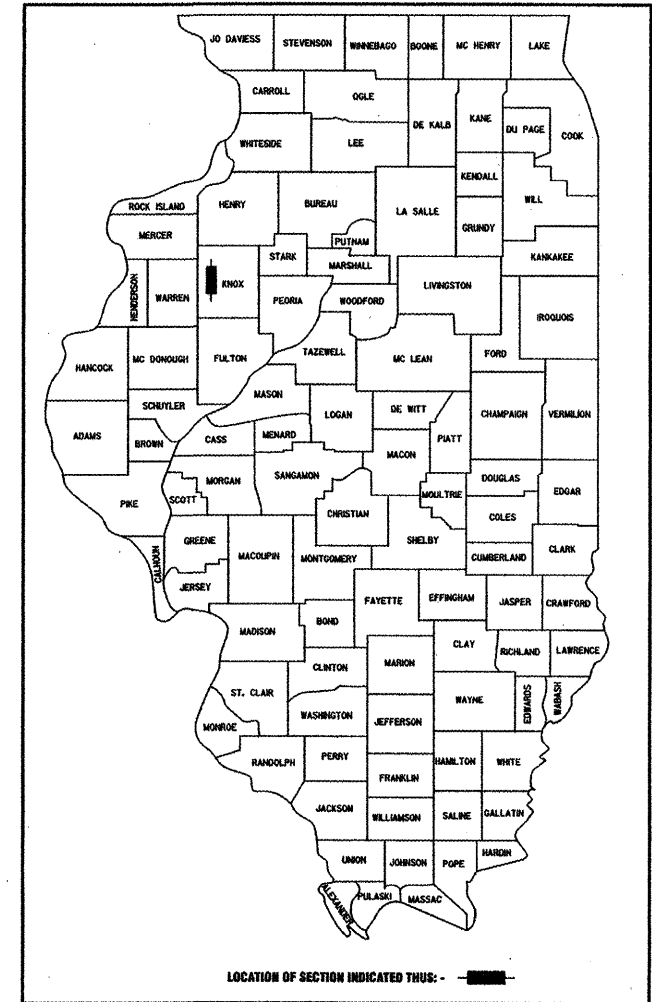


STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION BUREAU OF LOCAL ROADS AND STREETS PLANS FOR PROPOSED SUPERSTRUCTURE REPLACEMENT

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-------------|----------------|--------|--------------|-----------|
| 6791 | 07-00401-25-BR | KNOX | 18 | 1 |

BRM-5025(045)
CONTRACT NO. 89557
CATALOG 034305-00



**STRUCTURE NO. 048-0024
SOUTH HENDERSON STREET
CITY OF GALESBURG
SECTION 07-00401-25-BR
PROJECT BRM-5025(045)
CATALOG 034305-00
C-94-150-09**

INDEX OF SHEETS

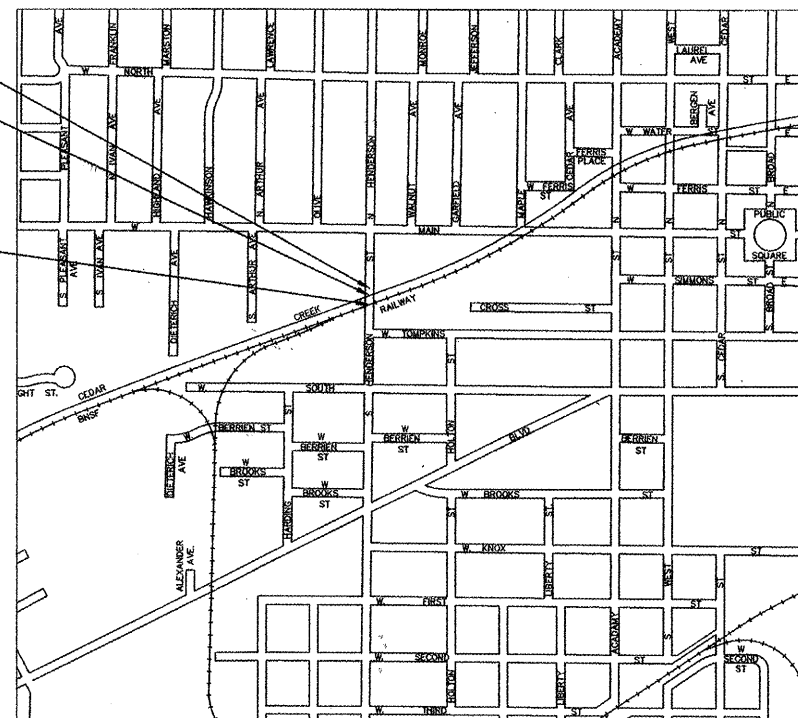
1. COVER SHEET
2. TYPICAL SECTIONS AND GENERAL NOTES
3. SUMMARY OF QUANTITIES
4. REMOVAL PLAN AND PLAN OF PROPOSED IMPROVEMENTS
- 5-18. BRIDGE PLANS

LIST OF STANDARDS

- | | |
|-----------|--|
| 000001-05 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001001-02 | AREAS OF REINFORCEMENT BARS |
| 420501-04 | PCC PAVEMENT AND PCC BASE COURSE ADJACENT TO RAILROAD GRADE CROSSING |
| 515001-03 | NAME PLATE FOR BRIDGES |
| 606001-04 | CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER |
| 606301-04 | PC CONCRETE ISLANDS AND MEDIANS |
| 701301-03 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701801-04 | LANE CLOSURE MULTILANE 1W or 2W CROSSWALK OR SIDEWALK CLOSURE |
| 701901-01 | TRAFFIC CONTROL DEVICES |
| 780001-02 | TYPICAL PAVEMENT MARKINGS |
| BLR 22-6 | TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO WAY RURAL TRAFFIC/ROAD CLOSED TO THRU TRAFFIC) |

SECTION BEGINS
STA. 44+90.00

Section 07-00401-25-BR
Includes Superstructure
Replacement of Structure
No. 048-0024
68'-9 1/4" BK to BK of Abutments
Two Span P.P.C. Deck Beam Bridge
STA. 45+21.34 to STA. 45+90.16
SECTION ENDS
STA. 47+77.20



LOCATION MAP (NO SCALE)



PLANS PREPARED BY
BRUNER, COOPER & ZUCK, INC
100 EAST SIMMONS STREET
GALESBURG, ILLINOIS 61401
PHONE: (309) 343-5282 FAX: (309) 343-5282

GROSS AND NET LENGTH OF SECTION 287.20 FT = 0.05 MILE
FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL (URBAN)
DESIGN SPEED: 35 mph CURRENT ADT = 6400
DESIGN GUIDELINES: FAPLH-3R
VARIANCES GRANTED: NONE
COMMITMENTS: NONE



Gregory C. Peterson 5/16/2010
DATE
GREGORY C. PETERSON
ILLINOIS REGISTERED
PROFESSIONAL ENGINEER
NO. 048387
EXPIRES NOV. 30, 2011

**CALL J.U.L.I.E. BEFORE YOU DIG
1-800-892-0123**

**CALL GALESBURG SANITARY DISTRICT BEFORE YOU DIG
1-309-342-0131**

CONTRACT NO. 89557

| AGENCY RESPONSIBLE FOR LETTING | |
|---|---|
| APPROVED | <i>M. L. ...</i> CITY OF GALESBURG, ENGINEER |
| PASSED | <i>Gregory C. Peterson</i> DISTRICT ENGINEER OF LOCAL ROADS |
| RELEASED FOR BID BASED ON LIMITED REVIEW | <i>Gregory C. Peterson</i> DEPUTY DIRECTOR OF HIGHWAYS/REGION 3 ENGINEER |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|---------------------|----------------|------------------|--------------------|-----------|
| F.A.I.D. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 6791 | 07-00401-25-BR | KNOX | 18 | 2 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |
| | | BRM-5025(045) | CONTRACT NO. 89557 | |

GENERAL NOTES

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 markers and monuments until the Owner, an authorized Surveyor, or agent has witnessed or otherwise referenced their location.

The final top 4" of soil in any area disturbed by the contractor must be a cohesive soil capable of supporting vegetation.

The Contractor shall be responsible for protecting utility property during construction operations as outlined in Article 107.31 of the Standard Specifications.

Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work. However, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Earth excavation and backfill for pavement, sidewalk, driveway, curb & gutter, etc. shall be included in the unit cost of the various items of work.

Work to be performed by others that the Contractor will be required to coordinate and schedule his work accordingly includes the following:

- Water main removal and replacement
- Removal and replacement of any existing street signs in conflict with the proposed improvements.
- Final pavement markings
- Removal and replacement of the existing railroad flashing signal with gate on the bridge superstructure.
- Telephone line(s) reattachment

Cost of Bituminous Materials, Prime Coat RC 70 shall be included in the unit cost of Bituminous Concrete Surface Course.

Butt Joints shall not be milled more than three (3) days prior to placement of the Bituminous Surface Course.

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

WATER MAIN NOTE

Existing 16" water main shall be removed by the Contractor. This cost for water main removal will be included in the cost for Concrete Removal. Sleeve for proposed water main will be included in Concrete Structures. Proposed water main to be installed by Owner. Any concrete removal required to install proposed water main sleeve will be paid for on a time and material basis during construction.

ELECTRICAL CONDUIT NOTES

CONTRACTOR RESPONSIBILITIES INCLUDE:

Provide electrical conduit and anchor bolts for the signal arm on the bridge as shown on sheet 13. The Conduit shall extend through the sidewalk and to the back of abutment. Attach to abutment in an identical manner that matches existing.

Provide conduit and anchor bolts for the signal north of the tracks near the south abutment. Construct per details shown on sheet 17.

All conduit shall be galvanized steel and 4" I.D. and shall have smooth curves to allow the new wires to be run through the conduit.

The Contractor shall allow the BNSF one working day to perform removals and three working days to perform replacement work and shall be included in the Progress Schedule.

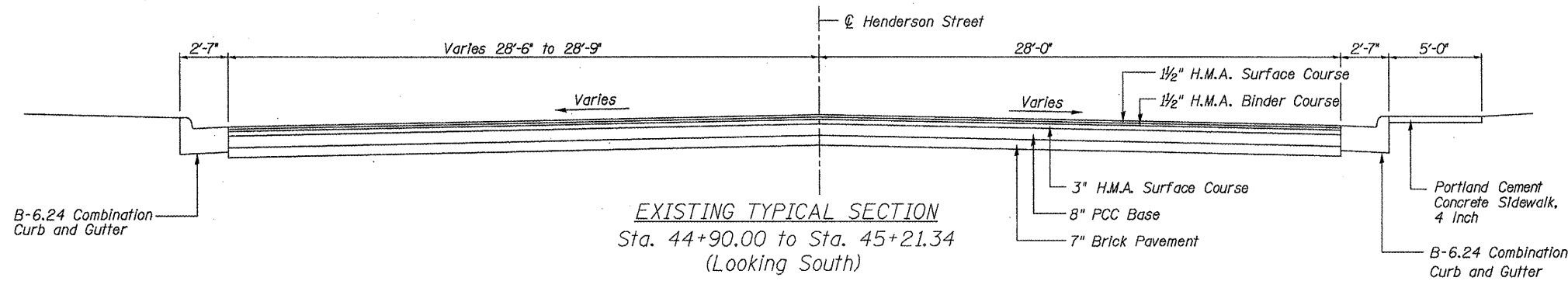
All work associated with the removal and installation of the electrical conduits shall be included in Concrete Structures.

BNSF RESPONSIBILITIES INCLUDE:

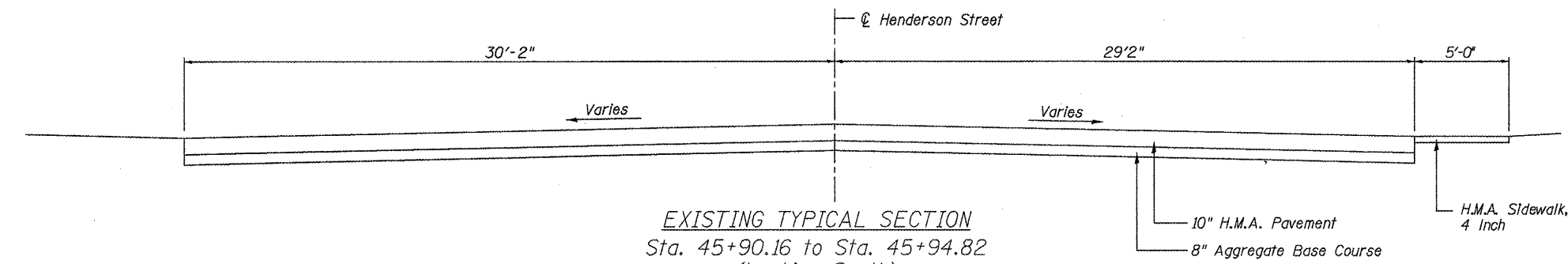
Remove signals and crossing arm and retire electrical prior to removals for medians and sidewalk.

Replace wiring and signals for crossing arm and signals on the bridge.

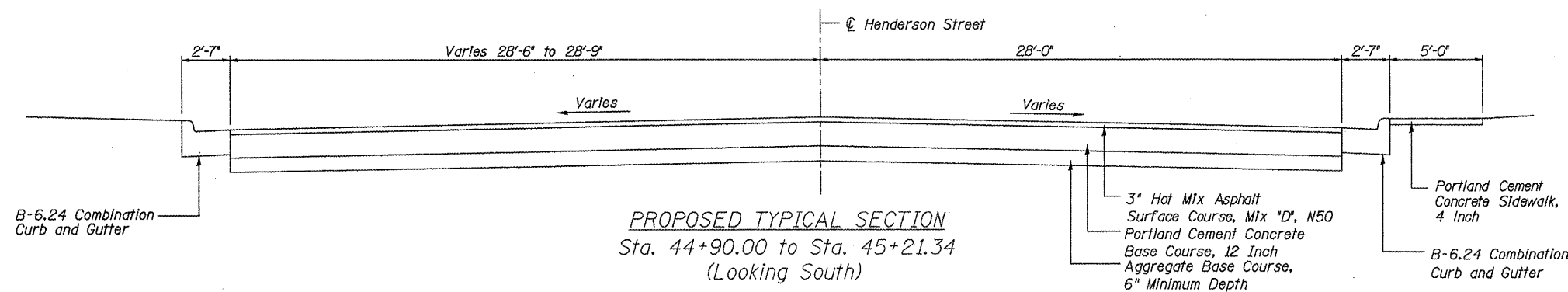
Replace wiring, foundation, bolts and signal located in the south median. (Note the owner will provide an elevation for the top of the median foundation during construction).



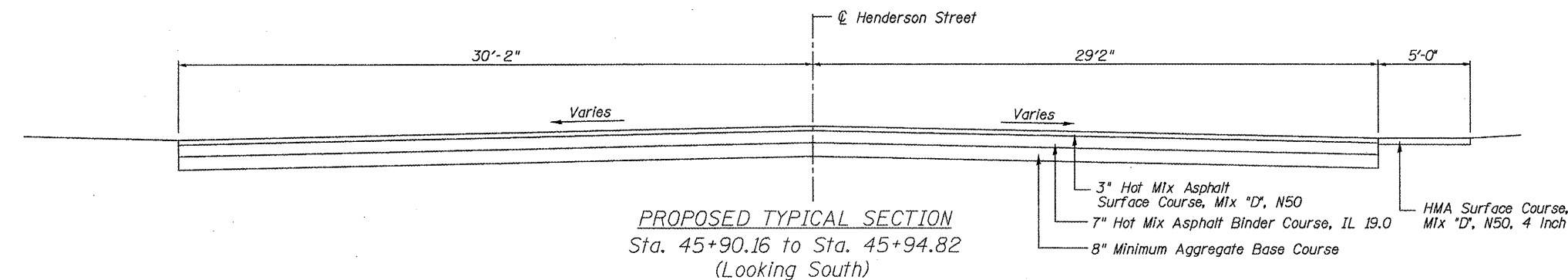
EXISTING TYPICAL SECTION
Sta. 44+90.00 to Sta. 45+21.34
(Looking South)



EXISTING TYPICAL SECTION
Sta. 45+90.16 to Sta. 45+94.82
(Looking South)



PROPOSED TYPICAL SECTION
Sta. 44+90.00 to Sta. 45+21.34
(Looking South)



PROPOSED TYPICAL SECTION
Sta. 45+90.16 to Sta. 45+94.82
(Looking South)

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
| | |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL SECTIONS AND
GENERAL NOTES
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

SCALE: VERT. NONE, HORIZ. NONE
DATE: 08/28/2009

DRAWN BY: RRR
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
Phone: (309) 343-2982 100 East Simons Street Galesburg, Illinois 61602
Fax: (309) 343-9232 E-Mail: bcz@brunercopco.com

JOB NO. 290067 FILE NAME: TYP_SECT.dwg

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|--------------------------------|----------------|----------|------------------|-----------|
| 6791 | 07-00401-25-BR | KNOX | 18 | 3 |
| STA. 44+90.00 TO STA. 47+77.20 | | | | |
| FED. ROAD DIST. NO. - | | ILLINOIS | FED. AID PROJECT | |

SUMMARY OF QUANTITIES

| CODE | ITEM | UNIT | TOTAL QUANTITY |
|----------|--|-------|----------------|
| 3510400 | AGGREGATE BASE COURSE, TYPE "B" | TON | 79.9 |
| 35300700 | PORTLAND CEMENT CONCRETE BASE COURSE, 12" | SQ YD | 195.3 |
| 40603080 | H.M.A. BINDER COURSE, IL-19.0, N50 | TON | 12.0 |
| 40603335 | H.M.A. SURFACE COURSE, MIXTURE D, N50 | TON | 99.9 |
| 42001300 | PROTECTIVE COAT | SQ YD | 169 |
| 42400410 | PORTLAND CEMENT CONCRETE SIDEWALK 8 INCH | SQ FT | 181 |
| 44000100 | PAVEMENT REMOVAL | SQ YD | 226.0 |
| 44000500 | COMBINATION CURB AND GUTTER REMOVAL | FOOT | 64 |
| 44000600 | SIDEWALK REMOVAL | SQ FT | 176 |
| 44004400 | PAVEMENT REMOVAL (SPECIAL) | SQ YD | 137.4 |
| 50101500 | REMOVAL OF EXISTING SUPERSTRUCTURE | EACH | 1 |
| 50102400 | CONCRETE REMOVAL | CU YD | 25.4 |
| 50200100 | STRUCTURE EXCAVATION | CU YD | 35.3 |
| 50300225 | CONCRETE STRUCTURES | CU YD | 31.9 |
| 50300255 | CONCRETE SUPERSTRUCTURE | CU YD | 24.6 |
| 50400305 | PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH) | SQ FT | 4486 |
| 50800205 | REINFORCEMENT BARS, EPOXY COATED | POUND | 9,990 |
| 50900105 | ALUMINUM RAILING, TYPE L | FOOT | 123 |
| 51500100 | NAME PLATES | EACH | 1 |
| 54002020 | EXPANSION BOLTS 3/4 INCH | EACH | 448 |
| 58100200 | WATERPROOFING MEMBRANE SYSTEM | SQ YD | 445 |
| 58300100 | PORTLAND CEMENT MORTAR FAIRING COURSE | FOOT | 1072 |
| 59300100 | CONTROLLED LOW STRENGTH MATERIAL | CU YD | 35.3 |
| 60255500 | MANHOLES TO BE ADJUSTED | EACH | 3 |
| 60255600 | MANHOLES TO BE ADJUSTED (SPECIAL) | EACH | 5 |
| 60266600 | VALVE BOXES TO BE ADJUSTED | EACH | 1 |
| 60605000 | COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 | FOOT | 64 |
| 60623711 | CONCRETE MEDIAN | SQ FT | 1577 |
| 67100100 | MOBILIZATION | LSUM | 1 |
| 70101835 | TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22 | LSUM | 1 |
| X0325305 | STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5') | SQ FT | 30 |
| Z0013798 | CONSTRUCTION LAYOUT | LSUM | 1 |
| Z0048665 | RAILROAD PROTECTIVE LIABILITY INSURANCE | LSUM | 1 |

* SPECIALTY ITEMS

H.M.A. MIXTURE REQUIREMENTS

The following mixture requirements are applicable for this project.

| MIXTURE USE(S): | SURFACE COURSE | BINDER COURSE |
|--|---------------------------------|-----------------------|
| AC/PG: | PG 64-22 | PG 64-22 |
| RAP %: (MAX)** | 15% | 25% |
| DESIGN AIR VOIDS: | 4.2% @ $N_{max} = 50$ | 4.2% @ $N_{max} = 50$ |
| MIXTURE COMPOSITION: (GRADATION MIXTURE) | IL 9.5 or 12.5 (FOR 3" OVERLAY) | IL 19.0 |
| FRICTION AGGREGATE: | MIXTURE D | N/A |

**If 15% RAP is used, the Contractor may be required to use a softer grade of asphalt as determined by the Materials Engineers.

QUANTITIES NOT OTHERWISE SHOWN

| LOCATION | AGGREGATE BASE COURSE VARIABLE THICKNESS | PORTLAND CEMENT CONCRETE BASE COURSE 12 INCH THICK | HMA SURFACE COURSE 3 INCH THICK U.N.O. | HMA BINDER COURSE 7 INCH THICK | HMA SURFACE COURSE 2 INCH THICK |
|--------------------------------|--|--|--|--------------------------------|---------------------------------|
| | INCH | 150 PCF | 112 LB/SY/INCH | 112 LB/SY/INCH | 112 LB/SY/INCH |
| | TON | SQ YD | TON | TON | TON |
| STA. 44+90 TO STA. 45+21.34 | 65.9 | 195.3 | 32.8 | - | - |
| STA. 45+21.34 TO STA. 45+90.16 | - | - | - | - | 59.2 |
| STA. 45+90.16 TO STA. 45+94.82 | 14.0 | - | 5.6 | 12.0 | - |
| STA. 46+25 TO STA. 47+37 | - | - | 2.3 | - | - |
| TOTAL | 79.9 | 195.3 | 40.7 | 12.0 | 59.2 |

* 1/2" THICKNESS AROUND PROPOSED MEDIAN

PAVEMENT REMOVAL
STA. 44+90 TO STA. 45+21.34
STA. 45+90.16 TO STA. 45+94.82
TOTAL 226.0 SQ YD

CONTROLLED LOW-STRENGTH MATERIAL
NORTH ABUTMENT 17.5 CU YD
SOUTH ABUTMENT 17.8 CU YD
TOTAL 35.3 CU YD

PAVEMENT REMOVAL (SPECIAL)
STA. 46+24 TO STA. 47+37
TOTAL 137.4 SQ YD

REMOVAL OF EXISTING SUPERSTRUCTURE
STA. 45+21.34 TO STA. 45+90.16
TOTAL 1 EACH

COMBINATION CURB AND GUTTER REMOVAL
STA. 44+90 TO STA. 45+21.34 LT.
STA. 44+90 TO STA. 45+21.34 RT.
TOTAL 64 FOOT

PROTECTIVE COAT
MEDIAN 81 SQ YD
SIDEWALK 43 SQ YD
PARAPETS 45 SQ YD
TOTAL 169 SQ YD

COMBINATION CONCRETE CURB & GUTTER, TYPE B-6.24
STA. 44+90 TO STA. 45+21.34 LT.
STA. 44+90 TO STA. 45+21.34 RT.
TOTAL 64 FOOT

SIDEWALK REMOVAL
STA. 44+90 TO STA. 45+34 RT
TOTAL 176 SQ FT

PORTLAND CEMENT CONCRETE SIDEWALK 8 INCH
STA. 44+90 TO STA. 45+21.34 RT.
TOTAL 181 SQ FT

VALVE BOXES TO BE ADJUSTED
STA. 45+00 LT
TOTAL 1 EACH

MANHOLES TO BE ADJUSTED (SPECIAL)
STA. 44+97 LT. 1 EACH
STA. 44+98 LT. 1 EACH
STA. 45+06 RT. 1 EACH
STA. 45+18 E. 1 EACH
STA. 45+94 E. 1 EACH
TOTAL 5 EACH

CONCRETE MEDIAN
STA. 45+24 TO STA. 45+90 LT.
STA. 46+27 TO STA. 47+35 RT.
TOTAL 987 SQ FT

MANHOLES TO BE ADJUSTED
STA. 46+92 RT. 1 EACH
STA. 47+03 RT. 1 EACH
STA. 47+17 LT. 1 EACH
TOTAL 3 EACH

CONCRETE REMOVAL
SOUTH ABUTMENT 9.1 CU YD
NORTH ABUTMENT 9.2 CU YD
PIER 7.1 CU YD
TOTAL 25.4 CU YD

MOBILIZATION
STA. 44+90.00 TO STA. 47+77.20
TOTAL 1 LSUM

TRAFFIC CONTROL AND PROTECTION
STA. 44+90.00 TO STA. 47+77.20
TOTAL 1 LSUM

NOTE:
PAVEMENT MARKING BY OWNER.

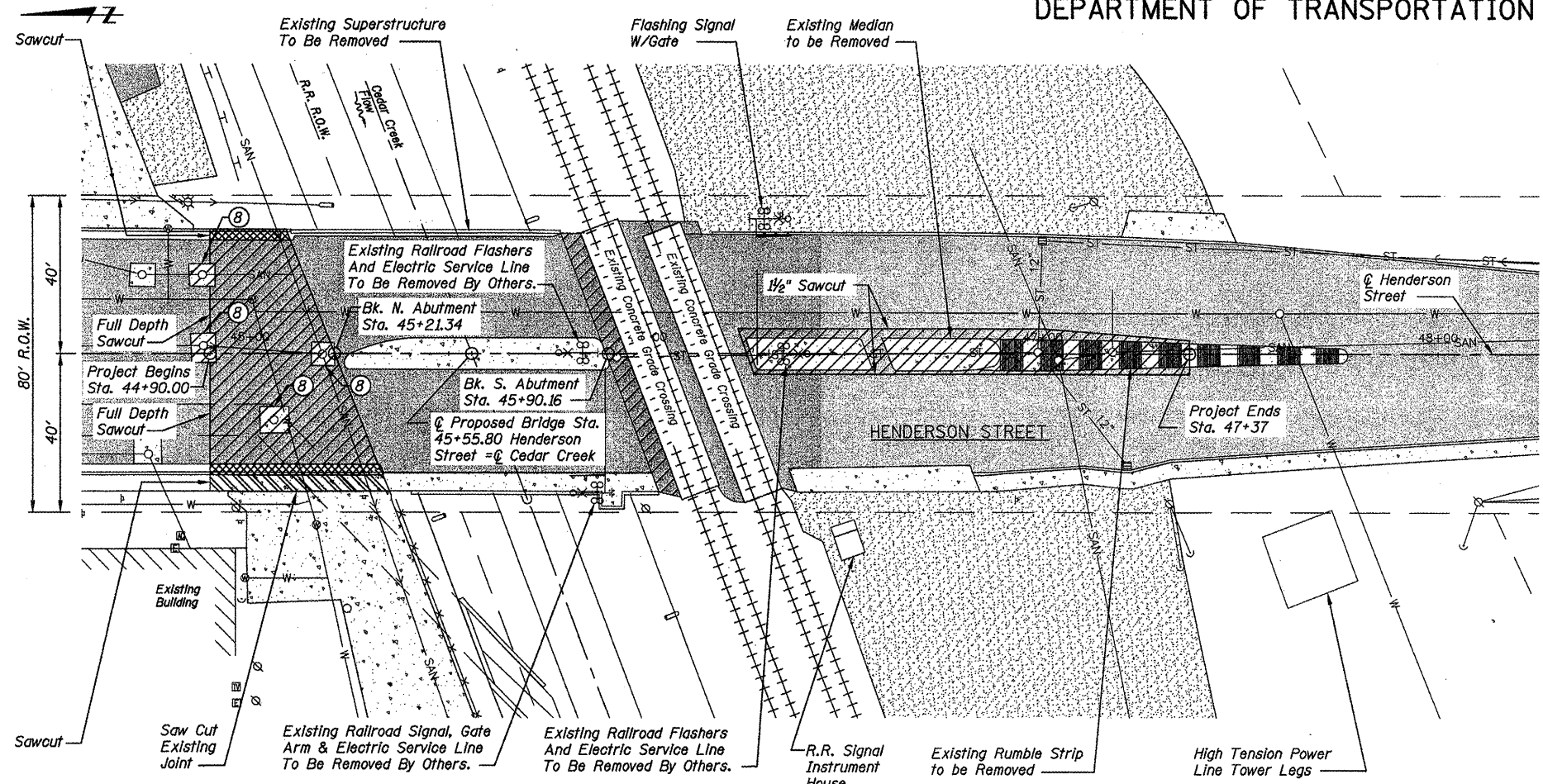
ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.8 S.N. 048-0024

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
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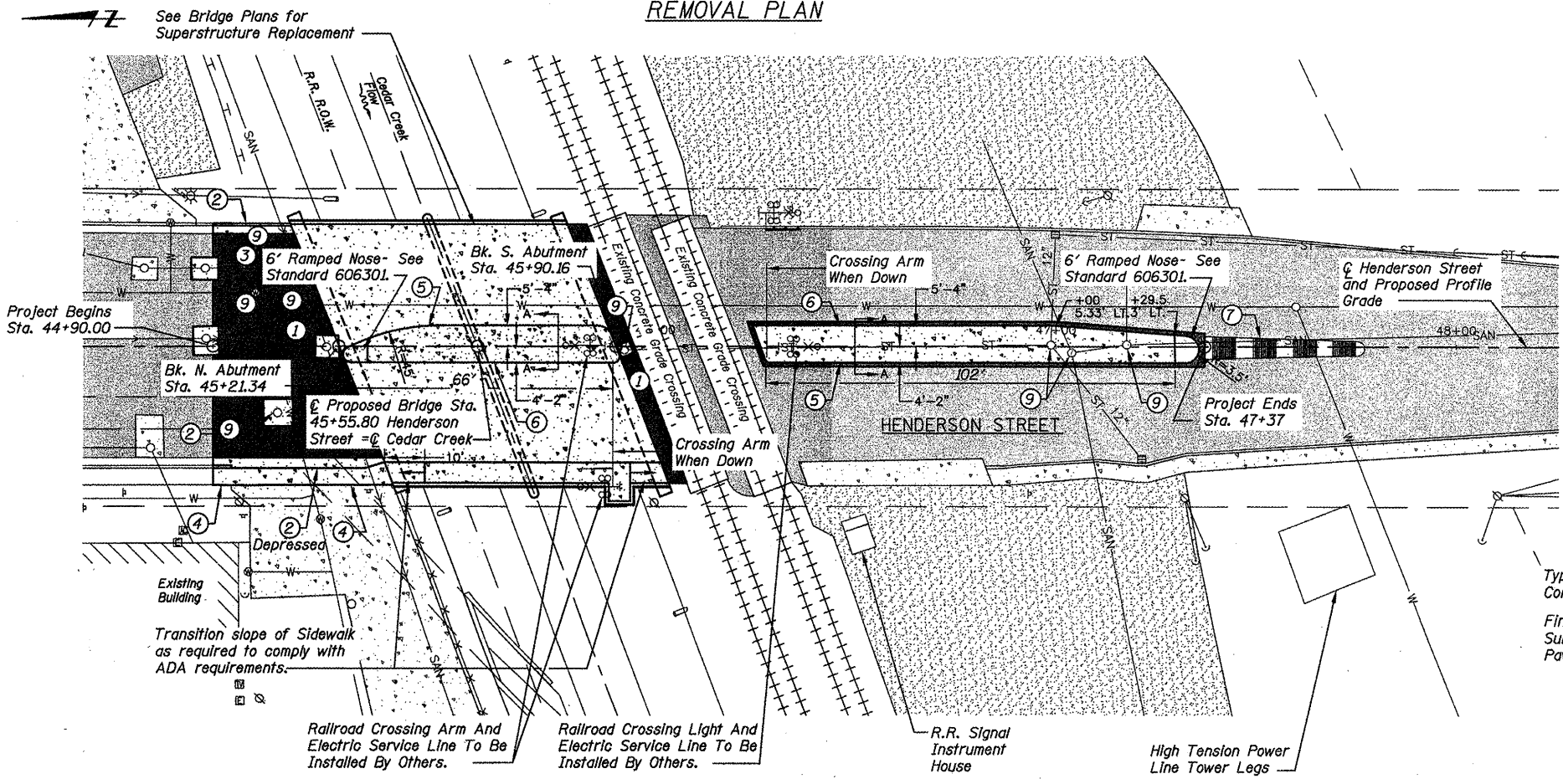
SCALE: VERT. NONE
HORIZ. NONE
DATE: 08/28/2009
DRAWN BY: RRR
DESIGNED BY: PETERSON
CHECKED BY: PETERSON
Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
108 East Simons Street Galesburg, IL 61602
Phone: (309) 343-2262 Fax: (309) 343-5232
E-Mail: bcz@brunercopcoz.com
JOB NO. 290067 FILE NAME: QUANTITIES.dwg

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-------------------------------------|----------------|------------------|--------------|------------------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 6791 | 07-00401-25-BR | KNOX | 18 | 4 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS | | FED. AID PROJECT |
| BRM-5025(045) CONTRACT NO. 89557 | | | | |



REMOVAL PLAN



PLAN OF PROPOSED IMPROVEMENTS

LEGEND

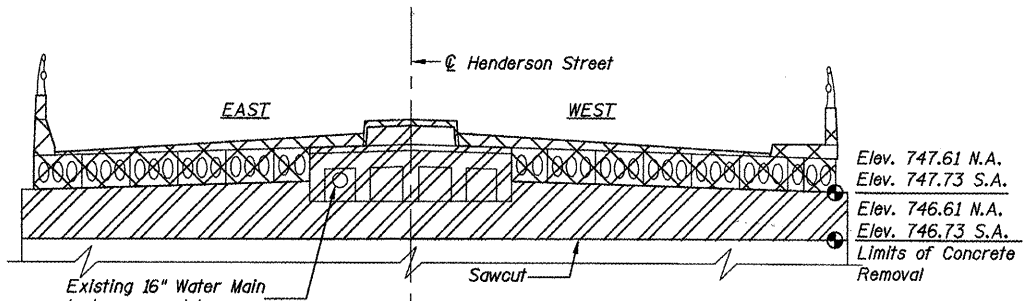
- ① Proposed Pavement
- ② Proposed Combination Concrete Curb & Gutter
- ③ Existing Valve Box to be Adjusted
- ④ Proposed P.C.C. Sidewalk, 8"
- ⑤ Proposed Median w/Mountable Type Edge
- ⑥ Proposed Median w/Barrier Type Edge
- ⑦ Existing Rumble Median to Remain
- ⑧ Existing Concrete Manhole Protection to be Removed
- ⑨ Proposed Manhole Adjustment

LEGEND

- ▨ Pavement Removal
- ▩ Curb and Gutter Removal
- ▧ Concrete Sidewalk Removal

Existing Railroad Track Elevations

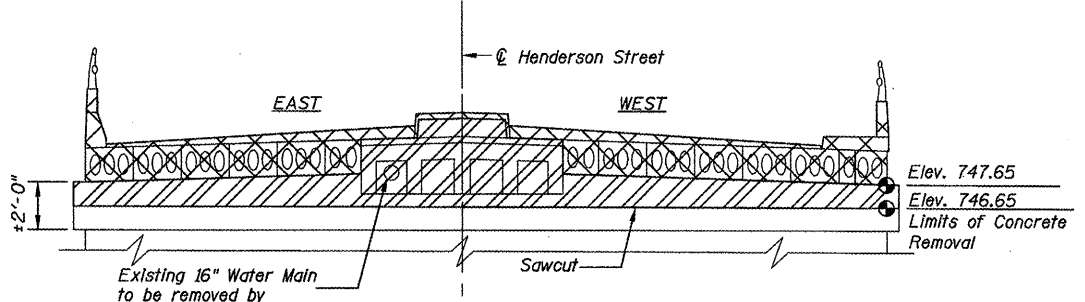
| | |
|--------------|----------------------------|
| North Tracks | |
| North Rail | Sta. 0+81.63, Elev. 756.57 |
| South Rail | Sta. 0+76.54, Elev. 756.58 |
| South Tracks | |
| North Rail | Sta. 0+63.58, Elev. 756.40 |
| South Rail | Sta. 0+58.59, Elev. 756.41 |



SECTION THRU BRIDGE SUPERSTRUCTURE
SHOWING LIMITS OF CONCRETE REMOVAL AT ABUTMENTS
(Looking South)

LEGEND

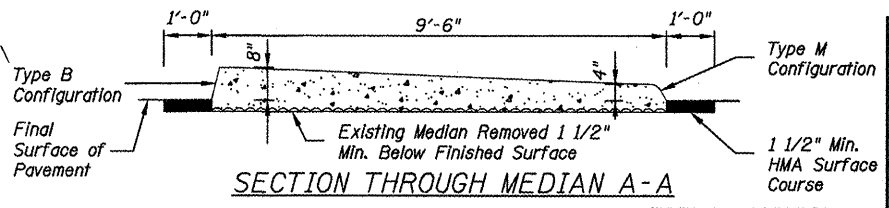
- ▨ Concrete Removal
- ▩ Superstructure Removal



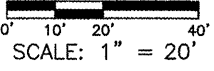
SECTION THRU BRIDGE SUPERSTRUCTURE
SHOWING LIMITS OF CONCRETE REMOVAL AT PIER
(Looking South)

LEGEND

- ▨ Concrete Removal
- ▩ Superstructure Removal



SECTION THROUGH MEDIAN A-A



Notes:
1. Transition Pavement And Curb And Gutter From Proposed Typical Section to Match Existing Typical Section In 10'-0" Unless Otherwise Noted.

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
**REMOVAL PLAN AND
PLAN OF PROPOSED IMPROVEMENTS**
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.8 S.N. 048-0024

SCALE: VERT. NONE, HORIZ. NONE
DATE: 08/28/2009

DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

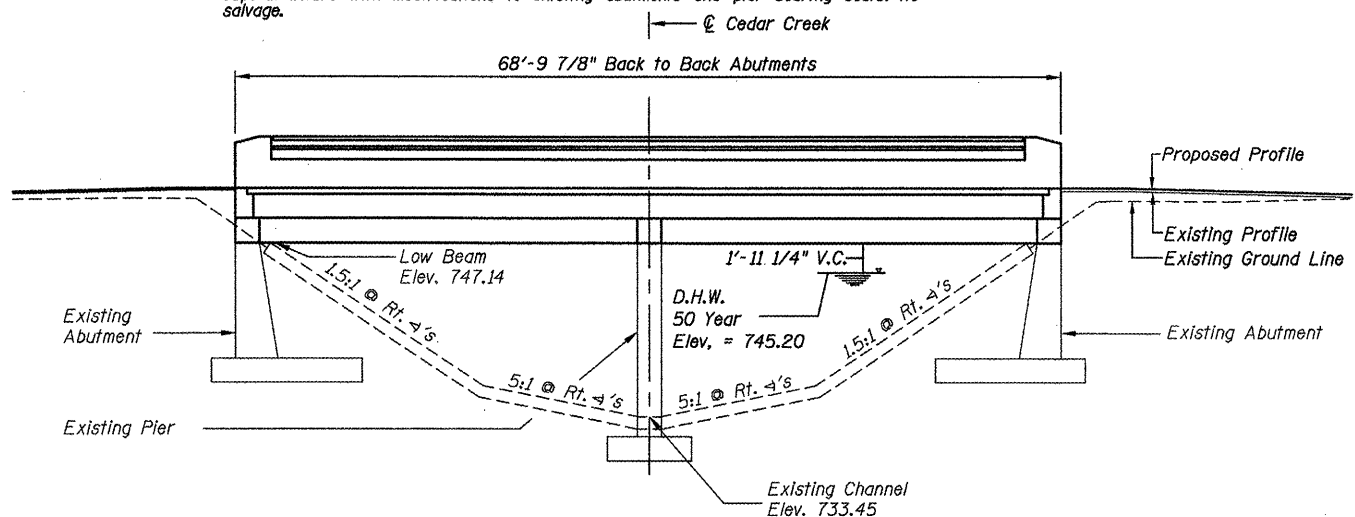
Bruner • Cooper & Zuck • Inc.
Consulting Engineers 188 East Simmons Street
Galesburg, Illinois 61601
Phone: (309) 343-2282 Fax: (309) 343-9232
E-Mail: bcz@brunercopco.com

JOB NO. 290067 FILE NAME: REMOPLAN B.dwg

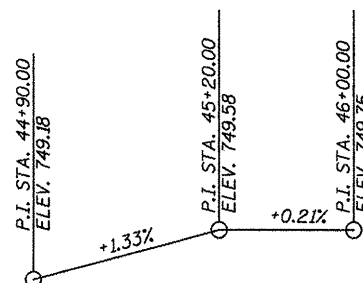
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------------|----------------|------------------|-------------------------------------|-----------|
| 6791 | 07-00401-25-BR | KNOX | 18 | 5 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS | FED. AID PROJECT | |
| Bridge Sheet 1 of 14 Sheets | | | BRM-5025(045) CONTRACT NO. 89557 | |

BM: Top of Stem Existing Fire Hydrant Sta. - 44+35.96, Elev. 750.51.
Existing Structure: S.N. 048-0024, Two span reinforced concrete tee beam and 17" precast, prestressed deck beams on reinforced concrete abutments on spread footings. 68'-0" back to back of abutments, 67'-0" out to out of deck. Remove and replace existing superstructure with modifications to existing abutments and pier bearing seats. No salvage.



ELEVATION



PROFILE GRADE HENDERSON STREET

GENERAL NOTES

1. Reinforcement bars shall conform to the requirements of ASTM A706, Grade 60.
2. Backfill shall be placed behind abutments after the superstructure has been erected and the dowel bars grouted. See Article 502.10 of the Standard Specifications.

TOTAL BILL OF MATERIAL

| ITEM | UNIT | SUPER | SUB | TOTAL |
|--|-------|-------|------|-------|
| Removal of Existing Superstructure | EACH | 1 | - | 1 |
| Structure Excavation | CU YD | - | 35.3 | 35.3 |
| Concrete Structures | CU YD | - | 31.9 | 31.9 |
| Concrete Superstructure | CU YD | 24.6 | - | 24.6 |
| Protective Coat | SQ YD | 169 | - | 169 |
| Precast Prestressed Concrete Deck Beams (17" Depth) | SQ FT | 4,486 | - | 4,486 |
| Reinforcement Bars, Epoxy Coated | POUND | 3,890 | 6100 | 9,990 |
| Name Plates | EACH | 1 | - | 1 |
| Expansion Bolts 3/4 Inch | EACH | - | 448 | 448 |
| Structural Repair of Concrete (Depth Equal to or Less than 5") | SQ FT | - | 30 | 30 |
| Aluminum Railing, Type L | FOOT | 123 | - | 123 |
| HMA Surface Course, 2" | SQ YD | 59.2 | - | 59.2 |

HENDERSON STREET OVER CEDAR CREEK
BUILT 20____
KNOX COUNTY
SEC. 07-00401-25-BR
STA. 45+55.80
S.N. 048-0024
LOADING HL-93

NAME PLATE

See Std. 515001

HIGHWAY CLASSIFICATION

ADT: 6400 (2006) 13740 (2021)
Functional Class: MINOR ARTERIAL (Urban)
Design Speed: 35 mph

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design
Specifications, 4th edition w/2008 Interim

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 (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 6,000$ psi
 $f'_{of} = 5,000$ psi
 $f_{pu} = 270,000$ psi (1/2" ϕ strands)

WATERWAY INFORMATION

Drainage Area = 8.20 Sq. Mi. Low Grade Elev. 747.14 @ Sta. 45+21.34

| Flood | Freq. Yr. | Q C.F.S. | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater El. | |
|-------------|-----------|----------|-----------------|-------|-------------|------------|-------|---------------|-------|
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| Design | 50 | 2350 | 304 | 310 | 746.00 | 0.00 | 0.00 | 746.0 | 746.0 |
| Base | | | | | | | | | |
| Overtopping | | | | | | | | | |
| Max. Calc. | | | | | | | | | |

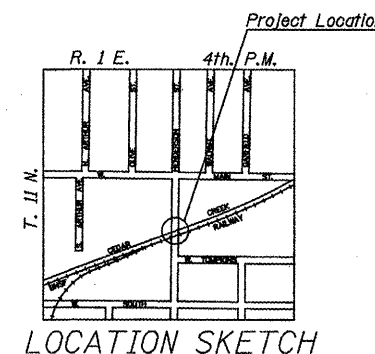
* Data taken from Flood Insurance Study, dated December 19, 1984 by FEMA. Community Number 170349.



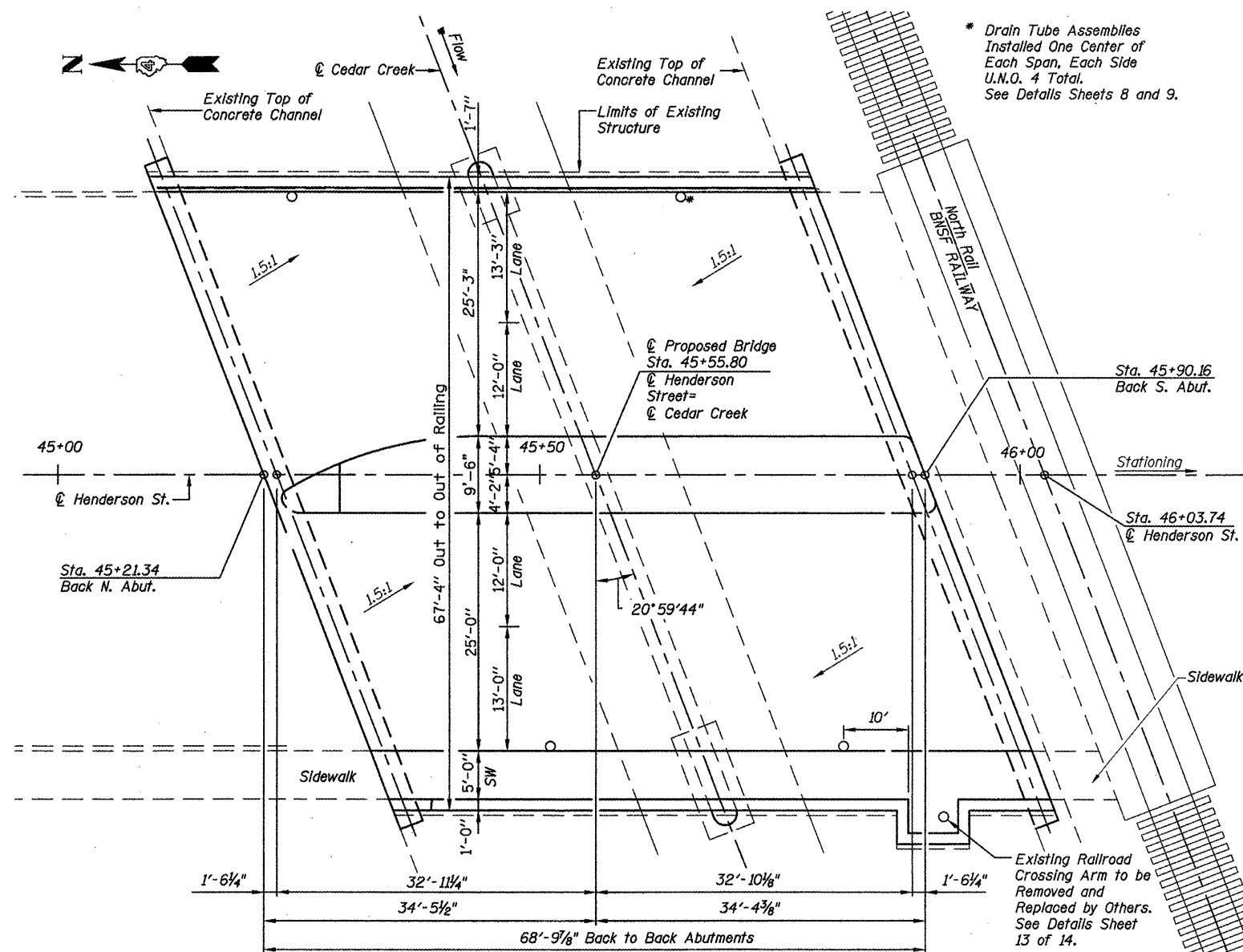
I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current A.A.S.H.T.O. LRFD Specifications.

Gregory C. Peterson
GREGORY C. PETERSON
Licensed Structural Engineer
State of Illinois 81-5717
Expires 11/30/2010

5/6/2010
Dated



LOCATION SKETCH



PLAN

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN AND ELEVATION
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

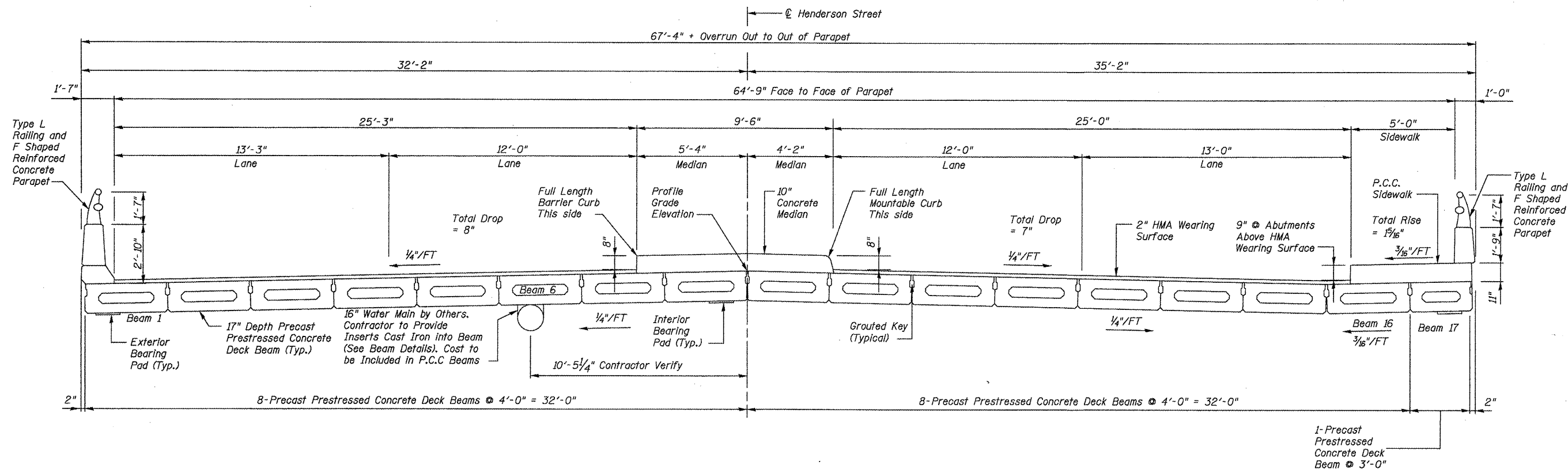
| REVISIONS | |
|-----------|------|
| NAME | DATE |
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| | |
| | |

SCALE: VERT. NONE, HORIZ. NONE.
DATE: 08/28/2009
DRAWN BY: RRR
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

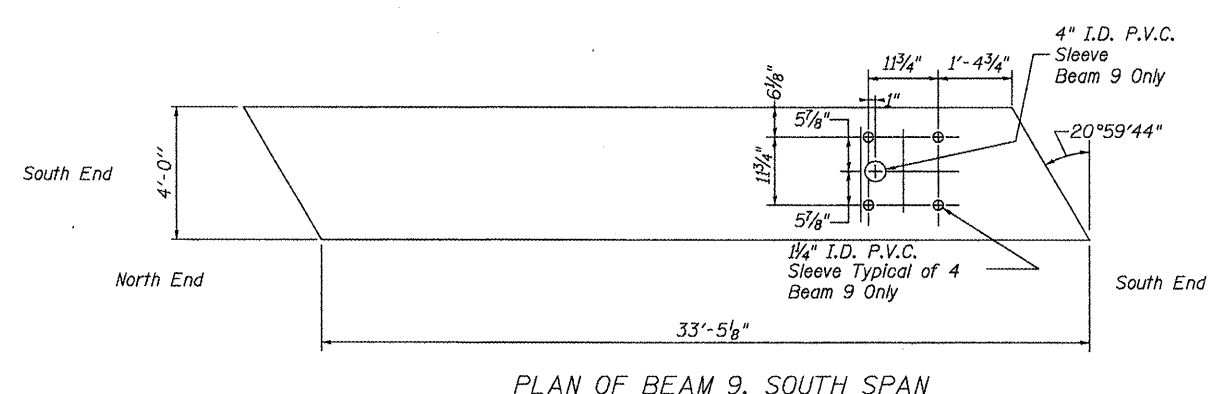
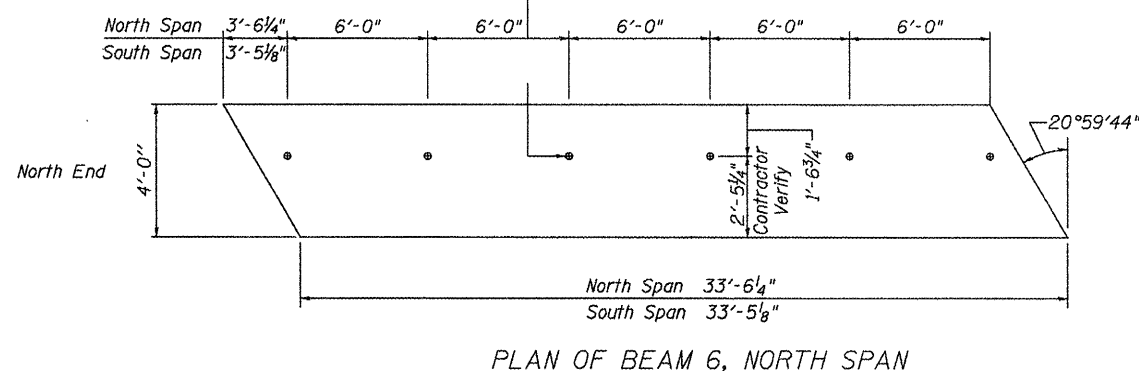
Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
Phone: (309) 343-9282 188 East Street Street PROFESSIONAL DESIGN FIRM
Galesburg, Illinois 61602 Fax: (309) 343-9282 LS/PE/SE CORP. 184-002535
E-Mail: bcz@brunercopco.com

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|---------------------|----------------|--------------------|--------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 6791 | 07-00401-25-BR | KNOX | 18 | 6 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |
| | | BRM-5025(045) | | |
| | | CONTRACT NO. 89557 | | |



Threaded Insert In Bottom of Beam 6 Only (North and South Spans). Spaced as Shown. See Typical Section This Sheet and Special Provisions.



ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE I
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

| REVISIONS | |
|-----------|------|
| NAME | DATE |
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SCALE: VERT. NONE.
HORIZ. NONE.

DATE: 08/28/2009

DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

Bruner, Cooper & Zuck, Inc.
Consulting Engineers
188 East Simons Street
Galesburg, Illinois 61402
Phone: (309) 343-9282
Fax: (309) 343-9232
E-Mail: bcz@bczinc.com

Structural Engineers
Land Surveyors
PROFESSIONAL DESIGN FIRM
LS/PE/SE/CEP, 184-02633

JOB NO. 290067
FILE NAME: SPRSTRUCT-1.dwg

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

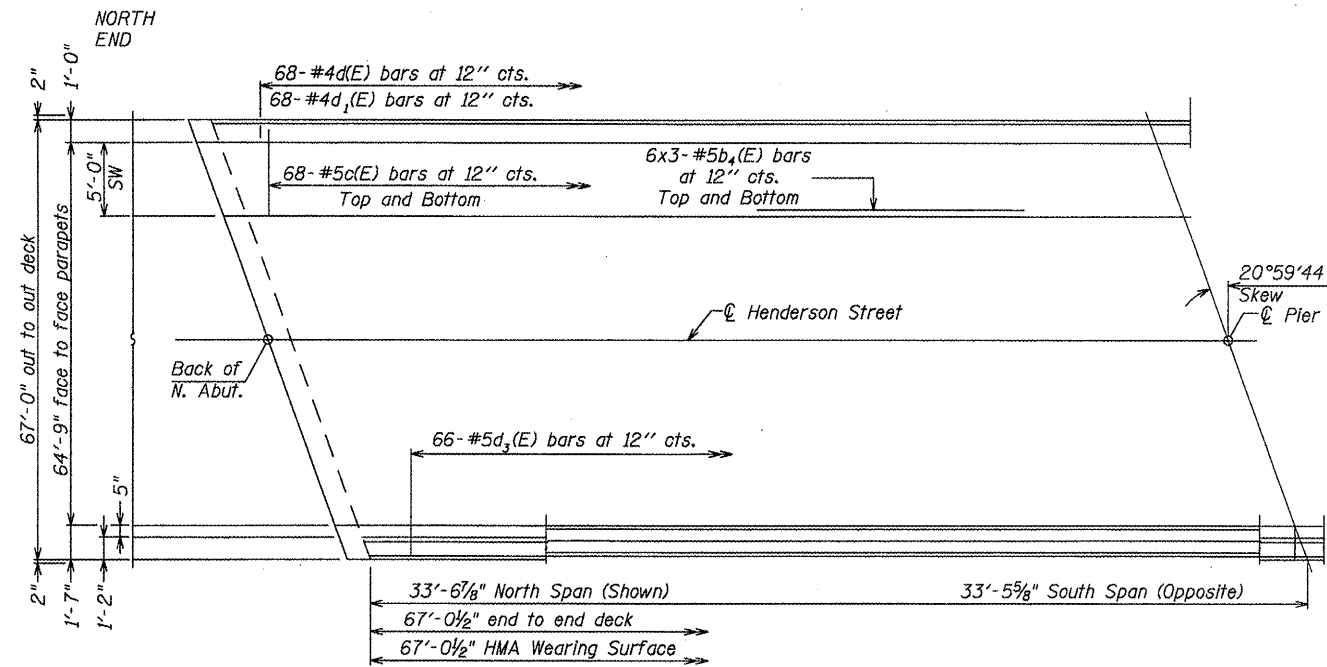
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| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. | ILLINOIS | FED. AID PROJECT | | |

Bridge Sheet 3 of 14 Sheets BRM-5025(045)
CONTRACT NO. 89557

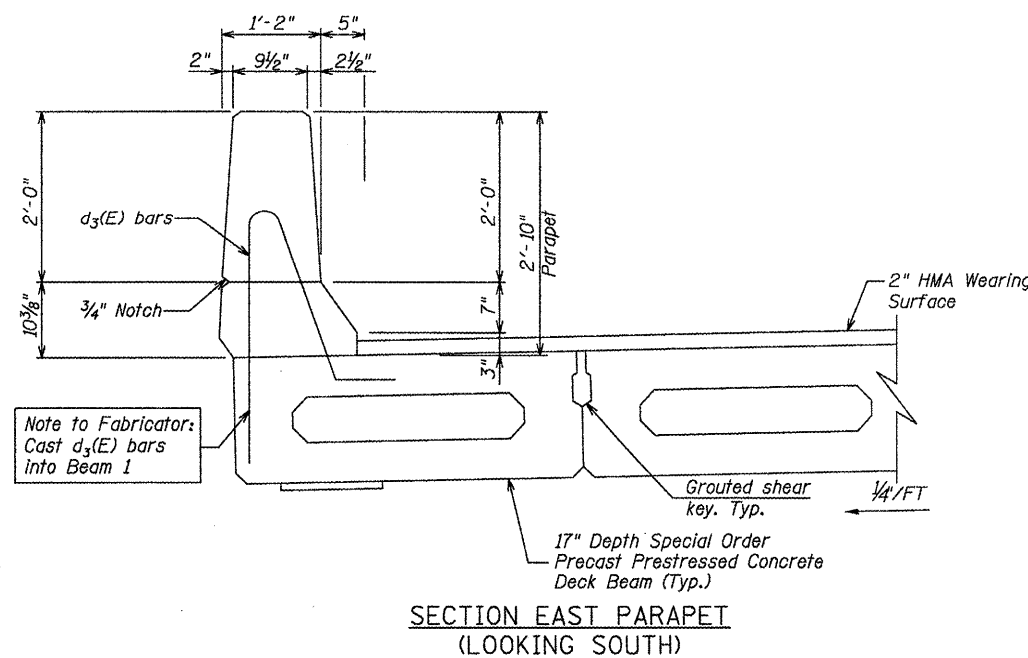
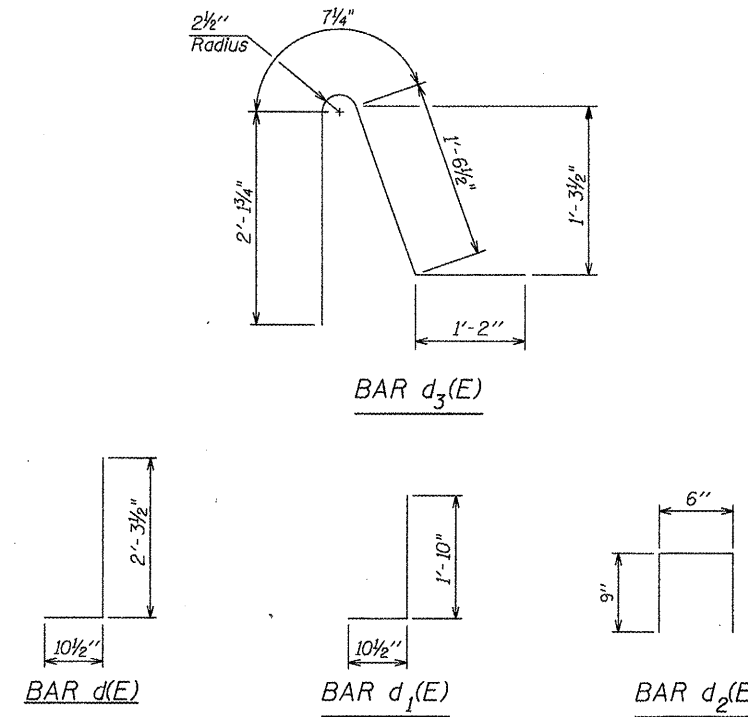
BILL OF MATERIALS

| BAR | NO. | SIZE | LENGTH | SHAPE |
|----------------------------------|-------|------|--------|-------|
| b ₁ (E) | 12 | 5 | 14'-1" | — |
| b ₂ (E) | 12 | 5 | 12'-8" | — |
| b ₃ (E) | 16 | 4 | 6'-8" | — |
| b ₄ (E) | 36 | 5 | 24'-2" | — |
| c(E) | 136 | 5 | 5'-8" | — |
| d(E) | 68 | 4 | 3'-2" | — |
| d ₁ (E) | 68 | 4 | 2'-9" | — |
| d ₂ (E) | 40 | 4 | 2'-0" | — |
| d ₃ (E) | 66 | 5 | 5'-5½" | — |
| e(E) | 14 | 4 | 12'-8" | — |
| e ₁ (E) | 14 | 4 | 14'-1" | — |
| e ₂ (E) | 2 | 8 | 12'-8" | — |
| e ₃ (E) | 2 | 8 | 14'-1" | — |
| e ₄ (E) | 2 | 4 | 12'-8" | — |
| e ₅ (E) | 2 | 4 | 14'-1" | — |
| e ₆ (E) | 16 | 4 | 6'-8" | — |
| e ₇ (E) | 2 | 8 | 6'-8" | — |
| e ₈ (E) | 2 | 4 | 6'-8" | — |
| v ₂ (E) | 28 | 4 | 4'-3" | — |
| v ₃ (E) | 28 | 4 | 4'-2" | — |
| Concrete Superstructure | CU YD | | 23.4 | |
| Reinforcement Bars, Epoxy Coated | POUND | | 3,520 | |
| Name Plates | EACH | | 1 | |

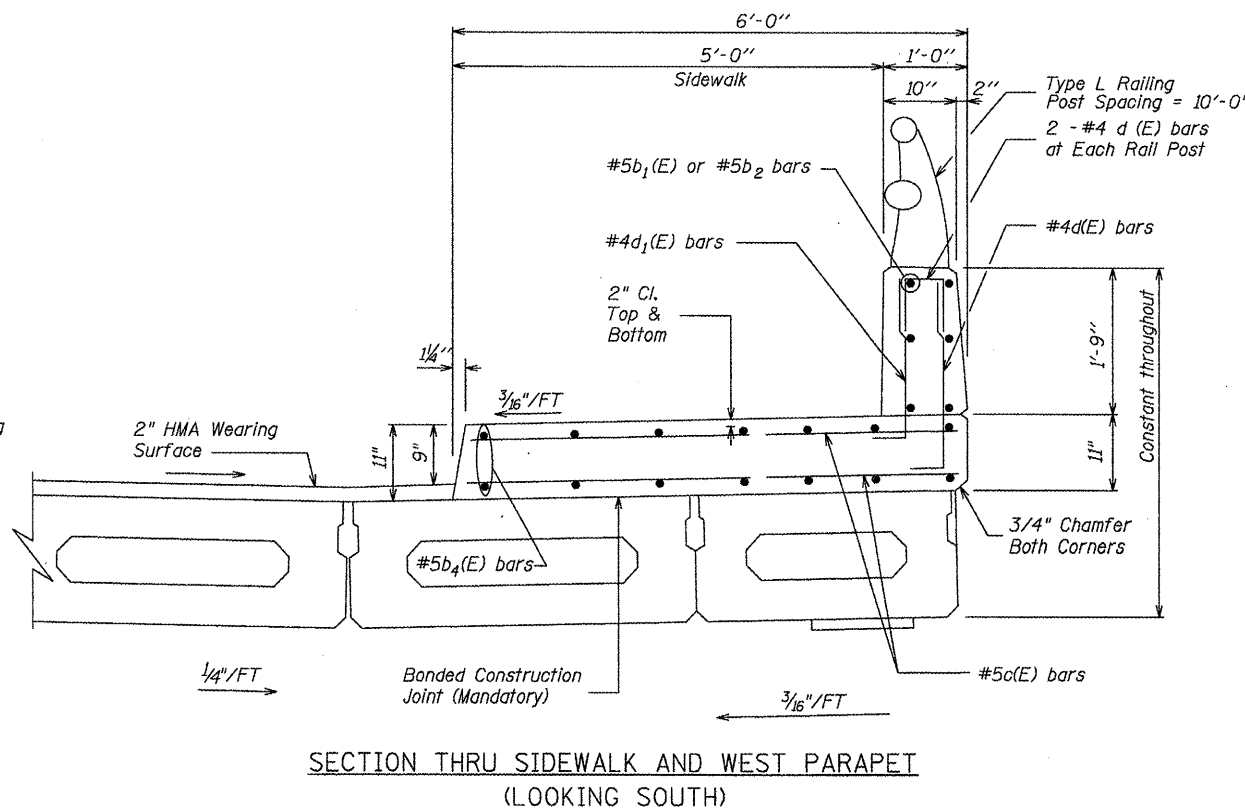
Reinforcement Bars Designated (E) Shall Be Epoxy Coated.



PLAN SHOWING DECK REINFORCEMENT



SECTION EAST PARAPET (LOOKING SOUTH)



SECTION THRU SIDEWALK AND WEST PARAPET (LOOKING SOUTH)

NOTES:

- Concrete Below Construction Joint (Sidewalk) Shall Be Allowed To Harden Before Placing Concrete Above. (2500 psi MIN.) Cost of WWF and Expansion Anchors to be Included in cost of Concrete Superstructure.
- Bars Indicated thus 20x2-#4 etc., indicates 20 lines of bars with 2 lengths per line.

JOINTING NOTES

- Sidewalk Joint Shall be 1/4" x 3/4" Formed Joint with Concrete Sealer (Full Width Along Joint - Backer Rod Not Required) at Pier.

Min. Bar Laps

| | |
|----|-------|
| #4 | 1'-4" |
| #5 | 1'-8" |

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE II
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

SCALE: VERT. NONE, HORIZ. NONE. DRAWN BY: BCB, DESIGNED BY: PETERSON, CHECKED BY: PETERSON. DATE: 08/28/2009

| REVISIONS | NAME | DATE |
|-----------|------|------|
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| | | |

Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
188 East Simons Street Galesburg, Illinois 62401
Phone: (309) 343-8282 Fax: (309) 343-8232 E-Mail: bcz@bczinc.com
JOB NO. 290067 FILE NAME: SPRSTRUCT_II.DGN

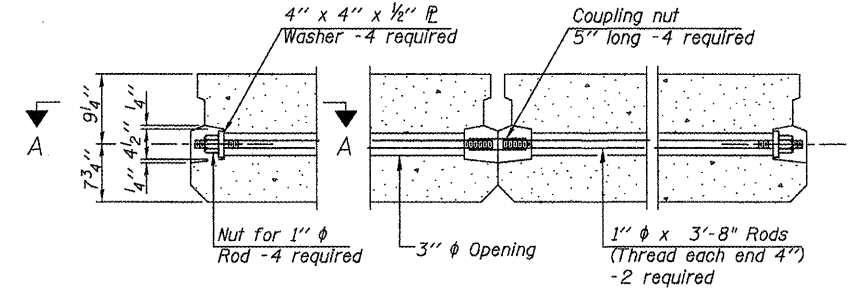
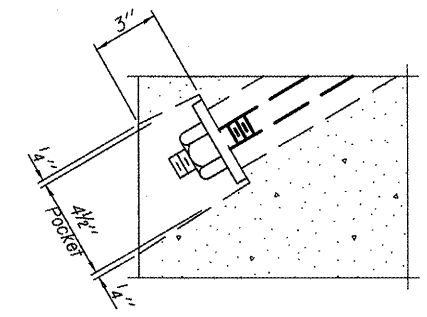
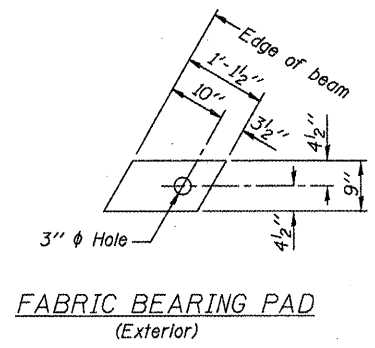
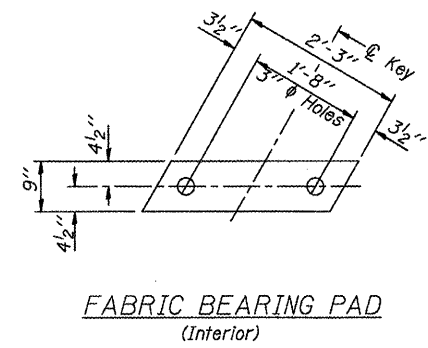
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PDS-11-M-F-D

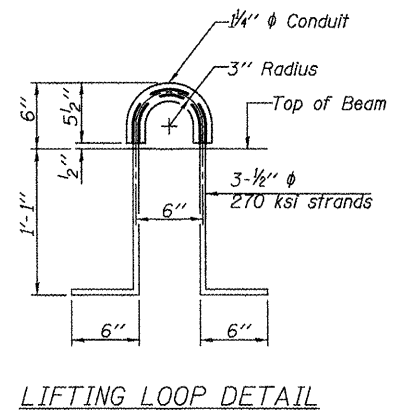
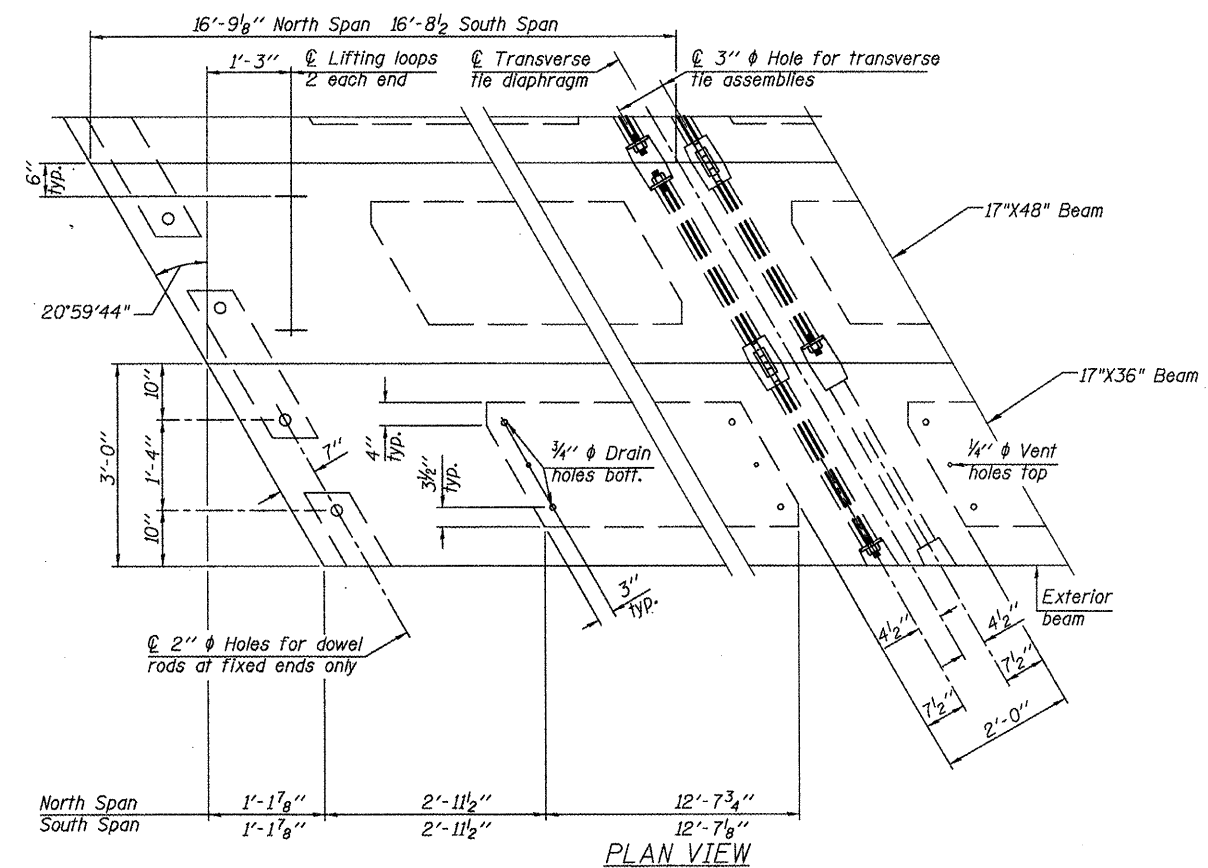
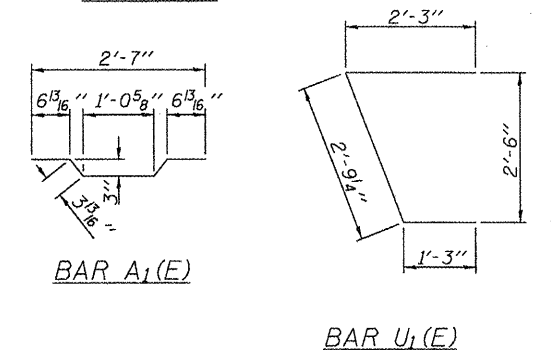
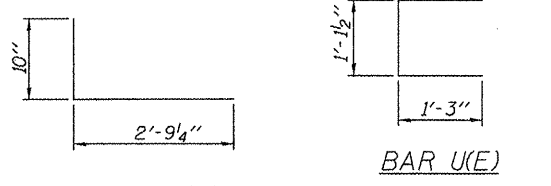
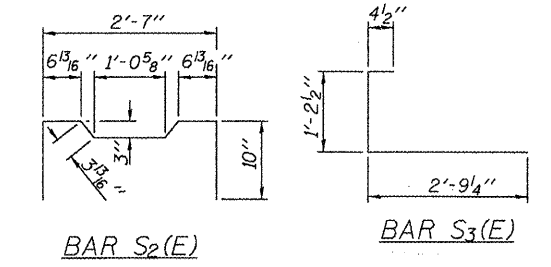
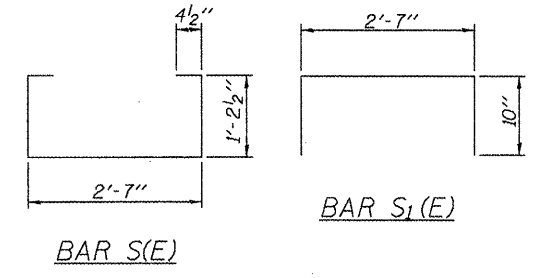
HENDERSON STREET (CITY OF GALESBURG) KNOX COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|-----------------------------|----------------|-------------------------------------|--------------|-----------|
| 6791 | 07-00401-25-BR | KNOX | 18 | 8 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS FED. AID PROJECT | | |
| Bridge Sheet 4 of 14 Sheets | | BRM-5025(045) CONTRACT NO. 89557 | | |



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



NOTES
 Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
 The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
 Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions).
 Two 1/2" 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.

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

BILL OF MATERIAL

| | | |
|---|---------|-----|
| Precast Prestressed Conc. Deck Bms. (17" depth) | Sq. Ft. | 201 |
|---|---------|-----|

ILLINOIS DEPARTMENT OF TRANSPORTATION
17"x36" PPC DECK BEAM DETAILS I
 S. HENDERSON STREET OVER CEDAR CREEK
 SECTION 07-00401-25-BR
 CITY OF GALESBURG, KNOX COUNTY
 STA. 45+55.80 S.N. 048-0024

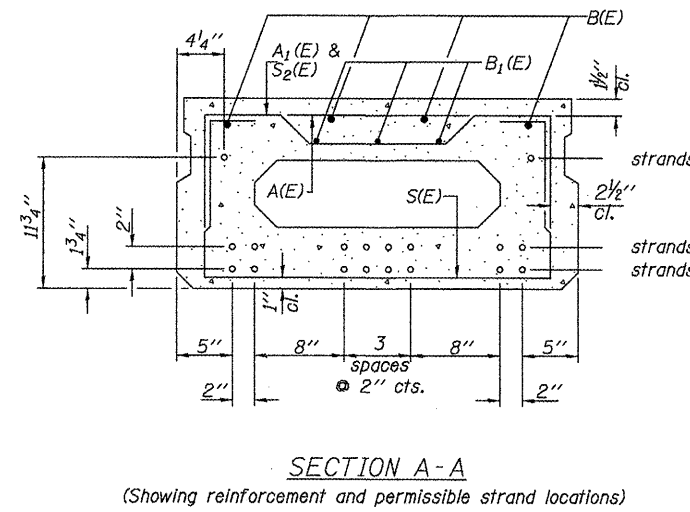
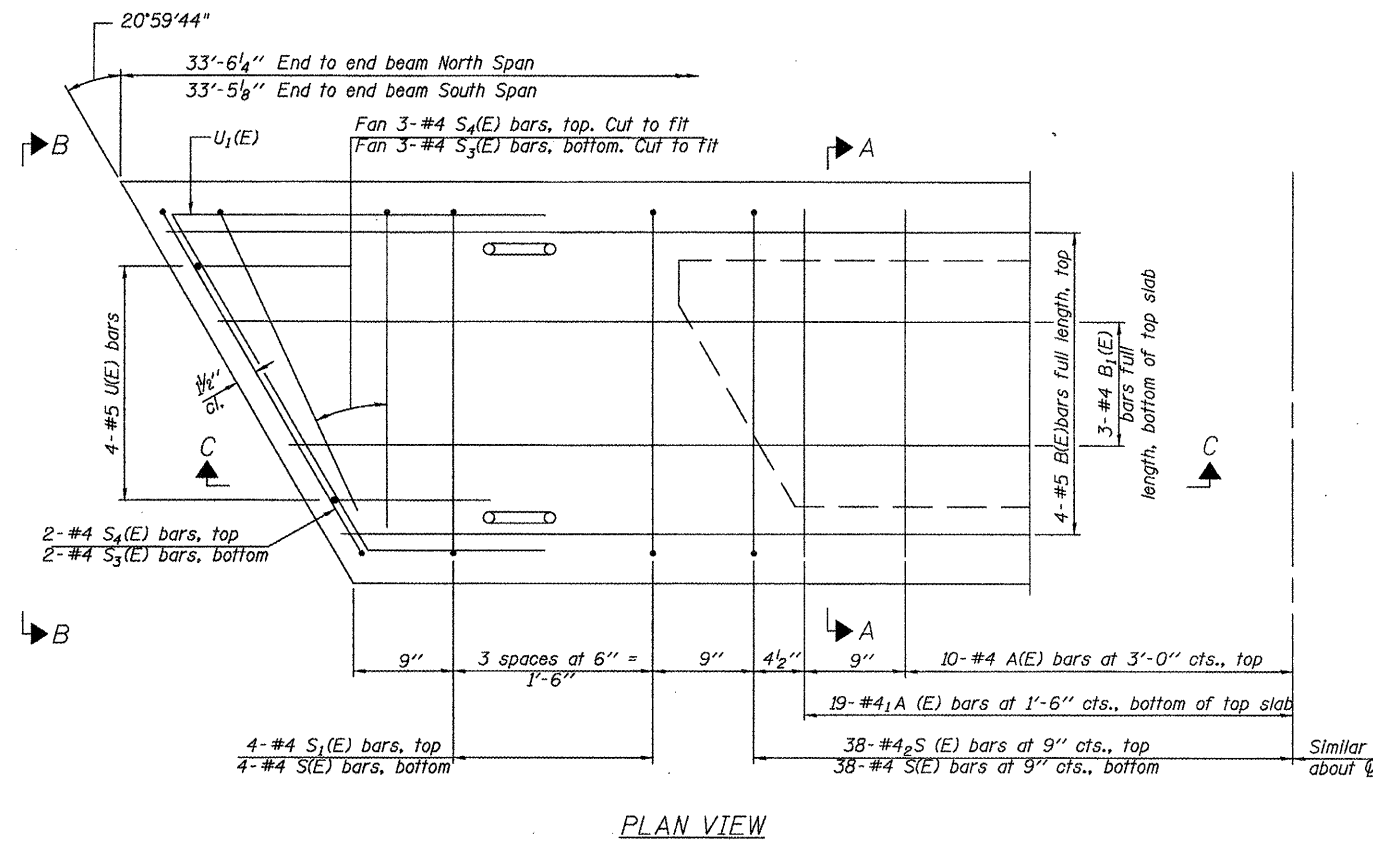
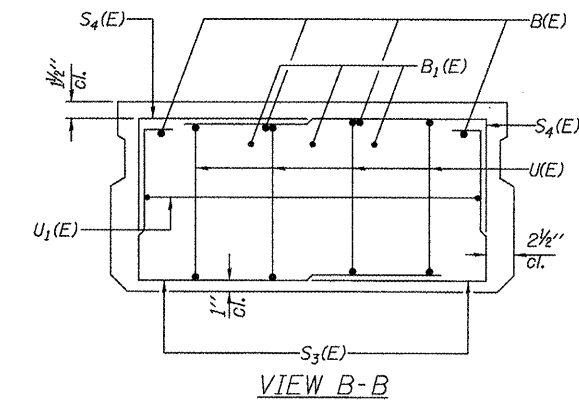
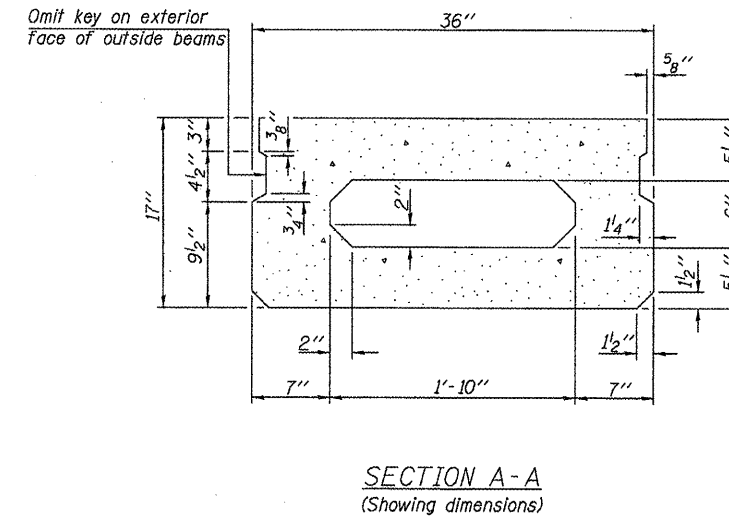
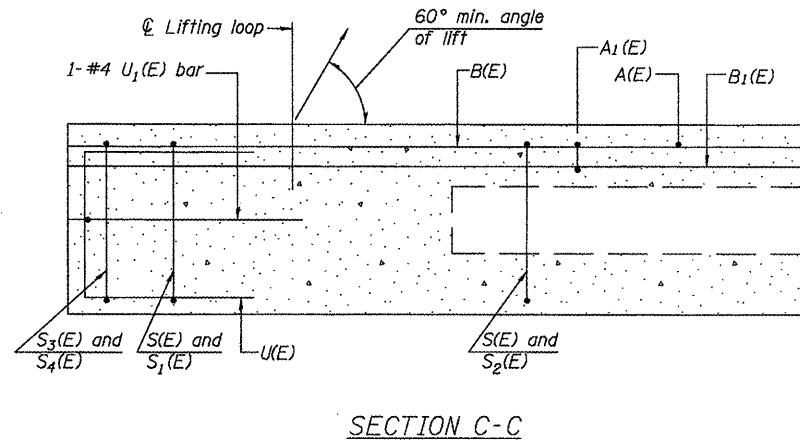
| REVISIONS | |
|-----------|------|
| NAME | DATE |
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| | |

SCALE: VERT. NONE, HORIZ. NONE
 DATE: 08/28/2009
 DRAWN BY: BCB
 DESIGNED BY: PETERSON
 CHECKED BY: PETERSON
Bruner, Cooper & Zuck, Inc.
 Consulting Engineers Structural Engineers Land Surveyors
 Phone: (309) 343-8282 188 East Simons Street Galesburg, Illinois 61402
 Fax: (309) 343-8232
 E-Mail: bcz@brunercooperzuck.com
 JOB NO. 290067 FILE NAME: PD-1736-RD.DGN

PD-1736-RD 11-1-09

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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|-----------------------------|----------------|-------------------------------------|------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 6791 | 07-00401-25-BR | KNOX | 18 | 9 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS | FED. AID PROJECT | |
| BRIDGE SHEET 5 of 14 SHEETS | | BRM-5025(045) CONTRACT NO. 89557 | | |



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) | 10 | #4 | 2'-7" | — |
| A1(E) | 19 | #4 | 2'-10" | — |
| B(E) | 4 | #5 | 33'-2" | — |
| B1(E) | 3 | #4 | 33'-2" | — |
| S(E) | 46 | #4 | 5'-9" | □ |
| S1(E) | 8 | #4 | 4'-3" | □ |
| S2(E) | 38 | #4 | 4'-6" | □ |
| S3(E) | 10 | #4 | 4'-4 1/4" | □ |
| S4(E) | 10 | #4 | 3'-7 1/4" | □ |
| U(E) | 8 | #5 | 3'-8" | □ |
| U1(E) | 2 | #4 | 6'-3 1/4" | □ |

Note: See sheet of 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

11-1-09

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
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| | |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
17"x36" PPC DECK BEAM DETAILS II
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

SCALE: VERT. NONE, HORIZ. NONE.
DATE: 08/28/2009

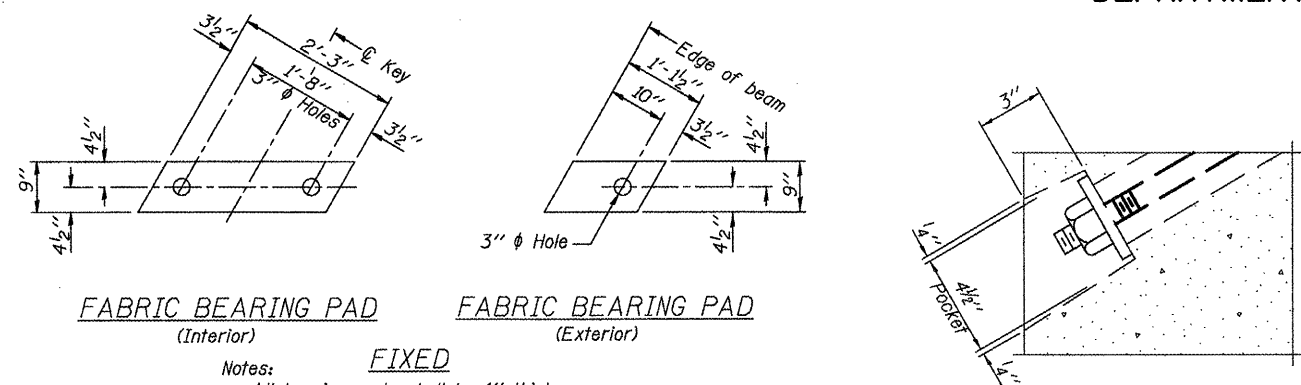
DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
Phone: (309) 343-9282 188 East Simons Street Galesburg, Illinois 62401
Fax: (309) 343-9232 157 E. SE. CORP. 184-002533
E-Mail: bcz@brunercopcoz.com

JOB NO. 290067 FILE NAME: PD-1736-R.DGN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------------|----------------|-------------------------------------|------------------|-----------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 6791 | 07-00401-25-BR | KNOX | 18 | 10 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS | FED. AID PROJECT | |
| Bridge Sheet 6 of 14 Sheets | | BRM-5025(045) CONTRACT NO. 89557 | | |

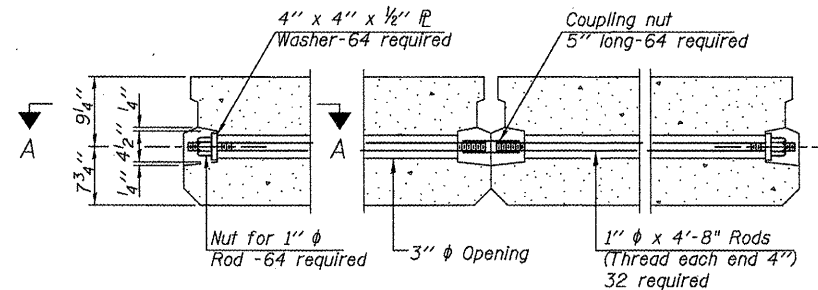


FABRIC BEARING PAD
(Interior)

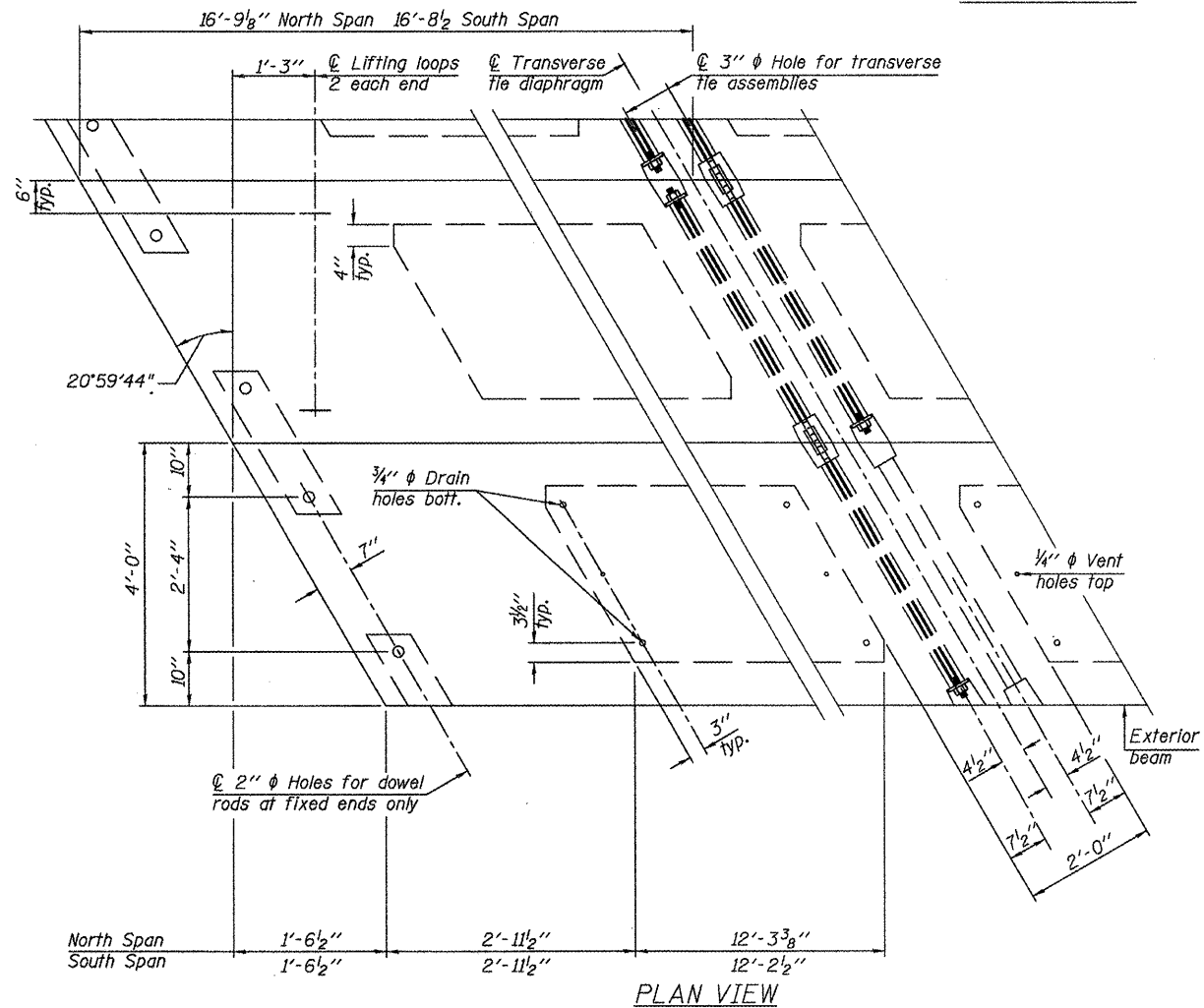
FABRIC BEARING PAD
(Exterior)

Notes:
FIXED
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

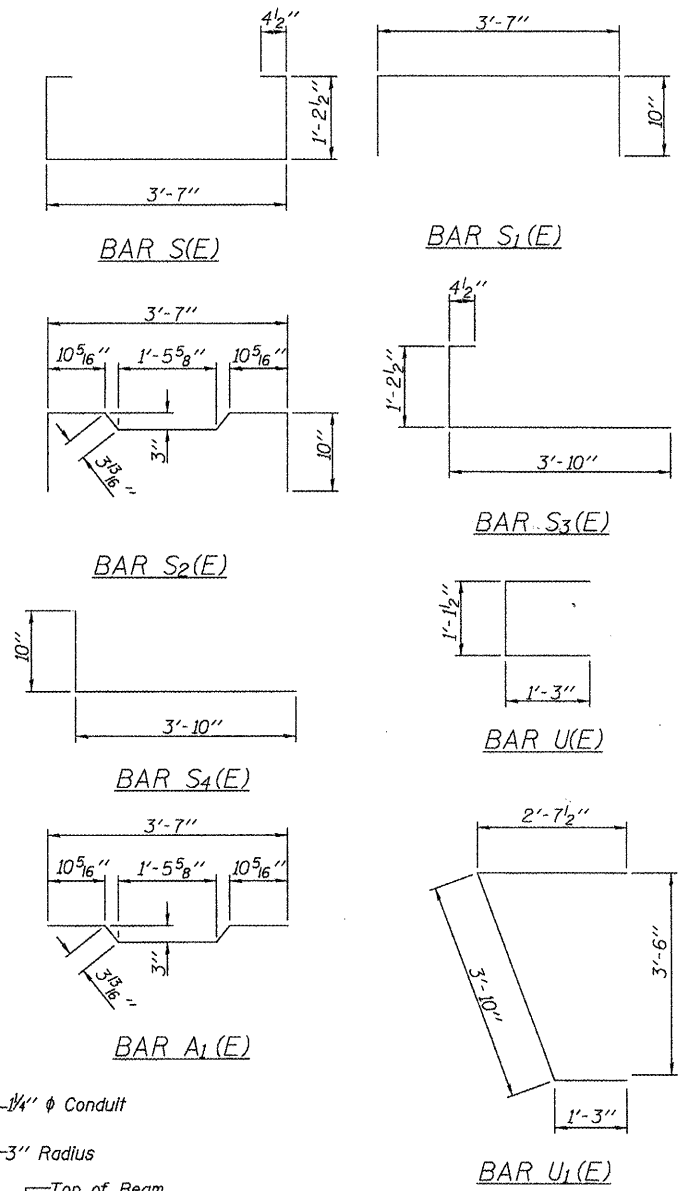


PLAN VIEW

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

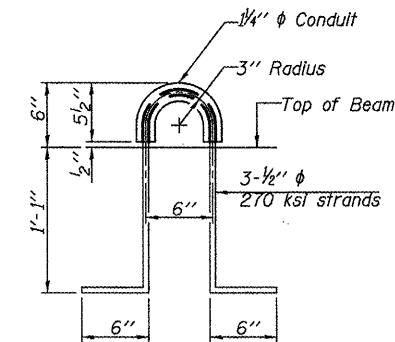
NOTES

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" 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.
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Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'cl, shall be 5000 psi.



BILL OF MATERIAL

| | | |
|---|---------|------|
| Precast Prestressed Conc. Deck Bms. (17" depth) | Sq. Ft. | 4285 |
|---|---------|------|



LIFTING LOOP DETAIL

PD-1748-RD

11-1-09

| REVISIONS | |
|-----------|------|
| NAME | DATE |
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ILLINOIS DEPARTMENT OF TRANSPORTATION
17"x48" PPC DECK BEAM DETAILS I
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

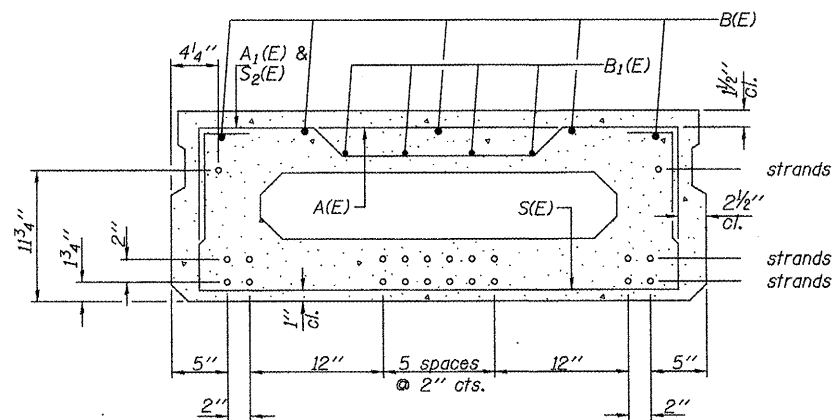
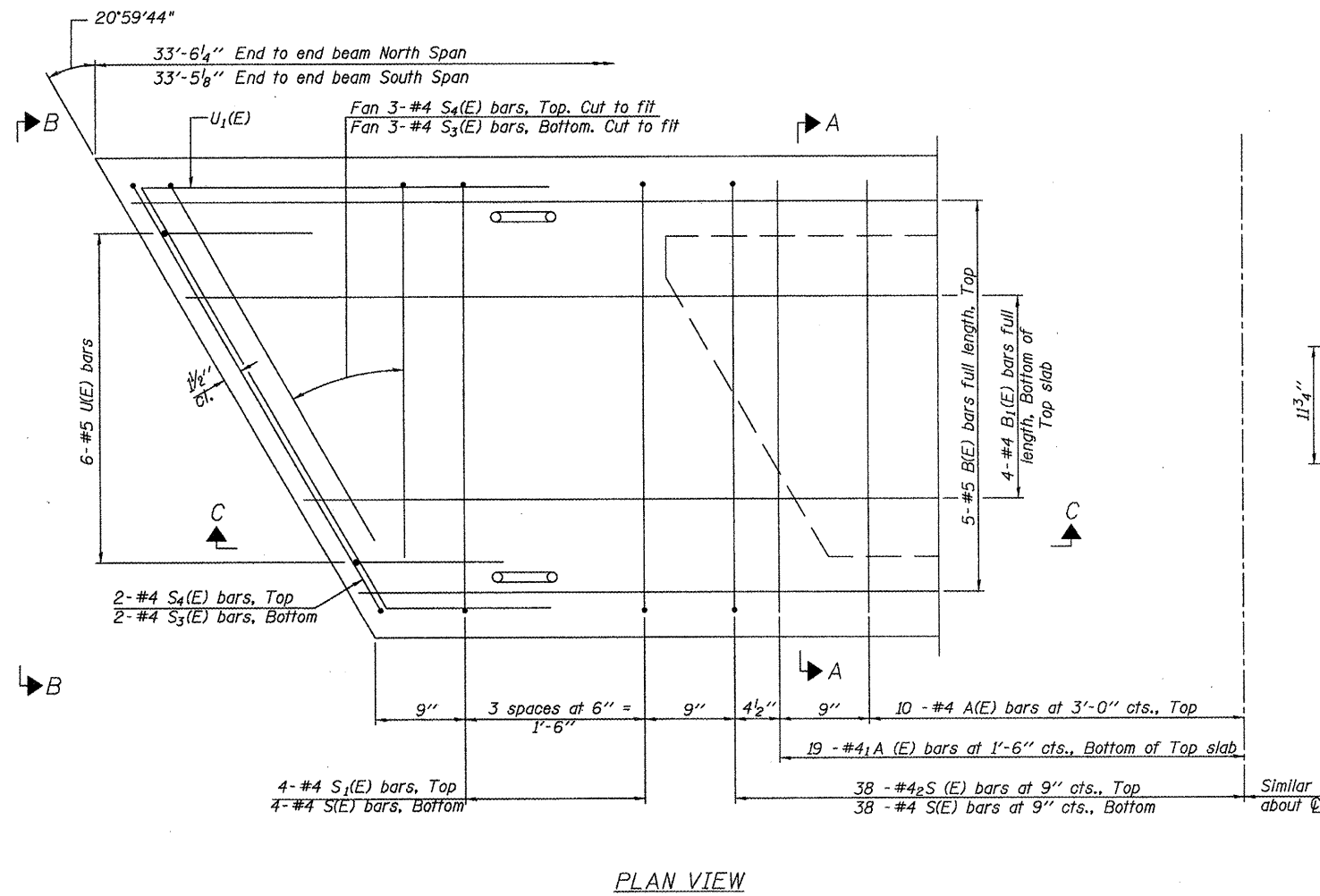
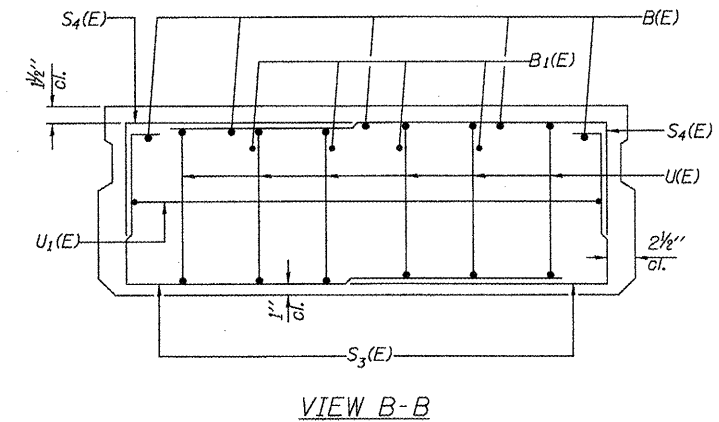
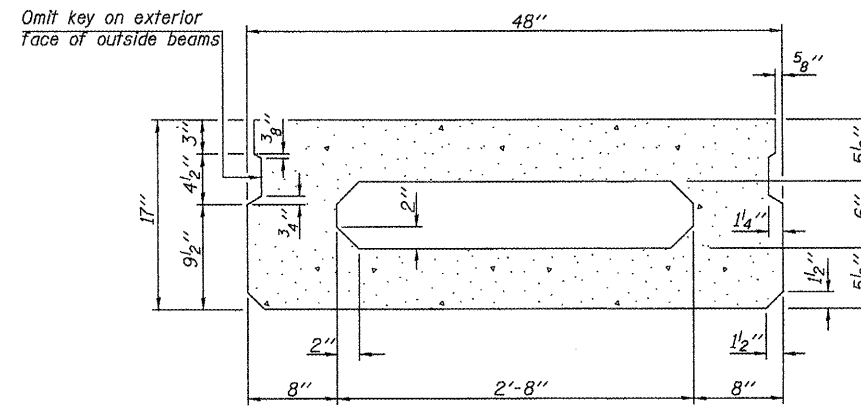
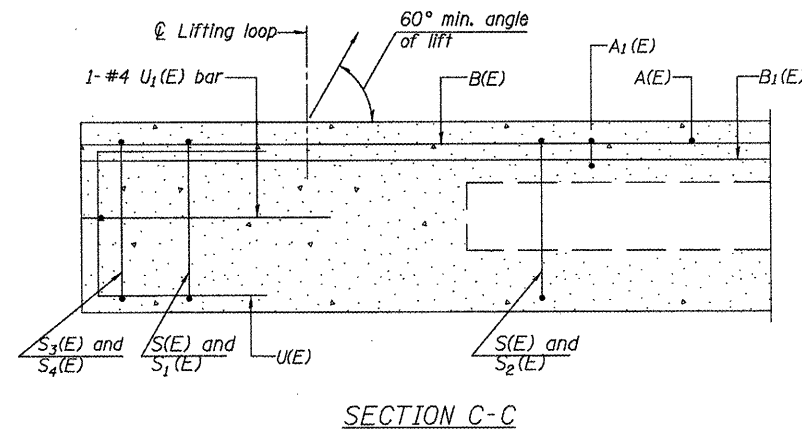
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DATE: 08/28/2009
DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
Phone: (309) 343-9282 188 East Simons Street Galesburg, Illinois 61402
Fax: (309) 343-9282 Professional Design Firm
E-Mail: bcz@bczengr.com LS/PE/SE CORP. 184-002533

JOB NO. 230067 FILE NAME: PD-1748-RD.DGN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------------|----------------|-------------------------------------|--------------|-----------|
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 6791 | 07-00401-25-BR | KNOX | 18 | 11 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. _ | | ILLINOIS FED. AID PROJECT | | |
| Bridge Sheet 7 of 14 Sheets | | BRM-5025(045) CONTRACT NO. 89557 | | |



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) | 10 #4 | 3'-7" | — |
| A1(E) | 19 #4 | 3'-10" | — |
| B(E) | 5 #5 | 33'-2" | — |
| B1(E) | 4 #4 | 33'-2" | — |
| S(E) | 46 #4 | 6'-9" | □ |
| S1(E) | 8 #4 | 5'-3" | □ |
| S2(E) | 38 #4 | 5'-6" | □ |
| S3(E) | 10 #4 | 5'-5" | □ |
| S4(E) | 10 #4 | 4'-8" | □ |
| U(E) | 12 #5 | 3'-8" | □ |
| U1(E) | 2 #4 | 7'-8 1/2" | □ |

Note: See sheet of 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-1748-R

11-1-09

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
| | |
| | |
| | |

ILLINOIS DEPARTMENT OF TRANSPORTATION
17'x48" PPC DECK BEAM DETAILS II
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

SCALE: VERT. NONE
HORIZ. NONE
DATE: 08/28/2009

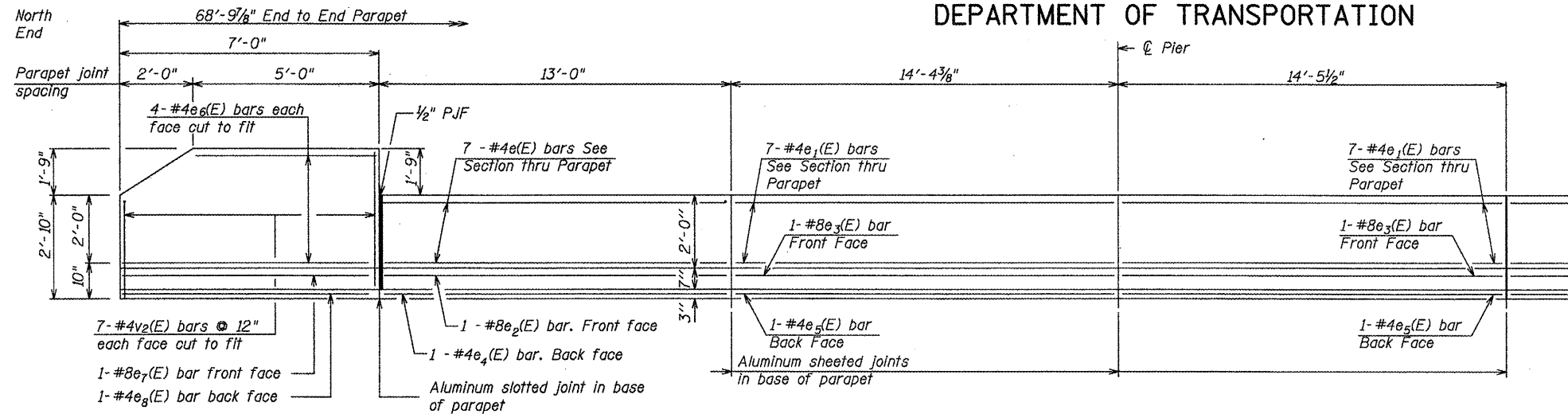
DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
188 East Simons Street Galesburg, Illinois 62402
Phone: (309) 343-9282 Fax: (309) 343-9232
E-Mail: bcz@brunercopcoz.com

JOB NO. 290067 FILE NAME: PD-1748-R.DGN

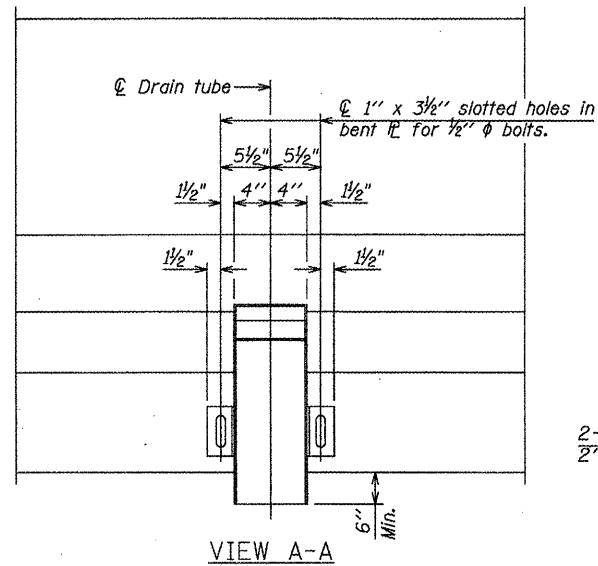
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------------|----------------|------------------|------------------|---------------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 6791 | 07-00401-25-BR | KNOX | 18 | 12 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS | FED. AID PROJECT | |
| Bridge Sheet 8 of 14 Sheets | | | | BRM-5025(045) |
| CONTRACT NO. 89557 | | | | |

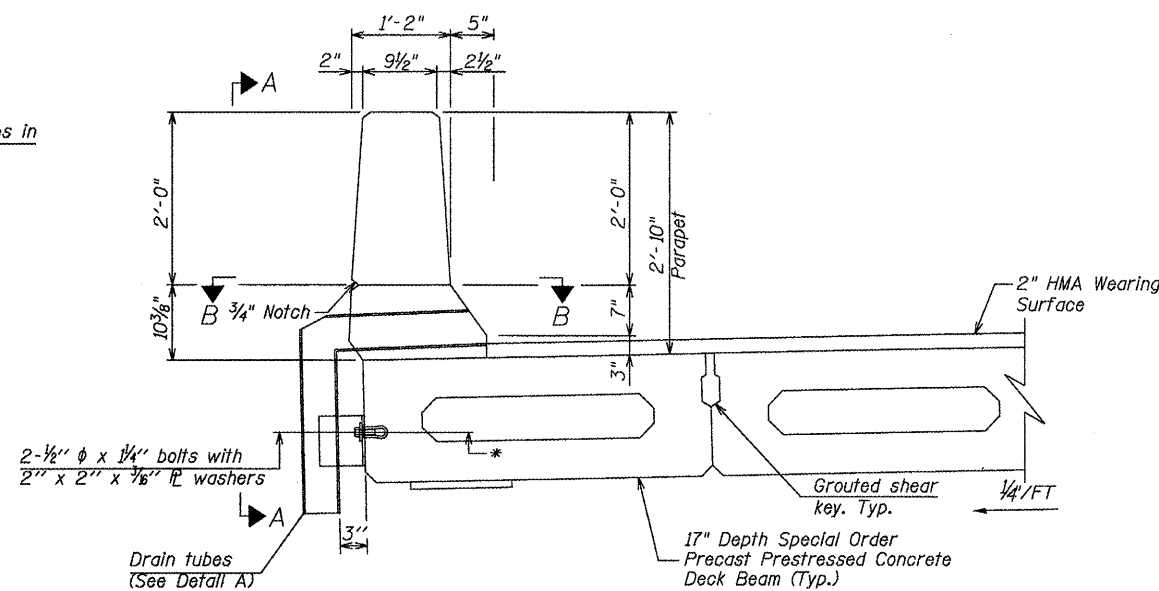


MINIMUM BAR LAP
#4 bar = 2'-0"
#8 bar = 5'-2"

INSIDE ELEVATION OF EAST PARAPET
(Looking East)

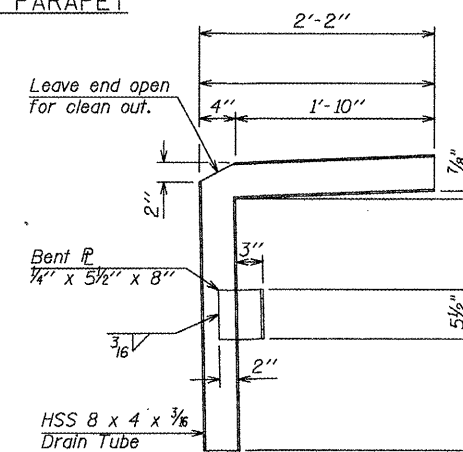


Note:
All drain tubes and accessories shall be galvanized according to AASHTO M111 or M232, (as applicable).
The cost of the drain tube assemblies and everything necessary for their installation is included with Concrete Superstructure.

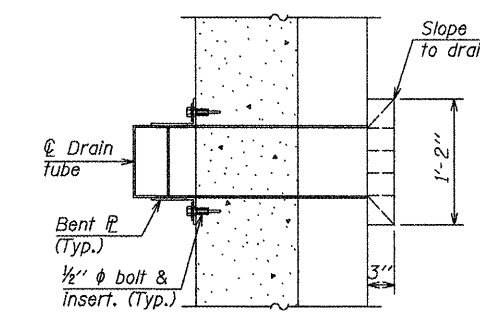


SECTION THRU EAST PARAPET

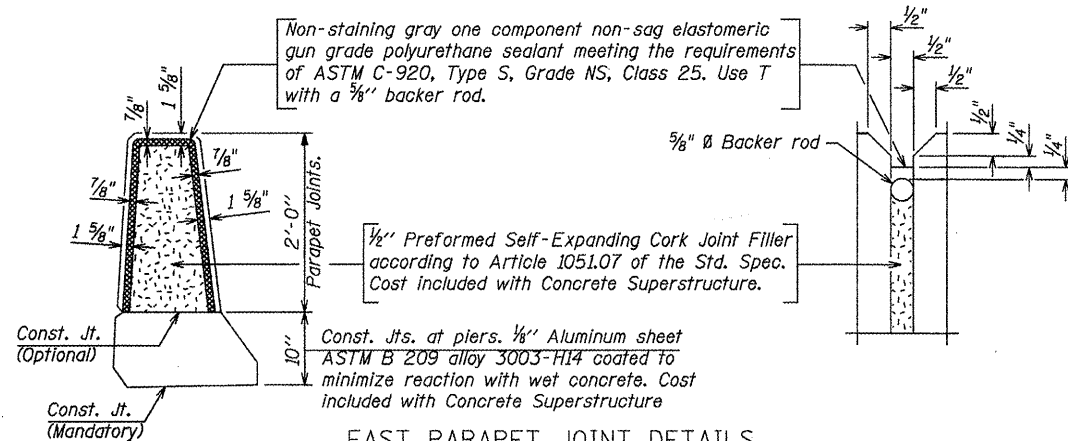
Loop Ferrule inserts for 1/2" diameter bolts.
Place at center of beam depth.



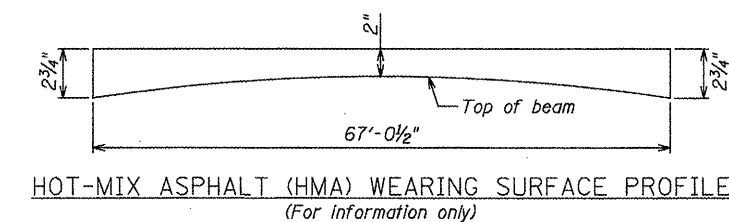
DETAIL A



SECTION B-B



EAST PARAPET JOINT DETAILS



HOT-MIX ASPHALT (HMA) WEARING SURFACE PROFILE
(For information only)

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
| | |
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ILLINOIS DEPARTMENT OF TRANSPORTATION
EAST PARAPET DETAILS
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

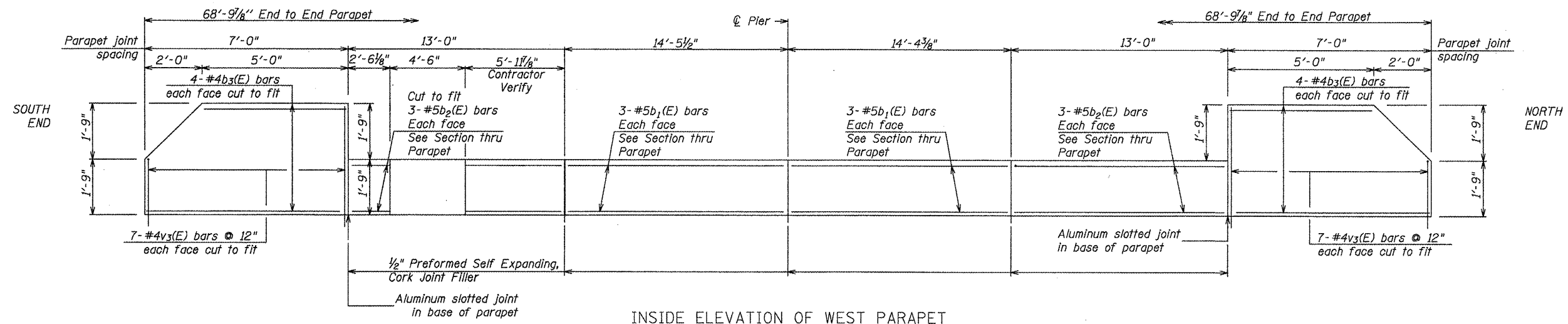
SCALE: VERT. NONE, HORIZ. NONE
DATE: 08/28/2009
DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
Phone: (309) 343-2282 188 East Simons Street Galesburg, Illinois 62401
Fax: (309) 343-9232 E-mail: bcz@bczengr.com

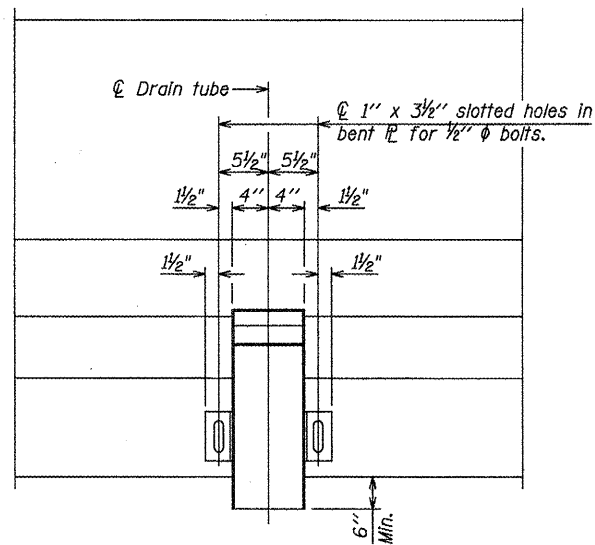
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| | | | | |
|-----------------------------|----------------|---------------------------|--------------|---------------|
| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
| 6791 | 07-00401-25-BR | KNOX | 18 | 13 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS FED. AID PROJECT | | |
| Bridge Sheet 9 of 14 Sheets | | | | BRM-5025(045) |
| CONTRACT NO. 89557 | | | | |

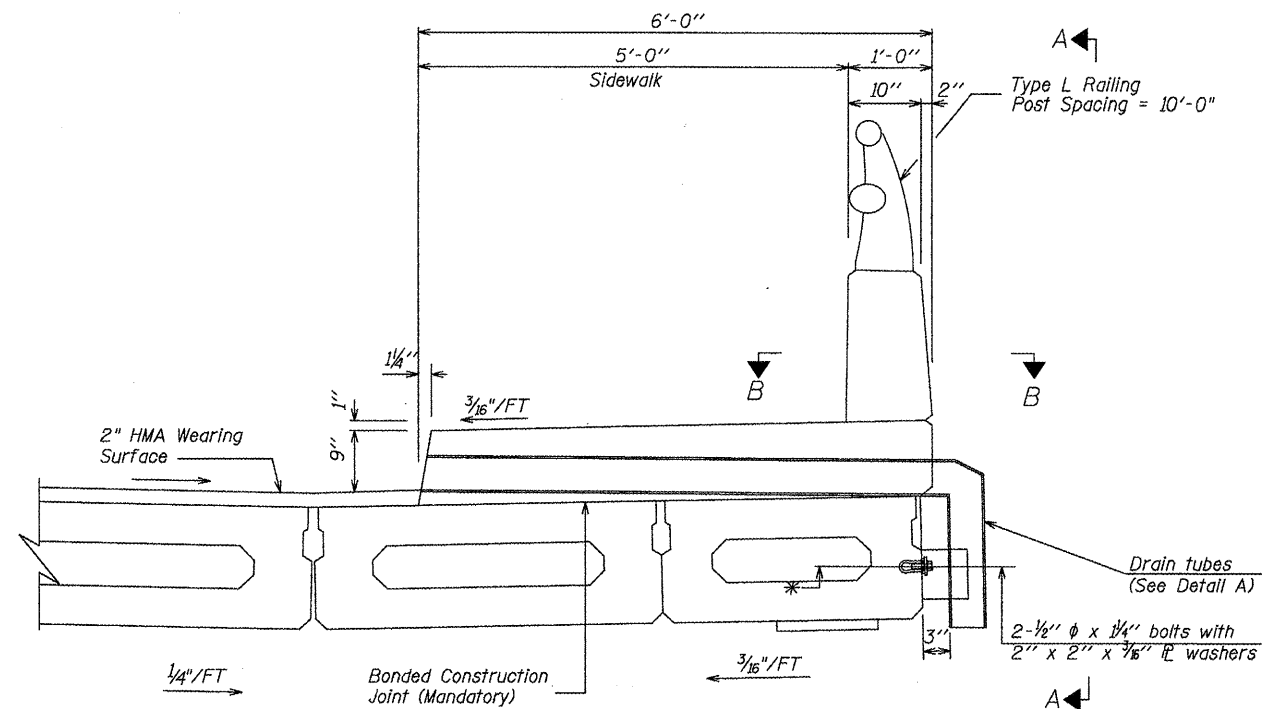


INSIDE ELEVATION OF WEST PARAPET
(LOOKING WEST)



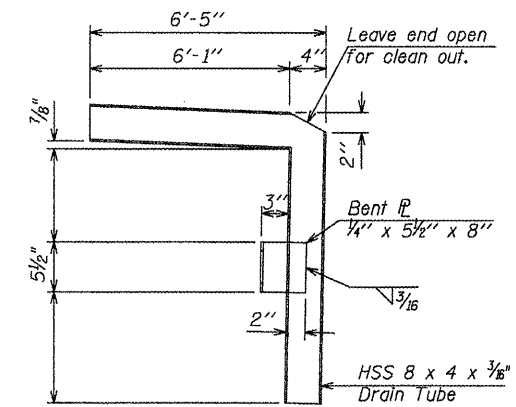
VIEW A-A

Note:
All drain tubes and accessories shall be galvanized according to AASHTO M111 or M232, (as applicable).
The cost of the drain tube assemblies and everything necessary for their installation is included with Concrete Superstructure.

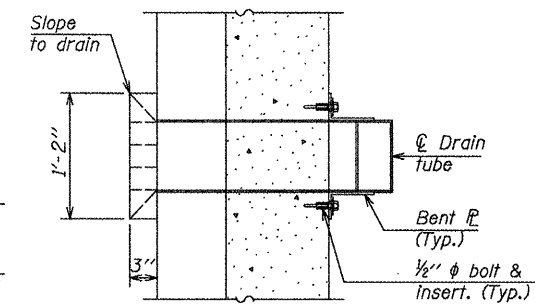


SECTION THRU SIDEWALK AND WEST PARAPET
(LOOKING SOUTH)

* @ Loop Ferrule Inserts for 1 1/2" Bolts.
Place at @ of Beam Depth.



DETAIL A



SECTION B-B

ILLINOIS DEPARTMENT OF TRANSPORTATION
WEST PARAPET DETAILS
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
| | |
| | |
| | |

SCALE: VERT. NONE, HORIZ. NONE
DATE: 08/28/2009
DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
Phone: (309) 343-9282 188 East Simons Street Galesburg, Illinois 61402
Fax: (309) 343-5232 E-MAIL: SCORING@BRUNERCOOPERZUCK.COM
JOB NO. 290067 FILE NAME: WESTPARAPETDETAILS.DGN

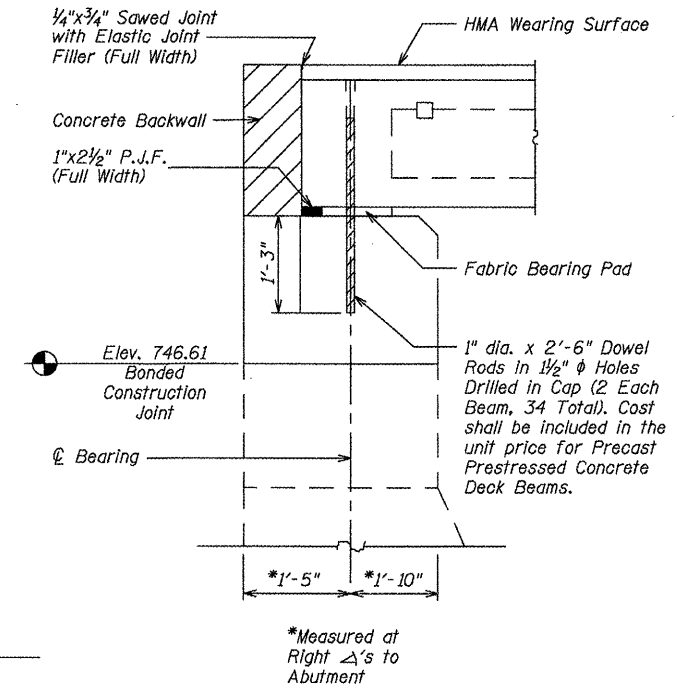
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------|----------------|--------------------|------------------|-----------|
| 6791 | 07-00401-25-BR | KNOX | 18 | 14 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. | | ILLINOIS | FED. AID PROJECT | |
| BRIDGE SHEET 10 OF 14 SHEETS | | CONTRACT NO. 89557 | | |

BILL OF MATERIALS

| BAR | NO. | SIZE | LENGTH | SHAPE |
|----------------------------------|-----|------|--------|-------|
| n(E) | 18 | #4 | 25'-6" | — |
| p(E) | 27 | #7 | 26'-3" | — |
| s(E) | 40 | #4 | 7'-7" | □ |
| v(E) | 150 | #4 | 3'-8" | — |
| Concrete Structures | | | CU YD | 11.7 |
| Reinforcement Bars, Epoxy Coated | | | POUND | 2330 |
| Expansion Bolts 3/4 inch | | | EACH | 148 |
| Structure Excavation | | | CU YD | 17.5 |

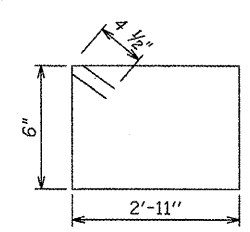
Reinforcement Bars Designated (E) Shall Be Epoxy Coated.



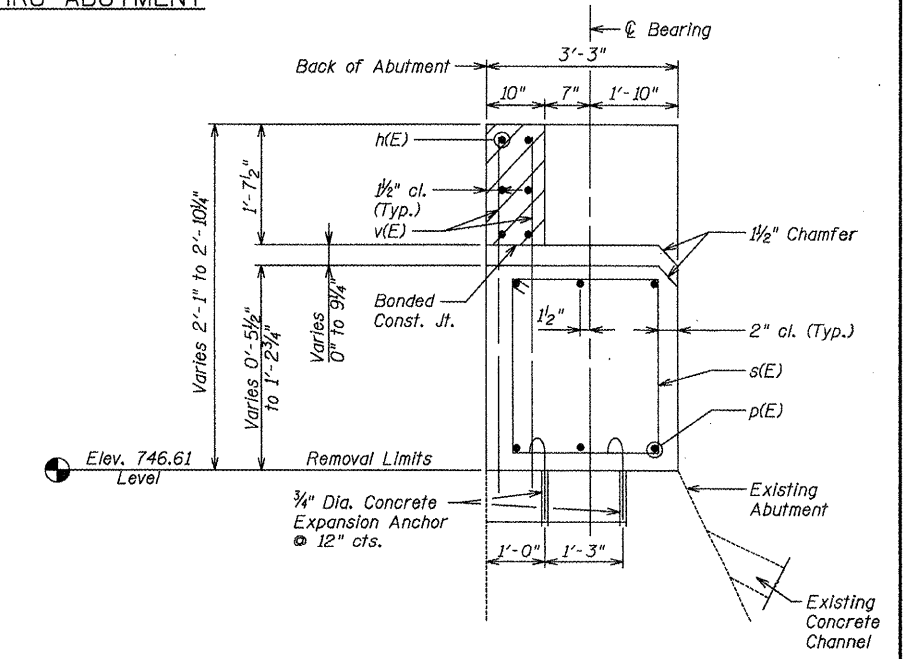
SECTION THRU ABUTMENT

Min. Bar Laps

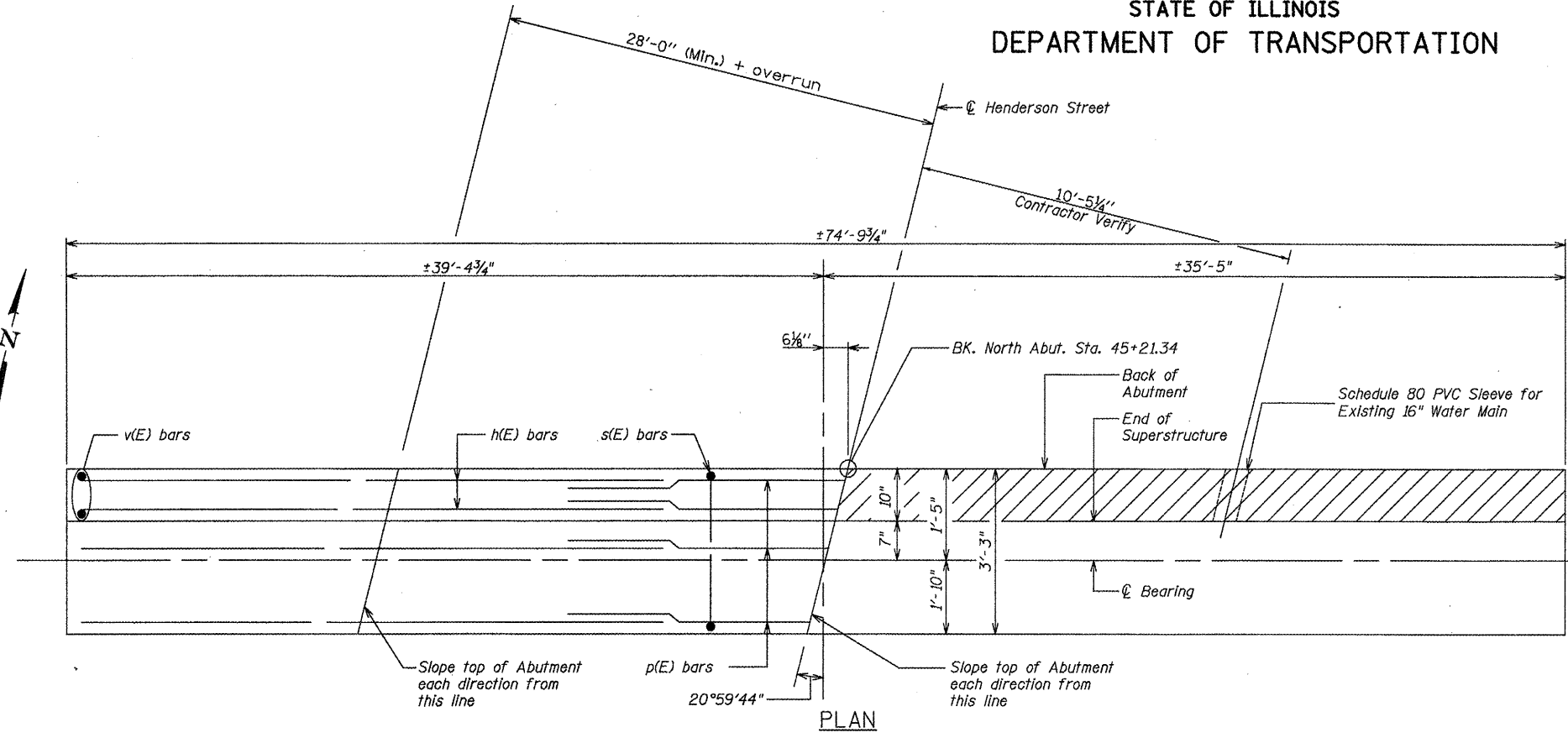
| | |
|----|-------|
| #4 | 1'-4" |
| #7 | 2'-8" |



Bar s(E)

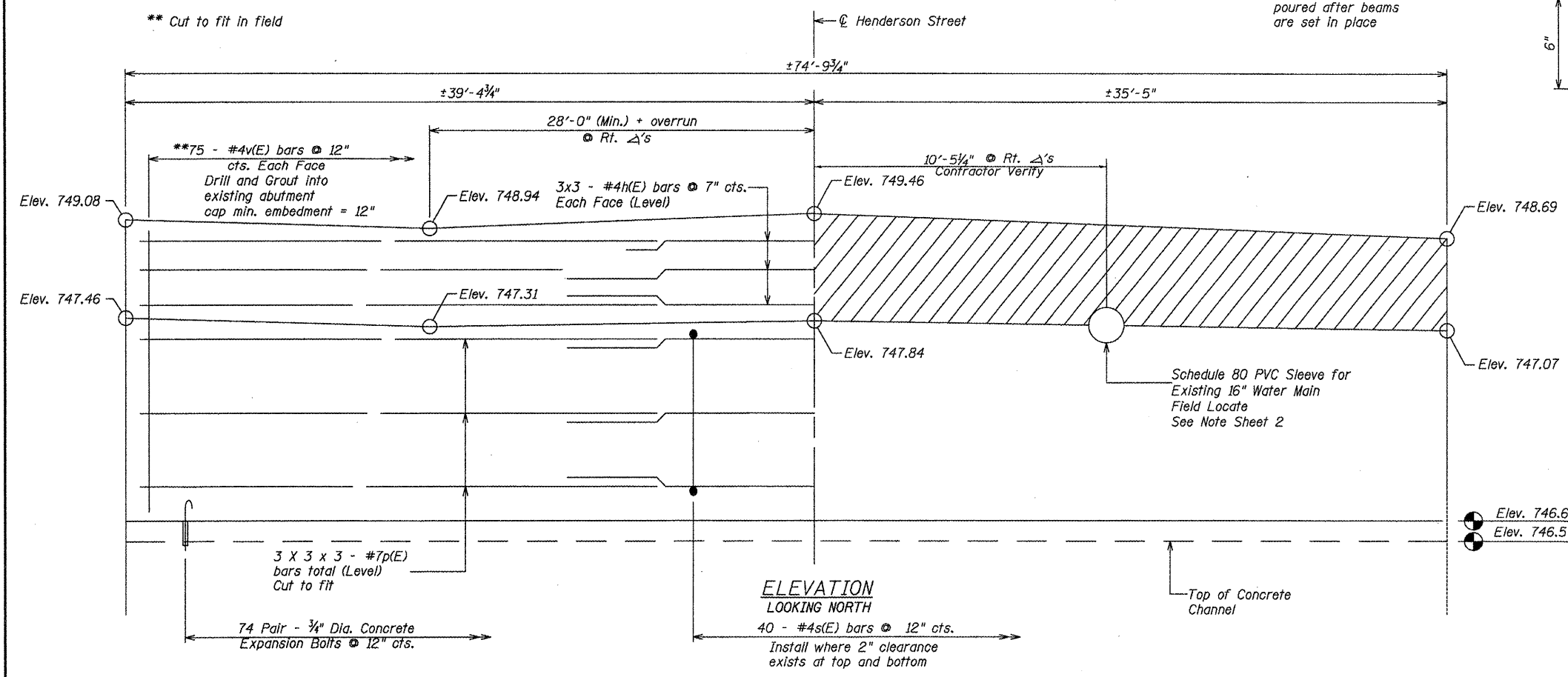


SECTION THRU TOP OF ABUTMENT



PLAN

NOTE: Hatched area to be poured after beams are set in place



ELEVATION
LOOKING NORTH

ILLINOIS DEPARTMENT OF TRANSPORTATION
NORTH ABUTMENT
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

SCALE: VERT. NONE, HORIZ. NONE.
DATE: 08/28/2009

DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
188 East Simons Street Phone: (309) 343-9282
Galesburg, Illinois 62401 Fax: (309) 343-9232
E-mail: bcz@bczengr.com

JOB NO. 290067 FILE NAME: NO_ABTMNT.dwg

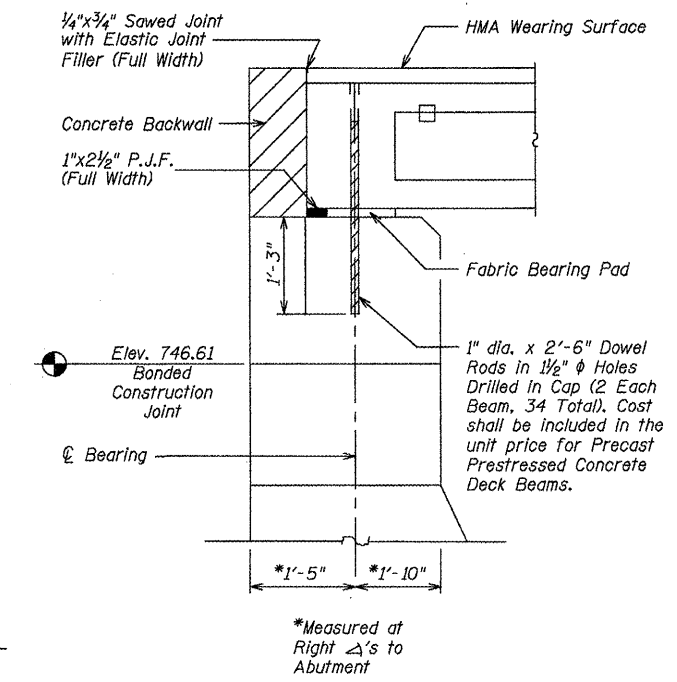
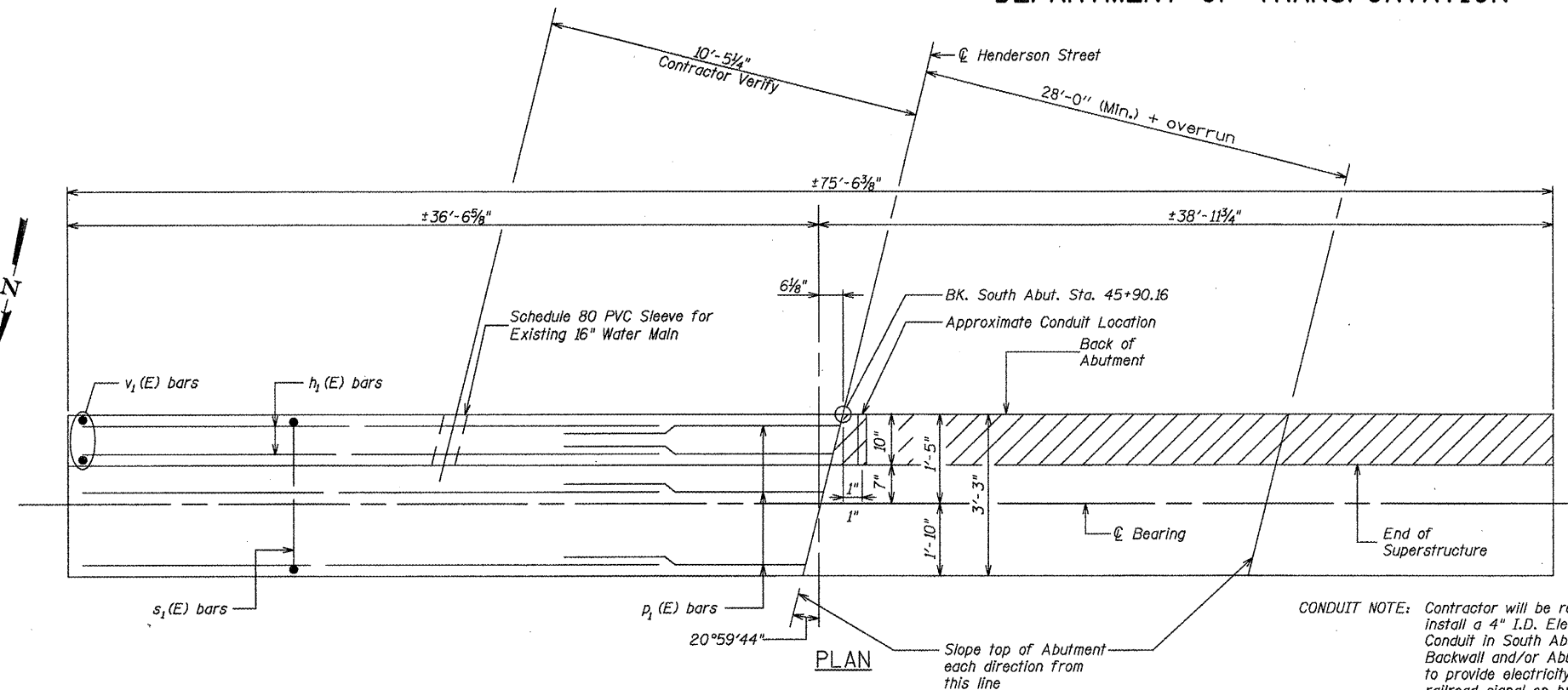
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------|----------------|------------------|------------------|--------------------|
| 6791 | 07-00401-25-BR | KNOX | 18 | 15 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS | FED. AID PROJECT | |
| Bridge Sheet 11 of 14 Sheets | | | BRM-5025(045) | CONTRACT NO. 89557 |

BILL OF MATERIALS

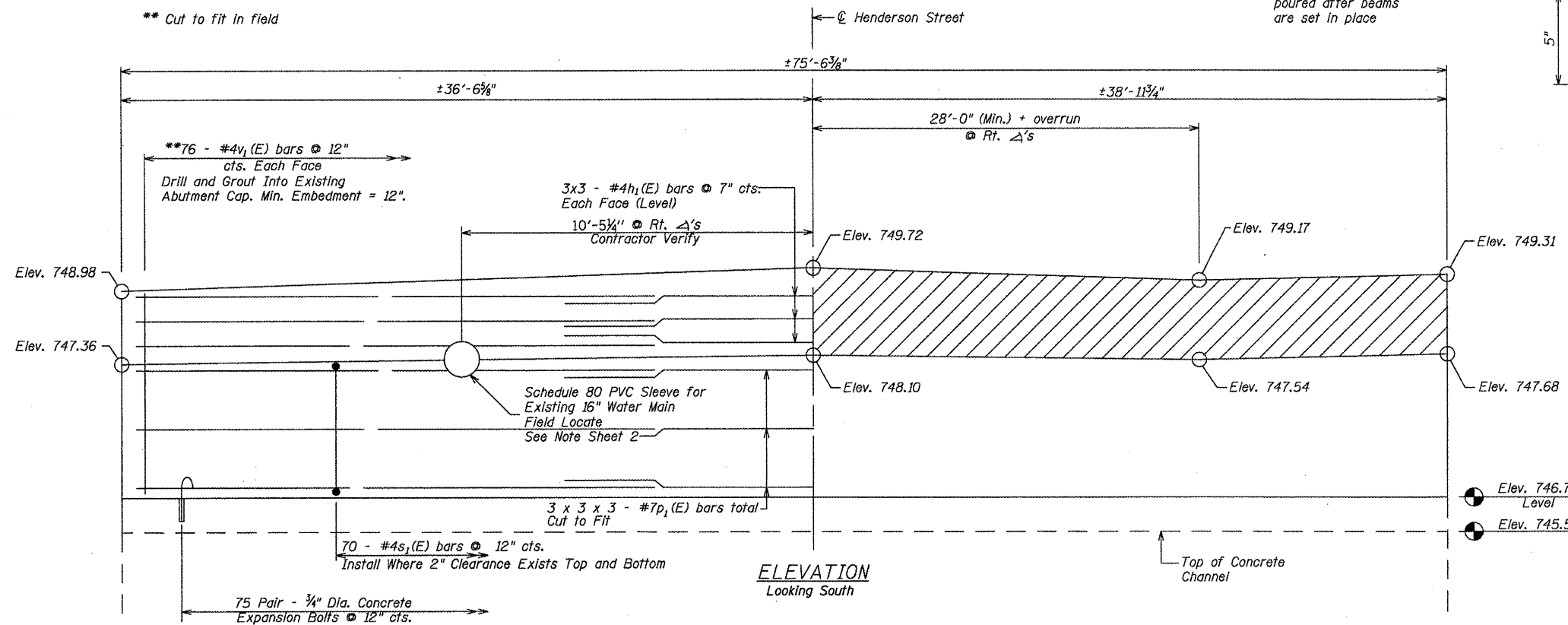
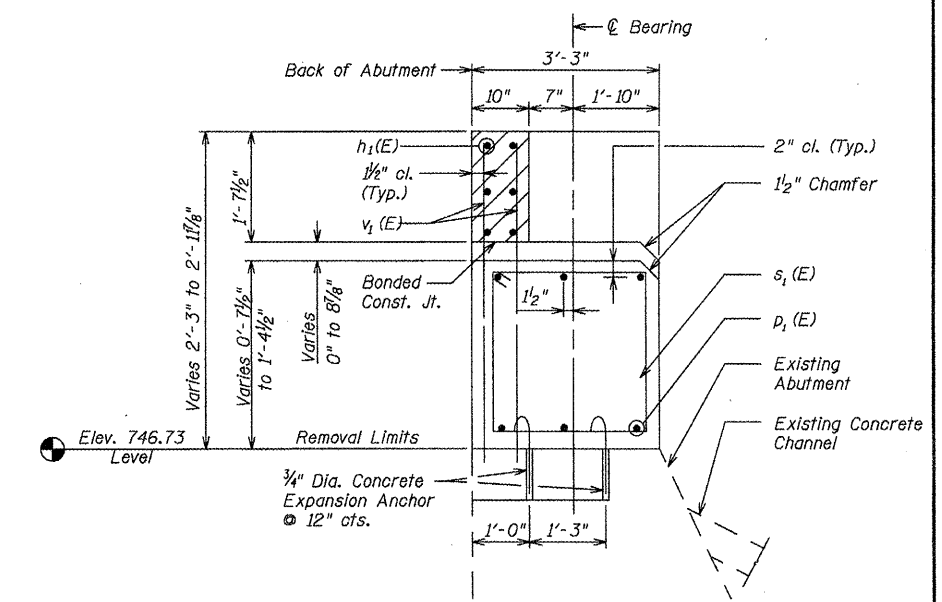
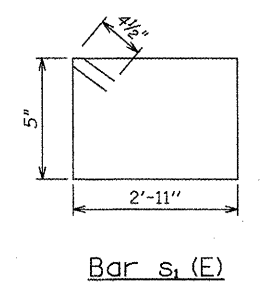
| BAR | NO. | SIZE | LENGTH | SHAPE |
|----------------------------------|-------|------|---------|-------|
| $h_1(E)$ | 18 | #4 | 25'-9" | — |
| $p_1(E)$ | 27 | #7 | 26'-5" | — |
| $s_1(E)$ | 70 | #4 | 7'-5" | □ |
| $v_1(E)$ | 152 | #4 | 31'-10" | — |
| Concrete Structures | CU YD | 13.0 | | |
| Reinforcement Bars, Epoxy Coated | POUND | 2510 | | |
| Expansion Bolts 3/4 inch | EACH | 150 | | |
| Structure Excavation | CU YD | 17.8 | | |

Reinforcement Bars Designated (E) Shall Be Epoxy Coated.



Min. Bar Laps

| | |
|----|-------|
| #4 | 1'-4" |
| #7 | 2'-8" |



ILLINOIS DEPARTMENT OF TRANSPORTATION

SOUTH ABUTMENT

S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

SCALE: VERT. NONE. HORIZ. NONE.

DATE: 08/28/2009

DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

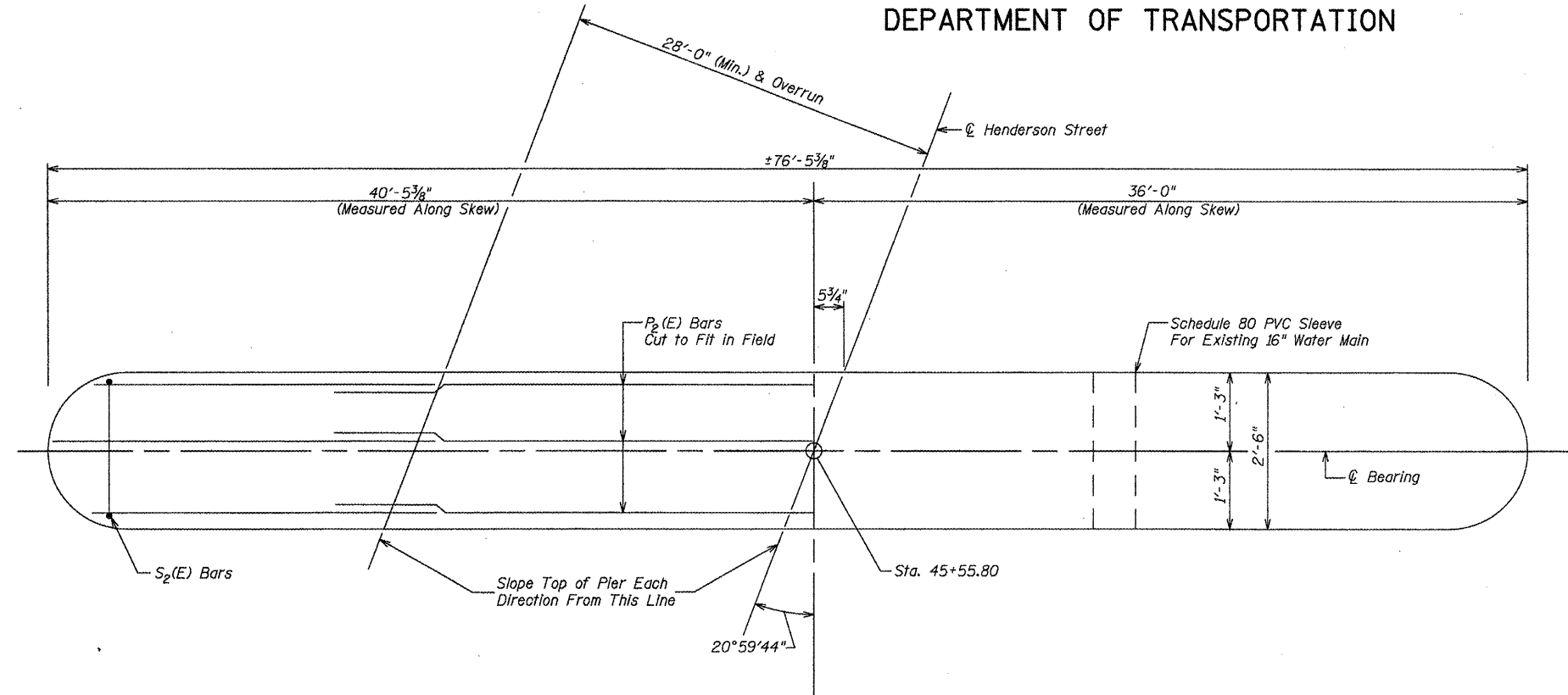
Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
Phone: (309) 343-9282 188 East Simons Street Galesburg, Illinois 61402
Fax: (309) 343-9232 E-mail: bcz@bczengr.com

JOB NO. 290067 FILE NAME: SO_ABTMNT.dwg

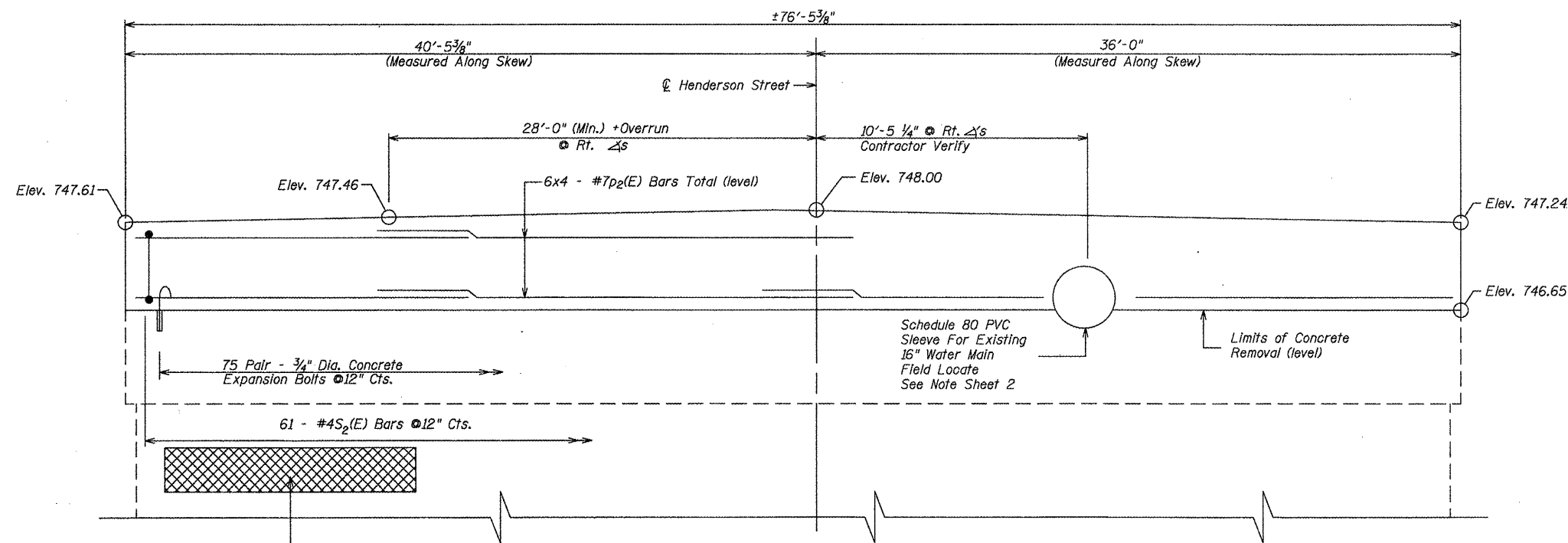
| REVISIONS | |
|-----------|------|
| NAME | DATE |
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------|----------------|------------------|-------------------------------------|-----------|
| 6791 | 07-00401-25-BR | KNOX | 18 | 16 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS | FED. AID PROJECT | |
| Bridge Sheet 12 of 14 Sheets | | | BRM-5025(045) CONTRACT NO. 89557 | |



PLAN



SOUTH FACE OF PIER CAP
(LOOKING NORTH)

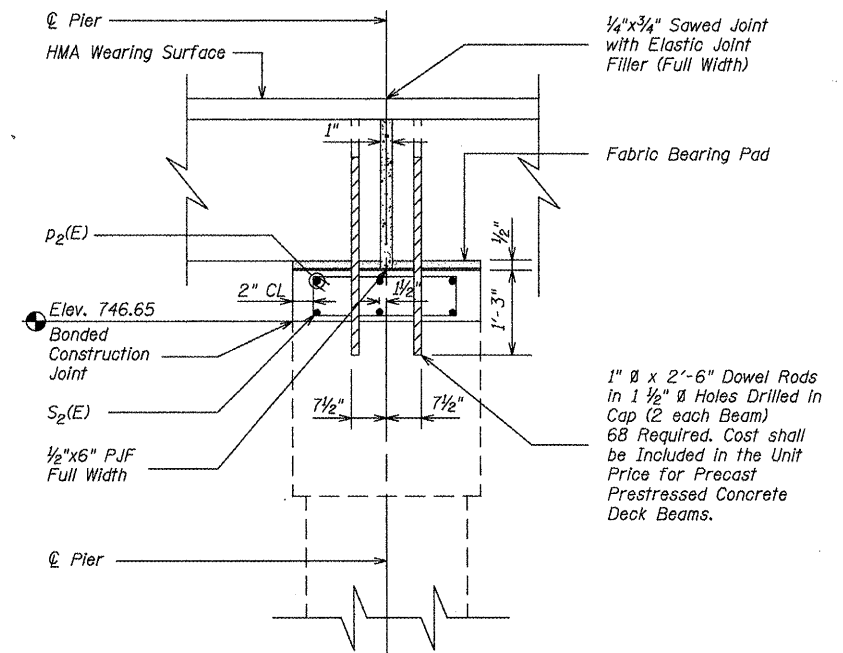
Min. Bar Laps

| | |
|----|-------|
| #4 | 1'-4" |
| #7 | 2'-8" |

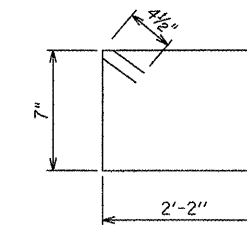
BILL OF MATERIALS

| BAR | NO. | SIZE | LENGTH | SHAPE |
|--|-----|------|--------|-------|
| P ₂ (E) | 24 | #7 | 20'-5" | — |
| S ₂ (E) | 61 | #4 | 6'-3" | □ |
| Concrete Structures | | | CU YD | 7.2 |
| Reinforcement Bars, Epoxy Coated | | | POUND | 1260 |
| Expansion Bolts 3/4 inch | | | EACH | 150 |
| Structural Repair of Concrete (Depth Equal to or Less than 5") | | | SQ FT | 30 |

Reinforcement Bars Designated (E) Shall Be Epoxy Coated.



SECTION THRU PIER CAP SHOWING REINFORCEMENT
(DIMENSIONS ARE AT RIGHT Δ'S)



BAR S₂(E)

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

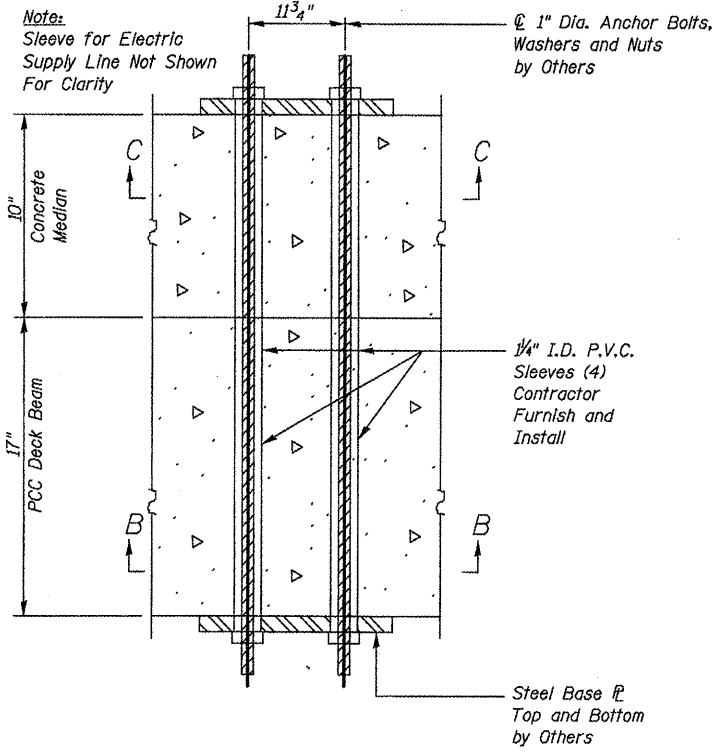
SCALE: VERT. NONE, HORIZ. NONE.
DATE: 08/28/2009
DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

Bruner, Cooper & Zuck, Inc.
Consulting Engineers Structural Engineers Land Surveyors
100 East Simons Street
Phone: (309) 343-5282
Fax: (309) 343-5232
Galesburg, Illinois 61602
E-Mail: bcz@bczinc.com
PROFESSIONAL DESIGN FIRM
LSP/PE CPE, IAW-002535

JOB NO. 290067 FILE NAME: PIERCAPM05.dwg

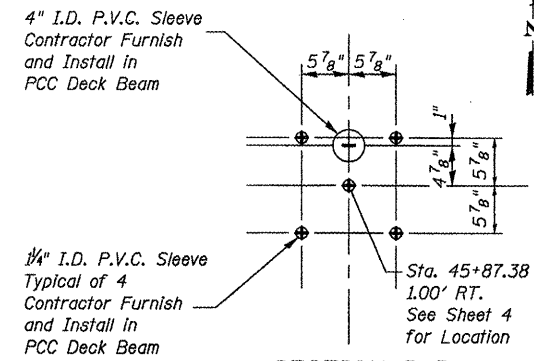
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

| F.A.U. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------|----------------|---------------------------|--------------|-------------------------------------|
| 6791 | 07-00401-25-BR | KNOX | 18 | 17 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. _ | | ILLINOIS FED. AID PROJECT | | |
| Bridge Sheet 13 of 14 Sheets | | | | BRM-5025(045) CONTRACT NO. 89557 |

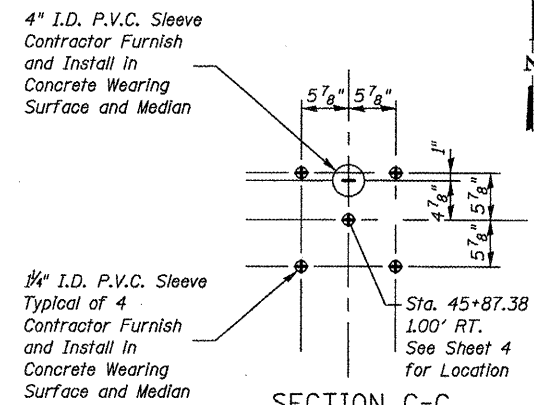


SECTION THRU RAILROAD FLASHING SIGNAL BASE

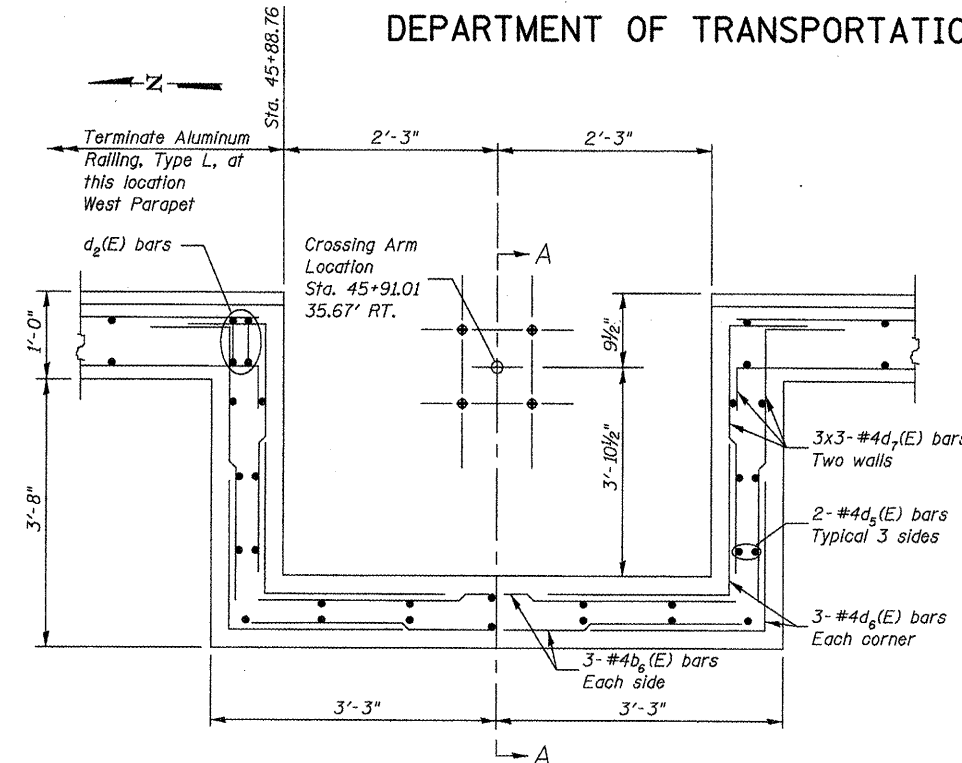
Sta. 45+87.38
1.00' Rt.



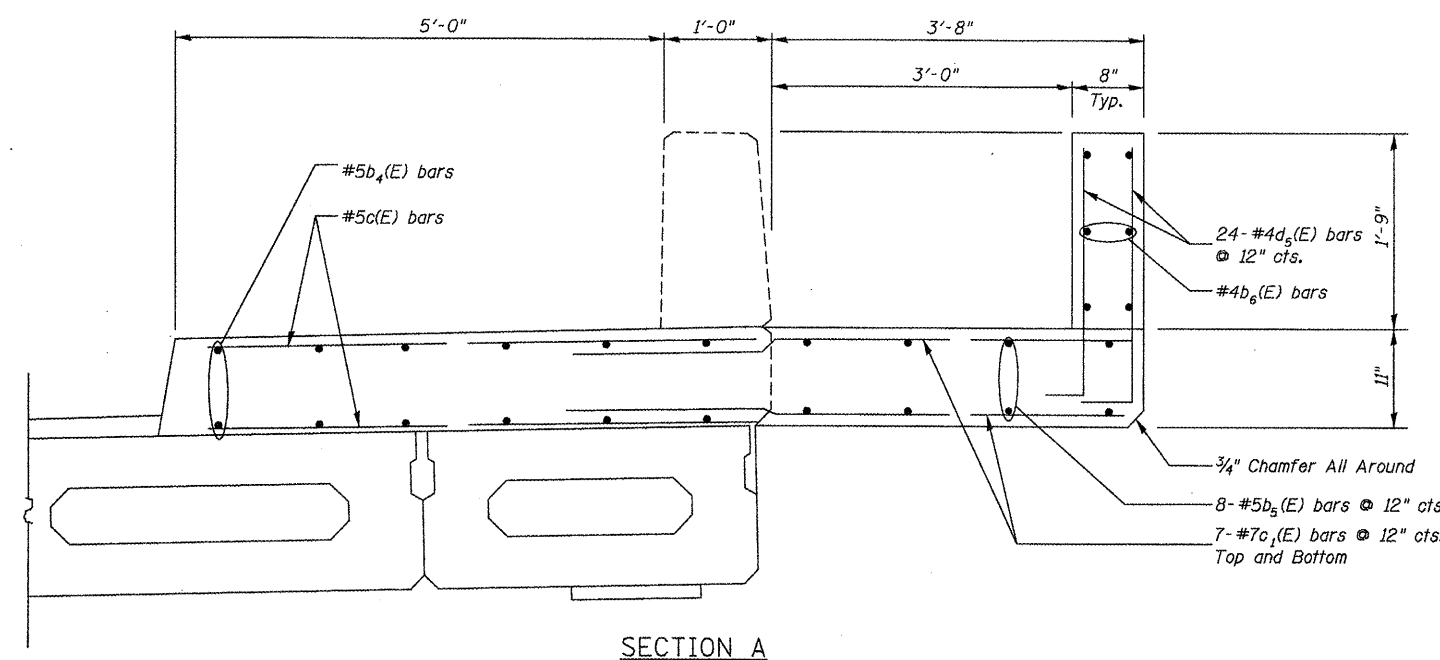
SECTION B-B



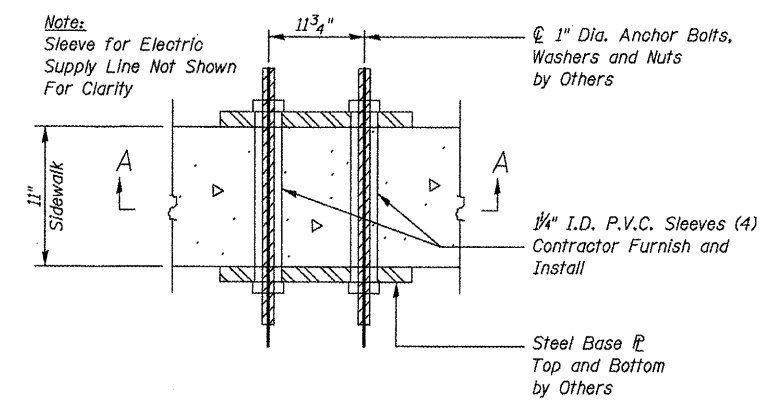
SECTION C-C



CROSSING ARM PLAN

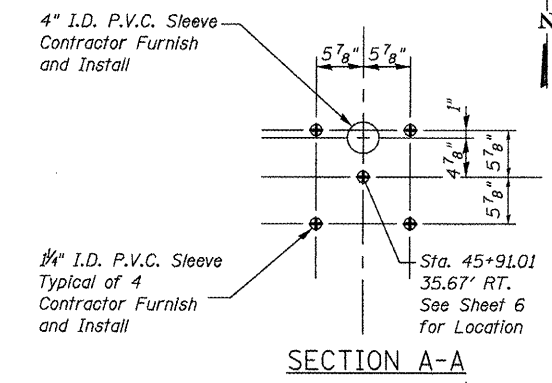


SECTION A



SECTION THRU RAILROAD CROSSING ARM BASE

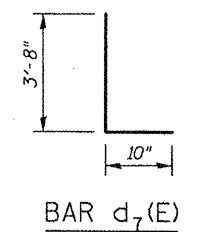
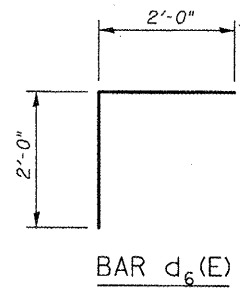
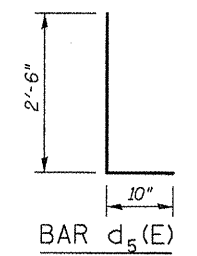
Sta. 45+91.01
35.67' Rt.



SECTION A-A

BILL OF MATERIALS

| BAR | NO. | SIZE | LENGTH | SHAPE | |
|----------------------------------|-----|------|--------|-------|-----|
| b ₅ (E) | 8 | 5 | 6'-2" | — | |
| b ₆ (E) | 6 | 4 | 6'-2" | — | |
| c ₁ (E) | 14 | 7 | 7'-0" | — | |
| d ₅ (E) | 24 | 4 | 3'-4" | — | |
| d ₆ (E) | 12 | 4 | 4'-0" | — | |
| d ₇ (E) | 18 | 4 | 4'-6" | — | |
| Concrete Superstructure | | | | CU YD | 1.2 |
| Reinforcement Bars, Epoxy Coated | | | | POUND | 370 |



ILLINOIS DEPARTMENT OF TRANSPORTATION
MISCELLANEOUS DETAILS
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.8 S.N. 048-0024

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
| | |
| | |
| | |

SCALE: VERT. NONE, HORIZ. NONE.
DATE: 08/28/2009
DRAWN BY: RRR
DESIGNED BY: PETERSON
CHECKED BY: PETERSON

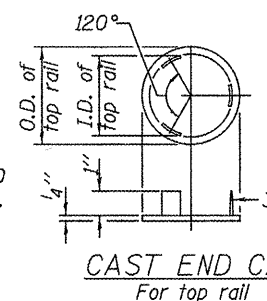
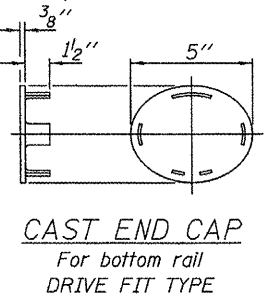
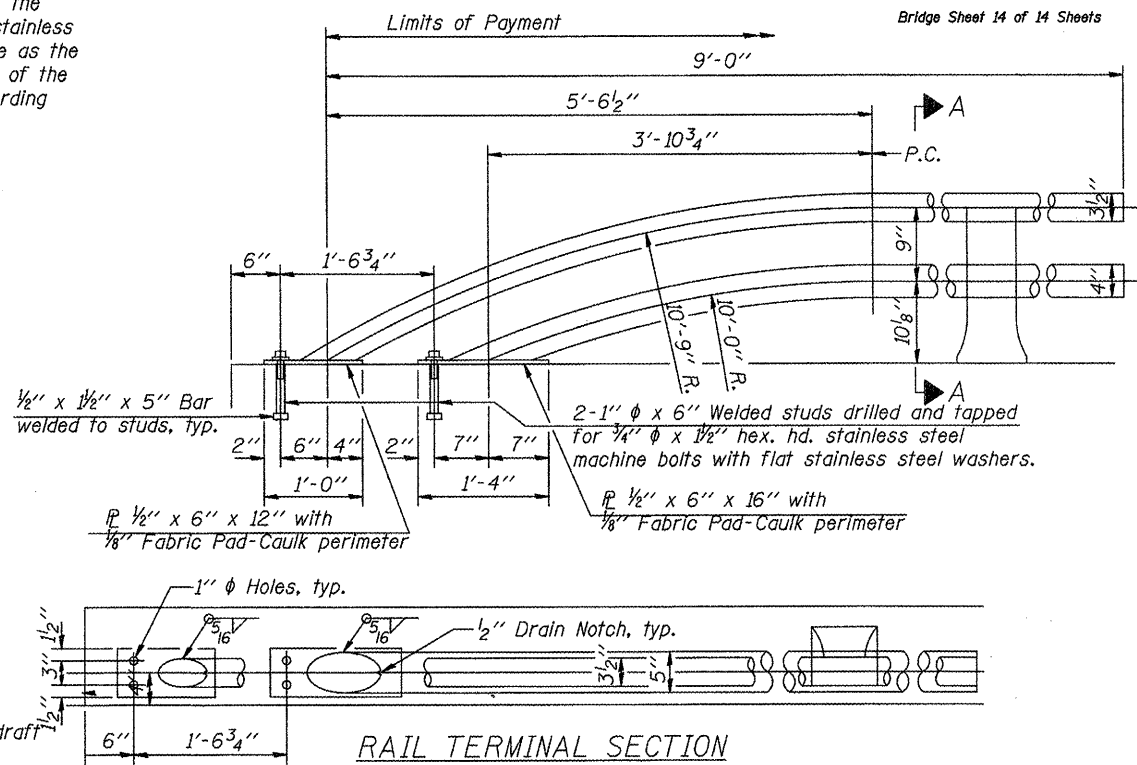
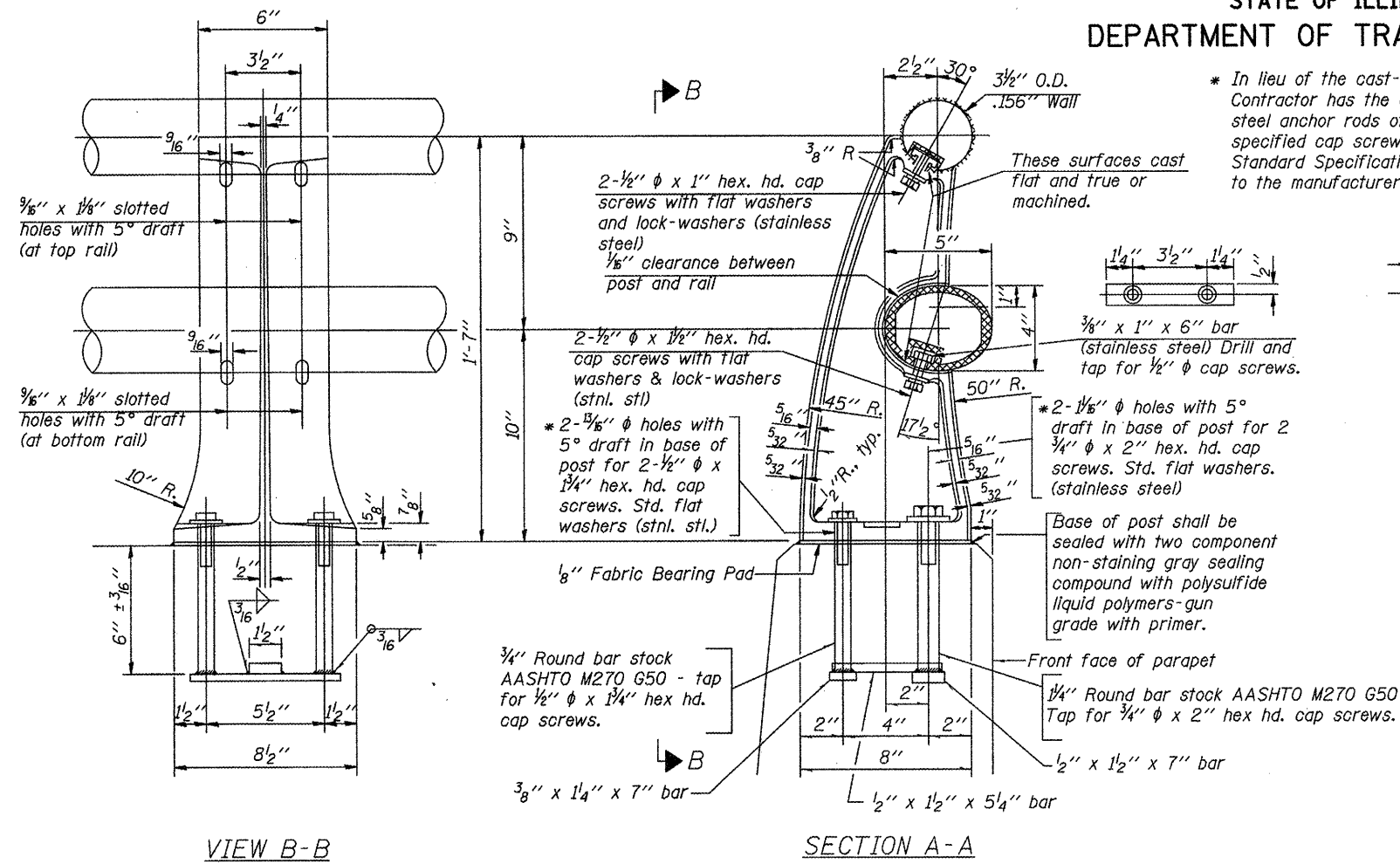
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188 East Stearns Street
Galesburg, Illinois 61602
Phone: (309) 343-2282 Fax: (309) 343-2232
E-Mail: bcz@brunercopco.com

JOB NO. 290067 FILE NAME: DETAILS.dwg

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

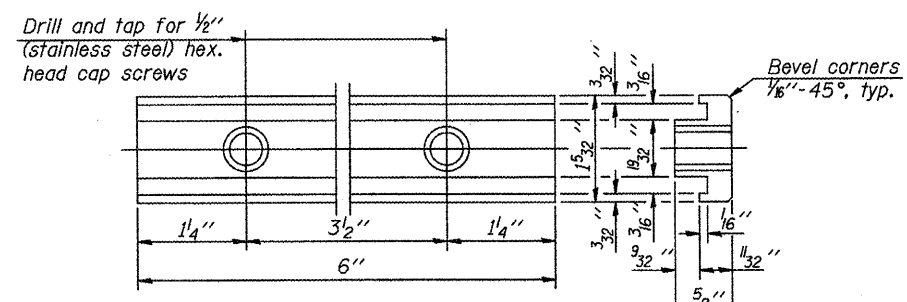
| F.A.I. RTE. | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------------|----------------|------------------|------------------|-----------|
| 6791 | 07-00401-25-BR | KNOX | 18 | 18 |
| STA. 44+90.00 | | TO STA. 47+77.20 | | |
| FED. ROAD DIST. NO. - | | ILLINOIS | FED. AID PROJECT | |
| Bridge Sheet 14 of 14 Sheets | | | | |
| BRM-5025(045) | | | | |
| CONTRACT NO. 89557 | | | | |

* In lieu of the cast-in-place anchor device shown, the Contractor has the option of drilling and setting stainless steel anchor rods of the same diameter and grade as the specified cap screws according to Article 509.06 of the Standard Specifications. Embedment shall be according to the manufacturer's specifications.

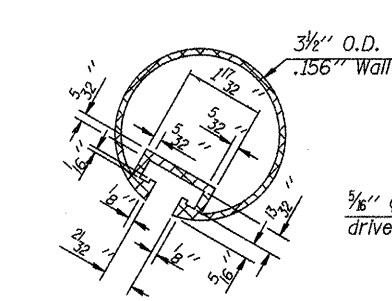


RAIL TERMINAL SECTION

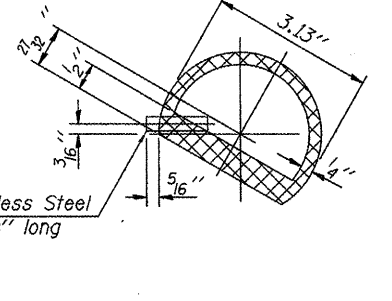
Note:
The end rail post shall be set back as required for the terminal rail section.



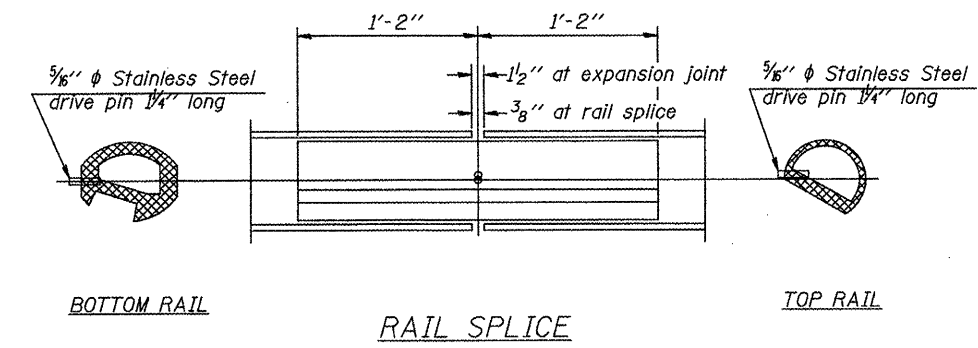
RAIL POST CLAMP BAR For Top Rail



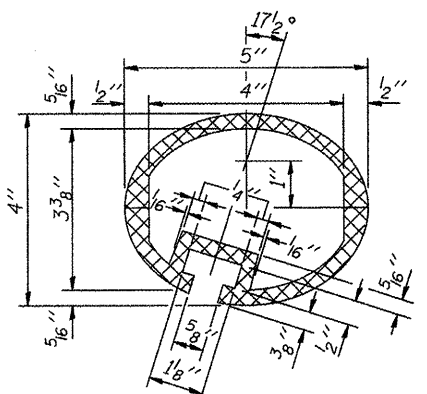
SECTION THRU TOP RAIL



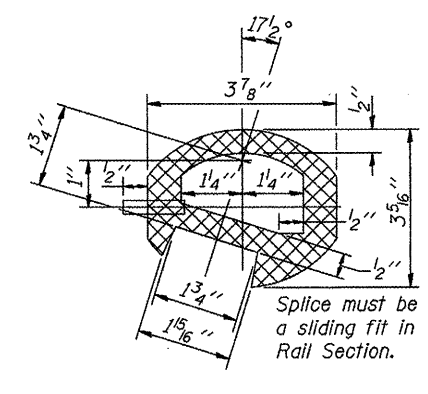
SECTION THRU SPLICE For Top Rail



RAIL SPLICE



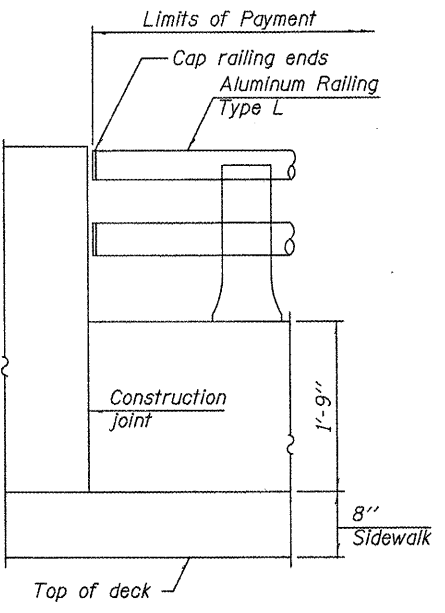
SEC. THRU ELLIPTICAL RAIL SECTION



SEC. THRU SPLICE

RAIL END TREATMENT FOR TYPE 5 AND 6 TERMINAL

Notes:
All Posts shall be normal to parapet.
All joints in rail shall be spliced per detail.
All exposed rail ends shall be capped per detail.
Provide 1-1/8" and 2-1/8" Aluminum Shims for 25% of the Posts. Rail elements shall be parallel to Grade-high spots will be ground and low spots shimmed.
See sheet of for rail post spacing.



BILL OF MATERIAL

| Item | Unit | Quantity |
|--------------------------|------|----------|
| Aluminum Railing, Type L | Foot | 123 |

ALUMINUM RAILING, TYPE L

ILLINOIS DEPARTMENT OF TRANSPORTATION
RAIL DETAILS
S. HENDERSON STREET OVER CEDAR CREEK
SECTION 07-00401-25-BR
CITY OF GALESBURG, KNOX COUNTY
STA. 45+55.80 S.N. 048-0024

SCALE: VERT. NONE, HORIZ. NONE
DATE: 08/28/2009
DRAWN BY: BCB
DESIGNED BY: PETERSON
CHECKED BY: PETERSON
Bruner, Cooper & Zuck, Inc.
Consulting Engineers
108 East Simons Street
Galesburg, Illinois 62402
Phone: (309) 343-9282
Fax: (309) 343-9232
E-Mail: bcz@brunercopzuck.com

| REVISIONS | |
|-----------|------|
| NAME | DATE |
| | |
| | |
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