

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**PROPOSED
 HIGHWAY PLANS**

**TR ROUTE 245 (SOUTH PAW PAW ROAD)
 SECTION 13-11109-01-BR
 PROJECT BROS0037(062)
 BRIDGE REPLACEMENT
 PAW PAW TOWNSHIP
 DEKALB COUNTY
 STP-BR FUNDS**

C-93-075-14

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	1
ILLINOIS			CONTRACT NO. 87586	

INDEX OF SHEETS

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TRAFFIC DATA

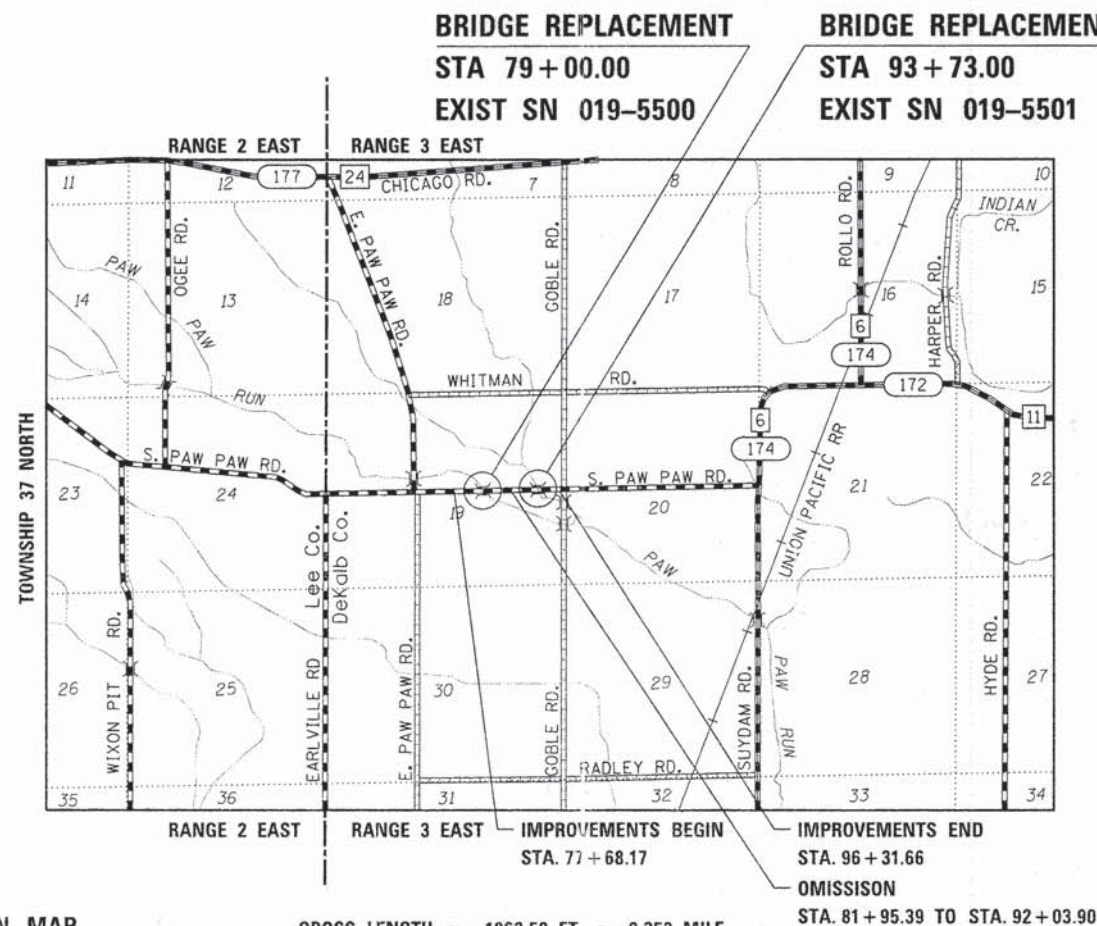
SOUTH PAW PAW ROAD
 POSTED SPEED LIMIT = 55 MPH
 DESIGN SPEED LIMIT = 55 MPH
 2013 ADT = 300
 2032 ADT = 422

DESIGN DESIGNATION

75(14) Local Road 0.06 (HMA-15)



SA STRAND ASSOCIATES*
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDFP NO. 184-001273



GROSS LENGTH = 1863.50 FT. = 0.353 MILE
 NET LENGTH = 855.00 FT. = 0.162 MILE



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
 JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
 1-800-892-0123
 OR 811

LOCATION MAP
 NOT TO SCALE

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED Feb 10 20 15
 [Signature]
 LOCAL AGENCY OFFICIAL

PASSED 2-19 20 15
 [Signature]
 DISTRICT 3 LOCAL ROADS AND STREETS ENGINEER

RELEASING FOR BID BASED ON LIMITED REVIEW
 2-19 20 15
 [Signature]
 DEPUTY DIRECTOR OF HIGHWAYS REGION 2 ENGINEER

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

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE DONE ACCORDING TO THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JAN. 1, 2012, THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" ADOPTED JANUARY 1, 2015, THE DETAILS IN THESE PLANS, AND THE SPECIAL PROVISIONS INCLUDED IN THE CONTRACT DOCUMENTS.
2. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION ACTIVITIES DURING DAYLIGHT HOURS.
3. THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO FULL SIZE PLANS AND NOT TO THE REDUCED SIZE PLANS. DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
4. ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS OR SPECIAL PROVISIONS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.
5. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO CONSTRUCTION AND ORDERING OF MATERIALS.
6. EXISTING STRUCTURES (INCLUDING FOUNDATIONS, WELLS, CISTERN, WALLS, OR OTHER UNDERGROUND STRUCTURES) WITHIN THE RIGHT OF WAY SHALL BE REMOVED IN ACCORDANCE WITH ARTICLE 501.04 AND 501.05 OF THE STANDARD SPECIFICATIONS, WITHOUT ADDITIONAL COMPENSATION, UNLESS OTHERWISE NOTED IN THE PLANS OR SPECIAL PROVISIONS.
7. THE CONTRACTOR SHALL SEED ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS.
8. THE FINAL TOP FOUR INCHES OF SOIL IN ANY AREA DISTURBED BY THE CONTRACTOR SHALL BE FERTILE, FRIABLE, NATURAL LOAM, SURFACE SOIL, REASONABLY FREE OF SUBSOIL, CLAY LUMPS, BRUSH WEEDS AND OTHER LITTER AND FREE OF ROOT STUMPS, STONES AND OTHER MATERIAL HARMFUL TO PLANT GROWTH. TOPSOIL MUST MEET REQUIREMENTS OF ARTICLE 1081.05.
9. THE CONTRACTOR SHALL ENSURE ALL PERMITS HAVE BEEN OBTAINED PRIOR TO COMMENCEMENT OF WORK.
10. 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, MONUMENTS AND RIGHT OF WAY PINS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. ANY PROPERTY MARKERS, SECTION OR SUBSECTION MONUMENTS UNLESS REFERENCED, DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN ACCESS TO THE FIELD ENTRANCE AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
12. CLEARING OF BRUSH, BUSHES AND TREES WITH A DIAMETER LESS THAN 6" WILL NOT BE PAID FOR SEPARATELY PER SECTION 201 OF THE STANDARD SPECIFICATIONS.
13. PROPOSED END SECTIONS SHALL BE SLOPED TO MATCH THE PROPOSED CULVERTS AND STORM SEWER PIPE SLOPES. CULVERTS MAY REQUIRE REVISIONS TO MEET EXISTING FIELD CONDITIONS.
14. ALL SUBSURFACE DRAINS AND/OR FIELD TILES ENCOUNTERED IN THE ROADWAY EXCAVATION SHALL BE REMOVED AND CONSIDERED TO BE INCLUDED IN THE COST OF EARTH EXCAVATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CAPPING THE EXISTING SUBSURFACE DRAINS OR CONNECTING TO THE PROPOSED DITCHES AT THE LOCATIONS SHOWN IN THE PLANS OR AS DIRECTED BY THE OWNER. THIS WORK SHALL NOT BE MEASURED SEPARATELY FOR PAYMENT, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.
15. REMOVAL OF END SECTIONS SHALL BE PAID PER FOOT UNDER PIPE CULVERT REMOVAL.
16. THE PROPOSED DRAINAGE STRUCTURES AND PIPES SHALL BE PROTECTED IMMEDIATELY AFTER THEY ARE CONSTRUCTED UNTIL THE SURFACES THAT DRAIN TO THEM ARE FULLY PAVED OR VEGETATED.
17. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR JOB SITE SAFETY AS WELL AS SUPERVISION, DIRECTION AND MEANS/METHOD OF CONSTRUCTION.
18. QUANTITIES AND ASSOCIATED PAY ITEMS FOR EARTHWORK, LANDSCAPE RESTORATION, AND EROSION CONTROL WERE DEVELOPED ACCORDING TO ONLY THE NECESSARY GRADING FOR THE PROJECT PROPOSED AS SHOWN IN THE CROSS SECTIONS. AREAS DISTURBED BEYOND THE SLOPE INTERCEPTS OR WITHIN THE LIMITS OF IMPROVEMENT SHALL HAVE EROSION CONTROL AND LANDSCAPING RESTORATION ACCORDING TO THE ADJACENT REQUIREMENTS SHOWN IN THE PLANS. THE GROUND SHALL BE GRADED AND RESTORED TO MATCH THE EXISTING PRE-CONSTRUCTION CONDITIONS. ALL WORK DESCRIBED ABOVE THAT IS BEYOND THE SLOPE INTERCEPTS WILL NOT BE PAID FOR SEPARATELY AND SHALL BE INCLUDED IN THE COST OF THE VARIOUS ESTABLISHED PAY ITEMS.
19. ALL SAW CUTS SHALL BE INCLUDED IN THE COST OF THE VARIOUS REMOVAL ITEMS.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND OR SURFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.
21. DAMAGE TO PAVEMENT OR ANY OTHER PORTION OF THE ROADWAY NOT SPECIFIED TO BE REMOVED AND REPLACED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.
22. THE CONTRACTOR SHALL PROVIDE AND INSTALL TWO (2) WEIGHTED SANDBAGS ON EACH TYPE I OR TYPE II BARRICADE USED. ONE (1) WEIGHTED SANDBAG SHALL BE PLACED ACROSS EACH BOTTOM RAIL.
23. FOR STEEL BAR CERTIFICATION, PLEASE CONTACT IDOT BUREAU OF MATERIALS AT 815-433-7100.
24. MATERIAL EXCAVATED FROM THE CHANNEL SHALL NOT BE RETURNED TO THE WATERWAY OR PLACED IN WETLANDS.
25. IT IS ASSUMED THAT 6" OF THE EXISTING GROUND OUTSIDE THE PAVEMENT SHALL BE EXCAVATED AND REMOVED FROM THE SITE. QUANTITIES FOR THIS WORK ARE INCLUDED IN REMOVAL AND DISPOSAL OF UNSUITABLE MATERIALS.
26. GRADING AND SHAPING DITCHES WILL NOT BE PAID FOR SEPARATELY AND SHOULD BE INCLUDED IN THE COST OF EARTH EXCAVATION.
27. ALL PIPE CULVERTS SHALL BE MADE OF CORRUGATED STEEL OR ALUMINUM ALLOY PIPE MATERIAL.

HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERTS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
630301-06	SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL TERMINALS
631032-08	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701901-04	TRAFFIC CONTROL DEVICES
720001-01	SIGN PANEL MOUNTING DETAILS
720006-04	SIGN PANEL ERECTION DETAILS
BLR22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (TWO-LANE TWO WAY RURAL TRAFFIC) (ROAD CLOSED TO THRU TRAFFIC)

DISTRICT THREE STANDARD DETAILS

251-2	EROSION CONTROL BLANKET LINING END SECTION
402-1	FIELD ENTRANCE DETAIL
406-8	HMA DETAIL AT BUTT JOINTS
720-10	TEMPORARY INFORMATION SIGNING - ROAD CLOSED

COMMITMENTS

THERE ARE NO COMMITMENTS FOR THIS PROJECT.

 DENOTES WORK INCLUDED IN THE COST OF OTHER ITEMS.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND HIGHWAY STANDARDS

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	2
				CONTRACT NO. 87586
ILLINOIS FED. AID PROJECT				



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PLOT SCALE = 1.0000' / 1"	CHECKED - MAG	REVISED -
PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

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

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				ROADWAY 0004	BRIDGE 0011
				80% FEDERAL 20% STATE RURAL	80% FEDERAL 20% STATE RURAL
20200100	EARTH EXCAVATION	CU YD	230	230	
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	421	421	
20400800	FURNISHED EXCAVATION	CU YD	560	560	
25000210	SEEDING, CLASS 2A	ACRE	.5	.5	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	41	41	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	41	41	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	41	41	
25100635	HEAVY DUTY EROSION CONTROL BLANKET	SQ YD	2,175	2,175	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	45	45	
28000305	TEMPORARY DITCH CHECKS	FOOT	41	41	
28000400	PERIMETER EROSION BARRIER	FOOT	1,148	1,148	
28000500	INLET AND PIPE PROTECTION	EACH	2	2	
28001100	TEMPORARY EROSION CONTROL BLANKET	SQ YD	2,175	2,175	
28100105	STONE RIPRAP, CLASS A3	SQ YD	8	8	

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES	
SCALE:	SHEET 1 OF 4 SHEETS STA. TO STA.

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	3
CONTRACT NO. 87586			ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				ROADWAY 0004 80% FEDERAL 20% STATE RURAL	BRIDGE 0011 80% FEDERAL 20% STATE RURAL
28100109	STONE RIPRAP, CLASS A5	SQ YD	960		960
28200200	FILTER FABRIC	SQ YD	968	8	960
35100700	AGGREGATE BASE COURSE, TYPE A 8"	SQ YD	1,798	1,798	
40200900	AGGREGATE SURFACE COURSE, TYPE B	CU YD	19	19	
40600275	BITUMINOUS MATERIALS (PRIME COAT)	POUND	4,166	4,166	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	267	267	
40603082	HOT-MIX ASPHALT BINDER COURSE, IL-19.0 FG, N50	TON	206	206	
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	133	133	
44000100	PAVEMENT REMOVAL	SQ YD	1,690	1,690	
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	831	831	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	2		2
50105220	PIPE CULVERT REMOVAL	FOOT	61	61	
50200100	STRUCTURE EXCAVATION	CU YD	152		152
50300225	CONCRETE STRUCTURES	CU YD	54		54

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SP. P.
245	13-11109-01-BR	DEKALB	46	
CONTRACT NO. 875				
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				ROADWAY 0004 80% FEDERAL 20% STATE RURAL	BRIDGE 0011 80% FEDERAL 20% STATE RURAL
50300260	BRIDGE DECK GROOVING	SO YD	304		304
50300280	CONCRETE ENCASEMENT	CU YD	8		8
50300300	PROTECTIVE COAT	SO YD	330		330
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SO FT	2,866		2,866
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	12,220		12,220
Δ 50901050	STEEL RAILING, TYPE SM	FOOT	248		248
51201700	FURNISHING STEEL PILES HP12X74	FOOT	972		972
51202305	DRIVING PILES	FOOT	972		972
51203700	TEST PILE STEEL HP12X74	EACH	4		4
51204650	PILE SHOES	EACH	20		20
51500100	NAME PLATES	EACH	2		2
54215550	METAL END SECTIONS 15"	EACH	2	2	
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	48	48	
Δ 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8	8	

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PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET 3 OF 4 SHEETS STA. TO STA.

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEETS N
245	13-11109-01-BR	DEKALB	46	1
			CONTRACT NO. 8751	
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE	
				ROADWAY 0004 80% FEDERAL 20% STATE RURAL	BRIDGE 0011 80% FEDERAL 20% STATE RURAL
Δ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	8	8	
66900200	NON-SPECIAL WASTE DISPOSAL	CU YD	50	50	
67100100	MOBILIZATION	L SUM	1	1	
72400100	REMOVE SIGN PANEL ASSEMBLY - TYPE A	EACH	12	12	
Δ 78200200	BIDIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	24	24	
Δ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	8	8	
• X5030305	CONCRETE WEARING SURFACE, 5"	SQ YD	320		320
• X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	152		152
• X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1	
• Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1	
• Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	42	42	
• Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	256		256

Δ SPECIALTY ITEMS

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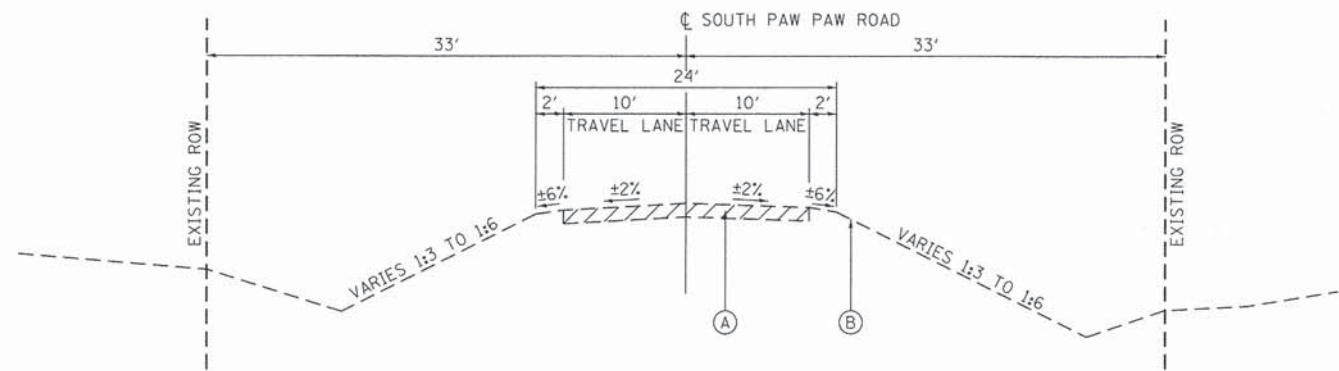
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

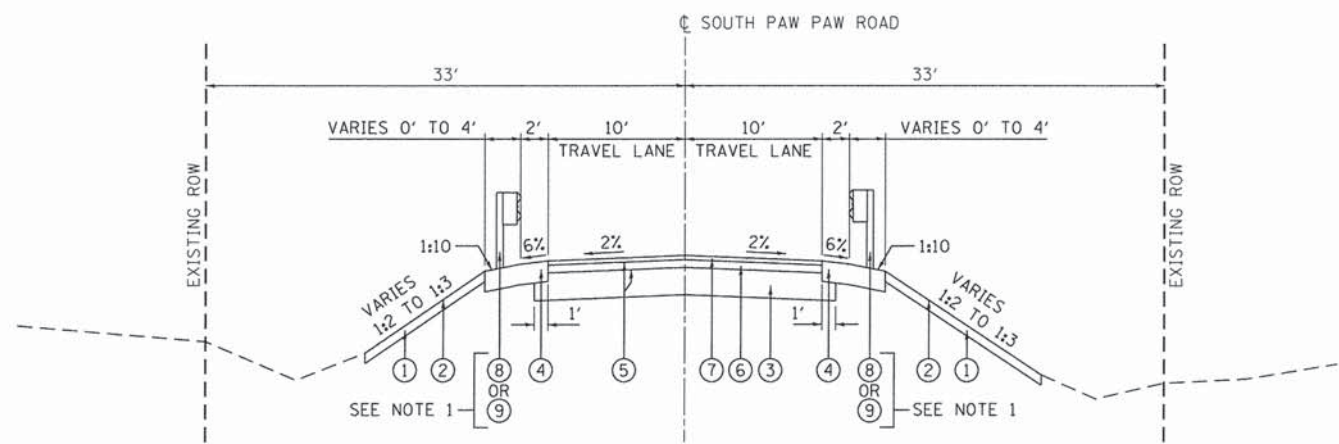
SUMMARY OF QUANTITIES

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

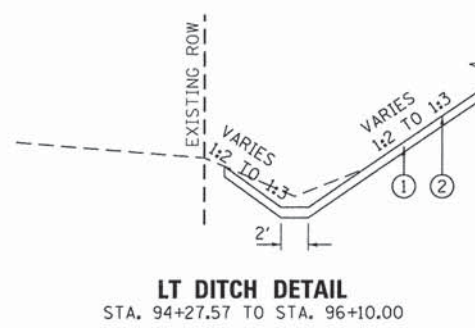
TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	6
CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				



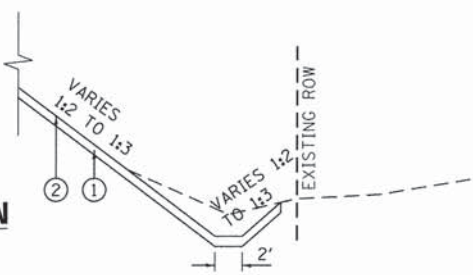
EXISTING TYPICAL SECTION
 *STA. 77+68.17 TO STA. 96+31.66
 *BRIDGE OMISSIONS:
 STA. 78+74.31 TO STA. 79+25.69
 STA. 93+47.31 TO STA. 93+98.69



PROPOSED TYPICAL SECTION
 **STA. 77+68.17 TO STA. 81+95.39
 **STA. 92+03.90 TO STA. 96+31.66
 **BRIDGE OMISSIONS:
 STA. 78+69.83 TO STA. 79+31.60
 STA. 93+42.21 TO STA. 94+03.97



LT DITCH DETAIL
 STA. 94+27.57 TO STA. 96+10.00



RT DITCH DETAIL
 STA. 77+35.18 TO STA. 78+50.00
 STA. 93+92.82 TO STA. 96+00.00

NOTES:
 1. APPLIES TO:
 STA. 77+73.65 TO STA. 78+74.08
 STA. 79+27.35 TO STA. 80+27.78
 STA. 92+46.03 TO STA. 93+46.46
 STA. 93+99.72 TO STA. 95+00.15

EXISTING LEGEND

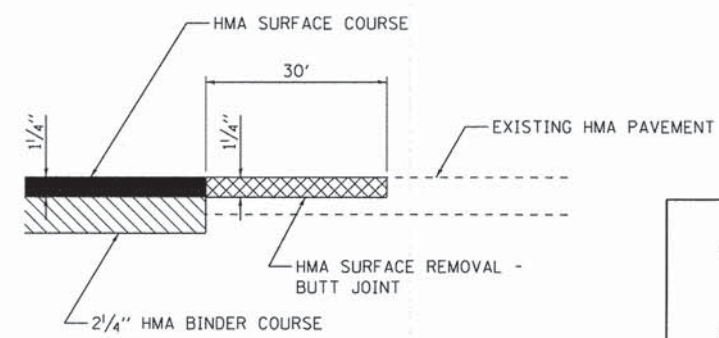
- (A) HOT-MIX ASPHALT PAVEMENT
- (B) 6" TOPSOIL (APPROX.)

REMOVAL LEGEND

PAVEMENT REMOVAL

PROPOSED LEGEND

- (1) VEGETATION SUSTAINING TOPSOIL (SEE FURNISHED EXCAVATION SPECIAL PROVISION)
- (2) SEEDING, CLASS 2A
- (3) AGGREGATE BASE COURSE, TYPE A 8"
- (4) AGGREGATE SHOULDERS, TYPE B 6"
- (5) BITUMINOUS MATERIALS (PRIME COAT)
- (6) 2 1/4" HOT-MIX ASPHALT BINDER COURSE, IL-19.0 FG, N50
- (7) 1 1/4" HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50
- (8) TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT
- (9) TRAFFIC BARRIER TERMINAL, TYPE 6A



BUTT JOINT DETAIL

STRUCTURAL DESIGN TRAFFIC: 359	YEAR: 2024
PV = 316	SU = 32 MU = 11
ROAD/STREET CLASSIFICATION: CLASS IV	
PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:	
P = 88%	S = 9% M = 3%
TRAFFIC FACTOR: = 0.06	
PG GRADE: BINDER = 64-22	SURFACE = 64-22
SUBGRADE SUPPORT RATING:	
SSR = POOR	

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

	HMA BINDER	HMA SURFACE
PG GRADE	PG 64-22	PG 64-22
DESIGN AIR VOIDS	4.0% @ N50	4.0% @ N50
MIXTURE COMPOSITION	IL 19.OFG	IL 9.5
FRICTION AGGREGATE		MIXTURE C
DENSITY TEST METHOD	CORES	CORES
MIXTURE WEIGHT	112* / SQ. YD. / IN.	112* / SQ. YD. / IN.
QUALITY MANAGEMENT PROGRAM	QC/OA	QC/OA
SUBLOT SIZE	N/A	N/A
LOCATION(S)	ENTIRE PROJECT	ENTIRE PROJECT

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1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = brianf	DESIGNED - AMS	REVISED -
MODEL NAME = Default	DRAWN - DJW	REVISED -
PLOT SCALE = 7.0000' / in.	CHECKED - MAG	REVISED -
PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS	
SCALE:	SHEET OF SHEETS STA. TO STA.

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	7
CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				

FILE NAME = S:\JULI_16000-6091\6091\003\MicroStation\CAAD_Sheets\012215-1ht-schedule.mxd

SOUTH PAW PAW ROAD						
EARTHWORK SCHEDULE						
LOCATION		EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (15%)	EMBANKMENT	FURNISHED EXCAVATION EARTHWORK BALANCE WASTE (+) OR SHORAGE (-)	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL
STATION	STATION	CU YD	CU YD	CY YD	CY YD	CY YD
77+00.00	77+11.18	0.08	0.07	11.16	-11.09	4.55
77+11.18	77+68.17	18.15	15.43	29.22	-16.54	17.57
77+68.17	78+00.00	24.27	20.63	1.36	14.75	11.30
78+00.00	78+50.00	24.03	20.42	7.39	6.91	20.44
78+50.00	78+66.61	0.96	0.81	3.74	-3.96	5.28
78+66.61	79+34.81	1.68	1.43	20.35	-22.87	21.27
79+34.81	79+50.00	0.00	0.00	7.70	-8.94	5.36
79+50.00	80+00.00	0.00	0.00	62.47	-72.88	27.32
80+00.00	80+50.00	0.00	0.00	83.31	-99.15	32.84
80+50.00	81+00.00	0.61	0.52	50.88	-64.48	26.36
81+00.00	81+50.00	8.05	6.84	18.75	-20.40	16.69
81+50.00	81+95.39	19.27	16.38	4.30	9.38	7.47
92+03.90	92+50.00	19.22	16.33	15.50	-4.22	14.57
92+50.00	93+00.00	7.56	6.43	33.82	-34.80	22.38
93+00.00	93+38.99	0.72	0.61	32.18	-36.53	16.46
93+38.99	94+07.19	13.92	11.83	73.71	-75.47	36.39
94+07.19	94+50.00	16.94	14.40	46.88	-46.30	30.65
94+50.00	95+00.00	18.06	15.35	44.93	-48.46	39.80
95+00.00	95+50.00	19.64	16.69	26.31	-27.58	34.39
95+50.00	96+00.00	21.68	18.42	8.74	-2.67	22.14
96+00.00	96+31.66	15.45	13.14	3.66	5.63	8.06
TOTALS		230	196	586	-560	421

SA
STRAND
ASSOCIATES*

1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = brianf
MODEL NAME = Default
PLOT SCALE = 50.0000' / 1" =
PLOT DATE = 2/12/2015

DESIGNED - AMS
DRAWN - DJW
CHECKED - MAG
DATE - 12-03-2014

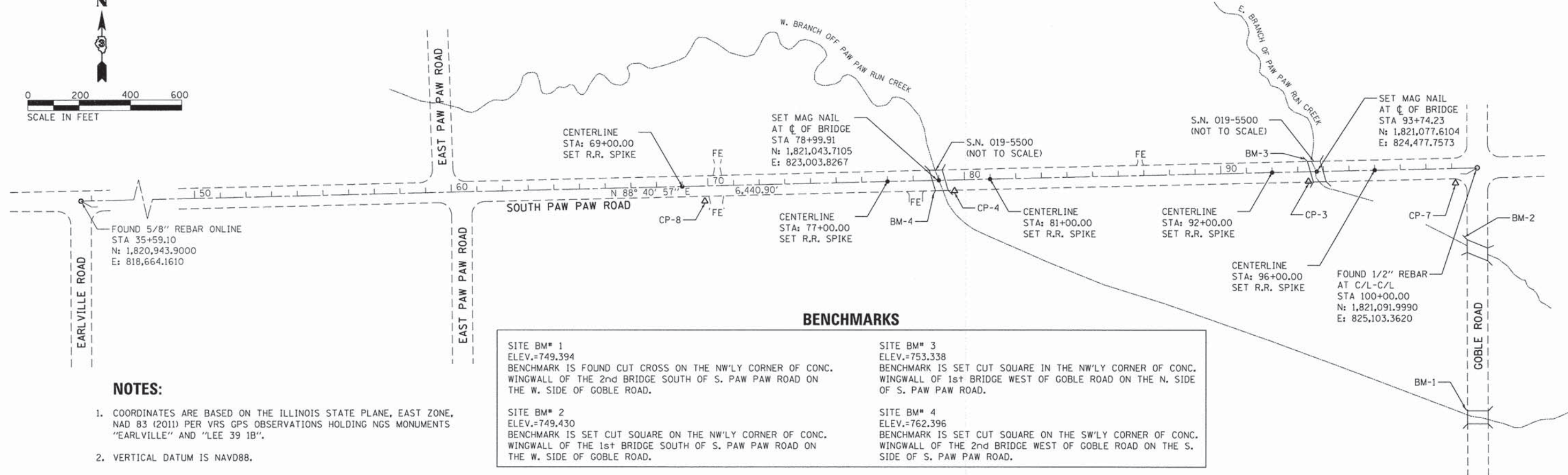
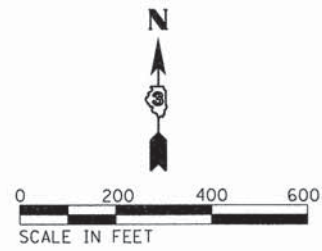
REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULES OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

TR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	8
CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				



NOTES:

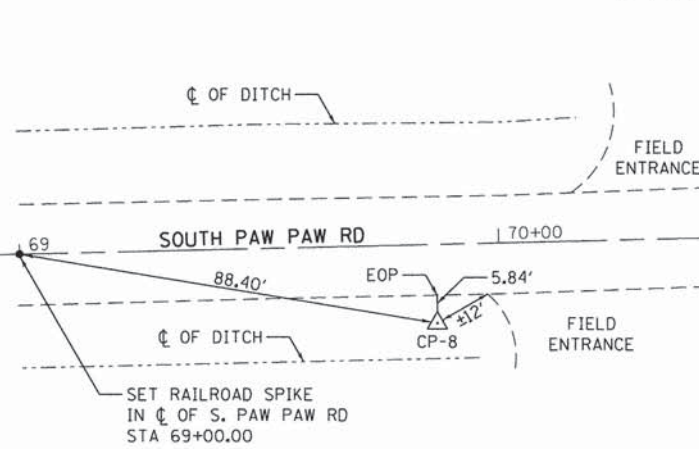
- COORDINATES ARE BASED ON THE ILLINOIS STATE PLANE, EAST ZONE, NAD 83 (2011) PER VRS GPS OBSERVATIONS HOLDING NGS MONUMENTS "EARLVILLE" AND "LEE 39 1B".
- VERTICAL DATUM IS NAVD88.

BENCHMARKS

<p>SITE BM# 1 ELEV.=749.394 BENCHMARK IS FOUND CUT CROSS ON THE NW'LY CORNER OF CONC. WINGWALL OF THE 2nd BRIDGE SOUTH OF S. PAW PAW ROAD ON THE W. SIDE OF GOBLE ROAD.</p>	<p>SITE BM# 3 ELEV.=753.338 BENCHMARK IS SET CUT SQUARE IN THE NW'LY CORNER OF CONC. WINGWALL OF 1st BRIDGE WEST OF GOBLE ROAD ON THE N. SIDE OF S. PAW PAW ROAD.</p>
<p>SITE BM# 2 ELEV.=749.430 BENCHMARK IS SET CUT SQUARE ON THE NW'LY CORNER OF CONC. WINGWALL OF THE 1st BRIDGE SOUTH OF S. PAW PAW ROAD ON THE W. SIDE OF GOBLE ROAD.</p>	<p>SITE BM# 4 ELEV.=762.396 BENCHMARK IS SET CUT SQUARE ON THE SW'LY CORNER OF CONC. WINGWALL OF THE 2nd BRIDGE WEST OF GOBLE ROAD ON THE S. SIDE OF S. PAW PAW ROAD.</p>

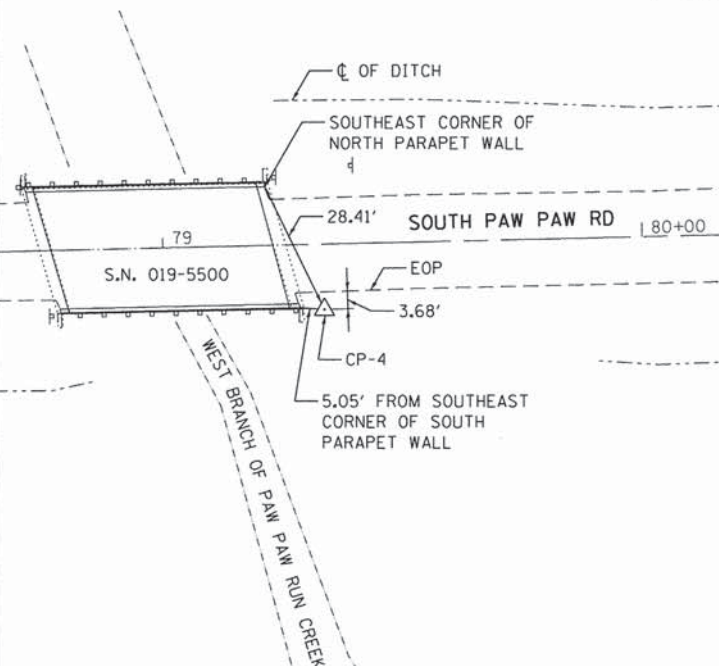
CONTROL POINT 8

SET 5/8" REBAR WITH CAP
N: 1,821,006.3205
E: 822,091.4120
ELEV: 772.5040
STA: 69+86.88
OFF: 16.4005



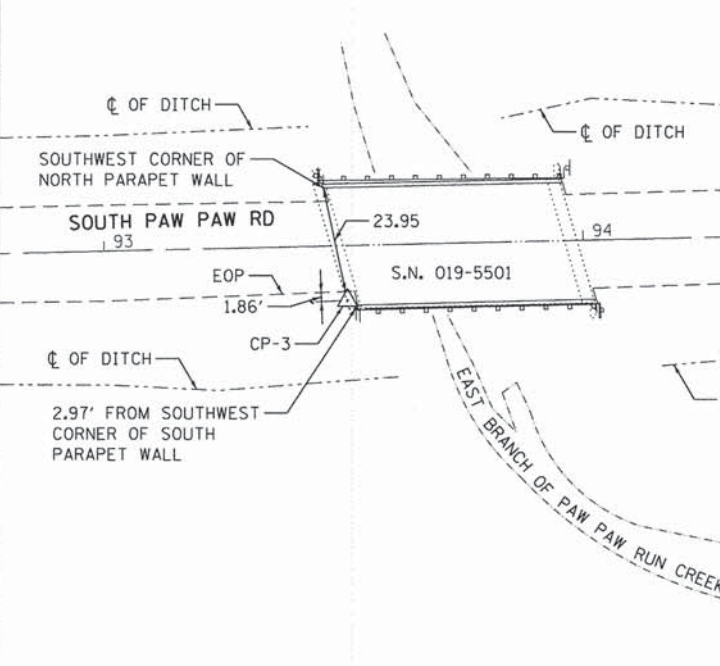
CONTROL POINT 4

SET 5/8" REBAR WITH CAP
N: 1,821,030.8810
E: 823,037.6945
ELEV: 761.5580
STA: 79+33.47
OFF: 13.6049



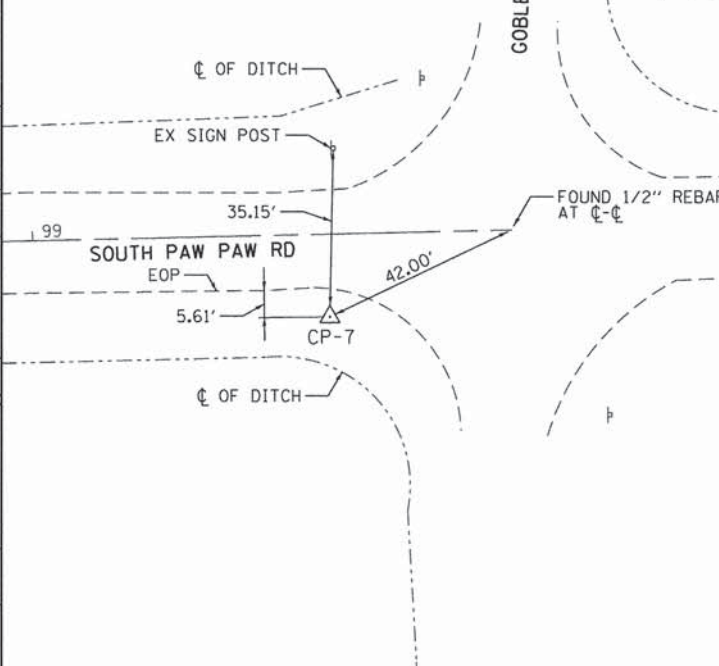
CONTROL POINT 3

SET 5/8" REBAR WITH CAP
N: 1,821,065.6790
E: 824,454.3445
ELEV: 752.8350
STA: 93+50.55
OFF: 11.3898



CONTROL POINT 7

SET 5/8" REBAR WITH CAP
N: 1,821,073.9375
E: 825,065.4385
ELEV: 755.3010
STA: 99+61.67
OFF: 17.1847



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ALIGNMENT, TIES, AND BENCHMARKS

SA STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = brianf	DESIGNED - AMS	REVISED -
MODEL NAME = Default	DRAWN - DJW	REVISED -
PLOT SCALE = 200.0000' / in.	CHECKED - MAG	REVISED -
PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

TR. RTE. 245	SECTION 13-11109-01-BR	COUNTY DEKALB	TOTAL SHEETS 46	SHEET NO. 9
--------------	------------------------	---------------	-----------------	-------------

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
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CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				

FILE NAME = s:\j\68000-68991\68991\03\micross\c600_Sheets\012345-sh1-ATB.dgn

LEGEND

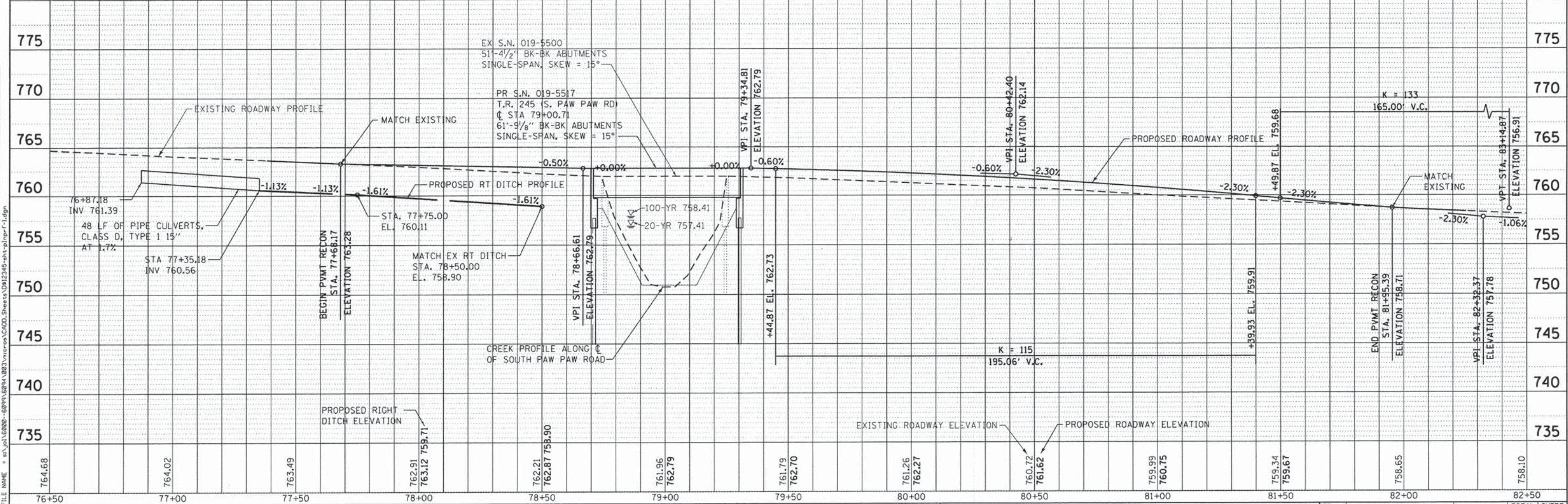
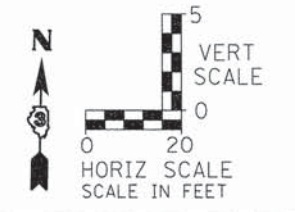
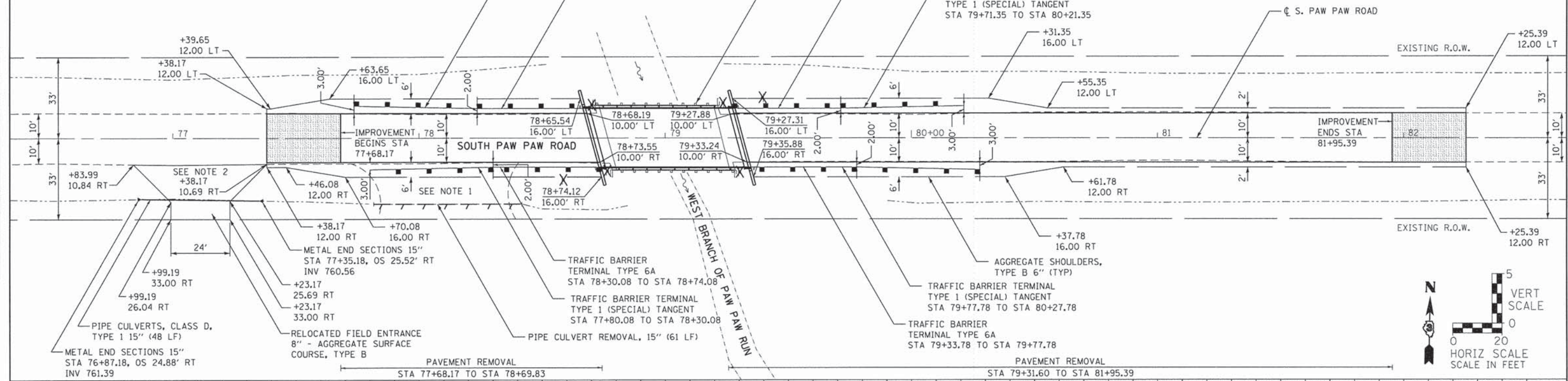
- X REMOVE SIGN PANEL ASSEMBLY - TYPE A
- HOT MIX ASPHALT SURFACE REMOVAL - BUTT JOINT

NOTES:

1. EXISTING FIELD ENTRANCE LOCATION STA 77+72.56 TO STA 78+40.59.
2. PROPOSED FIELD ENTRANCE LOCATION STA 76+83.99 TO STA. 77+38.17.

DATE	
BY	
NO.	
PLAN	
NO.	
NO.	
NO.	
NO.	
NO.	
NO.	
NO.	

DATE	
BY	
NO.	
PROFILE	
NO.	
NO.	
NO.	
NO.	
NO.	
NO.	
NO.	



STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = brief	DESIGNED - AMS	REVISED -
MODEL NAME = Default	DRAWN - DJW	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - MAG	REVISED -
PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SOUTH PAW PAW ROAD BRIDGE RECONSTRUCTION
PLAN AND PROFILE**

SCALE: 20'-H 5'-V SHEET 1 OF 2 SHEETS STA. 76+50.00 TO STA. 82+50.00

TR. RTE. 245	SECTION 13-11109-01-BR	COUNTY DEKALB	TOTAL SHEETS 46	SHEET NO. 10
CONTRACT NO. 87586			ILLINOIS FED. AID PROJECT	

LEGEND

X REMOVE SIGN PANEL ASSEMBLY - TYPE A

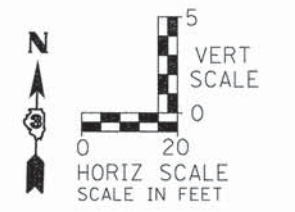
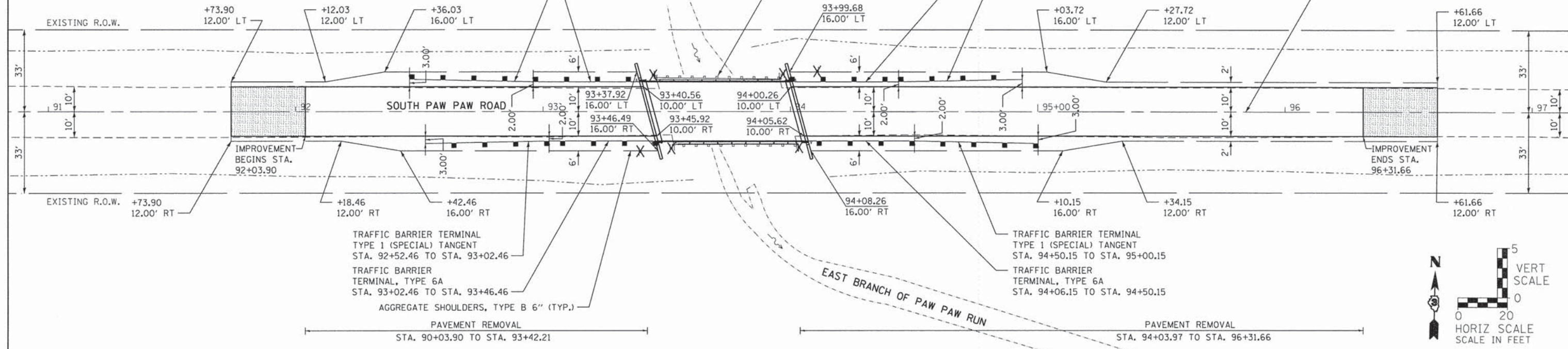
[Hatched Box] HOT MIX ASPHALT SURFACE REMOVAL - BUTT JOINT

TRAFFIC BARRIER TERMINAL, TYPE 6A STA. 92+46.03 TO STA. 93+40.03
 TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT STA. 92+46.03 TO STA. 92+96.03

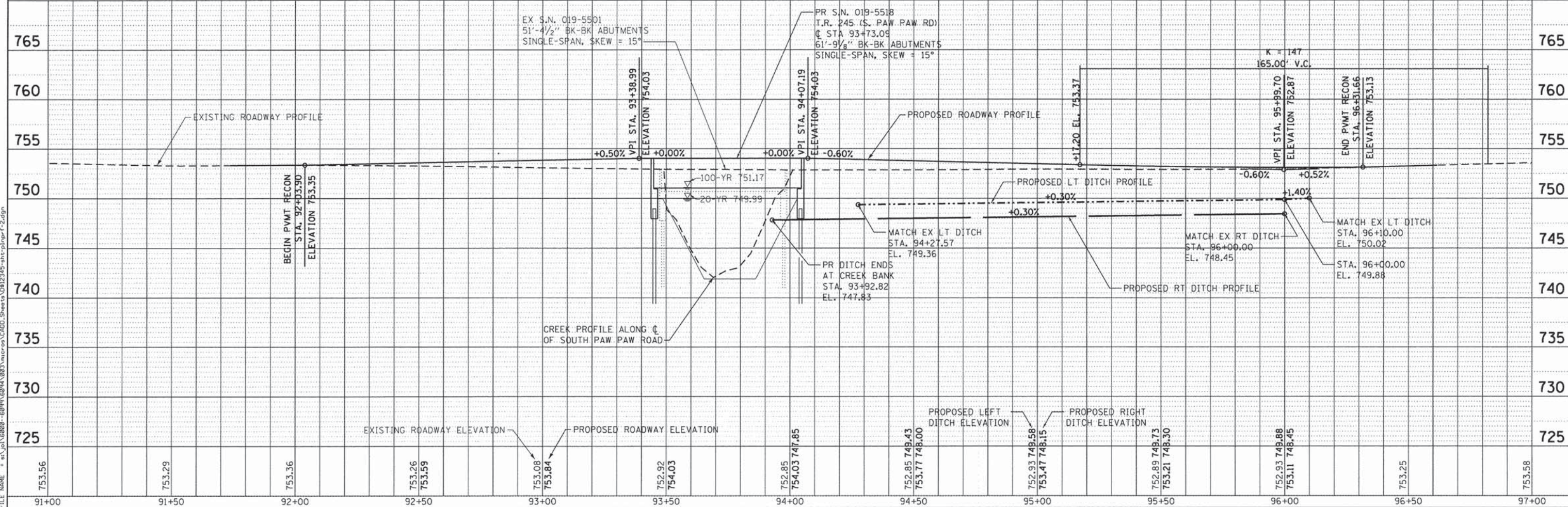
REMOVAL OF EXISTING STRUCTURE S.N. 019-5501

TRAFFIC BARRIER TERMINAL, TYPE 6A STA. 93+99.72 TO STA. 94+43.72
 TRAFFIC BARRIER TERMINAL TYPE 1 (SPECIAL) TANGENT STA. 94+43.72 TO STA. 94+93.72

PLAN	DATE
BY	
NO.	
DATE	
BY	
NO.	
DATE	
BY	
NO.	
DATE	



PROFILE	DATE
BY	
NO.	
DATE	
BY	
NO.	
DATE	
BY	
NO.	
DATE	



91+00	91+50	92+00	92+50	93+00	93+50	94+00	94+50	95+00	95+50	96+00	96+50	97+00																	
753.56	753.29	753.36	753.26	753.59	753.08	753.84	752.92	754.03	752.85	754.03	747.85	752.85	749.43	753.77	748.00	752.93	749.58	753.47	748.15	752.89	749.73	753.21	748.30	752.93	749.88	753.11	748.45	753.25	753.58

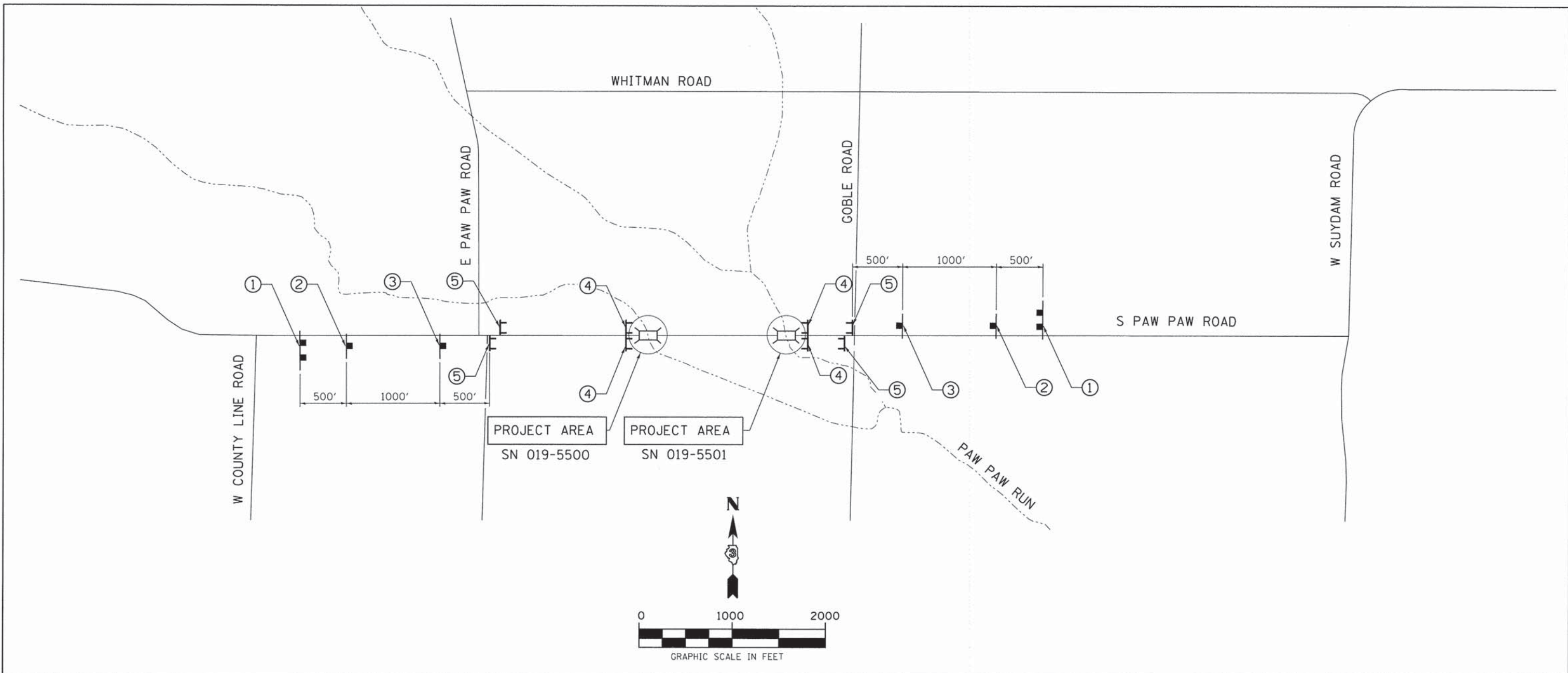
STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = brianf	DESIGNED - AMS	REVISED -
MODEL NAME = Default	DRAWN - DJW	REVISED -
PLOT SCALE = 20.00000 ' / in.	CHECKED - MAG	REVISED -
PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH PAW PAW ROAD BRIDGE RECONSTRUCTION
PLAN AND PROFILE
 SCALE: 20-H 5-V SHEET 2 OF 2 SHEETS STA. 91+00.00 TO STA. 97+00.00

TR. RTE. 245	SECTION 13-11109-01-BR	COUNTY DEKALB	TOTAL SHEETS 46	SHEET NO. 11
CONTRACT NO. 87586				ILLINOIS FED. AID PROJECT



SIGN LEGEND

- ① 720-10 (SEE SPECIAL PROVISION 7S)
- ② W20-3, 48"x48"
- ③ W20-3, 48"x48"
- ④ R11-2, 48"x30"
- ⑤ R11-4, 48"x30"

- TYPE III BARRICADES WITH 2 FLASHING LIGHTS EACH HIGHWAY STANDARD 701901
- SIGN WITH SINGLE POST
- SIGN WITH DOUBLE POST

NOTES

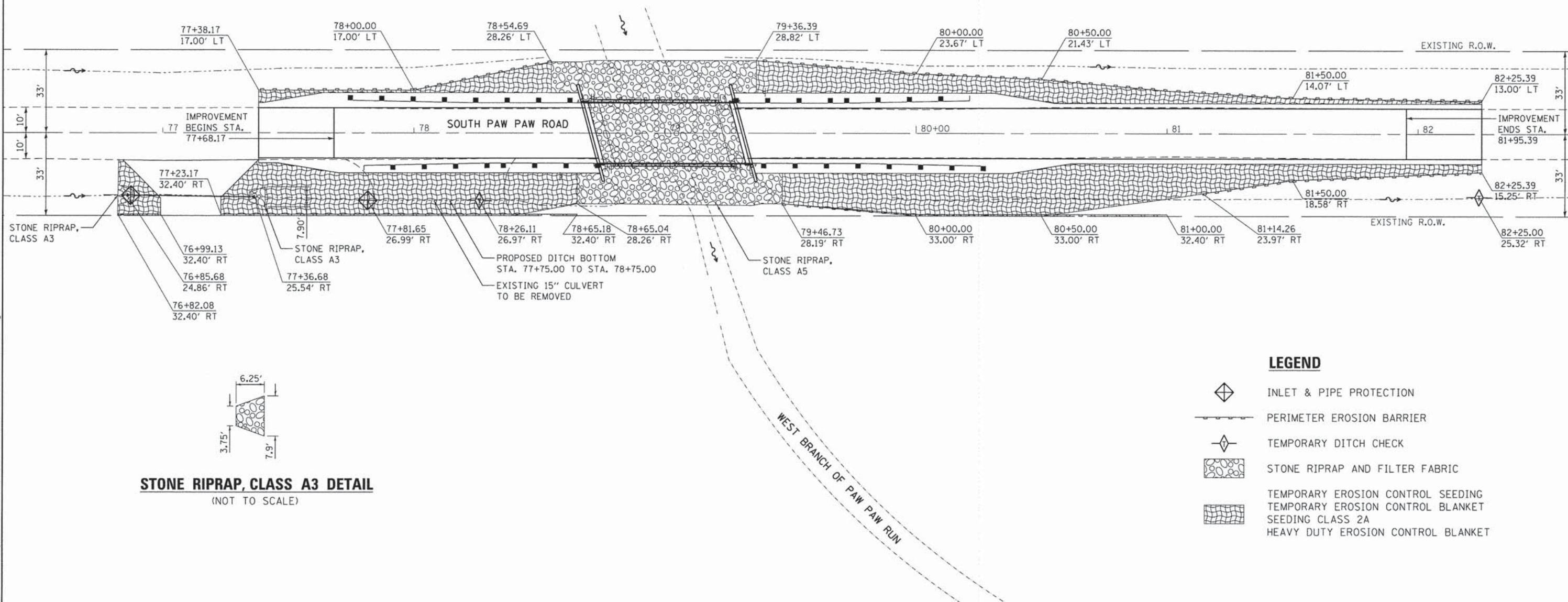
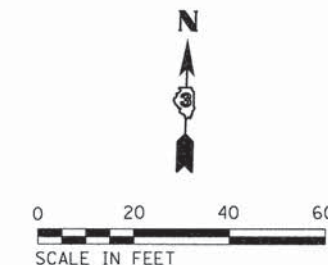
1. SEE THE APPLICABLE STANDARDS FOR USE OF FLASHING BEACON LIGHTS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE ANY SIGNS THAT ARE SUPPLIED BY OTHERS AND DAMAGED BY THE CONTRACTOR'S WORK FORCE OR BY SUBCONTRACTORS DURING RELOCATION OR CONSTRUCTION OPERATIONS.

FILE NAME = s:\jpl\60808-60995\6094\083\micro\AC000_Sheets\012345-ah-tr-veoffroadgn

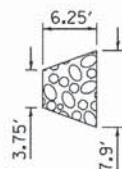
EROSION CONTROL GENERAL NOTES

1. PROPOSED PIPE CULVERTS RECEIVING RUNOFF SHALL BE PROTECTED WITH INLET AND PIPE PROTECTION IMMEDIATELY AFTER CONSTRUCTION.
2. FOR INLET AND PIPE PROTECTION, USE A COMBINATION OF TEMPORARY SEED, EROSION CONTROL BLANKET, AND TEMPORARY DITCH CHECKS FOR PIPE PROTECTION. THE USE OF STRAW BALES FOR PIPE PROTECTION SHALL NOT BE ALLOWED.
3. ALL ESC MEASURES SHOULD BE CHECKED WEEKLY AND AFTER EACH RAINFALL. 0.5 INCHES OR GREATER IN A 24 HOUR PERIOD, OR EQUIVALENT SNOWFALL. ADDITIONALLY, ALL MEASURES SHOULD BE CHECKED AFTER EACH SIGNIFICANT SNOWMELT.
4. THE ENGINEER WILL IMPLEMENT ALL PROVISIONS OF THE SPECIFICATION NECESSARY TO ASSURE THAT EROSION CONTROL ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY WAY. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES WHICH WILL POTENTIALLY CREATE ERODABLE CONDITIONS.
5. THE EROSION CONTROL MEASURES SHOWN ARE BUT A GRAPHICAL REPRESENTATION OF SUGGESTED MEASURES. DEVIATIONS FROM THIS PLAN ARE TO BE EXPECTED PENDING A JOBSITE INSPECTION BETWEEN CONTRACTOR AND DEKALB COUNTY.
6. TEMPORARY EROSION CONTROL BLANKET SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AFTER TEMPORARY SEEDING HAS BEEN COMPLETED.

□ DENOTES WORK INCLUDED IN THE COST OF OTHER ITEMS



STONE RIPRAP, CLASS A3 DETAIL
(NOT TO SCALE)



LEGEND

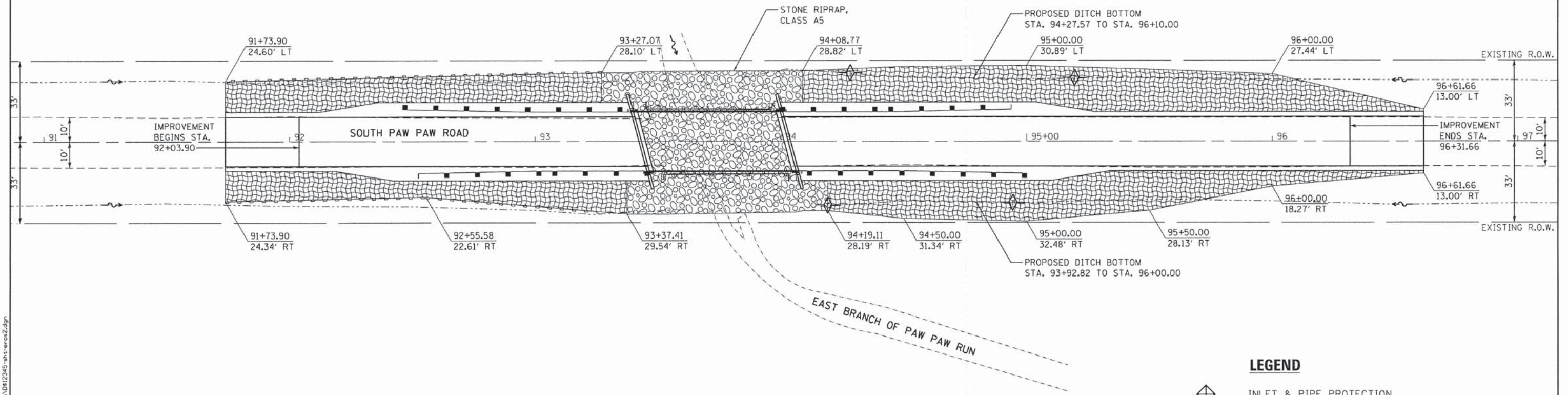
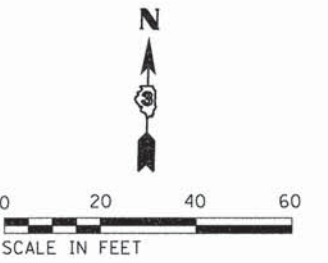
- INLET & PIPE PROTECTION
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- STONE RIPRAP AND FILTER FABRIC
- TEMPORARY EROSION CONTROL SEEDING
- TEMPORARY EROSION CONTROL BLANKET
- SEEDING CLASS 2A
- HEAVY DUTY EROSION CONTROL BLANKET

FILE NAME = s:_p\1\6800-6899\6899A\003\mucros\c000_sheets\012345-111-erost.dgn

EROSION CONTROL GENERAL NOTES

1. PROPOSED PIPE CULVERTS RECEIVING RUNOFF SHALL BE PROTECTED WITH INLET AND PIPE PROTECTION IMMEDIATELY AFTER CONSTRUCTION.
2. FOR INLET AND PIPE PROTECTION, USE A COMBINATION OF TEMPORARY SEED, EROSION CONTROL BLANKET, AND TEMPORARY DITCH CHECKS FOR PIPE PROTECTION. THE USE OF STRAW BALES FOR PIPE PROTECTION SHALL NOT BE ALLOWED.
3. ALL ESC MEASURES SHOULD BE CHECKED WEEKLY AND AFTER EACH RAINFALL, 0.5 INCHES OR GREATER IN A 24 HOUR PERIOD, OR EQUIVALENT SNOWFALL. ADDITIONALLY, ALL MEASURES SHOULD BE CHECKED AFTER EACH SIGNIFICANT SNOWMELT.
4. THE ENGINEER WILL IMPLEMENT ALL PROVISIONS OF THE SPECIFICATION NECESSARY TO ASSURE THAT EROSION CONTROL ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY WAY. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES WHICH WILL POTENTIALLY CREATE ERODABLE CONDITIONS.
5. THE EROSION CONTROL MEASURES SHOWN ARE BUT A GRAPHICAL REPRESENTATION OF SUGGESTED MEASURES. DEVIATIONS FROM THIS PLAN ARE TO BE EXPECTED PENDING A JOBSITE INSPECTION BETWEEN CONTRACTOR AND DEKALB COUNTY.
6. TEMPORARY EROSION CONTROL BLANKET SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AFTER TEMPORARY SEEDING HAS BEEN COMPLETED.

DENOTES WORK INCLUDED IN THE COST OF OTHER ITEMS



LEGEND

- INLET & PIPE PROTECTION
- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- STONE RIPRAP AND FILTER FABRIC
- TEMPORARY EROSION CONTROL SEEDING
- TEMPORARY EROSION CONTROL BLANKET SEEDING CLASS 2A
- HEAVY DUTY EROSION CONTROL BLANKET

FILE NAME = s:\p\6008-6099\6094\003\micros\6000_Sheets\0112345-shr-erots.dgn

USER NAME = brianf	DESIGNED - AMS	REVISED -
MODEL NAME = Default	DRAWN - DJW	REVISED -
PLOT SCALE = 20.0000' / in.	CHECKED - MAG	REVISED -
PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL AND LANDSCAPING DETAILS

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

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	14
CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				

Benchmark: Cut "□" SW Wingwall, Elev. 762.396

Existing Structure: S.N. 019-5500 built in 1965 as Section 109-13-TR. The Superstructure consists of seven 21" Deep Prestressed Precast Concrete Deck Beams with side mounted railing and a HMA Overlay. The Substructure consists of R.C. open Abutments on Creosoted Timber Piles. Structure measures 51'-4 1/2" Bk. to Bk. Abutments and 26'-0" out to out. Existing Structure to be removed. Roadway will be closed.

No salvage.

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated. Concrete Sealer shall be applied to the designated areas of the abutments. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer. The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments. Excavation to place the Stone Riprap, Class A5 is included in the cost of Stone Riprap, Class A5.

SCOPE OF WORK

1. Remove Existing Structure.
2. Install Proposed Abutments and Wingwalls.
3. Install proposed PPC Deck Beams and Concrete Wearing Surface.
4. Install proposed Type SM Rail.
5. Install proposed Riprap.

INDEX OF SHEETS

- | | |
|-------|-------------------------------------|
| 1 | General Plan and Elevation |
| 2 | General Details |
| 3 | Superstructure |
| 4 | Superstructure Details |
| 5 | Steel Railing, Type SM |
| 6 | 27"x36" PPC Deck Beam |
| 7 | 27"x36" PPC Deck Beam Details |
| 8 | Abutments |
| 9 | HP Pile Details |
| 10-11 | Soil Boring Logs |
| 12 | Existing General Plan and Elevation |

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.092g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.161g
 Soil Site Class = D

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition

DESIGN STRESSES

FIELD UNITS

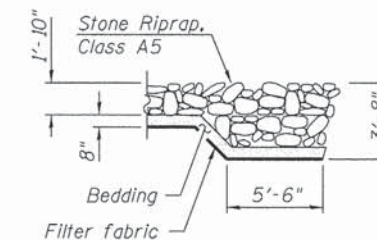
f'c = 3,500 psi (Substructures)
 f'c = 5,000 psi (Concrete Wearing Surface)
 fy = 60,000 psi (Reinforcement)
 fy = 50,000 psi (M270 Grade 50)

PRECAST PRESTRESSED UNITS

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

LOADING HL-93

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

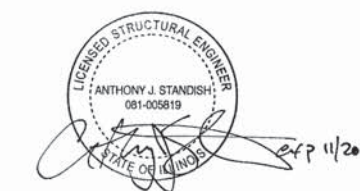


SECTION B-B

EAST BRANCH PAW PAW RUN CREEK
 BUILT 201X BY
 DEKALB COUNTY
 SEC. 13-11109-01-BR
 STATION 79+01
 STR. NO. 019-5517 LOADING HL-93

NAME PLATE

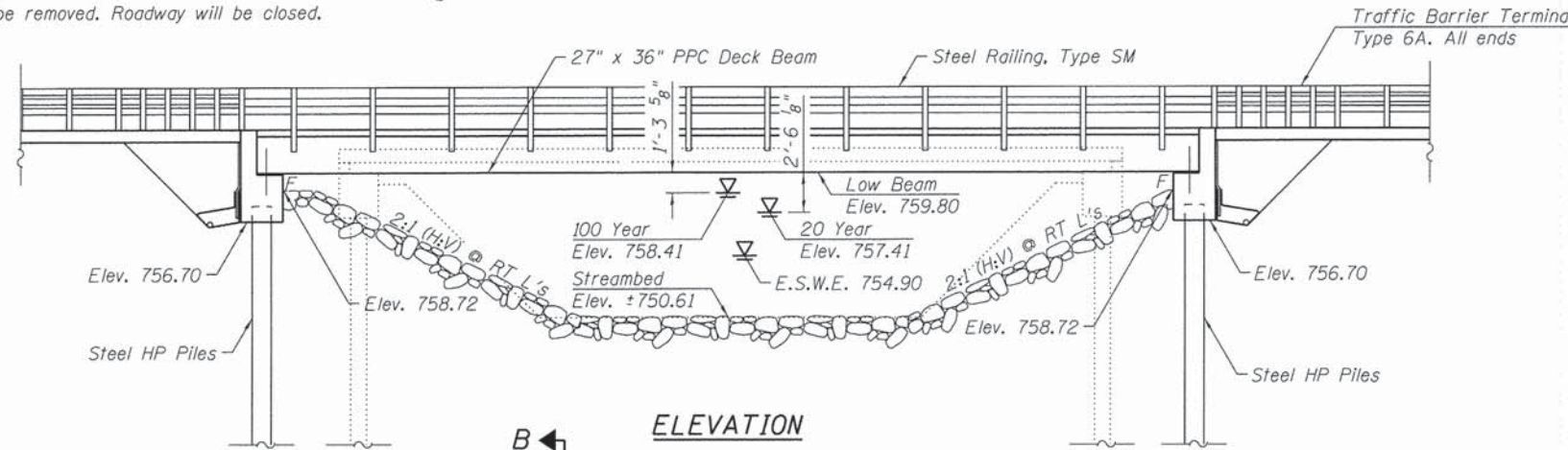
See Std. 515001



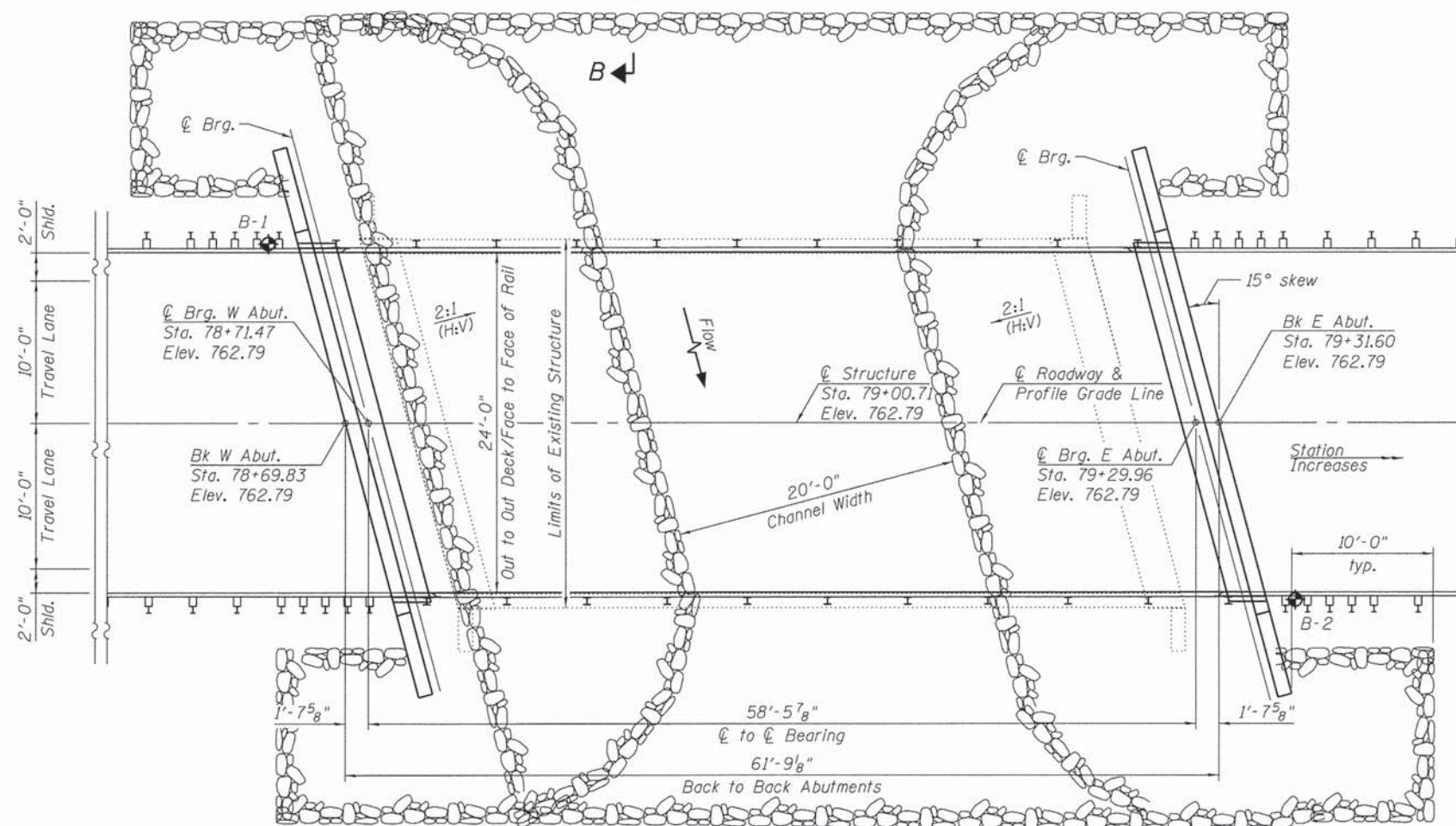
I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with the requirement of the current AASHTO LRFD Bridge Design Specifications.

GENERAL PLAN

**T.R. 245 (SOUTH PAW PAW ROAD)
 OVER W. BRANCH OF PAW PAW RUN CREEK
 DEKALB COUNTY
 STA.. 79+00.71
 S.N. 019-5517**



ELEVATION



PLAN

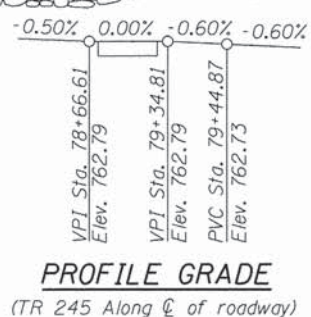
WATERWAY INFORMATION

Drainage Area = 5.3 Square Miles Low Grade Elev. 762.68 @ Sta. 79+52

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	20	699	166	214	757.1	0.1	0.0	757.2	757.1
Base	100	996	219	278	758.3	0.1	0.1	758.4	758.4
Scour Design Check	200	1127	240	303	758.7	0.2	0.2	758.9	758.9
Overtopping Existing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Overtopping Proposed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	1290	263	332	759.3	0.1	0.1	759.4	759.4

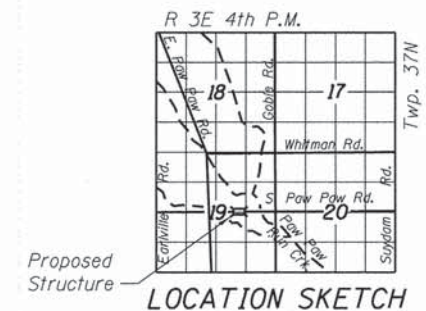
DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elevation (ft.)		Item 113
	W. Abut.	E. Abut.	
Design	756.70	756.70	8
Check	756.70	756.70	



PROFILE GRADE

(TR 245 Along C of roadway)



LOCATION SKETCH

FILE NAME: s:\1\6800-6899\6894-083\mxd\0300_Sheets\West Bridge\019550-XXXX-081-01E.dwg



USER NAME = brianf
 PLOT SCALE =
 PLOT DATE = 2/12/2015

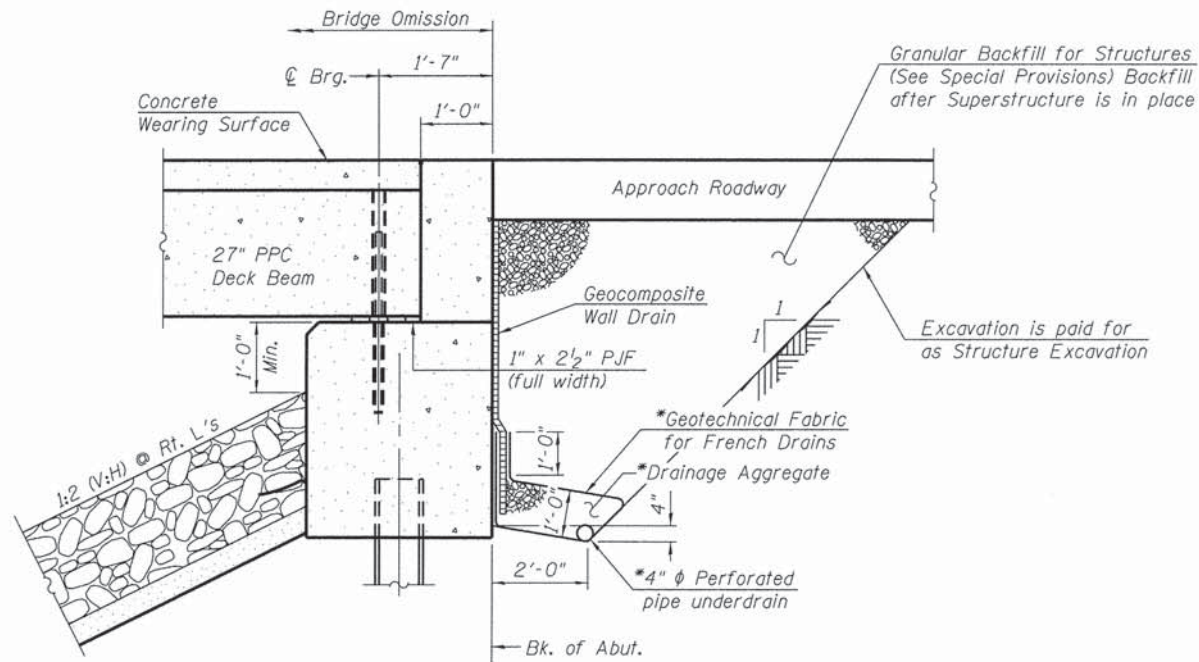
DESIGNED - RRD
 CHECKED - RRD
 DRAWN - BJF
 REVISIONS:

REVISIONS:
 REVISIONS:
 REVISIONS:

**DEKALB COUNTY
 DIVISION OF TRANSPORTATION**

**GENERAL PLAN AND ELEVATION
 STRUCTURE NO. 019-5517**
 SHEET NO. 1 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	15
			CONTRACT NO.	87586
ILLINOIS/FED. AID PROJECT				



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

*Included in the cost of Pipe Underdrains for Structures.
(See Special Provisions)

Note:

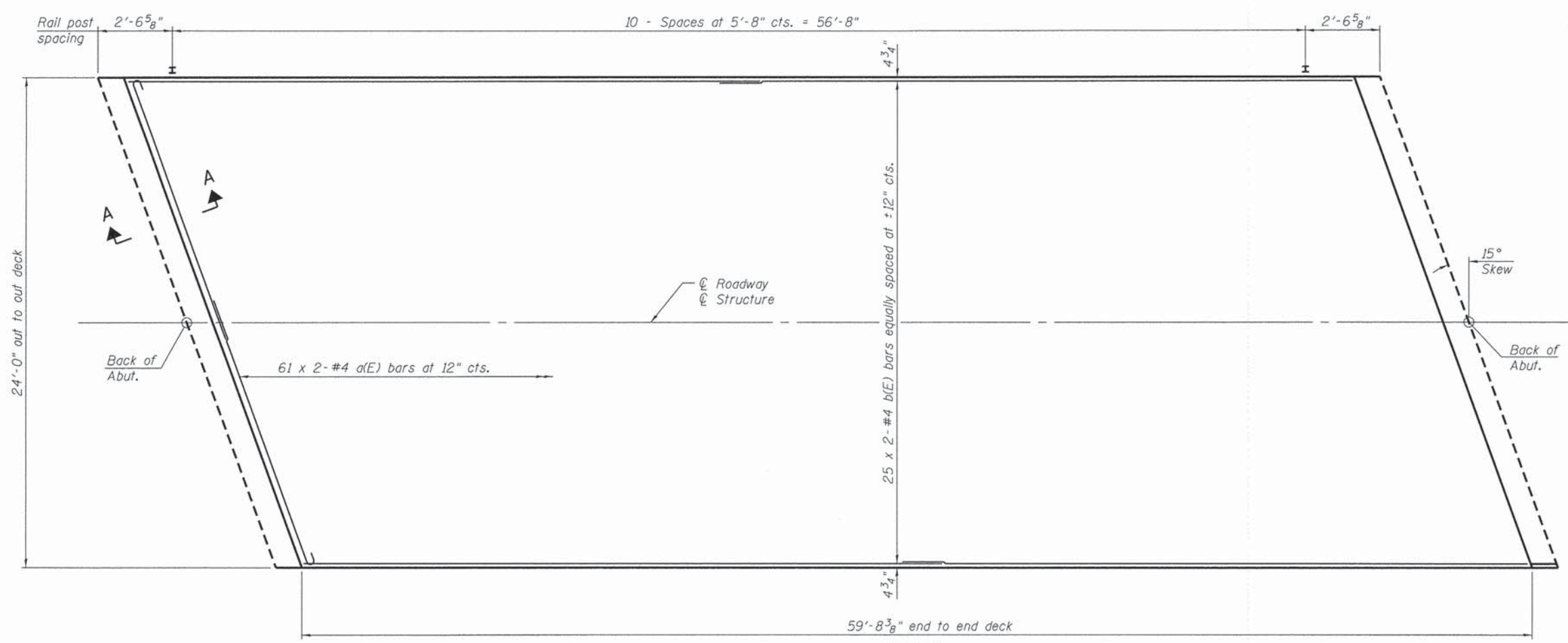
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601.101).

Provide a 2'-0" Riprap Berm on West Abutment only.

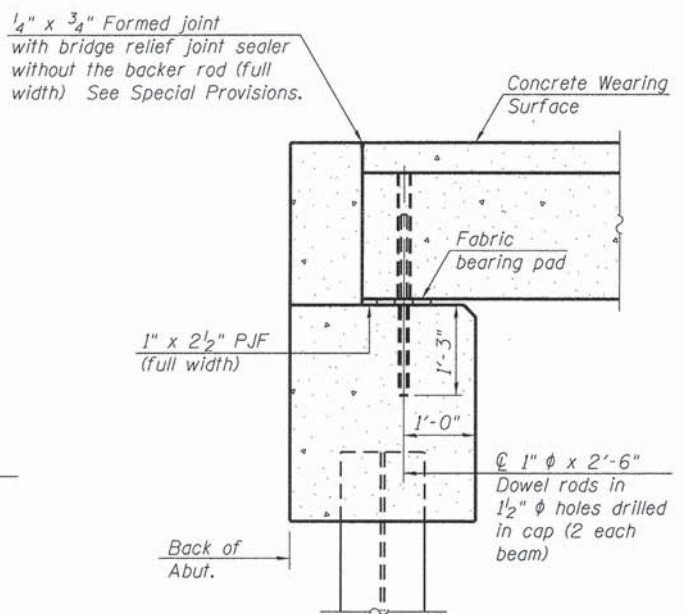
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	SQ YD		480	480
Filter Fabric	SQ YD		480	480
Removal Of Existing Structures	EACH	1		1
Structure Excavation	CU YD		76	76
Concrete Structures	CU YD		27	27
Bridge Deck Grooving	SQ YD	152		152
Concrete Encasement	CU YD		4	4
Protective Coat	SQ YD	165		165
Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	1,433		1,433
Reinforcement Bars, Epoxy Coated	POUND	2,200	3,910	6,110
Steel Railing, Type SM	FOOT	124		124
Furnishing Steel Piles, HP12X53	FOOT		480	480
Driving Piles	FOOT		480	480
Test Pile Steel, HP12X53	EACH		2	2
Name Plates	EACH	1		1
Concrete Wearing Surface, 5"	SQ YD	160		160
Granular Backfill For Structures	CU YD		76	76
Pipe Underdrains For Structures 4"	FOOT		128	128

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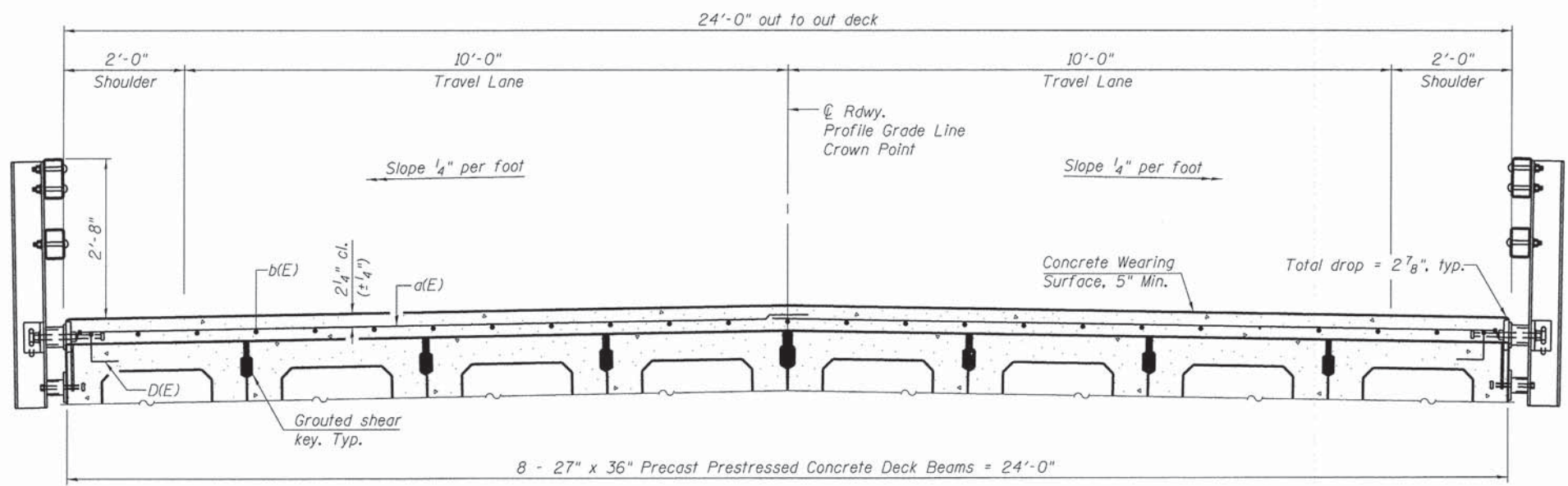


PLAN



SECTION A-A
(Dimensions are at Rt. L's)

Notes:
All concrete wearing surfaces shall be placed prior to casting a backwall and/or approach slab.
See sheet 7 of 12 for fabric bearing pad details.



CROSS SECTION
(Looking East)

Notes:
See sheet 4 of 12 for Superstructure Details and Bill of Material.
Bars indicated thus 20 x 2-#4 etc. indicates 20 lines of bars with 2 lengths per line.
Spacing of a(E) bars shall be measured along the ϕ of structure.

MINIMUM BAR LAP
#4 bar = 2'-7"

PDS-S-R34-R 7-1-10

SA STRAND ASSOCIATES
1170 SOUTH HUBBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME =	brianf
DESIGNED -	RRD
CHECKED -	AJS
DRAWN -	BJF
CHECKED -	RRD
PLLOT SCALE =	
PLLOT DATE =	2/12/2015

DESIGNED -	RRD	REVISED
CHECKED -	AJS	REVISED
DRAWN -	BJF	REVISED
CHECKED -	RRD	REVISED

DEKALB COUNTY DIVISION OF TRANSPORTATION

SUPERSTRUCTURE STRUCTURE NO. 019-5517

SHEET NO. 3 OF 12 SHEETS

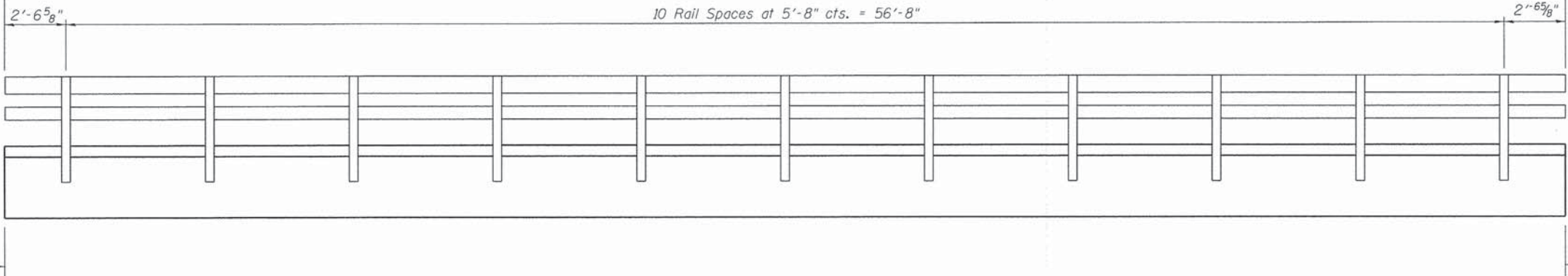
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	17
CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				

FILE NAME = s:\yol\62008-6099\6099-003\micoros\CAD\Sheets\West Bridge\019556-xxxx-020-SUP.dgn

Traffic Barrier Terminal Type 6A.
See Highway Std 631032

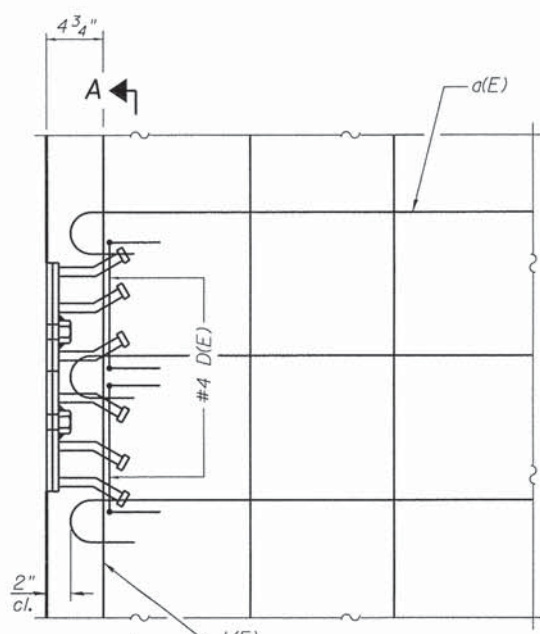
61'-9 1/4" End to End of Rail

Traffic Barrier Terminal Type 6A.
See Highway Std 631032



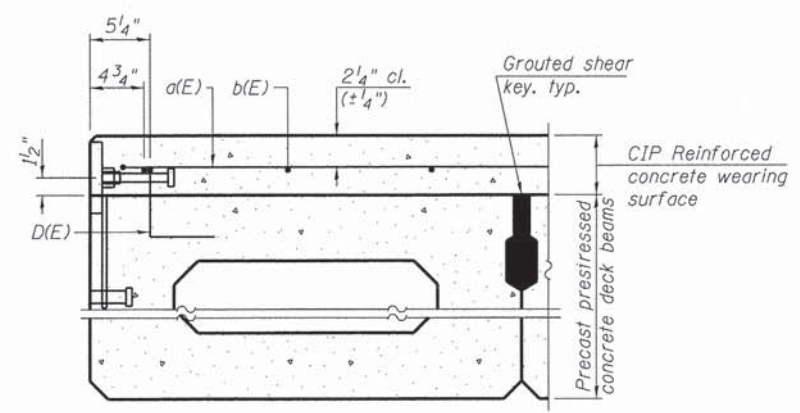
ELEVATION

Notes:
See sheet 5 of 12 for railing details.

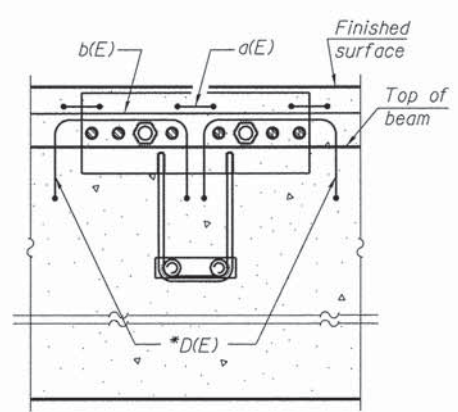


PLAN

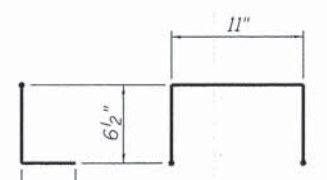
Notes:
Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam.



SECTION THRU FASCIA BEAM

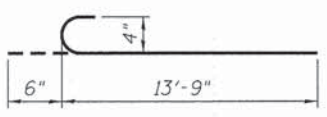


SECTION A-A

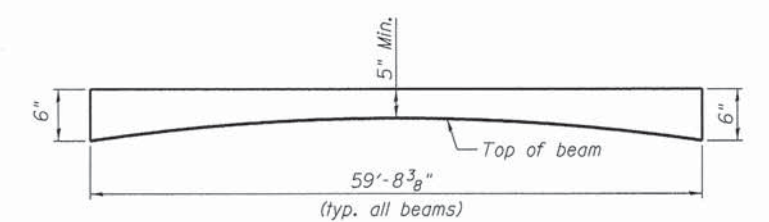


BAR D(E)

* Place 2-#4 D(E) bars in beam at each post location as shown. D(E) bar included in cost of beam.



BAR a(E)



ANTICIPATED CONCRETE WEARING SURFACE PROFILE
(For information only)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	122	#4	14'-3"	C
b(E)	50	#4	31'-0"	—
Reinforcement Bars, Epoxy Coated			Pound	2,200
Steel Railing Type SM			Foot	124
Concrete Wearing Surface, 5"			Sq. Yd.	160

FILE NAME = s:\j\6808--6899\6894\083\mtrcas\CADD\Sheets\West Bridge\019559-XXXX-804-SUPDET.dgn

PDS-S-R34-D 1-27-12

SA STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brsonf
PLOT SCALE =
PLOT DATE = 2/12/2015

DESIGNED - RRD
CHECKED - AJS
DRAWN - BJB
CHECKED - RRD

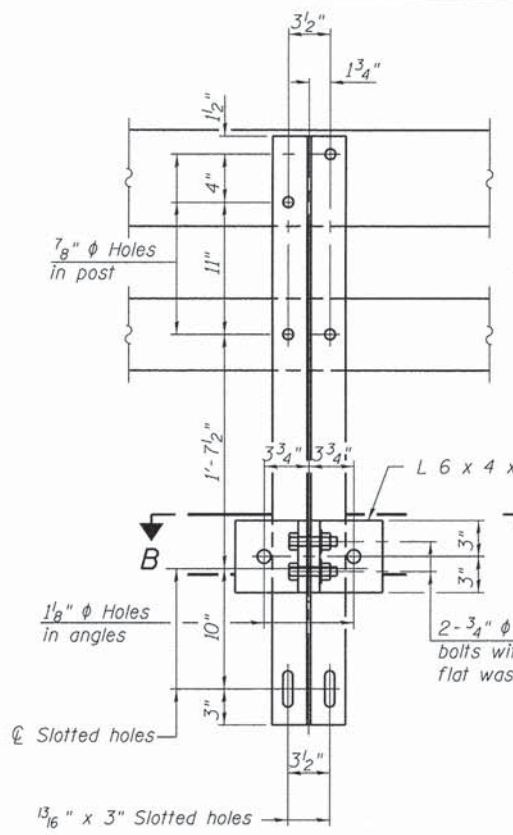
REVISED
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DEKALB COUNTY DIVISION OF TRANSPORTATION

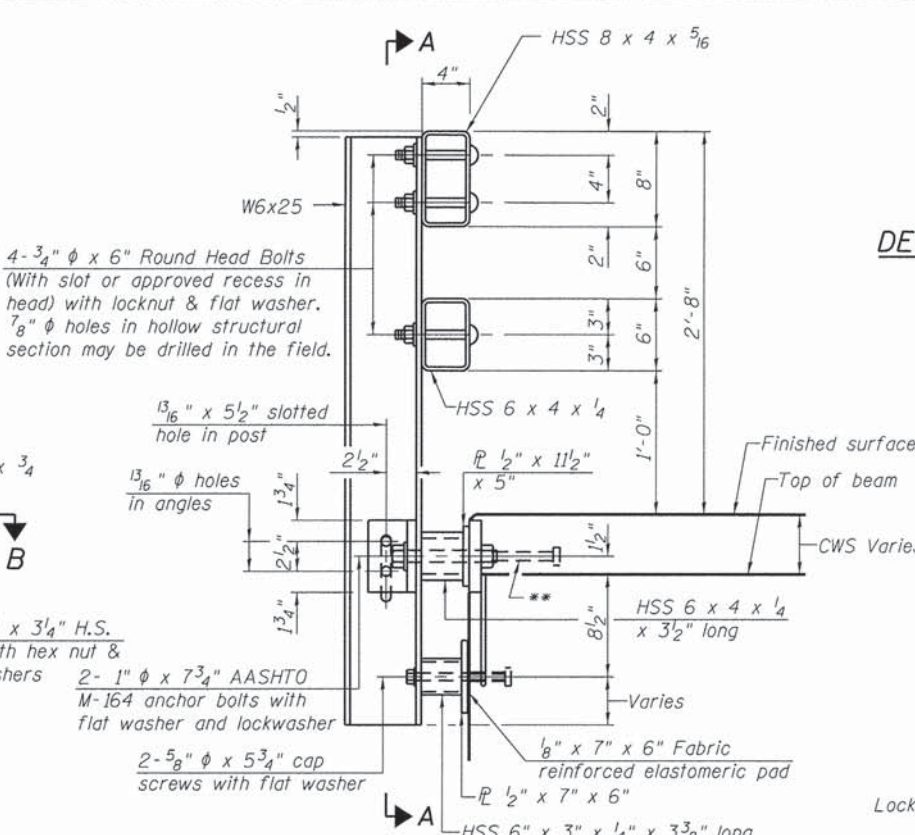
**SUPERSTRUCTURE DETAILS
STRUCTURE NO. 019-5517**

SHEET NO. 4 OF 12 SHEETS

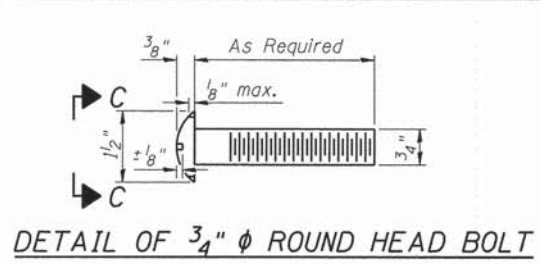
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	18
			CONTRACT NO. 87586	
ILLINOIS FED. AID PROJECT				



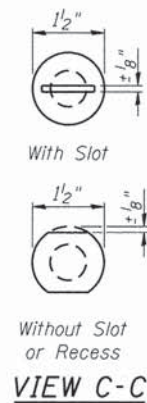
SECTION A-A



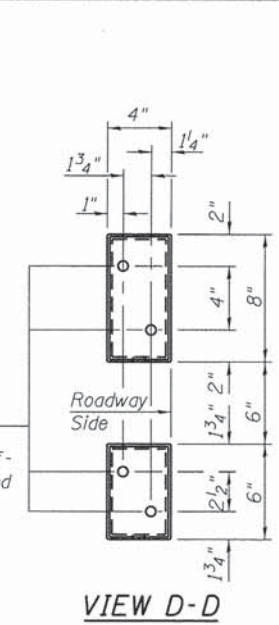
SECTION AT RAIL POST



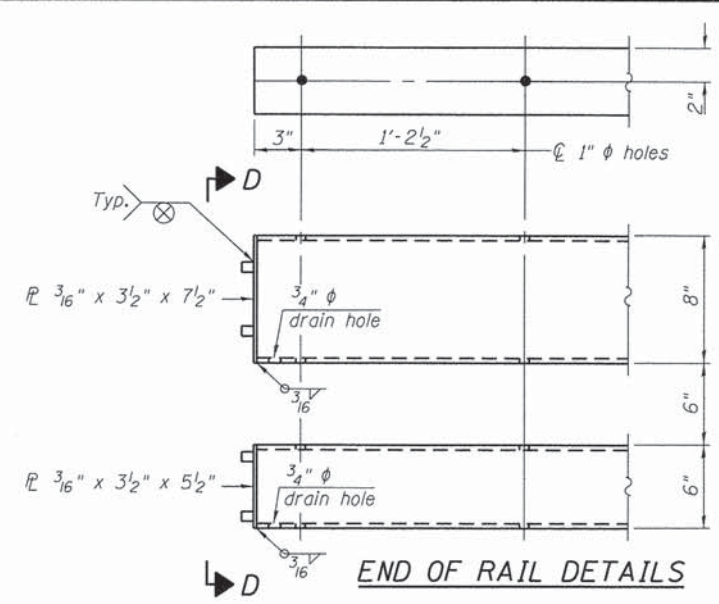
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



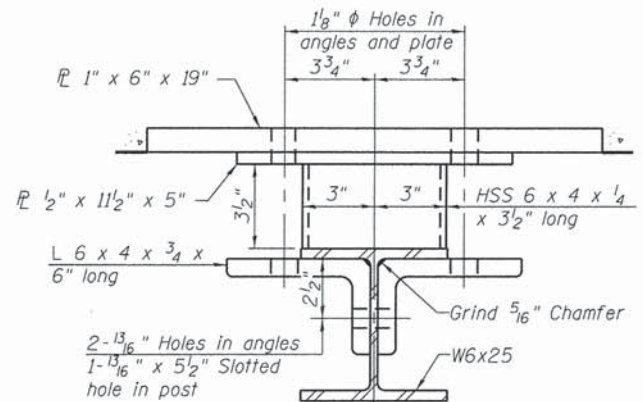
VIEW C-C



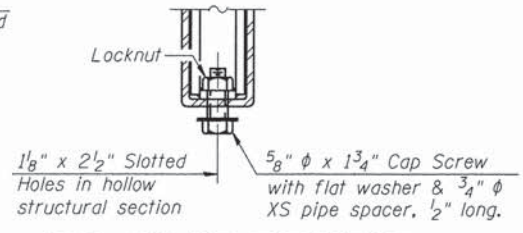
VIEW D-D



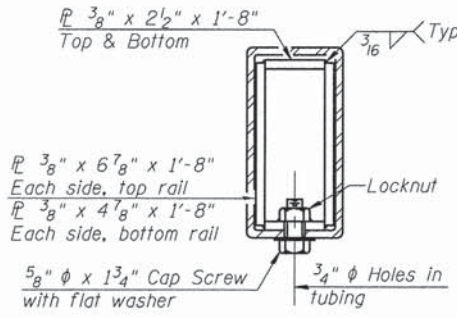
END OF RAIL DETAILS



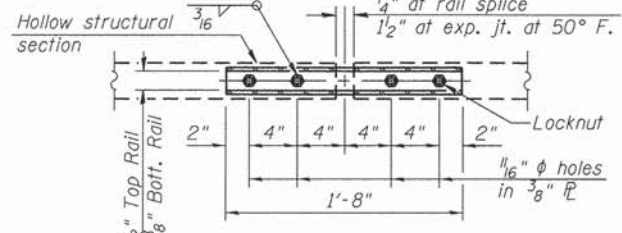
SECTION B-B



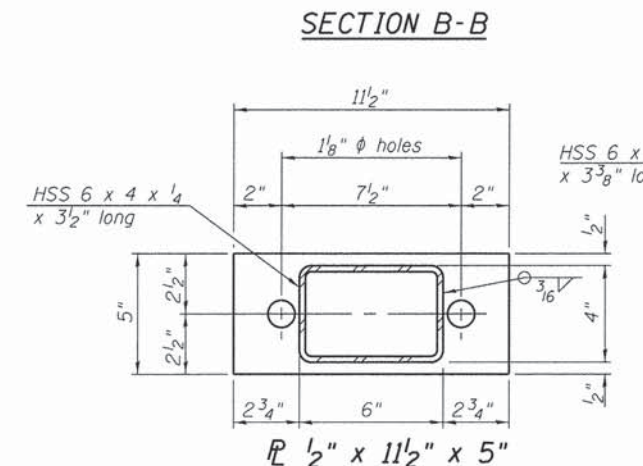
RAIL SPLICE CONNECTION AT EXPANSION JT.



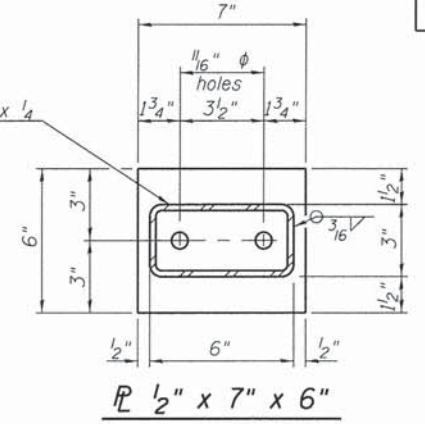
SECTION AT RAIL SPLICE



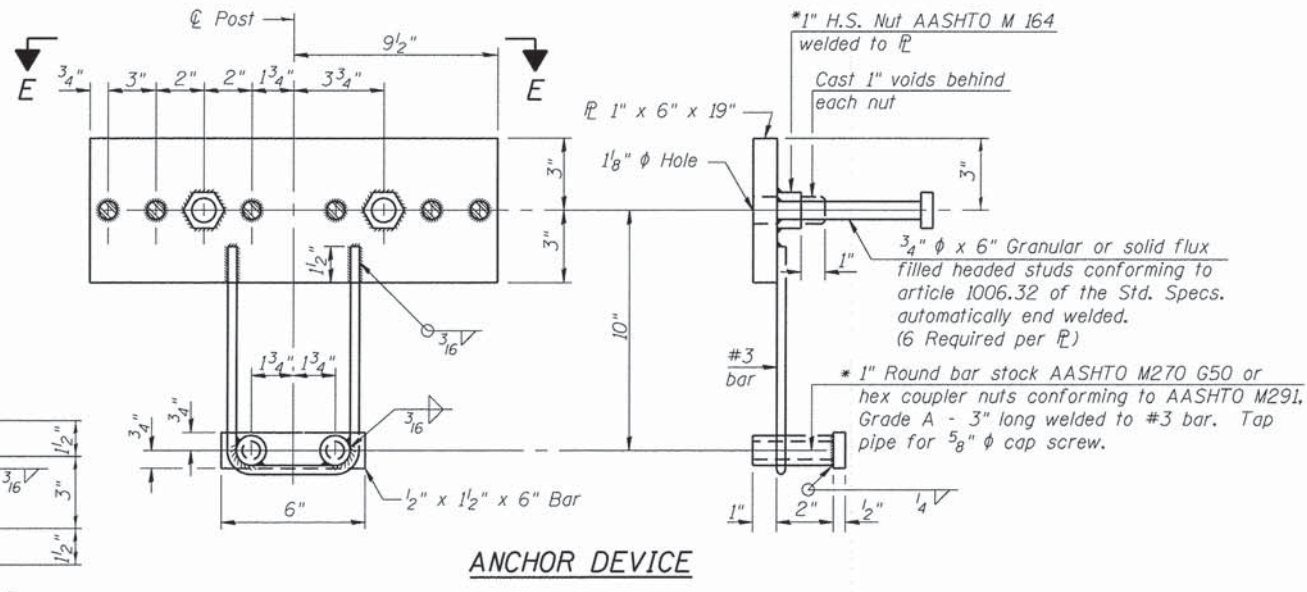
PLAN-BOTT. SPLICE TYPICAL



1/2" x 11 1/2" x 5"

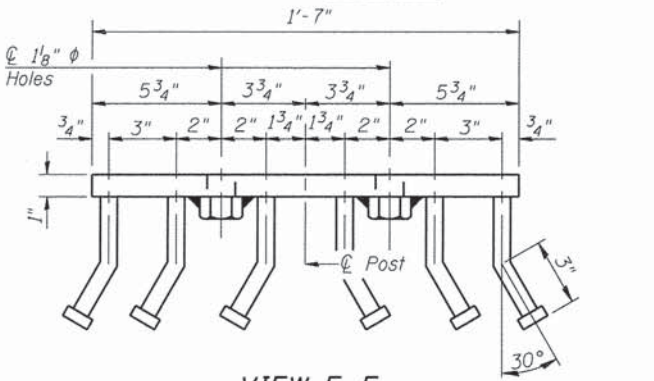


1/2" x 7" x 6"



ANCHOR DEVICE

*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.



VIEW E-E

Notes:
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4 inch x 6 inch x 1-2 inch galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
 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 SM	Foot	124

R-34CWS

7-1-10 (6'-3" Maximum Post Spacing) (5" minimum to 7 1/2" maximum CWS thickness)



1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDPR No. 184-001273

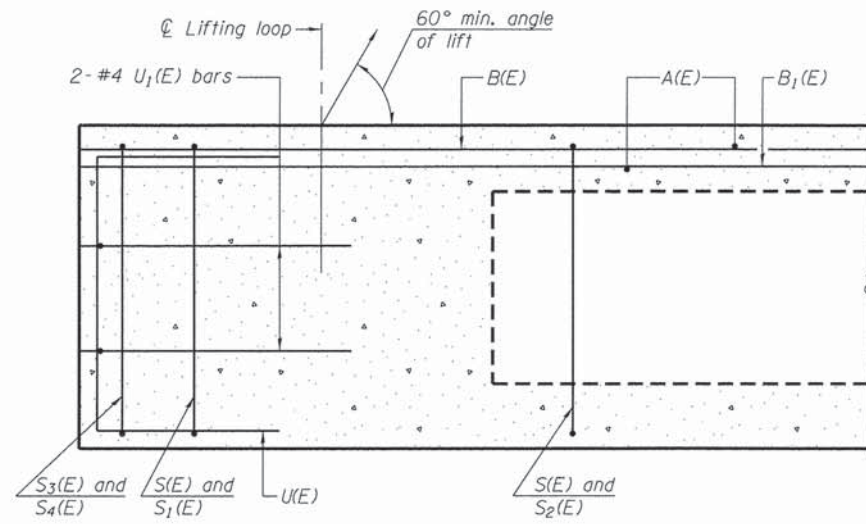
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 DESIGNED - RRD
 CHECKED - RRD
 PLOT SCALE =
 DRAWN - BJF
 PLOT DATE = 2/12/2015

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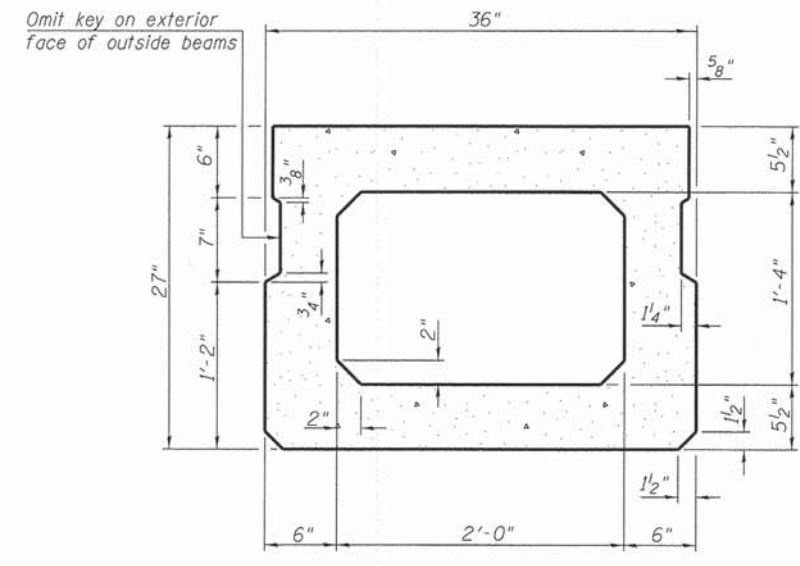
DEKALB COUNTY
 DIVISION OF TRANSPORTATION

STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE
 STRUCTURE NO. 019-5517
 SHEET NO. 5 OF 12 SHEETS

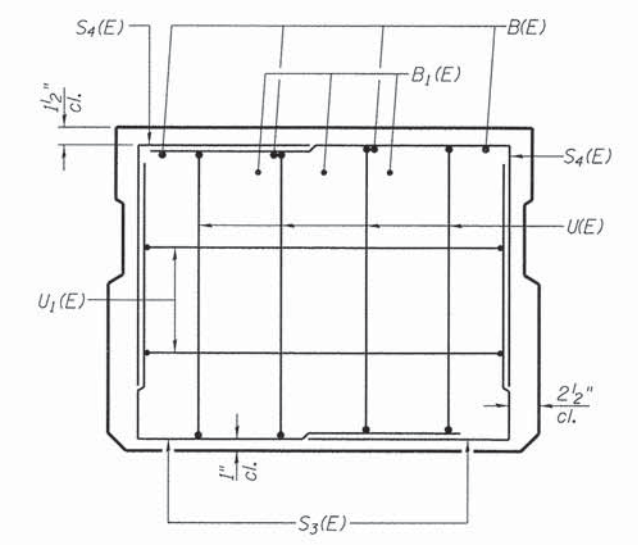
T.R. RT.E. 245
 SECTION 13-11109-01-BR
 COUNTY DEKALB
 TOTAL SHEETS 46
 SHEET NO. 19
 CONTRACT NO. 87586
 ILLINOIS FED. AID PROJECT



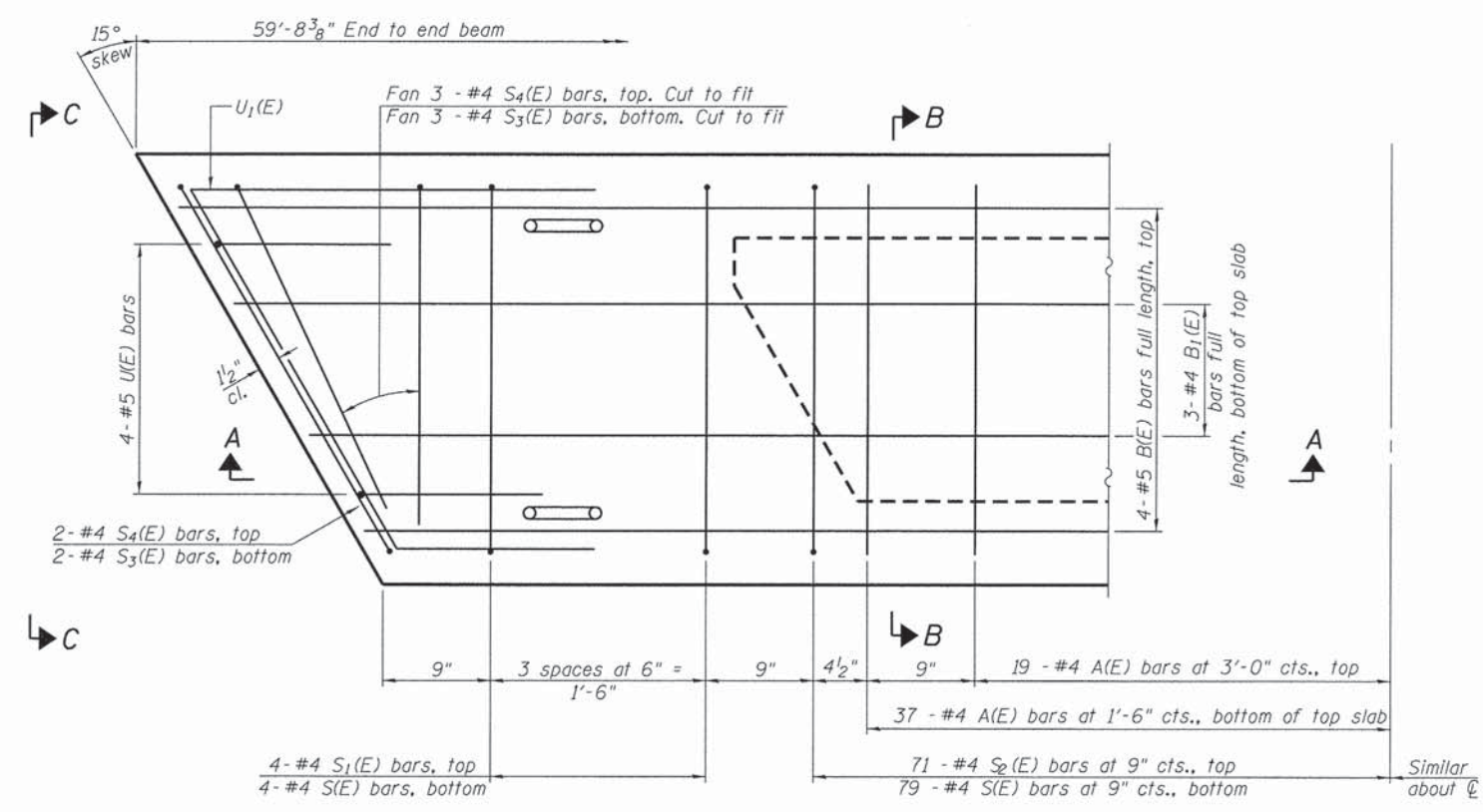
SECTION A-A



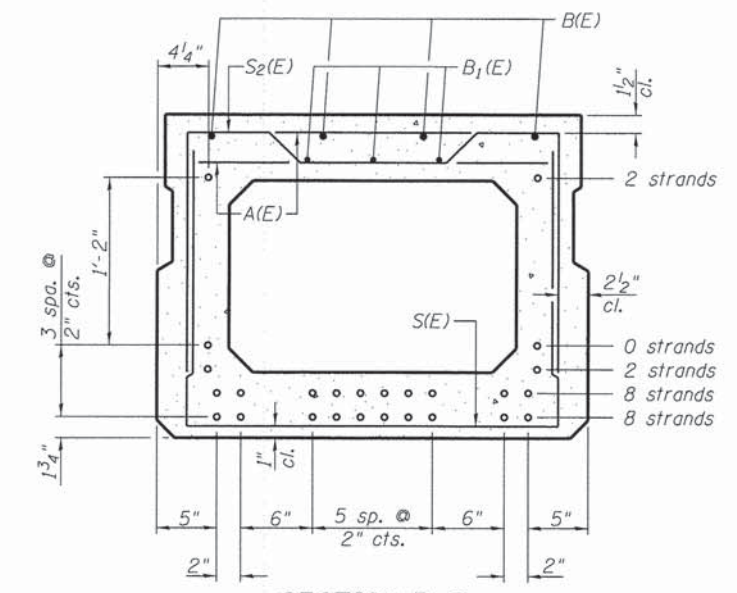
SECTION B-B
(Showing dimensions)



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.

DESIGN STRESSES
 $f'c = 6,000 \text{ psi}$
 $f'ci = 5,000 \text{ psi}$
 $fpu = 270,000 \text{ psi}$ ($1/2 \phi$ low lax strands)
 $fpbt = 201,960 \text{ psi}$ ($1/2 \phi$ low lax strands)

BAR LIST
ONE BEAM ONLY

(For information only)

Bar	No.	Size	Length	Shape
A(E)	56	#4	2'-7"	—
B(E)	8	#5	30'-4"	—
B1(E)	6	#4	30'-1"	—
D(E)*	22	#4	2'-9"	┌
S(E)	79	#4	6'-5"	┌
S1(E)	8	#4	5'-11"	┌
S2(E)	71	#4	6'-2"	┌
S3(E)	12	#4	4'-8"	┌
S4(E)	12	#4	4'-5"	┌
U(E)	8	#5	4'-6"	┌
U1(E)	4	#4	6'-2"	┌

Note: See sheet 7 of 12 for additional details and Bill of Material.

*Fascia Beams Only

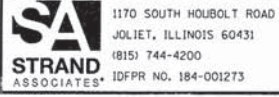
MINIMUM BAR LAP
 #4 bar = 2'-0"
 #5 bar = 2'-6"

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.

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PD-2736-R

7-1-10



1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDPR NO. 184-001273

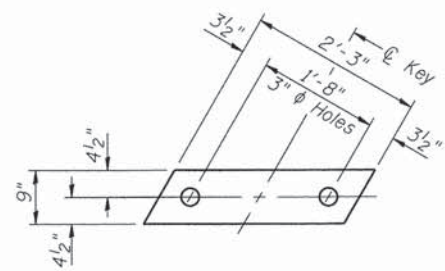
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 CHECKED - AJS
 DRAWN - BJF
 CHECKED - RRD
 PLOT SCALE =
 PLOT DATE = 2/12/2015

DEKALB COUNTY
DIVISION OF TRANSPORTATION

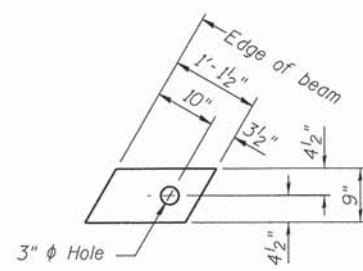
27" x 36" PPC DECK BEAM
STRUCTURE NO. 019-5517
 SHEET NO. 6 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	20

CONTRACT NO. 87586
 ILLINOIS FED. AID PROJECT



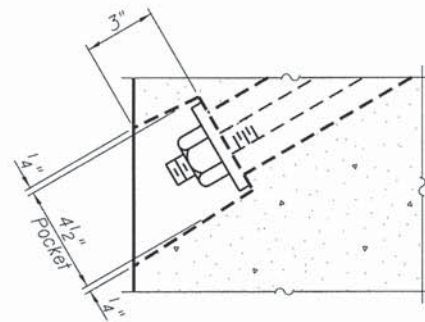
FABRIC BEARING PAD
(Interior)



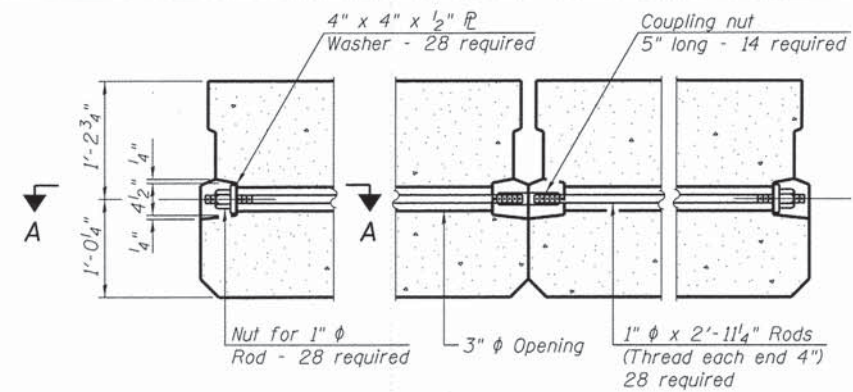
FABRIC BEARING PAD
(Exterior)

FIXED

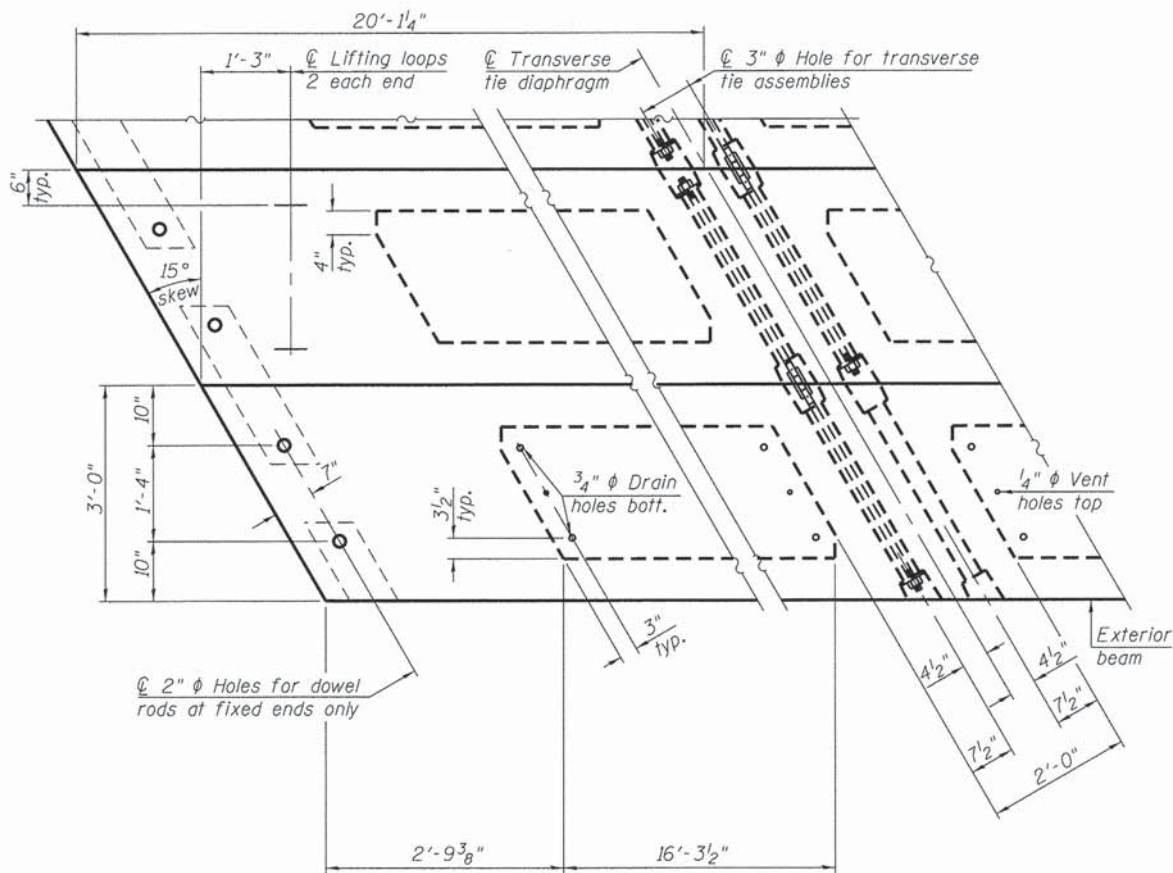
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY

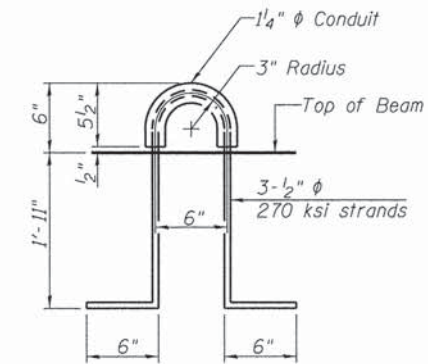


PLAN VIEW

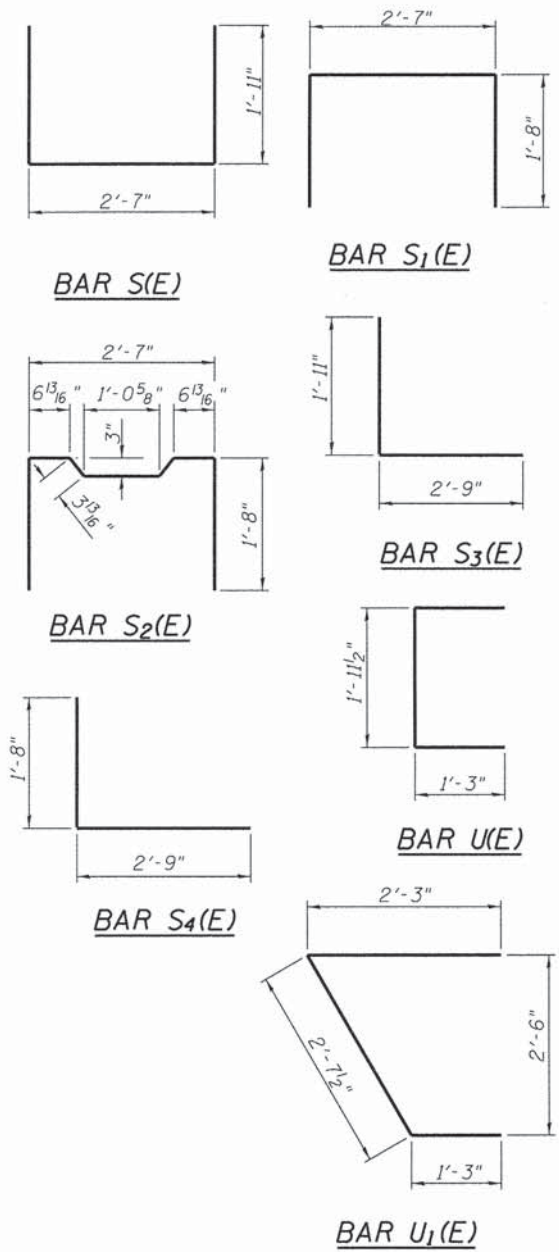
Note: Connect beams in pairs with the transverse tie configuration shown.

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.
Reinforcement bars shall conform to ASTM A 706, Grade 60.
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)(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.



LIFTING LOOP DETAIL



BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1,433
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FILE NAME = s:\proj\6808--6091\6804\003\micross\CADD_Sheets\West_Bridge\019559-XXXX-807-BEAM2.dgn

PD-2736-RD

7-1-10

SA STRAND ASSOCIATES
1170 SOUTH HOBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brantf
PLOT SCALE =
PLOT DATE = 2/12/2015

DESIGNED - RRD
CHECKED - AJS
DRAWN - BJB
CHECKED - RRD

REVISED
REVISED
REVISED
REVISED

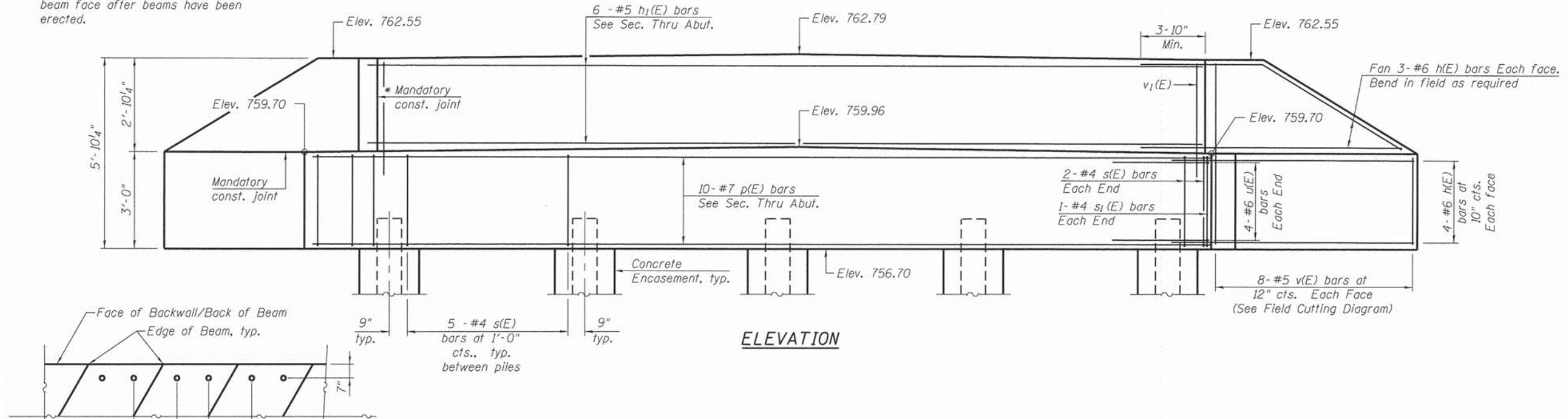
**DEKALB COUNTY
DIVISION OF TRANSPORTATION**

**27" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 019-5517**

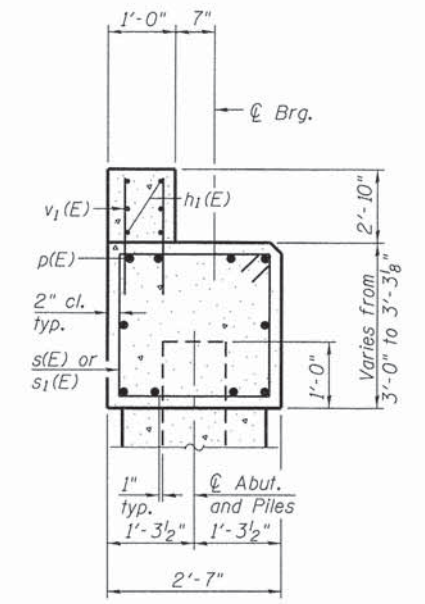
SHEET NO. 7 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	21
CONTRACT NO. 87586			ILLINOIS FED. AID PROJECT	

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

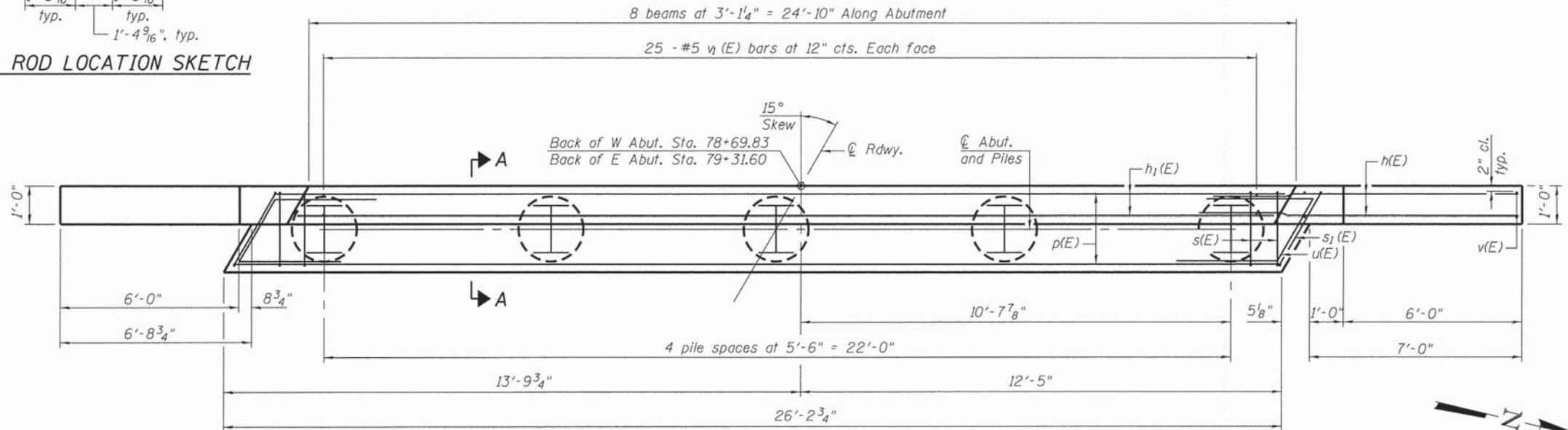


ELEVATION



SECTION A-A
(Dimensions are at Rt. L's)

DOWEL ROD LOCATION SKETCH

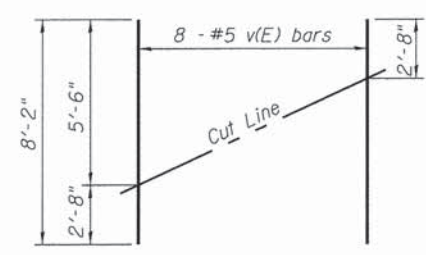


PLAN

PILE DATA

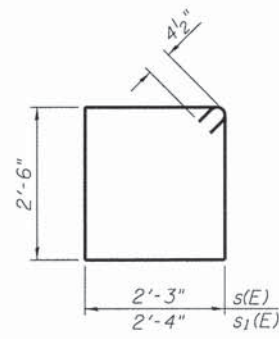
West Abutment
Type: HP 12x53
Nominal Required Bearing: 245 kips
Factored Resistance Available: 140 kips
Est. Length: 52
No. Production Piles: 4
No. Test Piles: 1

East Abutment
Type: HP 12x53
Nominal Required Bearing: 245 kips
Factored Resistance Available: 140 kips
Est. Length: 68
No. Production Piles: 4
No. Test Piles: 1

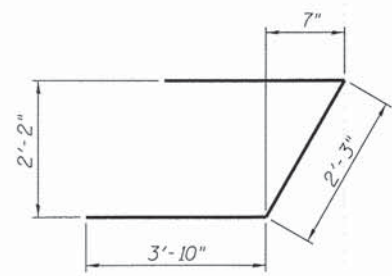


FIELD CUTTING DIAGRAM

Order v(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s(E) & s1(E)



BAR u(E)

BILL OF MATERIAL

Two Abutments				
Bar	No.	Size	Length	Shape
h(E)	56	#6	12'-2"	—
h1(E)	12	#6	24'-6"	—
p(E)	20	#7	25'-10"	—
s(E)	48	#4	10'-3"	□
s1(E)	4	#4	10'-5"	□
u(E)	16	#6	9'-11"	┘
v(E)	32	#5	8'-2"	—
v1(E)	100	#5	4'-11"	—
Structure Excavation		Cu. Yd.	76	
Concrete Structures		Cu. Yd.	27	
Reinforcement Bars, Epoxy Coated		Pound	3,910	
Furnishing Steel Piles, HP12x53		Foot	480	
Driving Piles		Foot	480	
Test Pile Steel, HP12x53		Each	2	
Concrete Encasement		Cu. Yd.	4	

Notes:
For details of piles and Concrete Encasement, see sheet 9 of 12.
Cast backwall after beams and concrete wearing surface, have been erected.
Apply Concrete Sealer to the exposed face of the Wingwalls and Abutments.

FILE NAME = s:\p1\62026--6299\6299\023\micro\cadd\Sheets\West Br ridge\019558-XXXX-028-rb\1.dgn

AD-2742-R

7-1-10



1170 SOUTH HOBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - RRD	REVISED
PLOT SCALE =	CHECKED - AJS	REVISED
PLOT DATE = 2/12/2015	DRAWN - BJF	REVISED
	CHECKED - RRD	REVISED

DEKALB COUNTY
DIVISION OF TRANSPORTATION

ABUTMENTS
STRUCTURE NO. 019-5517

SHEET NO. 8 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	22
CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				

PROJECT **Proposed Bridge Replacements, South Paw Paw Road, DeKalb, Illinois**

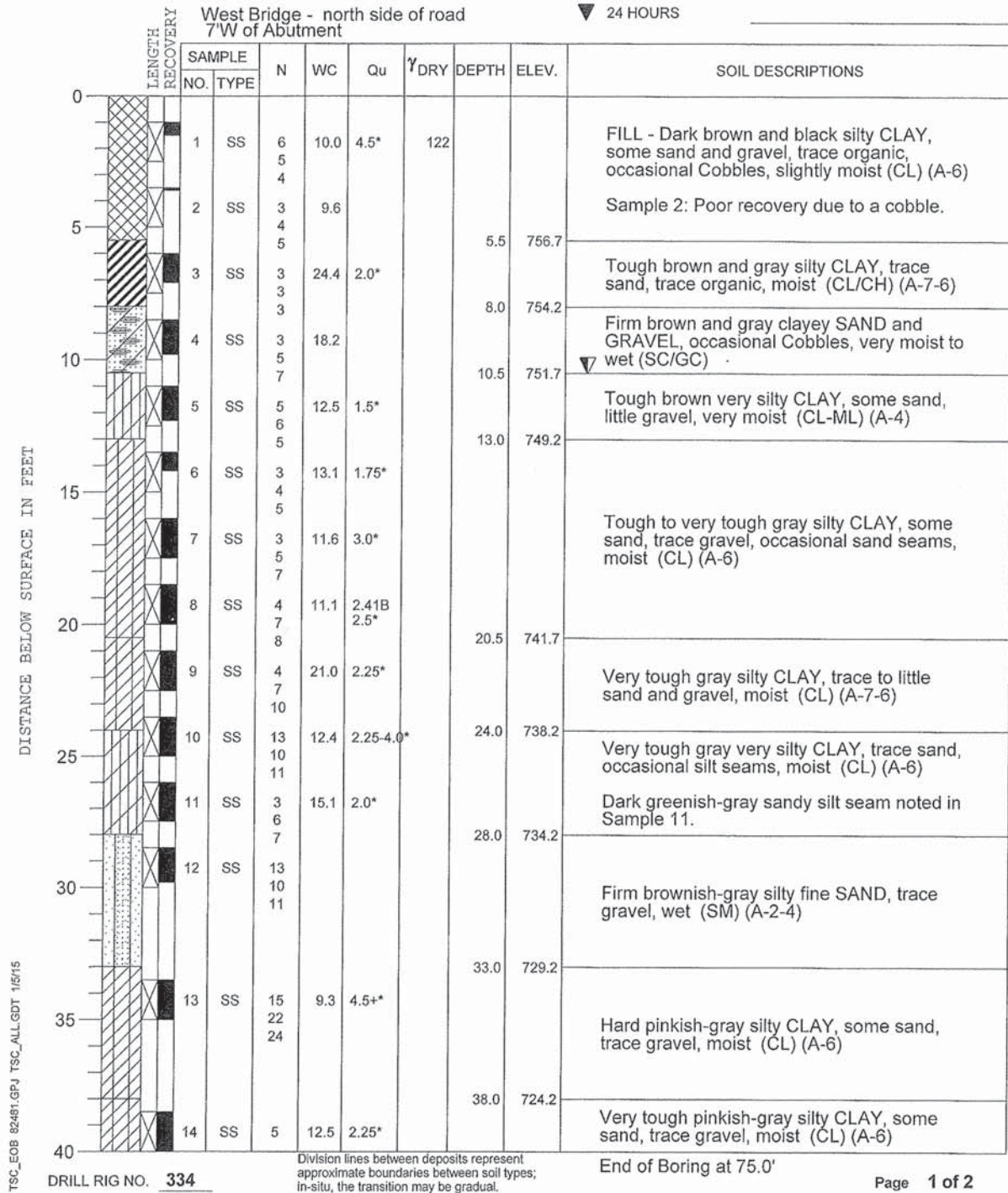
CLIENT **Strand Associates, Inc., Joliet, Illinois**



BORING **1** DATE STARTED **11-21-14** DATE COMPLETED **11-21-14** JOB **L-82,481**

ELEVATIONS
 GROUND SURFACE **762.2**
 END OF BORING **687.2**

WATER LEVEL OBSERVATIONS
 WHILE DRILLING **10.5'**
 AT END OF BORING **52.0'**
 24 HOURS



PROJECT **Proposed Bridge Replacements, South Paw Paw Road, DeKalb, Illinois**

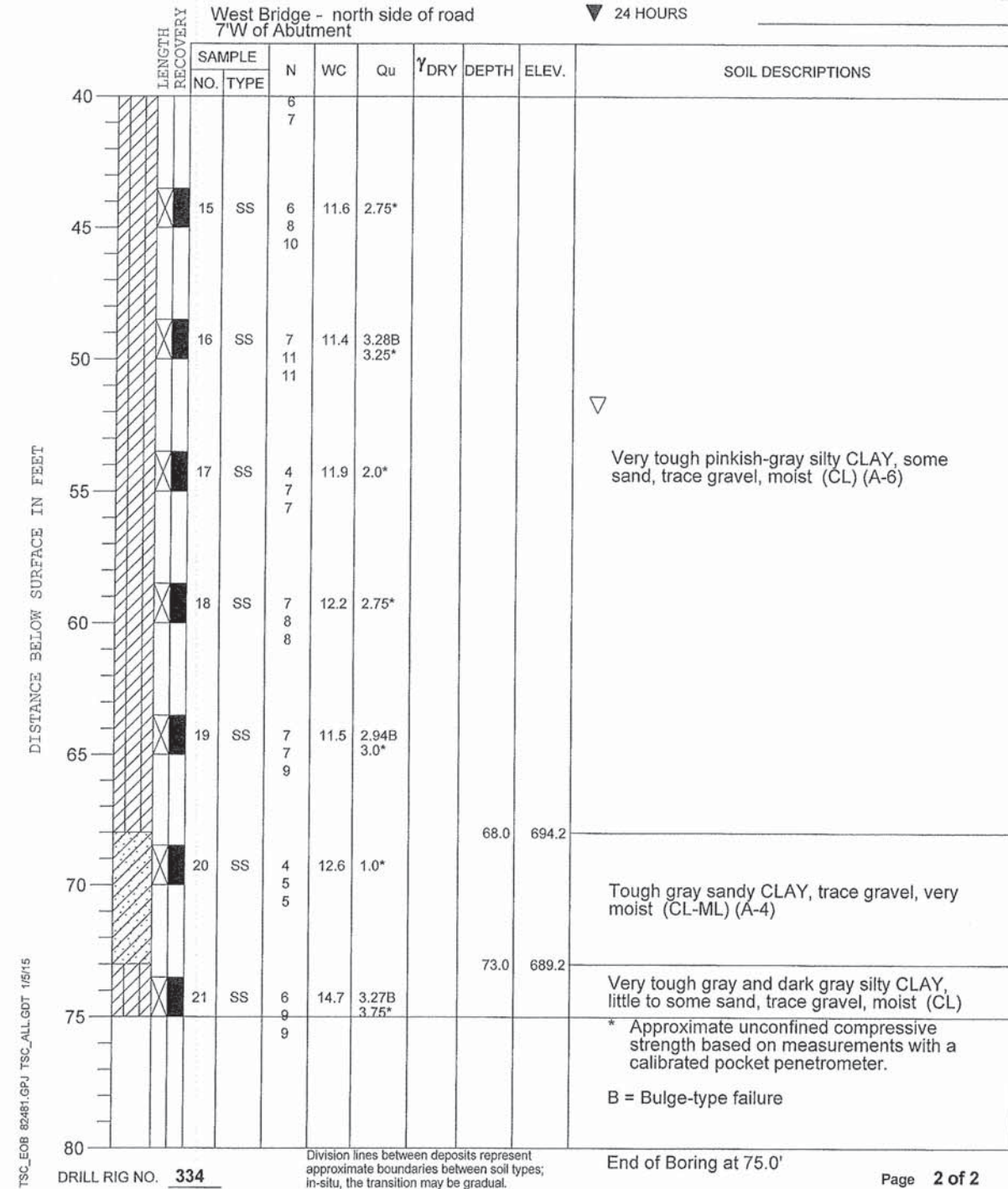
CLIENT **Strand Associates, Inc., Joliet, Illinois**



BORING **1** DATE STARTED **11-21-14** DATE COMPLETED **11-21-14** JOB **L-82,481**

ELEVATIONS
 GROUND SURFACE **762.2**
 END OF BORING **687.2**

WATER LEVEL OBSERVATIONS
 WHILE DRILLING **10.5'**
 AT END OF BORING **52.0'**
 24 HOURS



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PROJECT **Proposed Bridge Replacements, South Paw Paw Road, DeKalb, Illinois**

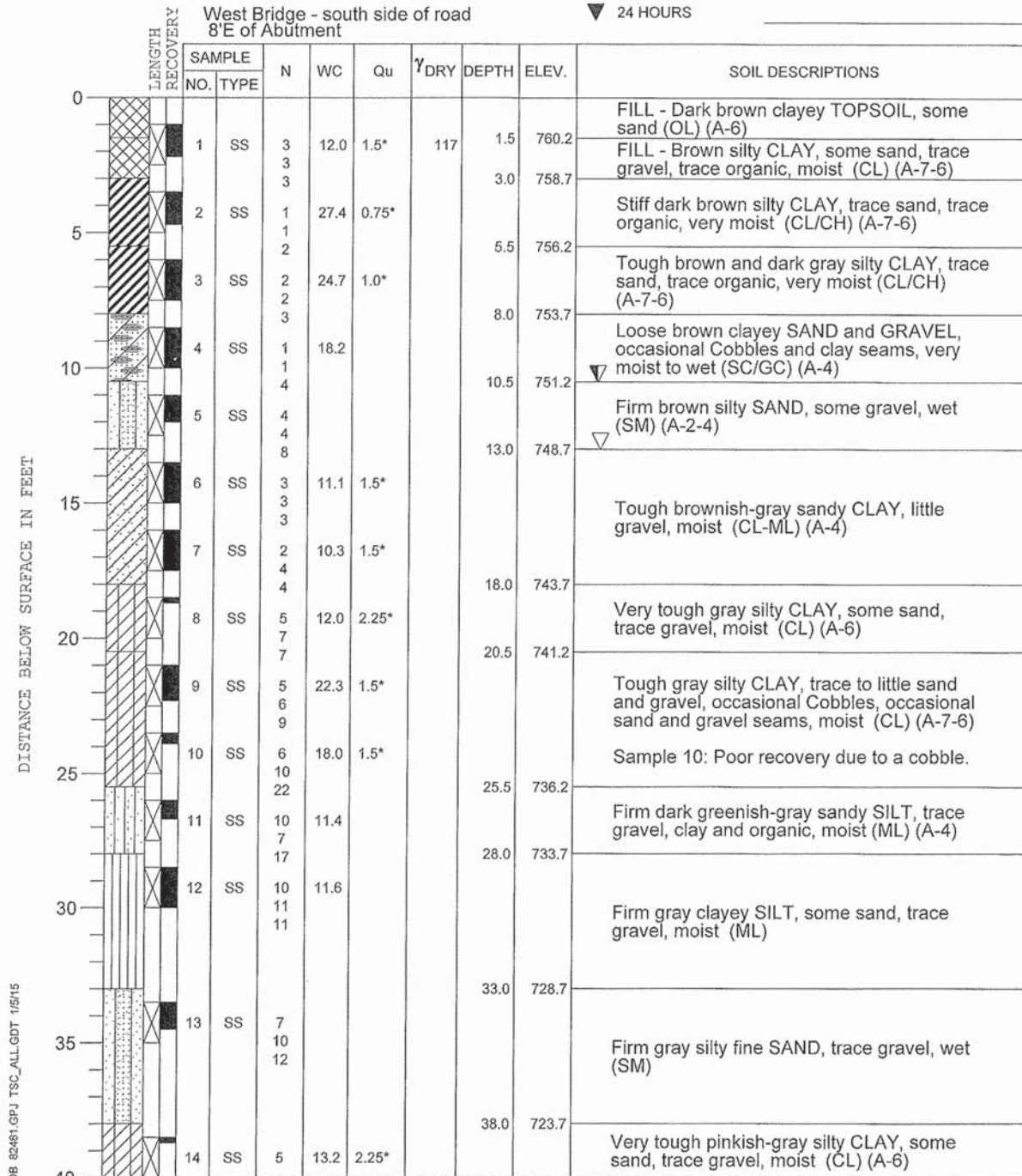
CLIENT **Strand Associates, Inc., Joliet, Illinois**



BORING **2** DATE STARTED **11-25-14** DATE COMPLETED **11-25-14** JOB **L-82,481**

ELEVATIONS
 GROUND SURFACE **761.7**
 END OF BORING **686.7**

WATER LEVEL OBSERVATIONS
 WHILE DRILLING **10.5'**
 AT END OF BORING **13.0'**
 24 HOURS



DRILL RIG NO. **334**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 75.0'

Page 1 of 2

PROJECT **Proposed Bridge Replacements, South Paw Paw Road, DeKalb, Illinois**

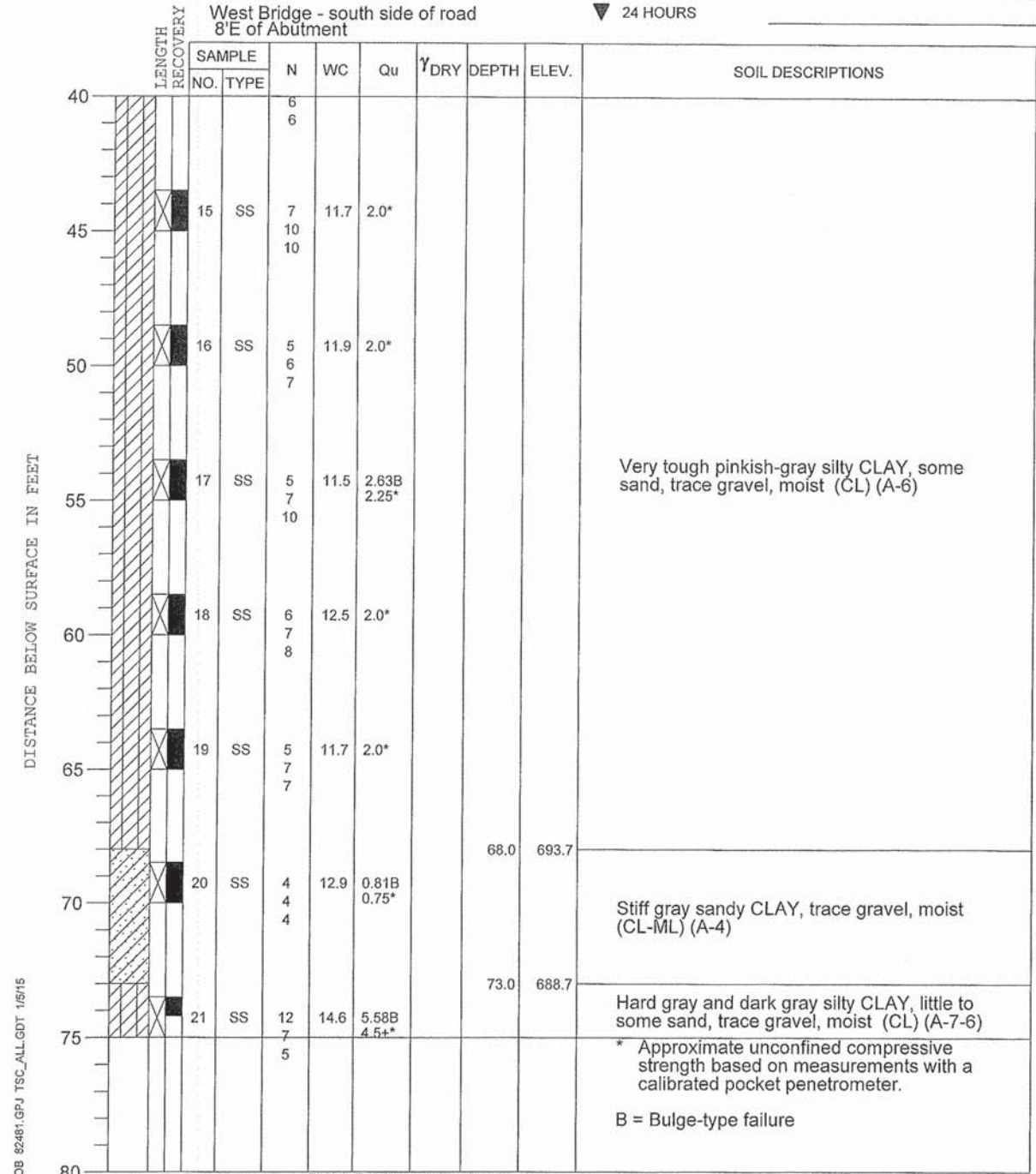
CLIENT **Strand Associates, Inc., Joliet, Illinois**



BORING **2** DATE STARTED **11-25-14** DATE COMPLETED **11-25-14** JOB **L-82,481**

ELEVATIONS
 GROUND SURFACE **761.7**
 END OF BORING **686.7**

WATER LEVEL OBSERVATIONS
 WHILE DRILLING **10.5'**
 AT END OF BORING **13.0'**
 24 HOURS



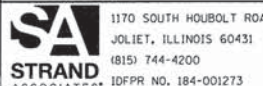
DRILL RIG NO. **334**

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 75.0'

Page 2 of 2

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1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDFPR NO. 184-001273

USER NAME = brianf
 DESIGNED - RRD
 CHECKED - RRD
 PLOT SCALE =
 PLOT DATE = 2/12/2015

REVISED
 REVISED
 REVISED
 REVISED

**DEKALB COUNTY
 DIVISION OF TRANSPORTATION**

**SOIL BORING LOG (2 OF 2)
 STRUCTURE NO. 019-5517**

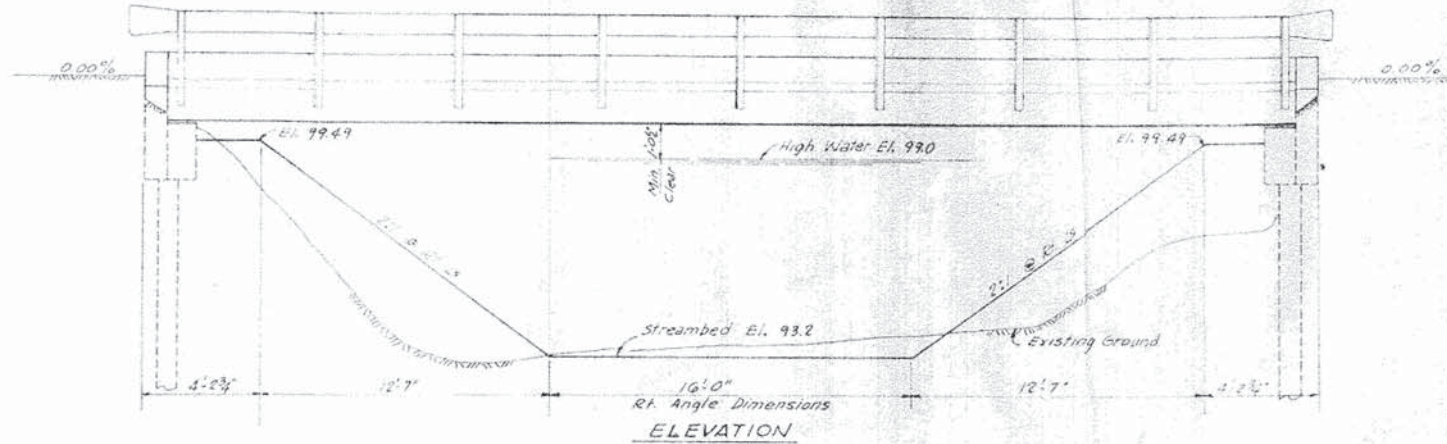
SHEET NO. 11 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	25
CONTRACT NO. 87586			ILLINOIS FED. AID PROJECT	

BM: Spike in tree 25' Rt Sta. 80135
 EL. 100.00 (Assumed)
 EXISTING STRUCTURE: 1. Span concrete Arch
 bridge, 16' roadway
 to be removed by Contractor
 S.A. 111001-10000

GENERAL NOTES

Class A Concrete shall be used throughout except in precast prestressed units.
 All reinforcement bars shall be lapped 20 bar diameters unless otherwise noted.
 The Contractor shall drive creosoted test piles in permanent locations at each abutment as directed by the Engineer before ordering the remainder of piles.
 Class A Excavation for Structures shall be included in the contract unit price per Cu. Yd. of Class A Concrete, Est. 35 Cu. Yds. The excavated material shall be used to shape the channel slopes as shown on ELEVATION.
 Expansion Guards are included in quantity of Structural Steel (3"x2"x1/2" angles only).
 Expansion guards that are not cast into beams shall be fabricated in accordance with Art. 5113(d) of the Standard Specifications.
 The exposed surfaces of the expansion guards shall receive two shop coats of red lead paint.
 All paint shall be furnished and applied by the contractor.

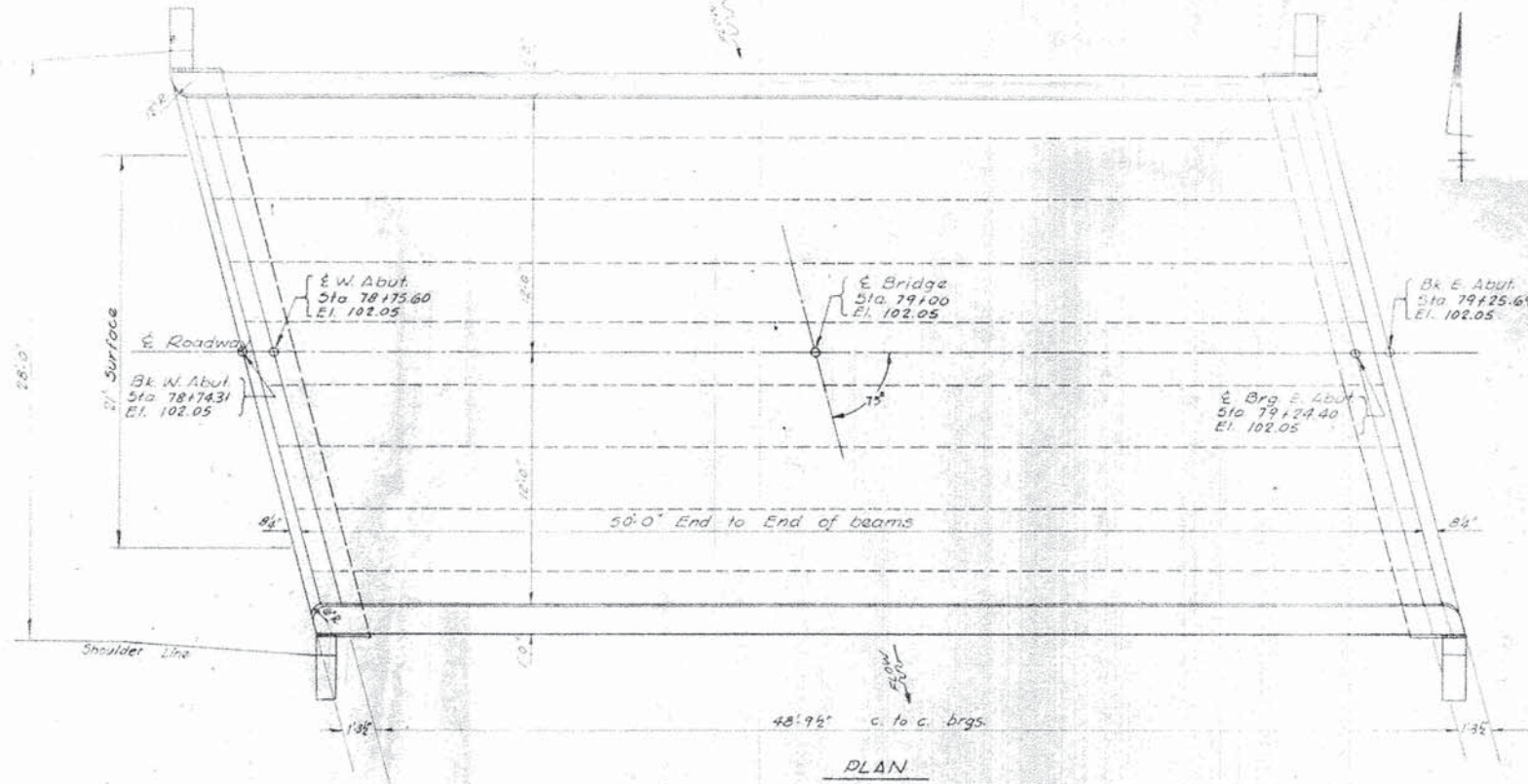


STATION 79+00
 GOBLE BRIDGE
 SEC. 109 B-TR BUILT 1965
 PAW PAW ROAD DISTRICT
 DEKALB COUNTY
 LOADING HS15-44

LETTERING FOR NAME PLATE
 REFER TO STD. 2113-1

TOTAL BILL OF MATERIAL - BRIDGE

ITEM	SUB	SUPER	TOTAL	
Class A Concrete	Cu. Yds.	175	34	209
Reinforcement Bars	Lbs.	1770	190	1960
Precast Prestressed Conc. Bridge Deck 21"	Sq. Ft.		1300	1300
Furnishing Creosoted Piles, 20" to 38"	Lin. Ft.	320		320
Driving Timber Piles	Lin. Ft.	320		320
Test Piles (Creosoted)	Each	2		2
Removal of Existing Structures	Each		1	1
Furnishing & Erecting Structural Steel	Lbs.		200	200
Metal Plate Bridge Rail	Lin. Ft.		96	96
Name Plates	Each		1	1
3/4" Concrete Surface Crse, Sub-cl. Ill.	Tons		13	13
Bituminous Materials (Prime Coat)	Gals.		13	13



WATERWAY INFORMATION

Drainage Area: 2700 A.
 Character: Level, Cultivated
 Present Opening: 200 S.F.
 Required Opening (15' x Flood): 160 S.F.
 Proposed Opening: 160 S.F.

DESIGN STRESSES

FIELD UNITS: FC = 1400 P.S.I., FS = 20000 P.S.I., η = 10
 PRECAST PRESTRESSED UNITS: FC = 5000 P.S.I., Fci = 4000 P.S.I., FS = 248000 P.S.I., Fsi = 175600 P.S.I.

BRIDGE NO. 1 STATION 79+00
SECTION 109 B-TR PAW PAW ROAD DIST.
DEKALB COUNTY

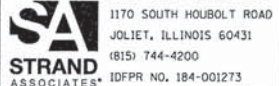
GENERAL PLAN AND ELEVATION

LAYOUT BY: D.E.H. DATE: MAY 1965	PLANS PREPARED BY S.W. KNETSCH AND ASSOCIATES	REVISIONS
DESIGN BY: D.E.H. DATE: MAY 1965		
CHECKED BY: H.P.W. DATE: MAY 1965	CONSULTING ENGINEERS DEKALB, ILLINOIS	
APPROVED:		

LOADING HS15-44

FILE NO. 1847-43 SHEET NO. 12 OF 12 SHEETS

FILE NAME = s:\p1\6080-6099\6099A\023\micro\CORD_Sheets\West_Bridge\019550-XXXX-012-EGPE.dgn



1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDPFR NO. 184-001273

USER NAME = brianf
 DESIGNED - RRD
 CHECKED - AJS
 PLOT SCALE =
 PLOT DATE = 2/12/2015
 DRAWN - BJF
 CHECKED - RRD

DEKALB COUNTY
 DIVISION OF TRANSPORTATION

EXISTING GENERAL PLAN AND ELEVATION
 STRUCTURE NO. 019-5517
 SHEET NO. 12 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	26

CONTRACT NO. 87586
 ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY

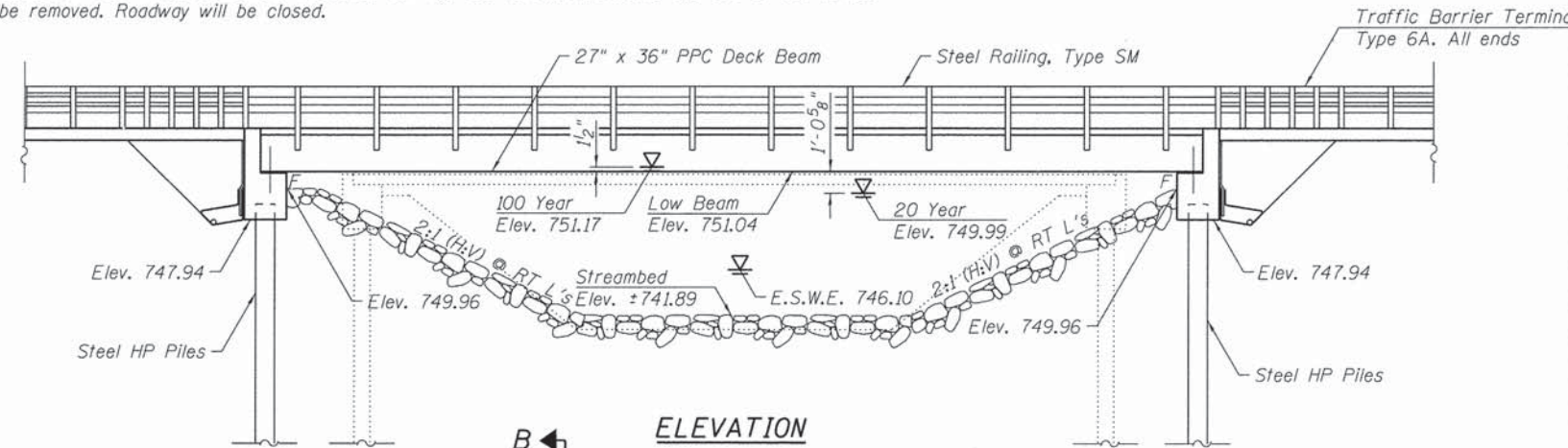
Benchmark: Cut "□" NW Wingwall. Elev. 753.333

Existing Structure: S.N. 019-5501 built in 1965 as Section 109-13-TR. The Superstructure consists of seven 21" Deep Prestressed Precast Concrete Deck Beams with side mounted railing and a HMA Overlay. The Substructure consists of R.C. open Abutments on Creosoted Timber Piles. Structure measures 51'-4 1/2" Bk. to Bk. Abutments and 26'-0" out to out. Existing Structure to be removed. Roadway will be closed.

No salvage.

GENERAL NOTES

Reinforcement bars designated (E) shall be epoxy coated.
 Concrete Sealer shall be applied to the designated areas of the abutments.
 Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
 The embankment configuration shown shall be the minimum that must be placed and compacted prior to construction of the abutments.
 Excavation to place the Stone Riprap, Class A5 is included in the cost of Stone Riprap, Class A5.



SCOPE OF WORK

1. Remove Existing Structure.
2. Install Proposed Abutments and Wingwalls.
3. Install proposed PPC Deck Beams and Concrete Wearing Surface.
4. Install proposed Type SM Rail.
5. Install proposed Riprap.

INDEX OF SHEETS

- | | |
|-------|-------------------------------------|
| 1 | General Plan and Elevation |
| 2 | General Details |
| 3 | Superstructure |
| 4 | Superstructure Details |
| 5 | Steel Railing, Type SM |
| 6 | 27"x36" PPC Deck Beam |
| 7 | 27"x36" PPC Deck Beam Details |
| 8 | Abutments |
| 9 | HP Pile Details |
| 10-11 | Soil Boring Logs |
| 12 | Existing General Plan and Elevation |

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
 Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.092g
 Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.161g
 Soil Site Class = D

DESIGN SPECIFICATIONS

2014 AASHTO LRFD Bridge Design Specifications, 7th Edition

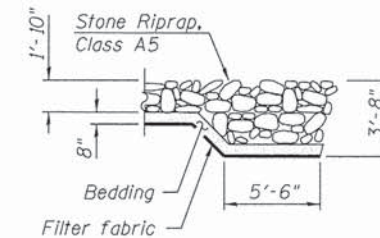
DESIGN STRESSES

FIELD UNITS

- f'c = 3,500 psi (Substructures)
 - f'c = 5,000 psi (Concrete Wearing Surface)
 - fy = 60,000 psi (Reinforcement)
 - fy = 50,000 psi (M270 Grade 50)
- PRECAST PRESTRESSED UNITS**
- f'c = 6,000 psi
 - f'ci = 5,000 psi
 - fpu = 270,000 psi (1/2" low lax. strands)
 - fpbt = 201,960 psi (1/2" low lax. strands)

LOADING HL-93

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

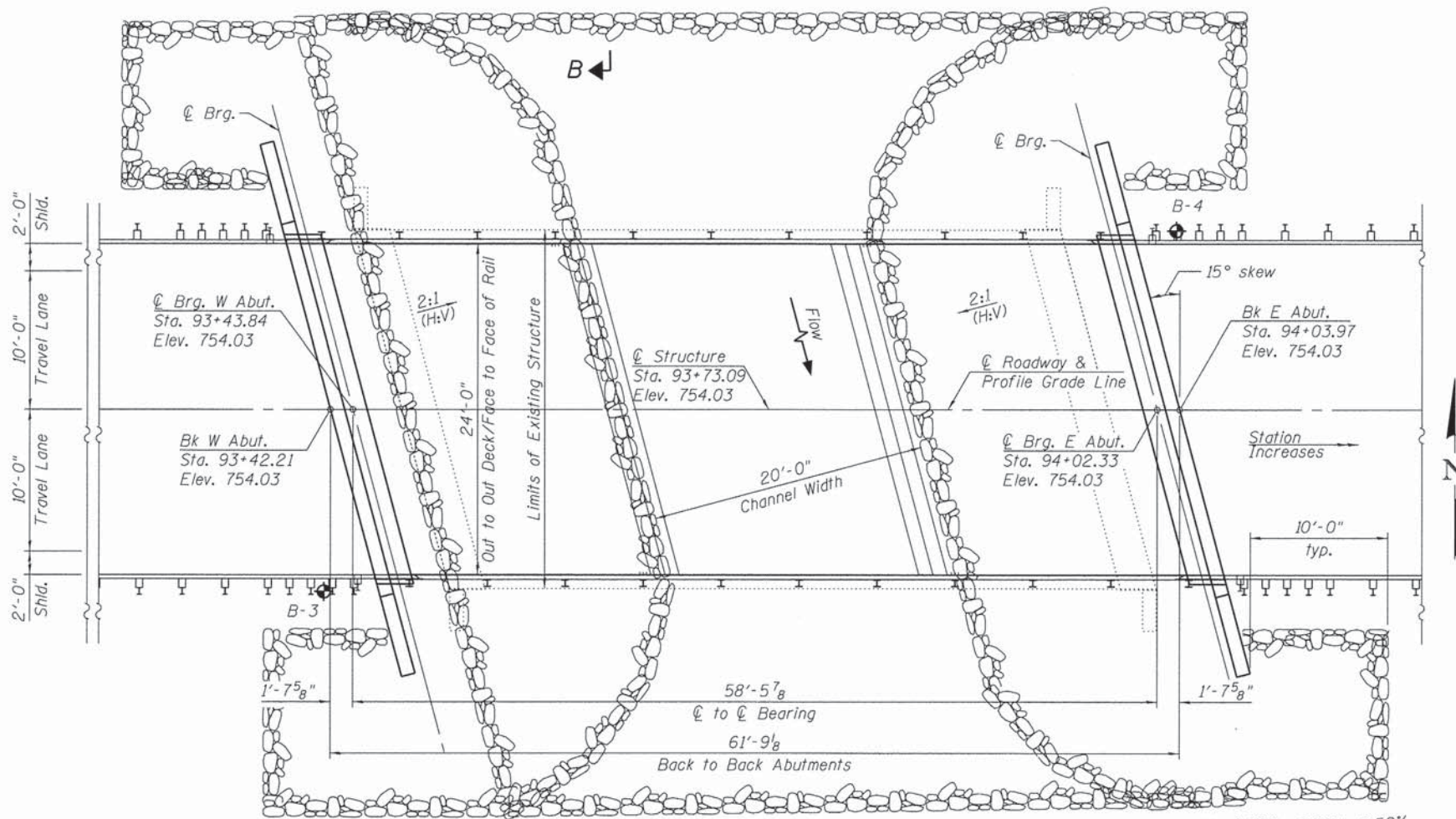


SECTION B-B

EAST BRANCH PAW PAW RUN CREEK
 BUILT 201X BY
 DEKALB COUNTY
 SEC. 13-11109-01-BR
 STATION 93+73
 STR. NO. 019-5518 LOADING HL-93

NAME PLATE

See Std. 515001

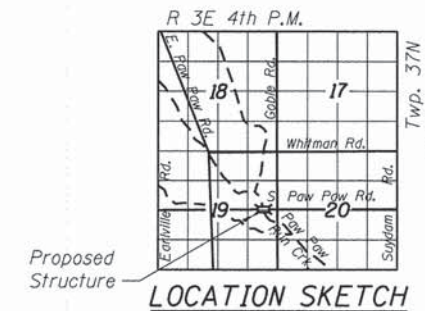
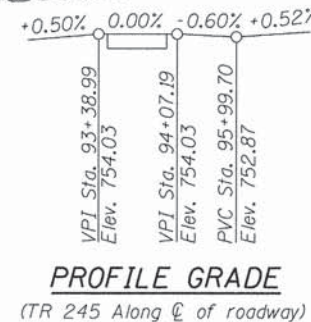


WATERWAY INFORMATION

Drainage Area = 3.4 Square Miles		Low Grade Elev. 753.11 @ Sta. 96+00		Nat. H.W.E.		Head - Ft.		Headwater El.	
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist. Prop.	H.W.E.	Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.	Exist. Prop.
Design	10	542	168 262	749.3	0.0	0.0	749.3	749.3	749.3
Base	20	666	196 299	750.0	0.0	0.0	750.0	750.0	750.0
Scour Design Check	100	961	232 357	751.0	0.1	0.2	751.1	751.2	751.2
Overtopping Existing	200	1092	232 357	751.1	0.4	0.0	751.5	751.1	751.1
Overtopping Proposed	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	500	1260	232 357	751.3	0.7	0.2	752.0	751.5	751.5

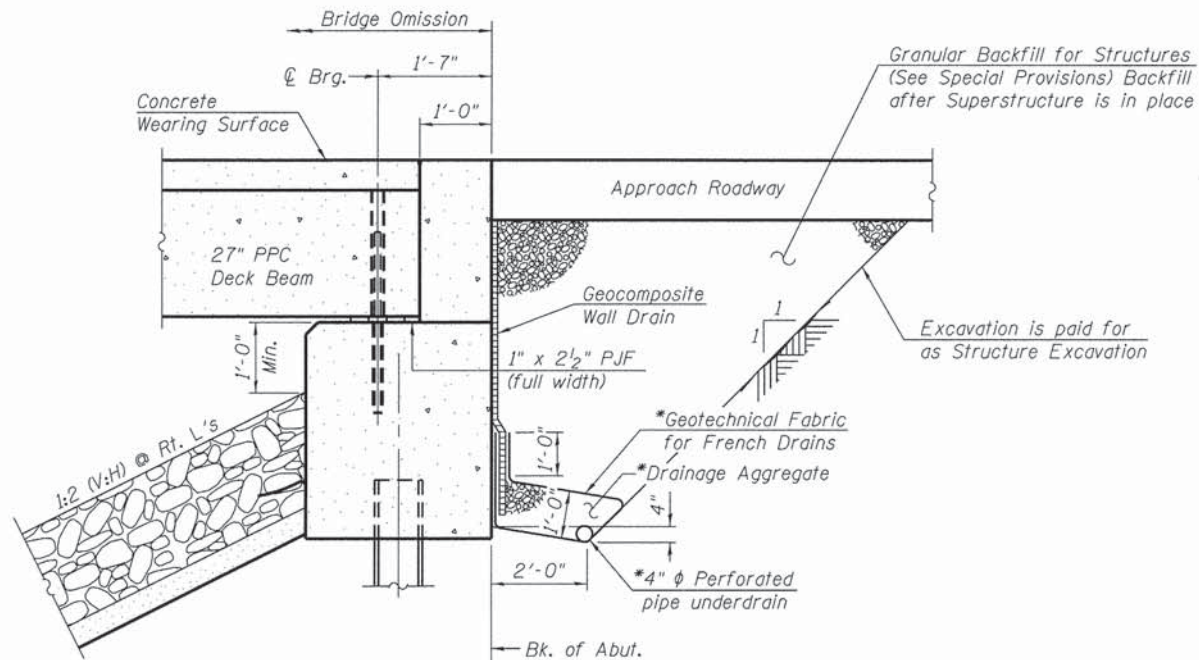
DESIGN SCOUR ELEVATION TABLE

Event/Limit State	Design Scour Elevation (ft.)		Item 113
	W. Abut.	E. Abut.	
Design	747.94	747.94	8
Check	747.94	747.94	



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 the requirement of the current AASHTO LRFD Bridge Design Specifications.

GENERAL PLAN
T.R. 245 (SOUTH PAW PAW ROAD)
OVER E. BRANCH OF PAW PAW RUN CREEK
DEKALB COUNTY
STA. 93+73.09
S.N. 019-5518



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

*Included in the cost of Pipe Underdrains for Structures.
(See Special Provisions)

Note:

All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).
Provide a 2'-0" Riprap Berm on West Abutment only.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	SQ YD		480	480
Filter Fabric	SQ YD		480	480
Removal Of Existing Structures	EACH	1		1
Structure Excavation	CU YD		76	76
Concrete Structures	CU YD		27	27
Bridge Deck Grooving	SQ YD	152		152
Concrete Encasement	CU YD		4	4
Protective Coat	SQ YD	165		165
Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	1,433		1,433
Reinforcement Bars, Epoxy Coated	POUND	2,200	3,910	6,110
Steel Railing, Type SM	FOOT	124		124
Furnishing Steel Piles, HP12X53	FOOT		492	492
Driving Piles	FOOT		492	492
Test Pile Steel, HP12X53	EACH		2	2
Name Plates	EACH	1		1
Concrete Wearing Surface, 5"	SQ YD	160		160
Granular Backfill For Structures	CU YD		76	76
Pipe Underdrains For Structures 4"	FOOT		128	128

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SA STRAND ASSOCIATES
1170 SOUTH HOBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf
PLOT SCALE =
PLOT DATE = 2/12/2015

DESIGNED - RRD
CHECKED - AJS
DRAWN - B.JF
CHECKED - RRD

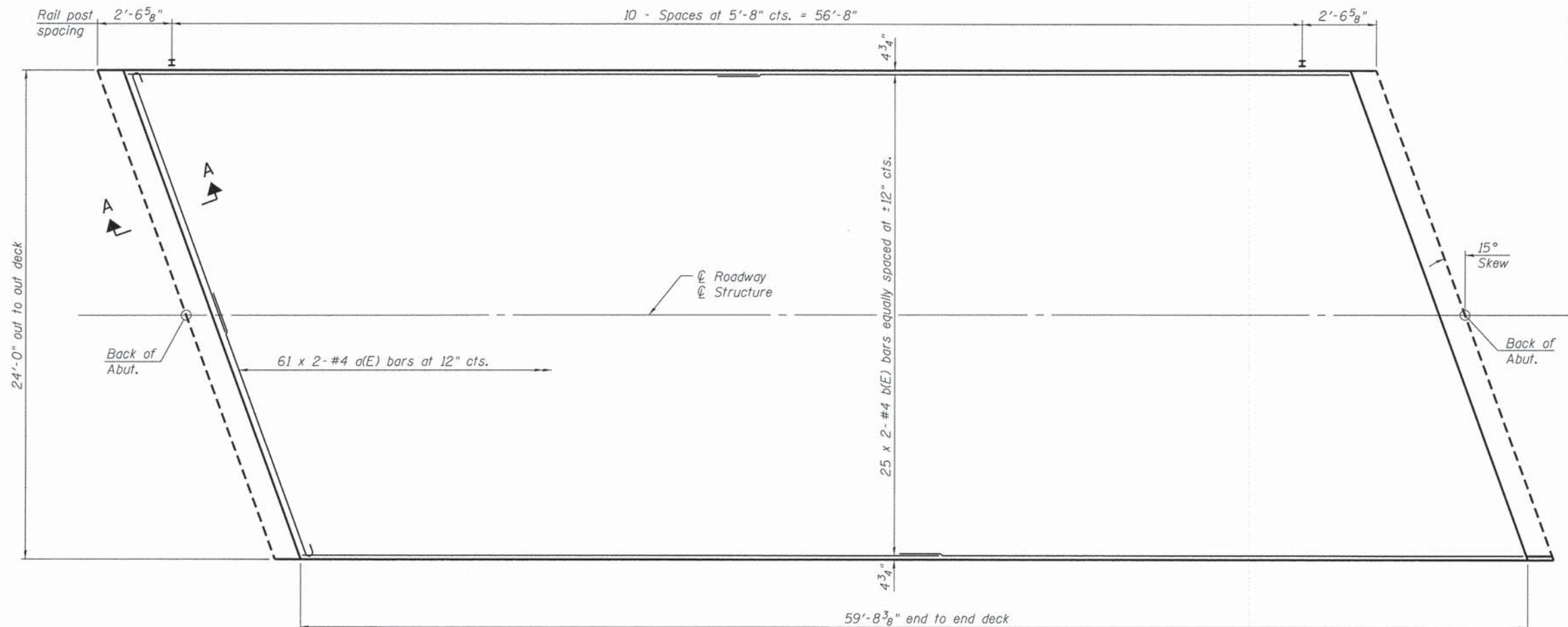
REVISED
REVISED
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REVISED

**DEKALB COUNTY
DIVISION OF TRANSPORTATION**

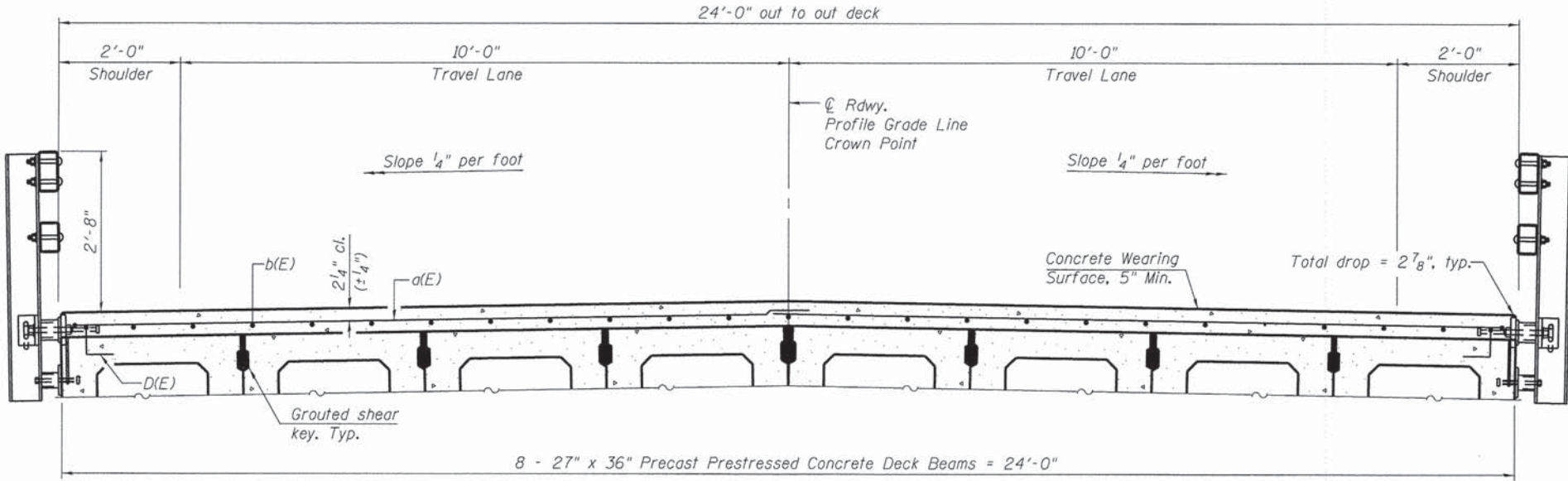
**GENERAL DETAILS
STRUCTURE NO. 019-5518**

SHEET NO. 2 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	28
			CONTRACT NO. 87586	
ILLINOIS FED. AID PROJECT				



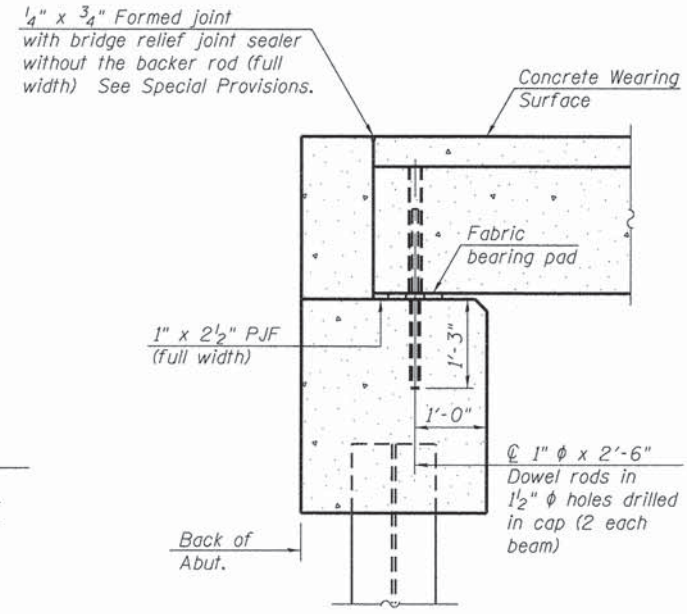
PLAN



CROSS SECTION
(Looking East)

Notes:
See sheet 4 of 12 for Superstructure Details and Bill of Material.
Bars indicated thus 20 x 2-#4 etc. indicates 20 lines of bars with 2 lengths per line.
Spacing of a(E) bars shall be measured along the ϕ of structure.

MINIMUM BAR LAP
#4 bar = 2'-7"



SECTION A-A

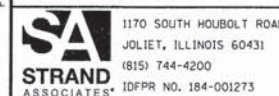
(Dimensions are at Rt. L's)

Notes:
All concrete wearing surfaces shall be placed prior to casting a backwall and/or approach slab.
See sheet 7 of 12 for fabric bearing pad details.

FILE NAME = s:\j\01\6800-6099\6894\083\micro\East_Bridge\019551-XXXXX-003-SUP.dgn

PDS-S-R34-R

7-1-10



1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - RRD	REVISED
PLOT SCALE =	CHECKED - AJS	REVISED
PLOT DATE = 2/12/2015	DRAWN - B.J.F.	REVISED
	CHECKED - RRD	REVISED

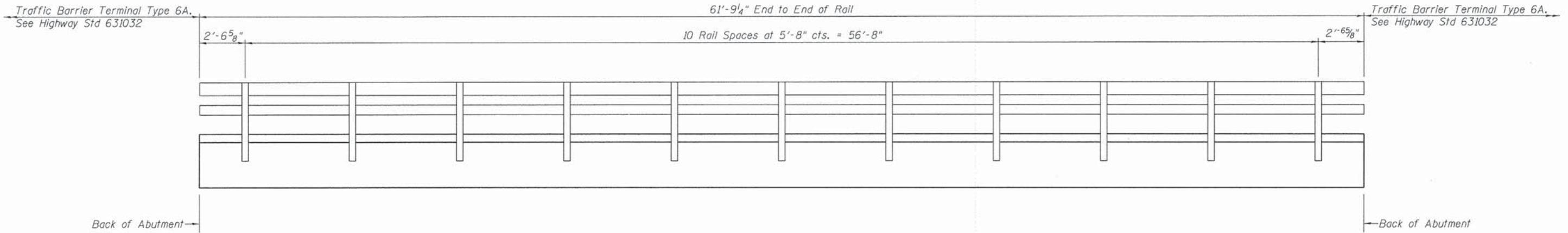
DEKALB COUNTY
DIVISION OF TRANSPORTATION

SUPERSTRUCTURE
STRUCTURE NO. 019-5518

SHEET NO. 3 OF 12 SHEETS

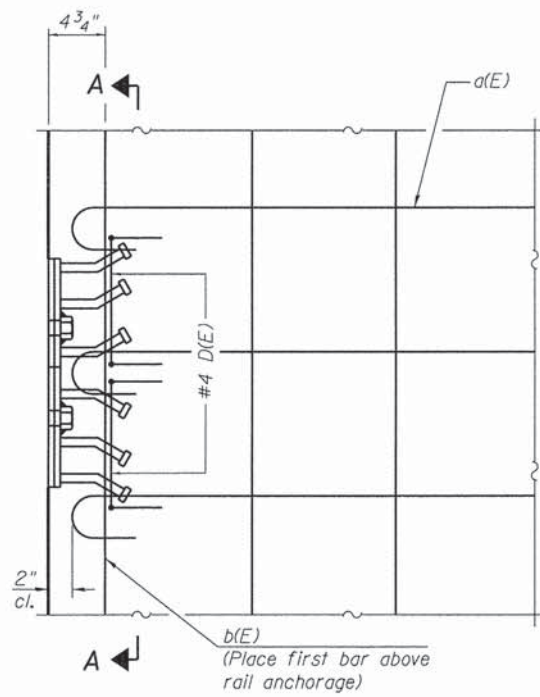
T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	29
CONTRACT NO. 87586				

ILLINOIS FED. AID PROJECT



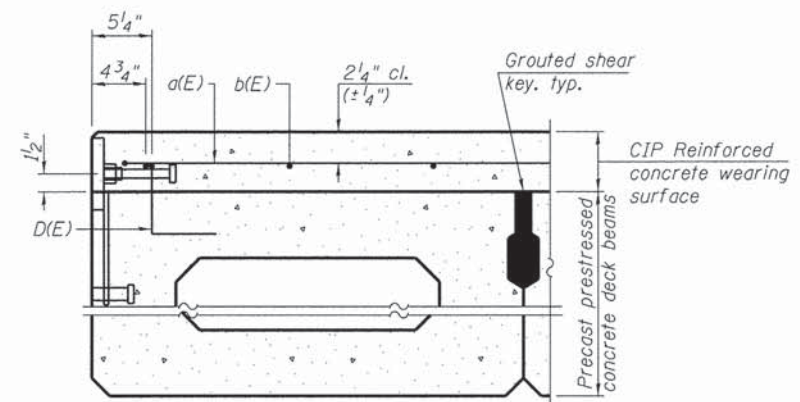
ELEVATION

Notes:
See sheet 5 of 12 for railing details.

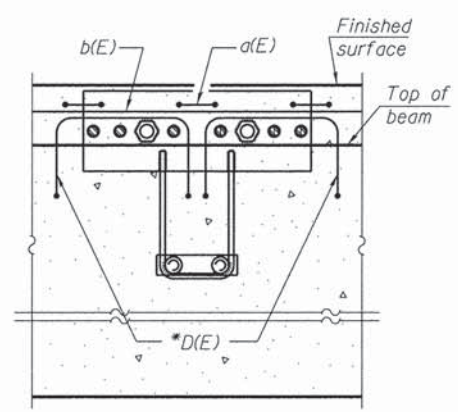


PLAN

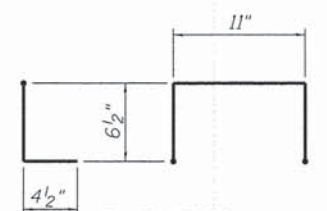
Notes:
Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam.



SECTION THRU FASCIA BEAM

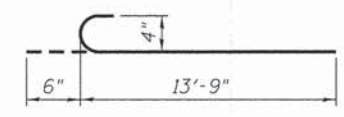


SECTION A-A

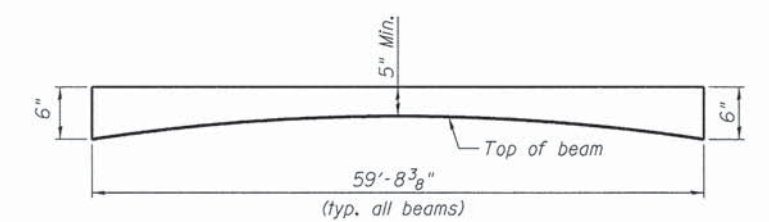


BAR D(E)

* Place 2-#4 D(E) bars in beam at each post location as shown. D(E) bar included in cost of beam.



BAR a(E)



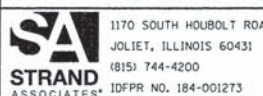
ANTICIPATED CONCRETE WEARING SURFACE PROFILE
(For information only)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	122	#4	14'-3"	C
b(E)	50	#4	31'-0"	—
Reinforcement Bars, Epoxy Coated			Pound	2,200
Steel Railing Type SM			Foot	124
Concrete Wearing Surface, 5"			Sq. Yd.	160

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PDS-S-R34-D 1-27-12



1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brionf
DESIGNED - RRD
CHECKED - AJS
DRAWN - BJF
CHECKED - RRD
PLOT SCALE =
PLOT DATE = 2/12/2015

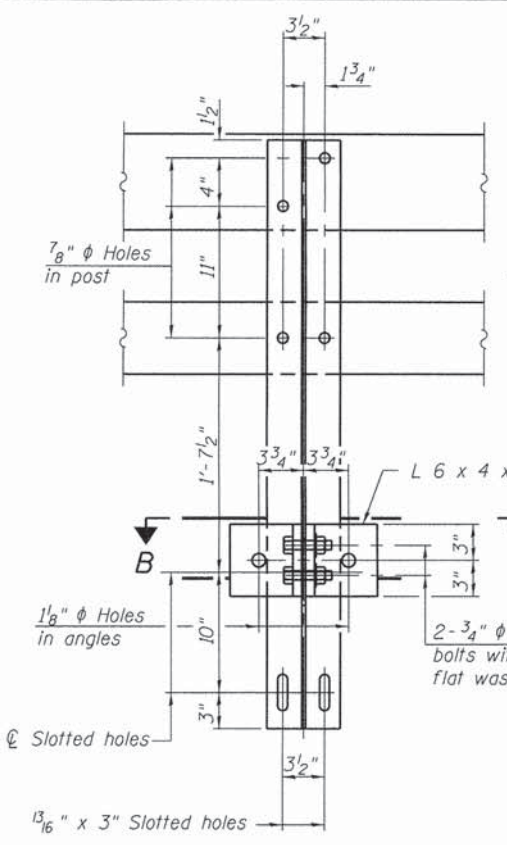
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REVISE
REVISE
REVISE

**DEKALB COUNTY
DIVISION OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS
STRUCTURE NO. 019-5518**

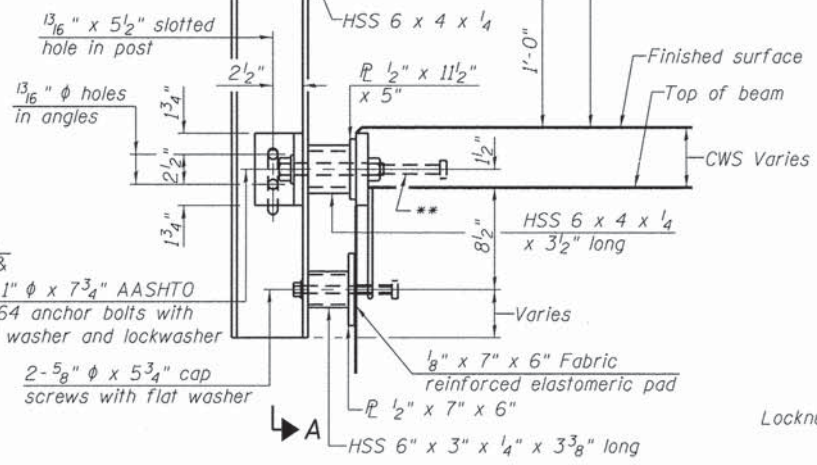
SHEET NO. 4 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	30
			CONTRACT NO. 87586	
ILLINOIS FED. AID PROJECT				

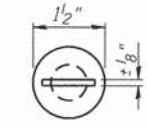
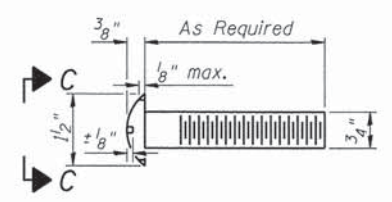


4- 3/4" φ x 6" Round Head Bolts (With slot or approved recess in head) with locknut & flat washer. 7/8" φ holes in hollow structural section may be drilled in the field.

2- 3/4" φ x 3 1/4" H.S. bolts with hex nut & flat washers
2- 1" φ x 7 3/4" AASHTO M-164 anchor bolts with flat washer and lockwasher
2- 5/8" φ x 5 3/4" cap screws with flat washer

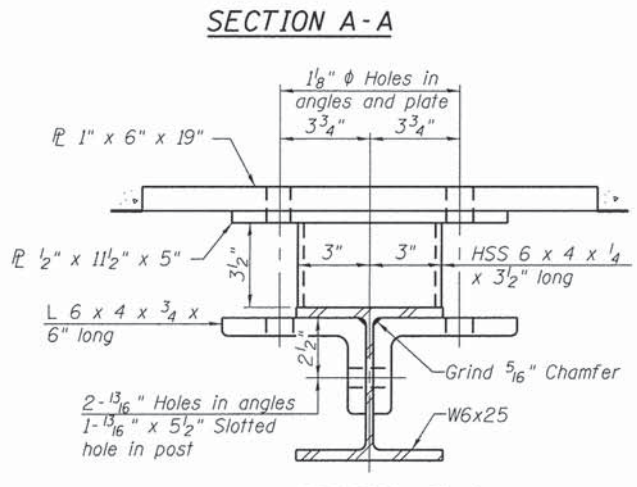
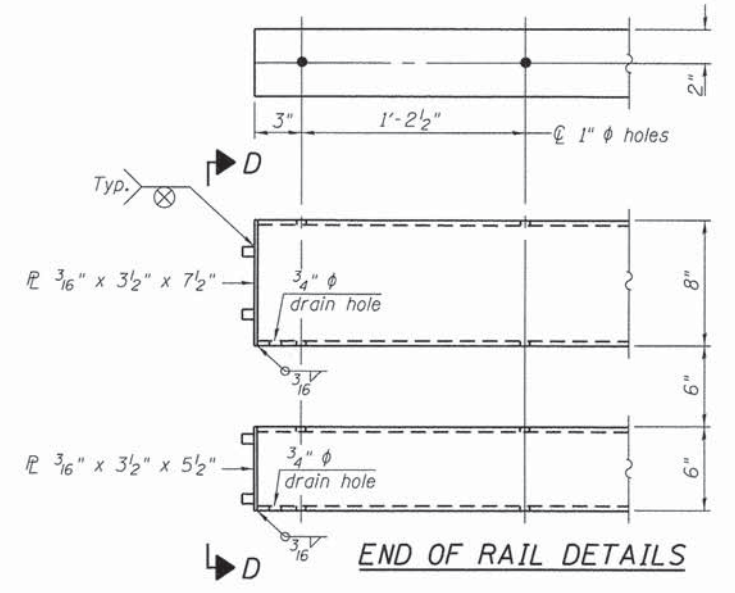
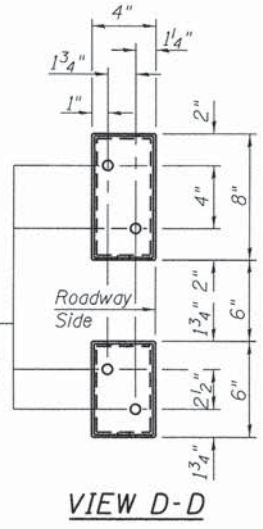


DETAIL OF 3/4" φ ROUND HEAD BOLT

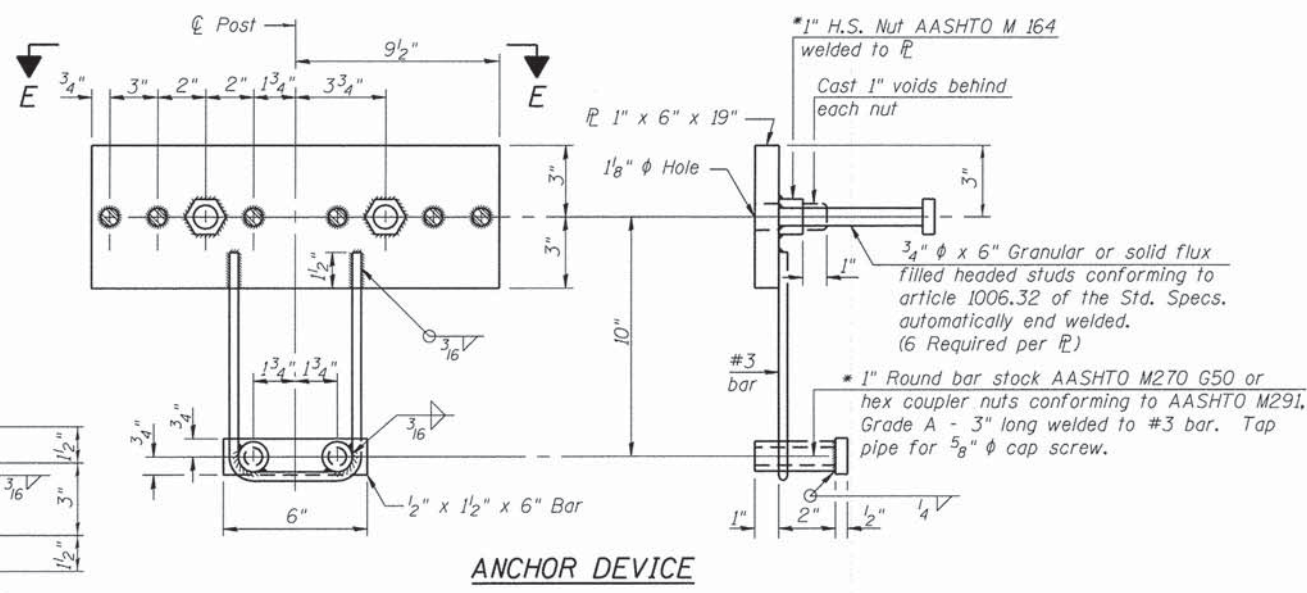
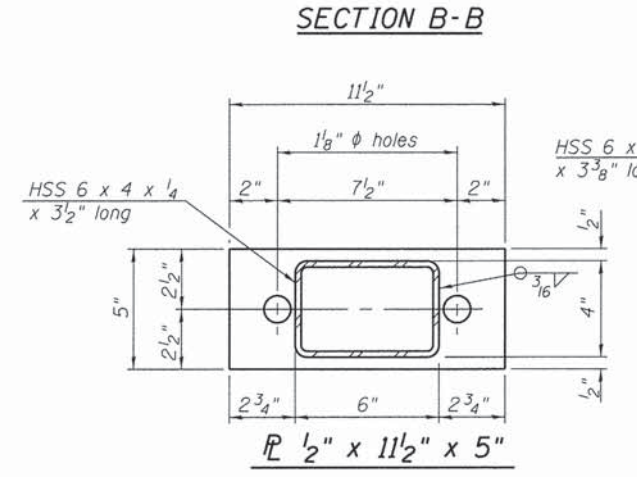
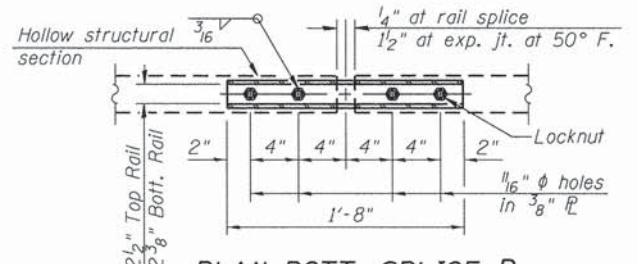
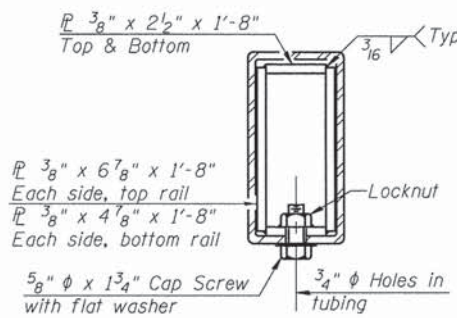
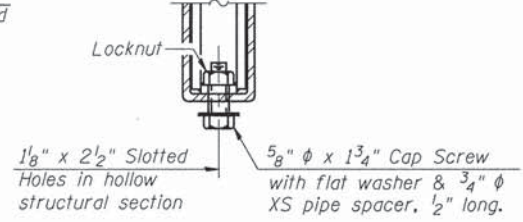


With Slot
Without Slot or Recess

4- 5/8" reduced base welded studs. Provide 4- 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032.

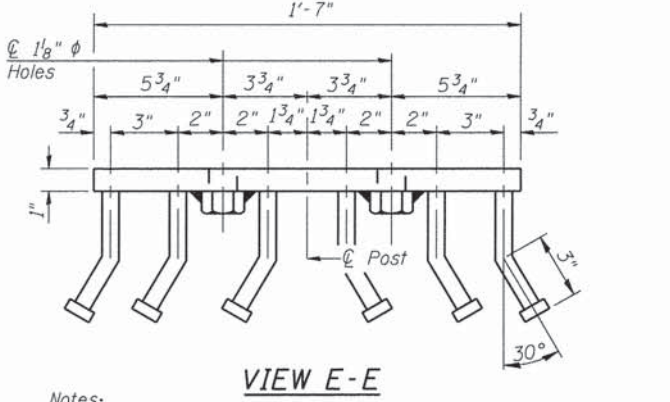


RAIL SPLICE CONNECTION AT EXPANSION JT.



*Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

SECTION AT RAIL SPLICE



Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.
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 SM	Foot	124

R-34CWS 7-1-10 (6'-3" Maximum Post Spacing) (5" minimum to 7 1/8" maximum CWS thickness)



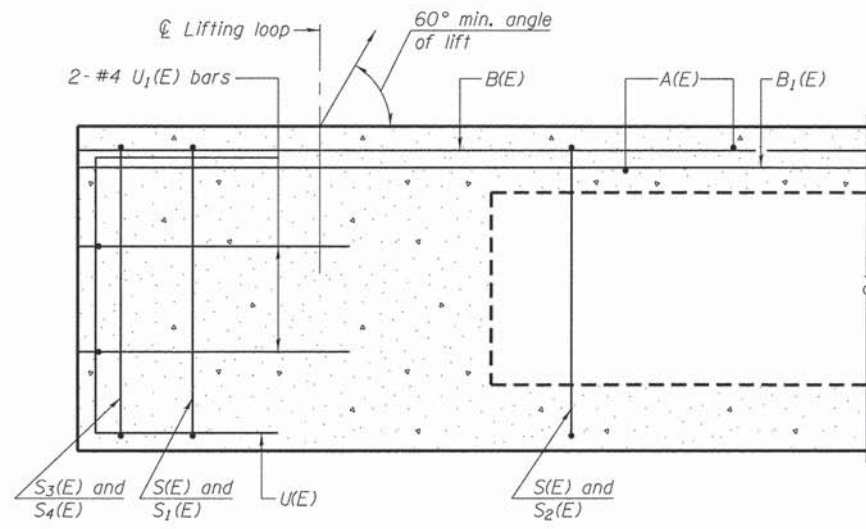
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PLOT SCALE =	CHECKED - AJS	REVISED
PLOT DATE = 2/12/2015	DRAWN - B.J.F.	REVISED
	CHECKED - RRD	REVISED

DEKALB COUNTY DIVISION OF TRANSPORTATION

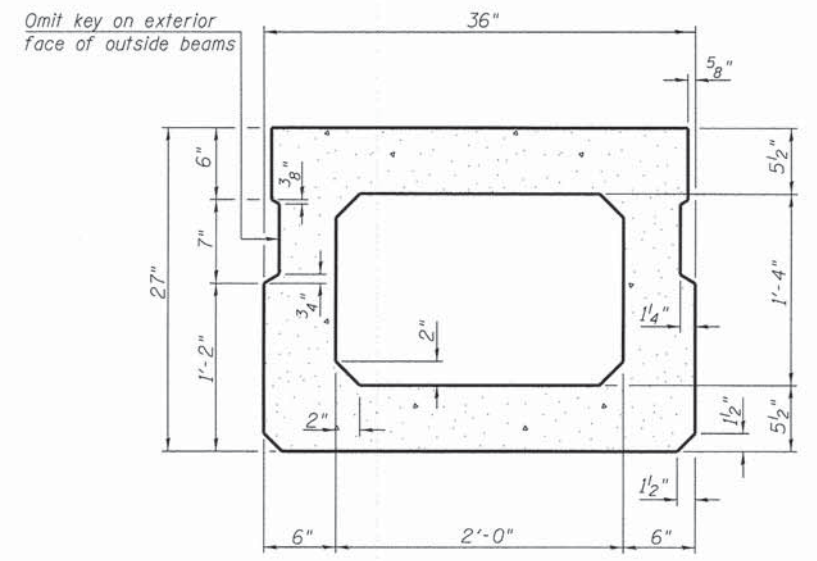
STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE STRUCTURE NO. 019-5518

SHEET NO. 5 OF 12 SHEETS

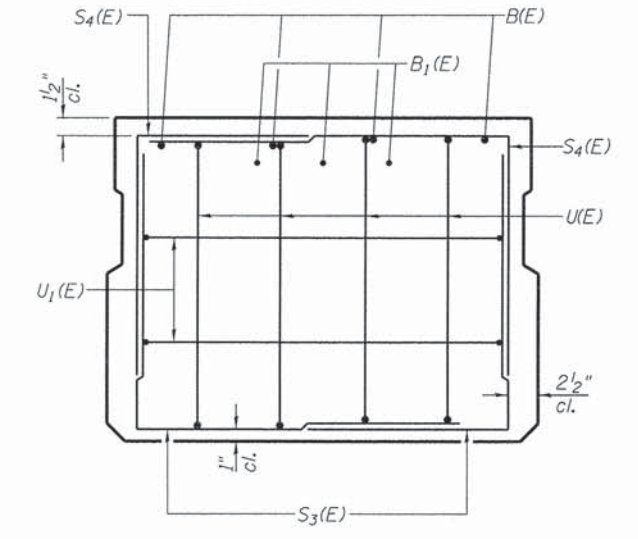
T.R. RTE. 245	SECTION 13-11109-01-BR	COUNTY DEKALB	TOTAL SHEETS 46	SHEET NO. 31
			CONTRACT NO. 87586	
ILLINOIS FED. AID PROJECT				



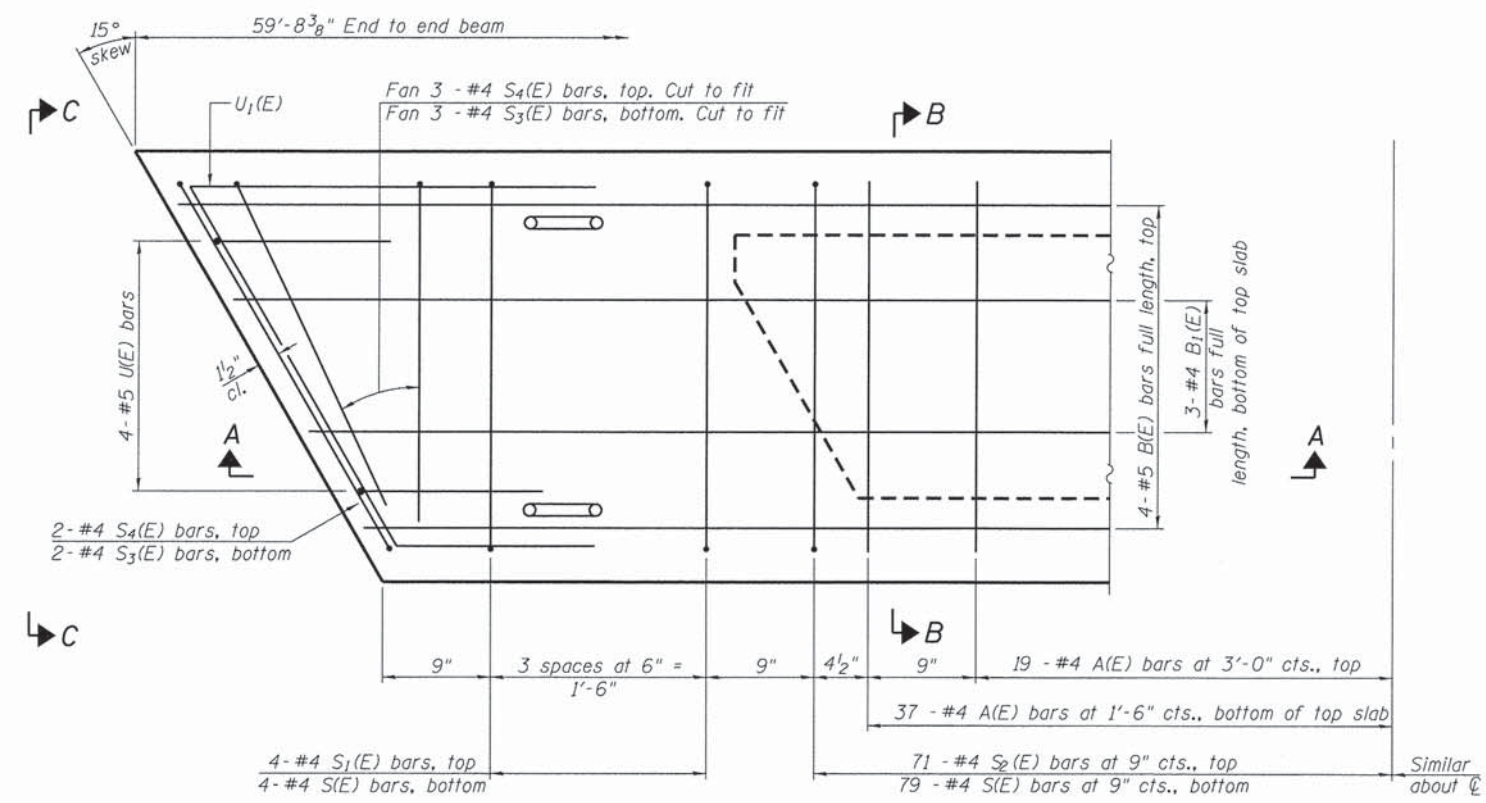
SECTION A-A



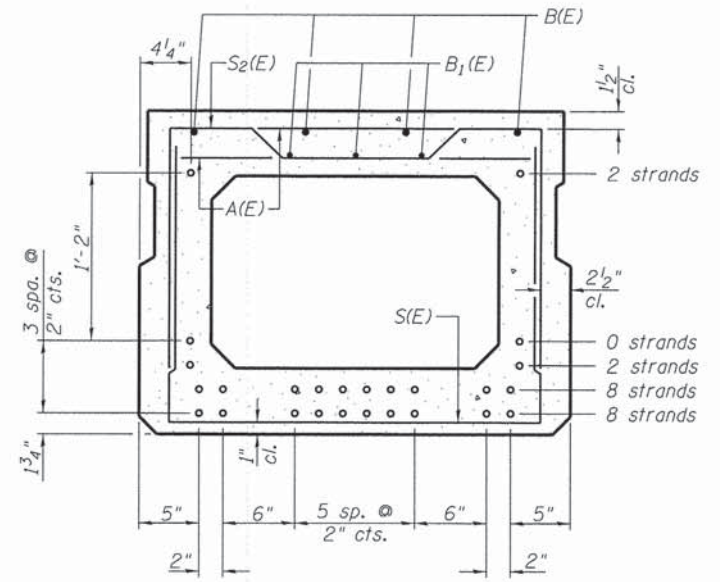
SECTION B-B
(Showing dimensions)



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.

DESIGN STRESSES

$f'_c = 6,000$ 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)

BAR LIST
 ONE BEAM ONLY

(For information only)

Bar	No.	Size	Length	Shape
A(E)	56	#4	2'-7"	—
B(E)	8	#5	30'-4"	—
B1(E)	6	#4	30'-1"	—
D(E)*	22	#4	2'-9"	┌
S(E)	79	#4	6'-5"	┌
S1(E)	8	#4	5'-11"	┌
S2(E)	71	#4	6'-2"	┌
S3(E)	12	#4	4'-8"	┌
S4(E)	12	#4	4'-5"	┌
U(E)	8	#5	4'-6"	┌
U1(E)	4	#4	6'-2"	┌

Note: See sheet 7 of 12 for additional details and Bill of Material.

*Fascia Beams Only

MINIMUM BAR LAP

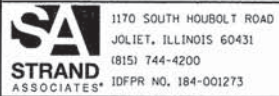
#4 bar = 2'-0"
 #5 bar = 2'-6"

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.

FILE NAME = s:\j\1\6889-6891\2015\micro-cs\CADD_Sheets\East_Bridge\1101551-XXXX-006-DECKM.dgn

PD-2736-R

7-1-10



1170 SOUTH HOBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - RRD	REVISED
PLOT SCALE =	CHECKED - AJS	REVISED
PLOT DATE = 2/12/2015	DRAWN - BJF	REVISED
	CHECKED - RRD	REVISED

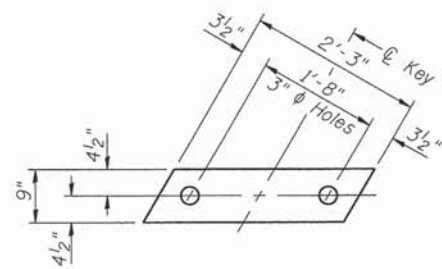
DEKALB COUNTY
 DIVISION OF TRANSPORTATION

27" x 36" PPC DECK BEAM
 STRUCTURE NO. 019-5518

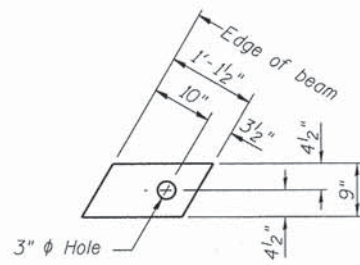
SHEET NO. 6 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	32
			CONTRACT NO. 87586	

ILLINOIS FED. AID PROJECT



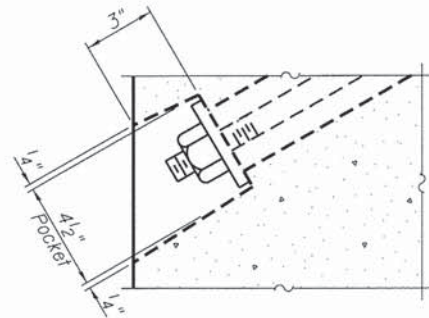
FABRIC BEARING PAD
(Interior)



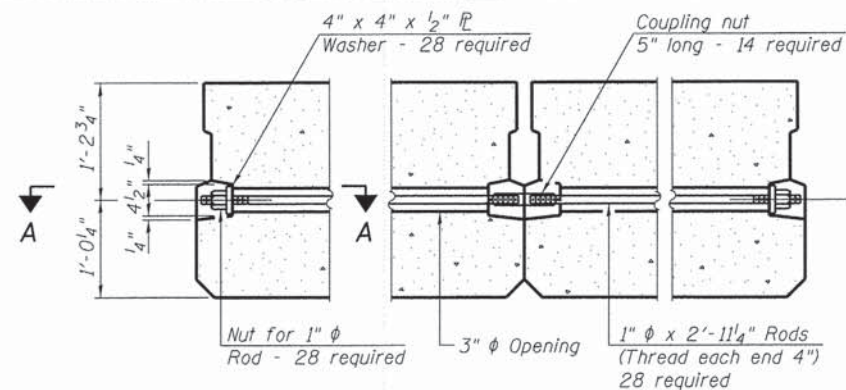
FABRIC BEARING PAD
(Exterior)

FIXED

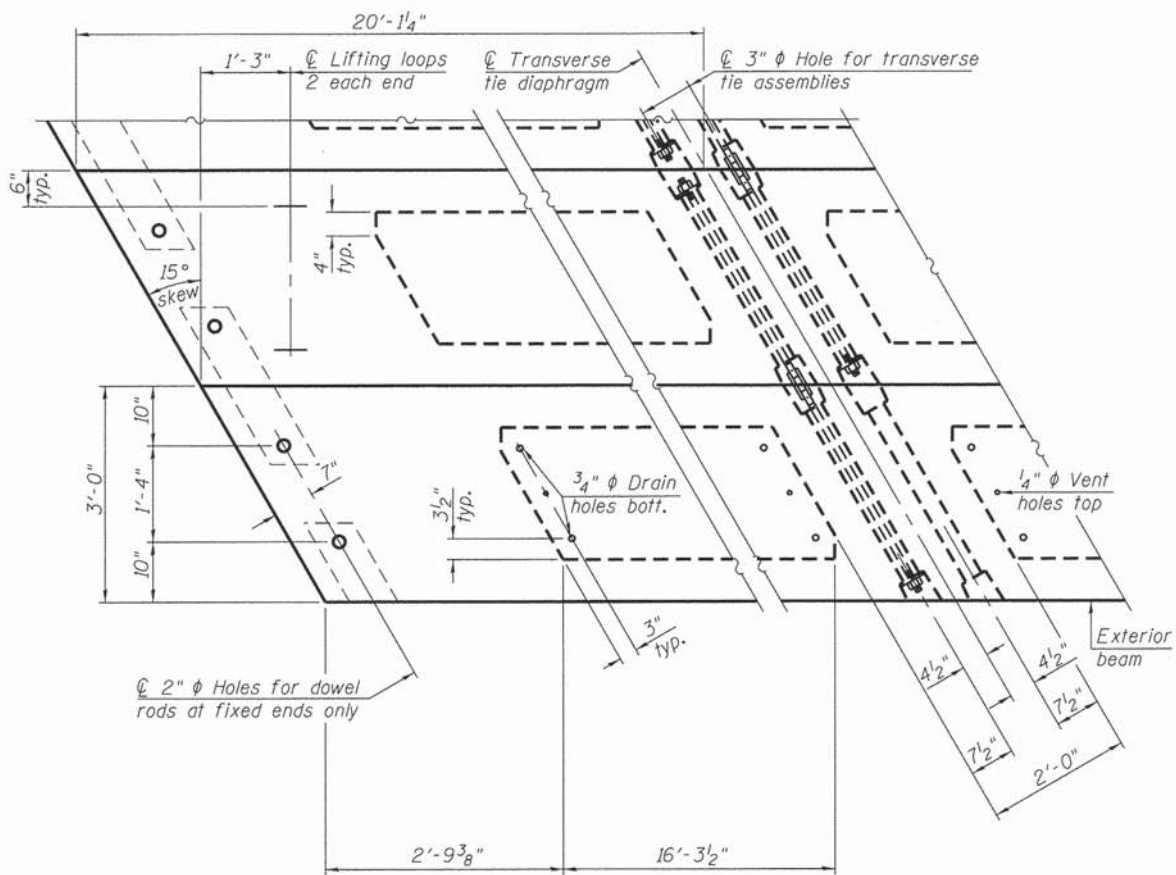
Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY

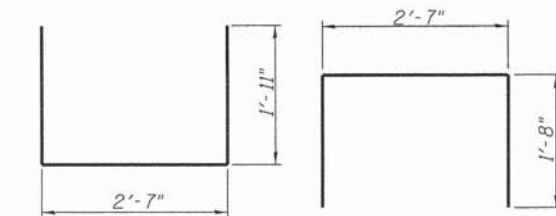


PLAN VIEW

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

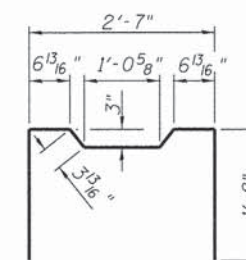
NOTES

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" phi rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Reinforcement bars shall conform to ASTM A 706, Grade 60.
Two 1/8" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2 1/2" phi 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.

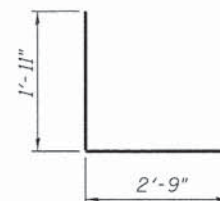


BAR S1(E)

BAR S(E)



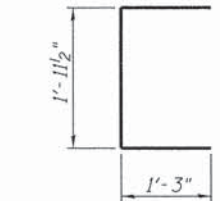
BAR S2(E)



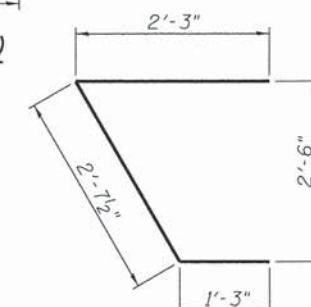
BAR S3(E)



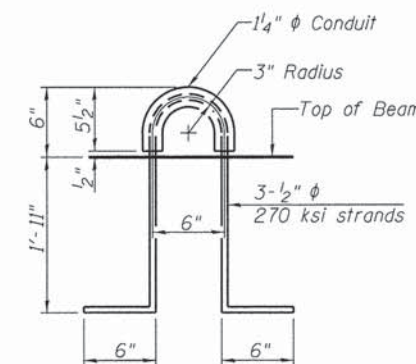
BAR S4(E)



BAR U(E)



BAR U1(E)



LIFTING LOOP DETAIL

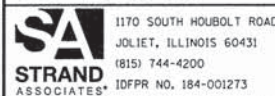
BILL OF MATERIAL

Precast Prestressed Conc. Deck Bms. (27" depth)	Sq. Ft.	1,433
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FILE NAME: s:\j\1\6080-6099\6094\003\miscos\CAD\Drawings\East_Bridge\019551-XXXX-007-DECK.dgn

PD-2736-RD

7-1-10



1170 SOUTH HUBBOLT ROAD JOLIET, ILLINOIS 60431 (815) 744-4200 IDFPR NO. 184-001273	USER NAME = briantf	DESIGNED - RRD	REVISED
	PLOT SCALE =	CHECKED - AJS	REVISED
	PLOT DATE = 2/12/2015	DRAWN - B.J.F.	REVISED
		CHECKED - RRD	REVISED

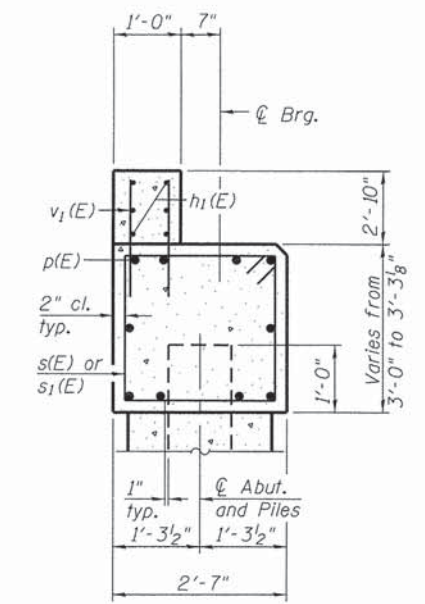
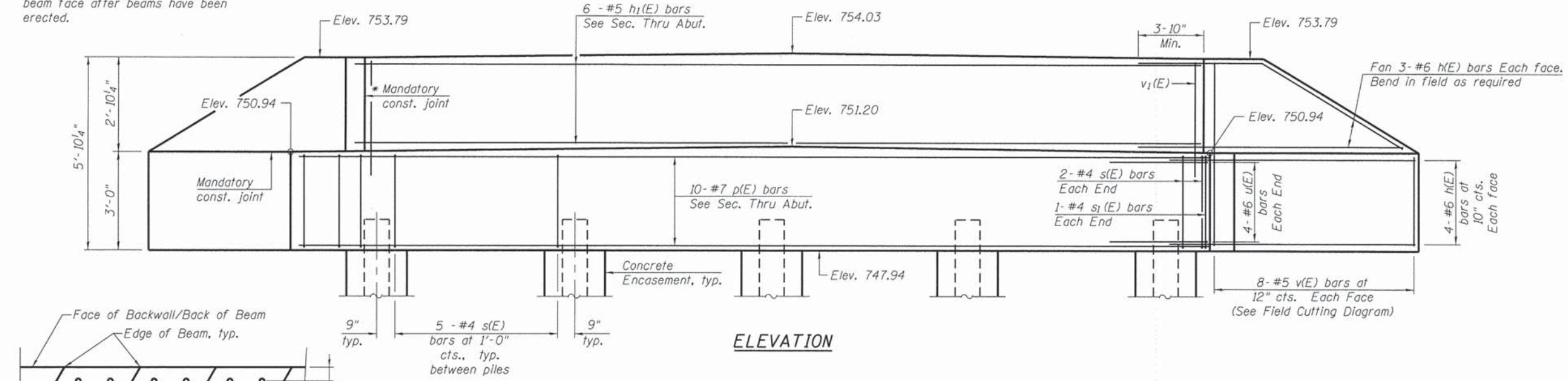
**DEKALB COUNTY
DIVISION OF TRANSPORTATION**

**27" x 36" PPC DECK BEAM DETAILS
STRUCTURE NO. 019-5518**

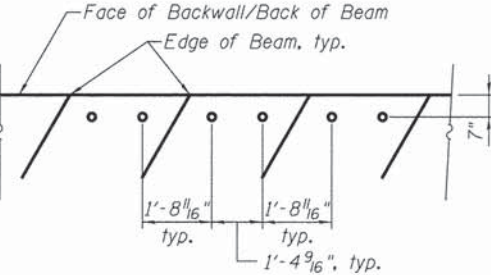
SHEET NO. 7 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	33
CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				

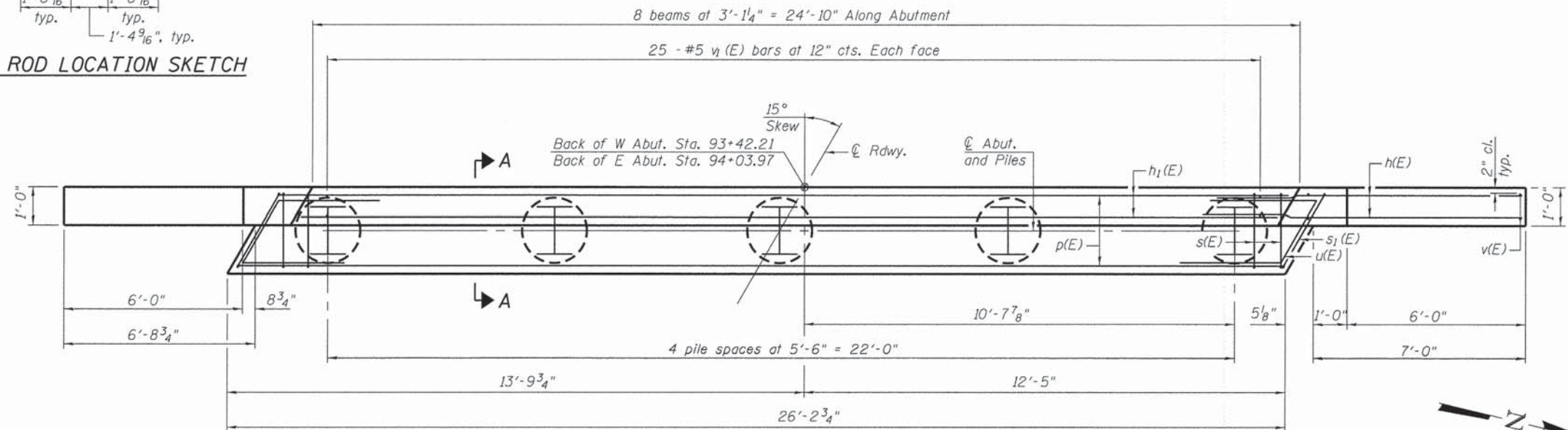
* Cast top of wingwall flush with exterior beam face after beams have been erected.



SECTION A-A
(Dimensions are at Rt. L's)



DOWEL ROD LOCATION SKETCH



PLAN

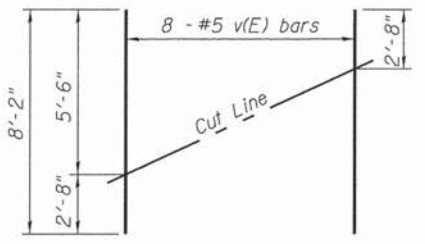
BILL OF MATERIAL

Two Abutments			
Bar	No.	Size	Length
h(E)	56	#6	12'-2"
h1(E)	12	#6	24'-6"
p(E)	20	#7	25'-10"
s(E)	48	#4	10'-3"
s1(E)	4	#4	10'-5"
u(E)	16	#6	9'-11"
v(E)	32	#5	8'-2"
v1(E)	100	#5	4'-11"
Structure Excavation	Cu. Yd.	76	
Concrete Structures	Cu. Yd.	27	
Reinforcement Bars, Epoxy Coated	Pound	3,910	
Furnishing Steel Piles, HP12x53	Foot	492	
Driving Piles	Foot	492	
Test Pile Steel, HP12x53	Each	2	
Concrete Encasement	Cu. Yd.	4	

PILE DATA

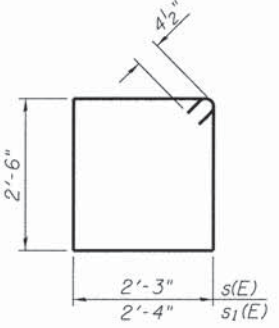
West Abutment
Type: HP 12x53
Nominal Required Bearing: 245 kips
Factored Resistance Available: 140 kips
Est. Length: 53
No. Production Piles: 4
No. Test Piles: 1

East Abutment
Type: HP 12x53
Nominal Required Bearing: 245 kips
Factored Resistance Available: 140 kips
Est. Length: 70
No. Production Piles: 4
No. Test Piles: 1

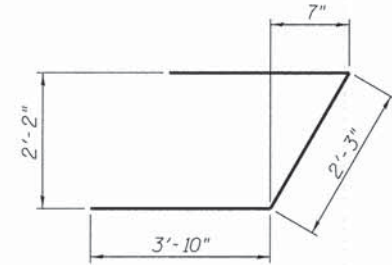


FIELD CUTTING DIAGRAM

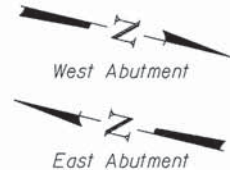
Order v(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s(E) & s1(E)



BAR u(E)



FILE NAME = s:\proj\62028-60991\6094\003\micro\COOD_Sheets\East_Bridge\019551\XXXX-008-ABUT.dgn

AD-2742-R

7-1-10



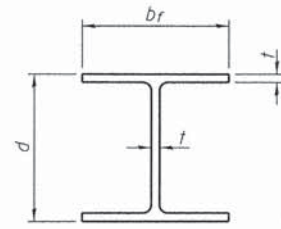
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brianf	DESIGNED - RRD	REVISED
PLOT SCALE =	CHECKED - AJS	REVISED
PLOT DATE = 2/12/2015	DRAWN - BJF	REVISED
	CHECKED - RRD	REVISED

DEKALB COUNTY
DIVISION OF TRANSPORTATION

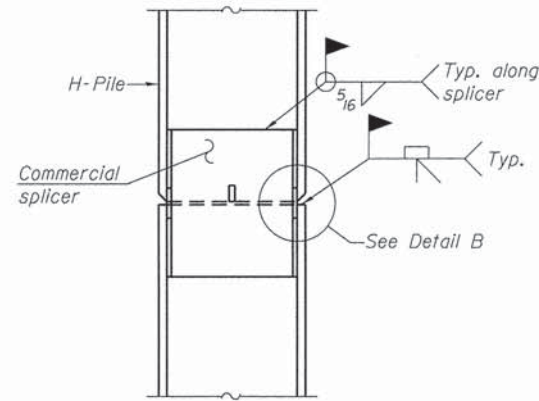
ABUTMENTS
STRUCTURE NO. 019-5518
SHEET NO. 8 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	34
ILLINOIS FED. AID PROJECT			CONTRACT NO. 87586	

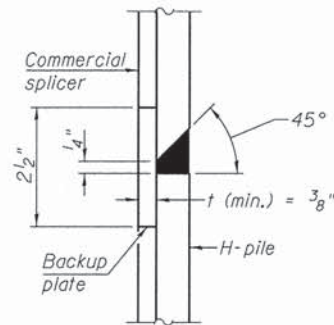


STEEL PILE TABLE

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

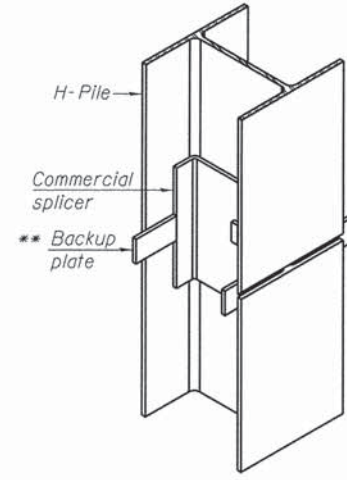


ELEVATION

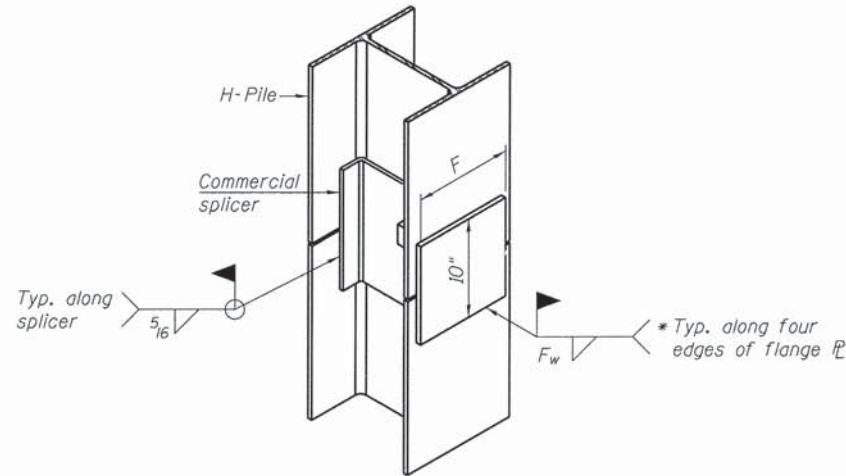


DETAIL "B"

WELDED COMMERCIAL SPLICE

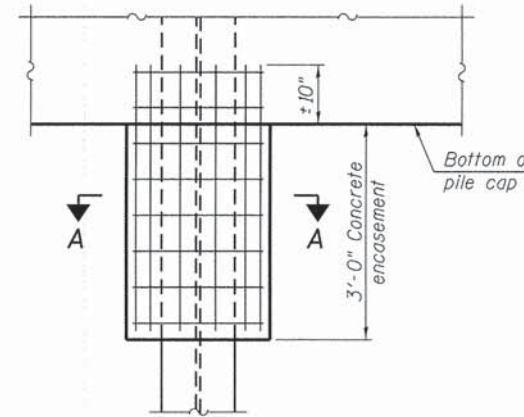


ISOMETRIC VIEW



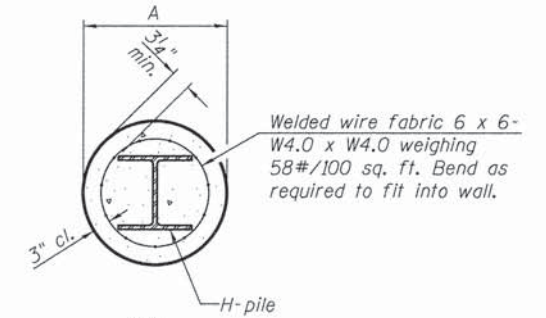
WELDED COMMERCIAL SPLICE ALTERNATE

- * 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.).



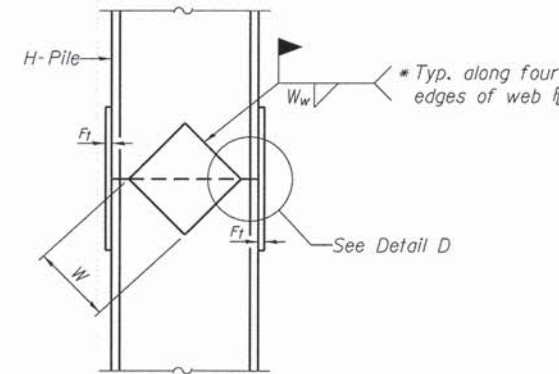
ELEVATION

PILE ENCASEMENT

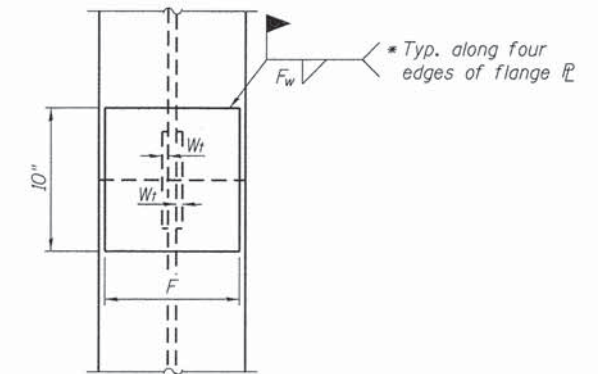


SECTION A-A

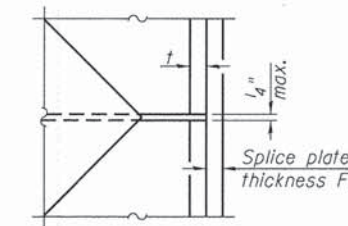
Note:
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



END VIEW



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 / ₁₆ "	7 ³ / ₄ "	5 ⁸ / ₁₆ "	1 ¹ / ₂ "
x102	12 ¹ / ₂ "	7 ⁸ / ₁₆ "	3 ⁴ / ₁₆ "	7 ³ / ₄ "	5 ⁸ / ₁₆ "	1 ¹ / ₂ "
x89	12 ¹ / ₂ "	3 ⁴ / ₁₆ "	11 ¹⁶ / ₁₆ "	7 ³ / ₄ "	5 ⁸ / ₁₆ "	1 ¹ / ₂ "
x73	12 ¹ / ₂ "	5 ⁸ / ₁₆ "	9 ¹⁶ / ₁₆ "	7 ³ / ₄ "	5 ⁸ / ₁₆ "	1 ¹ / ₂ "
HP 12x84	10"	7 ⁸ / ₁₆ "	11 ¹⁶ / ₁₆ "	6 ¹ / ₂ "	5 ⁸ / ₁₆ "	1 ¹ / ₂ "
x74	10"	7 ⁸ / ₁₆ "	11 ¹⁶ / ₁₆ "	6 ¹ / ₂ "	5 ⁸ / ₁₆ "	1 ¹ / ₂ "
x63	10"	5 ⁸ / ₁₆ "	1 ¹ / ₂ "	6 ¹ / ₂ "	1 ¹ / ₂ "	3 ⁸ / ₁₆ "
x53	10"	5 ⁸ / ₁₆ "	1 ¹ / ₂ "	6 ¹ / ₂ "	1 ¹ / ₂ "	3 ⁸ / ₁₆ "
HP 10x57	8"	3 ⁴ / ₁₆ "	9 ¹⁶ / ₁₆ "	5 ¹ / ₄ "	1 ¹ / ₂ "	3 ⁸ / ₁₆ "
x42	8"	5 ⁸ / ₁₆ "	9 ¹⁶ / ₁₆ "	5 ¹ / ₄ "	1 ¹ / ₂ "	3 ⁸ / ₁₆ "
HP 8x36	7"	5 ⁸ / ₁₆ "	7 ¹⁶ / ₁₆ "	4 ¹ / ₄ "	1 ¹ / ₂ "	3 ⁸ / ₁₆ "

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

F-HP

1-27-12

SA STRAND ASSOCIATES
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200
IDFPR NO. 184-001273

USER NAME = brionf
DESIGNED - RRD
CHECKED - RRD
PLLOT SCALE =
DRAWN - BJF
PLLOT DATE = 2/12/2015

DESIGNED - RRD
CHECKED - RRD
REVISIED
REVISIED
REVISIED
REVISIED

DEKALB COUNTY
DIVISION OF TRANSPORTATION

HP PILE DETAILS
STRUCTURE NO. 019-5518

SHEET NO. 9 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	35
CONTRACT NO. 87586			ILLINOIS FED. AID PROJECT	

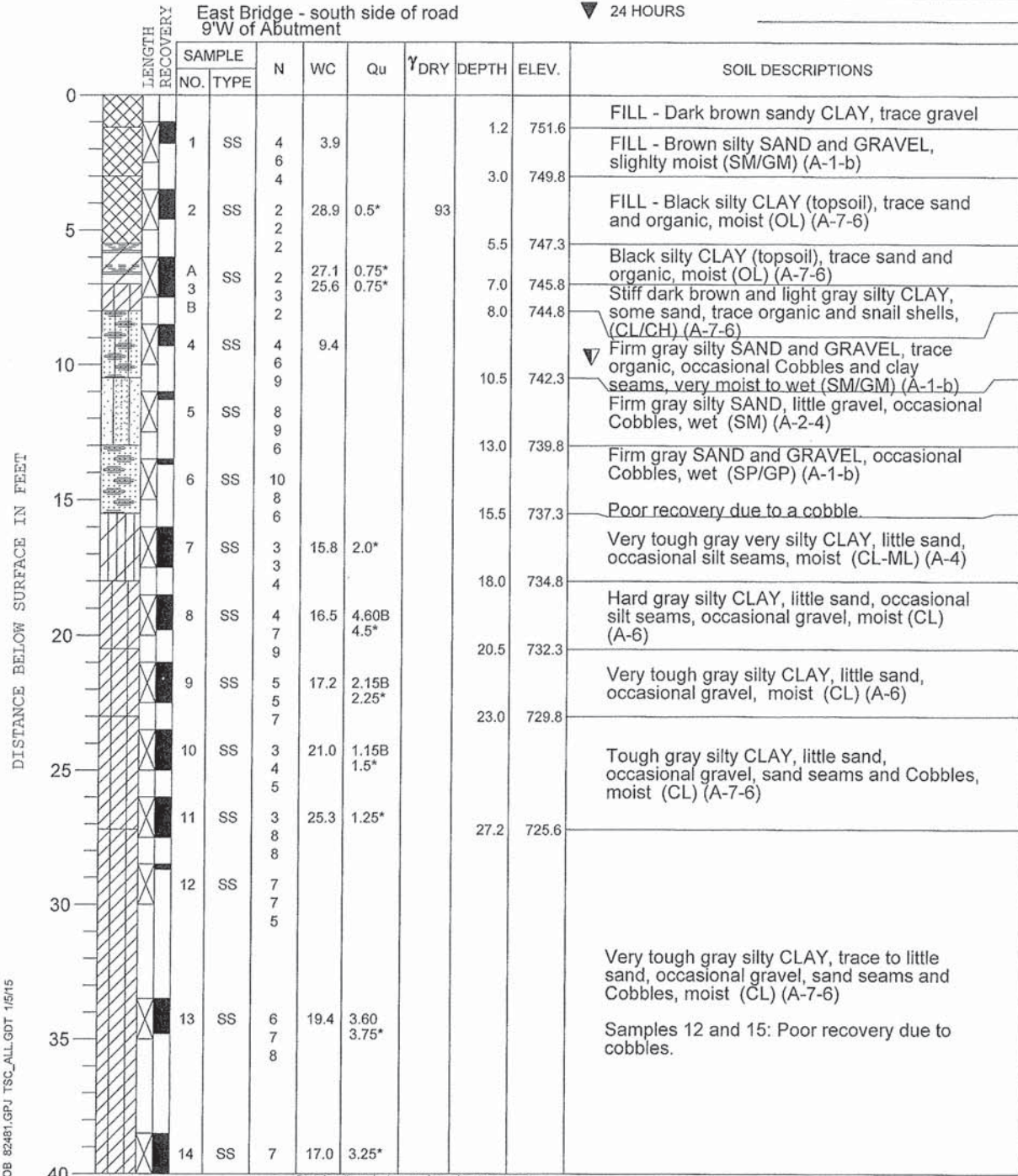
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PROJECT **Proposed Bridge Replacements, South Paw Paw Road, DeKalb, Illinois**
 CLIENT **Strand Associates, Inc., Joliet, Illinois**
 BORING **3** DATE STARTED **12-1-14** DATE COMPLETED **12-1-14** JOB **L-82,481**



ELEVATIONS
 GROUND SURFACE **752.8**
 END OF BORING **677.8**

WATER LEVEL OBSERVATIONS
 WHILE DRILLING **10.0'**
 AT END OF BORING **N/A - wash boring**
 24 HOURS



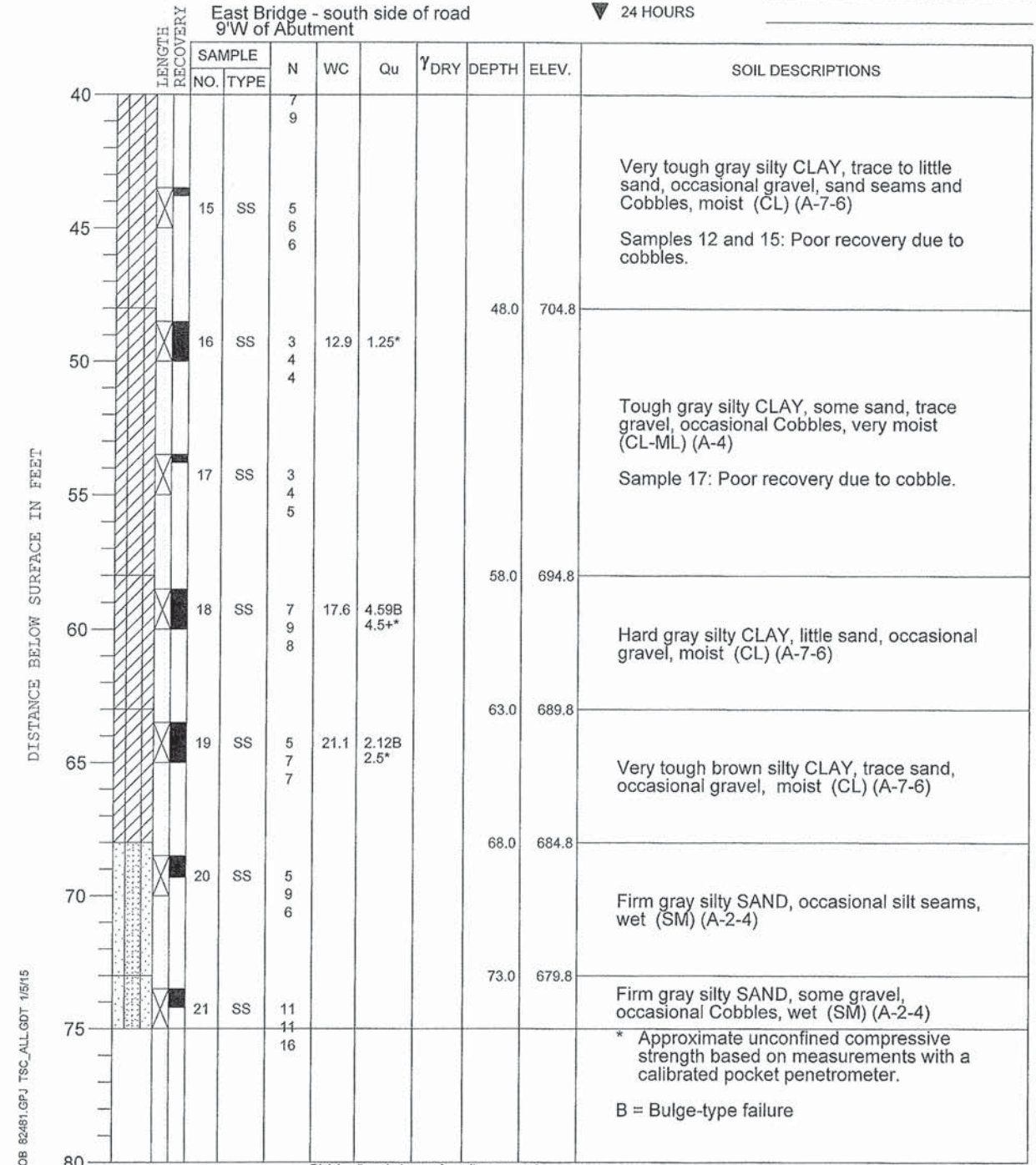
DRILL RIG NO. **334** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. End of Boring at 75.0'

PROJECT **Proposed Bridge Replacements, South Paw Paw Road, DeKalb, Illinois**
 CLIENT **Strand Associates, Inc., Joliet, Illinois**
 BORING **3** DATE STARTED **12-1-14** DATE COMPLETED **12-1-14** JOB **L-82,481**



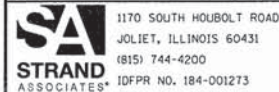
ELEVATIONS
 GROUND SURFACE **752.8**
 END OF BORING **677.8**

WATER LEVEL OBSERVATIONS
 WHILE DRILLING **10.0'**
 AT END OF BORING **N/A - wash boring**
 24 HOURS



DRILL RIG NO. **334** Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual. End of Boring at 75.0'

FILE NAME = s:\j\16000-6099\6094\023\micross\CADD_Sheets\East_Bridge\019091-XXXX-018-SB.Ldgn



1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDPRR NO. 184-001273

USER NAME = brianf	DESIGNED - RRD	REVISED
PLOT SCALE =	CHECKED - AJS	REVISED
PLOT DATE = 2/12/2015	DRAWN - BJJ	REVISED
	CHECKED - RRD	REVISED

DEKALB COUNTY
 DIVISION OF TRANSPORTATION

SOIL BORING LOG (1 OF 2)
 STRUCTURE NO. 019-5518

SHEET NO. 10 OF 12 SHEETS

T.R. RTE. 245	SECTION 13-11109-01-BR	COUNTY DEKALB	TOTAL SHEETS 46	SHEET NO. 36
CONTRACT NO. 87586			ILLINOIS FED. AID PROJECT	

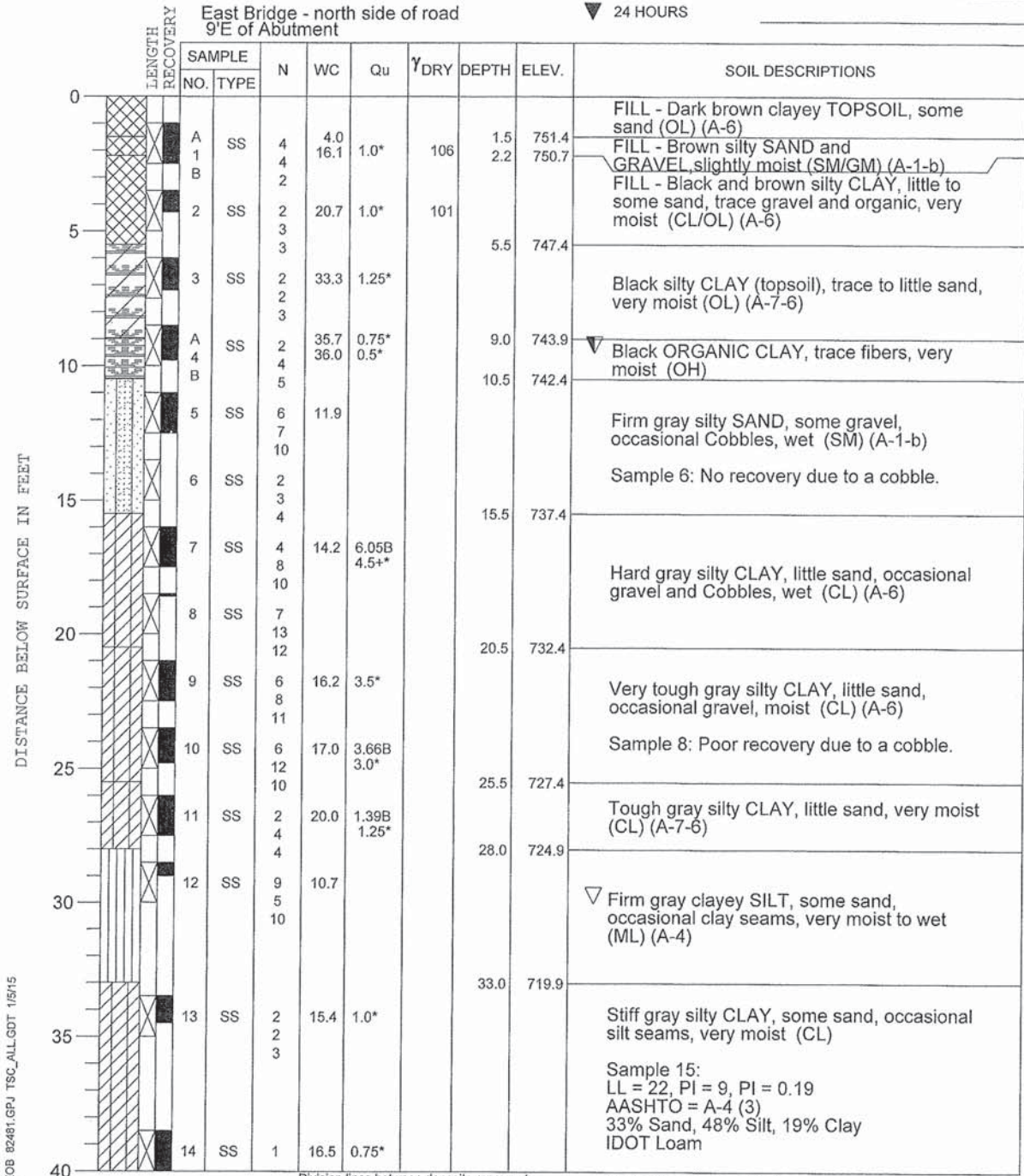
PROJECT Proposed Bridge Replacements, South Paw Paw Road, DeKalb, Illinois

CLIENT Strand Associates, Inc., Joliet, Illinois



BORING 4 DATE STARTED 11-26-14 DATE COMPLETED 11-26-14 JOB L-82,481

ELEVATIONS WATER LEVEL OBSERVATIONS
 GROUND SURFACE 752.9 WHILE DRILLING 9.5'
 END OF BORING 677.9 AT END OF BORING 30.0'
 24 HOURS



DRILL RIG NO. 334

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 75.0'

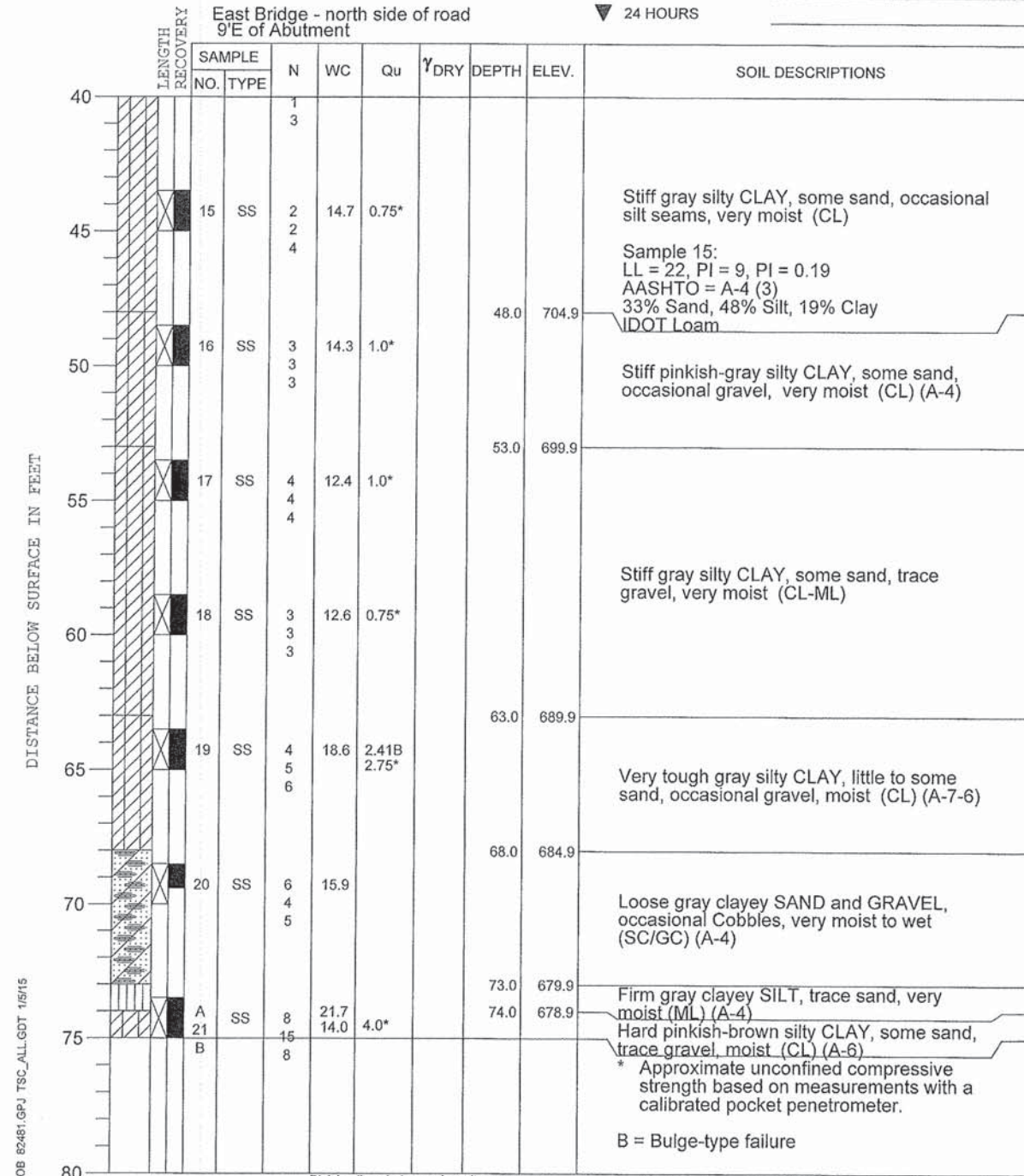
PROJECT Proposed Bridge Replacements, South Paw Paw Road, DeKalb, Illinois

CLIENT Strand Associates, Inc., Joliet, Illinois



BORING 4 DATE STARTED 11-26-14 DATE COMPLETED 11-26-14 JOB L-82,481

ELEVATIONS WATER LEVEL OBSERVATIONS
 GROUND SURFACE 752.9 WHILE DRILLING 9.5'
 END OF BORING 677.9 AT END OF BORING 30.0'
 24 HOURS

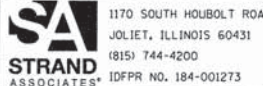


DRILL RIG NO. 334

Division lines between deposits represent approximate boundaries between soil types; in-situ, the transition may be gradual.

End of Boring at 75.0'

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1170 SOUTH HOBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDPRR NO. 184-001273

USER NAME = brianf
 DESIGNED - RRD
 CHECKED - AJS
 DRAWN - BJF
 CHECKED - RRD

REVISED
 REVISED
 REVISED
 REVISED

DEKALB COUNTY
 DIVISION OF TRANSPORTATION

SOIL BORING LOG (2 OF 2)
 STRUCTURE NO. 019-5518

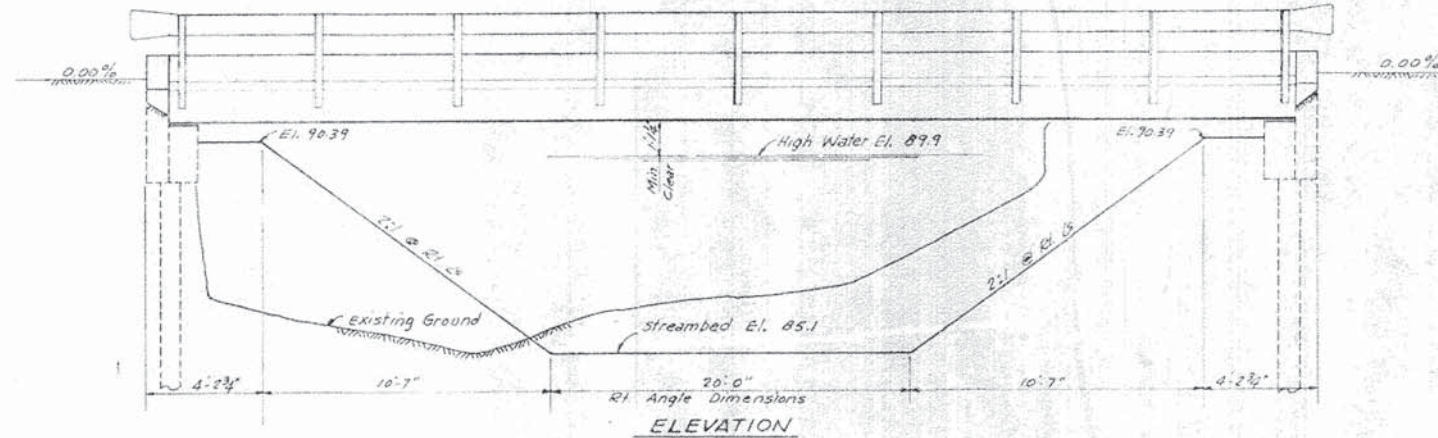
SHEET NO. 11 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	37
CONTRACT NO. 87586			ILLINOIS FED. AID PROJECT	

BM: Spike in Tree 80' RI Sta. 93150
 El. 92.39 (Assumed)
 EXISTING STRUCTURE: 1 Span Concrete Arch
 bridge, 16' Roadway
 To be removed by Contractor
 SALVAGE: None

GENERAL NOTES

Class X Concrete shall be used throughout except in precast Prestressed units.
 All reinforcement bars shall be lapped 20 bar diameters unless otherwise noted.
 The Contractor shall drive creosoted test piles in permanent locations at each abutment as directed by the Engineer before ordering the remainder of piles.
 Class A Excavation for Structures shall be included in the contract unit price per Cu.Yd of Class X Concrete. Est. 40 Cu.Yds. The excavated material shall be used to shape the channel slopes as shown on ELEVATION.
 Expansion Guards are included in quantity of Structural Steel (3"x2"x1/2" angles only).
 Expansion guards that are not cast into beams shall be fabricated in accordance with Art. 51.13(d) of the Standard Specifications.
 The exposed surfaces of the expansion guards shall receive two shop coats of red lead paint.
 All paint shall be furnished and applied by the contractor.

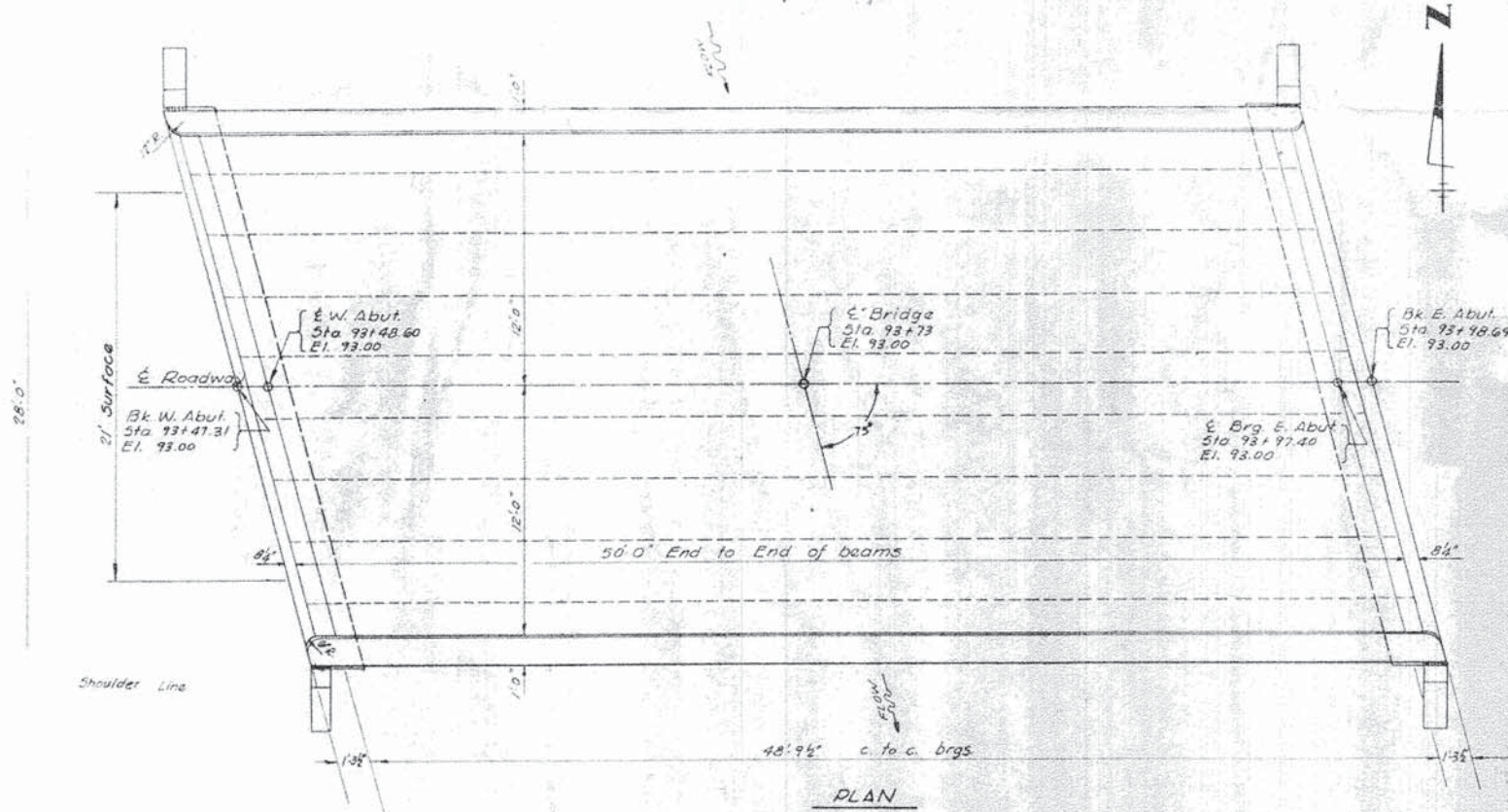


STATION 93+73
 DIMOND BRIDGE
 SEC. 109 B-TR BUILT 1965
 PAW PAW ROAD DISTRICT
 DEKALB COUNTY
 LOADING HS15-44

LETTERING FOR NAME PLATE
 REFER TO STD. 2113-1

TOTAL BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUB	SUPER	TOTAL
Class X Concrete	Cu.Yds	17.5	3.4	20.9
Reinforcement Bars	Lbs	1770	140	1910
Precast Prestressed Conc. Bridge Deck-2"	Sq Ft		1300	1300
Furnishing Creosoted Piles, 20" to 28"	Lin Ft	290		290
Driving Timber Piles	Lin Ft	290		290
Test Piles (Creosoted)	Each	2		2
Removal of Existing Structures	Each			1
Furnishing & Erecting Structural Steel	Lbs.		200	200
Metal Plate Bridge Rail	Lin. Ft		90	90
Name Plates	Each			1
Bit Concrete Surface Crse, Sub-cl. II	Tons		13	13
Bituminous Materials (Prime Coat)	Gals.		13	13



WATERWAY INFORMATION

Drainage Area 2170 A.
 Character Level, Cultivated
 Present Opening 137 S.F.
 Required Opening (1.5 X Flood) 140 S.F.
 Proposed Opening 142 S.F.

DESIGN STRESSES

FIELD UNITS	PRECAST PRESTRESSED UNITS
f _c = 1400 P.S.I.	f _c = 5000 P.S.I.
f _s = 20000 P.S.I.	f _{c1} = 4000 P.S.I.
η = 10	f _s = 248000 P.S.I.
	f _{sl} = 173600 P.S.I.

BRIDGE NO. 2 STATION 93+73
SECTION 109 B-TR PAW PAW ROAD DIST.
DEKALB COUNTY

GENERAL PLAN AND ELEVATION

LAYOUT BY: D.E.H. DATE: MAY 1965	PLANS PREPARED BY S.W. KNETSCH AND ASSOCIATES CONSULTING ENGINEERS DEKALB, ILLINOIS	REVISIONS
DESIGN BY: D.E.H. DATE: MAY 1965		
CHECKED BY: H.F.W. DATE: MAY 1965		
APPROVED: DATE:		

LOADING HS15-44

FILE NO. 1047-44

SHEET NO. 8 OF 12 SHEETS

FILE NAME = s:\proj\16820-6899\6899\003\micross\CADD\Sheets\East Bridge\19551-XXXX-012-EPPE.dgn

SA STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200
 IDPRR NO. 184-001273

USER NAME = brionf
 DESIGNED - RRD
 CHECKED - RRD
 PLOT SCALE =
 PLOT DATE = 2/12/2015

REVISIONS
 REVISIONS
 REVISIONS
 REVISIONS

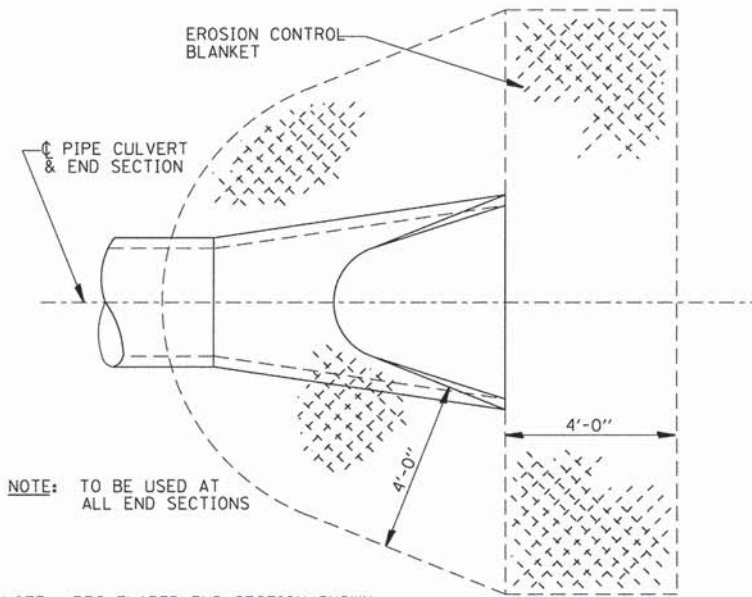
DEKALB COUNTY
DIVISION OF TRANSPORTATION

EXISTING GENERAL PLAN AND ELEVATION
STRUCTURE NO. 019-5518

SHEET NO. 12 OF 12 SHEETS

T.R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	38
CONTRACT NO. 87586			ILLINOIS FED. AID PROJECT	

FOR INFORMATION ONLY

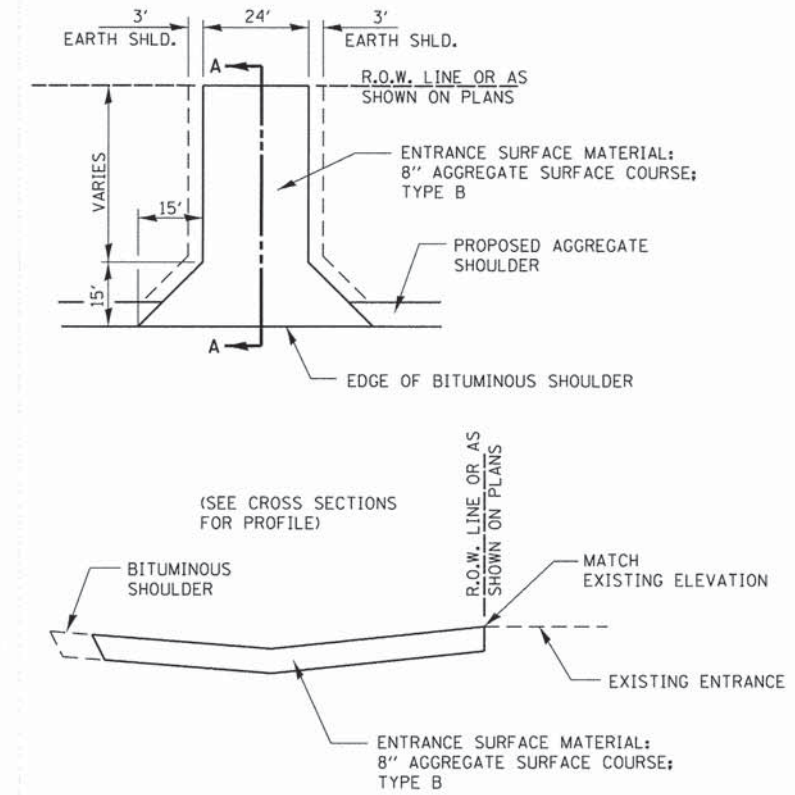


NOTE: TO BE USED AT ALL END SECTIONS

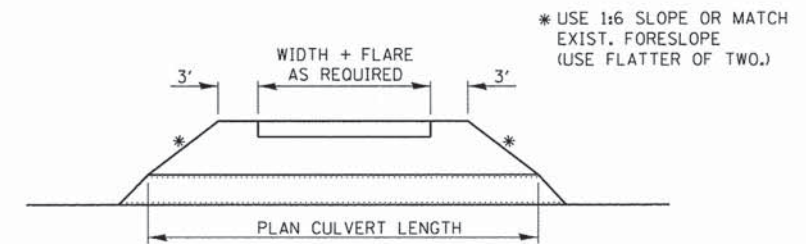
NOTE: PRC FLARED END SECTION SHOWN. TREATMENT SAME FOR OTHER END SECTIONS.

DETAIL OF EROSION CONTROL BLANKET LINING AROUND END SECTION

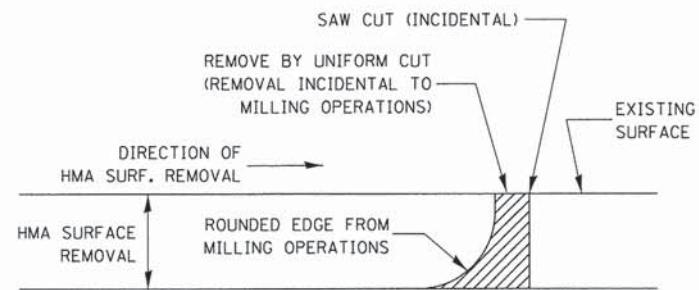
251-2



SECTION A-A



FIELD ENTRANCE DETAIL



NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL

HMA DETAIL AT BUTT JOINTS

406-8

402-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 3 DETAILS

SCALE: SHEET OF SHEETS STA. TO STA.

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	39
CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				

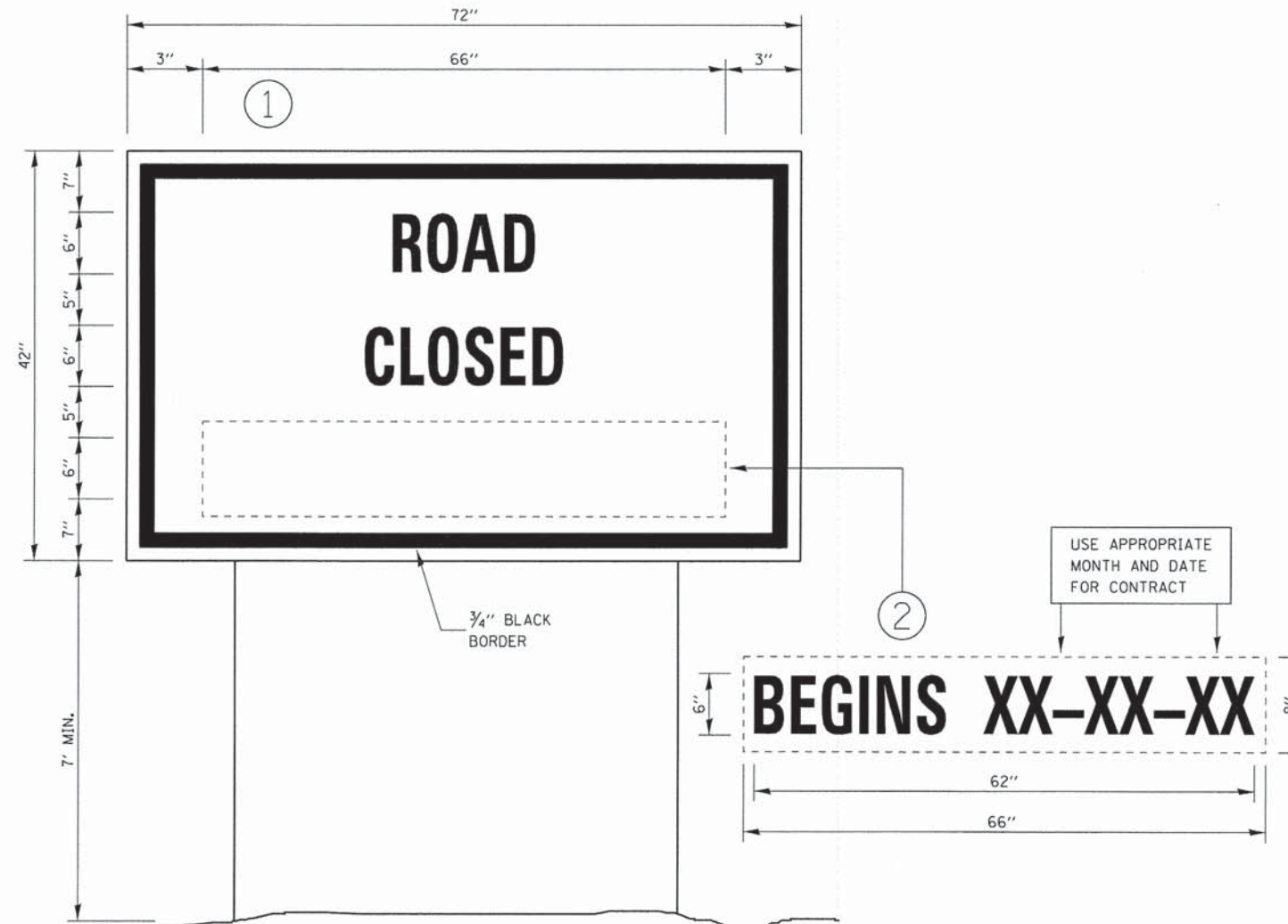
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SA
STRAND ASSOCIATES*
1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
(815) 744-4200

USER NAME = brianf
MODEL NAME = Default
PLOT SCALE = 50,0000 ' / in.
PLOT DATE = 2/12/2015

DESIGNED - AMS
DRAWN - DJW
CHECKED - MAG
DATE - 12-03-2014

REVISED -
REVISED -
REVISED -
REVISED -



TEMPORARY INFORMATION SIGNING

NOTES:

1. USE 6" D BLACK LETTERING ON FLOURESENT ORANGE BACKGROUND.
2. ERECT SIGNS AT LOCATIONS IN ADVANCE OF THE "ROAD CONSTRUCTION AHEAD" SIGNS AS DIRECTED BY THE ENGINEER.
3. ERECT SIGN ① WITH INSTALLED PANEL ② A MINIMUM OF ONE WEEK PRIOR TO THE START OF THE ROAD CLOSURE.
4. REMOVE PANEL ② ON THAT DATE.
5. SEE SPECIAL PROVISION "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
6. WILL BE PAID FOR PER SQ FT AS "TEMPORARY INFORMATION SIGNING". EACH SIGN = 21 SQ FT AND THE DATE PANEL ② WILL NOT BE MEASURED SEPARATELY FOR PAYMENT.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT 3 DETAILS

720-10

FILE NAME = S:\JULI6000-6099\6094\003\Micro\CA00.Sheets\0812215-ah-t-details-01.r3.dgn

SA
STRAND
ASSOCIATES*

1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
MODEL NAME = Default
PLOT SCALE = 50.0000' / in.
PLOT DATE = 2/12/2015

DESIGNED - AMS
DRAWN - DJW
CHECKED - MAG
DATE - 12-03-2014

REVISED -
REVISED -
REVISED -
REVISED -

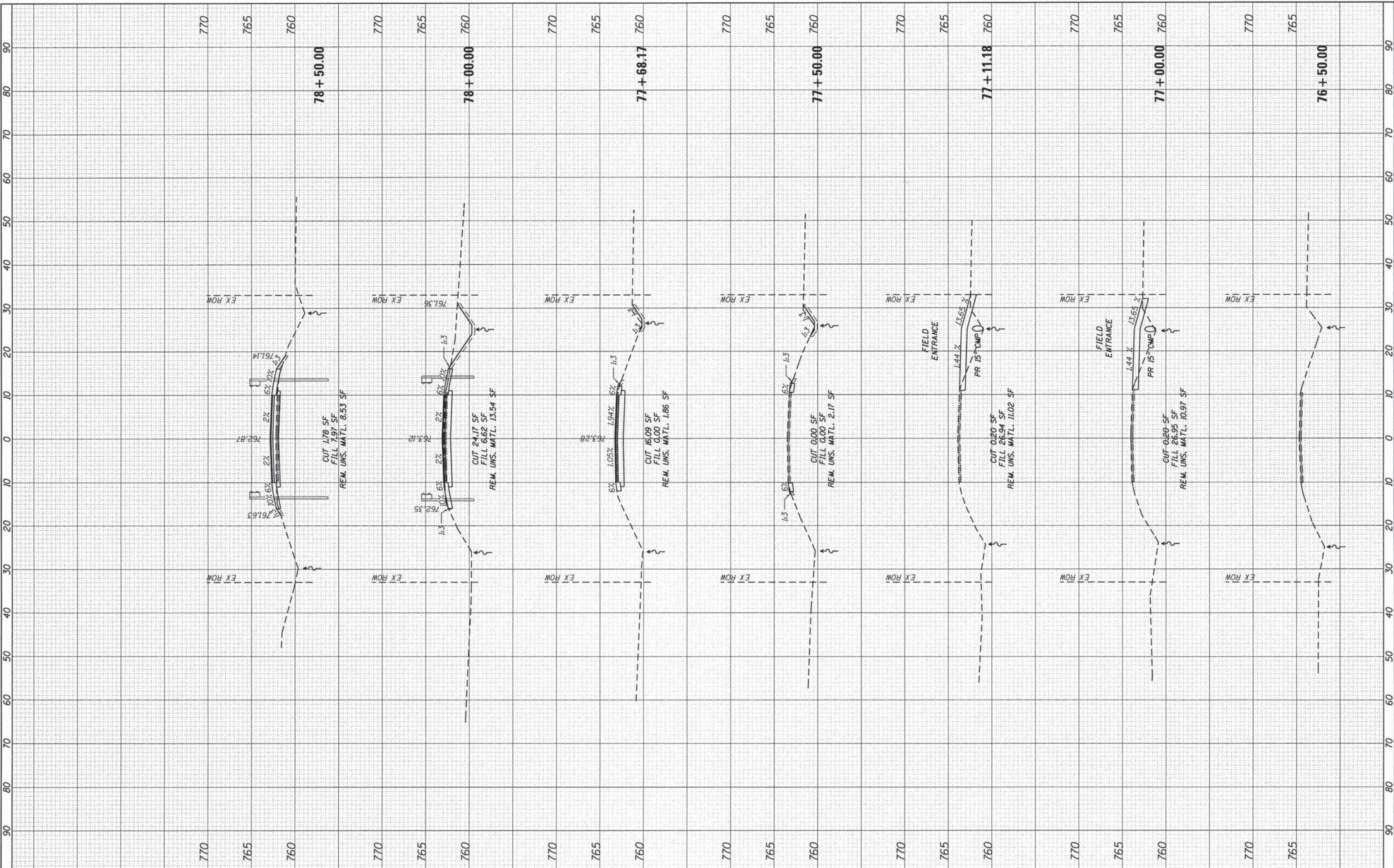
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TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	40
ILLINOIS FED. AID PROJECT			CONTRACT NO. 87586	

FINAL SURVEY	BY	DATE
EXEMPTED		
PLOTTED		
TEMPLATE		
AREAS		
CHECKED		

ORIGINAL SURVEY	BY	DATE
EXEMPTED		
PLOTTED		
TEMPLATE		
AREAS		
CHECKED		

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1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
STRAND ASSOCIATES
(815) 744-4200

USER NAME = briant	DESIGNED - AMS	REVISED -
MODEL NAME = Default	DRAWN - DJW	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED - MAG	REVISED -
PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOUTH PAW PAW ROAD CROSS SECTIONS

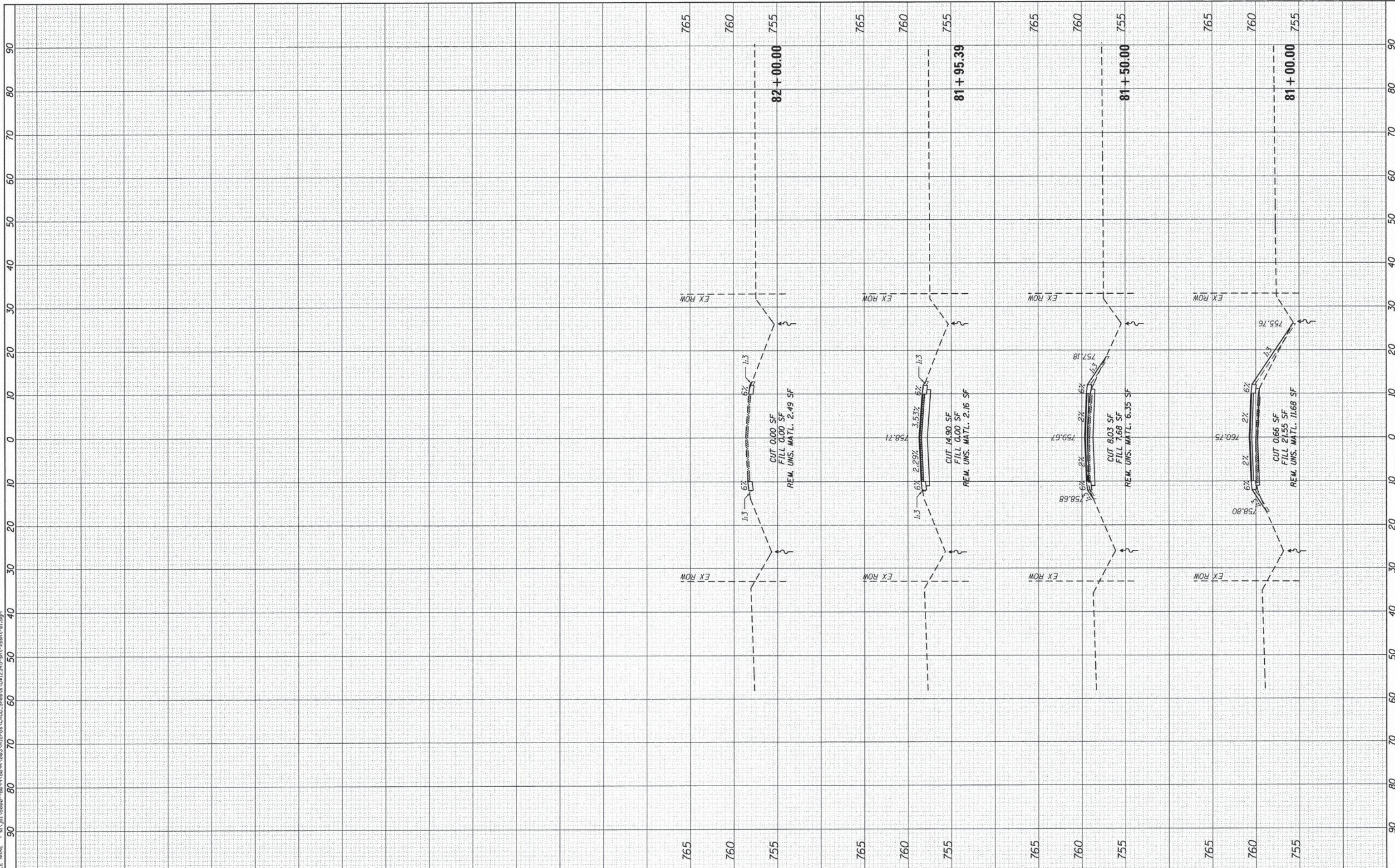
SCALE: SHEET 1 OF 6 SHEETS STA. 76+50.00 TO STA. 78+50.00

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	41
CONTRACT NO. 87586				
ILLINOIS FED. AID PROJECT				

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

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

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SA 1170 SOUTH HOUBOLT ROAD
JOLIET, ILLINOIS 60431
STRAND ASSOCIATES* (815) 744-4200

USER NAME = brianf	DESIGNED - AMS	REVISED -
MODEL NAME = Default	DRAWN - DJW	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED - MAG	REVISED -
PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOUTH PAW PAW ROAD CROSS SECTIONS

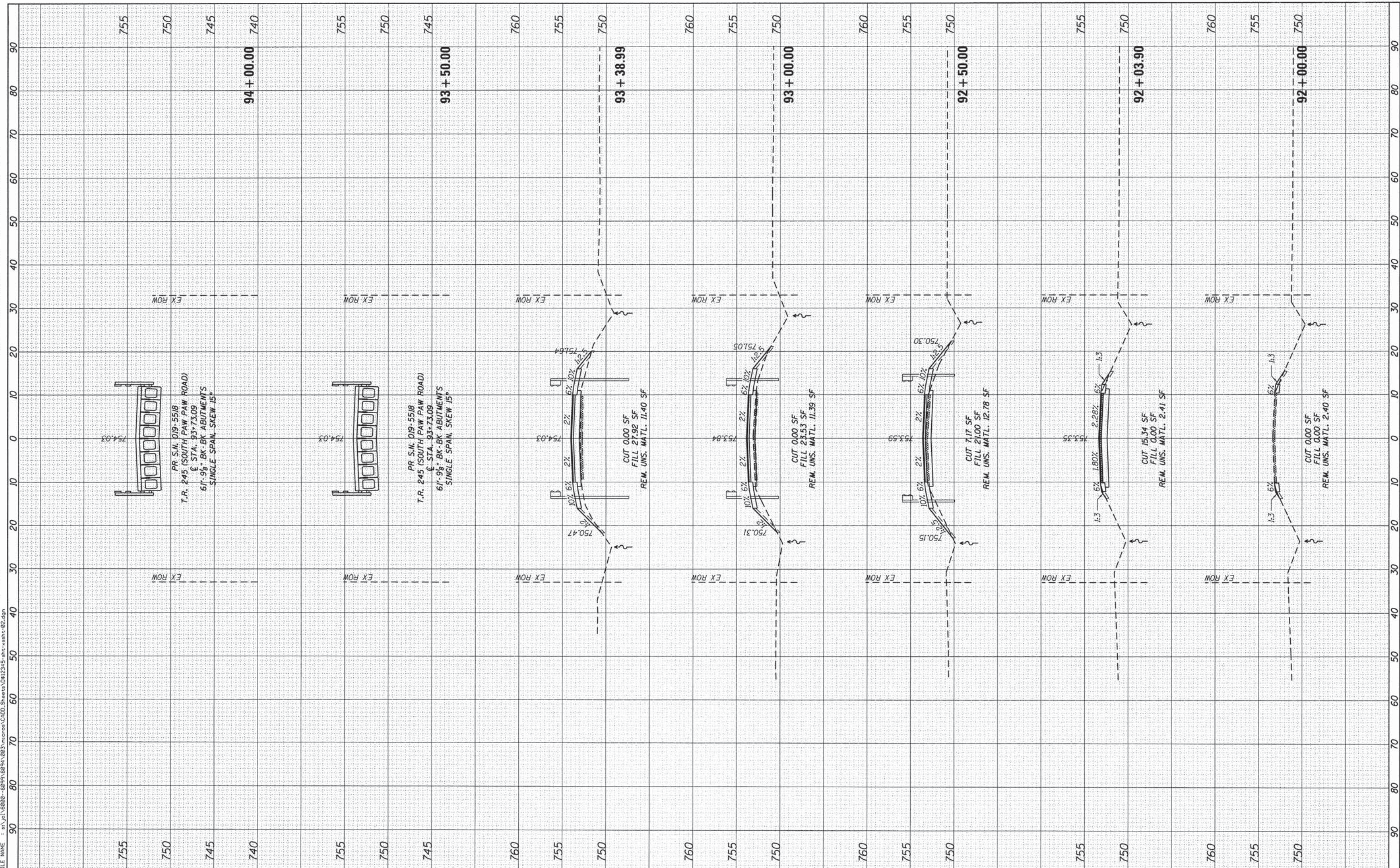
SCALE: SHEET 3 OF 6 SHEETS STA. 81+00.00 TO STA. 82+00.00

TR. RTE. 245	SECTION 13-11109-01-BR	COUNTY DEKALB	TOTAL SHEETS 46	SHEET NO. 43
CONTRACT NO. 87586				ILLINOIS FED. AID PROJECT

FINL SURVEY NO.	BY	DATE
SURVEYED PLOTTED		
NOTE BOOK		
AREAS CHECKED		

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

FILE NAME = s:\joi\6802-6893\6894\003\micro\1400_Sheets\012345-shr-vstht-02.dgn



STRAND ASSOCIATES
 1170 SOUTH HOUBOLT ROAD
 JOLIET, ILLINOIS 60431
 (815) 744-4200

USER NAME = brianf	DESIGNED - AMS	REVISED -
MODEL NAME = Default	DRAWN - DJW	REVISED -
PLOT SCALE = 10.0000' / in.	CHECKED - MAG	REVISED -
PLOT DATE = 2/12/2015	DATE - 12-03-2014	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SOUTH PAW PAW ROAD CROSS SECTIONS

SCALE: SHEET 4 OF 6 SHEETS STA. 92+00.00 TO STA. 94+00.00

TR. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
245	13-11109-01-BR	DEKALB	46	44
CONTRACT NO. 87586			ILLINOIS FED. AID PROJECT	

