

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED  
SURFACE TRANSPORTATION PROGRAM  
ON SYSTEM BRIDGE**

F.A.S. 339 / C.H. 4 / ELLIOTT ROAD  
SECTION 14-00124-00-BR  
PROJECT BRS-0339(112)  
FORD COUNTY  
PROPOSED STRUCTURE NO. 027-3454  
C-93-143-14

| ROUTE NO.           | SECTION        | COUNTY   | TOTAL SHEETS       | SHEET NO. |
|---------------------|----------------|----------|--------------------|-----------|
| C.H. 4              | 14-00124-00-BR | FORD     | 25                 | 1         |
| FED. ROAD DIST. NO. |                | ILLINOIS | CONTRACT NO. 87602 |           |

**INDEX OF SHEETS**

| SHEET NO. | DESCRIPTION                             |
|-----------|---|
| 1.        | COVER SHEET                             |
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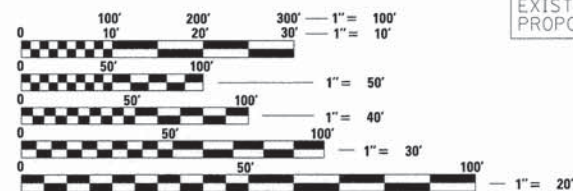
HIGHWAY STANDARDS:

|           |   |
|-----------|---|
| 515001-03 | NAME PLATE FOR BRIDGES  |
| 630001-10 | STEEL PLATE BEAM GUARDRAIL  |
| 630201-06 | PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL                                     |
| 630301-06 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS                              |
| 635006-03 | REFLECTOR AND TERMINAL MARKER PLACEMENT   |
| 635011-02 | REFLECTOR MARKER AND MOUNTING DETAILS   |
| 701901-04 | TRAFFIC CONTROL DEVICES   |
| BLR 21-9  | TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS |
| BLR 27-1  | TRAFFIC BARRIER TERMINAL, TYPE 5A   |

**UTILITIES**

EASTERN ILLINI ELECTRIC COOP  
330 WEST OTTAWA STREET  
PO BOX 96  
PAXTON, IL 60957  
ATTN: ALAN SCHWEIGHART

FRONTIER COMMUNICATIONS  
104 WEST MULBERRY  
NORMAL, IL 61761  
ATTN: GREGORY CURTIS  
309-454-1819



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.



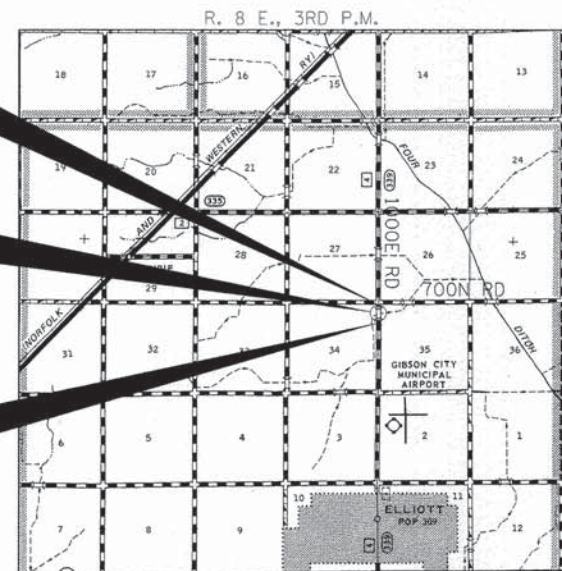
LOCATION OF SECTION INDICATED THUS: - ■ -

FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR (RURAL)  
DESIGN SPEED: 50 MPH  
DESIGN TRAFFIC: 479 ADT (2013)

STA. 15+12  
PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE. SINGLE SPAN @ 68'-0"  
28'-0" RDWY.; SKEW = 20° RT.  
EXISTING STRUCTURE NO. 027-3011  
PROPOSED STRUCTURE NO. 027-3454

IMPROVEMENT ENDS STATION 17+55

IMPROVEMENT BEGINS STATION 12+67



LOCATION MAP

APPROXIMATE SCALE: 0 1 MILE  
NET LENGTH OF SECTION = 488.00 FEET = 0.092 MILES

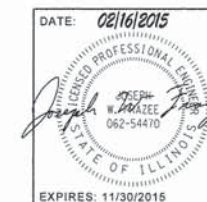


ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED: *Ferguson* 19 20 15  
COUNTY ENGINEER

PASSED: *David B. E.* 3-3 20 15  
DISTRICT THREE ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review: *Paul A. Luttrell* 3-3 20 15  
DEPUTY DIRECTOR OF HIGHWAYS  
REGION TWO ENGINEER  
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



HAMPTON, LENZINI AND RENWICK, INC.  
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS  
3085 STEVENSON DRIVE, SUITE 201  
SPRINGFIELD, ILLINOIS 62703  
217.546.3400 www.hirengineering.com



| SUMMARY OF QUANTITIES |   |                             |       |
|-----------------------|---|-----------------------------|-------|
| ITEM NO.              | ITEM  | CONSTRUCTION TYPE CODE 0011 |       |
|                       |   | UNIT                        | TOTAL |
| 20200100              | EARTH EXCAVATION                                    | CU YD                       | 65    |
| 20300100              | CHANNEL EXCAVATION                                  | CU YD                       | 320   |
| 20400800              | FURNISHED EXCAVATION                                | CU YD                       | 405   |
| 28000250              | TEMPORARY EROSION CONTROL SEEDING                   | POUND                       | 149   |
| 28000400              | PERIMETER EROSION BARRIER                           | FOOT                        | 441   |
| 28000500              | INLET AND PIPE PROTECTION                           | EACH                        | 2     |
| 28100830              | STONE DUMPED RIPRAP, CLASS B4                       | TON                         | 280   |
| 31102100              | SUBBASE GRANULAR MATERIAL, TYPE C, 4"               | SQ YD                       | 334   |
| 35101400              | AGGREGATE BASE COURSE, TYPE B                       | TON                         | 36    |
| 40600275              | BITUMINOUS MATERIALS (PRIME COAT)                   | POUND                       | 1193  |
| 40600982              | HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT        | SQ YD                       | 195   |
| 40603082              | HOT-MIX ASPHALT BINDER COURSE, IL-19.0 FG, N50      | TON                         | 8     |
| 40603310              | HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50        | TON                         | 89    |
| 48101500              | AGGREGATE SHOULDERS, TYPE B 6"                      | SQ YD                       | 184   |
| 48203013              | HOT-MIX ASPHALT SHOULDERS, 4"                       | SQ YD                       | 334   |
| 50100100              | REMOVAL OF EXISTING STRUCTURES                      | EACH                        | 1     |
| 50300225              | CONCRETE STRUCTURES                                 | CU YD                       | 27.2  |
| 50400505              | PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH) | SQ FT                       | 1904  |
| 50800205              | REINFORCEMENT BARS, EPOXY COATED                    | POUND                       | 2800  |
| 50900205              | STEEL RAILING, TYPE S1                              | FOOT                        | 144   |
| 51200957              | FURNISHING METAL SHELL PILES 12" X 0.250"           | FOOT                        | 450   |
| 51202305              | DRIVING PILES                                       | FOOT                        | 450   |
| 51203200              | TEST PILE METAL SHELLS                              | EACH                        | 1     |
| 51500100              | NAME PLATES   | EACH                        | 1     |
| 542D0229              | PIPE CULVERTS, CLASS D, TYPE 1 24"                  | FOOT                        | 320   |
| 58100200              | WATERPROOFING MEMBRANE SYSTEM                       | SQ YD                       | 212   |
| 58300100              | PORTLAND CEMENT MORTAR FAIRING COURSE               | FOOT                        | 102   |
| 58700300              | CONCRETE SEALER                                     | SQ FT                       | 154   |
| 60103600              | PIPE DRAINS, CORRUGATED STEEL 15"                   | FOOT                        | 20    |
| 60103700              | PIPE DRAINS, CORRUGATED STEEL 18"                   | FOOT                        | 20    |
| 60103800              | PIPE DRAINS, CORRUGATED STEEL 21"                   | FOOT                        | 20    |
| 63000001              | STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS    | FOOT                        | 125   |

^ SEE SPECIAL PROVISIONS  
\* SPECIALTY ITEMS

| SUMMARY OF QUANTITIES |  |                             |       |
|-----------------------|--|-----------------------------|-------|
| ITEM NO.              | ITEM   | CONSTRUCTION TYPE CODE 0011 |       |
|                       |  | UNIT                        | TOTAL |
| 63100075              | TRAFFIC BARRIER TERMINAL, TYPE 5A                  | EACH                        | 4     |
| 63100167              | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT | EACH                        | 4     |
| 63200310              | GUARDRAIL REMOVAL                                  | FOOT                        | 908   |
| 67100100              | MOBILIZATION                                       | L SUM                       | 1     |
| 70101830              | TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21    | L SUM                       | 1     |
| 78200410              | GUARDRAIL MARKERS, TYPE A                          | EACH                        | 6     |
| 78201000              | TERMINAL MARKER - DIRECT APPLIED                   | EACH                        | 4     |
| X2070302              | POROUS GRANULAR EMBANKMENT, SPECIAL                | TON                         | 140   |
| X2501000              | SEEDING, CLASS 2 (SPECIAL)                         | ACRE                        | 0.5   |

^ SEE SPECIAL PROVISIONS  
\* SPECIALTY ITEMS

### GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012," THESE PLANS AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
- ALL CLEARING AND GRUBBING, FENCE REMOVAL AND REMOVAL OF EXISTING DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE INDIVIDUAL UTILITY COMPANIES AND BY FIELD INSPECTION.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- THE CONTRACTOR SHALL CONSULT THE ENGINEER IN REGARD TO THE EXACT LENGTH OF PIPE CULVERTS AND PIPE DRAINS BEFORE ORDERING THESE ITEMS.
- THE REVISION NUMBER INDICATED FOR THE STANDARDS LISTED IN THE INDEX SHEETS SHALL BE USED IN THE CONSTRUCTION OF THIS SECTION.
- PIPE DRAINS AND PIPE CULVERTS SHALL BE PRECOATED IN ACCORDANCE WITH ARTICLE 1006.01(b) OF THE STANDARD SPECIFICATIONS.
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES.

|                                     |                  |
|-------------------------------------|------------------|
| AGGREGATE BASE COURSE, TYPE B       | 2.05 TON/CU YD   |
| HOT-MIX ASPHALT                     | 112 LBS/SQ YD/IN |
| STONE DUMPED RIPRAP, CLASS B4       | 1.75 TON/CU YD   |
| POROUS GRANULAR EMBANKMENT, SPECIAL | 2.05 TON/CU YD   |
| BITUMINOUS MATERIALS                |                  |
| ON PAVEMENT                         | 0.05 LB./SQ.FT.  |
| INTERMEDIATE LIFTS (FOG COAT)       | 0.025 LB./SQ.FT. |
| ON AGGREGATE SURFACE                | 0.25 LB./SQ.FT.  |
- EARTH SURFACES SHALL BE SEEDED WITHIN 14 DAYS OF THE END OF ACTIVE DISTURBANCE. THE AREA TO BE SEEDED SHALL CONSIST OF ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION AND AS DIRECTED BY THE ENGINEER. ESTIMATED AREAS OF SEEDING:

|                            |           |
|----------------------------|-----------|
| SEEDING, CLASS 2 (SPECIAL) | 0.5 ACRES |
|----------------------------|-----------|
- TEMPORARY SEEDING SHALL BE COMPLETED ON ALL AREAS THAT WILL NOT BE BROUGHT TO FINAL GRADE OR ON WHICH CONSTRUCTION WILL BE STOPPED FOR A PERIOD OF MORE THAN 14 DAYS.

|  |                       |                   |           |
|--|-----------------------|-------------------|-----------|
| FILE NAME = 130294-sht-summary.dgn   | USER NAME = #USER#    | DESIGNED - J.W.F. | REVISED - |
| HAMPTON, LENZINI AND RENWICK, INC.<br>3085 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62703<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS/P/E/SE CORP. 164-00999 | PLOT SCALE = #SCALE#  | DRAWN - D.A.B.    | REVISED - |
|  | PLOT DATE = 2/17/2015 | CHECKED - S.W.M.  | REVISED - |
|  |                       | DATE - 02/16/15   | REVISED - |

### STATE OF ILLINOIS FORD COUNTY HIGHWAY DEPARTMENT

### SUMMARY OF QUANTITIES AND GENERAL NOTES ELLIOTT ROAD

SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

| C.H.                                    | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---|----------------|--------|--------------------|-----------|
| 4                                       | 14-00124-00-BR | FORD   | 25                 | 2         |
|   |                |        | CONTRACT NO. 87602 |           |
| ILLINOIS FED. AID PROJECT BRS-0339(112) |                |        |                    |           |



| GUARDRAIL SCHEDULE                   |   |   |  |   |                      |                                |
|--------------------------------------|---|---|--|---|----------------------|--------------------------------|
| LOCATION                             | TRAFFIC BARRIER<br>TERMINAL<br>TYPE 5A* | STEEL PLATE<br>BEAM GUARDRAIL<br>TYPE A<br>6 FOOT POSTS | TRAFFIC BARRIER<br>TERMINAL<br>TYPE 1 (SPECIAL)<br>TANGENT | TERMINAL<br>MARKER<br>DIRECT<br>APPLIED | GUARDRAIL<br>REMOVAL | GUARDRAIL<br>MARKERS<br>TYPE A |
|                                      | 63100075<br>EACH                        | 63000001<br>FOOT  | 63100167<br>EACH   | 78201000<br>EACH                        | 63200310<br>FOOT     | 78200410<br>EACH               |
| CH 4 / ELLIOTT ROAD                  |   |   |  |   |                      |                                |
| LT. STA 13+91.95 TO LT. STA 14+73.96 | 1                                       | 12.5  | 1  | 1                                       |                      | 1                              |
| RT. STA 13+64.64 TO RT. STA 14+84.15 | 1                                       | 50  | 1  | 1                                       |                      | 2                              |
| LT. STA 15+56.24 TO LT. STA 16+59.36 | 1                                       | 50  | 1  | 1                                       |                      | 2                              |
| RT. STA 15+50.04 TO RT. STA 16+32.05 | 1                                       | 12.5  | 1  | 1                                       |                      | 1                              |
| LT. STA 12+67 TO LT. STA 17+55       |   |   |  |   | 454                  |                                |
| RT. STA 12+67 TO RT. STA 17+55       |   |   |  |   | 454                  |                                |
| TOTAL                                | 4                                       | 125   | 4  | 4                                       | 908                  | 6                              |

\* - THE TRAFFIC BARRIER TYPE 5A SHALL TRANSITION IN HEIGHT FROM THE STEEL RAILING TYPE S1 TO THE STEEL PLATE BEAM GUARDRAIL, TYPE A

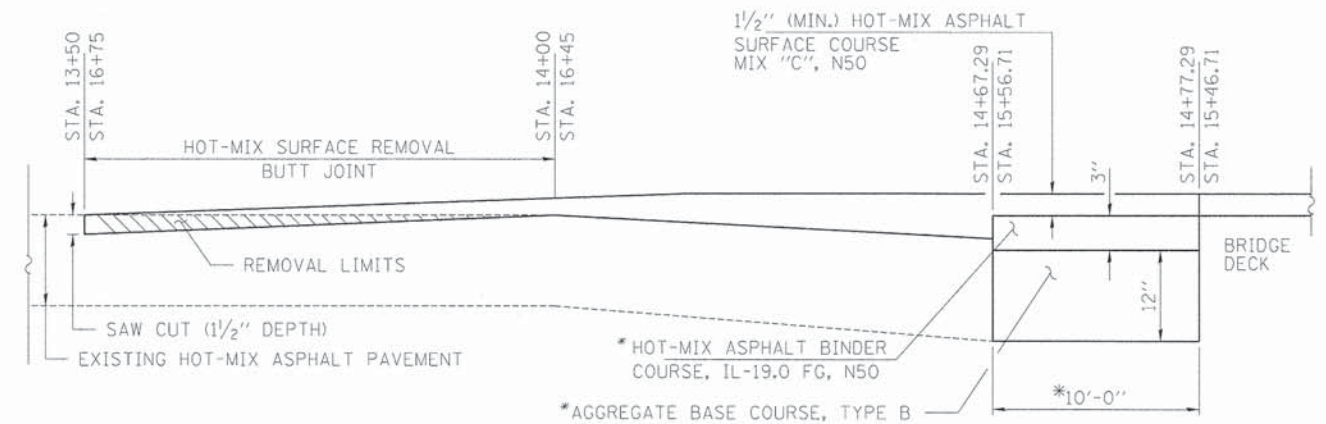
| MIXTURE REQUIREMENTS   |                                   |                                  |                              |
|------------------------|-----------------------------------|----------------------------------|------------------------------|
|                        | HOT MIX ASPHALT<br>SURFACE COURSE | HOT MIX ASPHALT<br>BINDER COURSE | HOT MIX ASPHALT<br>SHOULDERS |
| PG GRADE *             | PG64-22                           | PG64-22                          | PG64-22                      |
| DESIGN AIR<br>VOIDS    | 4% @<br>N50                       | 4% @<br>N50                      | 4% @<br>N50                  |
| MIXTURE<br>COMPOSITION | IL 9.5                            | IL 19.0 FG                       | IL 19.0 FG                   |
| FRICTION<br>AGGREGATE  | MIXTURE C                         | NONE                             | NONE                         |
| DENSITY TEST<br>METHOD | CORES                             | CORES                            | CORES                        |

NOTES:

- MATERIAL SHALL BE COMPACTED TO 93.0-97.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT WHEN PLACED AS FIRST LIFT ON AN UNIMPROVED SUBGRADE THE MINIMUM PERCENT COMPACTON SHALL BE 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.
- WHEN RAP/RAS ABR EXCEEDS 20 PERCENT, THE HIGH AND LOW VIRGIN ASPHALT BINDER GRADES SHALL EACH BE REDUCED BY ONE GRADE (I.E. 25% ABR WOULD REQUIRE A VIRGIN ASPHALT BINDER GRADE OF PG 64-22 TO BE REDUCED TO PG 58-28).

| EARTHWORK SCHEDULE        |                     |                       |                     |                 |   |                        |                      |
|---------------------------|---------------------|-----------------------|---------------------|-----------------|---|------------------------|----------------------|
| LOCATION                  | EARTH<br>EXCAVATION | CHANNEL<br>EXCAVATION | SHRINKAGE<br>FACTOR | PERCENT<br>USED | EARTH EXCAVATION<br>ADJUSTED<br>FOR SHRINKAGE | EMBANKMENT<br>REQUIRED | EARTHWORK<br>BALANCE |
|                           | 20200100<br>CU.YD.  | 20300100<br>CU.YD.    |                     |                 | CU.YD.  | CU.YD.                 | CU.YD.               |
| CH 4 / ELLIOTT ROAD       |                     |                       |                     |                 |   |                        |                      |
| STA 12+67 TO STA 14+77.29 | 32                  |                       | 25.00%              | 100.00%         | 24  | 210                    | -186                 |
| STA 15+46.71 TO STA 17+55 | 31                  |                       | 25.00%              | 100.00%         | 23  | 412                    | -389                 |
| CHANNEL EXCAVATION        |                     | 320                   | 25.00%              | 70.00%          | 168   |                        | 168                  |
| TOTAL                     | 63                  | 320                   |                     |                 | 215   | 622                    | -407                 |
| USE                       | 65                  | 320                   |                     |                 |   |                        | 405                  |

FURNISHED EXCAVATION = 405 CU YDS



PAVEMENT TRANSITION DETAIL

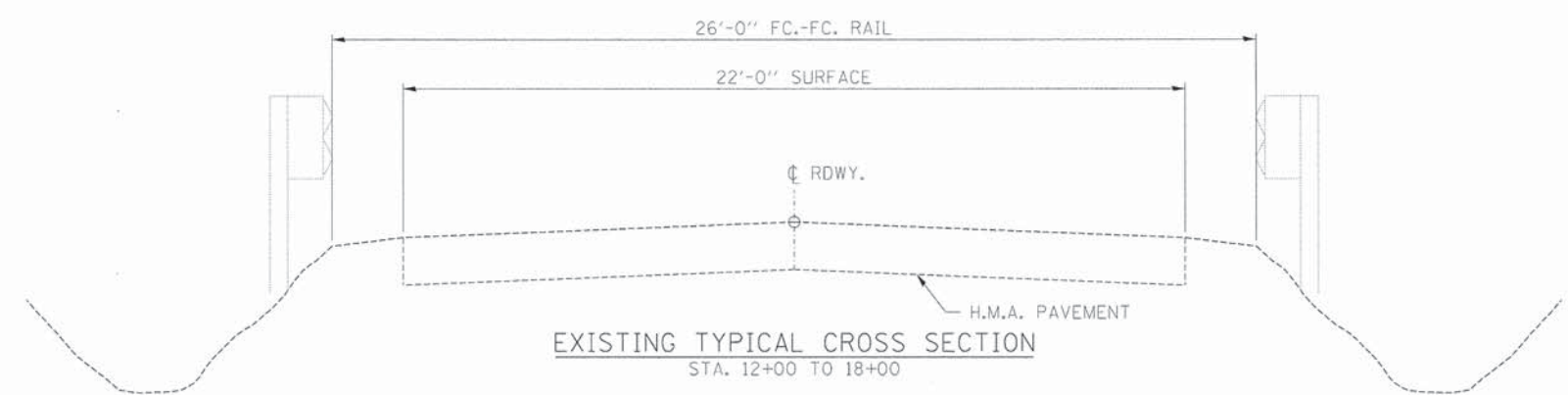
\*AGGREGATE BASE & HMA BINDER TO BE CONSTRUCTED IN AREA BEHIND ABUTMENTS ABOVE P.G.E. REPLACEMENT.

| ROADWAY SCHEDULE          |  |                                    |   |  |  |  |                                      |                                     |
|---------------------------|--|------------------------------------|---|--|--|--|--------------------------------------|-------------------------------------|
| LOCATION                  | SUBBASE<br>GRANULAR<br>MATERIAL,<br>TYPE C, 4" | AGGREGATE<br>BASE COURSE<br>TYPE B | BITUMINOUS<br>MATERIALS<br>(PRIME COAT) | HOT MIX<br>ASPHALT<br>SURFACE<br>REMOVAL<br>BUTT-JOINT | HOT MIX<br>ASPHALT<br>BINDER COURSE<br>IL-19.0 FG, N50 | HOT MIX<br>ASPHALT<br>SURFACE COURSE<br>MIX C, N50<br>1.5" MIN | AGGREGATE<br>SHOULDERS,<br>TYPE B 6" | HOT MIX<br>ASPHALT<br>SHOULDERS, 4" |
|                           | 31102100<br>SQ YD                              | 35101400<br>TON                    | 40600275<br>POUND                       | 40600982<br>SQ YD                                      | 40603082<br>TON  | 40603310<br>TON  | 48101500<br>SQ YD                    | 48203013<br>SQ YD                   |
| CH 4 / ELLIOTT ROAD       |  |                                    |   |  |  |  |                                      |                                     |
| STA 13+50 TO STA 14+77.29 | 167  | 18                                 | 571                                     | 122  | 4  | 26   | 93                                   | 167                                 |
| STA 15+46.71 TO STA 16+75 | 167  | 18                                 | 573                                     | 73   | 4  | 38   | 91                                   | 167                                 |
| BRIDGE                    |  |                                    | 49                                      |  |  | 25   |                                      |                                     |
| TOTAL                     | 334  | 36                                 | 1193                                    | 195  | 8  | 89   | 184                                  | 334                                 |

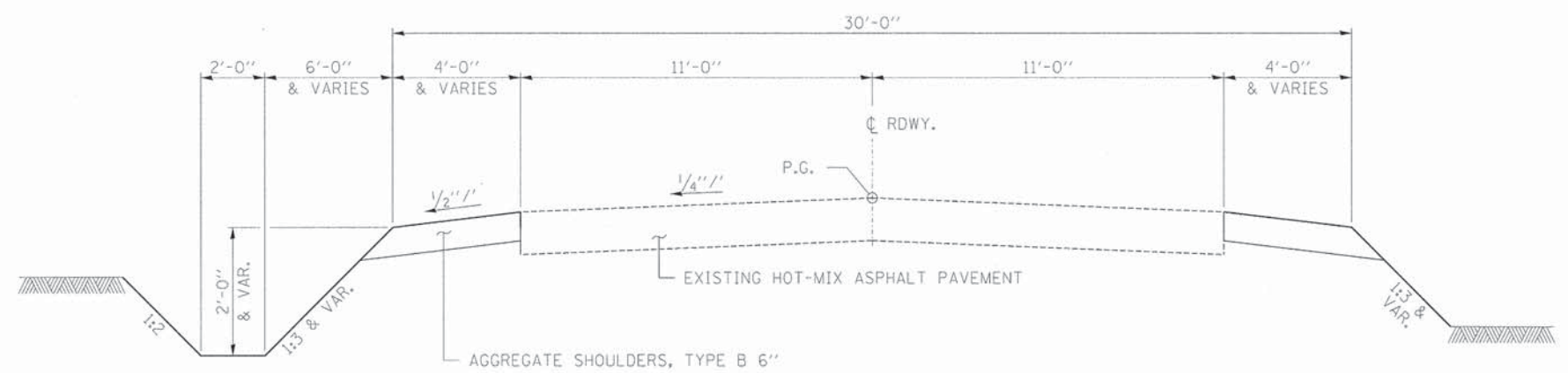
| EROSION CONTROL SCHEDULE   |  |                                 |                                 |                                  |
|----------------------------|--|---------------------------------|---------------------------------|----------------------------------|
| LOCATION                   | TEMPORARY<br>EROSION<br>CONTROL<br>SEEDING * | PERIMETER<br>EROSION<br>BARRIER | INLET<br>AND PIPE<br>PROTECTION | SEEDING,<br>CLASS 2<br>(SPECIAL) |
|                            | 28000250<br>POUND                            | 28000400<br>FOOT                | 28000500<br>EACH                | X2501000<br>ACRE                 |
| CH 4 / ELLIOTT ROAD        |  |                                 |                                 |                                  |
| LT. STA 12+67 TO STA 15+00 | 37   | 233                             |                                 | 0.09                             |
| RT. STA 12+67 TO STA 14+75 | 38   | 208                             |                                 | 0.10                             |
| LT. STA 15+40 TO STA 17+55 | 38   |                                 | 1                               | 0.09                             |
| RT. STA 15+25 TO STA 17+55 | 36   |                                 | 1                               | 0.09                             |
| TOTAL                      | 149  | 441                             | 2                               | 0.37                             |
| USE                        | 149  | 441                             | 2                               | 0.5                              |

\* 4 APPLICATIONS OF 100 LB/ACRE

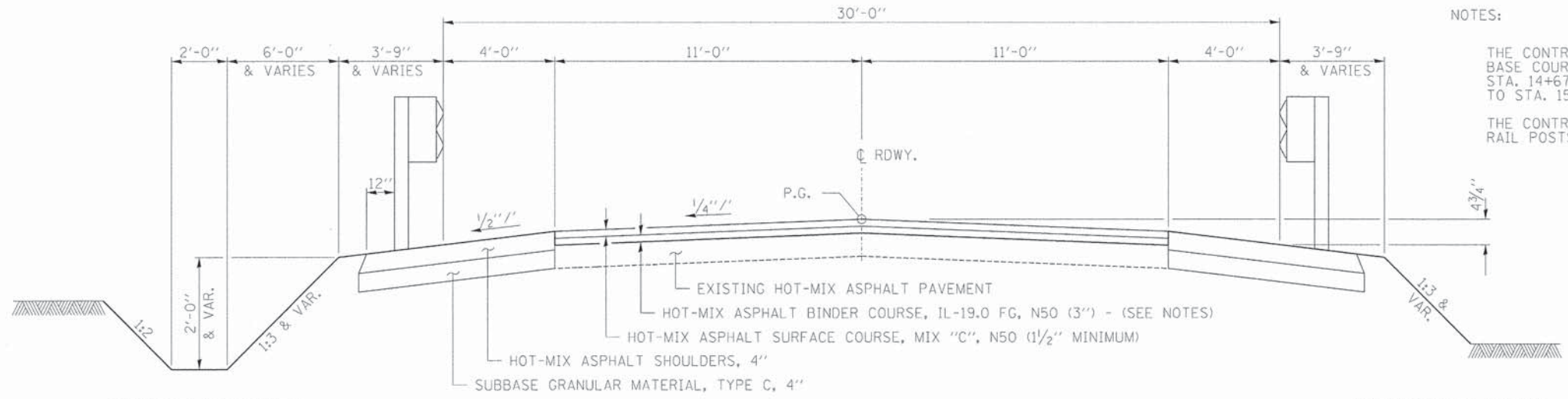




EXISTING TYPICAL CROSS SECTION  
STA. 12+00 TO 18+00



PROPOSED TYPICAL CROSS SECTION  
STA. 12+67 TO 13+50  
STA. 16+75 TO 17+55



PROPOSED TYPICAL CROSS SECTION  
STA. 13+50 TO 14+77.29  
STA. 15+46.71 TO 16+75

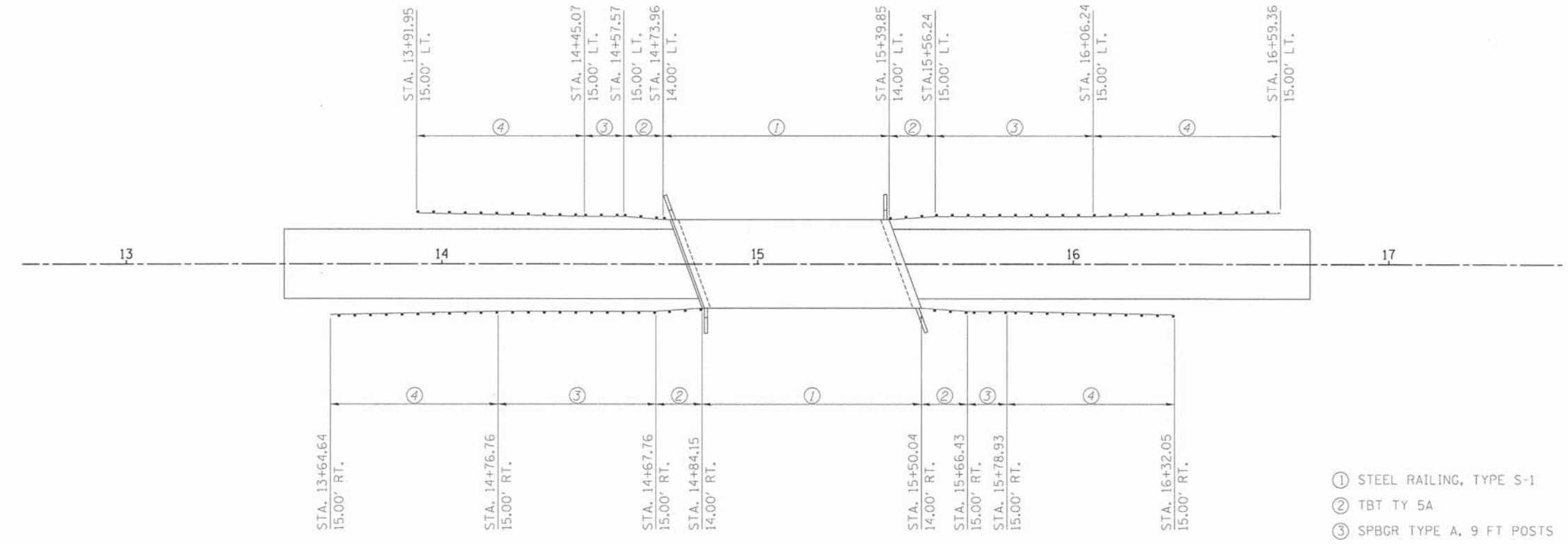
NOTES:  
THE CONTRACTOR SHALL CONSTRUCT AN AGGREGATE BASE COURSE, AND HMA BINDER COURSE FROM STA. 14+67.29 TO STA. 14+77.29 AND STA. 15+46.71 TO STA. 15+56.71. SEE PAVEMENT TRANSITION DETAIL.  
THE CONTRACTOR SHALL USE GROUT CAPS AT GUARD RAIL POSTS TO FILL CORES IN HMA SHOULDERS.

|   |                       |                   |           |   |  |                         |                    |         |  |                |           |    |   |
|---|-----------------------|-------------------|-----------|---|--|-------------------------|--------------------|---------|--|----------------|-----------|----|---|
| FILE NAME = 130294-sht-tyosections.dgn  | USER NAME = #USER#    | DESIGNED - J.W.F. | REVISED - | <b>STATE OF ILLINOIS<br/>FORD COUNTY HIGHWAY DEPARTMENT</b> | <b>TYPICAL CROSS SECTIONS<br/>ELLIOTT ROAD</b> |                         | C.H.               | SECTION | COUNTY                                 | TOTAL SHEETS   | SHEET NO. |    |   |
| <b>HAMPTON, LENZINI AND RENWICK, INC.</b><br>3585 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62765<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>L8 / PE / SE CORP. 184.000959 | PLOT SCALE = #SCALE#  | DRAWN - D.A.B.    | REVISED - |   | SCALE:   | SHEET NO. 1 OF 1 SHEETS | STA.               | TO STA. | 4                                      | 14-00124-00-BR | FORD      | 25 | 4 |
|   | PLOT DATE = 2/17/2015 | CHECKED - S.W.M.  | REVISED - |   |  |                         |                    |         |  |                |           |    |   |
|   |                       | DATE - 02/16/15   | REVISED - |   |  |                         |                    |         |  |                |           |    |   |
|   |                       |                   |           |   |  |                         | CONTRACT NO. 87602 |         | ILLINOIS FED. AID PROJECT BR5-03391121 |                |           |    |   |



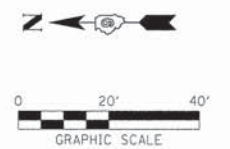




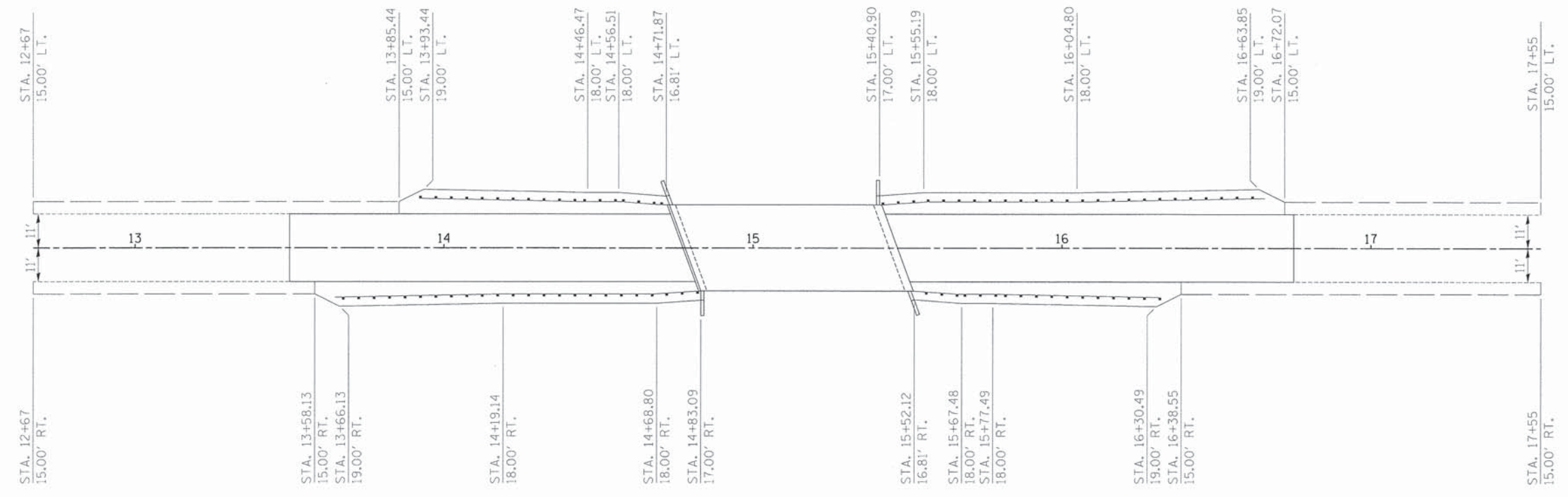


GUARDRAIL LAYOUT

- ① STEEL RAILING, TYPE S-1
- ② TBT TY 5A
- ③ SPBGR TYPE A, 9 FT POSTS
- ④ TBT TY 1 SPL TAN



NOTE:  
CONSTRUCT VERTICAL TRANSITION  
FOR GUARDRAIL HEIGHT FROM TBT 5A  
TO TBT T1 SPL TAN IN 25 FT.



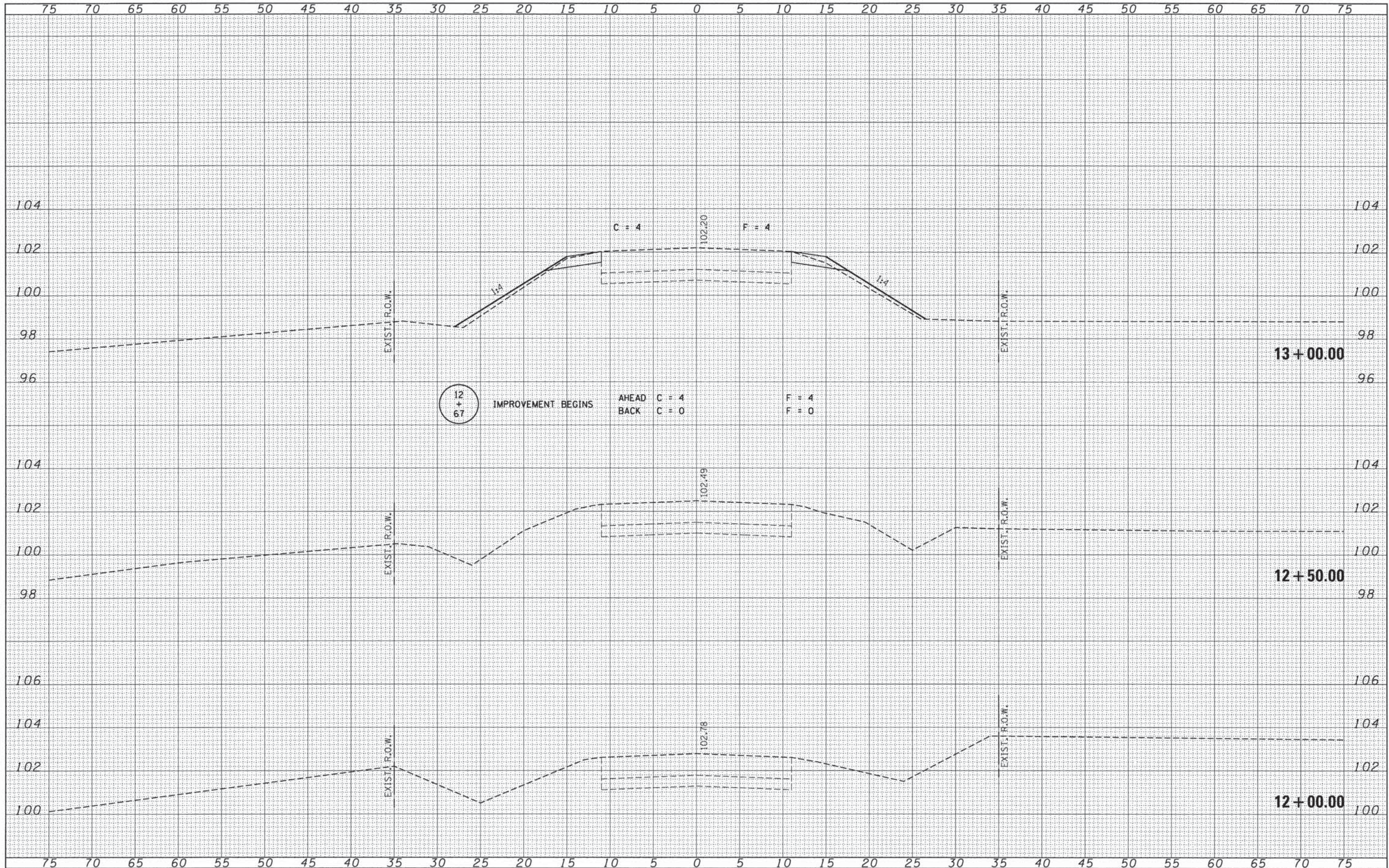
SHOULDER LAYOUT

|   |                       |                   |           |   |  |                         |      |         |         |                |              |           |   |
|---|-----------------------|-------------------|-----------|---|--|-------------------------|------|---------|---------|----------------|--------------|-----------|---|
| FILE NAME = 130294-shs-shld-grd.dgn   | USER NAME = #USER#    | DESIGNED - J.W.F. | REVISED - | <b>STATE OF ILLINOIS<br/>FORD COUNTY HIGHWAY DEPARTMENT</b> | <b>CENTERLINE, GUARDRAIL AND SHOULDER LAYOUT<br/>ELLIOTT ROAD / C.H. 4</b> |                         |      | C.H.    | SECTION | COUNTY         | TOTAL SHEETS | SHEET NO. |   |
| <b>HAMPTON, LENZINI AND RENWICK, INC.</b><br>3585 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62701<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS / PE / SE CORP. 184.000959 | PLOT SCALE = #SCALE#  | DRAWN - R.D.H.    | REVISED - |   | SCALE:   | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA. | 4       | 14-00124-00-BR | FORD         | 25        | 6 |
|   | PLOT DATE = 2/17/2015 | CHECKED - S.W.M.  | REVISED - |   | CONTRACT NO. 87602   |                         |      |         |         |                |              |           |   |
|   |                       | DATE - 02/16/15   | REVISED - |   | ILLINOIS FED. AID PROJECT BR5-03391121                                     |                         |      |         |         |                |              |           |   |



|               |      |
|---------------|------|
| FINAL SURVEY  | DATE |
| SUBMITTED     | BY   |
| NOTE BOOK     |      |
| TEMPLATE      |      |
| AREAS CHECKED |      |
| NO.           |      |

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|-----------------|------|
| ORIGINAL SURVEY | DATE |
| SUBMITTED       | BY   |
| NOTE BOOK       |      |
| TEMPLATE        |      |
| AREAS CHECKED   |      |
| NO.             |      |



FILE NAME = 130294-shr-sxs.dgn

USER NAME =

DESIGNED - JWF

REVISED -

DRAWN - L.G.C.

REVISED -

CHECKED - S.W.M.

REVISED -

DATE - 02/16/15

REVISED -

PLOT SCALE =

PLOT DATE = 2/17/2015

**HAMPTON, LENZINI AND RENWICK, INC.**  
 308 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 ILLINOIS PROFESSIONAL DESIGN FIRM  
 LS / PE / SE CORP. 184.000859

**STATE OF ILLINOIS  
 FORD COUNTY HIGHWAY DEPARTMENT**

**STATION CROSS SECTIONS**

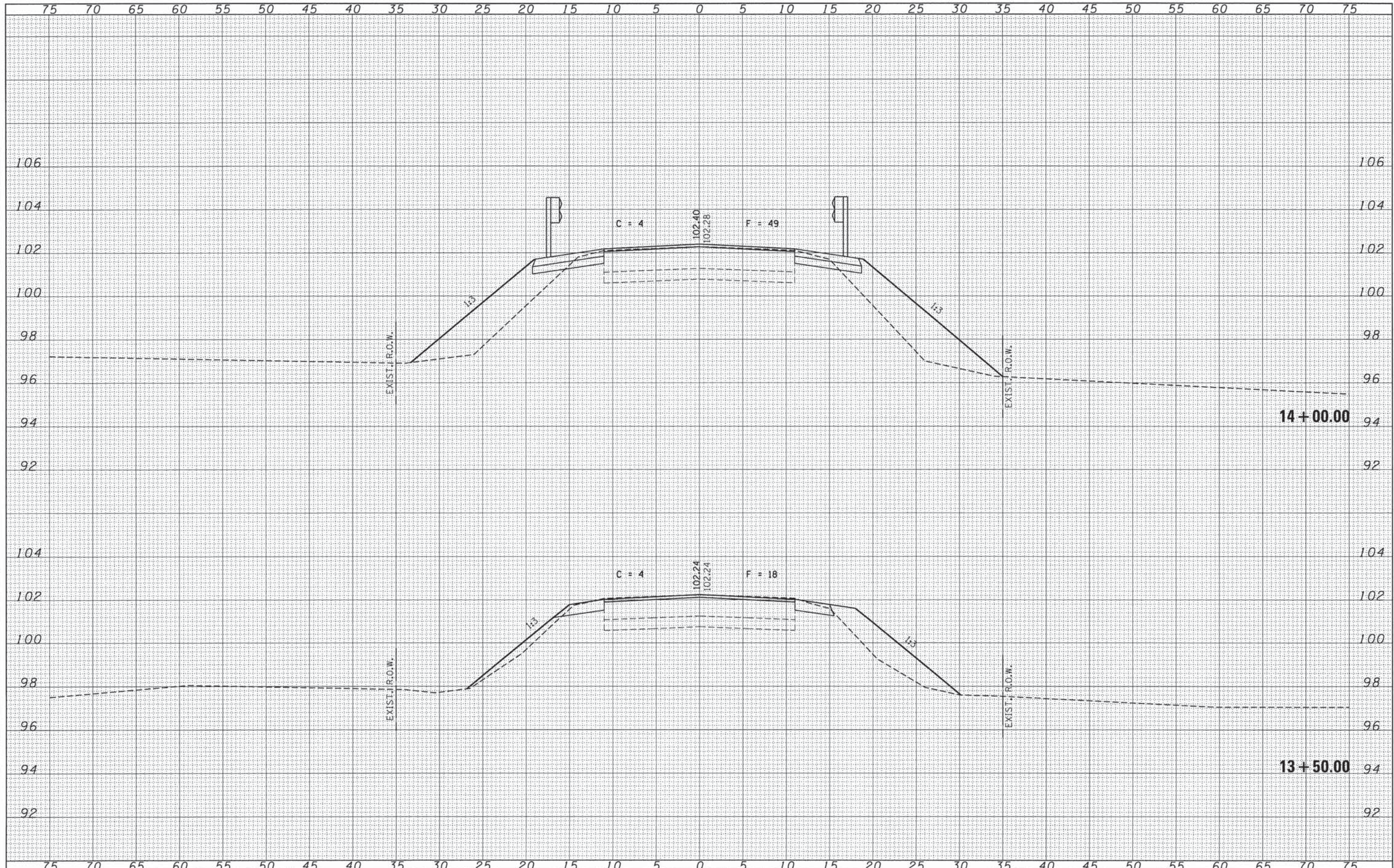
SCALE: 5H:2V SHEET NO. 1 OF 9 SHEETS STA. 12+00.00 TO STA. 13+00.00

| C.H.                                   | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|--|----------------|--------|--------------------|-----------|
| 4                                      | 14-00124-00-BR | FORD   | 25                 | 7         |
|  |                |        | CONTRACT NO. 87602 |           |
| ILLINOIS FED. AID PROJECT BR5-03391121 |                |        |                    |           |



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| BY            |  |
| FINAL SURVEY  |  |
| SURVEYED      |  |
| NOTE BOOK     |  |
| NO.           |  |
| AREAS CHECKED |  |
| TEMPLATE      |  |

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| BY              |  |
| ORIGINAL SURVEY |  |
| SURVEYED        |  |
| NOTE BOOK       |  |
| NO.             |  |
| AREAS CHECKED   |  |
| TEMPLATE        |  |



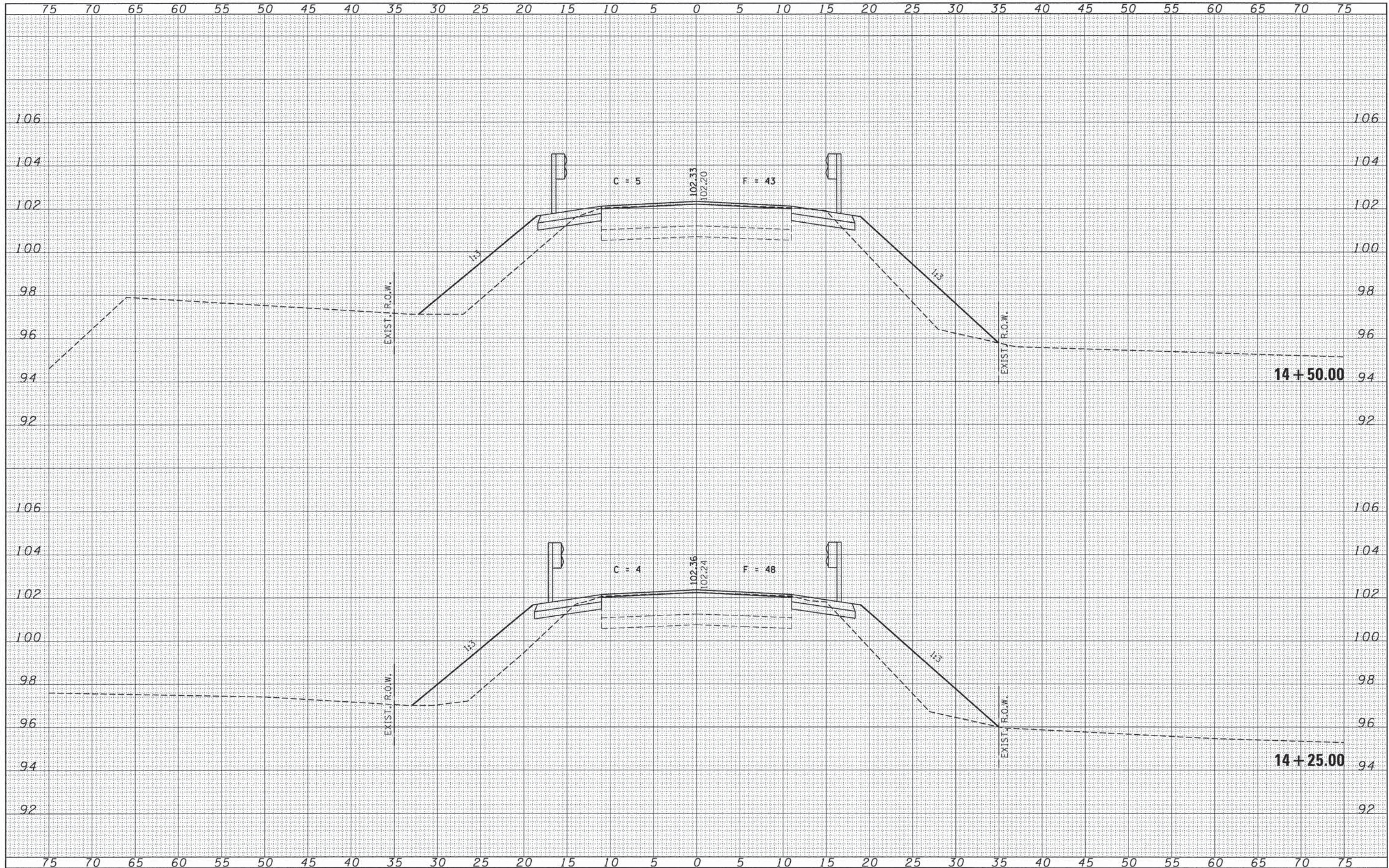
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| FILE NAME = 130294-sht-sxs.dgn  | USER NAME =  | DESIGNED - JWF   | REVISED - | <p align="center"><b>STATE OF ILLINOIS</b><br/><b>FORD COUNTY HIGHWAY DEPARTMENT</b></p> <p align="center"><b>STATION CROSS SECTIONS</b></p> | C.H.                                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC.<br>300 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62761<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS/P/E/SE CORP. 184-00099 | PLOT SCALE = | DRAWN - L.G.C.   | REVISED - |  | 4                                      | 14-00124-00-BR | FORD   | 25           | 8         |
| PLOT DATE = 2/17/2015   |              | CHECKED - S.W.M. | REVISED - |  | CONTRACT NO. 87602                     |                |        |              |           |
|   |              | DATE - 02/16/15  | REVISED - |  | ILLINOIS FED. AID PROJECT BRS-03391121 |                |        |              |           |

SCALE: 5H:2V SHEET NO. 2 OF 9 SHEETS STA. 13+50.00 TO STA. 14+00.00



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| DATE          |  |
| BY            |  |
| FINAL SURVEY  |  |
| SURVEYED      |  |
| NOTE BOOK     |  |
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| AREAS CHECKED |  |
| NO.           |  |

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| DATE            |  |
| BY              |  |
| ORIGINAL SURVEY |  |
| SURVEYED        |  |
| NOTE BOOK       |  |
| TEMPLATE        |  |
| AREAS CHECKED   |  |
| NO.             |  |



FILE NAME = 138294-sht-sws.dgn  
 HAMPTON, LENZINI AND RENWICK, INC.  
 3045 STEVENSON DRIVE, SUITE 201  
 SPRINGFIELD, ILLINOIS 62703  
 ILLINOIS PROFESSIONAL DESIGN FIRM  
 LB / PE / BE CORP. 184-00993

USER NAME =  
 DESIGNED - JWF  
 DRAWN - L.G.C.  
 CHECKED - S.W.M.  
 DATE - 02/16/15  
 PLOT SCALE =  
 PLOT DATE = 2/17/2015

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STATE OF ILLINOIS  
 FORD COUNTY HIGHWAY DEPARTMENT

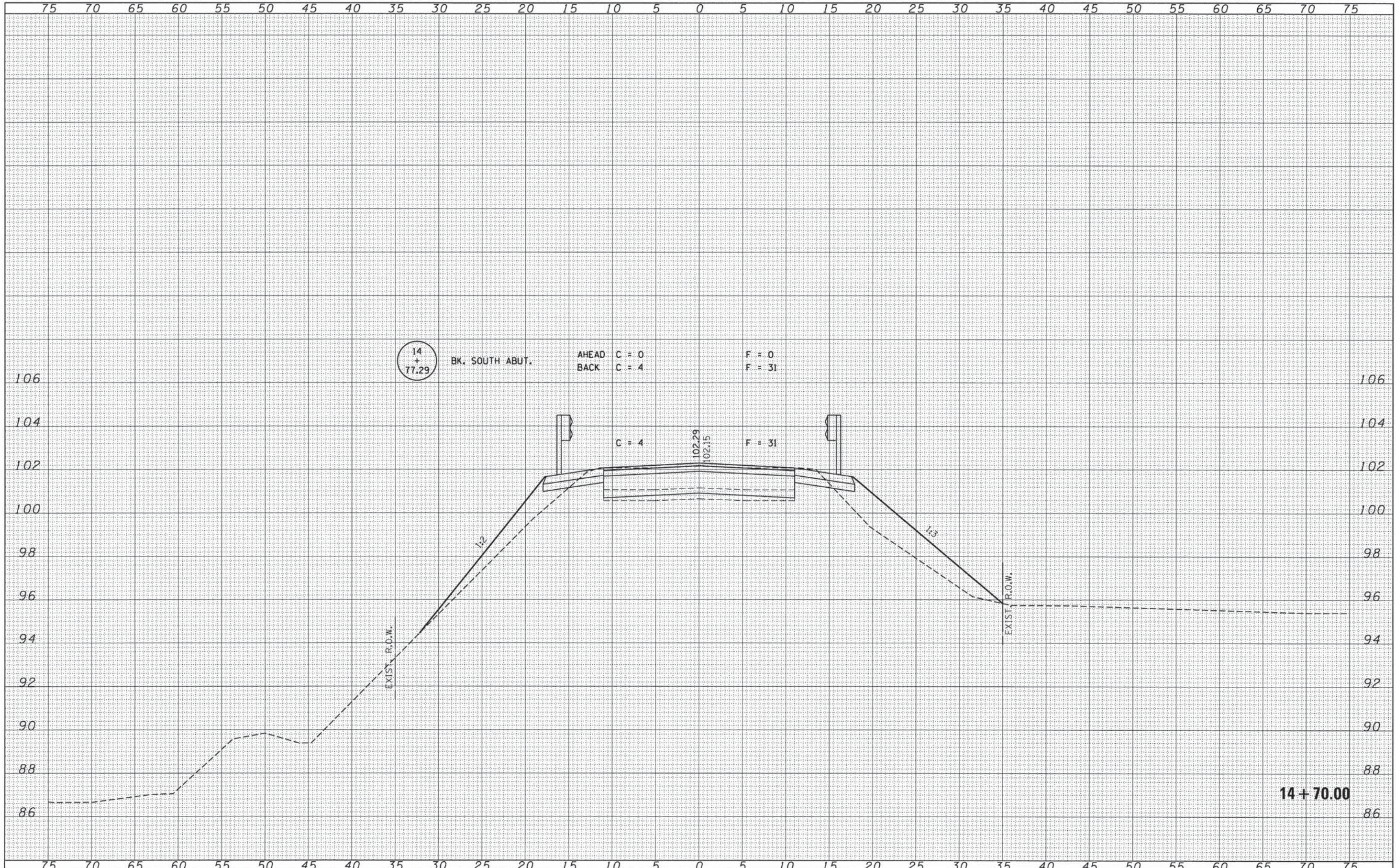
STATION CROSS SECTIONS  
 SCALE: 5H:2V  
 SHEET NO. 3 OF 9 SHEETS  
 STA. 14+25.00 TO STA. 14+50.00

| C.H.               | SECTION        | COUNTY | TOTAL SHEETS                            | SHEET NO. |
|--------------------|----------------|--------|---|-----------|
| 4                  | 14-00124-00-BR | FORD   | 25                                      | 9         |
| CONTRACT NO. 87602 |                |        | ILLINOIS FED. AID PROJECT BRS-0339(112) |           |



|               |    |      |
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| FINAL SURVEY  | BY | DATE |
| BOOKED        |    |      |
| NOTE BOOK     |    |      |
| AREAS CHECKED |    |      |
| NO.           |    |      |

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| ORIGINAL SURVEY | BY | DATE |
| BOOKED          |    |      |
| NOTE BOOK       |    |      |
| AREAS CHECKED   |    |      |
| NO.             |    |      |



FILE NAME = 138294-sht-axs.dgn  
 HAMPTON, LENZINI AND RENWICK, INC.  
 3883 STEVENSON DRIVE, SUITE 301  
 SPRINGFIELD, ILLINOIS 62703  
 ILLINOIS PROFESSIONAL DESIGN FIRM  
 LR / PE / SE CORP. 184.02999

|                       |                  |           |
|-----------------------|------------------|-----------|
| USER NAME =           | DESIGNED - JWF   | REVISED - |
| PLOT SCALE =          | DRAWN - L.G.C.   | REVISED - |
| PLOT DATE = 2/17/2015 | CHECKED - S.W.M. | REVISED - |
|                       | DATE - 02/16/15  | REVISED - |

STATE OF ILLINOIS  
 FORD COUNTY HIGHWAY DEPARTMENT

STATION CROSS SECTIONS

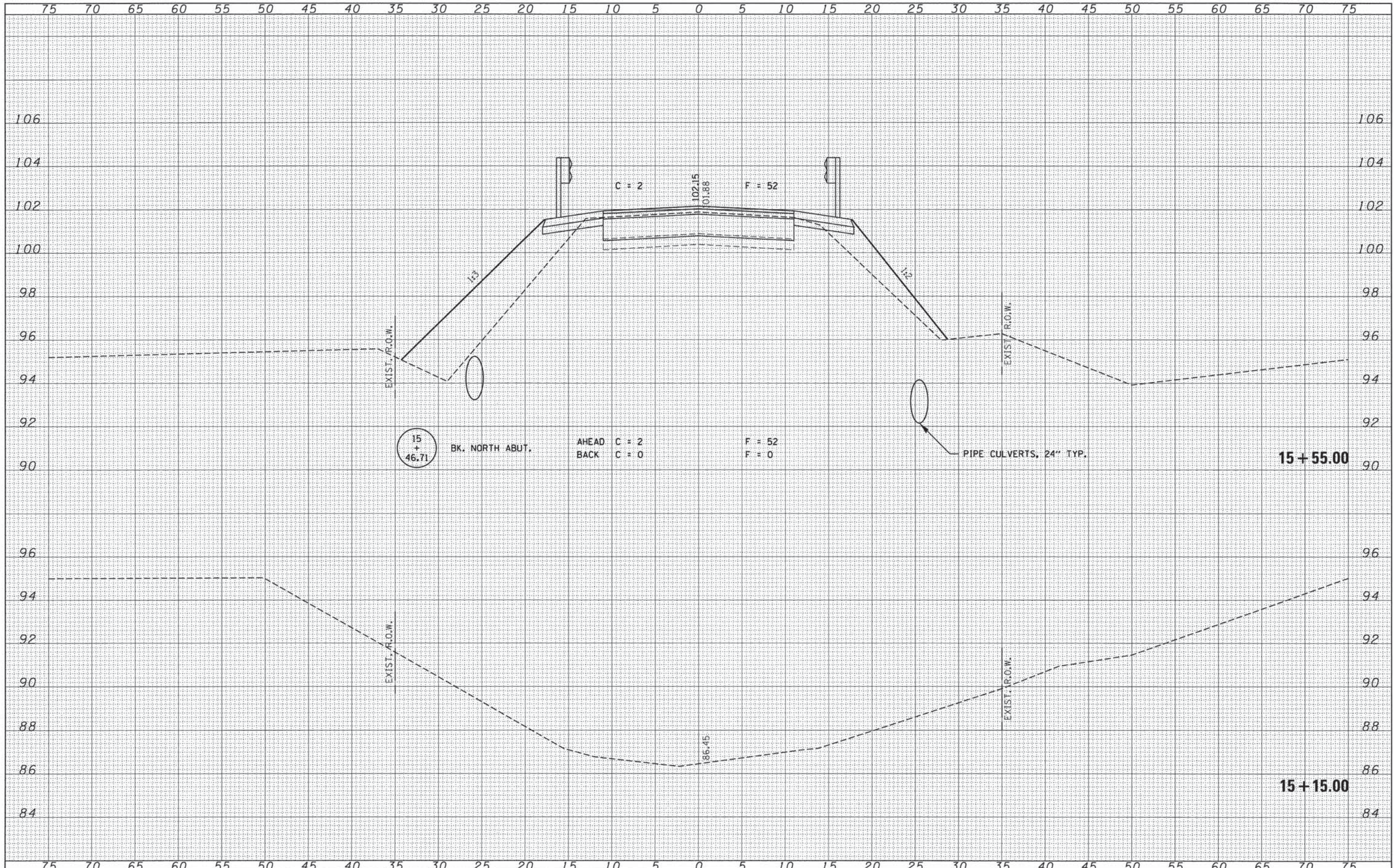
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| C.H.               | SECTION        | COUNTY | TOTAL SHEETS                            | SHEET NO. |
|--------------------|----------------|--------|---|-----------|
| 4                  | 14-00124-00-BR | FORD   | 25                                      | 10        |
| CONTRACT NO. 87602 |                |        | ILLINOIS FED. AID PROJECT BRS-0339(112) |           |



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| DATE         |  |
| BY           |  |
| FINAL SURVEY |  |
| SURVEYED     |  |
| NOTE BOOK    |  |
| TEMPLATE     |  |
| AREAS        |  |
| CHECKED      |  |
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| BY              |  |
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| NOTE BOOK       |  |
| TEMPLATE        |  |
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| CHECKED         |  |
| NO.             |  |

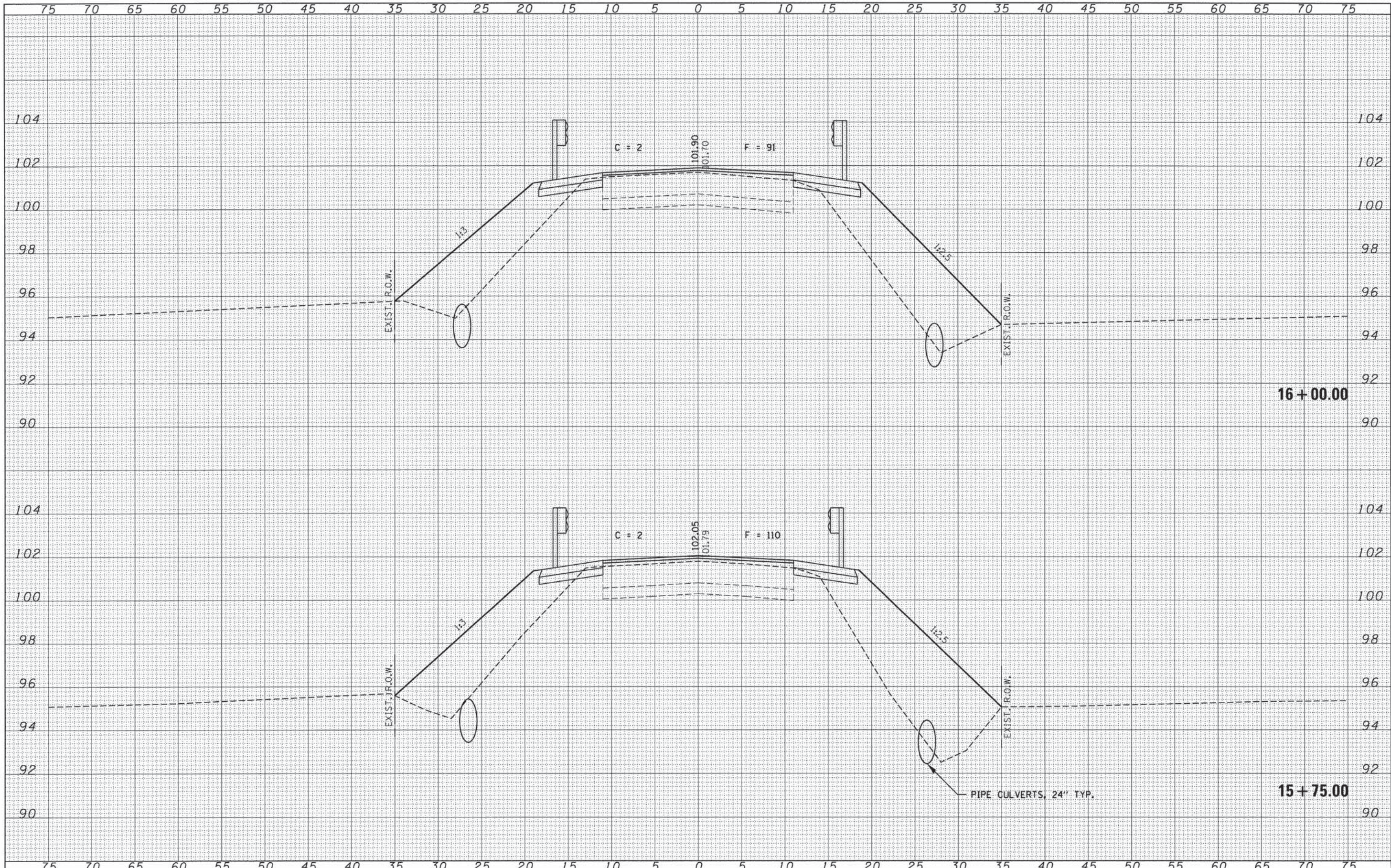


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| FILE NAME = 130294-sht-sxs.dgn   | USER NAME =           | DESIGNED - JWF   | REVISED - | <p align="center"><b>STATE OF ILLINOIS</b><br/><b>FORD COUNTY HIGHWAY DEPARTMENT</b></p> <p align="center"><b>STATION CROSS SECTIONS</b></p> <p>SCALE: 5H:2V    SHEET NO. 5 OF 9 SHEETS    STA. 15+15.00 TO STA. 15+50.00</p> | C.H.                                   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC.<br>3045 STEVENSON DRIVE, SUITE 200<br>SPRINGFIELD, ILLINOIS 62703 | PLOT SCALE =          | DRAWN - L.G.C.   | REVISED - |   | 4                                      | 14-00124-00-BR | FORD   | 25           | 11        |
| <b>HLR</b><br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>L8 / PE / SE CORP. 184.000959                     | PLOT DATE = 2/17/2015 | CHECKED - S.W.M. | REVISED - |   | CONTRACT NO. 87602                     |                |        |              |           |
|  |                       | DATE - 02/16/15  | REVISED - |   | ILLINOIS FED. AID PROJECT BR5-03391121 |                |        |              |           |
|  |                       |                  |           |   |  |                |        |              |           |



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| BY       |  |
| DESIGNED |  |
| DRAWN    |  |
| CHECKED  |  |
| DATE     |  |
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| DATE     |  |
| BY       |  |
| DESIGNED |  |
| DRAWN    |  |
| CHECKED  |  |
| DATE     |  |
| NO.      |  |

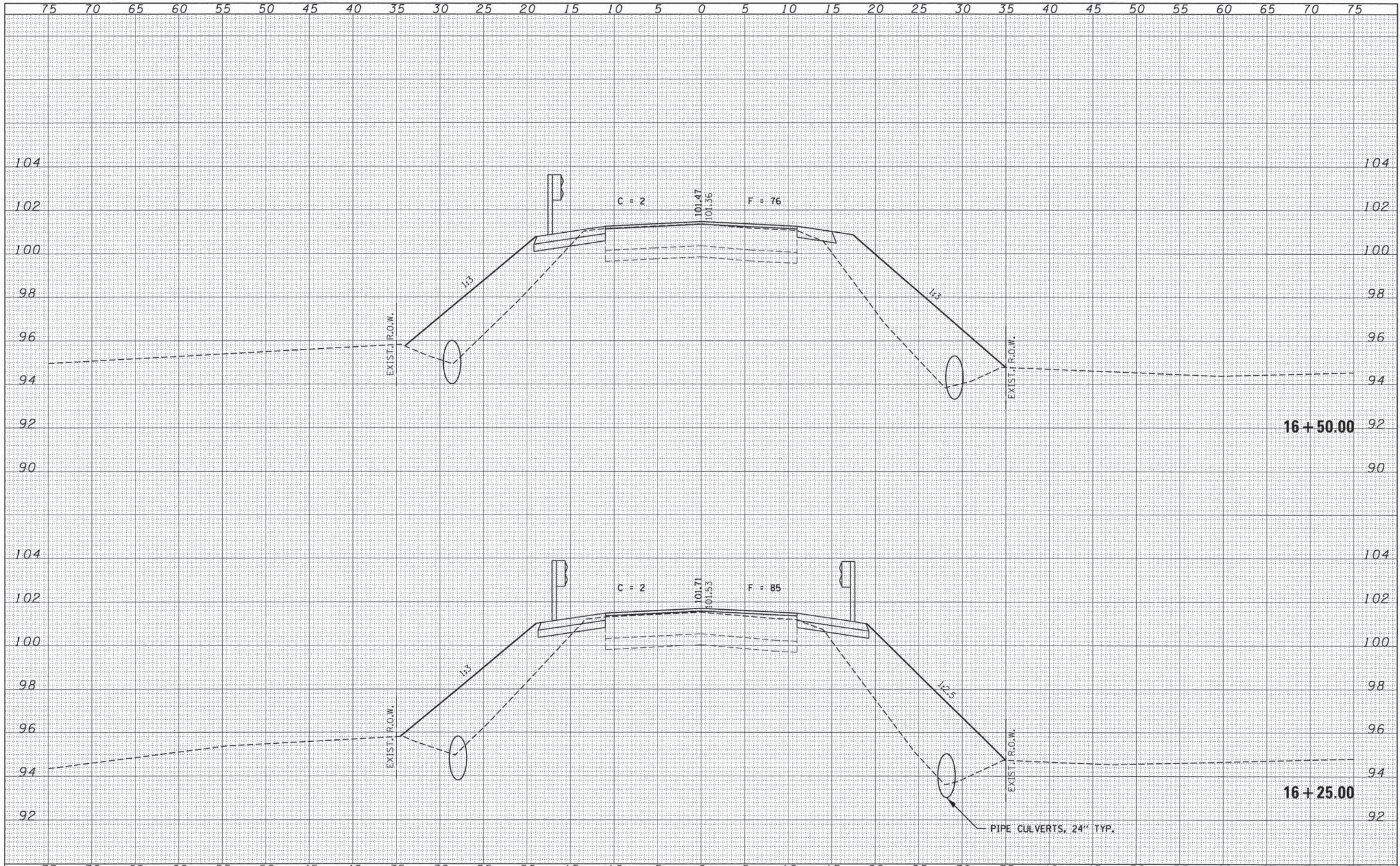


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| HAMPTON, LENZINI AND RENWICK, INC.<br>3045 STEVENSON DRIVE, SUITE 200<br>SPRINGFIELD, ILLINOIS 62761<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>L2 / PE / SE CORP. 194.000959 | PLOT SCALE =          | DRAWN - L.G.C.   | REVISED - |   | 4                                       | 14-00124-00-BR | FORD   | 25           | 12        |
|  | PLOT DATE = 2/17/2015 | CHECKED - S.W.M. | REVISED - |   | CONTRACT NO. 87602                      |                |        |              |           |
|  |                       | DATE - 02/16/15  | REVISED - |   | ILLINOIS FED. AID PROJECT BR5-0339(112) |                |        |              |           |
|  |                       |                  |           |   |   |                |        |              |           |



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| BY        |  |
| DESIGNED  |  |
| DRAWN     |  |
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| DATE      |  |
| FILE NAME |  |
| PROJECT   |  |
| DATE      |  |
| BY        |  |
| DESIGNED  |  |
| DRAWN     |  |
| CHECKED   |  |
| DATE      |  |

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| DATE      |  |
| BY        |  |
| DESIGNED  |  |
| DRAWN     |  |
| CHECKED   |  |
| DATE      |  |
| FILE NAME |  |
| PROJECT   |  |
| DATE      |  |
| BY        |  |
| DESIGNED  |  |
| DRAWN     |  |
| CHECKED   |  |
| DATE      |  |

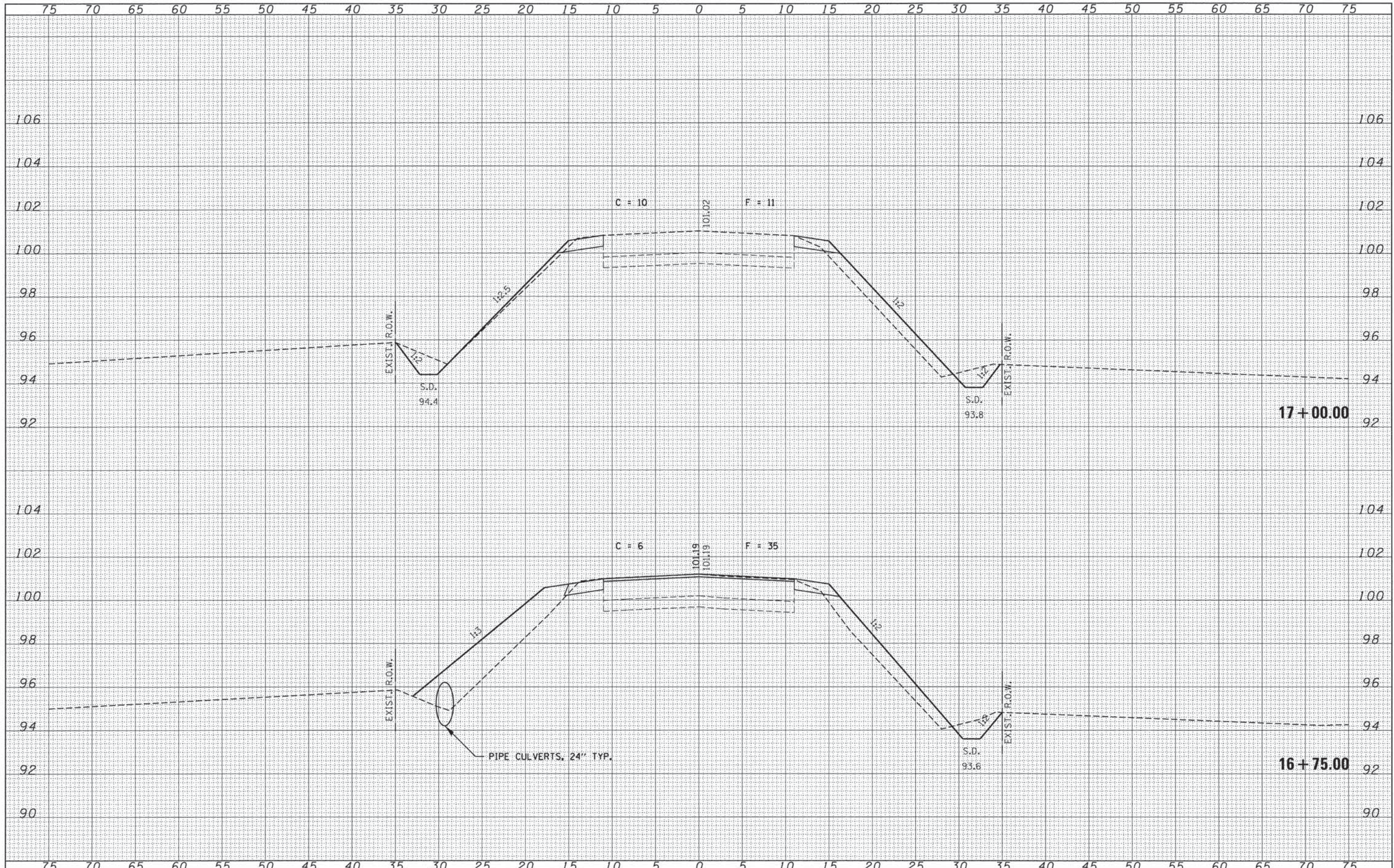


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| HAMPTON, LENZINI AND RENWICK, INC.                                 | PLOT SCALE =          | DRAWN - L.G.C.   | REVISED - |  | 4                                      | 14-00124-00-BR          | FORD   | 25                             | 13        |
| 3885 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62788     | PLOT DATE = 2/17/2015 | CHECKED - S.W.M. | REVISED - |  | CONTRACT NO. 87602                     |                         |        |                                |           |
| ILLINOIS PROFESSIONAL DESIGN FIRM<br>L8 / PE / SE CORP. 184-002989 |                       | DATE - 02/16/15  | REVISED - |  | ILLINOIS FED. AID PROJECT BR5-03391121 |                         |        |                                |           |
|  |                       |                  |           |  | SCALE: 5H:2V                           | SHEET NO. 7 OF 9 SHEETS |        | STA. 16+25.00 TO STA. 16+50.00 |           |



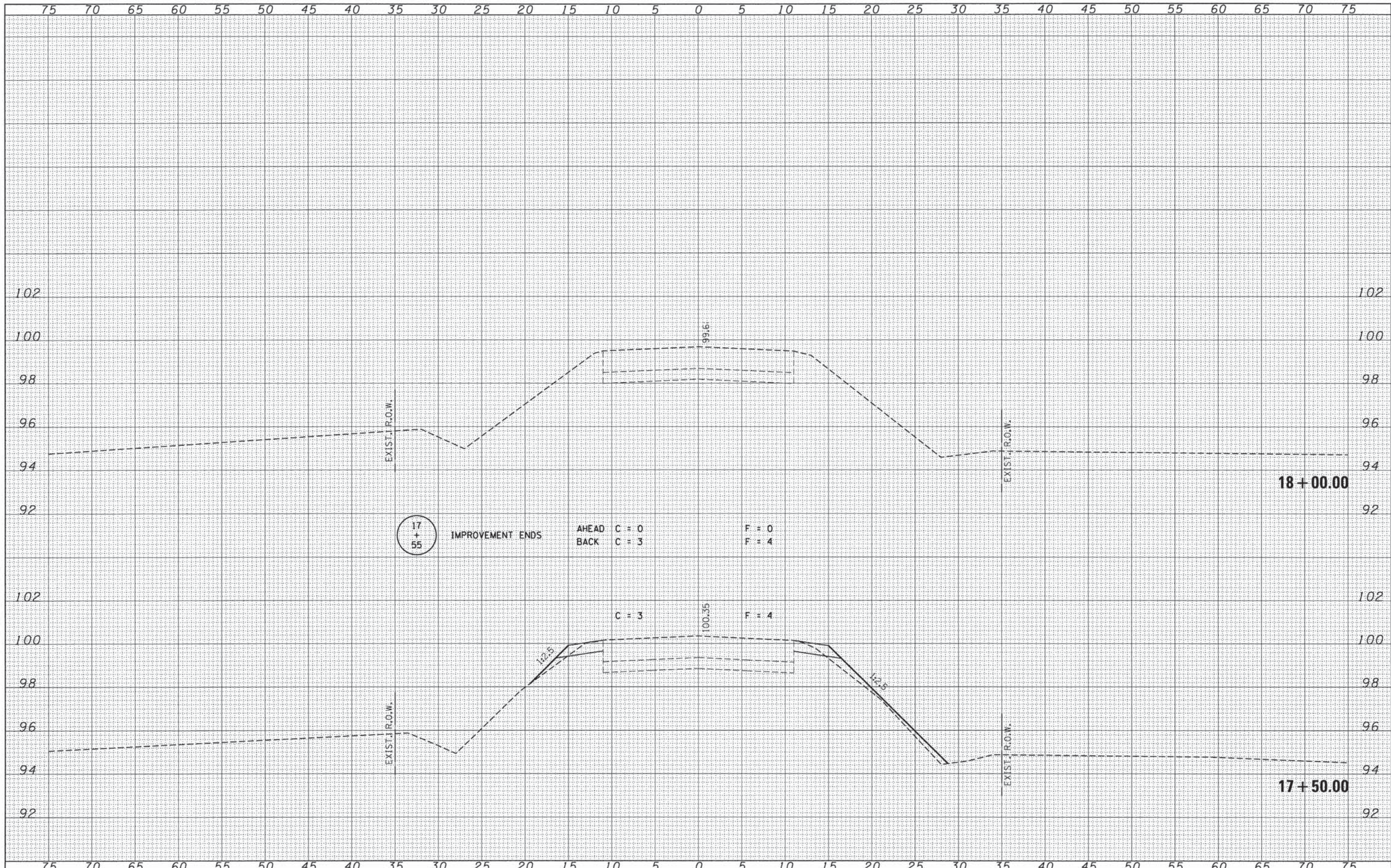
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| DATE          |  |
| BY            |  |
| FINAL SURVEY  |  |
| SURVEYED      |  |
| NOTE BOOK     |  |
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| AREAS CHECKED |  |
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| DATE            |  |
| BY              |  |
| ORIGINAL SURVEY |  |
| SURVEYED        |  |
| NOTE BOOK       |  |
| NO.             |  |
| AREAS CHECKED   |  |
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| FILE NAME = 138294-sht-sxs.dgn   | USER NAME =     | DESIGNED - JWF   | REVISED - | <p align="center"><b>STATE OF ILLINOIS</b><br/><b>FORD COUNTY HIGHWAY DEPARTMENT</b></p> <p align="center"><b>STATION CROSS SECTIONS</b></p> | C.H.   | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC.<br>3038 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62703<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS / PE / SE CORP. 184.000959 | PLOT SCALE =    | DRAWN - L.G.C.   | REVISED - |  | 4  | 14-00124-00-BR | FORD   | 25           | 14        |
| PLOT DATE = 2/17/2015  | DATE - 02/16/15 | CHECKED - S.W.M. | REVISED - |  | CONTRACT NO. 87602   |                |        |              |           |
|  |                 |                  |           |  | SCALE: 5H:2V SHEET NO. 8 OF 9 SHEETS STA. 16+75.00 TO STA. 17+00.00 ILLINOIS FED. AID PROJECT BR5-03391121 |                |        |              |           |





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| BY           |               |
| FINAL SURVEY | SURVEYED      |
| NOTE BOOK    | TEMPLATE      |
| NO.          | AREAS CHECKED |

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| DATE            |               |
| BY              |               |
| ORIGINAL SURVEY | SURVEYED      |
| NOTE BOOK       | TEMPLATE      |
| NO.             | AREAS CHECKED |

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| HAMPTON, LENZINI AND RENWICK, INC.<br>3045 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62703<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS / PE / SE CORP. 184-00099 | PLOT SCALE =          | DRAWN - L.G.C.   | REVISED - |   | 4                                      | 14-00124-00-BR | FORD   | 25           | 15        |
|   | PLOT DATE = 2/17/2015 | CHECKED - S.W.M. | REVISED - |   | CONTRACT NO. 87602                     |                |        |              |           |
|   |                       | DATE - 02/16/15  | REVISED - |   | ILLINOIS FED. AID PROJECT BR5-03391121 |                |        |              |           |
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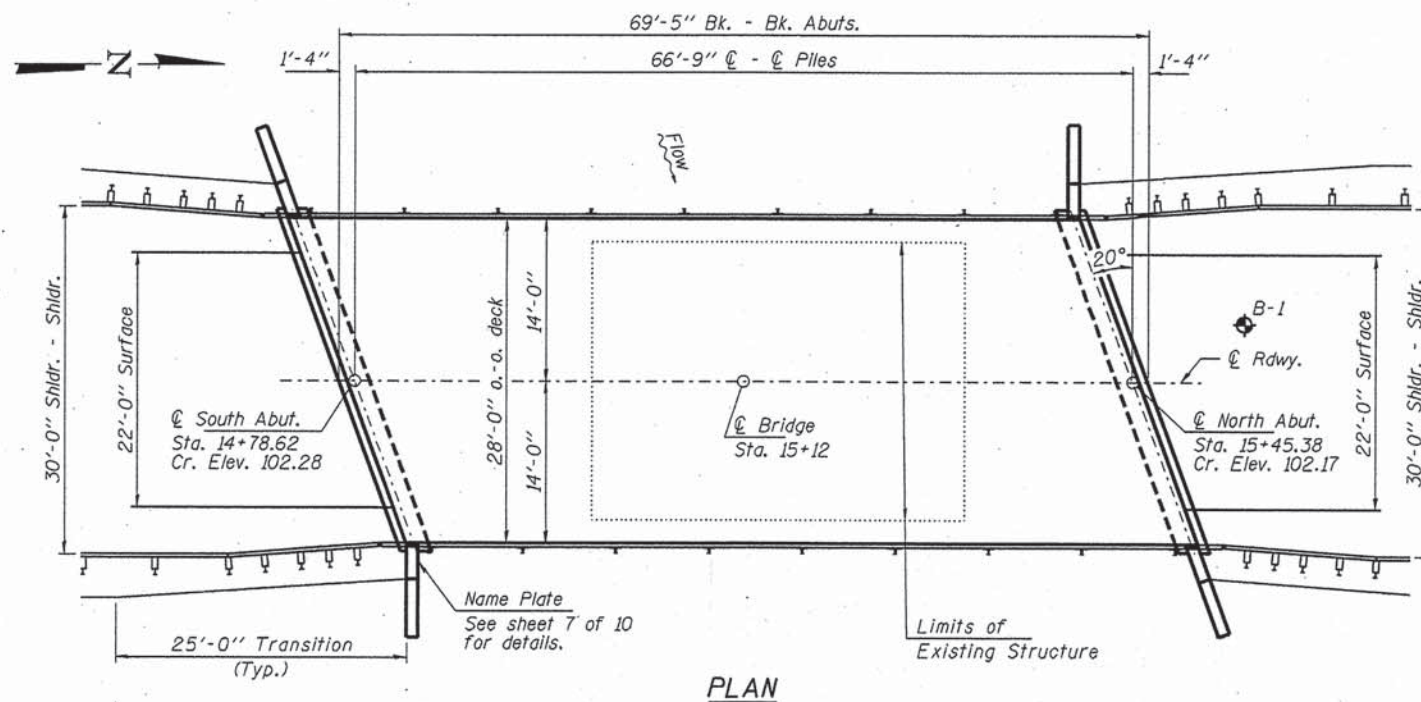
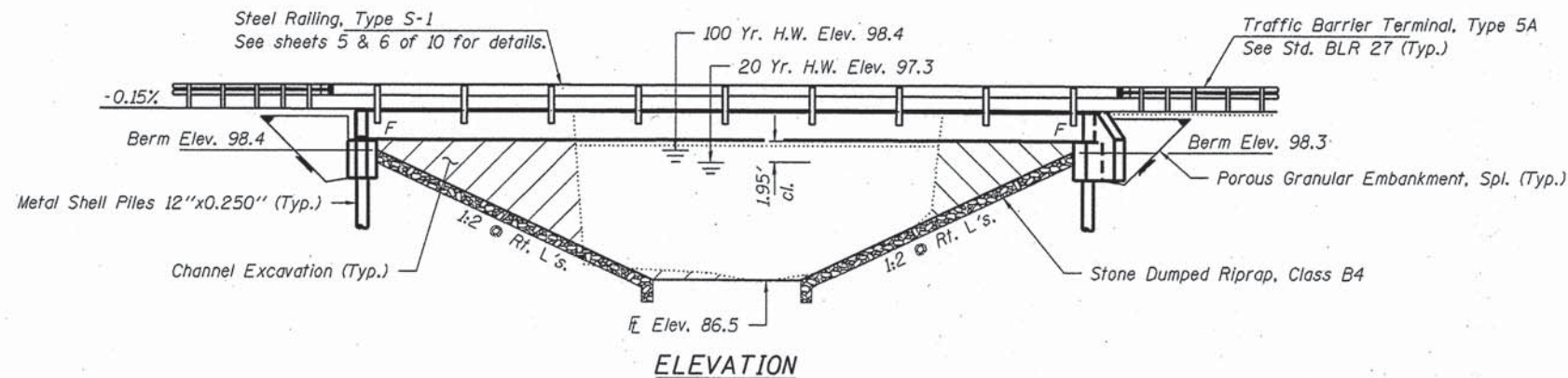


BENCHMARK: NE corner of concrete bridge cap. 12.0' Rt., Sta. 15+30, Elev. 102.22

EXISTING STRUCTURE: Single span bridge with a concrete deck on steel beams with closed timber abutments. 32.0' fc.-fc. abutts.; 24.0' o.-o. deck. Str. No. 027-3011

Structure closed to traffic during construction.

No Salvage



**GENERAL NOTES**

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at South Abutment or approved by the Engineer before ordering the remainder of the abutment.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

All bars to be epoxy coated.

Excavation required to construct the abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.

All proposed construction activities shall be in accordance with Nationwide Permit number 3 of the Department of the Army authorized under Section 404 of the Clean Water Act.

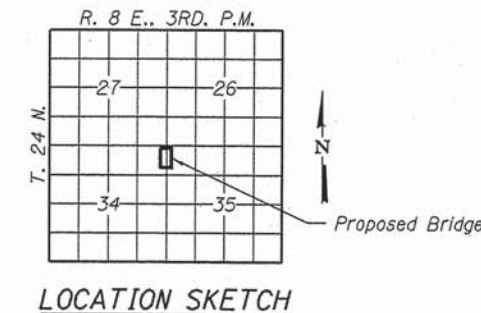
The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.

The abutments shall be backfilled full width with Porous Granular Embankment, Special from the bottom of the abutment cap to the subgrade elevation as directed by the Engineer.

Concrete sealer shall be applied to the designated areas of the abutments.

**INDEX OF STRUCTURE SHEETS**

1. General Plan & Elevation
2. Riprap Details
3. 27"x48" PPC Deck Beam
4. 27"x48" PPC Deck Beam Details
5. Superstructure Details
6. Steel Railing, Type S-1
7. South Abutment
8. North Abutment
9. Metal Shell Pile Details
10. Borings



BUILT 2011 BY  
FORD COUNTY  
SEC. 14-00124-00-BR  
C.H. 4  
STR. NO. 027-3454  
LOADING HL-93

**NAME PLATE**  
See Std. 515001

**DESIGN SPECIFICATIONS**

2012 AASHTO LRFD Bridge Design Specifications, 6th Edition with 2013 Interims.

**LOADING HL-93**

Allow 50#/sq. ft. for future wearing surface.

**DESIGN STRESSES**

**FIELD UNITS**

f'c = 3,500 psi  
fy = 60,000 psi (Reinf.)

**PRECAST PRESTRESSED UNITS**

f'c = 6,000 psi  
f'ci = 5,000 psi  
fpu = 270,000 psi (1/2" low lax. strands)  
fpbt = 201,960 psi (1/2" low lax. strands)  
fy = 60,000 psi (Reinf.)

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. (S<sub>D1</sub>) = 0.087g  
Design Spectral Acceleration at 0.2 sec. (S<sub>D5</sub>) = 0.154g  
Soil Site Class = C

**DESIGN SCOUR ELEVATION TABLE**

|                              |          |          |
|------------------------------|----------|----------|
| Design Scour Elevation (ft.) | S. Abut. | N. Abut. |
|                              | 95.8     | 95.7     |

**WATERWAY INFORMATION**

|            |  |           |          |  |  |            |               |
|------------|--|-----------|----------|--|--|------------|---------------|
| Flood      |  | Freq. Yr. | Q C.F.S. | Opening Sq. Ft.                                    | Natural H.W.E.                                     | Head - Ft. | Headwater El. |
| Design     |  | 10        | 1250     | 260  | 96.76  | 0.56       | 97.32         |
| Base       |  | 20        | 1580     | 280  | 97.29  | 0.76       | 98.05         |
| Max. Calc. |  | 100       | 2400     | 320  | 98.42  | 1.14       | 99.56         |
|            |  |           |          | Existing Low Grade Elev. 98.0 @ Sta. 20+00         | Proposed Low Grade Elev. 98.0 @ Sta. 20+00         |            |               |
|            |  |           |          | 10 Year Velocity through Existing Bridge = 4.8 fps | 10 Year Velocity through Proposed Bridge = 3.8 fps |            |               |

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO LRFD Specifications."

Steven W. McGinnison 02/16/2015  
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2016

**TOTAL BILL OF MATERIAL**

| ITEM  | UNIT    | SUPER | SUB   | TOTAL |
|---|---------|-------|-------|-------|
| Channel Excavation                                  | Cu. Yd. |       |       | 320   |
| Stone Dumped Riprap, Class B4                       | Ton     |       |       | 280   |
| Hot-Mix Asphalt Surface Course, Mix "C", N50        | Ton     |       |       | 25    |
| Removal of Existing Structures                      | Each    |       |       | 1     |
| Concrete Structures                                 | Cu. Yd. |       | 27.2  | 27.2  |
| Precast Prestressed Concrete Deck Beams (27" Depth) | Sq. Ft. | 1,904 |       | 1,904 |
| Reinforcement Bars, Epoxy Coated                    | Pound   |       | 2,800 | 2,800 |
| Steel Railing, Type S-1                             | Foot    | 144   |       | 144   |
| Furnishing Metal Shell Piles 12"x 0.250"            | Foot    |       | 450   | 450   |
| Driving Piles                                       | Foot    |       | 450   | 450   |
| Test Pile Metal Shells                              | Each    |       | 1     | 1     |
| Name Plates   | Each    |       | 1     | 1     |
| Waterproofing Membrane System                       | Sq. Yd. | 212   |       | 212   |
| Portland Cement Mortar Fairing Course               | Foot    | 102   |       | 102   |
| Porous Granular Embankment, Special                 | Ton     |       |       | 140   |
| Concrete Sealer                                     | Sq. Ft. |       |       | 154   |

|  |                   |                   |           |
|--|-------------------|-------------------|-----------|
| FILE NAME = 130294-ahb-bridge.dgn  | USER NAME =       | DESIGNED - L.A.P. | REVISED - |
| HAMPTON, LENZENI AND RENWICK, INC.<br>2011 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62763 | DESIGNED - L.A.P. | CHECKED - S.W.M.  | REVISED - |
| PLLOT SCALE =  | DESIGNED - L.A.P. | DRAWN - D.A.B.    | REVISED - |
| PLLOT DATE = 4/27/2015   | DESIGNED - L.A.P. | CHECKED - S.W.M.  | REVISED - |

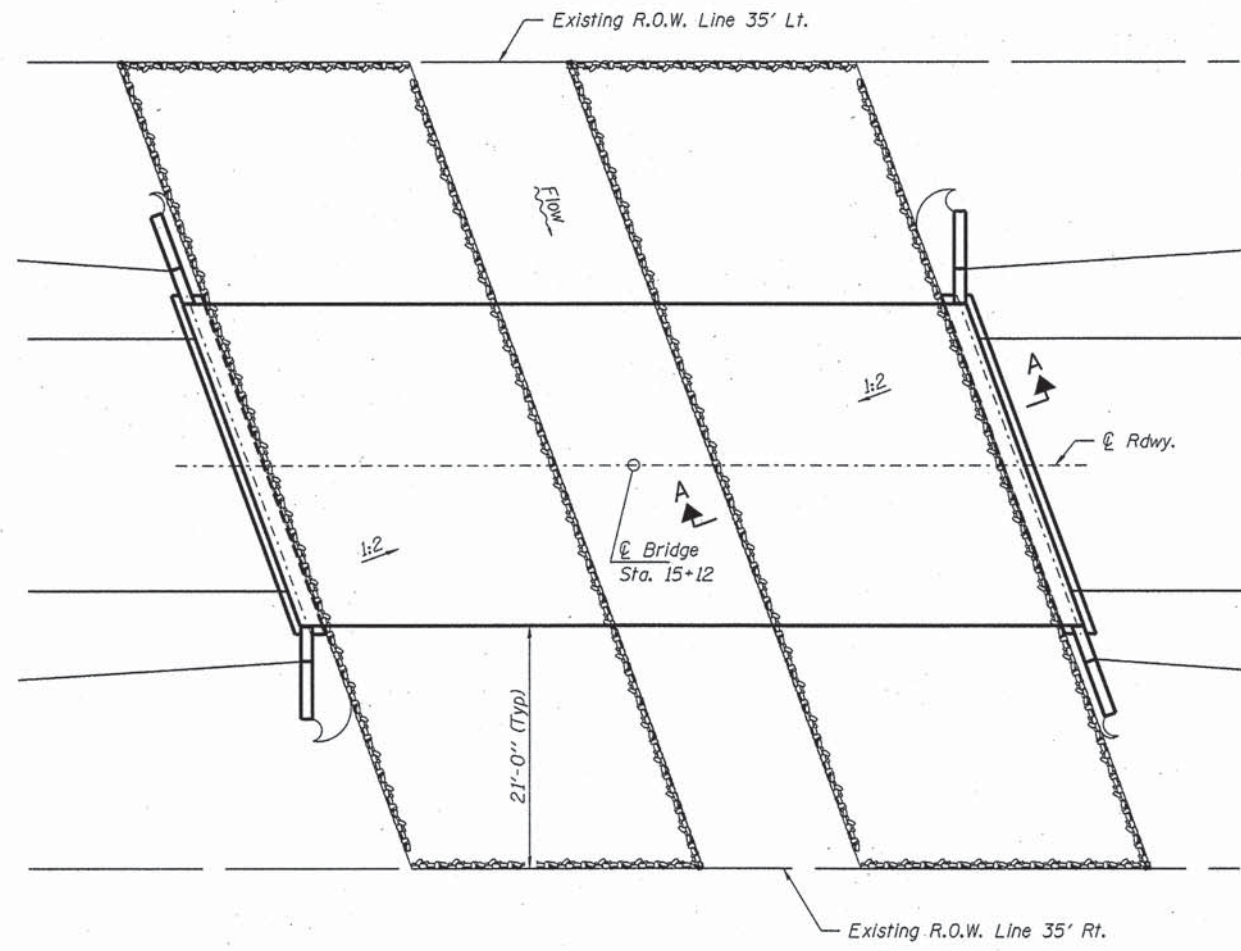
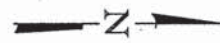
STATE OF ILLINOIS  
FORD COUNTY HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION  
STRUCTURE NO. 027-3454

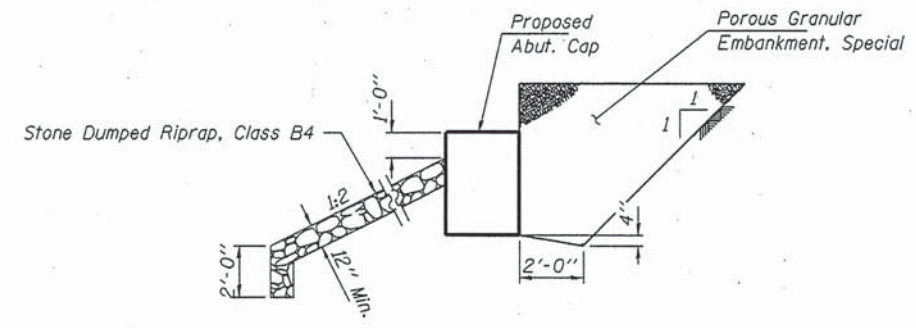
SHEET NO. 1 OF 10 SHEETS

| C.H.                                   | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|--|----------------|--------|--------------------|-----------|
| 4                                      | 14-00124-00-BR | FORD   | 25                 | 16        |
| ELLIOTT ROAD                           |                |        | CONTRACT NO. 87602 |           |
| ILLINOIS FED. AID PROJECT BRS-03391122 |                |        |                    |           |





**RIPRAP LAYOUT**

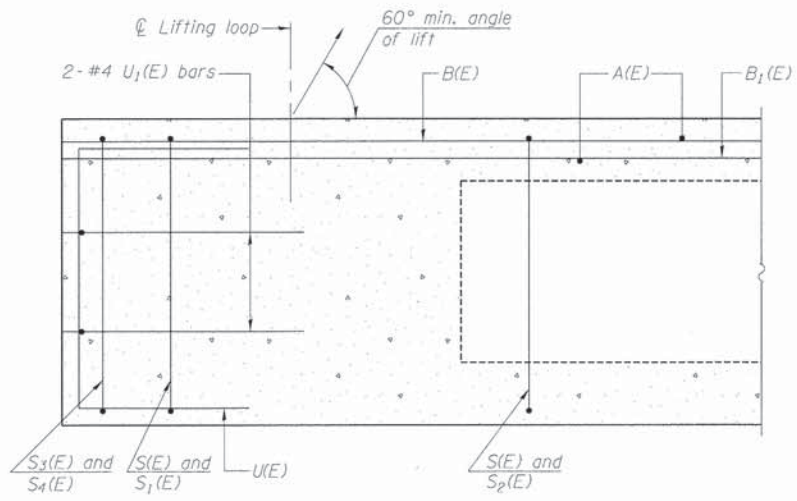


**SECTION A-A**

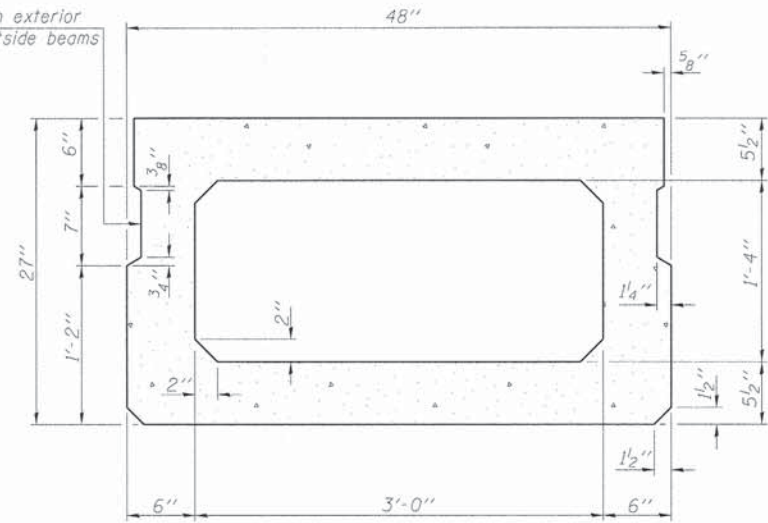
Note: See Special Provisions for Stone Dumped Riprap, Class B4.

|   |                       |                   |           |   |  |                          |                |  |              |           |
|---|-----------------------|-------------------|-----------|---|--|--------------------------|----------------|--|--------------|-----------|
| FILE NAME = 130294-aht-bridge.dgn   | USER NAME =           | DESIGNED - L.A.P. | REVISED - | <b>STATE OF ILLINOIS<br/>FORD COUNTY HIGHWAY DEPARTMENT</b> | <b>RIPRAP DETAILS<br/>STRUCTURE NO. 027-3454</b> | C.H.                     | SECTION        | COUNTY                                   | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC.<br>5001 STEVENSON DRIVE SUITE 107<br>SPRINGFIELD, ILLINOIS 62703 | PLOT SCALE =          | CHECKED - S.W.M.  | REVISED - |   |  | 4                        | 14-00124-00-BR | FORD                                     | 25           | 17        |
| <b>HLR</b> ILLINOIS PROFESSIONAL DESIGN FIRM<br>13 / P.C. INC. CORP. 18420919                       | PLOT DATE = 4/27/2015 | DRAWN - D.A.B.    | REVISED - |   |  | ELLIOTT ROAD             |                | CONTRACT NO. 87602                       |              |           |
|   |                       | CHECKED - S.W.M.  | REVISED - |   |  | SHEET NO. 2 OF 10 SHEETS |                | [ILLINOIS] FED. AID PROJECT BRS-03391127 |              |           |

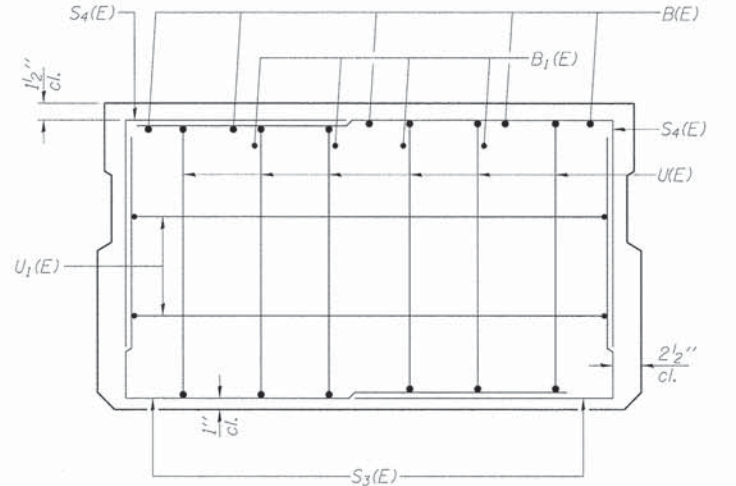




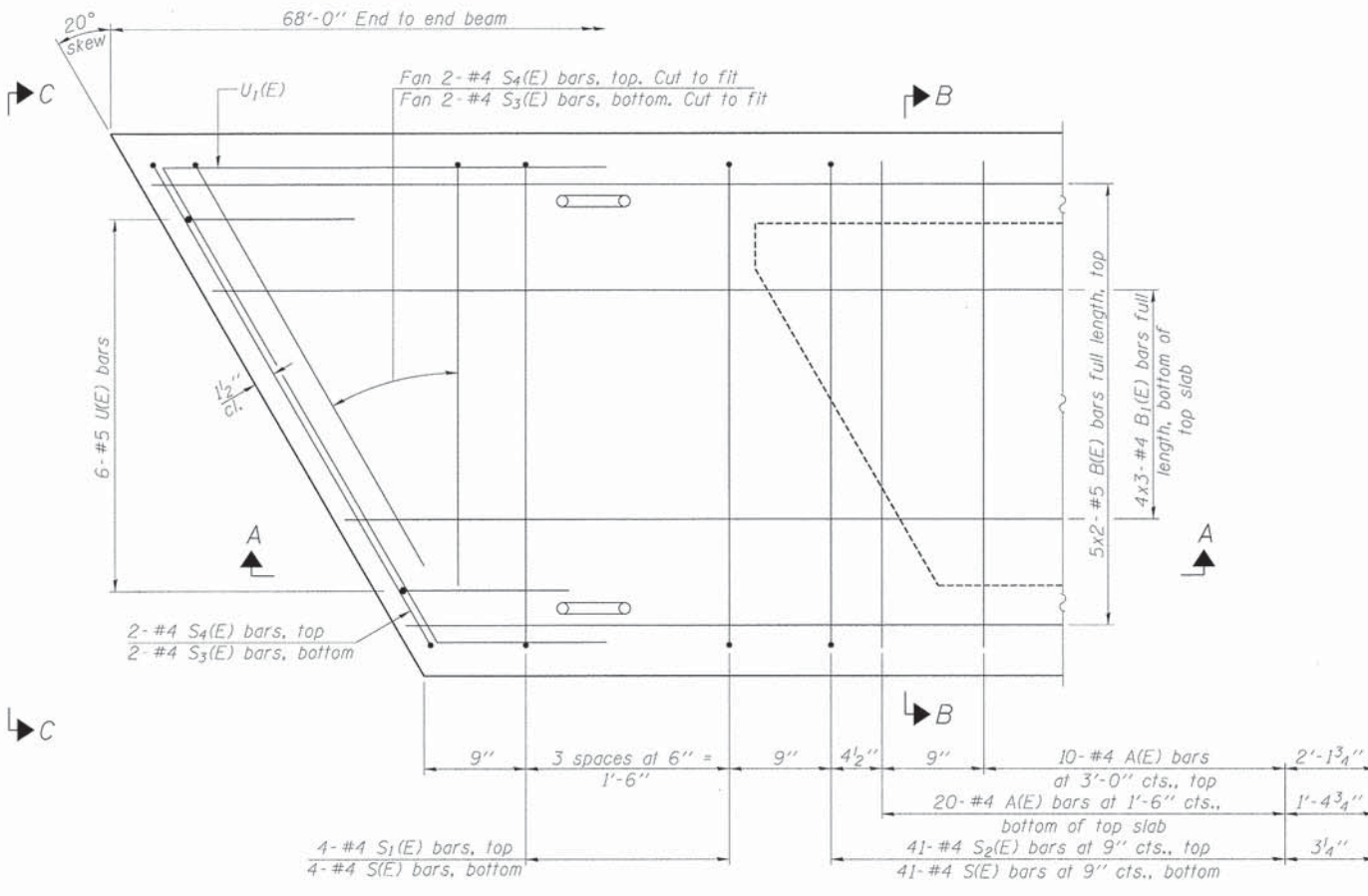
SECTION A-A



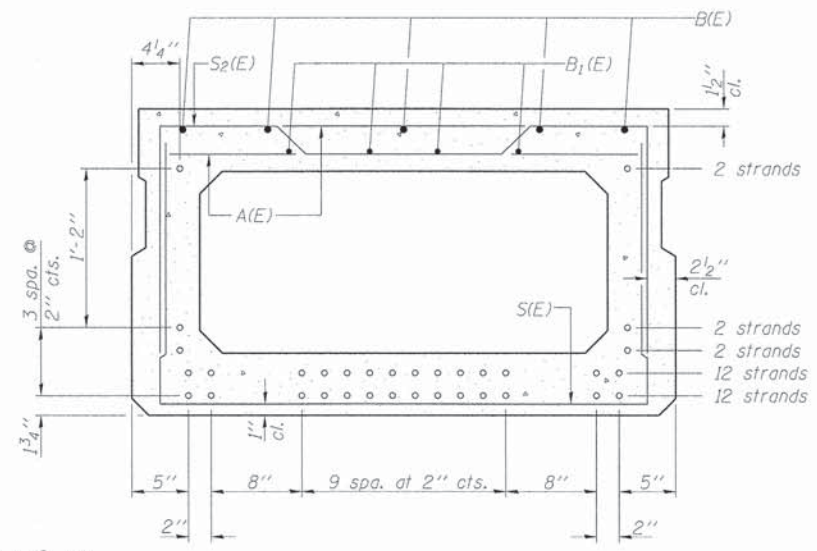
SECTION B-B  
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B

(Showing reinforcement and permissible strand locations)  
 Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST  
ONE BEAM ONLY

(For information only)

| Bar   | No. | Size | Length  | Shape |
|-------|-----|------|---------|-------|
| A(E)  | 62  | #4   | 3'-7"   | —     |
| B(E)  | 10  | #5   | 35'-2"  | —     |
| B1(E) | 12  | #4   | 23'-11" | —     |
| S(E)  | 90  | #4   | 7'-5"   | ┌     |
| S1(E) | 8   | #4   | 6'-11"  | ┌     |
| S2(E) | 82  | #4   | 7'-2"   | ┌     |
| S3(E) | 8   | #4   | 4'-9"   | ┌     |
| S4(E) | 8   | #4   | 4'-6"   | ┌     |
| U(E)  | 12  | #5   | 4'-6"   | ┌     |
| U1(E) | 4   | #4   | 7'-6"   | ┌     |

Note: See sheets 3 & 4 of 9 for additional details and Bill of Material.

Notes:  
 Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.  
 Bars indicated thus 5x2-#5 etc. indicates 5 lines of bars with 2 lengths per line.

MINIMUM BAR LAP  
 #4 bar = 2'-0"  
 #5 bar = 2'-6"

PD-2748-R 7-1-10

|  |                       |                   |           |
|--|-----------------------|-------------------|-----------|
| FILE NAME = 138294-sht-br1.dgn   | USER NAME =           | DESIGNED - L.A.P. | REVISED - |
| HAMPTON, LENZINI AND RENWICK, INC.<br>3885 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62763 | PLOT SCALE =          | CHECKED - S.W.M.  | REVISED - |
| ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS / PE / SE CORP. 184.000859                                   | PLOT DATE = 2/17/2015 | DRAWN - D.A.B.    | REVISED - |
|  |                       | CHECKED - S.W.M.  | REVISED - |

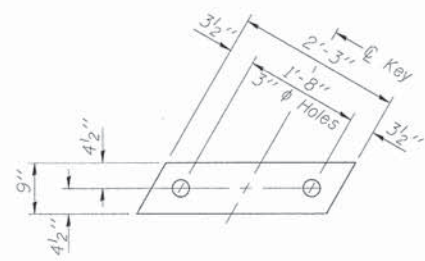
STATE OF ILLINOIS  
FORD COUNTY HIGHWAY DEPARTMENT

27" x 48" PPC DECK BEAM  
STRUCTURE NO. 027-3454

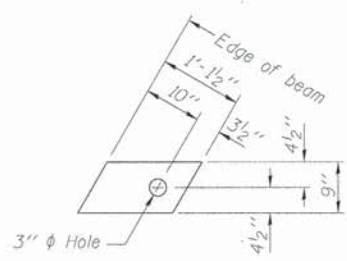
SHEET NO. 3 OF 10 SHEETS

| C.H.                                     | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|--|----------------|--------|--------------------|-----------|
| 4  | 14-00124-00-BR | FORD   | 25                 | 18        |
| ELL10TT ROAD                             |                |        | CONTRACT NO. 87602 |           |
| [ILLINOIS] FED. AID PROJECT BRS-03391121 |                |        |                    |           |





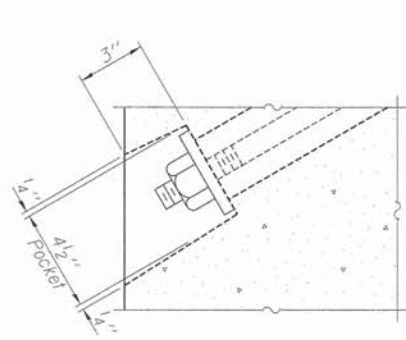
**FABRIC BEARING PAD**  
(Interior - 12 Required)



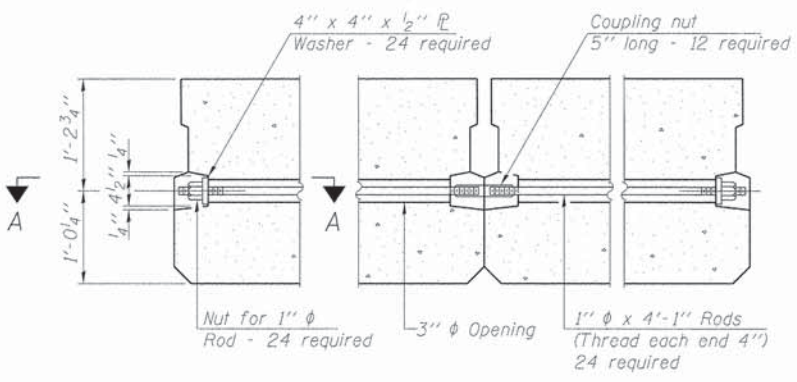
**FABRIC BEARING PAD**  
(Exterior - 4 Required)

**Notes:**  
All bearing pads shall be 1" thick.  
Omit holes when using expansion bearings.  
Expansion bearing pad shall be bonded to the substructure.

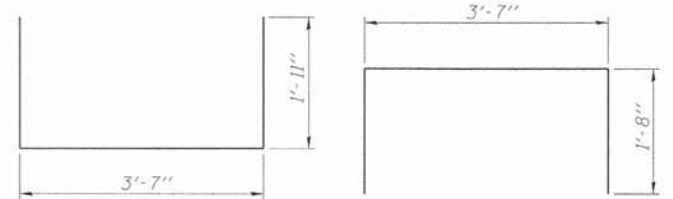
**FIXED**



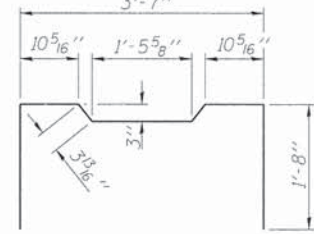
**SECTION A-A**



**TYPICAL TRANSVERSE TIE ASSEMBLY**



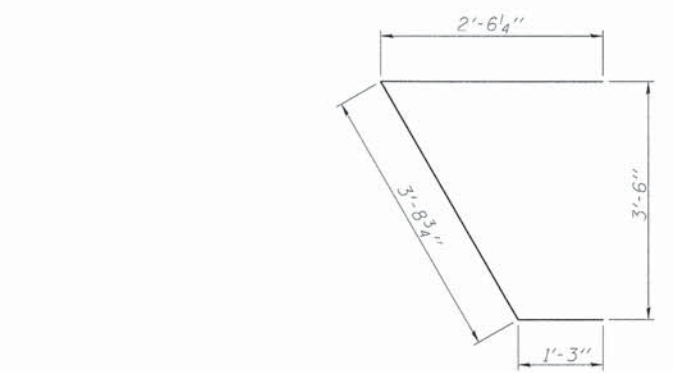
**BAR S(E)**



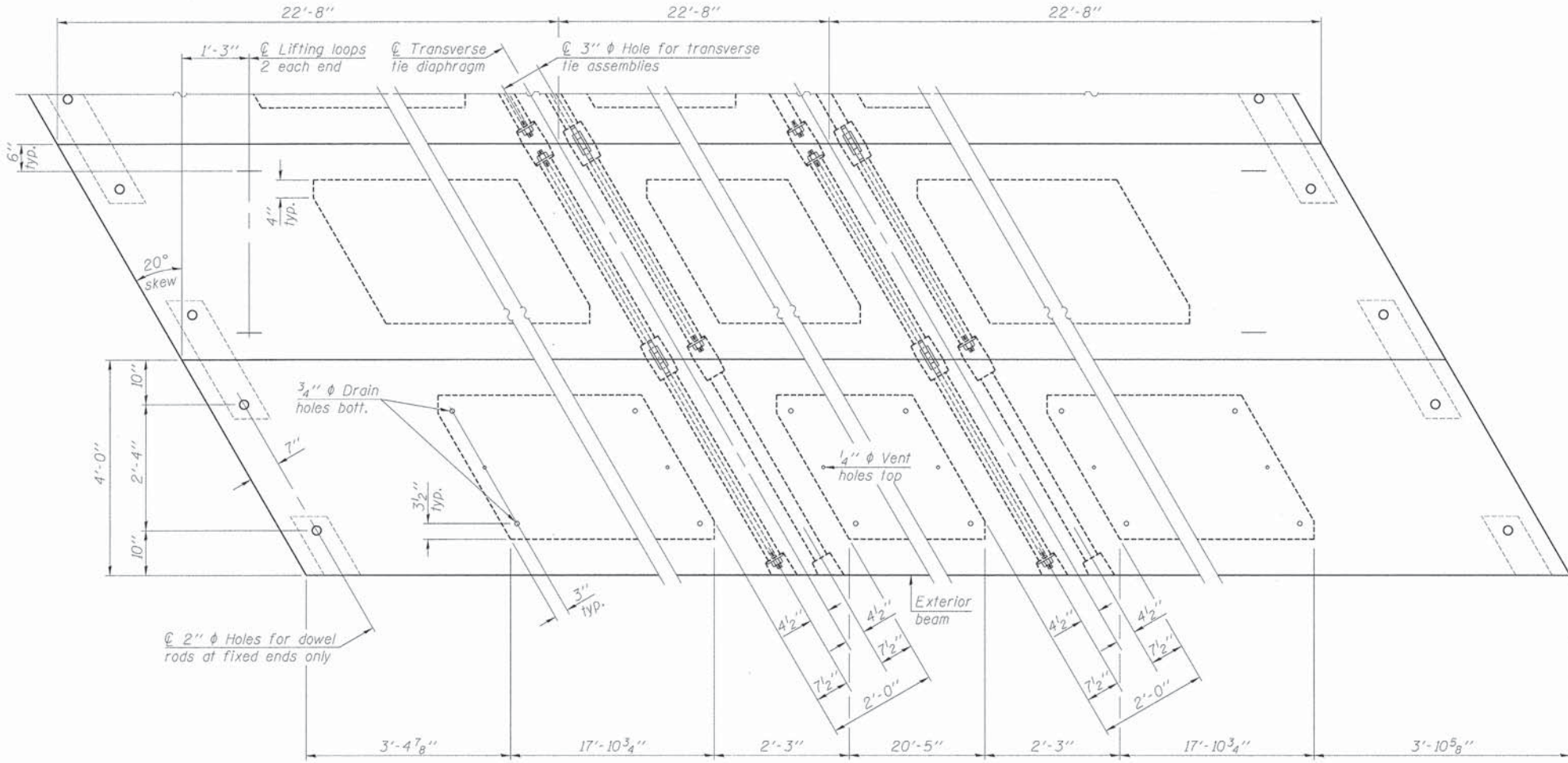
**BAR S2(E)**



**BAR S4(E)**



**BAR U1(E)**

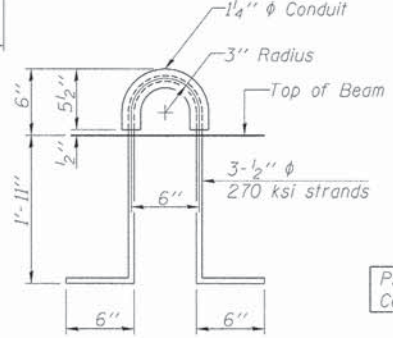


**PLAN VIEW**

**NOTES**

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.  
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).  
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.  
A minimum 2 1/2" diameter lifting pin shall be used to engage the lifting loops during handling.  
Corrosion Inhibitor, per Article 1020.05(b)(12) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.  
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.  
Compressive strength of prestressed concrete at release, f'ci, shall be 5000 psi.  
Reinforcement bars designated (E) shall be epoxy coated.

Note: Connect beams in pairs with the transverse tie configuration shown.



**LIFTING LOOP DETAIL**

**BILL OF MATERIAL**

|   |         |       |
|---|---------|-------|
| Precast Prestressed Conc. Deck Bms. (27" depth) | Sq. Ft. | 1,904 |
|---|---------|-------|

PD-2748-RD 7-1-10

|  |               |                   |           |
|--|---------------|-------------------|-----------|
| FILE NAME = 138294-sht-brIDGE.dgn  | USER NAME =   | DESIGNED - L.A.P. | REVISED - |
| HAMPTON, LENZINI AND RENWICK, INC.<br>3585 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62733<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS / PE / SE CORP. 184.000959 | PLLOT SCALE = | CHECKED - S.W.M.  | REVISED - |
| PLLOT DATE = 2/17/2015   |               | DRAWN - D.A.B.    | REVISED - |
|  |               | CHECKED - S.W.M.  | REVISED - |

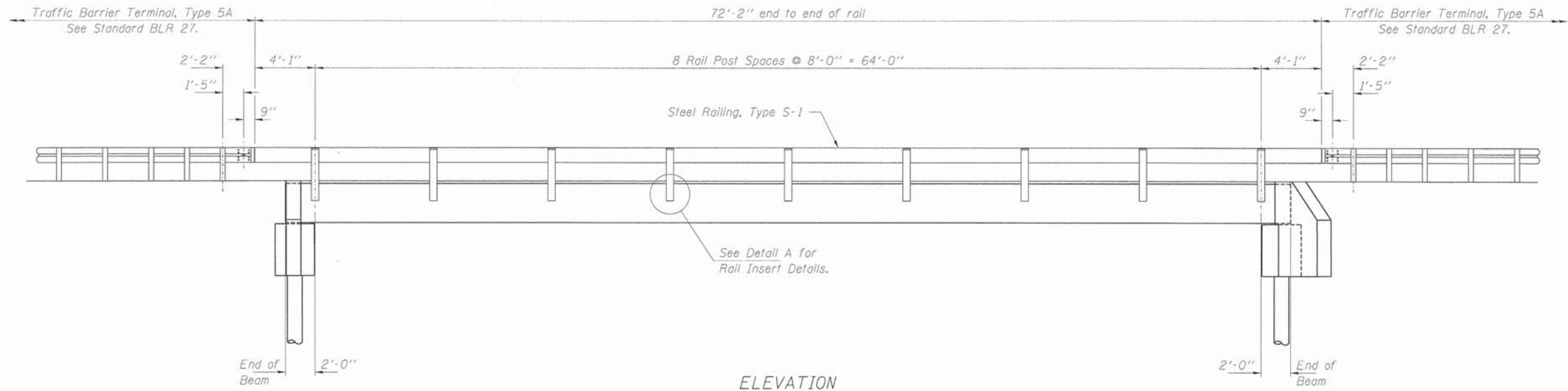
**STATE OF ILLINOIS  
FORD COUNTY HIGHWAY DEPARTMENT**

**17" x 48" PPC DECK BEAM DETAILS  
STRUCTURE NO. 027-3454**

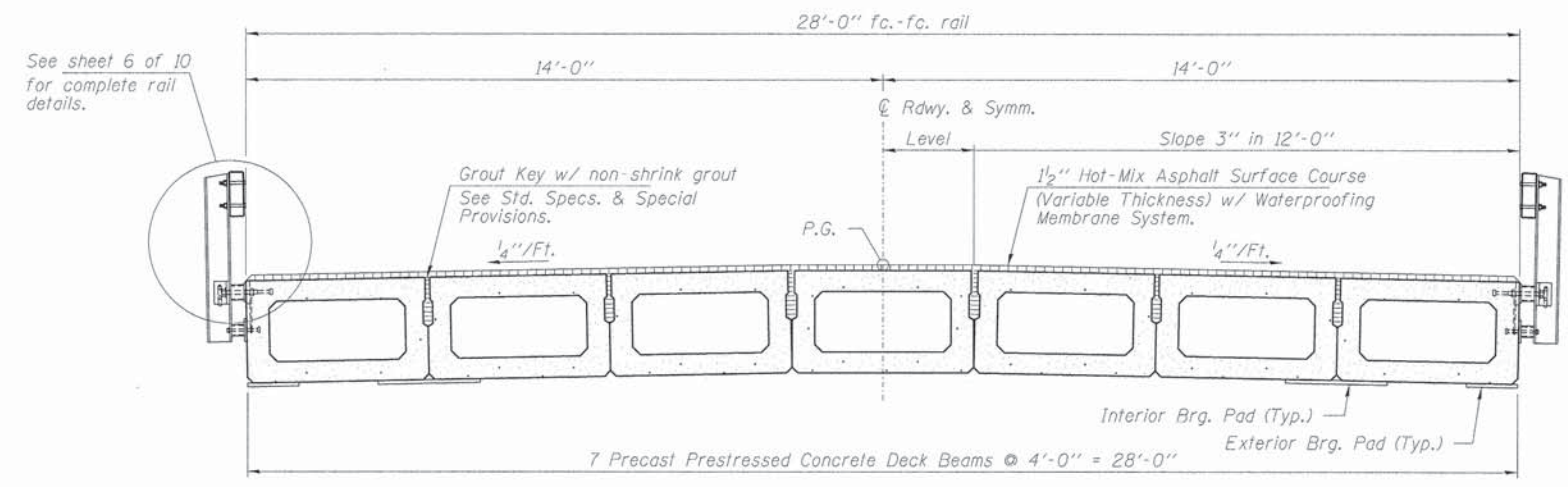
SHEET NO. 4 OF 10 SHEETS

|  |                |                    |              |           |
|--|----------------|--------------------|--------------|-----------|
| C.H.                                   | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
| 4                                      | 14-00124-00-BR | FORD               | 25           | 19        |
| ELLIOTT ROAD                           |                | CONTRACT NO. 87602 |              |           |
| ILLINOIS FED. AID PROJECT BRS-03391121 |                |                    |              |           |

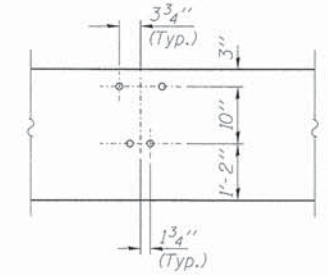




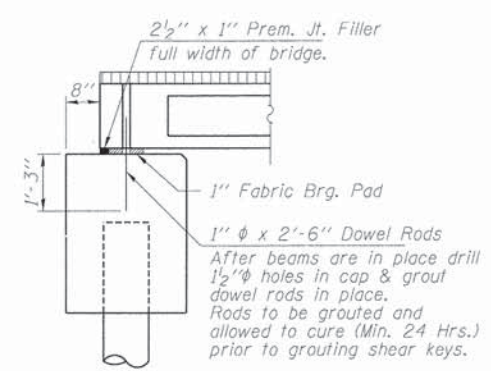
**ELEVATION**  
Showing Rail Post Spaces  
See sheet 6 of 10 for Railing Details.



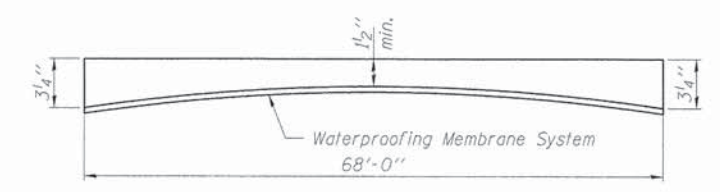
**CROSS SECTION**  
See sheets 3 & 4 of 10 for Superstructure.



**DETAIL A**



**SECTION AT ABUTMENTS**  
@ Rt. L's



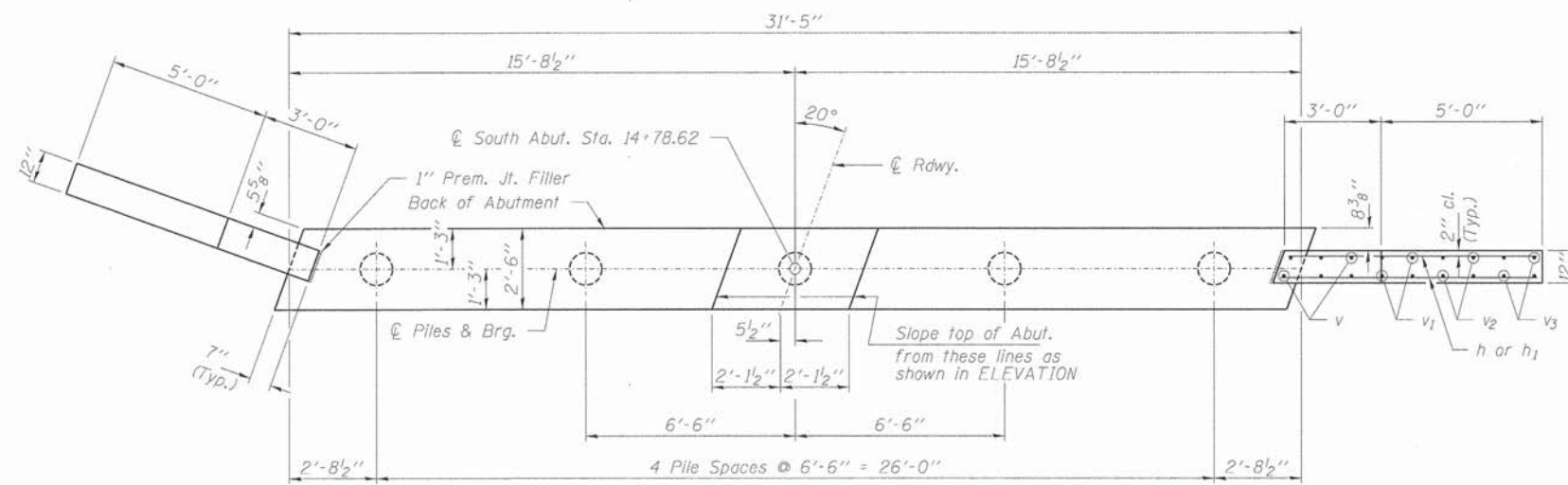
**ANTICIPATED HMA WEARING SURFACE PROFILE**  
(For information only)

|   |                       |                   |           |   |  |                          |                |        |              |           |  |
|---|-----------------------|-------------------|-----------|---|--|--------------------------|----------------|--------|--------------|-----------|--|
| FILE NAME = 138294-sht-bridge.dgn   | USER NAME =           | DESIGNED - L.A.P. | REVISED - | <b>STATE OF ILLINOIS<br/>FORD COUNTY HIGHWAY DEPARTMENT</b> | <b>SUPERSTRUCTURE DETAILS<br/>STRUCTURE NO. 027-3454</b> | C.H.                     | SECTION        | COUNTY | TOTAL SHEETS | SHEET NO. |  |
| <b>HAMPTON, LENZINI AND RENWICK, INC.</b><br>3340 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62763<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>L3 / PE / SE CORP. 184.000859 | PLOT SCALE =          | CHECKED - S.W.M.  | REVISED - |   |  | 4                        | 14-00124-00-BR | FORD   | 25           | 20        |  |
|   | PLOT DATE = 2/17/2015 | DRAWN - D.A.B.    | REVISED - |   |  | ELLIOTT ROAD             |                |        |              |           |  |
|   |                       | CHECKED - S.W.M.  | REVISED - |   |  | CONTRACT NO. 87602       |                |        |              |           |  |
|   |                       |                   |           |   |  | SHEET NO. 5 OF 10 SHEETS |                |        |              |           |  |

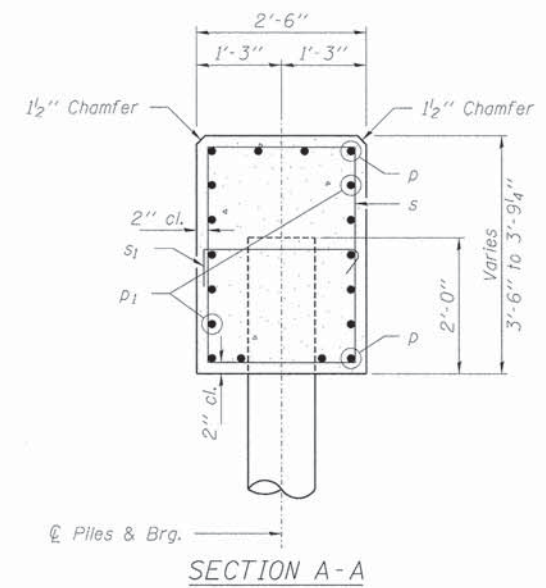




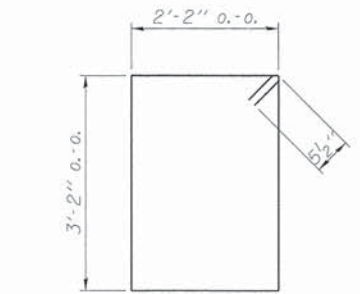




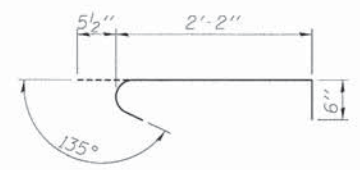
PLAN



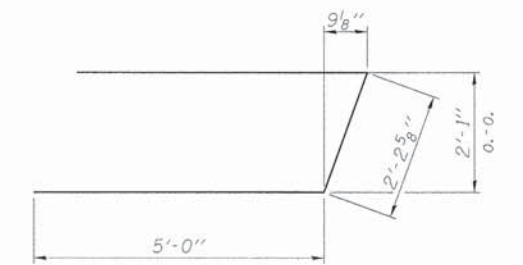
SECTION A-A



BAR s



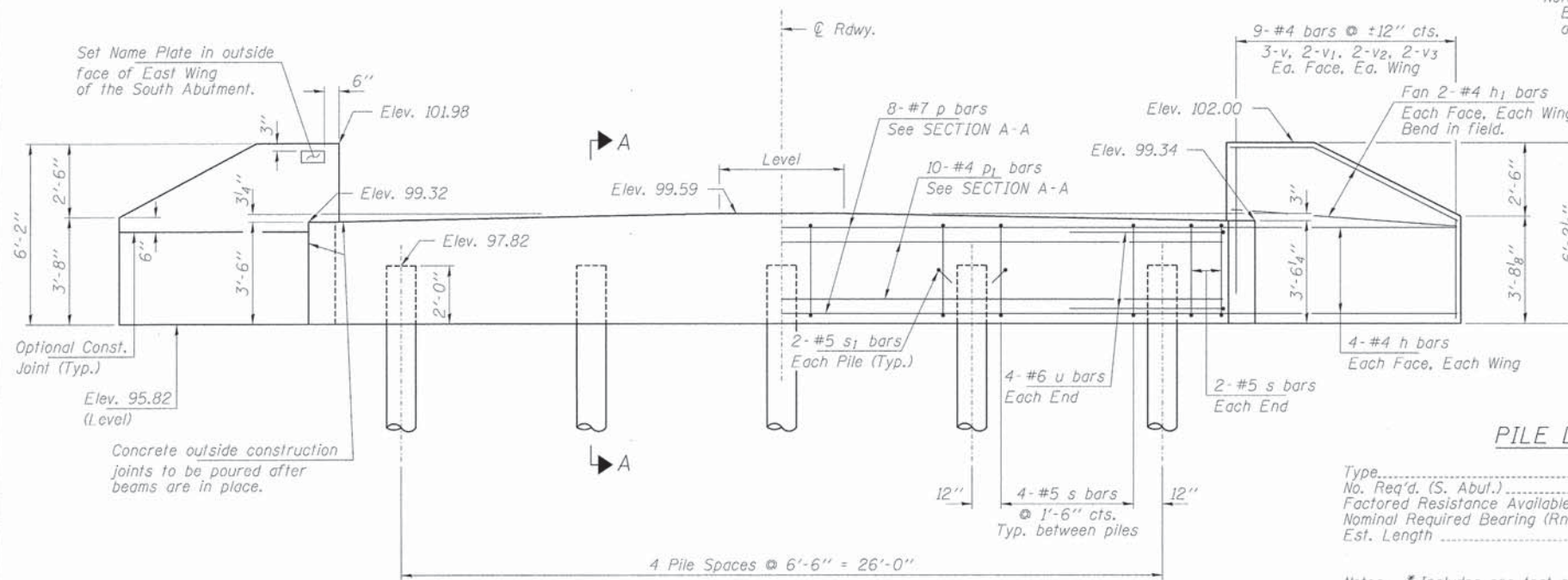
BAR s1



BAR u

Note: Concrete sealer shall be applied to all exposed surfaces of the bearing area.

Note: Extend h bars into abutment cap.



ELEVATION

PILE DATA

Type..... Metal Shell 12"x0.25"  
 No. Req'd. (S. Abut.)..... 5  
 Factored Resistance Available (Rf)..... 169 Kips/Pile  
 Nominal Required Bearing (Rn)..... 307 Kips/Pile  
 Est. Length..... 50 Ft/Pile

Notes: \* Includes one test pile to be driven in a permanent location at the South Abutment.

The test piles shall be driven to 110 percent of the Nominal Required Bearing indicated in the pile data information.

BILL OF MATERIAL - S. ABUT.

| BAR                              | NO. | SIZE | LENGTH  | SHAPE |
|----------------------------------|-----|------|---------|-------|
| h                                | 16  | #4   | 9'-3"   | —     |
| h1                               | 8   | #4   | 7'-9"   | —     |
| p                                | 8   | #7   | 31'-1"  | —     |
| p1                               | 10  | #4   | 31'-1"  | —     |
| s                                | 20  | #5   | 11'-7"  | □     |
| s1                               | 10  | #5   | 3'-2"   | U     |
| u                                | 8   | #6   | 12'-3"  | U     |
| v                                | 12  | #4   | 5'-10"  | —     |
| v1                               | 8   | #4   | 5'-4"   | —     |
| v2                               | 8   | #4   | 4'-5"   | —     |
| v3                               | 8   | #4   | 3'-6"   | —     |
| Concrete Structures              |     |      | Cu. Yd. | 13.6  |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 1,400 |
| Metal Shell Piles 12"x0.25"      |     |      | Foot    | 200   |
| Test Pile Metal Shells           |     |      | Each    | 1     |
| Name Plates                      |     |      | Each    | 1     |
| Concrete Sealer                  |     |      | Sq. Ft. | 77    |

All reinforcement bars shall be epoxy coated

FILE NAME = 130294-shr-bridge.dgn  
 USER NAME =  
 DESIGNED - L.A.P.  
 CHECKED - S.W.M.  
 DRAWN - D.A.B.  
 CHECKED - S.W.M.  
 PLOT SCALE =  
 PLOT DATE = 2/17/2015

DESIGNED - L.A.P.  
 CHECKED - S.W.M.  
 DRAWN - D.A.B.  
 CHECKED - S.W.M.  
 PLOT SCALE =  
 PLOT DATE = 2/17/2015

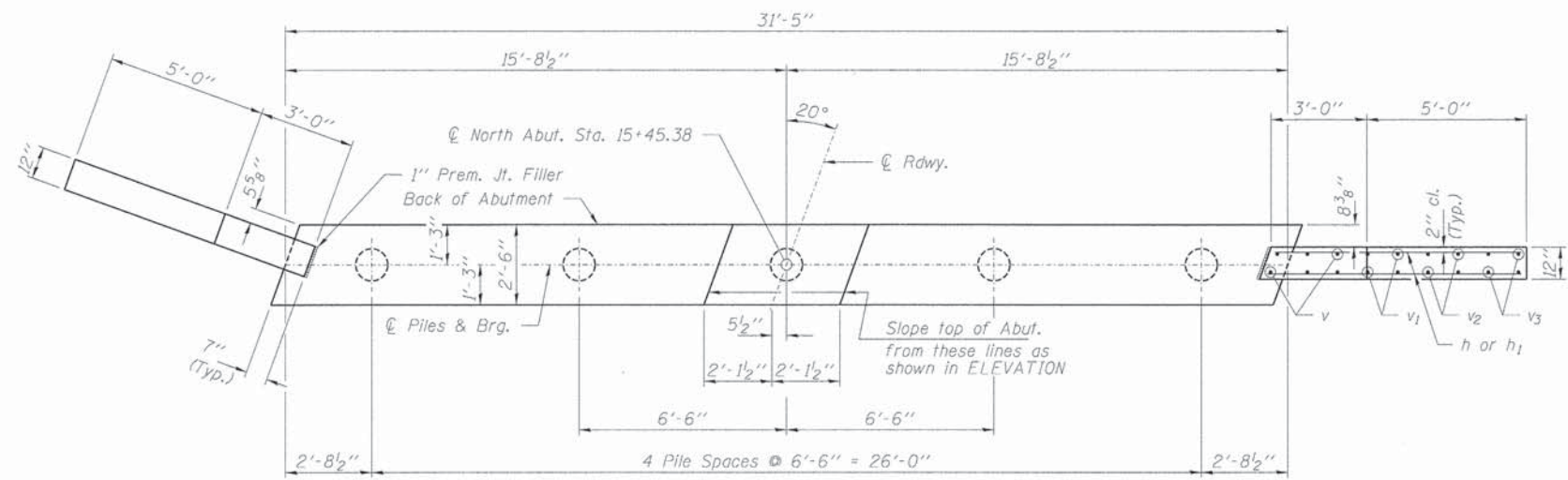
STATE OF ILLINOIS  
 FORD COUNTY HIGHWAY DEPARTMENT

SOUTH ABUTMENT  
 STRUCTURE NO. 027-3454

SHEET NO. 7 OF 10 SHEETS

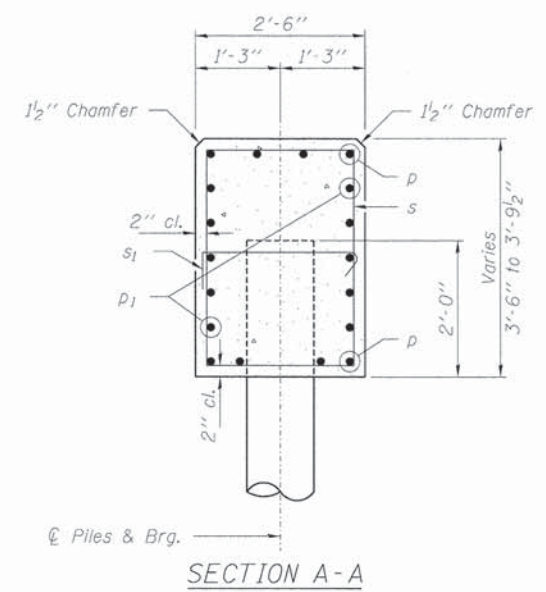
| C.H.                                     | SECTION        | COUNTY             | TOTAL SHEETS | SHEET NO. |
|--|----------------|--------------------|--------------|-----------|
| 4  | 14-00124-00-BR | FORD               | 25           | 22        |
| ELLTOTT ROAD                             |                | CONTRACT NO. 87602 |              |           |
| [ILLINOIS] FED. AID PROJECT BR5-03391121 |                |                    |              |           |



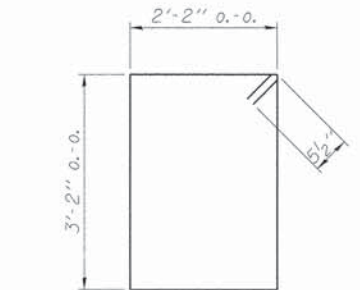


PLAN

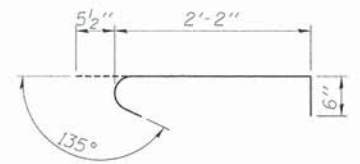
Note: Concrete sealer shall be applied to all exposed surfaces of the bearing area.



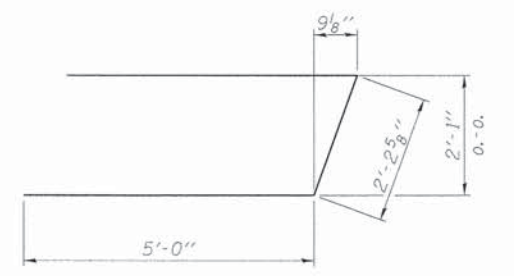
SECTION A-A



BAR s

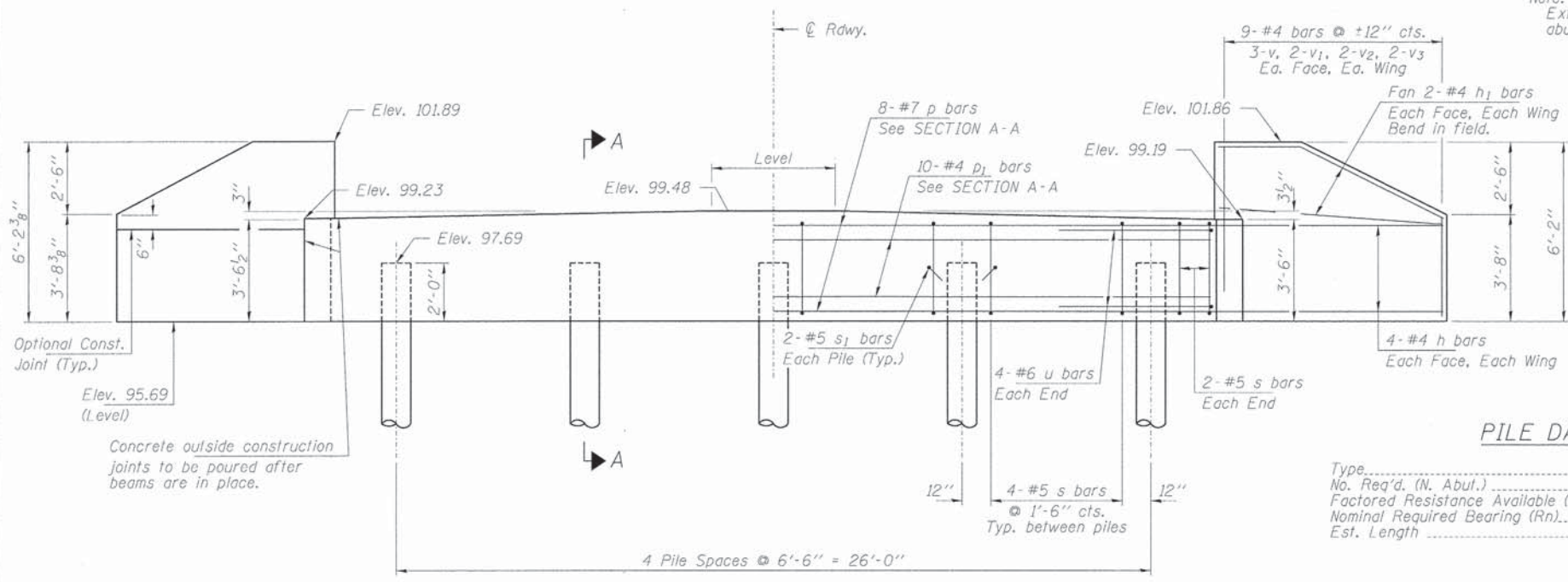


BAR s1



BAR u

Note: Extend h bars into abutment cap.



ELEVATION

PILE DATA

Type..... Metal Shell 12"x0.25"  
 No. Req'd. (N. Abut.)..... 5  
 Factored Resistance Available (Rf)..... 169 Kips/Pile  
 Nominal Required Bearing (Rn)..... 307 Kips/Pile  
 Est. Length..... 50 Ft/Pile

BILL OF MATERIAL - N. ABUT.

| BAR                              | NO. | SIZE | LENGTH  | SHAPE |
|----------------------------------|-----|------|---------|-------|
| h                                | 16  | #4   | 9'-3"   | —     |
| h1                               | 8   | #4   | 7'-9"   | —     |
| p                                | 8   | #7   | 31'-1"  | —     |
| p1                               | 10  | #4   | 31'-1"  | —     |
| s                                | 20  | #5   | 11'-7"  | □     |
| s1                               | 10  | #5   | 3'-2"   | ┌     |
| u                                | 8   | #6   | 12'-3"  | —     |
| v                                | 12  | #4   | 5'-10"  | —     |
| v1                               | 8   | #4   | 5'-4"   | —     |
| v2                               | 8   | #4   | 4'-5"   | —     |
| v3                               | 8   | #4   | 3'-6"   | —     |
| Concrete Structures              |     |      | Cu. Yd. | 13.6  |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 1,400 |
| Metal Shell Piles 12"x0.25"      |     |      | Foot    | 250   |
| Concrete Sealer                  |     |      | Sq. Ft. | 77    |

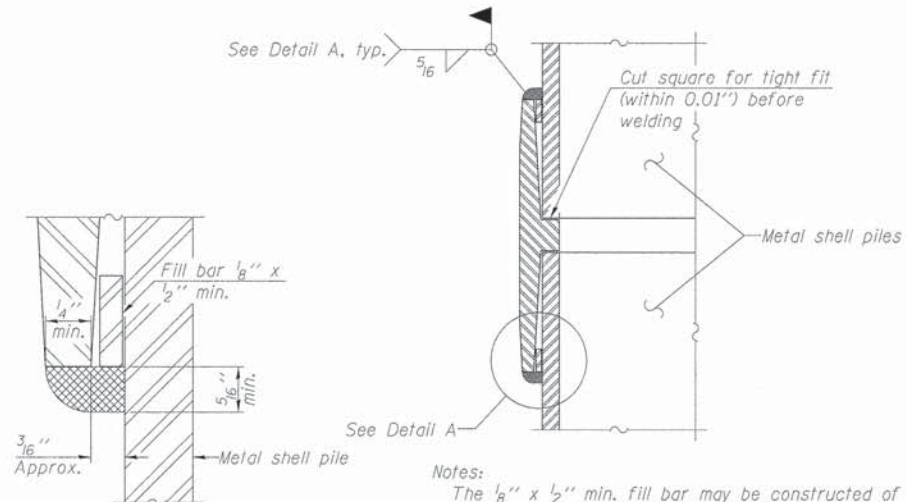
All reinforcement bars shall be epoxy coated





METAL SHELL PILE TABLE

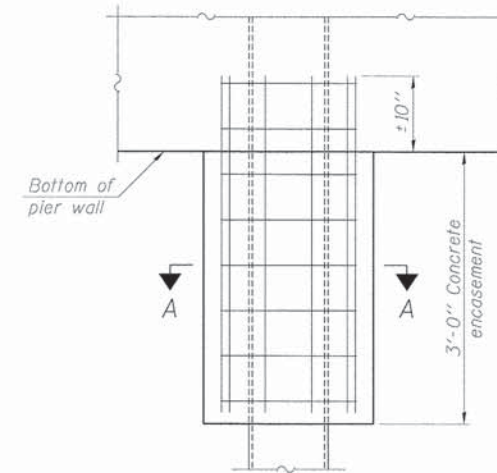
| Designation and outside diameter | Wall thickness t | Weight per foot (Lbs./ft.) | Inside volume (yd. <sup>3</sup> /ft.) |
|----------------------------------|------------------|----------------------------|---------------------------------------|
| PP12                             | 0.179"           | 22.60                      | 0.0274                                |
| PP12                             | 0.250"           | 31.37                      | 0.0267                                |
| PP14                             | 0.250"           | 36.71                      | 0.0368                                |
| PP14                             | 0.312"           | 45.61                      | 0.0361                                |



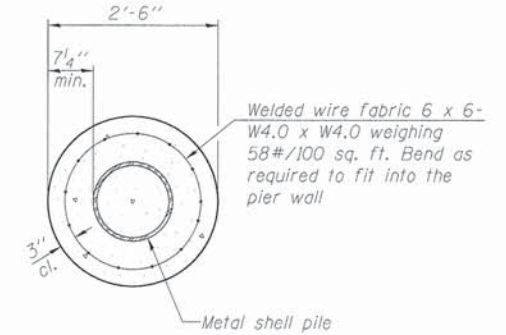
DETAIL A

Notes:  
 The 1/8" x 1/2" min. fill bar may be constructed of 2 bars with a 1/8" max. gap between them.  
 Pile segments shall be driven to solid contact with splicer before welding.

WELDED COMMERCIAL SPLICE



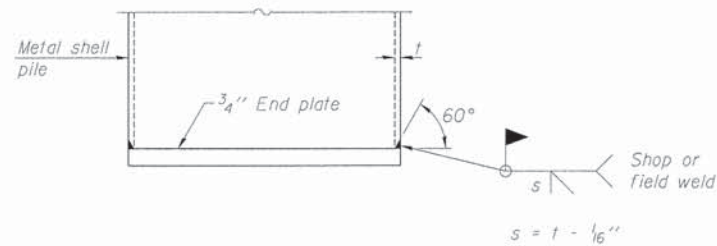
ELEVATION



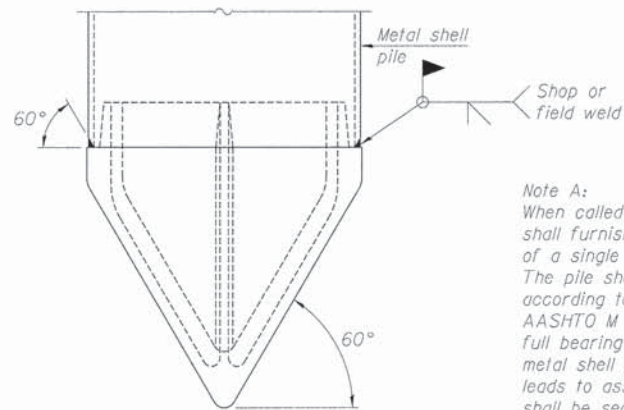
SECTION A-A

Note:  
 Forms for encasement may be omitted when soil conditions permit.

CONCRETE ENCASEMENT AT PIERS



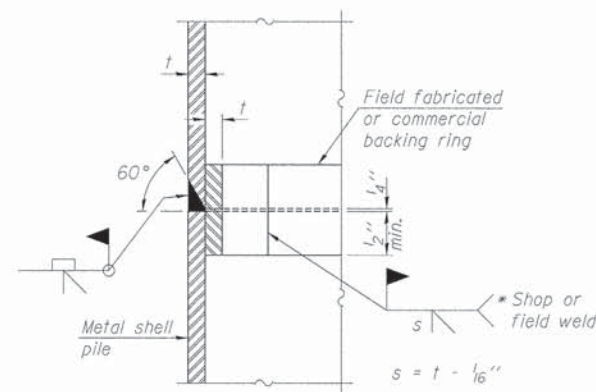
END PLATE ATTACHMENT



METAL SHELL PILE SHOE ATTACHMENT

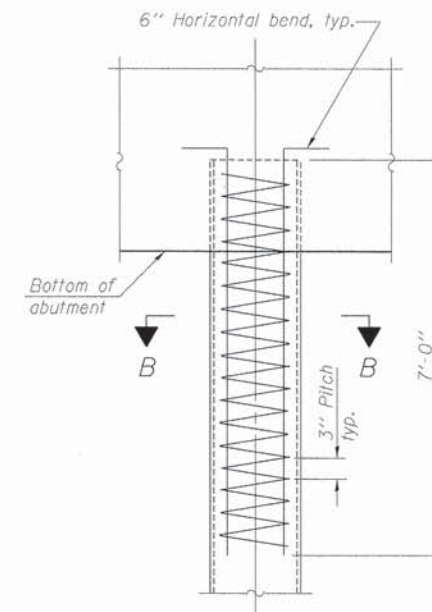
(See Note A)

Note A:  
 When called for on the plans, the Contractor shall furnish metal shell pile shoes consisting of a single piece conical pile point as shown. The pile shoes shall be cast in one piece steel according to either ASTM A 148 Grade 90-60 or AASHTO M 103 Grade 65-35 and shall provide full bearing over the full circumference of the metal shell pile. The pile shoe shall have tapered leads to assure proper alignment and fitting and shall be secured to the pile with a circumferential weld.

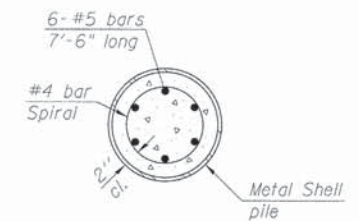


COMPLETE PENETRATION WELD SPLICE

\* Field fabricated backing ring may be made from pile shell by removing segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

Note:  
 The metal shell piles shall be according to ASTM A 252 Grade 3.

F-MS

7-1-10

|  |                       |                   |           |
|--|-----------------------|-------------------|-----------|
| FILE NAME * 130254-sht-br-bridge.dgn   | USER NAME *           | DESIGNED - L.A.P. | REVISED - |
| HAMPTON, LENZINI AND RENWICK, INC.<br>3040 STEVENSON DRIVE, SUITE 201<br>SPRINGFIELD, ILLINOIS 62763<br>ILLINOIS PROFESSIONAL DESIGN FIRM<br>LS / PE / SE CORP. 184.000959 |                       | CHECKED - S.W.M.  | REVISED - |
|  | PLOT SCALE *          | DRAWN - D.A.B.    | REVISED - |
|  | PLOT DATE * 2/17/2015 | CHECKED - S.W.M.  | REVISED - |

STATE OF ILLINOIS  
 FORD COUNTY HIGHWAY DEPARTMENT

METAL SHELL PILE DETAILS  
 STRUCTURE NO. 027-3454

SHEET NO. 9 OF 10 SHEETS

| C.H.                                      | SECTION        | COUNTY | TOTAL SHEETS       | SHEET NO. |
|---|----------------|--------|--------------------|-----------|
| 4   | 14-00124-00-BR | FORD   | 25                 | 24        |
| ELLIOTT ROAD                              |                |        | CONTRACT NO. 87602 |           |
| [ILLINOIS] FED. AID PROJECT BRS-0339(112) |                |        |                    |           |



CLIENT Hampton Lenzini & Renwick PROJECT NAME Ford Co Bridge - SN 027-3011 CH4  
 PROJECT NUMBER 13-G552 PROJECT LOCATION 10000 E Road, 2 mi. north of Elliot, IL  
 DATE COMPLETED 10/9/13 LOGGED BY DS/NJ DRILLING METHOD 3.25 in. I.D. HSA

| DEPTH (ft) | ELEVATION (ft) | GRAPHIC LOG | MATERIAL DESCRIPTION   | SAMPLE TYPE NUMBER | RECOVERY % (ROD) | BLOW COUNTS (N VALUE) | POCKET PEN. (Qp) (tsf) | UNC. STRENGTH (Qu) (tsf) | MOISTURE CONTENT (%) | DRY UNIT WT. (pcf) | ORGANIC CONTENT (%) | ATTERBERG LIMITS |               |                  |  |  |
|------------|----------------|-------------|--|--------------------|------------------|-----------------------|------------------------|--------------------------|----------------------|--------------------|---------------------|------------------|---------------|------------------|--|--|
|            |                |             |  |                    |                  |                       |                        |                          |                      |                    |                     | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX |  |  |
| 0          | (100.9)        |             | Bituminous Pavement (12")  |                    |                  |                       |                        |                          |                      |                    |                     |                  |               |                  |  |  |
| 0.8        | 99.8           |             | Gravel Base (6")   | SS 1               | 89               | 15-7-3 (10)           | 1.0                    |                          | 23.4                 |                    |                     |                  |               |                  |  |  |
| 1.3        | 99.3           |             | Black-brown clay Fill, trace concrete fragments, gravel and sand, stiff, moist | SS 2               | 67               | 4-2-3 (5)             | 1.0                    | 0.9                      | 26.4                 |                    |                     |                  |               |                  |  |  |
| 3.0        | 97.6           |             |  | SS 3               | 0                | 50/4*                 |                        |                          |                      |                    |                     |                  |               |                  |  |  |
| 4.3        | 96.4           |             | Black-gray clay Fill, trace gravel, soft, very moist                           | SS 4               | 44               | 7-3-4 (7)             | 1.0                    |                          | 21.1                 |                    |                     |                  |               |                  |  |  |
| 5.0        | 95.7           |             |  | SS 5               | 89               | 2-2-3 (5)             | 0.5                    | 0.9                      | 28.1                 |                    |                     |                  |               |                  |  |  |
| 6.0        | 94.9           |             | Brown-gray silty clay, trace sand, very soft, very moist                       | SS 6               | 100              | 2-1-2 (3)             |                        | 0.3                      | 36.2                 |                    |                     |                  |               |                  |  |  |
| 7.3        | 93.6           |             | Gray silty clay, trace sand and gravel, very stiff, moist                      | SS 7               | 100              | 3-4-6 (10)            | 3.5                    | 3.0                      | 15.9                 |                    |                     |                  |               |                  |  |  |
| 8.0        | 92.9           |             |  | SS 8               | 100              | 3-4-6 (10)            | 3.25                   | 3.0                      | 16.4                 |                    |                     |                  |               |                  |  |  |
| 9.0        | 91.9           |             |  | SS 9               | 100              | 4-5-5 (10)            | 3.5                    | 2.9                      | 15.3                 |                    |                     |                  |               |                  |  |  |
| 10.0       | 90.9           |             |  | SS 10              | 100              | 4-5-7 (12)            | 4.0                    | 3.0                      | 15.5                 |                    |                     |                  |               |                  |  |  |
| 11.0       | 89.9           |             |  | SS 11              | 100              | 5-5-5 (10)            | 3.0                    | 2.6                      | 16.9                 |                    |                     |                  |               |                  |  |  |
| 13.0       | 87.9           |             | Gray fine to medium sand, trace gravel, medium dense, wet                      | SS 12              | 100              | 9-4-7 (11)            |                        |                          | 21.9                 |                    |                     |                  |               |                  |  |  |
| 14.0       | 86.9           |             | Gray silty clay, trace sand and gravel, stiff to very stiff, moist             | SS 13              | 100              | 5-5-5 (10)            | 2.5                    | 3.0                      | 14.6                 |                    |                     |                  |               |                  |  |  |

COMPLETION DEPTH 50 ft GROUND ELEVATION 99.81 ft  
 CAVE DEPTH 9 ft BACKFILL Soil Cuttings (101.91)  
 GROUND WATER LEVELS:  
 AT TIME OF DRILLING 28.00 ft / Elev 71.81 ft (73.91)  
 AT END OF DRILLING --- none - dry above cave depth  
 AFTER DRILLING ---  
 NOTES: Boring located 40 feet north and 5 feet west of bridge center. Benchmark = bridge center = 100.0 feet. (102.1)

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

3000 Research Road, Suite 1 Champaign, Illinois 61822 Phone 217-403-9990 Fax 217-403-1559

CLIENT Hampton Lenzini & Renwick PROJECT NAME Ford Co Bridge - SN 027-3011 CH4  
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 DATE COMPLETED 10/9/13 LOGGED BY DS/NJ DRILLING METHOD 3.25 in. I.D. HSA

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|------------|----------------|-------------|--|--------------------|------------------|-----------------------|------------------------|--------------------------|----------------------|--------------------|---------------------|------------------|---------------|------------------|--|--|
|            |                |             |  |                    |                  |                       |                        |                          |                      |                    |                     | LIQUID LIMIT     | PLASTIC LIMIT | PLASTICITY INDEX |  |  |
| 40         |                |             | Gray silty clay, trace sand and gravel, stiff to very stiff, moist (continued) | SS 14              | 100              | 4-5-7 (12)            | 2.0                    | 3.3                      | 16.2                 |                    |                     |                  |               |                  |  |  |
| 45         |                |             |  | SS 15              | 100              | 5-6-9 (15)            | 2.5                    | 1.8                      | 15.4                 |                    |                     |                  |               |                  |  |  |
| 50         | 49.9           |             | Bottom of borehole at 50.0 feet.   | SS 16              | 100              | 4-4-5 (9)             | 1.75                   | 2.3                      | 15.2                 |                    |                     |                  |               |                  |  |  |

Bottom of borehole at 50.0 feet.

Lines of Demarcation represent an approximate boundary between soil types. Variations may occur between sampling intervals and between boring locations, and the transition may be gradual. Dashed lines are indicative of potentially erratic or unknown changes.

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BORING 1