

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM – BRIDGE**

**PROJECT BRS-0407(108)
SECTION 10-00128-00-BR
WARREN COUNTY
F.A.S. 407 / C.H. 8 / 170th ST.
DOC DAVIS BRIDGE
PROPOSED STRUCTURE NO. 094-3040
C-94-056-17**

| ROUTE NO. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------|----------------|----------|--------------------|-----------|
| F.A.S. 407 | 10-00128-00-BR | WARREN | 25 | 1 |
| FED. ROAD DIST. NO. | | ILLINOIS | CONTRACT NO. 89731 | |

INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|-----------|---|
| 1. | COVER SHEET |
| 2. | SUMMARY OF QUANTITIES AND GENERAL NOTES |
| 3. | TYPICAL CROSS SECTIONS |
| 4. | PLAN AND PROFILE |
| 5-12. | STATION CROSS SECTIONS |
| 13-23. | BRIDGE PLANS |
| 24-25. | BORINGS |

HIGHWAY STANDARDS:

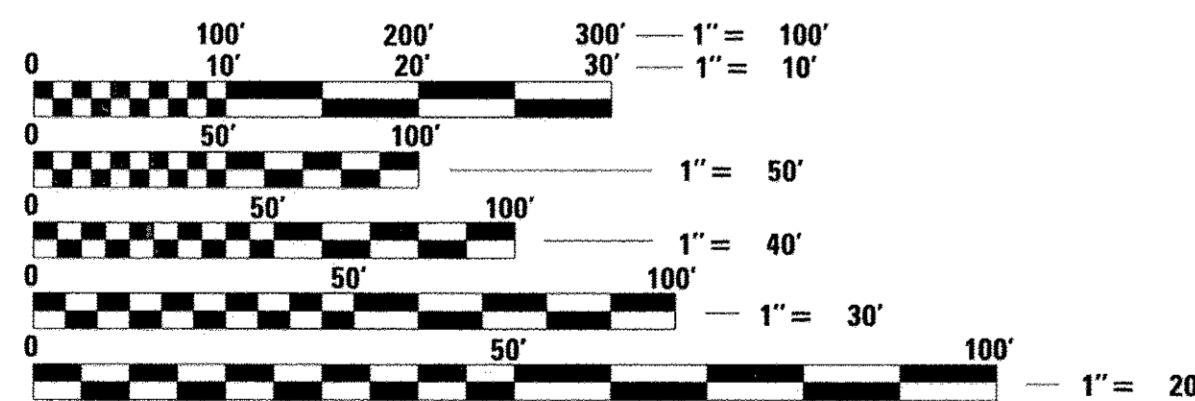
| | |
|-----------|---|
| 000001-06 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 280001-07 | TEMPORARY EROSION CONTROL SYSTEMS |
| 515001-03 | NAME PLATE FOR BRIDGES |
| 630301-07 | SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS |
| 701901-06 | TRAFFIC CONTROL DEVICES |
| 725001-01 | OBJECT AND TERMINAL MARKERS |
| 782006 | GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS |
| BLR 21-9 | TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS |
| BLR 27-1 | TRAFFIC BARRIER TERMINAL, TYPE 5A |

UTILITIES

MEDIACOM MIDWEST LLC
609 SOUTH FOURTH ST.
CHILLICOTHE, ILLINOIS 61523
ATTN: MIKE SUITER
(309) 274-4500

CENTURY LINK
416 MARGARET
PEKIN, ILLINOIS 61554
ATTN: DARRELL SCHMIDT
(309) 477-0255

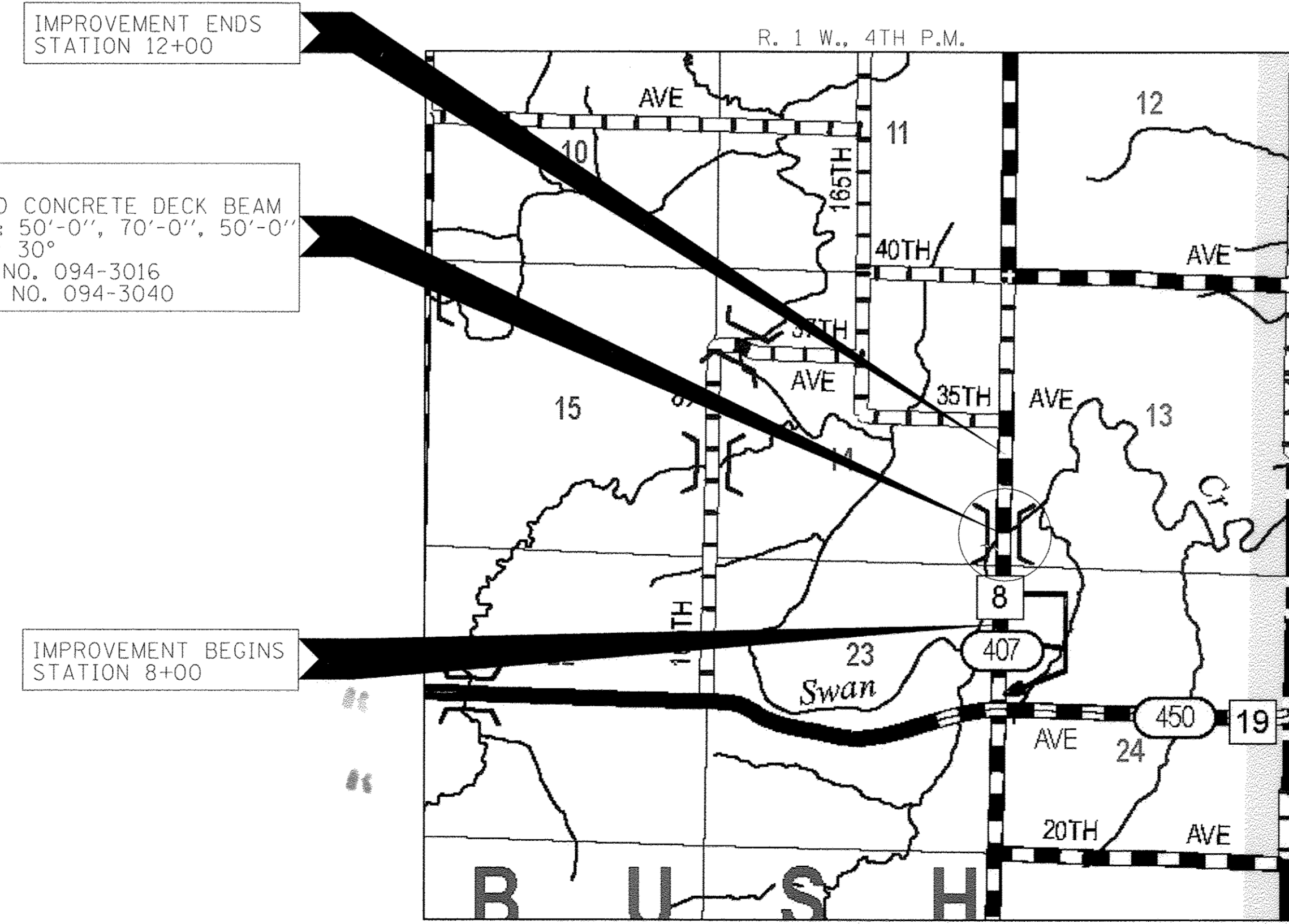
MCDONOUGH POWER COOPERATIVE
1210 WEST JACKSON STREET
PO BOX 352
MACOMB, ILLINOIS 61455
ATTN: MIKE SMITH
(309) 833-2101



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.

FUNCTIONAL CLASSIFICATION: MAJOR COLLECTOR (NON-URBAN)
DESIGN SPEED: 30 MPH
DESIGN TRAFFIC: 250 ADT (2016)

**CATALOG NO. 035479-00
CONTRACT NO. 89731**



LOCATION MAP

APPROXIMATE SCALE: 0 1/2 MILE
NET LENGTH OF SECTION = 400 FEET = 0.076 MILES



ILLINOIS DEPARTMENT OF TRANSPORTATION

APPROVED April 12 2017
D. J. [Signature]
COUNTY ENGINEER

PASSED April 24 2017
[Signature]
DISTRICT FOUR ENGINEER OF LOCAL ROADS & STREETS

Releasing For Bid Based on Limited Review
April 24 2017
[Signature]
REGION TWO ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

WARNING

CALL 811
BEFORE YOU DIG
DIG NO: A0130482

DATE: 04/12/2017

JOSEPH W. FRAZEE
062-54470

EXPIRES: 11/30/2017

HAMPTON, LENZINI AND RENWICK, INC.
CIVIL ENGINEERS - STRUCTURAL ENGINEERS - LAND SURVEYORS

HLR
184.000959
ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORPORATION

3085 STEVENSON DRIVE, SUITE 201
SPRINGFIELD, ILLINOIS 62703
217.546.3400 www.hlrengineering.com

| SUMMARY OF QUANTITIES | | | |
|-----------------------|---|-------|-----------------------------|
| CODE # | DESCRIPTION | UNIT | CONSTRUCTION TYPE CODE 0011 |
| | | | QUANTITY |
| 20200100 | EARTH EXCAVATION | CU YD | 99 |
| 20300100 | CHANNEL EXCAVATION | CU YD | 525 |
| 28000400 | PERIMETER EROSION BARRIER | FOOT | 640 |
| 35101400 | AGGREGATE BASE COURSE, TYPE B | TON | 254 |
| 40603310 | HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 | TON | 52 |
| 50100100 | REMOVAL OF EXISTING STRUCTURES | EACH | 1 |
| 50200300 | COFFERDAM EXCAVATION | CU YD | 306 |
| 50201121 | COFFERDAM (TYPE 2) (LOCATION - 1) | EACH | 1 |
| 50201122 | COFFERDAM (TYPE 2) (LOCATION - 2) | EACH | 1 |
| 50300225 | CONCRETE STRUCTURES | CU YD | 146.4 |
| 50400505 | PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH) | SQ FT | 4,760 |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 13,110 |
| * 50900205 | STEEL RAILING, TYPE S1 | FOOT | 344 |
| 51201600 | FURNISHING STEEL PILES HP12X53 | FOOT | 630 |
| 51202305 | DRIVING PILES | FOOT | 270 |
| 51203600 | TEST PILE STEEL HP12X53 | EACH | 1 |
| 51500100 | NAME PLATES | EACH | 1 |
| 58100200 | WATERPROOFING MEMBRANE SYSTEM | SQ YD | 534 |
| 58300100 | PORTLAND CEMENT MORTAR FAIRING COURSE | FOOT | 255 |
| 59300100 | CONTROLLED LOW-STRENGTH MATERIAL | CU YD | 76 |
| * ^ 63100167 | TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT | EACH | 2 |
| 67100100 | MOBILIZATION | LSUM | 1 |
| * 72501000 | TERMINAL MARKER - DIRECT APPLIED | EACH | 4 |
| * 78200005 | GUARDRAIL REFLECTORS, TYPE A | EACH | 6 |
| ^ X2501000 | SEEDING, CLASS 2 (SPECIAL) | ACRE | 0.3 |
| ^ X2810814 | STONE DUMPED RIPRAP, CLASS B5 (SPECIAL) | TON | 1,280 |
| * ^ X6311205 | TRAFFIC BARRIER TERMINAL, TYPE 5A (SPECIAL) | EACH | 2 |
| ^ X7011830 | TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21 | EACH | 1 |
| ^ Z0013798 | CONSTRUCTION LAYOUT | LSUM | 1 |
| ^ Z0065000 | SETTING PILES IN ROCK | EACH | 12 |

^ SEE SPECIAL PROVISIONS
* SPECIALTY ITEMS

| EARTHWORK SUMMARY | | | | | | | |
|-----------------------------|-------------------|--------------------|------------------|--------------|---|------------|---|
| LOCATION | EARTH EXCAVATION | CHANNEL EXCAVATION | SHRINKAGE FACTOR | PERCENT USED | EARTH EXCAVATION ADJUSTED FOR SHRINKAGE | EMBANKMENT | EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) |
| | 20200100 CU YD | 20300100 CU YD | | | CU YD | CU YD | CU YD |
| CH8/170TH ST. | | | | | | | |
| STA 8+00 TO STA 9+10.14 | 32 | | 25% | 100% | 24 | 155 | -131 |
| STA 9+10.40 TO STA 10+81.86 | | 525 | 25% | 70% | 276 | | 276 |
| STA 10+81.86 TO STA 12+00 | 67 | | 25% | 100% | 50 | 162 | -112 |
| TOTAL | 99 | 525 | | | 350 | 317 | 33 |

WASTE 33 CU YD

| GUARDRAIL SCHEDULE | | | | |
|--------------------------------------|---|--|--------------------------------|-----------------------------|
| LOCATION | TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT | TRAFFIC BARRIER TERMINAL TYPE 5A (SPECIAL) | TERMINAL MARKER DIRECT APPLIED | GUARDRAIL REFLECTORS TYPE A |
| CH 8/170TH ST. | EACH | EACH | EACH | EACH |
| RT. STA 8+66.49 TO RT. STA 9+16.49 | 1 | 1 | 1 | |
| LT. STA 10+83.51 TO RT. STA 11+33.51 | 1 | 1 | 1 | |
| RT. STA 8+66.49 TO RT. STA 10+81.15 | | | | 3 |
| LT. STA 9+16.49 TO RT. STA 11+33.51 | | | | 3 |
| TOTAL | 2 | 2 | 2 | 6 |

| MIXTURE REQUIREMENTS | |
|-----------------------------|--------------------------------|
| LOCATION(S): | CH 8 / 170TH STREET |
| MIXTURE USE(S): | HOT-MIX ASPHALT SURFACE COURSE |
| PG: | PG 64-22 |
| DESIGN AIR VOIDS: | 4% @ Ndes 50 |
| MIXTURE COMPOSITION: | IL 9.5 mm |
| (GRADATION MIXTURE): | |
| FRICITION AGGREGATE: | MIXTURE C |
| MIXTURE WEIGHTS: | 112 LBS / SY \ INCH THICKNESS |
| QUALITY MANAGEMENT PROGRAM: | QCOA |
| SUBLOT SIZE: | NONE |

| PERIMETER EROSION BARRIER | |
|--------------------------------|------------|
| LOCATION | FOOT |
| CH8/170TH ST. | |
| LT. STA 8+00 TO LT. STA 9+45 | 145 |
| RT. STA 8+00 TO RT. STA 9+85 | 185 |
| LT. STA 10+15 TO LT. STA 12+00 | 185 |
| RT. STA 10+75 TO RT. STA 12+00 | 125 |
| TOTAL | 640 |

| AGGREGATE BASE COURSE, TYPE B | |
|-----------------------------------|------------|
| LOCATION | TON |
| CH8/170TH ST. | |
| CL. STA 8+00 TO CL. STA 9+10.13 | 123 |
| CL. STA 10+81.87 TO CL. STA 12+00 | 131 |
| TOTAL | 254 |

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, ADOPTED APRIL 1, 2017", (HEREIN AFTER REFERRED TO AS THE STANDARD SPECIFICATIONS; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2016; THE LATEST EDITION OF THE "ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS"; THE DETAILS IN THE PLANS AND THE "SPECIAL PROVISIONS" INCLUDED IN THE DOCUMENTS.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DISTURBED BY CONSTRUCTION OPERATIONS.
- ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO MEAN THE LATEST STANDARDS OF THE DEPARTMENT.
- THE LOCATION OF EXISTING GAS MAINS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE BEST INFORMATION AVAILABLE, BUT THE LOCATIONS ARE NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNERS OF ALL UTILITIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF ALL UTILITY FACILITIES. THE CONTRACTOR SHALL COOPERATE WITH ALL UTILITY OWNERS AS PROVIDED FOR IN THE STANDARD SPECIFICATIONS IF UTILITY RELOCATION, ADJUSTMENTS OR PROTECTION IS NECESSARY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MIGHT NOT BE SHOWN ON THE PLANS, ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER. THE WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING CONSTRUCTION.
- THE REMOVAL OF THE EXISTING OIL&CHIP SURFACE WILL BE PAID FOR AS EARTH EXCAVATION. ALL BITUMINOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR IN A METHOD APPROVED BY THE ENGINEER. DISPOSAL OF BITUMINOUS MATERIAL SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE AREA TO BE SEEDED SHALL CONSIST OF ALL EARTH SURFACES WITHIN THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER SEEDING, CLASS 2 (SPECIAL) = **0.3 ACRES**
- THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES

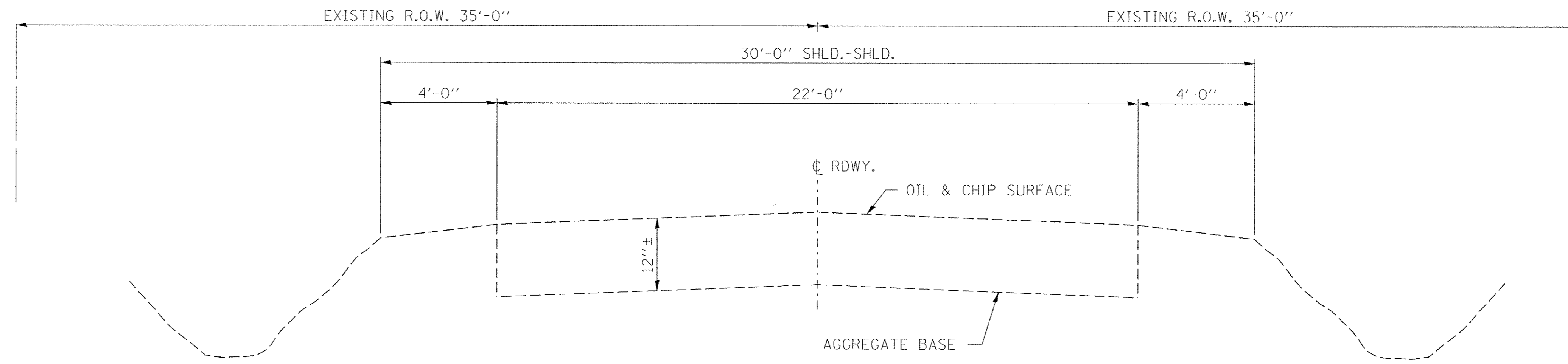
| | |
|--|---------------------------|
| AGGREGATE BASE COURSE | 2.05 TON/CU.YD. |
| STONE DUMPED RIPRAP, CLASS B5 (SPECIAL) | 1.75 TON/CU.YD. |
| HOT-MIX ASPHALT | 112 LBS/SQ. YD/IN. |
- FENCE REMOVAL AND REPLACEMENT WILL BE COMPLETED BY OTHERS.
- PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:
 BDE FORM 2289 (CULTURAL AND NATURAL RESOURCES REVIEW OF BORROW AREAS)
 BDE FORM 2290 (WASTE/USE AREA REVIEW)
 ALLOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA
 COLOR PHOTOGRAPHS DEPICTING THE USE AREA
 BORROW AREA ENTRY AGREEMENT FORM - D4 P10101

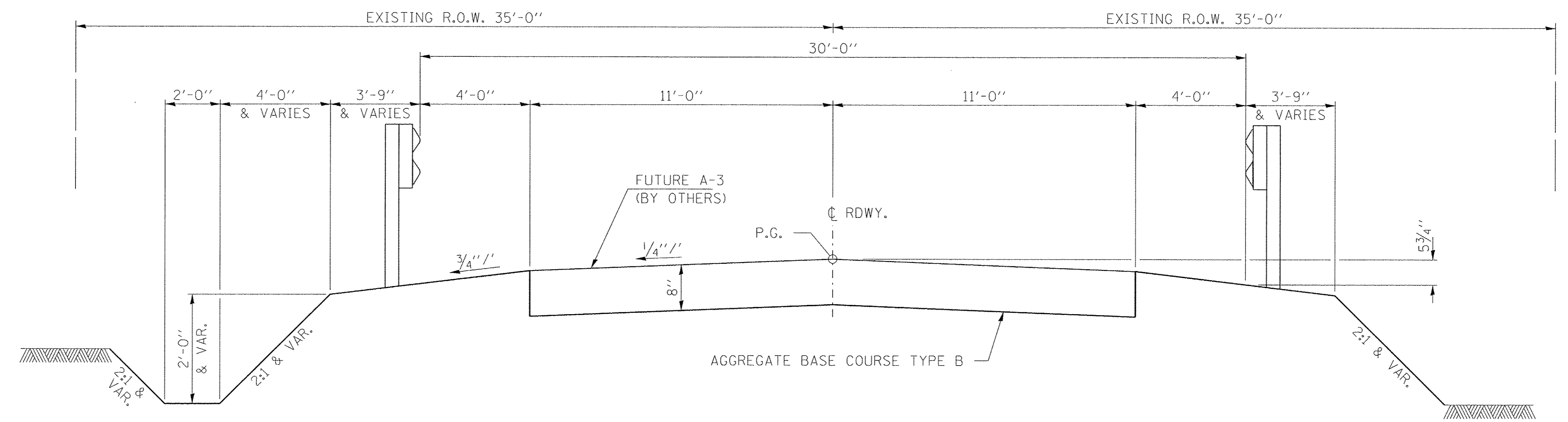
PRIOR TO ANY WASTE MATERIALS BEING REMOVED FROM THE CONSTRUCTION SITE, THE REQUIRED ENVIRONMENTAL RESOURCE SURVEYS SHALL BE OBTAINED AND FILED BY THE CONTRACTOR. EXCESS WASTE PRODUCTS REMOVED FROM THE CONSTRUCTION SITE SHALL BE DISPOSED OF AS REQUIRED IN SECTION 202.03 OF THE STANDARD SPECIFICATIONS.

ANY PROTRUDING METAL BARS SHALL BE REMOVED PRIOR TO THE DISPOSAL OF BROKEN CONCRETE AT APPROVED DISPOSAL SITES.

PLEASE NOTE THAT A MINIMUM OF FOUR WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED WASTE SITE ENVIRONMENTAL CLEARANCES AND SIX WEEKS FOR THE REQUIRED BORROW SITE ENVIRONMENTAL CLEARANCES.



EXISTING TYPICAL CROSS SECTION
STA. 8+00 TO 12+00



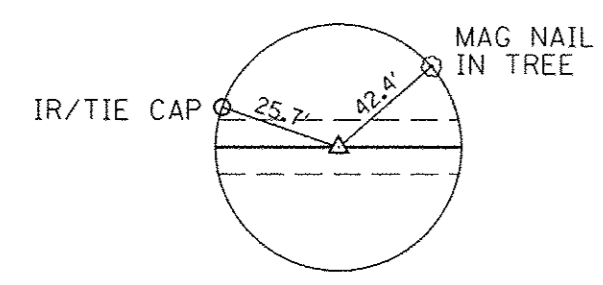
PROPOSED TYPICAL CROSS SECTION

SUGGESTED CUT SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

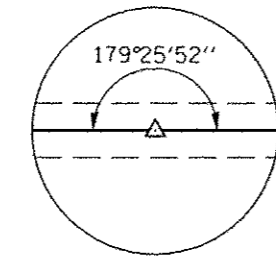
STA. 8+00 TO STA. 9+10.14
STA. 10+81.86 TO STA. 12+00
TRANSITION FROM THE PROPOSED ROADWAY TO THE EXISTING
ROADWAY IS TO BE CONSTRUCTED FROM STA. 8+00 TO 8+50 AND
STA. 11+50 TO 12+00. SEE SHEET 13 FOR TRANSITION AT BRIDGE.

SUGGESTED FILL SECTION
CONSTRUCT AS SHOWN IN
STATION CROSS SECTIONS

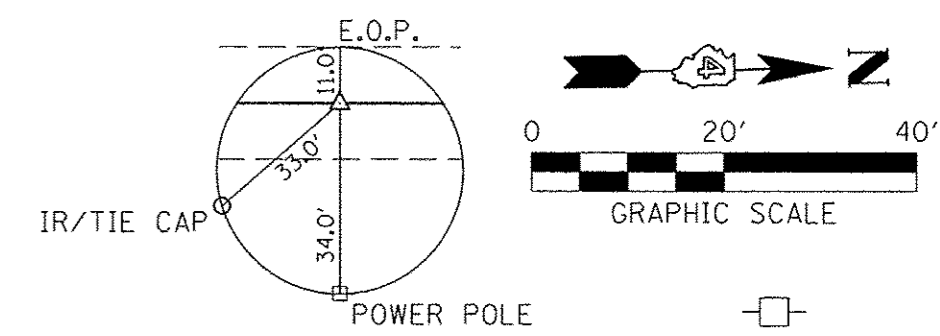
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| FILE NAME = 100126-sht-typsections.dgn | USER NAME = #USER# | DESIGNED - J.W.F. | REVISED - | STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT | TYPICAL CROSS SECTIONS C.H. 8 / 170th ST. | | | F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. | |
| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62793 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000958 | PLOT SCALE = #SCALE# | DRAWN - T.W.K. | REVISED - | | SCALE: | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA. | 407 | 10-00128-00-BR | WARREN | 25 | 3 |
| PLOT DATE = 4/13/2017 | DATE = 04/12/17 | CHECKED - L.F.S. | REVISED - | | | | | DOC DAVIS BRIDGE | | CONTRACT NO. 89731 | | | |
| | | DATE = 04/12/17 | REVISED - | | | | | ILLINOIS FED. AID PROJECT BRS-04071081 | | | | | |



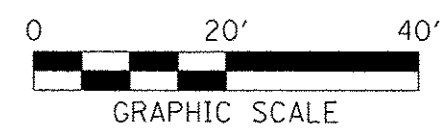
P.O.T. STA. 4+50.72
MAG NAIL (SET)
N. 1,458,701,420
E. 2,214,205,513



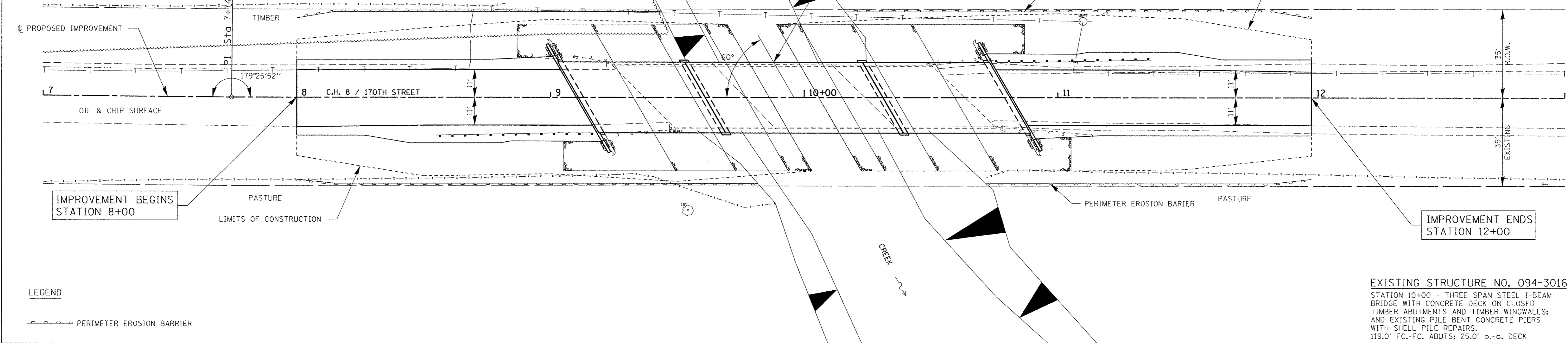
P.I. STA. 7+74.30
(TO BE SET)
NO CURVE
N. 1,459,024,878
E. 2,214,214,415



P.O.T. STA. 15+49.72
MAG NAIL (SET)
N. 1,459,800,180
E. 2,214,228,051



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| PLAN | BY | DATE |
| SURVEYED | | |
| DESIGNED | | |
| ALIGNED | | |
| CHECKED | | |
| NO. | | |
| NOTE BOOK | | |
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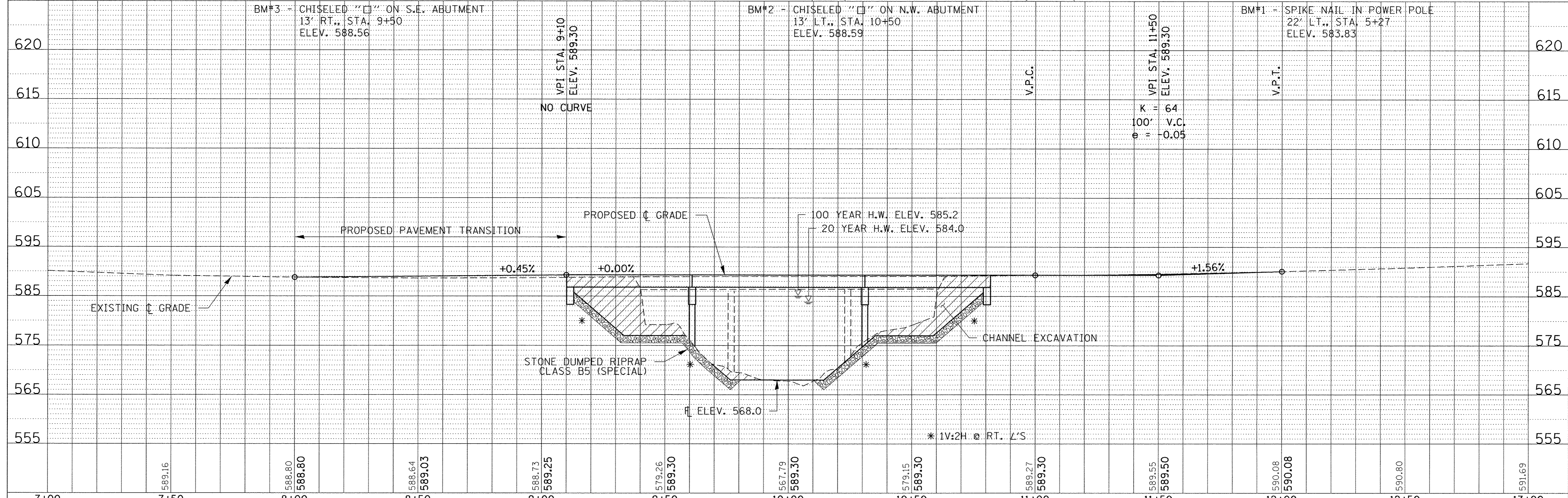


LEGEND

— PERIMETER EROSION BARRIER

EXISTING STRUCTURE NO. 094-3016
STATION 10+00 - THREE SPAN STEEL I-BEAM BRIDGE WITH CONCRETE DECK ON CLOSED TIMBER ABUTMENTS AND TIMBER WINGWALLS; AND EXISTING PILE BENT CONCRETE PIERS WITH SHELL PILE REPAIRS. 119.0' FC-FC. ABUTS; 25.0' o.-o. DECK

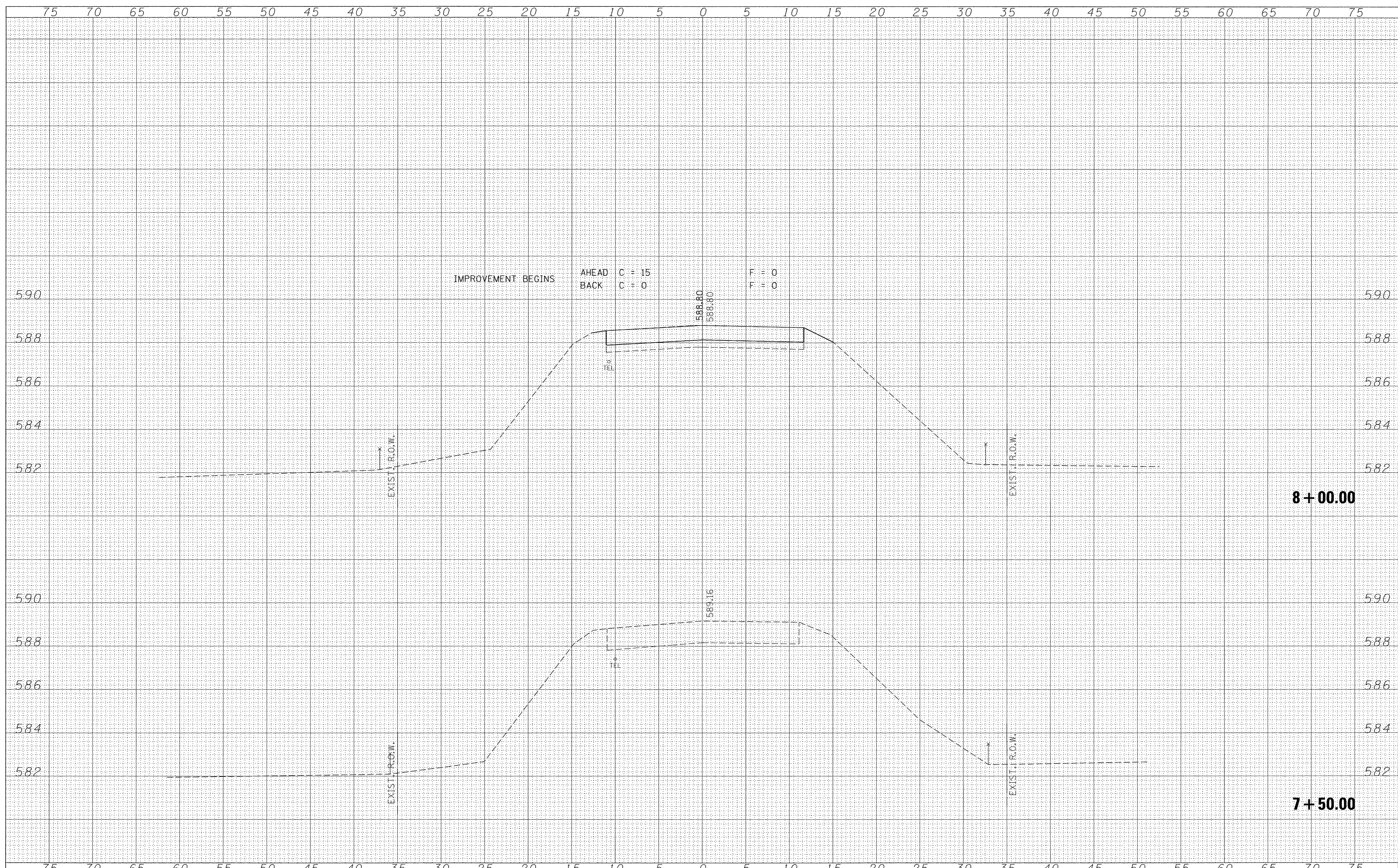
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|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 7+00 | 7+50 | 8+00 | 8+50 | 9+00 | 9+50 | 10+00 | 10+50 | 11+00 | 11+50 | 12+00 | 12+50 | 13+00 |
| 589.16 | 588.80 | 588.80 | 588.64 | 588.73 | 579.26 | 567.79 | 579.15 | 589.27 | 589.55 | 590.08 | 590.80 | 591.69 |

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

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



FILE NAME = 100126-sht-sxs.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 3065 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 164.000959

USER NAME = #USER#
 DESIGNED - J.W.F.
 DRAWN - T.W.K.
 CHECKED - L.F.S.
 DATE - 04/12/17
 PLOT SCALE = #SCALE#
 PLOT DATE = 4/12/2017

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**STATE OF ILLINOIS
 WARREN COUNTY HIGHWAY DEPARTMENT**

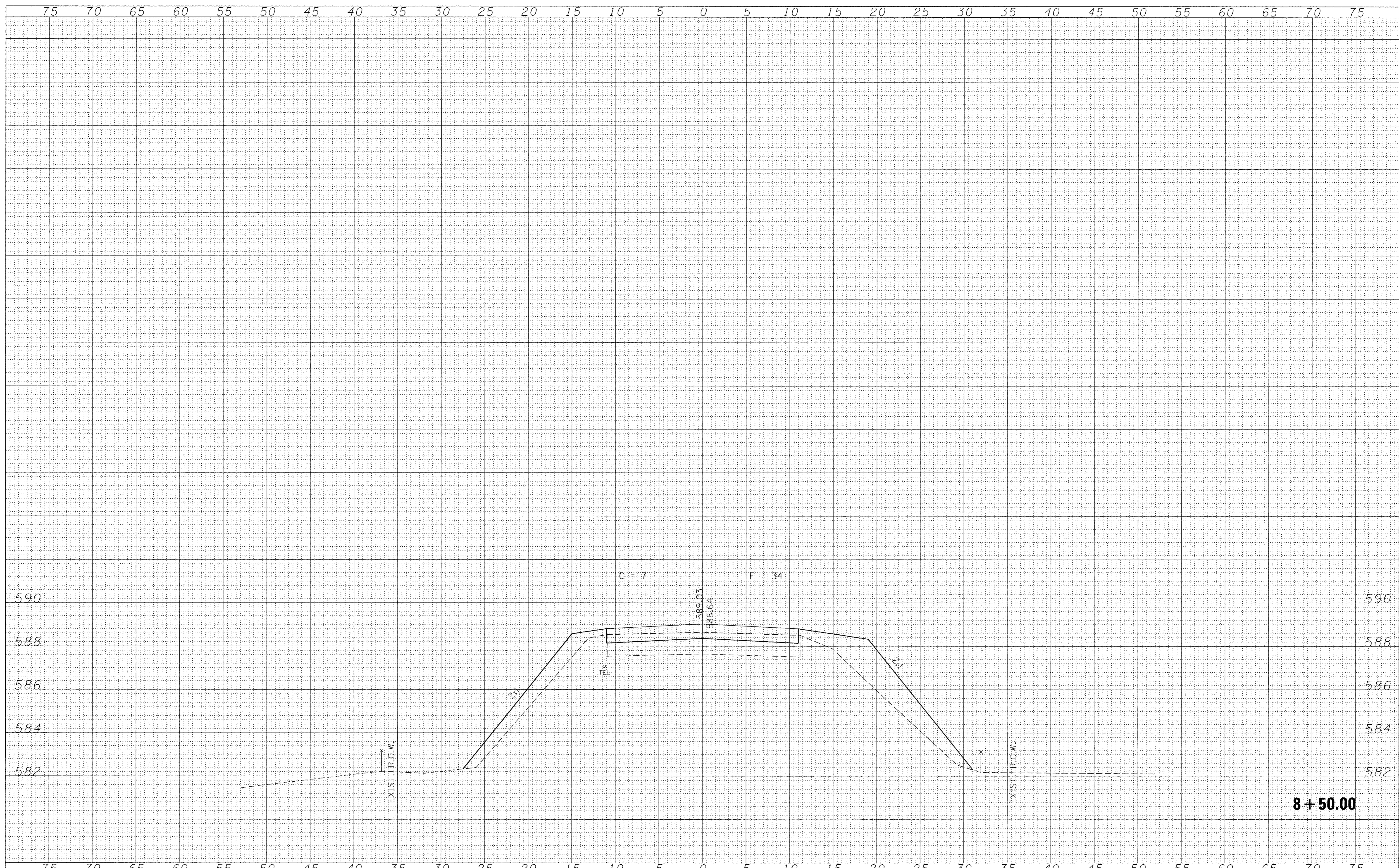
**STATION CROSS SECTIONS
 C.H. 8 / 170TH STREET**

SCALE: H5:V2 SHEET NO. 1 OF 8 SHEETS STA. 7+50.00 TO STA. 8+00.00

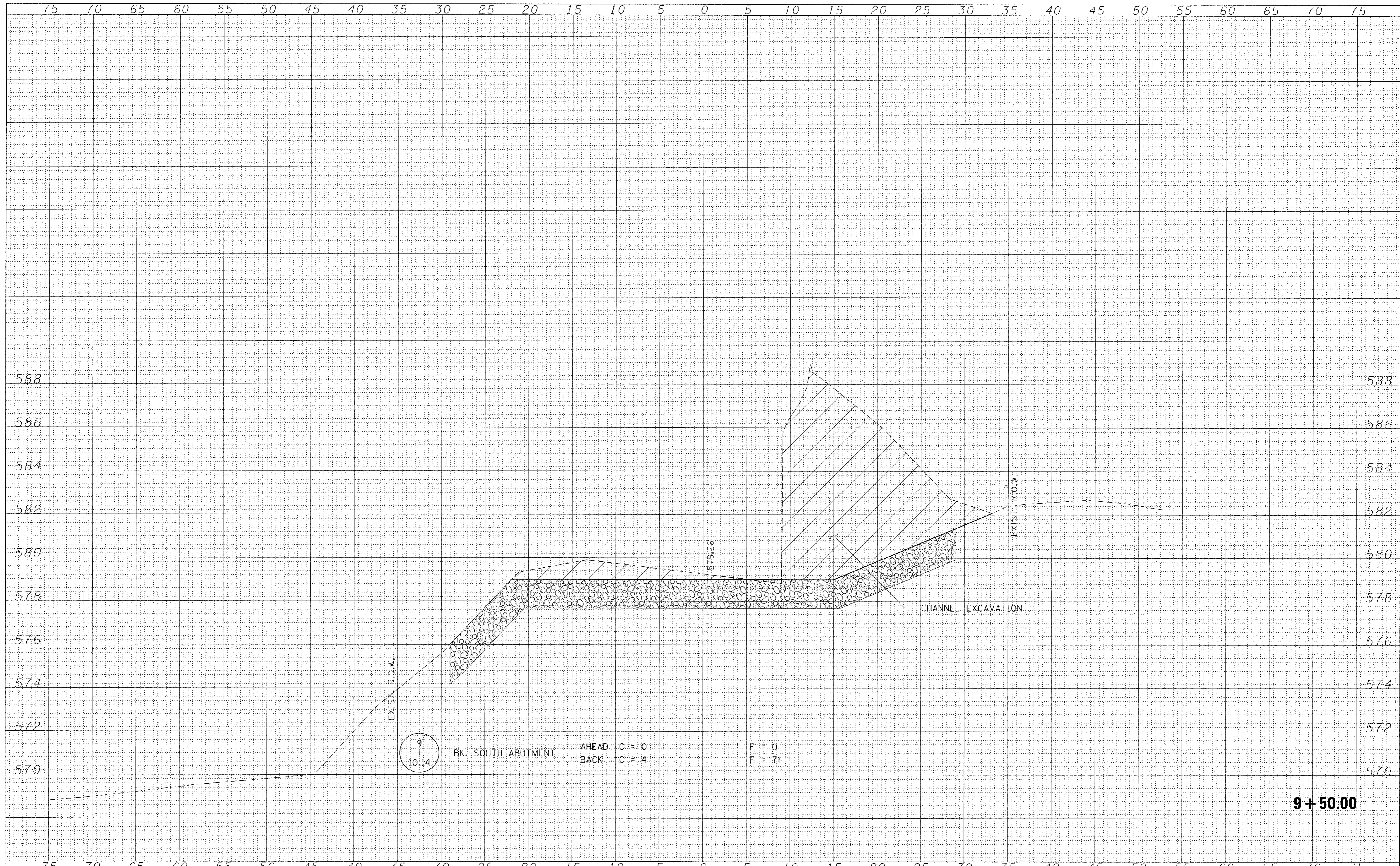
| F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---------------------------------------|----------------|--------|--------------------|-----------|
| 407 | 10-00128-00-BR | WARREN | 25 | 5 |
| DOC DAVIS BRIDGE | | | CONTRACT NO. 89731 | |
| ILLINOIS FED. AID PROJECT BRS-0407108 | | | | |

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| FINAL SURVEY | SURVEYED | DATE |
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| ORIGINAL SURVEY | SURVEYED | DATE |
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| FILE NAME = 100126-sht-axs.dgn | USER NAME = #USER# | DESIGNED - J.W.F. | REVISED - | STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT | STATION CROSS SECTIONS C.H. 8 / 170TH STREET | | | F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62790 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959 | PLOT SCALE = #SCALE# | DRAWN - T.W.K. | REVISED - | | 407 | 10-00128-00-BR | WARREN | 25 | 6 | | | |
| PLOT DATE = 4/12/2017 | DATE - 04/12/17 | CHECKED - L.F.S. | REVISED - | | SCALE: H5:V2 | | | SHEET NO. 2 OF 8 SHEETS | | | STA. 8+50.00 TO STA. 8+50.00 | ILLINOIS FED. AID PROJECT BRS-0407(108) |
| 8 + 50.00 | | | | | | | | | | | | |

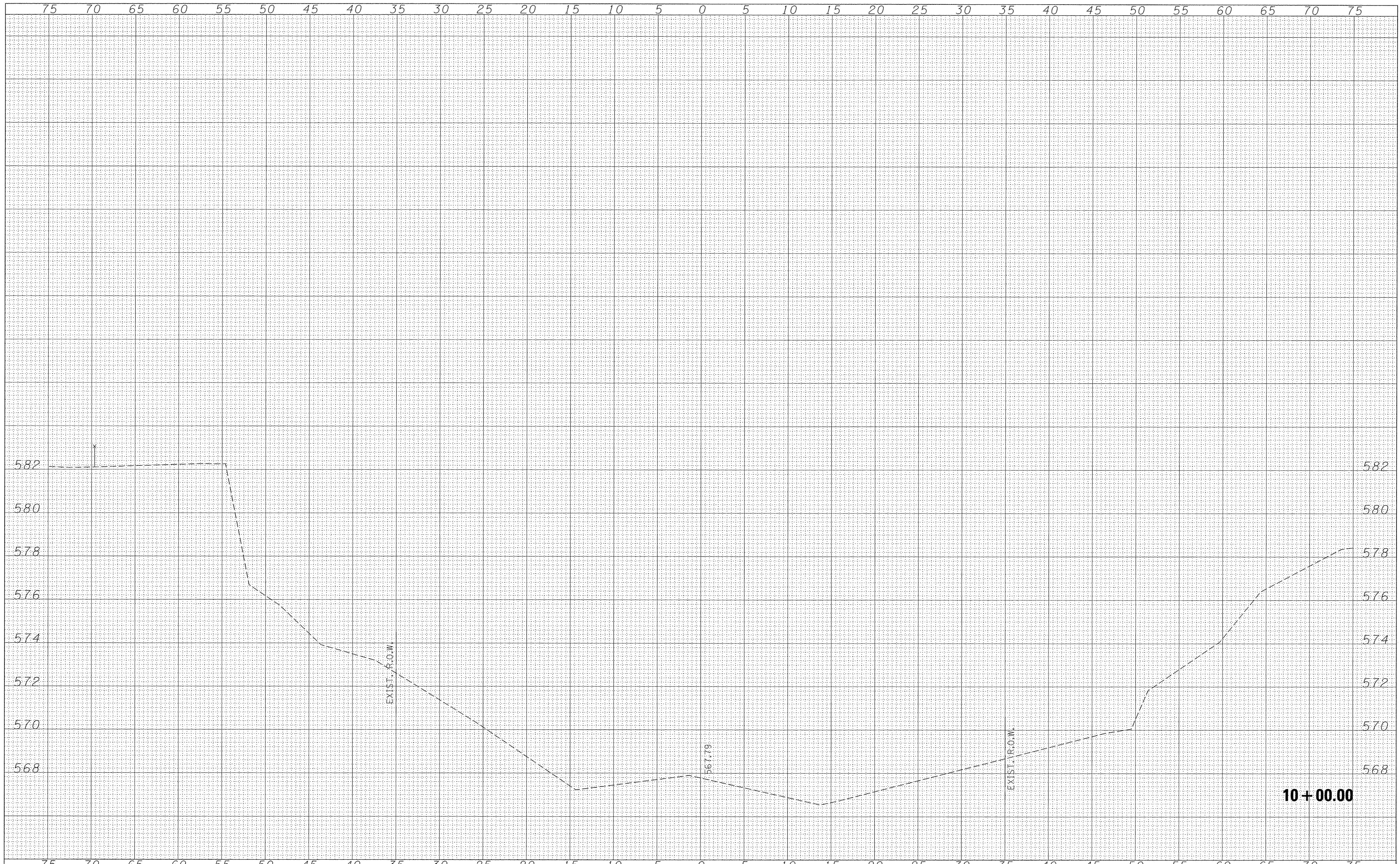


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| BY | |
| FINAL SURVEY | |
| NOTE BOOK | |
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| ORIGINAL SURVEY | |
| NOTE BOOK | |
| NO. | |
| SURVEYED | |
| PLOTTED | |
| TEMPLATE | |
| AREAS | |
| CHECKED | |



FILE NAME = 100126-sht-sxs.dgn
HAMPTON, LENZINI AND RENWICK, INC.
 3085 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 194.009959

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 PLOT DATE = 4/12/2017

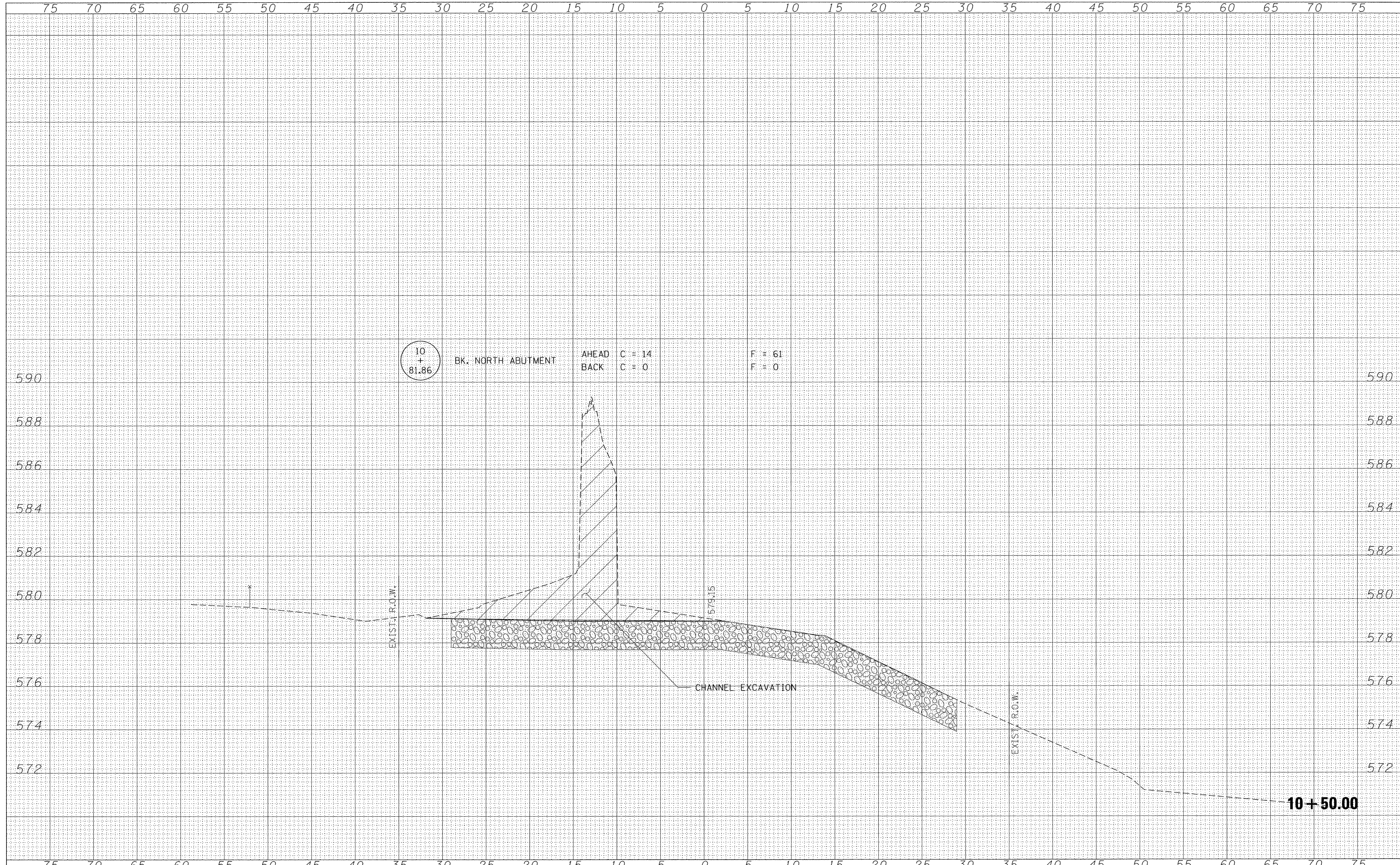
DESIGNED - J.W.F.
 DRAWN - T.W.K.
 CHECKED - L.F.S.
 DATE - 04/12/17

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 WARREN COUNTY HIGHWAY DEPARTMENT**

**STATION CROSS SECTIONS
 C.H. 8 / 170TH STREET**
 SCALE: H5:V2 SHEET NO. 5 OF 8 SHEETS STA. 10+00.00 TO STA. 10+00.00

| F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------|----------------|--------|--------------------|-----------|
| 407 | 10-00128-00-BR | WARREN | 25 | 9 |
| DOC DAVIS BRIDGE | | | CONTRACT NO. 89731 | |

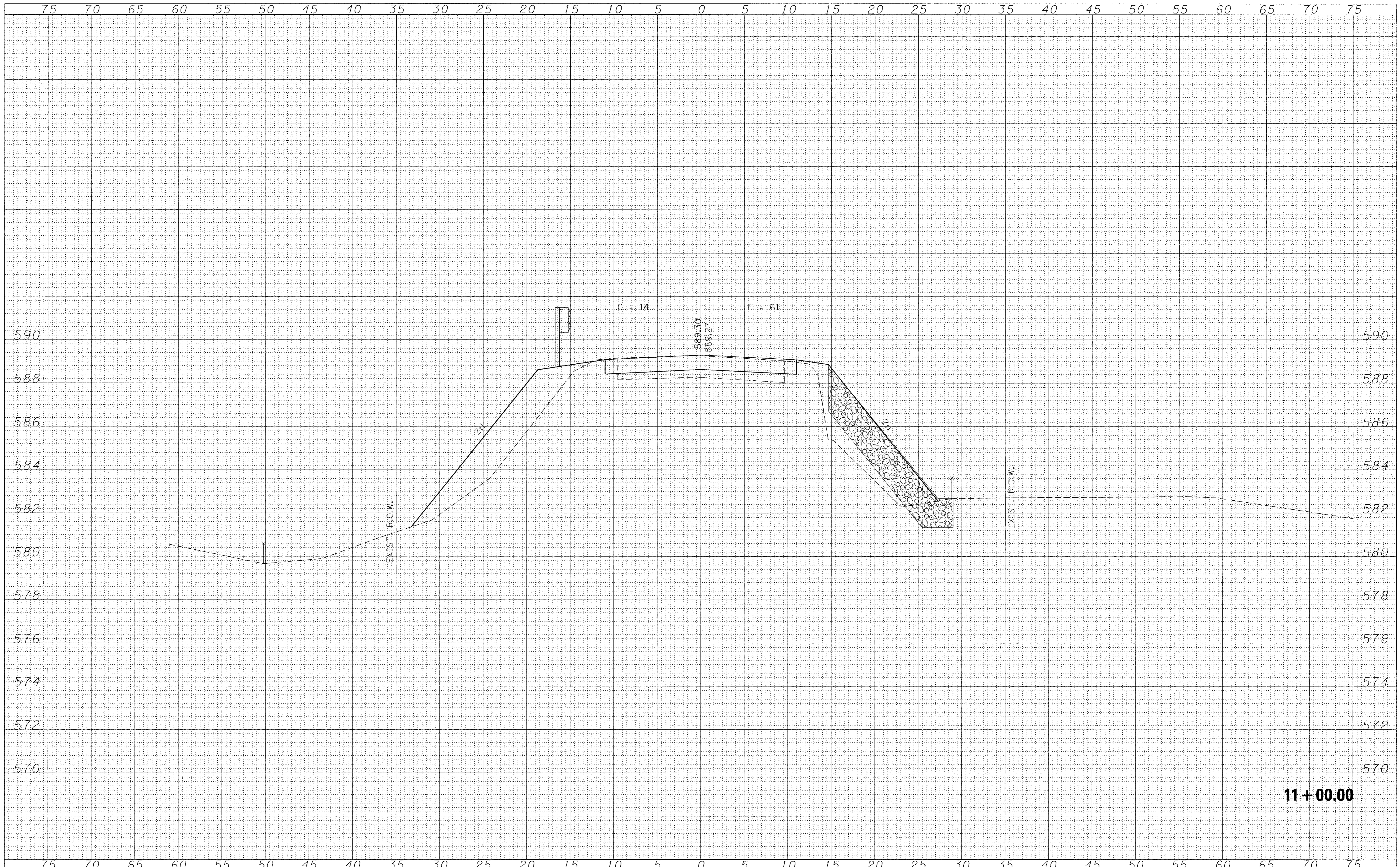


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| BY | |
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| NOTE BOOK | |
| NO. | |
| AREAS CHECKED | |

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

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| DATE | |
| BY | |
| SUPERVISED | |
| PLOTTED | |
| TEMPLATE | |
| AREAS | |
| CHECKED | |
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| DATE | |
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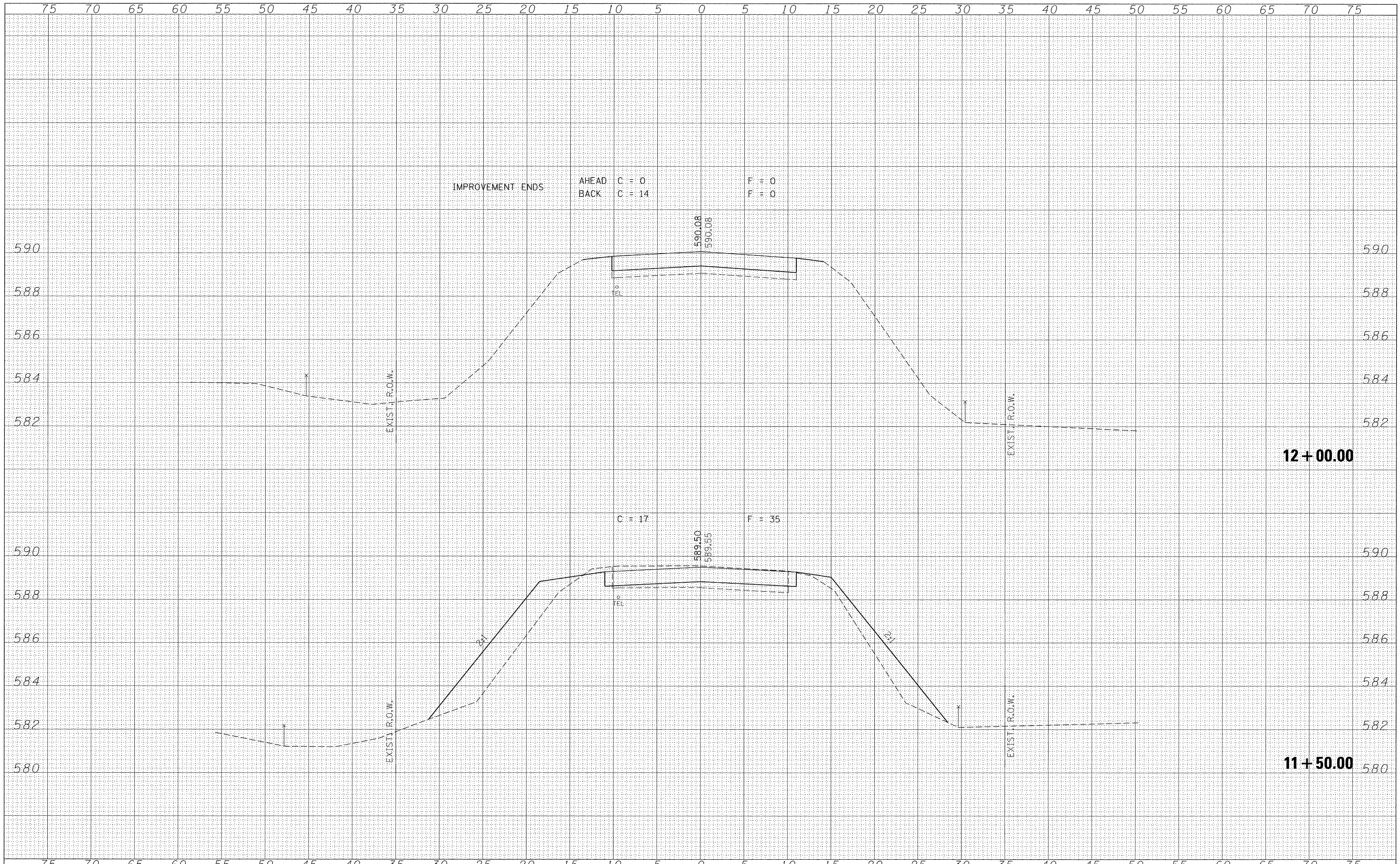


11 + 00.00

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| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62763 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 194.009959 | | DRAWN - T.W.K. | REVISED - | | 407 | 10-00128-00-BR | WARREN | 25 | 11 | | |
| PLOT SCALE = #SCALE# | | CHECKED - L.F.S. | REVISED - | | DOC DAVIS BRIDGE | | CONTRACT NO. 89731 | | | | |
| PLOT DATE = 4/12/2017 | | DATE - 04/12/17 | REVISED - | | SCALE: H5:V2 | | SHEET NO. 7 OF 8 SHEETS | | STA. 11+00.00 TO STA. 11+00.00 | ILLINOIS FED. AID PROJECT BRS-0407(108) | |

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

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



FILE NAME = 100126-sht-sss.dgn
 HAMPTON, LENZINI AND RENWICK, INC.
 3095 STEVENSON DRIVE, SUITE 201
 SPRINGFIELD, ILLINOIS 62703
 ILLINOIS PROFESSIONAL DESIGN FIRM
 LS / PE / SE CORP. 164.009956

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 DRAWN - T.W.K.
 CHECKED - L.F.S.
 DATE - 04/12/17
 PLOT SCALE = #SCALE#
 PLOT DATE = 4/12/2017

DESIGNED - J.W.F.
 DRAWN - T.W.K.
 CHECKED - L.F.S.
 DATE - 04/12/17

REVISED -
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 REVISED -

STATE OF ILLINOIS
 WARREN COUNTY HIGHWAY DEPARTMENT

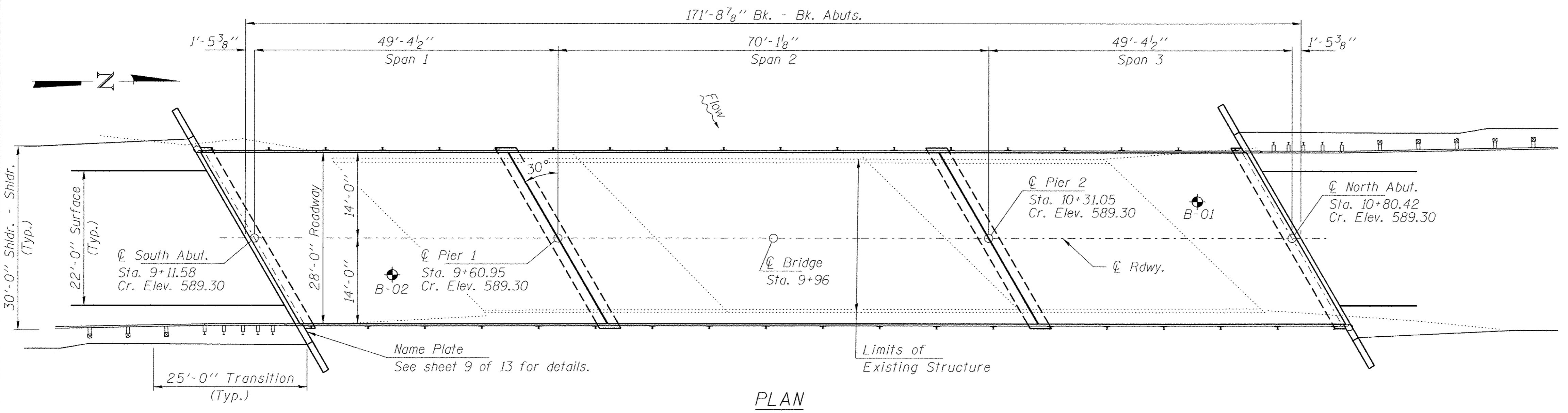
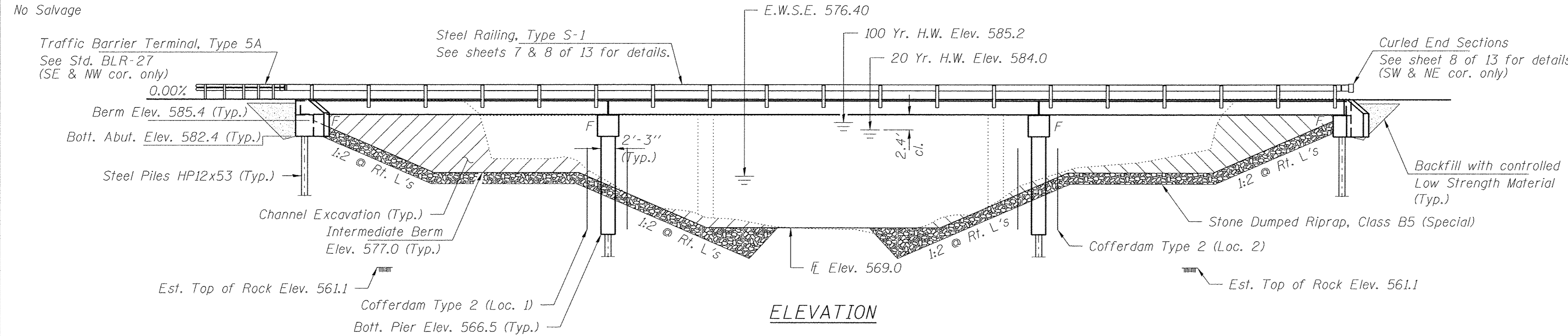
STATION CROSS SECTIONS
 C.H. 8 / 170TH STREET
 SCALE: H5:V2 SHEET NO. 8 OF 8 SHEETS STA. 11+50.00 TO STA. 12+00.00

| F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|---|----------------|--------|--------------------|-----------|
| 407 | 10-00128-00-BR | WARREN | 25 | 12 |
| DOC DAVIS BRIDGE | | | CONTRACT NO. 89731 | |
| ILLINOIS FED. AID PROJECT BR5-0407(108) | | | | |

BENCHMARK: Chiseled "□" on NW abutment. 13' Lt., Sta. 10+50, Elev. 588.59

EXISTING STRUCTURE: Three Span steel I-beam bridge with concrete deck on closed timber abutments and wingwalls; and exiting pile bent concrete piers with shell pile repairs. 119.0' fc.-fc. abuts., 25.0' o.-o. deck structure closed to traffic.

No Salvage

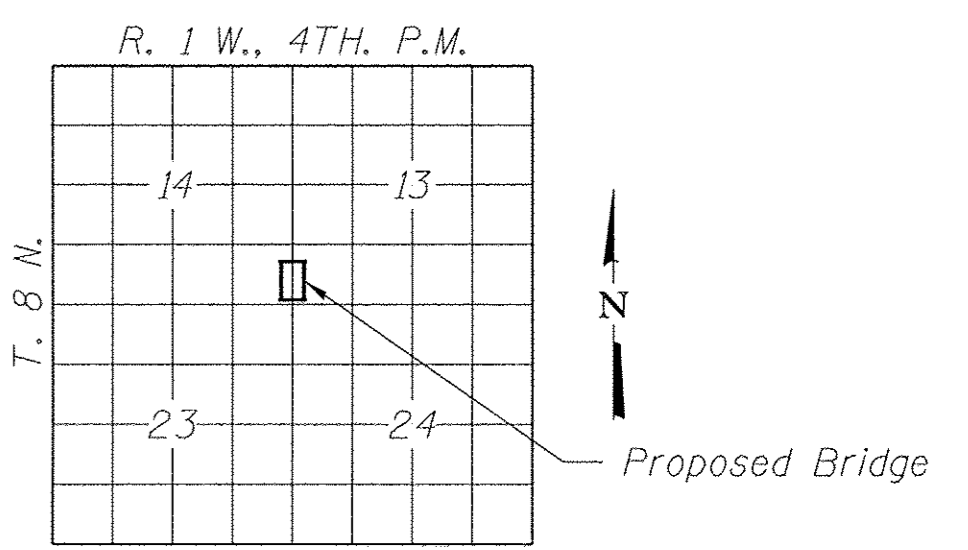


INDEX OF STRUCTURE SHEETS

1. General Plan & Elevation
2. General Details
3. 27"x48" PPC Deck Beam - Spans 1 & 3
4. 27"x48" PPC Deck Beam Details - Spans 1 & 3
5. 27"x48" PPC Deck Beam - Span 2
6. 27"x48" PPC Deck Beam Details - Span 2
7. Superstructure Details
8. Steel Railing, Type S-1
9. Abutments
10. Piers
11. HP Pile Details
- 12-13. Borings

SWAN CREEK
BUILT 201_ BY
WARREN COUNTY
SEC. 10-00128-00-BR
C.H. 8
STR. NO. 094-3040
LOADING HL-93

NAME PLATE
See Std. 515001



DESIGN SCOUR ELEVATION TABLE

| Event/Limit State | Design Scour Elevations (ft.) | | | | Item 113 |
|-------------------|-------------------------------|--------|--------|----------|----------|
| | S. Abut. | Pier 1 | Pier 2 | N. Abut. | |
| Q100 | 582.8 | 566.5 | 566.5 | 582.8 | 5 |
| Q500 | 582.8 | 565.3 | 565.3 | 582.8 | |
| Design | 582.8 | 566.5 | 566.5 | 582.8 | |
| Check | 582.8 | 565.3 | 565.3 | 582.8 | |

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition with 2015 & 2016 Interims.

LOADING HL-93

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

DESIGN STRESSES

FIELD UNITS

f_c = 3,500 psi
f_y = 60,000 psi (Reinf.)

PRECAST PRESTRESSED UNITS

f_c = 6,000 psi
f_{ci} = 5,000 psi
f_{pu} = 270,000 psi (1/2" low lax. strands)
f_{pbt} = 201,960 psi (1/2" low lax. strands)
f_y = 60,000 psi (Reinf.)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.076g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.121g
Soil Site Class = C

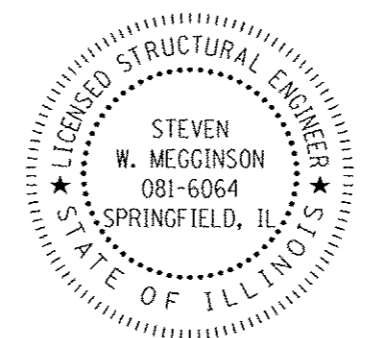
WATERWAY INFORMATION

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | | Natural Head - Ft. | | Headwater E.I. | | |
|------------|-----------|----------|-----------------|-------|--------------------|-------|----------------|--------|--------|
| | | | Exist. | Prop. | H.W.E. Exist. | Prop. | Exist. | Prop. | |
| Design | 10 | 7010 | 770 | 1180 | 584.01 | 1.58 | 0.87 | 585.59 | 584.88 |
| | | | 870 | 1350 | 585.24 | 3.98 | 1.34 | 589.22 | 586.58 |
| Base | 100 | 10100 | 870 | 1350 | 585.24 | 3.98 | 1.34 | 589.22 | 586.58 |
| Max. Calc. | 500 | 13400 | 970 | 1510 | 586.35 | 3.72 | 2.36 | 590.07 | 588.71 |

Existing Low Grade Elev. 588.64 @ Sta. 8+50
Proposed Low Grade Elev. 588.80 @ Sta. 8+00
Drainage Area = 94.9 Sq. Mi.
10 Year Velocity through Existing Bridge = 7.9 fps
10 Year Velocity through Proposed Bridge = 5.2 fps

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

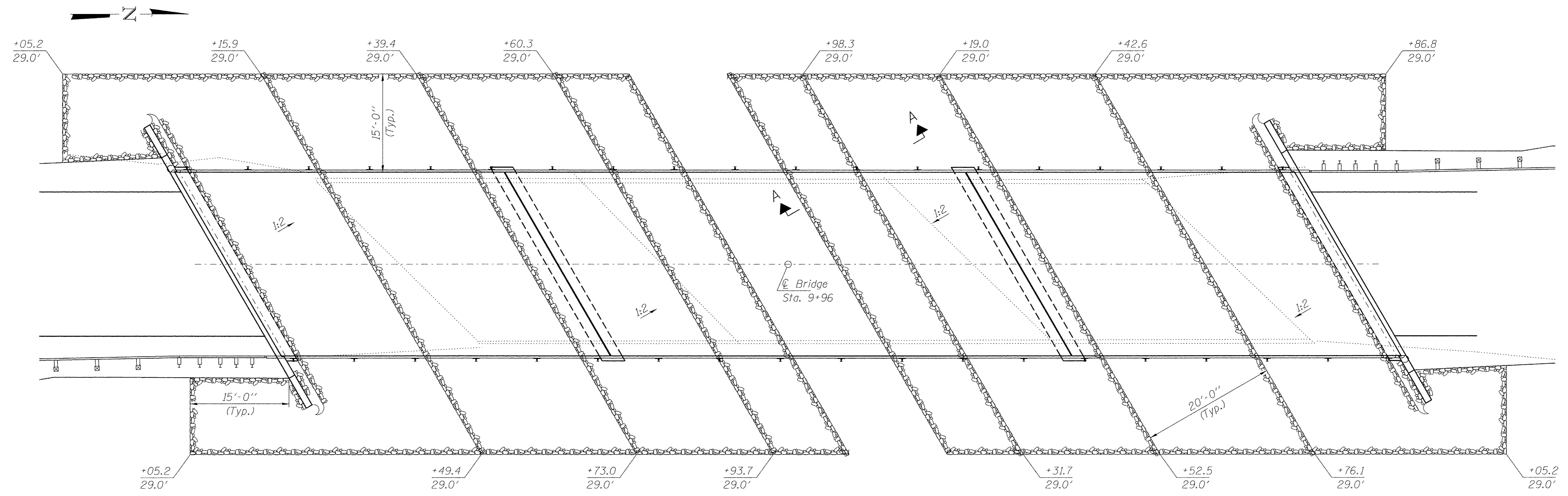
Steven W. Megginson 04/12/2017
ILLINOIS STRUCTURAL ENGINEER NO. 081-6064



Expires 11-30-2018

TOTAL BILL OF MATERIAL

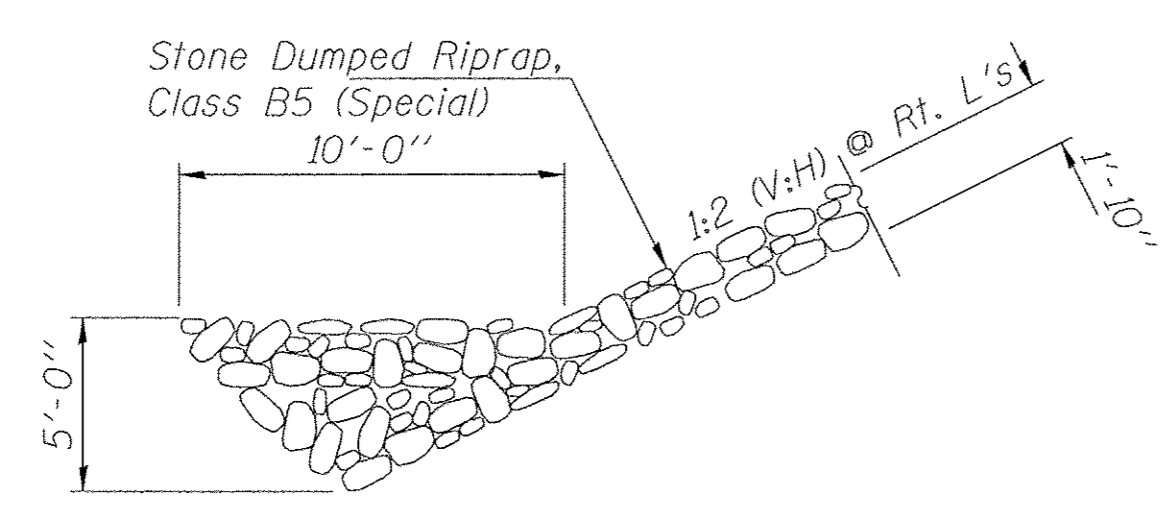
| ITEM | UNIT | SUPER | SUB | TOTAL |
|---|---------|-------|--------|--------|
| Channel Excavation | Cu. Yd. | | | 525 |
| Hot-Mix Asphalt Surface Course, Mix "C", N50 | Ton | 52 | | 52 |
| Removal of Existing Structures | Each | | | 1 |
| Cofferdam Excavation | Cu. Yd. | | | 306 |
| Cofferdam (Type 2) (Location 1) | Each | | 1 | 1 |
| Cofferdam (Type 2) (Location 2) | Each | | 1 | 1 |
| Concrete Structures | Cu. Yd. | | 146.4 | 146.4 |
| Precast Prestressed Concrete Deck Beams (27" Depth) | Sq. Ft. | 4,760 | | 4,760 |
| Reinforcement Bars, Epoxy Coated | Pound | | 13,110 | 13,110 |
| Steel Railing, Type S-1 | Foot | 344 | | 344 |
| Furnishing Steel Piles HP12x53 | Foot | | 630 | 630 |
| Driving Piles | Foot | | 270 | 270 |
| Test Pile Steel HP12x53 | Each | | 1 | 1 |
| Name Plates | Each | | 1 | 1 |
| Waterproofing Membrane System | Sq. Yd. | 534 | | 534 |
| P.C. Mortar Fairing Course | Foot | 255 | | 255 |
| Controlled Low-Strength Material | Cu. Yd. | | | 76 |
| Stone Dumped Riprap, Class B5 (Special) | Ton | | | 1,280 |
| Setting Piles in Rock | Each | | 12 | 12 |



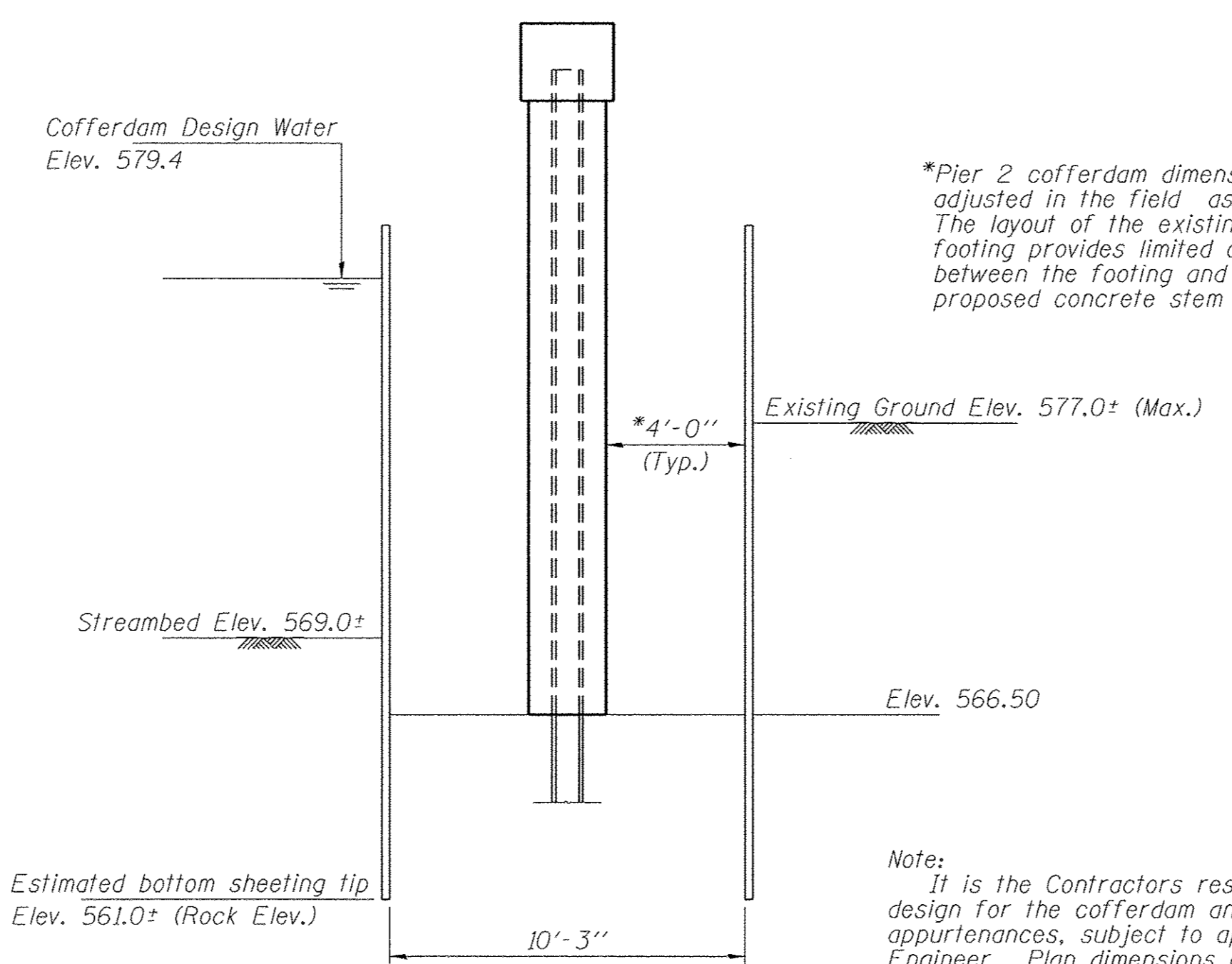
PLAN

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
 Excavation required to construct the Abutments shall be included in the cost of Concrete Structures. No additional compensation will be allowed for Structure Excavation.
 Protective coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.
 All proposed construction activities shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act. The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.



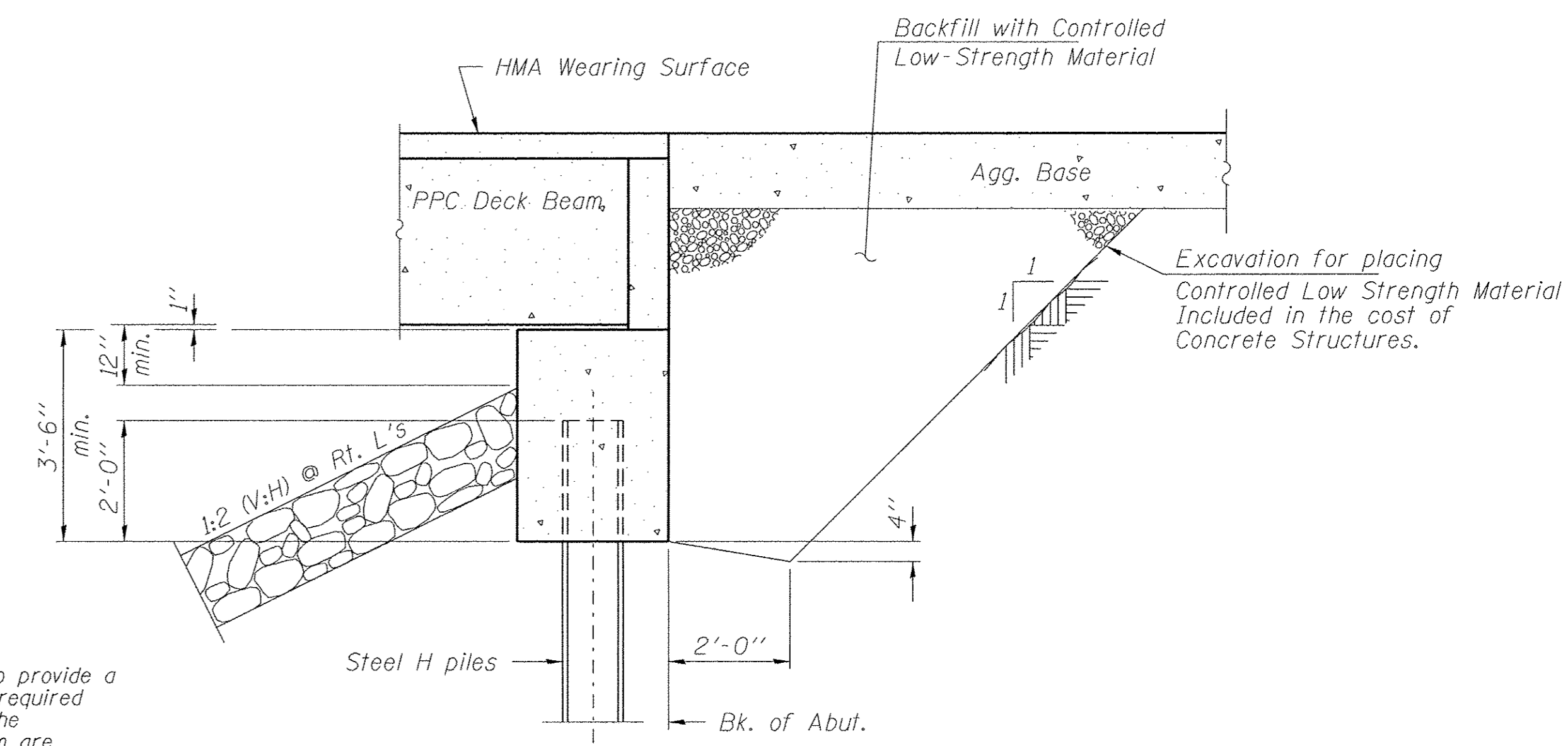
SECTION A-A



COFFERDAM DETAIL

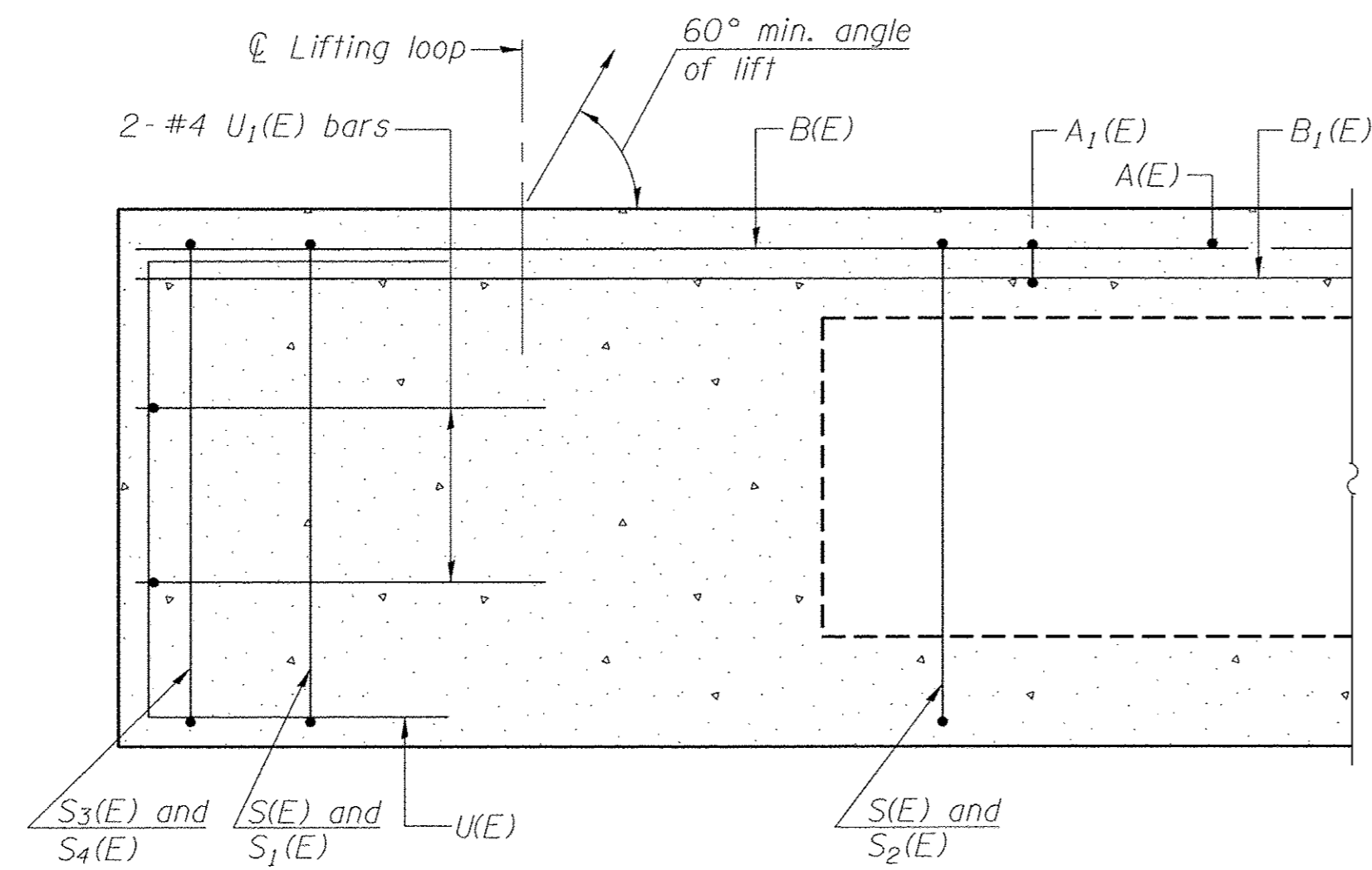
*Pier 2 cofferdam dimension may be adjusted in the field, as required. The layout of the existing Pier 2 footing provides limited clearance between the footing and the proposed concrete stem wall.

Note:
 It is the Contractors responsibility to provide a design for the cofferdam and all other required appurtenances, subject to approval of the Engineer. Plan dimensions of cofferdam are 10'-3" x 40'-3".

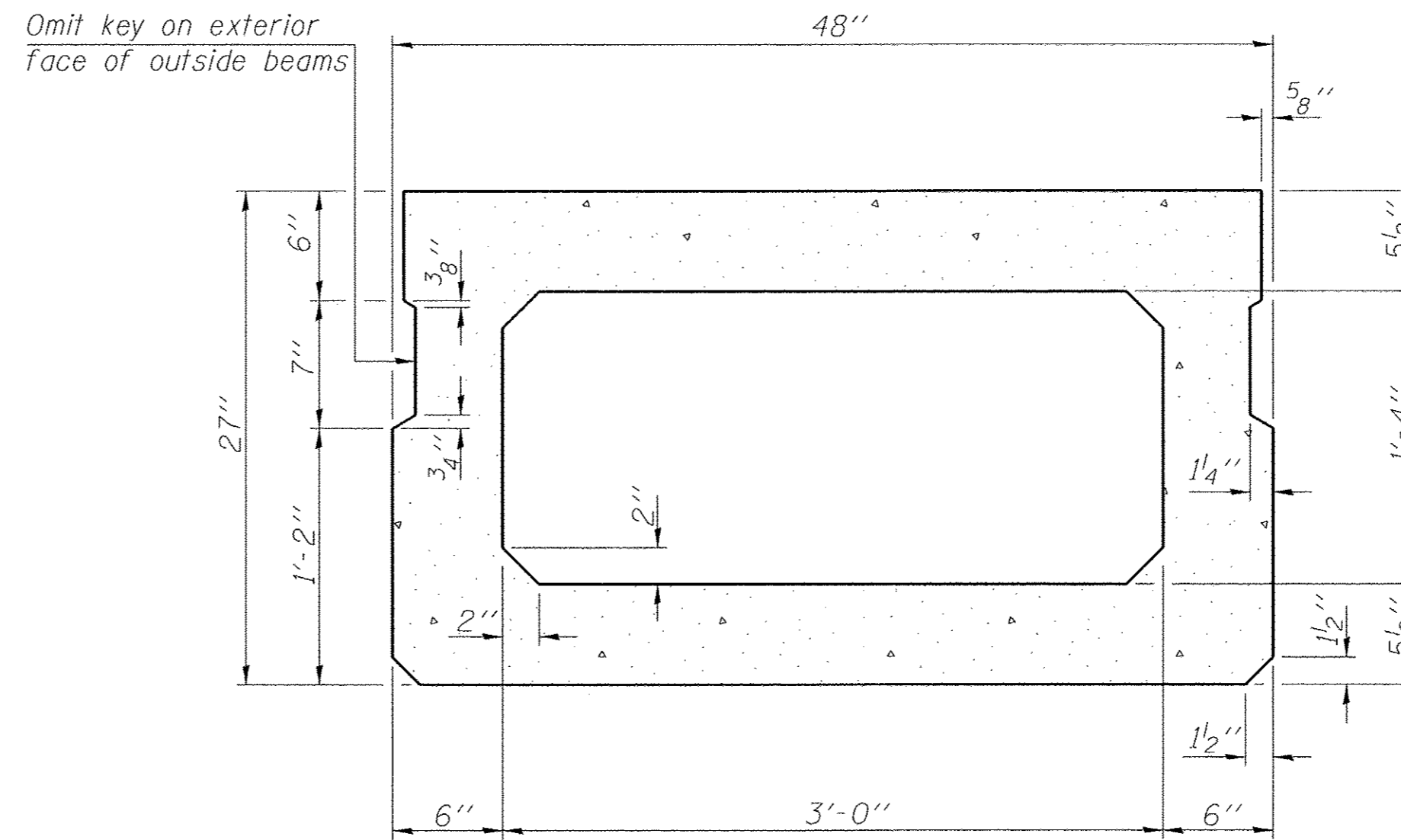


SECTION THRU ABUTMENT
 (Horiz. dim. @ Rt. L's)

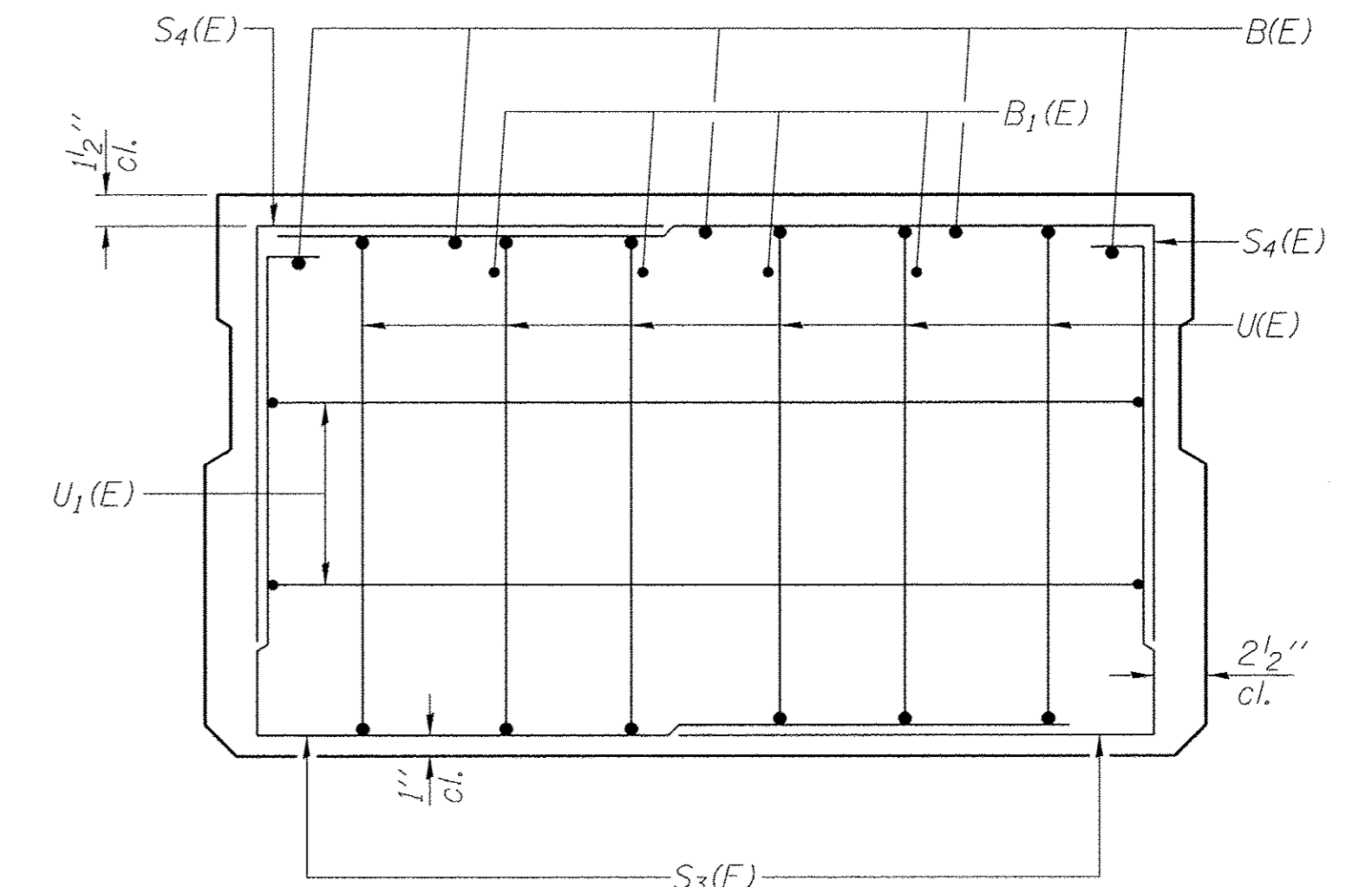
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| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 194.000969 | PLOT SCALE = #SCALE# | CHECKED - D.W.T. | REVISED - | | | 407 | 10-00128-00-BR | WARREN | 25 | 14 |
| PLOT DATE = 4/12/2017 | DRAWN - D.A.B. | REVISED - | REVISED - | | | DOC DAVIS BRIDGE | | CONTRACT NO. 89731 | | |
| | CHECKED - S.W.M. | REVISED - | REVISED - | | | SHEET NO. 2 OF 13 SHEETS | | ILLINOIS FED. AID PROJECT BRS-04071081 | | |



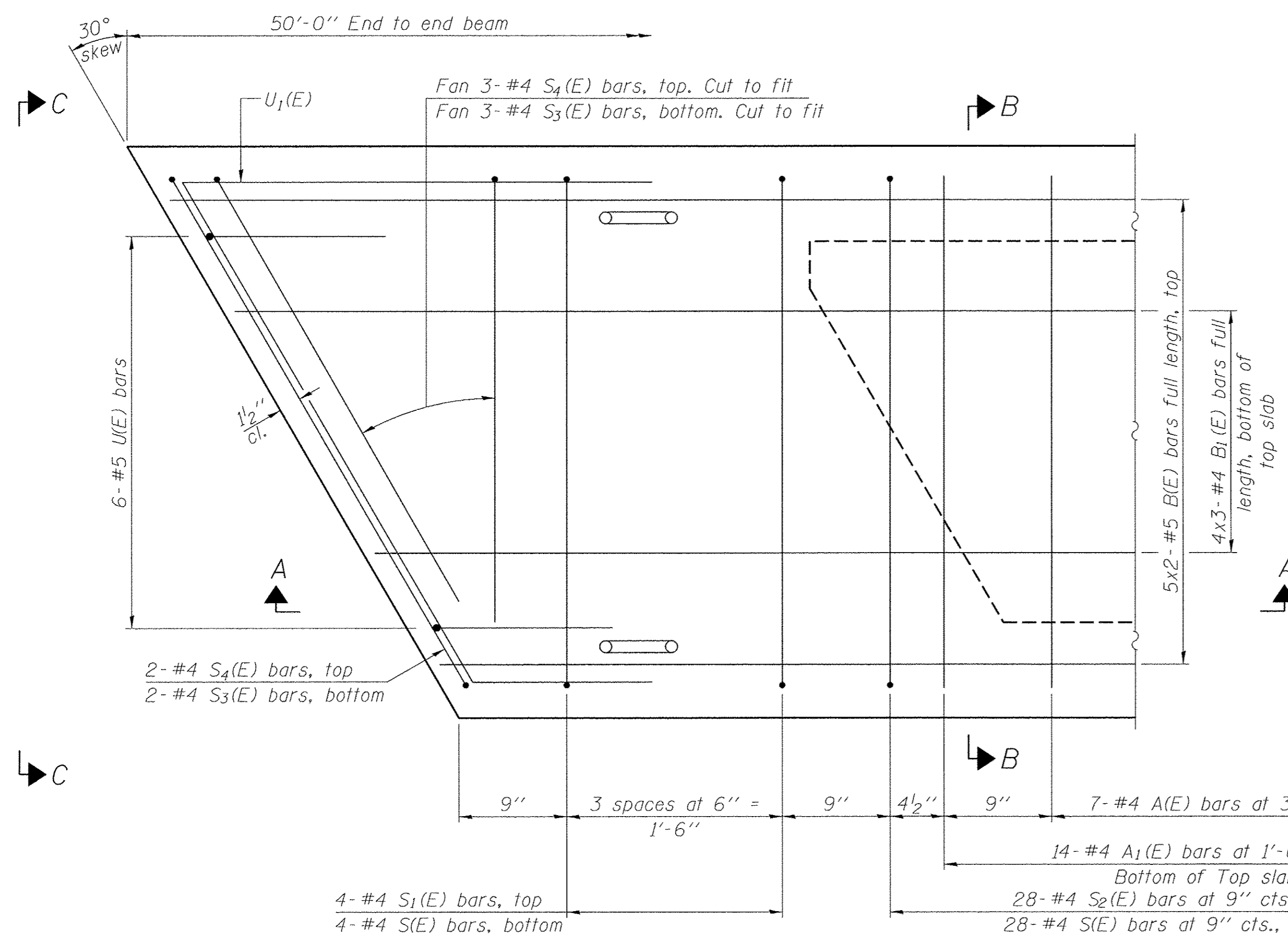
SECTION A-A



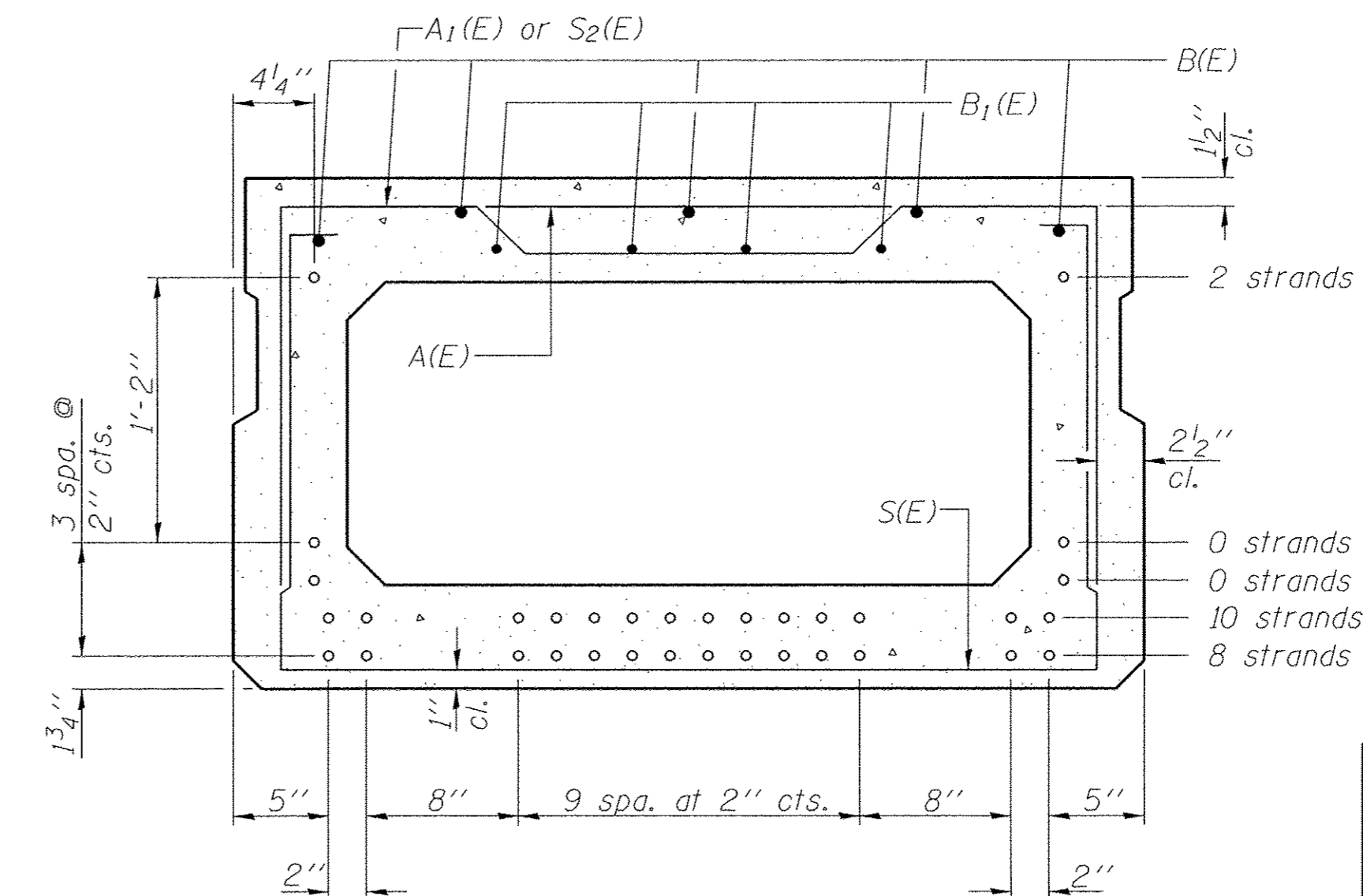
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B

Similar about C

(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) | 15 | #4 | 3'-7" | — |
| A1(E) | 29 | #4 | 3'-10" | ~ |
| B(E) | 10 | #5 | 26'-2" | — |
| B1(E) | 12 | #4 | 17'-10" | — |
| S(E) | 65 | #4 | 8'-5" | ⌊ |
| S1(E) | 8 | #4 | 6'-11" | ⌊ |
| S2(E) | 57 | #4 | 7'-2" | ⌊ |
| S3(E) | 10 | #4 | 5'-6" | ⌊ |
| S4(E) | 10 | #4 | 4'-9" | ⌊ |
| U(E) | 12 | #5 | 4'-6" | ⌊ |
| U1(E) | 4 | #4 | 8'-7" | ⌊ |

Note: See sheets 4 & 7 of 13 for additional details and Bill of Material.

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

MINIMUM BAR LAP
#4 bar = 1'-11"
#5 bar = 2'-6"

PD-2748-R 06-01-16

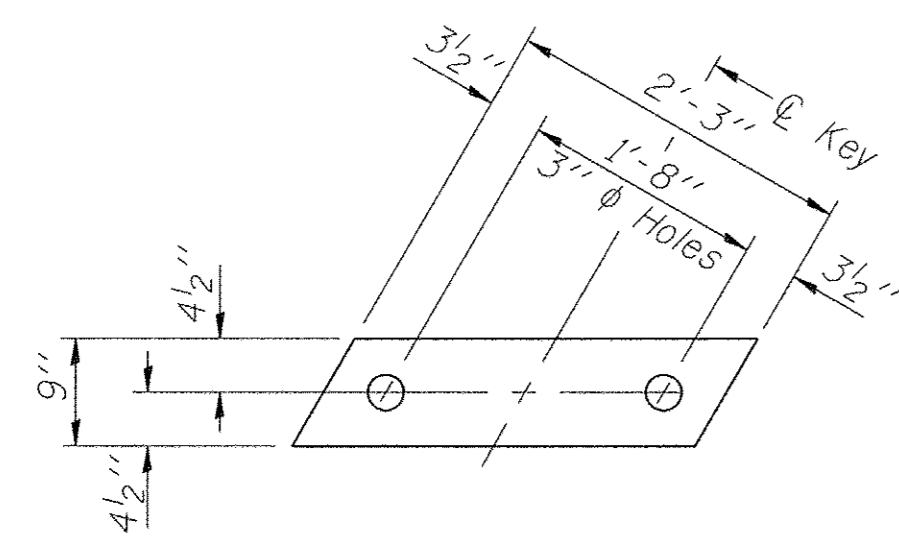
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| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959 | PLOT SCALE = #SCALE# | CHECKED - D.W.T. | REVISED - |
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| | | CHECKED - S.W.M. | REVISED - |

STATE OF ILLINOIS
WARREN COUNTY HIGHWAY DEPARTMENT

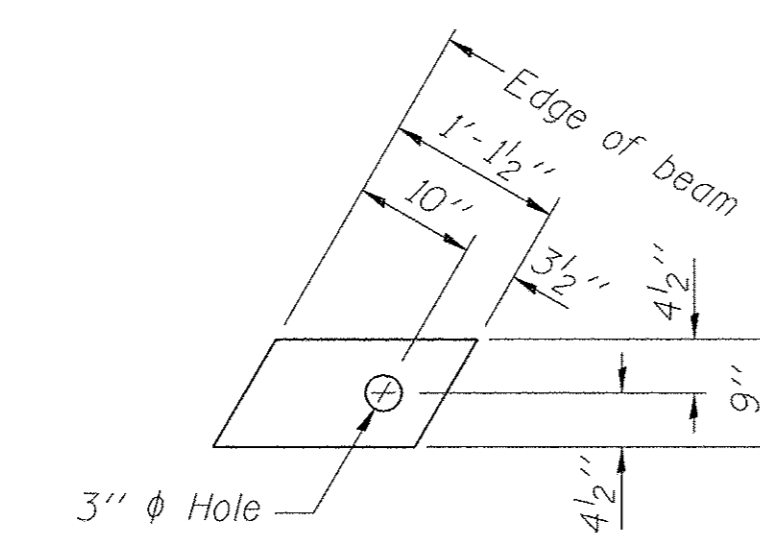
27" x 48" PPC DECK BEAM - SPANS 1 & 3
STRUCTURE NO. 094-3040

SHEET NO. 3 OF 13 SHEETS

| | | | | |
|---|----------------|--------------------|--------------|-----------|
| F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
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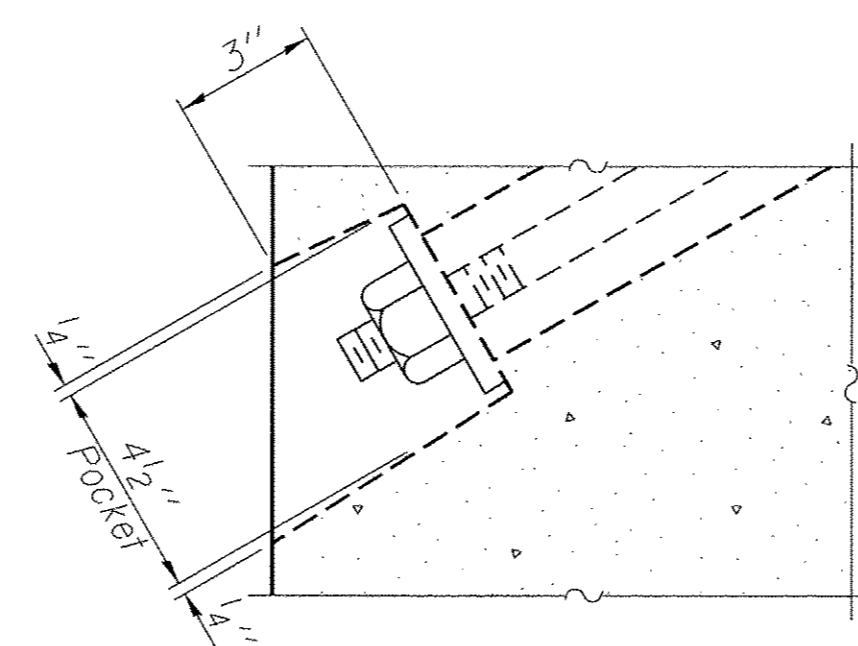
FABRIC BEARING PAD
(Interior - 24 req'd)



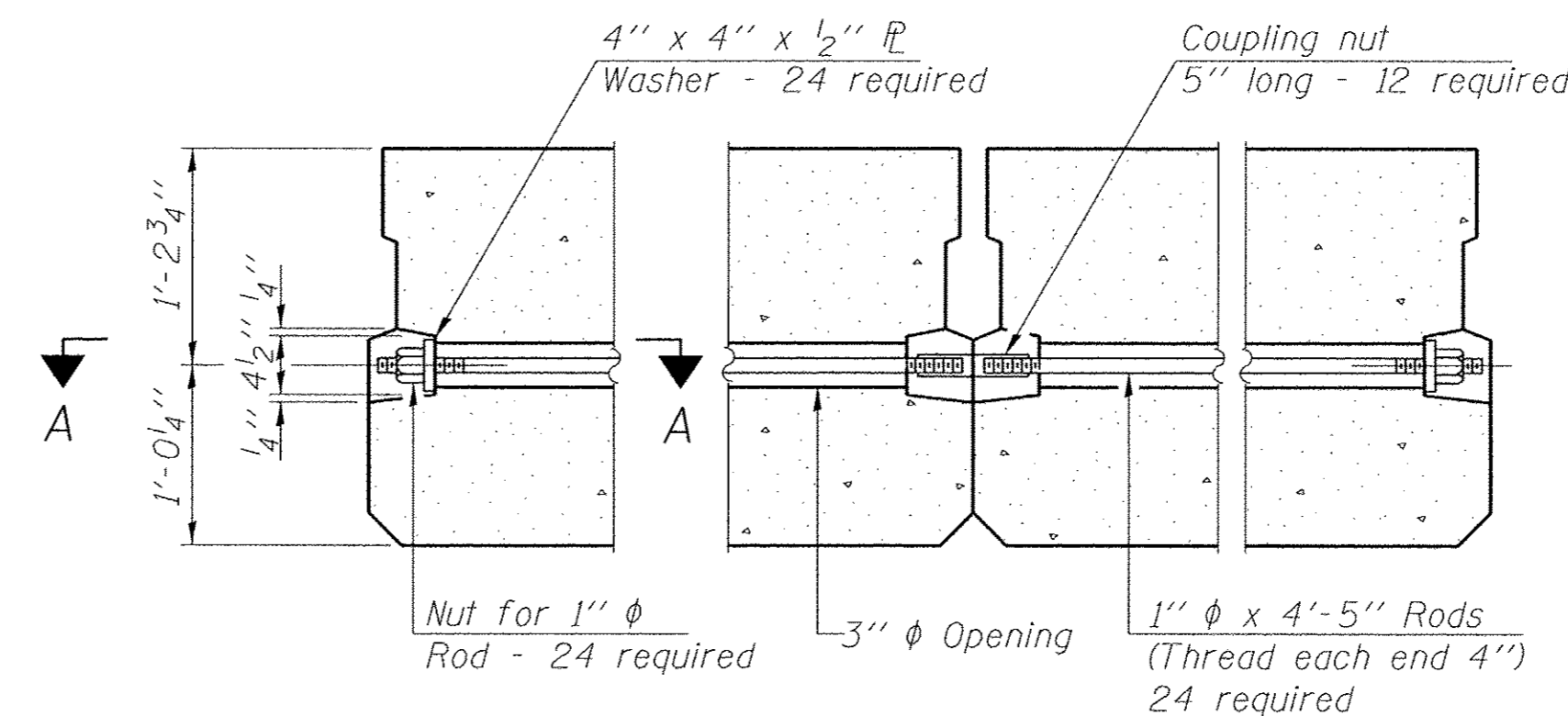
FABRIC BEARING PAD
(Exterior - 8 req'd)

FIXED

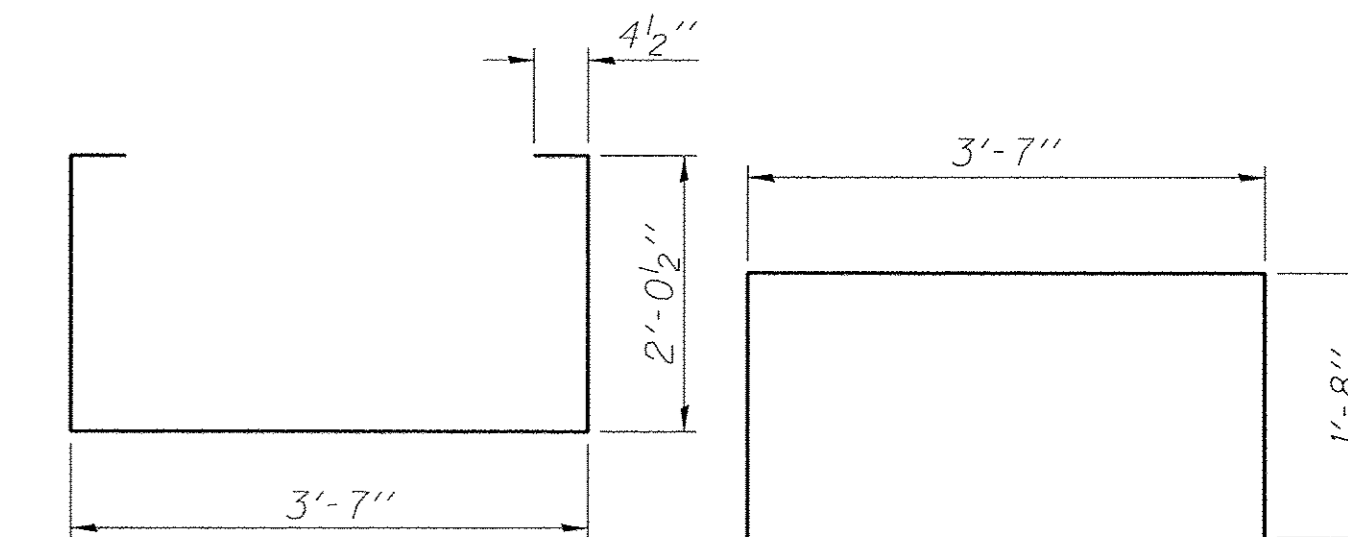
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A

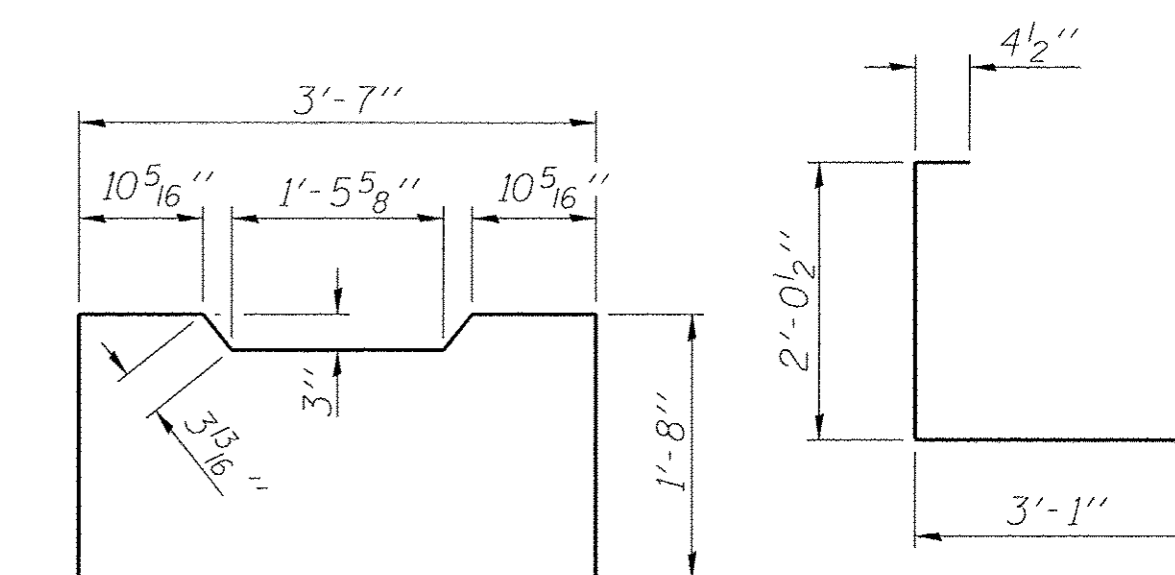


TYPICAL TRANSVERSE TIE ASSEMBLY



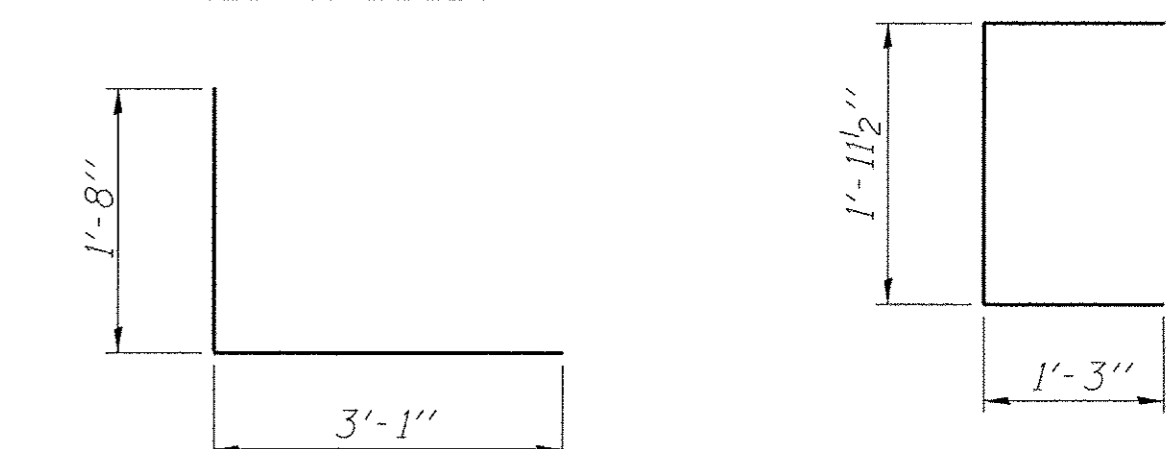
BAR S(E)

BAR S1(E)



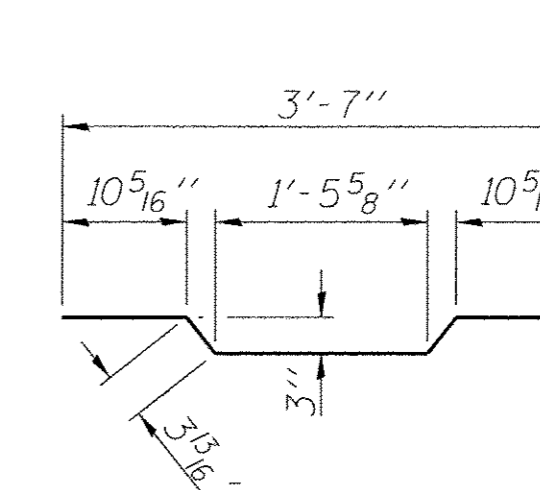
BAR S2(E)

BAR S3(E)

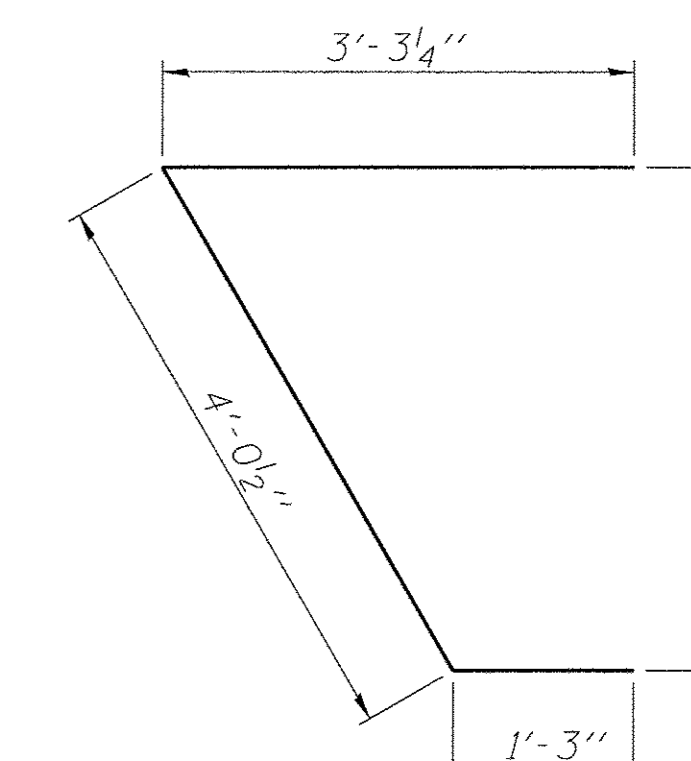


BAR S4(E)

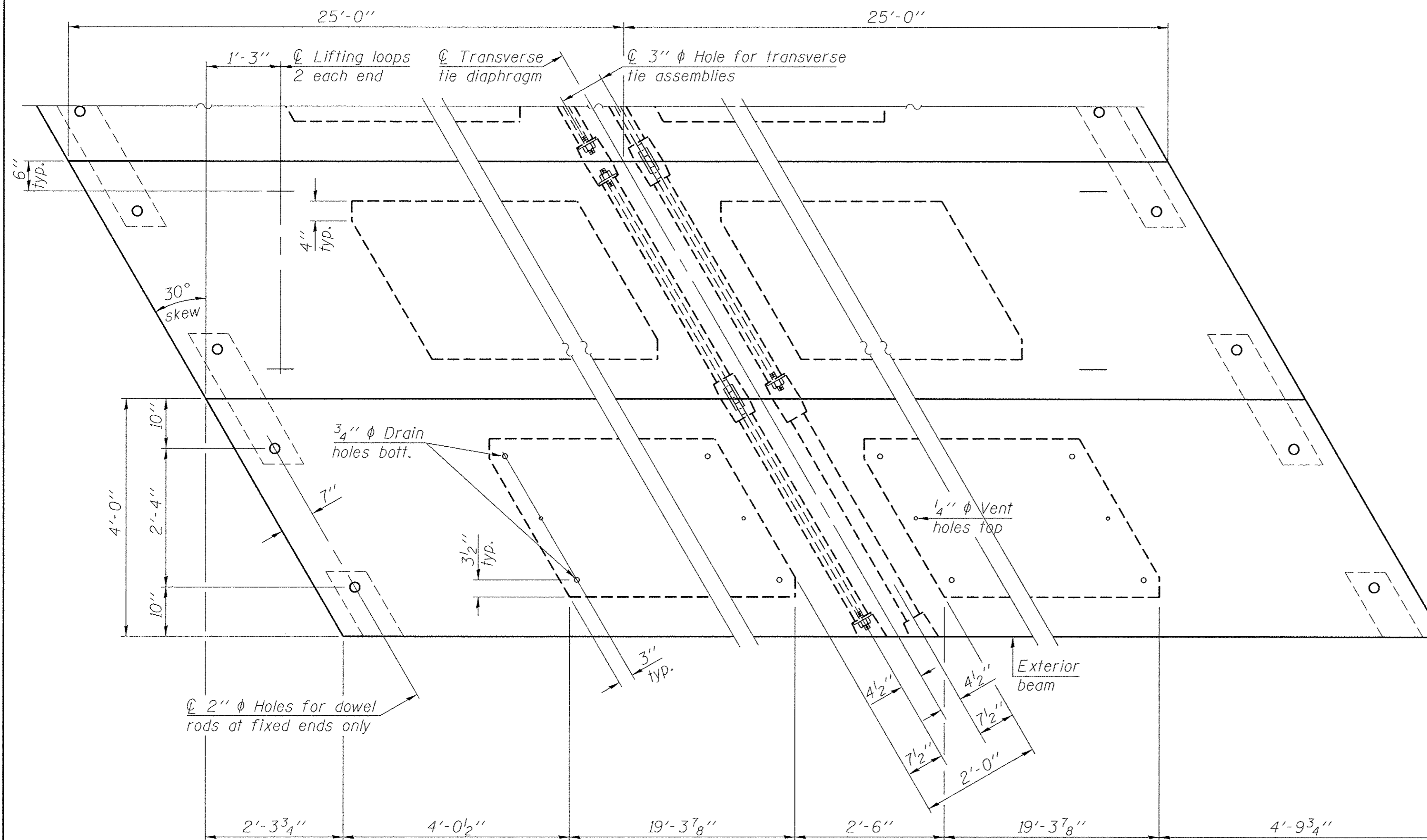
BAR U(E)



BAR A1(E)



BAR U1(E)

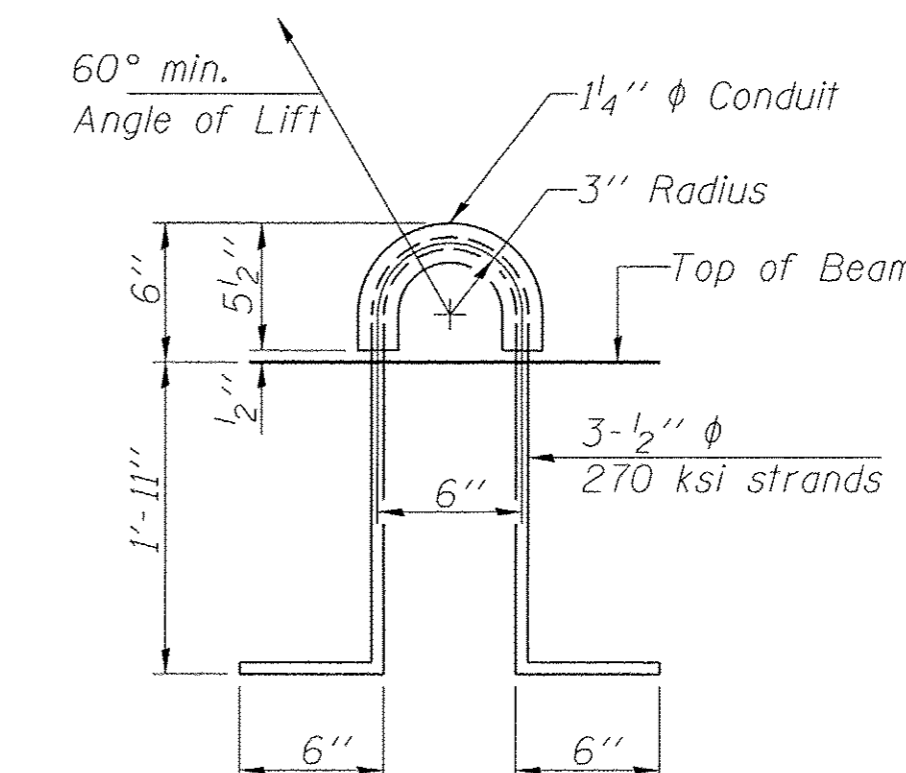


PLAN VIEW

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

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" ϕ 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.
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, $f'c$, shall be 6000 psi.
Compressive strength of prestressed concrete at release, $f'ci$, shall be 5000 psi.
Reinforcement bars designated (E) shall be epoxy coated.



LIFTING LOOP DETAIL

BILL OF MATERIAL

| Material | Unit | Quantity |
|---|---------|----------|
| Precast Prestressed Conc. Deck Bms. (27" depth) | Sq. Ft. | 2,800 |
| Hot-Mix Asphalt Surface Course | Ton | 31 |
| Waterproofing Membrane System | Sq. Yd. | 316 |
| P.C. Mortar Fairing Course | Foot | 150 |

PD-2748-RD 06-01-16

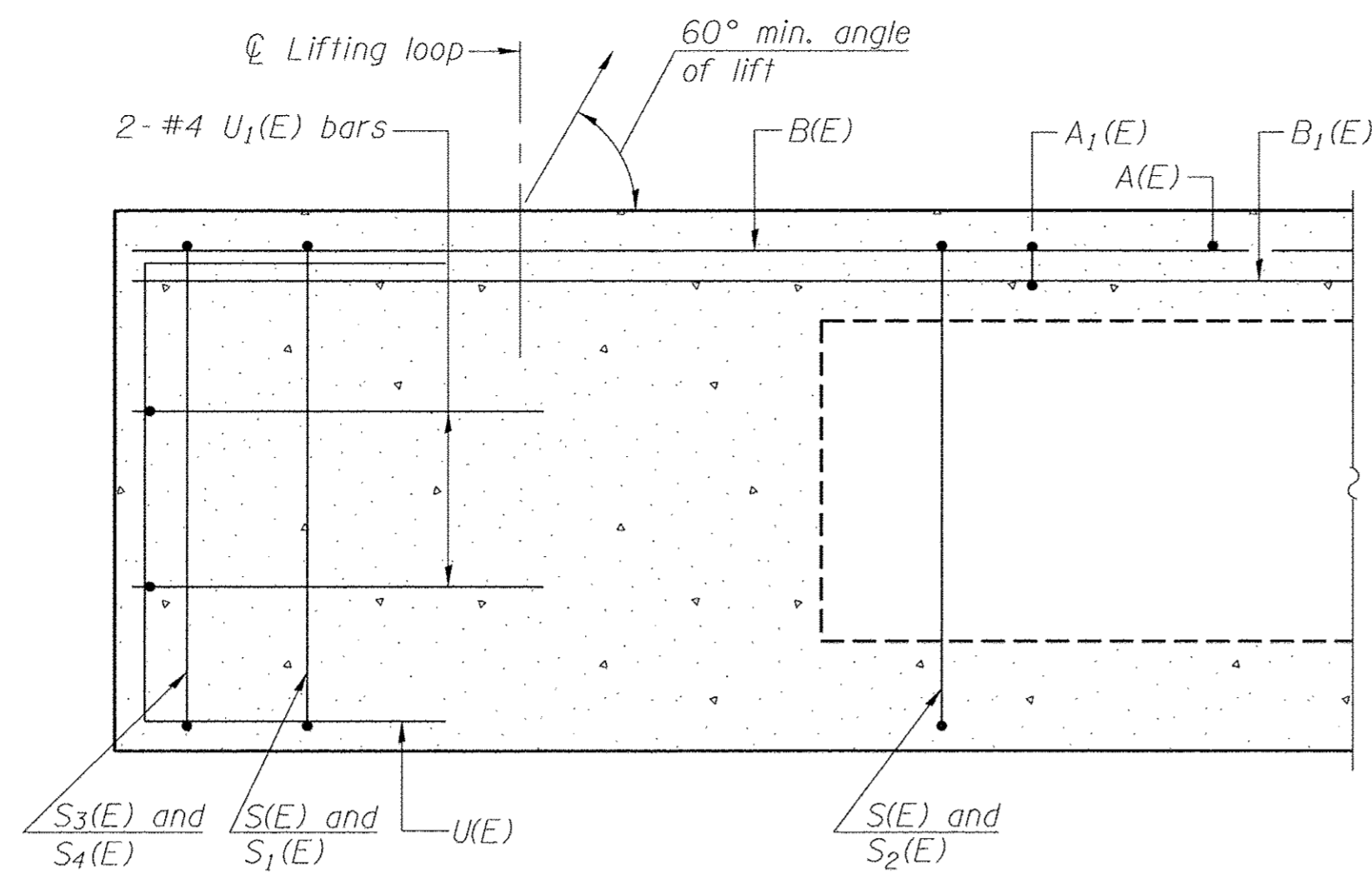
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| FILE NAME = 100126-sht-brIDGE.dgn | USER NAME = \$USER\$ | DESIGNED - S.M.S. | REVISED - |
| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 154.000959 | PLOT SCALE = \$SCALE\$ | CHECKED - D.W.T. | REVISED - |
| | PLOT DATE = 4/12/2017 | DRAWN - D.A.B. | REVISED - |
| | | CHECKED - S.W.M. | REVISED - |

**STATE OF ILLINOIS
WARREN COUNTY HIGHWAY DEPARTMENT**

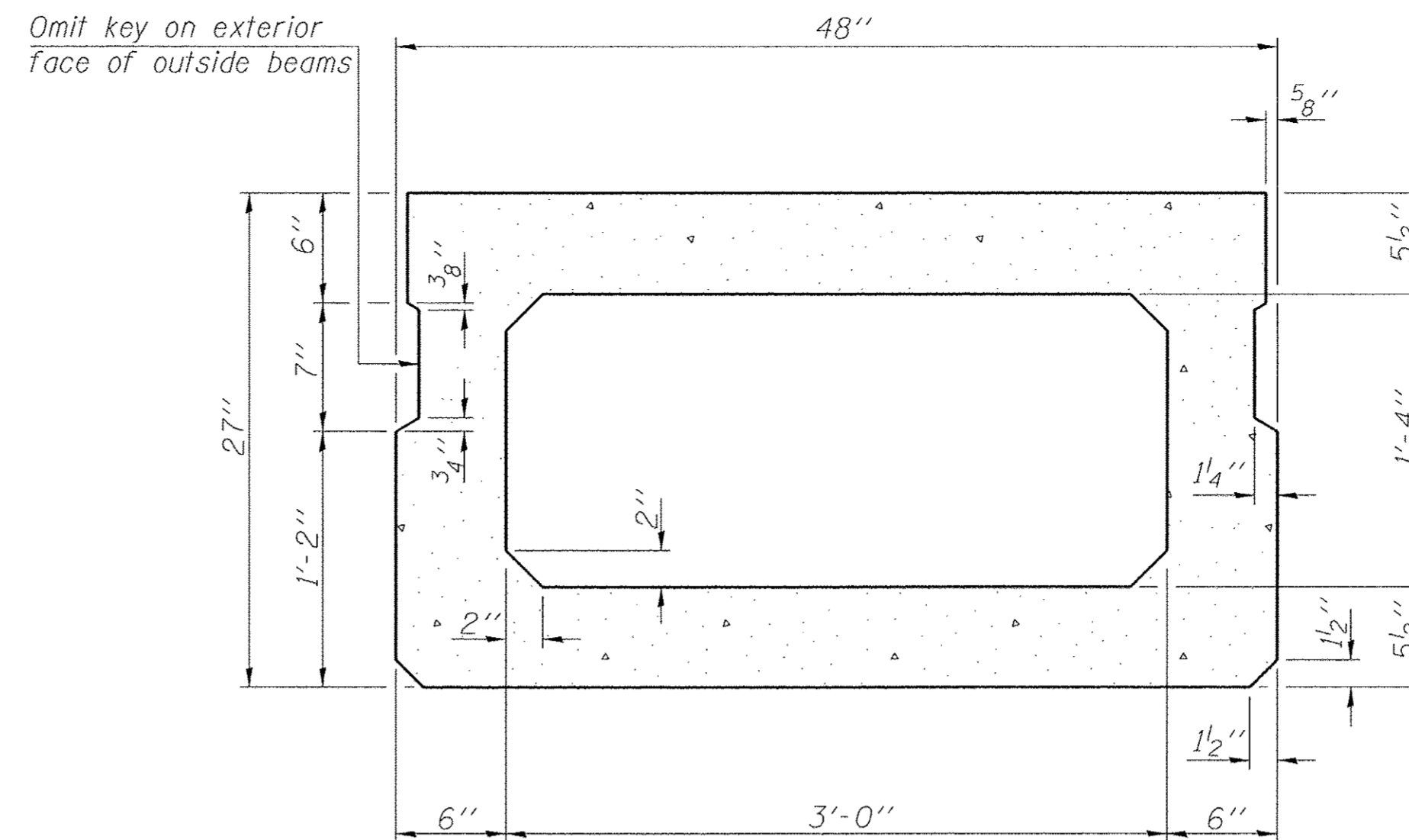
**27" x 48" PPC DECK BEAM DETAILS - SPANS 1 & 3
STRUCTURE NO. 094-3040**

SHEET NO. 4 OF 13 SHEETS

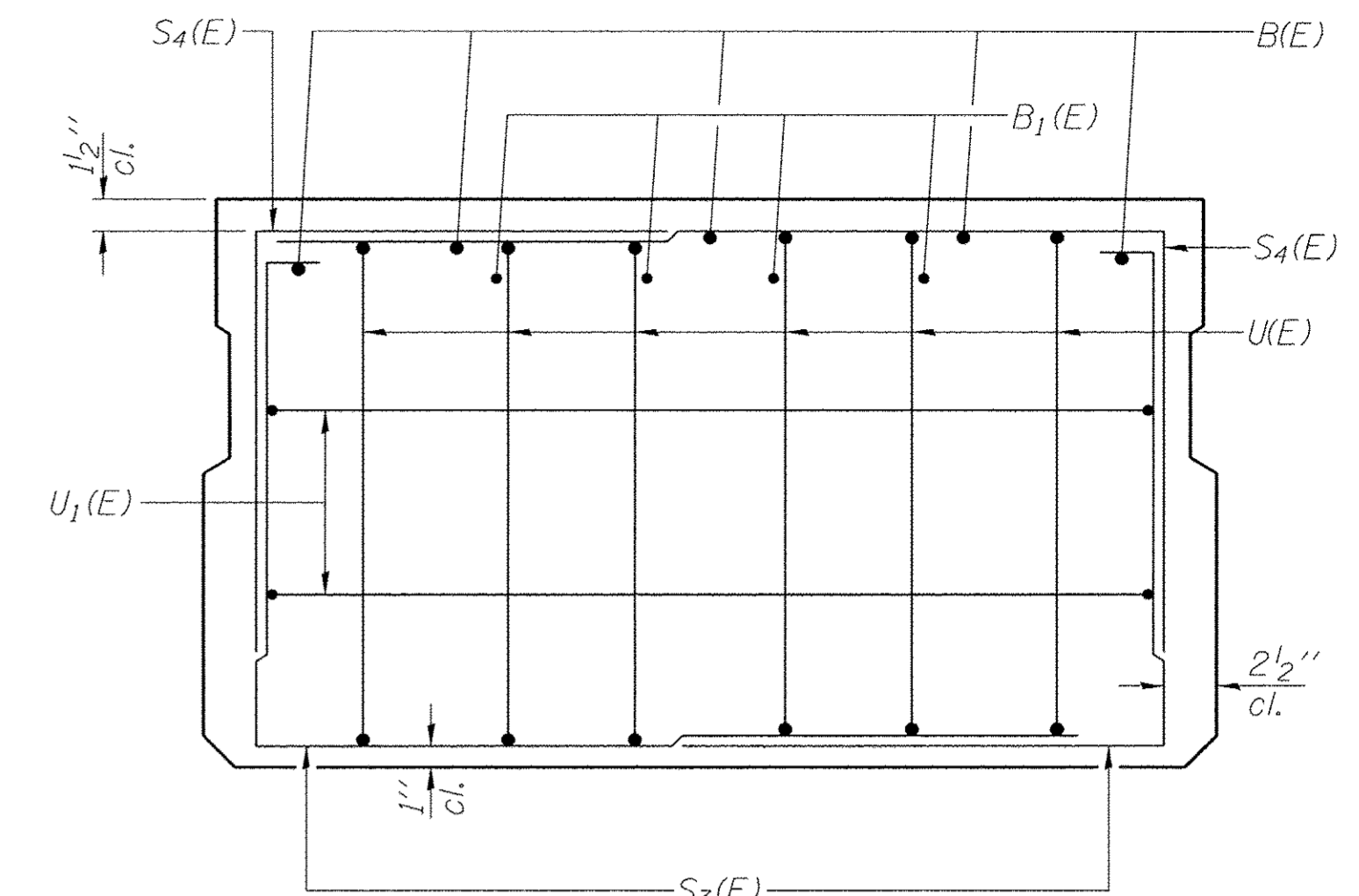
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| F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 407 | 10-00128-00-BR | WARREN | 25 | 16 |
| DOC DAVIS BRIDGE | | CONTRACT NO. 89731 | | |
| ILLINOIS FED. AID PROJECT BRS-04071001 | | | | |



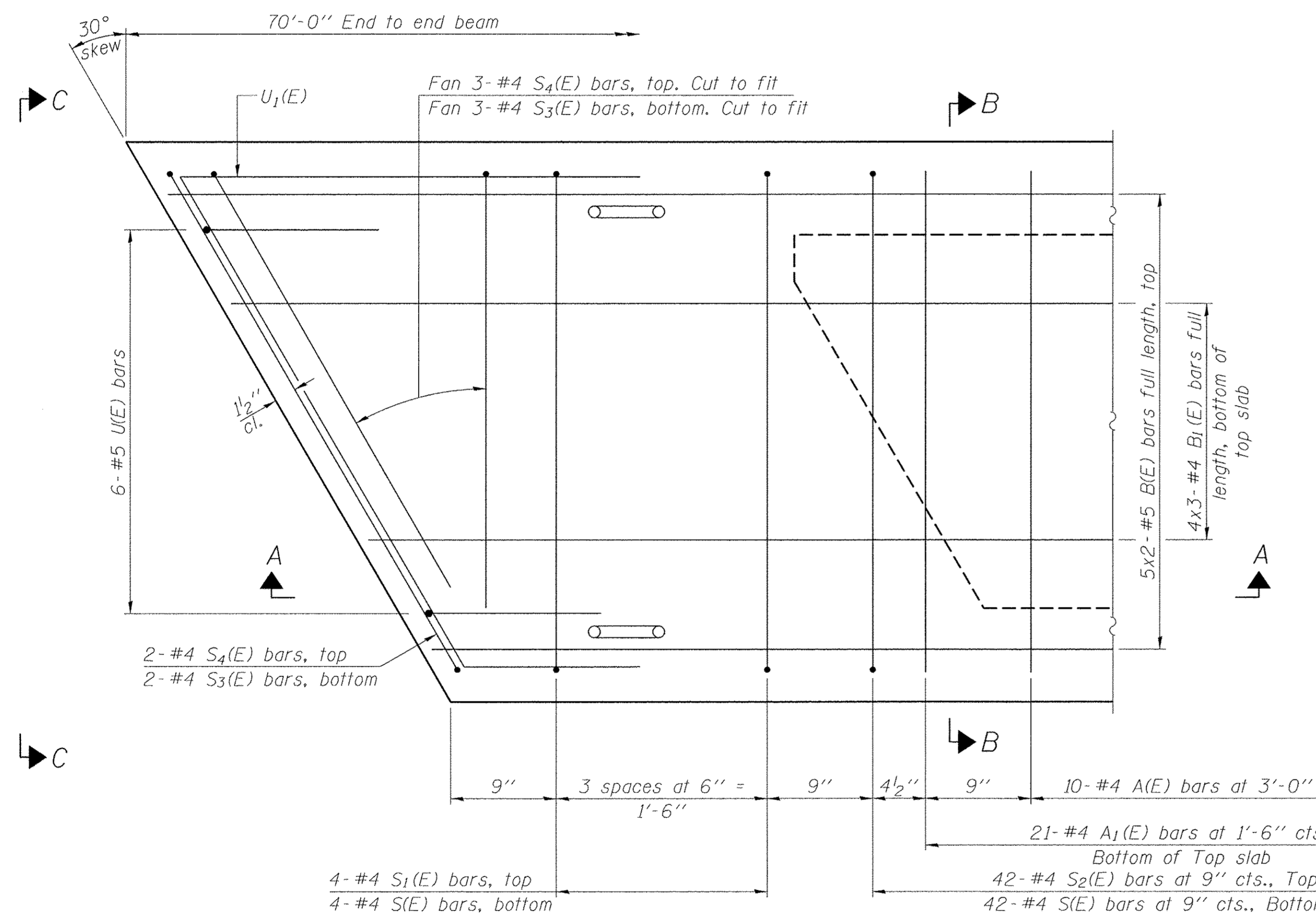
SECTION A-A



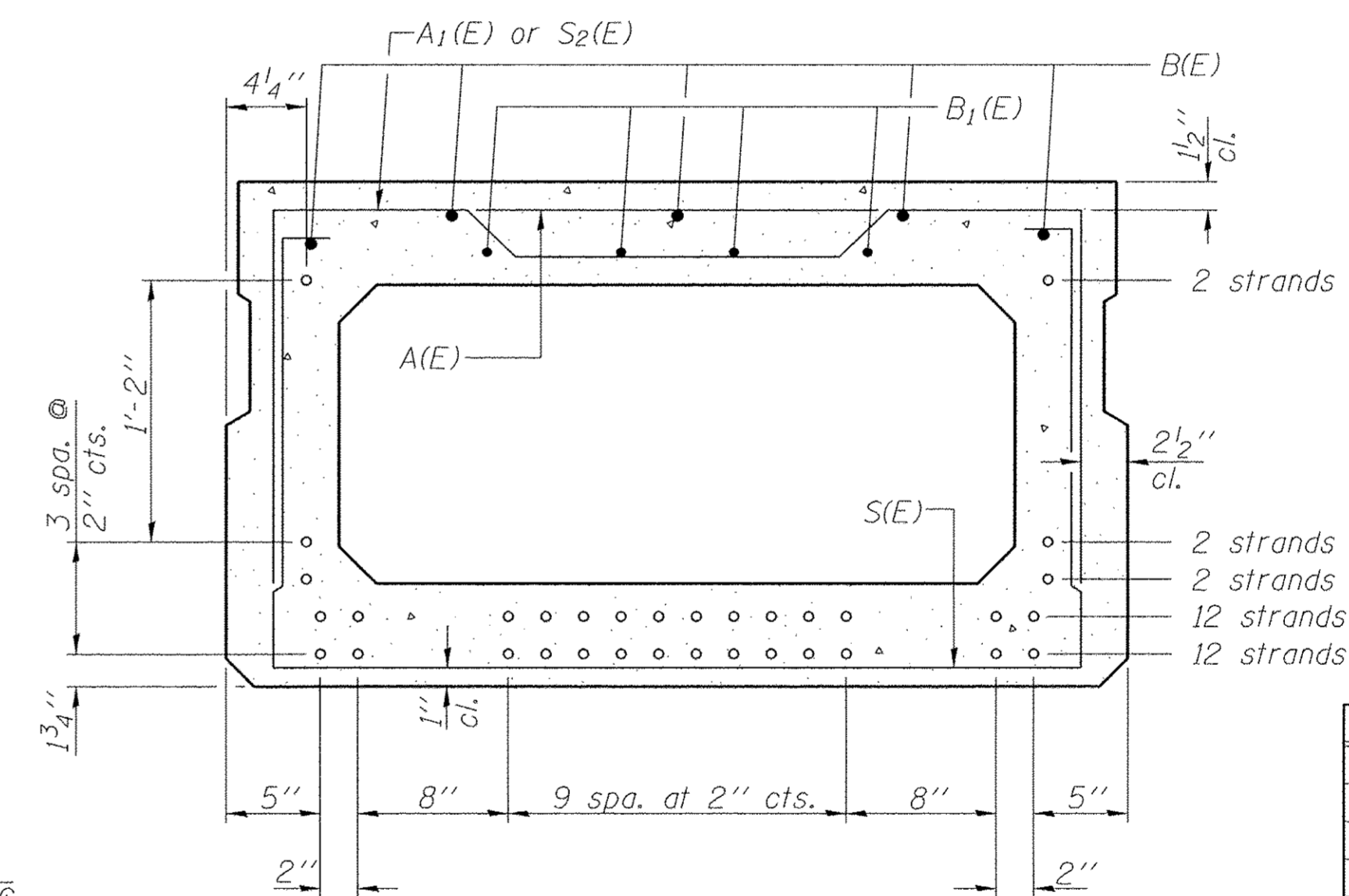
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B

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

BAR LIST
ONE BEAM ONLY
(For information only)

| Bar | No. | Size | Length | Shape |
|-------|-----|------|--------|-------|
| A(E) | 21 | #4 | 3'-7" | — |
| A1(E) | 42 | #4 | 3'-10" | — |
| B(E) | 10 | #5 | 36'-2" | — |
| B1(E) | 12 | #4 | 24'-6" | — |
| S(E) | 92 | #4 | 8'-5" | □ |
| S1(E) | 8 | #4 | 6'-11" | □ |
| S2(E) | 84 | #4 | 7'-2" | □ |
| S3(E) | 10 | #4 | 5'-6" | ┘ |
| S4(E) | 10 | #4 | 4'-9" | ┘ |
| U(E) | 12 | #5 | 4'-6" | ┘ |
| U1(E) | 4 | #4 | 8'-7" | ┘ |

Note: See sheets 6 & 7 of 13 for additional details and Bill of Material.

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

MINIMUM BAR LAP

#4 bar = 1'-11"
#5 bar = 2'-6"

PD-2748-R

06-01-16

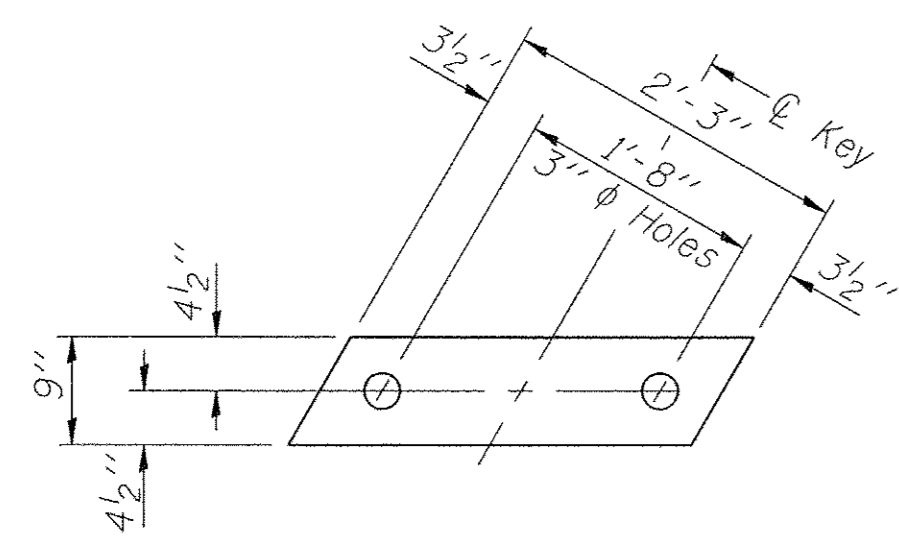
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| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS/PE/SE CORP. 184.000959 | PLOT SCALE = \$SCALE\$ | CHECKED - D.W.T. | REVISED - |
| PLOT DATE = 4/12/2017 | DRAWN - D.A.B. | REVISIONS - | REVISED - |
| | CHECKED - S.W.M. | | REVISED - |

STATE OF ILLINOIS
WARREN COUNTY HIGHWAY DEPARTMENT

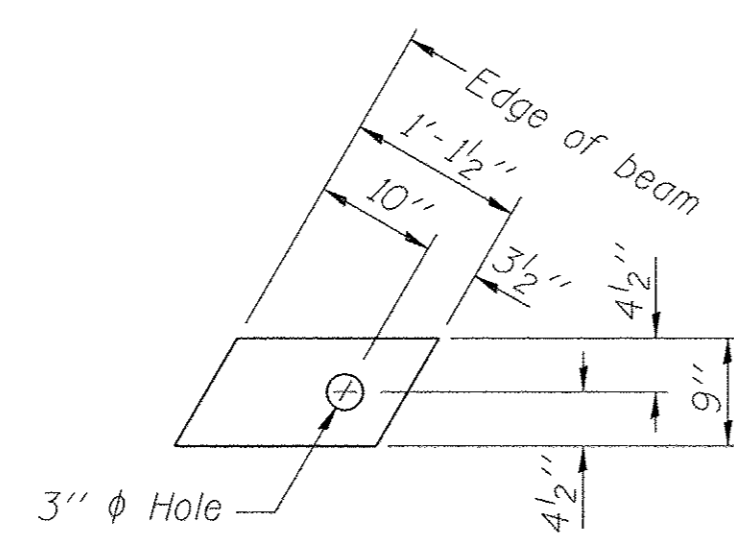
27" x 48" PPC DECK BEAM - SPAN 2
STRUCTURE NO. 094-3040

SHEET NO. 5 OF 13 SHEETS

| | | | | |
|---------------------------------------|----------------|--------------------|--------------|-----------|
| F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 407 | 10-00128-00-BR | WARREN | 25 | 17 |
| DOC DAVIS BRIDGE | | CONTRACT NO. 89731 | | |
| ILLINOIS FED. AID PROJECT BRS-0407108 | | | | |



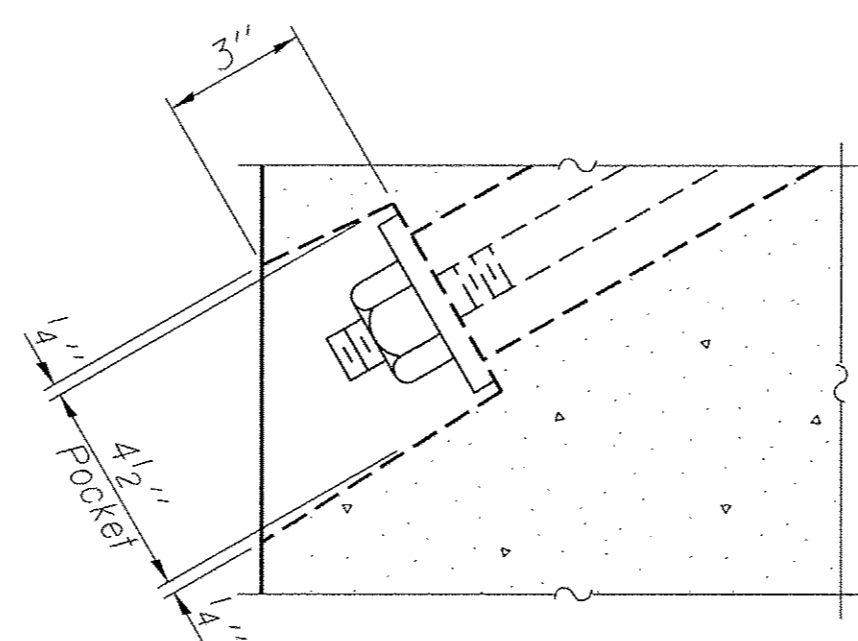
FABRIC BEARING PAD
(Interior - 12 req'd)



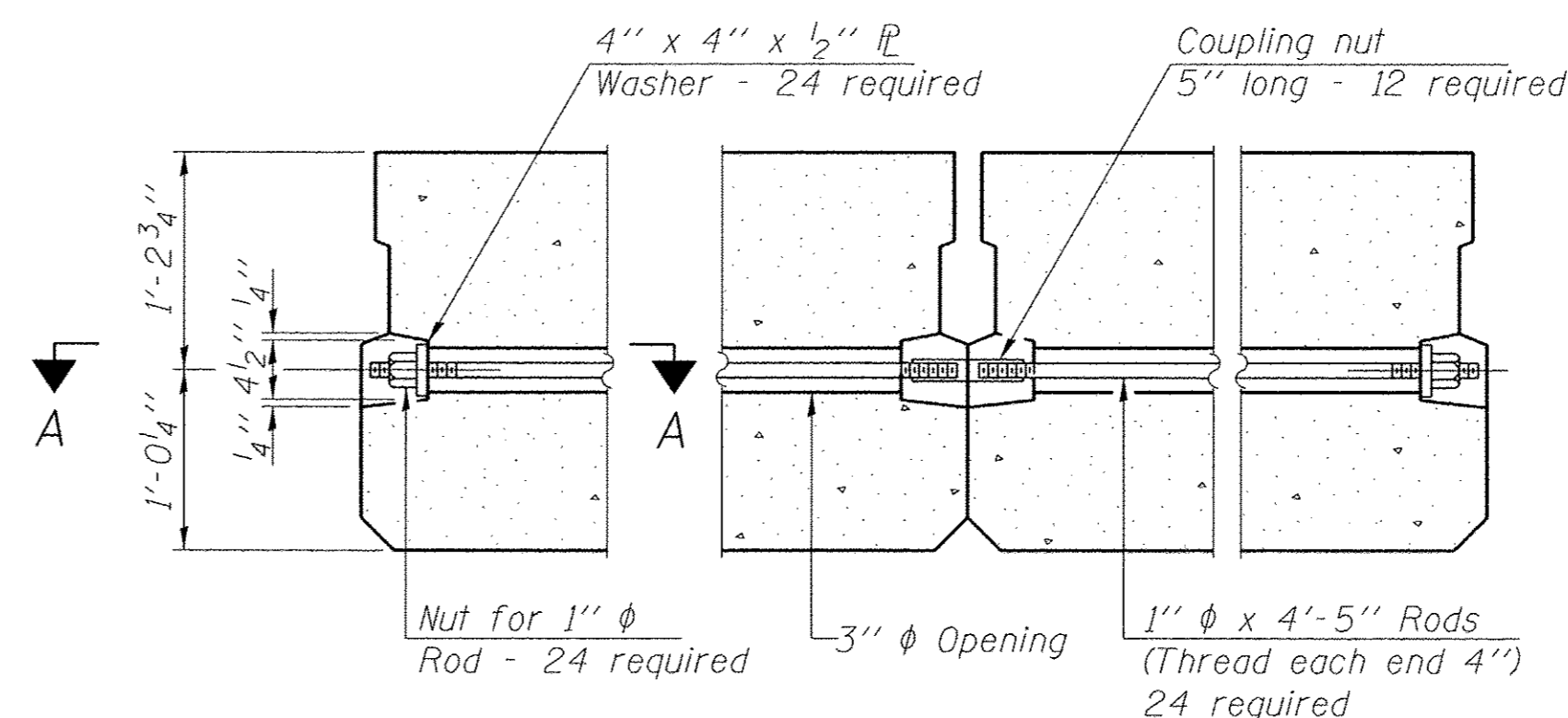
FABRIC BEARING PAD
(Exterior - 4 req'd)

FIXED

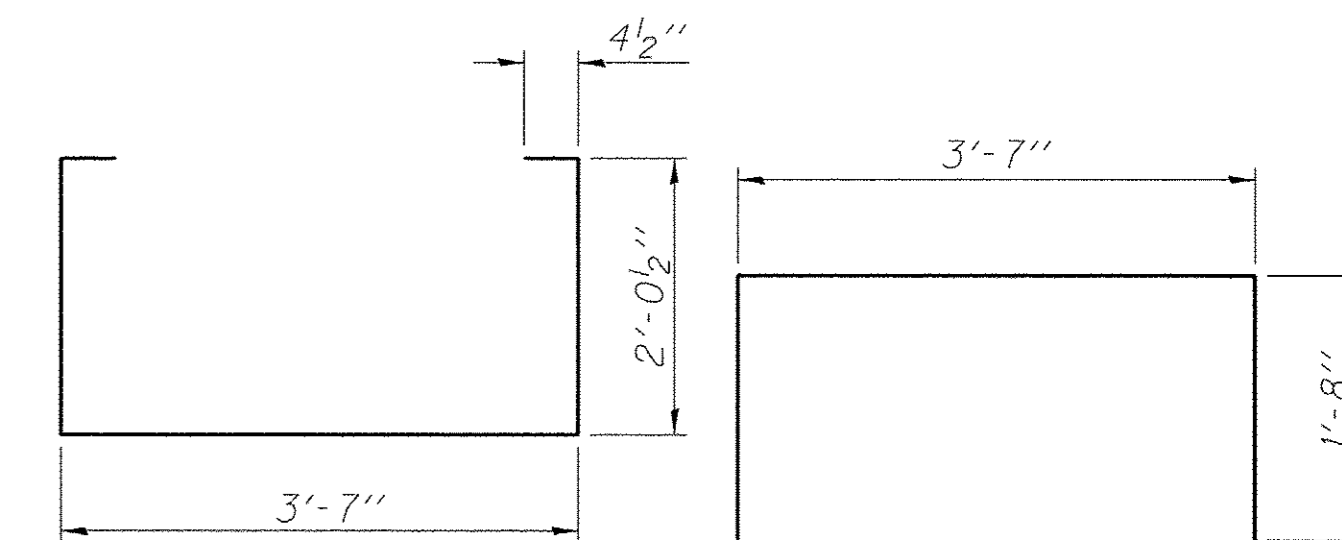
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.
23'-4"



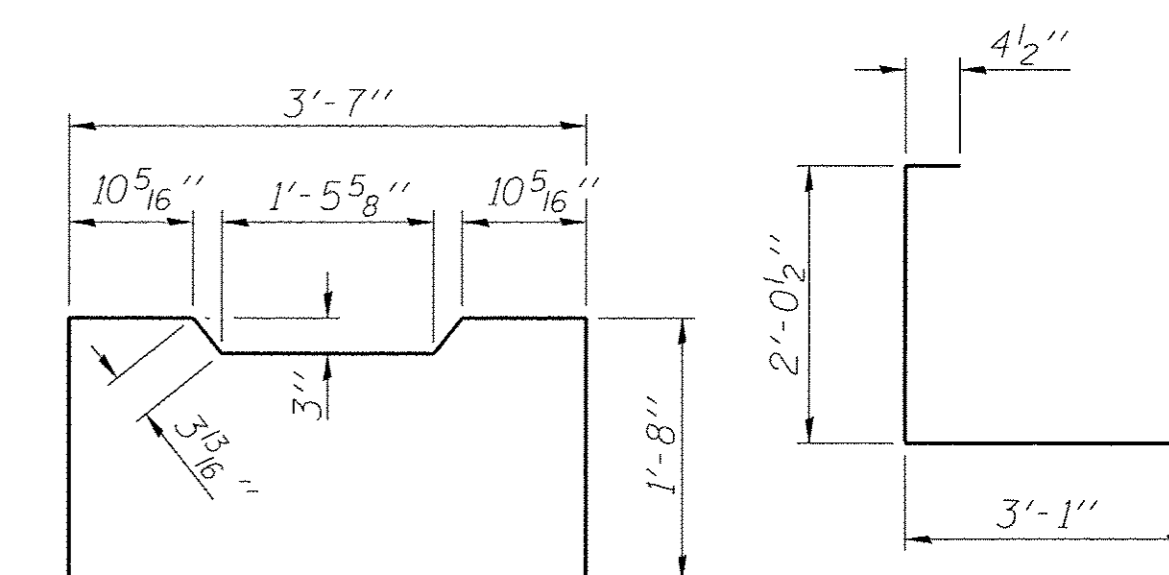
SECTION A-A



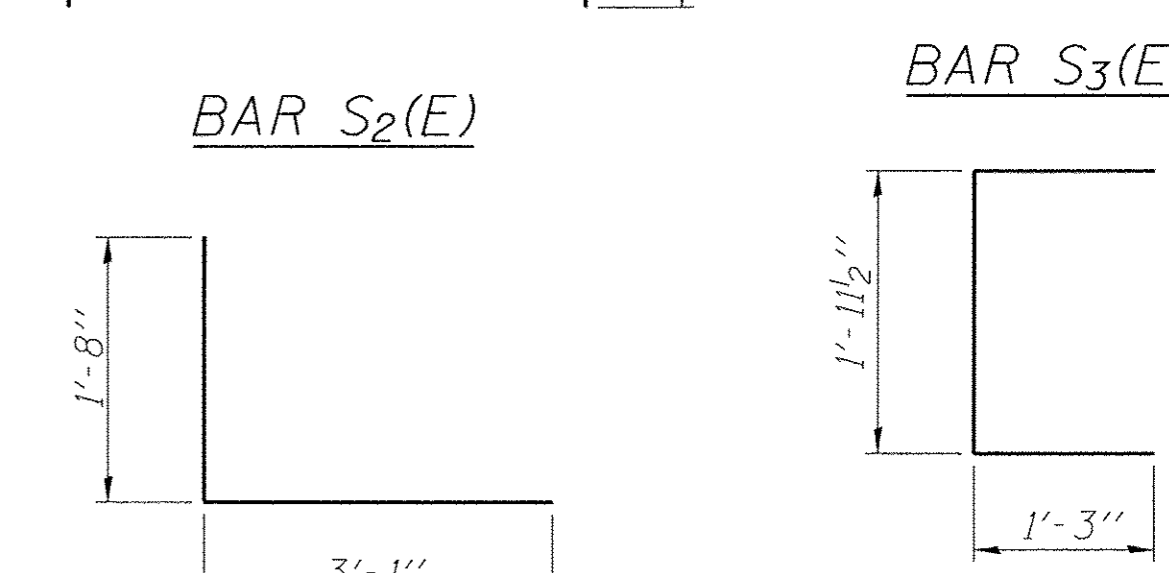
TYPICAL TRANSVERSE TIE ASSEMBLY



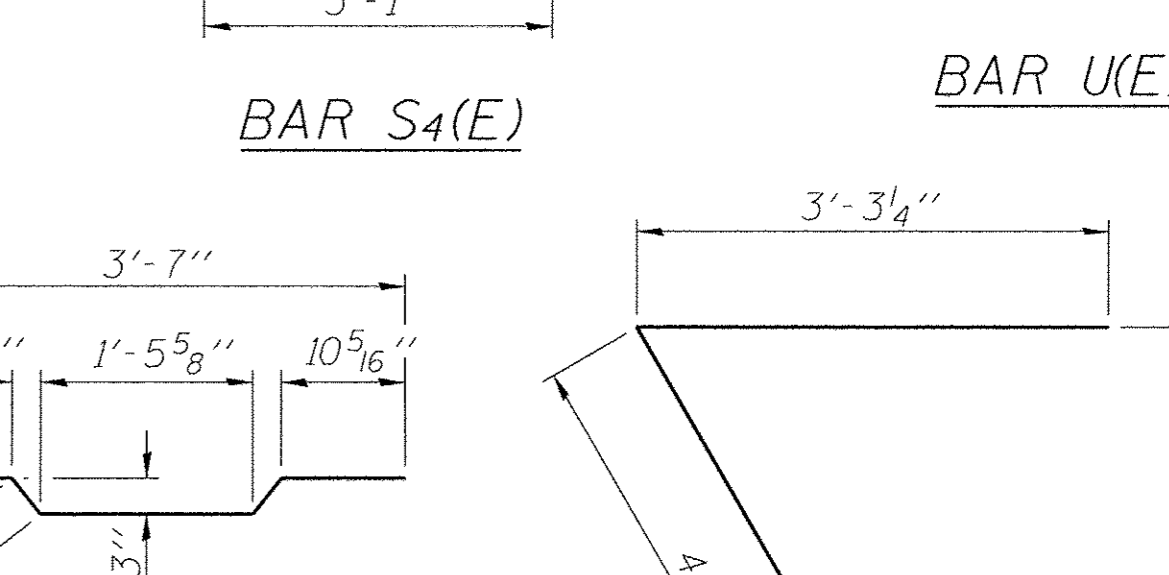
BAR S(E)



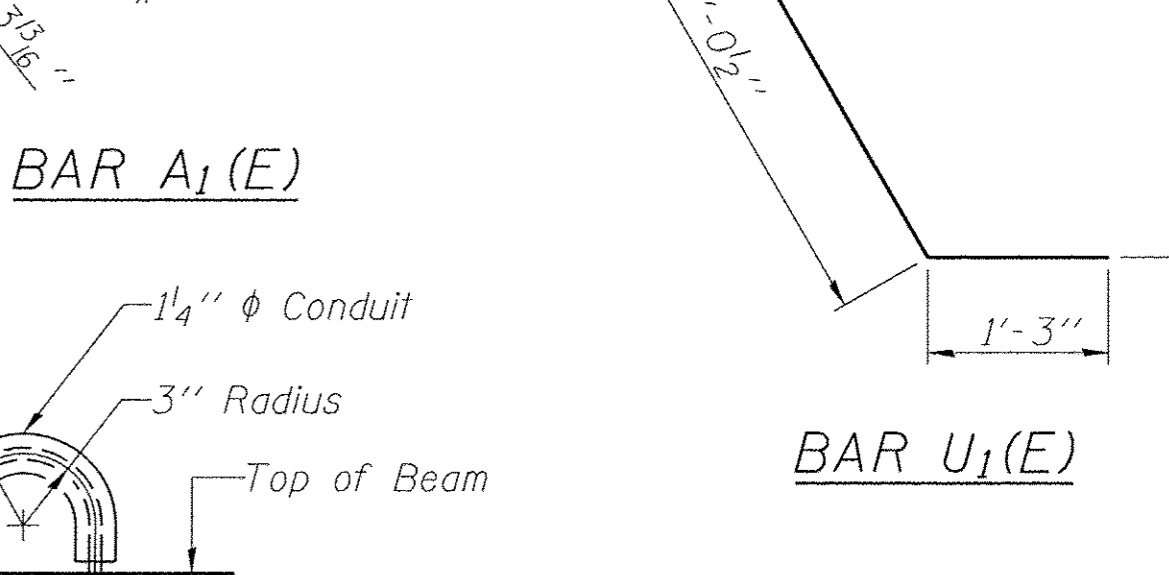
BAR S1(E)



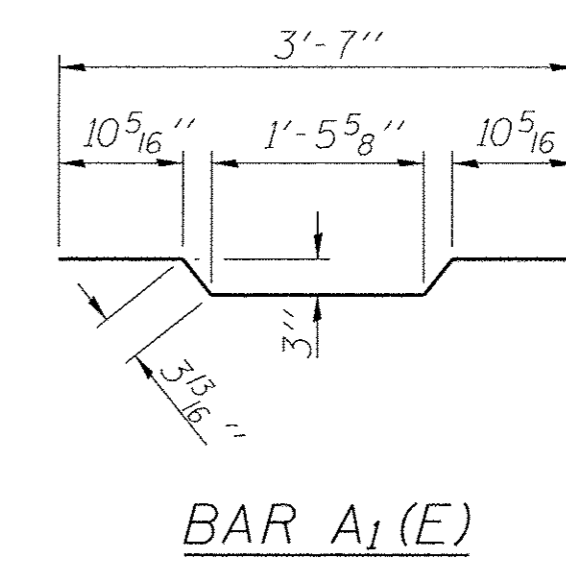
BAR S2(E)



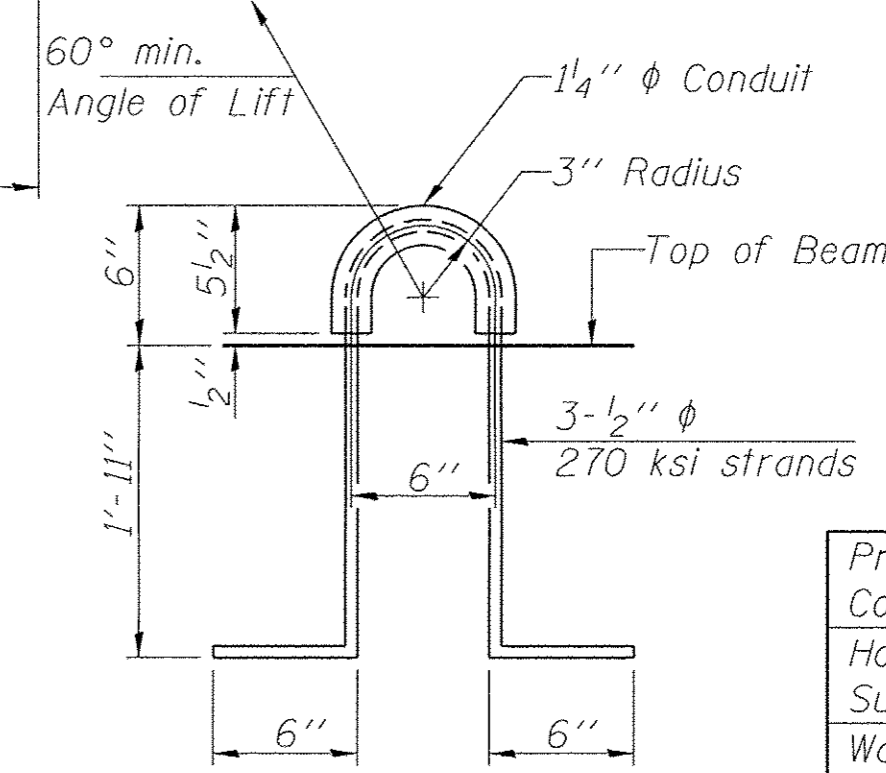
BAR S3(E)



BAR S4(E)

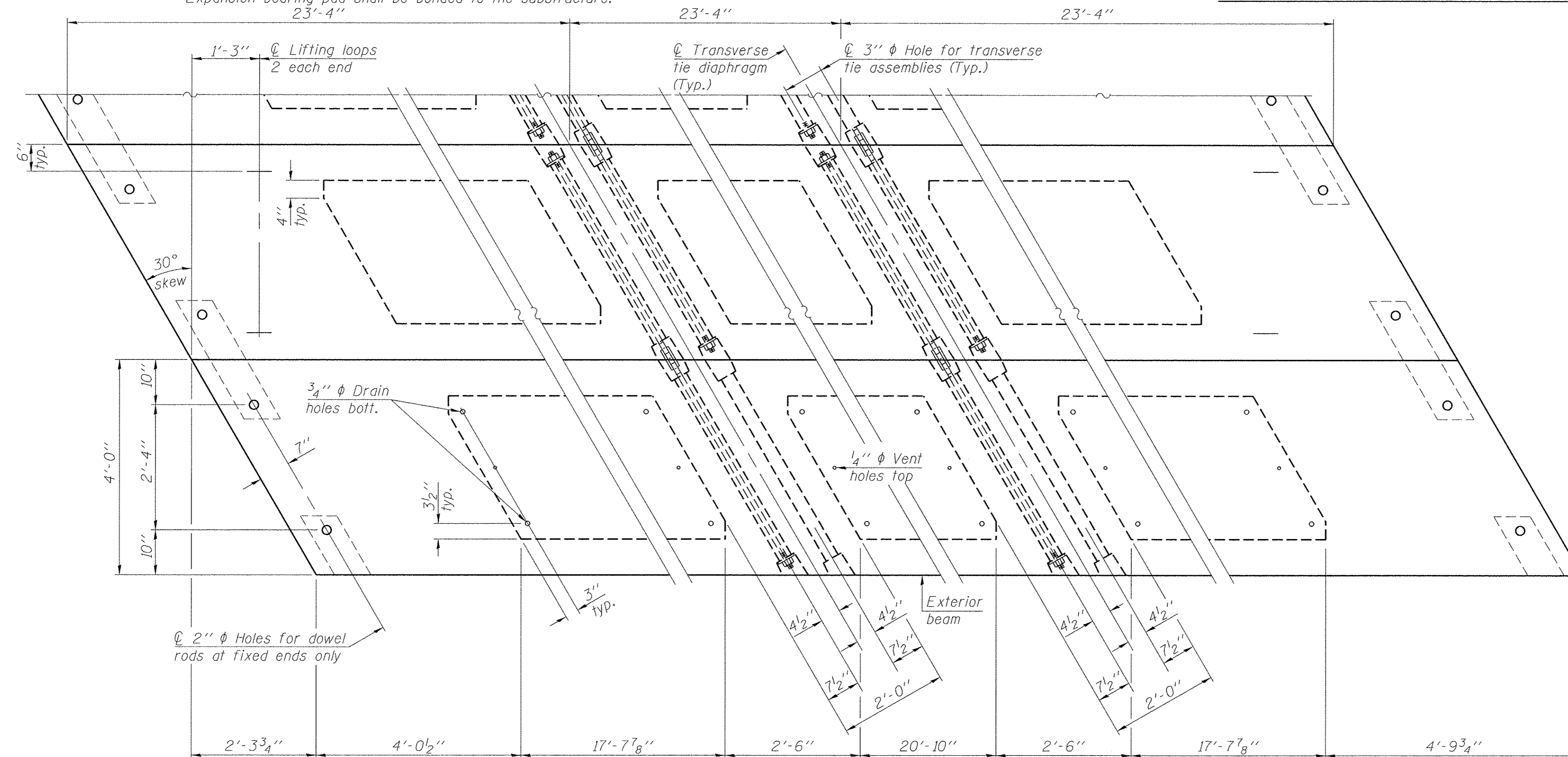


BAR A1(E)



LIFTING LOOP DETAIL

BAR U1(E)



PLAN VIEW

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

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" ϕ 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.
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, $f'c$, shall be 6000 psi.
Compressive strength of prestressed concrete at release, $f'ci$, shall be 5000 psi.
Reinforcement bars designated (E) shall be epoxy coated.

BILL OF MATERIAL

| Material | Unit | Quantity |
|---|---------|----------|
| Precast Prestressed Conc. Deck Bms. (27" depth) | Sq. Ft. | 1,960 |
| Hot-Mix Asphalt Surface Course | Ton | 21 |
| Waterproofing Membrane System | Sq. Yd. | 218 |
| P.C. Mortar Fairing Course | Foot | 105 |

PD-2748-RD 06-01-16

| | | | |
|--|------------------------|-------------------|-----------|
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| HAMPTON, LENZINI AND RENWICK, INC. 3095 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 | PLOT SCALE = \$SCALE\$ | CHECKED - D.W.T. | REVISED - |
| ILINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184-00999 | PLOT DATE = 4/12/2017 | DRAWN - D.A.B. | REVISED - |
| | | CHECKED - S.W.M. | REVISED - |

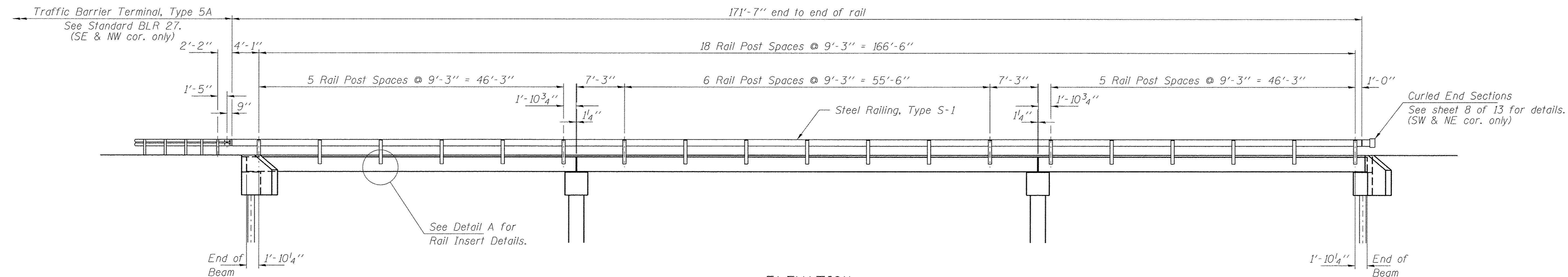
**STATE OF ILLINOIS
WARREN COUNTY HIGHWAY DEPARTMENT**

**27" x 48" PPC DECK BEAM DETAILS - SPAN 2
STRUCTURE NO. 094-3040**

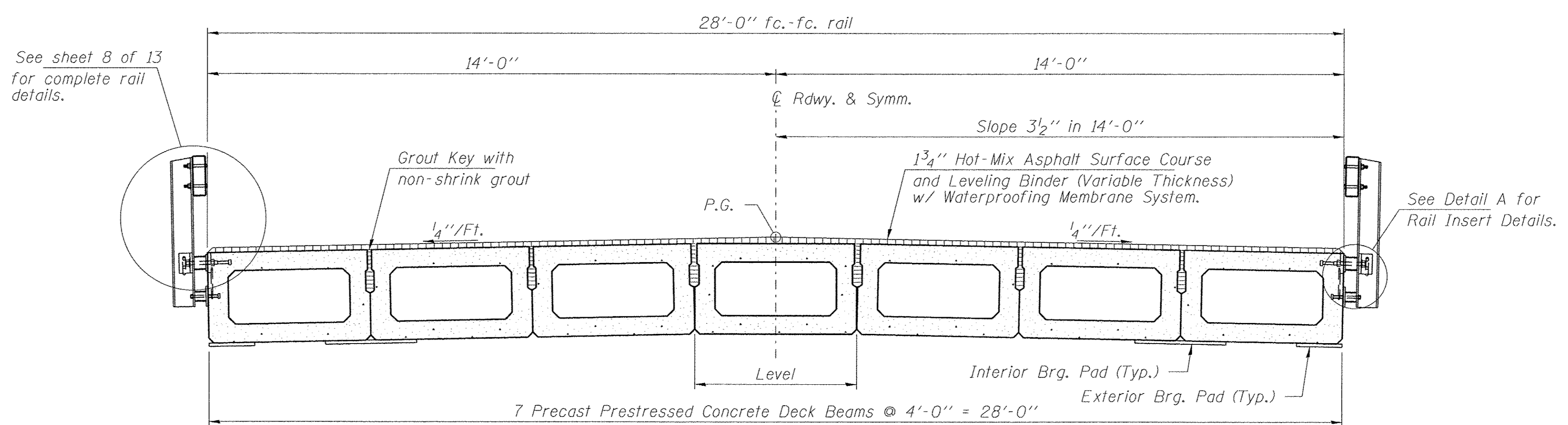
SHEET NO. 6 OF 13 SHEETS

| | | | | |
|------------------|----------------|--------|--------------------|-----------|
| F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 407 | 10-00128-00-BR | WARREN | 25 | 18 |
| DOC DAVIS BRIDGE | | | CONTRACT NO. 89731 | |

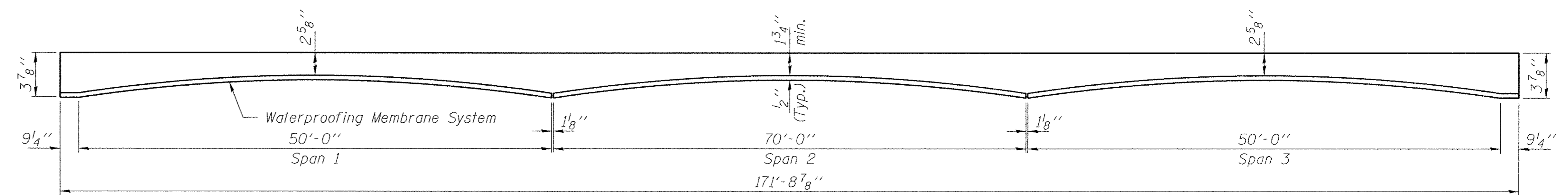
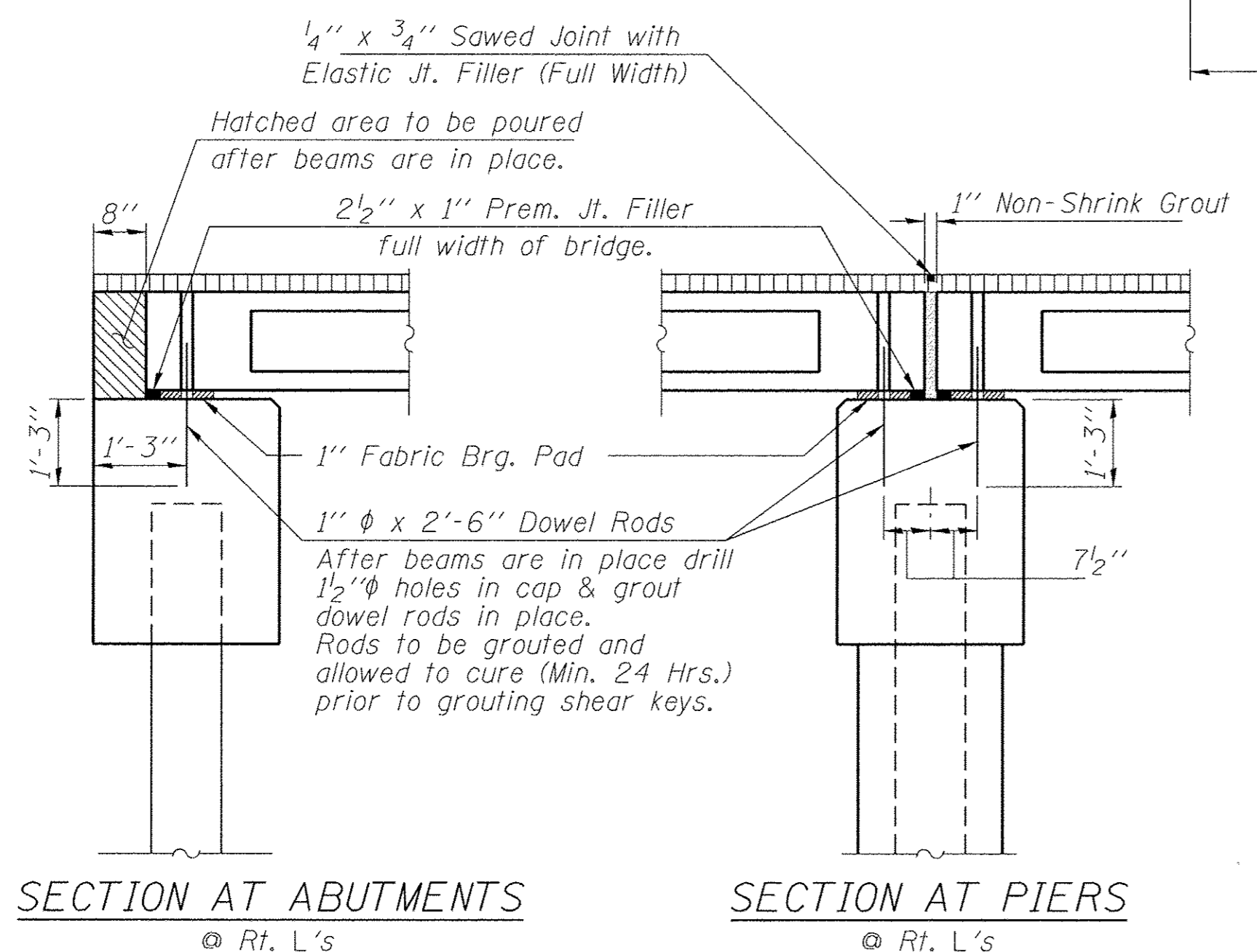
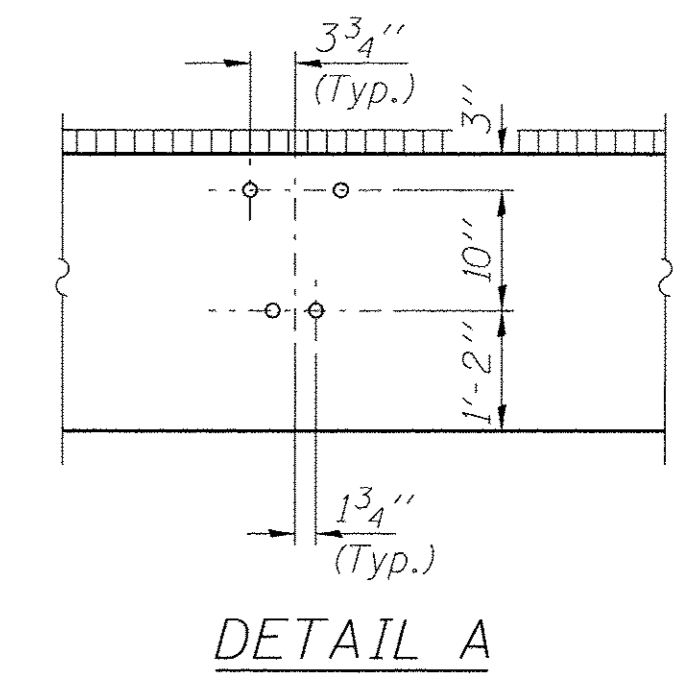
ILLINOIS FED. AID PROJECT BRS-0407(108)



ELEVATION
Showing Rail Post Spaces
See sheet 8 of 13 for Railing Details.

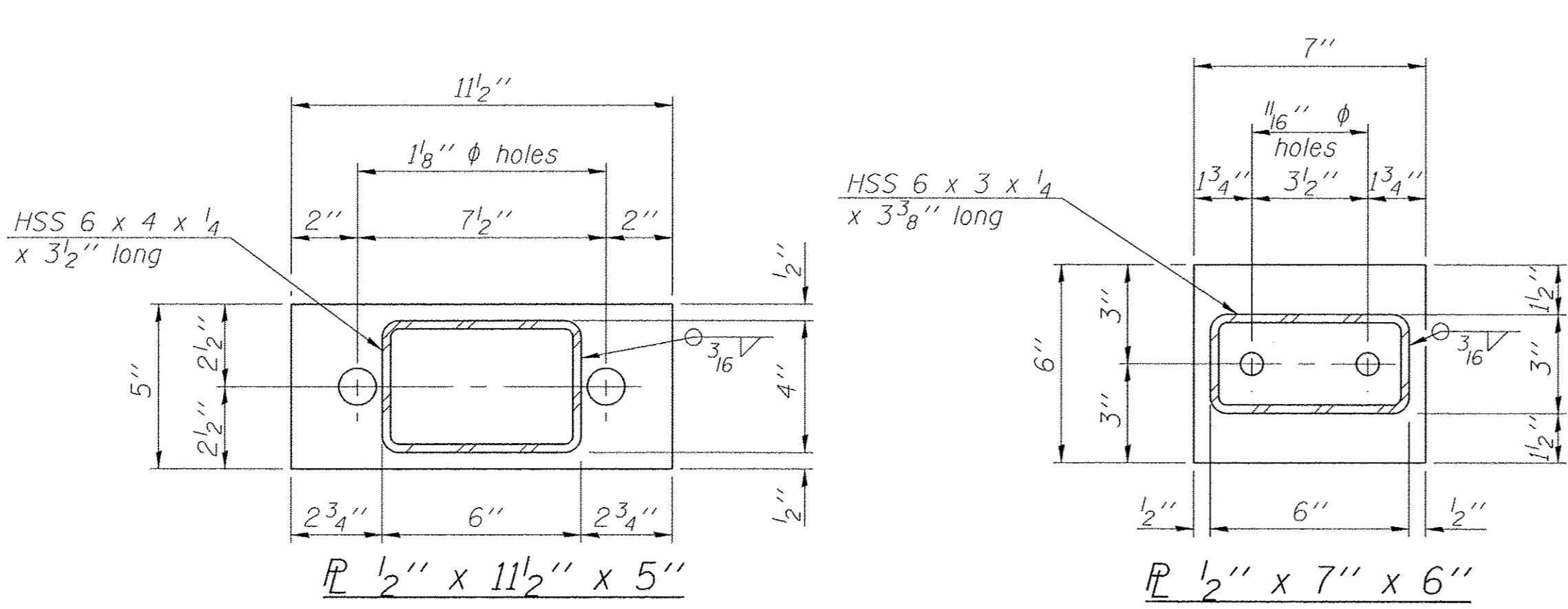
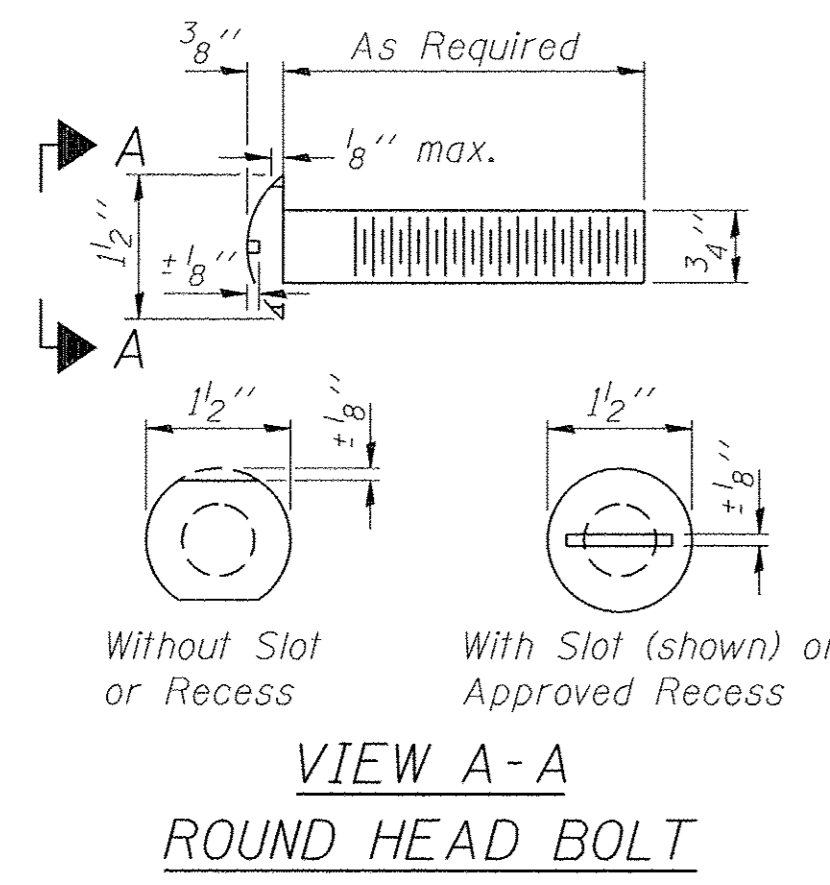


CROSS SECTION
See sheets 2 thru 7 of 13 for Superstructure.

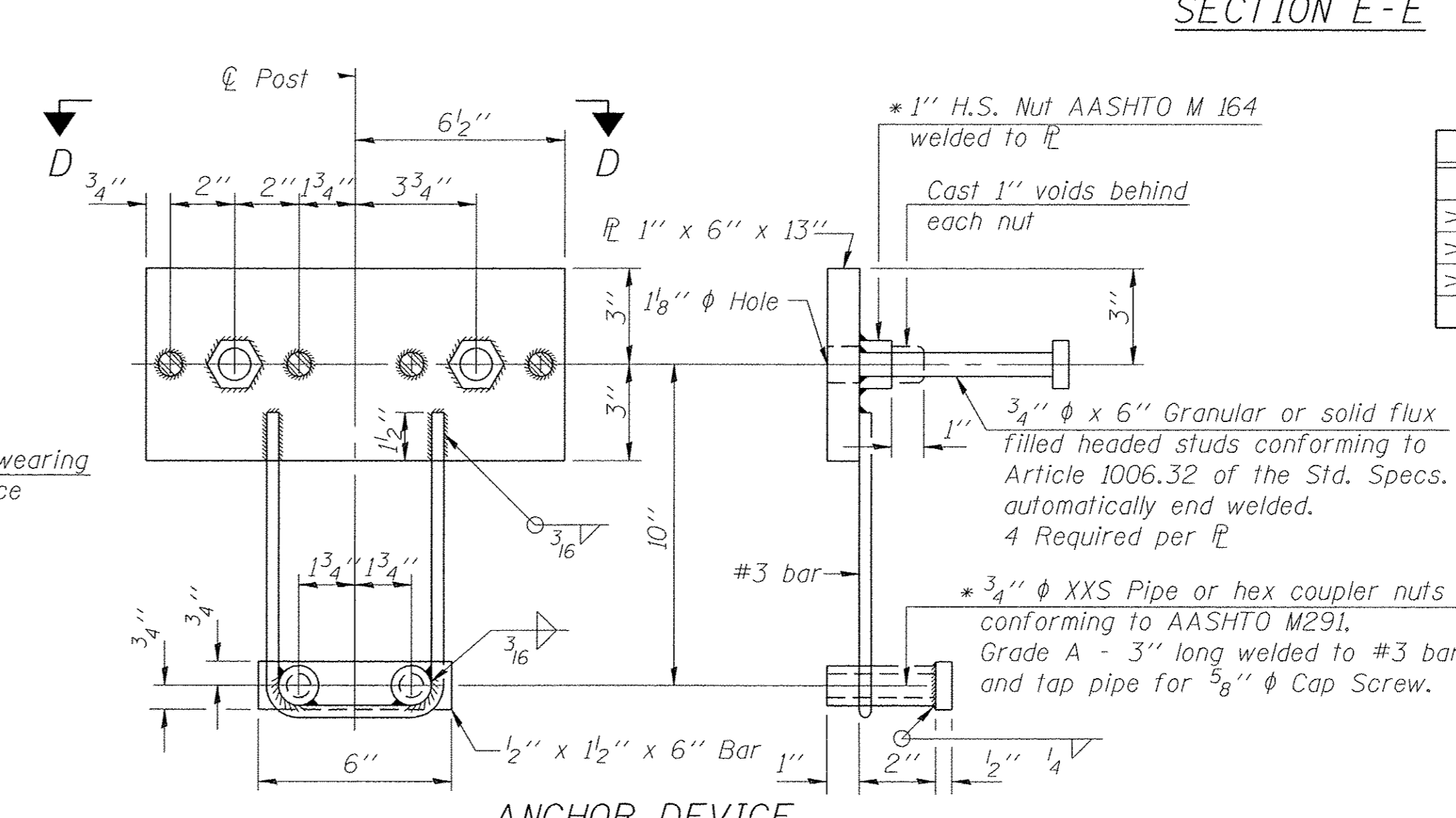
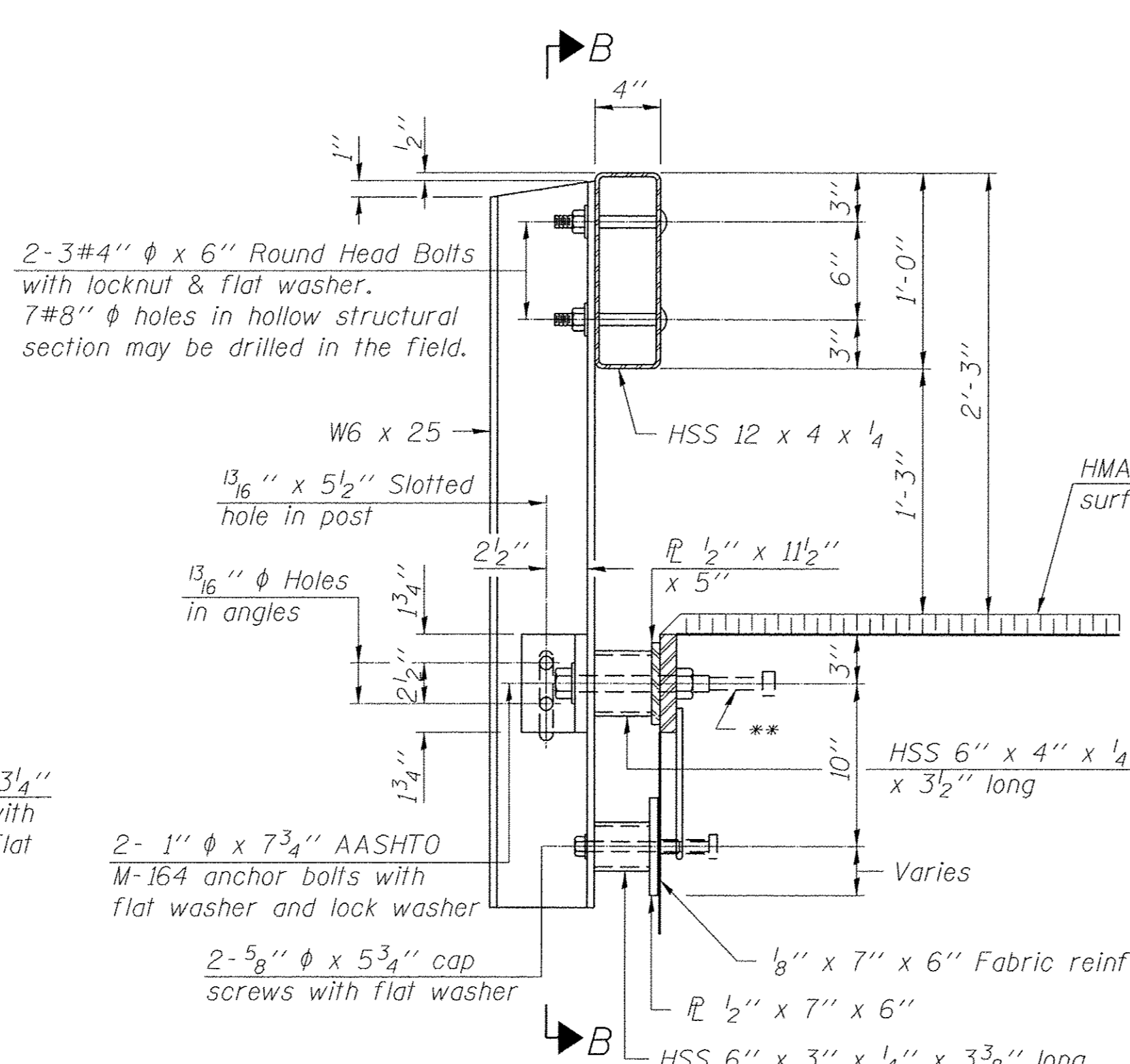
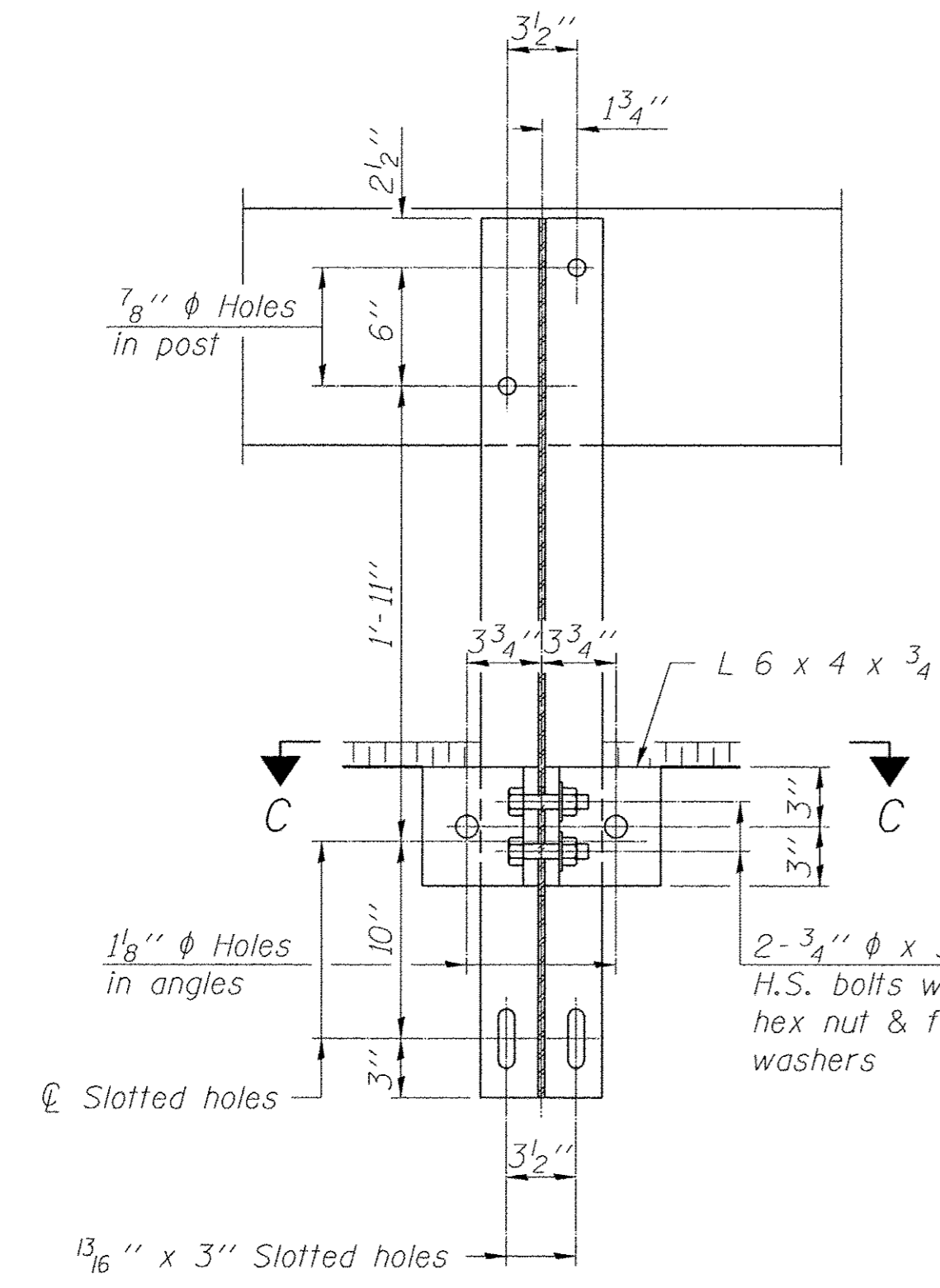
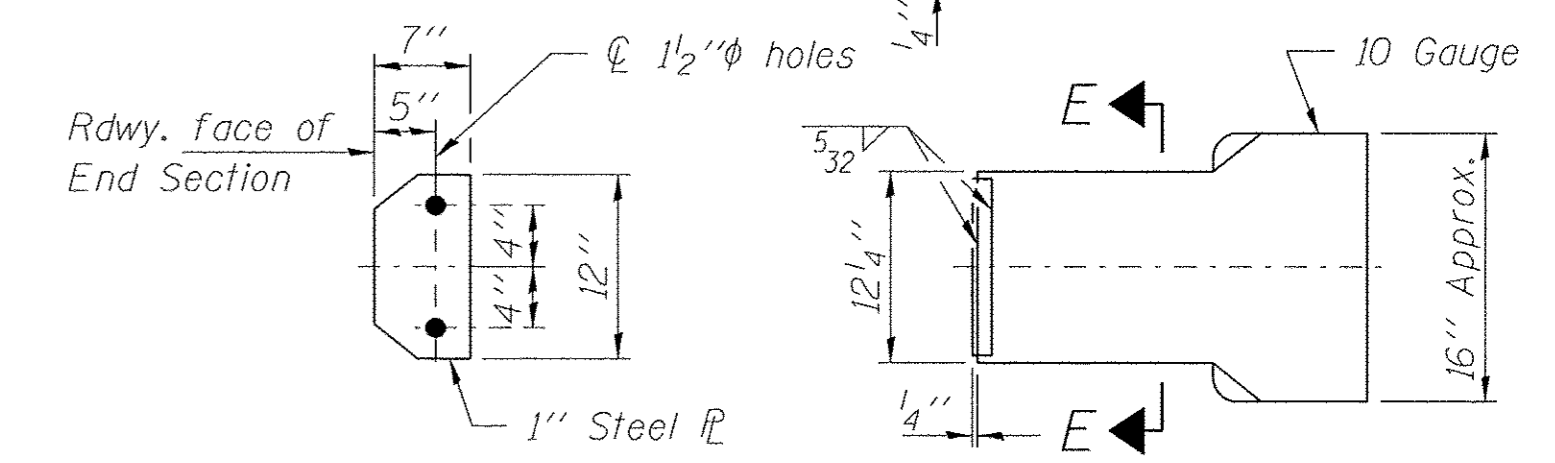


ANTICIPATED HMA WEARING SURFACE PROFILE
(For information only - beam camber may vary in field.)

| | | | | | | | | | | |
|--|----------------------|-------------------|----------|---|--|--------------------------|----------------|--|--------------|-----------|
| FILE NAME = 100126-sht-br1dgn | USER NAME = #USER# | DESIGNED - S.M.S. | REVISD - | STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT | SUPERSTRUCTURE DETAILS STRUCTURE NO. 094-3040 | F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC. 3085 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959 | PLOT SCALE = #SCALE# | CHECKED - D.W.T. | REVISD - | | | 407 | 10-00128-00-BR | WARREN | 25 | 19 |
| PLOT DATE = 4/12/2017 | | DRAWN - D.A.B. | REVISD - | | | DOC DAVIS BRIDGE | | CONTRACT NO. 89731 | | |
| | | CHECKED - S.W.M. | REVISD - | | | SHEET NO. 7 OF 13 SHEETS | | ILLINOIS FED. AID PROJECT BRS-04071080 | | |



Note: Cost of curled end sections shall be included with the Steel Railing. (2 Required)

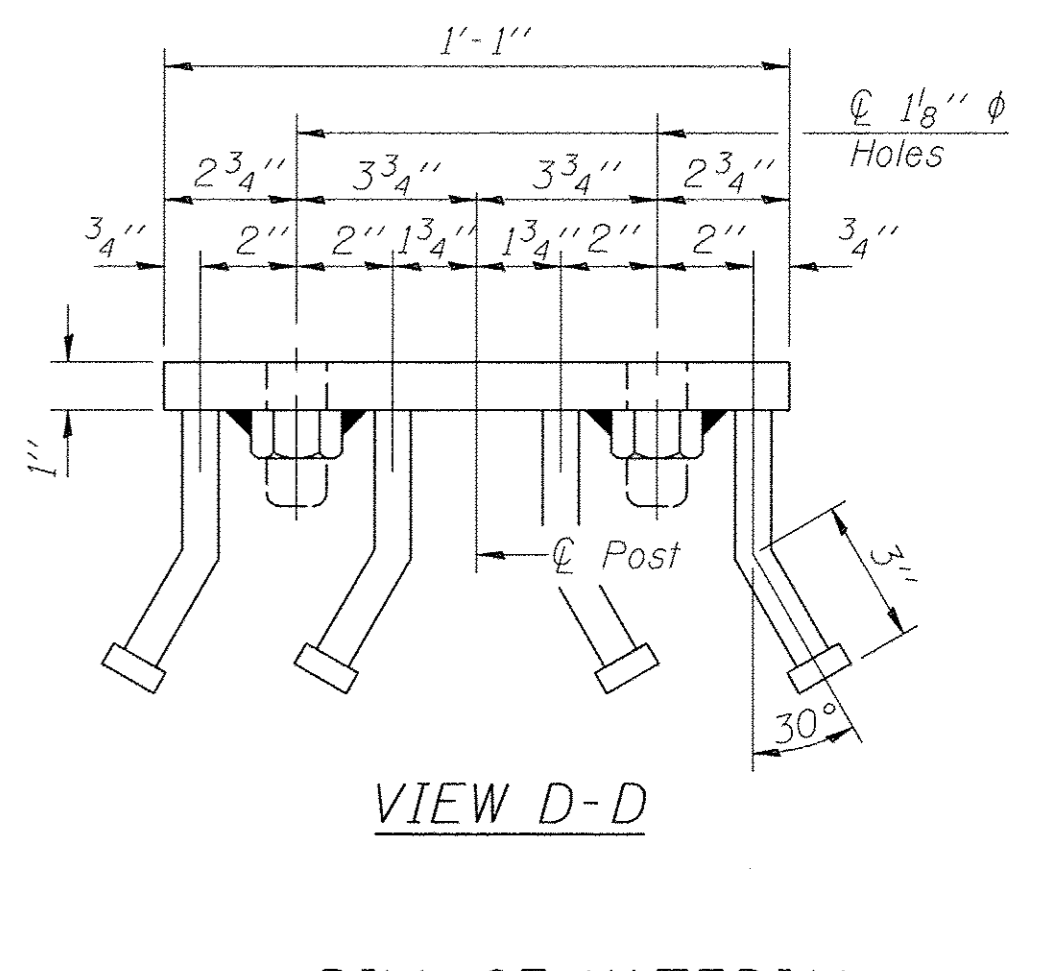
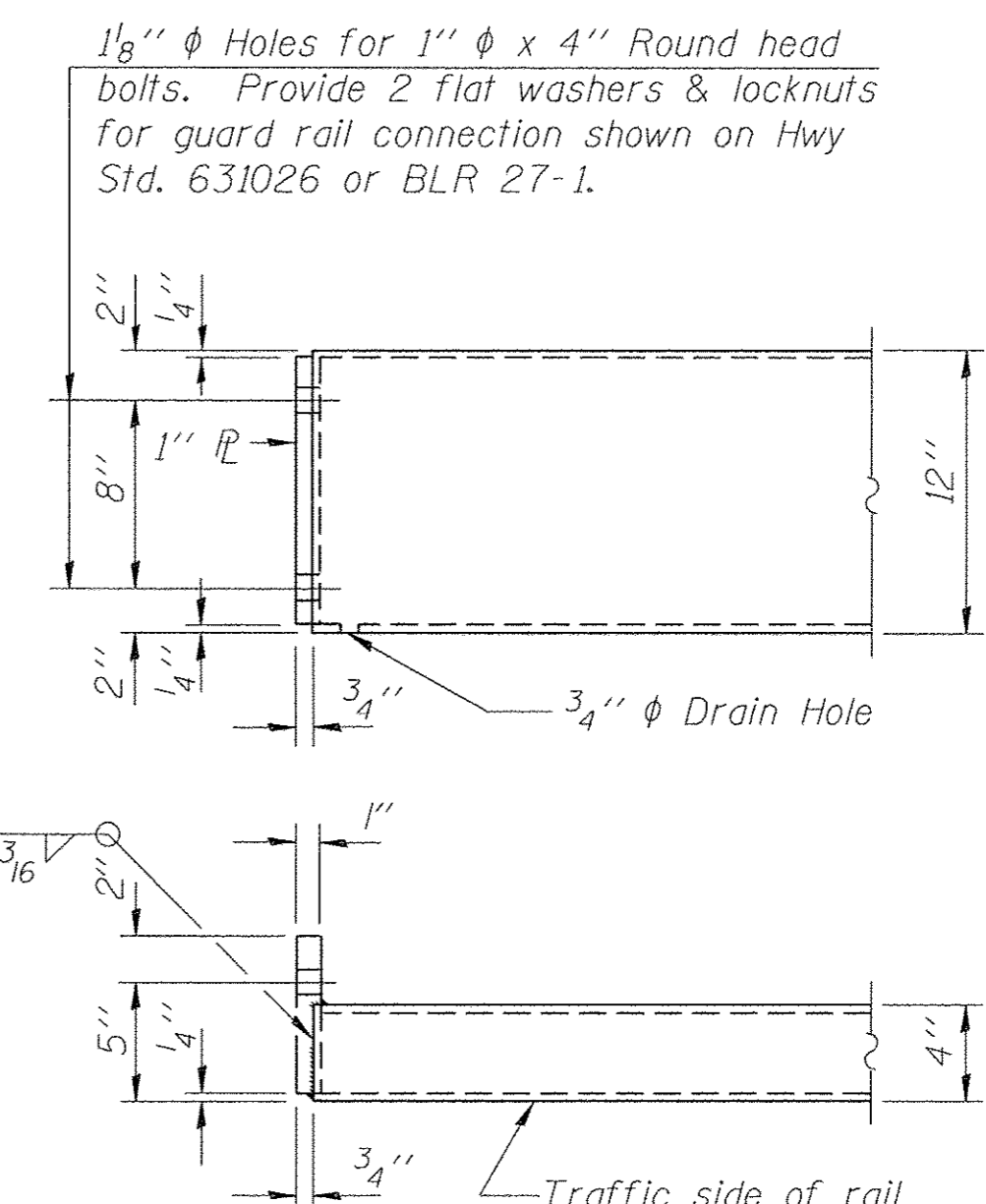
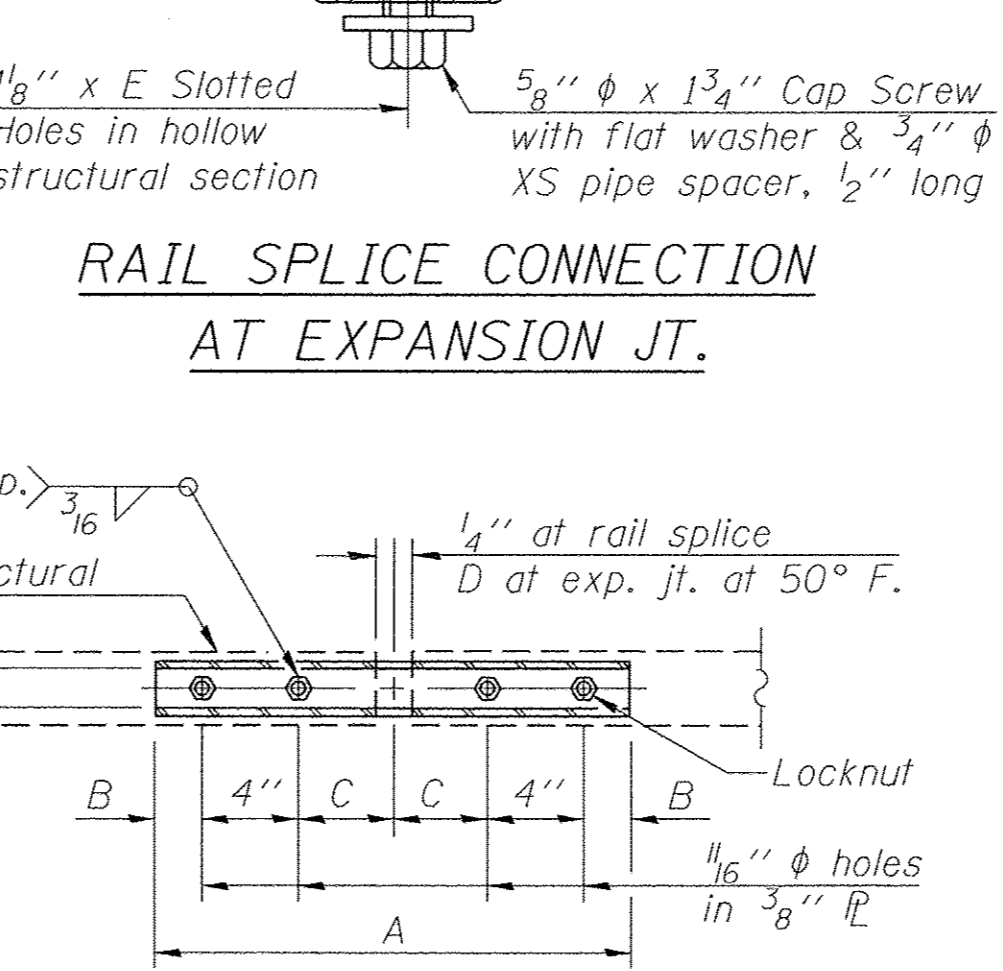
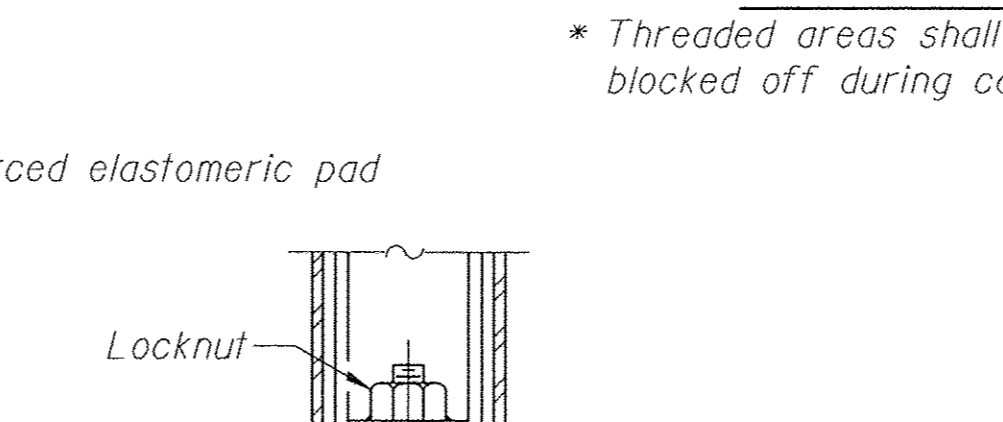
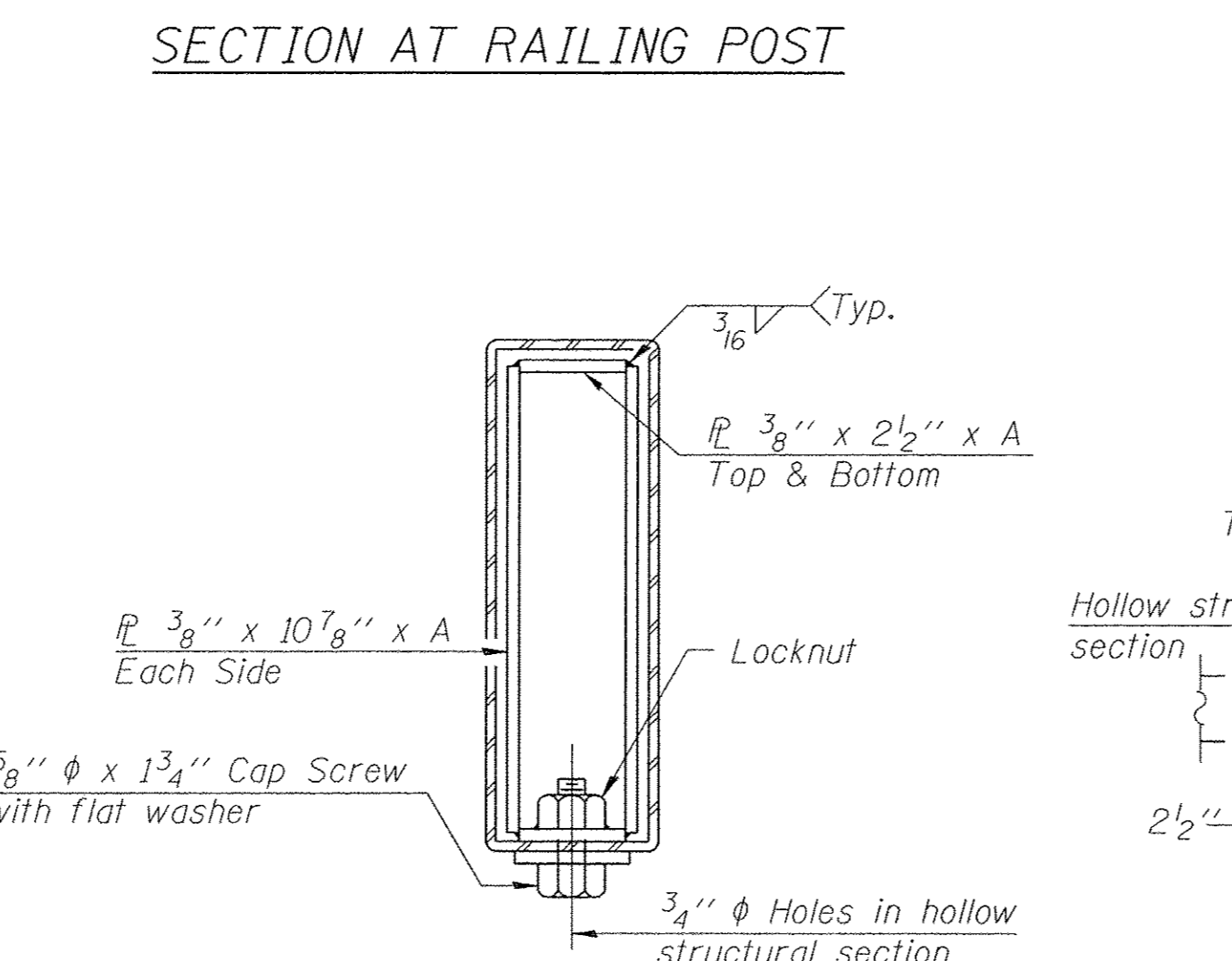
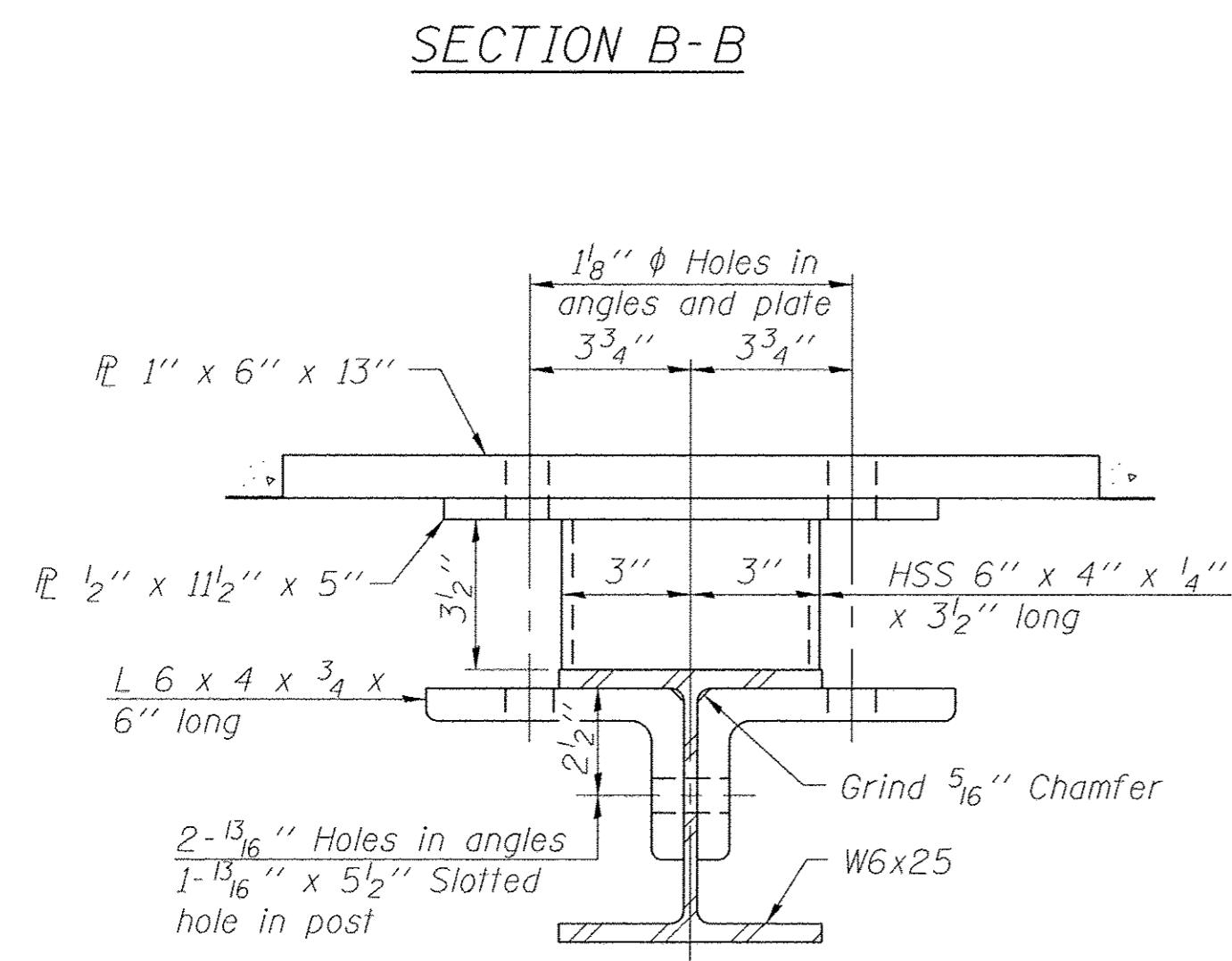


SPLICE DIMENSIONS

| T | D | A | B | C | E |
|---------------|--------|--------|--------|--------|--------|
| ≤ 4" | 2 1/2" | 1'-8" | 2" | 4" | 2 1/2" |
| > 4" ≤ 6 1/2" | 3 3/4" | 2'-0" | 2 1/2" | 5 1/2" | 3 1/2" |
| > 6 1/2" ≤ 9" | 5" | 2'-4" | 3 1/2" | 6 1/2" | 9" |
| > 9" ≤ 13" | 7" | 2'-10" | 4 1/2" | 8 1/2" | 11" |
| Rail Splice | 1 1/4" | 1'-8" | 2" | 4" | |

T = Total movement at expansion joint as shown on the design plans.

Notes:
 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.



BILL OF MATERIAL

| Item | Unit | Quantity |
|-------------------------|------|----------|
| Steel Railing, Type S-1 | Foot | 344 |

R-23A 11-22-16 (10'-9" Maximum Post Spacing)

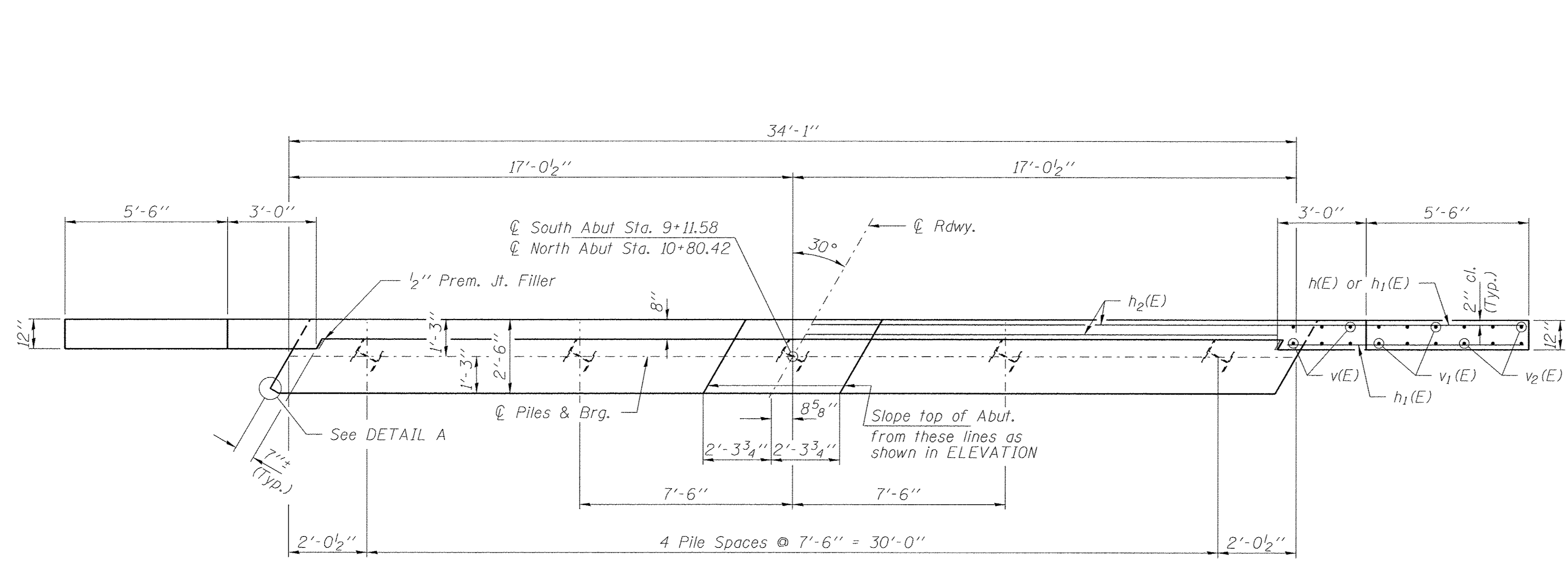
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| HAMPTON, LENZINI AND RENWICK, INC. 3095 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62703 | PLOT SCALE = *SCALE* | CHECKED - D.W.T. | REVISED - |
| ILLINOIS PROFESSIONAL DESIGN FIRM L8 / PE / SE CORP. 184-00959 | PLOT DATE = 4/12/2017 | DRAWN - D.A.B. | REVISED - |
| | | CHECKED - S.W.M. | REVISED - |

STATE OF ILLINOIS
WARREN COUNTY HIGHWAY DEPARTMENT

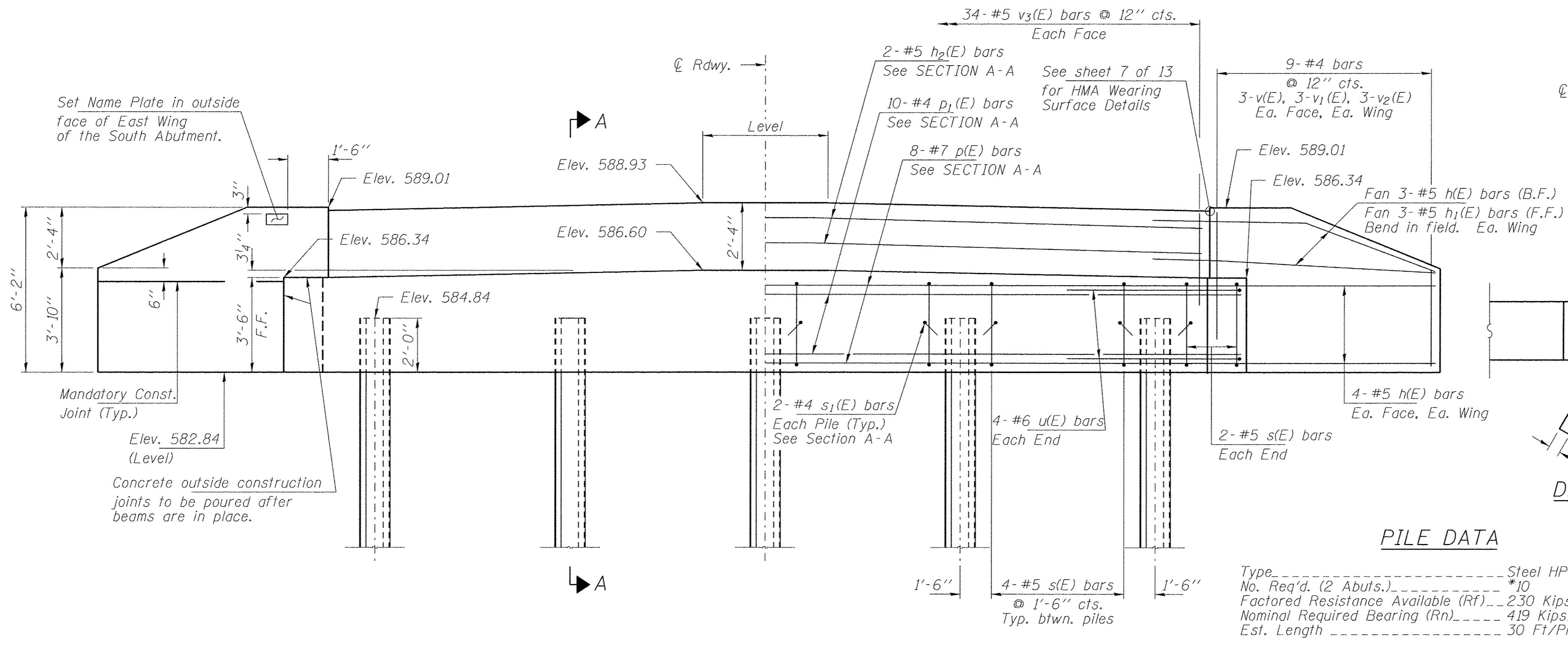
STEEL RAILING, TYPE S-1
STRUCTURE NO. 094-3040

SHEET NO. 8 OF 13 SHEETS

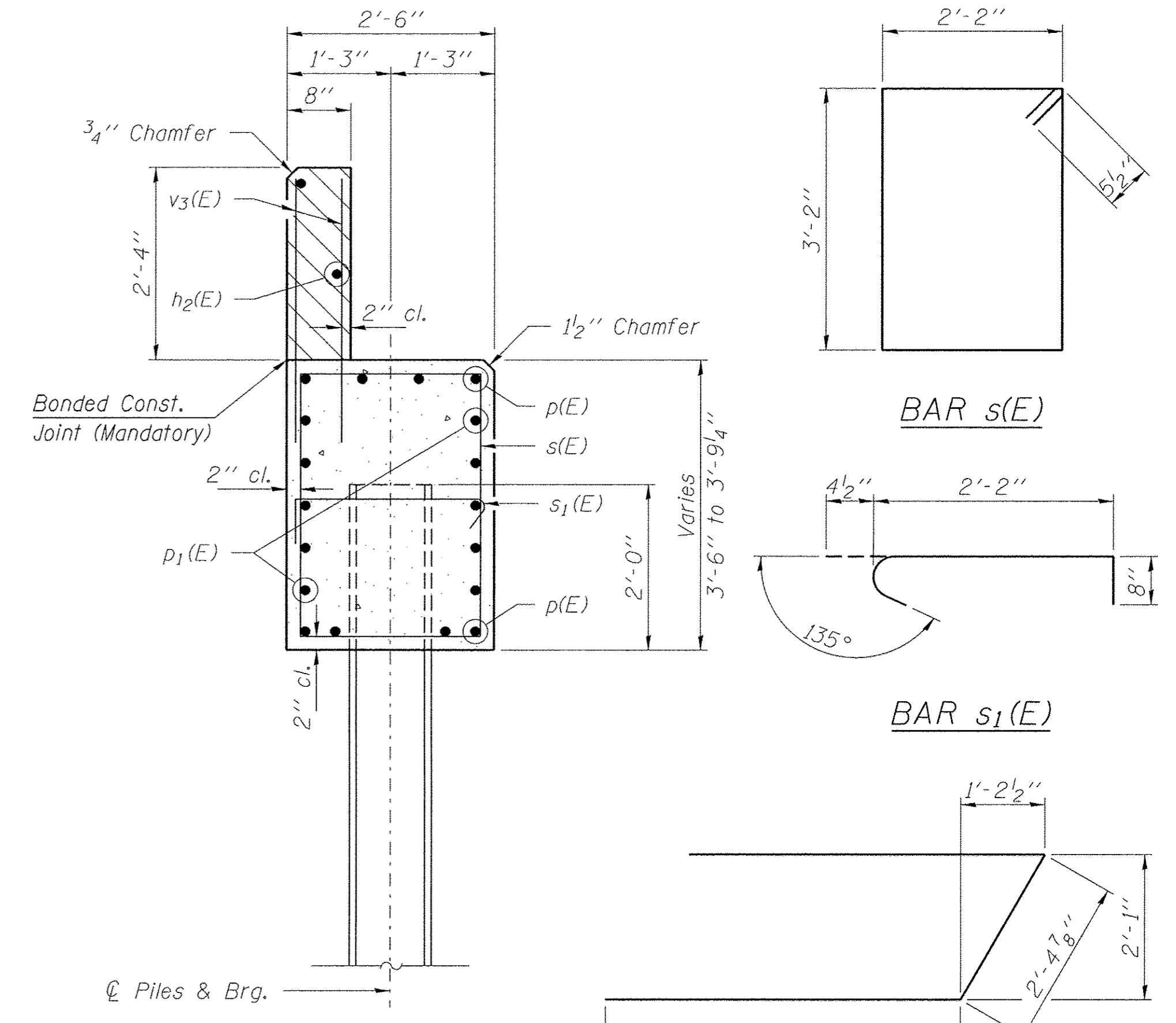
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| F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 407 | 10-00128-00-BR | WARREN | 25 | 20 |
| DOC DAVIS BRIDGE | | CONTRACT NO. 89731 | | |
| ILLINOIS FED. AID PROJECT BRS-0407108 | | | | |



PLAN



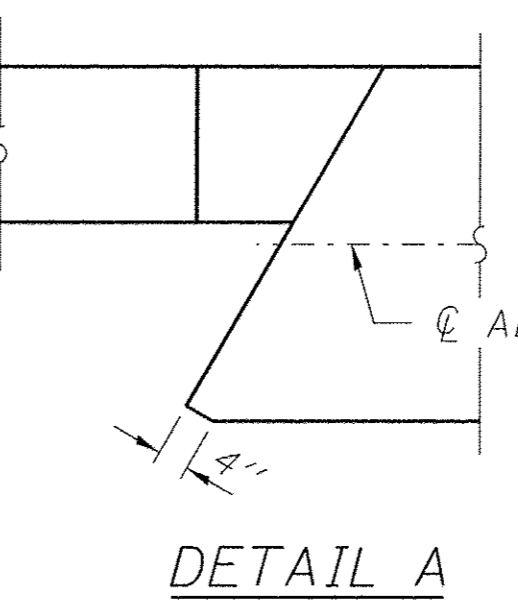
ELEVATION



SECTION A-A

Hatched area to be poured after beams are in place.

Cast top of wingwall flush with exterior beam face after beams have been erected.



DETAIL A

PILE DATA

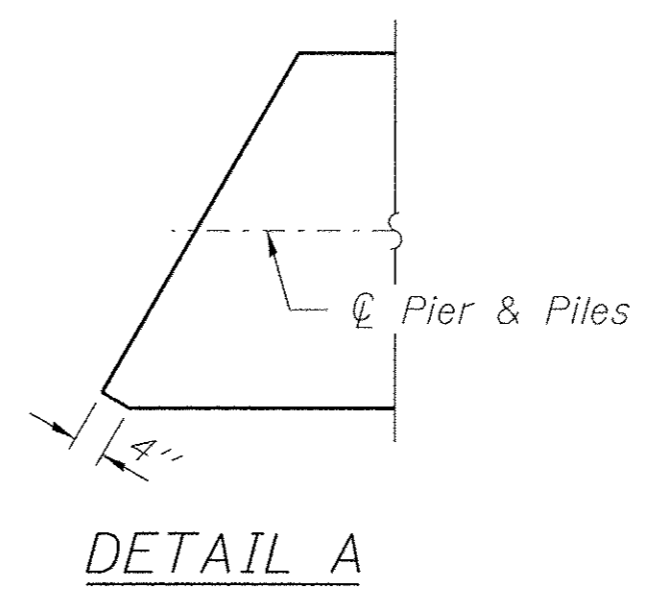
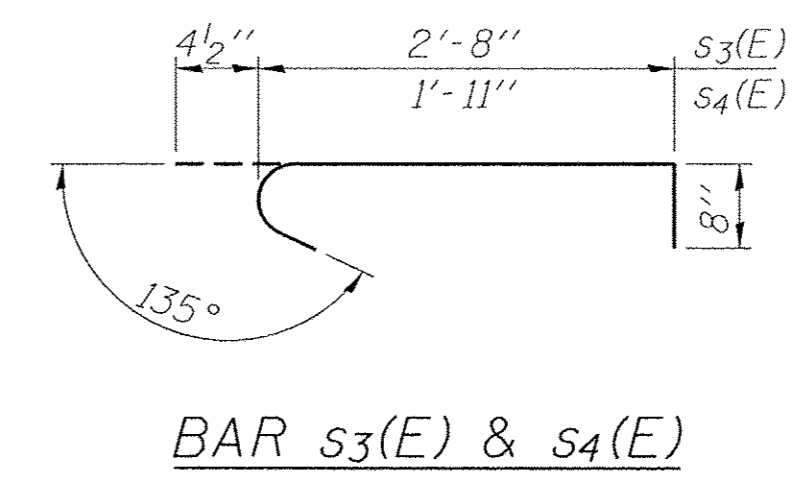
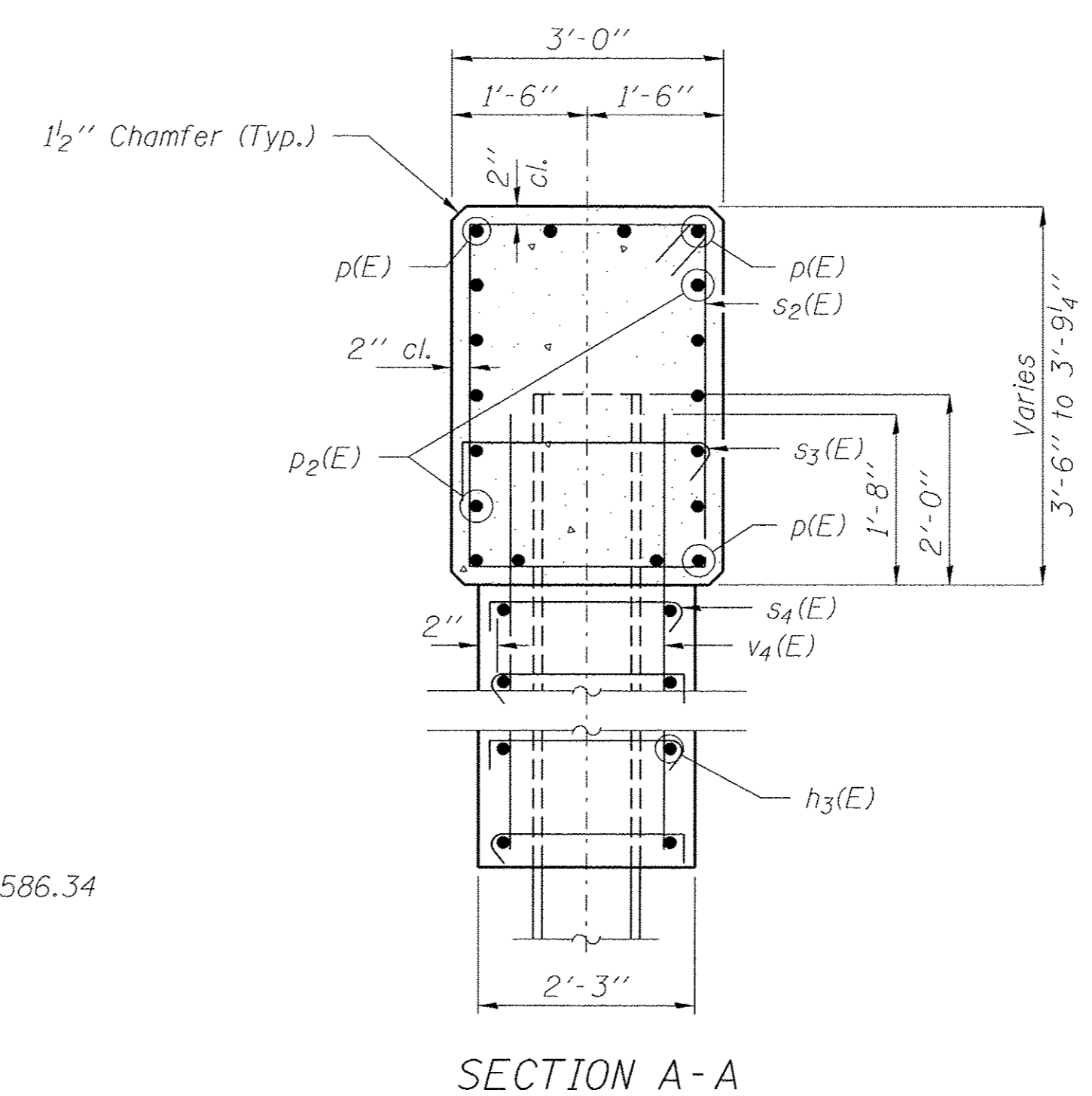
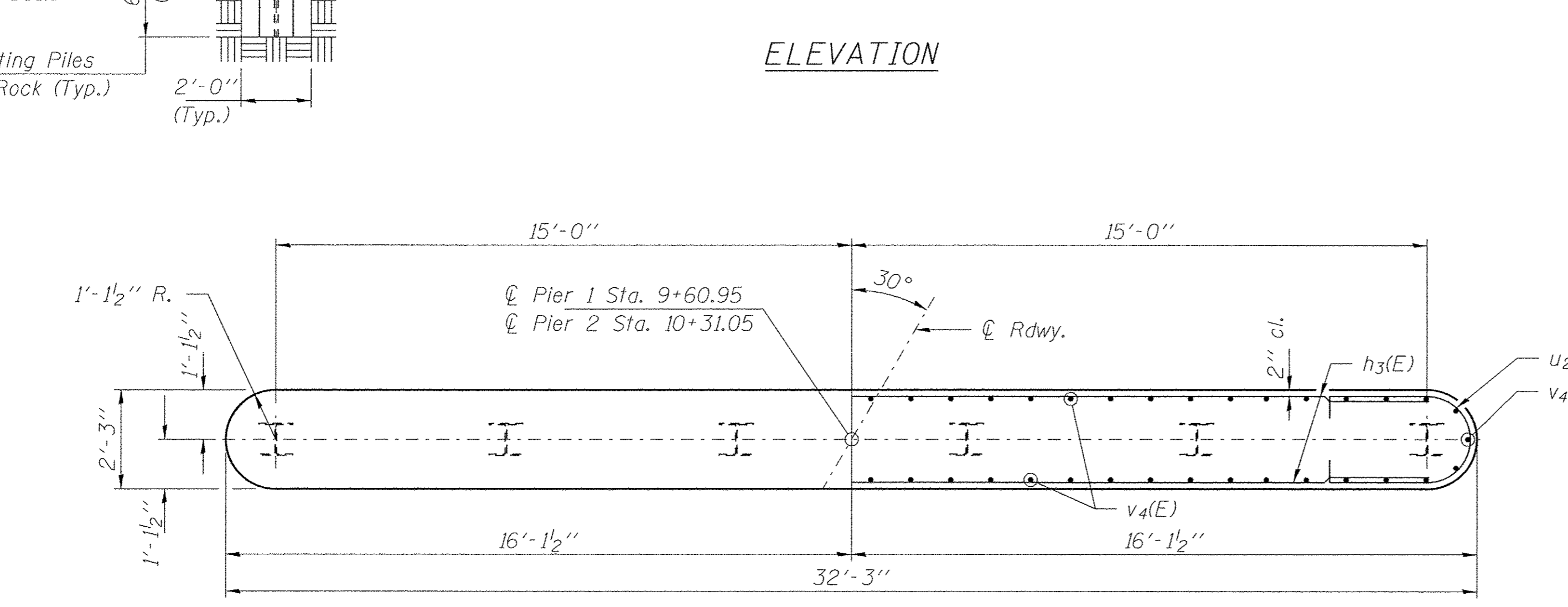
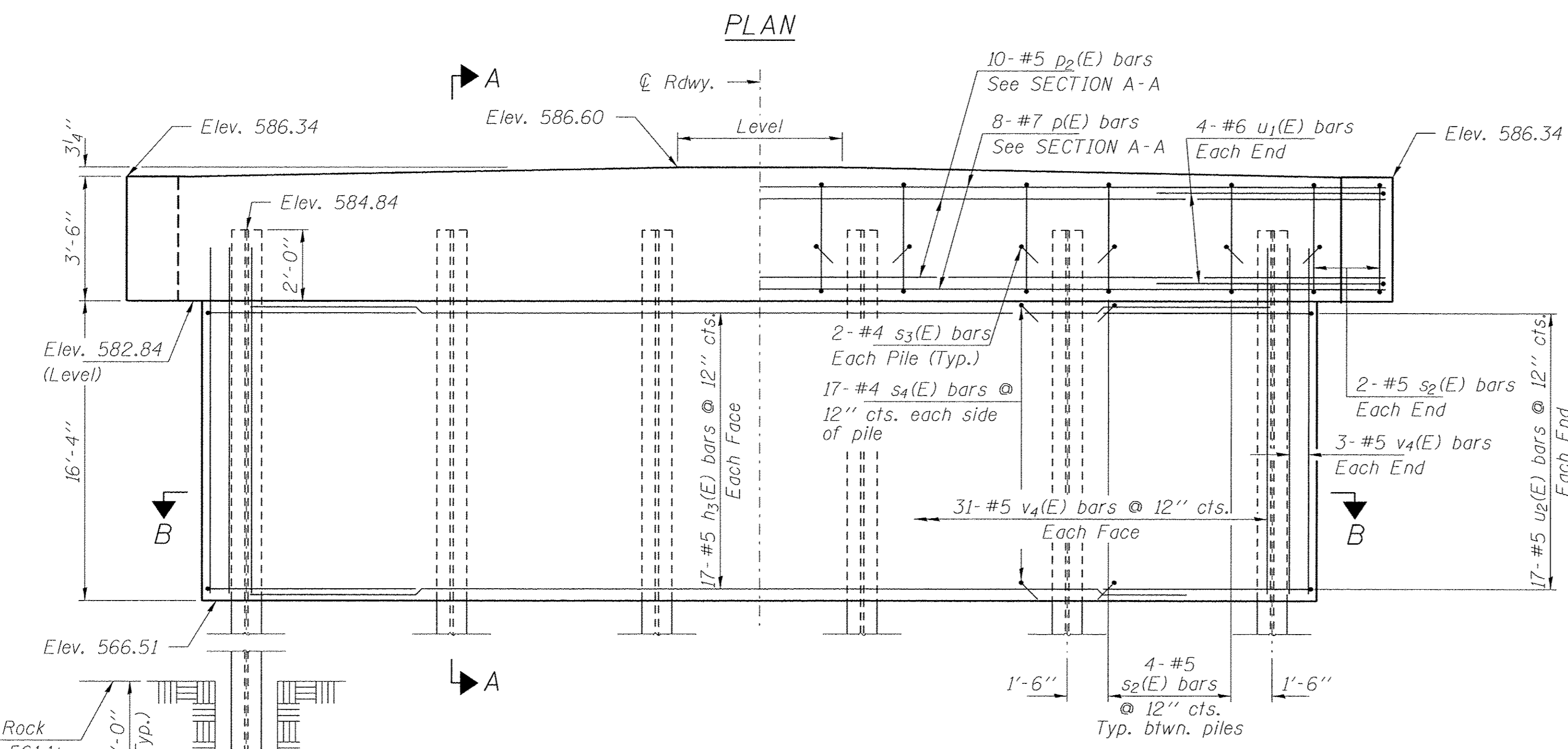
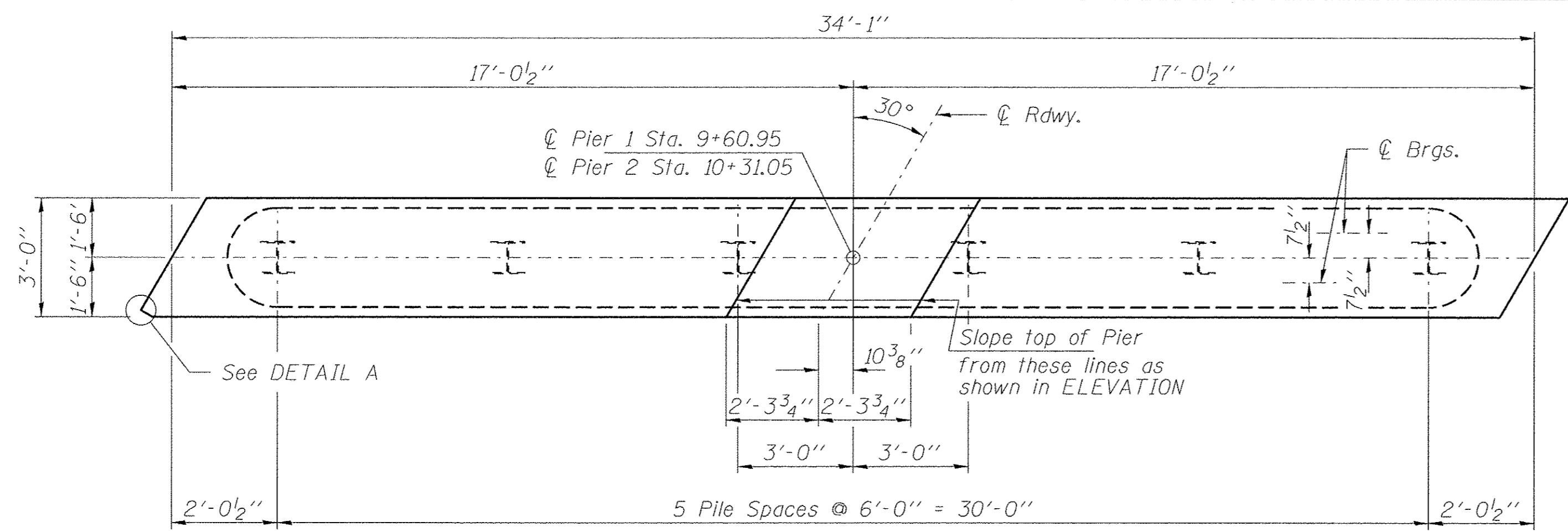
Type ----- Steel HP12x53
 No. Req'd. (2 Abuts.) ----- *10
 Factored Resistance Available (Rf) ----- 230 Kips/Pile
 Nominal Required Bearing (Rn) ----- 419 Kips/Pile
 Est. Length ----- 30 Ft/Pile

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

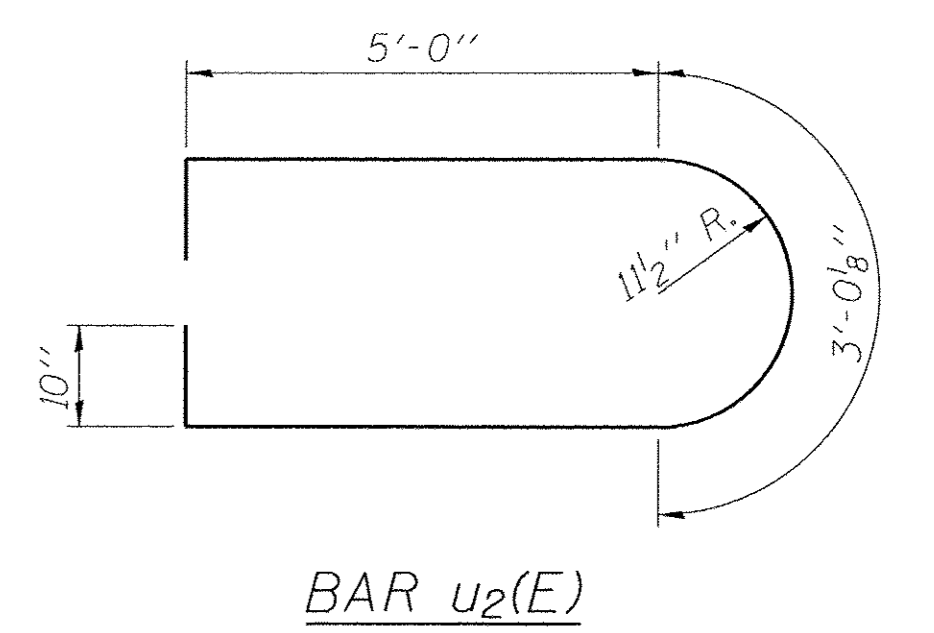
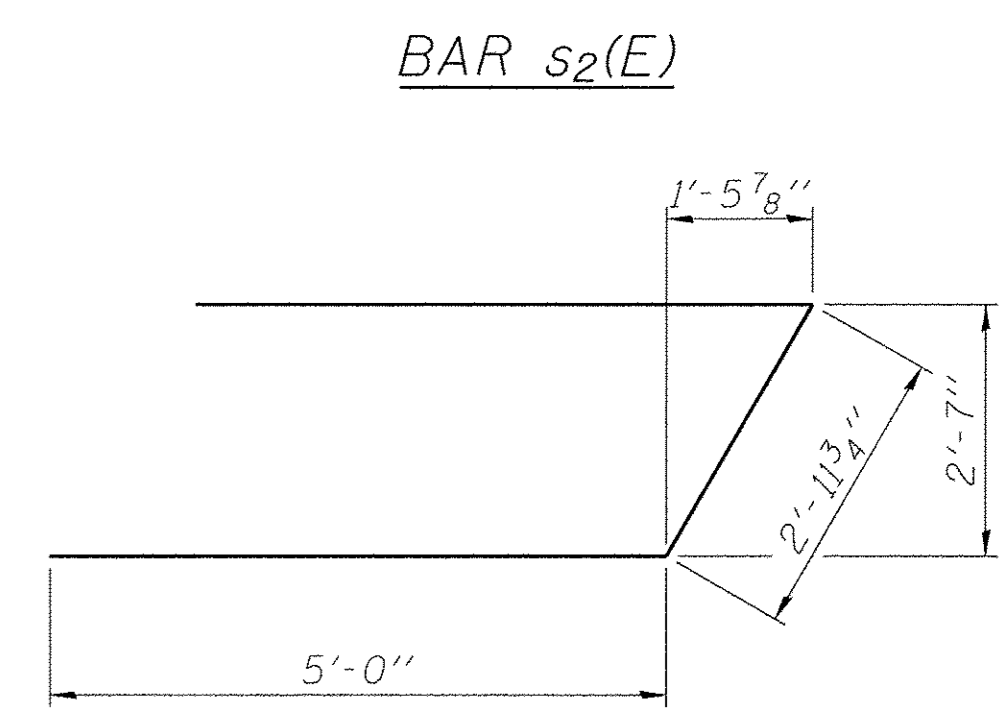
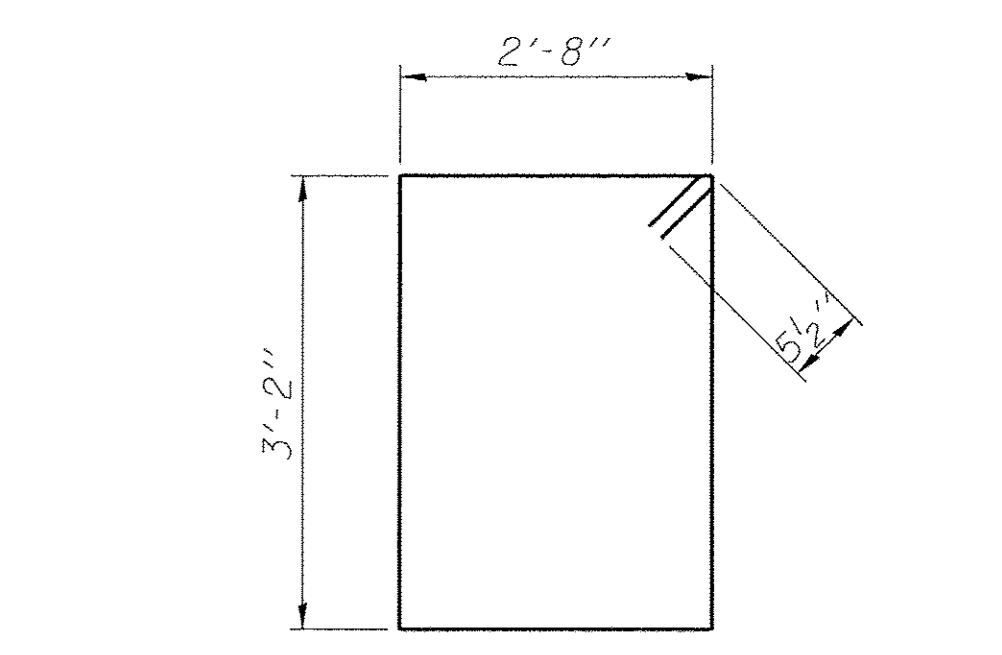
BILL OF MATERIAL - 2 ABUTS.

| BAR | NO. | SIZE | LENGTH | SHAPE |
|-------|-----|------|--------|-------|
| h(E) | 44 | #5 | 10'-6" | — |
| h1(E) | 12 | #5 | 8'-3" | — |
| h2(E) | 4 | #5 | 33'-9" | — |
| p(E) | 16 | #7 | 33'-9" | — |
| p1(E) | 20 | #4 | 33'-9" | — |
| s(E) | 40 | #5 | 11'-7" | □ |
| s1(E) | 20 | #4 | 3'-3" | ┌ |
| u(E) | 16 | #6 | 12'-5" | — |
| v(E) | 24 | #4 | 5'-10" | — |
| v1(E) | 24 | #4 | 4'-10" | — |
| v2(E) | 24 | #4 | 3'-6" | — |
| v3(E) | 136 | #5 | 3'-2" | — |

| Concrete Structures | Cu. Yd. | 33.2 |
|----------------------------------|---------|-------|
| Reinforcement Bars, Epoxy Coated | Pound | 3,780 |
| Furnishing Steel Piles HP12x53 | Foot | 270 |
| Driving Piles | Foot | 270 |
| Test Pile Steel HP12x53 | Each | 1 |
| Name Plates | Each | 1 |



Type Steel HP12x53
 No. Req'd. (2 Piers) 12
 Factored Resistance Available (Rf) 230 Kips/Pile
 Est. Length 30 Ft/Pile



BILL OF MATERIAL - 2 PIERS

| BAR | NO. | SIZE | LENGTH | SHAPE |
|----------------------------------|-----|------|---------|-------|
| $h_2(E)$ | 68 | #5 | 30'-0" | — |
| $p(E)$ | 16 | #7 | 33'-9" | — |
| $p_2(E)$ | 20 | #5 | 33'-9" | — |
| $s_2(E)$ | 48 | #5 | 12'-7" | □ |
| $s_3(E)$ | 24 | #4 | 3'-9" | — |
| $s_4(E)$ | 408 | #4 | 3'-0" | — |
| $u_1(E)$ | 16 | #6 | 13'-0" | — |
| $u_2(E)$ | 68 | #5 | 14'-8" | — |
| $v_4(E)$ | 136 | #5 | 17'-10" | — |
| Concrete Structures | | | Cu. Yd. | 113.2 |
| Reinforcement Bars, Epoxy Coated | | | Pound | 9,330 |
| Furnishing Steel Piles HP12x53 | | | Foot | 360 |
| Cofferdam (Type 2) (Location 1) | | | Each | 1 |
| Cofferdam (Type 2) (Location 2) | | | Each | 1 |
| Setting Piles in Rock | | | Each | 12 |

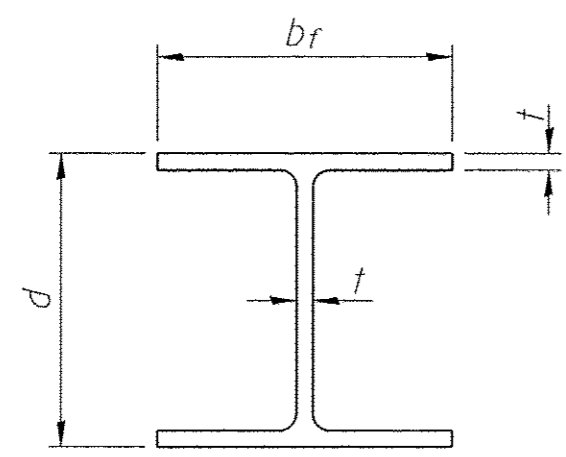
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 USER NAME = #USERS
 DESIGNED - S.M.S.
 CHECKED - D.W.T.
 DRAWN - D.A.B.
 CHECKED - S.W.M.
 PLOT SCALE = #SCALE#
 PLOT DATE = 4/12/2017

DESIGNED - S.M.S.
 CHECKED - D.W.T.
 DRAWN - D.A.B.
 CHECKED - S.W.M.
 REVISED -
 REVISED -
 REVISED -
 REVISED -

STATE OF ILLINOIS
 WARREN COUNTY HIGHWAY DEPARTMENT

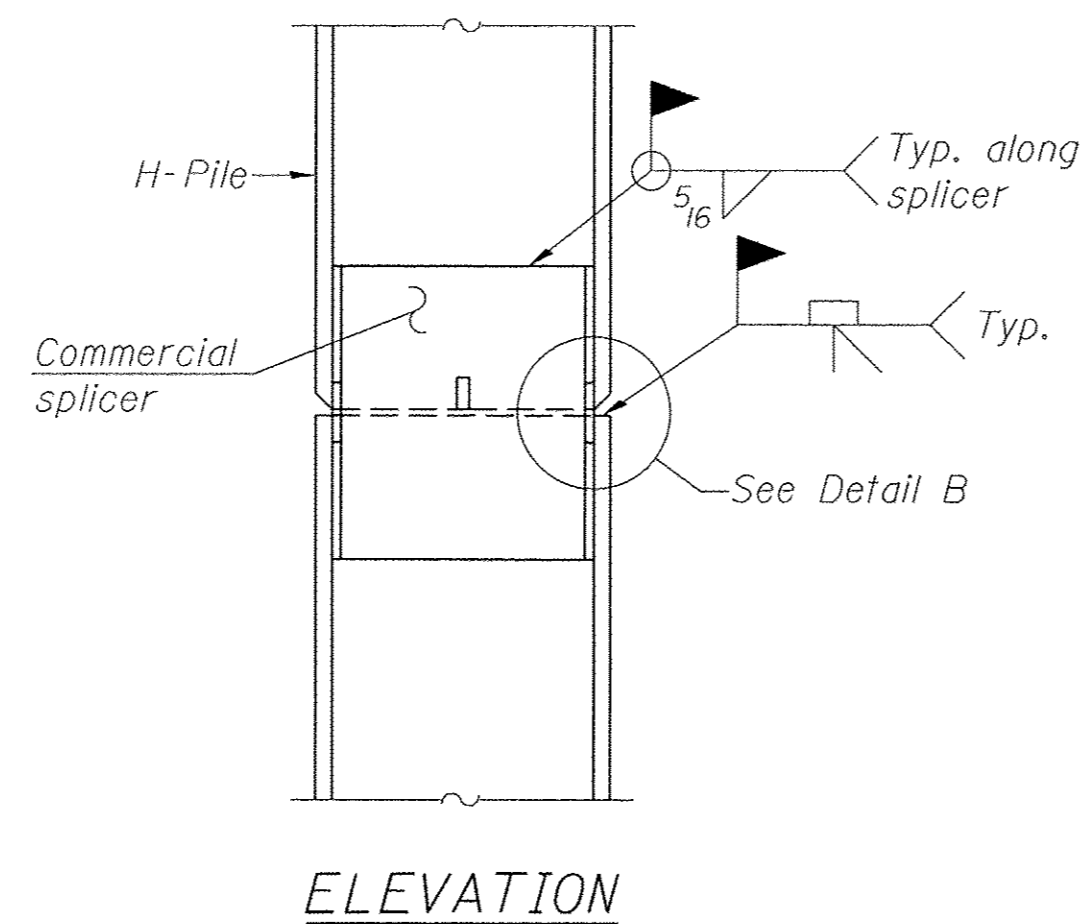
PIERS
 STRUCTURE NO. 094-3040
 SHEET NO. 10 OF 13 SHEETS

F.A.S. SECTION COUNTY TOTAL SHEETS SHEET NO.
 407 10-00128-00-BR WARREN 25 22
 DOC DAVIS BRIDGE CONTRACT NO. 89731
 [ILLINOIS] FED. AID PROJECT BRS-0407(108)

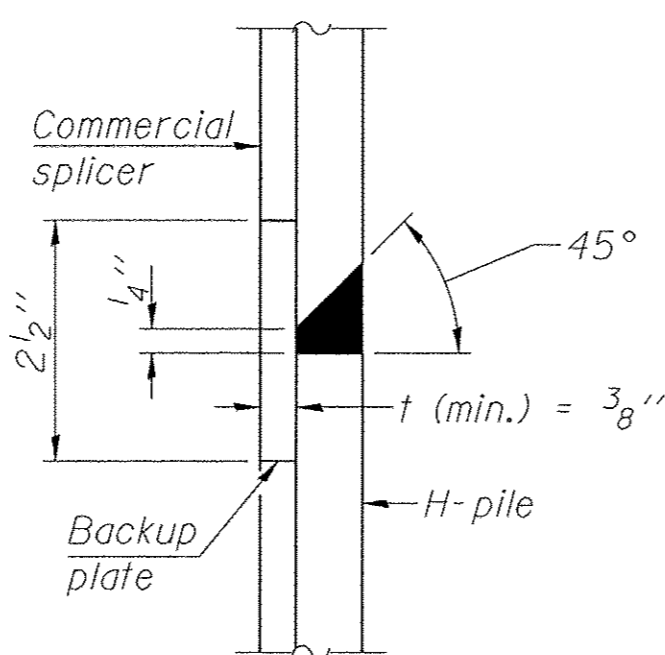


STEEL PILE TABLE

| Designation | Depth d | Flange width br | Web and Flange thickness t | Encasement diameter A |
|-------------|---------|-----------------|----------------------------|-----------------------|
| HP 14x117 | 14 1/4" | 14 7/8" | 1 3/16" | 30" |
| x102 | 14" | 14 3/4" | 1 1/16" | 30" |
| x89 | 13 7/8" | 14 3/4" | 5/8" | 30" |
| x73 | 13 5/8" | 14 5/8" | 1/2" | 30" |
| HP 12x84 | 12 1/4" | 12 1/4" | 1 1/16" | 24" |
| x74 | 12 1/8" | 12 1/4" | 5/8" | 24" |
| x63 | 12" | 12 1/8" | 1/2" | 24" |
| x53 | 11 3/4" | 12" | 7/16" | 24" |
| HP 10x57 | 10" | 10 1/4" | 9/16" | 24" |
| x42 | 9 3/4" | 10 1/8" | 7/16" | 24" |
| HP 8x36 | 8" | 8 1/8" | 7/16" | 18" |

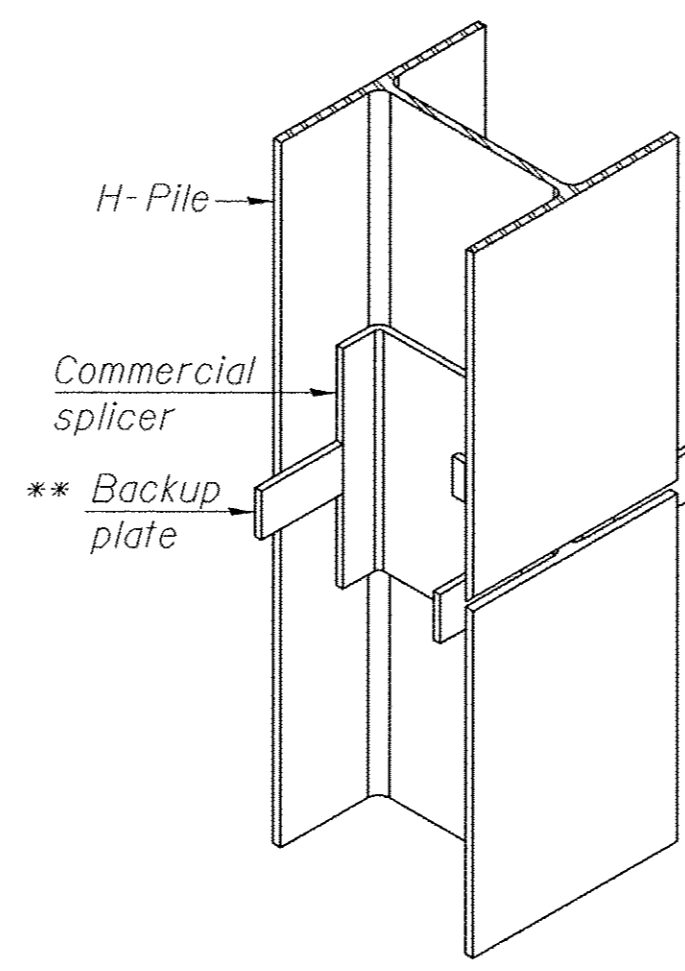


ELEVATION

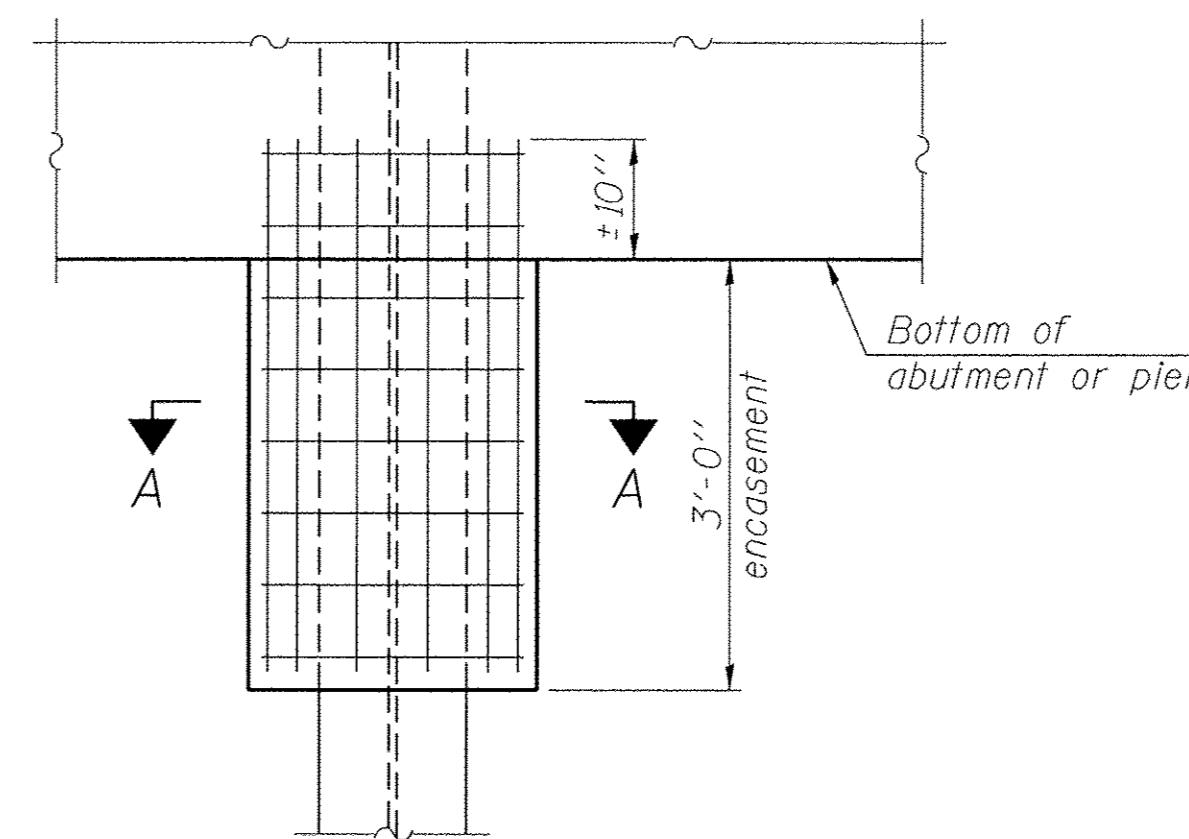


DETAIL "B"

WELDED COMMERCIAL SPLICE

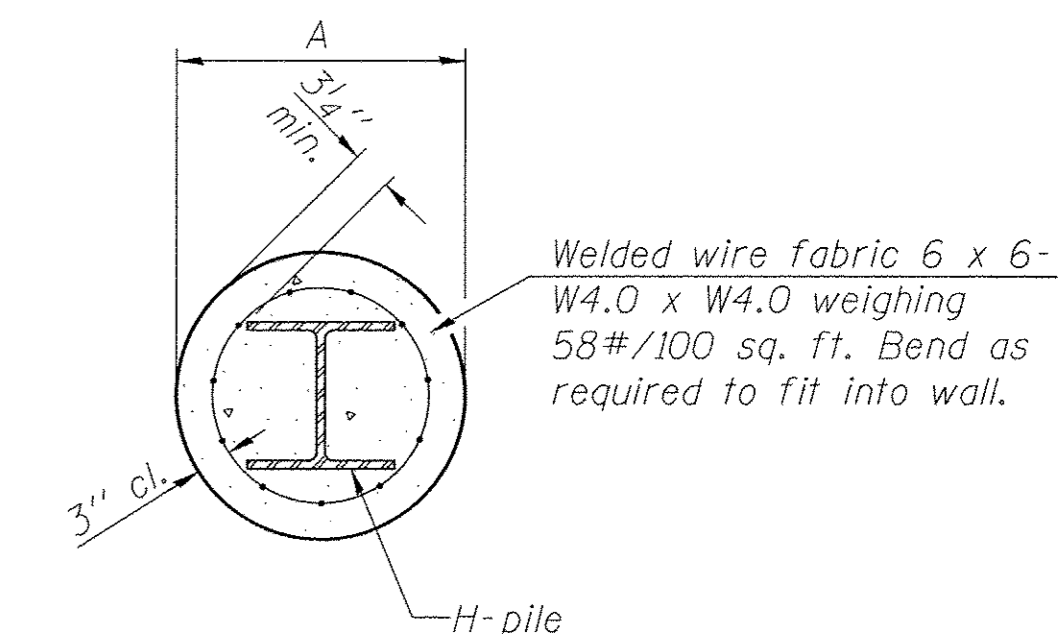


ISOMETRIC VIEW



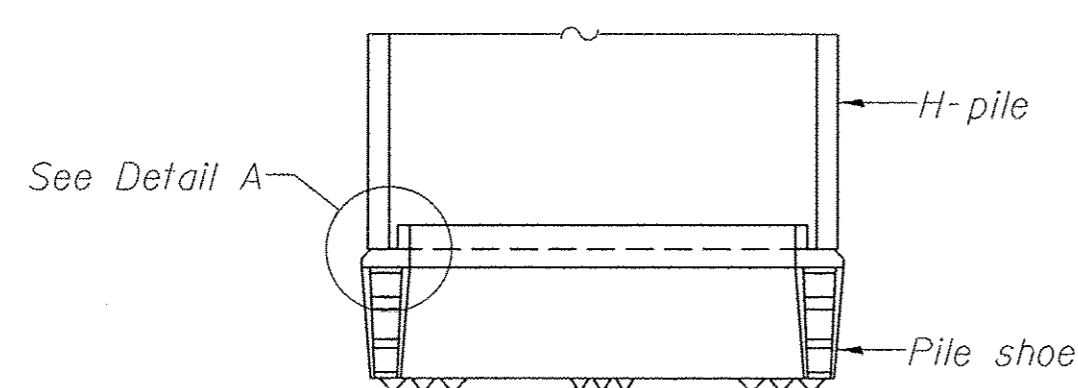
ELEVATION

PILE ENCASEMENT

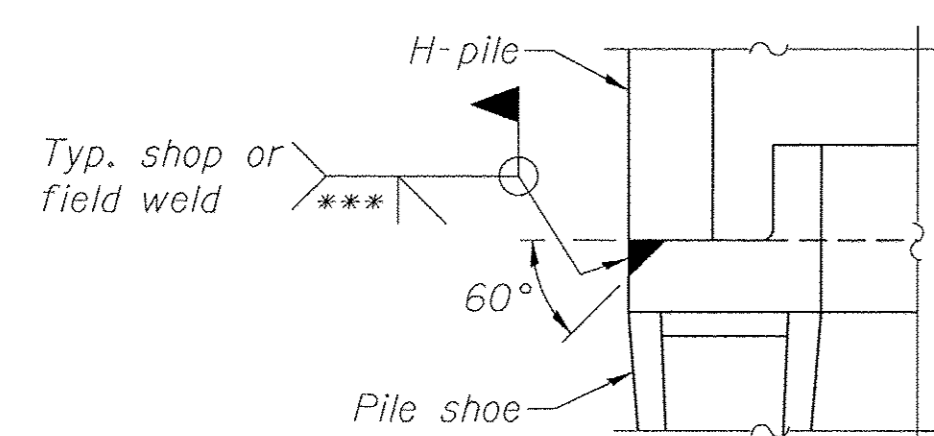


SECTION A-A

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

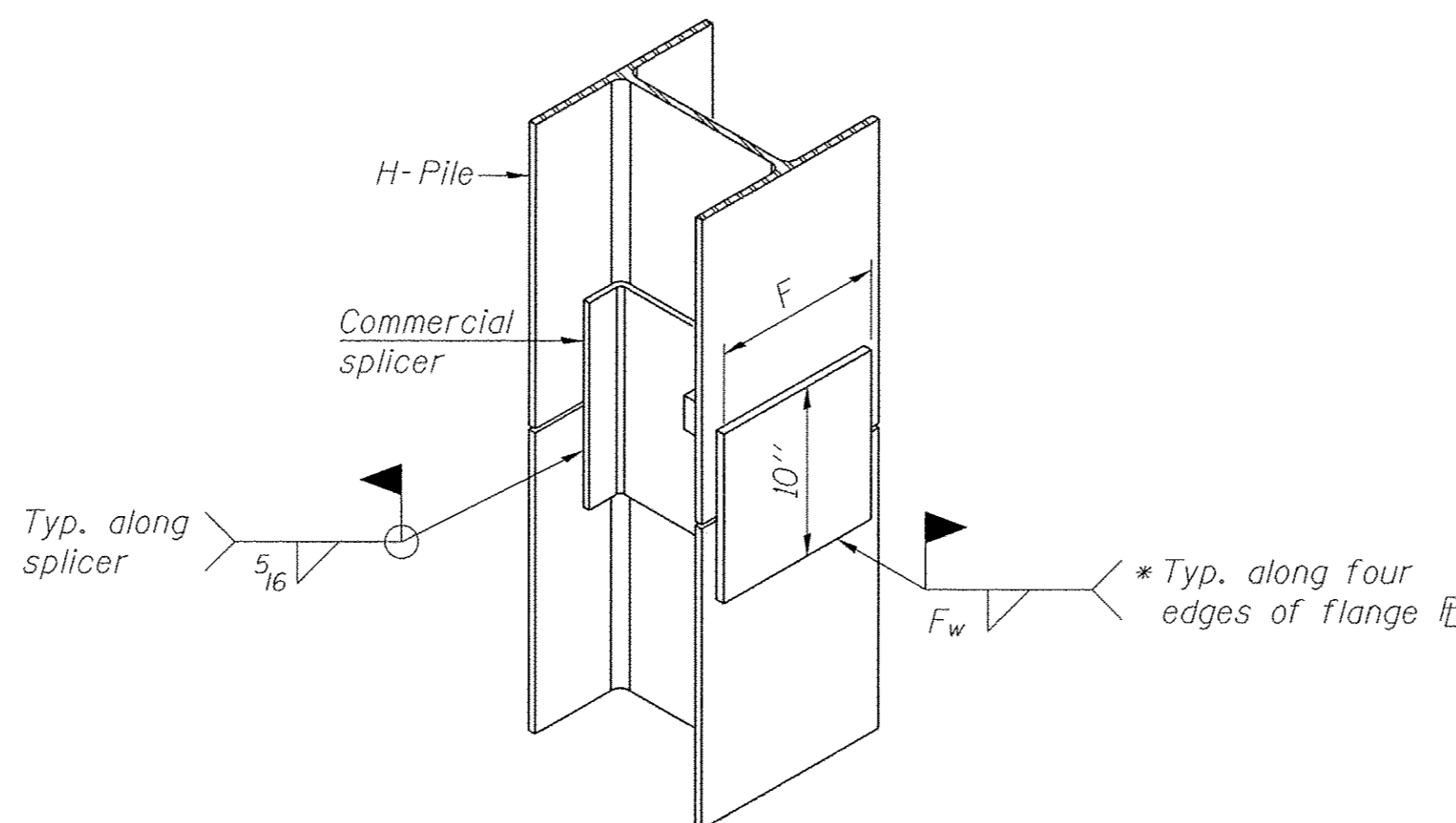


ELEVATION

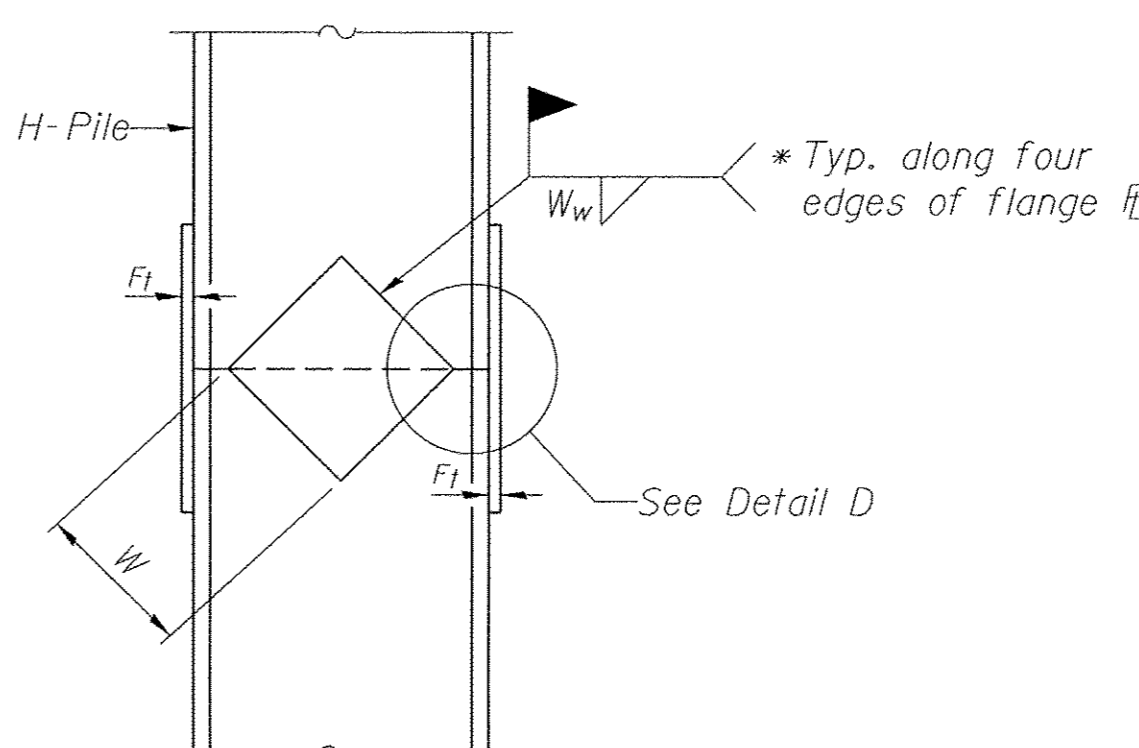


DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW



ELEVATION

DETAIL D

WELDED PLATE FIELD SPLICE

| Designation | F | F _t | F _w | W | W _t | W _w |
|-------------|---------|----------------|----------------|--------|----------------|----------------|
| HP 14x117 | 12 1/2" | 1" | 7/8" | 7 3/4" | 5/8" | 1/2" |
| x102 | 12 1/2" | 7/8" | 3/4" | 7 3/4" | 5/8" | 1/2" |
| x89 | 12 1/2" | 3/4" | 1 1/16" | 7 3/4" | 5/8" | 1/2" |
| x73 | 12 1/2" | 5/8" | 9/16" | 7 3/4" | 5/8" | 1/2" |
| HP 12x84 | 10" | 7/8" | 1 1/16" | 6 1/2" | 5/8" | 1/2" |
| x74 | 10" | 7/8" | 1 1/16" | 6 1/2" | 5/8" | 1/2" |
| x63 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| x53 | 10" | 5/8" | 1/2" | 6 1/2" | 1/2" | 3/8" |
| HP 10x57 | 8" | 3/4" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| x42 | 8" | 5/8" | 9/16" | 5 1/4" | 1/2" | 3/8" |
| HP 8x36 | 7" | 5/8" | 7/16" | 4 1/4" | 1/2" | 3/8" |

WELDED COMMERCIAL SPLICE ALTERNATE

- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

Note:
The steel H-piles shall be according to AASHTO M270 Grade 50.

F-HP 1-27-12

| | | | | | | | | | | |
|--|-----------------------|-------------------|-----------|---|---|---------------------------|----------------|---------------------------------------|--------------|-----------|
| FILE NAME = 100126-sht-br-bridge.dgn | USER NAME = #USER# | DESIGNED - S.M.S. | REVISED - | STATE OF ILLINOIS WARREN COUNTY HIGHWAY DEPARTMENT | HP PILE DETAILS STRUCTURE NO. 094-3040 | F.A.S. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| HAMPTON, LENZINI AND RENWICK, INC. 3095 STEVENSON DRIVE, SUITE 201 SPRINGFIELD, ILLINOIS 62793 ILLINOIS PROFESSIONAL DESIGN FIRM LS / PE / SE CORP. 184.000959 | PLOT SCALE = #SCALE# | CHECKED - D.W.T. | REVISED - | | | 407 | 10-00128-00-BR | WARREN | 25 | 23 |
| | PLOT DATE = 4/12/2017 | DRAWN - D.A.B. | REVISED - | | | DOC DAVIS BRIDGE | | CONTRACT NO. 89731 | | |
| | | CHECKED - S.W.M. | REVISED - | | | SHEET NO. 11 OF 13 SHEETS | | ILLINOIS FED. AID PROJECT BRS-0407108 | | |

BORING LOG

BORING NO. B-01
 DATE 05-04-10
 W. & A. FILE NO. 5297
 SHEET 1 OF 4

WHITNEY & ASSOCIATES
 INCORPORATED
 2406 West Nebraska Avenue
 PEORIA, ILLINOIS 61604

BORING LOG

PROJECT STRUCTURE NO. 094-3016; COUNTY HIGHWAY 8 LOCATION Warren County, Illinois
 BORING LOCATION Station 10+65; 6' Left of Centerline DRILLED BY Fehl
 BORING TYPE Hollow Stem Auger WEATHER CONDITIONS Partly Cloudy & Mild
 SOIL CLASSIFICATION SYSTEM U.S.B.S.C. SEEPAGE WATER ENCOUNTERED AT ELEVATION (-)20.0 FT.
 GROUND SURFACE ELEVATION -0.0 587.1 GROUND WATER ELEVATION AT 2 HRS. (-)11.6 FT.
 BORING DISCONTINUED AT ELEVATION (-)39.0 FT. GROUND WATER ELEVATION AT COMPLETION (-)19.1 FT.

| DESCRIPTION | DEPTH IN FEET | SAMPLE TYPE | N | Qp | Qu | Dd | Mc |
|---|---------------|-------------|--------|-----|-----|-----|----|
| OIL AND CHIPS | 3.5' | | | | | | |
| CRUSHED LIMESTONE | 8.0' | | | | | | |
| Stiff, Brown, SILTY CLAY With Some Fine- To Medium-Grained Gravel | | SS | 2 | 1.5 | 1.2 | 102 | 21 |
| Medium, Brown SILTY CLAY | 04 | SS | 2(4) | | | | |
| | | SS | 1 | 1.0 | 0.9 | 96 | 25 |
| | | SS | 2(4) | | | | |
| Soft, Dark Gray SILTY CLAY | 08 | SS | 1 | 0.8 | 0.7 | 95 | 26 |
| | | SS | 2 | | | | |
| | | SS | 2(4) | | | | |
| Medium, Dark Gray SILTY CLAY | 12 | SS | 1 | 0.4 | 0.4 | 92 | 27 |
| | | SS | 1 | 0.5 | 0.5 | 93 | 26 |
| | | SS | 1(2) | | | | |
| | | SS | 1 | 0.7 | 0.7 | 94 | 26 |
| | 16 | SS | 2 | | | | |
| | | SS | 2(4) | | | | |
| | | SS | 1 | 0.6 | 0.6 | 94 | 26 |
| | | SS | 2 | | | | |
| Soft, Dark Brown SANDY CLAY LOAM | 20 | SS | 2 | 0.3 | 0.3 | 95 | 25 |
| | | SS | 2(4) | | | | |
| | | SS | 9 | | | | |
| Stiff, Gray, Unweathered GLACIAL SILTY CLAY TILL | 24 | SS | 10 | 2.0 | 1.8 | 117 | 15 |
| | | SS | 11(21) | | | | |
| | | SS | 10 | | | | |
| Very Stiff, Gray, Unweathered GLACIAL SILTY CLAY TILL | | SS | 12 | 2.5 | 2.3 | 119 | 14 |
| | | SS | 14(26) | | | | |

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
 SS - SPLIT SPOON SAMPLE
 ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
 Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
 Dd - NATURAL DRY DENSITY - P.C.F.
 Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
 PEORIA, ILLINOIS

BORING LOG
 (CONTINUATION)

BORING NO. B-01 DATE 05-04-10
 PROJECT Structure No. 094-3016; County Highway 8 SHEET 2 OF 4
 LOCATION Warren County, Illinois W. & A. FILE NO. 5297

| DESCRIPTION | DEPTH IN FEET | SAMPLE TYPE | N | Qp | Qu | Dd | Mc |
|--|---------------|-------------|--------------------|------|-----|-----|----|
| See Sheet 1 of 4 | | | | | | | |
| Very Stiff, Gray CLAY SHALE | | SS | 19 21 24(45) | 3.0 | 2.8 | 118 | 12 |
| Hard, Gray SHALE | 30 | SS | 25 31 42(73) | 4.5+ | - | - | 9 |
| Hard, Gray LIMESTONE | 34 | SS | 103/1" | 4.5+ | - | - | 6 |
| AUGER REFUSAL AT (-)39.0 FEET | 38 | | | | | | |
| EXPLORATORY BORING DISCONTINUED | | | | | | | |
| | 42 | | | | | | |
| NOTE: Center of Bridge - Station 10+00 | | | | | | | |
| | 46 | | | | | | |
| | 50 | | | | | | |
| | 54 | | | | | | |

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
 SS - SPLIT SPOON SAMPLE
 ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
 Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
 Dd - NATURAL DRY DENSITY - P.C.F.
 Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
 PEORIA, ILLINOIS

BORING-1

BORING NO. B-02
 DATE 05-04-10
 W. & A. FILE NO. 5297
 SHEET 3 OF 4

WHITNEY & ASSOCIATES
 INCORPORATED
 2406 West Nebraska Avenue
 PEORIA, ILLINOIS 61604

BORING LOG

PROJECT STRUCTURE NO. 094-3016; COUNTY HIGHWAY 8 LOCATION Warren County, Illinois
 BORING LOCATION Station 9+34; 6' Right of Centerline DRILLED BY Fehl
 BORING TYPE Hollow Stem Auger WEATHER CONDITIONS Partly Cloudy & Mild
 SOIL CLASSIFICATION SYSTEM U.S.B.S.C. SEEPAGE WATER ENCOUNTERED AT ELEVATION (-)20.5 Ft.
 GROUND SURFACE ELEVATION 68 589.1 GROUND WATER ELEVATION AT _____ HRS. _____
 BORING DISCONTINUED AT ELEVATION (-)39.0 Ft. GROUND WATER ELEVATION AT COMPLETION (-)16.5 Ft.

| DESCRIPTION | DEPTH IN FEET | SAMPLE TYPE | N | Qp | Qu | Dd | Mc |
|--|---------------|-------------|---------------------|-----|-----|-----|----|
| BITUMINOUS CONCRETE | 8" | | | | | | |
| CRUSHED LIMESTONE With Some Silty Clay | 15" | | | | | | |
| Stiff, Brown And Dark Brown SILTY CLAY | | | | | | | |
| | 04 | SS | 1 2 2(4) | 1.4 | 1.3 | 97 | 23 |
| | | SS | 2 3(5) | 1.2 | 1.0 | 95 | 25 |
| Stiff, Brown And Dark Brown SILTY CLAY With Some Fine-Grained Gravel | 08 | SS | 1 1 2(3) | 1.3 | 1.1 | 99 | 21 |
| Medium, Dark Gray SILTY CLAY | 12 | SS | 1 2 2(4) 0 | 0.8 | 0.8 | 93 | 26 |
| | | SS | 1 1(2) | 0.8 | 0.7 | 92 | 27 |
| Soft, Dark Gray SILTY CLAY LOAM | 16 | SS | 1 1 1(2) | 0.5 | 0.5 | 90 | 28 |
| Medium, Brown And Dark Gray SANDY CLAY LOAM | | SS | 3 3 4(7) 5 | 0.8 | 0.6 | 96 | 23 |
| Medium-Density, Brown and Dark Gray, Fine- To Medium-Grained SAND | 20 | SS | 6 7(13) 3 | - | - | - | - |
| Medium, Dark Gray SANDY CLAY LOAM | 24 | SS | 5 7(12) 10 | 1.0 | 0.8 | 97 | 23 |
| Very Stiff, Gray, Unweathered GLACIAL SILTY CLAY TILL | | SS | 17 15(32) | 4.0 | 3.6 | 118 | 14 |

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
 SS - SPLIT SPOON SAMPLE
 ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
 Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
 Dd - NATURAL DRY DENSITY - P.C.F.
 Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
 PEORIA, ILLINOIS

BORING-2

BORING LOG
 (CONTINUATION)

BORING NO. B-02 DATE 05-04-10
 PROJECT Structure No. 094-3016; County Highway 8 SHEET 4 OF 4
 LOCATION Warren County, Illinois W. & A. FILE NO. 5297

| DESCRIPTION | DEPTH IN FEET | SAMPLE TYPE | N | Qp | Qu | Dd | Mc |
|--|---------------|-------------|--------------------|------|-----|-----|----|
| See Sheet 2 of 4 | | | | | | | |
| Stiff, Gray CLAY SHALE | | SS | 9 10 13(23) | 1.6 | 1.5 | 113 | 18 |
| Very Stiff, Gray SHALE | 30 | SS | 20 31 19(50) | 3.0 | - | - | 13 |
| Hard, Gray LIMESTONE | 34 | SS | 103/2" | 4.5+ | - | - | 6 |
| AUGER REFUSAL AT (-)39.0 FEET | 38 | | | | | | |
| EXPLORATORY BORING DISCONTINUED | | | | | | | |
| | 42 | | | | | | |
| NOTE: Center of Bridge - Station 10+00 | | | | | | | |
| | 46 | | | | | | |
| | 50 | | | | | | |
| | 54 | | | | | | |

N - BLOWS DELIVERED PER FOOT BY A 140 LB. HAMMER FALLING 30 INCHES
 SS - SPLIT SPOON SAMPLE
 ST - SHELBY TUBE SAMPLE

Qp - CALIBRATED PENETROMETER READING - T.S.F.
 Qu - UNCONFINED COMPRESSIVE STRENGTH - T.S.F.
 Dd - NATURAL DRY DENSITY - P.C.F.
 Mc - NATURAL MOISTURE CONTENT - %

WHITNEY & ASSOCIATES
 PEORIA, ILLINOIS