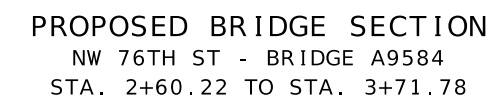
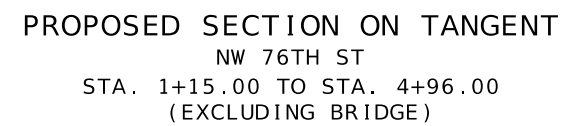






TYPE 2 ROCK BLANKET TO BE INSTALLED ON EMBANKMENT SLOPES  
NEAR BRIDGE STRUCTURE. SEE SPECIAL SHEETS FOR DETAILS.



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| SEEDING/MULCHING |            |      |               |         |
|------------------|------------|------|---------------|---------|
| STATION          | LOCATION   | SIDE | QUANTITY (AC) | REMARKS |
| 1+15 TO 2+60     | NW 76TH ST | LT   | 0.10          |         |
| 1+15 TO 2+60     | NW 76TH ST | RT   | 0.06          |         |
| 3+72 TO 4+96     | NW 76TH ST | LT   | 0.12          |         |
| 3+72 TO 4+96     | NW 76TH ST | RT   | 0.12          |         |
| TOTAL            |            |      | 0.40          |         |
| PAY TOTAL        |            |      | 0.4           |         |

| TYPE 1 AGGREGATE FOR BASE (4 IN. THICK) |            |       |               |         |
|-----------------------------------------|------------|-------|---------------|---------|
| STATION                                 | LOCATION   | SIDE  | QUANTITY (SY) | REMARKS |
| 1+15 TO 2+60                            | NW 76TH ST | LT/RT | 313           |         |
| 3+72 TO 4+96                            | NW 76TH ST | LT/RT | 257           |         |
|                                         |            |       |               |         |
|                                         |            |       |               |         |
|                                         |            |       |               |         |
| PAY TOTAL                               |            |       | 570           |         |

| EARTHWORK    |            |       |                         |                            |              |
|--------------|------------|-------|-------------------------|----------------------------|--------------|
| STATION      | LOCATION   | SIDE  | CLASS A EXCAVATION (CY) | COMPACTING EMBANKMENT (CY) | REMARKS      |
| 1+15 TO 2+50 | NW 76TH ST | LT/RT | 159                     | 287                        | ROADWAY      |
| 3+75 TO 4+96 | NW 76TH ST | LT/RT | 169                     | 489                        | ROADWAY      |
| CREEK/BRIDGE | NW 76TH ST | LT/RT | 905                     | 33                         | CREEK/BRIDGE |
|              |            |       |                         |                            |              |
| TOTAL        |            |       | 1233                    | 807                        |              |
| PAY TOTAL    |            |       | 1233                    | 807                        |              |

| TEMPORARY EROSION CONTROL |            |       |                 |                  |                       |                            |         |
|---------------------------|------------|-------|-----------------|------------------|-----------------------|----------------------------|---------|
| STATION                   | LOCATION   | SIDE  | SILT FENCE (LF) | TYPE C BERM (LF) | SEDIMENT REMOVAL (CY) | ALTERNATE DITCH CHECK (LF) | REMARKS |
| 1+15 TO 2+60              | NW 76TH ST | RT    | 219             |                  | 2                     |                            |         |
| 1+15 TO 2+60              | NW 76TH ST | LT    | 140             |                  | 1                     |                            |         |
| 3+72 TO 4+96              | NW 76TH ST | RT    | 187             |                  | 2                     |                            |         |
| 3+72 TO 4+96              | NW 76TH ST | LT    | 148             |                  | 2                     |                            |         |
| 3+02                      | NW 76TH ST | LT/RT |                 | 97               |                       |                            |         |
| 3+28                      | NW 76TH ST | LT/RT |                 | 98               |                       |                            |         |
| 3+94                      | NW 76TH ST | LT    |                 |                  |                       | 20                         |         |
| TOTAL                     |            |       | 694             | 195              | 7                     | 20                         |         |
| PAY TOTAL                 |            |       | 700             | 195              | 7                     | 20                         |         |

| PERMANENT EROSION CONTROL |            |       |                                         |                                      |                                     |                                  |                                           |              |
|---------------------------|------------|-------|-----------------------------------------|--------------------------------------|-------------------------------------|----------------------------------|-------------------------------------------|--------------|
| STATION                   | LOCATION   | SIDE  | FURNISHING TYPE 1 ROCK DITCH LINER (CY) | PLACING TYPE 1 ROCK DITCH LINER (CY) | FURNISHING TYPE 2 ROCK BLANKET (CY) | PLACING TYPE 2 ROCK BLANKET (CY) | PERMANENT EROSION CONTROL GEOTEXTILE (SY) | REMARKS      |
| 2+45 TO CREEK             | NW 76TH ST | LT/RT |                                         |                                      | 380.9                               | 380.9                            | 734                                       | ROCK BLANKET |
| CREEK TO 3+87             | NW 76TH ST | LT/RT |                                         |                                      | 518.9                               | 518.9                            | 979                                       | ROCK BLANKET |
| 3+81 TO 3+87              | NW 76TH ST | LT    | 2.5                                     | 2.5                                  |                                     |                                  | 19                                        | DRAIN FLUME  |
| 3+87 TO 3+94              | NW 76TH ST | RT    | 2.1                                     | 2.1                                  |                                     |                                  | 15                                        | DRAIN FLUME  |
|                           |            |       |                                         |                                      |                                     |                                  |                                           |              |
| TOTAL                     |            |       | 4.6                                     | 4.6                                  | 899.8                               | 899.8                            | 1747                                      |              |
| PAY TOTAL                 |            |       | 5                                       | 5                                    | 900                                 | 900                              | 1750                                      |              |

| MOBILIZATION |   |
|--------------|---|
| LUMP SUM     | 1 |

| CONTRACTOR FURNISHED SURVEYING & STAKING |   |
|------------------------------------------|---|
| LUMP SUM                                 | 1 |

| CLEARING & GRUBBING |            |       |               |  |
|---------------------|------------|-------|---------------|--|
| STATION             | LOCATION   | SIDE  | QUANTITY (AC) |  |
| 1+15 TO 4+96        | NW 76TH ST | LT/RT | 0.5           |  |
|                     |            |       |               |  |
| PAY TOTAL           |            |       | 0.5           |  |

| OPTIONAL PAVEMENT |            |       |               |         |
|-------------------|------------|-------|---------------|---------|
| STATION           | LOCATION   | SIDE  | QUANTITY (SY) | REMARKS |
| 1+15 TO 2+60      | NW 76TH ST | LT/RT | 313           |         |
| 3+72 TO 4+96      | NW 76TH ST | LT/RT | 257           |         |
|                   |            |       |               |         |
|                   |            |       |               |         |
| PAY TOTAL         |            |       | 570           |         |

| SUBGRADE COMPACTION (6-INCH DEPTH) |            |       |                   |         |
|------------------------------------|------------|-------|-------------------|---------|
| STATION                            | LOCATION   | SIDE  | QUANTITY (100 FT) | REMARKS |
| 1+15 TO 2+60                       | NW 76TH ST | LT/RT | 1.5               |         |
| 3+72 TO 4+96                       | NW 76TH ST | LT/RT | 1.2               |         |
|                                    |            |       |                   |         |
|                                    |            |       |                   |         |
| TOTAL                              |            |       | 2.7               |         |
| PAY TOTAL                          |            |       | 3                 |         |

| REMOVAL OF IMPROVEMENTS |            |       |               |                               |
|-------------------------|------------|-------|---------------|-------------------------------|
| STATION                 | LOCATION   | SIDE  | QUANTITY (LS) | REMARKS                       |
| 2+41 TO 2+60            | NW 76TH ST | LT/RT | -             | REMOVE EXISTING APPROACH SLAB |
| 3+72 TO 3+91            | NW 76TH ST | LT/RT | -             | REMOVE EXISTING APPROACH SLAB |
| 1+15 TO 2+41            | NW 76TH ST | LT/RT | -             | REMOVE EXISTING PAVEMENT      |
| 3+91 TO 4+96            | NW 76TH ST | LT/RT | -             | REMOVE EXISTING PAVEMENT      |
| 3+87 TO 4+97            | NW 76TH ST | LT    | -             | REMOVE EXISTING FENCE         |
| 6+08                    | NW 76TH ST | LT    | -             | REMOVE EXISTING SIGNS         |
| PAY TOTAL               |            |       | 1             |                               |

STATE OF MISSOURI

SCOTT MICHAEL MCDONALD

NUMBER PE-2018000240

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 07/28/2025

ROUTE NW 76 DISTRICT KC

STATE MO SHEET NO. 3

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)

VEENSTRA & KIMM INC

9788 N Ash Avenue Kansas City, Missouri 64157 816-781-6182 816-781-0643 (FAX)

Certificate of Authority No. 2002006347

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)

QUANTITIES SHEET 1 OF 2

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| SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA | QTY | TOTAL | QTY | TOTAL | SIGN | SIZE | AREA 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THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED  
**07/28/2025**

|              |           |
|--------------|-----------|
| ROUTE        | STATE     |
| <b>NW 76</b> | <b>MO</b> |
| DISTRICT     | SHEET NO. |
| <b>KC</b>    | <b>8</b>  |

COUNTY  
**PLATTE**

JOB NO.  
**JKU0238**

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
**A9584**

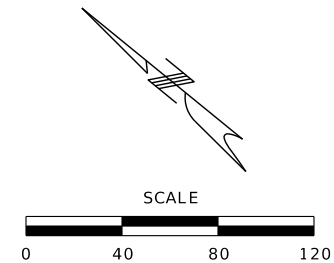
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MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

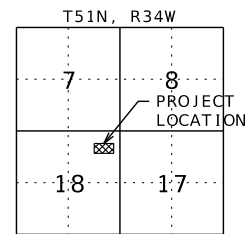
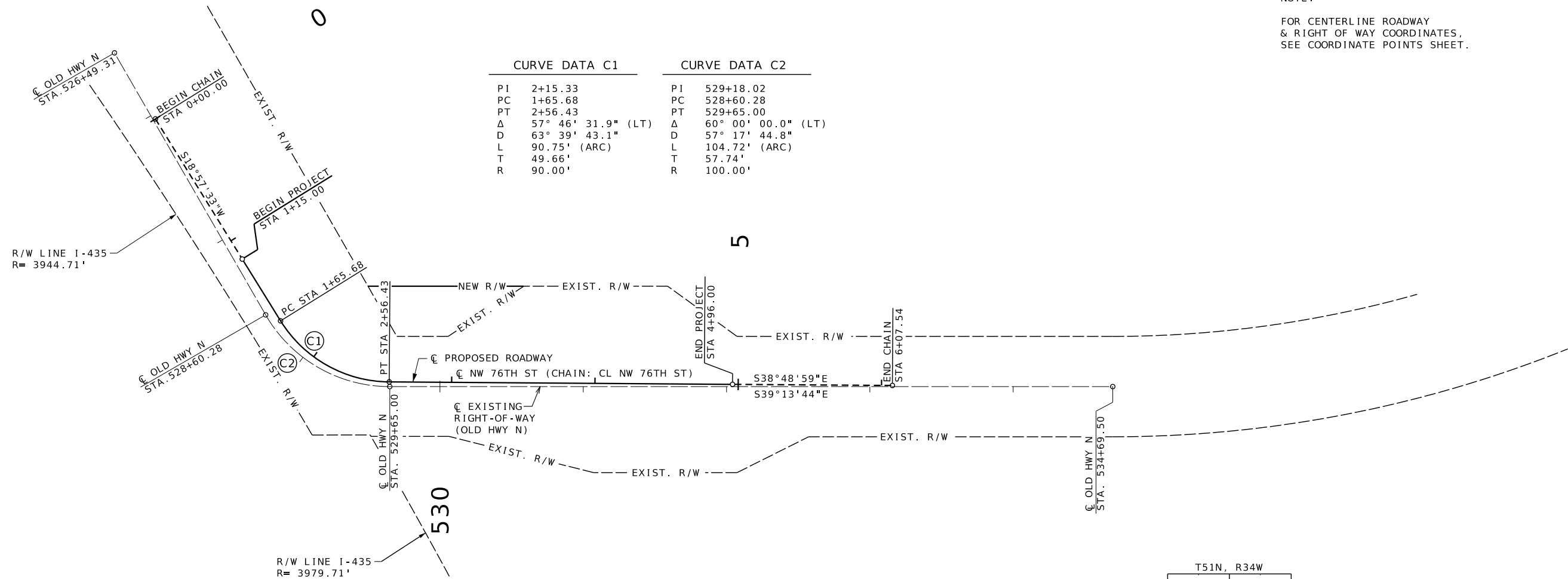
**VEENSTRA  
& KIMM INC**

9788 N Ash Avenue  
Kansas City, Missouri 64157  
816-781-6182 816-781-0643 (FAX)  
Certificate of Authority No. 2002006347

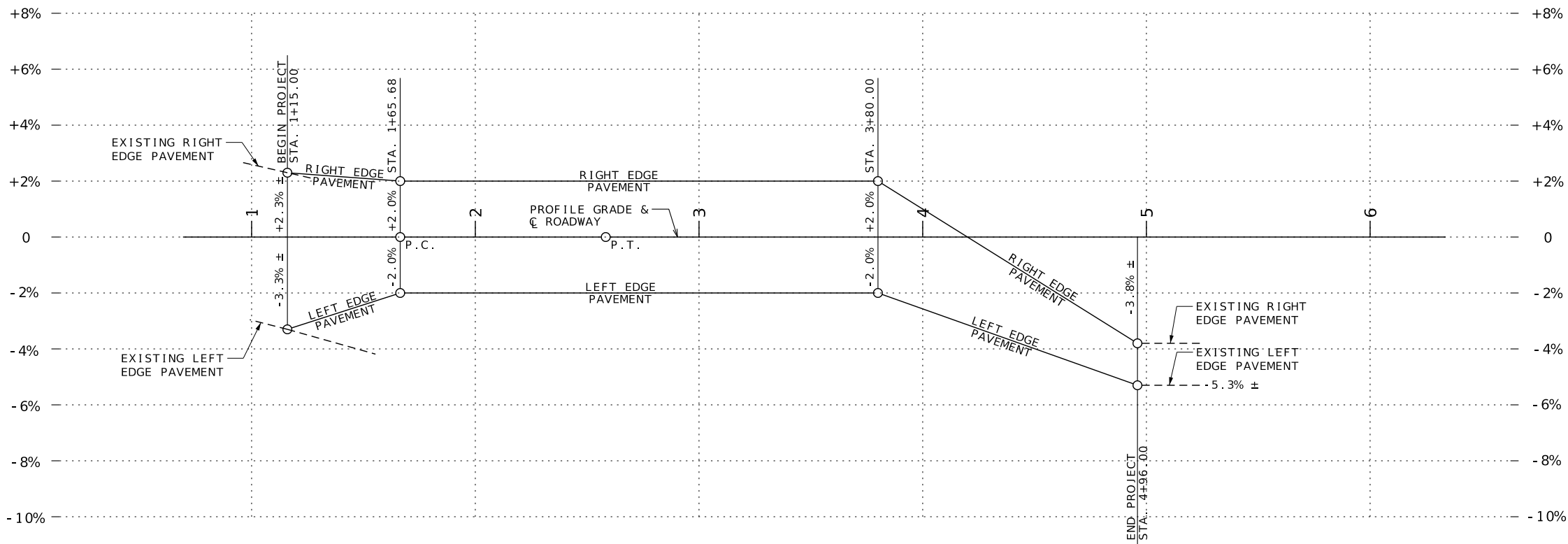


NOTE:  
FOR CENTERLINE ROADWAY  
& RIGHT OF WAY COORDINATES,  
SEE COORDINATE POINTS SHEET.

| CURVE DATA C1 |                    | CURVE DATA C2 |                    |
|---------------|--------------------|---------------|--------------------|
| PI            | 2+15.33            | PI            | 529+18.02          |
| PC            | 1+65.68            | PC            | 528+60.28          |
| PT            | 2+56.43            | PT            | 529+65.00          |
| Δ             | 57° 46' 31.9" (LT) | Δ             | 60° 00' 00.0" (LT) |
| D             | 63° 39' 43.1"      | D             | 57° 17' 44.8"      |
| L             | 90.75' (ARC)       | L             | 104.72' (ARC)      |
| T             | 49.66'             | T             | 57.74'             |
| R             | 90.00'             | R             | 100.00'            |

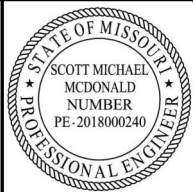


ALIGNMENT LAYOUT  
SPECIAL SHEETS  
SHEET 1 OF 4



NW 76TH ST

SUPERELEVATION CHART  
SPECIAL SHEETS  
SHEET 2 OF 4



THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED  
07/28/2025

ROUTE NW 76 STATE MO

DISTRICT KC SHEET NO. 9

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

VEENSTRA & KIMM INC

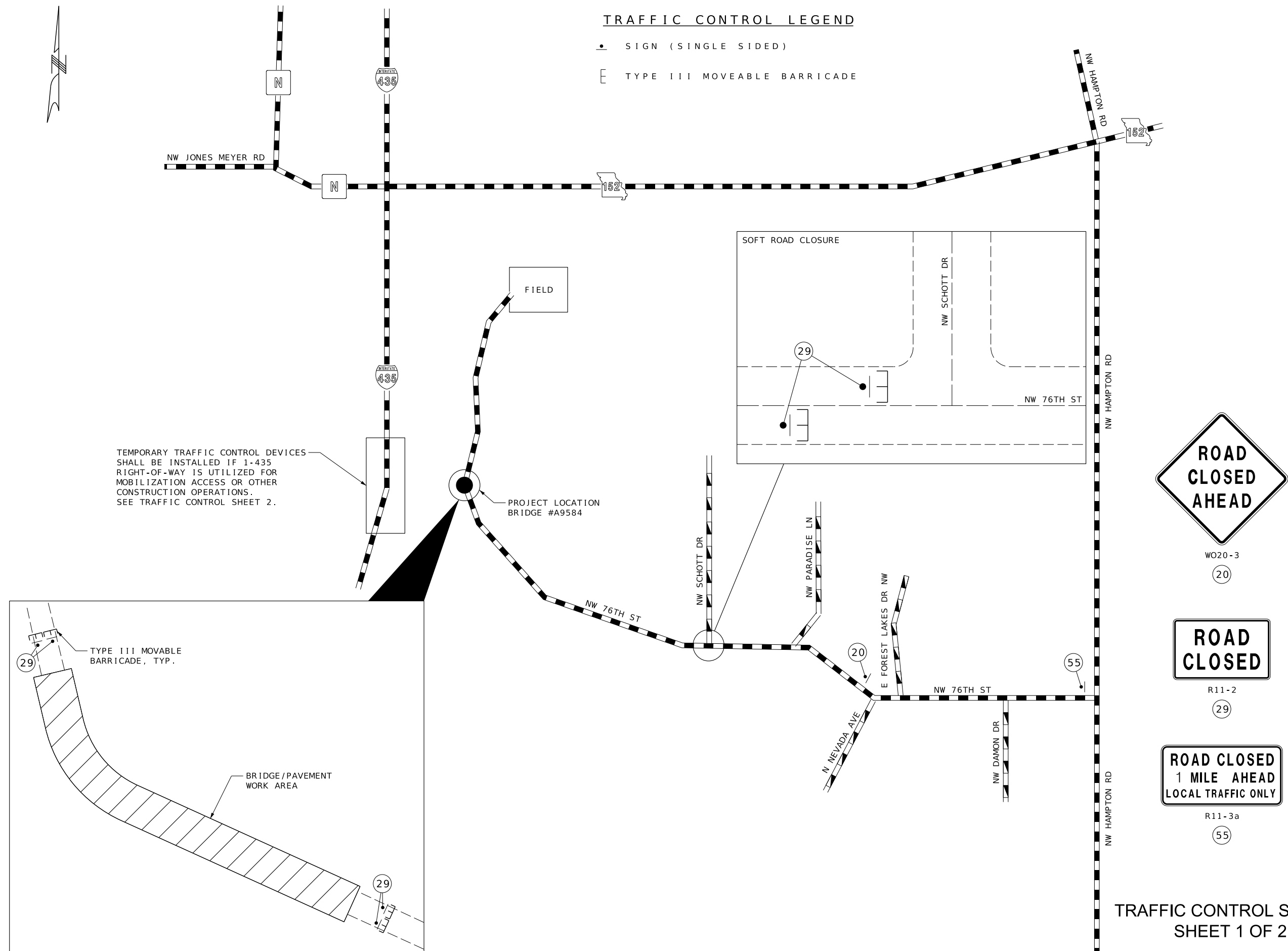
Kansas City, Missouri 64157  
816-781-0643 (FAX)  
Certificate of Authority No. 2002006347



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TEMPORARY TRAFFIC CONTROL DEVICES  
SHALL BE INSTALLED IF 1-435  
RIGHT-OF-WAY IS UTILIZED FOR  
MOBILIZATION ACCESS OR OTHER  
CONSTRUCTION OPERATIONS.  
SEE TRAFFIC CONTROL SHEET 2.

FIELD

- BRIDGE / PAVEMENT  
WORK AREA

### TRAFFIC CONTROL LEGEND

## SOFT ROAD CLOSURE

NW 76TH ST

NW 76TH ST

NW PARADISE LN

YES DR NW

NW 76TH ST

NW DAMON DR

NW HAMPTON RD

1

**ROAD  
CLOSED  
AHEAD**

# ROAD CLOSED

**ROAD CLOSED**  
**1 MILE AHEAD**  
**LOCAL TRAFFIC ONLY**

TRAFFIC CONTROL SHEETS  
SHEET 1 OF 2



DATE PREPARED  
07/28/2025

|                |                 |
|----------------|-----------------|
| ROUTE<br>NW 76 | STATE<br>MO     |
| DISTRICT<br>KC | SHEET NO.<br>12 |

|              |         |
|--------------|---------|
| COUNTY       | PLATTE  |
| JOB NO.      | JKU0238 |
| CONTRACT ID. |         |

|                     |
|---------------------|
| PROJECT NO.         |
| BRIDGE NO.<br>A9584 |

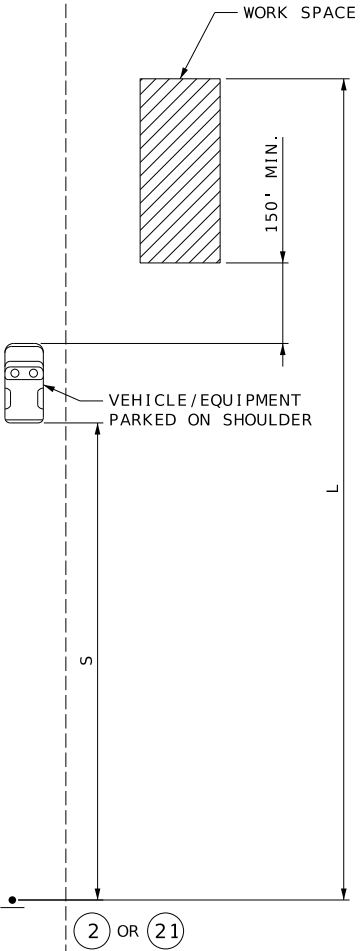
[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)



**VEENSTRA  
& KIMM INC.**

9788 N Ash Avenue Kansas City, Missouri 64157  
816-781-6182 816-781-0643 (FAX)  
Certificate of Authority No. 2002006347





SIGNING LEGEND

- EXISTING SIGN (SINGLE SIDED)

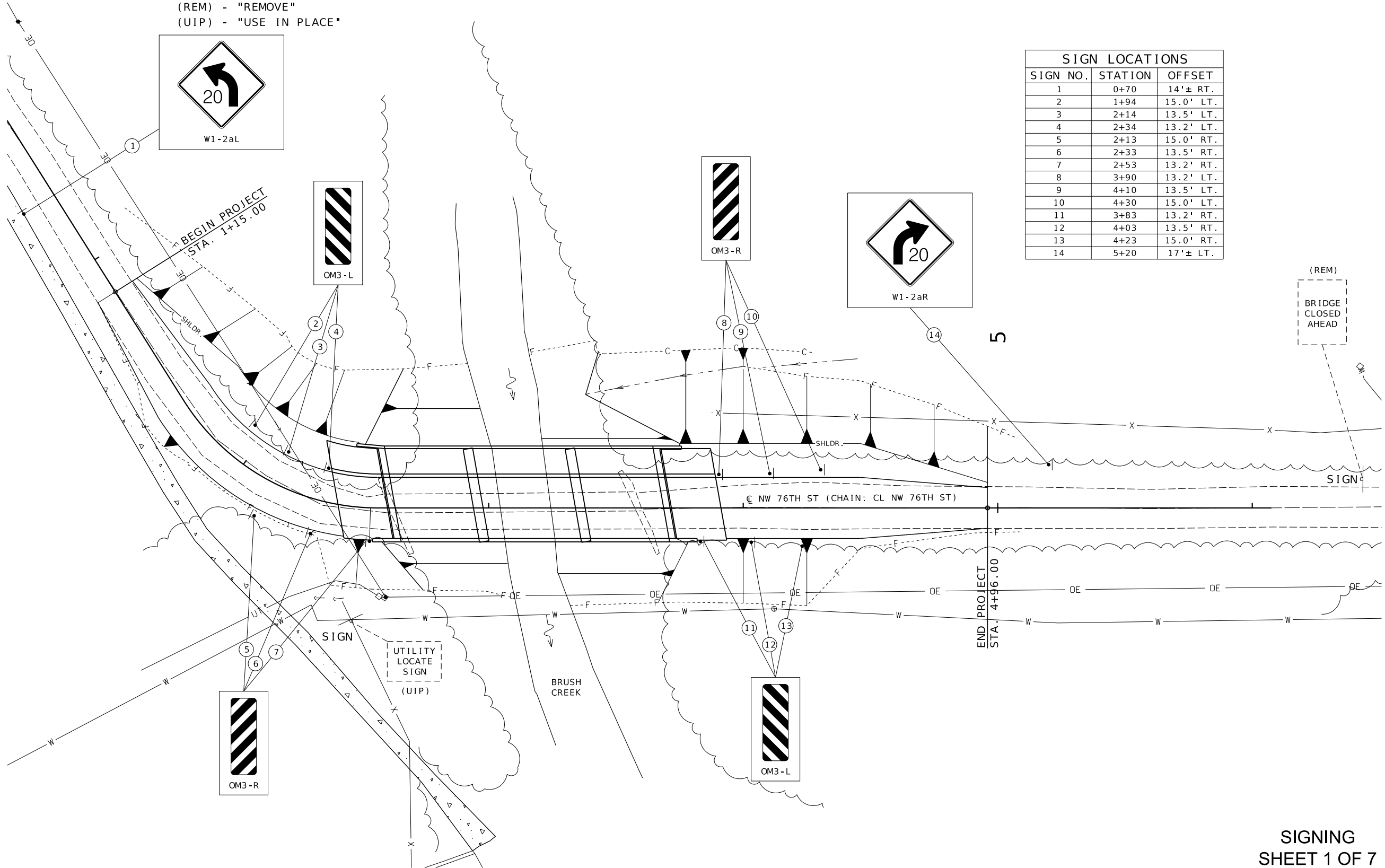
PROPOSED SIGN (SINGLE SIDED)

(REM) - "REMOVE"  
(UIP) - "USE IN PLACE"



NOTES:  
ALL EXISTING SIGNS AND POSTS SHALL BE REMOVED AND  
DELIVERED TO THE MODOT MAINTENANCE LOCATION PER  
JOB SPECIAL PROVISIONS.

| SIGN LOCATIONS |         |           |
|----------------|---------|-----------|
| SIGN NO.       | STATION | OFFSET    |
| 1              | 0+70    | 14'± RT.  |
| 2              | 1+94    | 15.0' LT. |
| 3              | 2+14    | 13.5' LT. |
| 4              | 2+34    | 13.2' LT. |
| 5              | 2+13    | 15.0' RT. |
| 6              | 2+33    | 13.5' RT. |
| 7              | 2+53    | 13.2' RT. |
| 8              | 3+90    | 13.2' LT. |
| 9              | 4+10    | 13.5' LT. |
| 10             | 4+30    | 15.0' LT. |
| 11             | 3+83    | 13.2' RT. |
| 12             | 4+03    | 13.5' RT. |
| 13             | 4+23    | 15.0' RT. |
| 14             | 5+20    | 17'± LT.  |



STATE OF MISSOURI

SCOTT MICHAEL MCDONALD

NUMBER PE-2018000240

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 07/28/2025

ROUTE NW 76

DISTRICT KC

STATE MO

SHEET NO. 15

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

VEENSTRA & KIMM INC

9788 N Ash Avenue

816-781-6182

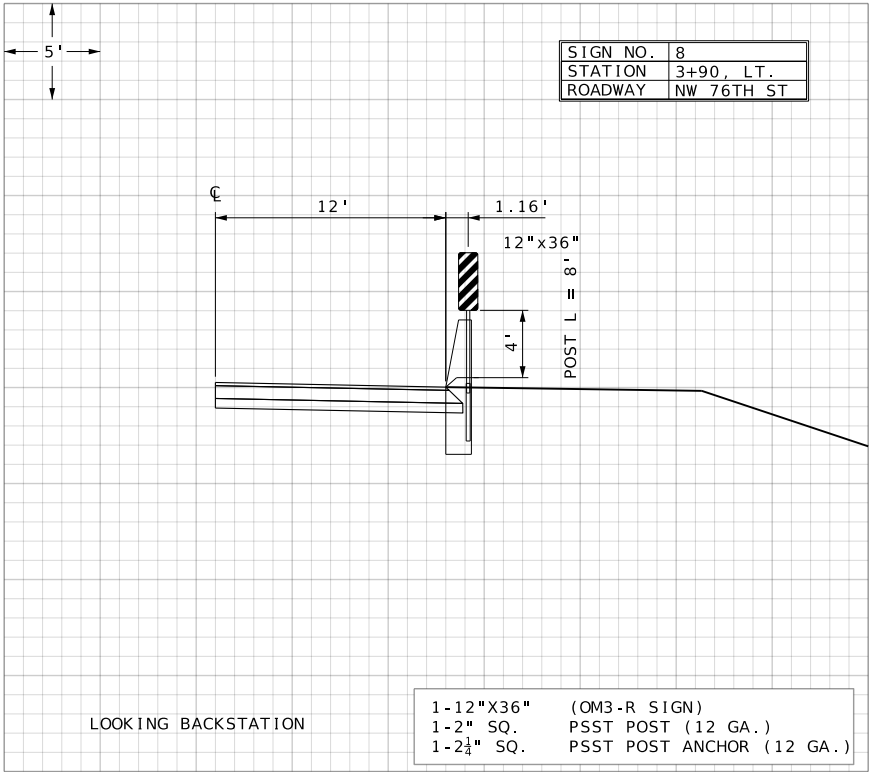
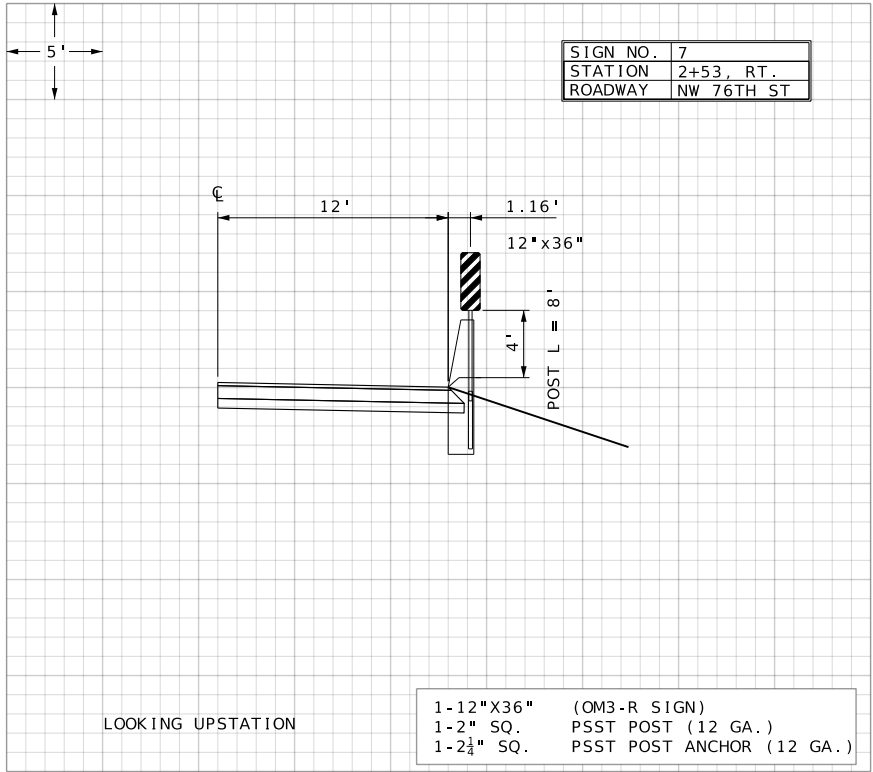
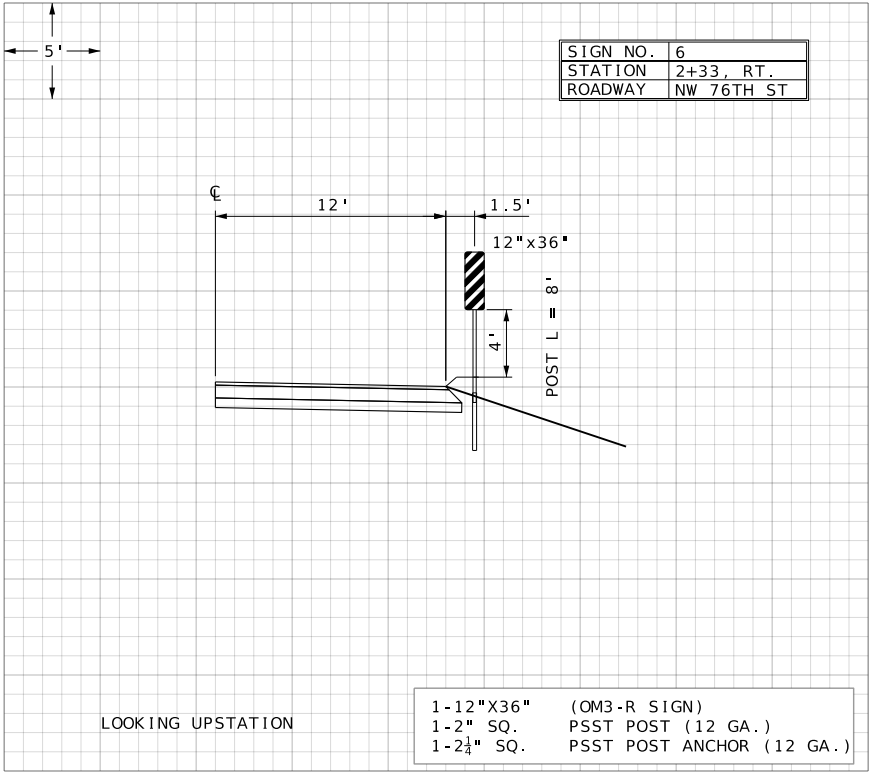
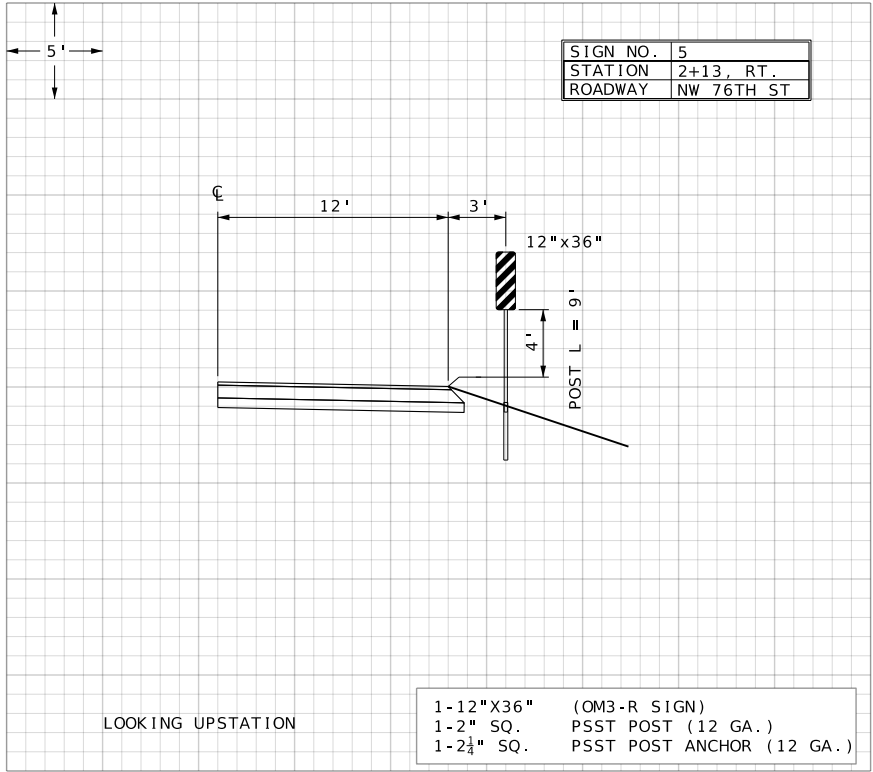
816-781-0643 (FAX)

Certificate of Authority No. 2002006347

Kansas City, Missouri 64157

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STATE OF MISSOURI

SCOTT MICHAEL MCDONALD

PROFESSIONAL ENGINEER

NUMBER PE-2018000240

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 07/28/2025

ROUTE NW 76

DISTRICT KC

STATE MO

SHEET NO. 17

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

VEENSTRA & KIMM INC

9788 N Ash Avenue

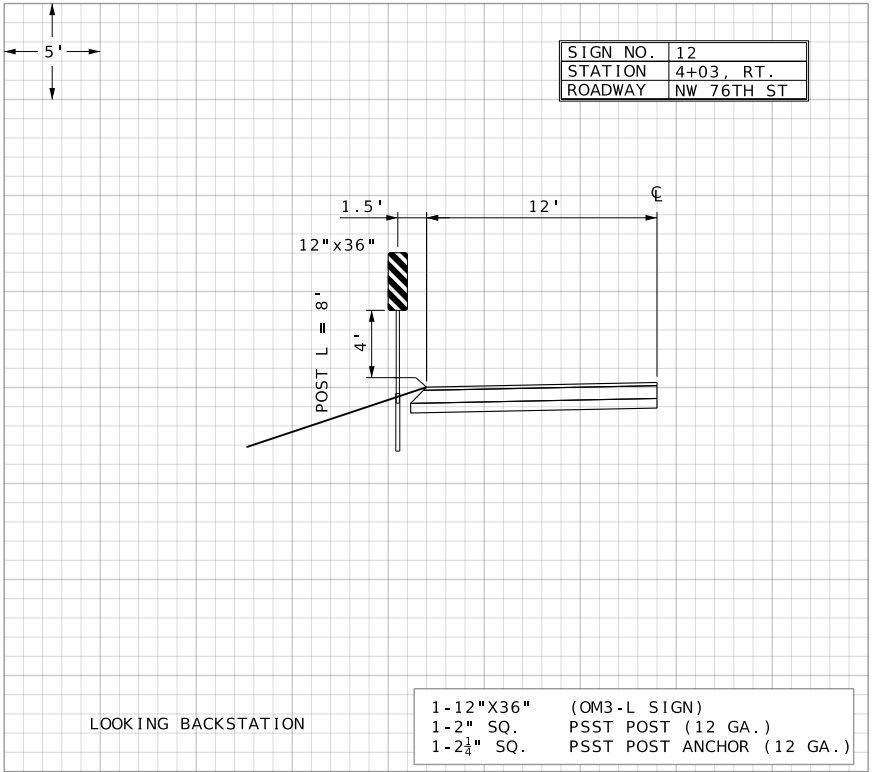
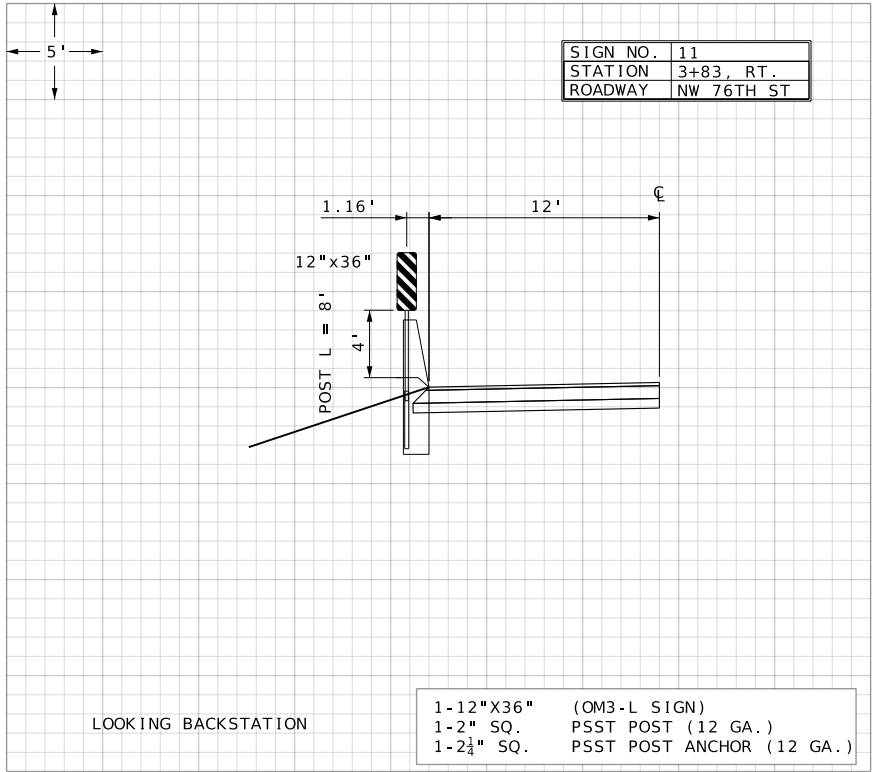
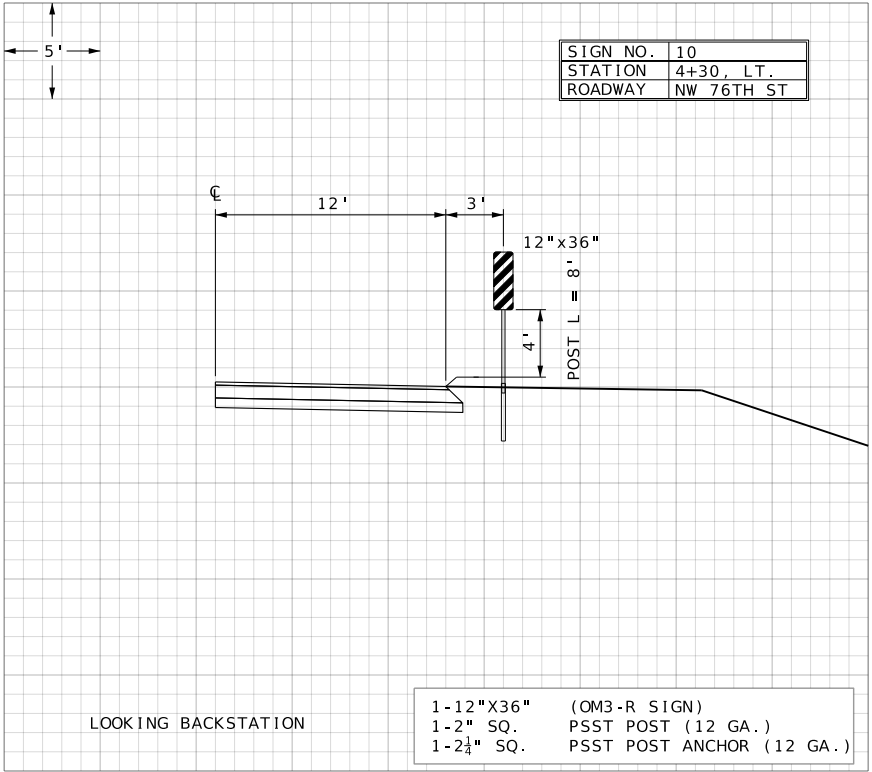
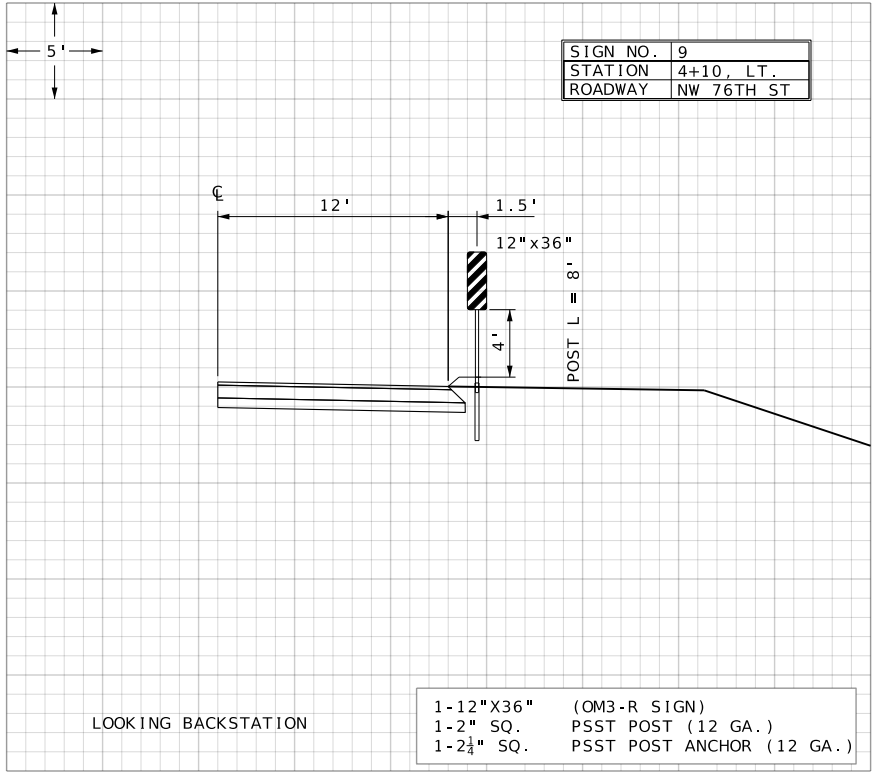
Kansas City, Missouri 64157

816-781-6182

816-781-0643 (FAX)

Certificate of Authority No. 2002006347

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STATE OF MISSOURI

SCOTT MICHAEL MCDONALD

PROFESSIONAL ENGINEER

NUMBER PE-2018000240

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 07/28/2025

ROUTE NW 76

DISTRICT KC

STATE MO

SHEET NO. 18

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

VEENSTRA & KIMM INC

9788 N Ash Avenue

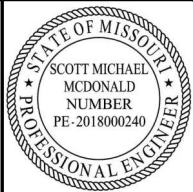
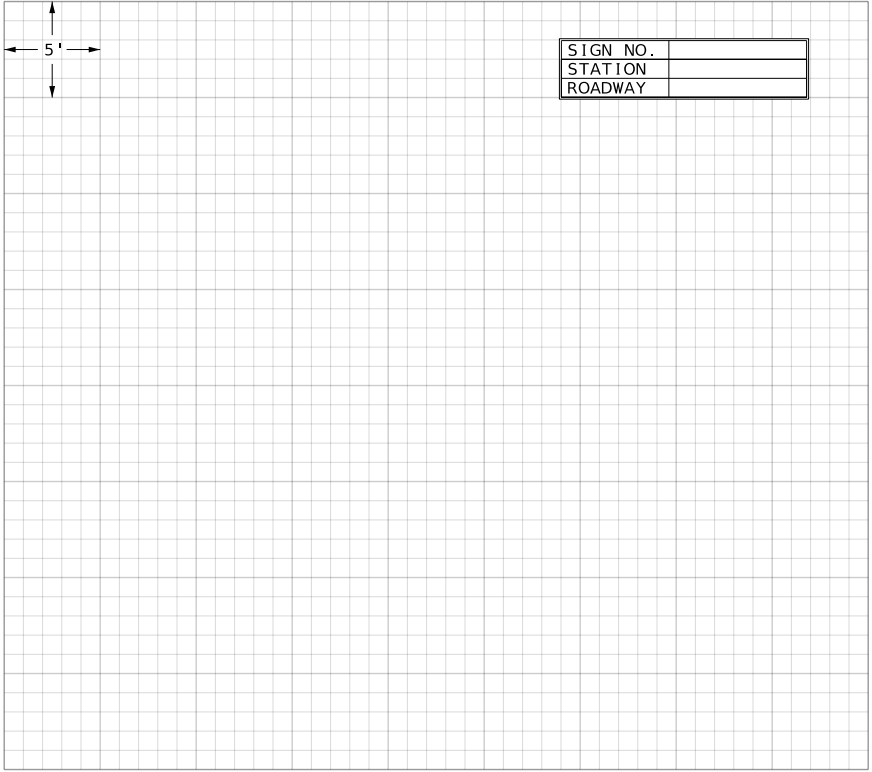
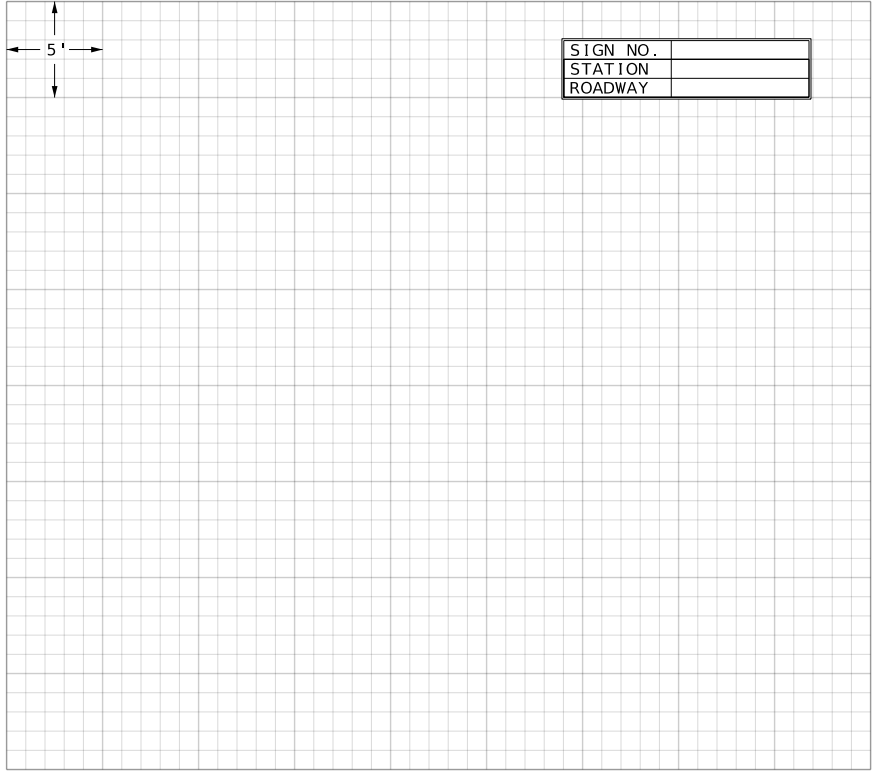
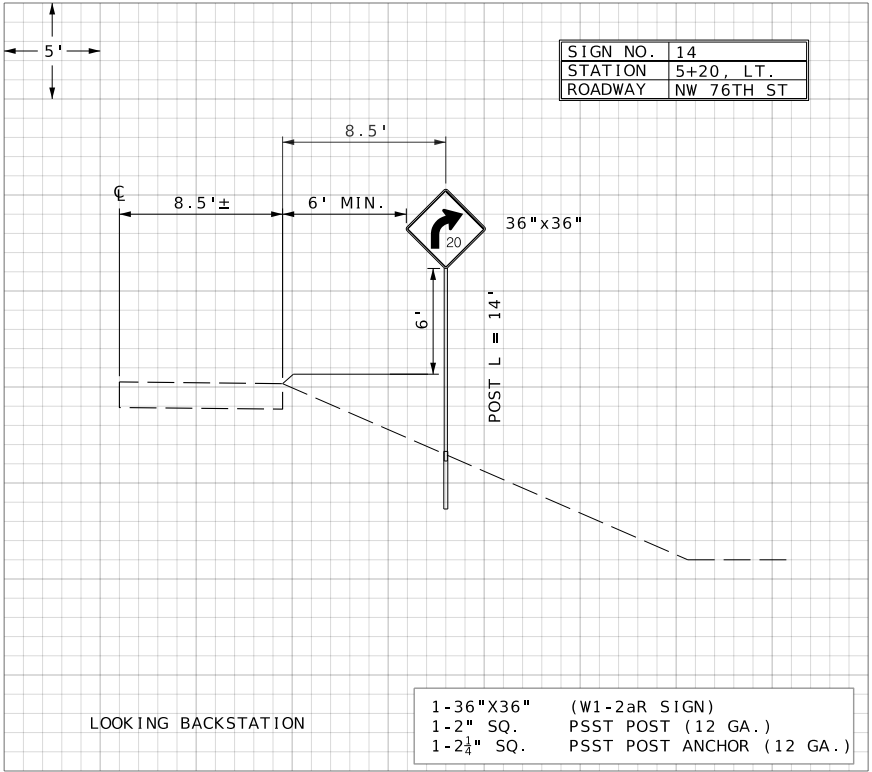
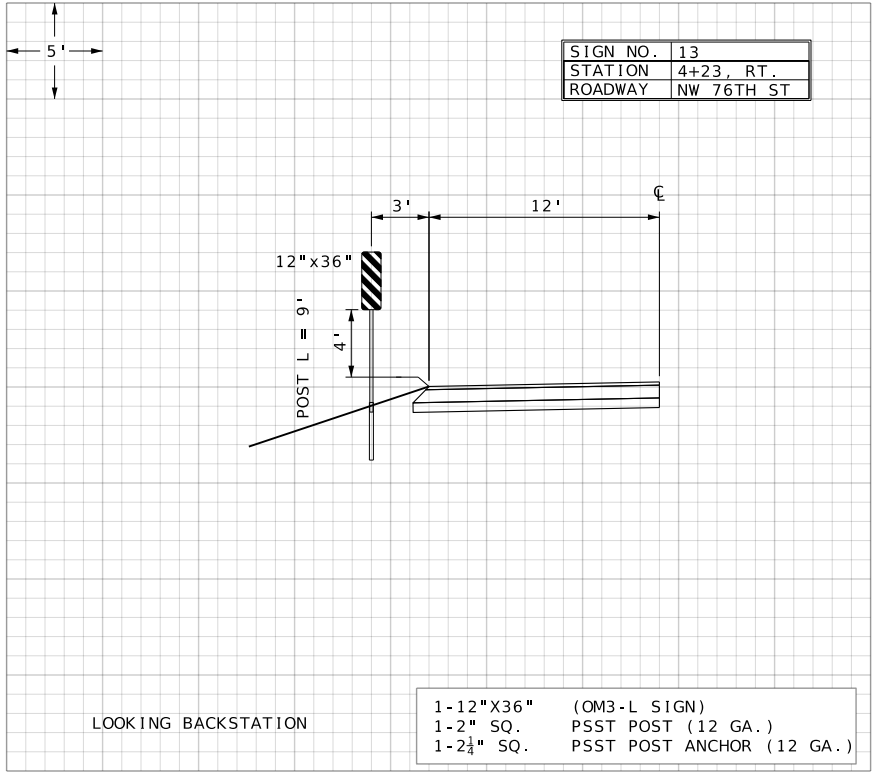
Kansas City, Missouri 64157

816-781-6182

816-781-0643 (FAX)

Certificate of Authority No. 2002006347

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DATE PREPARED  
07/28/2025

|          |           |
|----------|-----------|
| ROUTE    | STATE     |
| NW 76    | MO        |
| DISTRICT | SHEET NO. |
| KC       | 19        |

COUNTY  
PLATTE  
JOB NO.  
JKU0238  
CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9584

| DESCRIPTION | DATE |
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MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION



105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)



**VEENSTRA  
& KIMM INC**

9788 N Ash Avenue  
Kansas City, Missouri 64157  
816-781-6182 816-781-0643 (FAX)  
Certificate of Authority No. 2002006347

SIGNS

902 SIGNAL SIGNS TABULATED ON D-37A SHEET

SIGN NO.

SIGN SIZE

STATION OR LOG MILE

HORIZ CLEAR IF NOT STD

LOCATION

SIGN DTL SHT NO.

CONCRETE FOOTINGS EMBEDDED

ITEM NO. 9031010

CY

POST DES NO.

POST NO. 1

POST NO. 2

POST NO. 3

LBS PER FT

TOTAL

ITEM NO. 9031210

LBS

PIPE POSTS\*

PIPE SIZE

POST NO. 1

POST NO. 2

LBS PER FT

TOTAL

ITEM NO. 9031220

LBS

BACKING BARS\*\*

2" X 3/8" BARS AT 2.55 LBS/FT

ITEM NO. 9031250A

LF

U-CHANNEL POST

POST NO. 1

POST NO. 2

ITEM NO. 9031270A

LF

LF

LF

PERFORATED SQUARE STEEL TUBE

2-INCH POST

2.5-INCH POST

BREAK-AWAY ASSEMBLY

POST NO. 1

POST NO. 2

TOTAL

ITEM NO. 9031280

LF

LF

LF

ANCHORS

DRIVEN 12 GA.

DRIVEN 7 GA.

CONCRETE 7 GA.

ITEM NO. 9031271A

ITEM NO. 9031273A

ITEM NO. 9031274

EACH

EACH

EACH

2.25" INSERT (6 FT)

ITEM NO. 9031272A

EACH

ANCHORS

DRIVEN 7 GA.

CONCRETE 7 GA.

ITEM NO. 9031281A

ITEM NO. 9031285

ITEM NO. 9031241

EACH

EACH

EACH

REMARKS AND OTHER REQUIRED ITEMS

EFFECTIVE: 07-01-2024

STATE OF MISSOURI

SCOTT MICHAEL MCDONALD

NUMBER PE-2018000240

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED

07/28/2025

ROUTE

NW 76

STATE

MO

DISTRICT

KC

SHEET NO.

20

COUNTY

PLATTE

JOB NO.

JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)

VEENSTRA & KIMM INC

9788 N Ash Avenue Kansas City, Missouri 64157 816-781-6182 816-781-0643 (FAX) Certificate of Authority No. 2002006347

ROUND PIPE POST AND FOOTING DATA TABLE

| NOM. SIZE |        | WEIGHT |            | STUB LENGTH | FOOTING |      | CONCRETE |
|-----------|--------|--------|------------|-------------|---------|------|----------|
| (IN.)     | LBS/FT | LBS/IN | DIA.       |             | DEPTH   | C.Y. |          |
| 2 1/2     | 5.79   | 0.48   | 4'- 3 1/2" | 12"         | 4-6"    | 0.13 |          |
| 4         | 10.79  | 0.90   | 5'- 3 1/2" | 18"         | 5-6"    | 0.36 |          |

STRUCTURAL STEEL POST AND FOOTING DATA TABLE

| POST DES. NO. | NOM. SIZE | POST WEIGHT |        | STUB LENGTH | DIA. | FOOTING |      | 6:1 GRADE |      | 4:1 GRADE |      | 3:1 OR 2:1 GRADE |      |
|---------------|-----------|-------------|--------|-------------|------|---------|------|-----------|------|-----------|------|------------------|------|
|               |           | LBS/FT      | LBS/IN |             |      | DEPTH   | C.Y. | DEPTH     | C.Y. | DEPTH     | C.Y. |                  |      |
| 1             | W6        | 9.0         | 0.75   | 3'-0"       | 15"  | 3'-0"   | 0.14 | 3'-2"     | 0.15 | 3'-3"     | 0.16 | 3'-6"            | 0.17 |
| 2             | W6        | 15.0        | 1.25   | 4'-0"       | 24"  | 4'-0"   | 0.47 | 4'-2"     | 0.50 | 4'-3"     | 0.51 | 4'-6"            | 0.54 |
| 3             | W8        | 18.0        | 1.50   | 4'-6"       | 28"  | 4'-6"   | 0.71 | 4'-8"     | 0.73 | 4'-9"     | 0.74 | 5'-0"            | 0.78 |
| 4             | W10       | 22.0        | 1.83   | 5'-0"       | 36"  | 5'-0"   | 1.31 | 5'-2"     | 1.36 | 5'-3"     | 1.39 | 5'-6"            | 1.45 |
| 5             | W10       | 26.0        | 2.17   | 5'-0"       | 36"  | 5'-0"   | 1.31 | 5'-3"     | 1.37 | 5'-5"     | 1.43 | 5'-9"            | 1.52 |
| 6             | W12       | 35.0        | 2.92   | 5'-6"       | 36"  | 5'-6"   | 1.44 | 5'-9"     | 1.52 | 5'-11"    | 1.56 | 6'-3"            | 1.65 |

SIGNING SHEET 6 OF 7

D-29

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General Notes:

Design Specifications:

- 2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)
- 2023 AASHTO Guide Specifications for LRFD Seismic Bridge Design (3rd Ed.)
- Seismic Design Category = A (Nonseismic Details)

Design earthquake response spectral acceleration coefficient at 1.0 second period, SD1 = 0.082

Acceleration Coefficient (effective peak ground acceleration coefficient), As = 0.053

Design Loading:

Vehicular = HL-93  
Future Wearing Surface = 35 Lb./Sq. Ft.  
Earth = 120 Lb./Cu. Ft.  
Equivalent Fluid Pressure = 45 Lb./Cu. Ft.  
Superstructure: Simply-Supported, Non-Composite for dead load.  
Continuous Composite for live load.

Design Unit Stresses:

Class B Concrete (Substructure) f'c = 3,000 psi  
Class B-1 Concrete (Barrier & Pedestrian Curb) f'c = 4,000 psi  
Class B-2 Concrete (Superstructure, except  
Barrier, Ped. Curb and Prestressed I-Girders)f'c = 4,000 psi  
Reinforcing Steel (ASTM A615 Grade 60) fy = 60,000 psi  
Structural Steel HP Pile (ASTM A709 Grade 50) fy = 50,000 psi  
Structural Carbon Steel (ASTM A709 Grade 36) fy = 36,000 psi  
For Prestressed I-Girder Stresses, see Sheets No. 14 & 15.

Neoprene Pads:

Plain and Laminated Neoprene Bearing Pads shall be 60 durometer and shall be in accordance with Sec. 716.

Joint Filler:

All joint filler shall be in accordance with Sec. 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

Minimum clearance between galvanized piles and uncoated (plain) reinforcing steel including bar supports shall be 1 1/2". Nylon, PVC, or polyethylene spacers shall be used to maintain clearance. Nylon cable ties shall be used to bind the spacers to the reinforcement.

Traffic Handling:

Structure to remain closed during construction.  
Traffic to be maintained on other routes during construction.  
See roadway plans for traffic control.

| Estimated Quantities<br>for Slab on Concrete I-Girder |          |        |
|-------------------------------------------------------|----------|--------|
| Item                                                  |          | Total  |
| Class B-2 Concrete                                    | cu. yard | 155    |
| Reinforcing Steel (Epoxy Coated)                      | pound    | 42,770 |

Notes:

The table of Estimated Quantities for Slab on Concrete I-Girder represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for stay-in-place corrugated steel forms or conventional forms, all concrete, and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.

Slab shall be cast-in-place with conventional forms or stay-in-place corrugated steel forms. Precast panels will not be permitted.

| Estimated Quantities                          |             |         |           |
|-----------------------------------------------|-------------|---------|-----------|
| Item                                          |             | Substr. | Superstr. |
| Class 1 Excavation                            | cu. yard    | 120     |           |
| Removal of Bridges (S2220012)                 | lump sum    |         | 1         |
| Bridge Approach Slab (Minor)                  | sq. yard    |         | 159       |
| Pedestrian Fence (Structures)                 | linear foot |         | 135       |
| (72 in.) Pedestrian Fence (Structures)        | linear foot |         | 127       |
| Galvanized Structural Steel Pile (12 in.)     | linear foot | 400     |           |
| Galvanized Structural Steel Pile (14 in.)     | linear foot | 480     |           |
| Pre-Bore for Piling                           | linear foot | 646     |           |
| Pile Point Reinforcement                      | each        | 22      |           |
| Class B Concrete (Substructure)               | cu. yard    | 63.6    |           |
| Slab on Concrete I-Girder                     | sq. yard    |         | 463       |
| Type D Barrier                                | linear foot |         | 278       |
| Pedestrian Curb                               | linear foot |         | 128       |
| Type 2 (32 in.) Prestressed Concrete I-Girder | linear foot |         | 431       |
| Reinforcing Steel (Bridges)                   | pound       | 3900    |           |
| Fabricated Structural Carbon Steel (Misc.)    | pound       | 2880    |           |
| Slab Drain                                    | each        |         | 9         |
| Slab Drain with Grate                         | each        |         | 3         |
| Vertical Drain at End Bents                   | each        |         | 2         |
| Plain Neoprene Bearing Pad                    | each        |         | 8         |
| Laminated Neoprene Bearing Pad                | each        |         | 16        |
|                                               |             |         |           |
|                                               |             |         |           |
|                                               |             |         |           |

Notes:

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete I-Girder.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete I-Girder.

All reinforcement in the intermediate bent concrete diaphragms except reinforcement embedded in the beam cap is included in the Estimated Quantities for Slab on Concrete I-Girder.

All concrete above the intermediate beam cap is included in the Estimated Quantities for Slab on Concrete I-Girder.

The cost of furnishing, galvanizing, and installing steel sway bracing on piles at the intermediate bents will be considered completely covered by the contract unit price for Fabricated Structural Carbon Steel (Misc.).

| Foundation Data   |                                              |             |             |             |             |
|-------------------|----------------------------------------------|-------------|-------------|-------------|-------------|
| Type              | Design Data                                  | Bent Number |             |             |             |
|                   |                                              | 1           | 2           | 3           | 4           |
| Load Bearing Pile | Pile Type and Size                           | HP12x53     | HP14x73     | HP14x73     | HP12x53     |
|                   | Number                                       | 5           | 6           | 6           | 5           |
|                   | Approximate Length Per Each                  | ft          | 40          | 40          | 40          |
|                   | Pile Point Reinforcement                     | ea          | All         | All         | All         |
|                   | Min. Galvanized Penetration (Elev.)          | ft          | Full Length | Full Length | Full Length |
|                   | Est. Max. Scour Depth (Elev.)                | ft          | -           | *           | *           |
|                   | Minimum Tip Penetration (Elev.)              | ft          | 752         | 752         | 752         |
|                   | Criteria for Min. Tip Penetration            | **          | **          | **          | **          |
|                   | Pile Driving Verification Method             | DF          | DF          | DF          | DF          |
|                   | Resistance Factor                            | 0.4         | 0.4         | 0.4         | 0.4         |
|                   | Minimum Nominal Axial Compressive Resistance | kip         | 440         | 396         | 396         |

Minimum Nominal Axial Compressive Resistance =  $\frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

DF = FHWA - Modified Gates Dynamic Pile Formula

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

Piles are to be placed in prebored holes and driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702. When pile refusal on rock occurs as approved by the engineer, the minimum nominal axial compressive resistance is verified and no additional pile driving verification method is required.

\* Piles are located within the Type 2 Rock Blanket on spill slopes.

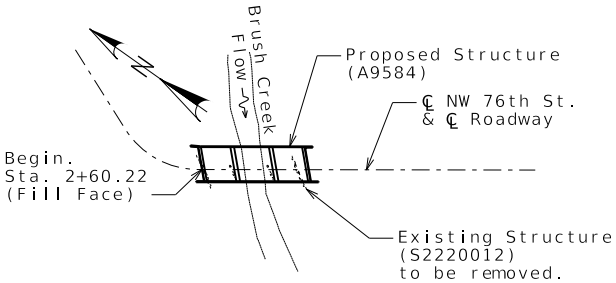
\*\* Penetrate weathered shale or soft rock to bear on sound limestone.

Prebore for piles at all bents to elevation 752.0.

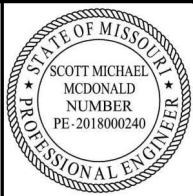
List of Drawings

| SHEET NO. | DESCRIPTION                                          |
|-----------|------------------------------------------------------|
| 1.        | GENERAL PLAN & ELEVATION                             |
| 2.        | GENERAL NOTES & QUANTITIES                           |
| 3.        | DETAILS OF END BENT NO. 1                            |
| 4.        | DETAILS OF END BENT NO. 1                            |
| 5.        | DETAILS OF END BENT NO. 1                            |
| 6.        | DETAILS OF END BENT NO. 1                            |
| 7.        | VERTICAL DRAIN AT END BENTS                          |
| 8.        | DETAILS OF INTERMEDIATE BENT NO. 2                   |
| 9.        | DETAILS OF INTERMEDIATE BENT NO. 3                   |
| 10.       | DETAILS OF END BENT NO. 4                            |
| 11.       | DETAILS OF END BENT NO. 4                            |
| 12.       | DETAILS OF END BENT NO. 4                            |
| 13.       | DETAILS OF END BENT NO. 4                            |
| 14.       | I-GIRDERS - SPANS (1-2) AND (3-4)                    |
| 15.       | I-GIRDERS - SPAN (2-3)                               |
| 16.       | DETAILS OF DIAPHRAGM AT INTERMEDIATE BENTS NO. 2 & 3 |
| 17.       | SLAB DRAINS                                          |
| 18.       | GIRDER CAMBER DIAGRAM & MISC. SLAB DETAILS           |
| 19.       | SLAB PLAN                                            |
| 20.       | SLAB SECTION & DETAILS                               |
| 21.       | TYPE D BARRIER                                       |
| 22.       | TYPE D BARRIER AT END BENTS (LEFT)                   |
| 23.       | TYPE D BARRIER AT END BENTS (RIGHT)                  |
| 24.       | PEDESTRIAN CHAIN LINK FENCE ON PEDESTRIAN CURB       |
| 25.       | PEDESTRIAN CHAIN LINK FENCE                          |
| 26.       | PEDESTRIAN CURB                                      |
| 27.       | BRIDGE APPROACH SLAB (MINOR)                         |
| 28.       | BENDING DIAGRAMS AND REINFORCING STEEL TOTALS        |
| 29.       | BILL OF REINFORCING STEEL                            |
| 30.       | BILL OF REINFORCING STEEL                            |
| 31.       | "AS BUILT PILE" DATA                                 |
| 32.       | BORING DATA                                          |
| 33.       | BORING DATA                                          |
| 34.       | BORING DATA                                          |

| Hydrologic Data                          |
|------------------------------------------|
| Drainage Area = 10.2 mi <sup>2</sup>     |
| Design Flood Frequency = 25 years        |
| Design Flood Discharge = 7600 cfs        |
| Design Flood (D.F.) Elevation = 788.4    |
| Base Flood (100-year)                    |
| Base Flood Elevation = 789.6             |
| Base Flood Discharge = 10,043 cfs        |
| Estimated Backwater = 1.0 ft             |
| Average Velocity thru Opening = 9.2 ft/s |
| Freeboard (50-year)                      |
| Freeboard = 2.1 ft                       |
| Roadway Overtopping                      |
| Overtopping Flood Discharge = N/A        |
| Overtopping Flood Frequency > 500 year   |
| 500-Year Flood Elevation = 791.1         |



LOCATION SKETCH



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ELECTRONICALLY.

DATE PREPARED  
07/28/2025

ROUTE STATE  
NW 76th MO

DISTRICT SHEET NO.  
BR 2

COUNTY  
PLATTE

JOB NO.  
JKU0238

CONTRACT ID.

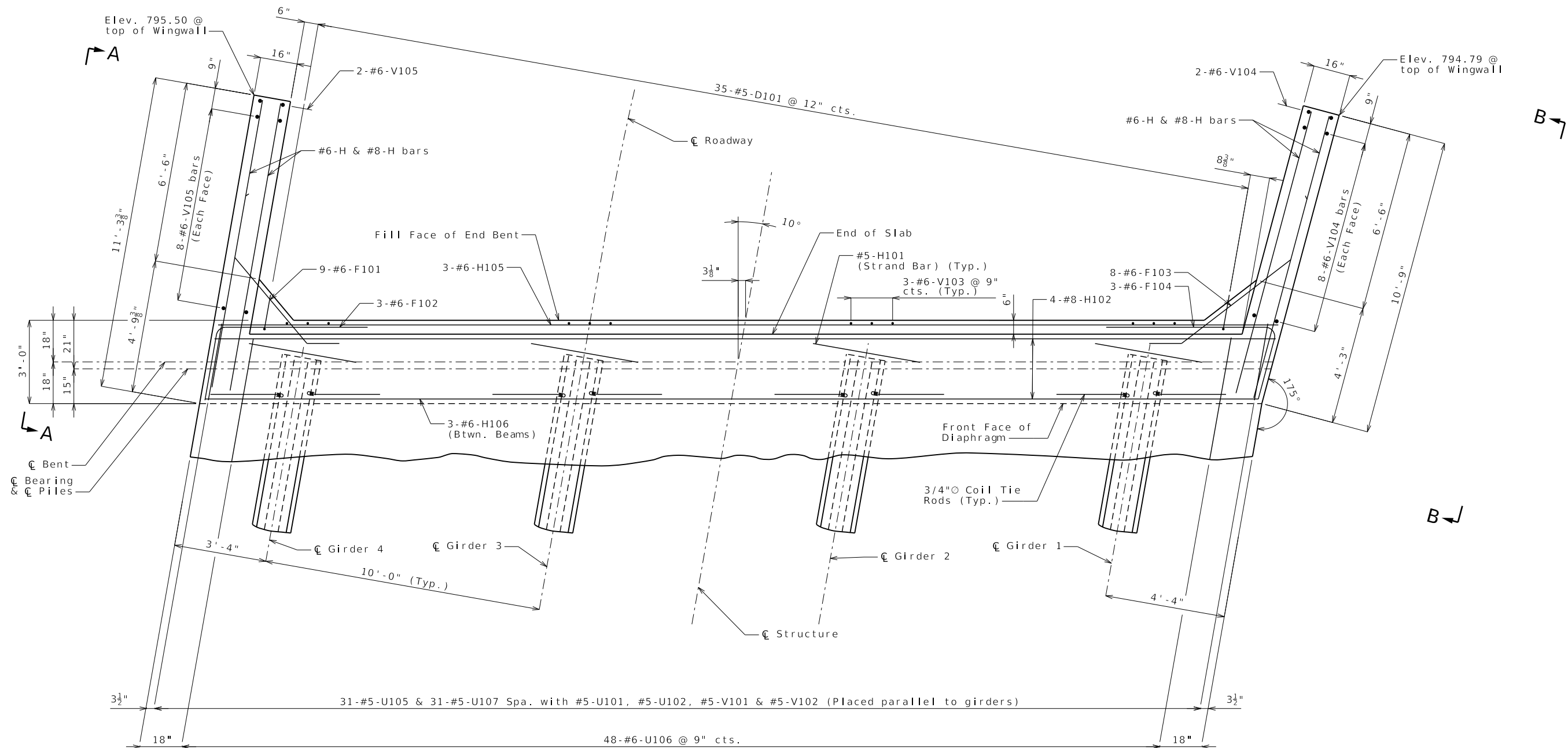
PROJECT NO.

BRIDGE NO.  
A9584

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MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION  
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

VEENSTRA & KIMM INC.  
9788 N Ash Ave. Kansas City, Missouri 64157  
816-781-6182 816-781-0643 (FAX)  
Certificate of Authority No. 2002006347



PART PLAN

Note: All U bars and V bar pairs in the End Bent shall be placed parallel to the girders.

- NOTES:
- All concrete in the end bent above top of beam and below top of slab shall be Class B-2.
- Strands at end of the beams shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.
- For location of coil tie rods and #5-H101 (strand tie bar), see Sheets No. 14 and 15.
- For Elevation A-A and Elevation B-B see Sheet No. 6.
- For details of Vertical Drain at End Bent, see Sheet No. 7.
- For details of Bridge Approach Slab, see Sheets No. 27.
- For details of End Bent No. 1 not shown, see Sheets No. 4, 5 & 6.

| Substructure Quantity Table for End Bent No. 1 |             |          |
|------------------------------------------------|-------------|----------|
| Item                                           |             | Quantity |
| Class 1 Excavation                             | cu. yard    | 55       |
| Galvanized Structural Steel Piles (12 in.)     | linear foot | 200      |
| Pre-Bore for Piling                            | linear foot | 185      |
| Pile Point Reinforcement                       | each        | 5        |
| Class B Concrete (Substructure)                | cu. yard    | 16.6     |

These quantities are included in the Estimated Quantities table on Sheet No. 2.

DETAILS OF END BENT NO. 1

STATE OF MISSOURI

SCOTT MICHAEL MCDONALD

NUMBER PE-2018000240

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 07/28/2025

ROUTE NW 76th

DISTRICT BR

STATE MO

SHEET NO. 3

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

MODOT

VEENSTRA & KIMM INC.

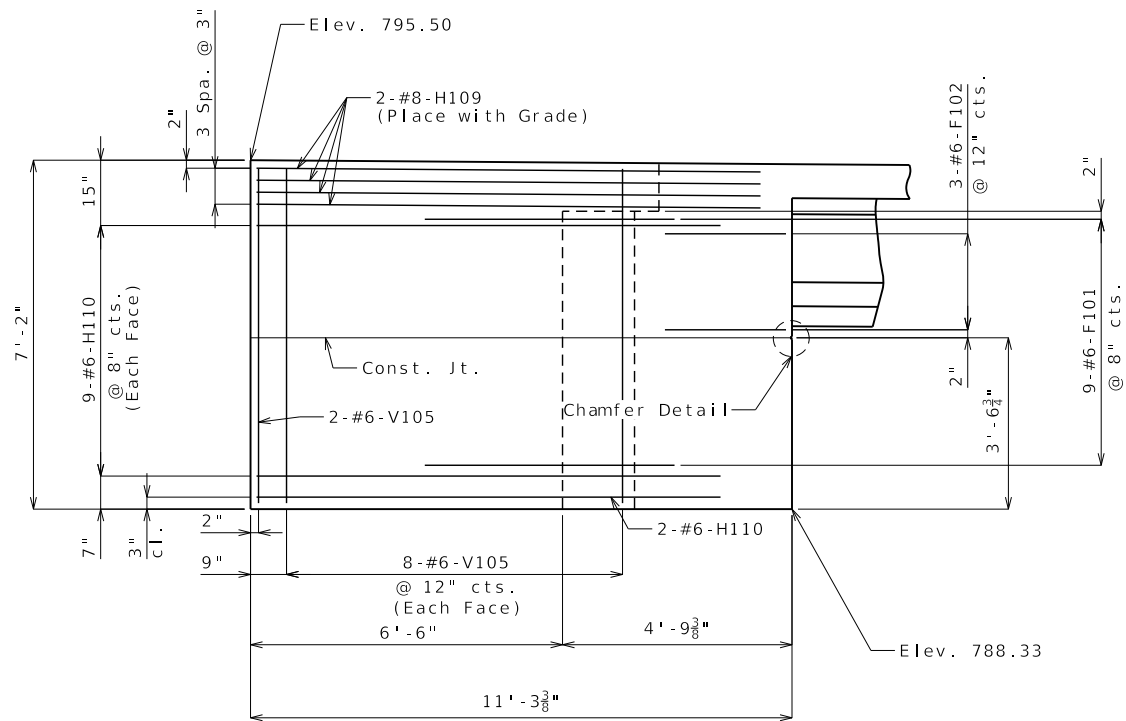
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816-781-6182 816-781-0643 (FAX)

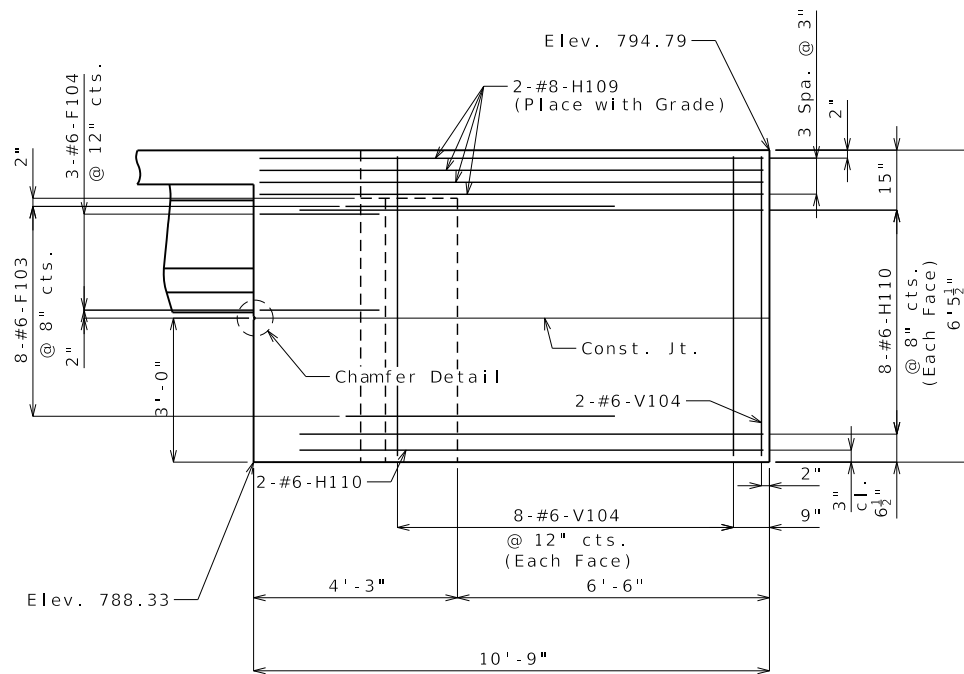
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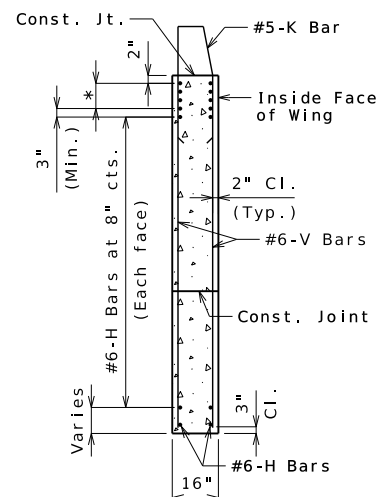
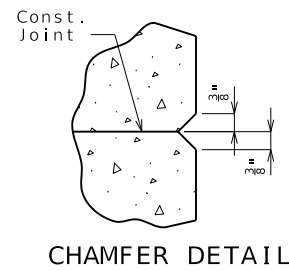




ELEVATION A-A

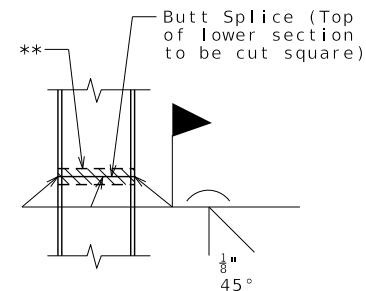


ELEVATION B-B



TYPICAL SECTION  
THRU WING

\* #8-H Bars at 3" cts.  
(Each face)(Place with grade)



STEEL PILE SPLICE  
(If required)

\*\* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.

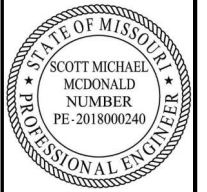
NOTES:

For location of Elevation A-A and Elevation B-B, see Sheet No. 3.

For details of End Bent No. 1 not shown, see Sheets No. 3, 4, & 5.

For reinforcement of the barrier, see Sheets No. 22 & 23.

For reinforcement of the pedestrian curb, see Sheet No. 26.



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DATE PREPARED  
07/28/2025

ROUTE STATE  
NW 76th MO

DISTRICT SHEET NO.  
BR 6

COUNTY  
PLATTE

JOB NO.  
JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO.  
A9584

| DATE | DESCRIPTION |
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MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

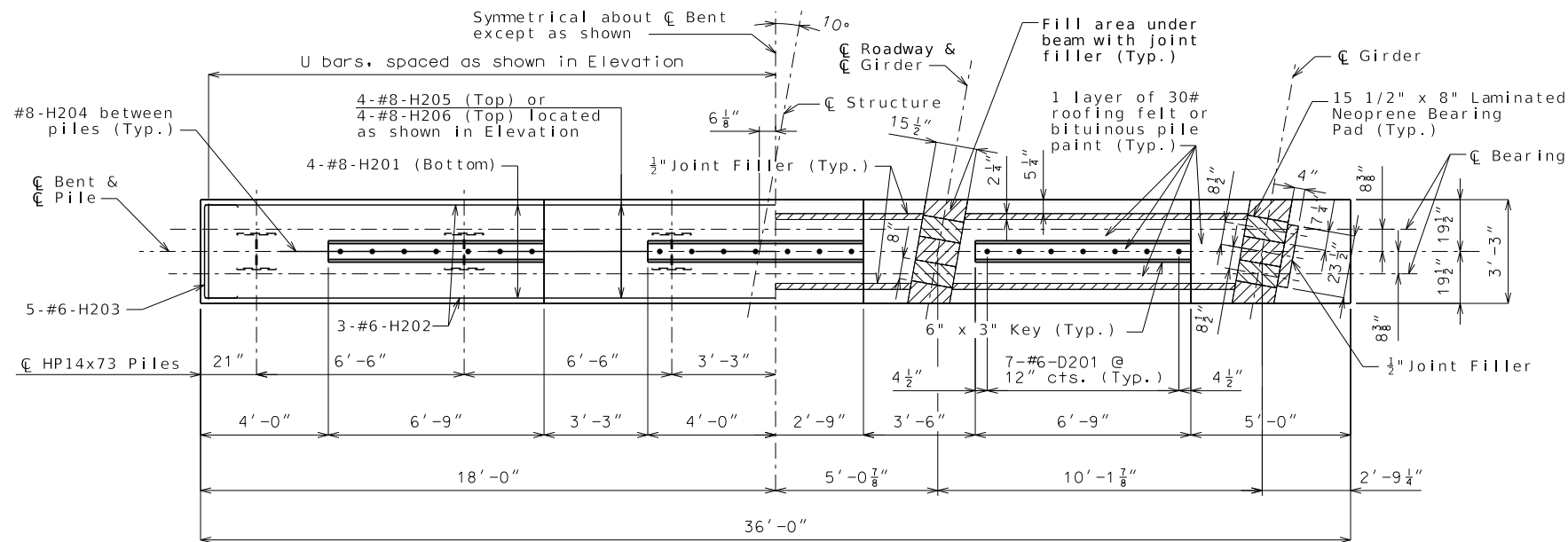
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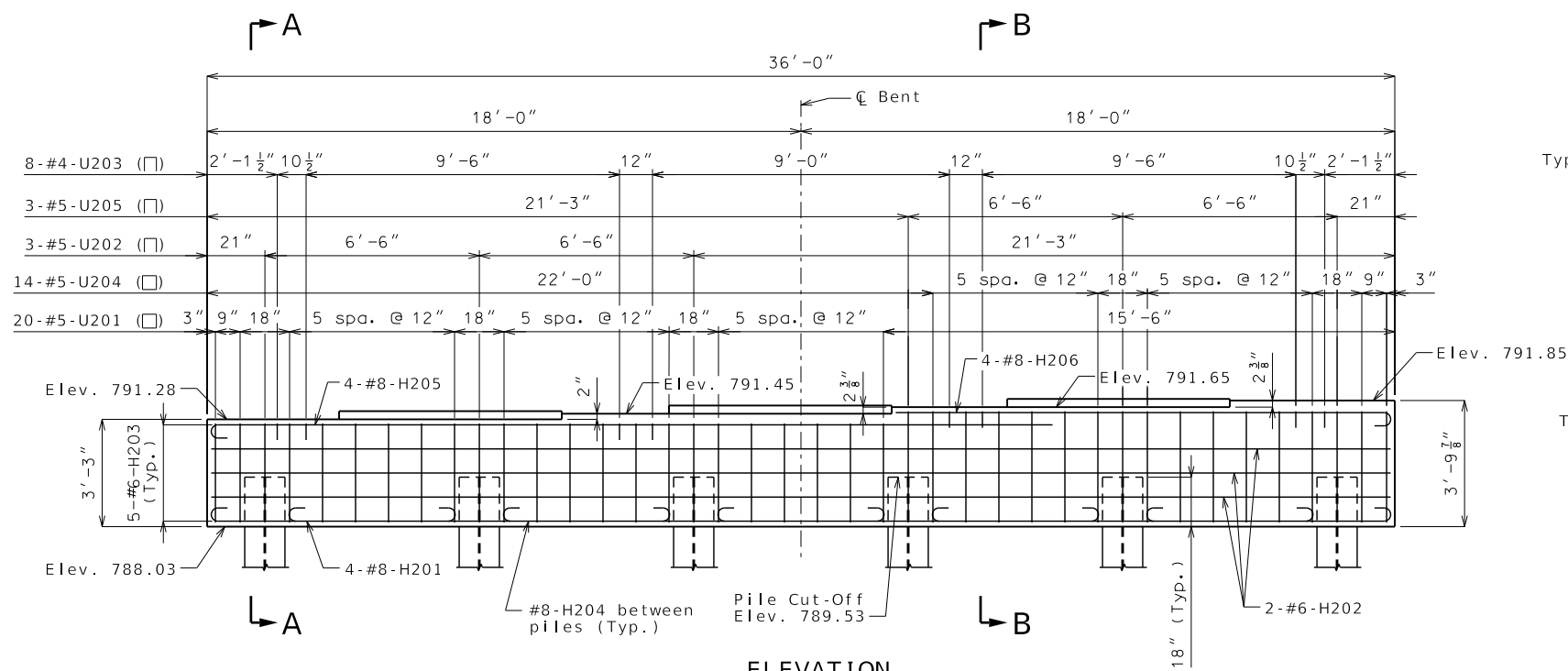
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Certificate of Authority No. 2002006947



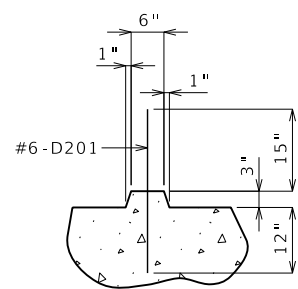


PLAN



ELEVATION

(Looking Ahead Station)

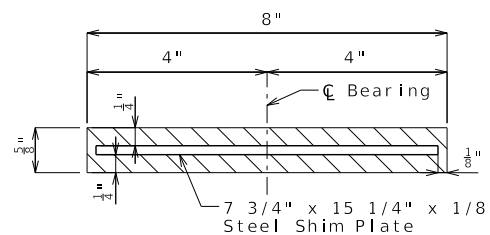


SECTION THRU KEY

Notes:

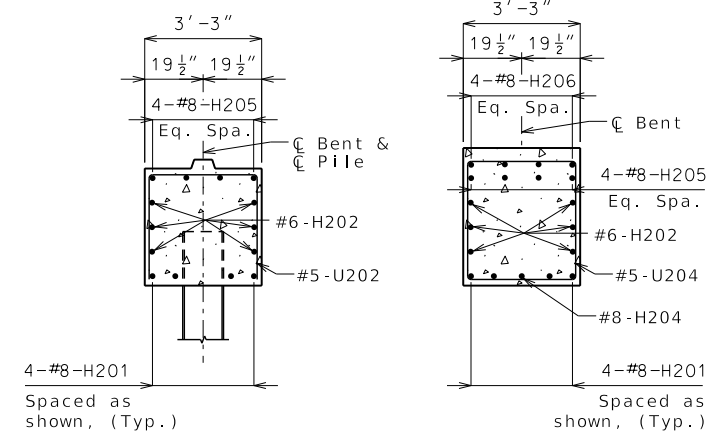
Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

For steps 2 inches or more, use 2 1/4 x 1/2 inch joint filler up vertical face.



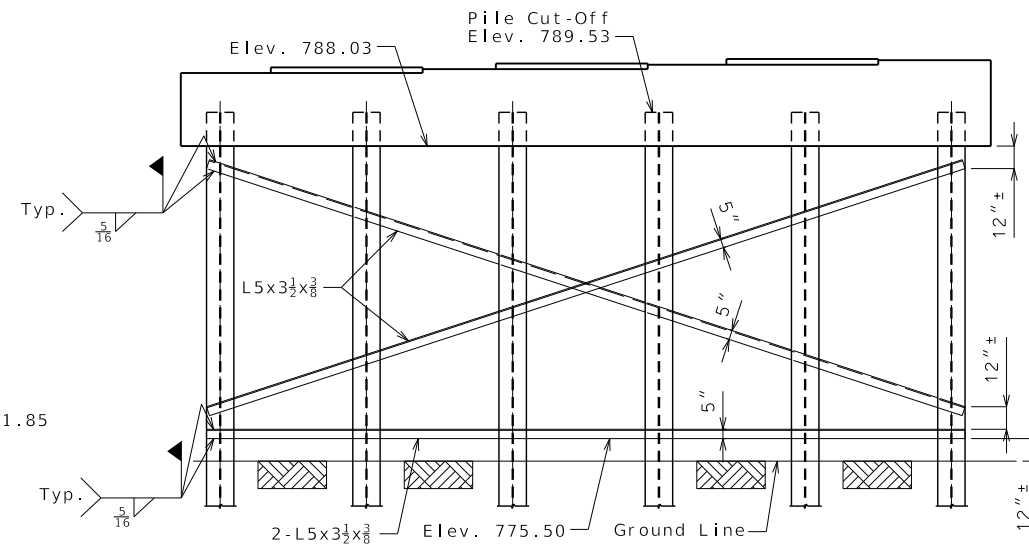
DETAIL OF LAMINATED NEOPRENE BEARING PAD

## DETAILS OF INTERMEDIATE BENT NO. 2



SECTION A-A

SECTION B-B

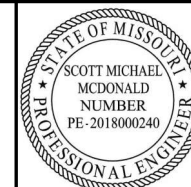


DETAIL OF SWAY BRACING

### Substructure Quantity Table for Bent No. 2

| Item                                       |             | Quantity |
|--------------------------------------------|-------------|----------|
| Galvanized Structural Steel Piles (14 in.) | linear foot | 240      |
| Pre-Bore for Piling                        | linear foot | 138      |
| Pile Point Reinforcement                   | each        | 6        |
| Class B Concrete (Substructure)            | cu. yard    | 15.2     |
| Reinforcing Steel (Bridges)                | pound       | 1950     |
| Fabricated Structural Carbon Steel (Misc.) | pound       | 1440     |

These quantities are included in the Estimated Quantities table on Sheet No. 2.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED

07/28/2025

ROUTE STATE

NW 76th MO

DISTRICT SHEET NO.

BR 8

COUNTY

PLATTE

JOB NO.

JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

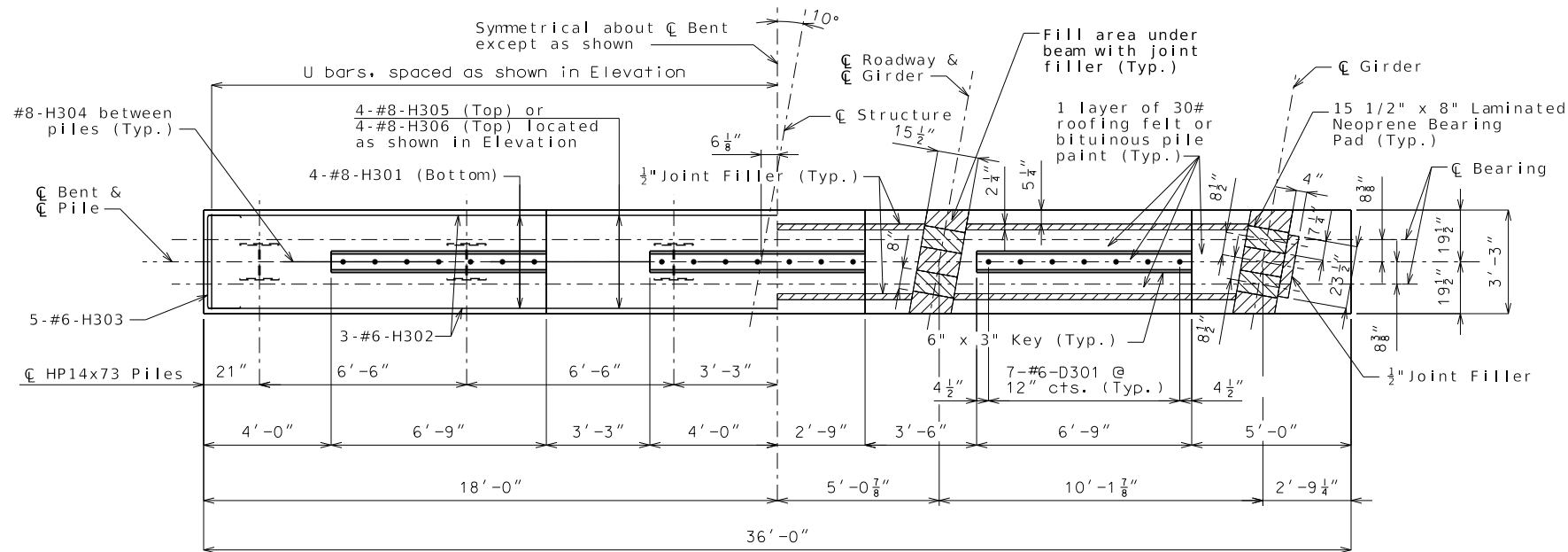
MODOT

VEENSTRA & KIMM INC.

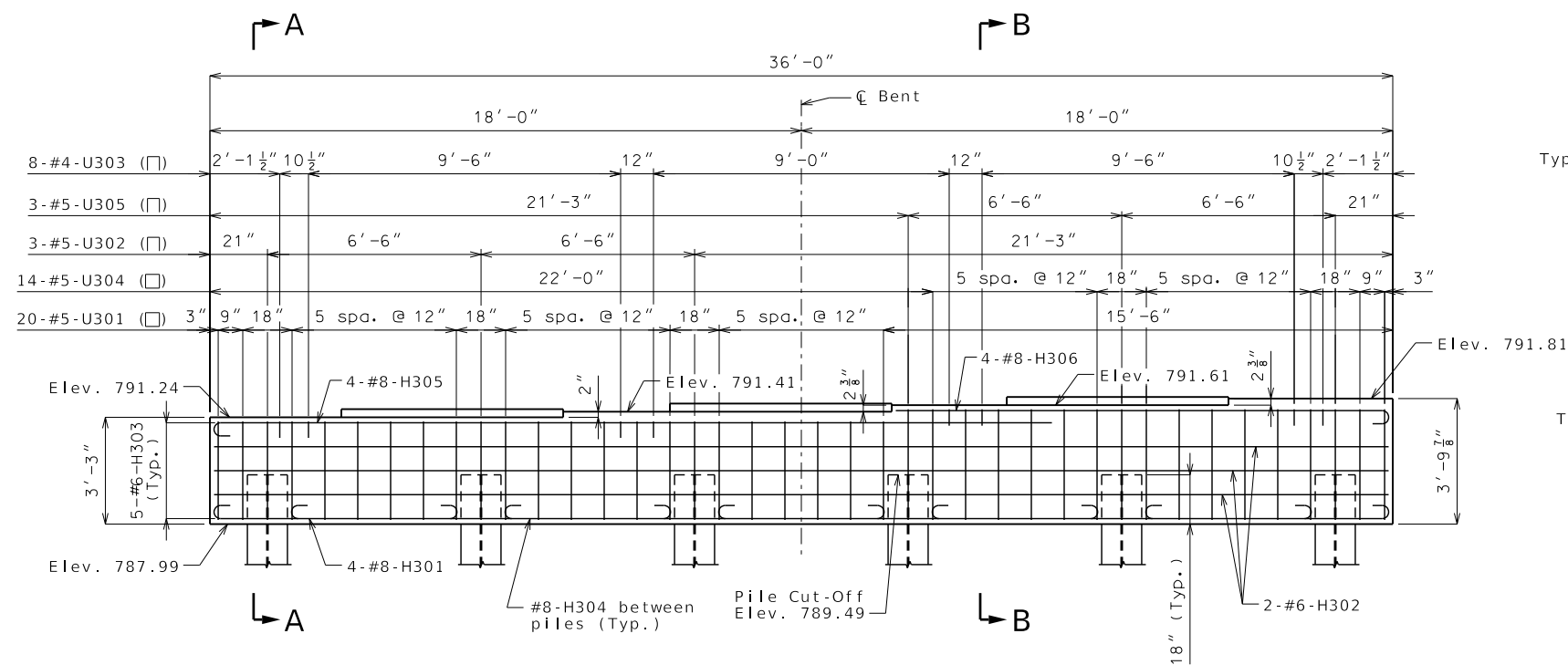
9788 N Ash Ave. Kansas City, Missouri 64157

816-781-6182 816-781-0643 (FAX)

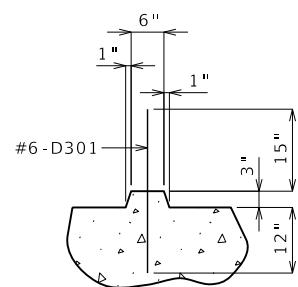
Certificate of Authority No. 200206947



PLAN



ELEVATION  
(Looking Ahead Station)

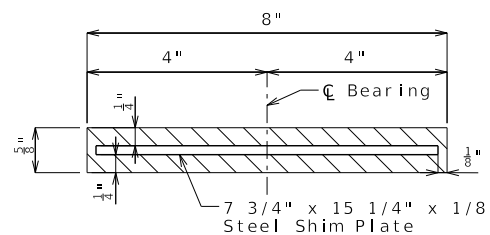


SECTION THRU KEY

Notes:

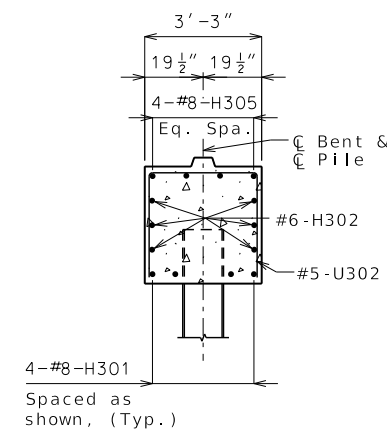
Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inches.

For steps 2 inches or more, use 2 1/4 x 1/2 inch joint filler up vertical face.

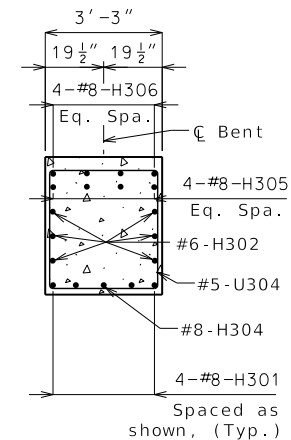


DETAIL OF LAMINATED NEOPRENE BEARING PAD

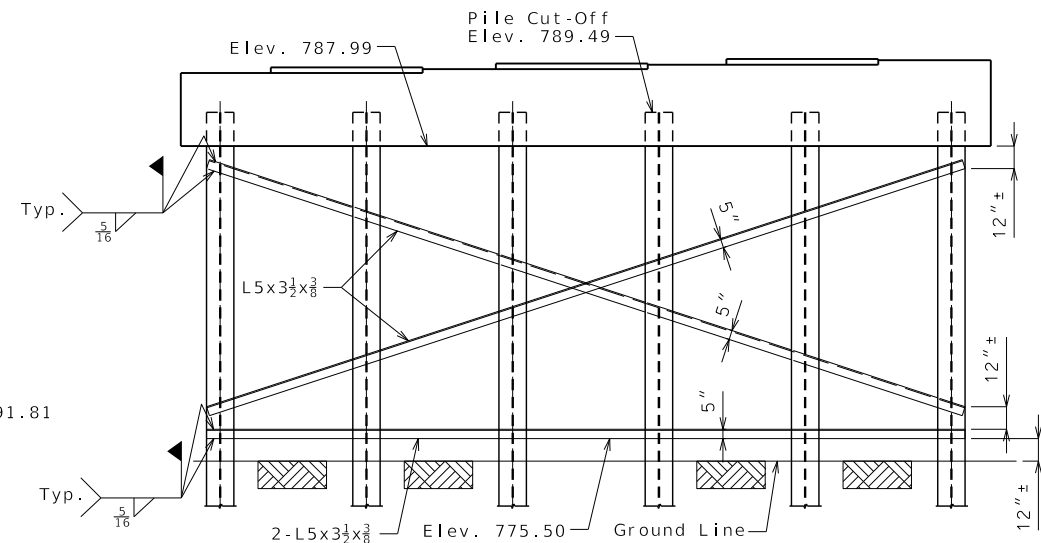
## DETAILS OF INTERMEDIATE BENT NO. 3



SECTION A-A



SECTION B-B

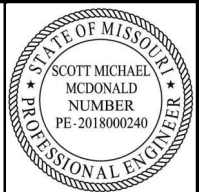


DETAIL OF SWAY BRACING

### Substructure Quantity Table for Bent No. 3

| Item                                       | Quantity        |
|--------------------------------------------|-----------------|
| Galvanized Structural Steel Piles (14 in.) | linear foot 240 |
| Pre-Bore for Piling                        | linear foot 138 |
| Pile Point Reinforcement                   | each 6          |
| Class B Concrete (Substructure)            | cu. yard 15.2   |
| Reinforcing Steel (Bridges)                | pound 1950      |
| Fabricated Structural Carbon Steel (Misc.) | pound 1440      |

These quantities are included in the Estimated Quantities table on Sheet No. 2.



THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED

07/28/2025

ROUTE STATE

NW 76th MO

DISTRICT SHEET NO.

BR 9

COUNTY

PLATTE

JOB NO.

JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

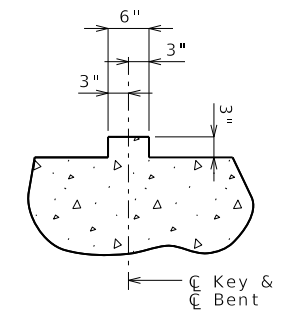
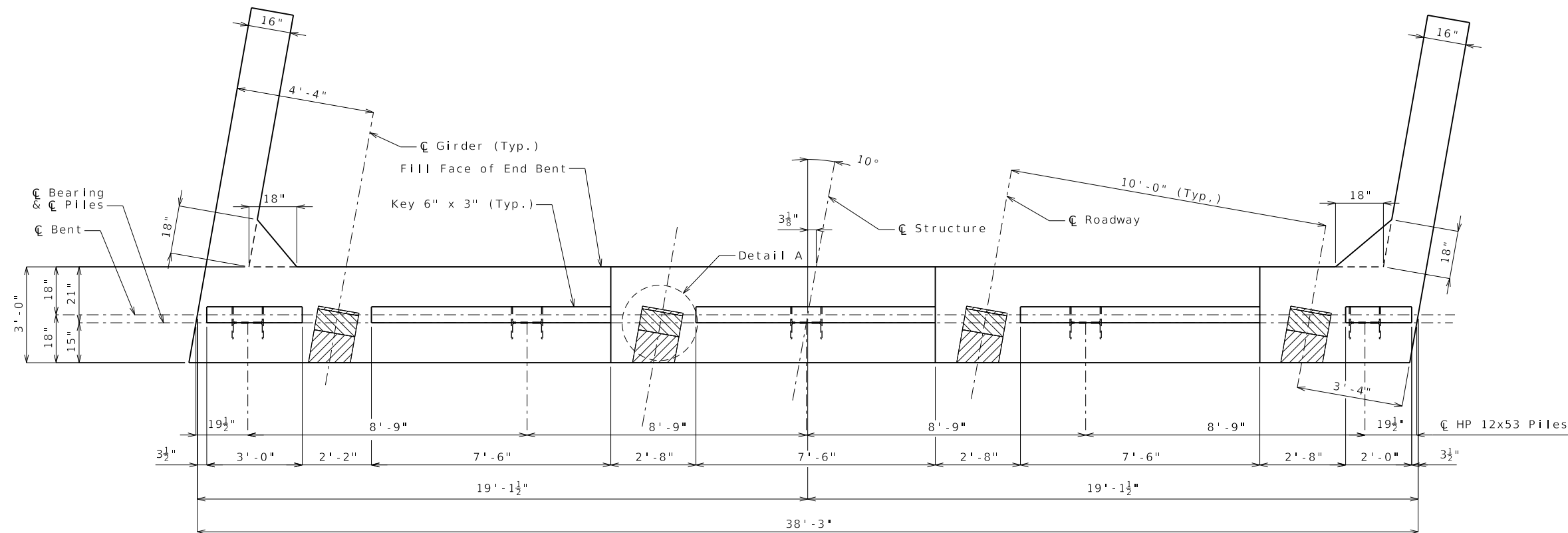
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)



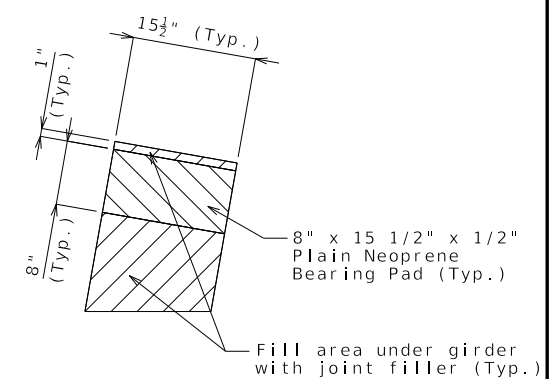
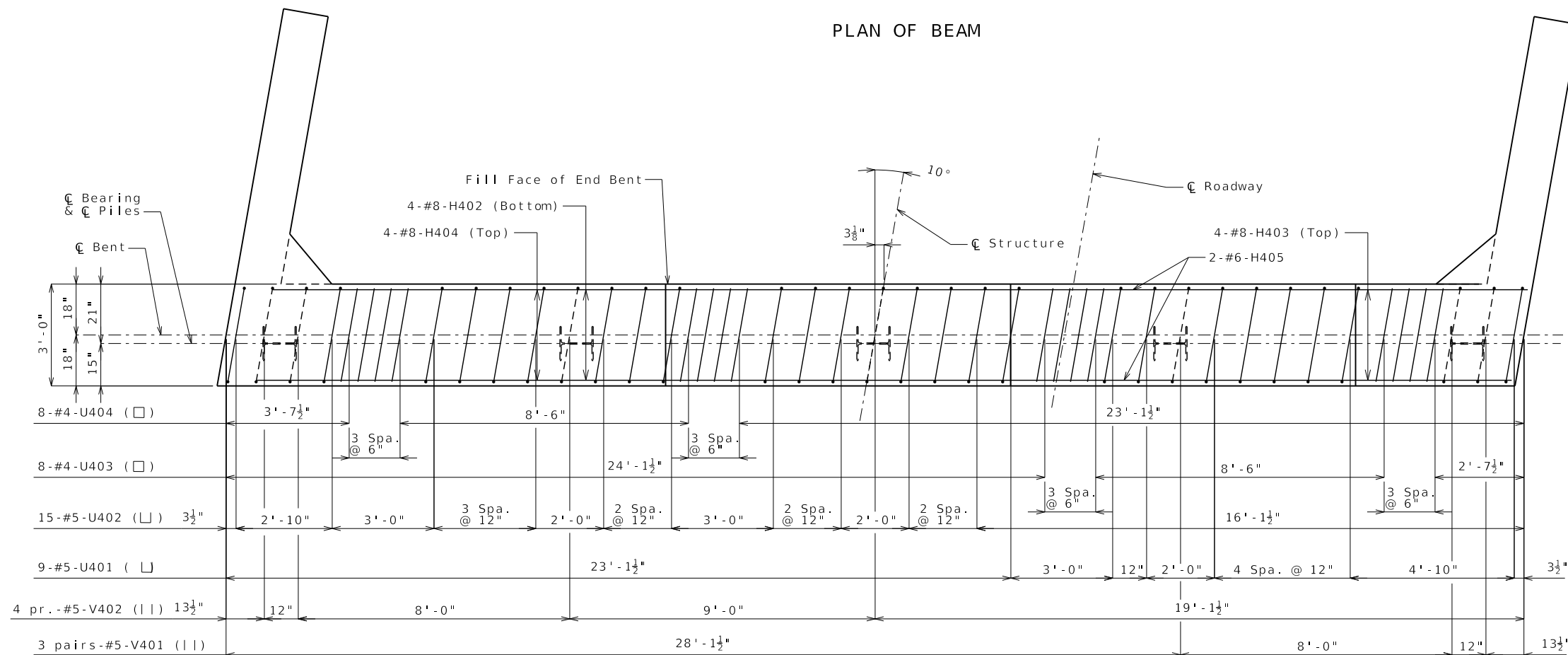
**VEENSTRA & KIMM INC.**

9788 N Ash Ave. Kansas City, Missouri 64157  
816-781-6182 816-781-0643 (FAX)  
Certificate of Authority No. 200206947





SECTION THRU KEY



DETAIL A

### PLAN OF BEAM SHOWING REINFORCEMENT

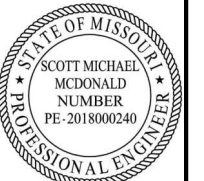
Note: All U bars and V bar pairs in the End Bent shall be placed parallel to the girders.

### DETAILS OF END BENT NO. 4

NOTES:

Reinforcing steel shall be shifted to clear piles. U bars shall clear piles by at least 1 1/2 inch.

For details of End Bent No. 4 not shown,  
see Sheets No. 10, 12, & 13.



THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED

07/28/2025

| ROUTE | STATE |
|-------|-------|
|-------|-------|

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|---------|----|
| NW 76th | MO |
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| DISTRICT | SHEET NO. |
| DD       | 11        |

|    |    |
|----|----|
| BR | 11 |
|----|----|

COUNTY  
PLATTE

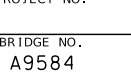
|         |
|---------|
| PLATTE  |
| JOB NO. |

JOB NO.  
IK110238

|              |
|--------------|
| JKU0238      |
| CONTRACT ID. |

CONTRACT ID.

|             |  |
|-------------|--|
| PROJECT NO. |  |
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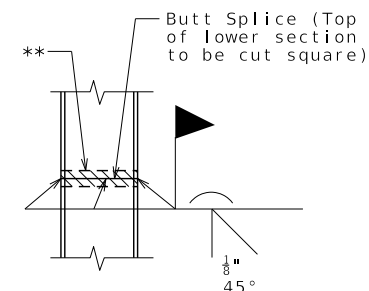
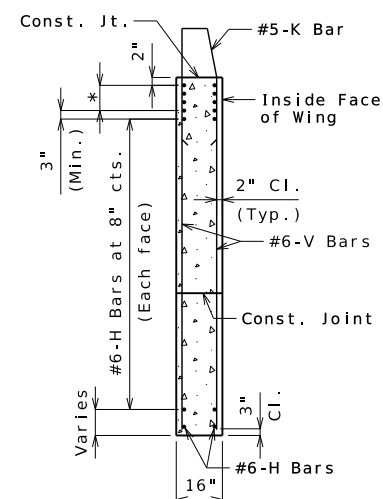
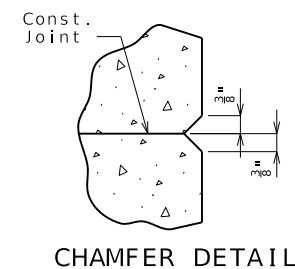
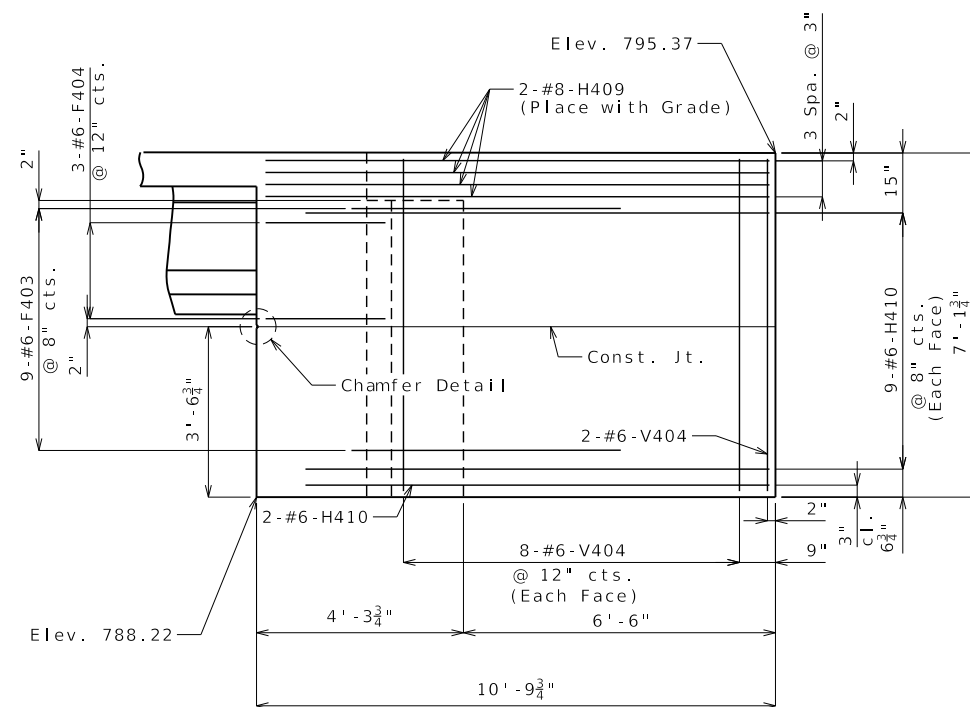
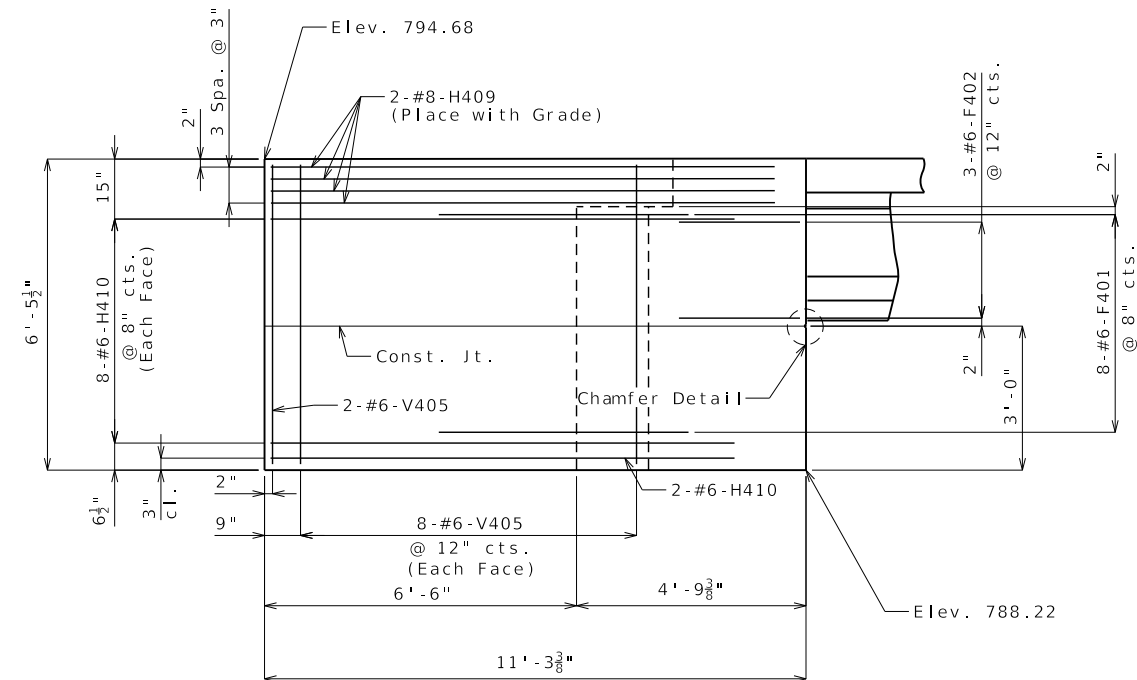
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NOTES:

For details of End Bent No. 4 not shown,  
see Sheets 10, 11 & 13.

[illegible]



\*\* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.

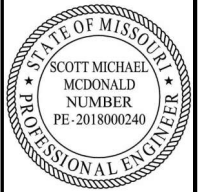
NOTES :

For location of Elevation A-A and  
Elevation B-B, see Sheet No. 10.

For details of End Bent No. 4 not shown,  
see Sheets No. 10, 11 & 12.

For reinforcement of the barrier, see Sheets No. 22 & 23.

For reinforcement of the  
pedestrian curb, see Sheets No. 26.



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DATE PREPARED

07/28/2025

|        |       |
|--------|-------|
| ROUTE  | STATE |
| NW 761 | MO    |

|         |    |
|---------|----|
| NW 76th | MO |
|---------|----|

|          |           |
|----------|-----------|
| DISTRICT | SHEET NO. |
| 55       | 12        |

|    |    |
|----|----|
| BR | 13 |
|----|----|

COUNTY

PLATTE

|         |          |
|---------|----------|
| JOB NO. | 11111111 |
|---------|----------|

JKU0238

|              |
|--------------|
| CONTRACT ID. |
|--------------|

|             |
|-------------|
| PROJECT NO. |
|-------------|

BRIDGE NO.

A9584

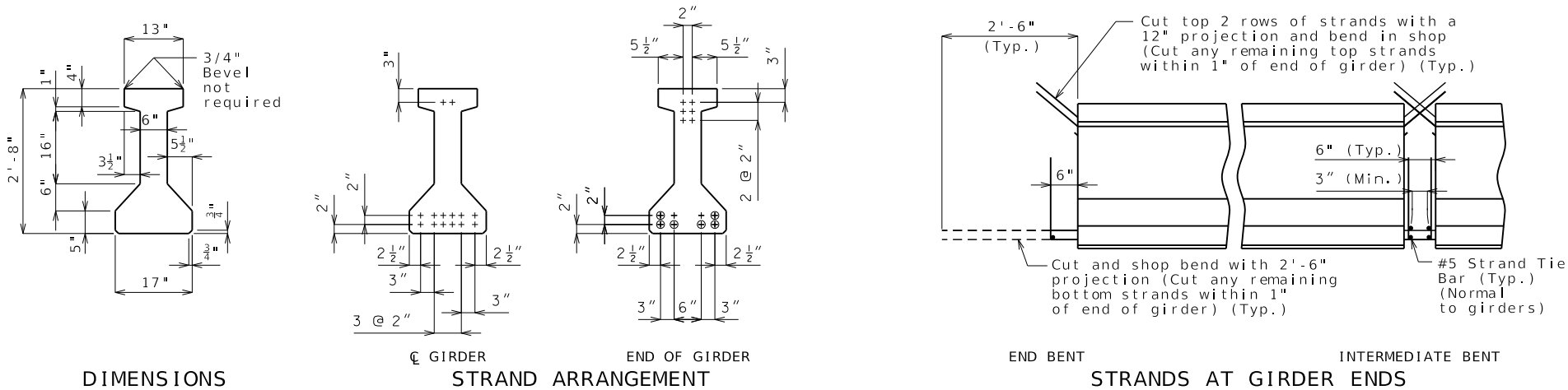
[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

**105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)**



**VEENSTRA  
& KIMM INC.**

7788 N Ash Ave. Kansas City, Missouri 64157  
816-781-6182 816-781-0643 (FAX)  
Certificate of Authority No. 2002006347



| BILL OF REINFORCING STEEL - EACH GIRDER |             |               |       |                 |
|-----------------------------------------|-------------|---------------|-------|-----------------|
| NO.                                     | SIZE & MARK | ACTUAL LENGTH | SHAPE | BENDING DIAGRAM |
| 2                                       | 5 A1        | 33'-10"       | 20    |                 |
| 92                                      | 5 B1        | 4'-1"         | 11S   |                 |
| 16                                      | 6 B2        | 3'-5"         | 11S   |                 |
| 54                                      | 4 C1        | 13"           | 10S   |                 |
| 108                                     | 4 D1        | 2'-3"         | 9S    |                 |

All dimensions are out to out.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

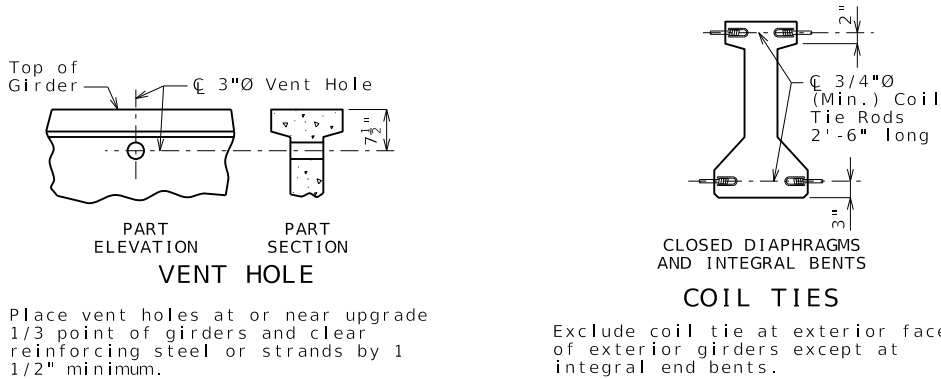
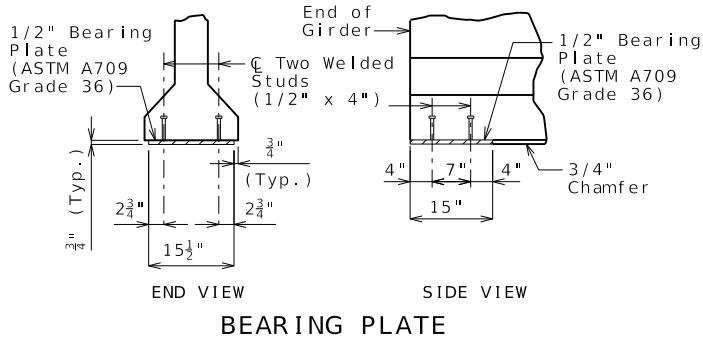
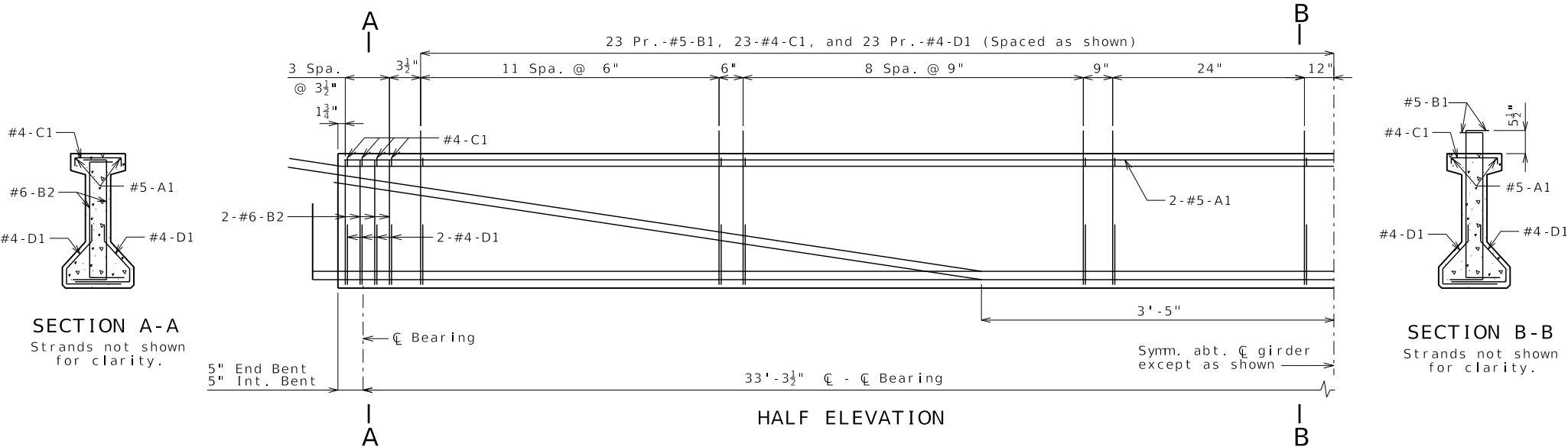
Actual lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch.

All reinforcement shall be Grade 60.

The two D1 bars may be furnished as one bar at the fabricator's option.

All B1 bars shall be epoxy coated.



General Notes:

Concrete for prestressed girders shall be Class A-1 with f'c = 6000 psi and f'ci = 4500 psi.

Use 14 strands, 1/2"Ø Grade 270, with an initial prestress force of 434 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

Exterior and interior girders are the same except: coil ties, coil inserts for slab drains.

For Girder Camber Diagram, see Sheet No. 18.

For location of coil inserts at slab drains, see Sheet No. 17.

For location of coil ties at concrete bent diaphragms, see Sheets No. 3, 10 & 16.

STATE OF MISSOURI

SCOTT MICHAEL MCDONALD

PROFESSIONAL ENGINEER

NUMBER PE-2018000240

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 07/28/2025

ROUTE NW 76th

DISTRICT BR

STATE MO

SHEET NO. 14

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

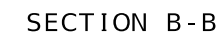
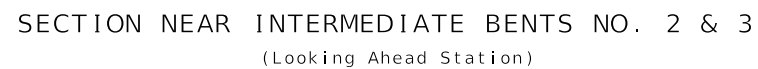
VEENSTRA & KIMM INC.

9788 N Ash Ave. Kansas City, Missouri 64157

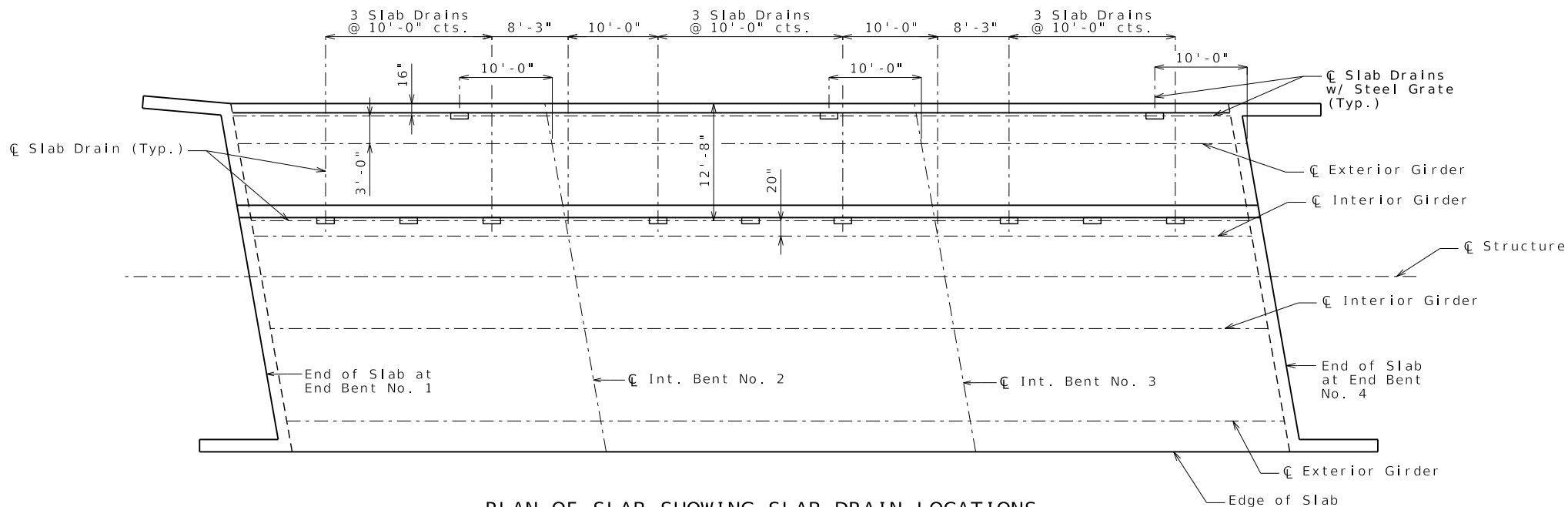
816-781-6182 816-781-0643 (FAX)

Certificate of Authority No. 2002006347

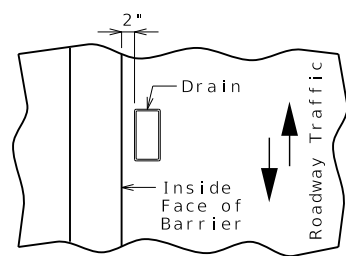




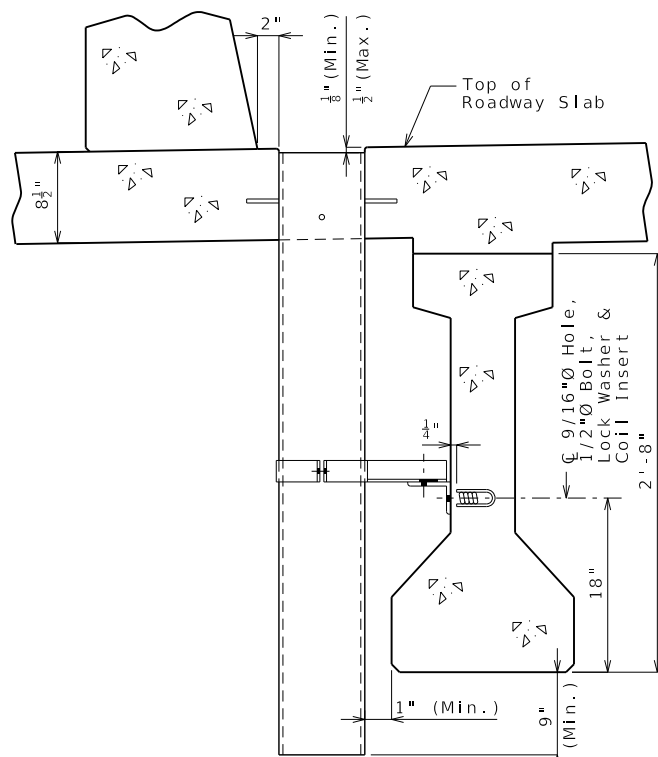
Slab reinforcing bars not shown for clarity.  
For location of strand tie bars, see Sheets No. 14 & 15.  
For location and details of Coil Tie Rods, see Sheets No. 14 & 15.  
Diaphragms at intermediate bents shall be built vertical.  
All U bars in diaphragm are to be placed parallel to C roadway.



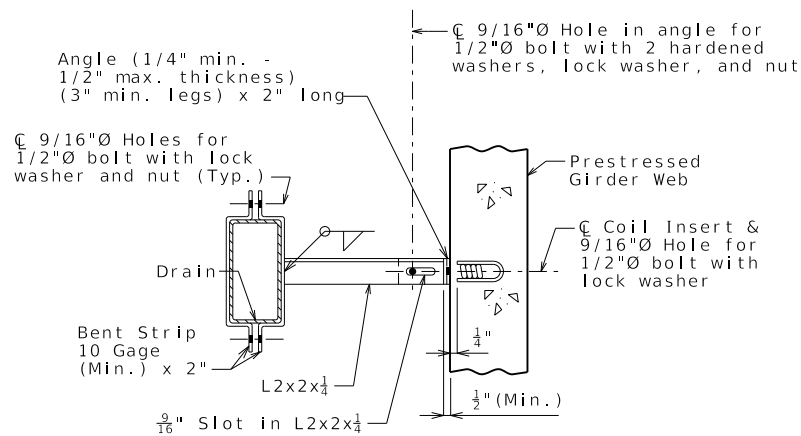
PLAN OF SLAB SHOWING SLAB DRAIN LOCATIONS



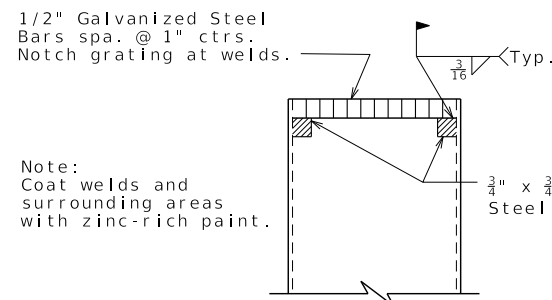
PART PLAN OF SLAB AT DRAIN



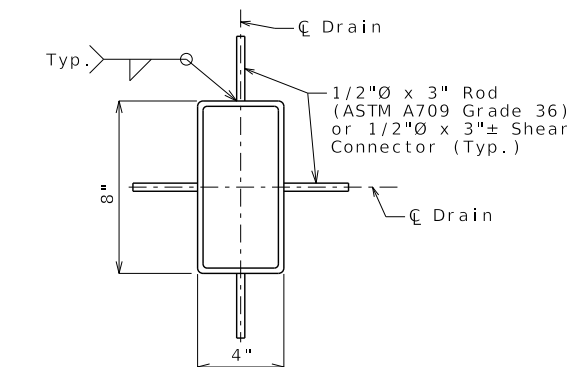
PART SECTION NEAR DRAIN



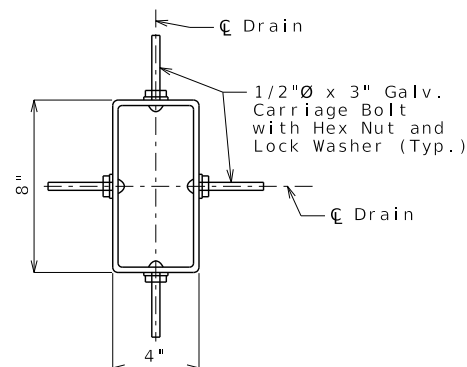
PART SECTION SHOWING BRACKET ASSEMBLY



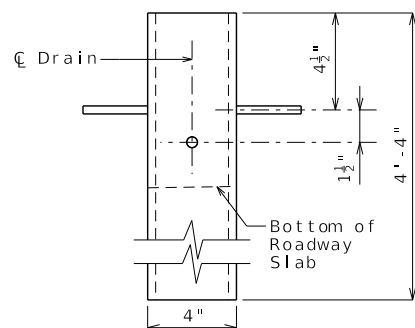
SLAB DRAIN WITH STEEL GRATE



PLAN OF STEEL DRAIN OPTION



PLAN OF FRP DRAIN OPTION



ELEVATION OF DRAIN

## General Notes:

Contractor shall have the option to construct either steel or FRP slab drains. All drains shall be of same type.

Slab drain bracket assembly shall be ASTM A709 Grade 36 steel.

Locate drains in slab by dimensions shown in Part Section Near Drain.

Reinforcing steel shall be shifted to clear drains.

The coil inserts and bracket assembly shall be galvanized in accordance with ASTM A123.

All bolts, hardened washers, lock washers and nuts shall be galvanized in accordance with AASHTO M 232 (ASTM A153), Class C.

All 1/2"Ø bolts shall be ASTM A307.

Shop drawings will not be required for the slab drains and the bracket assembly.

The coil insert required for the bracket assembly attachment shall be located on the prestressed girder shop drawings.

Coil inserts shall have a concrete pull-out strength (ultimate load) of at least 2,500 pounds in 5,000 psi concrete.

The bolt required to attach the slab drain bracket assembly to the prestressed girder web shall be supplied by the prestressed girder fabricator.

## Notes for Steel Drain:

Slab drains may be fabricated of either 1/4" welded sheets of ASTM A709 Grade 36 steel or from 1/4" structural steel tubing ASTM A500 or A501.

Outside dimensions of drains are 8" x 4".

The drains shall be galvanized in accordance with ASTM A123.

## Notes for FRP Drain:

Drains shall be machine filament-wound thermosetting resin tubing meeting the requirements of ASTM D2996 with the following exceptions:

Shape of drains shall be rectangular with outside nominal dimensions of 8" x 4".

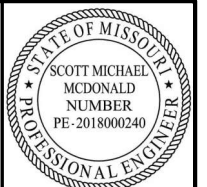
Minimum reinforced wall thickness shall be 1/4 inch.

The resin used shall be ultraviolet (UV) resistant and/or have UV inhibitors mixed throughout. Drains may have an exterior coating for additional UV resistance.

The color of the slab drain shall be gray (Federal Standard 26373). The color shall be uniform throughout the resin and any coating used.

The combination of materials used in the manufacture of the drains shall be tested for UV resistance in accordance with ASTM D4329 Cycle A. The representative material shall withstand at least 500 hours of testing with only minor discoloration and without any physical deterioration. The contractor shall furnish the results of the required ultraviolet testing prior to acceptance of the slab drains.

At the contractor's option, drains may be field cut. The method of cutting FRP slab drain shall be as recommended by the manufacturer to ensure a smooth, chip free cut.



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07/28/2025

ROUTE NW 76th STATE MO

DISTRICT BR SHEET NO. 17

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

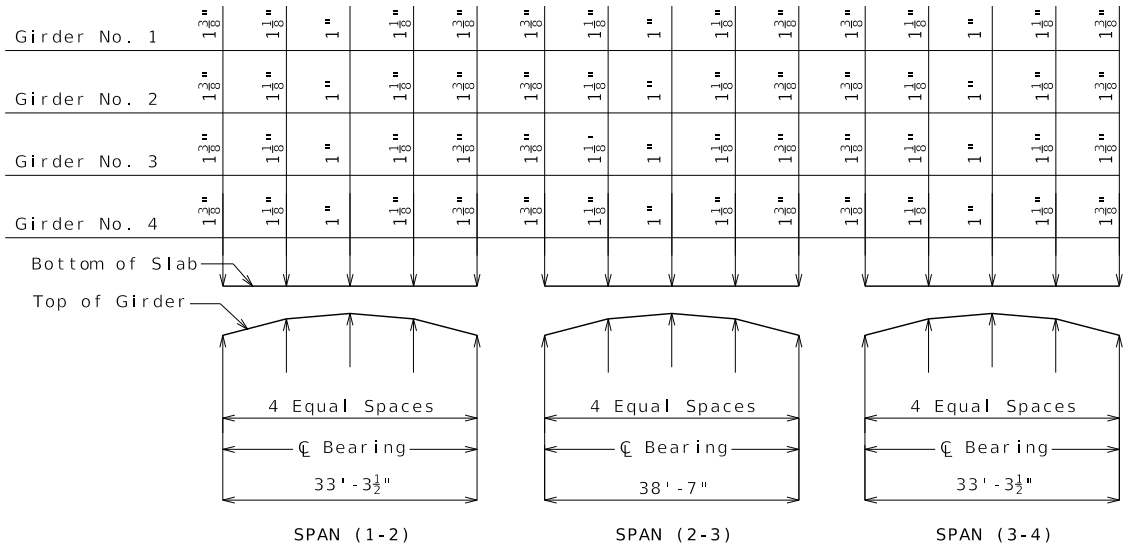
MODOT

VEENSTRA & KIMM INC.

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816-781-6182 816-781-0643 (FAX)

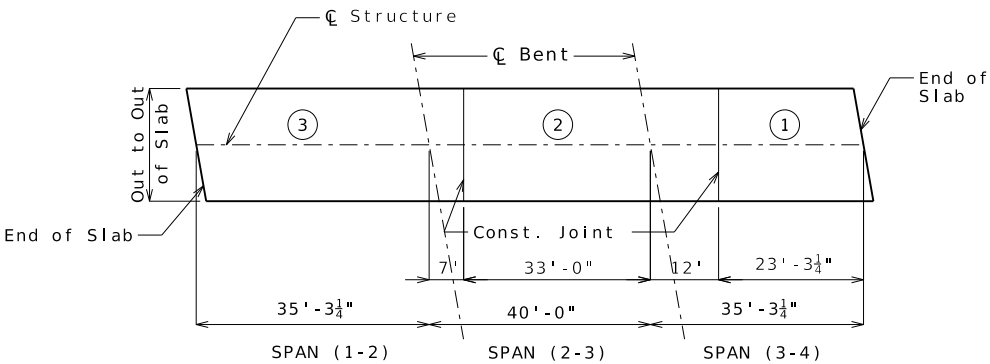
Certificate of Authority No. 2002006347



THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)

If girder camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. The haunch shall be limited to ensure the projecting girder reinforcement is embedded in to slab at least 2 inches. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete I-Girder.

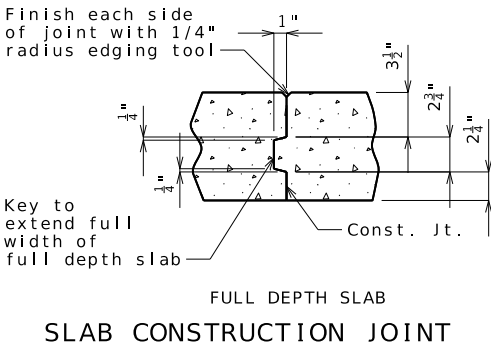


|                                                                                                               | Sequence of Pours |        |          | Min. Rate of Pour<br>Cu. Yds./Hr. |
|---------------------------------------------------------------------------------------------------------------|-------------------|--------|----------|-----------------------------------|
|                                                                                                               | Direction         |        |          | With Retarder                     |
| Basic Sequence                                                                                                | 1                 | 2      | 3        | 25                                |
|                                                                                                               | End to 2          | 1 to 3 | 2 to End |                                   |
| Alternate pours to the basic sequence are subject to the approval of the engineer in accordance with Sec 703. |                   |        |          |                                   |
| Alternate A Pours                                                                                             | 1 + 2             |        | 3        | 25                                |
|                                                                                                               | End to 3          |        | 2 to End |                                   |
| Alternate B Pours                                                                                             | 1 + 2 + 3         |        |          | 25                                |
|                                                                                                               | End to End        |        |          |                                   |

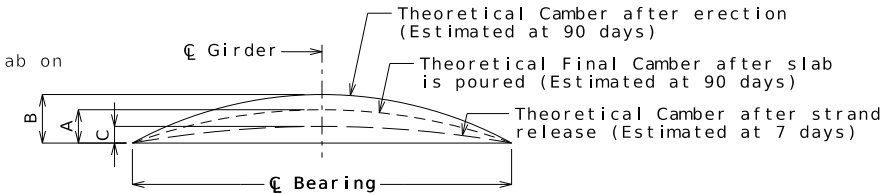
The contractor shall furnish an approved retarder to retard the set of the concrete to 2.5 hours, and shall pour and satisfactorily finish the slab pours at the rate given.

The concrete diaphragm at the intermediate bents and integral end bents shall be poured a minimum of 30 minutes and a maximum of 2 hours before the slab is poured.

SLAB POURING SEQUENCE



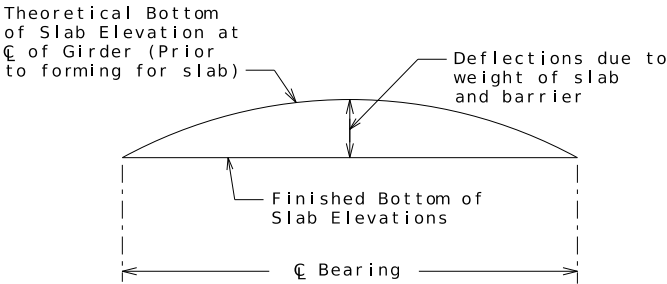
SLAB CONSTRUCTION JOINT



GIRDER CAMBER DIAGRAM

Conversion Factors for Girder Camber (Estimated at 90 days):

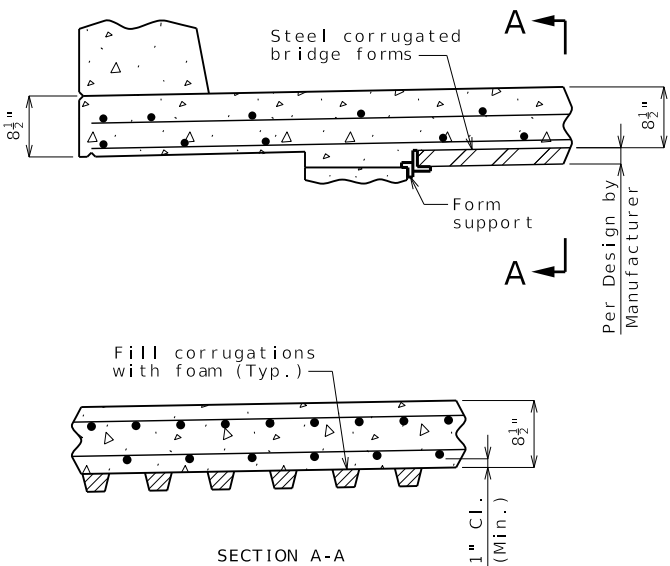
0.25 pt. = 0.7125 x 0.5 pt.



TYPICAL SLAB ELEVATIONS DIAGRAM

| Theoretical Bottom of Slab Elevations at Centerline of Girder<br>(Prior to forming for slab) (Estimated at 90 days) |                                         |        |        |        |        |                                     |        |        |        |        |                                         |        |        |        |        |
|---------------------------------------------------------------------------------------------------------------------|-----------------------------------------|--------|--------|--------|--------|-------------------------------------|--------|--------|--------|--------|-----------------------------------------|--------|--------|--------|--------|
| Girder Number                                                                                                       | Span (1-2) (33'-3 1/2" C Brg. - C Brg.) |        |        |        |        | Span (2-3) (38'-7" C Brg. - C Brg.) |        |        |        |        | Span (3-4) (33'-3 1/2" C Brg. - C Brg.) |        |        |        |        |
|                                                                                                                     | C Brg.                                  | .25    | .50    | .75    | C Brg. | C Brg.                              | .25    | .50    | .75    | C Brg. | C Brg.                                  | .25    | .50    | .75    | C Brg. |
| 1                                                                                                                   | 794.15                                  | 794.15 | 794.15 | 794.14 | 794.12 | 794.12                              | 794.13 | 794.13 | 794.11 | 794.08 | 794.08                                  | 794.08 | 794.08 | 794.06 | 794.04 |
| 2                                                                                                                   | 794.32                                  | 794.32 | 794.32 | 794.30 | 794.28 | 794.28                              | 794.29 | 794.29 | 794.27 | 794.24 | 794.24                                  | 794.25 | 794.24 | 794.23 | 794.21 |
| 3                                                                                                                   | 794.51                                  | 794.52 | 794.52 | 794.50 | 794.48 | 794.48                              | 794.49 | 794.49 | 794.47 | 794.44 | 794.44                                  | 794.44 | 794.44 | 794.43 | 794.41 |
| 4                                                                                                                   | 794.71                                  | 794.71 | 794.71 | 794.70 | 794.68 | 794.68                              | 794.69 | 794.68 | 794.67 | 794.64 | 794.64                                  | 794.64 | 794.64 | 794.62 | 794.60 |

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.



OPTIONAL STAY-IN-PLACE FORM DETAILS

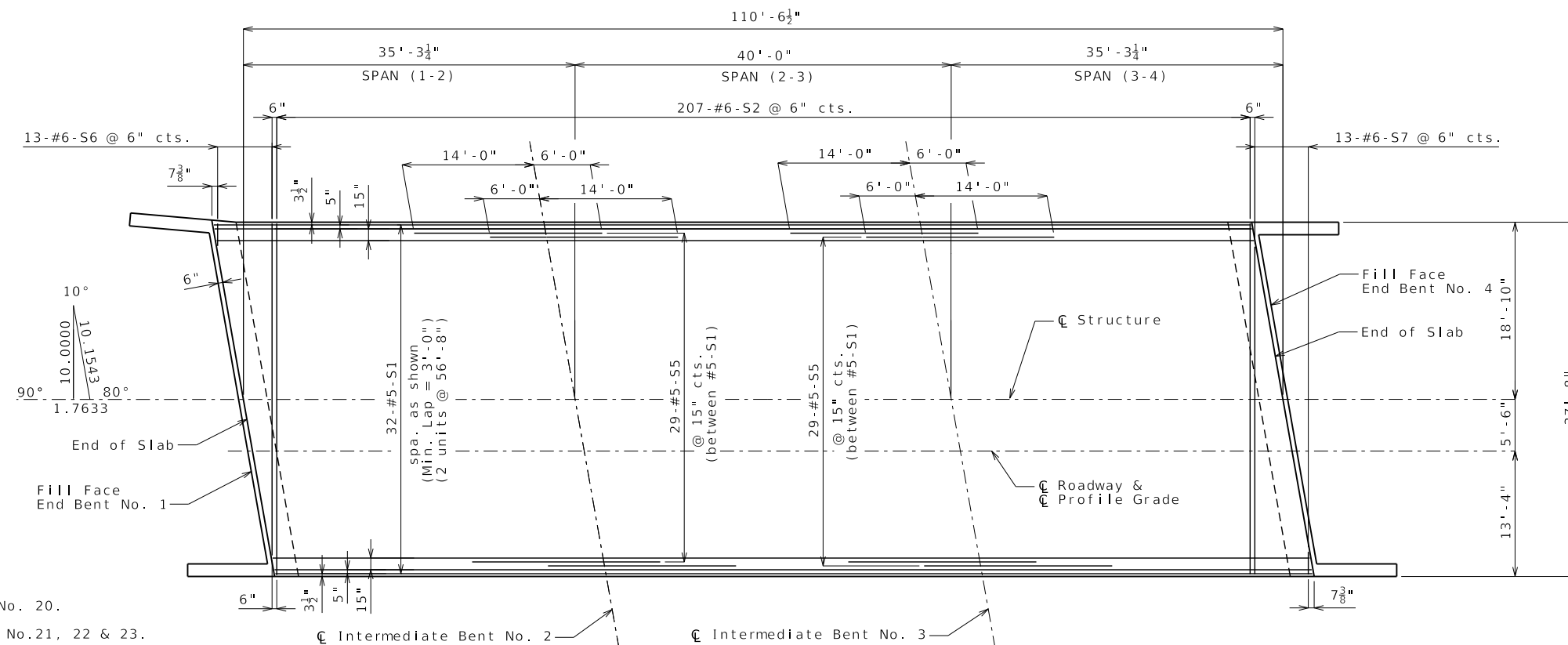
Stay-In-Place Forms:

Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.

Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of girder flanges. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the flange. Drilling holes in the girder flanges will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.

The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for girder loading.



Notes:

For sections thru slab, see Sheet No. 20.

For details of barrier, see Sheets No.21, 22 & 23.

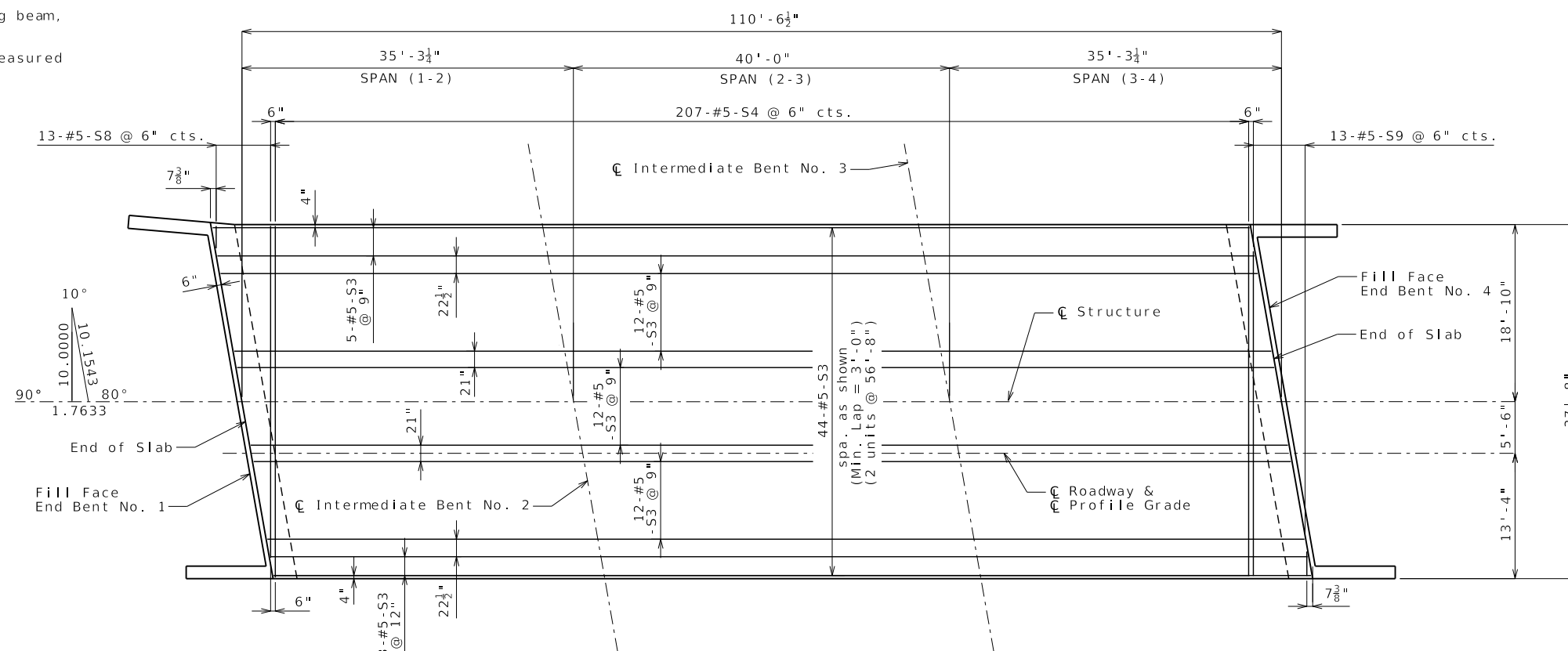
For details and locations of slab drains, see Sheet No. 17.

For theoretical haunch, see Sheet No. 18.

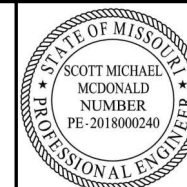
For slab pouring sequence, see Sheet No. 18.

For bottom of slab elevations along beam,  
see Sheet No. 18.

Longitudinal slab dimensions are measured horizontally.



PARTIAL PLAN OF SLAB SHOWING BOTTOM REINFORCEMENT



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DATE PREPARED \_\_\_\_\_

07/28/2025

| ROUTE | STATE |
|-------|-------|
| 101   | MO    |

|          |          |
|----------|----------|
| NW 76th  | MO       |
| CLARKSON | CLARKSON |

DISTRICT SHEET NO.  
BR 19

BR 19  
COUNTY

PLATTE

JOB NO.

JKU0238

CONTRACT ID.

PROJECT NO. \_\_\_\_\_

PROJECT NO.

BRIDGE NO.

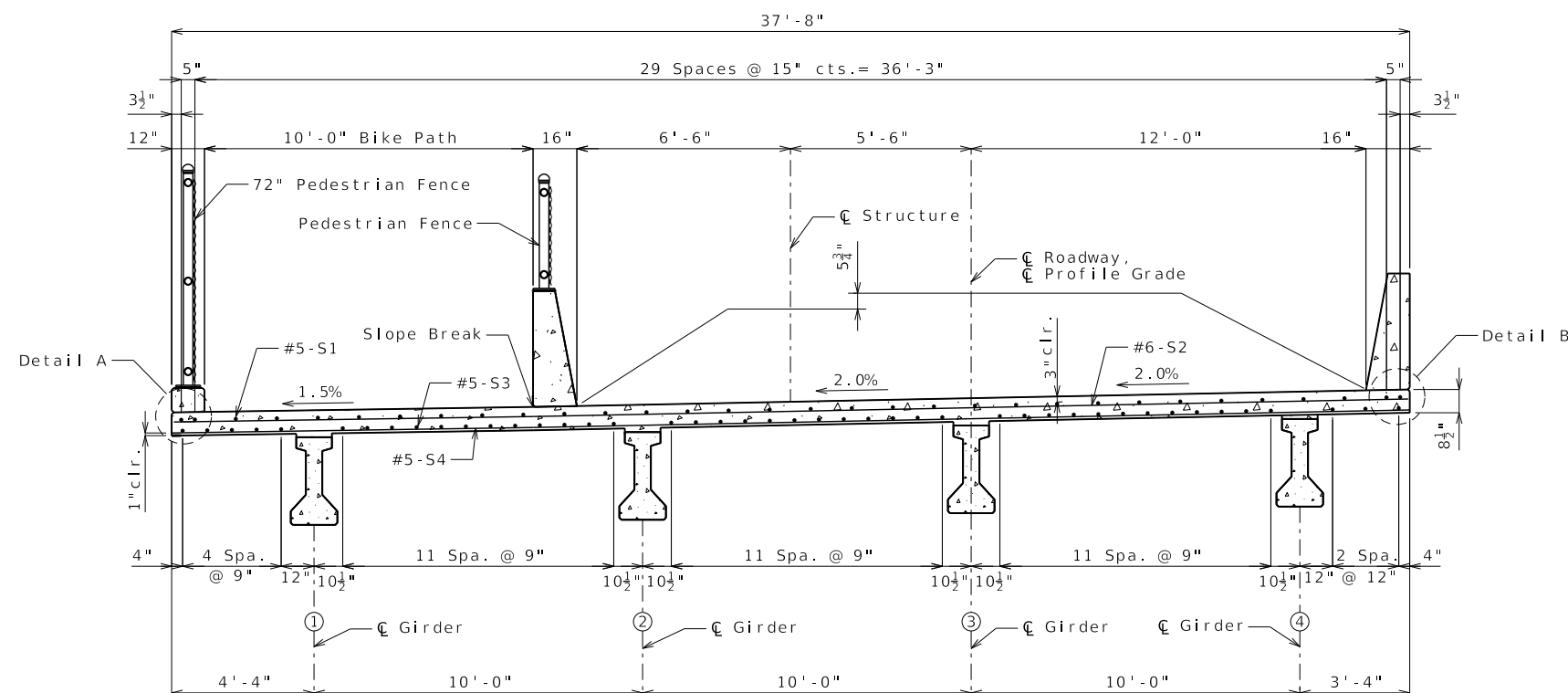
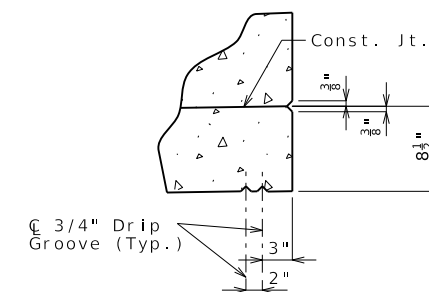
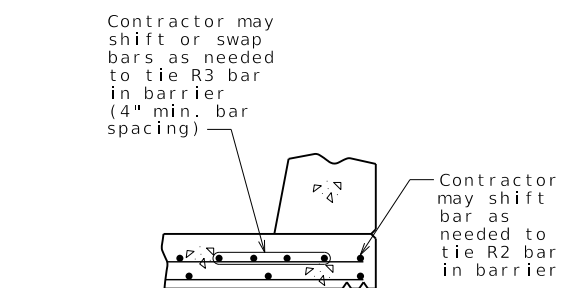
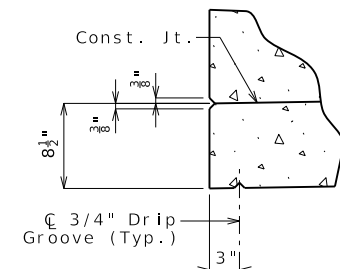
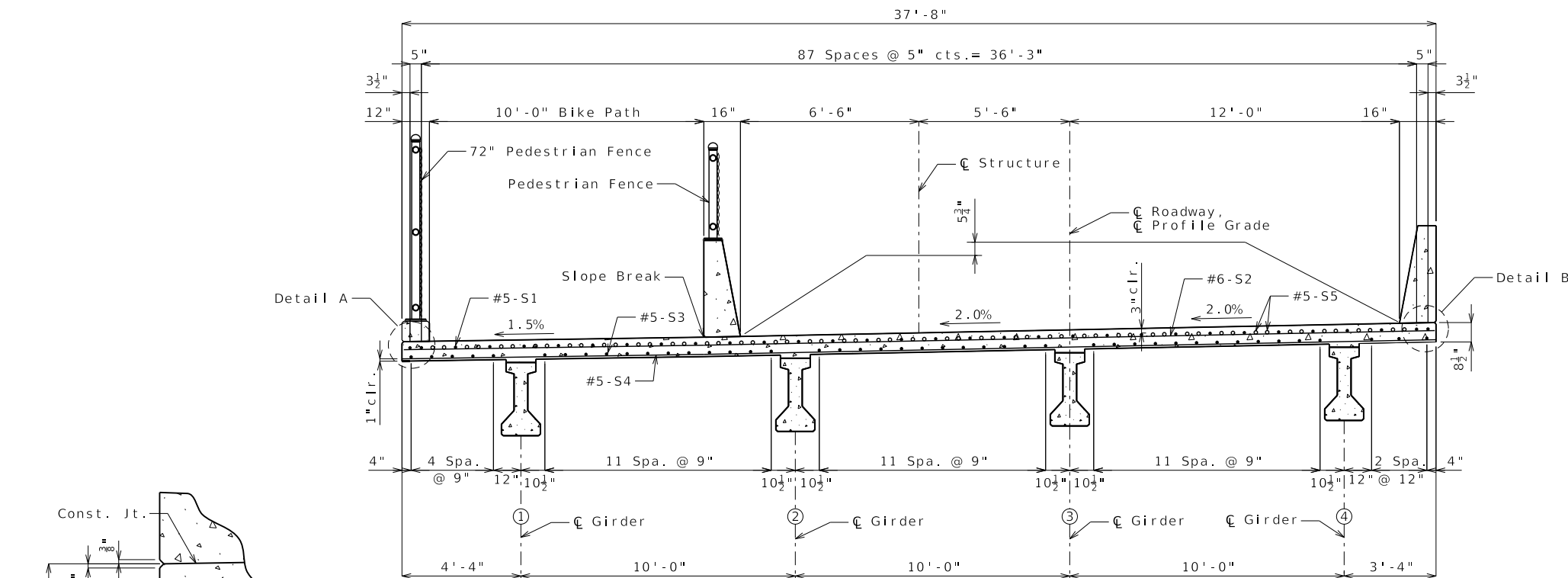
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 MISSOURI HIGHWAYS AND TRANSPORTATION  
 COMMISSION  
 105 WEST CAPITAL  
 JEFFERSON CITY, MO 65102

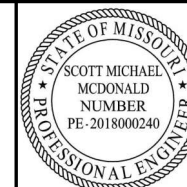


**VEENSTRA & KIMM INC.**  
9788 N Ash Ave. Kansas City, Missouri 64157  
816-781-6182 816-781-0643 (FAX)  
Certificate of Authority No. 2002006347



Note:

For plan of slab showing reinforcement,  
see Sheet No. 19.



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SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED \_\_\_\_\_

07/28/2025

|         |       |
|---------|-------|
| ROUTE   | STATE |
| NW 76th | MO    |

|          |          |
|----------|----------|
| DISTRICT | SHEET NO |
| BR       | 20       |

COUNTY  
PLATTE

JOB NO.  
JK110238

CONTRACT ID.

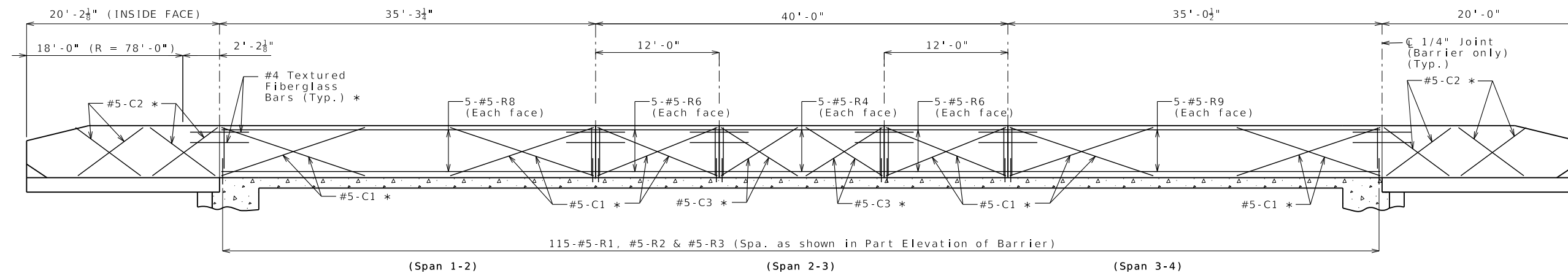
PROJECT NO.

BRIDGE NO.  
A9584[illegible]


 MISSOURI HIGHWAYS AND TRANSPORTATION  
 COMMISSION  
 105 WEST CAPITAL  
 JEFFERSON CITY, MO 65102

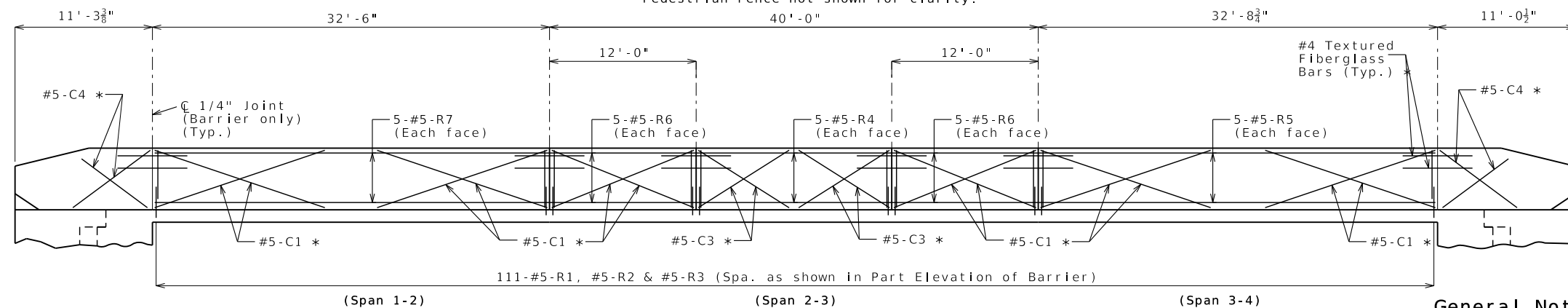


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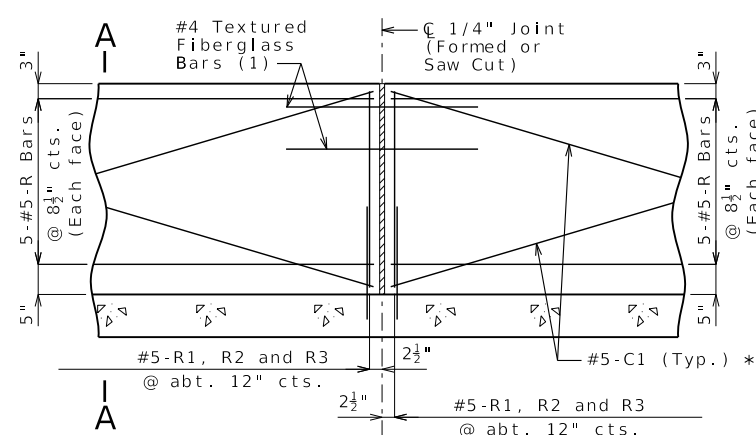
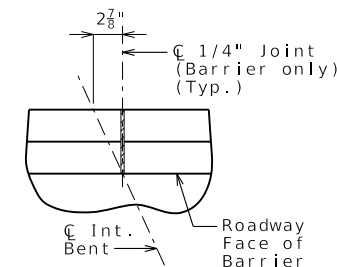
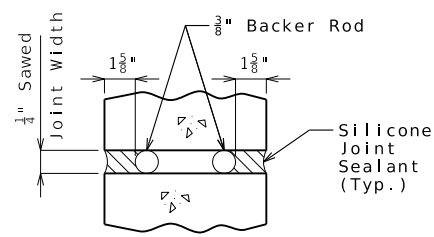
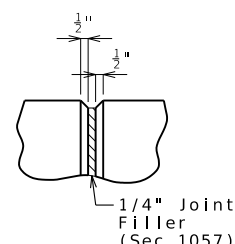
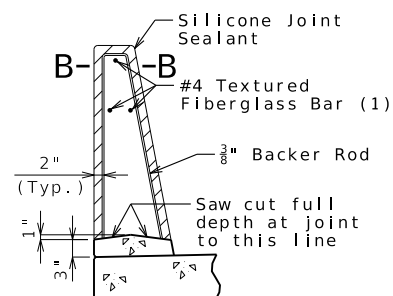
ELEVATION OF LEFT BARRIER

Longitudinal dimensions are horizontal.  
Pedestrian Fence not shown for clarity.



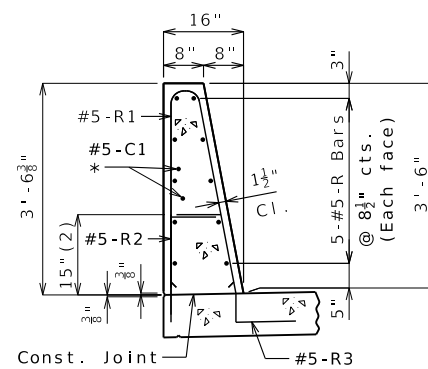
ELEVATION OF RIGHT BARRIER

Longitudinal dimensions are horizontal.



PART ELEVATION OF BARRIER

(1) Four feet long, centered on joint,  
slip-formed option only

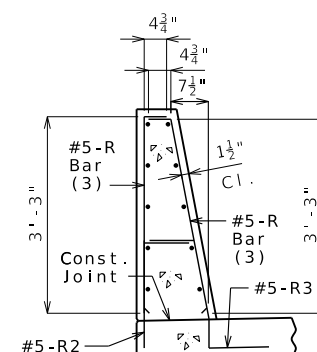


SECTION A-A

Use a minimum lap of 3'-1" for  
#5 horizontal barrier bars.

The cross-sectional area above the slab is 3.52 square feet.

(2) To top of bar



### R-BAR PERMISSIBLE ALTERNATE SHAPE

(3) The R1 bar may be separated into two bars as shown, at the contractor's option, only when slip forming is not used. (All dimensions are out to out.)

General Notes:

\* Slip-formed option only.

Conventional forming or slip forming may be used. Saw cut joints may be used with conventional forming.

Top of barrier shall be built parallel to grade and barrier joints (except at end bents) normal to grade.

All exposed edges of barrier shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Type D Barrier per linear foot.

Concrete in barrier shall be Class B-1.

Measurement of barrier is to the nearest linear foot for each structure, measured along the outside top of slab from end of wing to end of wing.

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec. 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

Joint sealant and backer rods shall be in accordance with Sec 717 for silicone joint sealant for saw cut and formed joints.

For slip-formed option, both sides of barrier shall have a vertically broomed finish and the top shall have a transversely broomed finish.



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DATE PREPARED  
07/28/2025

|         |       |
|---------|-------|
| ROUTE   | STATE |
| NW 76th | MO    |

|                |                 |
|----------------|-----------------|
| DISTRICT<br>BR | SHEET NO.<br>21 |
|----------------|-----------------|

COUNTY  
PLATTE

JOB NO.  
JK110238

|              |
|--------------|
| 01800250     |
| CONTRACT ID. |

|             |
|-------------|
| PROJECT NO. |
|-------------|

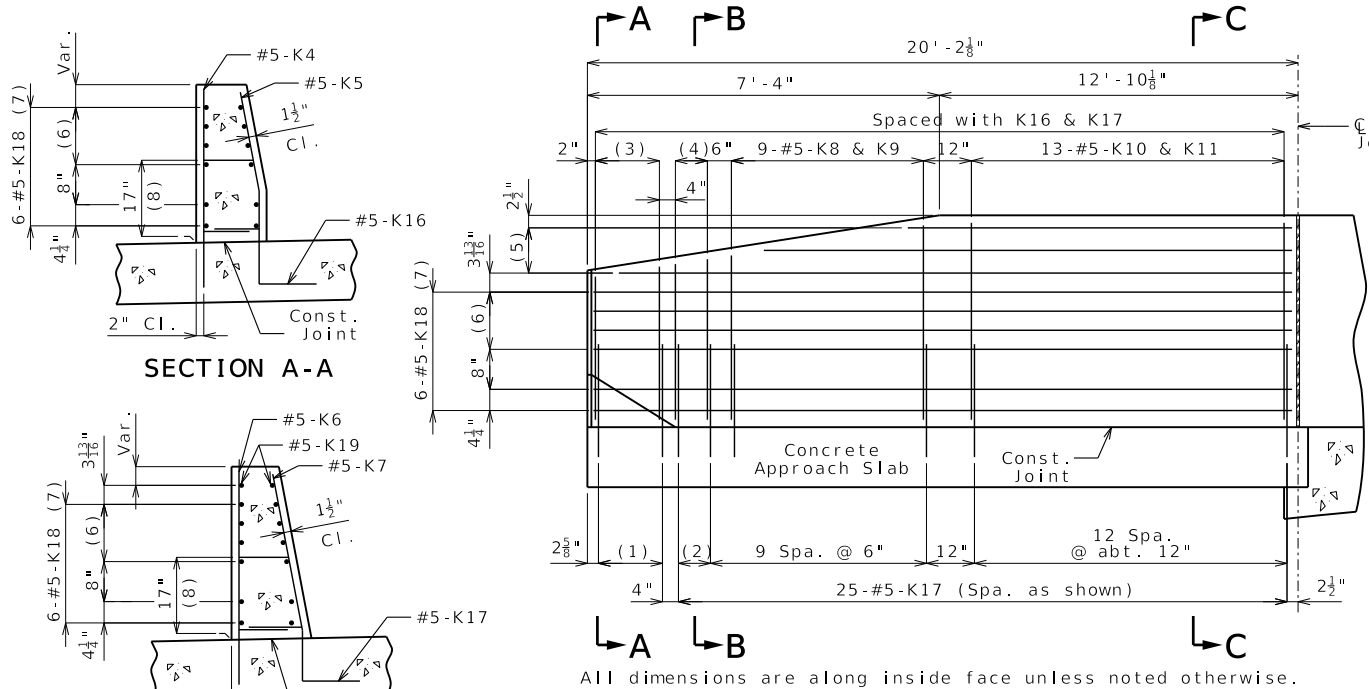
BRIDGE NO.  
A9584[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

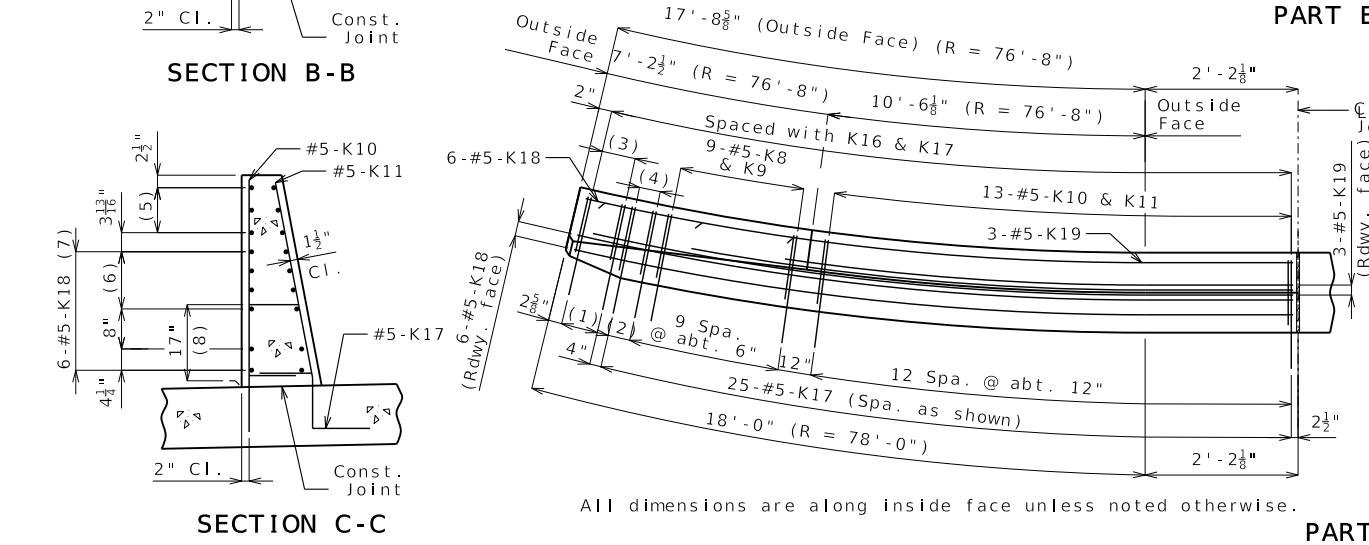


**VEENSTRA  
& KIM INC.**

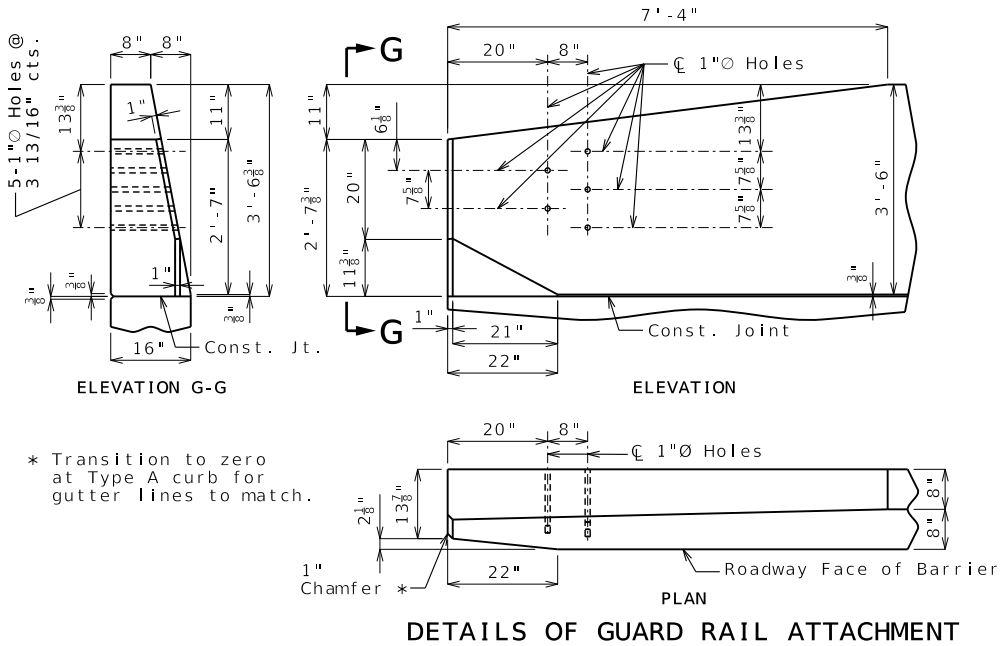
788 N Ash Ave. Kansas City, Missouri 64157  
816-781-6182 816-781-0643 (FAX)  
Certificate of Authority No. 2002006347



PART ELEVATION



PART PLAN



DETAILS OF GUARD RAIL ATTACHMENT

General Notes:

Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

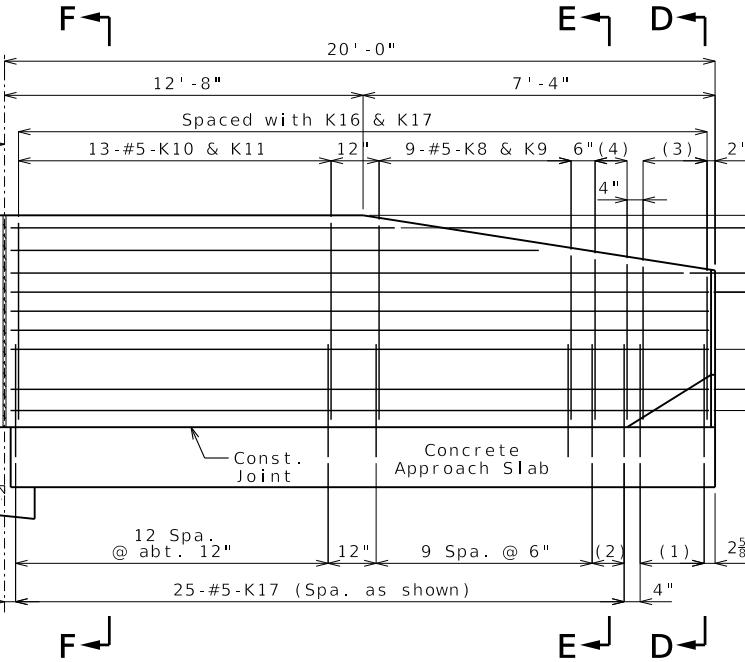
Reinforcing Steel:

Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

Contractor to bend curved horizontal K bars infield.

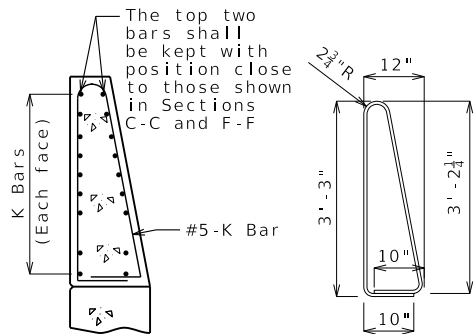
TYPE D BARRIER AT END BENTS (LEFT)

(Left barrier shown) Pedestrian Fence not shown for clarity.



SECTION E-E

SECTION F-F



K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

(Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 07/28/2025

ROUTE NW 76th STATE MO

DISTRICT BR SHEET NO. 22

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

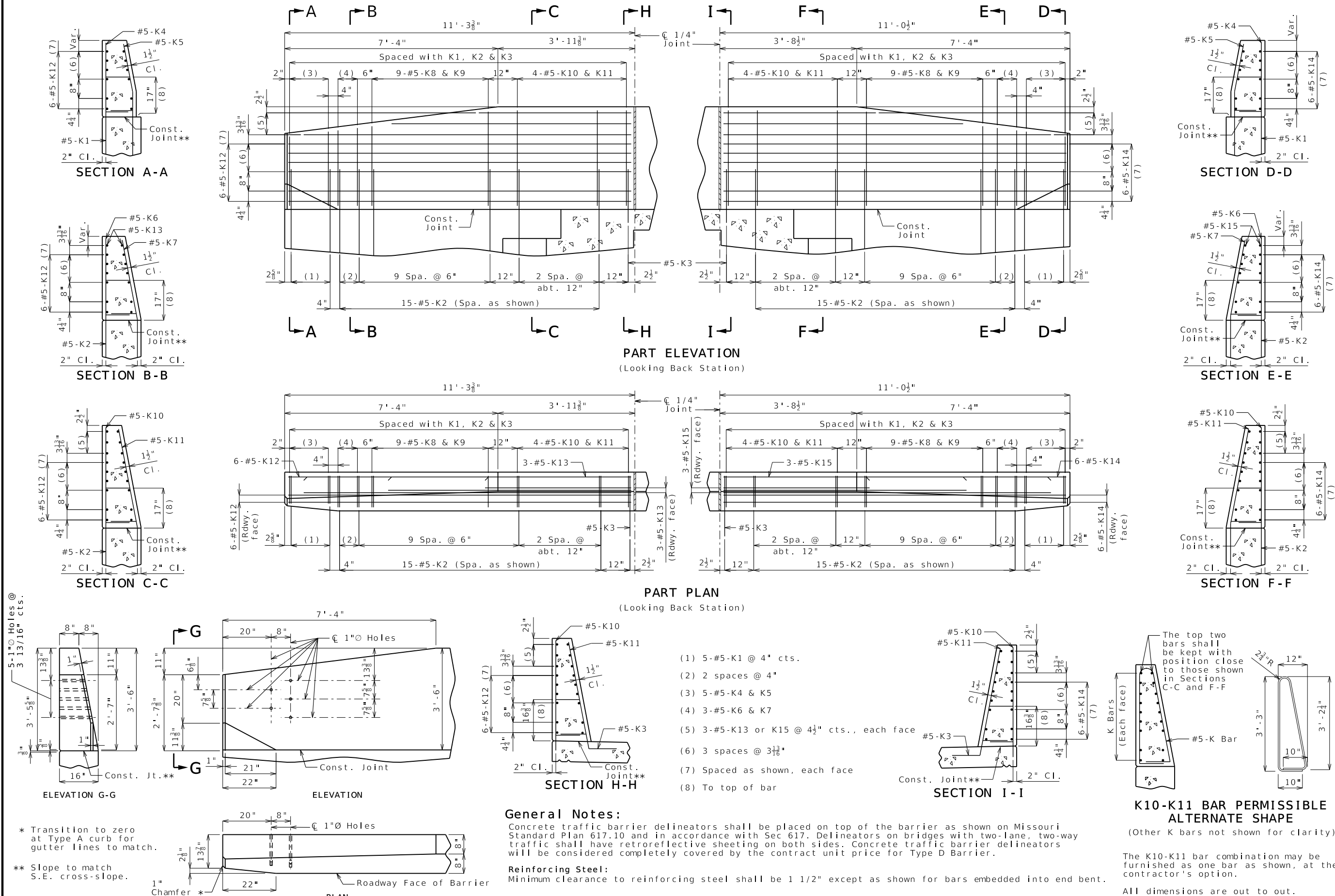
MODOT

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Certificate of Authority No. 2002006347



Detailed Feb. 2025  
Checked Feb. 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 23 of 34

STATE OF MISSOURI

SCOTT MICHAEL

MCDONALD

NUMBER

PE-2018000240

PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN

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ELECTRONICALLY.

DATE PREPARED

07/28/2025

ROUTE

NW 76th

STATE

MO

DISTRICT

BR

SHEET NO.

23

COUNTY

PLATTE

JOB NO.

JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION

COMMISSION

MoDOT

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

VEENSTRA & KIMM INC.

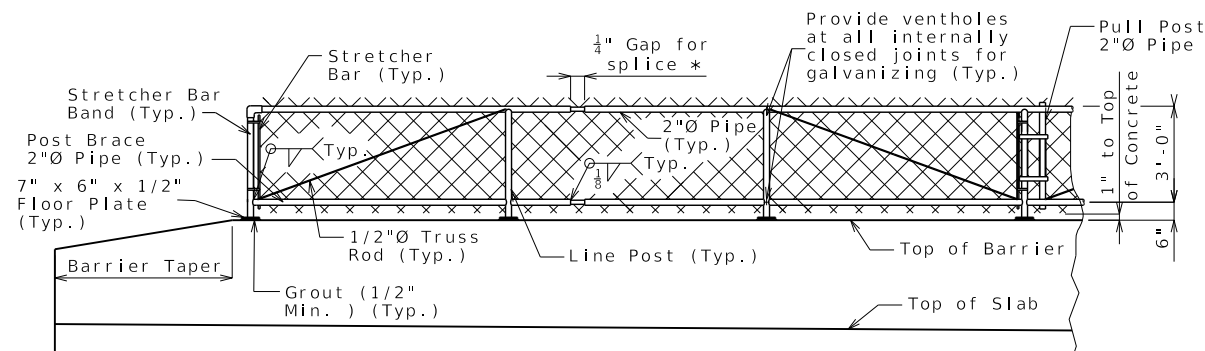
9788 N Ash Ave.

Kansas City, Missouri 64157

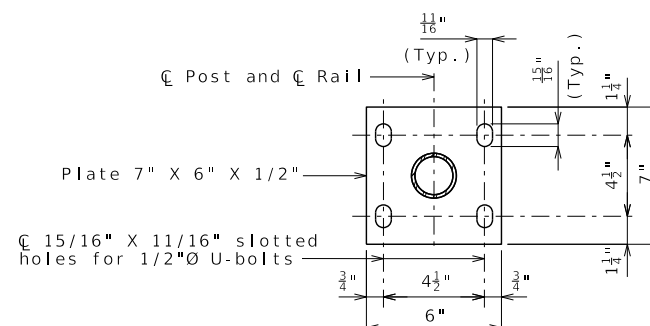
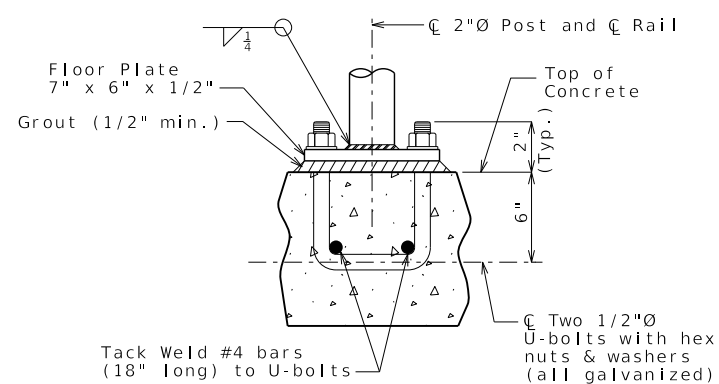
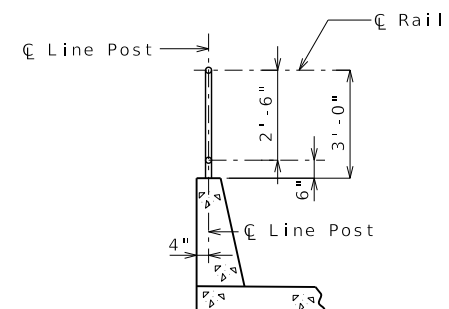
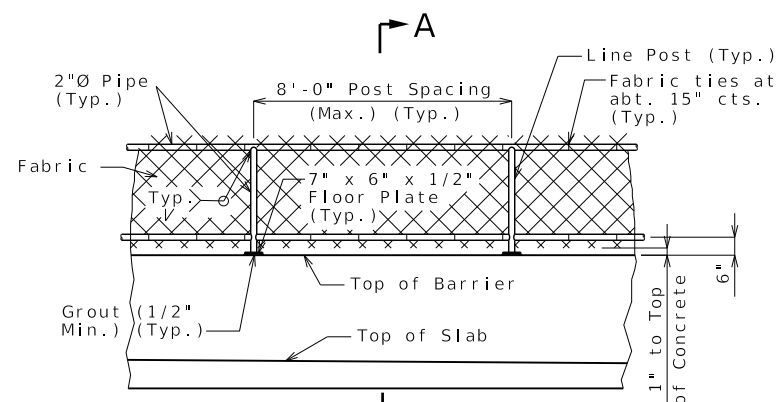
816-781-0643 (FAX)

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\* At about 30'-0" centers with at least one splice gap between pull or end posts.

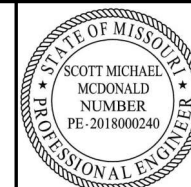


## PEDESTRIAN CHAIN LINK FENCE

Detailed Feb. 2025  
Checked Feb. 2025

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 25 of 34



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DATE PREPAR

07/28/2025

| ROUTE | STATE |
|-------|-------|
|-------|-------|

|         |    |
|---------|----|
| NW 76th | MO |
|---------|----|

|          |           |
|----------|-----------|
| DISTRICT | SHEET NO. |
|----------|-----------|

|    |    |
|----|----|
| BR | 25 |
|----|----|

COUNTY

PLATTE

JOB NO.

JKU023

CONTRACT

1000

PROJECT N

PROJECT IV

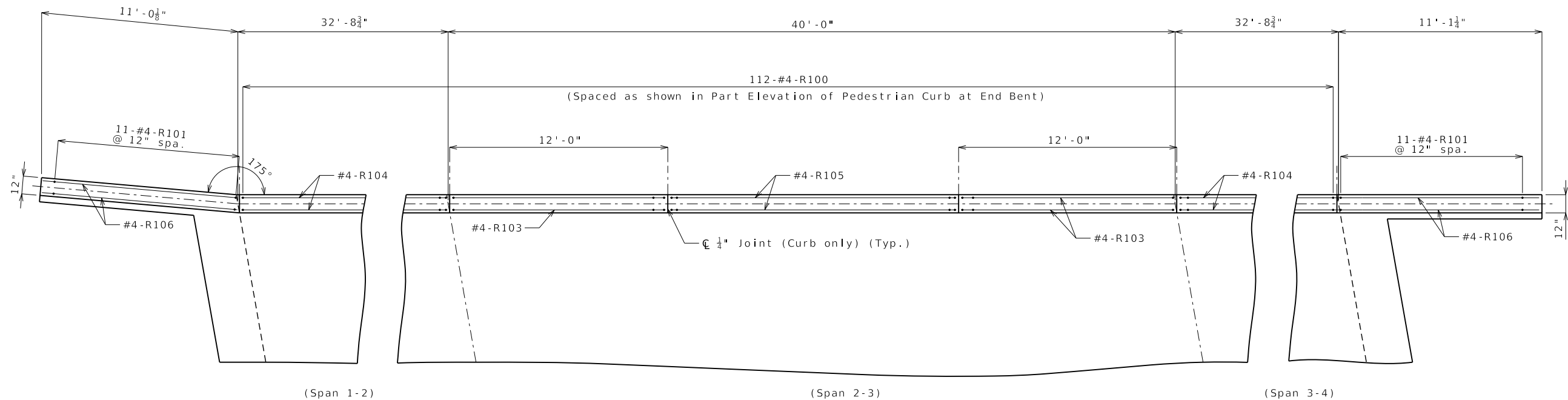
[illegible]MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

105 WEST CAPITOL  
JEFFERSON CITY, MO 65102



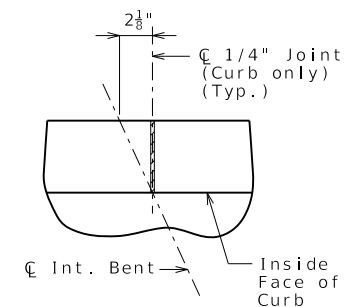
**VEENSTRA  
& KIM INC.**

788 N Ash Ave. Kansas City, Missouri 64157  
816-781-6182 816-781-0643 (FAX)

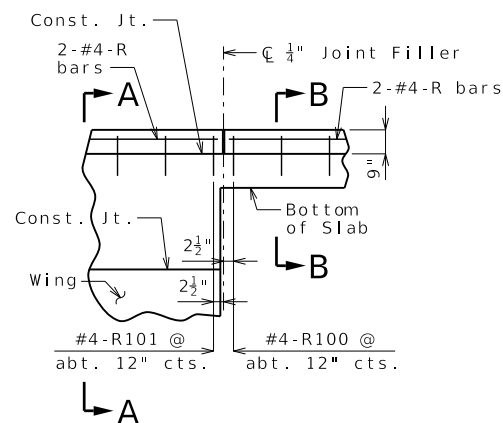


### PLAN SHOWING PEDESTRIAN CURB

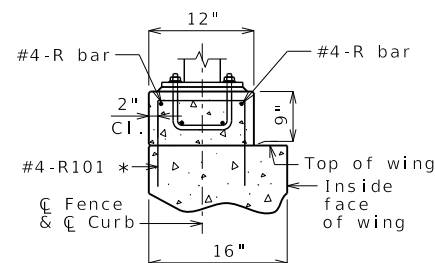
Longitudinal dimensions are horizontal.  
Fence post spacing "per manufacturer". (6" min. from joints and ends.)



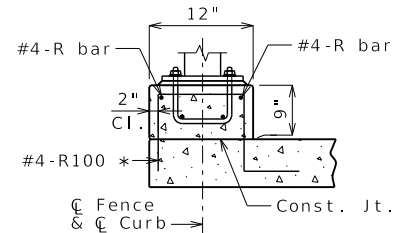
PART PLAN SHOWING  
JOINT LOCATION



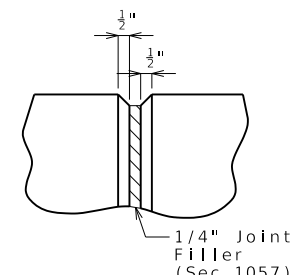
PART ELEVATION OF PEDESTRIAN  
CURB AT END BENT



SECTION A-A



SECTION B-B



PART ELEVATION  
AT CURB JOINT

\* Shift in field to clear U-bolts.

#### Notes:

Top of curb shall be built parallel to grade and curb joints (except at end bents) normal to grade.

All exposed edges of curb shall have either a 1/2-inch radius or a 3/8-inch bevel, unless otherwise noted.

Payment for all concrete and reinforcement, complete in place, will be considered completely covered by the contract unit price for Pedestrian Curb per linear foot.

Concrete in curb shall be Class B-1.

Measurement of pedestrian curb is to the nearest linear foot for each structure, measured along the outside top of curb from end of curb to end of curb.

Center of posts shall clear curb joints or ends by at least 6 inches.

Minimum lap for longitudinal R-bars is 2'-7".

Slab reinforcement not shown for clarity.

For details of pedestrian chain link fence on pedestrian curb, see Sheet No. 24.

## PEDESTRIAN CURB



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ELECTRONICALLY.

DATE PREPARED  
07/28/2025

ROUTE NW 76th STATE MO

DISTRICT BR SHEET NO. 26

COUNTY PLATTE

JOB NO. JKU0238

CONTRACT ID.

PROJECT NO.

BRIDGE NO. A9584

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-275-6636)

VEENSTRA & KIMM INC.

9788 N Ash Ave. Kansas City, Missouri 64157

816-781-6182 816-781-0643 (FAX)

Certificate of Authority No. 2002006347





[illegible]

Nominal lengths are based on out to out dimensions shown in bending diagrams and are listed to the nearest inch for fabricator's use. Actual lengths are measured along centerline bar to the nearest inch. Weights are based on actual lengths.

For bending diagrams and steel reinforcing totals, see Sheet No. 28.

Detailed Feb. 2025  
Checked Feb. 2025

Note: This drawing is not to scale. Follow dimensions.

# BILL OF REINFORCING STEEL

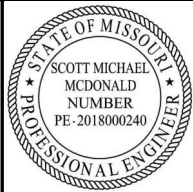
Sheet No. 29 of 34

| Bill of Reinforcing Steel |            |                |       |     |   |            |        |       |        |       |        |    |        |    |             |    |               |    |        |     |    |     |     |     |
|---------------------------|------------|----------------|-------|-----|---|------------|--------|-------|--------|-------|--------|----|--------|----|-------------|----|---------------|----|--------|-----|----|-----|-----|-----|
| No. Req.                  | Size/ Mark | Location       | Codes |     |   | Dimensions |        |       |        |       |        |    |        |    | Nom. Length |    | Actual Length |    | Weight |     |    |     |     |     |
|                           |            |                |       |     |   | B          |        |       | C      |       | D      |    | E      |    |             |    |               |    |        | F   |    | H   |     | K   |
|                           |            |                | C     | SH  | V | ft         | in.    | ft    | in.    | ft    | in.    | ft | in.    | ft | in.         | ft | in.           | ft |        | in. | ft | in. | lb  |     |
|                           |            | SUPERSTRUCTURE |       |     |   |            |        |       |        |       |        |    |        |    |             |    |               |    |        |     |    |     |     |     |
|                           |            | END BENT NO. 1 |       |     |   |            |        |       |        |       |        |    |        |    |             |    |               |    |        |     |    |     |     |     |
| 9                         | 6 F101     | WING BRACE     | E     | 15  |   | 2          | 3.000  | 4     | 0.000  |       | 14.000 |    | 10.750 |    | 9.000       |    | 20.625        |    | 17.375 | 7   | 5  | 7   | 3   | 98  |
| 3                         | 6 F102     | DIAPHRAGM      | E     | 21  |   | 2          | 8.000  | 5     | 5.000  |       |        |    |        | 5  | 3.750       |    | 11.250        |    | 11.250 | 8   | 1  | 7   | 9   | 35  |
| 8                         | 6 F103     | WING BRACE     | E     | 15  |   | 2          | 3.000  | 5     | 0.000  |       | 14.000 |    | 8.750  |    | 11.000      |    | 16.375        |    | 21.375 | 8   | 5  | 8   | 3   | 99  |
| 3                         | 6 F104     | DIAPHRAGM      | E     | 21  |   |            | 6      | 2.000 | 2      | 8.000 |        |    |        | 5  | 11.500      |    | 19.125        |    | 19.125 | 8   | 10 | 8   | 6   | 38  |
| 4                         | 5 H101     | DIAPHRAGM      | E     | 20  |   | 3          | 11.000 |       |        |       |        |    |        |    |             |    |               |    | 3      | 11  | 3  | 11  | 16  |     |
| 8                         | 8 H102     | BEAM & DIAPH.  | E     | 20  |   | 38         | 0.000  |       |        |       |        |    |        |    |             |    |               |    | 38     | 0   | 38 | 0   | 812 |     |
| 4                         | 8 H103     | BEAM           | E     | 20  |   | 14         | 7.000  |       |        |       |        |    |        |    |             |    |               |    | 14     | 7   | 14 | 7   | 156 |     |
| 4                         | 8 H104     | BEAM           | E     | 20  |   | 28         | 5.000  |       |        |       |        |    |        |    |             |    |               |    | 28     | 5   | 28 | 5   | 303 |     |
| 7                         | 6 H105     | BEAM & DIAPH.  | E     | 20  |   | 38         | 0.000  |       |        |       |        |    |        |    |             |    |               |    | 38     | 0   | 38 | 0   | 400 |     |
| 9                         | 6 H106     | DIAPHRAGM      | E     | 20  |   | 8          | 5.000  |       |        |       |        |    |        |    |             |    |               |    | 8      | 5   | 8  | 5   | 114 |     |
| 3                         | 6 H107     | DIAPHRAGM      | E     | 20  |   | 2          | 5.000  |       |        |       |        |    |        |    |             |    |               |    | 2      | 5   | 2  | 5   | 11  |     |
| 3                         | 6 H108     | DIAPHRAGM      | E     | 20  |   | 3          | 5.000  |       |        |       |        |    |        |    |             |    |               |    | 3      | 5   | 3  | 5   | 15  |     |
| 16                        | 8 H109     | WINGWALL       | E     | 20  |   | 10         | 6.000  |       |        |       |        |    |        |    |             |    |               |    | 10     | 6   | 10 | 6   | 449 |     |
| 38                        | 6 H110     | WINGWALL       | E     | 20  |   | 9          | 8.000  |       |        |       |        |    |        |    |             |    |               |    | 9      | 8   | 9  | 8   | 552 |     |
| 9                         | 5 U101     | BEAM           | E     | 31S |   | 5          | 8.000  | 2     | 9.000  | 5     | 8.000  |    |        |    |             |    |               |    | 15     | 1   | 14 | 10  | 139 |     |
| 15                        | 5 U102     | BEAM           | E     | 31S |   | 5          | 2.000  | 2     | 9.000  | 5     | 2.000  |    |        |    |             |    |               |    | 14     | 1   | 13 | 10  | 216 |     |
| 8                         | 4 U103     | BEAM           | E     | 13S |   | 2          | 9.000  | 2     | 11.000 | 2     | 9.000  | 2  | 11.000 |    |             |    |               |    | 12     | 1   | 11 | 11  | 63  |     |
| 8                         | 4 U104     | BEAM           | E     | 13S |   | 2          | 9.000  | 2     | 7.000  | 2     | 9.000  | 2  | 7.000  |    |             |    |               |    | 11     | 5   | 11 | 2   | 60  |     |
| 31                        | 5 U105     | DIAPHRAGM      | E     | 19S |   | 1          | 9.000  | 2     | 9.000  |       |        |    |        |    |             |    |               |    | 4      | 6   | 4  | 4   | 141 |     |
| 48                        | 6 U106     | DIAPHRAGM      | E     | 19S |   | 3          | 0.000  | 4     | 7.000  |       |        |    |        |    |             |    |               |    | 7      | 7   | 7  | 5   | 535 |     |
| 31                        | 5 U107     | DIAPHRAGM      | E     | 31S |   | 2          | 7.000  | 2     | 3.000  | 2     | 7.000  |    |        |    |             |    |               |    | 8      | 5   | 8  | 3   | 268 |     |
| 6                         | 5 V101     | BEAM           | E     | 17  |   | 5          | 8.000  |       |        |       |        |    |        |    |             |    |               |    | 6      | 3   | 6  | 3   | 39  |     |
| 8                         | 5 V102     | BEAM           | E     | 17  |   | 5          | 2.000  |       |        |       |        |    |        |    |             |    |               |    | 5      | 9   | 5  | 9   | 48  |     |
| 12                        | 6 V103     | DIAPHRAGM      | E     | 20  |   | 2          | 4.000  |       |        |       |        |    |        |    |             |    |               |    | 2      | 4   | 2  | 4   | 42  |     |
| 18                        | 6 V104     | WINGWALL       | E     | 20  |   | 6          | 0.000  |       |        |       |        |    |        |    |             |    |               |    | 6      | 0   | 6  | 0   | 162 |     |
| 18                        | 6 V105     | WINGWALL       | E     | 20  |   | 6          | 10.000 |       |        |       |        |    |        |    |             |    |               |    | 6      | 10  | 6  | 10  | 185 |     |
| 35                        | 5 D101     | DIAPHRAGM      | E     | 19  |   | 2          | 0.000  |       | 15.000 |       |        |    |        |    |             |    |               |    | 3      | 3   | 3  | 1   | 114 |     |
|                           |            |                |       |     |   |            |        |       |        |       |        |    |        |    |             |    |               |    |        |     |    |     |     |     |
|                           |            | END BENT NO. 4 |       |     |   |            |        |       |        |       |        |    |        |    |             |    |               |    |        |     |    |     |     |     |
| 8                         | 6 F401     | WING BRACE     | E     | 15  |   | 2          | 3.000  | 4     | 0.000  |       | 14.000 |    | 10.750 |    | 9.000       |    | 20.625        |    | 17.375 | 7   | 5  | 7   | 3   | 87  |
| 3                         | 6 F402     | DIAPHRAGM      | E     | 21  |   | 2          | 8.000  | 5     | 5.000  |       |        |    |        | 5  | 3.750       |    | 11.250        |    | 11.250 | 8   | 1  | 7   | 9   | 35  |
| 9                         | 6 F403     | WING BRACE     | E     | 15  |   | 2          | 3.000  | 4     | 9.000  |       | 14.000 |    | 9.000  |    | 10.750      |    | 17.375        |    | 20.625 | 8   | 2  | 8   | 0   | 108 |
| 3                         | 6 F404     | DIAPHRAGM      | E     | 21  |   |            | 6      | 2.000 | 2      | 8.000 |        |    |        | 6  | 0.875       |    | 12.875        |    | 12.875 | 8   | 10 | 8   | 6   | 38  |
| 4                         | 5 H401     | DIAPHRAGM      | E     | 20  |   | 3          | 11.000 |       |        |       |        |    |        |    |             |    |               |    | 3      | 11  | 3  | 11  | 16  |     |
| 8                         | 8 H402     | BEAM & DIAPH.  | E     | 20  |   | 38         | 0.000  |       |        |       |        |    |        |    |             |    |               |    | 38     | 0   | 38 | 0   | 812 |     |
| 4                         | 8 H403     | BEAM           | E     | 20  |   | 14         | 7.000  |       |        |       |        |    |        |    |             |    |               |    | 14     | 7   | 14 | 7   | 156 |     |
| 4                         | 8 H404     | BEAM           | E     | 20  |   | 28         | 5.000  |       |        |       |        |    |        |    |             |    |               |    | 28     | 5   | 28 | 5   | 303 |     |
| 7                         | 6 H405     | BEAM & DIAPH.  | E     | 20  |   | 38         | 0.000  |       |        |       |        |    |        |    |             |    |               |    | 38     | 0   | 38 | 0   | 400 |     |
| 9                         | 6 H406     | DIAPHRAGM      | E     | 20  |   | 8          | 5.000  |       |        |       |        |    |        |    |             |    |               |    | 8      | 5   | 8  | 5   | 114 |     |
| 3                         | 6 H407     | DIAPHRAGM      | E     | 20  |   | 2          | 5.000  |       |        |       |        |    |        |    |             |    |               |    | 2      | 5   | 2  | 5   | 11  |     |
| 3                         | 6 H408     | DIAPHRAGM      | E     | 20  |   | 3          | 5.000  |       |        |       |        |    |        |    |             |    |               |    | 3      | 5   | 3  | 5   | 15  |     |
| 16                        | 8 H409     | WINGWALL       | E     | 20  |   | 10         | 6.000  |       |        |       |        |    |        |    |             |    |               |    | 10     | 6   | 10 | 6   | 449 |     |
| 38                        | 6 H410     | WINGWALL       | E     | 20  |   | 9          | 8.000  |       |        |       |        |    |        |    |             |    |               |    | 9      | 8   | 9  | 8   | 552 |     |
| 9                         | 5 U401     | BEAM           | E     | 31S |   | 5          | 8.000  | 2     | 9.000  | 5     | 8.000  |    |        |    |             |    |               |    | 15     | 1   | 14 | 10  | 139 |     |
| 15                        | 5 U402     | BEAM           | E     | 31S |   | 5          | 2.000  | 2     | 9.000  | 5     | 2.000  |    |        |    |             |    |               |    | 14     | 1   | 13 | 10  | 216 |     |
| 8                         | 4 U403     | BEAM           | E     | 13S |   | 2          | 9.000  | 2     | 11.000 | 2     | 9.000  | 2  | 11.000 |    |             |    |               |    | 12     | 1   | 11 | 11  | 63  |     |
| 8                         | 4 U404     | BEAM           | E     | 13S |   | 2          | 9.000  | 2     | 7.000  | 2     | 9.000  | 2  | 7.000  |    |             |    |               |    | 11     | 5   | 11 | 2   | 60  |     |
| 31                        | 5 U405     | DIAPHRAGM      | E     | 19S |   | 1          | 9.000  | 2     | 9.000  |       |        |    |        |    |             |    |               |    | 4      | 6   | 4  | 4   | 141 |     |
| 48                        | 6 U406     | DIAPHRAGM      | E     | 19S |   | 3          | 0.000  | 4     | 7.000  |       |        |    |        |    |             |    |               |    | 7      | 7   | 7  | 5   | 535 |     |
| 31                        | 5 U407     | DIAPHRAGM      | E     | 31S |   | 2          | 7.000  | 2     | 3.000  | 2     | 7.000  |    |        |    |             |    |               |    | 8      | 5   | 8  | 3   | 268 |     |
| 6                         | 5 V401     | BEAM           | E     | 17  |   | 5          | 8.000  |       |        |       |        |    |        |    |             |    |               |    | 6      | 3   | 6  | 3   | 39  |     |
| 8                         | 5 V402     | BEAM           | E     | 17  |   | 5          | 2.000  |       |        |       |        |    |        |    |             |    |               |    | 5      | 9   | 5  | 9   | 48  |     |
| 12                        | 6 V403     | DIAPHRAGM      | E     | 20  |   | 2          | 4.000  |       |        |       |        |    |        |    |             |    |               |    | 2      | 4   | 2  | 4   | 42  |     |
| 18                        | 6 V404     | WINGWALL       | E     | 20  |   | 6          | 10.000 |       |        |       |        |    |        |    |             |    |               |    | 6      | 10  | 6  | 10  | 185 |     |
| 18                        | 6 V405     | WINGWALL       | E     | 20  |   | 6          | 0.000  |       |        |       |        |    |        |    |             |    |               |    | 6      | 0   | 6  | 0   | 162 |     |
| 35                        | 5 D401     | DIAPHRAGM      | E     | 19  |   | 2          | 0.000  |       | 15.000 |       |        |    |        |    |             |    |               |    | 3      | 3   | 3  | 1   | 114 |     |
|                           |            |                |       |     |   |            |        |       |        |       |        |    |        |    |             |    |               |    |        |     |    |     |     |     |
|                           |            |                |       |     |   |            |        |       |        |       |        |    |        |    |             |    |               |    |        |     |    |     |     |     |

Codes: C = Required coatings, where E = Epoxy Coated and G = Galvanized.

SH = Required shape, see bending diagrams.

V = Sets of varied bars and number of bars of each length. Bar dimensions vary in equal increments between dimensions shown on this line and the following line and the actual length dimension shown on this line and the following line vary by the specified increment.



THIS SHEET HAS BEEN  
SIGNED, SEALED AND DATED  
ELECTRONICALLY.

DATE PREPARED  
07/28/2025

|         |       |
|---------|-------|
| ROUTE   | STATE |
| NW 76th | MO    |

|          |           |
|----------|-----------|
| DISTRICT | SHEET NO. |
| BR       | 29        |

COUNTY  
PLATTE

JOB NO.  
JKU0238

|              |
|--------------|
| CONTRACT ID. |
|--------------|

|             |
|-------------|
| PROJECT NO. |
|-------------|

BRIDGE NO.  
A9584

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

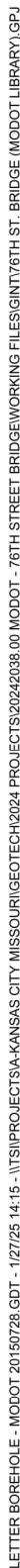
105 WEST CAPITOL  
JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)











| Depth<br>(ft) | Graphic | Description                                                                                      | Elevation<br>(ft) | Sample Type | REC %<br>(RQD %) | Blow Counts<br>(N <sub>60</sub> ) | Shear Data                        | Field Tests | Index Tests |
|---------------|---------|--------------------------------------------------------------------------------------------------|-------------------|-------------|------------------|-----------------------------------|-----------------------------------|-------------|-------------|
| 50            |         |                                                                                                  | 745               |             |                  |                                   |                                   |             |             |
|               |         | 50.0-62.0' LIMESTONE, gray, hard, moderately weathered, finely crystalline                       |                   |             |                  |                                   |                                   |             |             |
| 55            |         | 54.1' - shaley below 54.1 ft.                                                                    | 740               |             | 98<br>(95)       |                                   | Qu Test Results<br>UCS = 928 ksf  |             |             |
|               |         | 55.5' - 2.0" shale seam at 55.5 ft.                                                              |                   |             |                  |                                   |                                   |             |             |
|               |         | 57.0' - 1.0" shale seam at 57.0 ft.                                                              |                   |             |                  |                                   |                                   |             |             |
| 60            |         | 59.0' - 2.0" shale seam at 59.0 ft.                                                              | 735               |             | 100<br>(100)     |                                   | Qu Test Results<br>UCS = 2030 ksf |             |             |
|               |         | 61.9' - 1.0" shale seam at 61.9 ft.<br>Refusal at 37.0 feet.<br>Bottom of borehole at 62.0 feet. |                   |             |                  |                                   |                                   |             |             |

\* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

|                                                               |                                         |
|---------------------------------------------------------------|-----------------------------------------|
| County: <u>Platte</u>                                         | Route: <u>NW 76th St</u>                |
| Skew: _____                                                   | Location: <u>Parkville, Missouri</u>    |
| Logged By: <u>EV</u>                                          | Operator: <u>JC</u>                     |
| Longitude: <u>94°45'20.60"W</u>                               | Date of Work: <u>12/16/24-12/16/24</u>  |
| Latitude: <u>39°14'15.88"N</u>                                | Depth to Water: <u>24.0</u>             |
| Requested Northing: _____                                     | Depth Hole Open: _____                  |
| Requested Easting: _____                                      | Time Change: <u>At Time of Drilling</u> |
| Equipment: <u>B-57, Split-Spoon Sampler, Shelby Tube, HSA</u> |                                         |
| Location Note: _____                                          |                                         |
| Hammer Efficiency: <u>90%</u>                                 | Drilling Method: <u>HSA</u>             |

FTTER BOEHOFI F - MODOT 20150728 GDT - 1/27/25 14:15 - \US\PROJECTS\IA-KANSAS CITY MISSOURI\GEO\TECH\2024 PROJECTS\2024\2038.00 MODOT - 76TH STREET BRIDGE\WORKING FILE\GINT\76TH ST BRIDGE (MODOT) LIBRARY.GPJ

[illegible]

\* Persons using this information are cautioned that the materials shown are determined by the equipment noted and accuracy of the "log of materials" is limited thereby and by judgement of the operator. THIS INFORMATION IS FOR DESIGN PURPOSES ONLY.

County: Platte Route: NW 76th St

Skew: \_\_\_\_\_ Location: Parkville, Missouri

Logged By: EV/JM Operator: JC

Longitude: 94°45'19.51"W Date of Work: 10/30/24-10/31/24

Latitude: 39°14'14.93"N Depth to Water: 22.0

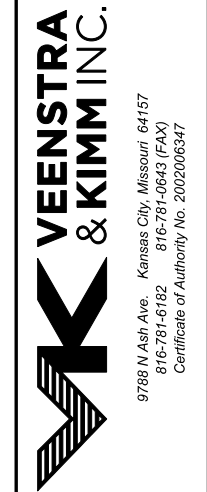
Requested Northing: \_\_\_\_\_ Depth Hole Open: \_\_\_\_\_

Requested Easting: \_\_\_\_\_ Time Change: At Time of Drilling

Equipment: B-57, Split-Spoon Sampler, Shelby Tube, HSA

Location Note: \_\_\_\_\_

Hammer Efficiency: 90% Drilling Method: HSA



Note: For locations of borings, see Sheet No. 1.

Sheet No. 33 of 34

