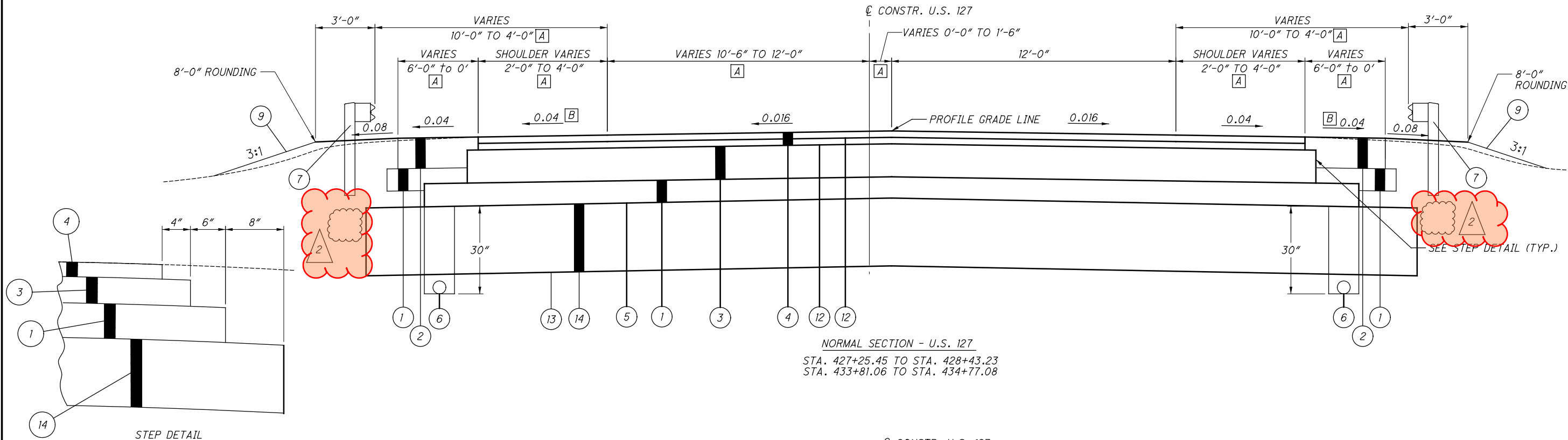


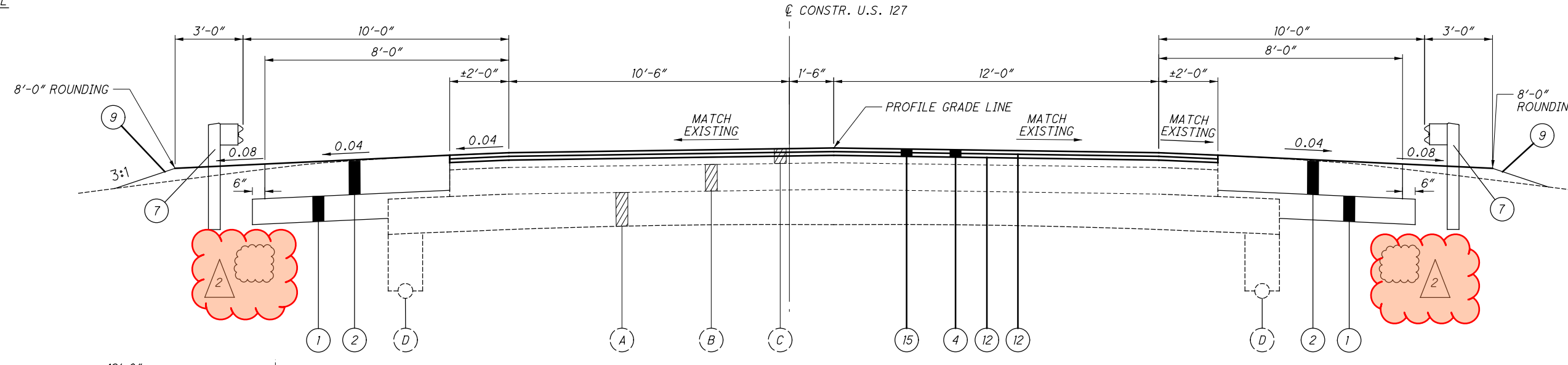
REVISION 2: 11/14/2022

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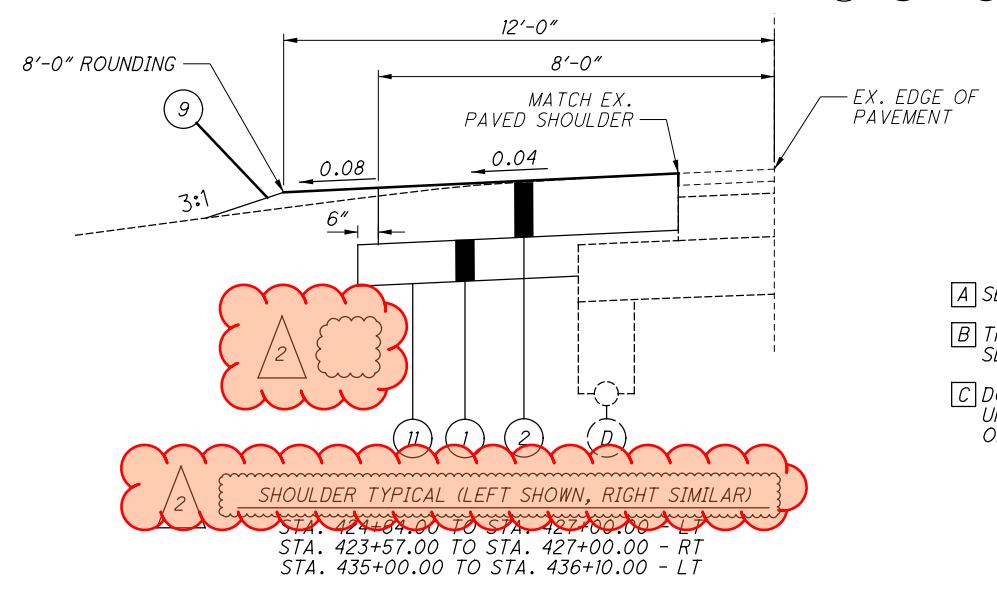


NORMAL SECTION - U.S. 127
 STA. 427+25.45 TO STA. 428+43.23
 STA. 433+81.06 TO STA. 434+77.08

STEP DETAIL



NORMAL SECTION - U.S. 127
 STA. 427+00.00 TO STA. 427+25.45
 STA. 434+77.08 TO STA. 435+00.00



SHOULDER TYPICAL (LEFT SHOWN, RIGHT SIMILAR)
 STA. 424+84.00 TO STA. 427+00.00 - LT
 STA. 423+57.00 TO STA. 427+00.00 - RT
 STA. 435+00.00 TO STA. 436+10.00 - LT

NOTES

- [A] SEE PLAN SHEETS FOR OFFSETS
- [B] TRANSITION TO 0.016 OVER 10' TO MATCH APPROACH SLAB CROSS SLOPES
- [C] DO NOT PLACE GEOTEXTILE FABRIC ABOVE THE UNDERDRAIN WITHIN 9" HORIZONTALLY FROM THE CENTER OF THE UNDERDRAIN

LEGEND

- 1 ITEM 304 - 6" AGGREGATE BASE
- 2 ITEM 304 - 8" AGGREGATE BASE
- 3 ITEM 301 - 9" ASPHALT CONCRETE BASE, PG64-22
- 4 ITEM 441 - 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 IN TWO 1.5" LIFTS
- 5 ITEM 204 - SUBGRADE COMPACTION
- 6 ITEM 611 - 6" SHALLOW PIPE UNDERDRAIN
- 7 ITEM 606 - GUARDRAIL, TYPE MGS
- 8 NOT USED
- 9 ITEM 659 - SEEDING AND MULCHING
- 10 ITEM 660 - SODDING STAKED
- 11 ITEM 209 - RESHAPING UNDER GUARDRAIL, AS PER PLAN
- 12 ITEM 407 - TACK COAT
- 13 ITEM 204 - GEOTEXTILE FABRIC [C]
- 14 ITEM 204 - 21" GRANULAR MATERIAL, TYPE B
- 15 ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (3")

TYPICAL SECTIONS

DEF-127-00.53

REVISION 1: 10/24/2022 ADDENDUM R1
 REVISION 2: 11/14/2022 ADDENDUM R2

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| SHEET NO. | | | | | FUNDING SPLIT | | ITEM | ITEM EXT. | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|-----------|-----|------|------|--|---------------|-----|-------|-----------|-------------|---|-------------|---------------|
| 6 | 13 | 14 | 15 | | 01/STR/BR | | | | | | | |
| LS | 948 | | | | LS | 201 | 11001 | LS | | ROADWAY CLEARING AND GRUBBING, AS PER PLAN | 6 | |
| | 4 | | | | 948 | 202 | 38000 | 948 | LF | GUARDRAIL REMOVED | | |
| | 4 | | | | 4 | 202 | 42000 | 4 | EA | ANCHOR ASSEMBLY REMOVED, TYPE A | | |
| | 4 | | | | 4 | 202 | 47000 | 4 | EA | BRIDGE TERMINAL ASSEMBLY REMOVED | | |
| | | 613 | | | 613 | 202 | 23000 | 613 | SY | PAVEMENT REMOVED | | |
| | | | 277 | | 277 | 203 | 10000 | 277 | CY | EXCAVATION | | |
| | | | 278 | | 278 | 203 | 20000 | 278 | CY | EMBANKMENT | | |
| | | 1660 | | | 1660 | 204 | 10000 | 1660 | SY | SUBGRADE COMPACTION | | |
| | | | 464 | | 464 | 204 | 13000 | 464 | CY | EXCAVATION OF SUBGRADE | | |
| | | | 464 | | 464 | 204 | 30010 | 464 | CY | GRANULAR MATERIAL, TYPE B | | |
| | | | 1 | | 1 | 204 | 45000 | 1 | HRS | PROOF ROLLING | | |
| | | | 22 | | 22 | 204 | 50000 | 22 | SY | GEOTEXTILE FABRIC | | |
| | | 11 | | | 11 | 209 | 15001 | 11 | STA | RESHAPING UNDER GUARDRAIL, AS PER PLAN | 6 | |
| | 425 | | | | 425 | 606 | 15101 | 425 | LF | GUARDRAIL, TYPE MGS WITH LONG POSTS, AS PER PLAN | 6 | |
| | 2 | | | | 2 | 606 | 26000 | 2 | EA | ANCHOR ASSEMBLY, TYPE B | | |
| | 2 | | | | 2 | 606 | 26100 | 2 | EA | ANCHOR ASSEMBLY, TYPE E | | |
| | 4 | | | | 4 | 606 | 35003 | 4 | EA | MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN | 6 | |
| | 52 | | | | 52 | 609 | 24510 | 52 | LF | CURB, TYPE 4-C | | |
| | | | | | | | | | | EROSION CONTROL | | |
| | 26 | | | | 26 | 601 | 21050 | 26 | SY | TIED CONCRETE BLOCK MAT, TYPE 1 | | |
| | 346 | | | | 346 | 601 | 21060 | 346 | SY | TIED CONCRETE BLOCK MAT, TYPE 2 | | |
| | 510 | | | | 510 | 601 | 32000 | 510 | CY | ROCK CHANNEL PROTECTION, TYPE A WITH FILTER | | |
| | | | 2 | | 2 | 659 | 00100 | 2 | EA | SOIL ANALYSIS TEST | | |
| | | | 198 | | 198 | 659 | 00300 | 198 | CY | TOPSOIL | | |
| | | | 1589 | | 1589 | 659 | 00510 | 1589 | SY | SEEDING AND MULCHING, CLASS 2 | 6 | |
| | | | 194 | | 194 | 659 | 00580 | 194 | SY | SEEDING AND MULCHING, CLASS 5B | 6 | |
| | | | 89 | | 89 | 659 | 14000 | 89 | SY | REPAIR SEEDING AND MULCHING | | |
| | | | 89 | | 89 | 659 | 15000 | 89 | SY | INTER-SEEDING | | |
| | | | 0.26 | | 0.26 | 659 | 20000 | 0.26 | TON | COMMERCIAL FERTILIZER | | |
| | | | 0.37 | | 0.37 | 659 | 31000 | 0.37 | ACRES | LIME | | |
| | | | 10 | | 10 | 659 | 35000 | 10 | MGAL | WATER | | |
| | | | 4 | | 4 | 659 | 40000 | 4 | MSF | MOWING | | |
| | 202 | | | | 202 | 660 | 25000 | 202 | SY | SODDING STAKED | | |
| | | | | | LS | 832 | 15000 | LS | | STORM WATER POLLUTION PREVENTION PLAN | | |
| | | | | | LS | 832 | 15002 | LS | | STORM WATER POLLUTION INSPECTIONS | | |
| | | | | | LS | 832 | 15010 | LS | | STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE | | |
| | | | | | 20000 | 832 | 30000 | 20000 | EA | EROSION CONTROL | | |
| | | | | | | | | | | DRAINAGE | | |
| | 0.4 | | | | 0.4 | 602 | 20000 | 0.4 | CY | CONCRETE MASONRY | | |
| | 29 | | | | 29 | 611 | 04900 | 29 | LF | 12" CONDUIT, TYPE D | | |
| | 236 | | | | 236 | 605 | 11100 | 236 | LF | 6" SHALLOW PIPE UNDERDRAIN | | |
| | 21 | | | | 21 | 611 | 00510 | 21 | LF | 6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS | | |
| | 2 | | | | 2 | 611 | 99710 | 2 | EA | PRECAST REINFORCED CONCRETE OUTLET | | |
| | | | | | | | | | | PAVEMENT | | |
| | | 159 | | | 159 | 254 | 01000 | 159 | SY | PAVEMENT PLANING, ASPHALT CONCRETE | | |
| | | 201 | | | 201 | 301 | 56000 | 201 | CY | ASPHALT CONCRETE BASE, PG64-22 (449) | | |
| | | 476 | | | 476 | 304 | 20000 | 476 | CY | AGGREGATE BASE | | |
| | | 108 | | | 108 | 407 | 10000 | 108 | GAL | TACK COAT (BELOW EACH SURFACE LIFT - 2 TOTAL) | | |
| | | | | | | | | | | ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 | | |

ADDENDUM R1

CALCULATED
 JTS
 CHECKED
 KMD
 GENERAL SUMMARY
 DEF-127-00.53
 11
 69

REVISION 2: 11/14/2022

2

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| REF NO. | SHEET NO. | STATION TO STATION | | SIDE | AVERAGE WIDTH FT | CADD GENERATED AREA SF | 202 | 204 | 209 | 254 | 301 | 304 | 304 | 407 | 441 |
|-----------------------------------|-----------|--------------------|-----------|-------|---------------------|---------------------------|------------------------|------------------------------|--|---|--|-------------------------|-------------------------|---|--|
| | | FROM | TO | | | | PAVEMENT REMOVED SY | SUBGRADE COMPACTION SY | RESHAPING UNDER GUARDRAIL, AS PER PLAN STA | PAVEMENT PLANING, ASPHALT CONCRETE SY | 9" ASPHALT CONCRETE BASE, PG64-22 CY | 6" AGGREGATE BASE CY | 8" AGGREGATE BASE CY | TACK COAT (BELOW EACH SURFACE LIFT - 2 TOTAL) GAL | 3" ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448) CY |
| P-1 | 16 | 422+81.08 | 423+98.72 | RT | | 236.8 | 26.3 | 37.2 | | | 7.7 | 6.2 | | 2.9 | 2.2 |
| | 16 - 17 | 423+56.61 | 427+49.56 | RT | | 2230.0 | | | 4 | | | 44.9 | 55.1 | | |
| | 16 - 17 | 424+64.24 | 427+85.97 | LT | | 1652.5 | | | 4 | | | 33.6 | 40.8 | | |
| | 17 | 427+00.00 | 427+25.45 | RT< | 28.7 | 729.6 | | | | 81.1 | | | | 11.3 | 6.8 |
| | 17 | 427+25.45 | 428+43.23 | RT< | | 3729.1 | | 436.2 | | | 105.8 | 72.7 | | 45.6 | 34.5 |
| | 17 | 427+25.45 | 428+20.43 | RT< | | 2739.9 | 304.4 | | | | | | | | |
| | 18 | 433+81.06 | 434+77.08 | RT< | | 3078.8 | | 359.9 | | | 87.3 | 60.0 | | 37.6 | 28.5 |
| | 18 | 433+95.55 | 434+77.08 | RT< | | 2543.2 | 282.6 | | | | | | | | |
| | 18 | 434+43.46 | 434+77.08 | RT | | 72.0 | | | 1 | | 1.6 | 1.8 | | | |
| | 18 | 434+60.86 | 436+08.77 | LT | | 741.4 | | | 2 | | 15.1 | 18.3 | | | |
| | 18 | 434+77.08 | 435+00.00 | RT< | 30.6 | 700.4 | | | | 77.82 | | | | 10.9 | 6.5 |
| | 19 | 200+33.03 | 200+38.19 | RT< | | 15.5 | | 1.7 | | | 0.3 | | | | |
| | 19 | 200+38.19 | 204+46.97 | RT< | 6 | 2452.7 | | 272.5 | | | 45.4 | | | | |
| | 19 | 204+46.97 | 204+85.57 | RT< | 8 | 308.8 | | 51.5 | | | 5.7 | | | | |
| | 19 | 204+85.57 | 204+85.60 | RT< | 10 | 0.3 | | 0.03 | | | 0.01 | | | | |
| E-4 | 19 | 204+85.60 | 205+07.83 | RT< | | 506.5 | | 56.3 | | | | | | | |
| DR-1 | 20 | 100+13.76 | 100+76.83 | RT< | | 1600.8 | | 177.9 | | | 29.6 | | | | |
| DR-2 | 20 | 100+76.83 | 101+16.83 | | 60 | 2400.0 | | 266.7 | | | 44.4 | | | | |
| TOTALS CARRIED TO GENERAL SUMMARY | | | | | | | 613 | 1660 | 11 | 159 | 201 | 360 | 116 | 108 | 78 |

CALCULATED
JTS
CHECKED
KMD

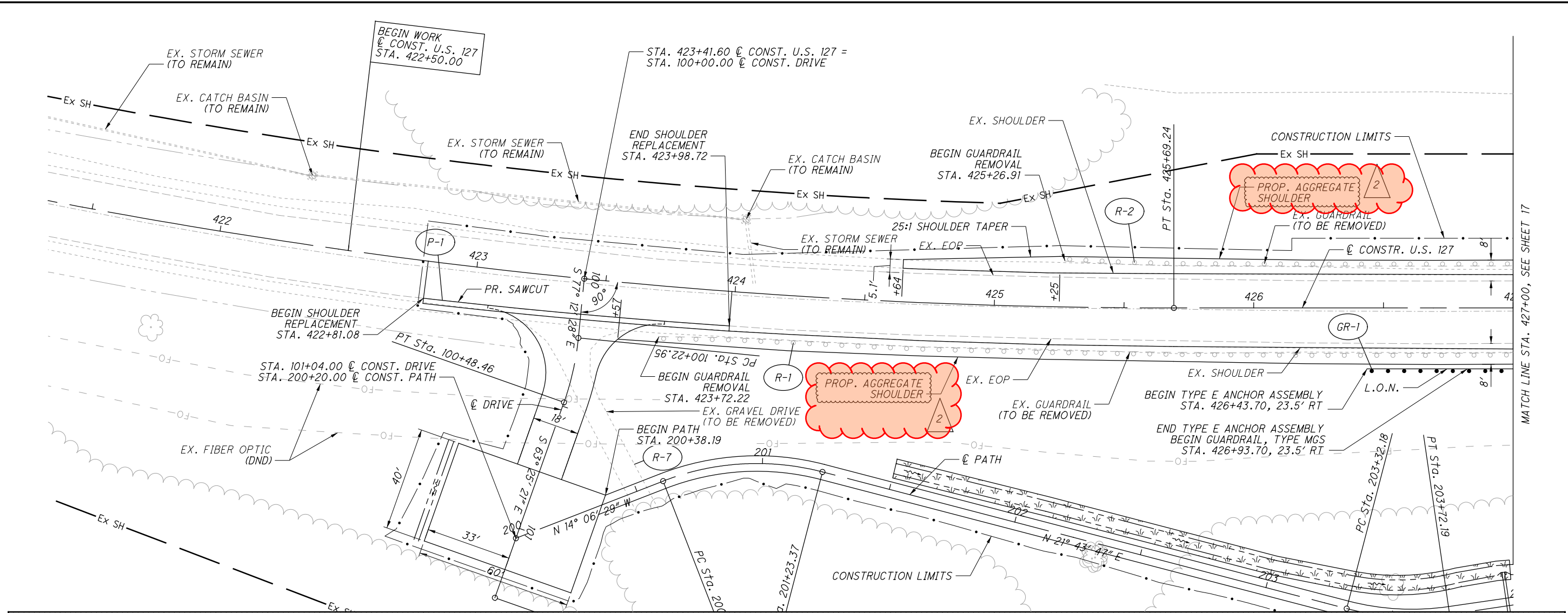
PAVEMENT SUBSUMMARY

DEF - 127 - 00.53

REVISION 2: 11/14/2022

2

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CALCULATED
JTS
CHECKED
DAB

0 20 40
10
HORIZONTAL
SCALE IN FEET

MATCH LINE STA. 427+00, SEE SHEET 17

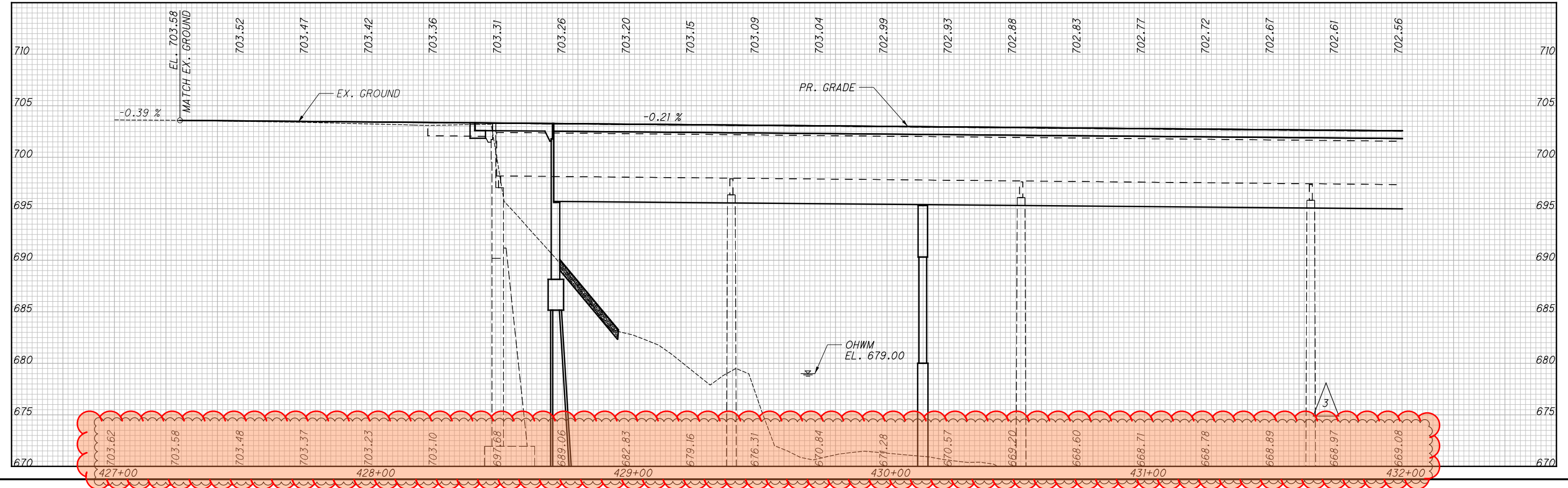
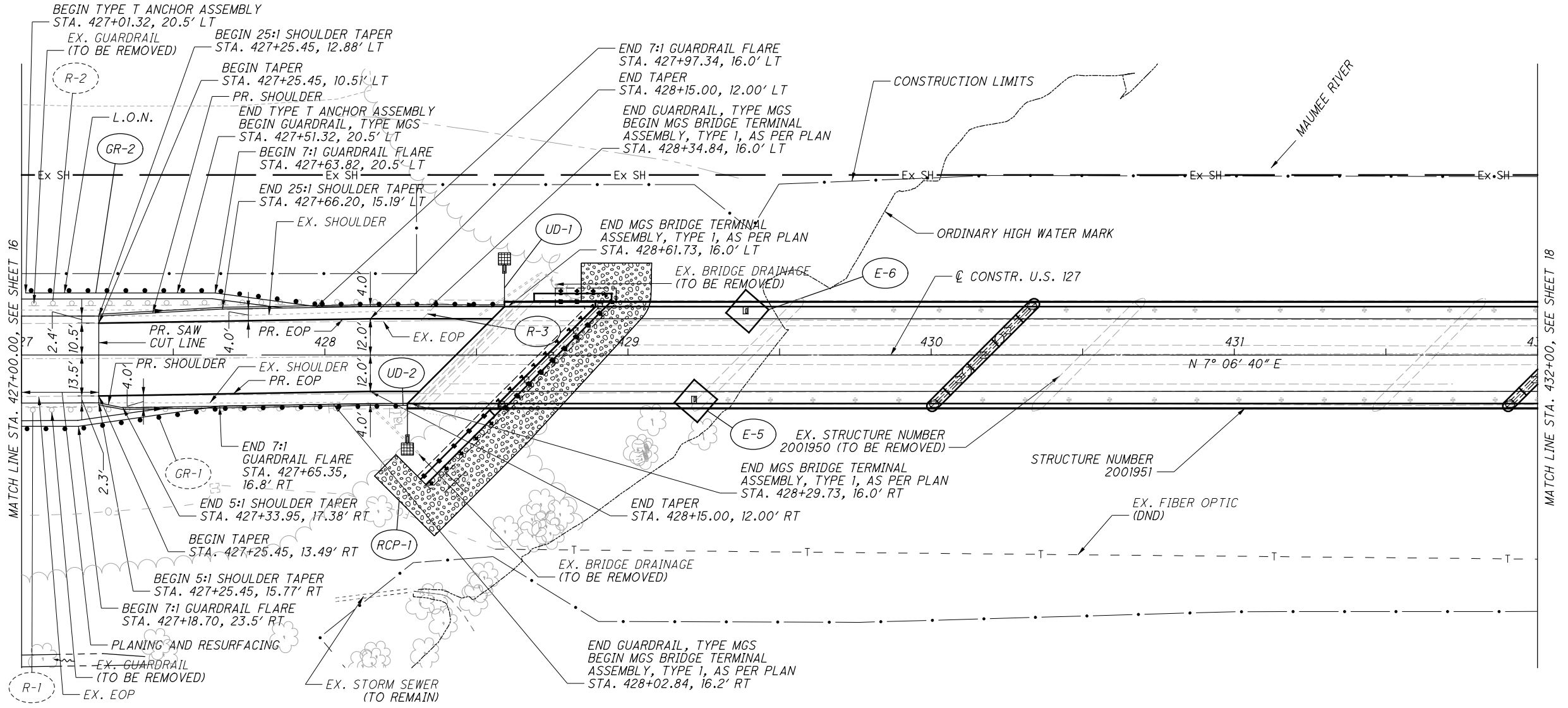
PLAN AND PROFILE
BEGIN TO STA. 427+00

DEF-127-00.53

REVISION 3: 11/23/2022

3

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CALCULATED
JTS
CHECKED
DAB

PLAN AND PROFILE
STA. 427+00.00 TO STA. 432+00

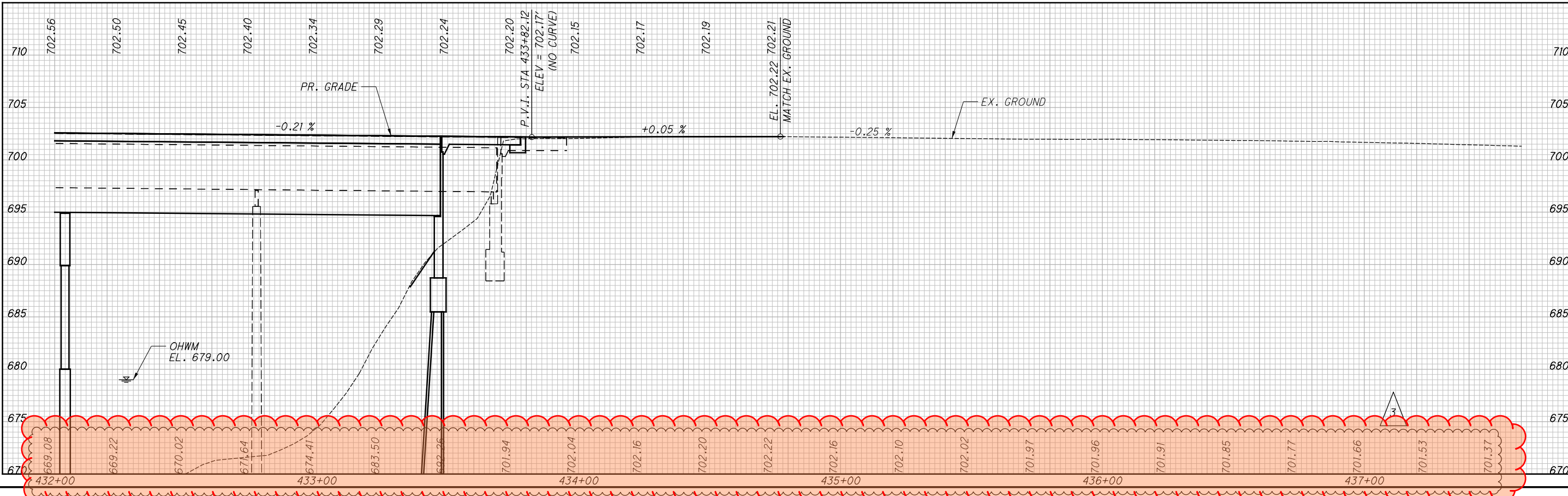
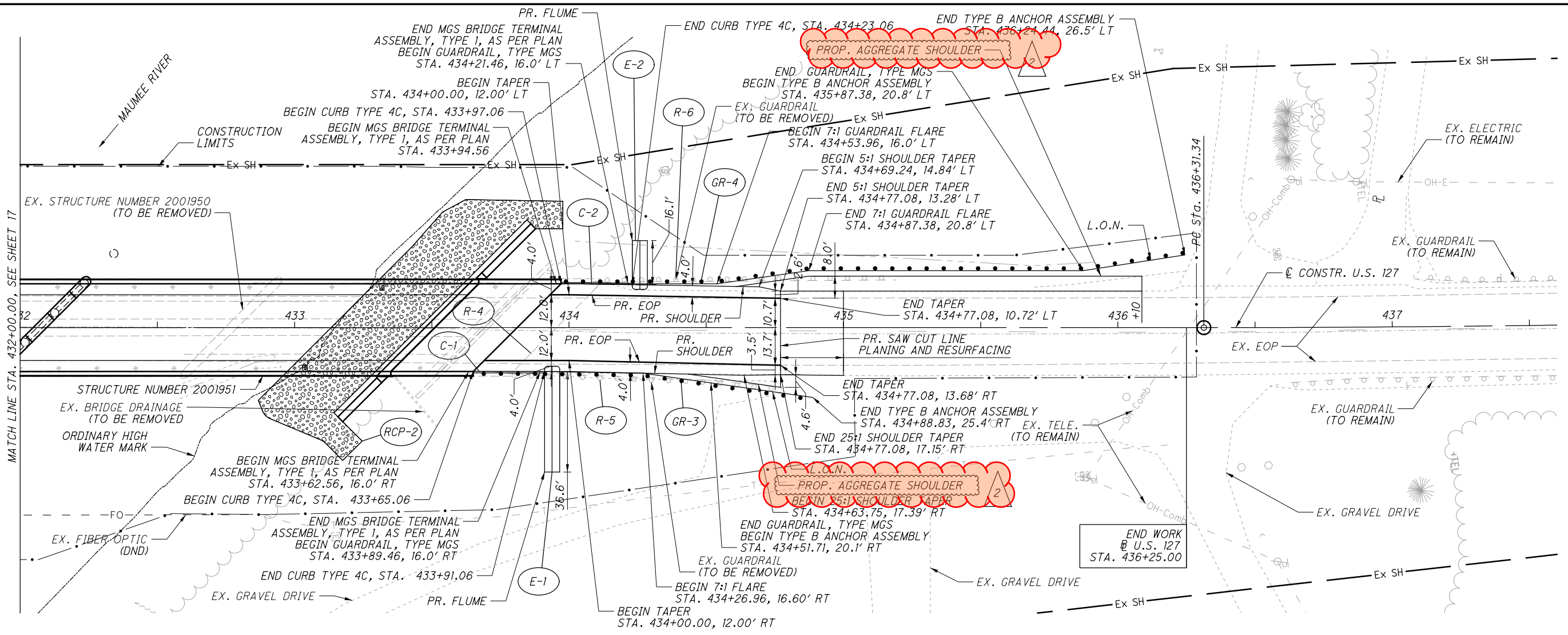
DEF - 127 - 00.53

17
69

REVISION 2: 11/14/2022

REVISION 3: 11/23/2022

11/22/2022 11:03:53 AM Jonathan.Shurillo

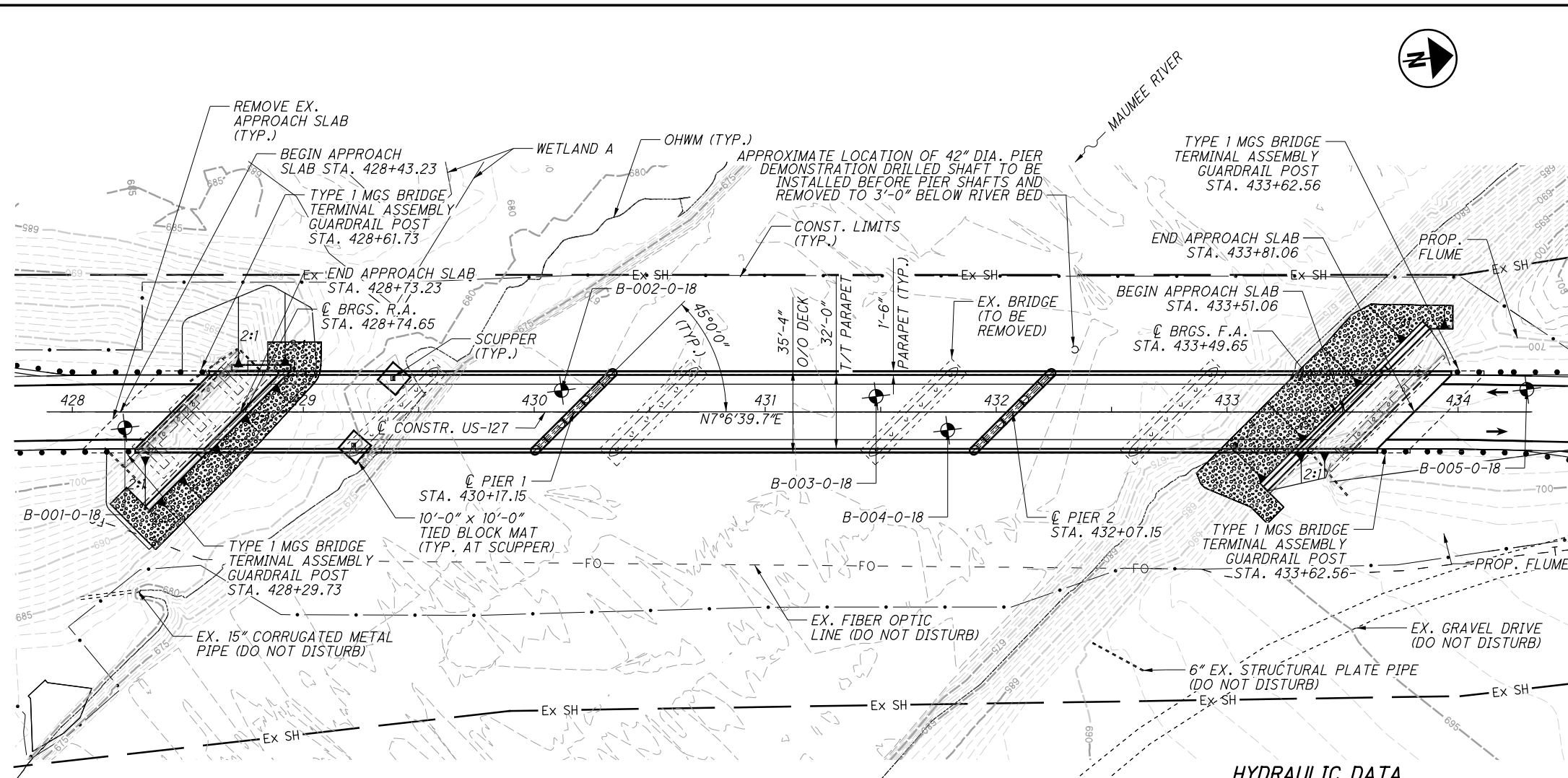


PLAN AND PROFILE
STA. 432+00.00 TO END

DEF-127-00.53

REVISION 3: 11/23/2022

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PLAN

BENCHMARK DATA

| | | | |
|-------------------------|--------------|---------------|-----|
| BM #300 STA. 416+75.16, | EL. 707.171, | OFFSET 17.62, | RT. |
| BM #303 STA. 437+51.08, | EL. 701.476, | OFFSET 15.61, | RT. |
| BM #304 STA. 446+63.60, | EL. 705.689, | OFFSET 15.85, | RT. |

FOR ADDITIONAL BENCHMARK INFORMATION. SEE ROADWAY PLAN SHEET 8/69

NOTES
EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPES SHALL CONFORM TO PLAN CROSS SECTIONS.

DESIGN TRAFFIC:
 2022 ADT = 3300
 2042 ADT = 3900
 2022 ADTT = 660
 2042 ADTT = 780
 DIRECTIONAL DISTRIBUTION = 0.51

LEGEND
 * = BORING LOCATION
 --- = TOP OF ROCK
 * = EXISTING GROUND
 □ = PROPOSED PROFILE GRADE

BORING LOCATIONS

| BORING | STATION | OFFSET | TOP OF ROCK |
|------------|-----------|----------|-------------|
| B-001-0-18 | 428+21.22 | 6.52 RT. | 656.3 |
| B-002-0-18 | 430+20.80 | 6.62 LT. | 654.7 |
| B-003-0-18 | 431+47.84 | 6.59 LT. | 652.4 |
| B-004-0-18 | 431+97.91 | 6.31 RT. | 653.5 |
| B-005-0-18 | 434+23.54 | 7.01 LT. | N/A |

EXISTING STRUCTURE

TYPE: 5-SPAN RIVETED PLATE GIRDER WITH REINFORCED CONCRETE SLAB, SOLID PIERS AND STUB ABUTMENTS FOUNDED ON CONCRETE FOOTINGS.

SPANS: 90'-0"±, 112'-6"±, 112'-6"±, 112'-6"±, 90'-0"± C/C BRGS.

ROADWAY: 32'-2"± TOE/TOE PARAPET

LOADING: S-15-40

SKEW: 45°00'00"± LEFT FORWARD

DECK: 7.5"± CAST-IN-PLACE CONCRETE DECK

APPROACH SLABS: 25'-0"± LONG (AS-1-81)

ALIGNMENT: TANGENT

CROWN: 0.0179± FT/FT

WEARING SURFACE: 1 1/4"± LATEX MODIFIED CONCRETE OVERLAY

STRUCTURAL FILE NUMBER: 2001950

DATE BUILT: 1946, 1986 (REHAB)

DISPOSITION: REMOVAL

PROPOSED STRUCTURE

TYPE: 3-SPAN STEEL PLATE GIRDER SUPERSTRUCTURE WITH COMPOSITE REINFORCED CONCRETE, CAP AND COLUMN PIERS AND SEMI-INTEGRAL ABUTMENTS

SPANS: 142'-6", 190'-0", 142'-6" C/C BRGS.

ROADWAY: 32'-0" TOE/TOE PARAPET

LOADING: HL-93, FWS = 60 PSF

SKEW: 45°00'00" LEFT FORWARD

APPROACH SLABS: 30'-0" LONG (AS-1-15)

ALIGNMENT: TANGENT

CROWN: 0.016 FT/FT

WEARING SURFACE: 1" MONOLITHIC CONCRETE

COORDINATES: LATITUDE 41°15'33.46" N
LONGITUDE 84°33'15.33" W

DECK AREA: 16,883 SF

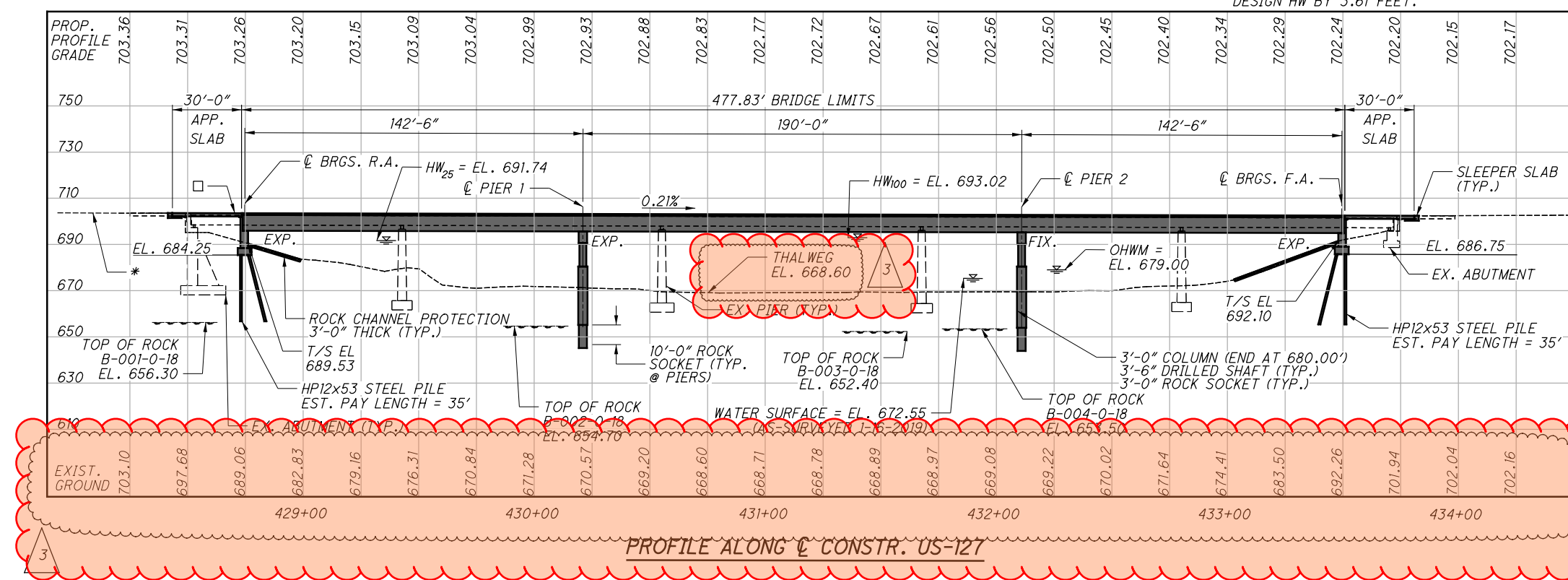
HYDRAULIC DATA

DRAINAGE AREA = 2,240 SQ. MILES

Q (25) = 24,936 CFS V (25) = 4.70 FT/S

Q (100) FIS = 30,800 CFS V (100) = 5.42 FT/S

STRUCTURE CLEARS THE 25 YEAR DESIGN HW BY 3.61 FEET.



PROFILE ALONG C CONSTR. US-127

Michael Baker INTERNATIONAL
 250 WEST STREET, SUITE 420, COLUMBUS, OH 43215

DESIGN AGENCY: Michael Baker INTERNATIONAL

DATE: 04/16/21

REVIEWED: TMP

STRUCTURE FILE NUMBER: 2001951

DRAWN: GMC

REVISION: REVISED

DESIGNED: AJE

CHECKED: BCM

DEFIANCE COUNTY

STA. 428+73.23

STA. 433+51.06

SITE PLAN

DEF-127-0053

US-127 OVER MAUMEE RIVER

DEF-127-00.53

PID No. 102669

1 / 38

32 / 69

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

| | | |
|-----------|-----------------|-----------|
| AS-1-15 | DATED (REVISED) | 7/17/2015 |
| AS-2-15 | DATED (REVISED) | 1/18/2019 |
| EXJ-4-87 | DATED (REVISED) | 1/19/2018 |
| GSD-1-19 | DATED (REVISED) | 1/18/2019 |
| SBR-1-20 | DATED (REVISED) | 1/17/2020 |
| SICD-1-96 | DATED (REVISED) | 7/18/2014 |
| SICD-2-14 | DATED (REVISED) | 7/18/2014 |

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

| | | |
|-----|-----------------|------------|
| 840 | DATED (REVISED) | 1/19/2017 |
| 863 | DATED (REVISED) | 10/19/2012 |

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS", 8TH EDITION, 2017 AND THE ODOT BRIDGE DESIGN MANUAL, 2020, INCLUDING REVISIONS THROUGH JANUARY 2020.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

DESIGN LOADING:

HL-93
FUTURE WEARING SURFACE (FWS) OF 0.060 KSF

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE CLASS QC5 - COMPRESSIVE STRENGTH 4.5 KSI WITH 1 IN. MAX. AGGREGATE SIZE (DRILLED SHAFT)
REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI INCLUDING SPIRAL BARS
STRUCTURAL STEEL - ASTM A709 GRADE 50W

YIELD STRENGTH 50 KSI
JOINT ARMOR & RETAINER STEEL
PROVIDE PER EXJ-4-87
STEEL H-PILES - ASTM A572 YIELD STRENGTH 50 KSI

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL
2 1/2" CONCRETE COVER

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

ITEM 202. STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN:

FOLLOW CMS 202 EXCEPT AS NOTED, REMOVE THE PIERS TO 1 FOOT BELOW THE CURRENT RIVERBED ELEVATION. REMOVE THE ABUTMENTS TO THE GREATER OF 1 FOOT BELOW FINISHED GRADE OR AS REQUIRED FOR GEOGRID REINFORCING.

ITEM 511. CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN:

FOLLOW CMS 511 EXCEPT INCLUDE THE COST OF THE WEBWALLS WITH ITEM 511. THIS SHALL INCLUDE ALL NECESSARY WORK, AND MATERIALS, EXCEPT FOR EPOXY COATED REINFORCING STEEL, TO FURNISH AND CONSTRUCT THE WEBWALLS. THIS INCLUDES, BUT MAY NOT BE LIMITED TO, COSTS ASSOCIATED WITH DEWATERING, EXCAVATION AND FILL, TEMPORARY FORMS, SEDIMENT CONTROL, AND REMOVAL OF SPOILS AND TAINED CONCRETE.

ITEM 513. STRUCTURAL STEEL MEMBERS, LEVEL 4, AS PER PLAN:

WELD DRIP PLATES NEAR THE GIRDER ENDS AS SHOWN ON THE GIRDER DETAILS SHEETS.

SHOP PAINT THE GIRDER ENDS, CROSS FRAMES, ETC. WITHIN THE AREAS DESCRIBED ON THE TRANSVERSE SECTION SHEET. ACCORDING TO THE "PARTIAL PAINTING OF A709 GRADE 50W STEEL" NOTE. USE A 3 COAT PAINT SYSTEM CONSISTING OF AN INORGANIC ZINC PRIME COAT, AN EPOXY INTERMEDIATE COAT AND A URETHANE FINISH COAT (FORMERLY CALLED SYSTEM IZEU).

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER POUND FOR ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL 4, AS PER PLAN, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 524 - DRILLED SHAFTS, MISC: DEMONSTRATION DRILLED SHAFT:

PART 1: DESCRIPTION
THIS WORK CONSISTS OF ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO CONSTRUCT A DEMONSTRATION DRILLED SHAFT FOR TESTING AND EVALUATION TO VERIFY THE PROPOSED CONSTRUCTION METHODS FOR THE PRODUCTION DRILLED SHAFTS.
COMPLETE THE INSTALLATION OF THE DEMONSTRATION DRILLED SHAFTS 30 DAYS OR MORE BEFORE INSTALLATION OF PRODUCTION DRILLED SHAFTS BEGINS. THE DEPARTMENT WILL CONSIDER THE DEMONSTRATION DRILLED SHAFT COMPLETE AFTER RECEIVING WRITTEN ACCEPTANCE FROM THE ENGINEER.

PART 2: MATERIALS
THE DEMONSTRATION DRILLED SHAFT SHALL USE THE SAME CONCRETE MIX DESIGN AND STEEL REINFORCEMENT AS THE PRODUCTION DRILLED SHAFTS.

PART 3: EXECUTION
SUBMIT A DRILLED SHAFT INSTALLATION PLAN TO THE ENGINEER FOR ACCEPTANCE IN ACCORDANCE WITH THE REQUIREMENTS OF C&MS 524.03. CONSTRUCT AT LEAST ONE DEMONSTRATION DRILLED SHAFT IN THE AREA SHOWN IN THE PLANS AND IN ACCORDANCE WITH THE ACCEPTED WRITTEN INSTALLATION. UPON CONSTRUCTION OF THE DEMONSTRATION DRILLED SHAFT, AND RECEIPT OF TESTING AND EVALUATION RESULTS CONFIRMING THE DEMONSTRATION DRILLED SHAFT HAS BEEN INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, THE ENGINEER WILL ISSUE A LETTER ACCEPTING THE INSTALLATION PLAN FOR THE CONSTRUCTION OF THE SUBSEQUENT PRODUCTION DRILLED SHAFTS.
IF MODIFICATIONS TO THE INSTALLATION PLAN ARE MADE, WHETHER DUE TO THE TESTING AND EVALUATION RESULTS OR FOR OTHER REASON, THE DEPARTMENT WILL REQUIRE CONSTRUCTION OF AN ADDITIONAL DEMONSTRATION SHAFT CONSTRUCTED IN ACCORDANCE WITH THE MODIFIED INSTALLATION PLAN, AT NO ADDITIONAL COST.
THE DIAMETER, LENGTH, REINFORCING, INSTALLATIONS METHODS, AND OTHER MISCELLANEOUS DETAILS OF THE DEMONSTRATION SHAFT SHALL BE THE SAME AS THE PRODUCTION DRILLED SHAFTS. SUBMIT THE LOCATION OF THE DEMONSTRATION SHAFT TO THE ENGINEER FOR ACCEPTANCE. LOCATE THE DEMONSTRATION DRILLED SHAFT SUCH THAT NO INTERFERENCE OCCURS WITH THE FOUNDATIONS OF EXISTING OR PROPOSED STRUCTURES, THE PROPOSED MAINTENANCE OF TRAFFIC, OR EXISTING OR PROPOSED UTILITIES. TEST THE DEMONSTRATION DRILLED SHAFT BY THERMAL INTEGRITY PROFILING (TIP) ACCORDING TO ASTM D7949, METHOD B.

PART 4: MEASUREMENT AND PAYMENT
THE DEPARTMENT WILL MEASURE DEMONSTRATION DRILLED SHAFT BY THE NUMBER OF FEET, MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE REQUIRED BOTTOM ELEVATION OF THE SHAFT TO THE PROPOSED TOP PLAN ELEVATION.
IN ADDITION TO THE PROVISIONS OF C&MS 524.17, THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF DEMONSTRATION DRILLED SHAFT AFTER INSTALLATION OF THE DEMONSTRATION SHAFT AND AFTER BEING PROVIDED WITH WRITTEN TESTING AND EVALUATION RESULTS ACCEPTABLE TO THE ENGINEER.
THE CONTRACT PRICE IS FULL COMPENSATION FOR FURNISHING AND INSTALLING DRILLED SHAFTS IN ACCORDANCE WITH THE ABOVE REQUIREMENTS, INCLUDING MOBILIZATION, SITE ACCESS, AND FINAL REMOVAL OF THE SHAFT TO 36 INCHES BELOW FINAL GRADE.
THE DEPARTMENT WILL PAY FOR TESTING AND EVALUATION OF THE ACCEPTED DEMONSTRATION SHAFT SEPARATELY.
THE DEPARTMENT WILL NOT PAY FOR TESTING AND EVALUATION OF ADDITIONAL DEMONSTRATION DRILLED SHAFTS.
THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS:
ITEM 524 - DRILLED SHAFTS, MISC: DEMONSTRATION DRILLED SHAFT

DRILLED SHAFTS:

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 1,239 KIPS AT THE PIERS. THIS LOAD IS RESISTED BY SIDE RESISTANCE WITHIN A PORTION OF THE BEDROCK SOCKET AND ALSO BY TIP RESISTANCE. THE FACTORED RESISTANCE DEVELOPED BY SIDE RESISTANCE IS 589 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 8 FEET OF THE BEDROCK SOCKET FOR THE PIERS. THE FACTORED RESISTANCE PROVIDED BY THE DRILLED SHAFT TIP IS 5089 KIPS.

THE MAXIMUM FACTORED LATERAL LOAD AND BENDING MOMENT TO BE SUPPORTED BY EACH DRILLED SHAFT ARE 41.5 KIPS AND 560 KIP-FEET, RESPECTIVELY. THESE LOADS PRODUCE A MAXIMUM FACTORED BENDING MOMENT OF 1,558 KIP-FEET, AND A MAXIMUM FACTORED SHEAR OF 195 KIPS, WITHIN THE DRILLED SHAFT.

DECK PLACEMENT ASSUMPTIONS:

THE FOLLOWING ASSUMPTIONS OF CONSTRUCTION MEANS AND METHODS WERE MADE FOR THE ANALYSIS OF AND DESIGN OF THE SUPERSTRUCTURE. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF THE FALSEWORK SUPPORT SYSTEM WITHIN THESE PARAMETERS AND WILL ASSUME RESPONSIBILITY FOR SUPERSTRUCTURE ANALYSIS FOR DEVIATION FROM THESE DESIGN ASSUMPTIONS.

AN EIGHT WHEEL FINISHING MACHINE WITH A MAXIMUM WHEEL LOAD OF 2.48 KIPS.

A MINIMUM OUT-TO-OUT WHEEL SPACING AT EACH END OF THE MACHINE OF 103".

A MAXIMUM SPACING OF OVERHANG FALSEWORK BRACKETS OF 48".

A MAXIMUM DISTANCE FROM THE CENTERLINE OF THE FASCIA GIRDER TO THE SAFETY HANDRAIL OF 65"

PILES DRIVEN TO BEDROCK:

DRIVE REAR ABUTMENT PILES TO REFUSAL ON BEDROCK. THE DEPARTMENT WILL CONSIDER REFUSAL TO BE OBTAINED WHEN THE PILE PENETRATION IS AN INCH OR LESS AFTER RECEIVING AT LEAST 20 BLOWS FROM THE PILE HAMMER. SELECT THE HAMMER SIZE TO ACHIEVE THE REQUIRED DEPTH TO BEDROCK AND REFUSAL.

THE TOTAL FACTORED LOAD IS 92.7 KIP PER PILE FOR THE REAR ABUTMENT PILES.

REAR ABUTMENT PILES:

HP12x53 PILES 40 FEET LONG, ORDER LENGTH

PILES DESIGN LOADS (ULTIMATE BEARING VALUE):

THE ULTIMATE BEARING VALUE (UBV) IS 166.3 KIPS PER PILE FOR THE FORWARD ABUTMENT PILES. THE UBV FOR THE FORWARD ABUTMENT PILES INCLUDES AN ADDITIONAL 33.9 KIPS PER PILE DUE TO THE POSSIBILITY OF LOSING 13.08 FT OF FRICTIONAL RESISTANCE DUE TO SCOUR. DRIVE THE FORWARD ABUTMENT PILES TO UBV OR A TIP ELEVATION OF 655, WHICHEVER IS DEEPER.

FORWARD ABUTMENT PILES:

HP12x53 PILES 40 FEET LONG, ORDER LENGTH
1 DYNAMIC LOAD TESTING ITEM

STEEL PILE POINTS:

USE STEEL PILE POINTS TO PROTECT THE TIPS OF THE STEEL H-PILES AT FORWARD AND REAR ABUTMENTS.

PILE DRIVING:

THE MINIMUM RATED ENERGY OF THE HAMMER USED TO INSTALL THE PILES SHALL BE 42,000 FOOT-POUNDS. ENSURE THE STRESSES IN THE PILES DURING DRIVING DO NOT EXCEED 45,000 POUNDS PER SQUARE INCH.

REVISION 2: 11/14/2022



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DESIGN AGENCY
Michael Baker
INTERNATIONAL
250 WEST STREET, SUITE 420, COLUMBUS, OH 43215

DESIGNED DATE
A/E TMP 04/16/21
CHECKED STRUCTURE FILE NUMBER
BCM 2001951

GENERAL NOTES
DEF-127-0053
US-127 OVER MAUMEE RIVER

DEF-127-00.53
PID No. 102669

REVISION 3: 11/23/2022

3

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| ITEM NO. | EXTENSION | TOTAL | UNIT | DESCRIPTION | ABUT. | PIERS | SUPER. | GEN | SEE SHEET NO. |
|----------|-----------|--------|------|---|-------|-------|--------|------|---------------|
| 202 | 11003 | LS | | STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN | | | | LS | 5 / 38 |
| 202 | 22900 | 198 | SY | APPROACH SLAB REMOVED | | | | 198 | |
| 202 | 23500 | 2111 | SY | WEARING COURSE REMOVED | | | | 2111 | |
| 203 | 10000 | 252 | CY | EXCAVATION | 252 | | | | |
| 203 | 20000 | 330 | CY | EMBANKMENT | 330 | | | | |
| 204 | 30010 | 78 | CY | GRANULAR MATERIAL, TYPE B | 78 | | | | |
| 204 | 50000 | 694 | SY | GEOTEXTILE FABRIC | 694 | | | | |
| 503 | 11101 | LS | | COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN | LS | | | | 3 / 38 |
| 503 | 21100 | 245 | CY | UNCLASSIFIED EXCAVATION | 245 | | | | |
| 505 | 11100 | LS | | PILE DRIVING EQUIPMENT MOBILIZATION | LS | | | | |
| 507 | 00200 | 2760 | FT | STEEL PILES HPI2X53, FURNISHED | 2760 | | | | |
| 507 | 00250 | 2415 | FT | STEEL PILES HPI2X53, DRIVEN | 2415 | | | | |
| 507 | 03300 | 60 | EACH | STEEL POINTS OR SHOES | 60 | | | | |
| 509 | 10000 | 238482 | LB | EPOXY COATED REINFORCING STEEL | 31109 | 43613 | 163760 | | |
| 509 | 30030 | 110 | FT | NO. 5 GFRP DEFORMED BARS | | | 110 | | |
| 509 | 30040 | 7592 | FT | NO. 6 GFRP DEFORMED BARS | | | 7592 | | |
| 511 | 33500 | 2 | EACH | SEMI-INTEGRAL DIAPHRAGM GUIDE | 2 | | | | |
| 511 | 34446 | 556 | CY | CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK | | | 556 | | |
| 511 | 34446 | 163 | CY | CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET) | | | 163 | | |
| 511 | 41011 | 180 | CY | CLASS QC1 CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN | | | 180 | | 2/38 |
| 511 | 43512 | 366 | CY | CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING | 366 | | | | |
| 512 | 10100 | 1663 | SY | SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) | | | | 1663 | |
| 513 | 10280 | 894000 | LB | STRUCTURAL STEEL MEMBERS, LEVEL 4 | | | 894000 | | |
| 513 | 20000 | 8430 | EACH | WELDED STUD SHEAR CONNECTORS | | | 8430 | | |
| 516 | 11210 | 46 | FT | STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL | | | | 46 | |
| 516 | 11211 | 46 | FT | STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN | | | | 46 | 36/38 |
| 516 | 13600 | 17 | SF | 1" PREFORMED EXPANSION JOINT FILLER | 17 | | | | |
| 516 | 13900 | 141 | SF | 2" PREFORMED EXPANSION JOINT FILLER | 141 | | | | |
| 516 | 14020 | 131 | FT | SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL | 131 | | | | |
| 516 | 44100 | 10 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 20.5"x24"x2.982" | | | 10 | | |
| 516 | 44400 | 10 | EACH | ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), 17"x17"x5.565" | | | 10 | | |
| 518 | 12200 | 4 | EACH | SCUPPERS, INCLUDING SUPPORTS | | | 4 | | |
| 518 | 21200 | 119 | CY | POROUS BACKFILL WITH FILTER FABRIC | 119 | | | | |
| 518 | 40000 | 190 | FT | 6" PERFORATED CORRUGATED PLASTIC PIPE | | | | 190 | |
| 518 | 40010 | 70 | FT | 6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS | | | | 70 | |
| 523 | 20000 | 1 | EACH | DYNAMIC LOAD TESTING | | | | 1 | |
| 524 | 94704 | 80 | FT | DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK | | 80 | | | |
| 524 | 94802 | 208 | FT | DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK | | 208 | | | |
| 524 | 95000 | 36 | FT | DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT | | 36 | | | |
| 524 | 95100 | 3 | EACH | DRILLED SHAFTS, MISC.: THERMAL INTEGRITY PROFILER (T.I.P.) WIRE CABLE TESTING OF DRILLED SHAFTS | | 3 | | | |
| 526 | 30001 | 236 | SY | REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN | | | | 236 | 10&15/38 |
| 526 | 90031 | 100 | FT | TYPE C INSTALLATION, AS PER PLAN | | | | 100 | 36/38 |
| 840 | 23000 | 484 | CY | SELECT GRANULAR BACKFILL | 484 | | | | |
| 863 | 00100 | 2614 | SY | GEOGRID, TYPE P1 | 2614 | | | | |

DESIGN AGENCY: Michael Baker INTERNATIONAL
 250 WEST STREET, SUITE 420, COLUMBUS, OH 43215

DESIGNED: AJE
 CHECKED: BCM

DRAWN: AJE
 REVISED:

REVIEWED: TMP
 DATE: 04/16/21
 STRUCTURE FILE NUMBER: 2001951

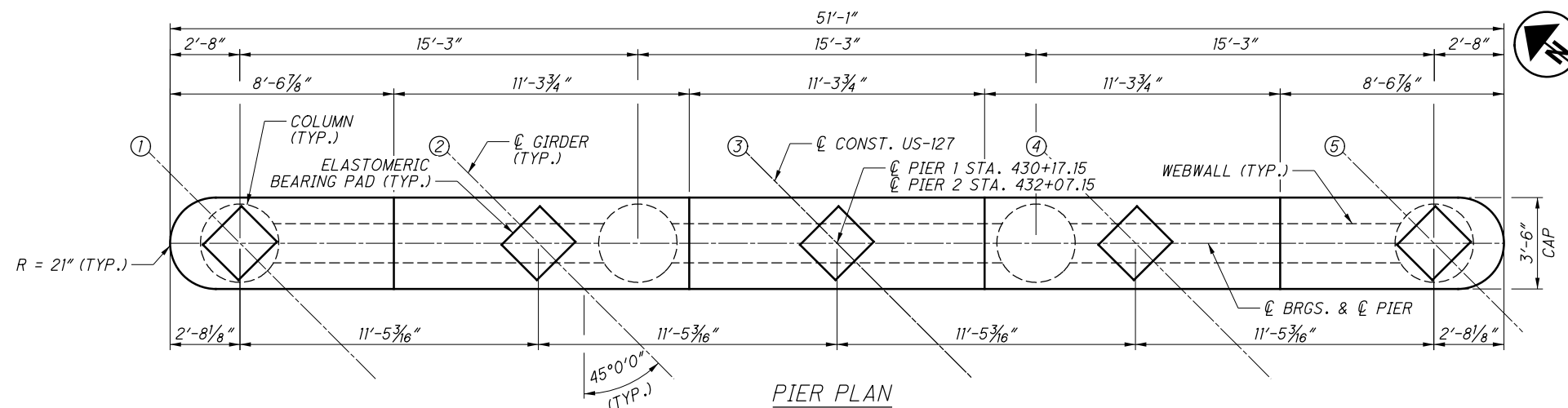
ESTIMATED QUANTITIES
 DEF-127-0053
 US-127 OVER MAUMEE RIVER

DEF-127-00.53
 PID No. 102669

4 / 38
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 69

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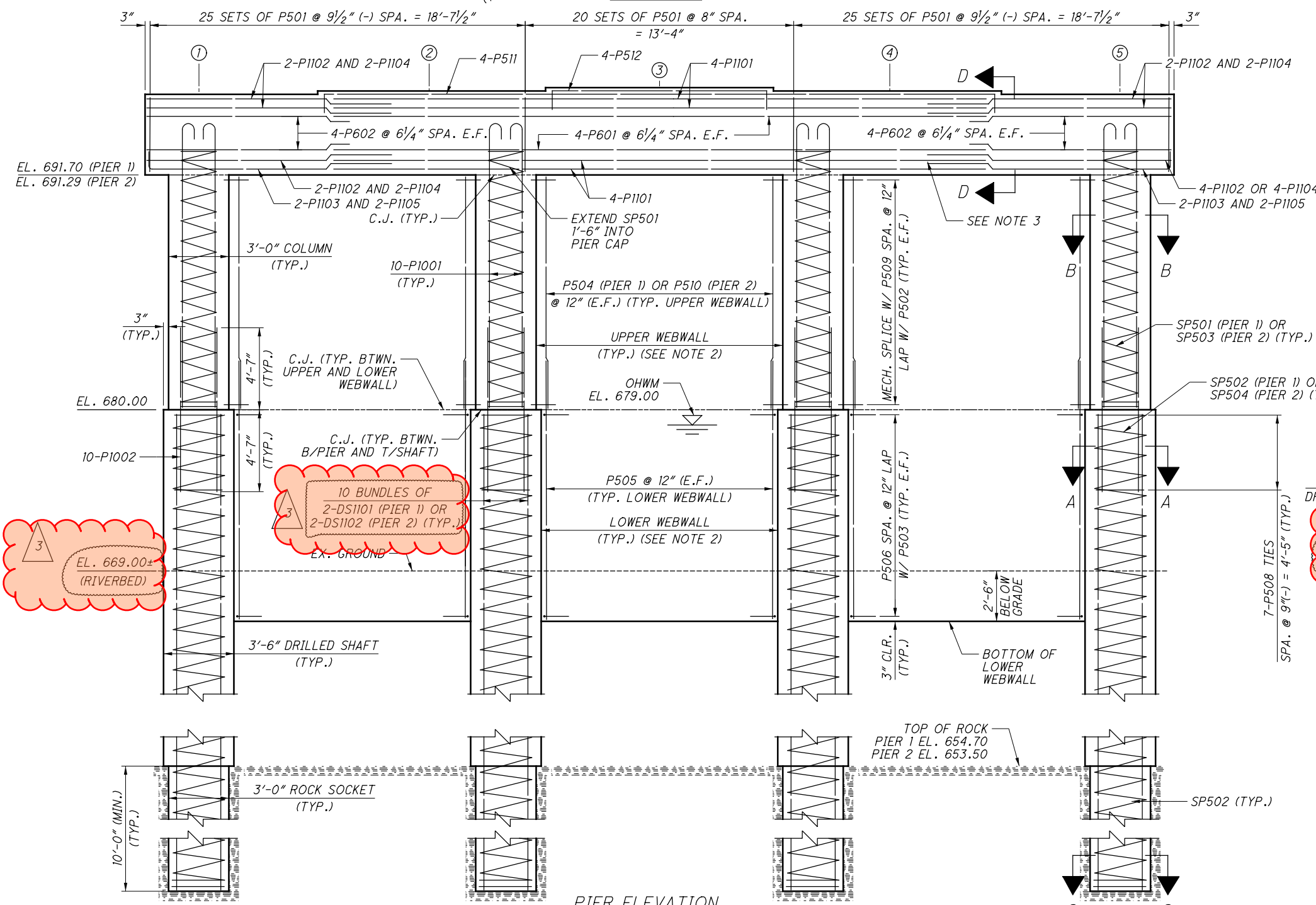


PIER PLAN

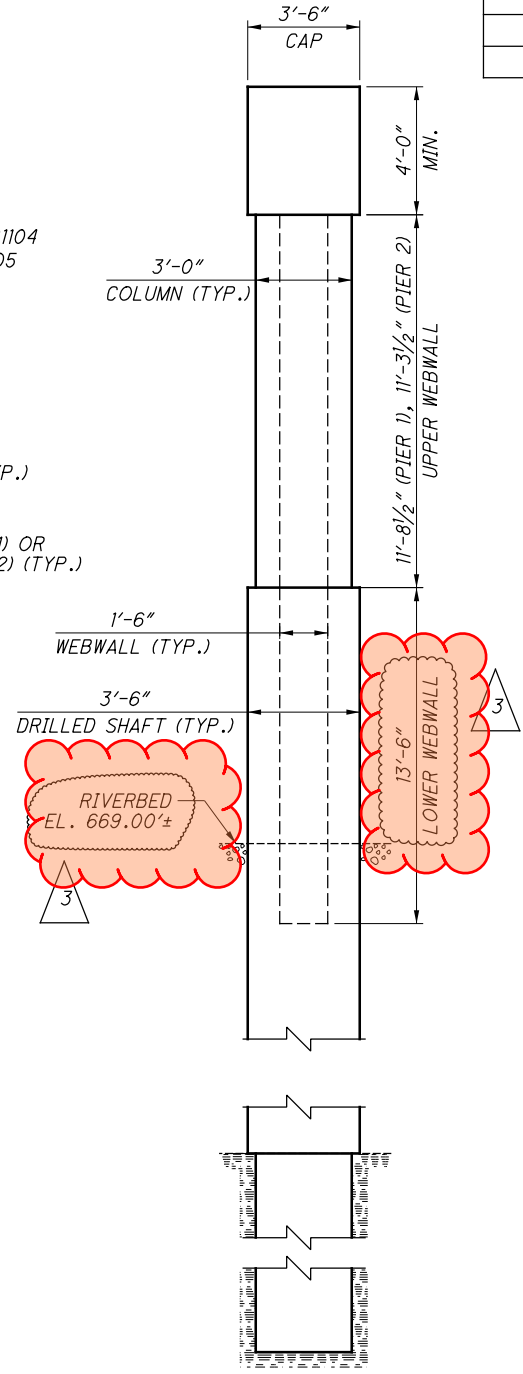
NOTES:

1. THE TOP OF THE DRILLED SHAFTS SHALL BE AT THE SAME ELEVATION AS THE TOP OF THE TEMPORARY ACCESS FILL. THIS IS DETERMINED AS ELEVATION 680.00'.
2. FOR ADDITIONAL WEBWALL NOTES, DETAILS, AND CONSTRUCTION SEQUENCING AND COLUMN, DRILLED SHAFT, AND ROCK SOCKET SECTIONS SEE SHEET 20/38
3. ADJACENT REINFORCING STEEL BARS SHALL NOT BE SPLICED IN THE SAME LOCATION. ALTERNATE SPLICE LOCATIONS.
4. ALL EXPOSED PIER CONCRETE SURFACES ABOVE GROUND EXCEPT TOP OF PIER CAP SHALL BE SEALED WITH EPOXY-URETHANE SEALER.
5. MINIMUM LAP LENGTH:
 #5 - 3'-1" (HORIZONTAL BARS)
 #5 - 2'-5" (VERTICAL BARS)
 #6 - 4'-0"
 #10 - 6'-0"
 #11 - 9'-9"

| BEARING SEAT ELEVATIONS | | |
|-------------------------|--------|--------|
| GIRDER # | PIER 1 | PIER 2 |
| 1 | 695.70 | 695.29 |
| 2 | 695.89 | 695.48 |
| 3 | 696.04 | 695.63 |
| 4 | 695.92 | 695.52 |
| 5 | 695.77 | 695.36 |



PIER ELEVATION
(LOOKING UPSTATION)



PIER END VIEW

DESIGN AGENCY: Michael Baker INTERNATIONAL
 250 WEST STREET, SUITE 420, COLUMBUS, OH 43215

DESIGNED: AJE
 CHECKED: BCM

DATE: 04/16/21
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 STRUCTURE FILE NUMBER: 2001951

PIER DETAILS
 DEF-127-0053
 US-127 OVER MAUMEE RIVER

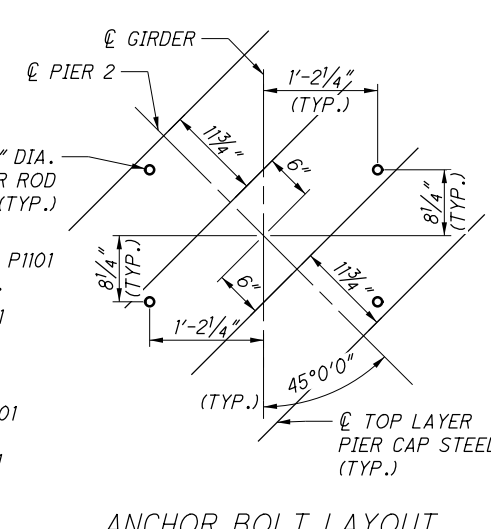
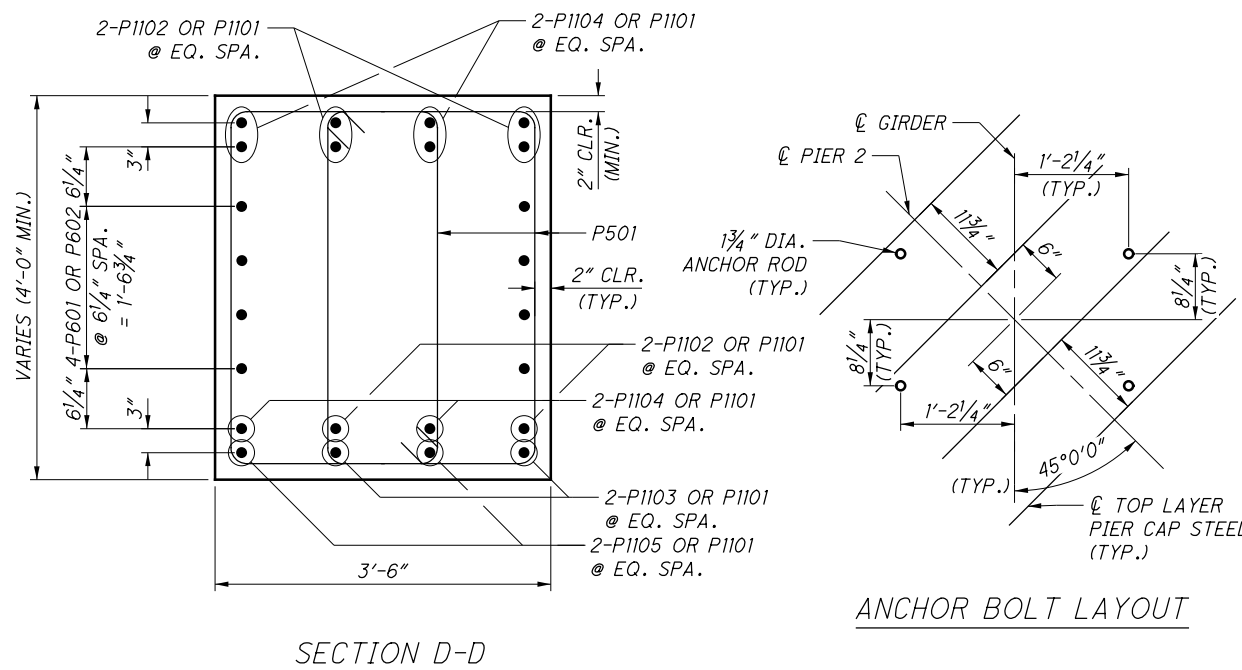
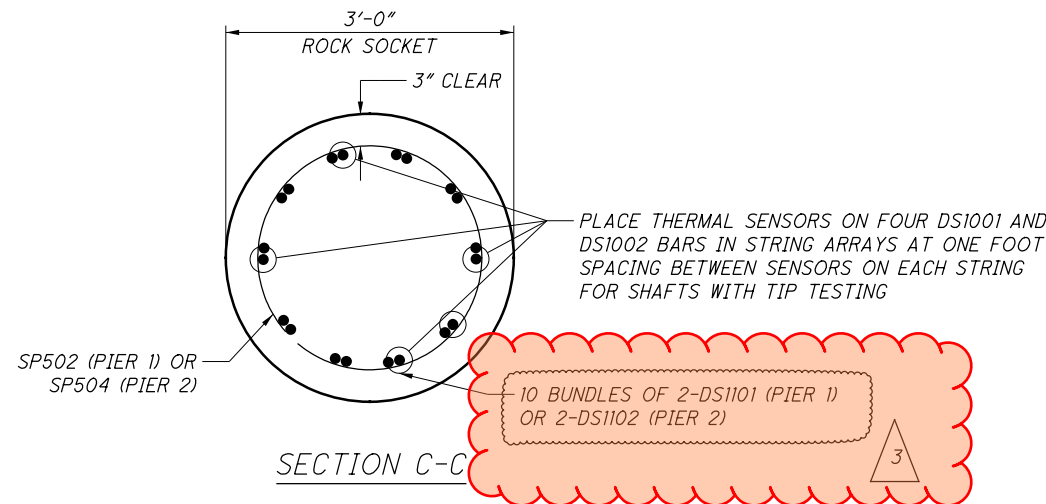
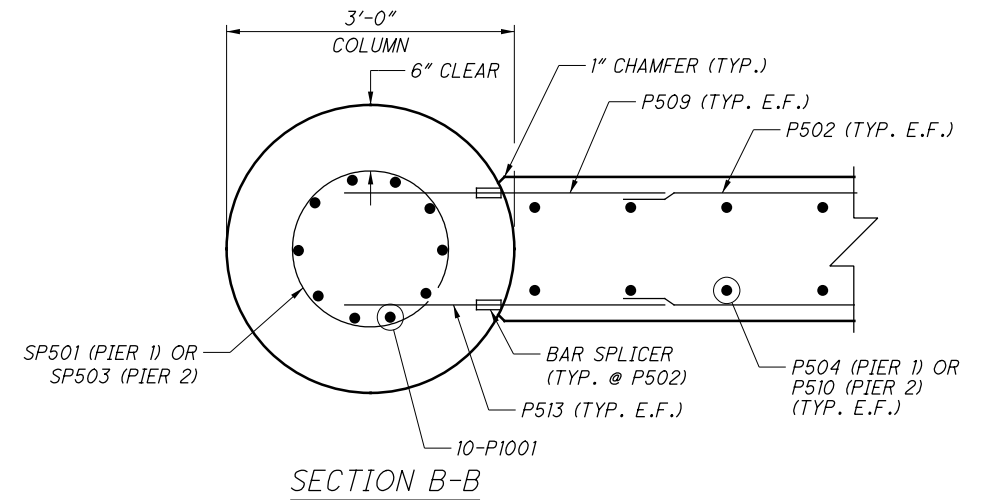
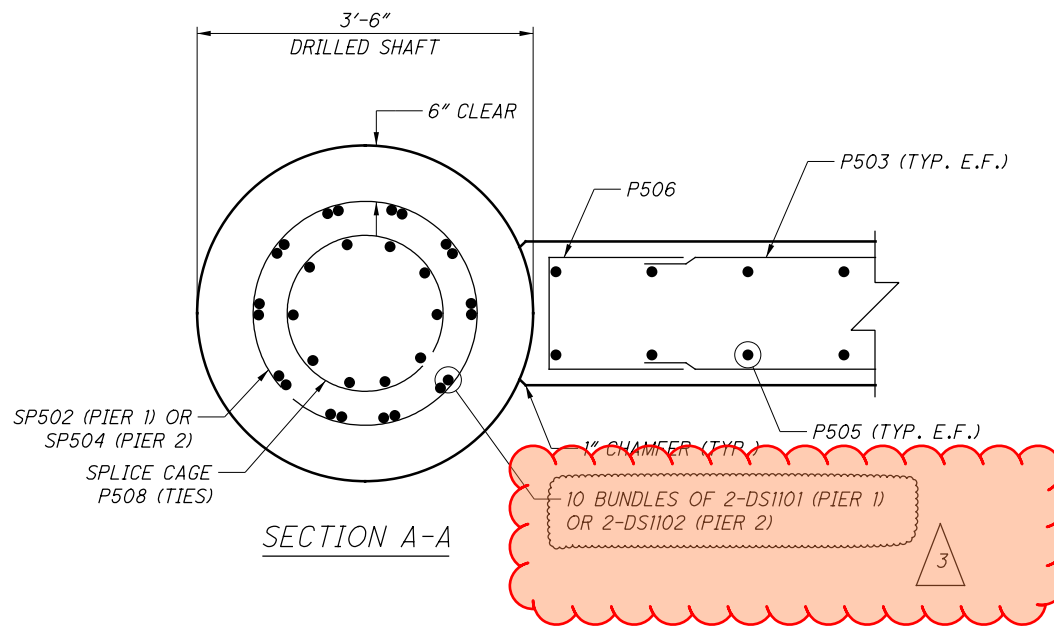
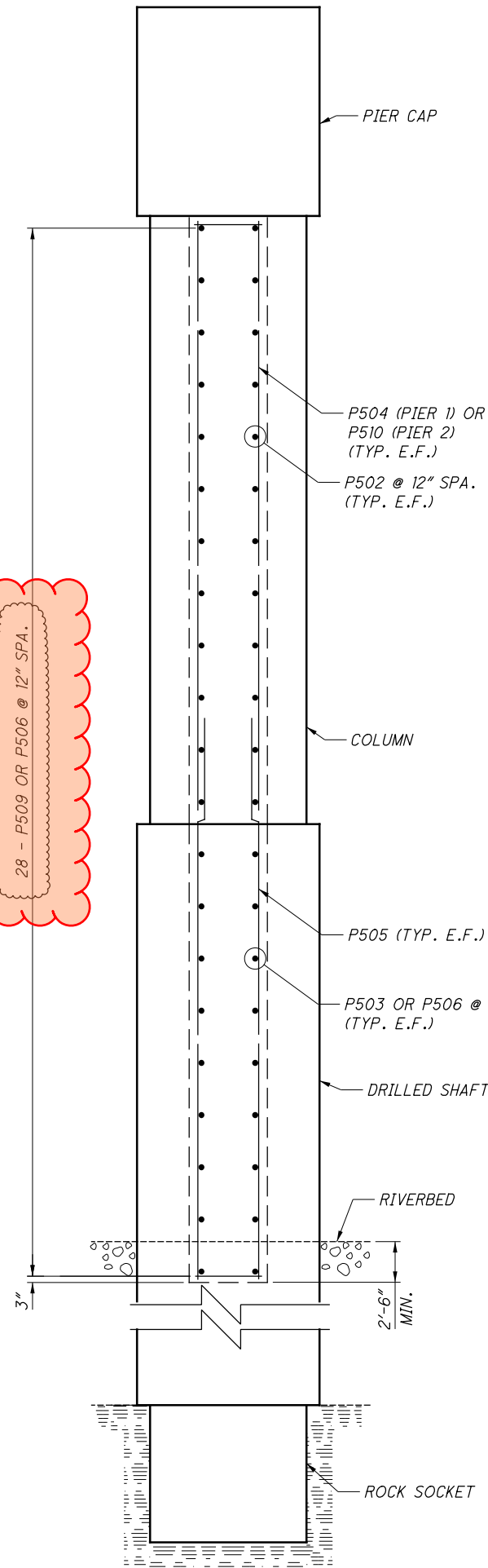
DEF-127-00.53
 PID No. 102669

19 / 38
 50 / 69

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28 - P509 OR P506 @ 12" SPA.



CONSTRUCTION SEQUENCING FOR WEBWALL:

1. EXCAVATE BETWEEN SHAFTS TO ELEVATION OF LOWER WEBWALL BASE AND SET LOWER WEBWALL FORMS THROUGH WATER TO BEAR ON THE CIRCULAR EDGE OF THE DRILLED SHAFTS. SECURE IN PLACE WITH FILL, STRUTS OR TIE FORMS TOGETHER AS REQUIRED.
2. PLACE THE LOWER WEBWALL REINFORCEMENT CAGE INTO THE FORMS USING SPACERS TO MAINTAIN PROPER CLEARANCES.
3. IF THE FORMS CAN BE SEALED AGAINST THE SHAFTS AND STREAMBED TO ALLOW DEWATERING, THE REINFORCEMENT AND THE CONCRETE PLACEMENT MAY BE COMPLETED IN THE DRY, AT THE CONTRACTOR'S CHOICE. ALTERNATIVELY, THE REBAR CAGE CAN BE LOWERED INTO POSITION THROUGH WATER AND THE CONCRETE DISCHARGED AT THE BASE OF THE EXCAVATION THROUGH A TREMIE PIPE OR PUMP HOSE, DISPLACING WATER, SEDIMENT, AND TAINTED CONCRETE OUT OF THE TOP OF THE FORMS.
4. CONSTRUCT COLUMNS ABOVE DRILLED SHAFTS.
5. CONSTRUCT UPPER WEBWALLS.

NOTES:

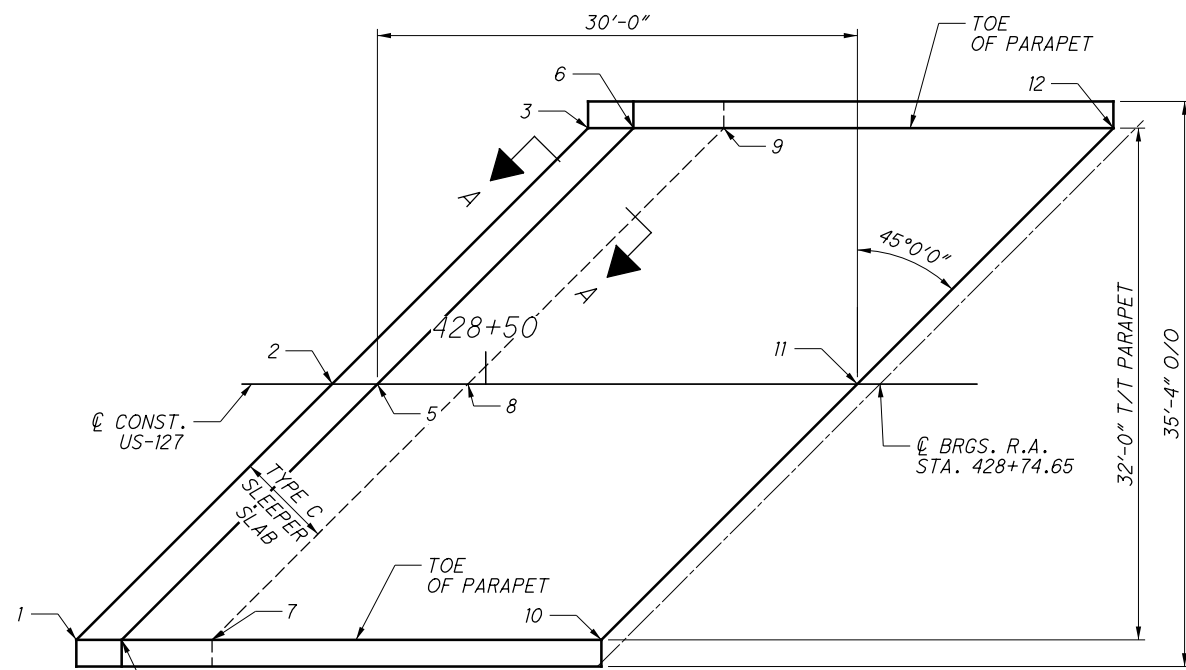
1. THE CONCRETE, DEWATERING MEANS, ANY EXCAVATION REQUIRED, SEDIMENT CONTROL, FORMS, AND ANY NECESSARY ITEMS, EXCLUDING EPOXY COATED REINFORCING STEEL, FOR THE PLACEMENT AND CONSTRUCTION OF THE WEBWALLS SHALL BE INCLUDED WITH ITEM 511 - CLASS QCI CONCRETE, PIER ABOVE FOOTINGS, AS PER PLAN.
2. THE CONCRETE QUANTITY FOR THE WEBWALLS IS BASED ON A RIVERBED ELEVATION OF 669.00'. DEVIATE FROM THIS HEIGHT AS NECESSARY TO PLACE THE LOWER WEBWALL SUCH THAT EXTENDS 2'-6" BELOW THE RIVERBED SURFACE ENCOUNTERED IN THE FIELD.
3. MECHANICAL CONNECTORS ARE CONSIDERED INCIDENTAL IN ITEM 509 - EPOXY COATED REINFORCING STEEL, PER CMS 509.11.
4. THE MINIMUM LAP LENGTHS ARE AS SHOWN ON SHEET 19/38
5. FOR LOCATIONS OF SECTIONS SEE PLAN AND ELEVATION VIEWS ON SHEET 19/38
6. NUMBER OF SENSORS MAY VARY BASED ON ELEVATION OF ROCK IN FIELD. ESTIMATED NUMBER OF SENSORS BASED ON PLAN TOP OF ROCK:
PIER 1: 144
PIER 2: 148

| | | | |
|--|---------|-----------------------|----------|
| DESIGN AGENCY | | DATE | |
| Michael Baker INTERNATIONAL | | 04/16/21 | |
| 250 WEST STREET, SUITE 420, COLUMBUS, OH 43215 | | STRUCTURE FILE NUMBER | |
| | | 2001951 | |
| DESIGNED | DRAWN | REVIEWED | DATE |
| AJE | AJE | TMP | 04/16/21 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| BCM | | 2001951 | |
| PIER DETAILS | | | |
| DEF-127-0053 | | | |
| US-127 OVER MAUMEE RIVER | | | |
| DEF-127-00.53 | | PID No. 102669 | |
| 20 / 38 | | 51 / 69 | |

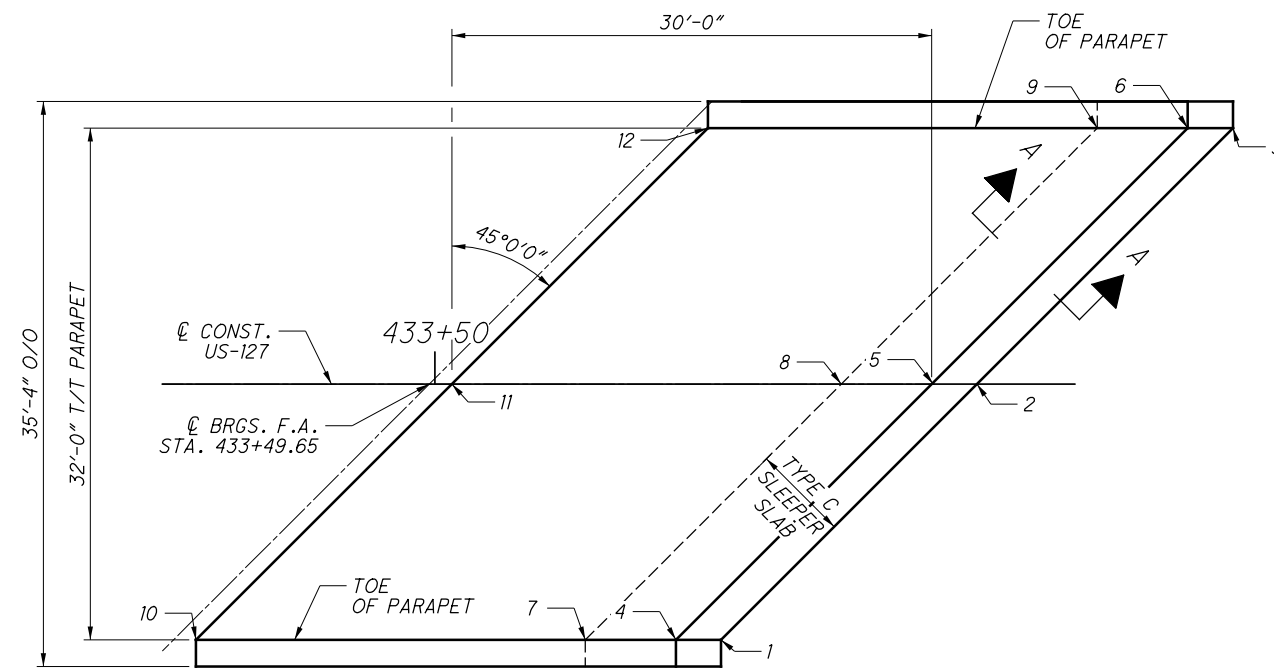
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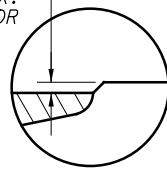
PLAN - REAR APPROACH SLAB



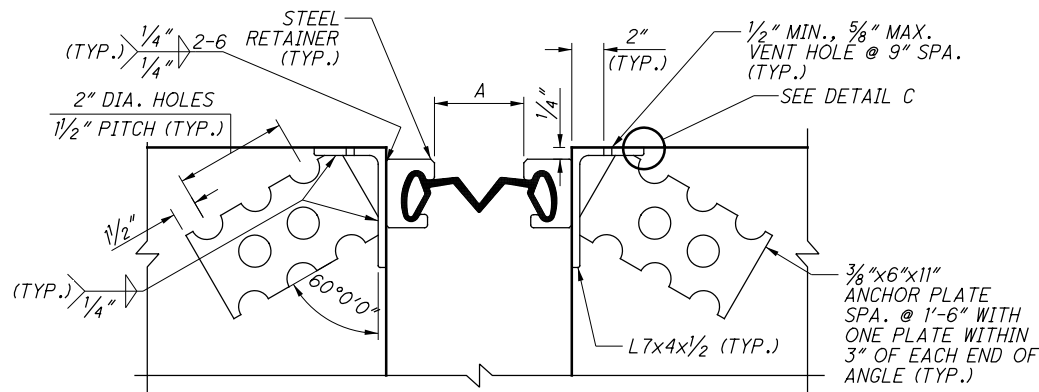
PLAN - FORWARD APPROACH SLAB



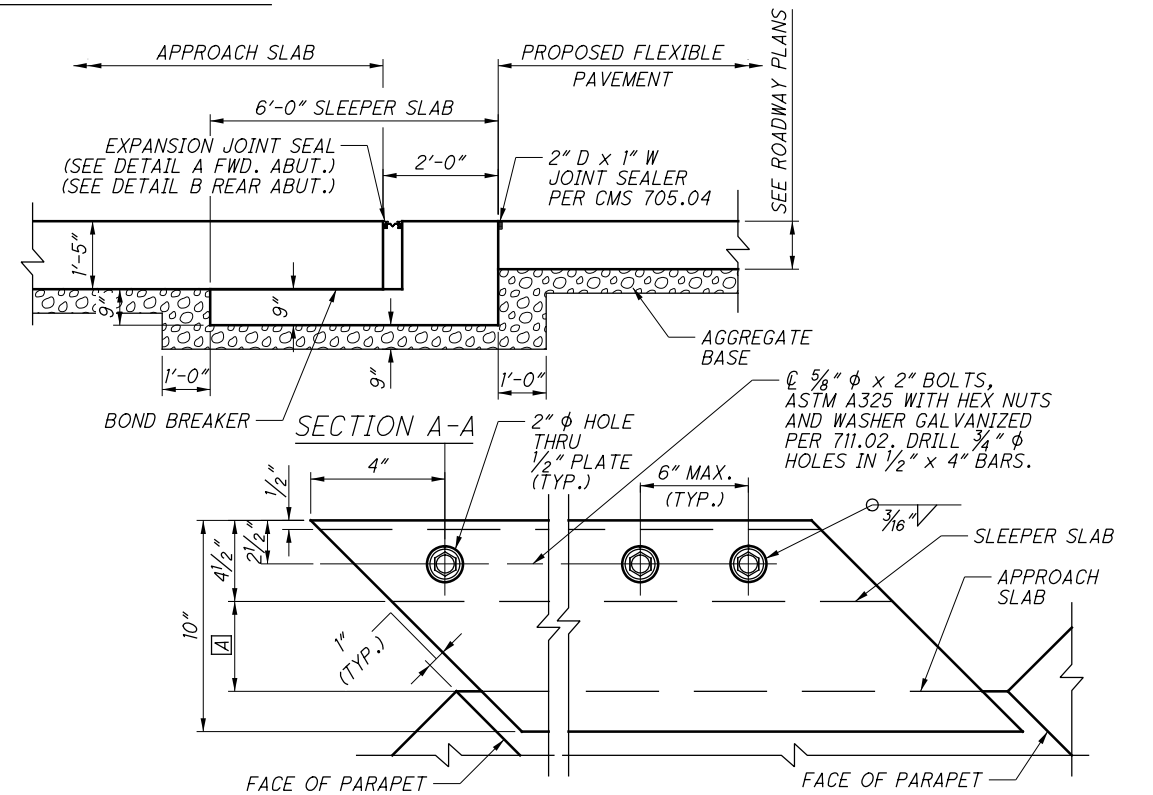
FINISH CONCRETE SURFACE EITHER FLUSH WITH OR A MAX. OF 1/4" ABOVE JOINT ARMOR



DETAIL C



DETAIL A (FORWARD ABUTMENT)



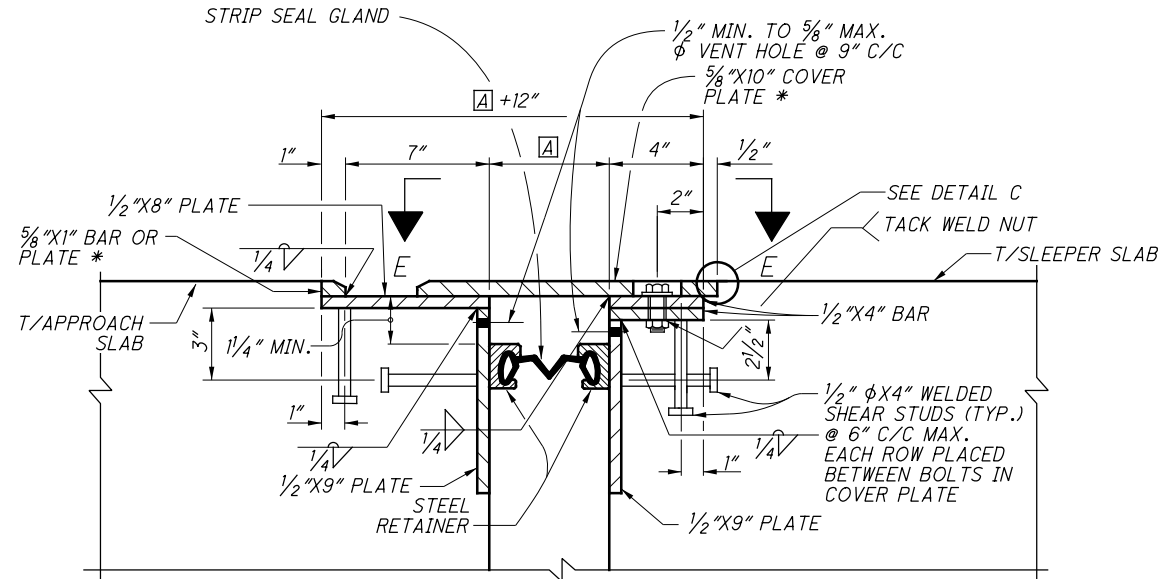
VIEW E-E

| POINT | REAR ABUTMENT | | FORWARD ABUTMENT | |
|-------|---------------|-----------|------------------|-----------|
| | STATION | ELEVATION | STATION | ELEVATION |
| 1 | 428+24.40 | 703.11 | 433+67.89 | 701.94 |
| 2 | 428+40.41 | 703.33 | 433+83.89 | 702.17 |
| 3 | 428+56.41 | 703.04 | 433+99.89 | 701.88 |
| 4 | 428+27.23 | 703.10 | 433+65.06 | 701.95 |
| 5 | 428+43.23 | 703.33 | 433+81.06 | 702.17 |
| 6 | 428+59.23 | 703.04 | 433+97.06 | 701.88 |
| 7 | 428+32.89 | 703.09 | 433+59.41 | 701.96 |
| 8 | 428+48.89 | 703.31 | 433+75.41 | 702.18 |
| 9 | 428+64.89 | 703.02 | 433+91.41 | 701.89 |
| 10 | 428+57.23 | 703.04 | 433+35.06 | 702.01 |
| 11 | 428+73.23 | 703.26 | 433+51.06 | 702.24 |
| 12 | 428+89.23 | 702.97 | 433+67.06 | 701.95 |

| TEMP. (F) | DIMENSION A | |
|-----------|----------------|-------------------|
| | REAR APP. SLAB | FORWARD APP. SLAB |
| 30° | 2 3/4" | 2" |
| 40° | 2 1/2" | 2" |
| 50° | 2 1/4" | 2" |
| 60° | 2" | 2" |
| 70° | 1 3/4" | 1 1/8" |
| 80° | N/A* | 1 1/4" |
| 90° | N/A* | 1 5/8" |

DIMENSION A IS THE JOINT OPENING REQUIRED AT THE TIME OF APPROACH SLAB CONCRETE PLACEMENT, BASED ON THE DAY'S ANTICIPATED PEAK AMBIENT TEMPERATURE.

* = REAR ABUTMENT APPROACH SLAB CONCRETE PLACEMENT NOT ALLOWED IF ANTICIPATED PEAK AMBIENT TEMPERATURE IS ABOVE 70°F.



DETAIL B (REAR ABUTMENT)

* PROVIDE A 1/2" HORIZONTAL x 1/4" VERTICAL BEVEL AT THE EXPOSED EDGE OF THE 5/8" COVER PLATE AND 5/8" x 1" BAR

NOTES:

- SEE STANDARD DRAWING AS-1-15 FOR ADDITIONAL DETAILS NOT SHOWN.
- APPROACH SLAB INSTALLATION SHALL BE TYPE C PER STANDARD DRAWINGS AS-2-15.
- ELEVATIONS ARE GIVEN AT TOP OF CONCRETE APPROACH SLAB.
- REINFORCING STEEL, CONCRETE, BOND BREAKER, AGGREGATE DRAINS, AND THE EXCAVATION FOR SLEEPER SLAB CONSTRUCTION SHALL BE INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLAB (T = 17") FOR PAYMENT.
- SEE STANDARD DRAWING EX-J-4-87 FOR ADDITIONAL NOTES AND DETAILS.

APPROACH SLAB DETAILS

DEF-127-0053
US-127 OVER MAUMEE RIVER

DEF-127-00.53
PID No. 102669

36 / 38

67
69

DESIGN AGENCY
Michael Baker
INTERNATIONAL
250 WEST STREET, SUITE 420, COLUMBUS, OH 43215

DESIGNED
A/E
CHECKED
BCM

DRAWN
A/E
REVISED

REVIEWED
TMP

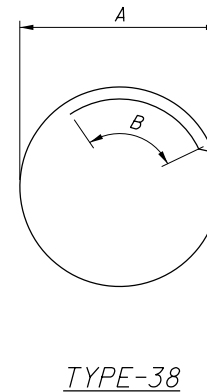
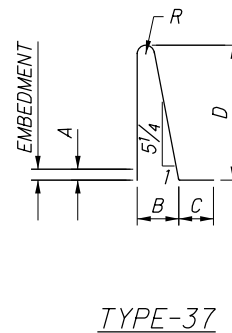
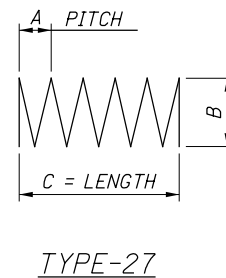
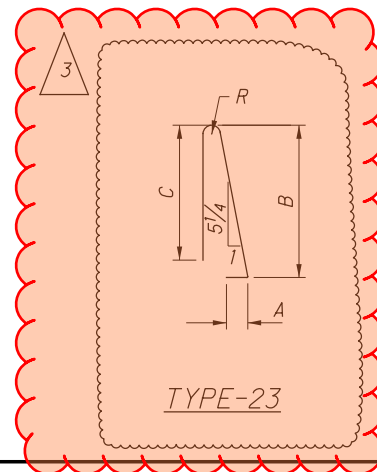
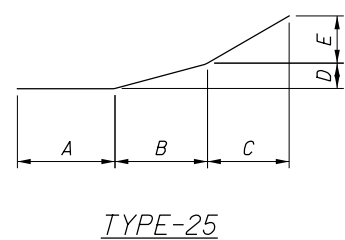
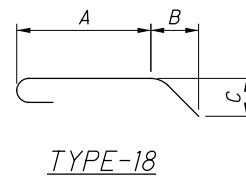
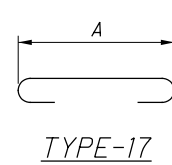
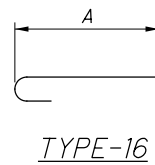
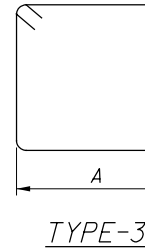
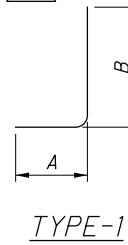
DATE
04/16/21

STRUCTURE FILE NUMBER
2001951

REVISION 3: 11/23/2022

...Sheets\27_0053C_SL002.dgn 11/23/2022 9:55:22 AM Aaron.Englehart

| MARK | NUMBER TOTAL | LENGTH | WEIGHT (LBS.) | TYPE | DIMENSIONS | | | | | | SER INC. |
|---|--------------|---------|---------------|------|------------|---------|---------|---|---|---|----------|
| | | | | | A | B | C | D | E | R | |
| PIERS | | | | | | | | | | | |
| P501 | 272 | 14'-3" | 4043 | 3 | 3'-2" | 3'-8" | | | | | |
| P502 | 150 | 11'-11" | 1864 | STR. | | | | | | | |
| P503 | 168 | 11'-5" | 2000 | STR. | | | | | | | |
| P504 | 98 | 11'-4" | 922 | STR. | | | | | | | |
| P505 | 156 | 15'-11" | 2590 | STR. | | | | | | | |
| P506 | 168 | 7'-5" | 1300 | 2 | 3'-3" | 1'-2" | 3'-3" | | | | |
| P508 | 56 | 11'-0" | 642 | 38 | 2'-6" | 3'-1" | | | | | |
| P509 * | 150 | 3'-6" | 548 | STR. | | | | | | | |
| P510 | 78 | 10'-11" | 888 | STR. | | | | | | | |
| P511 | 8 | 35'-2" | 293 | 2 | 0'-11" | 33'-7" | 0'-11" | | | | |
| P512 | 8 | 12'-10" | 107 | 2 | 0'-11" | 11'-3" | 0'-11" | | | | |
| P513 * | 150 | 2'-5" | 378 | STR. | | | | | | | |
| P601 | 16 | 30'-0" | 721 | STR. | | | | | | | |
| P602 | 32 | 14'-7" | 701 | STR. | | | | | | | |
| P1001 | 32 | 15'-2" | 2088 | 16 | 13'-9" | | | | | | |
| P1002 | 80 | 9'-2" | 3156 | STR. | | | | | | | |
| P1101 | 32 | 30'-0" | 5100 | STR. | | | | | | | |
| P1102 | 16 | 20'-4" | 1728 | STR. | | | | | | | |
| P1103 | 8 | 21'-10" | 928 | 1 | 1'-10" | 20'-4" | | | | | |
| P1104 | 16 | 30'-1" | | STR. | | | | | | | |
| P1105 | 8 | 36'-5" | 1548 | 1 | 1'-10" | 34'-11" | | | | | |
| SP501 | 4 | 214'-1" | 893 | 27 | 0'-5" | 2'-0" | 13'-3" | | | | |
| SP503 | 4 | 206'-8" | 862 | 27 | 0'-5" | 2'-0" | 12'-9" | | | | |
| SP504 | 4 | 691'-6" | 2885 | 27 | 0'-5" | 2'-6" | 36'-1" | | | | |
| SP501 | 4 | 214'-1" | 893 | 27 | 0'-5" | 2'-0" | 13'-3" | | | | |
| SP502 | 4 | 668'-4" | 2788 | 27 | 0'-5" | 2'-6" | 34'-10" | | | | |
| SP503 | 4 | 206'-8" | 862 | 27 | 0'-5" | 2'-0" | 12'-9" | | | | |
| SP504 | 4 | 691'-6" | 2885 | 27 | 0'-5" | 2'-6" | 36'-1" | | | | |
| TOTAL PIER REINFORCEMENT | | | | | 43,613 | | | | | | |
| DRY Laid SHANK REINFORCEMENT (FOR INFORMATION ONLY) | | | | | | | | | | | |
| SP502 | 4 | 668'-4" | 2788 | 27 | 0'-5" | 2'-6" | 34'-10" | | | | |
| SP504 | 4 | 691'-6" | 2885 | 27 | 0'-5" | 2'-6" | 36'-1" | | | | |
| DS1101 | 80 | 34'-10" | 14804 | STR. | | | | | | | |
| DS1102 | 80 | 36'-1" | 15337 | STR. | | | | | | | |



LEGEND:

* MECHANICAL CONNECTOR NECESSARY. BAR LENGTHS SHOWN ARE MEASURED TO THE INTERFACE BETWEEN BARS. THE CONTRACTOR IS TO MODIFY THESE LENGTHS BASED ON THE SELECTED CONNECTOR.

NOTES:

- FOR REINFORCING STEEL LIST NOTES, SEE SHEET 37.38.
- X602 BAR MAY BE PROVIDED AS EPOXY COATED STEEL REINFORCEMENT IF A GFRP FABRICATED SHAPE IS NOT AVAILABLE

| MARK | NUMBER TOTAL | LENGTH | WEIGHT (LBS.) | TYPE | DIMENSIONS | | | | | | SER INC. |
|---|--------------|--------|---------------|------|------------|------------|-----------|-----------|-------|---|-----------|
| | | | | | A | B | C | D | E | R | |
| SUPERSTRUCTURE | | | | | | | | | | | |
| S401 | 768 | 30'-0" | 15391 | STR. | | | | | | | |
| S402 | 96 | 19'-0" | 1218 | STR. | | | | | | | |
| S403 | 32 | 2'-3" | 48 | STR. | | | | | | | |
| | 4 | 12'-0" | | 16 | 11'-5" | | | | | | |
| S501 | SER. OF | TO | 6359 | 16 | | | | | | | 3 15/16" |
| | 67 | 33'-6" | | 16 | 32'-11" | | | | | | |
| S502 | 1862 | 36'-2" | 70238 | 17 | 35'-0" | | | | | | |
| S503 | 795 | 30'-0" | 24876 | STR. | | | | | | | |
| S504 | 44 | 19'-0" | 872 | STR. | | | | | | | |
| S505 | 47 | 57'-8" | 2827 | STR. | | | | | | | |
| S506 | NOT | USED | | | | | | | | | |
| S507 | 1974 | 7'-3" | 14927 | 2 | 6'-0" | 0'-9" | 0'-9" | | | | |
| S801 | 48 | 6'-5" | 822 | 18 | 4'-2" | 1'-0" | 1'-0" | | | | |
| PARAPET | | | | | | | | | | | |
| Y501 | 2144 | 7'-4" | 16399 | 23 | 0'-6" | 3'-3 1/2" | 3'-4" | | | | 0'-3" |
| Y502 | 2144 | 4'-3" | 9411 | 37 | 0'-6 1/4" | 0'-9 1/4" | 0'-10" | 1'-7 1/4" | | | 0'-5 1/4" |
| | 4 | 3'-9" | | | | 2'-11 1/4" | | | | | |
| Y601 | SER. OF | TO | 303 | 1 | 1'-0" | | | | | | 0 1/2" |
| | 12 | 4'-8" | | | | 3'-10 1/4" | | | | | |
| Y602 | 12 | 3'-10" | 69 | 1 | 1'-0" | 3'-0 1/4" | | | | | |
| TOTAL SUPERSTRUCTURE REINFORCEMENT | | | | | 163,760 | | | | | | |
| GLASS FIBER REINFORCED POLYMER (FOR INFORMATION ONLY) | | | | | | | | | | | |
| X601 | 48 | 10'-0" | 721 | STR. | | | | | | | |
| X602 | 24 | 5'-7" | 201 | 25 | 1'-10" | 2'-5" | 1'-4 1/4" | 0'-1 1/2" | 0'-5" | | |
| X603 | 24 | 5'-8" | 204 | STR. | | | | | | | |
| X604 | 44 | 18'-1" | 1195 | STR. | | | | | | | |
| X605 | 187 | 30'-0" | 8426 | STR. | | | | | | | |
| X606 | 22 | 20'-0" | 661 | STR. | | | | | | | |
| Y503 | 188 | 10'-0" | 1961 | STR. | | | | | | | |
| Y504 | 188 | 10'-2" | 1994 | STR. | | | | | | | |
| Y505 | 16 | 8'-0" | 134 | STR. | | | | | | | |
| Y506 | 16 | 8'-3" | 138 | STR. | | | | | | | |
| Y507 | 4 | 7'-11" | 33 | STR. | | | | | | | |
| Y508 | 4 | 8'-1" | 34 | STR. | | | | | | | |

REINFORCING STEEL LIST

DEF-127-0053
US-127 OVER MAUMEE RIVER

DEF-127-00.53
PID No. 102669