

04-24-2020 LETTING ITEM 195

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
**PROPOSED
 HIGHWAY PLANS**

FAP ROUTE 42 (IL 127/IL 140)
 SECTION 139BR-2
 PROJECT STP-JVIB (370)

BRIDGE REPAIR
 BOND COUNTY

C-98-058-20

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 1 |

D-98-044-20



LOCATION OF SECTION INDICATED THUS: [shaded box symbol]

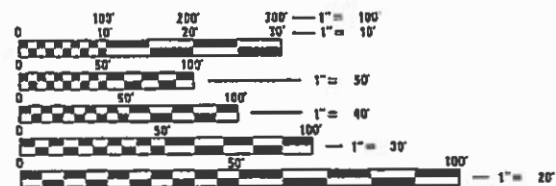
FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL

2019 ADT: 4700 VEH/DAY
 MU% 2.1%
 SU% 2.3%
 POSTED SPEED LIMIT: 55 MPH (STRUCTURE 003-0051)
 45 MPH (STRUCTURE 003-0057)

INDEX OF SHEETS

- 1 COVER SHEET
- 2 HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS
- 3-6 SUMMARY OF QUANTITIES
- 7-8 TYPICAL SECTIONS
- 9 QUANTITY SCHEDULES
- 10-11 ROADWAY PLANS
- 12 WIDE-LOAD SIGNING SHEET
- 13-16 MAINTENANCE OF TRAFFIC SHEETS
- 17-18 DETAILS
- 19-25 STRUCTURE SHEETS - SN 003-0051
- 26-36 STRUCTURE SHEETS - SN 003-0057

FOR LIST OF HIGHWAY STANDARDS, SEE SHEET NO. 2

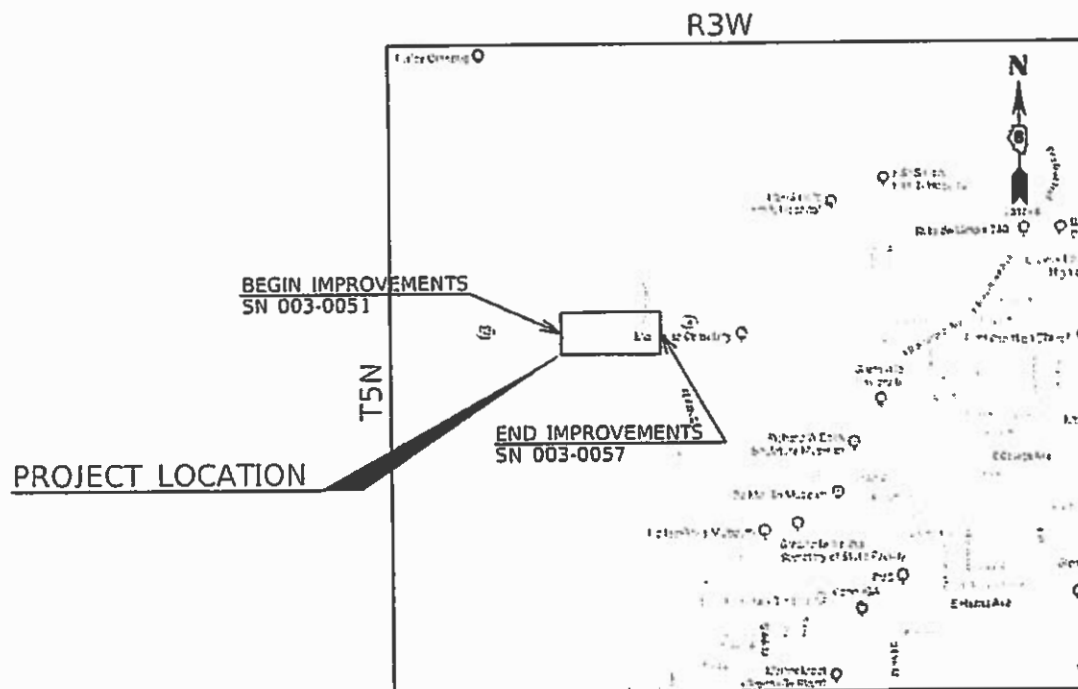


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
 1-800-892-0123
 OR 811

PROJECT ENGINEER: TIM PADGETT (618) 346-3325
 PROJECT MANAGER: TIM PADGETT (618) 346-3325

CONTRACT NO. 76N18



LOCATION MAP



GROSS LENGTH = 1,471.28 FT. = 0.279 MILE
 NET LENGTH = 596.96 FT. = 0.113 MILE

ROBERT M. MARKINS
 062-053696
 LICENSED
 PROFESSIONAL
 ENGINEER
 OF
 ILLINOIS

Robert M. Markins
 SIGNATURE: _____
 EXPIRES: 11/30/2021
 DATE: 12/13/2019

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUBMITTED Dec 13 2019
Karl Robert
 REGIONAL ENGINEER

Jan 31 2020
[Signature]
 ENGINEER OF DESIGN AND ENVIRONMENT

Jan 31 2020
[Signature]
 DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

**Farnsworth
 GROUP**
 100 Walnut Street, Suite 200
 Peoria, Illinois 61602
 309/689-9888, 309/689-9820 fax

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 OF THE STATE OF ILLINOIS

GENERAL NOTES

1. THE THICKNESS OF HMA SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HMA IS PLACED.
2. FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.
3. ON EXISTING PAVEMENT WHICH MAY BE SUPERELEVATED, THE NEW HMA PAVEMENT SHALL BE BUILT WITH THE SAME SUPERELEVATION UNLESS NEW SUPERELEVATION RATES ARE GIVEN ON THE PLANS.
4. CONSTRUCTION ASSOCIATED WITH STRUCTURES 003-0051 AND 003-0057 SHALL NOT TAKE PLACE AT THE SAME TIME, BUT WILL BE DONE SEQUENTIALLY.
5. FULL-DEPTH DECK PATCHES EXPOSED AFTER THE HYDRO-SCARIFICATION WILL BE PAID FOR ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

| | | |
|--|-------|---------------------------|
| GRANULAR MATERIALS | 2.05 | TONS / CU YD |
| BIT MATERIALS (PRIME COAT) ON AGGREGATE BASES | 0.25 | LB / SQ FT |
| BITUMINOUS MATERIALS (TACK COAT) ON MILLED/PCC BASES | 0.05 | LB / SQ FT |
| BITUMINOUS MATERIALS (TACK COAT) ON HMA LIFTS | 0.025 | LB / SQ FT |
| HMA RESURFACING | 112 | LBS / SQ YD / IN |
| SHORT TERM PAVEMENT MARKING | 10 | FT /100 FT OF APPLICATION |

COMMITMENTS

NONE

ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES WITHIN THE PROJECT AREA BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY BE OBTAINED BY CONTACTING J.U.L.I.E. OR FOR NON-MEMBERS THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

- * AMEREN ILLINOIS - GAS & ELECTRIC (AERIAL & BURIED)
- * AT&T ILLINOIS - COMMUNICATIONS (AERIAL & BURIED)
- * CITY OF GREENVILLE - WATER & SANITARY SEWER (BURIED)
- * NEW WAVE COMMUNICATIONS - CABLE TV (AERIAL & BURIED)

MEMBERS OF J.U.L.I.E. CALL TOLL FREE (800) 892-0123 OR 811 AND ARE INDICATED BY *. NON-J.U.L.I.E. MEMBERS MUST BE NOTIFIED INDIVIDUALLY.

HIGHWAY STANDARDS

| | |
|-----------|---|
| 000001-07 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001001-02 | AREAS OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 280001-07 | TEMPORARY EROSION CONTROL SYSTEMS |
| 606001-07 | CONCRETE CURB TYPE B AND COMB. CONC. CURB AND GUTTER |
| 630001-12 | STEEL PLATE BEAM GUARDRAIL |
| 631011-10 | TRAFFIC BARRIER TERMINAL, TYPE 2 |
| 631031-16 | TRAFFIC BARRIER TERMINAL, TYPE 6 |
| 701001-02 | OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY |
| 701006-05 | OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE |
| 701201-05 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701321-18 | LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER |
| 701326-04 | LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH |
| 701901-08 | TRAFFIC CONTROL DEVICES |
| 704001-08 | TEMPORARY CONCRETE BARRIER |
| 725001-01 | OBJECT AND TERMINAL MARKERS |
| 780001-05 | TYPICAL PAVEMENT MARKINGS |
| 781001-04 | TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS |
| 782006-01 | GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS |
| 701501-06 | URBAN LANE CLOSURE, 2L, 2W UNDIVIDED |
| BLR 21-9 | TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS |

MIXTURES TABLE

| | POLY SURFACE | BASE COURSE, BASE COURSE WIDE |
|----------------------|-----------------------|-------------------------------|
| AC/PG | SBS PG 76-22 | PG 64-22 |
| RAP % (MIX) | SEE SPECIAL PROVISION | SEE SPECIAL PROVISION |
| DESIGN AIR VOIDS | 4.0% @ NDES=70 | 4.0% @ NDES=70 |
| MIX COMPOSITION | IL 9.5 | IL 19.0 |
| FRICTION AGG | MIXTURE "D" | MIXTURE "B" |
| QUALITY MGMT PROGRAM | QC/QA | QC/QA |

* SEE SPECIAL PROVISIONS FOR RAP/RAS REQUIREMENTS.

REV. - MS

| | | | | | | | | | | |
|--|------------------------|------------------|--------------------|---|---|-------------|---------------------|--------------|--------------|------------------|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | HIGHWAY STANDARDS, GENERAL NOTES AND COMMITMENTS | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| W:\mmsworthgrp.com\data\Archive\CHAI2011\111004-3510\Drawings\CAD\CAD_Sheets\1876N18-8ht-002-gennote.dgn | DRAWN - DC | REVISIED - | 42 | | | 139BR-2 | BOND | 36 | 2 | |
| PLOT SCALE = 40.0000' / in. | CHECKED - MJB | REVISIED - | CONTRACT NO. 76N18 | | | | | | | |
| Default | PLOT DATE = 12/11/2019 | DATE - 11/4/2019 | REVISIED - | | | SCALE: NTS | SHEET 1 OF 1 SHEETS | STA. TO STA. | ILLINOIS | FED. AID PROJECT |

| CODE NUMBER | ITEM | UNIT | TOTAL | STRUCTURE NO. 003-0051 0013 | STRUCTURE NO. 003-0057 0013 |
|-------------|--|-------|-------|-----------------------------|-----------------------------|
| 20200100 | EARTH EXCAVATION | CU YD | 10 | 0 | 10 |
| 20200500 | EARTH EXCAVATION (WIDENING) | CU YD | 50 | 20 | 30 |
| 28100109 | STONE RIPRAP, CLASS A5 | SQ YD | 1913 | 1664 | 249 |
| 28200200 | FILTER FABRIC | SQ YD | 1913 | 1664 | 249 |
| 35501332 | HOT-MIX ASPHALT BASE COURSE, 12" | SQ YD | 53 | 0 | 53 |
| 35600724 | HOT-MIX ASPHALT BASE COURSE WIDENING, 12" | SQ YD | 420 | 181 | 239 |
| 40600290 | BITUMINOUS MATERIALS (TACK COAT) | POUND | 1427 | 580 | 847 |
| 40600982 | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT | SQ YD | 838 | 284 | 554 |
| 40600990 | TEMPORARY RAMP | SQ YD | 90 | 40 | 50 |
| 40604162 | POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70 | TON | 365 | 136 | 229 |
| 44000100 | PAVEMENT REMOVAL | SQ YD | 49 | 0 | 49 |
| 44004250 | PAVED SHOULDER REMOVAL | SQ YD | 256 | 136 | 120 |
| 48102100 | AGGREGATE WEDGE SHOULDER, TYPE B | TON | 3 | 1 | 2 |
| 50102400 | CONCRETE REMOVAL | CU YD | 28.6 | 9.4 | 19.2 |
| 50300255 | CONCRETE SUPERSTRUCTURE | CU YD | 31.9 | 10.5 | 21.4 |
| 50300260 | BRIDGE DECK GROOVING | SQ YD | 809 | 0 | 809 |
| 50500405 | FURNISHING AND ERECTING STRUCTURAL STEEL | POUND | 1230 | 1230 | 0 |
| 50606701 | CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 1 | L SUM | 1 | 1 | 0 |

△ SHOWS ITEMS THAT ARE SPECIALTY AND NOT COMPLETED BY GENERAL CONTRACTOR

REV. - MS

| | | | | | | | | | | | | | |
|--|---|------------------|-----------|---|------------------------------|---------------------|------|---------|-----------------------------|---------|--------|--------------|-----------|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES | | | | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| \\farnsworthgrp.com\data\Archive\CHA\2011\111004-350 | Drawings\DN\CAD_Sheets\0878\18-eh\003-006-SOQ.dgn | DRAWN - DC | REVISED - | | | | | | 42 | 139BR-2 | BOND | 36 | 3 |
| Default | PLOT SCALE = 2.0000' / in. | CHECKED - MJB | REVISED - | | CONTRACT NO. | | | | | | | | |
| | PLOT DATE = 12/12/2019 | DATE - 11/4/2019 | REVISED - | | SCALE: NTS | SHEET 1 OF 4 SHEETS | STA. | TO STA. | ILLINOIS FED. AID PROJECT | | | | |

| CODE NUMBER | ITEM | UNIT | TOTAL | STRUCTURE NO. 003-0051 0013 | STRUCTURE NO. 003-0057 0013 |
|-------------|--|--------|-------|-----------------------------|-----------------------------|
| 50606702 | CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 2 | L SUM | 1 | 0 | 1 |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 4170 | 1280 | 2890 |
| 50800515 | BAR SPLICERS | EACH | 54 | 24 | 30 |
| 52000110 | PREFORMED JOINT STRIP SEAL | FOOT | 190.5 | 68.5 | 122.0 |
| 58100200 | WATERPROOFING MEMBRANE SYSTEM | SQ YD | 973 | 973 | 0 |
| 58700300 | CONCRETE SEALER | SQ FT | 404 | 404 | 0 |
| △ 63000001 | STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS | FOOT | 657 | 300 | 357 |
| △ 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT | EACH | 4 | 1 | 3 |
| 63200310 | GUARDRAIL REMOVAL | FOOT | 912 | 444 | 468 |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A | CAL MO | 12 | 6 | 6 |
| 67100100 | MOBILIZATION | L SUM | 1 | 0.5 | 0.5 |
| 70103815 | TRAFFIC CONTROL SURVEILLANCE | CAL DA | 90 | 45 | 45 |
| 70106500 | TEMPORARY BRIDGE TRAFFIC SIGNALS | EACH | 2 | 1 | 1 |
| 70106700 | TEMPORARY RUMBLE STRIPS | EACH | 24 | 12 | 12 |
| 70107005 | PAVEMENT MARKING BLACKOUT TAPE, 5" | FOOT | 2515 | 1172 | 1343 |
| 70107024 | PAVEMENT MARKING BLACKOUT TAPE, 24" | FOOT | 31 | 0 | 31 |
| 70107025 | CHANGEABLE MESSAGE SIGN | CAL DA | 194 | 104 | 90 |
| 70300100 | SHORT TERM PAVEMENT MARKING | FOOT | 252 | 120 | 132 |

△ SHOWS ITEMS THAT ARE SPECIALTY AND NOT COMPLETED BY GENERAL CONTRACTOR

REV. - MS

| | | | | | | | | | | | | |
|---|---|------------------|-----------|---|------------------------------|---------------------|------|---------------------------|---------|--------|--------------|-----------|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES | | | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| W:\meworthgrp.com\data\Archive_CHA\2011111004-350 | Drawings\IGN\CAD_Sheets\18-eh-003-006-SOQ.dgn | DRAWN - DC | REVISED - | | | | | 42 | 139BR-2 | BOND | 36 | 4 |
| Default | PLOT SCALE = 2.0000' / in. | CHECKED - MJB | REVISED - | | CONTRACT NO. | | | ILLINOIS FED. AID PROJECT | | | | |
| | PLOT DATE = 12/12/2019 | DATE - 11/4/2019 | REVISED - | | SCALE: NTS | SHEET 2 OF 4 SHEETS | STA. | TO STA. | | | | |

| CODE NUMBER | ITEM | UNIT | TOTAL | STRUCTURE NO. 003-0051 0013 | STRUCTURE NO. 003-0057 0013 |
|-------------|---|-------|-------|-----------------------------|-----------------------------|
| 70300150 | SHORT TERM PAVEMENT MARKING REMOVAL | SQ FT | 1276 | 542 | 734 |
| 70300220 | TEMPORARY PAVEMENT MARKING - LINE 4" | FOOT | 3007 | 1297 | 1710 |
| 70400100 | TEMPORARY CONCRETE BARRIER | FOOT | 1189 | 454 | 735 |
| 70400200 | RELOCATE TEMPORARY CONCRETE BARRIER | FOOT | 841 | 427 | 414 |
| 70600250 | IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3 | EACH | 9 | 4 | 5 |
| 70600350 | IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3 | EACH | 8 | 6 | 2 |
| 72501000 | TERMINAL MARKER - DIRECT APPLIED | EACH | 4 | 1 | 3 |
| 78000200 | THERMOPLASTIC PAVEMENT MARKING - LINE 4" | FOOT | 2205 | 1297 | 908 |
| 78009004 | MODIFIED URETHANE PAVEMENT MARKING - LINE 4" | FOOT | 801 | 0 | 801 |
| 78100100 | RAISED REFLECTIVE PAVEMENT MARKER | EACH | 12 | 5 | 7 |
| 78200005 | GUARDRAIL REFLECTORS, TYPE A | EACH | 14 | 7 | 7 |
| 78200010 | BARRIER WALL REFLECTORS, TYPE B | EACH | 79 | 47 | 32 |
| 78300200 | RAISED REFLECTIVE PAVEMENT MARKER REMOVAL | EACH | 12 | 5 | 7 |
| X0324762 | WIDE LOAD DETOUR SIGNING | L SUM | 1 | 0.5 | 0.5 |
| X5060601 | CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES, NO. 1 | L SUM | 1 | 1 | 0 |
| X5060602 | CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES, NO. 2 | L SUM | 1 | 0 | 1 |
| X5870015 | BRIDGE DECK CONCRETE SEALER | SQ FT | 9976 | 2103 | 7873 |
| X6061700 | COMBINATION CONCRETE CURB AND GUTTER, TYPE B (SPECIAL) | FOOT | 35 | 20 | 15 |

△ SHOWS ITEMS THAT ARE SPECIALTY AND NOT COMPLETED BY GENERAL CONTRACTOR

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|--|----------------------------|------------------|-----------|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - |
| \\farmworthgrp.com\data\Archive\CHAI2011111004-350\Drawings\IGN\CAD_Sheets\18-eh-003-006-SOQ.dgn | | DRAWN - DC | REVISED - |
| Default | PLOT SCALE = 2.0000' / in. | CHECKED - MJB | REVISED - |
| | PLOT DATE = 12/12/2019 | DATE - 11/4/2019 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: NTS SHEET 3 OF 4 SHEETS STA. TO STA.

| F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 5 |
| CONTRACT NO. | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

80% FED / 10% STATE

| CODE NUMBER | ITEM | UNIT | TOTAL | STRUCTURE NO. 003-0051 0013 | STRUCTURE NO. 003-0057 0013 |
|-------------|---|-------|-------|-----------------------------|-----------------------------|
| △ X6310187 | TRAFFIC BARRIER TERMINAL, TYPE 6 (MODIFIED) | EACH | 7 | 4 | 3 |
| X7010202 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL) | EACH | 2 | 1 | 1 |
| X7010216 | TRAFFIC CONTROL AND PROTECTION, (SPECIAL) | L SUM | 1 | 0.5 | 0.5 |
| X7030005 | TEMPORARY PAVEMENT MARKING REMOVAL | SQ FT | 992 | 428 | 564 |
| Z0001495 | BRIDGE APPROACH SHOULDER REMOVAL | SQ YD | 7 | 4 | 3 |
| Z0001903 | STRUCTURAL STEEL REMOVAL | POUND | 1160 | 1160 | 0 |
| Z0001905 | STRUCTURAL STEEL REPAIR | POUND | 1030 | 1030 | 0 |
| Z0004405 | HOT-MIX ASPHALT SCARIFICATION | SQ YD | 97 | 12 | 85 |
| Z0010400 | CLEANING BRIDGE SEATS | SQ FT | 316 | 0 | 316 |
| Z0012130 | BRIDGE DECK SCARIFICATION 3/4" | SQ YD | 821 | 0 | 821 |
| Z0012166 | BRIDGE DECK MICROSILICA CONCRETE OVERLAY 2 3/4" | SQ YD | 821 | 0 | 821 |
| Z0012800 | CONCRETE PAVEMENT SCARIFICATION | SQ YD | 590 | 146 | 444 |
| Z0016002 | DECK SLAB REPAIR (FULL DEPTH, TY II) | SQ YD | 25 | 0 | 25 |
| Z0016200 | DECK SLAB REPAIR (PARTIAL) | SQ YD | 200 | 200 | 0 |
| Z0033700 | LONGITUDINAL JOINT SEALANT | FOOT | 393 | 123 | 270 |
| ∅ Z0076600 | TRAINEES | HOUR | 500 | 500 | 0 |
| Z0073200 | TEMPORARY SHORING AND CRIBBING | EACH | 4 | 4 | 0 |
| ∅ Z0076604 | TRAINEES TRAINING PROGRAM GRADUATE | HOUR | 500 | 500 | 0 |
| X0900090 | GROUTED FIBERGLASS REINFORCED PLASTIC ENCASED REPAIR | FOOT | 90 | 0 | 90 |

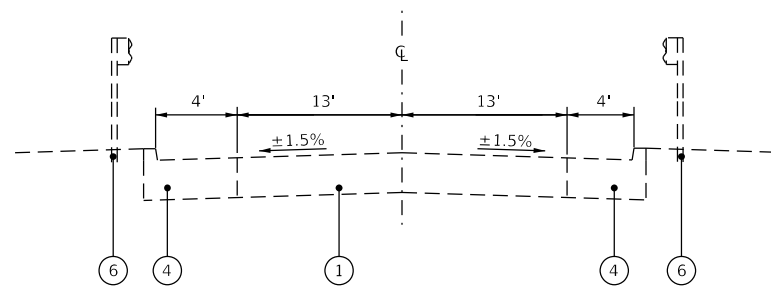
△ SHOWS ITEMS THAT ARE SPECIALTY AND NOT COMPLETED BY GENERAL CONTRACTOR

∅ 0042

REV. - MS

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|---|----------------------------|------------------|-----------|---|------------------------------|--------------|---------------------|--------|--------------|-----------------------------|--|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | SUMMARY OF QUANTITIES | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| W:\meworthgrp.com\data\Archive\CHAI2011111004-350\Drawings\IGN\CAD_Sheets\18-eh-003-006-SOQ.dgn | DRAWN - DC | REVISED - | 42 | | | 139BR-2 | BOND | 36 | 6 | | |
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| | PLOT DATE = 12/12/2019 | DATE - 11/4/2019 | REVISED - | | | SCALE: NTS | SHEET 4 OF 4 SHEETS | STA. | TO STA. | ILLINOIS FED. AID PROJECT | |

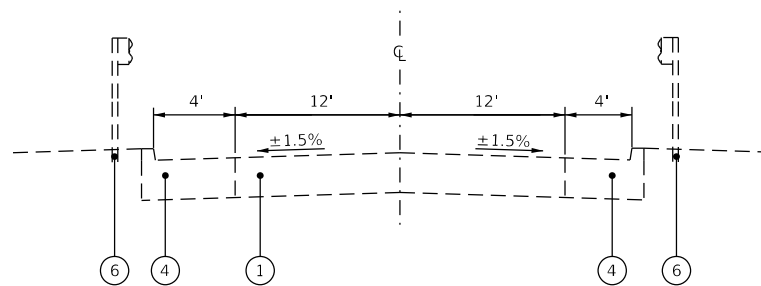
STRUCTURE 003-0051



EXISTING TYPICAL SECTION

STA. 2061+08.00 TO STA. 2061+20.00
STA. 2063+95.00 TO STA. 2064+07.00

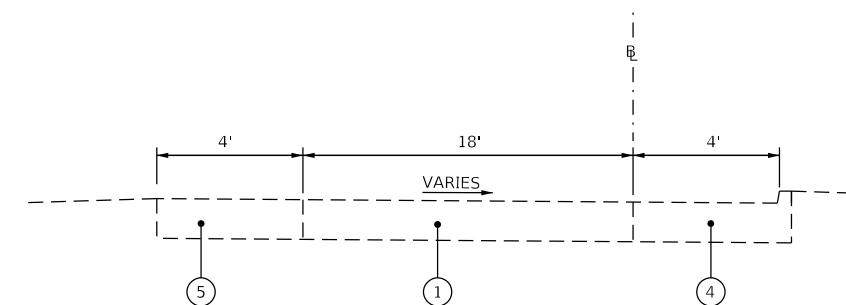
STRUCTURE 003-0057 - MAINLINE



EXISTING TYPICAL SECTION

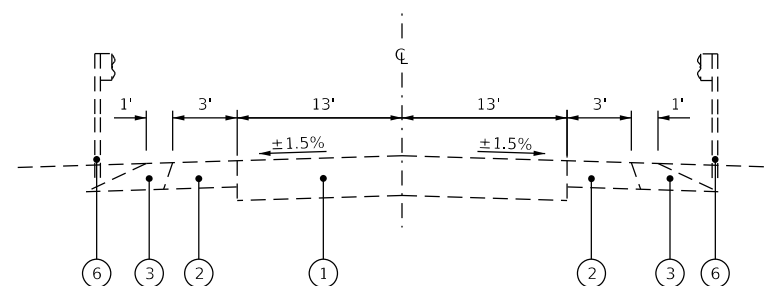
LT STA. 2072+59.39 TO STA. 2072+61.32
RT STA. 2072+35.85 TO STA. 2072+61.32

STRUCTURE 003-0057 - RAMP



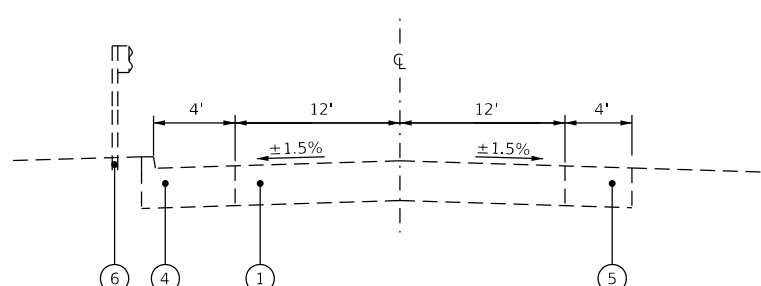
EXISTING TYPICAL SECTION - RAMP

LT STA. 2074+15.32 TO STA. 2074+30.06
RT STA. 2074+15.32 TO STA. 2074+23.49



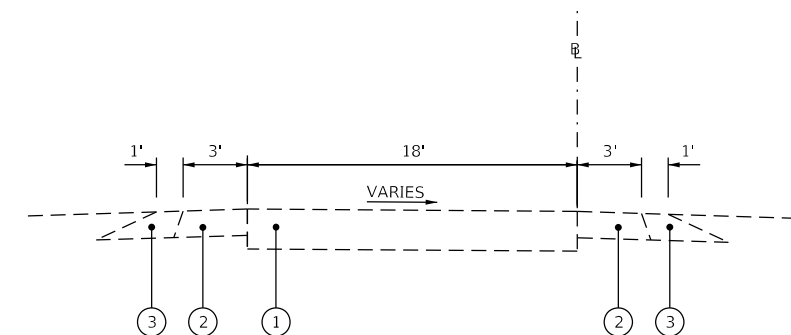
EXISTING TYPICAL SECTION

STA. 2060+98.00 TO STA. 2061+08.00
STA. 2064+07.00 TO STA. 2064+17.00



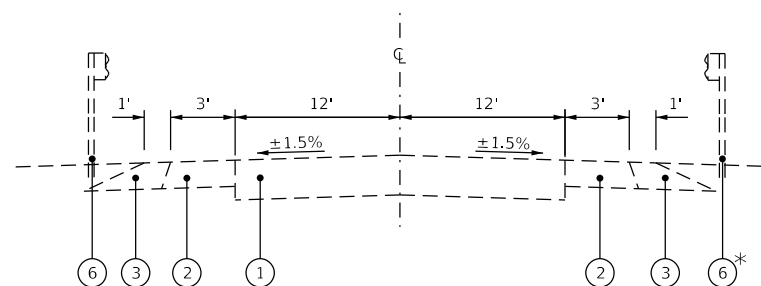
EXISTING TYPICAL SECTION

LT STA. 2074+39.28 TO STA. 2074+65.68
RT STA. 2074+39.28 TO STA. 2074+43.22



EXISTING TYPICAL SECTION - RAMP

LT STA. 2074+30.06 TO STA. 2074+65.32
RT STA. 2074+23.49 TO STA. 2074+65.32



EXISTING TYPICAL SECTION

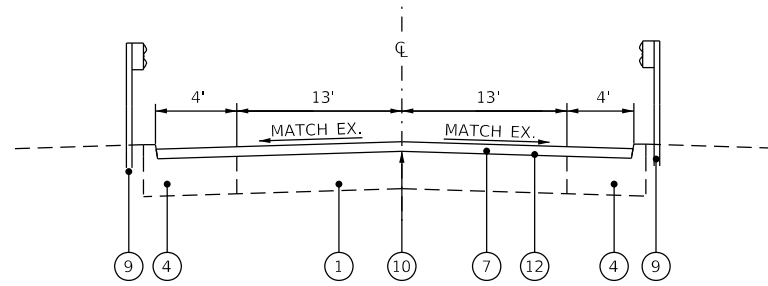
LT STA. 2072+11.32 TO STA. 2072+59.39
RT STA. 2072+11.32 TO STA. 2072+35.85
LT STA. 2074+65.68 TO STA. 2074+89.28
* RT STA. 2074+65.68 TO STA. 2074+89.28
* NO GUARDRAIL AT THIS LOCATION

LEGEND

- ① EXISTING P.C.C. APPROACH PAVEMENT
- ② EXISTING HMA SHOULDER, 6"
- ③ EXISTING AGGREGATE SHOULDER, 6"
- ④ EXISTING P.C.C. APPROACH SHOULDER W/ INTEGRAL TYPE B CURB
- ⑤ EXISTING P.C.C. APPROACH SHOULDER
- ⑥ EXISTING GUARDRAIL
- ⑦ PROPOSED 3/4" PAVEMENT SCARIFICATION AND 2 3/4" POLY HMA SURFACE COURSE, IL-9.5, MIX "D", N70
- ⑧ HMA BASE COURSE WIDENING, 12"
- ⑨ PROPOSED STEEL PLATE BEAM GUARDRAIL, TYPE A
- ⑩ PROPOSED LONGITUDINAL JOINT SEALANT
- ⑪ AGGREGATE WEDGE SHOULDER, TYPE B

| | | | | | | | | | | | | |
|-------------|--|------------------|-----------|---|-------------------------|---------------------|------|----------------|--------------------|-------------|-----------------|-------------|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TYPICAL SECTIONS | | | F.A.P. RTE. 42 | SECTION 139BR-2 | COUNTY BOND | TOTAL SHEETS 36 | SHEET NO. 7 |
| Default | Drawings\IDGN\CAD_Sheets\18-sh-007-008-typical.dgn | DRAWN - DC | REVISED - | | SCALE: NTS | SHEET 1 OF 2 SHEETS | STA. | TO STA. | CONTRACT NO. 76N18 | | | |
| | PLOT SCALE = 40,0000' / 1" | CHECKED - MJB | REVISED - | | | | | | | | | |
| | PLOT DATE = 12/11/2019 | DATE - 11/4/2019 | REVISED - | | | | | | | | | |

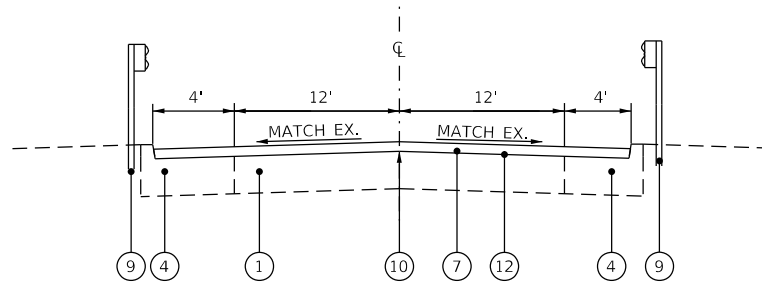
STRUCTURE 003-0051



PROPOSED TYPICAL SECTION

STA. 2061+08.00 TO STA. 2061+20.00
STA. 2063+95.00 TO STA. 2064+07.00

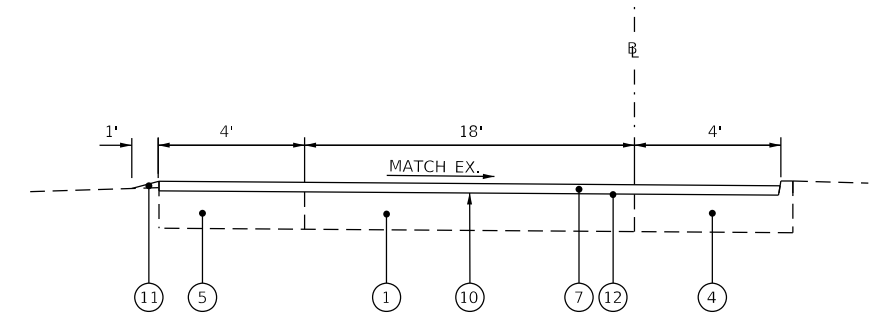
STRUCTURE 003-0057 - MAINLINE



PROPOSED TYPICAL SECTION

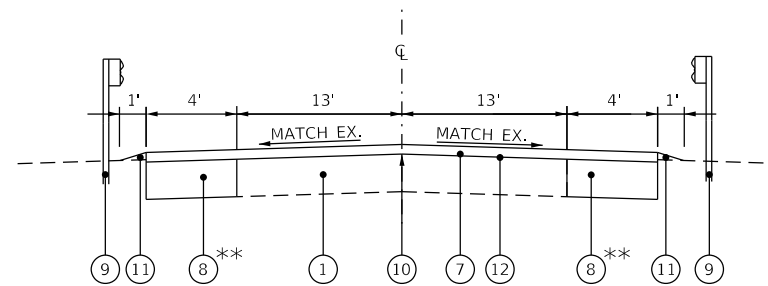
LT STA. 2072+59.39 TO STA. 2072+61.32
RT STA. 2072+35.85 TO STA. 2072+61.32

STRUCTURE 003-0057 - RAMP



PROPOSED TYPICAL SECTION

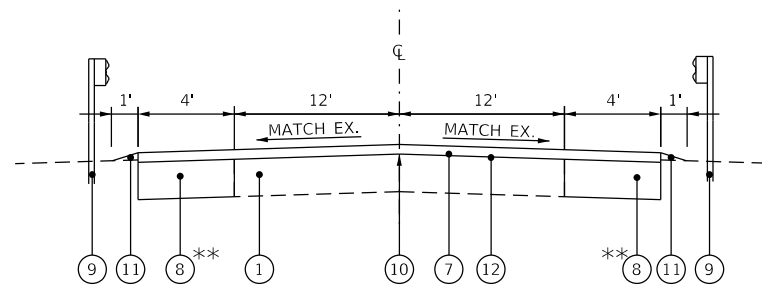
LT STA. 2074+15.32 TO STA. 2074+30.06
RT STA. 2074+15.32 TO STA. 2074+23.49



PROPOSED TYPICAL SECTION

STA. 2060+98.00 TO STA. 2061+08.00
STA. 2064+07.00 TO STA. 2064+17.00

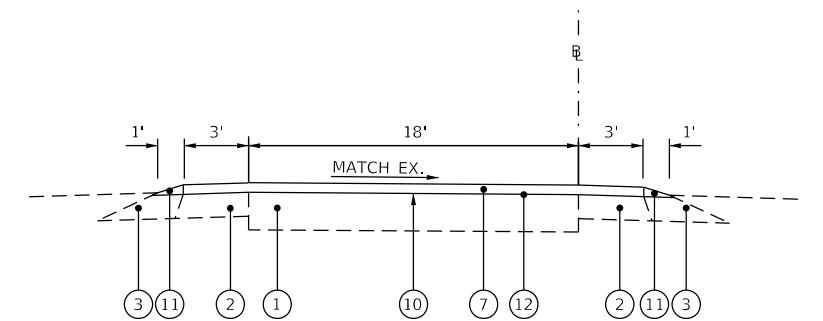
** SEE MOT PLANS FOR LIMITS OF HMA BASE COURSE WIDENING



PROPOSED TYPICAL SECTION

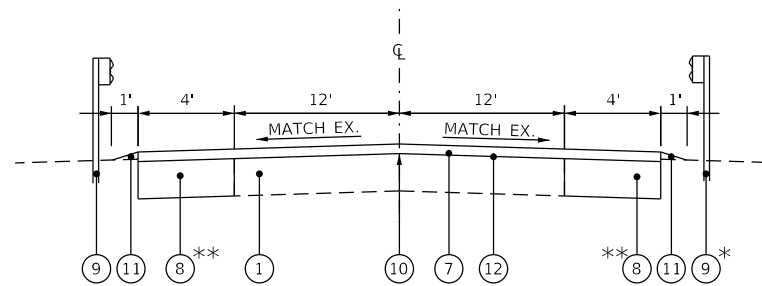
LT STA. 2074+39.28 TO STA. 2074+65.68
RT STA. 2074+39.28 TO STA. 2074+43.22

** SEE MOT PLANS FOR LIMITS OF HMA BASE COURSE WIDENING



PROPOSED TYPICAL SECTION

LT STA. 2074+30.06 TO STA. 2074+65.32
RT STA. 2074+23.49 TO STA. 2074+65.32



PROPOSED TYPICAL SECTION

LT STA. 2072+11.32 TO STA. 2072+59.39
RT STA. 2072+11.32 TO STA. 2072+35.85
LT STA. 2074+65.68 TO STA. 2074+89.28
* RT STA. 2074+65.68 TO STA. 2074+89.28

* NO GUARDRAIL AT THIS LOCATION
** SEE MOT PLANS FOR LIMITS OF HMA BASE COURSE WIDENING

LEGEND

- ① EXISTING P.C.C. APPROACH PAVEMENT
- ② EXISTING HMA SHOULDER, 6"
- ③ EXISTING AGGREGATE SHOULDER, 6"
- ④ EXISTING P.C.C. APPROACH SHOULDER W/ INTEGRAL TYPE B CURB
- ⑤ EXISTING P.C.C. APPROACH SHOULDER
- ⑥ EXISTING GUARDRAIL
- ⑦ PROPOSED 3/4" PAVEMENT SCARIFICATION AND 2 3/4" POLY HMA SURFACE COURSE, IL-9.5, MIX "D", N70
- ⑧ HMA BASE COURSE WIDENING, 12"
- ⑨ PROPOSED STEEL PLATE BEAM GUARDRAIL, TYPE A
- ⑩ PROPOSED LONGITUDINAL JOINT SEALANT
- ⑪ PROPOSED AGGREGATE WEDGE SHOULDER, TYPE B
- ⑫ PROPOSED BITUMINOUS MATERIALS (TACK COAT)

| | | | | | | | | | | | | |
|-------------|--|------------------|-----------|---|---------------------------|---------------------|--------------|--------------------|-----------------|-------------|-----------------|-------------|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | TYPICAL SECTIONS | | | F.A.P. RTE. 42 | SECTION 139BR-2 | COUNTY BOND | TOTAL SHEETS 36 | SHEET NO. 8 |
| Default | Drawings\IGN\CAD_Sheets\18-sh4-007-008-typical.dgn | DRAWN - DC | REVISED - | | SCALE: NTS | SHEET 2 OF 2 SHEETS | STA. TO STA. | CONTRACT NO. 76N18 | | | | |
| | PLOT SCALE = 40,0000' / 1" | CHECKED - MJB | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | |
| | PLOT DATE = 12/11/2019 | DATE - 11/4/2019 | REVISED - | | | | | | | | | |

| STAGING SCHEDULE | | | | | | | | | | | | | | | | | | | | | |
|--------------------|------------------|-----------------------------|----------------------------------|---|-----------------|------------------------|------------------|----------------------------------|-------------------------|-------------------------|----------------------------|-------------------------------------|---|--|---------------------------------|---|--|------------------------------------|-------------------------------------|----------------------------------|-------------------|
| LOCATION | EARTH EXCAVATION | EARTH EXCAVATION (WIDENING) | HOT-MIX ASPHALT BASE COURSE, 12" | HOT-MIX ASPHALT BASE COURSE WIDENING, 12" | TEMPORARY RAMPS | PAVED SHOULDER REMOVAL | PAVEMENT REMOVAL | TEMPORARY BRIDGE TRAFFIC SIGNALS | TEMPORARY RUMBLE STRIPS | CHANGEABLE MESSAGE SIGN | TEMPORARY CONCRETE BARRIER | RELOCATE TEMPORARY CONCRETE BARRIER | IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3 | IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3 | BARRIER WALL REFLECTORS, TYPE B | TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL) | POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70 | PAVEMENT MARKING BLACKOUT TAPE, 5" | PAVEMENT MARKING BLACKOUT TAPE, 24" | BITUMINOUS MATERIALS (TACK COAT) | |
| | CU YD | CU YD | SQ YD | SQ YD | SQ YD | SQ YD | SQ YD | EACH | EACH | CAL DA | FOOT | FOOT | EACH | EACH | EACH | EACH | TON | FOOT | FOOT | BCW POUND | BASE COURSE POUND |
| SN 003-0051 | | | | | | | | | | | | | | | | | | | | | |
| PRESTAGE | | 10 | | 91 | | | | 1 | | 104 | | | | | | 1 | | | | | 81 |
| STAGE 1 | | 10 | | 90 | 14 | 68 | | | 6 | | 454 | | 4 | | 23 | | | | 945 | | 81 |
| STAGE 2 | | | | | 26 | 68 | | | 6 | | | 427 | | 6 | 24 | | | | 227 | | |
| SN 003-0057 | | | | | | | | | | | | | | | | | | | | | |
| PRESTAGE | | 10 | | 118 | | | 49 | 1 | | 90 | | | | | | 1 | 67 | | | | 106 |
| STAGE 1 | 10 | 20 | 53 | 121 | 14 | 52 | | | 6 | | 735 | | 5 | | 20 | | | | 1009 | 31 | 133 136 |
| STAGE 2 | | | | | 36 | 68 | | | 6 | | | 414 | | 2 | 12 | | | | 334 | | |
| TOTAL | 10 | 50 | 53 | 420 | 90 | 256 | 49 | 2 | 24 | 194 | 1189 | 841 | 9 | 8 | 79 | 2 | 67 | 2515 | 31 | 401 | 136 |

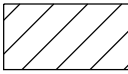

| ROADWAY IMPROVEMENT SCHEDULE | | | | | | | | | | | | |
|------------------------------|----------------------------------|------------|--|--|----------------------------------|--|---|--|----------------------------------|------------------------------|--|----------------------------|
| LOCATION | BITUMINOUS MATERIALS (TACK COAT) | | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT | POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70 | AGGREGATE WEDGE SHOULDER, TYPE B | STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS | TRAFFIC BARRIER TERMINAL, TYPE 6 (MODIFIED) | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT | TERMINAL MARKER - DIRECT APPLIED | GUARDRAIL REFLECTORS, TYPE A | COMBINATION CONCRETE CURB AND GUTTER, TYPE B (SPECIAL) | LONGITUDINAL JOINT SEALANT |
| | POUND | SQ YD | TON | TON | FOOT | EACH | EACH | EACH | EACH | FOOT | FOOT | |
| SN 003-0051 | | | | | | | | | | | | |
| 2060+58.00 | TO | 2061+20.00 | 99 | 142 | 34 | 0.6 | 44 | 2 | | 2 | 10 | 62 |
| 2063+95.00 | TO | 2064+57.00 | 99 | 142 | 34 | 0.6 | 256 | 2 | 1 | 5 | 10 | 61 |
| SN 003-0057 | | | | | | | | | | | | |
| 2071+71.32 | TO | 2072+61.32 | 222 | 305 | 76 | 0.4 | 194 | 2 | 2 | 2 | 4 | 90 |
| 2074+39.28 | TO | 2075+29.28 | 251 | 251 | 86 | 1.6 | 163 | 1 | 1 | 1 | 3 | 180 |
| TOTAL | | | 671 | 840 | 230 | 3 | 657 | 7 | 4 | 4 | 14 | 393 |

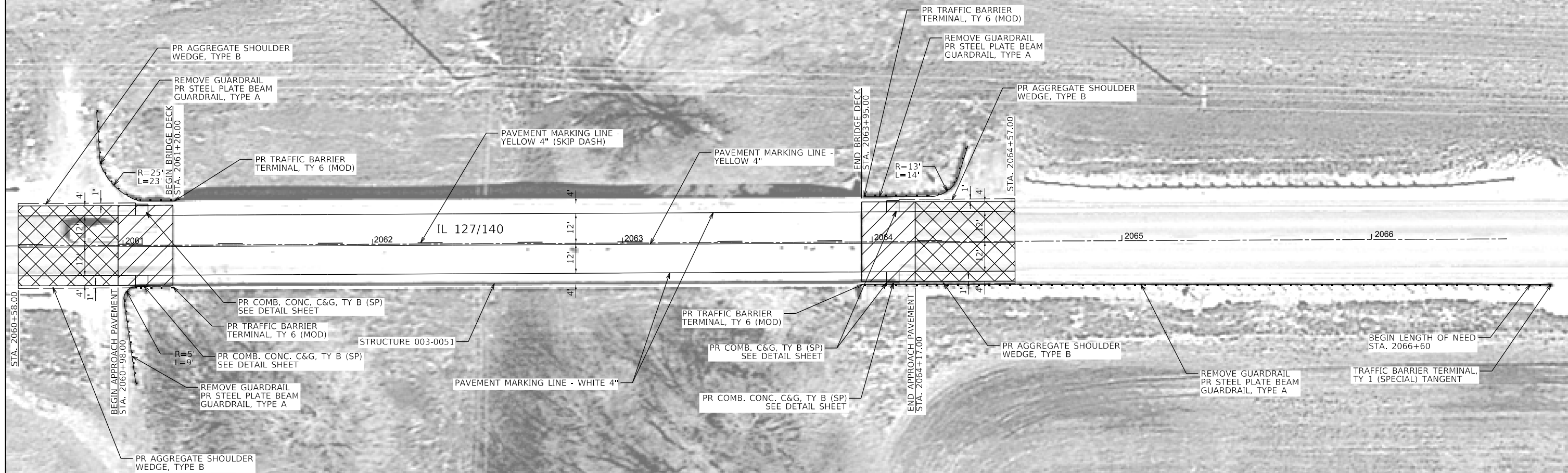
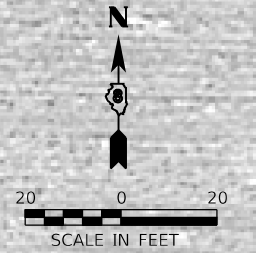
| PAVEMENT MARKING SCHEDULE | | | | | | | | | | | |
|---------------------------|-----------------------------------|--|--------|--|--------|-----------------------------|--------|--------------------------------------|--------|------|------|
| LOCATION | RAISED REFLECTIVE PAVEMENT MARKER | THERMOPLASTIC PAVEMENT MARKING - LINE 4" | | MODIFIED URETHANE PAVEMENT MARKING - LINE 4" | | SHORT TERM PAVEMENT MARKING | | TEMPORARY PAVEMENT MARKING - LINE 4" | | | |
| | | WHITE | YELLOW | WHITE | YELLOW | WHITE | YELLOW | WHITE | YELLOW | | |
| | | FOOT | FOOT | FOOT | FOOT | FOOT | FOOT | FOOT | FOOT | | |
| SN 003-0051 | | | | | | | | | | | |
| 2060+58.00 | TO | 2064+57.00 | 5 | 798 | 499 | 0 | 0 | 80 | 40 | 798 | 499 |
| SN 003-0057 | | | | | | | | | | | |
| 2071+71.32 | TO | 2075+29.28 | 7 | 455 | 453 | 387 | 414 | 96 | 36 | 901 | 809 |
| SUB-TOTAL | | | | 1253 | 952 | 387 | 414 | 176 | 76 | 1699 | 1308 |
| TOTAL | | | 12 | 2205 | | 801 | | 252 | | 3007 | |

| REMOVALS SCHEDULE | | | | | | | | | | |
|--------------------|--|------------|-------------------|---|----------------------------------|-------------------------------|---------------------------------|-------------------------------------|------------------------------------|-----|
| LOCATION | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT | | GUARDRAIL REMOVAL | RAISED REFLECTIVE PAVEMENT MARKER REMOVAL | BRIDGE APPROACH SHOULDER REMOVAL | HOT-MIX ASPHALT SCARIFICATION | CONCRETE PAVEMENT SCARIFICATION | SHORT TERM PAVEMENT MARKING REMOVAL | TEMPORARY PAVEMENT MARKING REMOVAL | |
| | SQ YD | FOOT | FOOT | EACH | SQ YD | SQ YD | SQ YD | SQ FT | SQ FT | |
| SN 003-0051 | | | | | | | | | | |
| 2060+58.00 | TO | 2061+20.00 | 142 | 114 | | 6 | 73 | 542 | 428 | |
| 2061+20.00 | TO | 2063+95.00 | | | 5 | | | | | |
| 2063+95.00 | TO | 2064+57.00 | 142 | 330 | | 4 | 6 | | | 73 |
| SN 003-0057 | | | | | | | | | | |
| 2071+71.32 | TO | 2072+61.32 | 305 | 268 | | 32 | 147 | 734 | 564 | |
| 2072+61.32 | TO | 2074+39.28 | | | 7 | | | | | |
| 2074+39.28 | TO | 2075+29.28 | 142 | 200 | | 3 | 27 | | | 159 |
| RIGHT TURN RAMP | | | 107 | | | | 26 | 138 | | |
| TOTAL | | | 838 | 912 | 12 | 7 | 97 | 590 | 1276 | 992 |

NOTE: ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.

LEGEND

-  PAVEMENT SCARIFICATION, 3/4" HOT-MIX ASPHALT SURFACE COURSE, 2 3/4"
-  HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT HOT-MIX ASPHALT SURFACE COURSE, 2 3/4"



| | | | |
|--|----------------------------|------------------|-----------|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - |
| \\farmsworthgrp.com\data\Archive_CHA\2011\11004-35\04_Drawings\DCN\CAD_Sheets\18-sh-010-Structure 0051 | | DRAWN - DC | REVISED - |
| Default | PLOT SCALE = 40,0000' / 1" | CHECKED - MJB | REVISED - |
| | PLOT DATE = 12/11/2019 | DATE - 11/4/2019 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**



**STRUCTURE 003-0051
ROADWAY PLAN**

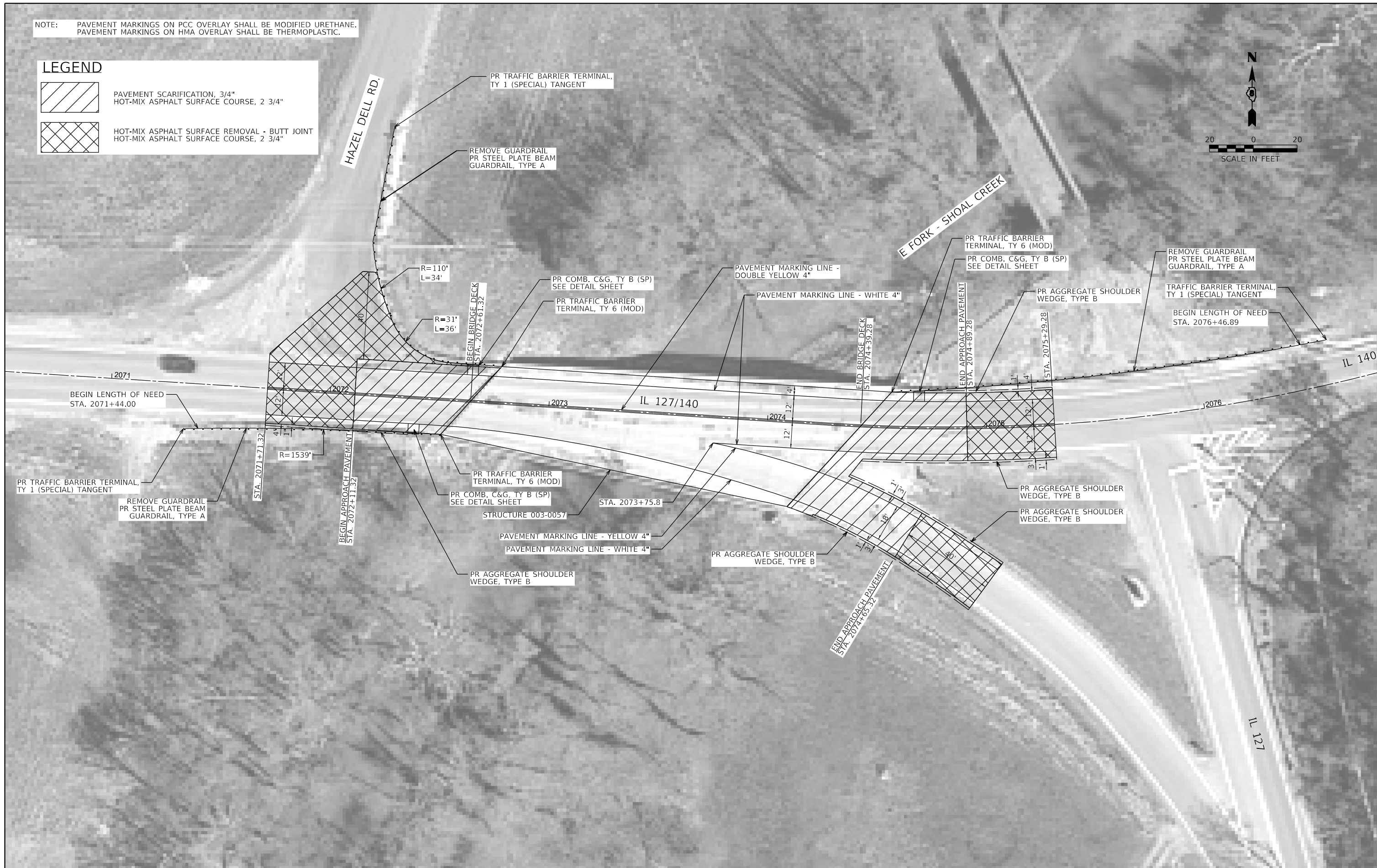
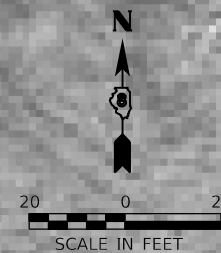
SCALE: 1" = 20' SHEET 1 OF 2 SHEETS STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 10 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

NOTE: PAVEMENT MARKINGS ON PCC OVERLAY SHALL BE MODIFIED URETHANE.
PAVEMENT MARKINGS ON HMA OVERLAY SHALL BE THERMOPLASTIC.

LEGEND

-  PAVEMENT SCARIFICATION, 3/4" HOT-MIX ASPHALT SURFACE COURSE, 2 3/4"
-  HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT HOT-MIX ASPHALT SURFACE COURSE, 2 3/4"



| | | | |
|---|-----------------------------|------------------|-----------|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - |
| \\farmworthgrp.com\data\Archive_CHA\2011\11004-35\05\Drawings\IGN\CAD_Sheets\1876N18-shh-011-Structure 0057 | DRAWN - DC | CHECKED - MJB | REVISED - |
| Default | PLOT SCALE = 40,0000' / in. | DATE - 11/4/2019 | REVISED - |
| | PLOT DATE = 12/11/2019 | | |

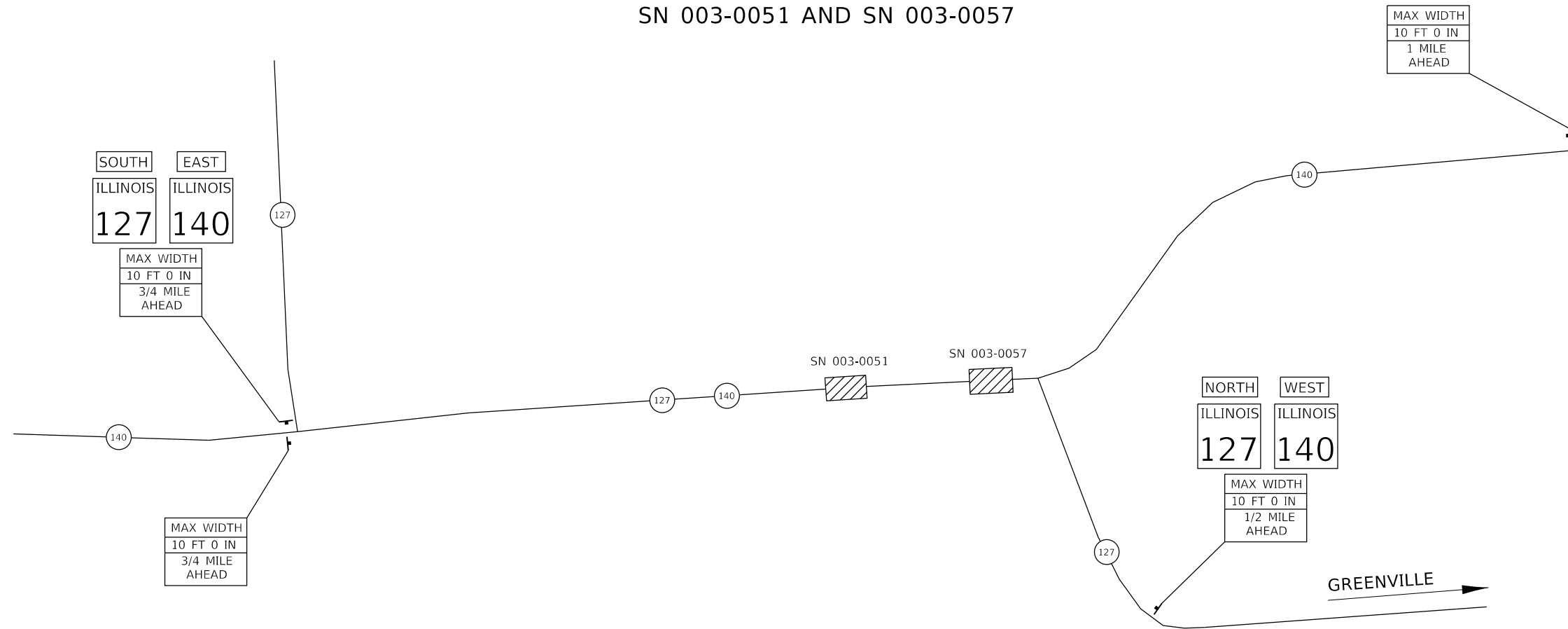
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STRUCTURE 003-0057
ROADWAY PLAN**

SCALE: 1" = 20' SHEET 2 OF 2 SHEETS STA. TO STA.

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 11 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

WIDTH RESTRICTION SIGNING
IL RTE 127/140 OVER
SN 003-0051 AND SN 003-0057



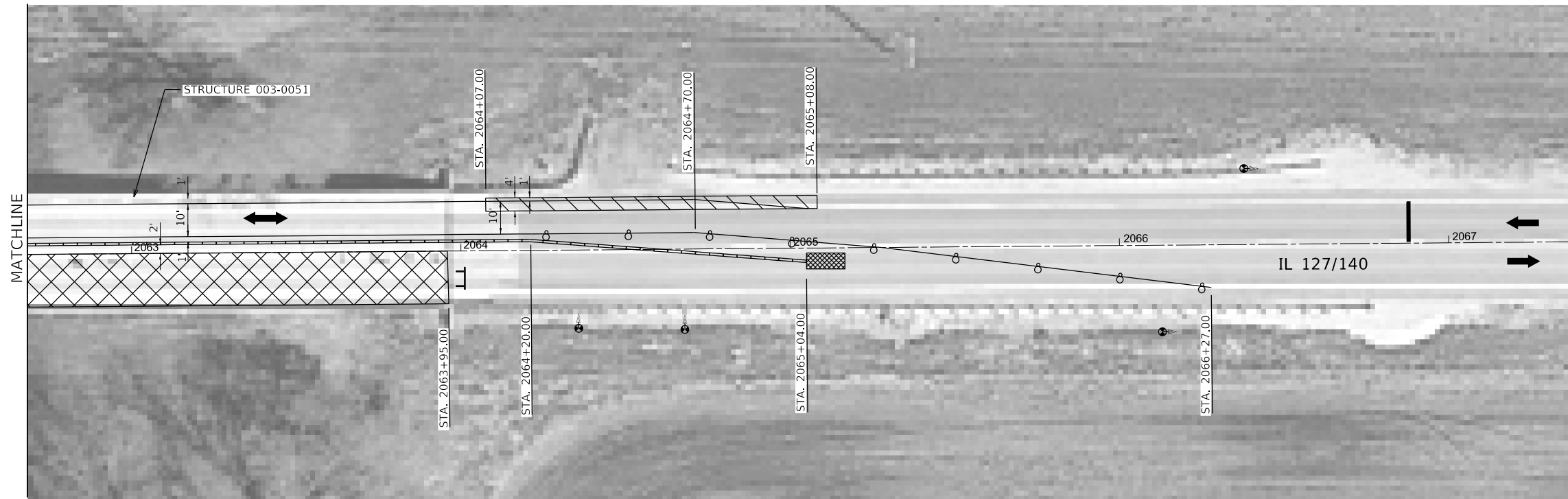
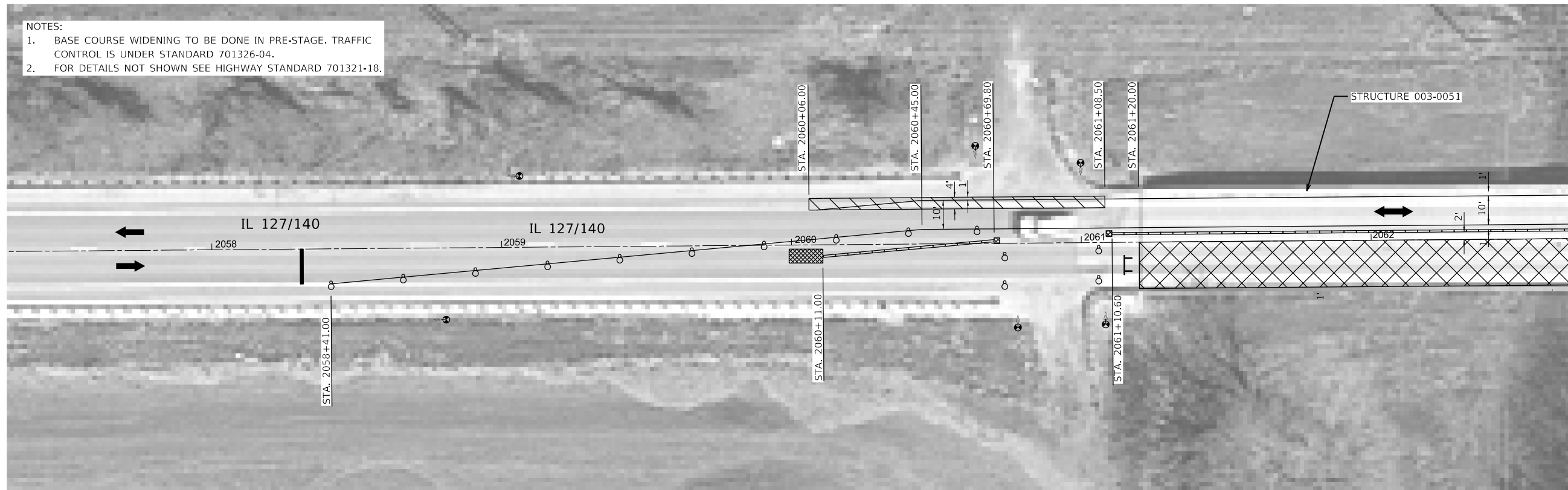
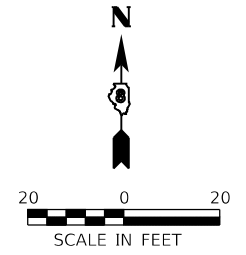
SIGNS REQUIRED

- | | | | |
|--|-----|--|-----|
| | (1) | | (1) |
| | (2) | | (1) |
| | (1) | | (1) |
| | | | (1) |
| | | | (2) |
| | | | (2) |

NOTES

- SIGN SPACING FROM INTERSECTIONS SHALL BE 400' OR TO FIT FIELD CONDITIONS PER ENGINEER.
- THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL NOT BE LESS THAN 6'.

- NOTES:
1. BASE COURSE WIDENING TO BE DONE IN PRE-STAGE. TRAFFIC CONTROL IS UNDER STANDARD 701326-04.
 2. FOR DETAILS NOT SHOWN SEE HIGHWAY STANDARD 701321-18.



| LEGEND | |
|--------|--|
| | TEMPORARY CONCRETE BARRIER |
| | TRAFFIC SIGNAL WITH SIGNAL DIRECTION |
| | MAINLINE TRAFFIC |
| | STAGE 1 WORK ZONE |
| | SHOULDER REMOVAL HOT-MIX ASPHALT BASE COURSE WIDENING, 12" |
| | IMPACT ATTENUATOR |
| | TYPE III BARRICADE |
| | DRUM WITH STEADY BURNING LIGHT |

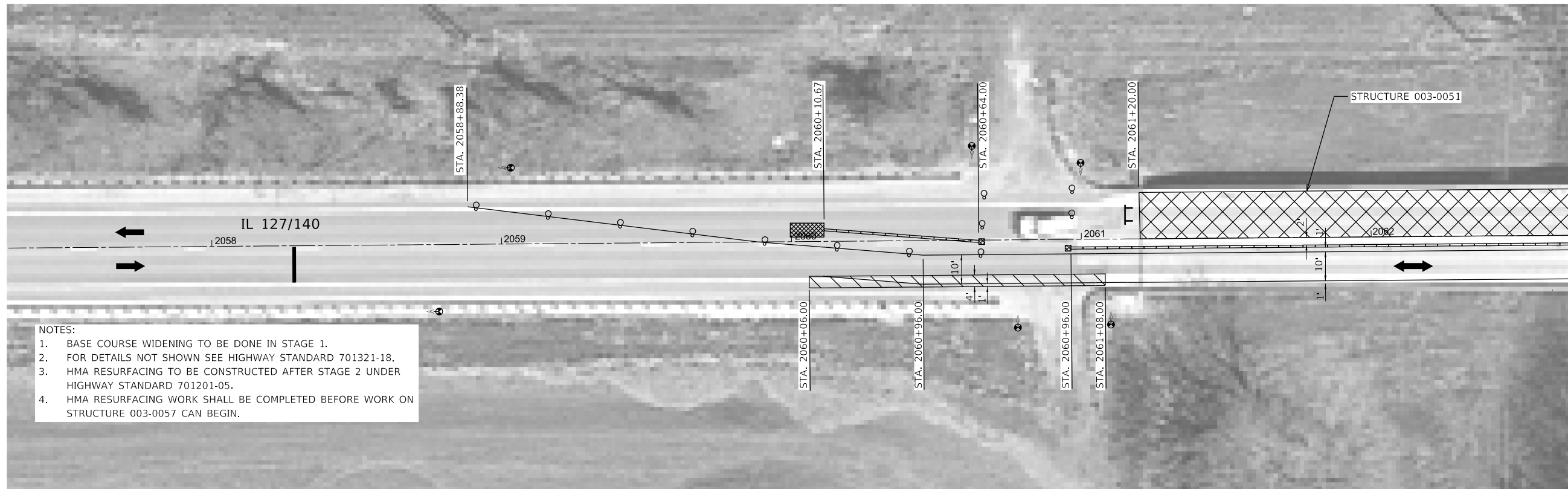
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| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - |
| \\farmsworthgrp.com\data\Archive_CHAI\2011\11004-35\04_Drawings\DCN\CAD_Sheets\18-shh-013-014-Structure | DRAWN - DC | CHECKED - MJB | REVISED - |
| STAGE 1 Rev | PLOT SCALE = 40,0000' / 1" | DATE - 11/4/2019 | REVISED - |
| | PLOT DATE = 12/11/2019 | | |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STRUCTURE 003-0051
MAINTENANCE OF TRAFFIC - STAGE 1

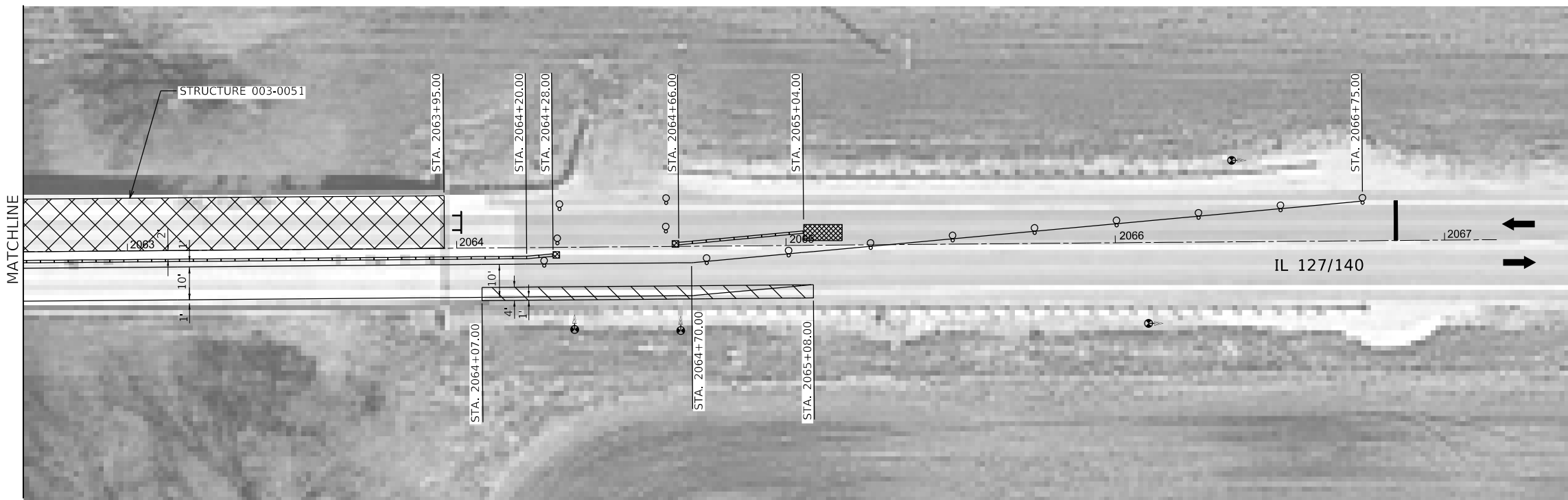
SCALE: 1" = 20' SHEET 1 OF 4 SHEETS STA. TO STA.

| | | | | |
|---------------------------|---------|--------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 42 | 139BR-2 | BOND | 36 | 13 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



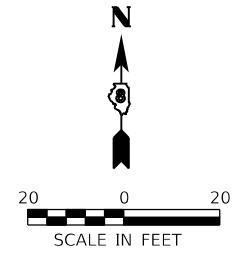
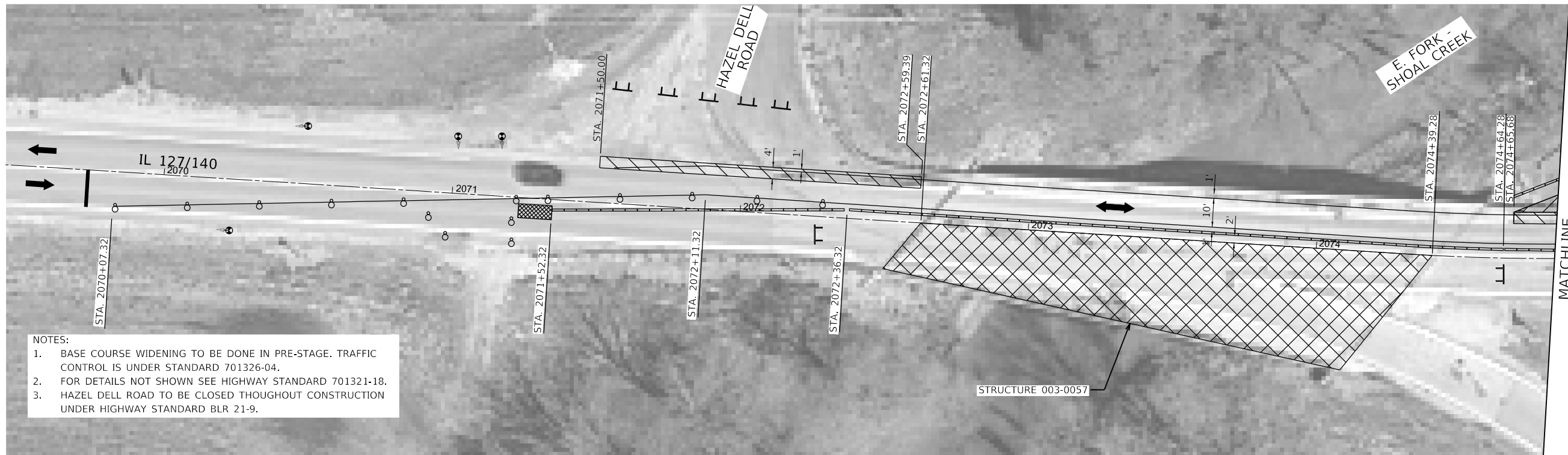
NOTES:

1. BASE COURSE WIDENING TO BE DONE IN STAGE 1.
2. FOR DETAILS NOT SHOWN SEE HIGHWAY STANDARD 701321-18.
3. HMA RESURFACING TO BE CONSTRUCTED AFTER STAGE 2 UNDER HIGHWAY STANDARD 701201-05.
4. HMA RESURFACING WORK SHALL BE COMPLETED BEFORE WORK ON STRUCTURE 003-0057 CAN BEGIN.

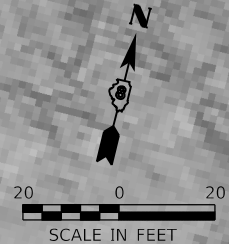
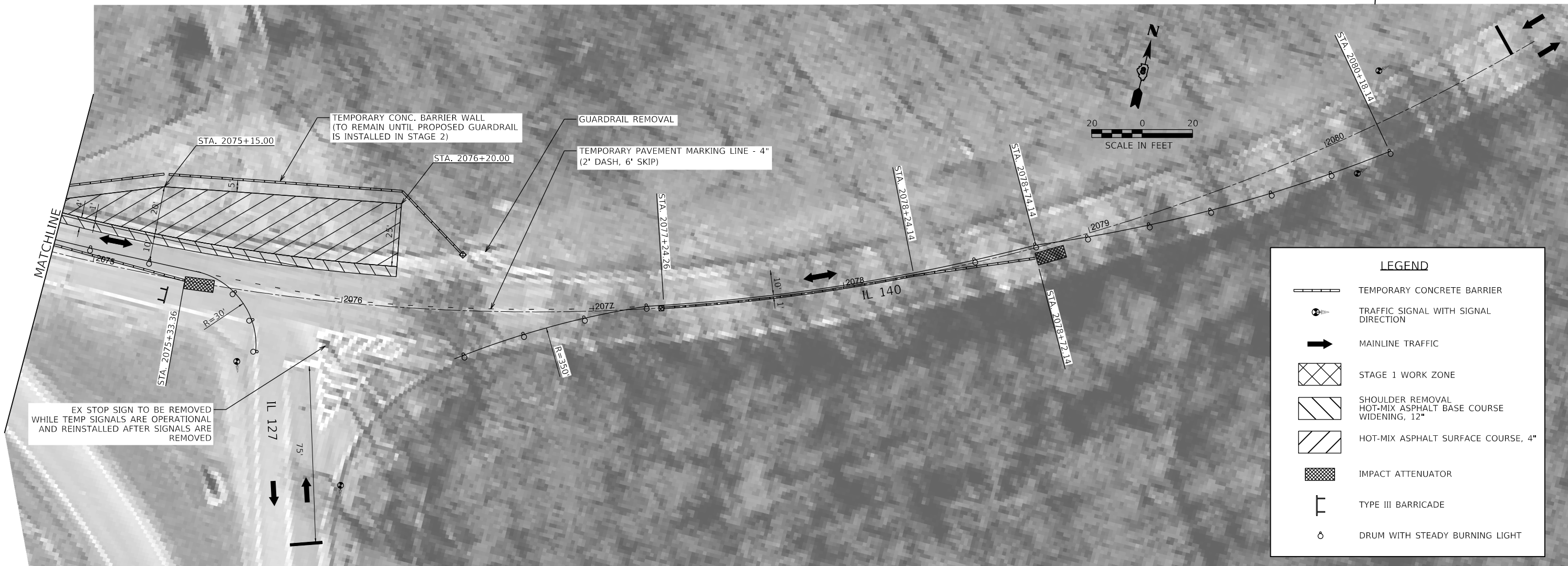


| LEGEND | |
|--------|--|
| | TEMPORARY CONCRETE BARRIER |
| | TRAFFIC SIGNAL WITH SIGNAL DIRECTION |
| | MAINLINE TRAFFIC |
| | STAGE 2 WORK ZONE |
| | SHOULDER REMOVAL HOT-MIX ASPHALT BASE COURSE WIDENING, 12" |
| | IMPACT ATTENUATOR |
| | TYPE III BARRICADE |
| | DRUM WITH STEADY BURNING LIGHT |

| | | | | | | | | | | | | |
|-------------|----------------------------|------------------|-----------|---|--|---------------------------|---------------------|-------------|-----------------|--------------------|--|--|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | STRUCTURE 003-0051 MAINTENANCE OF TRAFFIC - STAGE 2 | F.A.P. RTE. 42 | SECTION 139BR-2 | COUNTY BOND | TOTAL SHEETS 36 | SHEET NO. 14 | | |
| STAGE 2 Rev | PLOT SCALE = 40,0000' / 1" | CHECKED - MJB | REVISED - | | | SCALE: 1" = 20' | SHEET 2 OF 4 SHEETS | STA. | TO STA. | CONTRACT NO. 76N18 | | |
| | PLOT DATE = 12/11/2019 | DATE - 11/4/2019 | REVISED - | | | ILLINOIS FED. AID PROJECT | | | | | | |
| | | | | | | | | | | | | |



- NOTES:
1. BASE COURSE WIDENING TO BE DONE IN PRE-STAGE. TRAFFIC CONTROL IS UNDER STANDARD 701326-04.
 2. FOR DETAILS NOT SHOWN SEE HIGHWAY STANDARD 701321-18.
 3. HAZEL DELL ROAD TO BE CLOSED THOUGHOUT CONSTRUCTION UNDER HIGHWAY STANDARD BLR 21-9.



LEGEND

- TEMPORARY CONCRETE BARRIER
- TRAFFIC SIGNAL WITH SIGNAL DIRECTION
- MAINLINE TRAFFIC
- STAGE 1 WORK ZONE
- SHOULDER REMOVAL HOT-MIX ASPHALT BASE COURSE WIDENING, 12"
- HOT-MIX ASPHALT SURFACE COURSE, 4"
- IMPACT ATTENUATOR
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT

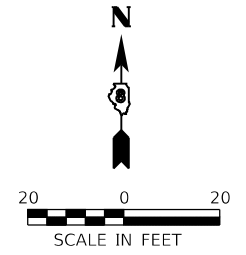
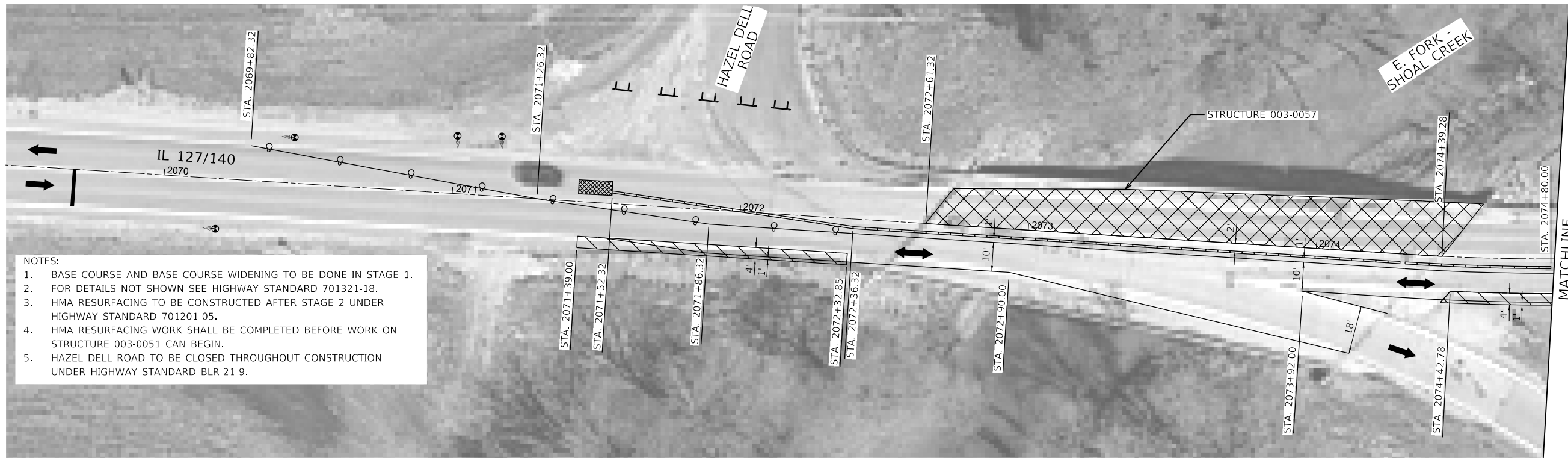
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| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - |
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| | PLOT SCALE = 40,0000' / 1" | CHECKED - MJB | REVISED - |
| STAGE 1 | PLOT DATE = 12/11/2019 | DATE - 11/4/2019 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

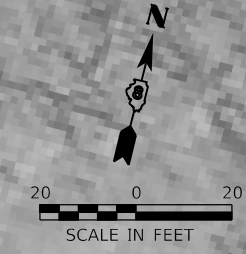
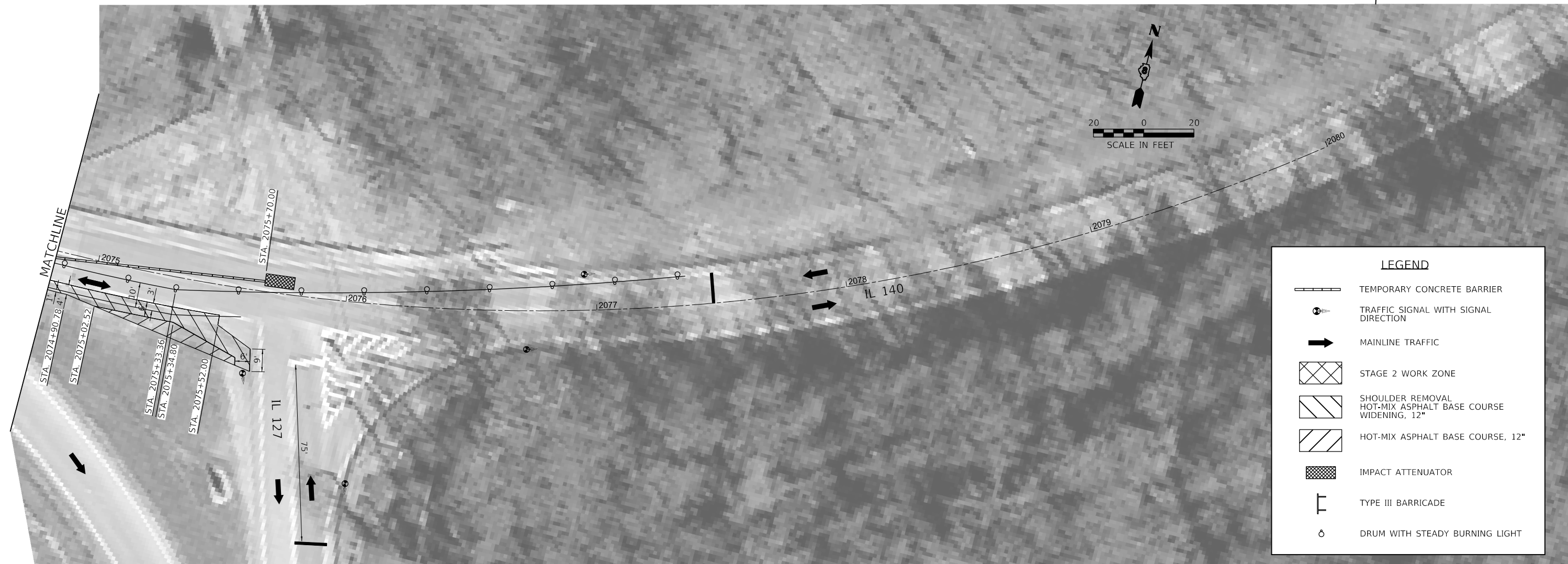
**STRUCTURE 003-0057
MAINTENANCE OF TRAFFIC - STAGE 1**

SCALE: NTS SHEET 3 OF 4 SHEETS STA. TO STA.

| | | | | |
|--------------------|-----------------|-------------|---------------------------|--------------|
| F.A.P. RTE. 42 | SECTION 139BR-2 | COUNTY BOND | TOTAL SHEETS 36 | SHEET NO. 15 |
| CONTRACT NO. 76N18 | | | ILLINOIS FED. AID PROJECT | |



- NOTES:
1. BASE COURSE AND BASE COURSE WIDENING TO BE DONE IN STAGE 1.
 2. FOR DETAILS NOT SHOWN SEE HIGHWAY STANDARD 701321-18.
 3. HMA RESURFACING TO BE CONSTRUCTED AFTER STAGE 2 UNDER HIGHWAY STANDARD 701201-05.
 4. HMA RESURFACING WORK SHALL BE COMPLETED BEFORE WORK ON STRUCTURE 003-0051 CAN BEGIN.
 5. HAZEL DELL ROAD TO BE CLOSED THROUGHOUT CONSTRUCTION UNDER HIGHWAY STANDARD BLR-21-9.



LEGEND

- TEMPORARY CONCRETE BARRIER
- TRAFFIC SIGNAL WITH SIGNAL DIRECTION
- MAINLINE TRAFFIC
- STAGE 2 WORK ZONE
- SHOULDER REMOVAL HOT-MIX ASPHALT BASE COURSE WIDENING, 12"
- HOT-MIX ASPHALT BASE COURSE, 12"
- IMPACT ATTENUATOR
- TYPE III BARRICADE
- DRUM WITH STEADY BURNING LIGHT

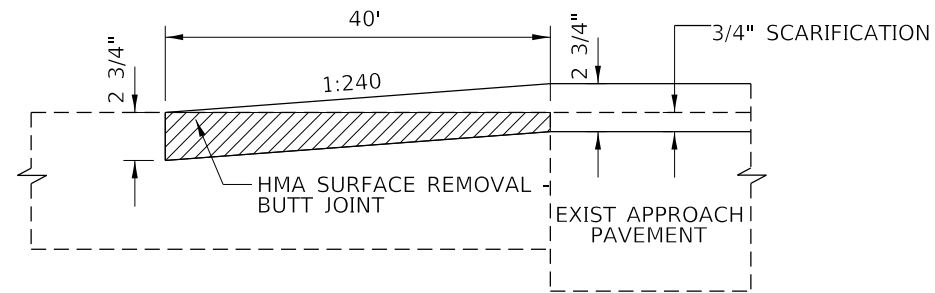
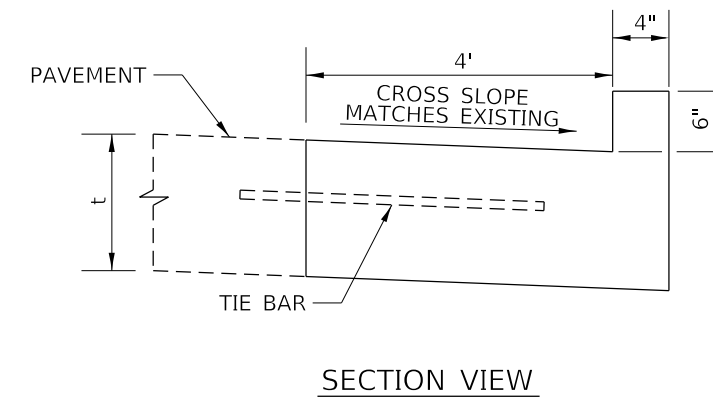
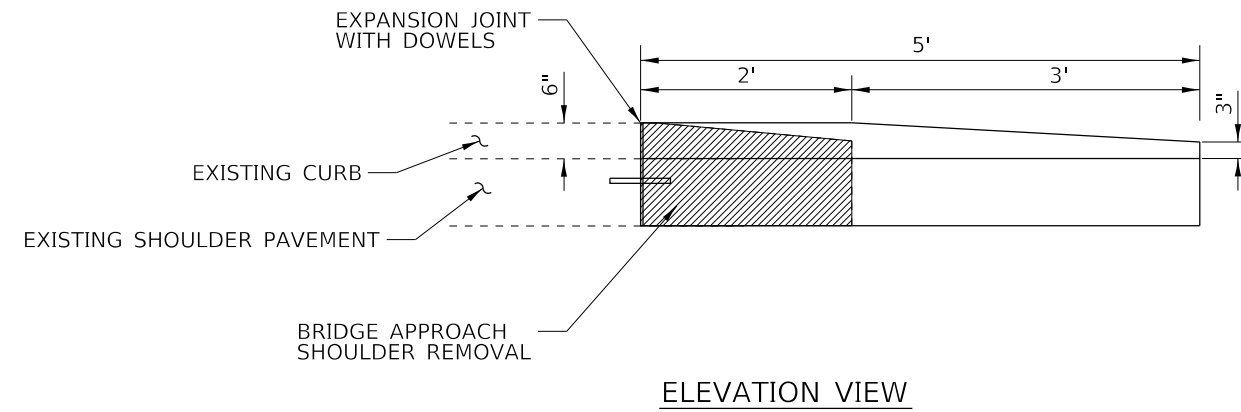
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| \\wmsworthgrp.com\data\Archive\CHA\2011\11004-35\03\Drawings\DC\N\CAD_Sheets\18-shh-015-016-Structure | | DRAWN - DC | REVISED - |
| | PLOT SCALE = 40,0000' / 1" | CHECKED - MJB | REVISED - |
| STAGE 2 Rev | PLOT DATE = 12/11/2019 | DATE - 11/4/2019 | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STRUCTURE 003-0057
MAINTENANCE OF TRAFFIC - STAGE 2**

SCALE: 1" = 20' SHEET 4 OF 4 SHEETS STA. TO STA.

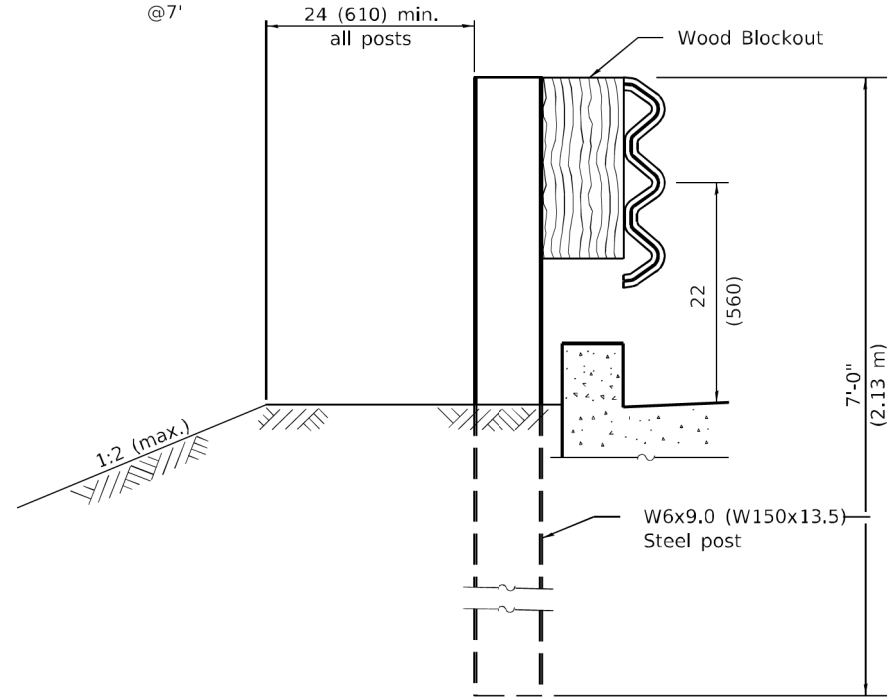
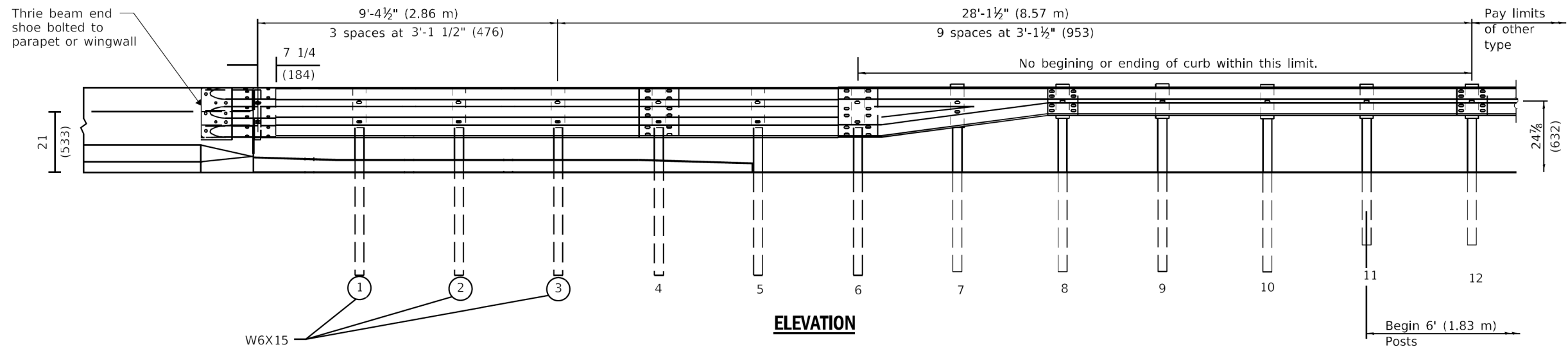
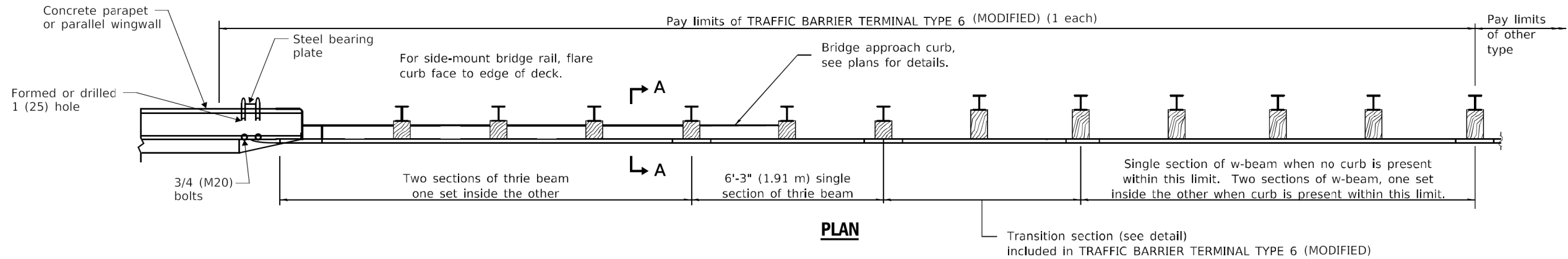
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|---------------------------|---------|--------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 42 | 139BR-2 | BOND | 36 | 16 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



NOTE: THE BUTT JOINT EXTENDS ACROSS THE SHOULDERS AND THE PAVEMENT.

COMBINATION CONCRETE CURB AND GUTTER, TYPE B (SPECIAL)

| | | | | | | | | | | | | | |
|-------------|--|------------------|-----------|---|---------------------------|---------------------|------|-------------|---------|---------|--------------|-----------|----|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | DETAILS | | | F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
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| | PLOT SCALE = 40,0000' / 1" | CHECKED - MJB | REVISED - | | CONTRACT NO. 76N18 | | | | | | | | |
| | PLOT DATE = 12/11/2019 | DATE - 11/4/2019 | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | | |



GENERAL NOTES

This standard shows attachment to curb mounted bridge rail. Attachment to side mounted bridge rail is similar.

See Standard 630001 for details of guardrail not shown.

Thrie beam rail shall be bolted to block-out at all posts.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in inches (millimeters) unless otherwise shown.

TRAFFIC BARRIER TERMINAL, TYPE 6 (MODIFIED)

| | | | | | | | | | | | | | |
|-------------|---|------------------|-----------|---|---------------------------|---------------------|------|-----------|---------|---------|--------------|-----------|----|
| FILE NAME = | USER NAME = bmarkunas | DESIGNED - RMM | REVISED - | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION | DETAILS | | | F.A. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
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| | PLOT SCALE = 40,0000' / 1" | CHECKED - MJB | REVISED - | | CONTRACT NO. 76N18 | | | | | | | | |
| | PLOT DATE = 12/11/2019 | DATE - 11/4/2019 | REVISED - | | ILLINOIS FED. AID PROJECT | | | | | | | | |

Existing Structure: 003-0051 was built in 1985 under contract 40370, FA Route 42 Sec 139BR-1. It is a 5 span continuous WF supported on pile bent abutments and pile bent piers.

The deck ends and hatchblocks shall be replaced with strip seal joints. The deck shall be patched, and overlaid with waterproofing membrane system and hot-mix asphalt. All 5 beam ends at the West Abutment shall be repaired with "L" plates and new end diaphragms.

SHEET INDEX

- 1) General Plan and Elevation
- 2) Deck Section
- 3) Joint Details
- 4) Beam End Repair & Diaphragm Replacement
- 5) Preformed Joint Strip Seal
- 6) Temporary Concrete Barrier
- 7) Bar Splicers

GENERAL NOTES

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The quantity for "Bridge Deck Concrete Sealer" is for the top and inside parapet surfaces and new hatchblock and deck end concrete.

The quantity for "Concrete Sealer" is for a 2' vertical surface along the backwall, 2'-9" wide abutment seats, and 1' vertical surface in front of the abutment caps. The sealer in these areas shall be a plural component.

All new structural steel shall be AASHTO M 270 Grade 36 and hot-dip galvanized. See special provision for "Hot Dip Galvanizing For Structural Steel".

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the GBSP "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Cleaning and Painting of the existing structural steel and bearings shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams within 5 feet (measured along the beam) of either side of the deck joints shall be cleaned per Near White Blast Cleaning (SSPC-SP10). Existing diaphragms at the west abutment will be replaced and are excluded from the cleaning requirements.

The designated areas cleaned per Near White Blast Cleaning (SSPC-SP10) and the new galvanized diaphragms, and repair L plates shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat for all steel surfaces shall be Interstate Green (Munsell No 7.5G 4/8).

Containment of cleaning residues is required to control nuisance dust. See special provisions.

Areas of deck repairs are estimated. The Engineer shall show actual locations of deck repairs on As-Built Plans.

Temporary shoring and cribbing is required at the W. Abutment Beams 1,2,4, & 5. The existing steel shoring pedestals shall be salvaged and returned to IDOT.

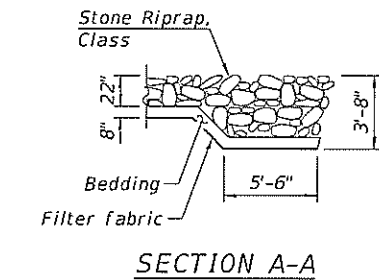
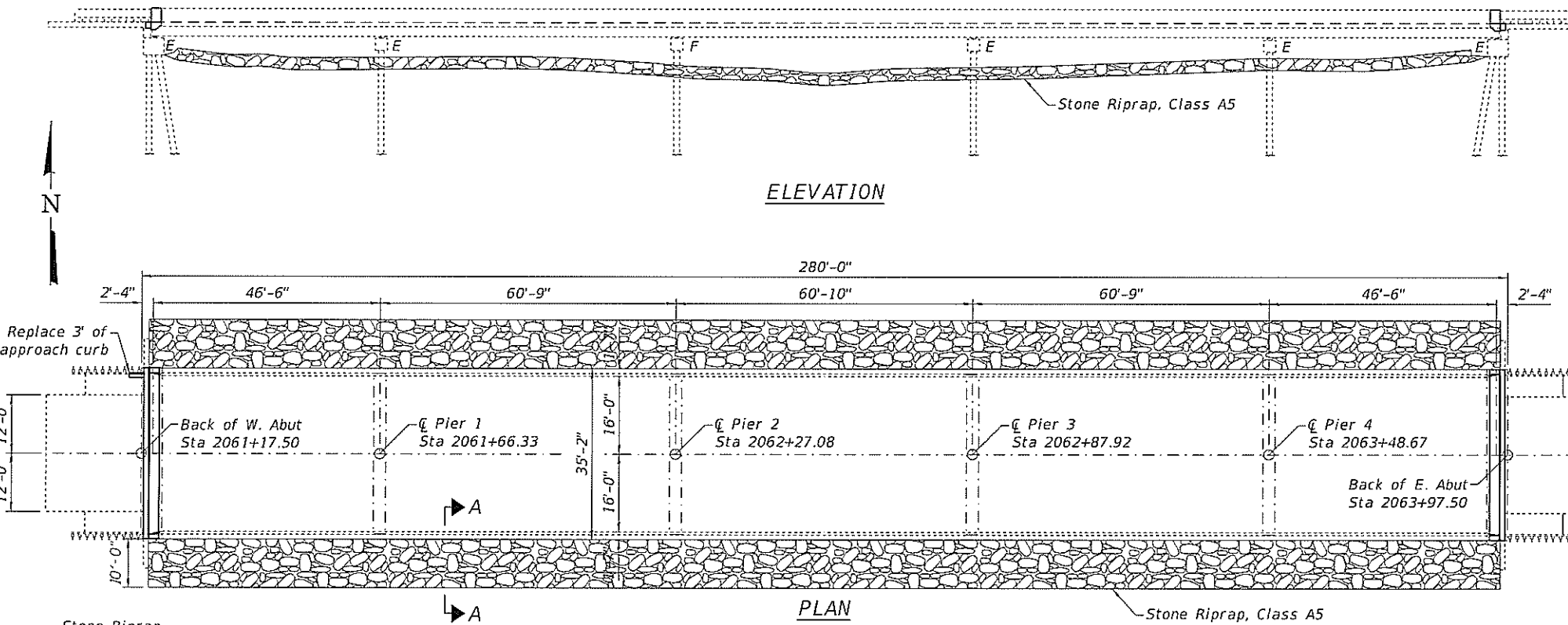
Joint opening shall be adjusted according to Article 520.04 of the Standard Specs. when the deck is poured at an ambient temperature other than 50°F.

**DESIGN STRESSES
FIELD UNITS**

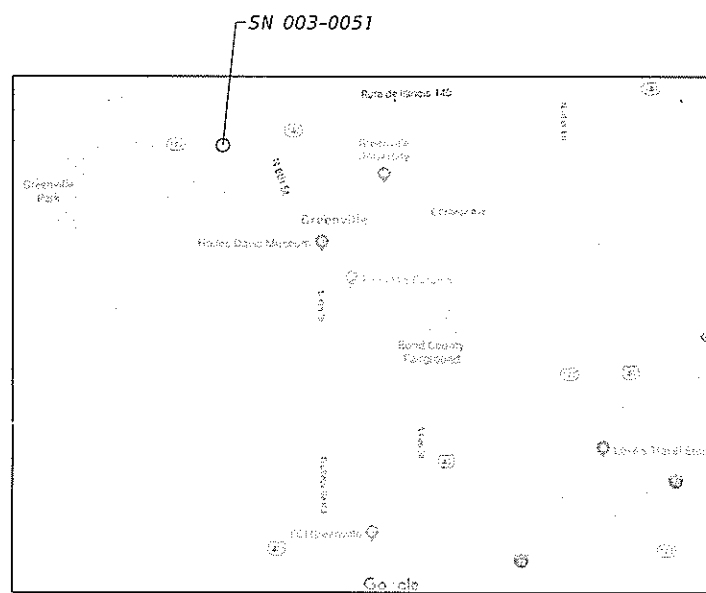
- f_c = 4,000 psi
- f_y = 60,000 psi (Reinforcement)
- f_y = 36,000 psi (M270 Grade 36)



PROFILE GRADE



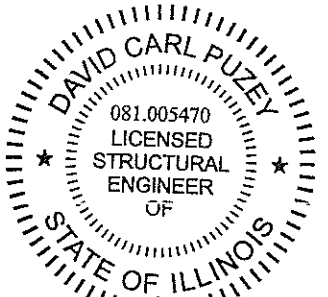
SECTION A-A



LOCATION SKETCH

TOTAL BILL OF MATERIAL

| ITEM | UNIT | TOTAL |
|--|---------|-------|
| Stone Riprap, Class A5 | Sq. Yd. | 1664 |
| Filter Fabric | Sq. Yd. | 1664 |
| Bituminous Materials (Tack Coat) | Pound | 219 |
| Polymerized HMA Surface Course, IL-9.5, Mix "D", N70 | Ton | 68 |
| Concrete Removal | Cu. Yd. | 9.4 |
| Concrete Superstructure | Cu. Yd. | 10.5 |
| Furnishing and Erecting Structural Steel | Pound | 1230 |
| Cleaning and Painting Structural Steel, Location 1 | L Sum | 1 |
| Reinforcement Bars, Epoxy Coated | Pound | 1280 |
| Bar Splicers | Each | 24 |
| Preformed Joint Strip Seal | Foot | 68.5 |
| Waterproofing Membrane System | Sq. Yd. | 973 |
| Concrete Sealer | Sq. Ft. | 404 |
| Containment and Disposal of Non-Lead Paint Cleaning Residues No. 1 | L Sum | 1 |
| Bridge Deck Concrete Sealer | Sq. Ft. | 2103 |
| Structural Steel Removal | Pound | 1160 |
| Structural Steel Repair | Pound | 1030 |
| Deck Slab Repair (Partial) | Sq. Yd. | 200 |
| Temporary Shoring and Cribbing | Each | 4 |



David Carl Puzey
Expires 11/30/2020

| | | |
|--------------|---------------------------|-----------|
| USER NAME = | DESIGNED - John Uehle | REVISED - |
| PLOT SCALE = | CHECKED - Adrian Halloway | REVISED - |
| PLOT DATE = | DRAWN - John Uehle | REVISED - |
| | CHECKED - Adrian Halloway | REVISED - |

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

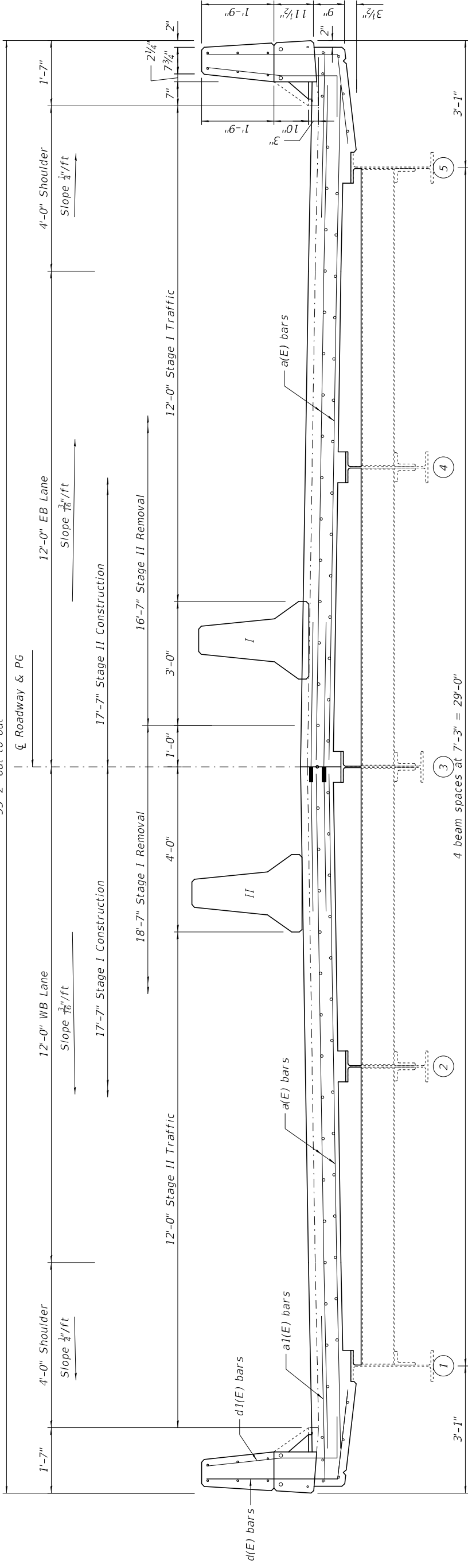
**GENERAL PLAN & ELEVATION
IL 127/140 OVER EAST FORK OF SHOAL CREEK OVERFLOW
SN 003-0051**

SHEET 1 OF 7 SHEETS

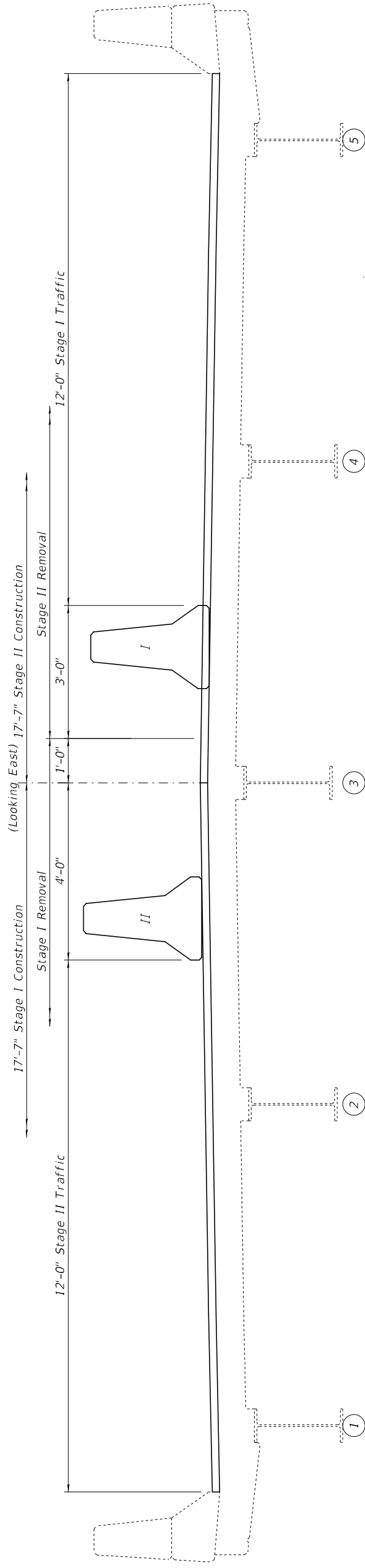
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 19 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

MODEL: 0030051-76N18-001
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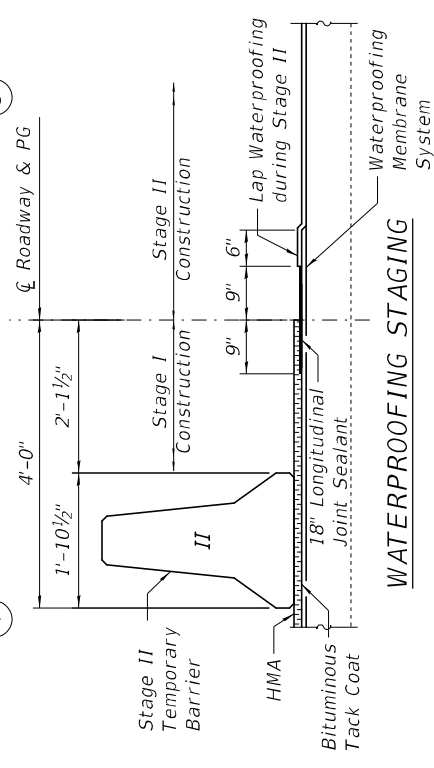
35'-2" out-to-out



DECK SECTION AT EAST ABUTMENT

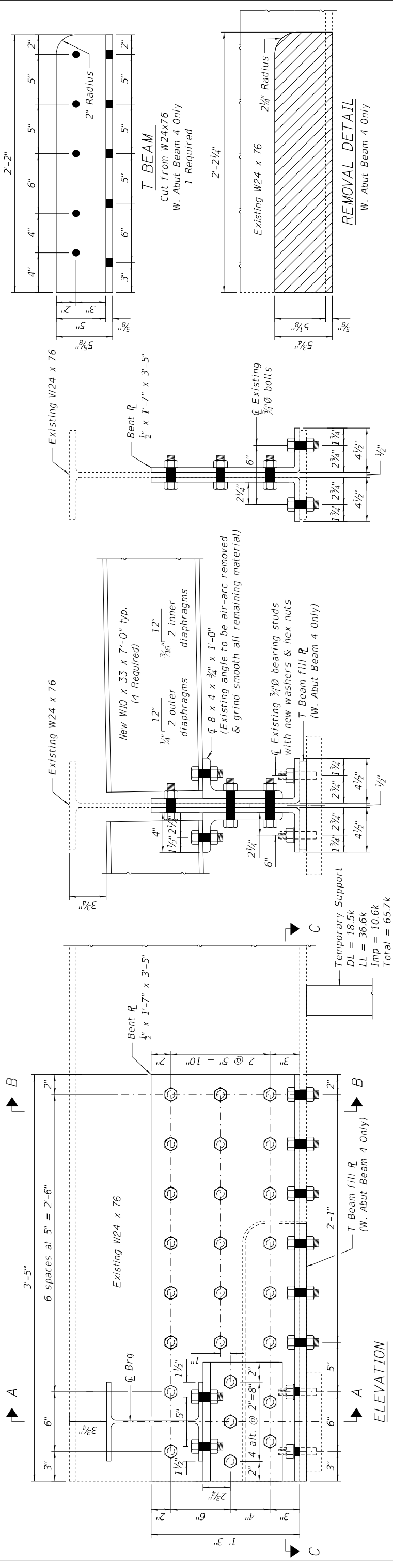


DECK SECTION AWAY FROM ABUTMENTS
(Looking East)

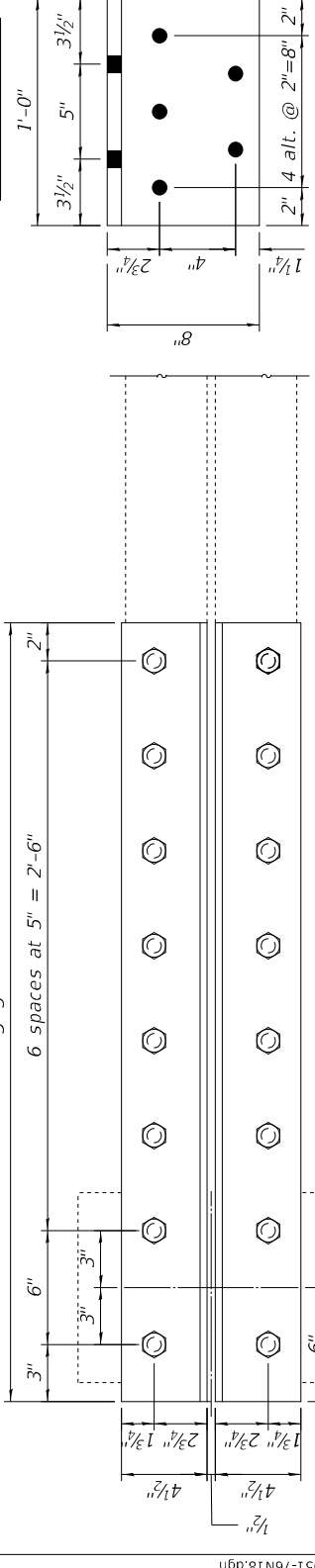


| | | | |
|--------------|-----------------|------------|--|
| DESIGNED - | John Uetle | REVISION - | |
| CHECKED - | Ardian Holloway | REVISION - | |
| DRAWN - | John Uetle | REVISION - | |
| CHECKED - | Ardian Holloway | REVISION - | |
| USER NAME = | | | |
| PLOT SCALE = | | | |
| PLOT DATE = | | | |

| | | | |
|--------------------------|---------|------------------------------|--------------|
| STATE OF ILLINOIS | | DEPARTMENT OF TRANSPORTATION | |
| DECK SECTION | | SN 003-0051 | |
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS |
| 42 | 139BR-2 | BOND | .36 |
| SHEET 2 OF 7 SHEETS | | CONTRACT NO. 76N18 | |
| ILLINOIS FED.AID PROJECT | | | |



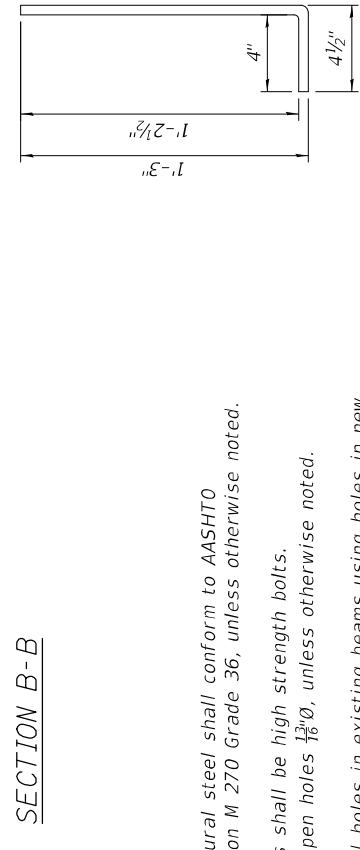
SECTION A-A



NEW CLIP ANGLE

L 8 x 4 x 3/4 x 1'-0"

SECTION B-B

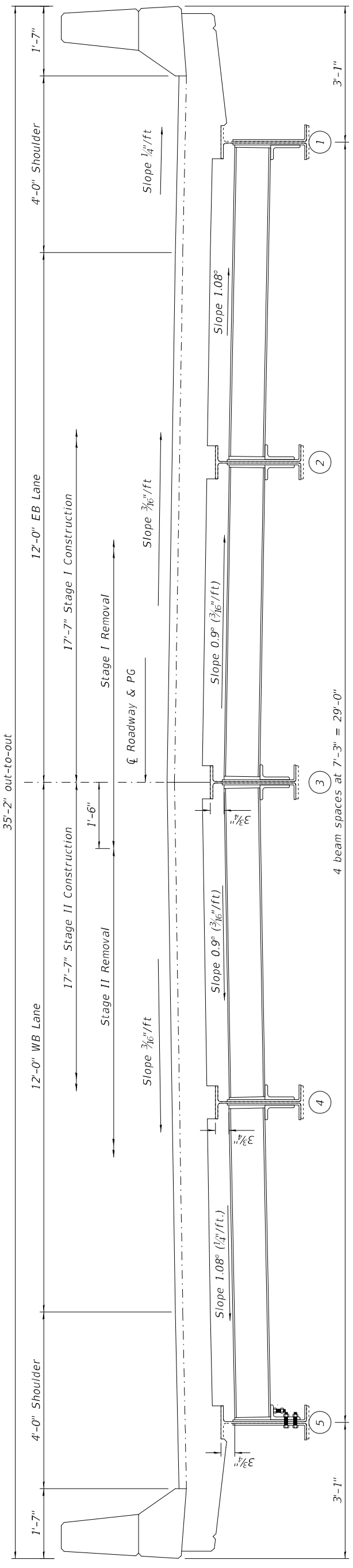


BENT PL DETAIL

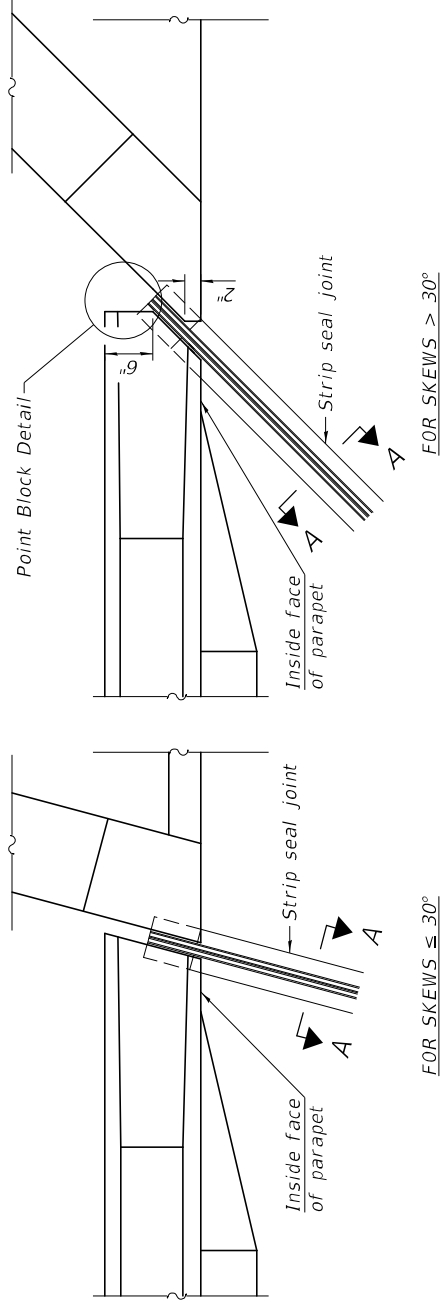


NOTES

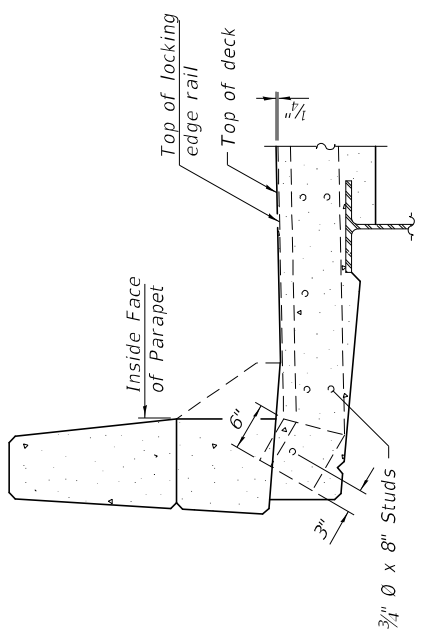
- All structural steel shall conform to AASHTO Classification M 270 Grade 36, unless otherwise noted.
- Fasteners shall be high strength bolts.
- Bolts $\frac{3}{4}$ " \emptyset , open holes $\frac{1}{8}$ " \emptyset , unless otherwise noted.
- Field drill holes in existing beams using holes in new bent plates as a template. Field drill holes in new diaphragms, after bent plates and angles are installed, using angles as a template.



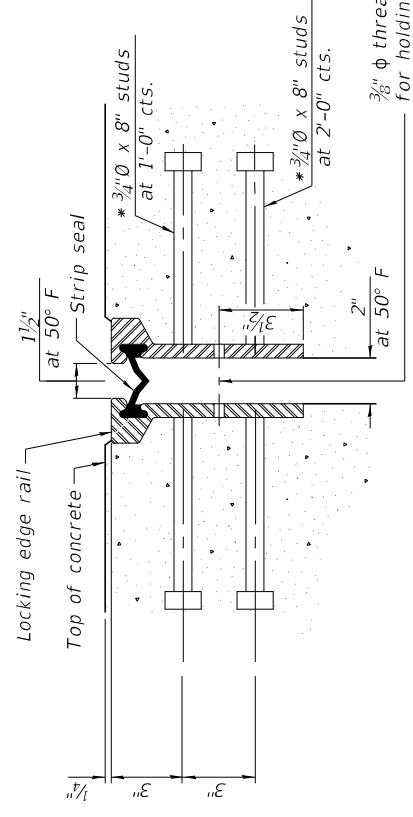
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| DESIGNED - John Uetle | CHECKED - Adrian Holloway | REVISION - |
| DRAWN - John Uetle | CHECKED - Adrian Holloway | REVISION - |
| USER NAME = | DESIGNED - | REVISION - |
| PLOT SCALE = | DRAWN - | REVISION - |
| PLOT DATE = | CHECKED - | REVISION - |
| STATE OF ILLINOIS | | |
| DEPARTMENT OF TRANSPORTATION | | |
| WEST ABUTMENT BEAM END REPAIRS SN 003-0051 | | |
| F.A.P. RTE. 42 | SECTION 139BR-2 | TOTAL SHEETS 36 |
| BOND | COUNTY | SHEET NO. 22 |
| ILLINOIS FED.AID PROJECT | CONTRACT NO. 76N18 | |
| SHEET 4 | OF 7 | SHEETS |



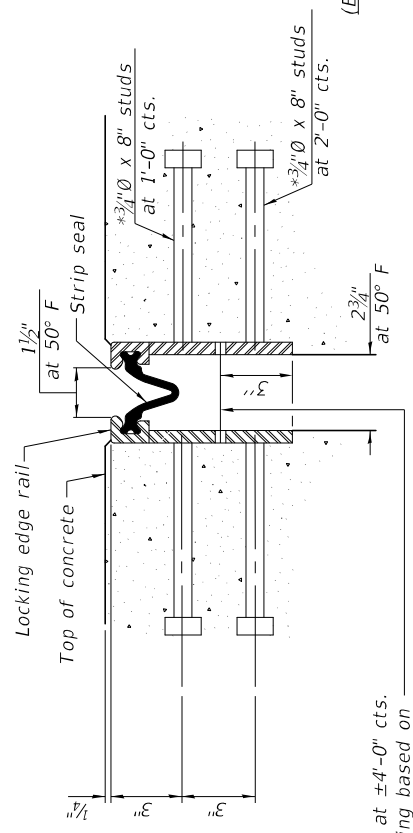
PLAN AT PARAPET



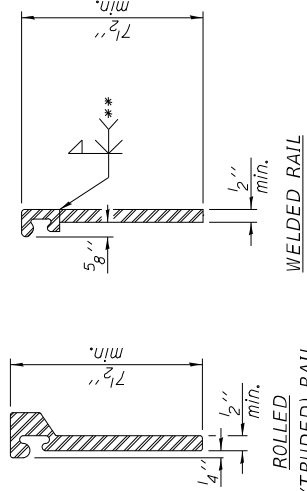
ELEVATION AT PARAPET



SHOWING ROLLED RAIL JOINT



SHOWING WELDED RAIL JOINT

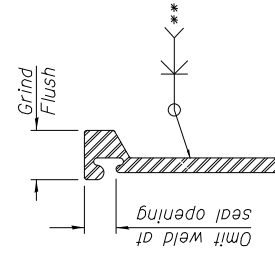


LOCKING EDGE RAILS

** Back gauge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.



Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed.
The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

BILL OF MATERIAL

| Item | Unit | Total |
|----------------------------|------|-------|
| Preformed Joint Strip Seal | Foot | 68.5 |

EJ-SS (TALL AT PARAPET TRANSITION) 12-3-19

| | | | |
|------------|-----------------|----------|---|
| DESIGNED - | John Uetli | REVISION | - |
| CHECKED - | Ardian Holloway | REVISION | - |
| DRAWN - | John Uetli | REVISION | - |
| CHECKED - | Ardian Holloway | REVISION | - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL
SN 003-0051

| | | | | |
|--------------------------|---------|--------|--------------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 42 | 139BR-2 | BOND | .86 | 23 |
| ILLINOIS FED.AID PROJECT | | | CONTRACT NO. 76N18 | |

SECTION A-A
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

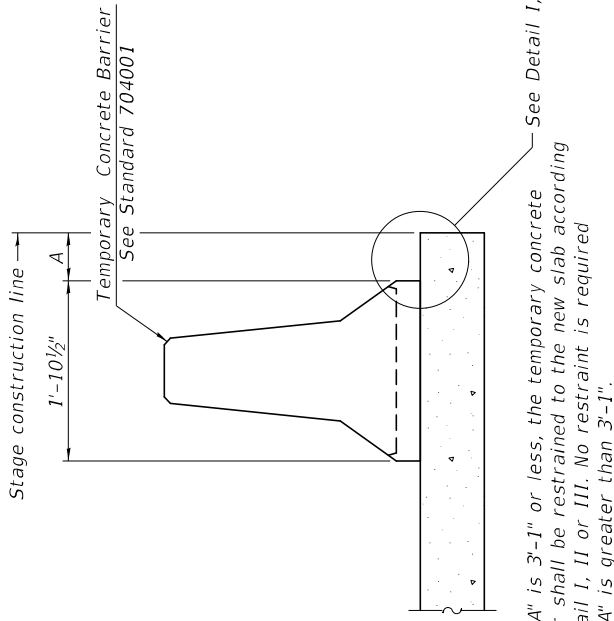
3/8" φ threaded rods in 7/16" φ holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

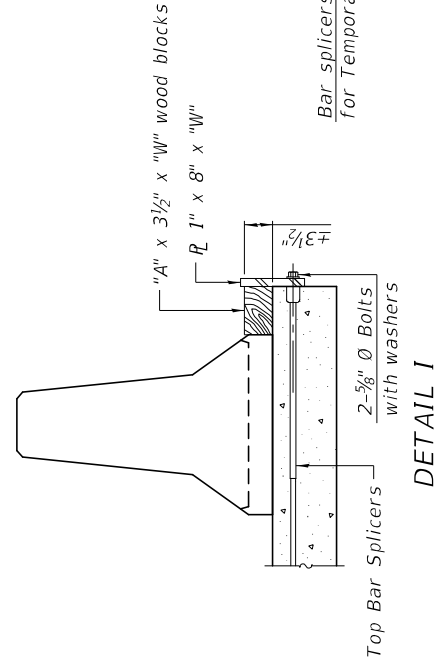
SHOWING WELDED RAIL JOINT

SHOWING ROLLED RAIL JOINT

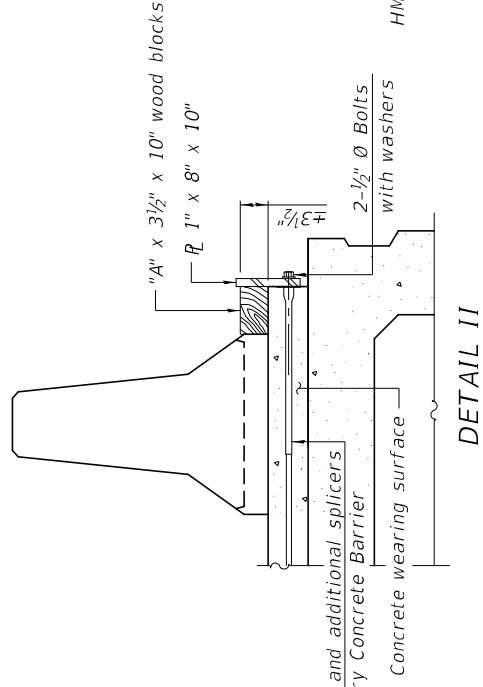


When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

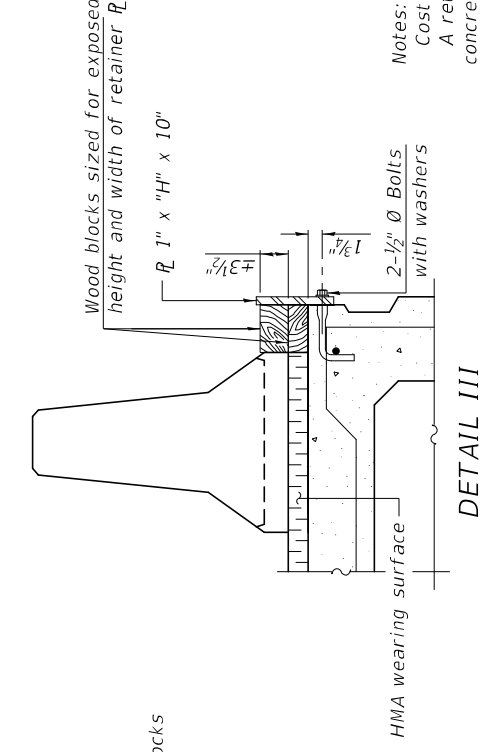
NEW SLAB OR NEW DECK BEAM



DETAIL I

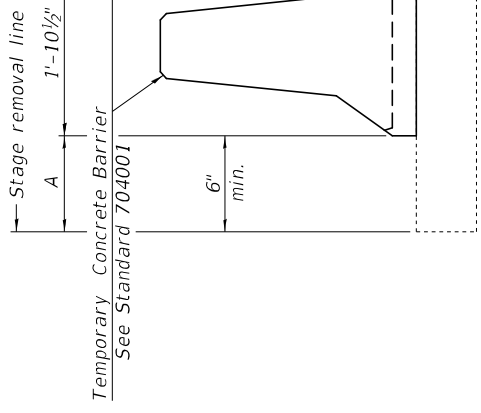


DETAIL II



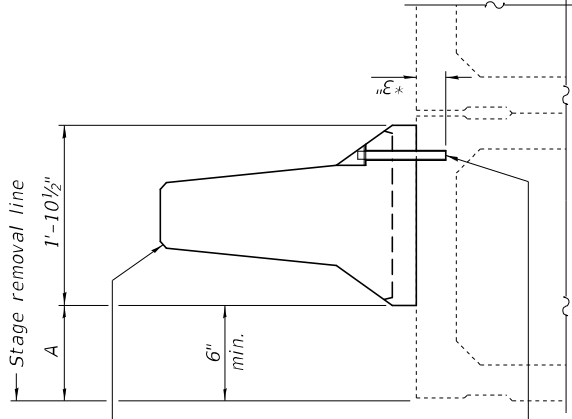
DETAIL III

SECTIONS THRU SLAB OR DECK BEAM



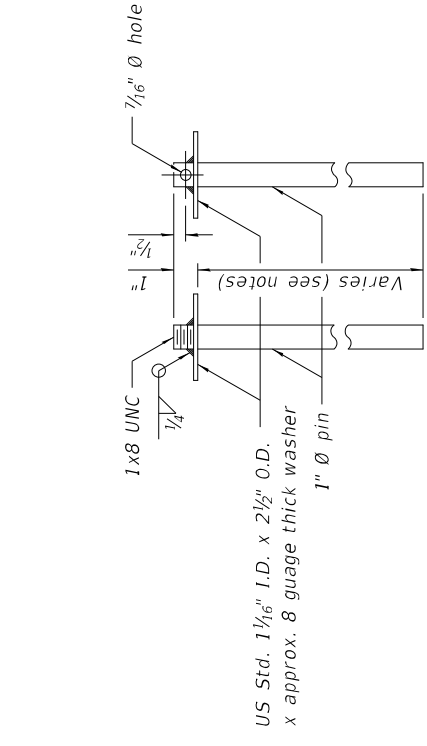
Drill 3-1/4" \varnothing Holes in existing slab for 1" \varnothing restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB



* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM



RESTRAINING PIN

US Std. 1 1/16" I.D. x 2 1/2" O.D. x approx. 8 gauge thick washer

Notes:
Cost of retainer assembly is included with Temporary Concrete Barrier.
A retainer assembly shall be located at the approximate \varnothing of each temporary concrete barrier.

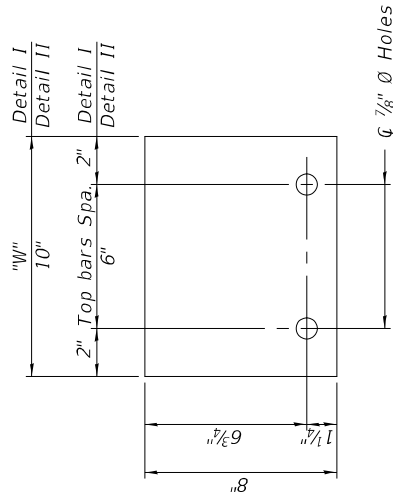
The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than 1 1/2", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

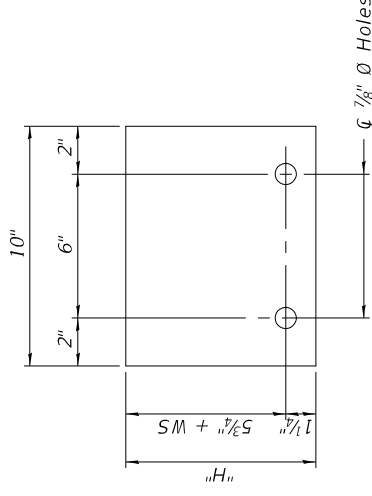
Detail I - Installation for a new bridge deck or bridge slab.

Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.

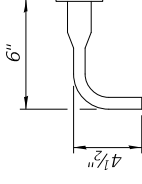
Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.



STEEL RETAINER \varnothing 1" x 8" x "W"
(Detail I and II)



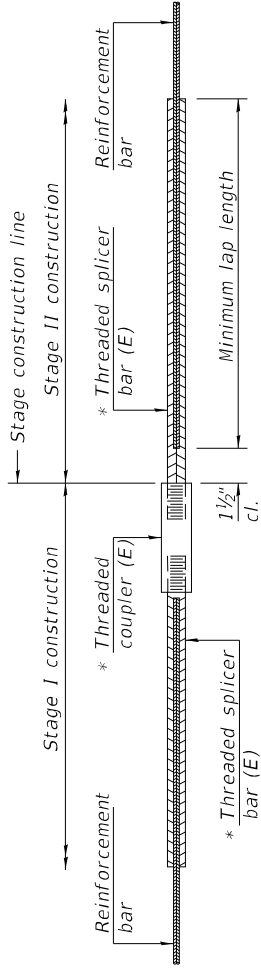
STEEL RETAINER \varnothing 1" x "H" x 10"
(Detail III)



BAR SPLICER FOR #4 BAR - DETAIL III

| | | |
|--------------|---------------------------|------------|
| USER NAME = | DESIGNED - John Uetle | REVISION - |
| PLOT SCALE = | CHECKED - Adrian Holloway | REVISION - |
| PLOT DATE = | DRAWN - John Uetle | REVISION - |
| | CHECKED - Adrian Holloway | REVISION - |

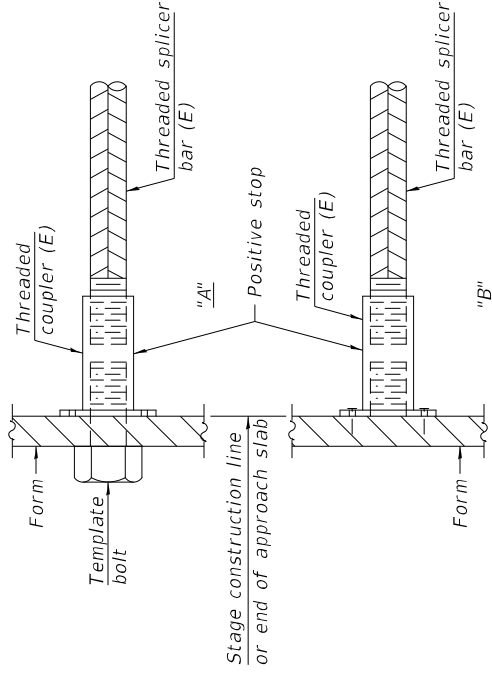
| | | | | |
|---------------------|-----------------|--------------------|------------------|--------------|
| F.A.P. RTE. 42 | SECTION 139BR-2 | COUNTY BOND | TOTAL SHEETS .36 | SHEET NO. 24 |
| SHEET 6 OF 7 SHEETS | | CONTRACT NO. 76N18 | | |
| ILLINOIS | | FED.AID PROJECT | | |



STANDARD BAR SPLICER ASSEMBLY

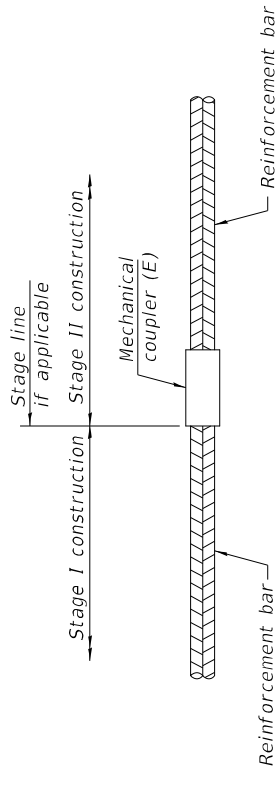
Threaded splicer bar length = min. lap length + 1 1/2" + thread length
 * Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

| Location | Bar size | No. assemblies required | Minimum lap length |
|-----------|----------|-------------------------|--------------------|
| Abutment | #6 | 8 | 4'-0" |
| Deck Ends | #5 | 16 | 3'-6" |
| | | | |
| | | | |



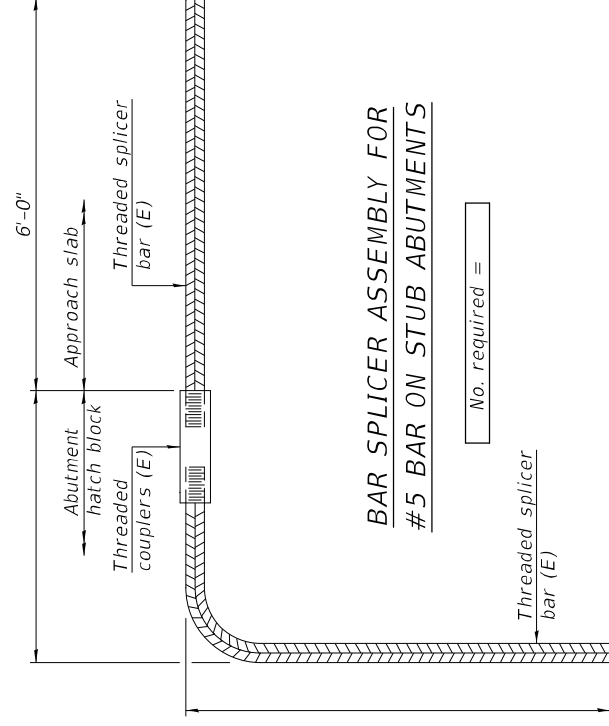
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

| Location | Bar size | No. assemblies required |
|----------|----------|-------------------------|
| | | |
| | | |
| | | |



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES
 Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BSD-1

2-17-2017

| | | | | |
|--------------|------------|-----------------|-----------|---|
| USER NAME = | DESIGNED - | John Uetle | REVISED - | - |
| PLOT SCALE = | CHECKED - | Ardian Holloway | REVISED - | - |
| PLOT DATE = | DRAWN - | John Uetle | REVISED - | - |
| | CHECKED - | Ardian Holloway | REVISED - | - |

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 SN 003-0051**

| | | | | |
|---------------------------|-----------------|-------------|--------------------|--------------|
| F.A.P. RTE. 42 | SECTION 139BR-2 | COUNTY BOND | TOTAL SHEETS .36 | SHEET NO. 25 |
| ILLINOIS FED. AID PROJECT | | | CONTRACT NO. 76N18 | |

Existing Structure-S.N. 003-0057 was built in 1990 under section 139BR at Sta. 2073+45.53. The current structure is 3 spans at 50', 63.9', and 50' with a variable deck width 7-1/2" thick cast-in-place reinforced concrete supported by W30 steel beams, 170.02' bk to bk abutments; pile bent abutments and piers.

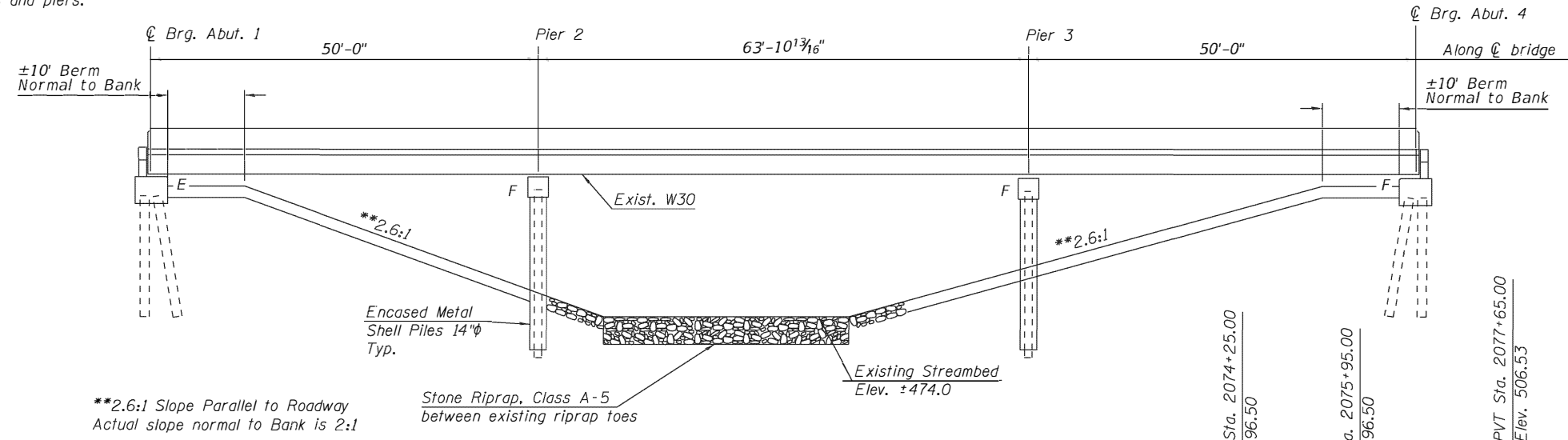
INDEX OF SHEETS

1. General Plan & Elevation
2. Deck Cross Section
3. Joint Removal Details
- 4.-5. Joint Replacement Details
6. Preformed Joint Strip Seal
- 7.-8. Pier Repair Details
9. Deck Slab Repair Plan (As-Built)
10. Temporary Concrete Barrier for Stage Construction
11. Bar Splicer Assembly and Mechanical Splicer Details

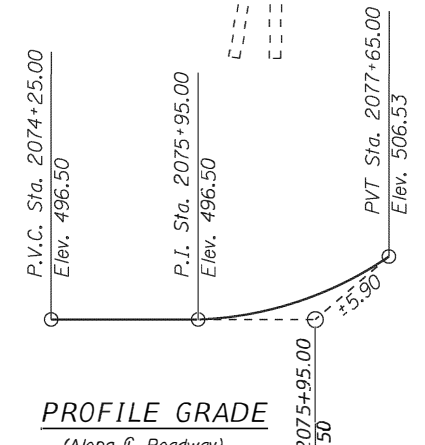
TOTAL BILL OF MATERIAL

| ITEM | UNIT | TOTAL |
|---|---------|-------|
| Filter Fabric | Sq. Yd. | 249 |
| Stone Riprap, Class A5 | Sq. Yd. | 249 |
| Concrete Removal | Cu. Yd. | 19.2 |
| Concrete Superstructure | Cu. Yd. | 21.4 |
| Bridge Deck Grooving | Sq. Yd. | 809 |
| Cleaning and Painting Structural Steel, Location 2 | L Sum | 1 |
| Reinforcement Bars, Epoxy Coated | Pound | 2890 |
| Bar Splicers | Each | 30 |
| Preformed Joint Strip Seal | Foot | 122 |
| * Bridge Deck Concrete Sealer | Sq. Ft. | 7873 |
| * Containment & Disposal of Non-Lead Paint Cleaning Residues, No. 2 | L Sum | 1 |
| * Cleaning Bridge Seats | Sq. Ft. | 316 |
| * Bridge Deck Scarification 3/4" | Sq. Yd. | 821 |
| * Bridge Deck Microsilica Concrete Overlay 2 3/4" | Sq. Yd. | 821 |
| * Deck Slab Repair (Full Depth, TY II) | Sq. Yd. | 25 |
| * Grouted FRP Encased Repair | Foot | 90 |

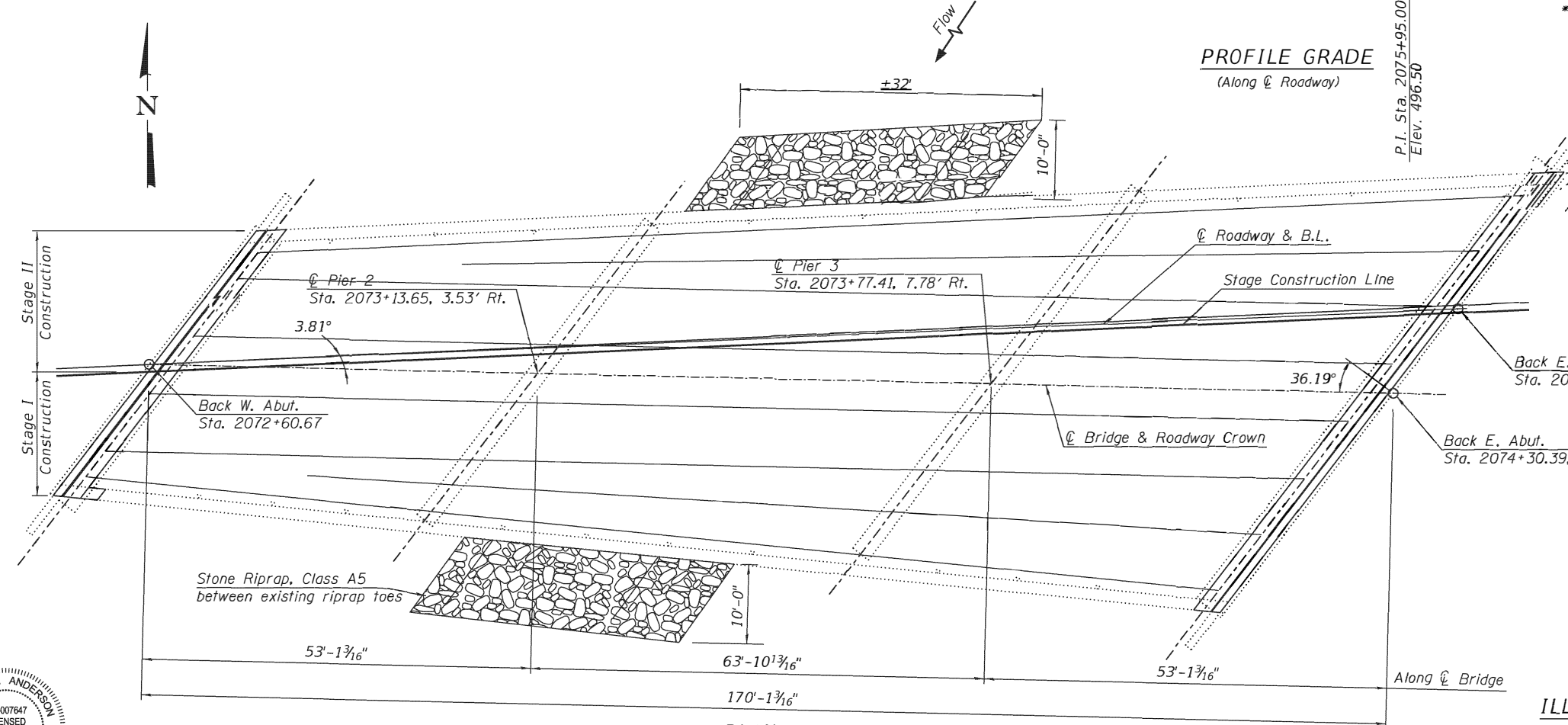
*Special Provision



ELEVATION



PROFILE GRADE
(Along Centerline of Roadway)



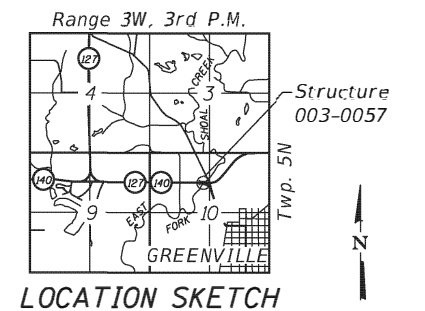
PLAN

PROPOSED IMPROVEMENTS

1. Complete bridge scarification.
2. Complete full-depth deck patching, removal of deck ends, parapets, and hatch blocks.
3. Clean bearing seats at abutments.
4. Complete structural repair of concrete on piers.
5. Clean and paint beam ends at abutments.
6. Clean and paint bearings at abutments.
7. Cast deck ends, parapet ends and hatch blocks.
8. Place preformed joint strip seal.
9. Place bridge deck microsilica concrete overlay, 2 3/4".
10. Complete bridge deck grooving.

DESIGN STRESSES
FIELD UNITS

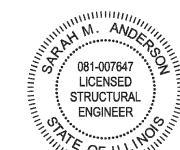
f'c = 4,000 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (M270 Grade 36)



LOCATION SKETCH

GENERAL PLAN & ELEVATION
ILLINOIS ROUTES 127 & 140 OVER EAST FORK SHOAL CREEK
F.A.P. 42 - SEC. 139BR-2
BOND COUNTY
STATION 2073+45.53
STRUCTURE NO. 003-0057

REV. - MS



Sarah M. Anderson Date 3-13-2020

Sarah M. Anderson
Illinois Structural Engineer
No. 81-007647
Exp. Date 11/30/2020

Sheets 1-7 & 9-11

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| | | |
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| PLOT SCALE = | CHECKED - SMA | REVISED - |
| PLOT DATE = 3/13/2020 | DRAWN - JLM | REVISED - |
| | CHECKED - SMA | REVISED - |

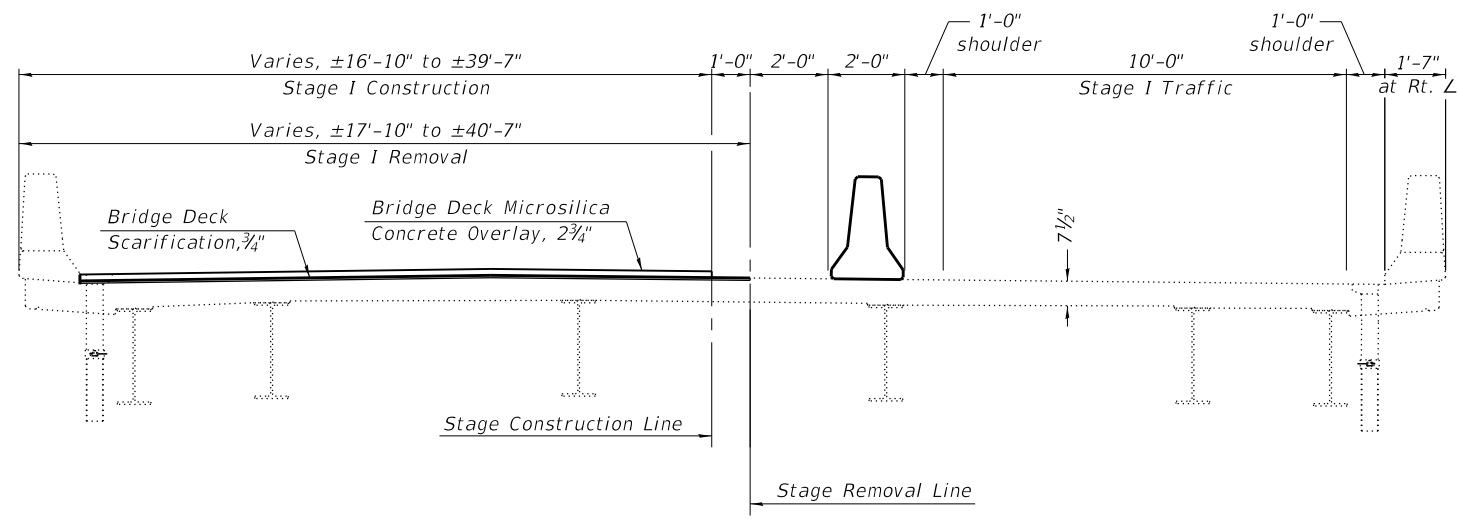
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 003-0057

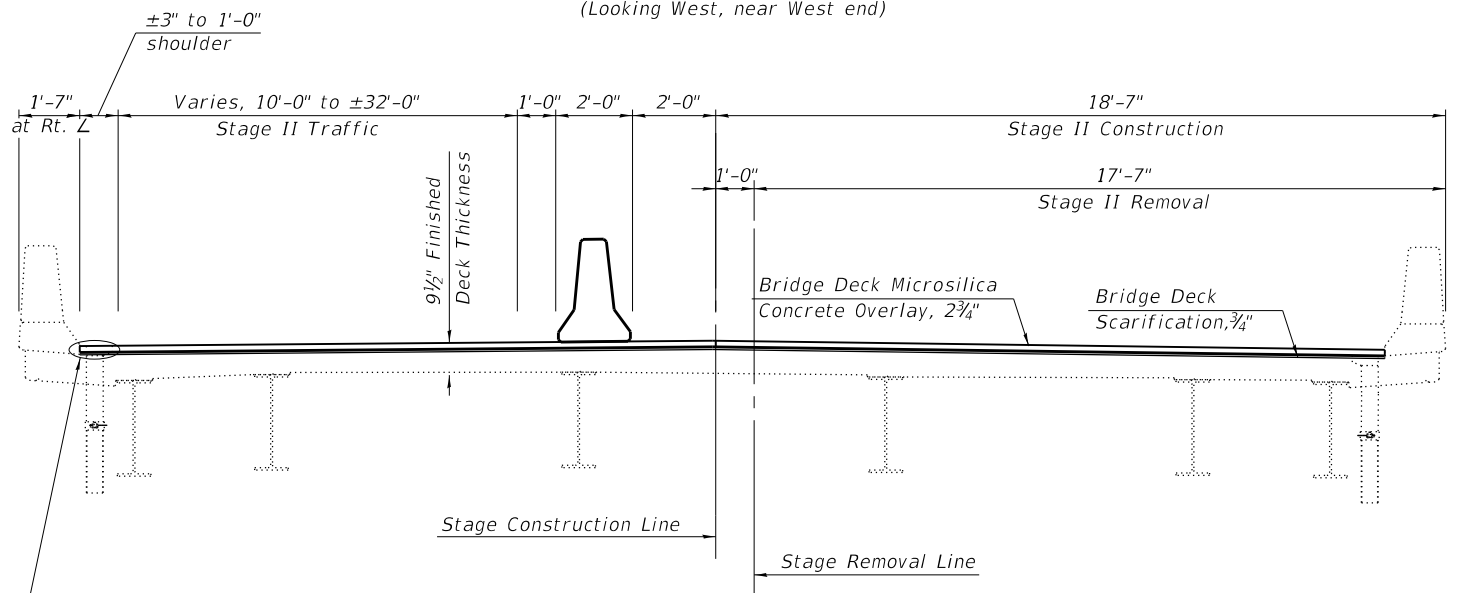
SHEET 1 OF 11 SHEETS

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 26 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

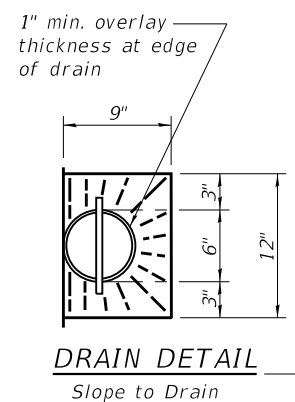
MODEL: 0030057-76N18-001
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CROSS SECTION
(Looking West, near West end)



CROSS SECTION
(Looking West, near West end)



(Dimensions perpendicular to Stage Construction Line unless noted otherwise)

GENERAL NOTES

Plan dimensions and details relative to the existing plans are subject to nominal construction variations. The contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of work, however, the contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

The existing abutment seats shall be cleaned according to the special provision for "Cleaning Bridge Seats".

Cleaning and painting of beam ends shall be performed after the concrete removal at the joints has been completed and prior to the installation of any forms for the placements of new concrete at those locations.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings and other structural steel within 5 feet (measured along the beam) of either side of deck joints shall be cleaned per Near White Blast Cleaning (SSPC-SP10).

The designated areas cleaned per Near White Blast Cleaning (SSPC-SP10) shall be painted according to the requirements of "Paint System 1 - OZ/E/U. The color of the final finish coat for all steel surfaces shall be Interstate Green Munsell No. 7.5G 4/8.

Containment of cleaning residue is required to control nuisance dust. See Special Provisions.

The painting contractor shall be SSPC-QP 1 certified for this project and shall maintain certification throughout the duration of the project.

Care shall be taken not to damage rubber bearing or joint components during the blasting and cleaning operations. Any damage to these components shall be repaired at the contractor's expense.

Joint openings shall be adjusted according to article 520.04 of the standard specifications when deck is poured at an ambient temperature other than 50° F.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with the concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Reinforcement bars designated (E) shall be epoxy coated.

See Special Provision "Deck Slab Repair" for additional requirements pertaining to deck slab repairs.

MODEL: 0030057-76N18-002
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| | | |
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| USER NAME = jmasset | DESIGNED - SMA | REVISED - |
| | CHECKED - SMA | REVISED - |
| PLOT SCALE = | DRAWN - JLM | REVISED - |
| PLOT DATE = 12/11/2019 | CHECKED - SMA | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

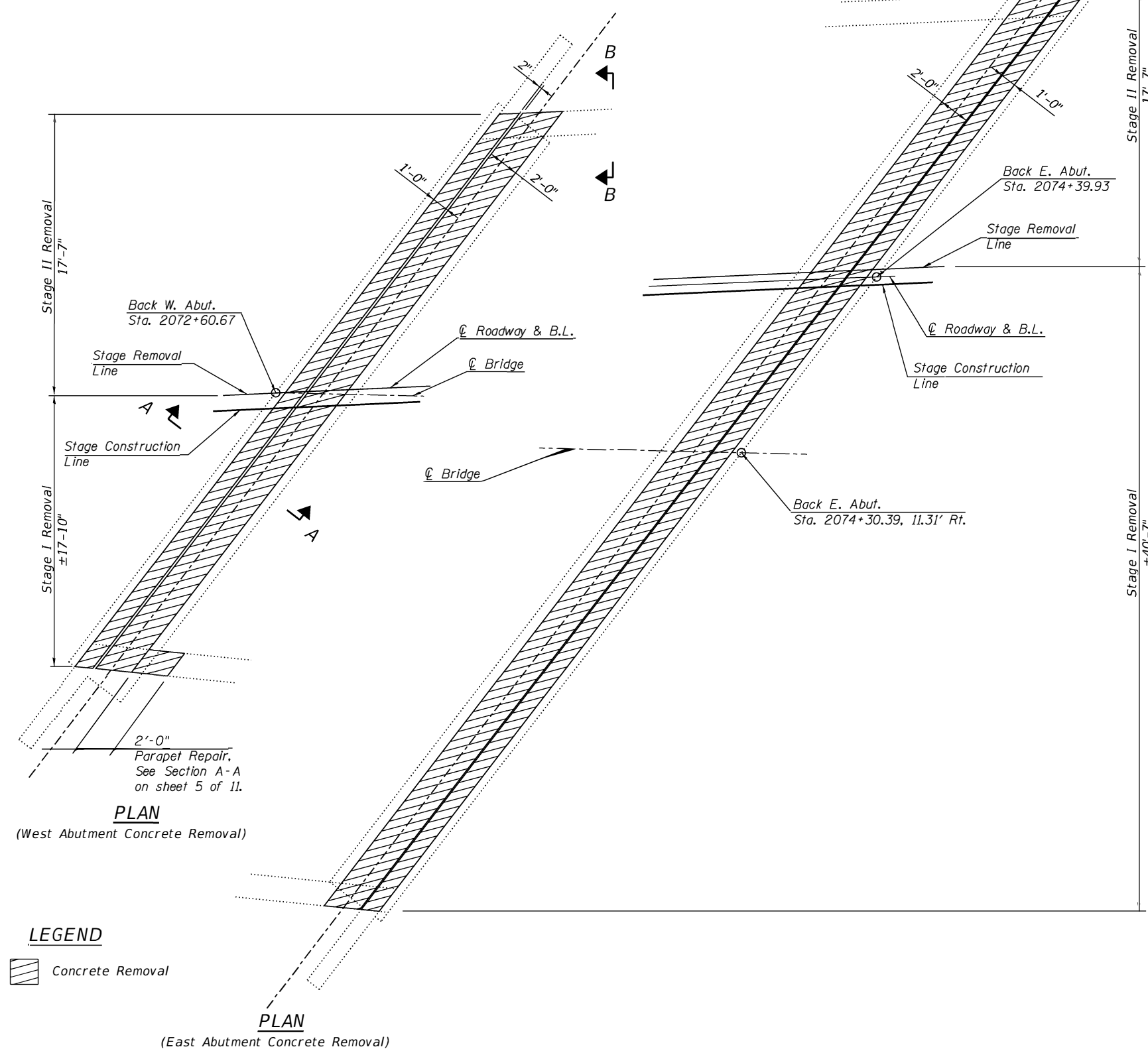
DECK CROSS SECTION
STRUCTURE NO. 003-0057

SHEET 2 OF 11 SHEETS

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 27 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

Notes:

The Contractor shall use extreme care during concrete removal so as not to damage the existing steel beams.
 Removal of existing expansion joint and associated material shall not be paid for separately, but shall be included in the cost of Concrete Removal.
 Trim existing reinforcement to accommodate proposed expansion joint.
 Existing reinforcement bars extending into removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
 The existing expansion joint system shall be removed completely, as well as any foreign material that has accumulated or been placed in the joint openings. The cost of this work is included in Concrete Removal and no additional compensation will be allowed.



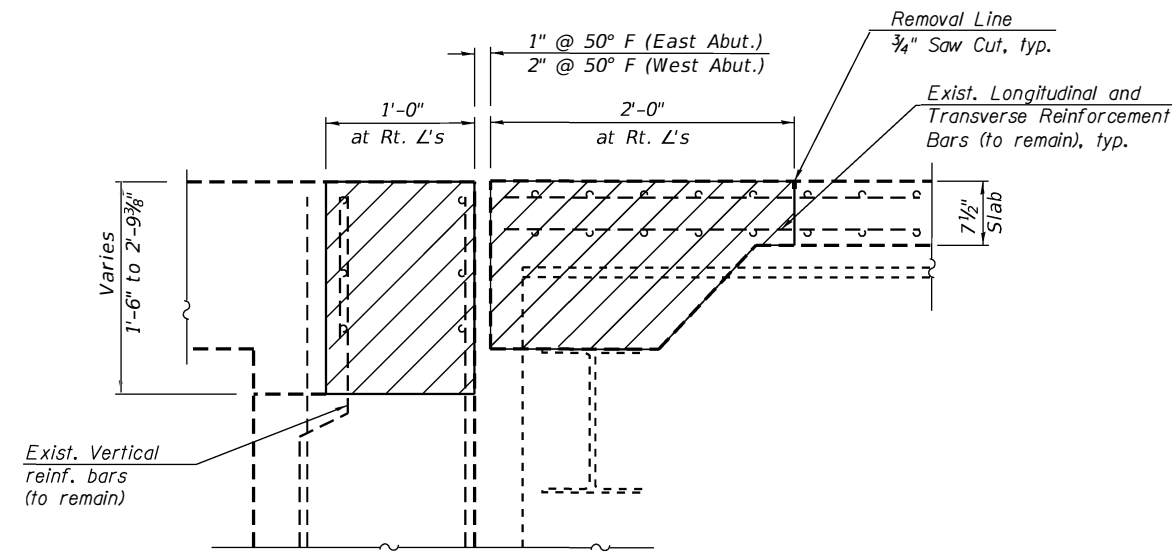
PLAN
(West Abutment Concrete Removal)

LEGEND
 Concrete Removal

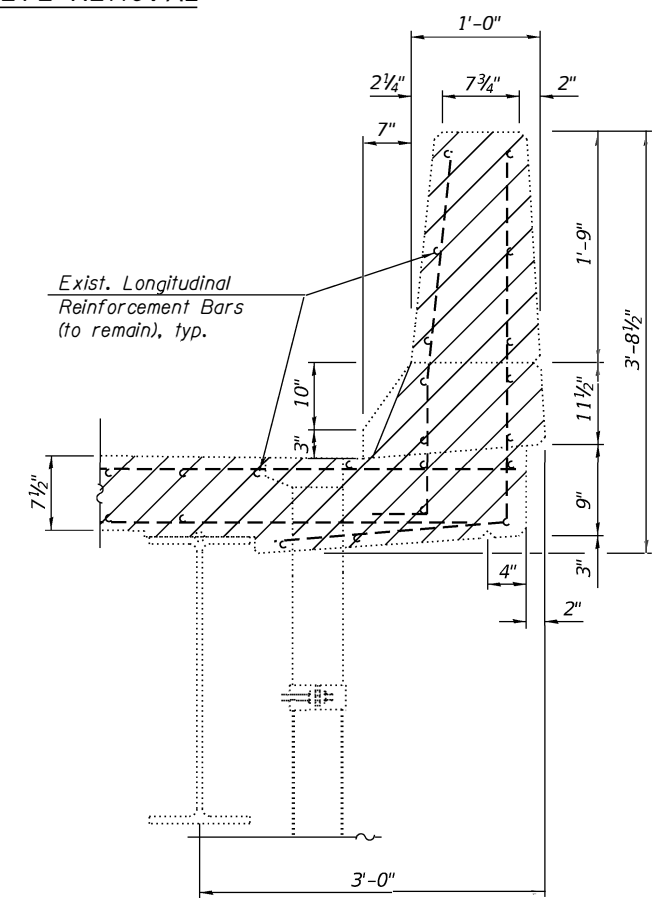
PLAN
(East Abutment Concrete Removal)

BILL OF MATERIAL

| Item | Unit | Total |
|------------------|---------|-------|
| Concrete Removal | Cu. Yd. | 19.2 |



SECTION A-A
CONCRETE REMOVAL



SECTION B-B
CONCRETE REMOVAL

REV. - MS

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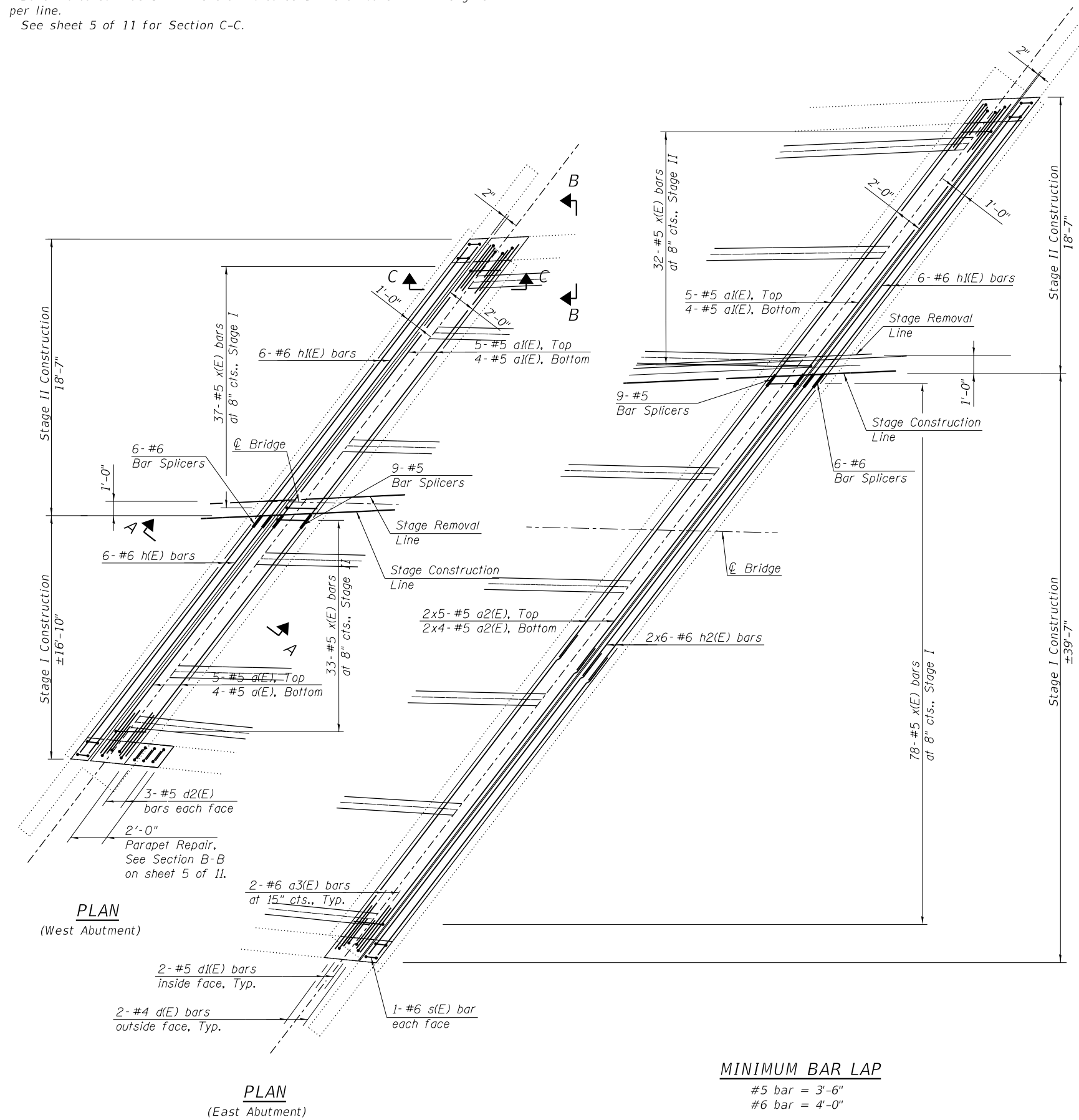
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| Prairie Engineers, P.C. www.prairieengineers.com professional design firm no. 184-005965 Copyright Prairie Engineers, P.C. 2018 | USER NAME = jmasset | DESIGNED - SMA | REVISED - 3/13/2020 |
| | PLOT SCALE = | CHECKED - SMA | REVISED - |
| | PLOT DATE = 3/13/2020 | DRAWN - JLM | REVISED - |
| | | CHECKED - SMA | REVISED - |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

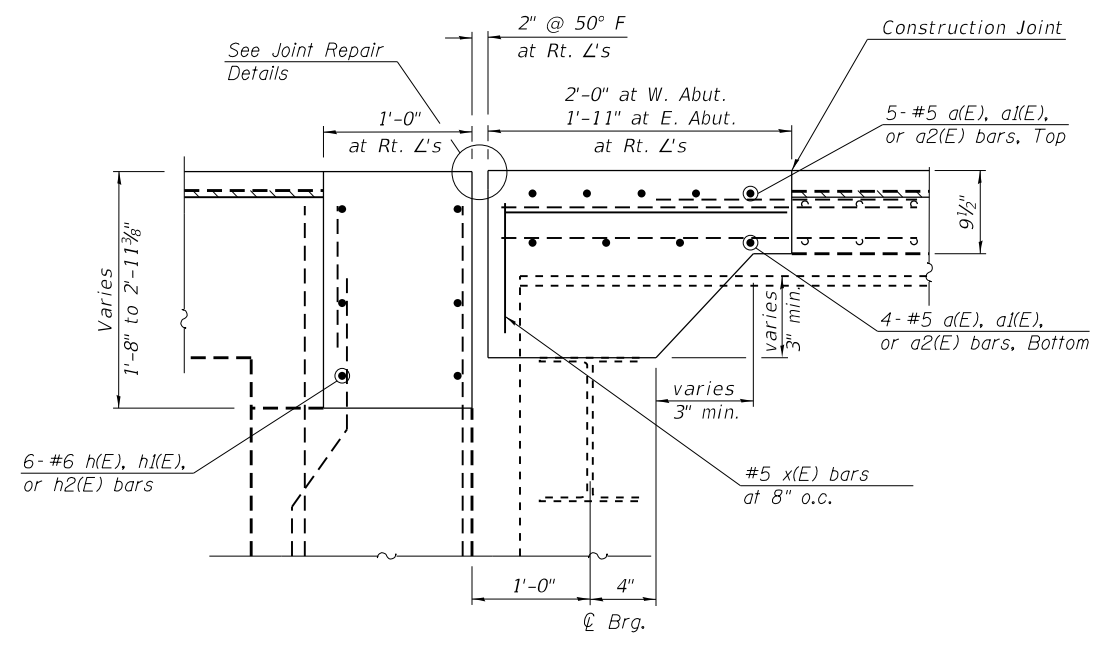
JOINT REMOVAL DETAILS
STRUCTURE NO. 003-0057
 SHEET 3 OF 11 SHEETS

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 28 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |

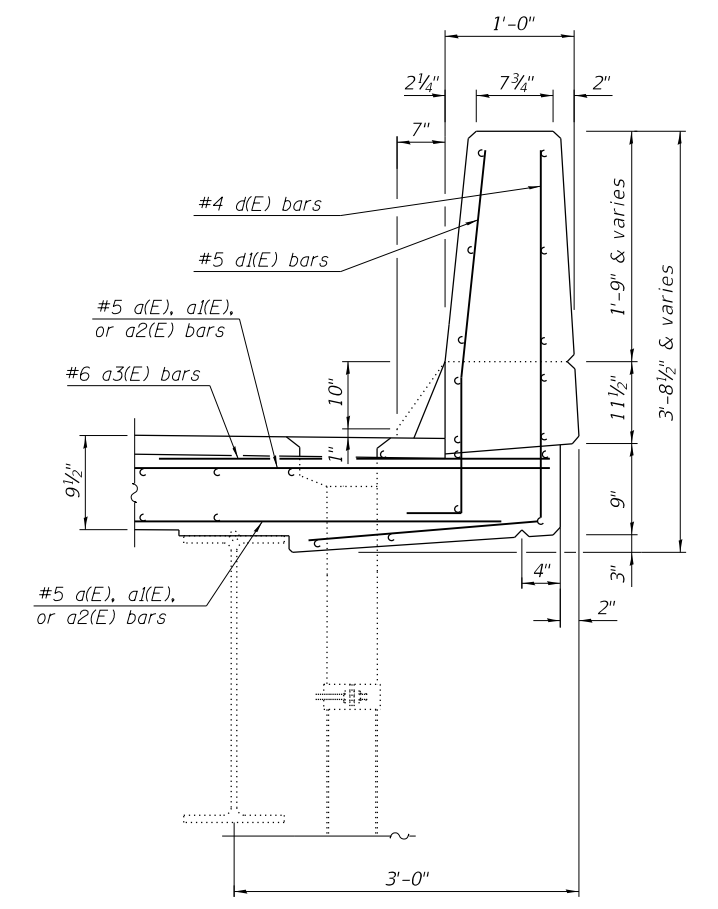
Notes:
 Trim existing reinforcement to accommodate proposed expansion joint.
 Bars indicated thus 1 x 2-#8 etc. indicates 1 line of bars with 2 lengths per line.
 See sheet 5 of 11 for Section C-C.



MINIMUM BAR LAP
 #5 bar = 3'-6"
 #6 bar = 4'-0"



SECTION A-A



SECTION B-B

MODEL: 0030057-76N18-004
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 PLOT SCALE =
 PLOT DATE = 12/12/2019

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 CHECKED - SMA

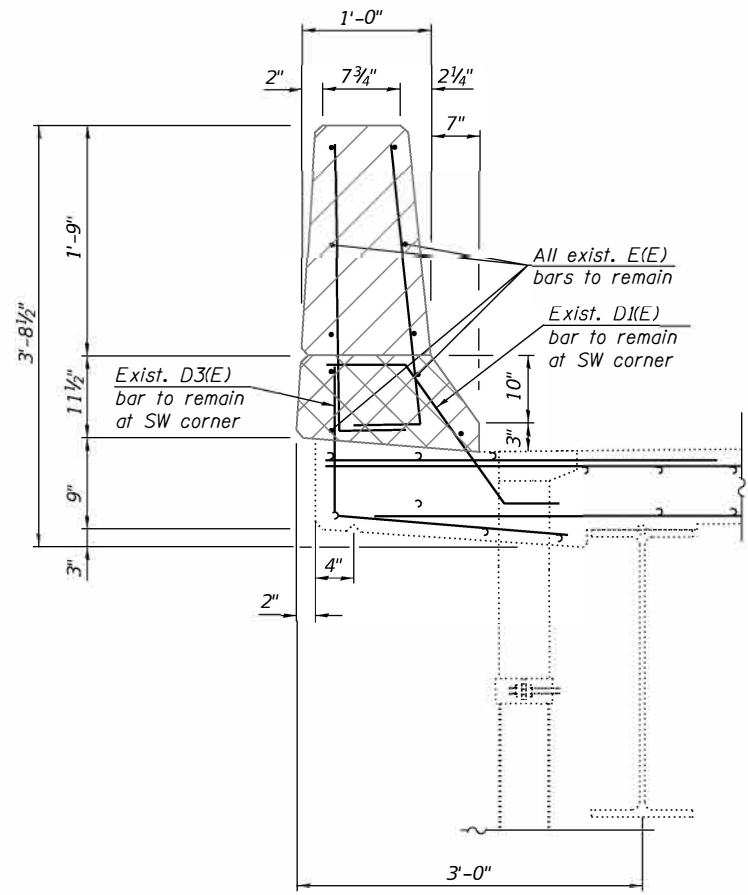
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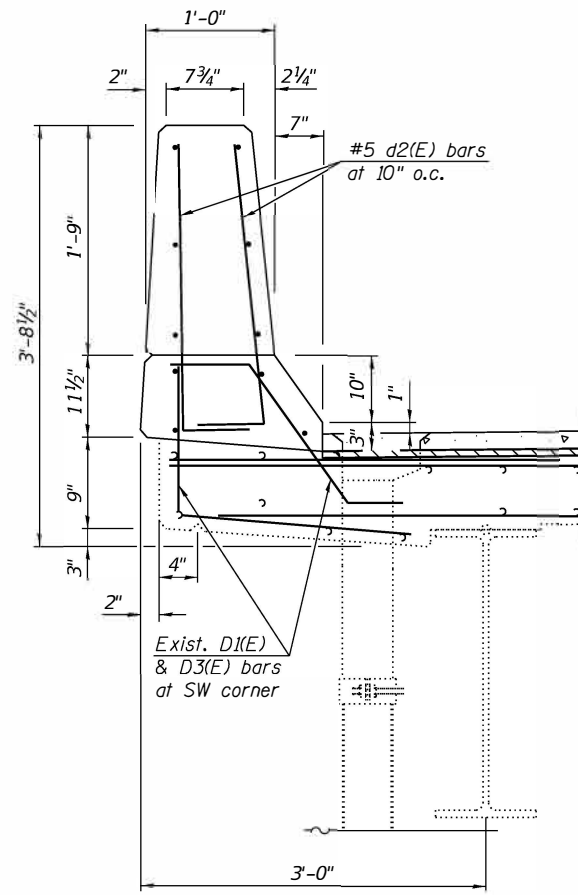
**JOINT REPLACEMENT DETAILS
 STRUCTURE NO. 003-0057**

SHEET 4 OF 11 SHEETS

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 29 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



PARAPET REPAIR SECTION A-A



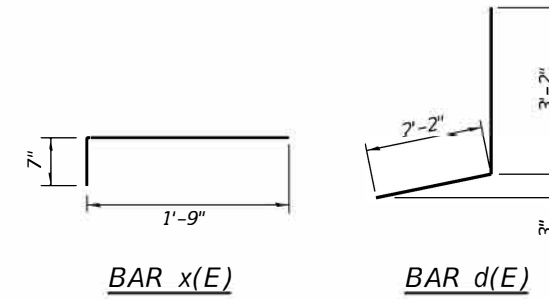
PARAPET REPAIR SECTION B-B



Concrete removal, existing E(E) bars to remain (typ.)

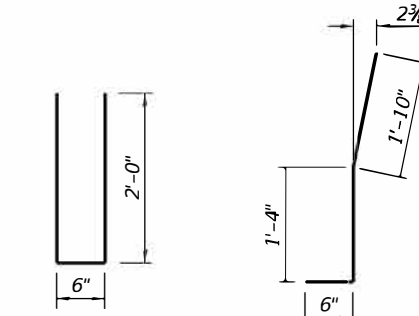


Concrete removal, existing D1(E), D3(E), and E(E) bars to remain at SW corner



BAR x(E)

BAR d(E)



BAR s(E)

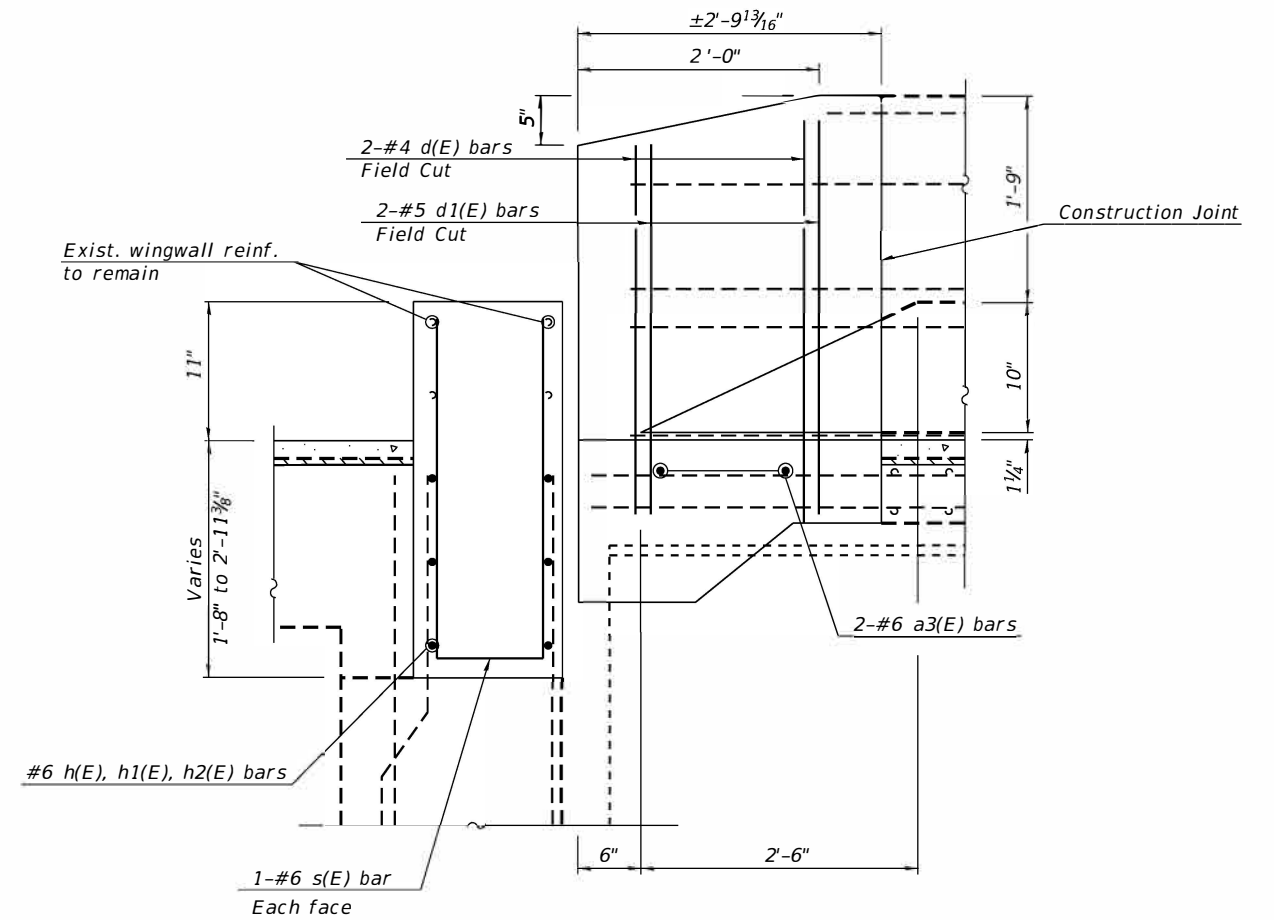
BAR d1(E)



BAR d2(E)

**SUPERSTRUCTURE
BILL OF MATERIAL**

| Bar | No. | Size | Length | Shape | |
|----------------------------------|-----|------|---------|----------|------|
| a(E) | 9 | #5 | 21'-6" | — | |
| a1(E) | 18 | #5 | 23'-10" | — | |
| a2(E) | 18 | #5 | 27'-6" | — | |
| a3(E) | 8 | #6 | 4'-0" | — | |
| d(E) | 8 | #4 | 5'-4" | — | |
| d1(E) | 8 | #5 | 3'-8" | — | |
| d2(E) | 6 | #5 | 3'-0" | — | |
| h(E) | 6 | #6 | 21'-0" | — | |
| h1(E) | 12 | #6 | 23'-7" | — | |
| h2(E) | 12 | #6 | 27'-6" | — | |
| s(E) | 8 | #6 | 4'-6" | — | |
| x(E) | 180 | #5 | 2'-4" | — | |
| Reinforcement Bars, Epoxy Coated | | | | Lbs. | 2890 |
| Concrete Superstructure | | | | Cu. Yds. | 21.4 |



SECTION C-C

REV. - MS

MODEL: 0030057-76N18-005
FILE NAME: I:\webs\2011\75.11010.35\drawings\cad_sheets\0030057-76N18.dgn

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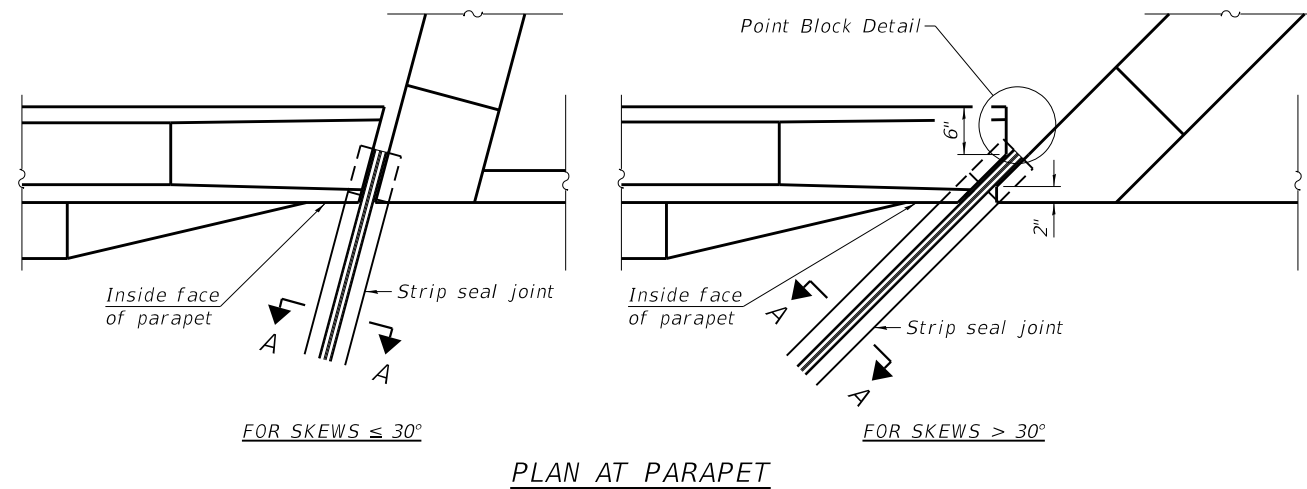
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| USER NAME = Jmasset | DESIGNED - SMA | REvised - 3/13/2020 |
| PLOT SCALE = | CHECKED - SMA | REvised - |
| PLOT DATE = 3/13/2020 | DRAWN - JLM | REvised - |
| | CHECKED - SMA | REvised - |

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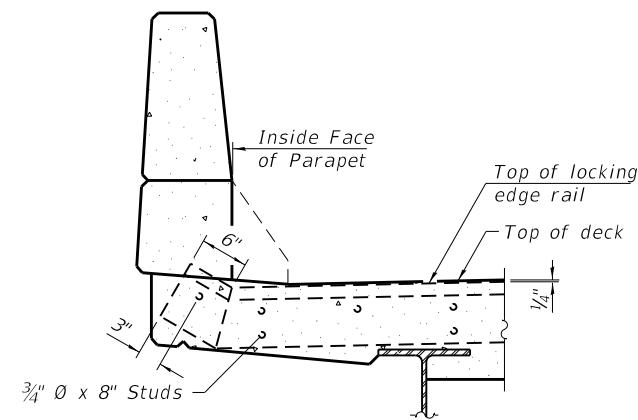
JOINT REPLACEMENT DETAILS (2 OF 2)
STRUCTURE NO. 003-0057

SHEET 5 OF 11 SHEETS

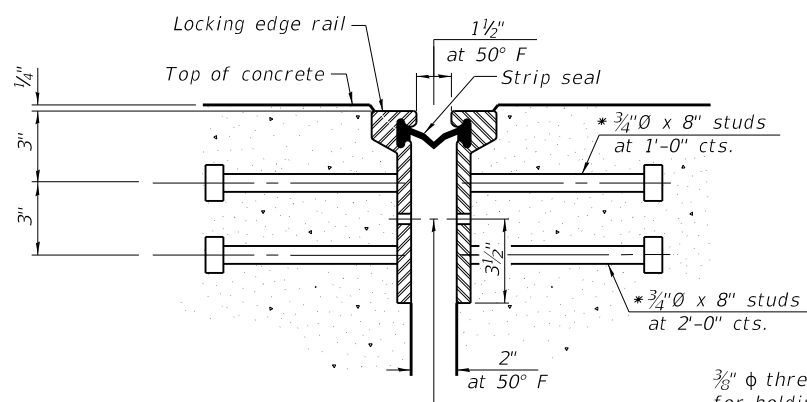
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 30 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



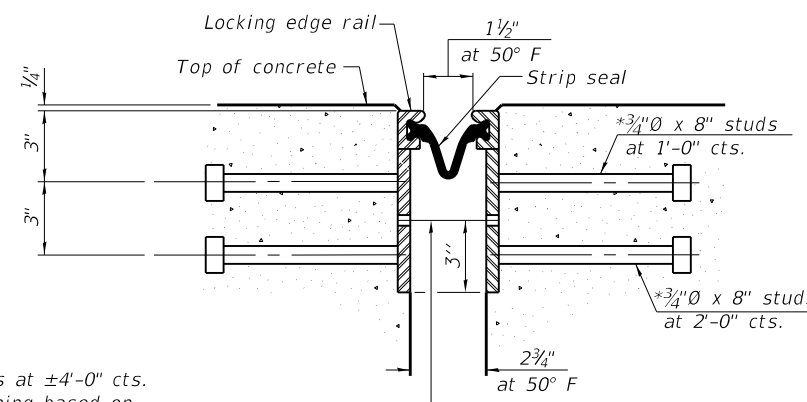
PLAN AT PARAPET



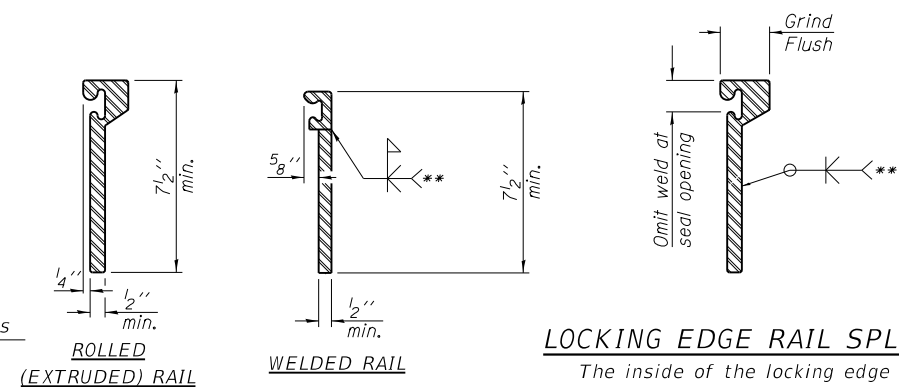
ELEVATION AT PARAPET



SHOWING ROLLED RAIL JOINT



SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.

LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue. Rolled rail shown, welded rail similar.

BILL OF MATERIAL

| Item | Unit | Total |
|---------------------------|------|-------|
| Prefomed Joint Strip Seal | Foot | 122.0 |

3/8" φ threaded rods in 7/16" φ holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

MODEL: 0030057-76N18-006
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PLOT SCALE =
DRAWN - JLM
PLOT DATE = 12/12/2019
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CHECKED - SMA
DRAWN - JLM
PLOT DATE = 12/12/2019
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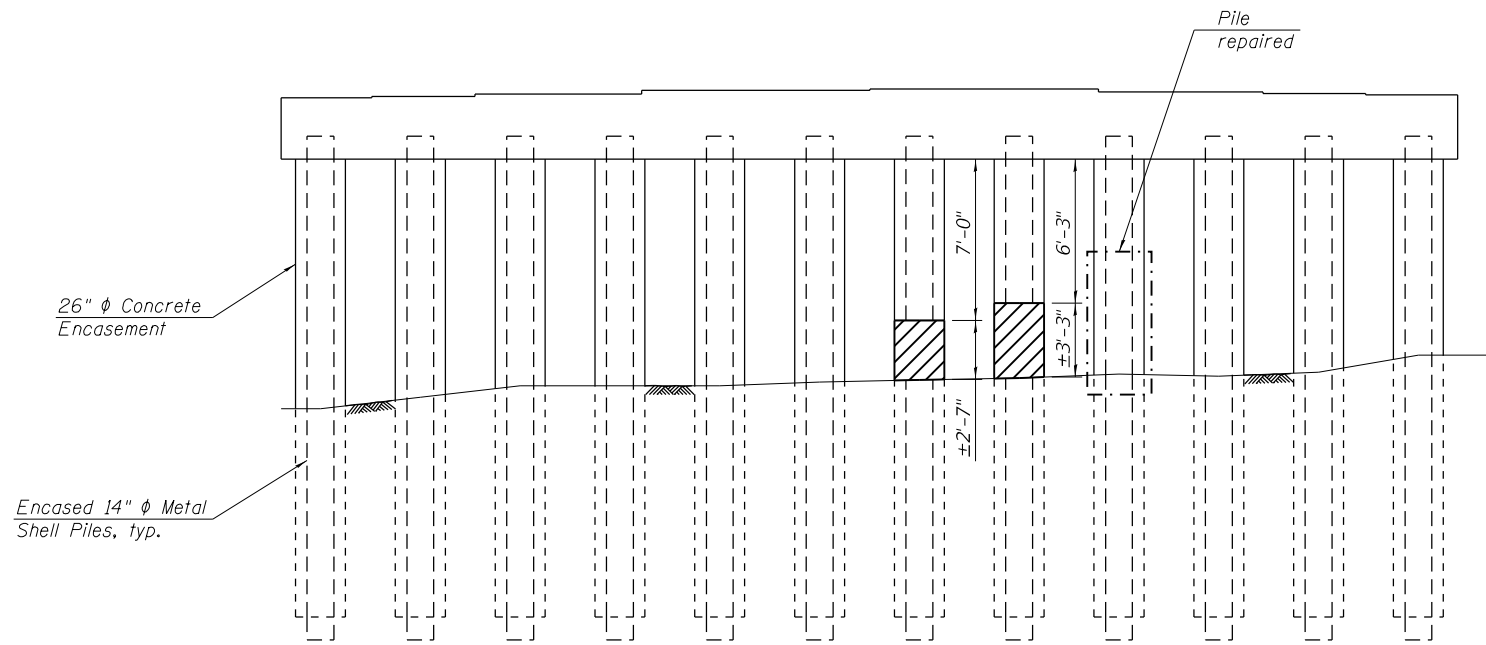
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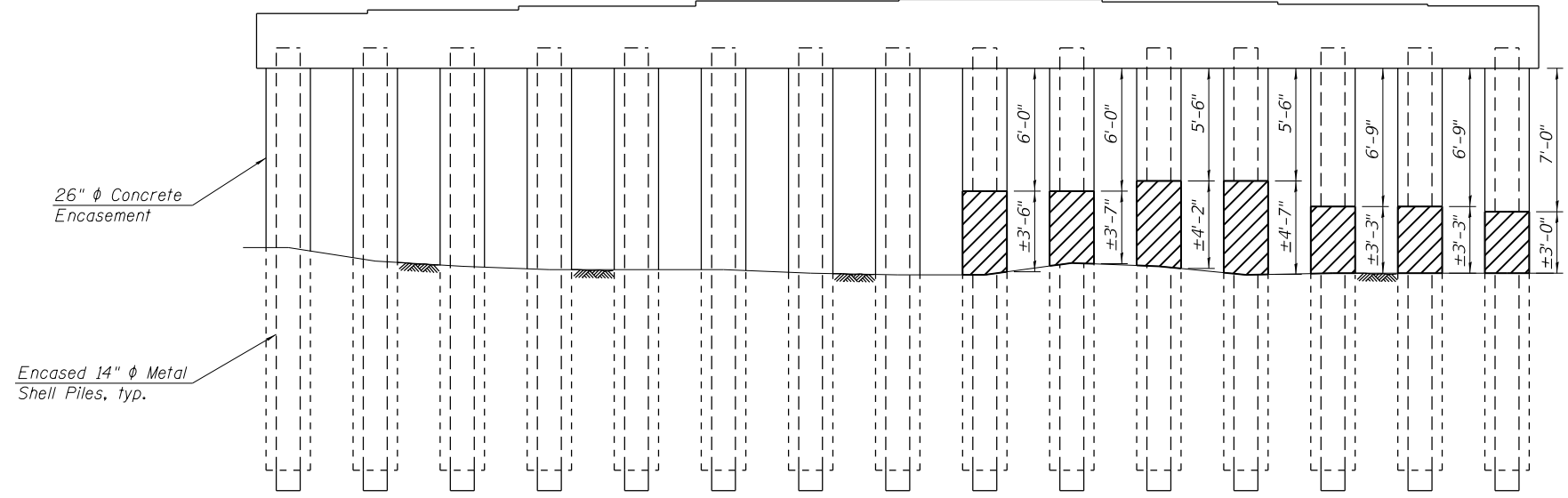
PREFORMED JOINT STRIP SEAL - MODIFIED
STRUCTURE NO. 003-0057

SHEET 6 OF 11 SHEETS

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 31 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



WEST PIER (2)
(Looking West)



EAST PIER (3)
(Looking West)

LEGEND
 Pile Deterioration

Note:
 Repair of existing piers shall include but may not be limited to the areas shown.
 See details for pile repairs on sheet 8 of 11.

MODEL: 0030057-76N18-007
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 PLOT DATE = 12/12/2019

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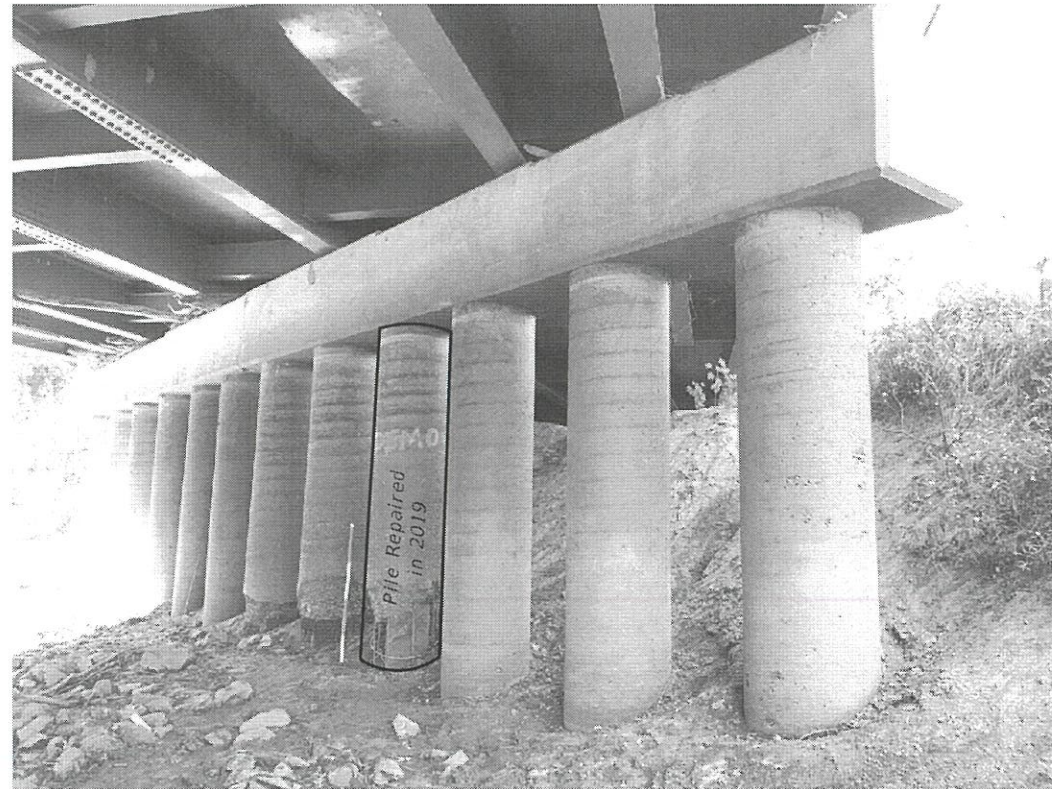
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PIER REPAIR DETAILS
STRUCTURE NO. 003-0057

SHEET 7 OF 11 SHEETS

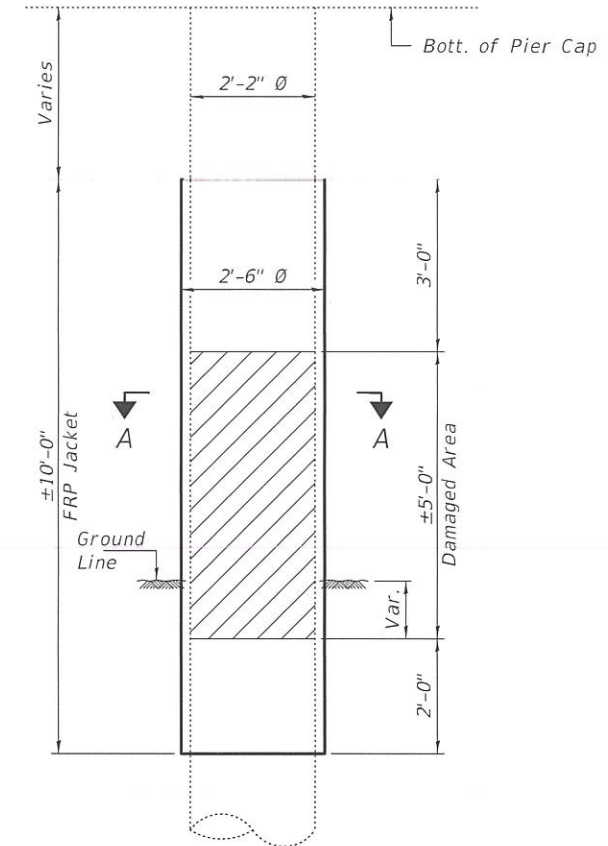
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| CONTRACT NO. 76N18 | | | | |
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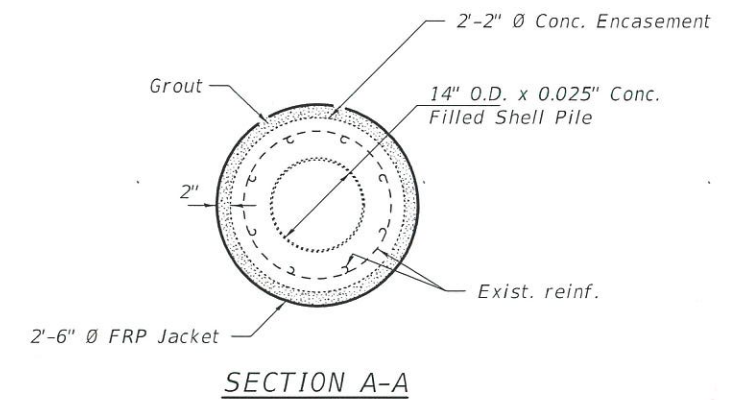
WEST PIER - LOOKING SOUTH WEST



EAST PIER - LOOKING EAST



TYPICAL PILE REPAIR

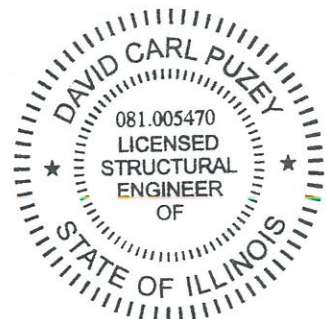


SECTION A-A

Note:
Contractor must remove material from around pile to determine depth of deterioration. Cost of excavation and back filling is included in the cost of Grouted FRP Encased Repair.

BILL OF MATERIAL

| ITEM | UNIT | QUANTITY |
|----------------------------|------|----------|
| Grouted FRP Encased Repair | Foot | 90 |



EXPIRES 11-30-2020
(Seal applies to this sheet only)

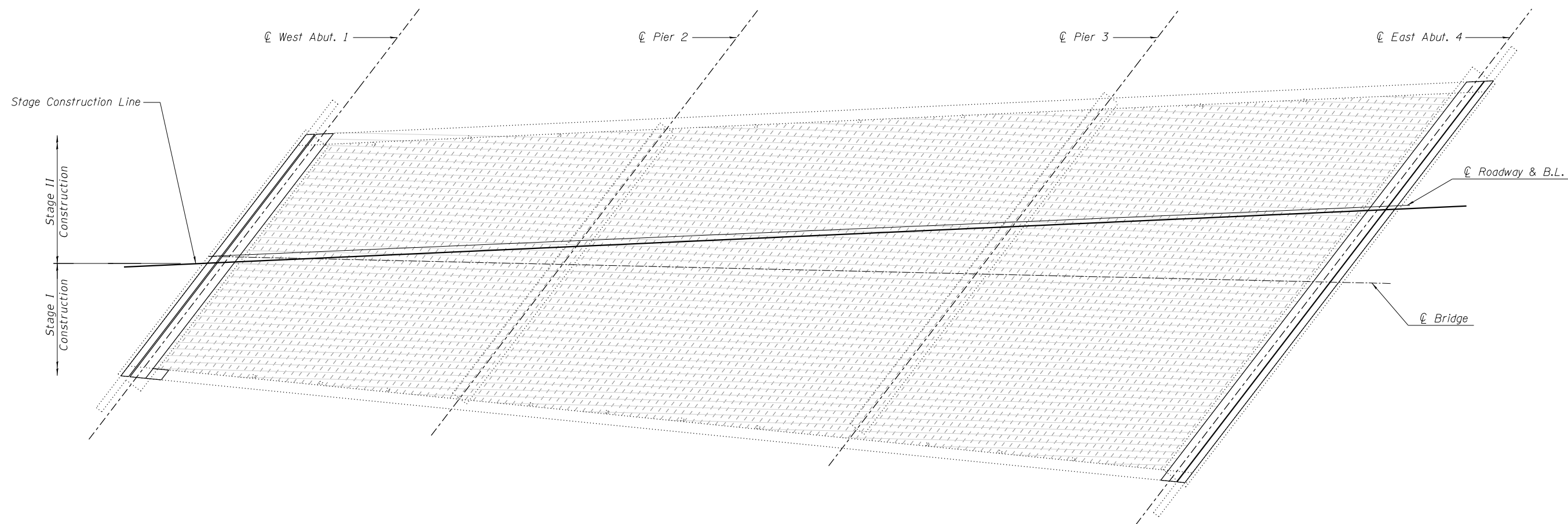
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|------------------------------------|---------------------------------------|-------------------------|
| DESIGNED - <i>V. S. H. Upliz</i> | EXAMINED - <i>Timothy A. Ambrosch</i> | DATE - JANUARY 28, 2020 |
| CHECKED - <i>Adnan T. Holloway</i> | PASSED - <i>Sh. Carl Kruger</i> | REVISED - |
| DRAWN - <i>daburdell</i> | | REVISED - |
| CHECKED - <i>V.H. ATH</i> | | |

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PIER REPAIR DETAIL
SN 003-0057

SHEET NO. 8 OF 11 SHEETS

| | | | | |
|---------------------------|---------|--------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 42 | 139BR-2 | BOND | 39 | 33 |
| CONTRACT NO. 76N18 | | | | |
| ILLINOIS FED. AID PROJECT | | | | |



AS-BUILT DECK PATCHING PLAN

BILL OF MATERIAL

| Item | Unit | Total |
|--------------------------------------|---------|-------|
| Deck Slab Repair (Full Depth, TY II) | Sq. Yd. | 25 |

Total area of deck repairs is estimated. The Engineer shall show actual locations of deck repairs on As-built plans. Full depth deck patches exposed after the hydro scarification will be paid for according to article 109.04 of the Standard Specifications.

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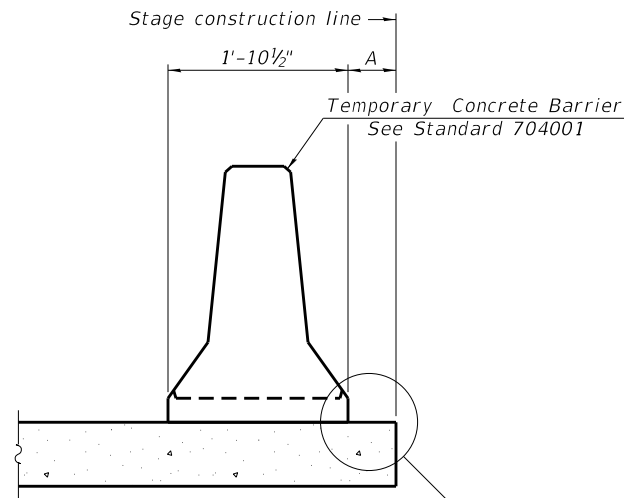
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**DECK SLAB REPAIR PLAN (AS BUILT)
 STRUCTURE NO. 003-057**

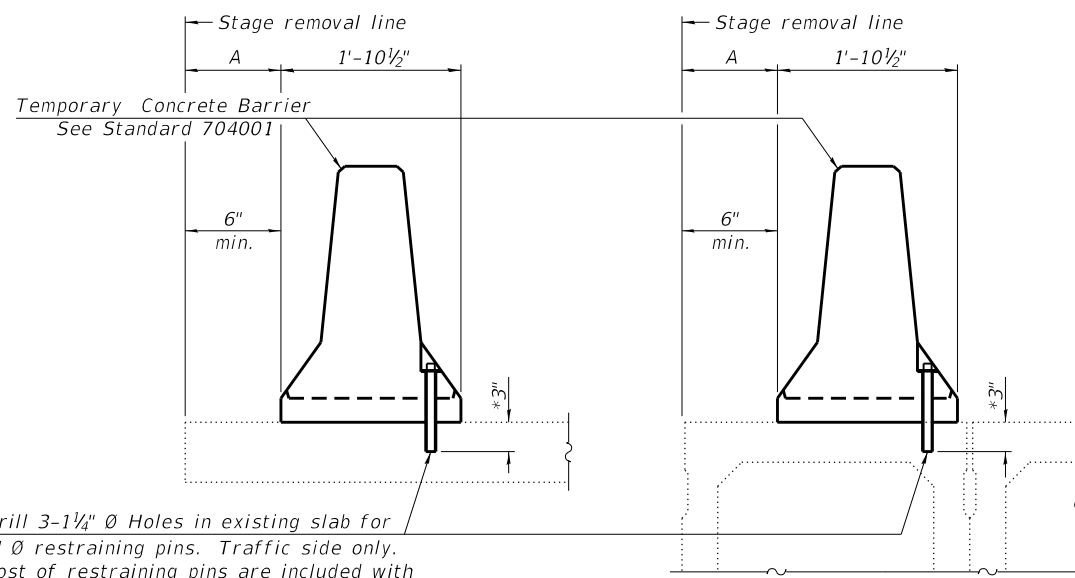
SHEET 9 OF 11 SHEETS

| | | | | |
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| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 42 | 139BR-2 | | 36 | 34 |
| | | | CONTRACT NO. 76N18 | |
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When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

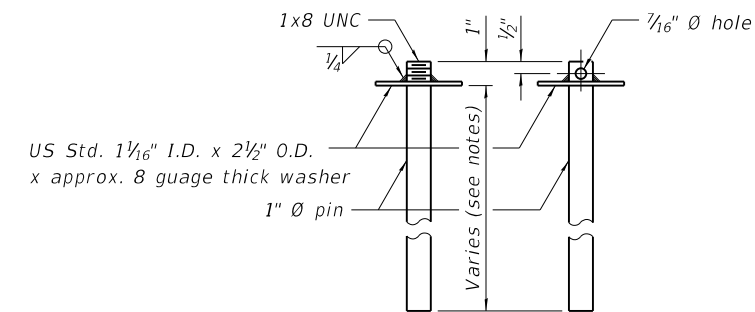


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

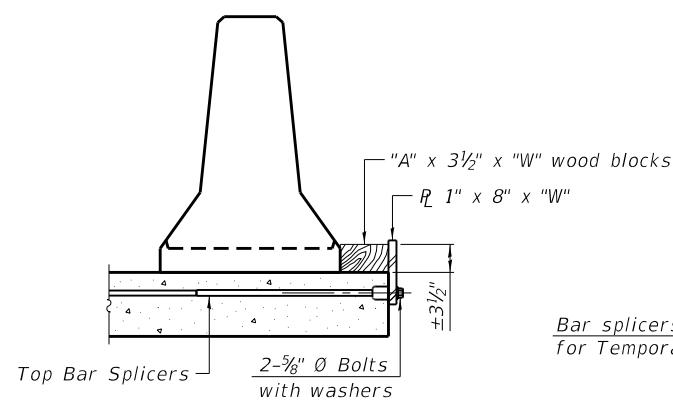
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

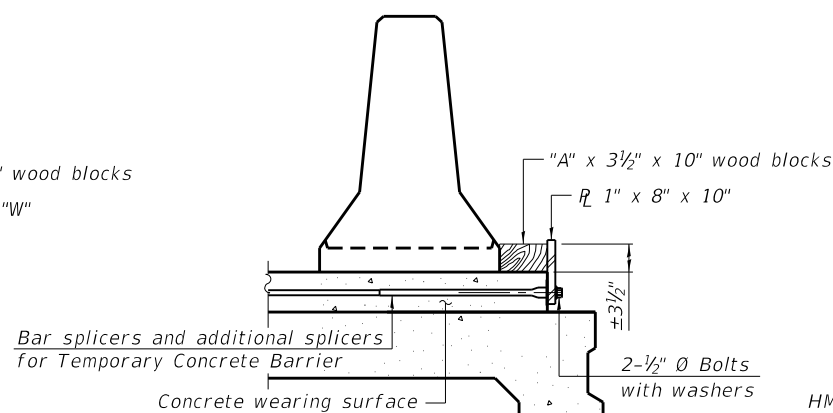


RESTRAINING PIN

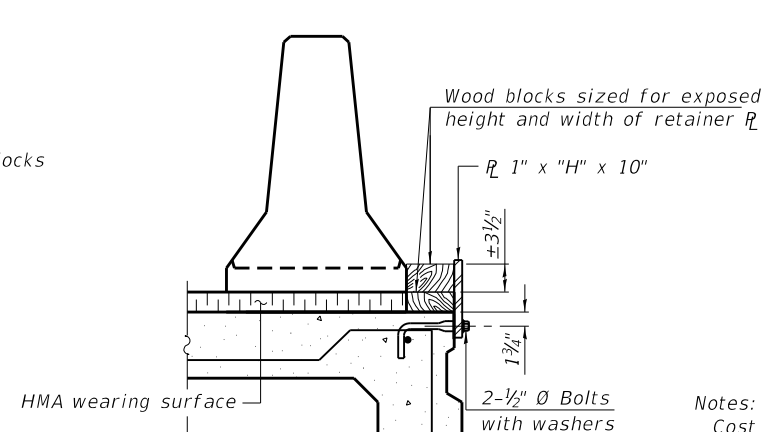
SECTIONS THRU SLAB OR DECK BEAM



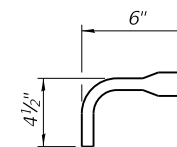
DETAIL I



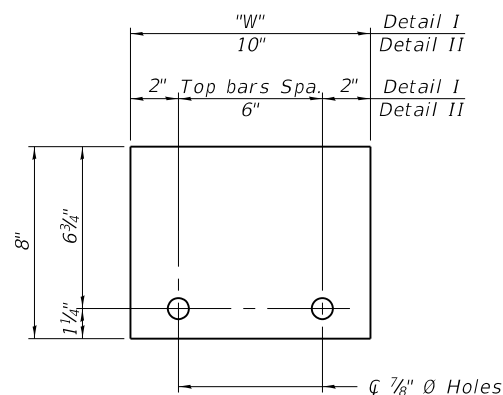
DETAIL II



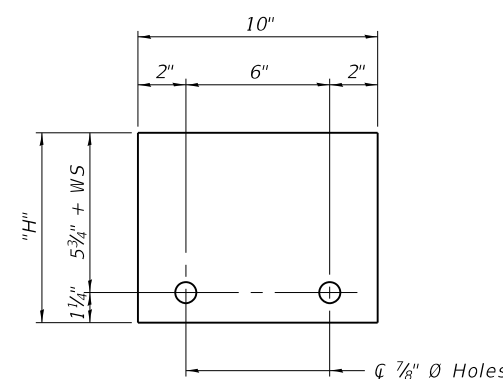
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W"
(Detail I and II)



STEEL RETAINER R 1" x "H" x 10"
(Detail III)

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate \bar{c} of each temporary concrete barrier.
 The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.
 When the 'A' dimension is less than 1 1/2', the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.
 Detail II - Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
 Detail III - Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

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R-27 2-17-2017

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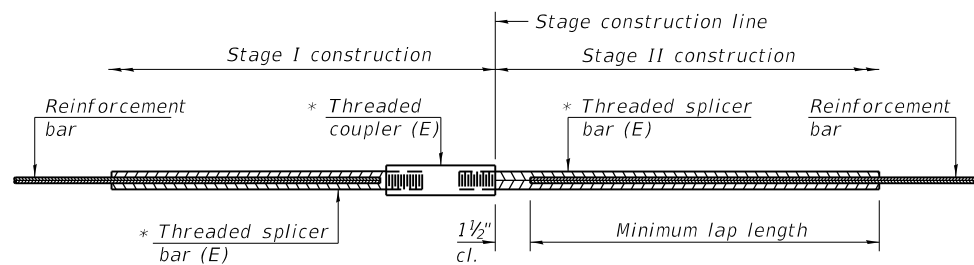
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TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
 STRUCTURE NO. 003-0057

SHEET 10 OF 11 SHEETS

| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|--------|--------------|-----------|
| 42 | 139BR-2 | BOND | 36 | 35 |
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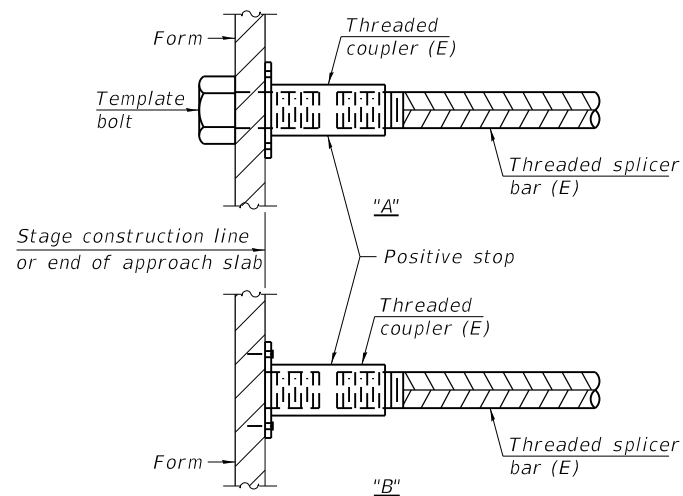


STANDARD BAR SPLICER ASSEMBLY

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

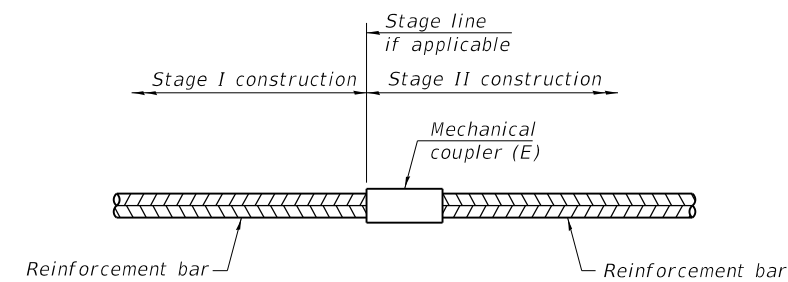
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

| Location | Bar size | No. assemblies required | Minimum lap length |
|--------------|----------|-------------------------|--------------------|
| Deck ends | #5 | 18 | 3'-6" |
| Hatch blocks | #6 | 12 | 4'-0" |
| | | | |
| | | | |



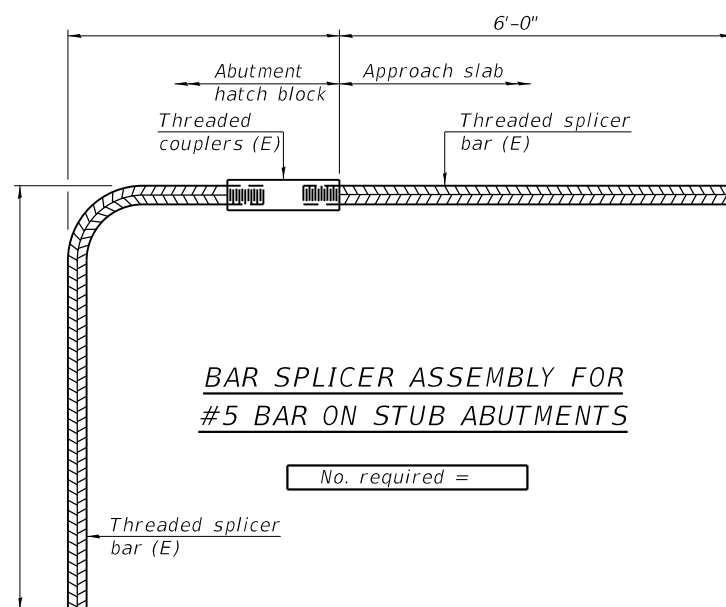
INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.



STANDARD MECHANICAL SPLICER

| Location | Bar size | No. assemblies required |
|----------|----------|-------------------------|
| | | |
| | | |
| | | |



BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS

No. required =

NOTES

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.
 All reinforcement shall be lapped and tied to the splicer bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.
 See approved list of bar splicer assemblies and mechanical splicers for alternatives.

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2-17-2017

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 DEPARTMENT OF TRANSPORTATION**

**BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 003-0057**

SHEET 11 OF 11 SHEETS

| | | | | |
|---------------------------|---------|--------|--------------|-----------|
| F.A.P. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 42 | 139BR-2 | BOND | 36 | 36 |
| CONTRACT NO. 76N18 | | | | |
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