

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

**PROPOSED  
 HIGHWAY PLANS**

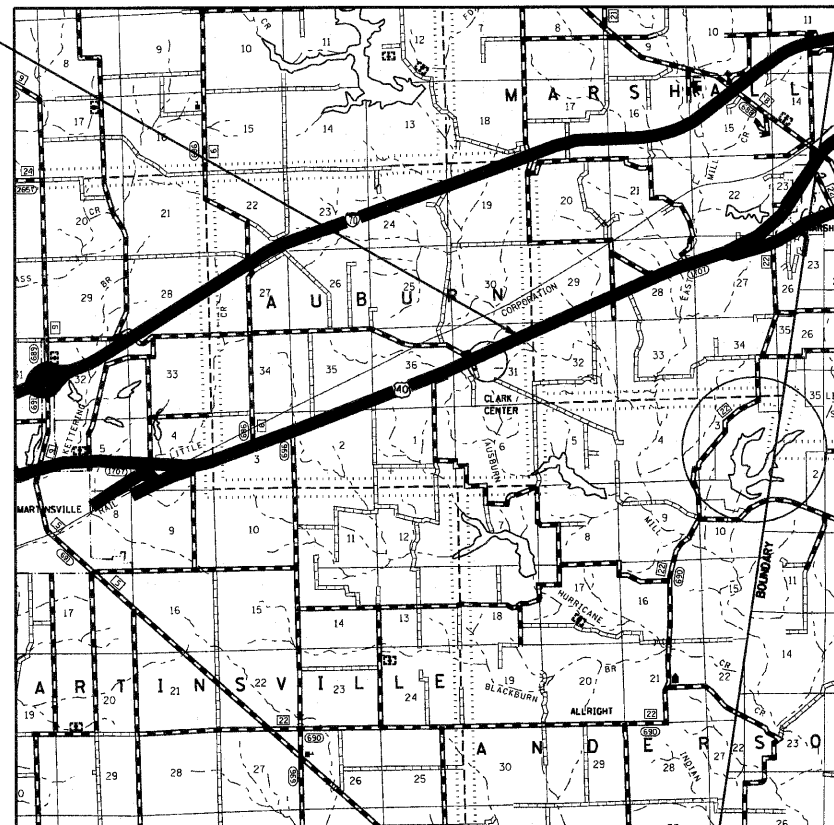
FAS ROUTE 1707 (US 40)  
 SECTION (BX-B)B-1  
 PROJECT: ACRS-1707(105)  
 BRIDGE REPLACEMENT  
 CLARK COUNTY

C-97-080-06

FOR INDEX OF SHEETS, SEE SHEET NO. 2

ADT (2008) = 2,950

EXISTING STRUCTURE  
 SN 012-0020  
 STA 3185+64.00  
 PROPOSED STRUCTURE  
 SN 012-0073  
 STA 3185+84.00

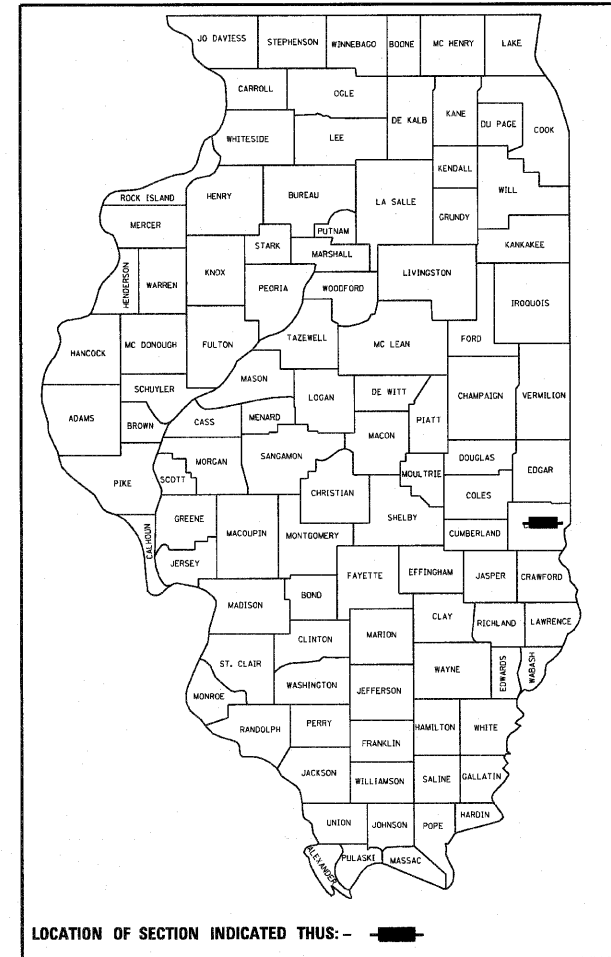


GROSS LENGTH = 815 FT. = 0.15 MILE  
 NET LENGTH = 815 FT. = 0.15 MILE

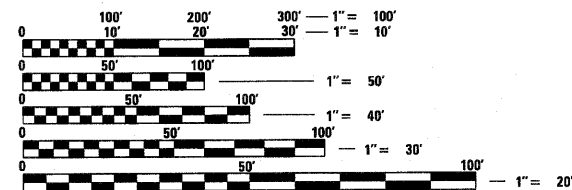
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1707	(BX-B)B-1	Clark	44	1
		ILLINOIS	CONTRACT NO.	74169

\* 44 + 1 = 45

D-97-042-06



LOCATION OF SECTION INDICATED THUS: —



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

PROJECT ENGINEER: MARK DAUGHERTY  
 PROJECT MANAGER: BRIAN BIERMAN

CONTRACT NO. 74169

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED *[Signature]* 2010  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

*[Signature]* 2010  
 ENGINEER OF DESIGN AND ENVIRONMENT

*[Signature]* 2010  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS**

**GENERAL NOTES**

THE CONTRACTOR SHALL PROVIDE INTERNET ACCESS TO THE BITUMINOUS PLANT QUALITY CONTROL LAB SO THAT BITUMINOUS PLANT REPORTS CAN BE E-MAILED TO THE DISTRICT HEADQUARTERS. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE UNIT PRICES FOR OTHER ITEMS IN THE CONTRACT.

ANY BITUMINOUS MATERIAL (PRIME COAT) THE CONTRACTOR USES SHALL BE EITHER RC-70, SS-1H, OR SS-1HP APPLIED AT THE RATE DIRECTED BY THE ENGINEER. THE COST OF THIS MATERIAL SHALL BE INCLUDED IN THE COST OF THE ASSOCIATED HOT-MIX ASPHALT PAY ITEM.

THE TOTAL QUANTITY OF PAINT PAVEMENT MARKING - LINE 4" CONSISTS OF 144 FEET OF YELLOW AND 1,140 FEET OF WHITE.

THE TOTAL QUANTITY OF RAISED REFLECTIVE PAVEMENT MARKERS IS 4 TWO-WAY AMBER.

TEMPORARY PORTABLE TRAFFIC SIGNALS WILL ONLY BE ALLOWED FROM MARCH 1 TO NOVEMBER 1.

ALL WORK NECESSARY TO ATTACH THE PIPE DRAINS TO THE ABUTMENT DRAIN PIPE, TRENCHING IN THE PIPE DRAINS AND INSTALLING THE PIPE DRAINS TO THE CONCRETE HEADWALLS IS INCLUDED IN THE PAY ITEM PIPE DRAINS 4".

THE CONTRACTOR SHALL TAKE SPECIAL CARE WHILE WORKING IN THE VICINITY OF THE EXISTING STRUCTURE'S SOUTHERN ABUTMENT WESTERLY BACK WALL SO AS NOT TO DISTURB AN EXISTING SURVEY MARKER IN THAT AREA. ONLY AFTER THE CONTRACTOR HAS PLACED A NEW SURVEY MARKER DURING STAGE I CONSTRUCTION ON THE SOUTHEAST BACK WALL OF THE PROPOSED STRUCTURE AND COORDINATE THE DIRECT TRANSFER OF THE ELEVATION FROM EXISTING TO PROPOSED SURVEY MARKER WITH THE ENGINEER AND THE CHIEF OF SURVEYS, SHALL THIS SURVEY MARKER BE REMOVED. THE PROCESS SHALL BE ACCORDING TO NATIONAL GEODETIC SURVEYS STANDARDS AND COPIES OF THE FIELD NOTES SUBMITTED TO THE CHIEF OF SURVEYS.

EXCAVATION FOR BASE COURSE WIDENING AND HMA SHOULDER SHALL BE PAID FOR AS EARTH EXCAVATION (WIDENING).

THE LOCATIONS AND/OR DEPTHS OF UNDERGROUND UTILITIES SHOWN HAVE BEEN TAKEN FROM INFORMATION FURNISHED BY THE UTILITY OWNERS AND MUST BE CONSIDERED APPROXIMATE. FIELD MARKINGS OF FACILITIES IN CRITICAL AREAS MAY BE OBTAINED BY PROVIDING A MINIMUM OF 96 HOURS ADVANCE NOTICE THROUGH THE J.U.L.I.E. SYSTEM BY CALLING 800-892-0123.

QUANTITIES OF BITUMINOUS CONCRETE SURFACE COURSE WERE CALCULATED USING THE FACTOR 112 LBS/SQ YD/INCH. THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE TO THIS PROJECT:

MIXTURE USE(S):	BASE COURSE WIDENING 10"	MIXTURE USE(S):	HOT-MIX ASPHALT SHOULDERS, 10"
AC/PG:	PG 64-22	AC/PG:	PG 58-22
DESIGN AIR VOIDS:	4.0% @ NDESIGN = 70	DESIGN AIR VOIDS:	4.0% @ NDESIGN = 30
MIXTURE COMPOSITION:		MIXTURE COMPOSITION:	
(GRADATION MIXTURE)	IL-19.0	(GRADATION MIXTURE)	IL-19.0L
FRICTION AGGREGATE:	N/A	FRICTION AGGREGATE:	N/A
MIXTURE USE(S):	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	MIXTURE USE(S):	HOT-MIX ASPHALT CURB
AC/PG:	PG 64-22	AC/PG:	PG 64-22
DESIGN AIR VOIDS:	4.0% @ NDESIGN = 70	DESIGN AIR VOIDS:	4.0% @ NDESIGN = 30
MIXTURE COMPOSITION:		MIXTURE COMPOSITION:	
(GRADATION MIXTURE)	IL-19.0	(GRADATION MIXTURE)	IL-9.5L
FRICTION AGGREGATE:	N/A	FRICTION AGGREGATE:	N/A

**INDEX OF SHEETS**

SHEET NO	TITLE
1	COVER SHEET
2	GENERAL NOTES & INDEX OF SHEETS
3	SUMMARY OF QUANTITIES
4	SCHEDULES
5	PROPOSED TYPICAL SECTION
6	PLAN AND PROFILE
7	STAGING TYPICAL SECTIONS
8	STAGE I CONSTRUCTION
9	STAGE II CONSTRUCTION
10-38	BRIDGE PLANS
39-44	CROSS-SECTIONS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS.

STD. NO.	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
482011-03	HMA SHLD. STRIPS/SHLDS. WITH RESURFACING OR WIDENING AND RESURFACING PROJECTS
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERTS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
610001-04	SHOULDER INLET WITH CURB
630001-08	STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-08	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-03	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-02	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH
701311-03	LANE CLOSURE, 2L, 2W MOVING OPERATIONS-DAY ONLY
701321-10	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-03	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS >= 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

FILE NAME =	USER NAME = #USER*	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL NOTES &amp; INDEX OF SHEETS</b>	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
#FILE#		DRAWN -	REVISED -			1707	(BX-B)B-1	Clark	44	2	
PLOT SCALE = #SCALE*		CHECKED -	REVISED -			<b>CONTRACT NO. 74169</b>					
PLOT DATE = #DATE*		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
					SCALE:	SHEET NO. OF SHEETS		STA.	TO STA.		

SUMMARY OF QUANTITIES			80% FED. 20% STATE	CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	OOII	
20200500	EARTH EXCAVATION (WIDENING)	CU YD	292	292	
20300100	CHANNEL EXCAVATION	CU YD	1434	1434	
28100109	STONE RIPRAP, CLASS A5	SQ YD	1629	1629	
28200200	FILTER FABRIC	SQ YD	1629	1629	
35650500	BASE COURSE WIDENING 10"	SQ YD	106	106	
42001300	PROTECTIVE COAT	SQ YD	1221	1221	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	118	118	
44000100	PAVEMENT REMOVAL	SQ YD	32	32	
44000300	CURB REMOVAL	FOOT	415	415	
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	945	945	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1	
50200100	STRUCTURE EXCAVATION	CU YD	442	442	
50300225	CONCRETE STRUCTURES	CU YD	338.3	338.3	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	433.3	433.3	
50300260	BRIDGE DECK GROOVING	SQ YD	1027	1027	
50300280	CONCRETE ENCASMENT	CU YD	7.1	7.1	
50401005	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 48 IN.	FOOT	1345.5	1345.5	
50500505	STUD SHEAR CONNECTORS	EACH	240	240	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	124,520	124,520	
50800515	BAR SPLICERS	EACH	919	919	
51201400	FURNISHING STEEL PILES HP10X42	FOOT	434	434	
51202000	FURNISHING STEEL PILES HP14X102	FOOT	560	560	
51202305	DRIVING PILES	FOOT	434	434	
51203400	TEST PILE STEEL HP10X42	EACH	2	2	
51500100	NAME PLATES	EACH	1	1	
54215547	METAL END SECTIONS 12"	EACH	2	2	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	77	77	
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4	4	
60100905	PIPE DRAINS 4"	FOOT	160	160	
60100945	PIPE DRAINS 12"	FOOT	70	70	
<del>20046304</del>	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	166	166	
60500060	REMOVING INLETS	EACH	4	4	
60900515	CONCRETE THRUST BLOCKS	EACH	2	2	
61000115	TYPE E INLET BOX, STANDARD 610001	EACH	2	2	

SUMMARY OF QUANTITIES			80% FED. 20% STATE	CONSTRUCTION TYPE CODE	
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	OOII	
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	425	425	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	
63200310	GUARDRAIL REMOVAL	FOOT	926	926	
66101150	HOT-MIX ASPHALT SHOULDER CURB	FOOT	150	150	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	7	7	
67100100	MOBILIZATION	L SUM	1	1	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
70101205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	4	4	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
70106700	TEMPORARY RUMBLE STRIP	EACH	6	6	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	921	921	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	563	563	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	500	500	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1284	1284	
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	4	4	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	10	10	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	428	428	
X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	171	171	
X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1	1	
X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1	1	
X5080600	MECHANICAL SPLICERS	EACH	180	180	
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2	2	
* Z0065000	SETTING PILES IN ROCK	EACH	14	14	
Z0073002	TEMPORARY SOIL RETENTION SYSTEM	SO FT	792	792	
Z0073100	TEMPORARY SHORING	EACH	1	1	

\* Specialty Items Rev.

STRIPING SCHEDULE

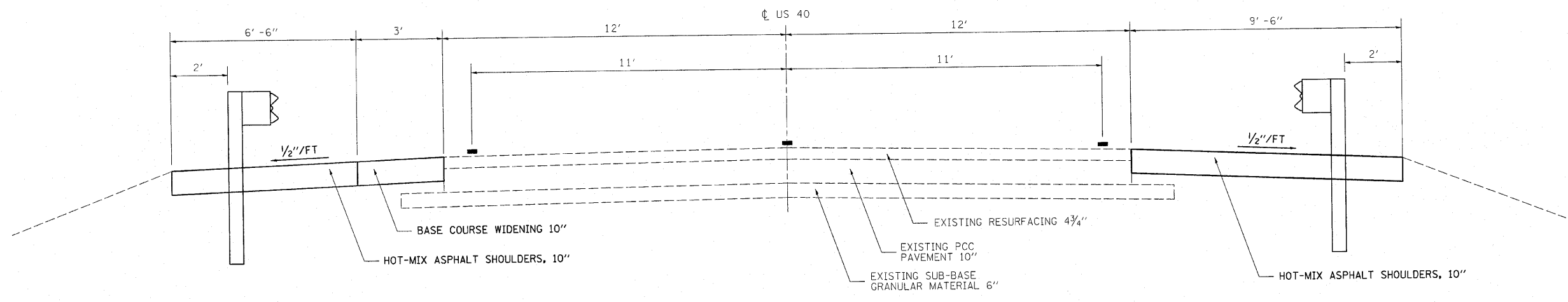
STATION TO STATION				TEMPORARY PAINT PAVEMENT MARKING LINE 4"	WORK ZONE PAVEMENT MARKING REMOVAL	PAINT PAVEMENT MARKING - LINE 4"	PAVEMENT MARKING REMOVAL
				FT	SQ FT	FT	SQ FT
STAGE I:							
LT STA	3183+17	TO	LT STA 3188+51	534	178	534	178
RT STA	3181+83	TO	RT STA 3189+03	-	240	-	-
CENTERLINE:							
STA	3182+81	TO	STA 3188+55	144	-	144	48
STAGE II:							
LT STA	3181+95	TO	LT STA 3189+55	-	253	-	-
RT STA	3182+81	TO	RT STA 3188+87	606	202	606	202
STAGE CONSTRUCTION STOP BARS:							
TOTALS:				1284	921	1284	428

GUARDRAIL SCHEDULE

STATION TO STATION				STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	TRAFFIC BARRIER TERMINAL, TYPE G	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	GUARDRAIL REMOVAL	GUARDRAIL MARKER, TYPE A	TERMINAL MARKER - DIRECT APPLIED
				FT	EACH	EACH	FT	EACH	EACH
LT STA	3182+91	TO	LT STA 3183+06	-	-	-	15	-	-
LT STA	3183+06	TO	LT STA 3183+56	-	-	1	50	1	1
LT STA	3183+56	TO	LT STA 3184+19	63	-	-	63	1	-
LT STA	3184+19	TO	LT STA 3184+64	-	1	-	42	-	-
BRIDGE OMISSION									
LT STA	3186+53	TO	LT STA 3186+86	-	-	-	33	-	-
LT STA	3186+86	TO	LT STA 3187+31	-	1	-	45	1	-
LT STA	3187+31	TO	LT STA 3188+81	150	-	-	150	1	-
LT STA	3188+81	TO	LT STA 3189+31	-	-	1	50	1	1
LT STA	3189+31	TO	LT STA 3189+47	-	-	-	16	-	-
BRIDGE OMISSION									
RT STA	3182+37	TO	RT STA 3182+87	-	-	1	-	-	1
RT STA	3182+87	TO	RT STA 3183+06	19	-	-	-	1	-
RT STA	3183+06	TO	RT STA 3184+37	131	-	-	131	2	-
RT STA	3184+37	TO	RT STA 3184+82	-	1	-	37	-	-
BRIDGE OMISSION									
RT STA	3186+68	TO	RT STA 3187+05	-	-	-	37	-	-
RT STA	3187+05	TO	RT STA 3187+50	-	1	-	45	1	-
RT STA	3187+50	TO	RT STA 3188+12	62	-	-	62	1	-
RT STA	3188+12	TO	RT STA 3188+62	-	-	1	50	-	1
RT STA	3188+62	TO	RT STA 3189+62	-	-	-	100	-	-
TOTALS:				425	4	4	926	10	4

EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION (WIDENING) (cut)	EARTH EXC (WIDENING) ADJ. FOR SHRINKAGE	CHANNEL EXCAVATION (cut)	CHANNEL EXCAVATION ADJ. FOR SHRINKAGE	STRUCTURE EXCAVATION (cut)	STRUCTURE EXCAVATION ADJ. FOR SHRINKAGE	EMBANKMENT (fill)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD	CU YD
STA 3181+66 TO 3182+00	16.61	12.46	0.00	0.00			0.05	12.41
STA 3182+00 TO 3183+00	48.85	36.63	0.00	0.00			3.12	33.51
STA 3183+00 TO 3184+00	48.85	36.63	0.00	0.00			4.55	32.08
STA 3184+00 TO 3184+54.8	26.77	20.08	0.00	0.00			0.18	19.90
BRIDGE OMISSION					442.00	331.50	0.00	331.50
N. ABUTMENT	0.00	0.00	1434.20	717.10			0.00	717.10
STA 3186+72 TO 3187+00	13.68	10.26	0.00	0.00			0.86	9.40
STA 3187+00 TO 3188+00	48.85	36.63	0.00	0.00			5.75	30.88
STA 3188+00 TO 3189+00	48.85	36.63	0.00	0.00			6.19	30.44
STA 3189+00 TO 3189+81	39.57	29.67	0.00	0.00			1.44	28.23
TOTAL =	292.0	219.0	1434.2	717.1	442.0	331.5	22.1	1245.5



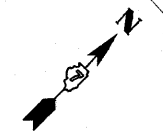
PROPOSED TYPICAL SECTION

FILE NAME =	USER NAME = teasleyck	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>PROPOSED TYPICAL SECTION</b>			F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
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	PLOT SCALE = 20.0000' / IN.	CHECKED -	REVISED -		CONTRACT NO. 74169										
	PLOT DATE = 8/13/2010	DATE -	REVISED -		ILLINOIS FED. AID PROJECT										

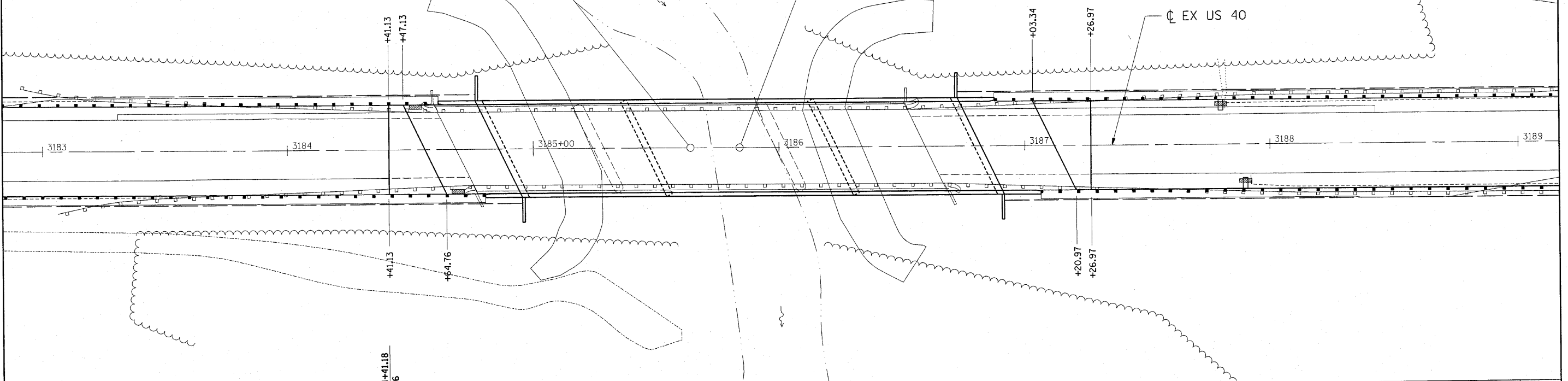
BENCHMARK: J211  
DISK SET IN THE TOP OF THE SOUTHEAST  
END OF THE BACKWALL AT THE WEST  
CORNER OF STRUCT. NO. 012-00200.  
STA. 3184+59.10, 18.0' LT.; ELEV. = 555.36

Ex Structure No. 012-0020  
3 Spans Continuous Concrete  
Tee Beams  
Rdwy C Sta. 3185+64  
Skew = 26°

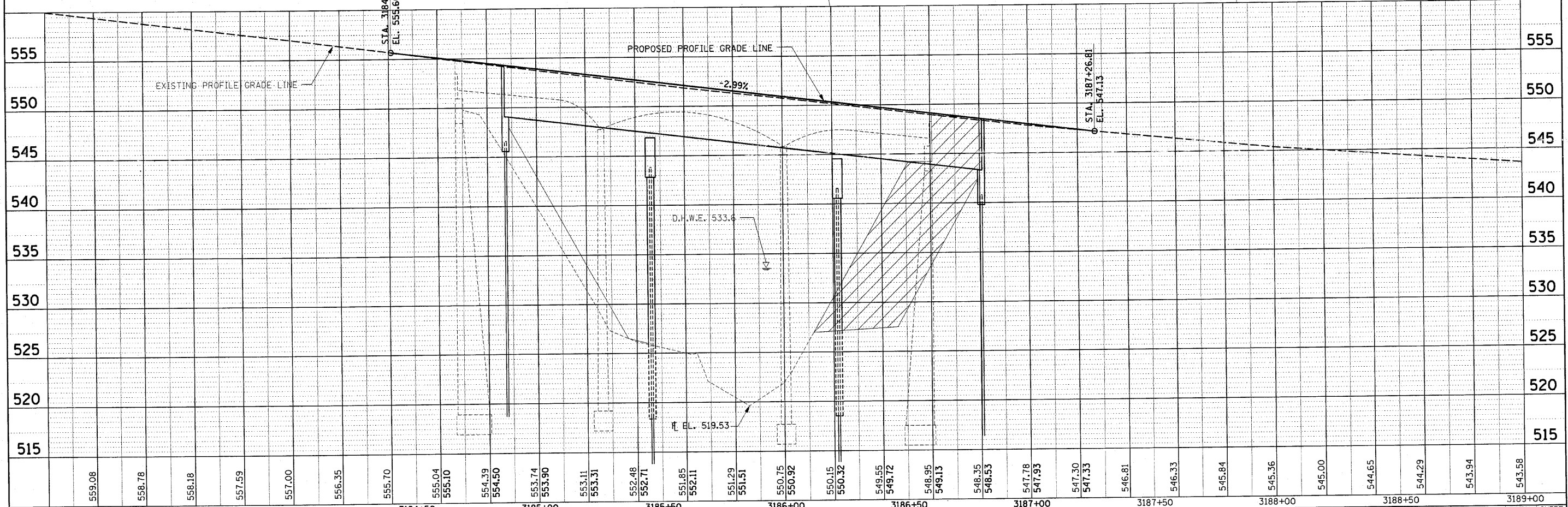
Pr. Structure No. 012-0073  
48" P.P.C. I Beams  
Rdwy C Sta. 3185+84.00  
3 Spans  
Skew = 26°



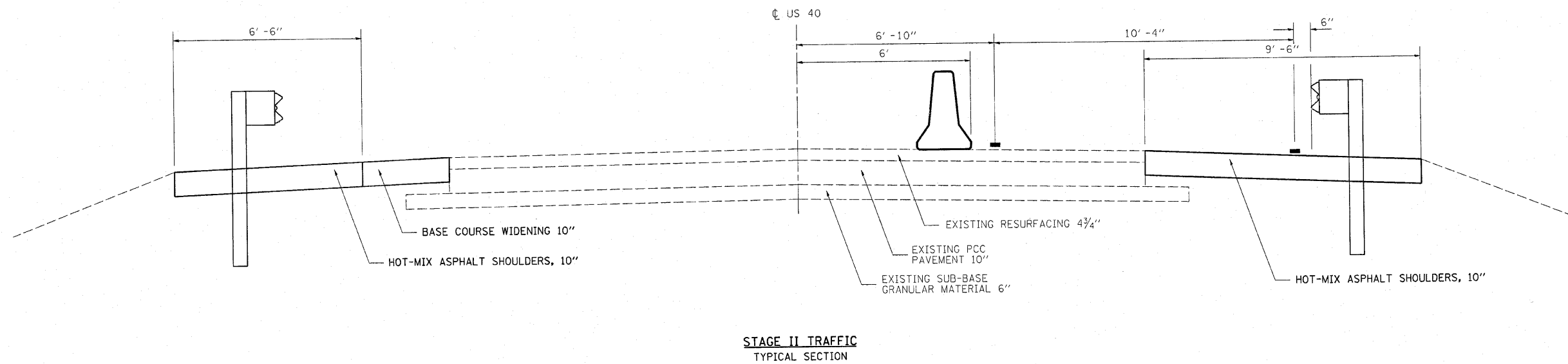
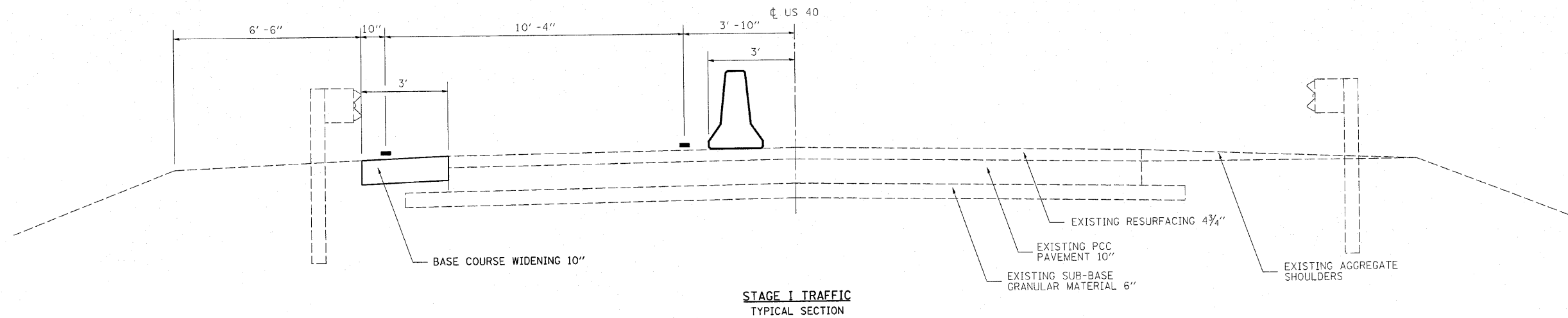
PLAN	SURVEYED	DATE
NOTE BOOK	ALIGNED	BY
NO.	CHECKED	
	BY	
	DATE	



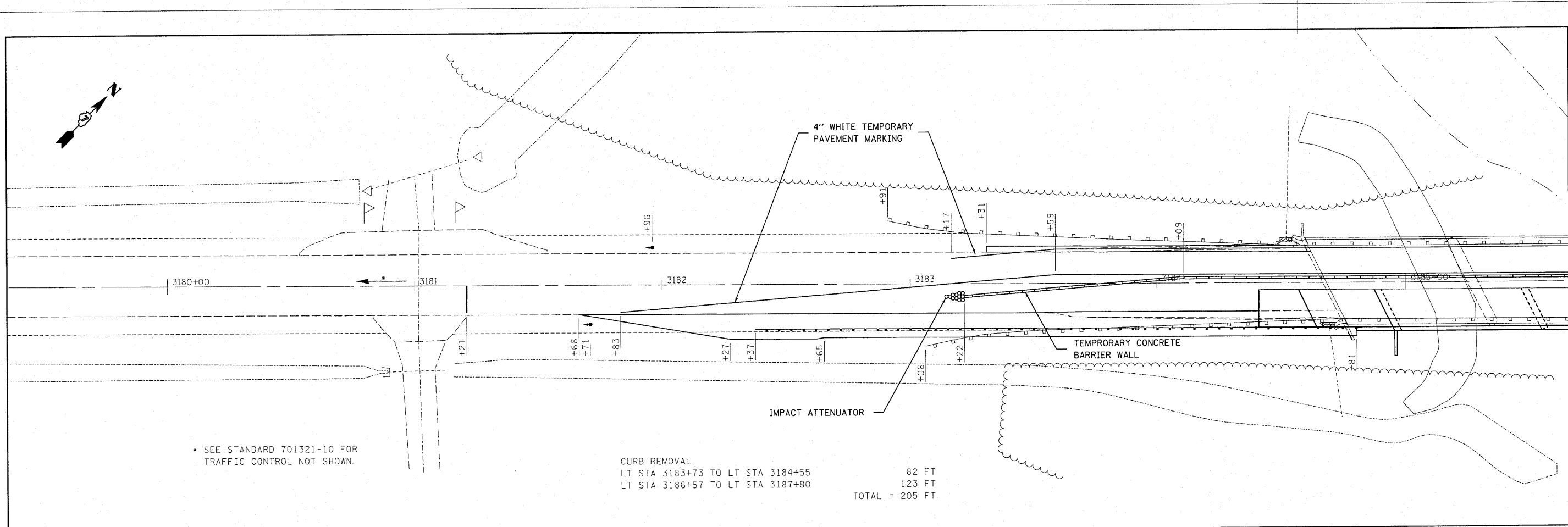
PROFILE	SURVEYED	DATE
NOTE BOOK	ALIGNED	BY
NO.	CHECKED	
	BY	
	DATE	



3183+00	559.08	558.78	558.18	557.59	557.00	556.35	555.70	555.04	555.10	554.39	554.50	553.74	553.90	553.11	553.31	552.48	552.71	551.85	552.11	551.29	551.51	550.75	550.92	550.15	550.32	549.55	549.72	548.95	549.13	548.35	548.53	547.78	547.93	547.30	547.33	546.81	546.33	545.84	545.36	545.00	544.65	544.29	543.94	543.58	3189+00
3183+00	3183+50	3184+00	3184+50	3185+00	3185+50	3186+00	3186+50	3187+00	3187+50	3188+00	3188+50	3189+00																																	
FILE NAME =		USER NAME = teasleyck		DESIGNED -		REVISED -		<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b> <b>PLAN AND PROFILE</b>																		F.A.S. RTE. 1707		SECTION (BX-B)B-1		COUNTY Clark		TOTAL SHEETS 44		SHEET NO. 6											
PLOT SCALE = 20x0.00000 '1' / IN.		DRAWN -		REVISOR -		SCALE:																				SHEET NO. OF SHEETS		STA. TO STA.		CONTRACT NO. 74169															
PLOT DATE = 8/13/2010		CHECKED -		REVISOR -																										ILLINOIS FED. AID PROJECT															
		DATE -		REVISOR -																																									



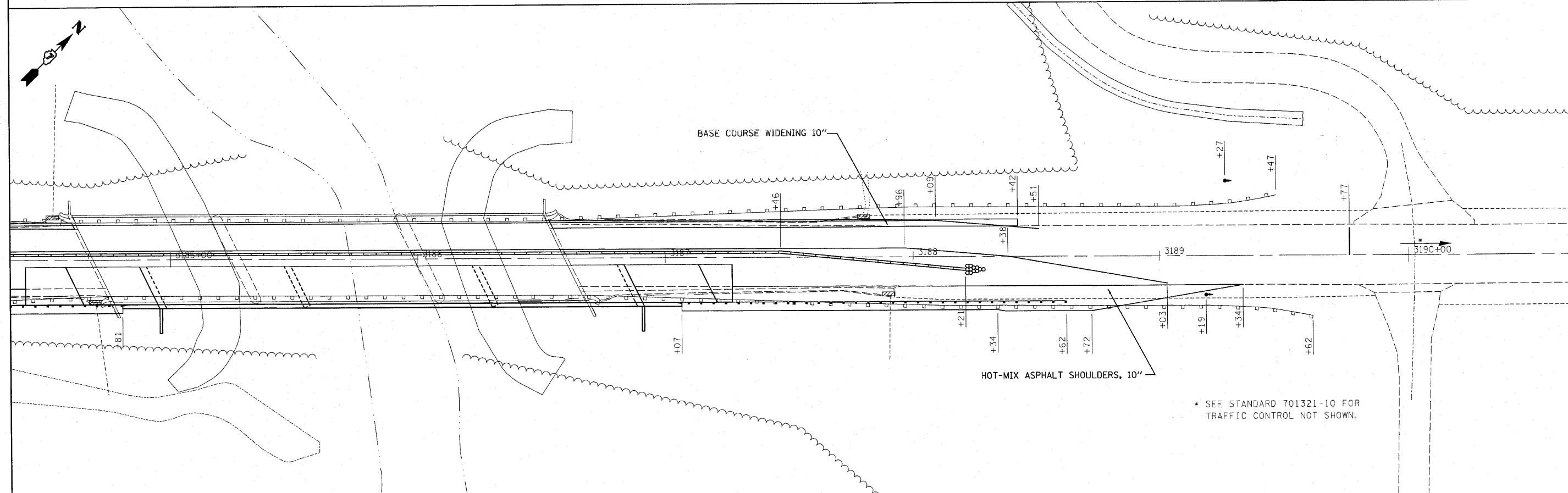
FILE NAME =	USER NAME = teasleyck	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGING TYPICAL SECTIONS</b>			F.A.S. RTE. 1707	SECTION (BX-B/B-1)	COUNTY Clark	TOTAL SHEETS 44	SHEET NO. 7
c:\pwork\pwork\teasleyck\dms55240\1707	4169-shr-staging.dgn	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		
	PLOT SCALE = 20,000' / IN.	CHECKED -	REVISED -		<b>CONTRACT NO. 74169</b>							
	PLOT DATE = 8/13/2010	DATE -	REVISED -									



• SEE STANDARD 701321-10 FOR TRAFFIC CONTROL NOT SHOWN.

CURB REMOVAL  
 LT STA 3183+73 TO LT STA 3184+55  
 LT STA 3186+57 TO LT STA 3187+80

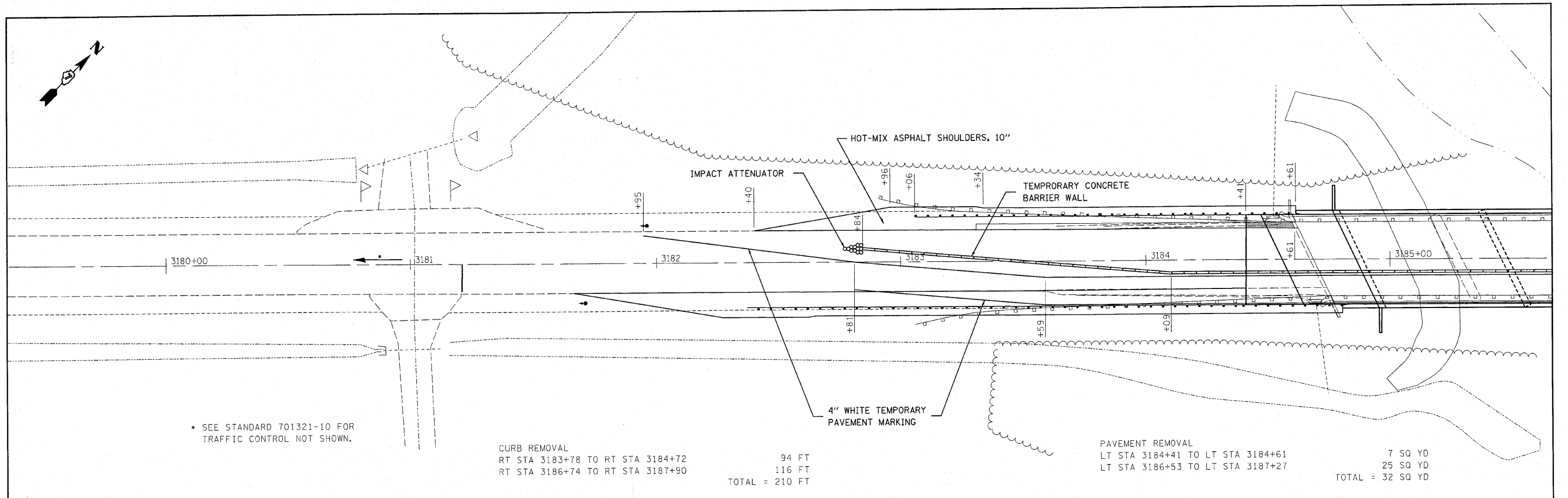
82 FT  
 123 FT  
 TOTAL = 205 FT



• SEE STANDARD 701321-10 FOR TRAFFIC CONTROL NOT SHOWN.

FILE NAME = c:\pwwork\pwwork\teasley\dm5524\07	USER NAME = teasleyk 4169-sht-staging.dgn	DESIGNED - DRAWN -	REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGE I CONSTRUCTION</b>			F.A.S. RTE. 1707	SECTION (BX-B)B-1	COUNTY Clark	TOTAL SHEETS 44	SHEET NO. 8
					SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	ILLINOIS FED. AID PROJECT				
					CONTRACT NO. 74169							
					CONTRACT NO. 74169							

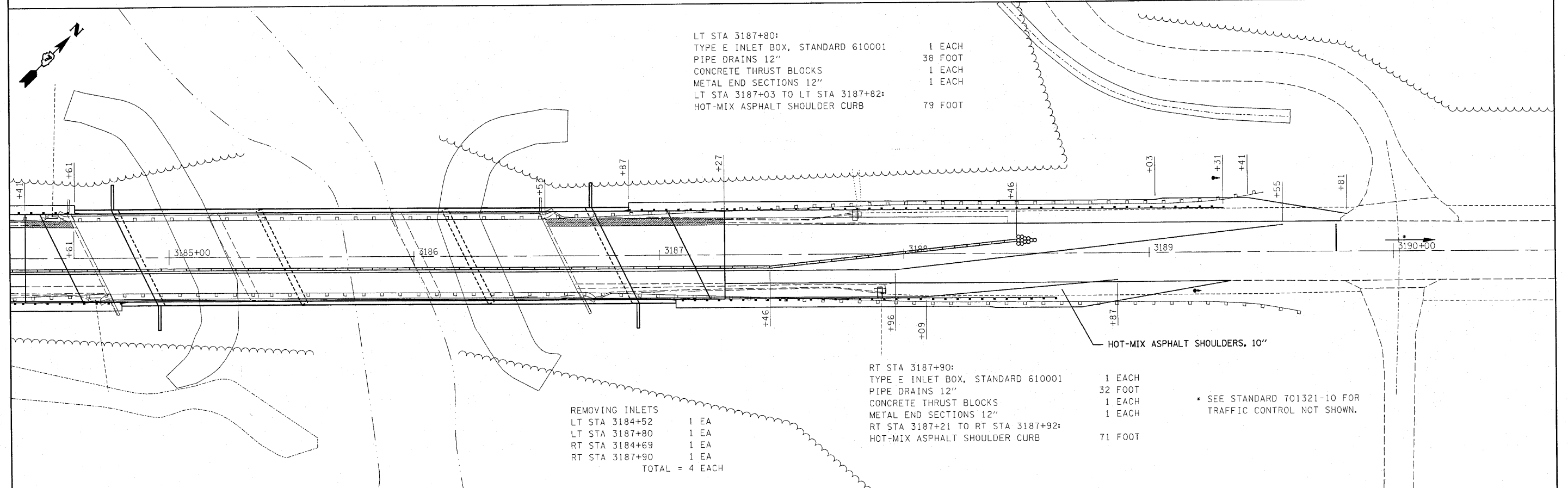




\* SEE STANDARD 701321-10 FOR TRAFFIC CONTROL NOT SHOWN.

CURB REMOVAL  
 RT STA 3183+78 TO RT STA 3184+72 94 FT  
 RT STA 3186+74 TO RT STA 3187+90 116 FT  
 TOTAL = 210 FT

PAVEMENT REMOVAL  
 LT STA 3184+41 TO LT STA 3184+61 7 SQ YD  
 LT STA 3186+53 TO LT STA 3187+27 25 SQ YD  
 TOTAL = 32 SQ YD



LT STA 3187+80:  
 TYPE E INLET BOX, STANDARD 610001 1 EACH  
 PIPE DRAINS 12" 38 FOOT  
 CONCRETE THRUST BLOCKS 1 EACH  
 METAL END SECTIONS 12" 1 EACH  
 LT STA 3187+03 TO LT STA 3187+82:  
 HOT-MIX ASPHALT SHOULDER CURB 79 FOOT

RT STA 3187+90:  
 TYPE E INLET BOX, STANDARD 610001 1 EACH  
 PIPE DRAINS 12" 32 FOOT  
 CONCRETE THRUST BLOCKS 1 EACH  
 METAL END SECTIONS 12" 1 EACH  
 RT STA 3187+21 TO RT STA 3187+92:  
 HOT-MIX ASPHALT SHOULDER CURB 71 FOOT

REMOVING INLETS  
 LT STA 3184+52 1 EA  
 LT STA 3187+80 1 EA  
 RT STA 3184+69 1 EA  
 RT STA 3187+90 1 EA  
 TOTAL = 4 EACH

\* SEE STANDARD 701321-10 FOR TRAFFIC CONTROL NOT SHOWN.

FILE NAME = c:\pwork\pwi\dot\teesleyck\dms55840\07	USER NAME = teesleyck 4189-ahh-staging.dgn	DESIGNED - DRAWN -	REVISED - REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGE II CONSTRUCTION</b>			F.A.S. RTE. 1707	SECTION (BX-B)B-1	COUNTY Clark	TOTAL SHEETS 44	SHEET NO. 9
					SCALE:	SHEET NO. OF SHEETS	STA. TO STA.	CONTRACT NO. 74169				
					ILLINOIS FED. AID PROJECT							

B.M. J211 - Disk set in the Top of the S.E. End of the Back Wall @ the West Corner of Structure No. 012-0020, Sta. 3184+59.10, 18.0' Lt. Elev. = 555.36

EXISTING STRUCTURE No. 012-0020: Built in 1952 as F.A. Rte. 12 Section B-XB. The structure is a 3 Span continuous Haunched Concrete Deck Girders with a 7" Concrete Deck cast Monolithically. It has a Bk. of Abut. to Bk. of Abut. Length of 193'-6" and 35'-8" Out to Out Horizontal width. Remove concrete slopewall's. New structure will be built using Stage Construction. No Salvage.

STATE OF ILLINOIS  
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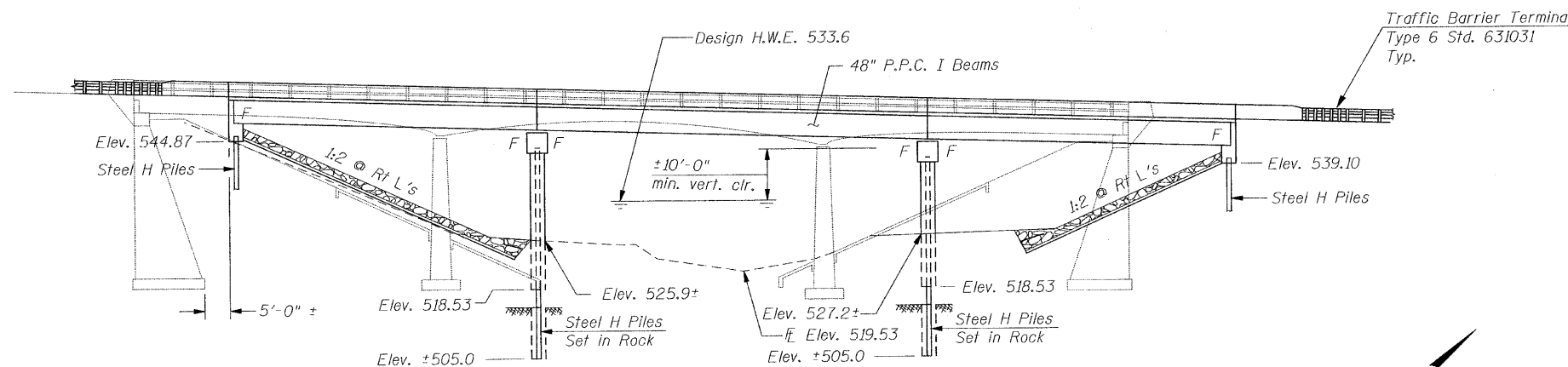
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	545.3	515.53	515.53	539.4

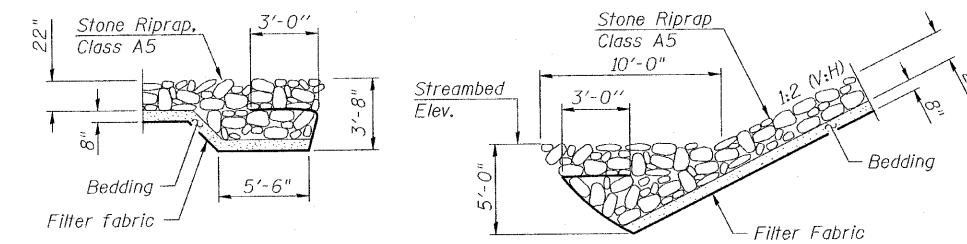
WATERWAY INFORMATION

Drainage Area = 31.9 SQ. MI. Ex. Low Grade Elev. 541.00 @ Sta. 3192+00

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	10	4790	664	774	532.0	1.9	1.7	533.9	533.7
Base	50	7760	818	958	533.6	3.0	2.7	536.6	536.3
Overtopping	100	9100	889	1042	534.3	3.5	3.0	537.8	537.3
Max. Calc.	500	12400	1036	1214	535.7	4.5	4.0	540.2	539.7

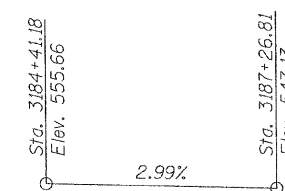


ELEVATION



SECTION B-B

SECTION A-A



PROPOSED PROFILE

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with 2009 Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

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

SEISMIC DATA

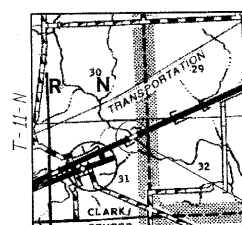
Seismic Performance Zone (SPZ) = 2  
Design Spectral Acceleration at 1.0 Sec. (SD1) = 0.176g  
Design Spectral Acceleration at 0.2 Sec. (SDs) = 0.370g  
Soil Site Class = D

STATION 3185+84.00  
BUILT 20xx BY  
STATE OF ILLINOIS  
F.A.S. ROUTE 1707  
SECTION (BX-B)B-1  
LOADING HL-93  
STRUCTURE NO. 012-0073

NAME PLATE

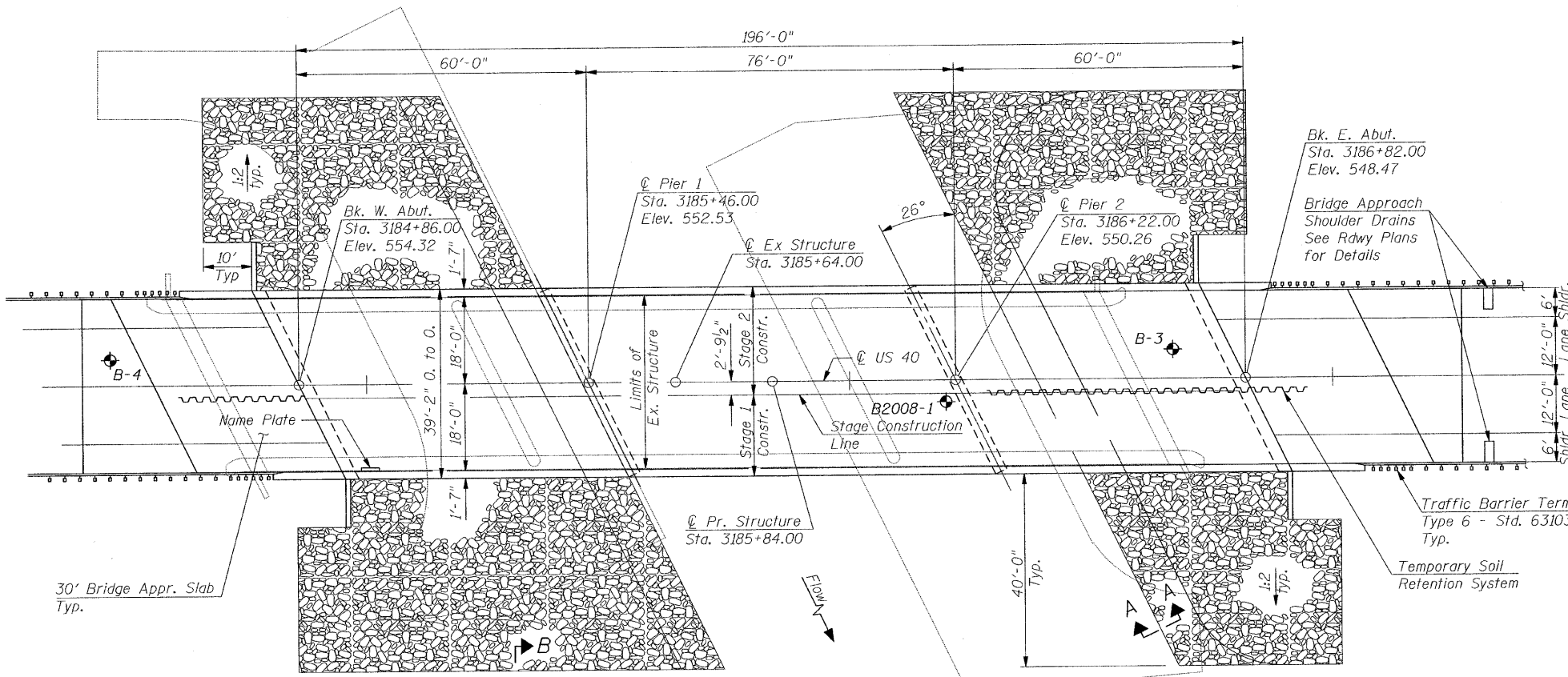
See Std. 515001

R-12-W 2nd P.M.



LOCATION SKETCH

GENERAL PLAN  
US 40 OVER MILL CREEK  
FAS ROUTE 1707  
SECTION (BX-B)B-1  
CLARK COUNTY  
STATION 3185+84.00  
STRUCTURE NO. 012-0073



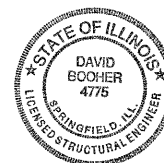
PLAN

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD



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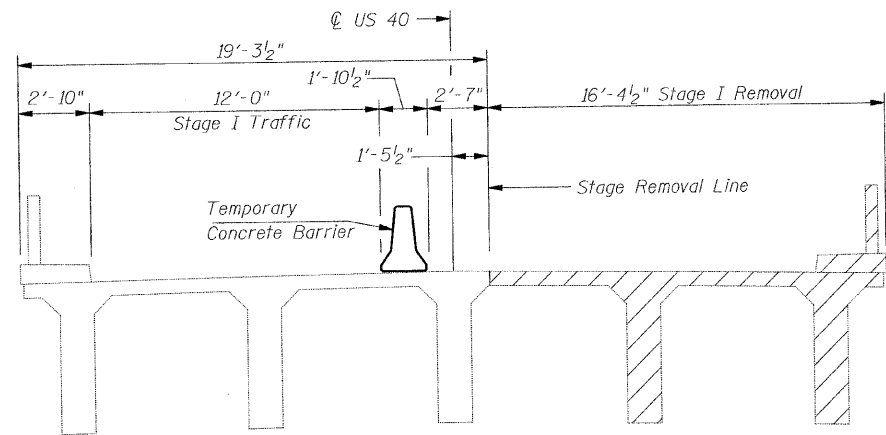
APPROVED  
FOR STRUCTURAL ADEQUACY ONLY  
*Robert E. Anderson*  
ENGINEER OF BRIDGES AND STRUCTURES



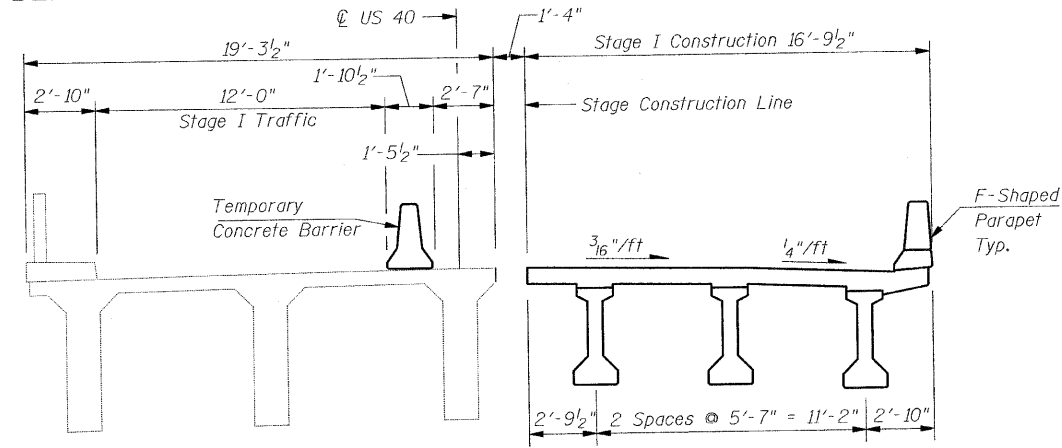
*David Booher*  
David Booher, Illinois S.E. 081-004775  
Expires 11-30-2010  
9-20-2010 Date

SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1 OF 29 SHEETS	1707	(BX-B)B-1	CLARK		10
CONTRACT NO. 74169					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

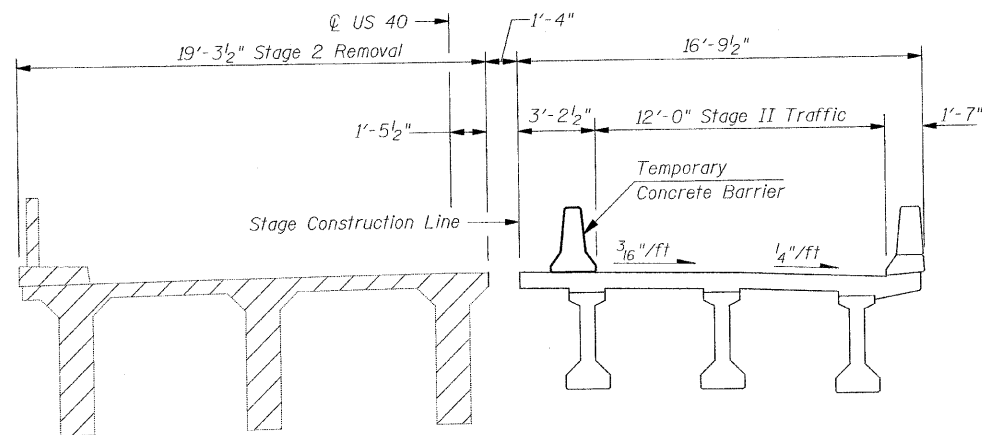
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



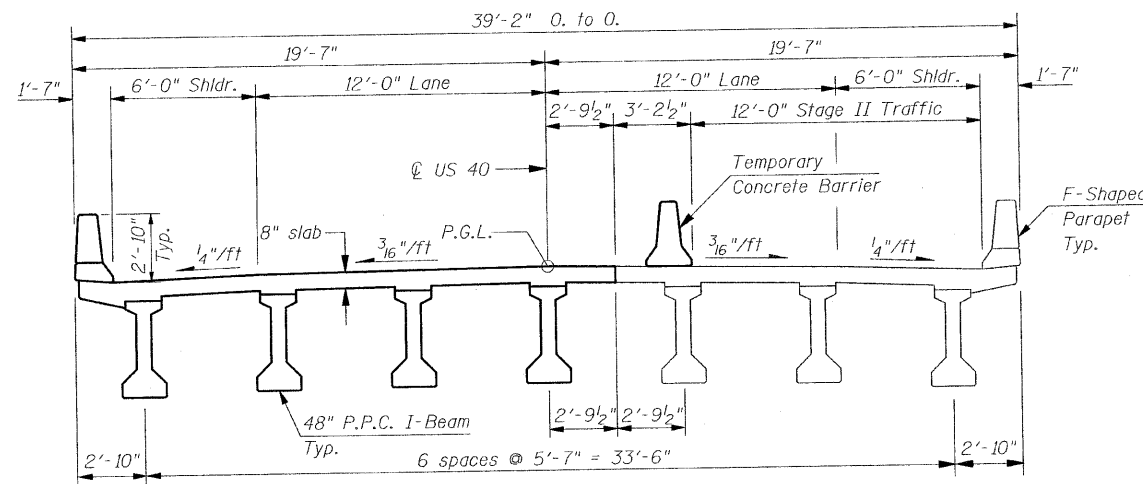
STAGE 1 REMOVAL - CROSS SECTION  
(Looking East)



STAGE 1 CONSTRUCTION - CROSS SECTION  
(Looking East)



STAGE 2 REMOVAL - CROSS SECTION  
(Looking East)



STAGE 2 CONSTRUCTION - CROSS SECTION  
(Looking East)

INDEX OF SHEETS

1. GENERAL PLAN & ELEVATION
2. GENERAL DATA
3. GENERAL DATA & FOOTING LAYOUT
- 3A. TEMPORARY SHORING
4. DECK ELEVATION LAYOUT
- 5.-8. DECK ELEVATIONS
- 9.-10. APPROACH SLAB ELEVATIONS
11. DECK PLAN
12. PARAPET DETAILS
13. DIAPHRAGM DETAILS
14. BRIDGE APPROACH SLAB DETAILS
15. BRIDGE APPROACH SLAB DETAILS
16. FRAMING PLAN
17. 48" P.P.C. I-BEAM, SPANS 1 & 3
18. 48" P.P.C. I-BEAM DETAILS, SPANS 1 & 3
19. 48" P.P.C. I-BEAM, SPAN 2
20. 48" P.P.C. I-BEAM DETAILS, SPAN 2
21. WEST ABUTMENT
22. EAST ABUTMENT
23. PIER 1 DETAILS
24. PIER 2 DETAILS
25. HP PILE DETAILS
26. BAR SPLICER ASSEMBLY DETAILS
27. TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
- 28.-29. SOIL BORINGS

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD		171.0	171.0
STONE RIPRAP, CLASS A5	SQ YD		1,629	1,629
FILTER FABRIC	SQ YD		1,629	1,629
PROTECTIVE COAT	SQ YD		1,221	1,221
REMOVAL OF EXISTING STRUCTURES	EACH			1
STRUCTURE EXCAVATION	CU YD		442.0	442.0
CONCRETE STRUCTURES	CU YD		338.3	338.3
CONCRETE SUPERSTRUCTURE	CU YD	433.3		433.3
BRIDGE DECK GROOVING	SQ YD	1027		1,027.0
CONCRETE ENCASEMENT	CU YD		7.1	7.1
FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 48 IN.	FOOT	1,345.5		1,345.5
REINFORCEMENT BARS, EPOXY COATED	POUND	92,740	31,780	124,520
BAR SPLICERS	EACH	705	214	919
FURNISHING STEEL PILES HP10X42	FOOT		434	434
FURNISHING STEEL PILES HP14X102	FOOT		560	560
DRIVING PILES	FOOT		434	434
TEST PILE STEEL HP10X42	EACH		2	2
NAME PLATES	EACH	1		1
GEOCOMPOSITE WALL DRAIN	SQ YD		77	77
PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT		166	166
MECHANICAL SPLICERS	EACH		180	180
TEMPORARY SOIL RETENTION SYSTEM	SQ FT		792	792
UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH		1	1
UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH		1	1
SETTING PILES IN ROCK	EACH		14	14
STUD SHEAR CONNECTORS	EACH		240	240
TEMPORARY SHORING	EACH		1	1

GENERAL NOTES

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- Slipforming of parapets is not allowed.
- A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

Notes:

Hatched area indicates Removal of Existing Structures. Removal of existing bridge rail is included with Removal of Existing Structures.

The Stage Removal Line shown is for the existing superstructure, piers and West Abutment. The Stage Removal Line for the existing East Abutment differs. See Sheet 3A of 29.

See sheet 27 of 29 for details of Temporary Concrete Barrier. See Roadway Plans for quantity and location.

GENERAL DATA  
STRUCTURE NO. 012-0073

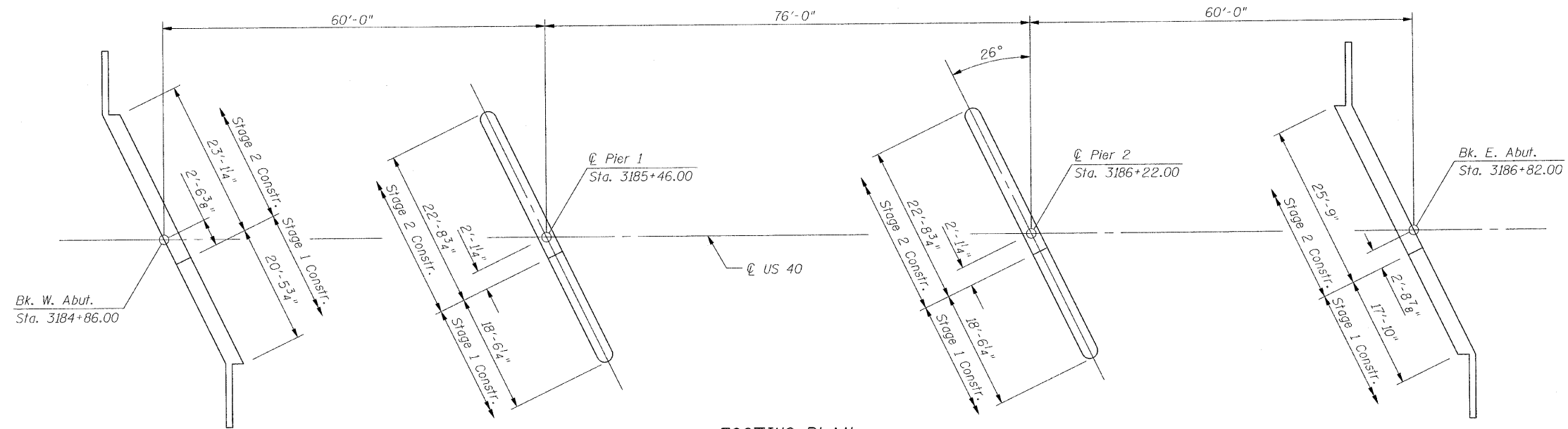
SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
2 OF 29 SHEETS	1707	(BX-B)B-1	CLARK		//
			CONTRACT NO. 74169		
FED. ROAD DIST. NO. -		ILLINOIS	FED. AID PROJECT		

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

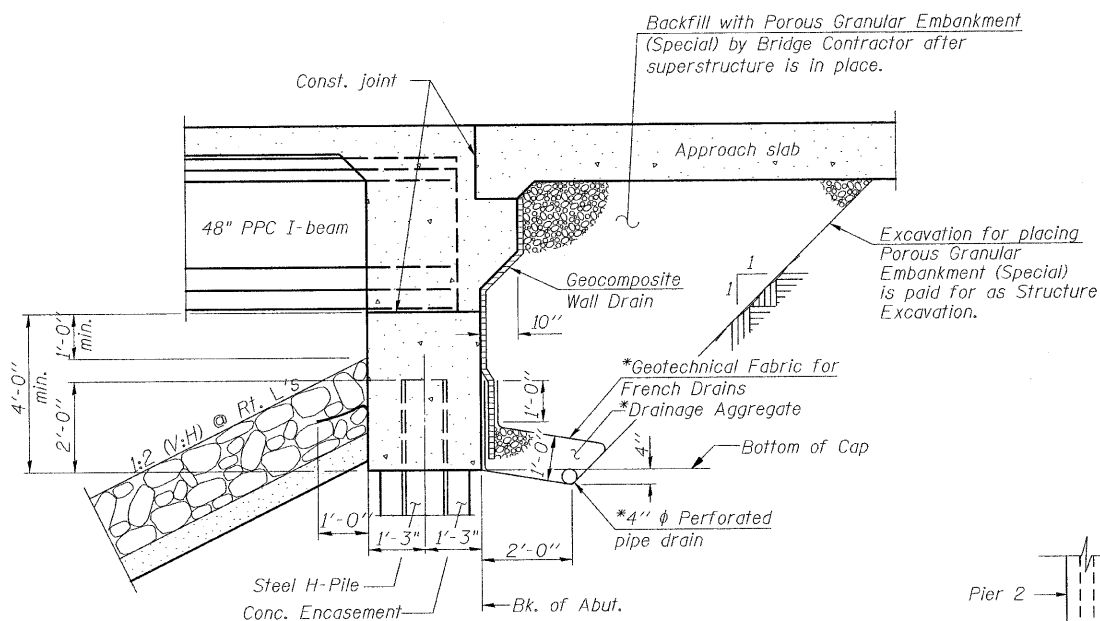


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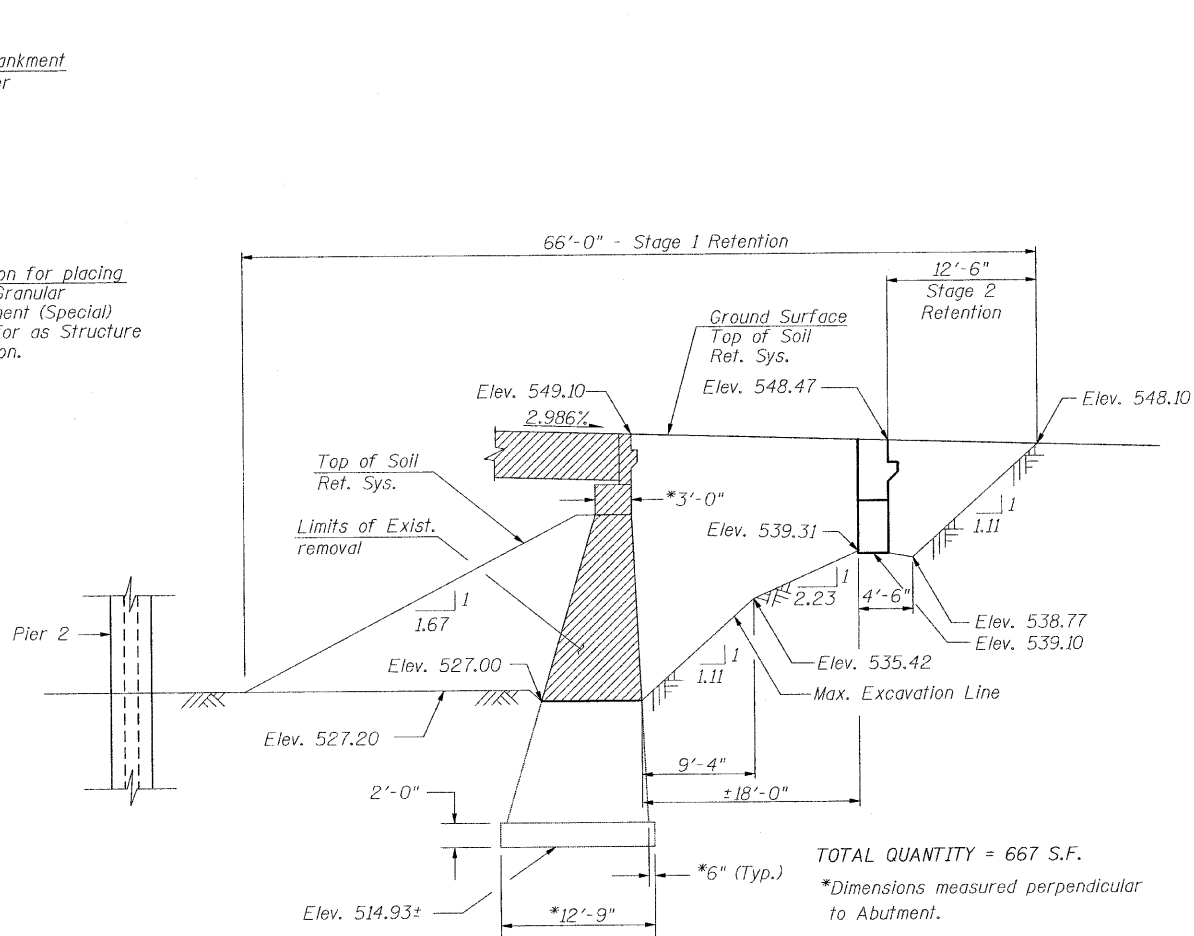
FOOTING PLAN



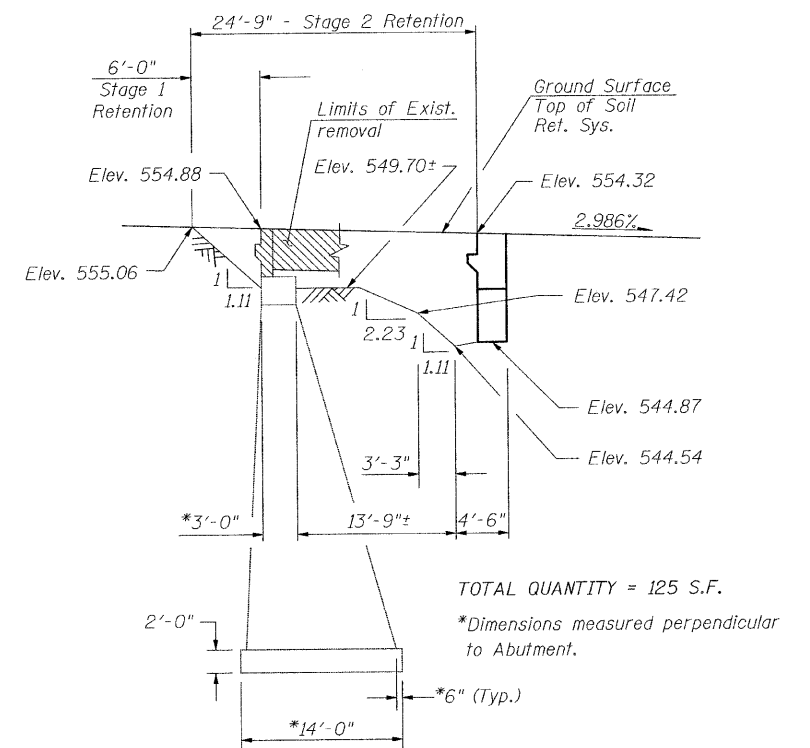
SECTION THRU INTEGRAL ABUTMENT  
(Horiz. dim. @ Rt. L's)

\*Included in the cost of Pipe Underdrains for Structures.

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 60110).



TEMPORARY SOIL RETENTION SYSTEM  
(EAST ABUTMENT)



TEMPORARY SOIL RETENTION SYSTEM  
(WEST ABUTMENT)

GENERAL DATA &  
FOOTING LAYOUT  
STRUCTURE NO. 012-0073

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

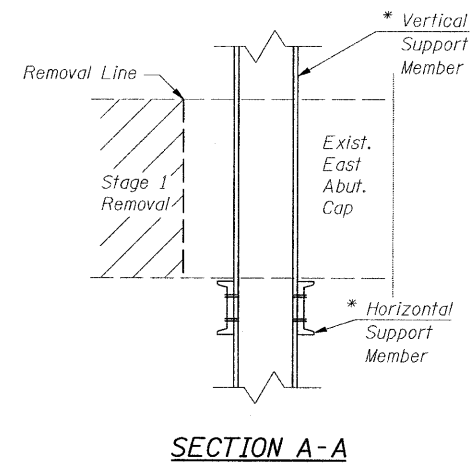
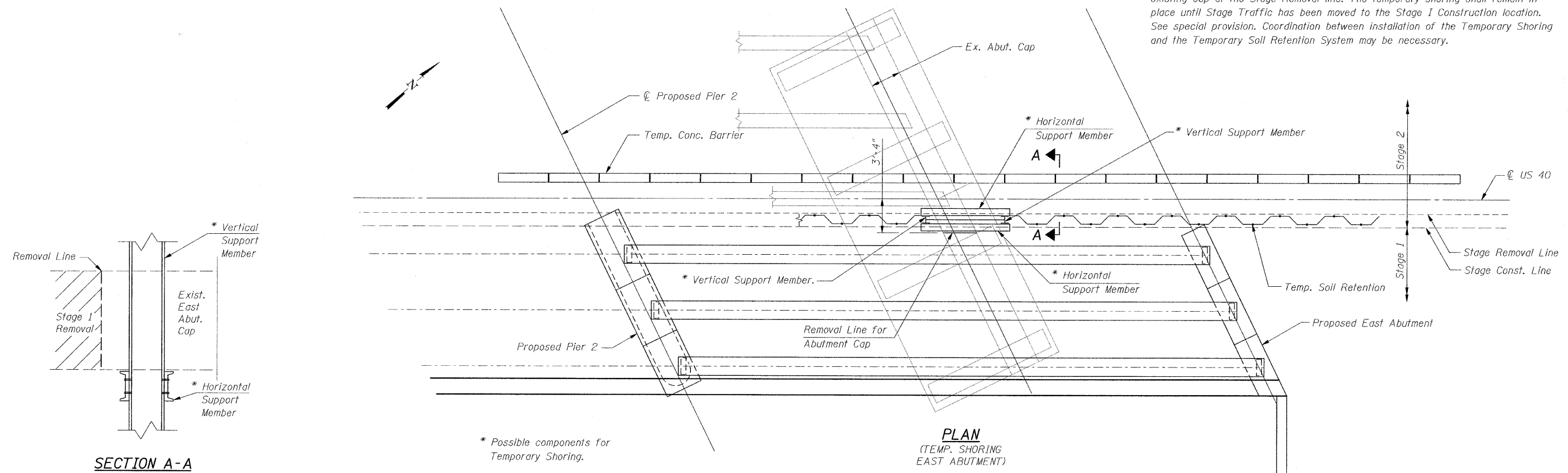


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SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3 OF 29 SHEETS	1707	(BX-B)B-1	CLARK		12
			CONTRACT NO. 74169		
FED. ROAD DIST. NO. -		ILLINOIS		FED. AID PROJECT	

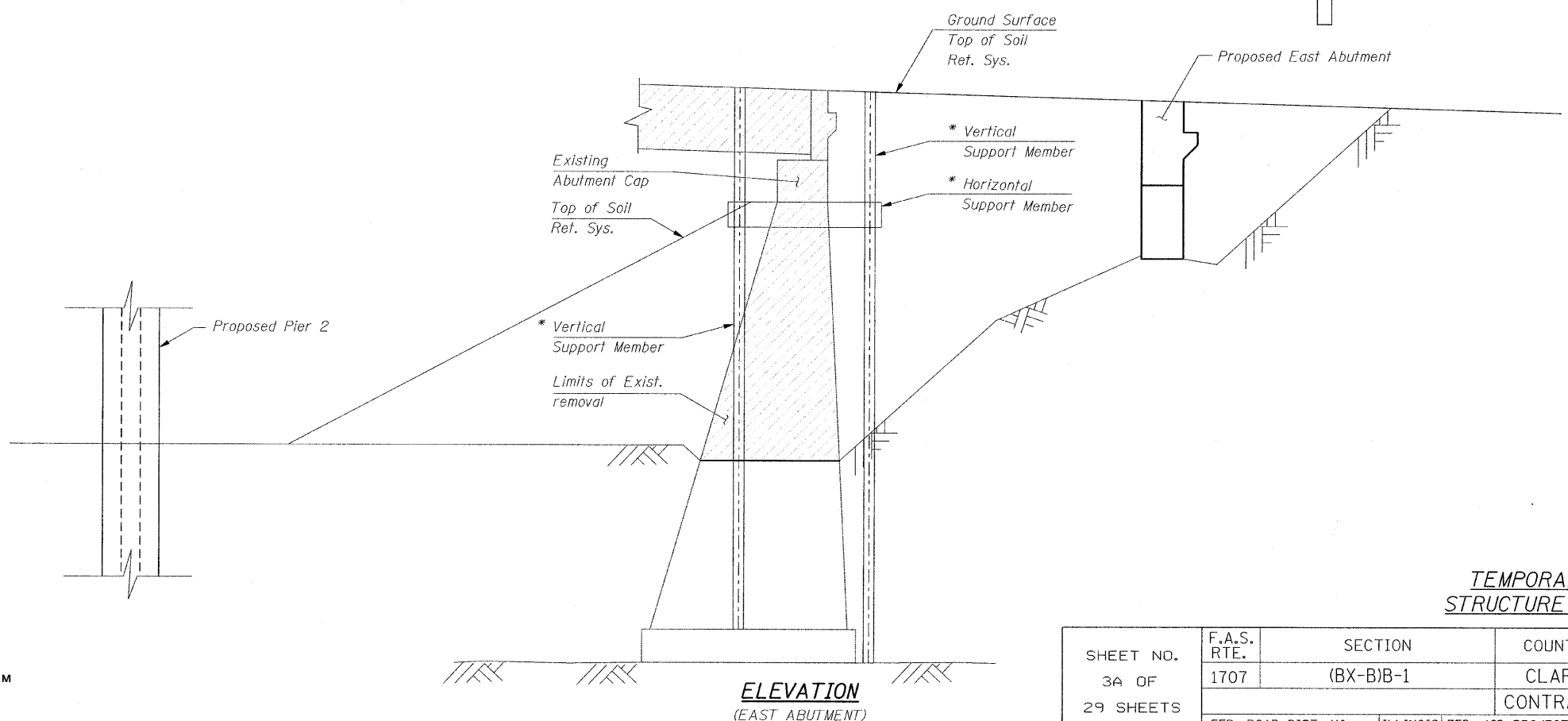
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**Shoring Notes:**  
The existing East Abutment cap shall be shored as shown prior to cutting the existing cap at the Stage Removal line. The temporary shoring shall remain in place until Stage Traffic has been moved to the Stage I Construction location. See special provision. Coordination between installation of the Temporary Shoring and the Temporary Soil Retention System may be necessary.



\* Possible components for Temporary Shoring.

**PLAN**  
(TEMP. SHORING EAST ABUTMENT)



**ELEVATION**  
(EAST ABUTMENT)

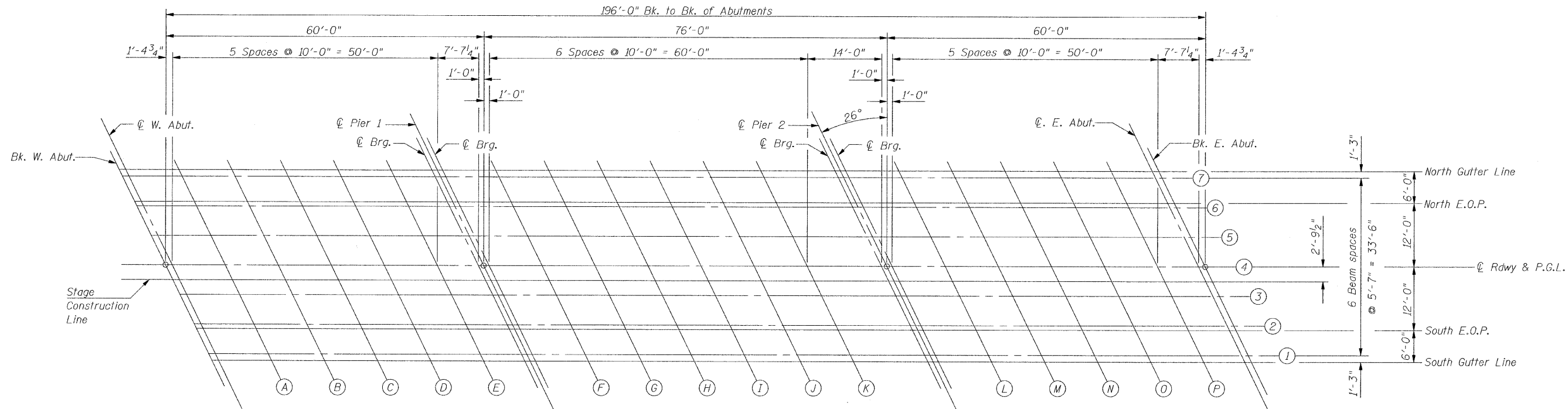
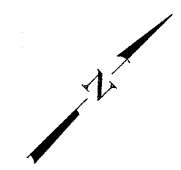
DESIGNED	SCD
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CHECKED	SCD

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**TEMPORARY SHORING  
STRUCTURE NO. 012-0073**

SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3A OF	1707	(BX-B)B-1	CLARK		124
29 SHEETS	CONTRACT NO. 74169				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



DECK ELEVATION LAYOUT

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

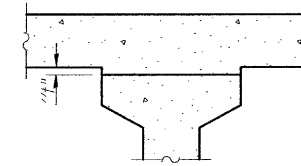
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consultants

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DECK ELEVATION LAYOUT  
STRUCTURE NO. 012-0073

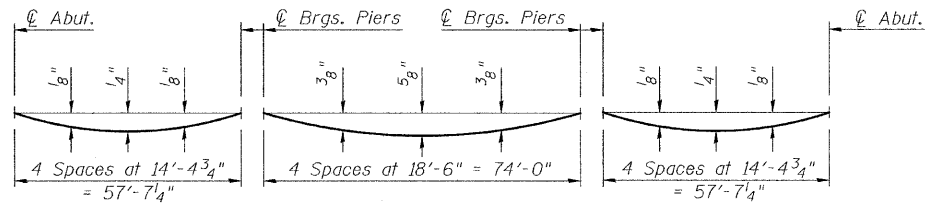
SHEET NO. 4 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	13
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 74169					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



To determine "f": After all precast prestressed beams have been erected, 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 Deflections" shown below, minus slab thickness, equals the fillet heights "f" above top flanges of beams.

FILLET HEIGHTS



**DEAD LOAD DEFLECTION DIAGRAM**  
(Includes weight of concrete, excluding beams).

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 below.

SOUTH GUTTER LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+94.78	18.00	553.75	553.75
CL W ABUT	3184+96.15	18.00	553.71	553.71
A	3185+06.15	18.00	553.41	553.42
B	3185+16.15	18.00	553.11	553.12
C	3185+26.15	18.00	552.81	552.83
D	3185+36.15	18.00	552.51	552.53
E	3185+46.15	18.00	552.21	552.22
CL W BRG PIER 1	3185+53.78	18.00	551.99	551.99
CL PIER 1	3185+54.78	18.00	551.96	551.96
CL E BRG PIER 1	3185+55.78	18.00	551.93	551.93
F	3185+65.78	18.00	551.63	551.65
G	3185+75.78	18.00	551.33	551.36
H	3185+85.78	18.00	551.03	551.08
I	3185+95.78	18.00	550.73	550.78
J	3186+05.78	18.00	550.43	550.47
K	3186+15.78	18.00	550.13	550.16
CL W BRG PIER 2	3186+29.78	18.00	549.72	549.72
CL PIER 2	3186+30.78	18.00	549.69	549.69
CL E BRG PIER 2	3186+31.78	18.00	549.66	549.66
L	3186+41.78	18.00	549.36	549.37
M	3186+51.78	18.00	549.06	549.07
N	3186+61.78	18.00	548.76	548.78
O	3186+71.78	18.00	548.46	548.48
P	3186+81.78	18.00	548.16	548.17
CL E ABUT	3186+89.40	18.00	547.94	547.94
BK E ABUT	3186+90.78	18.00	547.89	547.89

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+94.17	16.75	553.79	553.79
CL W ABUT	3184+95.54	16.75	553.75	553.75
A	3185+05.54	16.75	553.45	553.46
B	3185+15.54	16.75	553.15	553.17
C	3185+25.54	16.75	552.85	552.87
D	3185+35.54	16.75	552.56	552.57
E	3185+45.54	16.75	552.26	552.26
CL W BRG PIER 1	3185+53.17	16.75	552.03	552.03
CL PIER 1	3185+54.17	16.75	552.00	552.00
CL E BRG PIER 1	3185+55.17	16.75	551.97	551.97
F	3185+65.17	16.75	551.67	551.69
G	3185+75.17	16.75	551.37	551.41
H	3185+85.17	16.75	551.07	551.12
I	3185+95.17	16.75	550.78	550.82
J	3186+05.17	16.75	550.48	550.52
K	3186+15.17	16.75	550.18	550.21
CL W BRG PIER 2	3186+29.17	16.75	549.76	549.76
CL PIER 2	3186+30.17	16.75	549.73	549.73
CL E BRG PIER 2	3186+31.17	16.75	549.70	549.70
L	3186+41.17	16.75	549.40	549.41
M	3186+51.17	16.75	549.10	549.12
N	3186+61.17	16.75	548.80	548.82
O	3186+71.17	16.75	548.51	548.52
P	3186+81.17	16.75	548.21	548.21
CL E ABUT	3186+88.79	16.75	547.98	547.98
BK E ABUT	3186+90.17	16.75	547.94	547.94

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+91.85	12.00	553.96	553.96
CL W ABUT	3184+93.23	12.00	553.92	553.92
A	3185+03.23	12.00	553.62	553.63
B	3185+13.23	12.00	553.32	553.34
C	3185+23.23	12.00	553.02	553.04
D	3185+33.23	12.00	552.72	552.74
E	3185+43.23	12.00	552.43	552.43
CL W BRG PIER 1	3185+50.85	12.00	552.20	552.20
CL PIER 1	3185+51.85	12.00	552.17	552.17
CL E BRG PIER 1	3185+52.85	12.00	552.14	552.14
F	3185+62.85	12.00	551.84	551.86
G	3185+72.85	12.00	551.54	551.58
H	3185+82.85	12.00	551.24	551.29
I	3185+92.85	12.00	550.94	550.99
J	3186+02.85	12.00	550.64	550.69
K	3186+12.85	12.00	550.35	550.37
CL W BRG PIER 2	3186+26.85	12.00	549.93	549.93
CL PIER 2	3186+27.85	12.00	549.90	549.90
CL E BRG PIER 2	3186+28.85	12.00	549.87	549.87
L	3186+38.85	12.00	549.57	549.58
M	3186+48.85	12.00	549.27	549.29
N	3186+58.85	12.00	548.97	548.99
O	3186+68.85	12.00	548.67	548.69
P	3186+78.85	12.00	548.38	548.38
CL E ABUT	3186+86.48	12.00	548.15	548.15
BK E ABUT	3186+87.85	12.00	548.106	548.106

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD



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PI-E1 10-1-08

TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 012-0073

SHEET NO. 5 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	14
CONTRACT NO. 74169					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+91.45	11.17	553.98	553.98
CL W ABUT	3184+92.82	11.17	553.94	553.94
A	3185+02.82	11.17	553.65	553.65
B	3185+12.82	11.17	553.35	553.36
C	3185+22.82	11.17	553.05	553.07
D	3185+32.82	11.17	552.75	552.76
E	3185+42.82	11.17	552.45	552.46
CL W BRG PIER 1	3185+50.45	11.17	552.22	552.22
CL PIER 1	3185+51.45	11.17	552.19	552.19
CL E BRG PIER 1	3185+52.45	11.17	552.16	552.16
F	3185+62.45	11.17	551.86	551.89
G	3185+72.45	11.17	551.57	551.60
H	3185+82.45	11.17	551.27	551.31
I	3185+92.45	11.17	550.97	551.02
J	3186+02.45	11.17	550.67	550.71
K	3186+12.45	11.17	550.37	550.40
CL W BRG PIER 2	3186+26.45	11.17	549.95	549.95
CL PIER 2	3186+27.45	11.17	549.92	549.92
CL E BRG PIER 2	3186+28.45	11.17	549.89	549.89
L	3186+38.45	11.17	549.59	549.60
M	3186+48.45	11.17	549.30	549.31
N	3186+58.45	11.17	549.00	549.02
O	3186+68.45	11.17	548.70	548.71
P	3186+78.45	11.17	548.40	548.41
CL E ABUT	3186+86.07	11.17	548.17	548.17
BK E ABUT		11.17	548.13	548.13

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+88.72	5.58	554.15	554.15
CL W ABUT	3184+90.10	5.58	554.11	554.11
A	3185+00.10	5.58	553.81	553.82
B	3185+10.10	5.58	553.51	553.53
C	3185+20.10	5.58	553.22	553.23
D	3185+30.10	5.58	552.92	552.93
E	3185+40.10	5.58	552.62	552.63
CL W BRG PIER 1	3185+47.72	5.58	552.39	552.39
CL PIER 1	3185+48.72	5.58	552.36	552.36
CL E BRG PIER 1	3185+49.72	5.58	552.33	552.33
F	3185+59.72	5.58	552.03	552.05
G	3185+69.72	5.58	551.73	551.77
H	3185+79.72	5.58	551.44	551.48
I	3185+89.72	5.58	551.14	551.19
J	3185+99.72	5.58	550.84	550.88
K	3186+09.72	5.58	550.54	550.57
CL W BRG PIER 2	3186+23.72	5.58	550.12	550.12
CL PIER 2	3186+24.72	5.58	550.09	550.09
CL E BRG PIER 2	3186+25.72	5.58	550.06	550.06
L	3186+35.72	5.58	549.76	549.77
M	3186+45.72	5.58	549.46	549.48
N	3186+55.72	5.58	549.17	549.18
O	3186+65.72	5.58	548.87	548.88
P	3186+75.72	5.58	548.57	548.58
CL E ABUT	3186+83.35	5.58	548.34	548.34
BK E ABUT	3186+84.72	5.58	548.30	548.30

STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+87.36	2.79	554.24	554.24
CL W ABUT	3184+88.74	2.79	554.20	554.20
A	3184+98.74	2.79	553.90	553.91
B	3185+08.74	2.79	553.60	553.62
C	3185+18.74	2.79	553.30	553.32
D	3185+28.74	2.79	553.00	553.02
E	3185+38.74	2.79	552.70	552.71
CL W BRG PIER 1	3185+46.36	2.79	552.48	552.48
CL PIER 1	3185+47.36	2.79	552.45	552.45
CL E BRG PIER 1	3185+48.36	2.79	552.42	552.42
F	3185+58.36	2.79	552.12	552.14
G	3185+68.36	2.79	551.82	551.86
H	3185+78.36	2.79	551.52	551.57
I	3185+88.36	2.79	551.22	551.28
J	3185+98.36	2.79	550.92	550.97
K	3186+08.36	2.79	550.62	550.66
CL W BRG PIER 2	3186+22.36	2.79	550.21	550.21
CL PIER 2	3186+23.36	2.79	550.18	550.18
CL E BRG PIER 2	3186+24.36	2.79	550.15	550.15
L	3186+34.36	2.79	549.85	549.86
M	3186+44.36	2.79	549.55	549.57
N	3186+54.36	2.79	549.25	549.27
O	3186+64.36	2.79	548.95	548.97
P	3186+74.36	2.79	548.65	548.66
CL E ABUT	3186+81.99	2.79	548.43	548.43
BK E ABUT	3186+83.36	2.79	548.38	548.38

DESIGNED SCD
CHECKED DRB
DRAWN THW
CHECKED SCD



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PI-E1

10-1-08

TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 012-0073

SHEET NO. 6 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	15
			CONTRACT NO. 74169		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

☉ ROADWAY P.G.L. & BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+86.00	0.00	554.32	554.32
CL W ABUT	3184+87.38	0.00	554.28	554.28
A	3184+97.38	0.00	553.98	553.99
B	3185+07.38	0.00	553.68	553.70
C	3185+17.38	0.00	553.38	553.40
D	3185+27.38	0.00	553.09	553.10
E	3185+37.38	0.00	552.79	552.79
CL W BRG PIER 1	3185+45.00	0.00	552.56	552.56
CL PIER 1	3185+46.00	0.00	552.53	552.53
CL E BRG PIER 1	3185+47.00	0.00	552.50	552.50
F	3185+57.00	0.00	552.20	552.22
G	3185+67.00	0.00	551.90	551.94
H	3185+77.00	0.00	551.60	551.65
I	3185+87.00	0.00	551.31	551.35
J	3185+97.00	0.00	551.01	551.05
K	3186+07.00	0.00	550.71	550.74
CL W BRG PIER 2	3186+21.00	0.00	550.29	550.29
CL PIER 2	3186+22.00	0.00	550.26	550.26
CL E BRG PIER 2	3186+23.00	0.00	550.23	550.23
L	3186+33.00	0.00	549.93	549.94
M	3186+43.00	0.00	549.63	549.65
N	3186+53.00	0.00	549.33	549.35
O	3186+63.00	0.00	549.04	549.05
P	3186+73.00	0.00	548.74	548.74
CL E ABUT	3186+80.63	0.00	548.51	548.51
BK E ABUT	3186+82.00	0.00	548.47	548.47

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+83.28	-5.58	554.32	554.32
CL W ABUT	3184+84.65	-5.58	554.27	554.27
A	3184+94.65	-5.58	553.98	553.99
B	3185+04.65	-5.58	553.68	553.69
C	3185+14.65	-5.58	553.38	553.40
D	3185+24.65	-5.58	553.08	553.09
E	3185+34.65	-5.58	552.78	552.79
CL W BRG PIER 1	3185+42.28	-5.58	552.55	552.55
CL PIER 1	3185+43.28	-5.58	552.52	552.52
CL E BRG PIER 1	3185+44.28	-5.58	552.49	552.49
F	3185+54.28	-5.58	552.20	552.22
G	3185+64.28	-5.58	551.90	551.93
H	3185+74.28	-5.58	551.60	551.65
I	3185+84.28	-5.58	551.30	551.35
J	3185+94.28	-5.58	551.00	551.04
K	3186+04.28	-5.58	550.70	550.73
CL W BRG PIER 2	3186+18.28	-5.58	550.28	550.28
CL PIER 2	3186+19.28	-5.58	550.25	550.25
CL E BRG PIER 2	3186+20.28	-5.58	550.22	550.22
L	3186+30.28	-5.58	549.93	549.94
M	3186+40.28	-5.58	549.63	549.64
N	3186+50.28	-5.58	549.33	549.35
O	3186+60.28	-5.58	549.03	549.04
P	3186+70.28	-5.58	548.73	548.74
CL E ABUT	3186+77.90	-5.58	548.50	548.50
BK E ABUT	3186+79.28	-5.58	548.46	548.46

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+80.55	-11.17	554.31	554.31
CL W ABUT	3184+81.93	-11.17	554.27	554.27
A	3184+91.93	-11.17	553.97	553.98
B	3185+01.93	-11.17	553.67	553.69
C	3185+11.93	-11.17	553.37	553.39
D	3185+21.93	-11.17	553.07	553.09
E	3185+31.93	-11.17	552.78	552.78
CL W BRG PIER 1	3185+39.55	-11.17	552.55	552.55
CL PIER 1	3185+40.55	-11.17	552.52	552.52
CL E BRG PIER 1	3185+41.55	-11.17	552.49	552.49
F	3185+51.55	-11.17	552.19	552.21
G	3185+61.55	-11.17	551.89	551.93
H	3185+71.55	-11.17	551.59	551.64
I	3185+81.55	-11.17	551.29	551.34
J	3185+91.55	-11.17	551.00	551.04
K	3186+01.55	-11.17	550.70	550.72
CL W BRG PIER 2	3186+15.55	-11.17	550.28	550.28
CL PIER 2	3186+16.55	-11.17	550.25	550.25
CL E BRG PIER 2	3186+17.55	-11.17	550.22	550.22
L	3186+27.55	-11.17	549.92	549.93
M	3186+37.55	-11.17	549.62	549.64
N	3186+47.55	-11.17	549.32	549.34
O	3186+57.55	-11.17	549.02	549.04
P	3186+67.55	-11.17	548.73	548.73
CL E ABUT	3186+75.18	-11.17	548.50	548.50
BK E ABUT	3186+76.55	-11.17	548.46	548.46

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD



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PI-E1

10-1-08

TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 012-0073

SHEET NO. 7 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	16
			CONTRACT NO. 74169		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+80.15	-12.00	554.31	554.31
CL W ABUT	3184+81.52	-12.00	554.27	554.27
A	3184+91.52	-12.00	553.97	553.98
B	3185+01.52	-12.00	553.67	553.69
C	3185+11.52	-12.00	553.37	553.39
D	3185+21.52	-12.00	553.07	553.09
E	3185+31.52	-12.00	552.78	552.78
CL W BRG PIER 1	3185+39.15	-12.00	552.55	552.55
CL PIER 1	3185+40.15	-12.00	552.52	552.52
CL E BRG PIER 1	3185+41.15	-12.00	552.49	552.49
F	3185+51.15	-12.00	552.19	552.21
G	3185+61.15	-12.00	551.89	551.93
H	3185+71.15	-12.00	551.59	551.64
I	3185+81.15	-12.00	551.29	551.34
J	3185+91.15	-12.00	550.99	551.04
K	3186+01.15	-12.00	550.70	550.72
CL W BRG PIER 2	3186+15.15	-12.00	550.28	550.28
CL PIER 2	3186+16.15	-12.00	550.25	550.25
CL E BRG PIER 2	3186+17.15	-12.00	550.22	550.22
L	3186+27.15	-12.00	549.92	549.93
M	3186+37.15	-12.00	549.62	549.64
N	3186+47.15	-12.00	549.32	549.34
O	3186+57.15	-12.00	549.02	549.04
P	3186+67.15	-12.00	548.72	548.73
CL E ABUT	3186+74.77	-12.00	548.50	548.50
BK E ABUT	3186+76.15	-12.00	548.46	548.46

BEAM 7

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+77.83	-16.75	554.28	554.28
CL W ABUT	3184+79.21	-16.75	554.24	554.24
A	3184+89.21	-16.75	553.94	553.95
B	3184+99.21	-16.75	553.64	553.66
C	3185+09.21	-16.75	553.34	553.36
D	3185+19.21	-16.75	553.04	553.06
E	3185+29.21	-16.75	552.75	552.75
CL W BRG PIER 1	3185+36.83	-16.75	552.52	552.52
CL PIER 1	3185+37.83	-16.75	552.49	552.49
CL E BRG PIER 1	3185+38.83	-16.75	552.46	552.46
F	3185+48.83	-16.75	552.16	552.18
G	3185+58.83	-16.75	551.86	551.90
H	3185+68.83	-16.75	551.56	551.61
I	3185+78.83	-16.75	551.26	551.31
J	3185+88.83	-16.75	550.96	551.01
K	3185+98.83	-16.75	550.67	550.69
CL W BRG PIER 2	3186+12.83	-16.75	550.25	550.25
CL PIER 2	3186+13.83	-16.75	550.22	550.22
CL E BRG PIER 2	3186+14.83	-16.75	550.19	550.19
L	3186+24.83	-16.75	549.89	549.90
M	3186+34.83	-16.75	549.59	549.61
N	3186+44.83	-16.75	549.29	549.31
O	3186+54.83	-16.75	548.99	549.01
P	3186+64.83	-16.75	548.70	548.70
CL E ABUT	3186+72.46	-16.75	548.47	548.47
BK E ABUT	3186+73.83	-16.75	548.43	548.43

NORTH GUTTER LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK W ABUT	3184+77.22	-18.00	554.27	554.27
CL W ABUT	3184+78.60	-18.00	554.23	554.23
A	3184+88.60	-18.00	553.93	553.94
B	3184+98.60	-18.00	553.63	553.65
C	3185+08.60	-18.00	553.33	553.35
D	3185+18.60	-18.00	553.04	553.05
E	3185+28.60	-18.00	552.74	552.74
CL W BRG PIER 1	3185+36.22	-18.00	552.51	552.51
CL PIER 1	3185+37.22	-18.00	552.48	552.48
CL E BRG PIER 1	3185+38.22	-18.00	552.45	552.45
F	3185+48.22	-18.00	552.15	552.17
G	3185+58.22	-18.00	551.85	551.89
H	3185+68.22	-18.00	551.55	551.60
I	3185+78.22	-18.00	551.26	551.30
J	3185+88.22	-18.00	550.96	551.00
K	3185+98.22	-18.00	550.66	550.69
CL W BRG PIER 2	3186+12.22	-18.00	550.24	550.24
CL PIER 2	3186+13.22	-18.00	550.21	550.21
CL E BRG PIER 2	3186+14.22	-18.00	550.18	550.18
L	3186+24.22	-18.00	549.88	549.89
M	3186+34.22	-18.00	549.58	549.60
N	3186+44.22	-18.00	549.28	549.30
O	3186+54.22	-18.00	548.99	549.00
P	3186+64.22	-18.00	548.69	548.69
CL E ABUT	3186+71.85	-18.00	548.46	548.46
BK E ABUT	3186+73.22	-18.00	548.42	548.42

DESIGNED <i>SCD</i>
CHECKED <i>DRB</i>
DRAWN <i>THW</i>
CHECKED <i>SCD</i>



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PI-E1 10-1-08

TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 012-0073

SHEET NO. 8 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	17
CONTRACT NO. 74169					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of W. Appr. Slab	3184+47.22	-18.00	555.17
A1	3184+57.22	-18.00	554.87
A2	3184+67.22	-18.00	554.57
E. Edge of W. Appr. Slab	3184+77.22	-18.00	554.27

NORTH EOP

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of W. Appr. Slab	3184+50.15	-12.00	555.20
A1	3184+60.15	-12.00	554.90
A2	3184+70.15	-12.00	554.61
E. Edge of W. Appr. Slab	3184+80.15	-12.00	554.31

CL ROADWAY & PGL

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of W. Appr. Slab	3184+56.00	0.00	555.22
A1	3184+66.00	0.00	554.92
A2	3184+76.00	0.00	554.62
E. Edge of W. Appr. Slab	3184+86.00	0.00	554.32

STAGE CONSTRUCTION LINE

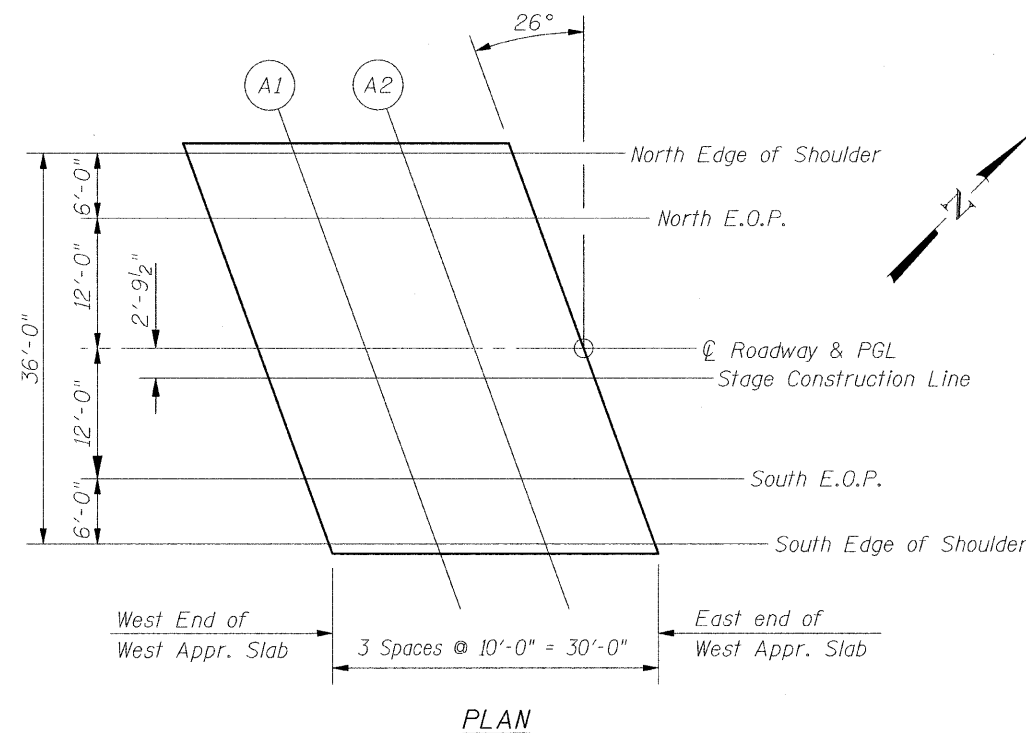
Location	Station	Offset	Theoretical Grade Elevations
W. Edge of W. Appr. Slab	3184+57.36	2.7917	555.14
A1	3184+67.36	2.7917	554.84
A2	3184+77.36	2.7917	554.54
E. Edge of W. Appr. Slab	3184+87.36	2.7917	554.24

SOUTH EOP

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of W. Appr. Slab	3184+61.85	12.00	554.86
A1	3184+71.85	12.00	554.56
A2	3184+81.85	12.00	554.26
E. Edge of W. Appr. Slab	3184+91.85	12.00	553.96

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of W. Appr. Slab	3184+64.78	18.00	554.64
A1	3184+74.78	18.00	554.34
A2	3184+84.78	18.00	554.04
E. Edge of W. Appr. Slab	3184+94.78	18.00	553.74



TOP OF WEST APPROACH  
SLAB ELEVATIONS  
STRUCTURE NO. 012-0073

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD



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E-AS

10-1-08

SHEET NO. 9 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	18
CONTRACT NO. 74169					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

NORTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of E. Appr. Slab	3186+73.22	-18.00	548.42
A3	3186+83.22	-18.00	548.12
A4	3186+93.22	-18.00	547.82
E. Edge of E. Appr. Slab	3187+03.22	-18.00	547.52

NORTH EOP

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of E. Appr. Slab	3186+76.15	-12.00	548.46
A3	3186+86.15	-12.00	548.16
A4	3186+96.15	-12.00	547.86
E. Edge of E. Appr. Slab	3187+06.15	-12.00	547.56

CL ROADWAY & PGL

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of E. Appr. Slab	3186+82.00	0.00	548.47
A3	3186+92.00	0.00	548.17
A4	3187+02.00	0.00	547.87
E. Edge of E. Appr. Slab	3187+12.00	0.00	547.57

STAGE CONSTRUCTION LINE

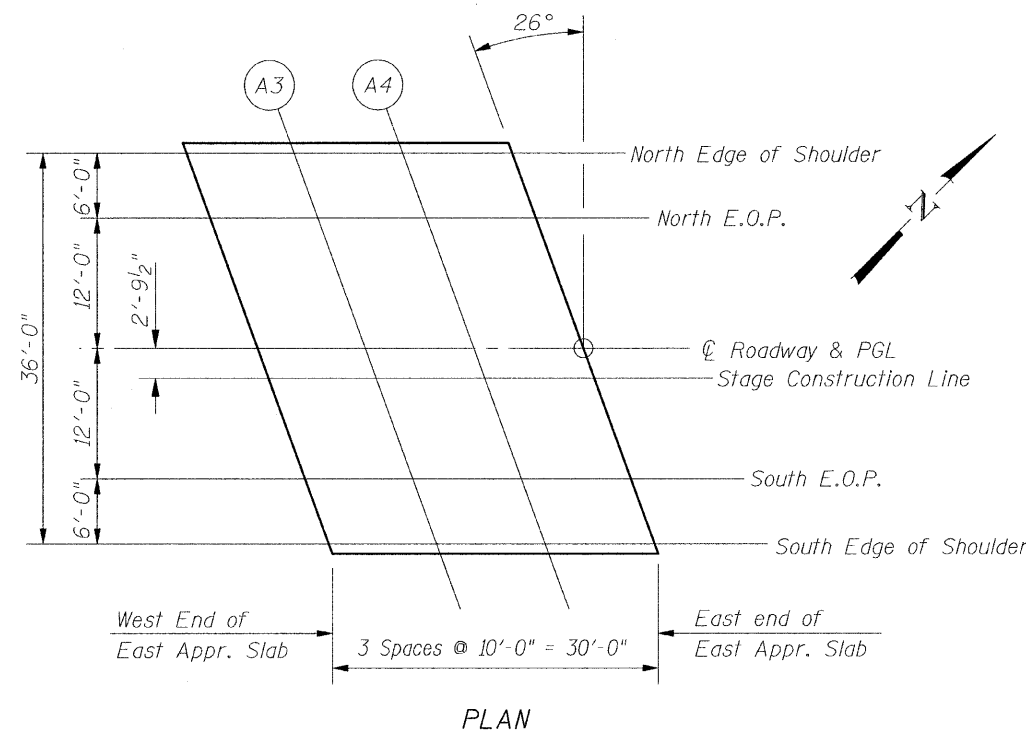
Location	Station	Offset	Theoretical Grade Elevations
W. Edge of E. Appr. Slab	3186+83.36	2.7917	548.39
A1	3186+93.36	2.7917	548.09
A2	3187+03.36	2.7917	547.79
E. Edge of E. Appr. Slab	3187+13.36	2.7917	547.49

SOUTH EOP

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of E. Appr. Slab	3186+87.85	12.00	548.11
A3	3186+97.85	12.00	547.81
A4	3187+07.85	12.00	547.51
E. Edge of E. Appr. Slab	3187+17.85	12.00	547.21

SOUTH EDGE OF SHOULDER

Location	Station	Offset	Theoretical Grade Elevations
W. Edge of E. Appr. Slab	3186+90.78	18.00	547.90
A3	3187+00.78	18.00	547.60
A4	3187+10.78	18.00	547.30
E. Edge of E. Appr. Slab	3187+20.78	18.00	547.00



TOP OF EAST APPROACH  
SLAB ELEVATIONS  
STRUCTURE NO. 012-0073

DESIGNED SCD
CHECKED DRB
DRAWN THW
CHECKED SCD
E-AS



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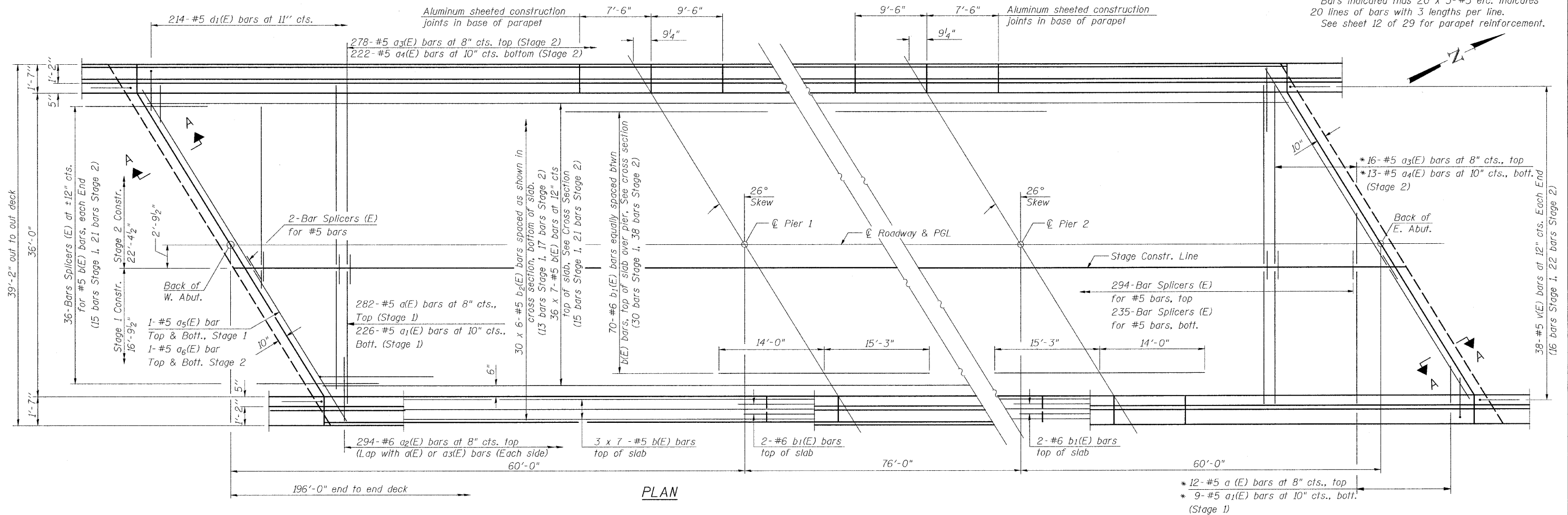
10-1-08

SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10 OF 29 SHEETS	1707	(BX-B)B-1	CLARK	44	19
			CONTRACT NO. 74169		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

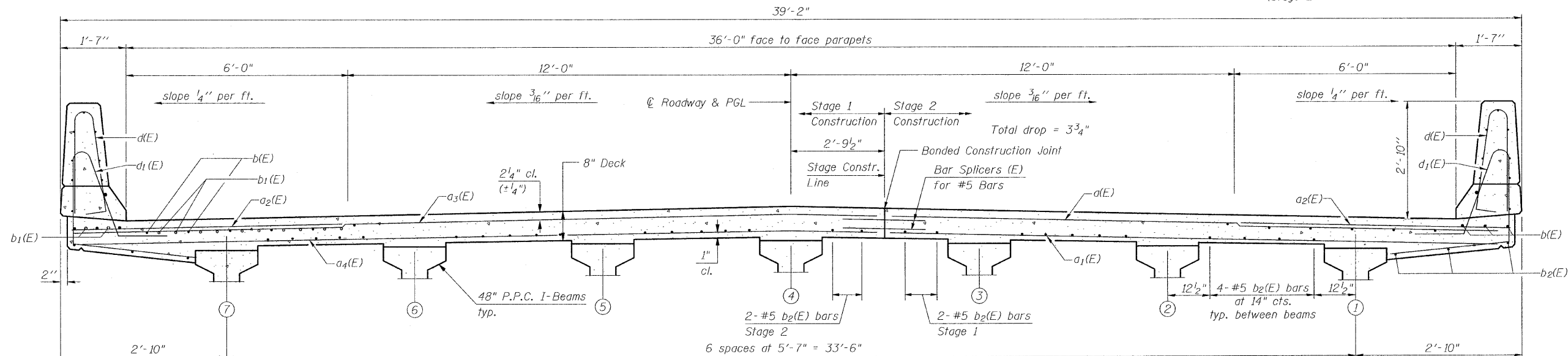
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\* Order a (E), a<sub>1</sub>(E), a<sub>3</sub>(E) & a<sub>4</sub>(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

Notes:  
See sheet 12 of 29 for superstructure details and Bill of Material.  
For Section A-A and diaphragm details see sheet 13 of 29.  
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.  
See sheet 12 of 29 for parapet reinforcement.



PLAN



CROSS SECTION  
(Looking East)

DECK PLAN  
STRUCTURE NO. 012-0073

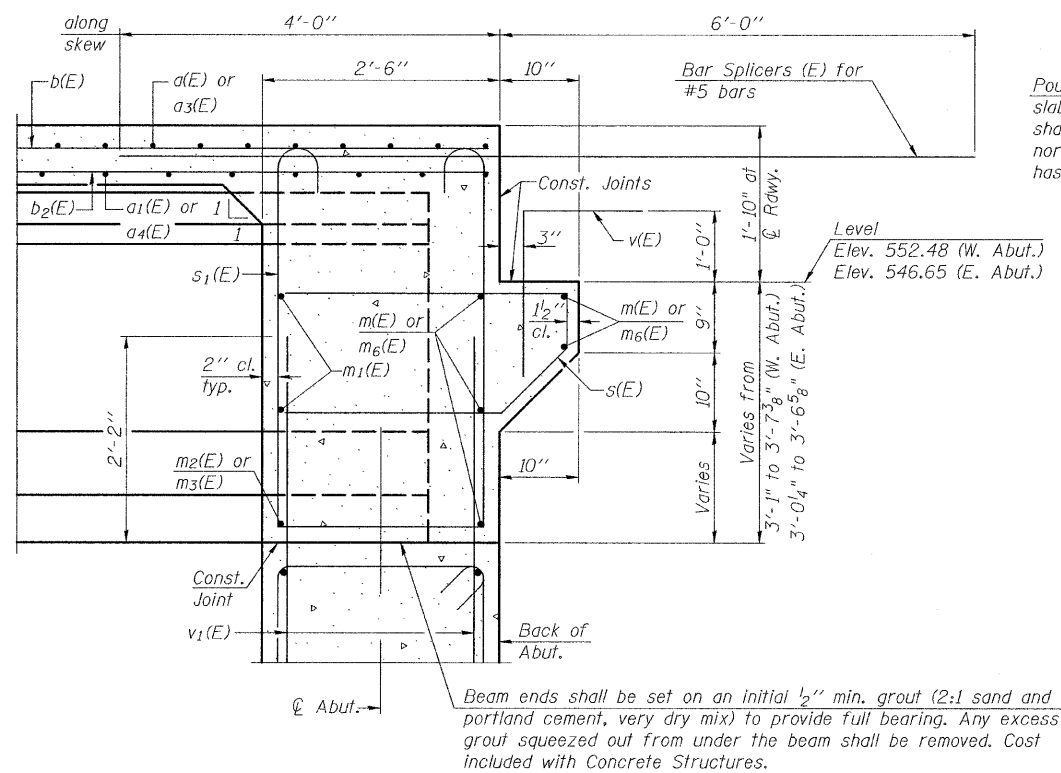
DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

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SHEET NO. 11 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	20
CONTRACT NO. 74169					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

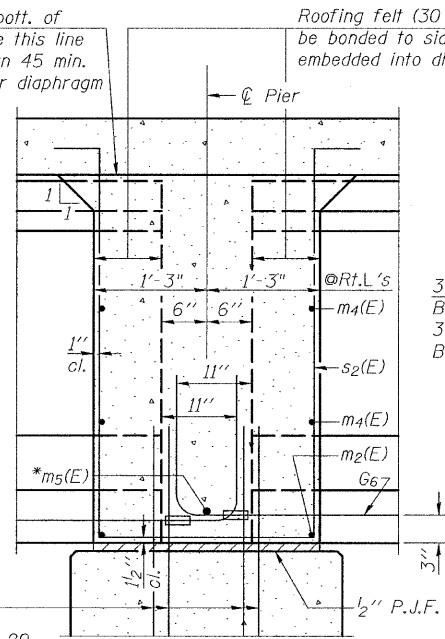


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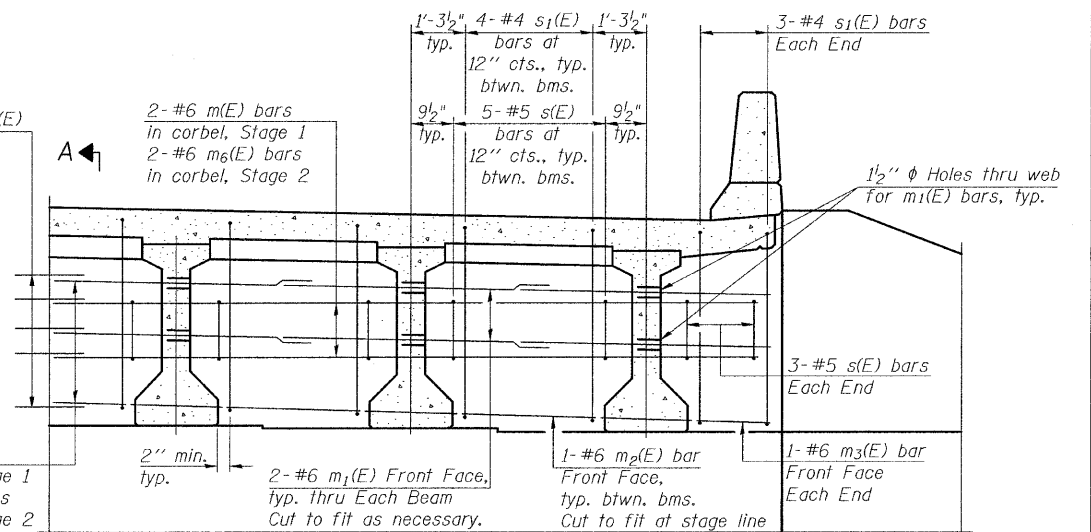


**SECTION A-A**  
Dimensions at right angles to abutment, except as shown.

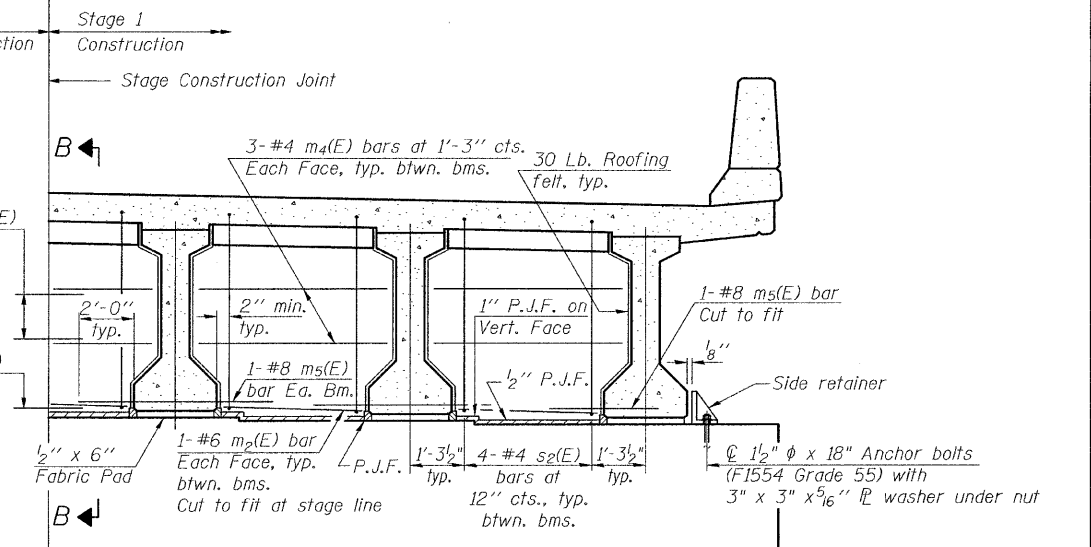
Pour diaphragm flush with bott. of slab. Concrete in slab above this line shall be placed not less than 45 min. nor more than 90 min. after diaphragm has been poured.



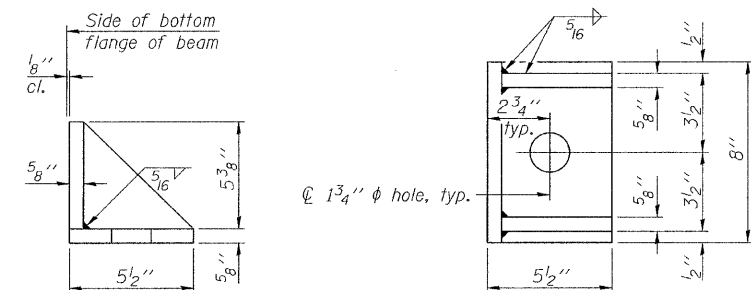
**SECTION B-B**  
Dimensions along centerline of beam, except as shown.  
\*Tightly fasten the #8 bars together with No. 9 wire ties.



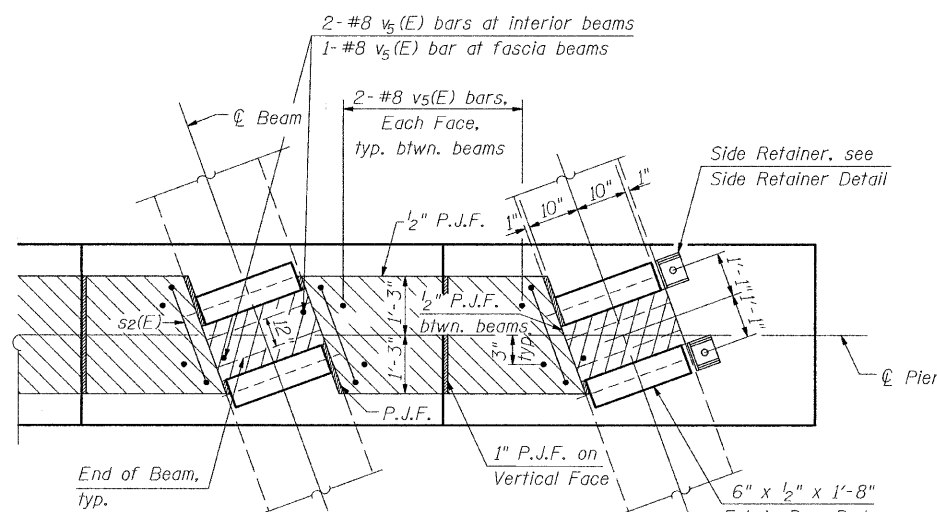
**DIAPHRAGM ELEVATION AT ABUTMENT**



**DIAPHRAGM AT PIER**



**SIDE RETAINER**  
(2 required each side of each pier).  
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



**PLAN AT FIXED PIER**  
(Showing bearing pad and P.J.F. details)

**Notes:**  
Reinforcement bars in diaphragm are billed with superstructure on sheet 12 of 29.  
Concrete in diaphragm is included with Concrete Superstructure on sheet 12 of 29.  
For details of bars s(E), s1(E) and s2(E) see sheet 12 of 29.  
The s(E), s1(E) and s2(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.  
Cost of 30 Lb. roofing felt is included with Concrete Superstructure.  
The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.  
Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts for side retainers may be either cast in place or installed in holes drilled after the supporting member is in place and prior to pouring the deck.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Cost of side retainer and anchor bolts shall be included with Concrete Structures.

**MIN. BAR LAP**  
#6 bar = 3'-4"

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD



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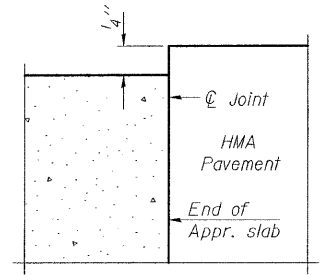
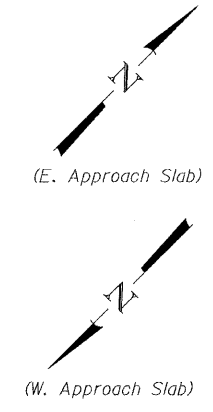
PI-2DDI PI-2DI 11-1-09

**DIAPHRAGM DETAILS**  
STRUCTURE NO. 012-0073

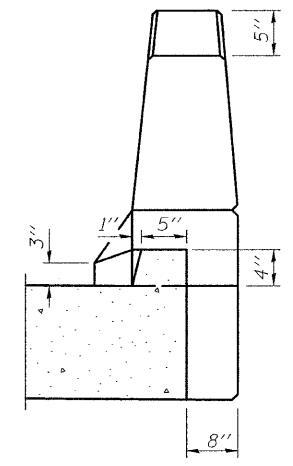
SHEET NO. 13 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	22
			CONTRACT NO. 74169		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
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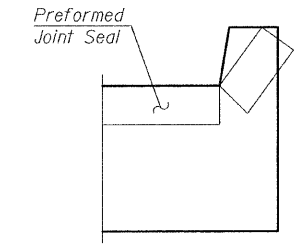
Notes:  
See sheet 15 of 29 for Sections C-C & D-D and View E-E.  
a<sub>7</sub>(E), a<sub>8</sub>(E), a<sub>10</sub>(E), a<sub>11</sub>(E), a<sub>12</sub>(E), and a<sub>13</sub>(E) bar  
spacings measured along  $\phi$  Rdwy.



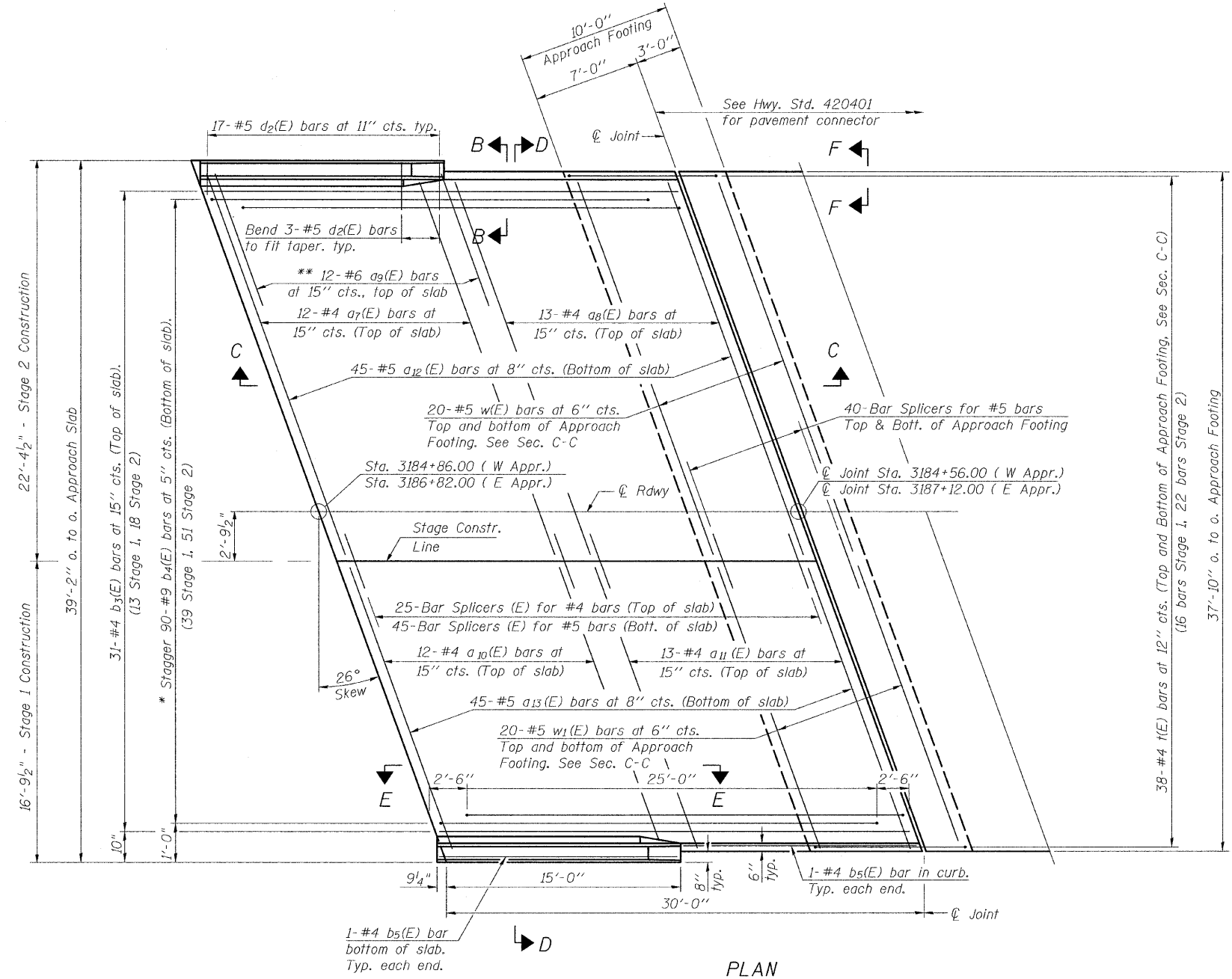
FLEXIBLE PAVEMENT  
DETAIL A



VIEW B-B



VIEW F-F  
Angle Preformed Joint Seal at 45°  
at curbs when req'd for drainage.



PLAN

\* Tilt #9 b<sub>4</sub>(E) bars as required to maintain clearance.  
\*\* Alternate with a<sub>7</sub>(E) or a<sub>10</sub>(E) bars, typ. each parapet.

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD



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BA-R 7-1-10

(Sheet 1 of 2)  
BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 012-0073

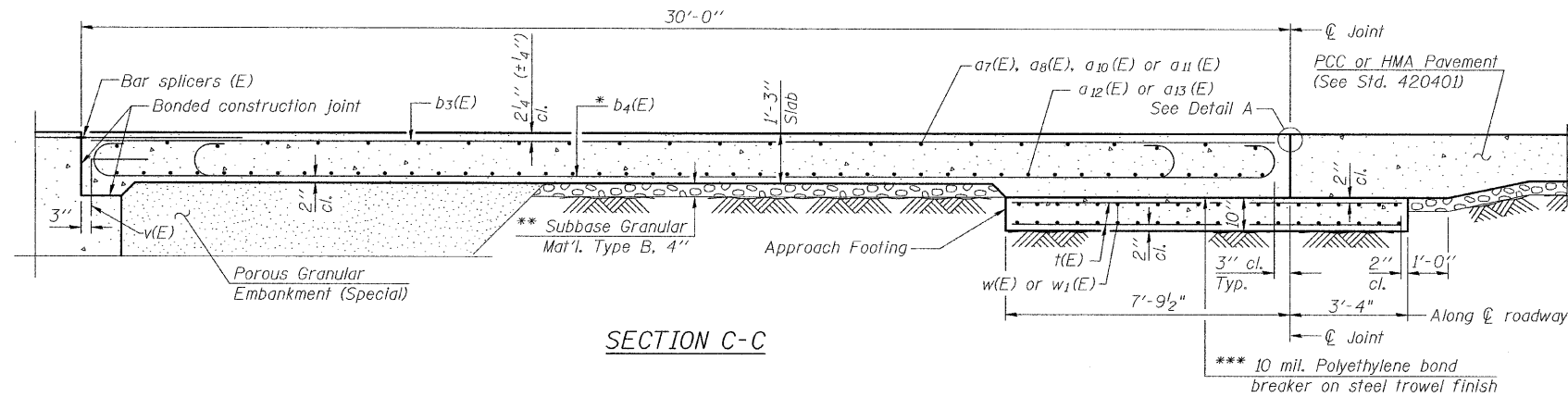
SHEET NO. 14 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	23
			CONTRACT NO. 74169		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					



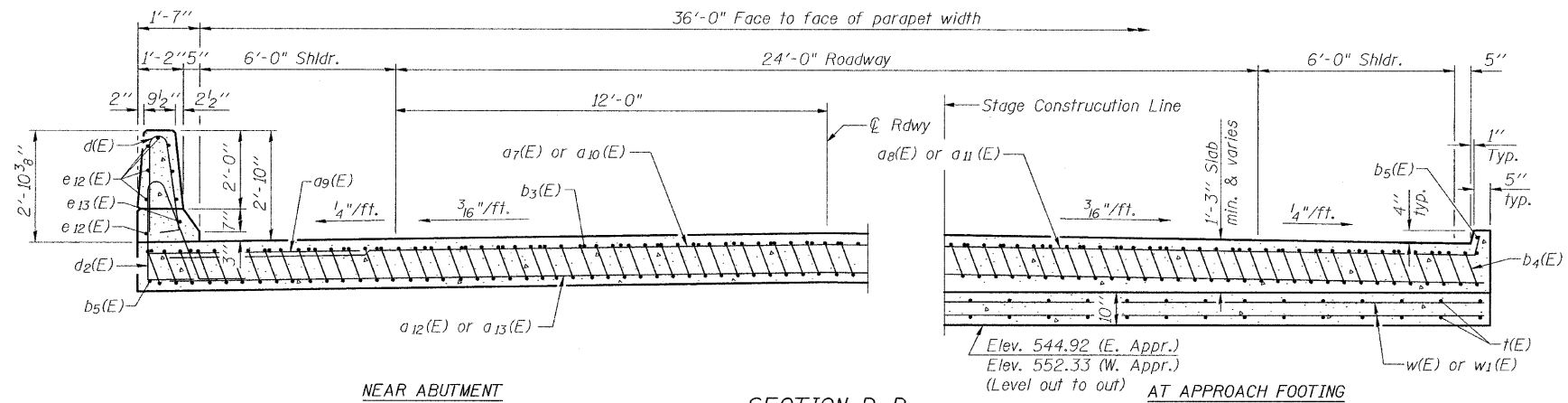
STATE OF ILLINOIS  
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Notes:

See sheet 14 of 29 for Detail A and View B-B.  
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
Approach footing concrete shall be paid for as Concrete Structures.  
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
For v(E) bar details, see sheet 13 of 29.  
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
For bar splicer details, see sheet 25 of 29.  
Cost of excavation for approach footing included with Concrete Structures.  
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 29.  
For additional parapet details, see sheet 2 of 29.



SECTION C-C

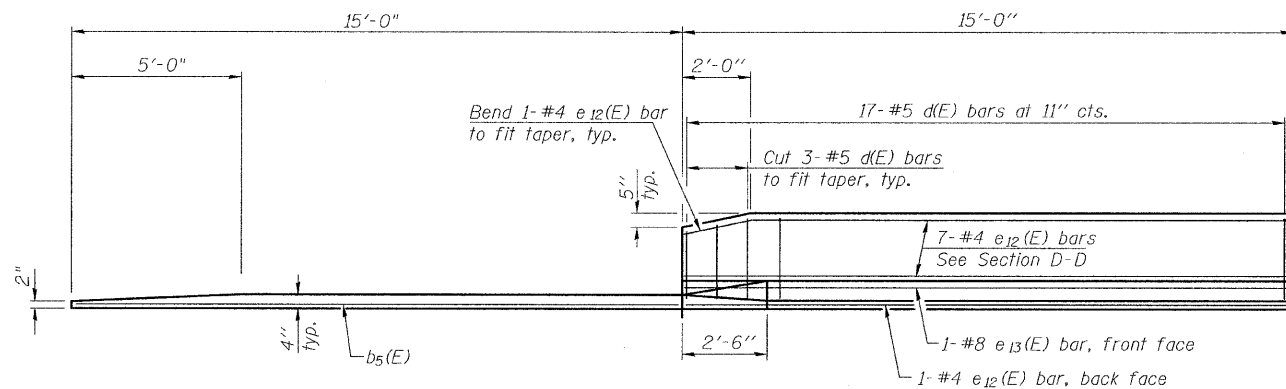


NEAR ABUTMENT

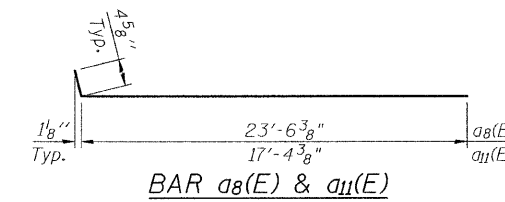
SECTION D-D

(See Plan for dimensions not shown)

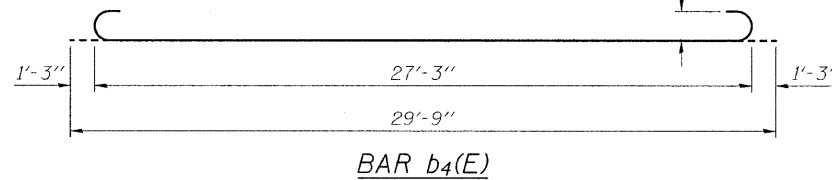
AT APPROACH FOOTING



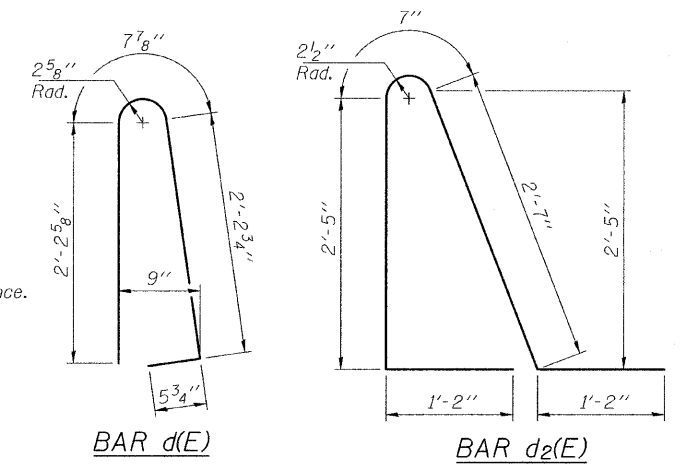
VIEW E-E



BAR a8(E) & a11(E)



BAR b4(E)



BAR d(E)

BAR d2(E)

TWO APPROACHES  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a7(E)	24	#4	24'-6"	—
a8(E)	26	#4	23'-9"	—
a9(E)	48	#6	6'-6"	—
a10(E)	24	#4	18'-4"	—
a11(E)	26	#4	17'-9"	—
a12(E)	90	#5	23'-9"	—
a13(E)	90	#5	17'-7"	—
b3(E)	62	#4	29'-8"	—
b4(E)	180	#9	29'-9"	—
b5(E)	8	#4	14'-8"	—
d(E)	68	#5	5'-7"	—
d2(E)	68	#5	7'-11"	—
e12(E)	32	#4	14'-8"	—
e13(E)	4	#8	14'-8"	—
t(E)	152	#4	10'-9"	—
w(E)	80	#5	24'-5"	—
w1(E)	80	#5	18'-4"	—
Concrete Superstructure		Cu. Yd.	123.9	
Concrete Structures		Cu. Yd.	25.9	
Reinforcement Bars, Epoxy Coated		Pound	31,360	
Bar Splicers		Each	220	

(Sheet 2 of 2)  
BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 012-0073

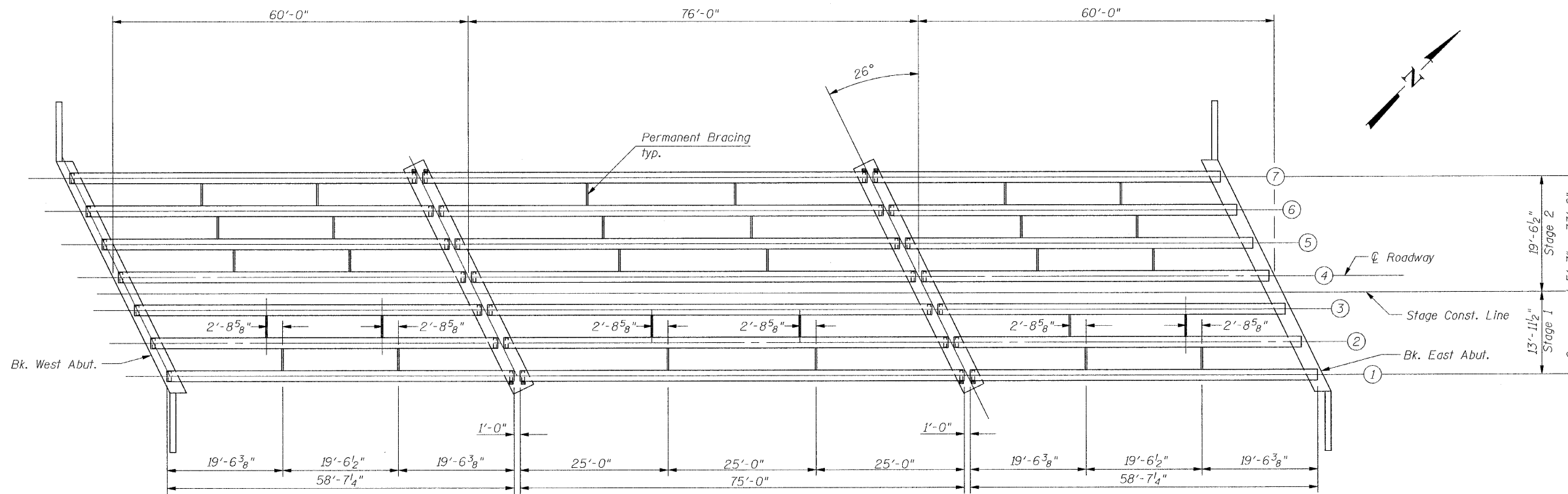
DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

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BA-R 7-1-10

SHEET NO. 15 OF 29 SHEETS	F.A.S. RTE. 1707	SECTION (BX-B)B-1	COUNTY CLARK	TOTAL SHEETS 44	SHEET NO. 24
	CONTRACT NO. 74169				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN

INTERIOR BEAM REACTION TABLE				
	W. Abut.	Pier 1, Span 1 Pier 2, Span 3	Pier 1, Span 2 Pier 2, Span 2	E. Abut.
$R_{DC1}$	(k)	33.7	43.3	33.7
* $R_{DC2}$	(k)	2.7	4.7	2.7
* $R_{DW}$	(k)	5.4	9.5	5.4
* $R_{L+IM}$	(k)	60.0	88.1	60.0
$R_{Total}$	(k)	101.8	102.6	101.8

\*The total  $R_{DC2}$ ,  $R_{DW}$  and  $R_{L+IM}$  are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

INTERIOR BEAM MOMENT TABLE						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
$I$	(in <sup>4</sup> )	144,117	144,117	144,117	144,117	144,117
$I'$	(in <sup>4</sup> )	372,565	---	372,565	---	372,565
$S_b$	(in <sup>3</sup> )	6,834.1	6,834.1	6,834.1	6,834.1	6,834.1
$S_b'$	(in <sup>3</sup> )	10,979.3	---	10,979.3	---	10,979.3
$S_t$	(in <sup>3</sup> )	5,355.1	5,355.1	5,355.1	5,355.1	5,355.1
$S_t'$	(in <sup>3</sup> )	26,485.9	---	26,485.9	---	26,485.9
$DC1$	(k/')	1.17	1.17	1.17	1.17	1.17
$M_{DC1}$	(k)	465.9	---	801.3	---	465.9
$DC2$	(k/')	0.128	0.128	0.128	0.128	0.128
$M_{DC2}$	(k)	28.6	56.2	31.7	56.2	28.6
$DW$	(k/')	0.257	0.257	0.257	0.257	0.257
$M_{DW}$	(k)	57.3	112.5	63.4	112.5	57.3
$M_{L+IM}$	(k)	599.9	644.5	613.3	644.5	599.9

- $I$ : Non-composite moment of inertia of beam section (in<sup>4</sup>).
- $I'$ : Composite moment of inertia of beam section (in<sup>4</sup>).
- $S_b$ : Non-composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).
- $S_b'$ : Composite section modulus for the bottom fiber of the prestressed beam (in<sup>3</sup>).
- $S_t$ : Non-composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).
- $S_t'$ : Composite section modulus for the top fiber of the prestressed beam (in<sup>3</sup>).
- $DC1$ : Un-factored non-composite dead load (kips/ft.).
- $M_{DC1}$ : Un-factored moment due to non-composite dead load (kip-ft.).
- $DC2$ : Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
- $M_{DC2}$ : Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
- $DW$ : Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
- $M_{DW}$ : Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_{L+IM}$ : Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

DESIGNED SCD
CHECKED DRB
DRAWN THW
CHECKED SCD

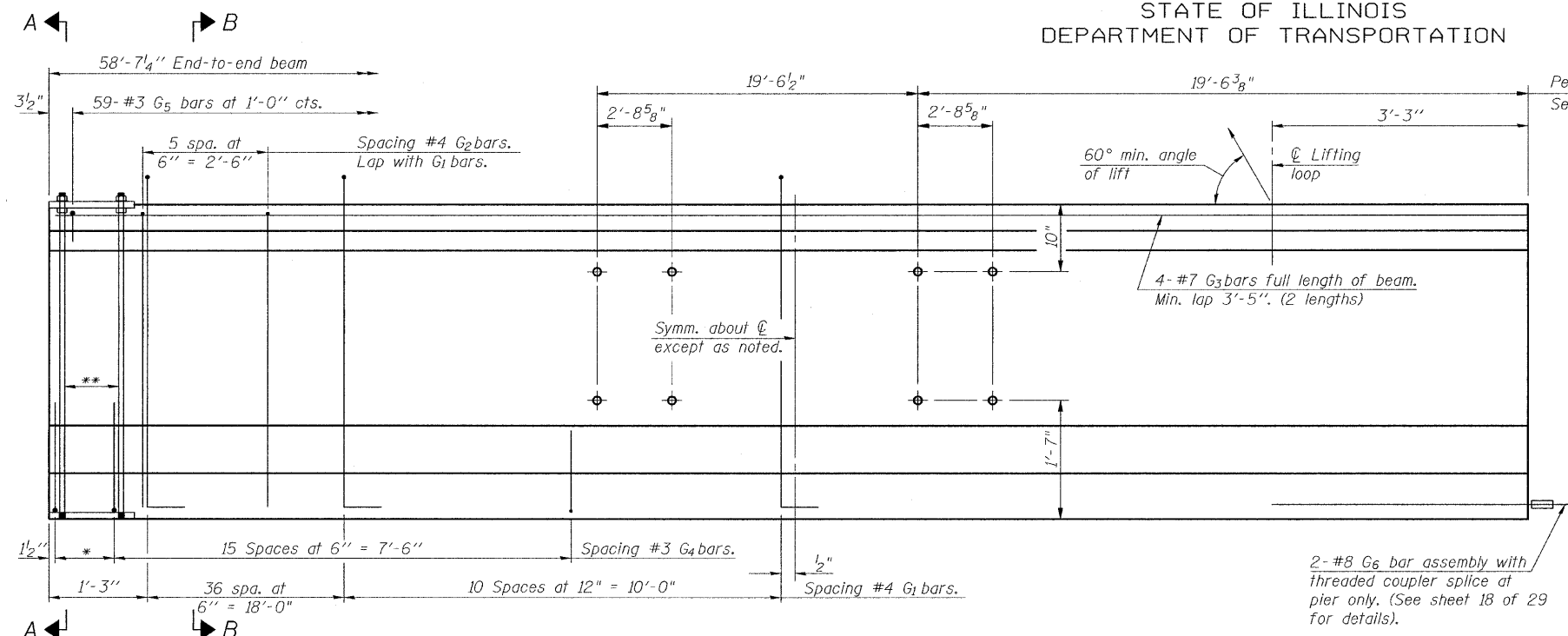


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FRAMING PLAN  
STRUCTURE NO. 012-0073

SHEET NO. 16 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	25
CONTRACT NO. 74169			FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



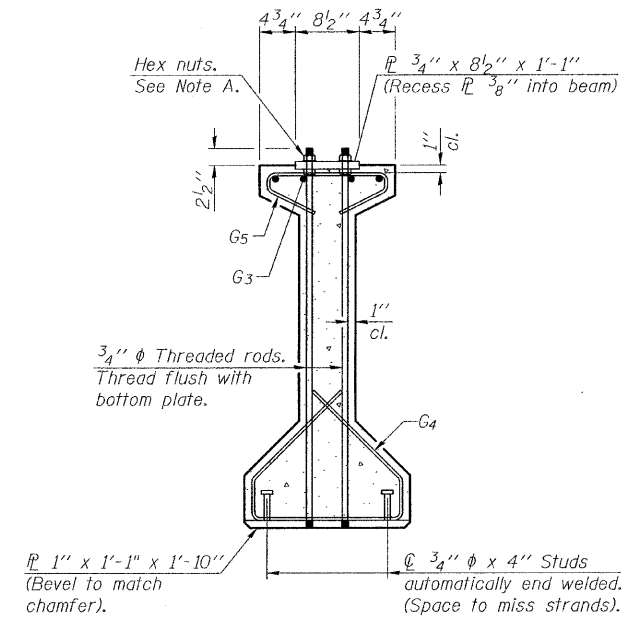
**ELEVATION OF BEAM**  
(Showing reinforcement & dimensions)  
Span 1, Looking North  
Span 3, Looking South

\* 3 spaces at 3" = 9".  
\*\* 4-3/4" φ threaded dowel rods at 3" cts., Each Face.

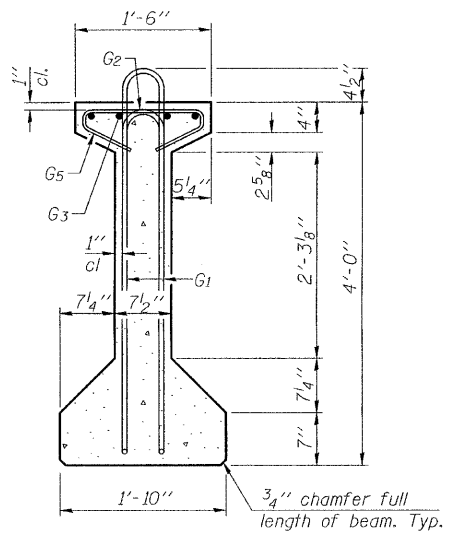
2-#8 G6 bar assembly with threaded coupler splice at pier only. (See sheet 18 of 29 for details).

Note A:  
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.

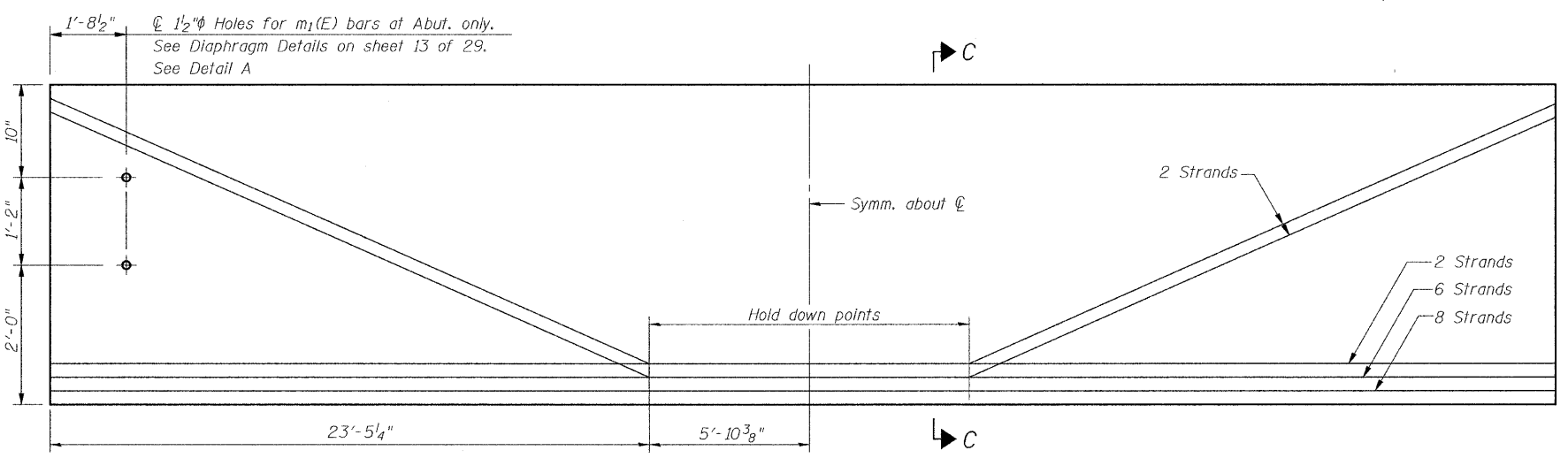
Permanent Bracing hole locations  
See sheet 18 of 29 for Details.



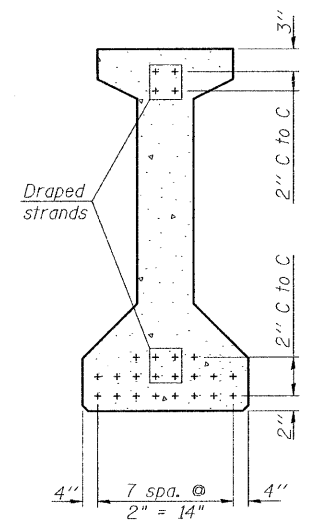
**SECTION A-A**



**SECTION B-B**



**ELEVATION OF BEAM**  
(Showing prestressing steel)



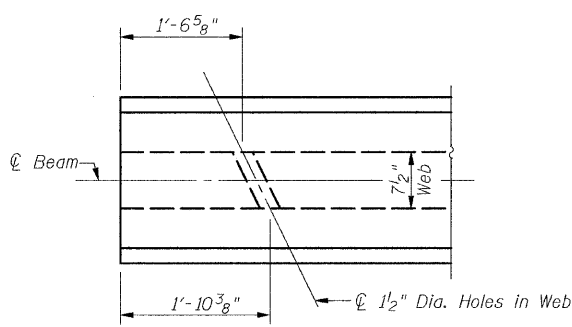
**SECTION C-C**

**\*\*\*BAR LIST  
ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G1	94	#4	9'-6"	∩L
G2	12	#4	7'-11"	∩
G3	8	#7	31'-4"	—
G4	38	#3	5'-3"	∩
G5	59	#3	2'-9"	∩
G6	2	#8	6'-6"	∩

\*\*\*For information only

Notes:  
See sheet 18 of 29 for additional details and Bill of Material.  
Required release strength, f'ci, shall be 5,000 psi.



**DETAIL A**

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

**ie** consultants  
IE CONSULTANTS, INC  
6420 SOUTH SIXTH STREET  
SPRINGFIELD, ILLINOIS 62712  
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WWW.IE-CONSULTANTS.COM

PI-4-48 11-1-09

**48" PPC I-BEAM  
SPAN 1 & 3  
STRUCTURE NO. 012-0073**

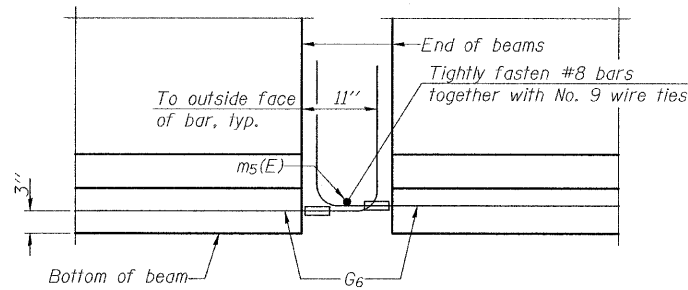
SHEET NO. 17 OF 29 SHEETS	F.A.S. RTE. 1707	SECTION (BX-B)B-1	COUNTY CLARK	TOTAL SHEETS 44	SHEET NO. 26
	CONTRACT NO. 74169				
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

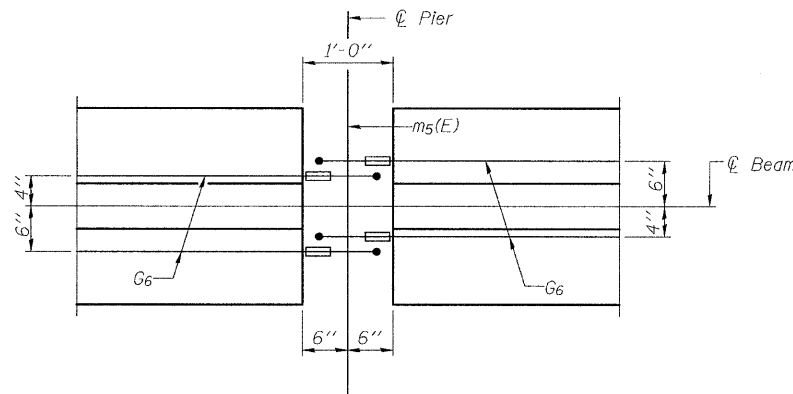
NOTES

Inserts for  $\frac{3}{4}$ "  $\phi$  threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be  $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.

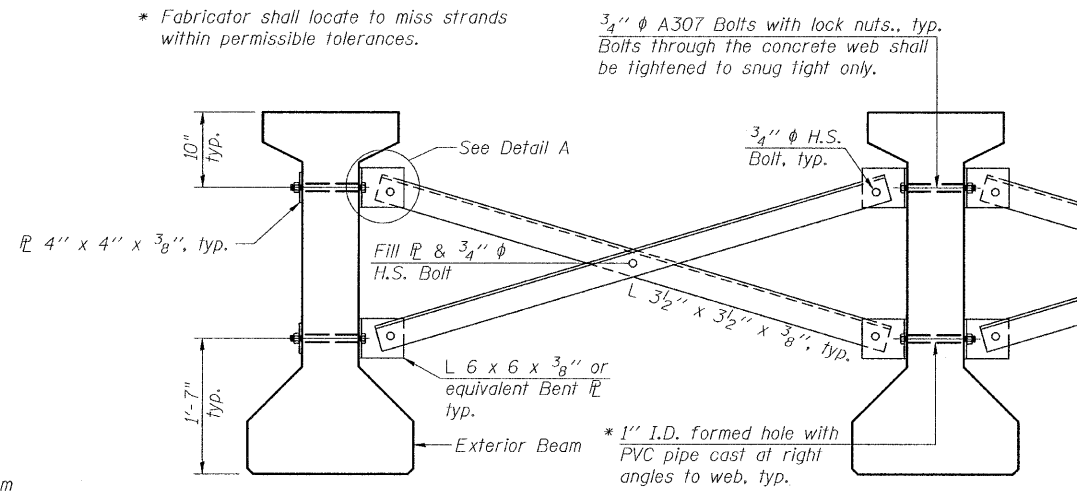
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). A minimum  $2\frac{1}{2}$ "  $\phi$  lifting pin shall be used to engage the lifting loops during handling. Tilt  $G_6$  bars when necessary to maintain  $1\frac{1}{2}$ " clearance. The top and bottom plates shall be AASHTO M270 Grade 50. The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized. Threaded rods shall be ASTM F 1554 Grade 55. The  $G_6$  bar assembly shall have the threaded ends oversized to ensure no reduction in cross sectional area after threading. The coupler splice shall be capable of developing 125 percent of the yield strength of the reinforcement bar.



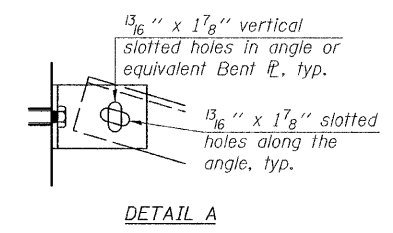
ELEVATION OF BEAM AT PIER



PLAN OF BEAM AT PIER

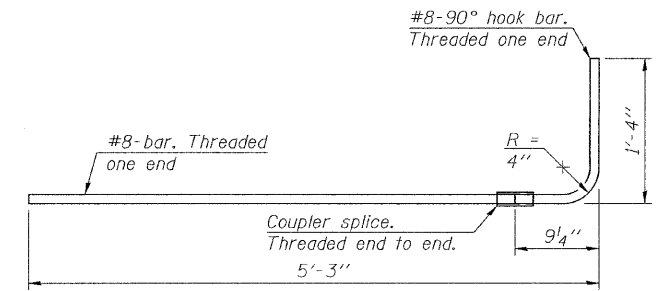


Notes:  
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted. Two hardened washers are required for each set of oversized holes. All holes shall be  $\frac{1}{16}$ "  $\phi$  unless otherwise noted.  $\frac{3}{16}$ " x 3" x 3" plate washers are required over all slotted holes. All bolts shall be galvanized according to AASHTO M232. Bracing shall be installed as beams are erected and tightened as soon as possible during erection. Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.

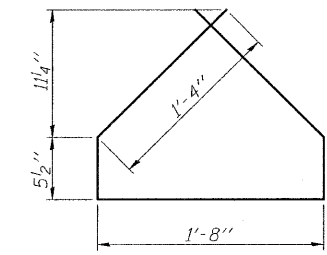


DETAIL A

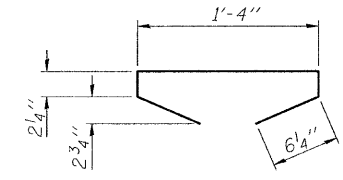
PERMANENT BRACING DETAILS



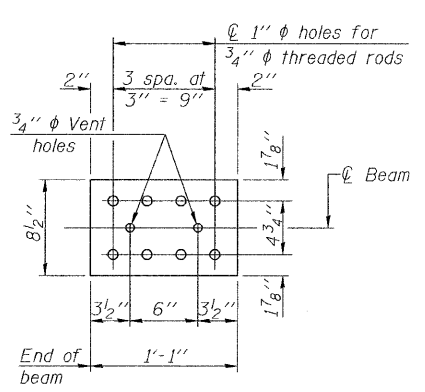
G6 BAR ASSEMBLY



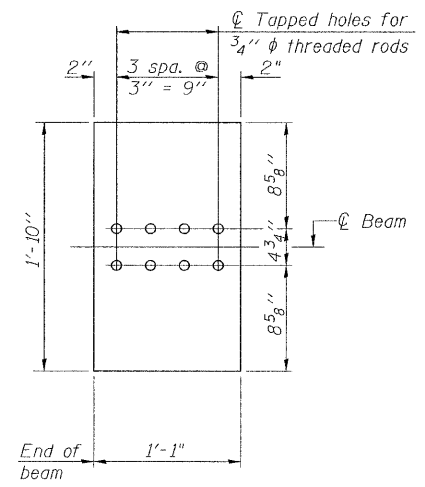
BAR G4



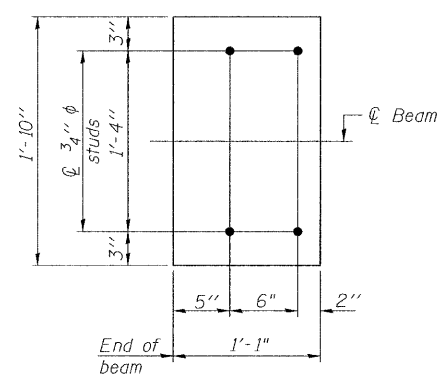
BAR G5



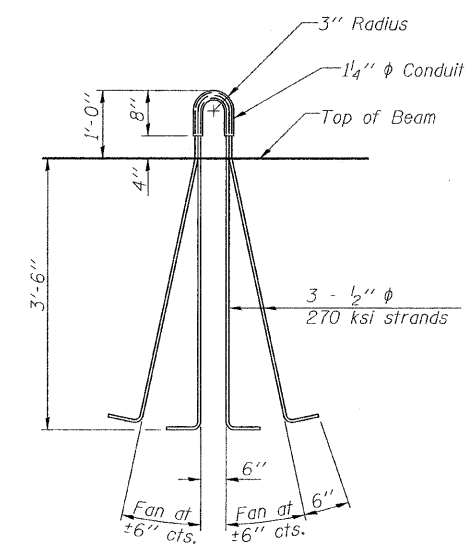
TOP PLATE



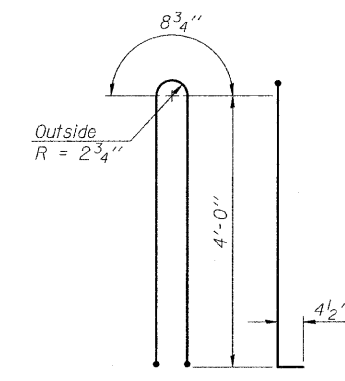
BOTTOM PLATE  
(Showing threaded rods)



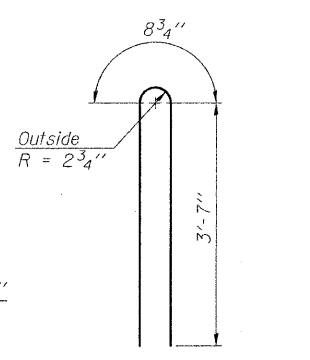
BOTTOM PLATE  
(Showing studs)



LIFTING LOOP DETAIL



BAR G1



BAR G2

48" PPC I-BEAM DETAILS  
SPANS 1 & 3  
STRUCTURE NO. 012-0073

BILL OF MATERIAL

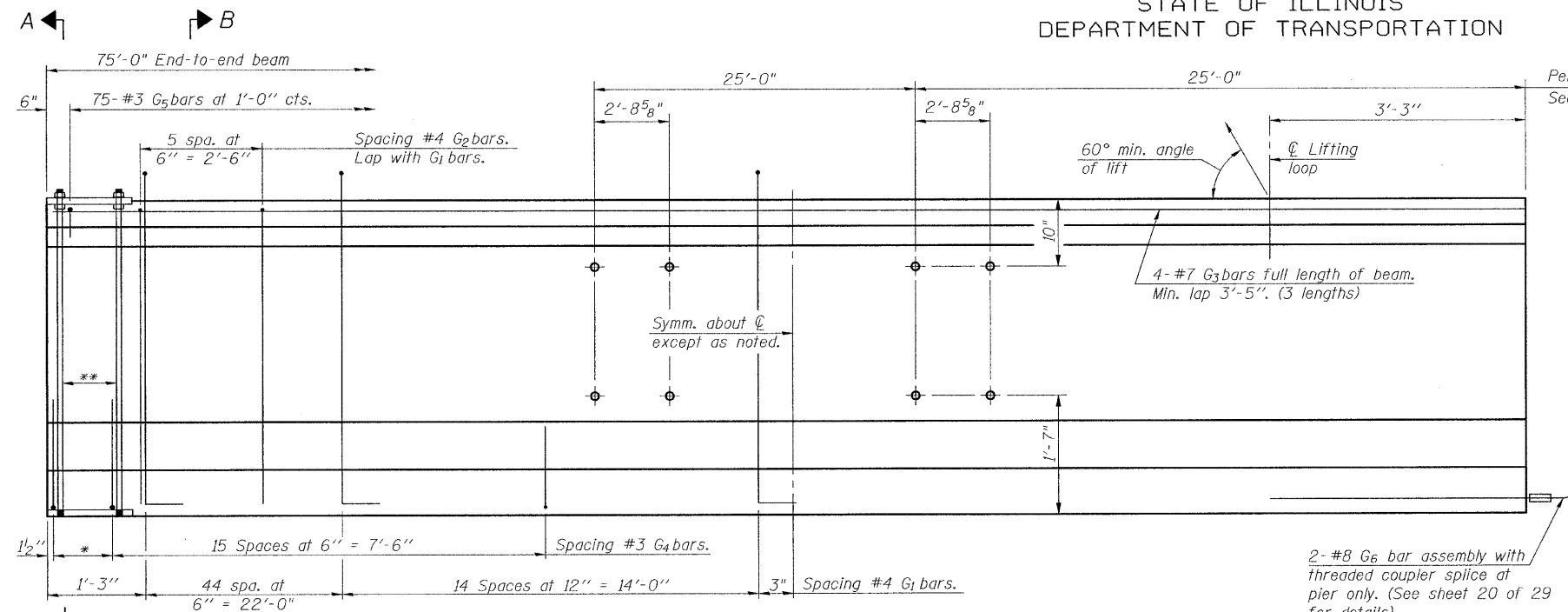
Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"	Ft.	820.5

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

**ie** consultants  
IE CONSULTANTS, INC  
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SHEET NO. 18 OF 29 SHEETS	F.A.S. RTE. 1707	SECTION (BX-B)B-1	COUNTY CLARK	TOTAL SHEETS 44	SHEET NO. 27
	CONTRACT NO. 74169 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



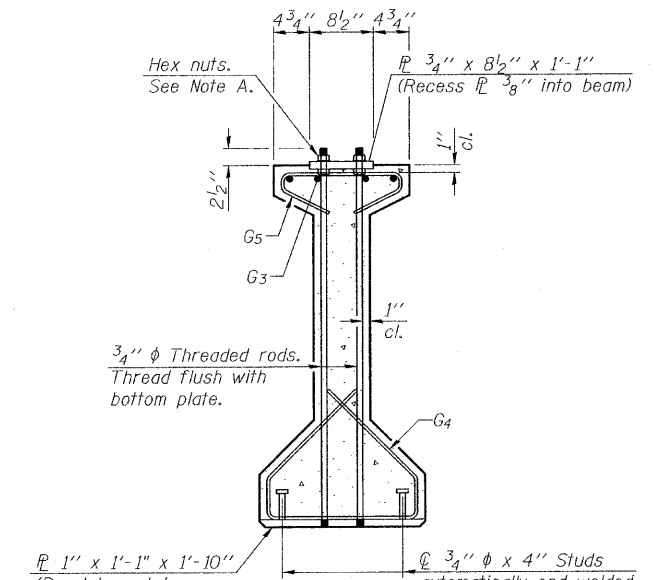
Permanent Bracing hole locations  
See sheet 20 of 29 for Details.

**ELEVATION OF BEAM**  
(Showing reinforcement & dimensions)  
Looking North

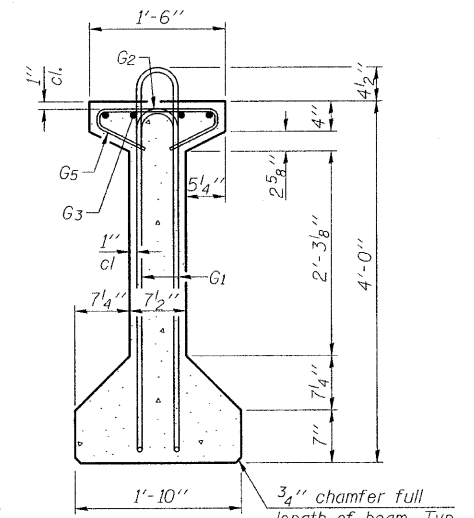
\* 3 spaces at 3" = 9".  
\*\* 4-3/4" φ threaded dowel rods at 3" cts., Each Face.

2- #8 G6 bar assembly with threaded coupler splice at pier only. (See sheet 20 of 29 for details).

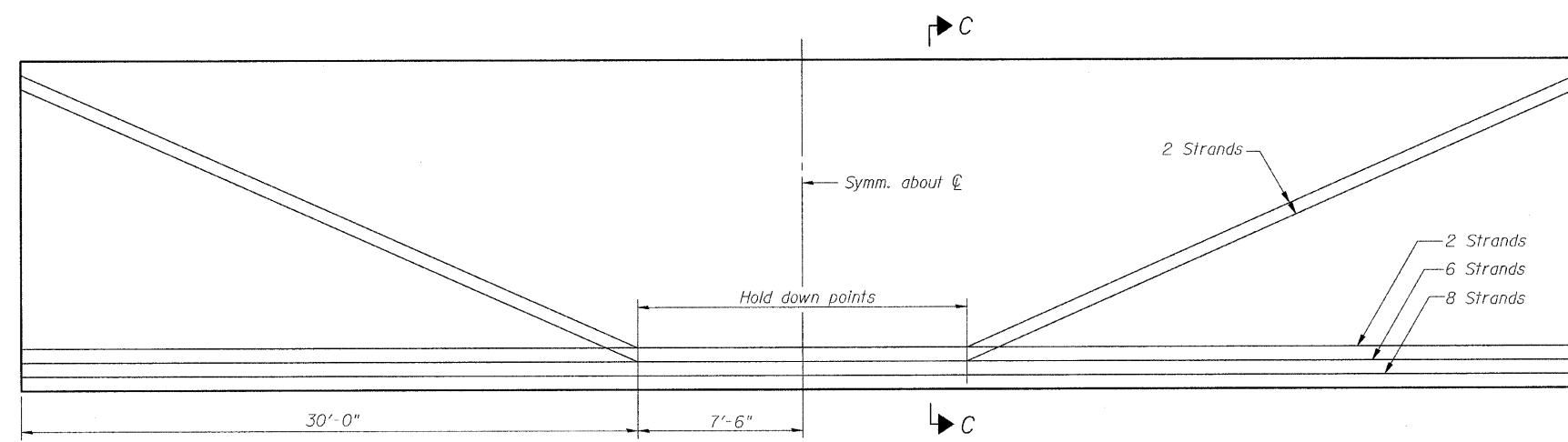
Note A:  
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



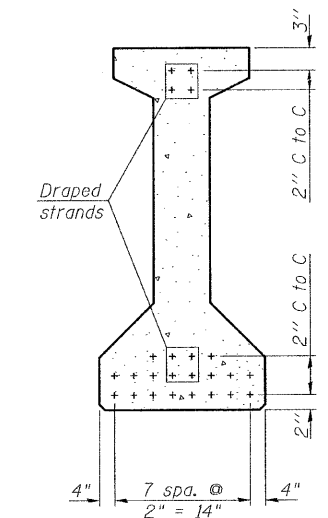
**SECTION A-A**



**SECTION B-B**



**ELEVATION OF BEAM**  
(Showing prestressing steel)



**SECTION C-C**

**\*\*\*BAR LIST  
ONE BEAM ONLY**

Bar	No.	Size	Length	Shape
G1	118	#4	9'-6"	∩L
G2	12	#4	7'-11"	∩
G3	12	#7	27'-9"	∩
G4	38	#3	5'-3"	∩
G5	75	#3	2'-9"	∩
G6	2	#8	6'-6"	∩

\*\*\*For information only

Notes:  
See sheet 20 of 29 for additional details and Bill of Material.  
Required release strength, f'ci, shall be 5,000 psi.

**48" PPC I-BEAM  
SPAN 2  
STRUCTURE NO. 012-0073**

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

**ie**  
consultants

IE CONSULTANTS, INC.  
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PI-4-48 11-1-09

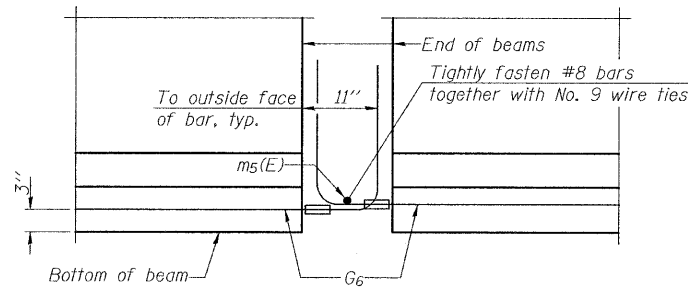
SHEET NO. 19 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	28
CONTRACT NO. 74169					
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

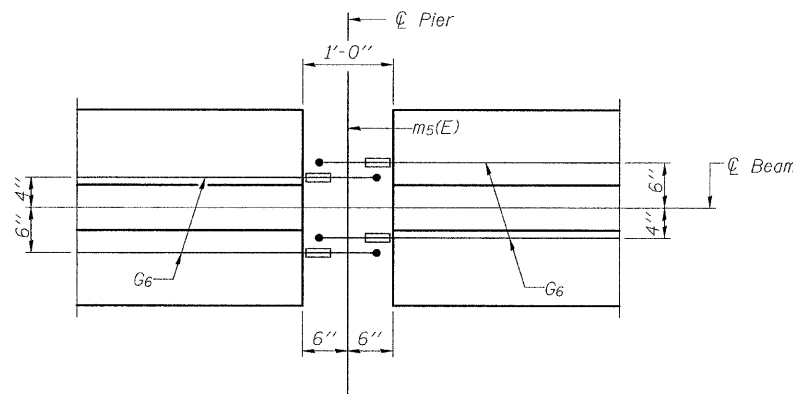
NOTES

Inserts for  $\frac{3}{4}$ "  $\phi$  threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams. Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be  $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.

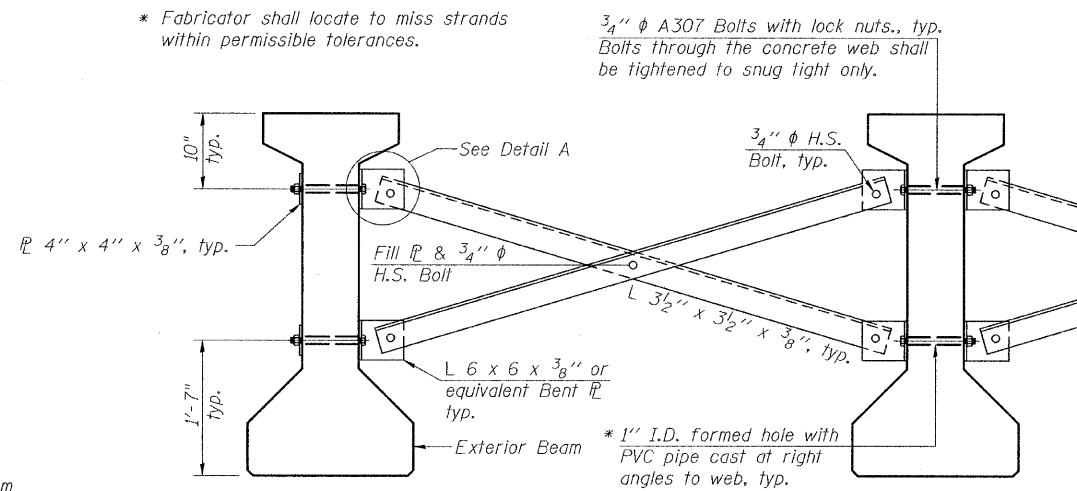
Reinforcement bars shall conform to ASTM A 706, Grade 60. (See Special Provisions). A minimum  $2\frac{1}{2}$ "  $\phi$  lifting pin shall be used to engage the lifting loops during handling. Tilt  $G_6$  bars when necessary to maintain  $1\frac{1}{2}$ " clearance. The top and bottom plates shall be AASHTO M270 Grade 50. The bottom plates and studs shall be galvanized according to AASHTO M111. Top plates and threaded rods need not be galvanized. Threaded rods shall be ASTM F 1554 Grade 55. The  $G_6$  bar assembly shall have the threaded ends oversized to ensure no reduction in cross sectional area after threading. The coupler splice shall be capable of developing 125 percent of the yield strength of the reinforcement bar.



ELEVATION OF BEAM AT PIER

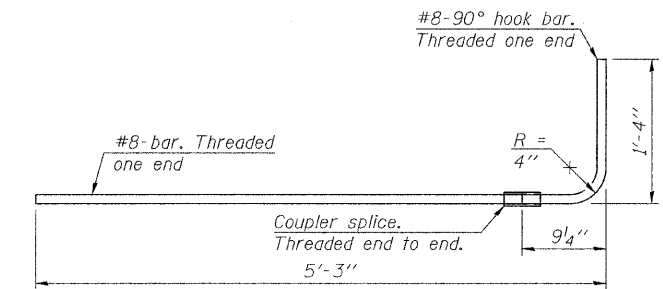
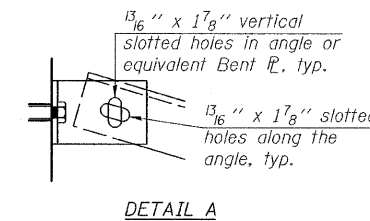


PLAN OF BEAM AT PIER

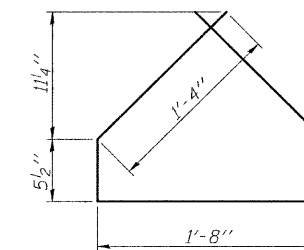


Notes:  
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted. Two hardened washers are required for each set of oversized holes. All holes shall be  $\frac{15}{16}$ "  $\phi$  unless otherwise noted.  $\frac{5}{16}$ " x 3" x 3" plate washers are required over all slotted holes. All bolts shall be galvanized according to AASHTO M232. Bracing shall be installed as beams are erected and tightened as soon as possible during erection. Permanent bracing shall not be paid for separately, but shall be included in the cost of Furnishing and Erecting Precast Prestressed Concrete I-Beams.

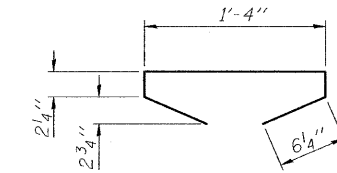
PERMANENT BRACING DETAILS



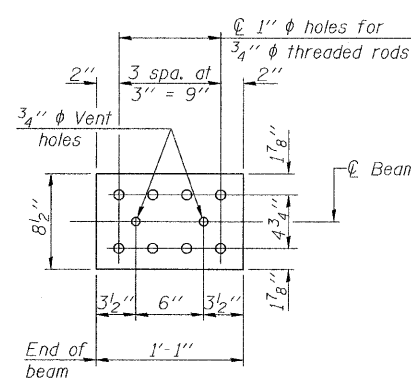
G6 BAR ASSEMBLY



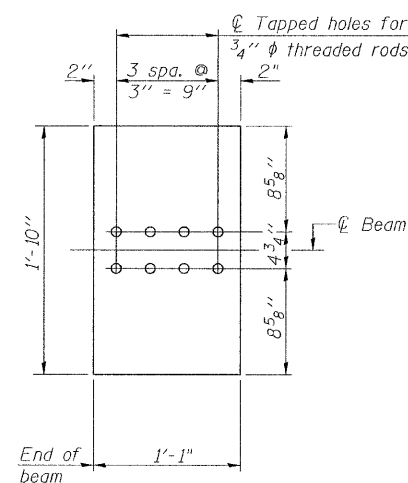
BAR G4



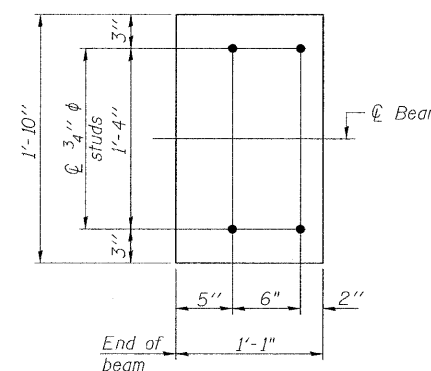
BAR G5



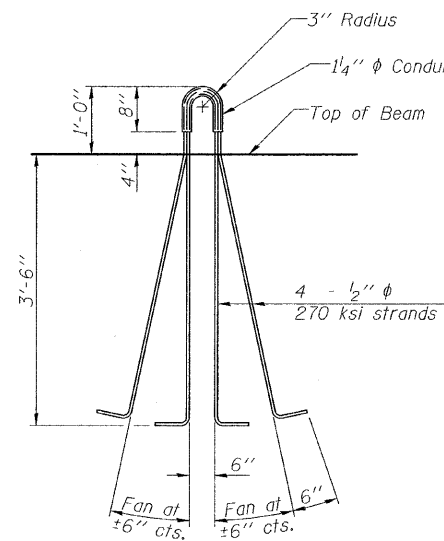
TOP PLATE



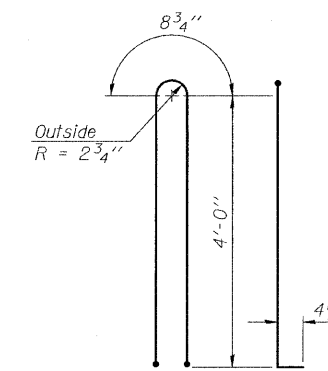
BOTTOM PLATE  
(Showing threaded rods)



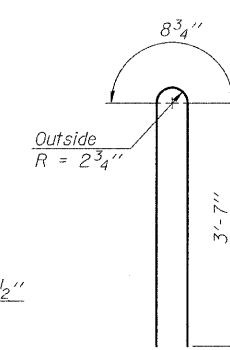
BOTTOM PLATE  
(Showing studs)



LIFTING LOOP DETAIL



BAR G1



BAR G2

48" PPC I-BEAM DETAILS  
SPAN 2  
STRUCTURE NO. 012-0073

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 48"	Ft.	525

DESIGNED SCD
CHECKED DRB
DRAWN THW
CHECKED SCD



IE CONSULTANTS, INC  
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SPRINGFIELD, ILLINOIS 62712  
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WWW.IE-CONSULTANTS.COM

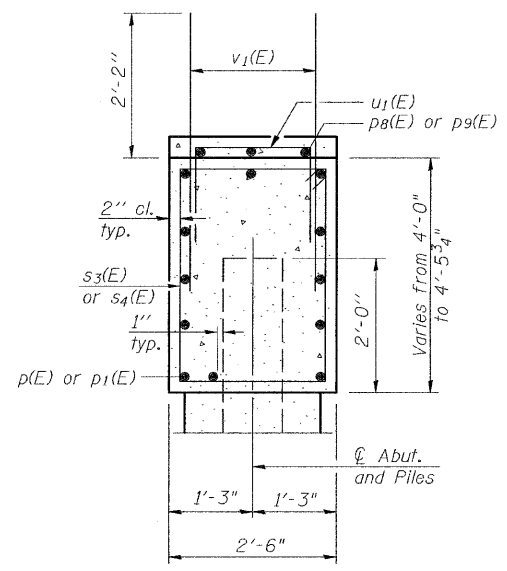
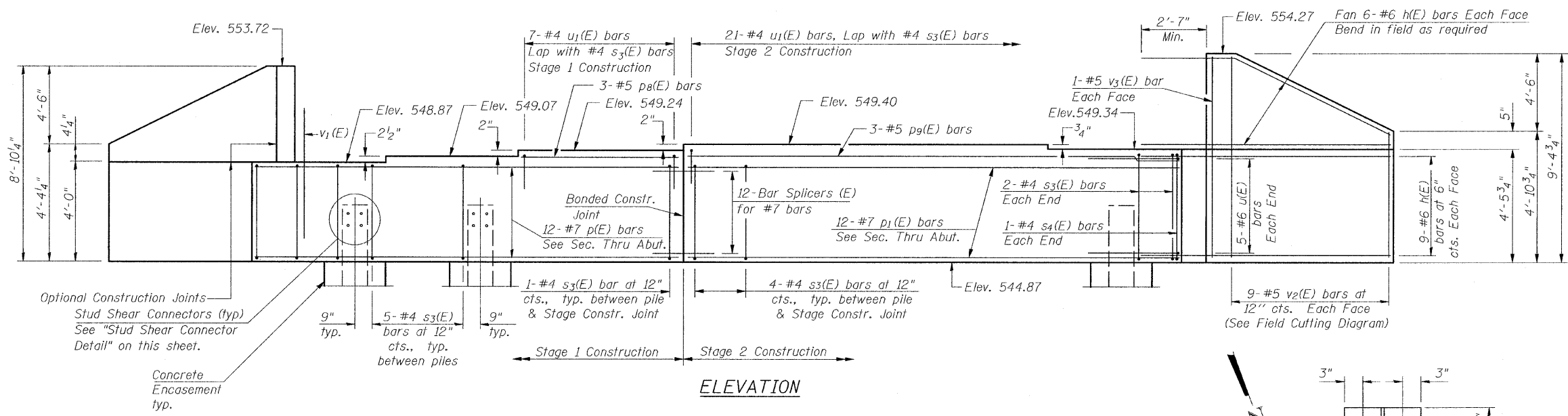
PI-4-48D

11-1-09

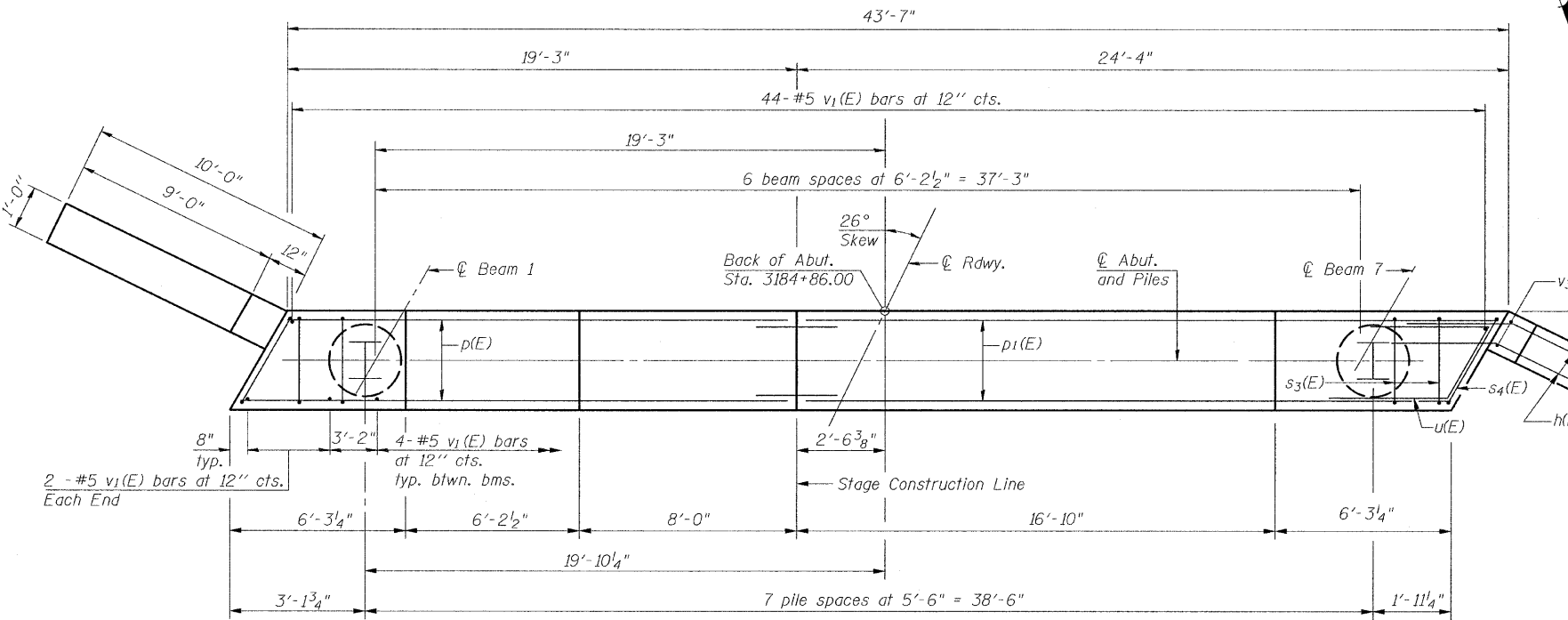
SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20 OF 29 SHEETS	1707	(BX-B)B-1	CLARK	44	29
CONTRACT NO. 74169					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

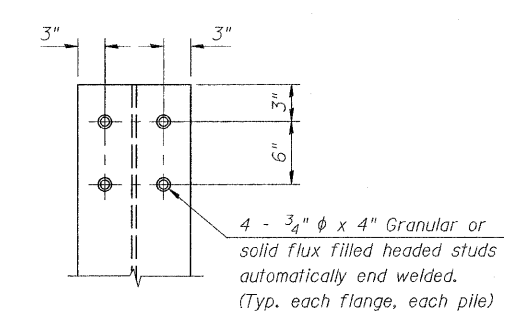
Notes:  
Four steps monolithically with cap.



SEC. THRU ABUT.



PLAN



STUD SHEAR CONNECTOR DETAIL

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	60	#6	12'-6"	—
p(E)	12	#7	19'-0"	—
p1(E)	12	#7	22'-11"	—
p8(E)	3	#5	7'-6"	—
p9(E)	3	#5	22'-9"	—
s3(E)	39	#4	12'-5"	□
s4(E)	2	#4	12'-11"	□
u(E)	10	#6	10'-8"	┌
u1(E)	28	#4	8'-2"	┌
v1(E)	56	#5	4'-4"	—
v2(E)	18	#5	13'-6"	—
v3(E)	4	#5	9'-0"	—
Structure Excavation		Cu. Yd.	10.0	
Concrete Structures		Cu. Yd.	22.9	
Reinforcement Bars, Epoxy Coated		Pound	3450	
Furnishing Steel Piles, HP 10x42		Foot	217	
Driving Piles		Foot	217	
Test Pile, Steel HP 10x42		Each	1	
Concrete Encasement		Cu. Yd.	2.8	
Bar Splicers		Each	12	
Stud Shear Connectors		Each	64	

For details of Bar Splicers, see sheet 26 of 29.  
For details of piles and Concrete Encasement, see sheet 25 of 29.

WEST ABUTMENT  
STRUCTURE NO. 012-0073

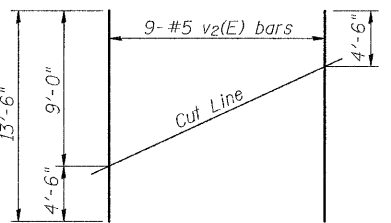
SHEET NO. 21 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	30
			CONTRACT NO. 74169		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

PILE DATA

Type: HP 10x42  
Nominal Required Bearing: 335 k  
Factored Resistance Available: 167 k  
Est. Length: 31'  
No. Production Piles: 7  
No. Test Piles: 1

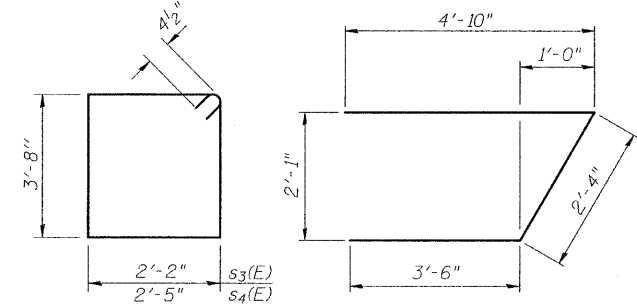
DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

**ie** consultants  
IE CONSULTANTS, INC  
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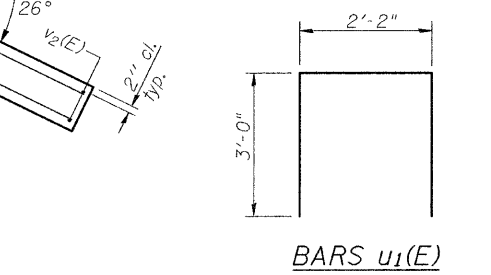


FIELD CUTTING DIAGRAM

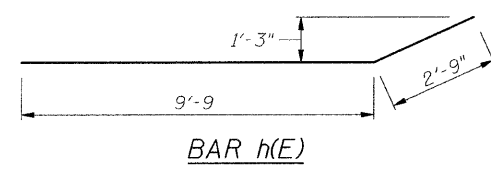
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s3(E) & s4(E) BAR u(E)



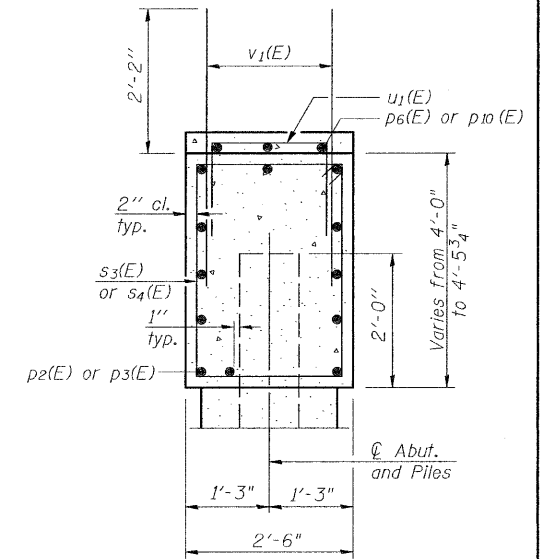
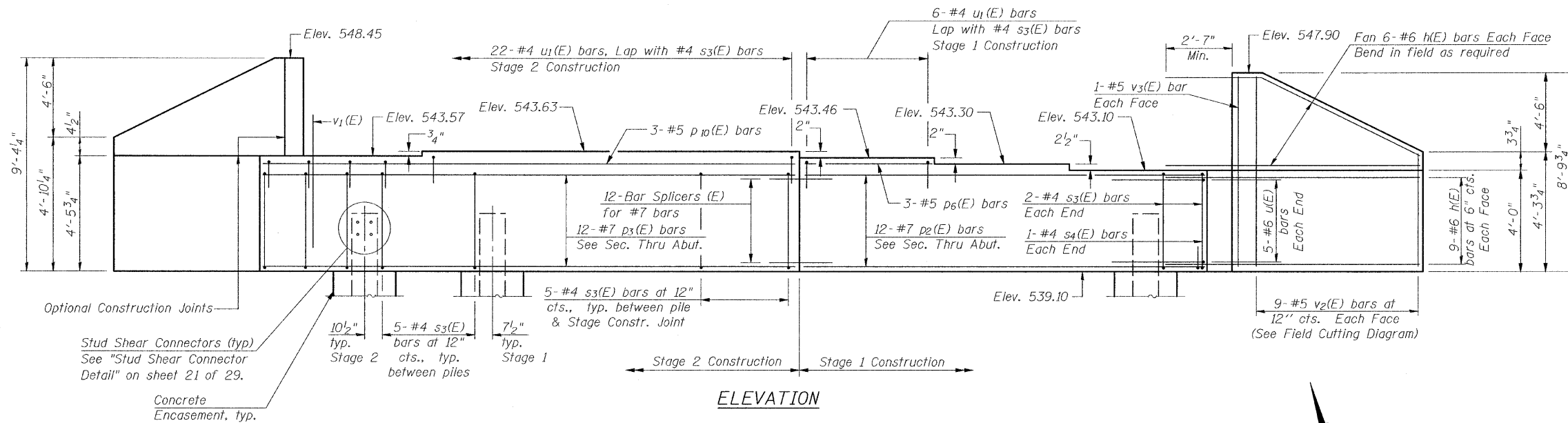
BARS u1(E)



BAR h(E)

Notes:  
Pour steps monolithically with cap.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



SEC. THRU ABUT.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	60	#6	12'-6"	
p2(E)	12	#7	17'-7"	
p3(E)	12	#7	24'-3"	
p6(E)	3	#5	5'-8"	
p10(E)	3	#5	24'-9"	
s3(E)	39	#4	12'-5"	
s4(E)	2	#4	12'-11"	
u(E)	10	#6	10'-8"	
u1(E)	28	#4	8'-2"	
v1(E)	56	#5	4'-4"	
v2(E)	18	#5	13'-6"	
v3(E)	4	#5	9'-0"	
Structure Excavation		Cu. Yd.	243.0	
Concrete Structures		Cu. Yd.	23.0	
Reinforcement Bars, Epoxy Coated		Pound	3450	
Furnishing Steel Piles, HP 10x42		Foot	217	
Driving Piles		Foot	217	
Test Pile, Steel HP 10x42		Each	1	
Concrete Encasement		Cu. Yd.	2.8	
Bar Splicers		Each	12	
Stud Shear Connectors		Each	64	

For details of Bar Splicers, see sheet 26 of 29.  
For details of piles and Concrete Encasement, see sheet 25 of 29.

EAST ABUTMENT  
STRUCTURE NO. 012-0073

SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 OF 29 SHEETS	1707	(BX-B)B-1	CLARK	44	31
			CONTRACT NO. 74169		
		FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT			

PILE DATA

Type: HP 10x42  
Nominal Required Bearing: 335 k  
Factored Resistance Available: 167 k  
Est. Length: 31'  
No. Production Piles: 7  
No. Test Piles: 1

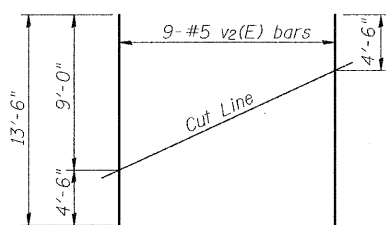
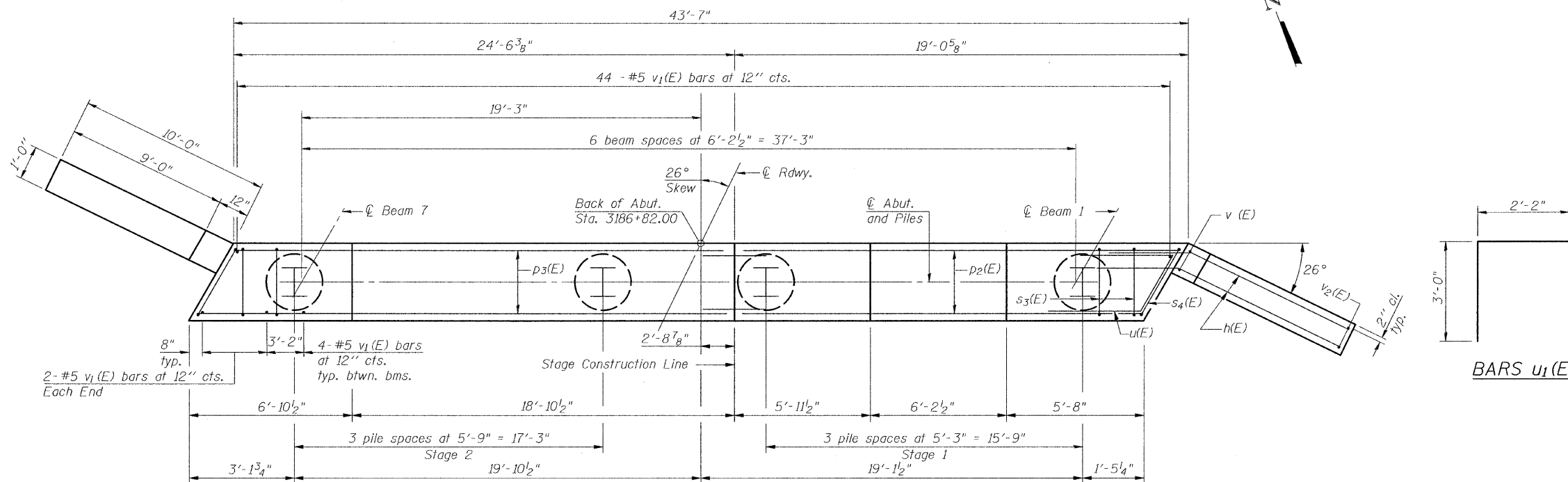
DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD



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AI-R 10-1-08

PLAN



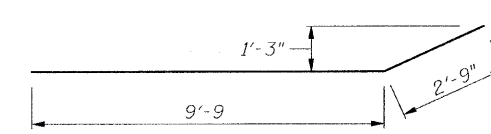
FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.

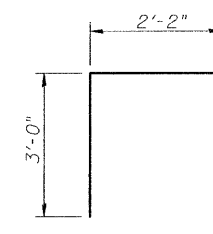
BARS s3(E) & s4(E)

BAR u(E)

BAR h(E)

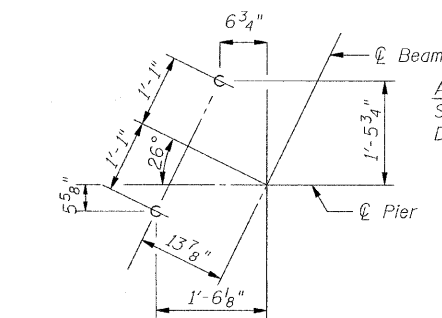


BARS u1(E)





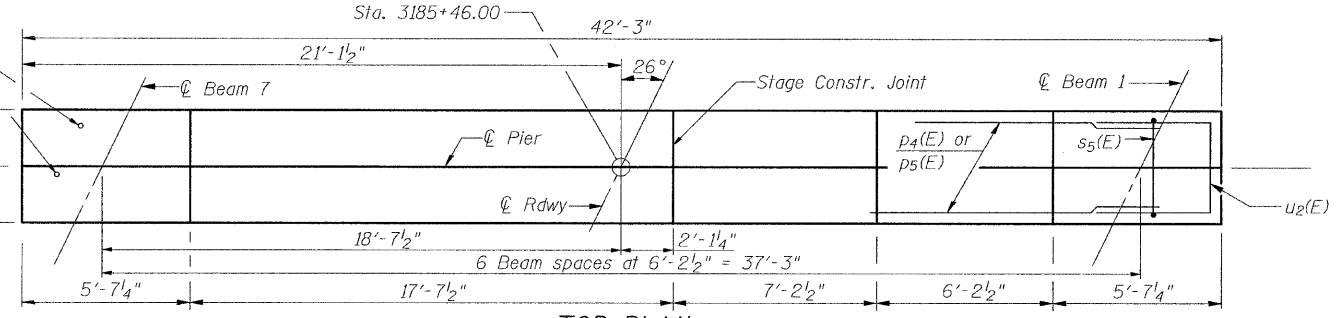
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



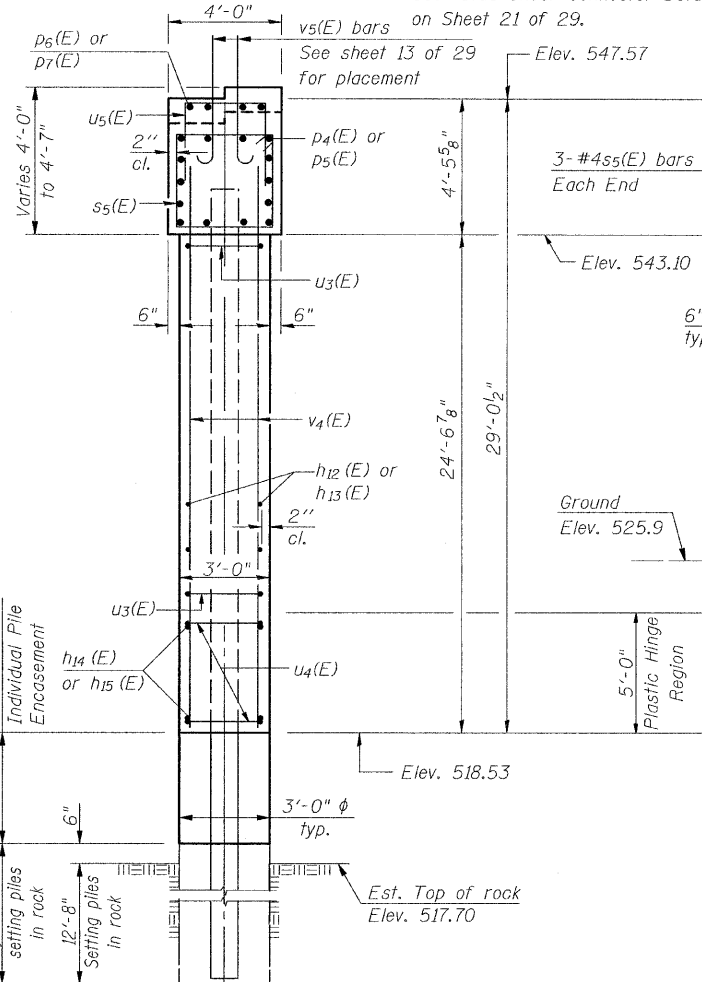
**ANCHOR BOLT LAYOUT DETAIL**

(Typical for beams 1 & 7 only)

Stud Shear Connectors (typ.)  
See "Stud Shear Connector Detail"  
on Sheet 21 of 29.



**TOP PLAN**



**END VIEW**

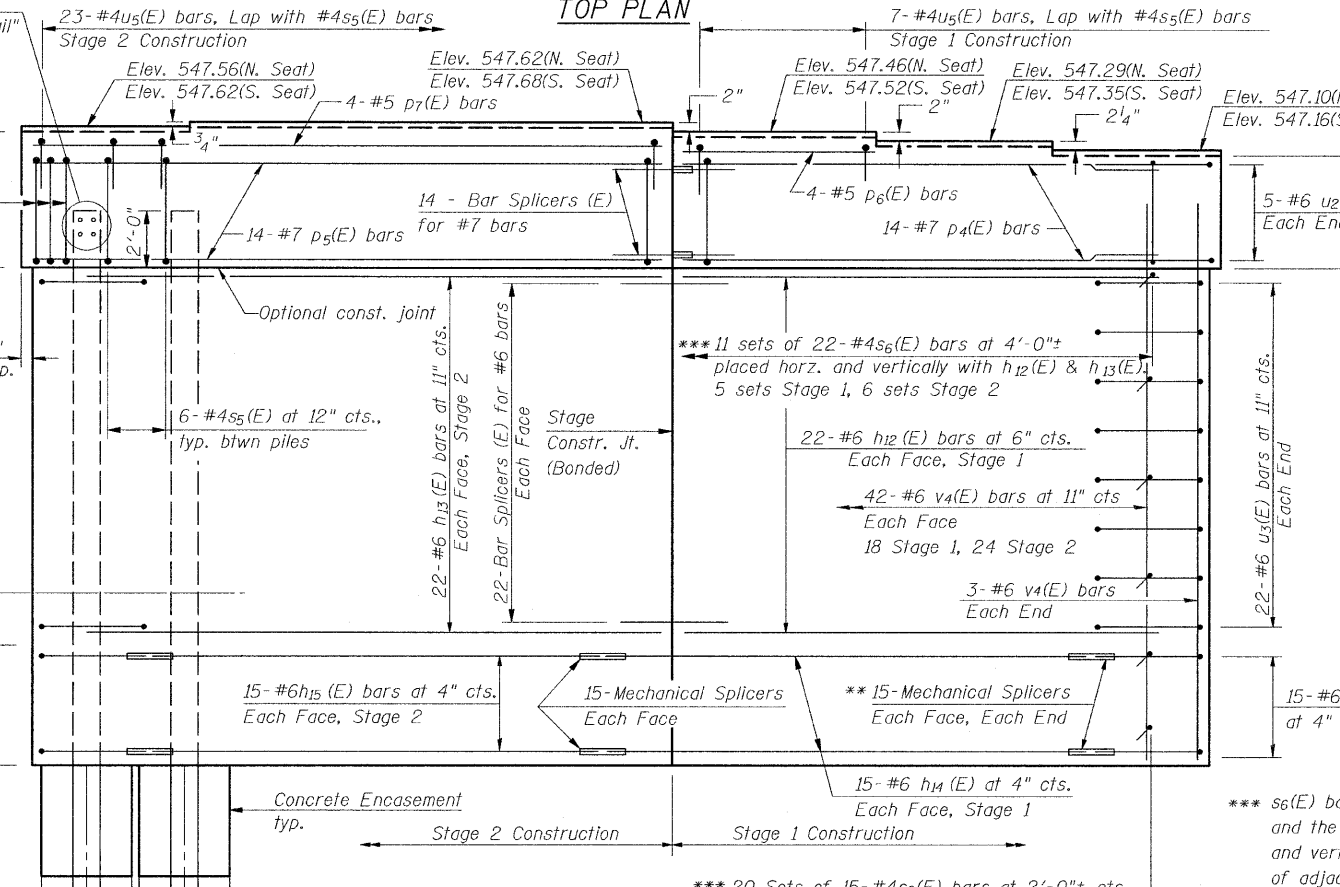
**PILE DATA**

Type: HP 14x102  
Nominal Required Bearing: Set in rock  
Factored Resistance Available: 388 kips  
Est. Length: 41  
No. Production Piles: 7  
No. Test Piles: 0  
Est. Top of Rock Elev.: 517.70  
Rock Socket Depth: 12.67 ft.  
Rock Socket Dia.: 3.0 ft.

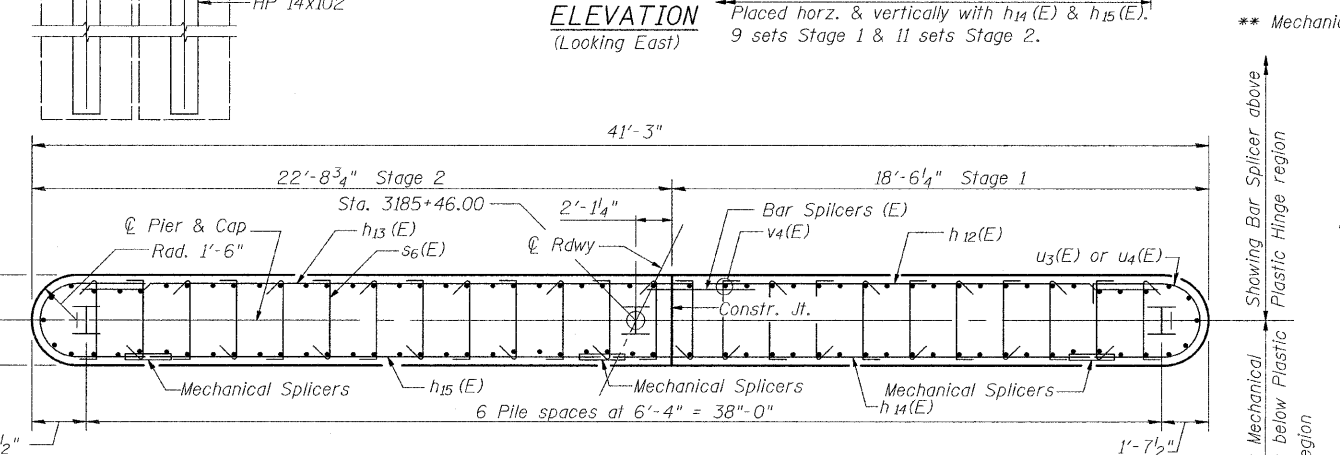
DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD



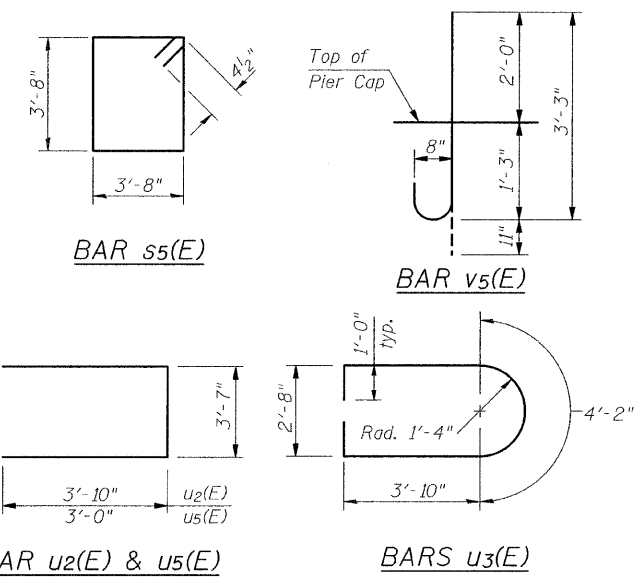
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**ELEVATION**  
(Looking East)



**FOOTING PLAN**



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h <sub>12</sub> (E)	44	#6	17'-0"	—
h <sub>13</sub> (E)	44	#6	21'-3"	—
h <sub>14</sub> (E)	30	#6	16'-0"	—
h <sub>15</sub> (E)	30	#6	17'-2"	—
p <sub>4</sub> (E)	14	#7	18'-6"	—
p <sub>5</sub> (E)	14	#7	22'-8"	—
p <sub>6</sub> (E)	4	#5	6'-10"	—
p <sub>7</sub> (E)	4	#5	22'-8"	—
s <sub>5</sub> (E)	42	#4	15'-5"	□
s <sub>6</sub> (E)	542	#4	3'-8"	└┘
u <sub>2</sub> (E)	10	#6	11'-3"	└┘
u <sub>3</sub> (E)	44	#6	13'-10"	└┘
u <sub>4</sub> (E)	30	#6	9'-2"	└┘
u <sub>5</sub> (E)	30	#4	9'-7"	└┘
v <sub>4</sub> (E)	90	#6	27'-0"	—
v <sub>5</sub> (E)	36	#8	4'-2"	—
Structure Excavation		Cu. Yd.	87.0	
Concrete Structures		Cu. Yd.	138.4	
Reinforcement Bars, Epoxy Coated		Pound	12,830	
Furnishing Steel Piles, HP 14x102		Foot	287	
Setting Piles in Rock		Each	7	
Concrete Encasement		Cu. Yd.	0.7	
Underwater Structure Excavation Protection Location 1		Each	1	
Mechanical Splicers		Each	90	
Bar Splicers		Each	58	
Stud Shear Connectors		Each	56	

**Min. Bar Lap**

#4	2'-7"
#6	3'-10"

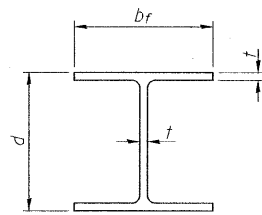
Notes:  
Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. For details of piles, see sheet 25 of 29. If a portion of the pier wall or concrete encasement is under water, reinforcement may be placed underwater into forms. Concrete shall be tremied according to Article 503.08 of the Standard Specifications to an elevation of 1'-0" above the water line at the time of construction.

**PIER 1 DETAILS**  
S.N. 012-0073

SHEET NO. 23 OF 29 SHEETS	F.A.S. RTE. 1707	SECTION (BX-B)B-1	COUNTY CLARK	TOTAL SHEETS 44	SHEET NO. 32
	CONTRACT NO. 74169				
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

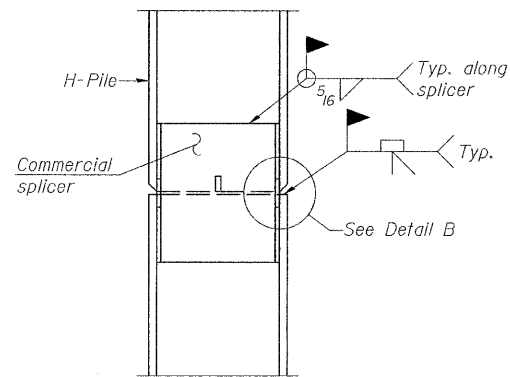


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

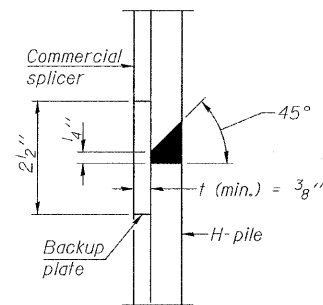


STEEL PILE TABLE

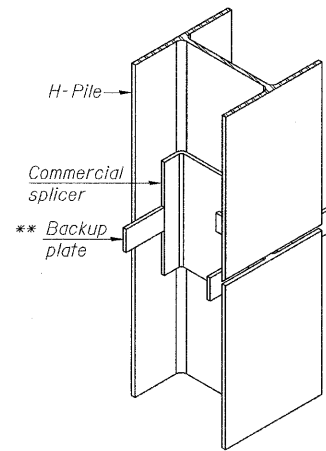
Designation	Depth d	Flange width b <sub>f</sub>	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"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



ELEVATION

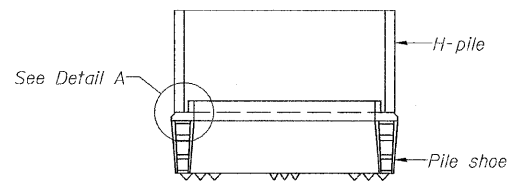


DETAIL "B"

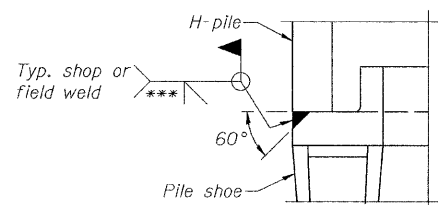


ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE

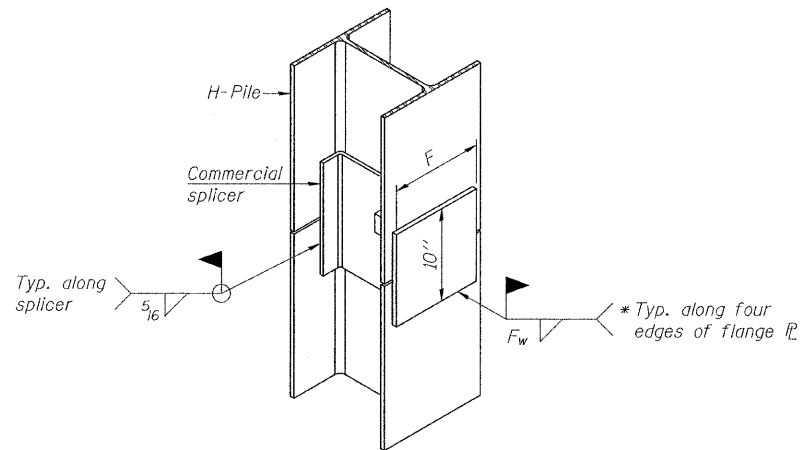


ELEVATION



DETAIL A

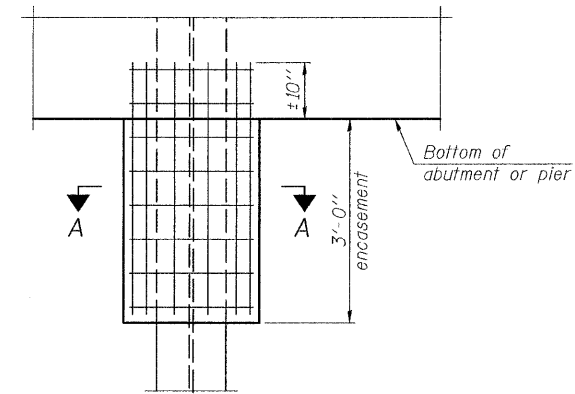
H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

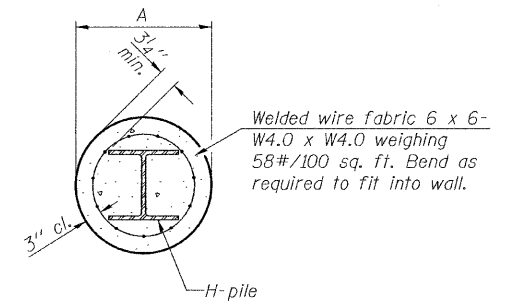
WELDED COMMERCIAL SPLICE ALTERNATE

- \* 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.).



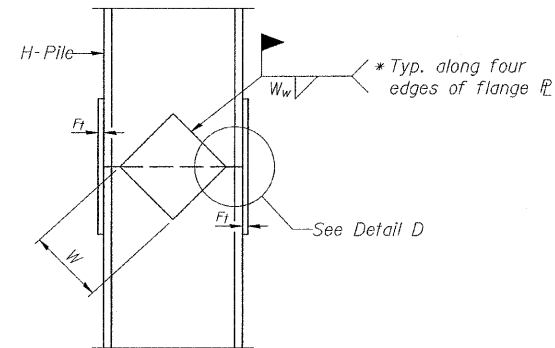
ELEVATION

PILE ENCASEMENT

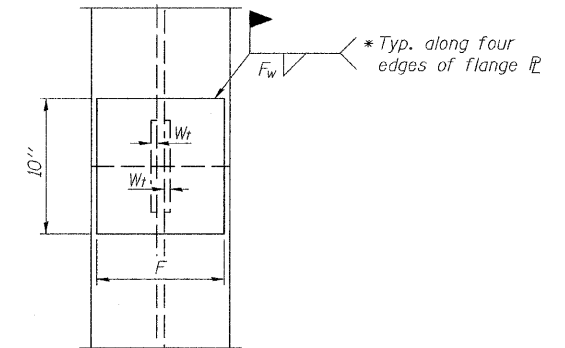


SECTION A-A

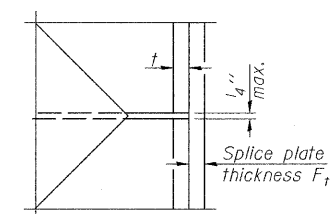
Note:  
Forms for encasement may be omitted when soil conditions permit.



ELEVATION



END VIEW



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 3/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 3/8"	1/2"
x89	12 1/2"	3/4"	1/2"	7 3/4"	5 3/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 3/8"	1/2"
HP 12x84	10"	7/8"	1/2"	6 1/2"	5 3/8"	1/2"
x74	10"	7/8"	1/2"	6 1/2"	5 3/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

HP PILE DETAILS  
STRUCTURE NO. 012-0073

DESIGNED SCD
CHECKED DRB
DRAWN THW
CHECKED SCD



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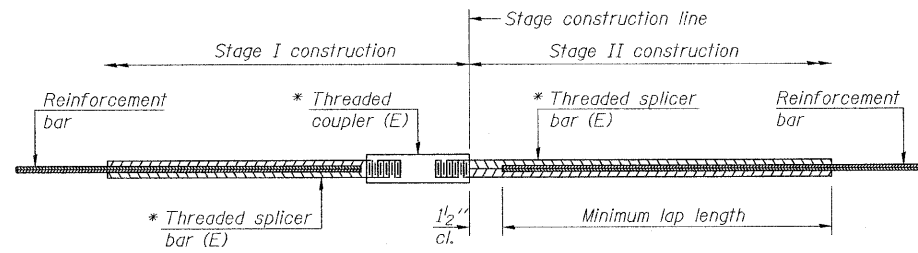
F-HP

11-1-09

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

SHEET NO. 25 OF 29 SHEETS	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	1707	(BX-B)B-1	CLARK	44	34
			CONTRACT NO. 74169		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION



STANDARD BAR SPLICER ASSEMBLY

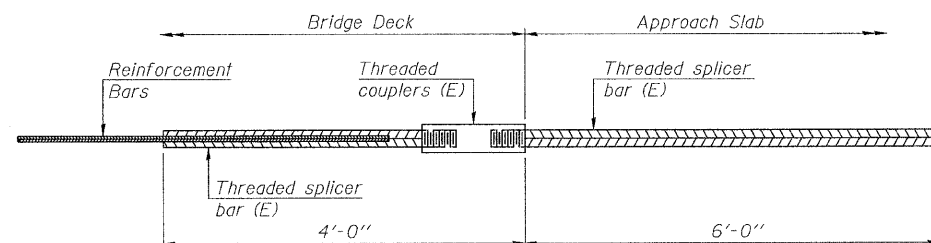
Bar size to be spliced	Minimum Lap Lengths			
	Table 1	Table 2	Table 3	Table 4
3, 4	1'-5"	1'-11"	2'-1"	2'-4"
5	1'-9"	2'-5"	2'-7"	2'-11"
6	2'-1"	2'-11"	3'-1"	3'-6"
7	2'-9"	3'-10"	4'-2"	4'-8"
8	3'-8"	5'-1"	5'-5"	6'-2"
9	4'-7"	6'-5"	6'-10"	7'-9"

Table 1: Black bar, 0.8 Class C  
Table 2: Black bar, Top bar lap, 0.8 Class C  
Table 3: Epoxy bar, 0.8 Class C  
Table 4: Epoxy bar, Top bar lap, 0.8 Class C

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck	#5	533	Table 3
Abut. Diaphragm	#6	16	Table 3
Pier Diaphragm	#4	12	Table 3
Pier Diaphragm	#6	4	Table 3
Appr. Slab	#4	50	Table 3
Appr. Slab	#5	170	Table 3
West Abut.	#7	12	Table 4
East Abut.	#7	12	Table 4
Pier 1	#7	14	Table 4
Pier 1	#6	44	Table 3
Pier 2	#7	14	Table 4
Pier 2	#6	38	Table 3



BAR SPLICER ASSEMBLY FOR #5 BAR ON  
INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

No. required = 72

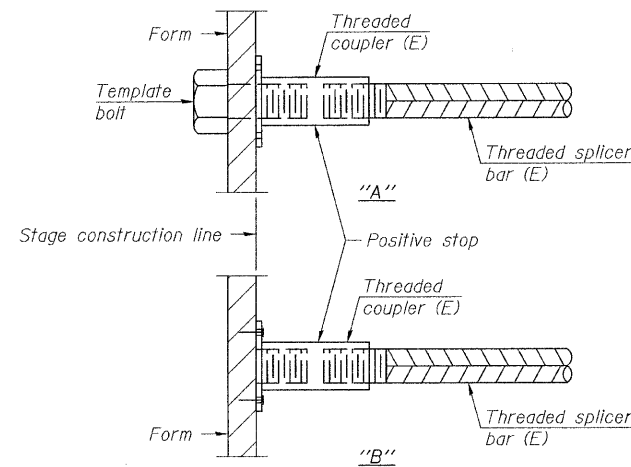
DESIGNED	SCD
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DRAWN	THW
CHECKED	SCD



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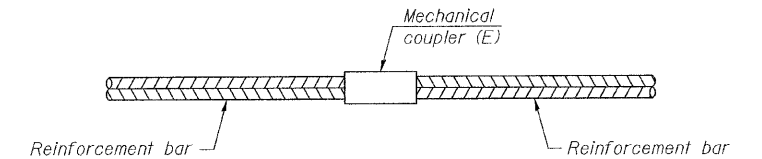
BSD-1

11-1-09



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.



STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required
Pier 1	#6	90
Pier 2	#6	90
Total		180

NOTES

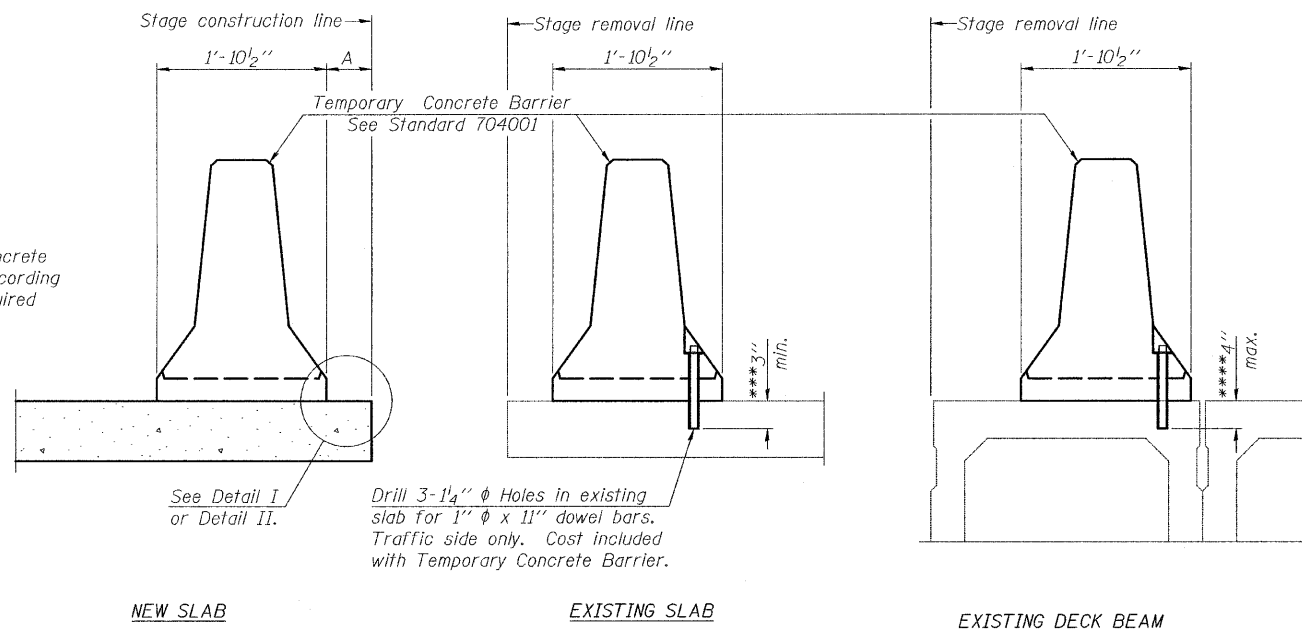
Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.  
All reinforcement shall be lapped and tied to the splicer bars.  
Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications.  
See special provision for Mechanical Splicers.  
See approved list of bar splicer assemblies and mechanical splicers for alternatives.

BAR SPLICER ASSEMBLY AND  
MECHANICAL SPLICER DETAILS  
STRUCTURE NO. 012-0073

SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
26 OF 29 SHEETS	1707	(BX-B)B-1	CLARK	44	35
CONTRACT NO. 74169					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB OR DECK BEAM

NOTES

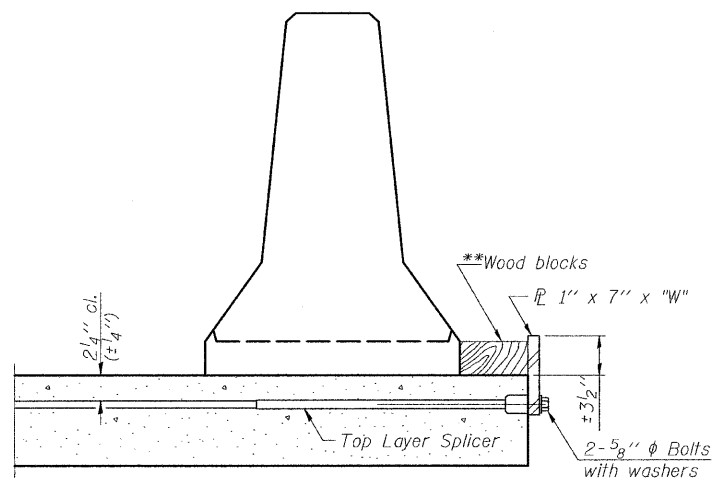
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1"x7"x10" steel PL to the concrete slab or concrete wearing surface with 2-5/8" φ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate C of each barrier panel.

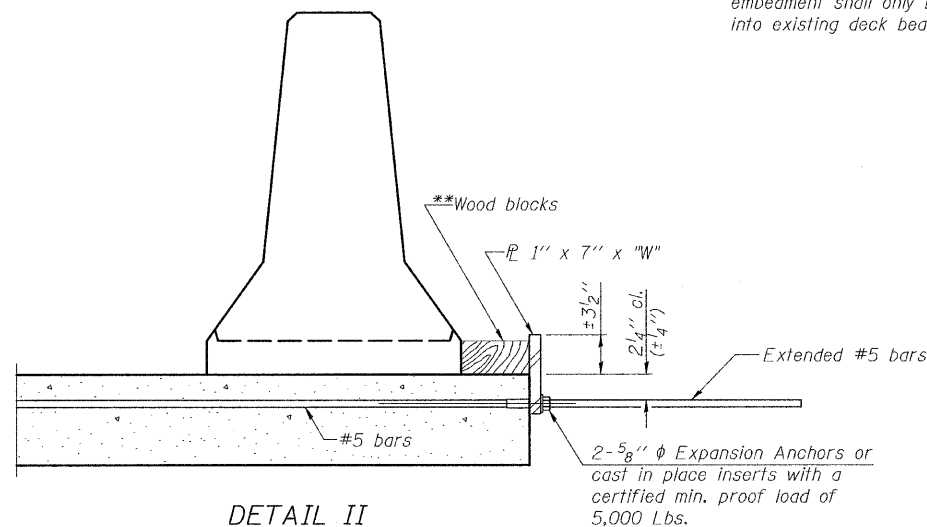
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

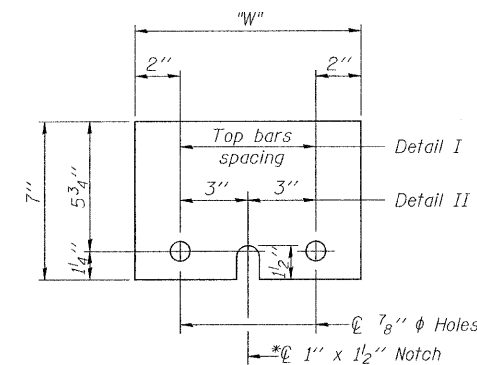
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7" x 10"

\* Required only with Detail II

\*\* Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

"W" = Top bars spacing + 4"

DESIGNED	SCD
CHECKED	DRB
DRAWN	THW
CHECKED	SCD

R-27



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11-1-09

TEMPORARY CONCRETE BARRIER  
FOR STAGE CONSTRUCTION  
STRUCTURE NO. 012-0073

SHEET NO.	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
27 OF 29 SHEETS	1707	(BX-B)B-1	CLARK	44	36
CONTRACT NO. 74169					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

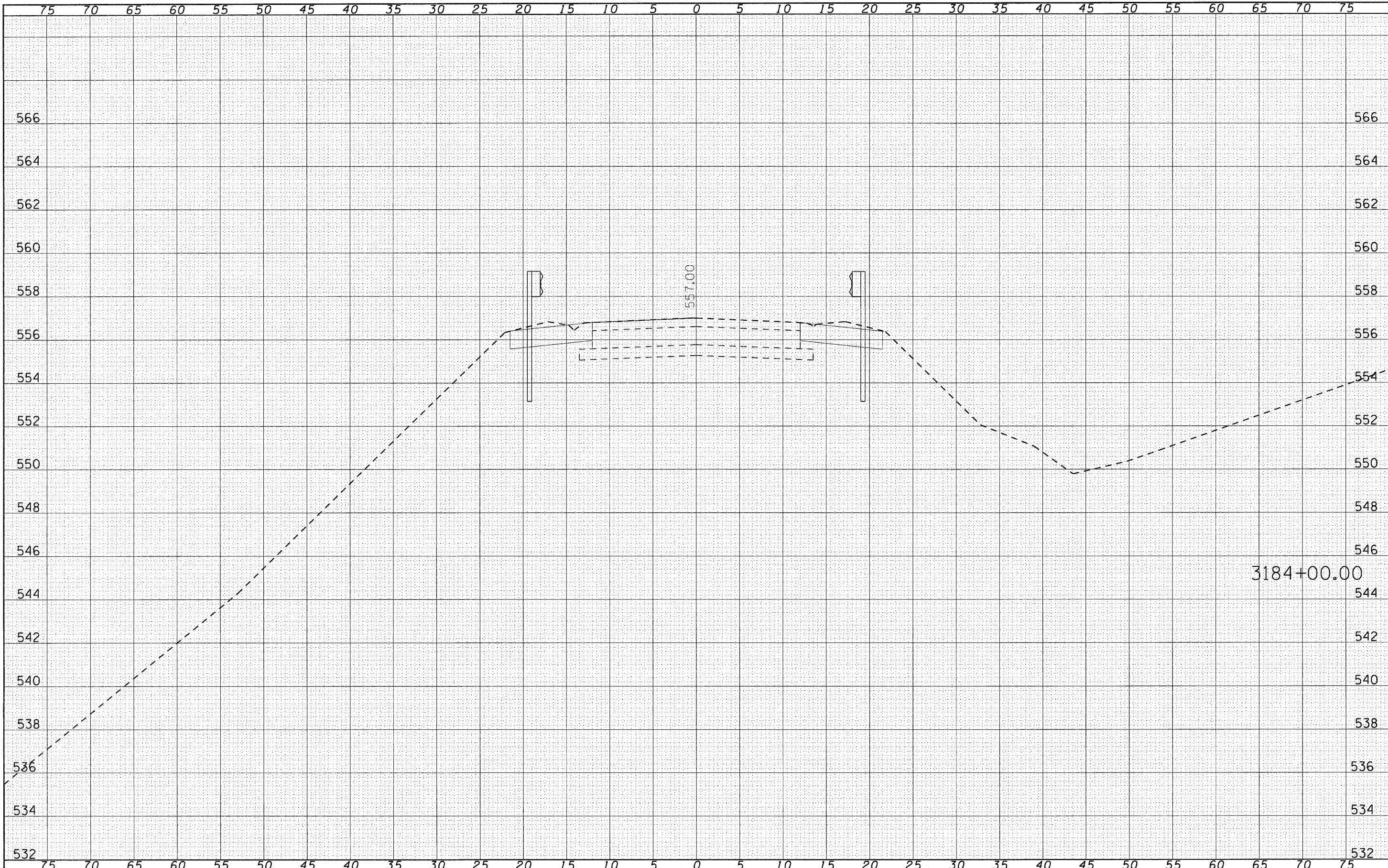








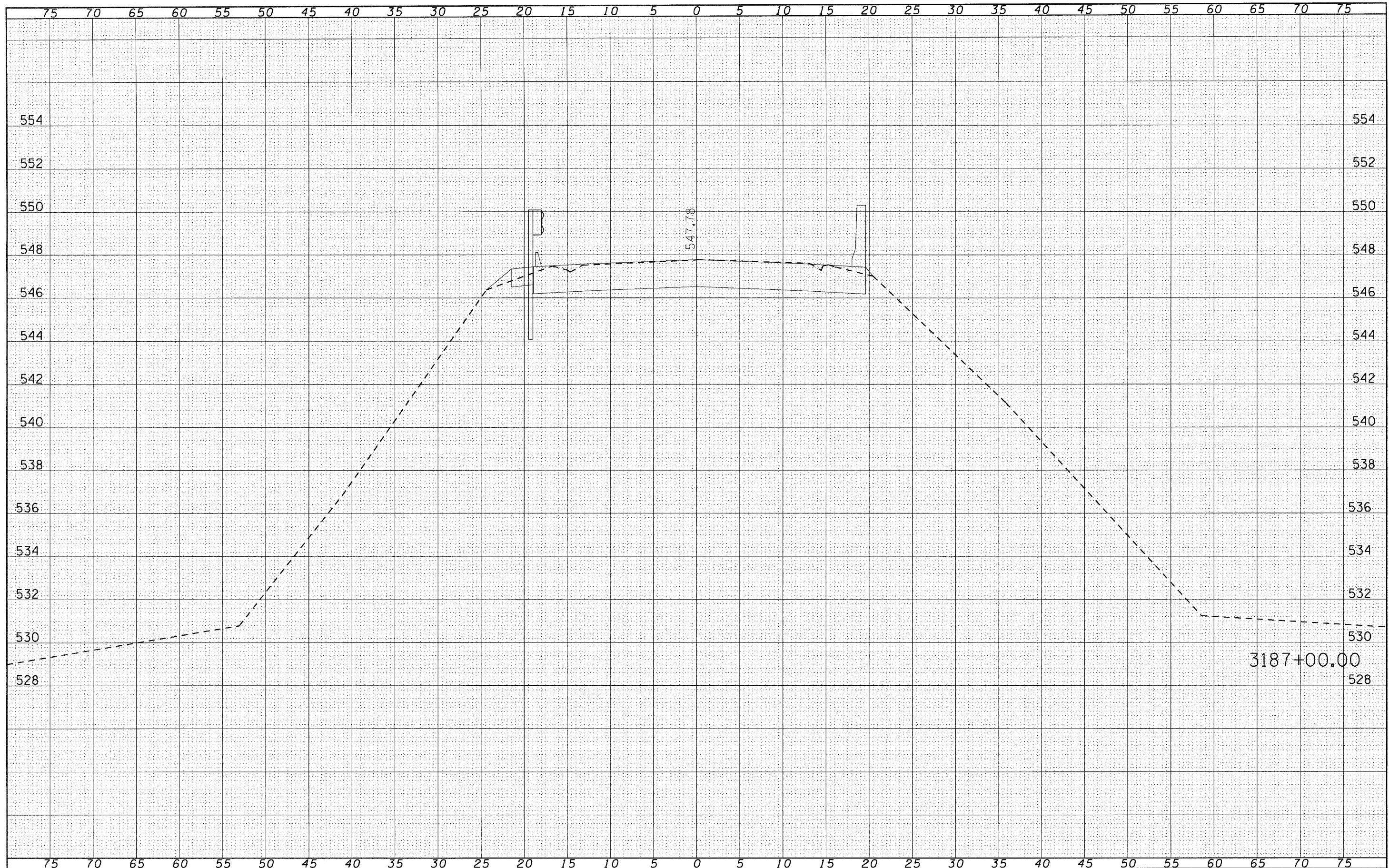




DATE	
BY	
SURVEYED	
NOTE BOOK	
NO.	
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NOTE BOOK	
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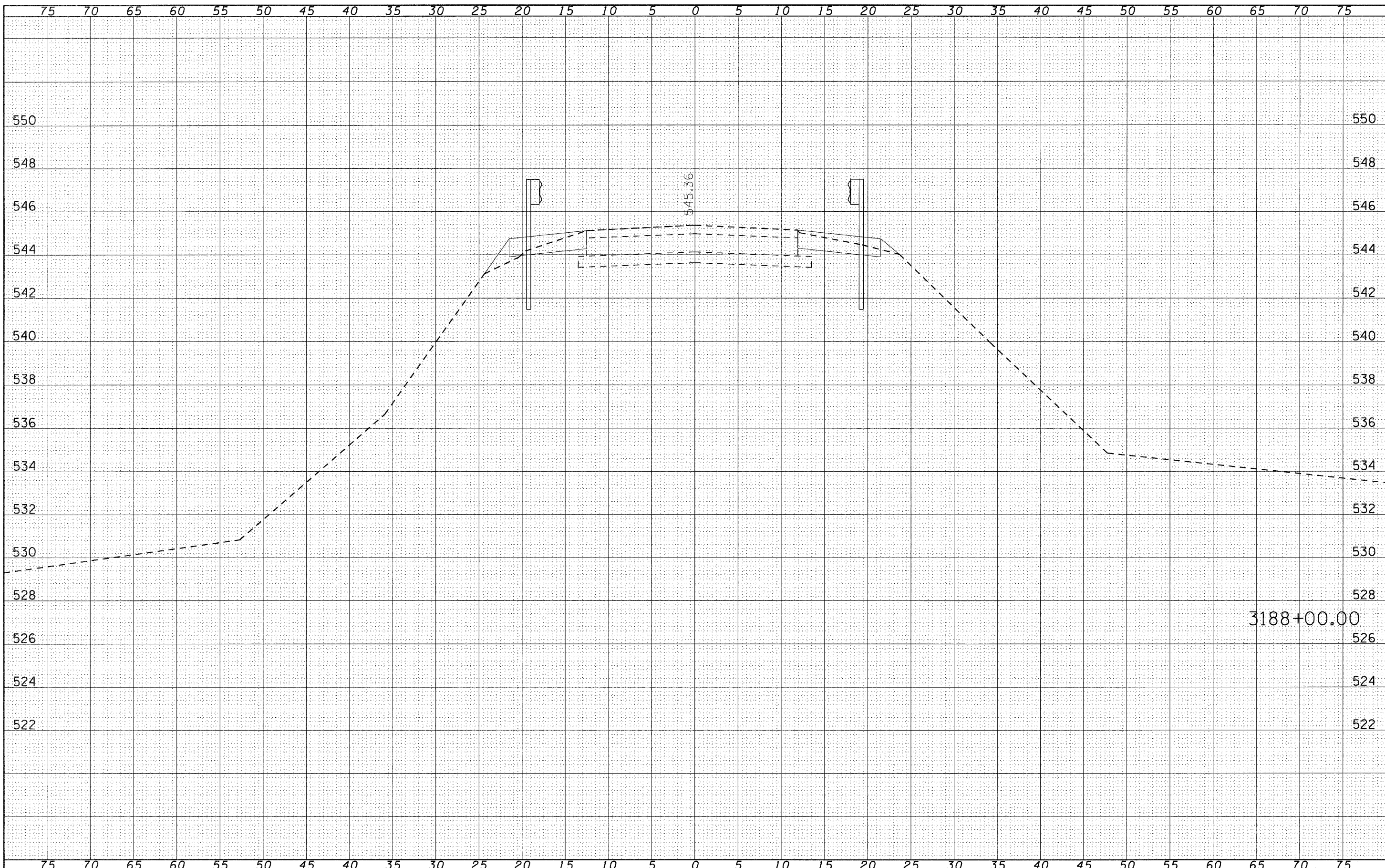
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		CHECKED -	REVISED -		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT								
		DATE -	REVISED -										



DATE	
BY	
SUPERVISED	
NOTE BOOK	
NO.	
AREAS CHECKED	

DATE	
BY	
SUPERVISED	
NOTE BOOK	
NO.	
AREAS CHECKED	

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		PLOT DATE = #DATE#	REVISED -									



DATE	
BY	
FINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
AREAS CHECKED	
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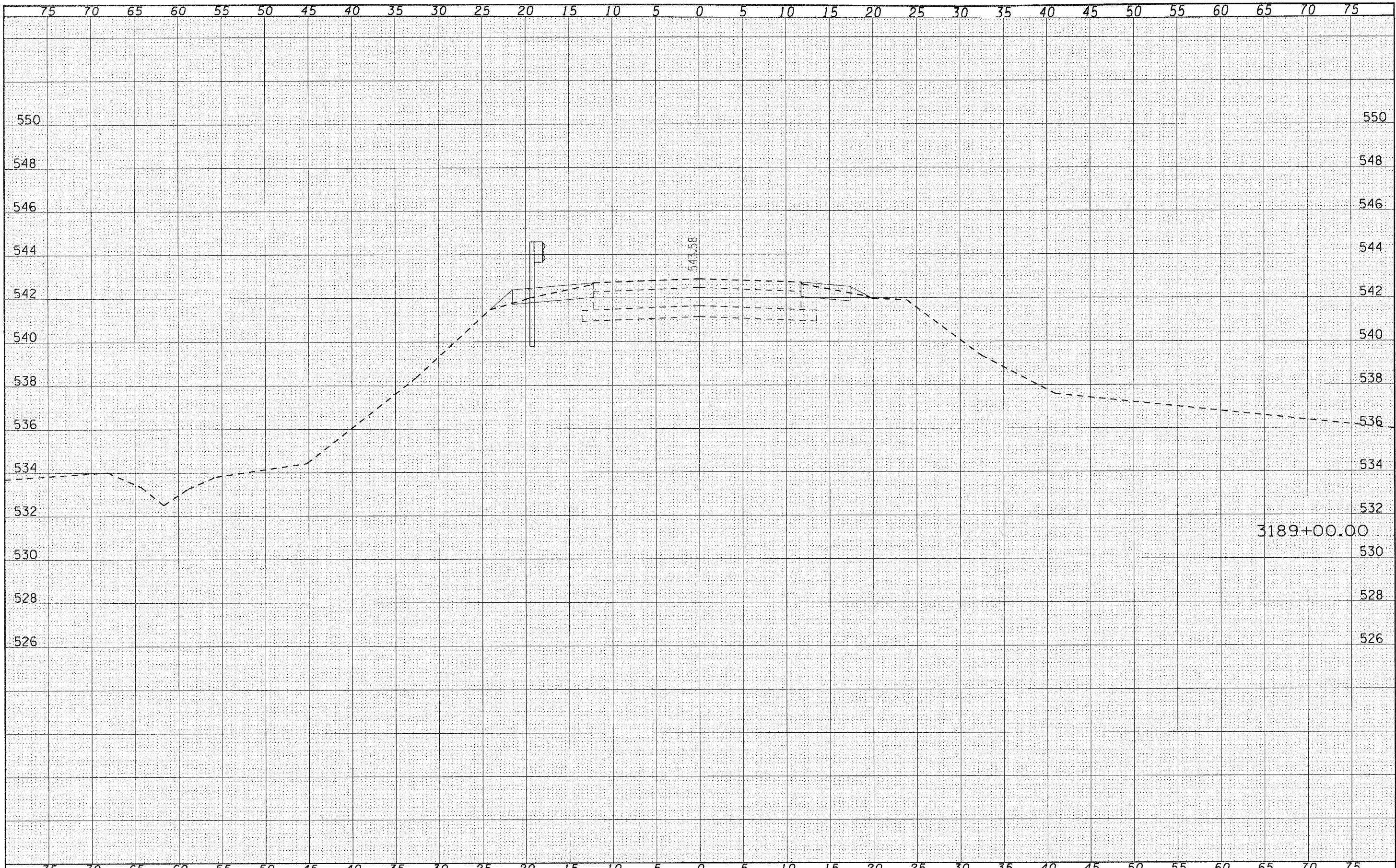
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	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**CROSS-SECTIONS**  
SCALE: SHEET NO. OF SHEETS STA. 3188+00 TO STA. 3188+00

F.A.S. RTE. 1707	SECTION IBX-BIB-1	COUNTY CLARK	TOTAL SHEETS 44	SHEET NO. 43
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 74169	

3188+00.00



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

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

FILE NAME =	USER NAME = #USER#	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>CROSS-SECTIONS</b>				F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
#FILE#		DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 3189+00	TO STA. 3189+00	1707	(BX-B)B-1	CLARK	44	44
		CHECKED -	REVISED -												
		DATE -	REVISED -												
														CONTRACT NO. 74169	
														FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT	