



2140 Herr Street
Harrisburg, PA 17103-5493

**Final Structure Plan Submission to PUC
SR 83 Section B79**

March 28, 2025

Dauphin County
City of Harrisburg
Seventeenth Street
DOT # 592188 M
PUC No. 2024-3051983
ECMS # 113357

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility
Commission PO Box 3265
Harrisburg, PA 17105-3265

Dear Secretary Chiavetta,

In accordance with the ordering number 3 of the PUC Secretarial Letter at Docket No. A-2024-3051983 dated 3/7/2025, please find attached for your approval one copy of the final signed Drawings for Construction of State Route 83, Section B79 in Dauphin County consisting of sheets 1, through 62 for total of 62 pages

The Department of Transportation hereby avers that a complete set of the aforesaid final Drawings for structure plans are being sent to the following parties of record for examination simultaneously with this submission to the Public Utility Commission:

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We respectfully request the approval of these plans and the subsequent issuance of the PUC Order. Should you have any questions or concerns, please feel free to contact me at (717) 787 – 4732

Sincerely



Ahmed Lasloudji
Engineering District 8-0
Department of Transportation

Attachment:

cc: Parties of Record
Mark J. Chappell, P.E Chief, Utilities and Right-of-Way Section, 7th Floor, CKB
Karen L. Cummings, Senior Assistant Chief Counsel, 9th Floor, CKB
William Sinick, P.E, Manager, Rail Safety Division, PUC, 3rd Floor, CKB

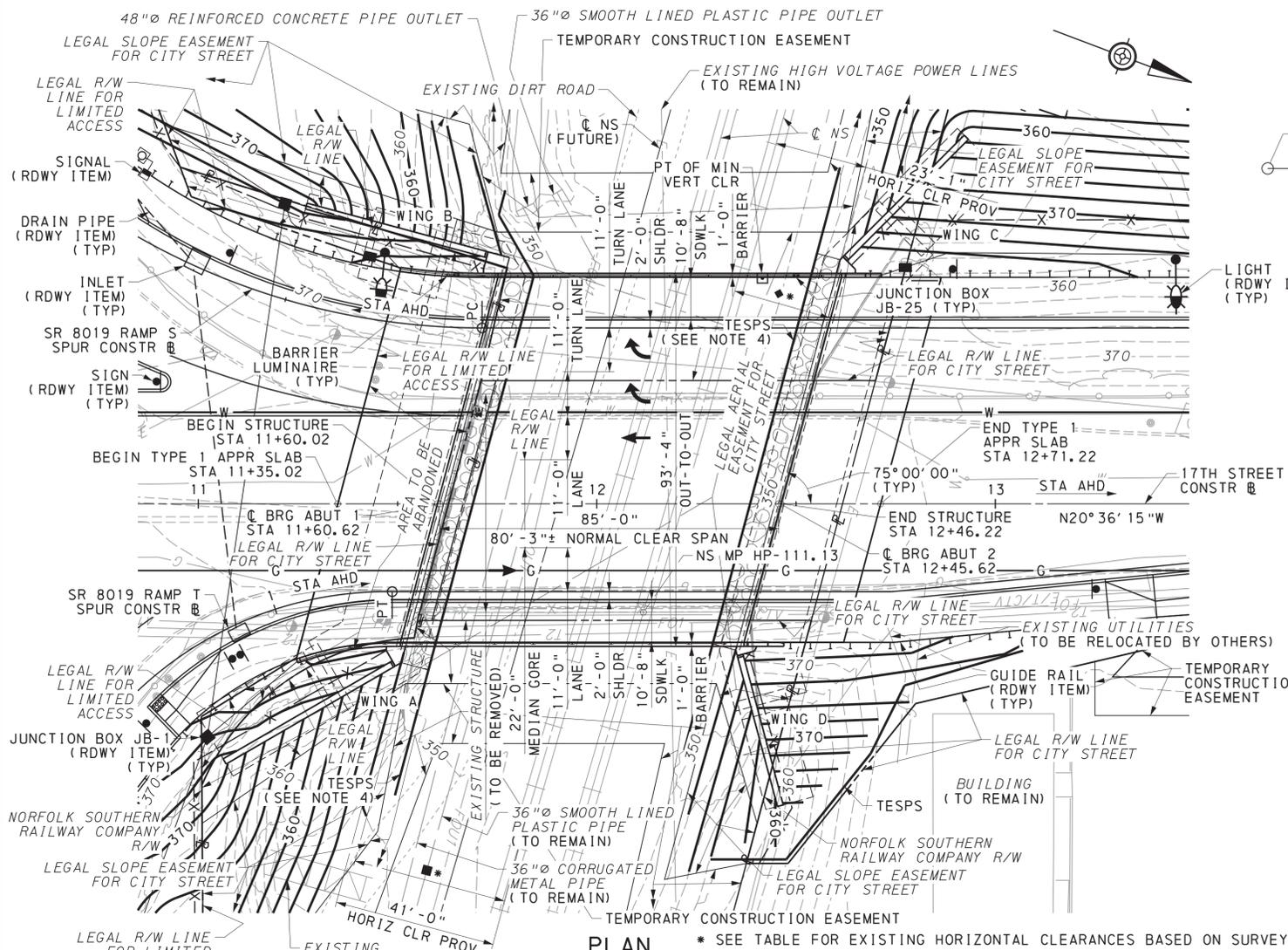
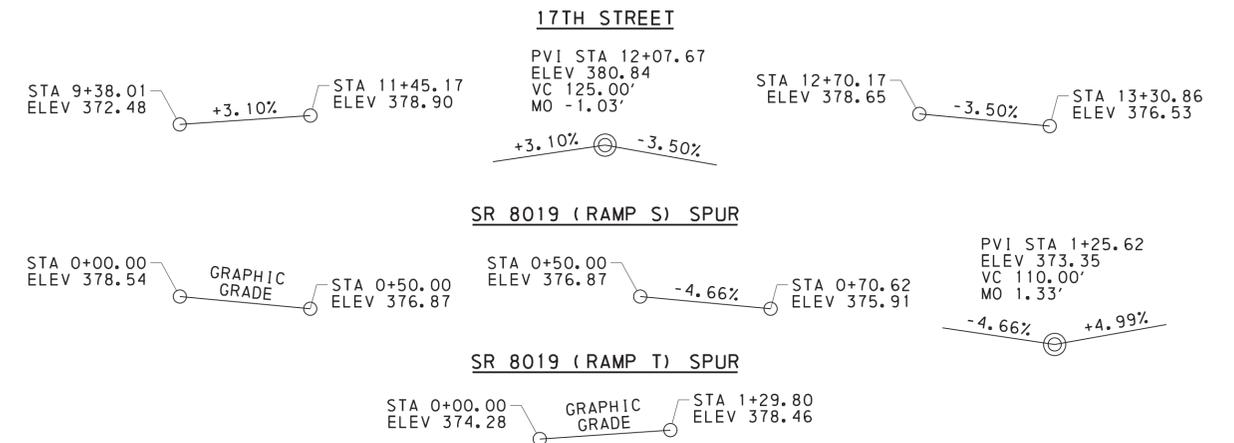
HORIZONTAL ALIGNMENT AND CURVE DATA

| 17TH STREET | SR 8019 (RAMP S) SPUR | SR 8019 (RAMP T) SPUR |
|-------------|-----------------------|-----------------------|
| STA 2+33.01 | PI STA 1+30.93 | PI STA 0+81.54 |
| N20°36'15"W | Δ = 73°36'19" RT | Δ = 72°01'42" RT |
| | T = 130.93' | T = 66.16' |
| | D = 32°44'26" | D = 62°57'19" |
| | L = 224.81' | L = 114.41' |
| | R = 175.00' | R = 91.01' |
| | E = 43.56' | E = 21.50' |
| | PC STA 0+00.00 | PC STA 0+15.38 |
| | PT STA 2+24.81 | PT STA 1+29.80 |

LEGEND

| | |
|--|--|
| | SEE ROCK DETAIL, SHEET 4 |
| | DIRECTION OF TRAFFIC |
| | PROPOSED CONTOUR |
| | PROPOSED WATER |
| | PROPOSED GAS |
| | PROPOSED R/W FENCE |
| | TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM (TESPS) |
| | EXISTING CONTOUR |
| | LEGAL RIGHT-OF-WAY |
| | EXISTING CABLE/TELEVISION |
| | EXISTING FIBER OPTIC |
| | EXISTING FIBER OPTIC UNDERGROUND |
| | EXISTING ELECTRIC |
| | EXISTING WATER |
| | EXISTING TELEPHONE |
| | EXISTING TELEPHONE UNDERGROUND |
| | EXISTING GAS |
| | EXISTING FENCE |

VERTICAL ALIGNMENT AND CURVE DATA



PLAN
10 0 10 20 FEET

* SEE TABLE FOR EXISTING HORIZONTAL CLEARANCES BASED ON SURVEY

NOTES:

- FOR INDEX OF DRAWINGS, SEE SHEET 2.
- FOR SUPPLEMENTAL DRAWINGS, SEE SHEET 3.
- FOR DEMOLITION CONCEPT DETAILS, SEE SHEET 6.
- SHORING IN FRONT OF ABUTMENTS TO REMAIN IN PLACE AND CUT OFF BELOW GRADE IN ACCORDANCE WITH THE NS SPECIAL PROVISIONS FOR THE PROTECTION OF RAILWAY INTERESTS.

HYDRAULIC DATA

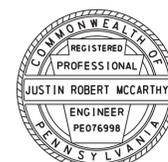
DRAINAGE AREA = 0.35 SQ MILES

| | EXISTING | PROPOSED |
|--|----------|----------|
| 25 YEAR DESIGN FLOOD HEADWATER ELEVATION | 351.38 | 351.37 |
| VELOCITY (FPS) | 4.2 | 4.2 |
| MAGNITUDE (CFS) | 370 | 370 |
| 100 YEAR FLOOD HEADWATER ELEVATION | 351.99 | 351.99 |
| VELOCITY (FPS) | 4.5 | 4.5 |
| MAGNITUDE (CFS) | 570 | 570 |

FLOOD OF RECORD: NONE

REFERENCES:

| | SHEETS: |
|--------------------------------|---------|
| TYPICAL SECTION & LOAD RATINGS | 2 |
| GENERAL NOTES | 3 - 4 |
| QUANTITIES | 5 |
| STAKE-OUT PLAN | 10 |
| STRUCTURE BORINGS | 57 - 62 |



Justin R. McCarthy
REG. PROF. ENGINEER
DATE: 1/21/2025
PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
GENERAL PLAN & ELEVATION

| | |
|---|--|
| RECOMMENDED 1-22-2025 | SHEET 1 OF 62 + SUPPLEMENTAL DRAWINGS |
| Derek Mitch DISTRICT 8-0 BRIDGE ENGINEER | S-42023 |

EXISTING HORIZONTAL CLEARANCES

| SYMBOL | CLEARANCE | LOCATION |
|--------|-----------|----------------|
| ■ | 38'-11" | SOUTH ABUTMENT |
| ◆ | 24'-9" | NORTH ABUTMENT |

CLEARANCE NOTE:
TEMPORARY CLEARANCES OF 22'-0" VERTICAL ABOVE TOP OF HIGHEST RAIL AND 13'-0" HORIZONTAL FROM CENTERLINE OF TRACK ARE TO BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION. EXISTING SUBSTANDARD CLEARANCES ARE NOT TO BE FURTHER REDUCED FOR THE TEMPORARY CONSTRUCTION CONDITION WITHOUT WRITTEN PERMISSION FROM NORFOLK SOUTHERN.

ELEVATION
10 0 10 20 FEET

VERTICAL CLEARANCES

| SYMBOL | EXISTING | PROPOSED | REQUIRED |
|--------|----------|-----------|----------|
| ★ | 21'-11" | 24'-7" | 23'-0" |
| ◆ | 22'-3" | 25'-0" | 23'-0" |
| ■ | - - - | 25'-1"*** | 23'-0" |

*** VERTICAL CLEARANCE ASSUMES THE FUTURE TRACK ELEVATIONS ARE CONSISTENT WITH THE EXISTING ADJACENT TRACK TOP OF RAIL ELEVATIONS.

1/21/2025 11:16 AM 16-3016-3-2R04-gpe01.dgn

| BRIDGE LOAD RATINGS WITHOUT FUTURE WEARING SURFACE | | | | | | | | |
|---|---------------------|------------|------------|------------|------------|-----------|-----------|-----------|
| ADT: 9,344 (2050); ADTT: 523 (2050) (ONE-DIRECTIONAL) | | | | | | | | |
| PA BULB-TEE BEAM, 33/31.5 | | | | | | | | |
| SPAN 1 | | H 20 | HS 20 | ML-80 | TK527 | PHL-93 | P-82 | P2016-13 |
| INVENTORY RATING (IR) | DISTRIBUTION FACTOR | 0.366 | 0.366 | 0.366 | 0.366 | 0.693 | - | - |
| | LOCATION | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | - | - |
| | LIMIT STATE | SERV-IIIIP | SERV-IIIIP | SERV-IIIIP | SERV-IIIIP | SERV-III | - | - |
| | RATING FACTOR | 1.98M | 1.52M | 1.33M | 1.34M | 1.20M | - | - |
| | RESISTANCE | 0.300 KSI | 0.300 KSI | 0.300 KSI | 0.300 KSI | 0.300 KSI | - | - |
| SPAN # / BEAM # | | 1 / 12 | 1 / 12 | 1 / 12 | 1 / 12 | 1 / 5 | - | - |
| OPERATING RATING (OR) | DISTRIBUTION FACTOR | 0.809 | 0.809 | 0.809 | 0.809 | 0.809 | 0.809 | 0.809 |
| | LOCATION | 0.25 L | 0.25 L | 0.25 L | 0.25 L | 0.30 L | 0.25 L | 0.25 L |
| | LIMIT STATE | STR-II | STR-II | STR-II | STR-II | STR-IA | STR-II | STR-II |
| | RATING FACTOR | 3.00V | 2.26V | 2.05V | 2.00V | 1.78V | 1.18V | 1.12V |
| | RESISTANCE | 208.8 KIP | 208.8 KIP | 208.8 KIP | 208.8 KIP | 210.7 KIP | 208.8 KIP | 208.8 KIP |
| SPAN # / BEAM # | | 1 / 5 | 1 / 5 | 1 / 5 | 1 / 5 | 1 / 5 | 1 / 5 | 1 / 5 |

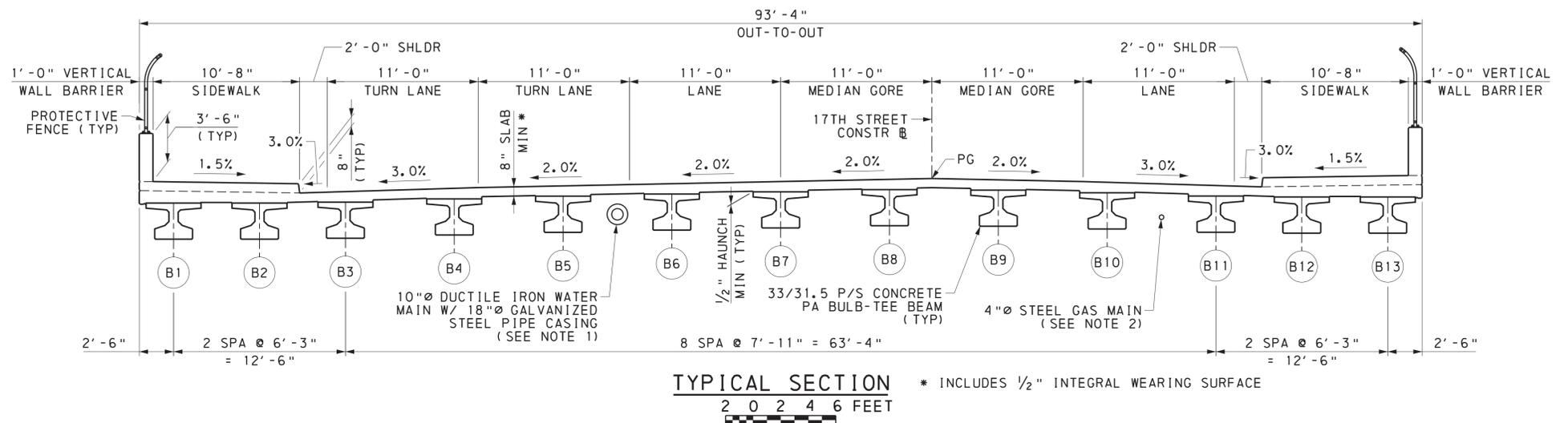
| BRIDGE LOAD RATINGS WITH FUTURE WEARING SURFACE | | | | | | | | |
|---|---------------------|------------|------------|------------|------------|-----------|-----------|-----------|
| ADT: 9,344 (2050); ADTT: 523 (2050) (ONE-DIRECTIONAL) | | | | | | | | |
| PA BULB-TEE BEAM, 33/31.5 | | | | | | | | |
| SPAN 1 | | H 20 | HS 20 | ML-80 | TK527 | PHL-93 | P-82 | P2016-13 |
| INVENTORY RATING (IR) | DISTRIBUTION FACTOR | 0.366 | 0.366 | 0.366 | 0.366 | 0.693 | - | - |
| | LOCATION | 0.50 L | 0.50 L | 0.50 L | 0.50 L | 0.50 L | - | - |
| | LIMIT STATE | SERV-IIIIP | SERV-IIIIP | SERV-IIIIP | SERV-IIIIP | SERV-III | - | - |
| | RATING FACTOR | 1.56M | 1.20M | 1.05M | 1.06M | 1.08M | - | - |
| | RESISTANCE | 0.300 KSI | 0.300 KSI | 0.300 KSI | 0.300 KSI | 0.300 KSI | - | - |
| SPAN # / BEAM # | | 1 / 12 | 1 / 12 | 1 / 12 | 1 / 12 | 1 / 5 | - | - |
| OPERATING RATING (OR) | DISTRIBUTION FACTOR | 0.809 | 0.809 | 0.809 | 0.809 | 0.809 | 0.809 | 0.809 |
| | LOCATION | 0.25 L | 0.25 L | 0.30 L | 0.25 L | 0.30 L | 0.25 L | 0.30 L |
| | LIMIT STATE | STR-II | STR-II | STR-II | STR-II | STR-IA | STR-II | STR-II |
| | RATING FACTOR | 2.86V | 2.15V | 1.95V | 1.90V | 1.68V | 1.12V | 1.06V |
| | RESISTANCE | 202.9 KIP | 202.9 KIP | 187.9 KIP | 202.9 KIP | 187.9 KIP | 202.9 KIP | 187.9 KIP |
| SPAN # / BEAM # | | 1 / 5 | 1 / 5 | 1 / 5 | 1 / 5 | 1 / 5 | 1 / 5 | 1 / 5 |

CRITICAL MEMBER MAXIMUM FACTORED FLEXURAL RESISTANCE: 6,951.88 K-FT LOCATION: BEAM 5 (SPAN 1), 42'-6"
 CRITICAL MEMBER MAXIMUM FACTORED SHEAR RESISTANCE: 344.29 K LOCATION: BEAM 5 (SPAN 1), 8'-6"

CRITICAL MEMBER MAXIMUM FACTORED FLEXURAL RESISTANCE: 6,640.61 K-FT LOCATION: BEAM 12 (SPAN 1), 42'-6"
 CRITICAL MEMBER MAXIMUM FACTORED SHEAR RESISTANCE: 335.70 K LOCATION: BEAM 5 (SPAN 1), 8'-6"

RATING NOTES:

- RATINGS BASED ON LOAD AND RESISTANCE FACTOR (LRFD) METHOD.
- DISTRIBUTION FACTORS ARE CORRESPONDING TO THE CONTROLLING LIMIT STATES.
- DATA TAKEN FROM PENNDOT'S P/S CONCRETE GIRDER DESIGN AND RATING (PSLRFD) PROGRAM (v2.16.0.0).
- FACTORED RESISTANCE TAKEN AT THE LOCATION ON THE CRITICAL MEMBER INDICATED.
- M - MOMENT RATING FACTOR CONTROLS
V - SHEAR RATING FACTOR CONTROLS
- RATINGS WITH FUTURE WEARING SURFACE INCLUDES SURFACE AREA DENSITY OF 30 LB/SF FOR FUTURE WEARING SURFACE.
- PHL-93 = PENNSYLVANIA DESIGN VEHICULAR LIVE LOAD
ML-80 = PENNSYLVANIA MAXIMUM LEGAL LOAD
TK527 = PENNSYLVANIA LEGAL LOAD CONFIGURATION
P-82 = PENNSYLVANIA PERMIT LOAD
P2016-13 = PENNSYLVANIA PERMIT LOAD
- FOR THE STR-IP LIMIT STATE, THE VEHICULAR LOAD DISTRIBUTION FACTOR ACCOUNTS FOR THE PRESENCE OF PEDESTRIAN LOADS.
- FOR BEAM PROPERTIES USED FOR RATINGS, SEE SHEET 35.



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| 4 | GENERAL NOTES 2 |
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| 6 | DEMOLITION CONCEPT DETAILS |
| 7 | CONCEPTUAL ERECTION PLAN 1 |
| 8 | CONCEPTUAL ERECTION PLAN 2 |
| 9 | CONCEPTUAL ERECTION PLAN 3 |
| 10 | STAKE-OUT PLAN |
| 11 | ABUTMENT 1 FOOTING PLAN |
| 12 | ABUTMENT 1 PLAN |
| 13 | ABUTMENT 1 ELEVATION |
| 14 | ABUTMENT 1 SECTION & DETAILS |
| 15 | WINGWALL A PLAN & ELEVATION |
| 16 | WINGWALL A SECTIONS |
| 17 | WINGWALL B PLAN & ELEVATION |
| 18 | WINGWALL B SECTIONS |
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| 21 | ABUTMENT 2 FOOTING PLAN 1 |
| 22 | ABUTMENT 2 FOOTING PLAN 2 |
| 23 | ABUTMENT 2 PLAN |
| 24 | ABUTMENT 2 ELEVATION |
| 25 | ABUTMENT 2 SECTIONS & DETAILS |
| 26 | WINGWALL C PLAN & ELEVATION |
| 27 | WINGWALL C SECTIONS |
| 28 | WINGWALL D PLAN & ELEVATION |
| 29 | WINGWALL D SECTIONS |
| 30 | MICROPILE DETAILS |

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| 33 | MISCELLANEOUS ABUTMENT DETAILS |
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| 35 | BEAM DETAILS 1 |
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| 37 | BEARING DETAILS |
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| 39 | SLAB TYPICAL SECTION |
| 40 | BARRIER & SIDEWALK DETAILS |
| 41 | GAS UTILITY SUPPORT HANGER DETAILS |
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| 43 | DIAPHRAGM DETAILS 2 |
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| 45 | SUPERSTRUCTURE REBAR SCHEDULE |
| 46 | DECK ELEVATIONS |
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| 48 | FAR APPROACH SLAB PLAN |
| 49 | APPROACH SLAB SECTIONS 1 |
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| 51 | APPROACH SLAB DETAILS 1 |
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| 54 | APPROACH SLAB REBAR SCHEDULE |
| 55 | PROTECTIVE FENCE DETAILS |
| 56 | FUTURE REDECKING PLAN |
| 57-62 | STRUCTURE BORINGS |

NOTES:

- COORDINATE WITH CAPITAL REGION WATER. SEE WATER UTILITY RELOCATION ALSO PLAN.
- COORDINATE WITH UGI UTILITIES, INC. AND THEIR CONTRACTOR FOR THE GAS UTILITY RELOCATION.

REFERENCES:

GENERAL PLAN
GENERAL NOTES

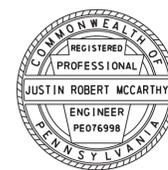
SHEETS:

1
3 - 4

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

HNTB



PREPARED BY:
HNTB CORPORATION
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
TYPICAL SECTION & LOAD RATINGS

RECOMMENDED 1-22-2025

SHEET 2 OF 62

S-42023

GENERAL NOTES

DESIGN SPECIFICATIONS:

1. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION, 2017, AND AS SUPPLEMENTED BY DESIGN MANUAL, PART 4, DECEMBER 2019.
2. LIVE LOAD DISTRIBUTION TO GIRDERS IS BASED UPON DM-4 DISTRIBUTION FACTORS.
3. DESIGN IS IN ACCORDANCE WITH THE LRFD METHOD.

DESIGN LIVE LOADS:

1. PHL-93, P-82 AND P2016-13
2. FATIGUE DESIGN IS BASED ON THE FOLLOWING:
PRESTRESSED CONCRETE: ADTT 523 (2050)(ONE-DIRECTIONAL)
3. MAXIMUM ALLOWABLE TENSILE STRESS IN PRECOMPRESSED TENSILE ZONE: $0.0948 \sqrt{(f'c)}$

DEAD LOADS:

1. INCLUDES SURFACE AREA DENSITY OF 0.030 KSF FOR FUTURE WEARING SURFACE ON THE DECK SLAB.
2. INCLUDES A SURFACE AREA DENSITY OF 0.015 KSF FOR PERMANENT METAL DECK FORMS THAT TAKES INTO ACCOUNT THE WEIGHT OF THE FORM, PLUS THE WEIGHT OF THE CONCRETE IN THE VALLEYS OF THE FORMS.
3. BEAMS 3, 4, 10 AND 11 INCLUDE 0.013 KIP/FT EACH FOR UTILITY AND SUPPORT.
4. BEAMS 5-9 INCLUDE 0.095 KIP/FT EACH FOR UTILITY AND SUPPORT.

GENERAL:

1. PROVIDE MATERIALS AND PERFORM WORK IN ACCORDANCE WITH SPECIFICATIONS, PUBLICATION 408/2020, AASHTO/AWS D1.5M/D1.5: 2015 BRIDGE WELDING CODE, AND CONTRACT SPECIAL PROVISIONS.
2. PROVIDE STRUCTURAL STEEL FOR INTERMEDIATE MID-SPAN DIAPHRAGMS CONFORMING TO AASHTO M270/M270M GRADE 50 (ASTM A709/A709M GRADE 50). ALL STEEL MEMBERS AND HARDWARE ARE TO BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH PUB 408, SECTION 1105.02(s).
3. PROVIDE 2" CONCRETE COVER ON REINFORCEMENT BARS, EXCEPT AS NOTED.
4. USE CLASS AAAP CEMENT CONCRETE IN DECK SLAB.
USE CLASS AA CEMENT CONCRETE IN ALTERNATE SIDEWALK, BARRIERS, TYPE 1 APPROACH SLABS, CONCRETE DIAPHRAGMS, CHEEKWALLS, SHEAR BLOCKS, AND SLEEPER SLABS.
USE CLASS A CEMENT CONCRETE IN ABUTMENTS BELOW BRIDGE SEAT, WINGWALLS, AND FOOTINGS.
USE CLASS C CEMENT CONCRETE BELOW THE BOTTOM OF FOOTINGS WHEN SPECIFIED.
5. A HIGHER CLASS CONCRETE MAY BE SUBSTITUTED FOR A LOWER CLASS CONCRETE AT NO ADDITIONAL COST TO THE DEPARTMENT, IF APPROVED BY THE DISTRICT BRIDGE ENGINEER.
6. PROVIDE GRADE 60 REINFORCING STEEL BARS THAT MEET THE REQUIREMENTS OF ASTM A 615/A 615M, A 996/A 996M OR A 706/A 706M. DO NOT WELD GRADE 60 REINFORCING STEEL BARS UNLESS SPECIFIED. GRADE 40 REINFORCING STEEL BARS MAY BE SUBSTITUTED WITH A PROPORTIONAL INCREASE IN CROSS-SECTIONAL AREA, IF APPROVED BY THE CHIEF BRIDGE ENGINEER. DO NOT USE RAIL STEEL A 996/A 996M REINFORCEMENT BARS IN ABUTMENTS, SHEAR BLOCKS, BEAMS, FOOTINGS, PILES, BARRIERS OR WHERE BENDING OF THE REINFORCEMENT BARS IS INDICATED.
7. USE EPOXY-COATED REINFORCEMENT BARS EVERYWHERE EXCEPT AS INDICATED WITHIN THE BEAM DETAILS NOTES.
8. GALVANIZED REINFORCING STEEL BARS MAY BE SUBSTITUTED FOR EPOXY-COATED REINFORCING STEEL BARS AT NO ADDITIONAL COST TO THE DEPARTMENT.
9. RAKE-FINISH ALL HORIZONTAL CONSTRUCTION JOINTS, EXCEPT AS INDICATED.
10. CONSTRUCT DECK SLAB TRANSVERSE CONSTRUCTION JOINTS PARALLEL TO BRIDGE CENTERLINE OF BEARINGS.
11. PLACE CHEEKWALL AND CONCRETE SHEAR BLOCKS AFTER BEAMS ARE SET IN POSITION.
12. CHAMFER EXPOSED CONCRETE EDGES $\frac{3}{4}$ " BY $\frac{3}{4}$ ", EXCEPT AS NOTED.
13. ALL DIMENSIONS SHOWN ARE HORIZONTAL, EXCEPT AS NOTED.
14. USE PERMANENT METAL FORMS TO CONSTRUCT THE DECK SLAB.
15. DECK SLAB THICKNESS INCLUDES A $\frac{1}{2}$ " INTEGRAL WEARING SURFACE.
16. SUPERSTRUCTURE DIMENSIONS SHOWN ARE FOR A NORMAL TEMPERATURE OF 68°F.
17. PROVIDE MINIMUM EMBEDMENT AND SPLICE LENGTHS IN ACCORDANCE WITH STANDARD DRAWING BC-736M, UNLESS OTHERWISE INDICATED.
18. PREPARE BEARING AREAS AS SPECIFIED IN PUBLICATION 408, SECTION 1001.3(k) 9.
19. BRIDGE IS NOT WEIGHT RESTRICTED. SEE PUBLICATION 408 SECTION 105.17 FOR CONSTRUCTION LOADING LIMITS.
20. DO NOT USE ADHESIVE ANCHORS IN A TENSION APPLICATION FOR PERMANENT INSTALLATIONS.
21. DO NOT USE ADHESIVE ANCHORS IN A SUSTAINED TENSION APPLICATION FOR TEMPORARY INSTALLATIONS, INCLUDING DURING CONSTRUCTION.
22. LABORATORY ANALYSIS OF SAMPLES FROM CAULKING MATERIAL OBSERVED AT THE ABUTMENT AND WINGWALL JOINTS OF THE EXISTING STRUCTURE DID NOT CONTAIN ASBESTOS. REFER TO THE ASBESTOS CONTAINING MATERIAL AND LEAD-BASED PAINT INSPECTION REPORT AND SPECIAL PROVISION.

FOUNDATION NOTES:

GENERAL:

1. FOUNDATIONS MAY BE ORDERED BY THE REPRESENTATIVE AND DISTRICT GEOTECHNICAL SPECIALIST TO BE AT ANY ELEVATION OR OF ANY DIMENSIONS NECESSARY TO PROVIDE A PROPER FOUNDATION.
2. CONTROL DRAINAGE DURING CONSTRUCTION. DIRECT RUNOFF AWAY FROM THE PROPOSED FOUNDATION FOOTPRINT.
3. EXISTING STEEL BEARING PILES AND CONCRETE PEDESTALS ARE ANTICIPATED TO BE ENCOUNTERED WITHIN THE EXCAVATION FOOTPRINT OF THE PROPOSED ABUTMENT 2. EXTRACT THE EXISTING STEEL BEARING PILES IN ACCORDANCE WITH THE SPECIAL PROVISIONS. REMOVE EXISTING PEDESTALS IN THEIR ENTIRETY.
4. PERFORM EXPLORATORY AIR TRACK DRILLING WITHIN THE ABUTMENT 2 FOOTPRINT TO VERIFY THE TRANSITION BETWEEN SPREAD FOOTING AND MICROPILE FOUNDATIONS IN ACCORDANCE WITH SPECIAL PROVISION - EXPLORATORY AIR TRACK DRILLING.
5. BEDROCK MAY BE ENCOUNTERED ABOVE THE BOTTOM OF FOOTING ELEVATION. BLASTING IS NOT ALLOWED WITHIN THE FOUNDATION FOOTPRINT. EXCAVATE ALL ROCK MECHANICALLY.
6. PRIOR TO CONSTRUCTION OF SPREAD FOOTINGS, ALLOW THE DISTRICT GEOTECHNICAL SPECIALIST TO INSPECT THE BOTTOM OF FOOTING EXCAVATION. AS DIRECTED, EXCAVATE SOFT OR UNSUITABLE MATERIAL BELOW THE BOTTOM OF FOOTING ELEVATION AND REPLACE WITH CLASS C CEMENT CONCRETE. IF BEDROCK IS NOT ENCOUNTERED AT THE BOTTOM OF FOOTING ELEVATION, OVER-EXCAVATE TO TOP OF ROCK AND BACKFILL WITH CLASS C CEMENT CONCRETE TO THE BOTTOM OF FOOTING ELEVATION IN ACCORDANCE WITH THE OVEREXCAVATION AND BACKFILL WITH CLASS C CEMENT CONCRETE SPECIAL PROVISION.
7. EXCAVATE ACCORDING TO CURRENT OSHA OR OTHER APPLICABLE LOCAL, STATE, AND FEDERAL REGULATIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE STABILITY OF THE EXCAVATIONS.
8. NOTIFY THE DISTRICT GEOTECHNICAL SPECIALIST IF ANY DEVIATIONS FROM THE NOTED SUBSURFACE CONDITIONS ARE ENCOUNTERED DURING CONSTRUCTION.
9. IF A SINKHOLE IS ENCOUNTERED DURING CONSTRUCTION, IMMEDIATELY CONTACT THE DISTRICT GEOTECHNICAL SPECIALIST.
10. CONSIDER THE SOIL ENVIRONMENT AS POTENTIALLY CORROSIVE. EPOXY COAT ALL REINFORCEMENT BARS. MICROPILES DESIGNED WITH A $\frac{1}{16}$ " REDUCTION OF STEEL ON EXPOSED SURFACES.
11. SITE CLASS IS NOT CLASS E OR F.

MICROPILE FOOTINGS:

1. PROVIDE MATERIALS AND CONSTRUCT MICROPILES IN ACCORDANCE WITH PUBLICATION 408, SECTION 1007.
2. EACH INDIVIDUAL PILE BOND ZONE MUST CONTAIN AN ACCUMULATION OF 11 FEET OF COMPETENT BEDROCK OR AS DETERMINED FROM LOAD TEST DATA.
3. SOIL AND VOIDS DO NOT COUNT TOWARD THE BOND ZONE LENGTH.
4. NO SOIL SEAM, IN EXCESS OF 5 FEET, WILL BE ACCEPTABLE WITHIN THE BOND ZONE.
5. NO ROCK SEAM, LESS THAN 5 FEET, WILL BE ACCEPTABLE WITHIN THE BOND ZONE.
6. NO BOND ZONE WILL TERMINATE WITHOUT A MINIMUM OF 5 FEET OF COMPETENT ROCK AT THE BOTTOM OF THE BOND ZONE.
7. PERFORM LOAD TESTING IN ACCORDANCE WITH PUBLICATION 408, SECTION 1007.3(j) 2. INSTALL ONE VERIFICATION LOAD TEST PILE AT ABUTMENT 2 (WEST) AND WINGWALL C. PERFORM VERIFICATION LOAD TESTS ON PRE-PRODUCTION MICROPILES INSTALLED OUTSIDE THE FOUNDATION FOOTPRINT. PERFORM TWO PROOF LOAD TESTS AT ABUTMENT 2 (WEST) AND WINGWALL C ON PRODUCTION PILES. UTILIZE LOAD TEST DATA TO VERIFY DESIGN BOND ZONE. AS A RESULT OF LOAD TESTS AND INSTALLATION RECORDS, MICROPILE BOND ZONES SHALL BE SHORTENED OR LENGTHENED. SUBMIT THE REVISIONS TO THE DISTRICT GEOTECHNICAL SPECIALIST OR REPRESENTATIVE FOR APPROVAL. THE MICROPILE DESIGN LOAD IS 200 KIPS.
8. MICROPILE FOOTINGS DESIGNED WITH A STRENGTH AXIAL CAPACITY OF 408.0 KIPS.
9. ABUTMENT 2 (WEST) AND WINGWALL C ARE DESIGNED SUCH THAT THE LATERAL LOADS ARE RESISTED BY THE BATTERED MICROPILES ONLY.

* AS SUPPLEMENTED BY ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS"

| CLASSIFICATION OF EARTHWORK FOR STRUCTURES | RC-11M | 06/01/2010 |
|---|----------|------------|
| BACKFILL AT STRUCTURES | RC-12M | 11/01/2022 |
| GUIDE RAIL TO BRIDGE BARRIER TRANSITIONS | RC-50M | 02/27/2023 |
| PROTECTIVE FENCE | BC-701M | 11/23/2022 |
| ELECTRICAL DETAILS | BC-721M | 02/19/2021 |
| PERMANENT METAL DECK FORMS | BC-732M | 11/23/2022 |
| ANCHOR SYSTEMS | BC-734M | 02/19/2021 |
| WALL CONSTRUCTION AND EXPANSION JOINT DETAILS | BC-735M | 09/30/2016 |
| REINFORCEMENT BAR FABRICATION DETAILS | BC-736M | 11/23/2022 |
| BRIDGE DRAINAGE | BC-751M | 01/31/2019 |
| CONCRETE DECK SLAB DETAILS | BC-752M | 11/23/2022 |
| BEARINGS | BC-755M | 01/31/2019 |
| PREFORMED NEOPRENE COMPRESSION SEAL JOINT FOR APPROACH SLABS | BC-766M | 11/23/2022 |
| STEEL MID-SPAN DIAPHRAGMS FOR P/S CONCRETE AASHTO I-BEAM AND PA BULB-TEE BEAM BRIDGES | BC-770M | 01/31/2019 |
| PRESTRESSED CONCRETE BEAM BRACING | BC-772M | 11/23/2022 |
| MISCELLANEOUS PRESTRESS DETAILS | BC-775M | 11/23/2022 |
| TYPICAL WATERPROOFING AND EXPANSION DETAILS * | BC-788M | 11/23/2022 |
| UTILITY ATTACHMENT & SUPPORT DETAILS, PRESTRESSED BRIDGES | BC-794M | 01/31/2019 |
| DESCRIPTION | DWG. NO. | REC. DATE |

SUPPLEMENTAL DRAWINGS

EXISTING STRUCTURE PLANS:

1. DO NOT CONSIDER ANY OF THE DATA ON THE EXISTING STRUCTURE SUPPLIED IN THE ORIGINAL DESIGN DRAWINGS OR MADE AVAILABLE TO YOU BY THE DEPARTMENT OR ITS AUTHORIZED AGENTS AS POSITIVE REPRESENTATIONS OF ANY OF THE CONDITIONS THAT YOU WILL ENCOUNTER IN THE FIELD.
2. THE INFORMATION SHOWN ON THE PLANS FOR THE EXISTING BRIDGE IS NOT PART OF THE PLANS, PROPOSAL OR CONTRACT AND IS NOT TO BE CONSIDERED A BASIS FOR COMPUTATION OF THE UNIT PRICES USED FOR BIDDING PURPOSES. THERE IS NO EXPRESSED OR IMPLIED AGREEMENT THAT INFORMATION IS CORRECTLY SHOWN. THE BIDDER IS NOT TO RELY ON THIS INFORMATION, BUT IS TO ASSUME THE POSSIBILITY THAT CONDITIONS AFFECTING THE COST AND/OR QUANTITIES OF WORK TO BE PERFORMED MAY DIFFER FROM THOSE INDICATED. SEE JANUARY 1972 PLAN SHEETS FOR EXISTING STRUCTURE INFORMATION.
3. REMOVE EXISTING BRIDGE IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS AND SPECIAL PROVISIONS.

UTILITY NOTES:

1. COORDINATE, LOCATE, AND CONDUCT ALL WORK RELATED TO PUBLIC AND PRIVATE UTILITIES IN ACCORDANCE WITH PUBLICATION 408, SECTIONS 105.06 AND 107.12.
2. COORDINATE WITH CAPITAL REGION WATER. SEE WATER UTILITY RELOCATION ALSO PLAN.
3. COORDINATE WITH UGI UTILITIES, INC. AND THEIR CONTRACTOR FOR THE GAS UTILITY RELOCATION.
4. COORDINATE WITH CAPITAL REGION WATER AND UGI UTILITIES, INC. PRIOR TO DEMOLITION OF THE EXISTING STRUCTURE. THE EXISTING UTILITIES SHALL BE DISCONNECTED/ABANDONED AND TEMPORARY SERVICE PROVIDED BEFORE EXISTING BRIDGE REMOVAL.
5. COORDINATE WITH PPL CORPORATION FOR DE-ENERGIZATION OF THE EXISTING AERIAL HIGH VOLTAGE POWER LINES.

GAS UTILITY SUPPORT HANGER NOTES:

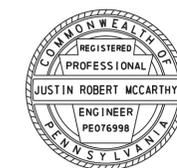
1. PROVIDE STRUCTURAL STEEL FOR UTILITY SUPPORT MEMBERS CONFORMING TO AASHTO M270/M270M GRADE 36 (ASTM A709 /A709M GRADE 36).
2. PROVIDE HIGH-STRENGTH BOLTS, INCLUDING NUTS AND WASHERS, CONFORMING TO AASHTO M164 (ASTM A325) DESIGNATION.
3. ALL STEEL MEMBERS AND HARDWARE ARE TO BE HOT-DIPPED GALVANIZED IN ACCORDANCE WITH PUB 408, SECTION 1105.02(s).
4. PRESTRESSED WEB INSERTS ARE TO BE GALVANIZED OR COMPLETELY ZINC-ELECTROPLATED. DRILLING IN THE BEAMS IS NOT PERMITTED. COST OF INSERTS IS INCIDENTAL TO THE PRESTRESSED BEAMS.
5. PRESTRESSED BEAMS ARE TO PROVIDE A MINIMUM PULLOUT STRENGTH OF 1.5 KIPS.
6. PLACE THE SUPPORT ANGLES PERPENDICULAR TO THE BEAMS.
7. MAXIMUM SPACING BETWEEN HANGERS IS 20'-0".
8. ADJUST ATTACHMENT RODS, AS REQUIRED, TO PROVIDE PROPER CLEARANCE THROUGH DIAPHRAGM OPENINGS.
9. THE NUTS ON ALL RODS ARE TO BE TIGHTENED FOR A SNUG ASSEMBLY ONLY AND LOCKED.

ARCHITECTURAL DETAIL NOTES:

1. ALL CONCRETE TO BE NATURAL COLOR.
2. PROVIDE A MODIFIED PROTECTIVE FENCE AS INDICATED ON SHEET 55 AND IN ACCORDANCE WITH SPECIAL PROVISION - RAILROAD PROTECTIVE FENCE, CURVED TOP, VINYL-COATED STEEL, BLACK.
FEDERAL COLOR #37031, BLACK

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
GENERAL NOTES 1

RECOMMENDED 1-22-2025

SHEET 3 OF 62

S-42023

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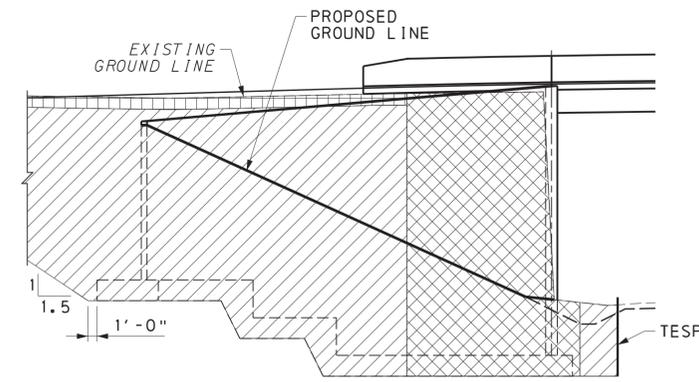
GENERAL NOTES

RAILROAD NOTES:

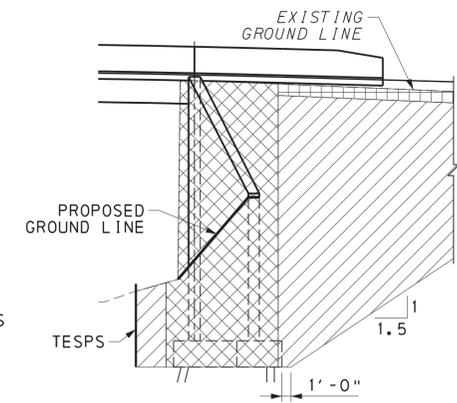
- ALL WORK TO BE PERFORMED ON, OVER, UNDER, OR ADJACENT TO THE RAILROAD RIGHT-OF-WAY SHALL COMPLY WITH THE NORFOLK SOUTHERN RAILWAY COMPANY ("RAILROAD", "NSR" OR "NS") PUBLIC PROJECTS MANUAL (APPENDIX E, SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS, AND APPENDIX H1, OVERHEAD GRADE SEPARATION DESIGN CRITERIA). WHEN IN CONFLICT WITH OTHER PROJECT SPECIFICATIONS, THE MOST STRINGENT ONE SHALL APPLY.
- "ONE CALL" SERVICES DO NOT LOCATE BURIED NORFOLK SOUTHERN SIGNALS AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE 7 DAYS IN ADVANCE OF WORK AT THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE THE RAILROAD'S UNDERGROUND FACILITIES. UPON REQUEST FROM THE CONTRACTOR OR SPONSOR, RAILROAD FORCES WILL LOCATE AND PAINT MARK OR FLAG THE RAILROAD'S UNDERGROUND FACILITIES. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE FACILITIES. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD FACILITY, THE CONTRACTOR SHALL COORDINATE WITH THE RAILROAD TO HAVE THE FACILITY POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION. THE FACILITY SHALL BE PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF THE RAILROAD'S REPRESENTATIVE. (SEE NS PUBLIC PROJECTS MANUAL, APPENDIX E, SECTION 4.D).
- ALL UTILITY INSTALLATIONS OR RELOCATIONS THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR OR PROJECT CONTRACTOR'S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION TO RAILPROS FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICABLE FEES. FOR UTILITY APPLICATIONS GO TO: <https://www.norfolksouthern.com/en/rail-development-property/ns-property/projects-on-ns-property/pipe-and-wire>. NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.
- THE CONTRACTOR SHALL NOT COMMENCE ANY WORK ON RAILROAD RIGHTS-OF-WAY UNTIL THEY HAVE COMPLIED WITH THE CONDITIONS PRESENTED IN NS PUBLIC PROJECTS MANUAL (SEE APPENDIX E, NORFOLK SOUTHERN - SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTERESTS).
- THE CONTRACTOR SHALL SO ARRANGE AND CONDUCT THEIR WORK SUCH THAT THERE WILL BE NO INTERFERENCE WITH THE RAILROAD'S OPERATIONS. WHENEVER WORK IS LIABLE TO AFFECT THE OPERATIONS OR SAFETY OF TRAINS, THE METHODS OF DOING SUCH WORK SHALL FIRST BE SUBMITTED TO THE RAILROAD ENGINEER FOR APPROVAL, BUT SUCH APPROVAL SHALL NOT RELIEVE THE CONTRACTOR FROM ANY LIABILITY.
- MATERIALS AND EQUIPMENT SHALL NOT BE STORED WHERE THEY WILL INTERFERE WITH RAILROAD OPERATIONS, NOR ON THE RIGHTS-OF-WAY OF THE RAILROAD WITHOUT FIRST HAVING OBTAINED PERMISSION FROM THE RAILROAD ENGINEER, AND SUCH PERMISSION WILL BE WITH THE UNDERSTANDING THAT THE RAILROAD WILL NOT BE LIABLE FOR DAMAGE TO SUCH MATERIAL AND EQUIPMENT FROM ANY CAUSE AND THAT THE RAILROAD ENGINEER MAY MOVE OR REQUIRE THE CONTRACTOR TO MOVE, AT THE CONTRACTOR'S EXPENSE, SUCH MATERIAL AND EQUIPMENT. (SEE NS PUBLIC PROJECTS MANUAL, APPENDIX E, SECTION 6K).
- SUPPORT OF EXCAVATION AND EXISTING SUBSTRUCTURE TO REMAIN ARE TO BE CUT OFF AT LEAST 2 FEET BELOW PROPOSED GRADE. (SEE NS PUBLIC PROJECTS MANUAL, APPENDIX E6, SECTION D9, AND APPENDIX H1, SECTION 5H).
- PROVIDE NO. 3 COARSE AGGREGATE FOR THE TOP 2 FEET OF ANY BACKFILL WITHIN 30 FEET OF CENTERLINE OF EXISTING TRACK.
- THE RAILROAD WILL BE PROVIDED AS-BUILT DRAWINGS SHOWING THE ACTUAL CLEARANCES AS CONSTRUCTED. DEPTH, SIZE, AND LOCATION OF ALL FOUNDATION COMPONENTS SHALL BE SHOWN ON THE DRAWINGS. (SEE NS PUBLIC PROJECTS MANUAL, APPENDIX H1, SECTION 8A).
- THE PROPOSED PROJECT WILL NOT CHANGE THE QUANTITY AND/OR CHARACTER OF FLOW IN THE RAILWAY'S DITCHES AND/OR DRAINAGE STRUCTURES.
- NORFOLK SOUTHERN HAS 54 TRAINS PER DAY AT 40 MPH.

LEGEND OF ABBREVIATIONS:

- ABUT = ABUTMENT
- ADT = AVERAGE DAILY TRAFFIC
- ADTT = AVERAGE DAILY TRUCK TRAFFIC
- AHD = AHEAD
- ALT = ALTERNATE
- APPR = APPROACH
- APPROX = APPROXIMATE
- AUX = AUXILIARY
- BFE = BOTTOM OF FOOTING ELEVATION
- ℄ = BASELINE
- BOT = BOTTOM
- BPCE = BOTTOM OF PILE CAP ELEVATION
- BRG = BEARING
- CFS = CUBIC FEET PER SECOND
- CG = CENTER OF GRAVITY
- CHK'D/CKD = CHECKED
- ℄ = CENTERLINE
- CLR = CLEAR
- CONSTR = CONSTRUCTION
- DES = DESIGN
- ∅/DIA = DIAMETER
- DWG = DRAWING
- EA = EACH
- EBBZ = ESTIMATED BOTTOM OF BOND ZONE
- EF = EACH FACE
- ELEV = ELEVATION
- EQ = EQUAL
- ETBZ = ESTIMATED TOP OF BOND ZONE
- EXIST = EXISTING
- E/EXP = EXPANSION
- F = FIXED
- FF = FRONT FACE
- FPS = FEET PER SECOND
- GALV = GALVANIZED
- H/HORIZ = HORIZONTAL
- ID = INSIDE DIAMETER
- INV = INVERT
- JT = JOINT
- LT = LEFT
- MAINT = MAINTENANCE
- MAX = MAXIMUM
- MIN = MINIMUM
- MP = MILEPOST
- NB = NORTHBOUND
- NO. = NUMBER
- NS = NORFOLK SOUTHERN RAILWAY
- OD = OUTSIDE DIAMETER
- PCP = PREFORMED CELLULAR POLYSTYRENE
- PED = PEDESTAL
- PG/PGL = PROFILE GRADE LINE
- PI = POINT OF INTERSECTION
- ℄ = PLATE
- POB = POINT OF BEGINNING
- POC = POINT OF CURVATURE
- POE = POINT OF ENDING
- POT = POINT OF TANGENCY
- PROV = PROVIDED
- P/S = PRESTRESSED
- PUB = PUBLICATION
- R = RADIUS
- RDWY = ROADWAY
- RECM'D = RECOMMENDED
- REINF = REINFORCEMENT
- REQ'D = REQUIRED
- RF = REAR FACE
- RT = RIGHT
- R/W = RIGHT-OF-WAY
- SB = SOUTHBOUND
- SCHED = SCHEDULE
- SHLDR = SHOULDER
- SPA = SPACE
- SR = STATE ROUTE
- ST = STREET
- STA = STATION
- STD = STANDARD
- TEMP = TEMPORARY
- TESPS = TEMPORARY EXCAVATION SUPPORT & PROTECTION SYSTEM
- TOR = TOP OF ROCK
- TYP = TYPICAL
- UNO = UNLESS NOTED OTHERWISE
- V/VERT = VERTICAL
- WING = WINGWALL
- WP = WORK POINT



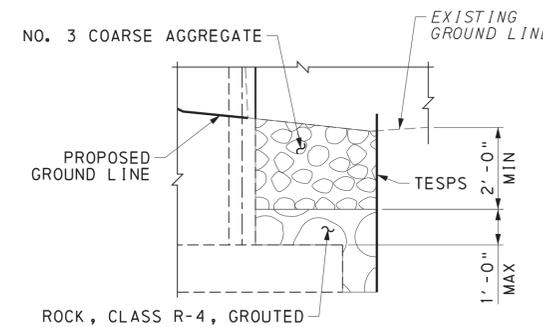
LIMITS OF EXCAVATION AT ABUTMENT 1 AND WINGS A & B
NOT TO SCALE



LIMITS OF EXCAVATION AT ABUTMENT 2 AND WINGS C & D
NOT TO SCALE

LEGEND

- CLASS 3 EXCAVATION
- CLASS 1 EXCAVATION (RDWY ITEM)
- REMOVAL OF EXISTING STRUCTURE

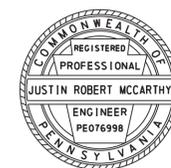


ROCK DETAIL
NOT TO SCALE

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BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
GENERAL NOTES 2

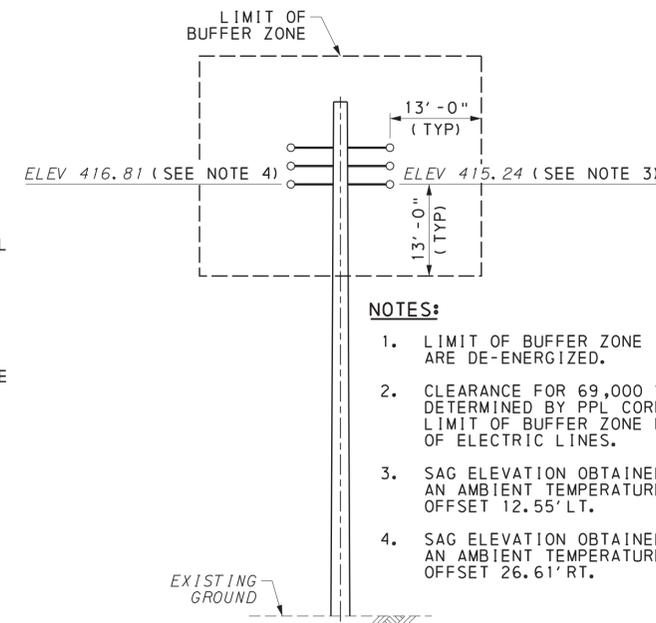
RECOMMENDED 1-22-2025

SHEET 4 OF 62

S-42023

| APPROXIMATE QUANTITIES - BRIDGE STRUCTURE, AS DESIGNED | | | | | | | | |
|--|--|-------------|----------------|--------|--------|---------------|-----------------|--------|
| ITEM NUMBER | DESCRIPTION | UNIT | NEAR APPR SLAB | ABUT 1 | ABUT 2 | FAR APPR SLAB | SUPER STRUCTURE | TOTAL |
| 8030-0001 | BRIDGE STRUCTURE, AS DESIGNED, S-42023 | (2) LS | - - - | - - - | - - - | - - - | - - - | LS |
| (1) | CLASS 3 EXCAVATION | (3) CY | - - - | 7950 | 4700 | - - - | - - - | 12650 |
| (1) | STRUCTURE BACKFILL | CY | - - - | 6800 | 6900 | - - - | - - - | 13700 |
| (1) | ELASTOMER WATERPROOFING MEMBRANE ON OTHER SURFACES | (2) (4) SY | - - - | 194 | 185 | - - - | - - - | 379 |
| (1) | NO. 57 COARSE AGGREGATE | (5) CY | - - - | 44 | 42 | - - - | - - - | 86 |
| (1) | NO. 3 COARSE AGGREGATE | CY | - - - | 260 | 190 | - - - | - - - | 450 |
| (1) | ROCK, CLASS R-4, GROUTED | (2) CY | - - - | 70 | 60 | - - - | - - - | 130 |
| (1) | JUNCTION BOXES J.B.-25 | EA | 2 | - - - | - - - | - - - | 1 | 3 |
| (1) | 1/2" CONDUIT IN STRUCTURE | (2) LF | 26 | - - - | - - - | - - - | 164 | 190 |
| (1) | 2" CONDUIT IN STRUCTURE | LF | 68 | - - - | - - - | 20 | 174 | 262 |
| (1) | 6" STRUCTURE FOUNDATION DRAIN | LF | - - - | 344 | 326 | - - - | - - - | 670 |
| (1) | MECHANICAL TEXTURING WITH LONGITUDINAL SAWED GROOVES | SY | 192 | - - - | - - - | 186 | 648 | 1026 |
| (1) | CLASS AAAP CEMENT CONCRETE | (6) CY | - - - | - - - | - - - | - - - | 260 | 260 |
| (1) | CLASS AA CEMENT CONCRETE | CY | 161 | 6 | 5 | 149 | 99 | 420 |
| (1) | CLASS A CEMENT CONCRETE | CY | - - - | 1157 | 1041 | - - - | - - - | 2198 |
| (1) | PREFORMED NEOPRENE COMPRESSION JOINT SEAL, 1/2" MOVEMENT | LF | 105 | - - - | - - - | 105 | - - - | 210 |
| (1) | PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, REINFORCED CONCRETE SUBSTRUCTURE SURFACES) | SY | - - - | 868 | 734 | - - - | - - - | 1602 |
| (1) | PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, BRIDGE SUPERSTRUCTURE) | SY | 290 | - - - | - - - | 267 | 974 | 1531 |
| (1) | FABRICATED STRUCTURAL STEEL, GALVANIZED | (7) LB | - - - | - - - | 5950 | - - - | 3600 | 9550 |
| (1) | PRESTRESSED CONCRETE PA BULB-TEE BEAMS, 33" X 31.5" | (8) LF | - - - | - - - | - - - | - - - | 1125 | 1125 |
| (1) | RAILROAD PROTECTIVE FENCE, CURVED TOP, VINYL-COATED STEEL, BLACK | (2) LF | - - - | - - - | - - - | - - - | 169 | 169 |
| (1) | BARRIER LUMINAIRE | (2) EA | 4 | - - - | - - - | - - - | 18 | 22 |
| AND | | | | | | | | |
| 1002-0190 | REINFORCEMENT BARS, EPOXY COATED | (9) (10) LB | 31200 | 139300 | 106600 | 29100 | 56500 | 362700 |
| AND | | | | | | | | |
| 1007-0230 | MICROPILES GROUT | (9) (11) CF | - - - | - - - | 440 | - - - | - - - | 440 |
| AND | | | | | | | | |
| 1007-0350 | MICROPILES 9 5/8" DIAMETER, PLAIN STEEL | (9) (12) LF | - - - | - - - | 2150 | - - - | - - - | 2150 |
| AND | | | | | | | | |
| 9000-0537 | EXTRACT EXISTING STEEL BEARING PILES, S-42023 | (2) (9) EA | - - - | - - - | 65 | - - - | - - - | 65 |
| AND | | | | | | | | |
| 1007-0200 | MICROPILES VERIFICATION LOAD TEST | EA | - - - | - - - | 1 | - - - | - - - | 1 |
| 1007-0210 | MICROPILES PROOF LOAD TEST | EA | - - - | - - - | 2 | - - - | - - - | 2 |
| 1007-0220 | MICROPILES MOBILIZATION | LS | - - - | - - - | - - - | - - - | - - - | LS |
| 1018-0001 | REMOVAL OF EXISTING BRIDGE, S-42023 | (2) LS | - - - | - - - | - - - | - - - | - - - | LS |
| 9000-0501 | OVEREXCAVATION AND BACKFILL WITH CLASS C CEMENT CONCRETE, S-42023 | (2) CY | - - - | 350 | 125 | - - - | - - - | 475 |
| 9000-0519 | EXPLORATORY AIR TRACK DRILLING, S-42023 | (2) LF | - - - | - - - | 1250 | - - - | - - - | 1250 |
| 9000-0555 | INSTALLATION OF UGI UTILITIES, INC. GAS FACILITIES ON BRIDGE | (2) LS | - - - | - - - | - - - | - - - | - - - | LS |
| 9203-0101 | TEMPORARY EXCAVATION SUPPORT AND PROTECTION SYSTEM, S-42023 | (2) LS | - - - | - - - | - - - | - - - | - - - | LS |

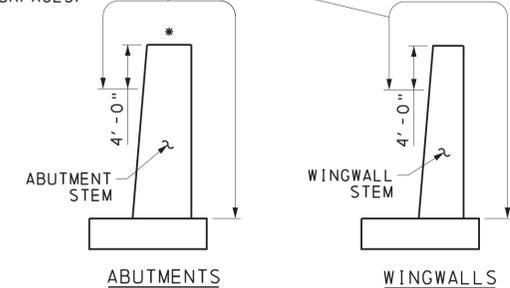
- (1) ITEMS IN BRIDGE STRUCTURE LUMP SUM ITEM 8030-0001 - GIVEN FOR INFORMATION ONLY.
- (2) SEE SPECIAL PROVISIONS.
- (3) FOR EXCAVATION PAY LIMITS, SEE SHEET 4.
- (4) SEE ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS".
- (5) GEOTEXTILE, CLASS 1 IS INCIDENTAL TO NO. 57 COARSE AGGREGATE.
- (6) INCLUDES 11 CY OF CLASS AAAP CEMENT CONCRETE IN THE VALLEYS OF SIP FORMS.
- (7) GALVANIZING IS INCIDENTAL TO THIS ITEM.
- (8) INCLUDES P/S CONCRETE PA BULB-TEE BEAMS DELIVERED AND SET IN PLACE WITH NEOPRENE BEARING PADS, DOWEL HOLES, GROUT, PREFORMED CELLULAR POLYSTYRENE, NEOPRENE PADS, THE WATERPROOFING SYSTEM AS PER BC-788M, AND ALL OTHER MATERIAL AND WORK FOR A COMPLETE INSTALLATION.
- (9) FOR AS DESIGNED STRUCTURE. FOR ALTERNATE DESIGNS INCLUDE IN BRIDGE STRUCTURE LUMP SUM BID ITEM.
- (10) INCLUDES 297 LBS OF STAINLESS STEEL DOWEL BARS.
- (11) QUANTITY PROVIDED FOR GROUT IN EXCESS OF TWO TIMES THE NEAT THEORETICAL VOLUME OF THE DRILL HOLE. ANY GROUT REQUIRED TO FILL THE MICROPILE THAT IS LESS THAN TWO TIMES THE NEAT VOLUME IS CONSIDERED INCIDENTAL TO THE MICROPILE.
- (12) DRILLING/CONCRETE CORING, STEEL CASING, AND CORE REINFORCEMENT ARE INCIDENTAL TO MICROPILES.



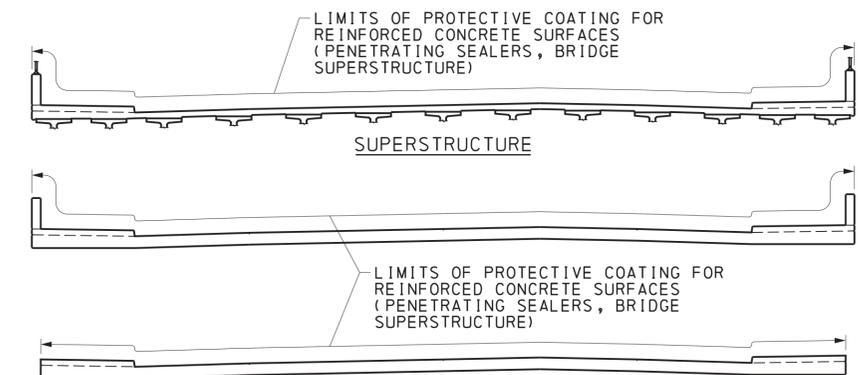
HIGH VOLTAGE UTILITY MINIMUM CLEARANCE DETAIL
(LOOKING WEST)
NOT TO SCALE

| ALTERNATE STRUCTURE ITEMS | | | | |
|---------------------------|--|--------|----------|--|
| ITEM NUMBER | DESCRIPTION | UNIT | TOTAL | |
| 8030-0001 | BRIDGE STRUCTURE, AS DESIGNED, S-42023 | (2) LS | LUMP SUM | |
| 8000-0001 | PRESTRESSED CONCRETE BRIDGE STRUCTURE | (2) LS | LUMP SUM | |
| 8100-0001 | STEEL BRIDGE STRUCTURE | (2) LS | LUMP SUM | |

LIMITS OF PROTECTIVE COATING FOR REINFORCED CONCRETE SURFACES (PENETRATING SEALERS, REINFORCED CONCRETE SUBSTRUCTURE SURFACES)



* DO NOT APPLY PROTECTIVE COATING WITHIN 2" OF BEARING PADS
SUBSTRUCTURE PROTECTIVE COATING LIMITS
NOT TO SCALE

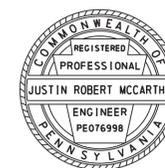


SUPERSTRUCTURE PROTECTIVE COATING LIMITS
NOT TO SCALE

| Mark | Description | By | Chk'd | Recm'd | Date |
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DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

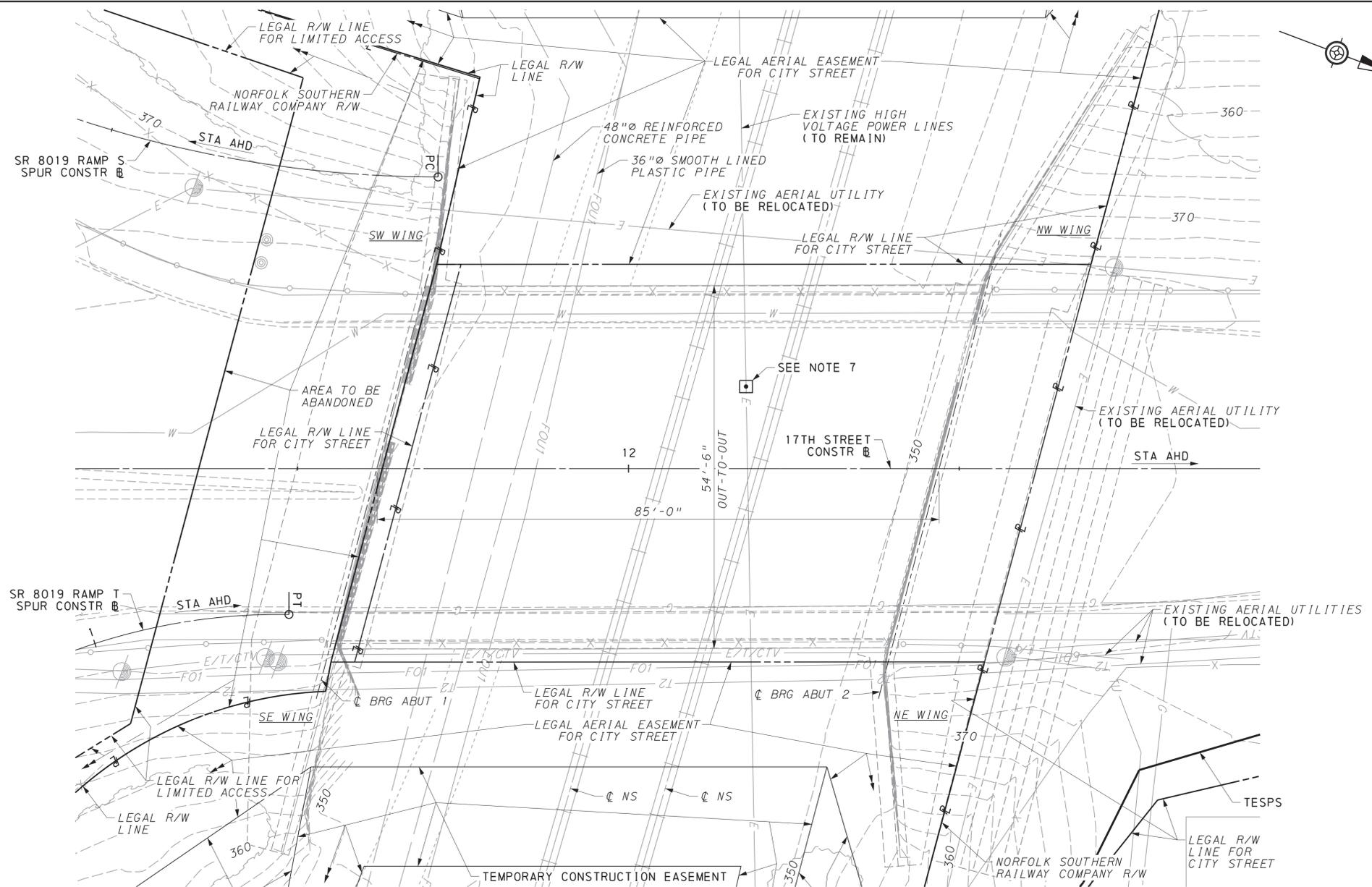
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
QUANTITIES

PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

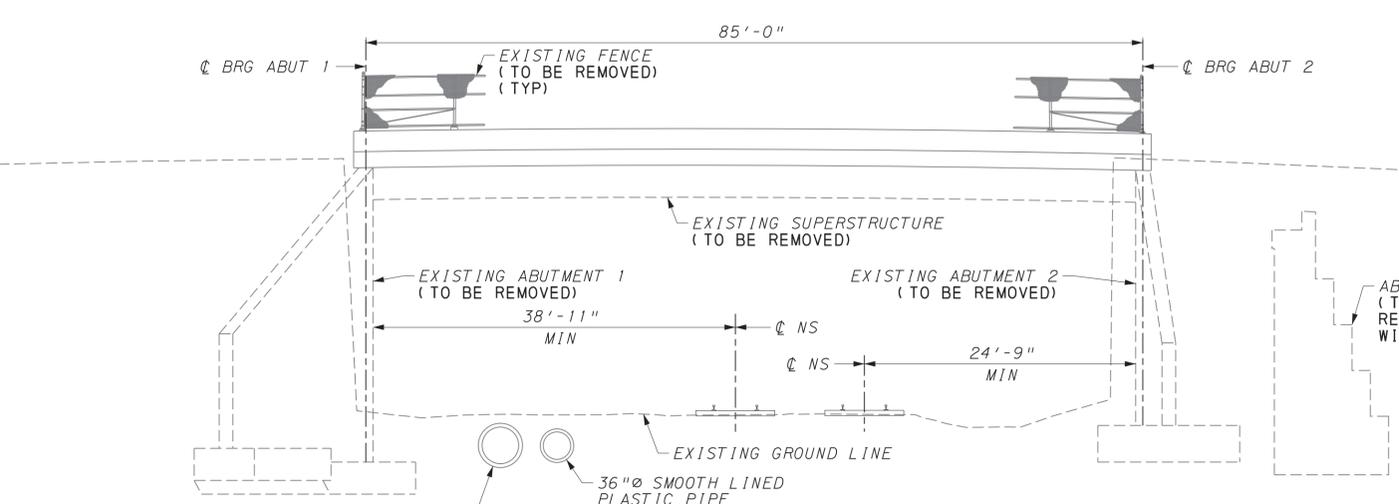
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SHEET 5 OF 62

S-42023



PLAN
5 0 5 10 FEET



ELEVATION
5 0 5 10 FEET

NOTES:

- REMOVAL OF THE EXISTING STRUCTURE CONSISTS OF:
 - SUPERSTRUCTURE IN ITS ENTIRETY
 - ABUTMENT 1, WINGWALLS AND ASSOCIATED ELEMENTS IN ITS ENTIRETY
 - ABUTMENT 2, WINGWALLS AND ASSOCIATED ELEMENTS IN ITS ENTIRETY
- CONCEPTUAL DEMOLITION SEQUENCE IS PROVIDED "FOR INFORMATION ONLY". SEE DESCRIPTION OF CONCEPTUAL SEQUENCE.
- NORFOLK SOUTHERN REQUIRES CRANES AND LIFTING EQUIPMENT TO HAVE A CAPACITY OF 150% OF THE EXPECTED LOAD (INCLUDING RIGGING) FOR ALL LIFTS OVER RAILROAD PROPERTY.
- SKID BEAM DEPICTED WITHIN THE CONCEPTUAL ERECTION PLANS MAY BE USED TO REMOVE THE EXISTING SUPERSTRUCTURE.
- ALL DEMOLITION RELATED ACTIVITIES TAKING PLACE ON NORFOLK SOUTHERN PROPERTY NEED TO BE COORDINATED WITH AND APPROVED BY NORFOLK SOUTHERN.
- SHORING FOR EXCAVATION SHALL BE IN ACCORDANCE WITH NORFOLK SOUTHERN REQUIREMENTS. NO EXCAVATIONS WILL BE ALLOWED WITHIN 10 FEET OF CENTERLINE OF EXISTING TRACK.
- APPROXIMATE LOCATION OF EXISTING AERIAL HIGH VOLTAGE POWER LINES MINIMUM VERTICAL CLEARANCE. SURVEYED SAC ELEVATION IS 415.24. CONTRACTOR IS RESPONSIBLE TO VERIFY CLEARANCE IN THE FIELD.
- MAINTAIN A MINIMUM 13'-0" CLEARANCE TO THE EXISTING HIGH VOLTAGE AERIAL UTILITIES WHEN DE-ENERGIZED OR AS DIRECTED BY PPL CORPORATION. COORDINATE CLEARANCE RELATED ACTIVITIES WITH PPL CORPORATION.

CONCEPTUAL DEMOLITION SEQUENCE:

- STEP 1: REMOVE THE EXISTING SUPERSTRUCTURE.
- STEP 2: REMOVE THE EXISTING ABUTMENT 1, WINGWALLS AND ASSOCIATED ELEMENTS.
- STEP 3: REMOVE THE EXISTING ABUTMENT 2, WINGWALLS AND ASSOCIATED ELEMENTS.

REFERENCES:

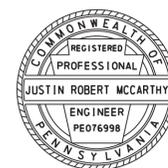
- GENERAL NOTES
- CONCEPTUAL ERECTION PLANS

SHEETS:

- 3 - 4
- 7 - 9

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|-----------|-------------|----|-------|--------|------|
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DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
DEMOLITION CONCEPT DETAILS

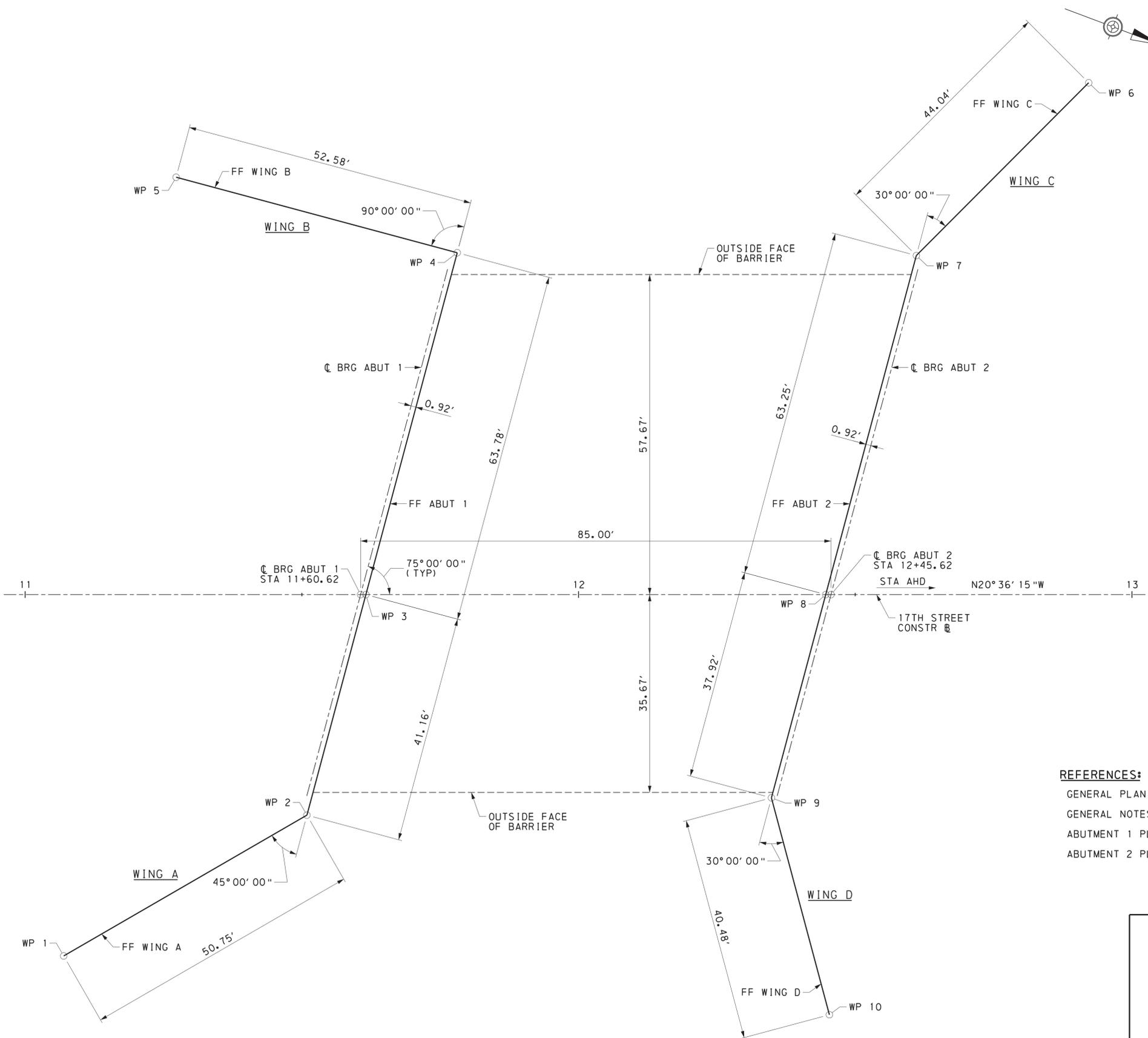
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SHEET 6 OF 62

S-42023

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DATUM 335



| 17TH STREET CONSTR & COORDINATES | | | | |
|----------------------------------|----------|-------------|--------------|-------------|
| POINT | STATION | NORTH | EAST | BEARING |
| POB | 02+33.01 | 336864.0464 | 2217262.7694 | |
| POE | 17+78.05 | 338310.2602 | 2216719.0548 | N20°36'15"W |

| WORKING POINT COORDINATES | | | | |
|---------------------------|----------|-----------|-------------|--------------|
| WP | STATION | OFFSET | NORTH | EAST |
| 1 | 11+06.97 | 65.13' RT | 337705.0179 | 2217016.1810 |
| 2 | 11+50.92 | 39.76' RT | 337737.2278 | 2216976.9623 |
| 3 | 11+61.57 | 0.00' | 337733.2086 | 2216936.0015 |
| 4 | 11+78.08 | 61.60' LT | 337726.9805 | 2216872.5292 |
| 5 | 11+27.29 | 75.21' LT | 337674.6517 | 2216877.6639 |
| 6 | 12+92.18 | 92.24' LT | 337823.0091 | 2216803.6994 |
| 7 | 12+61.04 | 61.10' LT | 337804.8182 | 2216843.8088 |
| 8 | 12+44.67 | 0.00' | 337810.9949 | 2216906.7572 |
| 9 | 12+34.86 | 36.63' RT | 337814.6985 | 2216944.5008 |
| 10 | 12+45.33 | 75.73' RT | 337838.2633 | 2216977.4109 |

FOUR PLACE COORDINATES ARE FOR COMPUTATIONAL PURPOSES ONLY AND DO NOT IMPLY A PRECISION BEYOND TWO DECIMAL POINTS.

| WORKING POINT CLOSURE DISTANCES | |
|---------------------------------|----------|
| WP TO WP | DISTANCE |
| 2 TO 7 | 149.33' |
| 4 TO 9 | 113.47' |

REFERENCES:

- GENERAL PLAN
- GENERAL NOTES
- ABUTMENT 1 PLAN
- ABUTMENT 2 PLAN

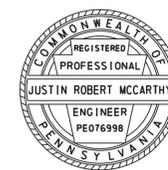
SHEETS:

- 1
- 3 - 4
- 12
- 23

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|-----------|-------------|----|-------|--------|------|
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DAUPHIN COUNTY
SR 0083 SECTION B79

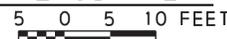
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
STAKE-OUT PLAN

RECOMMENDED 1-22-2025

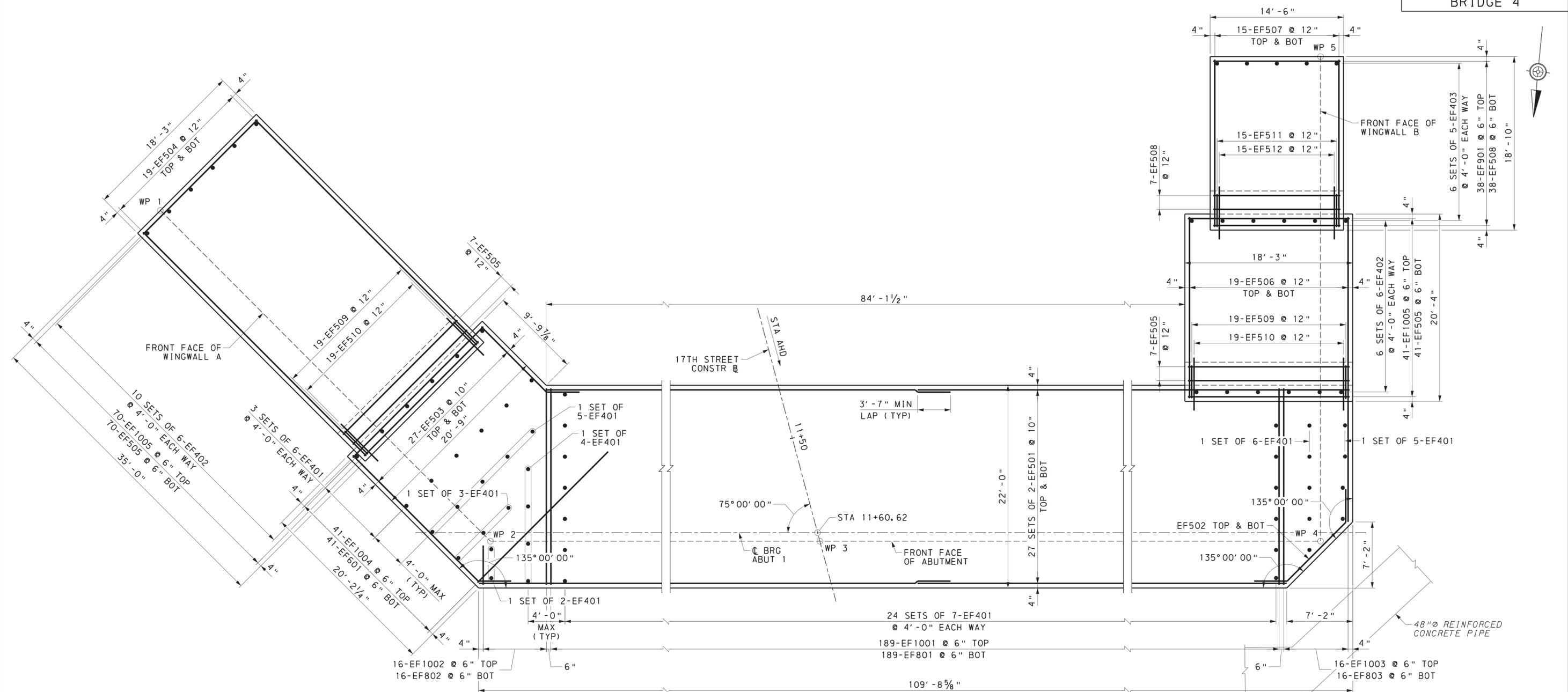
SHEET 10 OF 62

S-42023

STAKE-OUT PLAN



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FOOTING PLAN
2 0 2 4 6 FEET
(TESPS NOT SHOWN FOR CLARITY)

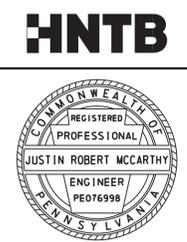
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| BEARING CAPACITY | ABUTMENT 1 | | | |
|----------------------|------------|---------------|-------------------------|---------------------|
| | ABUTMENT 1 | WING A @ ABUT | WING A & B (BFE 344.75) | WING B (BFE 349.75) |
| SECTION | TYPICAL | TYPICAL | TYPICAL | TYPICAL |
| BEARING RESISTANCE | 87.50 KSF | 87.50 KSF | 87.50 KSF | 87.50 KSF |
| MAX BEARING PRESSURE | 12.35 KSF | 10.27 KSF | 9.30 KSF | 9.22 KSF |
| PERFORMANCE RATIO | 7.082 | 8.522 | 9.406 | 9.492 |
| LIMIT STATE | STR-I | STR-I | STR-I | STR-I |
| LOAD CASE | MAX | MAX | MAX | MAX |
| STAGE | FINAL | FINAL | FINAL | FINAL |
| SLIDING RESISTANCE | ABUTMENT 1 | WING A @ ABUT | WING A & B (BFE 344.75) | WING B (BFE 349.75) |
| SECTION | TYPICAL | TYPICAL | TYPICAL | TYPICAL |
| SLIDING RESISTANCE | 84.60 K | 74.24 K | 58.02 K | 39.64 K |
| MAX HORIZONTAL FORCE | 49.60 K | 47.74 K | 36.81 K | 27.52 K |
| PERFORMANCE RATIO | 1.706 | 1.555 | 1.576 | 1.440 |
| LIMIT STATE | STR-I | STR-I | STR-I | STR-I |
| LOAD CASE | MIN | MIN | MIN | MIN |
| CONDITION | FINAL | FINAL | FINAL | FINAL |

| | |
|-----------------------------|-----------|
| EMPIRICAL BEARING CAPACITY | 175.0 KSF |
| ALLOWABLE SETTLEMENT | 1.0 IN |
| BEARING CAPACITY PHI FACTOR | 0.50 |
| SLIDING PHI FACTOR | 1.00 |
| CONCRETE/ROCK FRICTION | 35° |
| INTACT ELASTIC MODULUS | 5700 KSI |
| POISSON'S RATIO | 0.23 |
| ROCK MASS MODULUS | 1369 KSI |

- REFERENCES:**
- GENERAL NOTES 3 - 4
 - STAKE-OUT PLAN 10
 - ABUTMENT 1 DRAWINGS 11 - 20
- SHEETS:**

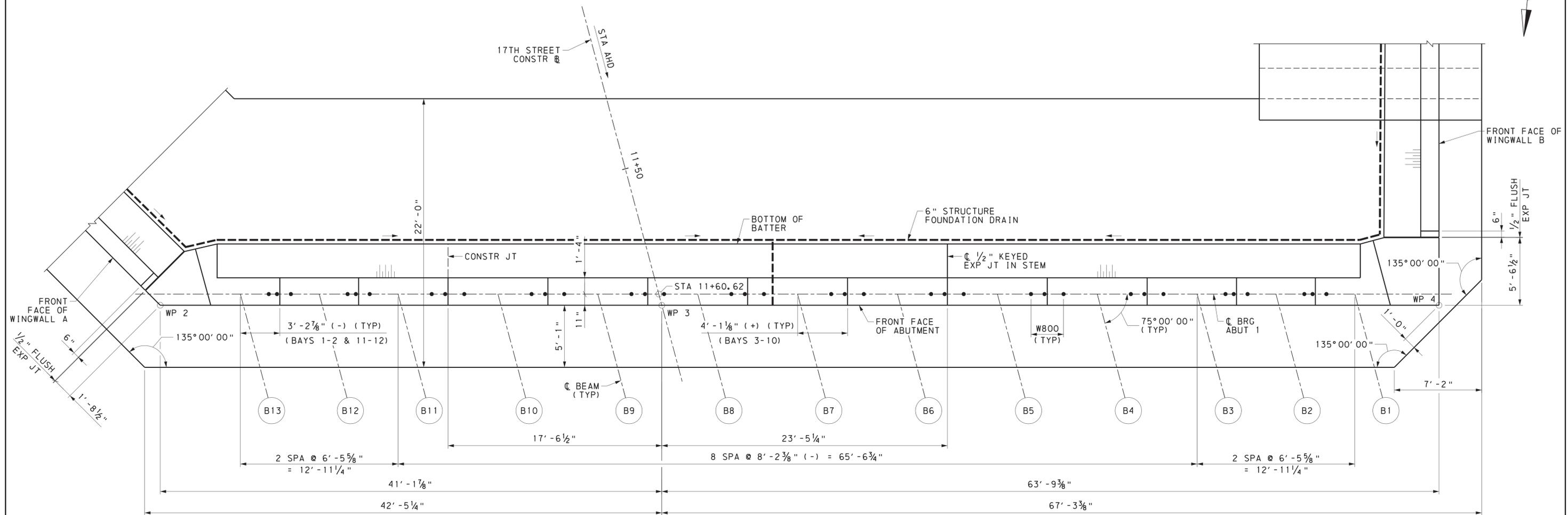


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DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 FOOTING PLAN

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SHEET 11 OF 62
S-42023

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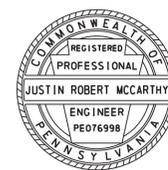


PLAN
2 0 2 4 FEET

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DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 PLAN

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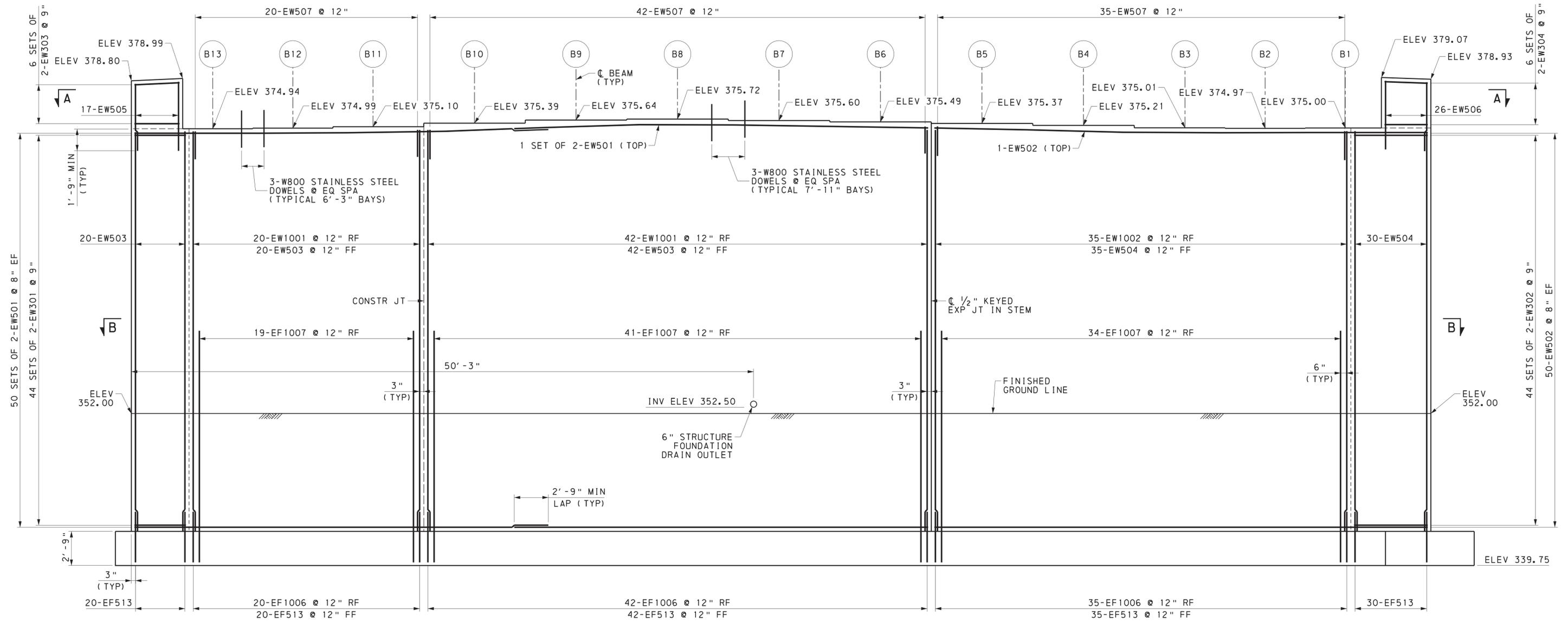
REFERENCES:

- GENERAL NOTES
- STAKE-OUT PLAN
- ABUTMENT 1 DRAWINGS

SHEETS:

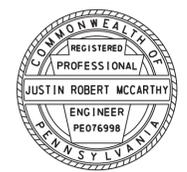
- 3 - 4
- 10
- 11 - 20

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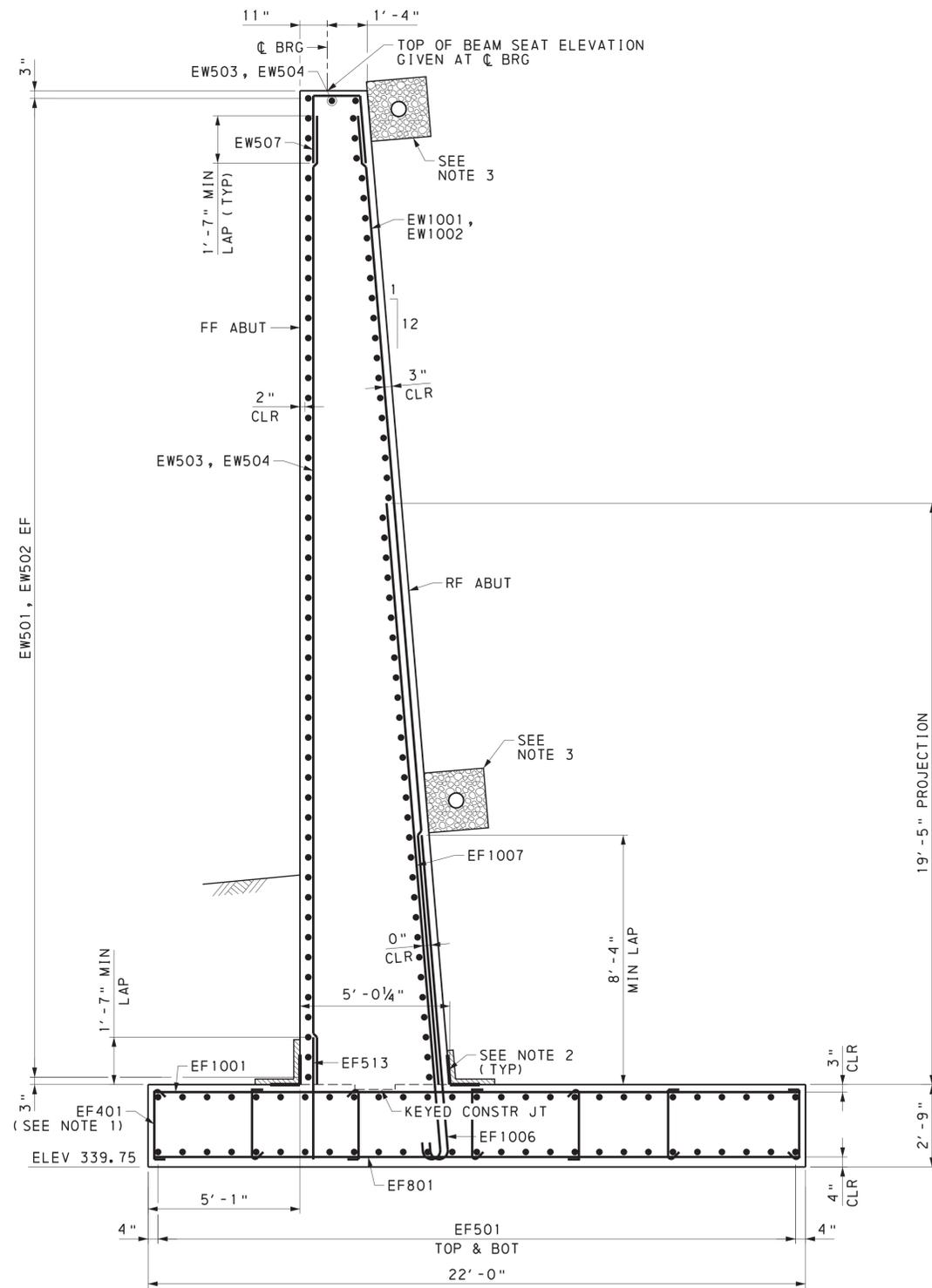
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17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 ELEVATION

RECOMMENDED 1-22-2025 SHEET 13 OF 62

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| | |
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| REFERENCES: | SHEETS: |
| GENERAL NOTES | 3 - 4 |
| ABUTMENT 1 DRAWINGS | 11 - 20 |
| MISCELLANEOUS ABUTMENT DETAILS | 33 |

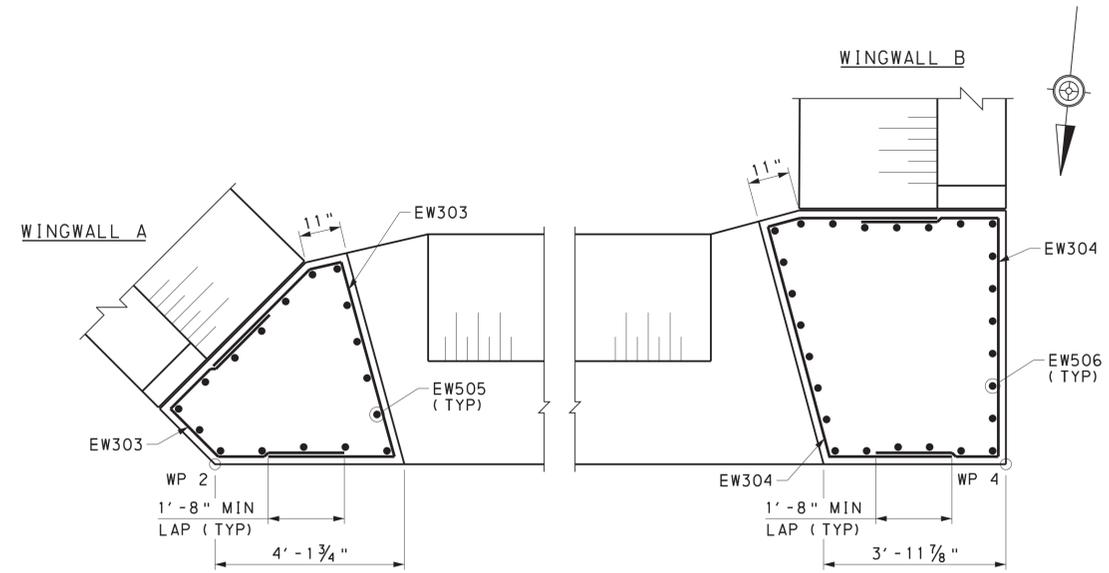
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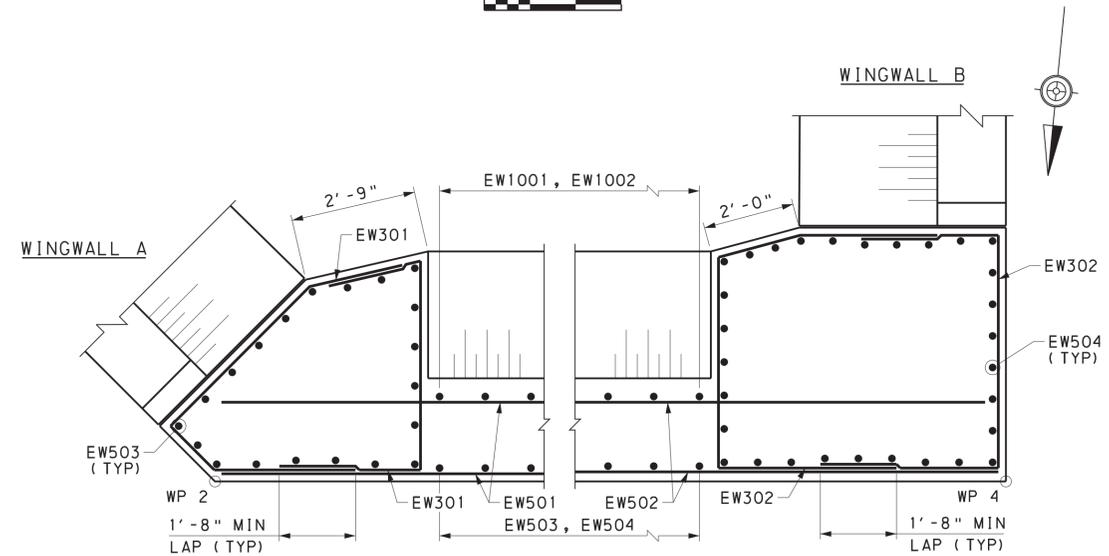
TYPICAL SECTION
1 0 1 2 3 FEET

NOTES:

1. TIE TOP & BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOKS AT TOP IN ALTERNATE TIES.
2. FOR WATERPROOFING DETAILS, SEE ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS".
3. 6" STRUCTURE FOUNDATION DRAIN WITHIN CONTINUOUS 2' x 2' OF NO. 57 COARSE AGGREGATE ENCASED IN GEOTEXTILE, CLASS 1. SEE PUB 408 SECTION 1001.3(d) AND BC-751M.



SECTION A-A
1 0 1 2 FEET

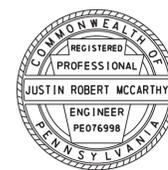


SECTION B-B
1 0 1 2 FEET

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DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 SECTION & DETAILS

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SHEET 14 OF 62

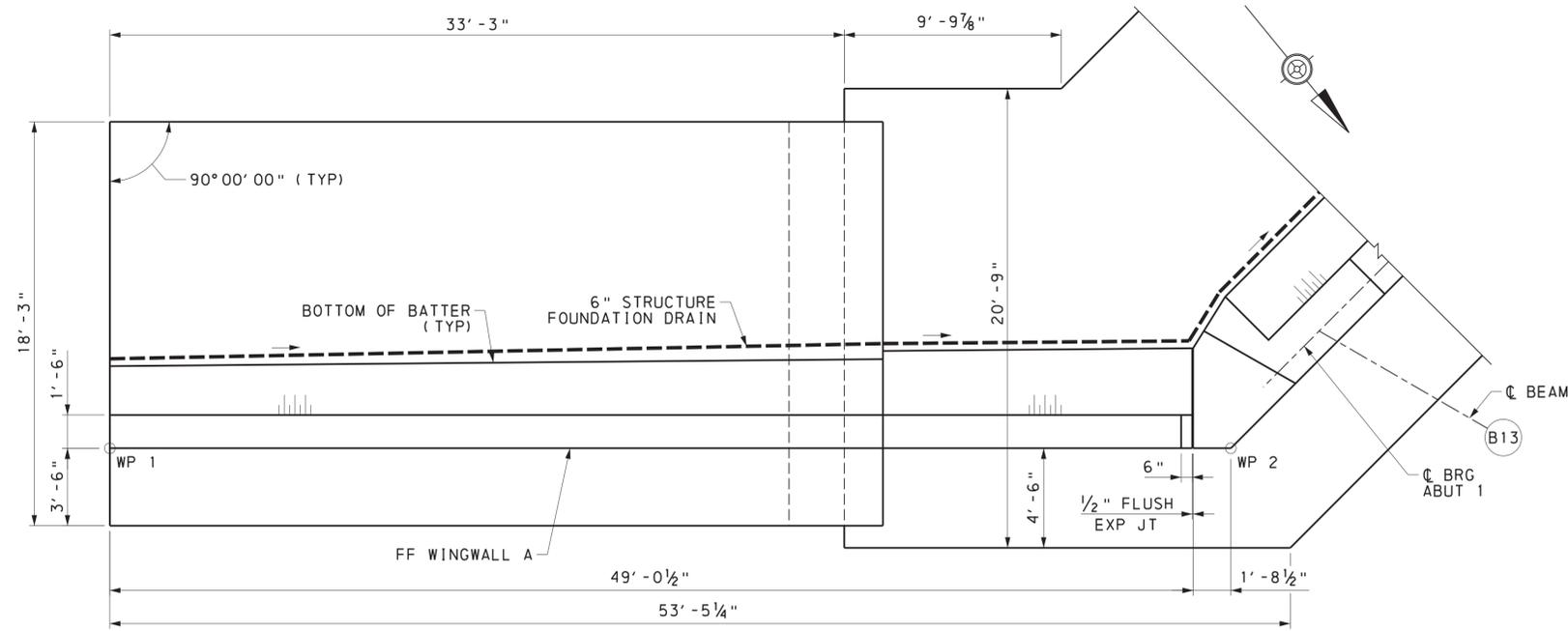
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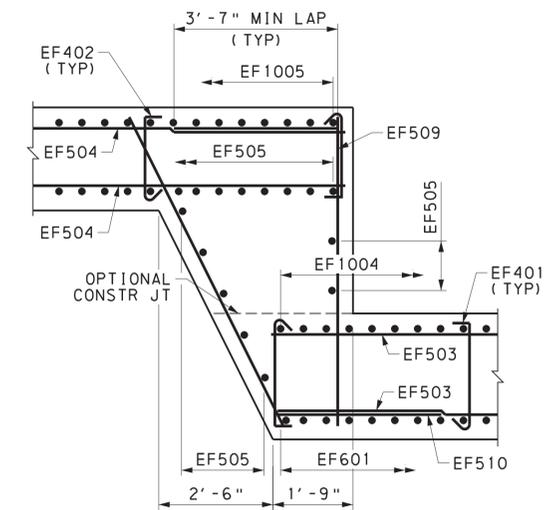
- GENERAL NOTES
- ABUTMENT 1 DRAWINGS
- MISCELLANEOUS ABUTMENT DETAILS

SHEETS:

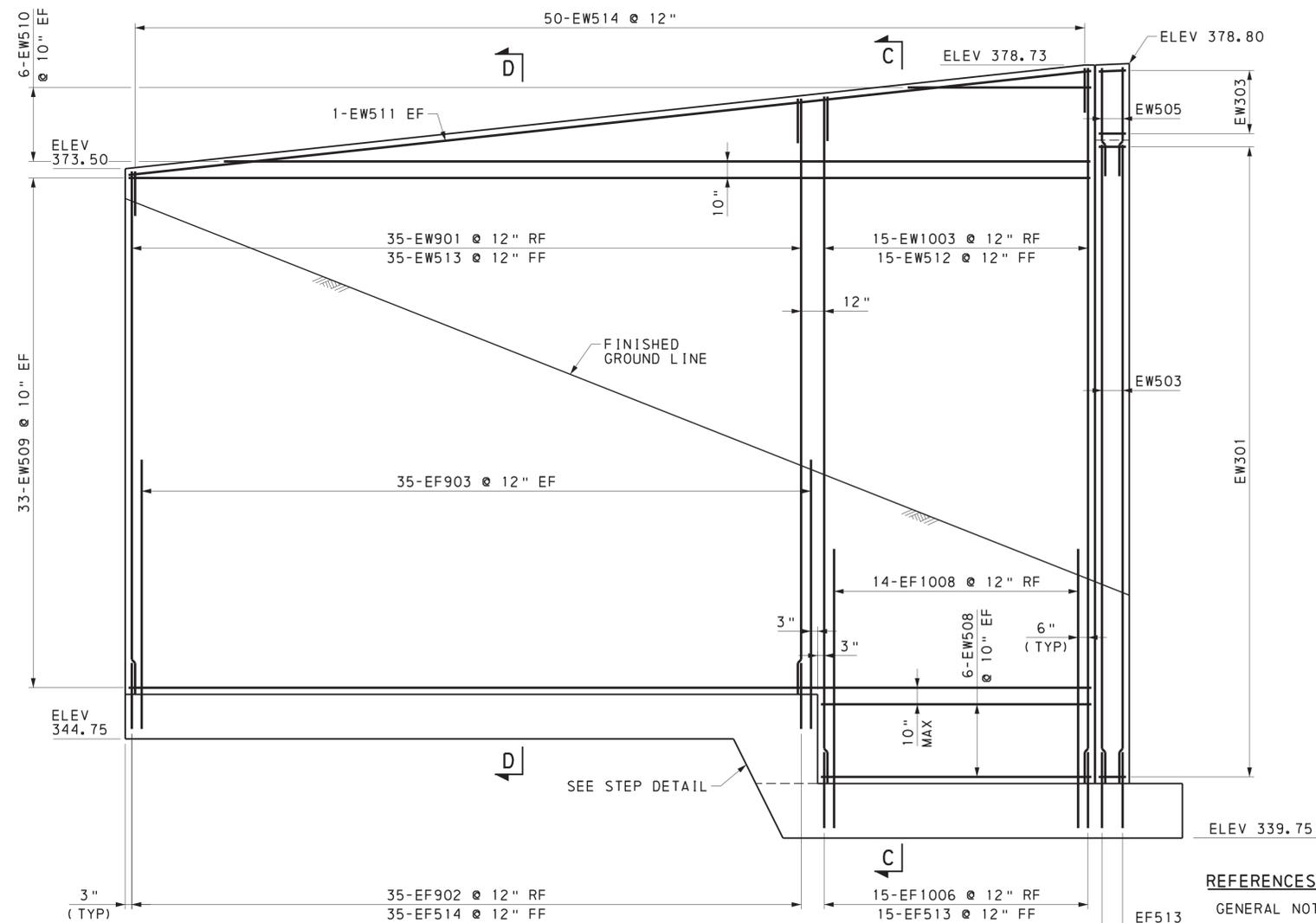
- 3 - 4
- 11 - 20
- 33



PLAN
2 0 2 4 FEET



STEP DETAIL
1 0 1 2 FEET



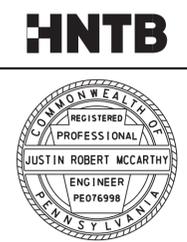
ELEVATION
2 0 2 4 FEET

REFERENCES:
GENERAL NOTES
ABUTMENT 1 DRAWINGS

SHEETS:
3 - 4
11 - 20

| Mark | Description | By | Chk'd | Recm'd | Date |
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| REVISIONS | | | | | |

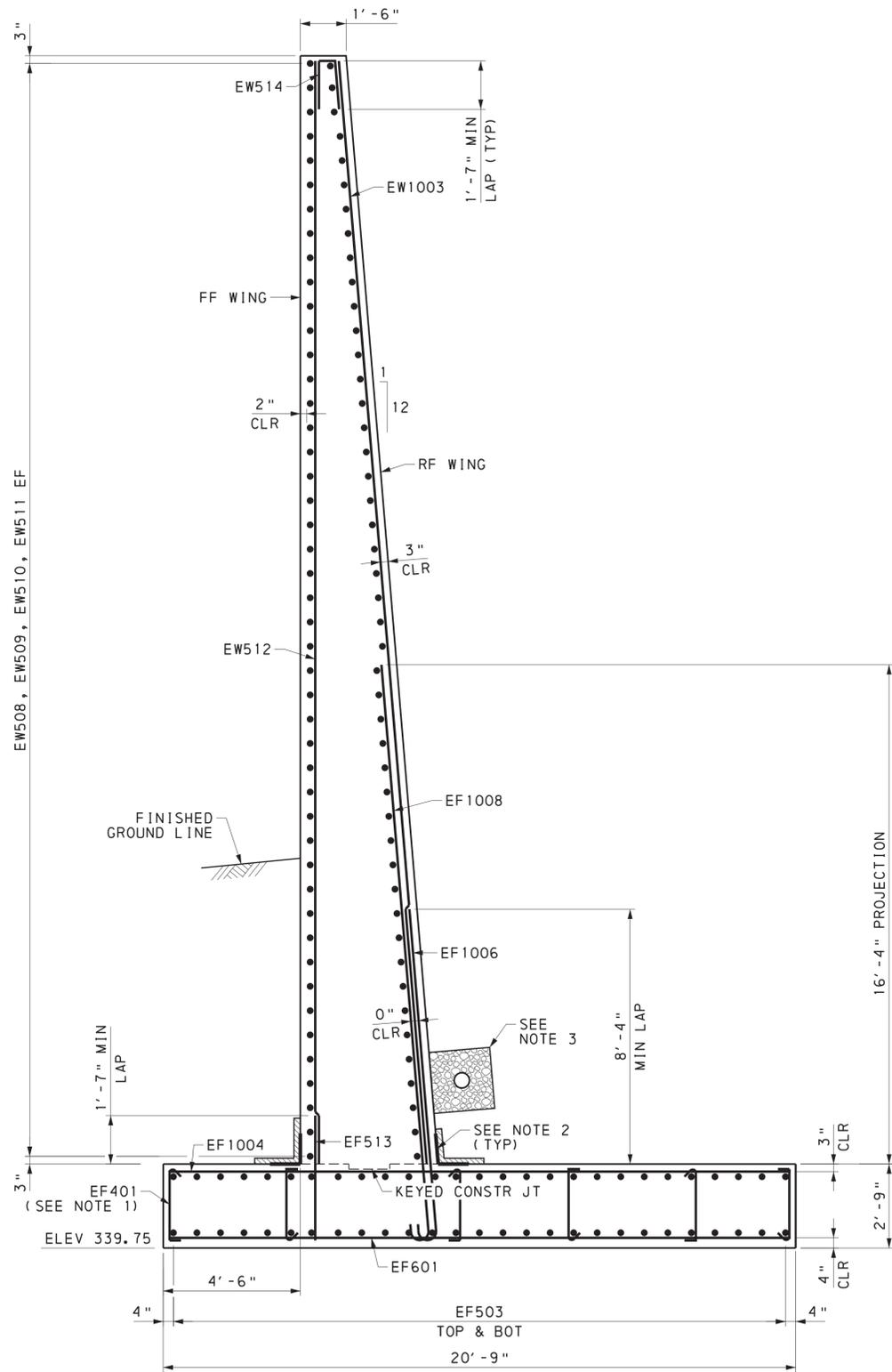
BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



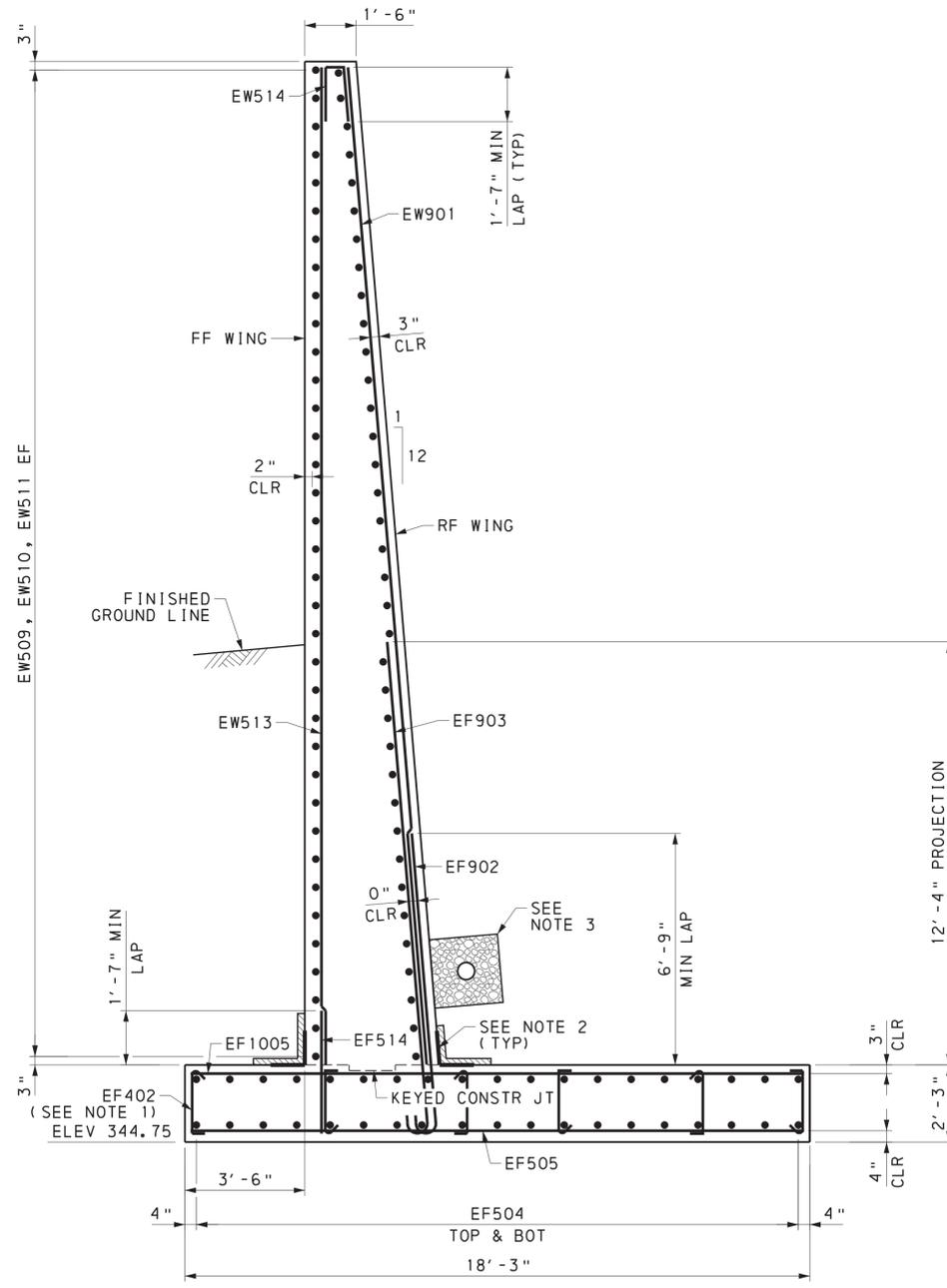
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DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
WINGWALL A PLAN & ELEVATION
RECOMMENDED 1-22-2025
SHEET 15 OF 62
S-42023

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SECTION C-C
1 0 1 2 3 FEET



SECTION D-D
1 0 1 2 3 FEET

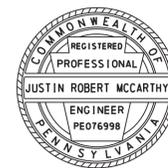
NOTES:

1. TIE TOP & BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOKS AT TOP IN ALTERNATE TIES.
2. FOR WATERPROOFING DETAILS, SEE ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS".
3. 6" STRUCTURE FOUNDATION DRAIN WITHIN CONTINUOUS 2' x 2' OF NO. 57 COARSE AGGREGATE ENCASED IN GEOTEXTILE, CLASS 1. SEE PUB 408 SECTION 1001.3(d) AND BC-751M.

| Mark | Description | By | Chk'd | Recm'd | Date |
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DEPARTMENT OF TRANSPORTATION

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SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
WINGWALL A SECTIONS

RECOMMENDED 1-22-2025

SHEET 16 OF 62

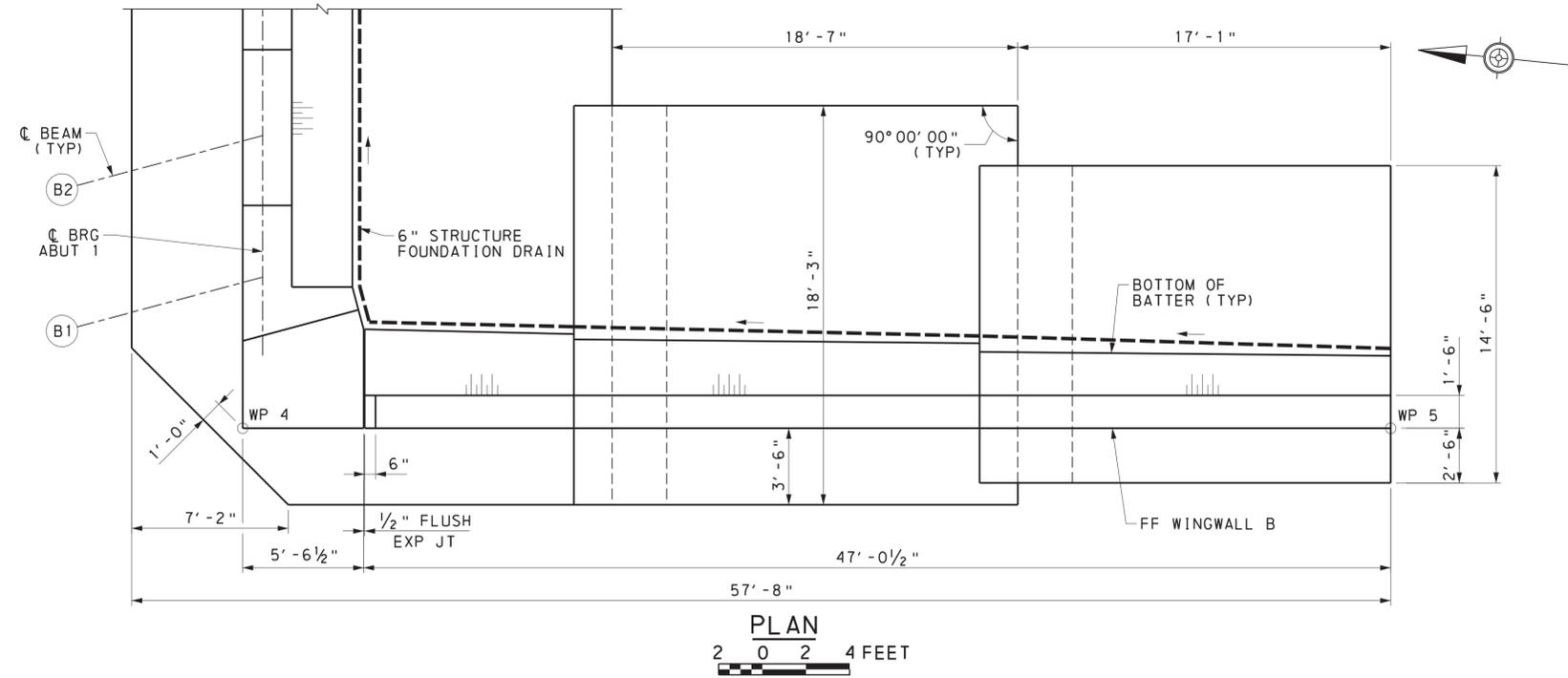
S-42023

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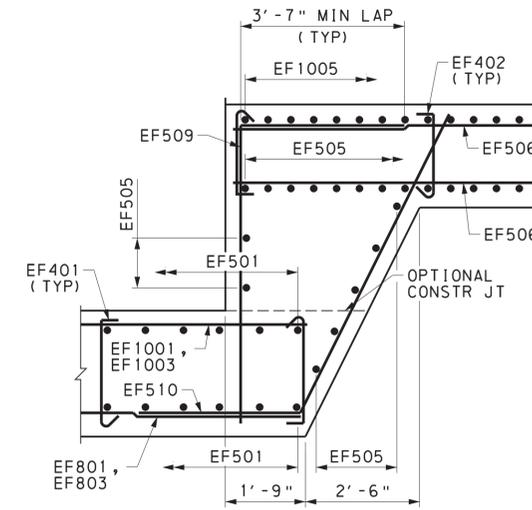
GENERAL NOTES
ABUTMENT 1 DRAWINGS

SHEETS:

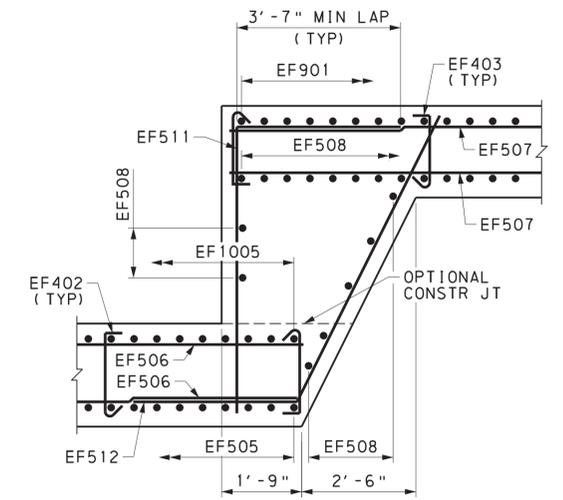
3 - 4
11 - 20



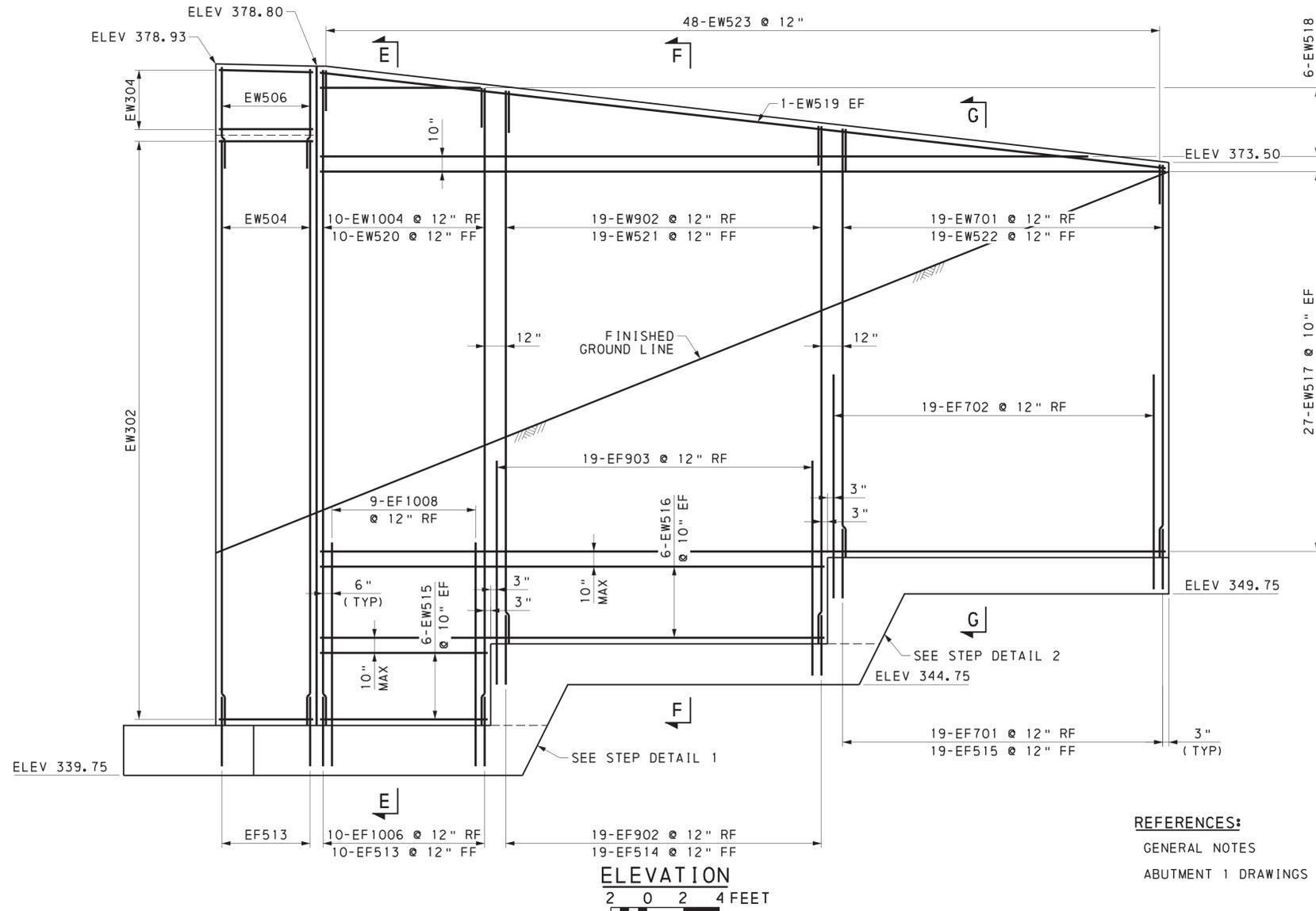
PLAN
2 0 2 4 FEET



STEP DETAIL 1
1 0 1 2 FEET



STEP DETAIL 2
1 0 1 2 FEET



ELEVATION
2 0 2 4 FEET

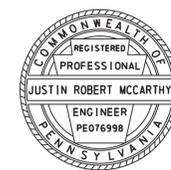
REFERENCES:
GENERAL NOTES
ABUTMENT 1 DRAWINGS

SHEETS:
3 - 4
11 - 20

| Mark | Description | By | Chk' d | Recm' d | Date |
|-----------|-------------|----|--------|---------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

HNTB



PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

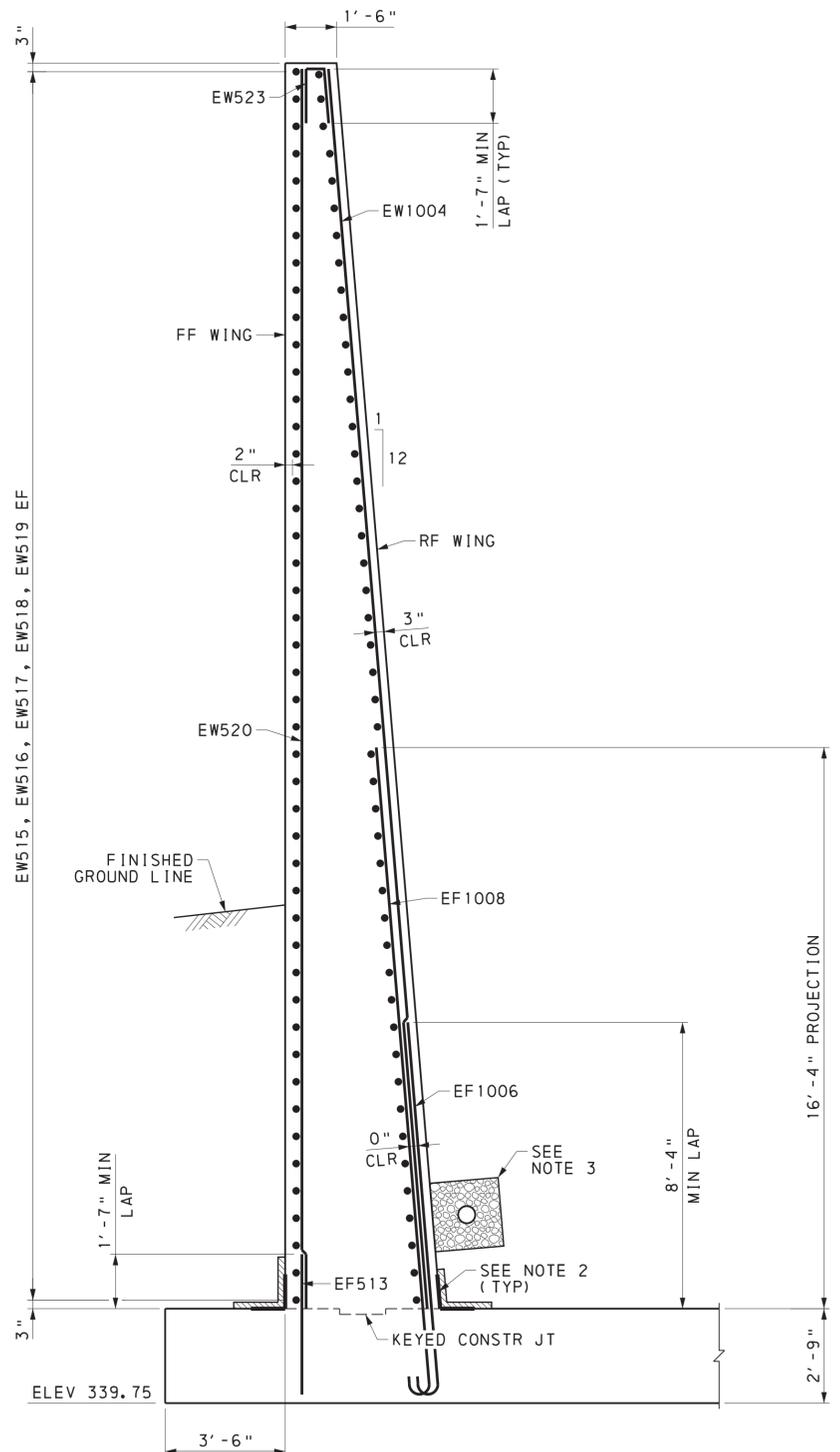
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
WINGWALL B PLAN & ELEVATION

RECOMMENDED 1-22-2025

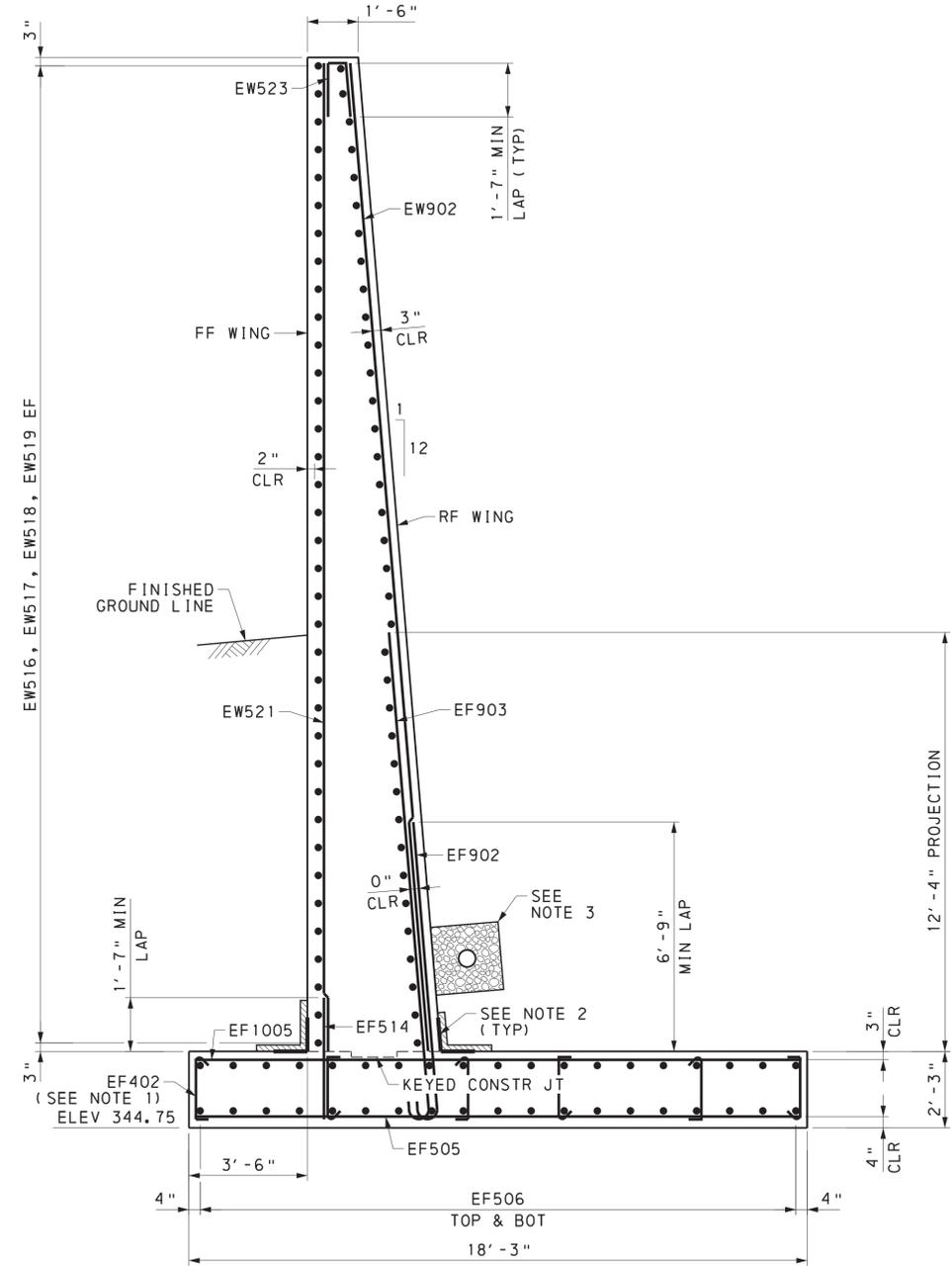
SHEET 17 OF 62

S-42023

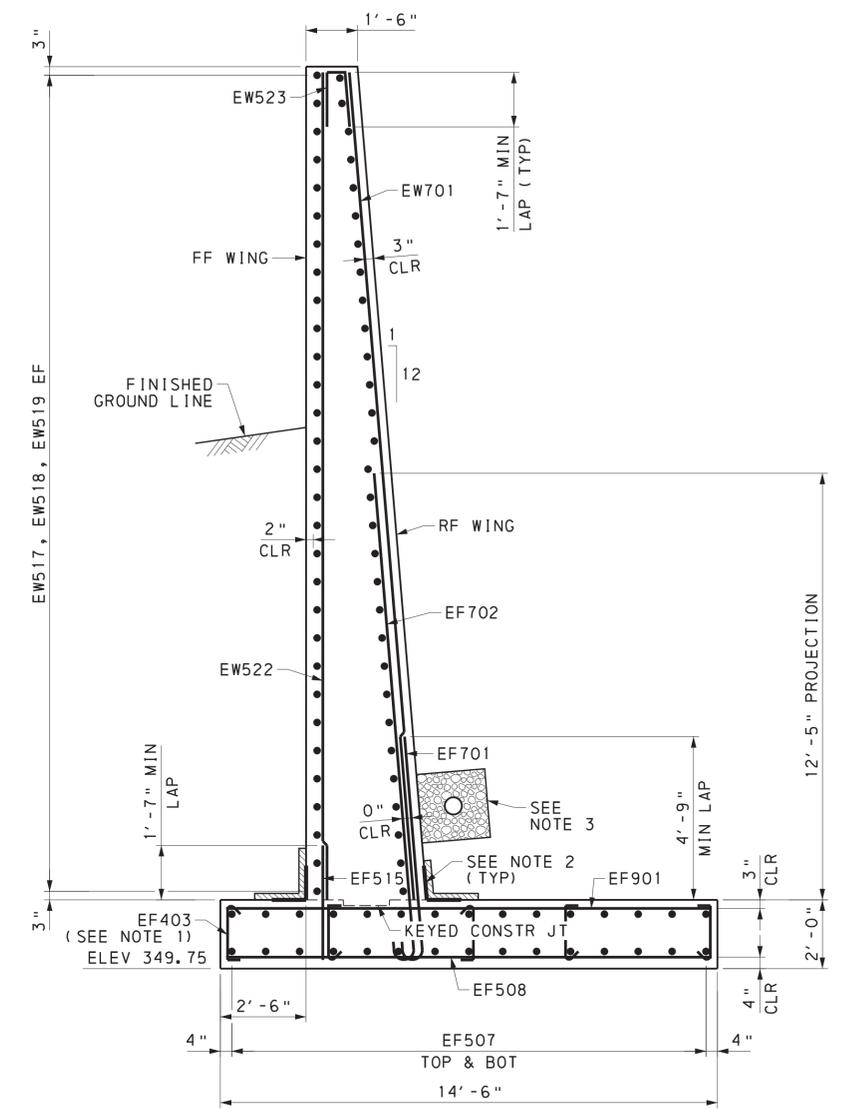


SECTION E-E
1 0 1 2 3 FEET

(ABUTMENT FOOTING REINFORCEMENT NOT SHOWN FOR CLARITY)



SECTION F-F
1 0 1 2 3 FEET



SECTION G-G
1 0 1 2 3 FEET

NOTES:

1. TIE TOP & BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOKS AT TOP IN ALTERNATE TIES.
2. FOR WATERPROOFING DETAILS, SEE ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS".
3. 6" STRUCTURE FOUNDATION DRAIN WITHIN CONTINUOUS 2' x 2' OF NO. 57 COARSE AGGREGATE ENCASED IN GEOTEXTILE, CLASS 1. SEE PUB 408 SECTION 1001.3(d) AND BC-751M.

REFERENCES:

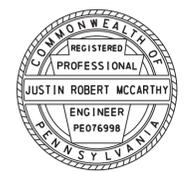
GENERAL NOTES
ABUTMENT 1 DRAWINGS

SHEETS:

3 - 4
11 - 20

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
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BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



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SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
WINGWALL B SECTIONS

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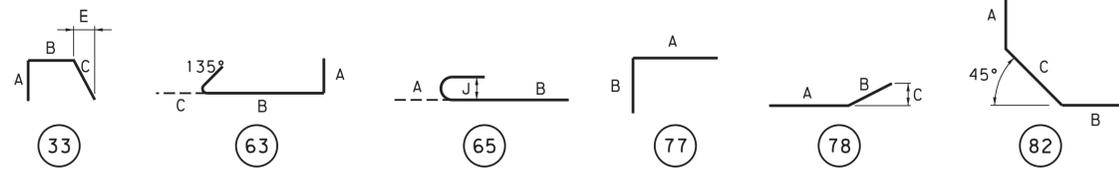
SHEET 18 OF 62

S-42023

1/2/2025
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| MARK | SIZE | NO REQ'D | LENGTH | TYPE | A | B | C | D | E | REMARKS |
|------------|------|----------|-----------------------------|------|---------|-------------|----------|---|--------|---------------------------|
| ABUTMENT 1 | | | | | | | | | | |
| EF401 | 4 | 185 | 2' - 11" | 63 | 4 1/2" | 2' - 2" | 4 1/2" | | | |
| EF501 | 5 | 108 | 55' - 6" | STR | | | | | | |
| EF502 | 5 | 2 | 17' - 0" | 82 | 3' - 7" | 3' - 7" | 9' - 10" | | | |
| EF513 | 5 | 147 | 4' - 2" | STR | | | | | | |
| EF801 | 8 | 189 | 21' - 6" | STR | | | | | | |
| EF802 | 8 | 16 | 5' - 3" TO 21' - 6" | STR | | | | | | VARY EACH BY 1' - 1" |
| EF803 | 8 | 16 | 14' - 3 3/4" TO 21' - 6" | STR | | | | | | VARY EACH BY 5 3/4" |
| EF1001 | 10 | 189 | 21' - 6" | STR | | | | | | |
| EF1002 | 10 | 16 | 6' - 6" TO 21' - 6" | STR | | | | | | VARY EACH BY 1' - 0" |
| EF1003 | 10 | 16 | 14' - 3 3/4" TO 21' - 6" | STR | | | | | | VARY EACH BY 5 3/4" |
| EF1006 | 10 | 97 | 12' - 5" | 65 | 1' - 5" | 11' - 0" | | | | J = 1' - 1 1/4" |
| EF1007 | 10 | 94 | 23' - 6" | 65 | 1' - 5" | 22' - 1" | | | | J = 1' - 1 1/4" |
| EW301 | 3 | 88 | 10' - 7" | STR | | | | | | BEND IN FIELD |
| EW302 | 3 | 88 | 13' - 1" | STR | | | | | | BEND IN FIELD |
| EW303 | 3 | 12 | 9' - 4" | STR | | | | | | BEND IN FIELD |
| EW304 | 3 | 12 | 11' - 6" | STR | | | | | | BEND IN FIELD |
| EW401 | 4 | 8 | 3' - 6" | STR | | | | | | |
| EW501 | 5 | 202 | 33' - 7" | STR | | | | | | |
| EW502 | 5 | 101 | 40' - 0" | STR | | | | | | |
| EW503 | 5 | 82 | 32' - 3" | STR | | | | | | |
| EW504 | 5 | 65 | 32' - 4" | STR | | | | | | |
| EW505 | 5 | 17 | 5' - 11" | STR | | | | | | |
| EW506 | 5 | 26 | 5' - 11" | STR | | | | | | |
| EW507 | 5 | 97 | 6' - 10 3/8" | 33 | 2' - 6" | 1' - 9 3/8" | 2' - 7" | | 2 1/2" | |
| W800 | 8 | 36 | 3' - 1" | STR | | | | | | STAINLESS STEEL DOWEL BAR |
| EW1001 | 10 | 62 | 32' - 4" | STR | | | | | | |
| EW1002 | 10 | 35 | 32' - 5" | STR | | | | | | |

| MARK | SIZE | NO REQ'D | LENGTH | TYPE | A | B | C | D | E | REMARKS |
|------------|------|----------|---------------------------------|------|----------------------------|-------------|-------------|---|--------|------------------------|
| WINGWALL A | | | | | | | | | | |
| EF401 | 4 | 26 | 2' - 11" | 63 | 4 1/2" | 2' - 2" | 4 1/2" | | | |
| EF402 | 4 | 60 | 2' - 5" | 63 | 4 1/2" | 1' - 8" | 4 1/2" | | | |
| EF503 | 5 | 54 | 13' - 4" TO 23' - 4 1/4" | 78 | 9' - 9" TO 19' - 9 1/4" | 3' - 7" | 2' - 6 3/8" | | | VARY A EACH BY 4 5/8" |
| EF504 | 5 | 38 | 34' - 6" | STR | | | | | | |
| EF505 | 5 | 77 | 17' - 9" | STR | | | | | | |
| EF509 | 5 | 19 | 10' - 1" | 77 | 6' - 6" | 3' - 7" | | | | |
| EF510 | 5 | 19 | 10' - 11" | 78 | 7' - 4" | 3' - 7" | 3' - 2 1/2" | | | |
| EF513 | 5 | 15 | 4' - 2" | STR | | | | | | |
| EF514 | 5 | 35 | 3' - 8" | STR | | | | | | |
| EF601 | 6 | 41 | 20' - 3" | STR | | | | | | |
| EF902 | 9 | 35 | 10' - 2" | 65 | 1' - 3" | 8' - 11" | | | | J = 11 3/4" |
| EF903 | 9 | 35 | 15' - 9" | 65 | 1' - 3" | 14' - 6" | | | | J = 11 3/4" |
| EF1004 | 10 | 41 | 20' - 3" | STR | | | | | | |
| EF1005 | 10 | 70 | 17' - 9" | STR | | | | | | |
| EF1006 | 10 | 15 | 12' - 5" | 65 | 1' - 5" | 11' - 0" | | | | J = 1' - 1 1/4" |
| EF1008 | 10 | 14 | 20' - 5" | 65 | 1' - 5" | 19' - 0" | | | | J = 1' - 1 1/4" |
| EW508 | 5 | 12 | 13' - 8" | STR | | | | | | |
| EW509 | 5 | 66 | 48' - 8" | STR | | | | | | |
| EW510 | 5 | 12 | 8' - 10" TO 41' - 9" | STR | | | | | | VARY 2 EACH BY 6' - 7" |
| EW511 | 5 | 2 | 48' - 11" | STR | | | | | | |
| EW512 | 5 | 15 | 34' - 7" TO 36' - 0 1/2" | STR | | | | | | VARY EACH BY 1 1/4" |
| EW513 | 5 | 35 | 26' - 2 1/2" TO 30' - 1 1/4" | STR | | | | | | VARY EACH BY 1 3/8" |
| EW514 | 5 | 50 | 4' - 7 3/8" | 33 | 1' - 9" | 1' - 0 3/8" | 1' - 10" | | 1 7/8" | |
| EW901 | 9 | 35 | 26' - 3 1/2" TO 30' - 2 1/4" | STR | | | | | | VARY EACH BY 1 3/8" |
| EW1003 | 10 | 15 | 34' - 8 1/2" TO 36' - 2" | STR | | | | | | VARY EACH BY 1 1/4" |



NOTES:

- "E" PREFIX IN BAR MARK DENOTES EPOXY COATED BARS.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" & "C" ON STANDARD 135° AND 180° HOOKS, UNLESS NOTED.
- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- FIGURES IN CIRCLE REPRESENT BAR TYPES.
- "J" DIMENSIONS ON 180° HOOKS ARE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- RADIUS, "R" IS TO THE INSIDE OF THE BAR.
- REINFORCEMENT BAR SCHEDULE IS FOR INFORMATION ONLY. VERIFY INFORMATION BEFORE FABRICATION.

REFERENCES:

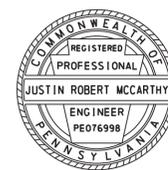
- GENERAL NOTES
- ABUTMENT 1 DRAWINGS
- MISCELLANEOUS ABUTMENT DETAILS

SHEETS:

- 3 - 4
- 11 - 20
- 33

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



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4507 NORTH FRONT STREET
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HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

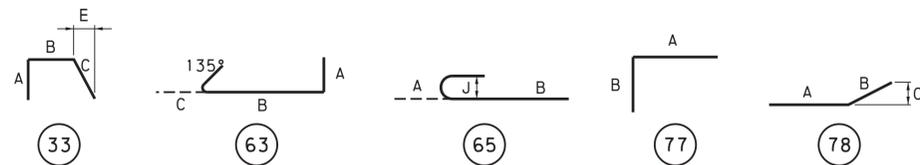
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 REBAR SCHEDULE 1

RECOMMENDED 1-22-2025

SHEET 19 OF 62

S-42023

| MARK | SIZE | NO REQ'D | LENGTH | TYPE | A | B | C | D | E | REMARKS |
|------------|------|----------|-----------------------------|------|--------|-----------|-----------|---|--------|--------------------------|
| WINGWALL B | | | | | | | | | | |
| EF402 | 4 | 36 | 2'-5" | 63 | 4 1/2" | 1'-8" | 4 1/2" | | | |
| EF403 | 4 | 30 | 2'-2" | 63 | 4 1/2" | 1'-5" | 4 1/2" | | | |
| EF505 | 5 | 48 | 17'-9" | STR | | | | | | |
| EF506 | 5 | 38 | 19'-10" | STR | | | | | | |
| EF507 | 5 | 30 | 18'-4" | STR | | | | | | |
| EF508 | 5 | 45 | 14'-0" | STR | | | | | | |
| EF509 | 5 | 19 | 10'-1" | 77 | 6'-6" | 3'-7" | | | | |
| EF510 | 5 | 19 | 10'-11" | 78 | 7'-4" | 3'-7" | 3'-2 1/2" | | | |
| EF511 | 5 | 15 | 9'-10" | 77 | 6'-3" | 3'-7" | | | | |
| EF512 | 5 | 15 | 10'-8" | 78 | 7'-1" | 3'-7" | 3'-2 1/2" | | | |
| EF513 | 5 | 10 | 4'-2" | STR | | | | | | |
| EF514 | 5 | 19 | 3'-8" | STR | | | | | | |
| EF515 | 5 | 19 | 3'-5" | STR | | | | | | |
| EF701 | 7 | 19 | 7'-6" | 65 | 10" | 6'-8" | | | | J = 7" |
| EF702 | 7 | 19 | 15'-2" | 65 | 10" | 14'-4" | | | | J = 7" |
| EF901 | 9 | 38 | 14'-0" | STR | | | | | | |
| EF902 | 9 | 19 | 10'-2" | 65 | 1'-3" | 8'-11" | | | | J = 11 3/4" |
| EF903 | 9 | 19 | 15'-9" | 65 | 1'-3" | 14'-6" | | | | J = 11 3/4" |
| EF1005 | 10 | 41 | 17'-9" | STR | | | | | | |
| EF1006 | 10 | 10 | 12'-5" | 65 | 1'-5" | 11'-0" | | | | J = 1'-1 1/4" |
| EF1008 | 10 | 9 | 20'-5" | 65 | 1'-5" | 19'-0" | | | | J = 1'-1 1/4" |
| EW515 | 5 | 12 | 9'-3" | STR | | | | | | |
| EW516 | 5 | 12 | 27'-10" | STR | | | | | | |
| EW517 | 5 | 54 | 46'-8" | STR | | | | | | |
| EW518 | 5 | 12 | 7'-10 1/2" TO 40'-2" | STR | | | | | | VARY 2 EACH BY 6'-5 1/2" |
| EW519 | 5 | 2 | 46'-11 1/2" | STR | | | | | | |
| EW520 | 5 | 10 | 35'-0" TO 36'-1 1/2" | STR | | | | | | VARY EACH BY 1 1/2" |
| EW521 | 5 | 19 | 28'-5 1/2" TO 30'-6 1/4" | STR | | | | | | VARY EACH BY 1 3/8" |
| EW522 | 5 | 19 | 21'-7" TO 23'-7 3/4" | STR | | | | | | VARY EACH BY 1 3/8" |
| EW523 | 5 | 48 | 4'-7 3/8" | 33 | 1'-9" | 1'-0 3/8" | 1'-10" | | 1 7/8" | |
| EW701 | 7 | 19 | 21'-8" TO 23'-8 3/4" | STR | | | | | | VARY EACH BY 1 3/8" |
| EW902 | 9 | 19 | 28'-6 3/4" TO 30'-7 1/2" | STR | | | | | | VARY EACH BY 1 3/8" |
| EW1004 | 10 | 10 | 35'-1 1/2" TO 36'-3" | STR | | | | | | VARY EACH BY 1 1/2" |



NOTES:

- "E" PREFIX IN BAR MARK DENOTES EPOXY COATED BARS.
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- FIGURES IN CIRCLE REPRESENT BAR TYPES.
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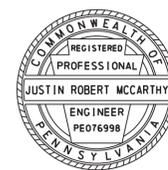
- GENERAL NOTES
- ABUTMENT 1 DRAWINGS
- MISCELLANEOUS ABUTMENT DETAILS

SHEETS:

- 3 - 4
- 11 - 20
- 33

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

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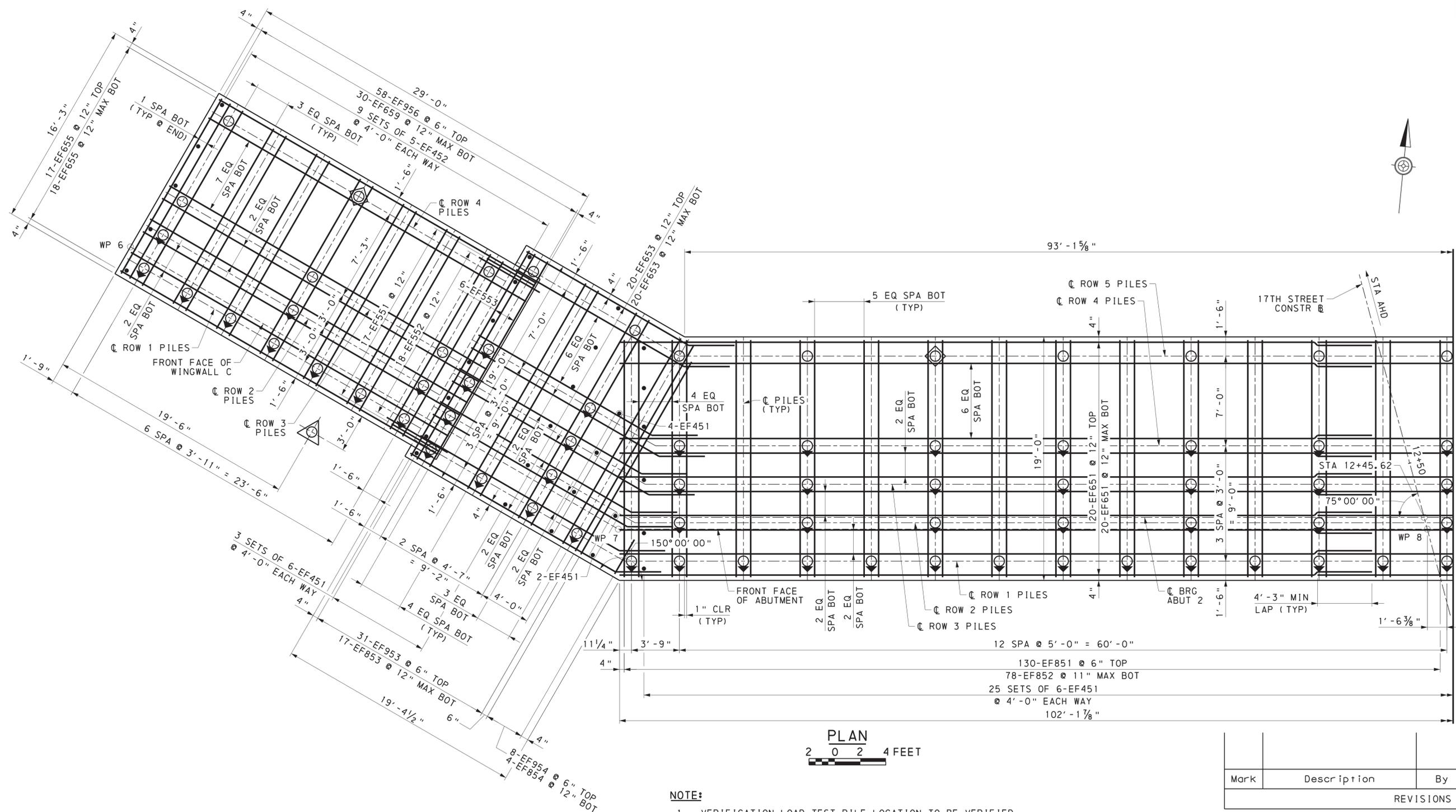
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 1 REBAR SCHEDULE 2

RECOMMENDED 1-22-2025

SHEET 20 OF 62

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PLAN
2 0 2 4 FEET

NOTE:

1. VERIFICATION LOAD TEST PILE LOCATION TO BE VERIFIED IN THE FIELD BY THE GEOTECHNICAL SPECIALIST.

LEGEND:

ALL PILE CASINGS ARE 9.625" O.D. WITH 0.472" WALL THICKNESS

- DENOTES VERTICAL PILES
- ◐ DENOTES BATTERED PILES, ALL PILES BATTERED 3H:12V
- ◑ DENOTES PROOF LOAD TEST PILES
- △ DENOTES VERIFICATION LOAD TEST PILES

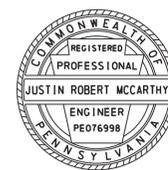
REFERENCES:

- GENERAL NOTES
- STAKE-OUT PLAN
- ABUTMENT 2 DRAWINGS

SHEETS:

- 3 - 4
- 10
- 21 - 32

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SUITE 300
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17TH STREET STA 12+03.12
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1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 FOOTING PLAN 1

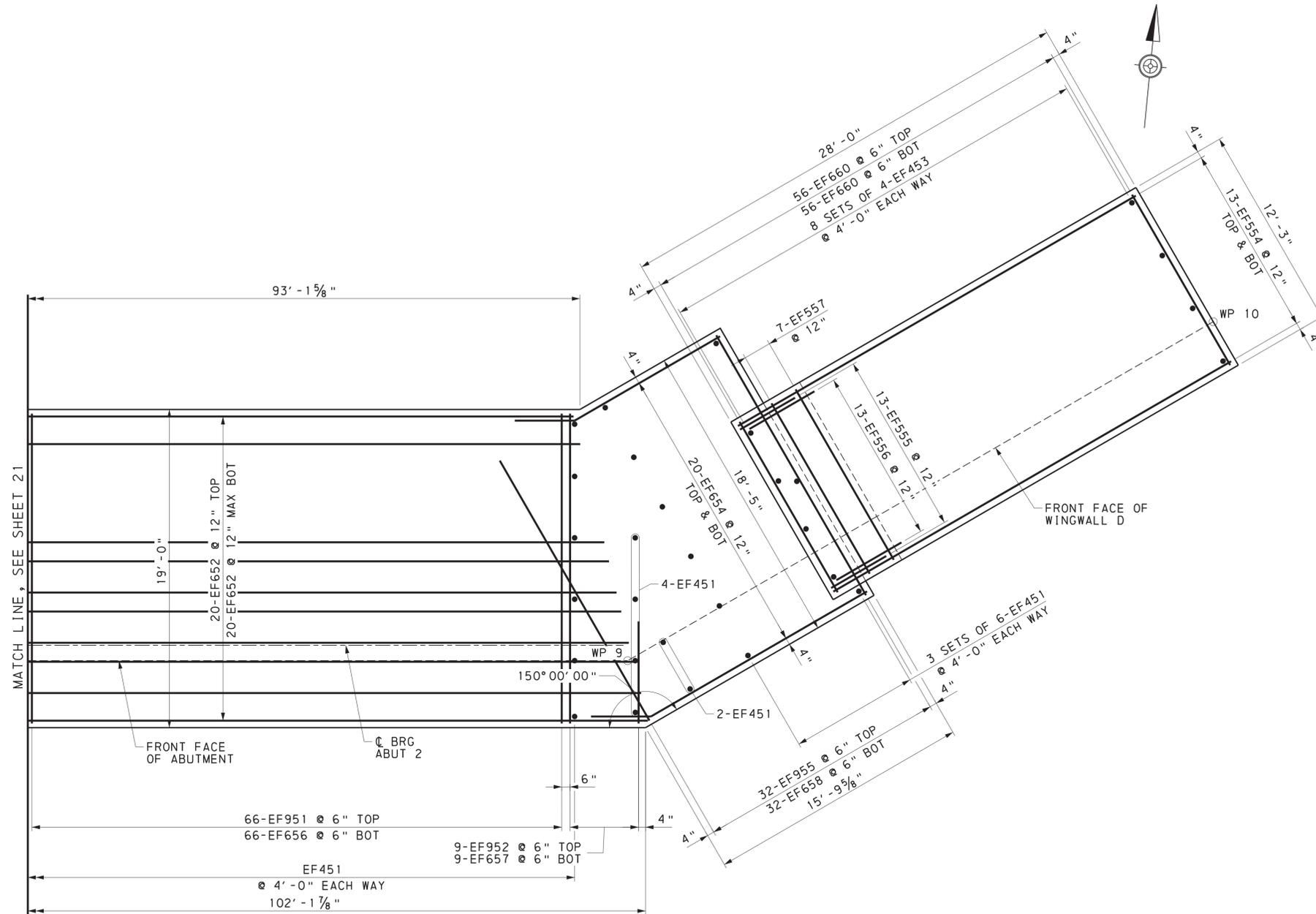
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SHEET 21 OF 62

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| PILE FOOTING FOUNDATION PARAMETERS | | | |
|---|---------------|---------------|---------------|
| | ABUT 2 (WEST) | WING C @ ABUT | WING C @ STEP |
| AXIAL | | | |
| LIMIT STATE | STR-I | STR-I | STR-III |
| LOAD CASE | MAX | MAX | MAX |
| STAGE | FINAL | FINAL | TEMPORARY |
| (A) FACTORED MAX DESIGN AXIAL PILE LOAD (KIP) | 283.72 | 207.19 | 241.64 |
| (B) FACTORED AXIAL PILE RESISTANCE (KIP) | 408.00 | 408.00 | 408.00 |
| B/A AXIAL PERFORMANCE RATIO | 1.438 | 1.969 | 1.688 |
| LATERAL | | | |
| LIMIT STATE | STR-I | STR-I | STR-I |
| LOAD CASE | MAX | MAX | MAX |
| STAGE | FINAL | FINAL | FINAL |
| (A) FACTORED MAX DESIGN LATERAL PILE LOAD (KIP) | 48.50 | 47.13 | 31.69 |
| (B) FACTORED LATERAL PILE RESISTANCE (KIP) | 49.48 | 53.98 | 33.67 |
| B/A LATERAL PERFORMANCE RATIO | 1.020 | 1.145 | 1.062 |

1/2/2025
FILENAME: s3016-s-brB4-ab21.dgn



PLAN
2 0 2 4 FEET

| FOUNDATION PARAMETERS AT ABUTMENT 2 | | | |
|-------------------------------------|-------------------|---------------|---------------|
| BEARING CAPACITY | ABUTMENT 2 (EAST) | WING D @ ABUT | WING D @ STEP |
| SECTION | TYPICAL | TYPICAL | TYPICAL |
| BEARING RESISTANCE | 87.50 KSF | 87.50 KSF | 87.50 KSF |
| MAX BEARING PRESSURE | 15.62 KSF | 13.46 KSF | 23.12 KSF |
| PERFORMANCE RATIO | 5.602 | 6.499 | 3.784 |
| LIMIT STATE | STR-I | STR-I | STR-I |
| LOAD CASE | MAX | MAX | MIN |
| STAGE | FINAL | FINAL | FINAL |
| SLIDING RESISTANCE | ABUTMENT 2 (EAST) | WING D @ ABUT | WING D @ STEP |
| SECTION | TYPICAL | TYPICAL | TYPICAL |
| SLIDING RESISTANCE | 64.08 K | 68.78 K | 26.64 K |
| MAX HORIZONTAL FORCE | 40.48 K | 49.69 K | 25.02 K |
| PERFORMANCE RATIO | 1.583 | 1.384 | 1.065 |
| LIMIT STATE | STR-I | STR-I | STR-I |
| LOAD CASE | MIN | MIN | MIN |
| CONDITION | TEMPORARY | FINAL | FINAL |

| SPREAD FOOTING ROCK PARAMETERS | |
|--------------------------------|-----------|
| EMPIRICAL BEARING CAPACITY | 175.0 KSF |
| ALLOWABLE SETTLEMENT | 1.0 IN |
| BEARING CAPACITY PHI FACTOR | 0.50 |
| SLIDING PHI FACTOR | 1.00 |
| CONCRETE/ROCK FRICTION | 35° |
| INTACT ELASTIC MODULUS | 5700 KSI |
| POISSON'S RATIO | 0.23 |
| ROCK MASS MODULUS | 1369 KSI |

REFERENCES:

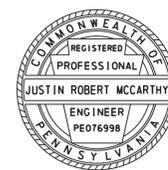
- GENERAL NOTES
- STAKE-OUT PLAN
- ABUTMENT 2 DRAWINGS

SHEETS:

- 3 - 4
- 10
- 21 - 32

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



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SUITE 300
HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

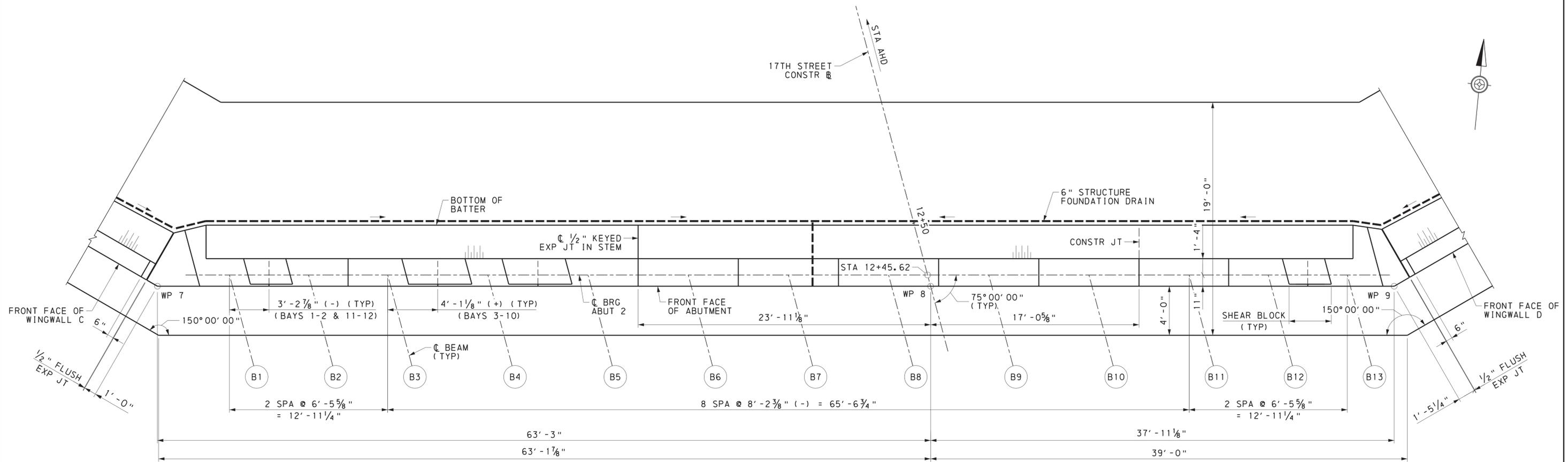
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 FOOTING PLAN 2

RECOMMENDED 1-22-2025

SHEET 22 OF 62

S-42023

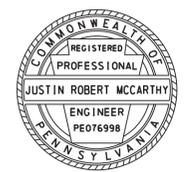


PLAN
2 0 2 4 FEET

| Mark | Description | By | Chk'd | Recm'd | Date |
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| REVISIONS | | | | | |

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DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 PLAN

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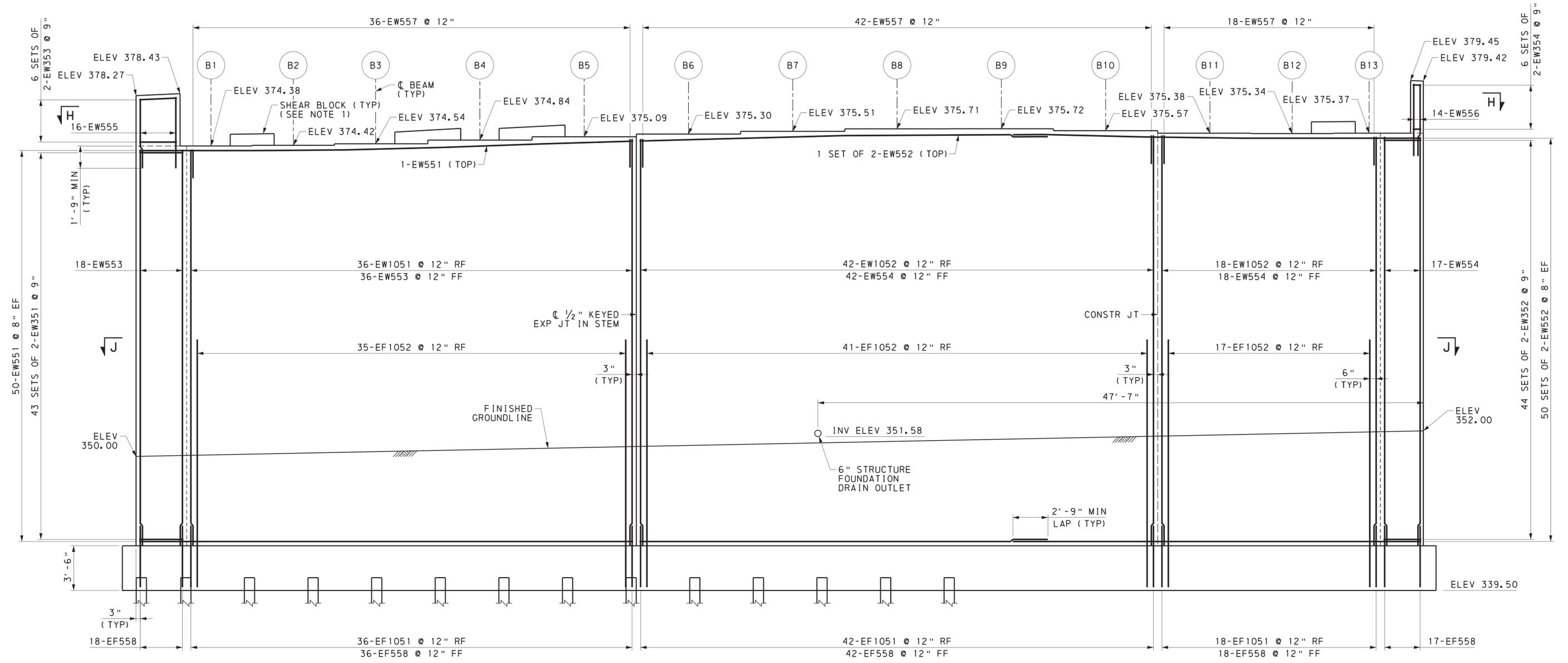
RECOMMENDED 1-22-2025

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| | |
|---------------------|----------------|
| REFERENCES: | SHEETS: |
| GENERAL NOTES | 3 - 4 |
| STAKE-OUT PLAN | 10 |
| ABUTMENT 2 DRAWINGS | 21 - 32 |

1/2/2025
LEWANE: 63016-35-brB4-abt23.dgn



NOTE:

- SHEAR BLOCK REINFORCEMENT NOT SHOWN FOR CLARITY.

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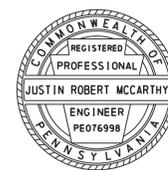
- GENERAL NOTES
- ABUTMENT 2 DRAWINGS
- MISCELLANEOUS ABUTMENT DETAILS

SHEETS:

- 3 - 4
- 21 - 32
- 33

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

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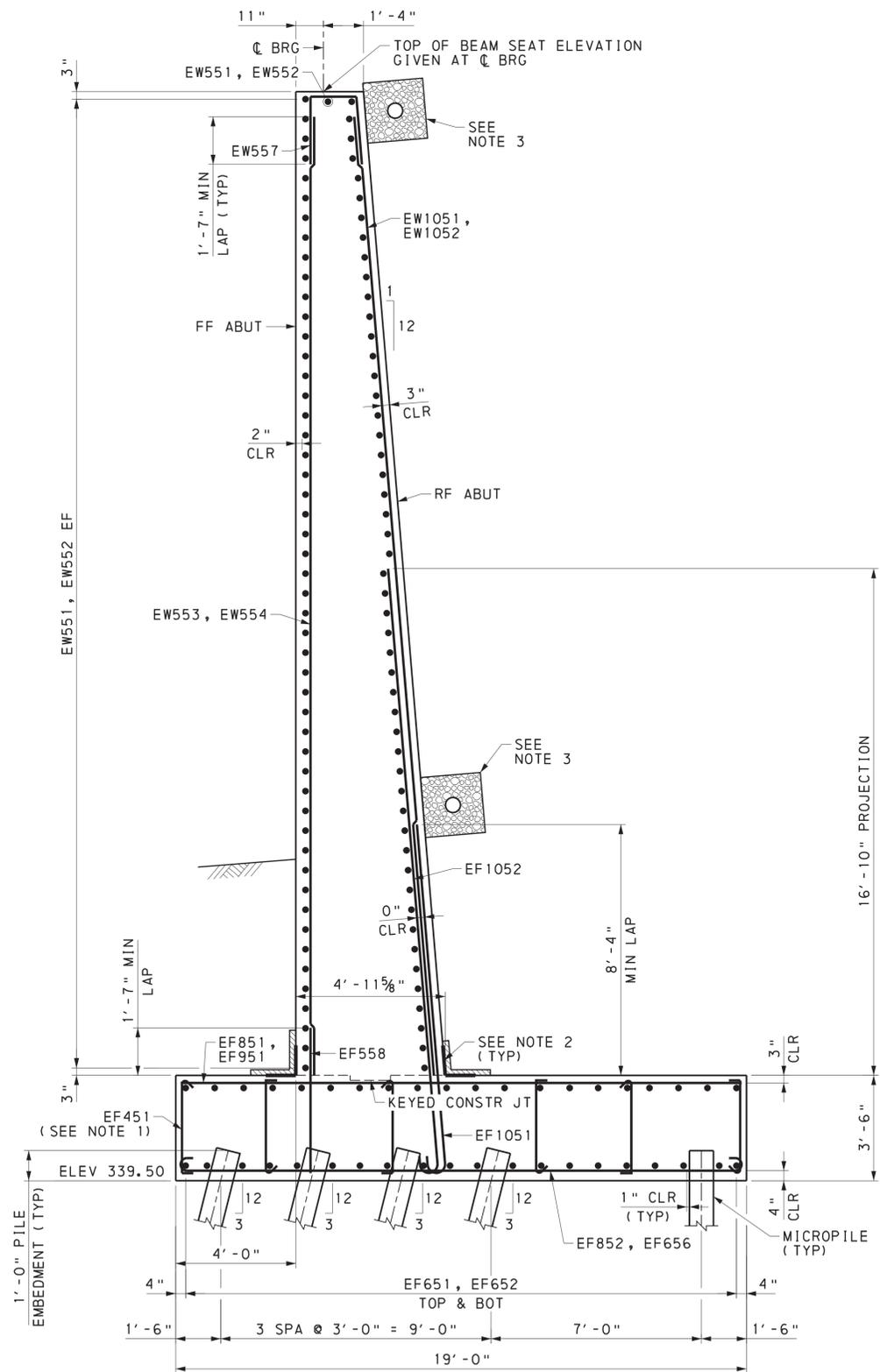
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 ELEVATION

RECOMMENDED 1-22-2025

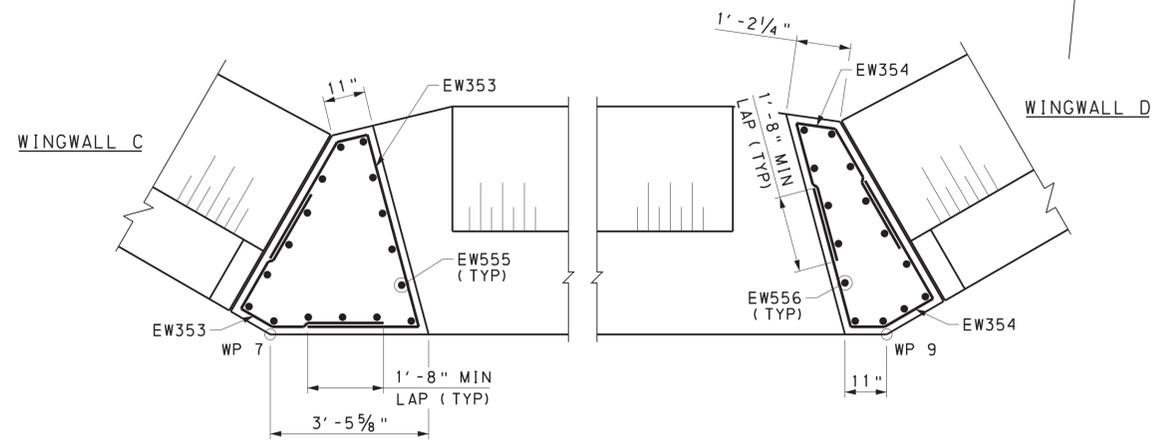
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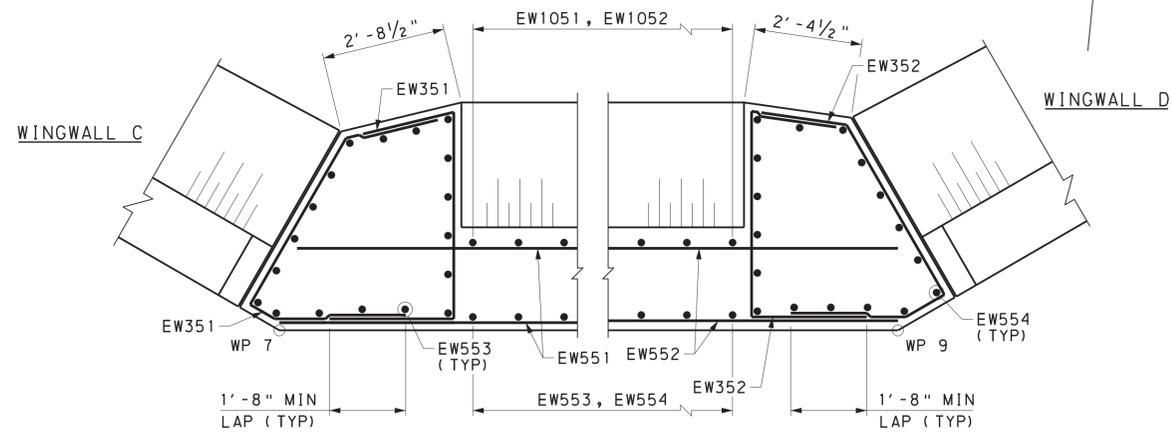
TYPICAL SECTION

(MICROPILES NOT PRESENT AT EAST PORTION OF ABUTMENT)



SECTION H-H

1 0 1 2 FEET



SECTION J-J

1 0 1 2 FEET

NOTES:

1. TIE TOP & BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOKS AT TOP IN ALTERNATE TIES.
2. FOR WATERPROOFING DETAILS, SEE ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS".
3. 6" STRUCTURE FOUNDATION DRAIN WITHIN CONTINUOUS 2' x 2' OF NO. 57 COARSE AGGREGATE ENCASED IN GEOTEXTILE, CLASS 1. SEE PUB 408 SECTION 1001.3(d) AND BC-751M.

REFERENCES:

- GENERAL NOTES 3 - 4
- ABUTMENT 2 DRAWINGS 21 - 32
- MISCELLANEOUS ABUTMENT DETAILS 33

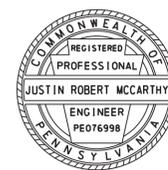
SHEETS:

- 3 - 4
- 21 - 32
- 33

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

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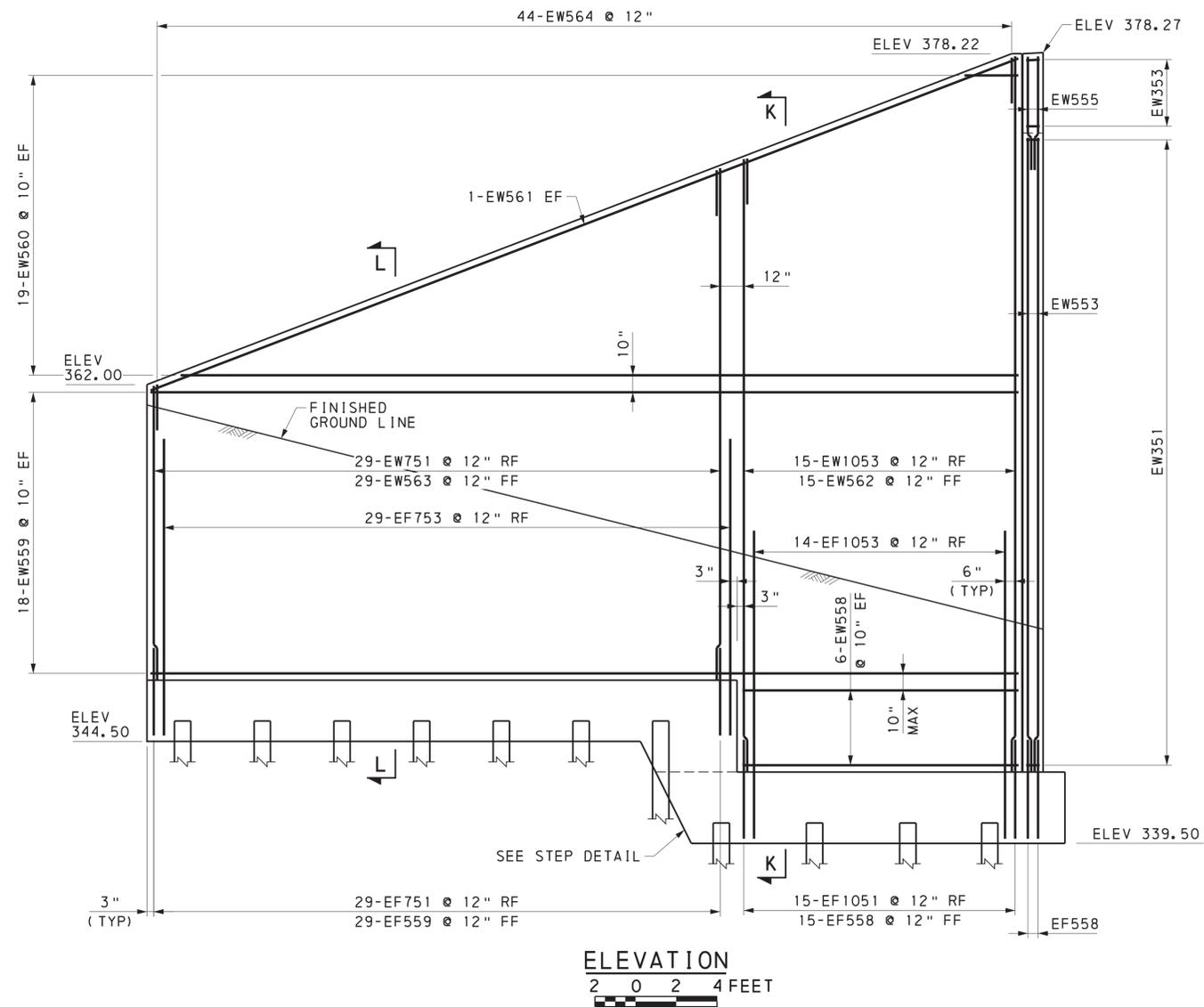
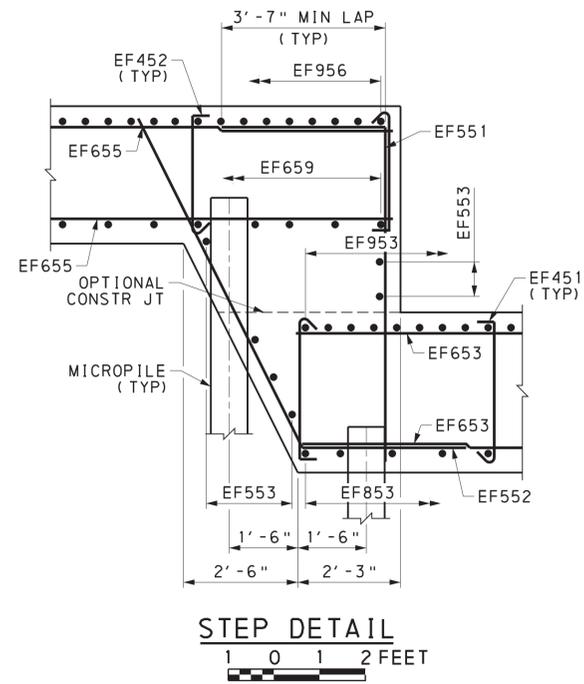
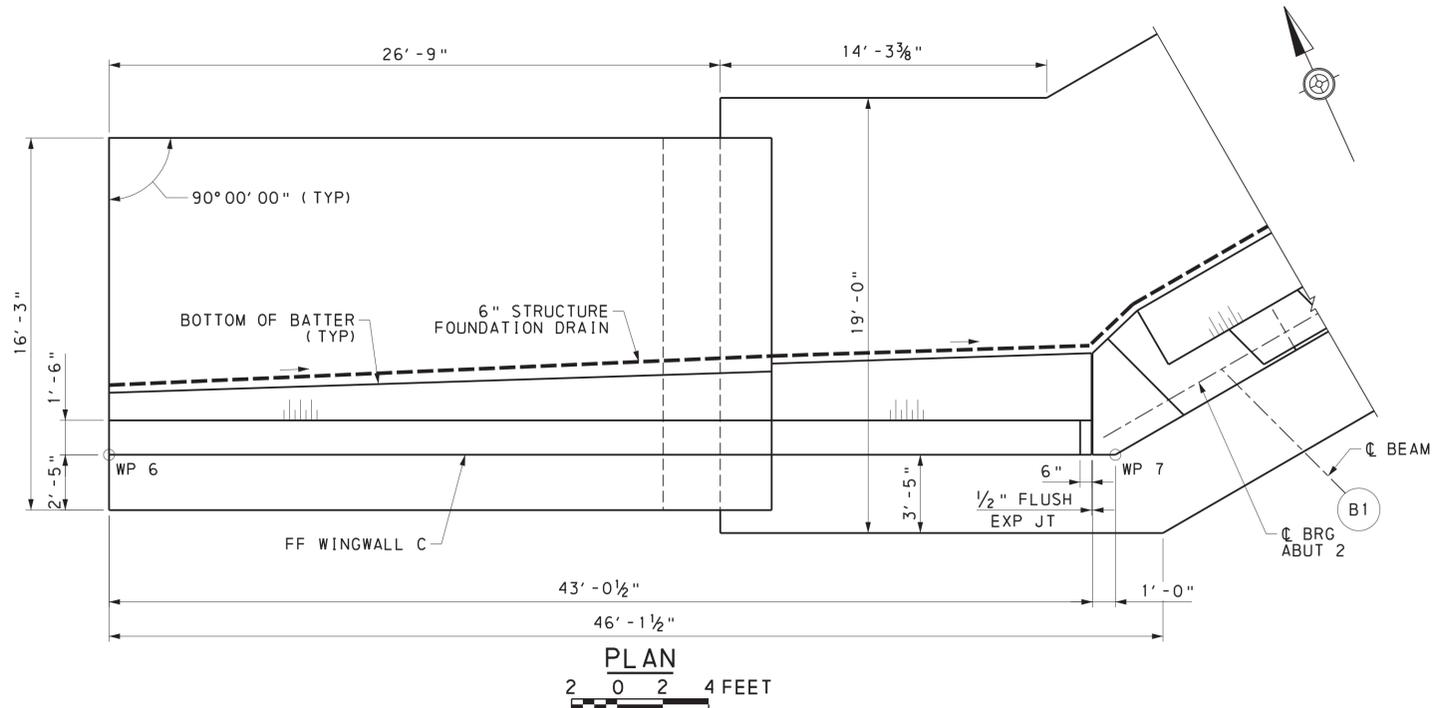
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 SECTIONS & DETAILS

RECOMMENDED 1-22-2025

SHEET 25 OF 62

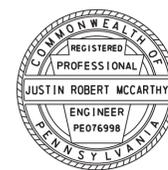
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| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
WINGWALL C PLAN & ELEVATION

RECOMMENDED 1-22-2025

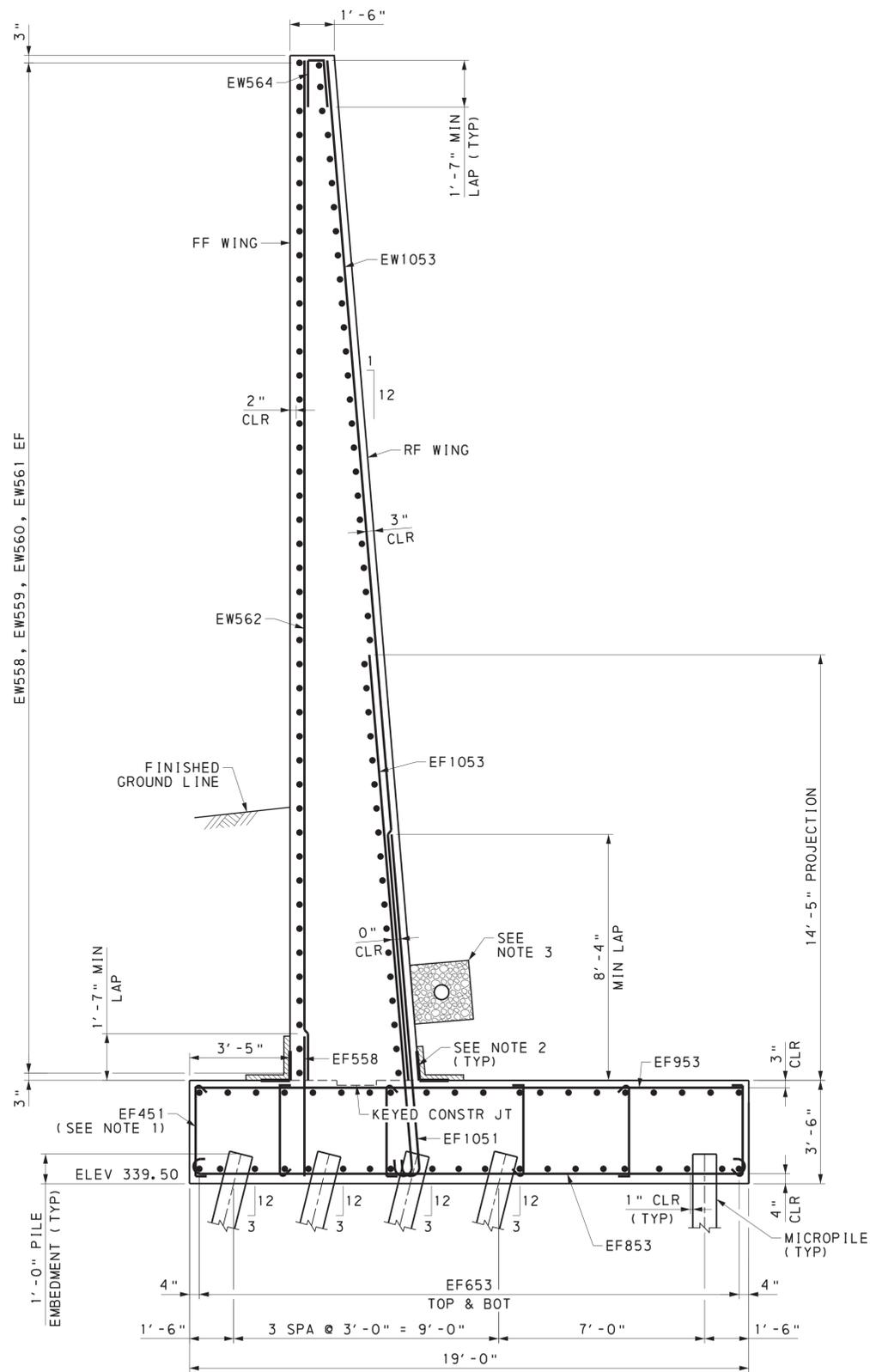
SHEET 26 OF 62

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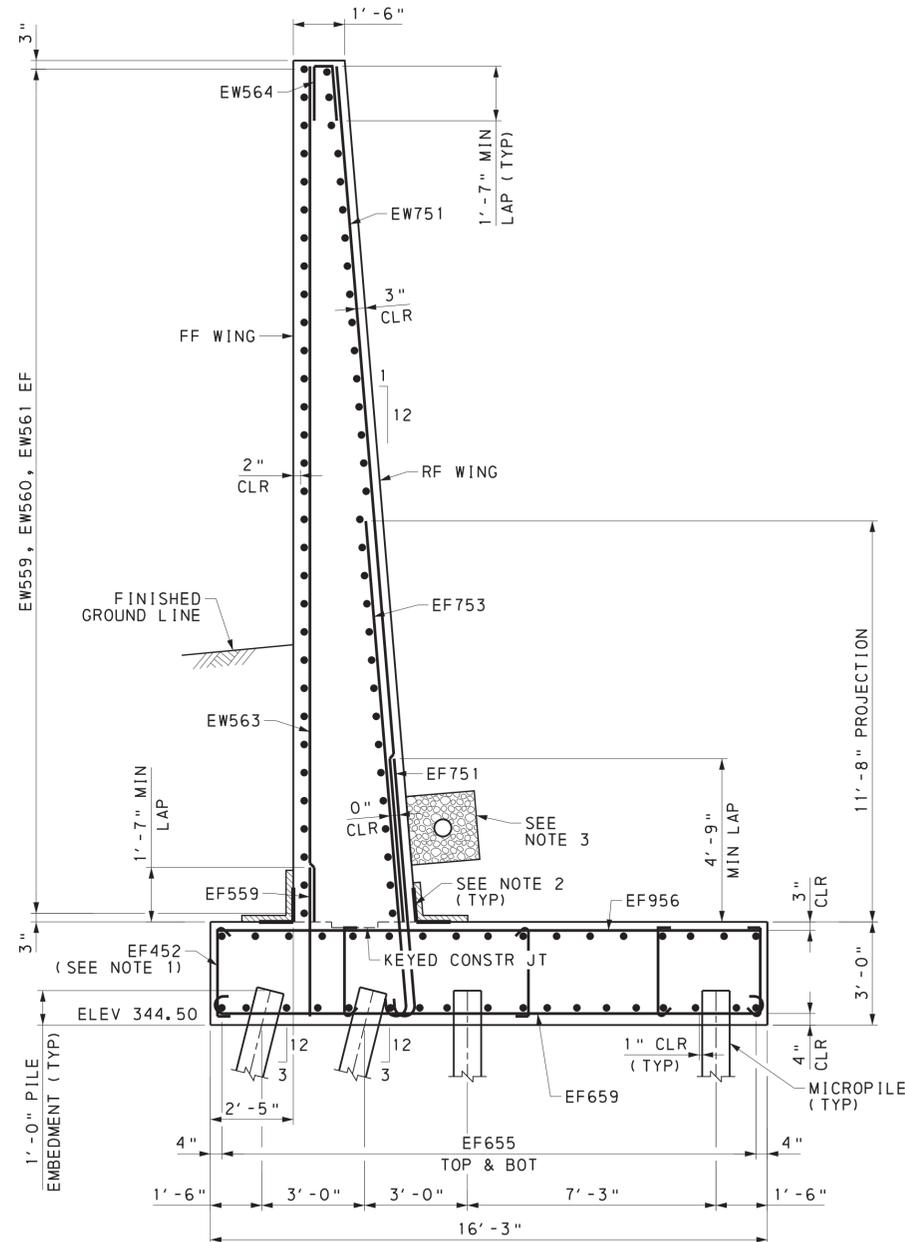
REFERENCES:
GENERAL NOTES
ABUTMENT 2 DRAWINGS

SHEETS:
3 - 4
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SECTION K-K
1 0 1 2 3 FEET



SECTION L-L
1 0 1 2 3 FEET

NOTES:

1. TIE TOP & BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOKS AT TOP IN ALTERNATE TIES.
2. FOR WATERPROOFING DETAILS, SEE ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS".
3. 6" STRUCTURE FOUNDATION DRAIN WITHIN CONTINUOUS 2' x 2' OF NO. 57 COARSE AGGREGATE ENCASED IN GEOTEXTILE, CLASS 1. SEE PUB 408 SECTION 1001.3(d) AND BC-751M.

| Mark | Description | By | Chk'd | Recm'd | Date |
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| REVISIONS | | | | | |

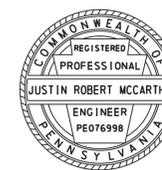
BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
WINGWALL C SECTIONS

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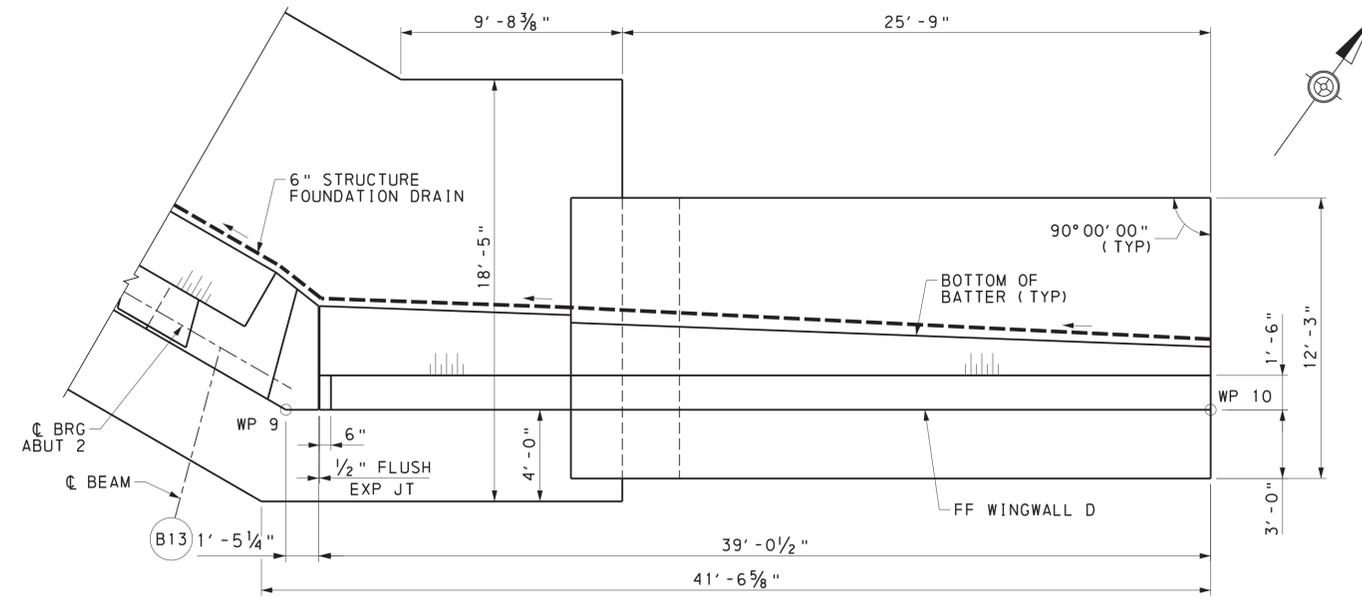
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GENERAL NOTES
ABUTMENT 2 DRAWINGS

SHEETS:
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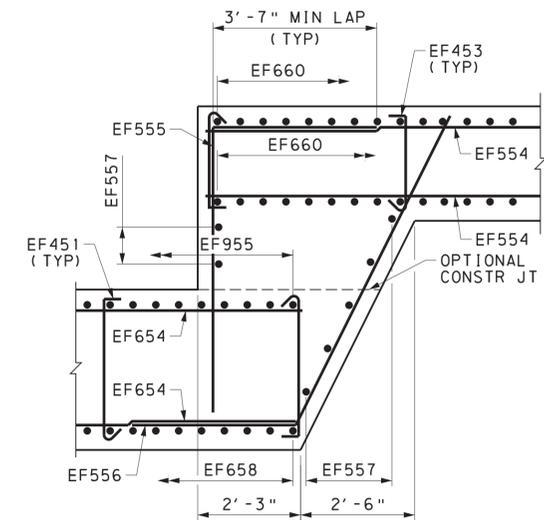
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SHEET 27 OF 62

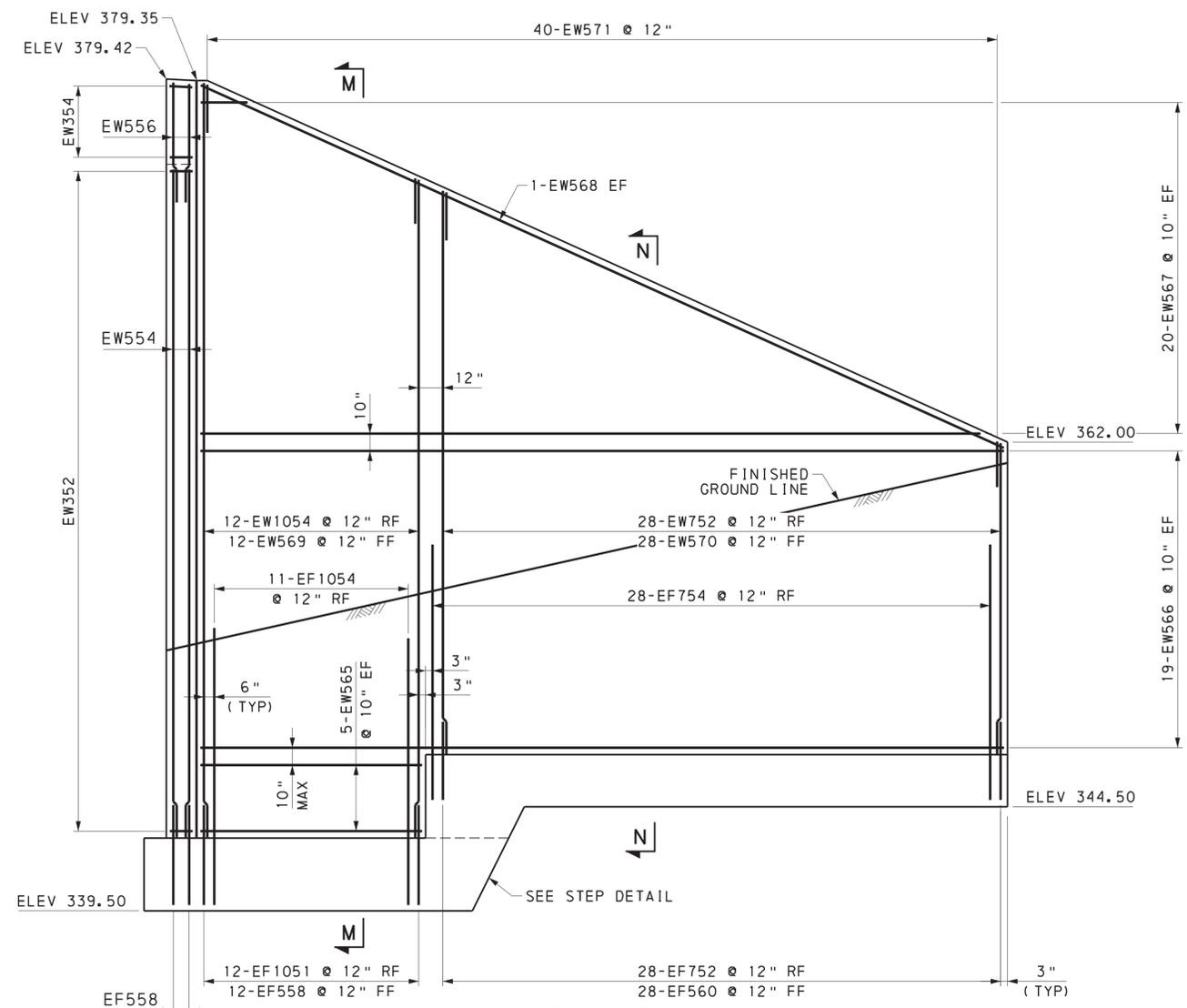
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PLAN
2 0 2 4 FEET



STEP DETAIL
1 0 1 2 FEET

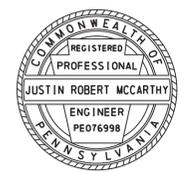


ELEVATION
2 0 2 4 FEET

| Mark | Description | By | Chk'd | Recm'd | Date |
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DEPARTMENT OF TRANSPORTATION
DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
WINGWALL D PLAN & ELEVATION

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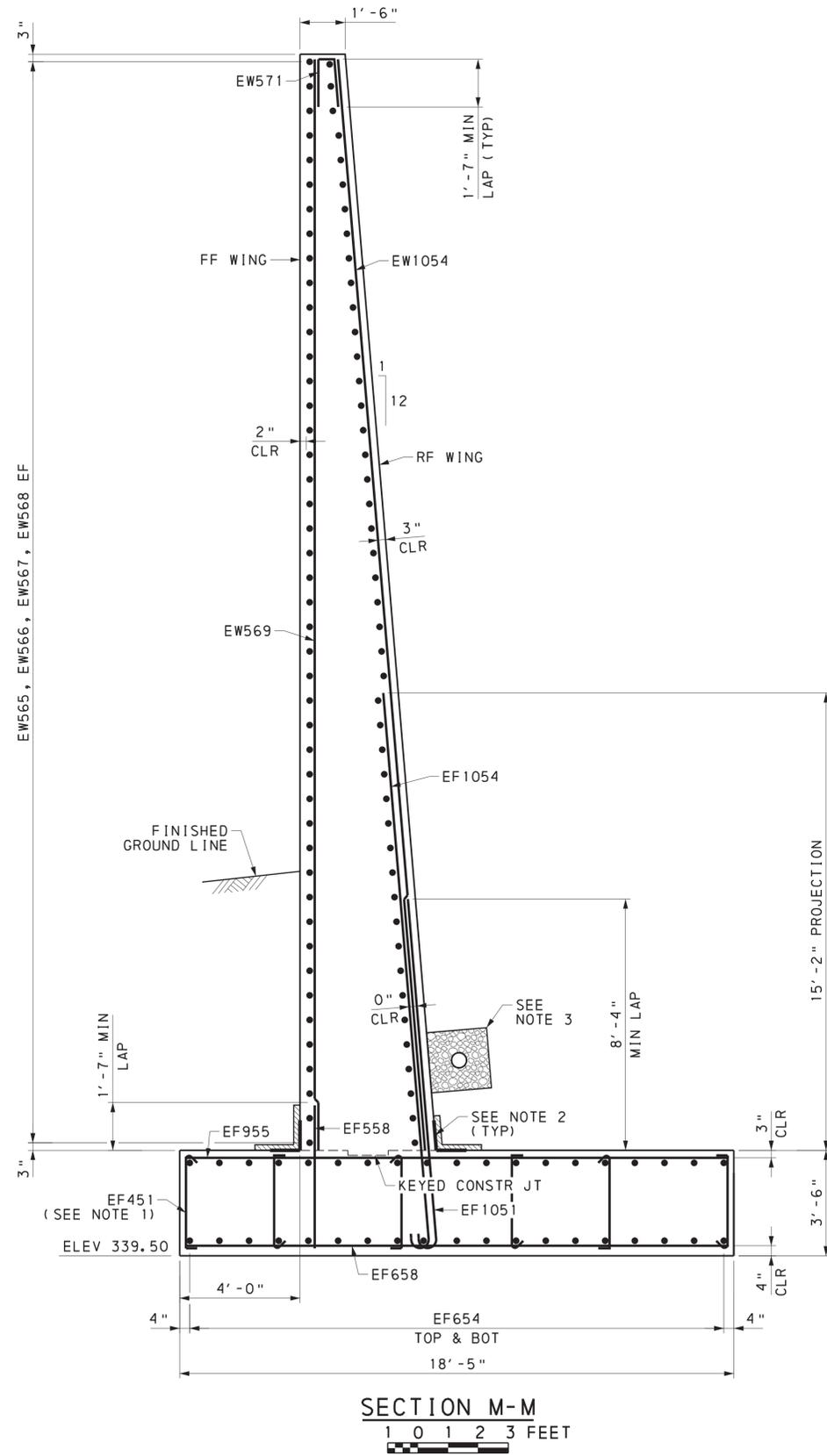
SHEET 28 OF 62

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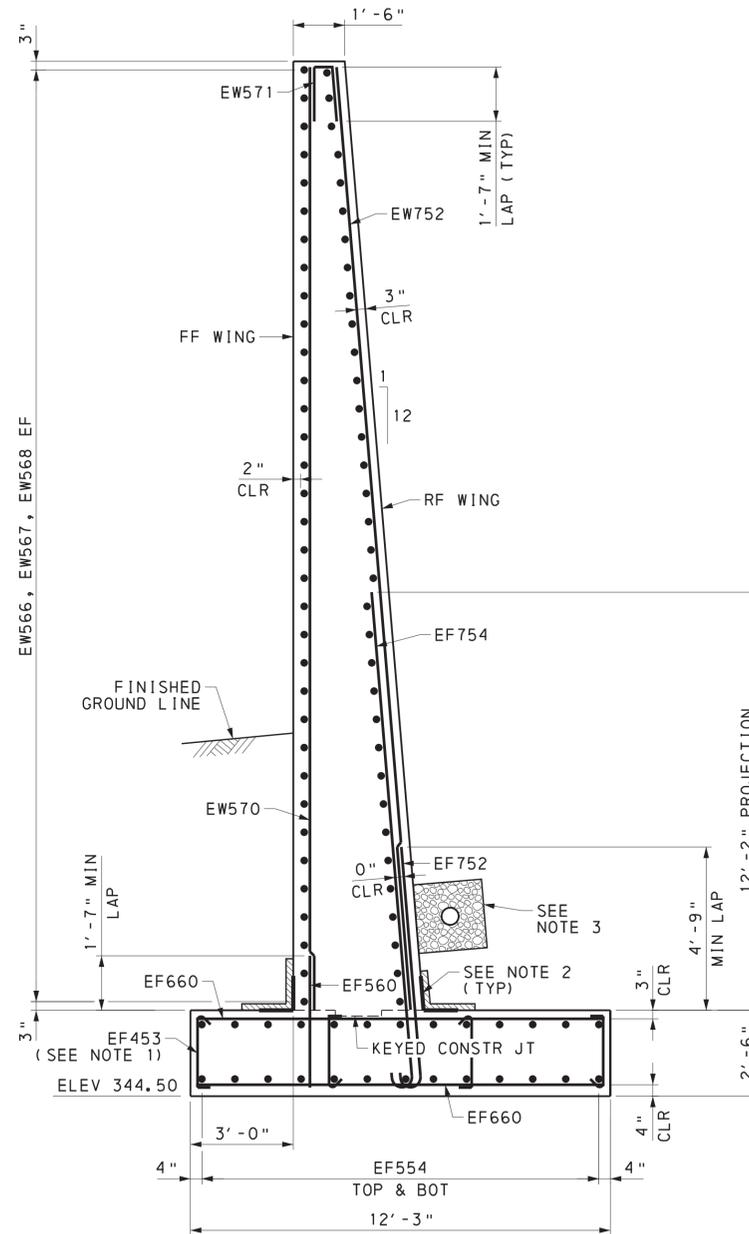
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GENERAL NOTES
ABUTMENT 2 DRAWINGS

SHEETS:
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SECTION M-M
1 0 1 2 3 FEET



SECTION N-N
1 0 1 2 3 FEET

NOTES:

1. TIE TOP & BOTTOM MATS OF REINFORCING STEEL WITH #4 TIE BARS AT A MAXIMUM SPACING OF 4'-0" IN BOTH DIRECTIONS. PROVIDE TIE BARS WITH 90° HOOK AT ONE END AND 135° HOOK AT THE OTHER END. ALTERNATE 90° AND 135° HOOKS AT TOP IN ALTERNATE TIES.
2. FOR WATERPROOFING DETAILS, SEE ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS".
3. 6" STRUCTURE FOUNDATION DRAIN WITHIN CONTINUOUS 2' x 2' OF NO. 57 COARSE AGGREGATE ENCASED IN GEOTEXTILE, CLASS 1. SEE PUB 408 SECTION 1001.3(d) AND BC-751M.

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

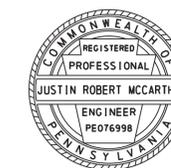
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
WINGWALL D SECTIONS

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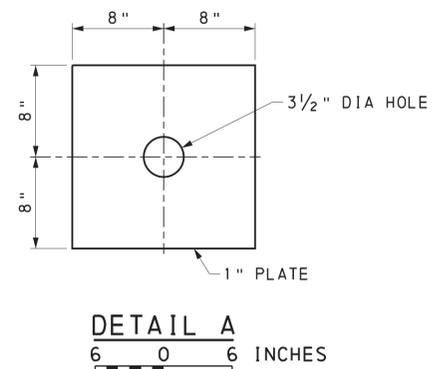
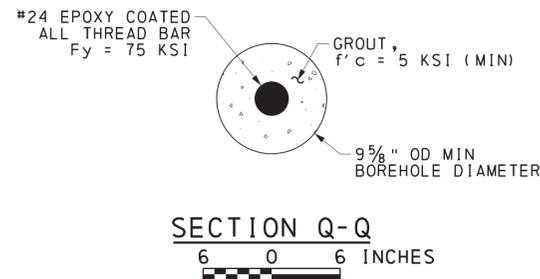
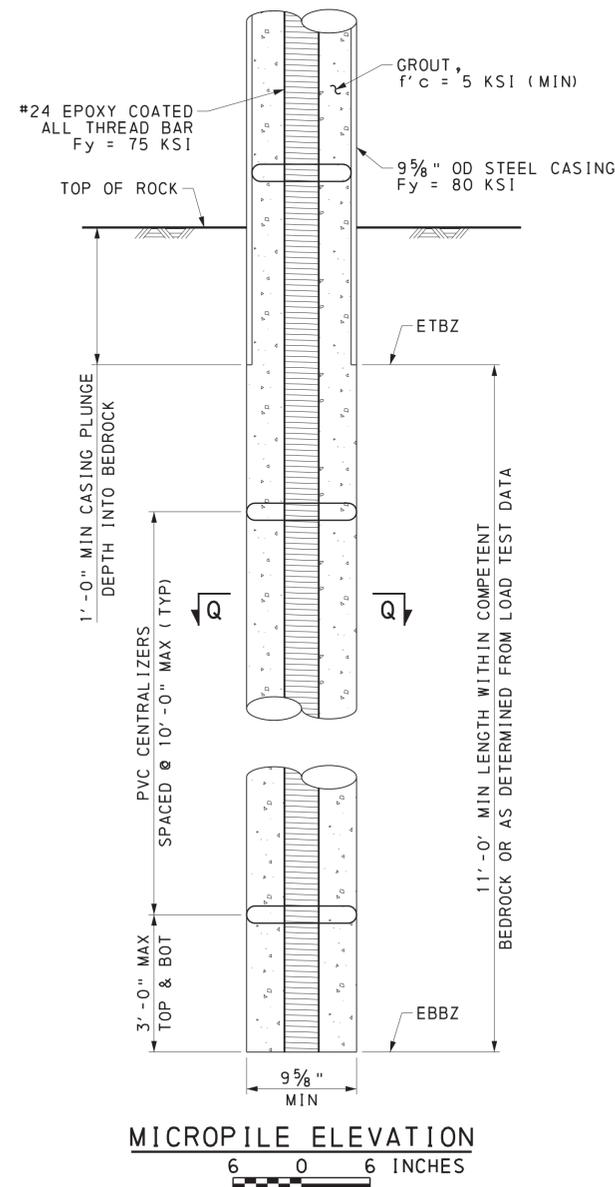
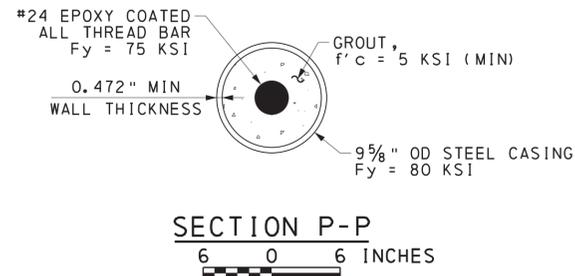
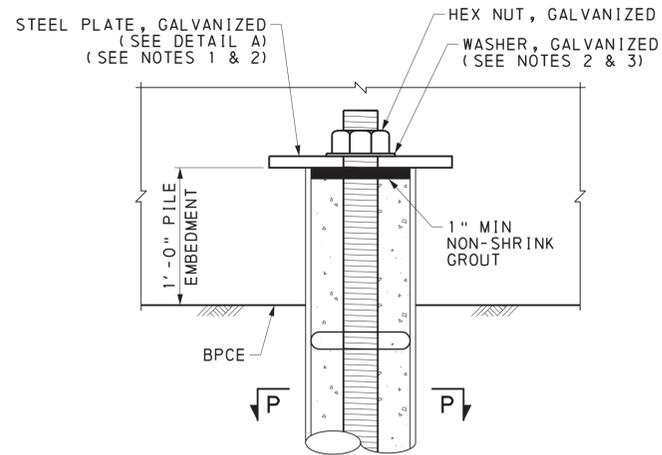
REFERENCES:
GENERAL NOTES
ABUTMENT 2 DRAWINGS

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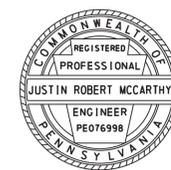
NOTES:

1. PROVIDE STEEL PLATE CONFORMING TO AASHTO M270, GRADE 50 (ASTM A709, GRADE 50) DESIGNATION.
2. STEEL PLATE, HEX NUT, AND WASHER ARE TO BE HOT-DIP GALVANIZED IN ACCORDANCE WITH PUB 408, SECTION 1105.02(s).
3. PROVIDE BEVELED PLATE WASHER AT BATTERED PILES.

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
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BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
MICROPILE DETAILS

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SHEET 30 OF 62

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REFERENCES:

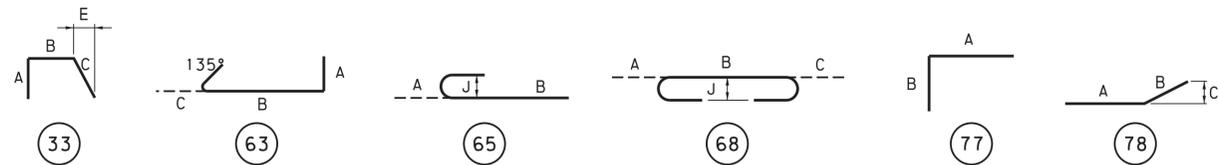
- GENERAL NOTES
- ABUTMENT 2 DRAWINGS
- STRUCTURE BORINGS

SHEETS:

- 3 - 4
- 21 - 32
- 57 - 62

| | | | | | | | | | | BRIDGE 4 |
|------------|------|----------|------------|------|--------|-----------|--------|---|----|---------------------|
| MARK | SIZE | NO REQ'D | LENGTH | TYPE | A | B | C | D | E | REMARKS |
| ABUTMENT 2 | | | | | | | | | | |
| EF451 | 4 | 154 | 3'-8" | 63 | 4 1/2" | 2'-11" | 4 1/2" | | | |
| EF558 | 5 | 131 | 4'-11" | STR | | | | | | |
| EF651 | 6 | 40 | 60'-0" | STR | | | | | | |
| EF652 | 6 | 40 | 43'-1" TO | STR | | | | | | VARY EACH BY 2" |
| | | | 46'-3" | | | | | | | |
| EF656 | 6 | 66 | 18'-6" | STR | | | | | | |
| EF657 | 6 | 9 | 3'-2" TO | STR | | | | | | VARY EACH BY 1'-11" |
| | | | 18'-6" | | | | | | | |
| EF851 | 8 | 130 | 18'-6" | STR | | | | | | |
| EF852 | 8 | 78 | 20'-4" | 68 | 11" | 18'-6" | 11" | | | J = 8" |
| EF951 | 9 | 66 | 18'-6" | STR | | | | | | |
| EF952 | 9 | 9 | 6'-6" TO | STR | | | | | | VARY EACH BY 1'-6" |
| | | | 18'-6" | | | | | | | |
| EF1051 | 10 | 96 | 13'-2" | 65 | 1'-5" | 11'-9" | | | | J = 1'-1 1/4" |
| EF1052 | 10 | 93 | 21'-8" | 65 | 1'-5" | 20'-3" | | | | J = 1'-1 1/4" |
| EW351 | 3 | 86 | 9'-10" | STR | | | | | | BEND IN FIELD |
| EW352 | 3 | 88 | 9'-8" | STR | | | | | | BEND IN FIELD |
| EW353 | 3 | 12 | 8'-7" | STR | | | | | | BEND IN FIELD |
| EW354 | 3 | 12 | 7'-10" | STR | | | | | | BEND IN FIELD |
| EW451 | 4 | 8 | 3'-6" | STR | | | | | | |
| EW551 | 5 | 101 | 38'-11" | STR | | | | | | |
| EW552 | 5 | 202 | 32'-2" | STR | | | | | | |
| EW553 | 5 | 54 | 31'-2" | STR | | | | | | |
| EW554 | 5 | 77 | 32'-1" | STR | | | | | | |
| EW555 | 5 | 16 | 5'-10" | STR | | | | | | |
| EW556 | 5 | 14 | 5'-10" | STR | | | | | | |
| EW557 | 5 | 96 | 7'-10 3/8" | 33 | 3'-0" | 1'-9 3/8" | 3'-1" | | 3" | |
| EW1051 | 10 | 36 | 31'-3" | STR | | | | | | |
| EW1052 | 10 | 60 | 32'-2" | STR | | | | | | |

| | | | | | | | | | | BRIDGE 4 |
|------------|------|----------|---------------|------|---------------|-----------|-----------|---|--------|------------------------------|
| MARK | SIZE | NO REQ'D | LENGTH | TYPE | A | B | C | D | E | REMARKS |
| WINGWALL C | | | | | | | | | | |
| EF451 | 4 | 24 | 3'-8" | 63 | 4 1/2" | 2'-11" | 4 1/2" | | | |
| EF452 | 4 | 45 | 3'-2" | 63 | 4 1/2" | 2'-5" | 4 1/2" | | | |
| EF551 | 5 | 17 | 10'-10" | 77 | 7'-3" | 3'-7" | | | | |
| EF552 | 5 | 18 | 11'-9" | 78 | 8'-2" | 3'-7" | 3'-2 1/2" | | | |
| EF553 | 5 | 6 | 15'-9" | STR | | | | | | |
| EF558 | 5 | 15 | 4'-11" | STR | | | | | | |
| EF559 | 5 | 29 | 4'-5" | STR | | | | | | |
| EF653 | 6 | 40 | 18'-4 1/8" TO | STR | 14'-1 1/8" TO | 4'-3" | 2'-1 1/2" | | | VARY A 2 EACH BY 3 1/8" |
| | | | 23'-3 1/2" | | 19'-0 1/2" | | | | | |
| EF655 | 6 | 35 | 28'-6" | STR | | | | | | J = 6" |
| EF659 | 6 | 30 | 17'-1" | 68 | 8" | 15'-9" | 8" | | | J = 6" |
| EF751 | 7 | 29 | 8'-6" | 65 | 10" | 7'-8" | | | | J = 7" |
| EF753 | 7 | 29 | 15'-5" | 65 | 10" | 14'-7" | | | | J = 7" |
| EF853 | 8 | 17 | 20'-4" | 68 | 11" | 18'-6" | 11" | | | J = 8" |
| EF854 | 8 | 4 | 5'-11" TO | 65 | 11" | 5'-0" TO | | | | VARY B EACH BY 4'-6", J = 8" |
| | | | 19'-5" | | | 18'-6" | | | | |
| EF953 | 9 | 31 | 18'-6" | STR | | | | | | |
| EF954 | 9 | 8 | 6'-3" TO | STR | | | | | | VARY EACH BY 1'-9" |
| | | | 18'-6" | | | | | | | |
| EF956 | 9 | 58 | 15'-9" | STR | | | | | | |
| EF1051 | 10 | 15 | 13'-2" | 65 | 1'-5" | 11'-9" | | | | J = 1'-1 1/4" |
| EF1053 | 10 | 14 | 19'-3" | 65 | 1'-5" | 17'-10" | | | | J = 1'-1 1/4" |
| EW558 | 5 | 12 | 13'-8" | STR | | | | | | |
| EW559 | 5 | 36 | 42'-8" | STR | | | | | | |
| EW560 | 5 | 38 | 2'-7 1/2" TO | STR | | | | | | VARY 2 EACH BY 2'-1 1/2" |
| | | | 40'-10 1/2" | | | | | | | |
| EW561 | 5 | 2 | 45'-7" | STR | | | | | | |
| EW562 | 5 | 15 | 29'-11" TO | STR | | | | | | VARY EACH BY 4 3/8" |
| | | | 35'-0 1/4" | | | | | | | |
| EW563 | 5 | 29 | 14'-4" TO | STR | | | | | | VARY EACH BY 4 3/4" |
| | | | 25'-5" | | | | | | | |
| EW564 | 5 | 44 | 4'-7 3/8" | 33 | 1'-9" | 1'-0 3/8" | 1'-10" | | 1 7/8" | |
| EW751 | 7 | 29 | 14'-5" TO | STR | | | | | | VARY EACH BY 4 3/4" |
| | | | 25'-6" | | | | | | | |
| EW1053 | 10 | 15 | 30'-0 1/4" TO | STR | | | | | | VARY EACH BY 4 3/8" |
| | | | 35'-1 1/2" | | | | | | | |



NOTES:

- "E" PREFIX IN BAR MARK DENOTES EPOXY COATED BARS.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" & "C" ON STANDARD 135° AND 180° HOOKS, UNLESS NOTED.
- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- FIGURES IN CIRCLE REPRESENT BAR TYPES.
- "J" DIMENSIONS ON 180° HOOKS ARE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- RADIUS, "R" IS TO THE INSIDE OF THE BAR.
- REINFORCEMENT BAR SCHEDULE IS FOR INFORMATION ONLY. VERIFY INFORMATION BEFORE FABRICATION.

REFERENCES:

- GENERAL NOTES
- ABUTMENT 2 DRAWINGS
- MISCELLANEOUS ABUTMENT DETAILS

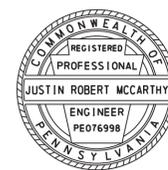
SHEETS:

- 3 - 4
- 21 - 32
- 33

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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SUITE 300
HARRISBURG, PA 17110

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DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

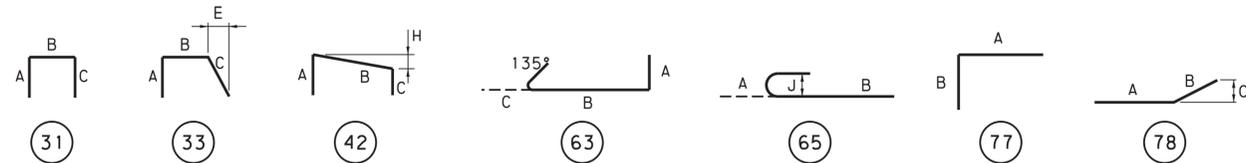
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 REBAR SCHEDULE 1

RECOMMENDED 1-22-2025

SHEET 31 OF 62

S-42023

| MARK | SIZE | NO REQ'D | LENGTH | TYPE | A | B | C | D | E | REMARKS |
|--------------|------|----------|------------------------------|------|----------------------------|-----------|-----------|---|--------|-------------------------|
| WINGWALL D | | | | | | | | | | |
| EF451 | 4 | 20 | 3'-8" | 63 | 4 1/2" | 2'-11" | 4 1/2" | | | |
| EF453 | 4 | 32 | 2'-8" | 63 | 4 1/2" | 1'-11" | 4 1/2" | | | |
| EF554 | 5 | 26 | 27'-6" | STR | | | | | | |
| EF555 | 5 | 13 | 10'-5" | 77 | 6'-10" | 3'-7" | | | | |
| EF556 | 5 | 13 | 11'-2" | 78 | 7'-7" | 3'-7" | 3'-2 1/2" | | | |
| EF557 | 5 | 7 | 11'-9" | STR | | | | | | |
| EF558 | 5 | 12 | 4'-11" | STR | | | | | | |
| EF560 | 5 | 28 | 3'-11" | STR | | | | | | |
| EF654 | 6 | 40 | 13'-9 1/4" TO 19'-8 1/2" | STR | 9'-6 1/4" TO 15'-5 1/2" | 4'-3" | 2'-1 1/2" | | | VARY A 2 EACH BY 3 3/4" |
| EF658 | 6 | 32 | 17'-11" | STR | | | | | | |
| EF660 | 6 | 56 | 11'-9" | STR | | | | | | |
| EF752 | 7 | 28 | 8'-0" | 65 | 10" | 7'-2" | | | | J = 7" |
| EF754 | 7 | 28 | 15'-5" | 65 | 10" | 14'-7" | | | | J = 7" |
| EF955 | 9 | 32 | 17'-11" | STR | | | | | | |
| EF1051 | 10 | 12 | 13'-2" | 65 | 1'-5" | 11'-9" | | | | J = 1'-1 1/4" |
| EF1054 | 10 | 11 | 20'-0" | 65 | 1'-5" | 18'-7" | | | | J = 1'-1 1/4" |
| EW565 | 5 | 10 | 10'-8" | STR | | | | | | |
| EW566 | 5 | 38 | 38'-8" | STR | | | | | | |
| EW567 | 5 | 40 | 2'-4" TO 37'-2" | STR | | | | | | VARY 2 EACH BY 1'-10" |
| EW568 | 5 | 2 | 42'-3" | STR | | | | | | |
| EW569 | 5 | 12 | 31'-5 5/8" TO 36'-2" | STR | | | | | | VARY EACH BY 5 1/8" |
| EW570 | 5 | 28 | 14'-9 3/4" TO 27'-5 5/8" | STR | | | | | | VARY EACH BY 5 5/8" |
| EW571 | 5 | 40 | 4'-7 3/8" | 33 | 1'-9" | 1'-0 3/8" | 1'-10" | | 1 7/8" | |
| EW752 | 7 | 28 | 14'-10 1/4" TO 27'-6 1/8" | STR | | | | | | VARY EACH BY 5 5/8" |
| EW1054 | 10 | 12 | 31'-7" TO 36'-3 3/8" | STR | | | | | | VARY EACH BY 5 1/8" |
| SHEAR BLOCKS | | | | | | | | | | |
| EW575 | 5 | 8 | 6'-3 1/2" | 31 | 2'-3" | 1'-9 1/2" | 2'-3" | | | |
| EW576 | 5 | 12 | 6'-7 1/2" | 31 | 2'-5" | 1'-9 1/2" | 2'-5" | | | |
| EW577 | 5 | 6 | 7'-7 1/4" | 42 | 2'-3" | 3'-1 1/4" | 2'-3" | | | H = 1/2" |
| EW578 | 5 | 6 | 7'-7 1/4" | 42 | 2'-3" | 3'-1 1/4" | 2'-3" | | | H = 3/8" |
| EW579 | 5 | 6 | 9'-4" | 42 | 2'-3" | 4'-10" | 2'-3" | | | H = 3 5/8" |
| EW580 | 5 | 6 | 9'-4" | 42 | 2'-3" | 4'-10" | 2'-3" | | | H = 3" |



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REFERENCES:

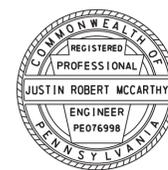
- GENERAL NOTES
- ABUTMENT 2 DRAWINGS
- MISCELLANEOUS ABUTMENT DETAILS

SHEETS:

- 3 - 4
- 21 - 32
- 33

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

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DEPARTMENT OF TRANSPORTATION

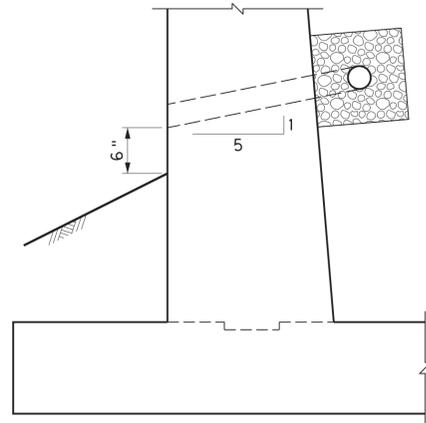
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
ABUTMENT 2 REBAR SCHEDULE 2

RECOMMENDED 1-22-2025

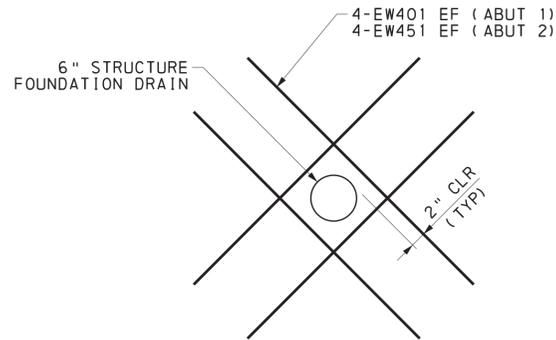
SHEET 32 OF 62

S-42023



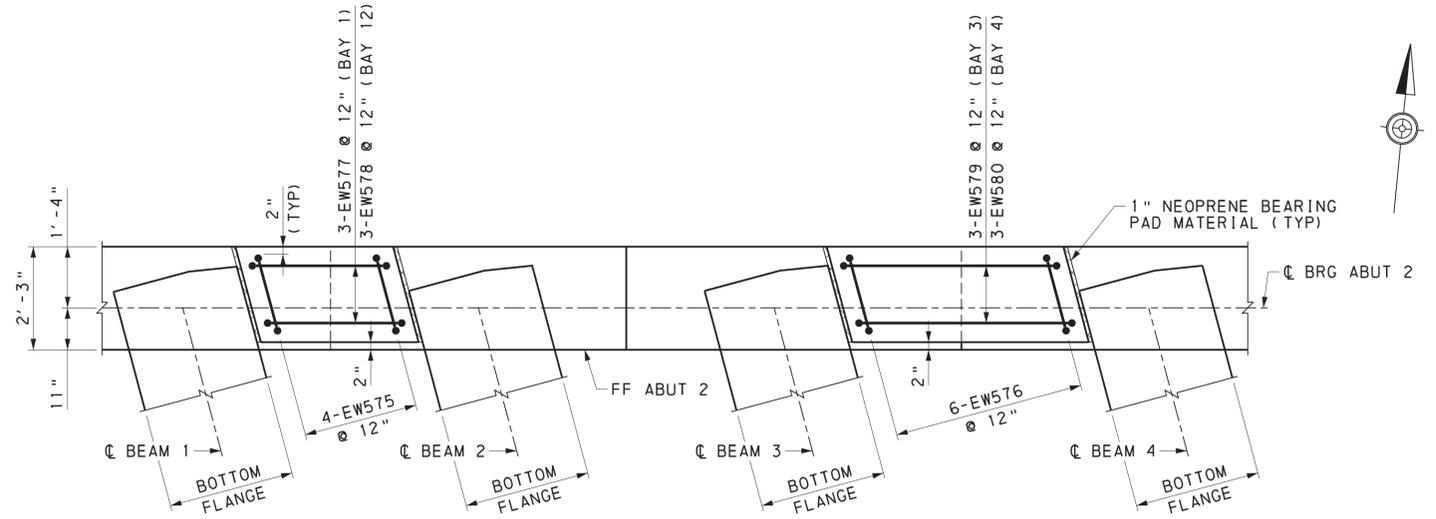
STRUCTURE FOUNDATION DRAIN OUTLET DETAIL

NOT TO SCALE



STRUCTURE FOUNDATION DRAIN REINFORCEMENT DETAIL

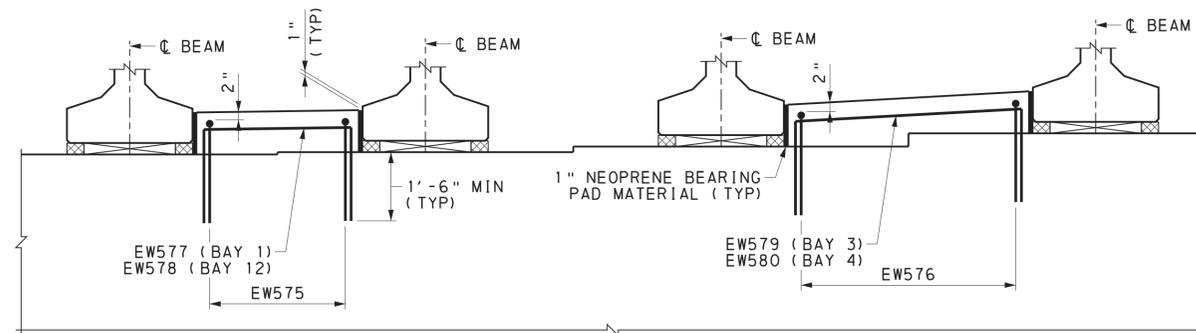
NOT TO SCALE



SHEAR BLOCK PLAN

1 0 1 2 FEET

(ABUTMENT 2 BAY 1 SHOWN, ABUTMENT 2 BAY 12 SIMILAR)
(ABUTMENT 2 BAY 3 SHOWN, ABUTMENT 2 BAY 4 SIMILAR)



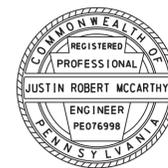
SHEAR BLOCK ELEVATION

1 0 1 2 FEET

| Mark | Description | By | Chk' d | Recm' d | Date |
|-----------|-------------|----|--------|---------|------|
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17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
MISCELLANEOUS ABUTMENT DETAILS

RECOMMENDED 1-22-2025

SHEET 33 OF 62

S-42023

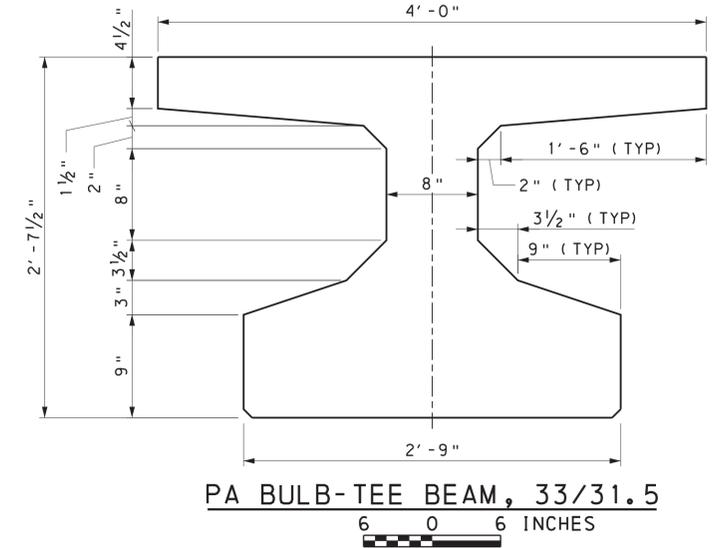
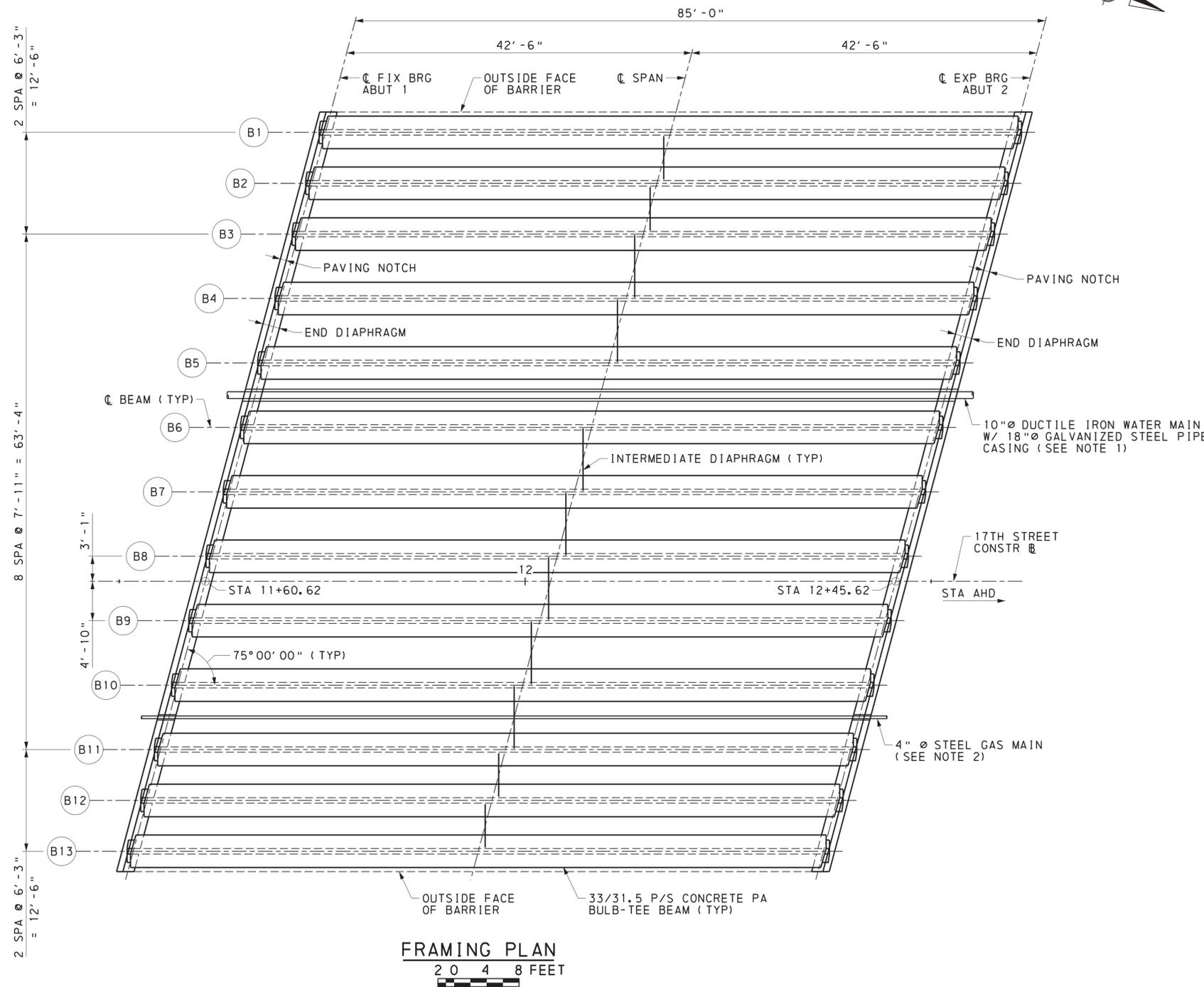
REFERENCES:

GENERAL NOTES
ABUTMENT 1 & 2 DRAWINGS

SHEETS:

3 & 4
11 - 32

1/2/2025
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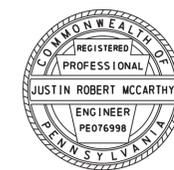
NOTES:

- COORDINATE WITH CAPITAL REGION WATER. SEE WATER UTILITY RELOCATION ALSO PLAN.
- COORDINATE WITH UGI UTILITIES, INC. AND THEIR CONTRACTOR FOR THE GAS UTILITY RELOCATION.

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|-----------|-------------|----|-------|--------|------|
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SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
FRAMING PLAN

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SHEET 34 OF 62

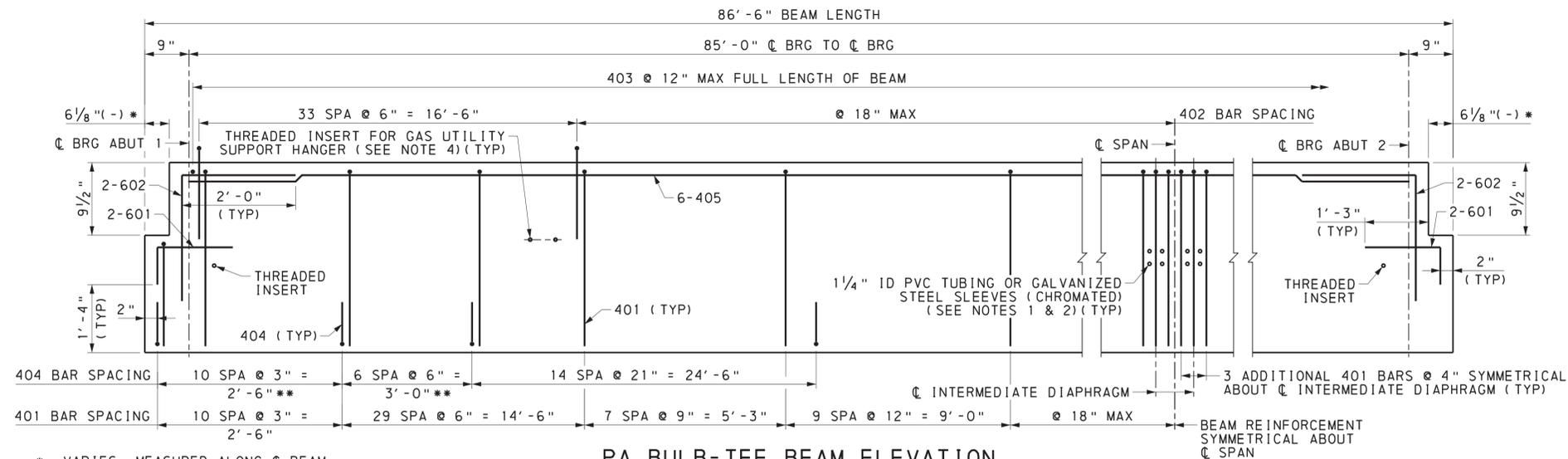
S-42023

REFERENCES:

| | |
|----------------------|---------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| BEAM DETAILS | 35, 36 |
| SLAB PLAN | 38 |
| SLAB TYPICAL SECTION | 39 |
| DIAPHRAGM DETAILS | 42 - 44 |

SHEETS:

1/2/2025 LEMANE: 63016-s-brB4-rp01.dgn



PA BULB-TEE BEAM ELEVATION

NOT TO SCALE
(REFER TO CLIPPED FLANGE REINFORCEMENT DETAIL FOR ADDITIONAL BEAM END REINFORCEMENT)

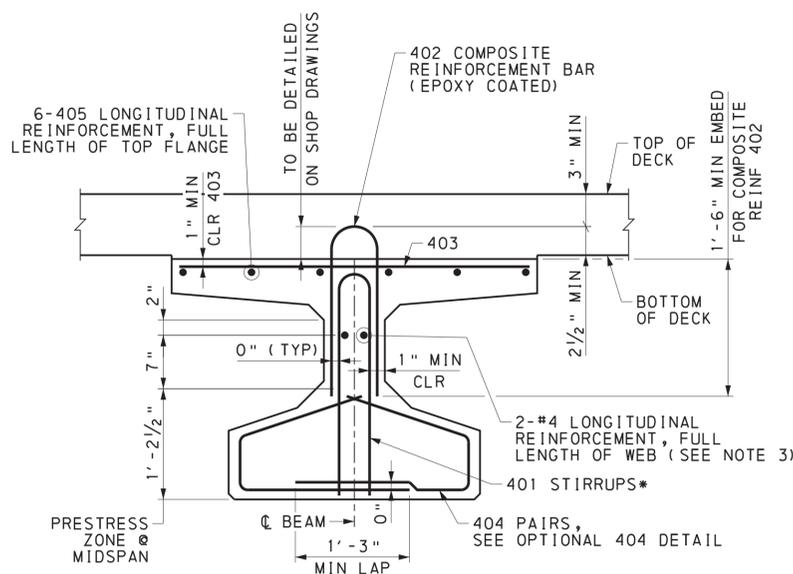
* VARIES, MEASURED ALONG CL BEAM
** MATCH BAR SPACING WITH 401

BEAM NOTES:

1. PROVIDE MATERIAL AND WORK QUALITY IN ACCORDANCE WITH THE APPROPRIATE SPECIFICATIONS AS OUTLINED IN THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PUBLICATION 408.
2. EPOXY COAT ALL REBARS FOR A DISTANCE OF 9'-0" FROM BEAM ENDS.
3. EPOXY COAT ALL REINFORCEMENT WHICH PROTRUDES INTO BRIDGE DECK FROM TOP OF BEAMS.
4. SHOW DESIGN LENGTH AND CASTING LENGTH ON SHOP DRAWINGS.
5. SHOW PLAN, ELEVATION, SECTIONS AND ALL REINFORCEMENT DETAILS ON SHOP DRAWINGS.
6. SHOW ANY MODIFICATIONS TO REINFORCEMENT SPLICE AND BENDING DETAILS ON SHOP DRAWINGS.
7. SHOW THE FOLLOWING DATA ON THE SHOP DRAWINGS:
 - 1) THE SIZE AND LOCATION OF THE TEMPORARY STORAGE SUPPORTS.
 - 2) THE TYPE AND LOCATION OF THE BRACING AND TEMPORARY SUPPORTS USED FOR THE TRANSPORTATION AND ERECTION OF THE BEAMS.
8. END ZONE REINFORCEMENT MAY BE INCREASED BY FABRICATOR TO REFLECT FABRICATOR'S EXPERIENCE AND/OR TO CONTROL CRACKING.
9. FABRICATOR TO CHECK STABILITY FOR HANDLING AND TRANSPORTING OF THE MEMBERS.
10. MIN COVER: STIRRUPS - 1" MIN
ALL OTHERS - 1 1/2" MIN

| SECTION PROPERTY | BASIC BEAM | COMPOSITE BEAM, TRANSFORMED PROPERTIES* | | | |
|------------------------------|------------|---|--------------|--------------|--------------|
| | | BEAMS 1 & 13 | BEAMS 2 & 12 | BEAMS 3 & 11 | BEAMS 4 - 10 |
| AREA - IN ² | 754.25 | - | - | - | - |
| EFF. WIDTH - IN | - | 67.50 | 75.00 | 85.00 | 95.00 |
| I - IN ⁴ | 89,649 | 184,122 | 191,230 | 200,089 | 208,324 |
| Y TOP SLAB - IN | - | 18.32 | 17.89 | 17.35 | 16.85 |
| Y TOP BEAM - IN | 15.76 | 10.82 | 10.39 | 9.85 | 9.35 |
| Y BOT BEAM - IN | 15.74 | 20.68 | 21.11 | 21.65 | 22.15 |
| S TOP SLAB - IN ³ | - | 10,051 | 10,691 | 11,533 | 12,362 |
| S TOP BEAM - IN ³ | 5,688 | 17,020 | 18,412 | 20,315 | 22,277 |
| S BOT BEAM - IN ³ | 5,696 | 8,902 | 9,057 | 9,242 | 9,406 |

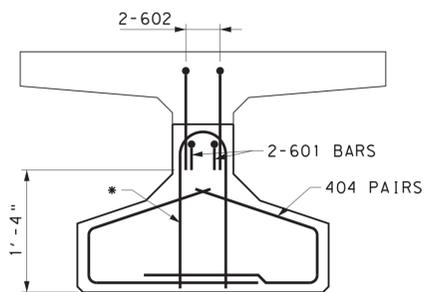
* PROPERTIES DO NOT INCLUDE THE HAUNCH HEIGHT. PROPERTIES TAKEN AT CL SPAN.



PA BULB-TEE TYPICAL SECTION

6 0 6 12 INCHES

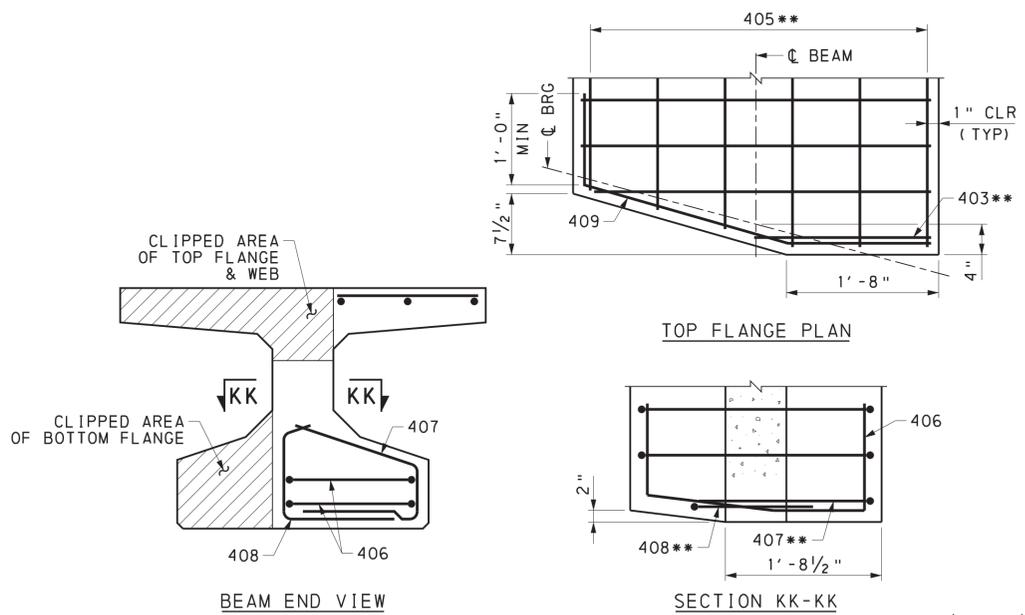
* 401 MAY BE UTILIZED BY FABRICATOR TO REPLACE 402 COMPOSITE REINFORCEMENT. ALL 401 REINFORCEMENT BARS PROJECTING INTO THE DECK SLAB MUST BE EPOXY COATED FOR ENTIRE LENGTH.



PA BULB-TEE NOTCH REINF END VIEW

6 0 6 12 INCHES

* MODIFY 401 BAR, AS REQUIRED, TO ACCOMMODATE BEAM NOTCH



CLIPPED FLANGE REINFORCEMENT DETAIL

NOT TO SCALE

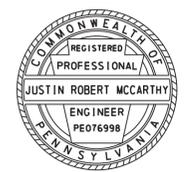
** MODIFY REINFORCEMENT BARS AS REQUIRED TO ACCOMMODATE CLIPPED FLANGE

NOTES:

1. OMIT INTERMEDIATE DIAPHRAGM TUBING/SLEEVES IN BAY 5 AND ALONG BEAMS 1 & 13 FASCIA WEB.
2. SEE DETAILS ON SHEET 43 FOR LOCATIONS OF INTERMEDIATE DIAPHRAGM TUBING/SLEEVES.
3. ADJUST LOCATIONS AS NECESSARY TO PROVIDE REQUIRED CLEARANCE TO THE INTERMEDIATE DIAPHRAGM AND GAS UTILITY SUPPORT GALVANIZED WEB BOLTS.
4. FOR LOCATIONS, SEE GAS UTILITY SUPPORT HANGER DETAILS ON SHEET 41 FOR BEAMS 10 AND 11 WITHIN BAY 10 ONLY.

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

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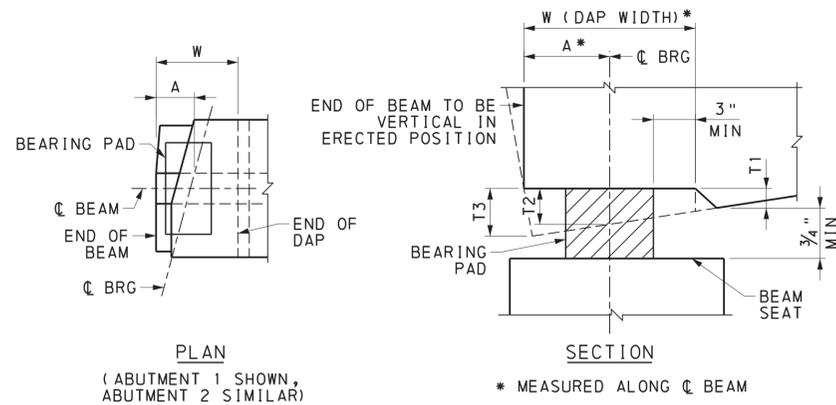
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
BEAM DETAILS 1

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SHEET 35 OF 62

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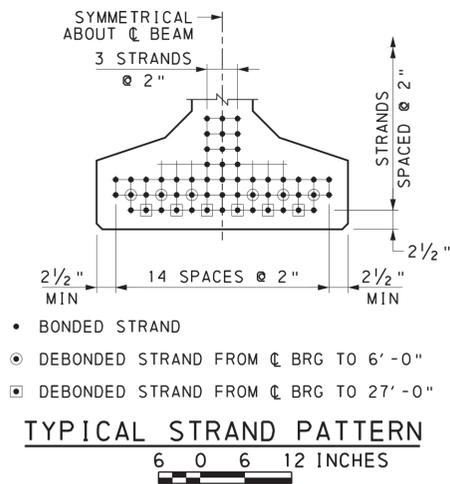


BEAM DAP DETAILS
NOT TO SCALE

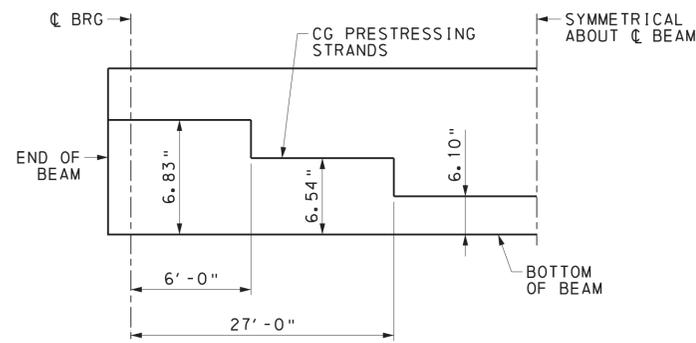
| DAP DIMENSIONS | | | |
|--------------------|-----------|------------|-------|
| LOCATION/DIMENSION | BEAMS 1-7 | BEAMS 8-13 | |
| ABUT 1 | W | 16" | 16" |
| | A | 9" | 9" |
| | T1 | 1/4" | 1/4" |
| | T2 | 5/16" | 3/8" |
| ABUT 2 | T3 | 3/8" | 1/2" |
| | W | 16" | 16" |
| | A | 9" | 9" |
| | T1 | 1/4" | 1/4" |
| | T2 | 3/8" | 5/16" |
| | T3 | 1/2" | 3/8" |

BEAM DAP NOTES:

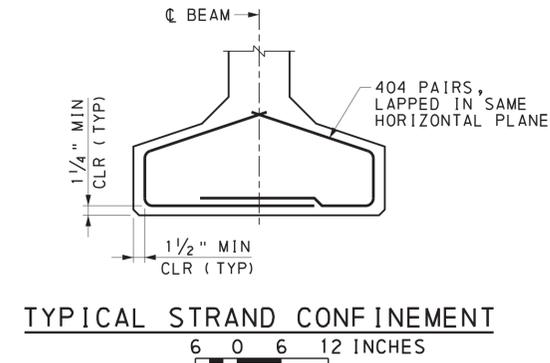
- T1 IS DAP THICKNESS AT END OF BEAM FOR HIGHER END OF BEAM AND DAP THICKNESS AT BEGINNING OF DAP FOR LOWER END OF BEAM. T1 MINIMUM IS 1/4".
- T2 IS DAP THICKNESS AT CENTERLINE OF BEARING.
- T3 IS DEFINED AS THE DAP THICKNESS BASED ON THE SLOPE OF THE BEAM DUE TO THE GRADE AND CAMBER.
- BEAM SEAT AND BOTTOM OF BEAM BEARING AREA REQUIREMENTS AS PER DESIGN MANUAL PART 4, SECTION 14.7.6.3.9dP.
- MAXIMUM GRADE FOR USE OF DAPPING IS BASED ON LIMITING THE MAXIMUM DAP THICKNESS TO 1 1/2" AND MAINTAINING 1" MINIMUM CONCRETE COVER ON CONFINEMENT REINFORCEMENT IN THE PROPOSED BEAM DAPPING AREA.
- FOR BEAM DAPPING, A MINIMUM CLEARANCE OF 3/4" MUST BE PROVIDED BETWEEN THE BOTTOM OF THE BEAM (WITHOUT CONSIDERATION OF THE DAP) AND THE TOP OF BEAM SEAT TO ENSURE INSPECTABILITY OF BEARING PAD.
- PARTIAL-WIDTH BEAM DAPS ARE NOT PERMITTED.
- THE MAXIMUM DAP THICKNESS IS 1 1/2".
- ENSURE THAT ALL CONCRETE COVER REQUIREMENTS ON STEEL CONFINEMENT REINFORCEMENT AND PRESTRESSING STRANDS ARE SATISFIED WHEN USING BEAM DAPS TO MODIFY THE BOTTOM OF BEAM AREA.



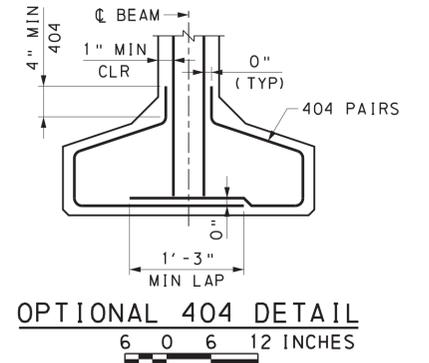
TYPICAL STRAND PATTERN
6 0 6 12 INCHES



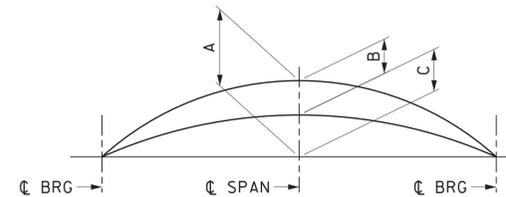
DEBONDING DIAGRAM
NOT TO SCALE



TYPICAL STRAND CONFINEMENT
6 0 6 12 INCHES



OPTIONAL 404 DETAIL
6 0 6 12 INCHES



BEAM CAMBER DIAGRAM

- A = ESTIMATED PRESTRESS CAMBER LESS DEFLECTION DUE TO DEAD LOAD OF BEAM TIMES CREEP FACTOR. (CHECK IN FIELD)
 - B = DEFLECTION DUE TO ALL DEAD LOAD EXCEPT BEAM WEIGHT AND FUTURE WEARING SURFACE.
 - C = A-B = NET FINAL CAMBER.
- VARY THE THICKNESS OF THE CONCRETE HAUNCH TO COMPENSATE FOR ANY DEVIATIONS OF THE ACTUAL CAMBER FROM THE DESIGN CAMBER.
 - NEGATIVE HAUNCHES ARE NOT ALLOWED.
 - A, B AND C ARE THEORETICAL VALUES AND MAY VARY WITH ACTUAL CONCRETE STRENGTH (AGE), VARIOUS PRESTRESSING CONDITIONS, CREEP FACTOR AND PRESTRESS LOSSES.
 - A CREEP FACTOR EQUAL TO 1.6 AND P/S LOSS EQUAL TO 10% WAS USED.

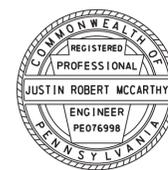
| CAMBER TABLE (INCHES) | | | |
|-----------------------|------|------|------|
| SPAN/BEAM | A | B | C |
| BEAMS 1 & 13 | 5.48 | 2.67 | 2.81 |
| BEAMS 2 & 12 | 5.48 | 2.96 | 2.52 |
| BEAMS 3 & 11 | 5.48 | 2.19 | 3.29 |
| BEAMS 4 - 10 | 5.48 | 2.43 | 3.05 |

PRESTRESSING DATA:

- PRESTRESSED BEAM SIZE = 33/31.5 PA BULB-TEE.
- CONCRETE STRENGTH AT STRAND RELEASE = 8500 PSI.
- CONCRETE STRENGTH AT 28 DAYS (F'C) = 10000 PSI.
- USE ONLY 0.6" DIA OVERSIZED GRADE 270, LOW RELAXATION STRANDS FOR AS-DESIGNED BEAMS.
- TOTAL NUMBER OF STRANDS = 55
- JACKING PRESTRESS STRESS = 202500 PSI.
- JACKING PRESTRESS FORCE PER BEAM = 2416.8 KIPS

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
BEAM DETAILS 2

RECOMMENDED 1-22-2025

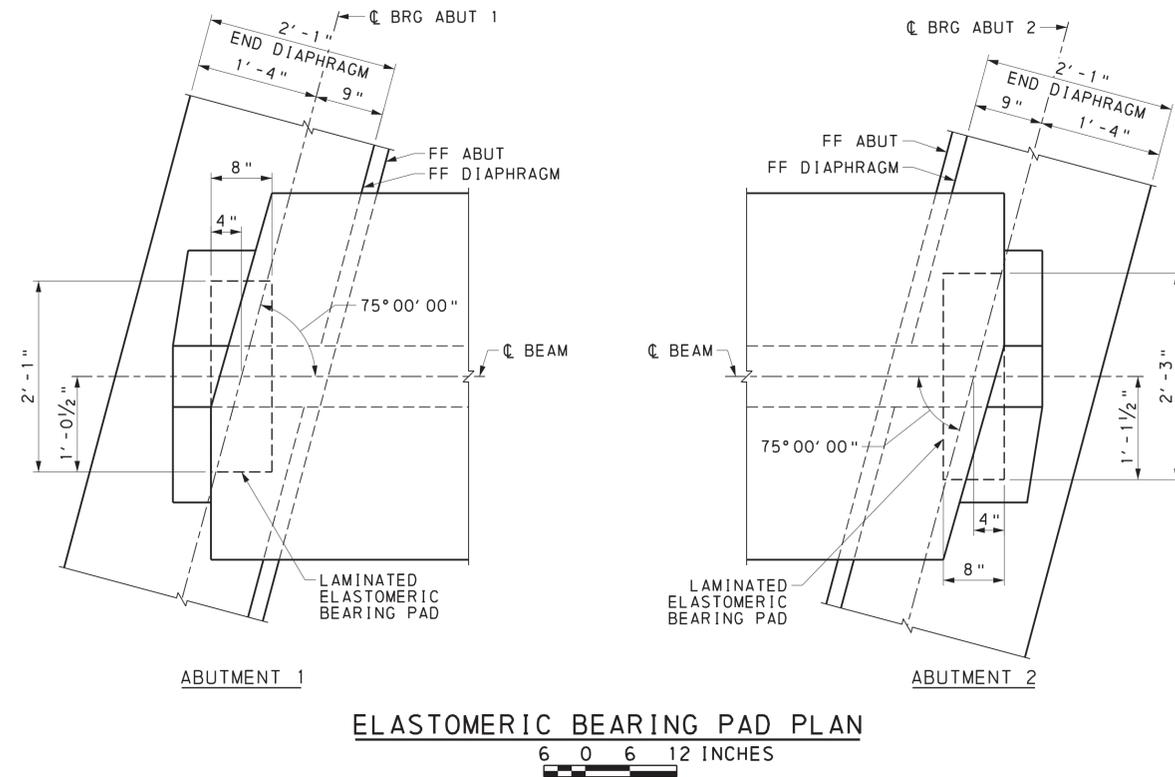
SHEET 36 OF 62

S-42023

REFERENCES:

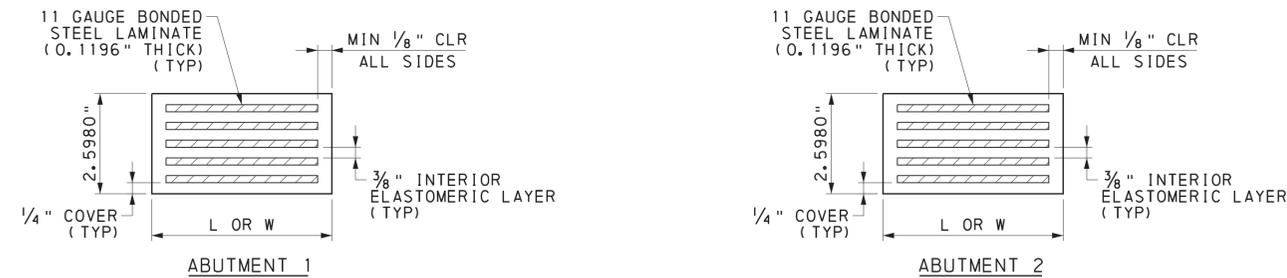
| | |
|----------------------|---------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| FRAMING PLAN | 34 |
| BEAM DETAILS 1 | 35 |
| SLAB PLAN | 38 |
| SLAB TYPICAL SECTION | 39 |
| DIAPHRAGM DETAILS | 42 - 44 |

SHEETS:



ELASTOMERIC BEARING PAD PLAN

6 0 6 12 INCHES



ELASTOMERIC BEARING PAD TYPICAL SECTION

NOT TO SCALE

| ELASTOMERIC BEARING PADS | | | | |
|--------------------------|--------------|------------------|----------------------|-----------------|
| LOCATION | BEARING TYPE | ITEM DESCRIPTION | SIZE (T x L x W) | NUMBER REQUIRED |
| ABUT 1 | FIXED | LAMINATED PADS | 2,5980" x 8" x 2'-1" | 13 |
| ABUT 2 | EXPANSION | LAMINATED PADS | 2,5980" x 8" x 2'-3" | 13 |

NOTES:

- SMOOTH CUT AND DEBURR METAL SHIMS.
- GRIT BLAST AND DEGREASE METAL SHIMS.
- MANUFACTURE ALL BEARINGS IN ACCORDANCE WITH THE COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF TRANSPORTATION PLANS AND SPECIFICATIONS (PUB. 408) SECTION 1113.
- ALL BEARING PADS ARE TO BE MOLDED TO DESIGN DIMENSIONS. CUTTING TO SIZE AFTER FABRICATION IS PROHIBITED.
- PROVIDE NEOPRENE 50 +/-5 DUROMETER.
- PROVIDE MINIMUM LOW-TEMPERATURE NEOPRENE GRADE 3.
- PROVIDE INTERNAL SHIMS AS PER ASTM A36 GRADE 36.
- VULCANIZE PATCH PIN GROOVES.
- FABRICATOR MAY USE CONTRACT DRAWINGS TO FABRICATE BEARING PADS.
- FOR ADDITIONAL BEARING PAD DETAILS AND STANDARD BEARING DETAILS AND NOTES, SEE BC-755M.
- PAYMENT FOR BEARING PADS IS CONSIDERED INCIDENTAL TO THE PRESTRESSED CONCRETE PA BULB-TEE BEAMS.

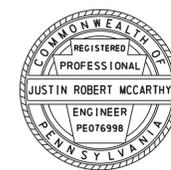
DESIGN CRITERIA:

- CONSTRUCTION TOLERANCE ABOUT TRANSVERSE AXIS OF PAD = 0.003 RADIAN
- CONSTRUCTION TOLERANCE ABOUT LONGITUDINAL AXIS OF PAD = 0.000 RADIAN

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
BEARING DETAILS

PREPARED BY:
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4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

RECOMMENDED 1-22-2025

SHEET 37 OF 62

S-42023

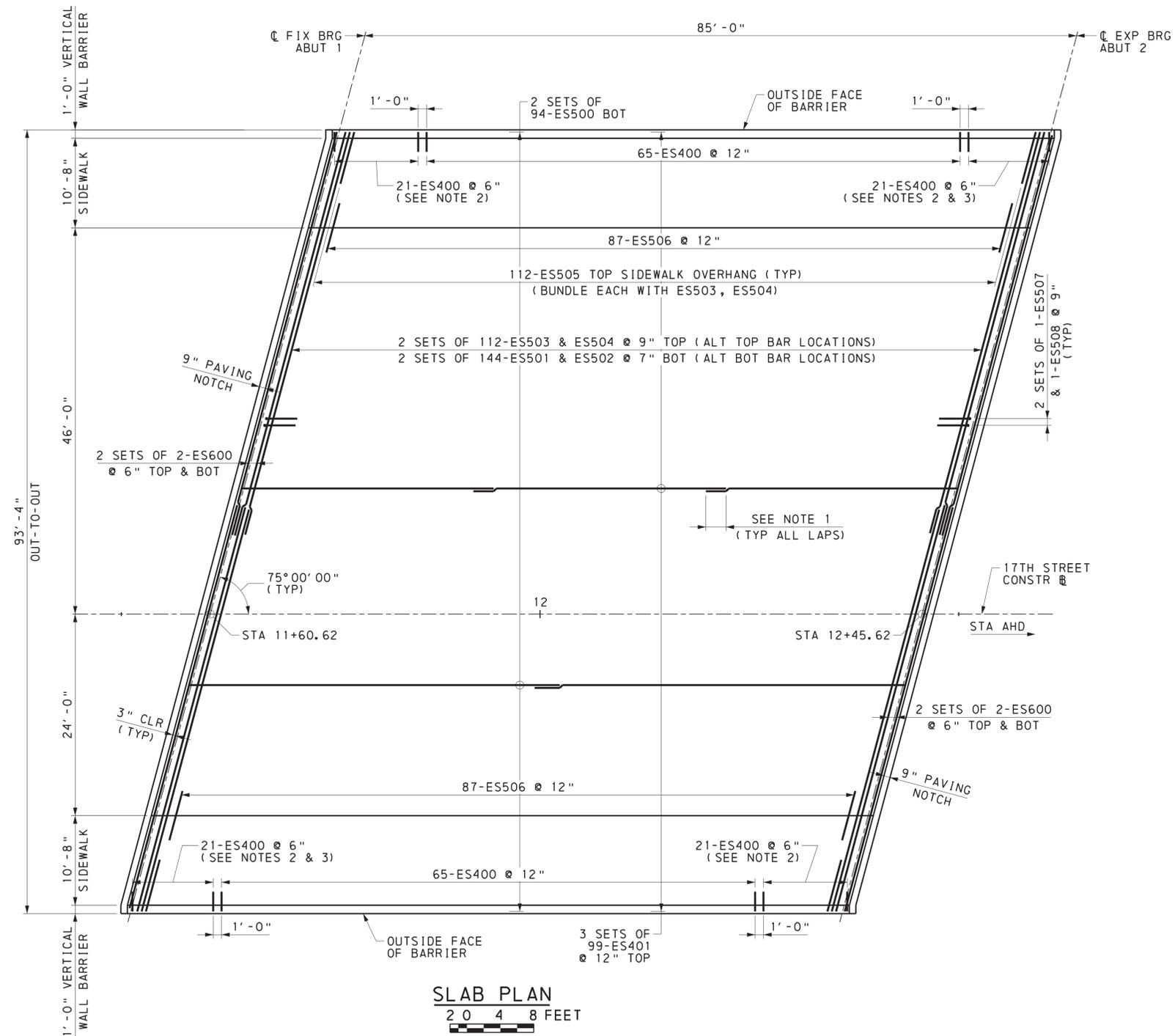
REFERENCES:

- GENERAL NOTES
- FRAMING PLAN
- BEAM DETAILS
- DIAPHRAGM DETAILS

SHEETS:

- 3 - 4
- 34
- 35, 36
- 42 - 44

1/2/2025 LERAME: s3016-s-brB4-brg01.dgn



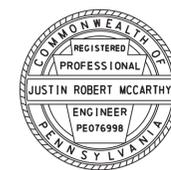
NOTES:

- DECK SLAB LAP SPLICE LENGTH:
 #4 BARS - 2'-5"
 #5 BARS - 3'-0"
 #6 BARS - 3'-7"
- PROVIDE ONE ADDITIONAL ES400 BAR ON EACH SIDE OF BARRIER LIGHTING BLOCKOUT. ADJUST REINFORCEMENT AS REQUIRED TO ACCOMMODATE PLACEMENT OF JUNCTION BOXES AND LIGHTING BLOCKOUTS.
- SPLAY THE LAST FOUR ES400 BARS ADJACENT TO END OF BRIDGE DECK AS REQUIRED TO ACCOMMODATE PLACEMENT.

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

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COMMONWEALTH OF PENNSYLVANIA
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DAUPHIN COUNTY
 SR 0083 SECTION B79

17TH STREET STA 12+03.12
 OVER NORFOLK SOUTHERN RAILWAY COMPANY
 1-SPAN COMPOSITE PS CONCRETE
 PA BULB-TEE BEAM BRIDGE
 SLAB PLAN

RECOMMENDED 1-22-2025

SHEET 38 OF 62

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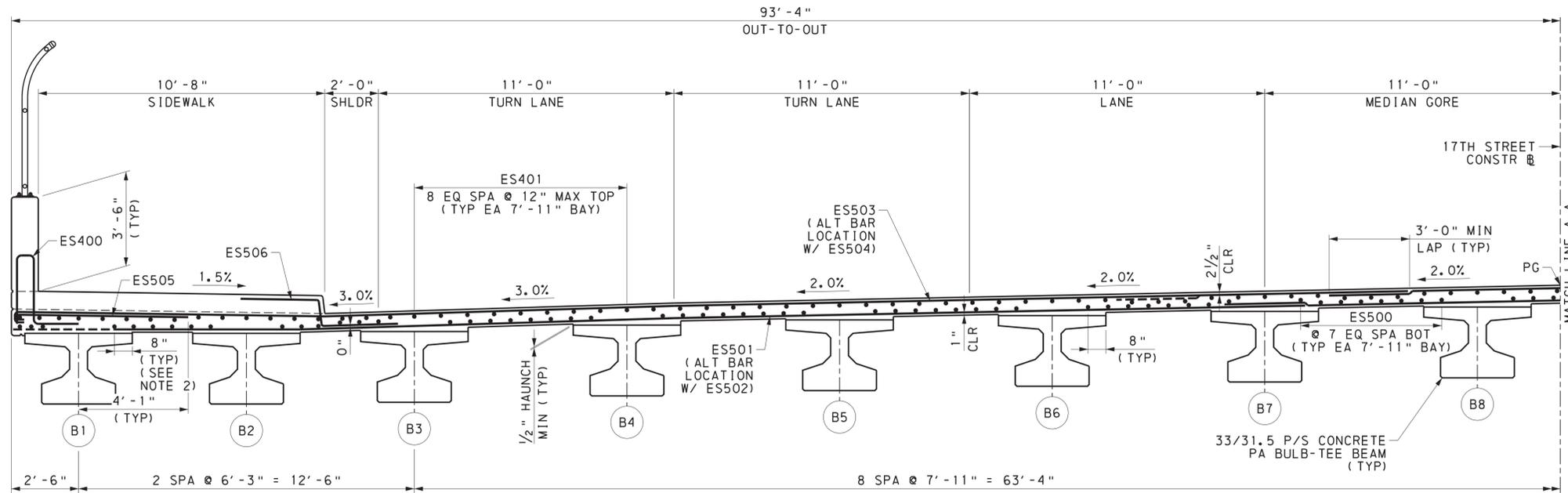
REFERENCES:

| | |
|-------------------------------|---------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| SLAB TYPICAL SECTION | 39 |
| BARRIER & SIDEWALK DETAILS | 40 |
| DIAPHRAGM DETAILS | 42 - 44 |
| SUPERSTRUCTURE REBAR SCHEDULE | 45 |

SHEETS:

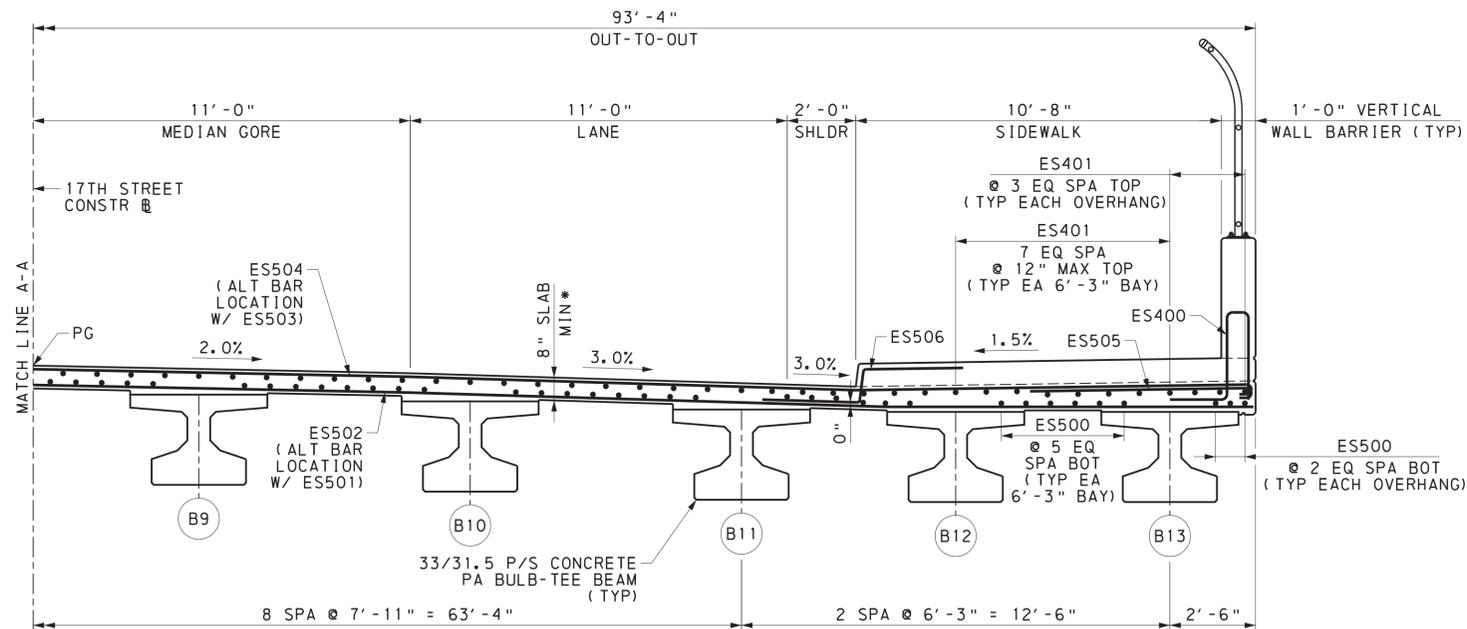
SLAB PLAN
 2 0 4 8 FEET

1/2/2025 LEMME: 63016-35-brB4-s1b01.dgn



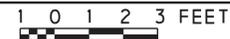
| TOTAL DECK SLAB THICKNESS TABLE | | |
|---------------------------------|---------------|---------------|
| BEAM | CL BRG ABUT 1 | CL BRG ABUT 2 |
| BEAM 1 | 8 1/2" | 8 1/2" |
| BEAM 2 | 8 1/2" | 8 1/2" |
| BEAM 3 | 9 1/4" | 9 1/4" |
| BEAM 4 | 9 1/4" | 9 1/4" |
| BEAM 5 | 9" | 9" |
| BEAM 6 | 9" | 9" |
| BEAM 7 | 9" | 9" |
| BEAM 8 | 9" | 9" |
| BEAM 9 | 9" | 9" |
| BEAM 10 | 9 1/4" | 9 1/4" |
| BEAM 11 | 9 1/4" | 9 1/4" |
| BEAM 12 | 8 1/2" | 8 1/2" |
| BEAM 13 | 8 1/2" | 8 1/2" |

MEASURED AT CL BEAM. VALUES INCLUDE DECK THICKNESS, HAUNCH THICKNESS, AND EFFECT OF DECK CROSS SLOPE.



SLAB TYPICAL SECTION

* INCLUDES 1/2" INTEGRAL WEARING SURFACE



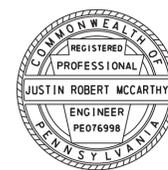
NOTES:

- BARRIER AND SIDEWALK REINFORCEMENT NOT SHOWN FOR CLARITY.
- EXTEND ONE HALF OF ES501 AND ES502 BARS ACROSS THE FULL WIDTH OF THE OVERHANG. THE ALTERNATE BARS WHICH DO NOT EXTEND INTO THE OVERHANG SHALL EXTEND 8" MINIMUM BEYOND THE INTERIOR EDGE OF THE FLANGE OF THE FASCIA BEAM.
- UTILITIES NOT SHOWN FOR CLARITY.
- BEAM HAUNCH REINFORCEMENT WAS NOT DETERMINED TO BE REQUIRED FOR THE COMPUTED BEAM CAMBERS. HOWEVER, PROVIDE HAUNCH REINFORCEMENT IN ACCORDANCE WITH BC-752M WHERE IRREGULAR BEAM CAMBERS OR OTHER CONSTRUCTION CONDITIONS PROVIDE ACTUAL HAUNCHES THAT EXCEED THE THICKNESSES SPECIFIED IN BC-752M.

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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4507 NORTH FRONT STREET
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HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
SLAB TYPICAL SECTION

RECOMMENDED 1-22-2025

SHEET 39 OF 62

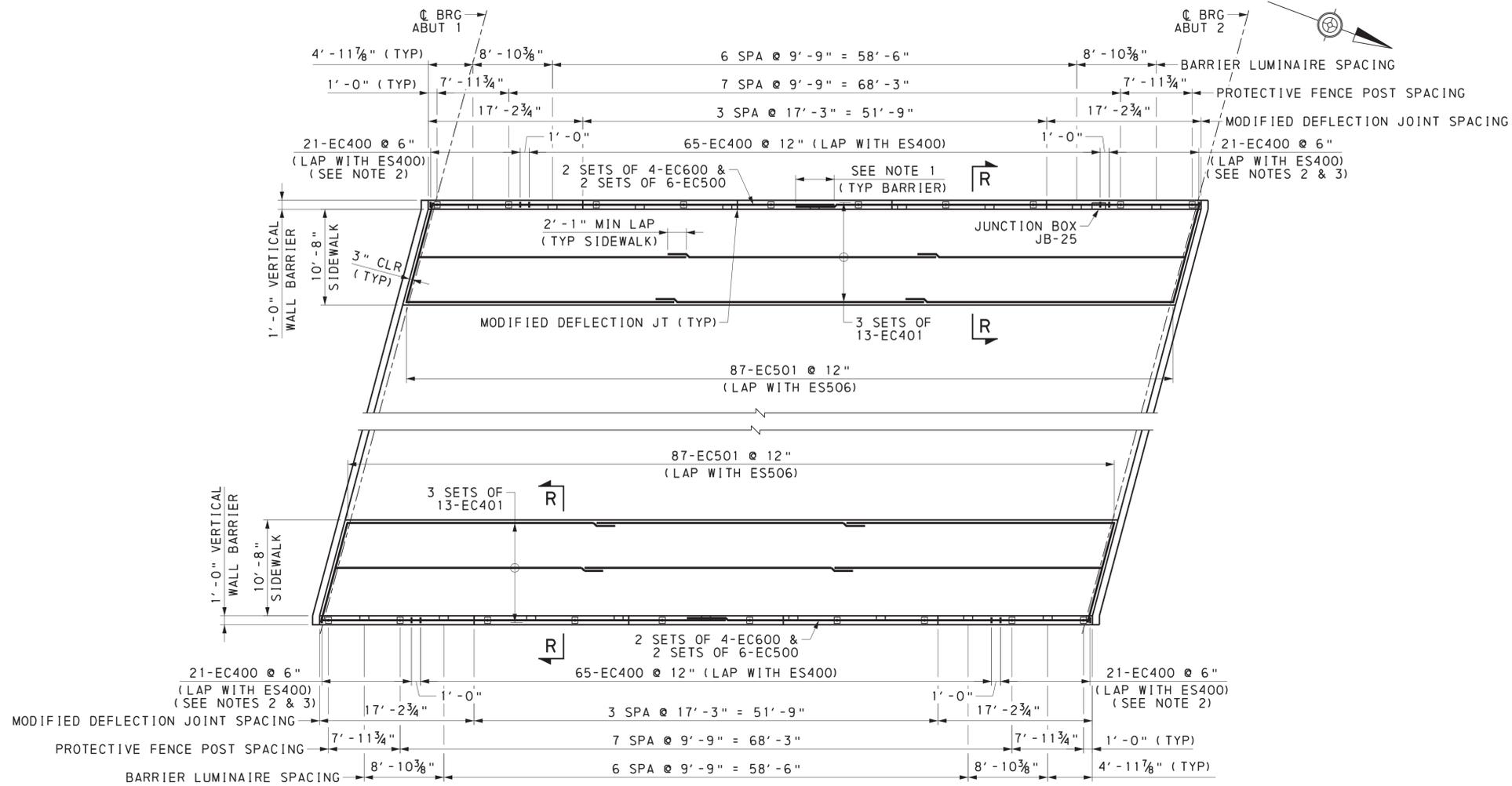
S-42023

REFERENCES:

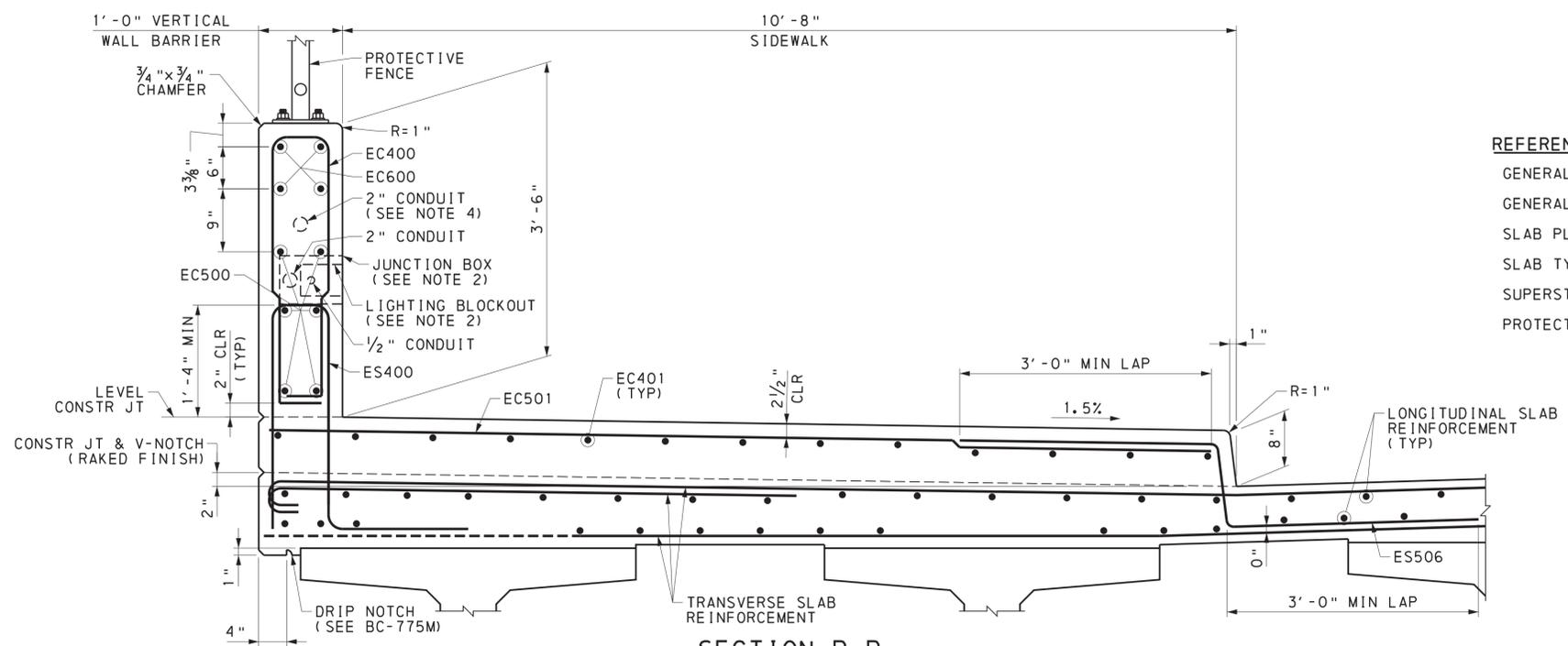
| | |
|-------------------------------|--------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| BEAM DETAILS | 35, 36 |
| SLAB PLAN | 38 |
| BARRIER & SIDEWALK DETAILS | 40 |
| SUPERSTRUCTURE REBAR SCHEDULE | 45 |

SHEETS:

| |
|--------|
| 1 |
| 3 - 4 |
| 35, 36 |
| 38 |
| 40 |
| 45 |



PLAN
2 0 4 8 FEET



SECTION R-R
6 0 6 12 INCHES

NOTES:

- BARRIER LAP SPLICE LENGTH:
#5 BARS - 3'-7"
#6 BARS - 4'-4"
- PROVIDE ONE ADDITIONAL EC400 BAR ON EACH SIDE OF BARRIER LIGHTING BLOCKOUT (LAP WITH ES400). ADJUST REINFORCEMENT AS REQUIRED TO ACCOMMODATE PLACEMENT OF JUNCTION BOXES AND LIGHTING BLOCKOUTS. COORDINATE WITH HIGHWAY LIGHTING ALSO PLAN FOR PLACEMENT OF JUNCTION BOXES AND BARRIER LUMINAIRES.
- SPLAY THE LAST FOUR EC400 BARS ADJACENT TO END OF BRIDGE DECK AS REQUIRED TO ACCOMMODATE PLACEMENT.
- PROVIDE SPECIFIED 2" CONDUIT ALONG WEST BARRIER ONLY. (RESERVED FOR FUTURE USE BY CITY OF HARRISBURG)
- PROVIDE 9" MINIMUM DISTANCE BETWEEN CENTERLINE OF PROTECTIVE FENCE POST AND ADJACENT DEFLECTION JOINTS.

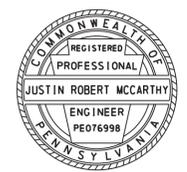
REFERENCES:

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|-------------------------------|-------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| SLAB PLAN | 38 |
| SLAB TYPICAL SECTION | 39 |
| SUPERSTRUCTURE REBAR SCHEDULE | 45 |
| PROTECTIVE FENCE DETAILS | 55 |

SHEETS:

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

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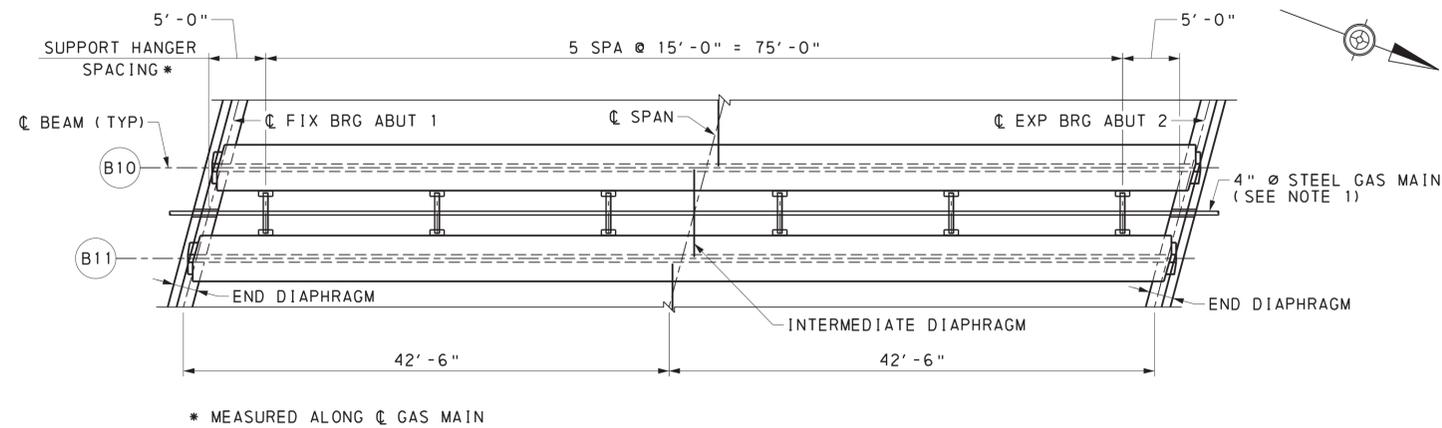
PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
BARRIER & SIDEWALK DETAILS

RECOMMENDED 1-22-2025 SHEET 40 OF 62

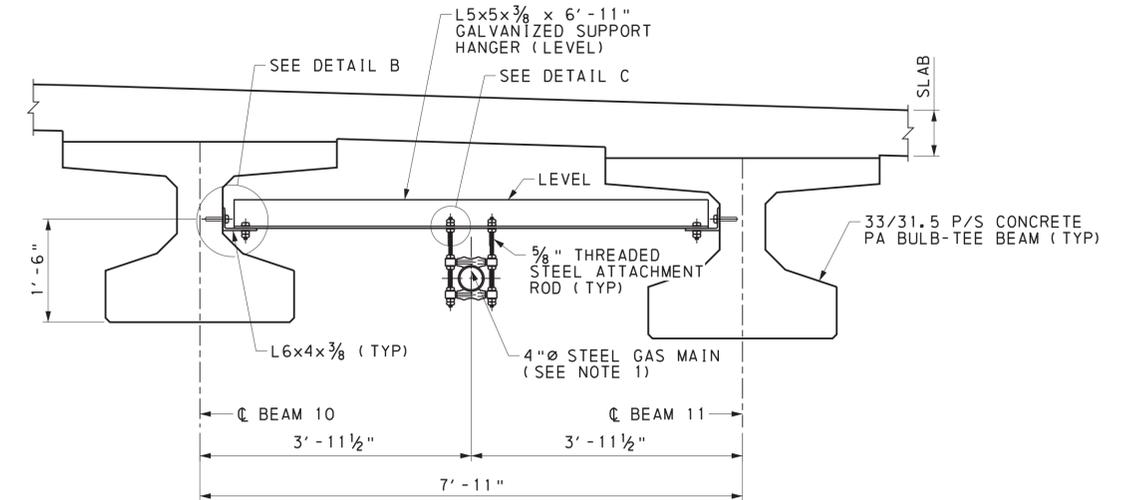
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1/2/2025 LEMME-63016-s-brB4-s-b02.dgn



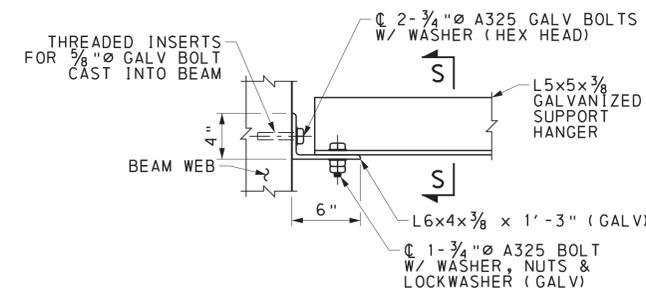
GAS SUPPORT HANGER PLAN

2 0 4 8 FEET



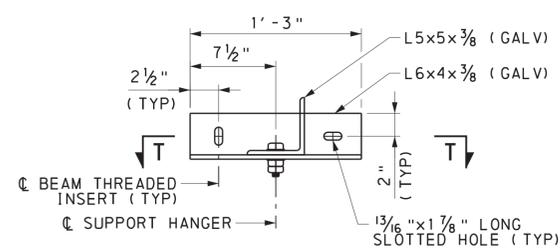
BAY 10 GAS MAIN SUPPORT HANGER

12 0 12 INCHES



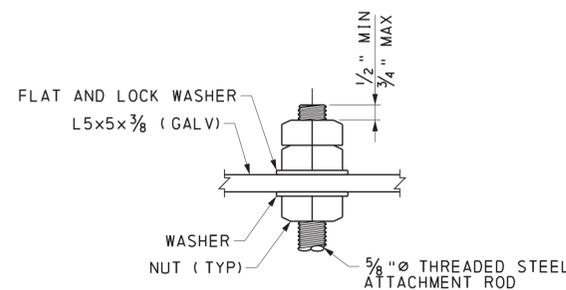
DETAIL B

6 0 6 INCHES



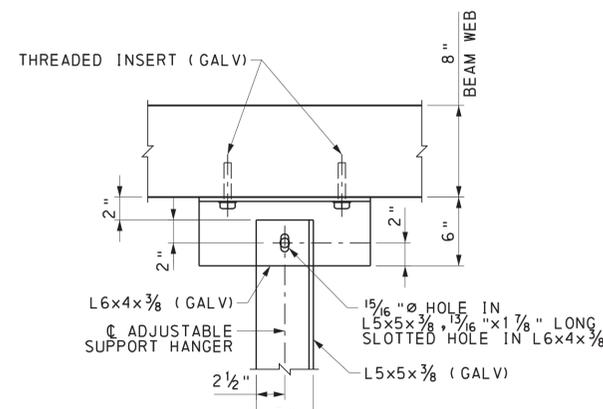
SECTION S-S

6 0 6 INCHES



DETAIL C

NOT TO SCALE



SECTION T-T

6 0 6 INCHES

ITEM 9000-0555 INSTALLATION OF UGI UTILITIES, INC. GAS FACILITIES ON BRIDGE

| MATERIALS | FURNISH BY | INSTALL BY | UNIT | AMOUNT |
|--|------------|------------|------|--------|
| GLAS MESH NON-CONDUCTIVE PIPE ROLLER | UTILITY | UTILITY | EA | 12 |
| LILLY PAD | UTILITY | UTILITY | EA | 12 |
| 5/8" THREADED ROD W/ HEX NUT & WASHERS | UTILITY | UTILITY | EA | 12 |
| 8" SCHEDULE 40 POWERCRETE STEEL SLEEVE | UTILITY | CONTRACTOR | EA | 2 |
| WATERPROOFING MODULAR SEAL | UTILITY | UTILITY | EA | 2 |
| 4" POWERCRETE STEEL CARRIER PIPE | UTILITY | UTILITY | LF | 85 |
| L5" X 5" X 3/8" X 6'-11" | CONTRACTOR | CONTRACTOR | EA | 6 |
| L6" X 4" X 3/8" X 1'-3" | CONTRACTOR | CONTRACTOR | EA | 12 |
| 4" STEEL - PE TRANSITION FITTING | UTILITY | UTILITY | EA | 2 |
| 4" PE3408 CARRIER PIPE | UTILITY | UTILITY | LF | 58 |
| 3/4" A325 GALV BOLTS W/WASHER (HEX HEAD) | CONTRACTOR | CONTRACTOR | EA | 24 |
| 3/4" A325 GALV BOLTS W/WASHER, NUTS & LOCKWASHER | CONTRACTOR | CONTRACTOR | EA | 12 |

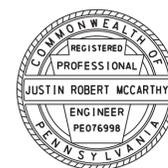
NOTE:

- COORDINATE WITH UGI UTILITIES, INC. AND THEIR CONTRACTOR FOR THE GAS UTILITY RELOCATION.

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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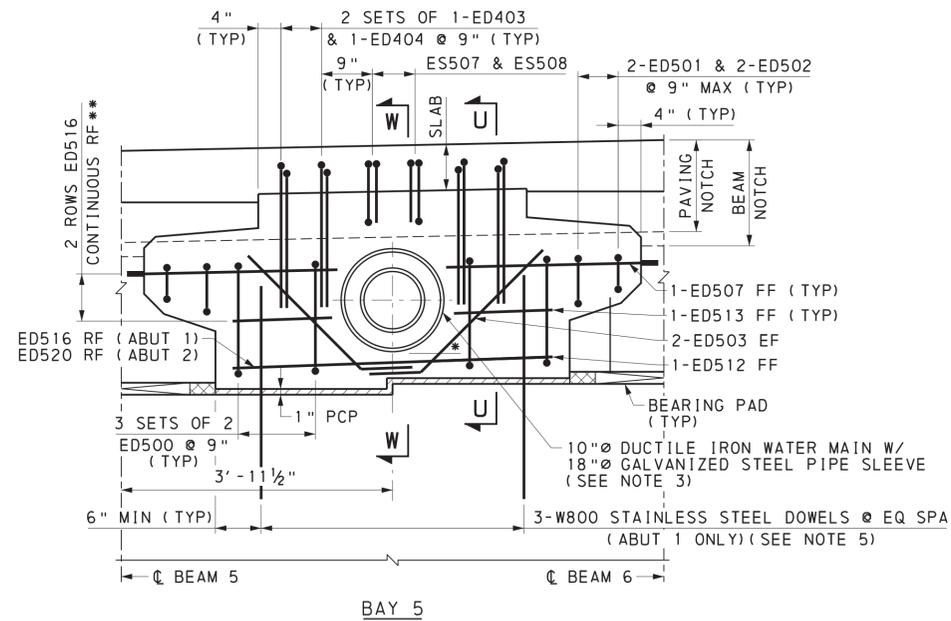
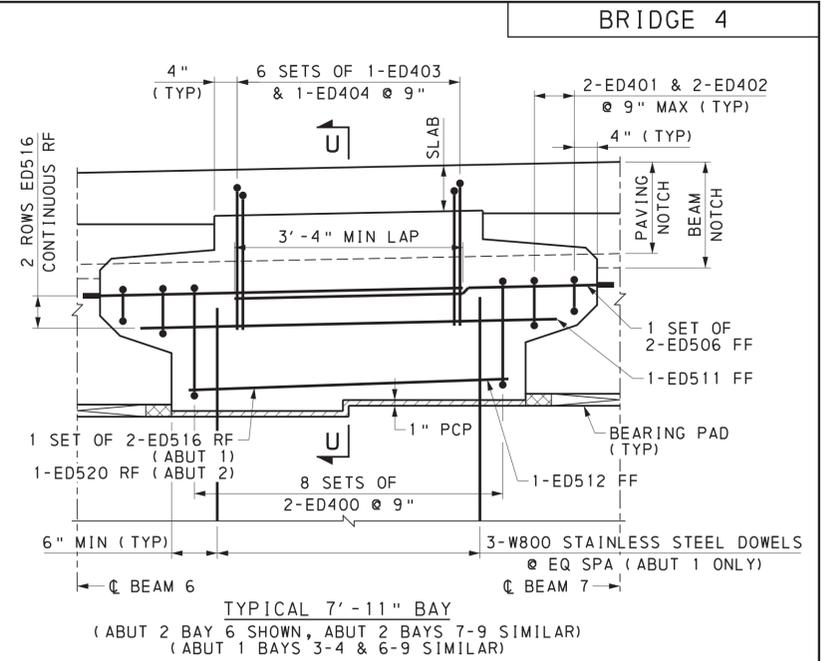
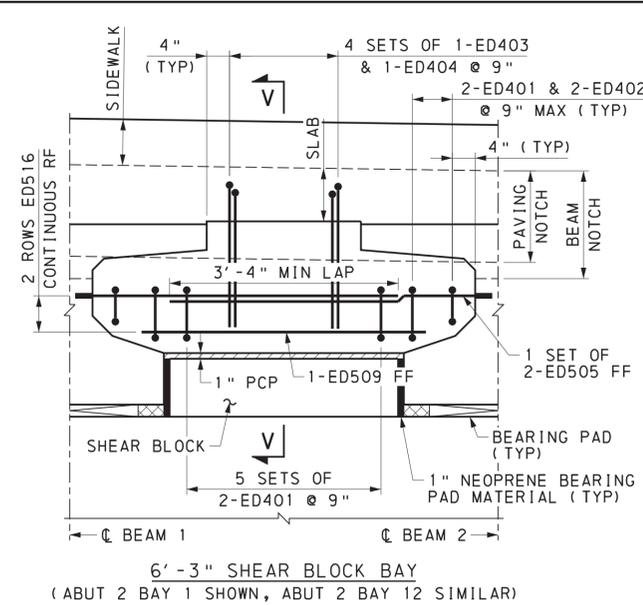
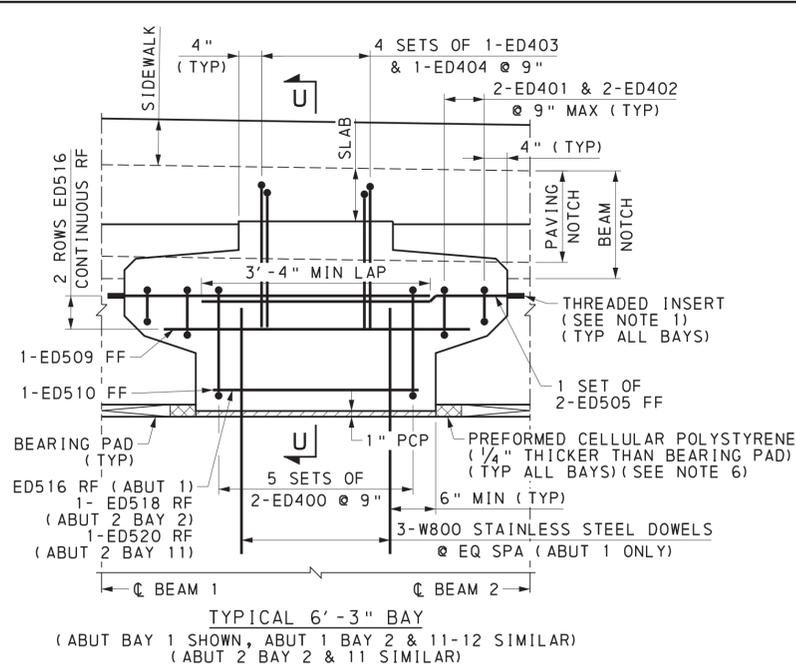
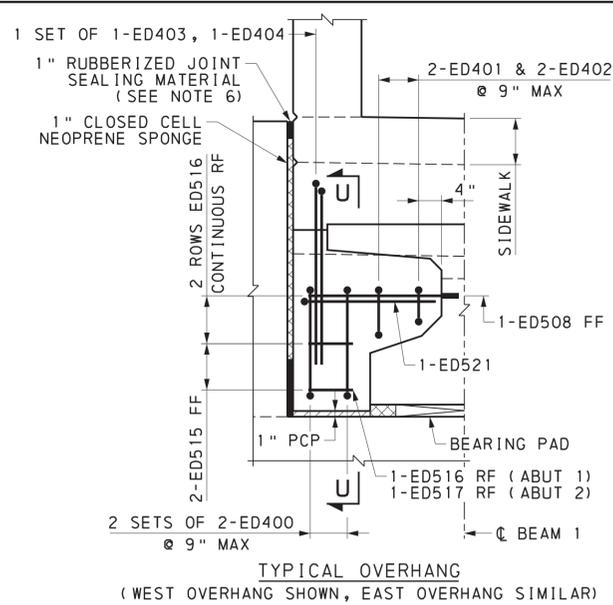
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
GAS UTILITY SUPPORT HANGER DETAILS

RECOMMENDED 1-22-2025

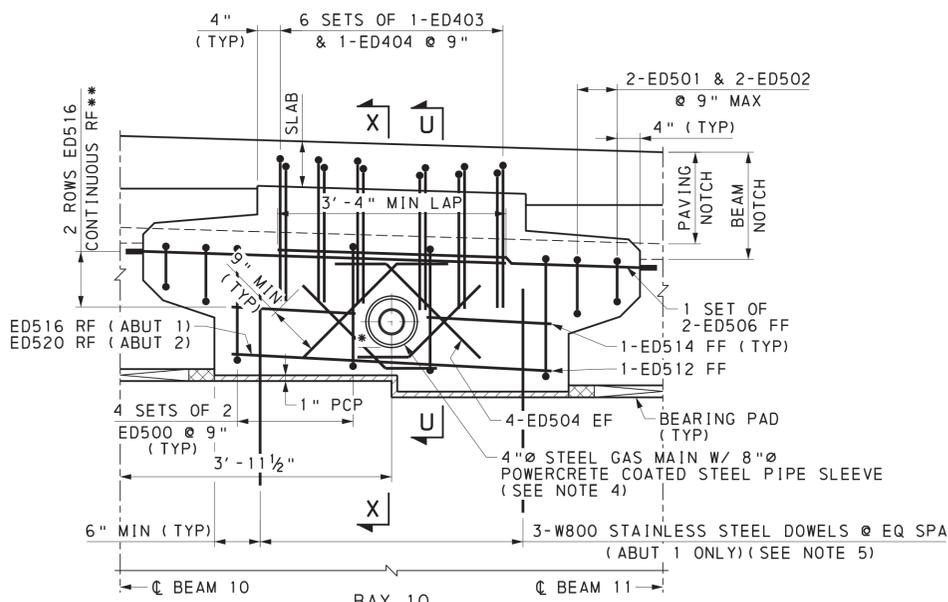
SHEET 41 OF 62

S-42023



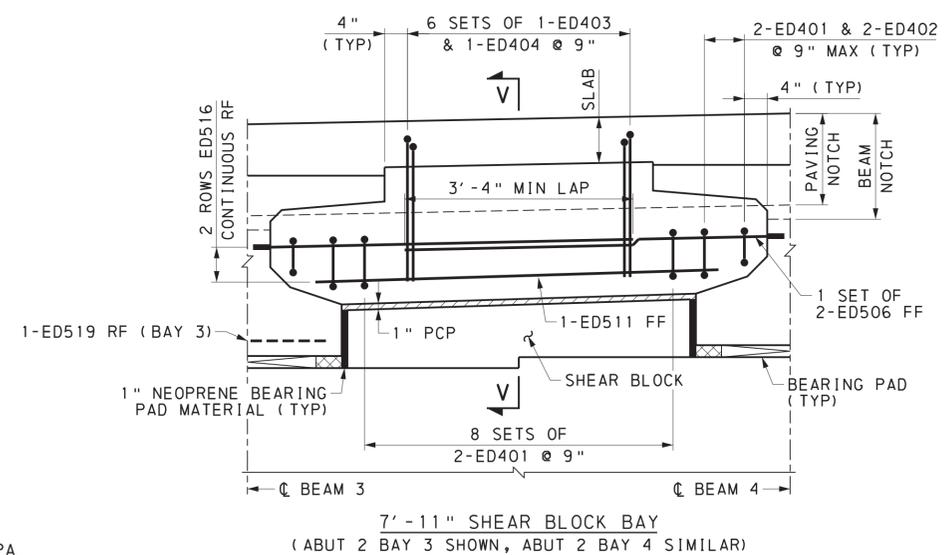
* SLEEVE INVERT ELEV: 375.98 (ABUT 1)
375.76 (ABUT 2)

** CUT IN FIELD TO ACCOMMODATE UTILITY



* SLEEVE INVERT ELEV: 375.80 (ABUT 1)
376.01 (ABUT 2)

** CUT IN FIELD TO ACCOMMODATE UTILITY



DIAPHRAGM AT ABUTMENTS



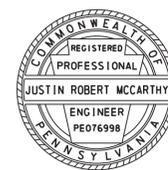
NOTES:

- USE ONE SIZE SMALLER INSERT FOR DEFORMED BARS. THE MINIMUM LENGTH OF THE INSERT IS 3". INSERTS TO BE GALVANIZED OR COMPLETELY ZINC-ELECTROPLATED.
- REFER TO SHEET 44 FOR SECTIONS U-U, V-V, W-W AND X-X.
- COORDINATE WITH CAPITAL REGION WATER. SEE WATER UTILITY RELOCATION ALSO PLAN.
- COORDINATE WITH UGI UTILITIES, INC. AND THEIR CONTRACTOR FOR THE GAS UTILITY RELOCATION.
- ADJUST DOWELS AS REQUIRED TO ACCOMMODATE THE UTILITY.
- FOR WATERPROOFING DETAILS, SEE BC-788M.
- CAST END DIAPHRAGMS A MINIMUM OF 2 HOURS PRIOR TO PLACING DECK CONCRETE OVER END DIAPHRAGMS.

REFERENCES:

| | |
|-------------------------------|---------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| ABUTMENT 1 DRAWINGS | 11 - 20 |
| ABUTMENT 2 DRAWINGS | 21 - 32 |
| FRAMING PLAN | 34 |
| BEAM DETAILS | 35, 36 |
| SLAB PLAN | 38 |
| DIAPHRAGM DETAILS 3 | 44 |
| SUPERSTRUCTURE REBAR SCHEDULE | 45 |

SHEETS:



PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
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| REVISIONS | | | | | |

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

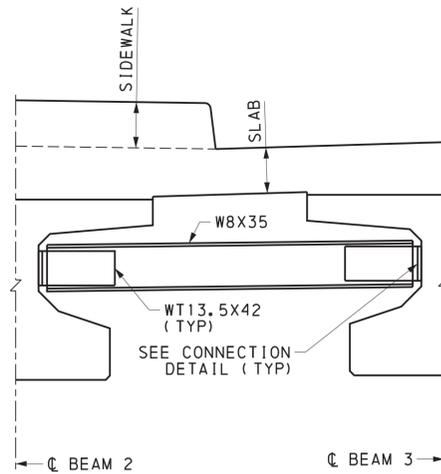
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
DIAPHRAGM DETAILS 1

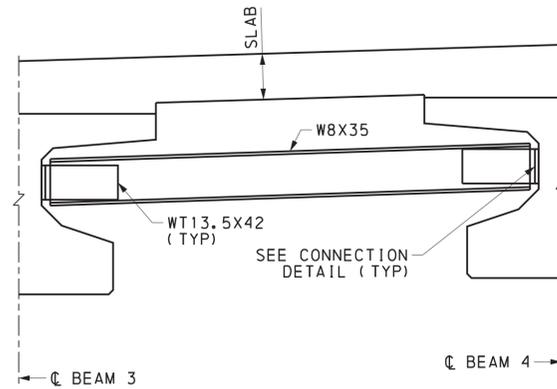
RECOMMENDED 1-22-2025

SHEET 42 OF 62

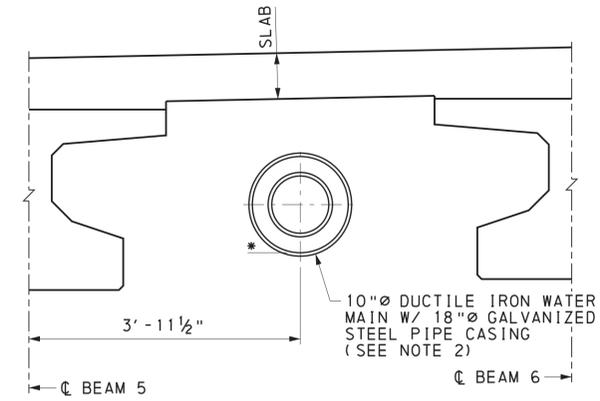
S-42023



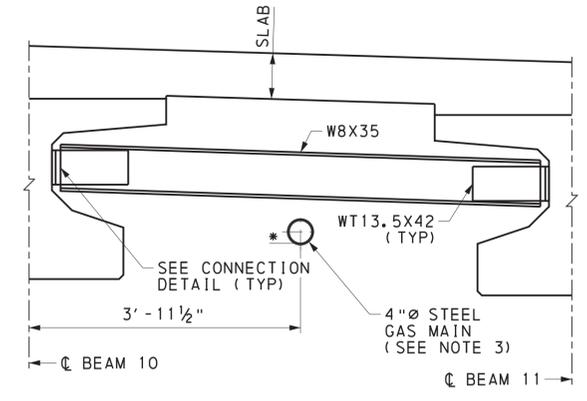
TYPICAL 6'-3" BAY
(BAY 2 SHOWN, BAYS 1, 11, & 12 SIMILAR)



TYPICAL 7'-11" BAY
(BAY 3 SHOWN, BAYS 4 & 6-9 SIMILAR)



BAY 5 (OMIT DIAPHRAGM)
* INVERT ELEV: 376.13

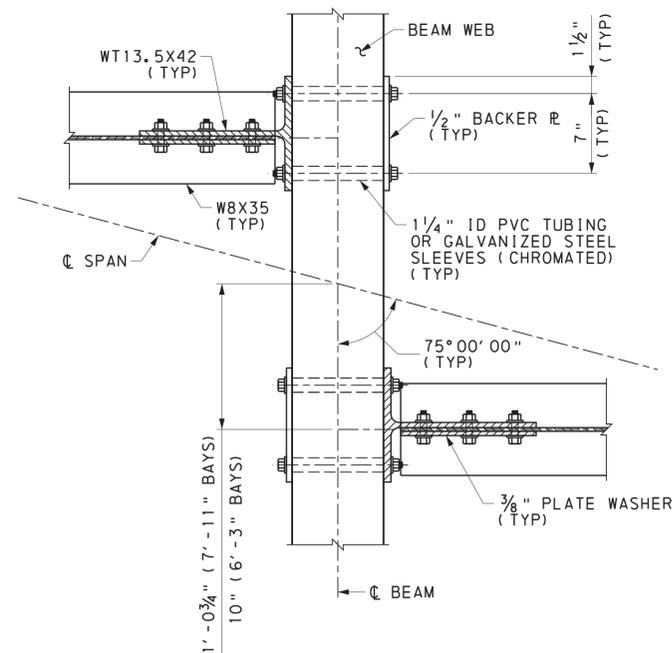


BAY 10
* INVERT ELEV: 376.33

INTERMEDIATE DIAPHRAGM

12 0 12 INCHES

(LOOKING STATIONS AHEAD)
(SLAB REINFORCEMENT NOT SHOWN FOR CLARITY)



CONNECTION DETAIL

6 0 6 INCHES

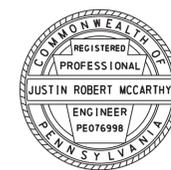
NOTES:

1. REFER TO BC-770M FOR ADDITIONAL INFORMATION.
2. COORDINATE WITH CAPITAL REGION WATER. SEE WATER UTILITY RELOCATION ALSO PLAN.
3. COORDINATE WITH UGI UTILITIES, INC. AND THEIR CONTRACTOR FOR THE GAS UTILITY RELOCATION.

| Mark | Description | By | Chk' d | Recm' d | Date |
|-----------|-------------|----|--------|---------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

HNTB



PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
DIAPHRAGM DETAILS 2

RECOMMENDED 1-22-2025

SHEET 43 OF 62

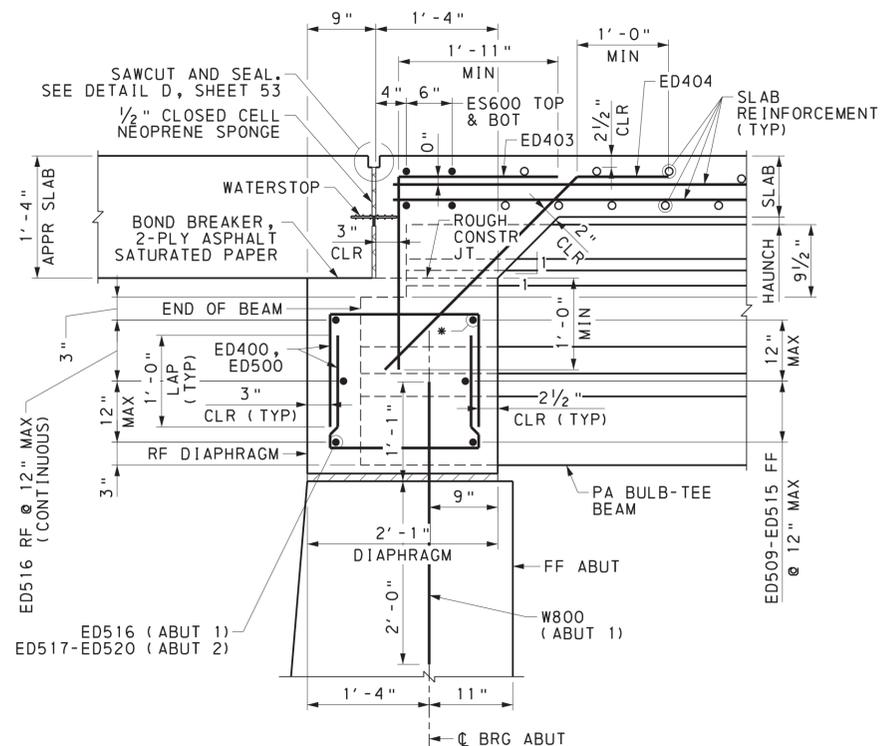
S-42023

REFERENCES:

- GENERAL PLAN
- GENERAL NOTES
- FRAMING PLAN
- BEAM DETAILS
- SLAB PLAN

SHEETS:

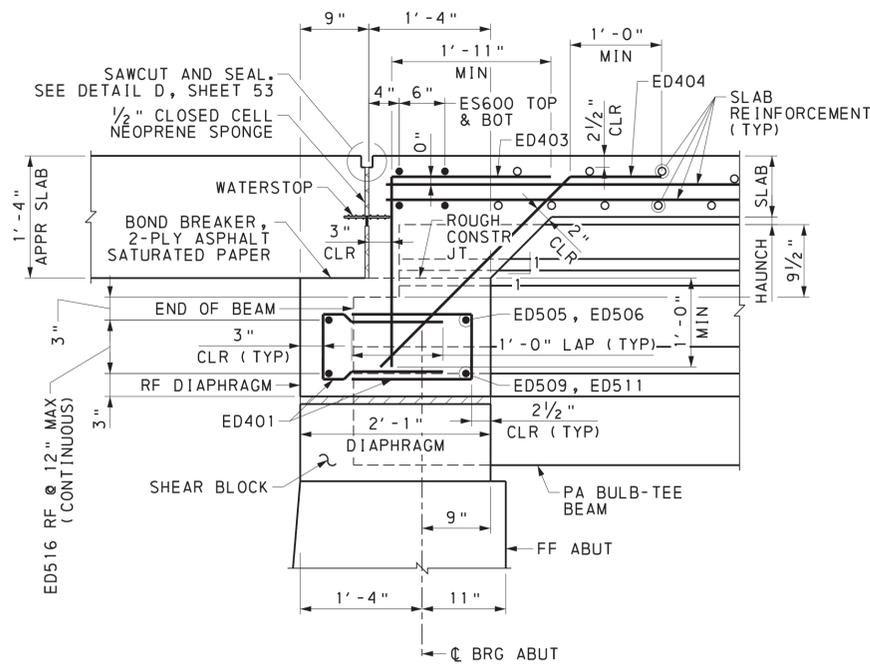
- 1
- 3 - 4
- 34
- 35, 36
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* ED505, ED506, ED507, ED508

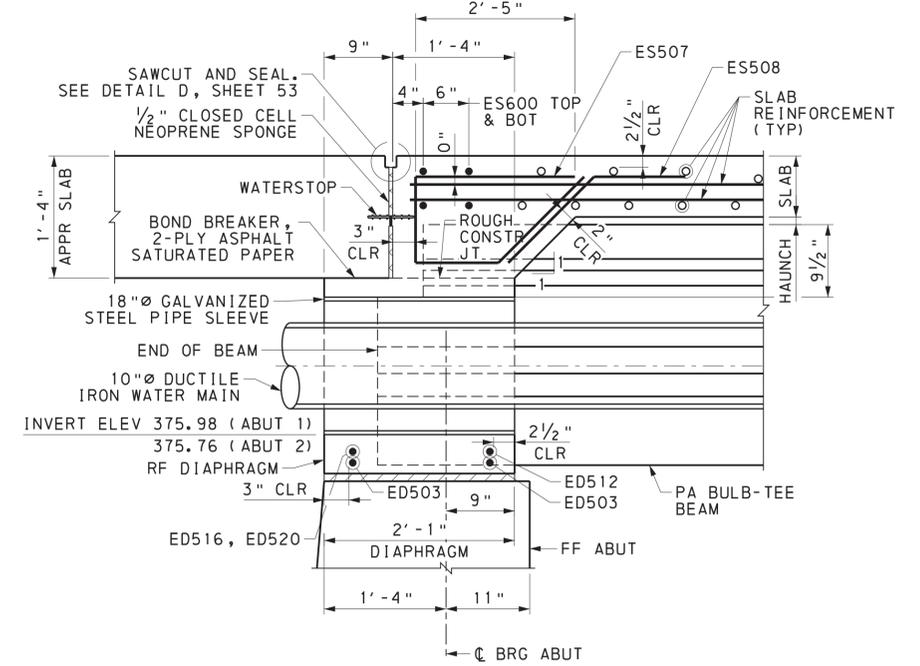
(FOR DRAINAGE AND WATERPROOFING DETAILS, SEE BC-751M AND ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS")

SECTION U-U
6 0 6 12 INCHES



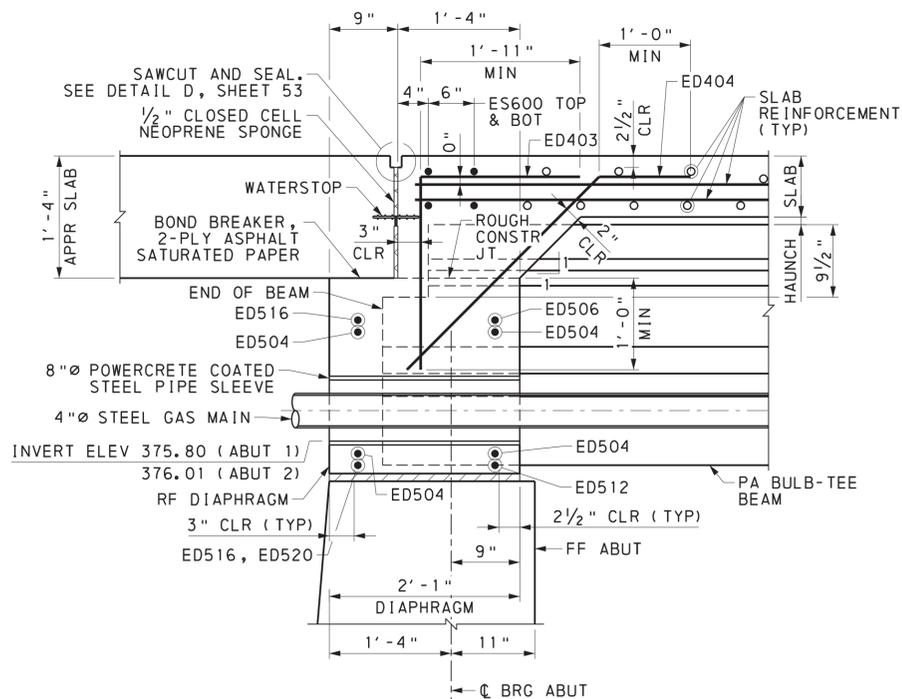
(FOR DRAINAGE AND WATERPROOFING DETAILS, SEE BC-751M AND ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS")

SECTION V-V
6 0 6 12 INCHES



(FOR DRAINAGE AND WATERPROOFING DETAILS, SEE BC-751M AND ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS")

SECTION W-W
6 0 6 12 INCHES

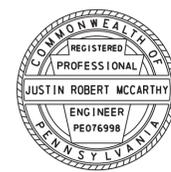


(FOR DRAINAGE AND WATERPROOFING DETAILS, SEE BC-751M AND ATTACHMENT BC-788 MODIFIED "SPRAY-ON WATERPROOFING DETAILS")

SECTION X-X
6 0 6 12 INCHES

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



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HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
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DAUPHIN COUNTY
SR 0083 SECTION B79

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OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
DIAPHRAGM DETAILS 3

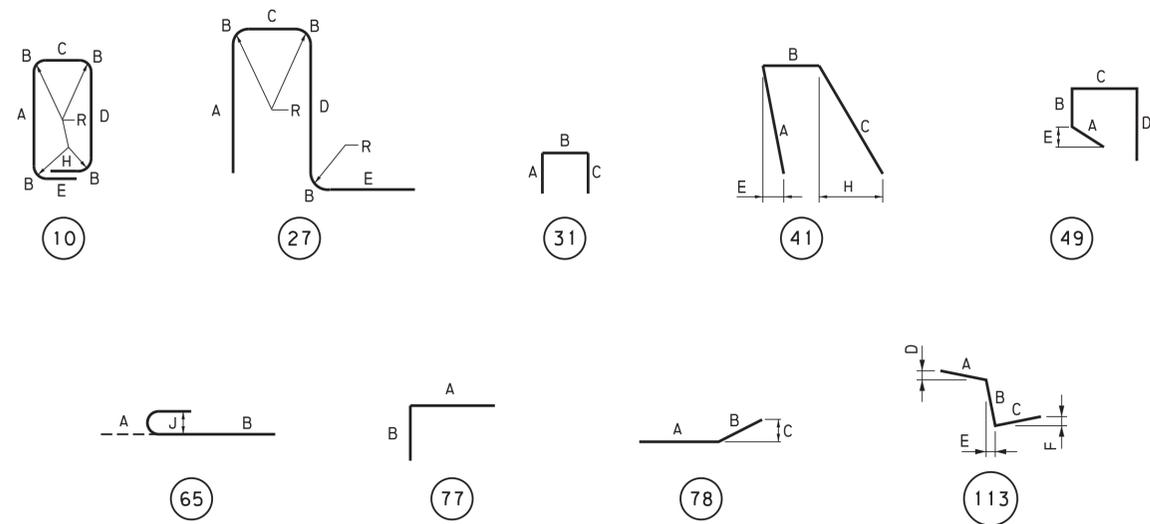
RECOMMENDED 1-22-2025 SHEET 44 OF 62

S-42023

| REFERENCES: | SHEETS: |
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| GENERAL PLAN | 1 |
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1/2/2025 LEMME: s3016-s-brB4-d1003.dgn

| MARK | SIZE | NO REQ'D | LENGTH | TYPE | A | B | C | D | E | REMARKS |
|---------------------|------|----------|-------------|------|-------------|-------------|-------------|---------|---------|-------------------|
| DECK | | | | | | | | | | |
| ES400 | 4 | 218 | 7' - 7 1/2" | 27 | 2' - 6 1/2" | 4" | 3" | 2' - 4" | 1' - 6" | R = 2" |
| ES401 | 4 | 297 | 30' - 3" | STR | | | | | | |
| ES500 | 5 | 188 | 44' - 5" | STR | | | | | | |
| ES501 | 5 | 144 | 45' - 11" | STR | | | | | | |
| ES502 | 5 | 144 | 49' - 9" | STR | | | | | | |
| ES503 | 5 | 112 | 54' - 5" | 65 | 7" | 53' - 10" | | | | J = 5" |
| ES504 | 5 | 112 | 46' - 3" | 65 | 7" | 45' - 8" | | | | J = 5" |
| ES505 | 5 | 224 | 7' - 3" | 65 | 7" | 6' - 8" | | | | J = 5" |
| ES506 | 5 | 174 | 7' - 0 1/2" | 113 | 3' - 0" | 1' - 0 1/2" | 3' - 0" | 1/2" | 1 1/2" | F = 1 1/8" |
| ES507 | 5 | 4 | 5' - 8" | 49 | 1' - 3" | 1' - 1" | 10 3/4" | 2' - 5" | 10 5/8" | |
| ES508 | 5 | 4 | 2' - 3" | 78 | 1' - 0" | 1' - 3" | 10 5/8" | | | |
| ES600 | 6 | 16 | 50' - 0" | STR | | | | | | |
| EC400 | 4 | 218 | 7' - 10" | 10 | 2' - 9" | 4" | 3" | 2' - 9" | 5 1/2" | H = 3", R = 2" |
| EC401 | 4 | 78 | 30' - 0" | STR | | | | | | |
| EC500 | 5 | 24 | 44' - 9" | STR | | | | | | |
| EC501 | 5 | 174 | 11' - 8" | STR | | | | | | |
| EC600 | 6 | 16 | 45' - 1" | STR | | | | | | |
| ABUTMENT DIAPHRAGMS | | | | | | | | | | |
| ED400 | 4 | 236 | 4' - 1" | 31 | 1' - 3" | 1' - 7" | 1' - 3" | | | |
| ED401 | 4 | 140 | 3' - 5" | 31 | 1' - 4" | 8 1/2" | 1' - 4" | | | |
| ED402 | 4 | 88 | 3' - 2" | 31 | 1' - 4" | 6" | 1' - 4" | | | |
| ED403 | 4 | 128 | 4' - 0" | 77 | 2' - 1" | 1' - 11" | | | | |
| ED404 | 4 | 128 | 3' - 11" | 78 | 2' - 11" | 1' - 0" | 8 1/2" | | | |
| ED500 | 5 | 28 | 4' - 1" | 31 | 1' - 3" | 1' - 7" | 1' - 3" | | | |
| ED501 | 5 | 16 | 3' - 5" | 31 | 1' - 4" | 8 1/2" | 1' - 4" | | | |
| ED502 | 5 | 16 | 3' - 2" | 31 | 1' - 4" | 6" | 1' - 4" | | | |
| ED503 | 5 | 8 | 3' - 10" | 78 | 1' - 6" | 2' - 4" | 1' - 7 3/4" | | | |
| ED504 | 5 | 16 | 2' - 4" | 78 | 9" | 1' - 7" | 1' - 1 3/8" | | | |
| ED505 | 5 | 16 | 4' - 10" | STR | | | | | | THREAD ONE END 3" |
| ED506 | 5 | 28 | 5' - 9" | STR | | | | | | THREAD ONE END 3" |
| ED507 | 5 | 4 | 3' - 1" | STR | | | | | | THREAD ONE END 3" |
| ED508 | 5 | 4 | 2' - 4" | STR | | | | | | THREAD ONE END 3" |
| ED509 | 5 | 8 | 4' - 5" | STR | | | | | | |
| ED510 | 5 | 6 | 3' - 3" | STR | | | | | | |
| ED511 | 5 | 12 | 6' - 1" | STR | | | | | | |
| ED512 | 5 | 14 | 5' - 0" | STR | | | | | | |
| ED513 | 5 | 4 | 1' - 9" | STR | | | | | | |
| ED514 | 5 | 4 | 2' - 2" | STR | | | | | | |
| ED515 | 5 | 8 | 9" | STR | | | | | | |
| ED516 | 5 | 10 | 49' - 10" | STR | | | | | | |
| ED517 | 5 | 2 | 3' - 9" | STR | | | | | | |
| ED518 | 5 | 1 | 9' - 1" | STR | | | | | | |
| ED519 | 5 | 1 | 2' - 8" | STR | | | | | | |
| ED520 | 5 | 1 | 58' - 4" | STR | | | | | | |
| ED521 | 5 | 4 | 5' - 2" | 41 | 1' - 10" | 1' - 6" | 1' - 10" | | 5 3/4" | H = 5 3/4" |



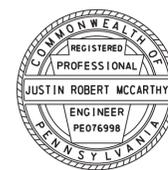
NOTES:

- "E" PREFIX IN BAR MARK DENOTES EPOXY COATED BARS.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" & "C" ON STANDARD 135° AND 180° HOOKS, UNLESS NOTED.
- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- FIGURES IN CIRCLE REPRESENT BAR TYPES.
- "J" DIMENSIONS ON 180° HOOKS ARE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- RADIUS, "R" IS TO THE INSIDE OF THE BAR.
- REINFORCEMENT BAR SCHEDULE IS FOR INFORMATION ONLY. VERIFY INFORMATION BEFORE FABRICATION.

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

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PA BULB-TEE BEAM BRIDGE
SUPERSTRUCTURE REBAR SCHEDULE

RECOMMENDED 1-22-2025

SHEET 45 OF 62

S-42023

REFERENCES:

- GENERAL NOTES
- SLAB DRAWINGS
- DIAPHRAGM DRAWINGS

SHEETS:

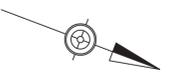
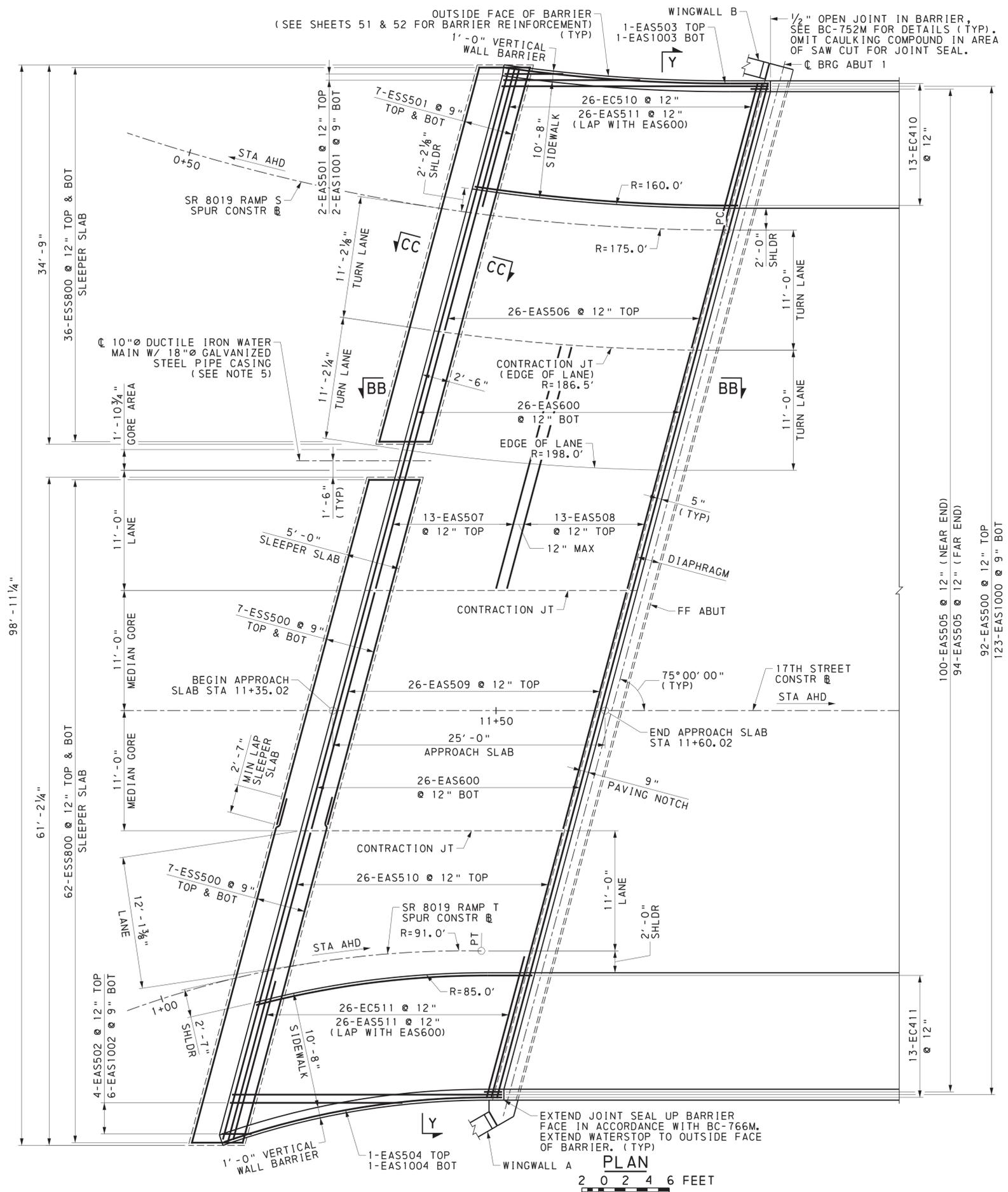
- 3 - 4
- 38 - 40
- 42 - 44

FINISHED DECK ELEVATIONS AT TENTH POINTS ON C BEAM

| LOCATION | BEAM B1 | | BEAM B2 | | BEAM B3 | | BEAM B4 | | BEAM B5 | | BEAM B6 | | BEAM B7 | | BEAM B8 | | BEAM B9 | | BEAM B10 | | BEAM B11 | | BEAM B12 | | BEAM B13 | | | | | |
|---------------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|----------|--------|
| | STATION | ELEV | | |
| CL BRG ABUT 1 | 11+75.40 | 379.35 | 11+73.73 | 379.23 | 11+72.05 | 378.60 | 11+69.93 | 378.80 | 11+67.81 | 378.93 | 11+65.69 | 379.05 | 11+63.57 | 379.17 | 11+61.45 | 379.28 | 11+59.33 | 379.19 | 11+57.20 | 378.97 | 11+55.08 | 378.68 | 11+53.41 | 379.24 | 11+51.73 | 379.29 | 11+50.00 | 379.52 | | |
| 0.1L | 11+83.90 | 379.46 | 11+82.23 | 379.35 | 11+80.55 | 378.72 | 11+78.43 | 378.93 | 11+76.31 | 379.08 | 11+74.19 | 379.20 | 11+72.07 | 379.33 | 11+69.95 | 379.45 | 11+67.83 | 379.38 | 11+65.70 | 379.16 | 11+63.58 | 378.88 | 11+61.91 | 379.45 | 11+60.23 | 379.50 | 11+58.55 | 379.63 | 11+56.87 | 379.76 |
| 0.2L | 11+92.40 | 379.53 | 11+90.73 | 379.43 | 11+89.05 | 378.81 | 11+86.93 | 379.03 | 11+84.81 | 379.18 | 11+82.69 | 379.32 | 11+80.57 | 379.45 | 11+78.45 | 379.58 | 11+76.33 | 379.52 | 11+74.20 | 379.31 | 11+72.08 | 379.04 | 11+70.41 | 379.62 | 11+68.73 | 379.68 | 11+67.05 | 379.81 | 11+65.37 | 379.94 |
| 0.3L | 12+00.90 | 379.57 | 11+99.23 | 379.47 | 11+97.55 | 378.85 | 11+95.43 | 379.08 | 11+93.31 | 379.25 | 11+91.19 | 379.39 | 11+89.07 | 379.54 | 11+86.95 | 379.68 | 11+84.83 | 379.62 | 11+82.70 | 379.42 | 11+80.58 | 379.16 | 11+78.91 | 379.75 | 11+77.23 | 379.82 | 11+75.55 | 379.95 | 11+73.87 | 380.08 |
| 0.4L | 12+09.40 | 379.56 | 12+07.73 | 379.47 | 12+06.05 | 378.86 | 12+03.93 | 379.10 | 12+01.81 | 379.28 | 11+99.69 | 379.43 | 11+97.57 | 379.58 | 11+95.45 | 379.73 | 11+93.33 | 379.69 | 11+91.20 | 379.50 | 11+89.08 | 379.25 | 11+87.41 | 379.84 | 11+85.73 | 379.92 | 11+84.05 | 380.05 | 11+82.37 | 380.18 |
| 0.5L | 12+17.90 | 379.52 | 12+16.23 | 379.43 | 12+14.55 | 378.83 | 12+12.43 | 379.08 | 12+10.31 | 379.27 | 12+08.19 | 379.43 | 12+06.07 | 379.59 | 12+03.95 | 379.75 | 12+01.83 | 379.72 | 11+99.70 | 379.54 | 11+97.58 | 379.29 | 11+95.91 | 379.90 | 11+94.23 | 379.98 | 11+92.55 | 380.11 | 11+90.87 | 380.24 |
| 0.6L | 12+26.40 | 379.43 | 12+24.73 | 379.36 | 12+23.05 | 378.77 | 12+20.93 | 379.03 | 12+18.81 | 379.22 | 12+16.69 | 379.39 | 12+14.57 | 379.56 | 12+12.45 | 379.73 | 12+10.33 | 379.71 | 12+08.20 | 379.54 | 12+06.08 | 379.30 | 12+04.41 | 379.91 | 12+02.73 | 380.01 | 12+01.05 | 380.14 | 11+99.37 | 380.27 |
| 0.7L | 12+34.90 | 379.31 | 12+33.23 | 379.25 | 12+31.55 | 378.66 | 12+29.43 | 378.93 | 12+27.31 | 379.13 | 12+25.19 | 379.32 | 12+23.07 | 379.50 | 12+20.95 | 379.68 | 12+18.83 | 379.66 | 12+16.70 | 379.50 | 12+14.58 | 379.27 | 12+12.91 | 379.89 | 12+11.23 | 379.99 | 12+09.55 | 380.12 | 12+07.87 | 380.25 |
| 0.8L | 12+43.40 | 379.16 | 12+41.73 | 379.10 | 12+40.05 | 378.52 | 12+37.93 | 378.80 | 12+35.81 | 379.01 | 12+33.69 | 379.20 | 12+31.57 | 379.39 | 12+29.45 | 379.58 | 12+27.33 | 379.57 | 12+25.20 | 379.42 | 12+23.08 | 379.21 | 12+21.41 | 379.83 | 12+19.73 | 379.94 | 12+18.05 | 380.07 | 12+16.37 | 380.20 |
| 0.9L | 12+51.90 | 378.96 | 12+50.23 | 378.91 | 12+48.55 | 378.34 | 12+46.43 | 378.62 | 12+44.31 | 378.85 | 12+42.19 | 379.05 | 12+40.07 | 379.25 | 12+37.95 | 379.45 | 12+35.83 | 379.45 | 12+33.70 | 379.31 | 12+31.58 | 379.10 | 12+29.91 | 379.74 | 12+28.23 | 379.85 | 12+26.55 | 379.96 | 12+24.87 | 380.09 |
| CL BRG ABUT 2 | 12+60.40 | 378.72 | 12+58.73 | 378.68 | 12+57.05 | 378.12 | 12+54.93 | 378.41 | 12+52.81 | 378.65 | 12+50.69 | 378.86 | 12+48.57 | 379.07 | 12+46.45 | 379.27 | 12+44.33 | 379.29 | 12+42.20 | 379.15 | 12+40.08 | 378.96 | 12+38.41 | 379.60 | 12+36.73 | 379.72 | 12+35.05 | 379.85 | 12+33.37 | 379.98 |

FINISHED DECK ELEVATIONS AT BREAK POINTS

| STATION | A | B | C | D | E' | E | F | G (PGL) | H | I | J | K |
|----------|--------|--------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|
| 11+24.60 | - | - | - | - | - | - | - | - | - | - | - | 378.19 |
| 11+27.85 | - | - | - | - | - | - | - | - | - | - | 377.63 | 378.34 |
| 11+28.61 | - | - | - | - | - | - | - | - | - | 377.76 | 377.66 | 378.38 |
| 11+30.00 | - | - | - | - | - | - | - | - | - | 377.82 | 377.72 | 378.45 |
| 11+32.07 | - | - | - | - | - | - | - | - | 378.28 | 377.90 | 377.81 | 378.55 |
| 11+35.02 | - | - | - | - | - | - | - | 378.59 | 378.37 | 378.01 | 377.93 | 378.69 |
| 11+37.96 | - | - | - | - | - | 378.46 | 378.68 | 378.46 | 378.11 | 378.03 | 378.81 | |
| 11+40.00 | - | - | - | - | - | 378.52 | 378.74 | 378.52 | 378.17 | 378.10 | 378.89 | |
| 11+40.91 | - | - | - | - | 378.33 | 378.55 | 378.77 | 378.55 | 378.20 | 378.13 | 378.93 | |
| 11+41.42 | - | - | - | - | 378.31 | 378.35 | 378.57 | 378.79 | 378.57 | 378.22 | 378.15 | 378.95 |
| 11+44.33 | - | - | - | 378.13 | 378.41 | 378.44 | 378.66 | 378.88 | 378.66 | 378.32 | 378.25 | 379.06 |
| 11+47.25 | - | - | 377.85 | 378.24 | 378.51 | 378.53 | 378.75 | 378.97 | 378.75 | 378.41 | 378.35 | 379.18 |
| 11+47.81 | - | 377.79 | 377.87 | 378.26 | 378.53 | 378.55 | 378.77 | 378.99 | 378.77 | 378.43 | 378.37 | 379.20 |
| 11+50.00 | - | 377.88 | 377.95 | 378.33 | 378.59 | 378.61 | 378.83 | 379.05 | 378.83 | 378.50 | 378.44 | 379.26 |
| 11+50.59 | 378.67 | 377.90 | 377.97 | 378.35 | 378.61 | 378.63 | 378.85 | 379.07 | 378.85 | 378.52 | 378.46 | 379.28 |
| 11+50.73 | 378.68 | 377.91 | 377.98 | 378.36 | 378.61 | 378.63 | 378.85 | 379.07 | 378.85 | 378.52 | 378.46 | 379.28 |
| 11+53.59 | 378.79 | 378.00 | 378.07 | 378.44 | 378.69 | 378.71 | 378.93 | 379.15 | 378.93 | 378.60 | 378.54 | 379.36 |
| 11+54.12 | 378.81 | 378.02 | 378.09 | 378.45 | 378.70 | 378.72 | 378.94 | 379.16 | 378.94 | 378.61 | 378.55 | 379.38 |
| 11+57.07 | 378.91 | 378.11 | 378.18 | 378.54 | 378.78 | 378.80 | 379.02 | 379.24 | 379.02 | 378.69 | 378.63 | 379.45 |
| 11+60.00 | 379.01 | 378.21 | 378.27 | 378.63 | 378.86 | 378.87 | 379.09 | 379.31 | 379.09 | 378.76 | 378.70 | 379.52 |
| 11+60.02 | 379.01 | 378.21 | 378.27 | 378.63 | 378.86 | 378.87 | 379.09 | 379.31 | 379.09 | 378.76 | 378.70 | 379.52 |
| 11+62.96 | 379.10 | 378.29 | 378.35 | 378.69 | 378.92 | 378.93 | 379.15 | 379.37 | 379.15 | 378.82 | 378.76 | 379.59 |
| 11+65.91 | 379.17 | 378.36 | 378.42 | 378.76 | - | 378.99 | 379.21 | 379.43 | 379.21 | 378.88 | 378.82 | 379.65 |
| 11+68.86 | 379.25 | 378.43 | 378.49 | 378.83 | - | 379.05 | 379.27 | 379.49 | 379.27 | 378.94 | 378.88 | 379.71 |
| 11+70.00 | 379.28 | 378.45 | 378.51 | 378.85 | - | 379.07 | 379.29 | 379.51 | 379.29 | 378.96 | 378.90 | 379.73 |
| 11+71.81 | 379.32 | 378.49 | 378.55 | 378.88 | - | 379.10 | 379.32 | 379.54 | 379.32 | 378.99 | 378.93 | 379.76 |
| 11+72.34 | 379.33 | 378.50 | 378.56 | 378.89 | - | 379.11 | 379.33 | 379.55 | 379.33 | 379.00 | 378.94 | 379.77 |
| 11+75.20 | 379.37 | 378.55 | 378.61 | 378.94 | - | 379.16 | 379.38 | 379.60 | 379.38 | 379.05 | 378.99 | 379.81 |
| 11+80.00 | 379.44 | 378.61 | 378.67 | 379.00 | - | 379.22 | 379.44 | 379.66 | 379.44 | 379.11 | 379.05 | 379.88 |
| 11+90.00 | 379.54 | 378.71 | 378.77 | 379.10 | - | 379.32 | 379.54 | 379.76 | 379.54 | 379.21 | 379.15 | 379.98 |
| 12+00.00 | 379.59 | 378.76 | 378.82 | 379.15 | - | 379.37 | 379.59 | 379.81 | 379.59 | 379.26 | 379.20 | 380.03 |
| 12+10.00 | 379.58 | 378.75 | 378.81 | 379.14 | - | 379.36 | 379.58 | 379.80 | 379.58 | 379.25 | 379.19 | 380.02 |
| 12+20.00 | 379.52 | 378.70 | 378.76 | 379.09 | - | 379.31 | 379.53 | 379.75 | 379.53 | 379.20 | 379.14 | 379.96 |
| 12+30.00 | 379.41 | 378.58 | 378.64 | 378.97 | - | 379.19 | 379.41 | 379.63 | 379.41 | 379.08 | 379.02 | 379.85 |
| 12+36.94 | 379.30 | 378.48 | 378.54 | 378.87 | - | 379.09 | 379.31 | 379.53 | 379.31 | 378.98 | 378.92 | 379.74 |
| 12+39.79 | 379.25 | 378.42 | 378.48 | 378.81 | - | 379.03 | 379.25 | 379.47 | 379.25 | 378.92 | 378.86 | 379.69 |
| 12+40.00 | 379.25 | 378.42 | 378.48 | 378.81 | - | 379.03 | 379.25 | 379.47 | 379.25 | 378.92 | 378.86 | 379.69 |
| 12+40.33 | 379.24 | 378.41 | 378.47 | 378.80 | - | 379.02 | 379.24 | 379.46 | 379.24 | 378.91 | 378.85 | 379.68 |
| 12+43.28 | 379.18 | 378.36 | 378.42 | 378.75 | - | 378.97 | 379.19 | 379.41 | 379.19 | 378.86 | 378.80 | 379.62 |
| 12+46.22 | 379.12 | 378.29 | 378.35 | 378.68 | - | 378.90 | 379.12 | 379.34 | 379.12 | 378.79 | 378.73 | 379.56 |
| 12+49.17 | 379.05 | 378.22 | 378.28 | 378.61 | - | 378.83 | 379.05 | 379.27 | 379.05 | 378.72 | 378.66 | 379.49 |
| 12+50.00 | 379.03 | 378.20 | 378.26 | 378.59 | - | 378.81 | 379.03 | 379.25 | 379.03 | 378.70 | 378.64 | 379.47 |
| 12+52.12 | 378.98 | 378.15 | 378.21 | 378.54 | - | 378.76 | 378.98 | 379.20 | 378.98 | 378.65 | 378.59 | 379.42 |
| 12+55.07 | 378.90 | 378.07 | 378.13 | 378.46 | - | 378.68 | 378.90 | 379.12 | 378.90 | 378.57 | 378.51 | 379.34 |
| 12+58.01 | 378.82 | 377.99 | 378.05 | 378.38 | - | 378.60 | 378.82 | 379.04 | 378.82 | 378.49 | 378.43 | 379.26 |
| 12+58.55 | 378.80 | 377.98 | 378.04 | 378.37 | - | 378.59 | 378.81 | 379.03 | 378.81 | 378.48 | 378.42 | 379.24 |
| 12+60.00 | 378.76 | 377.93 | 377.99 | 378.32 | - | 378.54 | 378.76 | 378.98 | 378.76 | 378.43 | 378.37 | 379.20 |
| 12+61.41 | 378.72 | 377.89 | 377.95 | 378.28 | - | 378.50 | 378.72 | 378.94 | 378.72 | 378.39 | 378.33 | 379.16 |
| 12+61.94 | 378.70 | 377.88 | 377.94 | 378.27 | - | 378.49 | 378.71 | 378.93 | 378.71 | 378.38 | 378.32 | 379.14 |
| 12+64.79 | 378.61 | 377.79 | 377.85 | 378.18 | - | 378.40 | 378.62 | 378.84 | 378.62 | 378.29 | 378.23 | - |
| 12+65.33 | 378.59 | 377.77 | 377.83 | 378.16 | - | 378.38 | 378.60 | 378.82 | 378.60 | 378.27 | - | - |
| 12+68.28 | 378.50 | 377.67 | 377.73 | 378.06 | - | 378.28 | 378.50 | 378.72 | 378.50 | - | - | - |
| 12+70.00 | 378.44 | 377.61 | 377.67 | 378.00 | - | 378.22 | 378.44 | 378.66 | | | | |



NOTES:

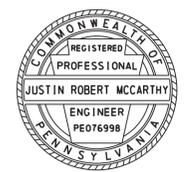
1. CONSTRUCT BRIDGE APPROACH SLAB AFTER THE BRIDGE DECK IS CONSTRUCTED.
2. PLACE CONCRETE IN ONE CONTINUOUS OPERATION, UNLESS OTHERWISE INDICATED OR DIRECTED.
3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE INDICATED.
4. BURN OFF, TO TOP OF BEAM, REINFORCEMENT AND/OR LIFTING DEVICES PROTRUDING INTO APPROACH SLAB.
5. COORDINATE WITH CAPITAL REGION WATER. SEE WATER UTILITY RELOCATION ALSO PLAN.

REFERENCES:

| REFERENCE | SHEETS: |
|------------------------------|---------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| DIAPHRAGM DETAILS | 42 - 44 |
| APPROACH SLAB SECTIONS | 49, 50 |
| APPROACH SLAB DETAILS | 51 - 53 |
| APPROACH SLAB REBAR SCHEDULE | 54 |

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION
DAUPHIN COUNTY
 SR 0083 SECTION B79
 17TH STREET STA 12+03.12
 OVER NORFOLK SOUTHERN RAILWAY COMPANY
 1-SPAN COMPOSITE PS CONCRETE
 PA BULB-TEE BEAM BRIDGE
 NEAR APPROACH SLAB PLAN

PREPARED BY:
 HNTB CORPORATION
 4507 NORTH FRONT STREET
 SUITE 300
 HARRISBURG, PA 17110

RECOMMENDED _____ 1-22-2025
 SHEET 47 OF 62

S-42023

1/2/2025
 LEMME: 63016-s-brB4-gps01.dgn



NOTES:

1. CONSTRUCT BRIDGE APPROACH SLAB AFTER THE BRIDGE DECK IS CONSTRUCTED.
2. PLACE CONCRETE IN ONE CONTINUOUS OPERATION, UNLESS OTHERWISE INDICATED OR DIRECTED.
3. TRANSVERSE CONSTRUCTION JOINTS ARE NOT PERMITTED IN THE CONCRETE APPROACH SLAB OR SLEEPER SLAB, UNLESS OTHERWISE INDICATED.
4. BURN OFF, TO TOP OF BEAM, REINFORCEMENT AND/OR LIFTING DEVICES PROTRUDING INTO APPROACH SLAB.
5. COORDINATE WITH CAPITAL REGION WATER. SEE WATER UTILITY RELOCATION ALSO PLAN.

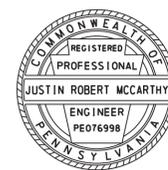
REFERENCES:

| REFERENCES: | SHEETS: |
|------------------------------|---------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| DIAPHRAGM DETAILS | 42 - 44 |
| APPROACH SLAB SECTIONS | 49, 50 |
| APPROACH SLAB DETAILS | 51 - 53 |
| APPROACH SLAB REBAR SCHEDULE | 54 |

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

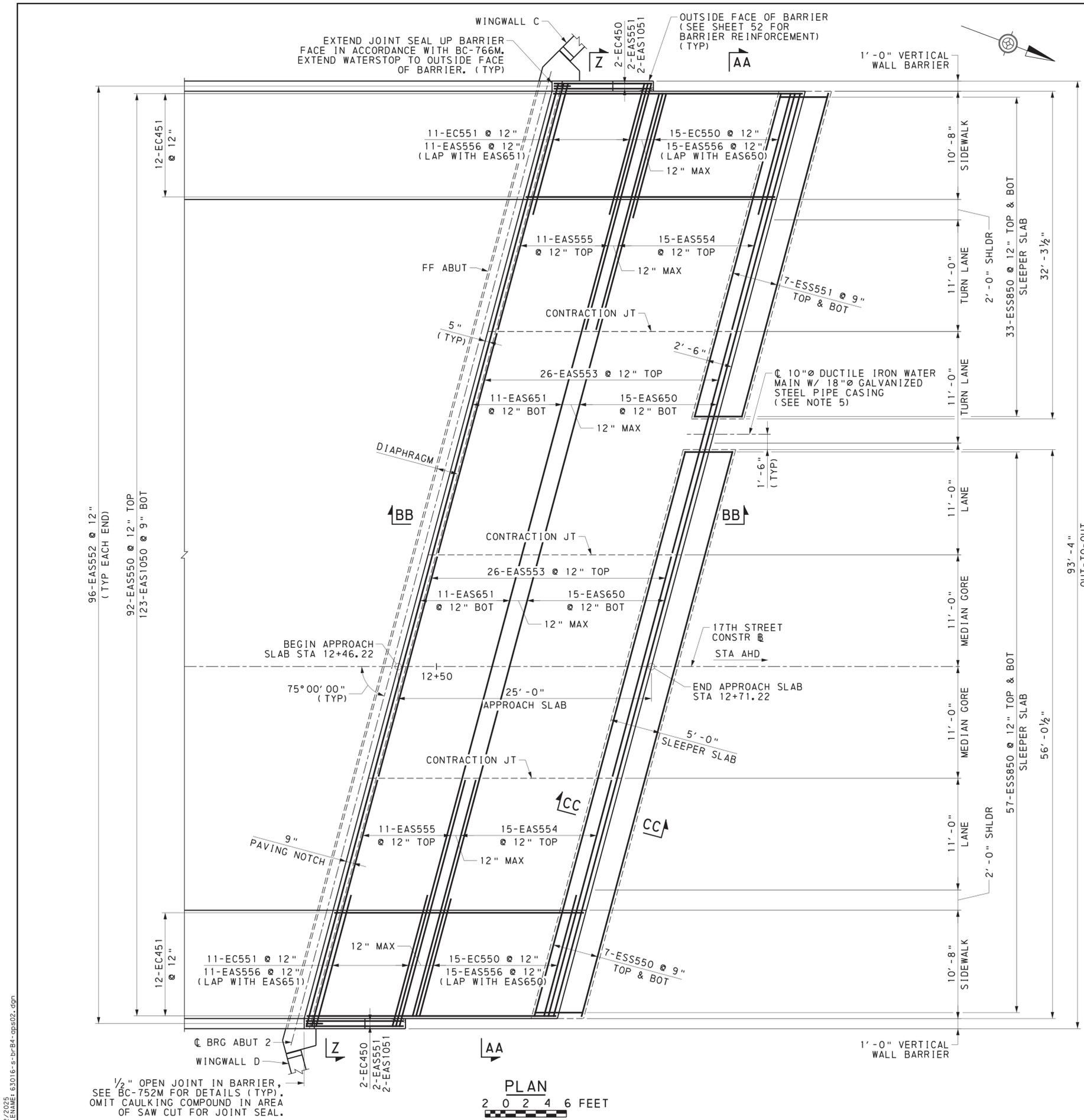
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
FAR APPROACH SLAB PLAN

PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

RECOMMENDED 1-22-2025

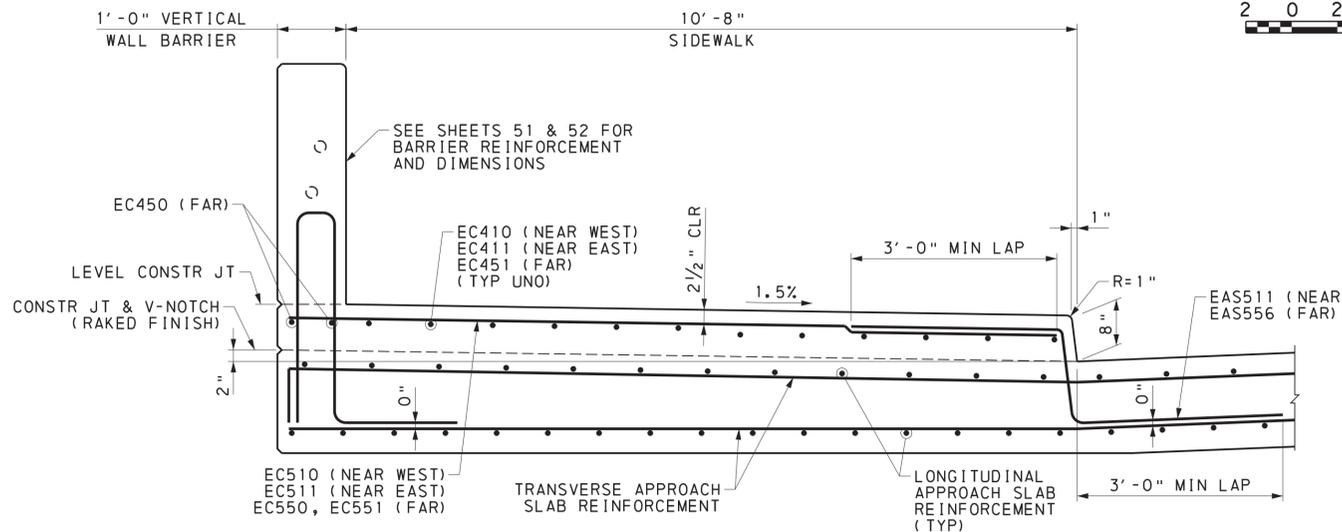
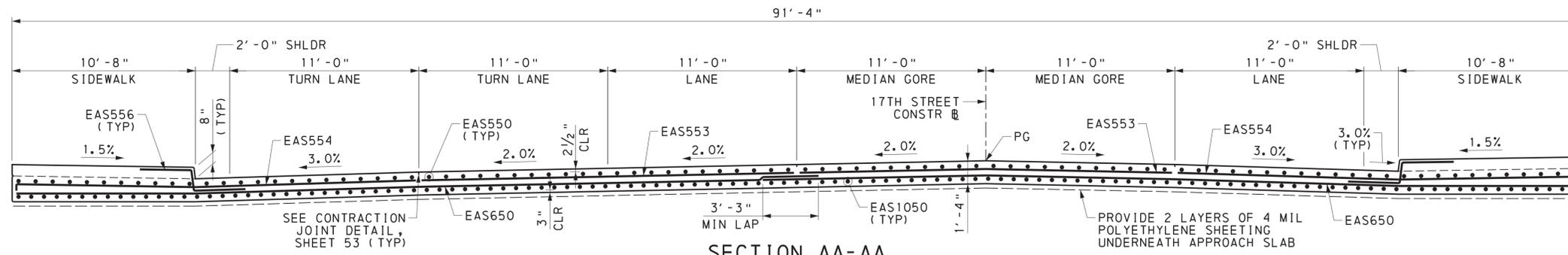
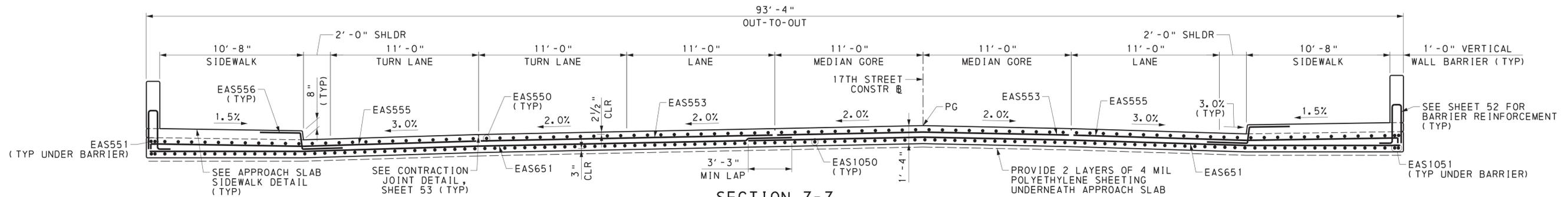
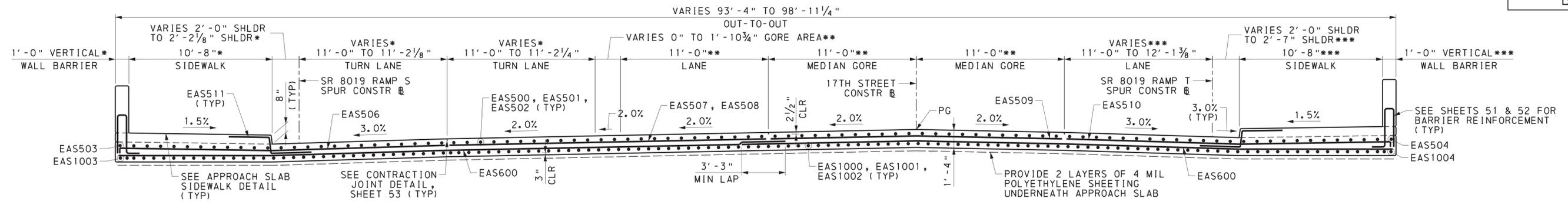
SHEET 48 OF 62

S-42023



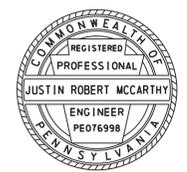
1/22/2025
LEWIS@HNTB.COM
16-3016-35-DR-B4-gps02.dgn

DES: SMZ | DES CKD: JRM | DWG: SMZ | DWG CKD: JRM



| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

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PREPARED BY:
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4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

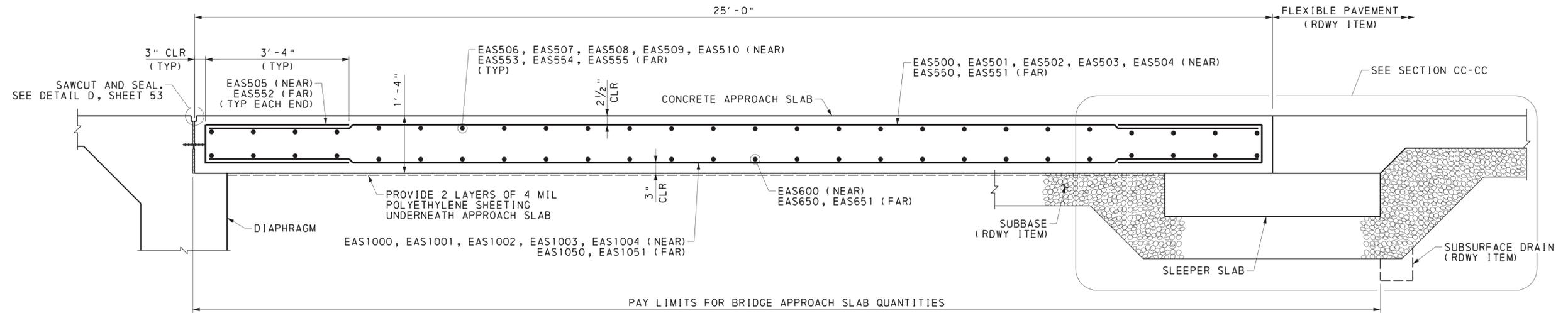
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION
DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
APPROACH SLAB SECTIONS 1

RECOMMENDED 1-22-2025 SHEET 49 OF 62

S-42023

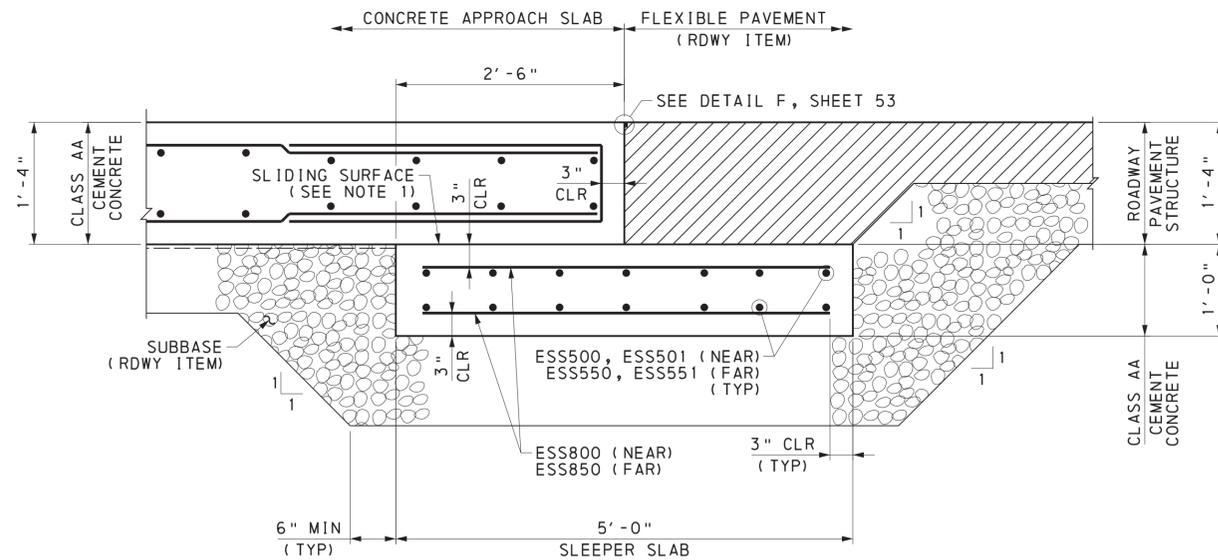
| | |
|------------------------------|----------------|
| REFERENCES: | SHEETS: |
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| DIAPHRAGM DETAILS | 42 - 44 |
| APPROACH SLAB PLANS | 47, 48 |
| APPROACH SLAB SECTIONS 2 | 50 |
| APPROACH SLAB DETAILS | 51 - 53 |
| APPROACH SLAB REBAR SCHEDULE | 54 |

1/2/2025 LELWAMEL 63016-35-brB4-gp803.dgn



SECTION BB-BB

12 0 12 INCHES



SECTION CC-CC

6 0 6 12 INCHES

NOTE:

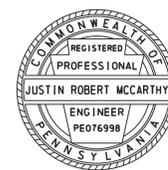
- TROWEL SMOOTH AND PLACE 2 LAYERS OF 4 MIL POLYETHYLENE SHEETING AS BOND BREAKER.

REFERENCES:

| | |
|------------------------------|---------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| DIAPHRAGM DETAILS | 42 - 44 |
| APPROACH SLAB PLANS | 47, 48 |
| APPROACH SLAB SECTIONS 1 | 49 |
| APPROACH SLAB DETAILS | 51 - 53 |
| APPROACH SLAB REBAR SCHEDULE | 54 |

SHEETS:

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PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

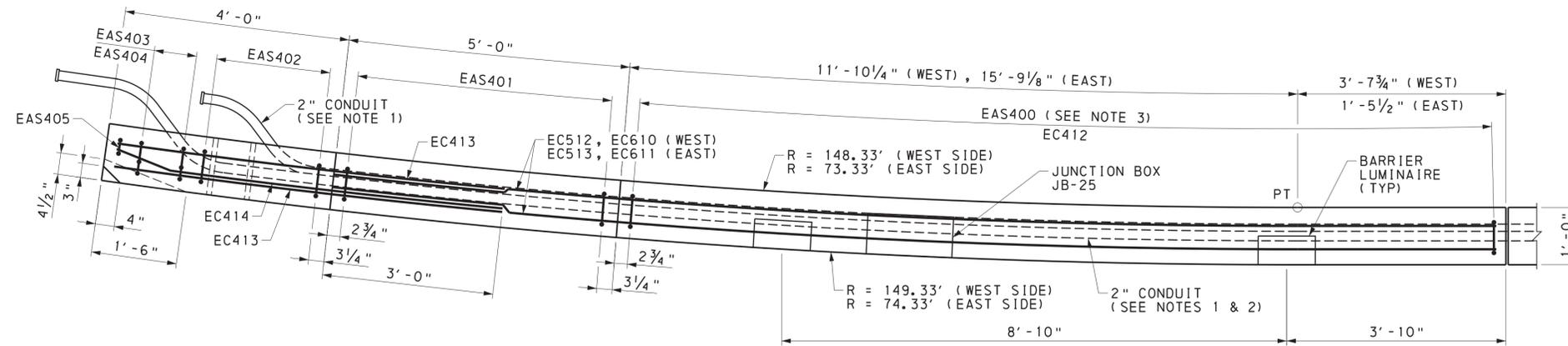
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
APPROACH SLAB SECTIONS 2

RECOMMENDED 1-22-2025

SHEET 50 OF 62

S-42023

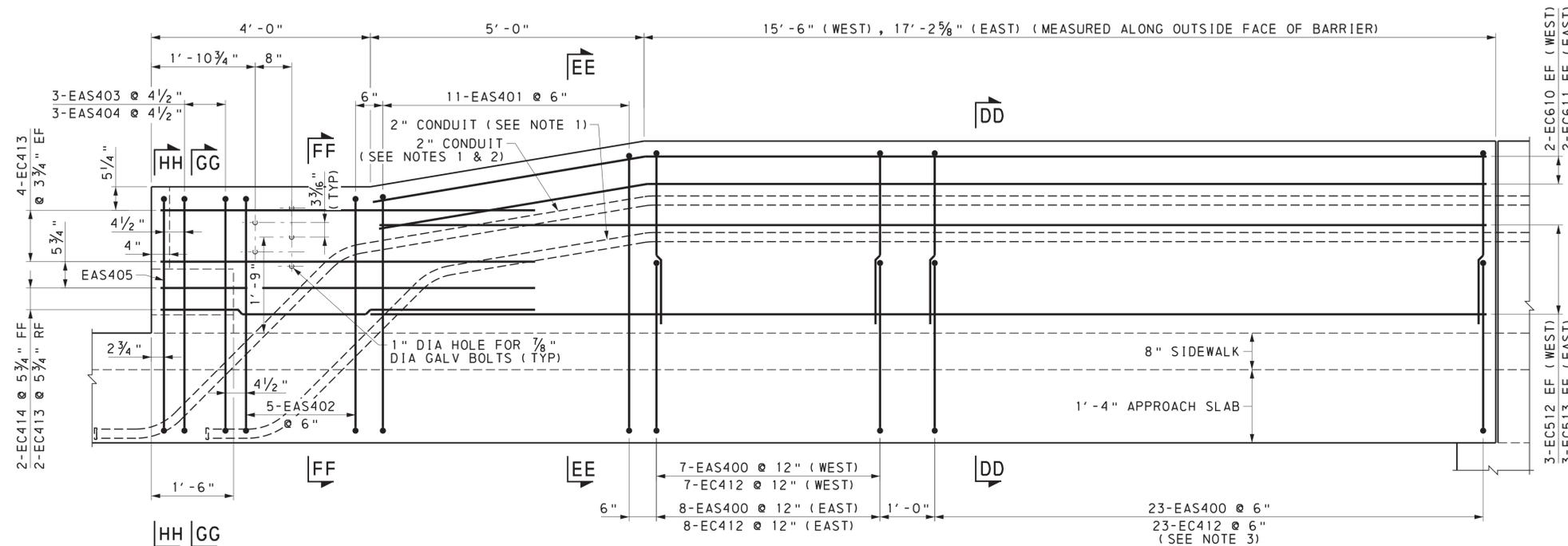
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(NEAR WEST SIDE SHOWN, NEAR EAST SIDE SIMILAR BY OPPOSITE HAND AND AS NOTED)
PLAN

NOTES:

1. REFER TO BC-721M FOR ADDITIONAL INFORMATION.
2. PROVIDE SPECIFIED 2" CONDUIT ALONG WEST BARRIER ONLY. (RESERVED FOR FUTURE USE BY CITY OF HARRISBURG)
3. PROVIDE ONE ADDITIONAL EC412 BAR ON EACH SIDE OF BARRIER LIGHTING BLOCKOUT (LAP WITH EAS400). ADJUST REINFORCEMENT AS REQUIRED TO ACCOMMODATE PLACEMENT OF JUNCTION BOXES AND LIGHTING BLOCKOUTS. COORDINATE WITH HIGHWAY LIGHTING ALSO PLAN FOR PLACEMENT OF JUNCTION BOXES AND BARRIER LUMINAIRES.
4. SEE SHEET 52 FOR SECTIONS DD-DD, EE-EE, FF-FF, GG-GG, & HH-HH.

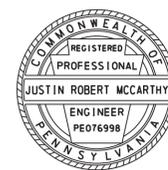


(APPROACH SLAB AND SIDEWALK REINFORCEMENT NOT SHOWN FOR CLARITY)
ELEVATION
42" VERTICAL WALL CONCRETE BARRIER END TRANSITION
 12 0 12 INCHES

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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PREPARED BY:
 HNTB CORPORATION
 4507 NORTH FRONT STREET
 SUITE 300
 HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
 SR 0083 SECTION B79

17TH STREET STA 12+03.12
 OVER NORFOLK SOUTHERN RAILWAY COMPANY
 1-SPAN COMPOSITE PS CONCRETE
 PA BULB-TEE BEAM BRIDGE
 APPROACH SLAB DETAILS 1

RECOMMENDED 1-22-2025

SHEET 51 OF 62

S-42023

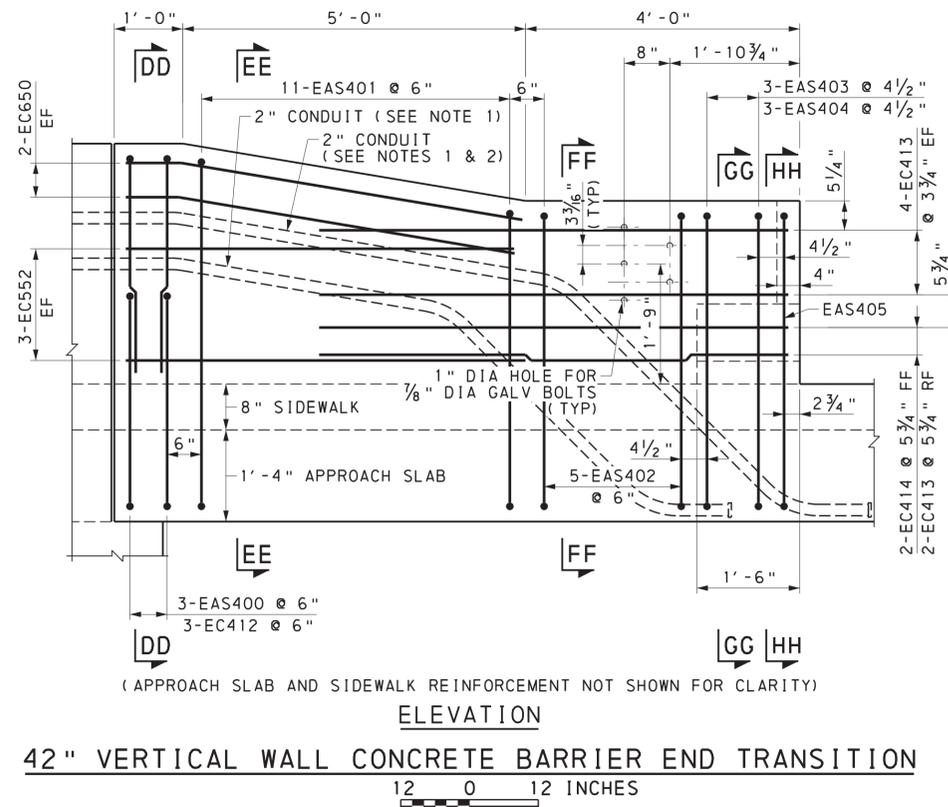
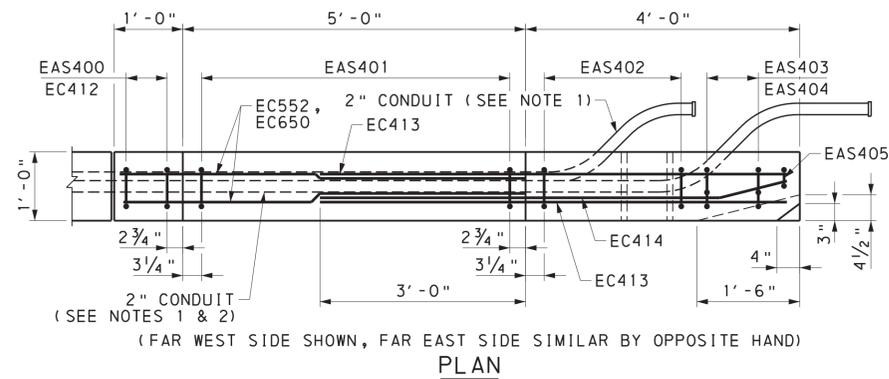
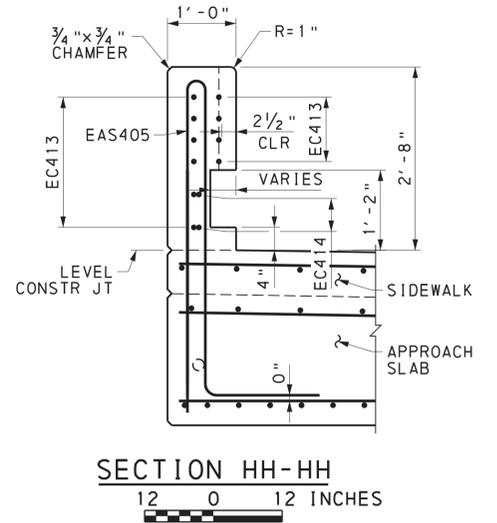
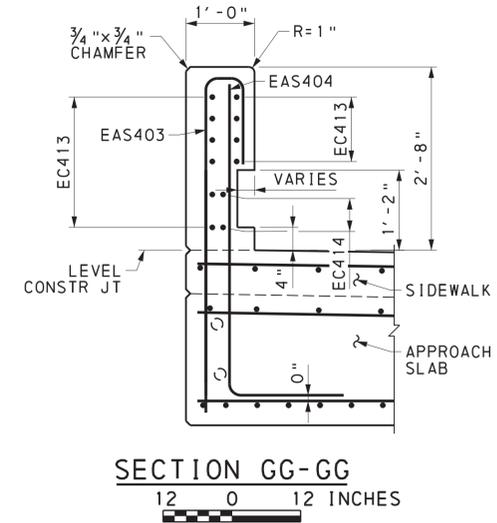
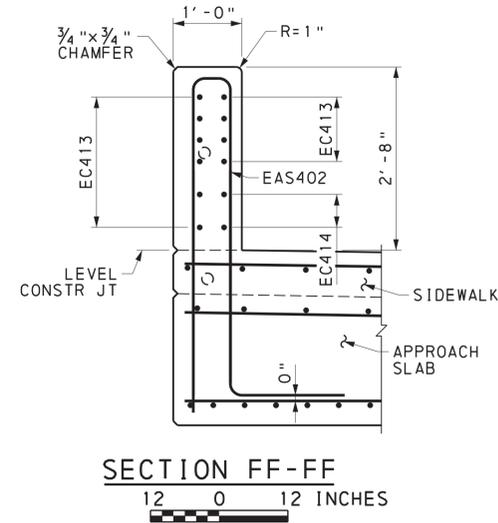
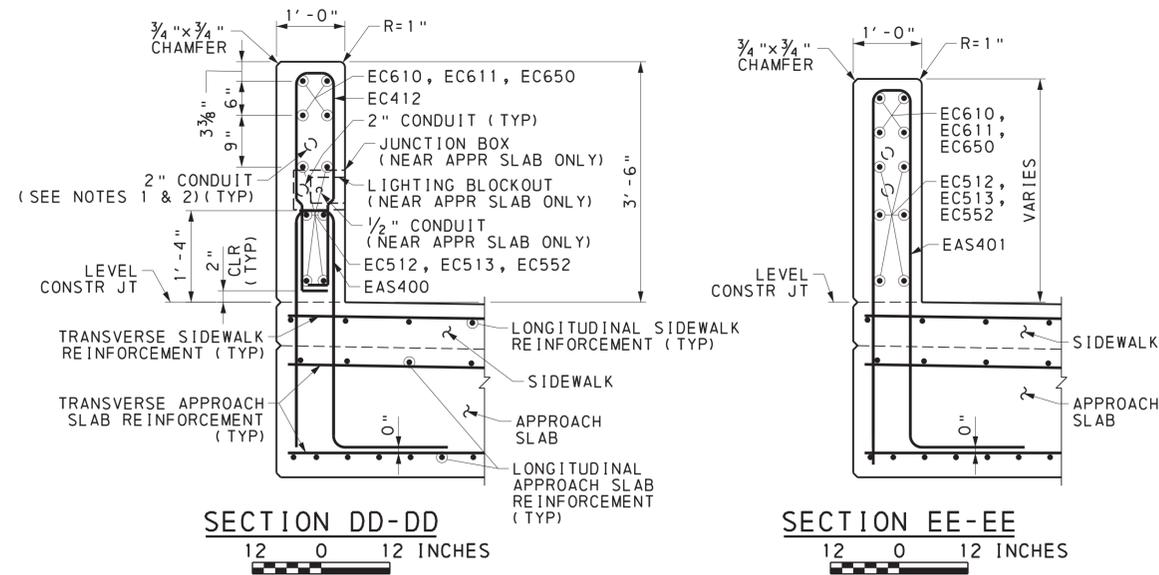
REFERENCES:

- GENERAL PLAN
- GENERAL NOTES
- APPROACH SLAB PLANS
- APPROACH SLAB SECTIONS
- APPROACH SLAB DETAILS 2
- APPROACH SLAB REBAR SCHEDULE

SHEETS:

- 1
- 3 - 4
- 47, 48
- 49, 50
- 52
- 54

1/2/2025 LERNAME: s3016-s-brB4-gps05.dgn



NOTES:

- REFER TO BC-721M FOR ADDITIONAL INFORMATION.
- PROVIDE SPECIFIED 2" CONDUIT ALONG WEST BARRIER ONLY. (RESERVED FOR FUTURE USE BY CITY OF HARRISBURG)

REFERENCES:

- GENERAL PLAN
- GENERAL NOTES
- APPROACH SLAB PLANS
- APPROACH SLAB SECTIONS
- APPROACH SLAB DETAILS 1
- APPROACH SLAB REBAR SCHEDULE

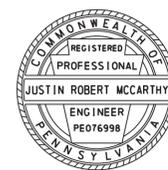
SHEETS:

- 1
- 3 - 4
- 47, 48
- 49, 50
- 51
- 54

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

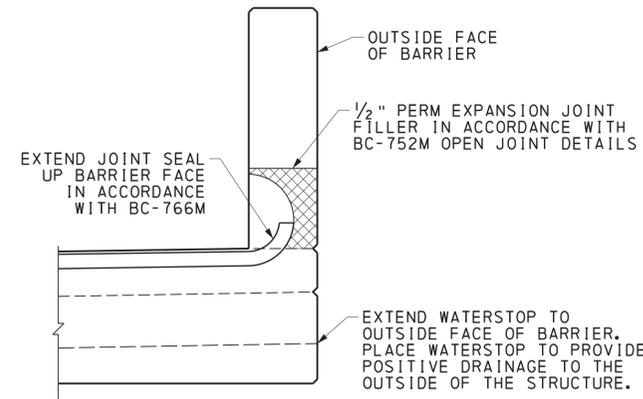
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
APPROACH SLAB DETAILS 2

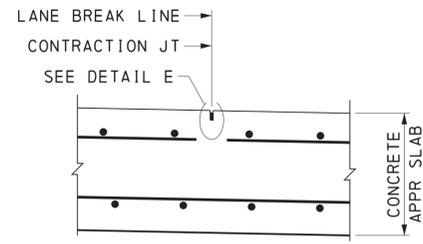
RECOMMENDED 1-22-2025

SHEET 52 OF 62

S-42023

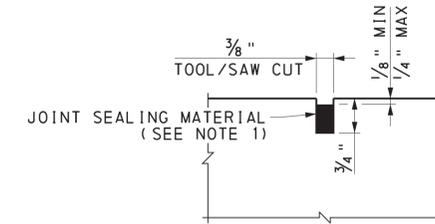


JOINT SEAL AND WATERSTOP TERMINATION DETAIL
 12 0 12 INCHES
 (EAST BARRIER SHOWN, WEST BARRIER SIMILAR)

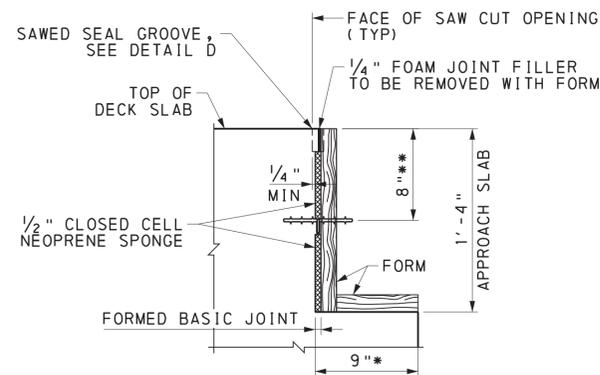


CONTRACTION JOINT DETAIL
 6 0 6 12 INCHES

NOTE: TOP REINFORCEMENT NOT CONTINUOUS THRU JOINT. BOTTOM REINFORCEMENT CONTINUOUS THRU JOINT.



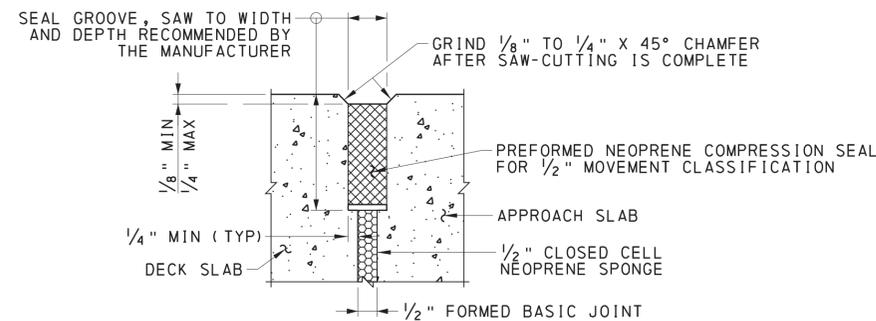
DETAIL E
 NOT TO SCALE



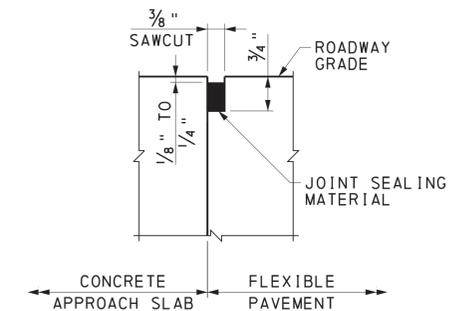
PAVING NOTCH FORMING DETAIL
 NOT TO SCALE

* MEASURED NORMAL TO ABUTMENT

** AN EXPANSION WATERSTOP (TYPE E1 OR E2), IN ACCORDANCE WITH BC-735M, MUST BE INSTALLED AT MID-DEPTH OF APPROACH SLAB. PLACE WATERSTOP TO PROVIDE POSITIVE DRAINAGE TO THE OUTSIDE OF THE STRUCTURE.



DETAIL D
 NOT TO SCALE
 (FOR NOTES, SEE BC-766M)

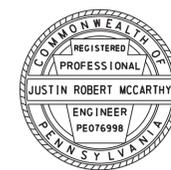


DETAIL F
 NOT TO SCALE

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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 HNTB CORPORATION
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 SUITE 300
 HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
 SR 0083 SECTION B79

17TH STREET STA 12+03.12
 OVER NORFOLK SOUTHERN RAILWAY COMPANY
 1-SPAN COMPOSITE PS CONCRETE
 PA BULB-TEE BEAM BRIDGE
 APPROACH SLAB DETAILS 3

RECOMMENDED 1-22-2025

SHEET 53 OF 62

S-42023

REFERENCES:

| | |
|------------------------|---------|
| GENERAL PLAN | 1 |
| GENERAL NOTES | 3 - 4 |
| DIAPHRAGM DETAILS | 42 - 44 |
| APPROACH SLAB PLANS | 47, 48 |
| APPROACH SLAB SECTIONS | 49, 50 |

SHEETS:

NOTE:

- FOR JOINT MATERIAL, REFER TO PUBLICATION 408 SECTION 705.4(a), OR (b).

1/2/2025 LERAME: 63016-3-b-B4-gps07.dgn

| MARK | SIZE | NO REQ'D | LENGTH | TYPE | A | B | C | D | E | REMARKS |
|--------------------|------|----------|------------------------------|------|-----------------------------|------------|--------|----------------------------|--------|----------------------------|
| NEAR APPROACH SLAB | | | | | | | | | | |
| ESS500 | 5 | 28 | 32'-9" | STR | | | | | | |
| ESS501 | 5 | 14 | 35'-5" | STR | | | | | | |
| ESS800 | 8 | 196 | 4'-8" | STR | | | | | | |
| EAS400 | 4 | 61 | 8'-11" | 27 | 3'-2" | 4" | 3" | 3'-0" | 1'-6" | R = 2" |
| EAS401 | 4 | 22 | 10'-8 5/8" TO 12'-4 5/8" | 27 | 4'-2" TO 5'-0" | 2 3/8" | 5" | 4'-0 1/2" TO 4'-10 1/2" | 1'-6" | VARY A & D 1" EACH, R = 1" |
| EAS402 | 4 | 10 | 10'-8 5/8" | 27 | 4'-2" | 2 3/8" | 5" | 4'-0 1/2" | 1'-6" | R = 1" |
| EAS403 | 4 | 6 | 6'-0 1/4" | 39 | 4'-2" | 2 3/8" | 5" | 1'-0 1/2" | | R = 1" |
| EAS404 | 4 | 6 | 5'-10 3/8" | 76 | 1'-6" | 2 3/8" | 4'-2" | | | R = 1" |
| EAS405 | 4 | 2 | 10'-5 7/8" | 27 | 4'-2" | 3 1/8" | 0" | 4'-0 1/2" | 1'-6" | R = 1 1/2" |
| EAS500 | 5 | 92 | 24'-6" | STR | | | | | | |
| EAS501 | 5 | 2 | 7'-2" TO 16'-9" | STR | | | | | | VARY EACH BY 9'-7" |
| EAS502 | 5 | 4 | 3'-3" TO 17'-2" | STR | | | | | | SEE VARYING BAR NOTE 1 |
| EAS503 | 5 | 1 | 24'-1" | STR | | | | | | BEND IN FIELD |
| EAS504 | 5 | 1 | 25'-10" | STR | | | | | | BEND IN FIELD |
| EAS505 | 5 | 194 | 7'-6" | 31 | 3'-4" | 10" | 3'-4" | | | |
| EAS506 | 5 | 26 | 25'-9" TO 26'-1" | 77 | 24'-10" TO 25'-2" | 11" | | | | VARY A 3 EACH BY 1/2" |
| EAS507 | 5 | 13 | 22'-11 1/2" TO 24'-2 1/2" | STR | | | | | | VARY EACH BY 1 1/4" |
| EAS508 | 5 | 13 | 22'-4 3/4" TO 22'-10 3/4" | STR | | | | | | VARY EACH BY 1/2" |
| EAS509 | 5 | 26 | 22'-5" | STR | | | | | | |
| EAS510 | 5 | 26 | 26'-1 1/4" TO 30'-0 1/4" | 77 | 25'-2 1/4" TO 29'-1 1/4" | 11" | | | | SEE VARYING BAR NOTE 2 |
| EAS511 | 5 | 52 | 7'-5" | 113 | 3'-0" | 1'-5" | 3'-0" | 1/2" | 2" | F = 1" |
| EAS600 | 6 | 52 | 49'-9" TO 52'-10 1/2" | STR | | | | | | VARY EACH BY 1 1/2" |
| EAS1000 | 10 | 123 | 24'-6" | STR | | | | | | |
| EAS1001 | 10 | 2 | 6'-3" TO 12'-8" | STR | | | | | | VARY EACH BY 6'-5" |
| EAS1002 | 10 | 6 | 2'-4" TO 18'-2" | STR | | | | | | SEE VARYING BAR NOTE 3 |
| EAS1003 | 10 | 1 | 24'-1" | STR | | | | | | BEND IN FIELD |
| EAS1004 | 10 | 1 | 25'-10" | 100 | 25'-10" | 25'-8 1/2" | | | | H = 1'-1 5/8", R = 73'-7" |
| EC410 | 4 | 13 | 24'-1" | STR | | | | | | |
| EC411 | 4 | 13 | 25'-6" TO 26'-0" | STR | | | | | | VARY EACH BY 1/2" |
| EC412 | 4 | 61 | 7'-9 1/2" | 10 | 2'-9" | 4" | 3" | 2'-9" | 5 1/2" | H = 3", R = 2" |
| EC413 | 4 | 20 | 6'-10" | STR | | | | | | |
| EC414 | 4 | 4 | 6'-10 5/8" | 78 | 5'-5 5/8" | 1'-5" | 4 1/8" | | | |
| EC510 | 5 | 26 | 11'-5" TO 11'-8" | STR | | | | | | VARY 2 EACH BY 1/4" |
| EC511 | 5 | 26 | 11'-8 1/4" TO 13'-2" | STR | | | | | | SEE VARYING BAR NOTE 4 |
| EC512 | 5 | 6 | 20'-4" | STR | | | | | | BEND IN FIELD |
| EC513 | 5 | 6 | 22'-2" | STR | | | | | | BEND IN FIELD |
| EC610 | 6 | 4 | 20'-5" | 78 | 15'-4" | 5'-1" | 10" | | | BEND TRANSVERSELY IN FIELD |
| EC611 | 6 | 4 | 22'-2" | 78 | 17'-1" | 5'-1" | 10" | | | BEND TRANSVERSELY IN FIELD |

| MARK | SIZE | NO REQ'D | LENGTH | TYPE | A | B | C | D | E | REMARKS |
|-------------------|------|----------|-----------------------------|------|-------------------|--------|--------|----------------------------|--------|----------------------------|
| FAR APPROACH SLAB | | | | | | | | | | |
| ESS550 | 5 | 14 | 57'-6" | STR | | | | | | |
| ESS551 | 5 | 14 | 32'-11" | STR | | | | | | |
| ESS850 | 8 | 180 | 4'-8" | STR | | | | | | |
| EAS400 | 4 | 6 | 8'-11" | 27 | 3'-2" | 4" | 3" | 3'-0" | 1'-6" | R = 2" |
| EAS401 | 4 | 22 | 10'-8 5/8" TO 12'-4 5/8" | 27 | 4'-2" TO 5'-0" | 2 3/8" | 5" | 4'-0 1/2" TO 4'-10 1/2" | 1'-6" | VARY A & D 1" EACH, R = 1" |
| EAS402 | 4 | 10 | 10'-8 5/8" | 27 | 4'-2" | 2 3/8" | 5" | 4'-0 1/2" | 1'-6" | R = 1" |
| EAS403 | 4 | 6 | 6'-0 1/4" | 39 | 4'-2" | 2 3/8" | 5" | 1'-0 1/2" | | R = 1" |
| EAS404 | 4 | 6 | 5'-10 3/8" | 76 | 1'-6" | 2 3/8" | 4'-2" | | | R = 1" |
| EAS405 | 4 | 2 | 10'-5 7/8" | 27 | 4'-2" | 3 1/8" | 0" | 4'-0 1/2" | 1'-6" | R = 1 1/2" |
| EAS550 | 5 | 92 | 24'-6" | STR | | | | | | |
| EAS551 | 5 | 4 | 9'-6" | STR | | | | | | |
| EAS552 | 5 | 192 | 7'-6" | 31 | 3'-4" | 10" | 3'-4" | | | |
| EAS553 | 5 | 52 | 22'-5" | STR | | | | | | |
| EAS554 | 5 | 30 | 25'-1" | 77 | 24'-2" | 11" | | | | |
| EAS555 | 5 | 22 | 26'-1" | 77 | 25'-2" | 11" | | | | |
| EAS556 | 5 | 52 | 7'-5" | 113 | 3'-0" | 1'-5" | 3'-0" | 1/2" | 2" | F = 1" |
| EAS650 | 6 | 30 | 48'-9" | STR | | | | | | |
| EAS651 | 6 | 22 | 49'-10" | STR | | | | | | |
| EAS1050 | 10 | 123 | 24'-6" | STR | | | | | | |
| EAS1051 | 10 | 4 | 9'-6" | STR | | | | | | |
| EC412 | 4 | 6 | 7'-9 1/2" | 10 | 2'-9" | 4" | 3" | 2'-9" | 5 1/2" | H = 3", R = 2" |
| EC413 | 4 | 20 | 6'-10" | STR | | | | | | |
| EC414 | 4 | 4 | 6'-10 5/8" | 78 | 5'-5 5/8" | 1'-5" | 4 1/8" | | | |
| EC450 | 4 | 4 | 9'-6" | STR | | | | | | |
| EC451 | 4 | 24 | 24'-6" | STR | | | | | | |
| EC550 | 5 | 30 | 10'-8" | STR | | | | | | |
| EC551 | 5 | 22 | 11'-8" | STR | | | | | | |
| EC552 | 5 | 12 | 5'-10" | STR | | | | | | |
| EC650 | 6 | 8 | 5'-11" | 78 | 10" | 5'-1" | 10" | | | |

NOTES:

- "E" PREFIX IN BAR MARK DENOTES EPOXY COATED BARS.
- ALL DIMENSIONS ARE OUT TO OUT OF BAR EXCEPT "A" & "C" ON STANDARD 135° AND 180° HOOKS, UNLESS NOTED.
- FOR REINFORCEMENT BAR FABRICATION DETAILS, REFER TO STANDARD DRAWING BC-736M.
- FIGURES IN CIRCLE REPRESENT BAR TYPES.
- "J" DIMENSIONS ON 180° HOOKS ARE SHOWN ONLY WHERE NECESSARY TO RESTRICT HOOK SIZE, OTHERWISE STANDARD HOOKS ARE TO BE USED.
- RADIUS, "R" IS TO THE INSIDE OF THE BAR.
- REINFORCEMENT BAR SCHEDULE IS FOR INFORMATION ONLY. VERIFY INFORMATION BEFORE FABRICATION.

REFERENCES:

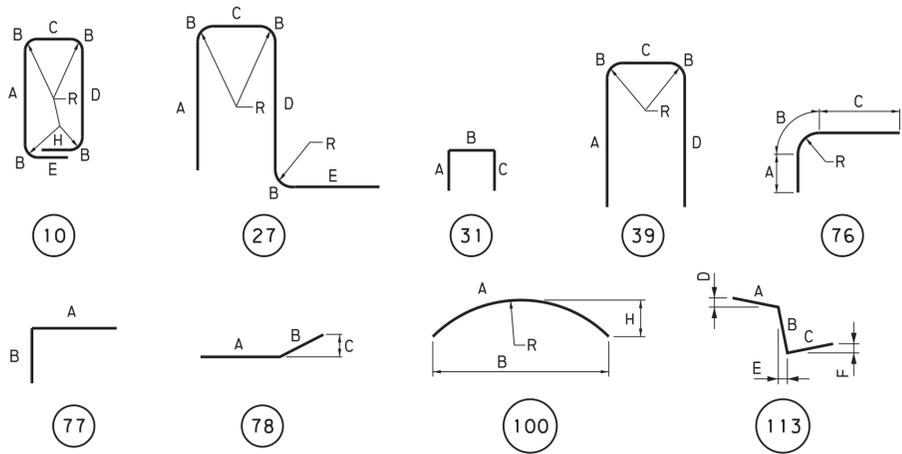
GENERAL NOTES
APPROACH SLAB DRAWINGS

SHEETS:

3 - 4
47 - 54

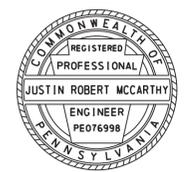
| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



VARYING BAR NOTES:

- EAS502 BAR LENGTHS: 3'-3", 6'-9", 11'-5", 17'-2"
- EAS510 BAR LENGTHS:
30'-0 1/4" (2 BARS)
28'-5" TO 29'-8" (5 BARS, VARY EACH BY 3 3/4")
27'-3" TO 28'-2" (5 BARS, VARY EACH BY 2 3/4")
26'-6" TO 27'-1" (5 BARS, VARY EACH BY 1 3/4")
26'-2" TO 26'-5" (5 BARS, VARY EACH BY 3/4")
26'-1 1/4" (4 BARS)
- EAS1002 BAR LENGTHS: 2'-4", 4'-5", 6'-11", 9'-11", 14'-0", 18'-2"
- EC511 BAR LENGTHS:
12'-10 1/2" (1 BAR)
12'-9" TO 13'-2" (5 BARS, VARY EACH BY 1 1/4")
12'-4" TO 12'-8" (5 BARS, VARY EACH BY 1")
12'-0" TO 12'-3" (5 BARS, VARY EACH BY 3/4")
11'-9" TO 12'-0" (5 BARS, VARY EACH BY 3/4")
11'-8 1/4" (5 BARS)



PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

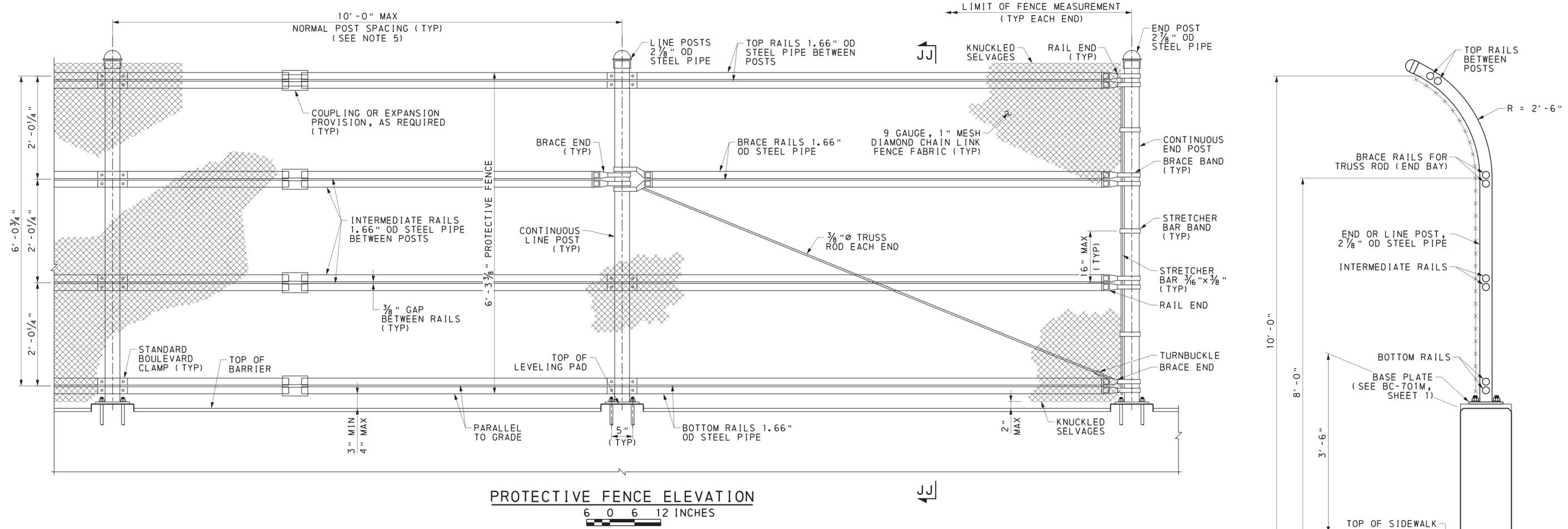
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
APPROACH SLAB REBAR SCHEDULE

RECOMMENDED 1-22-2025 SHEET 54 OF 62

S-42023

1/2/2025 LEMME: 63016-3-b784-bcr06.dgn



PROTECTIVE FENCE ELEVATION
6 0 6 12 INCHES

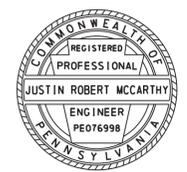
SECTION JJ-JJ
6 0 6 12 INCHES

NOTES:

1. REFER TO BC-701M FOR ADDITIONAL DETAILS.
2. INCLUDE ANTI-CLIMB SHIELD AT EACH END (4 TOTAL).
3. REFER TO SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.
4. COORDINATE PROTECTIVE FENCE ANCHOR BOLT LOCATIONS WITH PROTECTIVE FENCE FABRICATOR, BARRIER LUMINAIRES, AND JUNCTION BOXES. COORDINATE WITH HIGHWAY LIGHTING ALSO PLAN FOR PLACEMENT OF BARRIER LUMINAIRES AND JUNCTION BOXES.
5. REFER TO SHEET 40 FOR PROTECTIVE FENCE POST LOCATIONS AND SPACING.

| Mark | Description | By | Chk' d | Recm' d | Date |
|-----------|-------------|----|--------|---------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124



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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
PROTECTIVE FENCE DETAILS

RECOMMENDED 1-22-2025 SHEET 55 OF 62

S-42023

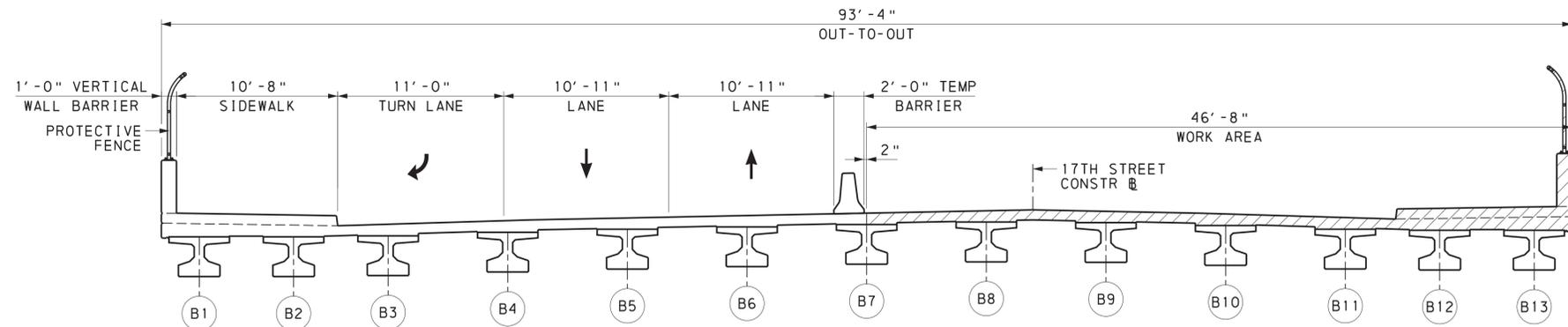
REFERENCES:

- GENERAL PLAN
- TYPICAL SECTION & LOAD RATINGS
- GENERAL NOTES
- BARRIER & SIDEWALK DETAILS

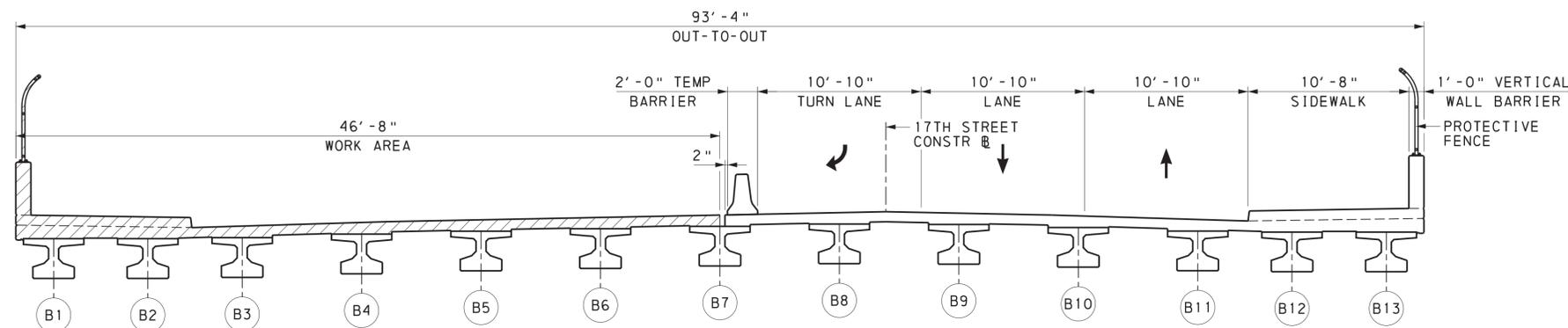
SHEETS:

- 1
- 2
- 3 - 4
- 40

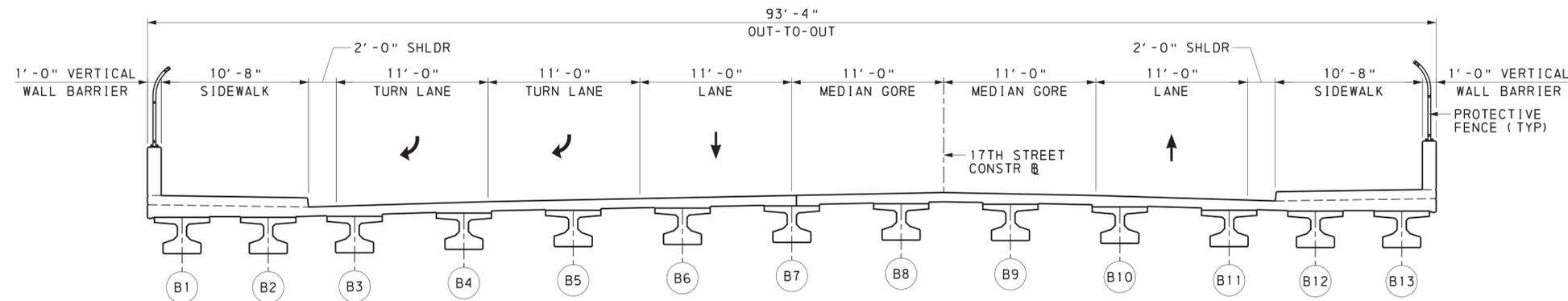
1/2/2025 LEMME: 63016-35-DR-B4-s-1603.dgn



STAGE 1
2 0 2 4 6 FEET
(LOOKING STATIONS AHEAD)



STAGE 2
2 0 2 4 6 FEET
(LOOKING STATIONS AHEAD)



STAGE 3
2 0 2 4 6 FEET
(LOOKING STATIONS AHEAD)

NOTES:

1. THE INTENT OF THIS SHEET IS TO DESCRIBE AN AVAILABLE STAGING CONCEPT FOR FUTURE REDECKING OF THE BRIDGE. IT IS NOT TO BE USED FOR THE CONSTRUCTION DEPICTED IN THESE PLANS.
2. A FULL CLOSURE WITH A LOCAL DETOUR IS THE PREFERRED ALTERNATIVE COMPARED TO STAGED REDECKING.

CONCEPTUAL REDECKING SEQUENCE:

- STAGE 1: PLACE TRAFFIC (BI-DIRECTIONAL) ON THE SOUTHBOUND SIDE OF THE BRIDGE. REMOVE AND REPLACE DECK AND BARRIER ON NORTHBOUND PORTION.
- STAGE 2: PLACE TRAFFIC ON NEWLY CONSTRUCTED NORTHBOUND PORTION OF BRIDGE (BI-DIRECTIONAL). REMOVE AND REPLACE DECK AND BARRIER ON SOUTHBOUND PORTION.
- STAGE 3: OPEN BRIDGE TO TRAFFIC.

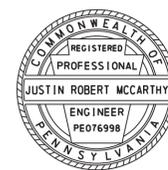
LEGEND:

LIMITS OF REMOVAL & RECONSTRUCTION

| Mark | Description | By | Chk'd | Recm'd | Date |
|-----------|-------------|----|-------|--------|------|
| REVISIONS | | | | | |

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

HNTB



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY
1-SPAN COMPOSITE PS CONCRETE
PA BULB-TEE BEAM BRIDGE
FUTURE REDECKING PLAN

PREPARED BY:
HNTB CORPORATION
4507 NORTH FRONT STREET
SUITE 300
HARRISBURG, PA 17110

RECOMMENDED 1-22-2025

SHEET 56 OF 62

S-42023

1/2/2025 11:21AM 63016-3-br-B4-1xp03.dgn

GENERAL NOTES

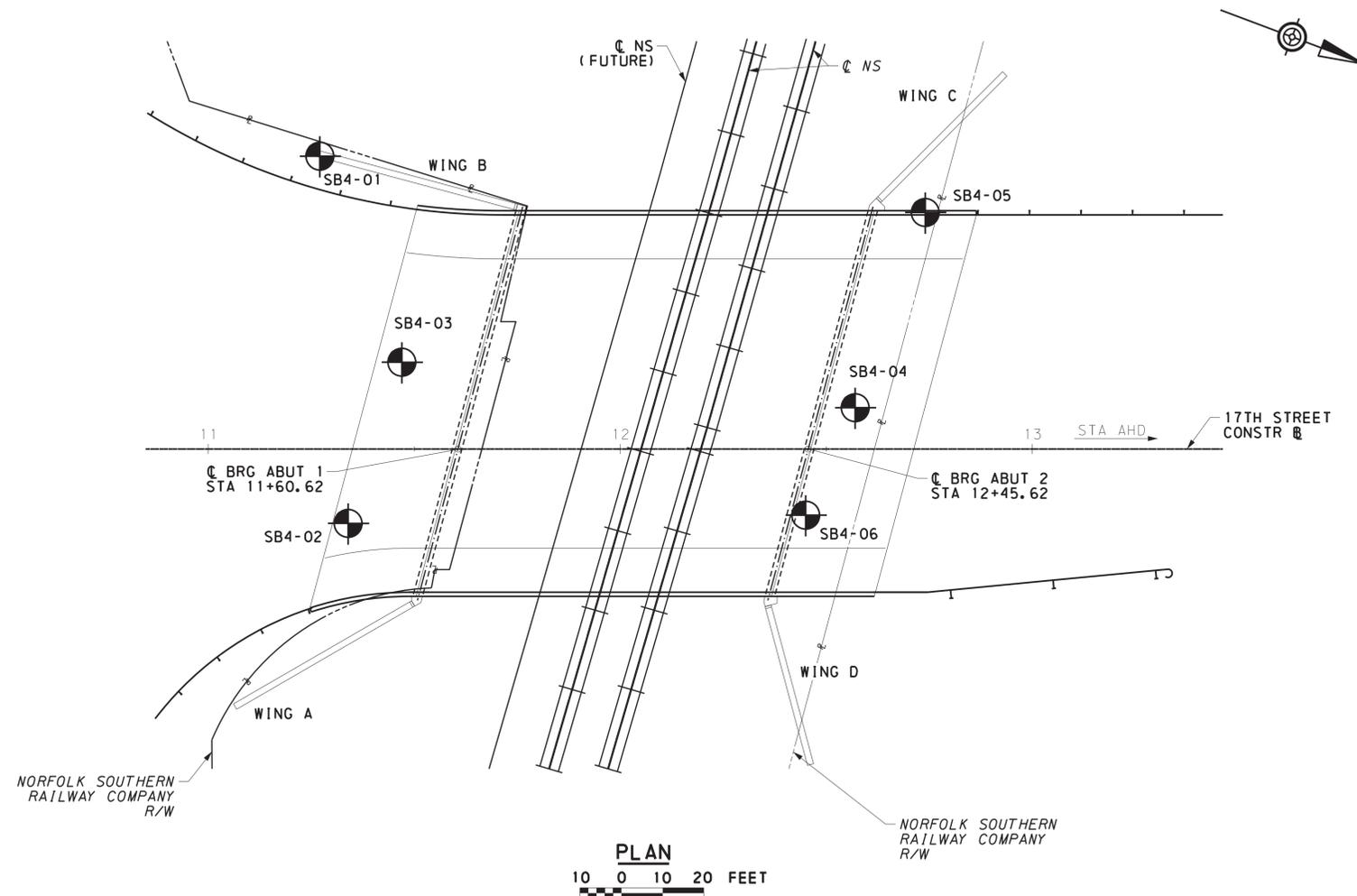
THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

- PP POCKET PENETROMETER
- T TORVANE
- NTS NOT TO SCALE
- BFE BOTTOM OF FOOTING ELEVATION
- BPCE BOTTOM OF PILE CAP ELEVATION
- EBBZ ESTIMATED BOTTOM OF BOND ZONE ELEVATION
- ETBZ ESTIMATED TOP OF BOND ZONE ELEVATION
- TOR ESTIMATED TOP OF ROCK ELEVATION



THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.
ME

THE SUBSURFACE EXPLORATION DATA THAT ARE PRESENTED ON THESE DRAWINGS (INCLUDING BORING LOGS, EARTH SAMPLES, ROCK CORES, CLASSIFICATION OF MATERIALS AND DEPTH OF BORINGS) ACCURATELY REPRESENT THE CONDITIONS ENCOUNTERED BY THE TEST BORING PROGRAM AT EACH BORING LOCATION.

[Signature]
GEOTECHNICAL ENGINEER/ENGINEERING GEOLOGIST

8/10/2023
DATE:

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

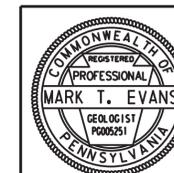
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY

1-SPAN COMPOSITE PS CONCRETE PA
BULB-TEE BEAM BRIDGE
STRUCTURE BORINGS - 1

SHEET 57 OF 62

S - 42023



SUBSTRUCTURE UNIT: WINGWALL B LOG 1 OF 1

BORING NUMBER: **SB4-01** BORING LOCATION STATION: 11+27.0 OFFSET: 71.0 FT. LT.

START: 02/23/2021 11:20 AM HAMMER: SAFETY
FINISH: 02/23/2021 2:35 PM EFFICIENCY: 0.6 Era

DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, SAFETY, ACKER SOIL SCOUT TRACK RIG

DRILLING INSPECTOR: RICK RICHARDS
DRILLER & DRILLING COMPANY: DYLAN ONEIL NAVARRO WRIGHT

| ELEV. | GRAPHIC | MATERIAL DESCRIPTION | AASHTO/USCS | SAMPLE DEPTH | SAMPLE NO. | BLOW COUNT | N ₆₀ / PPT TFSF | %RQD | REC (ft.) | REC (%) | Soil/Rock Rec. % | SPT (N ₆₀) |
|-------|-------------|--|-------------|--------------|------------|------------|----------------------------|------|-----------|---------|------------------|------------------------|
| 365 | [SILT] | SILT, some Clay, little Sand, trace Gravel, medium to stiff, damp, heterogeneous, low plastic fines, brown, fill. <i>With coal refuse in stratum.</i> 4.5'/EI. 362.3 | a-4 / ml | 1.5 | S-1 | 2-4-4 | 8 | 1.0 | 67 | | | |
| 363 | | | | S-2 | 4-7-5 | 12 | 0.9 | 60 | | | | |
| 361 | | | | S-3 | 5-6-7 | 13 | 0.9 | 60 | | | | |
| 359 | | | | S-4 | 3-7-7 | 14 | 1.1 | 73 | | | | |
| 357 | | | | S-5 | 10-16-22 | 38 | 1.0 | 67 | | | | |
| 355 | | | | S-6 | 25-22-22 | 44 | 0.7 | 47 | | | | |
| 353 | | | | S-7 | 18-12-12 | 24 | 0.5 | 33 | | | | |
| 351 | | | | S-8 | 9-5-5 | 10 | 0.9 | 60 | | | | |
| 349 | | | | S-9 | 10-10-10 | 20 | 1.2 | 80 | | | | |
| 347 | | | | S-10 | 2-5-5 | 10 | 0.8 | 53 | | | | |
| 345 | [LIMESTONE] | LIMESTONE, gray to dark gray, dull luster, medium hard to hard, slightly weathered to weathered, indistinct bedding, random fractures, narrow to medium spacing, shallow to very steep dip, narrow joint opening. <i>With calcite in stratum.</i> Soil seam from 20.9' to 21.1'. 15.0'/EI. 351.8 | a-4 / ml | 15.0 | R-1 | | 0% | 1.3 | 66 | | | |
| 343 | | | | R-2 | | 0% | 1.9 | 76 | | | | |
| 341 | | | | R-3 | | 72% | 2.4 | 96 | | | | |
| 339 | | | | R-4 | | 36% | 2.0 | 40 | | | | |
| 337 | | | | R-5 | | 77% | 2.6 | 100 | | | | |
| 335 | | | | R-6 | | 80% | 1.6 | 80 | | | | |
| 333 | | | | R-7 | | 92% | 5.0 | 100 | | | | |
| 331 | [SILT] | SILT, some Clay, little Sand, hard, moist, homogeneous, low plastic fines, brown, S-13: 27.0' to 27.8', 0.8' recovery, blows 2-50/0.3', slid down pinnacle. Started coring at 27.4'. 27.0'/EI. 339.8 | a-4 / cl-ml | 27.0 | | | | | | | | |
| 329 | | | | | | | | | | | | |
| 327 | [LIMESTONE] | LIMESTONE, dark gray to gray, dull luster, hard, slightly weathered, indistinct bedding, random fractures, narrow to medium spacing, moderate to very steep dip, narrow joint opening. <i>With calcite in stratum.</i> 27.4'/EI. 339.4 | a-4 / cl-ml | 27.4 | | | | | | | | |
| 325 | | | | | | | | | | | | |
| 323 | | | | 30.0 | | | | | | | | |
| 321 | | | | 32.0 | | | | | | | | |
| 319 | | | | 37.0 | | | | | | | | |

SUBSTRUCTURE UNIT: ABUTMENT 1 AND WINGWALL A LOG 1 OF 1

BORING NUMBER: **SB4-02** BORING LOCATION STATION: 11+34.0 OFFSET: 18.0 FT. RT.

START: 02/16/2021 10:30 AM HAMMER: AUTOMATIC
FINISH: 02/17/2021 3:00 PM EFFICIENCY: 0.8 Era

DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, DIEDRICH D50 TRACK RIG

DRILLING INSPECTOR: JACOB PERCEY
DRILLER & DRILLING COMPANY: LARRY MCCOY NAVARRO WRIGHT

| ELEV. | GRAPHIC | MATERIAL DESCRIPTION | AASHTO/USCS | SAMPLE DEPTH | SAMPLE NO. | BLOW COUNT | N ₆₀ / PPT TFSF | %RQD | REC (ft.) | REC (%) | Soil/Rock Rec. % | SPT (N ₆₀) |
|-------|-------------|--|-------------|--|------------|------------|----------------------------|------|-----------|---------|------------------|------------------------|
| 375 | [CONCRETE] | BITUMINOUS CONCRETE. 0.4'/EI. 376.2 | | 1.5 | | | | | | | | |
| 373 | | | | CEMENT CONCRETE, with rebar. 1.5'/EI. 375.1 | | | | | | | | |
| 371 | [GRAVEL] | GRAVEL, some Sand, trace Silt, trace Clay, dense to very dense, moist, heterogeneous, gap graded, sub-angular to angular, black to dark gray, fill. | A-1-a / GW | 4.5 | S-1 | 9-24-19 | 57 | 1.5 | 100 | | | |
| 369 | | | | S-2 | 36-20-20 | 53 | 1.5 | 100 | | | | |
| 367 | | | | S-3 | 10-15-13 | 37 | 1.0 | 67 | | | | |
| 365 | | | | S-4 | 25-13-20 | 44 | 1.5 | 100 | | | | |
| 363 | | | | S-5 | 23-20-28 | 64 | 1.5 | 100 | | | | |
| 361 | | | | S-6 | 26-50/2' | >67 | 0.7 | 100 | | | | |
| 359 | | | | S-7 | 50-50/1' | >67 | 0.6 | 100 | | | | |
| 357 | | | | S-8 | 50-43-47 | 120 | 1.5 | 100 | | | | |
| 355 | | | | S-9 | 40-24-40 | 85 | 1.5 | 100 | | | | |
| 353 | | | | S-10 | 50/4' | >67 | 0.4 | 100 | | | | |
| 351 | S-11 | 28-50/2' | >67 | 0.6 | 86 | | | | | | | |
| 349 | S-12 | 40-33-29 | 83 | 1.0 | 67 | | | | | | | |
| 347 | S-13 | 13-26-37 | 84 | 1.0 | 67 | | | | | | | |
| 345 | S-14 | 50/1' | >67 | 0.0 | 0 | | | | | | | |
| 343 | S-15 | WOH-1-2 0.25 | 4 | 1.0 | 67 | | | | | | | |
| 341 | S-16 | 2-1-50 0.75 | 68 | 1.1 | 73 | | | | | | | |
| 339 | S-17 | 50/0' | >67 | 0.0 | 0 | | | | | | | |
| 337 | R-1 | | 0% | 0.3 | 20 | | | | | | | |
| 335 | S-18 | 1-2-2 0.75 | 5 | 1.5 | 100 | | | | | | | |
| 333 | S-19 | 2-3-50/1' | 71 | 1.1 | 100 | | | | | | | |
| 331 | R-2 | | 96% | 2.3 | 96 | | | | | | | |
| 329 | R-3 | | 84% | 5.0 | 100 | | | | | | | |
| 327 | R-4 | | 88% | 5.0 | 100 | | | | | | | |
| 325 | R-5 | | 90% | 5.0 | 100 | | | | | | | |
| 323 | R-6 | | 97% | 2.9 | 97 | | | | | | | |
| 321 | [SILT] | SILT, some Clay, little Sand, trace Gravel, soft to medium, moist, homogeneous, low plastic fines, brown, residuum. S-16: Broken rock in shoe. 25.5'/EI. 351.1 | a-4 / ml | 24.0 | | | | | | | | |
| 319 | | | | | | | | | | | | |
| 317 | [CLAY] | CLAY, some Silt, little Gravel, medium to very stiff, moist, homogeneous, medium plastic fines, brown, residuum. 27.0'/EI. 349.6 | a-6 / cl | 25.5 | | | | | | | | |
| 315 | | | | | | | | | | | | |
| 313 | [LIMESTONE] | LIMESTONE, gray, dull luster, medium hard, slightly weathered to fresh, indistinct bedding, jointed, close to wide spacing, flat to steep dip, open joints. <i>Fractures infilled with calcite.</i> 29.6'/EI. 347.0 | | 27.0 | | | | | | | | |
| 311 | | | | | | | | | | | | |
| 309 | | | | 29.6 | | | | | | | | |
| 307 | | | | 50.0 | | | | | | | | |

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

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LEGEND

- PP POCKET PENETROMETER
- T TORVANE
- NTS NOT TO SCALE
- BFE BOTTOM OF FOOTING ELEVATION
- BPCE BOTTOM OF PILE CAP ELEVATION
- EBBZ ESTIMATED BOTTOM OF BOND ZONE ELEVATION
- ETBZ ESTIMATED TOP OF BOND ZONE ELEVATION
- TOR ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

ME

¹0-hr. Water: Boring grouted upon completion.

**SAMPLE NO. shading indicates lab testing performed.

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

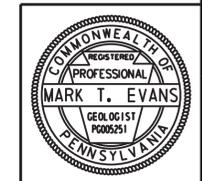
DAUPHIN COUNTY
SR 0083 SECTION B79

17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY

1-SPAN COMPOSITE PS CONCRETE PA
BULB-TEE BEAM BRIDGE
STRUCTURE BORINGS - 2

SHEET 58 OF 62

S - 42023



\\f1reser\sc1-net\01\Projects\36002\SR 83, Sec 079 - River to Eisenhower\SR 83, Sec 079\GEOTECHNICAL\CADD\WORKING FILES\TEST BORING SHEETS\B79 B4\36002-B79.ctb.B4.dgn
 PENNDOT STRUCTURE BORING LOG - PENNDOT_GINT_VERSION 1.2.3, 12-1-2016.GIT - 6/12/2016 10:08 AM - N:\PROJECTS\36002\SR 83, Sec 079\GEOTECHNICAL\CADD\WORKING FILES\TEST BORING SHEETS\B79 B4\36002-B79.ctb.B4.dgn

| | | | | | | | |
|---|--|---|--|---|--|--------------------------------|--|
| SUBSTRUCTURE UNIT: ABUTMENT 1 | | | | LOG 1 OF 1 | | | |
| BORING NUMBER: SB4-03 | | BORING LOCATION STATION: 11+47.0 OFFSET: 21.0 FT. LT. | | START: 02/25/2021 10:00 AM | | HAMMER: SAFETY | |
| DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, SAFETY, ACKER SOIL SCOUT TRACK RIG | | | | SIZE OF CORE: 2.000 IN. | | VERTICAL SCALE: 0 FT. 5 FT. | |
| DRILLING INSPECTOR: JACOB PERCEY DRILLER & DRILLING COMPANY: DYLAN ONEIL NAVARRO WRIGHT | | | | TOP OF BORING ELEVATION: 376.6 FT. | | | |
| | | | | ▽ 0 HR. READING - ELAPSED TIME: El. 348.3 ft. - 0.0 hr. | | | |
| | | | | ▼ 24 HR. READING - ELAPSED TIME: El. 348.3 ft. - 68.3 hr. | | | |

GENERAL NOTES

THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT. REFER TO PUBLICATION 408 SECTION 102.05 FOR FURTHER INFORMATION.

FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

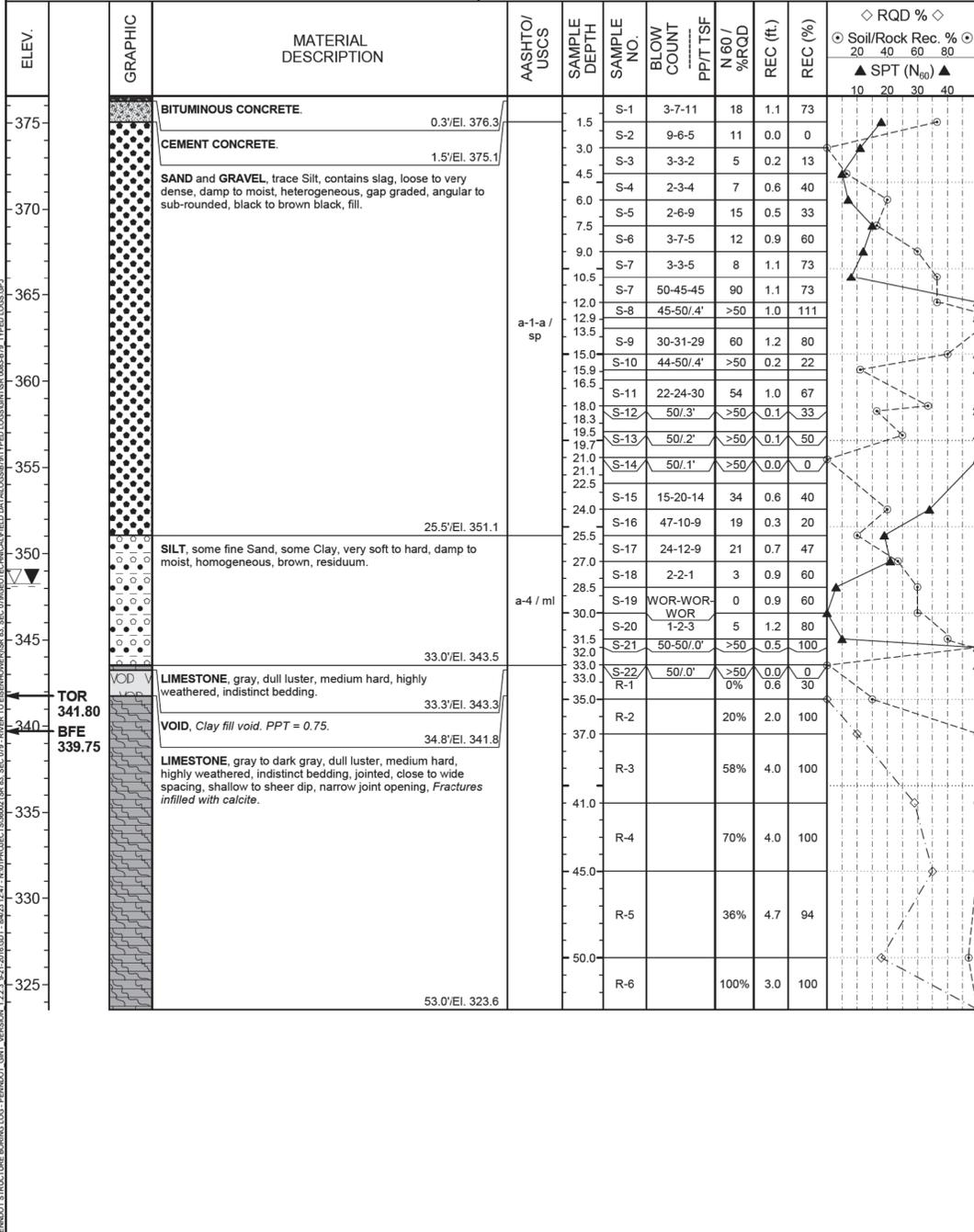
THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

- PP POCKET PENETROMETER
- T TORVANE
- NTS NOT TO SCALE
- BFE BOTTOM OF FOOTING ELEVATION
- BPCE BOTTOM OF PILE CAP ELEVATION
- EBBZ ESTIMATED BOTTOM OF BOND ZONE ELEVATION
- ETBZ ESTIMATED TOP OF BOND ZONE ELEVATION
- TOR ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

ME

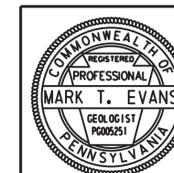


BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

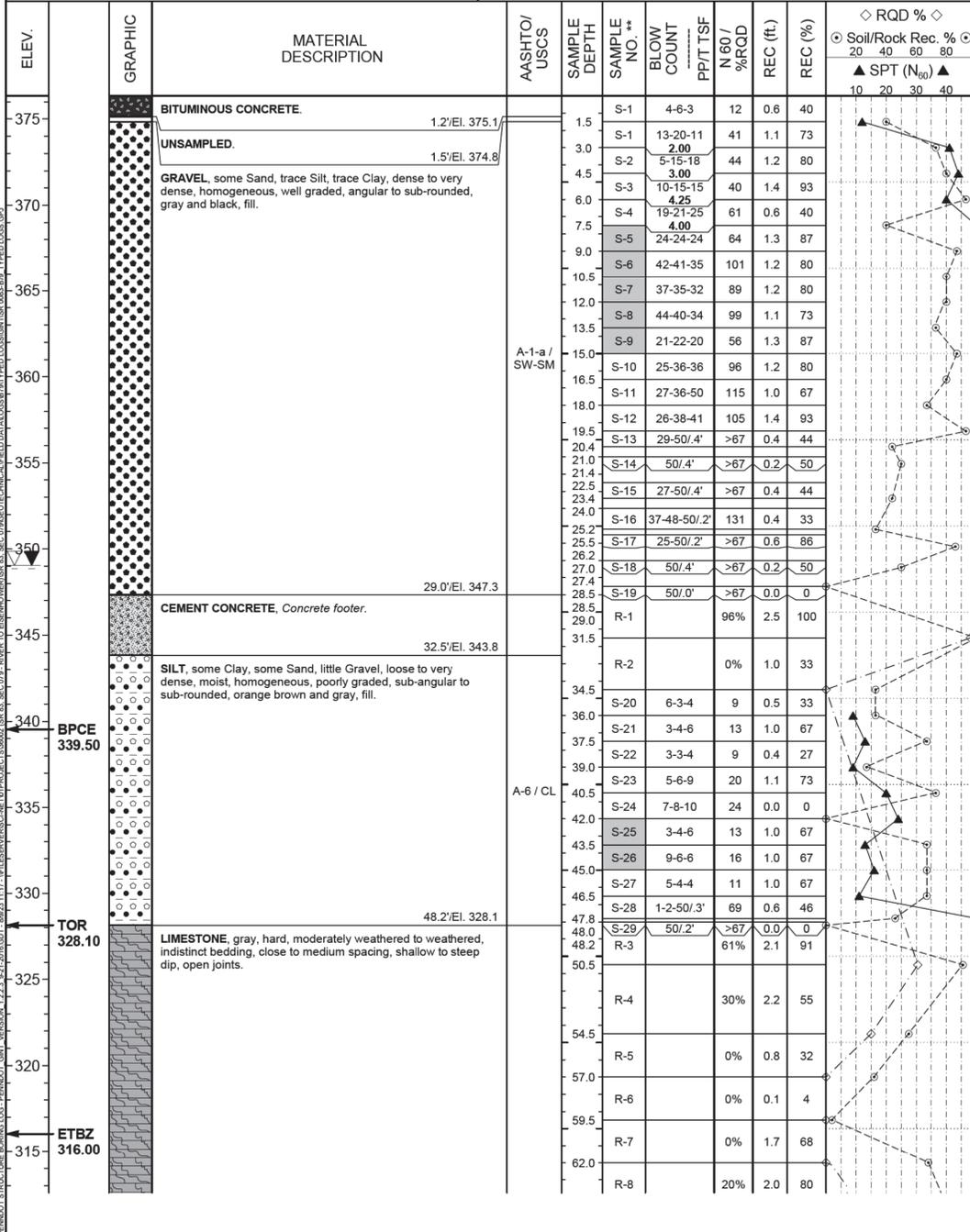
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY

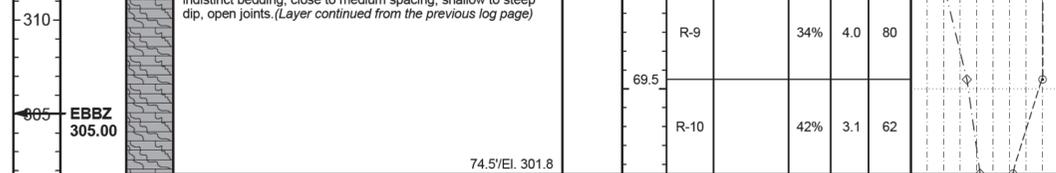
1-SPAN COMPOSITE PS CONCRETE PA
BULB-TEE BEAM BRIDGE
STRUCTURE BORINGS - 3



| | | | | | | | |
|---|--|---|--|---|--|---|--|
| SUBSTRUCTURE UNIT: ABUTMENT 2 | | | | LOG 1 OF 2 | | | |
| BORING NUMBER: SB4-04 | | BORING LOCATION STATION: 12+57.0 OFFSET: 10.0 FT. LT. | | START: 02/25/2021 9:30 AM FINISH: 03/01/2021 12:31 PM | | HAMMER: AUTOMATIC EFFICIENCY: 0.8 Era | |
| DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER AD2 TRUCK RIG | | | | SIZE OF CORE: 2.000 IN. | | VERTICAL SCALE: 0 FT. ██████████ 5 FT. | |
| DRILLING INSPECTOR: JEREMY COOK DRILLER & DRILLING COMPANY: TIM MEHALICK NAVARRO WRIGHT | | | | ▽ 0 HR. READING - ELAPSED TIME: El. 349.0 ft. - 0.0 hr. ▼ 24 HR. READING - ELAPSED TIME: El. 349.0 ft. - 1.5 hr. | | | |
| TOP OF BORING ELEVATION: 376.3 FT. | | | | | | | |



| | | | | | | | |
|---|--|---|--|---|--|---|--|
| SUBSTRUCTURE UNIT: ABUTMENT 2 | | | | LOG 2 OF 2 | | | |
| BORING NUMBER: SB4-04 | | BORING LOCATION STATION: 12+57.0 OFFSET: 10.0 FT. LT. | | VERTICAL SCALE: 0 FT. ██████████ 5 FT. | | ▽ 0 HR.: El. 349.0 ft. - 0.0 hr. ▼ 24 HR.: El. 349.0 ft. - 1.5 hr. | |
| TOP OF BORING ELEVATION: 376.3 FT. | | | | | | | |



**SAMPLE NO. shading indicates lab testing performed.

GENERAL NOTES

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FOR ADDITIONAL SOIL AND ROCK DESCRIPTIONS SEE PUBLICATION 222.

THE BORING LOGS AND RELATED INFORMATION DEPICT SUBSURFACE CONDITIONS ONLY AT THE SPECIFIC LOCATIONS AND DATES INDICATED. SUBSURFACE CONDITIONS MAY DIFFER FROM THE CONDITIONS REPORTED AT THE SPECIFIC LOCATIONS. ALSO, THE PASSAGE OF TIME MAY RESULT IN A CHANGE OF CONDITIONS AT THE BORING LOCATIONS.

LEGEND

- PP POCKET PENETROMETER
- T TORVANE
- NTS NOT TO SCALE
- BFE BOTTOM OF FOOTING ELEVATION
- BPCE BOTTOM OF PILE CAP ELEVATION
- EBBZ ESTIMATED BOTTOM OF BOND ZONE ELEVATION
- ETBZ ESTIMATED TOP OF BOND ZONE ELEVATION
- TOR ESTIMATED TOP OF ROCK ELEVATION

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

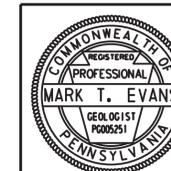
ME

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION

DAUPHIN COUNTY
SR 0083 SECTION B79
17TH STREET STA 12+03.12
OVER NORFOLK SOUTHERN RAILWAY COMPANY

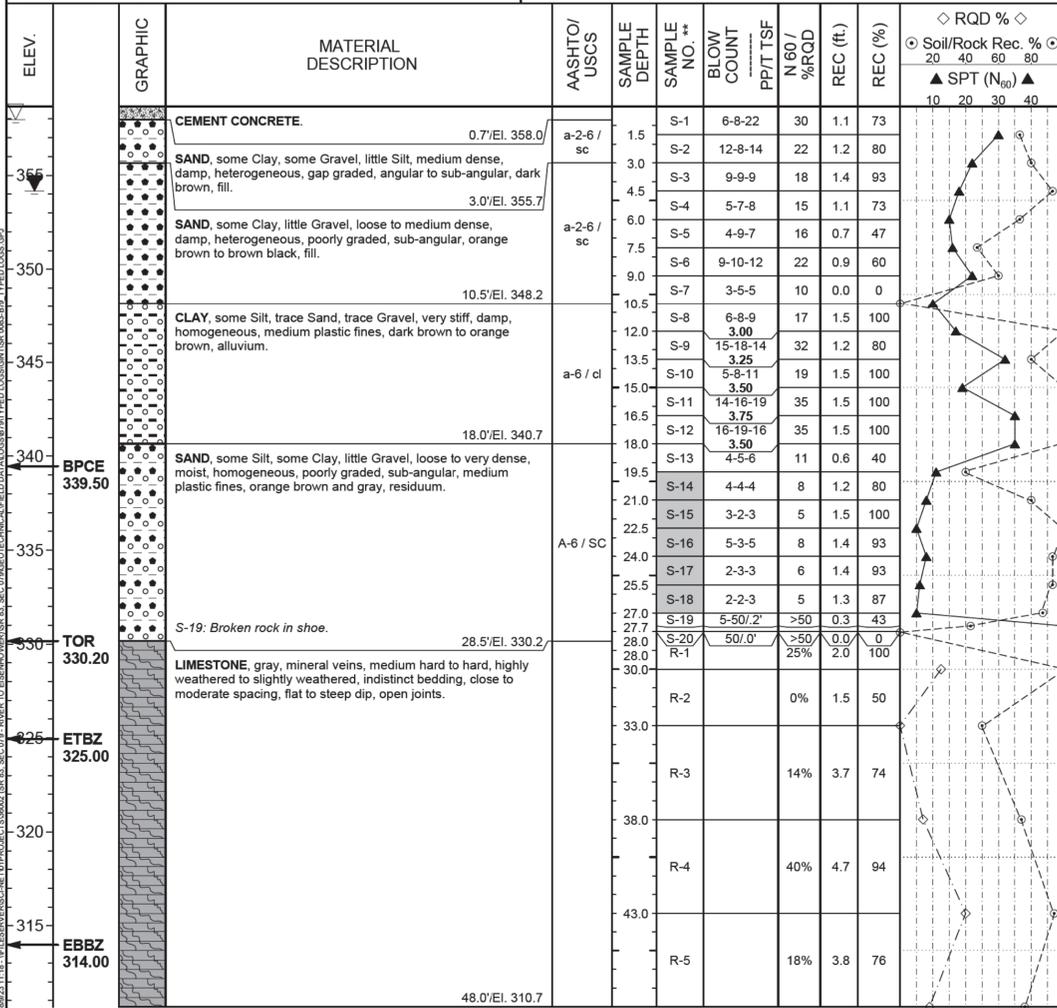
1-SPAN COMPOSITE PS CONCRETE PA
BULB-TEE BEAM BRIDGE
STRUCTURE BORINGS - 4



\\f1reser\sc1-net\01\Projects\36002\SR 83, Sec 079 - River to Eisenhower\SR 83, Sec 079\GEOTECHNICAL\CADD\WORKING FILES\TEST BORING SHEETS\B79 B4 36002-B79.ctb.B4.dgn
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SUBSTRUCTURE UNIT: **ABUTMENT 2 AND WINGWALL C** LOG 1 OF 1

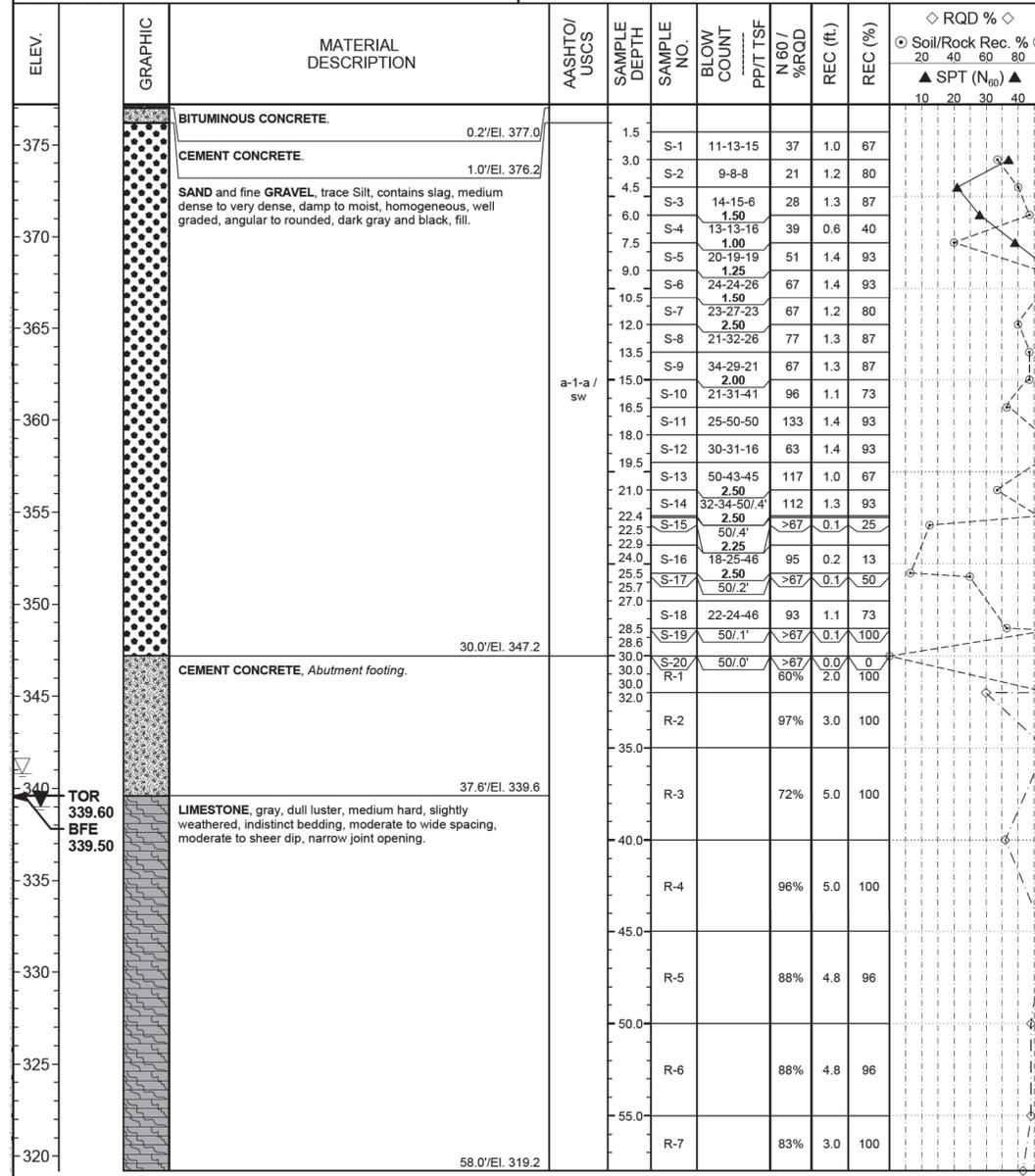
| | | | |
|---|---|---|---------------------------------------|
| BORING NUMBER: SB4-05 | BORING LOCATION STATION: 12+74.0 OFFSET: 57.0 FT. LT. | START: 03/19/2021 1:00 PM FINISH: 03/22/2021 2:00 PM | HAMMER: SAFETY EFFICIENCY: 0.6 Era |
| DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, SAFETY, ACKER SOIL SCOUT TRACK RIG | | SIZE OF CORE: 2.000 IN. | VERTICAL SCALE: 0 FT. 5 FT. |
| DRILLING INSPECTOR: JEREMY COOK/JACOB PERCEY DRILLER & DRILLING COMPANY: DYLAN ONEIL NAVARRO WRIGHT | | TOP OF BORING ELEVATION: 358.7 FT. | |
| ▽ 0 HR. READING - ELAPSED TIME: El. 358.0 ft. - 0.0 hr. | | ▼ 24 HR. READING - ELAPSED TIME: El. 354.2 ft. - 19.5 hr. | |



**SAMPLE NO. shading indicates lab testing performed.

SUBSTRUCTURE UNIT: **ABUTMENT 2 AND WINGWALL D** LOG 1 OF 1

| | | | |
|---|---|---|--|
| BORING NUMBER: SB4-06 | BORING LOCATION STATION: 12+45.0 OFFSET: 16.0 FT. RT. | START: 02/17/2021 10:00 AM FINISH: 02/23/2021 2:50 PM | HAMMER: AUTOMATIC EFFICIENCY: 0.8 Era |
| DRILLING METHOD AND EQUIPMENT: DOUBLE TUBE WIRE LINE-NQ, AUTOMATIC, ACKER AD2 TRUCK RIG | | SIZE OF CORE: 2.000 IN. | VERTICAL SCALE: 0 FT. 5 FT. |
| DRILLING INSPECTOR: JEREMY COOK DRILLER & DRILLING COMPANY: TIM MEHALICK NAVARRO WRIGHT | | TOP OF BORING ELEVATION: 377.2 FT. | |
| ▽ 0 HR. READING - ELAPSED TIME: El. 340.8 ft. - 0.0 hr. | | ▼ 24 HR. READING - ELAPSED TIME: El. 339.0 ft. - 18.4 hr. | |



GENERAL NOTES

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LEGEND

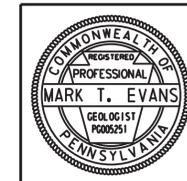
| | |
|------|---|
| PP | POCKET PENETROMETER |
| T | TORVANE |
| NTS | NOT TO SCALE |
| BFE | BOTTOM OF FOOTING ELEVATION |
| BPCE | BOTTOM OF PILE CAP ELEVATION |
| EBBZ | ESTIMATED BOTTOM OF BOND ZONE ELEVATION |
| ETBZ | ESTIMATED TOP OF BOND ZONE ELEVATION |
| TOR | ESTIMATED TOP OF ROCK ELEVATION |

THE DESCRIPTIONS OF THE MATERIALS ENCOUNTERED HAVE BEEN VERIFIED.

ME

BMS STR ID: 22-7301-0000-0014 MPMS/ECMS PROJ: 113357 BRKEY: 70124

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 DEPARTMENT OF TRANSPORTATION
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 SR 0083 SECTION B79
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 OVER NORFOLK SOUTHERN RAILWAY COMPANY
 1-SPAN COMPOSITE PS CONCRETE PA
 BULB-TEE BEAM BRIDGE
 STRUCTURE BORINGS - 5



\\f1reser\sc1-net\01\Projects\36002\SR 83, Sec 079 - River - River to Eisenhower\SR 83, Sec 079 GEOTECHNICAL\CADD\WORKING FILES\TEST BORING SHEETS\B79 B4\36002-B79.ctb.B4.dgn
 PENNDOT\STRUCTURE BORING LOGS - PENNDOT.GIT - VERSION 1.2.3, 4/21/2016.GIT - AM93.11.18 - VFILESERVERS\NET\PROJECTS\36002\SR 83, SEC 079 - RIVER TO EISENHOWER\SR 83, SEC 079 GEOTECHNICAL\CADD\WORKING FILES\TEST BORING SHEETS\B79 B4\36002-B79.ctb.B4.dgn

