

| F.A.P. RTE. | SECTION | COUNTY   | TOTAL SHEETS       | SHEET NO. |
|-------------|---------|----------|--------------------|-----------|
| 42          | 112BR-3 | CLINTON  | 23                 | 1         |
|             |         | ILLINOIS | CONTRACT NO. 76P79 |           |

**INDEX OF SHEETS**

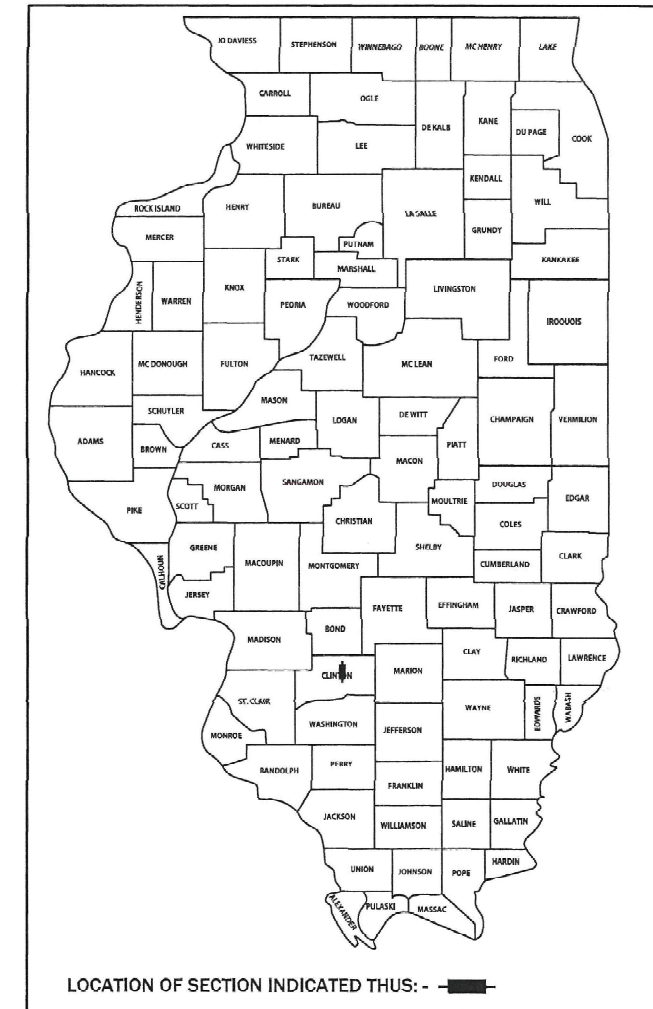
- 1 COVER SHEET
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- 3 - 6 SUMMARY OF QUANTITIES
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- 8 SCHEDULE OF QUANTITIES
- 9 ROADWAY PLAN - IL ROUTE 127
- 10 - 13 MAINTENANCE OF TRAFFIC
- 14 - 23 BRIDGE REPAIR PLANS SN 014-0063

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

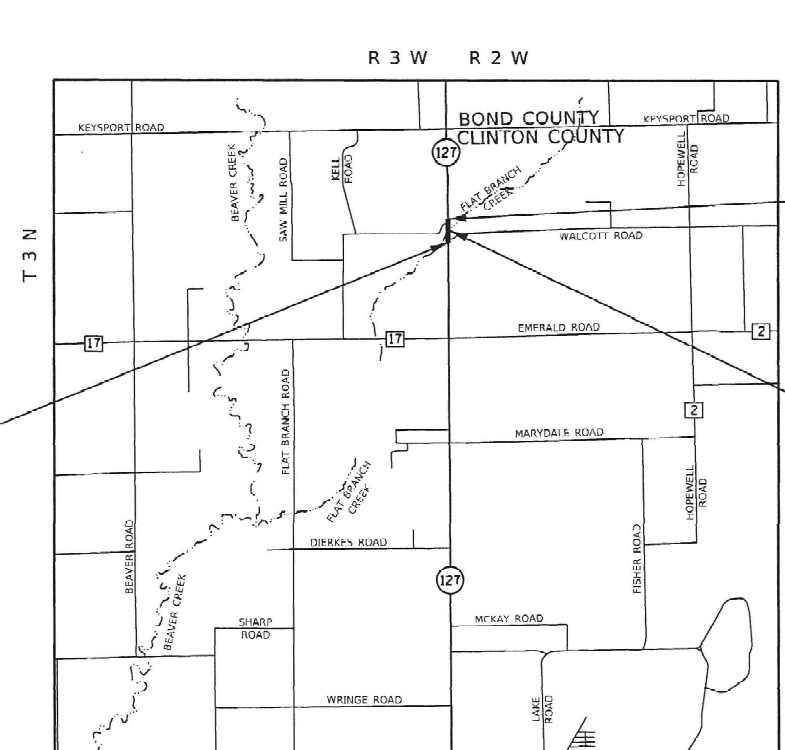
**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 42 (IL ROUTE 127)  
SECTION 112BR-3  
PROJECT  
BRIDGE JOINT REPLACEMENT & REPAIR - CM  
CLINTON COUNTY

D-98-023-22



C-98-052-22



IL ROUTE 127  
PROJECT BEGINS  
STA 422+49.00

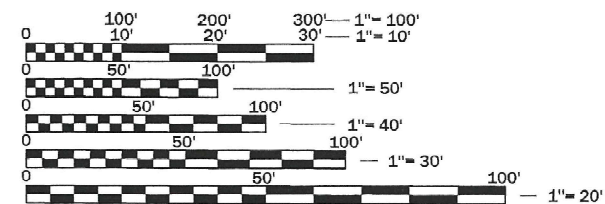
IL ROUTE 127  
PROJECT ENDS  
STA 427+63.00



IL ROUTE 127 OVER FLAT BRANCH CREEK  
STRUCTURE NO. 014-0063  
228'-9 1/2" BK TO BK ABUTS  
LAT: 38.72751810  
LONG: -89.37190408

**DESIGN DESIGNATION**

ROADWAY CLASSIFICATION = MINOR ARTERIAL  
DESIGN SPEED = 55 MPH  
2021 ADT = 3550 (ACTUAL)  
2022 ADT = 3600 (ESTIMATED)  
2042 ADT = 4200 (ESTIMATED)  
SU = 4.3% MU = 15.2%



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 EXCAVATION  
1-800-892-0123  
OR 811

**LOCATION MAP**  
IRISHTOWN TOWNSHIP

GROSS LENGTH = 514.0 FEET = 0.097 MILES  
NET LENGTH = 514.0 FEET = 0.097 MILES

PROJECT ENGINEER BILLIE OWEN 618-346-3209

CONTRACT NO. 76P79

PLANS PREPARED BY:



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
SUBMITTED Jan 19 2022  
Stephen Travia REGIONAL ENGINEER  
May 13, 2022  
[Signature]  
ENGINEER OF DESIGN AND ENVIRONMENT  
May 13, 2022  
[Signature]  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION



Elizabeth S. Witt 1/7/22  
ILLINOIS PROFESSIONAL ENGINEER NO. 062-061876  
EXP. 11-30-2023  
APPLIES TO SHEETS 1-13

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

## HIGHWAY STANDARDS

|           |   |
|-----------|---|
| 000001-08 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS                                |
| 001001-02 | AREAS OF REINFORCEMENT BARS   |
| 001006    | DECIMAL OF AN INCH AND OF A FOOT  |
| 630001-12 | STEEL PLATE BEAM GUARDRAIL  |
| 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 |
| 701301-04 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS                                 |
| 701311-03 | LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY                          |
| 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  |
| 780001-05 | TYPICAL PAVEMENT MARKINGS   |
| 781001-04 | TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS                     |

## GENERAL NOTES

1. UTILITIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA:
 

|  |                |
|--|----------------|
| AT&T ILLINOIS                            | COMMUNICATIONS |
| CARLYLE NORTH WATER COMPANY              | WATER          |
| CLINTON COUNTY ELECTRIC COOPERATIVE, INC | ELECTRIC       |
| METRO                                    | COMMUNICATIONS |
2. LIMITED SURVEY WAS PERFORMED FOR THIS PROJECT AND THE PLANS WERE CREATED USING MICROFILM AND FIELD MEASUREMENTS.
3. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
4. EARTH EXCAVATION INCLUDES THE REMOVAL OF THE EXISTING AGGREGATE SHOULDER AND ANY EXCAVATION REQUIRED FOR INSTALLATION OF STONE RIPRAP, CLASS A4.
5. A QUANTITY OF 10 TONS OF AGGREGATE SHOULDER (SPECIAL) HAS BEEN INCLUDED IN THE PLANS TO ADDRESS EROSION OF THE EXISTING AGGREGATE SHOULDERS IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND AS DIRECTED BY THE ENGINEER.
6. TWO APPLICATIONS OF BITUMINOUS MATERIALS (TACK COAT) HAVE BEEN INCLUDED FOR PROPOSED HOT-MIX ASPHALT SHOULDERS, 8"
7. TWO CHANGEABLE MESSAGE SIGNS SHALL BE REQUIRED FOR THIS PROJECT. THEY SHALL BE PLACED ON THE APPROACHES ON IL ROUTE 127 TWO WEEKS PRIOR TO ANY LANE CLOSURE AND SHALL REMAIN FOR FOUR WEEKS. THE CHANGEABLE MESSAGE SIGNS SHALL BE PLACED ALONG IL ROUTE 127 OR AT THE DIRECTION OF THE ENGINEER.

## COMMITMENTS

NONE

## MIXTURE REQUIREMENTS

| LOCATIONS                       | IL ROUTE 127          |                       |
|---------------------------------|-----------------------|-----------------------|
| MIXTURE USE:                    | SHOULDERS (LOWER)     | SHOULDER (SURFACE)    |
| AC/PG:                          | PG 64-22              | PG 64-22              |
| RAP %(MAX):                     | SEE SPECIAL PROVISION | SEE SPECIAL PROVISION |
| DESIGN AIR VOIDS:               | 4.0% @ NDES=30        | 4.0% @ NDES=30        |
| MIXTURE COMPOSITION (GRADATION) | IL 19.0L              | IL 9.5L               |
| FRICITION AGGREGATE:            |                       |                       |
| QUALITY MANAGEMENT PROGRAM      | QC/QA                 | QC/QA                 |
| MAT TRAN DEV REQUIRED?          | NO                    | NO                    |

PLAN QUANTITIES FOR BITUMINOUS CONCRETE SURFACE COUSE ITEMS ARE CALCULATED USING A UNIT WEIGHT OF 112 LBS/SQ YD/IN.

REV. - MS

FILE NAME: X:\Production\11a\2020\420-0017\PRJ-01\CAD\CADD\_Sheets\087679-ah1-gmncstdgn



|                           |                  |           |
|---------------------------|------------------|-----------|
| USER NAME + Betsy         | DESIGNED - ESW   | REVISED - |
| MODEL NAME + Gen-01       | DRAWN - LEC      | REVISED - |
| PLOT SCALE + 0.1667 / in. | CHECKED - BRM    | REVISED - |
| PLOT DATE + 1/1/2022      | DATE - 10/8/2021 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**HIGHWAY STANDARDS, GENERAL NOTES  
AND COMMITMENTS**

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

| F.A.P. RTE.        | SECTION | COUNTY   | TOTAL SHEETS     | SHEET NO. |
|--------------------|---------|----------|------------------|-----------|
| 42                 | 112BR-3 | CLINTON  | 23               | 2         |
| CONTRACT NO. 76P79 |         |          |                  |           |
|                    |         | ILLINOIS | FED. AID PROJECT |           |

FILE NAME: X:\Production\Files\2020\420-0017\PRJ-01\CAD\CADD\_Sheets\0876P79-shr-500.dgn

| CODE NO. | ITEM                                     | UNIT  | TOTAL QUANTITY | CONSTRUCTION CODE |  |  |
|----------|--|-------|----------------|-------------------|--|--|
|          |  |       |                | 100% STATE        |  |  |
|          |  |       |                | BRIDGE            |  |  |
|          |  |       |                | 0047              |  |  |
|          |  |       |                | RURAL             |  |  |
| 20200100 | EARTH EXCAVATION                         | CU YD | 80             | 80                |  |  |
| 28100107 | STONE RIPRAP, CLASS A4                   | SQ YD | 42             | 42                |  |  |
| 28200200 | FILTER FABRIC                            | SQ YD | 42             | 42                |  |  |
| 40600290 | BITUMINOUS MATERIALS (TACK COAT)         | POUND | 108            | 108               |  |  |
| 44004250 | PAVED SHOULDER REMOVAL                   | SQ YD | 12             | 12                |  |  |
| 48102100 | AGGREGATE WEDGE SHOULDER, TYPE B         | TON   | 19             | 19                |  |  |
| 48203029 | HOT-MIX ASPHALT SHOULDERS, 8"            | SQ YD | 239            | 239               |  |  |
| 50102400 | CONCRETE REMOVAL                         | CU YD | 19.2           | 19.2              |  |  |
| 50300100 | FLOOR DRAINS                             | EACH  | 8              | 8                 |  |  |
| 50300255 | CONCRETE SUPERSTRUCTURE                  | CU YD | 19.1           | 19.1              |  |  |
| 50300300 | PROTECTIVE COAT                          | SQ YD | 43             | 43                |  |  |
| 50500405 | FURNISHING AND ERECTING STRUCTURAL STEEL | POUND | 6389           | 6389              |  |  |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED         | POUND | 2210           | 2210              |  |  |



|                             |                  |           |
|-----------------------------|------------------|-----------|
| USER NAME + Betsy           | DESIGNED - ESW   | REVISED - |
| MODEL NAME + SOQ 1          | DRAWN - LEC      | REVISED - |
| PLOT SCALE + 40,0000' / in. | CHECKED - BRM    | REVISED - |
| PLOT DATE + 1/7/2022        | DATE - 10/8/2021 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

|   |                     |      |         |
|---|---------------------|------|---------|
| <b>SUMMARY OF QUANTITIES<br/>IL ROUTE 127</b> |                     |      |         |
| SCALE:  | SHEET 1 OF 4 SHEETS | STA. | TO STA. |

|                           |         |         |              |           |
|---------------------------|---------|---------|--------------|-----------|
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 42                        | 112BR-3 | CLINTON | 23           | 3         |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |

FILE NAME: X:\Production\Files\2020\420-0017\PRJ-01\CAD\CADD\_Sheets\0876P79-ah-500.dgn

| CODE NO. | ITEM  | UNIT   | TOTAL QUANTITY | CONSTRUCTION CODE |  |  |
|----------|---|--------|----------------|-------------------|--|--|
|          |   |        |                | 100% STATE        |  |  |
|          |   |        |                | BRIDGE            |  |  |
|          |   |        |                | 0047              |  |  |
|          |   |        |                | RURAL             |  |  |
| 50800515 | BAR SPLICERS  | EACH   | 24             | 24                |  |  |
| 52000110 | PREFORMED JOINT STRIP SEAL                            | FOOT   | 112.0          | 112.0             |  |  |
| 52100010 | ELASTOMERIC BEARING ASSEMBLY, TYPE I                  | EACH   | 12             | 12                |  |  |
| 52100505 | ANCHOR BOLTS, 5/8"                                    | EACH   | 24             | 24                |  |  |
| 63300575 | REMOVE AND REERECT RAIL ELEMENT OF EXISTING GUARDRAIL | FOOT   | 631            | 631               |  |  |
| 67000400 | ENGINEER'S FIELD OFFICE, TYPE A                       | CAL MO | 6              | 6                 |  |  |
| 67100100 | MOBILIZATION  | L SUM  | 1              | 1                 |  |  |
| 70100500 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701326       | L SUM  | 1              | 1                 |  |  |
| 70106500 | TEMPORARY BRIDGE TRAFFIC SIGNALS                      | EACH   | 1              | 1                 |  |  |
| 70106700 | TEMPORARY RUMBLE STRIPS                               | EACH   | 6              | 6                 |  |  |
| 70107005 | PAVEMENT MARKING BLACKOUT TAPE, 5"                    | FOOT   | 1248           | 1248              |  |  |
| 70107025 | CHANGEABLE MESSAGE SIGN                               | CAL DA | 84             | 84                |  |  |
| 70300150 | SHORT TERM PAVEMENT MARKING REMOVAL                   | SQ FT  | 520            | 520               |  |  |

REV. - MS



|                             |                  |           |
|-----------------------------|------------------|-----------|
| USER NAME + Betsy           | DESIGNED - ESW   | REVISED - |
| MODEL NAME + SOQ2           | DRAWN - LEC      | REVISED - |
| PLOT SCALE + 40.0000' / in. | CHECKED - BRM    | REVISED - |
| PLOT DATE + 1/7/2022        | DATE - 10/8/2021 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES  
IL ROUTE 127**

SCALE: SHEET 2 OF 4 SHEETS STA. TO STA.

| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 4         |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



FILE NAME: X:\Production\11ea\2020\420-0017\PRJ-01\CAD\CADD\_Sheets\0876P79-shr-500.dgn

| CODE NO. | ITEM   | UNIT  | TOTAL QUANTITY | CONSTRUCTION CODE |  |  |
|----------|--|-------|----------------|-------------------|--|--|
|          |  |       |                | 100% STATE        |  |  |
|          |  |       |                | BRIDGE            |  |  |
|          |  |       |                | 0047              |  |  |
|          |  |       |                | RURAL             |  |  |
| 70400100 | TEMPORARY CONCRETE BARRIER                                     | FOOT  | 450            | 450               |  |  |
| 70400200 | RELOCATE TEMPORARY CONCRETE BARRIER                            | FOOT  | 450            | 450               |  |  |
| 70600250 | IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3 | EACH  | 2              | 2                 |  |  |
| 70600350 | IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3  | EACH  | 2              | 2                 |  |  |
| 78100300 | REPLACEMENT REFLECTOR  | EACH  | 12             | 12                |  |  |
| X1200030 | FILLING INLETS, TEMPORARY                                      | EACH  | 2              | 2                 |  |  |
| X4811900 | AGGREGATE SHOULDERS (SPECIAL)                                  | TON   | 10             | 10                |  |  |
| X5870015 | BRIDGE DECK CONCRETE SEALER                                    | SQ FT | 10963          | 10963             |  |  |
| X7010202 | TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)      | EACH  | 1              | 1                 |  |  |
| X7830050 | RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL           | EACH  | 12             | 12                |  |  |
| Z0001899 | JACK AND REMOVE EXISTING BEARINGS                              | EACH  | 12             | 12                |  |  |
| Z0001903 | STRUCTURAL STEEL REMOVAL                                       | POUND | 3928           | 3928              |  |  |
| Z0001905 | STRUCTURAL STEEL REPAIR  | POUND | 2553           | 2553              |  |  |



USER NAME + Betsy  
 MODEL NAME + SOQ 3  
 PLOT SCALE + 40,0000' / in.  
 PLOT DATE + 1/7/2022

DESIGNED - ESW  
 DRAWN - LEC  
 CHECKED - BRM  
 DATE - 10/8/2021

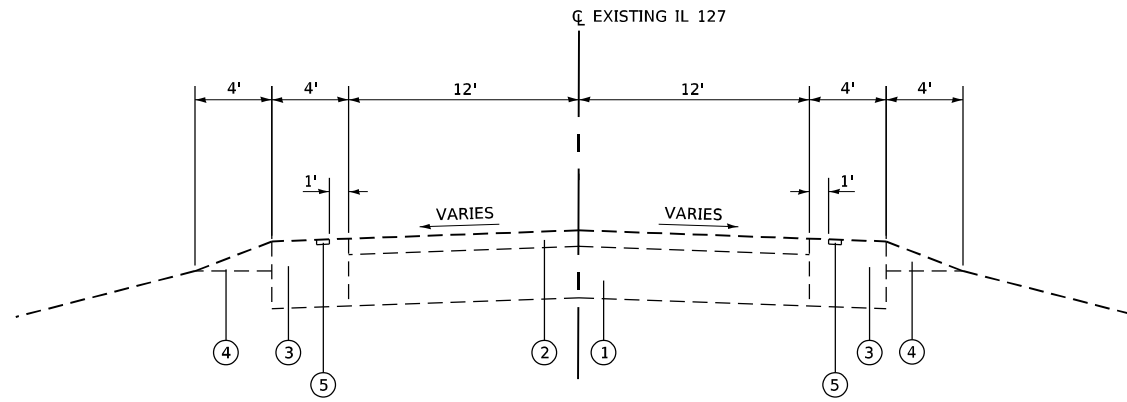
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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES  
 IL ROUTE 127  
 SCALE: SHEET 3 OF 4 SHEETS STA. TO STA.

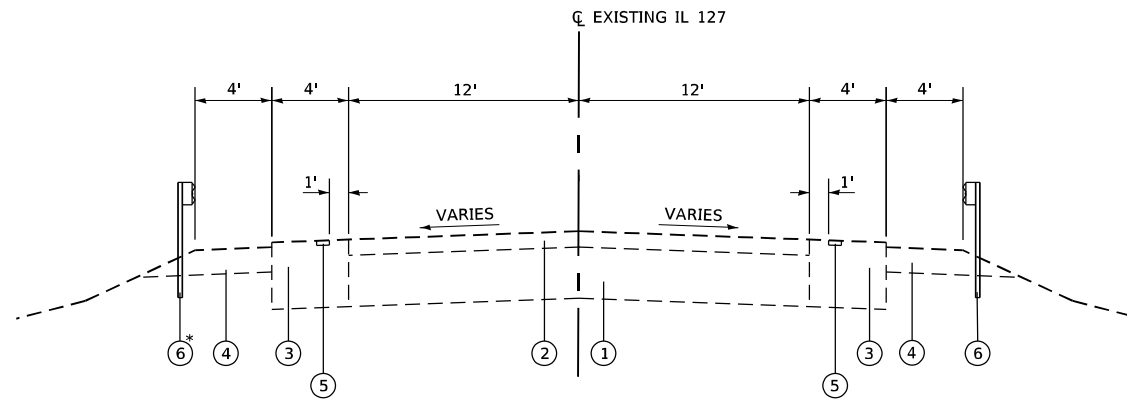
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 5         |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |





**EXISTING IL 127 TYPICAL SECTION**

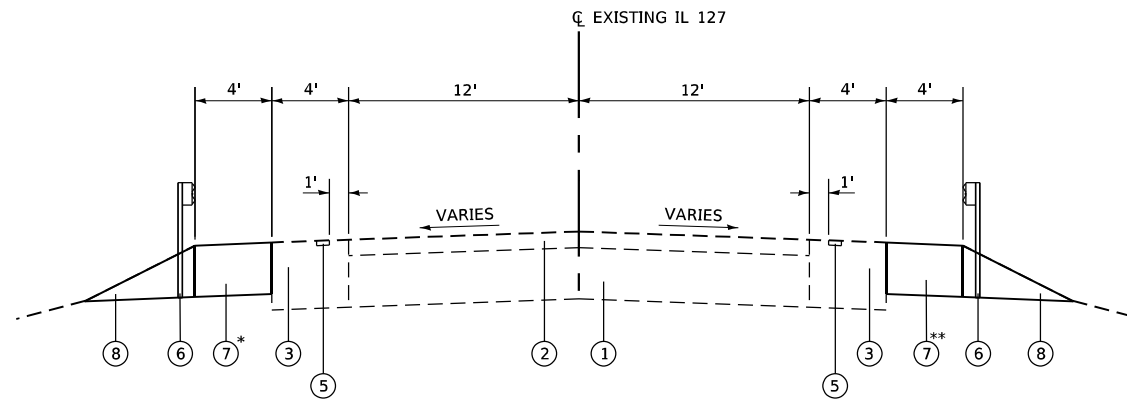
STA 419+00 TO STA 421+85  
STA 428+20 TO STA 431+00



**EXISTING IL 127 TYPICAL SECTION**

STA 421+85 TO STA 423+95  
BRIDGE OMISSION STA 423+95 TO STA 426+23  
STA 426+23 TO STA 428+20

\* GUARDRAIL BEGINS STA 422+24 LT



**PROPOSED IL 127 TYPICAL SECTION**

\* HMA SHOULDER WIDENING FROM  
STA 422+55 TO STA 423+61 LT  
STA 426+04 TO STA 427+63 LT

STA 421+85 TO STA 423+95  
BRIDGE OMISSION STA 423+95 TO STA 426+23  
STA 426+23 TO STA 428+20

\*\* HMA SHOULDER WIDENING FROM  
STA 422+49 TO STA 423+97 RT  
STA 426+35 TO STA 427+59 RT

**LEGEND**

- ① EXISTING PCC PAVEMENT, 8"
- ② EXISTING HOT-MIX ASPHALT RESURFACING, 2 1/2"
- ③ EXISTING HOT-MIX ASPHALT SHOULDER, 10 1/2"
- ④ EXISTING AGGREGATE SHOULDER
- ⑤ EXISTING SHOULDER RUMBLE STRIP, 8"
- ⑥ EXISTING STEEL PLATE BEAM GUARDRAIL
- ⑦ PROPOSED HOT-MIX ASPHALT SHOULDERS, 8"
- ⑧ PROPOSED AGGREGATE WEDGE SHOULDER, TYPE B

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|            |                  |          |             |         |   |
|------------|------------------|----------|-------------|---------|---|
| USER NAME  | + Betsy          | DESIGNED | - ESW       | REVISED | - |
| MODEL NAME | + Typ 01         | DRAWN    | - LEC       | REVISED | - |
| PLOT SCALE | + 10,0000' / in. | CHECKED  | - BRM       | REVISED | - |
| PLOT DATE  | + 1/7/2022       | DATE     | - 10/8/2021 | REVISED | - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS  
IL ROUTE 127**

SCALE: 1"=5' SHEET 1 OF 1 SHEETS STA. TO STA.

| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 7         |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |

### MAINTENANCE OF TRAFFIC SCHEDULE

| LOCATION           |       |              |       | TEMPORARY RUMBLE STRIPS | TEMPORARY CONCRETE BARRIER | RELOCATE TEMPORARY CONCRETE BARRIER | IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE) TEST LEVEL 3 | IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE) TEST LEVEL 3 | FILLING INLETS, TEMPORARY |
|--------------------|-------|--------------|-------|-------------------------|----------------------------|-------------------------------------|--|---|---------------------------|
| STATION TO STATION | SIDE  | ROADWAY      | STAGE | (EACH)                  | (FOOT)                     | (FOOT)                              | (EACH)   | (EACH)  | (EACH)                    |
| 402+95 TO 412+95   | RT    | IL ROUTE 127 | 1     | 3                       |                            |                                     |  |   |                           |
| 422+90 TO 427+40   | LT/RT | IL ROUTE 127 | 1     |                         | 450                        |                                     | 2  |   | 2                         |
| 437+55 TO 447+55   | LT    | IL ROUTE 127 | 1     | 3                       |                            |                                     |  |   |                           |
| 422+74 TO 427+24   | LT/RT | IL ROUTE 127 | 2     |                         |                            | 450                                 |  | 2   |                           |
| SUBTOTAL           |       |              |       | 6                       | 450                        | 450                                 | 2  | 2   | 2                         |
| PAY TOTAL          |       |              |       | 6                       | 450                        | 450                                 | 2  | 2   | 2                         |

### PAVING SCHEDULE

| LOCATION           |      |              | EARTH EXCAVATION | PAVED SHOULDER REMOVAL | BITUMINOUS MATERIALS (TACK COAT) | AGGREGATE WEDGE SHOULDER, TYPE B | HOT-MIX ASPHALT SHOULDERS, 8" |
|--------------------|------|--------------|------------------|------------------------|----------------------------------|----------------------------------|-------------------------------|
| STATION TO STATION | SIDE | ROADWAY      | (CU YD)          | (SQ YD)                | (POUND)                          | (TON)                            | (SQ YD)                       |
| 422+55 TO 423+61   | LT   | IL ROUTE 127 | 10.5             |                        | 21.2                             | 3.6                              | 47.1                          |
| 422+49 TO 423+97   | RT   | IL ROUTE 127 | 14.6             |                        | 29.6                             | 5.0                              | 65.8                          |
| 426+04 TO 427+63   | LT   | IL ROUTE 127 | 15.7             | 4.7                    | 31.8                             | 5.5                              | 70.7                          |
| 426+35 TO 427+59   | RT   | IL ROUTE 127 | 12.2             | 7.0                    | 24.8                             | 4.2                              | 55.1                          |
| SUBTOTAL           |      |              | 53.0             | 11.7                   | 107.4                            | 18.3                             | 238.7                         |
| PAY TOTAL          |      |              | 55*              | 12                     | 108                              | 19                               | 239                           |

\* NOT A TOTAL QUANTITY

### PAVEMENT MARKING SCHEDULE

| LOCATION           |      |              | PAVEMENT MARKING BLACKOUT TAPE, 5" | SHORT TERM PAVEMENT MARKING REMOVAL | REPLACEMENT REFLECTOR | RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL |
|--------------------|------|--------------|------------------------------------|-------------------------------------|-----------------------|--|
| STATION TO STATION | SIDE | ROADWAY      | (FOOT)                             | (SQ FT)                             | (EACH)                | (EACH)   |
| 420+98 TO 429+30   | MID  | IL ROUTE 127 | 240.0                              | 100.0                               | 12                    | 12   |
| 422+49 TO 427+59   | RT   | IL ROUTE 127 | 510                                | 212.5                               |                       |  |
| 422+62 TO 427+60   | LT   | IL ROUTE 127 | 498                                | 207.5                               |                       |  |
| SUBTOTAL           |      |              | 1248                               | 520.0                               | 12                    | 12   |
| PAY TOTAL          |      |              | 1248                               | 520                                 | 12                    | 12   |

### GUARDRAIL SCHEDULE

| LOCATION             |      |              | REMOVE AND REERECT RAIL ELEMENT OF EXISTING GUARDRAIL |
|----------------------|------|--------------|---|
| STATION TO STATION   | SIDE | ROADWAY      | (FOOT)  |
| 422+24.1 TO 423+81.3 | LT   | IL ROUTE 127 | 158   |
| 422+47.9 TO 424+17.5 | RT   | IL ROUTE 127 | 170   |
| 426+00.4 TO 427+70.1 | LT   | IL ROUTE 127 | 170   |
| 426+36.3 TO 427+68.8 | RT   | IL ROUTE 127 | 133   |
| SUBTOTAL             |      |              | 631   |
| PAY TOTAL            |      |              | 631   |

### RIPRAP SCHEDULE

| LOCATION           |      |              | EARTH EXCAVATION | STONE RIPRAP, CLASS A4 | FILTER FABRIC | DEBRIS REMOVAL |
|--------------------|------|--------------|------------------|------------------------|---------------|----------------|
| STATION TO STATION | SIDE | ROADWAY      | (CU YD)          | (SQ YD)                | (SQ YD)       | (L SUM)        |
| 423+60 TO 423+77   | LT   | IL ROUTE 127 | 6.0              | 9.9                    | 9.9           | 0.25           |
| 423+96 TO 424+13   | RT   | IL ROUTE 127 | 6.4              | 10.4                   | 10.4          | 0.25           |
| 426+05 TO 426+22   | LT   | IL ROUTE 127 | 6.9              | 11.4                   | 11.4          | 0.25           |
| 426+41 TO 426+58   | RT   | IL ROUTE 127 | 5.9              | 9.7                    | 9.7           | 0.25           |
| SUBTOTAL           |      |              | 25.2             | 41.4                   | 41.4          | 1.00           |
| PAY TOTAL          |      |              | 25*              | 42                     | 42            | 1              |

\* NOT A TOTAL QUANTITY

FILE NAME: X:\P\production\11ea\2020\420-0017\PRJ-01\CAD\CADD\_Sheets\0876P79-sh-t-schedule.dgn



USER NAME + Betsy  
 MODEL NAME + SCHEDULE 01  
 PLOT SCALE + 2,0000"/in.  
 PLOT DATE + 1/7/2022

DESIGNED - ESW  
 DRAWN - LEC  
 CHECKED - BRM  
 DATE - 10/8/2021

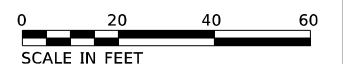
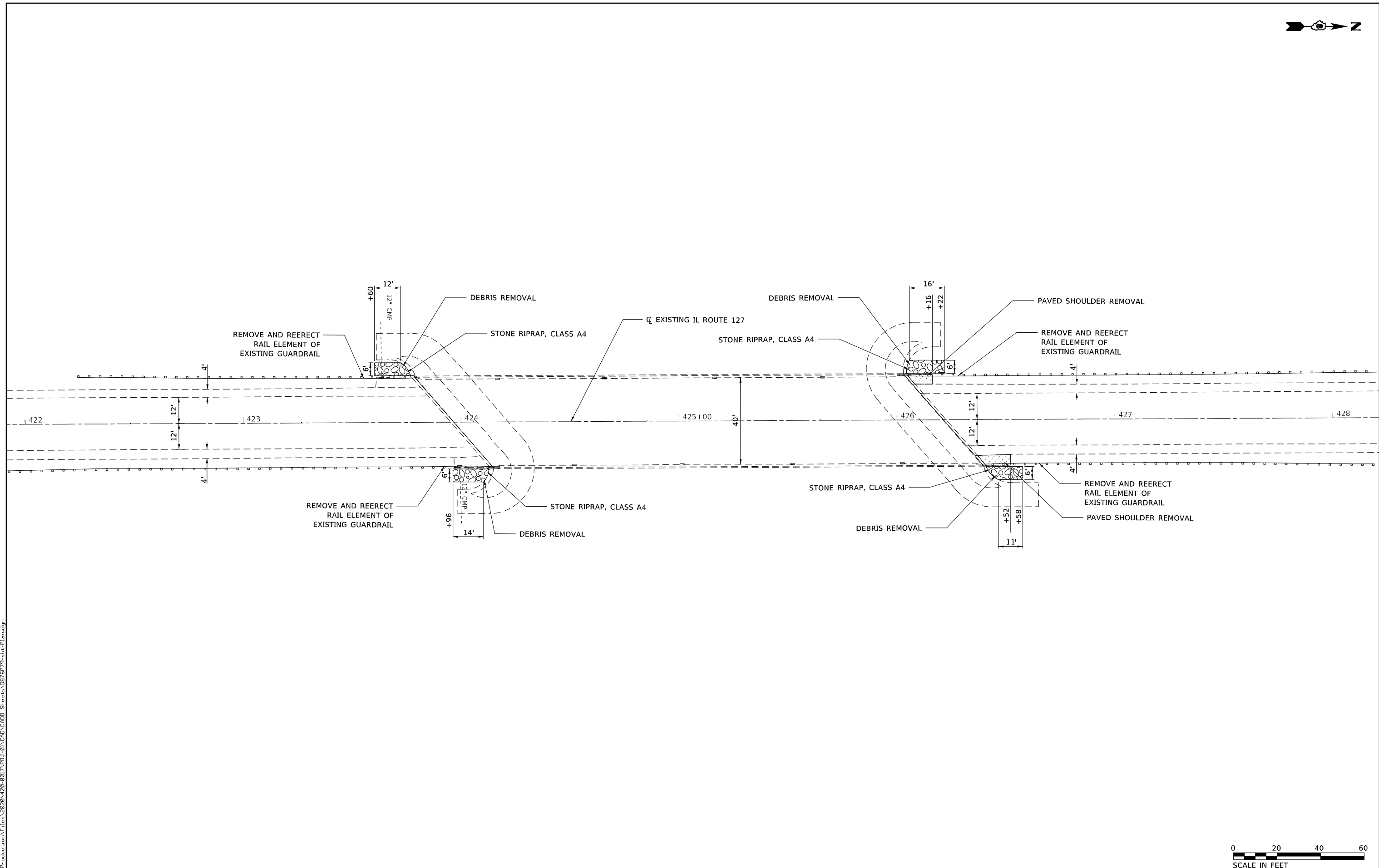
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 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES  
 IL ROUTE 127

SCALE: SHEET 1 OF 1 SHEETS STA. TO STA.

| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 8         |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



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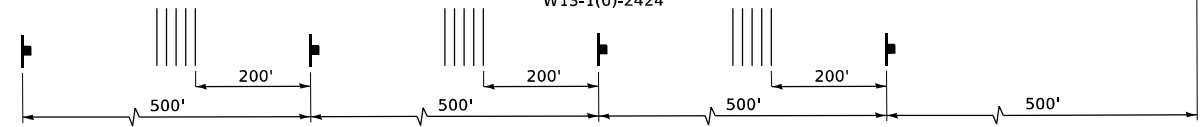
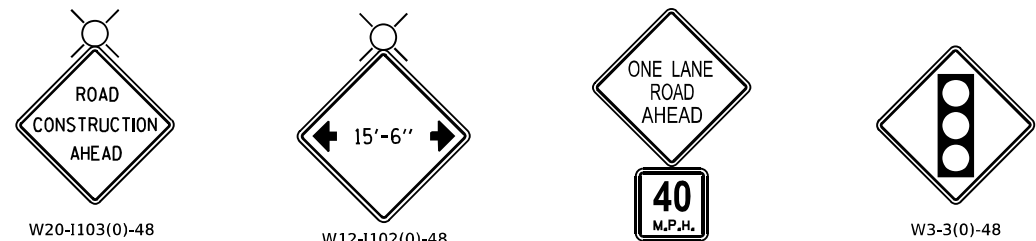
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| MODEL NAME | + PLAN           | DRAWN    | - LEC       | REVISED | - |
| PLOT SCALE | + 40,0000' / in. | CHECKED  | - BRM       | REVISED | - |
| PLOT DATE  | + 1/7/2022       | DATE     | - 10/8/2021 | REVISED | - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

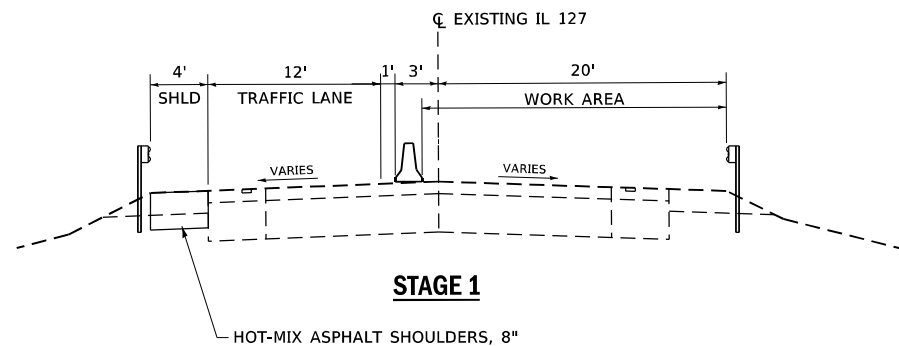
**ROADWAY PLAN  
IL ROUTE 127**

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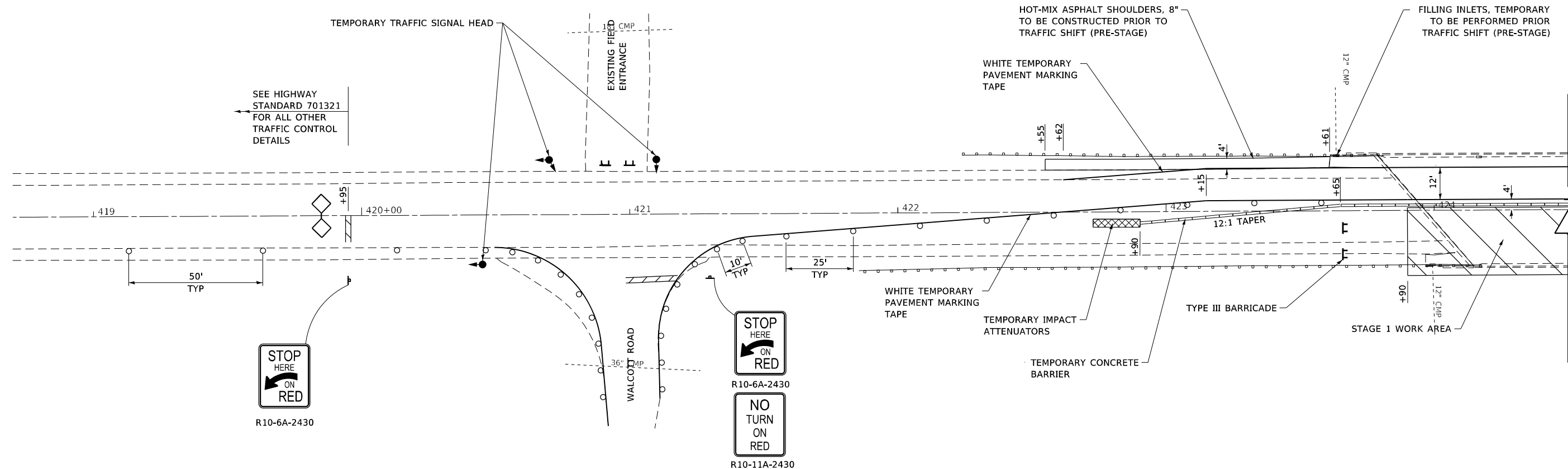
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 9         |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



**ADVANCE WARNING SIGN SEQUENCE DETAIL**



**STAGE 1**

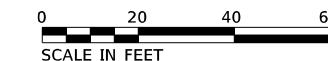


**LEGEND**

- WORK AREA
- SIGN
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOPS
- IMPACT ATTENUATOR
- DRUMS
- TEMPORARY CONCRETE BARRIER
- TEMPORARY RUMBLE STRIPS

**NOTES**

1. DRUMS ALONG TAPER SHALL HAVE STEADY BURNING BI-DIRECTIONAL LIGHT AS SHOWN ON HIGHWAY STANDARD 701321.
2. GUARDRAIL AND TEMPORARY CONCRETE BARRIER SHALL HAVE CRYSTAL, BI-DIRECTIONAL WALL REFLECTORS AS SHOWN ON HIGHWAY STANDARD 701321.
3. ANY DETAILS NOT SHOWN SHALL BE ACCORDING TO HIGHWAY STANDARD 701321.



FILE NAME: X:\Production\11ea\2020\420-0017\PRJ-01\CAD\CADD\_Sheets\087679-sh1-MOT\_Stage\_1.dgn



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|------------|------------------|----------|-------------|---------|---|
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| MODEL NAME | + MOT Stage 1_1  | DRAWN    | - LEC       | REVISED | - |
| PLOT SCALE | + 40,0000' / in. | CHECKED  | - BRM       | REVISED | - |
| PLOT DATE  | + 1/7/2022       | DATE     | - 10/8/2021 | REVISED | - |

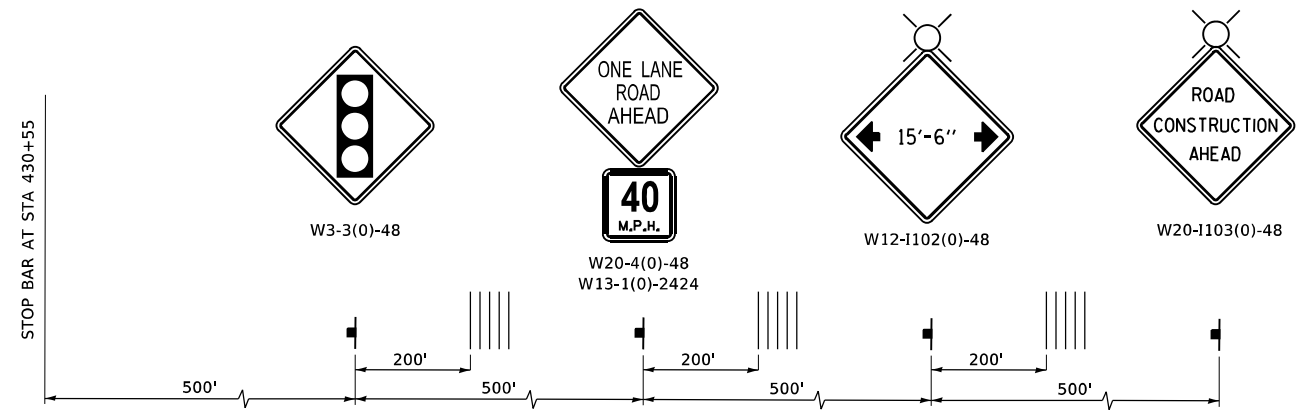
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC - STAGE 1  
IL ROUTE 127**

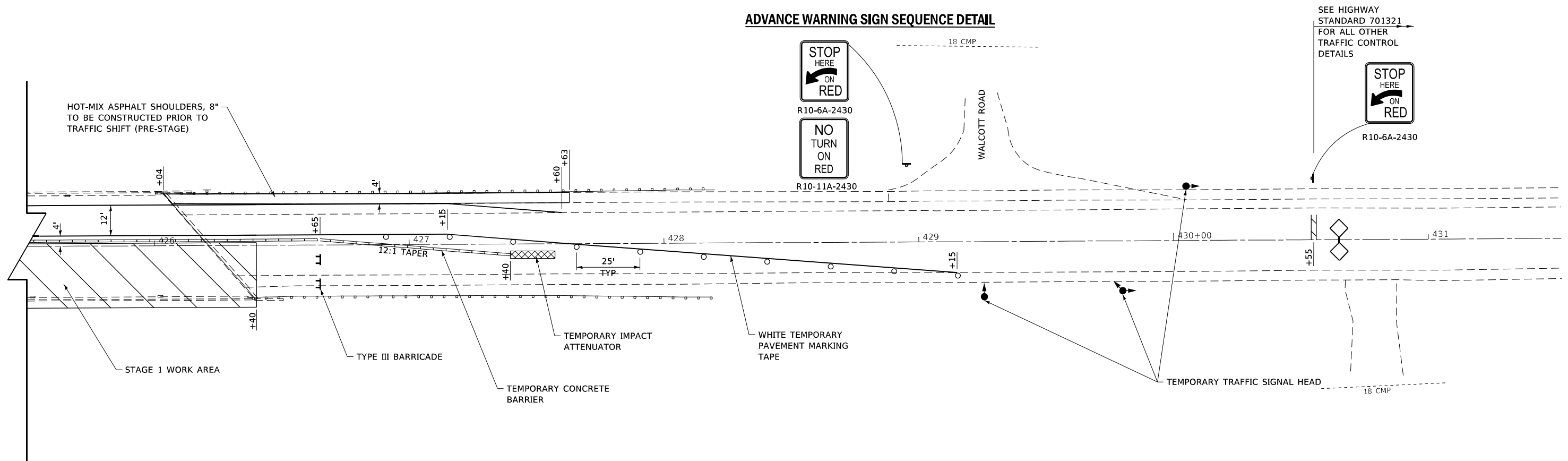
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| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 10        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |





**ADVANCE WARNING SIGN SEQUENCE DETAIL**



SEE HIGHWAY STANDARD 701321 FOR ALL OTHER TRAFFIC CONTROL DETAILS

**LEGEND**

- WORK AREA
- SIGN
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOPS
- IMPACT ATTENUATOR
- DRUMS
- TEMPORARY CONCRETE BARRIER
- TEMPORARY RUMBLE STRIPS

**NOTES**

1. DRUMS ALONG TAPER SHALL HAVE STEADY BURNING BI-DIRECTIONAL LIGHT AS SHOWN ON HIGHWAY STANDARD 701321.
2. GUARDRAIL AND TEMPORARY CONCRETE BARRIER SHALL HAVE CRYSTAL, BI-DIRECTIONAL WALL REFLECTORS AS SHOWN ON HIGHWAY STANDARD 701321.
3. ANY DETAILS NOT SHOWN SHALL BE ACCORDING TO HIGHWAY STANDARD 701321.



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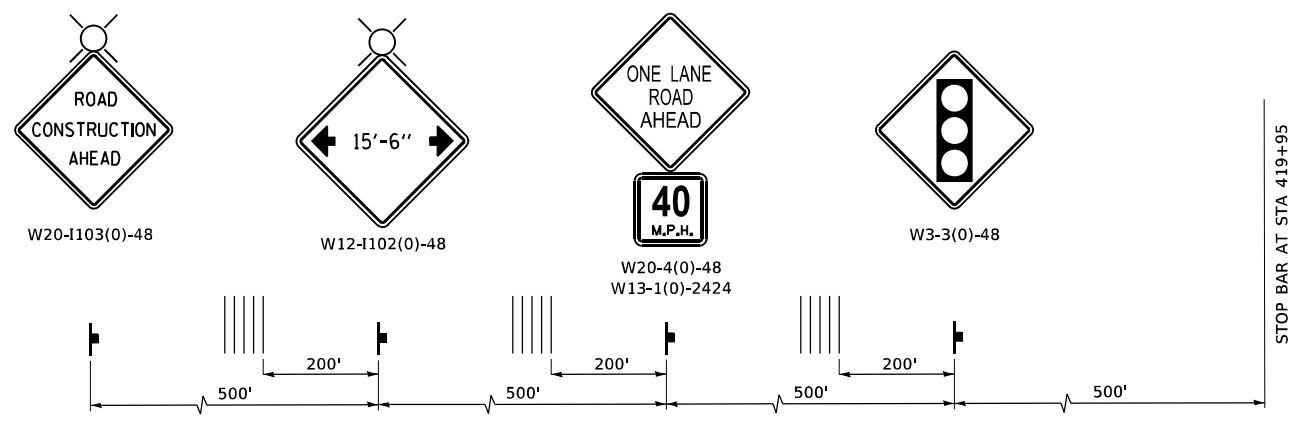
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| MODEL NAME | + MOT Stage 1_2  | DRAWN    | - LEC       | REVISED | - |
| PLOT SCALE | + 40,0000' / in. | CHECKED  | - BRM       | REVISED | - |
| PLOT DATE  | + 1/7/2022       | DATE     | - 10/8/2021 | REVISED | - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

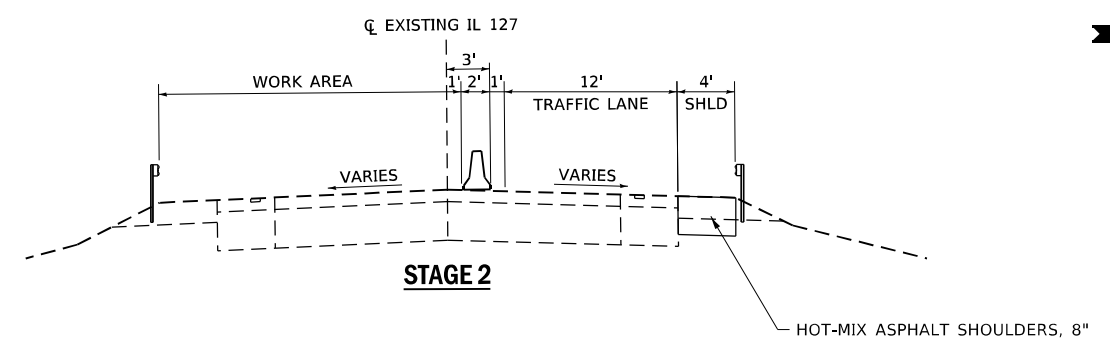
**MAINTENANCE OF TRAFFIC - STAGE 1  
IL ROUTE 127**

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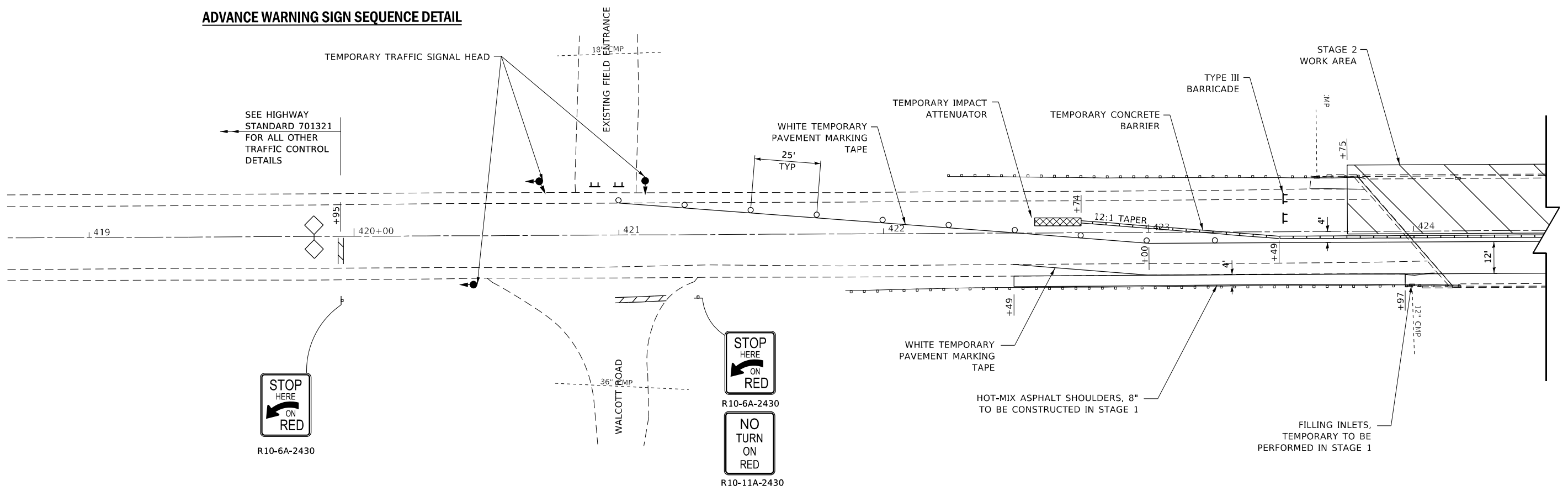
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 11        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



**ADVANCE WARNING SIGN SEQUENCE DETAIL**



**STAGE 2**



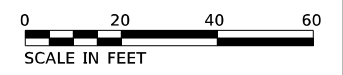
SEE HIGHWAY STANDARD 701321 FOR ALL OTHER TRAFFIC CONTROL DETAILS

**LEGEND**

- WORK AREA
- SIGN
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOPS
- IMPACT ATTENUATOR
- DRUMS
- TEMPORARY CONCRETE BARRIER
- TEMPORARY RUMBLE STRIPS

**NOTES**

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3. ANY DETAILS NOT SHOWN SHALL BE ACCORDING TO HIGHWAY STANDARD 701321.



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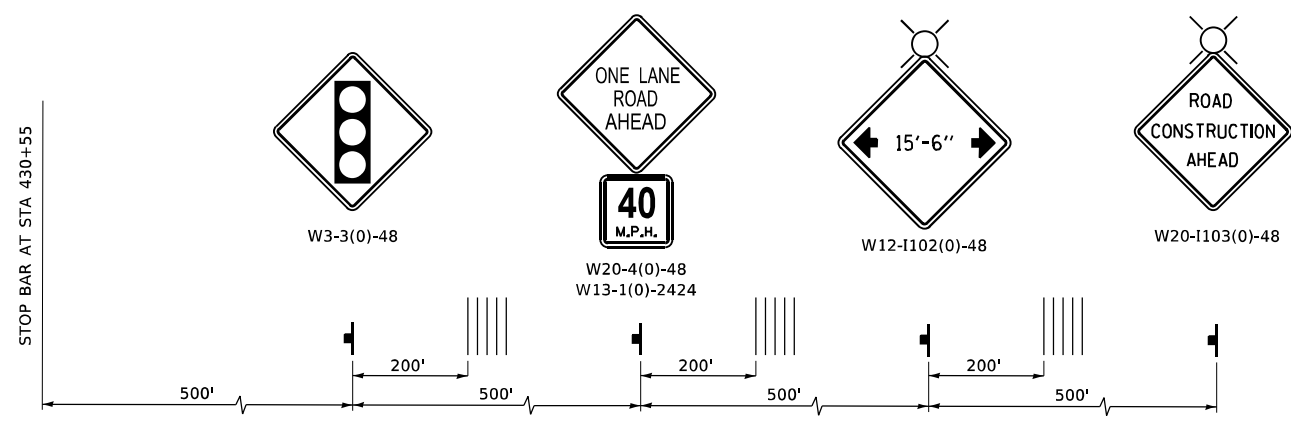
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| MODEL NAME | + MOT Stage 2_1  | DRAWN    | - LEC       | REVISED | - |
| PLOT SCALE | + 40,0000' / in. | CHECKED  | - BRM       | REVISED | - |
| PLOT DATE  | + 1/7/2022       | DATE     | - 10/8/2021 | REVISED | - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

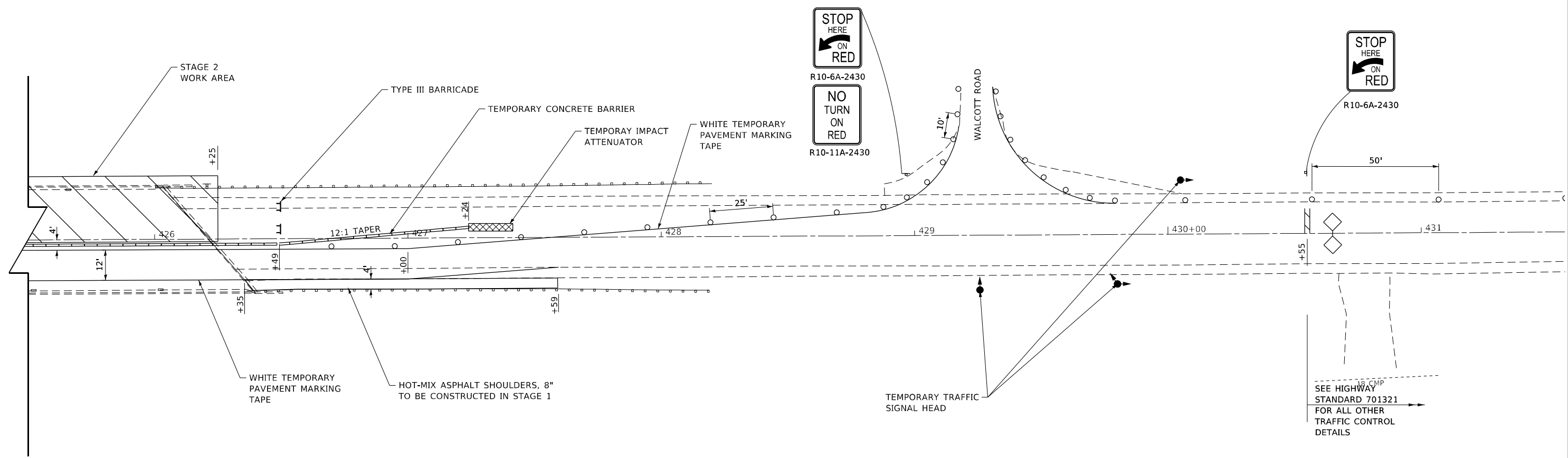
**MAINTENANCE OF TRAFFIC - STAGE 2  
IL ROUTE 127**

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

| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 12        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



**ADVANCE WARNING SIGN SEQUENCE DETAIL**



**LEGEND**

- WORK AREA
- SIGN
- TYPE III BARRICADE
- TRAFFIC SIGNAL
- DETECTOR LOOPS
- IMPACT ATTENUATOR
- DRUMS
- TEMPORARY CONCRETE BARRIER
- TEMPORARY RUMBLE STRIPS

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3. ANY DETAILS NOT SHOWN SHALL BE ACCORDING TO HIGHWAY STANDARD 701321.



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|------------|------------------|----------|-------------|---------|---|
| USER NAME  | + Betsy          | DESIGNED | - ESW       | REVISED | - |
| MODEL NAME | + MOT Stage 2_2  | DRAWN    | - LEC       | REVISED | - |
| PLOT SCALE | + 40,0000' / in. | CHECKED  | - BRM       | REVISED | - |
| PLOT DATE  | + 1/7/2022       | DATE     | - 10/8/2021 | REVISED | - |

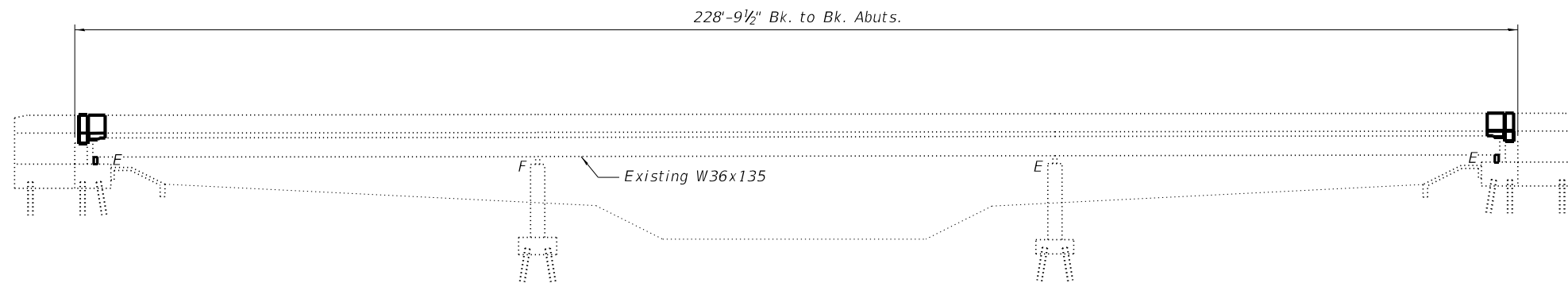
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC - STAGE 2  
IL ROUTE 127**

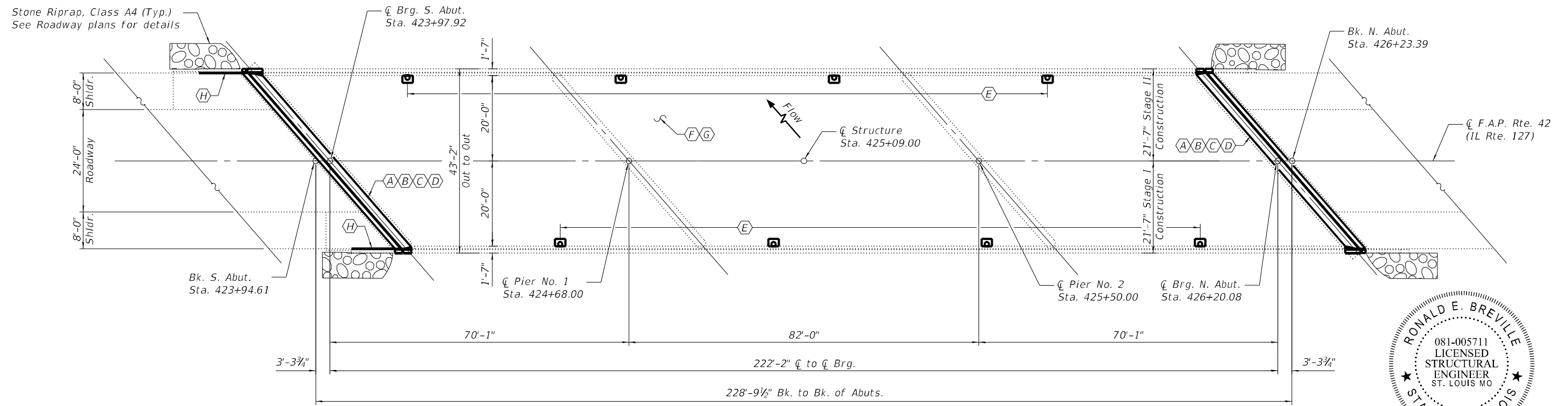
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| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 13        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |

Existing Structure: SN 014-0063, built in 1980, is a 3 span bridge carrying F.A.P. Route 42 (IL Route 127) over Flat Branch Creek. The proposed project consists of the replacement of the expansion joints with new strip seals, replacement of the abutment bearings with new elastomeric bearings, beam repair on all beam ends with galvanized steel bent plates, replacement of the abutment diaphragms with new galvanized steel diaphragms, replacement of the floor drains, both full and partial depth deck patching, deck sealing and sealing of the gap between the existing wingwalls and approach slabs.



**ELEVATION**



**PLAN**

- (A) - Removing existing expansion joint and replace with strip seals
- (B) - Remove existing abutment bearings and replace with elastomeric bearings
- (C) - Remove and replace existing abutment diaphragms
- (D) - Repair beam ends with bent L plates
- (E) - Remove and replace floor drains
- (F) - Deck sealing
- (G) - Partial depth deck repair
- (H) - Seal gap between existing approach slab and wingwalls

**DESIGN SPECIFICATIONS**

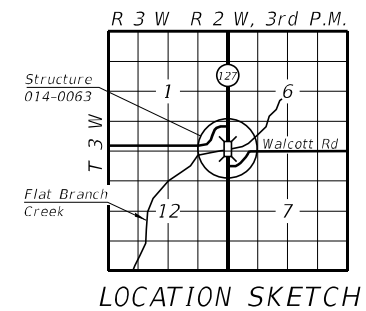
**NEW CONSTRUCTION**  
2002 AASHTO Standard Specification for Highway Bridges  
17th Edition with Interims  
**ORIGINAL CONSTRUCTION**  
1977 AASHTO Specifications and 1978 Interim Specifications

**DESIGN STRESSES**

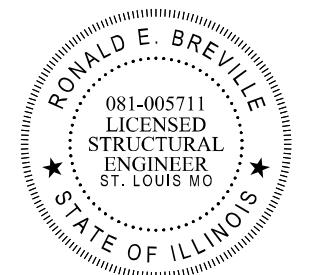
**NEW CONSTRUCTION**  
f'c = 4,000 psi  
fy = 60,000 psi (Reinforcement)  
fy = 36,000 psi (Structural Steel)  
**ORIGINAL CONSTRUCTION (SUPERSTRUCTURE)**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
fy = 50,000 psi (Structural Steel)

**LOADING**

**NEW CONSTRUCTION**  
Live Load: HS20-44  
Future W.S.: 25#/sq. ft.  
**ORIGINAL CONSTRUCTION**  
Live Load: HS20-44  
Future W.S.: 25#/sq. ft.



**LOCATION SKETCH**



*Ronald E. Breville*  
7 JAN. 2022  
EXP: 30 NOV. 2022  
APPLIES TO SHEETS 14-23

**GENERAL PLAN AND ELEVATION**  
**F.A.P. RTE. 42 (IL RTE. 127) OVER**  
**FLAT BRANCH CREEK**  
**SECTION 112BR-3**  
**CLINTON COUNTY**  
**STA. 425+09.00**

MODEL: BRD 01  
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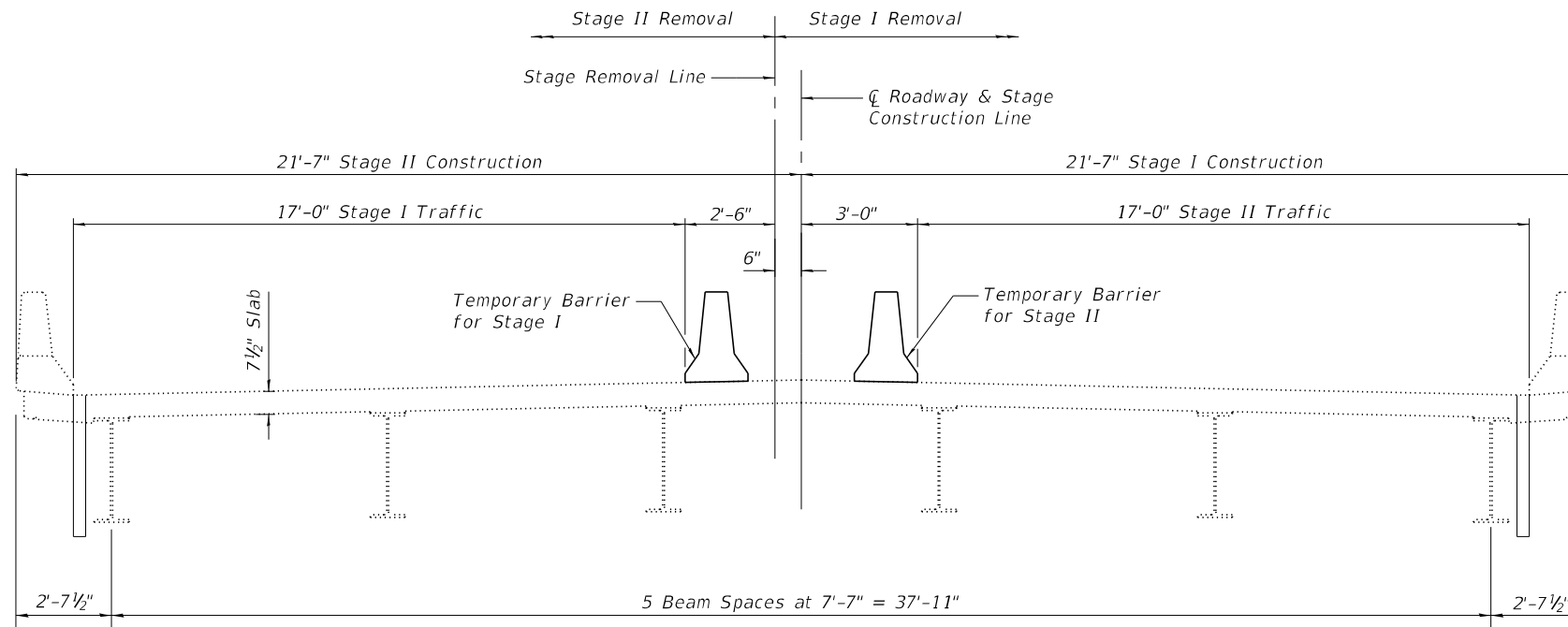


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| USER NAME  | sspillers     | DESIGNED - | SJS | REVISED - |  |
|            |               | CHECKED -  | ACS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | DRAWN -    | WJS | REVISED - |  |
| PLOT DATE  | 5/5/2022      | CHECKED -  | ACS | REVISED - |  |

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**GENERAL PLAN & ELEVATION**  
**STRUCTURE NO. 014-0063**  
SHEET 1 OF 10 SHEETS

| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 14        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



**STAGE CONSTRUCTION DETAIL**

Looking North

**GENERAL NOTES**

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.

Reinforcement bars designated (E) shall be epoxy coated.

Existing reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.

Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost included with Concrete Removal.

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

Protective Coat to be applied to areas of new concrete only.

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.

Locations of Bridge Deck Concrete Sealer are the deck, inside and top of bridge parapets, inside and top of approach parapets and portions of the ±16' south approach shoulders that are not covered by existing Hot-Mix Asphalt overlay.

Longitudinal gaps between wingwalls and approach shoulders are to be sealed with Silicone Joint Sealer.

It is anticipated that full depth deck slab repair will be necessary at each existing floor drain location. Removal and disposal of existing floor drains shall be included in the contract unit price for Deck Slab Repair (Full Depth, Type I).

Proposed new Floor Drains shall be constructed of 6" diameter fiberglass pipe.

All new fasteners shall be high strength bolts. Holes shall be 1 3/16" dia. for 3/4" dia. bolts and 1 5/16" dia. for 7/8" dia. bolts, unless otherwise noted.

Diaphragm connection holes shall be 1 5/16" dia. for 3/4" dia. bolts. Two hardened washers shall be required at diaphragm connections.

Cleaning and field painting of structural steel shall be done under a separate painting contract.

All new structural steel and bearing assemblies shall be hot dipped galvanized according to the 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 Special Provision, "Cleaning and Painting Contact Surface Areas of Existing Steel Structures."

Deck slab repair quantities shown are estimated. The Engineer shall show actual locations of deck slab repairs on as-built plans.

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

**INDEX OF SHEETS**

1. General Plan and Elevation
2. General Data
- 3-4. Expansion Joint Replacement Details
5. Preformed Joint Strip Seal Details
6. Floor Drain Details
- 7-8. Structural Steel Repair Details
9. Bearing Details
10. Bar Splicer Assembly and Mechanical Splicer Details

**TOTAL BILL OF MATERIAL**

| ITEM                                     | UNIT    | QUANTITY |
|--|---------|----------|
| Concrete Removal                         | Cu. Yd. | 19.2     |
| Concrete Superstructure                  | Cu. Yd. | 19.1     |
| Bridge Deck Concrete Sealer              | Sq. Ft. | 10,963   |
| Reinforcement Bars, Epoxy Coated         | Pound   | 2,210    |
| Preformed Joint Strip Seal               | Foot    | 112.0    |
| Protective Coat                          | Sq. Yd. | 43       |
| Bar Splicers                             | Each    | 24       |
| Floor Drains                             | Each    | 8        |
| Jack and Remove Existing Bearings        | Each    | 12       |
| Elastomeric Bearing Assembly, Type I     | Each    | 12       |
| Anchor Bolts, 5/8"                       | Each    | 24       |
| Furnishing and Erecting Structural Steel | Pound   | 6,389    |
| Structural Steel Removal                 | Pound   | 3,928    |
| Structural Steel Repair                  | Pound   | 2,553    |
| Deck Slab Repair (Full Depth, Type I)    | Sq. Yd. | 2        |
| Deck Slab Repair (Partial)               | Sq. Yd. | 16       |
| Silicone Joint Sealer, 3/4"              | Foot    | 11       |
| Silicone Joint Sealer, 1"                | Foot    | 11       |

MODEL: BRD 02  
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|            |               |            |     |           |  |
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| USER NAME  | sspillers     | DESIGNED - | SJS | REVISED - |  |
|            |               | CHECKED -  | ACS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | DRAWN -    | WJS | REVISED - |  |
| PLOT DATE  | 4/22/2022     | CHECKED -  | ACS | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

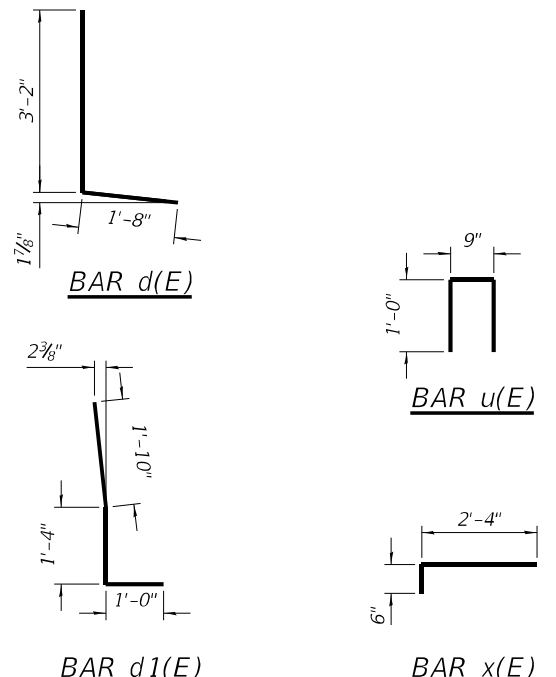
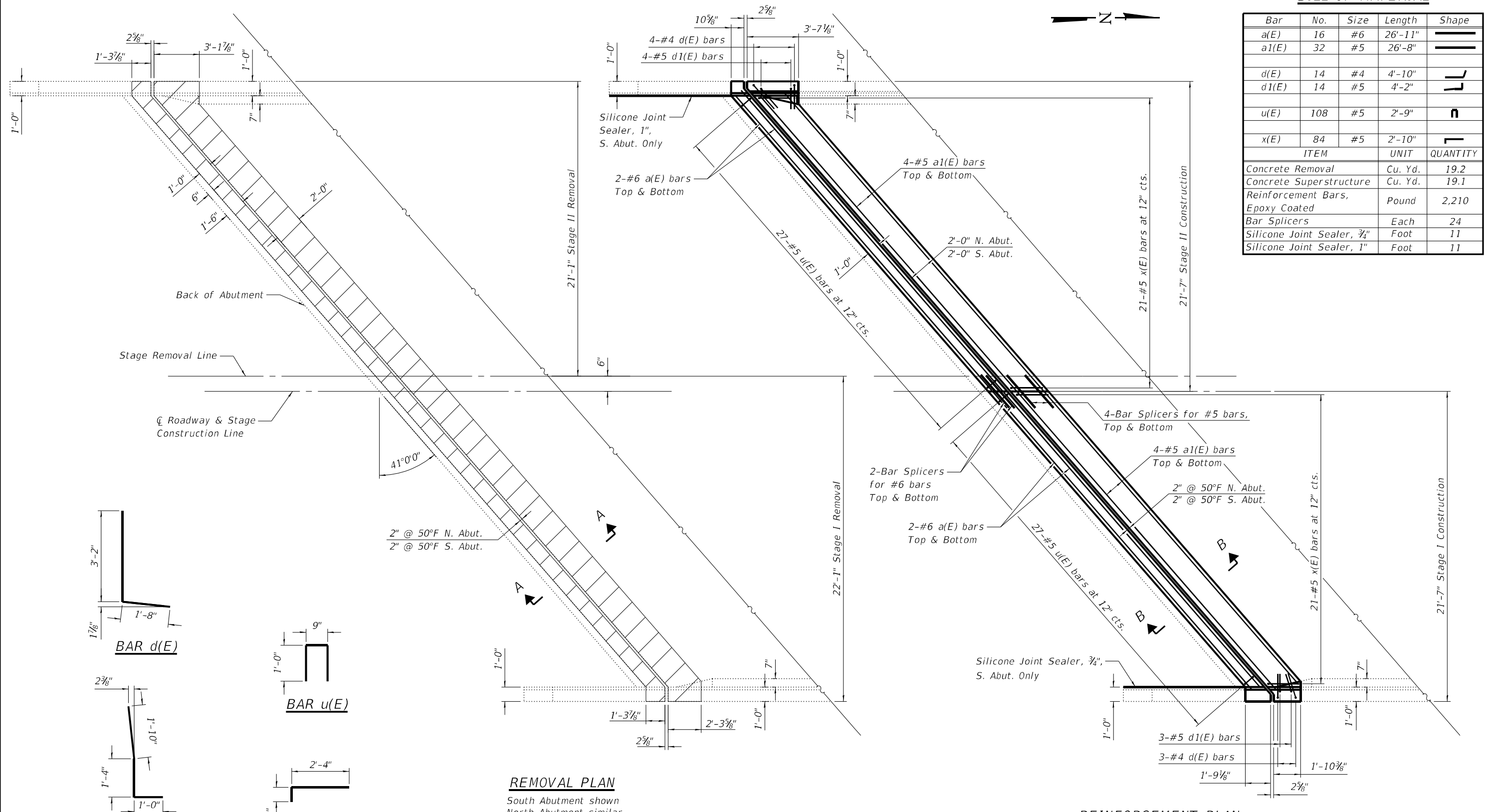
**GENERAL DATA  
STRUCTURE NO. 014-0063**

SHEET 2 OF 10 SHEETS

|                           |         |         |              |           |
|---------------------------|---------|---------|--------------|-----------|
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 42                        | 112BR-3 | CLINTON | 23           | 15        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |

**BILL OF MATERIAL**

| Bar                              | No.     | Size     | Length  | Shape |
|----------------------------------|---------|----------|---------|-------|
| a(E)                             | 16      | #6       | 26'-11" |       |
| a1(E)                            | 32      | #5       | 26'-8"  |       |
| d(E)                             | 14      | #4       | 4'-10"  |       |
| d1(E)                            | 14      | #5       | 4'-2"   |       |
| u(E)                             | 108     | #5       | 2'-9"   |       |
| x(E)                             | 84      | #5       | 2'-10"  |       |
| ITEM                             | UNIT    | QUANTITY |         |       |
| Concrete Removal                 | Cu. Yd. | 19.2     |         |       |
| Concrete Superstructure          | Cu. Yd. | 19.1     |         |       |
| Reinforcement Bars, Epoxy Coated | Pound   | 2,210    |         |       |
| Bar Splicers                     | Each    | 24       |         |       |
| Silicone Joint Sealer, 3/4"      | Foot    | 11       |         |       |
| Silicone Joint Sealer, 1"        | Foot    | 11       |         |       |



**REMOVAL PLAN**  
South Abutment shown  
North Abutment similar

**REINFORCEMENT PLAN**  
South Abutment shown  
North Abutment similar

Notes:  
Hatched area indicates Concrete Removal.  
For Section A-A and Section B-B, see sheet 4 of 10.  
For bar splicer details, see sheet 10 of 10.

MODEL: BRD\_03  
FILE NAME: X:\Production\Files\2020\420-0017\PP-01\CAD\CADD Structure Sheets\0140063-76P79-003-Expansion Joint Replacement Details.dgn  
4/22/2022 10:12:06 AM



|            |               |            |     |           |  |
|------------|---------------|------------|-----|-----------|--|
| USER NAME  | sspillers     | DESIGNED - | SJS | REVISED - |  |
|            |               | CHECKED -  | ACS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | DRAWN -    | WJS | REVISED - |  |
| PLOT DATE  | 4/22/2022     | CHECKED -  | ACS | REVISED - |  |

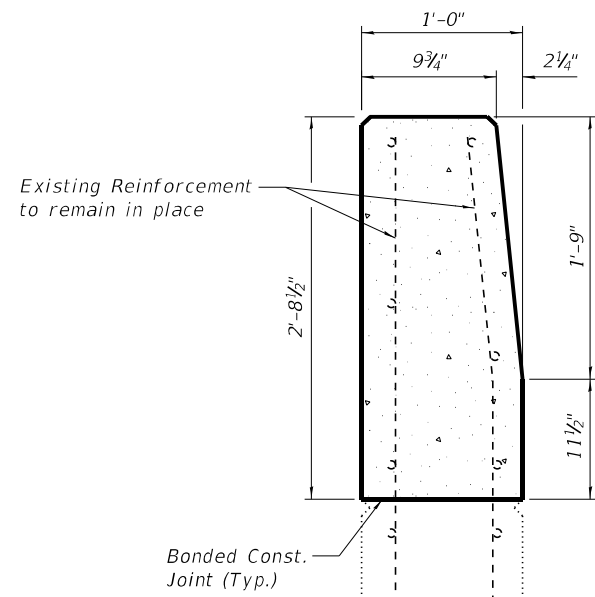
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS  
STRUCTURE NO. 014-0063**

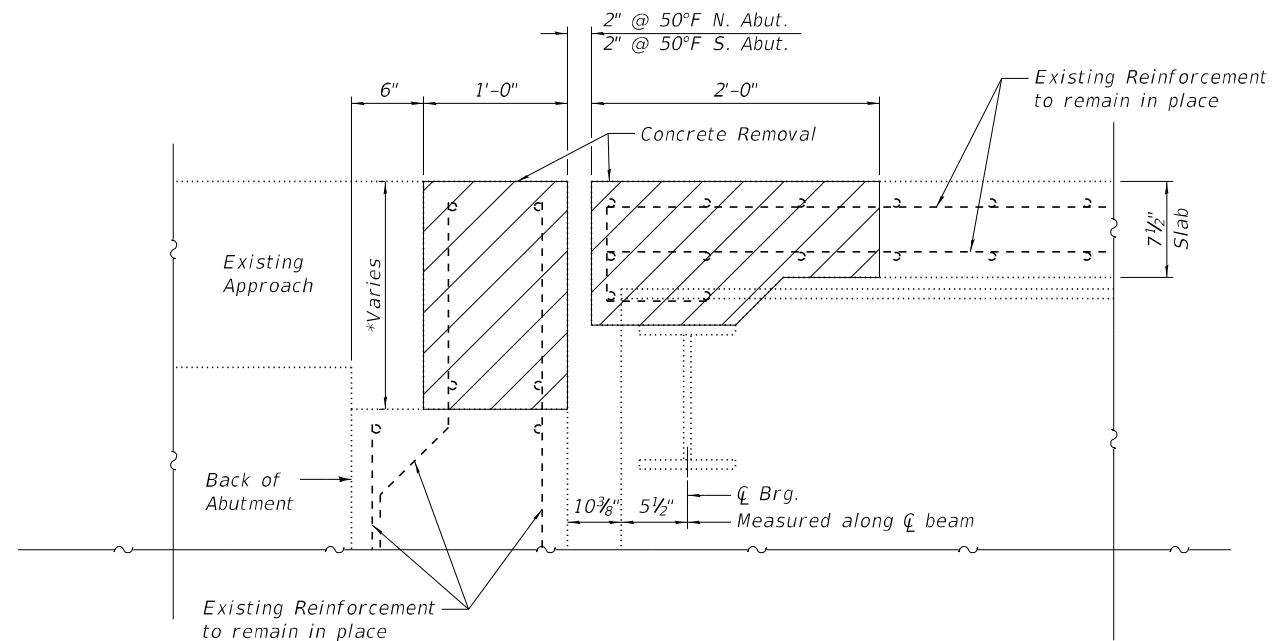
SHEET 3 OF 10 SHEETS

|                           |         |         |              |           |
|---------------------------|---------|---------|--------------|-----------|
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 42                        | 112BR-3 | CLINTON | 23           | 16        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



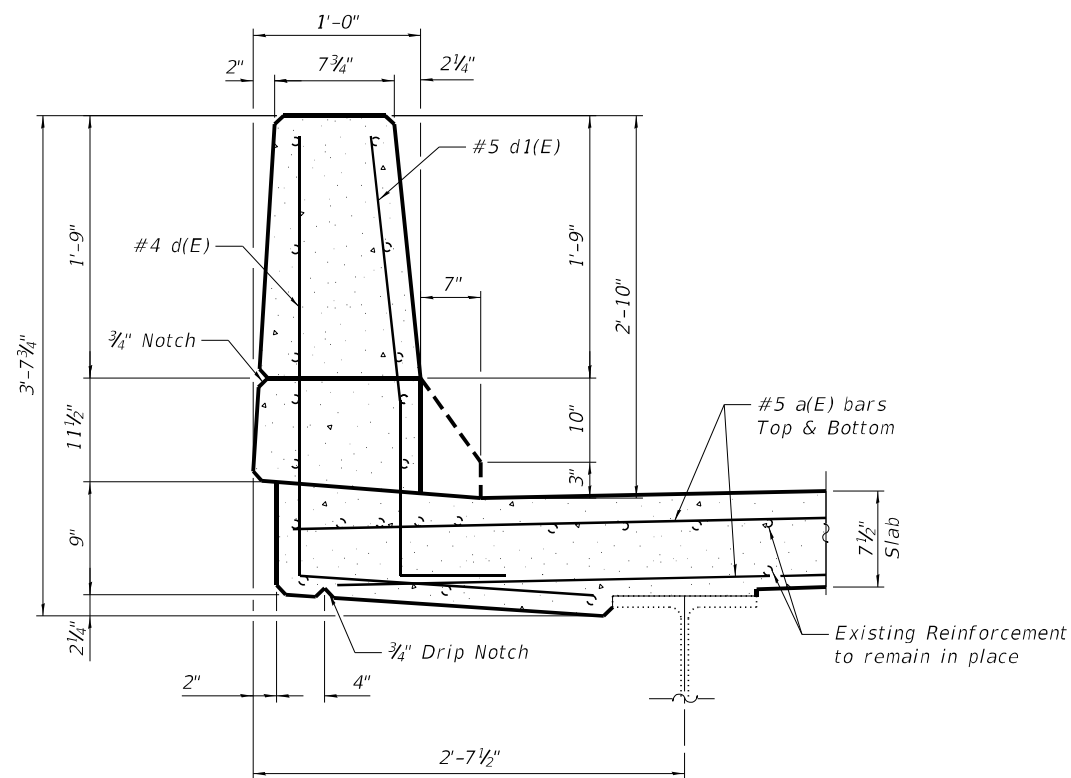


SECTION THRU WINGWALL

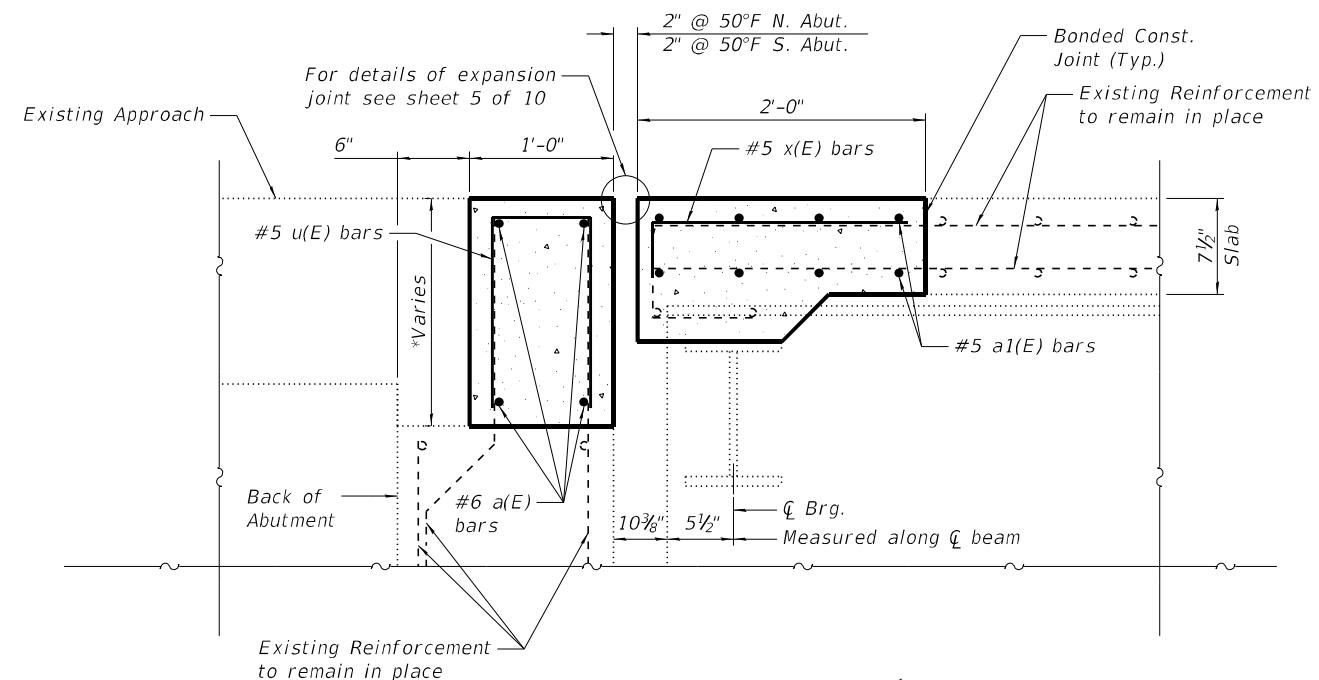


SECTION A-A

Note: Hatched area indicates Concrete Removal.



SECTION THRU PARAPET



SECTION B-B

- \*1'-2 1/8" at S.W. Wingwall
- 1'-2 3/4" at S.E. Wingwall
- 1'-6 7/8" at  $\bar{C}$  Roadway at Back of S. Abut.
- 1'-2 1/8" at N.W. Wingwall
- 1'-2 3/4" at N.E. Wingwall
- 1'-7" at  $\bar{C}$  Roadway at Back of N. Abut.

MODEL: BRD\_04  
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4/22/2022 10:12:08 AM



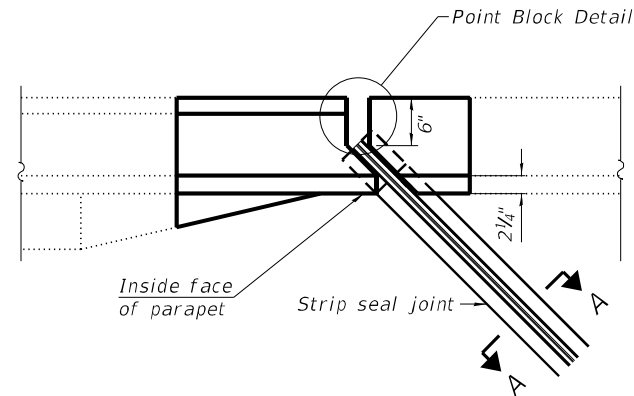
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| USER NAME  | sspillers     | DESIGNED - | SJS | REVISED - |  |
|            |               | CHECKED -  | ACS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | DRAWN -    | WJS | REVISED - |  |
| PLOT DATE  | 4/22/2022     | CHECKED -  | ACS | REVISED - |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

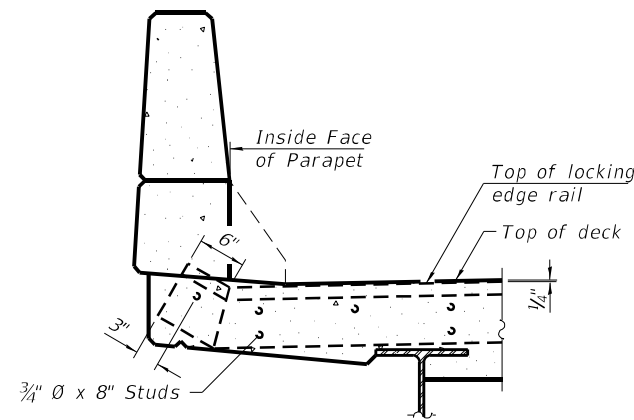
EXPANSION JOINT REPLACEMENT DETAILS  
STRUCTURE NO. 014-0063

SHEET 4 OF 10 SHEETS

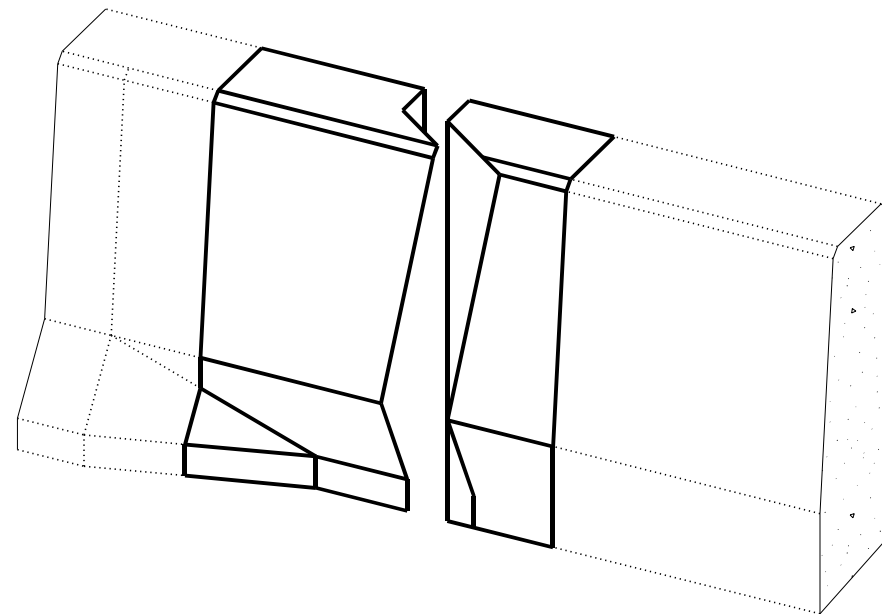
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| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 42                        | 112BR-3 | CLINTON | 23           | 17        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



PLAN AT PARAPET



ELEVATION AT PARAPET



TRIMETRIC VIEW  
(Showing parapet only)

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.

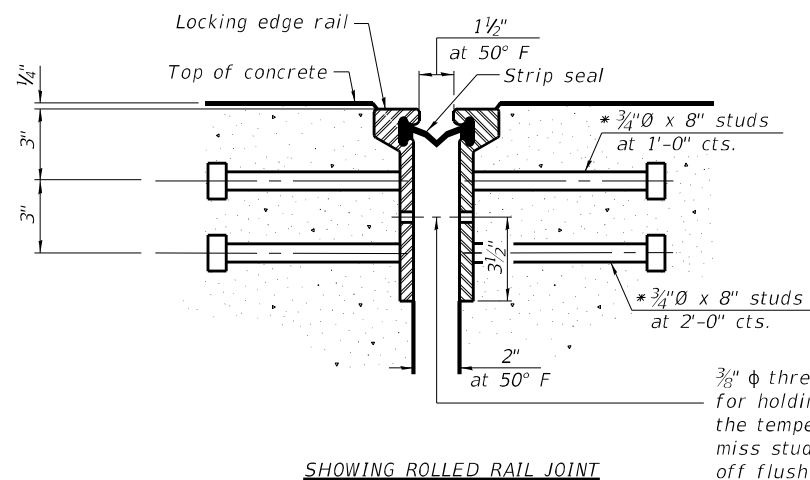
The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, 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.

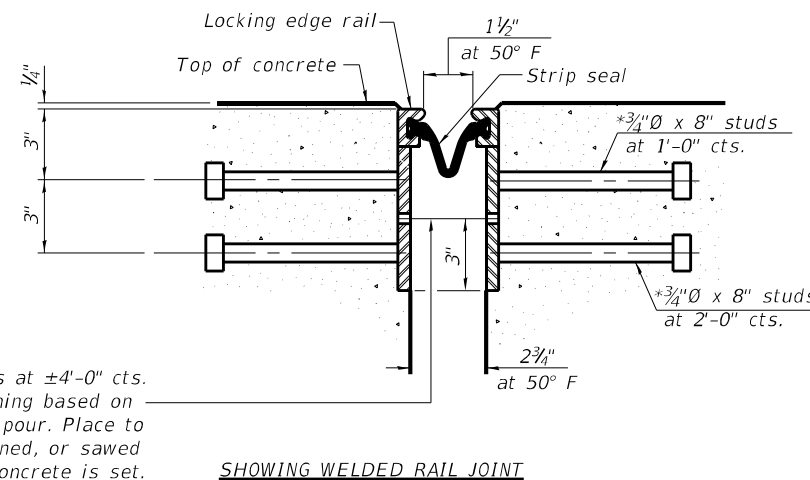


SHOWING ROLLED RAIL JOINT

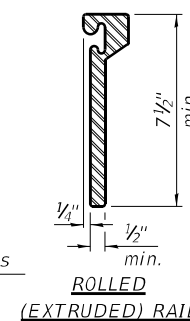
3/8" φ threaded rods in 1/16" φ holes at ±4'-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

SECTION A-A

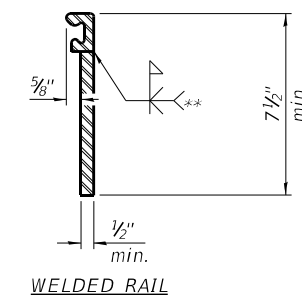
\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.



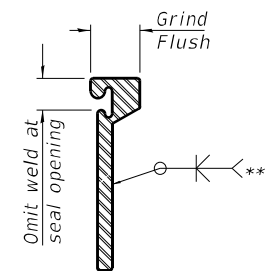
SHOWING WELDED RAIL JOINT



ROLLED (EXTRUDED) RAIL



WELDED RAIL



LOCKING EDGE RAIL SPLICE

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

LOCKING EDGE RAILS

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

BILL OF MATERIAL

| ITEM                       | UNIT | QUANTITY |
|----------------------------|------|----------|
| Preformed Joint Strip Seal | Foot | 112.0    |

MODEL: BRD\_05  
FILE NAME: X:\ProductionFiles\2020\420-0017\PE-01\CAD\CADD Structure Sheets\0140063-76P79-005-Preformed Joint Strip Seal Detail.dgn



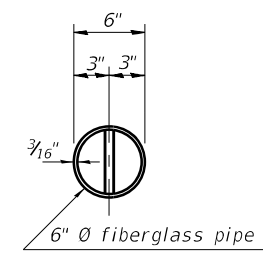
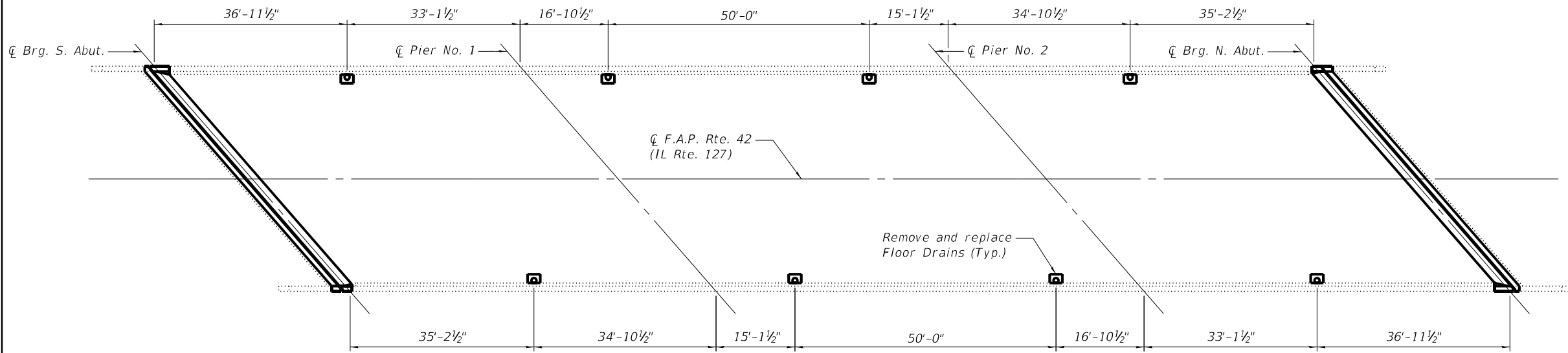
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|------------|---------------|------------|-----|-----------|--|
| USER NAME  | sspillers     | DESIGNED - | SJS | REVISED - |  |
|            |               | CHECKED -  | ACS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | DRAWN -    | WJS | REVISED - |  |
| PLOT DATE  | 4/22/2022     | CHECKED -  | ACS | REVISED - |  |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

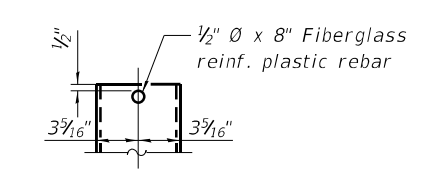
PREFORMED JOINT STRIP SEAL DETAILS  
STRUCTURE NO. 014-0063

SHEET 5 OF 10 SHEETS

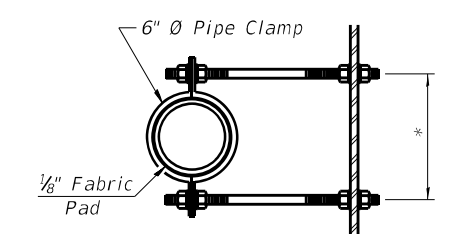
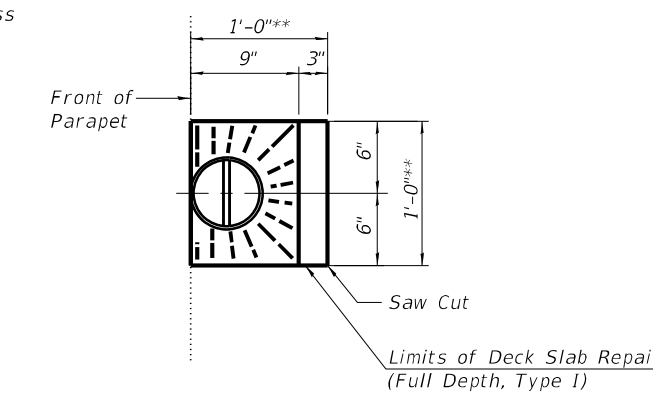
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|---------------------------|---------|---------|--------------|-----------|
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 42                        | 112BR-3 | CLINTON | 23           | 18        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



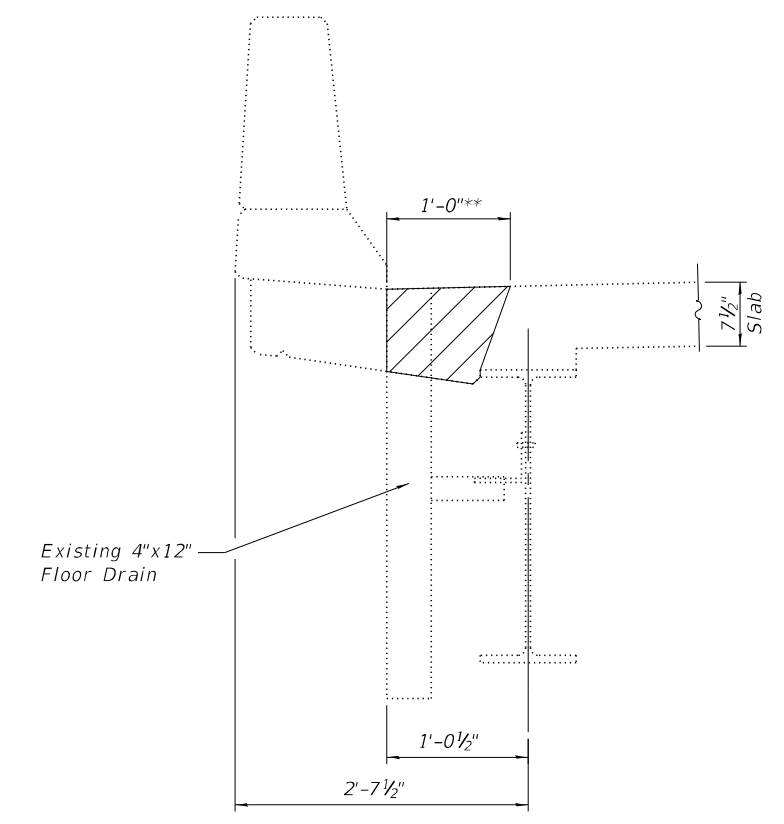
TOP PLAN



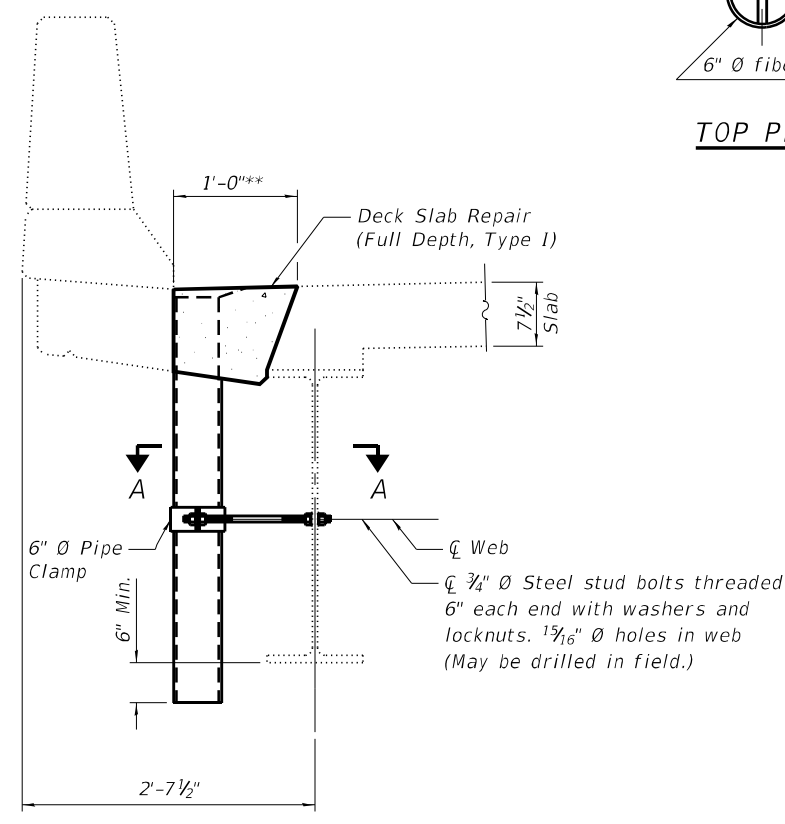
FIBERGLASS PIPE



\*Dimension as required by pipe clamp



Note: Hatch pattern indicates removal.



Notes:  
 Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
 The exterior surfaces of the floor drains shall be painted according to Article 506 with the finish coat as specified. The exterior surfaces of the drains shall be cleaned according to the Society of Protective Coatings Spec. SSPC-SP1 prior to painting.  
 The clamping device shall be galvanized according to AASHTO M 232. Cost of clamping device included with Floor Drains.

\*\* Actual dimensions of Deck Slab Repair shall be determined by the Engineer

MODEL: BRD\_06  
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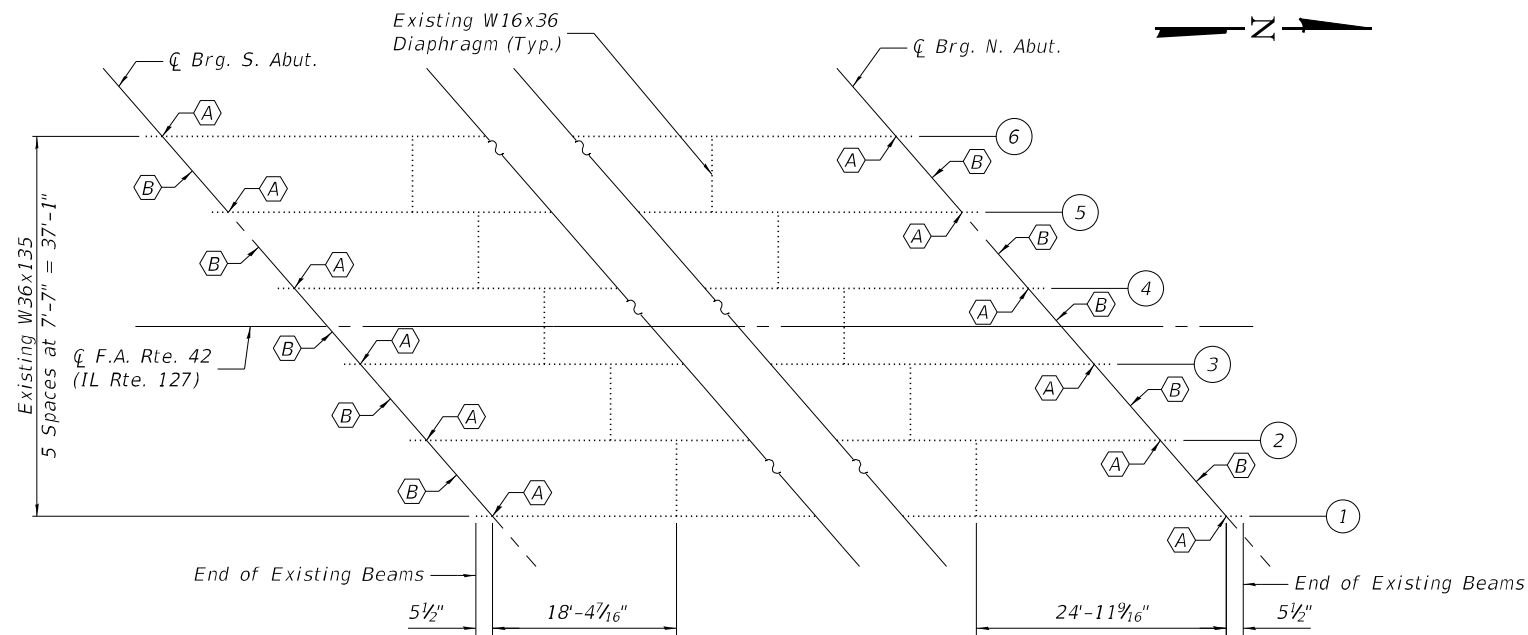
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| USER NAME  | sspillers     | DESIGNED - | SJS | REVISED - |  |
|            |               | CHECKED -  | ACS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | DRAWN -    | WJS | REVISED - |  |
| PLOT DATE  | 4/22/2022     | CHECKED -  | ACS | REVISED - |  |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

FLOOR DRAIN DETAILS  
 STRUCTURE NO. 014-0063

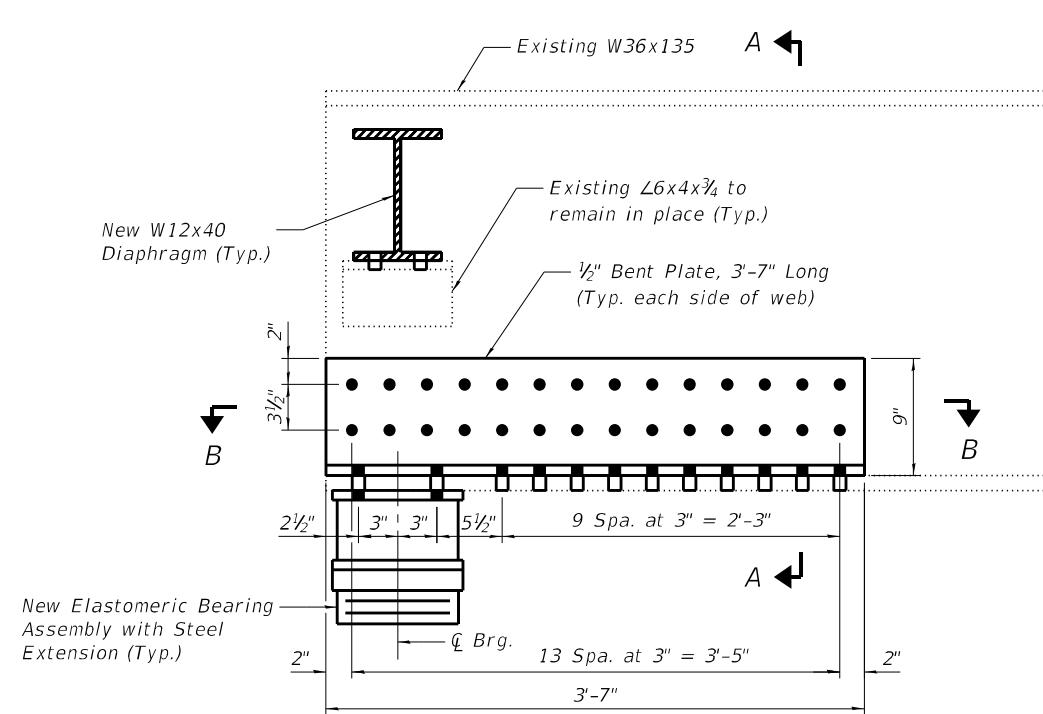
SHEET 6 OF 10 SHEETS

| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 19        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |

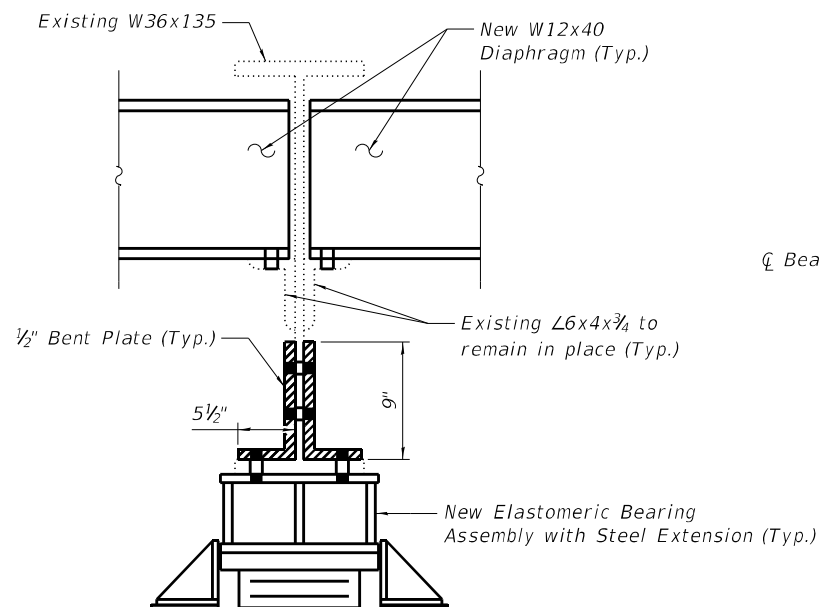


**PARTIAL FRAMING PLAN**

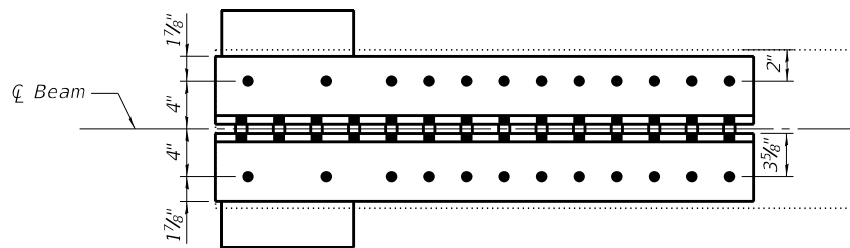
A - Beam End Repair  
B - Diaphragm Replacement



**ELEVATION OF BEAM REPAIR**



**SECTION A-A**



**SECTION B-B**

**BOLT HOLE LEGEND**

- Field drill holes
- Shop drill holes

**Notes:**

All structural steel shall be AASHTO M 270 Grade 36, unless otherwise noted.  
 Cost of furnishing and erecting steel diaphragms shall be included with Furnishing and Erecting Structural Steel.  
 Cost of furnishing and erecting steel for beam end repairs shall be included with Structural Steel Repair.  
 Removal of existing diaphragms shall be included in Structural Steel Removal.  
 All holes in existing steel shall be field drilled using shop drilled holes in new steel as a template, except as noted.  
 For details of Elastomeric Bearing Assembly, see sheet 9 of 10.

**BILL OF MATERIAL**

| ITEM                                     | UNIT  | QUANTITY |
|--|-------|----------|
| Furnishing and Erecting Structural Steel | Pound | 3,928    |
| Structural Steel Removal                 | Pound | 3,928    |
| Structural Steel Repair                  | Pound | 2,553    |

MODEL: BRD 07  
 FILE NAME: X:\Production\Files\2020\420-0017\PEL-01\CAD\CADD Structure Sheets\0140063-76P79-007-Structural Steel Repair Details.Ldgn  
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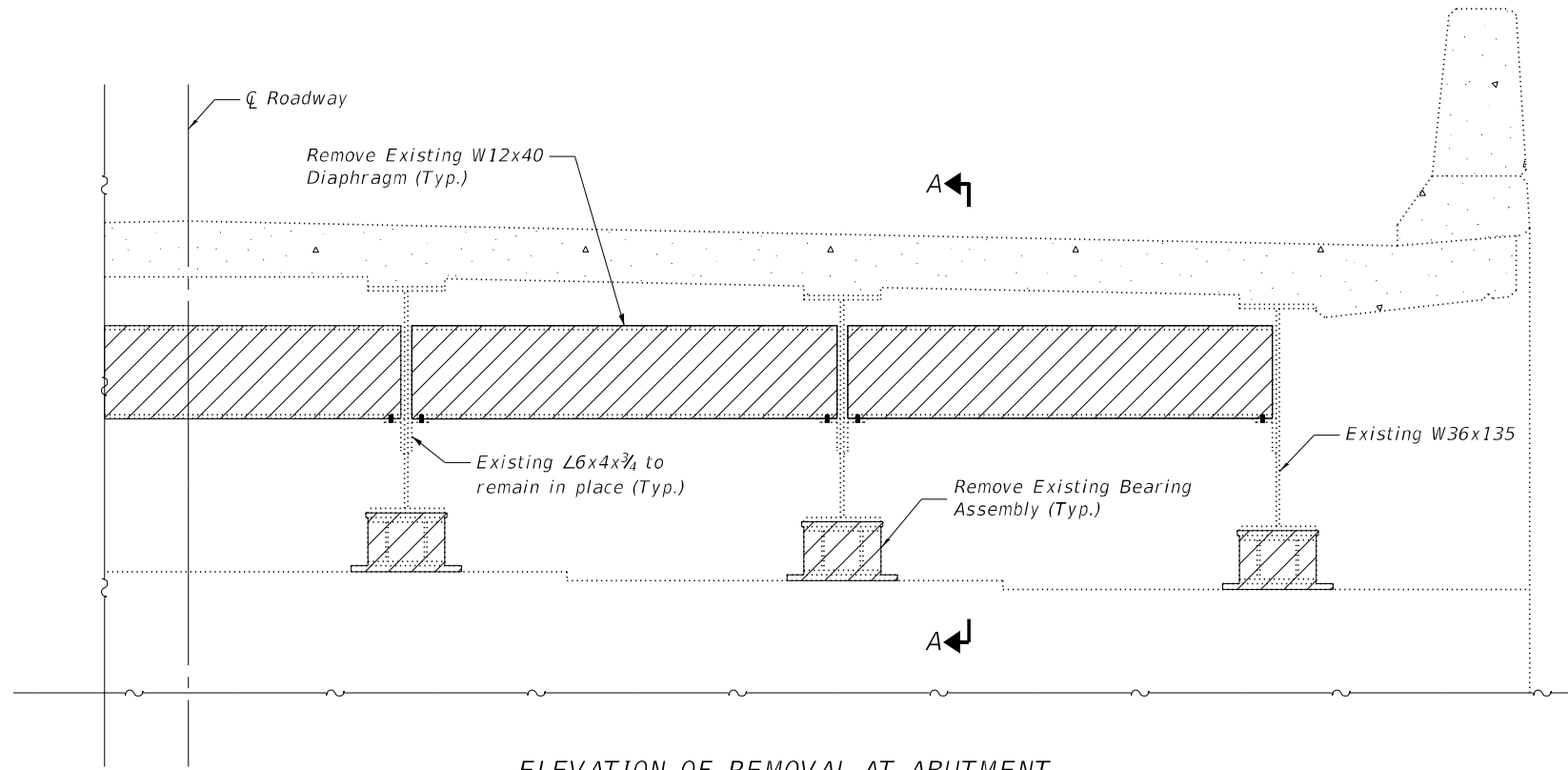
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|------------|---------------|------------|-----|-----------|--|
| USER NAME  | sspillers     | DESIGNED - | SJS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | CHECKED -  | ACS | REVISED - |  |
| PLOT DATE  | 4/22/2022     | DRAWN -    | WJS | REVISED - |  |
|            |               | CHECKED -  | ACS | REVISED - |  |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL REPAIR DETAILS  
STRUCTURE NO. 014-0063**

SHEET 7 OF 10 SHEETS

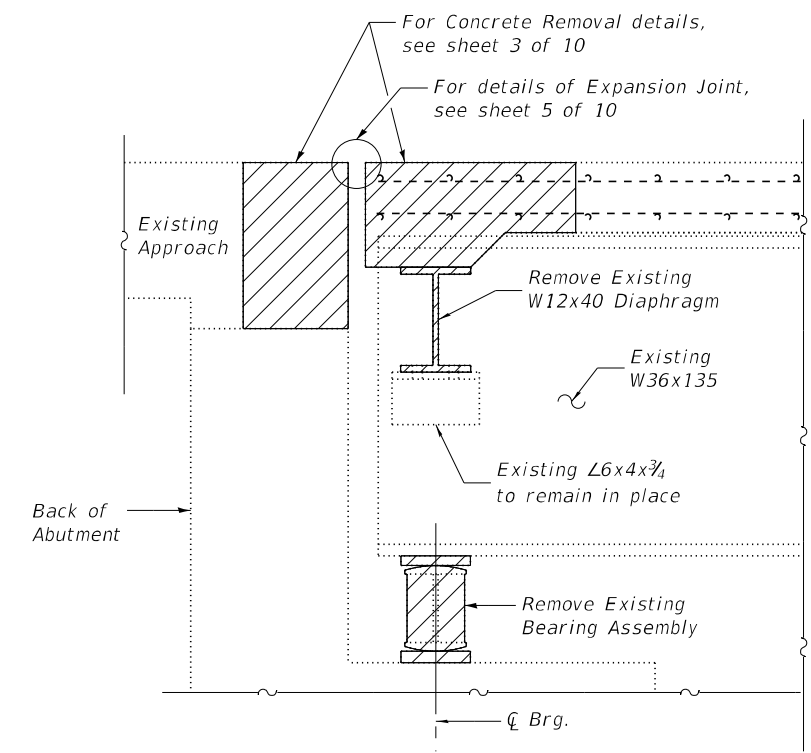
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
| 42                        | 112BR-3 | CLINTON | 23           | 20        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



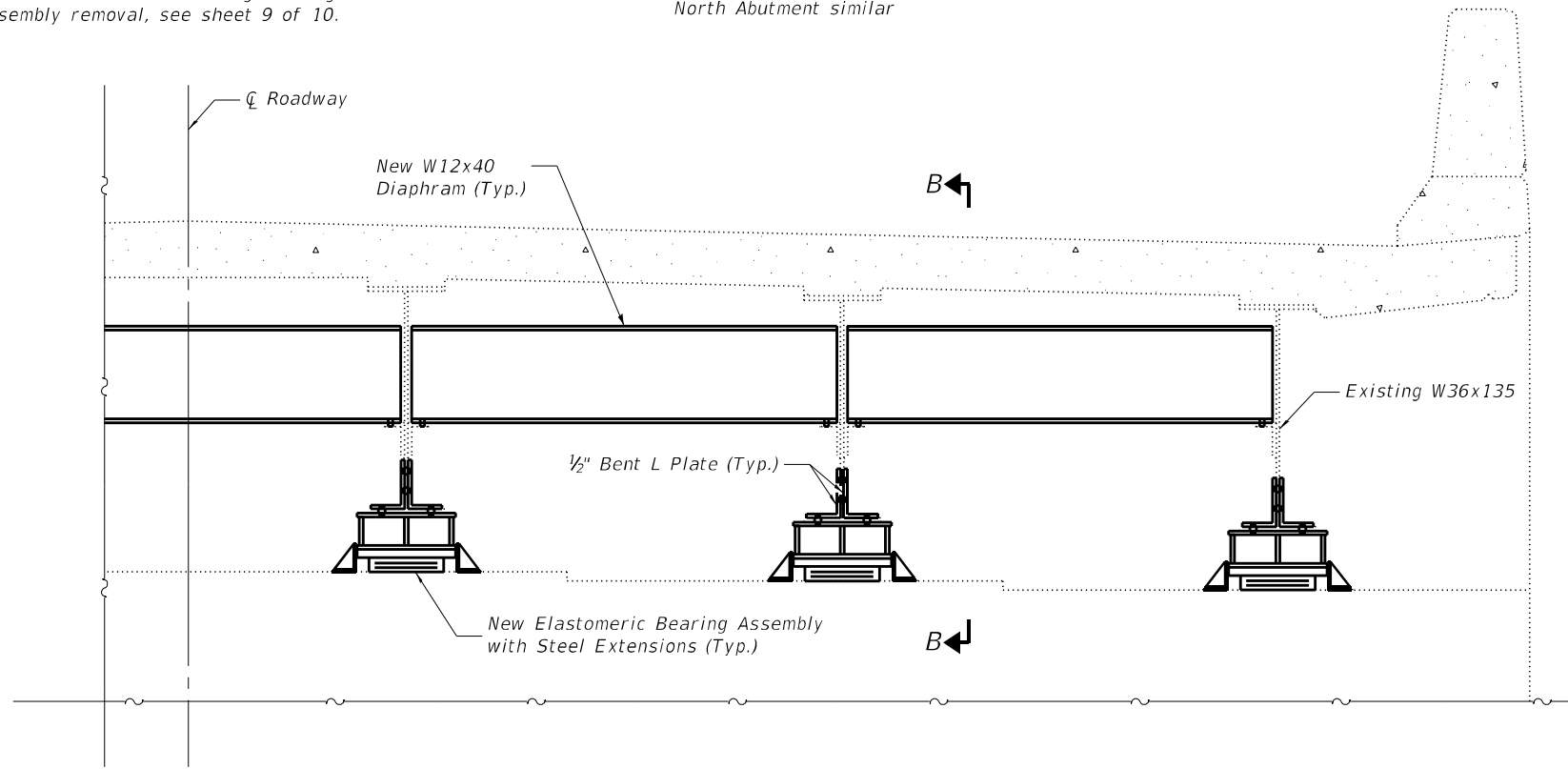
**ELEVATION OF REMOVAL AT ABUTMENT**

Symmetrical about  $\bar{C}$  Roadway  
 South Abutment shown  
 North Abutment similar

Note: For details of Existing Bearing Assembly removal, see sheet 9 of 10.



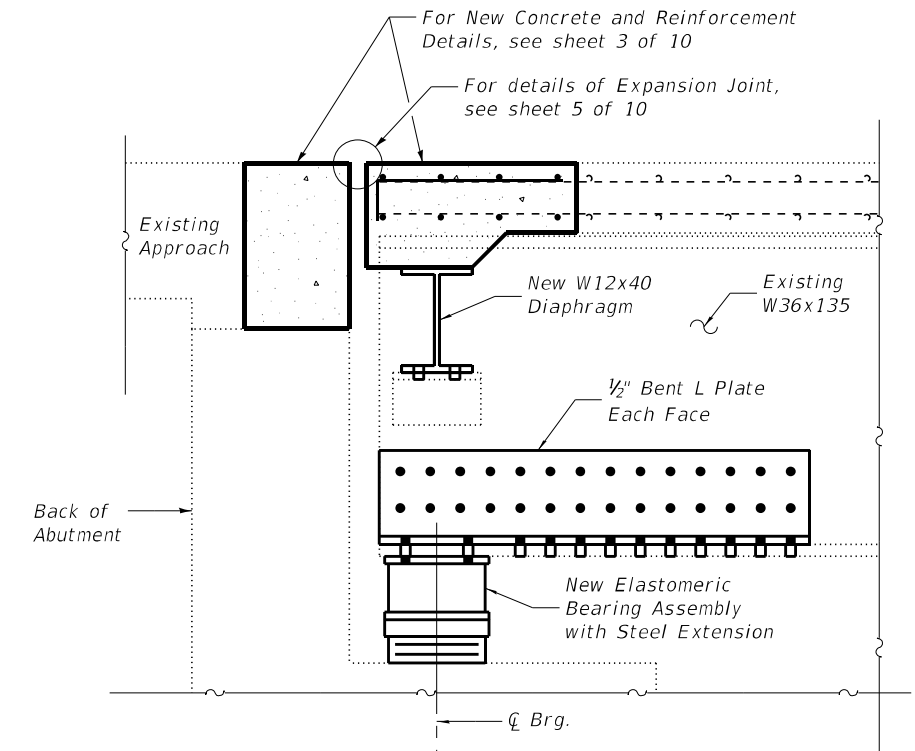
**SECTION A-A**



**ELEVATION OF REPAIRS AT ABUTMENT**

Symmetrical about  $\bar{C}$  Roadway  
 South Abutment shown  
 North Abutment similar

Note: For details of Elastomeric Bearing Assembly, see sheet 9 of 10.



**SECTION B-B**

Note: For details of Bent L Plate for beam end repair, see sheet 7 of 10.

MODEL: BRD\_08  
 FILE NAME: X:\Production\Files\2020\420-0017\PP1-01\CAD\CADD Structure Sheets\0140063-76P79-008-Structural Steel Repair Details II.dgn



|            |               |            |     |           |  |
|------------|---------------|------------|-----|-----------|--|
| USER NAME  | sspillers     | DESIGNED - | SJS | REVISED - |  |
|            |               | CHECKED -  | ACS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | DRAWN -    | WJS | REVISED - |  |
| PLOT DATE  | 4/22/2022     | CHECKED -  | ACS | REVISED - |  |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**STRUCTURAL STEEL REPAIR DETAILS  
 STRUCTURE NO. 014-0063**

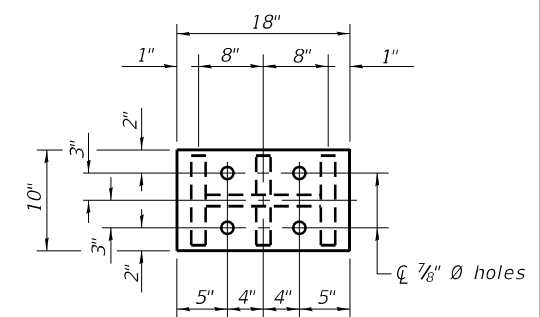
SHEET 8 OF 10 SHEETS

| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
|---------------------------|---------|---------|--------------|-----------|
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| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |

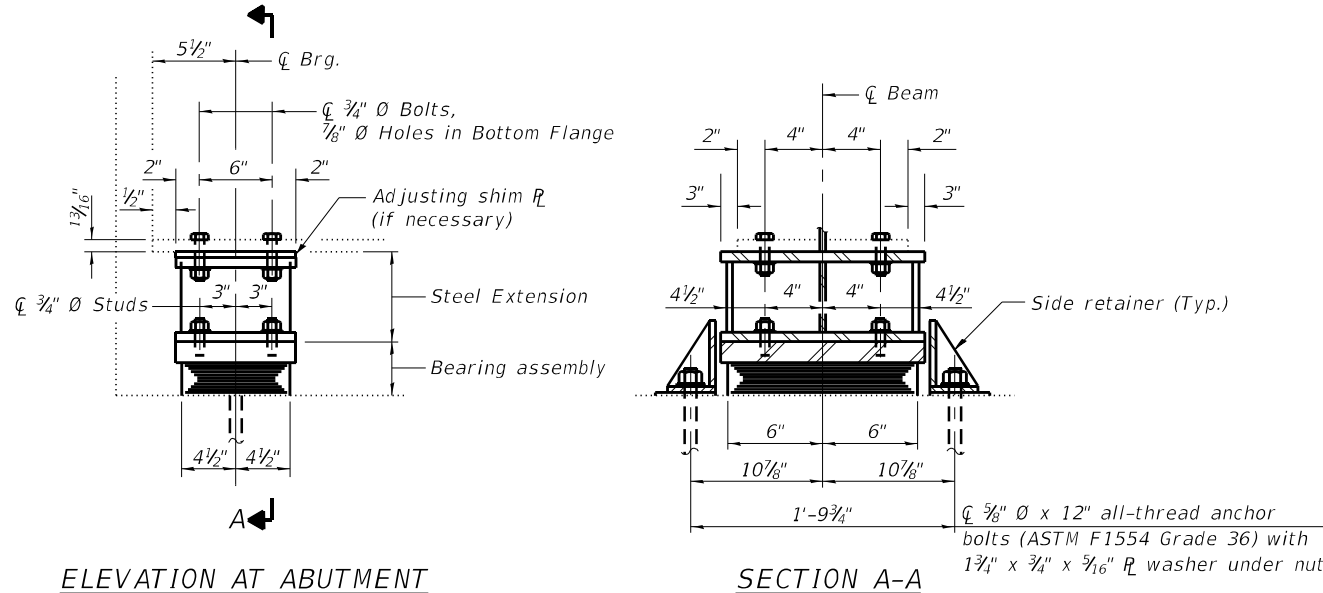
**BEAM REACTIONS**

|                |     |      |
|----------------|-----|------|
| R <sub>D</sub> | (K) | 31.5 |
| R <sub>L</sub> | (K) | 42.0 |
| Imp.           | (K) | 10.7 |
| R (Total)      | (K) | 84.2 |

Notes:  
 Beam Reactions are taken from existing plans for SN 014-0063.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).  
 Min. jack capacity = 44 Tons.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Cost of Side retainers and stainless steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.  
 The structural steel plates of the Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 36.



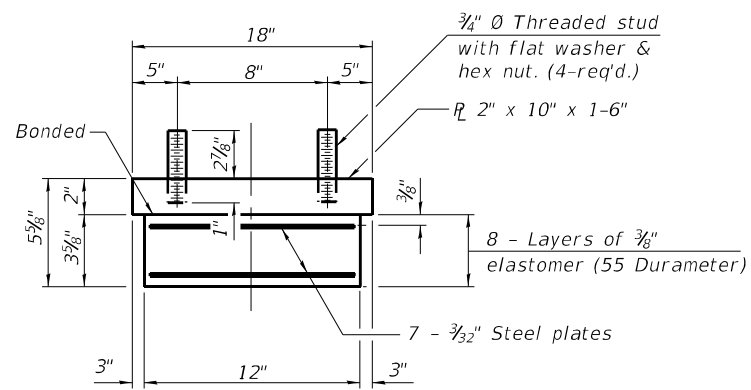
**PLAN TOP AND BOTTOM PLATE**



**ELEVATION AT ABUTMENT**

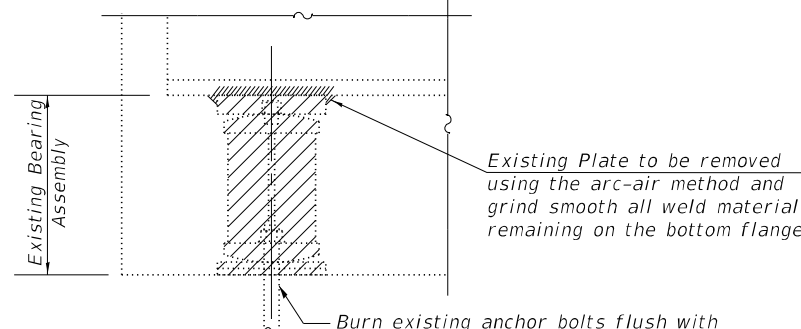
**SECTION A-A**

**TYPE I ELASTOMERIC EXPANSION BEARING**



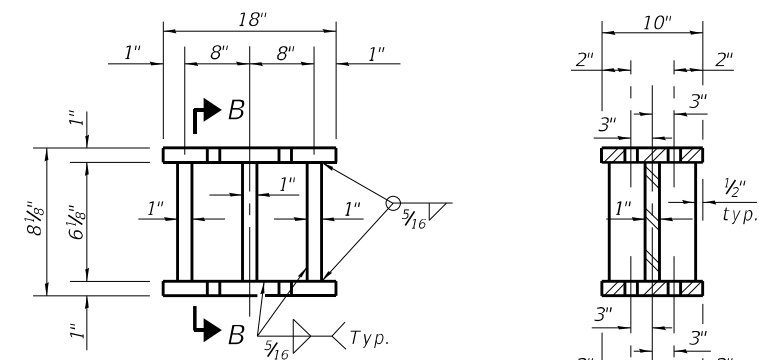
**BEARING ASSEMBLY**

Note: Shim plates shall not be placed under bearing assembly.



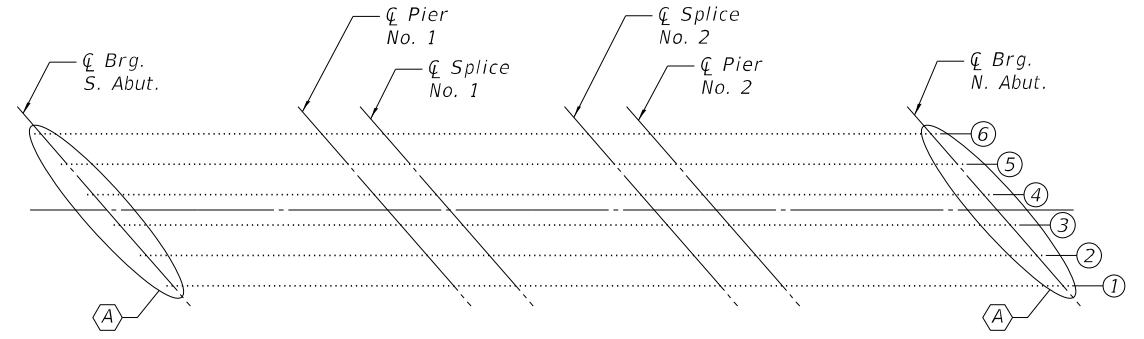
**EXISTING BEARING REMOVAL DETAIL**

Cost included with Jack and Remove Existing Bearings



**STEEL EXTENSION DETAIL**

**SECTION B-B**

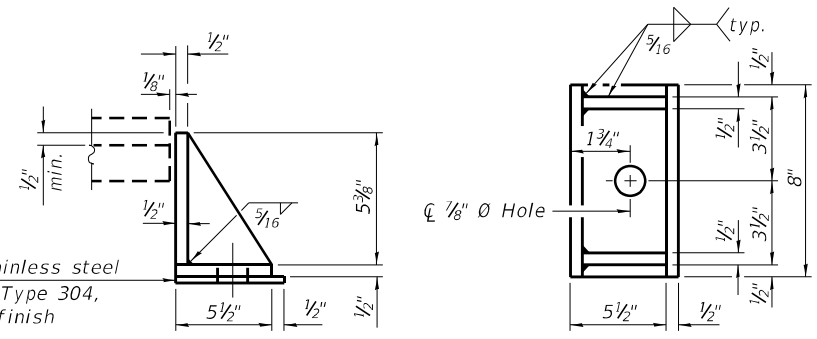


**FRAMING PLAN**

(A) - Bearing Removal and Replacement

**BILL OF MATERIAL**

| ITEM                                     | UNIT  | QUANTITY |
|--|-------|----------|
| Elastomeric Bearing Assembly Type I      | Each  | 12       |
| Jack and Remove Existing Bearings        | Each  | 12       |
| Furnishing and Erecting Structural Steel | Pound | 2,461    |
| Anchor Bolts, 3/8"                       | Each  | 24       |



**SIDE RETAINER**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

MODEL: BRD\_09  
 FILE NAME: X:\Production\Files\2020420-0017\PE-01\CAD\CADD Structure Sheets\0140063-76P79-09-Abutment Bearing Replacement Details.dgn



|            |               |            |     |           |  |
|------------|---------------|------------|-----|-----------|--|
| USER NAME  | sspillers     | DESIGNED - | SJS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | CHECKED -  | ACS | REVISED - |  |
| PLOT DATE  | 4/22/2022     | DRAWN -    | WJS | REVISED - |  |
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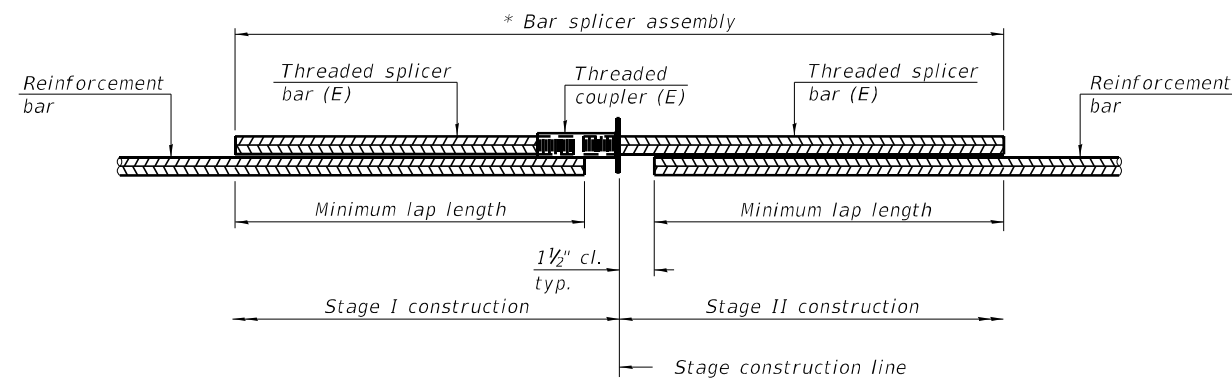
**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**BEARING DETAILS  
 STRUCTURE NO. 014-0063**

SHEET 9 OF 10 SHEETS

|                           |         |         |              |           |
|---------------------------|---------|---------|--------------|-----------|
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO. |
| 42                        | 112BR-3 | CLINTON | 23           | 22        |
| CONTRACT NO. 76P79        |         |         |              |           |
| ILLINOIS FED. AID PROJECT |         |         |              |           |



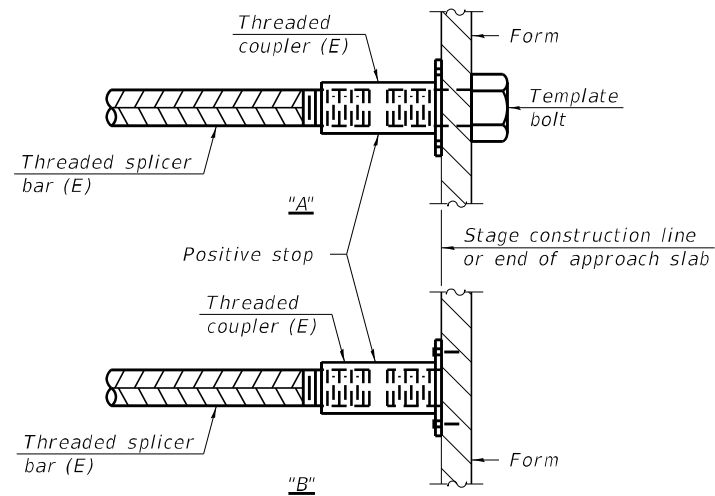


**STANDARD BAR SPLICER ASSEMBLY PLAN**  
 (All components shall be provided from one supplier)

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     | #5       | 16                      | 3'-6"              |
| Abutment | #6       | 8                       | 4'-0"              |
|          |          |                         |                    |
|          |          |                         |                    |

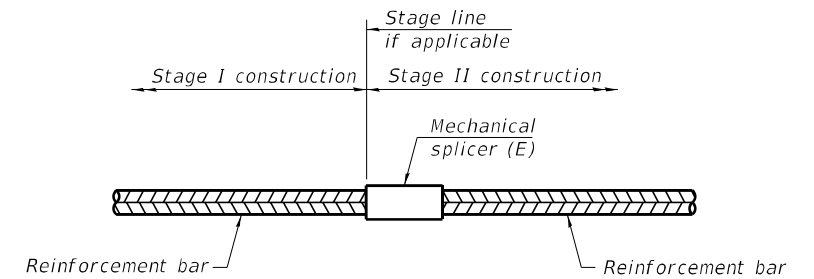


**INSTALLATION AND SETTING METHODS**

"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 |
|----------|----------|-------------------------|
|          |          |                         |
|          |          |                         |
|          |          |                         |
|          |          |                         |

**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.

MODEL: BRD 10  
 FILE NAME: X:\Production\Files\2020\420-0017\PEL-01\CAD\CADD Structure Sheets\0140063-76P79-010-Bar Splicer Assembly & Mech Splicer Details Sheet.dgn



|            |               |            |     |           |  |
|------------|---------------|------------|-----|-----------|--|
| USER NAME  | ssplilers     | DESIGNED - | SJS | REVISED - |  |
|            |               | CHECKED -  | ACS | REVISED - |  |
| PLOT SCALE | 0.1667' / in. | DRAWN -    | WJS | REVISED - |  |
| PLOT DATE  | 4/22/2022     | CHECKED -  | ACS | REVISED - |  |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 014-0063

SHEET 10 OF 10 SHEETS

|                           |         |         |                    |           |
|---------------------------|---------|---------|--------------------|-----------|
| F.A.P. RTE.               | SECTION | COUNTY  | TOTAL SHEETS       | SHEET NO. |
| 42                        | 112BR-3 | CLINTON | 23                 | 23        |
|                           |         |         | CONTRACT NO. 76P79 |           |
| ILLINOIS FED. AID PROJECT |         |         |                    |           |