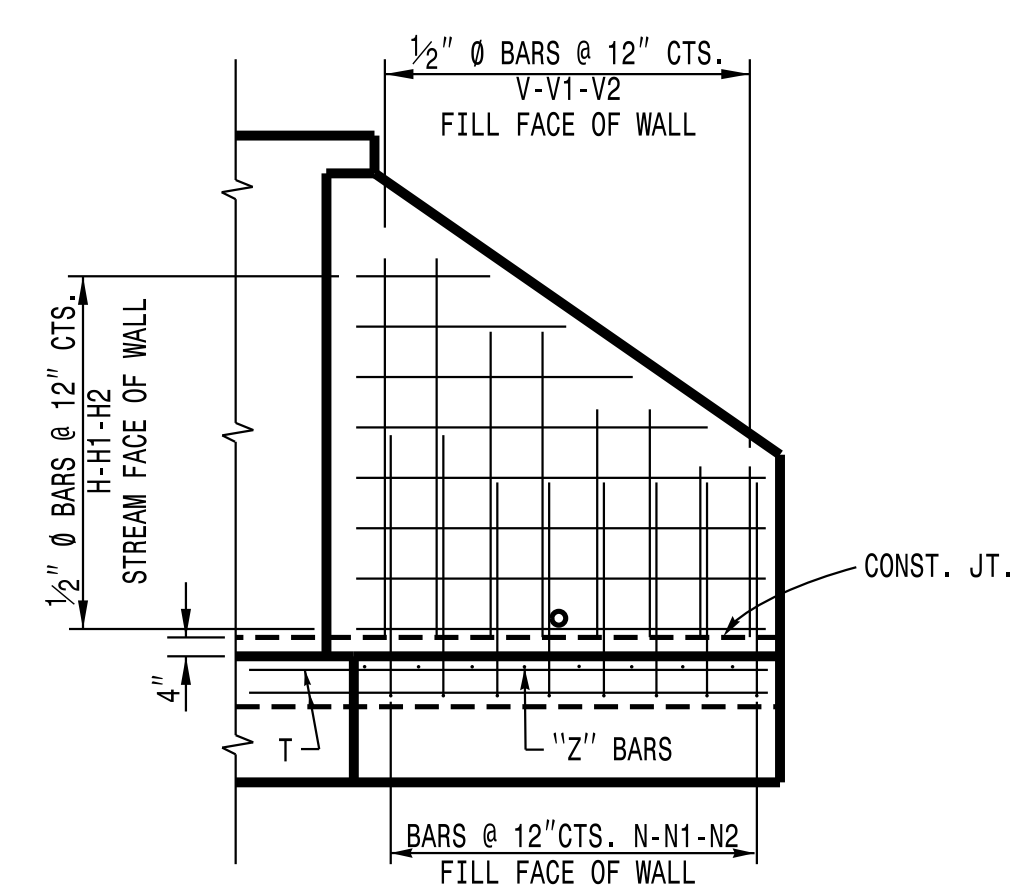
**SECTION A-A
FOR ALL ENDWALLS**



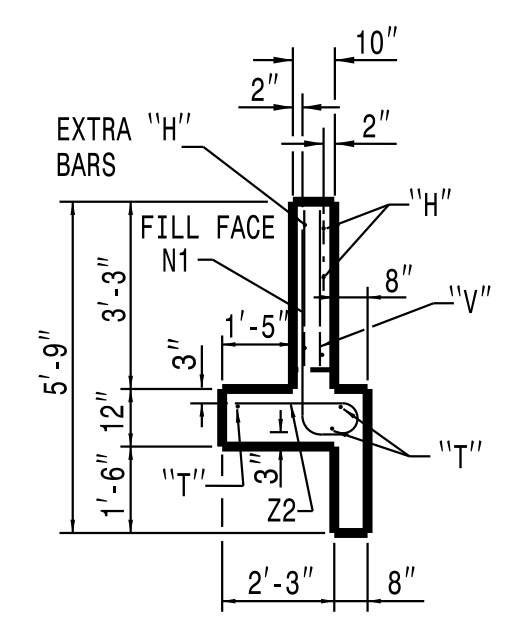
PLAN



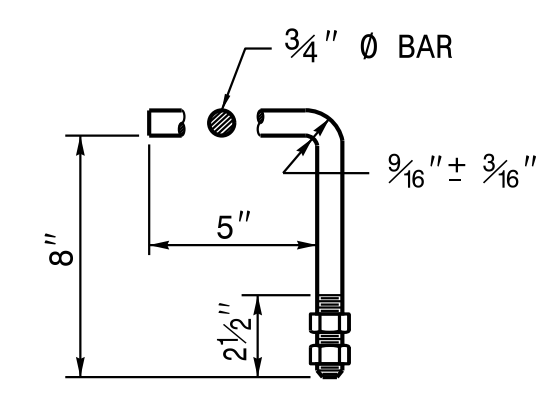
PLAN



**ELEVATION OF WING
SHOWING REINFORCEMENT**

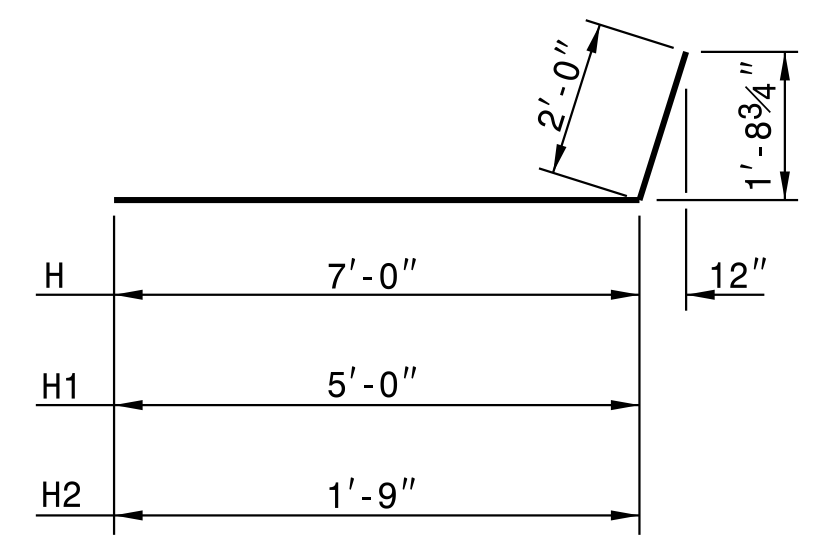


END OF WING

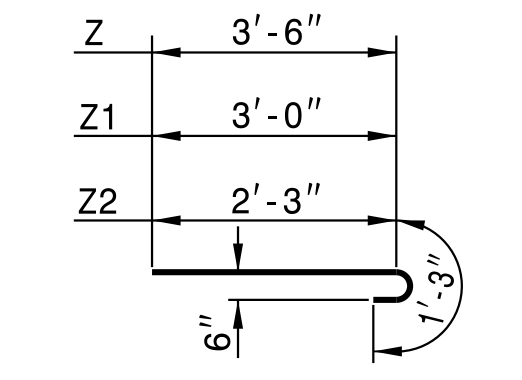


HOOK BOLT

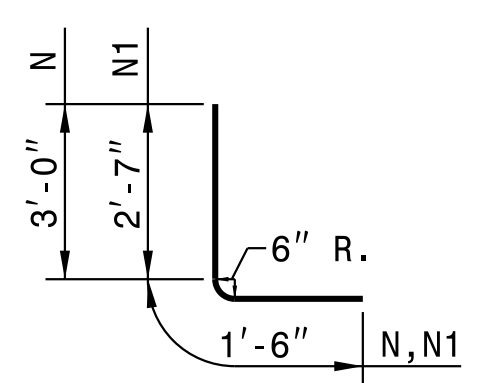
HOOK BOLTS (ANCHORS SHALL BE CONSTRUCTED AT 2'-0" CTS. ALONG THE CIRCUMFERENCE OF THE 7'-0" CSPA. THE HOOK BOLTS SHALL BE EMBEDDED IN THE CONCRETE ENDWALL 8" IN DEPTH. THE GALVANIZED 3/4" DIA. HOOK BOLTS MUST MEET ASTM A-307 OR ASTM A-836. BOTH BOLTS AND NUTS MUST BE IN ACCORDANCE WITH ASTM A-153 FOR GALVANIZING.



BARS H-H1-H2



BARS Z-Z1-Z2



BARS N-N1

NOTES:

- ALL CONCRETE TO BE CLASS "A".
- ALL REINFORCING STEEL SHALL BE ASTM A615-GRADE 60.
- ALL REINFORCING STEEL SHALL BE DEFORMED BARS. WHERE SPLICING OF REINFORCEMENT IS NECESSARY, BARS ARE TO BE LAPPED 45 DIAMETERS. ALL DIMENSIONS RELATIVE TO REINFORCEMENT ARE TO CENTERS OF BARS.
- THE FOOTING, CURTAIN WALL AND 4" OF WALL ARE TO BE POURED IN ONE OPERATION ALLOWING NO TIME FOR INITIAL SET TO TAKE PLACE BETWEEN THEM. THE REMAINING WALL SHALL THEN BE POURED IN ONE OPERATION.
- ALL EXPOSED CORNERS ARE TO BE CHAMFERED 1".
- 3" DIAMETER DRAINS SHALL BE PLACED IN WALL AS SHOWN AND BE 6" ABOVE NORMAL FLOW LINE.
- ALL MATERIAL AND WORKMANSHIP AS PER N.C. DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

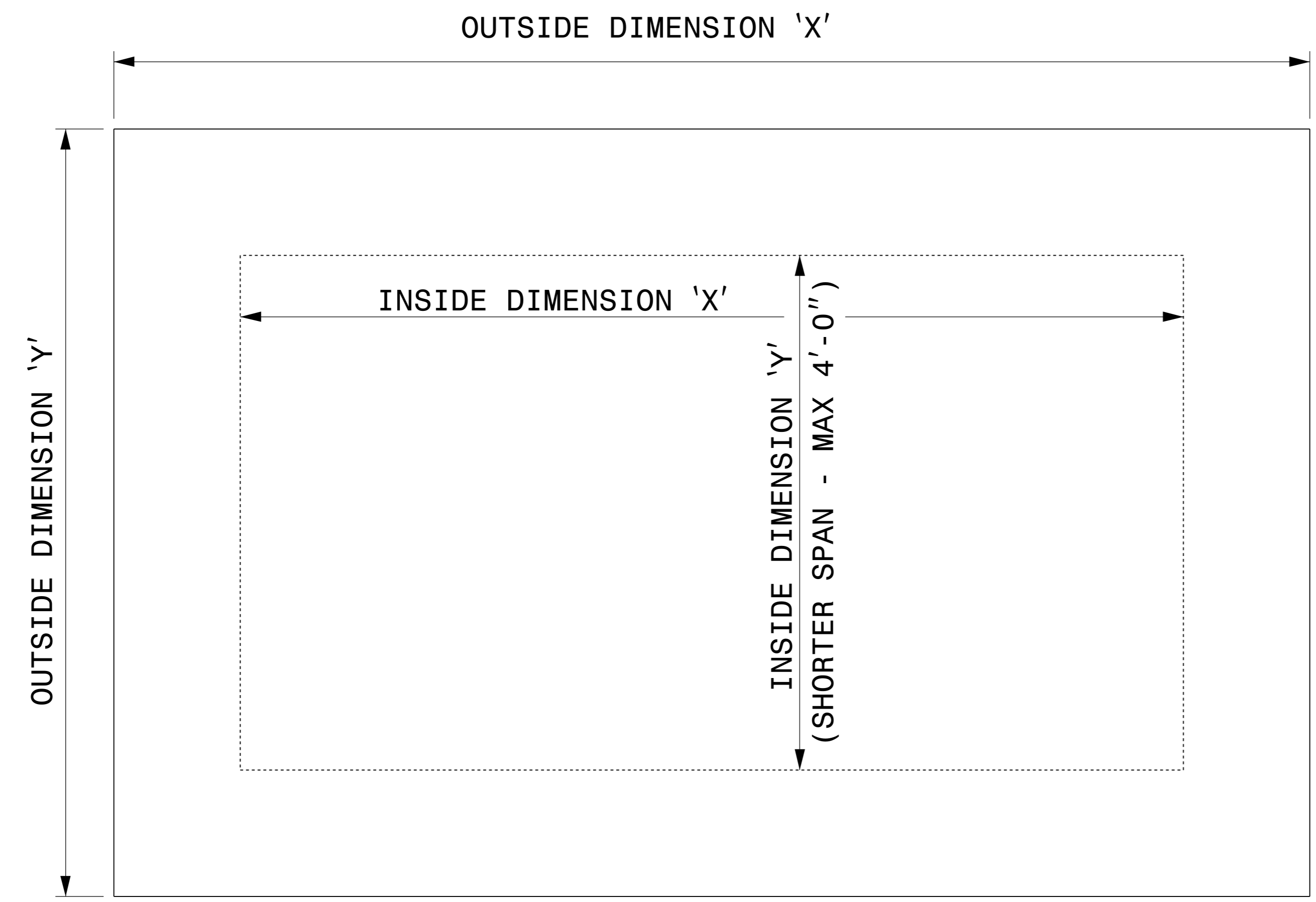
BILL OF MATERIAL FOR ONE ENDWALL

| REINFORCING STEEL | | 1 PIPE | 2 PIPES | 3 PIPES | | | | |
|----------------------------|------|--------|---------|---------|-----|--------|-----|--------|
| BAR | SIZE | LENGTH | NO. | WEIGHT | NO. | WEIGHT | NO. | WEIGHT |
| B | #4 | 6'-0" | 8 | 32 | 16 | 64 | 24 | 96 |
| G | #5 | 10'-9" | 4 | 45 | - | - | - | - |
| G1 | #5 | 11'-9" | - | - | 8 | 98 | - | - |
| G2 | #5 | 17'-0" | - | - | - | - | 8 | 142 |
| H | #4 | 9'-0" | 10 | 60 | 10 | 60 | 10 | 60 |
| H1 | #4 | 7'-0" | 6 | 28 | 6 | 28 | 6 | 28 |
| H2 | #4 | 3'-9" | 4 | 10 | 4 | 10 | 4 | 10 |
| N | #5 | 4'-6" | 10 | 47 | 15 | 70 | 20 | 94 |
| N1 | #4 | 4'-1" | 10 | 27 | 10 | 27 | 10 | 27 |
| T | #4 | 6'-6" | 6 | 26 | 6 | 26 | 6 | 26 |
| T1 | #4 | 15'-0" | 6 | 60 | - | - | - | - |
| T2 | #4 | 13'-9" | - | - | 12 | 110 | - | - |
| T3 | #4 | 19'-0" | - | - | - | - | 12 | 152 |
| T4 | #4 | 2'-9" | 4 | 7 | 7 | 13 | 10 | 18 |
| V | #4 | 5'-9" | 6 | 23 | 6 | 23 | 6 | 23 |
| V1 | #4 | 4'-6" | 6 | 18 | 6 | 18 | 6 | 18 |
| V2 | #4 | 2'-9" | 8 | 15 | 8 | 15 | 8 | 15 |
| V3 | #4 | 7'-6" | 6 | 30 | 11 | 55 | 16 | 80 |
| Z | #5 | 4'-9" | 4 | 20 | 4 | 20 | 4 | 20 |
| Z1 | #4 | 4'-3" | 4 | 11 | 4 | 11 | 4 | 11 |
| Z2 | #4 | 3'-6" | 6 | 14 | 6 | 14 | 6 | 14 |
| TOTAL REINF. STEEL (lbs.) | | | | 473 | | 662 | | 834 |
| CLASS "A" CONC. (cu. yds.) | | | | 7.9 | | 10.8 | | 13.8 |

**CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN**
Office 919-250-4128 FAX 919-250-4119

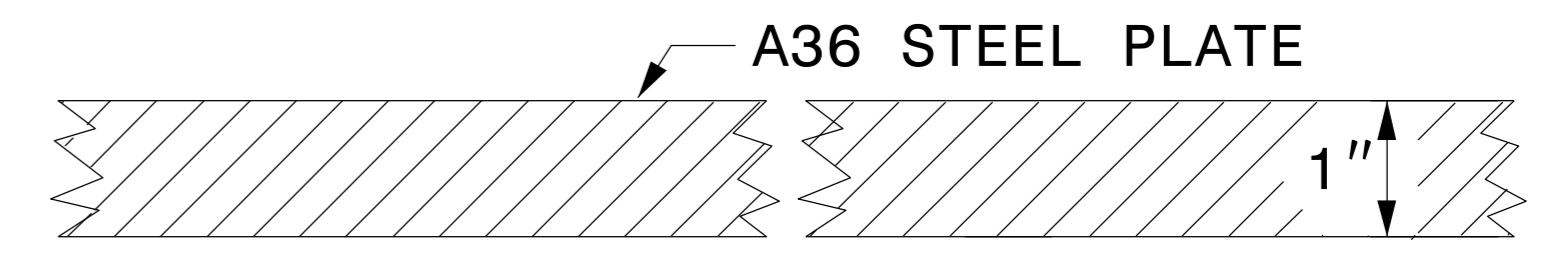
**DETAIL OF REINFORCED
CONCRETE ENDWALL FOR
84" DIAMETER PIPE - 90° SKEW**

ORIGINAL BY: R.S.WICKER DATE: 6-46
MODIFIED BY: R.E.D.&T.S.S. DATE: 6-96 & 5-00
CHECKED BY: DATE:
FILE SPEC.: details/nbritt/english/hydro/84_endwall_90sk.dgn



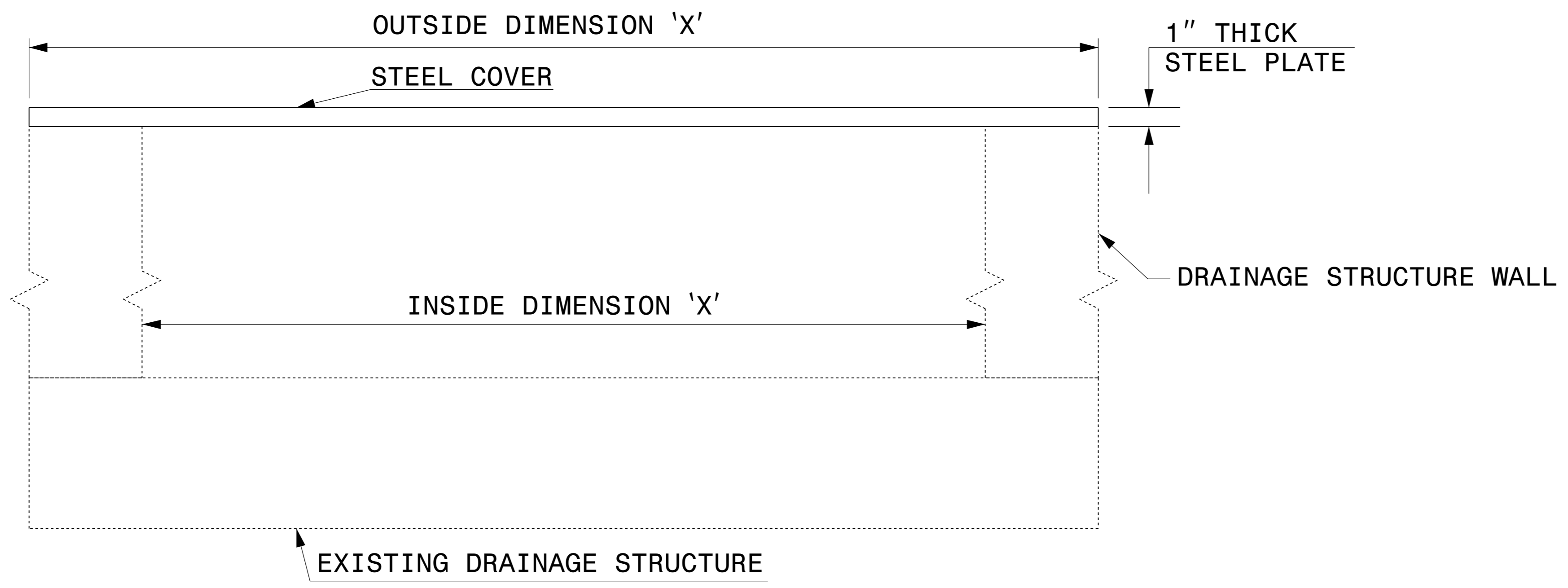
GENERAL NOTES:

- USE GRADE A36 STEEL
- STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
- FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.
- SEE ROADWAY PLANS AND PROVISIONS FOR LOCATIONS
- QUANTITIES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.

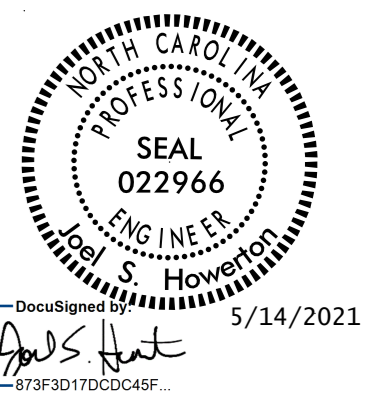


SECTION VIEW OF STEEL TOP PLATE

PLAN VIEWS



ELEVATION VIEWS



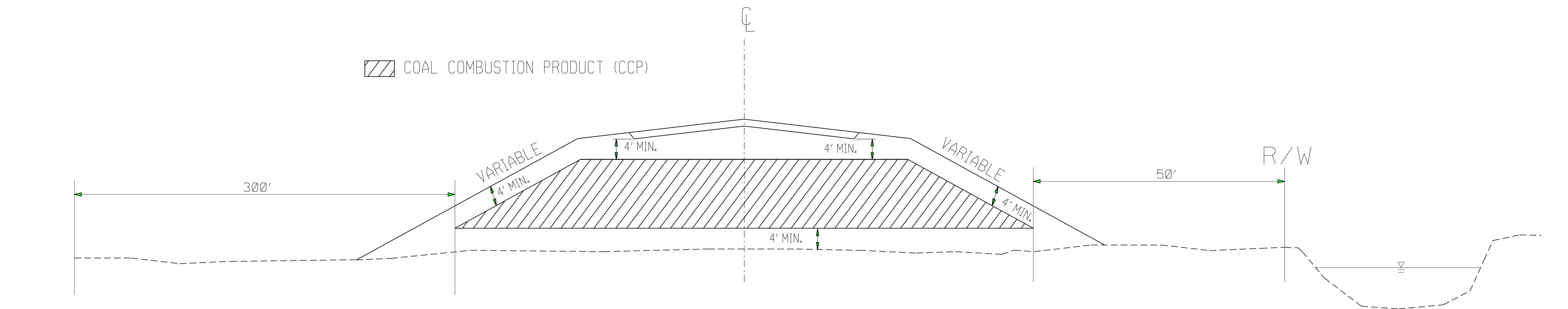
DocuSigned by: Eric S. Howerton 5/14/2021

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| | |
|---|------------------|
| CONTRACT STANDARDS AND DEVELOPMENT UNIT | |
| Office 919-707-6950 | FAX 919-250-4119 |
| DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE | |
| ORIGINAL BY: E.E. WARD | DATE: 2-2-98 |
| MODIFIED BY: | DATE: |
| CHECKED BY: | DATE: |
| FILE SPEC.: eric/usr/details/metric/stand/st1cvr2.dgn | |

\$\$\$\$\$ USERNAME\$\$\$\$\$

COAL COMBUSTION PRODUCT PLACEMENT



PRIVATE DWELLING OR WELL

PERENNIAL STREAM, OTHER SURFACE WATER BODY OR *WETLAND

*(OBTAIN PERMISSION FROM ARMY CORPS OF ENGINEERS)

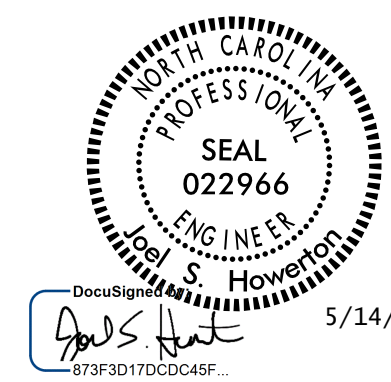
PLACE CCP IN HATCHED AREA IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS

PLACE CCP A MINIMUM OF 5' ABOVE SEASONAL HIGH GROUND WATER

PLACE AT LOCATIONS AS APPROVED BY THE ENGINEER

PLACE SOIL BORROW MATERIAL ON THE OUTSIDE OF CCP AS EACH LIFT OF CCP IS PLACED

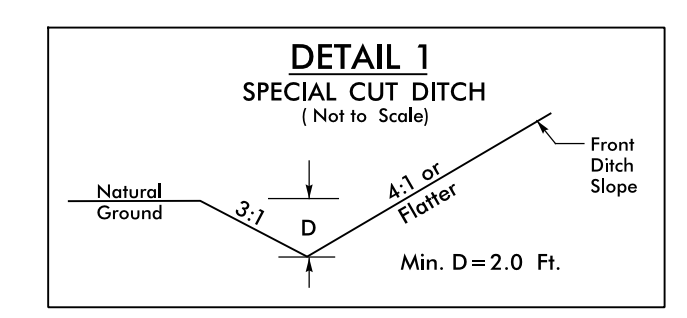
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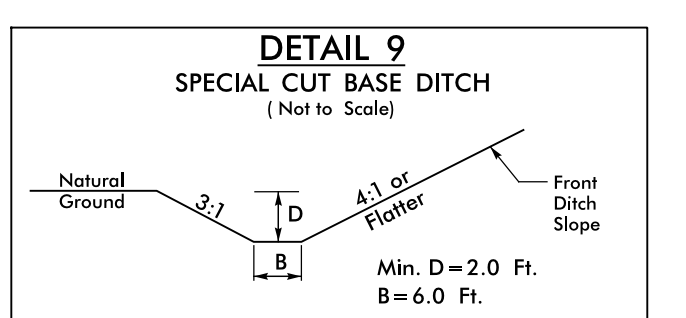
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|--|---------------|
| CONTRACT STANDARDS AND DEVELOPMENT UNIT | |
| Office 919-707-6950 FAX 919-250-4119 | |
| COAL COMBUSTION PRODUCT PLACEMENT DETAIL | |
| ORIGINAL BY: J.S.H. | DATE: 3/16/15 |
| MODIFIED BY: | DATE: |
| CHECKED BY: | DATE: |
| FILE SPEC.: joel/coal combustion material detail.dgn | |

07-SEP-2017 08:21 S:\Contracts\Projects\Special Details\Howerton\Coal Combustion Product Detail.dgn Howerton AT USD-232595

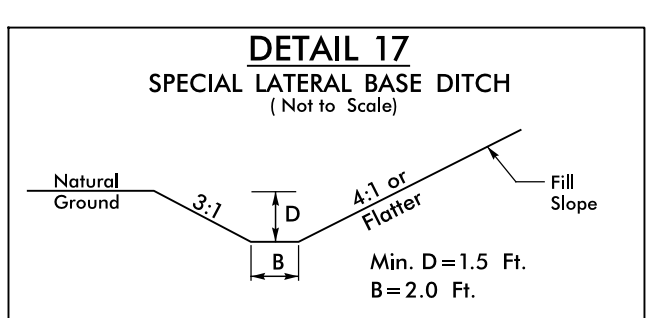
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| PROJECT REFERENCE NO. 1-5878 | SHEET NO. 2D-2 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER SEAL 027373 | HYDRAULICS ENGINEER SEAL 26971 |
| DocuSign Susan C Lancaster 4/26/2022 | DocuSign Joshua G Dalton 4/26/2022 |
| DO NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Michael Baker Engineering, Inc. 6000 Gregory Drive Suite 500 Cary, NC 27518 Tel: 919.241.1100 Fax: 919.241.1101 www.mbakeng.com | SUNGATE DESIGN GROUP, P.A. 100 ZION PARKWAY, SUITE 100 RALEIGH, NORTH CAROLINA 27605 Tel: 919.876.1000 Fax: 919.876.1001 www.sungate.com |



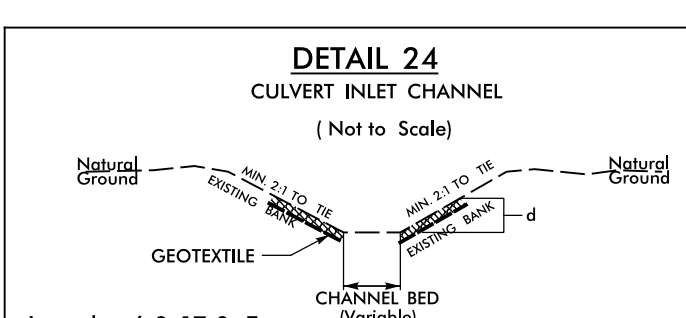
FROM STA. 967+00 TO STA. 969+00 -L- RT
FROM STA. 15+54 TO STA. 18+71 -NBCD- RT
FROM STA. 10+50 TO STA. 12+00 -SR11- LT
FROM STA. 12+00 TO STA. 18+00 -SR12- LT
FROM STA. 10+51.47 TO STA. 12+51.47 -SR13- LT
FROM STA. 15+01.47 TO STA. 16+01.47 -SR13- LT
FROM STA. 14+78 TO STA. 17+39 -SR18- LT
FROM STA. 17+88 TO STA. 19+42.5 -SR18- LT
FROM STA. 21+71.7 TO STA. 22+16 -SR18- LT
FROM STA. 23+30 TO STA. 23+73 -SR18- LT
FROM STA. 24+75 TO STA. 25+00 -SR18- RT
FROM STA. 16+71 TO STA. 20+50 -Y15RPD- RT
FROM STA. 16+76 TO STA. 23+00 -Y15RPD- LT



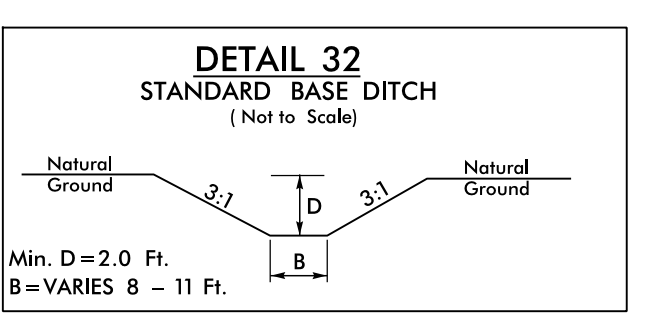
FROM STA. 1036+50 TO STA. 1037+00 -L- RT



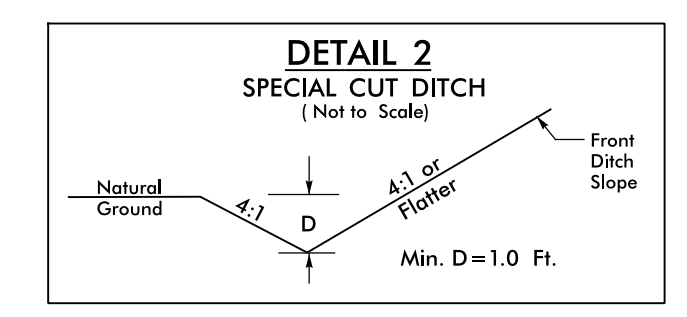
FROM STA. 74+43 TO STA. 75+55 -SR9- LT
FROM STA. 20+05 TO STA. 25+50 -SR9A- LT
FROM STA. 12+50 TO STA. 18+00 -SR12- LT
FROM STA. 40+80 TO STA. 44+00 -Y14- LT
FROM STA. 43+10 TO STA. 44+50 -Y15- RT
FROM STA. 46+00 TO STA. 46+65 -Y15- RT



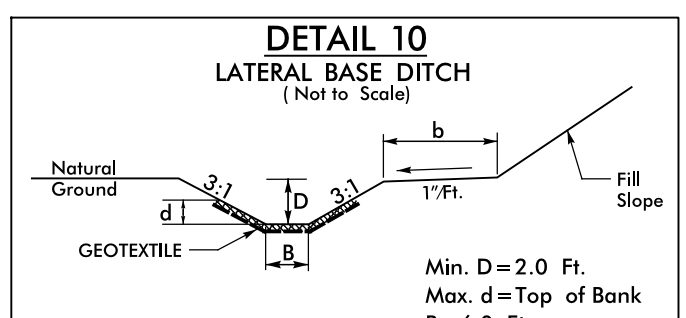
FROM STA. 1042+43 TO STA. 1042+52 -L- LT
FROM STA. 1042+79 TO STA. 1042+96 -L- LT



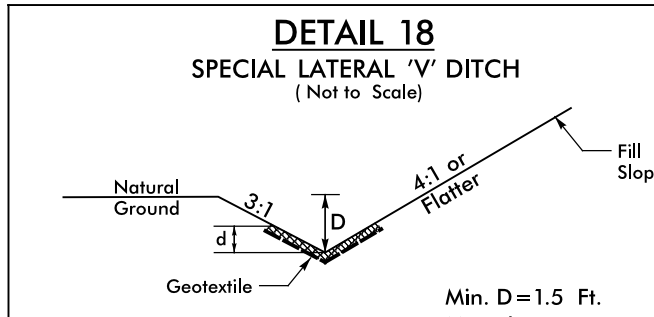
FROM STA. 973+67 TO STA. 973+73 -L- RT



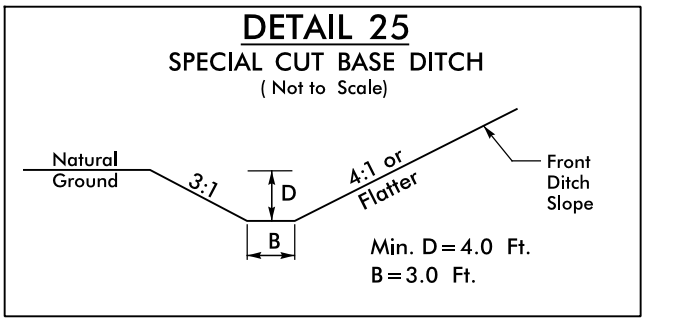
FROM STA. 18+00 TO STA. 19+50 -Y15RPA- RT
FROM STA. 10+50 TO STA. 12+00 -DR10- LT
FROM STA. 10+50 TO STA. 12+00 -DR10- RT
FROM STA. 964+00 TO STA. 966+68 -L- RT



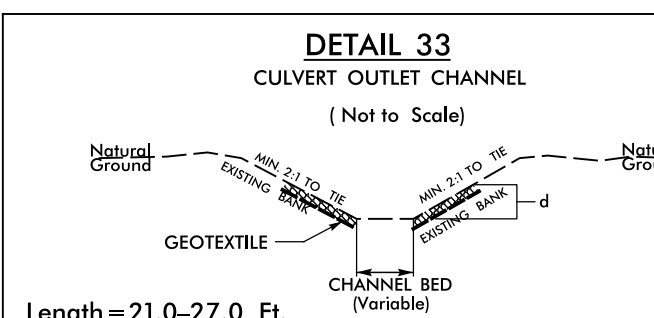
FROM STA. 1037+00 TO STA. 1038+81 -L- RT



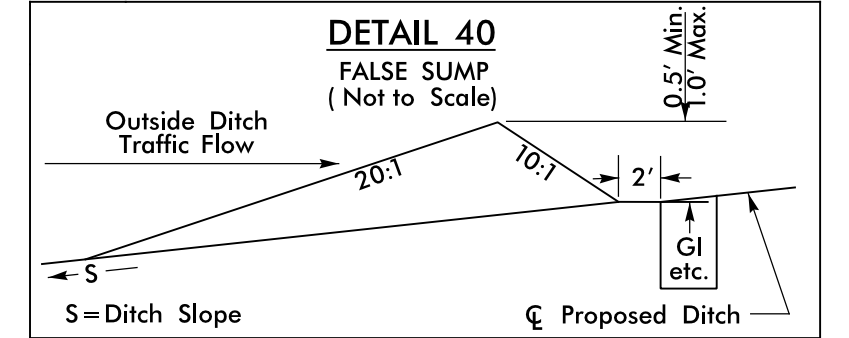
FROM STA. 45+00 TO STA. 46+50 -Y15- LT



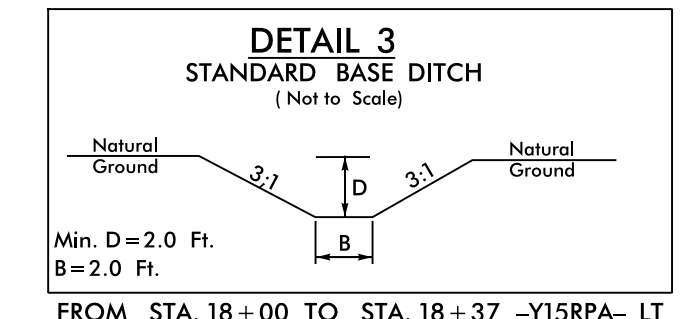
FROM STA. 31+00 TO STA. 32+60 -Y15- LT



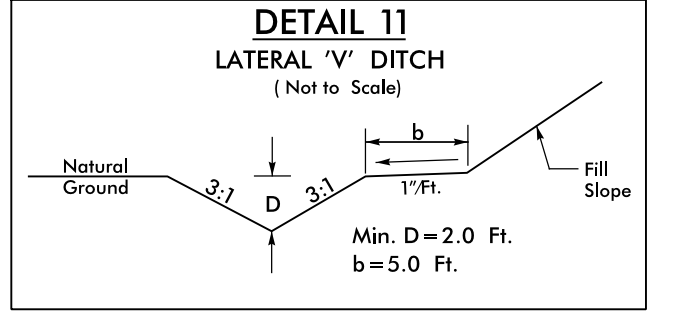
FROM STA. 1041+18 TO STA. 1041+40 -L- RT
FROM STA. 1041+59 TO STA. 1041+75 -L- RT



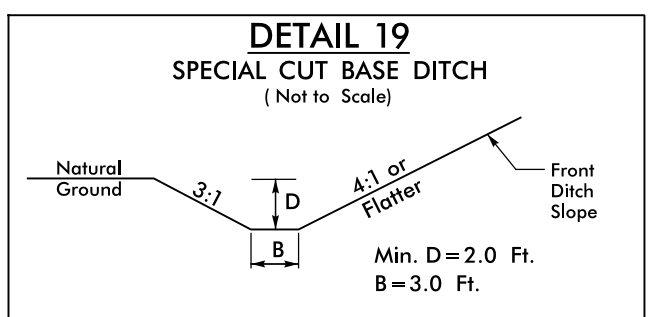
FROM STA. 943+50 -L- RT
FROM STA. 959+15 -L- LT
FROM STA. 1045+83 -L- RT
FROM STA. 1053+99 -L- RT



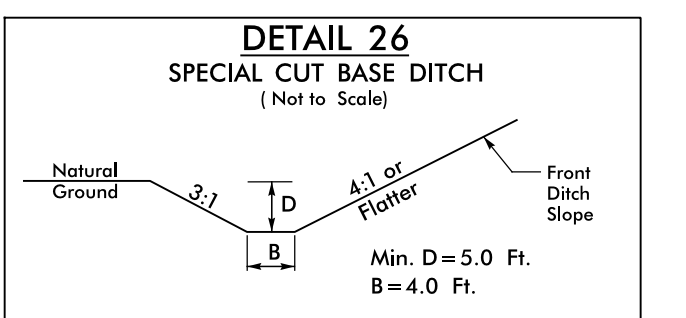
FROM STA. 18+00 TO STA. 18+37 -Y15RPA- LT
FROM STA. 998+76 TO STA. 999+43 -LREV- LT
FROM STA. 999+43 TO STA. 1002+48 -LREV- RT
FROM STA. 1007+91 TO STA. 1008+00 -LREV- RT



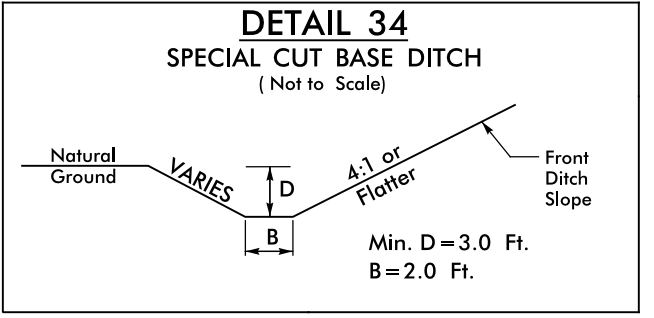
FROM STA. 12+51.47 TO STA. 15+01.47 -SR13- LT



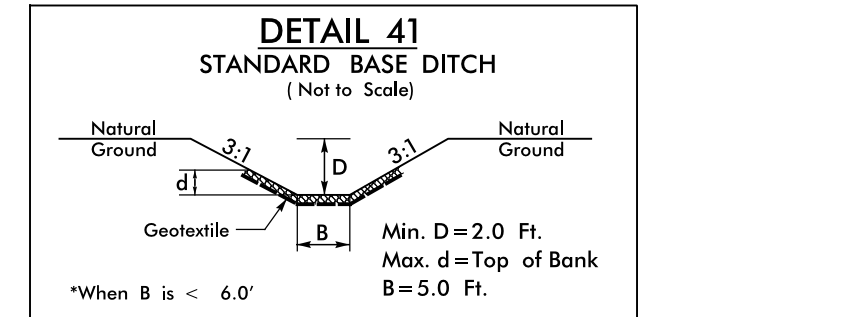
FROM STA. 1032+00 TO STA. 1036+50 -L- RT



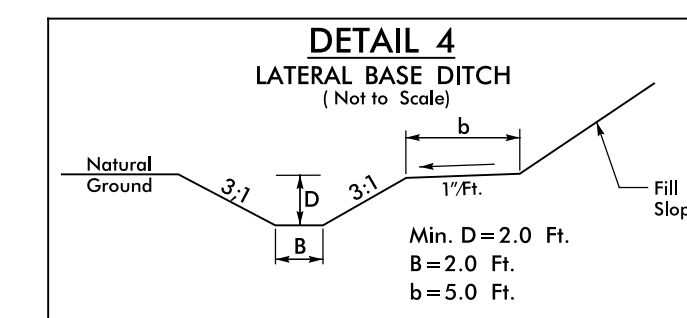
FROM STA. 38+60 TO STA. 39+95 -Y15- LT



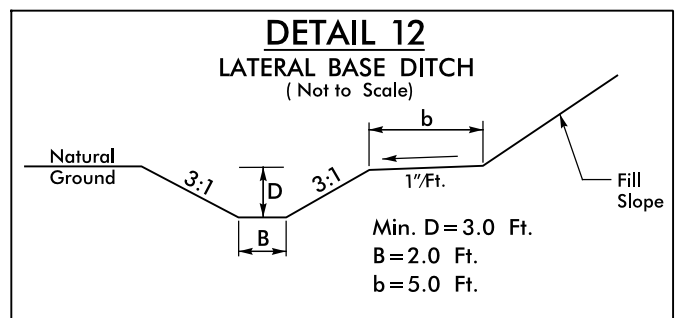
FROM STA. 973+76 TO STA. 980+50 -L- RT
FROM STA. 981+00 TO STA. 988+00 -LREV- RT



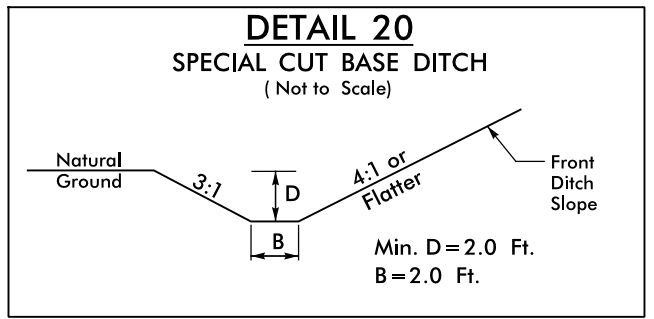
FROM STA. 1041+00 TO STA. 1041+15 -L- RT



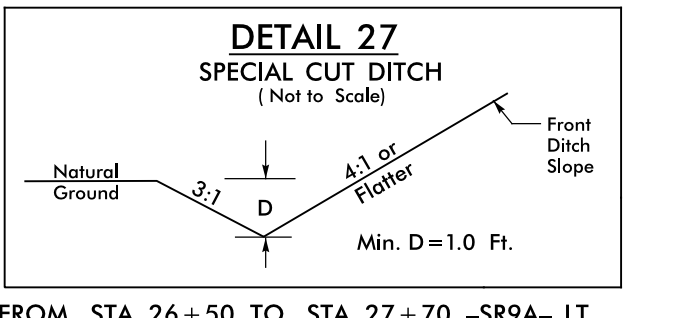
FROM STA. 20+25 TO STA. 21+82 -Y14- LT
FROM STA. 19+00 TO STA. 21+80 -Y14RPB- LT
FROM STA. 23+50 TO STA. 27+00 -Y15RPD- LT



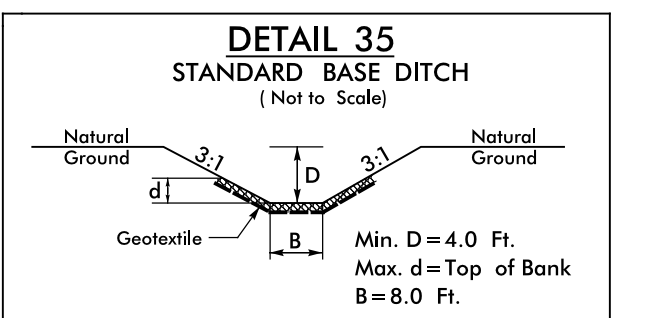
FROM STA. 994+12 TO STA. 1001+09 -LREV- RT



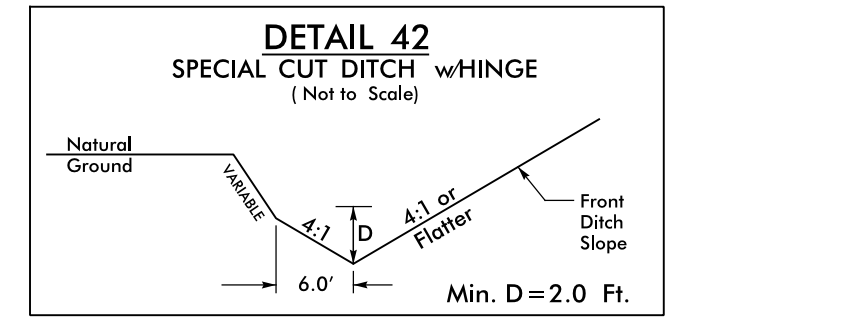
FROM STA. 1027+00 TO STA. 1032+00 -L- RT
FROM STA. 88+90 TO STA. 92+76 -SR9- LT
FROM STA. 15+48 TO STA. 19+00 -Y14RPB- LT
FROM STA. 14+37.85 TO STA. 21+75 -Y14RPC- RT
FROM STA. 10+80 TO STA. 10+89 -Y14SPB3- RT
FROM STA. 20+50 TO STA. 27+84 -Y15RPD- RT



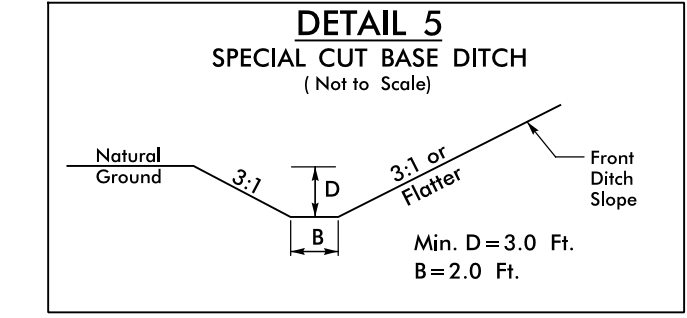
FROM STA. 26+50 TO STA. 27+70 -SR9A- LT



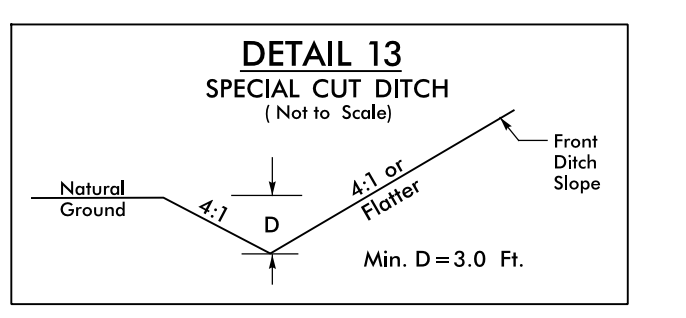
FROM STA. 15+44 TO STA. 15+49 -NBCD- RT



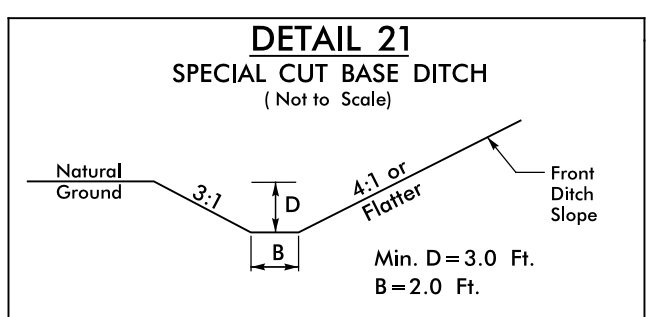
FROM STA. 35+00 TO STA. 38+50 -SBCD- LT



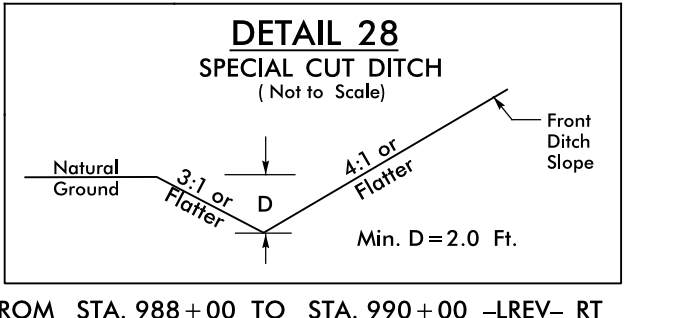
FROM STA. 1001+09 TO STA. 1001+41 -LREV- RT
FROM STA. 80+80 TO STA. 88+10 -SR9- LT
FROM STA. 19+01 TO STA. 29+97 -SR11- LT
FROM STA. 31+89 TO STA. 35+57 -SR11- LT
FROM STA. 35+84 TO STA. 35+99.12 -SR11- LT
FROM STA. 30+65 TO STA. 32+57 -Y15- RT
FROM STA. 33+88 TO STA. 35+50 -Y15- RT
FROM STA. 27+00 TO STA. 27+50 -Y15RPD- LT



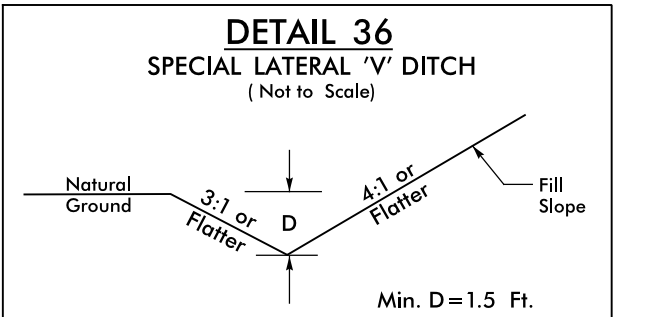
FROM STA. 40+66.5 TO STA. 42+24 -NBCD- LT
FROM STA. 40+66.5 TO STA. 42+25 -NBCD- RT



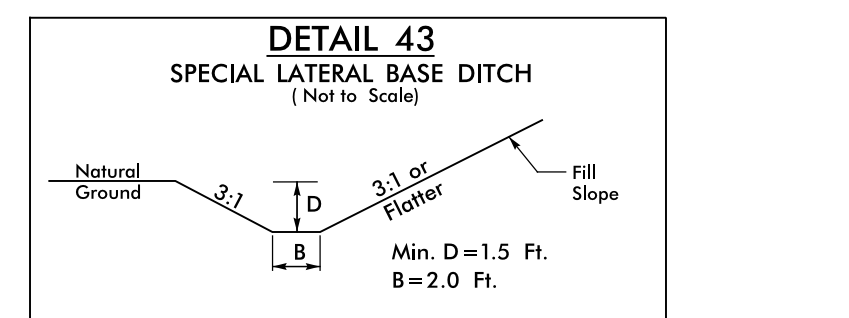
FROM STA. 14+20 TO STA. 17+93 -SBCD- LT
FROM STA. 24+00 TO STA. 24+63 -Y15- LT
FROM STA. 24+64 TO STA. 26+50 -Y15- RT



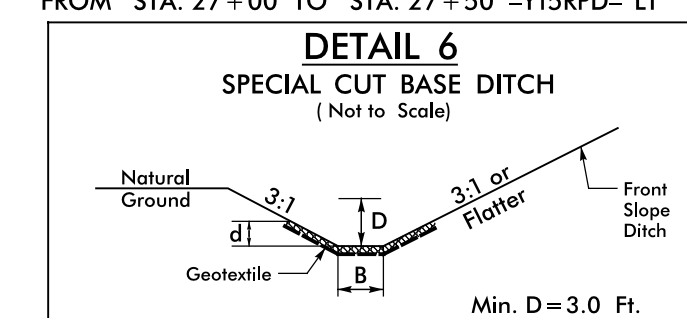
FROM STA. 988+00 TO STA. 990+00 -LREV- RT
FROM STA. 1060+00 TO STA. 1062+00 -L- RT



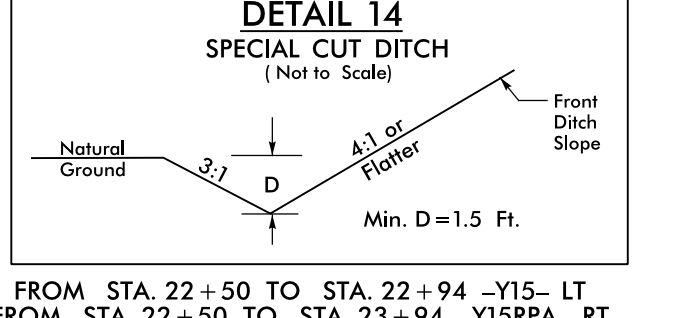
FROM STA. 946+18 TO STA. 947+55 -L- LT
FROM STA. 947+67 TO STA. 954+00 -L- LT



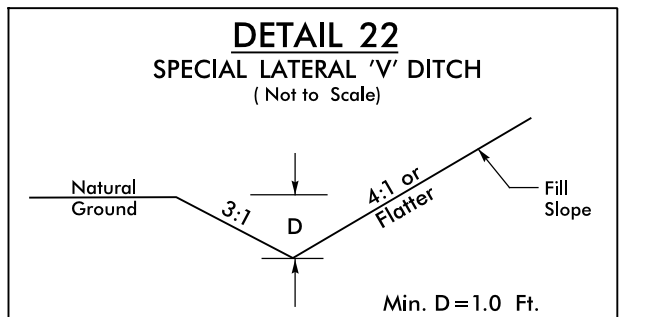
FROM STA. 73+93 TO STA. 74+43 -SR9- LT



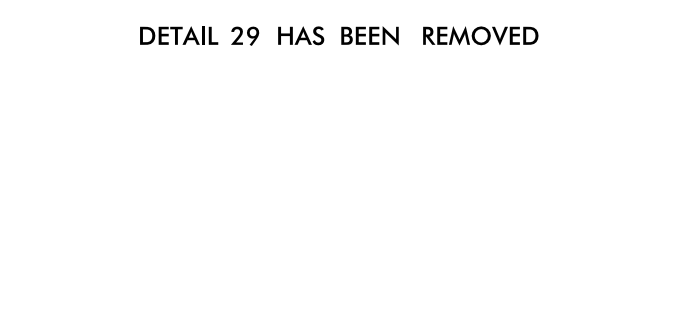
FROM STA. 29+97 TO STA. 31+28 -SR11- LT



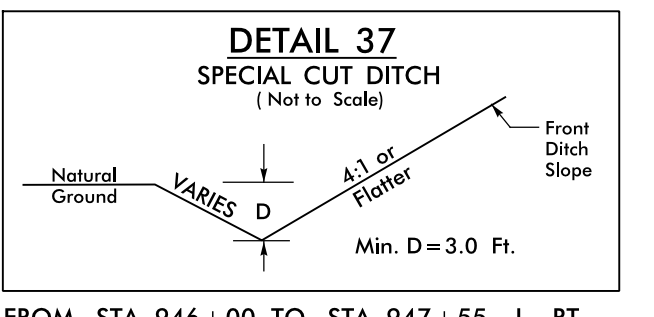
FROM STA. 22+50 TO STA. 22+94 -Y15- LT
FROM STA. 22+50 TO STA. 23+94 -Y15RPA- RT
FROM STA. 10+30 TO STA. 11+00 -SR9A- LT
FROM STA. 10+30 TO STA. 11+00 -SR9A- RT



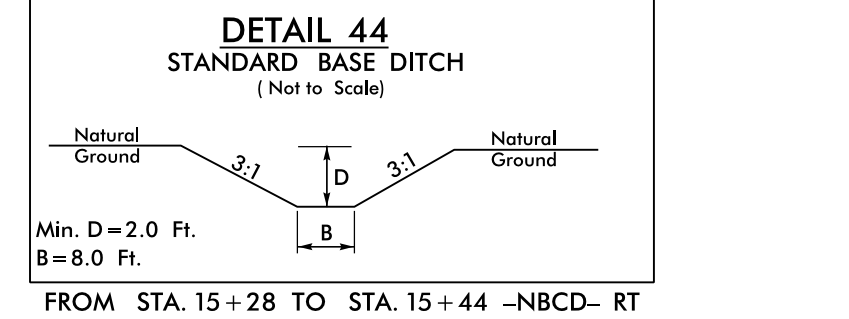
FROM STA. 16+00 TO STA. 22+81 -SR12- RT
FROM STA. 12+00 TO STA. 14+00 -DR1- LT



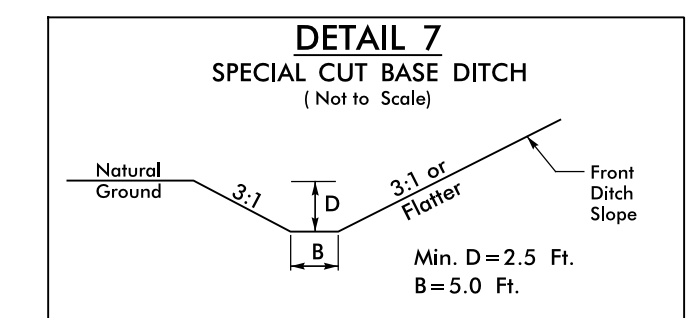
FROM STA. 967+00 TO STA. 970+00 -L- LT



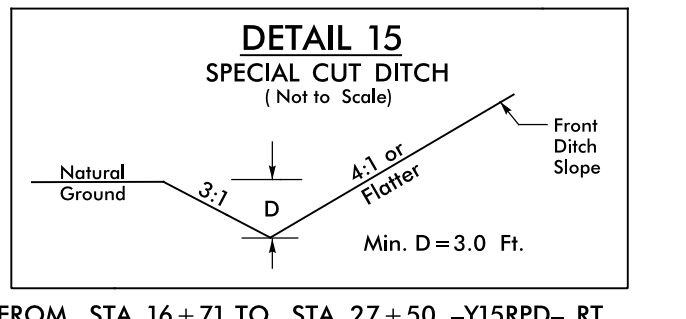
FROM STA. 946+00 TO STA. 947+55 -L- RT
FROM STA. 947+67 TO STA. 950+50 -L- RT



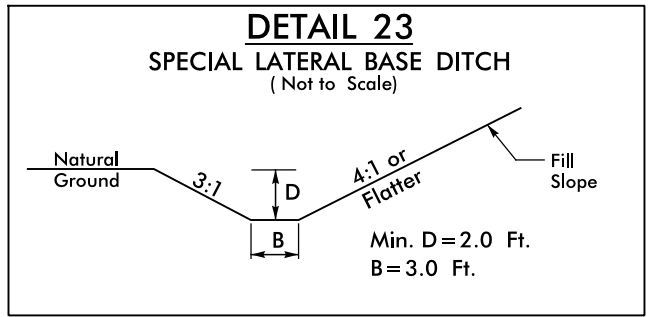
FROM STA. 15+28 TO STA. 15+44 -NBCD- RT



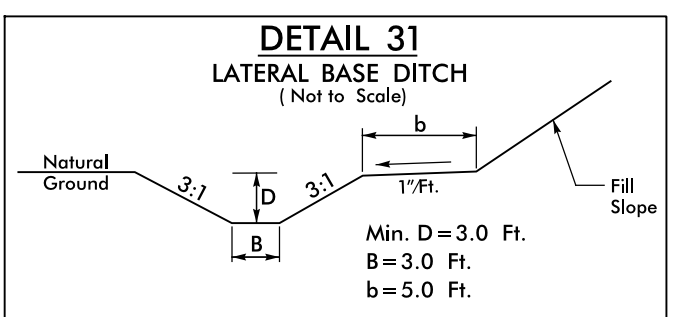
FROM STA. 1034+50 TO STA. 1038+00 -L- LT
FROM STA. 35+84 TO STA. 35+99.12 -SR11- LT



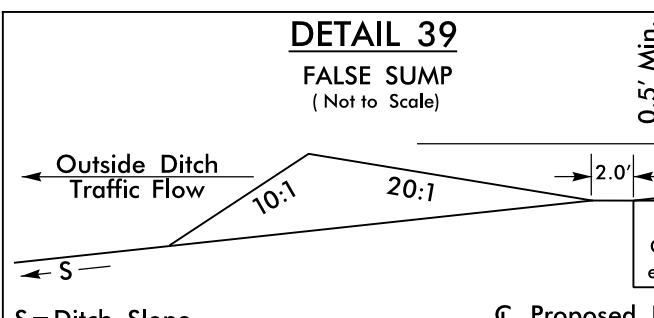
FROM STA. 16+71 TO STA. 27+50 -Y15RPD- RT
FROM STA. 38+50 TO STA. 40+51 -SBCD- RT



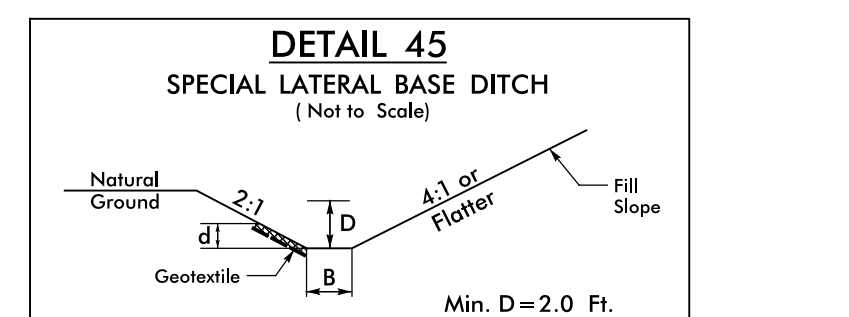
FROM STA. 18+00 TO STA. 19+50 -SR12- LT



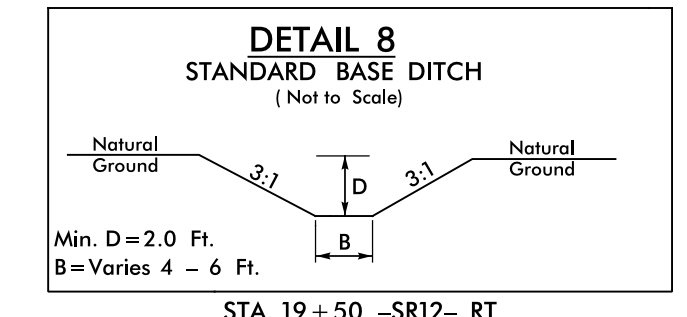
FROM STA. 11+10 TO STA. 15+41 -NBCD- RT
FROM STA. 11+37 TO STA. 14+20 -SBCD- LT
FROM STA. 31+00 TO STA. 31+72 -Y14- LT
FROM STA. 11+35 TO STA. 11+63 -Y14RAB- RT



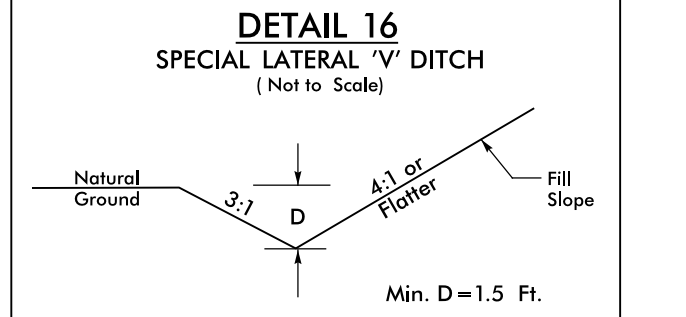
FROM STA. 75+55 TO STA. 76+83 -SR9- LT



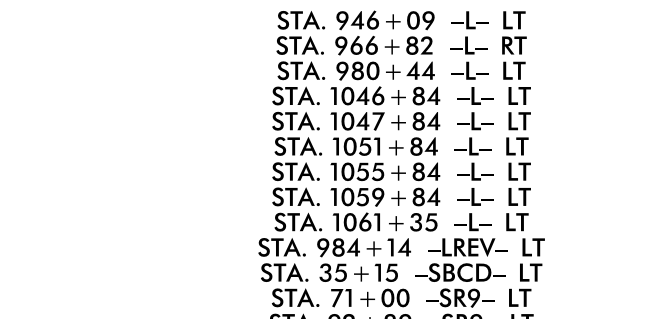
FROM STA. 44+50 TO STA. 45+15 -Y15- RT
FROM STA. 45+15 TO STA. 46+00 -Y15- RT



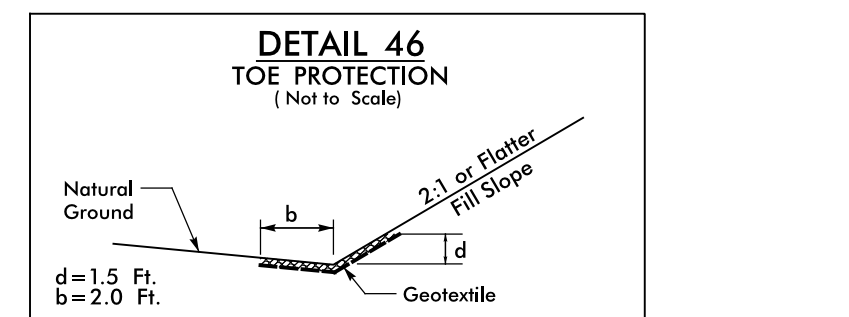
FROM STA. 19+50 TO STA. 19+50 -SR12- RT



FROM STA. 34+50 TO STA. 44+00 -Y14- RT
FROM STA. 35+50 TO STA. 40+80 -Y14- LT
FROM STA. 47+30 TO STA. 49+30 -Y15- RT
FROM STA. 66+00 TO STA. 69+04 -Y24- LT
FROM STA. 10+39 TO STA. 10+77 -DR1- RT
FROM STA. 14+00 TO STA. 15+40 -SR9A- LT
FROM STA. 20+50 TO STA. 24+00 -SR9A- RT
FROM STA. 19+50 TO STA. 22+81 -SR12- LT
FROM STA. 32+00 TO STA. 36+35 -SR18- RT
FROM STA. 33+00 TO STA. 34+45 -SR18- LT



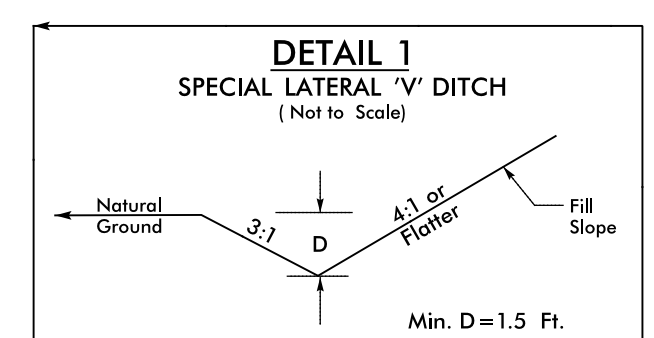
FROM STA. 946+09 -L- LT
FROM STA. 966+82 -L- RT
FROM STA. 980+44 -L- LT
FROM STA. 1046+84 -L- LT
FROM STA. 1047+84 -L- LT
FROM STA. 1051+84 -L- LT
FROM STA. 1055+84 -L- LT
FROM STA. 1057+84 -L- LT
FROM STA. 1061+35 -L- LT
FROM STA. 984+14 -LREV- LT
FROM STA. 35+15 -SBCD- LT
FROM STA. 71+00 -SR9- LT
FROM STA. 92+89 -SR9- LT
FROM STA. 20+37 -SR18- LT
FROM STA. 47+00 -Y24- LT



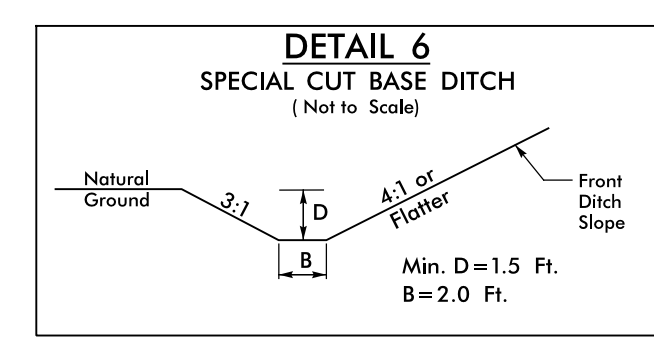
FROM STA. 1038+69 TO STA. 1040+95 -L- LT
FROM STA. 1039+51 TO STA. 1041+23 -L- RT
FROM STA. 1041+75 TO STA. 1044+20 -L- RT
FROM STA. 1042+96 TO STA. 1045+18 -L- LT

B:\17\99\2016\16-20\16-20-1-5986B-Rdy-psh-2D-2.dgn

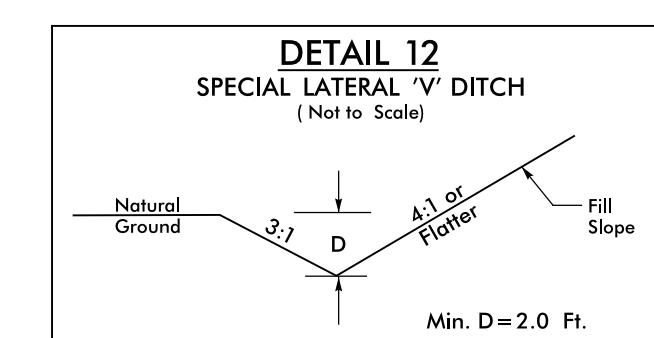
| | |
|---|--|
| PROJECT REFERENCE NO. 1-5883 | SHEET NO. 2D-3 |
| RW SHEET NO. | |
| ROADWAY DESIGN ENGINEER SUSAN C. LANCASTER NORTH CAROLINA PROFESSIONAL SEAL 027373 DocuSign Envelope ID: 4F9834A5F2CA405 | HYDRAULICS ENGINEER JOSHUA G. DALTON NORTH CAROLINA PROFESSIONAL SEAL 26971 DocuSign Envelope ID: 4F9834A5F2CA405 |
| 5/13/2021 | |
| DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED | |
| Michael Baker Engineering, Inc. 6000 Gregory Drive Suite 500 Raleigh, NC 27618 Licenses: P-1084 | SUNGATE DESIGN GROUP, P.A. 90201 FARMER ROAD ROSELAND, NORTH CAROLINA 27068 NC COA No. C-0880 |



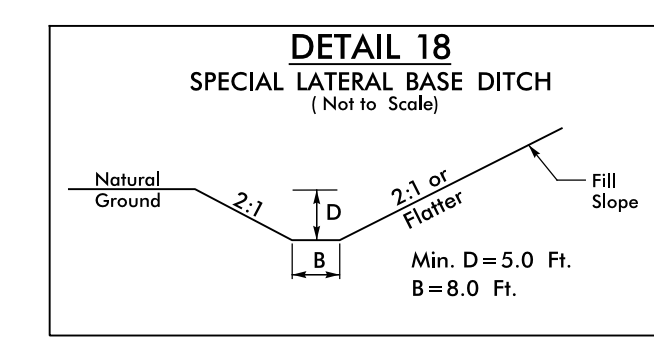
FROM STA. 1092+50 TO STA. 1096+00 -L- RT
 FROM STA. 1122+00 TO STA. 1128+00 -L- RT
 FROM STA. 1134+00 TO STA. 1137+50 -L- RT
 FROM STA. 49+00 TO STA. 52+40 -SR13- RT
 FROM STA. 53+04 TO STA. 53+50 -SR13- RT
 FROM STA. 57+00 TO STA. 58+50 -SR13- LT
 FROM STA. 29+00 TO STA. 31+47 -SR15- RT
 FROM STA. 43+21 TO STA. 49+71 -SR15- RT
 FROM STA. 19+00 TO STA. 20+30 -Y16- LT
 FROM STA. 20+00 TO STA. 22+22 -Y16RPC- LT
 FROM STA. 10+20 TO STA. 12+00 -SR16- LT
 FROM STA. 10+15 TO STA. 12+00 -SR16- RT
 FROM STA. 14+00 TO STA. 15+50 -SR16- LT
 FROM STA. 43+55 TO STA. 46+50 -SR16- LT
 FROM STA. 72+50 TO STA. 81+00 -SR16- LT
 FROM STA. 82+00 TO STA. 85+50 -SR16- LT
 FROM STA. 16+86 TO STA. 19+00 -Y17- RT
 FROM STA. 14+00 TO STA. 21+50 -Y26- LT
 FROM STA. 10+34 TO STA. 11+00 -DR2- LT
 FROM STA. 13+00 TO STA. 16+50 -DR3- LT



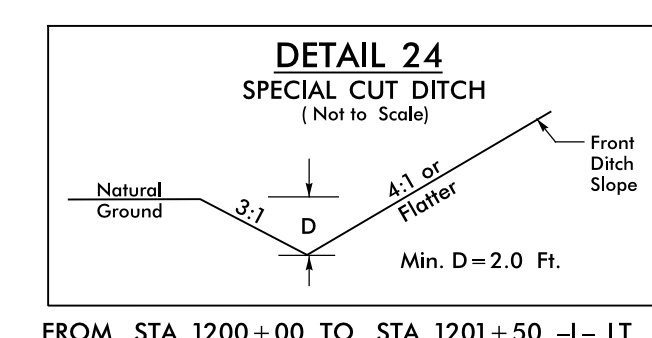
FROM STA. 1131+00 TO STA. 1134+00 -L- LT
 FROM STA. 12+00 TO STA. 13+50 -Y16- LT
 FROM STA. 15+80 TO STA. 17+80 -Y16- RT



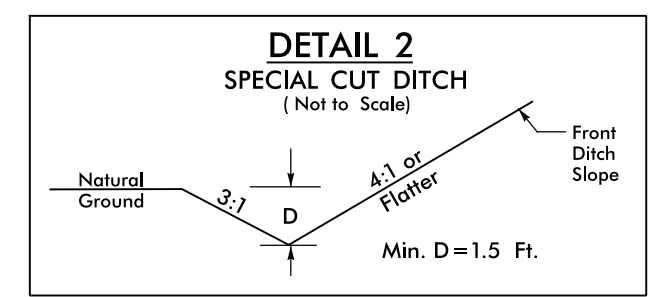
FROM STA. 1201+50 TO STA. 1206+04 -L- LT
 FROM STA. 34+50 TO STA. 35+85 -SR17- LT



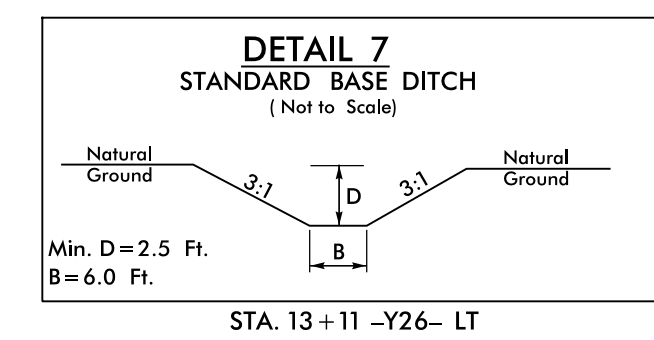
FROM STA. 38+20 TO STA. 39+80 -SR14- RT



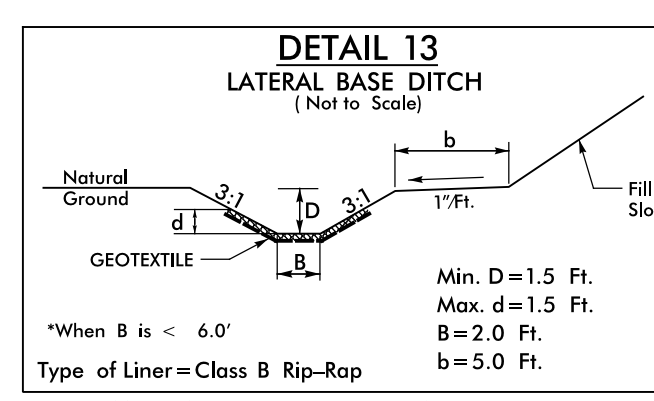
FROM STA. 1200+00 TO STA. 1201+50 -L- LT
 FROM STA. 1218+70 TO STA. 1220+00 -L- RT
 FROM STA. 39+00 TO STA. 46+67 -SR17- RT



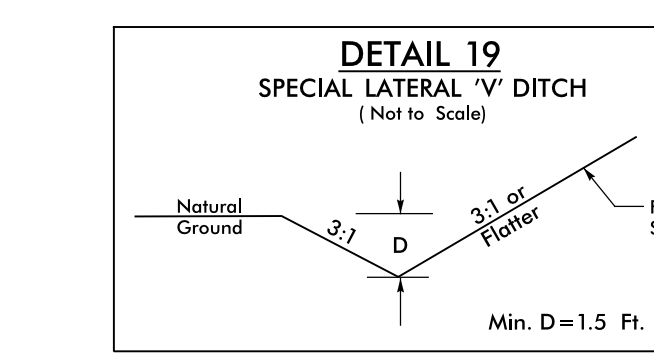
FROM STA. 1082+00 TO STA. 1082+50 -L- LT
 FROM STA. 1096+00 TO STA. 1097+50 -L- RT
 FROM STA. 1102+00 TO STA. 1106+50 -L- LT
 FROM STA. 1103+00 TO STA. 1107+00 -L- RT
 FROM STA. 1199+00 TO STA. 1201+00 -L- RT
 FROM STA. 1211+45 TO STA. 1213+00 -L- RT
 FROM STA. 1225+00 TO STA. 1227+50 -L- RT
 FROM STA. 11+00 TO STA. 14+00 -Y16- RT
 FROM STA. 10+50 TO STA. 12+00 -Y16- LT
 FROM STA. 15+00 TO STA. 15+80 -Y16- RT
 FROM STA. 17+80 TO STA. 19+00 -Y16- RT
 FROM STA. 38+00 TO STA. 38+64 -Y16- LT
 FROM STA. 41+00 TO STA. 43+50 -Y16- LT
 FROM STA. 12+70 TO STA. 16+12 -Y17- RT
 FROM STA. 13+00 TO STA. 18+00 -Y17- LT
 FROM STA. 36+00 TO STA. 38+00 -Y17- RT
 FROM STA. 39+50 TO STA. 40+39 -Y17- RT
 FROM STA. 12+74 TO STA. 22+25 -SR17- LT
 FROM STA. 19+00 TO STA. 19+60 -DR3- LT
 FROM STA. 19+00 TO STA. 19+65 -DR3- RT
 FROM STA. 13+50 TO STA. 15+80 -DR4- RT



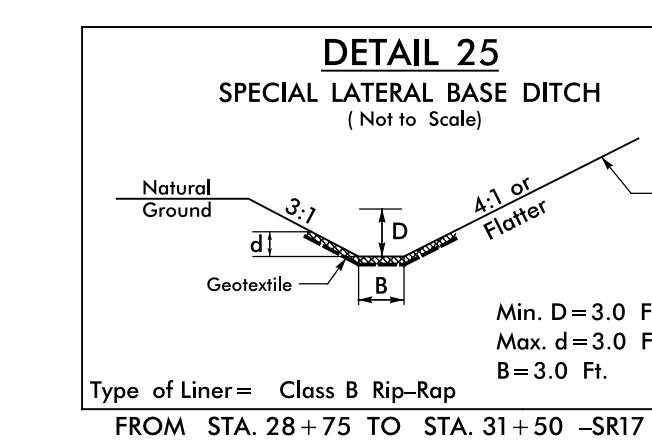
STA. 13+11 -Y26- LT



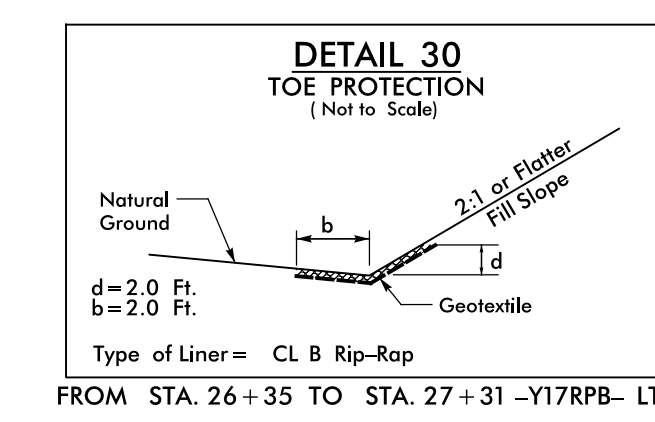
FROM STA. 1128+50 TO STA. 1131+00 -L- LT



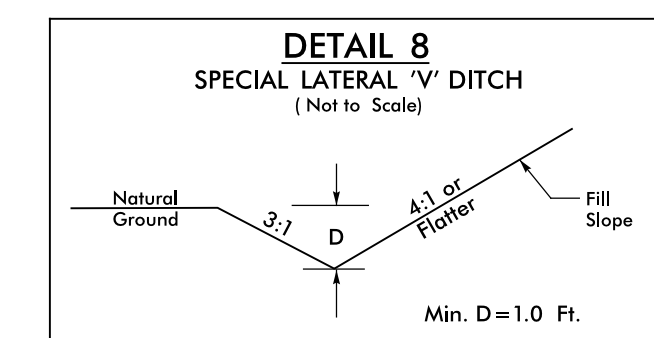
FROM STA. 1201+00 TO STA. 1203+87 -L- RT
 FROM STA. 56+36 TO STA. 58+21 -SR15- RT
 FROM STA. 77+25 TO STA. 82+10 -SR15- RT
 FROM STA. 20+50 TO STA. 21+00 -Y17- LT
 FROM STA. 17+50 TO STA. 21+50 -Y17RPA- RT
 FROM STA. 13+15 TO STA. 14+00 -Y26- LT



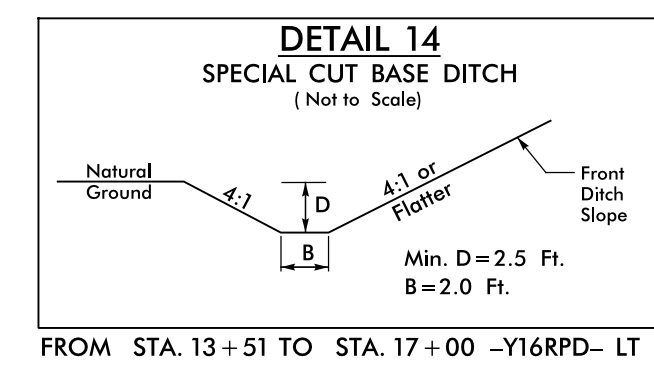
FROM STA. 28+75 TO STA. 31+50 -SR17 LT



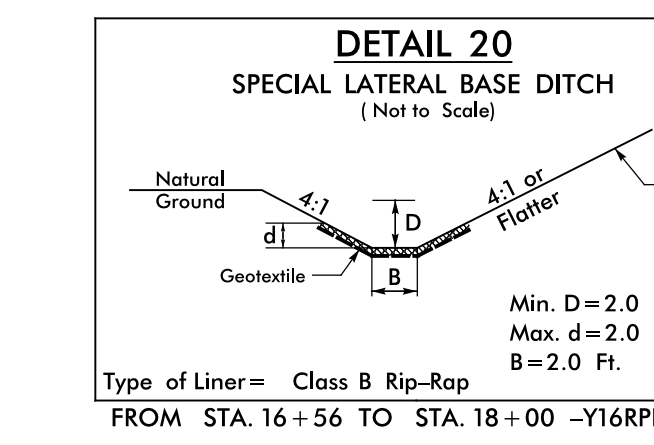
FROM STA. 26+35 TO STA. 27+31 -Y17RPB- LT



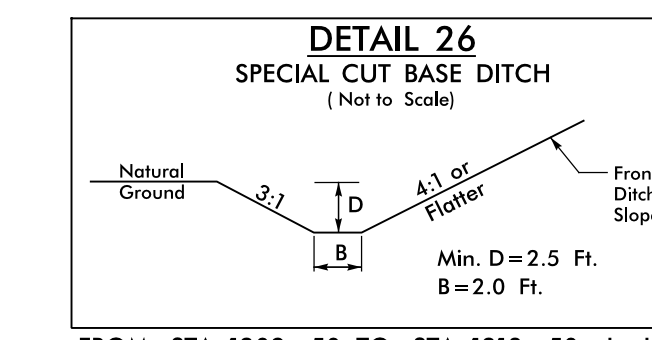
FROM STA. 44+50 TO STA. 45+00 -SR13- LT
 FROM STA. 14+50 TO STA. 21+50 -Y26- RT
 FROM STA. 22+50 TO STA. 27+60 -Y26- LT
 FROM STA. 22+00 TO STA. 26+00 -Y26- RT
 FROM STA. 27+60 TO STA. 30+00 -Y26- LT



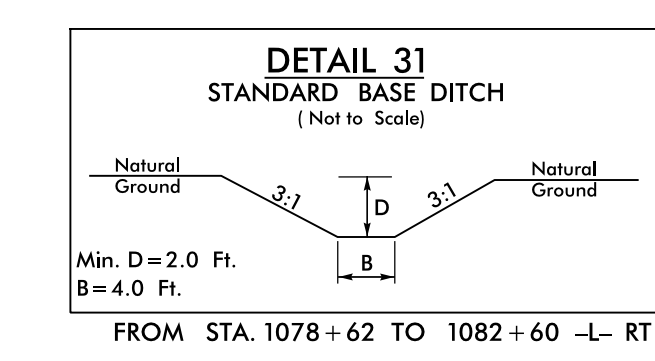
FROM STA. 13+51 TO STA. 17+00 -Y16RPD- LT



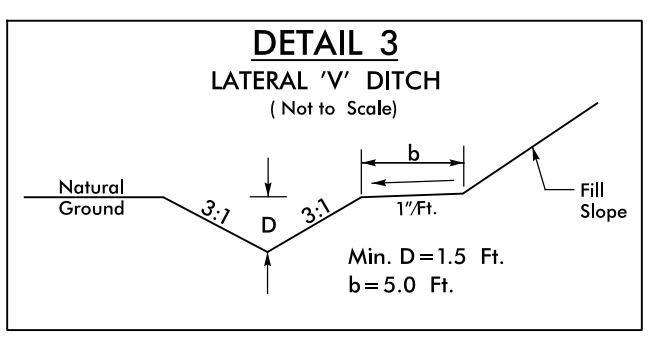
FROM STA. 16+56 TO STA. 18+00 -Y16RPB- LT



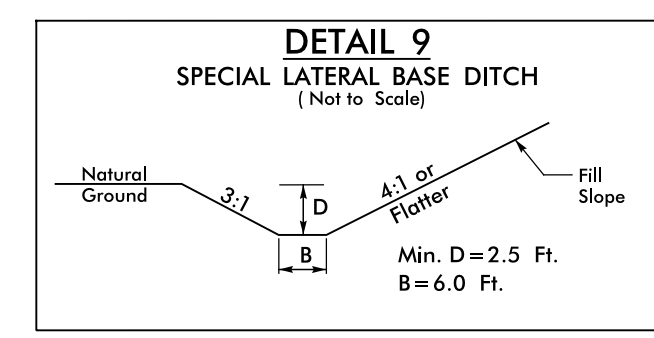
FROM STA. 1209+50 TO STA. 1213+50 -L- LT
 FROM STA. 1216+50 TO STA. 1219+00 -L- LT
 FROM STA. 18+80 TO STA. 23+00 -SR17- RT
 FROM STA. 22+25 TO STA. 28+75 -SR17- LT
 FROM STA. 14+63 TO STA. 17+50 -Y17RPA- RT



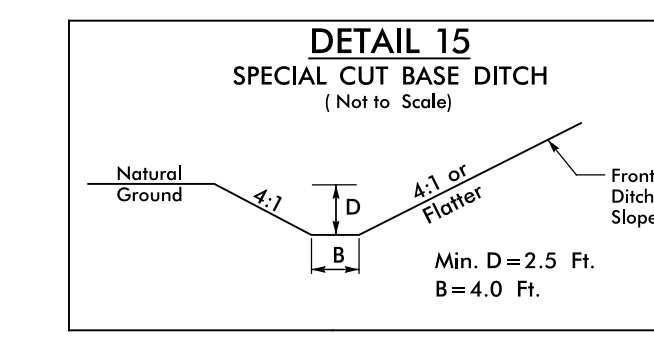
FROM STA. 1078+62 TO STA. 1082+60 -L- RT



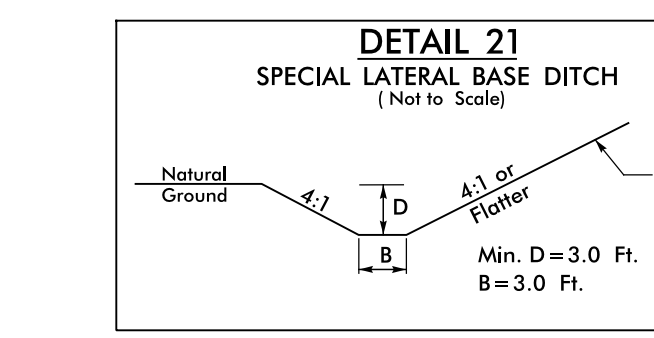
FROM STA. 38+55 TO STA. 40+50 -SR13- LT
 FROM STA. 33+65 TO STA. 36+00 -Y17- RT
 FROM STA. 22+00 TO STA. 24+00 -Y17RPC- RT



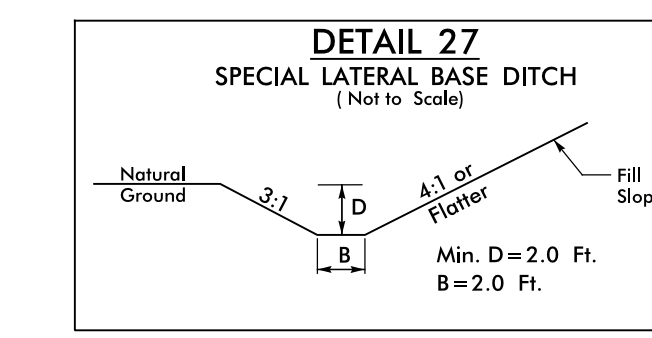
FROM STA. 45+00 TO STA. 47+90 -SR13- LT



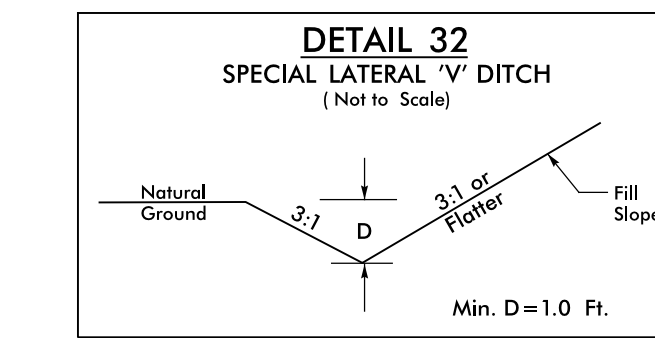
FROM STA. 32+85 TO STA. 34+50 -SR15- RT
 FROM STA. 17+00 TO STA. 18+91 -Y16RPD- LT



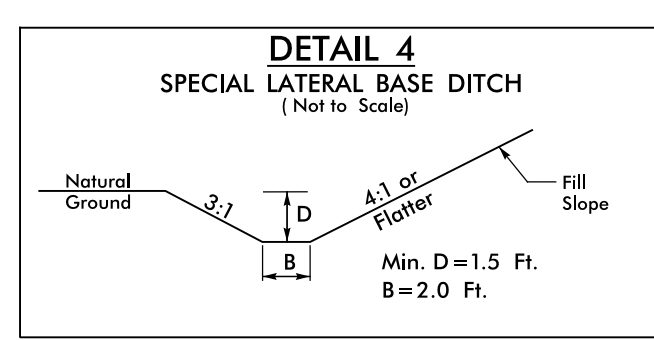
FROM STA. 1082+50 TO STA. 1091+00 -L- LT
 FROM STA. 14+59 TO STA. 16+56 -Y16RPB- LT



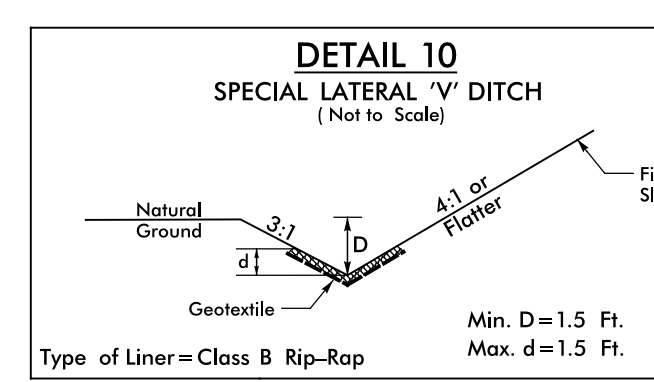
FROM STA. 29+35 TO STA. 30+25 -Y17- RT



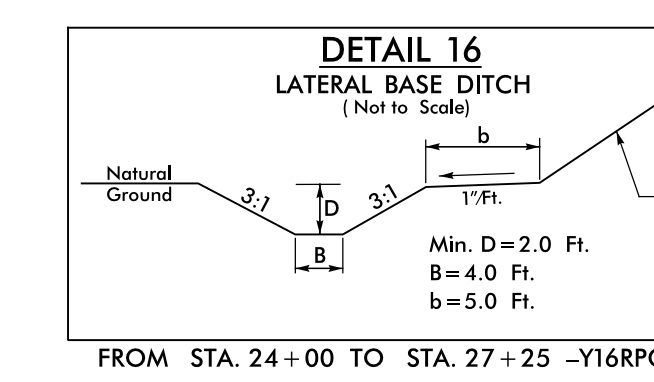
FROM STA. 69+71 TO STA. 72+41 -SR15- RT
 FROM STA. 88+45 TO STA. 98+30 -SR15- RT
 FROM STA. 10+50 TO STA. 13+08 -Y26- LT
 FROM STA. 22+00 TO STA. 22+50 -Y26- LT
 FROM STA. 26+00 TO STA. 27+74 -Y26- RT
 FROM STA. 27+74 TO STA. 30+00 -Y26- RT



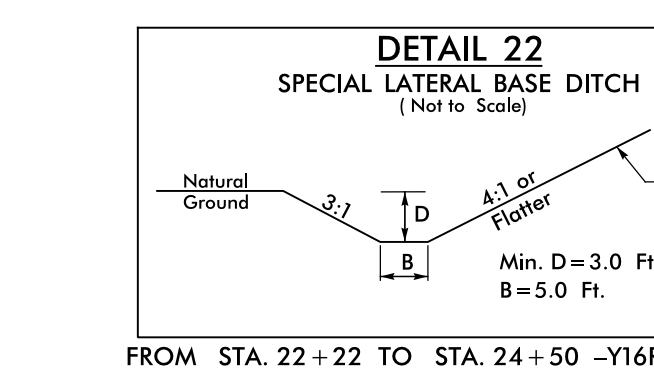
FROM STA. 1220+35 TO STA. 1224+50 -L- LT
 FROM STA. 45+00 TO STA. 49+00 -SR13- RT
 FROM STA. 37+60 TO STA. 43+21 -SR15- RT
 FROM STA. 24+12 TO STA. 26+12 -SR16- LT
 FROM STA. 61+90 TO STA. 64+20 -SR16- LT



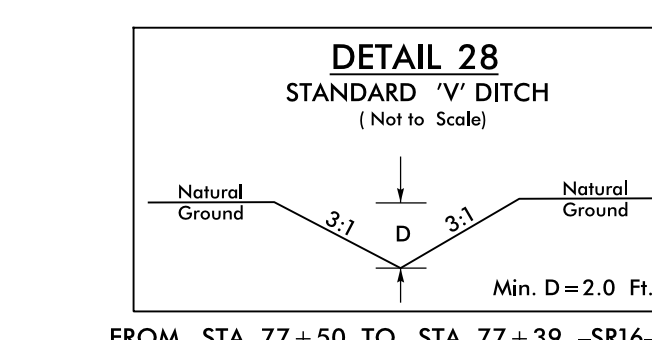
FROM STA. 53+85 TO STA. 57+00 -SR13- LT
 FROM STA. 31+47 TO STA. 32+85 -SR15- RT



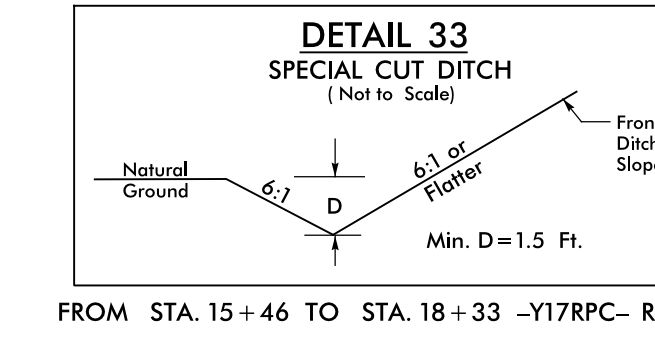
FROM STA. 24+00 TO STA. 27+25 -Y16RPC- RT



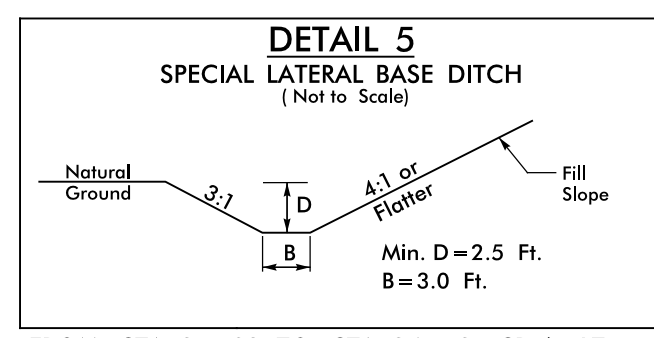
FROM STA. 22+22 TO STA. 24+50 -Y16RPC- LT



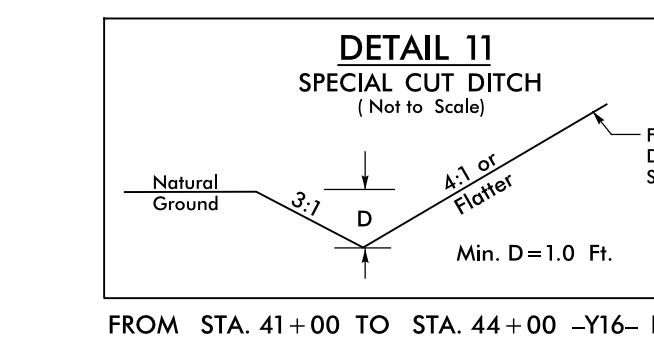
FROM STA. 77+50 TO STA. 77+39 -SR16- RT
 STA. 14+50 -SR16- RT



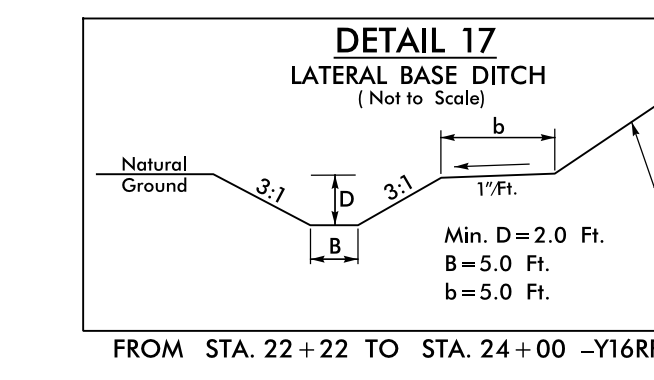
FROM STA. 15+46 TO STA. 18+33 -Y17RPC- RT



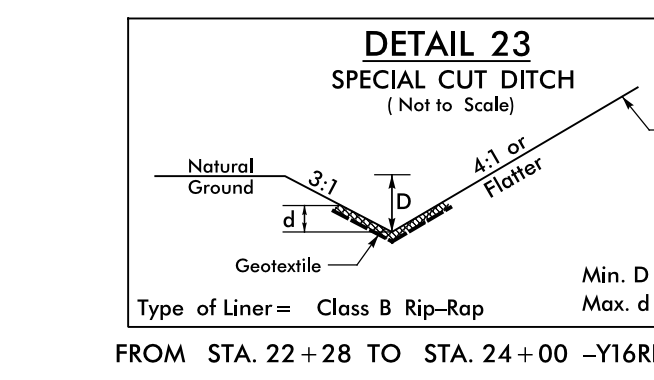
FROM STA. 21+82 TO STA. 24+12 -SR16- LT
 FROM STA. 46+50 TO STA. 47+35 -SR16- LT
 FROM STA. 31+50 TO STA. 34+52 -SR17- LT
 FROM STA. 20+50 TO STA. 22+28 -Y16RPA- LT
 FROM STA. 23+05 TO STA. 26+36 -Y17- RT



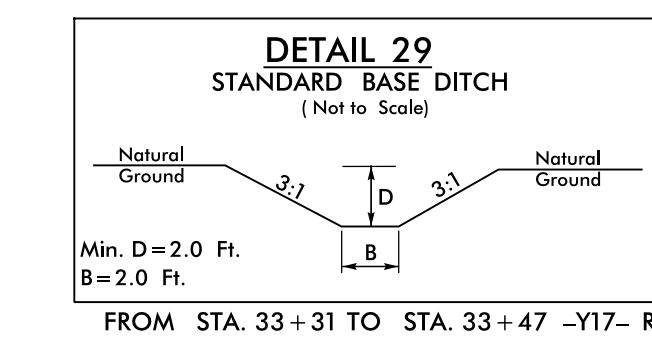
FROM STA. 41+00 TO STA. 44+00 -Y16- RT
 FROM STA. 39+00 TO STA. 41+77 -Y17- LT
 FROM STA. 15+00 TO STA. 15+75 -DR4- LT
 FROM STA. 23+60 TO STA. 27+37 -SR17- RT



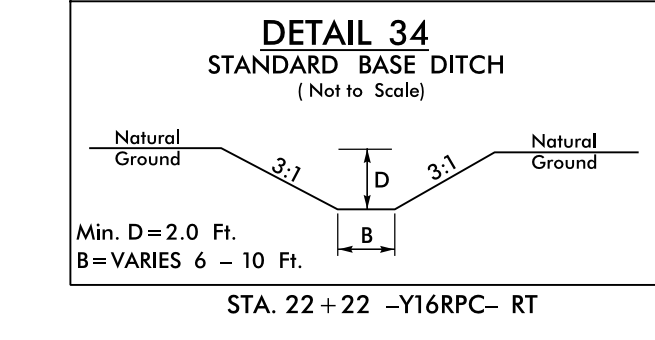
FROM STA. 22+22 TO STA. 24+00 -Y16RPC- RT



FROM STA. 22+28 TO STA. 24+00 -Y16RPA- LT



FROM STA. 33+31 TO STA. 33+47 -Y17- RT



FROM STA. 22+22 -Y16RPC- RT

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