

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
PLANS FOR

PROPOSED LOCAL AGENCY IMPROVEMENTS  
HIGHWAY BRIDGE PROGRAM

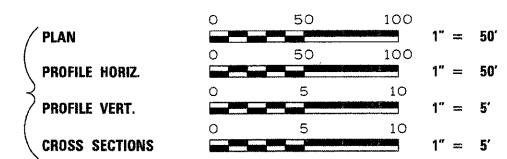
| T.R. RTE.           | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
|---------------------|----------------|-----------|--------------------|-----------|
| 307A                | 08-04118-00-BR | CHRISTIAN | 26                 | 1         |
| FED. ROAD DIST. NO. |                | ILLINOIS  | CONTRACT NO. 93567 |           |

SHEET NO. DESCRIPTION

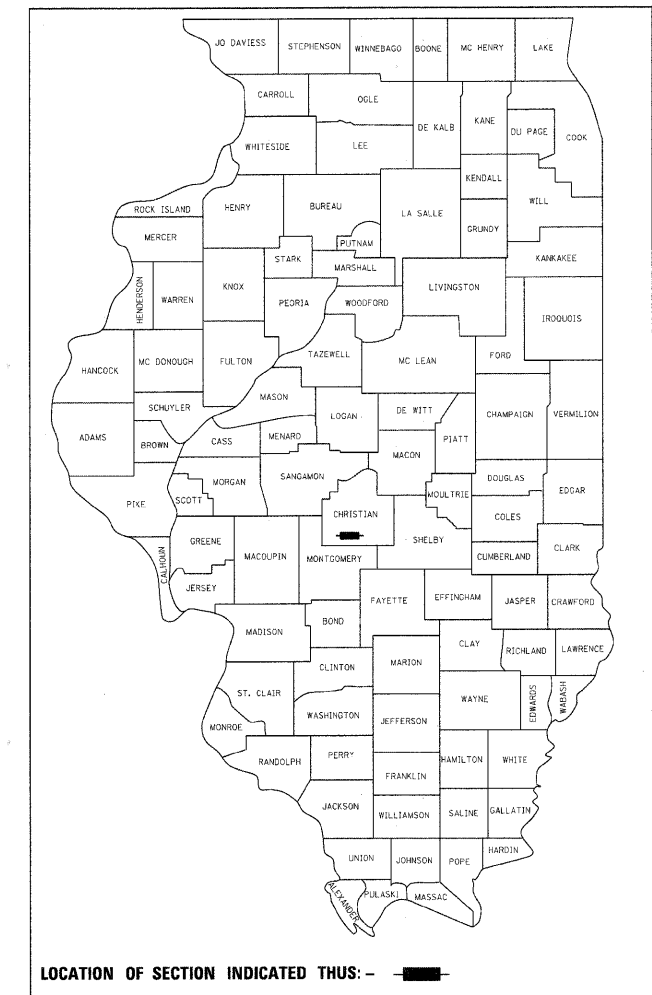
|         |  |
|---------|--|
| 1       | COVER SHEET  |
| 2       | SUMMARY OF QUANTITIES, GENERAL NOTES AND CENTERLINE TIES |
| 3       | SCHEDULE OF QUANTITIES                                   |
| 4       | TYPICAL SECTIONS   |
| 5       | ROADWAY PLAN AND PROFILE                                 |
| 6       | EROSION CONTROL PLAN                                     |
| 7 - 8   | RIGHT OF WAY PLAN  |
| 9 - 18  | BRIDGE PLANS   |
| 19 - 26 | CROSS SECTIONS   |

STANDARDS

|           |   |
|-----------|---|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS  |
| 280001-06 | TEMPORARY EROSION CONTROL SYSTEMS   |
| 515001-03 | NAME PLATE FOR BRIDGE   |
| 630301-05 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS                              |
| 635006-03 | REFLECTOR AND TERMINAL MARKER PLACEMENT   |
| 701901-02 | TRAFFIC CONTROL DEVICES   |
| BLR 21-9  | TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS |
| BLR 26-3  | STEEL PLATE BEAM GUARDRAIL (27 1/2" HGT)  |
| BLR 27-1  | TRAFFIC BARRIER TERMINAL TYPE 5A  |



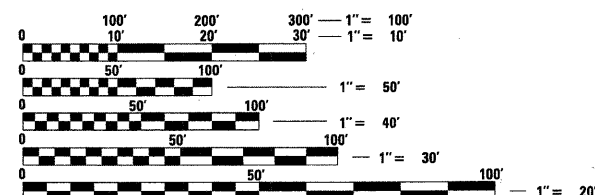
TR ROUTE 307A  
SECTION 08-04118-00-BR  
CHRISTIAN COUNTY  
GREENWOOD ROAD DISTRICT  
PROJECT BROS-0021(178)  
JOB NUMBER C-96-225-10



UTILITIES

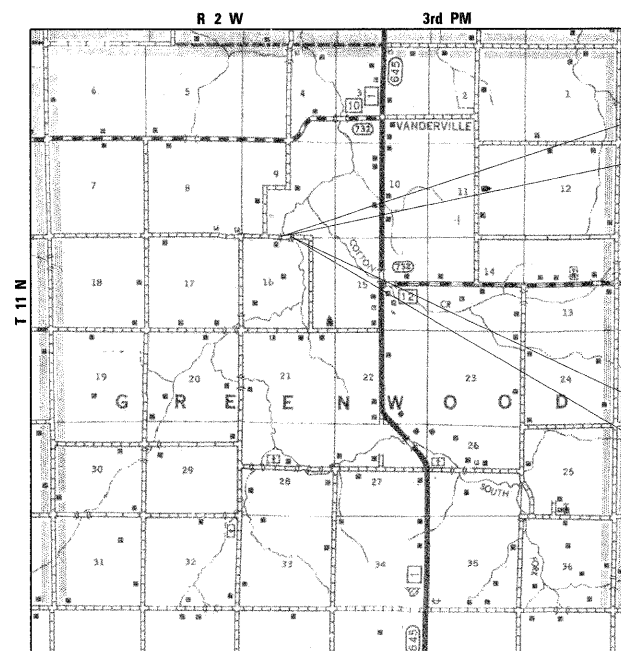
ILLINOIS CONSOLIDATED TELEPHONE  
LITCHFIELD, ILLINOIS 62056

SHELBY ELECTRIC COOPERATIVE  
SHELBYVILLE, ILLINOIS 62565



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

NET LENGTH OF PROJECT = 1300.00 FEET = 0.246 MILES

DESIGN DESIGNATION

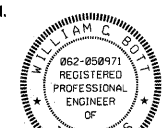
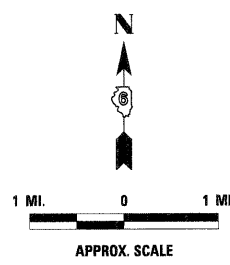
LOCAL ROAD: ADT < 150  
DESIGN SPEED: 30 MPH

STA. 11+00.00  
BEGIN IMPROVEMENTS  
SECTION 08-04118-00-BR

EXISTING STRUCTURE NO. 011-3247  
EXISTING 61' X 14' SINGLE SPAN PONY TRUSS BRIDGE

PROPOSED STRUCTURE NO. 011-3417  
THREE SPAN PPC DECK BEAM BRIDGE ON REINFORCED CONCRETE  
SPILL THRU ABUTMENTS AND CONCRETE ENCASED PILE BENT PIERS.  
105'-0" BACK TO BACK ABUTMENTS, 24'-0" OUT TO OUT DECK

STA. 24+00.00  
END IMPROVEMENTS  
SECTION 08-04118-00-BR



Willie C. Burt 12/15/2011  
EXPIRES: 11/30/13

|   |   |             |       |
|---|---|-------------|-------|
| APPROVED                                  | <i>Chris D. Ferguson</i>                          | 12/16       | 20 11 |
|   | COUNTY ENGINEER                                   |             |       |
| APPROVED                                  | <i>John Livingston</i>                            | 12/16       | 20 11 |
|   | ROAD COMMISSIONER                                 |             |       |
| PASSED                                    | <i>Tennessie H. Fountain</i>                      | February 17 | 20 12 |
|   | DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS    |             |       |
| PASSED                                    | <i>Ron Dehanbean</i>                              | February 17 | 20 12 |
|   | DISTRICT SIX ENGINEER OF CONSTRUCTION             |             |       |
| Releasing For Bid Based on Limited Review | <i>Roger L. Driskell</i>                          | February 17 | 20 12 |
|   | DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER |             |       |
|   | STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION    |             |       |

PROJECT ENGINEER  
PROJECT MANAGER

CONTRACT NO. 93567

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS



GENERAL NOTES

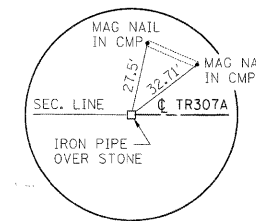
- WHEN SECTION OR SUB-SECTION MONUMENTS ARE ENCOUNTERED THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENT UNTIL THE OWNER OR AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- SEE SPECIAL PROVISIONS FOR SEEDING RATES.
- ALL PLAN ELEVATIONS REPRESENT ASSUMED DATUM.
- THE LOCATIONS OF THOSE BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTION PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTOR TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVE GROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVE GROUND UTILITIES, REMAINS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. J.U.L.I.E. MEMBERS ACTIVE IN THE VICINITY OF THE PROJECT ARE LISTED ON THE COVER SHEET.
- APPLICATION RATES:  
 AGGREGATE BASE COURSE: 2.05 TONS/CU YD  
 COVER & SEAL COAT AGGREGATE: 25 LBS/SQ YD  
 BITUMINOUS MATL'S (PRIME COAT): 0.375 GAL/SQ YD  
 BITUMINOUS MATL'S (C & S COATS): 0.35 GAL/SQ YD  
 STONE RIPRAP, CLASS A4: 1.5 TONS/CU YD  
 TEMPORARY DITCH CHECKS: 10 FOOT/EA LOCATION

SUMMARY OF QUANTITIES

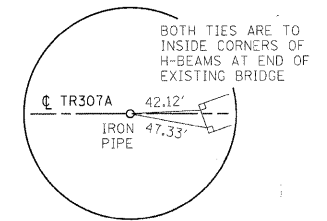
| PAY ITEM | ITEM  | UNIT   | TOTAL  |
|----------|---|--------|--------|
| 20100110 | TREE REMOVAL (6 TO 15 UNITS DIAMETER)               | UNIT   | 374    |
| 20100210 | TREE REMOVAL (OVER 15 UNITS DIAMETER)               | UNIT   | 126    |
| 20200100 | EARTH EXCAVATION                                    | CU YD  | 2,194  |
| 20300100 | CHANNEL EXCAVATION                                  | CU YD  | 191    |
| 20400800 | FURNISHED EXCAVATION                                | CU YD  | 3,195  |
| 28000250 | TEMPORARY EROSION CONTROL SEEDING                   | POUND  | 600    |
| 28000305 | TEMPORARY DITCH CHECKS                              | FOOT   | 220    |
| 28000400 | PERIMETER EROSION BARRIER                           | FOOT   | 644    |
| 28100207 | STONE RIPRAP, CLASS A4                              | TON    | 448    |
| 28200200 | FILTER FABRIC                                       | SQ YD  | 673    |
| 35101400 | AGGREGATE BASE COURSE, TYPE B                       | TON    | 1,140  |
| 40300100 | BITUMINOUS MATERIALS (PRIME COAT)                   | GALLON | 1,000  |
| 40300300 | BITUMINOUS MATERIALS (COVER AND SEAL COATS)         | GALLON | 2,520  |
| 40300500 | COVER COAT AGGREGATE                                | TON    | 62     |
| 40300600 | SEAL COAT AGGREGATE                                 | TON    | 31     |
| 48101200 | AGGREGATE SHOULDERS, TYPE B                         | TON    | 50     |
| 50100100 | REMOVAL OF EXISTING STRUCTURES                      | EACH   | 1      |
| 50200100 | STRUCTURE EXCAVATION                                | CU YD  | 28     |
| 50200300 | COFFERDAM EXCAVATION                                | CU YD  | 81     |
| 50201101 | COFFERDAM (TYPE 1) (LOCATION-1)                     | EACH   | 1      |
| 50201102 | COFFERDAM (TYPE 1) (LOCATION-2)                     | EACH   | 1      |
| 50300225 | CONCRETE STRUCTURES                                 | CU YD  | 119.2  |
| 50400305 | PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH) | SQ FT  | 2,473  |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED                    | POUND  | 10,280 |
| 50900205 | STEEL RAILING, TYPE S-1                             | FOOT   | 210    |
| 51200957 | FURNISHING METAL SHELL PILES, 12" X 0.25"           | FOOT   | 762    |
| 51202305 | DRIVING PILES                                       | FOOT   | 762    |
| 51203200 | TEST PILE, METAL SHELLS                             | EACH   | 2      |
| 51500100 | NAME PLATES   | EACH   | 1      |
| 63100075 | TRAFFIC BARRIER TERMINAL, TYPE 5A                   | EACH   | 2      |
| 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT) | EACH   | 2      |
| 67100100 | MOBILIZATION  | L SUM  | 1      |
| 70101830 | TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21     | L SUM  | 1      |
| 78201000 | TERMINAL MARKERS - DIRECT APPLIED                   | EACH   | 2      |
| X2501000 | SEEDING, CLASS 2 (SPECIAL)                          | ACRE   | 2.0    |

\* SPECIAL PROVISION  
 Δ SPECIALTY ITEMS  
 CONSTRUCTION TYPE CODE: 0011 (X080)

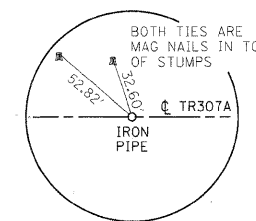
CENTERLINE TIES



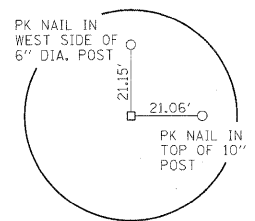
P.O.T. STA. 2+35.92  
 SW COR., SE 1/4, SW 1/4, SEC. 9,  
 T11N, R2W, 3RD P.M.  
 IRON PIPE OVER STONE  
 N 999, 111, 6009  
 E 2, 535, 494. 4470



P.O.T. STA. 15+00.00  
 IRON PIPE  
 N 999, 111, 2983  
 E 2, 536, 758. 5270



P.O.T. STA. 18+00.00  
 IRON PIPE  
 N 999, 111, 2265  
 E 2, 537, 058. 5270



STA. 28+87.35, 20,40' RT  
 SE COR., SW 1/4, SE 1/4, SEC. 9  
 T11N, R2W, 3RD P.M.  
 STONE  
 N 999, 090, 5702  
 E 2, 538, 145. 8741

GREENE & BRADFORD, INC.  
 OF SPRINGFIELD



FILE NAME =  
 #FILEL#  
 G&B PROJECT: 09029  
 PLOT DRIVER = #PLCTTR#

USER NAME = #USER#  
 PLOT SCALE = #SCALE#  
 PLOT DATE = #DATE#

DESIGNED - WCB  
 DRAWN - MDS  
 CHECKED - WCB  
 DATE - 6/29/09

REVISED - AH 04/20/11  
 REVISED - AH 09/09/11  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TR 307A  
 SUMMARY OF QUANTITIES, GENERAL NOTES & CENTERLINE TIES  
 SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
|---|----------------|-----------|--------------------|-----------|
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                 | 2         |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT BROS-0021 (178) |                |           | CONTRACT NO. 93567 |           |

| TREE REMOVAL SCHEDULE         |                           |                           |
|-------------------------------|---------------------------|---------------------------|
|                               | 6 TO 15 UNITS DIA. (UNIT) | OVER 15 UNITS DIA. (UNIT) |
| STA. 14+72, 22' RT.           |                           | 20                        |
| STA. 14+78, 21' RT.           |                           | 18                        |
| STA. 14+88, 22' RT. (3 x 14") | 42                        |                           |
| STA. 14+92, 24' RT.           | 12                        |                           |
| STA. 14+96, 37' RT.           | 12                        |                           |
| STA. 15+21, 39' LT.           |                           | 20                        |
| STA. 15+21, 22' LT.           | 8                         |                           |
| STA. 15+26, 28' RT.           | 6                         |                           |
| STA. 15+29, 28' LT.           |                           | 30                        |
| STA. 15+39, 25' RT. (2 x 12") | 24                        |                           |
| STA. 15+43, 25' RT.           | 12                        |                           |
| STA. 15+51, 21' RT.           | 12                        |                           |
| STA. 15+53, 16' RT.           | 12                        |                           |
| STA. 15+54, 19' RT.           | 12                        |                           |
| STA. 15+65, 52' RT. (4 x 10") | 40                        |                           |
| STA. 15+67, 32' LT.           |                           | 18                        |
| STA. 15+96, 40' LT.           | 8                         |                           |
| STA. 16+00, 4' RT.            | 8                         |                           |
| STA. 16+06, 44' LT.           |                           | 20                        |
| STA. 16+07, 7' RT.            | 8                         |                           |
| STA. 16+08, 13' RT.           | 8                         |                           |
| STA. 16+12, 11' RT.           | 8                         |                           |
| STA. 16+12, 11' RT.           | 12                        |                           |
| STA. 16+17, 19' RT. (3 x 12") | 36                        |                           |
| STA. 16+19, 21' RT.           | 8                         |                           |
| STA. 16+21, 25' RT. (3 x 8")  | 24                        |                           |
| STA. 16+29, 22' RT.           | 8                         |                           |
| STA. 16+35, 18' RT.           | 10                        |                           |
| STA. 17+57, 32' LT.           | 10                        |                           |
| STA. 17+86, 30' LT.           | 12                        |                           |
| STA. 20+48, 34' LT.           | 12                        |                           |
| STA. 20+79, 34' LT.           | 10                        |                           |
| TOTALS                        | 374                       | 126                       |

| PAVEMENT SCHEDULE                |                                     |  |  |   |                            |                           |
|----------------------------------|-------------------------------------|--|--|---|----------------------------|---------------------------|
| LOCATION                         | AGGREGATE BASE COURSE, TYPE B (TON) | AGGREGATE SHOULDERS, TYPE B (6") (TON) | BITUMINOUS MATERIALS (PRIME COAT) (GALLON) | BITUMINOUS MATERIALS (C&S COATS) (GALLON) | COVER COAT AGGREGATE (TON) | SEAL COAT AGGREGATE (TON) |
| STA. 11+00 TO STA. 15+20         | 400                                 |  | 350  | 885                                       | 22                         | 11                        |
| STA. 14+33 RT. TO STA. 15+33 RT. |                                     | 25                                     |  |   |                            |                           |
| STA. 16+10 LT. TO STA. 17+10 LT. |                                     | 25                                     |  |   |                            |                           |
| STA. 16+23 TO STA. 24+00         | 740                                 |  | 650  | 1635                                      | 40                         | 20                        |
| TOTALS                           | 1140                                | 50                                     | 1000                                       | 2520                                      | 62                         | 31                        |

| SEEDING AND EROSION CONTROL SCHEDULE       |                                   |  |                               |                                  |
|--|-----------------------------------|--|-------------------------------|----------------------------------|
| LOCATION                                   | SEEDING, CLASS 2 (SPECIAL) (ACRE) | TEMPORARY EROSION CONTROL SEEDING (3 APPLICATIONS) (POUND) | TEMPORARY DITCH CHECKS (FOOT) | PERIMETER EROSION BARRIER (FOOT) |
| STA. 11+00 LT. TO STA. 15+32 LT.           | 0.35                              | 105  |                               |                                  |
| STA. 11+00 RT. TO STA. 15+98 RT.           | 0.50                              | 150  |                               |                                  |
| STA. 11+33, LT. & RT.                      |                                   |  | 20                            |                                  |
| STA. 11+62, LT. & RT.                      |                                   |  | 20                            |                                  |
| STA. 11+91, LT. & RT.                      |                                   |  | 20                            |                                  |
| STA. 12+20, LT. & RT.                      |                                   |  | 20                            |                                  |
| STA. 12+25, 39' LT. TO STA. 13+50, 48' LT. |                                   |  |                               | 125                              |
| STA. 12+49, LT. & RT.                      |                                   |  | 20                            |                                  |
| STA. 12+78, LT. & RT.                      |                                   |  | 20                            |                                  |
| STA. 13+07, LT. & RT.                      |                                   |  | 20                            |                                  |
| STA. 13+36, LT. & RT.                      |                                   |  | 20                            |                                  |
| STA. 14+90, LT. & RT.                      |                                   |  | 20                            |                                  |
| STA. 15+01, 54' LT. TO STA. 15+33, 12' LT. |                                   |  |                               | 52                               |
| STA. 15+48, 12' RT. TO STA. 15+98, 50' RT. |                                   |  |                               | 63                               |
| STA. 15+55, 52' LT. TO STA. 15+89, 12' LT. |                                   |  |                               | 52                               |
| STA. 15+55 LT. TO STA. 24+00 LT.           | 0.60                              | 180  |                               |                                  |
| STA. 16+13, 12' RT. TO STA. 16+50, 48' RT. |                                   |  |                               | 52                               |
| STA. 16+13 RT. TO STA. 24+00 RT.           | 0.55                              | 165  |                               |                                  |
| STA. 17+34, LT.                            |                                   |  | 10                            |                                  |
| STA. 18+00, RT.                            |                                   |  | 10                            |                                  |
| STA. 20+67, LT.                            |                                   |  | 10                            |                                  |
| STA. 21+00, RT.                            |                                   |  | 10                            |                                  |
| STA. 21+00, 33' LT. TO STA. 22+00, 28' LT. |                                   |  |                               | 100                              |
| STA. 22+00, 29' RT. TO STA. 24+00, 18' RT. |                                   |  |                               | 200                              |
| TOTALS                                     | 2.00                              | 600  | 220                           | 644                              |

| GUARD RAIL AND TRAFFIC BARRIER TERMINAL SCHEDULE |  |  |   |
|--|--|--|---|
| LOCATION   | TRAFFIC BARRIER TERMINAL, TYPE 5A (EACH) | TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT) (EACH) | TERMINAL MARKER - DIRECT APPLIED (EACH) |
| SW CORNER PROPOSED BRIDGE                        | 1  | 1  | 1                                       |
| NE CORNER PROPOSED BRIDGE                        | 1  | 1  | 1                                       |
| TOTALS   | 2  | 2  | 2                                       |

| EARTHWORK SCHEDULE       |  |   |                           |                              |
|--------------------------|--|---|---------------------------|------------------------------|
| LOCATION                 | EARTH EXCAVATION (UNADJUSTED) (CU) (CU YD) | EARTH EXCAVATION (ADJUSTED FOR 25% SHRINKAGE) (CU YD) | EMBANKMENT (FILL) (CU YD) | FURNISHED EXCAVATION (CU YD) |
| STA. 11+00 TO STA. 24+00 | 2194                                       | 1646  | 4841                      | 3195                         |
| TOTALS                   | 2194                                       | 1646  | 4841                      | 3195                         |

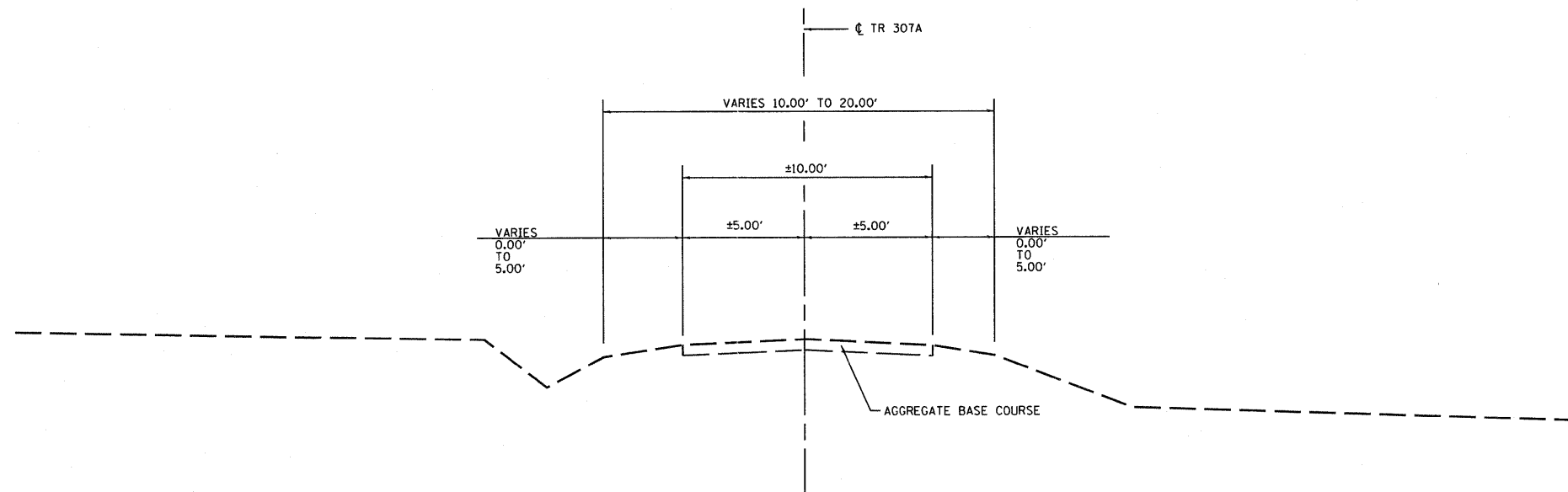
GREENE & BRADFORD, INC.  
 OF SPRINGFIELD  
 CIVIL ENGINEERS  
 1000 N. WASHINGTON ST.  
 SPRINGFIELD, ILL. 62761  
 TEL: 217/223-1111 FAX: 217/223-1112  
 WWW.GREENE-AND-BRADFORD.COM

|  |                      |                |                      |
|--|----------------------|----------------|----------------------|
| FILE NAME = J:\09029\CADD\CADsheets\09029-sht-schedule.dgn | USER NAME = amandah  | DESIGNED - WCB | REVISED - AH 4/20/11 |
| PLOT SCALE = 100.0000' / in.                               | PLOT DATE = 5/3/2011 | DRAWN - MDS    | REVISED -            |
| G&B PROJECT: 09029   | DATE = 6/29/09       | CHECKED - WCB  | REVISED -            |
| PLOT DRIVER = V8i.PDF.pltcf                                |                      |                |                      |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

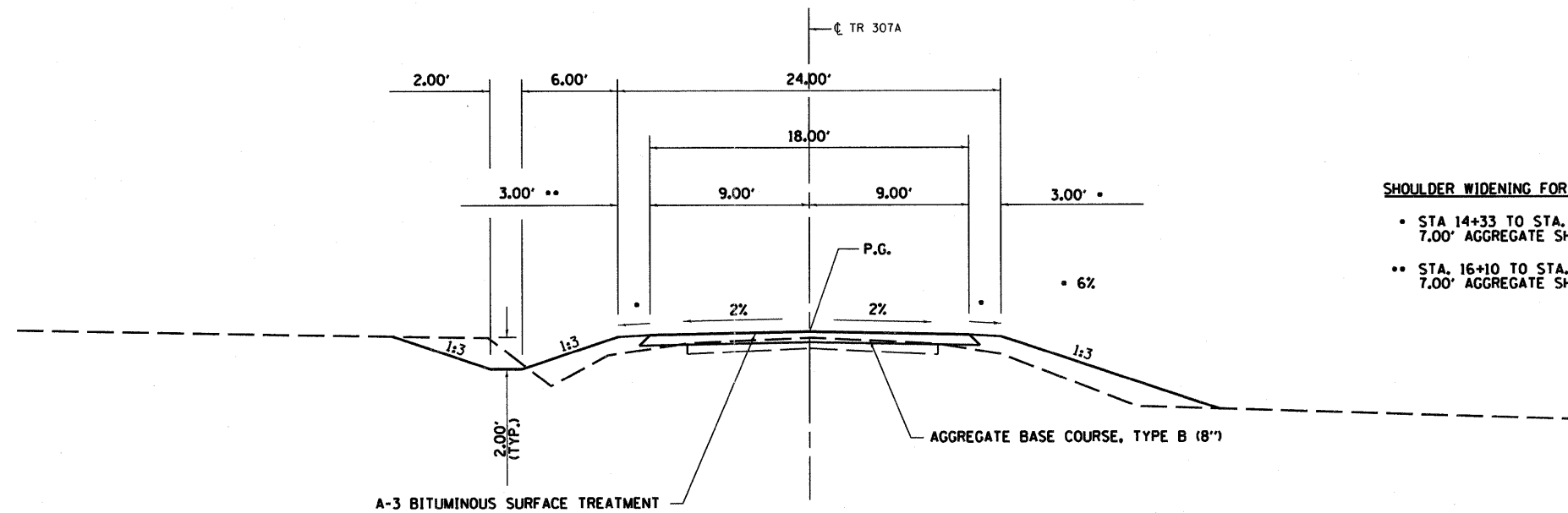
TR 307A  
 SCHEDULE OF QUANTITIES  
 SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.

|   |                |           |                    |           |
|---|----------------|-----------|--------------------|-----------|
| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                 | 3         |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT BR05-0021 (118) |                |           | CONTRACT NO. 93567 |           |



**EXISTING TYPICAL ROADWAY SECTION**

STA. 11+00 TO STA. 24+00



**PROPOSED TYPICAL ROADWAY SECTION**

STA. 11+00 TO STA. 24+00  
(BRIDGE OMISSION : STA. 15+19.00 TO STA. 16+24.00)

**SHOULDER WIDENING FOR TRAFFIC BARRIER TERMINALS**

- STA 14+33 TO STA. 15+33  
7.00' AGGREGATE SHOULDERS, TYPE B (6")
- STA. 16+10 TO STA. 17+10  
7.00' AGGREGATE SHOULDERS, TYPE B (6")

GREENE & BRAUNFORD, INC.  
CONSULTING ENGINEERS  
1011 17th Street, Springfield, IL 62761  
TEL: 217-223-8800 FAX: 217-223-8801  
WWW.GREENE-AND-BRAUNFORD.COM



|   |                     |                 |           |
|---|---------------------|-----------------|-----------|
| FILE NAME =                                 | USER NAME = amandah | DESIGNED - WCB  | REVISED - |
| J:\09029\CADD\CADsheets\09029-sht-typic.dgn |                     | DRAWN - FAV     | REVISED - |
| PLOT SCALE = 100.0000' / in.                |                     | CHECKED - MDS   | REVISED - |
| PLOT DATE = 5/3/2011                        |                     | DATE - 05/01/09 | REVISED - |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

|                                   |                         |
|-----------------------------------|-------------------------|
| <b>TR 307A - TYPICAL SECTIONS</b> |                         |
| SCALE:                            | SHEET NO. 1 OF 1 SHEETS |
| STA.                              | TO STA.                 |

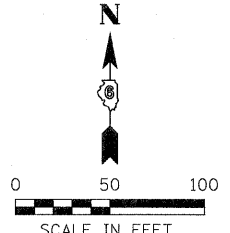
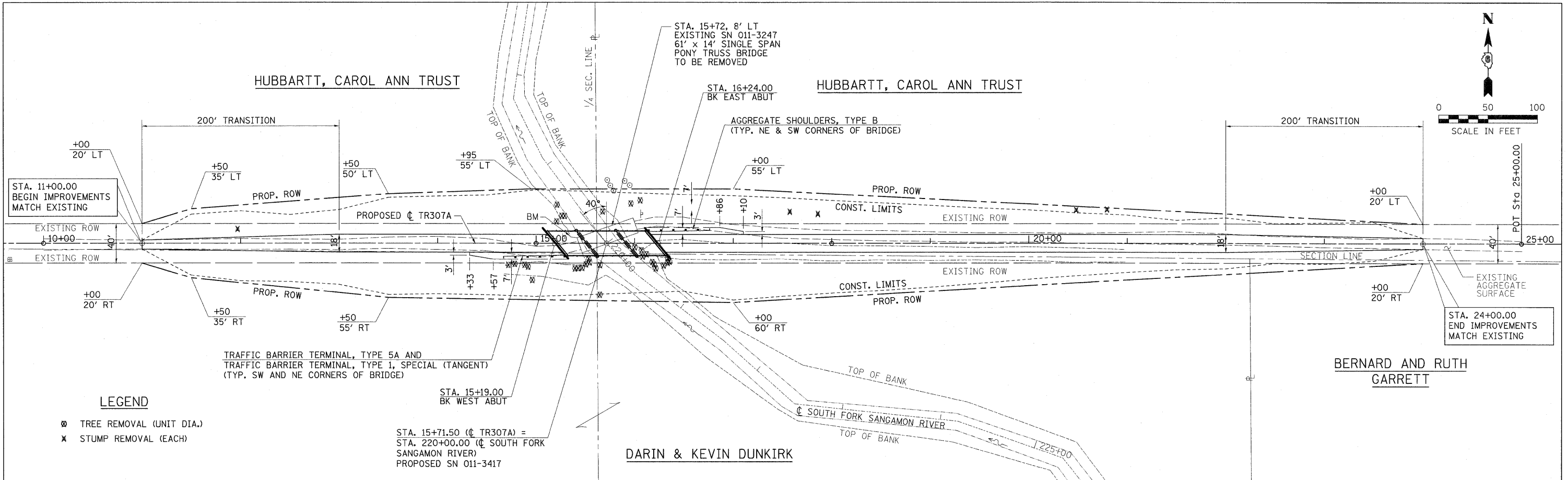
| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
|---|----------------|-----------|--------------------|-----------|
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                 | 4         |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT BROS-0021 (179) |                |           | CONTRACT NO. 93567 |           |

PLOT DRIVER = V81.PDF.pltcf

|      |  |
|------|--|
| DATE |  |
| BY   |  |
| PLAN |  |
| NO.  |  |
| DATE |  |
| BY   |  |
| DATE |  |
| BY   |  |
| DATE |  |
| BY   |  |
| DATE |  |

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| DATE |  |
| BY   |  |
| DATE |  |
| BY   |  |
| DATE |  |

GREENE & BRADFORD, INC.  
 OF BRADFORD  
 1000 N. WASHINGTON ST.  
 CHICAGO, IL 60610  
 (773) 399-1000  
 FAX (773) 399-1001  
 WWW.GREENE-AND-BRADFORD.COM



**LEGEND**

- ⊗ TREE REMOVAL (UNIT DIA.)
- ✕ STUMP REMOVAL (EACH)

TRAFFIC BARRIER TERMINAL, TYPE 5A AND  
 TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)  
 (TYP. SW AND NE CORNERS OF BRIDGE)

STA. 15+72, 8' LT  
 EXISTING SN 011-3247  
 61' x 14' SINGLE SPAN  
 PONY TRUSS BRIDGE  
 TO BE REMOVED

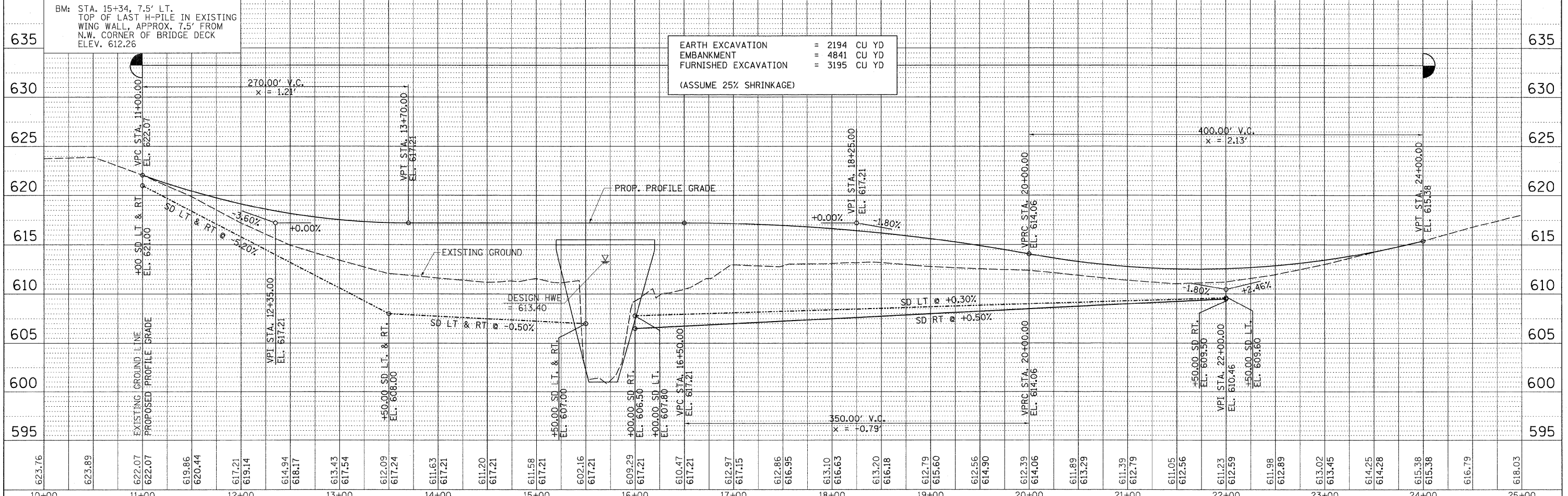
STA. 16+24.00  
 BK EAST ABUT

AGGREGATE SHOULDERS, TYPE B  
 (TYP. NE & SW CORNERS OF BRIDGE)

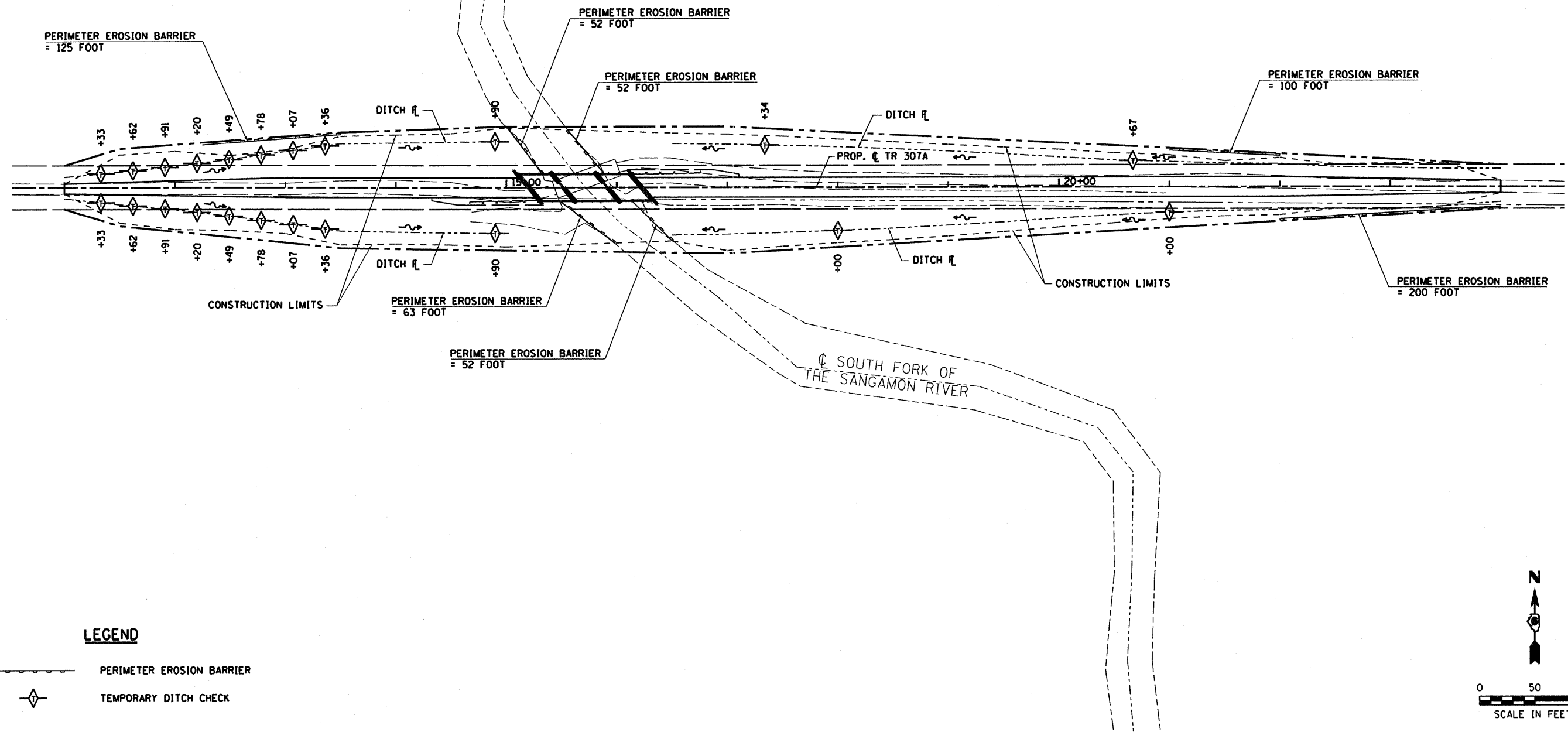
STA. 15+19.00  
 BK WEST ABUT

STA. 15+71.50 (CL TR307A) =  
 STA. 220+00.00 (CL SOUTH FORK  
 SANGAMON RIVER)  
 PROPOSED SN 011-3417

EARTH EXCAVATION = 2194 CU YD  
 EMBANKMENT = 4841 CU YD  
 FURNISHED EXCAVATION = 3195 CU YD  
 (ASSUME 25% SHRINKAGE)

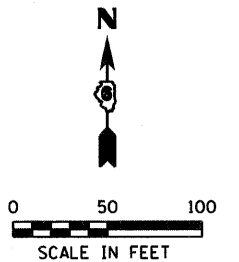


|  |                           |              |                        |   |                                  |                |                         |   |                 |                    |  |  |
|--|---------------------------|--------------|------------------------|---|----------------------------------|----------------|-------------------------|---|-----------------|--------------------|--|--|
| FILE NAME = J:\09029\CADD\CAD\Sheets\09029-sht-p1npr-f.dgn | USER NAME = amandah       | DESIGNED WCB | REVISED - AH 4/20/11   | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>TR307A - PLAN AND PROFILE</b> | T.R. RTE. 307A | SECTION 08-04118-00-BR  | COUNTY CHRISTIAN                          | TOTAL SHEETS 26 | SHEET NO. 5        |  |  |
| G&B PROJECT: 09029   | PLOT SCALE = 50.000' / 1" | DRAWN MDS    | REVISED - AH 9/09/2011 |   |                                  | SCALE:         | SHEET NO. 1 OF 1 SHEETS | STA. 10+00                                | TO STA. 25+00   | CONTRACT NO. 93567 |  |  |
| PLOT DRIVER = V8i_PDF.plt                                  | PLOT DATE = 12/15/2011    | CHECKED WCB  | REVISED -              |   |                                  |                |                         | ILLINOIS FED. AID PROJECT BROS-0021 (178) |                 |                    |  |  |
|  |                           | DATE 5/01/09 | REVISED -              |   |                                  |                |                         |   |                 |                    |  |  |



**LEGEND**

-  PERIMETER EROSION BARRIER
-  TEMPORARY DITCH CHECK



GREENE & BRADFORD, INC.  
OF SPRINGFIELD



|  |                     |                |           |
|--|---------------------|----------------|-----------|
| FILE NAME = J:\09029\CADD\CADsheets\09029-sht-eros.dgn | USER NAME = amandah | DESIGNED - WCB | REVISED - |
| PLOT SCALE = 100.0000' / 1" =                          | DRAWN - MDS         | CHECKED - WCB  | REVISED - |
| PLOT DATE = 5/3/2011                                   | DATE - 6/29/09      |                |           |

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

|   |                         |
|---|-------------------------|
| <b>TR 307A<br/>EROSION CONTROL PLAN</b> |                         |
| SCALE: 1" = 50'                         | SHEET NO. 1 OF 1 SHEETS |
| STA. 11+00                              | TO STA. 24+00           |

| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS        | SHEET NO. |
|---|----------------|-----------|---------------------|-----------|
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                  | 6         |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT BROS-0021 (175) |                |           | CONTRACT NO. 093567 |           |

PLOT DRIVER = V81.PDF.pltcf

# RIGHT OF WAY PLAT

SE 1/4, SW 1/4, SECTION 9,  
T11N, R2W, 3rd P.M.

PARCEL 101  
TAX ID NO. 04-23-09-300-005-00

**HUBBARTT, CAROL ANN TRUST**

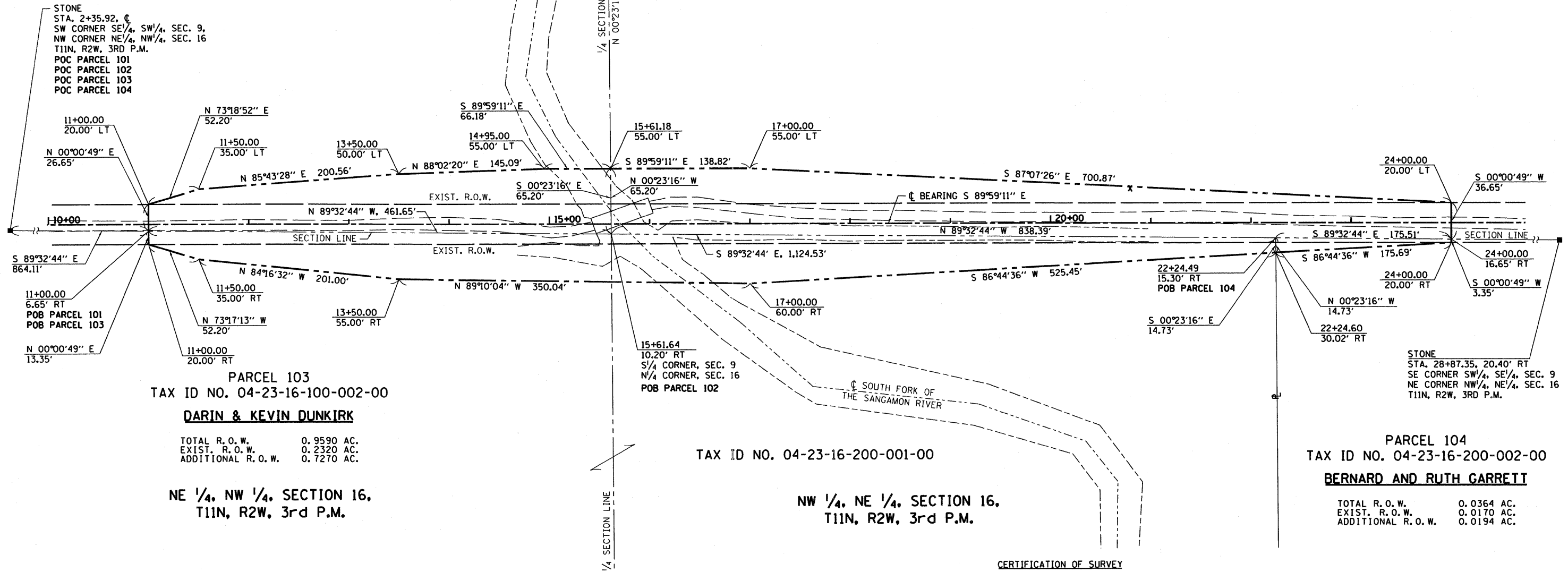
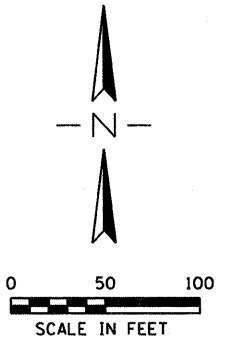
TOTAL R. O. W. 0.5745 AC.  
EXIST. R. O. W. 0.3012 AC.  
ADDITIONAL R. O. W. 0.2733 AC.

SW 1/4, SE 1/4, SECTION 9,  
T11N, R2W, 3rd P.M.

PARCEL 102  
TAX ID NO. 04-23-09-400-002-00

**HUBBARTT, CAROL ANN TRUST**

TOTAL R. O. W. 1.0360 AC.  
EXIST. R. O. W. 0.6430 AC.  
ADDITIONAL R. O. W. 0.3930 AC.



PARCEL 103  
TAX ID NO. 04-23-16-100-002-00

**DARIN & KEVIN DUNKIRK**

TOTAL R. O. W. 0.9590 AC.  
EXIST. R. O. W. 0.2320 AC.  
ADDITIONAL R. O. W. 0.7270 AC.

NE 1/4, NW 1/4, SECTION 16,  
T11N, R2W, 3rd P.M.

TAX ID NO. 04-23-16-200-001-00

NW 1/4, NE 1/4, SECTION 16,  
T11N, R2W, 3rd P.M.

PARCEL 104  
TAX ID NO. 04-23-16-200-002-00

**BERNARD AND RUTH GARRETT**

TOTAL R. O. W. 0.0364 AC.  
EXIST. R. O. W. 0.0170 AC.  
ADDITIONAL R. O. W. 0.0194 AC.

### LEGEND

- CENTERLINE (EXISTING)
- - - CENTERLINE (PROPOSED)
- RIGHT OF WAY LINE (EXISTING)
- - - RIGHT OF WAY LINE (PROPOSED)
- STONE

### CERTIFICATION OF SURVEY

I, RICHARD TONELLATO, HEREBY STATE THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS; THAT THE SURVEY OF TOWNSHIP ROAD TR 307A WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION; AND THAT THE PLAT HEREON IS IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE LAND ACQUISITION AND POLICIES AND PROCEDURES MANUAL, OF THE DEPARTMENT'S DISTRICT POLICIES.

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-002590



EXPIRES: 11/30/2012

GREENE & BRADFORD, INC.

GREENE & BRADFORD, INC.

|  |                                   |                |                      |   |   |                         |                        |                  |                 |                    |
|--|-----------------------------------|----------------|----------------------|---|---|-------------------------|------------------------|------------------|-----------------|--------------------|
| FILE NAME = J:\09029\CADD\CADsheets\09029-sht-rwpl.dgn | USER NAME = amandah               | DESIGNED - WCB | REVISED - AH 4/20/11 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b>       | <b>TR 307A OVER SOUTH FORK OF THE SANGAMON RIVER<br/>RIGHT OF WAY PLANS</b> | T.R. RTE. 307A          | SECTION 08-04118-00-BR | COUNTY CHRISTIAN | TOTAL SHEETS 26 | SHEET NO. 7        |
| G&B PROJECT: 09029                                     | PLOT SCALE = 100.0000' / 1" / 10' | CHECKED - RT   | REVISER -            | SCALE: 1" = 50'   |   | SHEET NO. 1 OF 2 SHEETS |                        | STA. TO STA.     |                 | CONTRACT NO. 93567 |
| PLOT DATE = 5/3/2011                                   | DATE = 9/17/09                    | REVISER -      |                      | FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT BROS-0021 (175) |   |                         |                        |                  |                 |                    |

# RIGHT OF WAY PLAT

## LEGAL DESCRIPTIONS

PARCEL 101

PART OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 9, TOWNSHIP 11 NORTH, RANGE 2 WEST OF THE THIRD PRINCIPAL MERIDIAN; DESCRIBED MORE PARTICULARLY AS FOLLOWS:

COMMENCING AT A STONE MARKING THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF THE AFOREMENTIONED SECTION 9, THENCE SOUTH 89 DEGREES 32 MINUTES 44 SECONDS EAST ALONG THE SECTION LINE A DISTANCE OF 864.11 FEET TO THE TRUE POINT OF BEGINNING, THENCE NORTH 00 DEGREES 00 MINUTES 49 SECONDS EAST 26.65 FEET, THENCE NORTH 73 DEGREES 18 MINUTES 52 SECONDS EAST 52.20 FEET, THENCE NORTH 85 DEGREES 43 MINUTES 28 SECONDS EAST 200.56 FEET, THENCE NORTH 88 DEGREES 02 MINUTES 20 SECONDS EAST 145.09 FEET, THENCE SOUTH 89 DEGREES 59 MINUTES 11 SECONDS EAST 66.18 FEET TO THE QUARTER SECTION LINE, THENCE SOUTH 00 DEGREES 23 MINUTES 16 SECONDS EAST ALONG THE QUARTER SECTION LINE 65.20 FEET TO THE SOUTH ONE QUARTER CORNER OF THE AFOREMENTIONED SECTION 9, THENCE NORTH 89 DEGREES 32 MINUTES 44 SECONDS WEST ALONG THE SOUTH LINE OF SECTION 9 A DISTANCE 461.65 FEET TO THE TRUE POINT OF BEGINNING.

SAID PARCEL 101 CONTAINS 0.5745 ACRES, MORE OR LESS OF WHICH 0.3012 ACRE IS WITHIN THE EXISTING RIGHT-OF-WAY OF TOWNSHIP ROAD, ALL IN THE COUNTY OF CHRISTIAN, STATE OF ILLINOIS.

PARCEL 102

PART OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 9, TOWNSHIP 11 NORTH, RANGE 2 WEST OF THE THIRD PRINCIPAL MERIDIAN; DESCRIBED MORE PARTICULARLY AS FOLLOWS:

COMMENCING AT A STONE MARKING THE SOUTHWEST CORNER OF THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF THE AFOREMENTIONED SECTION 9, THENCE SOUTH 89 DEGREES 32 MINUTES 44 SECONDS EAST ALONG THE SECTION LINE A DISTANCE OF 1,325.76 FEET TO THE SOUTH ONE QUARTER CORNER OF THE AFOREMENTIONED SECTION 9 BEING THE TRUE POINT OF BEGINNING, THENCE NORTH 00 DEGREES 23 MINUTES 16 SECONDS WEST ALONG THE WEST LINE OF THE SOUTHEAST QUARTER A DISTANCE OF 65.20 FEET, THENCE SOUTH 89 DEGREES 59 MINUTES 11 SECONDS EAST 138.82 FEET, THENCE SOUTH 87 DEGREES 07 MINUTES 26 SECONDS EAST 700.87 FEET, THENCE SOUTH 00 DEGREES 00 MINUTES 49 SECONDS WEST 36.65 FEET TO THE SOUTH LINE OF THE AFOREMENTIONED SECTION 9, THENCE NORTH 89 DEGREES 32 MINUTES 44 SECONDS WEST ALONG SAID SOUTH LINE A DISTANCE OF 838.39 FEET TO THE TRUE POINT OF BEGINNING.

SAID PARCEL 102 CONTAINS 1.0360 ACRES, MORE OR LESS OF WHICH 0.6430 ACRE IS WITHIN THE EXISTING RIGHT-OF-WAY OF TOWNSHIP ROAD, ALL IN THE COUNTY OF CHRISTIAN, STATE OF ILLINOIS.

PARCEL 103

PART OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER AND PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 16, TOWNSHIP 11 NORTH, RANGE 2 WEST OF THE THIRD PRINCIPAL MERIDIAN; DESCRIBED MORE PARTICULARLY AS FOLLOWS:

COMMENCING AT A STONE MARKING THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE AFOREMENTIONED SECTION 16, THENCE SOUTH 89 DEGREES 32 MINUTES 44 SECONDS EAST ALONG THE SECTION LINE A DISTANCE OF 864.11 FEET TO THE TRUE POINT OF BEGINNING, THENCE CONTINUING SOUTH 89 DEGREES 32 MINUTES 44 SECONDS EAST ALONG THE NORTH LINE OF THE AFOREMENTIONED SECTION 16 A DISTANCE OF 1,124.53 FEET, THENCE SOUTH 00 DEGREES 23 MINUTES 16 SECONDS EAST 14.73 FEET, THENCE SOUTH 86 DEGREES 44 MINUTES 36 SECONDS WEST 525.45 FEET, THENCE NORTH 89 DEGREES 10 MINUTES 04 SECONDS WEST 350.04 FEET, THENCE NORTH 84 DEGREES 16 MINUTES 32 SECONDS WEST 201.00 FEET, THENCE NORTH 73 DEGREES 17 MINUTES 13 SECONDS WEST 52.20 FEET, THENCE NORTH 00 DEGREES 00 MINUTES 49 SECONDS EAST 13.35 FEET TO THE TRUE POINT OF BEGINNING.

SAID PARCEL 103 CONTAINS 0.9590 ACRES, MORE OR LESS OF WHICH 0.2320 ACRE IS WITHIN THE EXISTING RIGHT-OF-WAY OF TOWNSHIP ROAD, ALL IN THE COUNTY OF CHRISTIAN, STATE OF ILLINOIS.

PARCEL 104

PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 16, TOWNSHIP 11 NORTH, RANGE 2 WEST OF THE THIRD PRINCIPAL MERIDIAN; DESCRIBED MORE PARTICULARLY AS FOLLOWS:

COMMENCING AT A STONE MARKING THE NORTHWEST CORNER OF THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER OF THE AFOREMENTIONED SECTION 16, THENCE SOUTH 89 DEGREES 32 MINUTES 44 SECONDS EAST ALONG THE SECTION LINE A DISTANCE OF 1,988.64 FEET TO THE TRUE POINT OF BEGINNING, THENCE CONTINUING SOUTH 89 DEGREES 32 MINUTES 44 SECONDS EAST ALONG THE NORTH LINE OF THE AFOREMENTIONED SECTION 16 A DISTANCE OF 175.51 FEET, THENCE SOUTH 00 DEGREES 00 MINUTES 49 SECONDS WEST 3.35 FEET, THENCE SOUTH 86 DEGREES 44 MINUTES 36 SECONDS WEST 175.69 FEET, THENCE NORTH 00 DEGREES 23 MINUTES 16 SECONDS WEST 14.73 FEET TO THE TRUE POINT OF BEGINNING.

SAID PARCEL 104 CONTAINS 0.0364 ACRES, MORE OR LESS OF WHICH 0.0170 ACRE IS WITHIN THE EXISTING RIGHT-OF-WAY OF TOWNSHIP ROAD, ALL IN THE COUNTY OF CHRISTIAN, STATE OF ILLINOIS.

**CERTIFICATION OF SURVEY**

I, RICHARD TONELLATO, HEREBY STATE THAT I AM A PROFESSIONAL LAND SURVEYOR OF THE STATE OF ILLINOIS; THAT THE SURVEY OF TOWNSHIP ROAD TR 307A WAS MADE BY ME OR UNDER MY DIRECT SUPERVISION; AND THAT THE PLAT HEREON IS IN ACCORDANCE WITH APPLICABLE SECTIONS OF THE LAND ACQUISITION AND POLICIES AND PROCEDURES MANUAL, OF THE DEPARTMENT'S DISTRICT POLICIES.

DATE: \_\_\_\_\_ BY: \_\_\_\_\_

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-002590



EXPIRES: 11/30/2012  
GREENE & BRADFORD, INC.

GREENE & BRADFORD, INC.  
OF SPRINGFIELD  
1000 W. WASHINGTON ST., SUITE 100  
SPRINGFIELD, ILLINOIS 62760  
TEL: 217-223-1111 FAX: 217-223-1112  
WWW.GREENE-AND-BRADFORD.COM

|  |                     |                      |           |   |   |   |                |              |              |           |  |
|--|---------------------|----------------------|-----------|---|---|---|----------------|--------------|--------------|-----------|--|
| FILE NAME = J:\09029\CADD\CADsheets\09029-sht-rwp1.dgn | USER NAME = amandah | DESIGNED - WCB       | REVISED - | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>TR 307A OVER SOUTH FORK OF THE SANGAMON RIVER<br/>RIGHT OF WAY PLANS</b> | T.R. RTE.   | SECTION        | COUNTY       | TOTAL SHEETS | SHEET NO. |  |
|  |                     | DRAWN - MDS          | REVISED - |   |   | 307A  | 08-04118-00-BR | CHRISTIAN    | 26           | 8         |  |
|  |                     | CHECKED - RT         | REVISED - |   |   | CONTRACT NO. 090567   |                |              |              |           |  |
|  |                     | DATE - 9/17/09       | REVISED - |   |   | FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT BR05-0021 (178) |                |              |              |           |  |
| G&B PROJECT: 09029                                     |                     | PLOT DATE = 5/3/2011 |           | SCALE: 1" = 50'   |   | SHEET NO. 2 OF 2 SHEETS                                       |                | STA. TO STA. |              |           |  |
| PLOT DRIVER = VB1.PDF.pltcfq                           |                     |                      |           |   |   |   |                |              |              |           |  |



Benchmark: Sta. 15+34, 7.5' Lt., Top of H-Pile Elev. 612.26

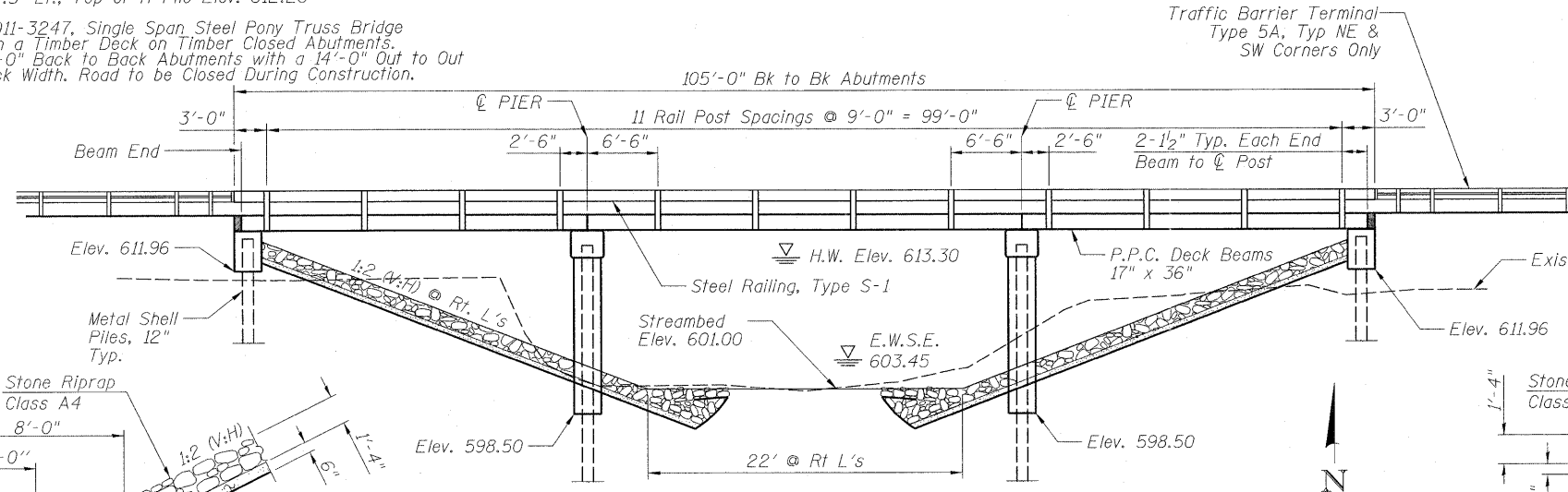
Existing Structure: S.N. 011-3247, Single Span Steel Pony Truss Bridge With a Timber Deck on Timber Closed Abutments. 61'-0" Back to Back Abutments with a 14'-0" Out to Out Deck Width. Road to be Closed During Construction.

No Salvage

**WATERWAY INFORMATION**

| Drainage Area = 41.35 sq. mi. |                 | Existing Low Grade Elevation 611.05 ft. @ Sta. 21+50.00 |                      | Proposed Low Grade Elevation 612.54 ft. @ Sta. 21+69.01 |       |       |     |     |       |       |
|-------------------------------|-----------------|---|----------------------|---|-------|-------|-----|-----|-------|-------|
| Freq. Year                    | Discharge (cfs) | Opening (sq ft)   | Natural Head - (ft.) | Headwater Elevation                                     | Prop. |       |     |     |       |       |
| Overtopping                   | 5               | 2320  | 2320                 | 306   | 488   | 612.6 | 0.1 | 0.5 | 612.7 | 613.1 |
| Design                        | 10              | 3070  | 3070                 | 306   | 535   | 613.3 | 0.1 | 0.5 | 613.4 | 613.8 |
| Base                          | 100             | 5620  | 5620                 | 306   | 676   | 615.3 | 0.1 | 0.4 | 615.4 | 615.7 |
| Max. Calc.                    | 500             | 7480  | 7480                 | 306   | 684   | 616.4 | 0.1 | 0.4 | 616.5 | 616.8 |

10 Year Velocity through Existing Bridge = 7.6 fps      10 Year Velocity through Proposed Bridge = 4.8 fps

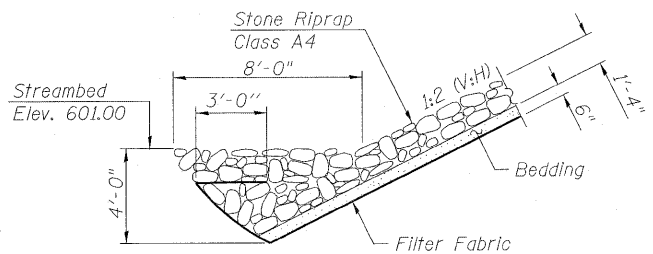


| DESIGN SCOUR ELEVATION | N & S Abut. | N & S Pier |
|------------------------|-------------|------------|
|                        | 611.96      | 587.85     |

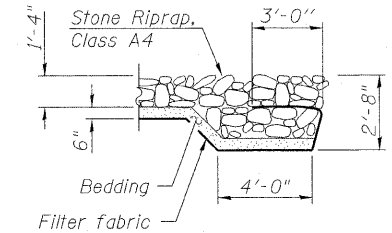
**TOTAL BILL OF MATERIAL**

| ITEM  | UNIT    | SUPER | SUB    | TOTAL  |
|---|---------|-------|--------|--------|
| Stone Riprap, Class A4                              | Ton     |       | 448    | 448    |
| Filter Fabric                                       | Sq. Yd. |       | 673    | 673    |
| Removal of Existing Structures                      | Each    |       | 1      | 1      |
| Structure Excavation                                | Cu. Yd. |       | 28.0   | 28.0   |
| Cofferdam Excavation                                | Cu. Yd. |       | 81.0   | 81.0   |
| Cofferdam (Type 1) (Location-1)                     | Each    |       | 1      | 1      |
| Cofferdam (Type 1) (Location-2)                     | Each    |       | 1      | 1      |
| Concrete Structures                                 | Cu. Yd. |       | 119.2  | 119.2  |
| Precast Prestressed Concrete Deck Beams (17" depth) | Sq. Ft. | 2,473 |        | 2,473  |
| Reinforcement Bars, Epoxy Coated                    | Pound   |       | 10,280 | 10,280 |
| Steel Railing, Type S1                              | Foot    | 210   |        | 210    |
| Furnishing Metal Shell Piles, 12" x 0.25"           | Foot    |       | 762    | 762    |
| Driving Piles                                       | Foot    |       | 762    | 762    |
| Test Pile, Metal Shells                             | Each    |       | 2      | 2      |
| Name Plates   | Each    | 1     |        | 1      |

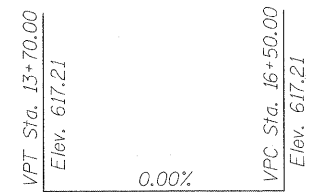
**STONE RIPRAP ANCHOR DETAIL**



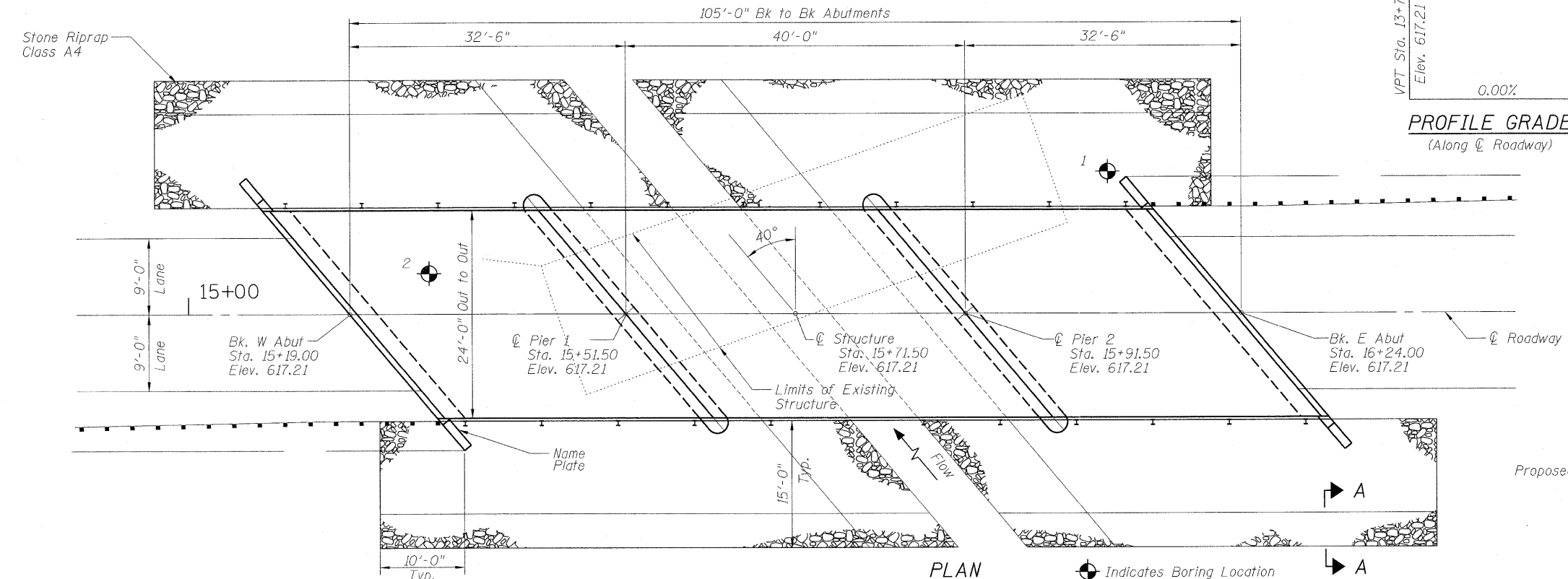
**SECTION A-A**



**PROFILE GRADE**  
(Along Roadway)



**ELEVATION**



**PLAN**

Indicates Boring Location

**DESIGN STRESSES**

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

**PRECAST PRESTRESSED UNITS**

$f'_c = 6,000$  psi  
 $f'_{ci} = 5,000$  psi  
 $f_{pu} = 270,000$  psi ( $\frac{1}{2}$ "  $\phi$  Low Lax. Strands)  
 $f_{pbt} = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  Low Lax. Strands)  
 $f_y = 60,000$  psi (Reinforcement)

**LOADING HL-93**

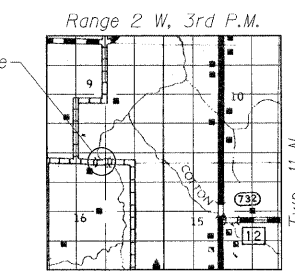
Allow 50#/sq. ft. for future wearing surface.

**DESIGN SPECIFICATIONS**

2010 AASHTO LRFD Bridge Design Specifications

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
Design Spectral Acceleration at 1.0 sec. ( $S_{D1}$ ) = 0.071  
Design Spectral Acceleration at 0.2 sec. ( $S_{D5}$ ) = 0.210  
Soil Site Class = D



**LOCATION SKETCH**

SOUTH FORK SANGAMON RIVER  
BUILT 20 BY  
CHRISTIAN COUNTY  
GREENWOOD ROAD DISTRICT  
SECTION 08-04118-00-BR  
TR 307A STATION 15+71.50  
S.N. 011-3417 LOADING HL-93

**NAME PLATE**

See Std. 515001 & Abut. Detail for Location

**GENERAL PLAN AND ELEVATION**

**SECTION 08-04118-00-BR**

**CHRISTIAN COUNTY**

**STRUCTURE NO. 011-3417**

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 A.A.S.H.T.O. L.R.F.D. Bridge Design Specifications.

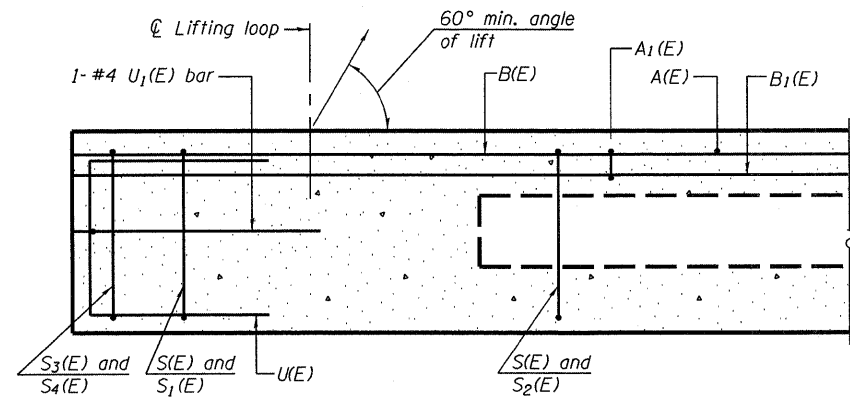
Signed: [Signature] Dated: 12-16-11



Exp. 11-30-2012

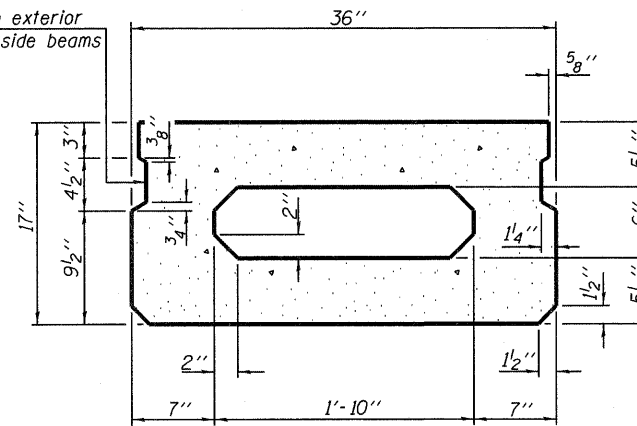


|  |                        |                      |                      |   |  |                        |                  |                 |             |
|--|------------------------|----------------------|----------------------|---|--|------------------------|------------------|-----------------|-------------|
| FILE NAME = J:\09029\CADD\CAD\sheeta\SN 011-3417\0804118-09029-9-Shr-GPE.dgn | USER NAME = amandah    | DESIGNED - NIEWINSKI | REVISED - AH 4/20/11 | <p align="center"><b>STATE OF ILLINOIS</b><br/><b>DEPARTMENT OF TRANSPORTATION</b></p> <p align="center">GENERAL PLAN AND ELEVATION<br/>STRUCTURE NO. 011-3417</p> <p align="center">SHEET NO. 1 OF 10 SHEETS</p> | T.R. 307A                                  | SECTION 08-04118-00-BR | COUNTY CHRISTIAN | TOTAL SHEETS 26 | SHEET NO. 9 |
| PLOT SCALE = 8.0252 / in.  | PLOT DATE = 12/16/2011 | CHECKED - TRELLO     | REVISED - AH 9/09/11 |   | CONTRACT NO. 93567                         |                        |                  |                 |             |
|  |                        | DRAWN - VERENSKI     | REVISED -            |   | ILLINOIS FED. AID PROJECT: BRGS-0021 (178) |                        |                  |                 |             |
|  |                        | CHECKED - TRELLO     | REVISED -            |   |  |                        |                  |                 |             |

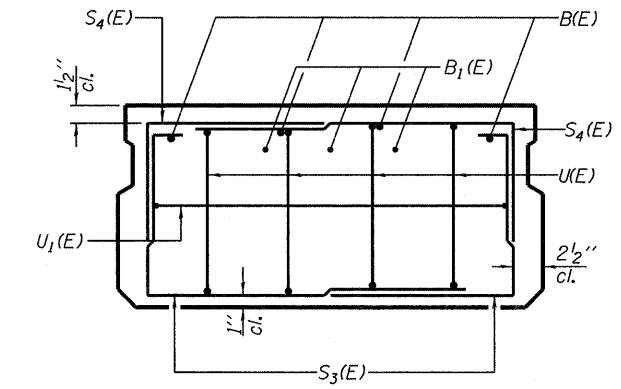


**SECTION A-A**

\*Omit key on exterior face of outside beams

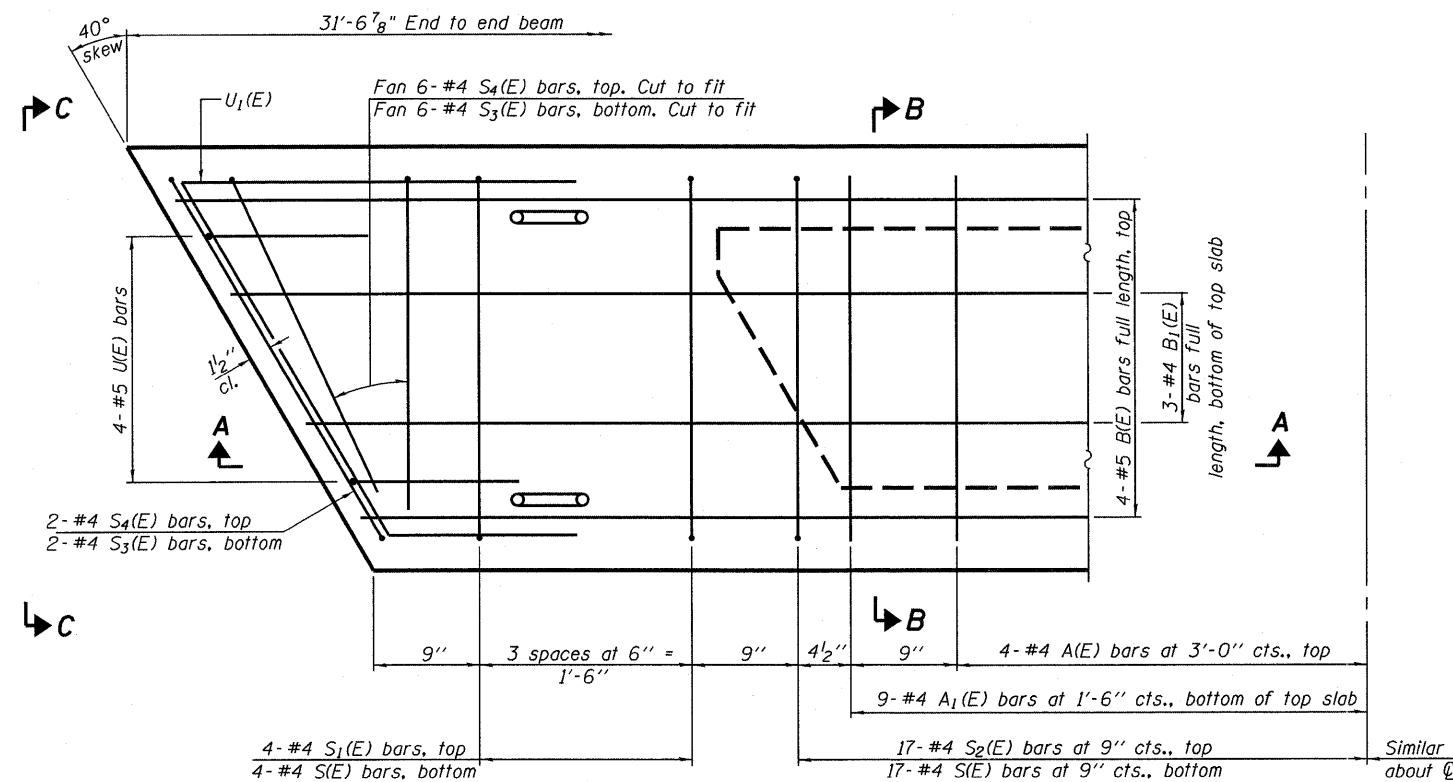


**SECTION B-B**  
(Showing dimensions)

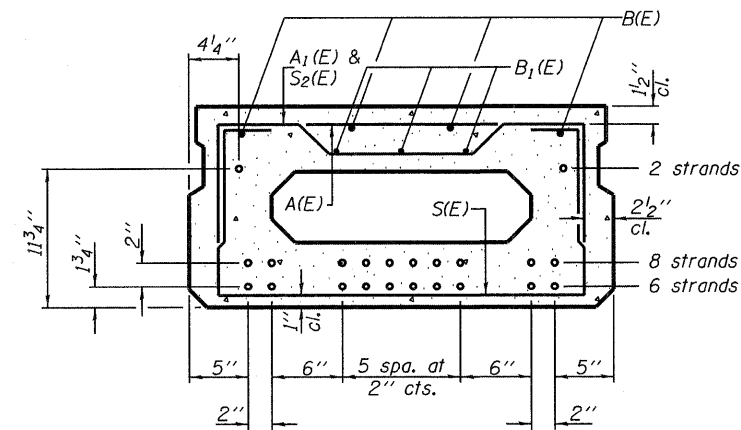


**VIEW C-C**

\*Rail Post Anchor Devices Shall be Cast into Exterior Face of Outside Beams.



**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)  | 8   | #4   | 2'-7"  | —     |
| A1(E) | 18  | #4   | 2'-10" | —     |
| B(E)  | 4   | #5   | 31'-3" | —     |
| B1(E) | 3   | #4   | 31'-3" | —     |
| S(E)  | 42  | #4   | 5'-9"  | U     |
| S1(E) | 8   | #4   | 4'-3"  | U     |
| S2(E) | 34  | #4   | 4'-6"  | U     |
| S3(E) | 16  | #4   | 4'-11" | U     |
| S4(E) | 16  | #4   | 4'-2"  | U     |
| U(E)  | 8   | #5   | 3'-8"  | U     |
| U1(E) | 2   | #4   | 7'-10" | U     |

Note: See sheet 4 of 10 for additional details and Bill of Material.

Note: 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.

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



PD-1736-R 7-1-10

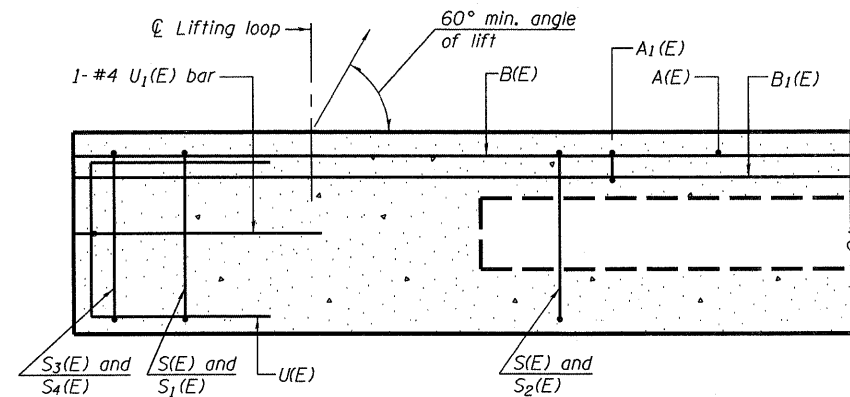
|  |                      |                      |                      |
|--|----------------------|----------------------|----------------------|
| FILE NAME = J:\09029\CADD\CADsheets\SN 011-3417\0841118-09029-Sht-Span 1-3.dgn | USER NAME = amandah  | DESIGNED - NIEWINSKI | REVISED - AH 4/20/11 |
| PLOT SCALE = 0.2, 0000 1' / 1"   | PLOT DATE = 5/3/2011 | CHECKED - TRELLO     | REVISED -            |
|  |                      | DRAWN - VERENSKI     | REVISED -            |
|  |                      | CHECKED - TRELLO     | REVISED -            |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

17" x 36" PPC DECK BEAM SPANS 1 & 3  
STRUCTURE NO. 011-3417

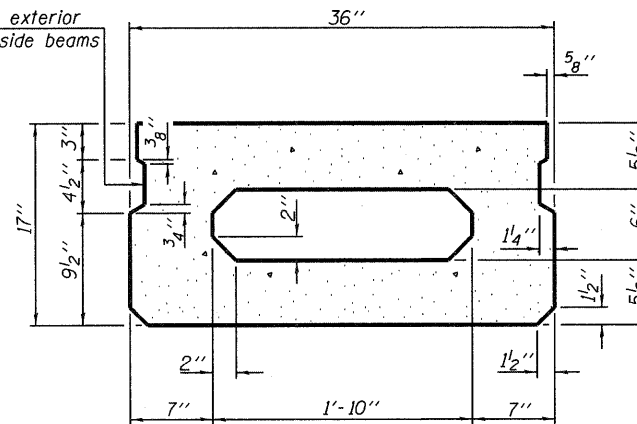
SHEET NO. 2 OF 10 SHEETS

| T.R. RTE.                                  | SECTION        | COUNTY    | TOTAL SHEETS        | SHEET NO. |
|--|----------------|-----------|---------------------|-----------|
| 307A                                       | 08-04118-00-BR | CHRISTIAN | 26                  | 10        |
|  |                |           | CONTRACT NO. 093567 |           |
| ILLINOIS FED. AID PROJECT: BR05-0021 (173) |                |           |                     |           |

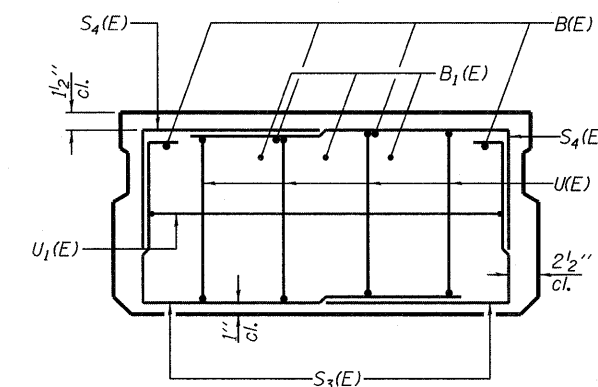


**SECTION A-A**

\*Omit key on exterior face of outside beams

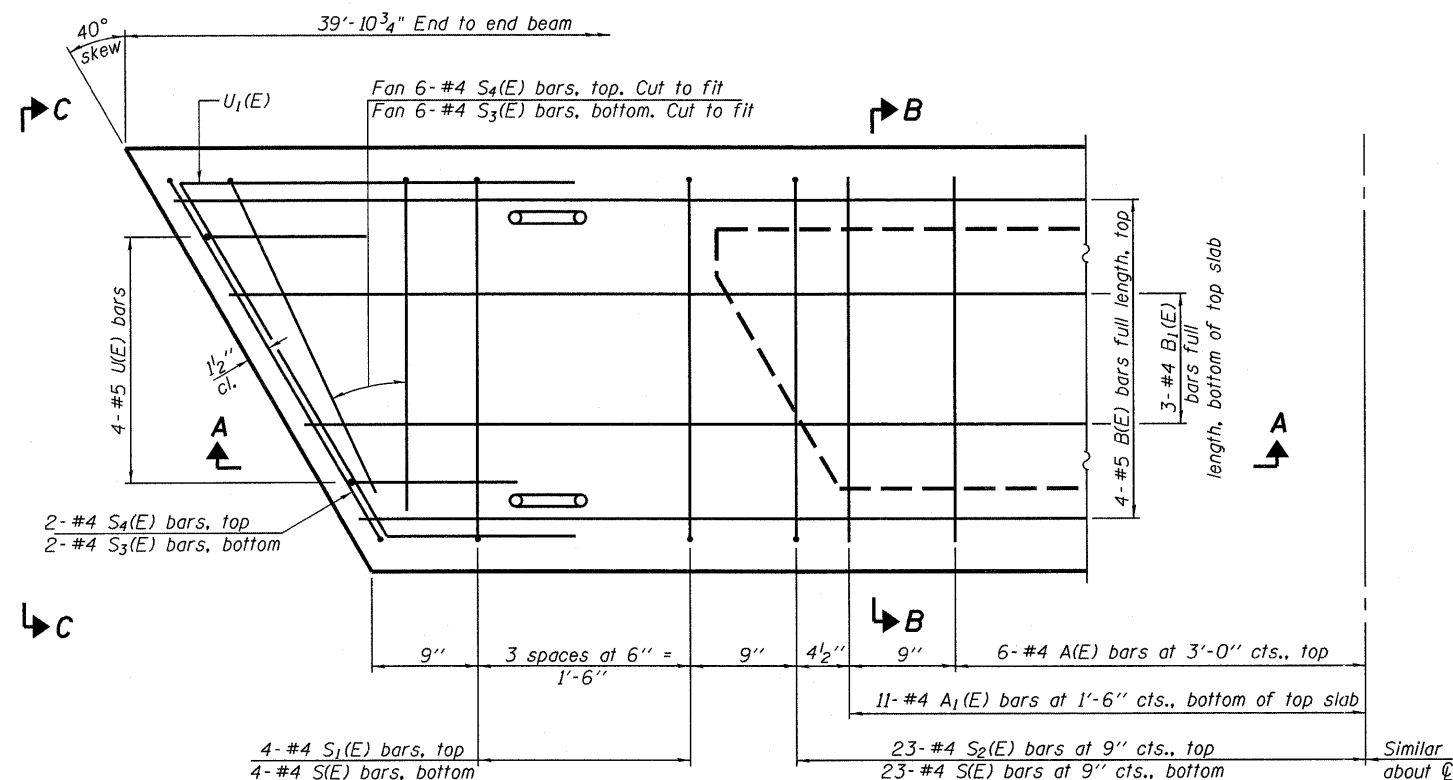


**SECTION B-B**  
(Showing dimensions)

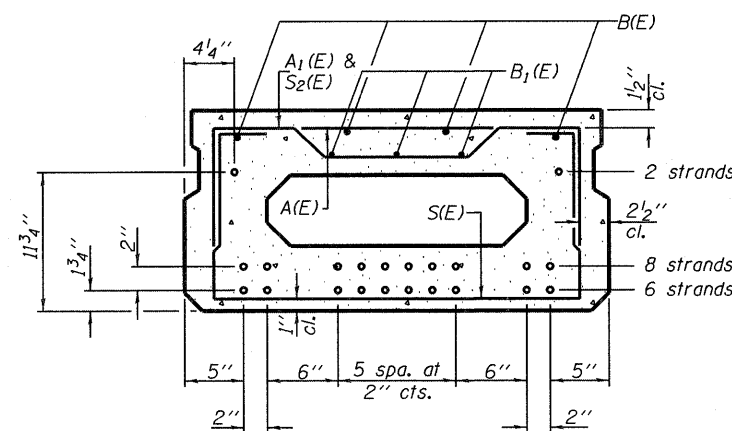


**VIEW C-C**

\* Rail Post Anchor Devices Shall be Cast into Exterior Face of Outside Beams.



**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)

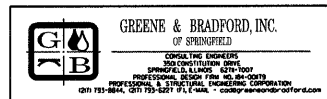
| Bar   | No. | Size | Length | Shape |
|-------|-----|------|--------|-------|
| A(E)  | 12  | #4   | 2'-7"  | —     |
| A1(E) | 22  | #4   | 2'-10" | —     |
| B(E)  | 4   | #5   | 39'-6" | —     |
| B1(E) | 3   | #4   | 39'-6" | —     |
| S(E)  | 54  | #4   | 5'-9"  | U     |
| S1(E) | 8   | #4   | 4'-3"  | U     |
| S2(E) | 46  | #4   | 4'-6"  | U     |
| S3(E) | 16  | #4   | 4'-11" | U     |
| S4(E) | 16  | #4   | 4'-2"  | U     |
| U(E)  | 8   | #5   | 3'-8"  | U     |
| U1(E) | 2   | #4   | 7'-10" | U     |

Note: See sheet 4 of 10 for additional details and Bill of Material.

**MINIMUM BAR LAP**

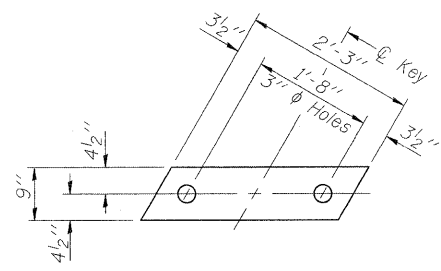
#4 bar = 2'-0"  
#5 bar = 2'-6"

Note: 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.

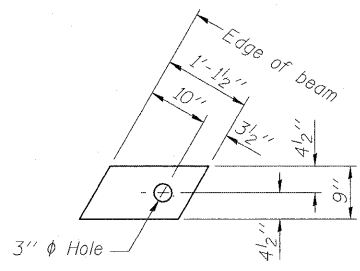


PD-1736-R 7-1-10

|  |                      |                      |                      |   |  |  |                |           |              |           |  |
|--|----------------------|----------------------|----------------------|---|--|--|----------------|-----------|--------------|-----------|--|
| FILE NAME = J:\09029\CADD\CADsheets\SN 011-3417-08 | USER NAME = amandah  | DESIGNED - NIEWINSKI | REVISED - AH 4/20/11 | <b>STATE OF ILLINOIS<br/>DEPARTMENT OF TRANSPORTATION</b> | <b>17" x 36" PPC DECK BEAM SPAN 2<br/>STRUCTURE NO. 011-3417</b> | T.R. RTE.                                  | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |  |
| PLOT SCALE = 0:2.0000 ' / in.                      | PLOT DATE = 5/3/2011 | CHECKED - TRELLO     | REVISED -            |   |  | 307A                                       | 08-04118-00-BR | CHRISTIAN | 26           | 11        |  |
|  |                      | DRAWN - VERENSKI     | REVISED -            |   |  | CONTRACT NO. 93567                         |                |           |              |           |  |
|  |                      | CHECKED - TRELLO     | REVISED -            |   |  | ILLINOIS FED. AID PROJECT: BR05-0021 (175) |                |           |              |           |  |



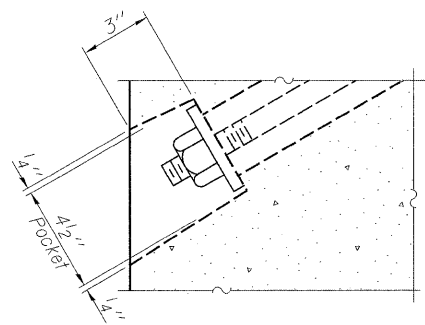
**FABRIC BEARING PAD**  
(Interior)



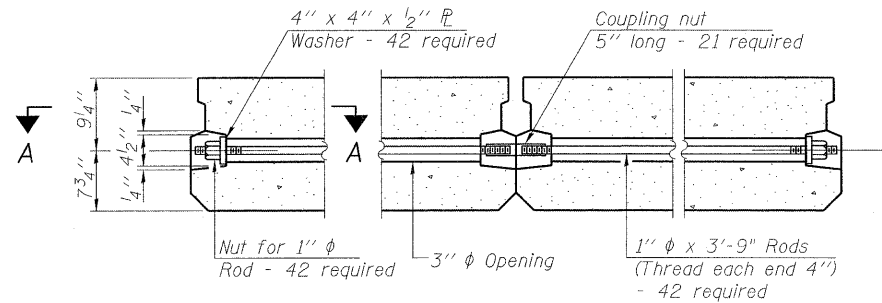
**FABRIC BEARING PAD**  
(Exterior)

**FIXED**

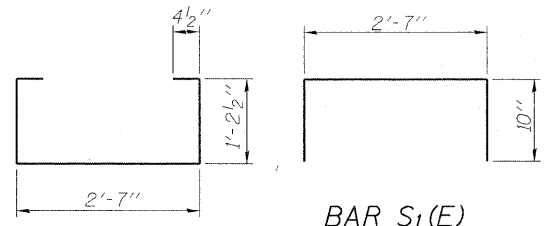
Notes:  
All bearing pads shall be 1" thick.  
Omit holes when using expansion bearings.  
Expansion bearing pad shall be bonded to the substructure.



**SECTION A-A**

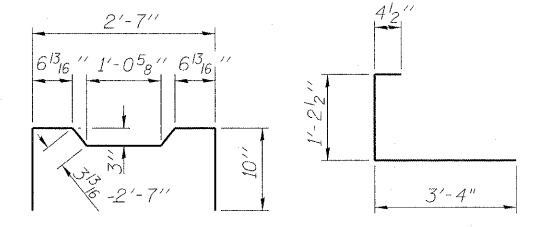


**TYPICAL TRANSVERSE TIE ASSEMBLY**



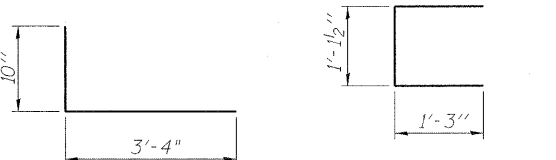
**BAR S(E)**

**BAR S<sub>1</sub>(E)**



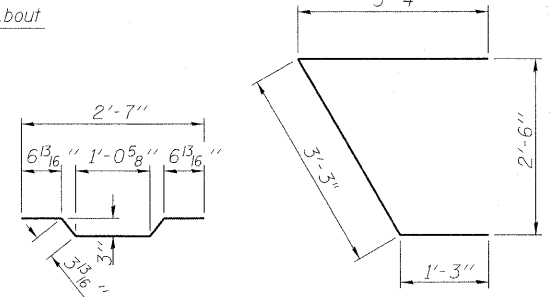
**BAR S<sub>2</sub>(E)**

**BAR S<sub>3</sub>(E)**



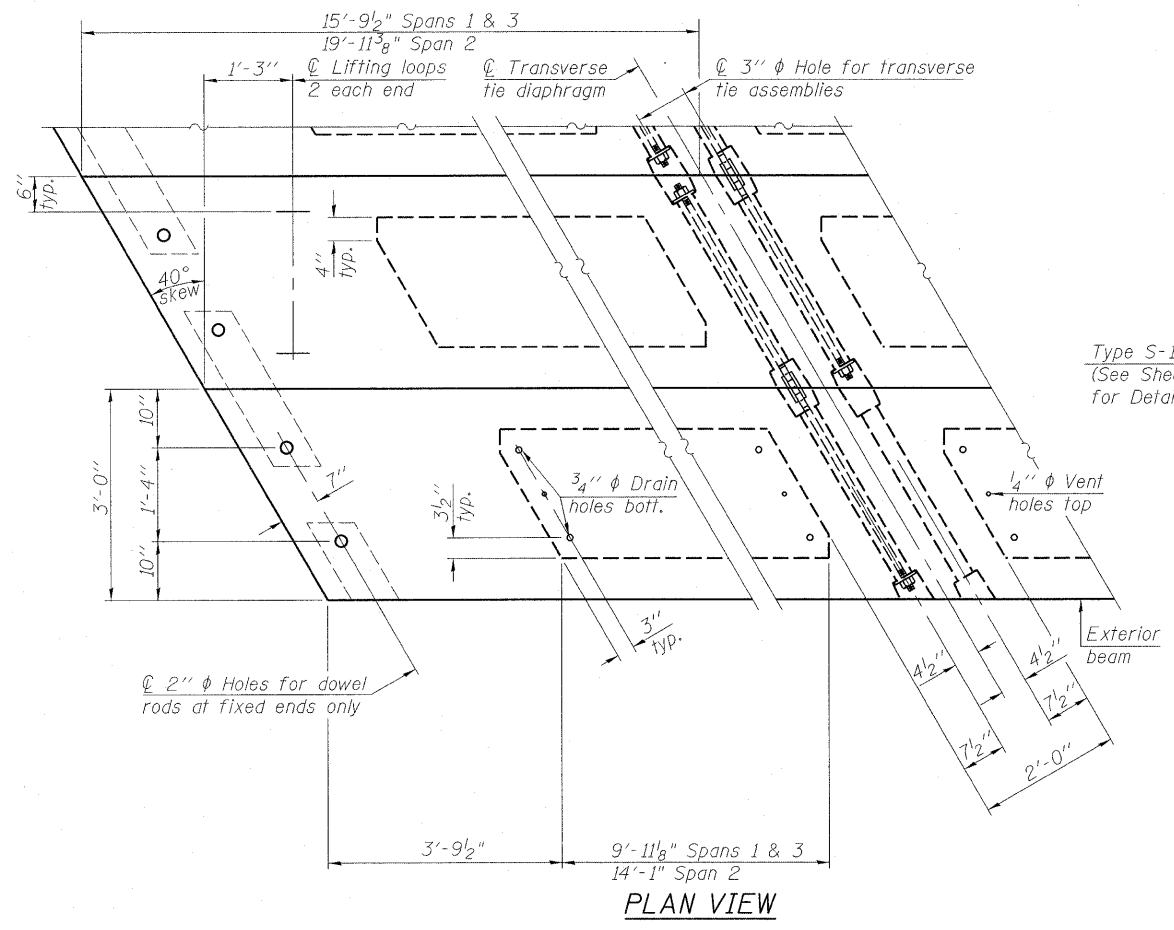
**BAR S<sub>4</sub>(E)**

**BAR U(E)**



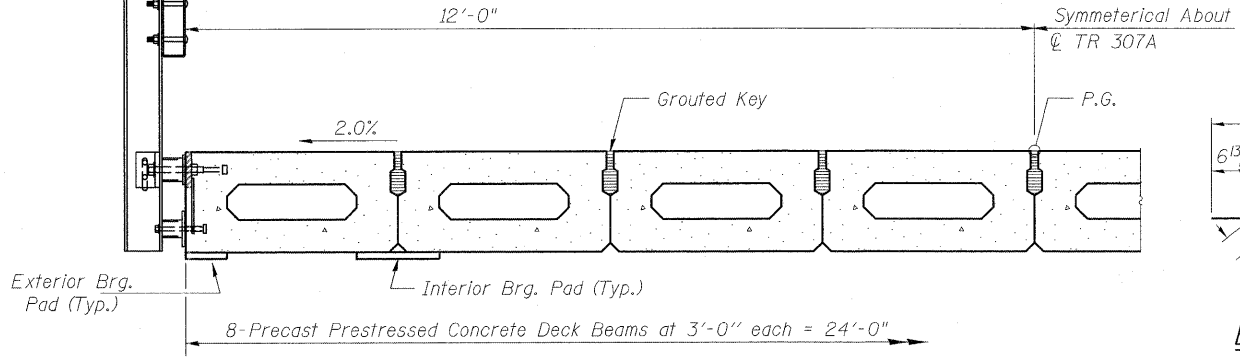
**BAR A<sub>1</sub>(E)**

**BAR U<sub>1</sub>(E)**



**PLAN VIEW**

Type S-1 Steel Rail  
(See Sheet 5 of 10  
for Details)



**PARTIAL CROSS SECTION**

**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.  
Two 1/2" 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 1021.06 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.

**BILL OF MATERIAL**

|   |         |      |
|---|---------|------|
| Precast Prestressed Conc. Deck Bms. (17" depth) | Sq. Ft. | 2473 |
|---|---------|------|

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



PD-1736-RD 7-1-10

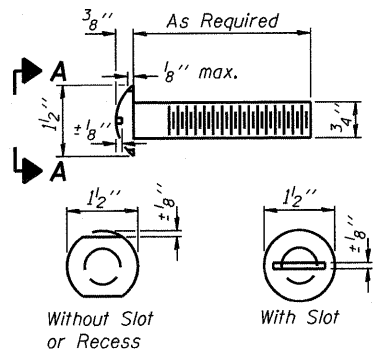
|  |                        |                      |                        |
|--|------------------------|----------------------|------------------------|
| FILE NAME = J:\09029\CADD\CADsheets\SN 011-3417\084118-09029-Sht-PPC Deck Beam.dgn | USER NAME = amandah    | DESIGNED - NIEWINSKI | REVISED - AH 9/09/2011 |
| PLOT SCALE = 01' / 1" = 1/8"   | PLOT DATE = 12/15/2011 | CHECKED - TRELLO     | REVISED -              |
|  |                        | DRAWN - VERENSKI     | REVISED -              |
|  |                        | CHECKED - TRELLO     | REVISED -              |

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

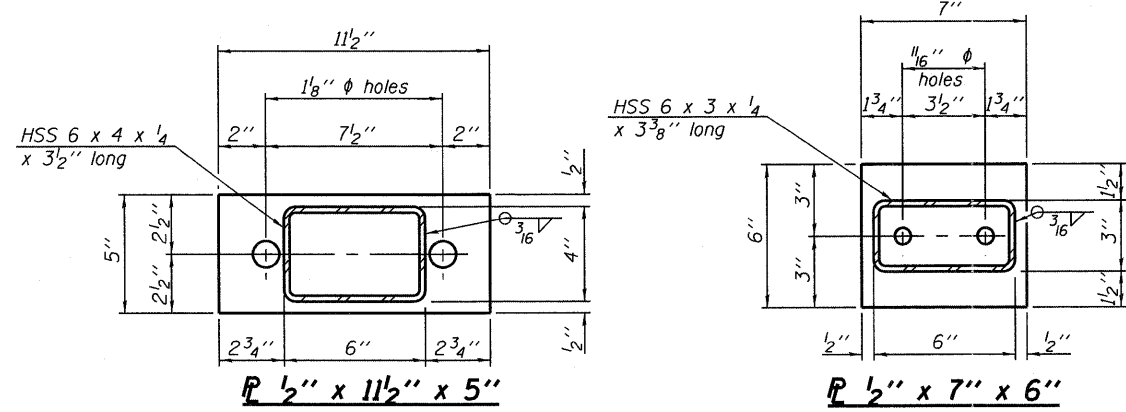
**17" x 36" PPC DECK BEAM DETAILS**  
**STRUCTURE NO. 011-3417**

SHEET NO. 4 OF 10 SHEETS

|  |                |           |                    |           |
|--|----------------|-----------|--------------------|-----------|
| T.R. RTE.                                  | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
| 307A                                       | 08-04118-00-BR | CHRISTIAN | 26                 | 12        |
|  |                |           | CONTRACT NO. 93567 |           |
| ILLINOIS FED. AID PROJECT: BR05-0021 (118) |                |           |                    |           |

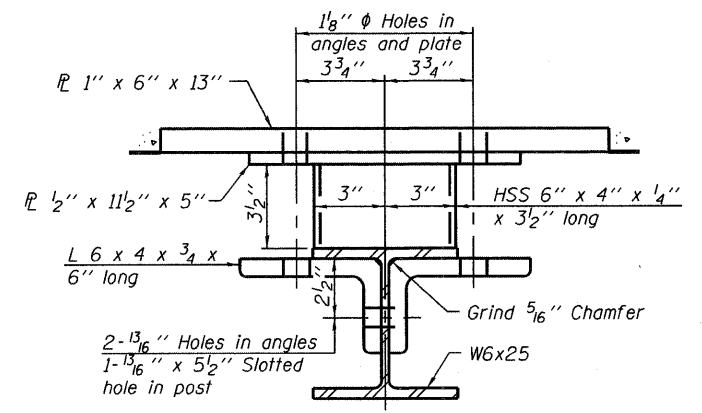


**VIEW A-A  
ROUND HEAD BOLT**

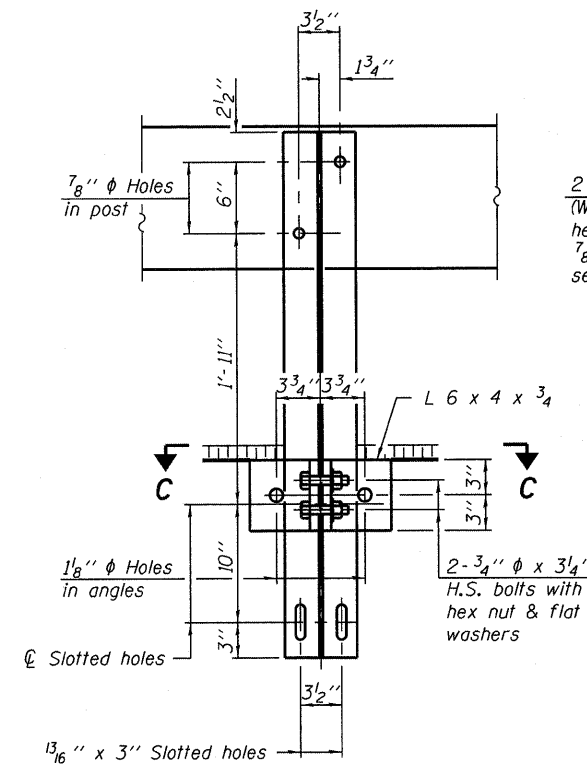


**SECTION B-B**

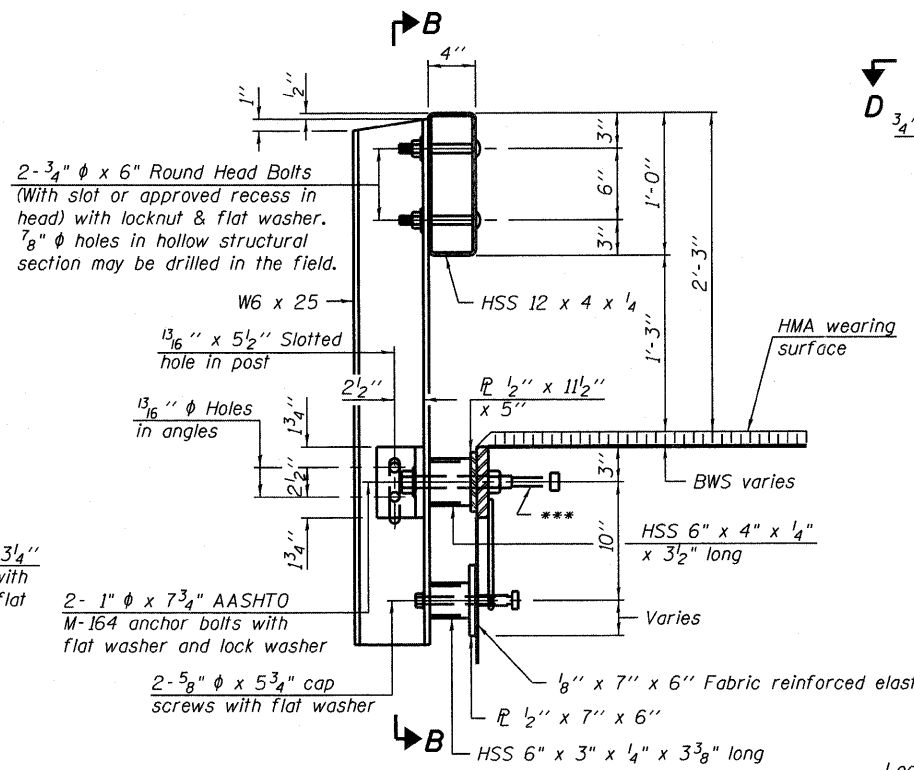
**SECTION AT RAILING POST**



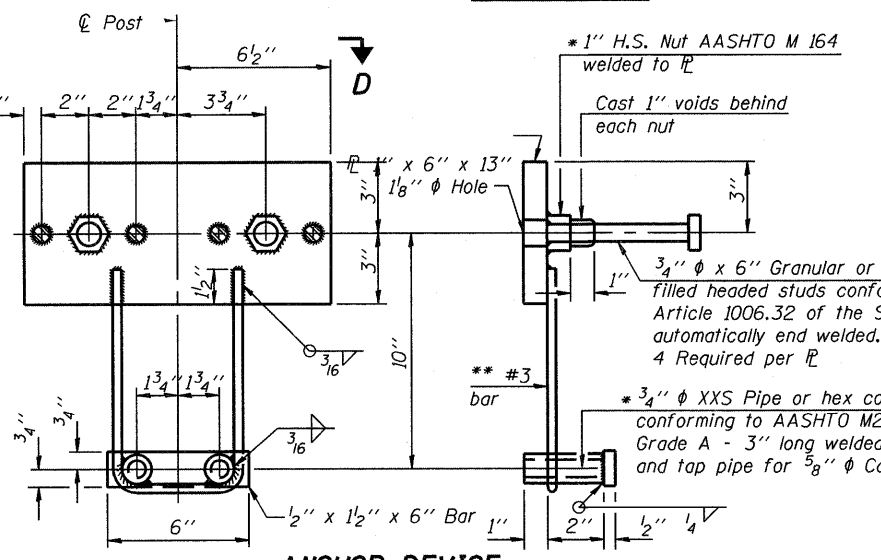
**SECTION C-C**



**SECTION B-B**



\*\* Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

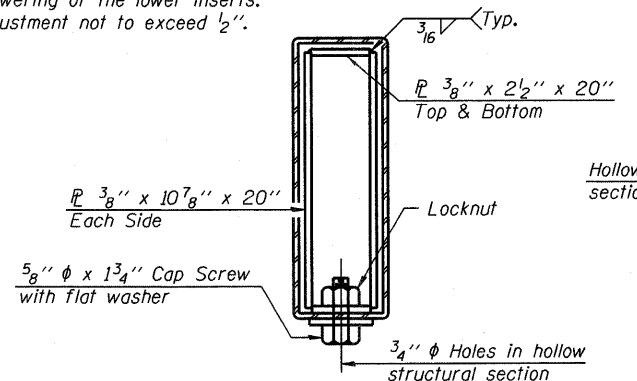


**ANCHOR DEVICE**

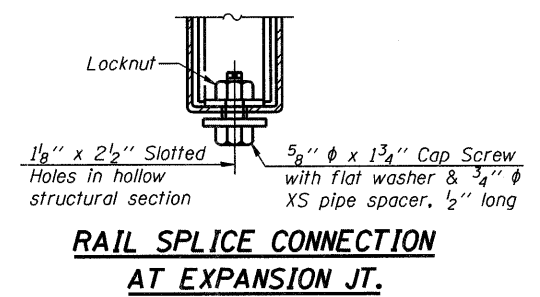
\* Threaded areas shall be plugged or blocked off during casting of beam.

**Notes:**  
All field drilled holes shall be coated with an approved zinc rich paint before erection.  
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.  
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

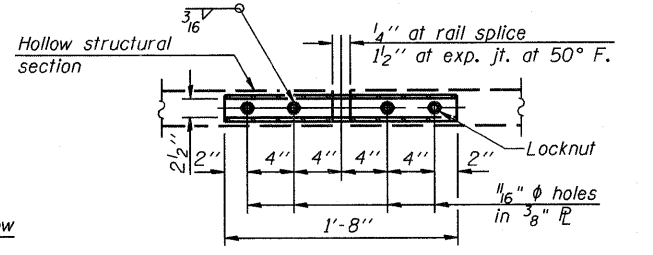
\*\*\* The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



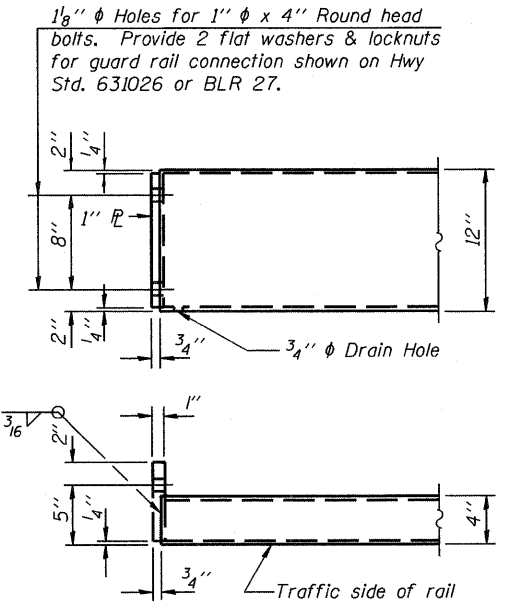
**SECTIONS AT RAIL SPLICE**



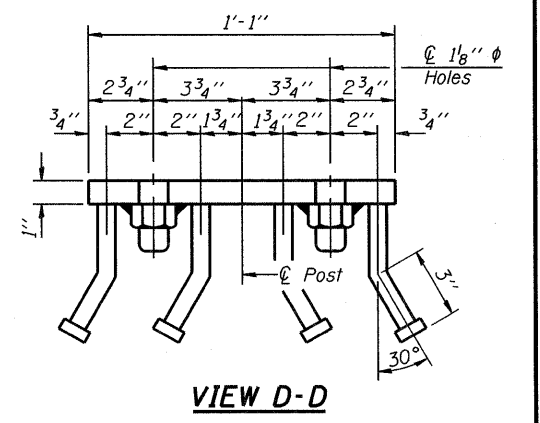
**RAIL SPLICE CONNECTION AT EXPANSION JT.**



**PLAN-BOTT. SPLICE TYPICAL**



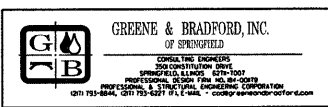
**END OF RAIL DETAILS**



**VIEW D-D**

**BILL OF MATERIAL**

| Item                    | Unit | Quantity |
|-------------------------|------|----------|
| Steel Railing, Type S-1 | Foot | 210      |



R-23A

7-1-10 (10'-9" Maximum Post Spacing)

| FILE NAME  | USER NAME | DESIGNED  | REVISED    |
|--|-----------|-----------|------------|
| J:\09029\CADD\CADsheets\SN 011-3417\0804118-09029-Sht-S1 Railing.dgn | amandah   | NIEWINSKI | AH 4/20/11 |
|  |           | TRELLO    |            |
|  |           | VERENSKI  |            |
|  |           | TRELLO    |            |

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STEEL RAILING, TYPE S-1  
STRUCTURE NO. 011-3417  
SHEET NO. 5 OF 10 SHEETS

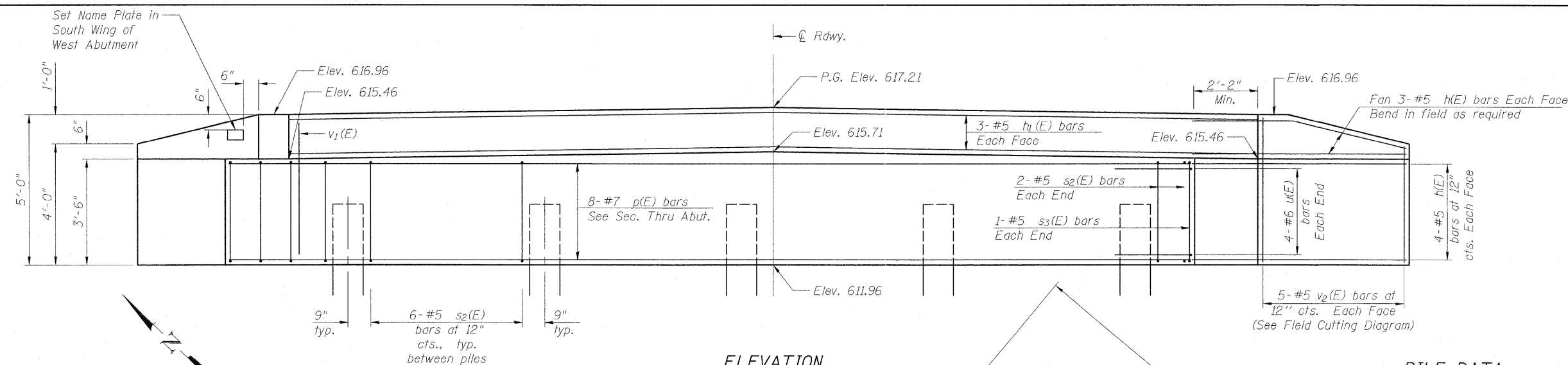
| T.R. RTE.                                  | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO.          |
|--|----------------|-----------|--------------|--------------------|
| 307A                                       | 08-04118-00-BR | CHRISTIAN | 26           | 13                 |
|  |                |           |              | CONTRACT NO. 03567 |
| ILLINOIS FED. AID PROJECT: BR05-0021 (178) |                |           |              |                    |

**TWO ABUTMENTS  
BILL OF MATERIAL**

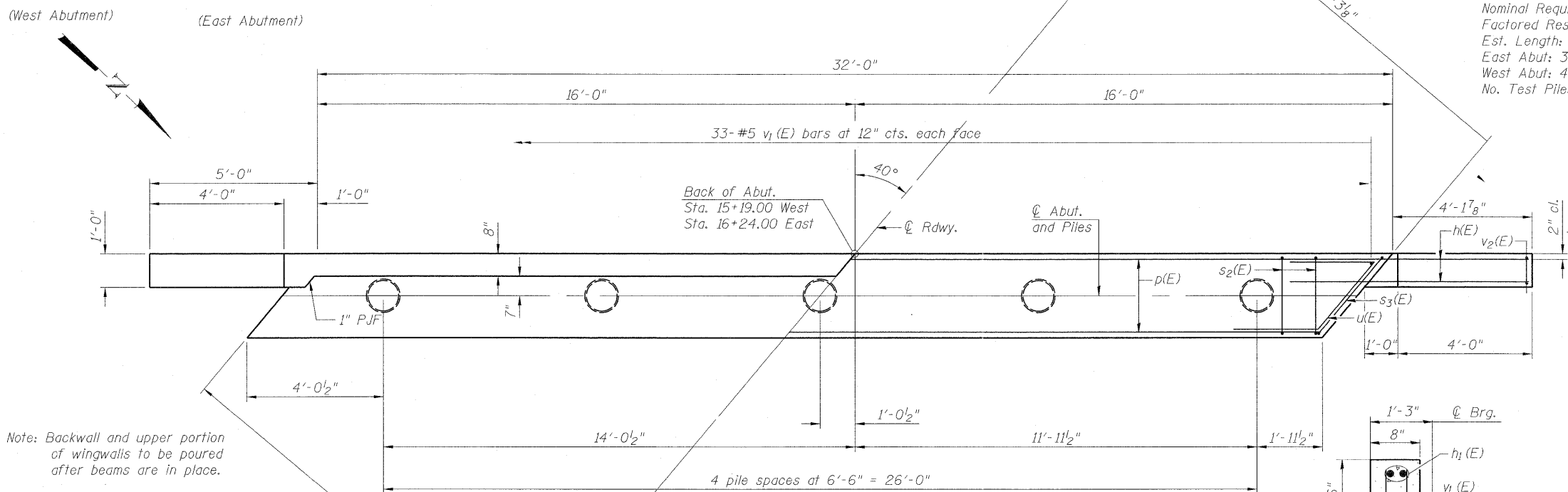
| Bar                              | No. | Size | Length  | Shape |
|----------------------------------|-----|------|---------|-------|
| h(E)                             | 56  | #5   | 7'-3"   |       |
| h <sub>1</sub> (E)               | 12  | #5   | 31'-8"  |       |
| p(E)                             | 16  | #7   | 31'-8"  |       |
| s <sub>2</sub> (E)               | 56  | #5   | 11'-7"  | □     |
| s <sub>3</sub> (E)               | 4   | #5   | 12'-11" | □     |
| u(E)                             | 16  | #6   | 7'-7"   | ┘     |
| v <sub>1</sub> (E)               | 132 | #5   | 4'-4"   |       |
| v <sub>2</sub> (E)               | 20  | #5   | 8'-4"   |       |
| Structure Excavation             |     |      | Cu. Yd. | 28.0  |
| Concrete Structures              |     |      | Cu. Yd. | 26.8  |
| Reinforcement Bars, Epoxy Coated |     |      | Pound   | 3,540 |
| Furnishing                       |     |      |         |       |
| Metal Shell Piles                |     |      | Foot    | 290   |
| 12" φ x 0.25"                    |     |      |         |       |
| Driving Piles                    |     |      | Foot    | 290   |
| Test Pile, Metal Shells          |     |      | Each    | 1     |
| Name Plates                      |     |      | Each    | 1     |

For details of piles see sheet 8 of 10.

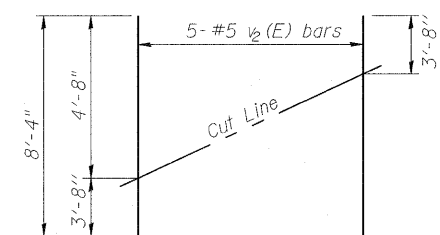
**PILE DATA**  
 Type: Metal Shells, 12" φ x 0.25" wall  
 Nominal Required Bearing: 165 Kips  
 Factored Resistance Available: 91 Kips  
 Est. Length: West Abut: 30', East Abut: 34' No. Production Piles:  
 West Abut: 4, East Abut: 5  
 No. Test Piles: 1 (West Abut.)



**ELEVATION**  
(Looking @ front face of Abutment)



**PLAN**

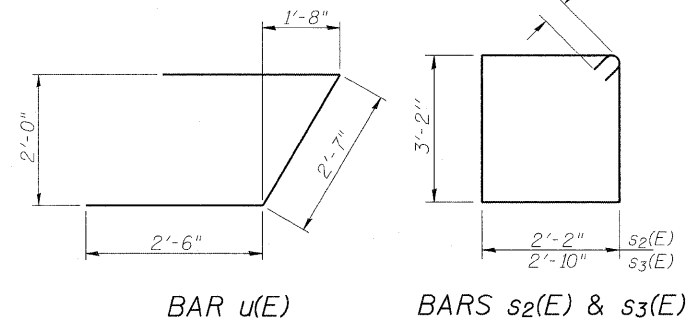


**FIELD CUTTING DIAGRAM**

Order v<sub>2</sub>(E) full length. Cut as shown and use remainder of bars in opposite face.

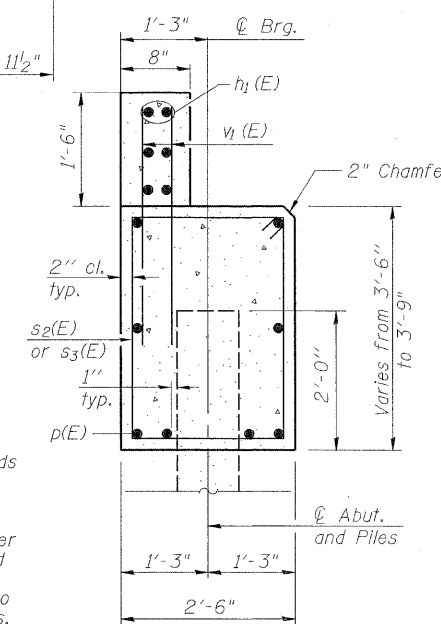


AI-R 7-1-10

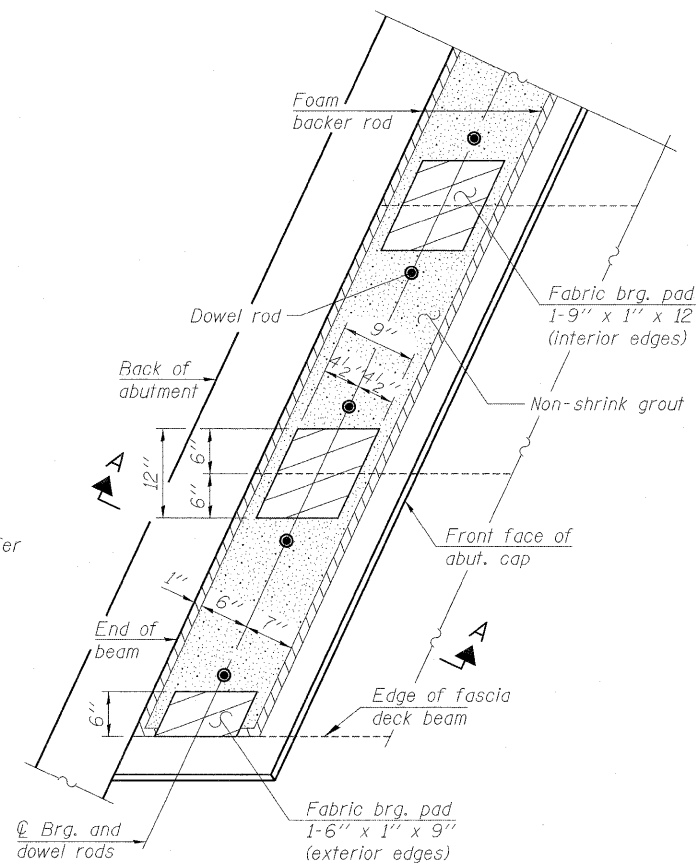


**TYP. SEC. AT BEARINGS**

Note: All horizontal dimensions are at right angles to beam ends.



**SEC. THRU ABUT.**



**PLAN**

Notes:  
 The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2-1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**ABUTMENTS  
STRUCTURE NO. 011-3417**

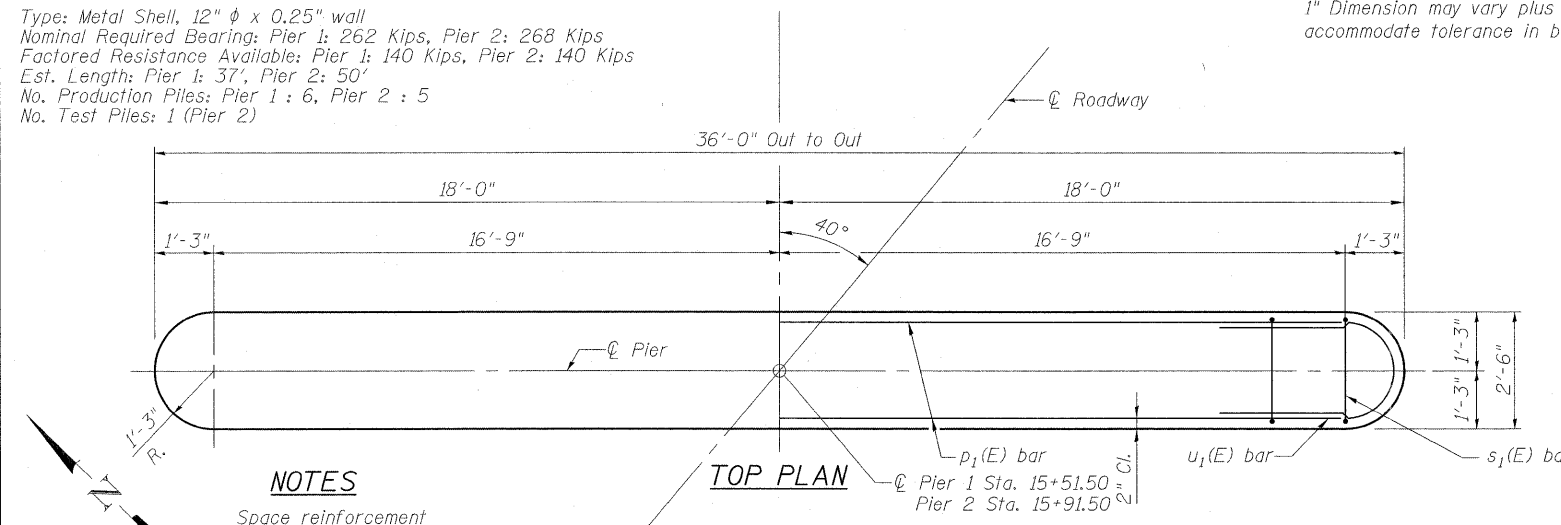
SHEET NO. 6 OF 10 SHEETS

| T.R. RTE.                                  | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO.          |
|--|----------------|-----------|--------------|--------------------|
| 307A                                       | 08-04118-00-BR | CHRISTIAN | 26           | 14                 |
|  |                |           |              | CONTRACT NO. 93367 |
| ILLINOIS FED. AID PROJECT: BR05-0021 (176) |                |           |              |                    |

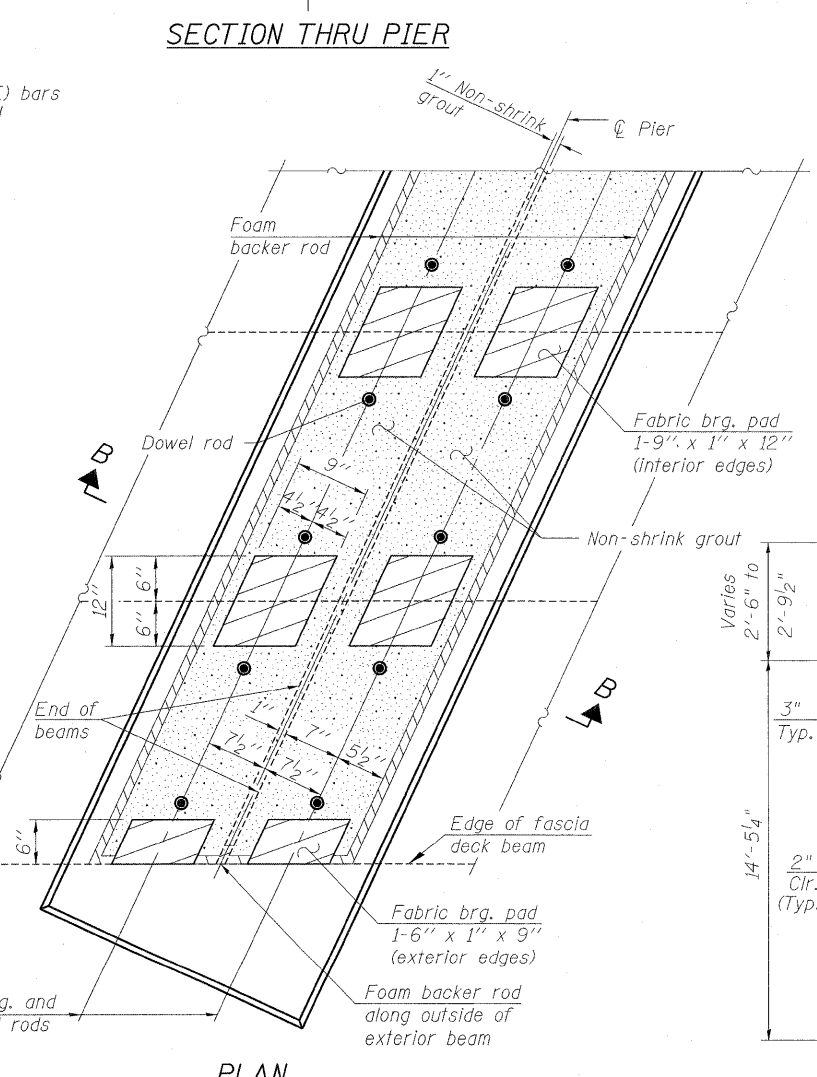
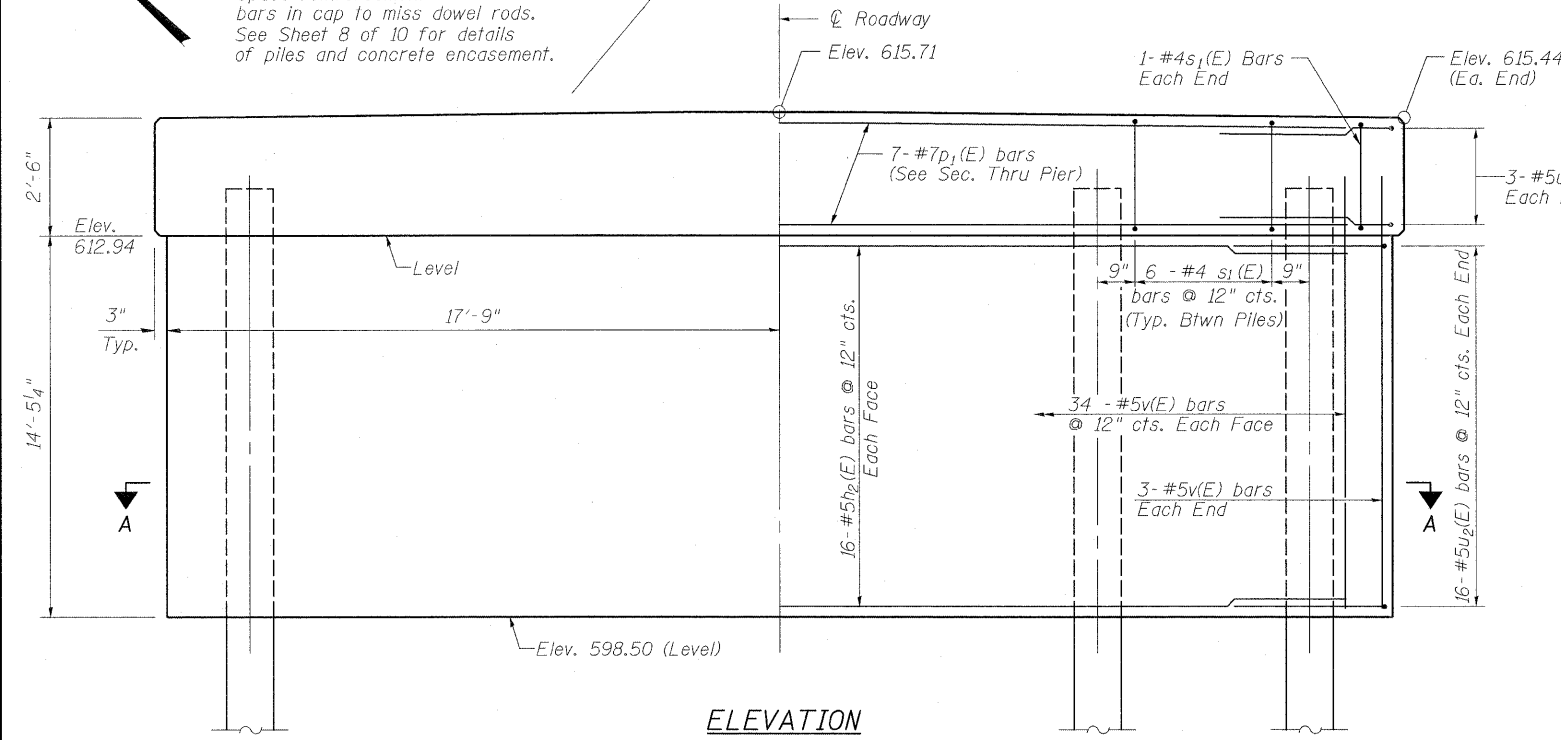
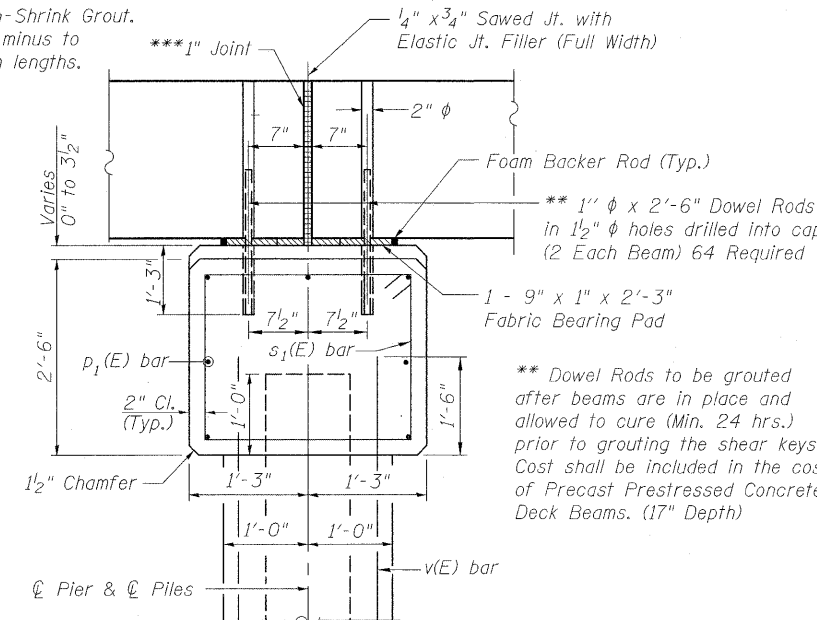
**PILE DATA**

Type: Metal Shell, 12"  $\phi$  x 0.25" wall  
 Nominal Required Bearing: Pier 1: 262 Kips, Pier 2: 268 Kips  
 Factored Resistance Available: Pier 1: 140 Kips, Pier 2: 140 Kips  
 Est. Length: Pier 1: 37', Pier 2: 50'  
 No. Production Piles: Pier 1 : 6, Pier 2 : 5  
 No. Test Piles: 1 (Pier 2)

\*\*\*1" Joint shall be filled with Non-Shrink Grout.  
 1" Dimension may vary plus or minus to accommodate tolerance in beam lengths.

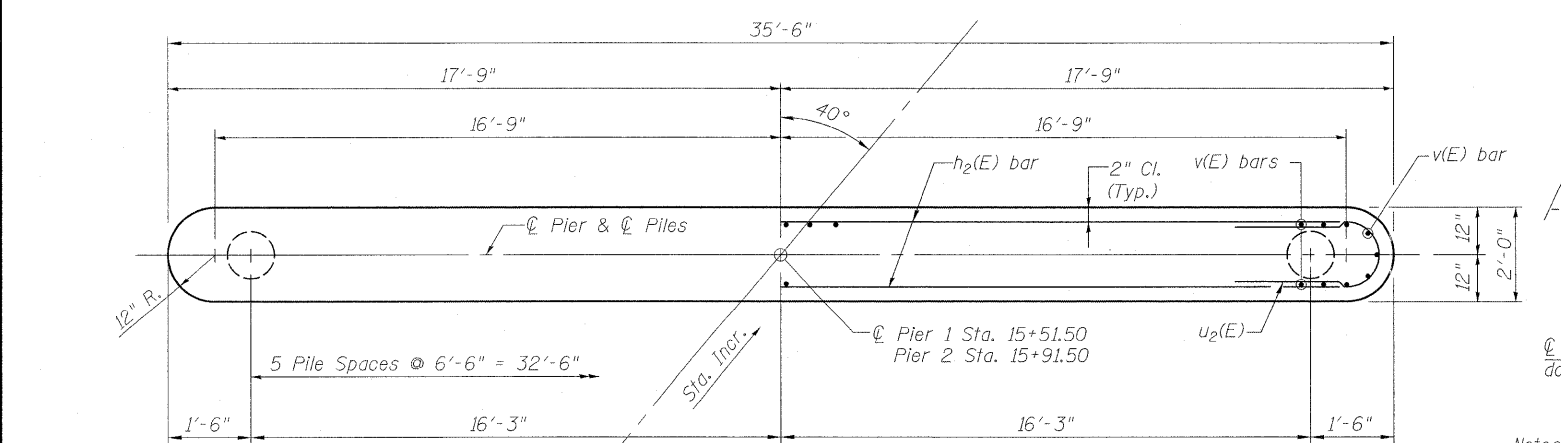
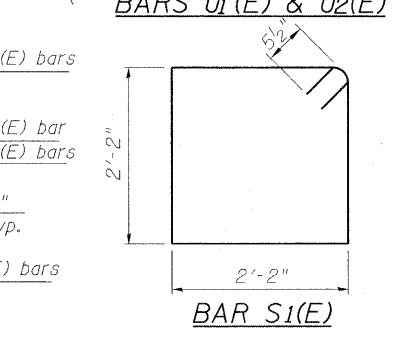
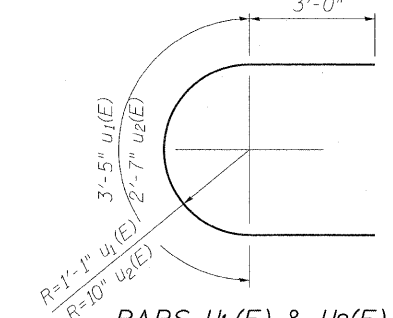


**NOTES**  
 Space reinforcement bars in cap to miss dowel rods. See Sheet 8 of 10 for details of piles and concrete encasement.

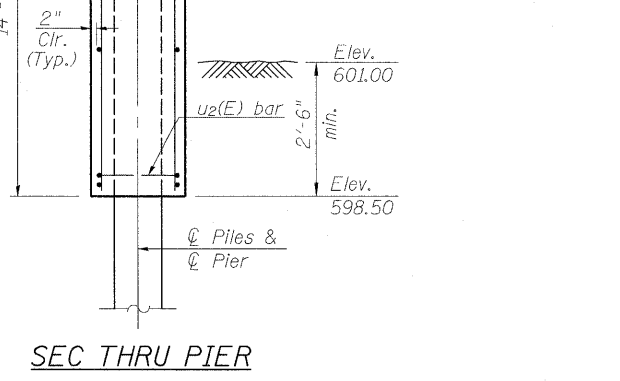


**TWO PIERS  
 BILL OF MATERIAL**

| BAR                                      | NO. | SIZE | LENGTH  | SHAPE |
|--|-----|------|---------|-------|
| h <sub>2</sub> (E)                       | 64  | #5   | 33'-6"  | —     |
| p <sub>1</sub> (E)                       | 14  | #7   | 33'-6"  | —     |
| s <sub>1</sub> (E)                       | 64  | #4   | 9'-7"   | □     |
| u <sub>1</sub> (E)                       | 12  | #5   | 9'-5"   | U     |
| u <sub>2</sub> (E)                       | 64  | #5   | 8'-7"   | U     |
| v(E)                                     | 148 | #5   | 15'-10" | —     |
| Concrete Structures                      |     |      | Cu. Yd. | 92.4  |
| Reinforcement Bars, Epoxy Coated         |     |      | Pound   | 6,740 |
| Furnishing Metal Shell Piles 12" x 0.25" |     |      | Foot    | 472   |
| Driving Piles                            |     |      | Foot    | 472   |
| Test Pile, Metal Shells                  |     |      | Each    | 1     |
| Cofferdam Excavation                     |     |      | Cu. Yd. | 81    |
| Cofferdam (Type 1) (Location-1)          |     |      | Each    | 1     |
| Cofferdam (Type 1) (Location-2)          |     |      | Each    | 1     |



**Notes:**  
 The bearing seat surfaces shall be adjusted by shimming the bearing to assure firm and even bearing prior to placement of grout. 2'-6" fabric adjusting shims of the dimensions of the exterior bearing pad shown shall be provided for each bearing.

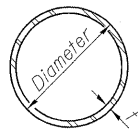


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| PLOT SCALE = 0.1' / 1"  | PLOT DATE = 12/15/2011 | CHECKED - TRELLO     | REVISED - AH 9/09/11 |
|   |                        | DRAWN - VERENSKI     | REVISED -            |
|   |                        | CHECKED - TRELLO     | REVISED -            |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

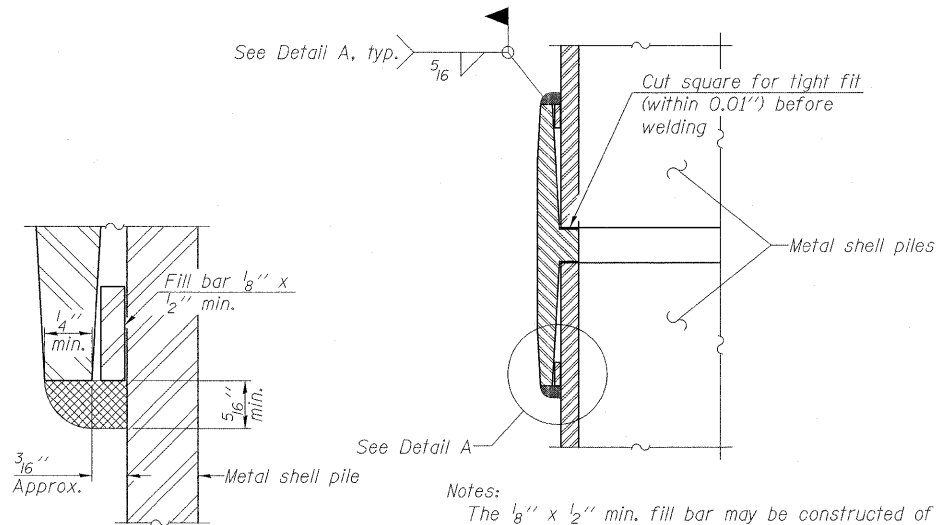
**PIERS 1 & 2  
 STRUCTURE NO. 011-3417  
 SHEET NO. 7 OF 10 SHEETS**

| T.R. RTE.                                  | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO.          |
|--|----------------|-----------|--------------|--------------------|
| 307A                                       | 08-04118-00-BR | CHRISTIAN | 26           | 15                 |
|  |                |           |              | CONTRACT NO. 93567 |
| ILLINOIS FED. AID PROJECT: BR05-0021 (178) |                |           |              |                    |



**METAL SHELL PILE TABLE**

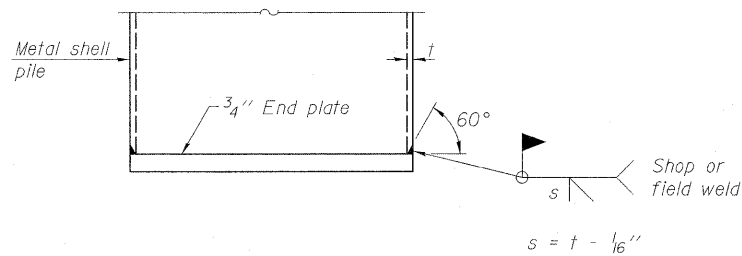
| Designation and outside diameter | Wall thickness t | Weight per foot (Lbs./ft.) | Inside volume (yd. <sup>3</sup> /ft.) |
|----------------------------------|------------------|----------------------------|---------------------------------------|
| PP12                             | 0.179"           | 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                                |



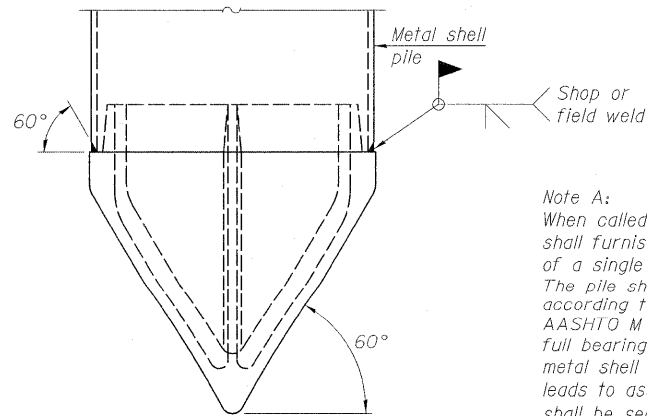
**DETAIL A**

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**



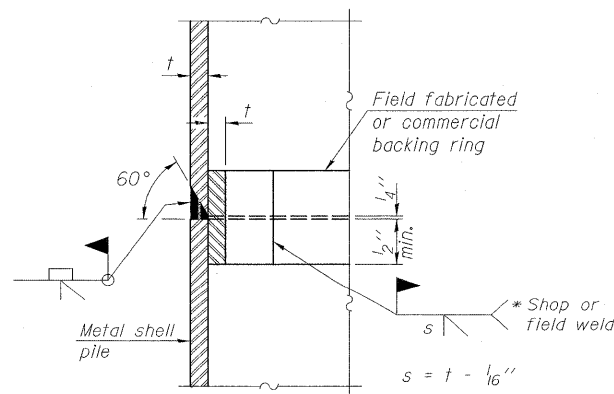
**END PLATE ATTACHMENT**



**METAL SHELL PILE SHOE ATTACHMENT**

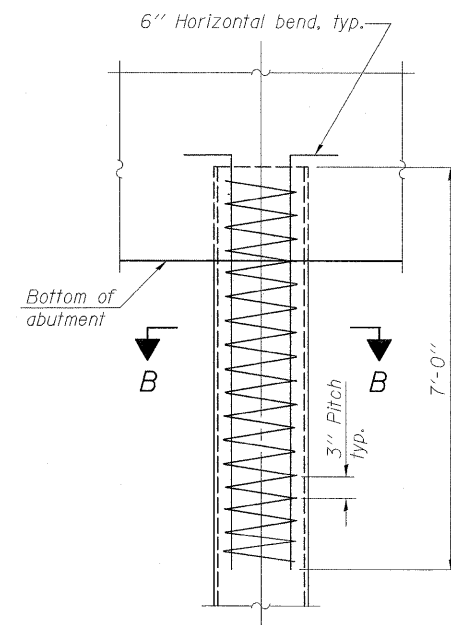
(See Note A)

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.



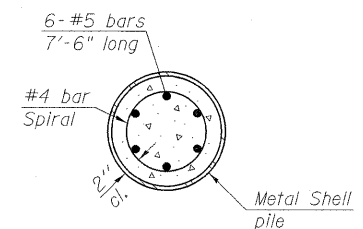
**COMPLETE PENETRATION WELD SPLICE**

\* 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**

**METAL SHELL REINFORCEMENT AT ABUTMENTS**



**SECTION B-B**

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



7-1-10

|   |                        |                      |                        |   |  |  |                       |                  |                 |              |
|---|------------------------|----------------------|------------------------|---|--|--|-----------------------|------------------|-----------------|--------------|
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| PLOT SCALE = 0.1" / 1"  | PLOT DATE = 12/15/2011 | DRAWN - VERENSKI     | CHECKED - TRELLO       |   |  | CONTRACT NO. 93567                         |                       |                  |                 |              |
|   |                        |                      |                        |   |  | SHEET NO. 8 OF 10 SHEETS                   |                       |                  |                 |              |
|   |                        |                      |                        |   |  | ILLINOIS FED. AID PROJECT: BR05-0021 (178) |                       |                  |                 |              |



Christian County Bridge  
Greenwood Township  
Existing Structure No. 011-3247  
Project #181-2979

ATLAS SOILS, INC.  
HILLSBORO, ILLINOIS  
PHONE 217/532-3959

DATE: September 16, 2009  
BORING TECH.: M. Malafa  
DRILLING TECH.: M. Hough

FOUNDATION BORING LOG

| BORING NO. 1<br>Station: 10 ft. E. of E.<br>Abutment: 12 ft. S. of Centerline<br>SURFACE ELEV.: 610.7 ft. | N<br>Value | Qu<br>(tsf) | W<br>(%) | REC<br>(%) | GROUNDWATER ELEV.<br>COMP.: -10.4 ft.; Bridge @ -10.7 ft.<br>AFTER 24 HRS.: -8.6 ft.;<br>Bridge @ -11.1 ft. | N<br>Value | Qu<br>(tsf) | W<br>(%) | REC<br>(%) |
|---|------------|-------------|----------|------------|---|------------|-------------|----------|------------|
|   |            |             |          |            |   |            |             |          |            |
| SILTY CLAY LOAM (CL).<br>Dark Brown, Dry to Moist,<br>Medium Stiff  | 0          |             |          |            |   | 20         |             |          |            |
|   | 7          | 2.75        | 17.2     | 55         |   | 8          | NP          | 28.5     | 90         |
|   | 5          | 4           | 1.5      | 21.1       | 65  | 19         | 2.76        | 14.9     | 55         |
| Few Sand  | 3          | 0.5         | 19.0     | 90         |   | 27         | >4.5        | 13.7     | 90         |
| LOAM, Dark Brown, Wet, Very<br>Soft   | 10         | 1           | --       | 21.0       | 100   | 30         | 4.0         | 11.8     | 90         |
| SILTY CLAY (CL), Gray, Reddish-<br>Brown, Mottled, Moist to Wet,<br>Very Soft, Few Sand and Gravel        | 2          | 0.25        | 20.8     | 95         |   | 35         | 4.3         | 2.6      | 15.2       |
|   | 15         | 1           | 0.25     | 25.1       | 66  | 40         | 5.9         | >4.5     | 12.1       |
| SAND (SP), Gray, Saturated,<br>Loose, Fine  | 20         | 7           | NP       | 17.5       | 100   |            |             |          |            |

N: Blows per ft. to Drive 2" O.D. Soil Spoon Sampler  
12" with 140 lb. Hammer falling 30"  
(Standard Penetration Test)  
ROD: Rock Quality Determination

Qu: Unconfined Compression Strength  
NP: Non-Plastic  
ST: Shelby Tube  
W: Water Content

Type Failure:  
B: Bulge Failure  
S: Shear Failure  
NS: No Sample  
P: Penetrometer

Christian County Bridge  
Greenwood Township  
Existing Structure No. 011-3247  
Project #181-2979

ATLAS SOILS, INC.  
HILLSBORO, ILLINOIS  
PHONE 217/532-3959

DATE: September 16, 2009  
BORING TECH.: M. Malafa  
DRILLING TECH.: M. Hough

FOUNDATION BORING LOG

| BORING NO. 1<br>Station: 10 ft. E. of E.<br>Abutment: 12 ft. S. of Centerline<br>SURFACE ELEV.: 610.7 ft. | N<br>Value | Qu<br>(tsf) | W<br>(%) | REC<br>(%) | GROUNDWATER ELEV.<br>COMP.: -10.4 ft.; Bridge @ -10.7 ft.<br>AFTER 24 HRS.: -8.6 ft.;<br>Bridge @ -11.1 ft. | N<br>Value | Qu<br>(tsf) | W<br>(%) | REC<br>(%) |
|---|------------|-------------|----------|------------|---|------------|-------------|----------|------------|
|   |            |             |          |            |   |            |             |          |            |
| SILTY LOAM TILL (ML).<br>Gray, Dry to Moist, Hard, Trace<br>of Sand and Gravel                            | 40         |             |          |            |   | 60         |             |          |            |
|   | 45         | 38          | >4.5     | 11.7       | 95  | 32         | >4.5        | 13.0     | 95         |
| SILTY CLAY TILL (CL), Gray,<br>Dry to Moist, Hard, Trace<br>of Sand and Gravel                            | 45         | 38          | >4.5     | 11.7       | 95  | 32         | >4.5        | 13.0     | 95         |
|   | 55         | 28          | >4.5     | 17.7       | 100   | 75         |             |          |            |
|   | 60         | 32          | >4.5     | 11.4       | 100   | 80         |             |          |            |

N: Blows per ft. to Drive 2" O.D. Soil Spoon Sampler  
12" with 140 lb. Hammer falling 30"  
(Standard Penetration Test)  
ROD: Rock Quality Determination

Qu: Unconfined Compression Strength  
NP: Non-Plastic  
ST: Shelby Tube  
W: Water Content

Type Failure:  
B: Bulge Failure  
S: Shear Failure  
NS: No Sample  
P: Penetrometer

Notes:  
1) Boring backfilled with soil  
cuttings upon completion of final  
groundwater measurement.  
2) Creek flowline at approximate  
elevation of 601.1 ft. at time  
of boring activities.  
3) Elevations based on local  
benchmark provided by  
Christian County Highway Dept.



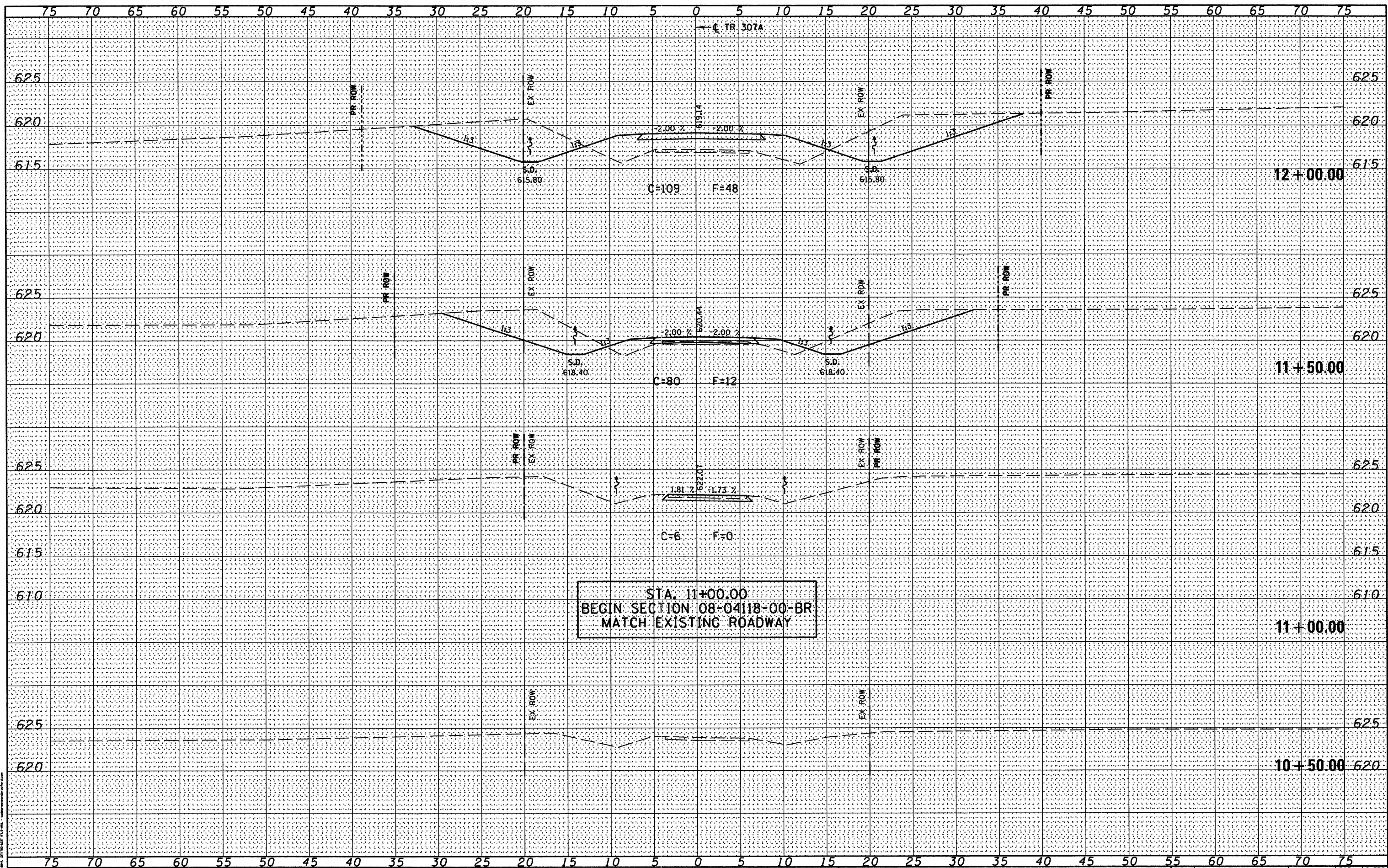
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| PLOT SCALE = 0.2" = 1' / in.                        | PLOT DATE = 5/3/2011 | CHECKED - TRELLO     | REVISED - |   |  | SHEET NO. 9 OF 10 SHEETS |                          | ILLINOIS FED. AID PROJECT: BR05-0021 (175) |                   |                |  |  |
|   |                      | DRAWN - VERENSKI     | REVISED - |   |  |                          |                          |  |                   |                |  |  |
|   |                      | CHECKED - TRELLO     | REVISED - |   |  |                          |                          |  |                   |                |  |  |



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

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| DATE            |  |
| BY              |  |
| ORIGINAL SURVEY |  |
| SURVEYED        |  |
| PLOTTED         |  |
| TEMPLATE        |  |
| NOTE BOOK       |  |
| AREAS           |  |
| CHECKED         |  |
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 PLOT DATE = 5/3/2011

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| DESIGNED - WCB | REVISED - |
| DRAWN - MDS    | REVISED - |
| CHECKED - WCB  | REVISED - |
| DATE - 5/4/09  | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

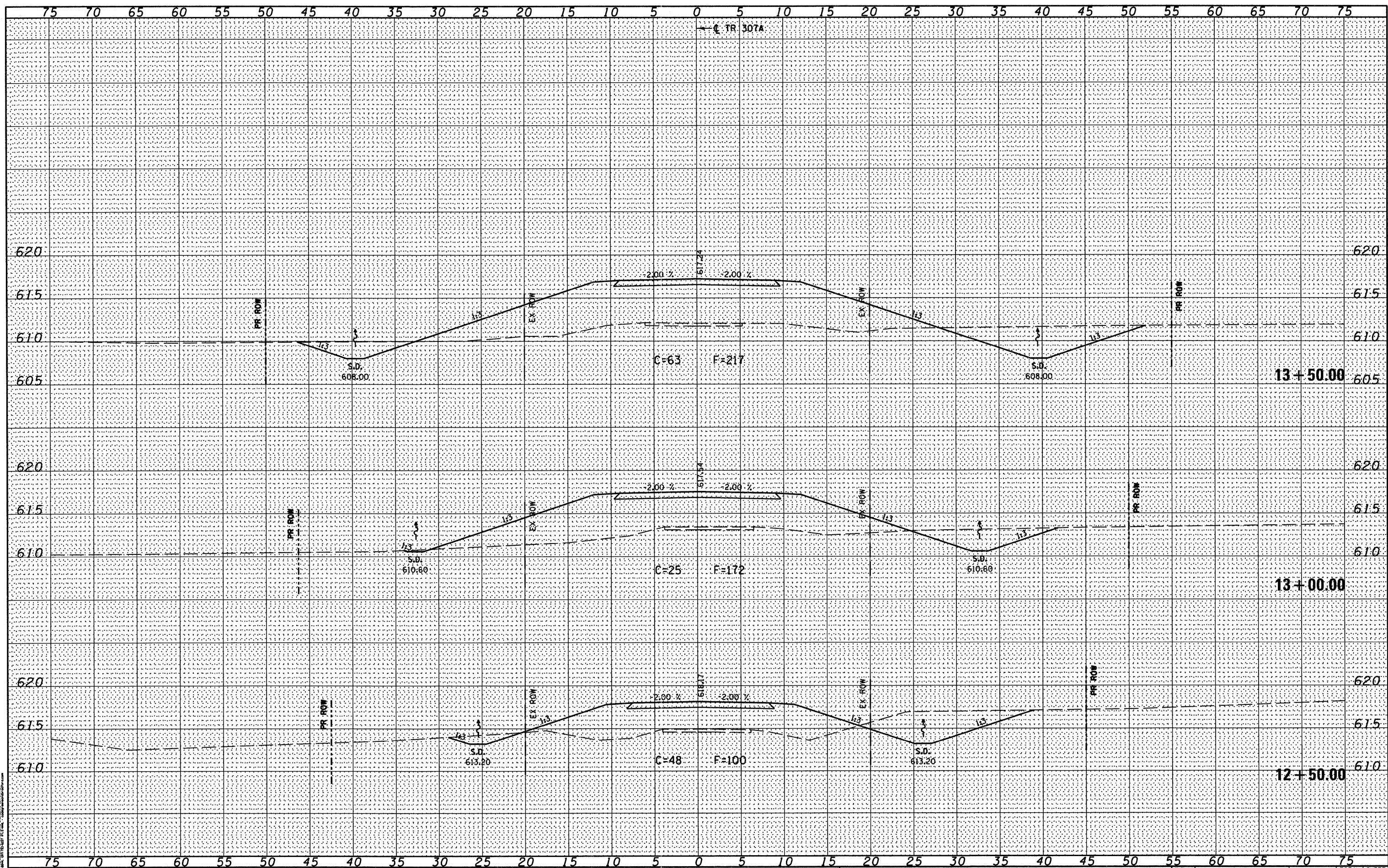
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 SCALE: 1" = 5'  
 SHEET NO. 1 OF 8 SHEETS  
 STA. 10+50.00 TO STA. 12+00.00

| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
|---|----------------|-----------|--------------------|-----------|
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                 | 19        |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT BROS-0021 (178) |                |           | CONTRACT NO. 93567 |           |

C&B PROJECT: 09029  
 PLOT DRIVER = V8L.PDF.pltcfq

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|              | AREAS CHECKED |      |

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| DRAWN - MDS    | REVISED - |
| CHECKED - WCB  | REVISED - |
| DATE - 5/4/09  | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

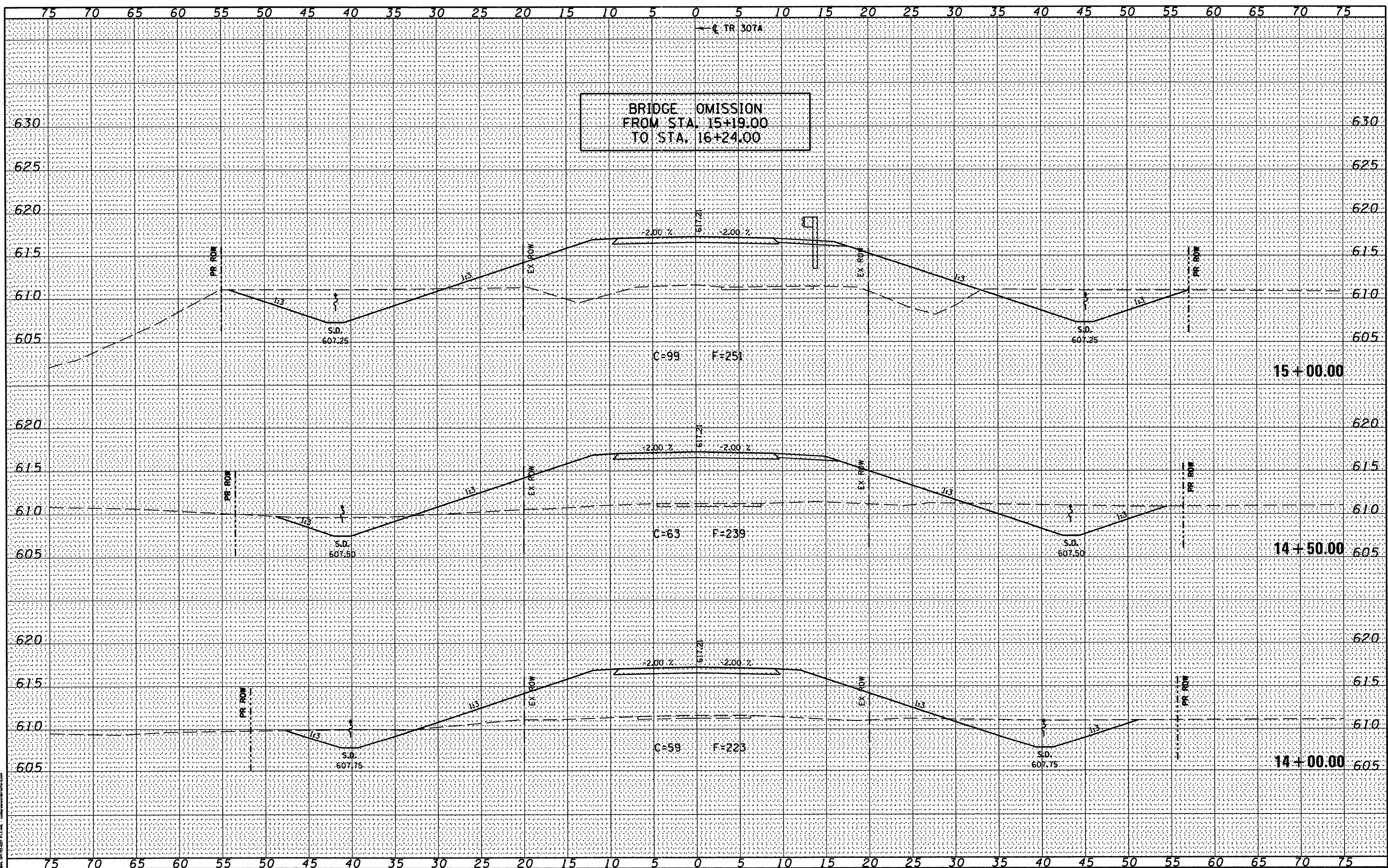
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 SHEET NO. 2 OF 8 SHEETS  
 STA. 12+50.00 TO STA. 13+50.00

| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
|---|----------------|-----------|--------------------|-----------|
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                 | 20        |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT BROS-0021 (178) |                |           | CONTRACT NO. 93567 |           |

|              |               |
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| DATE         |               |
| BY           |               |
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| NOTE BOOK    | PLOTTED       |
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 CHICAGO, ILLINOIS 60610  
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 FAX: (312) 467-1001  
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BRIDGE OMISSION  
 FROM STA. 15+19.00  
 TO STA. 16+24.00

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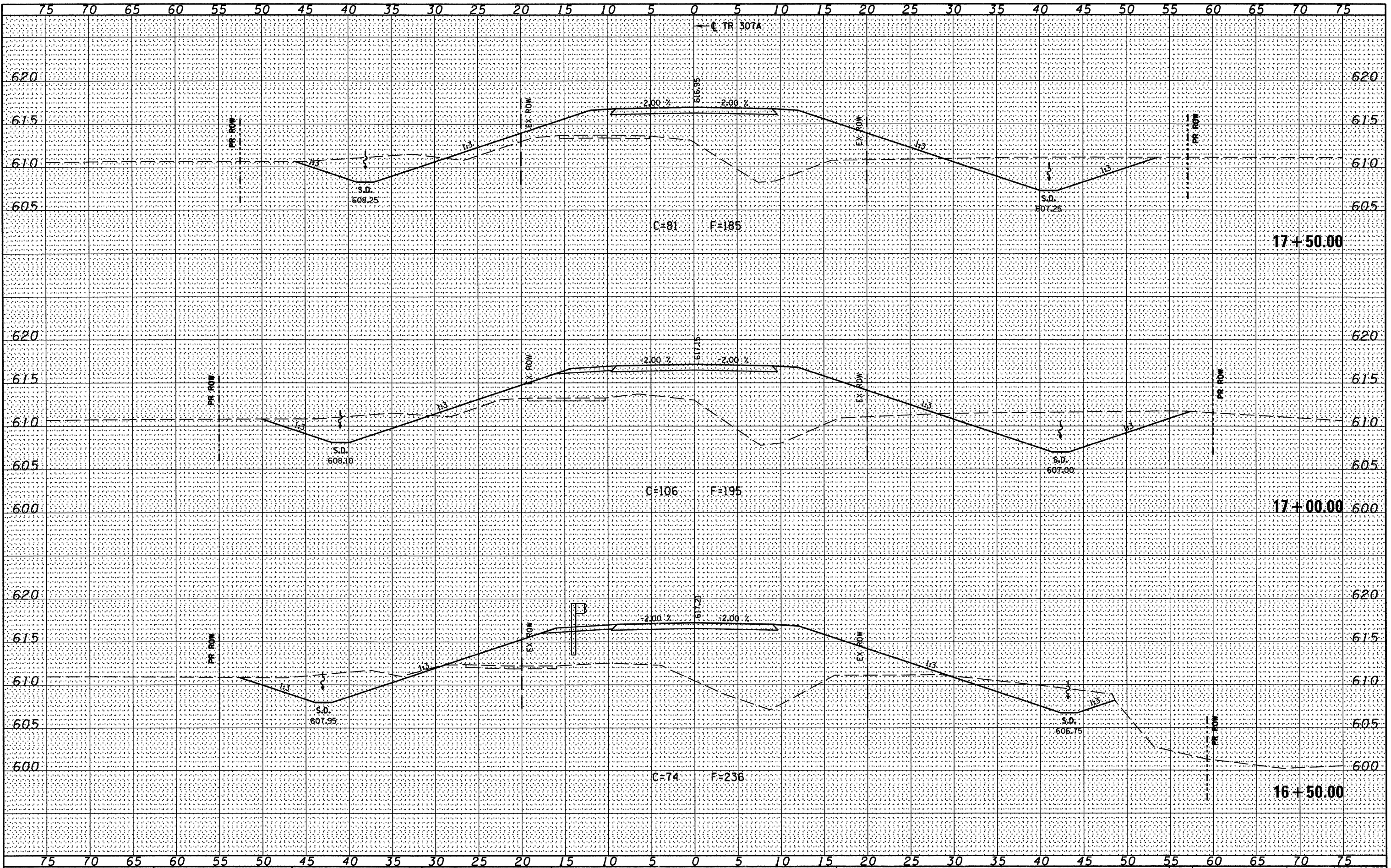
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 DATE - 5/4/09

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STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TR 307A - CROSS SECTIONS  
 SCALE: 1" = 5'  
 SHEET NO. 3 OF 8 SHEETS  
 STA. 14+00.00 TO STA. 15+00.00

| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
|---|----------------|-----------|--------------------|-----------|
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                 | 21        |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT BROS-0021 (17R) |                |           | CONTRACT NO. 93567 |           |



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 PLOT DATE = 5/3/2011

DESIGNED - WCB  
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 CHECKED - WCB  
 DATE - 5/4/09

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 DEPARTMENT OF TRANSPORTATION

TR 307A - CROSS SECTIONS

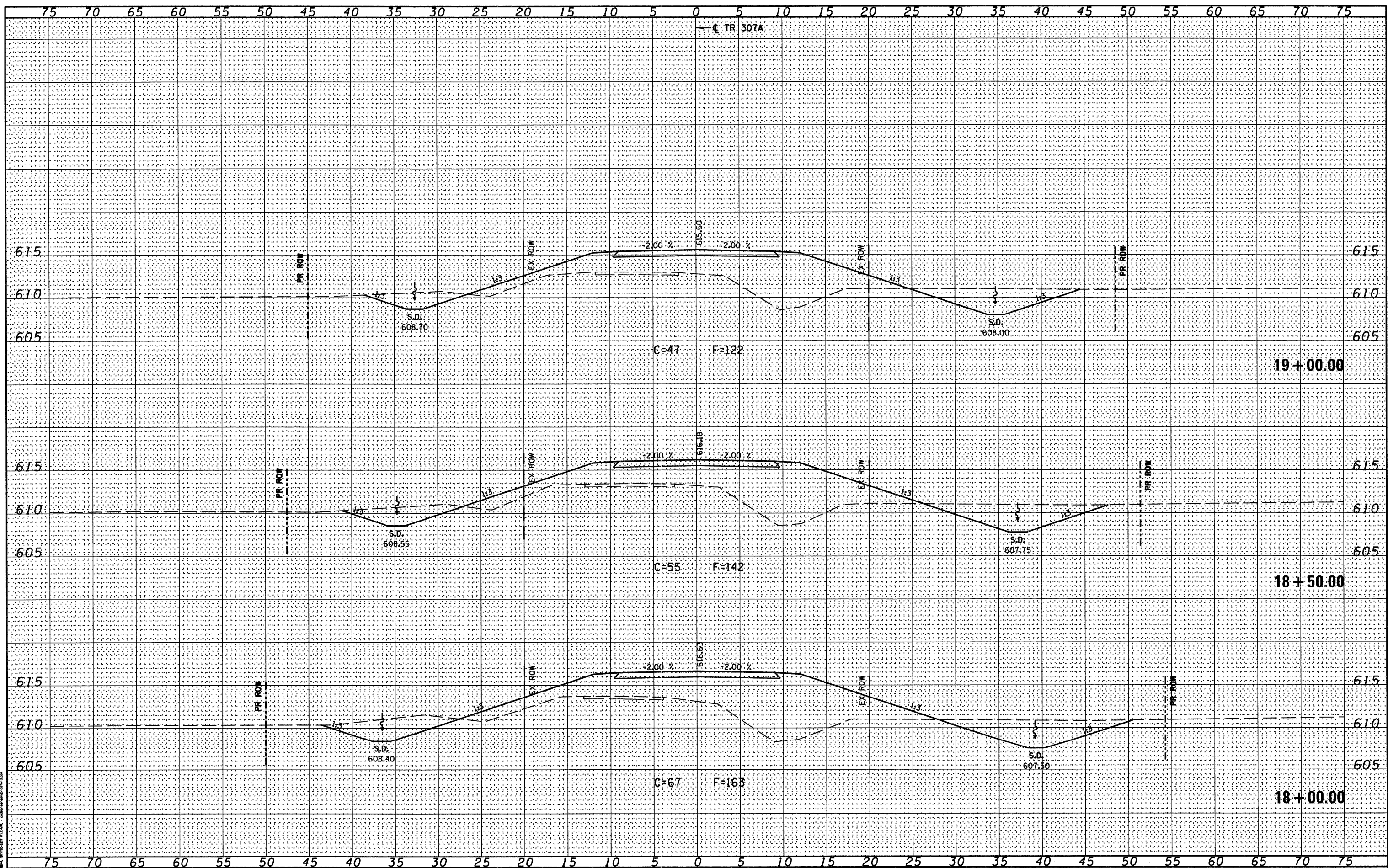
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|   |                |           |                    |           |
|---|----------------|-----------|--------------------|-----------|
| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                 | 22        |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT BROS-0021 (178) |                |           | CONTRACT NO. 93567 |           |

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|--------------|---------------|
| BY           | DATE          |
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| FINAL SURVEY | SURVEYED      |
| NOTE BOOK    | PLOTTED       |
|              | TEMPLATE      |
|              | AREAS CHECKED |
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| CHECKED - WCB  | REVISED - |
| DATE - 5/4/09  | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

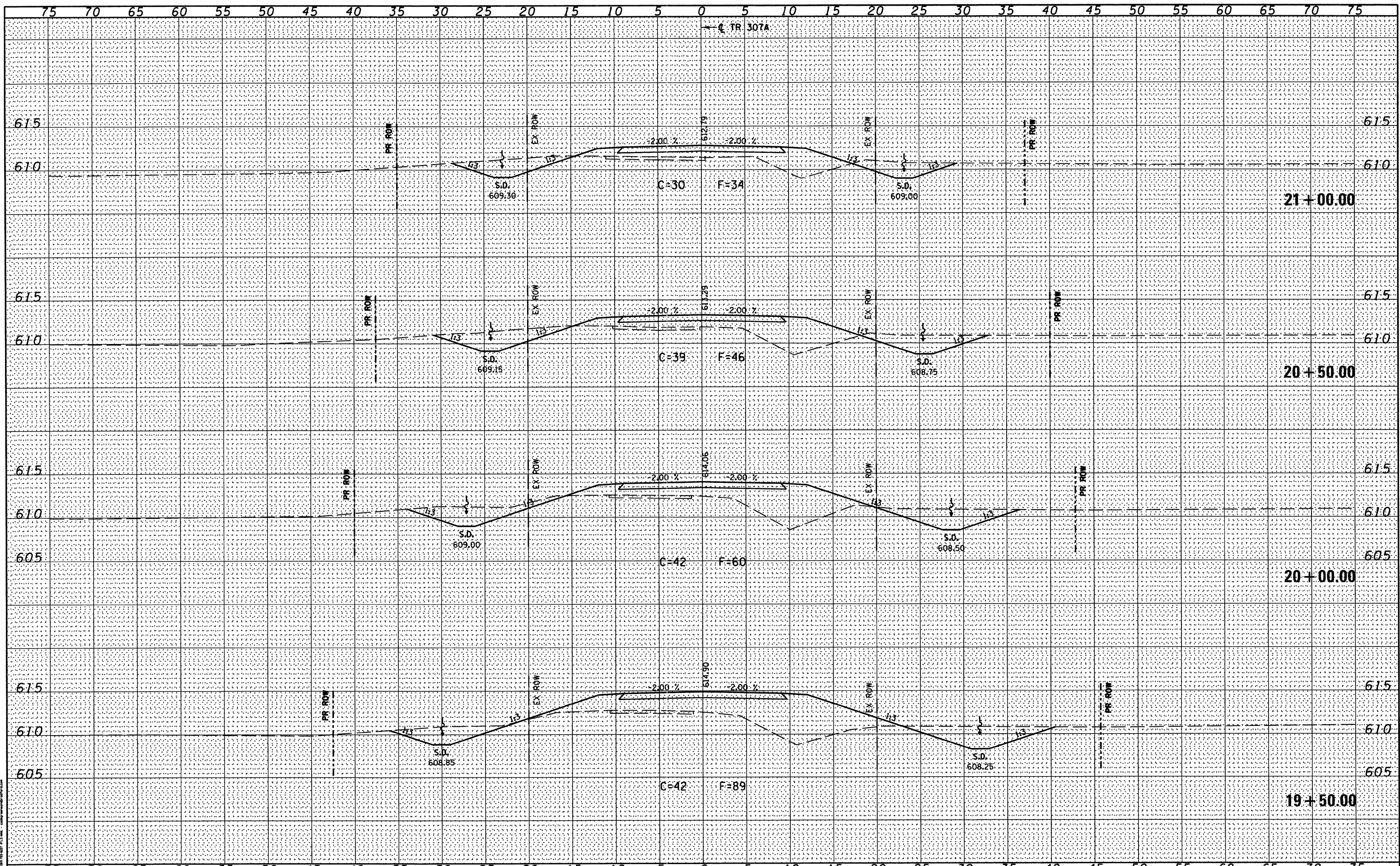
TR 307A - CROSS SECTIONS  
 SCALE: 1" = 5'  
 SHEET NO. 5 OF 8 SHEETS  
 STA. 18+00.00 TO STA. 19+00.00

|                     |                |           |   |           |
|---------------------|----------------|-----------|---|-----------|
| T.R. RTE.           | SECTION        | COUNTY    | TOTAL SHEETS                              | SHEET NO. |
| 307A                | 08-04118-00-BR | CHRISTIAN | 26  | 23        |
| FED. ROAD DIST. NO. |                |           | ILLINOIS FED. AID PROJECT BROS-0021 (177) |           |
| CONTRACT NO.        |                |           | 93567                                     |           |

|                      |  |
|----------------------|--|
| DATE                 |  |
| BY                   |  |
| FINAL SURVEY         |  |
| NOTED                |  |
| NO. OF AREAS CHECKED |  |

|                      |  |
|----------------------|--|
| DATE                 |  |
| BY                   |  |
| ORIGINAL SURVEY      |  |
| NOTED                |  |
| NO. OF AREAS CHECKED |  |

GREENE & BRADY, INC.  
 1000 N. W. 10th St., Ft. Lauderdale, FL 33304  
 PHONE: (954) 562-1000  
 FAX: (954) 562-1001  
 WWW: www.greenesurvey.com



FILE NAME = J:\09029\CADD\CADsheets\09029-sht-xssht.dgn  
 G&B PROJECT: 09029  
 PLOT DRIVER = V8L\_PDF.pltcf

|                              |                |           |
|------------------------------|----------------|-----------|
| USER NAME = amandah          | DESIGNED - WCB | REVISED - |
| PLOT SCALE = 10.0000' / 1" = | DRAWN - MDS    | REVISED - |
| PLOT DATE = 5/3/2011         | CHECKED - WCB  | REVISED - |
|                              | DATE - 5/4/09  | REVISED - |

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

|                                 |                         |                                |
|---------------------------------|-------------------------|--------------------------------|
| <b>TR 307A - CROSS SECTIONS</b> |                         |                                |
| SCALE: 1" = 5'                  | SHEET NO. 6 OF 8 SHEETS | STA. 19+50.00 TO STA. 21+00.00 |

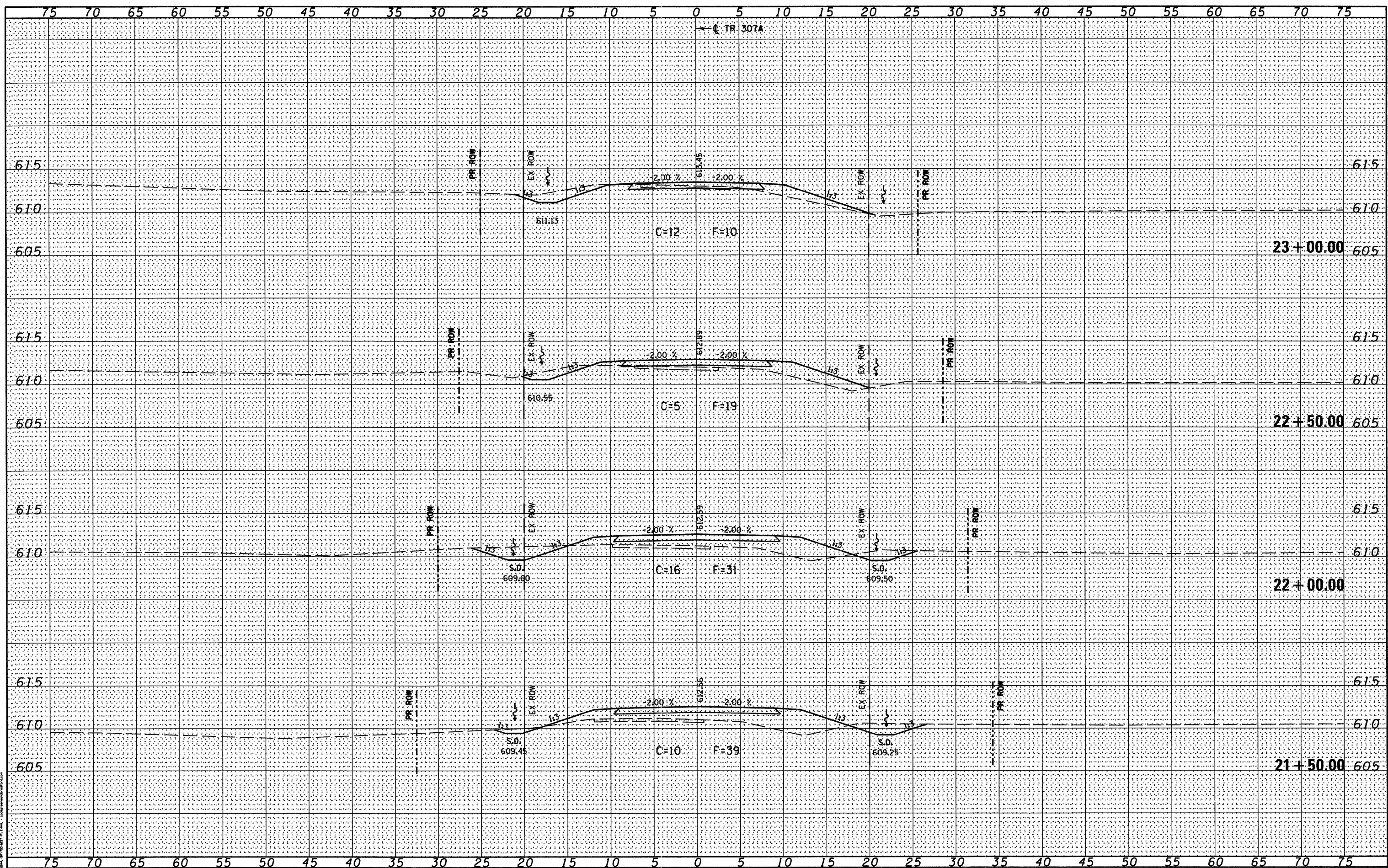
| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
|---|----------------|-----------|--------------------|-----------|
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                 | 24        |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT BROS-0021 (178) |                |           | CONTRACT NO. 93567 |           |



|               |  |
|---------------|--|
| DATE          |  |
| BY            |  |
| FINAL SURVEY  |  |
| SURVEYED      |  |
| PLOTTED       |  |
| TEMPLATE      |  |
| NOTE BOOK     |  |
| AREAS CHECKED |  |
| AREAS CHECKED |  |

|                 |  |
|-----------------|--|
| DATE            |  |
| BY              |  |
| ORIGINAL SURVEY |  |
| SURVEYED        |  |
| PLOTTED         |  |
| TEMPLATE        |  |
| NOTE BOOK       |  |
| AREAS CHECKED   |  |
| AREAS CHECKED   |  |

GREENE & BRAIDWOOD, INC.  
 1000 N. WASHINGTON ST., SUITE 200  
 CHICAGO, ILLINOIS 60610  
 TEL: 312.467.1000  
 FAX: 312.467.1001  
 WWW.GREENEANDBRAIDWOOD.COM



FILE NAME = J:\09029\CADD\CADsheets\09029-sht-xsht.dgn  
 USER NAME = amandah  
 PLOT SCALE = 10.0000' / 1" = 100  
 PLOT DATE = 5/3/2011  
 G&B PROJECT: 09029  
 PLOT DRIVER = V8L\_PDF.pltcf9

|                |           |
|----------------|-----------|
| DESIGNED - WCB | REVISED - |
| DRAWN - MDS    | REVISED - |
| CHECKED - WCB  | REVISED - |
| DATE - 5/4/09  | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

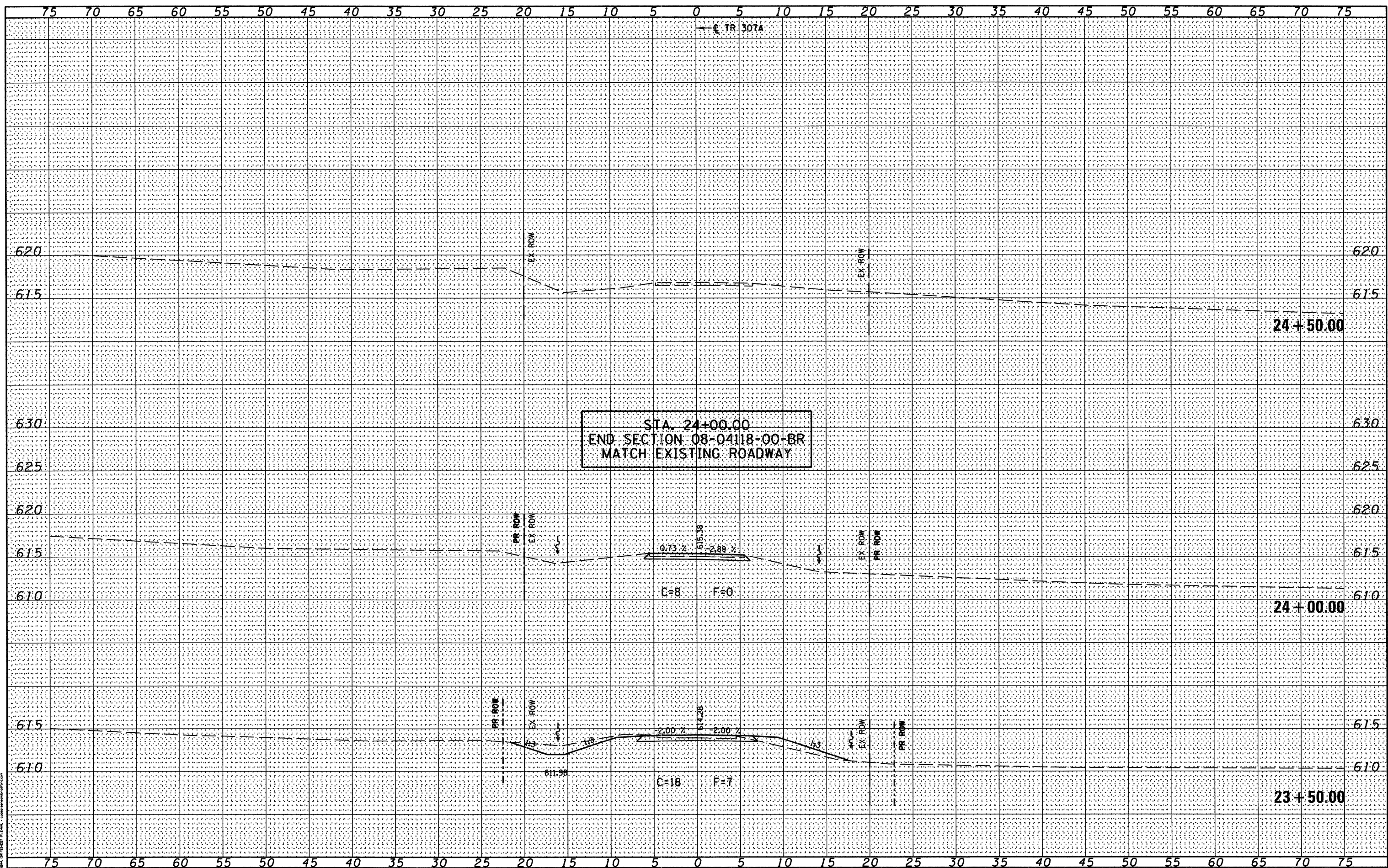
TR 307A - CROSS SECTIONS  
 SCALE: 1" = 5'  
 SHEET NO. 7 OF 8 SHEETS  
 STA. 21+50.00 TO STA. 23+00.00

| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS       | SHEET NO. |
|---|----------------|-----------|--------------------|-----------|
| 307A  | 08-04118-00-BR | CHRISTIAN | 26                 | 25        |
| FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT BROS-0021 (178) |                |           | CONTRACT NO. 93567 |           |

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

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

GREENE & RAJFORD, INC.  
 1000 N. W. 10th St., Ft. Lauderdale, FL 33304  
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 FAX (954) 561-1101  
 WWW.GREENE-RAJFORD.COM



FILE NAME = J:\09029\CADD\CADsheets\09029-sh1-xssht.dgn  
 USER NAME = amandah  
 PLOT SCALE = 10,0000' / 1" = 100'  
 PLOT DATE = 5/3/2011  
 G&B PROJECT: 09029  
 PLOT DRIVER = V8L\_PDF.pltcfgr

|                |           |
|----------------|-----------|
| DESIGNED - WCB | REVISED - |
| DRAWN - MDS    | REVISED - |
| CHECKED - WCB  | REVISED - |
| DATE - 5/4/09  | REVISED - |

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TR 307A - CROSS SECTIONS  
 SCALE: 1" = 5'  
 SHEET NO. 8 OF 8 SHEETS  
 STA. 23+50.00 TO STA. 24+50.00

| T.R. RTE.   | SECTION        | COUNTY    | TOTAL SHEETS | SHEET NO. |
|---|----------------|-----------|--------------|-----------|
| 307A  | 08-04118-00-BR | CHRISTIAN | 26           | 26        |
| CONTRACT NO. 93567  |                |           |              |           |
| FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT BROS-0021 (178) |                |           |              |           |