

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	1
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

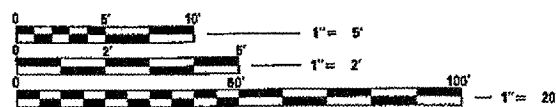
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STANDARDS

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- 001001-01 AREAS OF REINFORCEMENT BARS
- 001006 DECIMAL OF AN INCH AND OF A FOOT
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- 702001-08 TRAFFIC CONTROL DEVICES
- 780001-01 TYPICAL PAVEMENT MARKINGS
- 781001-02 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

SCALE



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
SCOUT TOWNSHIP

TRAFFIC DATA

ADT = 2,300 (1999)

DESIGN DESIGNATION - N.A.

CONTRACT NO. 90919

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PLANS FOR PROPOSED
FEDERAL AID HIGHWAY**

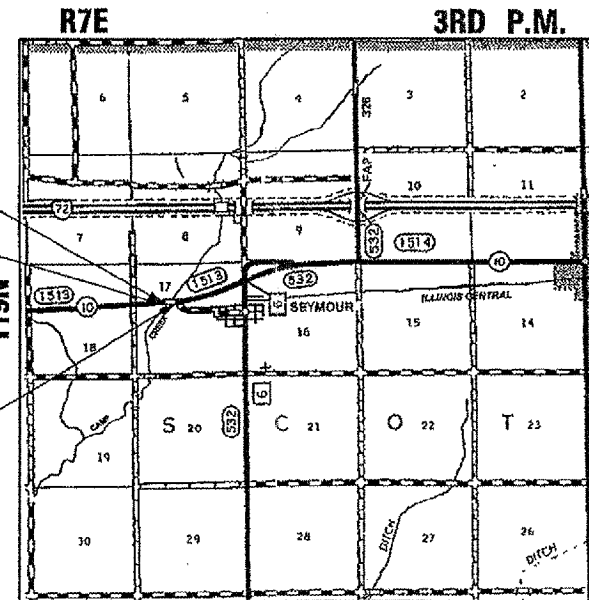
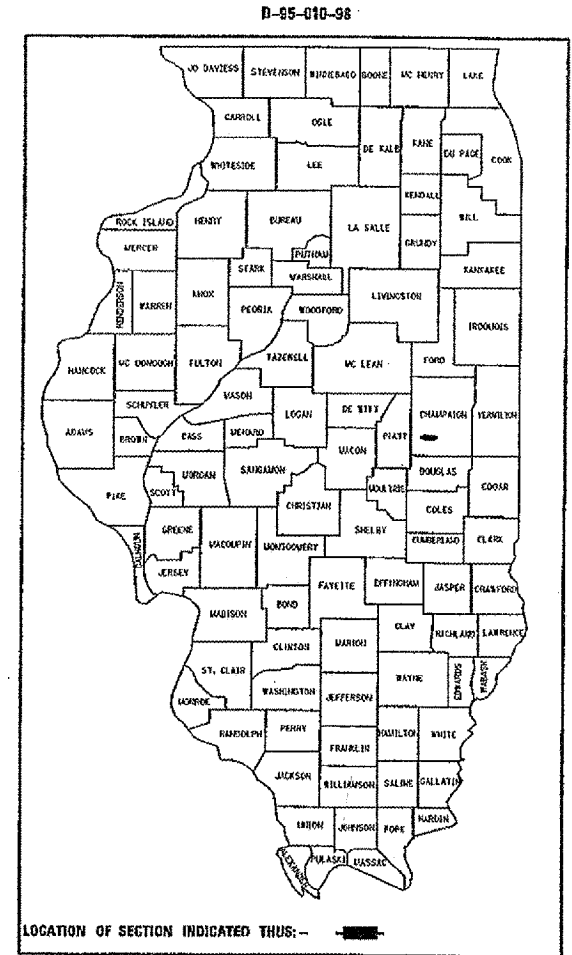
F.A.S. ROUTE 1513 (IL 10)

SECTION 5 BR-1

PROJECT NO. ACBRS-1513(101)

**BRIDGE REPLACEMENT
CHAMPAIGN COUNTY**

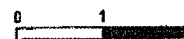
C-95-010-98



BEGIN SECTION 5BR-1
STA. 13+30
STRUCTURE NO. 010-0275
STA. 16+69
TWO SPAN CONTINUOUS
RC DECK ON STEEL BEAM
135' BK TO BK ABUT.
IL RTE 10 OVER CAMP CREEK
BRIDGE REPLACEMENT
END SECTION 5BR-1
STA. 18+70

LOCATION MAP

SCALE: 1"=1 MILE



GROSS LENGTH OF SECTION 5BR-1 AND PROJECT = 540' (0.102 mile)
NET LENGTH OF SECTION 5BR-1 AND PROJECT = 540' (0.102 mile)



THE UPCHURCH GROUP, INC.
EXPIRES 11-30-2007

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
SUBMITTED 7/24 20 07
Joseph E. Crowe, DEPUTY DIRECTOR, REGIONAL ENGINEER
October 12, 20 07
Eric E. Harms, INTERIM ENGINEER OF DESIGN AND ENVIRONMENT
October 12, 20 07
Milton R. See, P.E., DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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

PROJECT ENGINEER: KENSIL GARNETT

CONSULTANT LIAISON CONTACT: NANCY FASIG (217)465-4181

CONSULTANT: THE UPCHURCH GROUP, INC.

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	2
STA.			TO STA.	
FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT				

GENERAL NOTES

G.N. 100
ENGLISH UNITS OF MEASUREMENT SHALL GOVERN OVER AND SUPERCEDE ANY METRIC UNITS SHOWN ON THIS CONTRACT. WHERE INCLUDED, METRIC UNITS ARE FOR INFORMATION ONLY.

G.N. 105.09A
ALL ELEVATIONS SHOWN IN THE PLANS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD 88)

G.N. 107.31
UTILITY LINES WERE PLOTTED FROM INFORMATION FURNISHED BY THE VARIOUS UTILITY COMPANIES INVOLVED (QUALITY LEVEL C &/OR QUALITY LEVEL D) AND THE ACCURACY SHOULD BE CONSIDERED APPROXIMATE ONLY. UTILITY COMPANIES MAY BE ADJUSTING THEIR FACILITIES DURING CONSTRUCTION. THE CONTRACTOR SHALL COOPERATE WITH THESE ORGANIZATIONS WHILE THESE ADJUSTMENTS ARE BEING PERFORMED. J.U.L.I.E. - JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS SYSTEM (800)892-0123.

G.N. 281
THE RIPRAP GRADATION SHALL BE IN ACCORDANCE WITH THE GRADATION SPECIFIED IN THE PLANS OR, WITH APPROVAL OF THE ENGINEER, A RIPRAP GRADATION MEETING A D50 GREATER THAN OR EQUAL TO 0.75 FEET. D50 IS DEFINED AS THE MEAN ROCK SIZE AS DESCRIBED IN THE FHWA HYDRAULIC ENGINEERING CIRCULARS (HEC 11, HEC 14, AND HEC 15).

IF GRAVEL IS USED FOR THE BEDDING MATERIAL UNDER RIPRAP, THE GRAVEL SHALL BE CRUSHED AS ALLOWED UNDER ARTICLE 1005.01.

G.N. 406
THE QUANTITIES INCLUDED IN THE PLANS FOR HOT-MIX ASPHALT RESURFACING ARE INTENDED TO GIVE THE COVERAGE SHOWN ON THE TYPICAL CROSS SECTIONS. IT IS NOT INTENDED TO INCREASE THE THICKNESS OF THE HOT-MIX ASPHALT MIXTURE IN ORDER TO USE ALL OF THE QUANTITIES INCLUDED IN THE CONTRACT.

G.N. 406H
THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE USE(S):	HMA SURFACE COURSE & TOP 1 1/2" LIFT HMA SHOULDER	HMA BINDER COURSE & FLEX. CONN.	BOTTOM 6 1/2" HMA SHOULDER
AC/PG:	PG 64-22	PG 64-22	PG 58-22
RAP %: (MAX)	15%	25%	30%
DESIGN AIR VOIDS:	4.0% @ 50 GYRATIONS	4.0% @ 50 GYRATIONS	2.0% @ 30 GYRATIONS
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL-9.5	IL-19.0	BAM
FRICTION AGGREGATE:	MIX C	N/A	N/A

G.N. 406.05b
ALL LEVELING BINDER OR BINDER SHALL BE GIVEN A FOG COAT OF PRIME BEFORE THE SURFACE COURSE IS PLACED WHEN DIRECTED BY THE ENGINEER.

THE FOG COAT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER GALLON FOR BITUMINOUS MATERIAL (PRIME COAT) AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

G.N. 482
ALL MATERIAL PLACED AS HOT-MIX ASPHALT SHOULDERS SHALL BE COMPACTED TO 94.0 - 98.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY. THIS REQUIREMENT SHALL APPLY TO IL 9.5L GRADATION SHOULDER MIXES AND OTHER MIXES (BOTTOM LIFT OF SHOULDERS). THIS MAXIMUM DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE OF FOUR TESTS AS IN OTHER QC/QA TESTING. A NUCLEAR GAUGE DENSITY/CORE CORRELATION SHALL BE PERFORMED FOR THE IL 9.5L MIXES AND OTHER MIXES USING STANDARD CORRELATION PROCEDURES.

G.N. 631
IF THE CONTRACTOR ELECTS TO USE THE ALTERNATE MOUNTING METHOD OF THRU DRILLING OF THE MOUNTING HOLES FOR THE TRAFFIC BARRIER TERMINALS, TYPE 6, THE HOLES SHALL BE DRILLED USING A CORE DRILL. A HAMMER DRILL WILL NOT BE ALLOWED.

G.N. 703A
SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE PAVEMENT AFTER ANY OF THE FOLLOWING:
COLD MILLING AND/OR PLACING BITUMINOUS MATERIALS (PRIME COAT), LEVELING BINDER (MACHINE METHOD), BINDER AND SURFACE COURSES. SHORT TERM PAVEMENT MARKING PLACED ON THE SURFACE, SHALL COINCIDE WITH THE FINAL PAVEMENT STRIPING. SHORT TERM PAVEMENT MARKING PLACED PRIOR TO THE SURFACE SHALL COINCIDE WITH THE EXISTING PAVEMENT MARKINGS. USE 4 FEET PER 40 FEET (OR 10% PER STATION).

G.N. 781
RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED IN ACCORDANCE WITH STANDARD 781001, AND THE DETAILS SHOWN IN THE PLANS. IF THERE IS ANY DISCREPANCY BETWEEN THE STANDARD AND THE DETAILS IN THE PLANS, THE DETAILS IN THE PLAN SHALL GOVERN. THE FINAL PAVEMENT MARKINGS SHALL BE IN PLACE PRIOR TO PLACING THE RAISED REFLECTIVE PAVEMENT MARKERS AND THE RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE PLACED MIDWAY IN THE 30 FOOT SPACE BETWEEN THE DASHED CENTERLINE STRIPES (WHEN APPLICABLE).

G.N. 1004.01
COARSE AGGREGATE GRADATION CA-10 MAY BE USED WHENEVER COARSE AGGREGATE CA-6 IS SPECIFIED IN THE STANDARD SPECIFICATIONS.

G.N. 20038
AN ALUMINUM TABLET OF THE TYPE SHOWN ON STANDARD 667101 SHALL BE PLACED ON THE PROPOSED STRUCTURE AS DIRECTED BY THE ENGINEER. THE BENCH MARK ELEVATION WILL BE ESTABLISHED AND MARKED BY THE DEPARTMENT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR PERMANENT BENCH MARKS.

NO COMMITMENTS.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL NOTES
IL ROUTE 10 OVER CAMP CREEK
FAS RTE. 1513 SECTION 5BR-1

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	3
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES

**RURAL TWO-LANE
80% FEDERAL 20% STATE
CONSTRUCTION CODE X071-2A**

**RURAL TWO-LANE
80% FEDERAL 20% STATE
CONSTRUCTION CODE X071-2A**

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
20200100	EARTH EXCAVATION	CU YD	915
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	122
25000200	SEEDING, CLASS 2	ACRE	0.25
25000322	SEEDING, CLASS 5A	ACRE	0.25
25000400	NITROGEN FERTILIZER NUTRIENT	<i>POUND</i>	23
25000500	PHOSPHORUS FERTILIZER NUTRIENT	<i>POUND</i>	23
25000600	POTASSIUM FERTILIZER NUTRIENT	<i>POUND</i>	23
25100630	EROSION CONTROL BLANKET	SQ YD	1210
28000250	TEMPORARY EROSION CONTROL SEEDING	<i>POUND</i>	25
28000300	TEMPORARY DITCH CHECKS	EACH	8
28000400	PERIMETER EROSION BARRIER	FOOT	1500
28100107	STONE RIPRAP, CLASS A4	SQ YD	826
28200200	FILTER FABRIC	SQ YD	826
31100700	SUB-BASE GRANULAR MATERIAL, TYPE A 8"	SQ YD	284
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	168
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	160
40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	139
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	89
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	220
42001300	PROTECTIVE COAT	SQ YD	220
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43
44000100	PAVEMENT REMOVAL	SQ YD	446
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	510
48101600	AGGREGATE SHOULDERS, TYPE B 8"	SQ YD	373
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	431
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50200100	STRUCTURE EXCAVATION	CU YD	380
50200300	COFFERDAM EXCAVATION	CU YD	127
50202901	COFFERDAM (LOCATION - 1)	EACH	1
50300100	FLOOR DRAINS	EACH	16
50300225	CONCRETE STRUCTURES	CU YD	214.1
50300255	CONCRETE SUPERSTRUCTURE	CU YD	157.7
50300260	BRIDGE DECK GROOVING	SQ YD	428
50300300	PROTECTIVE COAT	SQ YD	591
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	1944

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
50800205	REINFORCEMENT BARS, EPOXY COATED	<i>POUND</i>	53620
50800515	BAR SPLICERS	EACH	102
51200956	FURNISHING METAL SHELL PILES 12" x 0.179"	FOOT	1044
51200957	FURNISHING METAL SHELL PILES 12" x 0.250"	FOOT	840
51202305	DRIVING PILES	FOOT	1884
51203200	TEST PILE METAL SHELLS	EACH	2
51204650	PILE SHOES	EACH	22
51500100	NAME PLATES	EACH	1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	104
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12
54215547	METAL END SECTIONS 12"	EACH	2
58700300	CONCRETE SEALER	SQ FT	300
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	68
60100945	PIPE DRAINS 12"	FOOT	42
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	122
60500060	REMOVING INLETS	EACH	4
60900140	TYPE B INLET BOX, STANDARD 609006	EACH	2
60900515	CONCRETE THRUST BLOCKS	EACH	2
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	412.5
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	400
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6
67100100	MOBILIZATION	L SUM	1
70101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	120
78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1350
78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	7
78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	1
78200100	MONODIRECTIONAL PRISMATIC BARRIER REFLECTOR	EACH	4
78200420	GUARDRAIL MARKERS, TYPE B	EACH	10
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	5
X0300247	REMOVE WOOD POST	EACH	6
Z0037300	PAVEMENT GROOVING	SQ YD	220
Z0038700	PERMANENT BENCH MARKS	EACH	1
<i>▲ Z0076600</i>	<i>TRAINEES</i>	<i>Hour</i>	<i>500</i>

• SPECIALTY ITEM

▲ Y080

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
IL ROUTE 10 OVER CAMP CREEK
FAS RTE. 1513 SECTION 5BR-1
STA. 16+69
CHAMPAIGN COUNTY STR. 010-0133
SCALE: NONE DRAWN BY RMH
DATE MAY 2007 CHECKED BY MJS

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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	4
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	

FURNISHED EXCAVATION				
LOCATION	EARTH EXCAVATION (CY)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT (CY)	EARTHWORK BALANCE WASTE(+) OR SHORTAGE(-)
STA. 13+00 TO 16+00	45	34	125	-91
STA. 17+50 TO 20+00	50	38	60	-22
BULK EXCAVATION BEHIND EX ABUTMENTS	820	615	0	+615
STRUCTURE EXCAVATION (FROM BRIDGE PLANS)	380	285	0	+285
• COFFERDAM EXCAVATION	127	95	0	+95
TOTAL	1422	1067	185	+882
FURNISHED EXCAVATION = EMBANKMENT - (EXCAVATION × 0.75) = 185.0 - 1067.0 = -882.0 CU. YD.				

• UNSUITABLE MATERIAL FOR EMBANKMENT

GUARDRAIL SCHEDULE		
ITEM	LOCATION	QUANTITY
STEEL PLATE BEAM GUARDRAIL, TYPE A	RT. STA. 13+74.89 TO 15+12.39	137.5 L.F.
	LT. STA. 15+06.53 TO 15+69.03	62.5 L.F.
	RT. STA. 17+68.97 TO 18+31.47	62.5 L.F.
	LT. STA. 18+07.11 TO 19+57.11	150 L.F.
TRAFFIC BARRIER TERMINAL, TYPE 6	RT. STA. 15+12.39 TO 15+55.54*	1 EACH
	LT. STA. 15+69.03 TO 16+12.18*	1 EACH
	RT. STA. 17+25.82* TO 17+68.97	1 EACH
	LT. STA. 17+63.96* TO 18+07.11	1 EACH
TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	RT. STA. 13+24.89 TO 13+74.89	1 EACH
	LT. STA. 14+56.53 TO 15+06.53	1 EACH
	RT. STA. 18+31.47 TO 18+81.47	1 EACH
	LT. STA. 19+57.11 TO 20+07.11	1 EACH
GUARDRAIL REMOVAL	RT. STA. 15+17 TO 16+17	100 L.F.
	LT. STA. 15+59 TO 16+59	100 L.F.
	RT. STA. 16+83 TO 17+83	100 L.F.
GUARDRAIL MARKERS, TYPE B	LT. STA. 17+18 TO 18+18	100 L.F.
	RT. STA. 13+24.89 TO 15+55.54	3 EACH
	LT. STA. 14+56.53 TO 16+12.18	2 EACH
TERMINAL MARKER - DIRECT APPLIED	RT. STA. 17+25.82 TO 18+81.47	2 EACH
	LT. STA. 17+63.96 TO 20+07.11	3 EACH
	RT. STA. 13+24.89	1 EACH
	LT. STA. 14+56.53	1 EACH
	RT. STA. 18+81.47	1 EACH
	LT. STA. 20+07.11	1 EACH

• END OF WINGWALL STATION

BRIDGE APPROACH PAVEMENT SCHEDULE		
ITEM	LOCATION	QUANTITY
BRIDGE APPROACH PAVEMENT	STA. 15+72.28 TO 16+02.28	110 SQ. YD.
	STA. 17+35.72 TO 17+65.72	110 SQ. YD.
BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	STA. 15+66.28 TO 15+72.28	21.5 SQ. YD.
	STA. 17+65.72 TO 17+71.72	21.5 SQ. YD.
** SUB-BASE GRANULAR MATERIAL, TYPE A, 8"	STA. 15+66.28 TO 16+01.50	142 SQ. YD.
	STA. 17+36.50 TO 17+71.72	142 SQ. YD.
PAVEMENT REMOVAL	STA. 15+66.28 TO 16+38	223 SQ. YD.
	STA. 17+00 TO 17+71.72	223 SQ. YD.
PAVEMENT GROOVING	STA. 15+72.28 TO 16+04.61	110 SQ. YD.
	STA. 17+33.39 TO 17+65.72	110 SQ. YD.

** THE ADDITIONAL SUB-BASE GRANULAR MATERIAL IS FOR RAISING THE PROFILE ELEVATION TO THE BASE OF THE BRIDGE APPROACH PAVEMENT SUB-BASE AFTER PAVEMENT REMOVAL.

TEMPORARY DITCH CHECKS		
LOCATION	OFFSET	QUANTITY
13+50.89	45.26' RT	1
14+80.48	43.97' LT	1
15+01.56	47.83' RT	1
15+48.98	43.97' LT	1
15+71.78	35.00' RT	1
15+76.10	37.10' LT	1
18+54.55	35.00' RT	1
19+81.15	37.73' LT	1

HOT-MIX ASPHALT SURFACE & BINDER COURSE YIELD				
STATION	THICKNESS (IN)		YIELD (LB/SY)	
	BINDER	SURFACE	BINDER	SURFACE
13+00	0	1.5	0	168
14+00	0	1.5	0	168
14+50	2.7	1.5	302.4	168
15+00	5.1	1.5	571.2	168
15+50	8.5	1.5	952.0	168
18+00	2.8	1.5	313.6	168
18+50	0	1.5	0	168
19+00	0	1.5	0	168

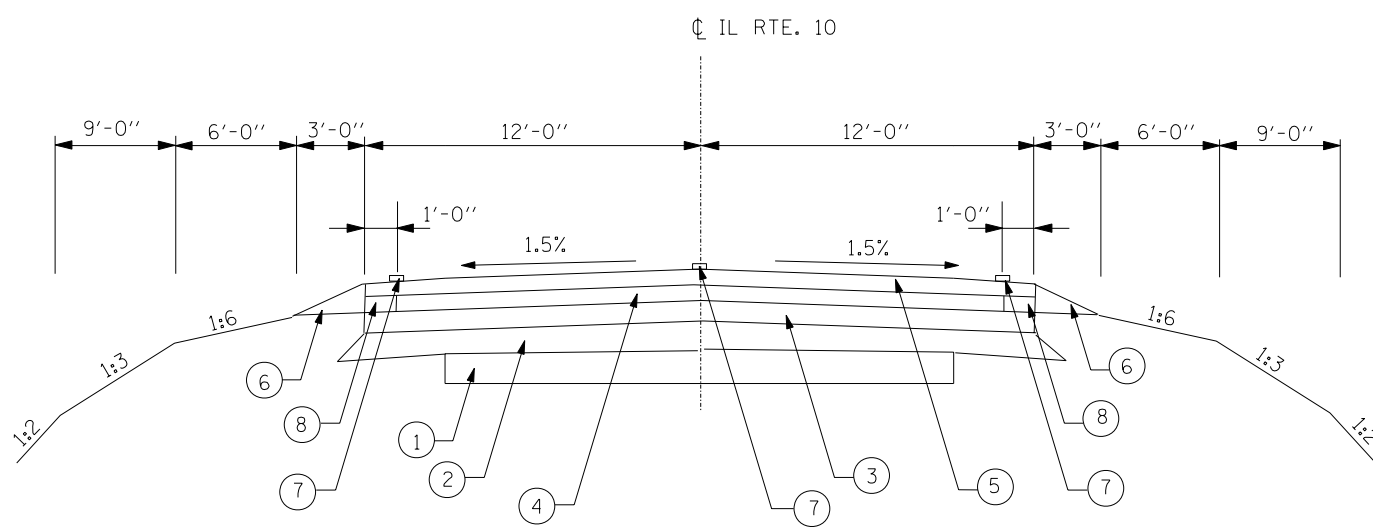
COMBINATION CURB AND GUTTER REMOVAL	
LOCATION	QUANTITY
RT. STA. 14+96 TO 16+20	124 L.F.
LT. STA. 15+27 TO 16+59	132 L.F.
RT. STA. 16+83 TO 18+12	129 L.F.
LT. STA. 17+17 TO 18+42	125 L.F.

REVISIONS	
NAME	DATE

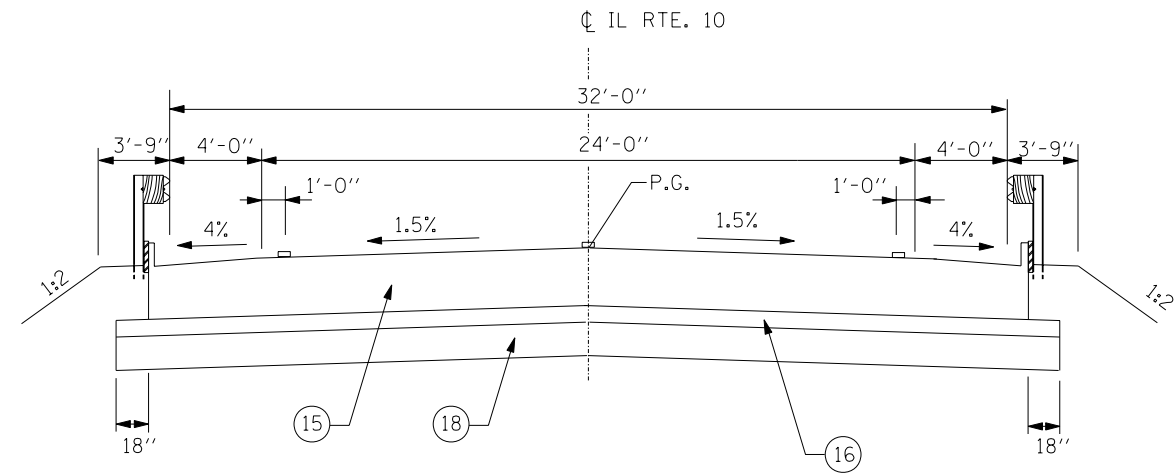
ILLINOIS DEPARTMENT OF TRANSPORTATION
 SCHEDULE OF QUANTITIES
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69
 CHAMPAIGN COUNTY STR. 010-0133
 SCALE: NONE DRAWN BY GEW
 DATE MAY 2007 CHECKED BY MJS

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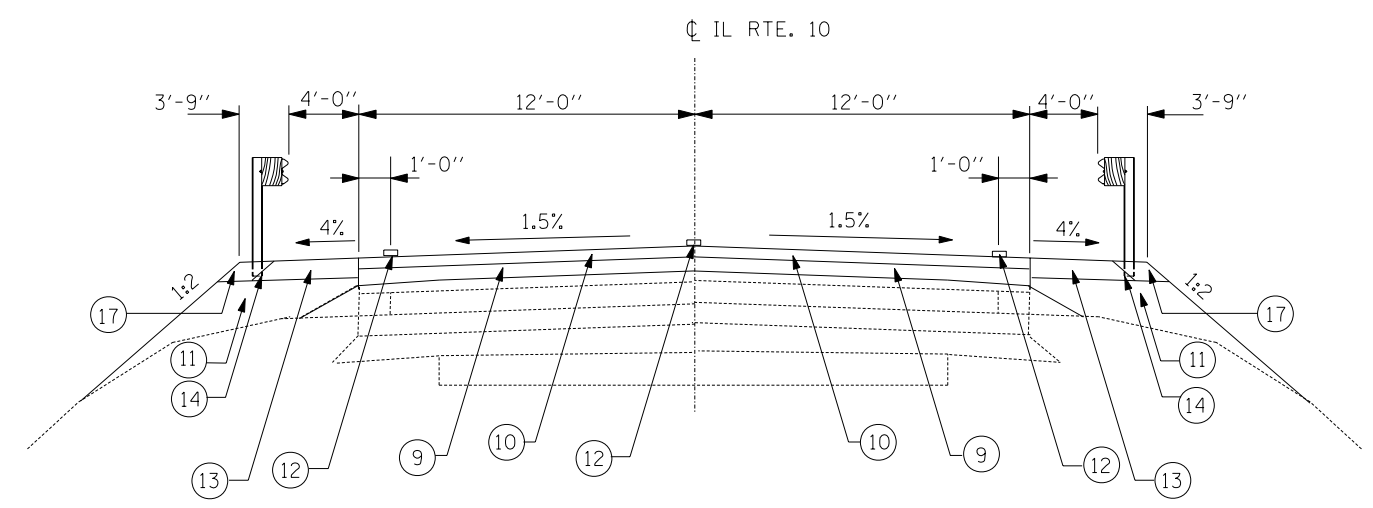
CONTRACT NO. 90919				
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	5
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		



EXISTING TYPICAL SECTION
 STA. 13+30 TO 16+38
 STA. 17+00 TO 18+70



PROPOSED BRIDGE APPROACH SECTION
 STA. 15+72.28 TO 16+02.28
 STA. 17+35.72 TO 17+65.72
 (HIGHWAY STANDARD 420401)



PROPOSED TYPICAL SECTION
 STA. 13+30 TO 15+72.28
 STA. 17+65.72 TO 18+70

LEGEND

- ① PCC PAVEMENT (9"-7"-9")
- ② GRANULAR EMBANKMENT (4"-24")
- ③ HMA OVERLAY (VARIABLE THICKNESS)
- ④ LEVELING BINDER (3/4")
- ⑤ HMA SURFACE COURSE (1 1/2")
- ⑥ AGGREGATE SHOULDER WEDGE
- ⑦ PAVEMENT MARKING
- ⑧ HMA SAFETY SHOULDER
- ⑨ HMA BINDER COURSE, IL-19.0, N50 (112-952 LBS/SY)
- ⑩ HMA SURFACE COURSE, MIX C, N50 (168 LBS/SY)
- ⑪ EMBANKMENT
- ⑫ PAINT PAVEMENT MARKING
- ⑬ HMA SHOULDERS, 8"
- ⑭ STEEL PLATE BEAM GUARDRAIL, TYPE A
- ⑮ BRIDGE APPROACH PAVEMENT, 15"
- ⑯ SUB-BASE GRANULAR MATERIAL, TYPE A, 4" (INCLUDED IN BRIDGE APPROACH PAVEMENT)
- ⑰ AGGREGATE SHOULDERS, TYPE B, 8"
- ⑱ SUB-BASE GRANULAR MATERIAL, TYPE A, 8" AND VARIES

ALL HMA SHOULD BE PLACED WITH A STRINGLINE.

REVISIONS	
NAME	DATE

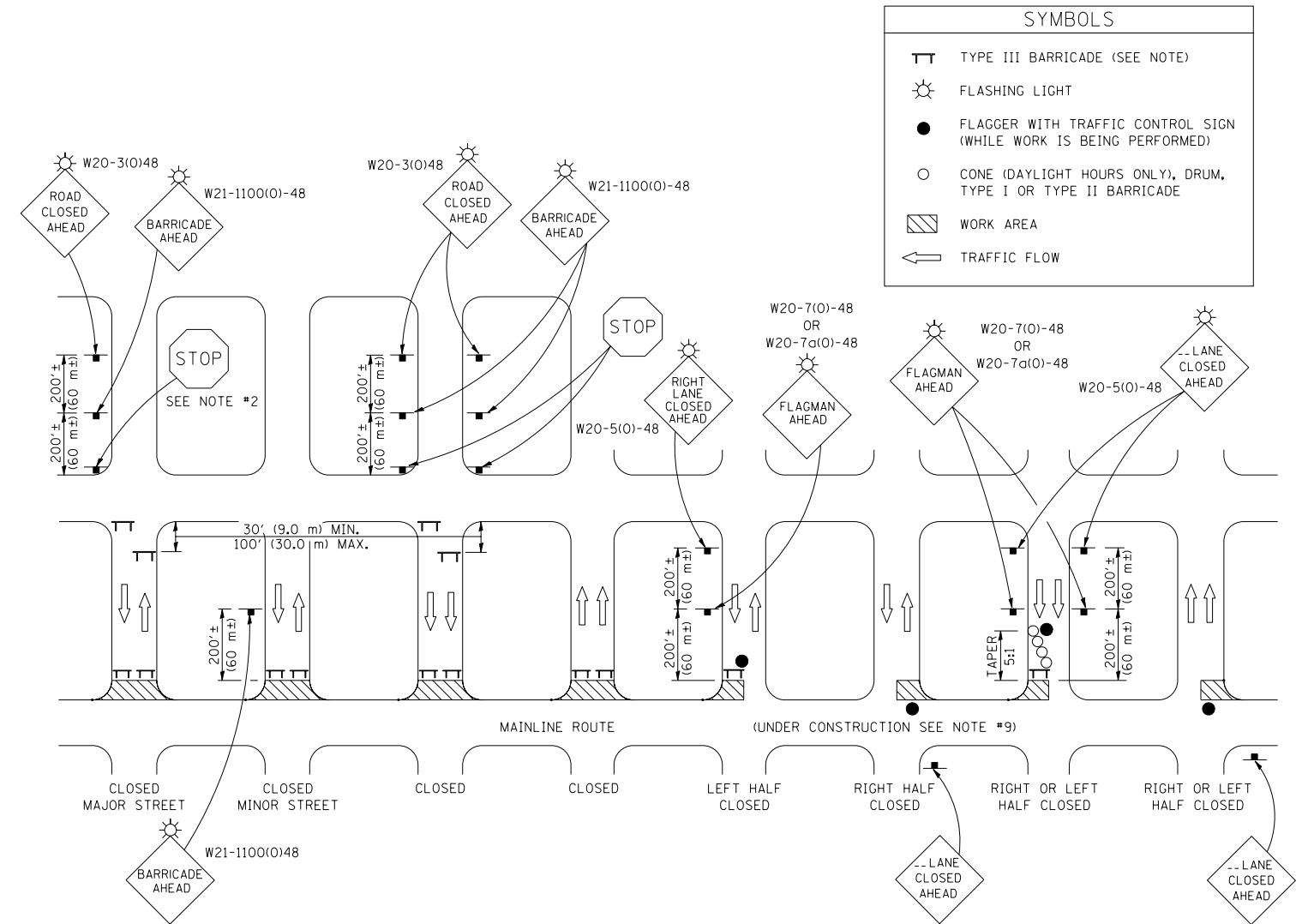
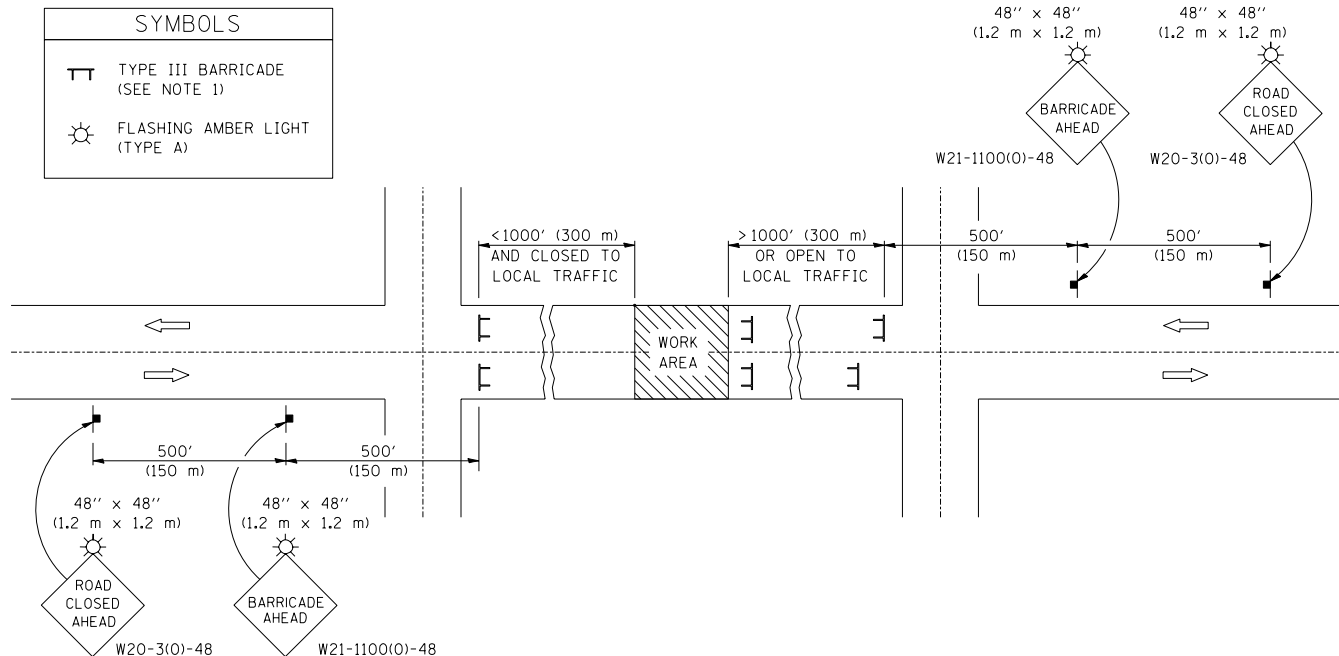
ILLINOIS DEPARTMENT OF TRANSPORTATION
 TYPICAL SECTION
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

TUG PROJ. # 3106078-02
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	9

ROAD CLOSURE

SIDEROAD / STREET CLOSURE



GENERAL NOTES

- TYPE III BARRICADES SHALL BE AS SHOWN ON STANDARD 702001 "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- IF THE ROAD IS OPEN TO LOCAL TRAFFIC OR EXCEEDS 1000' (300 m), ANOTHER SET OF TYPE III BARRICADES, EQUIPPED AS IN NOTE 1 ABOVE, SHALL BE PLACED AT EACH END OF THE WORK AREA.
- WHEN A STOP CONDITION EXISTS, NO SIGNS ARE REQUIRED IN ADVANCE OF THE "STOP" SIGN WHEN THE ROAD IS CLOSED WITHIN 100' (30 m) OF THE INTERSECTION.
- STANDARD 702001 SHALL APPLY FOR THE PLACEMENT & DESIGN OF TYPE III BARRICADES.
- IF A TYPE III BARRICADE WITH AN ATTACHED SIGN PANEL WHICH MEETS NCHRP 350 IS NOT AVAILABLE, THE SIGNS MAY BE MOUNTED ON AN NCHRP 350 TEMPORARY SIGN SUPPORT DIRECTLY IN FRONT OF THE BARRICADE.
- REFLECTORIZED STRIPING SHALL APPEAR ON BOTH SIDES OF THE TYPE III BARRICADES IF ROAD IS OPEN TO LOCAL TRAFFIC.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- A MINIMUM OF TWO FLASHING LIGHTS SHALL BE USED AT NIGHT ON EACH APPROACH IN ADVANCE OF THE WORK AREA. FLASHING LIGHTS SHALL BE INSTALLED ABOVE THE FIRST TWO SIGNS IN THE SERIES.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT. 725 AND BT. 726 ARE REQUIRED.
- WHEN A SIDEROAD INTERSECTS THE HIGHWAY ON WHICH WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC DEVICES SHALL BE ERECTED AND PROVIDED AS DIRECTED BY THE ENGINEER.
- AN ADDITIONAL SIGN MAY BE REQUIRED AT A MAJOR INTERSECTING ROAD IN ADVANCE OF THE CLOSURE. THE ADDITIONAL SIGN SHALL GIVE THE DISTANCE TO THE BARRICADE IN MILES OR FRACTIONS OF A MILE.

GENERAL NOTES

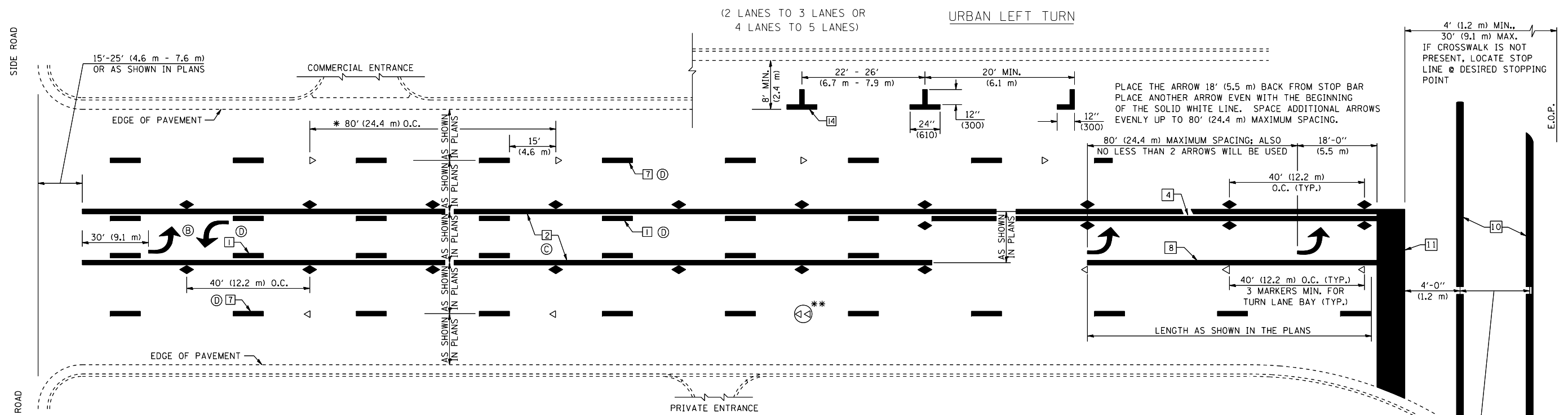
- TYPE III BARRICADES SHALL BE AS SHOWN ON "TYPICAL APPLICATIONS OF TYPE III BARRICADES CLOSING A ROAD". EACH TYPE III BARRICADE SHALL HAVE TWO FLASHING AMBER LIGHTS MOUNTED ABOVE IT.
- WHERE A STOP CONDITION EXISTS, AS SHOWN ABOVE, WARNING SIGNS MAY BE OMITTED IN ADVANCE OF THE "STOP" SIGN.
- STANDARD 702001 SHALL APPLY FOR THE PLACEMENT & MANUFACTURE OF TYPE III BARRICADES.
- ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
- ONE FLASHING LIGHT IS REQUIRED ABOVE EACH ADVANCE WARNING SIGN DURING HOURS OF DARKNESS.
- LONGITUDINAL DIMENSIONS MAY BE ADJUSTED SLIGHTLY TO FIT FIELD CONDITIONS.
- FORMS BT 725 AND BT 726 ARE REQUIRED.
- THE MAINLINE ROUTE TEMPORARY TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE PLANS, SPECIAL PROVISIONS AND STANDARD SPECIFICATIONS.
- THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE VARIOUS PAY ITEMS INVOLVING THE RECONSTRUCTION OF ALL APPLICABLE SIDE STREETS AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DATE	REVISIONS	NAME
11/06	REPLACED DETAILS F-5.03 & F-5.04	TJB

ILLINOIS DEPARTMENT OF TRANSPORTATION
TRAFFIC CONTROL & PROTECTION DEVICES
DISTRICT 5 DETAIL NO. 7020000

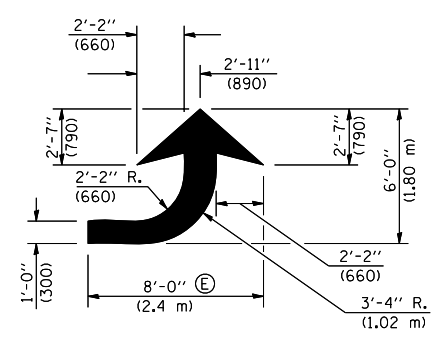
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	11



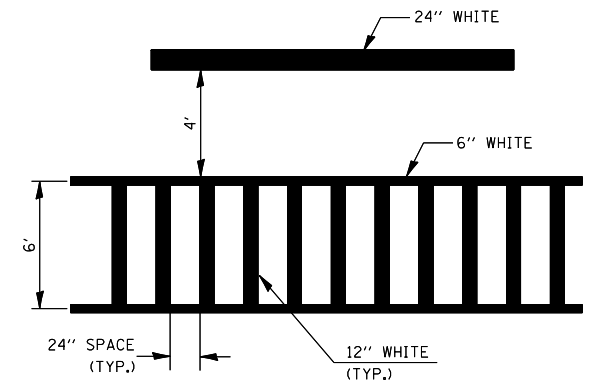
* REDUCE TO 40 FEET (12.2 METERS) ON CENTER ON CURVES WHERE ADVISORY SPEEDS ARE 10 MPH (15 km/h) LOWER THAN POSTED SPEEDS.

** DOUBLE LANE LINE MARKERS SHALL BE SPECIFIED AND SPACED AS SHOWN IN HIGHWAY STANDARD 781001 FOR MULTI-LANE DIVIDED AND UNDIVIDED HIGHWAYS.

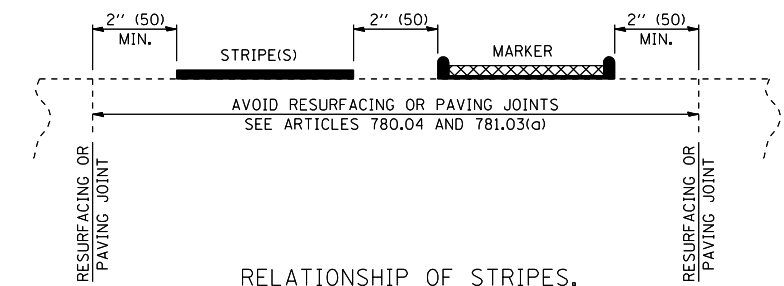
BLOOMINGTON-NORMAL CITY LIMITS ONLY



LEFT ARROW
REVERSE FOR RIGHT ARROW
AREA = 15.6 SQ. FT. (1.47 m²)
(WHITE)



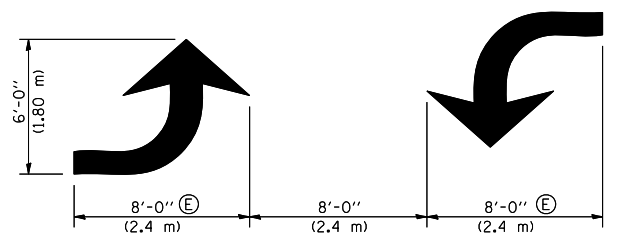
TYPICAL SPACING FOR
CROSSWALKS & STOP BARS



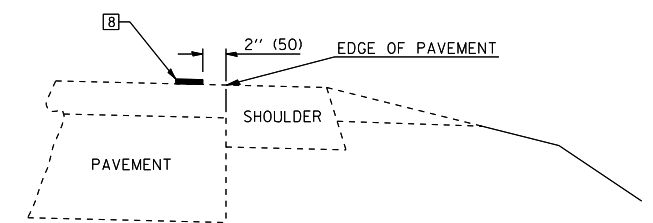
RELATIONSHIP OF STRIPES,
MARKERS AND JOINTS

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

- NOTES:
- ⓑ TURN ARROW PAIRS SHALL BE PLACED AT 250' (75 m) INTERVALS AND SHALL BE EVENLY SPACED BETWEEN BOTH ENDS OF THE BIDIRECTIONAL LEFT TURN LANE.
 - ⓒ THE SOLID YELLOW PAVEMENT MARKINGS ② SHOULD GENERALLY START OR END NEAR THE RADIUS POINT OF EACH STREET RETURN EXCEPT WHERE ONE OR BOTH ENDS WOULD INCLUDE STOP BARS.
 - ⓓ THE SKIP-DASH PAVEMENT MARKINGS ① OR ⑦ SHOULD BE CENTERED BETWEEN BOTH ENDS OF EACH CITY BLOCK AND SHALL BE PLACED SO THEY LINE UP ACROSS FROM EACH OTHER. SEE EXAMPLE ON SHEET 2 OF 3.
 - ⓔ TURN ARROW SIZE DEPENDS ON THE LOCATION.
RURAL LOCATION - LARGE ARROW SIZE
URBAN LOCATION - SMALL ARROW SIZE



TYPICAL DOUBLE
TURN ARROWS (WHITE)



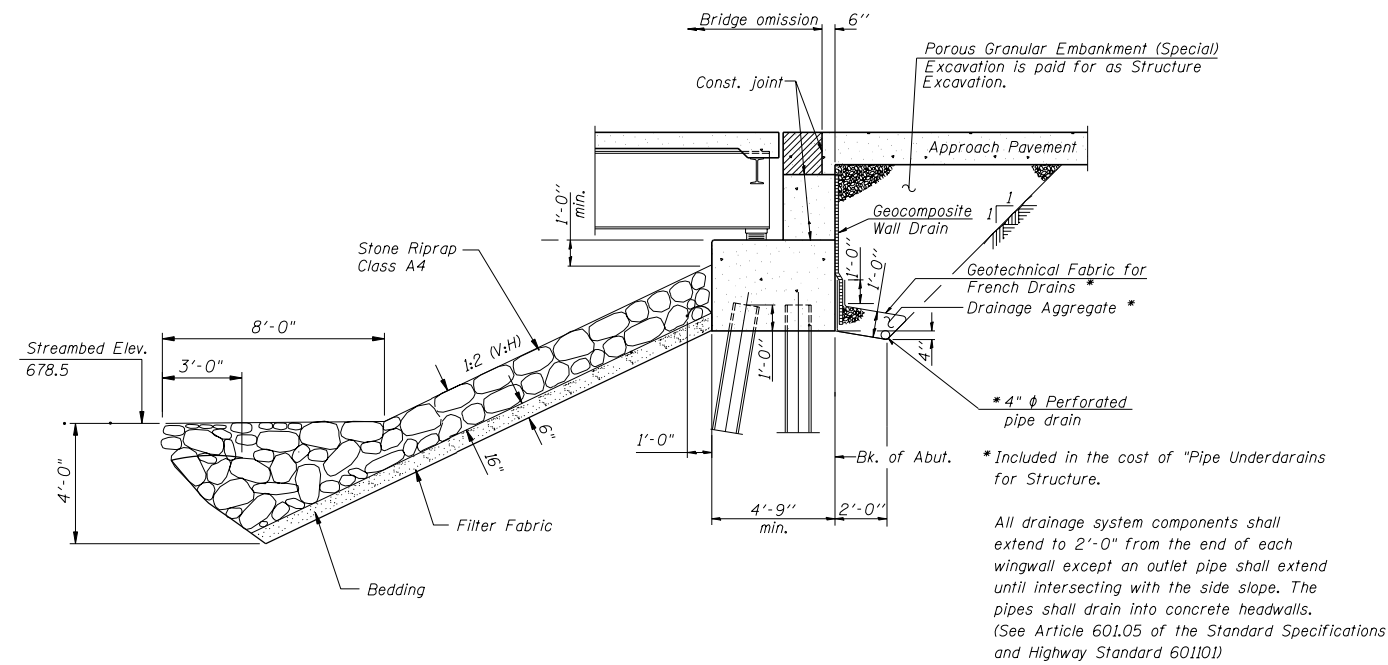
RELATIONSHIP OF EDGE LINE TO EDGE OF PAVEMENT
(SAFETY SHOULDER OR PAVED SURFACE)
SEE ARTICLE 780.04

DATE	REVISIONS	NAME
11/06	REPLACED DETAIL F-5.25	TJB

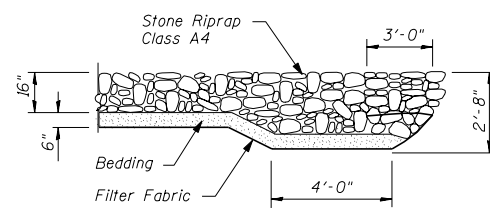
ILLINOIS DEPARTMENT OF TRANSPORTATION
PAVEMENT MARKING AND
MARKERS (RURAL &
URBAN APPLICATIONS)
DISTRICT 5 DETAIL NO. 7800AAA

PLOT DATE = 7/28/2007
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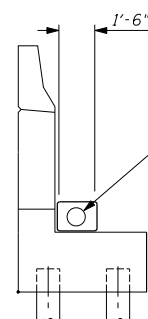
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	13
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		



SECTION THRU PILE BENT ABUTMENT
(at Rt. L's)

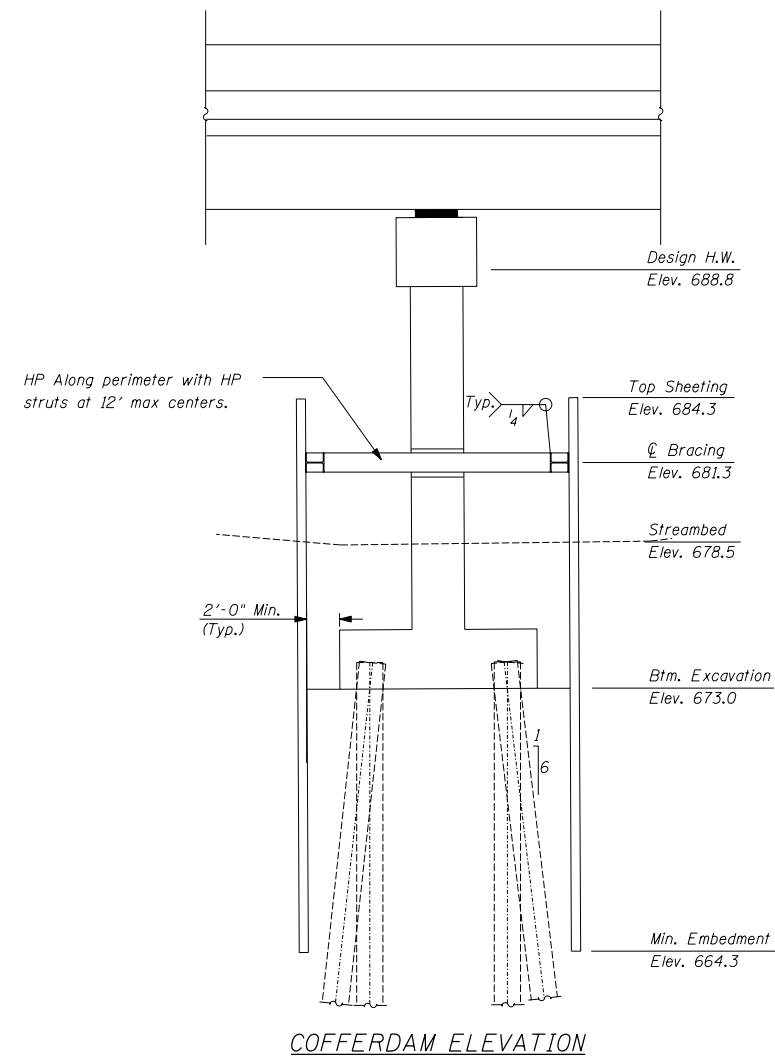


SECTION A-A



SECTION THRU RETAINING WALL
(at Rt. L's)

A 6" ϕ perforated drain pipe in accordance with Section 601 of the Standard Specification encased in 18" of gravel or crushed stone. Extend pipe parallel with the cap from the back of the abutment to past the end of the wall. At the wall end extend the pipe perpendicular to the wall until intersecting the sideslope.**
**Included in the cost of "Structure Excavation."
See sheet 13 of 19 for Wall Details.

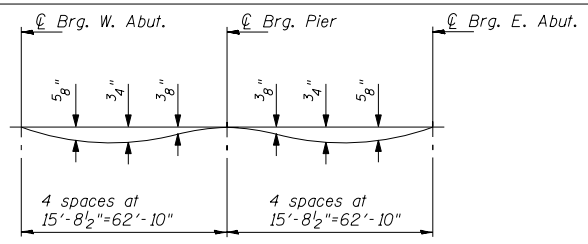


1. If the Contractor chooses to alter the cofferdam design requirements shown on the plans for lesser design requirements, then full design submittals with the required seals will be expected by the Department for review and approval.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
COFFERDAM AND RIPRAP DETAILS
IL ROUTE 10 OVER CAMP CREEK
FAS ROUTE 1513 SECTION 5BR-1
STA. 16+69.00
CHAMPAIGN COUNTY STR. 010-0275
SCALE: N.T.S. DRAWN BY LP
DATE MAY 2007 CHECKED BY MJS

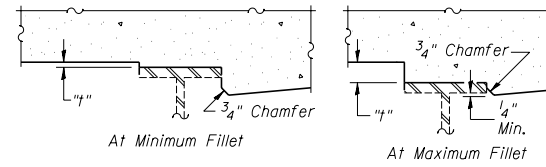
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	14
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		



DEAD LOAD DEFLECTION DIAGRAM

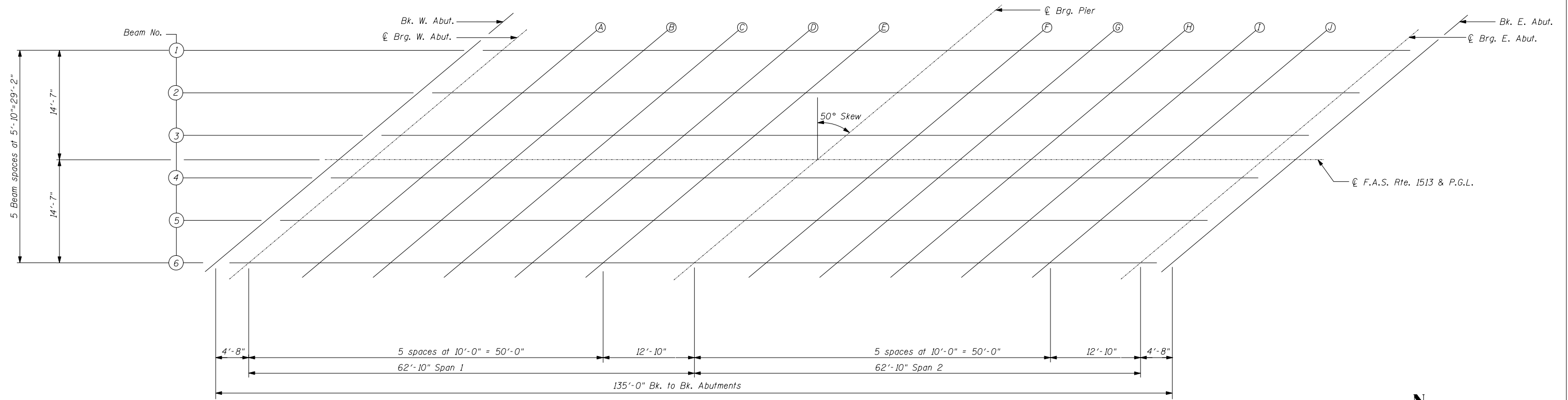
(Includes weight of concrete only)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 4 of 19.



To determine "t": After the existing Steel Beams have been raised, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 4 of 19, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TOP OF SLAB ELEVATIONS
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

Note: Work this sheet with sheet 4 of 19

TUG PROJ. # 3106078-02
 PLOT DATE = 7/19/2007 3:53:55 PM
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BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	16+18.88	14'-7"	694.60	694.60
☉ Brg. West Abut.	16+23.55	14'-7"	694.57	694.57
A	16+33.55	14'-7"	694.52	694.56
B	16+43.55	14'-7"	694.47	694.53
C	16+53.55	14'-7"	694.42	694.49
D	16+63.55	14'-7"	694.38	694.42
E	16+73.55	14'-7"	694.33	694.35
☉ Brg. Pier	16+86.38	14'-7"	694.26	694.26
F	16+96.38	14'-7"	694.21	694.23
G	17+06.38	14'-7"	694.16	694.21
H	17+16.38	14'-7"	694.11	694.17
I	17+26.38	14'-7"	694.07	694.13
J	17+36.38	14'-7"	694.02	694.06
☉ Brg. East Abut.	17+49.21	14'-7"	693.95	693.95
Back of East Abut.	17+53.88	14'-7"	693.93	693.93

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	16+11.93	8'-9"	694.73	694.73
☉ Brg. West Abut.	16+16.59	8'-9"	694.71	694.71
A	16+26.59	8'-9"	694.66	694.70
B	16+36.59	8'-9"	694.61	694.67
C	16+46.59	8'-9"	694.56	694.63
D	16+56.59	8'-9"	694.51	694.56
E	16+66.59	8'-9"	694.46	694.49
☉ Brg. Pier	16+79.43	8'-9"	694.40	694.40
F	16+89.43	8'-9"	694.35	694.37
G	16+99.43	8'-9"	694.30	694.35
H	17+09.43	8'-9"	694.25	694.31
I	17+19.43	8'-9"	694.20	694.27
J	17+29.43	8'-9"	694.15	694.20
☉ Brg. East Abut.	17+42.26	8'-9"	694.09	694.09
Back of East Abut.	17+46.93	8'-9"	694.07	694.07

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	16+04.98	2'-11"	694.86	694.86
☉ Brg. West Abut.	16+09.64	2'-11"	694.84	694.84
A	16+19.64	2'-11"	694.79	694.82
B	16+29.64	2'-11"	694.74	694.80
C	16+39.64	2'-11"	694.69	694.75
D	16+49.64	2'-11"	694.64	694.69
E	16+59.64	2'-11"	694.59	694.61
☉ Brg. Pier	16+72.48	2'-11"	694.53	694.53
F	16+82.48	2'-11"	694.48	694.49
G	16+92.48	2'-11"	694.43	694.47
H	17+02.48	2'-11"	694.38	694.44
I	17+12.48	2'-11"	694.33	694.39
J	17+22.48	2'-11"	694.28	694.32
☉ Brg. East Abut.	17+35.31	2'-11"	694.22	694.22
Back of East Abut.	17+39.98	2'-11"	694.19	694.19

☉ F.A.S. 1513 & PGL

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	16+01.50	0	694.92	694.92
☉ Brg. West Abut.	16+06.17	0	694.90	694.90
A	16+16.17	0	694.85	694.89
B	16+26.17	0	694.80	694.86
C	16+36.17	0	694.75	694.81
D	16+46.17	0	694.70	694.75
E	16+56.17	0	694.65	694.68
☉ Brg. Pier	16+69.00	0	694.59	694.59
F	16+79.00	0	694.54	694.56
G	16+89.00	0	694.49	694.53
H	16+99.00	0	694.44	694.50
I	17+09.00	0	694.39	694.45
J	17+19.00	0	694.34	694.39
☉ Brg. East Abut.	17+31.83	0	694.28	694.28
Back of East Abut.	17+36.50	0	694.26	694.26

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	15+98.02	2'-11"	694.89	694.89
☉ Brg. West Abut.	16+02.69	2'-11"	694.87	694.87
A	16+12.69	2'-11"	694.82	694.86
B	16+22.69	2'-11"	694.77	694.83
C	16+32.69	2'-11"	694.72	694.79
D	16+42.69	2'-11"	694.67	694.72
E	16+52.69	2'-11"	694.62	694.65
☉ Brg. Pier	16+65.52	2'-11"	694.56	694.56
F	16+75.52	2'-11"	694.51	694.53
G	16+85.52	2'-11"	694.46	694.50
H	16+95.52	2'-11"	694.41	694.47
I	17+05.52	2'-11"	694.36	694.43
J	17+15.52	2'-11"	694.31	694.36
☉ Brg. East Abut.	17+28.36	2'-11"	694.25	694.25
Back of East Abut.	17+33.02	2'-11"	694.23	694.23

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	15+91.07	8'-9"	694.83	694.83
☉ Brg. West Abut.	15+95.74	8'-9"	694.81	694.81
A	16+05.74	8'-9"	694.76	694.80
B	16+15.74	8'-9"	694.72	694.77
C	16+25.74	8'-9"	694.67	694.73
D	16+35.74	8'-9"	694.62	694.67
E	16+45.74	8'-9"	694.57	694.59
☉ Brg. Pier	16+58.57	8'-9"	694.50	694.50
F	16+68.57	8'-9"	694.45	694.47
G	16+78.57	8'-9"	694.41	694.45
H	16+88.57	8'-9"	694.36	694.42
I	16+98.57	8'-9"	694.31	694.37
J	17+08.57	8'-9"	694.26	694.30
☉ Brg. East Abut.	17+21.41	8'-9"	694.19	694.19
Back of East Abut.	17+26.07	8'-9"	694.17	694.17

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of West Abut.	15+84.12	14'-7"	694.74	694.74
☉ Brg. West Abut.	15+88.79	14'-7"	694.73	694.73
A	15+98.79	14'-7"	694.69	694.73
B	16+08.79	14'-7"	694.65	694.70
C	16+18.79	14'-7"	694.60	694.66
D	16+28.79	14'-7"	694.55	694.59
E	16+38.79	14'-7"	694.50	694.52
☉ Brg. Pier	16+51.62	14'-7"	694.43	694.43
F	16+61.62	14'-7"	694.38	694.40
G	16+71.62	14'-7"	694.34	694.38
H	16+81.62	14'-7"	694.29	694.35
I	16+91.62	14'-7"	694.24	694.30
J	17+01.62	14'-7"	694.19	694.23
☉ Brg. East Abut.	17+14.45	14'-7"	694.12	694.12
Back of East Abut.	17+19.12	14'-7"	694.10	694.10

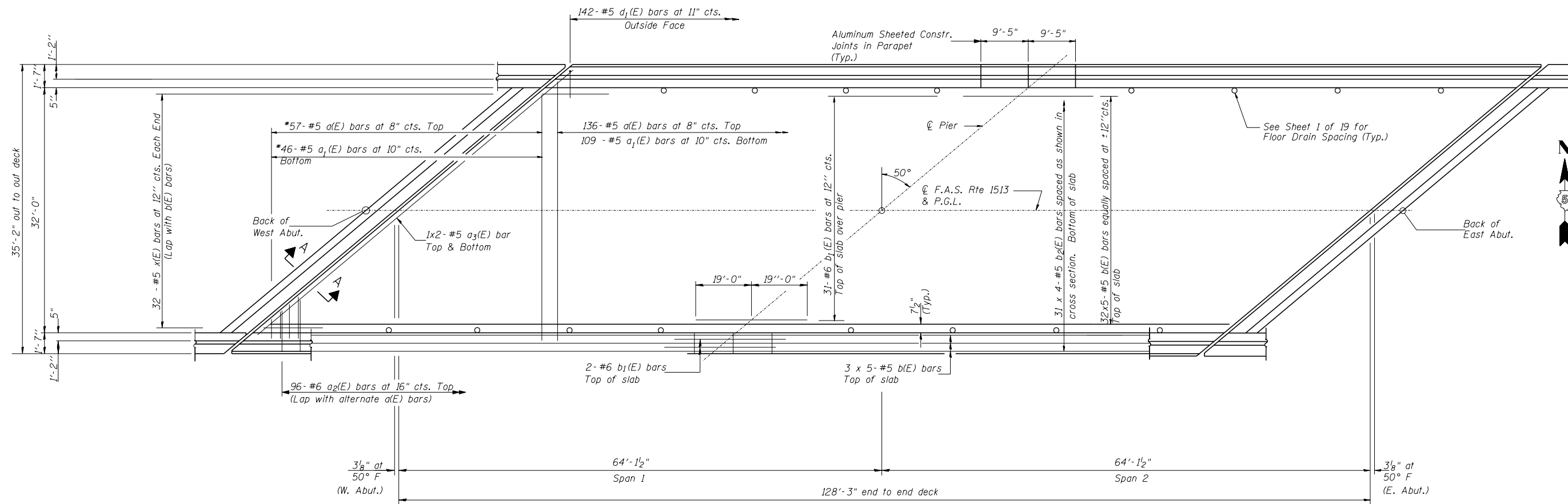
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 TOP OF SLAB ELEVATIONS 2
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

Note: Work this Sheet with Sheet 3 of 19

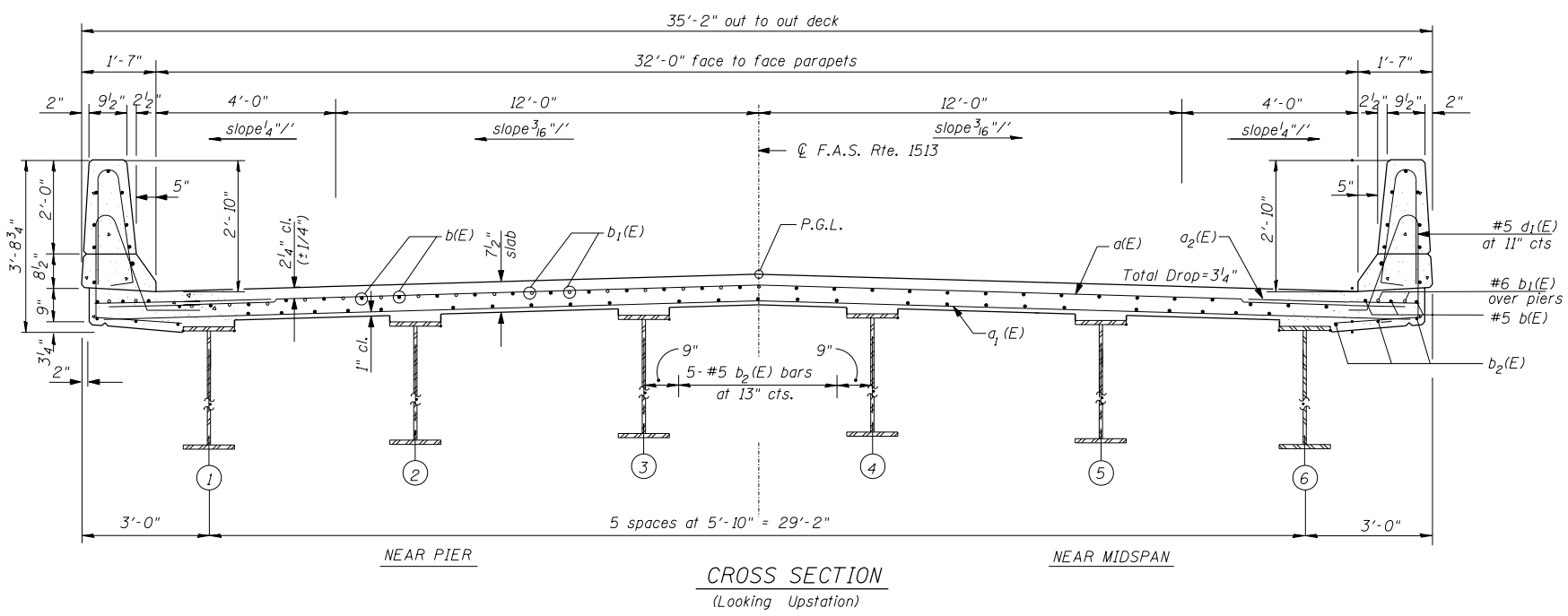
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	16

STA.	TO STA.
FED. ROAD DIST. NO. 5	ILLINOIS FED. AID PROJECT



PLAN

* Order a(E) and a₁(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.



CROSS SECTION
(Looking Upstation)

Notes:
 See Sheet 6 of 19 for superstructure details and Bill of Material.
 Bars indicated thus 31 x 4-#5 etc. indicates 31 lines of bars with 4 lengths per line.
 See Sheet 6 of 19 for parapet reinforcement.
 Reinforcement bars shown on this sheet are included in Bill of Material on Sheet 6 of 19.
 See Sheet 6 of 19 for Section A-A.
 Work this sheet with sheet 6 of 19.

MIN. BAR LAP
 #5 Bar = 1'-8"
 #6 Bar = 2'-0"

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DECK DETAILS
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

TUG PROJ. # 3106078-02
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	17
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		

**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length (ft)	Shape
a(E)	193	*5	33'-2"	
a ₁ (E)	155	*5	34'-0"	
a ₂ (E)	192	*6	4'-6"	
a ₃ (E)	8	*5	27'-3"	
b(E)	190	*5	26'-11"	
b ₁ (E)	35	*6	38'-0"	
b ₂ (E)	124	*5	33'-3"	
d(E)	284	*5	5'-7"	
d ₁ (E)	284	*5	7'-9"	
e(E)	84	*4	17'-11"	
e ₁ (E)	8	*8	29'-0"	
e ₂ (E)	8	*4	27'-11"	
e ₃ (E)	28	*4	9'-2"	
e ₄ (E)	4	*8	9'-2"	
e ₅ (E)	4	*4	9'-2"	
x(E)	64	*5	4'-1"	
Item		Unit	Qty.	
Reinforcement Bars, Epoxy Coated		lb	31620	
Concrete Superstructure		Cu. Yd.	157.7	
Floor Drains		Each	16	

Bars indicated thus 1x2-#5 etc. indicates 1 line of bars with 2 lengths per line.
Work this sheet with sheet 5 of 19.

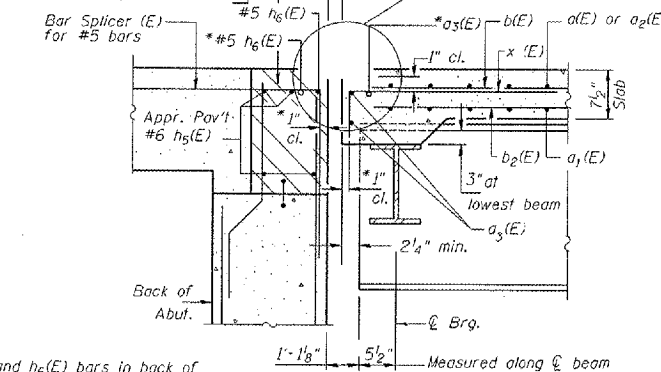
Slip-Forming of the Parapet is not allowed.

MIN. BAR LAP PARAPET

- #4 bars = 1'-4"
- #5 bars = 1'-8"
- #8 bars = 3'-5"

Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure.

For details of expansion joints, see sheet 9 of 19



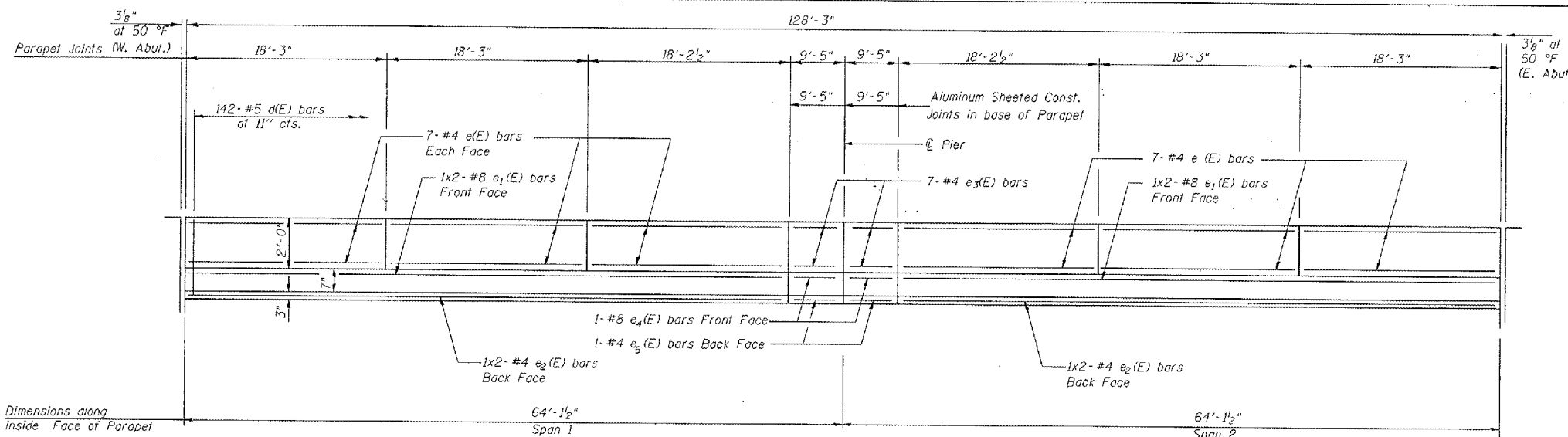
*Place a₃(E) and h₆(E) bars in back of anchor studs as shown if required to maintain 1" cl. (+0-1/8").

SECTION A-A

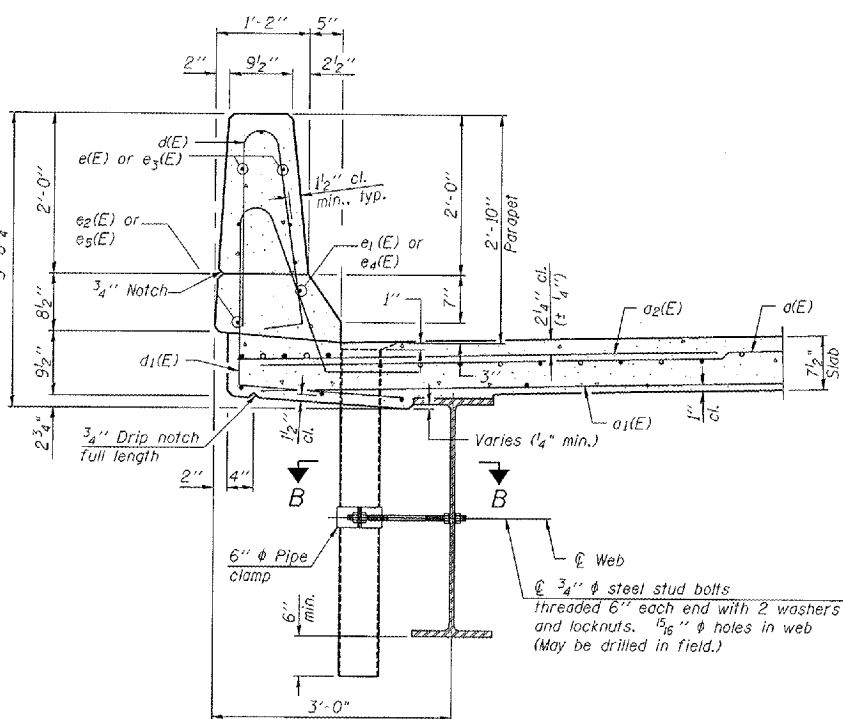
(W. Abut. shown, E. Abut. similar)
(Dimensions are at Rt. L's except as noted)

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

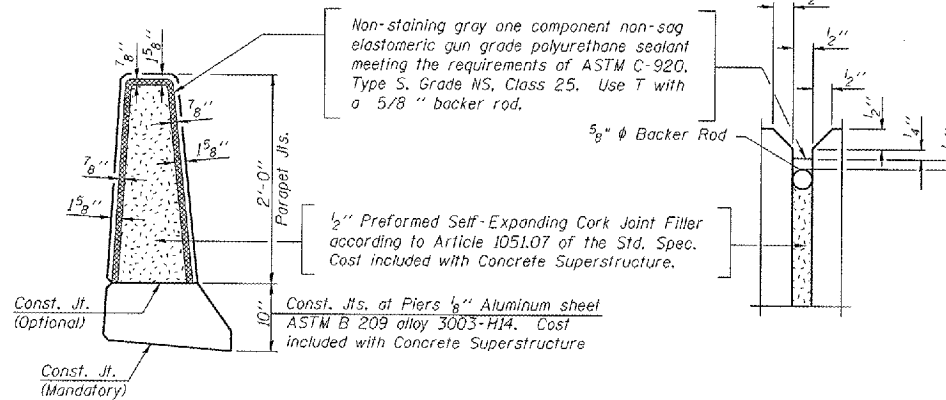


INSIDE ELEVATION OF PARAPET



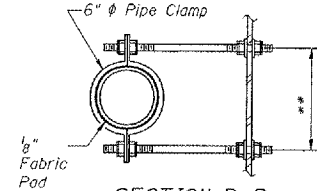
SECTION THRU PARAPET

Note: Floor drains need not be painted.
Fiberglass pipe shall conform to ASTM D2996 with short-time rupture strength hoop tensile stress of 30,000 psi minimum.

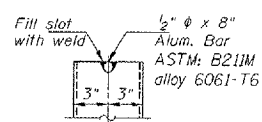


PARAPET JOINT DETAILS

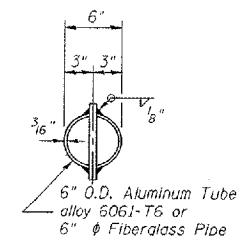
** Dimension as required by Pipe Clamp



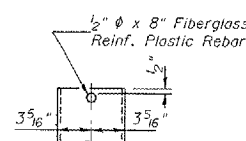
SECTION B-B



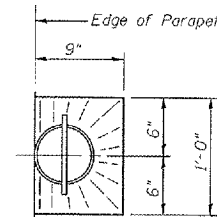
ALUMINUM TUBE



TOP PLAN (Showing Aluminum Tube)

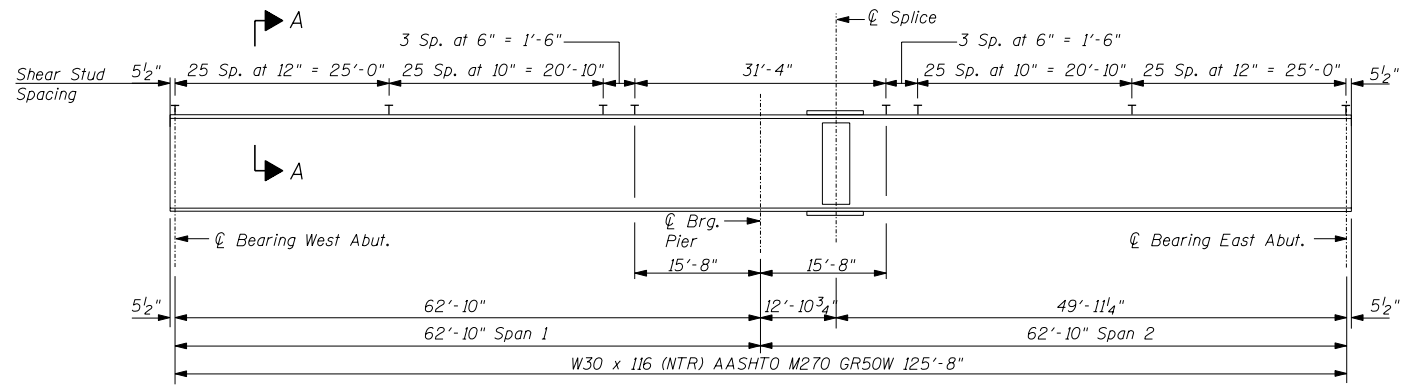


FIBERGLASS PIPE

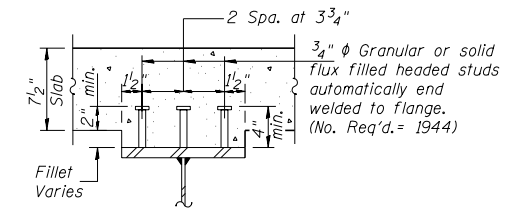


TOP PLAN

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	18
STA. 16+69.00		TO STA. 16+99.00		
FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT				
SHEET 7 OF 19 SHEETS				



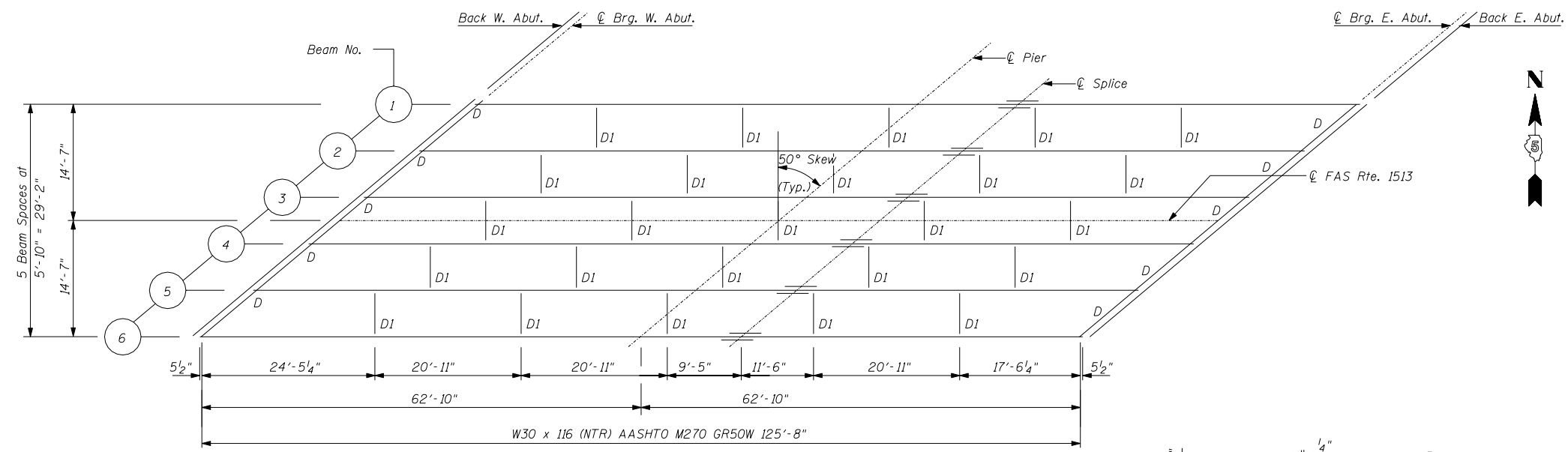
ELEVATION



SECTION A-A

TOP OF BEAM ELEVATIONS
(For Fabrication Only)

	W. Abut.	℄ Pier	℄ Splice	E. Abut.
Beam 1	693.90	693.53	693.44	693.28
Beam 2	694.04	693.67	693.58	693.42
Beam 3	694.17	693.80	693.71	693.55
Beam 4	694.20	693.84	693.75	693.58
Beam 5	694.14	693.78	693.69	693.52
Beam 6	694.06	693.71	693.62	693.45



FRAMING PLAN

INTERIOR BEAM MOMENT TABLE

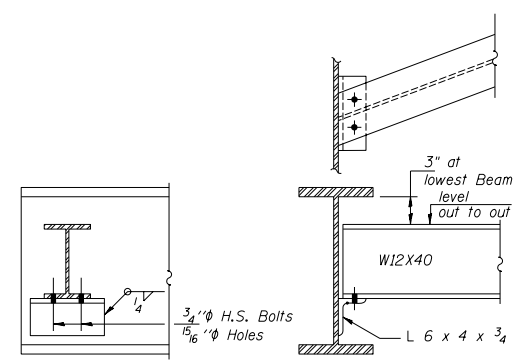
	0.4 Sp. 1 & 0.6 Sp. 2	Pier
Is (in ⁴)	4930	4930
Ic (n) (in ⁴)	12787	
Ic (3n) (in ⁴)	9382	
Ss (in ³)	329	329
Sc (n) (in ³)	477	
Sc (3n) (in ³)	430	
Z (in ³)		
℄ (K/ft.)	0.708	1.117
M℄ (K)	198	495
s℄ (K/ft.)	0.409	
Ms℄ (K)	136	
M℄ (K)	390	204
M (Imp) (K)	104	55
℄ ₃ (M℄ + I) (K)	824	432
Ma (K)	1506	1206
Mu (K)	1852	
fs℄ non-comp (k.s.i.)	7.3	18.2
fs℄ (comp) (k.s.i.)	3.8	
fs ₃ (℄ + I) (k.s.i.)	20.8	15.8
fs (Overload) (k.s.i.)	31.9	33.9
fs (Total) (k.s.i.)		44.1
VR (K)	43.2	

INTERIOR BEAM REACTION TABLE

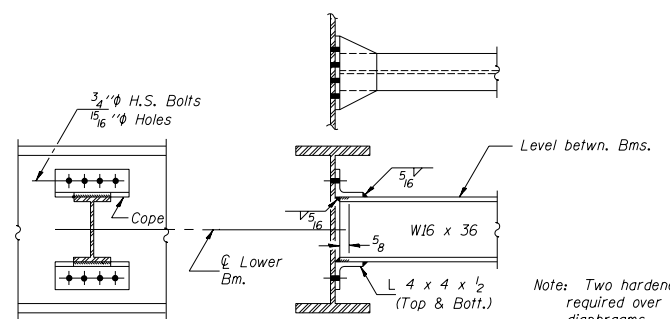
	Abut.	Pier
R℄ (k)	27.3	86.0
R℄ (k)	33.7	41.0
Imp. (k)	9.0	8.2
R (Total) (k)	70.0	135.2

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
 Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)
 VR is the maximum Live Load + Impact shear range in span.
 Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
 Ma (Applied Moment) = 1.3[M℄ + Ms℄ + ℄₃(M℄ + M_{imp})].
 Mu is the Full Plastic Moment Capacity for Compact, Braced Section.
 fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + ℄₃(M℄ + M_{imp}).
 fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℄ + Ms℄ + ℄₃(M℄ + M_{imp})].

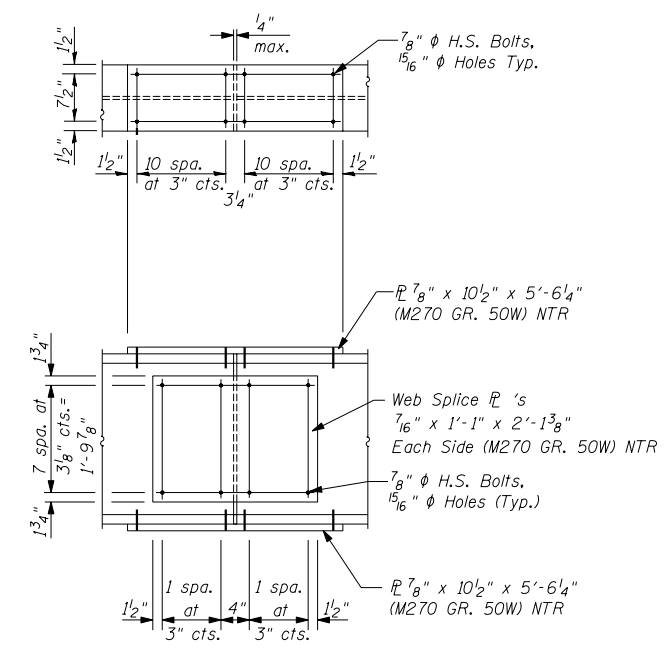
Notes:
 Steel designated with N.T.R. shall conform to the requirements for Notch Toughness (Zone 2).
 All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



END DIAPHRAGM D
(10 Required)



INTERIOR DIAPHRAGM D1
(25 Required)



SPlice DETAIL

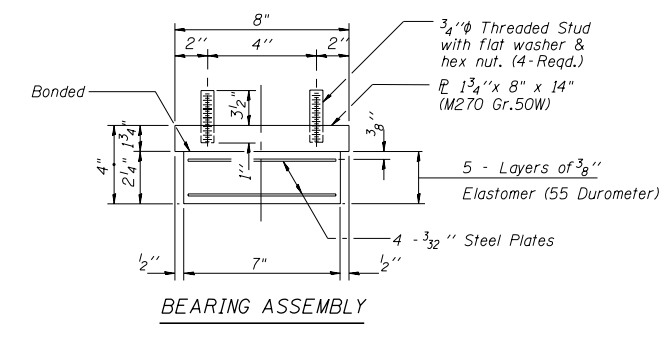
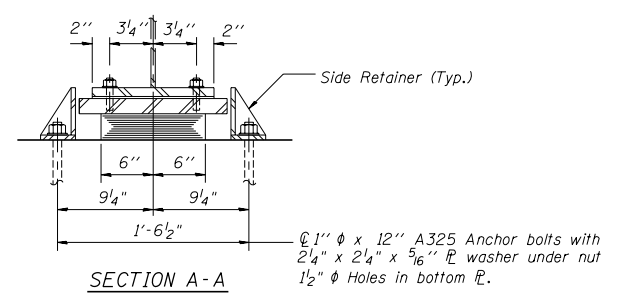
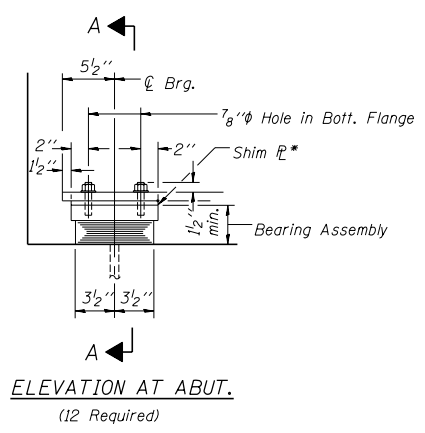
REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 FRAMING PLAN
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

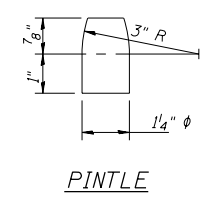
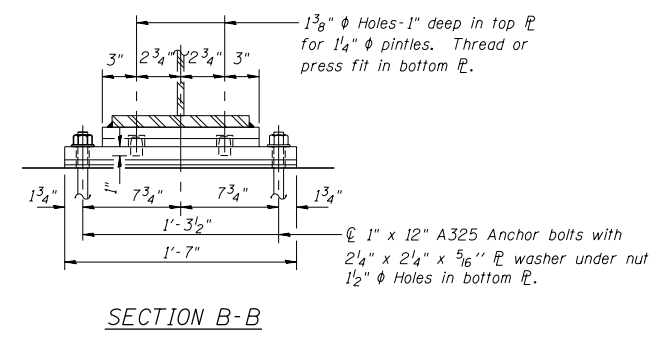
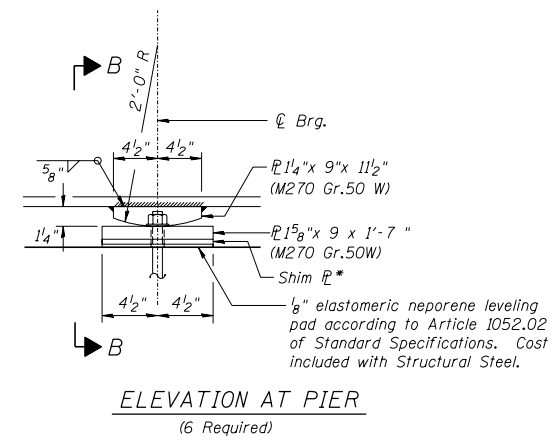
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 PLOT DATE = 7/19/2007 3:58:13 PM
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	19
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	
SHEET 8 OF 19 SHEETS				



Note: Shim plates shall not be placed under Bearing Assembly.

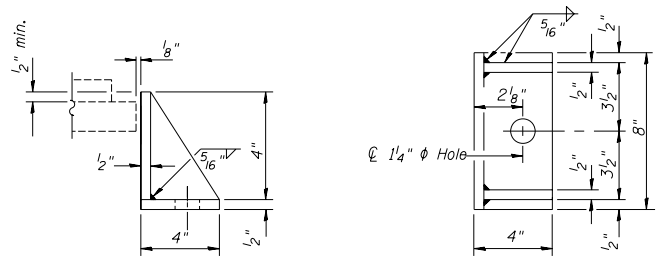
TYPE I ELASTOMERIC EXP. BRG.



Notes:
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

See sheet 15 of 19 for Anchor Bolt installation.

FIXED BEARING



SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
(24 Required)

* SHIM PL REQUIRED IN ADDITION TO THE TWO 1/8" ADJUSTING SHIMS

Location	Beam No.	Shim PL Thickness (in.)
West Abutment	Beam 3	3/8"
	Beam 4	3/4"
East Abutment	Beam 3	3/8"
	Beam 4	3/4"
Pier	Beam 3	3/8"
	Beam 4	3/4"

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12

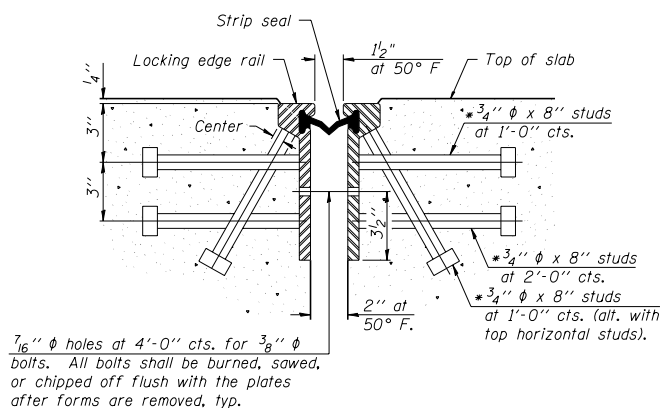
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STEEL AND BEARING DETAILS
IL ROUTE 10 OVER CAMP CREEK
FAS RTE. 1513 SECTION 5BR-1
STA. 16+69.00
CHAMPAIGN COUNTY STR. 010-0275
SCALE: N.T.S. DRAWN BY LP
DATE MAY 2007 CHECKED BY MJS

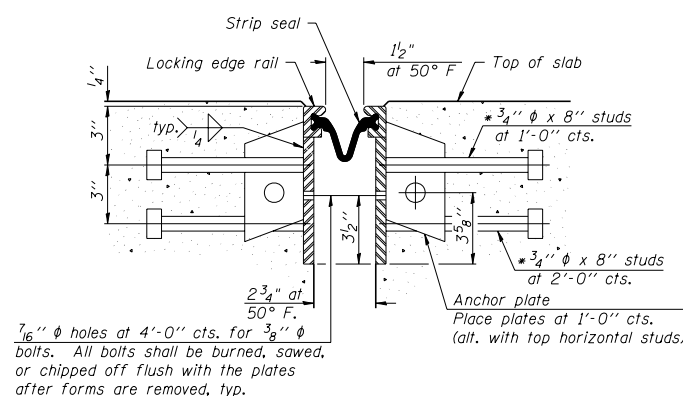
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	20

STA.	TO STA.
FED. ROAD DIST. NO. 5	ILLINOIS FED. AID PROJECT
SHEET 9 OF 19 SHEETS	

* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

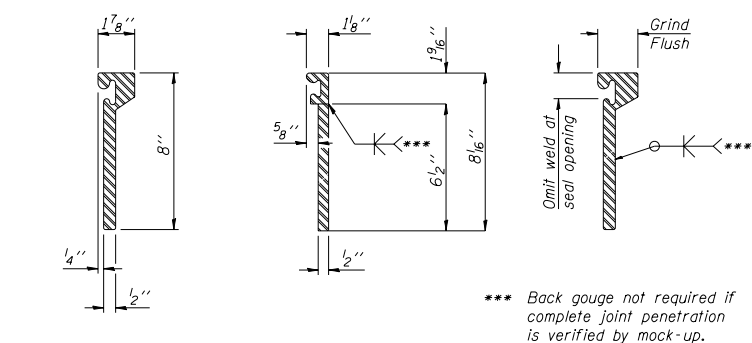


SECTION THRU ROLLED RAIL JOINT



SECTION THRU WELDED RAIL JOINT

Notes:
 The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
 The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.
 The manufacturer's recommended installation methods shall be followed.
 The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.
 All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.



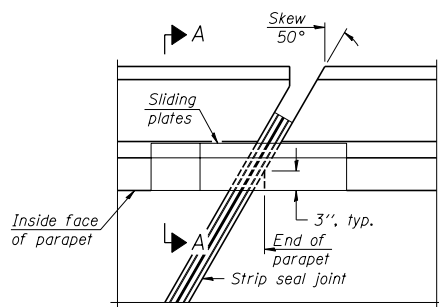
ROLLED (EXTRUDED) RAIL WELDED RAIL

*** Back gauge not required if complete joint penetration is verified by mock-up.

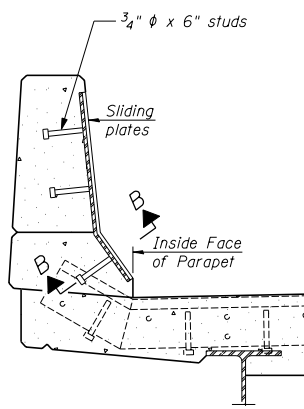
LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.

LOCKING EDGE RAILS

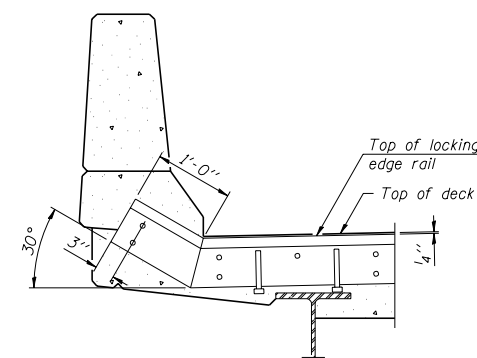


PLAN

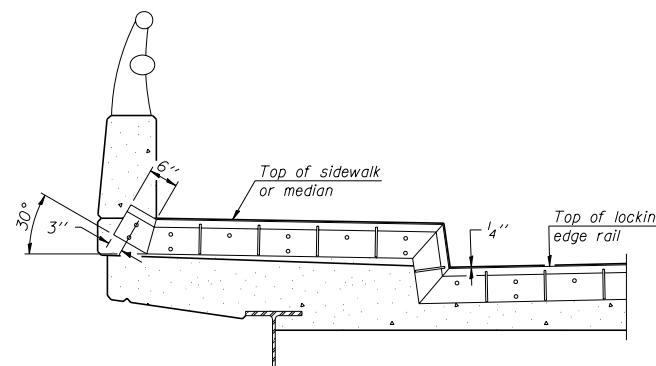


SECTION A-A

POINT BLOCK DETAILS (for skews > 30°)



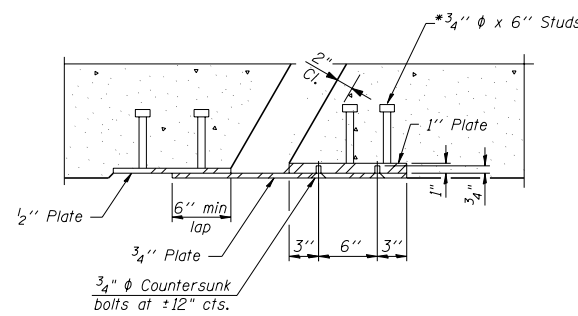
AT PARAPET



AT SIDEWALK OR MEDIAN

Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.

TYPICAL END TREATMENTS



SECTION B-B

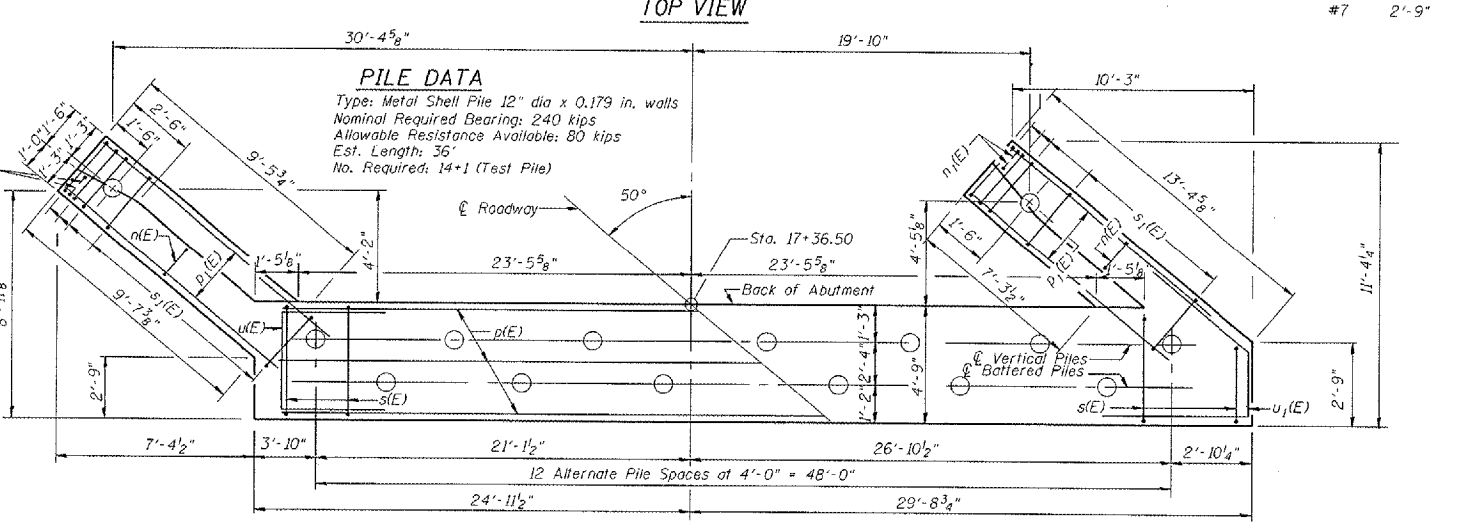
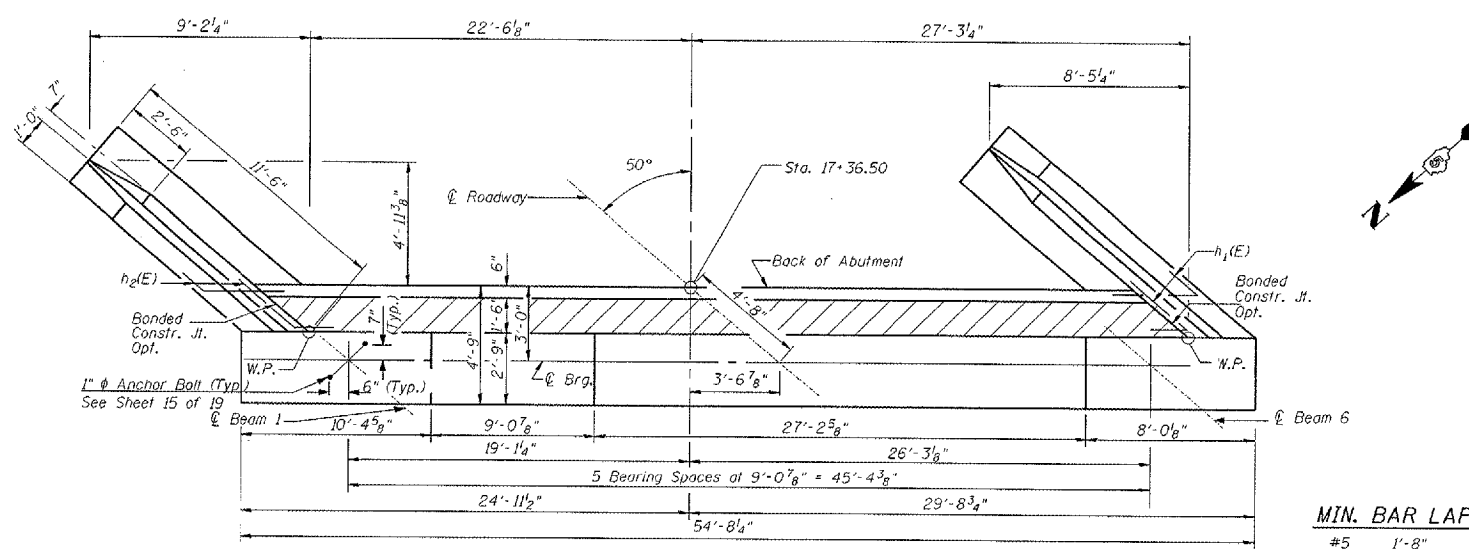
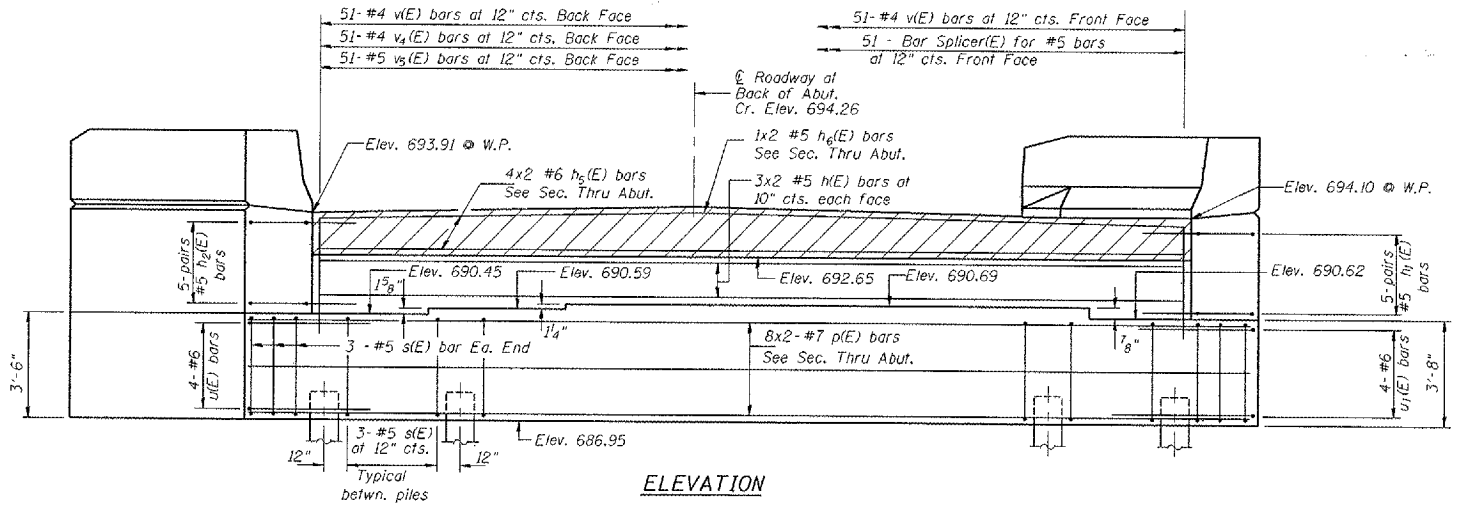
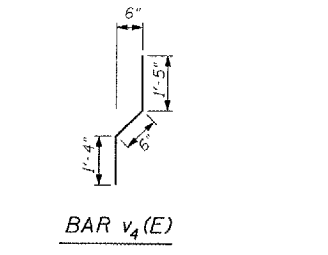
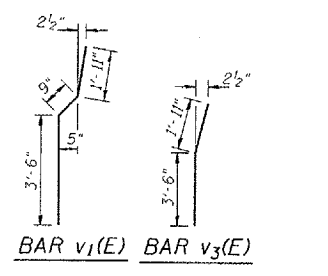
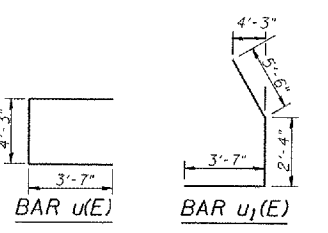
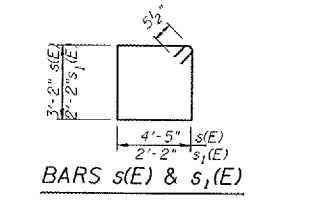
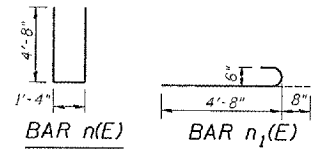
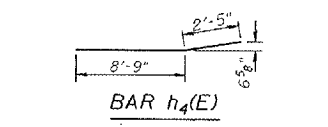
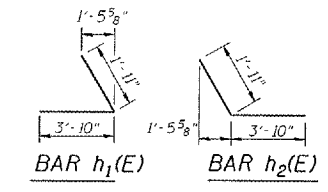
BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	104

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 PREFORMED JOINT STRIP SEAL
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY GEW
 DATE MAY 2007 CHECKED BY MJS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	21
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		



**EAST ABUTMENT
BILL OF MATERIAL**

Bar No.	Size	Length (ft.)	Shape
n(E)	#5	26'-6"	
n1(E)	#5	5'-9"	
n2(E)	#5	5'-9"	
n3(E)	#4	12'-10"	
n4(E)	#4	11'-2"	
n5(E)	#6	25'-9"	
n6(E)	#5	25'-9"	
n7(E)	#4	9'-4"	
n8(E)	#4	11'-2"	
n9(E)	#6	10'-8"	
n10(E)	#6	5'-4"	
p(E)	#7	28'-6"	
p1(E)	#7	11'-5"	
s(E)	#5	16'-1"	
s1(E)	#5	9'-7"	
u(E)	#6	11'-5"	
u1(E)	#6	11'-5"	
v(E)	#4	4'-8"	
v1(E)	#6	6'-2"	
v2(E)	#6	6'-0"	
v3(E)	#6	5'-5"	
v4(E)	#4	3'-3"	
v5(E)	#5	2'-6"	
Structure Excavation	Cu Yd.	170	
Concrete Structures	Cu Yd.	53.1	
Reinforcement Bars	Pound	4990	
Epoxy Coated			
Concrete Sealer	Sq. Ft.	150	
Furnishing Metal Shell Piles, 12"x0.175"	Ft.	504	
Driving Piles	Ft.	504	
Test Pile Metal Shell	Each	1	
Porous Granular Embankment (Special)	Cu Yd.	61	

MIN. BAR LAP

#5	1'-8"
#6	2'-0"
#7	2'-9"

- For details of Bar Splices See Sheet 16 of 19
- For Wingwall Details and Section thru Abutment see Sheet 12 of 19.
- Hatched area to be poured after Superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure.
- Space reinforcement in cap to miss anchor bolts.
- Pour steps monolithically with cap.
- Quantity of concrete in end post included with Concrete Superstructure on Sheet 6 of 19.
- Bars indicated thus 1X2 - #5 etc. Indicates 1 line of bars with 2 lengths per line.

REVISIONS	NAME	DATE

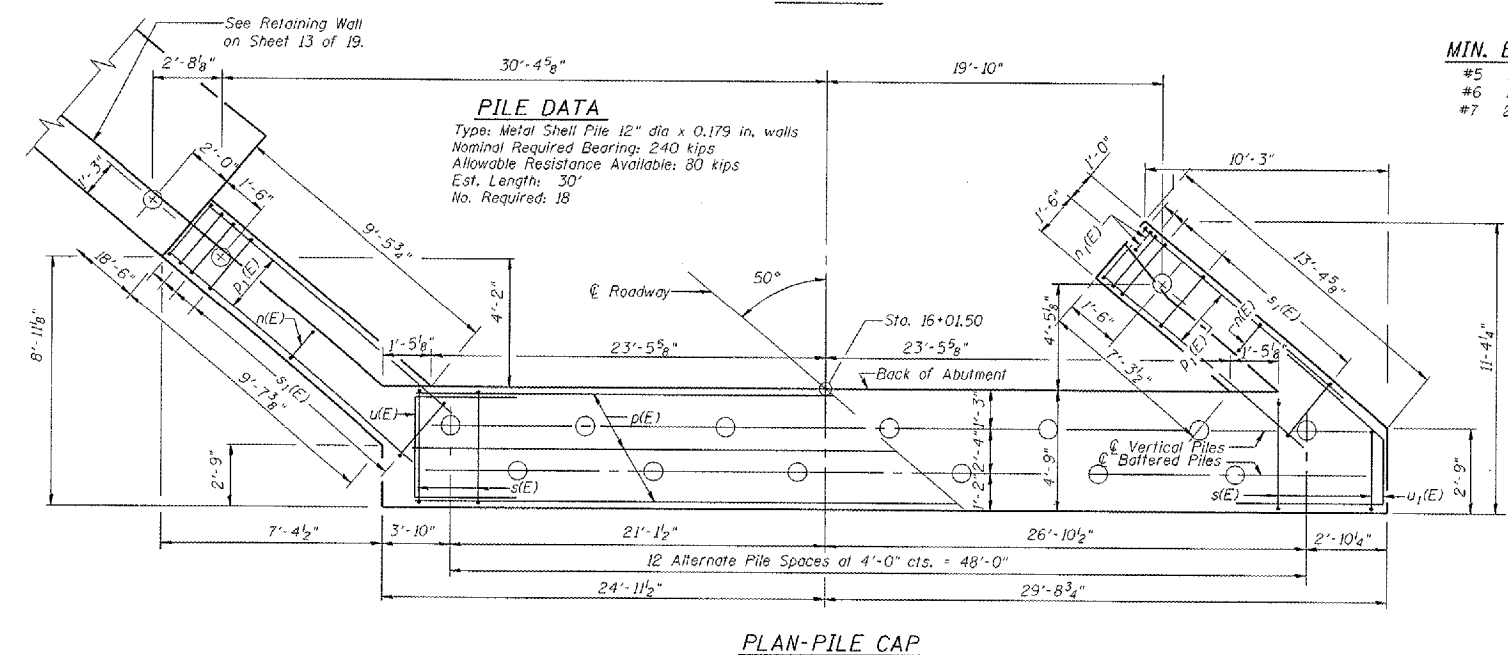
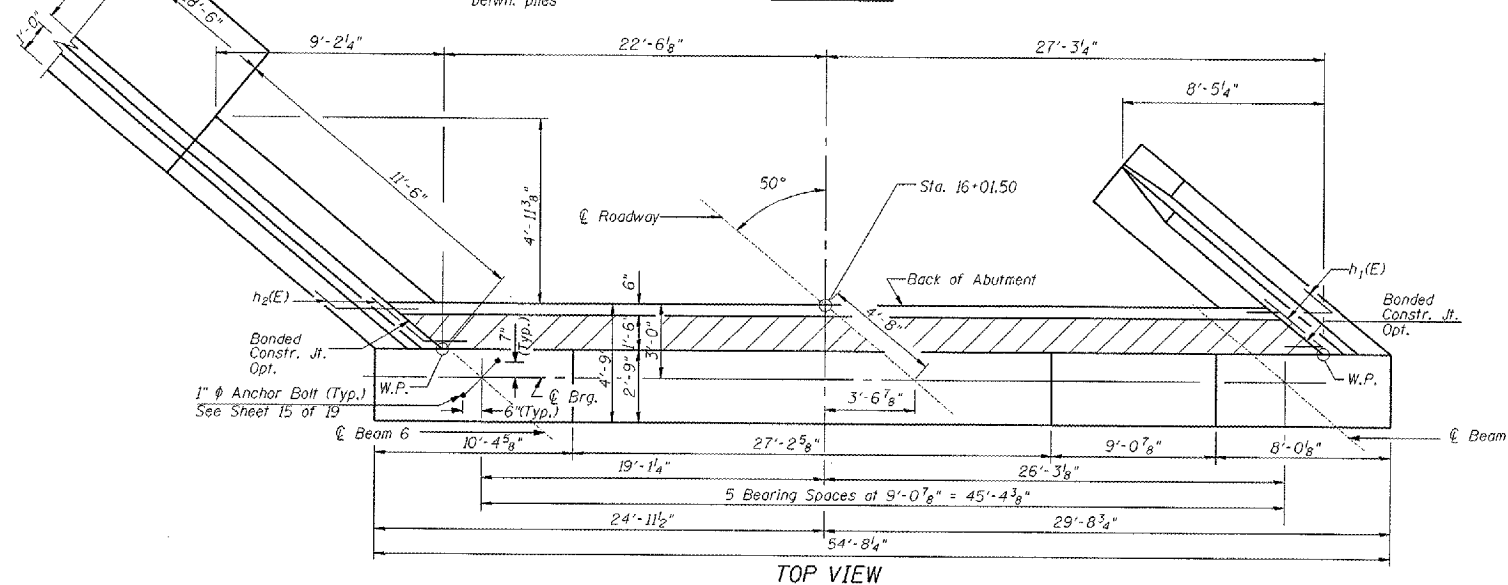
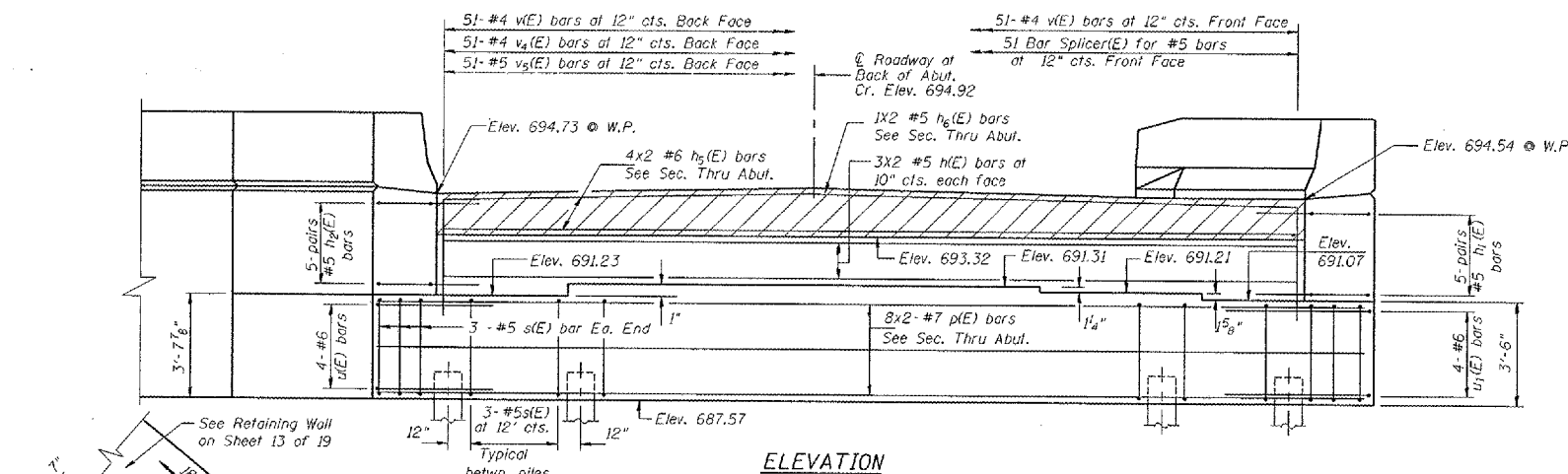
ILLINOIS DEPARTMENT OF TRANSPORTATION
EAST ABUTMENT DETAILS
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

THE PROJ. # 2165075-02
 PLOT DATE: 5/26/2007 11:58:08 AM
 FILE NAME: s:\PROJECTS\2165075-02\5BR-1\2165075-02.dwg

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	22
STA.		TO STA.		
FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT				
SHEET 11 OF 19 SHEETS				

**WEST ABUTMENT
BILL OF MATERIAL**

Bar	No.	Size	Length (ft.)	Shape	
h(E)	12	#5	26'-6"		
h ₁ (E)	10	#5	5'-9"		
h ₂ (E)	10	#5	5'-9"		
h ₃ (E)	9	#4	12'-10"		
h ₄ (E)	7	#4	11'-2"		
h ₅ (E)	8	#6	25'-9"		
h ₆ (E)	2	#5	25'-9"		
h ₇ (E)	11	#4	18'-2"		
h ₈ (E)	7	#4	18'-2"		
h ₁₀ (E)	2	#4	9'-4"		
h ₁₁ (E)	12	#4	11'-2"		
n(E)	41	#6	10'-8"		
n ₁ (E)	12	#6	5'-4"		
p(E)	16	#7	28'-6"		
p ₁ (E)	12	#7	11'-5"		
p ₂ (E)	8	#7	18'-2"		
s(E)	42	#5	16'-1"		
s ₁ (E)	26	#5	9'-7"		
s ₂ (E)	20	#5	15'-3"		
u(E)	4	#6	11'-5"		
u ₁ (E)	4	#6	11'-5"		
v(E)	102	#4	4'-8"		
v ₁ (E)	39	#6	6'-2"		
v ₂ (E)	46	#6	6'-0"		
v ₃ (E)	6	#6	5'-5"		
v ₄ (E)	51	#4	3'-3"		
v ₅ (E)	51	#5	2'-6"		
Structure Excavation				Cu. Yd.	210
Concrete Structures				Cu. Yd.	67.3
Reinforcement Bars, Epoxy Coated				Pound	6675
Furnishing Metal Shell Piles, 12"x0.179"				Ft	540
Driving Piles				Ft	540
Porous Granular Embankment (Special)				Cu. Yd.	61
Concrete Sealer				Sq. Ft.	150



PILE DATA
 Type: Metal Shell Pile 12" dia x 0.179 in. walls
 Nominal Required Bearing: 240 kips
 Allowable Resistance Available: 80 kips
 Est. Length: 30'
 No. Required: 18

MIN. BAR LAP
 #5 1'-8"
 #6 2'-0"
 #7 2'-9"

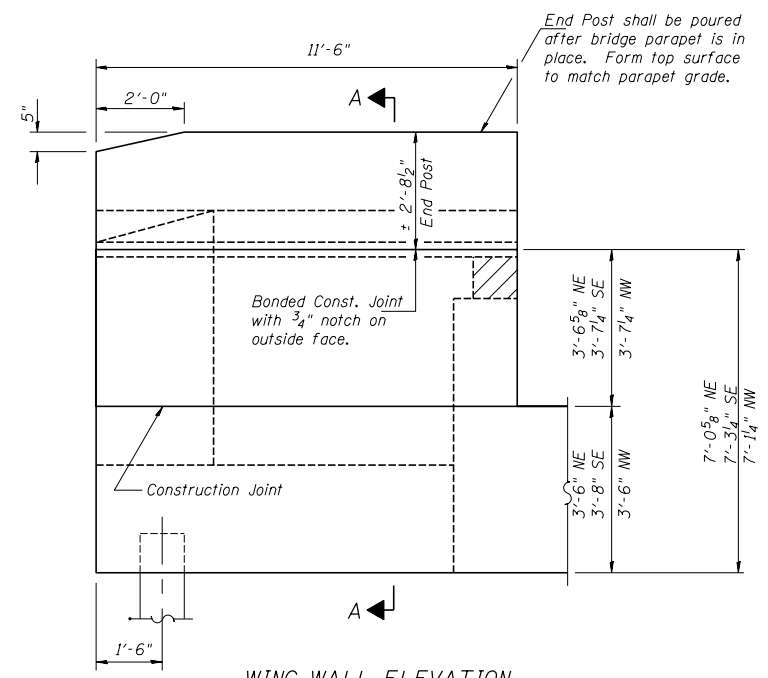
1. Expose and demolish the existing roofing as required in order to drive the piles. Cost included with "Driving Piles".
2. For details of Bar Splices See Sheet 16 of 19
3. Hatched area to be poured after Superstructure falsework has been removed. Quantity of concrete included with Concrete Superstructure.
4. Space reinforcement in cap to miss anchor bolts.
5. Pour steps monolithically with cap.
6. Quantity of concrete in end post included with Concrete Superstructure on Sheet 6 of 19.
7. For North Wingwall Details and Section thru Abut. see Sheet 12 of 19.
For South Wingwall Details see Sheet 13 of 19.
8. Bars indicated thus 1x2-#5 etc indicates 1 line of bars with 2 lengths per line.

REVISIONS	
NAME	DATE

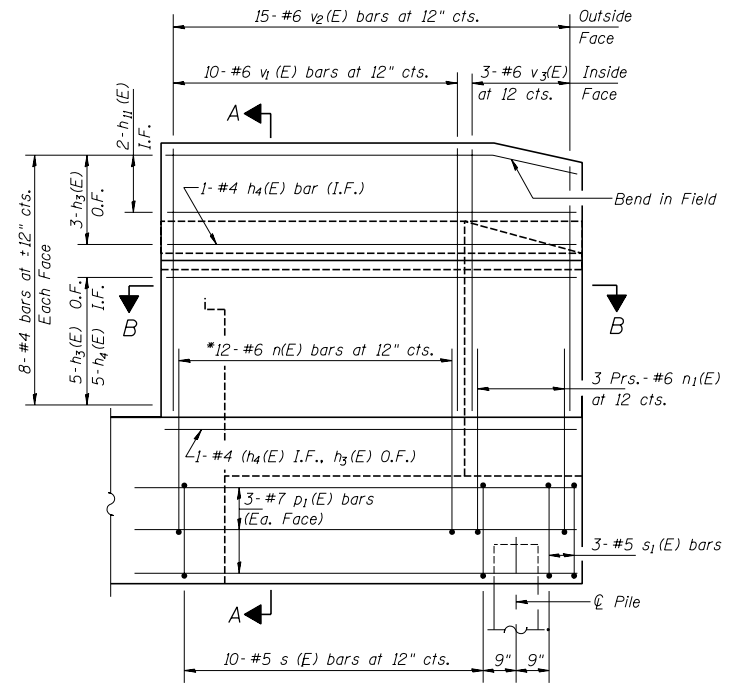
ILLINOIS DEPARTMENT OF TRANSPORTATION
WEST ABUTMENT DETAILS
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

TUC PROJ. 3106676-02 11/02/07 PM
 PLOT DATE: 05/09/07 11:56:00 AM
 FILE NAME: A:\PROJECTS\1513\5BR-1\5BR-1.dwg
 THE UPCHURCH GROUP, INC.

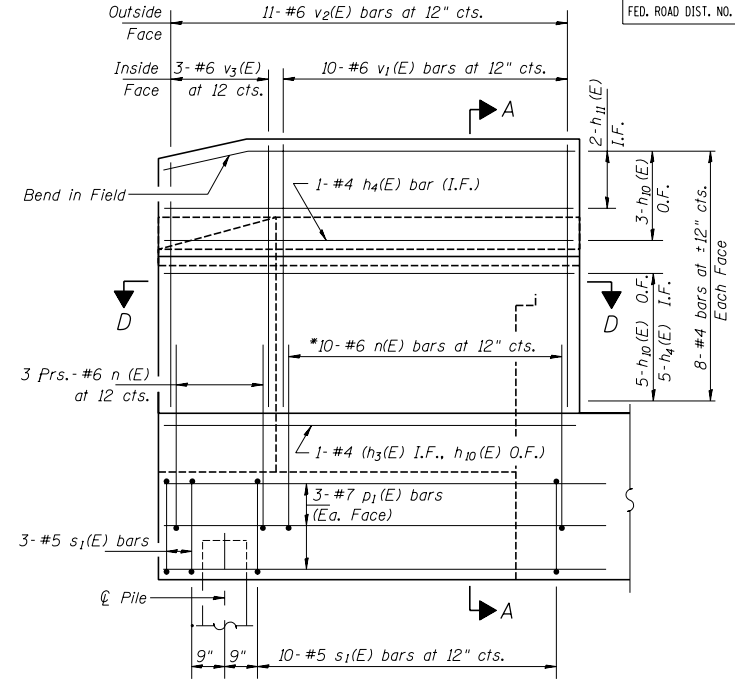
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	23
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		
SHEET 12 OF 19 SHEETS				



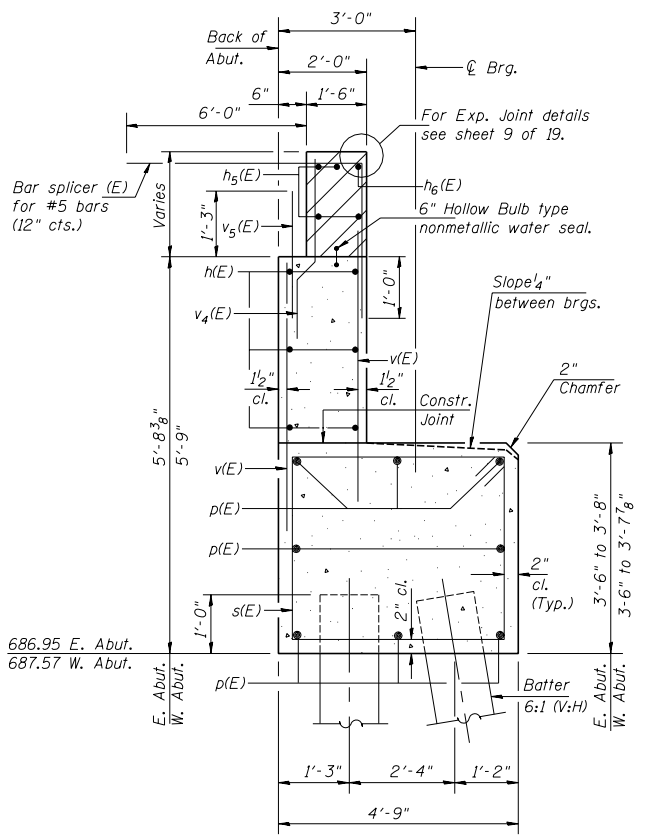
WING WALL ELEVATION
(Showing Dimensions along inside Face of Parapet)



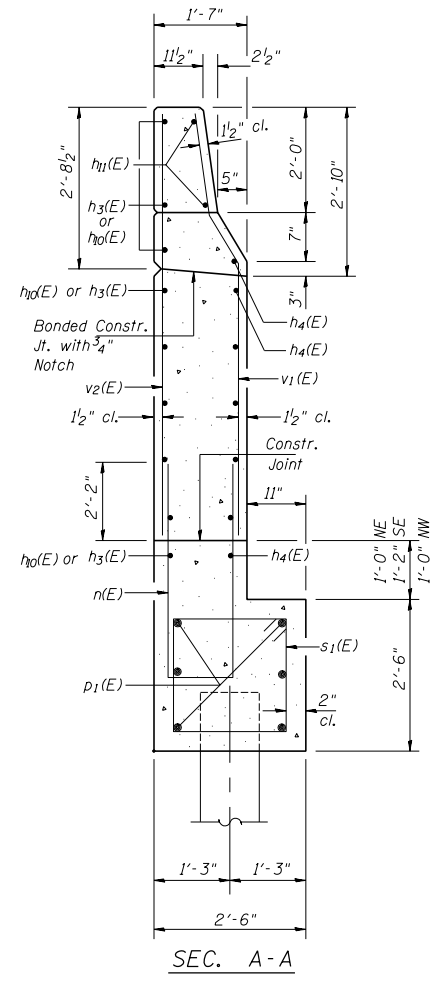
WING WALL ELEVATION
(Showing Reinforcement for SE and NW wingwall)



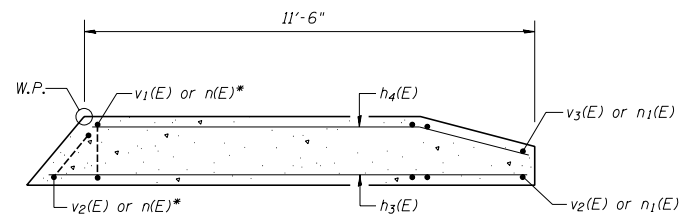
WING WALL ELEVATION
(Showing Reinforcement for SE and NE wingwall)



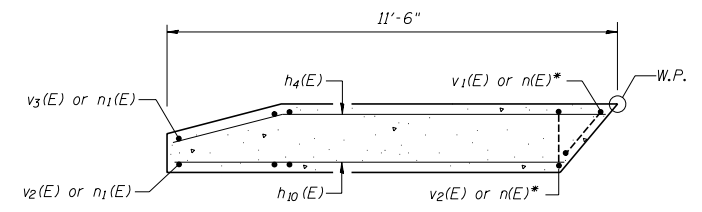
SEC. THRU ABUT.
(at Rt. L's)



SEC. A-A



SEC. B-B



SEC. D-D

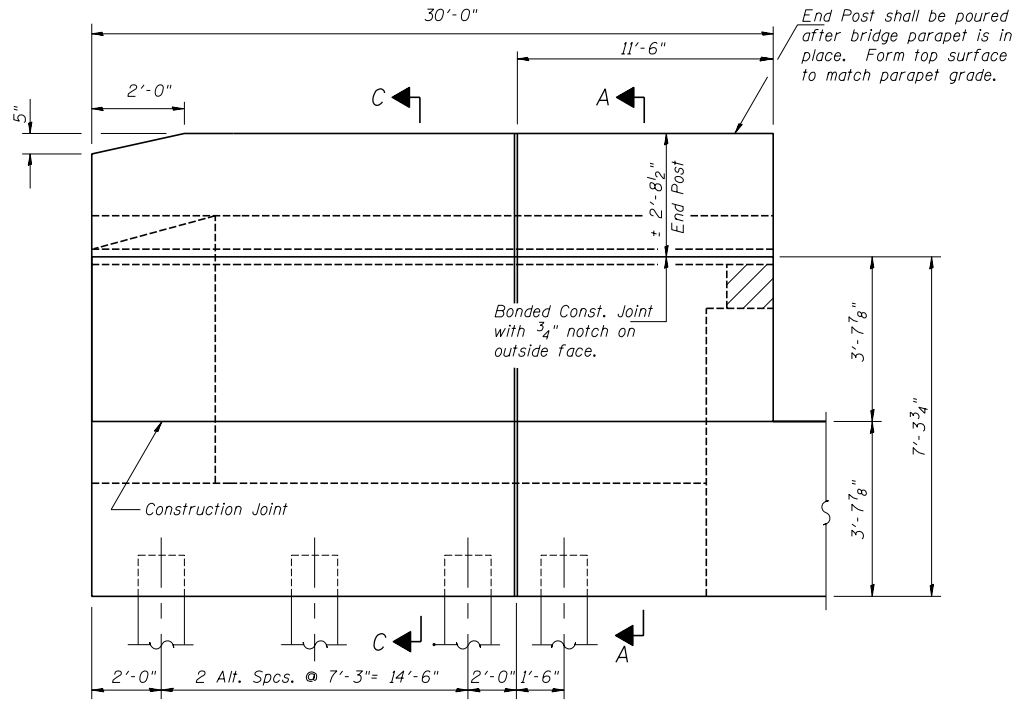
* Rotate n (E) bars to fit within wingwall

Notes: 1. Work this sheet with Sheet 10 and 11 of 19.

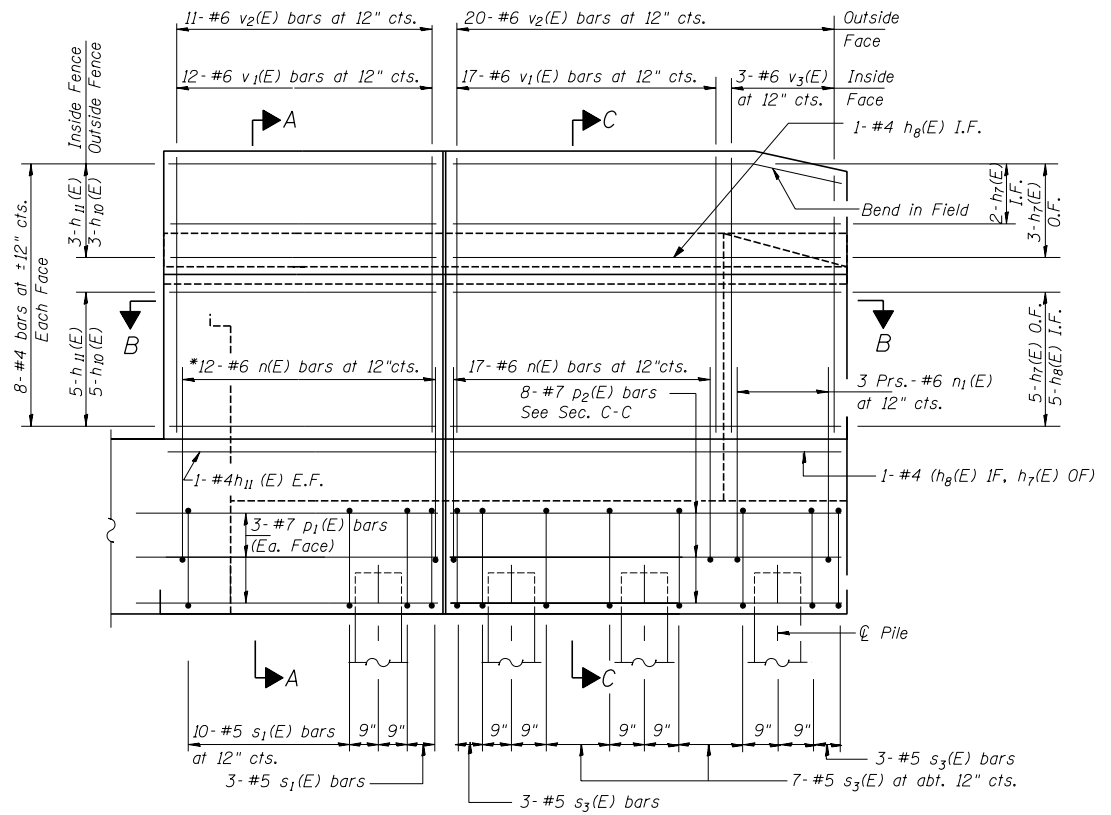
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WINGWALL DETAILS
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

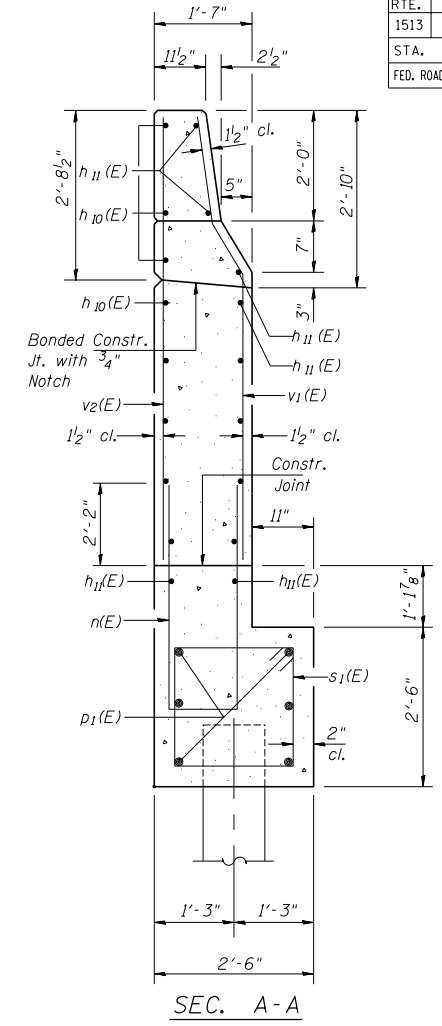
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	24
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		
SHEET 13 OF 19 SHEETS				



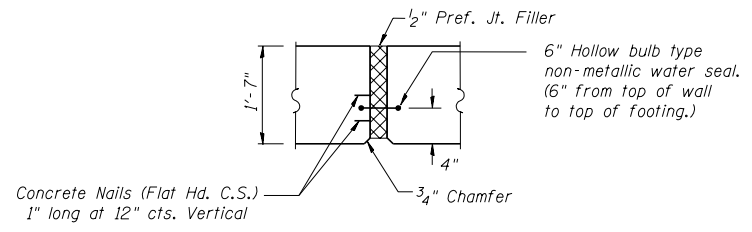
RETAINING WALL & WING WALL ELEVATION
(Showing Dimensions along inside Face of Parapet)



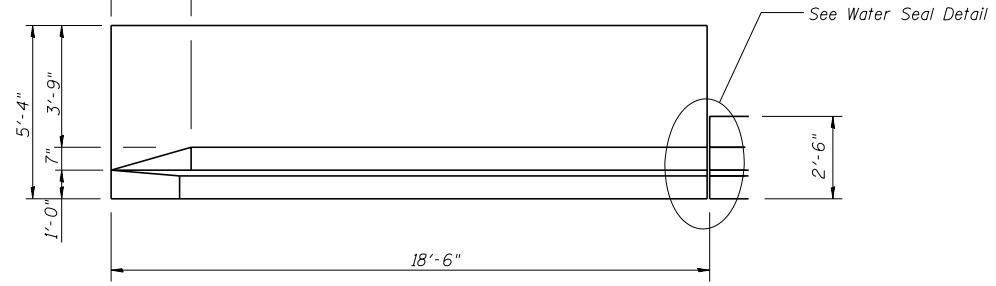
RETAINING WALL & WING WALL ELEVATION
Showing Reinforcement



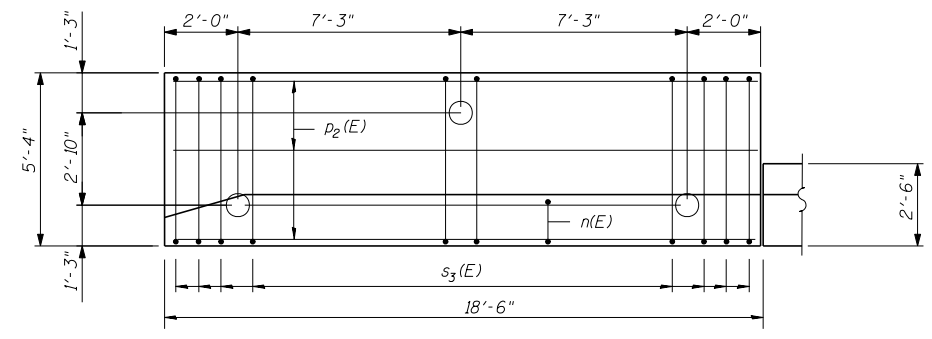
SEC. A-A



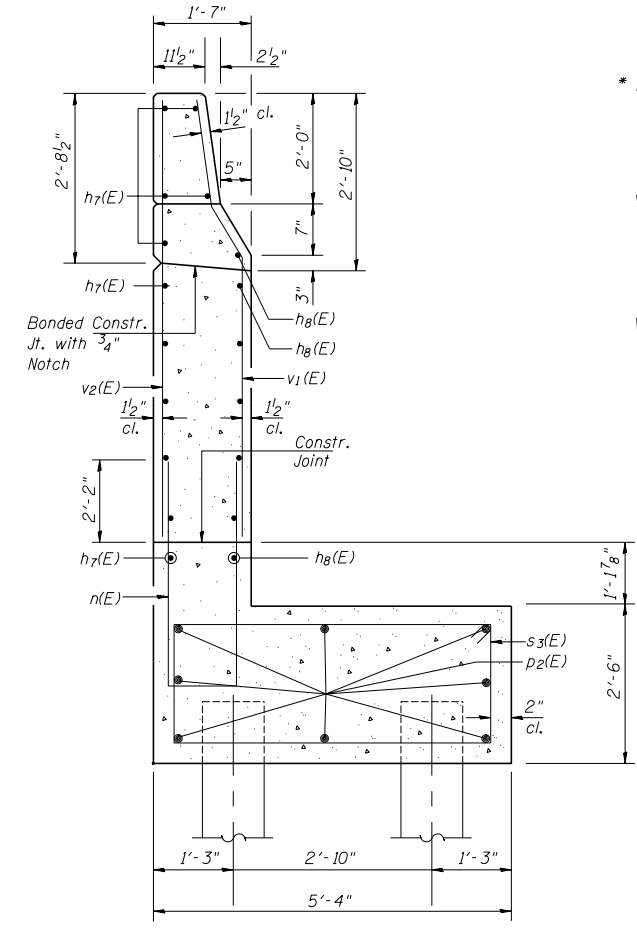
WATER SEAL DETAIL



RETAINING WALL - TOP VIEW

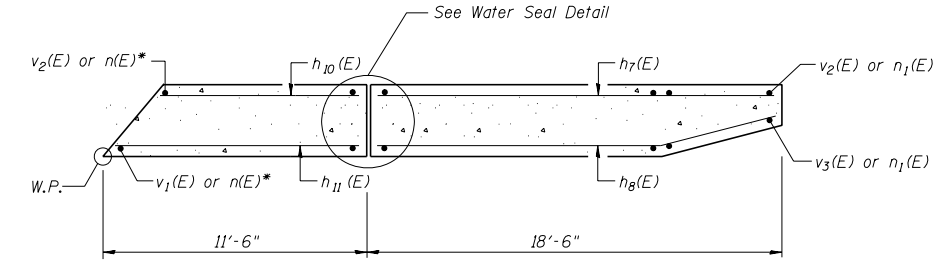


RETAINING WALL PLAN - PILE CAP



SEC. C-C

* Rotate n(E) bars to fit within wingwall



SEC. B-B

Notes:

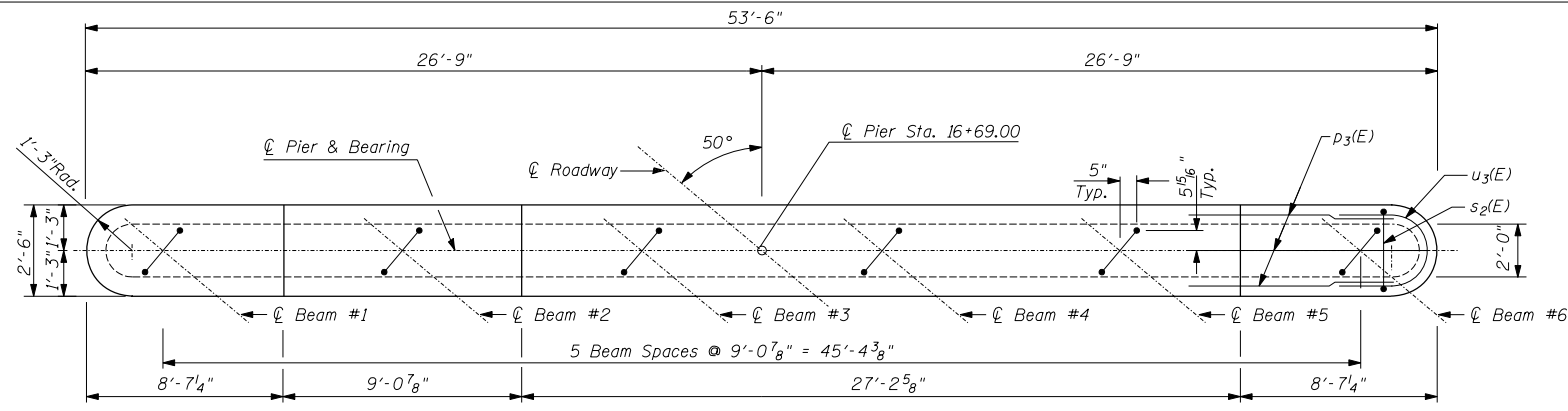
- Quantity of concrete in end post included with Concrete Superstructure on Sheet 6 of 19.
- See Sheet 2 of 19 for drainage details behind Retaining Wall.
- Work this sheet with Sheet 11 and 12 of 19.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SW WING WALL DETAILS
IL ROUTE 10 OVER CAMP CREEK
FAS RTE. 1513 SECTION 5BR-1
STA. 16+69.00
CHAMPAIGN COUNTY STR. 010-0275
SCALE: N.T.S. DRAWN BY LP
DATE: MAY 2007 CHECKED BY MJS

TUG PROJ. # 3106076-02
PLOT DATE 7/20/2007 11:02:21 AM
FILE NAME: _p1100\distrect5\Camp Creek Revised.WG 2\CAD001-estall.dgn

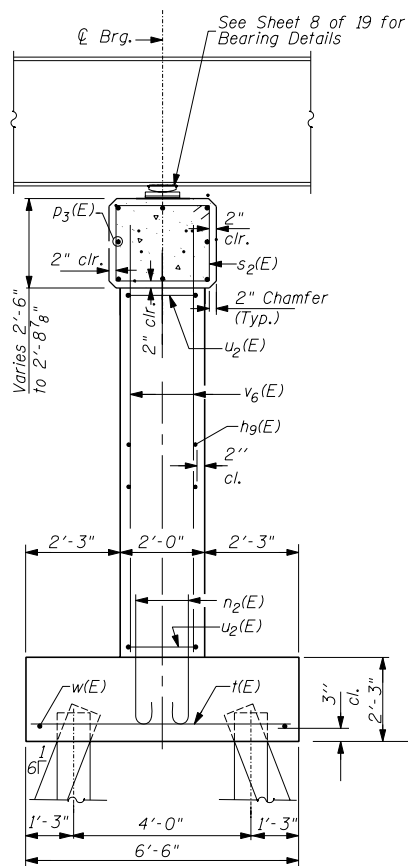
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		



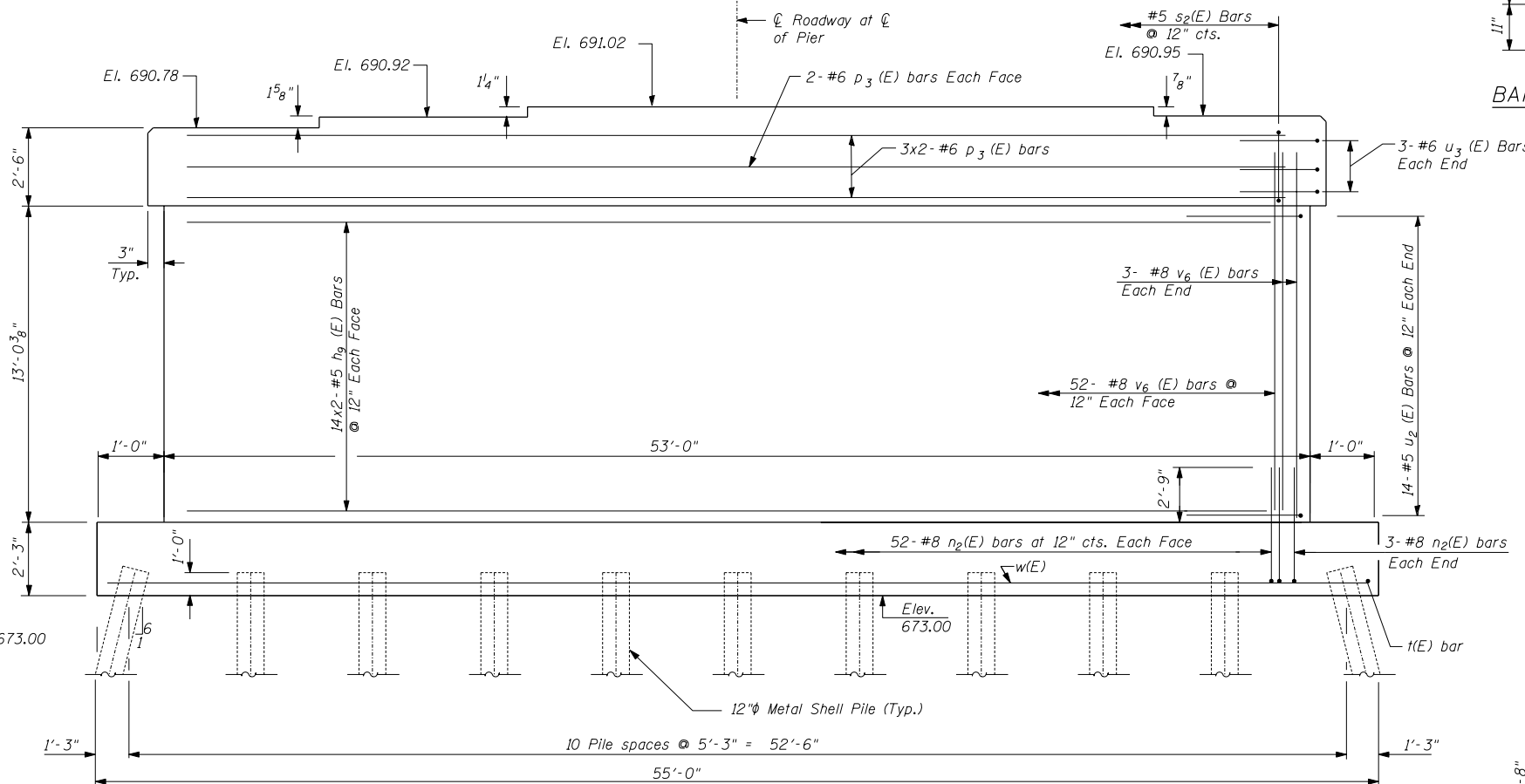
TOP PLAN

PILE DATA

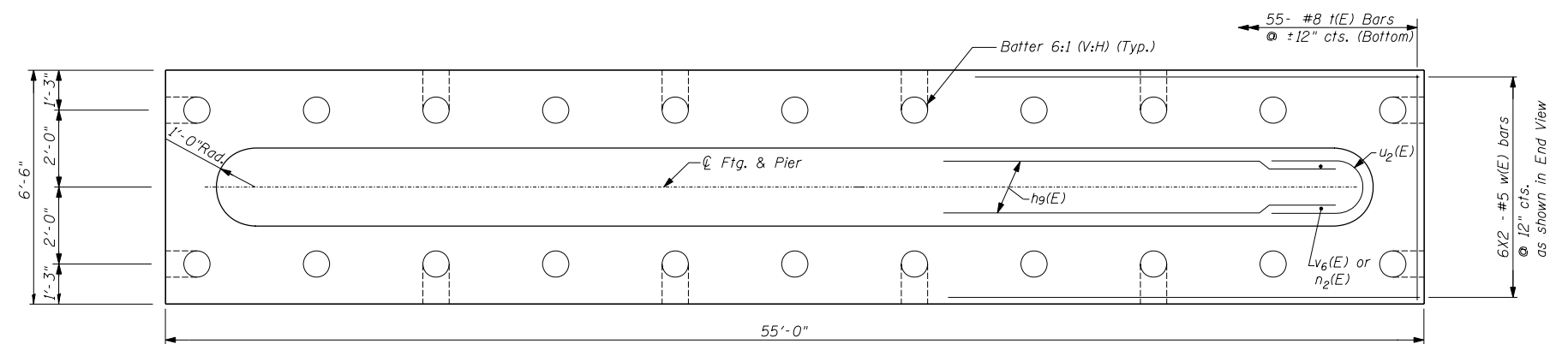
Type	Metal Shell - 12" dia. x 0.250" Walls w/ pile shoes
No. Required	21+1 Test Pile
Nominal Required Bearing	300 Kips
Allowable Resistance Available	80 Kips
Est. Length	40 Ft.



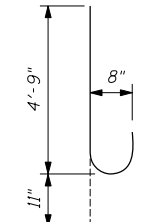
END VIEW



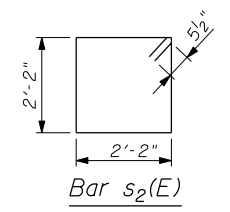
ELEVATION
(Looking East)



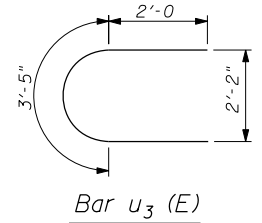
FOOTING PLAN



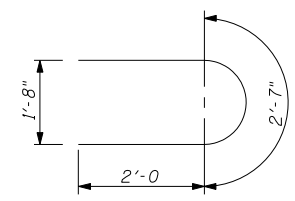
BAR n₂(E)



BAR s₂(E)



BAR u₃(E)



BAR u₂(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₉ (E)	56	#5	26'-4"	—
n ₂ (E)	110	#8	5'-8"	U
p ₃ (E)	16	#6	27'-7"	—
s ₂ (E)	52	#5	9'-7"	□
t(E)	55	#8	6'-0"	—
u ₂ (E)	28	#5	6'-7"	U
u ₃ (E)	6	#6	7'-5"	U
v ₆ (E)	110	#8	15'-2"	—
w(E)	12	#5	28'-2"	—
Cofferdam Excavation		Cu. Yd.	127	
Concrete Structures		Cu. Yd.	93.7	
Reinforcement Bars, Epoxy Coated		Lbs.	10335	
Furnishing Metal, Shell Piles, 12"x0.250"		Ft.	840	
Driving Piles		Ft.	840	
Test Pile Metal Shells		Each	1	
Pile Shoes		Each	22	

The Metal Shell Piles shall be according ASTM A 252 Grade 3.

Space reinforcement in cap to miss anchor bolts.

Pour steps monolithically with cap.

Bars indicated thus 14x2-#5 h₉(E) indicates 14 lines of bars with 2 lengths per line.

For Cofferdam Detail. See Sheet 2 of 19.

MIN. BAR LAP

- #5 1'-8"
- #6 2'-0"

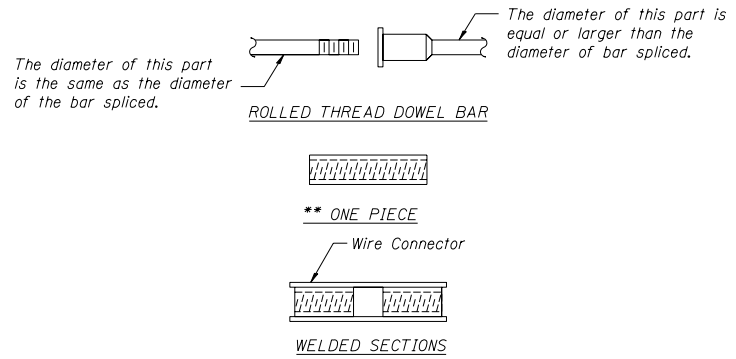
REVISIONS

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
PIER DETAILS
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

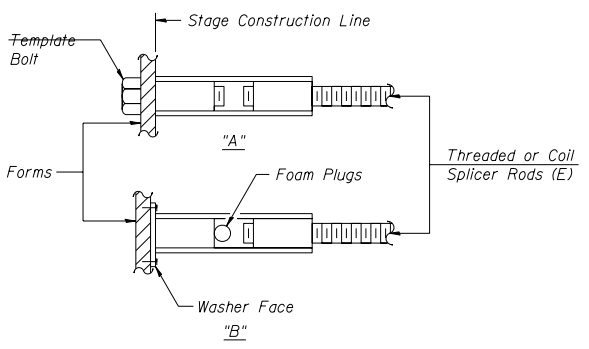
TUG PROJ. # 3106078-02
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	27
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	
SHEET 16 OF 19 SHEETS				



BAR SPLICER ASSEMBLY ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

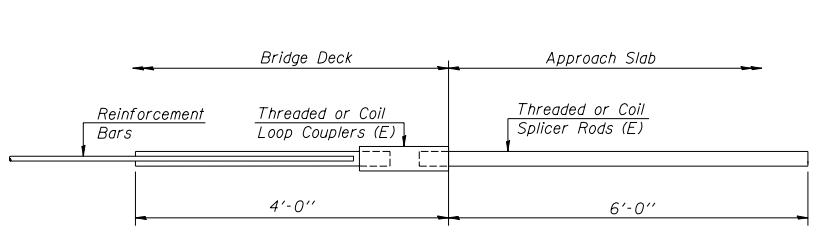
"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

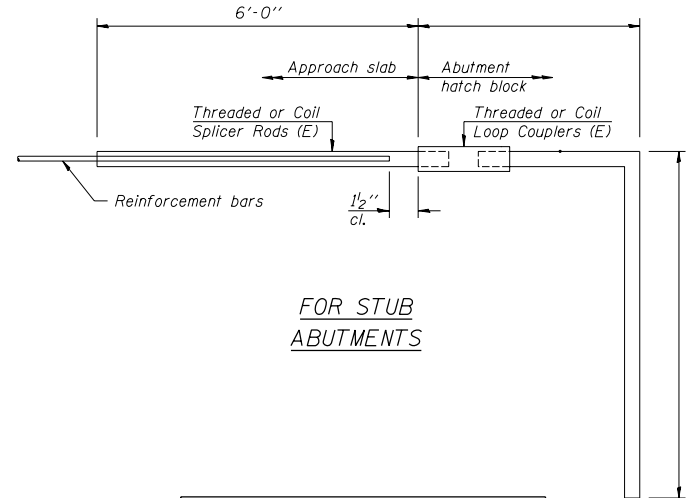
- ① Minimum Capacity = $1.25 \times f_y \times A_s$
 (Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_s$
 (Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_s = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



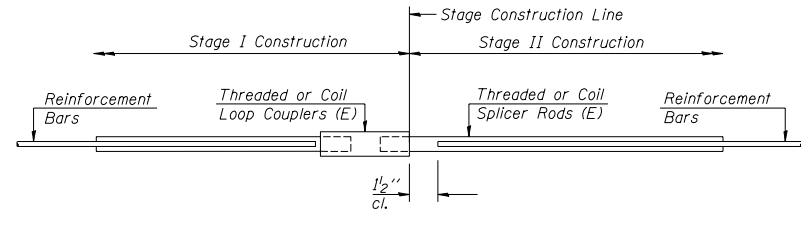
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = Void



FOR STUB ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 102



STANDARD

Bar Size	No. Assemblies Required	Location
Void	Void	Void

TUG PROJ. # 3106078-02
 PLOT DATE = 7/19/2007 4:08:28 PM
 FILE NAME = p:\1007\dist\15\Camp_Creek_Rev\std.MD_2\CADD\bar-splicr.dgn

BSD-1 11-1-06

REVISIONS	
NAME	DATE

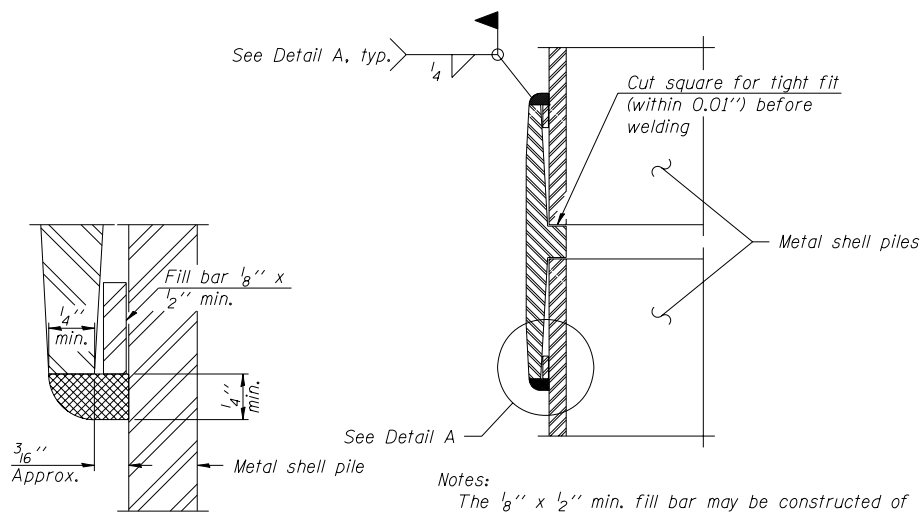
ILLINOIS DEPARTMENT OF TRANSPORTATION
BAR SPLICER
 IL ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	28
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		



METAL SHELL PILE TABLE

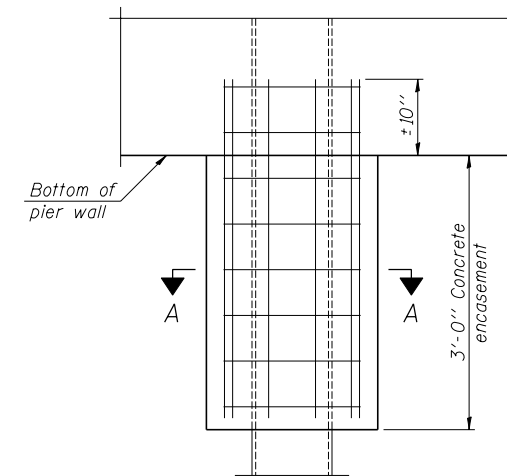
Designation	Wall thickness t	Weight per foot (Lbs./ft.)	Inside volume (yd. ³ /ft.)	Encasement diameter A
PP12	0.179"	22.60	0.0274	30"
PP12	0.250"	31.37	0.0267	30"
PP14	0.250"	36.71	0.0368	30"
PP14	0.312"	45.61	0.0361	30"



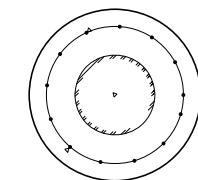
DETAIL A

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

WELDED COMMERCIAL SPLICE



ELEVATION

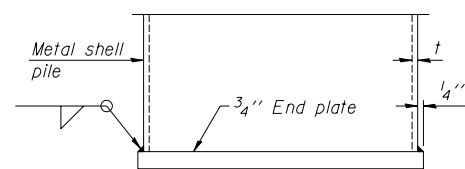


Metal shell pile

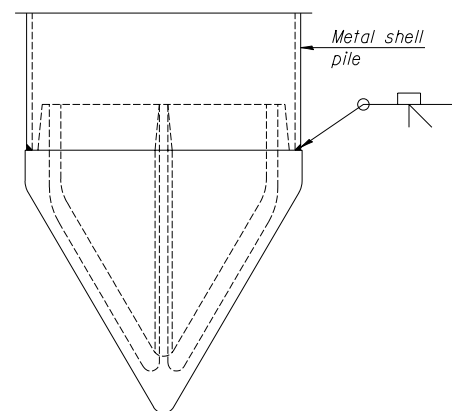
SECTION A-A

Notes:
 See Metal Shell Pile Table for dimension "A".
 Forms for encasement may be omitted when soil conditions permit.

CONCRETE ENCASEMENT AT PIERS

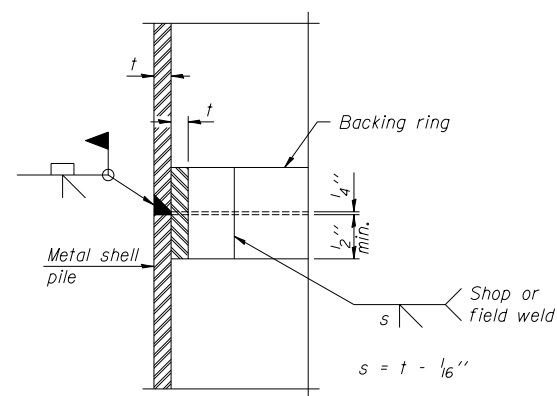


END PLATE ATTACHMENT



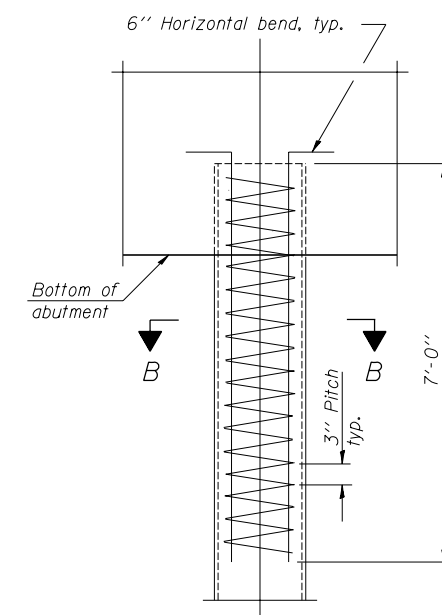
METAL SHELL PILE SHOE ATTACHMENT

At locations specified in the plans, the Contractor shall furnish metal shell pile shoes satisfying Art. 1006.05(e) of the standard specifications except that the cone angle shall be between 55 and 65 degrees from the horizontal and utilize an inside flange to allow a circumferential weld as shown above.

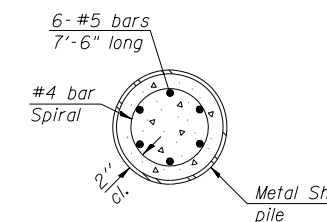


COMPLETE PENETRATION WELD SPLICE

Backing ring made from pile shell. Remove segment to allow reducing circumference and vertically rejoin with partial joint penetration weld.



ELEVATION



SECTION B-B

METAL SHELL REINFORCEMENT AT ABUTMENTS

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

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
CONCRETE PILES
 IL ROUTE 10 OVER CAMP CREEK
 FAS ROUTE 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY LP
 DATE MAY 2007 CHECKED BY MJS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	30
STA.		TO STA.		
FED. ROAD DIST. NO. 5		ILLINOIS	FED. AID PROJECT	
SHEET 19 OF 19 SHEETS				



SOIL BORING LOG

Date 10/9/01

ROUTE FAS Route 1513 (IL-10) DESCRIPTION 0.5 Miles West of Seymour LOGGED BY CNA
 SECTION 5 BR-1 LOCATION NW, SEC. 17, TWP. 19N, RNG. 7E, 3rd PM
 COUNTY Champaign DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	STATION	DEPTH (ft)	SPT (blows)	UNSAT. (%)	MOIST. (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	HRS.																																																																																																																																																																																																																
101-0275 (Prop)	16+69					681.80 ft	678.60 ft	679.4 ft	679.4 ft																																																																																																																																																																																																																			
BORING NO.	1 NW Abut.																																																																																																																																																																																																																											
Station	16+20																																																																																																																																																																																																																											
Offset	13.0 ft Lt.																																																																																																																																																																																																																											
Ground Surface Elev.	694.40 ft																																																																																																																																																																																																																											
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SOIL BORING LOG

Date 10/9/01

ROUTE FAS Route 1513 (IL-10) DESCRIPTION 0.5 Miles West of Seymour LOGGED BY CNA
 SECTION 5 BR-1 LOCATION NW, SEC. 17, TWP. 19N, RNG. 7E, 3rd PM
 COUNTY Champaign DRILLING METHOD Hollow Stem Auger HAMMER TYPE Automatic

STRUCT. NO.	STATION	DEPTH (ft)	SPT (blows)	UNSAT. (%)	MOIST. (%)	Surface Water Elev.	Stream Bed Elev.	Groundwater Elev.:	First Encounter	Upon Completion	After	HRS.																																																																																																																																																																																																																													
101-0275 (Prop)	16+69					681.80 ft	678.60 ft	679.4 ft	679.4 ft																																																																																																																																																																																																																																
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TUG PROJ. # 3106078-02
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REVISIONS	
NAME	DATE

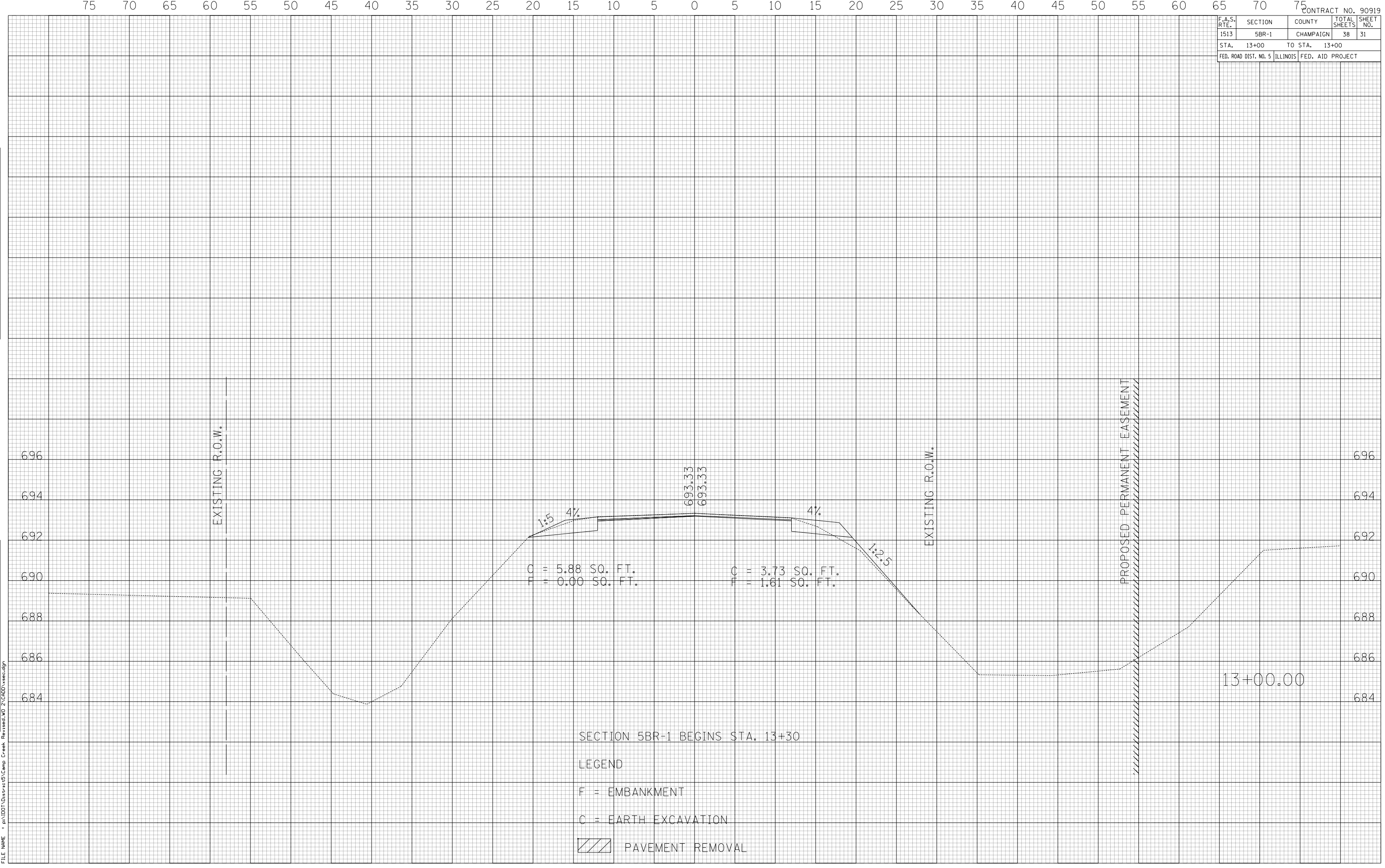
ILLINOIS DEPARTMENT OF TRANSPORTATION
 BORING DATA - SHEET 2
 IL. ROUTE 10 OVER CAMP CREEK
 FAS RTE. 1513 SECTION 5BR-1
 STA. 16+69.00
 CHAMPAIGN COUNTY STR. 010-0275
 SCALE: N.T.S. DRAWN BY JAU
 DATE MAY 2007 CHECKED BY MJS

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	31
STA. 13+00		TO STA. 13+00		
FED. ROAD DIST. NO. 5		ILLINOIS FED. AID PROJECT		

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

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

TUG PROJ. 3106078-02
 PLOT DATE 7/20/2007 8:07:21 AM
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SECTION 5BR-1 BEGINS STA. 13+30

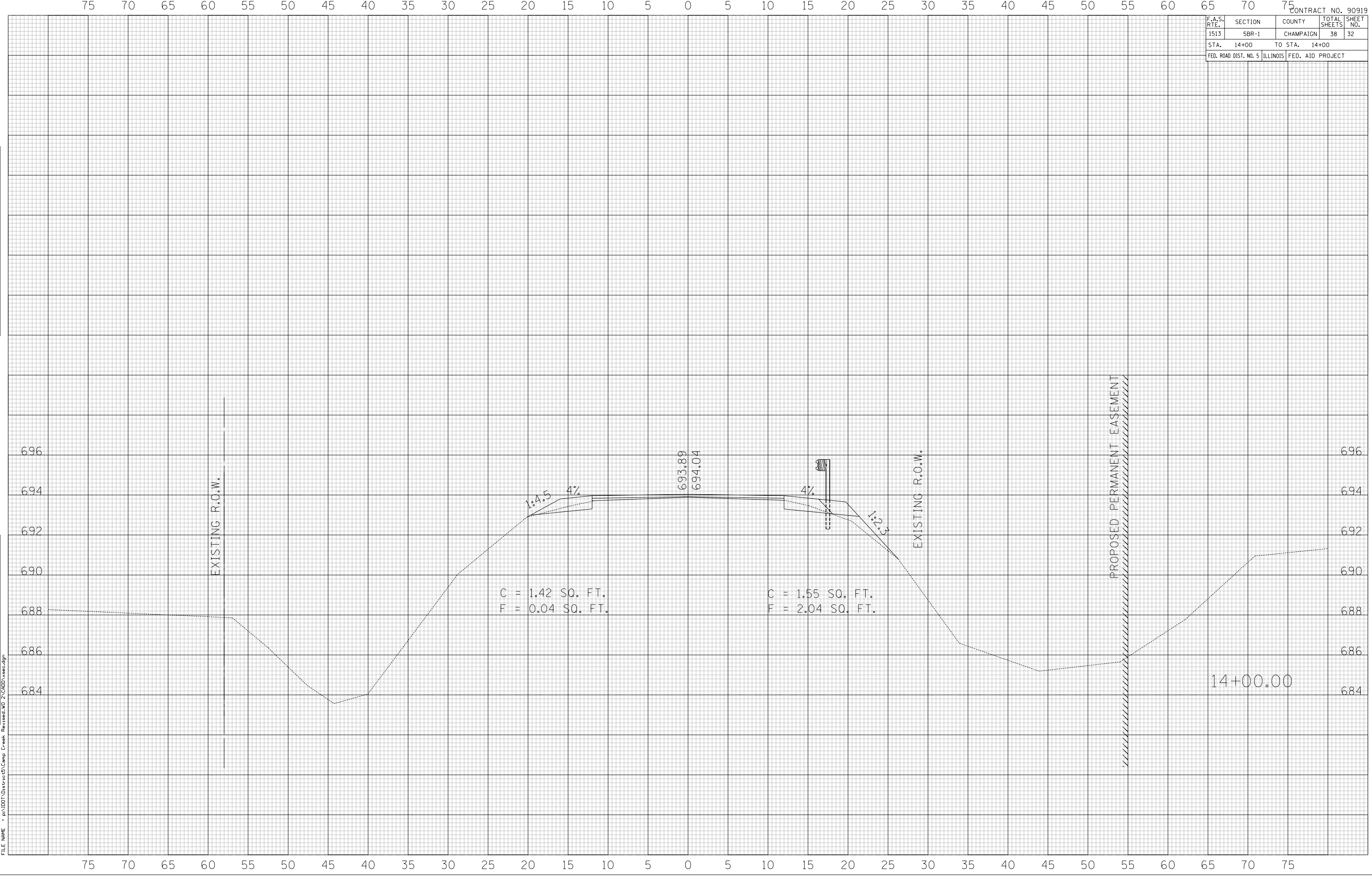
- LEGEND
- F = EMBANKMENT
 - C = EARTH EXCAVATION
 - PAVEMENT REMOVAL

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	32
STA. 14+00		TO STA. 14+00		
FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT				

FINAL SURVEY	DATE
NO. _____	_____
BY _____	
SURVEYED	
USING	
TEMPLATE	
AREAS CHECKED	
AREAS CHECKED	
NO. _____	

ORIGINAL SURVEY	DATE
NO. _____	_____
BY _____	
SURVEYED	
USING	
TEMPLATE	
AREAS CHECKED	
AREAS CHECKED	
NO. _____	

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 PLOT DATE 7/20/2007 8:08:49 AM
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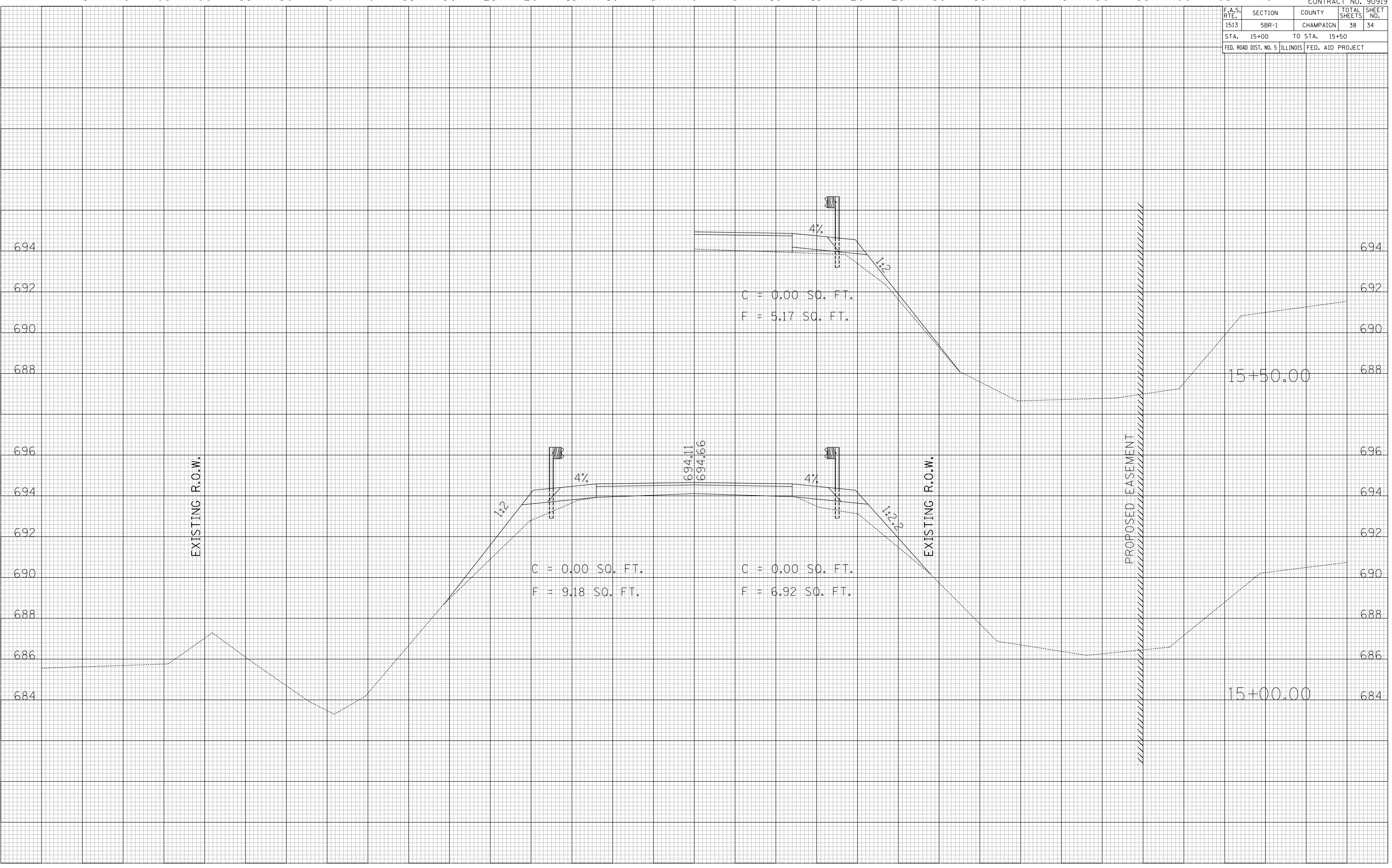


F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	34
STA. 15+00		TO STA. 15+50		
FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT				

DATE	BY
DATE	BY
DATE	BY
DATE	BY

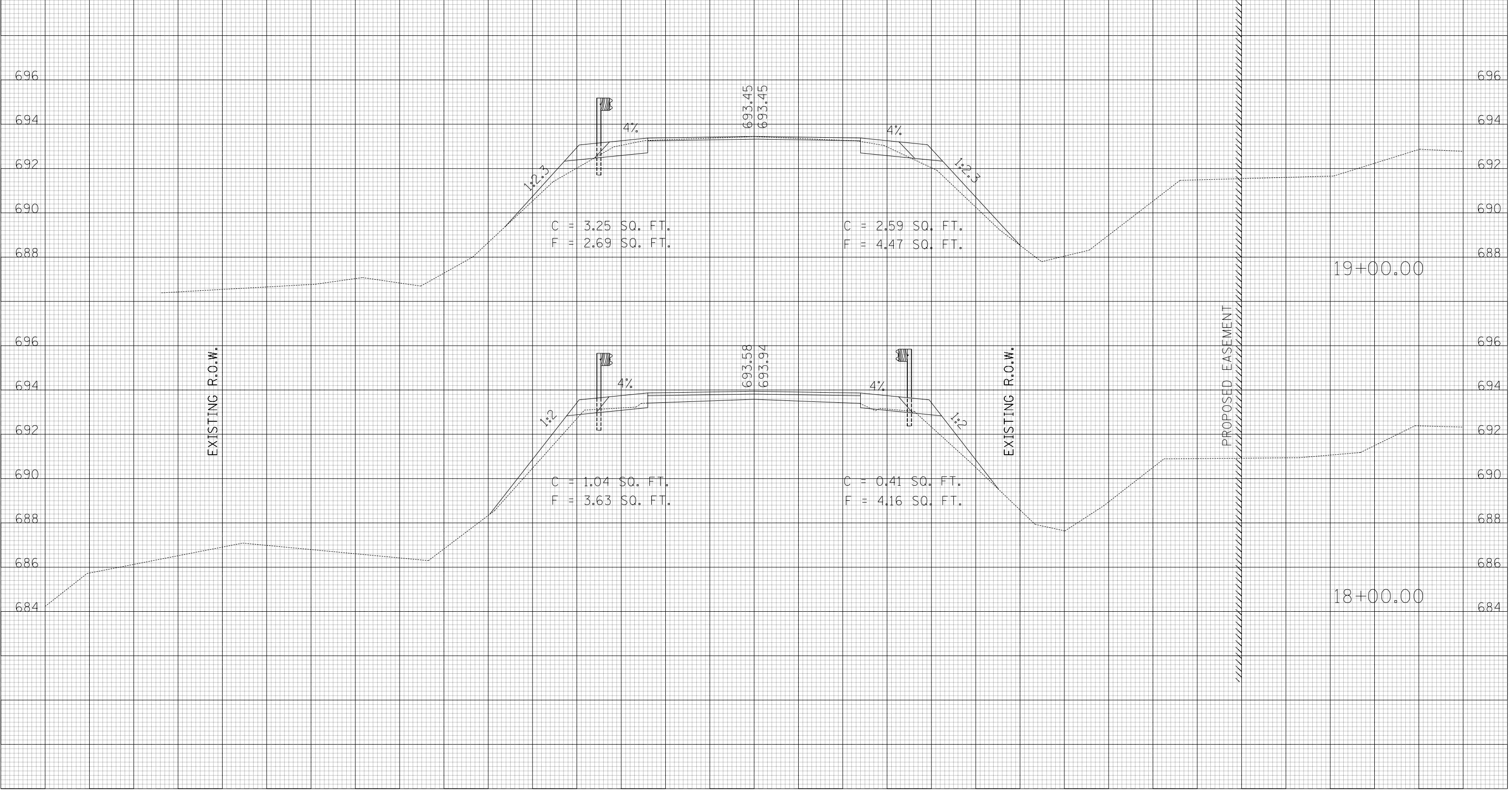
DATE	BY
DATE	BY
DATE	BY
DATE	BY

TUG PROJ. # 310607B-02
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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1513	5BR-1	CHAMPAIGN	38	37
STA. 18+00		TO STA. 19+00		
FED. ROAD DIST. NO. 5 ILLINOIS FED. AID PROJECT				

SECTION 5BR-1 ENDS STA. 18+70



DATE: _____ BY: _____
 SURVEYED: _____
 ORIGINAL SURVEY: _____
 NOTE BOOK: _____
 NO. _____

TUG PROJ. # 3106078-02
 PLOT DATE 7/20/2007 8:27:07 AM
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