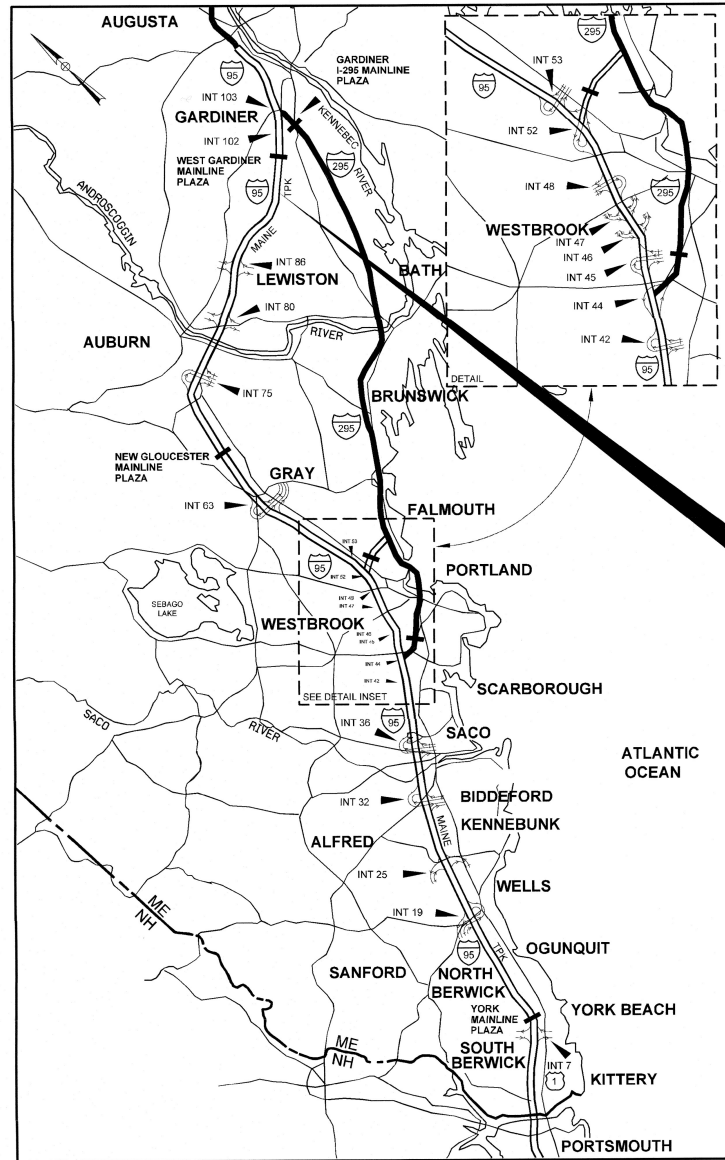


Date: 1/27/2022



LOCATION MAP



THE GOLD STAR MEMORIAL HIGHWAY

# MAINE TURNPIKE AUTHORITY

DANIEL E. WATHEN, CHAIR  
 ROBERT D. STONE, VICE CHAIR  
 MICHAEL J. CIANCHETTE, MEMBER  
 ANN R. ROBINSON, MEMBER  
 THOMAS J. ZUKE, MEMBER  
 JANE L. LINCOLN, MEMBER  
 BRUCE VAN NOTE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

## CONTRACT 2022.06 SUPERSTRUCTURE REPLACEMENT RICHMOND ROAD (ROUTE 197) UNDERPASS MILE 93.3

### INDEX OF SHEETS

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CONTRACT 2022.06

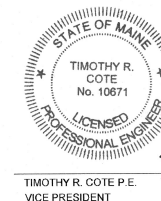
APPROVED: MAINE TURNPIKE AUTHORITY

*Peter S. Merfeld*  
 PETER S. MERFELD, P.E. - CHIEF OPERATIONS OFFICER

02-03-2022  
 DATE

*Stephen R. Martre*  
 STEPHEN R. MARTRE, P.E. - DIRECTOR OF ENGINEERING & BUILDING MAINTENANCE

2/3/22  
 DATE



*Timothy R. Cote*

TIMOTHY R. COTE P.E.  
 VICE PRESIDENT

2/2/2022  
 DATE

Filename: OXX\_Title\_Sheet.dgn

Date: 2/7/2022

| ESTIMATED QUANTITIES |  |                |      |
|----------------------|--|----------------|------|
| ITEM NO.             | DESCRIPTION  | TOTAL QUANTITY | UNIT |
| 201.11               | CLEARING   | 1.00           | AC   |
| 202.10               | REMOVING EXISTING SUPERSTRUCTURE - PROPERTY OF CONTRACTOR (STEEL 157,000 LBS; CONCRETE 280 CY) | 1              | LS   |
| 202.12               | REMOVING EXISTING STRUCTURAL CONCRETE  | 92             | CY   |
| 203.20               | COMMON EXCAVATION  | 1,900          | CY   |
| 203.24               | COMMON BORROW  | 2,750          | CY   |
| 203.34               | LIGHTWEIGHT FILL   | 80             | CY   |
| 206.082              | STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY                                  | 125            | CY   |
| 304.10               | AGGREGATE SUBBASE COURSE - GRAVEL  | 3,150          | CY   |
| 403.207              | HOT MIX ASPHALT, 19 MM NOMINAL MAXIMUM SIZE  | 580            | TON  |
| 403.208              | HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE  | 415            | TON  |
| 403.209              | HOT MIX ASPHALT, 9.5 MM NOMINAL MAXIMUM SIZE (SIDEWALKS, DRIVES, ISLANDS & INCIDENTALS)        | 2              | TON  |
| 403.213              | HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE (BASE AND INTERMEDIATE BASE COURSE)              | 415            | TON  |
| 409.15               | BITUMINOUS TACK COAT, APPLIED  | 280            | GAL  |
| 419.30               | SAWING BITUMINOUS PAVEMENT   | 46             | LF   |
| 502.219              | STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (115 CY)                                    | 1              | LS   |
| 502.239              | STRUCTURAL CONCRETE, PIERS (47 CY)   | 1              | LS   |
| 502.26               | STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGES (226 CY)                        | 1              | LS   |
| 502.31               | STRUCTURAL CONCRETE APPROACH SLAB (11 CY)  | 1              | LS   |
| 502.49               | STRUCTURAL CONCRETE CURBS AND SIDEWALKS (40 CY)  | 1              | LS   |
| 503.14               | EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED                                       | 107,200        | LB   |
| 503.15               | EPOXY-COATED REINFORCING STEEL, PLACING  | 107,200        | LB   |
| 504.711              | STRUCTURAL STEEL ERECTION, SUPPLIED BY AUTHORITY (217,000 LBS)                                 | 1              | LS   |
| 505.08               | SHEAR CONNECTORS (3,264 EA)  | 1              | LS   |
| 507.0821             | STEEL BRIDGE RAILING, 3 BAR (592 LF)   | 1              | LS   |
| 508.13               | SHEET WATERPROOFING MEMBRANE (75 SY)   | 1              | LS   |
| 508.14               | HIGH PERFORMANCE WATERPROOFING MEMBRANE (795 SY)   | 1              | LS   |
| 509.202              | CULVERT SLIPLINING   | 1              | LS   |
| 511.07               | COFFERDAM  | 1              | LS   |
| 514.06               | CURING BOX FOR CONCRETE CYLINDERS  | 1              | EA   |
| 515.201              | PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES   | 380            | SY   |
| 515.202              | CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES   | 710            | SY   |
| 518.20               | PIER REPAIRS   | 220            | SF   |
| 518.40               | EPOXY INJECTION CRACK REPAIR   | 40             | LF   |
| 520.2211             | EXPANSION DEVICE INSTALLATION - GLAND SEAL, SUPPLIED BY THE AUTHORITY                          | 2              | EA   |
| 523.521              | INSTALLATION OF BEARING DEVICES - SUPPLIED BY AUTHORITY  | 20             | EA   |
| 524.40               | PROTECTIVE SHIELDING - STEEL GIRDERS   | 1,200          | SY   |
| 526.306              | TEMPORARY CONCRETE BARRIER, TYPE I - SUPPLIED BY AUTHORITY (320 LF)                            | 1              | LS   |
| 526.34               | PERMANENT CONCRETE TRANSITION BARRIER  | 4              | EA   |
| 527.341              | WORK ZONE CRASH CUSHIONS - TL-3  | 2              | UNIT |
| 606.1301             | 3" W-BEAM GUARDRAIL - MID-WAY SPLICE (7' STEEL POSTS, 8' OFFSET BLOCKS, SINGLE FACED)          | 1,350          | LF   |
| 606.1307             | 3" W-BEAM GUARDRAIL - MID-WAY SPLICE FLARED TERMINAL   | 4              | EA   |
| 606.1723             | BRIDGE TRANSITION - TYPE III   | 4              | EA   |
| 606.353              | REFLECTORIZED FLEXIBLE GUARDRAIL MARKER  | 8              | EA   |
| 606.3605             | GUARDRAIL - REMOVE, MODIFY, AND RESET SINGLE RAIL  | 540            | LF   |
| 607.17               | CHAIN LINK FENCE - 6 FOOT  | 370            | LF   |
| 607.183              | CHAIN LINK SNOW FENCE  | 304            | LF   |
| 607.23               | CHAIN LINK FENCE GATE  | 2              | EA   |
| 607.32               | BRACING ASSEMBLY TYPE I - METAL POSTS  | 8              | EA   |
| 607.33               | BRACING ASSEMBLY TYPE II - METAL POSTS   | 8              | EA   |
| 610.08               | PLAN RIPRAP  | 61             | CY   |
| 610.181              | TEMPORARY STONE CHECK DAM  | 2              | CY   |
| 613.319              | EROSION CONTROL BLANKET  | 3,850          | SY   |
| 615.07               | LOAM   | 360            | CY   |
| 618.14               | SEEDING METHOD NUMBER 2  | 57             | UNIT |
| 619.1201             | MULCH, PLAN QUANTITY   | 57             | UNIT |
| 619.1202             | TEMPORARY MULCH  | 1              | LS   |
| 619.14               | EROSION CONTROL MIX  | 490            | CY   |
| 620.58               | EROSION CONTROL GEOTEXTILE   | 200            | SY   |
| 627.733              | 4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE   | 4,500          | LF   |
| 629.05               | HAND LABOR, STRAIGHT TIME  | 30             | HR   |
| 631.10               | AIR COMPRESSOR (INCLUDING OPERATOR)  | 30             | HR   |
| 631.11               | AIR TOOL (INCLUDING OPERATOR)  | 30             | HR   |
| 631.12               | ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)   | 30             | HR   |
| 631.172              | TRUCK - LARGE (INCLUDING OPERATOR)   | 30             | HR   |
| 631.32               | CULVERT CLEANER (INCLUDING OPERATORS)  | 10             | HR   |
| 631.36               | FOREMAN  | 10             | HR   |
| 639.18               | FIELD OFFICE, TYPE A   | 1              | EA   |
| 652.30               | FLASHING ARROW   | 2              | EA   |
| 652.312              | TYPE III BARRICADES  | 4              | EA   |
| 652.33               | DRUM   | 70             | EA   |
| 652.34               | CONE   | 70             | EA   |

| ESTIMATED QUANTITIES |   |                |      |
|----------------------|---|----------------|------|
| ITEM NO.             | DESCRIPTION                                     | TOTAL QUANTITY | UNIT |
| 652.35               | CONSTRUCTION SIGNS                              | 960            | SF   |
| 652.361              | MAINTENANCE OF TRAFFIC CONTROL DEVICES (244 CD) | 1              | LS   |
| 652.41               | PORTABLE-CHANGEABLE MESSAGE SIGN                | 2              | EA   |
| 652.45               | TRUCK MOUNTED ATTENUATOR                        | 200            | CD   |
| 652.452              | AUTOMATED TRAILER MOUNTED SPEED LIMIT SIGN      | 2              | EA   |
| 656.50               | BALED HAY, IN PLACE                             | 10             | EA   |
| 656.60               | TEMPORARY BERMS                                 | 100            | LF   |
| 656.62               | TEMPORARY SLOPE DRAINS                          | 100            | LF   |
| 656.632              | 30 INCH TEMPORARY SILT FENCE                    | 2,020          | LF   |
| 659.10               | MOBILIZATION                                    | 1              | LS   |

**EARTHWORK SUMMARY (CY)**

**COMMON EXCAVATION FOR ESTIMATE**

|   |       |       |
|---|-------|-------|
| COMMON EXCAVATION (FROM CROSS SECTIONS) | 1,686 |       |
| GRUBBING IN FILL                        | 204   |       |
| TOTAL COMMON EXCAVATION (for estimate)  |       | 1,890 |

**FILL FOR BORROW CALCULATIONS**

|                                   |       |       |
|-----------------------------------|-------|-------|
| COMMON FILL (FROM CROSS SECTIONS) | 3,416 |       |
| GRUBBING IN FILL                  | 204   |       |
| TOTAL FILL                        |       | 3,620 |

**AVAILABLE COMMON EXCAVATION FOR BORROW CALCULATIONS**

|                               |     |       |
|-------------------------------|-----|-------|
| (1) TOTAL COMMON EXCAVATION   |     | 1,890 |
| DEDUCTIONS:                   |     |       |
| GRUBBING IN CUT               | 230 |       |
| GRUBBING IN FILL              | 204 |       |
| PAVEMENT SALVAGE (CUT & FILL) | 473 |       |
| (2) TOTAL DEDUCTIONS          |     | 907   |

TOTAL AVAILABLE COMMON EXCAVATION (1) MINUS (2) UNDERDRAIN ONLY) 983

TOTAL AVAILABLE NON-ROCK EXCAVATION 983

**COMPUTATION FOR COMMON BORROW FOR ESTIMATE**

(3) TOTAL FILL 3,620

TOTAL AVAIL. NON-ROCK EXCAV. 983 x 0.90 = 885

(4) TOTAL AVAILABLE EXCAVATION = 885

BORROW NEEDED = TOTAL FILL MINUS TOTAL AVAILABLE EXCAVATION 2,735

Filename: 0XX\_EstimatedQuantities.dgn

Scale: **NOT TO SCALE**

Designed by:



HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
TEL (207) 774-5155  
FAX (207) 228-0909



**THE GOLD STAR  
MEMORIAL HIGHWAY**

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
ESTIMATED QUANTITIES AND  
EARTHWORK SUMMARY

SHEET NUMBER: EQ-01

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2022.06

2 OF 81

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |

|   |     |       |              |     |       |
|---|-----|-------|--------------|-----|-------|
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
|   | CDH | 01\22 | Checked      | DAM | 01\22 |
|   | CDH | 01\22 | In Charge of | TRC | 01\22 |

Date: 2/7/2022

Filename: 0XX\_GeneralNotes.dgn

**GENERAL**

1. ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MAINE DOT) STANDARD DETAILS HIGHWAYS AND BRIDGES, 2014, AND MAINE DEP BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL, LATEST REVISION, UNLESS OTHERWISE INCLUDED IN THESE PLANS.
2. CHAIN LINK FENCE GATES SHALL BE 4' WIDE SINGLE GATES. A GATE SHALL BE LOCATED ON EACH SIDE OF THE TURNPIKE ROADWAY. EXACT LOCATION OF THE GATE SHALL BE DETERMINED IN THE FIELD BY THE RESIDENT.
3. CONNECTIONS FOR EXISTING FENCE TO PROPOSED FENCE SHALL BE INCIDENTAL TO THE PROPOSED FENCE ITEMS.
4. THE CONTRACTOR SHALL SUBMIT PROPOSED STAGING AREA(S) AND FIELD TRAILER LOCATION TO THE RESIDENT FOR APPROVAL PRIOR TO STARTING WORK.
5. RIGHT OF WAY AND PROPERTY LINES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
6. PAVED APRONS FOR DRIVEWAYS SHALL BE PAVED WITH A DEPTH OF 2".
7. DURING CONSTRUCTION ROUTE 197 WILL BE CLOSED FOR A TIME PERIOD SPECIFIED IN THE SPECIAL PROVISIONS.
8. EXISTING BEAMS WERE REPAINTED IN 2007 AND MAY CONTAIN REMNANTS OF LEAD BASED PAINT. SEE SPECIAL PROVISIONS FOR LEAD BASED PAINT DISPOSAL IF ENCOUNTERED.
9. AS PART OF THE DETOUR SETUP, A DOUBLE YELLOW CENTERLINE SHALL BE STRIPED ACROSS THE SMALL ROAD BRIDGE CROSSING THE MAINE TURNPIKE. A QUANTITY OF 300 LF WAS INCLUDED IN THE ESTIMATE UNDER ITEM 627.733 TO COVER THIS WORK.

**GUARDRAIL**

1. AT THE END OF EACH WORK DAY, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL OR CONCRETE BARRIER WITHIN ALL WORK AREAS THAT ARE ACCESSIBLE TO TRAFFIC.
2. GUARDRAIL REMOVED AND NOT RESET OR STACKED SHALL BE INCIDENTAL TO CONTRACT ITEMS AND INCLUDE ALL REMOVAL, DISPOSAL, EQUIPMENT, AND LABOR NECESSARY TO SATISFACTORILY COMPLETE THE WORK.
3. W-BEAM GUARDRAIL EXISTS ON THE PROJECT SITE. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING W-BEAM GUARDRAIL NOT RESET.
4. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING ALL EXISTING MAILBOXES TO ENSURE THAT MAIL WILL BE DELIVERABLE. THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT.
5. OFFSET BLOCKS FOR GUARDRAIL SHALL BE COMPOSITE.

**DRAINAGE**

1. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT. ABANDONED STRUCTURES TO REMAIN SHALL BE PLUGGED WITH BRICK AND MORTAR (INCIDENTAL TO 604 ITEMS) AND FILLED WITH FLOWABLE FILL (ITEM 602.30).
2. INLETS AND OUTLETS OF ALL CULVERTS SHALL BE RIPRAPPED UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.
3. EXISTING CULVERTS TO REMAIN SHALL BE CLEANED AS DIRECTED BY THE RESIDENT UNDER ITEM 631.32 CULVERT CLEANER (INCLUDING OPERATORS). POST CONSTRUCTION, ALL EXISTING DRAINAGE TO REMAIN AND NEW DRAINAGE SHALL BE CLEANED AS DIRECTED BY THE RESIDENT UNDER ITEM 631.32 CULVERT CLEANER (INCLUDING OPERATORS).
4. ALL DITCH ELEVATIONS AND OFFSETS SHOWN ON THE CROSS SECTIONS ARE FOR THE FINISHED DITCH FLOW LINE.

**EARTHWORK**


1. CLEARING LIMITS SHALL BE AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE RESIDENT. THE ACTUAL CLEARING LINES SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AND SHALL BE APPROVED BY THE RESIDENT PRIOR TO ANY CLEARING TAKING PLACE.
2. EXISTING INSLOPES STEEPER THAN 2:1 IN PROPOSED FILL AREAS SHALL BE BENCHING AS SHOWN IN THE DETAILS OR AS DIRECTED BY THE RESIDENT.
3. GRUBBING IN FILL HAS BEEN SHOWN ON THE CROSS SECTIONS. THESE LIMITS ARE APPROXIMATE AND HAVE BEEN USED FOR QUANTITY ESTIMATION PURPOSES ONLY. ACTUAL LIMITS MAY VARY BASED ON FIELD CONDITIONS AND AS DIRECTED BY THE RESIDENT. GRUBBING DEPTH HAS BEEN ESTIMATED AS 6 INCHES IN FIELD AREAS AND 12 INCHES IN WOODED AREAS.
4. WASTE MATERIALS SHALL BE DISPOSED OF OFF THE PROJECT SITE, IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS.
6. ALL EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA SUBPART P, EXCAVATIONS, OF 29 CFR PART 1926.650-652 AND APPENDICES. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY, STABILITY AND MAINTENANCE OF ALL TEMPORARY SLOPES.
7. REMOVAL OF EXISTING PAVEMENT SHALL BE PAID FOR AS COMMON EXCAVATION. EXISTING PAVEMENT THICKNESS HAS BEEN ESTIMATED TO BE 6 INCHES.
8. PLACEMENT OF TEMPORARY FILLS OUTSIDE THE EMBANKMENT FOOTPRINT FOR PURPOSES SUCH AS MATERIAL STOCKPILES, ACCESS ROADS, ETC. WILL REQUIRE ADVANCE APPROVAL OF THE RESIDENT. THE CONTRACTOR SHALL SUBMIT PLAN DETAILS IN ADVANCE SHOWING PROPOSED LOCATION AND HEIGHTS OF TEMPORARY FILLS. TEMPORARY FILLS SHALL HAVE SUFFICIENT LATERAL CLEARANCE FROM EXISTING UTILITIES, ROADWAYS, AND STRUCTURES TO PREVENT DAMAGE.
9. EXCAVATED SOIL MEETING THE MATERIAL AND GRADATION REQUIREMENTS OF COMMON BORROW MAY BE REPURPOSED FOR EMBANKMENT CONSTRUCTION. ALL OTHER SOILS AND WASTE MATERIALS, INCLUDING ORGANIC PEAT/MUCK, ROOTS, AND STUMPS, SHALL BE DISPOSED OF OFF THE PROJECT SITE IN ACCORDANCE WITH ENVIRONMENTAL REGULATIONS.
10. DO NOT EXCAVATE FOR AGGREGATE SUBBASE COURSE WHERE EXISTING MATERIAL IS SUITABLE, AS DETERMINED BY THE RESIDENT.

**UTILITY**

1. EXISTING UTILITIES ON THESE PLANS WERE COMPILED FROM FIELD SURVEY AND VARIOUS OTHER SOURCES. LOCATIONS ARE NOT GUARANTEED TO BE ACCURATE NOR IS IT GUARANTEED THAT ALL UTILITIES ARE SHOWN. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND THE ACTUAL FIELD CONDITIONS ENCOUNTERED. NO WORK SHALL BE STARTED UNTIL THE OWNERS OF THE VARIOUS UTILITIES ARE NOTIFIED BY THE CONTRACTOR OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR IS ALSO REQUIRED TO CALL DIG SAFE AT 1-888-344-7233, OR WWW.DIGSAFE.COM IN CONFORMANCE WITH ALL STATE AND LOCAL LAWS, ORDINANCES, AND STATUTES.
2. THE MAINE TURNPIKE AUTHORITY IS A NON-MEMBER UTILITY OPERATOR AND IS NOT REGISTERED WITH THE DIG SAFE SYSTEM. THE CONTRACTOR SHALL CONTACT ALL NON-MEMBERS THROUGH WWW.OKTODIG.COM OR AS OTHERWISE REQUIRED BY THE MAINE PUBLIC UTILITIES COMMISSION. ALL PROPOSED EXCAVATION LOCATIONS SHALL BE MARKED AT THE TIME OF NOTIFICATION. NO EXCAVATION SHALL BE PERMITTED UNTIL THE AUTHORITY HAS LOCATED AND MARKED ITS UNDERGROUND UTILITIES. THE RESIDENT ENGINEER SHALL BE PROVIDED AN ELECTRONIC COPY OF ALL DIG SAFE TICKETS WITHIN 24 HOURS OF THEIR RELEASE FOR PROJECT NOTIFICATIONS AND 3RD PARTY UTILITY LOCATOR COORDINATION.
3. THE UTILITIES INVOLVED IN THIS CONTRACT ARE:  
  
CONSOLIDATED COMMUNICATIONS
4. CONTRACTOR SHALL PROTECT ALL NEW AND EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION AS APPROVED BY THE UTILITY OWNERS.
5. ALL UTILITY FACILITIES SHALL BE ADJUSTED BY THE RESPECTIVE UTILITIES UNLESS NOTED.
6. CONTRACTOR IS RESPONSIBLE FOR REMOVING GUARDRAIL AND PROVIDING TEMPORARY EMBANKMENT BERM TO ALLOW UTILITY EQUIPMENT ACCESS (MIN. 10'x10' COMPACTED SURFACE) FOR UTILITY POLE RELOCATIONS.
7. THE COST OF ALL WORK RELATED TO UTILITY COORDINATION IS INCIDENTAL TO THE CONTRACT.

**EROSION CONTROL**

1. THE ANTICIPATED EROSION CONTROL DEVICES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROPOSE ACTUAL TYPE AND LOCATION OF DEVICES FOR APPROVAL BY THE RESIDENT. ADDITIONAL MEASURES MAY BE PROPOSED BY THE CONTRACTOR DUE TO SITE OR WEATHER CONDITIONS. THE RESIDENT MAY DIRECT THE CONTRACTOR TO IMPLEMENT ADDITIONAL MEASURES. ANY ADDITIONAL MEASURES APPROVED BY THE RESIDENT WILL BE MEASURED FOR PAYMENT.
2. 4' LOAM HAS BEEN ESTIMATED FOR 100% OF THE DISTURBED SLOPE AREA UNLESS OTHERWISE SPECIFIED ON THE PLANS. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS DESIGNATED BY THE RESIDENT.
3. TEMPORARY STABILIZATION WITH MULCH OR OTHER NON-ERODABLE COVER IS REQUIRED ON ALL EXPOSED SOILS THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS. AREAS WITHIN 75 FEET OF A WETLAND OR WATERBODY SHALL BE STABILIZED WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST. THE CONTRACTOR IS RESPONSIBLE FOR APPLYING TEMPORARY MULCH AS NECESSARY, IN ACCORDANCE WITH THE LATEST EDITION OF THE BMP'S TO MINIMIZE SOIL EROSION PRIOR TO THE APPLICATION OF THE FINAL SLOPE TREATMENT.
4. TEMPORARY SEED SHALL BE APPLIED TO ALL DISTURBED AREAS THAT WILL NOT BE COMPLETED WITHIN 30 DAYS.
5. ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MAINE DEP BEST MANAGEMENT PRACTICES.
6. TEMPORARY BERMS AND TEMPORARY SLOPE DRAINS ARE ANTICIPATED AT ALL STONE DOWNSPOUT LOCATIONS WHILE GROWTH IS BEING ESTABLISHED ON SIDE SLOPES.
7. TEMPORARY EROSION CONTROL BLANKET, ITEM 613.319 SHALL BE INSTALLED IN ALL DITCHES AND 2:1 OR STEEPER SLOPES FROM TOP TO TOE OF SLOPE. LOAM AND SEED SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE EROSION CONTROL BLANKET. LIMITS OF THE EROSION CONTROL BLANKET IN DITCHES SHALL BE 6' WIDE OR AS DESIGNATED BY THE RESIDENT.
8. UNLESS OTHERWISE NOTED; SEEDING METHOD NO. 2 SHALL BE UTILIZED ON ALL AREAS.
9. A DOUBLE ROW OF SILT FENCE PROTECTION SHALL BE INSTALLED AT ALL STREAM LOCATIONS AND OPEN WATER WETLANDS AS SHOWN ON THE PLANS.
10. TEMPORARY STONE CHECK DAMS SHALL BE PLACED IN EXISTING DITCHES AS SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT.
11. STABILIZED CONSTRUCTION ENTRANCES MUST BE USED AND MAINTAINED. NO TRACKING OF SOIL ON THE MAINE TURNPIKE OR LOCAL ROADS WILL BE ALLOWED.

| Scale:       |          |    |      | Designed by:   |           |              |           |
|--------------|----------|----|------|--|-----------|--------------|-----------|
| NOT TO SCALE |          |    |      |  |           |              |           |
| No.          | Revision | By | Date | CONSULTANT PROJECT MANAGER: \$CONSULTANTPMS  |           |              |           |
|              |          |    |      | By   | Date      | By           | Date      |
|              |          |    |      | Designed   | CDH 01\22 | Checked      | DAM 01\22 |
|              |          |    |      | Drawn  | CDH 01\22 | In Charge of | TRC 01\22 |

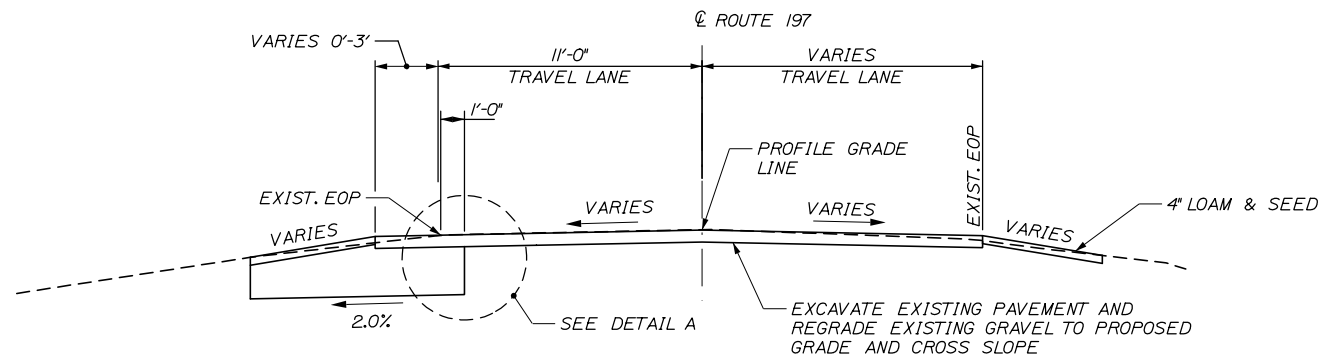
|   |  |  |  |
|---|--|--|--|
| HNTB CORPORATION<br>82 Running Hill Road, Suite 201<br>South Portland, ME 04106<br>TEL (207) 774-5155<br>FAX (207) 228-0909 |  |  |  |
|---|--|--|--|

|   |  |  |  |
|---|--|--|--|
|  |  |  |  |
| <b>THE GOLD STAR<br/>MEMORIAL HIGHWAY</b>   |  |  |  |
| MTA PROJECT MANAGER: \$MTAPMS   |  |  |  |

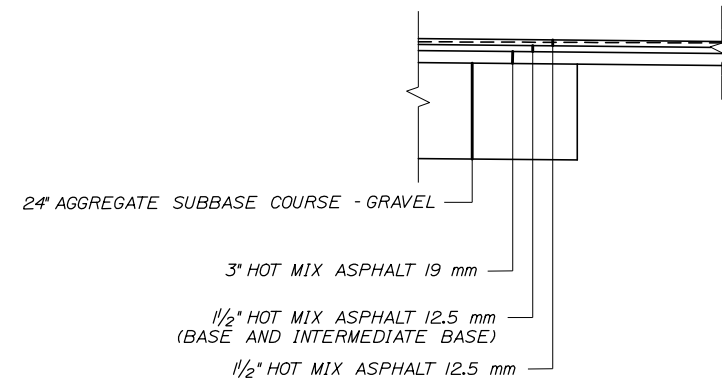
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| SUPERSTRUCTURE REPLACEMENT<br>ROUTE 197 UNDERPASS<br><br>GENERAL NOTES |  |
| SHEET NUMBER: GN-01  |  |
| CONTRACT: \$MTA CONTRACT \$  |  |

|                             |  |
|-----------------------------|--|
| SHEET NUMBER: GN-01         |  |
| CONTRACT: \$MTA CONTRACT \$ |  |
| \$PSETNO\$ OF \$PSETTOT     |  |

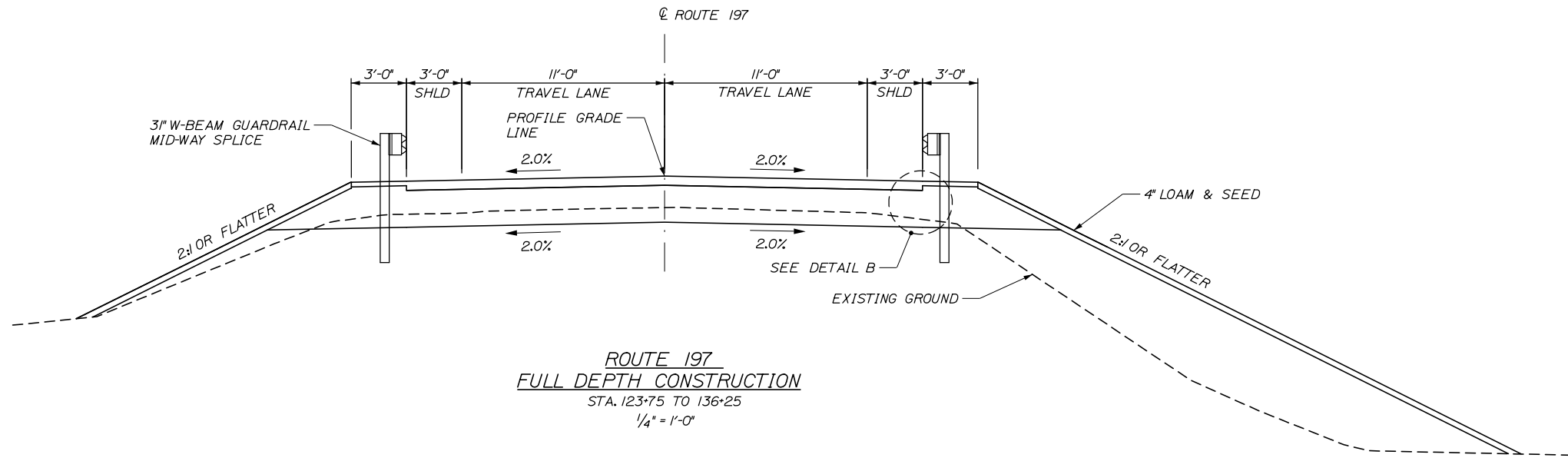
Date: 2/7/2022



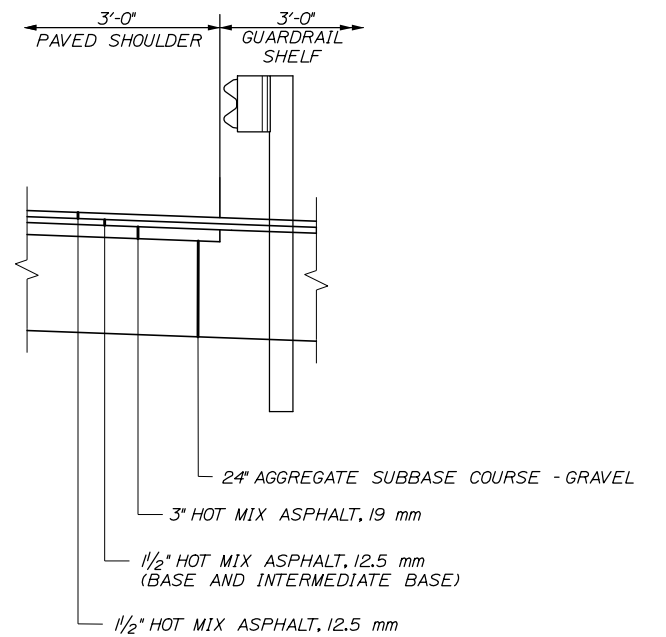
**ROUTE 197  
FULL DEPTH PAVEMENT REMOVAL**  
STA. 123+00 TO 123+75  
STA. 136+25 TO 137+00  
1/4" = 1'-0"



**DETAIL A**  
1/2" = 1'-0"



**ROUTE 197  
FULL DEPTH CONSTRUCTION**  
STA. 123+75 TO 136+25  
1/4" = 1'-0"



**DETAIL B**  
1/2" = 1'-0"

**NOTES:**

1. THE PAVEMENT, BASE, AND SUBBASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.
2. CROWNS FOR NORMAL SECTIONS FOR ALL COURSES OF SUBBASE AND PAVEMENT SHALL BE STRAIGHT.
3. ALL NECESSARY PAVEMENT CUTTING SHALL BE SAWCUT AND DONE IN SUCH A MANNER AS TO LEAVE A CLEAN, VERTICAL FACE.
4. THE STATIONING SHOWN UNDER EACH TYPICAL SECTION IS APPROXIMATE.

Filename: 0XX\_Typical Sections.dgn

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| Scale: AS NOTED |          |    |      |
| No.             | Revision | By | Date |
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| Designed by:                                    |     |       |              |     |       |
| <b>HNTB</b>                                     |     |       |              |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn   | CDH | 01\22 | In Charge of | TRC | 01\22 |

HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
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**MAINE  
TURNPIKE**

**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS**

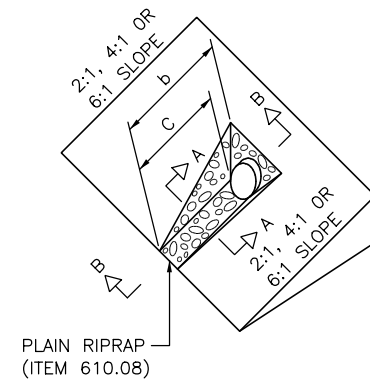
**TYPICAL SECTIONS**

SHEET NUMBER: TYP-1  
CONTRACT: 2022.06  
4 OF 81



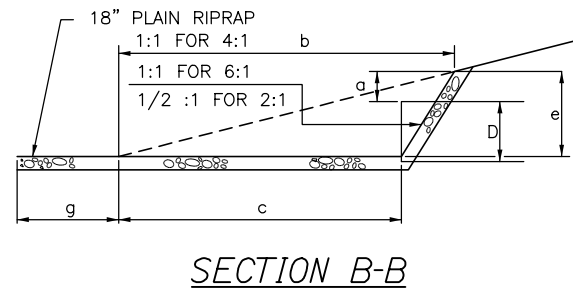
**DIMENSIONS FOR SLOPE OF 2:1**

| D   | a (FT) | b (FT) | c (FT) | e (FT) | f (FT) | g (FT) | STONE DEPTH (FT) | STONE (CY) |
|-----|--------|--------|--------|--------|--------|--------|------------------|------------|
| 12" | 1.00   | 4.00   | 3.00   | 2.00   | 6.00   | 1.00   | 1.50             | 1.30       |
| 15" | 1.00   | 4.50   | 3.37   | 2.25   | 6.75   | 1.63   | 1.50             | 1.70       |
| 18" | 1.00   | 5.00   | 3.75   | 2.50   | 7.50   | 2.25   | 1.50             | 2.09       |
| 21" | 1.00   | 5.50   | 4.13   | 2.75   | 8.25   | 2.88   | 1.50             | 2.58       |
| 24" | 1.00   | 6.00   | 4.50   | 3.00   | 9.00   | 3.50   | 1.50             | 3.12       |
| 30" | 1.00   | 7.00   | 5.25   | 3.50   | 10.50  | 4.75   | 1.50             | 4.33       |
| 36" | 1.00   | 8.00   | 6.00   | 4.00   | 12.00  | 6.00   | 1.50             | 5.75       |
| 42" | 1.00   | 9.00   | 6.75   | 4.50   | 13.50  | 7.25   | 1.50             | 7.37       |
| 48" | 1.00   | 10.00  | 7.50   | 5.00   | 15.00  | 8.50   | 1.50             | 9.18       |
| 54" | 1.00   | 11.00  | 8.25   | 5.50   | 16.50  | 9.75   | 1.50             | 11.19      |
| 60" | 1.00   | 12.00  | 9.00   | 6.00   | 18.00  | 11.00  | 1.50             | 13.40      |
| 66" | 1.00   | 13.00  | 9.75   | 6.50   | 19.50  | 12.25  | 1.50             | 15.81      |
| 72" | 1.00   | 14.00  | 10.50  | 7.00   | 21.00  | 13.50  | 1.50             | 18.41      |
| 84" | 1.00   | 16.00  | 12.00  | 8.00   | 24.00  | 16.00  | 1.50             | 24.22      |



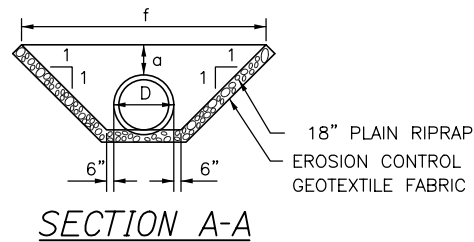
**DIMENSIONS FOR SLOPE OF 4:1**

| D   | a (FT) | b (FT) | c (FT) | e (FT) | f (FT) | g (FT) | STONE DEPTH (FT) | STONE (CY) |
|-----|--------|--------|--------|--------|--------|--------|------------------|------------|
| 12" | 1.00   | 8.00   | 6.00   | 2.00   | 6.00   | 0.00   | 1.50             | 2.20       |
| 15" | 1.00   | 9.00   | 6.75   | 2.25   | 6.75   | 0.00   | 1.50             | 2.80       |
| 18" | 1.00   | 10.00  | 7.50   | 2.50   | 7.50   | 0.00   | 1.50             | 3.40       |
| 21" | 1.00   | 11.00  | 8.25   | 2.75   | 8.25   | 0.00   | 1.50             | 4.10       |
| 24" | 1.00   | 12.00  | 9.00   | 3.00   | 9.00   | 0.00   | 1.50             | 4.86       |
| 30" | 1.00   | 14.00  | 10.50  | 3.50   | 10.50  | 0.00   | 1.50             | 6.58       |
| 36" | 1.00   | 16.00  | 12.00  | 4.00   | 12.00  | 0.00   | 1.50             | 8.56       |
| 42" | 1.00   | 18.00  | 13.50  | 4.50   | 13.50  | 0.50   | 1.50             | 10.92      |
| 48" | 1.00   | 20.00  | 15.00  | 5.00   | 15.00  | 1.00   | 1.50             | 13.57      |
| 54" | 1.00   | 22.00  | 16.50  | 5.50   | 16.50  | 1.50   | 1.50             | 16.50      |
| 60" | 1.00   | 24.00  | 18.00  | 6.00   | 18.00  | 2.00   | 1.50             | 19.72      |
| 66" | 1.00   | 26.00  | 19.50  | 6.50   | 19.50  | 2.50   | 1.50             | 23.22      |
| 72" | 1.00   | 28.00  | 21.00  | 7.00   | 21.00  | 3.00   | 1.50             | 27.01      |
| 84" | 1.00   | 32.00  | 24.00  | 8.00   | 24.00  | 4.00   | 1.50             | 35.45      |



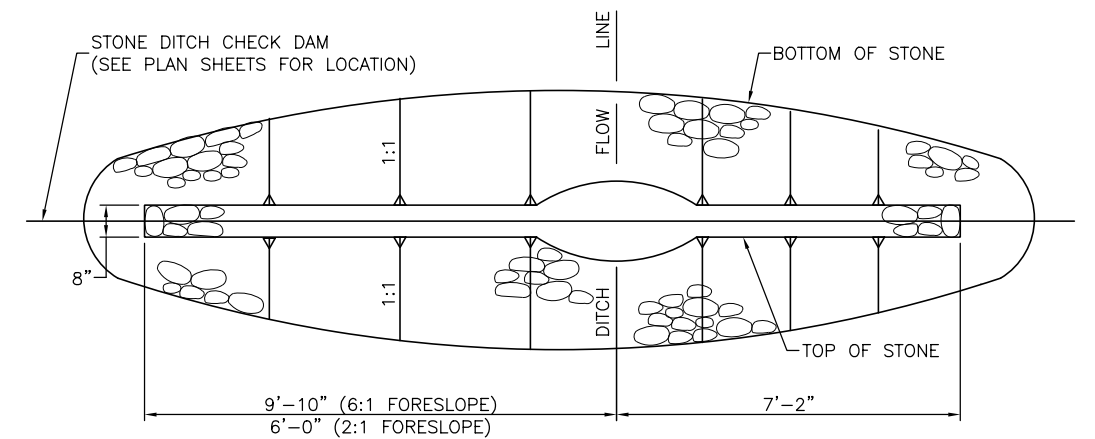
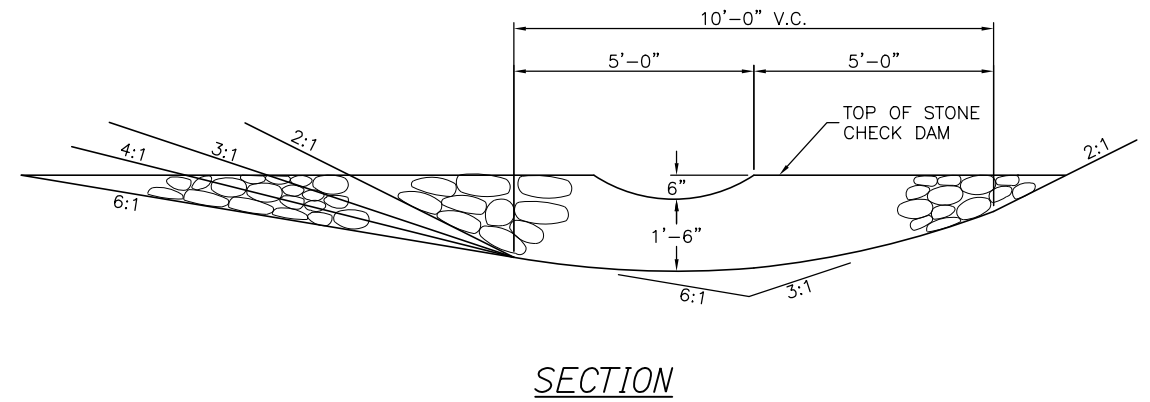
**DIMENSIONS FOR SLOPE OF 6:1**

| D   | a (FT) | b (FT) | c (FT) | e (FT) | f (FT) | g (FT) | STONE DEPTH (FT) | STONE (CY) |
|-----|--------|--------|--------|--------|--------|--------|------------------|------------|
| 12" | 0.50   | 9.00   | 7.50   | 1.50   | 4.50   | 0.00   | 1.50             | 2.30       |
| 15" | 0.50   | 10.50  | 8.75   | 1.75   | 5.50   | 0.00   | 1.50             | 2.93       |
| 18" | 0.50   | 12.00  | 10.00  | 2.00   | 6.50   | 0.00   | 1.50             | 3.57       |
| 21" | 0.50   | 13.50  | 11.25  | 2.25   | 7.25   | 0.00   | 1.50             | 4.46       |
| 24" | 0.50   | 15.00  | 12.50  | 2.50   | 8.00   | 0.00   | 1.50             | 5.44       |
| 30" | 0.50   | 18.00  | 15.00  | 3.00   | 9.50   | 0.00   | 1.50             | 7.71       |
| 36" | 0.50   | 21.00  | 17.50  | 3.50   | 11.00  | 0.00   | 1.50             | 10.37      |
| 42" | 0.50   | 24.00  | 20.00  | 4.00   | 12.50  | 0.00   | 1.50             | 13.42      |
| 48" | 0.50   | 27.00  | 22.50  | 4.50   | 14.00  | 0.00   | 1.50             | 16.87      |
| 54" | 0.50   | 30.00  | 25.00  | 5.00   | 15.50  | 0.00   | 1.50             | 20.70      |
| 60" | 0.50   | 33.00  | 27.50  | 5.50   | 17.00  | 0.00   | 1.50             | 24.93      |
| 66" | 0.50   | 36.00  | 30.00  | 6.00   | 18.50  | 0.00   | 1.50             | 29.55      |
| 72" | 0.50   | 39.00  | 32.50  | 6.50   | 20.00  | 0.00   | 1.50             | 34.56      |
| 84" | 0.50   | 45.00  | 37.50  | 7.50   | 23.00  | 0.00   | 1.50             | 45.76      |



**ROADWAY CULVERT END SLOPE TREATMENT**

- NOTES:**
- THE DIMENSIONS SHOWN ARE APPROXIMATE AND MAY BE MODIFIED BY THE RESIDENT.
  - STONE QUANTITIES ARE FOR ONE END OF THE PIPE.



**STONE CHECK DAM**  
1" = 2'-0"

| FORESLOPE | BACKSLOPE | QUANTITY C.Y. STONE |
|-----------|-----------|---------------------|
| 6:1       | 3:1       | 2.5                 |
| 4:1       | 3:1       | 2.5                 |
| 3:1       | 3:1       | 2.0                 |
| 2:1       | 3:1       | 2.0                 |

- NOTES:**
- STONE FOR TEMPORARY AND PERMANENT STONE CHECK DAMS SHALL MEET THE REQUIREMENTS OF MDOT SPECIFICATION 703.29, STONE DITCH PROTECTION.
  - TEMPORARY STONE CHECK DAMS WILL BE PAID FOR UNDER ITEM 610.181.

Date: 2/7/2022

Filename: OXX\_ErosionControlDetails\_1.dgn

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| Scale: <b>NOT TO SCALE</b> |          |    |      |
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|---|--------------|-------|-------|
| Designed by:                                    |              |       |       |
| <b>HNTB</b>                                     |              |       |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |              |       |       |
|   | By           | Date  |       |
|   | CDH          | 01\22 |       |
|   | Checked      | DAM   | 01\22 |
|   | Drawn        | CDH   | 01\22 |
|   | In Charge of | TRC   | 01\22 |

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**THE GOLD STAR MEMORIAL HIGHWAY**

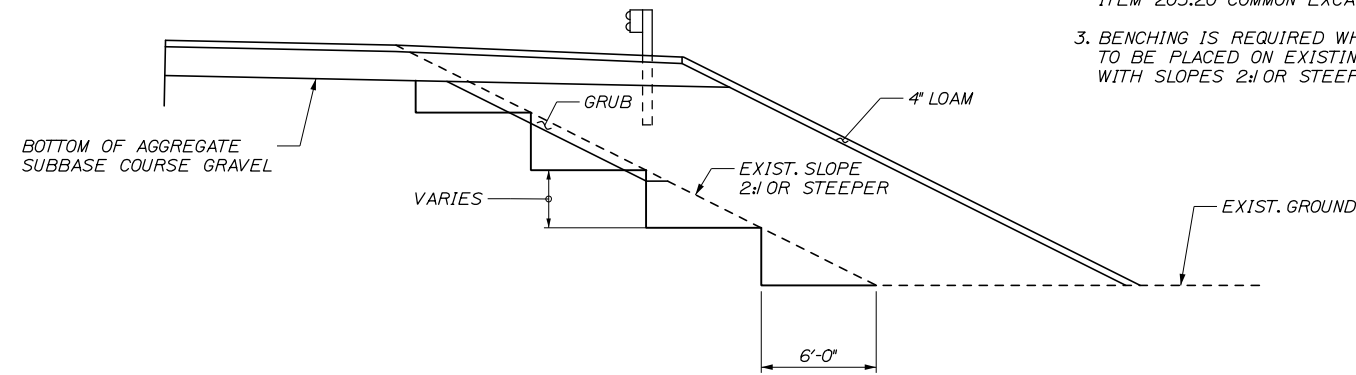
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
EROSION CONTROL DETAILS I

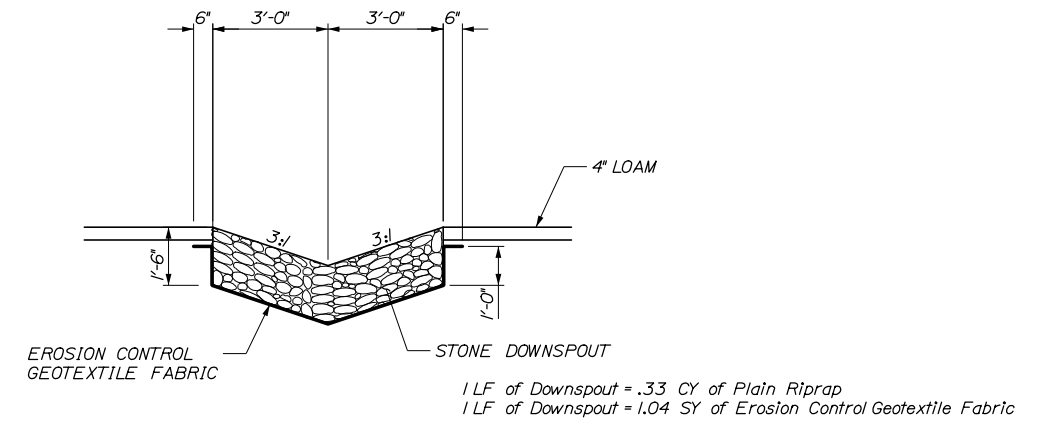
SHEET NUMBER: CD-01  
CONTRACT: 2022.06  
5 OF 81

Date: 2/7/2022

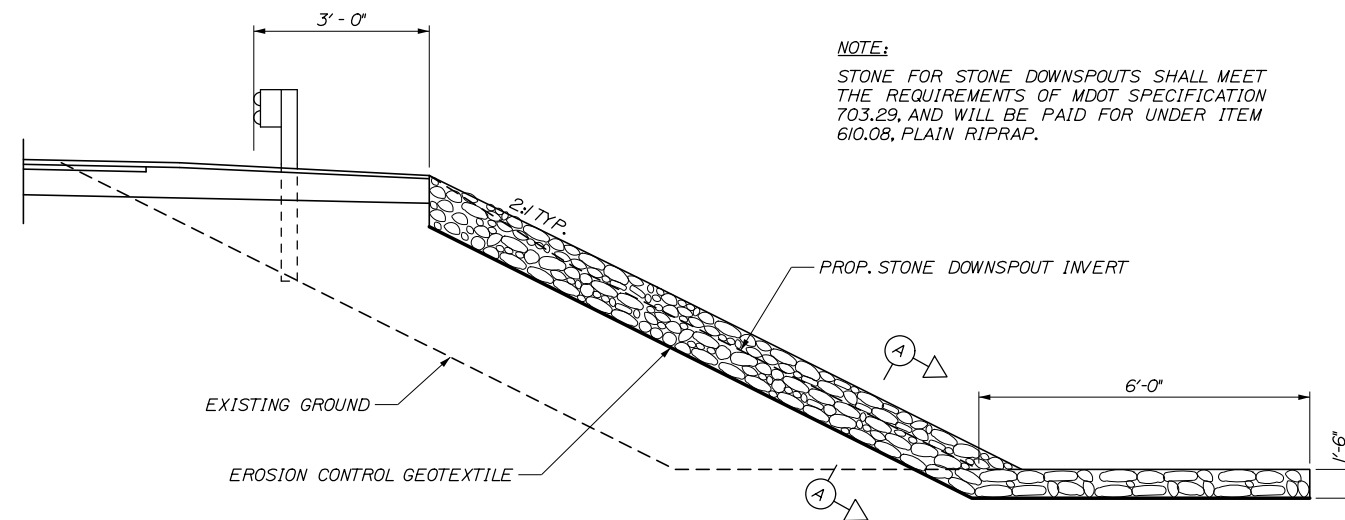
- NOTES:**
- GRUBBING WILL BE PAID FOR UNDER ITEM 203.20 COMMON EXCAVATION. SEE CROSS SECTIONS FOR ACTUAL LIMITS.
  - EXCAVATION FOR BENCHING TO RECEIVE EMBANKMENTS IS INCIDENTAL TO ITEM 203.20 COMMON EXCAVATION.
  - BENCHING IS REQUIRED WHERE FILL IS TO BE PLACED ON EXISTING EMBANKMENTS WITH SLOPES 2:1 OR STEEPER.



**BENCH DETAIL**



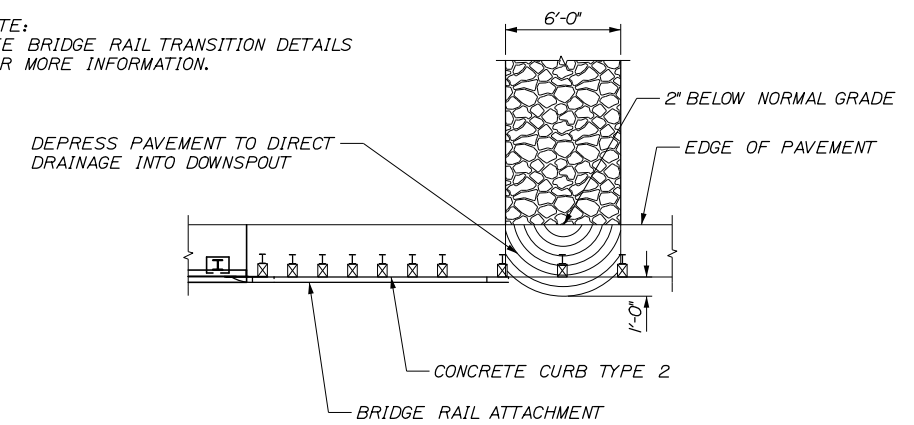
**SECTION A-A**



**SECTION**

- NOTE:**
- STONE FOR STONE DOWNSPOUTS SHALL MEET THE REQUIREMENTS OF MDOT SPECIFICATION 703.29, AND WILL BE PAID FOR UNDER ITEM 610.08, PLAIN RIPRAP.

- NOTE:**
- SEE BRIDGE RAIL TRANSITION DETAILS FOR MORE INFORMATION.



**PLAN VIEW**

**DOWNSPOUT DETAILS**

Scale: **NOT TO SCALE**

| No. | Revision | By | Date |
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|     |          |    |      |
|     |          |    |      |
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Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

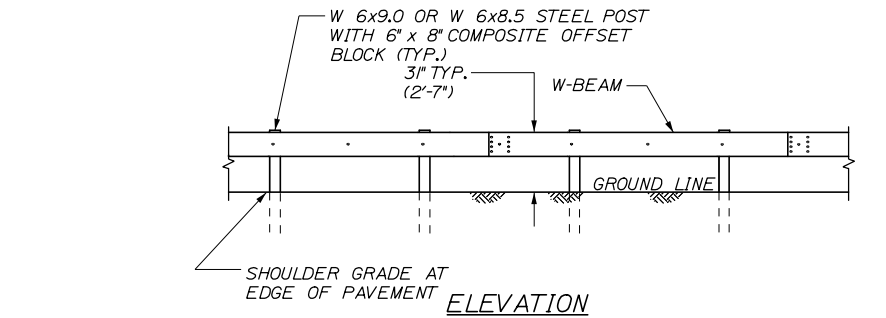
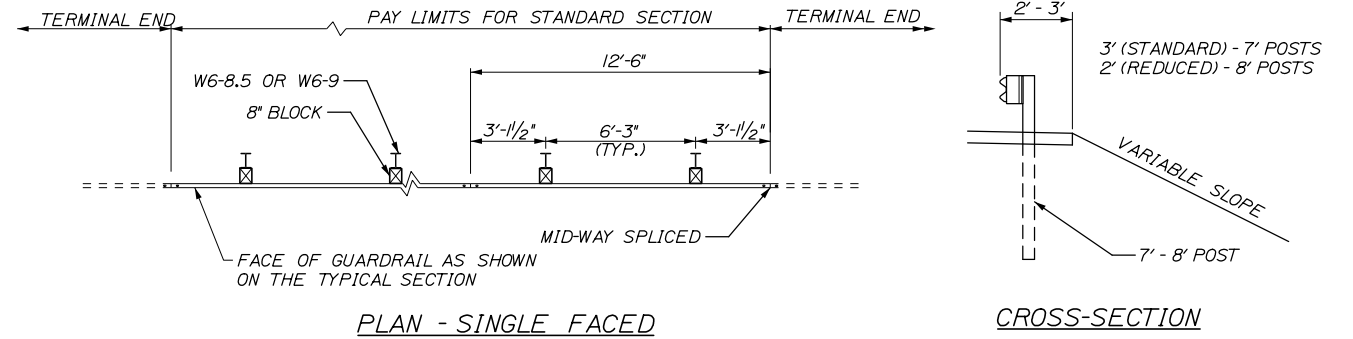
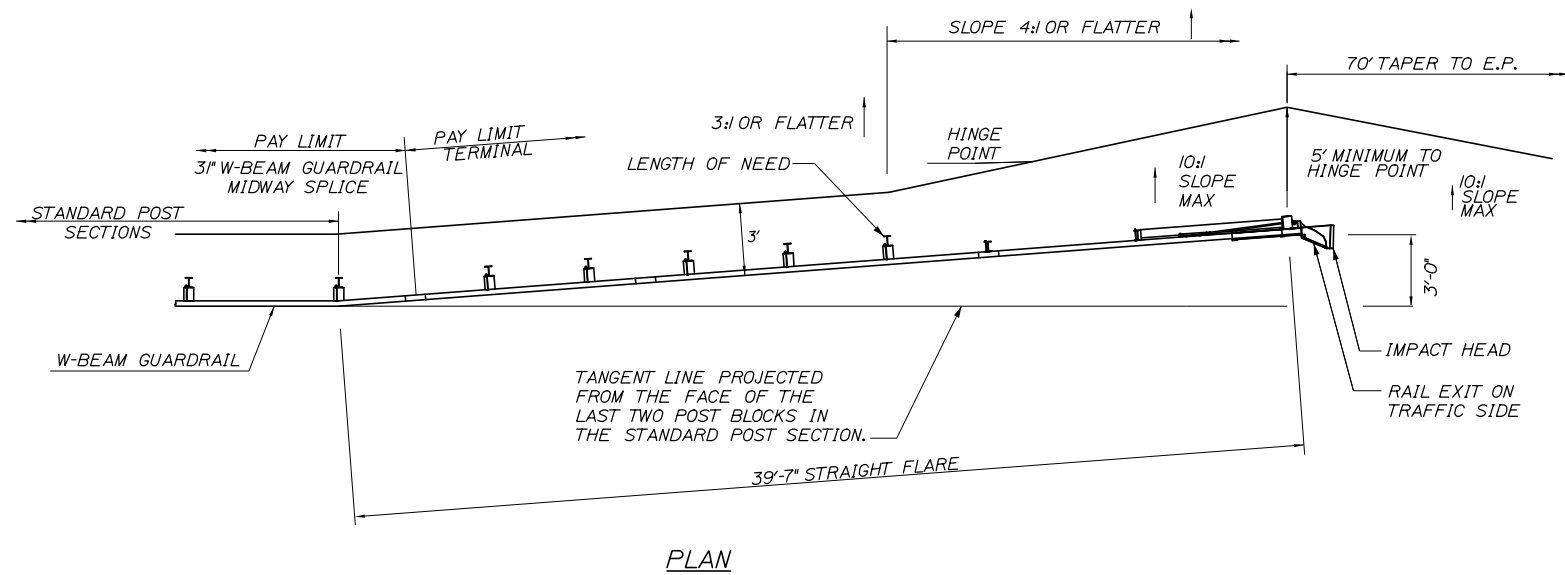
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS  
 EROSION CONTROL DETAILS II

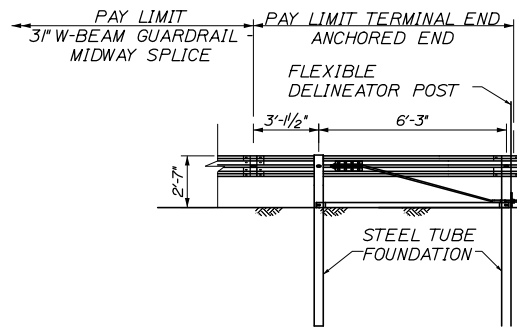
SHEET NUMBER: CD-02  
 CONTRACT: 2022.06  
 6 OF 81

Filename: 0XX\_ErosionControlDetails\_2.dgn

Date: 2/7/2022

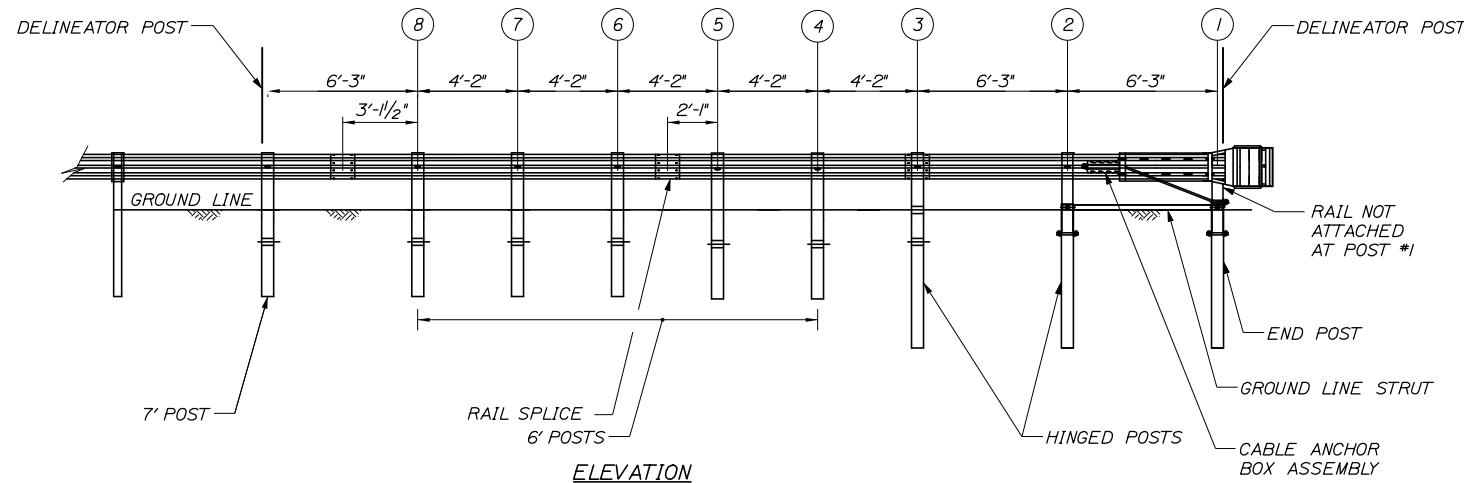


31" W-BEAM GUARDRAIL - MID-WAY SPLICE (8" OFFSET BLOCKS)  
NOT TO SCALE



TERMINAL END - ANCHORED END - 31" W-BEAM GUARDRAIL  
NOT TO SCALE

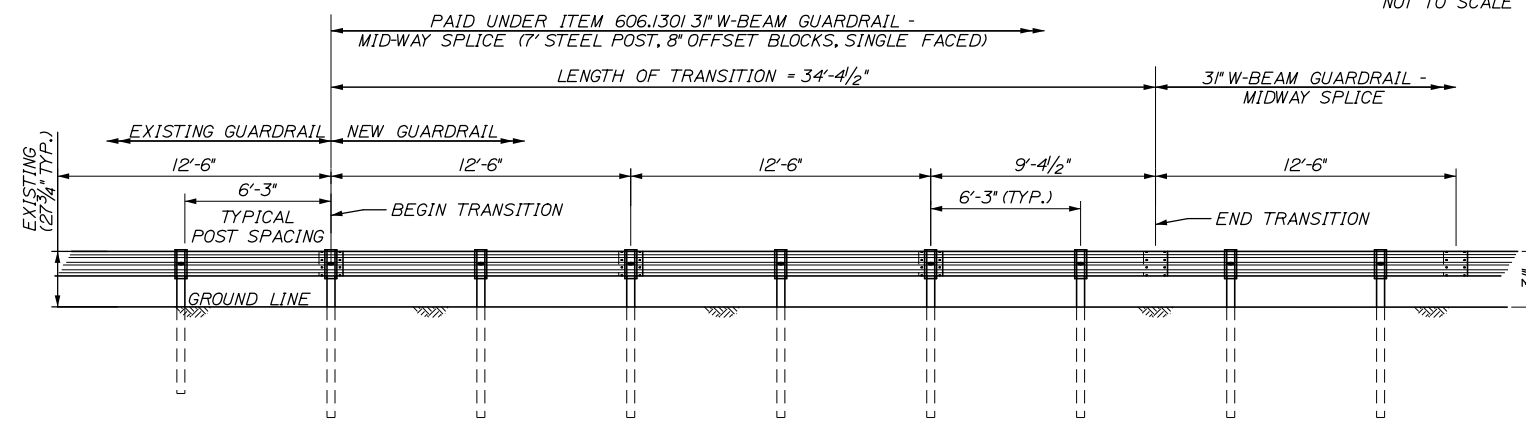
NOTES:  
1. THIS DETAIL MODIFIES THE SEW31 DRAWING SUCH THAT W-BEAM DOES NOT EXTEND BEYOND THE LAST GUARDRAIL POST. THE RWM14a W-BEAM PANEL SHALL HAVE A LENGTH OF 9'-4 1/2" MEASURED FROM THE CENTER OF THE MIDWAY SPLICE TO THE CENTER OF THE LAST GUARDRAIL POST.



31" W-BEAM GUARDRAIL - MID-WAY SPLICE FLARED TERMINAL  
NOT TO SCALE

**GENERAL GUARDRAIL INSTALLATION NOTES:**

1. THE CONTRACTOR SHALL FOLLOW ALL MANUFACTURER'S INSTALLATION INSTRUCTIONS FOR THE INSTALLATION OF ALL GUARDRAIL COMPONENTS TO BE INSTALLED. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER OF ANY CONFLICTS OR IRREGULARITIES BETWEEN THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASH END TREATMENT ON ALL GUARDRAIL ENDS PRIOR TO THE REMOVAL OF ANY MOT FEATURES.
3. GUARDRAIL HEIGHT SHALL BE 3'. GUARDRAIL HEIGHT SHALL BE MEASURED FROM AT GROUND ELEVATION ADJACENT TO EACH POST.
4. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL CUT BOLTS, DISCARD PARTS, TRASH, PAVEMENT DEBRIS, ETC., AFTER COMPLETING THE GUARDRAIL INSTALLATION.
5. CONNECTION FOR PROPOSED RAIL TO EXISTING RAIL SHALL BE INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS.
6. TERMINAL UNIT SHALL BE MFLAAT AND MASH CERTIFIED AS MANUFACTURED BY ROAD SYSTEMS INC.
7. SEE SPECIFICATIONS FOR REFLECTIVE SHEETING REQUIREMENTS.



TRANSITION FROM EXISTING GUARDRAIL TO 31" MID-WAY SPLICED GUARDRAIL  
NOT TO SCALE

TRANSITION FROM EXISTING GUARDRAIL NOTES:  
1. MAINTAIN STANDARD 1" CLEARANCE OF POST ABOVE PANEL THROUGHOUT THE ENTIRE LENGTH OF TRANSITION.  
2. A MINIMUM OF ONE (1) 12'-6" PANEL SHALL BE PLACED BETWEEN THIS TRANSITION AND THE START OF ANY END TREATMENT OR ANCHORAGE.  
3. ALL NEW POSTS SHALL BE 7' IN LENGTH UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.

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| Designed by:                                    |              |       |       |
| <b>HNTB</b>                                     |              |       |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |              |       |       |
|   | By           | Date  |       |
|   | CDH          | 01\22 |       |
|   | Checked      | DAM   | 01\22 |
|   | By           | Date  |       |
|   | CDH          | 01\22 |       |
|   | In Charge of | TRC   | 01\22 |

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82 RUNNING HILL ROAD, SUITE 201  
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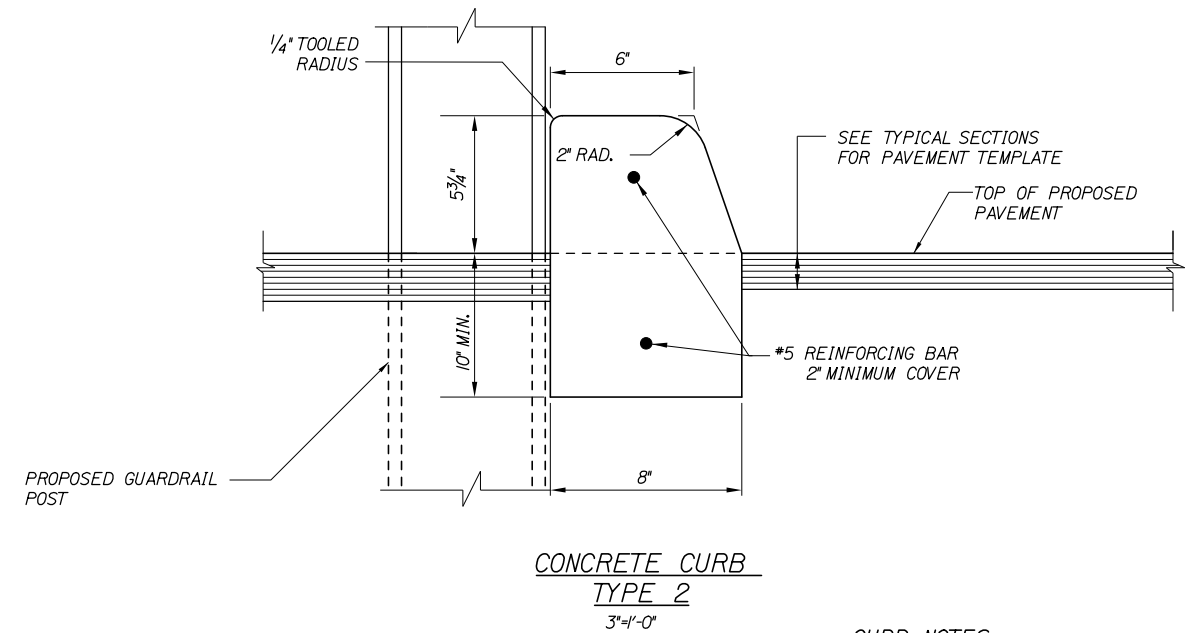
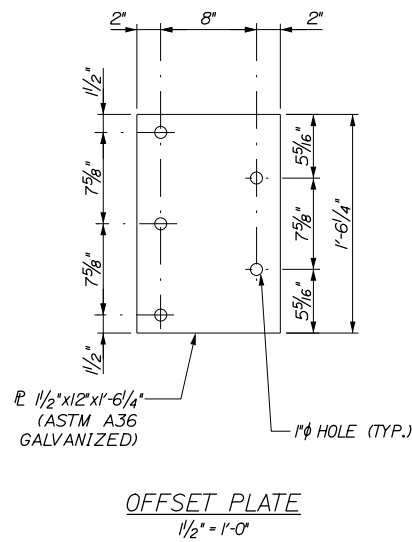
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
GUARDRAIL DETAILS I

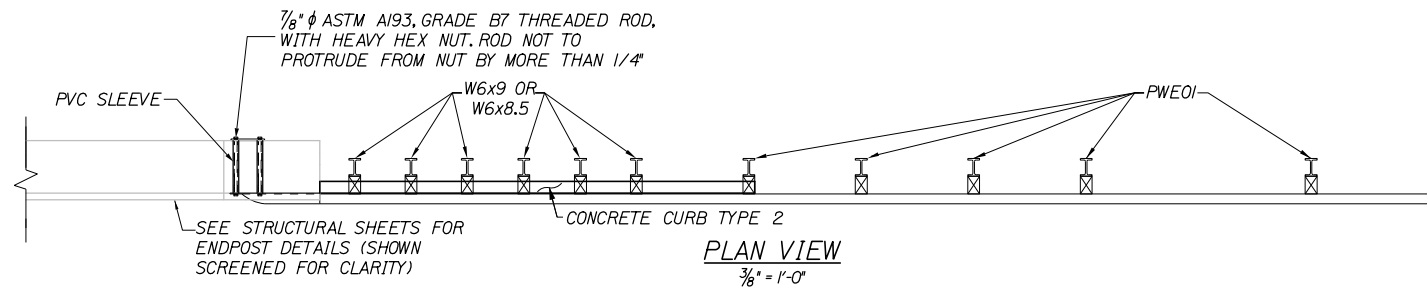
SHEET NUMBER: CD-03  
CONTRACT: 2022.06  
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Date: 2/7/2022



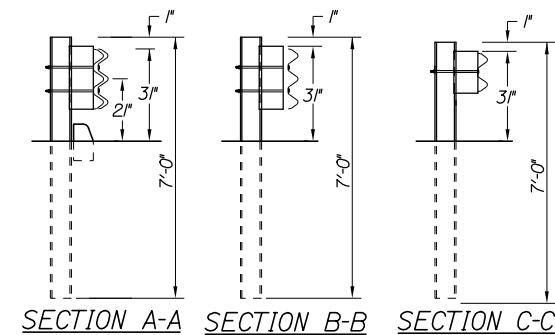
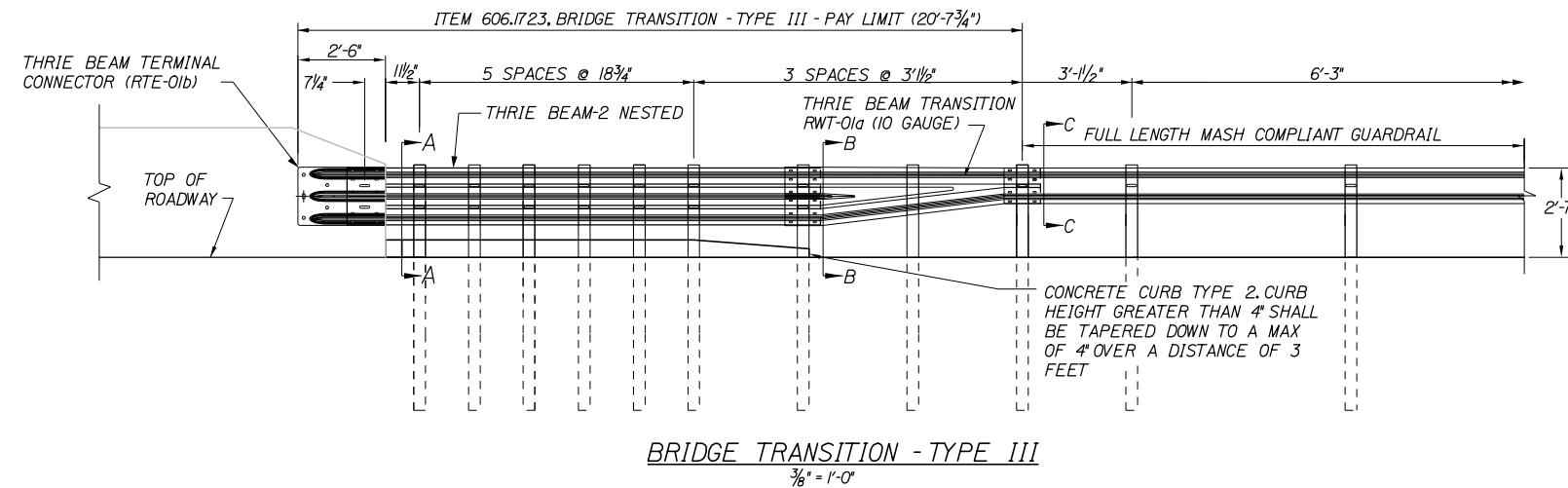
**CURB NOTES:**

1. CURBING SHALL BE EITHER PRECAST CONCRETE, CAST-IN-PLACE CONCRETE OR GRANITE TO MEET DIMENSIONS SHOWN ON THE PLANS.
2. CONCRETE CURBS USED IN CONJUNCTION WITH THRIE-BEAM BRIDGE TRANSITION SHALL BE TYPE 2. SEE DETAILS THIS SHEET. CONCRETE CURBS SHALL BE SET TO FORM A CONTINUOUS GUTTERLINE WITHOUT ANY DRAINAGE OPENINGS.
3. CURB TRANSITION SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCIDENTAL TO THE BRIDGE TRANSITION PAY ITEM.



**GUARDRAIL NOTES:**

1. ADDITIONAL HOLES MAY BE MADE IN THE THRIE-BEAM PANELS BY DRILLING, PUNCHING, OR OTHER MEANS THAT PRODUCE A NEAT, CLEAN HOLE. BURNING HOLES WILL NOT BE ALLOWED.
2. THRIE BEAM SHALL BE PLACED WITH THE COMPOSITE BLOCKOUT FACE IN FRONT OF OR DIRECTLY ABOVE THE CURB FACE.
3. RAIL ELEMENT SHALL MEET ALL REQUIREMENTS OF AASHTO M-180 EXCEPT AS MODIFIED ON THE PLANS. THE THRIE BEAM TRANSITION TO W-BEAM SHALL BE OF THE SAME MATERIAL, BUT SHALL NOT BE LESS THAN 10 GAUGE.
4. AFTER INSTALLATION IS COMPLETE, UPSET THE THREAD ON THE ANCHOR BOLTS IN THREE PLACES AROUND EACH BOLT, AT THE JUNCTION OF THE NUT AND THE EXPOSED THREAD, WITH A CENTER PUNCH OR SIMILAR TOOL.
5. STANDARD BARRIER HARDWARE HAS BEEN USED TO DEVELOP THESE GUARDRAIL ATTACHMENTS. DESIGNATIONS PROVIDED IN PARENTHESES RELATE TO STANDARD ELEMENTS DETAILED IN "A GUIDE TO STANDARDIZED BARRIER RAIL HARDWARE," 1995. AASHTO-AGC-ARTBA JOINT COOPERATE COMMITTEE. 2013 UPDATE.
6. 1" HOLE IN CONCRETE SHALL BE FORMED BY A 1" I.D. PVC SLEEVE AS APPROVED BY THE ENGINEER.
7. GUARDRAIL HEIGHT SHALL BE ADJUSTED UNIFORMLY BETWEEN SECTION CALLOUTS.



Filename: 0XX\_GuardrailDetails\_2.dgn

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| Designed by:                                    |              |       |       |
| <b>HNTB</b>                                     |              |       |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |              |       |       |
|   | By           | Date  |       |
|   | CDH          | 01\22 |       |
|   | Checked      | DAM   | 01\22 |
|   | By           | Date  |       |
|   | CDH          | 01\22 |       |
|   | In Charge of | TRC   | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

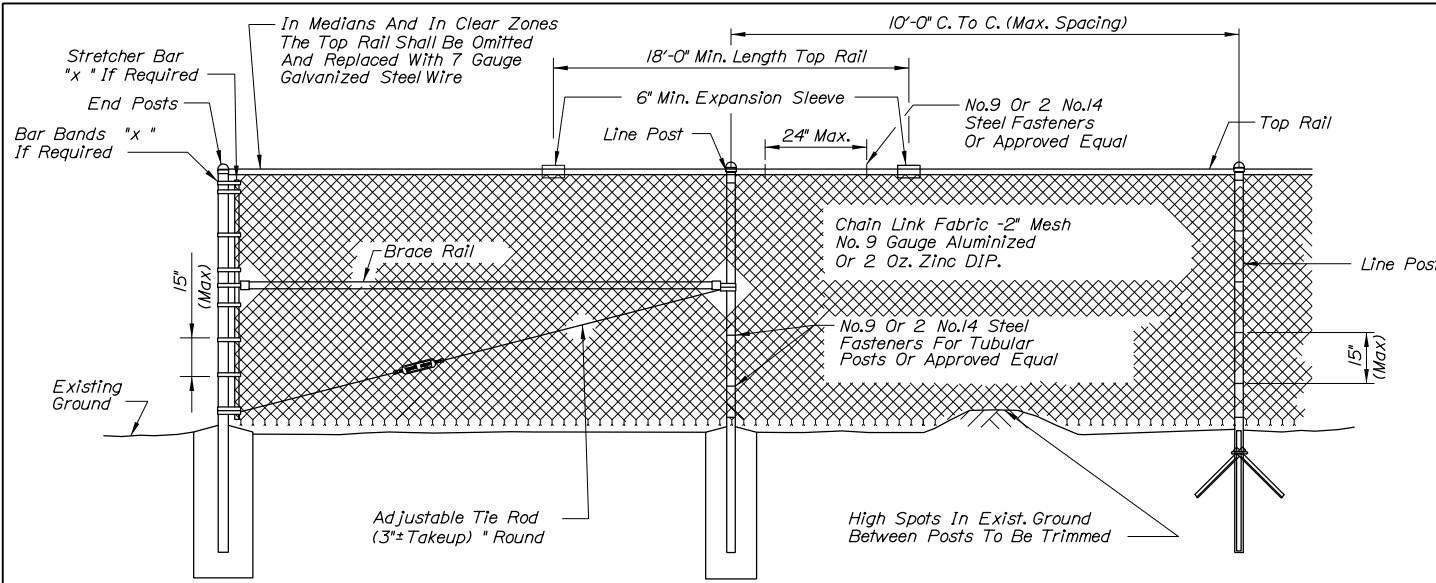
GUARDRAIL DETAILS 2

SHEET NUMBER: CD-04

CONTRACT: 2022.06

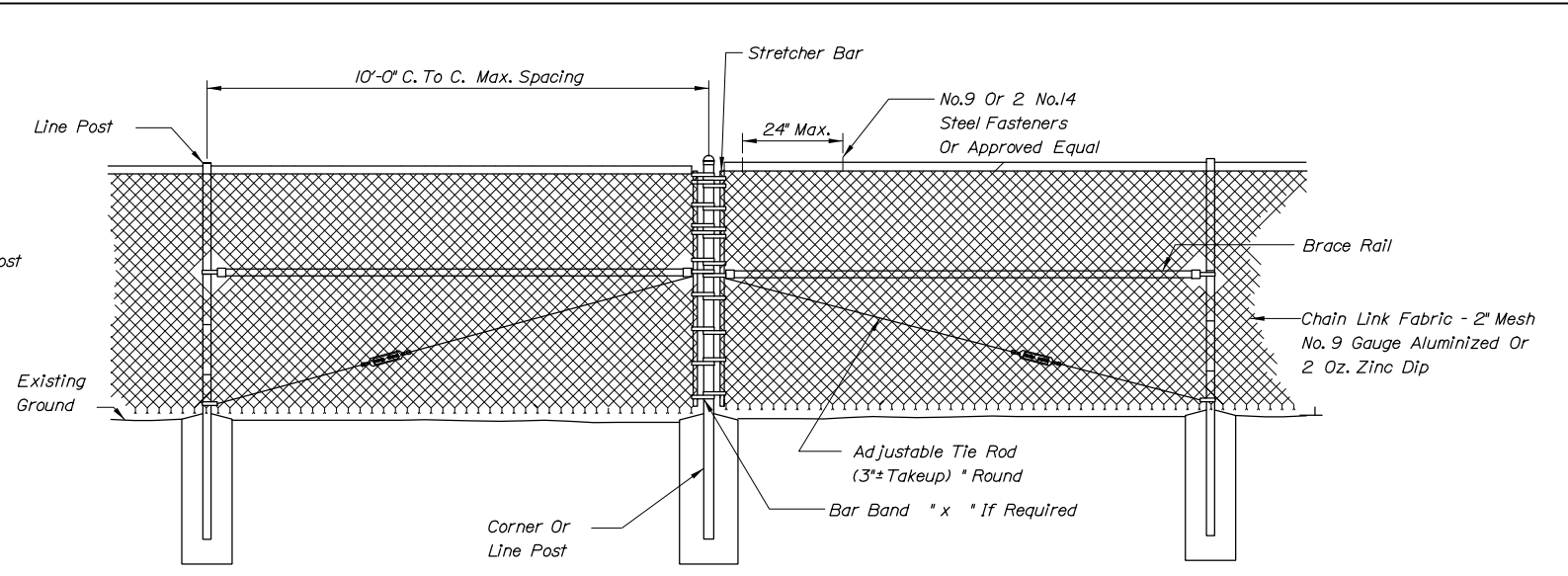
8 OF 81

Date: 2/7/2022

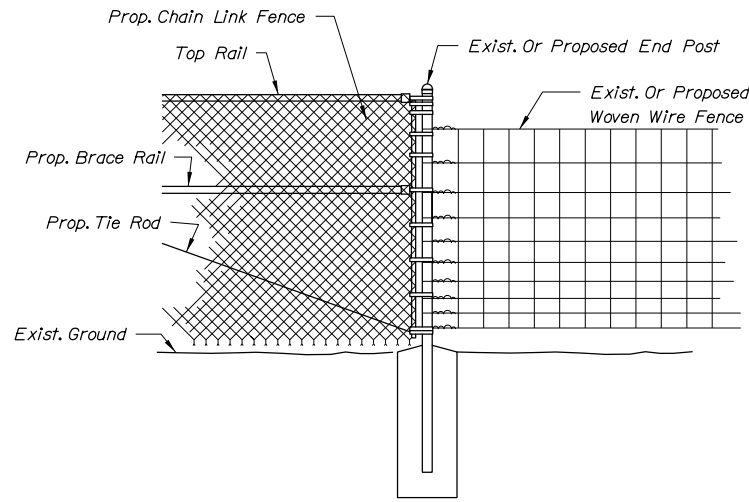


**TYPICAL TYPE I END PANEL**  
N.T.S.

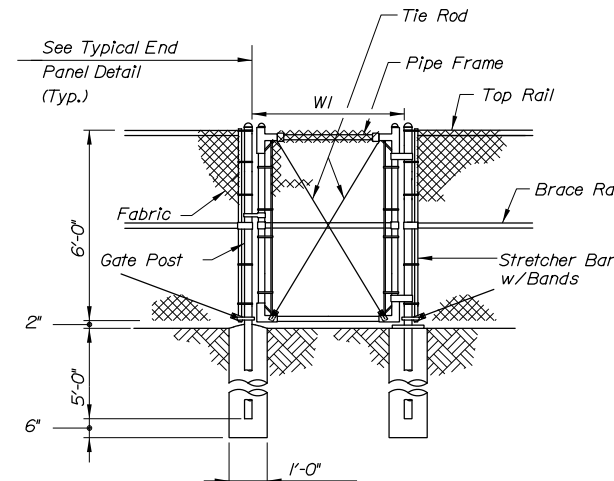
**TYPICAL INTERMEDIATE PANEL**  
N.T.S.



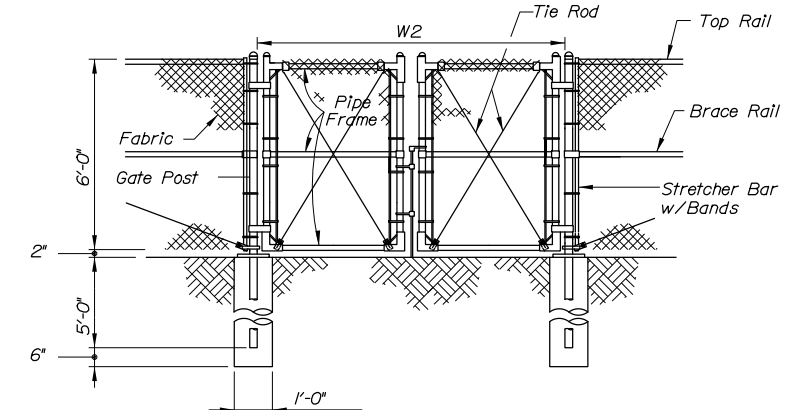
**TYPICAL TYPE II BRACE PANEL**  
N.T.S.



**METHOD OF ATTACHING CHAIN LINK FENCE TO WOVEN WIRE FENCE**  
N.T.S.



**SINGLE GATE**



**DOUBLE GATE**

| Gate Width |            | Gate Post O.D. |
|------------|------------|----------------|
| W1         | W2         |                |
| to 6'      | to 12'     | 3"             |
| 6' to 12'  | 12' to 24' | 4"             |
| 12' to 18' | 24' to 36' | 6"             |

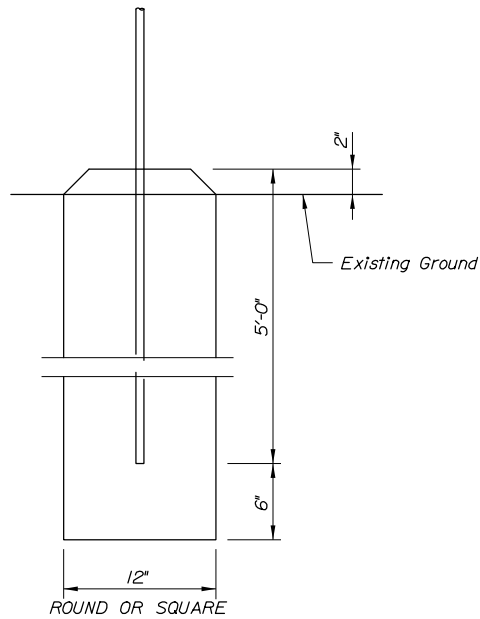
BENDING MOMENTS BASED ON GRADE 1 (SCHEDULE 40 STEEL)

| CHAIN LINK FENCE   | SHAPE | NOMINAL SIZE (INCHES) | BENDING MOMENT* (LBS.-IN.) |
|--------------------|-------|-----------------------|----------------------------|
| END & CORNER POSTS | ∅     | 2 I.D.                | 14,025                     |
| LINE POSTS         | ∅     | 1-1/2 I.D.            | 8,150                      |
| TOP & BRACE RAILS  | ∅     | 1-1/4 I.D.            | 5,875                      |

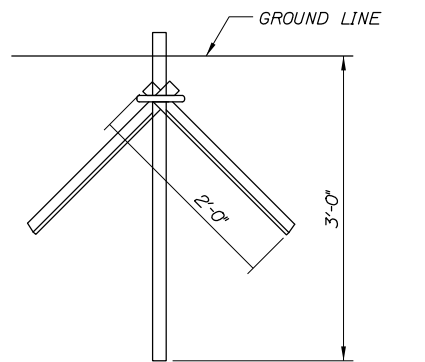
\* MATERIAL FOR GRADE 2 END, CORNER & LINE POSTS AND TOP & BRACE RAILS MUST MEET OR EXCEED BENDING MOMENTS FOR GRADE 1 STEEL AS NOTED ABOVE.

**NOTES:**

- BRACE PANELS SHALL BE INSTALLED WHERE THE CHANGE IN GRADE BETWEEN ANY THREE POSTS EXCEEDS 15 PERCENT.
- NO ADDITIONAL PAYMENT WILL BE MADE FOR LONGER POSTS NECESSITATED BY LARGE GRADE DIFFERENTIAL.
- TYPE I BRACING WILL BE USED AT FENCE ENDS. TYPE II BRACING WILL BE USED AT CORNER POSTS.
- WHEN LEDGE IS ENCOUNTERED, STEEL POSTS SHALL BE SET AND GROUTED 12" DEEP UNLESS THE POSTS PENETRATE THE GROUND TO THE DEPTH INDICATED ON THE DRAWINGS.
- CONCRETE FOR POST FOUNDATION SHALL BE CLASS B.
- BRACE, GATE AND END POSTS SHALL BE SET IN CONCRETE.
- CHAIN LINK FENCE SHALL BE INSTALLED WITH BARBS DOWN.
- ALL COMPONENTS OF CHAIN LINK FENCE SHALL BE IN ACCORDANCE WITH AASHTO M181.



**BRACE, GATE AND END POST BASE DETAIL**  
N.T.S.



**LINE POST DRIVE ANCHOR DETAIL**  
N.T.S.

Filename: 0XX\_FenceDetails.dgn

|                     |          |    |      |
|---------------------|----------|----|------|
| Scale: NOT TO SCALE |          |    |      |
| No.                 | Revision | By | Date |
|                     |          |    |      |
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|   |              |       |       |
|---|--------------|-------|-------|
| Designed by:                                    |              |       |       |
| <b>HNTB</b>                                     |              |       |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |              |       |       |
|   | By           | Date  |       |
|   | CDH          | 01\22 |       |
|   | Checked      | DAM   | 01\22 |
|   | By           | Date  |       |
|   | CDH          | 01\22 |       |
|   | In Charge of | TRC   | 01\22 |

HNTB CORPORATION  
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FAX (207) 228-0909



**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS**

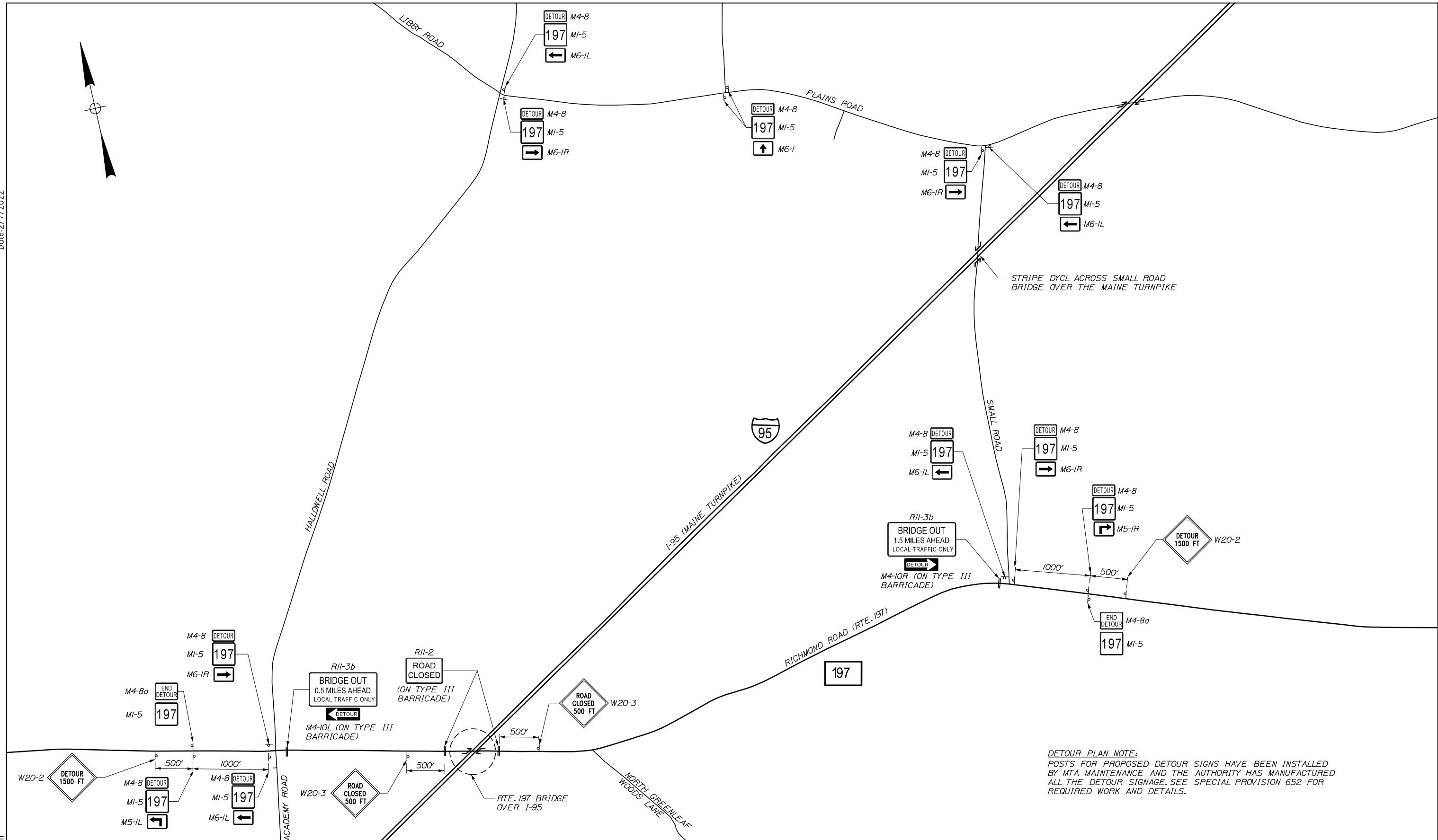
**CHAIN LINK FENCE DETAILS**

SHEET NUMBER: CD-05  
9 OF 81

CONTRACT: 2022.06



Date: 2/7/2022



**DETOUR PLAN NOTE:**  
 POSTS FOR PROPOSED DETOUR SIGNS HAVE BEEN INSTALLED BY MTA MAINTENANCE AND THE AUTHORITY HAS MANUFACTURED ALL THE DETOUR SIGNAGE. SEE SPECIAL PROVISION 652 FOR REQUIRED WORK AND DETAILS.

Scale: 600 0 600 1200  
 Scale of Feet

| No. | Revision | By | Date |
|-----|----------|----|------|
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|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS**

**DETOUR PLAN**

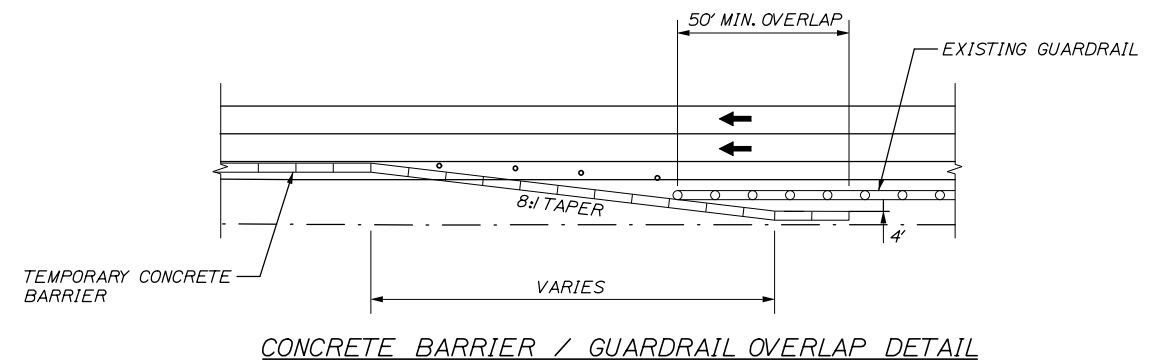
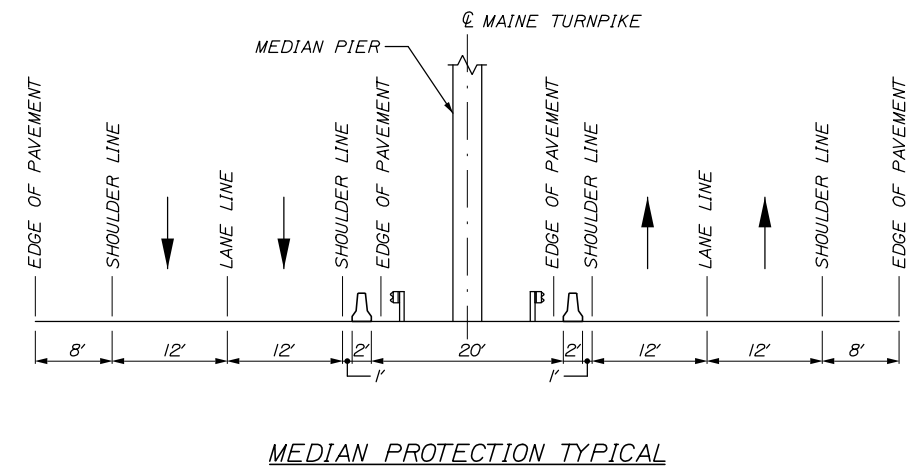
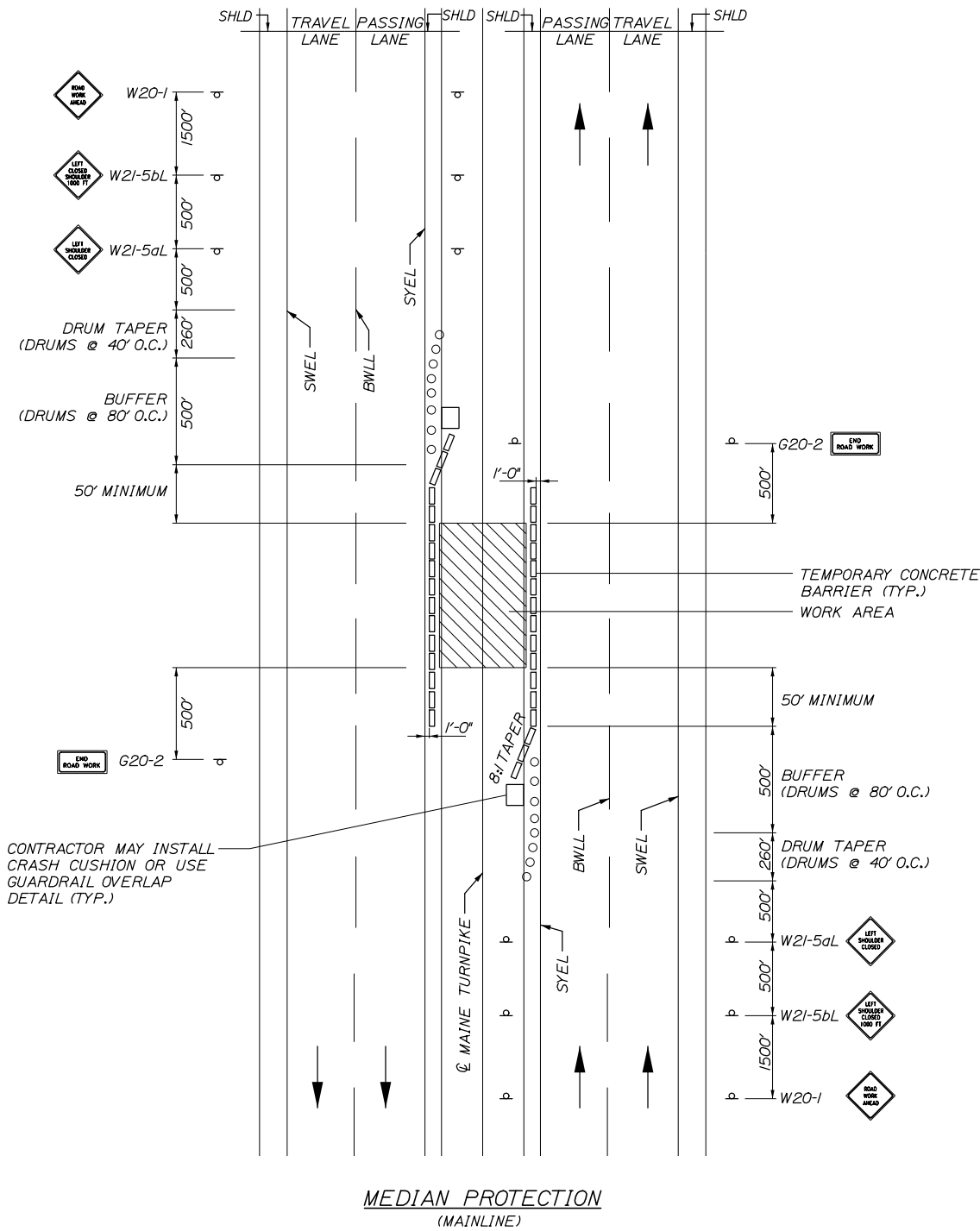
SHEET NUMBER: GP-01  
 10 OF 81

CONTRACT: 2022.06

Filename: OXX\_Detour\_Plan.dgn



Date: 2/7/2022



Filename: OXX\_MOTDetails\_2.dgn

Scale: **NOT TO SCALE**

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
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Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS  
 MAINTENANCE OF TRAFFIC  
 DETAILS 2**

SHEET NUMBER: MOT-03  
 CONTRACT: 2022.06  
 12 OF 81

DETOUR SIGN SUMMARY - SUPPLIED BY MTA

| IDENTIFICATION NUMBER             | SIZE OF SIGN |        | TEXT | TEXT DIMENSIONS (INCHES)   |                  |                 | NUMBER OF SIGNS REQUIRED | COLOR       |               | AREA IN SQUARE FEET            |
|-----------------------------------|--------------|--------|------|--|------------------|-----------------|--------------------------|-------------|---------------|--------------------------------|
|                                   | WIDTH        | HEIGHT |      | LETTER HEIGHT  | VERTICAL SPACING | ARROW RTE. MKR. |                          | BACK-GROUND | LEGEND BORDER |                                |
| M1-5                              | 30"          | 24"    |      | TEXT DIMENSIONS SHALL CONFORM TO THE STANDARD HIGHWAY SIGNS 2004 EDITION AND 2012 SUPPLEMENT |                  |                 | 14                       | WHITE       | BLACK         | 5.00 (70.00)                   |
| M4-8                              | 24"          | 12"    |      |  |                  |                 | 12                       | ORANGE      | BLACK         | 2.00 (24.00)                   |
| M4-8a                             | 24"          | 18"    |      |  |                  |                 | 2                        | ORANGE      | BLACK         | 3.00 (6.00)                    |
| M4-10L                            | 48"          | 18"    |      |  |                  |                 | 1                        | ORANGE      | BLACK         | 6.00 (6.00)                    |
| M4-10R                            | 48"          | 18"    |      |  |                  |                 | 1                        | ORANGE      | BLACK         | 6.00 (6.00)                    |
| M5-1L                             | 21"          | 15"    |      |  |                  |                 | 1                        | WHITE       | BLACK         | 2.19 (2.19)                    |
| M5-1R                             | 21"          | 15"    |      |  |                  |                 | 1                        | WHITE       | BLACK         | 2.19 (2.19)                    |
| M6-1L                             | 21"          | 15"    |      |  |                  |                 | 4                        | WHITE       | BLACK         | 2.19 (8.76)                    |
| M6-1R                             | 21"          | 15"    |      |  |                  |                 | 4                        | WHITE       | BLACK         | 2.19 (8.76)                    |
| M6-3                              | 21"          | 15"    |      |  |                  |                 | 2                        | WHITE       | BLACK         | 2.19 (4.38)                    |
| R11-2                             | 48"          | 30"    |      |  |                  |                 | 2                        | WHITE       | BLACK         | 10.00 (20.00)                  |
| R11-3B (0.5 MILES)<br>(1.5 MILES) | 60"          | 30"    |      |  |                  |                 | 1<br>1                   | WHITE       | BLACK         | 12.50 (12.50)<br>12.50 (12.50) |
| W20-2                             | 36"          | 36"    |      |  |                  |                 | 2                        | ORANGE      | BLACK         | 9.00 (18.00)                   |
| W20-3                             | 36"          | 36"    |      |  |                  |                 | 2                        | ORANGE      | BLACK         | 9.00 (18.00)                   |

DETOUR SIGN NOTE:  
SIGNS INCLUDED IN THE DETOUR HAVE BEEN MANUFACTURED BY MTA MAINTENANCE, SEE SPECIAL PROVISION 652.

CONSTRUCTION SIGN SUMMARY

| IDENTIFICATION NUMBER | SIZE OF SIGN |        | TEXT | TEXT DIMENSIONS (INCHES)   |                  |                 | NUMBER OF SIGNS REQUIRED | COLOR       |               | AREA IN SQUARE FEET |
|-----------------------|--------------|--------|------|--|------------------|-----------------|--------------------------|-------------|---------------|---------------------|
|                       | WIDTH        | HEIGHT |      | LETTER HEIGHT  | VERTICAL SPACING | ARROW RTE. MKR. |                          | BACK-GROUND | LEGEND BORDER |                     |
| CS-1                  | 48"          | 48"    |      | TEXT DIMENSIONS SHALL CONFORM TO THE STANDARD HIGHWAY SIGNS 2004 EDITION AND 2012 SUPPLEMENT |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| G20-2                 | 48"          | 24"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 8.00 (32.00)        |

CONSTRUCTION SIGN SUMMARY CONTINUED

| IDENTIFICATION NUMBER | SIZE OF SIGN |        | TEXT | TEXT DIMENSIONS (INCHES)   |                  |                 | NUMBER OF SIGNS REQUIRED | COLOR       |               | AREA IN SQUARE FEET |
|-----------------------|--------------|--------|------|--|------------------|-----------------|--------------------------|-------------|---------------|---------------------|
|                       | WIDTH        | HEIGHT |      | LETTER HEIGHT  | VERTICAL SPACING | ARROW RTE. MKR. |                          | BACK-GROUND | LEGEND BORDER |                     |
| G20-5aP               | 36"          | 24"    |      | TEXT DIMENSIONS SHALL CONFORM TO THE STANDARD HIGHWAY SIGNS 2004 EDITION AND 2012 SUPPLEMENT |                  |                 | 4                        | ORANGE      | BLACK         | 6.00 (24.00)        |
| R2-1                  | 48"          | 60"    |      |  |                  |                 | 4                        | WHITE       | BLACK         | 20.00 (80.00)       |
| R2-6aP                | 36"          | 24"    |      |  |                  |                 | 4                        | WHITE       | BLACK         | 6.00 (24.00)        |
| R2-12                 | 24"          | 36"    |      |  |                  |                 | 4                        | WHITE       | BLACK         | 6.00 (24.00)        |
| W3-4                  | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| W4-2L                 | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| W4-2R                 | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| W20-1                 | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| W20-5L                | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| W20-5R                | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| W21-5aL               | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| W21-5aR               | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| W21-5bL               | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |
| W21-5bR               | 48"          | 48"    |      |  |                  |                 | 4                        | ORANGE      | BLACK         | 16.00 (64.00)       |

CONSTRUCTION SIGN NOTE:  
CONSTRUCTION SIGNS ARE AN ESTIMATE BASED ON TRAFFIC CONTROL DETAILS.

Date: 2/7/2022

Filename: 0XX\_Sign\_Summary.dgn

Scale: NOT TO SCALE

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

HNTB CORPORATION  
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**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

SIGN SUMMARY

SHEET NUMBER: MOT-4  
CONTRACT: 2022.06  
13 OF 81

Date: 2/7/2022

ITEM 201.11 CLEARING  
 STA. 123+29 RT. TO STA. 127+88 RT.

ITEM 606.1301 3" W BEAM GUARDRAIL - MIDWAY SPLICE      LENGTH  
 (7' STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)  
 STA. 124+41.21, 14.24' RT. TO STA. 128+16.19, 13.33' RT.      375 LF  
 STA. 125+92.87, 14.24' LT. TO STA. 128+42.85, 13.33' LT.      250 LF

ITEM 606.1307 3" W BEAM GUARDRAIL - MIDWAY SPLICE  
FLARED TERMINAL  
 STA. 124+04.85, 17.00' RT. TO STA. 124+41.21, 14.24' RT.  
 STA. 125+56.52, 17.00' LT. TO STA. 125+92.87, 14.24' LT.

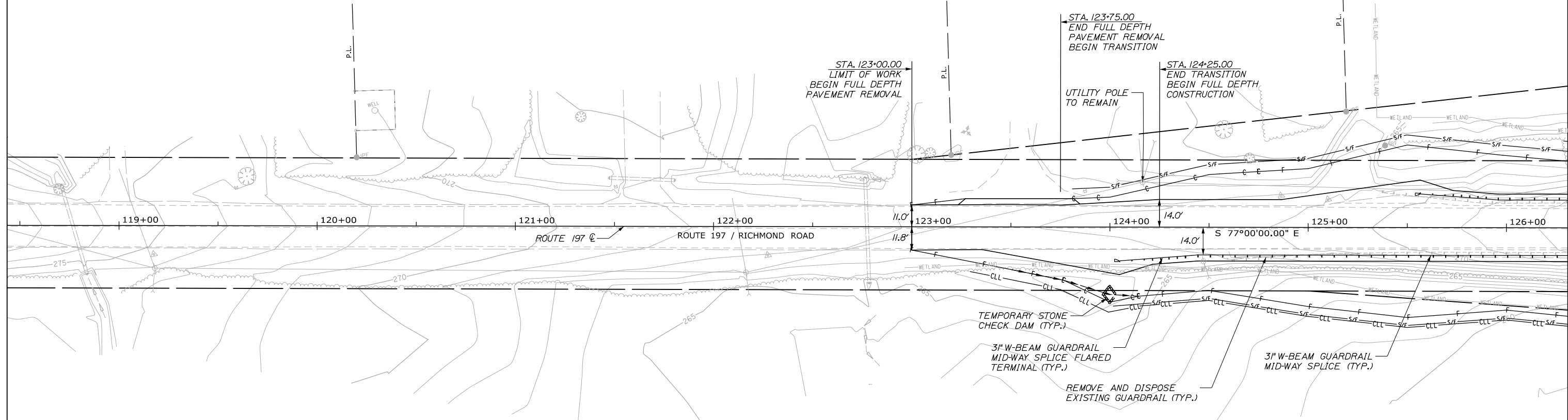
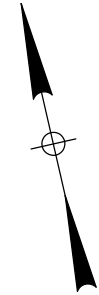
ITEM 610.181 TEMPORARY STONE CHECK DAM  
 STA. 124+00 RT.

ITEM 656.632 30 INCH TEMPORARY SILT FENCE      LENGTH  
 STA. 123+81, 19' LT. TO STA. 128+81 49' LT.      434 LF  
 STA. 124+02, 40' RT. TO STA. 128+34 64' RT.      505 LF

LOUISE HOWARD

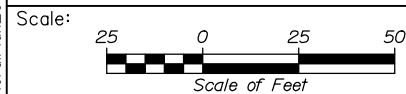
HANSON S. RAY  
 PENELOPE A. RAY

STEVEN M. OWENS



ROGER W. MACWHINNIE

Filename: OXX\_GeneralPlan\_01.dgn



Designed by:



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 South Portland, ME 04106  
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THE GOLD STAR  
 MEMORIAL HIGHWAY

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS

GENERAL PLAN 1

| No. | Revision | By | Date |
|-----|----------|----|------|
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|   |     |       |              |     |       |
|---|-----|-------|--------------|-----|-------|
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn   | CDH | 01\22 | In Charge of | TRC | 01\22 |

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2022.06

SHEET NUMBER: GP-01

14 OF 81



ITEM 201.11 CLEARING  
 STA. 126+29.00 LT. TO STA. 128+84.00 LT.  
 STA. 131+04.00 RT. TO STA. 136+00.00 RT.  
 STA. 132+01.00 LT. TO STA. 134+18.00 LT.

ITEM 606.1301 3" W BEAM GUARDRAIL - MIDWAY SPLICE (7" STEEL POST, 8" OFFSET BLOCKS, SINGLE FACED)  
 STA. 131+83.81, 13.33' LT. TO STA. 135+58.71, 14.24' LT.  
 STA. 131+57.15, 13.33' RT. TO STA. 135+07.21, 14.24' RT.      LENGTH  
 375 LF  
 350 LF

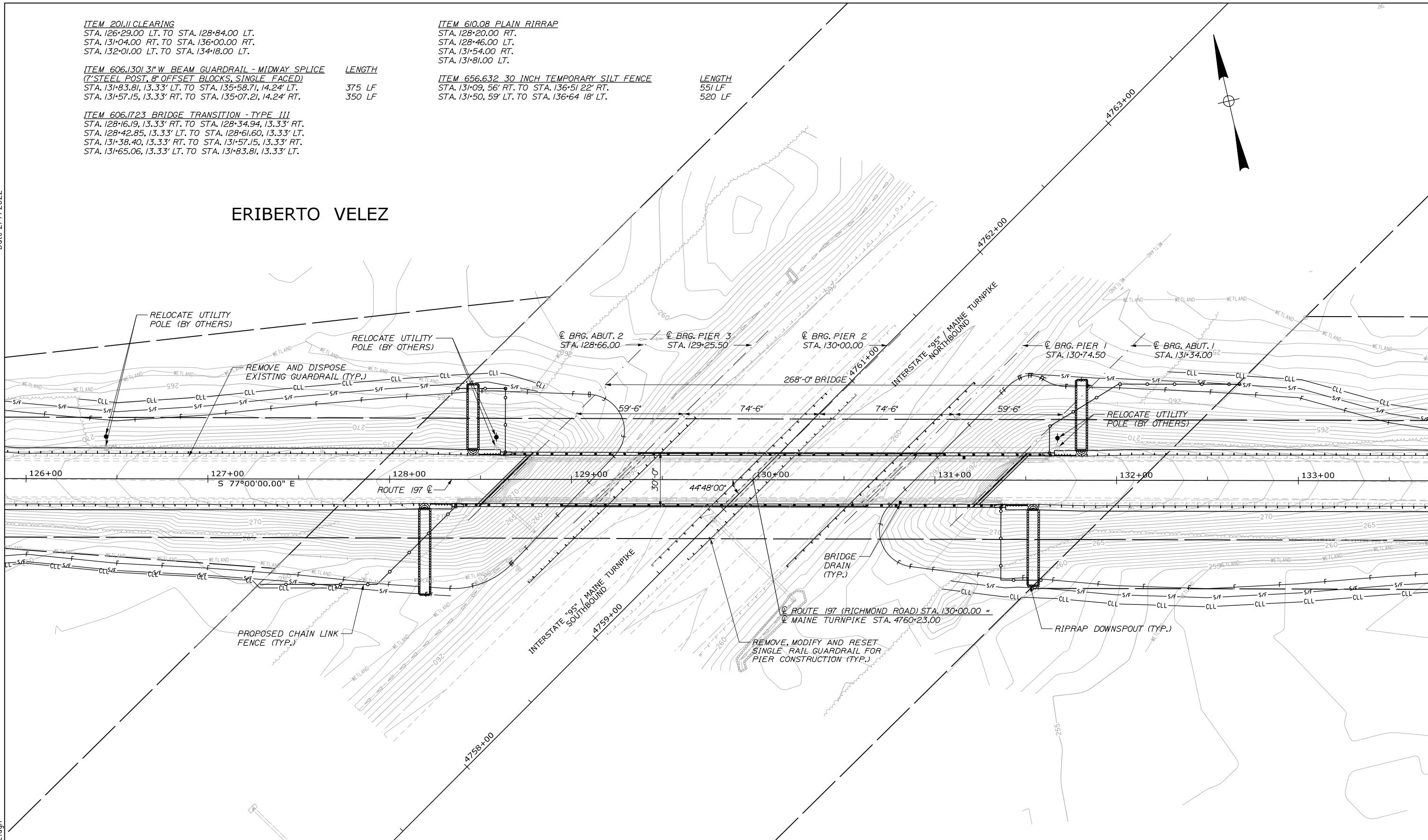
ITEM 606.1723 BRIDGE TRANSITION - TYPE III  
 STA. 128+16.19, 13.33' RT. TO STA. 128+34.94, 13.33' RT.  
 STA. 128+42.85, 13.33' LT. TO STA. 128+61.60, 13.33' LT.  
 STA. 131+38.40, 13.33' RT. TO STA. 131+57.15, 13.33' RT.  
 STA. 131+65.06, 13.33' LT. TO STA. 131+83.81, 13.33' LT.

ITEM 610.08 PLAIN RIPRAP  
 STA. 128+20.00 RT.  
 STA. 128+46.00 LT.  
 STA. 131+54.00 RT.  
 STA. 131+81.00 LT.

ITEM 656.632 30 INCH TEMPORARY SILT FENCE  
 STA. 131+09, 56' RT. TO STA. 136+51 22' RT.  
 STA. 131+50, 59' LT. TO STA. 136+64 18' LT.      LENGTH  
 551 LF  
 520 LF

ERIBERTO VELEZ

Date: 2/7/2022



Scale: 1" = 25'

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS

GENERAL PLAN 2

SHEET NUMBER: GP-02  
 15 OF 81

CONTRACT: 2022.06

ITEM 201.11 CLEARING  
 STA. 135+00.00 LT. TO STA. 136+42.00 LT.

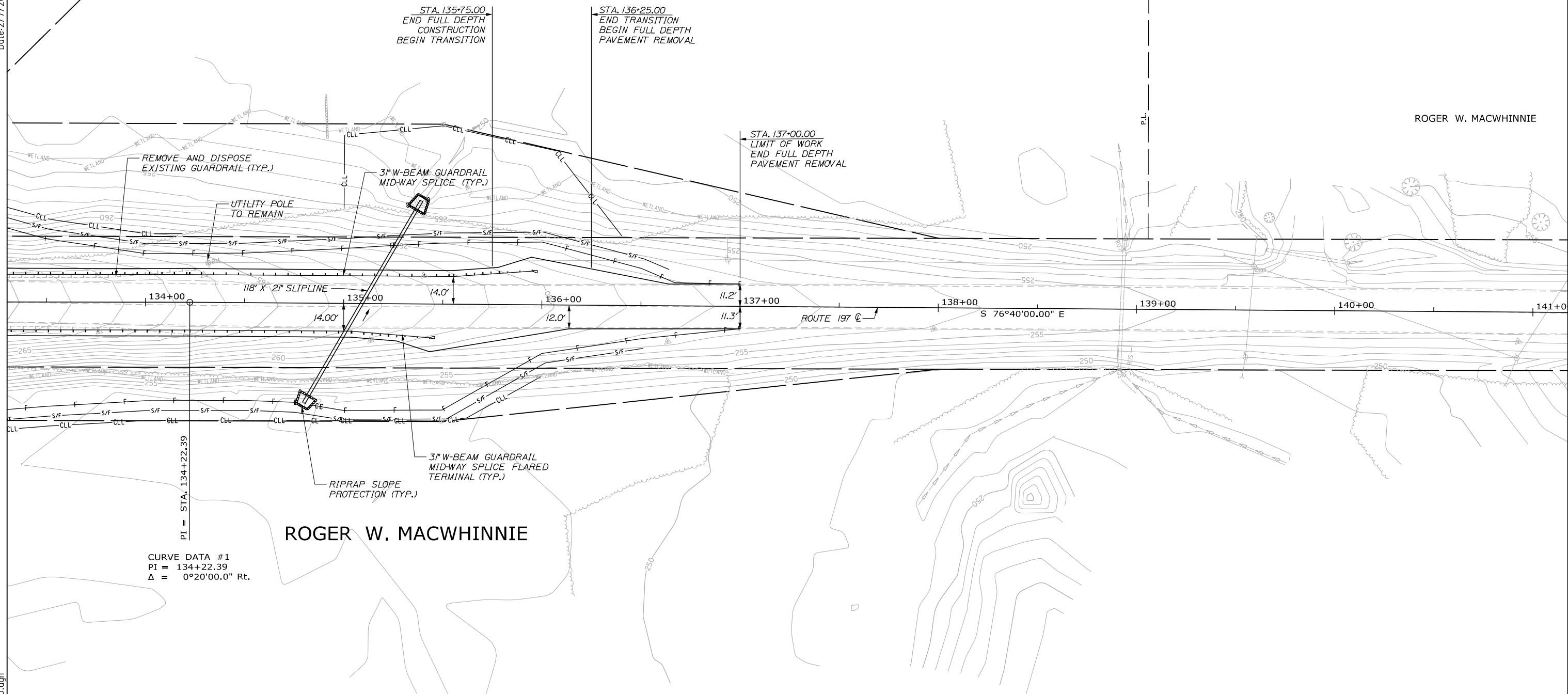
ITEM 606.1307 3" W BEAM GUARDRAIL - MIDWAY SPLICE  
 FLARED TERMINAL  
 STA. 135+07.21, 14.24' RT. TO STA. 135+43.56, 17.00' RT.  
 STA. 135+58.71, 14.24' LT. TO STA. 135+95.07, 17.00' LT.

ITEM 610.08 PLAIN RIRRAP  
 STA. 134+80.00 RT.  
 STA. 135+39.00 LT.

ROGER W. MACWHINNIE

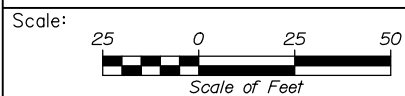


Date: 2/7/2022



CURVE DATA #1  
 PI = 134+22.39  
 Δ = 0°20'00.0" Rt.

ROGER W. MACWHINNIE



| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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THE GOLD STAR  
 MEMORIAL HIGHWAY

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS

GENERAL PLAN 3

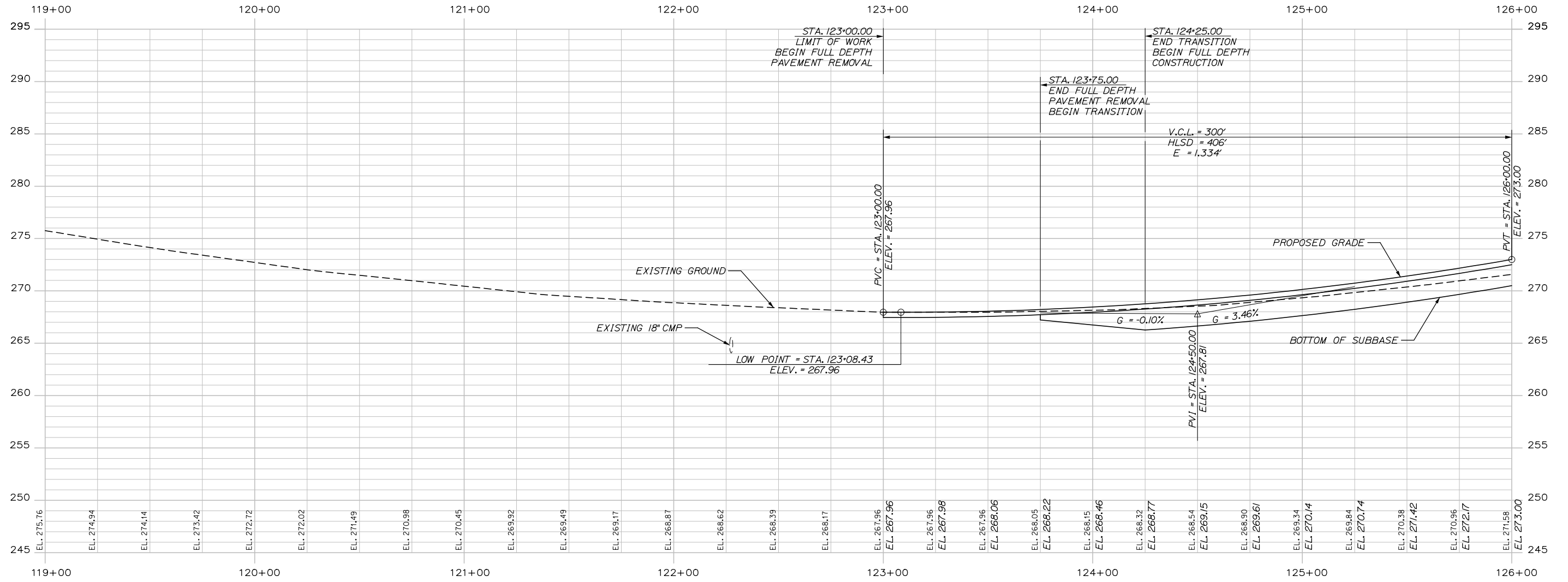
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2022.06

SHEET NUMBER: GP-03

16 OF 81

Date: 2/7/2022



PROFILE

Scale: Horiz. 25 0 25 50  
Vert. 5 0 5 10

| No. | Revision | By | Date |
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|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

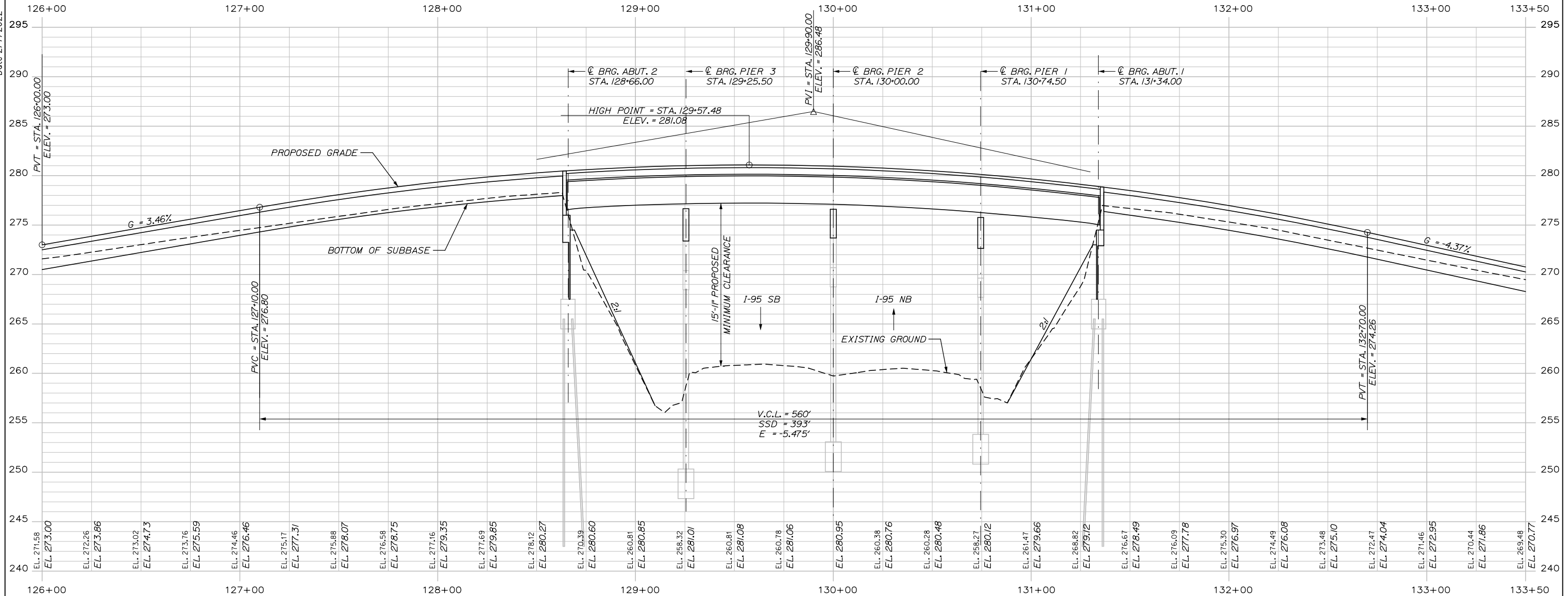
SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

PROFILE 1

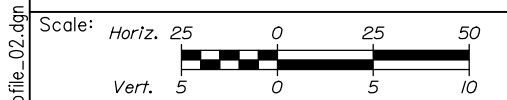
SHEET NUMBER: PRO-01  
17 OF 81

CONTRACT: 2022.06

Date: 2/7/2022



PROFILE  
(DISTRIBUTION SLAB AND LIGHTWEIGHT FILL AT ABUTMENTS NOT SHOWN)



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THE GOLD STAR  
MEMORIAL HIGHWAY

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

PROFILE 2

| No. | Revision | By | Date |
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| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |
| Designed  | By  | Date  | Checked      |
|   | CDH | 01\22 | DAM          |
| Drawn   | By  | Date  | In Charge of |
|   | CDH | 01\22 | TRC          |

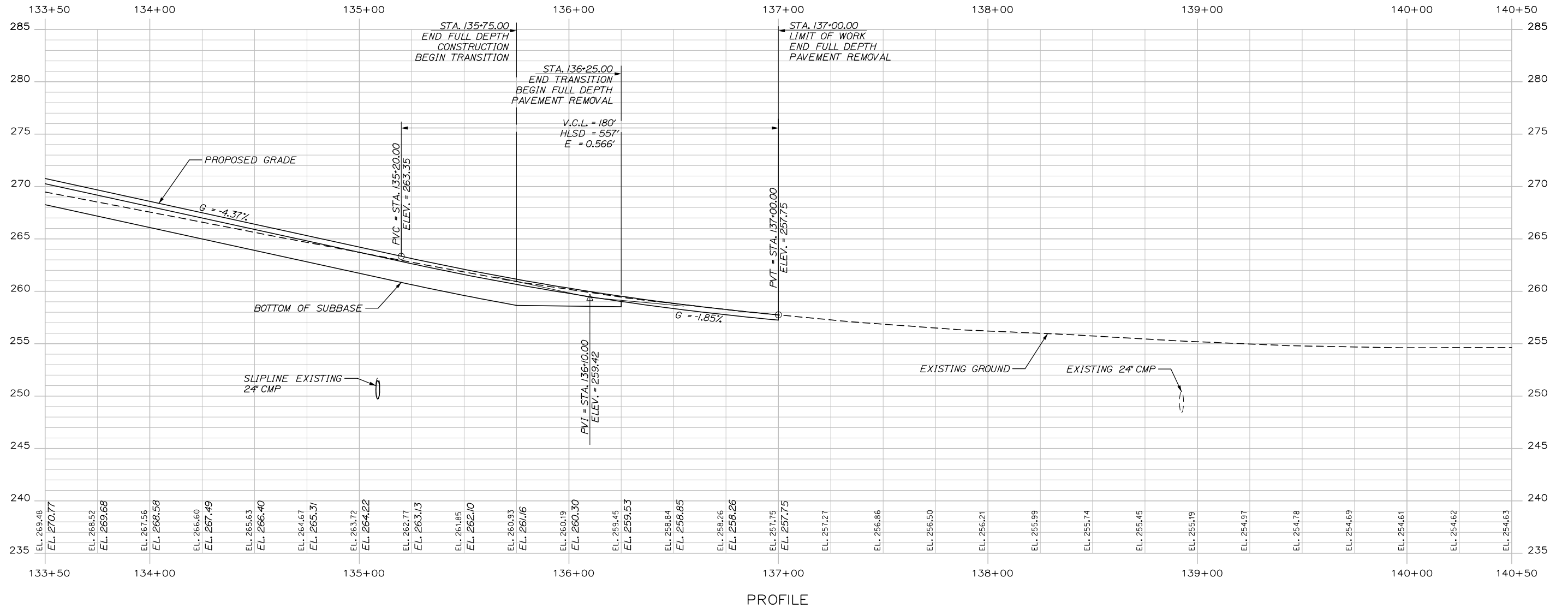
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2022.06

SHEET NUMBER: PRO-02  
18 OF 81

Filename: 0XX\_Profile\_02.dgn

Date: 2/7/2022



Scale: Horiz. 25 0 25 50  
 Vert. 5 0 5 10

| No. | Revision | By | Date |
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Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS

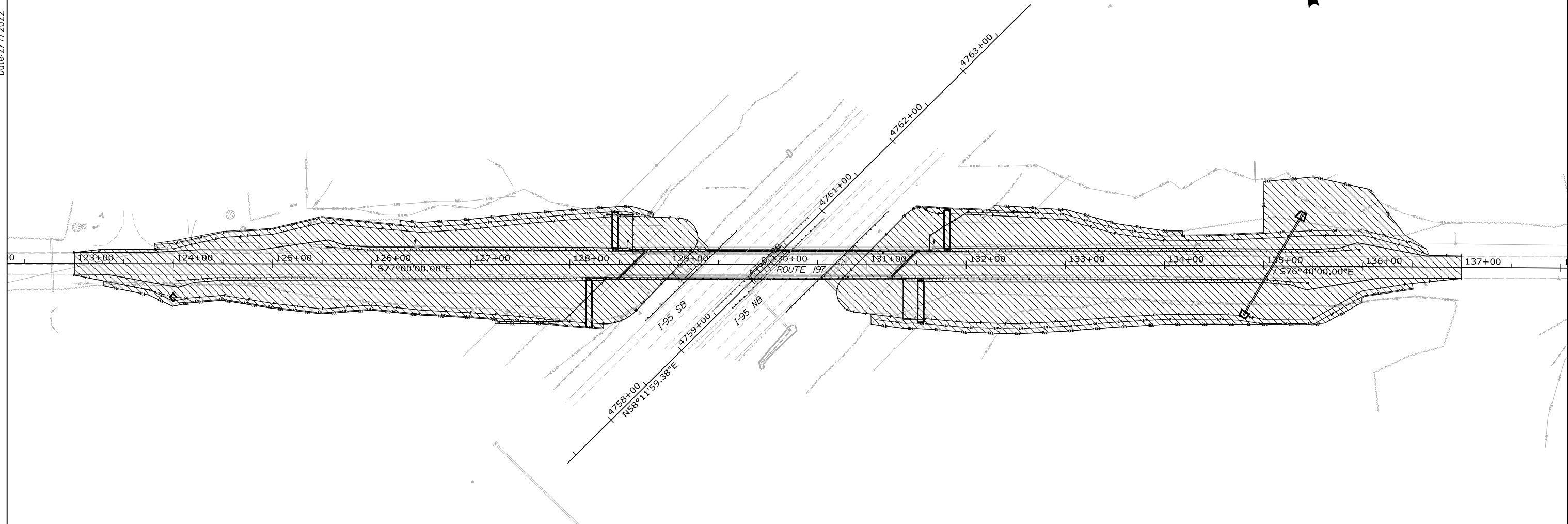
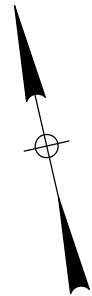
PROFILE 3

SHEET NUMBER: PRO-03  
 19 OF 81

CONTRACT: 2022.06



Date: 2/7/2022

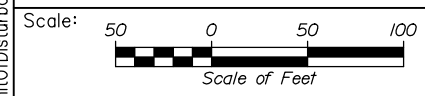


**LEGEND**

 CONTRACT LIMIT OF DISTURBANCE  
(2.72 ACRES)

**NOTES:**

1. AN ADDITIONAL 0.43 ACRES OF DISTURBANCE HAS BEEN ESTIMATED FOR ADDITIONAL CONTRACTOR ACCESS LOCATIONS AND STORAGE AREAS.
2. TOTAL LIMIT OF DISTURBANCE FOR THIS PROJECT HAS BEEN ESTIMATED TO BE 3.15 ACRES.



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| No. | Revision | By | Date |
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|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

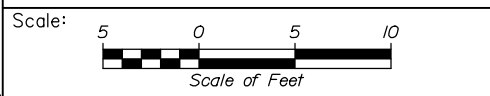
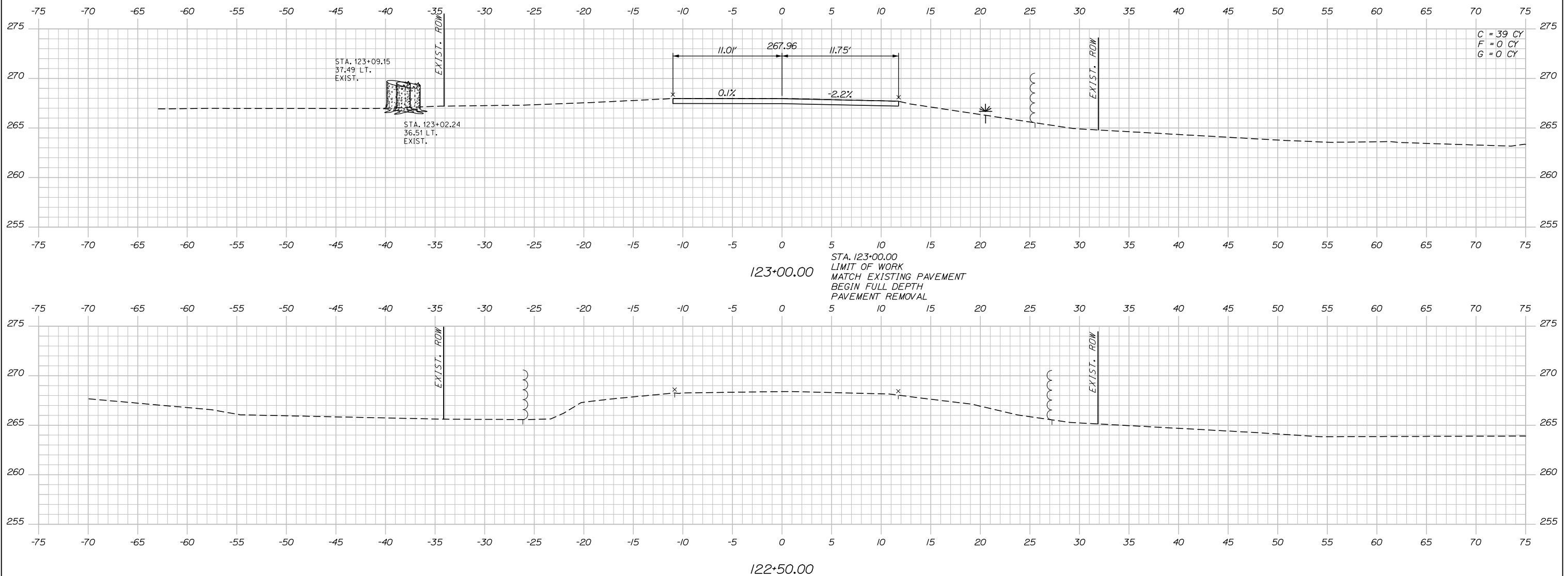
SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
LIMIT OF DISTURBANCE PLAN

SHEET NUMBER: LOD-01  
20 OF 81

CONTRACT: 2022.06

Filename: OXX\_LimitOfDisturbance.dgn

Date: 2/7/2022



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|   |     |       |              |      |       |
|---|-----|-------|--------------|------|-------|
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |      |       |
|   | By  | Date  | By           | Date |       |
| Designed  | CDH | 01\22 | Checked      | DAM  | 01\22 |
| Drawn   | CDH | 01\22 | In Charge of | TRC  | 01\22 |

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SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS

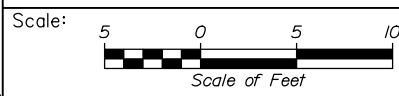
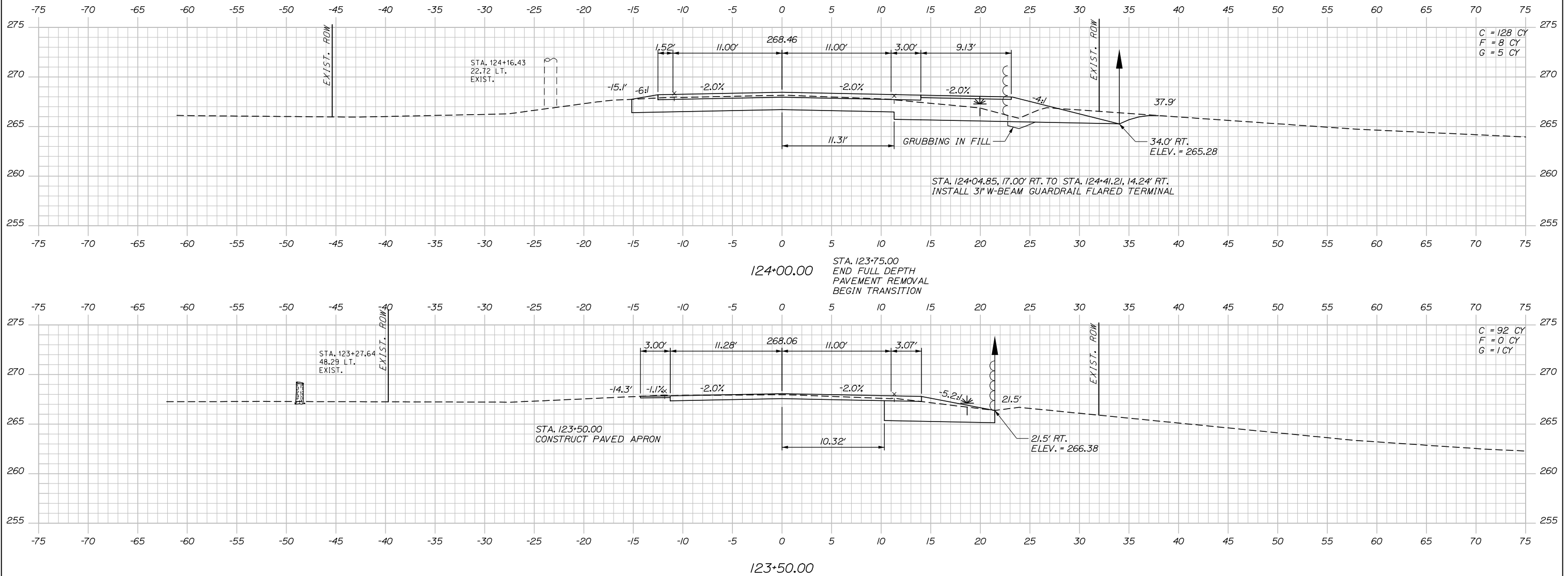
STA. 122+50 TO STA.123+00

SHEET NUMBER: XS-01  
 21 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn

Date: 2/7/2022



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| No. | Revision | By | Date |
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

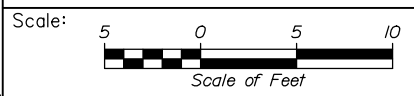
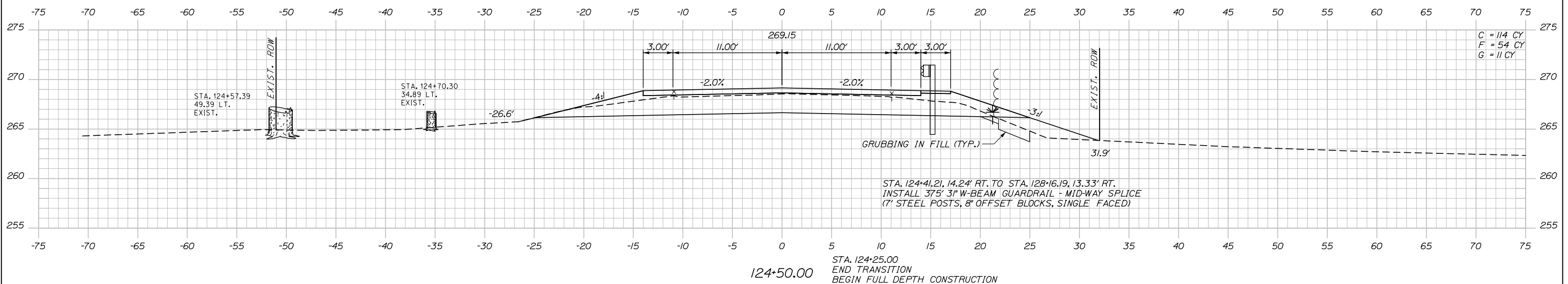
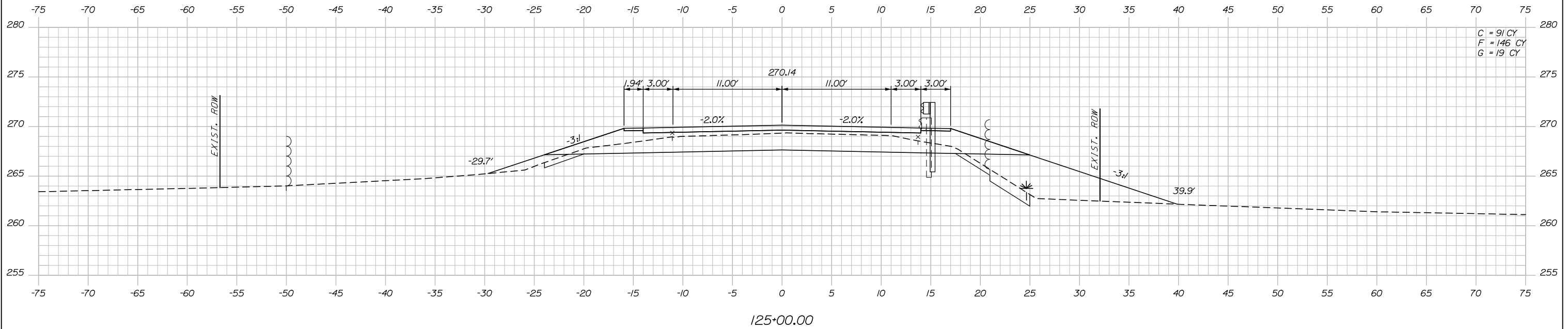
SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
STA. 123+50 TO STA.124+00

SHEET NUMBER: XS-02  
22 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn

Date: 2/7/2022



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| No. | Revision | By | Date |
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| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

STA. 124+25.00  
 END TRANSITION  
 BEGIN FULL DEPTH CONSTRUCTION

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS**

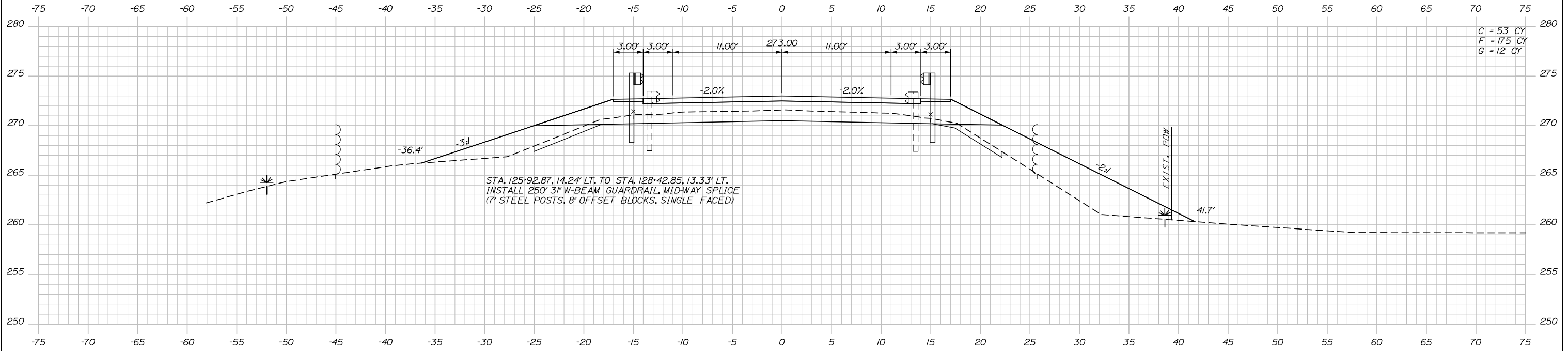
STA. 124+50 TO STA. 125+00

SHEET NUMBER: XS-03  
 23 OF 81

CONTRACT: 2022.06

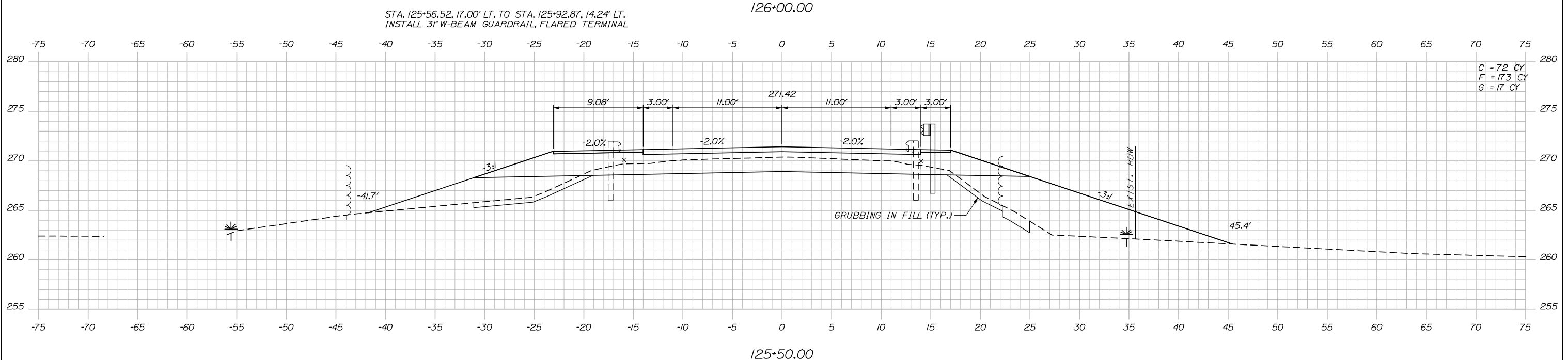
Filename: Xsect.dgn

Date: 2/7/2022



C = 53 CY  
F = 175 CY  
G = 12 CY

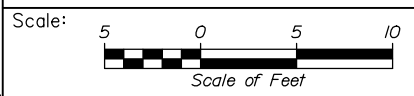
STA. 125+92.87, 14.24' LT. TO STA. 128+42.85, 13.33' LT.  
INSTALL 250' 3\"/>



C = 72 CY  
F = 173 CY  
G = 17 CY

STA. 125+56.52, 17.00' LT. TO STA. 125+92.87, 14.24' LT.  
INSTALL 3\"/>

GRUBBING IN FILL (TYP.)



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| No. | Revision | By | Date |
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| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
STA. 125+50 TO STA.126+00

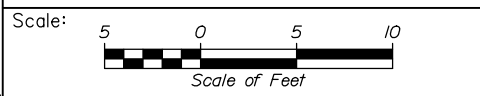
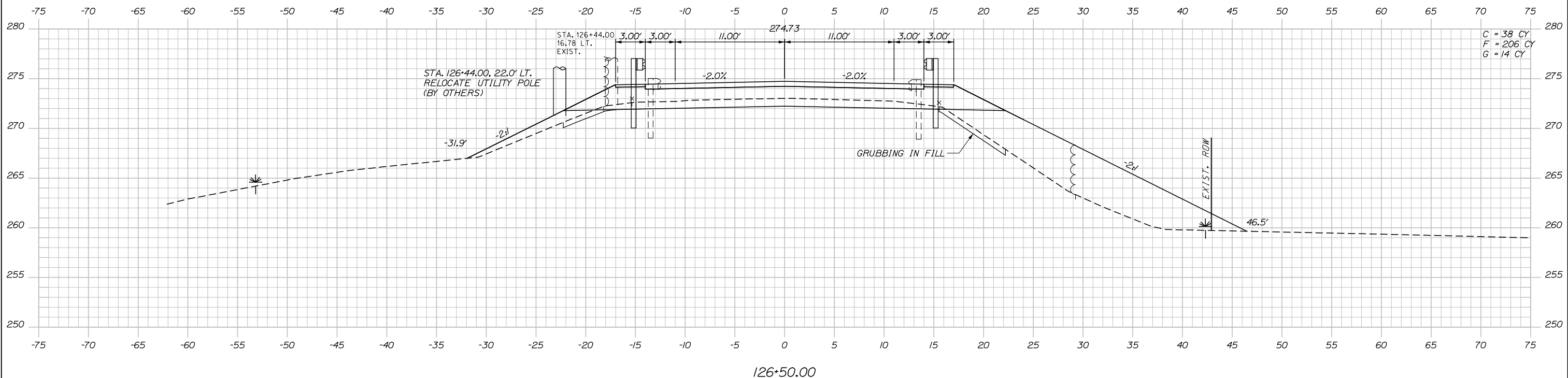
SHEET NUMBER: XS-04  
24 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn



Date: 2/7/2022



Designed by:

**HNTB**

| No. | Revision | By | Date |
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

STA. 126+50

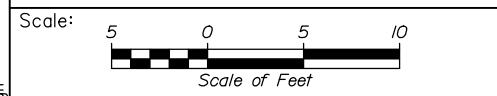
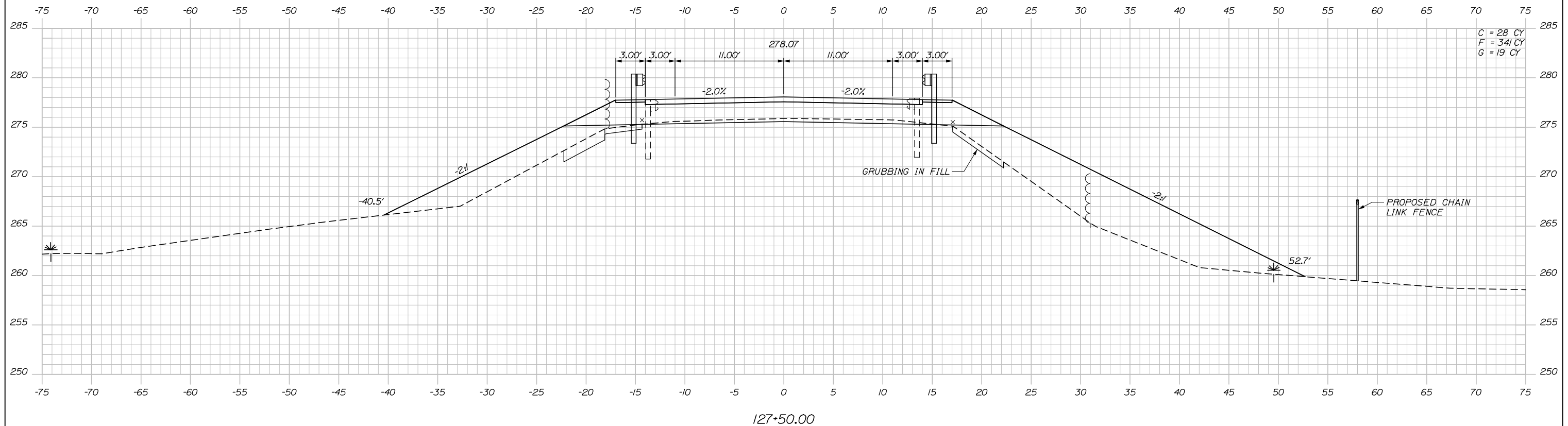
SHEET NUMBER: XS-05  
25 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn



Date: 2/7/2022



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| No. | Revision | By | Date |
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 |              | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

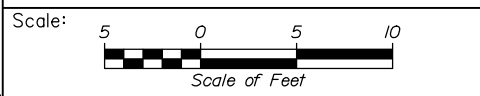
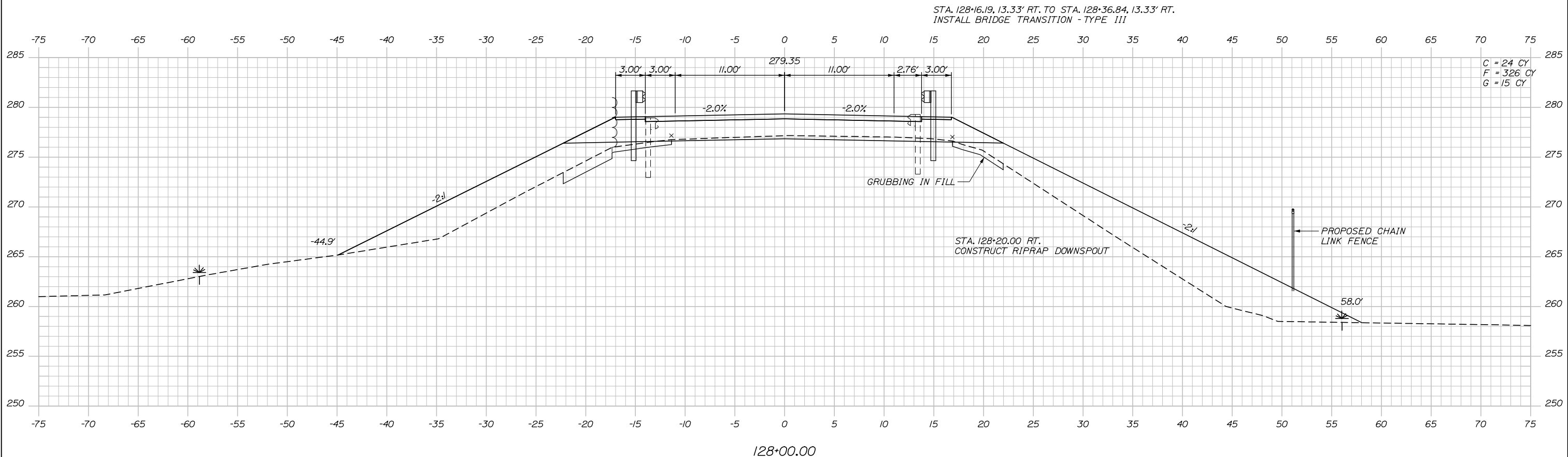
STA. 127+50

SHEET NUMBER: XS-07  
27 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn

Date: 2/7/2022



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| No. | Revision | By | Date |
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
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| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

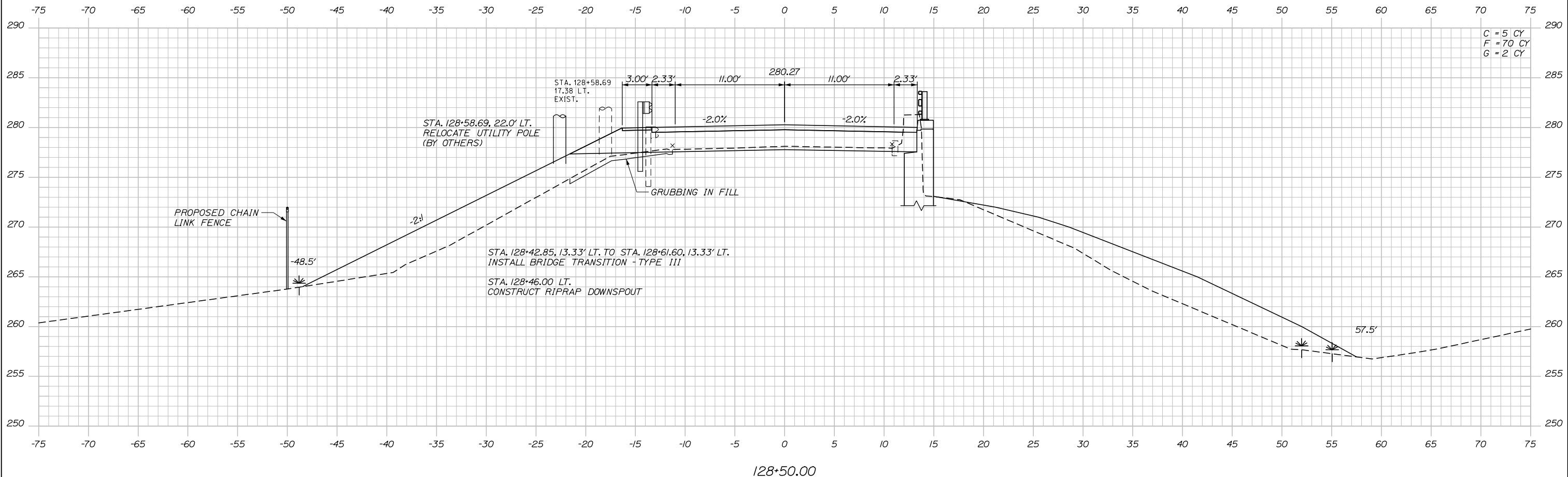
STA. 128+00

SHEET NUMBER: XS-08  
28 OF 81

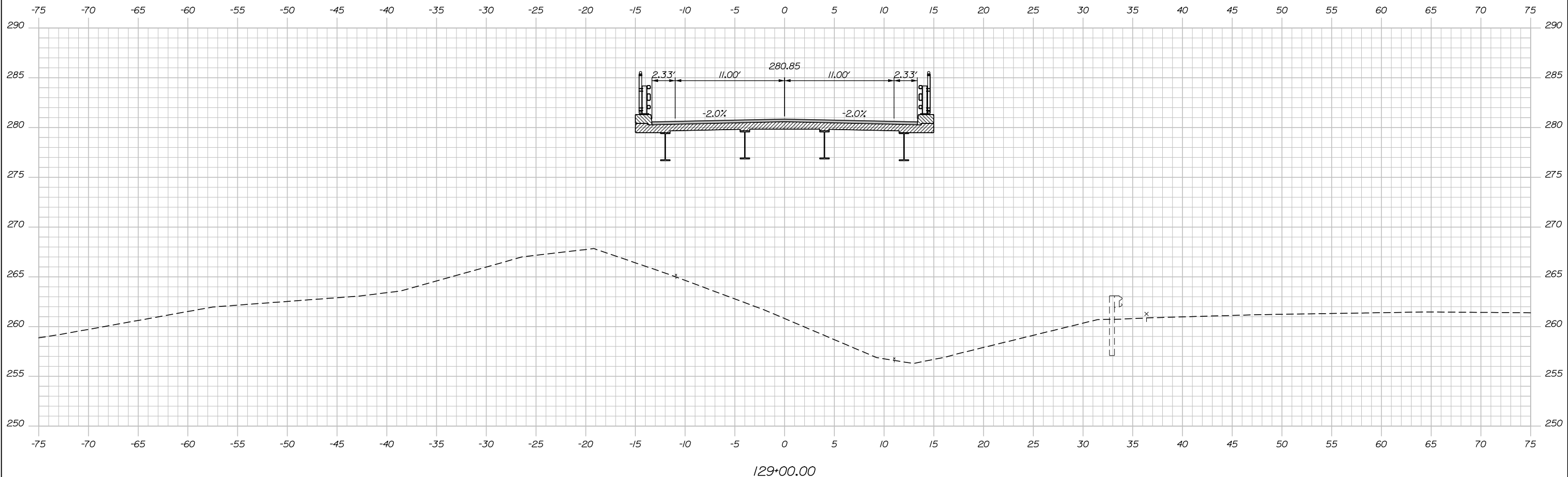
CONTRACT: 2022.06

Filename: Xsect.dgn

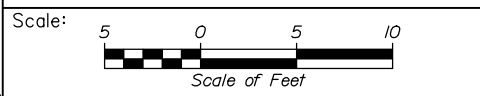
Date: 2/7/2022



Date: 2/7/2022



129+00.00



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| No. | Revision | By | Date |
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 | DAM          | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

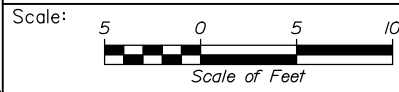
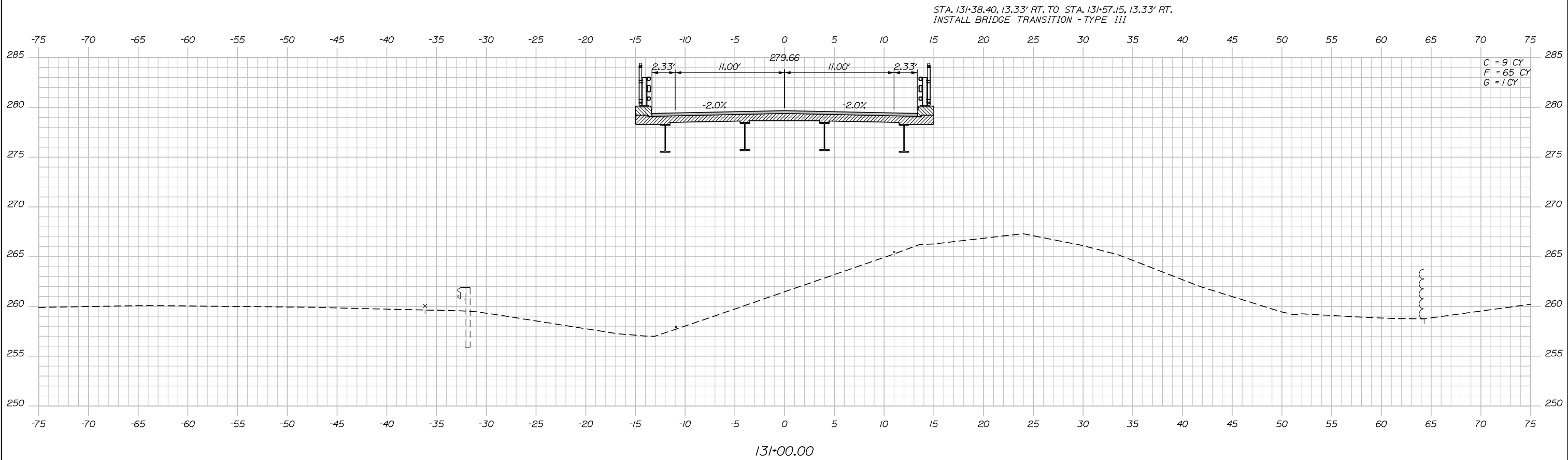
STA. 129+00

SHEET NUMBER: XS-10  
30 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn

Date: 2/7/2022



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| No. | Revision | By | Date |
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
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| Designed | CDH | 01\22 | DAM          | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

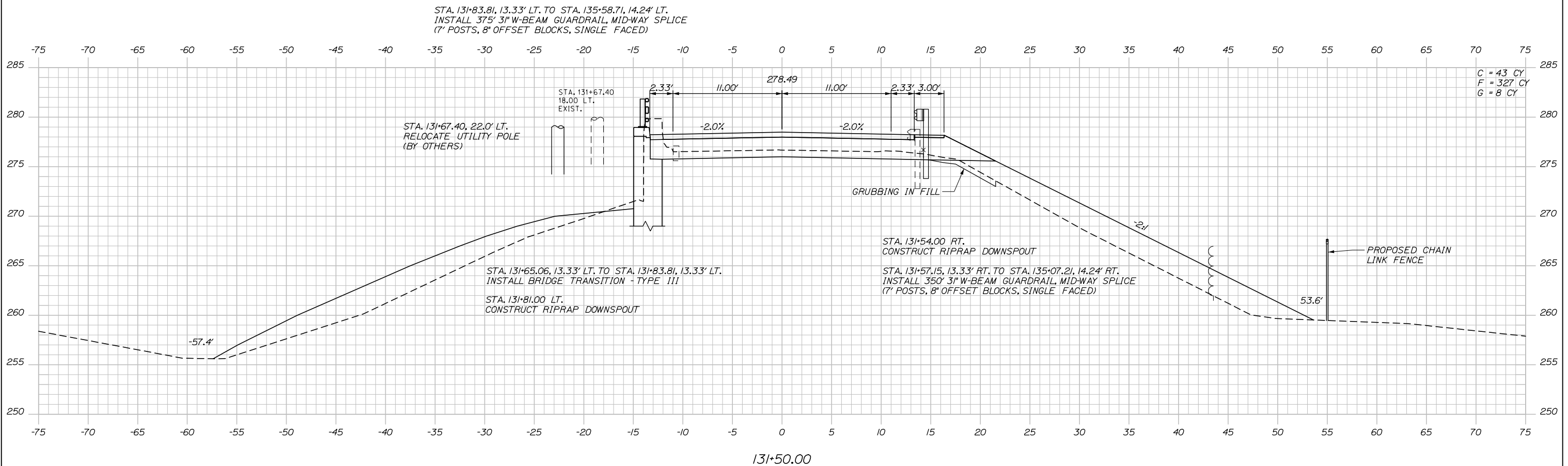
STA. 131+00

SHEET NUMBER: XS-11  
31 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn

Date: 2/7/2022



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SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

STA. 131+50

| No. | Revision | By | Date |
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| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn   | CDH | 01\22 | In Charge of | TRC | 01\22 |

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2022.06

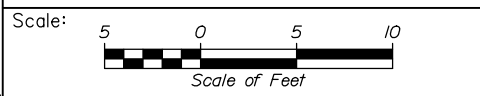
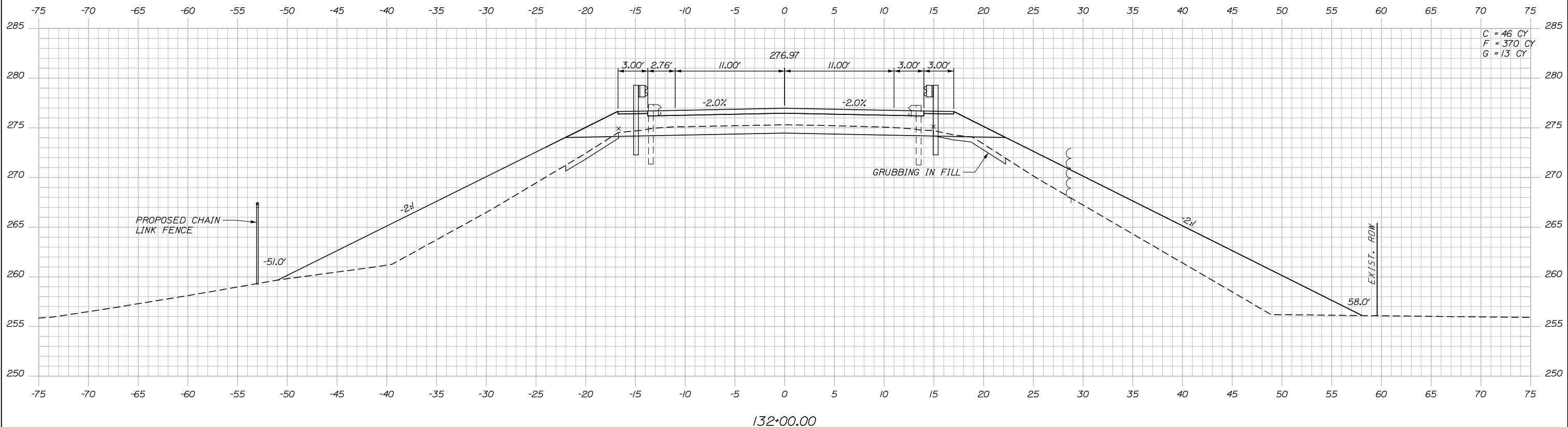
SHEET NUMBER: XS-12

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Filename: Xsect.dgn



Date: 2/7/2022



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| No. | Revision | By | Date |
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | CDH | 01\22 |              | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS

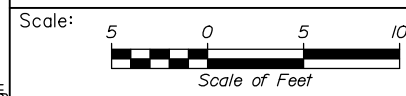
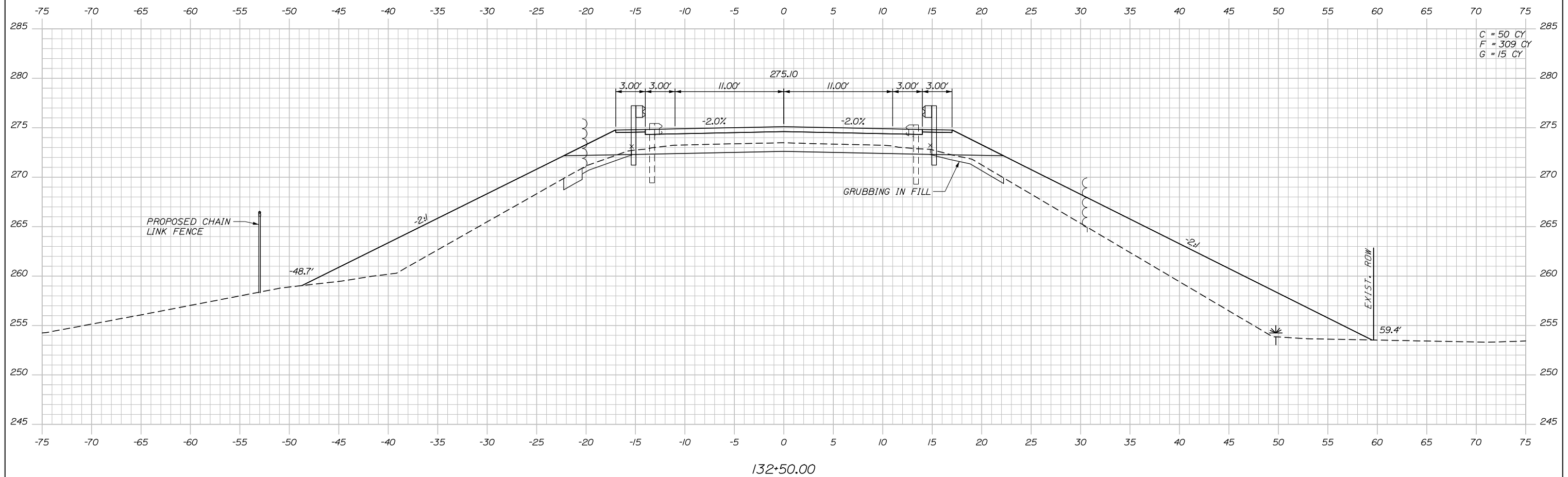
STA. 132+00

SHEET NUMBER: XS-13  
 33 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn

Date: 2/7/2022



Designed by:

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| No. | Revision | By | Date |
|-----|----------|----|------|
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
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| Designed | CDH | 01\22 | DAM          | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

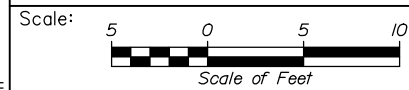
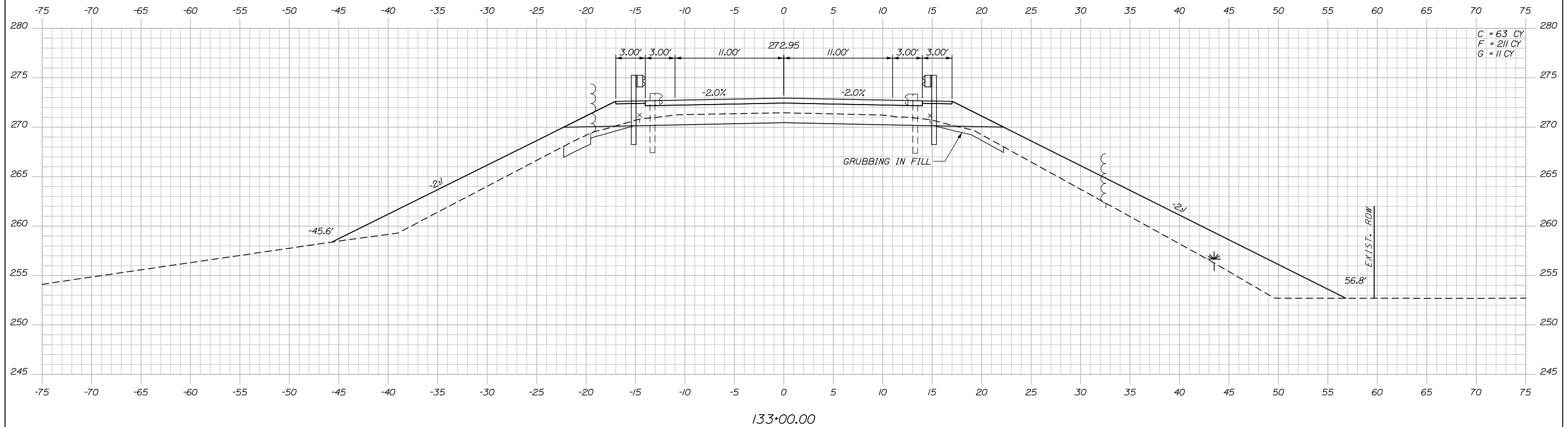
STA. 132+50

SHEET NUMBER: XS-14  
34 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn

Date: 2/7/2022



Designed by:



HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
 FAX (207) 228-0909



THE GOLD STAR  
 MEMORIAL HIGHWAY

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS

STA. 133+00

| No. | Revision | By | Date |
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| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |                        |
|   | By  | Date  |                        |
| Designed  | CDH | 01\22 | Checked DAM 01\22      |
| Drawn   | CDH | 01\22 | In Charge of TRC 01\22 |

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

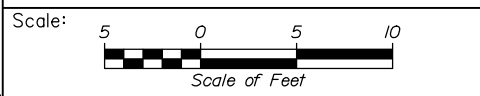
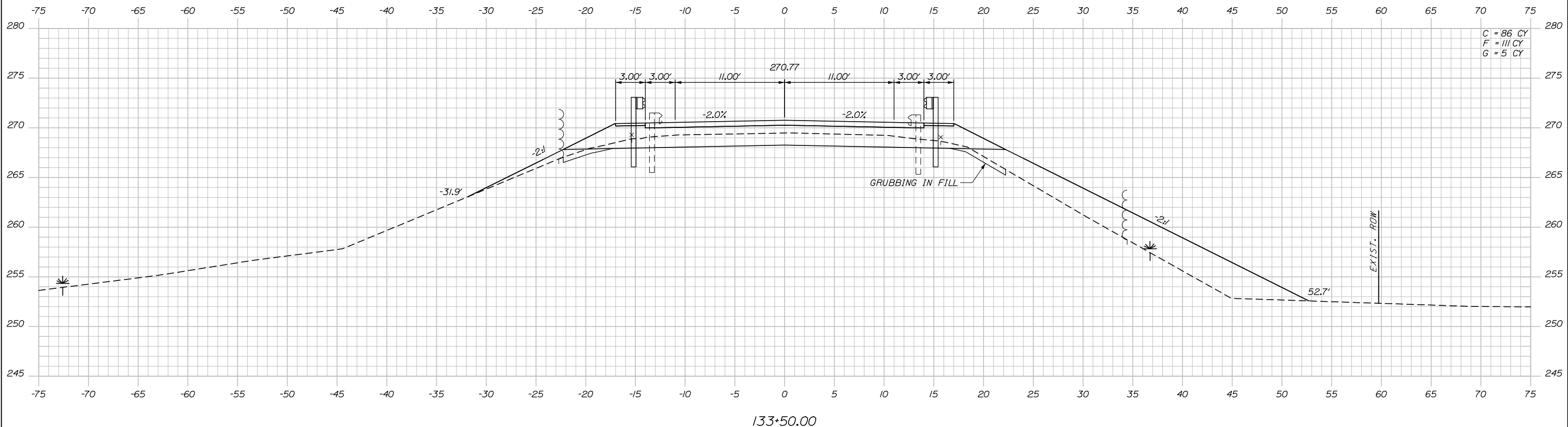
CONTRACT: 2022.06

SHEET NUMBER: XS-15

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Filename: Xsect.dgn

Date: 2/7/2022



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| No. | Revision | By | Date |
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
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| Designed | CDH | 01\22 | DAM          | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

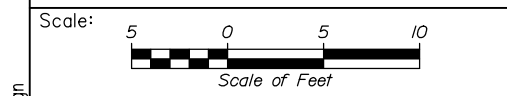
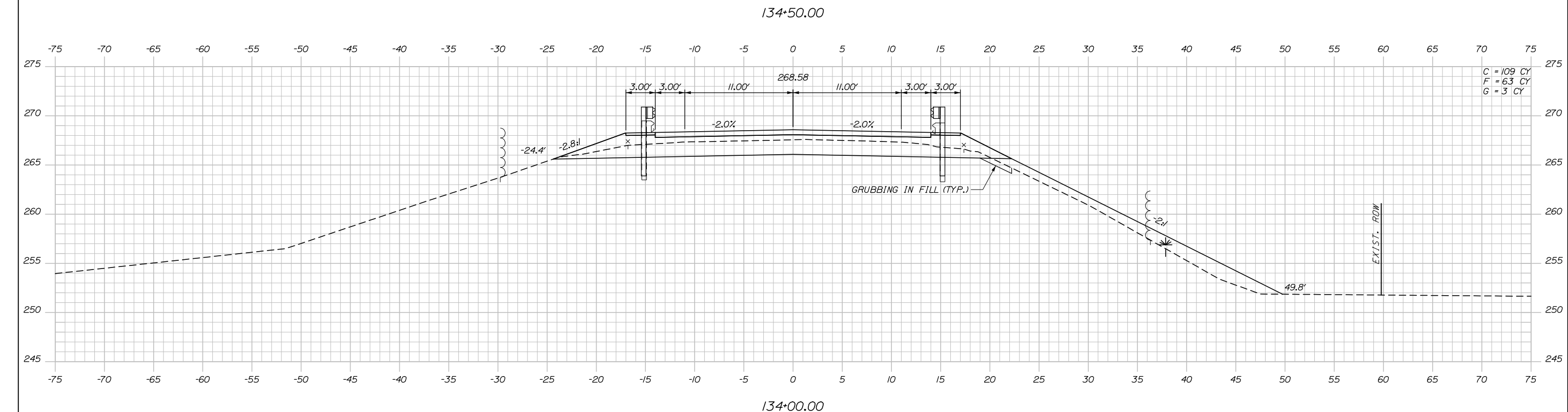
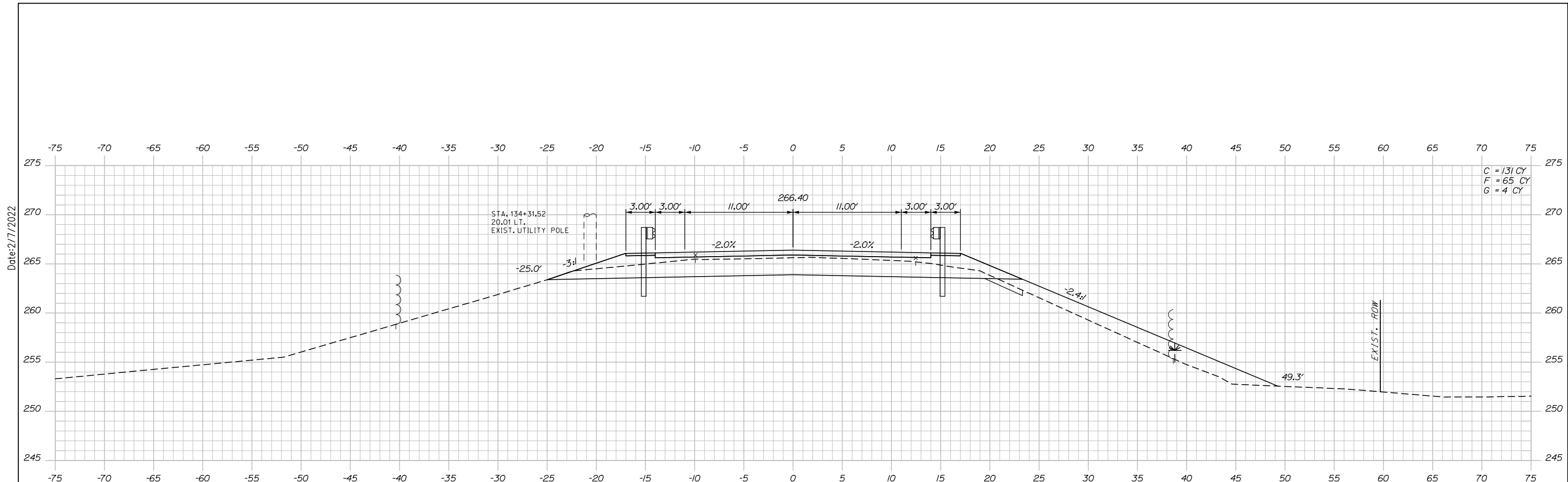
SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

STA. 133+50

SHEET NUMBER: XS-16  
36 OF 81

CONTRACT: 2022.06

Filename: Xsect.dgn



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| No. | Revision | By | Date |
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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
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| Designed | CDH | 01\22 | DAM          | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS**

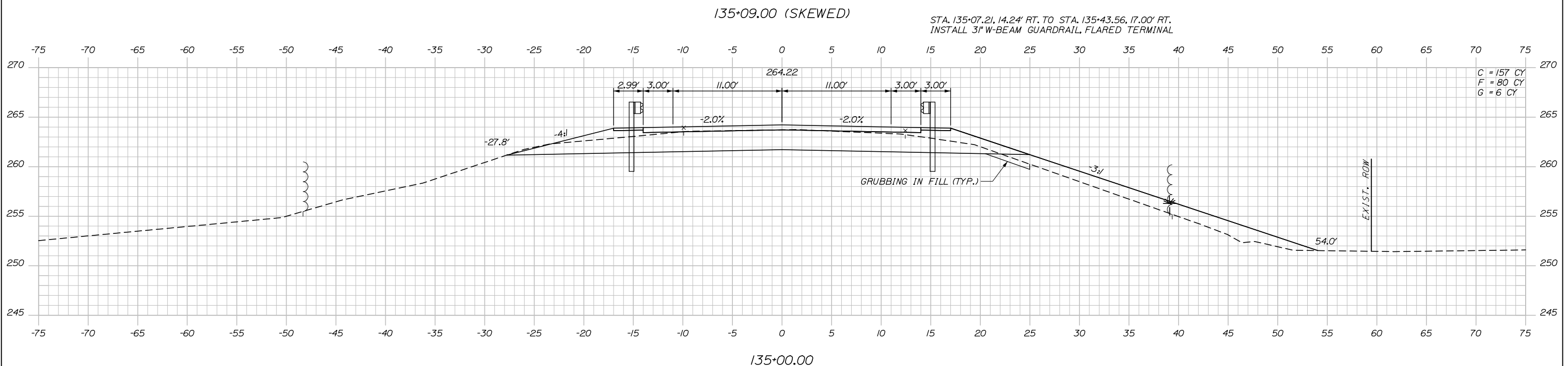
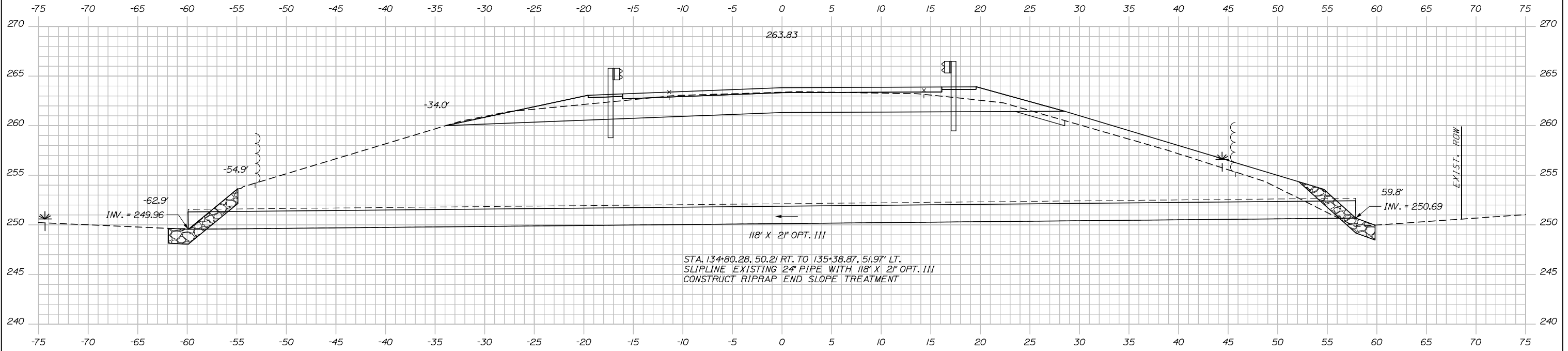
STA. 134+00

SHEET NUMBER: XS-17  
 CONTRACT: 2022.06  
 37 OF 81

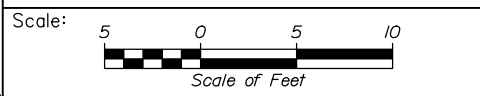
Filename: Xsect.dgn

Date: 2/7/2022

Date: 2/7/2022



C = 157 CY  
F = 80 CY  
G = 6 CY



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| No. | Revision | By | Date |
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| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
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MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

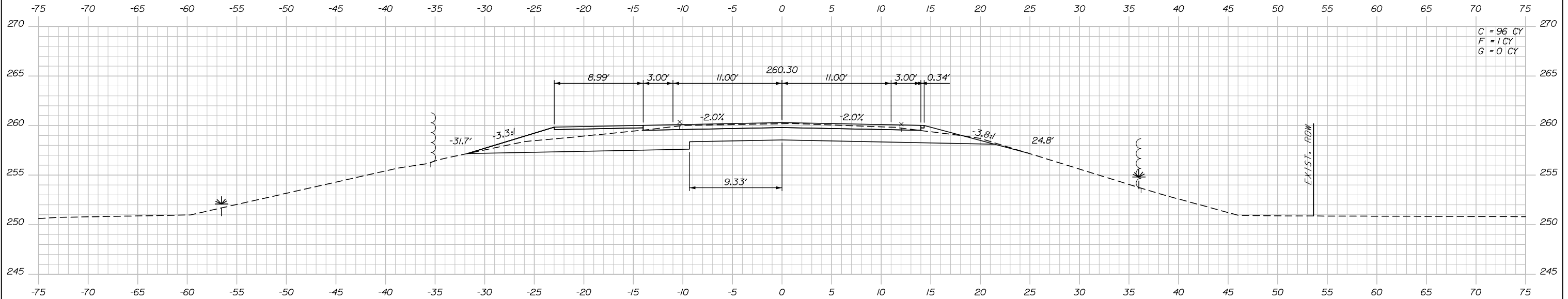
**SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS**

STA. 135+00 TO STA. 135+09

SHEET NUMBER: XS-18  
CONTRACT: 2022.06  
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Filename: Xsect.dgn

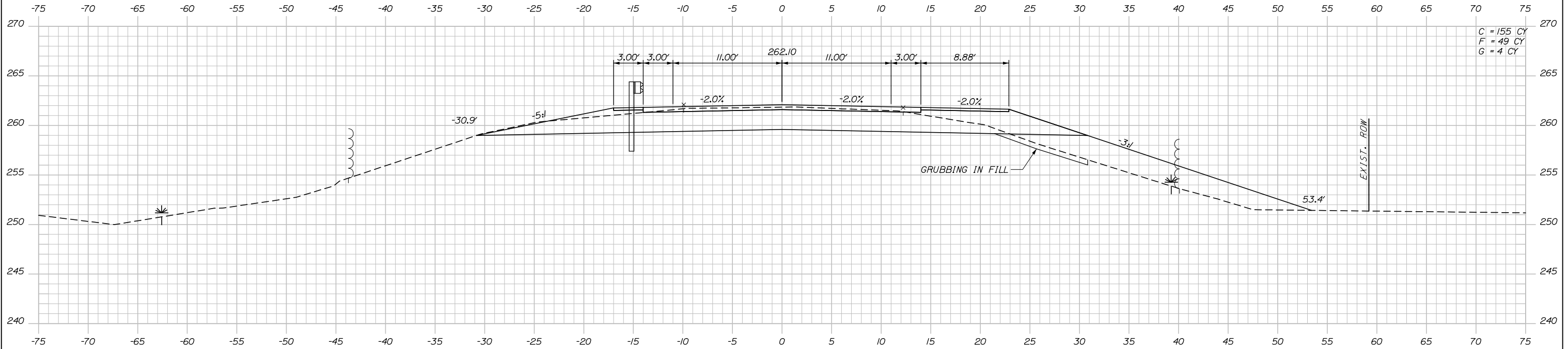
Date: 2/7/2022



C = 96 CY  
F = 1 CY  
G = 0 CY

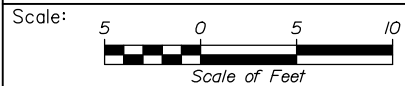
STA. 135+58.71, 14.24' LT. TO STA. 135+95.07, 17.00' LT.  
INSTALL 31" W-BEAM GUARDRAIL, FLARED TERMINAL

136+00.00 STA. 135+75.00  
END FULL DEPTH CONSTRUCTION  
BEGIN TRANSITION



C = 155 CY  
F = 49 CY  
G = 4 CY

135+50.00



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THE GOLD STAR  
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SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

STA. 135+50 TO STA. 136+00

| No. | Revision | By | Date |
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| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |
| Designed  | By  | Date  | Checked      |
|   | CDH | 01\22 | DAM          |
| Drawn   | By  | Date  | In Charge of |
|   | CDH | 01\22 | TRC          |

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

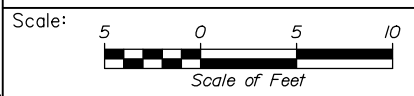
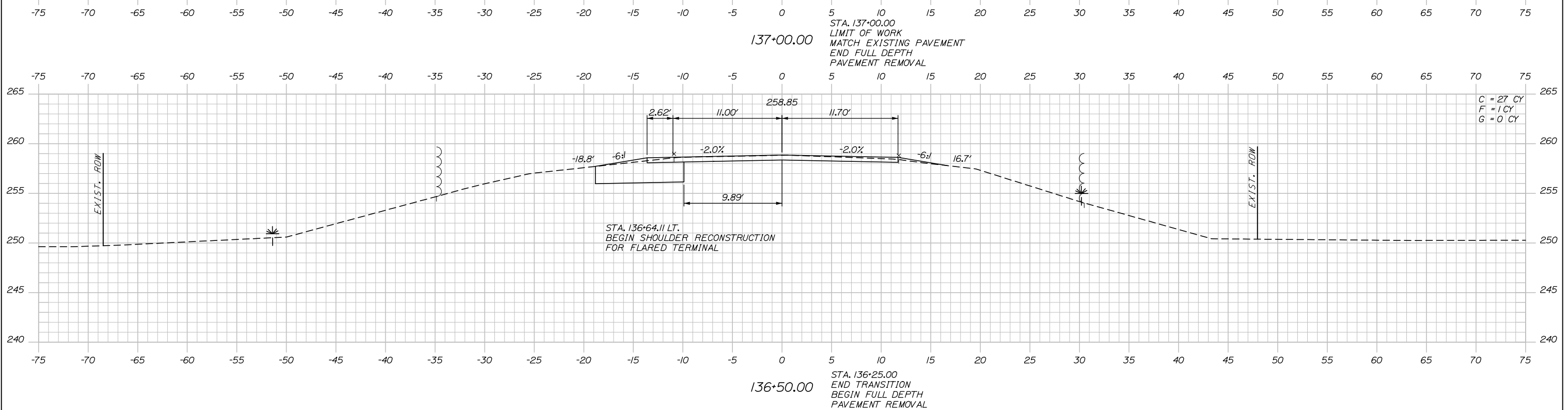
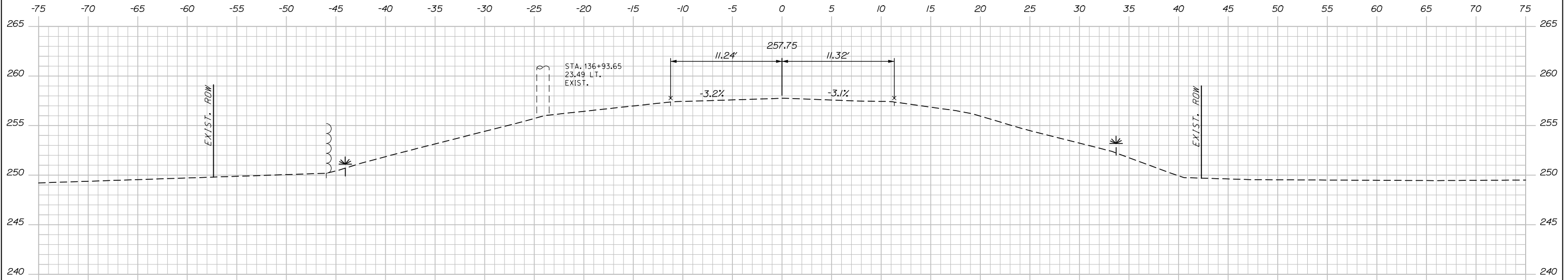
CONTRACT: 2022.06

SHEET NUMBER: XS-19

39 OF 81

Filename: Xsect.dgn

Date: 2/7/2022



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CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  | Checked      | By  | Date  |
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| Designed | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn    | CDH | 01\22 | In Charge of | TRC | 01\22 |

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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

STA. 136+50 TO STA.137+00

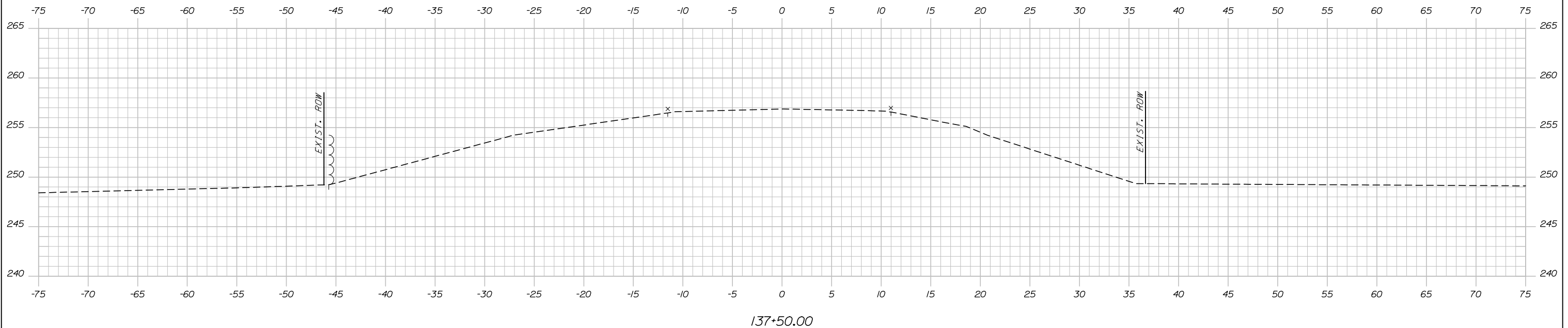
SHEET NUMBER: XS-20  
40 OF 81

CONTRACT: 2022.06

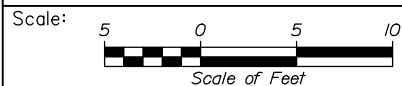
Filename: Xsect.dgn



Date: 2/7/2022



137+50.00



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SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

STA. 137+50 TO STA. 137+50

| No. | Revision | By | Date |
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| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | CDH | 01\22 | Checked      | DAM | 01\22 |
| Drawn   | CDH | 01\22 | In Charge of | TRC | 01\22 |

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

CONTRACT: 2022.06

SHEET NUMBER: XS-21

41 OF 81

Filename: Xsect.dgn

**SPECIFICATIONS**

**DESIGN**  
 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION 2020.

**CONSTRUCTION**  
 STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES, REVISION OF NOVEMBER 2014.  
 STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD DETAILS FOR HIGHWAYS AND BRIDGES, REVISION OF NOVEMBER 2014, WITH ALL REVISIONS THERETO.  
 AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 4TH. EDITION

**DESIGN LOADING**

LIVE LOAD - HL-93

**MATERIALS**

**CONCRETE**  
 DECK CONCRETE - CLASS AAA-DECK  
 ALL OTHER CONCRETE SHALL BE CLASS AAA, U.O.N

**REINFORCING STEEL**  
 ASTM A775, GRADE 60  
 ALL REINFORCING SHALL BE EPOXY-COATED.

ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 105 AND SHALL BE SWEDGED OR THREADED ON THE EMBEDDED PORTION OF THE ROD.

**STRUCTURAL STEEL**  
 BEAMS, SPLICE PLATES, FILLER PLATES, DIAPHRAGMS AND BEARING STIFFENERS SHALL BE AASHTO M270, GRADE 50.

ALL OTHER STRUCTURAL STEEL SHALL BE AASHTO M270, GRADE 36.

HIGH STRENGTH BOLTS SHALL BE AASHTO M164 (ASTM A325, TYPE 1).

**PROTECTIVE COATING**  
 BEAMS, CONNECTION PLATES, BEARING STIFFENERS, SPLICE PLATES, DIAPHRAGMS AND INTERMEDIATE STIFFENERS, SHALL BE METALLIZED AFTER FABRICATION IN ACCORDANCE WITH SPECIAL PROVISION SECTION 506.

**BASIC DESIGN STRESSES**

**CONCRETE**  
 CLASS AAA-DECK, f'c = 4,500 P.S.I.  
 CLASS AAA, f'c = 4,500 P.S.I.

**REINFORCING STEEL**  
 EPOXY-COATED REINFORCING STEEL, fy = 60,000 P.S.I.

**STRUCTURAL STEEL**  
 AASHTO M270 (ASTM A709) GRADE 36, Fy = 36,000 P.S.I.  
 AASHTO M270 (ASTM A709) GRADE 50, Fy = 50,000 P.S.I.

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**ORIGINAL CONSTRUCTION PLANS**

77 OF 81 AS-BUILT PLANS

**LIST OF ABBREVIATIONS**

|                         |  |                                 |
|-------------------------|--|---------------------------------|
| ABUT. - ABUTMENT        | EXIST. - EXISTING                          | SHLDR. - SHOULDER               |
| ADDL. - ADDITIONAL      | EXP. - EXPANSION                           | SB - SOUTHBOUND                 |
| ALT. - ALTERNATE        | F.F. - FAR FACE                            | SF - SQUARE FEET                |
| APPROX. - APPROXIMATELY | JT. - JOINT                                | SP. - SPACES                    |
| BOT. - BOTTOM           | MAX. - MAXIMUM                             | STA. - STATION                  |
| BRG. - BEARING          | MEDOT - MAINE DEPARTMENT OF TRANSPORTATION | T.&B. - TOP & BOTTOM            |
| CL. - CLEAR             | MIN. - MINIMUM                             | TPKE. - TURNPIKE                |
| CL. - CENTERLINE        | MTA - MAINE TURNPIKE AUTHORITY             | TYP. - TYPICAL                  |
| CONC. - CONCRETE        | NB - NORTHBOUND                            | U.O.N. - UNLESS OTHERWISE NOTED |
| CONSTR. - CONSTRUCTION  | N.F. - NEAR FACE                           | VERT. - VERTICAL                |
| C.Y. - CUBIC YARD       | N.T.S. - NOT TO SCALE                      | WB - WESTBOUND                  |
| DEMO. - DEMOLITION      | PED. - PEDESTAL                            | W.P. - WORKING POINT            |
| DIA. - DIAMETER         | PGL - PROFILE GRADE LINE                   | WW - WINGWALL                   |
| EA. - EACH              | PL. - PLATE                                |                                 |
| EB - EASTBOUND          | PROP. - PROPOSED                           |                                 |
| E.F. - EACH FACE        | P.S.I. - POUNDS per SQUARE INCH            |                                 |
| EL. - ELEVATION         | RDWY. - ROADWAY                            |                                 |
| EQ. - EQUAL             |  |                                 |

**STRUCTURAL QUANTITIES**

| ITEM NUMBER | ITEM DESCRIPTION  | UNIT | QUANTITY |
|-------------|---|------|----------|
| 202.10      | REMOVING EXISTING SUPERSTRUCTURE (STEEL 157,0000 LBS; CONCRETE 280 CY)            | LS   | 1        |
| 202.12      | REMOVING EXISTING STRUCTURAL CONCRETE   | CY   | 92       |
| 203.34      | LIGHTWEIGHT FILL  | CY   | 80       |
| 206.082     | STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY                     | CY   | 125      |
| 403.208     | HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE                                     | TON  | 65       |
| 403.213     | HOT MIX ASPHALT, 12.5 MM NOMINAL MAXIMUM SIZE (BASE AND INTERMEDIATE BASE COURSE) | TON  | 65       |
| 409.15      | BITUMINOUS TACK COAT, APPLIED   | GAL  | 50       |
| 502.219     | STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (115 CY)                       | LS   | 1        |
| 502.239     | STRUCTURAL CONCRETE, PIERS (47 CY)  | LS   | 1        |
| 502.26      | STRUCTURAL CONCRETE ROADWAY AND SIDEWALK SLAB ON STEEL BRIDGES (226 CY)           | LS   | 1        |
| 502.31      | STRUCTURAL CONCRETE APPROACH SLAB (11 CY)   | LS   | 1        |
| 502.49      | STRUCTURAL CONCRETE CURBS AND SIDEWALKS (40 CY)                                   | LS   | 1        |
| 503.14      | EPOXY-COATED REINFORCING STEEL, FABRICATED AND DELIVERED                          | LB   | 107,200  |
| 503.15      | EPOXY-COATED REINFORCING STEEL, PLACING   | LB   | 107,200  |
| 504.711     | STRUCTURAL STEEL ERECTION, SUPPLIED BY AUTHORITY (217,000 LBS)                    | LS   | 1        |
| 505.08      | SHEAR CONNECTORS (3264 EA)  | LS   | 1        |
| 507.0821    | STEEL BRIDGE RAILING, 3 BAR (592 LF)  | LS   | 1        |
| 508.13      | SHEET WATERPROOFING MEMBRANE (75 SY)  | LS   | 1        |
| 508.14      | HIGH PERFORMANCE WATERPROOFING MEMBRANE (795 SY)                                  | LS   | 1        |
| 514.06      | CURING BOX FOR CONCRETE CYLINDERS   | EA   | 1        |
| 515.201     | PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES                                | SY   | 380      |
| 515.202     | CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES                                    | SY   | 710      |
| 518.20      | PIER REPAIRS  | SF   | 220      |
| 518.40      | EPOXY INJECTION CRACK REPAIR  | LF   | 40       |
| 520.2211    | EXPANSION DEVICE INSTALLATION - GLAND SEAL, SUPPLIED BY AUTHORITY                 | EA   | 2        |
| 523.521     | INSTALLATION OF BEARING DEVICES - SUPPLIED BY AUTHORITY                           | EA   | 20       |
| 524.40      | PROTECTIVE SHIELDING - STEEL GIRDERS  | SY   | 1,200    |
| 526.34      | PERMANENT CONCRETE TRANSITION BARRIER   | EA   | 4        |
| 607.183     | CHAIN LINK SNOW FENCE   | LF   | 304      |
| 619.14      | EROSION CONTROL MIX   | CY   | 390      |

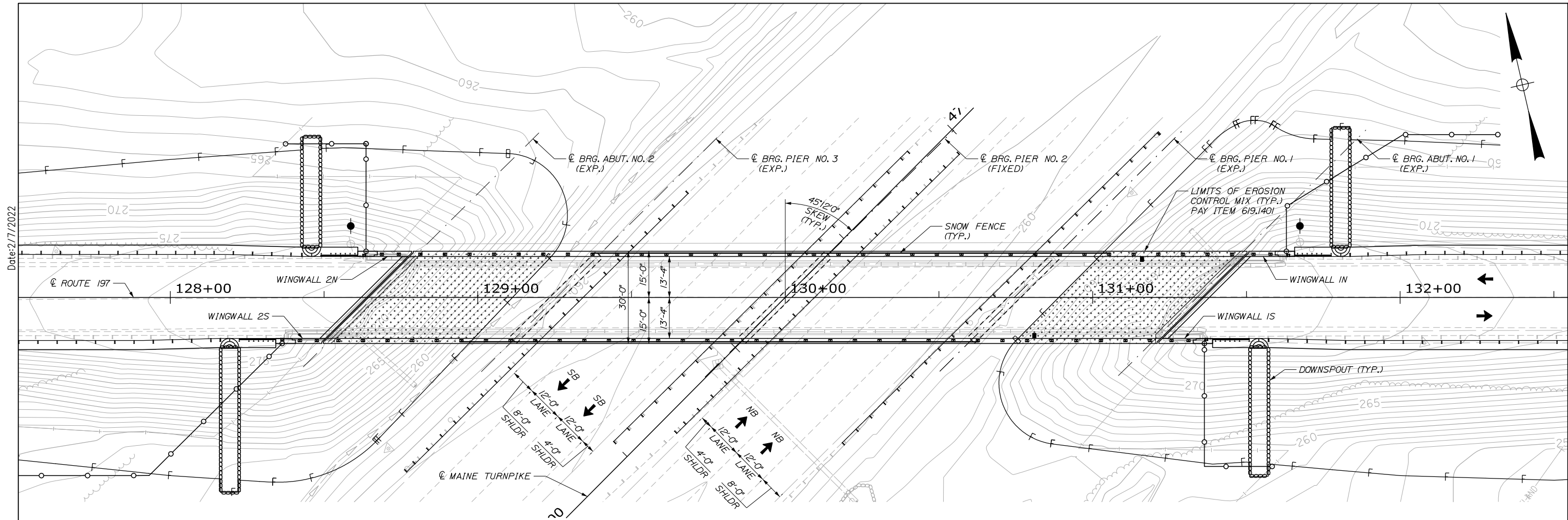
**NOTES:**

- FOR ADDITIONAL DETAILS REFERENCED OR NOT SHOWN IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH UPDATES.
- COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY. A PORTION OF THESE PLANS ARE INCLUDED IN THIS CONTRACT FOR THE CONTRACTOR'S CONVENIENCE. THE COMPLETENESS AND ACCURACY OF THESE PLANS IS NOT GUARANTEED.
- REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE NOTED.
- CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROFILE THE TOPS OF THE BEAMS BEFORE THE FORMWORK IS STARTED AND SHALL SUBMIT TO THE RESIDENT THE FINAL BLOCKING ELEVATIONS FOR REVIEW. FIVE (5) WORKING DAYS SHALL BE ALLOWED FOR THE BLOCKING POINT TURN AROUND TIME.
- CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO THE FOLLOWING AREAS:  
 - EXPOSED SURFACES OF THE CURBS AND ENDPPOSTS;  
 - VERTICAL FACES OF THE DECK FASCIA EXTENDING BENEATH THE DECK TO THE GIRDER TOP FLANGE.  
 - EXPOSED SURFACES OF THE ABUTMENTS AND WINGWALLS.
- PIGMENTED PROTECTIVE COATING FOR CONCRETE SURFACES SHALL BE APPLIED TO EXPOSED SURFACES OF THE PIERS.
- WHERE DRILLING AND ANCHORING IS SPECIFIED, THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINE DEPARTMENT OF TRANSPORTATION QUALIFIED LIST OF CONCRETE ADHESIVE ANCHOR SYSTEMS. THE DEPTH OF EMBEDMENT SHALL BE SUFFICIENT TO DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR, BUT SHALL BE NO LESS THAN THE MINIMUM DEPTH OF EMBEDMENT WHEN SPECIFIED. WHERE MINIMUM EMBEDMENT DEPTHS HAVE NOT BEEN SPECIFIED BAR LENGTHS HAVE BEEN DEVELOPED BASED ON AN ASSUMED EMBEDMENT DEPTH OF 9' FOR #5 BARS AND 1'-0" FOR #6 BARS. THE CONTRACTOR SHALL VERIFY THE REQUIRED DEPTH OF EMBEDMENT AND ADJUST THE REQUIRED BAR LENGTHS AS REQUIRED.

Date: 2/7/2022

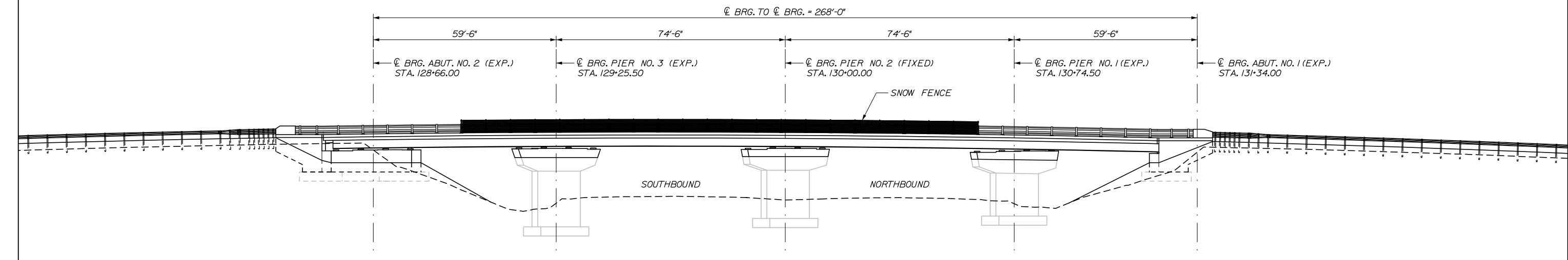
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| Scale:   |          | Designed by: |              |      |       | <p>HNTB CORPORATION<br/>                 82 Running Hill Road, Suite 201<br/>                 South Portland, ME 04106<br/>                 TEL (207) 774-5155<br/>                 FAX (207) 228-0909</p> |      |          |     | <p><b>THE GOLD STAR<br/>                 MEMORIAL HIGHWAY</b></p> |         |     |       | <p><b>SUPERSTRUCTURE REPLACEMENT<br/>                 ROUTE 197 UNDERPASS</b></p> <p>GENERAL NOTES, INDEX, AND QUANTITIES</p> |     |       |              |     |       |   |  |  |  |                                |  |   |  |
|--|----------|--------------|--------------|------|-------|--|------|----------|-----|---|---------|-----|-------|---|-----|-------|--------------|-----|-------|---|--|--|--|--------------------------------|--|---|--|
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>  |          | No.          | Revision     | By   | Date  |  |      |          |     |   |         |     |       |   |     |       |              |     |       |   |  |  |  |                                |  | CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |  |
| No.  | Revision | By           | Date         |      |       |  |      |          |     |   |         |     |       |   |     |       |              |     |       |   |  |  |  |                                |  |   |  |
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| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th> </th> <th>By</th> <th>Date</th> <th> </th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>IJM</td> <td>01\22</td> <td>Checked</td> <td>BRG</td> <td>01\22</td> </tr> <tr> <td>Drawn</td> <td>PEB</td> <td>01\22</td> <td>In Charge of</td> <td>TRC</td> <td>01\22</td> </tr> </tbody> </table> |          |              | By           | Date |       | By   | Date | Designed | IJM | 01\22   | Checked | BRG | 01\22 | Drawn   | PEB | 01\22 | In Charge of | TRC | 01\22 | MTA PROJECT MANAGER: Kristi Van Ooyen, P.E. |  |  |  | SHEET NUMBER: S-01<br>42 OF 81 |  |   |  |
|  | By       | Date         |              | By   | Date  |  |      |          |     |   |         |     |       |   |     |       |              |     |       |   |  |  |  |                                |  |   |  |
| Designed   | IJM      | 01\22        | Checked      | BRG  | 01\22 |  |      |          |     |   |         |     |       |   |     |       |              |     |       |   |  |  |  |                                |  |   |  |
| Drawn  | PEB      | 01\22        | In Charge of | TRC  | 01\22 |  |      |          |     |   |         |     |       |   |     |       |              |     |       |   |  |  |  |                                |  |   |  |



**GENERAL PLAN**  
1/16" = 1'-0"

CL BRG. TO CL BRG. = 268'-0"



**ELEVATION**  
1/16" = 1'-0"

Filename: 043\_GeneralPlan & Elevation.dgn

Scale: **AS NOTED**

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
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Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | IJM | 01\22 | Checked      | BRG | 01\22 |
| Drawn    | ERB | 01\22 | In Charge of | TRC | 01\22 |

HNTB CORPORATION  
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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS**

BRIDGE GENERAL PLAN AND ELEVATION

SHEET NUMBER: S-02  
CONTRACT: 2022.06  
43 OF 81

**GENERAL NOTES:**

1. CONCRETE DEMOLITION, WHICH GENERALLY INCLUDES EXISTING ENDPOSTS, WINGWALLS, ABUTMENT SEAT, APPROACH CURBS AND ABUTMENT BACKWALLS, WILL BE MEASURED FOR PAYMENT UNDER PAY ITEM 202.12, REMOVING EXISTING STRUCTURAL CONCRETE. THIS WORK SHALL INCLUDE SAWCUTTING AND REMOVING EXISTING CONCRETE AND REINFORCING STEEL TO THE LIMITS SHOWN ON THE PLANS.

2. EXCAVATION REQUIRED TO COMPLETE ABUTMENT AND PIER REPAIRS SHALL BE MEASURED FOR PAYMENT UNDER PAY ITEM 206.082, STRUCTURAL EARTH EXCAVATION-MAJOR STRUCTURES. BACKFILL SHALL BE INCIDENTAL TO THE STRUCTURAL EXCAVATION PAY ITEM.

3. THE LIMITS OF CONCRETE ABUTMENT SEAT REPLACEMENT UNDER PAY ITEM 502.219 STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS, SHALL EXTEND TO THE REMOVAL ELEVATION SHOWN OR TO SOUND CONCRETE, WHICHEVER IS GREATER. ANY CONCRETE REQUIRED FOR ADDITIONAL DEPTH SHALL BE INCIDENTAL TO ITEM 502.219.

**REMOVAL PROCEDURES:**

1. SHOULD THE REMOVAL AREA LIMITS APPEAR TO CHANGE DURING THE SOUNDING PROCESS, THE CONTRACTOR SHALL NOTIFY THE RESIDENT. THE RESIDENT AND CONTRACTOR SHALL AGREE ON THE REVISED PAY LIMITS PRIOR TO THE CONTRACTOR CONTINUING THE REMOVALS.

2. PERFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REMOVAL.

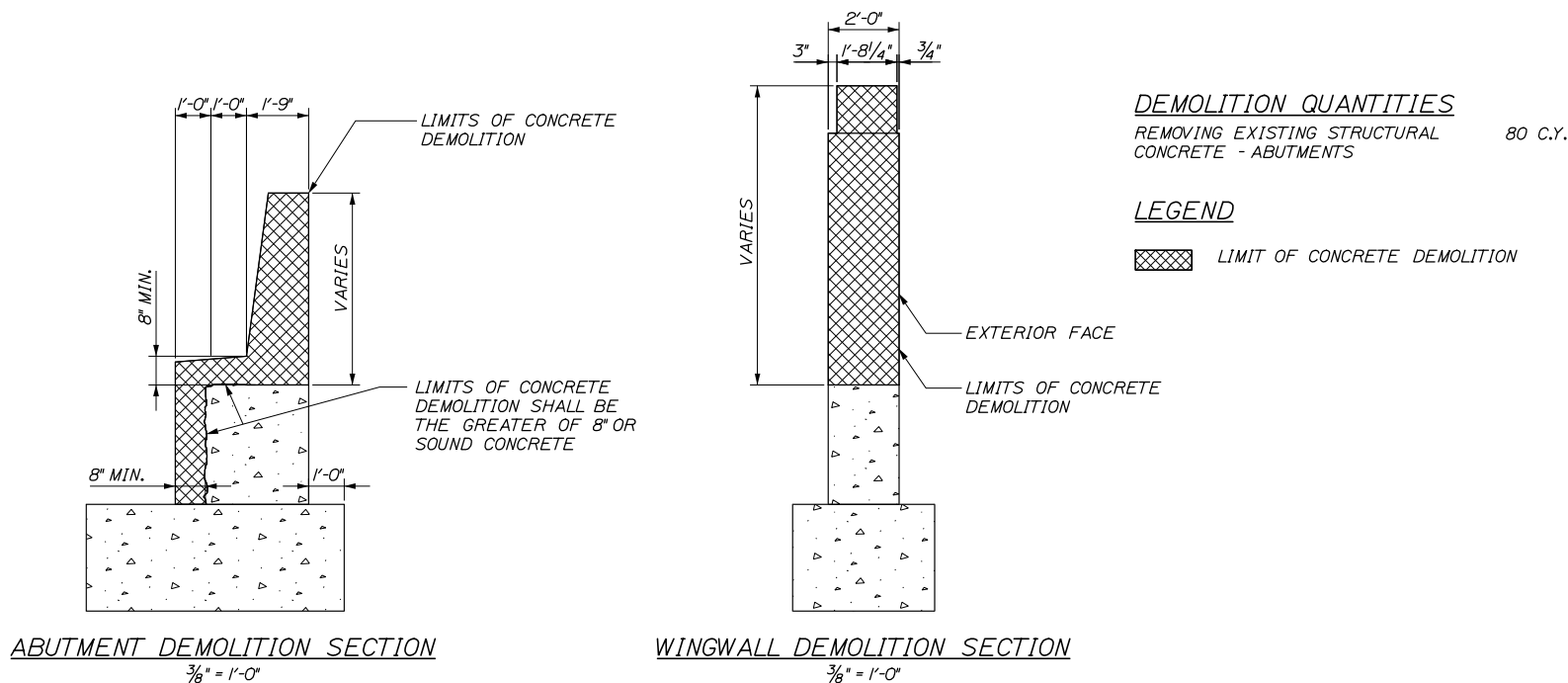
3. CHIP CONCRETE TO DEPTH SHOWN.

**GENERAL FINISHING:**

1. CONTRACTOR SHALL REMOVE GRAFFITI AND TECTYL COATING WHERE PRESENT PRIOR TO APPLYING PROTECTIVE CONCRETE COATING. WORK SHALL BE INCIDENTAL TO THE SPECIFIED ITEM IN SPECIAL PROVISION 518.

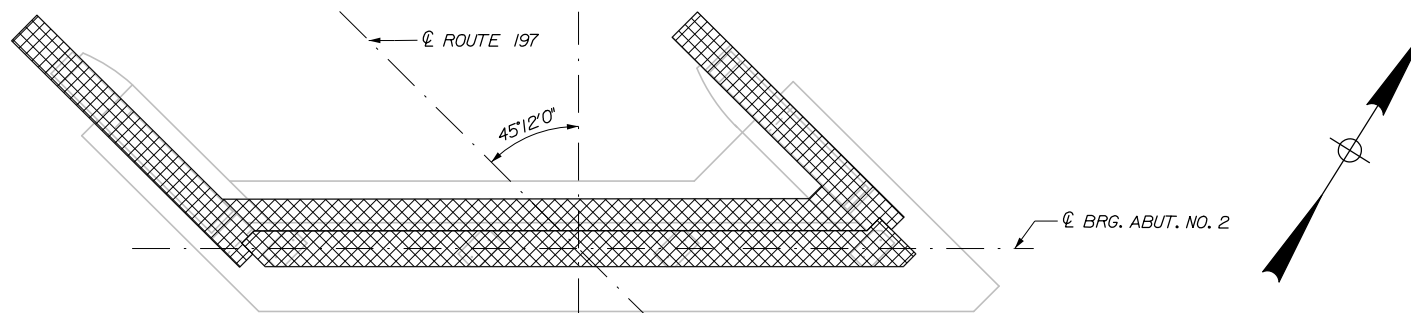
Date: 2/7/2022

Filename: 044-Abutment Demolition and Repair Plan.dgn

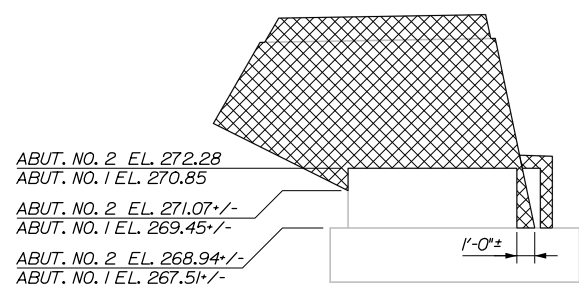


**ABUTMENT DEMOLITION SECTION**  
3/8" = 1'-0"

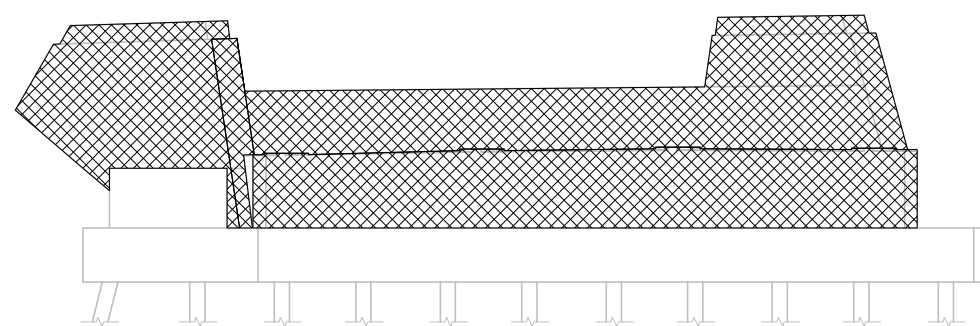
**WINGWALL DEMOLITION SECTION**  
3/8" = 1'-0"



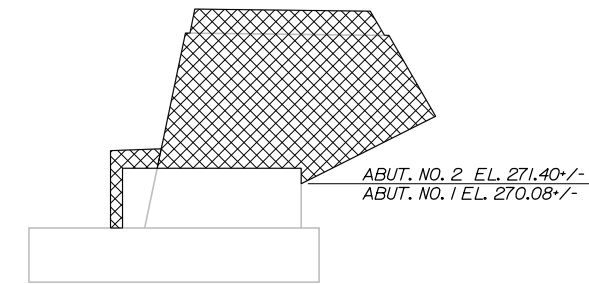
**ABUTMENT NO. 2 PLAN**  
(ABUTMENT NO. 1 SIMILAR)  
3/16" = 1'-0"



**WINGWALL ELEVATION**  
3/16" = 1'-0"



**ABUTMENT NO. 2 ELEVATION**  
(ABUTMENT NO. 1 SIMILAR)  
3/16" = 1'-0"



**WINGWALL ELEVATION**  
3/16" = 1'-0"

|                 |          |    |      |
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| Designed by:                                    |     |       |              |     |       |
| <b>HNTB</b>                                     |     |       |              |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn   | PEB | 01\22 | In Charge of | TRC | 01\22 |

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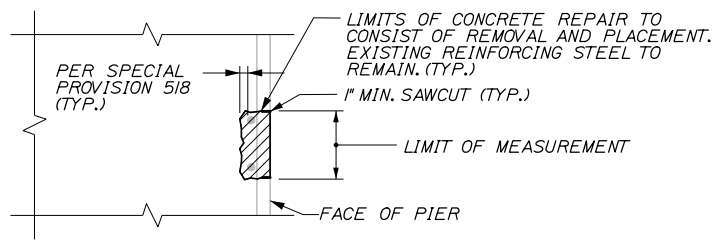
**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

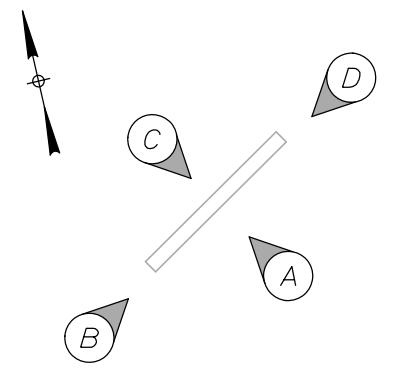
**SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS**

**ABUTMENT DEMOLITION AND REPAIRS**

SHEET NUMBER: S-03  
CONTRACT: 2022.06  
44 OF 81



CONCRETE SURFACE PATCH REPAIR DETAIL  
1" = 1'-0"



PIER ELEVATION KEY  
NTS

**DEMOLITION QUANTITIES**

REMOVING EXISTING STRUCTURAL CONCRETE - PIERS (3 LOCATIONS) 12 C.Y.

**REPAIR QUANTITIES**

PIER 3 SURFACE PATCH REPAIR = 32 S.F.  
PIER 3 EPOXY CRACK REPAIR = 10 LF

ESTIMATED QUANTITIES BASED ON VISUAL INSPECTION, FOR BID QUANTITY SEE ITEMS 518.20 AND 518.40 IN ESTIMATED QUANTITIES TABLE

**LEGEND**

- LIMIT OF PIER SURFACE PATCH REPAIR
- LIMIT OF CONCRETE DEMOLITION
- SQUARE FOOT AREA OF REPAIR
- EPOXY INJECTION CRACK REPAIR
- LINEAR FOOT LENGTH OF CRACK

**GENERAL NOTES:**

1. PIER REPAIR WORK SHALL INCLUDE: PROVIDING ACCESS FOR PIER INSPECTION, PIER SURFACE PATCH REPAIRS, AND SURFICIAL EXCAVATION TO EXPOSE REPAIRS UP TO 6" BELOW GRADE.
2. WHERE PIER SURFACE PATCH REPAIRS ARE SPECIFIED THE WORK SHALL INCLUDE REMOVAL OF UNSOUND CONCRETE AND PLACEMENT AND CURING OF REPAIR MATERIALS. REPAIRS SHALL BE MEASURED FOR PAYMENT UNDER PAY ITEM 518.20, PIER REPAIRS.
3. THE CONTRACTOR SHALL PROVIDE STAGING, OR ANOTHER ACCEPTABLE MEANS OF ACCESS, AT ALL PIER LOCATIONS THAT WILL ALLOW THE RESIDENT TO SAFELY PERFORM A DETAILED CONCRETE INSPECTION OF ALL PIER SURFACES. THIS WORK SHALL BE INCIDENTAL TO PAY ITEM 518.20, PIER REPAIRS.
4. THE QUANTITIES OF PIER REPAIR NOTED ON THESE DRAWINGS HAVE BEEN DEVELOPED BASED PRIMARILY ON VISUAL INSPECTION OF THE PIERS FROM THE GROUND LEVEL. ACTUAL REPAIR AREAS WILL BE DETERMINED BY THE RESIDENT DURING CONSTRUCTION.
5. EXCAVATION REQUIRED TO COMPLETE PIER REPAIRS SHALL BE INCIDENTAL TO PAY ITEM 518.20 PIER REPAIRS.
6. TEMPORARY CONCRETE BARRIER, TYPE I SHALL BE USED FOR SHOULDER CLOSURES DURING PIER REPAIRS AS SHOWN IN THE MOT DETAILS. A MEDIAN SHOULDER CLOSURE AND AN OUTSIDE SHOULDER CLOSURE IS NOT PERMITTED TO OCCUR AT THE SAME TIME ON EITHER BOUND.
7. CONTRACTOR SHALL NOT DAMAGE EXISTING REINFORCEMENT DURING CONSTRUCTION.
8. PIERS WERE PATCHED AND COATED DURING A 2008 REPAIR CONTRACT.

**REMOVAL PROCEDURES:**

1. PRIOR TO THE START OF THE CONCRETE REMOVALS, THE RESIDENT AND THE CONTRACTOR SHALL SOUND THE CONCRETE AND AGREE ON THE REMOVAL LIMITS. SHOULD THE REMOVAL AREA LIMITS APPEAR TO CHANGE DURING THE SOUNDING PROCESS, THE CONTRACTOR SHALL NOTIFY THE RESIDENT. THE RESIDENT AND CONTRACTOR SHALL AGREE ON THE REVISED PAY LIMITS PRIOR TO THE CONTRACTOR CONTINUING THE REMOVALS.
2. PERFORM 1 INCH DEEP SAWCUTS ALONG LIMITS OF REMOVAL.
3. CHIP CONCRETE TO DEPTH SHOWN.

**CONCRETE SURFACE PATCH/REPAIR PROCEDURE:**

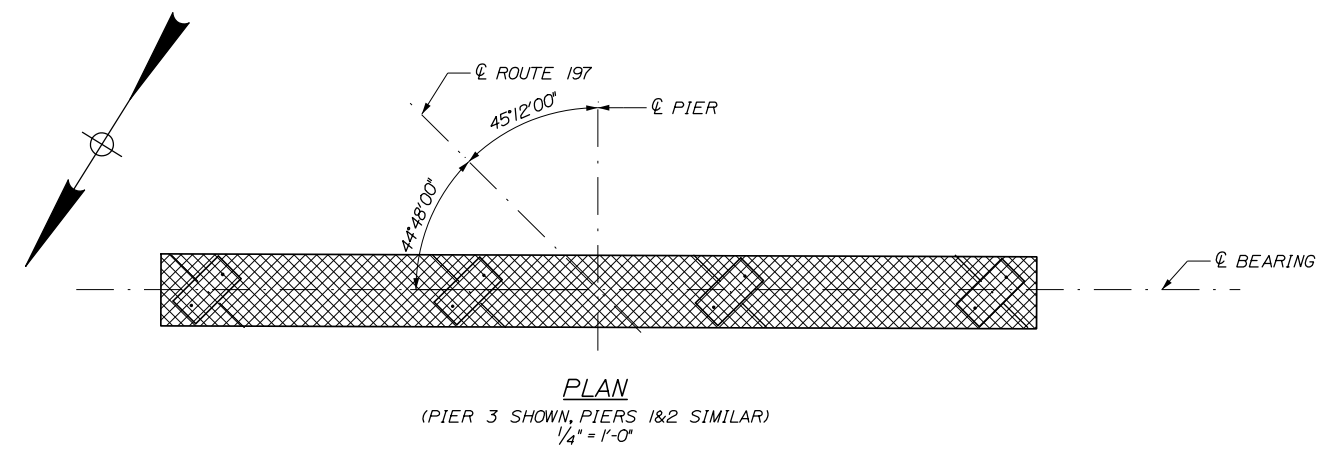
1. PREPARE AND PATCH REPAIR AREAS WITH CLASS AAA MODIFIED CONCRETE. SEE SPECIFICATIONS FOR MATERIAL PREPARATION, PLACEMENT, AND CURING REQUIREMENTS.
2. PERFORM GENERAL FINISHING.

**GENERAL FINISHING:**

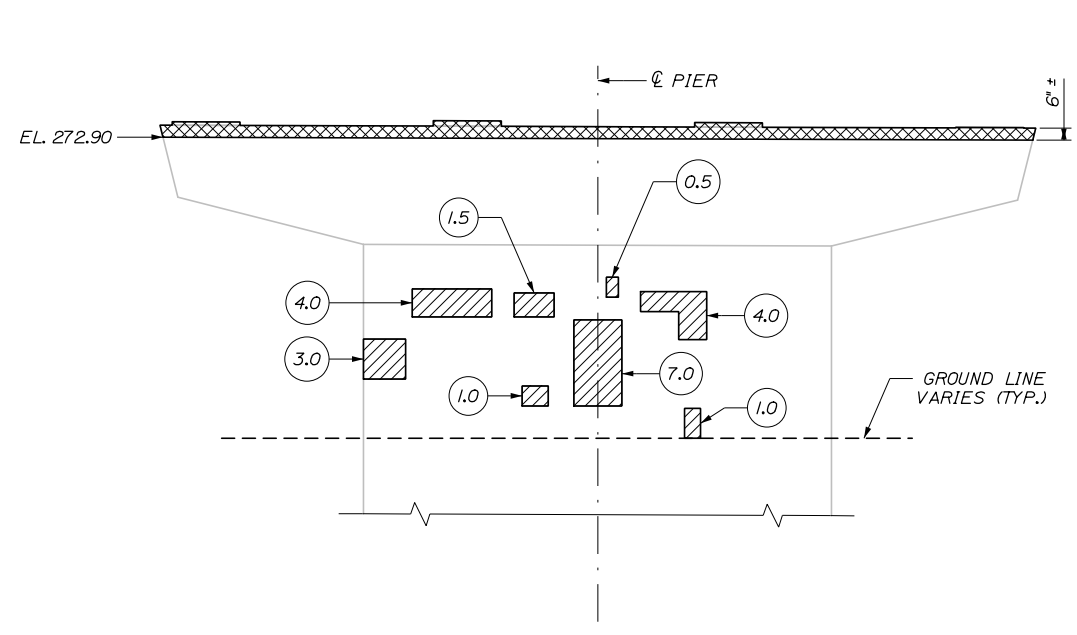
1. ALL EXPOSED SURFACES OF PIERS SHALL BE COATED WITH A PIGMENTED PROTECTIVE COATING SUITABLE FOR CONCRETE SURFACES AFTER PATCHING IS COMPLETED AND PATCH MATERIALS HAVE CURED.
2. CONTRACTOR SHALL REMOVE GRAFFITI AND TECTYL COATING WHERE PRESENT PRIOR TO APPLYING PROTECTIVE CONCRETE COATING. WORK SHALL BE INCIDENTAL TO THE SPECIFIED ITEM IN SPECIAL PROVISION 518.

Date: 2/7/2022

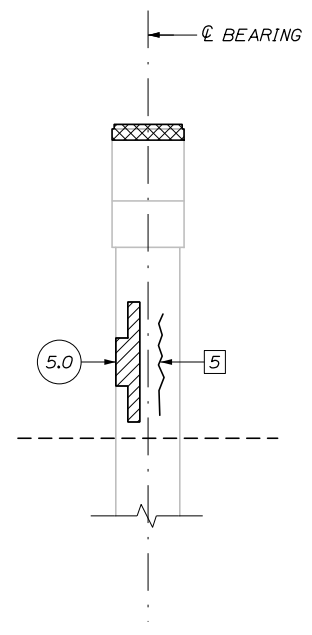
Filename: 045\_Pier 3 Demolition and Repairs.dgn



PLAN  
(PIER 3 SHOWN, PIERS 1&2 SIMILAR)  
1/4" = 1'-0"



PIER 3 ELEVATION C  
1/4" = 1'-0"



PIER 3 ELEVATION D  
1/4" = 1'-0"

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| Designed by:                                    |     |       |              |     |       |
| <b>HNTB</b>                                     |     |       |              |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
|   | YP  | 01\22 | Checked      | HJW | 01\22 |
|   | PEB | 01\22 | In Charge of | TRC | 01\22 |

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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

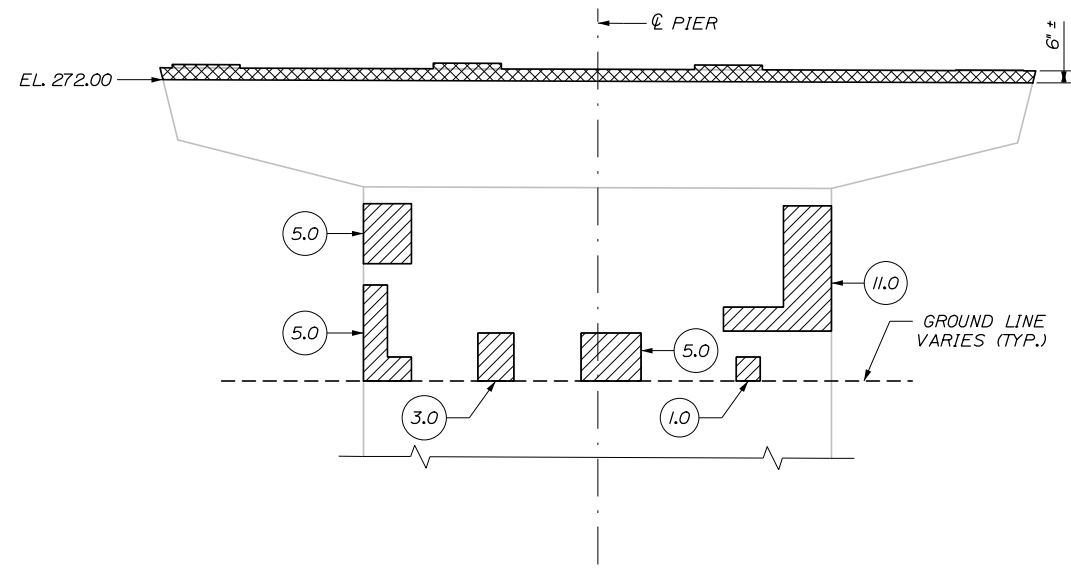
SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

PIER 3 DEMOLITION AND REPAIRS

SHEET NUMBER: S-04  
CONTRACT: 2022.06  
45 OF 81

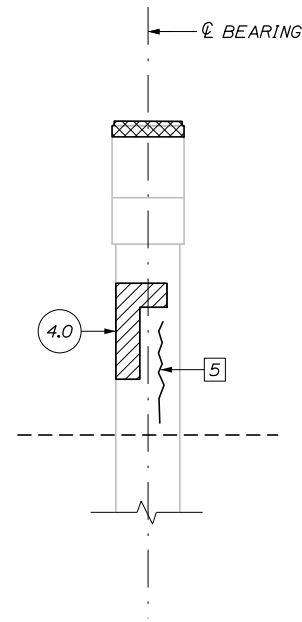
Date: 2/7/2022

Filename: 046\_Pier 1&2\_Demolition and Repairs.dgn



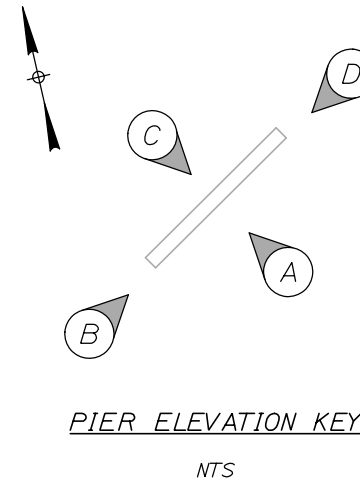
PIER 1 ELEVATION C

1/4" = 1'-0"



PIER 1 ELEVATION B

1/4" = 1'-0"



**REPAIR QUANTITIES**

PIER 1 SURFACE PATCH REPAIR = 39 S.F.

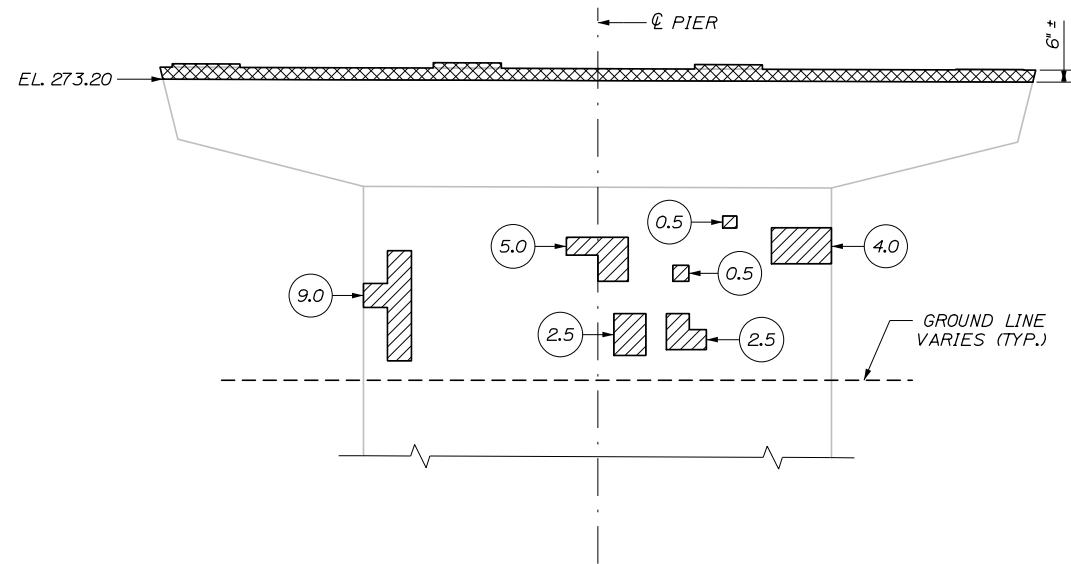
PIER 1 EPOXY CRACK REPAIR = 10 LF

PIER 2 SURFACE PATCH REPAIR = 30 S.F.

ESTIMATED QUANTITIES BASED ON VISUAL INSPECTION, FOR BID QUANTITY SEE ITEMS 518.20 AND 518.40 IN ESTIMATED QUANTITIES TABLE

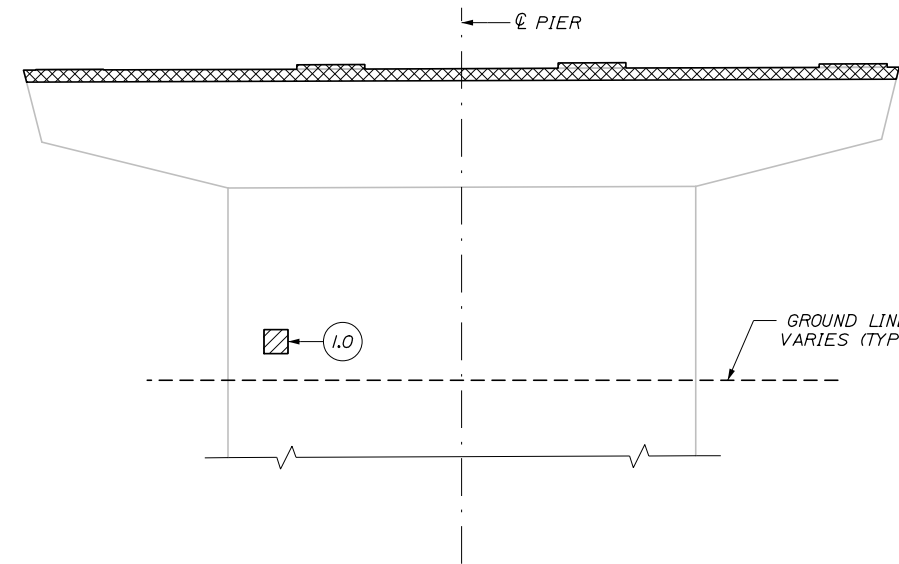
**LEGEND**

- LIMIT OF PIER SURFACE PATCH REPAIR
- LIMIT OF CONCRETE DEMOLITION
- SQUARE FOOT AREA OF REPAIR
- EPOXY INJECTION CRACK REPAIR
- LINEAR FOOT LENGTH OF CRACK



PIER 2 ELEVATION C

1/4" = 1'-0"



PIER 2 ELEVATION A

1/4" = 1'-0"

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| No.      | Revision | By | Date |
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| <b>HNTB</b>                                     |     |       |              |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn   | PEB | 01\22 | In Charge of | TRC | 01\22 |

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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

PIERS 1 & 2 DEMOLITION AND REPAIRS

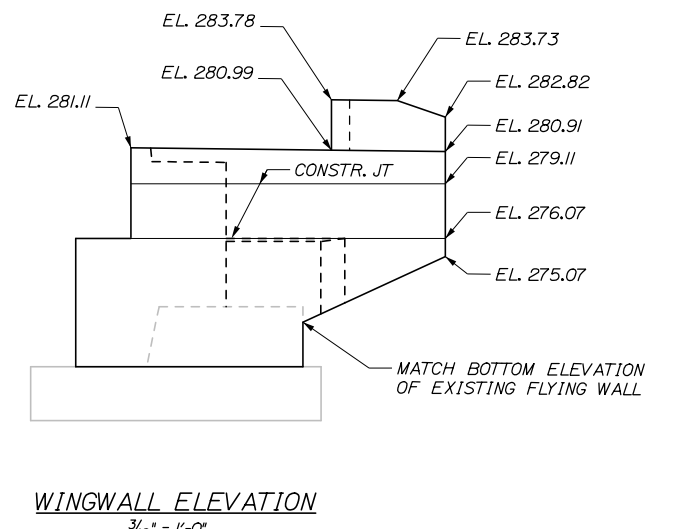
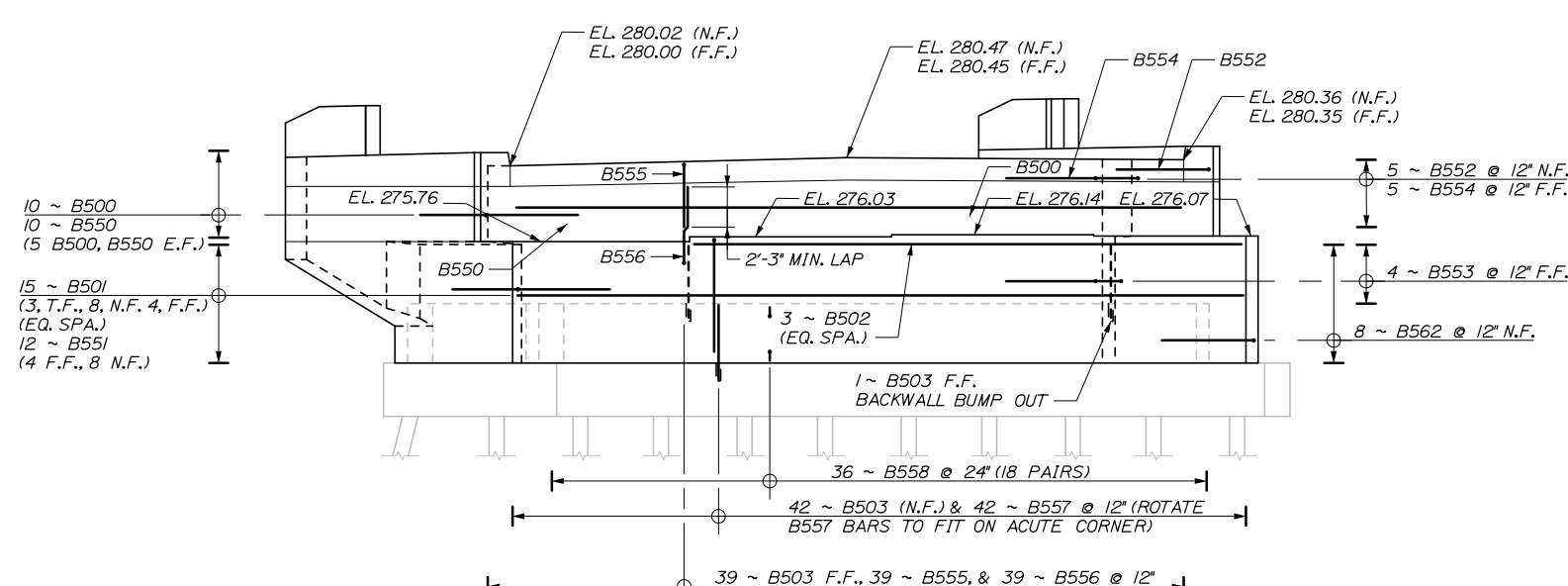
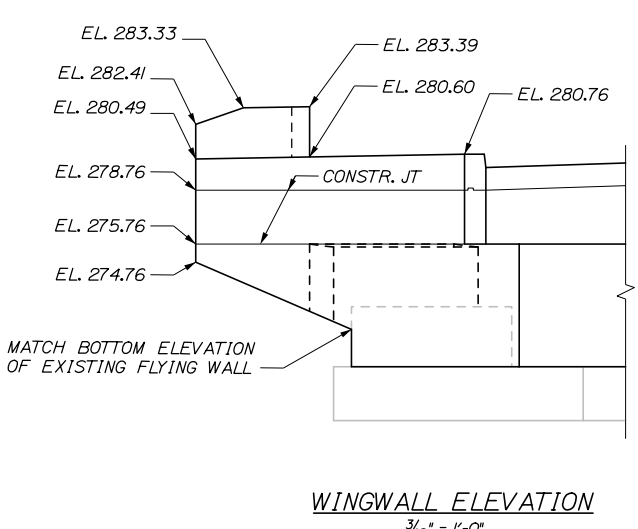
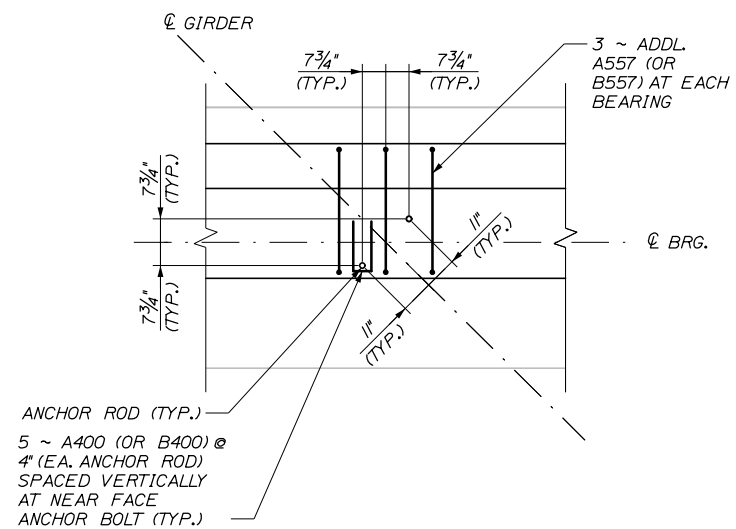
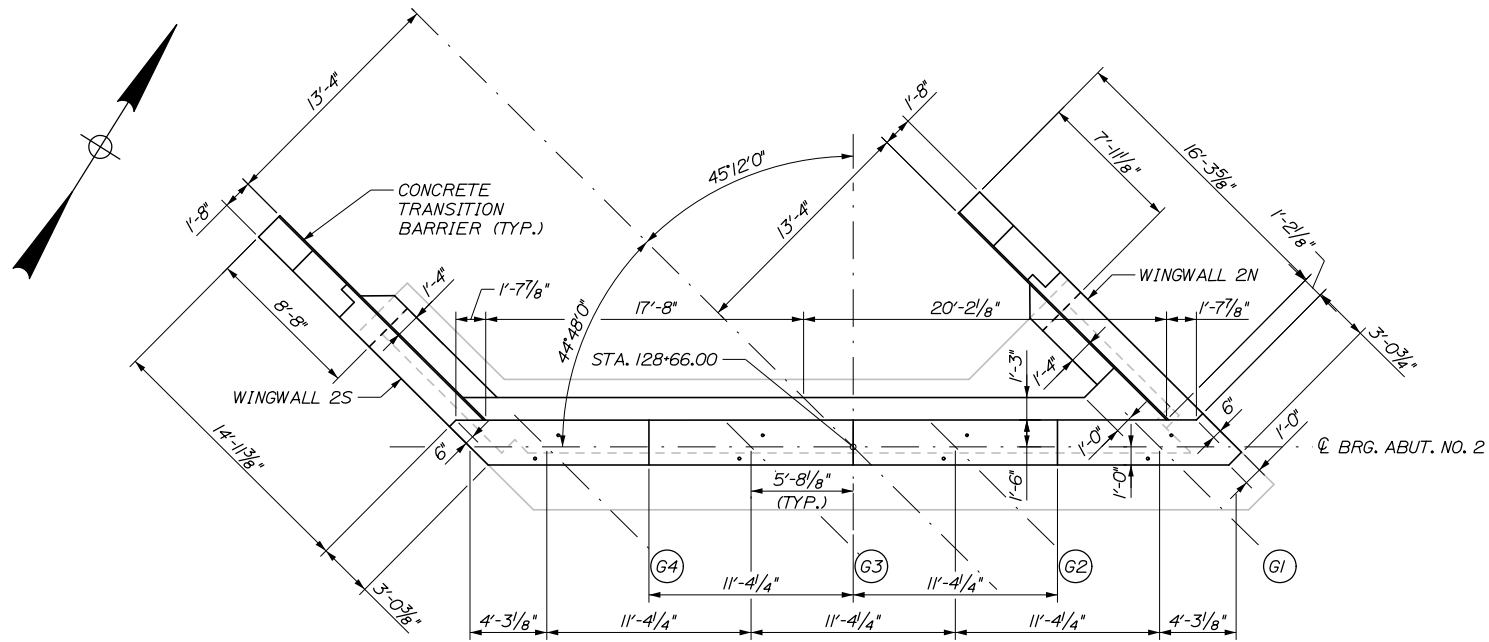
SHEET NUMBER: S-05

CONTRACT: 2022.06

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**ABUTMENT NOTES:**

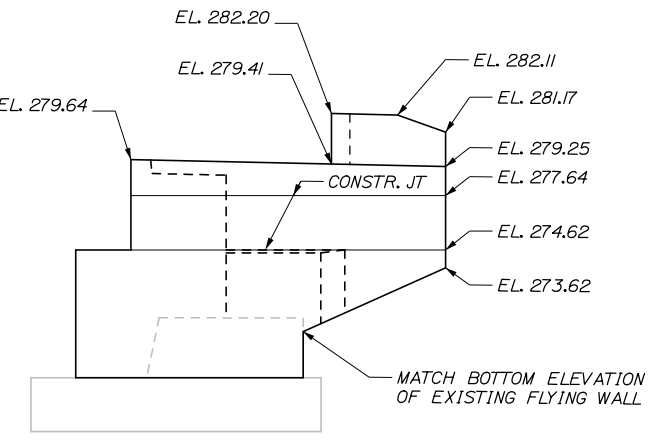
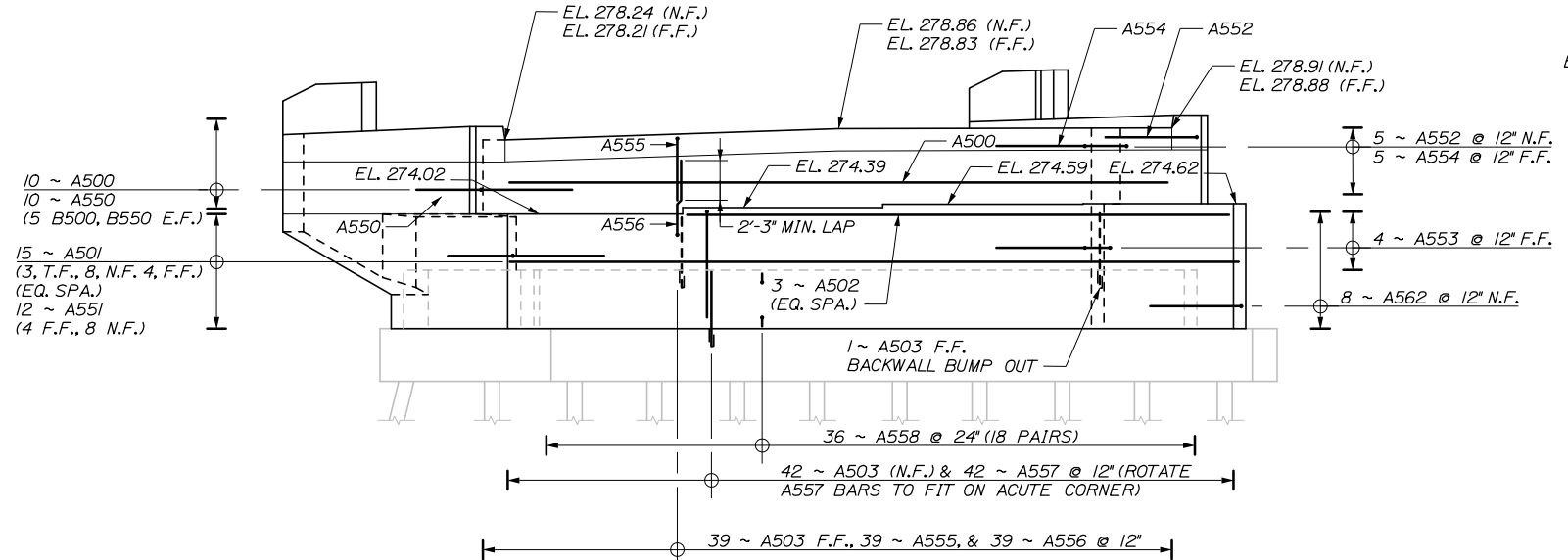
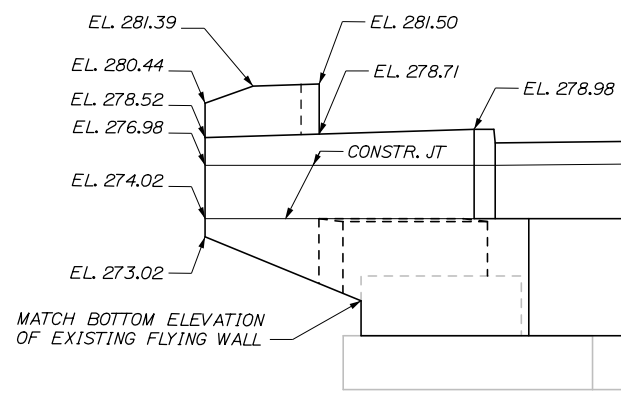
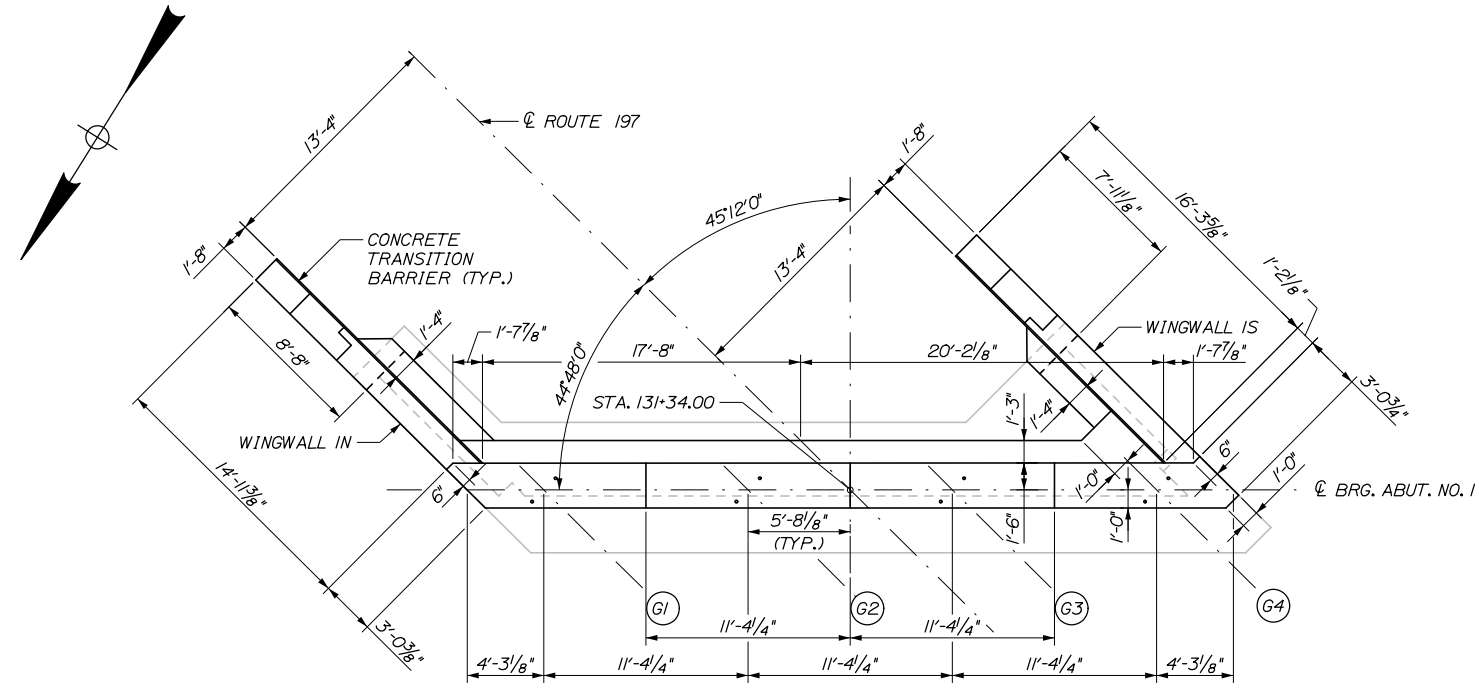
1. ALL EXISTING CONCRETE SURFACES AGAINST WHICH NEW CONCRETE SHALL BE PLACED SHALL BE ROUGHENED AND COATED WITH AN EPOXY BONDING COMPOUND. THIS WORK SHALL BE INCIDENTAL TO ITEM 502.219, STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS.
2. FOR ABUTMENT AND WINGWALL SECTIONS SEE SHEET S-08 AND S-10 THROUGH S-14.
3. FOR WINGWALL REINFORCING DETAILS SEE SHEET S-09.
4. THE CONTRACTOR SHALL INSTALL TRANSITION BARRIER VERTICAL CLOSED STIRRUPS, AS SHOWN IN THE STANDARD DETAILS SECTION 526, PRIOR TO PLACEMENT OF THE CURB CONCRETE.



Date: 2/7/2022  
Filename: 047-Abutment 2 Plan and Elevation.dgn

| Scale: <b>AS NOTED</b>  |           | Designed by: |           | <br>HNTB CORPORATION<br>82 Running Hill Road, Suite 201<br>South Portland, ME 04106<br>TEL (207) 774-5155<br>FAX (207) 228-0909 |  | <br><b>THE GOLD STAR<br/>MEMORIAL HIGHWAY</b> |  | SUPERSTRUCTURE REPLACEMENT<br>ROUTE 197 UNDERPASS<br>ABUTMENT 2<br>PLAN AND ELEVATION |      |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |  |    |      |    |      |          |          |         |           |       |           |              |           |
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| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>No.</th> <th>Revision</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> |           | No.          | Revision  |   |  |   |  | By  | Date |  |  |  |  |  |  |  |  |  |  |  |  | CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |  | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>By</th> <th>Date</th> <th>By</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>Designed</td> <td>YP 01\22</td> <td>Checked</td> <td>HJW 01\22</td> </tr> <tr> <td>Drawn</td> <td>PEB 01\22</td> <td>In Charge of</td> <td>TRC 01\22</td> </tr> </tbody> </table> |  | By | Date | By | Date | Designed | YP 01\22 | Checked | HJW 01\22 | Drawn | PEB 01\22 | In Charge of | TRC 01\22 |
| No.   | Revision  | By           | Date      |   |  |   |  |   |      |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |  |    |      |    |      |          |          |         |           |       |           |              |           |
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|   |           |              |           |   |  |   |  |   |      |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |  |    |      |    |      |          |          |         |           |       |           |              |           |
|   |           |              |           |   |  |   |  |   |      |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |  |    |      |    |      |          |          |         |           |       |           |              |           |
| By  | Date      | By           | Date      |   |  |   |  |   |      |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |  |    |      |    |      |          |          |         |           |       |           |              |           |
| Designed  | YP 01\22  | Checked      | HJW 01\22 |   |  |   |  |   |      |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |  |    |      |    |      |          |          |         |           |       |           |              |           |
| Drawn   | PEB 01\22 | In Charge of | TRC 01\22 |   |  |   |  |   |      |  |  |  |  |  |  |  |  |  |  |  |  |   |  |   |  |    |      |    |      |          |          |         |           |       |           |              |           |

Date: 2/7/2022



Filename: 048\_Abutment 1 Plan and Elevation.dgn

Scale: 3/16" = 1'-0"

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn    | PEB | 01\22 | In Charge of | TRC | 01\22 |

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South Portland, ME 04106  
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FAX (207) 228-0909

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

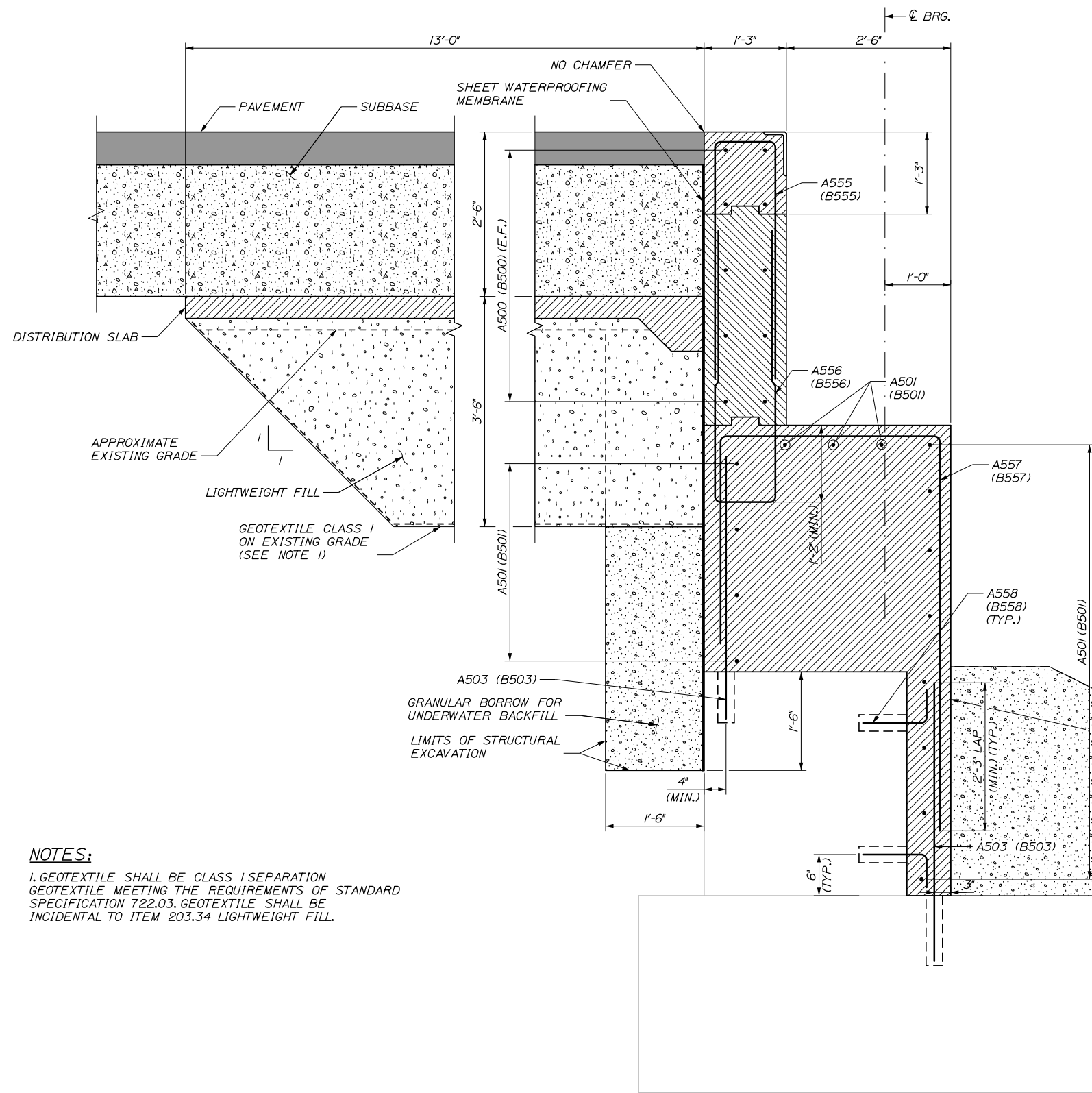
SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
ABUTMENT 1  
PLAN AND ELEVATION

SHEET NUMBER: S-07  
CONTRACT: 2022.06  
48 OF 81

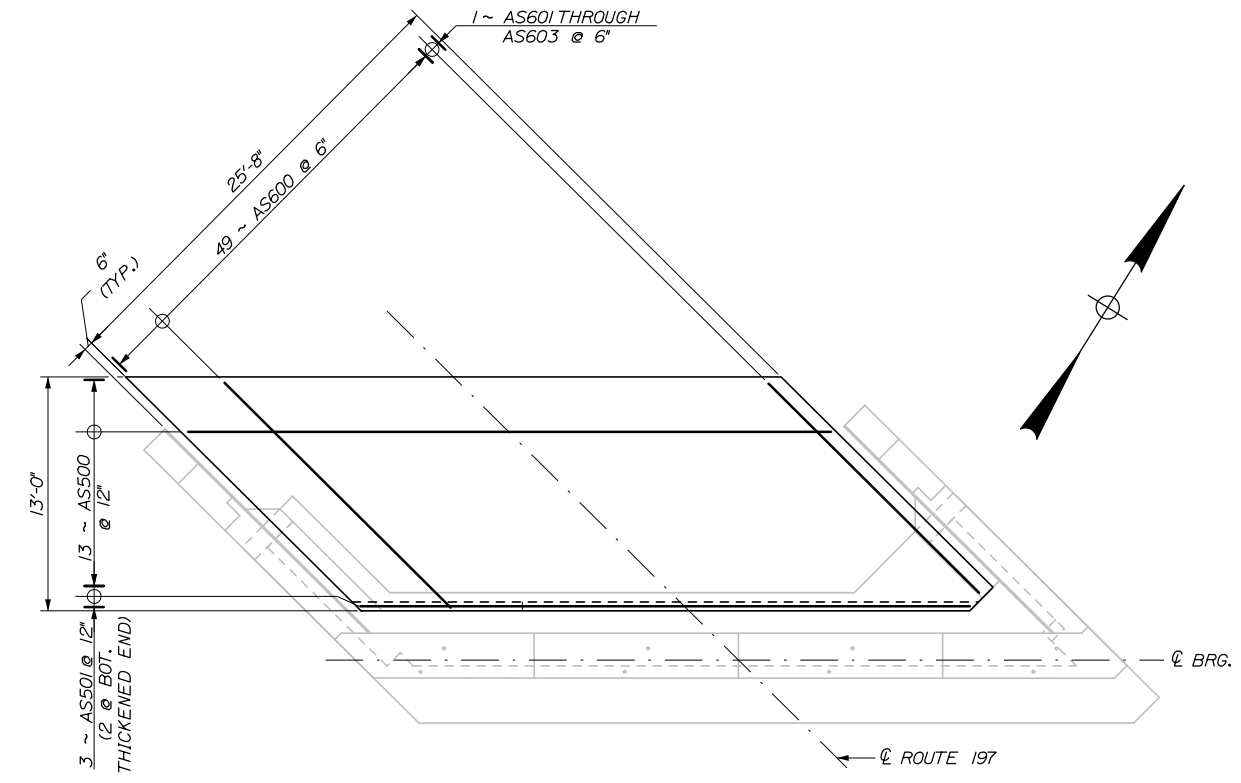


Date: 2/7/2022

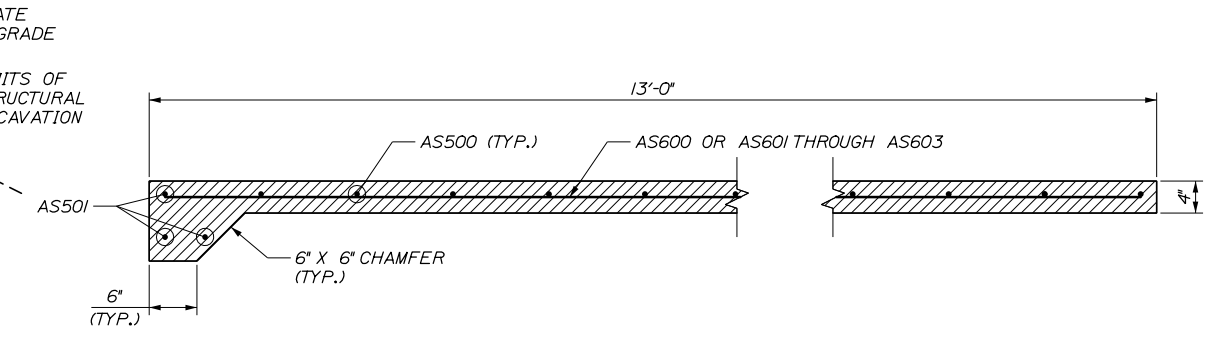
Filename: 049-Abutment Modifications Details.dgn



**ABUTMENT SECTION**  
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)  
1/4" = 1'-0"



**DISTRIBUTION SLAB PLAN**  
(PROPOSED ABUTMENT SCREENED FOR CLARITY)  
(ABUTMENT 1 SHOWN, ABUTMENT 2 SIMILAR)  
3/16" = 1'-0"



**DISTRIBUTION SLAB SECTION**  
1/4" = 1'-0"

**NOTES:**  
1. GEOTEXTILE SHALL BE CLASS I SEPARATION GEOTEXTILE MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 722.03. GEOTEXTILE SHALL BE INCIDENTAL TO ITEM 203.34 LIGHTWEIGHT FILL.

|          |          |    |      |   |      |       |              |     |       |
|----------|----------|----|------|---|------|-------|--------------|-----|-------|
| Scale:   |          |    |      | Designed by:                                    |      |       |              |     |       |
| AS NOTED |          |    |      |   |      |       |              |     |       |
| No.      | Revision | By | Date |   |      |       |              |     |       |
|          |          |    |      | CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |      |       |              |     |       |
|          |          |    |      | By  | Date | By    | Date         |     |       |
|          |          |    |      | Designed  | YP   | 01\22 | Checked      | HJW | 01\22 |
|          |          |    |      | Drawn   | ERB  | 01\22 | In Charge of | TRC | 01\22 |

|                                 |  |  |  |
|---------------------------------|--|--|--|
| HNTB CORPORATION                |  |  |  |
| 82 Running Hill Road, Suite 201 |  |  |  |
| South Portland, ME 04106        |  |  |  |
| TEL (207) 774-5155              |  |  |  |
| FAX (207) 228-0909              |  |  |  |

MAINE TURNPIKE

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
ABUTMENT SECTIONS AND  
DISTRIBUTION SLAB DETAILS

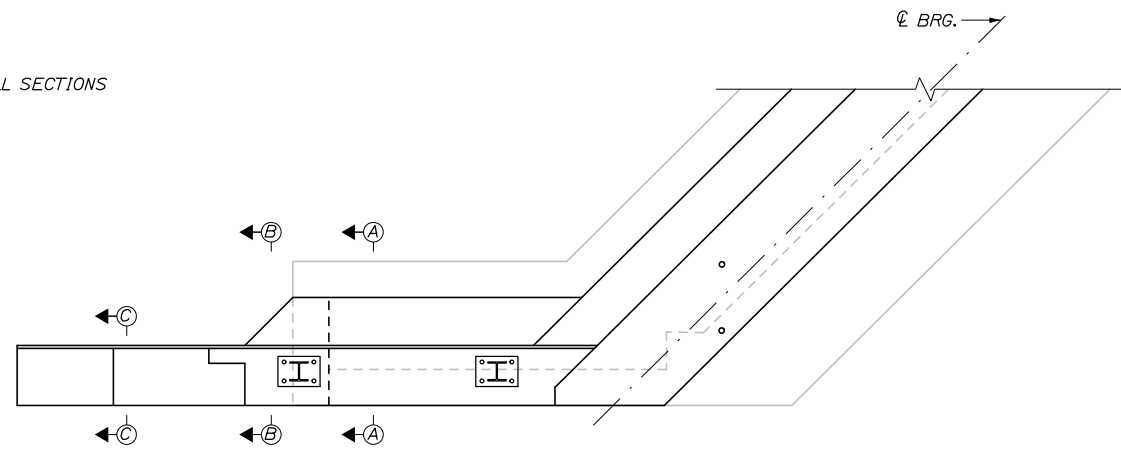
SHEET NUMBER: S-08

CONTRACT: 2022.06

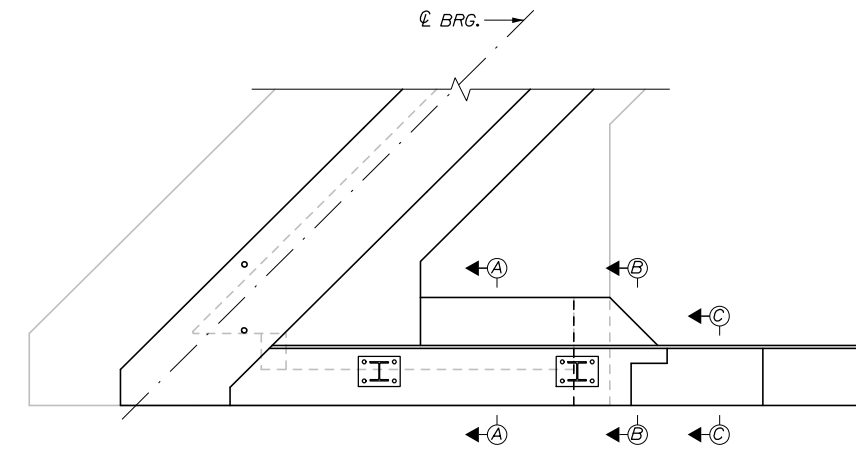
49 OF 81

**NOTES:**

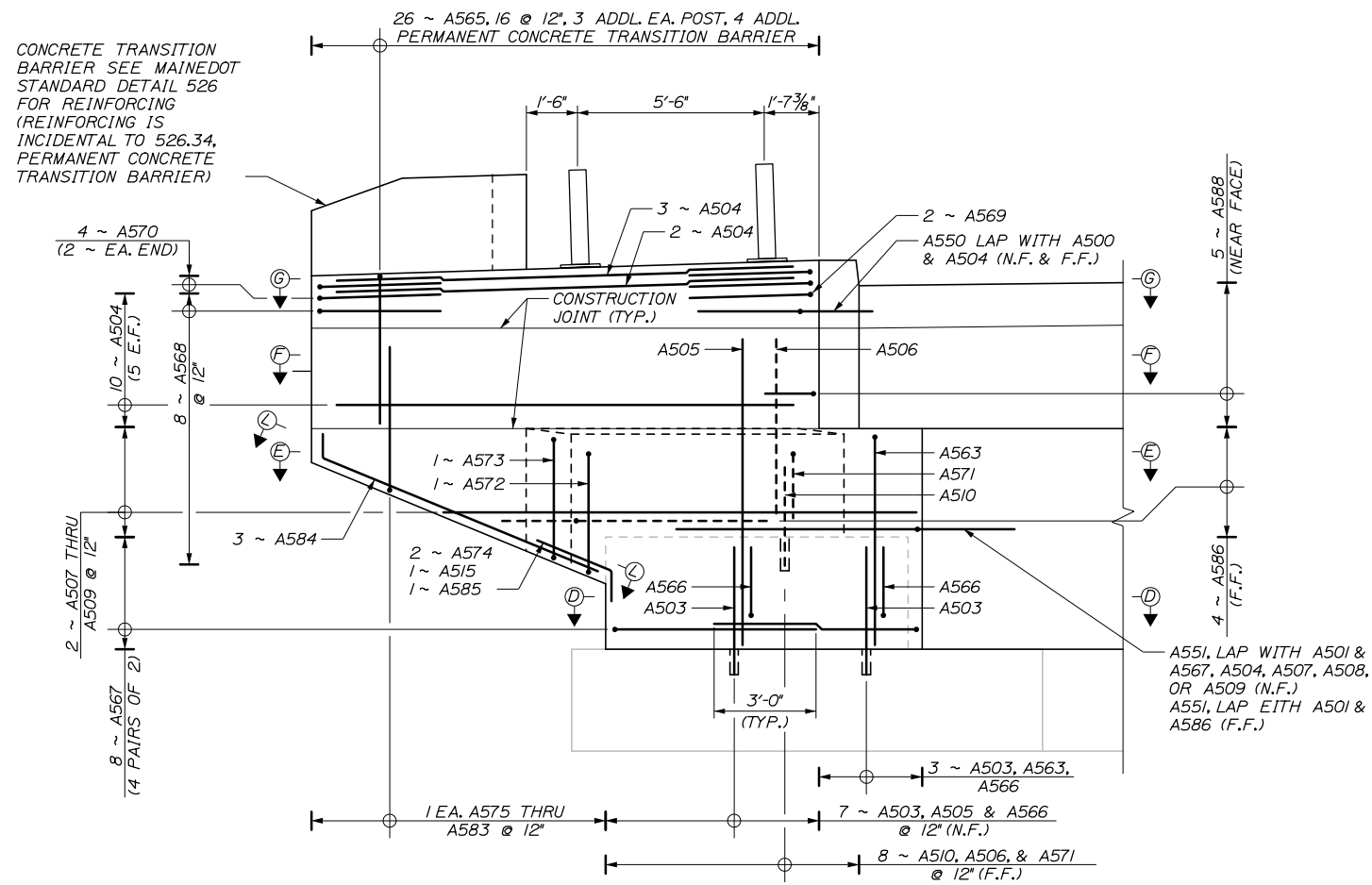
1. SEE SHEET S-10 THRU S-14 FOR WINGWALL SECTIONS



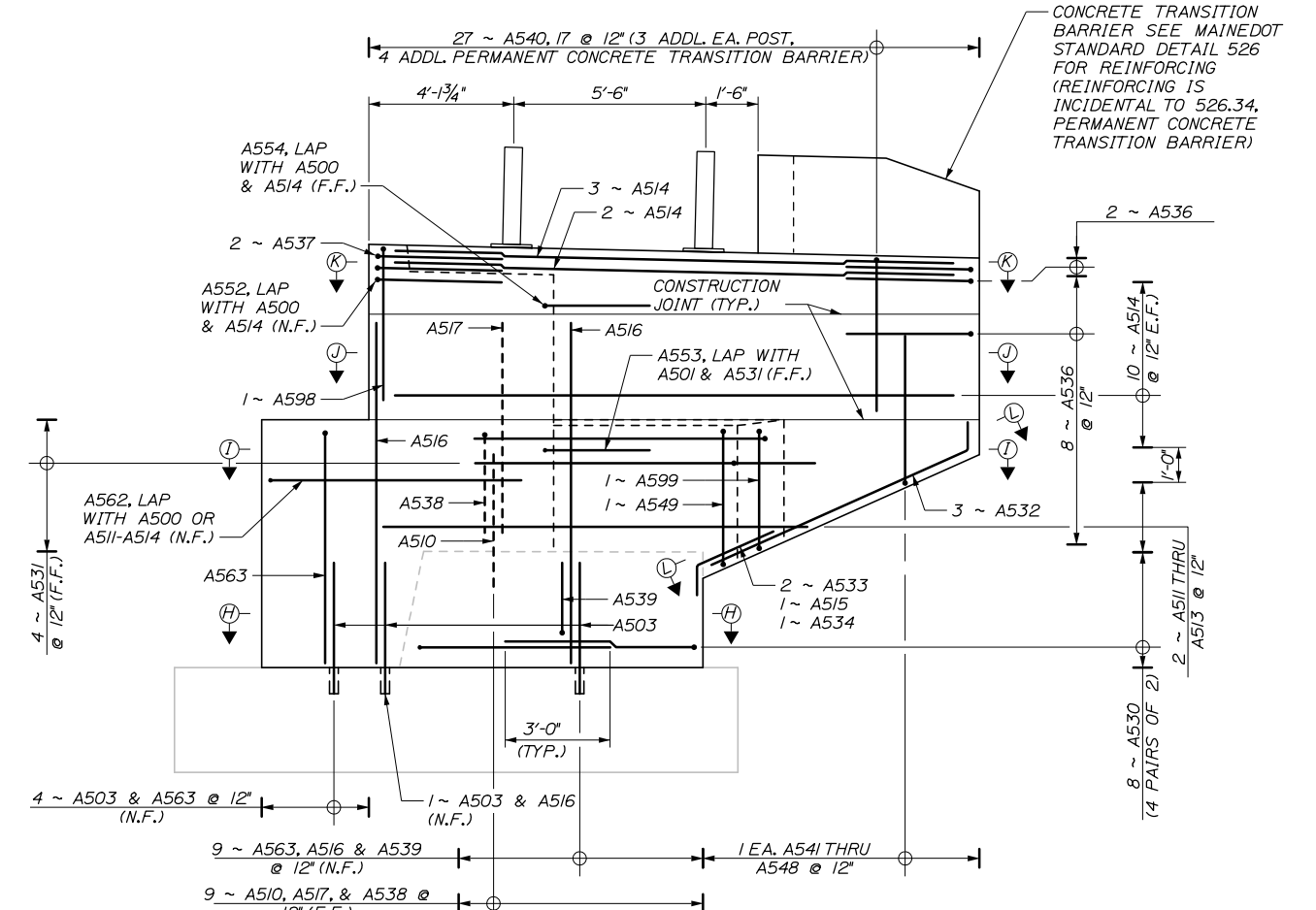
**WINGWALL PLAN**  
WINGWALL IN & 2S  
3/8" = 1'-0"



**WINGWALL PLAN**  
WINGWALL IS & 2N  
3/8" = 1'-0"



**WINGWALL ELEVATION**  
WINGWALL IN SHOWN, 2S SIMILAR  
3/8" = 1'-0"



**WINGWALL ELEVATION**  
WINGWALL IS SHOWN, 2N SIMILAR  
3/8" = 1'-0"

Date: 2/7/2022

Filename: 050\_Wingwall Modifications Details 1.dgn

|                 |          |    |      |
|-----------------|----------|----|------|
| Scale: AS NOTED |          |    |      |
| No.             | Revision | By | Date |
|                 |          |    |      |
|                 |          |    |      |

|   |     |       |              |     |       |
|---|-----|-------|--------------|-----|-------|
| Designed by:                                    |     |       |              |     |       |
| <b>HNTB</b>                                     |     |       |              |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn   | PEB | 01\22 | In Charge of | TRC | 01\22 |

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FAX (207) 228-0909



**MAINE  
TURNPIKE**

**THE GOLD STAR  
MEMORIAL HIGHWAY**

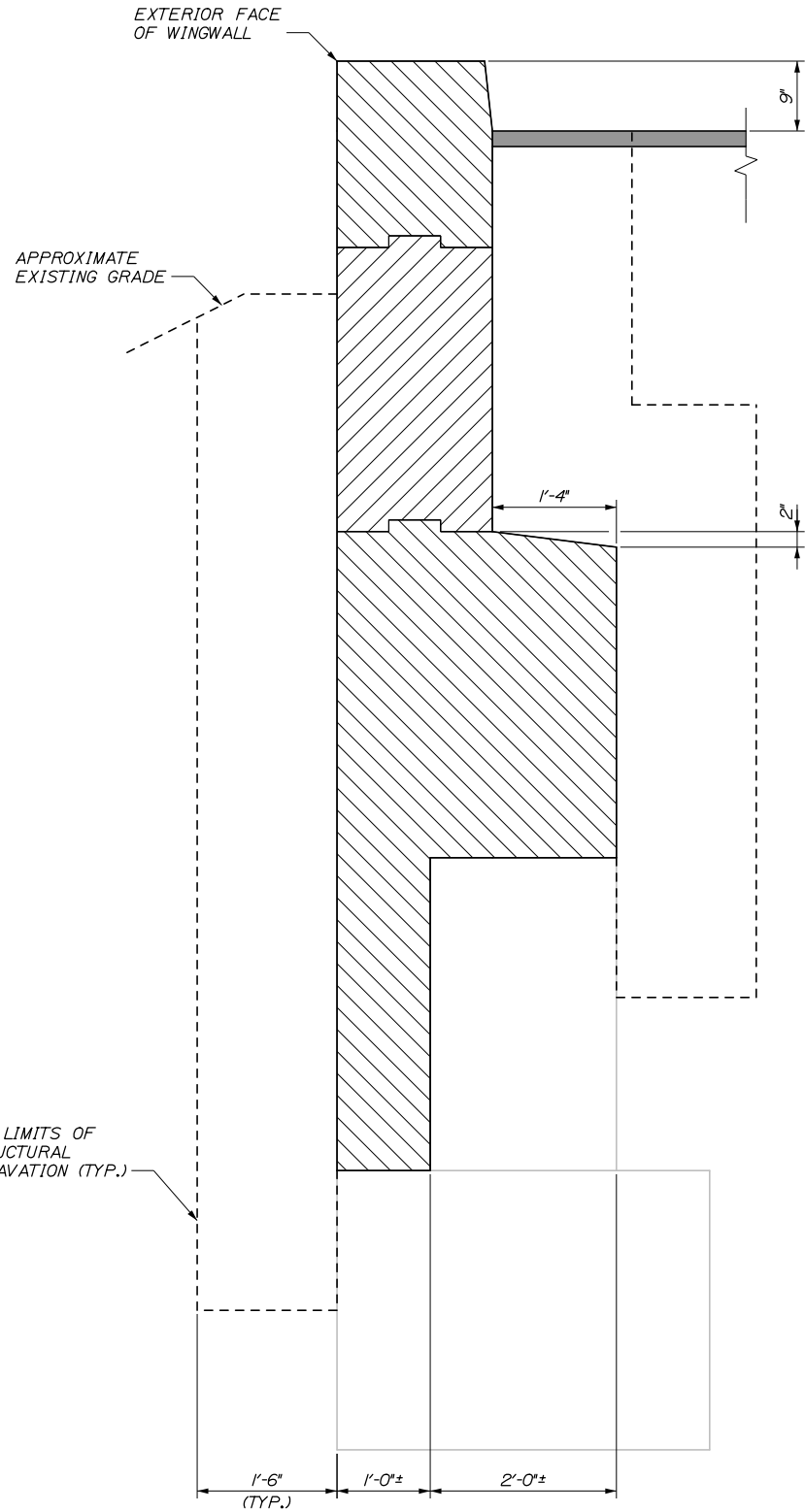
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
WINGWALL MODIFICATION DETAILS I

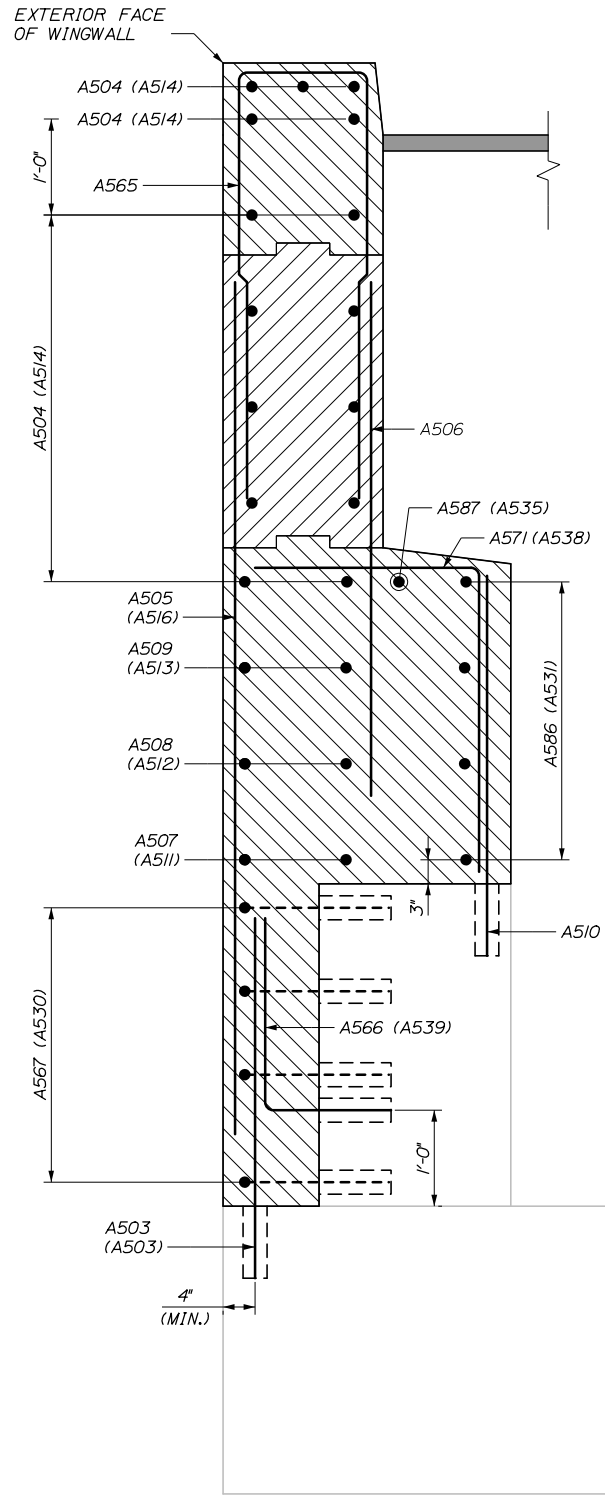
SHEET NUMBER: S-09  
CONTRACT: 2022.06  
50 OF 81

Date: 2/7/2022

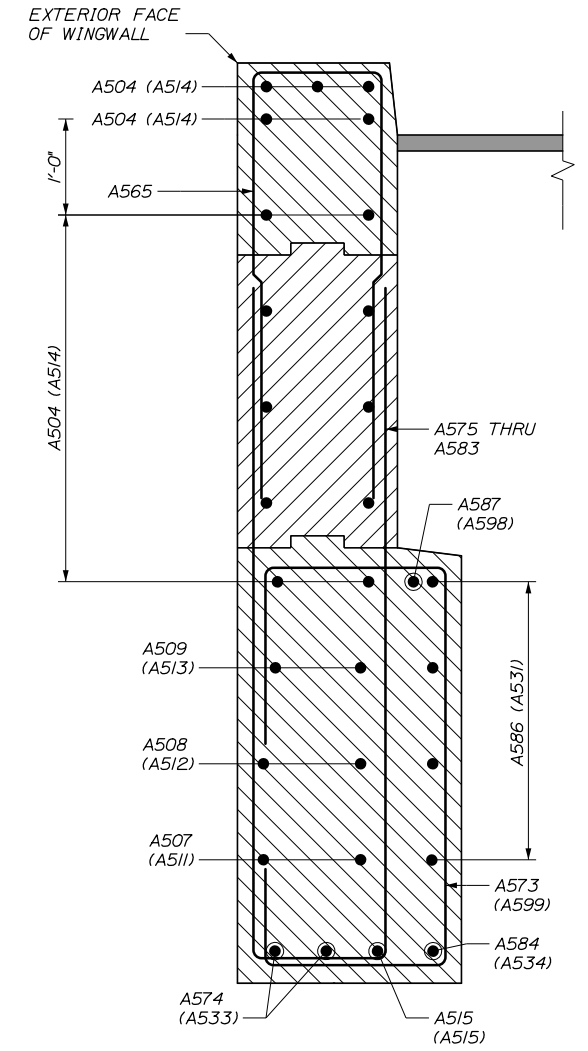
Filename: 051\_Wingwall Modifications Details II.dgn



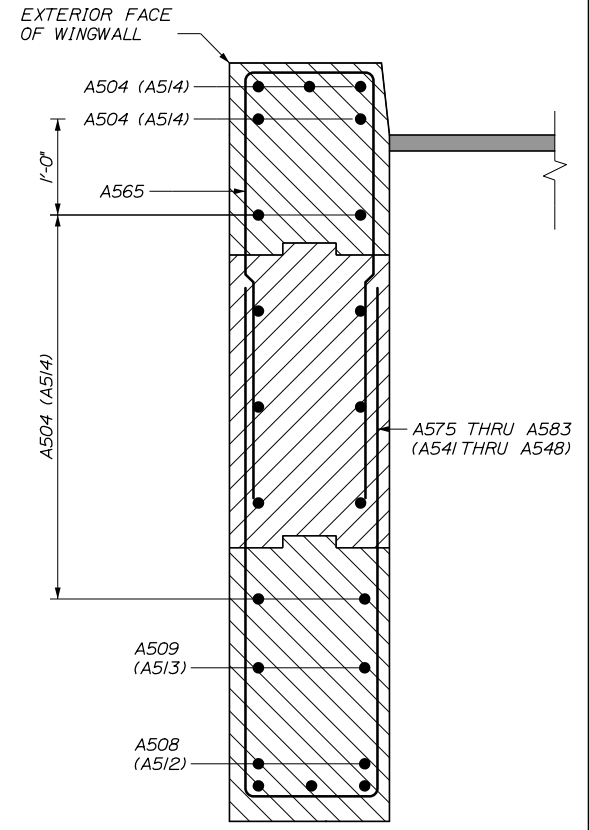
**WINGWALL BACKFILL DETAIL**  
(WINGWALL IN SHOWN, OTHERS SIMILAR)  
I" = I'-0"



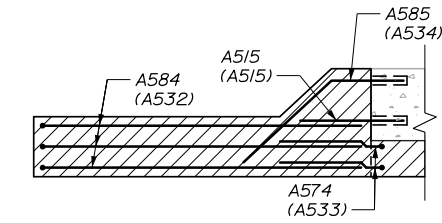
**WINGWALL SECTION A-A**  
(WINGWALL IN SHOWN, OTHERS SIMILAR)  
I" = I'-0"



**WINGWALL SECTION B-B**  
(WINGWALL IN SHOWN, OTHERS SIMILAR)  
I" = I'-0"



**WINGWALL SECTION C-C**  
(WINGWALL IN SHOWN, OTHERS SIMILAR)  
(END POST NOT SHOWN FOR CLARITY)  
I" = I'-0"



**WINGWALL SECTION L-L**  
OBTUSE WINGWALL SHOWN, ACUTE WINGWALL OPPOSITE HAND  
3/8" = I'-0"

**NOTE:**  
ABUTMENT 1 SHOWN (AXXX)  
ABUTMENT 2 SIMILAR (BXXX)  
OBTUSE WINGWALL BARS SHOWN  
ACUTE WINGWALL BARS IN ( )

Scale: **AS NOTED**

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn    | PEB | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

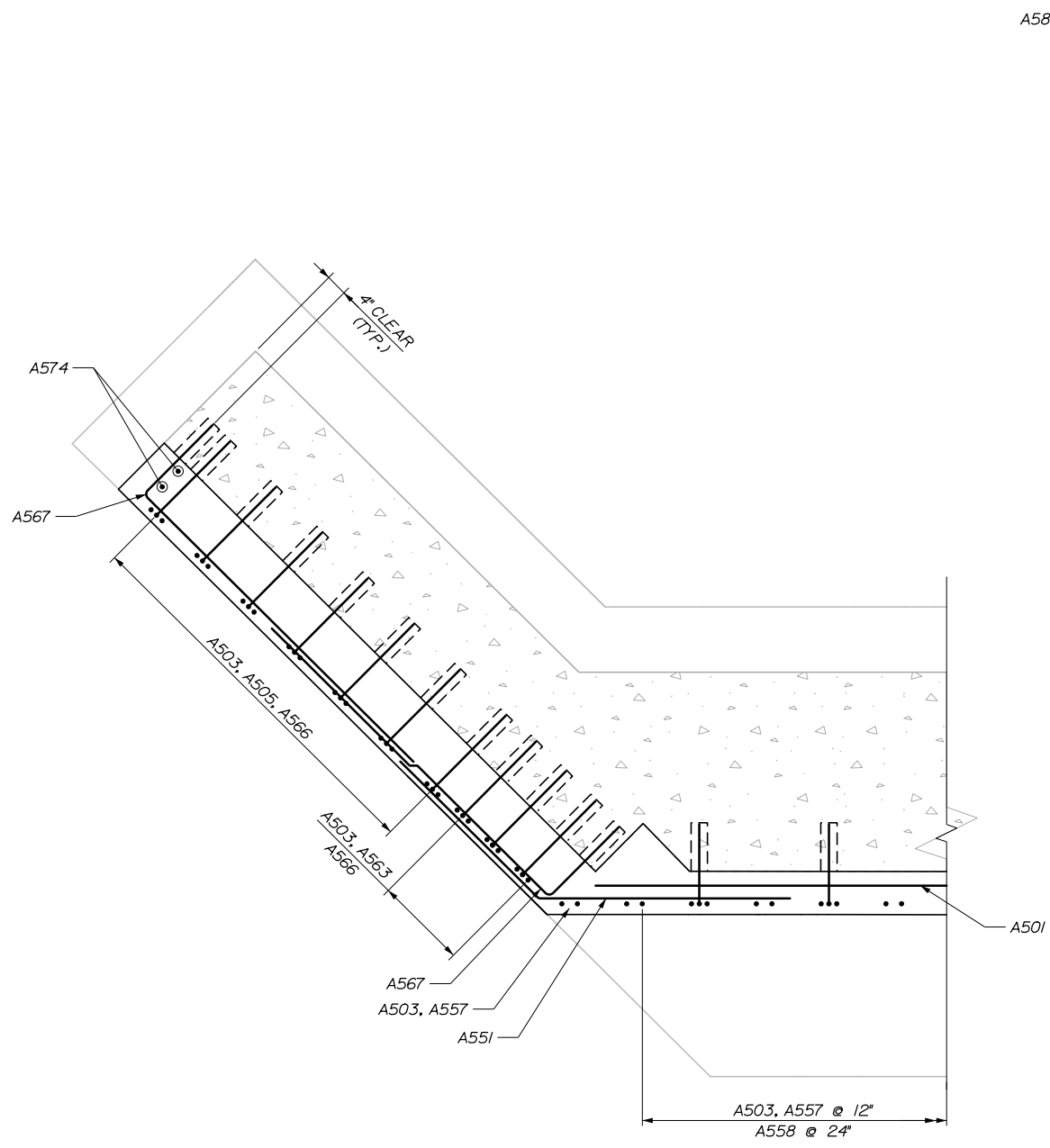
**SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS**  
 WINGWALL MODIFICATION DETAILS II

SHEET NUMBER: S-10  
51 OF 81

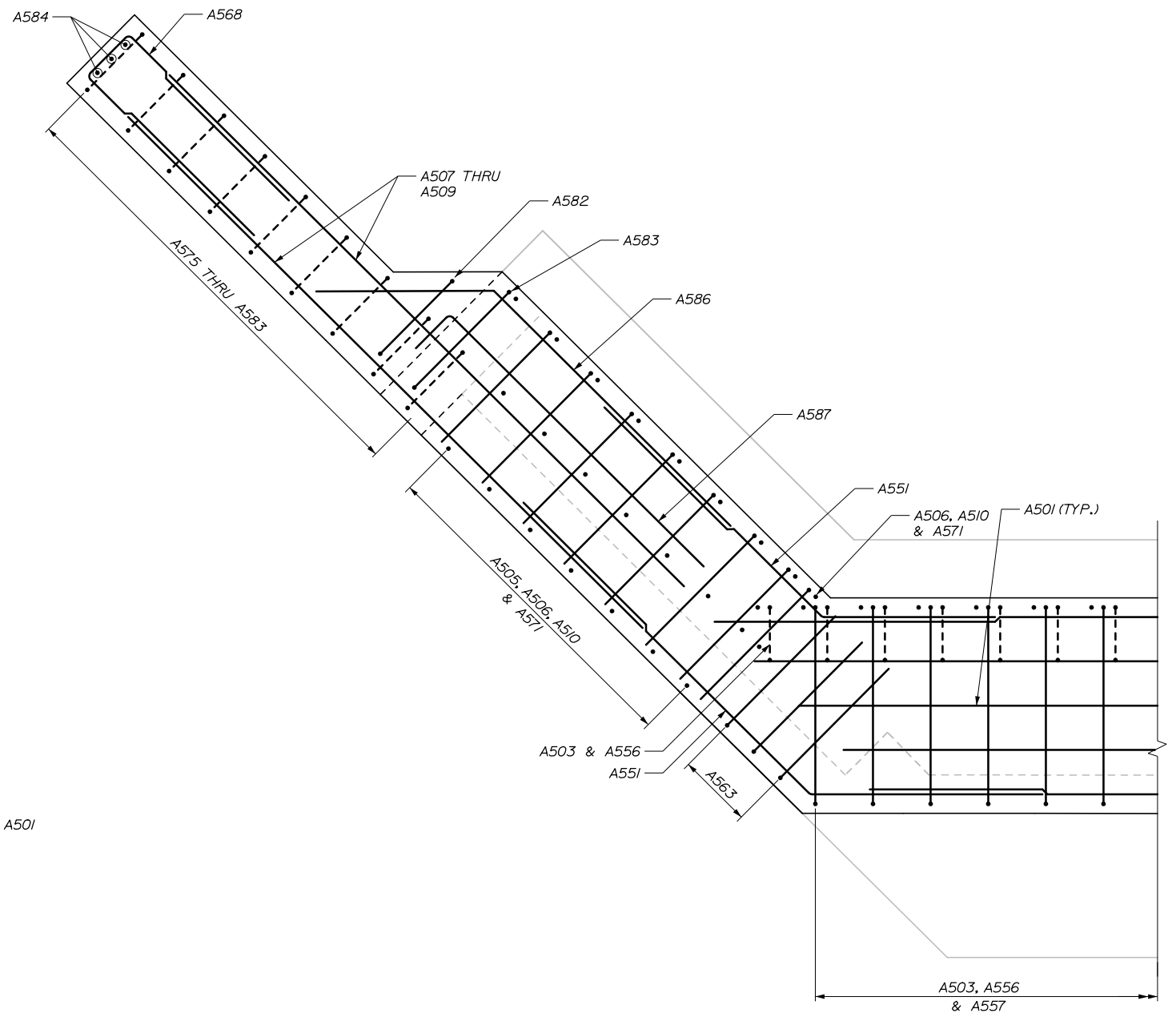
CONTRACT: 2022.06

Date: 2/7/2022

Filename: 052\_Wingwall Modifications Details III.dgn



SECTION D-D  
3/4" = 1'-0"



SECTION E-E  
3/4" = 1'-0"

Scale: 3/4" = 1'-0"

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn    | PEB | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
WINGWALL MODIFICATION DETAILS III

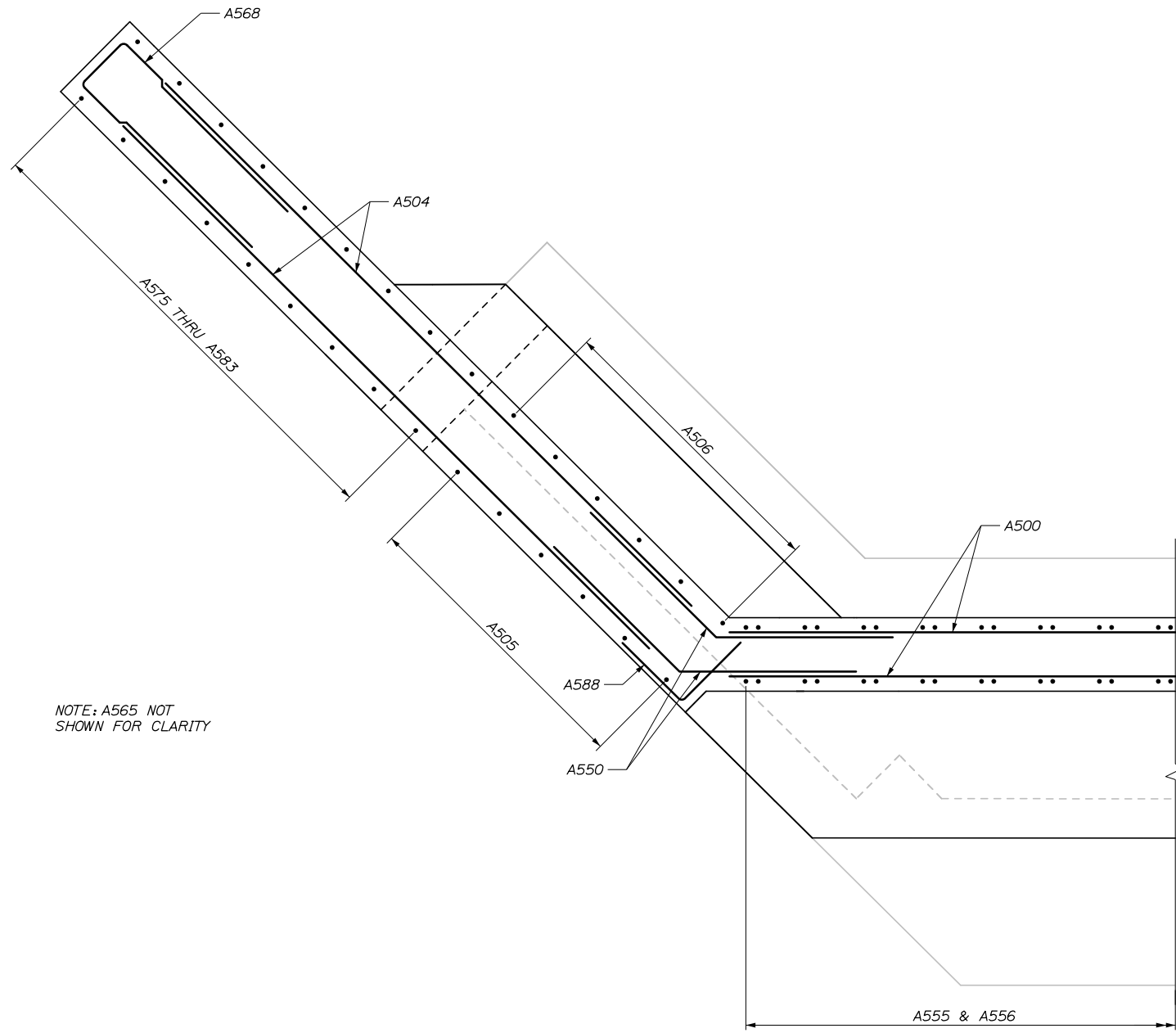
SHEET NUMBER: S-11

CONTRACT: 2022.06

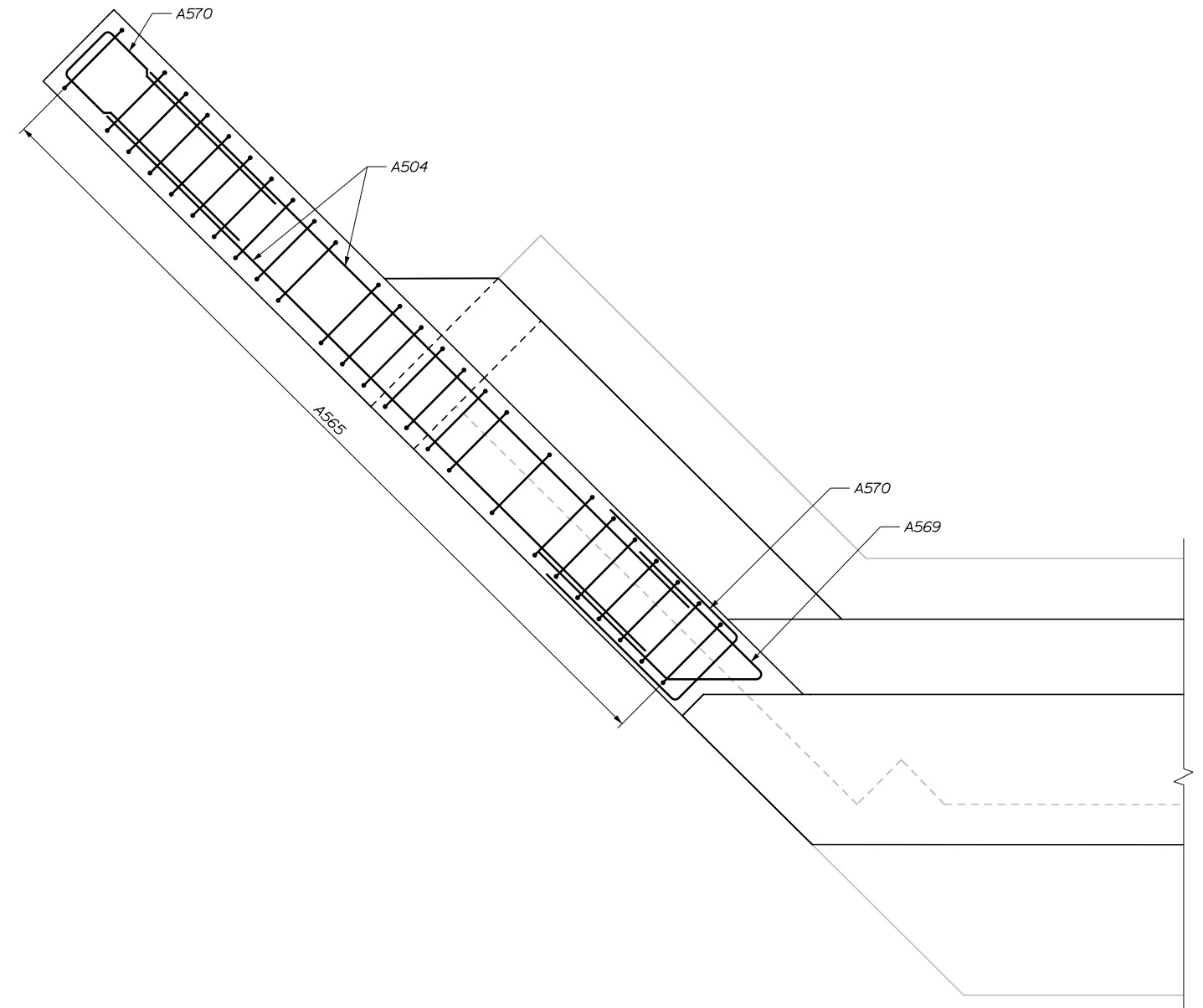
52 OF 81

Date: 2/7/2022

Filename: 053\_Wingwall Modifications Details IV.dgn



SECTION F-F  
3/4" = 1'-0"



SECTION G-G  
3/4" = 1'-0"

Scale: 3/4" = 1'-0"

| No. | Revision | By | Date |
|-----|----------|----|------|
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|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn    | PEB | 01\22 | In Charge of | TRC | 01\22 |

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FAX (207) 228-0909

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

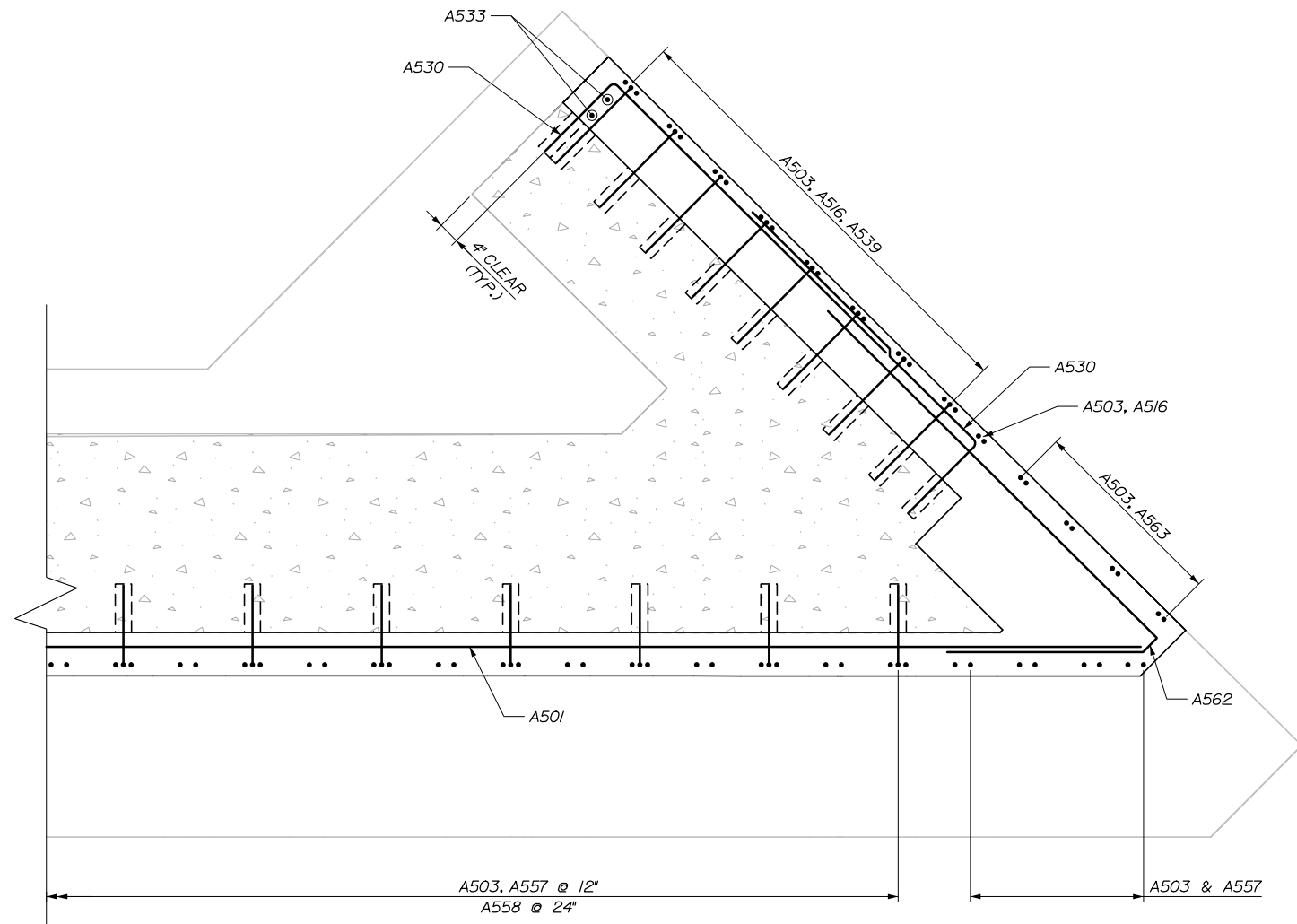
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
WINGWALL MODIFICATION DETAILS IV

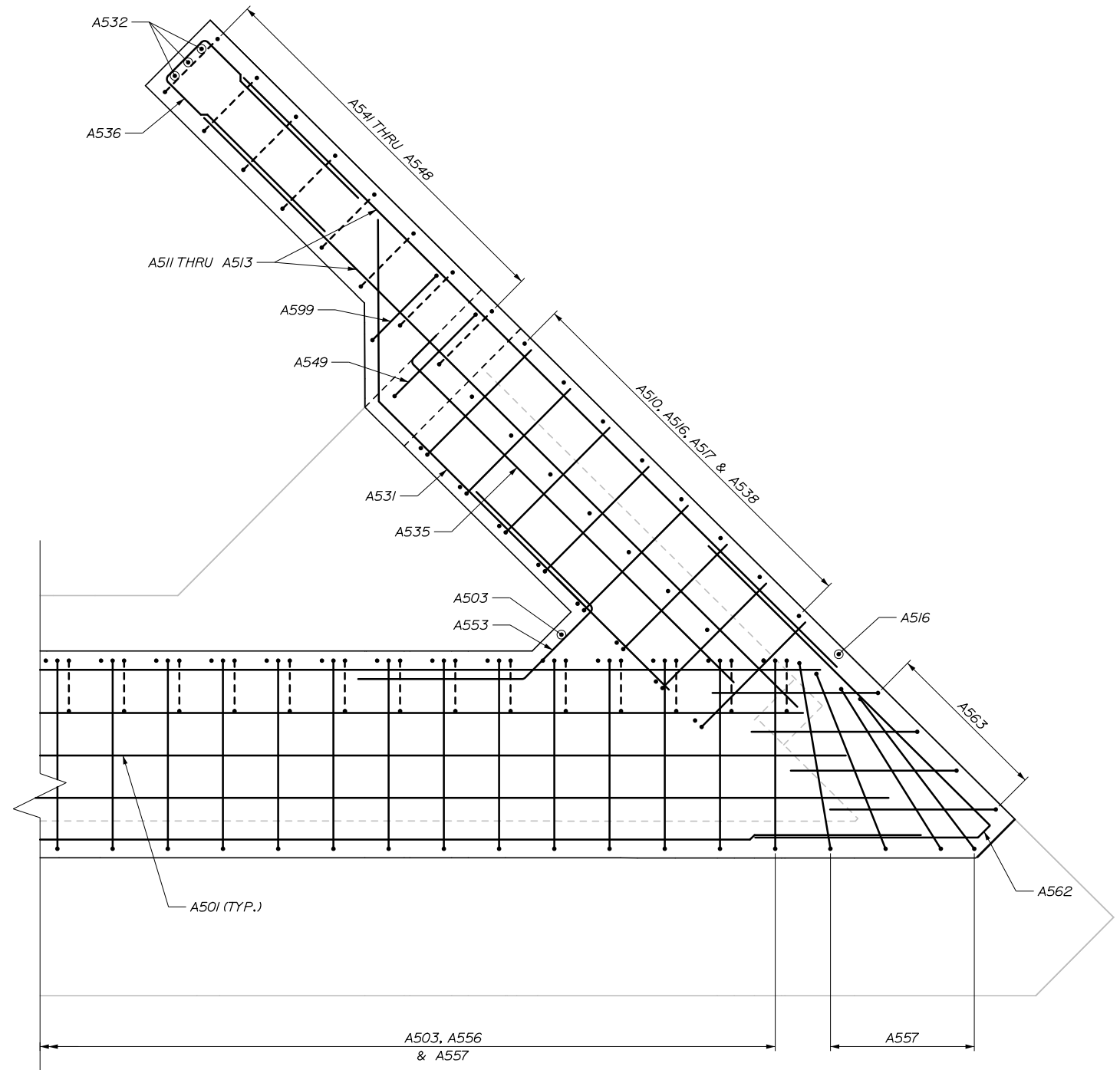
SHEET NUMBER: S-12  
CONTRACT: 2022.06  
53 OF 81

Date: 2/7/2022

Filename: 054\_Wingwall Modifications Details V.dgn



SECTION H-H  
3/4" = 1'-0"



SECTION I-I  
3/4" = 1'-0"

| Scale: 3/4" = 1'-0" |          |    |      |
|---------------------|----------|----|------|
| No.                 | Revision | By | Date |
|                     |          |    |      |
|                     |          |    |      |

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|---|-----|-------|--------------|-----|-------|
| Designed by:                                    |     |       |              |     |       |
| <b>HNTB</b>                                     |     |       |              |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn   | PEB | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

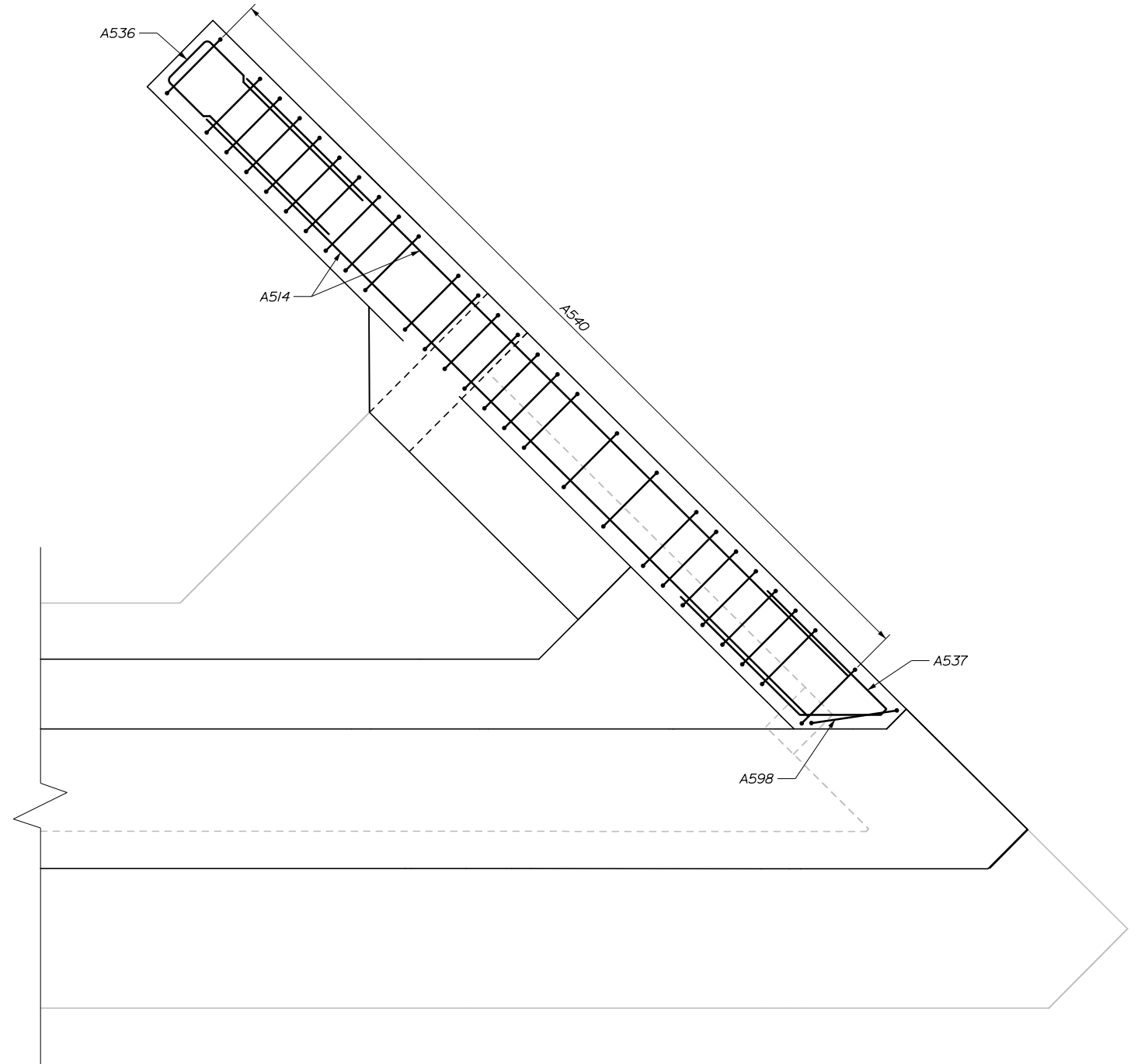
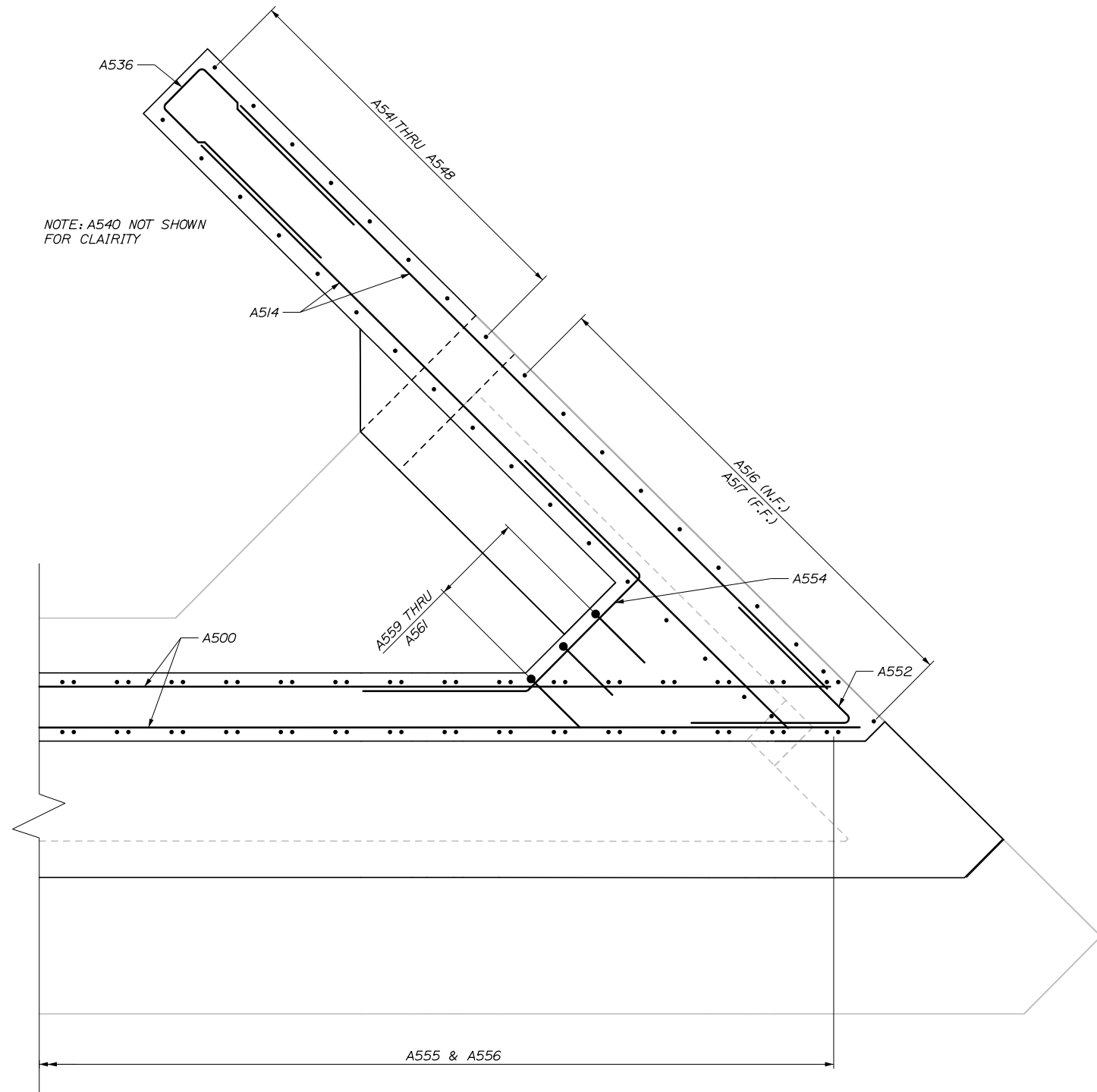
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
WINGWALL MODIFICATION DETAILS V

SHEET NUMBER: S-13  
CONTRACT: 2022.06  
54 OF 81

Date: 2/7/2022

Filename: 055\_Wingwall Modifications Details\_V1.dgn



Scale: 3/4" = 1'-0"

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn    | PEB | 01\22 | In Charge of | TRC | 01\22 |

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FAX (207) 228-0909



**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

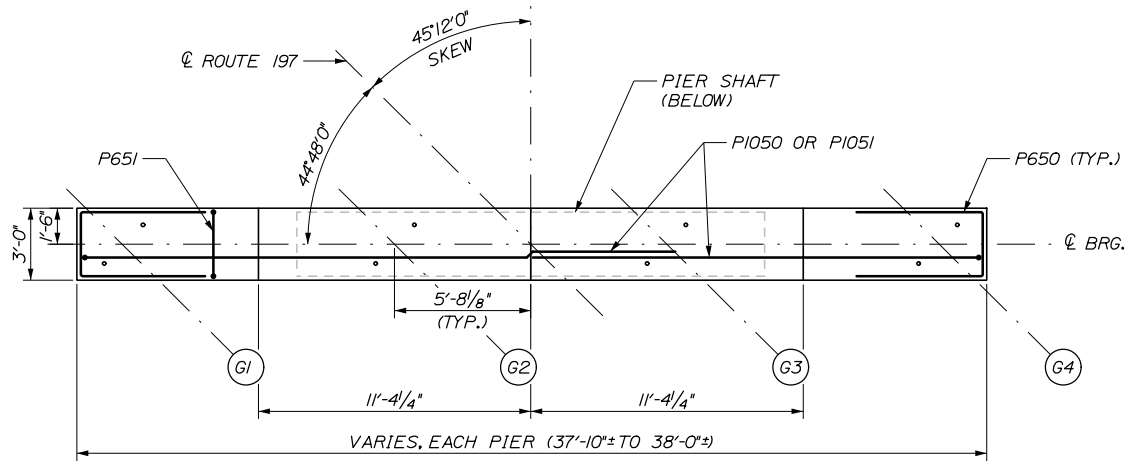
SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
WINGWALL MODIFICATION DETAILS VI

SHEET NUMBER: S-14

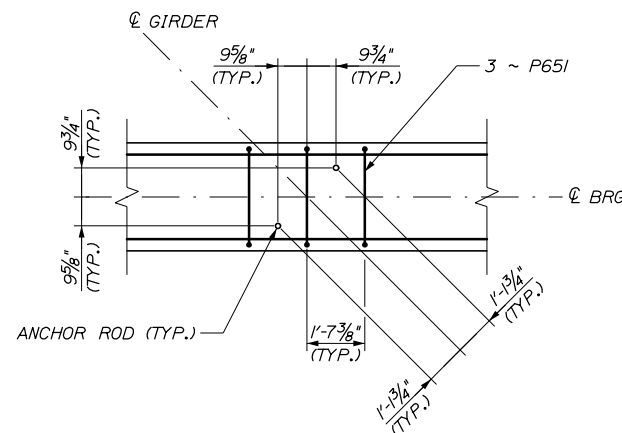
CONTRACT: 2022.06

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Date: 2/7/2022

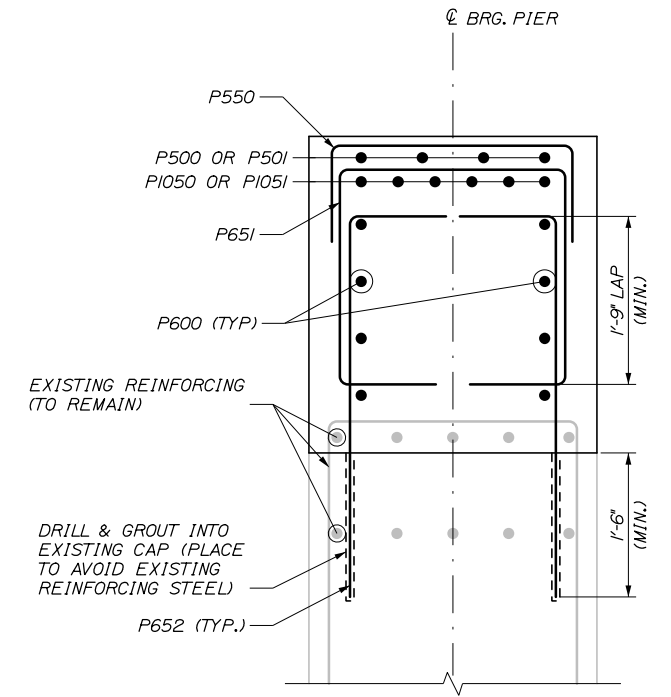


PLAN  
1/4" = 1'-0"

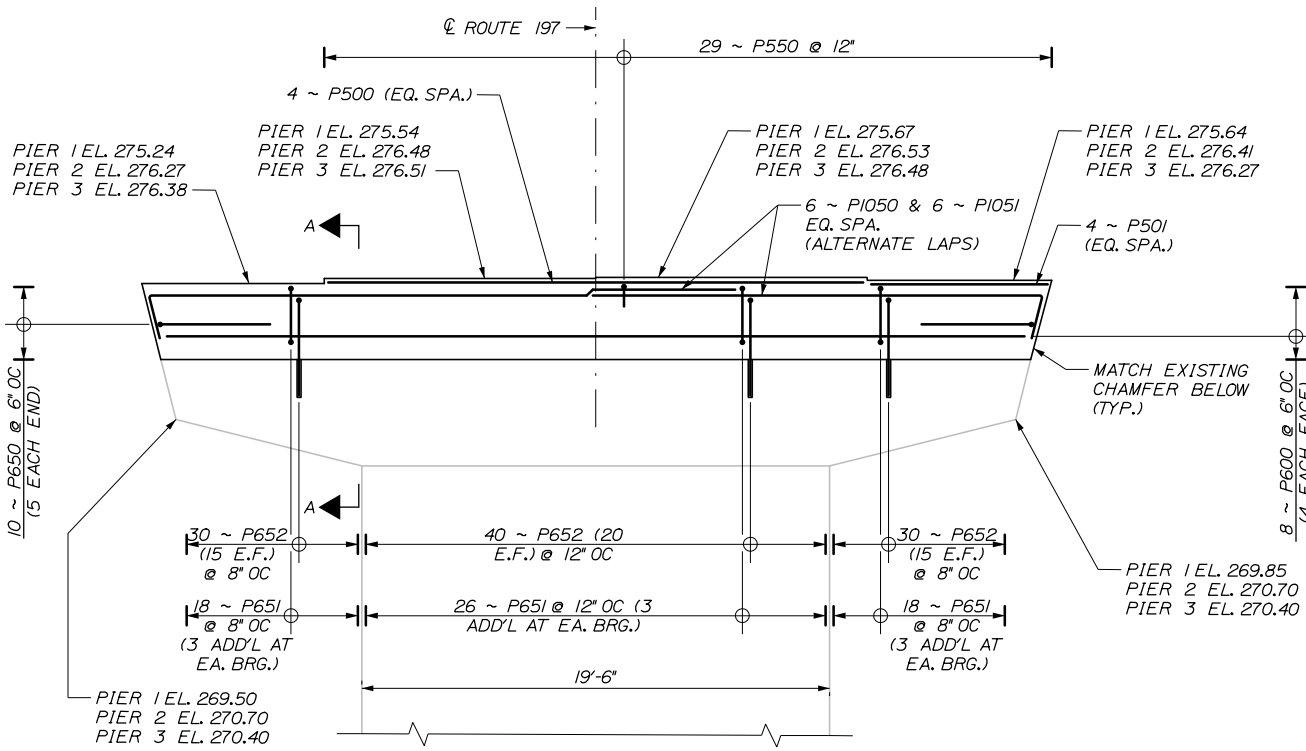


NOTE: ADD 3 ADDITIONAL P651 STIRRUPS AT EACH BEARING EQUALLY SPACED AS SHOWN ABOVE. 12 ADDITIONAL BARS PER PIER.

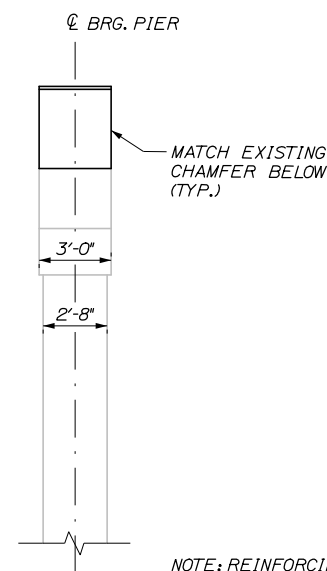
TYPICAL PIER ANCHOR ROD DETAIL  
3/8" = 1'-0"



SECTION A-A  
1" = 1'-0"



ELEVATION  
1/4" = 1'-0"



SECTION  
1/4" = 1'-0"

PIER NOTES:

1. ALL EXPOSED PIER SURFACES SHALL BE COATED WITH PIGMENTED COATING FOR CONCRETE SURFACES AFTER RECONSTRUCTION IS COMPLETE AND MATERIAL HAS CURED.
2. ALL EXISTING CONCRETE SURFACES AGAINST NEW CONCRETE PLACED SHALL BE ROUGHENED AND COATED WITH AN EPOXY BONDING COMPOUND. THIS WORK SHALL BE INCIDENTAL TO ITEM 502.239.
3. PIER BAR MARKS ARE SHOWN GENERICALLY. THE NUMBER PREFIX IN THE REINFORCEMENT SCHEDULE DENOTES THE PIER LOCATION SUCH AS IP FOR PIER 1 AND 2P FOR PIER 2.
4. THE P652 BARS SHALL BE LOCATED SUFFICIENTLY FROM THE END TO PROVIDE AT LEAST 6" OF BOTTOM COVER ON THE BAR. THE EMBEDDED PORTION OF THE BAR MAY NEED TO BE INSTALLED AT AN ANGLE AND FIELD BENT VERTICAL DEPENDING ON THE REQUIRED EMBEDMENT DEPTH OF THE SELECTED ANCHORING MATERIAL. THE RESIDENT AND CONTRACTOR SHALL DETERMINE THE APPROPRIATE OFFSET FROM THE END OF THE PIER FOR THE FIRST P652, WHICH SHALL NOT EXCEED 12".
5. P1050 AND P1051 SHALL BE LEVEL AND MINIMUM COVER SATISFIED ON THE LOWEST SEGMENT OF THE PIER CAP. THE DISTANCE FROM TOP OF LOWEST SEGMENT TO CL OF P1050 AND P1051 IS APPROXIMATELY 3 3/8".

NOTE: REINFORCING NOT SHOWN FOR CLARITY

Filename: 056\_Pier Reconstruction.dgn

|          |          |    |      |
|----------|----------|----|------|
| Scale:   |          |    |      |
| AS NOTED |          |    |      |
| No.      | Revision | By | Date |
|          |          |    |      |
|          |          |    |      |

|   |     |       |              |     |       |
|---|-----|-------|--------------|-----|-------|
| Designed by:                                    |     |       |              |     |       |
| <b>HNTB</b>                                     |     |       |              |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | YP  | 01\22 | Checked      | HJW | 01\22 |
| Drawn   | PEB | 01\22 | In Charge of | TRC | 01\22 |

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THE GOLD STAR  
MEMORIAL HIGHWAY

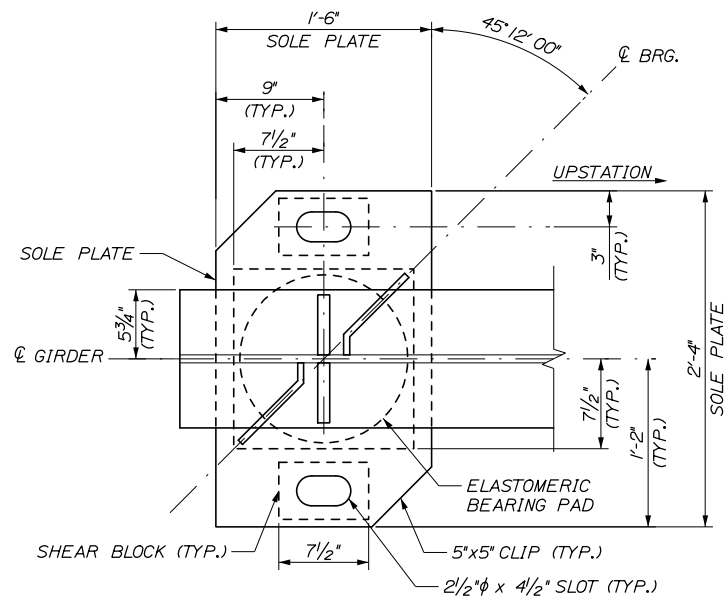
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
PIER RECONSTRUCTION

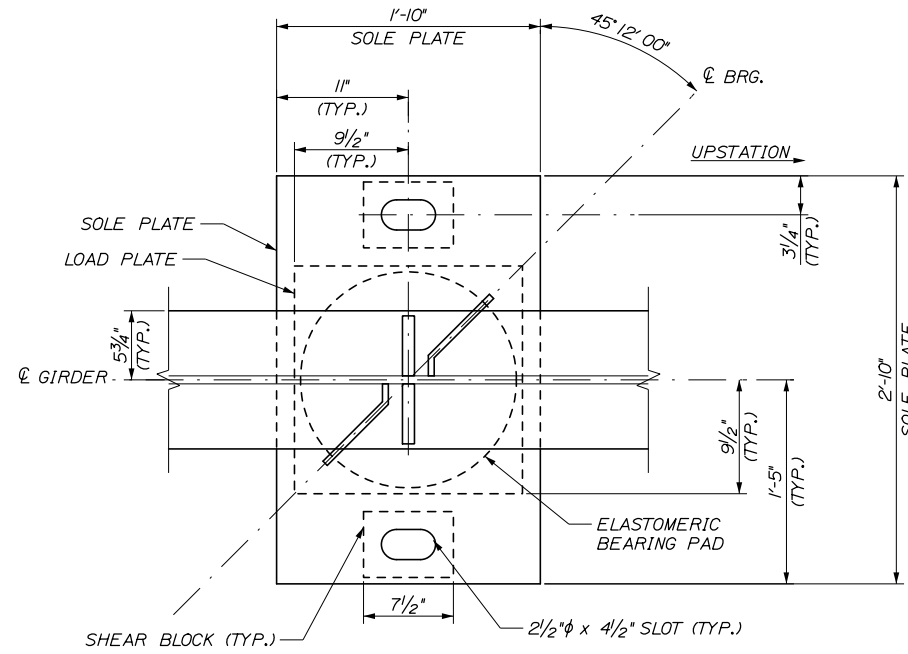
SHEET NUMBER: S-15  
CONTRACT: 2022.06  
56 OF 81



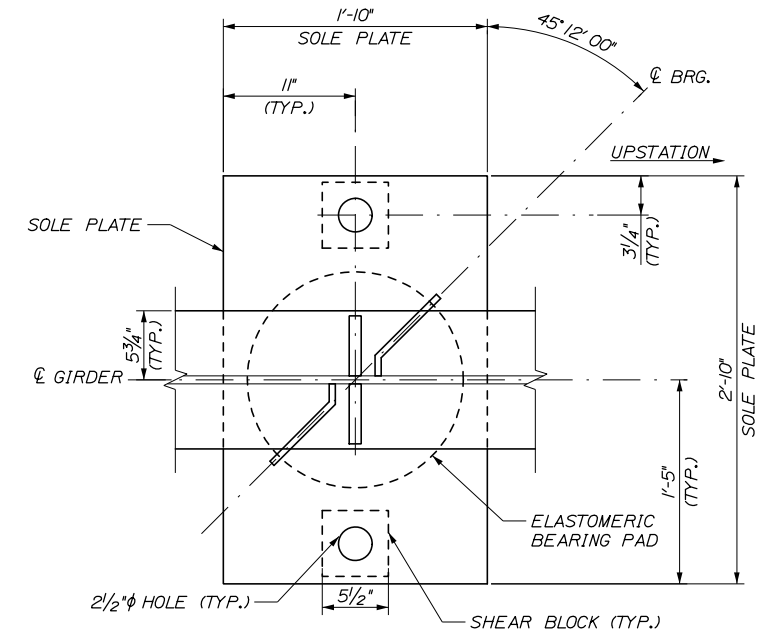
Date: 2/7/2022



PLAN

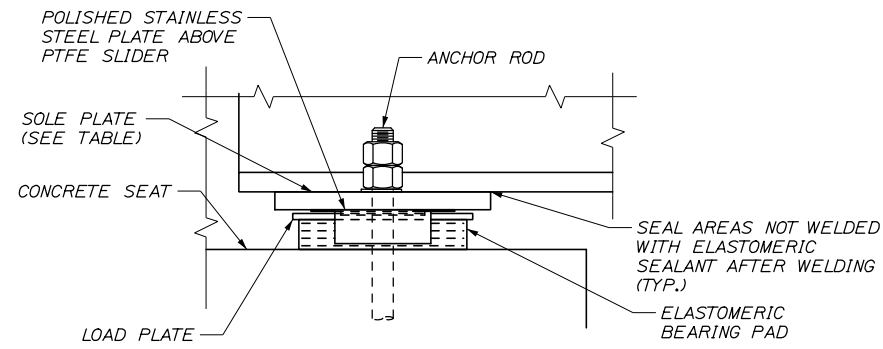


PLAN

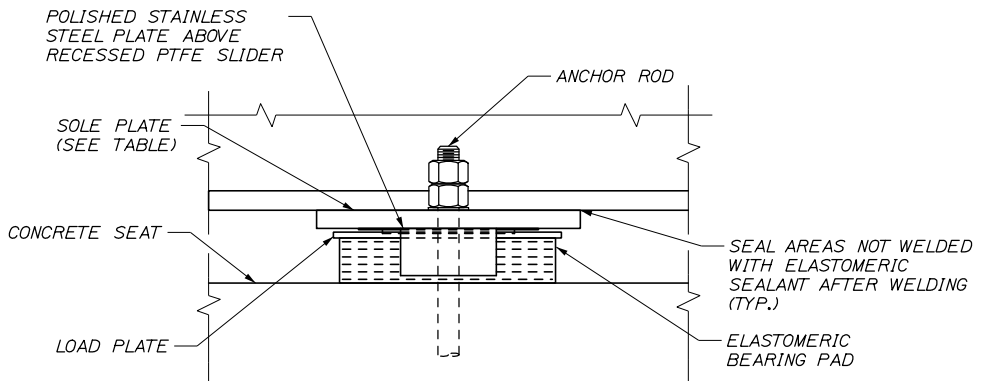


PLAN

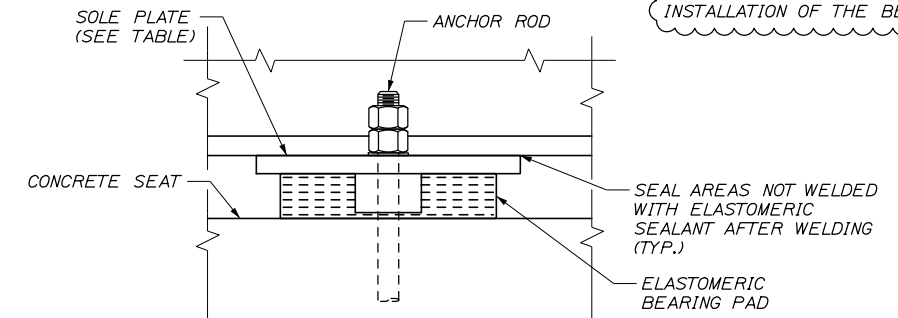
BEARING ASSEMBLIES, INCLUDING ANCHOR BOLTS, WILL BE FABRICATED AS PART OF A SEPARATE CONTRACT AND PROVIDED TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF THE BEARINGS.



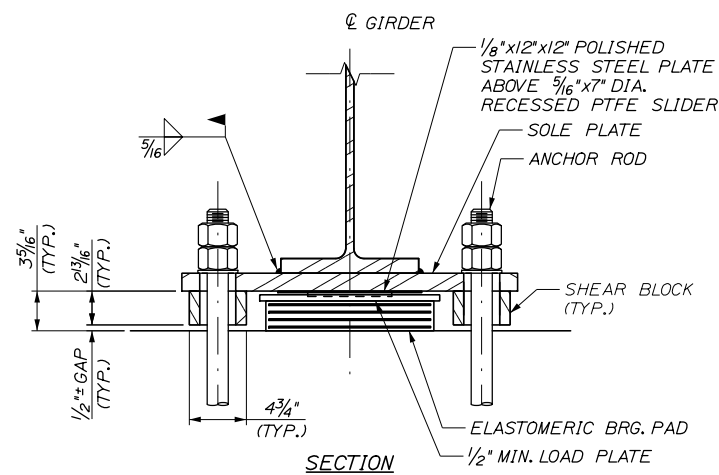
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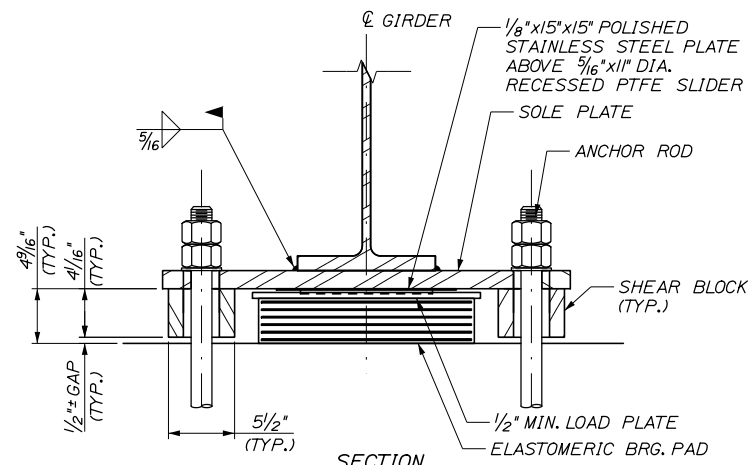
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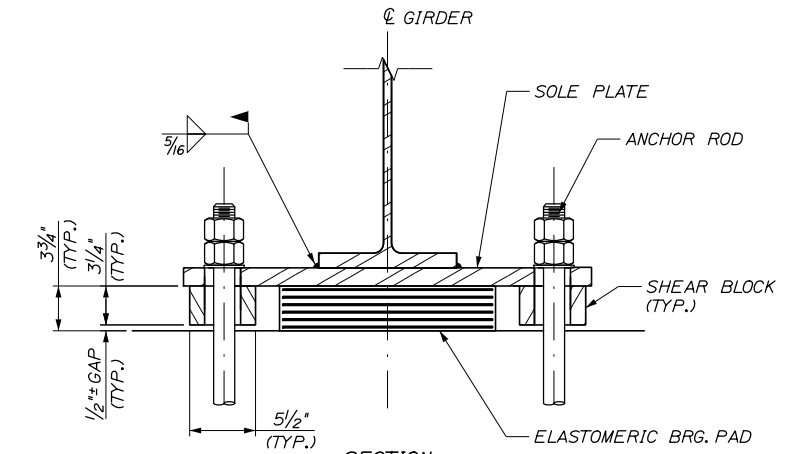
ELEVATION



SECTION  
EXPANSION BEARING DETAILS  
AT ABUTMENTS  
(8 REQUIRED)



SECTION  
EXPANSION BEARING DETAILS  
AT PIER 1 & 3  
(8 REQUIRED)



SECTION  
FIXED BEARING DETAILS  
AT PIER 2  
(4 REQUIRED)

Filename: 057\_Bearing Details 1.dgn

|                     |          |    |      |
|---------------------|----------|----|------|
| Scale: 1/2" = 1'-0" |          |    |      |
| No.                 | Revision | By | Date |
|                     |          |    |      |
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|   |     |       |              |     |       |
|---|-----|-------|--------------|-----|-------|
| Designed by:                                    |     |       |              |     |       |
| <b>HNTB</b>                                     |     |       |              |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | BRG | 01\22 | Checked      | IJM | 01\22 |
| Drawn   | PEB | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
BEARING DETAILS I

SHEET NUMBER: S-16  
CONTRACT: 2022.06  
97 OF 81

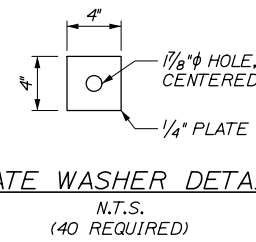
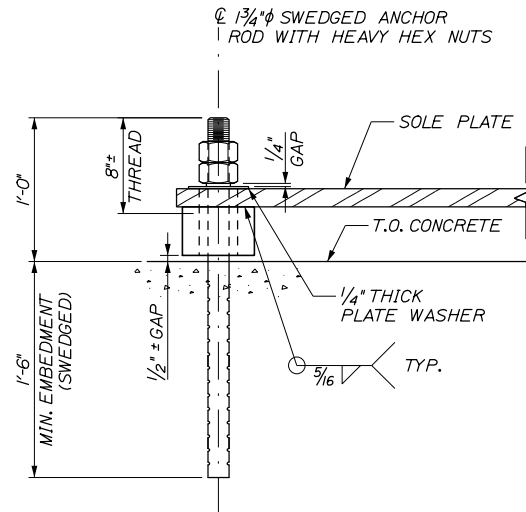
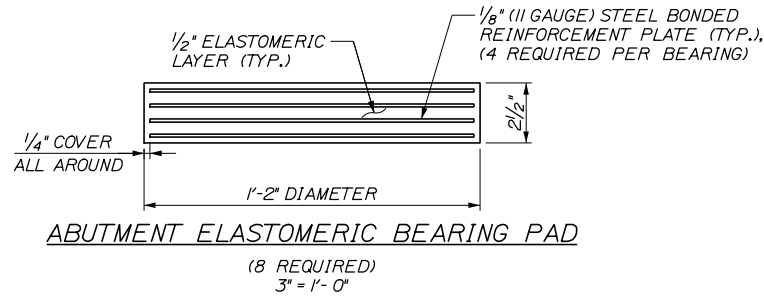
Date: 2/7/2022

**BEARING NOTES:**

- ELASTOMER SHALL BE 100% POLYCHLOROPRENE (NEOPRENE) WITH DUROMETER HARDNESS OF 50. THE SHEAR MODULUS OF THE ELASTOMER SHALL BE BETWEEN 100 AND 130 PSI.
- SOLE PLATE, LOAD PLATE, AND ANCHOR BLOCK SHALL BE AASHTO M270 GRADE 50.
- CONTRACTOR SHALL RE-FINISH GALVANIZING, IN ACCORDANCE WITH ASTM A780, AFTER WELDING.
- BEARING PADS WERE DESIGNED USING "METHOD A" FROM THE AASHTO LRFD SPECIFICATIONS AND SHALL BE SUBSEQUENTLY TESTED IN ACCORDANCE WITH THE SPECIFICATIONS.
- ANCHOR RODS SHALL MEET THE REQUIREMENTS OF ASTM F1554, GRADE 105, AND SHALL BE SWEDGED OR THREADED ON THE EMBEDDED PORTION OF THE ROD.
- ALL STEEL REINFORCING PLATES SHALL MEET THE REQUIREMENTS OF ASTM A36, UNLESS OTHERWISE NOTED, AND SHALL BE DEBURRED PRIOR TO MOLDING THE BEARING.
- VULCANIZING ELASTOMER TO STEEL PLATES SHALL BE DONE DURING THE PRIMARY MOLD PROCESS.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND SHALL BE VISIBLE AFTER THE BEARING IS INSTALLED.
- BEARINGS SHALL BE COVERED DURING TRANSIT.
- THE BEARINGS ARE DESIGNED SO THAT THE SUPERSTRUCTURE MAY BE ERECTED WHEN THE AMBIENT AIR TEMPERATURE IS WITHIN THE RANGE OF 35°F AND 80°F.

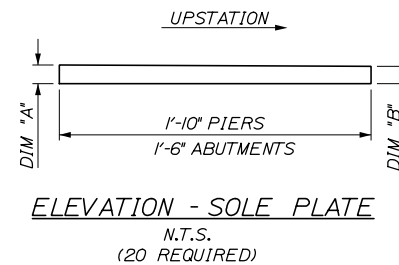
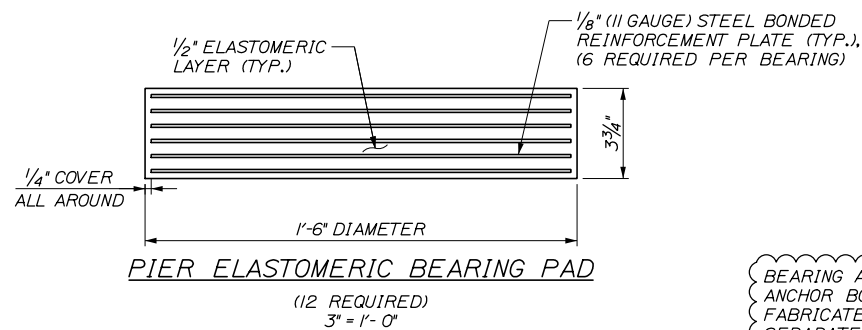
- ALL PRECAUTIONS NECESSARY SHALL BE TAKEN TO PROTECT BEARING COMPONENTS FROM FIELD WELD FLASH AND SPATTER. WELDING PROCEDURES SHALL BE ESTABLISHED BY THE CONTRACTOR TO RESTRICT THE MAXIMUM TEMPERATURE OF STEEL ADJACENT TO THE ELASTOMER TO 200°F THROUGH USE OF TEMPERATURE INDICATING CRAYONS OR OTHER SUITABLE MEANS.
- ALL EXPOSED STEEL COMPONENTS SHALL BE HOT DIP GALVANIZED AFTER STEEL FABRICATION IN ACCORDANCE WITH ASTM A123 AND ASTM A153 AS APPLICABLE.
- ANCHOR RODS SHALL BE SET BEFORE INSTALLING STRUCTURAL STEEL.
- PTFE SLIDER SHALL BE DIMPLED AND LUBRICATED. LUBRICATION SHALL BE SUPPLIED AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATION TO ENSURE A COEFFICIENT OF FRICTION LESS THAN OR EQUAL TO 0.03 AT 68 DEGREES FAHRENHEIT.
- RECESS AND BOND THE PTFE TO LOAD PLATE WITH AN APPROVED ADHESIVE. THE SURFACE PREPARATION OF THE PTFE AND THE MATING STAINLESS STEEL SHALL BE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

| BEARING ASSEMBLY SUMMARY               |          |
|--|----------|
| COMPONENT                              | QUANTITY |
| <b>ABUTMENT EXPANSION BEARINGS (8)</b> |          |
| ELASTOMERIC BEARING PAD (14" DIAMETER) | 8        |
| LOAD PLATE (15" x 15")                 | 8        |
| PTFE SLIDER (7" DIA.)                  | 8        |
| STAINLESS STEEL PLATE (12" x 12")      | 8        |
| SHEAR BLOCK (7 1/2" x 4 3/4")          | 16       |
| SOLE PLATE (18" x 28")                 | 8        |
| ANCHOR RODS (1 3/4" DIA. x 30" LONG)   | 16       |
| PLATE WASHER (4" x 4")                 | 16       |
| HEAVY HEX NUTS (1 3/4" DIA.)           | 32       |
| <b>PIER EXPANSION BEARINGS (8)</b>     |          |
| ELASTOMERIC BEARING PAD (18" DIAMETER) | 8        |
| LOAD PLATE (19" x 19")                 | 8        |
| PTFE SLIDER (11" DIA.)                 | 8        |
| STAINLESS STEEL PLATE (15" x 15")      | 8        |
| SHEAR BLOCK (7 1/2" x 5 1/2")          | 16       |
| SOLE PLATE (22" x 34")                 | 8        |
| ANCHOR RODS (1 3/4" DIA. x 30" LONG)   | 16       |
| PLATE WASHER (4" x 4")                 | 16       |
| HEAVY HEX NUTS (1 3/4" DIA.)           | 32       |
| <b>PIER FIXED BEARINGS (4)</b>         |          |
| ELASTOMERIC BEARING PAD (18" DIAMETER) | 4        |
| SHEAR BLOCK (5 1/2" x 5 1/2")          | 8        |
| SOLE PLATE (22" x 34")                 | 4        |
| ANCHOR RODS (1 3/4" DIA. x 30" LONG)   | 8        |
| PLATE WASHER (4" x 4")                 | 8        |
| HEAVY HEX NUTS (1 3/4" DIA.)           | 16       |



| BEARING DESIGN CRITERIA  |             |             |
|--------------------------|-------------|-------------|
| CRITERIA                 | ABUTMENTS   | PIERS       |
| UNFACTORED DEAD LOAD     | 34 KIP      | 113 KIP     |
| UNFACTORED LIVE LOAD     | 60 KIP      | 100 KIP     |
| MAX. LONGITUDINAL DISPL. | 1.52 INCHES | 0.75 INCHES |
| ROTATIONAL TOLERANCE     | 0.005 RAD   | 0.005 RAD   |

| SOLE PLATE THICKNESS TABLE (INCHES) |         |          |          |          |          |
|-------------------------------------|---------|----------|----------|----------|----------|
| LOCATION                            | DIM     | GIRDER   |          |          |          |
|                                     |         | G1       | G2       | G3       | G4       |
| ABUT. 2                             | DIM "A" | 1 1/2"   | 1 1/2"   | 1 1/2"   | 1 1/2"   |
|                                     | DIM "B" | 1 3/4"   | 1 3/4"   | 1 3/4"   | 1 3/4"   |
| PIER 3                              | DIM "A" | 1 1/2"   | 1 1/2"   | 1 1/2"   | 1 1/2"   |
|                                     | DIM "B" | 1 1/2"   | 1 1/2"   | 1 1/2"   | 1 1/2"   |
| PIER 2                              | DIM "A" | 1 1/2"   | 1 1/2"   | 1 1/2"   | 1 1/2"   |
|                                     | DIM "B" | 1 1/2"   | 1 1/2"   | 1 1/2"   | 1 1/2"   |
| PIER 1                              | DIM "A" | 1 13/16" | 1 13/16" | 1 13/16" | 1 3/4"   |
|                                     | DIM "B" | 1 1/2"   | 1 1/2"   | 1 1/2"   | 1 1/2"   |
| ABUT. 1                             | DIM "A" | 1 7/8"   | 1 7/8"   | 1 7/8"   | 1 13/16" |
|                                     | DIM "B" | 1 1/2"   | 1 1/2"   | 1 1/2"   | 1 1/2"   |



BEARING ASSEMBLIES, INCLUDING ANCHOR BOLTS, WILL BE FABRICATED AS PART OF A SEPARATE CONTRACT AND PROVIDED TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF THE BEARINGS.

Filename: 058\_Bearing Details 2.dgn

|                 |          |    |      |
|-----------------|----------|----|------|
| Scale: AS NOTED |          |    |      |
| No.             | Revision | By | Date |
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|   |    |      |  |
|---|----|------|--|
| Designed by:                                    |    |      |  |
| <b>HNTB</b>                                     |    |      |  |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |    |      |  |
|   | By | Date |  |
|   | By | Date |  |
|   | By | Date |  |
|   | By | Date |  |
|   | By | Date |  |
|   | By | Date |  |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

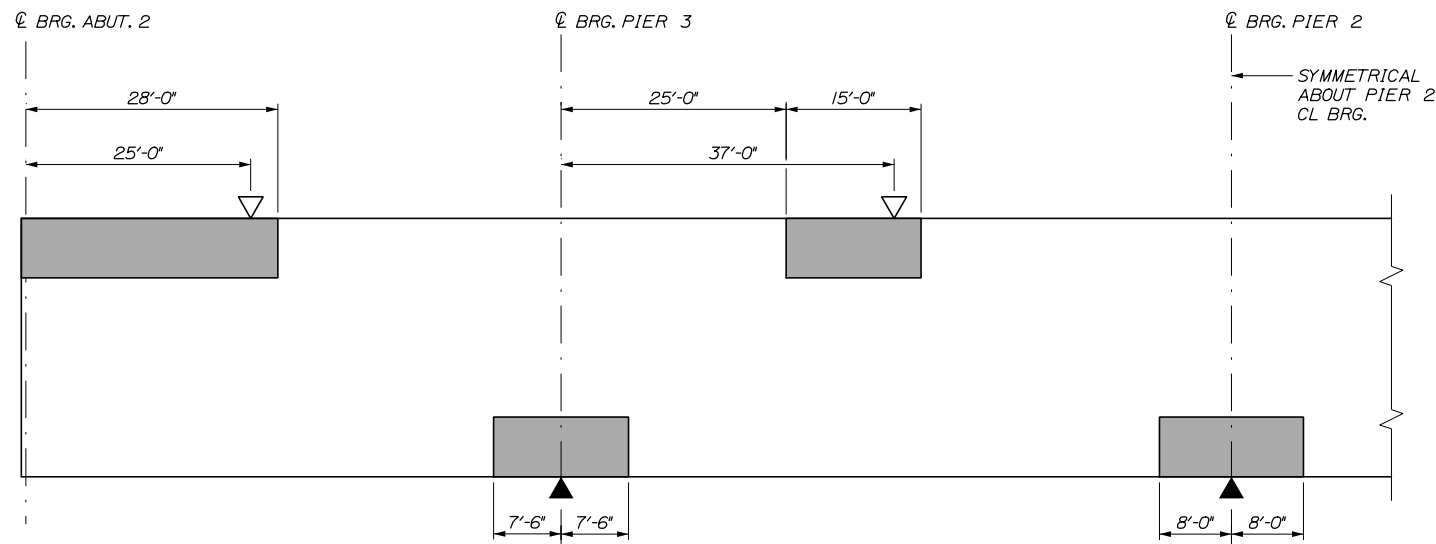
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
BEARING DETAILS II

SHEET NUMBER: S-17  
CONTRACT: 2022.06  
8 OF 81



Date: 2/7/2022

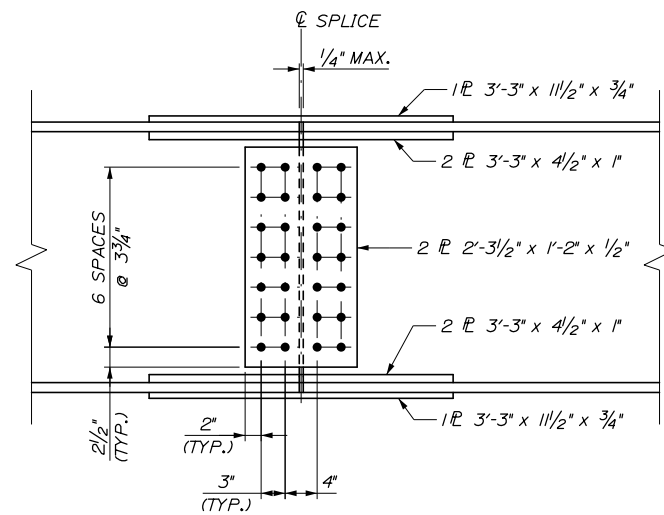


▽ POINT OF MAXIMUM POSITIVE MOMENT  
 ▲ POINT OF MAXIMUM NEGATIVE MOMENT  
 [ ] INDICATES AREA ALWAYS IN COMPRESSION. ALL OTHER AREAS ARE IN TENSION OR HAVE STRESS REVERSALS.

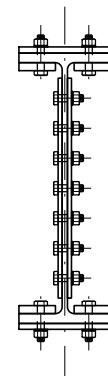
**GIRDER STRESS DIAGRAM**  
 (SYMMETRICAL ABOUT CL PIER 2)  
 N.T.S.

**STRUCTURAL STEEL NOTES**

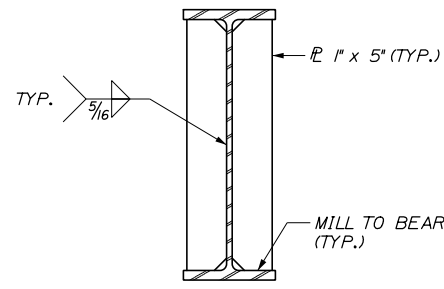
1. CAMBER ORDINATES, AS SHOWN, ARE COMPUTED TO COMPENSATE FOR ALL DEAD LOAD DEFLECTIONS AND FOR THE CURVATURE OF THE FINISHED GRADE PROFILE.
2. NO TRANSVERSE BUTT WELD SPLICES WILL BE ALLOWED IN THE FLANGE PLATES OR WEB PLATES WITHIN 10 FEET OR 10 PERCENT OF THE SPAN LENGTH (WHICHEVER IS GREATER) FROM THE POINTS OF MAXIMUM NEGATIVE MOMENT OR MAXIMUM POSITIVE MOMENT. BUTT WELD SPLICES IN FLANGES SHALL BE NOT LESS THAN ONE FOOT FROM TRANSVERSE BUTT WELDS IN THE WEB PLATES AND NO TRANSVERSE WEB OR FLANGE BUTT WELDS SHALL BE LOCATED WITHIN ONE FOOT OF OTHER TRANSVERSE WELDS (E.G. CONNECTION PLATES TO WEB WELDS) ON EITHER FLANGE OR WEB. NO TRANSVERSE BUTT WELD SPLICES WILL BE ALLOWED IN AREAS OF STRESS REVERSAL.
3. SECTIONS OF FLANGE PLATES OR WEB PLATES BETWEEN TRANSVERSE SHOP SPLICES OR BETWEEN A TRANSVERSE SHOP SPLICE AND A FIELD SPLICE SHALL BE AT LEAST 10 FEET IN LENGTH UNLESS OTHERWISE SHOWN ON THE PLANS.
4. BEARING STIFFENERS SHALL BE PLUMB AFTER ERECTION AND DEAD LOADING OF THE STRUCTURE.
5. INTERMEDIATE DIAPHRAGM CONNECTION PLATES MAY BE EITHER PLUMB OR NORMAL TO THE TOP FLANGE.
6. ALL BOLTS, NUTS, AND WASHERS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.
7. BOLTED FIELD SPLICE CONNECTIONS SHALL BE MADE USING 7/8" ASTM A325 HIGH STRENGTH BOLTS. BOLT HOLE SIZE SHALL BE 9/16" DIAMETER. FIELD SPLICE BOLT THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANE.
8. ENDS OF GIRDER WEBS SHALL BE VERTICAL UNDER FULL DEAD LOAD.
9. THE TOP OF THE TOP FLANGE (EXCEPT UNDER BOLTED SPLICE PLATES) SHALL BE MASKED FROM METALLIZING OR GALVANIZING PROTECTIVE COATING, 8" WIDE CENTERED ON THE FLANGE, TO ALLOW FOR FIELD WELDED SHEAR CONNECTORS. A SEAL COAT OR PRIMER SHALL BE APPLIED TO THE TOP FLANGE IN ALL MASKED AREAS IN ACCORDANCE WITH SPECIAL PROVISION SUBSECTION 506.35.
10. AT THE FABRICATOR'S OPTION, ALL STRUCTURAL STEEL MAY BE HOT DIP GALVANIZED IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 506. GALVANIZING TUBS SHALL BE OF SUFFICIENT SIZE TO ALLOW COMPLETE IMMERSION OF THE STEEL SEGMENT. DOUBLE DIPPING IS NOT ALLOWED.
11. BUTT WELDS AT WEB SPLICES AND FLANGE SPLICES SHALL BE GROUND FLUSH IN LONGITUDINAL DIRECTION OF GIRDER.
12. BEARING STIFFENERS SHALL BE MILL-TO-BEAR ON THE BOTTOM FLANGE AND TIGHT-TO-FIT TO THE TOP FLANGE.
13. FOR DETAILS OF DIAPHRAGMS, SEE MAINEDOT STANDARD DETAILS.
14. ATTENTION FABRICATOR: PROJECT ROADWAY STATIONING IS FROM WEST TO EAST. ORIGINAL PLANS FOR THE EXISTING BRIDGE INCLUDE ROADWAY STATIONING THAT IS REVERSE FROM THIS. THE EXISTING SUBSTRUCTURES ARE TO BE RETAINED AND MODIFIED TO ACCOMMODATE THE NEW STRUCTURAL STEEL AND SUPERSTRUCTURE.
15. THE ESTIMATED QUANTITY OF STRUCTURAL STEEL (EXCLUDING ANCILLARY COMPONENTS) IS APPROXIMATELY 218,000 LBS.
16. USE A SINGLE ROW OF SHEAR STUDS ON SPLICE PLATES TO AVOID INTERFERENCE WITH SPLICE BOLTS.
17. PRIOR TO THE ERECTION OF STRUCTURAL STEEL THE CONTRACTOR SHALL SUBMIT A DETAILED ERECTION PLAN FOR APPROVAL.



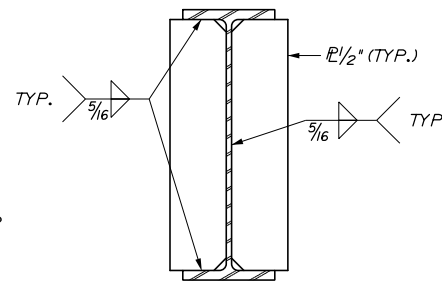
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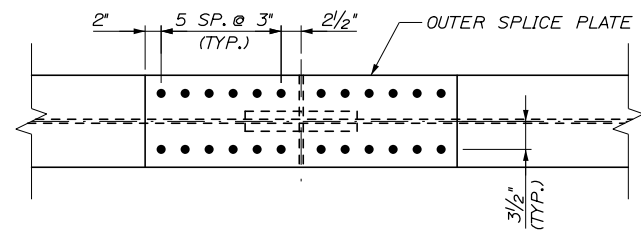
SECTION



**BEARING STIFFENER**  
 N.T.S.

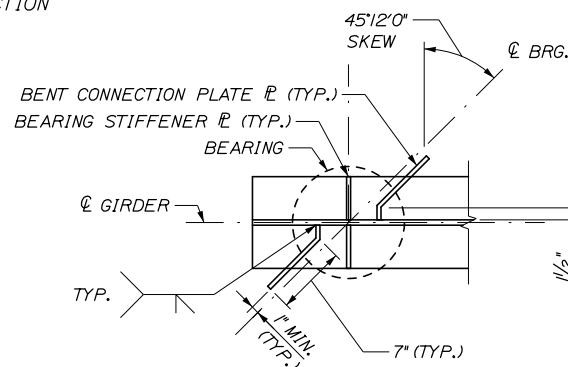


**CONNECTION PLATE**  
 (BENT CONNECTION PLATE REQUIRED AT CENTERLINE OF BEARINGS)  
 N.T.S.

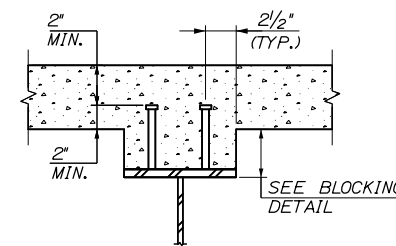


PLAN  
 (TOP & BOTTOM FLANGE)

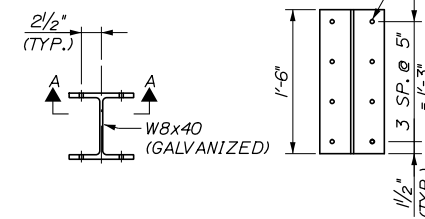
**FIELD SPLICE**  
 (INNER SPLICE PLATES NOT SHOWN FOR CLARITY)  
 1" = 1'-0"



**DETAIL A**  
 (ABUTMENT 2 SHOWN, ABUTMENT 1 AND PIER LOCATIONS SIMILAR)  
 (OMIT BENT PLATE ON FASCIA SIDE OF GIRDERS 1 AND 4)  
 1" = 1'-0"



**SHEAR CONNECTOR DETAIL**  
 N.T.S.



SIGN SUPPORT  
 (4 REQUIRED)

SECTION A-A

**SIGN SUPPORT DETAIL**  
 1" = 1'-0"

BRIDGE CONTRACTOR SHALL FIELD DRILL 3/16" DIAMETER HOLES IN GIRDER WEB USING SIGN SUPPORT BRACKET AS A TEMPLATE (TYP.)

STRUCTURAL STEEL, INCLUDING DIAPHRAGMS, BRIDGE DRAINS, AND CONNECTIONS WILL BE FABRICATED AS PART OF A SEPARATE CONTRACT AND PROVIDED TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF THE STRUCTURAL STEEL. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROCURING AND INSTALLING THE SHEAR STUDS.

Filename: 060\_SteelDetails 1.dgn

|          |          |    |      |   |           |              |           |
|----------|----------|----|------|---|-----------|--------------|-----------|
| Scale:   |          |    |      | Designed by:                                    |           |              |           |
| AS NOTED |          |    |      | <b>HNTB</b>                                     |           |              |           |
| No.      | Revision | By | Date | CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |           |              |           |
|          |          |    |      | By  | Date      | By           | Date      |
|          |          |    |      | Designed  | IJM 01\22 | Checked      | BRG 01\22 |
|          |          |    |      | Drawn   | PEB 01\22 | In Charge of | TRC 01\22 |

|   |  |  |  |
|---|--|--|--|
| HNTB CORPORATION<br>82 Running Hill Road, Suite 201<br>South Portland, ME 04106<br>TEL (207) 774-5155<br>FAX (207) 228-0909 |  |  |  |
| MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.   |  |  |  |

**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

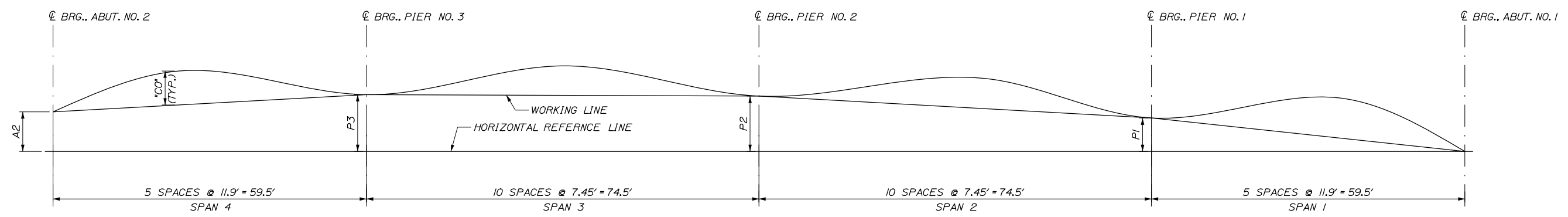
**SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS**

**STEEL DETAILS I**

|                    |          |
|--------------------|----------|
| SHEET NUMBER: S-19 |          |
| CONTRACT: 2022.06  | 60 OF 81 |

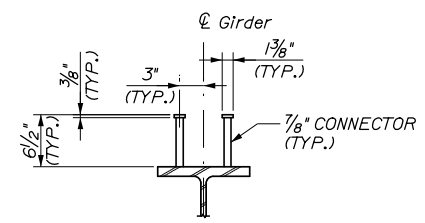
STRUCTURAL STEEL, INCLUDING DIAPHRAGMS, BRIDGE DRAINS, AND CONNECTIONS WILL BE FABRICATED AS PART OF A SEPARATE CONTRACT AND PROVIDED TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE ERECTION OF THE STRUCTURAL STEEL. THE CONTRACTOR IS ALSO RESPONSIBLE FOR PROCURING AND INSTALLING THE SHEAR STUDS.

DIRECTION OF STATIONING

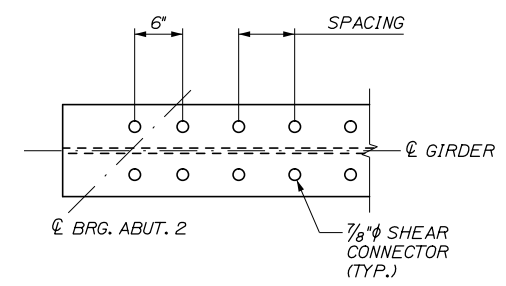


NOTE: THE ROLLED SHAPE OPTION SHALL MEET THE TABULATED CAMBER ORDINATES AT QUARTER POINTS.

CAMBER DIAGRAM  
NOT TO SCALE



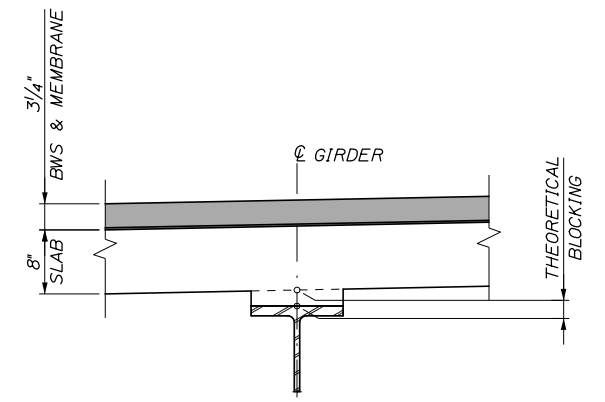
SHEAR CONNECTOR DETAIL  
1" = 1'-0"



SHEAR CONNECTOR PLAN  
(ABUTEMENTS 2 SHOWN, ABUTMENT 1 SIMILAR)  
(2 STUDS PER ROW)  
1" = 1'-0"

| GIRDER | "A2"  | "P3"  | "P2"  | "P1"  |
|--------|-------|-------|-------|-------|
| G1     | 24.53 | 29.48 | 27.32 | 15.85 |
| G2     | 20.93 | 26.69 | 25.54 | 15.06 |
| G3     | 17.33 | 23.89 | 23.72 | 14.26 |
| G4     | 13.74 | 21.10 | 21.94 | 13.46 |

**BLOCKING NOTES:**  
1. PRIOR TO PROFILING THE GIRDERS, THE CONTRACTOR SHALL HAVE LOWERED THE GIRDERS TO THEIR FINAL ELEVATIONS AND INSTALLED ALL NECESSARY DIAPHRAGMS AND/OR TEMPORARY BRACES NECESSARY TO HOLD THE GIRDERS IN THEIR FINAL PLUMB CONDITION.  
2. THE CONTRACTOR SHALL INSTALL THE PROTECTIVE SHIELDING AND ACCEPTABLE SAFETY LINES OR SHIELDING PRIOR TO PROFILING THE GIRDERS.



BLOCKING DETAIL  
THEORETICAL BLOCKING = 2" AT BRG. LOCATIONS  
(DO NOT USE THEORETICAL BLOCKING TO SET FORMS)  
1" = 1'-0"

| GIRDER | TABLE OF CAMBER ORDINATES "CO" (INCHES) |       |       |       |       |                |       |       |       |       |       |       |       |       |       |                |       |       |       |       |       |       |       |       |       |                |       |       |       |       |                 |
|--------|---|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-----------------|
|        | CL BRG. ABUT. 2                         | 0.2xL | 0.4xL | 0.6xL | 0.8xL | CL BRG. PIER 3 | 0.1xL | 0.2xL | 0.3xL | 0.4xL | 0.5xL | 0.6xL | 0.7xL | 0.8xL | 0.9xL | CL BRG. PIER 2 | 0.1xL | 0.2xL | 0.3xL | 0.4xL | 0.5xL | 0.6xL | 0.7xL | 0.8xL | 0.9xL | CL BRG. PIER 1 | 0.2xL | 0.4xL | 0.6xL | 0.8xL | CL BRG. ABUT. 1 |
| G1     | 0.00                                    | 0.81  | 1.21  | 1.12  | 0.62  | 0.00           | 0.54  | 1.07  | 1.49  | 1.78  | 1.86  | 1.75  | 1.46  | 1.01  | 0.50  | 0.00           | 0.51  | 1.05  | 1.47  | 1.77  | 1.86  | 1.75  | 1.47  | 1.02  | 0.51  | 0.00           | 0.65  | 1.18  | 1.29  | 0.85  | 0.00            |
| G2     | 0.00                                    | 0.86  | 1.28  | 1.19  | 0.65  | 0.00           | 0.54  | 1.06  | 1.52  | 1.80  | 1.90  | 1.78  | 1.50  | 1.03  | 0.51  | 0.00           | 0.51  | 1.04  | 1.50  | 1.79  | 1.89  | 1.79  | 1.50  | 1.05  | 0.51  | 0.00           | 0.65  | 1.19  | 1.28  | 0.86  | 0.00            |
| G3     | 0.00                                    | 0.86  | 1.27  | 1.19  | 0.65  | 0.00           | 0.51  | 1.05  | 1.50  | 1.78  | 1.90  | 1.79  | 1.51  | 1.05  | 0.51  | 0.00           | 0.51  | 1.03  | 1.50  | 1.80  | 1.89  | 1.79  | 1.52  | 1.06  | 0.53  | 0.00           | 0.64  | 1.18  | 1.27  | 0.86  | 0.00            |
| G4     | 0.00                                    | 0.84  | 1.28  | 1.18  | 0.66  | 0.00           | 0.52  | 1.03  | 1.46  | 1.75  | 1.85  | 1.76  | 1.46  | 1.06  | 0.52  | 0.00           | 0.50  | 1.01  | 1.45  | 1.74  | 1.86  | 1.77  | 1.48  | 1.05  | 0.53  | 0.00           | 0.62  | 1.11  | 1.21  | 0.81  | 0.00            |

|              | CL BRG. ABUT. 2 | 0.2xL | 0.4xL | 0.6xL | 0.8xL | CL BRG. PIER 3 | 0.1xL | 0.2xL | 0.3xL | 0.4xL | 0.5xL | 0.6xL | 0.7xL | 0.8xL | 0.9xL | CL BRG. PIER 2 | 0.1xL | 0.2xL | 0.3xL | 0.4xL | 0.5xL | 0.6xL | 0.7xL | 0.8xL | 0.9xL | CL BRG. PIER 1 | 0.2xL | 0.4xL | 0.6xL | 0.8xL | CL BRG. ABUT. 1 |
|--------------|-----------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-----------------|
| STEEL DL     | 0.00            | -0.07 | -0.10 | -0.08 | -0.02 | 0.00           | -0.01 | -0.05 | -0.08 | -0.11 | -0.12 | -0.11 | -0.08 | -0.05 | -0.01 | 0.00           | -0.01 | -0.05 | -0.08 | -0.11 | -0.12 | -0.11 | -0.08 | -0.05 | -0.01 | 0.00           | -0.02 | -0.08 | -0.10 | -0.07 | 0.00            |
| CONC. DL     | 0.00            | -0.25 | -0.37 | -0.30 | -0.11 | 0.00           | -0.07 | -0.19 | -0.34 | -0.43 | -0.46 | -0.42 | -0.32 | -0.18 | -0.06 | 0.00           | -0.06 | -0.19 | -0.32 | -0.42 | -0.46 | -0.42 | -0.32 | -0.19 | -0.06 | 0.00           | -0.12 | -0.31 | -0.38 | -0.25 | 0.00            |
| SUPERIMP. DL | 0.00            | -0.06 | -0.10 | -0.08 | -0.04 | 0.00           | -0.02 | -0.07 | -0.12 | -0.14 | -0.16 | -0.14 | -0.12 | -0.06 | -0.02 | 0.00           | -0.02 | -0.06 | -0.12 | -0.14 | -0.16 | -0.14 | -0.12 | -0.07 | -0.02 | 0.00           | -0.04 | -0.08 | -0.10 | -0.06 | 0.00            |
| TOTAL DL     | 0.00            | -0.38 | -0.56 | -0.47 | -0.17 | 0.00           | -0.11 | -0.31 | -0.54 | -0.68 | -0.73 | -0.67 | -0.53 | -0.29 | -0.10 | 0.00           | -0.10 | -0.30 | -0.53 | -0.67 | -0.73 | -0.67 | -0.53 | -0.31 | -0.10 | 0.00           | -0.18 | -0.48 | -0.58 | -0.38 | 0.00            |

| GIRDER | BOTTOM OF SLAB ELEVATIONS AT BLOCKING POINTS |        |        |        |        |                |        |        |        |        |        |        |        |        |        |                |        |        |        |        |        |        |        |        |        |                |        |        |        |        |                 |
|--------|--|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|-----------------|
|        | CL BRG. ABUT. 2                              | 0.2xL  | 0.4xL  | 0.6xL  | 0.8xL  | CL BRG. PIER 3 | 0.1xL  | 0.2xL  | 0.3xL  | 0.4xL  | 0.5xL  | 0.6xL  | 0.7xL  | 0.8xL  | 0.9xL  | CL BRG. PIER 2 | 0.1xL  | 0.2xL  | 0.3xL  | 0.4xL  | 0.5xL  | 0.6xL  | 0.7xL  | 0.8xL  | 0.9xL  | CL BRG. PIER 1 | 0.2xL  | 0.4xL  | 0.6xL  | 0.8xL  | CL BRG. ABUT. 1 |
| G1     | 279.45                                       | 279.60 | 279.72 | 279.80 | 279.84 | 279.87         | 279.89 | 279.92 | 279.94 | 279.94 | 279.93 | 279.91 | 279.86 | 279.81 | 279.75 | 279.69         | 279.63 | 279.58 | 279.52 | 279.45 | 279.36 | 279.26 | 279.14 | 279.01 | 278.87 | 278.73         | 278.52 | 278.30 | 278.05 | 277.75 | 277.41          |
| G2     | 279.52                                       | 279.69 | 279.82 | 279.91 | 279.96 | 280.00         | 280.04 | 280.07 | 280.10 | 280.11 | 280.11 | 280.09 | 280.06 | 280.01 | 279.96 | 279.90         | 279.86 | 279.82 | 279.77 | 279.70 | 279.63 | 279.53 | 279.42 | 279.29 | 279.16 | 279.03         | 278.83 | 278.63 | 278.39 | 278.10 | 277.78          |
| G3     | 279.42                                       | 279.60 | 279.74 | 279.85 | 279.91 | 279.97         | 280.01 | 280.05 | 280.09 | 280.11 | 280.12 | 280.11 | 280.08 | 280.04 | 280.00 | 279.95         | 279.92 | 279.88 | 279.84 | 279.79 | 279.71 | 279.63 | 279.53 | 279.41 | 279.29 | 279.16         | 278.98 | 278.79 | 278.56 | 278.28 | 277.97          |
| G4     | 279.15                                       | 279.34 | 279.50 | 279.61 | 279.69 | 279.76         | 279.81 | 279.86 | 279.90 | 279.93 | 279.95 | 279.95 | 279.93 | 279.90 | 279.87 | 279.83         | 279.80 | 279.77 | 279.74 | 279.69 | 279.63 | 279.55 | 279.46 | 279.35 | 279.24 | 279.12         | 278.95 | 278.77 | 278.55 | 278.29 | 278.00          |

Date: 2/7/2022

Filename: 061\_SteelDetails 2.dgn

|                 |          |    |      |
|-----------------|----------|----|------|
| Scale: AS NOTED |          |    |      |
| No.             | Revision | By | Date |
|                 |          |    |      |
|                 |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          |           |              |           |
|----------|-----------|--------------|-----------|
| By       | Date      | By           | Date      |
| Designed | IJM 01\22 | Checked      | BRG 01\22 |
| Drawn    | PEB 01\22 | In Charge of | TRC 01\22 |

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MAINE TURNPIKE

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

STEEL DETAILS II

SHEET NUMBER: S-20

CONTRACT: 2022.06

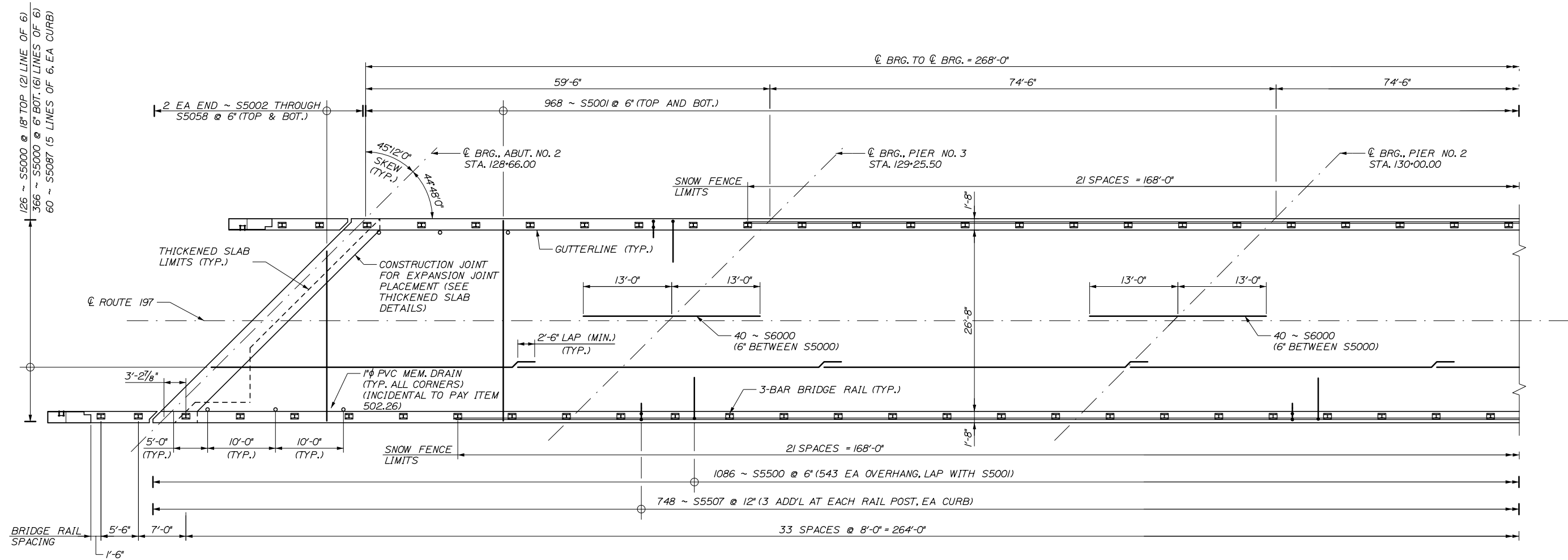
61 OF 81



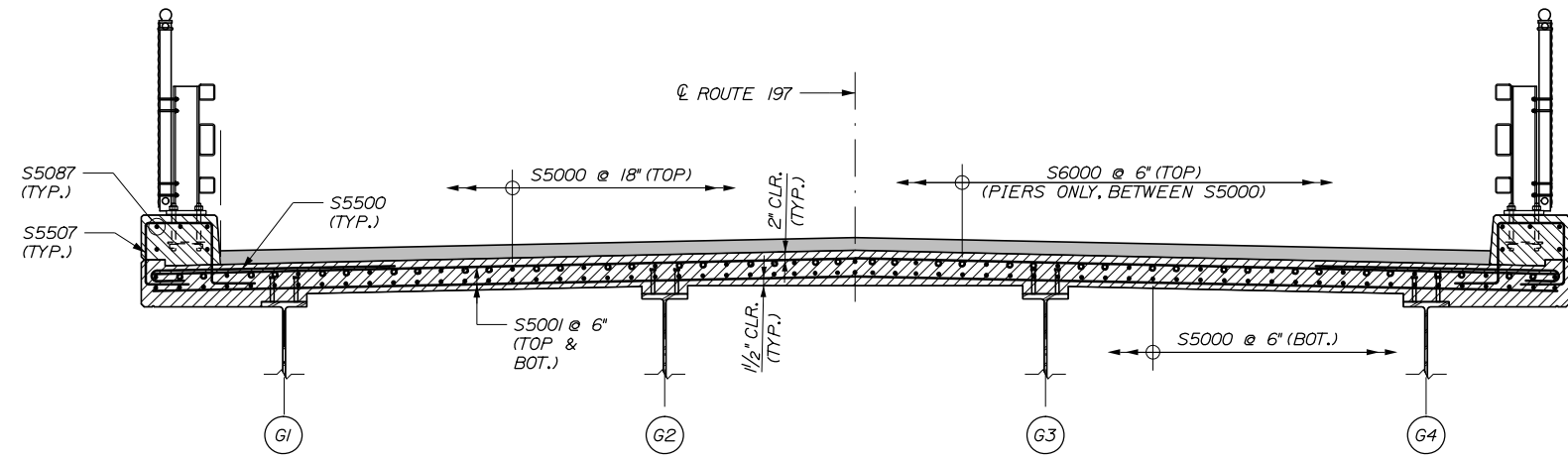


Date: 2/7/2022

Filename: 064\_Superstructure Plan 1.dgn



PLAN  
1/8" = 1'-0"



REINFORCING SECTION  
(LOOKING UPSTATION)  
1/2" = 1'-0"

|          |          |    |      |   |           |              |           |
|----------|----------|----|------|---|-----------|--------------|-----------|
| Scale:   |          |    |      | Designed by:                                    |           |              |           |
| AS NOTED |          |    |      |   |           |              |           |
| No.      | Revision | By | Date |   |           |              |           |
|          |          |    |      | CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |           |              |           |
|          |          |    |      | By  | Date      | By           | Date      |
|          |          |    |      | Designed  | NTB 01\22 | Checked      | KEB 01\22 |
|          |          |    |      | Drawn   | ERB 01\22 | In Charge of | TRC 01\22 |

|   |  |  |  |  |  |  |  |
|---|--|--|--|--|--|--|--|
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|   |  |  |  |  |  |  |  |
| MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.   |  |  |  |  |  |  |  |

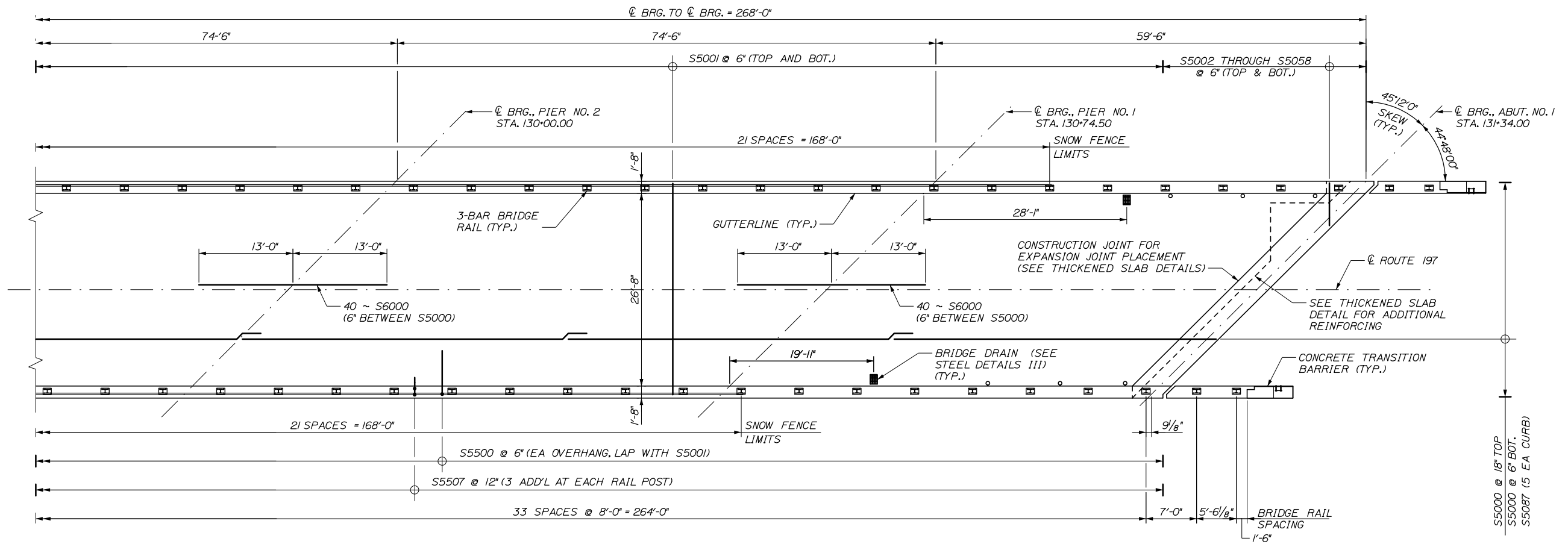
**THE GOLD STAR  
MEMORIAL HIGHWAY**

**SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
SUPERSTRUCTURE PLAN I**

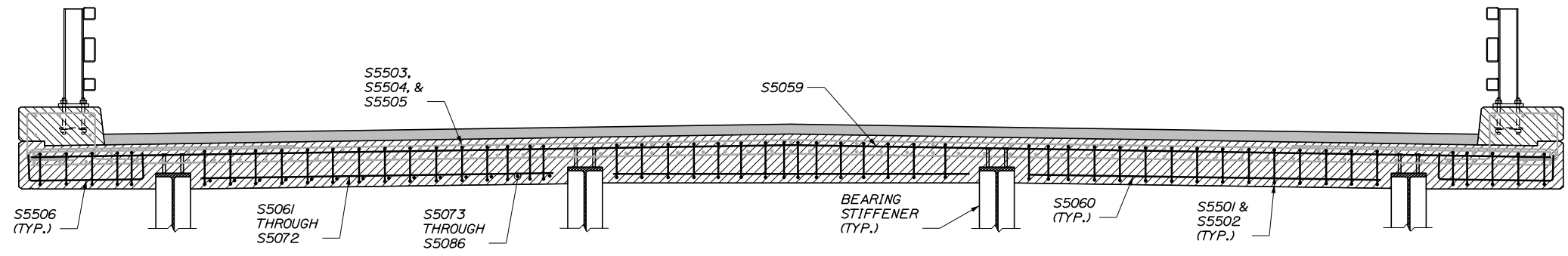
SHEET NUMBER: S-23  
 CONTRACT: 2022.06  
 64 OF 81



Date: 2/7/2022



PLAN  
1/8" = 1'-0"



END OF SLAB DETAIL  
(LOOKING UPSTATION TO FACE OF ABUT. 1 ALONG SKEW, ABUTMENT 2 OPPOSITE HAND)  
1/2" = 1'-0"

Filename: 065\_Superstructure Plan II.dgn

|          |          |    |      |
|----------|----------|----|------|
| Scale:   |          |    |      |
| AS NOTED |          |    |      |
| No.      | Revision | By | Date |
|          |          |    |      |
|          |          |    |      |

|   |     |       |              |     |       |
|---|-----|-------|--------------|-----|-------|
| Designed by:                                    |     |       |              |     |       |
| <b>HNTB</b>                                     |     |       |              |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |     |       |
|   | By  | Date  |              | By  | Date  |
| Designed  | NTB | 01\22 | Checked      | KEB | 01\22 |
| Drawn   | ERB | 01\22 | In Charge of | TRC | 01\22 |

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THE GOLD STAR  
MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS

SUPERSTRUCTURE PLAN II

SHEET NUMBER: S-24  
CONTRACT: 2022.06  
65 OF 81

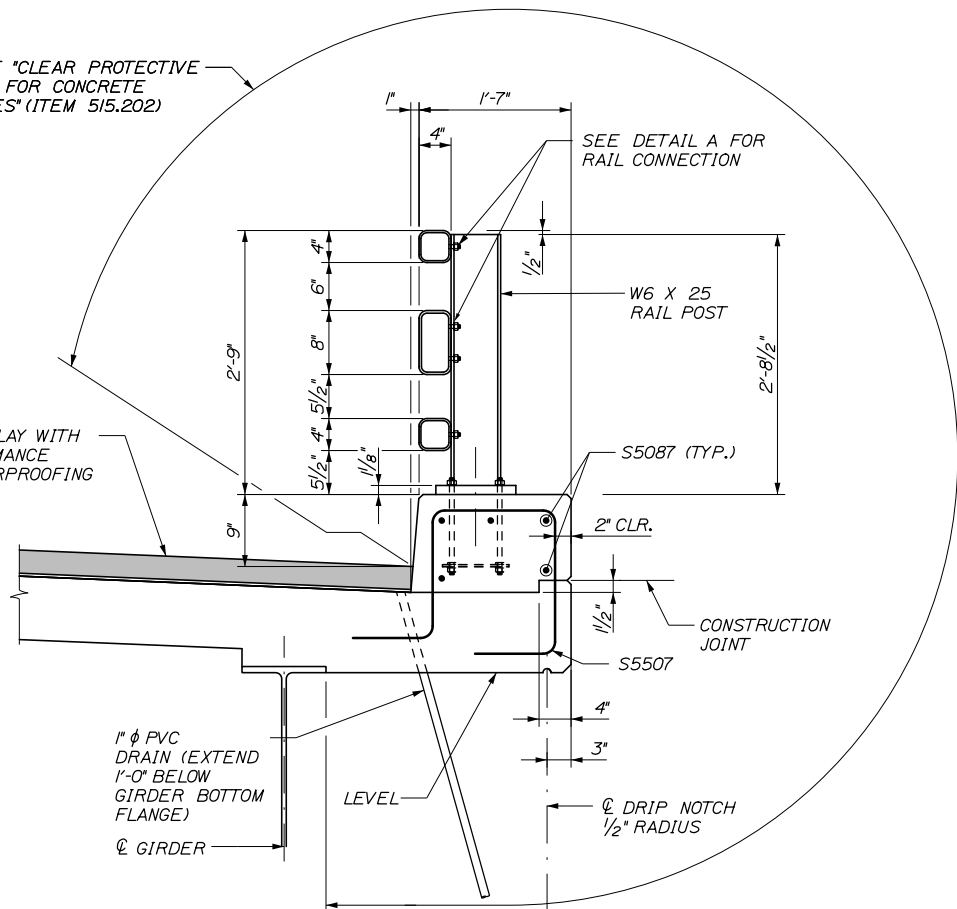


Date: 2/7/2022

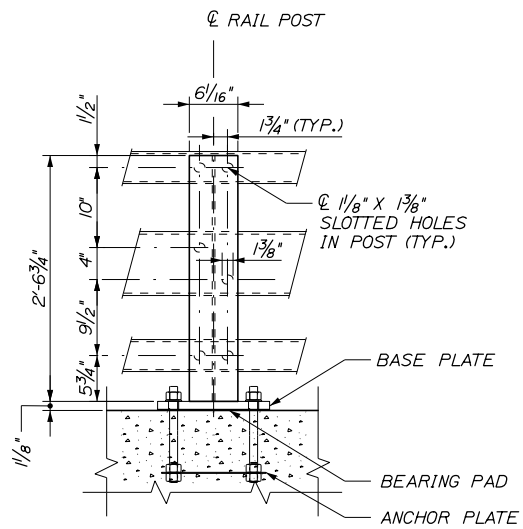
Filename: 067\_Superstructure Details II.dgn

LIMIT OF "CLEAR PROTECTIVE COATING FOR CONCRETE SURFACES" (ITEM 515.202)

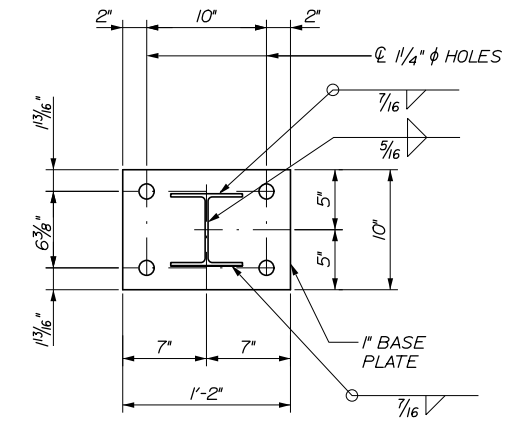
3" BIT. CONC. OVERLAY WITH 1/4" HIGH PERFORMANCE MEMBRANE WATERPROOFING



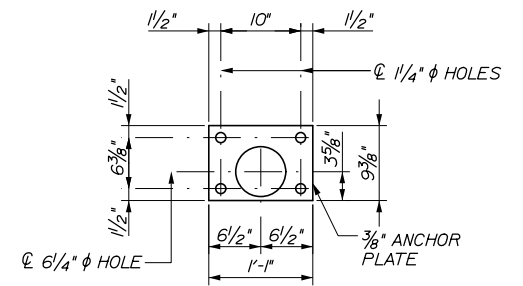
**BARRIER DETAIL**  
1" = 1'-0"



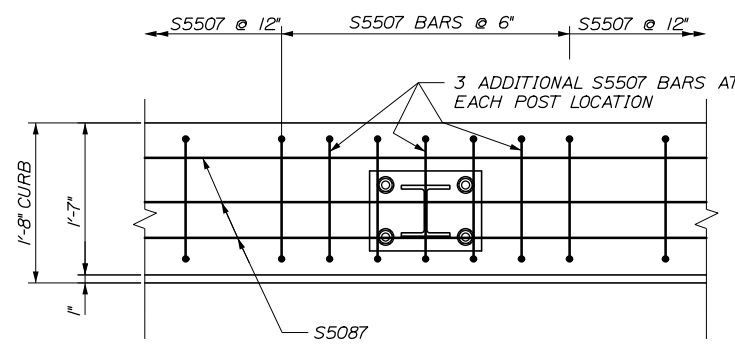
**BACK ELEVATION VIEW**  
1" = 1'-0"



**POST & BASE PLATE PLAN**  
1/2" = 1'-0"

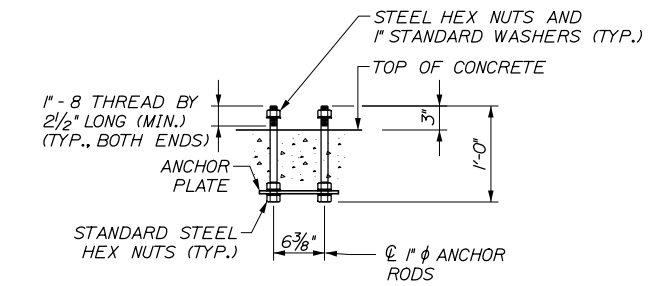


**ANCHOR PLATE PLAN**  
1" = 1'-0"

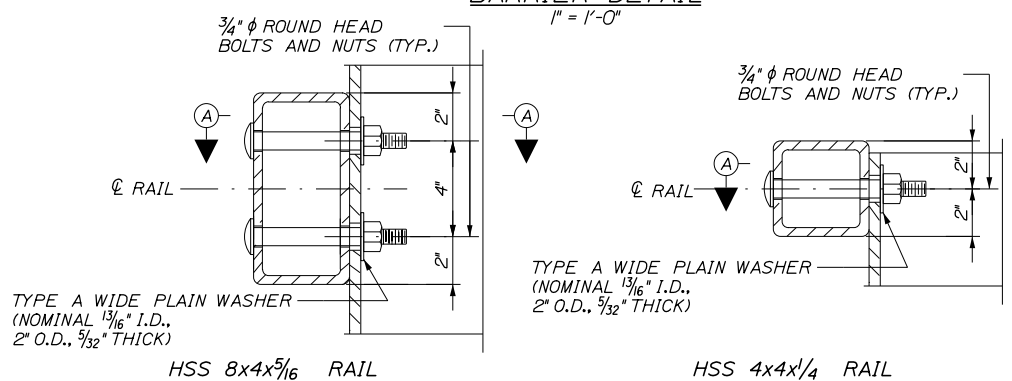


**BRIDGE RAIL MATERIAL NOTES: CURB REINFORCING PLAN**  
1" = 1'-0"

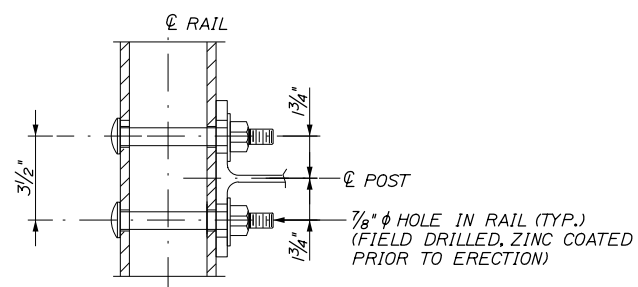
- STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, STRUCTURAL TUBING. RAIL TUBING SHALL MEET THE LONGITUDINAL CHARPY V-NOTCH REQUIREMENTS OF 15 FT. LBS. AT 0 DEGREES F. FOR ASTM A500, GRADE B, THE TEST SAMPLES SHALL BE TAKEN AFTER FORMING THE TUBES.
- RAIL POSTS AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A572 GRADE 50, EXCEPT ANCHOR PLATES MAY BE ASTM A36.
- BOLTS AND MATCHING NUTS FOR RAIL-TO-POST ATTACHMENT SHALL CONFORM TO ASTM A325 OR A449. ALL OTHER BOLTS AND NUTS SHALL CONFORM TO ASTM 307 AND ASTM 563 GRADE A RESPECTIVELY OR BETTER, EXCEPT ASTM A307 NUTS MAY BE USED ON THE BOTTOM OF ANCHOR ASSEMBLY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN WIDE WASHERS AND SHALL MEET DIMENSIONAL REQUIREMENTS OF A.N.S.I. B18.22. ANCHOR RODS SHALL CONFORM TO ASTM F1554, Gr. 105.
- ALL STEEL COMPONENTS (EXCEPT STAINLESS) SHALL BE GALVANIZED AFTER FABRICATION IN CONFORMANCE TO AASHTO M232 (ASTM A153) AND AASHTO M111 (ASTM A123). THE GALVANIZING KETTLE SHALL HAVE 0.05 TO 0.09 PERCENT NICKEL GALVANIZING SURFACES SHALL HAVE A UNIFORM APPEARANCE AND GALVANIZING MATERIAL SHALL BE PROPERLY STORED.
- PREFORMED BEARING PADS (1/8" THICK) SHALL CONFORM TO AASHTO M251.
- SEE MAINEDOT STANDARD DETAIL SECTION 507 FOR RAIL BAR EXPANSION JOINT AND SPLICE DETAILS.



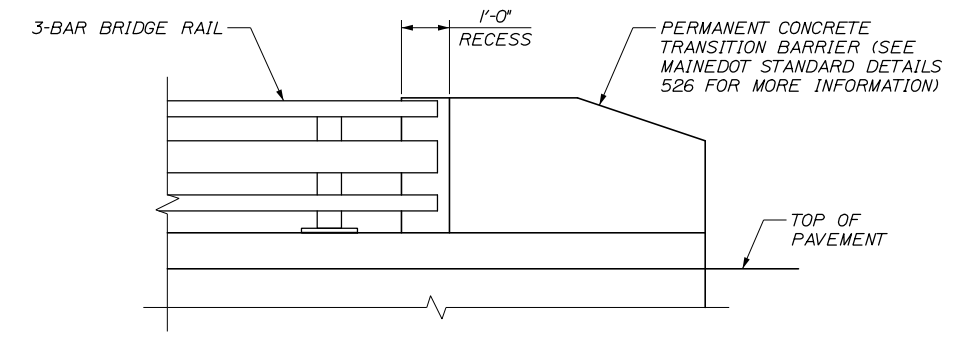
**RAIL POST ANCHORAGE**  
1" = 1'-0"



**DETAIL A RAIL CONNECTION**  
3" = 1'-0"



**SECTION A-A**  
3" = 1'-0"



**PERMANENT CONCRETE TRANSITION BARRIER ELEVATION**  
1/2" = 1'-0"

|          |          |    |      |   |           |              |           |
|----------|----------|----|------|---|-----------|--------------|-----------|
| Scale:   |          |    |      | Designed by:                                    |           |              |           |
| AS NOTED |          |    |      |   |           |              |           |
| No.      | Revision | By | Date |   |           |              |           |
|          |          |    |      | CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |           |              |           |
|          |          |    |      | By  | Date      | By           | Date      |
|          |          |    |      | Designed  | NTB 11/21 | Checked      | KEB 11/21 |
|          |          |    |      | Drawn   | ERB 11/21 | In Charge of | TRC 11/21 |

|   |  |  |  |
|---|--|--|--|
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| FAX (207) 228-0909                          |  |  |  |
| MTA PROJECT MANAGER: Kristi Van Ooyen, P.E. |  |  |  |

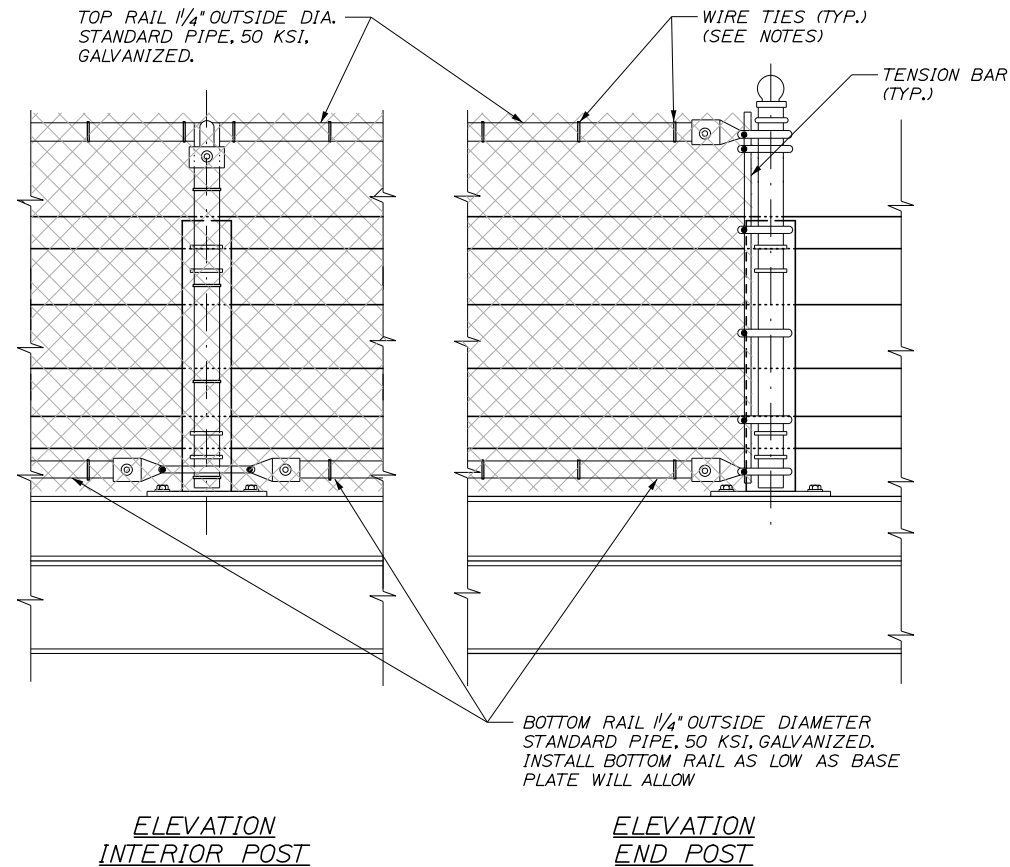
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**THE GOLD STAR MEMORIAL HIGHWAY**

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
SUPERSTRUCTURE DETAILS II

SHEET NUMBER: S-26  
CONTRACT: 2022.06  
67 OF 81

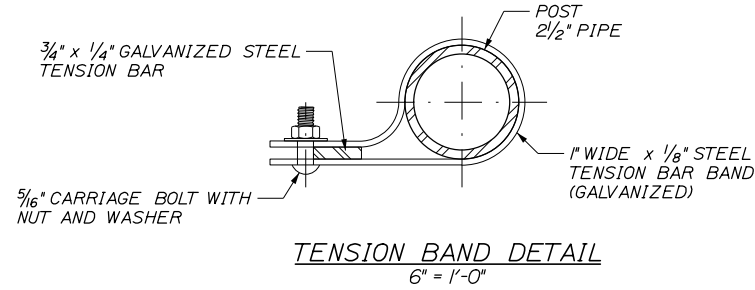
Date: 2/7/2022



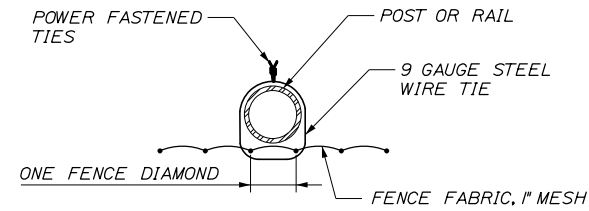
ELEVATION INTERIOR POST

ELEVATION END POST

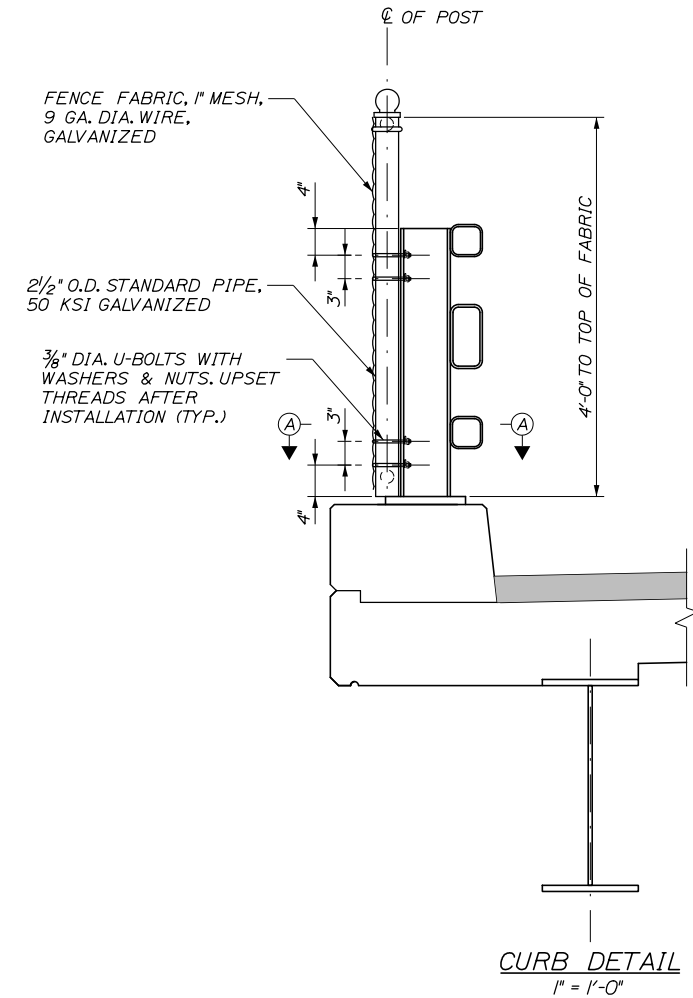
SNOW FENCE POST ATTACHMENT TO TWO-RAIL RAILING  
1" = 1'-0"



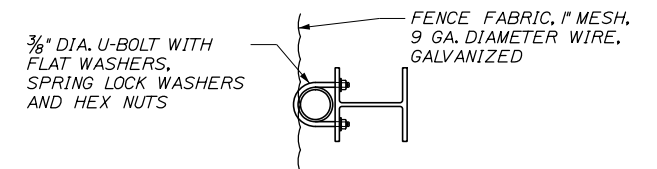
TENSION BAND DETAIL  
6" = 1'-0"



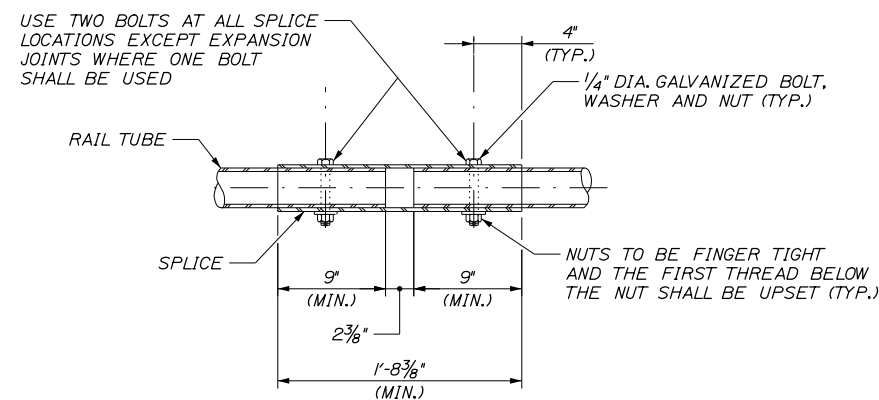
POWER FASTENED TIE  
NOT TO SCALE



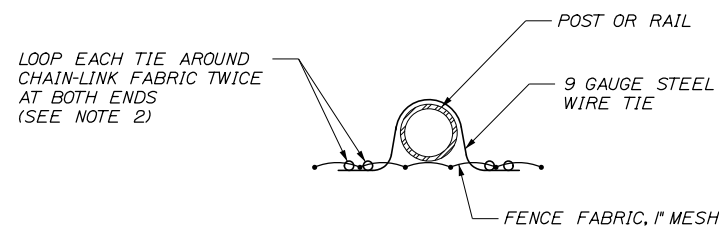
CURB DETAIL  
1" = 1'-0"



SECTION A-A  
1/2" = 1'-0"



TYPICAL RAIL SPLICE DETAIL (TOP & BOTTOM RAIL)  
1/2" = 1'-0"



DOUBLE PIGTAILED TIE - ALTERNATE  
NOT TO SCALE

**NOTES:**

1. ROUND WIRE TIES SHALL BE 9 GAUGE ZINC-COATED STEEL PREFORMED TO THE RADIUS OF THE POST AND POWER-FASTENED TO WRAP 360 DEGREES AROUND THE POST AND ONE COMPLETE DIAMOND OF THE CHAIN-LINK FENCE. THE TWO ENDS SHALL BE TWISTED TOGETHER IN A CLOSE HELIX OF 1/2 MACHINE TURNS (3 FULL TWISTS) TIGHTLY AROUND THE POST AND CHAIN-LINK FABRIC. SPACE TIES @ 6" O.C. TO BOTTOM RAIL AND @ 12" O.C. TO ALL POSTS AND OTHER RAILS. TWISTED ENDS SHALL BE BENT DOWN UPON COMPLETION.
2. ALTERNATIVELY, WIRE TIES MAY BE STANDARD ROUND 9 GAUGE ZINC-COATED STEEL. ALL TIES SHALL BE WRAPPED AROUND CHAIN-LINK FABRIC TWICE (DOUBLE PIGTAILED) AT BOTH ENDS. SPACE TIES @ 6" O.C. TO BOTTOM RAIL AND @ 12" O.C. TO ALL POSTS AND OTHER RAILS.
3. ALL BOLTS AND NUTS SHALL BE STEEL CONFORMING TO ASTM A 307 AND ASTM A 563 GRADE A RESPECTIVELY. WASHERS SHALL BE HARDENED STEEL COMMERCIAL TYPE A PLAIN AND SHALL MEET THE DIMENSIONAL REQUIREMENTS OF ANSI B18.22. ALL BOLTS, NUTS AND WASHERS SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M III (ASTM A 123) OR AASHTO M 232 (ASTM A 153) AS APPLICABLE.
4. POST CAPS SHALL BE SECURELY ATTACHED TO POSTS.
5. FENCE FABRIC SHALL EXTEND TO TOP OF CURB.
6. FOR SNOW FENCE LIMITS SEE SUPERSTRUCTURE PLAN.

Filename: 068\_Snow Fence Details.dgn

|          |          |    |      |
|----------|----------|----|------|
| Scale:   |          |    |      |
| AS NOTED |          |    |      |
| No.      | Revision | By | Date |
|          |          |    |      |
|          |          |    |      |
|          |          |    |      |

|   |     |       |  |     |       |
|---|-----|-------|--|-----|-------|
| Designed by:                                    |     |       |  |     |       |
| <b>HNTB</b>                                     |     |       |  |     |       |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |  |     |       |
|   | By  | Date  |  | By  | Date  |
|   | NTB | 11/21 |  | BRG | 11/21 |
|   | ERB | 11/21 |  | TRC | 11/21 |

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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
SNOW FENCE DETAILS

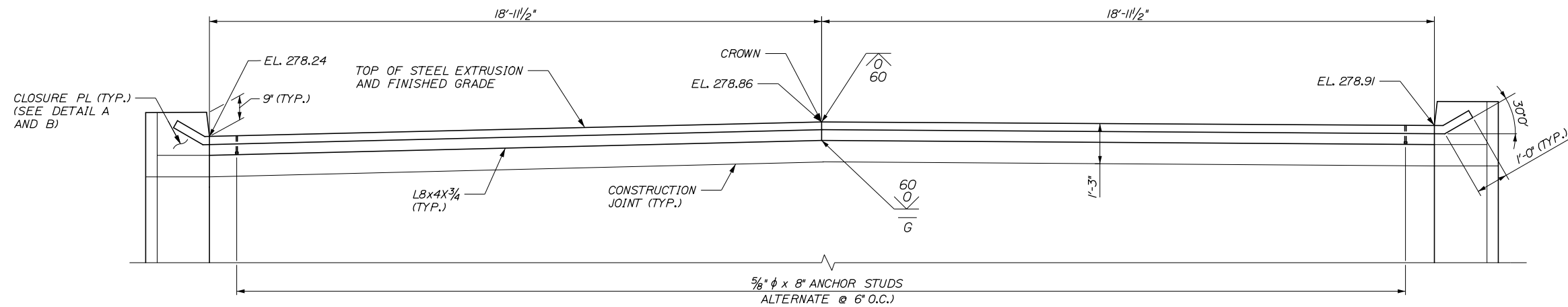
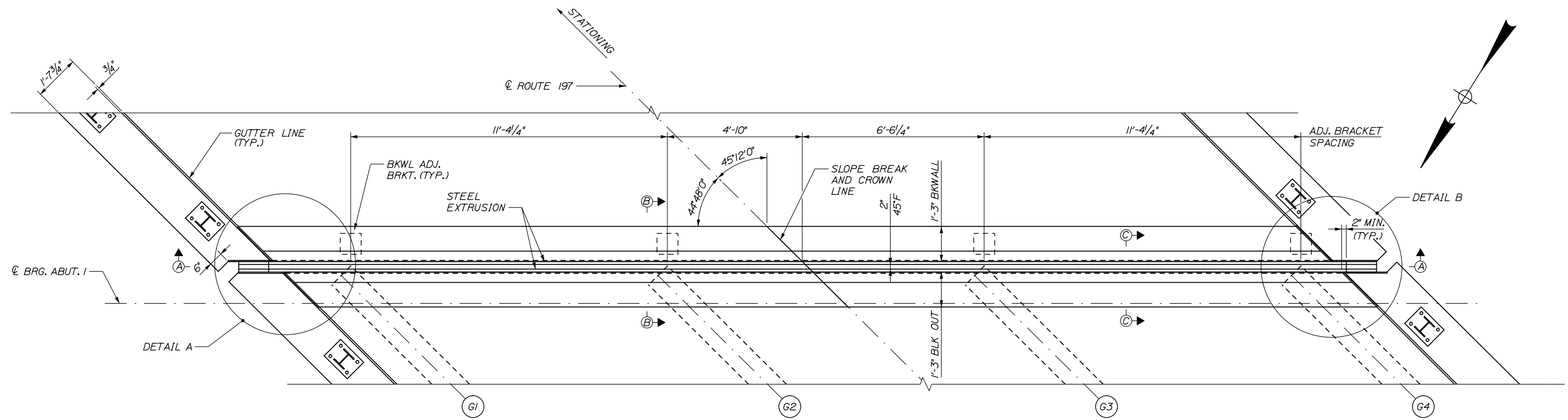
CONTRACT: 2022.06

SHEET NUMBER: S-27

68 OF 81



Date: 2/7/2022



EXPANSION JOINTS WILL BE FABRICATED AS PART OF A SEPARATE CONTRACT AND PROVIDED TO THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF THE EXPANSION JOINTS.

Filename: 070\_Expansion Joint Details 2.dgn

Scale: 1/2" = 1'-0"

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | IJM | 01\22 | Checked      | BRG | 01\22 |
| Drawn    | PEB | 01\22 | In Charge of | TRC | 01\22 |

HNTB CORPORATION  
82 Running Hill Road, Suite 201  
South Portland, ME 04106  
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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

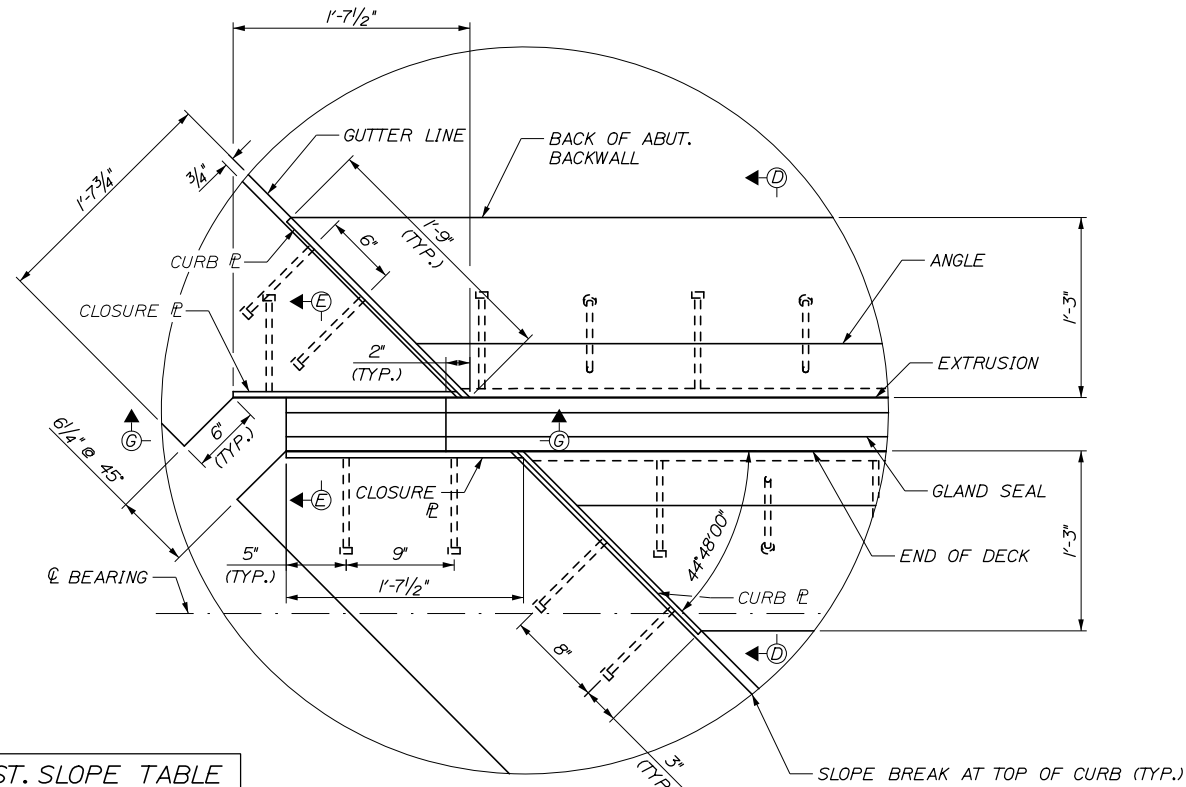
SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
EXPANSION JOINT DETAILS II

SHEET NUMBER: S-29  
70 OF 81

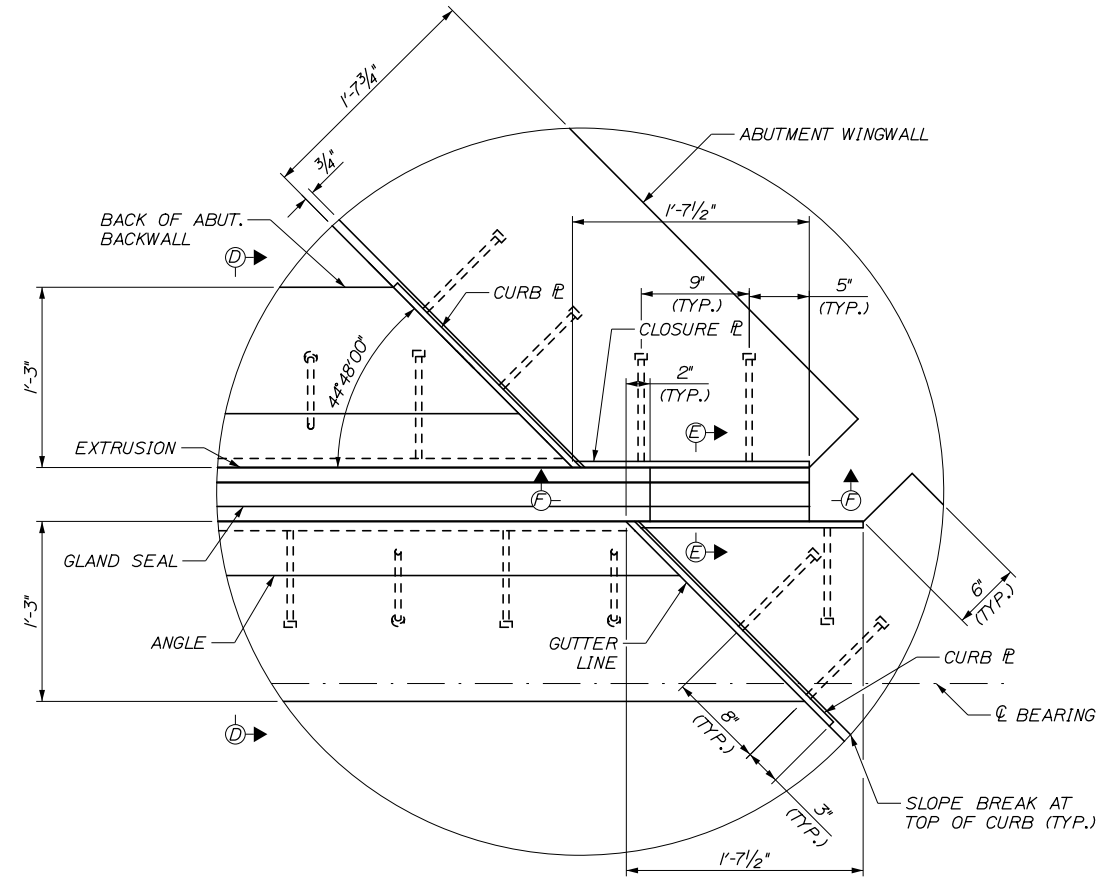
CONTRACT: 2022.06



Date: 2/7/2022



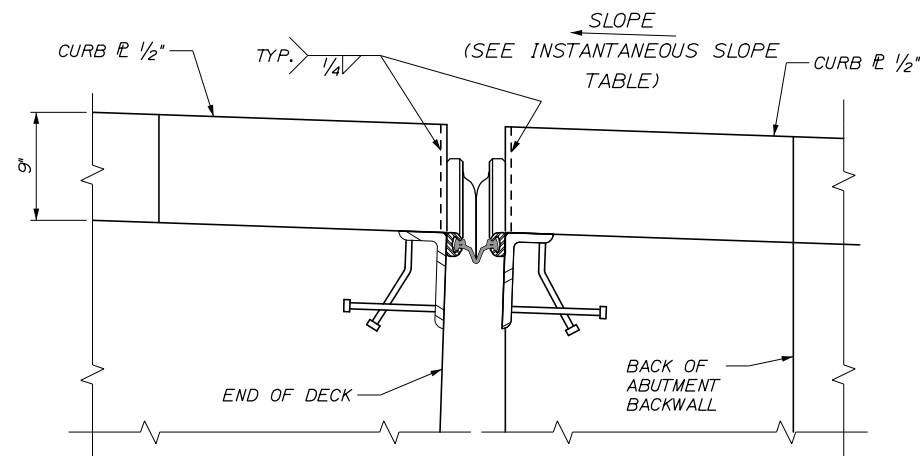
**DETAIL A**  
(ADJUSTMENTS BRACKETS NOT SHOWN)



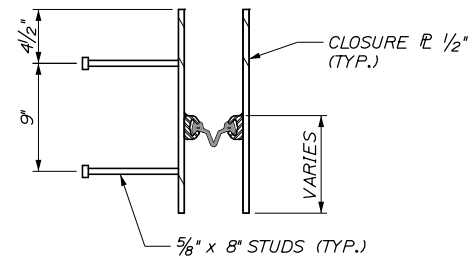
**DETAIL B**  
(ADJUSTMENTS BRACKETS NOT SHOWN)

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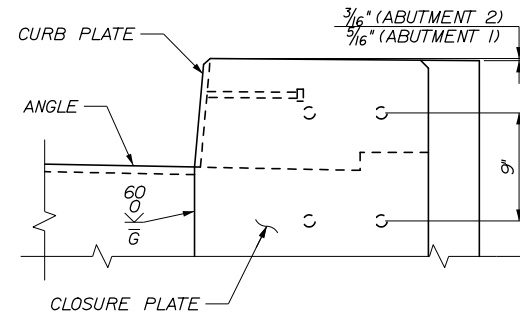
| INST. SLOPE TABLE |       |
|-------------------|-------|
| LOCATION          | SLOPE |
| ABUT. 2 LEFT      | +1.1% |
| ABUT. 2 RIGHT     | +1.5% |
| ABUT. 1 LEFT      | +2.7% |
| ABUT. 1 RIGHT     | +2.3% |



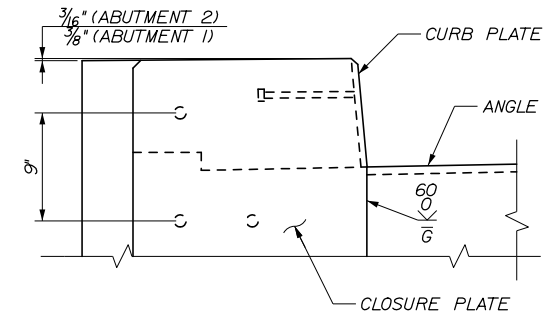
**SECTION D-D**  
(SEE SECTION B-B FOR ROADWAY GRADES AT FACE OF CURB)



**SECTION E-E**



**SECTION F-F**



**SECTION G-G**

Filename: 072\_Expansion Joint Details 4.dgn

Scale: 1/2" = 1'-0"

| No. | Revision | By | Date |
|-----|----------|----|------|
|     |          |    |      |
|     |          |    |      |
|     |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          | By  | Date  |              | By  | Date  |
|----------|-----|-------|--------------|-----|-------|
| Designed | IJM | 01\22 | Checked      | BRG | 01\22 |
| Drawn    | PEB | 01\22 | In Charge of | TRC | 01\22 |

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
ROUTE 197 UNDERPASS  
EXPANSION JOINT DETAILS IV

SHEET NUMBER: S-31  
CONTRACT: 2022.06  
72 OF 81

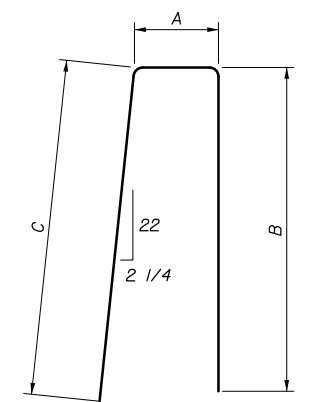
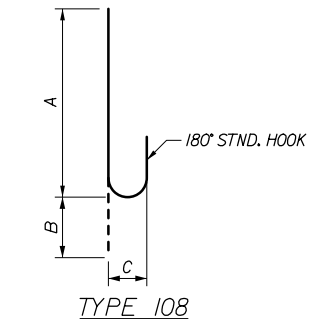


Route 197 Bridge - Litchfield

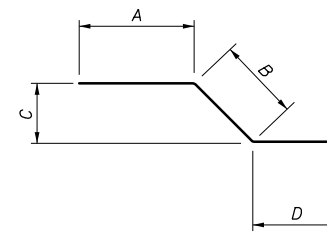
| MARK                 | SIZE | NO. | LENGTH    | TYPE | A      | B      | C      | D     | E | REMARKS                                   |
|----------------------|------|-----|-----------|------|--------|--------|--------|-------|---|---|
| <b>ABUTMENT NO.1</b> |      |     |           |      |        |        |        |       |   |   |
| A400                 | 4    | 80  | 3' - 6"   | 129  | 6"     | 1'-6"  |        |       |   | Anchor Rod U-bar                          |
| A500                 | 5    | 10  | 38' - 3"  | STR  |        |        |        |       |   | Backwall Longitudinal                     |
| A501                 | 5    | 15  | 40' - 3"  | STR  |        |        |        |       |   | Seat Longitudinal                         |
| A502                 | 5    | 3   | 30' - 4"  | STR  |        |        |        |       |   | Seat Longitudinal                         |
| A503                 | 5    | 106 | 4' - 0"   | STR  |        |        |        |       |   | Vertical Dowel                            |
| A504                 | 5    | 15  | 12' - 7"  | STR  |        |        |        |       |   | Wingwall Top Section Longitudinal         |
| A505                 | 5    | 7   | 9' - 2"   | STR  |        |        |        |       |   | Wingwall Bottom Vertical                  |
| A506                 | 5    | 8   | 6' - 0"   | STR  |        |        |        |       |   | Wingwall Middle Vertical                  |
| A507                 | 5    | 2   | 7' - 11"  | STR  |        |        |        |       |   | Wingwall Cantilever Horizontal            |
| A508                 | 5    | 2   | 10' - 5"  | STR  |        |        |        |       |   | Wingwall Cantilever Horizontal            |
| A509                 | 5    | 2   | 12' - 7"  | STR  |        |        |        |       |   | Wingwall Cantilever Horizontal            |
| A510                 | 5    | 17  | 3' - 2"   | STR  |        |        |        |       |   | Wingwall Vertical Dowel                   |
| A511                 | 5    | 2   | 10' - 4"  | STR  |        |        |        |       |   | Wingwall Acute Long.                      |
| A512                 | 5    | 2   | 12' - 6"  | STR  |        |        |        |       |   | Wingwall Acute Long.                      |
| A513                 | 5    | 2   | 14' - 9"  | STR  |        |        |        |       |   | Wingwall Acute Long.                      |
| A514                 | 5    | 15  | 15' - 11" | STR  |        |        |        |       |   | Wingwall Acute Long.                      |
| A515                 | 5    | 2   | 3' - 1"   | STR  |        |        |        |       |   | Wingwall Acute Long. Bottom Bumpout       |
| A516                 | 5    | 10  | 9' - 9"   | STR  |        |        |        |       |   | Wingwall Acute Trans. Front Face          |
| A517                 | 5    | 9   | 4' - 9"   | STR  |        |        |        |       |   | Wingwall Acute Trans. Back Face           |
| A530                 | 5    | 8   | 7' - 2"   | 118  | 1'-7"  | 5'-7"  |        |       |   | Wingwall Acute Front Face Long.           |
| A531                 | 5    | 4   | 10' - 11" | 119  | 7'-5"  | 3'-6"  | 2'-6"  |       |   | Wingwall Acute Bumpout Long.              |
| A532                 | 5    | 3   | 9' - 0"   | 119  | 0'-10" | 8'-2"  | 3'-4"  |       |   | Wingwall Acute Long. Bottom               |
| A533                 | 5    | 2   | 4' - 1"   | 119  | 0'-10" | 3'-3"  | 1'-4"  |       |   | Wingwall Acute Long. Bottom               |
| A534                 | 5    | 1   | 5' - 8"   | 119  | 1'-11" | 3'-9"  | 2'-9"  |       |   | Wingwall Acute Long. Bottom Bumpout       |
| A535                 | 5    | 1   | 9' - 1"   | 118  | 8'-3"  | 0'-10" |        |       |   | Wingwall Acute Top Thickened Section      |
| A536                 | 5    | 10  | 7' - 2"   | 129  | 3'-0"  | 1'-2"  |        |       |   | Wingwall Acute Long. Back Face Stirrup    |
| A537                 | 5    | 2   | 8' - 8"   | 106  | 3'-0"  | 4'-1"  | 1'-2"  | 1'-7" |   | Wingwall Acute Long. Front Face Stirrup   |
| A538                 | 5    | 9   | 5' - 9"   | 118  | 3'-3"  | 2'-6"  |        |       |   | Wingwall Acute Trans. Back Bumpout        |
| A539                 | 5    | 9   | 3' - 10"  | 118  | 2'-3"  | 1'-7"  |        |       |   | Wingwall Acute Trans. Front Doweled L-Bar |
| A540                 | 5    | 27  | 9' - 9"   | 129  | 1'-3"  | 4'-3"  |        |       |   | Wingwall Acute Top Curb Stirrup           |
| A541                 | 5    | 1   | 15' - 0"  | 129  | 1'-4"  | 6'-10" |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| A542                 | 5    | 1   | 14' - 2"  | 129  | 1'-4"  | 6'-5"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| A543                 | 5    | 1   | 13' - 4"  | 129  | 1'-4"  | 6'-0"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| A544                 | 5    | 1   | 12' - 4"  | 129  | 1'-4"  | 5'-6"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| A545                 | 5    | 1   | 11' - 6"  | 129  | 1'-4"  | 5'-1"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| A546                 | 5    | 1   | 10' - 8"  | 129  | 1'-4"  | 4'-8"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| A547                 | 5    | 1   | 9' - 8"   | 129  | 1'-4"  | 4'-2"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| A548                 | 5    | 1   | 8' - 10"  | 129  | 1'-4"  | 3'-9"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| A549                 | 5    | 1   | 10' - 8"  | 132  | 3'-8"  | 2'-8"  | 0'-10" |       |   | Wingwall Acute Trans. Back Stirrup        |
| A550                 | 5    | 10  | 9' - 4"   | 119  | 4'-2"  | 5'-2"  | 3'-8"  |       |   | Backwall End, Obtuse End                  |
| A551                 | 5    | 12  | 10' - 4"  | 119  | 6'-2"  | 4'-2"  | 2'-11" |       |   | Stem End, Obtuse End                      |

Route 197 Bridge - Litchfield

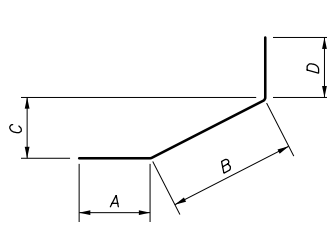
| MARK                 | SIZE | NO. | LENGTH    | TYPE | A      | B      | C      | D     | E      | REMARKS                                    |
|----------------------|------|-----|-----------|------|--------|--------|--------|-------|--------|--|
| <b>ABUTMENT NO.1</b> |      |     |           |      |        |        |        |       |        |  |
| A552                 | 5    | 5   | 9' - 4"   | 114  | 4'-2"  | 0      | 3'-8"  | 5'-2" |        | Backwall End Front Face, Acute End         |
| A553                 | 5    | 4   | 7' - 6"   | 109  | 1'-6"  | 3'-0"  | 2'-1"  | 3'-0" | 2'-2"  | Seat End Back Face, Acute End              |
| A554                 | 5    | 5   | 8' - 10"  | 109  | 2'-10" | 3'-0"  | 2'-1"  | 3'-0" | 2'-2"  | Backwall End Back Face, Acute End          |
| A555                 | 5    | 39  | 8' - 7"   | 129  | 0'-11" | 3'-10" |        |       |        | Backwall Vertical U-Bar                    |
| A556                 | 5    | 39  | 9' - 1"   | 129  | 0'-11" | 4'-1"  |        |       |        | Seat to Backwall Vertical U-Bar            |
| A557                 | 5    | 54  | 12' - 7"  | 150  | 3'-5"  | 3'-0"  | 6'-2"  |       |        | Stem Vertical U-Bar                        |
| A558                 | 5    | 36  | 2' - 0"   | 118  | 1'-2"  | 0'-10" |        |       |        | Seat Vertical Doweled L-Bar                |
| A559                 | 5    | 1   | 9' - 1"   | 118  | 7'-8"  | 1'-5"  |        |       |        | Acute Corner L-Bar                         |
| A560                 | 5    | 1   | 5' - 10"  | 118  | 3'-11" | 1'-11" |        |       |        | Acute Corner L-Bar                         |
| A561                 | 5    | 1   | 6' - 4"   | 118  | 3'-11" | 2'-5"  |        |       |        | Acute Corner L-Bar                         |
| A562                 | 5    | 8   | 12' - 10" | 109  | 0'-8"  | 8'-2"  | 2'-10" | 4'-0" | 2'-10" | Seat End Front Face, Acute End             |
| A563                 | 5    | 7   | 5' - 6"   | 118  | 2'-10" | 2'-8"  |        |       |        | Obtuse and Acute Corner L-Bar              |
| A565                 | 5    | 26  | 9' - 7"   | 129  | 1'-3"  | 4'-2"  |        |       |        | Wingwall Vertical U-Bar                    |
| A566                 | 5    | 10  | 3' - 10"  | 118  | 1'-7"  | 2'-3"  |        |       |        | Wingwall Doweled L-Bar                     |
| A567                 | 5    | 8   | 7' - 7"   | 118  | 6'-0"  | 1'-7"  |        |       |        | Wingwall Bottom Horizontal Doweled L-Bar   |
| A568                 | 5    | 8   | 9' - 2"   | 129  | 1'-2"  | 4'-0"  |        |       |        | Wingwall Top Horizontal End U-Bar          |
| A569                 | 5    | 2   | 9' - 8"   | 106  | 4'-0"  | 4'-0"  | 1'-2"  | 1'-8" |        | Wingwall Curb Horizontal End Bar           |
| A570                 | 5    | 4   | 9' - 2"   | 129  | 1'-2"  | 4'-0"  |        |       |        | Wingwall Curb Horizontal End U-Bar         |
| A571                 | 5    | 8   | 5' - 4"   | 118  | 2'-8"  | 2'-8"  |        |       |        | Wingwall Cap Vertical L-Bar                |
| A572                 | 5    | 1   | 10' - 9"  | 132  | 3'-9"  | 2'-8"  | 0'-10" |       |        | Wingwall Cantilever End C-Bar              |
| A573                 | 5    | 1   | 9' - 0"   | 132  | 3'-4"  | 2'-0"  | 0'-10" |       |        | Wingwall Cantilever End C-Bar              |
| A574                 | 5    | 2   | 5' - 1"   | 119  | 3'-4"  | 1'-9"  | 0'-9"  |       |        | Wingwall Cantilever Diagonal L-Bar         |
| A575                 | 5    | 1   | 14' - 10" | 129  | 1'-4"  | 6'-9"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| A576                 | 5    | 1   | 14' - 0"  | 129  | 1'-4"  | 6'-4"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| A577                 | 5    | 1   | 13' - 4"  | 129  | 1'-4"  | 6'-0"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| A578                 | 5    | 1   | 12' - 6"  | 129  | 1'-4"  | 5'-7"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| A579                 | 5    | 1   | 11' - 8"  | 129  | 1'-4"  | 5'-2"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| A580                 | 5    | 1   | 10' - 10" | 129  | 1'-4"  | 4'-9"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| A581                 | 5    | 1   | 10' - 0"  | 129  | 1'-4"  | 4'-4"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| A582                 | 5    | 1   | 9' - 2"   | 129  | 1'-4"  | 3'-11" |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| A583                 | 5    | 1   | 8' - 4"   | 129  | 1'-4"  | 3'-6"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| A584                 | 5    | 3   | 10' - 9"  | 119  | 9'-0"  | 1'-9"  | 0'-9"  |       |        | Wingwall Cantilever Diagonal L-Bar         |
| A585                 | 5    | 1   | 5' - 4"   | 119  | 1'-8"  | 3'-8"  | 2'-7"  |       |        | Wingwall Cantilever Diagonal Doweled L-Bar |
| A586                 | 5    | 4   | 10' - 9"  | 119  | 7'-1"  | 3'-8"  | 2'-7"  |       |        | Wingwall Cantilever Tapper L-Bar           |
| A587                 | 5    | 1   | 9' - 4"   | 119  | 7'-1"  | 2'-3"  | 1'-7"  |       |        | Wingwall Cantilever Tapper L-Bar           |
| A588                 | 5    | 5   | 2' - 8"   | 118  | 1'-4"  | 1'-4"  |        |       |        | Wingwall Obtuse Corner End L-Bar           |
| A598                 | 5    | 1   | 10' - 2"  | 129  | 1'-8"  | 4'-3"  |        |       |        | Wingwall Acute Curb Front Stirrup          |
| A599                 | 5    | 1   | 9' - 0"   | 132  | 3'-4"  | 2'-0"  | 0'-10" |       |        | Wingwall Acute Trans. Back Stirrup         |



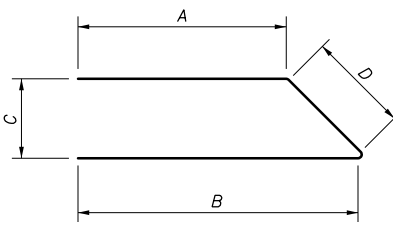
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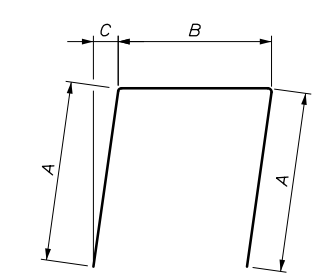
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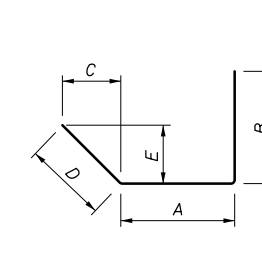
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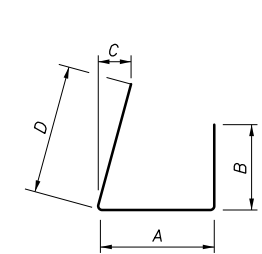
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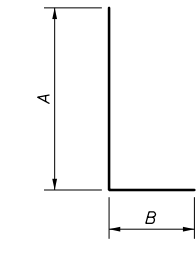
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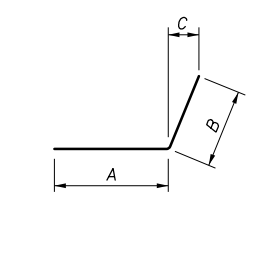
TYPE 109



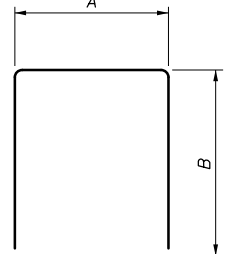
TYPE 114



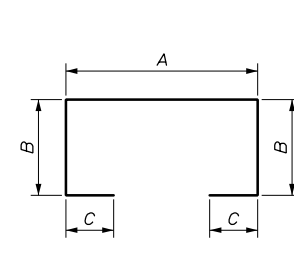
TYPE 118



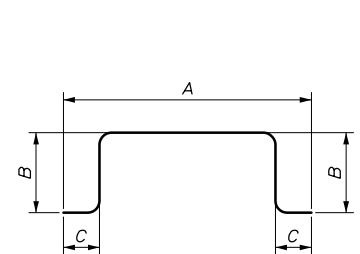
TYPE 119



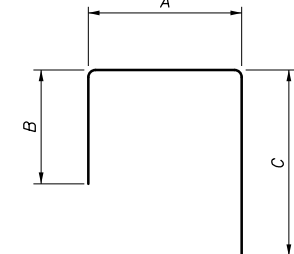
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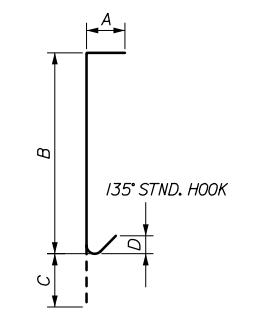
TYPE 132



TYPE 145



TYPE 150



TYPE 135

Date: 2/7/2022

Filename: 073\_Reinforcing Schedule I.dgn

|        |          |    |      |
|--------|----------|----|------|
| Scale: |          |    |      |
| No.    | Revision | By | Date |
|        |          |    |      |
|        |          |    |      |

|   |     |       |              |
|---|-----|-------|--------------|
| Designed by:                                    |     |       |              |
| <b>HNTB</b>                                     |     |       |              |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |
| Designed  | IJM | 01\22 | Checked      |
| Drawn   | PEB | 01\22 | In Charge of |
|   |     |       | By           |
|   |     |       | Date         |
|   |     |       | By           |
|   |     |       | Date         |

HNTB CORPORATION  
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**THE GOLD STAR  
MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS  
 REINFORCING SCHEDULE I

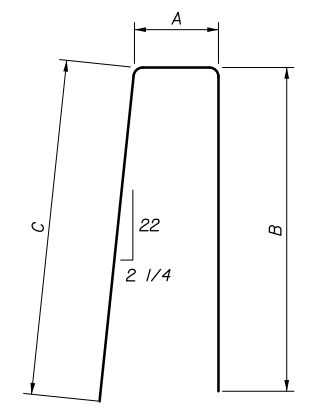
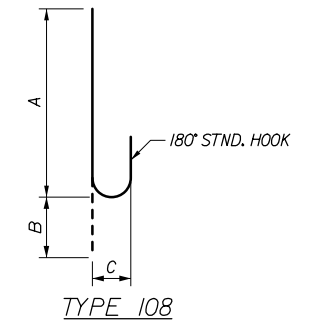
SHEET NUMBER: S-32  
 CONTRACT: 2022.06  
 73 OF 81

Route 197 Bridge - Litchfield

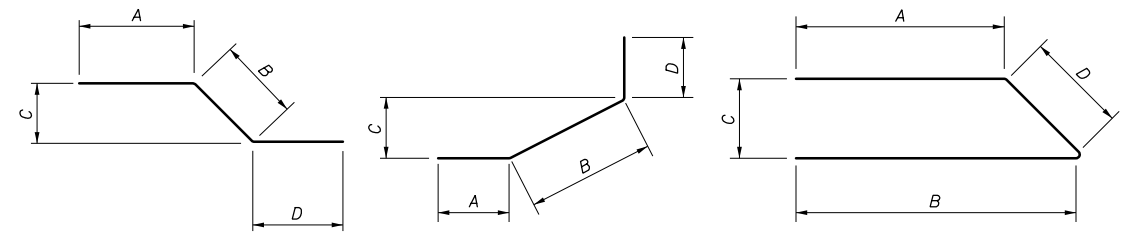
| MARK                 | SIZE | NO. | LENGTH    | TYPE | A      | B      | C      | D     | E | REMARKS                                   |
|----------------------|------|-----|-----------|------|--------|--------|--------|-------|---|---|
| <b>ABUTMENT NO.2</b> |      |     |           |      |        |        |        |       |   |   |
| B400                 | 4    | 80  | 3' - 6"   | 129  | 0'-6"  | 1'-6"  |        |       |   | Anchor Rod U-bar                          |
| B500                 | 5    | 10  | 38' - 3"  | STR  |        |        |        |       |   | Backwall Longitudinal                     |
| B501                 | 5    | 15  | 40' - 3"  | STR  |        |        |        |       |   | Seat Longitudinal                         |
| B502                 | 5    | 3   | 30' - 4"  | STR  |        |        |        |       |   | Seat Longitudinal                         |
| B503                 | 5    | 106 | 4' - 0"   | STR  |        |        |        |       |   | Vertical Dowel                            |
| B504                 | 5    | 15  | 12' - 7"  | STR  |        |        |        |       |   | Wingwall Top Section Longitudinal         |
| B505                 | 5    | 7   | 9' - 6"   | STR  |        |        |        |       |   | Wingwall Bottom Vertical                  |
| B506                 | 5    | 8   | 6' - 4"   | STR  |        |        |        |       |   | Wingwall Middle Vertical                  |
| B507                 | 5    | 2   | 7' - 11"  | STR  |        |        |        |       |   | Wingwall Cantilever Horizontal            |
| B508                 | 5    | 2   | 10' - 5"  | STR  |        |        |        |       |   | Wingwall Cantilever Horizontal            |
| B509                 | 5    | 2   | 12' - 7"  | STR  |        |        |        |       |   | Wingwall Cantilever Horizontal            |
| B510                 | 5    | 16  | 3' - 2"   | STR  |        |        |        |       |   | Wingwall Vertical Dowel                   |
| B511                 | 5    | 2   | 10' - 5"  | STR  |        |        |        |       |   | Wingwall Acute Long.                      |
| B512                 | 5    | 2   | 12' - 7"  | STR  |        |        |        |       |   | Wingwall Acute Long.                      |
| B513                 | 5    | 2   | 14' - 9"  | STR  |        |        |        |       |   | Wingwall Acute Long.                      |
| B514                 | 5    | 15  | 15' - 11" | STR  |        |        |        |       |   | Wingwall Acute Long.                      |
| B515                 | 5    | 2   | 3' - 1"   | STR  |        |        |        |       |   | Wingwall Acute Long. Bottom Bumpout       |
| B516                 | 5    | 10  | 9' - 10"  | STR  |        |        |        |       |   | Wingwall Acute Trans. Front Face          |
| B517                 | 5    | 9   | 4' - 9"   | STR  |        |        |        |       |   | Wingwall Acute Trans. Back Face           |
| B530                 | 5    | 8   | 7' - 2"   | 118  | 1'-7"  | 5'-7"  |        |       |   | Wingwall Acute Front Face Long.           |
| B531                 | 5    | 4   | 10' - 11" | 119  | 7'-5"  | 3'-6"  | 2'-6"  |       |   | Wingwall Acute Bumpout Long.              |
| B532                 | 5    | 3   | 9' - 1"   | 119  | 0'-10" | 8'-3"  | 3'-6"  |       |   | Wingwall Acute Long. Bottom               |
| B533                 | 5    | 2   | 4' - 1"   | 119  | 0'-10" | 3'-3"  | 1'-4"  |       |   | Wingwall Acute Long. Bottom               |
| B534                 | 5    | 1   | 5' - 8"   | 119  | 1'-11" | 3'-9"  | 2'-9"  |       |   | Wingwall Acute Long. Bottom Bumpout       |
| B535                 | 5    | 1   | 9' - 1"   | 118  | 8'-3"  | 0'-10" |        |       |   | Wingwall Acute Top Thickened Section      |
| B536                 | 5    | 10  | 7' - 2"   | 129  | 3'-0"  | 1'-2"  |        |       |   | Wingwall Acute Long. Back Face Stirrup    |
| B537                 | 5    | 2   | 8' - 8"   | 106  | 3'-0"  | 4'-1"  | 1'-2"  | 1'-7" |   | Wingwall Acute Long. Front Face Stirrup   |
| B538                 | 5    | 9   | 5' - 9"   | 118  | 3'-3"  | 2'-6"  |        |       |   | Wingwall Acute Trans. Back Bumpout        |
| B539                 | 5    | 9   | 3' - 10"  | 118  | 2'-3"  | 1'-7"  |        |       |   | Wingwall Acute Trans. Front Doweled L-Bar |
| B540                 | 5    | 27  | 9' - 9"   | 129  | 1'-3"  | 4'-3"  |        |       |   | Wingwall Acute Top Curb Stirrup           |
| B541                 | 5    | 1   | 15' - 4"  | 129  | 1'-4"  | 7'-0"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| B542                 | 5    | 1   | 14' - 4"  | 129  | 1'-4"  | 6'-6"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| B543                 | 5    | 1   | 13' - 6"  | 129  | 1'-4"  | 6'-1"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| B544                 | 5    | 1   | 12' - 6"  | 129  | 1'-4"  | 5'-7"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| B545                 | 5    | 1   | 11' - 8"  | 129  | 1'-4"  | 5'-2"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| B546                 | 5    | 1   | 10' - 8"  | 129  | 1'-4"  | 4'-8"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| B547                 | 5    | 1   | 9' - 10"  | 129  | 1'-4"  | 4'-3"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| B548                 | 5    | 1   | 8' - 10"  | 129  | 1'-4"  | 3'-9"  |        |       |   | Wingwall Acute Bottom Flying Stirrup      |
| B549                 | 5    | 1   | 10' - 9"  | 132  | 3'-9"  | 2'-8"  | 0'-10" |       |   | Wingwall Acute Trans. Back Stirrup        |
| B550                 | 5    | 10  | 9' - 4"   | 119  | 4'-2"  | 5'-2"  | 3'-8"  |       |   | Backwall End, Obtuse End                  |

Route 197 Bridge - Litchfield

| MARK                 | SIZE | NO. | LENGTH    | TYPE | A      | B      | C      | D     | E      | REMARKS                                    |
|----------------------|------|-----|-----------|------|--------|--------|--------|-------|--------|--|
| <b>ABUTMENT NO.2</b> |      |     |           |      |        |        |        |       |        |  |
| B551                 | 5    | 12  | 10' - 4"  | 119  | 6'-2"  | 4'-2"  | 2'-11" |       |        | Stem End, Obtuse End                       |
| B552                 | 5    | 5   | 9' - 4"   | 114  | 4'-2"  | 0      | 3'-8"  | 5'-2" |        | Backwall End Front Face, Acute End         |
| B553                 | 5    | 4   | 7' - 6"   | 109  | 1'-6"  | 3'-0"  | 2'-1"  | 3'-0" | 2'-2"  | Seat End Back Face, Acute End              |
| B554                 | 5    | 5   | 8' - 10"  | 109  | 2'-10" | 3'-0"  | 2'-1"  | 3'-0" | 2'-2"  | Backwall End Back Face, Acute End          |
| B555                 | 5    | 39  | 8' - 7"   | 129  | 0'-11" | 3'-10" |        |       |        | Backwall Vertical U-Bar                    |
| B556                 | 5    | 39  | 9' - 1"   | 129  | 0'-11" | 4'-1"  |        |       |        | Seat to Backwall Vertical U-Bar            |
| B557                 | 5    | 54  | 12' - 9"  | 150  | 3'-5"  | 3'-1"  | 6'-3"  |       |        | Stem Vertical U-Bar                        |
| B558                 | 5    | 36  | 2' - 0"   | 118  | 1'-2"  | 0'-10" |        |       |        | Seat Vertical Doweled L-Bar                |
| B559                 | 5    | 1   | 9' - 1"   | 118  | 7'-8"  | 1'-5"  |        |       |        | Acute Corner L-Bar                         |
| B560                 | 5    | 1   | 5' - 10"  | 118  | 3'-11" | 1'-11" |        |       |        | Acute Corner L-Bar                         |
| B561                 | 5    | 1   | 6' - 4"   | 118  | 3'-11" | 2'-5"  |        |       |        | Acute Corner L-Bar                         |
| B562                 | 5    | 8   | 12' - 10" | 109  | 0'-8"  | 8'-2"  | 2'-10" | 4'-0" | 2'-10" | Seat End Front Face, Acute End             |
| B563                 | 5    | 7   | 5' - 6"   | 118  | 2'-10" | 2'-8"  |        |       |        | Obtuse and Acute Corner L-Bar              |
| B565                 | 5    | 26  | 9' - 7"   | 129  | 1'-3"  | 4'-2"  |        |       |        | Wingwall Vertical U-Bar                    |
| B566                 | 5    | 10  | 3' - 10"  | 118  | 1'-7"  | 2'-3"  |        |       |        | Wingwall Doweled L-Bar                     |
| B567                 | 5    | 8   | 7' - 7"   | 118  | 6'-0"  | 1'-7"  |        |       |        | Wingwall Bottom Horizontal Doweled L-Bar   |
| B568                 | 5    | 8   | 9' - 2"   | 129  | 1'-4"  | 4'-0"  |        |       |        | Wingwall Top Horizontal End U-Bar          |
| B569                 | 5    | 2   | 9' - 8"   | 106  | 4'-0"  | 4'-0"  | 1'-2"  | 1'-8" |        | Wingwall Curb Horizontal End Bar           |
| B570                 | 5    | 4   | 9' - 2"   | 129  | 1'-2"  | 4'-0"  |        |       |        | Wingwall Curb Horizontal End U-Bar         |
| B571                 | 5    | 8   | 5' - 8"   | 118  | 3'-0"  | 2'-8"  |        |       |        | Wingwall Cap Vertical L-Bar                |
| B572                 | 5    | 1   | 10' - 11" | 132  | 3'-11" | 2'-8"  | 0'-10" |       |        | Wingwall Cantilever End C-Bar              |
| B573                 | 5    | 1   | 9' - 1"   | 132  | 3'-5"  | 2'-0"  | 0'-10" |       |        | Wingwall Cantilever End C-Bar              |
| B574                 | 5    | 2   | 5' - 4"   | 119  | 3'-5"  | 1'-11" | 0'-10" |       |        | Wingwall Cantilever Diagonal L-Bar         |
| B575                 | 5    | 1   | 15' - 2"  | 129  | 1'-4"  | 6'-11" |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| B576                 | 5    | 1   | 14' - 4"  | 129  | 1'-4"  | 6'-6"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| B577                 | 5    | 1   | 13' - 6"  | 129  | 1'-4"  | 6'-1"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| B578                 | 5    | 1   | 12' - 8"  | 129  | 1'-4"  | 5'-8"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| B579                 | 5    | 1   | 11' - 10" | 129  | 1'-4"  | 5'-3"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| B580                 | 5    | 1   | 11' - 0"  | 129  | 1'-4"  | 4'-10" |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| B581                 | 5    | 1   | 10' - 2"  | 129  | 1'-4"  | 4'-5"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| B582                 | 5    | 1   | 9' - 2"   | 129  | 1'-4"  | 3'-11" |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| B583                 | 5    | 1   | 8' - 4"   | 129  | 1'-4"  | 3'-6"  |        |       |        | Wingwall Cantilever Vertical U-Bar         |
| B584                 | 5    | 3   | 10' - 9"  | 119  | 9'-0"  | 1'-9"  | 9"     |       |        | Wingwall Cantilever Diagonal L-Bar         |
| B585                 | 5    | 1   | 5' - 4"   | 119  | 1'-8"  | 3'-8"  | 2'-7"  |       |        | Wingwall Cantilever Diagonal Doweled L-Bar |
| B586                 | 5    | 4   | 10' - 9"  | 119  | 7'-1"  | 3'-8"  | 2'-7"  |       |        | Wingwall Cantilever Tapper L-Bar           |
| B587                 | 5    | 1   | 9' - 4"   | 119  | 7'-1"  | 2'-3"  | 1'-7"  |       |        | Wingwall Cantilever Tapper L-Bar           |
| B588                 | 5    | 5   | 2' - 8"   | 118  | 1'-4"  | 1'-4"  |        |       |        | Wingwall Obtuse Corner End L-Bar           |
| B598                 | 5    | 1   | 10' - 2"  | 129  | 1'-8"  | 4'-3"  |        |       |        | Wingwall Acute Curb Front Stirrup          |
| B599                 | 5    | 1   | 9' - 1"   | 132  | 3'-5"  | 2'-0"  | 0'-10" |       |        | Wingwall Acute Trans. Back Stirrup         |



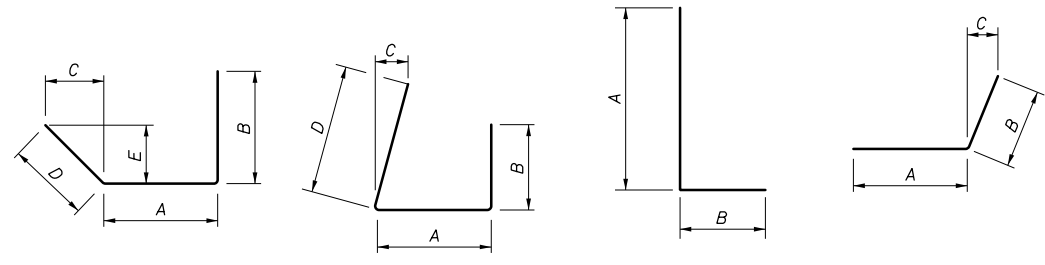
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TYPE 103

TYPE 105

TYPE 106

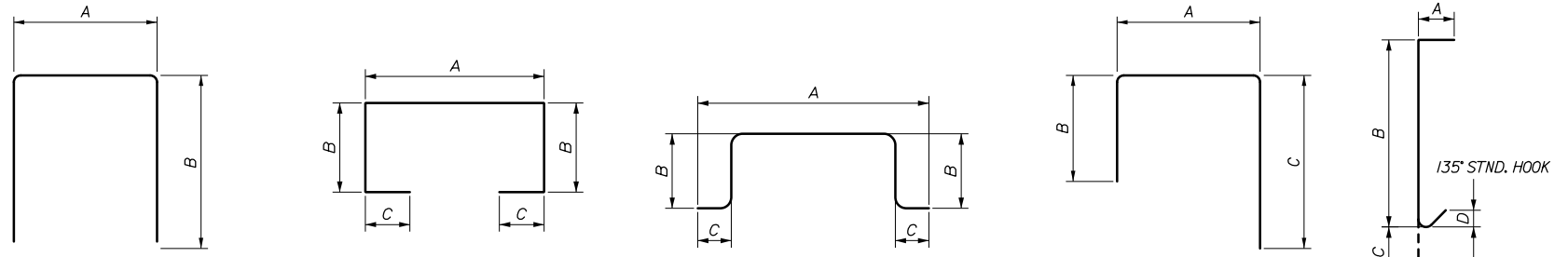


TYPE 109

TYPE 114

TYPE 118

TYPE 119



TYPE 129

TYPE 132

TYPE 145

TYPE 150

TYPE 135

TYPE 144

Date: 2/7/2022

Filename: 074\_Reinforcing Schedule II.dgn

|        |          |    |      |
|--------|----------|----|------|
| Scale: |          |    |      |
| No.    | Revision | By | Date |
|        |          |    |      |
|        |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|          |     |       |              |     |       |
|----------|-----|-------|--------------|-----|-------|
| Designed | IJM | 01\22 | Checked      | BRG | 01\22 |
| Drawn    | PEB | 01\22 | In Charge of | TRC | 01\22 |

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**THE GOLD STAR  
 MEMORIAL HIGHWAY**

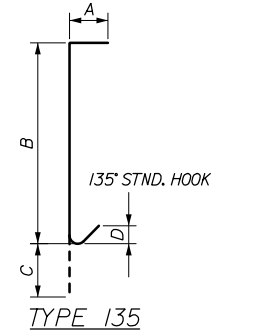
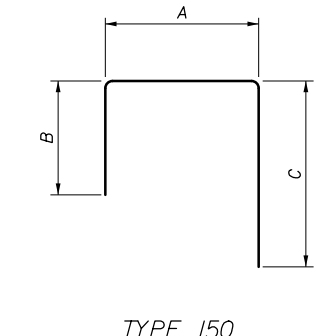
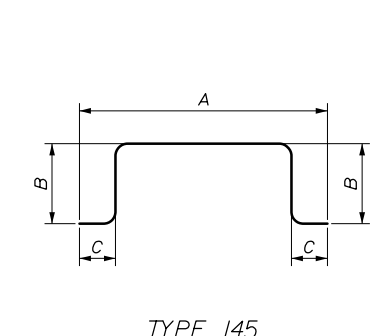
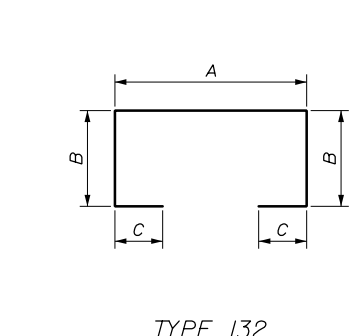
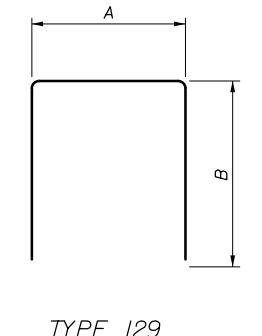
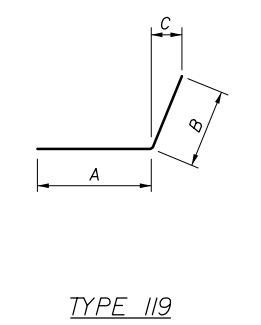
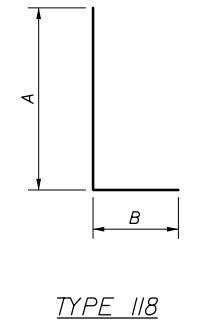
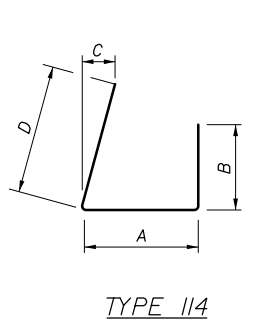
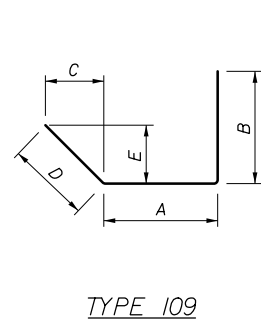
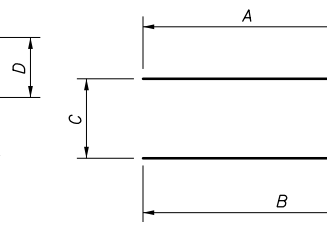
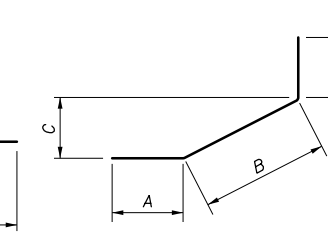
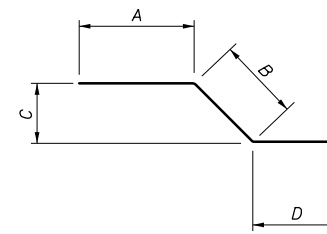
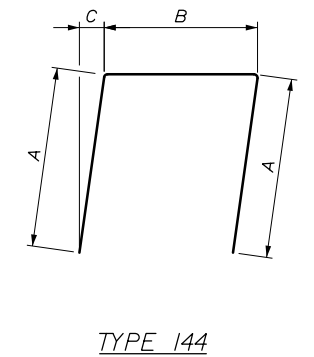
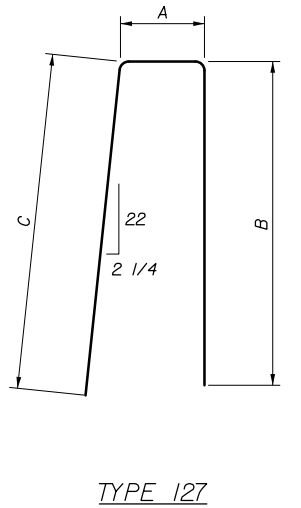
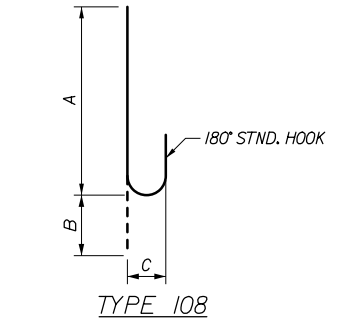
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

**SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS**  
**REINFORCING SCHEDULE II**

SHEET NUMBER: S-33  
 CONTRACT: 2022.06  
 74 OF 81

Route 197 Bridge - Litchfield

| MARK                     | SIZE | NO. | LENGTH    | TYPE | A       | B     | C     | D      | E | REMARKS                             |
|--------------------------|------|-----|-----------|------|---------|-------|-------|--------|---|-------------------------------------|
| <b>PIER NO.1</b>         |      |     |           |      |         |       |       |        |   |                                     |
| 1P500                    | 5    | 4   | 22' - 4"  | STR  |         |       |       |        |   | Cap Horizontal Top                  |
| 1P501                    | 5    | 4   | 7' - 4"   | STR  |         |       |       |        |   | Cap Horizontal Top                  |
| 1P550                    | 5    | 29  | 5' - 8"   | 129  | 2'-8"   | 1'-6" |       |        |   | Cap Top U-Bar                       |
| 1P600                    | 6    | 8   | 35' - 11" | STR  |         |       |       |        |   | Cap Horizontal Side                 |
| 1P650                    | 6    | 10  | 11' - 10" | 129  | 2'-8"   | 4'-7" |       |        |   | Cap Horizontal End U-Bar            |
| 1P651                    | 6    | 62  | 10' - 2"  | 132  | 2'-8"   | 2'-9" | 1'-0" |        |   | Cap Vertical C-Bar                  |
| 1P652                    | 6    | 100 | 5' - 11"  | 118  | 4'-11"  | 1'-0" |       |        |   | Cap Vertical Doweled L-Bar          |
| 1P1050                   | 10   | 6   | 20' - 9"  | 114  | 18'-10" | 0     | 0'-5" | 1'-11" |   | Cap Primary Longitudinal            |
| 1P1051                   | 10   | 6   | 28' - 6"  | 114  | 26'-7"  | 0     | 0'-5" | 1'-11" |   | Cap Primary Longitudinal            |
| <b>PIER NO.2</b>         |      |     |           |      |         |       |       |        |   |                                     |
| 2P500                    | 5    | 4   | 22' - 4"  | STR  |         |       |       |        |   | Cap Horizontal Top                  |
| 2P501                    | 5    | 4   | 7' - 4"   | STR  |         |       |       |        |   | Cap Horizontal Top                  |
| 2P550                    | 5    | 29  | 5' - 8"   | 129  | 2'-8"   | 1'-6" |       |        |   | Cap Top U-Bar                       |
| 2P600                    | 6    | 8   | 35' - 11" | STR  |         |       |       |        |   | Cap Horizontal Side                 |
| 2P650                    | 6    | 10  | 11' - 10" | 129  | 2'-8"   | 4'-7" |       |        |   | Cap Horizontal End U-Bar            |
| 2P651                    | 6    | 62  | 10' - 2"  | 132  | 2'-8"   | 2'-9" | 1'-0" |        |   | Cap Vertical C-Bar                  |
| 2P652                    | 6    | 100 | 5' - 11"  | 118  | 4'-11"  | 1'-0" |       |        |   | Cap Vertical Doweled L-Bar          |
| 2P1050                   | 10   | 6   | 20' - 9"  | 114  | 18'-10" | 0     | 0'-5" | 1'-11" |   | Cap Primary Longitudinal            |
| 2P1051                   | 10   | 6   | 28' - 6"  | 114  | 26'-7"  | 0     | 0'-5" | 1'-11" |   | Cap Primary Longitudinal            |
| <b>PIER NO.3</b>         |      |     |           |      |         |       |       |        |   |                                     |
| 3P500                    | 5    | 4   | 22' - 4"  | STR  |         |       |       |        |   | Cap Horizontal Top                  |
| 3P501                    | 5    | 4   | 7' - 4"   | STR  |         |       |       |        |   | Cap Horizontal Top                  |
| 3P550                    | 5    | 29  | 5' - 8"   | 129  | 2'-8"   | 1'-6" |       |        |   | Cap Top U-Bar                       |
| 3P600                    | 6    | 8   | 35' - 11" | STR  |         |       |       |        |   | Cap Horizontal Side                 |
| 3P650                    | 6    | 10  | 11' - 10" | 129  | 2'-8"   | 4'-7" |       |        |   | Cap Horizontal End U-Bar            |
| 3P651                    | 6    | 62  | 10' - 2"  | 132  | 2'-8"   | 2'-9" | 1'-0" |        |   | Cap Vertical C-Bar                  |
| 3P652                    | 6    | 100 | 5' - 11"  | 118  | 4'-11"  | 1'-0" |       |        |   | Cap Vertical Doweled L-Bar          |
| 3P1050                   | 10   | 6   | 20' - 9"  | 114  | 18'-10" | 0     | 0'-5" | 1'-11" |   | Cap Primary Longitudinal            |
| 3P1051                   | 10   | 6   | 28' - 6"  | 114  | 26'-7"  | 0     | 0'-5" | 1'-11" |   | Cap Primary Longitudinal            |
| <b>DISTRIBUTION SLAB</b> |      |     |           |      |         |       |       |        |   |                                     |
| AS500                    | 5    | 26  | 36' - 2"  | STR  |         |       |       |        |   | Dist. Slab Transverse               |
| AS501                    | 5    | 6   | 35' - 1"  | STR  |         |       |       |        |   | Dist. Slab Transverse/Thickened End |
| AS600                    | 6    | 98  | 18' - 2"  | STR  |         |       |       |        |   | Dist. Slab Longitudinal             |
| AS601                    | 6    | 2   | 17' - 6"  | STR  |         |       |       |        |   | Dist. Slab Longitudinal             |
| AS602                    | 6    | 2   | 17' - 0"  | STR  |         |       |       |        |   | Dist. Slab Longitudinal             |
| AS603                    | 6    | 2   | 16' - 6"  | STR  |         |       |       |        |   | Dist. Slab Longitudinal             |



Date: 2/7/2022

Filename: 075\_Reinforcing Schedule III.dgn

|        |          |    |      |
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| No.    | Revision | By | Date |
|        |          |    |      |
|        |          |    |      |

Designed by:

**HNTB**

CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E.

|              |       |                  |       |
|--------------|-------|------------------|-------|
| By           | Date  | By               | Date  |
| Designed IJM | 01\22 | Checked BRG      | 01\22 |
| Drawn PEB    | 01\22 | In Charge of TRC | 01\22 |

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**MAINE TURNPIKE**

**THE GOLD STAR MEMORIAL HIGHWAY**

MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS  
 REINFORCING SCHEDULE III

SHEET NUMBER: S-34  
 CONTRACT: 2022.06  
 75 OF 81

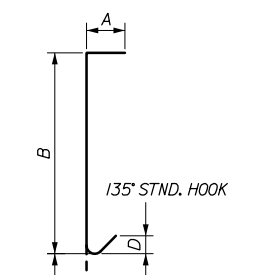
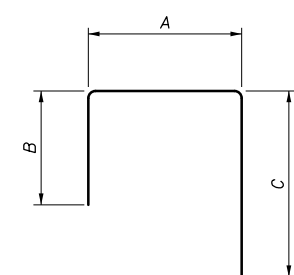
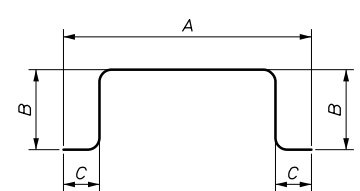
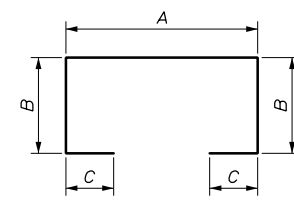
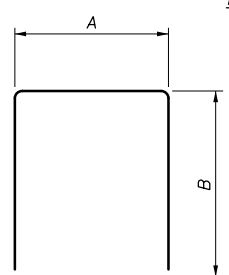
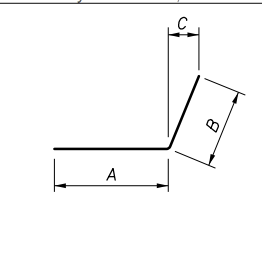
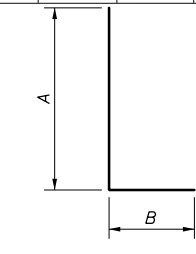
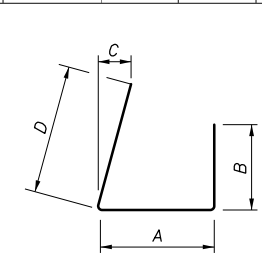
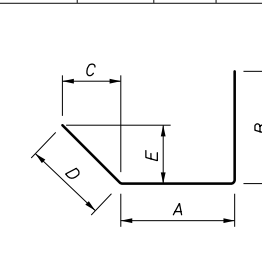
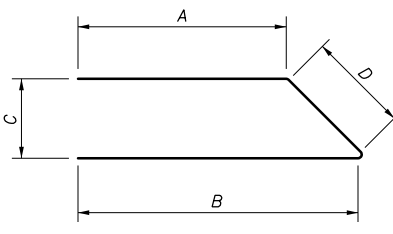
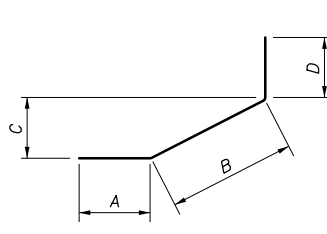
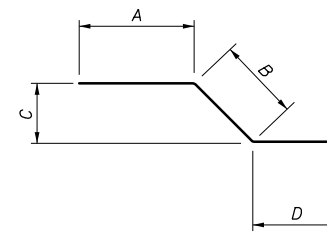
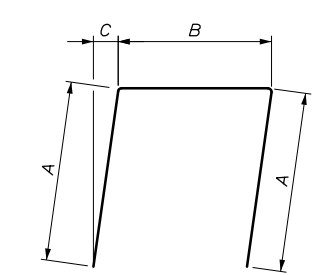
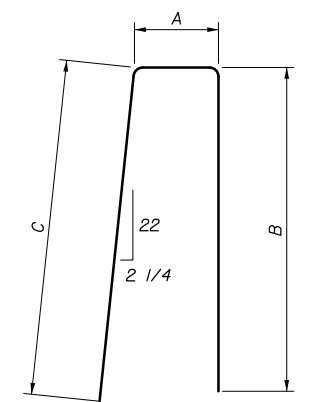
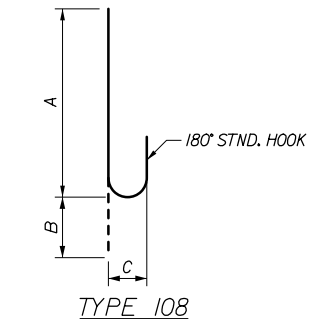


Route 197 Bridge - Litchfield

| MARK                  | SIZE | NO. | LENGTH   | TYPE | A | B | C | D | E | REMARKS                       |
|-----------------------|------|-----|----------|------|---|---|---|---|---|-------------------------------|
| <b>SUPERSTRUCTURE</b> |      |     |          |      |   |   |   |   |   |                               |
| S5000                 | 5    | 492 | 47' - 8" | STR  |   |   |   |   |   | Primary Longitudinal          |
| S5001                 | 5    | 968 | 29' - 8" | STR  |   |   |   |   |   | Primary Transverse            |
| S5002                 | 5    | 4   | 29' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5003                 | 5    | 4   | 28' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5004                 | 5    | 4   | 28' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5005                 | 5    | 4   | 27' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5006                 | 5    | 4   | 27' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5007                 | 5    | 4   | 26' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5008                 | 5    | 4   | 26' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5009                 | 5    | 4   | 25' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5010                 | 5    | 4   | 25' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5011                 | 5    | 4   | 24' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5012                 | 5    | 4   | 24' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5013                 | 5    | 4   | 23' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5014                 | 5    | 4   | 23' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5015                 | 5    | 4   | 22' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5016                 | 5    | 4   | 22' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5017                 | 5    | 4   | 21' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5018                 | 5    | 4   | 21' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5019                 | 5    | 4   | 20' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5020                 | 5    | 4   | 20' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5021                 | 5    | 4   | 19' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5022                 | 5    | 4   | 19' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5023                 | 5    | 4   | 18' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5024                 | 5    | 4   | 18' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5025                 | 5    | 4   | 17' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5026                 | 5    | 4   | 17' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5027                 | 5    | 4   | 16' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5028                 | 5    | 4   | 16' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5029                 | 5    | 4   | 15' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5030                 | 5    | 4   | 15' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5031                 | 5    | 4   | 14' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5032                 | 5    | 4   | 14' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5033                 | 5    | 4   | 13' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5034                 | 5    | 4   | 13' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5035                 | 5    | 4   | 12' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5036                 | 5    | 4   | 12' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5037                 | 5    | 4   | 11' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5038                 | 5    | 4   | 11' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5039                 | 5    | 4   | 10' - 8" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5040                 | 5    | 4   | 10' - 2" | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5041                 | 5    | 4   | 9' - 8"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5042                 | 5    | 4   | 9' - 2"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5043                 | 5    | 4   | 8' - 8"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5044                 | 5    | 4   | 8' - 2"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5045                 | 5    | 4   | 7' - 8"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5046                 | 5    | 4   | 7' - 2"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5047                 | 5    | 4   | 6' - 8"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5048                 | 5    | 4   | 6' - 2"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5049                 | 5    | 4   | 5' - 8"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5050                 | 5    | 4   | 5' - 2"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5051                 | 5    | 4   | 4' - 8"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5052                 | 5    | 4   | 4' - 2"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5053                 | 5    | 4   | 3' - 8"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5054                 | 5    | 4   | 3' - 2"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5055                 | 5    | 4   | 2' - 8"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |
| S5056                 | 5    | 4   | 2' - 2"  | STR  |   |   |   |   |   | Primary Transverse, Acute End |

Route 197 Bridge - Litchfield

| MARK                  | SIZE | NO.  | LENGTH   | TYPE | A       | B      | C      | D      | E      | REMARKS                               |
|-----------------------|------|------|----------|------|---------|--------|--------|--------|--------|---------------------------------------|
| <b>SUPERSTRUCTURE</b> |      |      |          |      |         |        |        |        |        |                                       |
| S5057                 | 5    | 4    | 1' - 8"  | STR  |         |        |        |        |        | Primary Transverse, Acute End         |
| S5058                 | 5    | 4    | 1' - 2"  | STR  |         |        |        |        |        | Primary Transverse, Acute End         |
| S5059                 | 5    | 12   | 42' - 3" | STR  |         |        |        |        |        | Top Thickened End Bars                |
| S5060                 | 5    | 36   | 9' - 8"  | STR  |         |        |        |        |        | Bottom Thickened End Bars             |
| S5061                 | 5    | 14   | 6' - 9"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5062                 | 5    | 2    | 6' - 3"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5063                 | 5    | 2    | 5' - 9"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5064                 | 5    | 2    | 5' - 3"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5065                 | 5    | 2    | 4' - 9"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5066                 | 5    | 2    | 4' - 3"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5067                 | 5    | 2    | 3' - 9"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5068                 | 5    | 2    | 3' - 3"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5069                 | 5    | 2    | 2' - 9"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5070                 | 5    | 2    | 2' - 3"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5071                 | 5    | 2    | 1' - 9"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5072                 | 5    | 2    | 1' - 3"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Perp.         |
| S5073                 | 5    | 2    | 2' - 8"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5074                 | 5    | 2    | 3' - 2"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5075                 | 5    | 2    | 3' - 8"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5076                 | 5    | 2    | 4' - 2"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5077                 | 5    | 2    | 4' - 8"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5078                 | 5    | 2    | 5' - 2"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5079                 | 5    | 2    | 5' - 8"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5080                 | 5    | 2    | 6' - 2"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5081                 | 5    | 2    | 6' - 8"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5082                 | 5    | 2    | 7' - 2"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5083                 | 5    | 2    | 7' - 8"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5084                 | 5    | 2    | 8' - 2"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5085                 | 5    | 2    | 8' - 8"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5086                 | 5    | 2    | 9' - 2"  | STR  |         |        |        |        |        | Bottom Thickened Acute, Parallel      |
| S5087                 | 5    | 60   | 47' - 8" | STR  |         |        |        |        |        | Curb Longitudinal Bars                |
| S5500                 | 5    | 1086 | 5' - 2"  | 108  | 4'-7"   | 0'-7"  | 0'-5"  |        |        | Deck Overhang Hook                    |
| S5501                 | 5    | 80   | 4' - 10" | 109  | 2'-8"   | 0'-10" | 0'-11" | 1'-4"  | 0'-11" | Thickened End Bottom Stirrups         |
| S5502                 | 5    | 90   | 3' - 4"  | 118  | 2'-6"   | 0'-10" |        |        |        | Thickened End Top L-Bar               |
| S5503                 | 5    | 30   | 6' - 1"  | 103  | 2'-6"   | 0'-10" | 0'-7"  | 2'-9"  |        | Thickened Acute End, Bottom Bent Bar  |
| S5504                 | 5    | 30   | 3' - 7"  | 118  | 2'-9"   | 0'-10" |        |        |        | Thickened Acute End, Bottom L-Bar     |
| S5505                 | 5    | 30   | 12' - 9" | 118  | 11'-11" | 0'-10" |        |        |        | Thickened Acute End, Top L-Bar        |
| S5506                 | 5    | 24   | 4' - 8"  | 129  | 3'-0"   | 0'-10" |        |        |        | Thickened End, Overhang U-Bar         |
| S5507                 | 5    | 748  | 5' - 7"  | 101  | 1'-3"   | 1'-4"  | 0'-10" | 0'-10" |        | Curb Stirrups                         |
| S6000                 | 6    | 120  | 26' - 0" | STR  |         |        |        |        |        | Negative Moment Reinforcing over Pier |



Date: 2/7/2022

Filename: 076\_Reinforcing Schedule IV.dgn

|        |          |    |      |
|--------|----------|----|------|
| Scale: |          |    |      |
| No.    | Revision | By | Date |
|        |          |    |      |
|        |          |    |      |

|   |     |       |              |
|---|-----|-------|--------------|
| Designed by:                                    |     |       |              |
| <b>HNTB</b>                                     |     |       |              |
| CONSULTANT PROJECT MANAGER: Steve Hodgdon, P.E. |     |       |              |
| Designed  | IJM | 01\22 | Checked      |
| Drawn   | PEB | 01\22 | In Charge of |
|   |     |       |              |
|   |     |       |              |

HNTB CORPORATION  
 82 Running Hill Road, Suite 201  
 South Portland, ME 04106  
 TEL (207) 774-5155  
 FAX (207) 228-0909

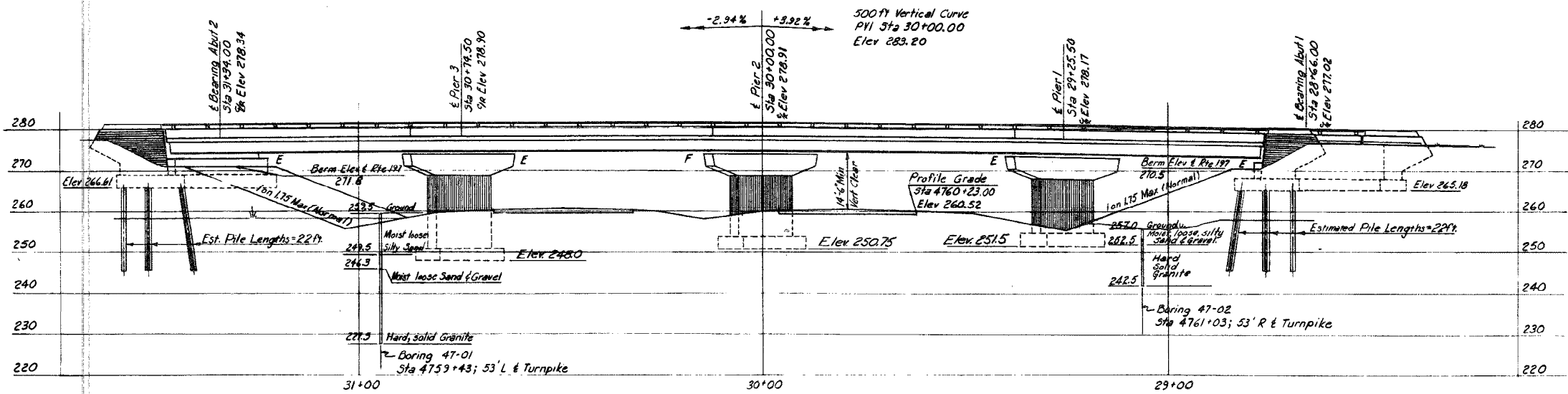


**THE GOLD STAR  
MEMORIAL HIGHWAY**

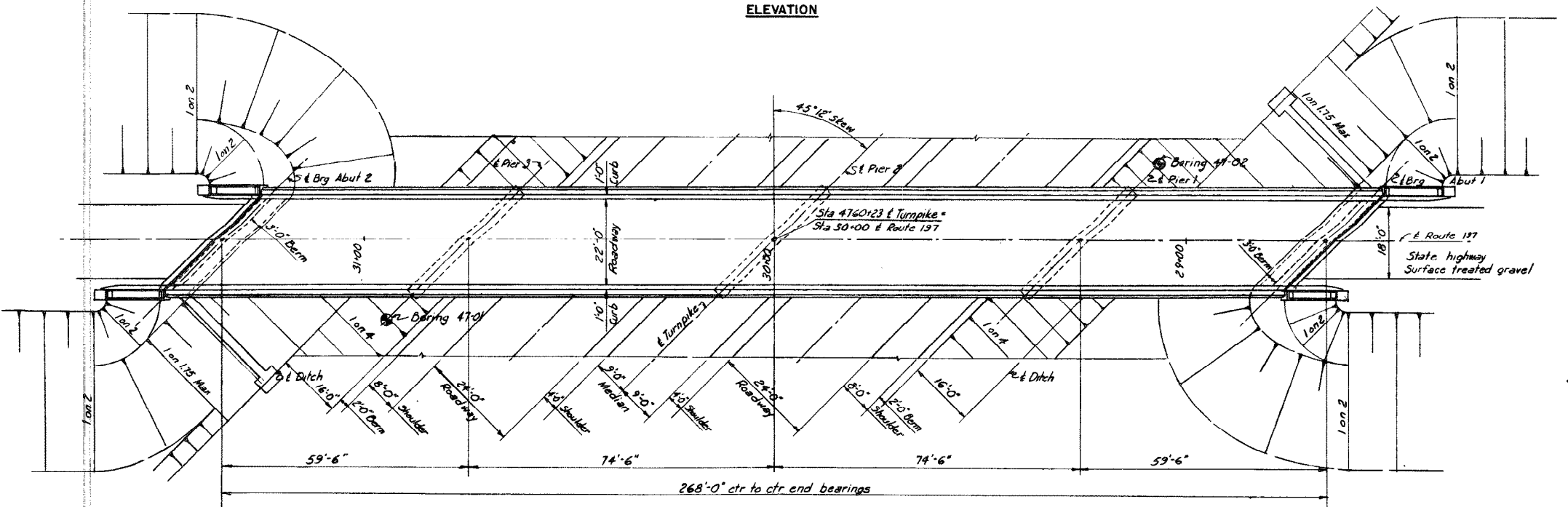
MTA PROJECT MANAGER: Kristi Van Ooyen, P.E.

SUPERSTRUCTURE REPLACEMENT  
 ROUTE 197 UNDERPASS  
 REINFORCING SCHEDULE IV

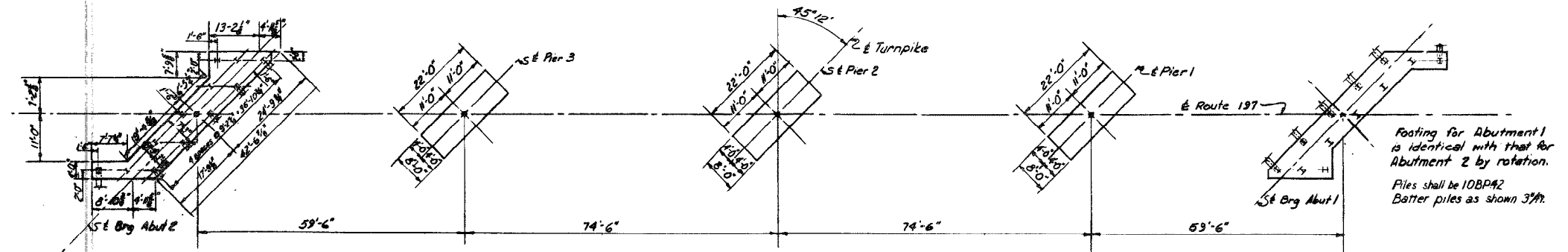
SHEET NUMBER: S-35  
 CONTRACT: 2022.06  
 76 OF 81



ELEVATION



PLAN



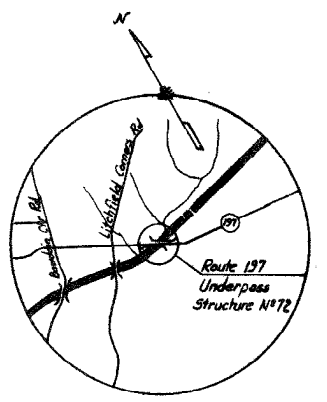
FOOTING PLAN

GENERAL NOTES

Design Specifications: AASHTO (1953) with minor modifications  
 Design Live Load: H-15  
 Maximum Soil Pressures:  
 Pier 3 = 5.6 ton/4y ft  
 Pier 2 = 5.5 ton/4y ft  
 Pier 1 = 5.0 ton/4y ft  
 Maximum Pile Load:  
 Abutments = 30 ton/pile

REFERENCES

| Dwg. No. | Title   | Superstructure          |                  |               |                  |
|----------|---|-------------------------|------------------|---------------|------------------|
|          |   | Substructure Contractor | Steel Fabricator | Steel Erector | Floor Contractor |
| SD14     | Standard Abutment Details                                       | ✓                       | ✓                | ✓             | ✓                |
| SD2      | Standard Pier Details   | ✓                       | ✓                | ✓             | ✓                |
| SD3      | Abutment Drainage Details                                       | ✓                       |                  |               |                  |
| SD5      | Standard Handrail, Bearing Devices and Miscellaneous Details    | ✓                       | ✓                | ✓             | ✓                |
| SD6      | Standard Diaphragm Details                                      |                         | ✓                | ✓             | ✓                |
| SD9      | Standard Type A Splices for 33WF Beams                          |                         | ✓                | ✓             | ✓                |
| SD12     | Type Z Expansion Joint  | ✓                       | ✓                | ✓             | ✓                |
| SD14     | Standard Bridge Floor Cross Sections 20'-0" and 22'-0" Roadways | ✓                       | ✓                | ✓             | ✓                |
| SD-4     | Standard Pile Details   | ✓                       |                  |               |                  |

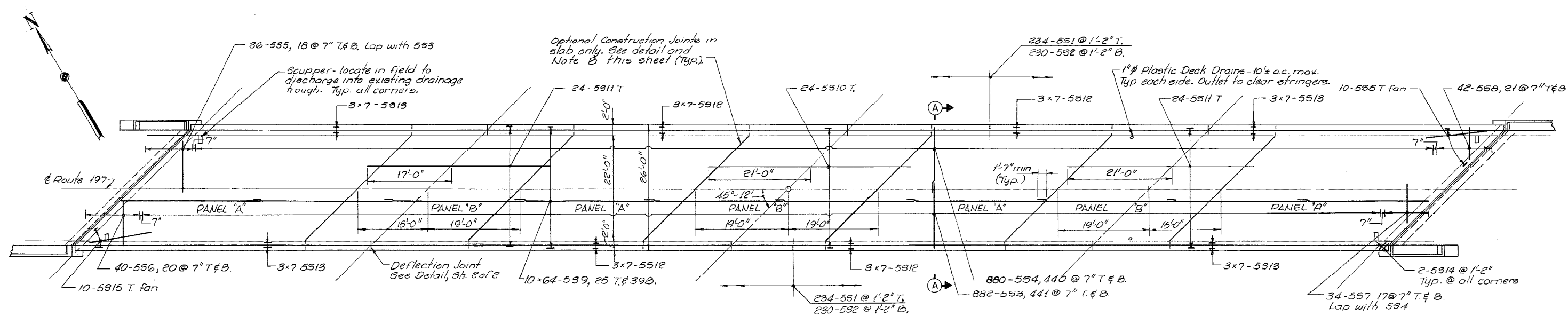


VICINITY MAP  
Scale: 1" = 1 Mile

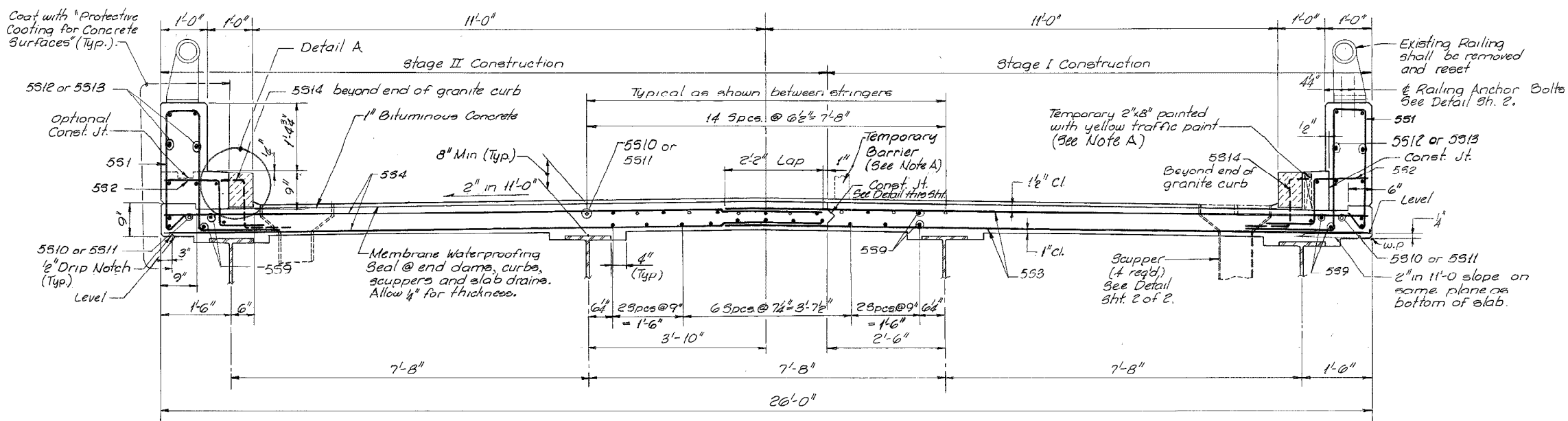
DRAWING 72.01.03

| BY     | DATE   | REVISION | BY                             | DATE       |
|--------|--------|----------|--------------------------------|------------|
| WCM    | 2-1-54 | 3        | As-Built                       | HBM/253L   |
| WCM    | 2-1-54 | 3        | Pier Fty. Elev.                | CVA 713-SS |
| R.F.S. | 2-8-54 | 1        | Added Steel Piles to Abutments | MCH 224-54 |

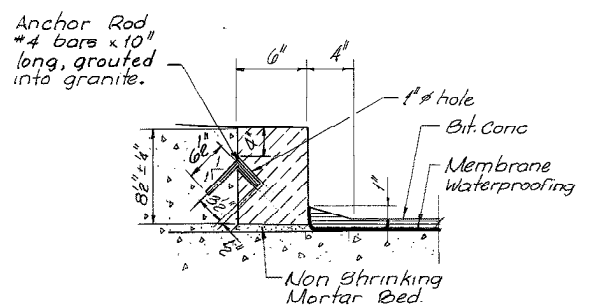
MAINE TURNPIKE AUTHORITY  
**MAINE TURNPIKE**  
 SECTION 2- PORTLAND TO AUGUSTA  
 STRUCTURE NO. 72 TURNPIKE UNDER  
 STATE HIGHWAY ROUTE 197  
 STA 4760 + 23  
**GENERAL PLAN AND ELEVATION**  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS  
 SCALE: 1" = 10'  
 CONTRACT NO. \_\_\_\_\_  
 NEW YORK KANSAS CITY SHEET NO. 321 OF 302



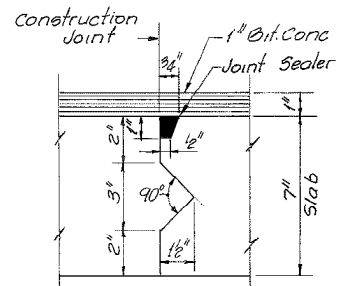
**DECK PLAN**  
1"=10'



**SECTION A-A**  
3/8"=1'-0"



**DETAIL A**  
1/2"=1'-0"



Reinforcement shall be continuous through the joint.  
**CONSTRUCTION JOINT DETAIL**  
3/8"=1'-0"

**NOTE A**

Do not set the granite curb or place the concrete safety walk during Stage I Construction. The temporary 2x8 shall be secured to the reinforcing steel and painted as indicated. The Temporary Barrier shall be set maintaining 9'-5" min. from its face to the face of the temporary 2x8.

**NOTE B**

As an alternate and at the Contractors option, the deck concrete may be placed in one continuous operation thus eliminating slab construction joints and joint sealer. Continuous placing of concrete in the deck shall be made with the use of an acceptable set-retarder.

**SPECIFICATIONS**

**DESIGN**  
A.A.S.H.T.O. Standard Specifications for Highway Bridges 1973 with interim specifications.

**CONTRACT**  
State of Maine, State Highway Commission Standard Specifications, Highways and Bridges, revision of June 1968.

**LIVE LOADING**

H15-44

**ALLOWABLE STRESSES**

Concrete ( $n=10$ ) -  $f_c=1200$  p.s.i.  
Reinforcing Steel, ASTM Designation A615 Grade 60,  $f_s=24,000$  p.s.i.

**CONCRETE CLASSIFICATION**

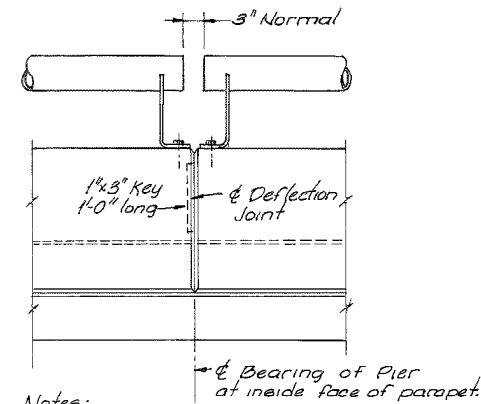
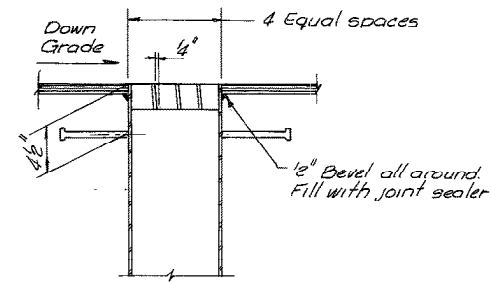
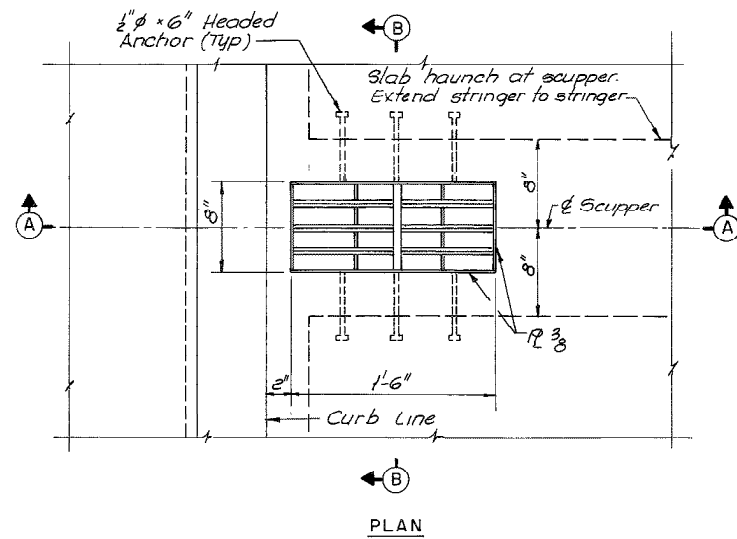
All Concrete shall be Class A

**NOTES:**

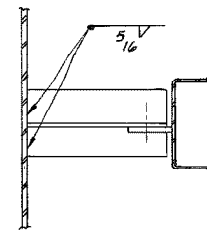
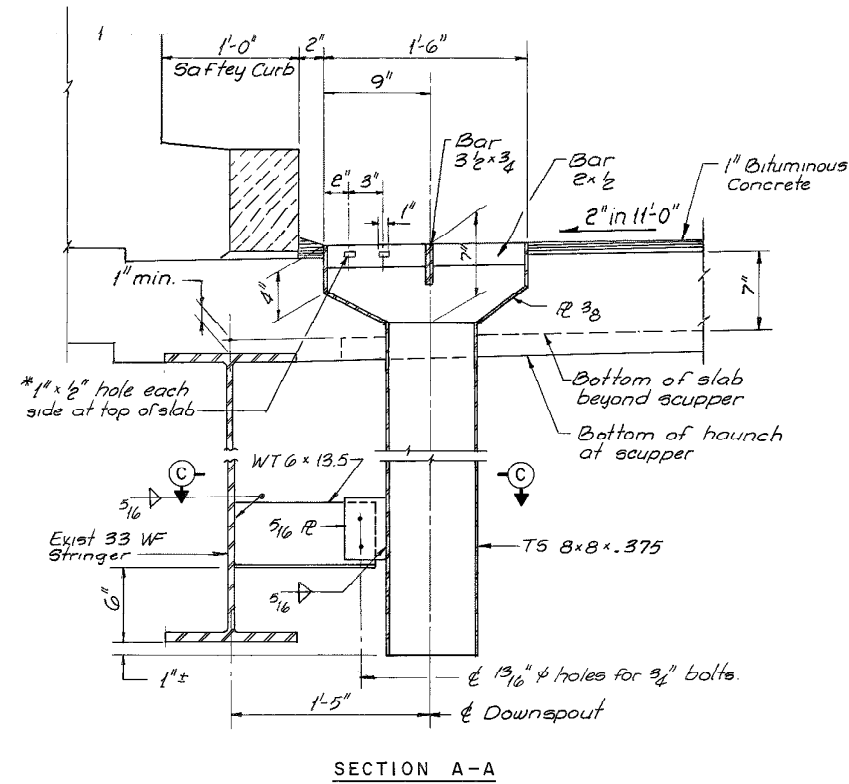
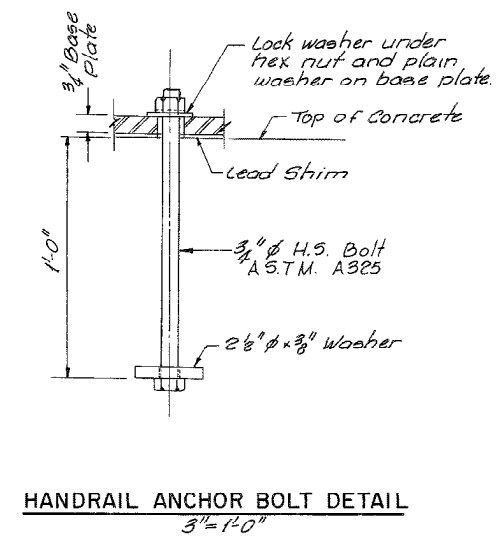
1. Reinforcing steel to have 2" minimum clear cover unless otherwise noted.
2. Chamfer all exposed edges 1/2".
3. Place concrete in "B" panels before placing in "A" panels.

|  |                                    |
|--|------------------------------------|
| MAINE TURNPIKE AUTHORITY<br><b>MAINE TURNPIKE</b><br>SECTION 2 - PORTLAND TO AUGUSTA |                                    |
| <b>ROUTE 197</b><br><b>DECK REPLACEMENT</b>  |                                    |
| HOWARD NEEDLES TAMMEN & BERGENDOFF<br>CONSULTING ENGINEERS<br>BOSTON                 | SCALE AS NOTED<br>SHEET NO. 1 of 2 |

| NO. | REVISION | BY DATE      | IN CHARGE OF |
|-----|----------|--------------|--------------|
|     | MADE     | RCM 6-26-75  |              |
|     | TRACED   |              |              |
|     | CHECKED  | L.B. 6-27-75 |              |
|     |          |              | J.P.W.       |

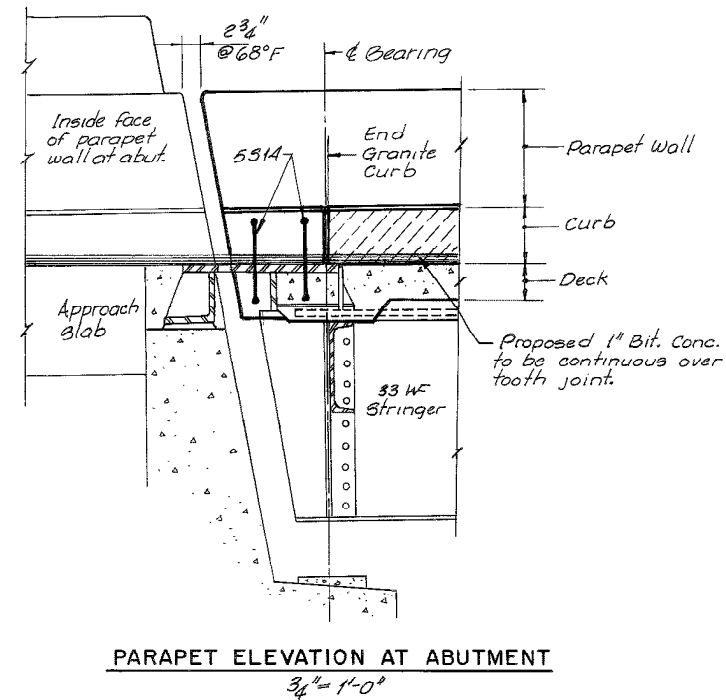


Notes:  
 1. No reinforcing steel is to pass through deflection joints  
 2. Coat concrete faces with colorless form oil to break bond.  
 3/4" = 1'-0"



SCUPPER NOTES:  
 1. All welds to be continuous 3/16" bead or fillet weld.  
 2. All steel shall conform to A.S.T.M. Designation A36, Galvanize after fabrication.  
 3. \* Do not cover holes with membrane waterproofing.

SCUPPER DETAILS  
 1/2" = 1'-0"  
 (Four Required)



| NO. | REVISION | BY      | DATE           | IN CHARGE OF |
|-----|----------|---------|----------------|--------------|
|     |          | MADE    | R.C.M. 6-25-75 |              |
|     |          | TRACED  |                |              |
|     |          | CHECKED | L.S. 6-27-75   |              |
|     |          | BY DATE |                | J.P.W.       |

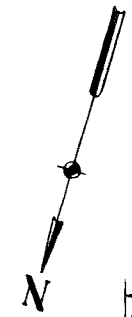
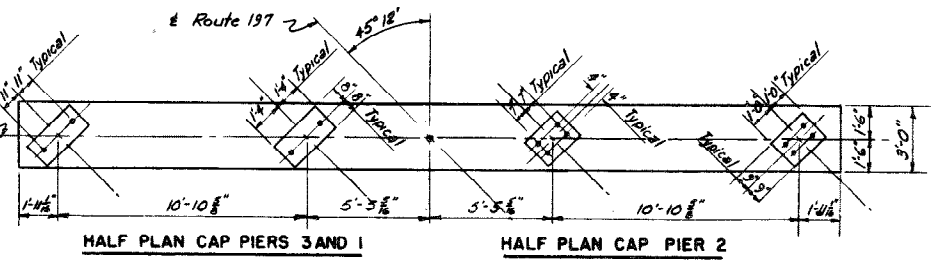
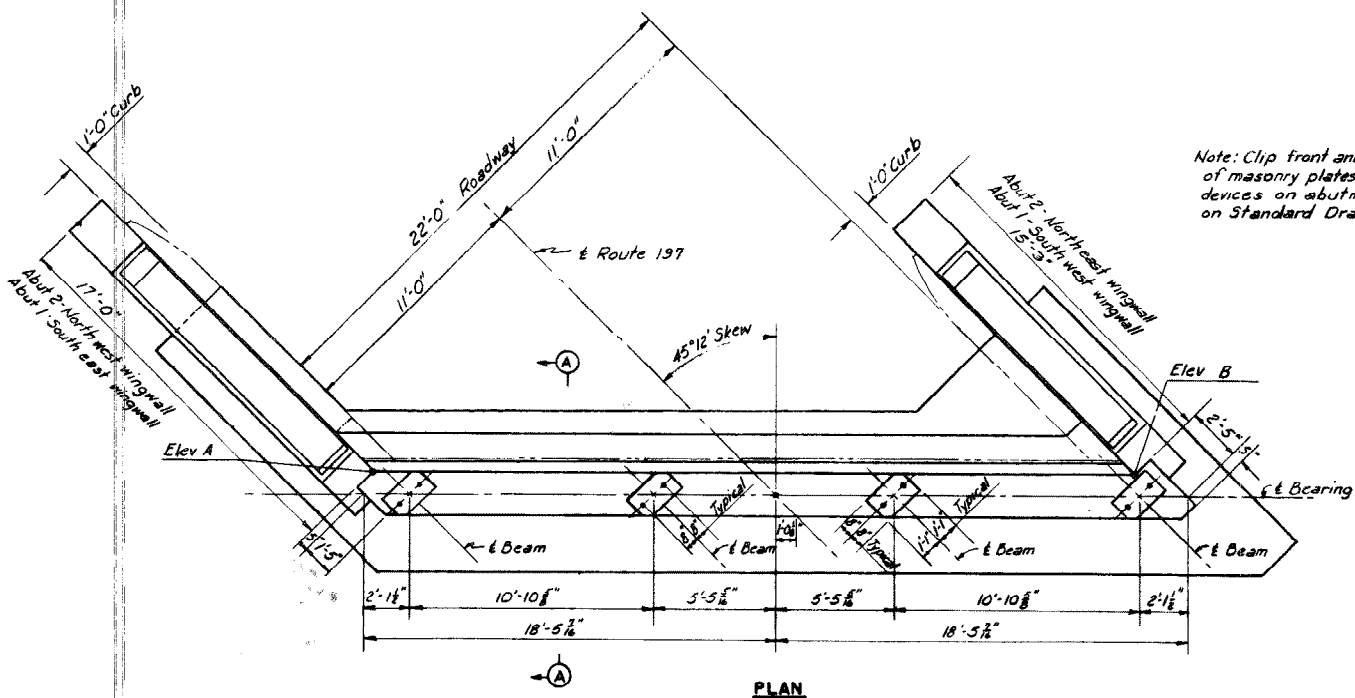
MAINE TURNPIKE AUTHORITY  
**MAINE TURNPIKE**  
 SECTION 2 - PORTLAND TO AUGUSTA

**ROUTE 197**  
**MISCELLANEOUS DETAILS**

HOWARD NEEDLES TAMMEN & BERGENDOFF  
 CONSULTING ENGINEERS  
 BOSTON

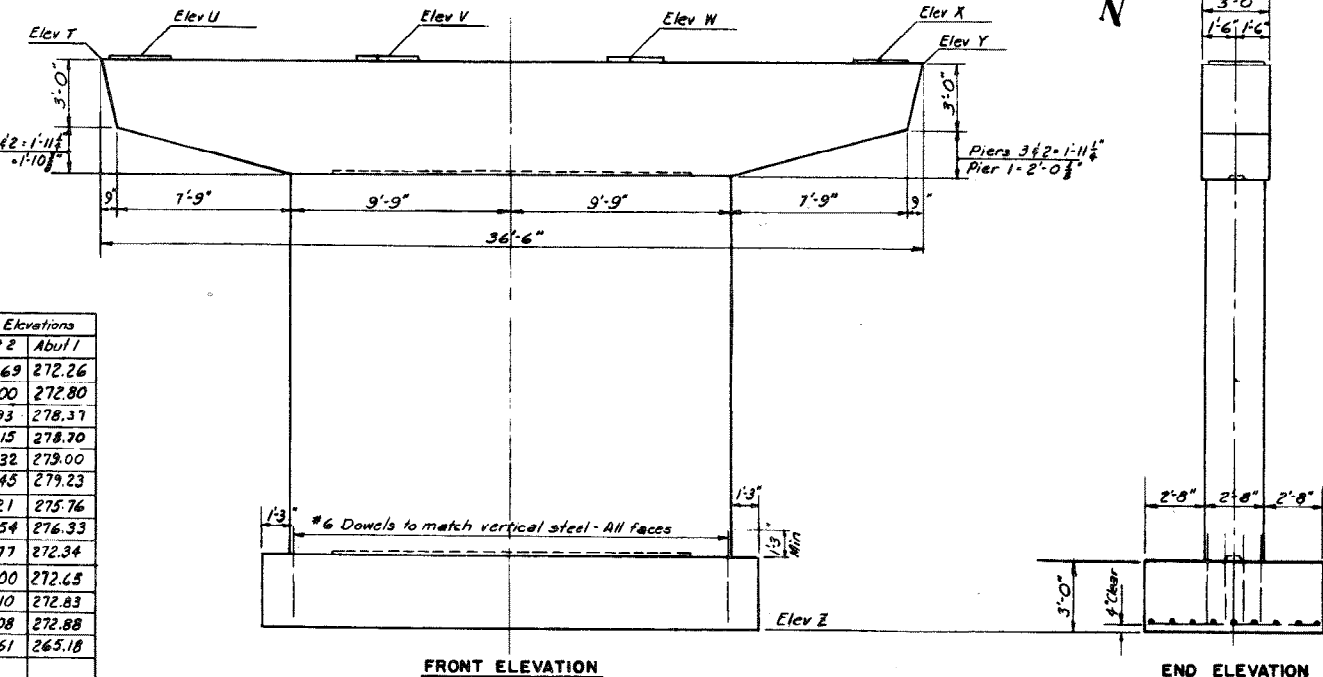
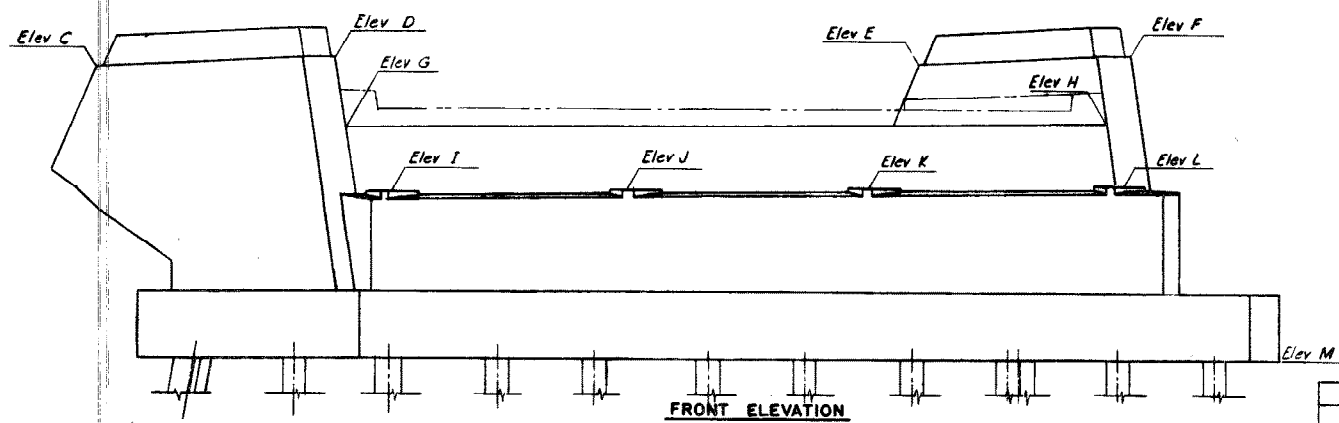
SCALE AS NOTED  
 SHEET NO. 2 of 2

Note: Clip front and back corners of masonry plates of bearing devices on abutments as shown on Standard Drawing 5.

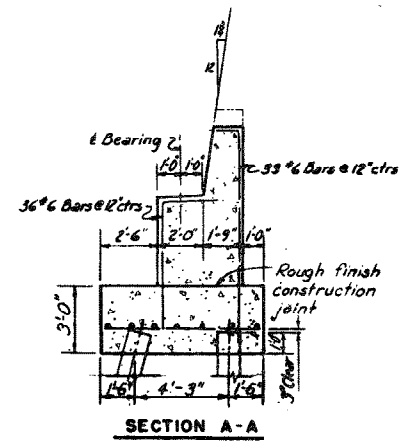
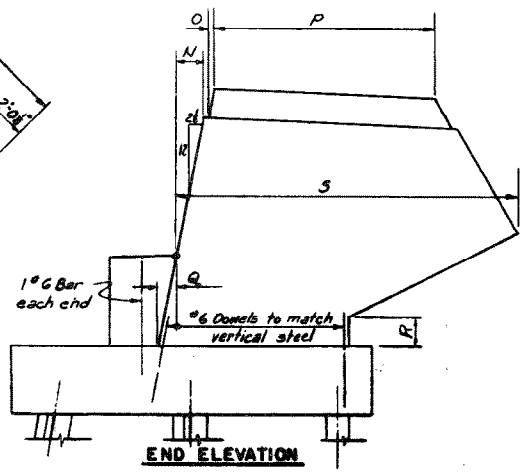
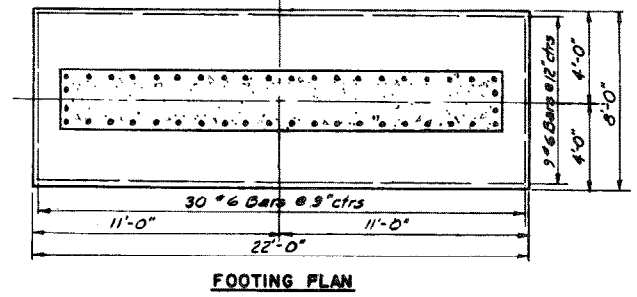
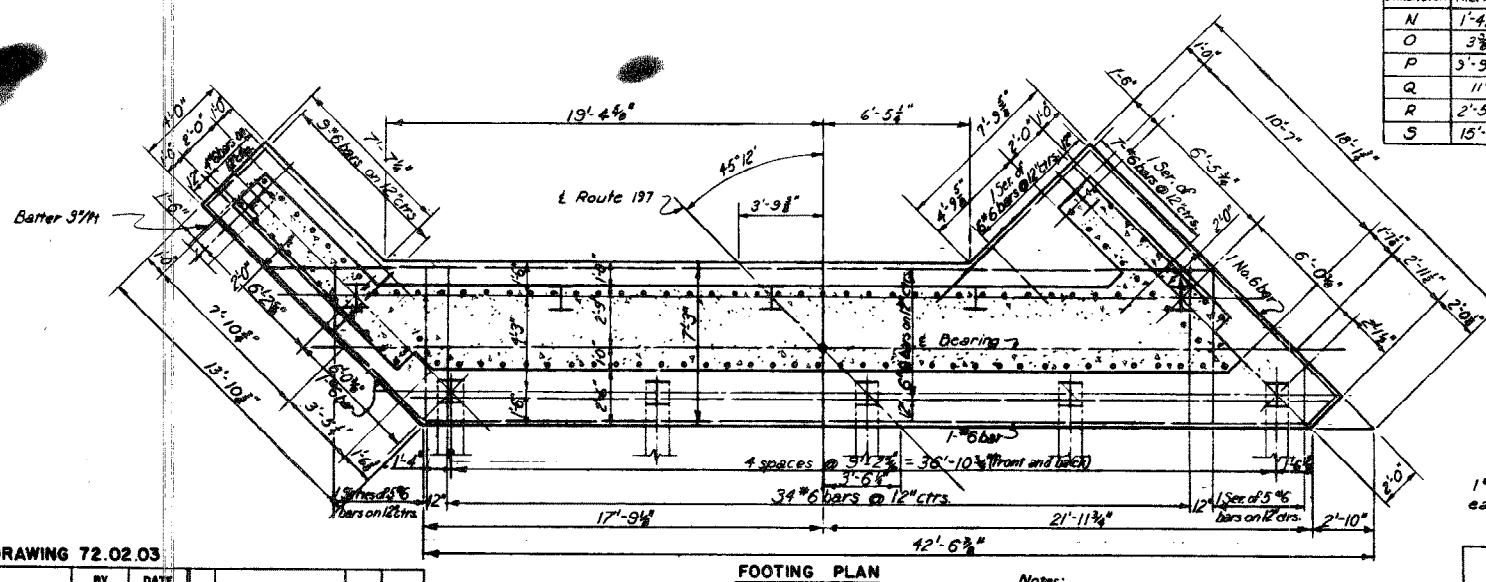


| Point | Abut 2 | Abut 1 |
|-------|--------|--------|
| A     | 273.69 | 272.26 |
| B     | 274.00 | 272.80 |
| C     | 279.93 | 278.37 |
| D     | 280.15 | 278.70 |
| E     | 280.32 | 279.00 |
| F     | 280.45 | 279.23 |
| G     | 277.21 | 275.76 |
| H     | 277.54 | 276.33 |
| I     | 273.77 | 272.34 |
| J     | 274.00 | 272.65 |
| K     | 274.10 | 272.83 |
| L     | 274.08 | 272.88 |
| M     | 266.61 | 265.18 |

| Dimension | Wingwall Dimensions |                     |                     |                     |
|-----------|---------------------|---------------------|---------------------|---------------------|
|           | Abut 2<br>N.E. Wall | Abut 2<br>N.W. Wall | Abut 1<br>S.E. Wall | Abut 1<br>S.W. Wall |
| N         | 1'-4 1/2"           | 1'-4 1/2"           | 1'-4 1/2"           | 1'-4 1/2"           |
| O         | 3 3/8"              | 3 3/8"              | 3 3/8"              | 3 3/8"              |
| P         | 3'-9 1/2"           | 11'-6 1/2"          | 11'-6 1/2"          | 9'-9 1/2"           |
| Q         | 11"                 | 10 1/2"             | 10 1/2"             | 11 1/2"             |
| R         | 2'-5 1/2"           | 2'-0 1/2"           | 1'-11 1/2"          | 2'-6 3/8"           |
| S         | 15'-3"              | 17'-0"              | 17'-0"              | 15'-3"              |



| Point | Pier Elevations |        |        |
|-------|-----------------|--------|--------|
|       | Pier 3          | Pier 2 | Pier 1 |
| T     | 274.06          | 274.36 | 273.16 |
| U     | 274.20          | 274.38 | 273.24 |
| V     | 274.89          | 274.55 | 273.48 |
| W     | 274.29          | 274.58 | 273.60 |
| X     | 274.08          | 274.50 | 273.59 |
| Y     | 274.06          | 274.36 | 273.57 |
| Z     | 248.00          | 250.75 | 251.50 |



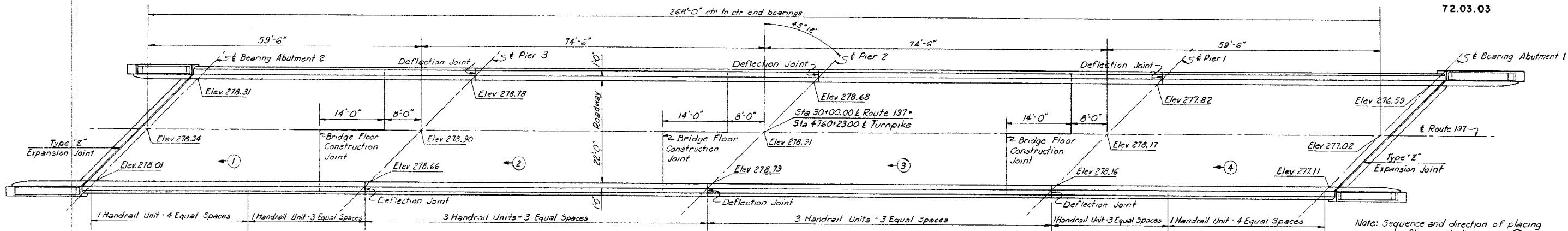
Notes:  
Piles shall be 10BD42.  
Batter piles as shown  
3" per foot.  
All abutment reinforcing  
shall be #6 at 12" ctrs.

DRAWING 72.02.03

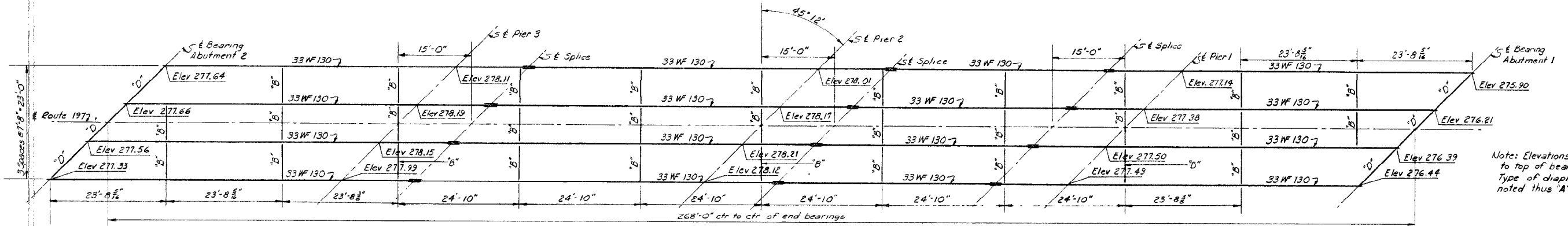
| BY      | DATE    | REVISION | BY                             | DATE      |
|---------|---------|----------|--------------------------------|-----------|
| WGM     | 1-29-54 | 3        | AS-BUILT                       | NEW 12556 |
| TRACED  |         | 2        | Pier Elev.                     | OW 11835  |
| CHECKED | R.F.S.  | 1        | Added Steel Piles to Abutments | NEW 22354 |

MAINE TURNPIKE AUTHORITY  
**SECTION 2— PORTLAND TO AUGUSTA**  
 STRUCTURE NO. 72 TURNPIKE UNDER  
 STATE HIGHWAY ROUTE 197  
 STA 4760 + 23  
**SUBSTRUCTURE**  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF  
 CONSULTING ENGINEERS  
 NEW YORK KANSAS CITY  
 SCALE: 1/4" = 1'-0"  
 CONTRACT NO. \_\_\_\_\_  
 SHEET NO. 322 OF 362

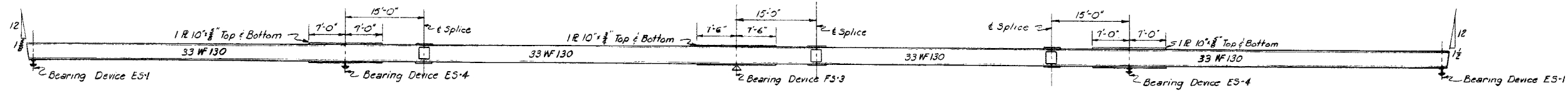
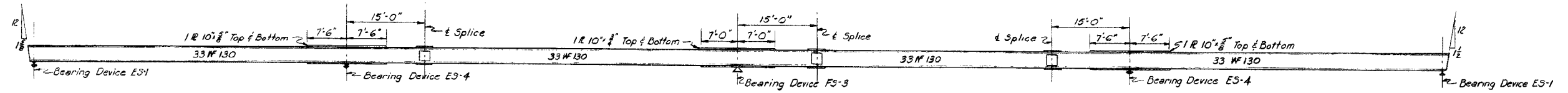




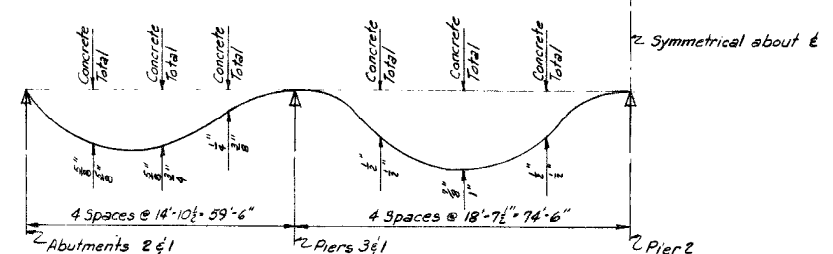
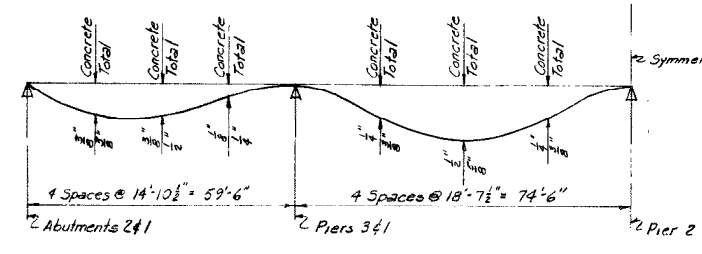
Note: Sequence and direction of placing concrete floor noted thus: ① Elevations shown are to top surface of concrete. Use a 7" bridge floor (Non-composite) as shown on Standard Drawing 14.



Note: Elevations shown are to top of beam flange. Type of diaphragm is noted thus "A"



Note: All bearing stiffeners at points of support are 7" x 4" x 5/8" angles. Bevel of beam ends is true with respect to the beam axis.



DRAWING 72.03.03

|                       |      |          |          |           |
|-----------------------|------|----------|----------|-----------|
| BY                    | DATE |          |          |           |
| MADE                  | WCM  | 1-25-54  |          |           |
| TRACED                |      |          |          |           |
| CHECKED               | RFS  | 2-8-54   | As-Built | HBH V2554 |
| IN CHARGE OF I.D.S.K. | No   | REVISION | BY       | DATE      |

MAINE TURNPIKE AUTHORITY  
**MAINE TURNPIKE**  
 SECTION 2- PORTLAND TO AUGUSTA  
 STRUCTURE NO. 72 TURNPIKE UNDER  
 STATE HIGHWAY ROUTE 197  
 STA 4760+23  
**SUPERSTRUCTURE**  
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS SCALE: As noted CONTRACT NO. \_\_\_\_\_  
 NEW YORK KANSAS CITY SHEET NO. 323 OF 382