CONTRACT NO. 72997

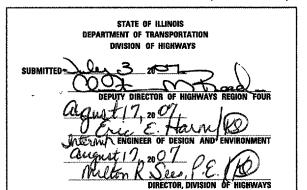
80

SECTION LOGAN 315 79 1 ·· † ) FED, ROAD DIST, NO. 6 ILLINOIS FED. AID PROJECT 116(BR-1) & 116(BR-2)

D-96-529-05

ADT = 2550 (2005)% SU = 13.7 (2005)% MU = 13.7 (2005)**TOWNSHIP: PRAIRIE CREEK FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL** 

LOCATION OF SECTION INDICATED THUS: - -



PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

STATE OF ILLINOIS

DEPARTMENT OF TRANSPORTATION

**DIVISION OF HIGHWAYS** 

# **PROPOSED** HIGHWAY PLANS

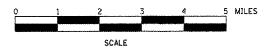
FAP 315 (US 136)

**SECTIONS 116(BR-1, BR-2)** 

PROJECT: BHF-03/5(050)

LOGAN COUNTY C-96-534-07

NET LENGTH OF PROJECT = 1878 FEET = 0.356 MILES NET LENGTH OF PROJECT = 23790 FEET = 4.506 MILES



NET LENGTH OF SECTION 116(88-2) = 978 FEET = 0.185 MILES



1-800-892-0123

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION

ALLEN HENDERSON & ASSOCIATES, INC.

(NON-URBAN)

ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT

CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

PROPOSED PROJECT BEGINS -STA, 81 + 00

SECTION 116(BR-1) PROPOSED PRECAST PRESTRESSED CONCRETE DECK BEAM SUPERSTRUCTURE REPLACEMENT ON EXISTING THREE SPAN SUBSTRUCTURE 105'-10 1/4" BK.-BK. ABUTMENTS,

S.N. 054-0024

S.N. 054-0025

S.N. 054-0024

S.N. 054-0025

S.N. 054~0024

S.N. 054~0025

S.N. 054-0024

S.N. 054--0025

S.N. 054-0024

S.N. 054-0025

S.N. 054-0024

S.N. 054-0025

S.N. 054-0024

S.N. 054--0025

42'-0" CLEAR DECK WIDTH WITH TYPE SM STEEL BRIDGE RAILING, 54° SKEW LT. FORWARD @ STA. 85 + 45

BEGIN PROJECT OMISSION

-STA, 90 + 00

**LOCATION MAP** 

NET LENGTH OF SECTION 116(BR-1) = 900 FEET = 0.170 MILES

OPHERA CHRIS 062-046558 LICENSED PROFESSIONAL ENGINEER KINO18

**END PROJECT OMISSION** 

PROPOSED PRECAST PRESTRESSED

CONCRETE DECK BEAM SUPERSTRUCTURE

REPLACEMENT ON EXISTING THREE SPAN SUBSTRUCTURE 159-2 12" BK.-BK. ABUTMENTS, 42'-0" CLEAR DECK WIDTH WITH TYPE SM STEEL BRIDGE RAILING, 50° SKEW LT. FORWARD

-STA. 309 + 00

SECTION 116(BR-2)

@ STA. 314+50

-STA. 318 + 90

RAILROAD OMISSION

STA. 312+69 TO STA. 312+81

PROPOSED PROJECT ENDS

INDEX OF SHEETS

GENERAL NOTES & MIXTURE REQUIREMENTS

WIDTH RESTRICTION SIGNING DETAILS

DETAILS & TYPICAL ROADWAY SECTIONS

DETAILS & TYPICAL ROADWAY SECTIONS

STAGE CONSTRUCTION TRAFFIC DETAILS

STAGE CONSTRUCTION TRAFFIC DETAILS

LIST OF ILLINOIS DOT HIGHWAY STANDARDS

STORM WATER POLLUTION PREVENTION PLAN

TEMPORARY BRIPGE TRAFFIC SIGNAL LOOP REPLACEMENT DETAIL

635011-01

701001-01

701006-02

701011--01

701201-02

701301-02

701306-01

701311-02

701321-08

701326-02

702001-06 704001--03

780001-01 781001--02

857006

886001

88600L

TITLE SHEET

SUMMARY OF QUANTITIES

SCHEDULE OF QUANTITIES

SCHEDULE OF QUANTITIES

EROSION CONTROL PLAN

EROSION CONTROL PLAN

STRUCTURE PLANS

STRUCTURE PLANS

CROSS SECTIONS

CROSS SECTIONS STANDARDS

000001-04

001001-01

280001-03

420001-06

420401-05

420601-04

420701-01

482006-02

515001-02

630001-07

630301-04

631032-03

635006-02

542401

001006

PLAN & PROFILE

PLAN & PROFILE

3-4

5

6-7

8 - 9 10

11

12 - 13

14 - 15

16 - 18

19 - 21

22 - 25

26

27

28 - 42

43 - 58 59 - 69

70 - 79

\* ZIA .

**CONTRACT NO. 72997** 

LOGAN COUNTY SECTION 116(BR-1) & 116(BR-2)

FAP 315 (US 136)

#### ENVIRONMENTAL REVIEWS

PRIOR TO THE USE OF ANY PROPOSED BORROW AREAS, USE AREAS, (TEMPORARY ACCESS ROADS, DETOURS, RUN-AROUNDS, ETC.) AND/OR WASTE AREAS, THE CONTRACTOR SHALL. FILE THE REQUIRED ENVIRONMENTAL RESOURCE REQUEST SURVEYS ACCORDING TO SECTION 107.22 OF THE STANDARD SPECIFICATIONS. THESE SURVEYS ARE REQUIRED IN ORDER FOR THE DEPARTMENT TO CONDUCT CULTURAL AND BIOLOGICAL RESOURCE SURVEYS FOR THE PROPOSED SITE.

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

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

THE REQUIRED ENVIRONMENTAL RESOURCE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:

BOE FORM 2289 (ENVIRONMENTAL SURVEY REQUEST) A LOCATION MAP SHOWING THE SIZE LIMITS AND LOCATION OF THE USE AREA SIGNED PROPERTY OWNER AGREEMENT FORM COLOR PHOTOGRAPHS DEPICTING THE USE AREA

PLEASE NOTE THAT A MINIMUM OF TWO WEEKS SHALL BE ALLOWED FOR THE DISTRICT TO OBTAIN THE REQUIRED ENVIRONMENTAL CLEARANCES.

#### PROPERTY OWNER ACCESS REQUIREMENT

ACCESS MUST BE MAINTAINED TO ALL EXISTING PROPERTIES DURING CONSTRUCTION PER ARTICLE 107.09 UNLESS ARRANGEMENTS ARE MADE IN WRITING BY THE CONTRACTOR WITH THE PROPERTY OWNERS WITH A COPY TO THE ENGINEER FOR SHORT-TERM CLOSURES.

#### GENERAL NOTES

- 1.) THE THICKNESS OF BITUMINOUS MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.
- 2.) EXCEPT AS NOTED IN THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
- 3.) WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED. THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER OR AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION, THE CONTRACTOR WILL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
- 4.) SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET OR IN AN UNTILLABLE CONDITION. AREAS TO BE SEEDED SHALL BE DETERMINED BY THE ENGINEER AND SEEDED AS SOON AS POSSIBLE.
- 5.) ALL SAW CUTS, NECESSARY TO COMPLETE THE WORK DETAILED IN THESE PLANS, SHALL BE INCLUDED IN THE COST FOR THE VARIOUS PAY ITEMS INVOLVED. THE MINIMUM SAW CUT DEPTH IN THE PAVEMENT SHALL BE 11/2" UNLESS UNLESS OTHERWISE SPECIFIED IN A DETAIL SHOWN IN THE PLANS.
- 6.) UNLESS DIRECTED BY THE ENGINEER, PAVEMENT MARKING LINES SHALL NOT BE LAID DIRECTLY OVER A LONGITUDINAL CRACK OR JOINT NOR OVER A TAR OR ASPHALT PAINTED LINE. THE EDGE OF A CENTERLINE OR LANE LINE SHALL BE OFFSET A MINIMUM DISTANCE OF 2" FROM A LONGITUDINAL CRACK OR JOINT. EDGE LINES SHALL BE APPROXIMATELY 2" FROM THE EDGE LINE OF PAVEMENT. SEE SECTION 780 OF THE STANDARD SPECIFICATIONS FOR TRAFFIC CONTROL ITEMS.
- 7.) ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OUTSIDE THE LIMITS OF RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPERATELY BUT SHALL BE INCLUDED IN THE COST PER CUBIC YARD FOR EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 8.) ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED IN THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
- 9.) IN ADDITION TO THE FIELD SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- 10.) THE EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION WILL BE REMOVED OR RELOCATED AS DIRECTED BY THE ENGINEER, AFTER THE CONSTRUCTION IS COMPLETED, THE CONTRACTOR WILL REPLACE THE SIGNS AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE CONTRACT, AND NO COMPENSATION WILL BE ALLOWED.
- 11.) THE LOCATION OF ALL UTILITIES ARE BASED ON INFORMATION PROVIDED BY OTHERS AND IS INTENDED TO BE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBLITY TO COORDINATE HIS CONSTRUCTION ACTIVITIES WITH THE VARIOUS UTILITY OWNERS. ALL POTENTIAL CONFLICTS SHALL BE INVESTIGATED AND REMEDIAL ACTION TAKEN PRIOR TO INTERRUPTION OF THE CONTRACTOR'S PROGRESS.
- 12.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E. NUMBER IS 800-892-0123. A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED.
- 13.) ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM. ALL STATION AND OFFSET REFERENCES ARE TO THE ROADWAY CENTERLINE UNLESS OTHERWISE NOTED. THE STATE PLANE COORDINATE SYSTEM HAS BEEN USED FOR THE HORIZONTAL CONTROL.
- 14.) THE DISTRICT BUREAU OF OPERATIONS SHALL BE NOTIFIED AT LEAST 14 DAYS PRIOR TO PLACEMENT OF FINAL PAVEMENT MARKINGS (PH: 217-785-5312)
- 15.) QUANTITY FOR EARTH EXCAVATION INCLUDES ANY EXCAVATION NECESSARY TO PLACE HOT MIX ASPHALT BASE COURSE 10". COMMITMENTS: NONE

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED TO CALCULATE THE PLAN QUANTITIES:

BITUMINOUS MATERIALS (PRIME COAT) BITUMINOUS MATERIALS (PRIME COAT) HOT MIX ASPHALT SURFACE / BINDER AGGREGATE MATERIAL RIPRAP NITROGEN FERTILIZER NUTRIENT PHOSPHOROUS FERTILIZER NUTRIENT POTASSIUM FERTILIZER NUTRIENT AGGREGATE PRIME COAT

AGRICULTURAL GROUND LIMESTONE

0.00038 TON/SO. YD. (ON PAVEMENT) 0.001425 TON/SO.YD. (ON AGG) 0.056 TON/SQ. YD. PER 1" 2.05 TON/CU, YD. 1.75 TON/CU. YD. 90 LBS./ACRE 90 | BS\_/ACRE 90 LBS./ACRE 0.002 TON/SQ. YD. 2.0 TON/ACRE

#### MIXTURE REQUIREMENTS

NOTIFICATION OF THE PROPERTY O								
MIXTURE USE(S)	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N50	HOT MIX ASPHALT BASE COURSE 10"	HOT MIX ASPHALT SHOULDERS					
AC/PG	PG 64-22	PG 64-22	PG 58-22					
DESIGN AIR VOIDS	4.0% @ N DESIGN = 50	4.0% @ N DESIGN = 50	2.0% & N DESIGN = 30					
MIXTURE COMPOSITION	IL 9.5 OR 12.5	IL 19.0	BAM					
FRICTION AGGREGATE	MIX C	N/A	N/A					

CONTRACT NO. 72997

COUNTY TOTAL SHEET NO. SECTION 315 LOGAN 79 2

- 116(B-1) & 116(B-2)

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

#### COMMITMENTS

- 1) CONTACT IDOT STUDIES AND PLANS ON ANY MAJOR PLAN CHANGE 2) ILLINOIS CENTRAL RAILROAD AGREEMENT 3) STORM WATER POLLUTION PREVENTION PLAN

DISTRICT SIX EXAMINED 2007 18 OPERATIONS ENGINEER 2007 EXAMINED PROGRAM IMPLEMENTATION ENGINEER EXAMINED 20 PROGRAM DEVELOPMENT EMCINEER

> GENERAL NOTES, UTILITIES & MIXTURE REQUIREMENTS U.S. 136 OVER PRAIRIE CREEK DITCH F.A.P. RTE. 315 - SECTION 116 (BR-1) STA. 85+45.00 S.N. 054-0024 U.S. 136 OVER PRAIRIE CREEK F.A.P. RTE. 315 - SECTION 116 (BR-2) STA. 314+50.00 S.N. 054-0025 LOGAN COUNTY

ATE AME NAME

CONTRACT NO. 72997

F.A.P. RTÉ.	SECTION	COUNTY	TOTAL	SHEET NO.
315	•	LOGAN	79	3

FED. ROAD DIST.	NO	ILLINOIS	FED.	AID	PROJEC

- - 116 (BR-1) & 116 (BR-

	SUMMARY OF QUANTITIES				4-0024	S.N. 054-0025	
•		_	-	ROADWAY FAP 315 80% FEDERAL 20% STATE	20% STATE	ROADWAY FAP 315 80% FEDERAL 20% STATE	20% STATE
CODE NO.	SUMMARY OF QUANTITIES PAY ITEM	UNIT	TOTAL	IOOO-2A	N TYPE CODE X080-2A	CONSTRUCTIO IOOO-2A	N TYPE CODE X080-2A
20200100	EARTH EXCAVATION	CU YO	507	237		270	
20400800	FURNISHED EXCAVATION	CU YD	1141	563		578	
25000200	SEEDING, CLASS 2	ACRE	1.9	1.0		6.0	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	171	90		81	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	171	90		81	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	171	90		81	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	3.8	2.0		1.8	
25100115	MULCH METHOD 2	ACRE	1.9	1.0		0.9	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	380	200		180	
28000400	PERIMETER EROSION BARRIER	FOOT	2375	1037		1338	
28001000	AGGREGATE (EROSION CONTROL)	TOM	55	30		25	
31100300	SUB-BASE GRANULAR MATERIAL, TYPE A 4"	\$0 YD	300	300			
35501324	HOT-MIX ASPHALT BASE COURSE, 10"	SQ YD.	2590	1311		1279	
10200800	AGGREGATE SURFACE COURSE TYPE B	TON	70	70			
10600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	2.55	1.28		1.27	
10600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ. YO.	719	320	***************************************	399	
10600990	TEMPORARY RAMP	\$0. YD	54	27		27	
10603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	566	278		288	
(4200412	PORTLAND CEMENT CONCRETE PAVEMENT 12", SPECIAL	SO YD	280	280			
	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ, YD.	294			294	
12001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SO YD.	112	56		56	
14000100	PAVEMENT REMOVAL	SO, YD	384	192		192	
14000920	BITUMINOUS CONCRETE SHOULDER REMOVAL	\$0 YD.	1949	945		1004	
18101300	AGGREGATE SHOULDERS, TYPE B (SPECIAL)	TON	86	42		44	
50101700	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 1	EACH	1		1		
50101800	REMOVAL OF EXISTING SUPERSTRUCTURES NO. 2	EACH	1	***************************************			1
30102400	CONCRETE REMOVAL	CU/ YD	20.8		11.0		9.8
50105220	PIPE CULVERT REMOVAL	FOOT	56	56			510
50300225	CONCRETE STRUCTURES	CU₄ ∛D	20.8		11.0		9.8
0300260	BRIDGE DECK GROOVING	SQ, YD	1706		725		981
50300300	PROTECTIVE COAT	SQ YD	1848		724		1124
	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	50 FT.	4196		4196		71127
50400405	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21" DEPTH)		3968		7130	****	3968
	PRECAST PRESTRESSED CONCRETE DECK BEAMS (21' DEPTH)	SQ FT,	2512				2512
	REINFORCEMENT BARS, EPOXY COATED		22695		9445		13250
***************************************		POUND	280		113		15250
50800515	BAR SPLICERS  STEEL PAULING TYPE SH	EACH	531		212		319
50901050	STEEL RAILING, TYPE SM	FOOT					
51500100	NAME PLATES	EACH	2		1		1
52000110	PREFORMED JOINT STRIP SEAL	FOOT	274		143		131
54200643	PIPE CULVERTS, TYPE I, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE 18"	FOOT	40	40		·	

SUMMARY OF QUANTITIES
U.S. 136 OVER PRAIRIE CREEK DITCH
F.A.P. RTE. 315 - SECTION 116 (BR-1)

STA. 85+45

S.N. 054-0024
U.S. 136 OVER PRAIRIE CREEK
F.A.P. RTE. 315 - SECTION 116 (BR-2)

STA. 314+50

S.N. 054-0025

LOGAN COUNTY

CONTRACT NO. 72997

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	•	LOGAN	79	4

		SUMMARY OF QUANTITIES			5 N 05	4-0024	S NI OF	64~0025
		SUMMANT OF QUARTIFIES		**	ROADWAY FAP 315 80% FEDERAL 20% STATE	STRUCTURE S.N. 054-0024 80% FEDERAL	ROADWAY FAP 315 80% FEDERAL 20% STATE	STRUCTURE S.N. 054-0025 80% FEDERAL
	CODE NO.	SUMMARY OF QUANTITIES PAY ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTIO	N TYPE CODE X080-2A	CONSTRUCTIO	N TYPE CODE X080-2A
	54215553	METAL END SECTIONS 18"	EACH	2	2			X000 EX
	54215559	METAL END SECTIONS 24"	EACH	2	2			
	59000200	EPOXY CRACK INJECTION	FOOT	52				52
¥	63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	825	550		275	
*	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	7	4		3	
<b>*</b>	63100167	TRAFFIC BARRIER TERMINAL TYPE 1. SPECIAL (TANGENT)	EACH	7	4		3	
	63200310		FOOT	737	400		337	
		ENGINEERS FIELD OFFICE, TYPE A	CAL MO.	8	4		4	
		MOBILIZATION	L SUM	1	0.5		0.5	***************************************
		TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1				
					0.5		0.5	
	70100460		L SUM	1	0.5		0,5	
	70100500		L, SUM	1	0.5		0,5	
	70101205	TRAFFIC CONTROL AND PROTECTION STANDARD 701321, SPECIAL	EACH	1	0.5	***************************************	0.5	
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL. DA	10	5		5	
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1		1	
	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	530	252		278	
	70300230	TEMPORARY PAVEMENT MARKING - LINE 5"	FOOT	3780	1800	and disk disk the billed block in the law phases him block at the second paper deprine pro	1980	
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	1811	862		949	
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1062.5	500		562.5	
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1062.5	500		562.5	
*	78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ. FT.	320			320	
*	78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	5250	2030		3220	
*	78001180	PAINT PAVEMENT MARKING - LINE 24"	FOOT	144			144	
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	24	11		13	
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	28	16		12	
*	78201000	TERMINAL MARKER-DIRECT APPLIED	EACH	7	4		3	
	78300100	PAVEMENT MARKING REMOVAL	SO FT	2014	796		1218	
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	24	11		13	
	x03236 <b>6</b> 5	RIPRAP SLURRY	SG YD	23			23	
	X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SO FT	119				119
	x5030305	CONCRETE WEARING SURFACE, 5"	SQ. YD	1188.7	***************************************	467.5		721.2
	X7200201	WIDTH RESTRICTION SIGNING	L. SUM	1	0.5		0.5	
	XX005519	STONE DUMPED RIPRAP, CLASS A4 (SPECIAL)	TON	1908		891		1017
	Z0015500	DEBRIS REMOVAL	L. SUM	1908	0,5		0,5	
	Z0015500 Z0001900	ASBESTOS BEARING PAD REMOVAL			U.J	60	0,0	ςή
			EACH	120	0.5	60	O.F.	60
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.5		0.5	
		IMPACT ATTENUATORS (FULLY REDIRECTIVE, RESETTABLE), TEST LEVEL 3	EACH	1			1	
		IMPACT ATTENUATORS TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	6	2		4	
		IMPACT ATTENUATORS RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3	EACH	6	2		4	
	20048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1			1	
l					L			L

SUMMARY OF QUANTITIES

U.S. 136 OVER PRAIRIE CREEK DITCH

F.A.P. RTE. 315 - SECTION 116 (BR-1)

STA. 85+45

S.N. 054-0024

U.S. 136 OVER PRAIRIE CREEK

F.A.P. RTE. 315 - SECTION 116 (BR-2)

STA. 314+50

S.N. 054-0025

LOGAN COUNTY

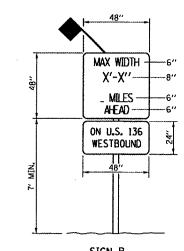
\*SPECIALTY ITEMS

ONTRACT NO. 72997
COUNTY TOTAL SHEET NO. F.A.P. SECTION LOGAN 79 5 315

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT • - 116(B-1) & 116(B-2)

MAX WIDTH MILES . AHEAD -

> SIGN A (WIDTH RESTRICTION SIGN) (TO BE PLACED ON US 136)



SIGN B (WIDTH RESTRICTION SIGN) (TO BE PLACED ON I-155)

SIGN BY SIGN B SIGN A-11 12 20 11 S N R 1.3 17 15 34 E 20 21 23 22 24 26 23 27

E

20

29

21

28

**(D)** 

27

34

WIDTH RESTRICTION SIGNING LOCATIONS

WIDTH RESTRICTION SIGNING DETAILS U.S. 136 OVER PRAIRIE CREEK DITCH F.A.P. RTE. 315 - SECTION 116 (BR-1) STA. 85+45.00

S.N. 054-0024 U.S. 136 OVER PRAIRIE CREEK F.A.P. RTE. 315 - SECTION 116 (BR-2)

STA. 314+50.00

S.N. 054-0025

LOGAN COUNTY

N

WINKEL

683

25

30

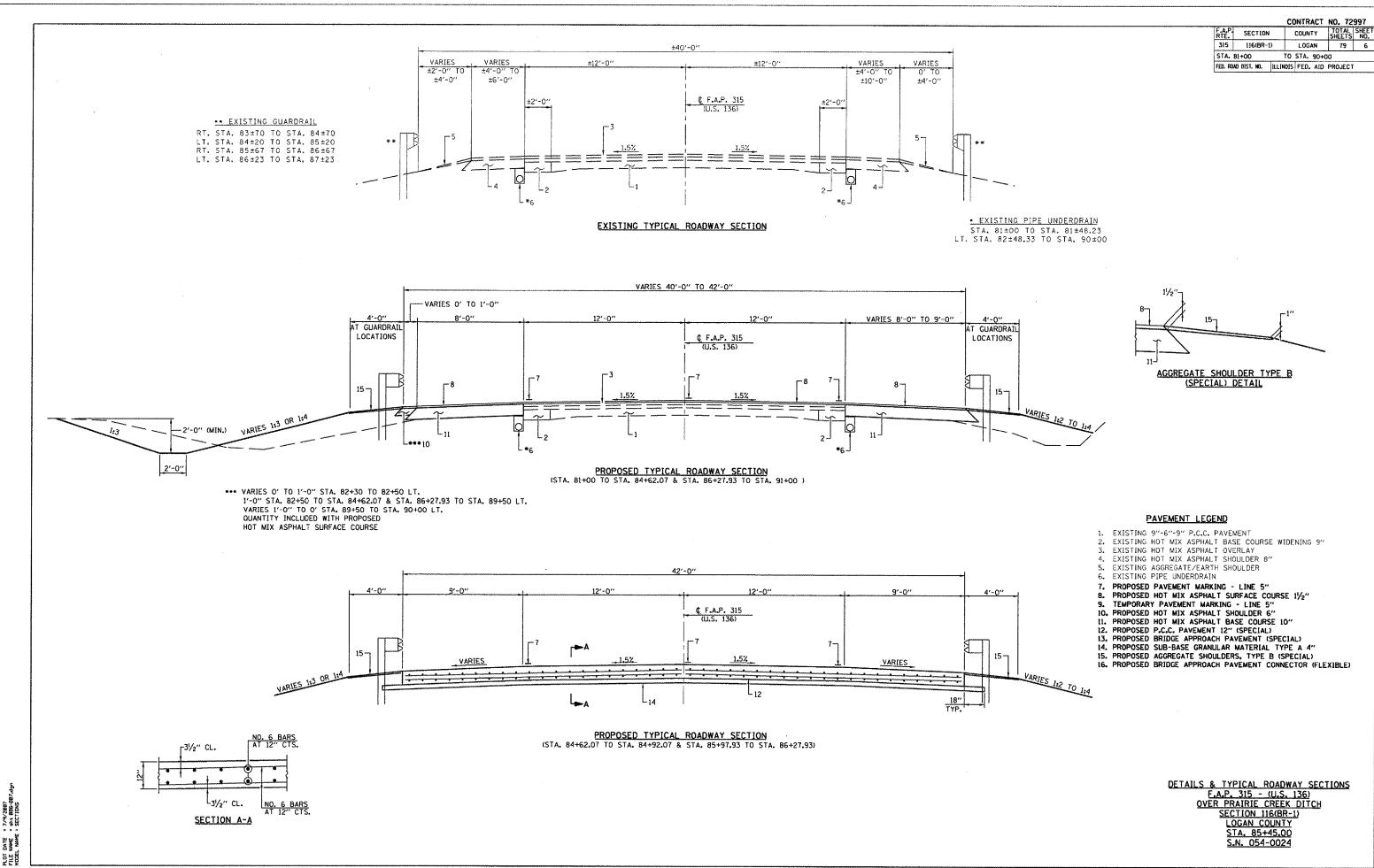
(**369**)

13

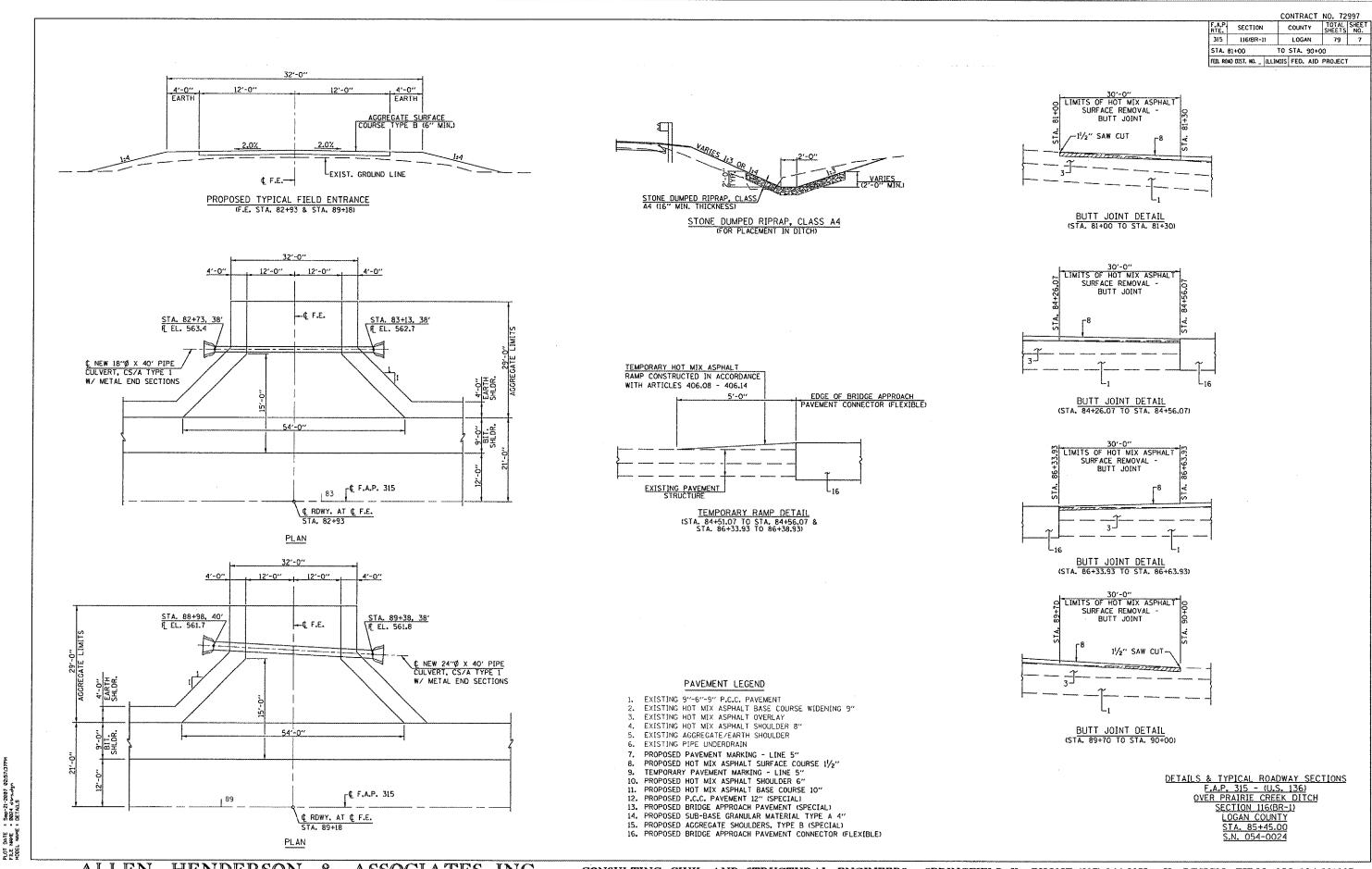
25

A

35

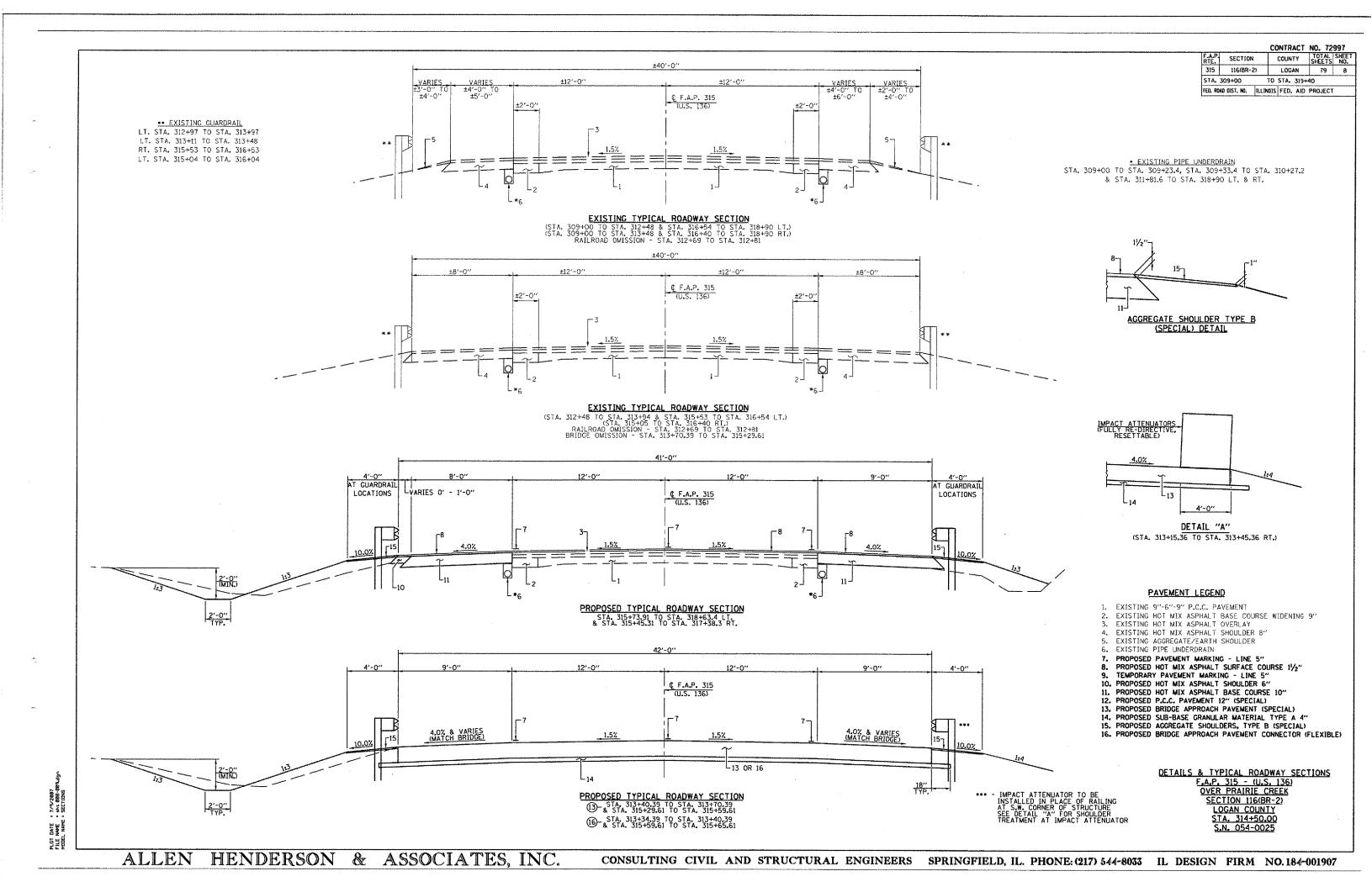


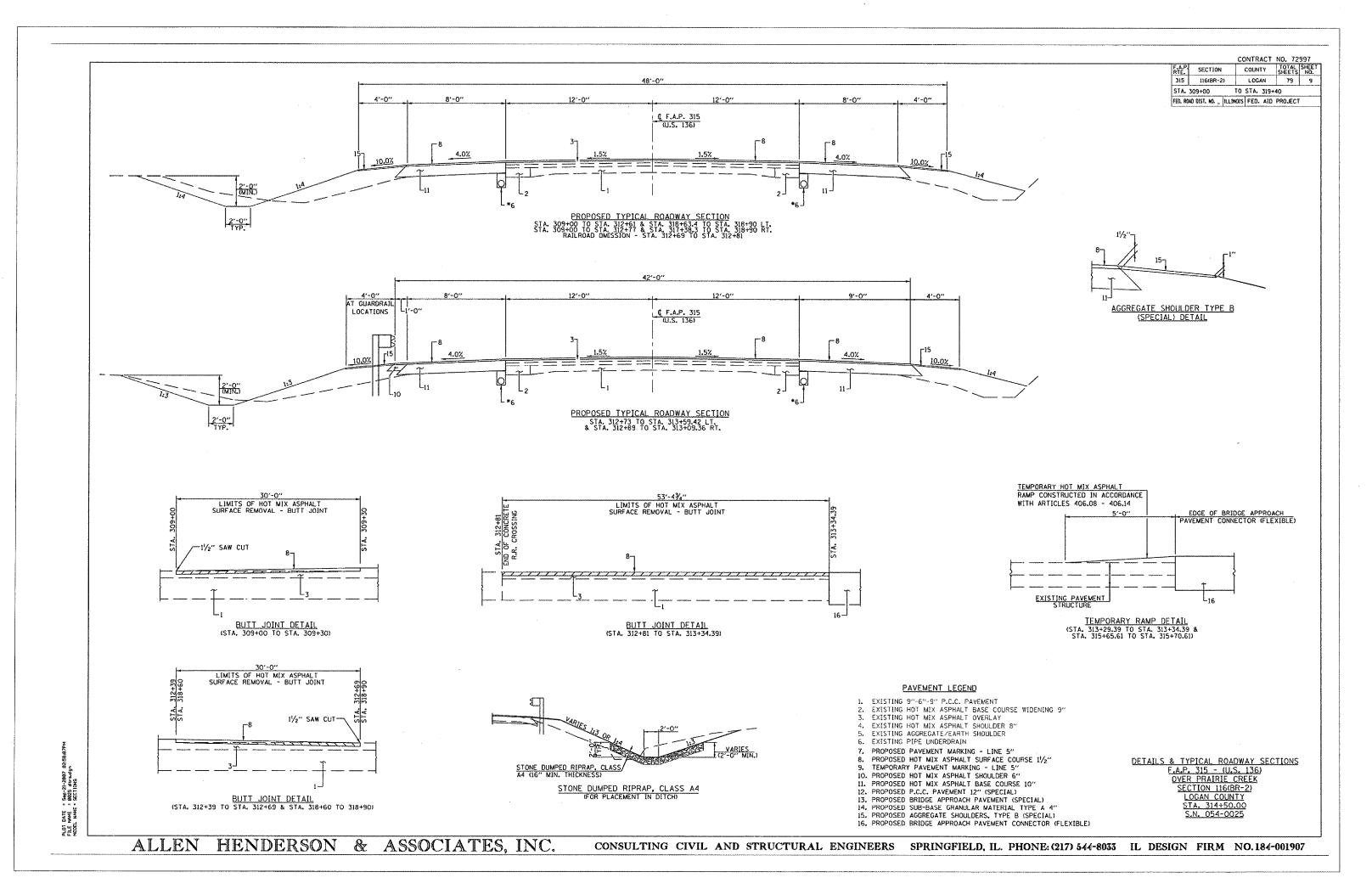
ALLEN HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND ST



HENDERSON & ASSOCIATES, INC.

CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907





GUARDRAIL	SCHEDULE

LOCATION	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (EACH)	STEEL PLATE BEAM GUARDRAIL TYPE A (FOOT)	TRAFFIC BARRIER TERMINAL, TYPE 6/ (EACH)
STAGE I			
STA. 81+94.42 TO STA. 82+44.42 RT.	1		**************************************
STA. 82+44.42 TO STA. 84+19.42 RT.		175	
STA. 84+19.42 TO STA. 84+63.17 RT.			1
STA. 85+69.03 TO STA. 86+12.78 RT.	***************************************		1
STA. 86+12.78 TO STA. 87+12.78 RT.		100	
STA. 87+12.78 TO STA. 87+62.78 RT.	1		********************
STAGE II			
STA. 83+27.22 TO STA. 83+77.22 LT.	1		
STA. 83+77.22 TO STA. 84+77.22 LT.		100	
STA. 84+77.22 TO STA. 85+20.97 LT.			1
STA. 86+26.83 TO STA. 86+70.58 LT.			1
STA. 86+70.58 TO STA. 88+45.58 LT.		175	
STA. 88+45.58 TO STA. 88+95.58 LT.	1		
TOTAL	4	550	4

PAVEMENT MARKING SCHEDULE

PAVEMENT MK. REMOVAL

YELLOW SKIP DASH & NO PASSING (SQ. FT,)

SHORT TERM PVMT. MARKING

YELLOW (FT.)

900

PAINT PVMT. MK. LINE - 5"

YELLOW SKIP DASH &

NO PASSING

#### HOT MIX ASPHALT SCHEDULE

		· MIN NOIT	AL JUILDOLL		
LOCATION		TEMPORARY RAMP (SQ. YD.)	HOT MIX ASPHALT BASE COURSE 10" (SO. YD.)	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N50 (TON)	BITUMINOUS MATERIALS (PRIME COAT) (TON)
STA. 84+51.07 TO STA. 84+56.07		13.5			***************************************
STA. 86+33.93 TO STA. 86+38.93		13.5			
STA. 81+00 TO STA. 84+72.59 LT.			320	34	
STA. 81+00 TO STA. 84+39.55 RT.			329	23	
STA, 86+50.45 TO STA, 90+00 LT.			300	33	
STA. 86+17 TO STA. 90+00 RT.			362	26	
STA. 81+00 TO STA. 84+62.07				80	
STA, 86+27.93 TO STA, 90+00				82	
STA. 81+00 TO STA. 84+56.07					0.63
STA. 86+33.93 TO STA. 90+00					0.65
	TOTAL	27	1311	278	1.28

# SCHEDULE PERMANENT SEEDING

		***************************************					
LOCATION	SEEDING CLASS 2 (ACRE)	NITROGEN FERT. NUT. (POUND)	PHOSPHORUS FERT. NUT. (POUND)	POTASSIUM FERT, NUT, (POUND)	MULCH METHOD 2 (ACRE)	ENOSION	AGRICULTURAL GROUND LIMESTONE (TON)
STA. 81+00 TO STA. 90+00	1.0	90	90	90	1.0	200	2,0
TOTAL	1.0	90	90	90	1.0	200	2.0

#### EARTHWORK SCHEDULE

LOCATION		SHRINKAGE		EARTHWORK BALANCE WASTE (+) OF SHORTAGE (-)
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA. 81+00 TO STA. 90+00	237	178	741	563
TO	AL 237	178	741	563

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA. 81+00 TO STA. 90+00	237	178	741	563
TOTAL	237	178	741	563

### NOTE: SHORT-TERM PAVEMENT MARKING QUANTITIES ARE FOR TWO APPLICATIONS. • 10% OF TOTAL LENGTH FOR SHORT-TERM PAVEMENT MARKING

LOCATION

STA. 82+38 TO STA. 88+55 LT. ST. I
STA. 81+00 TO STA. 84+92.07 (¢) ST. I
STA. 85+97.93 TO STA. 90+00 (¢) ST. I
STA. 81+00 TO STA. 82+38 (EDGE) ST. II LT.
STA. 81+00 TO STA. 82+38 (EDGE) ST. II LT.
STA. 81+00 TO STA. 84+75.55 ST. II RT.
STA. 81+00 TO STA. 84+75.55 ST. II RT.
STA. 85+81.41 TO STA. 90+00 ST. II RT.
STA. 81+00 TO STA. 90+00 (EDGE) LT.
STA. 81+00 TO STA. 90+00 (EDGE) LT.
STA. 81+00 TO STA. 90+00 (¢)
STA. 81+00 TO STA. 90+00 (CDGE) RT.
SHORT TERM DIAGONALS

### GUARDRAIL & TERMINAL MARKERS

TOTAL

LOCATION	GUARDRAIL MARKERS TYPE A (EACH)	TERMINAL MARKER DIRECT APPLIED (EACH)
STA. 82+10 LT.	1	
STA. 83+85 LT.	1	
STA. 83+50 RT. & STA. 83+60 LT.	2	***************************************
STA. 84+25 RT. & STA. 84+35 LT.	2	
STA. 85+00 RT. & STA. 85+10 LT.	2	***************************************
STA. 85+75 RT. & STA. 85+85 LT.	2	
STA. 86+50 RT. & STA. 86+60 LT.	2	
STA. 87+25 RT. & STA. 87+35 LT.	2	
STA. 88+00 RT.	1	
STA. 88+75 RT.	1	***************************************
STA. 81+94.42 RT.		i
STA. 83+27.22 LT.		1
STA, 87+62,78 RT.		1
STA. 88+95.58 LT.		1
TOTAL	16	4

# SCHEDULE SUB-BASE GRANULAR MATERIAL TYPE A 4"

OUD DATE OF THE PROPERTY OF TH	127364 1 1 1 1	
LOCATION		QUANTITY (SQ. YD.)
STA. 84+62.07 TO STA. 84+92.07		150
STA. 85+97.93 TO STA. 86+27.93		150
	TOTAL	300

## SCHEDULE PORTLAND CEMENT CONCRETE PAVEMENT 12" (SPECIAL)

LOCATION		QUANTITY (SQ. YD.)
STA. 84+62.07 TO STA. 84+92.07		140
STA. 85+97.93 TO STA. 86+27.93		140
	TOTAL	280

## SCHEDULE RAISED REFLECTIVE PAVEMENT MARKER

LOCATION	QUANTITY (EACH)
ASSUME 80' CTS. INCLUDING STRUCTURE	
STA. 81+00 TO STA. 90+00	11
TOTAL	11

## SCHEDULE RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

LOCATION	QUANTITY (EACH)
ASSUME 80' CTS. INCLUDING STRUCTURE	
STA. 81+00 TO STA. 90+00	11
TOTAL	11

### SCHEDULE GUARDRAIL REMOVAL

LOCATION		QUANTITY (FOOT)
STA. 83+70 TO STA. 84+70 RT.		100
STA. 84+20 TO STA. 85+20 LT.		100
STA. 85+67 TO STA. 86+67 RT.		100
STA. 86+23 TO STA. 87+23 LT.		100
	TOTAL	400

#### SCHEDULE PAVEMENT REMOVAL

	LOCATION				QUANTITY (SQ. YD.)	
STA.	84+56.07	TO	STA.	84+92.07		96
STA.	85+97.93	TO	STA	86+33.93		96
					TOTAL	192

#### SCHEDULE HOT MIX ASPHALT SURFACE REMOVAL - BUTT JOINT

LOCATION	QUANTITY (SQ. YD.)
STA. 81+00 TO STA. 81+30	80
STA. 84+26.07 TO STA. 84+56.07	80
STA. 86+33.93 TO STA. 86+63.93	80
STA. 89+70 TO STA. 90+00	80
TOTAL	320

#### SCHEDULE BITUMINOUS CONCRETE SHOULDER REMOVAL

LOCATION	QUANTITY (SQ. YD.)
STA. 81+00 TO STA. 85+08,59 LT.	231
STA. 81+00 TO STA. 84+75.55 RT.	253
STA. 85+81.43 TO STA. 90+00 RT.	262
STA. 86+14.47 TO STA. 90+00 LT.	199
TOTAL	945

## SCHEDULE PIPE CULVERTS, TYPE 1, CORRUGATED STEEL OR ALUMINUM

LOCATION		QUANTITY (FEET) 18"Ø	QUANTITY (FEET) 24"Ø
STA. 82+73 TO STA. 83+13 LT.		40	
STA. 88+98 TO STA. 89+38 LT.			40
	TOTAL	40	40

# SCHEDULE METAL END SECTIONS

LOCATION	QUANTITY (EACH) 18"	QUANTITY (EACH) 24"
STA. 82+73 38' LT.	1	
STA. 83+13 38' LT.	1	
STA. 88+98 40' LT.		1
STA. 89+38 38' LT.		1
TOTAL	2	2

### F.A.P. SECTION COUNTY TOTAL SHEET

RIE.	520.1011		SHEETS	NO.
315	116(BR-1)	LOGAN	79	10
STA.	81+00	TO STA. 90+0	0	
FFD. BO	AD DIST. NO. 6 BLD	INIS FED. AID	PROJECT	

#### SCHEDULE AGGREGATE SHOULDERS, TYPE B (SPECIAL)

LOCATION	QUANTITY (TON)	
STA. 81+00 TO STA. 85+26.49 LT.		11
STA. 81+00 TO STA. 84+57,67 RT.		10
STA. 86+32.34 TO STA. 90+00 LT.		9
STA. 85+63.52 TO STA. 90+00 RT.		12
	TOTAL	42

#### SCHEDULE PERIMETER EROSION BARRIER

LOCATION		QUANTITY (FOOT)
STA. 81+00 TO STA. 84+65 RT.		365
STA. 83+13 TO STA. 85+60 LT.		247
STA. 85+65 TO STA. 87+00 RT.		135
STA. 86+10 TO STA. 89+00 LT.		290
	TOTAL	1037

#### SCHEDULE AGGREGATE EROSION CONTROL

LOCATION	QUANTITY (TON)
STA. 83+50 LT.	5
STA. 84+50 LT. & RT.	10
STA. 86+75 LT. & RT.	10
STA. 88+75 LT.	5
TOTAL	30

#### SCHEDULE AGGREGATE SURFACE COURSE TYPE B

_		
	LOCATION	QUANTITY (TON)
Ī	F.E. STA. 82+93 LT.	35
Œ	F.E. STA. 89+18 LT.	35
ľ	TOTAL	70

#### SCHEDULE PIPE CULVERT REMOVAL

***************************************						
LOCATION	QUANTITY (FOOT)					
STA. 82+79 TO STA. 83+70 LT.	28					
STA. 89+04 TO STA. 89+32 LT.	28					
TOTAL	56					

#### SCHEDULE BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

				***********	30.77.12.0.1.0.1	** ************************************
			LOCA	TION		QUANTITY (SQ. YD.)
STA.	84+56,07	ΤO	STA.	84+62.07		28
STA.	86+27.93	TO	STA.	86+33.93		28
					TOTAL	56

OUANTITY SCHEDULES
F.A.P. ROUTE 315 - (U.S. 136)
OVER PRAIRIE CREEK DITCH
SECTION 116 (BR-1)
LOGAN COUNTY
STA 85-46 STA. 85+45 S.N. 054-0024

F.A.P. RTE.	SECTION	C	OUNTY	TOTAL SHEETS	SHEET NO.		
315	116@R-2	)	LOGAN	79	11		
STA.	STA. 309+00 TO STA. 318+90						
FEO. R	DAD DIST, NO. 6	(LLINOIS	FED. AID	PROJECT			

### GUARDRAIL SCHEDULE

LOCATION	TRAFFIC BARRIER TERMINAL TYPE 1 SPECIAL (TANGENT) (EACH)	STEEL PLATE BEAM GUARDRAIL TYPE A (FOOT)	TRAFFIC BARRIER TERMINAL, TYPE 6A (EACH)
STAGE I			
STA. 315+04.58 TO STA. 315+48.33 RT.			1
STA. 315+48.33 TO STA. 316+48.33 RT.		100	
STA. 316+48.33 TO STA. 316+98.33 RT.	1		
STAGE II			
STA. 313+01.67 TO STA. 313+51.67 LT.	1		
STA. 313+51.67 TO STA. 313+95.42 LT.			1
STA. 315+54.64 TO STA. 315+98.39 LT.			1
STA. 315+98.39 TO STA. 317+73.39 LT.		175	
STA. 317+73.39 TO STA. 318+23.39 LT	1		
TOTAL	3	275	. 3

PAVEMENT MARKING SCHEDULE											
L COLUTION			VEMENT MK. REMOVAL	SHORT TE MARKIN	RM PVMT. IG LINE	PA MK	INT PVMT. . LINE - 5"	PAINT MK. LIN	PVMT. E - 24"	PAINT MK. LI AND S	PVMT. ETTERS SYMBOLS
LOCATION	LENGTH (FT.)	WHITE (SQ. FT.)	YELLOW SKIP DASH & NO PASSING (SQ. FT.)	WHITE (FT.)	YELLOW (FT.)	WHITE (FT.)	YELLOW SKIP DASH & NO PASSING (FT,)	WHITE (FT.)	YELLOW (FT.)	WHITE (SQ. FT.)	YELLOW (SQ. FT.
STA. 310+34 TO STA. 317+36 (EDGE) ST. I	732	308		1							
STA. 309+00 TO STA. 313+70.4 (¢) ST. I	471		248						T		
STA. 315+29.6 TO STA. 318+90 (¢) ST. I	361		190								
STA. 309+00 TO STA. 310+34 (EDGE) ST. II	134	56									
STA. 317+36 TO STA. 318+90 (EDGE) ST. II	154	67									
STA, 309+00 TO STA, 313+53.9 (EDGE) ST. II	454	191								1	
STA. 315+13.1 TO STA. 318+90 (EDGE) ST. II	377	158									T
STA. 309+00 TO STA. 318+90 (EDGE) LT.						990					
STA. 309+00 TO STA. 318+90 (¢)				•198			1240				
STA. 309+00 TO STA. 318+90 (EDGE) RT.				L		990					
STA. 311+53 RT.								24			
STA. 312+03 RT.		L		<u> </u>				24			
STA, 312+53 RT.				<u> </u>				24		<u> </u>	1
STA. 312+95 LT.				ļ				24		1	1
STA. 313+45 LT.								24		L	<u> </u>
STA. 313+95 LT.								24		L	
STA. 311+68 TO STA. 311+88 RT.			w				**************	<u> </u>	L	160	
STA. 313+60 TO STA. 313+80 LT.				<u> </u>					<u> </u>	160	
SHORT TERM DIAGONALS				80					L		<u> </u>
TOTAL		L	1218	2	78		3220	14	14	3:	20

NOTE: SHORT-TERM PAVEMENT MARKING QUANTITIES ARE FOR TWO APPLICATIONS. • 10% OF TOTAL LENGTH FOR SHORT-TERM PAVEMENT MARKING

### GUARDRAIL & TERMINAL MARKERS

LOCATION	GUARDRAIL MARKERS TYPE A (EACH)	TERMINAL MARKER DIRECT APPLIED (EACH)
STA. 313+20 LT.	1	
STA. 313+90 LT.	1	***************************************
STA. 314+60 LT. & STA. 314+70 RT.	2	
STA. 315+30 LT. & STA. 315+40 RT.	2	
STA. 316+00 LT. & STA. 316+10 RT.	2	
STA. 316+70 LT. & STA. 316+80 RT.	2	
STA. 317+40 LT.	1	
STA. 318+10 LT.	1	
STA. 313+01.67 LT.		1
STA. 316+98.33 RT.		1
STA. 318+23.39 LT.		1
TOTAL	12	3

#### SCHEDULE RIPRAP SLURRY

LOCATION	QUANTITY (SQ. YD.)
STA. 311+93 TO STA. 311+99 (35' RT. TO 60' RT.)	23
TOTAL	23

### BRIDGE APPROACH PAVEMENT (SPECIAL)

LOCATION	QUANTITY (SQ. YD.)
STA. 313+40.39 TO STA. 313+70.39	154
STA. 315+29.61 TO STA. 315+59.61	140
TOTAL	294

## SCHEDULE BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

LOCATION	QUANTITY (SQ.YD.)
STA. 313+34.39 TO STA. 313+40.39	28
STA. 315+23.61 TO STA. 315+29.61	28
TOTAL	56

### SCHEDULE

KAISED	REPLECT.	IVE	PAVEMENI	MARKER	REMUVAL
					OUANTITY

LOCATION	QUANTITY (EACH)
ASSUME BO' CTS. INCLUDING STRUCTURE	
STA. 309+00 TO STA. 318+90	13
TOTAL	13

#### SCHEDULE GUARDRAIL REMOVAL

LOCATION	QUANTITY (FOOT)
STA. 312+97 TO STA. 313+97 LT	100
STA. 313+11 TO STA. 313+48 RT.	37
STA. 315+04 TO STA. 316+04 LT	100
STA. 315+53 TO STA. 316+53 RT.	100
TOTAL	337

#### SCHEDULE PAVEMENT REMOVAL

PROCESSA CONTRACTOR AND				
LOCATION ,	QUANTITY (SQ. YD.)			
STA. 313+34.39 TO STA. 313+70.39	96			
STA. 315+29.61 TO STA. 315+65.61	96			
TOTAL	192			

#### HOT MIX ASPHALT SCHEDULE

IIO I	MIV WOLLE	IL SCHEDULE		
LOCATION	TEMPORARY RAMP (SQ. YD.)	HOT MIX ASPHALT BASE COURSE 10" SQ. YD.	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N50 (TON)	BITUMINOUS MATERIALS (PRIME COAT) (TON)
STA. 313+29.39 TO STA. 313+34.39	13.5			
STA. 315+65.61 TO STA. 315+70.61	13.5			
STA. 309+00 TO STA. 312+61 LT.		310	24	
STA. 309+00 TO STA. 312+77 RT.		324	25	
STA. 312+73 TO STA. 313+59.42 LT.		77	11	
STA. 312+89 TO STA. 313+09.36 RT.		21	2	
STA. 315+89.45 TO STA. 318+90 LT.		254	33	
STA. 315+40.58 TO STA. 318+90 RT.		293	25	
STA. 309+00 TO STA. 312+69			83	0.62
STA. 312+81 TO STA. 313+34.39			12	0.09
STA. 315+65.61 TO STA. 318+90			73	0.56
TOTAL	27	1279	288	1.27

#### SCHEDULE PERMANENT SEEDING

LOCATION	SEEDING CLASS 2 (ACRE)	NITROGEN RET. NUT. (POUND)	PHOSPHORUS FERT. NUT. (POUND)		MULCH METHOD 2 (ACRE)	TEMPORARY EROSION CONTROL SEEDING (POUND)
STA. 309+00 TO STA. 318+90	0.9	81	81	81	0.9	180
TOT	AL 0.9	81	81	81	0.9	180

#### EARTHWORK SCHEDULE

LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
	CUBIC YARD	CUBIC YARD	CUBIC YARD	CUBIC YARD
STA. 309+00 TO STA. 318+90	270	202	780	578
TOTAL	270	202	780	578

#### SCHEDULE HOT MIX ASPHALT SURFACE REMOVAL - BUTT JOINT

LOCATION		QUANTITY (SQ. YD.)
STA. 309+00 TO STA, 309+30		80
STA, 312+39 TO STA, 312+69		80
STA, 312+81 TO STA, 313+40,39		159
STA. 318+60 TO STA. 318+90		80
	TOTAL	399

#### SCHEDULE RAISED REFLECTIVE PAVEMENT MARKER

LOCATION	QUANTITY (EACH)
ASSUME 80' CTS. INCLUDING STRUCTURE	
STA. 309+00 TO STA. 318+90	13
TOTAL	13

#### SCHEDULE BITUMINOUS SHOULDER REMOVAL

LOCATION		OUANTITY (SQ.YD.)
STA. 309+00 TO STA. 312+61 LT.		201
STA. 309+00 TO STA. 312+77 RT.		168
STA. 312+73 TO STA. 313+86.9 LT.		114
STA. 312+89 TO STA. 313+53.9 RT.		65
STA. 315+46.12 TO STA. 318+90 LT.		200
STA. 315+13.08 TO STA. 318+90 RT.		256
	TOTAL	1004

# SCHEDULE IMPACT ATTENUATORS (FULLY REDIRECTIVE, RESETTABLE)

LOCATION	QUANTITY (EACH)
STA. 312+96.5 TO STA. 313+11.5	1
TOTAL	1

#### SCHEDULE PERIMETER EROSION BARRIER

LOCATION		QUANTITY (FOOT)
STA. 309+00 TO STA. 311+75 LT.		275
STA. 309+00 TO STA. 312+53 RT.		338
STA. 315+00 TO STA. 318+90 RT.		390
STA. 315+55 TO STA. 318+90 LT.		335
	TOTAL	1338

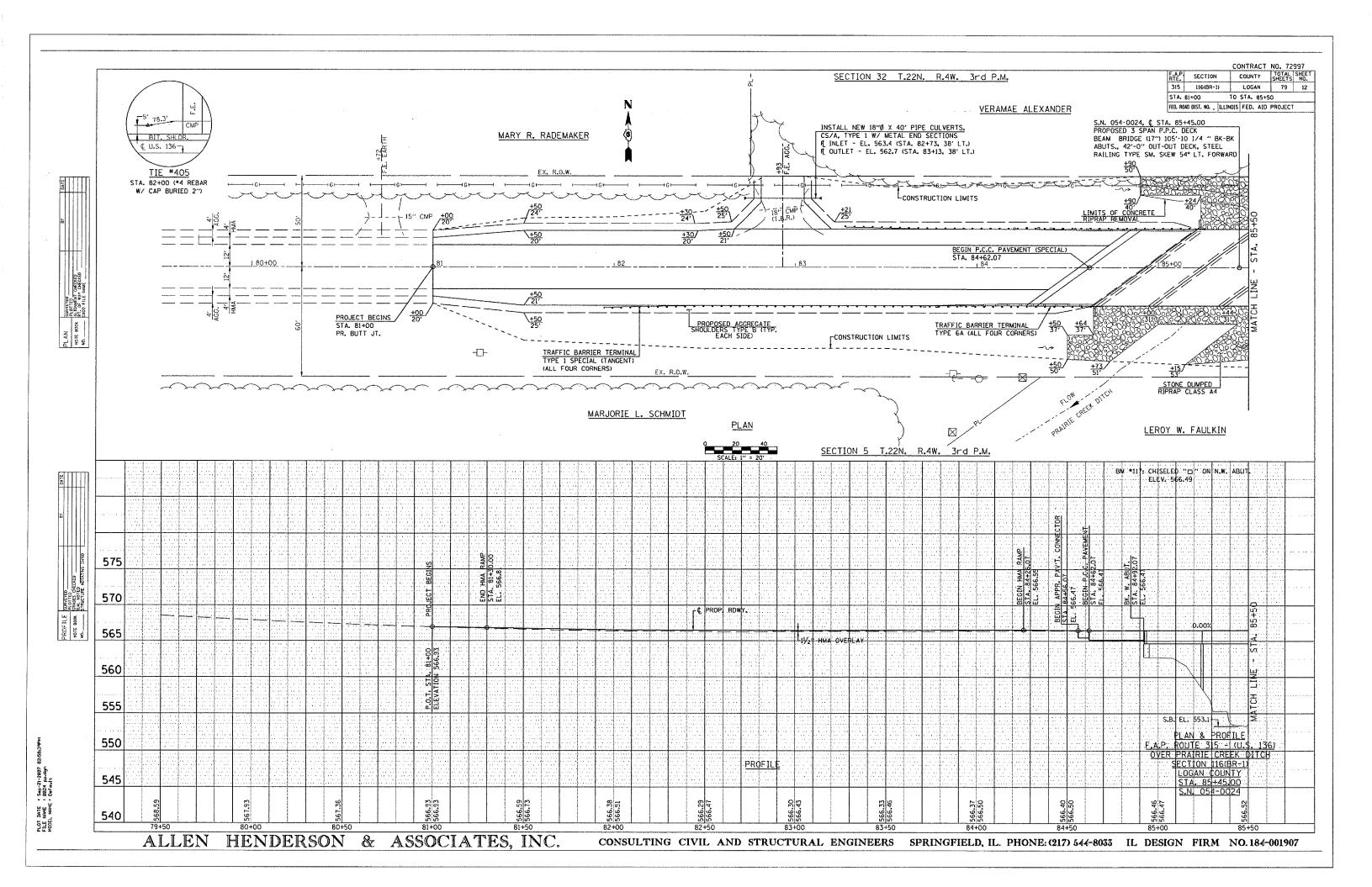
# SCHEDULE AGGREGATE (EROSION CONTROL)

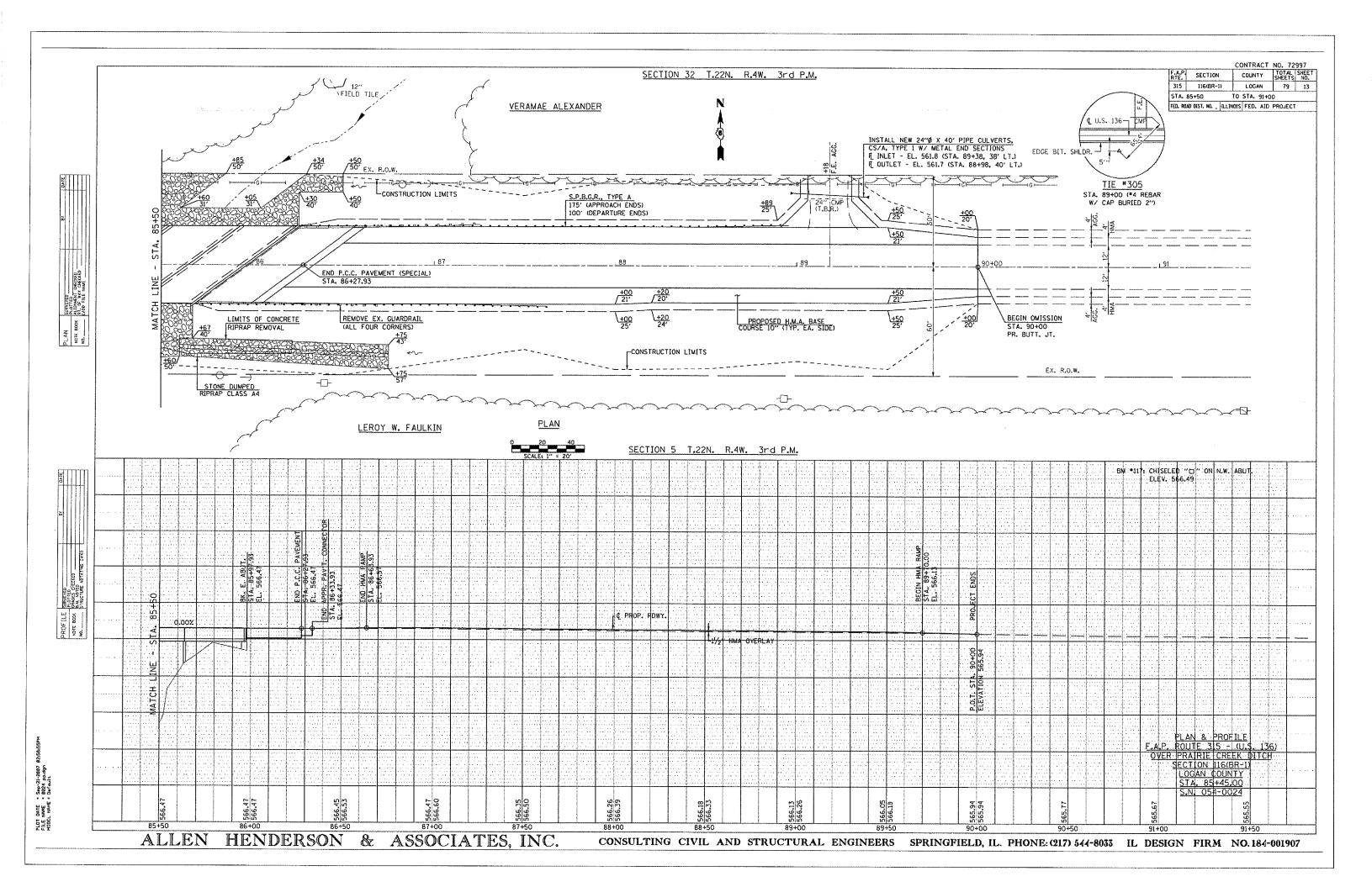
LOCATION	QUANTITY (TON)
STA. 311+50 LT.	5
STA. 315+60 LT. & RT.	10
STA. 317+50 LT. & RT.	10
TOTAL	25

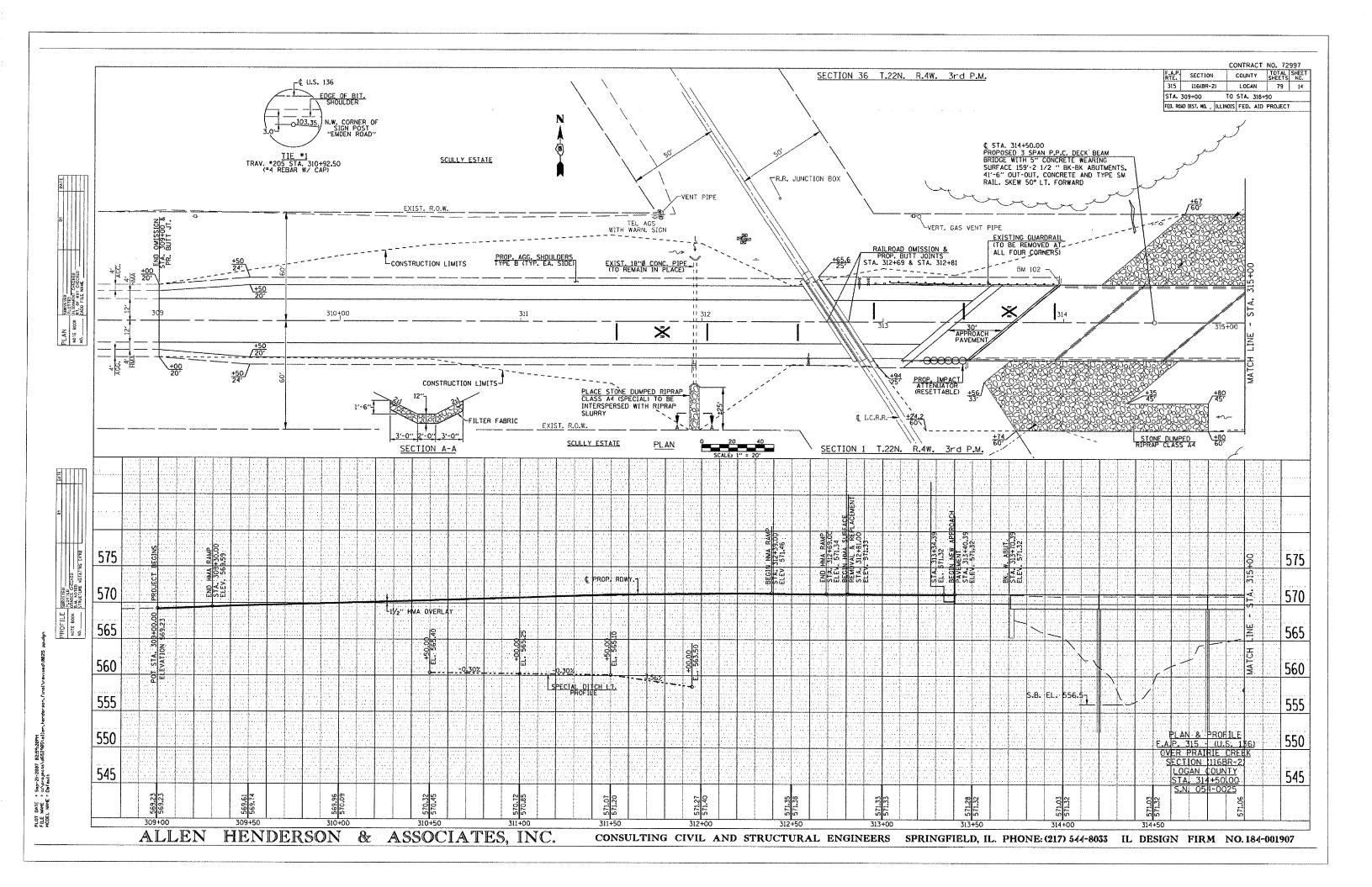
# SCHEDULE AGGREGATE SHOULDERS, TYPE B (SPECIAL)

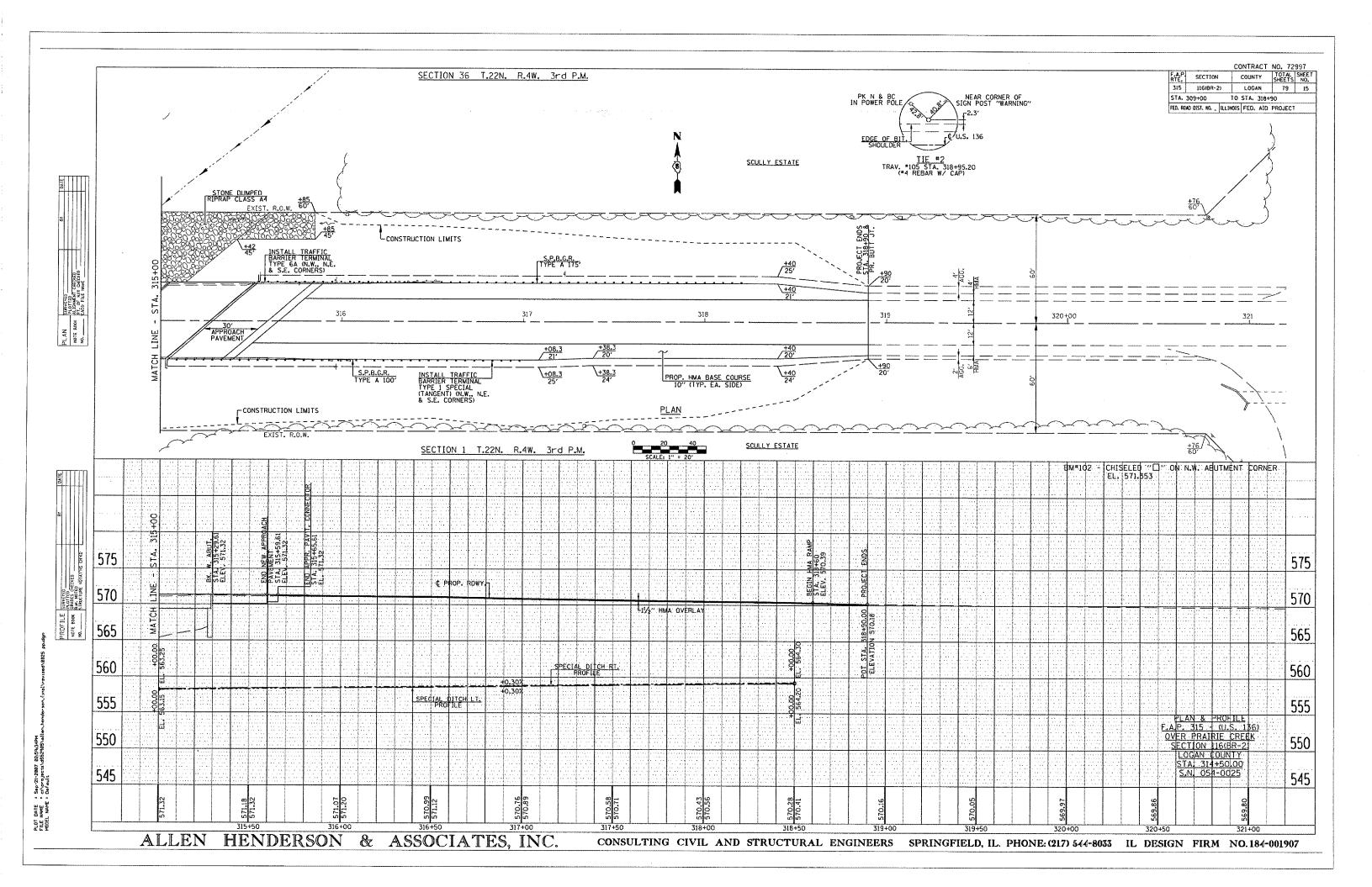
LOCATION		OUANTITY (TON)
STA. 309+00 TO STA. 312+61 LT.		10
STA. 309+00 TO STA. 312+77 RT.		10
STA. 312+73 TO STA. 313+95.42 LT.		3
STA. 312+89 TO STA. 313+15.36 RT.		1
STA. 315+53.45 TO STA. 318+90 LT.		3
STA, 315+04.58 TO STA, 318+90 RT.		11
	TOTAL	44

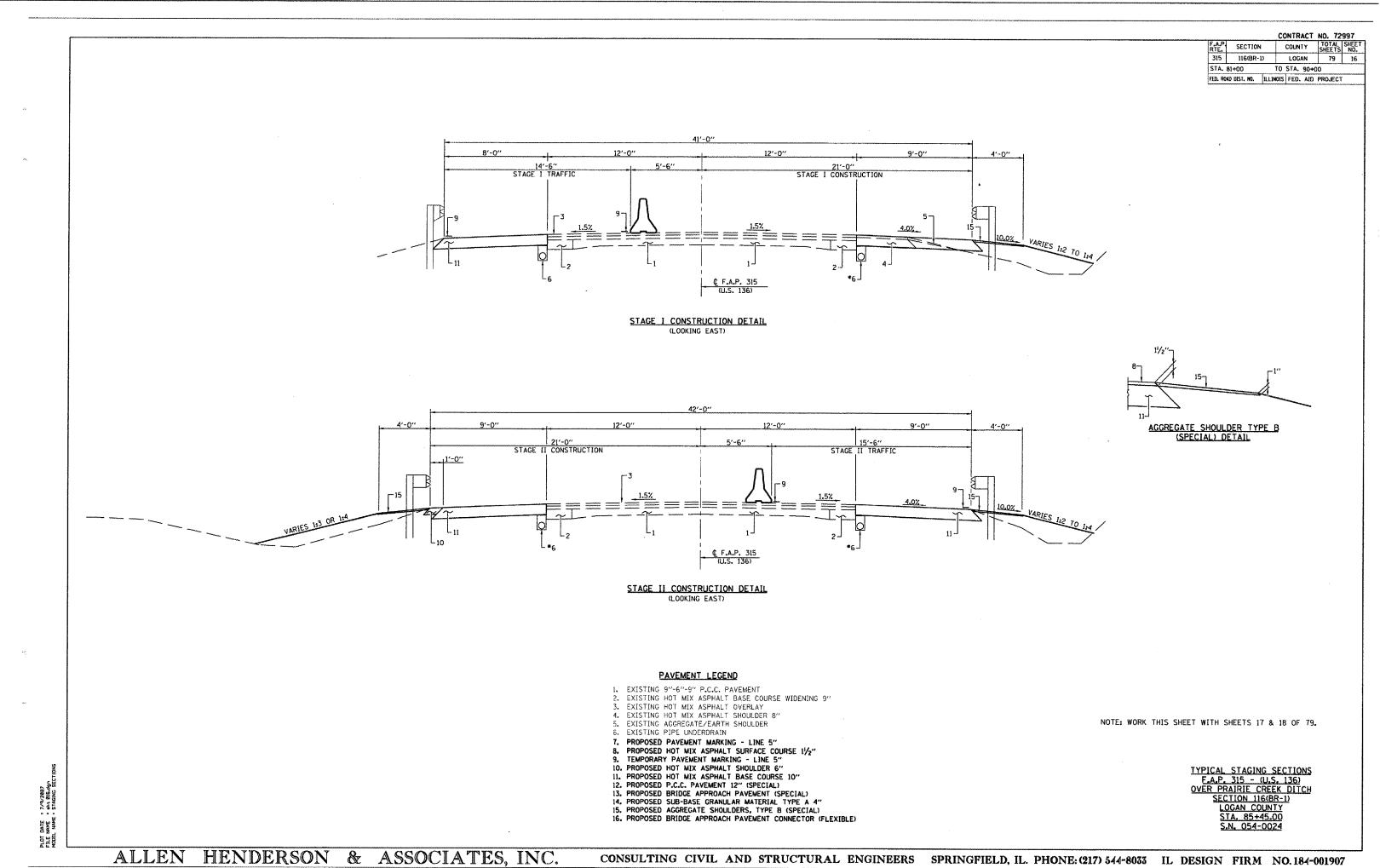
QUANTITY SCHEDULES
F.A.P. ROUTE 315 - (U.S. 136)
OVER PRAIRIE CREEK
SECTION 116(BR-2)
LOGAN COUNTY
STA 314-E0 00 STA. 314+50.00 S.N. 054-0025

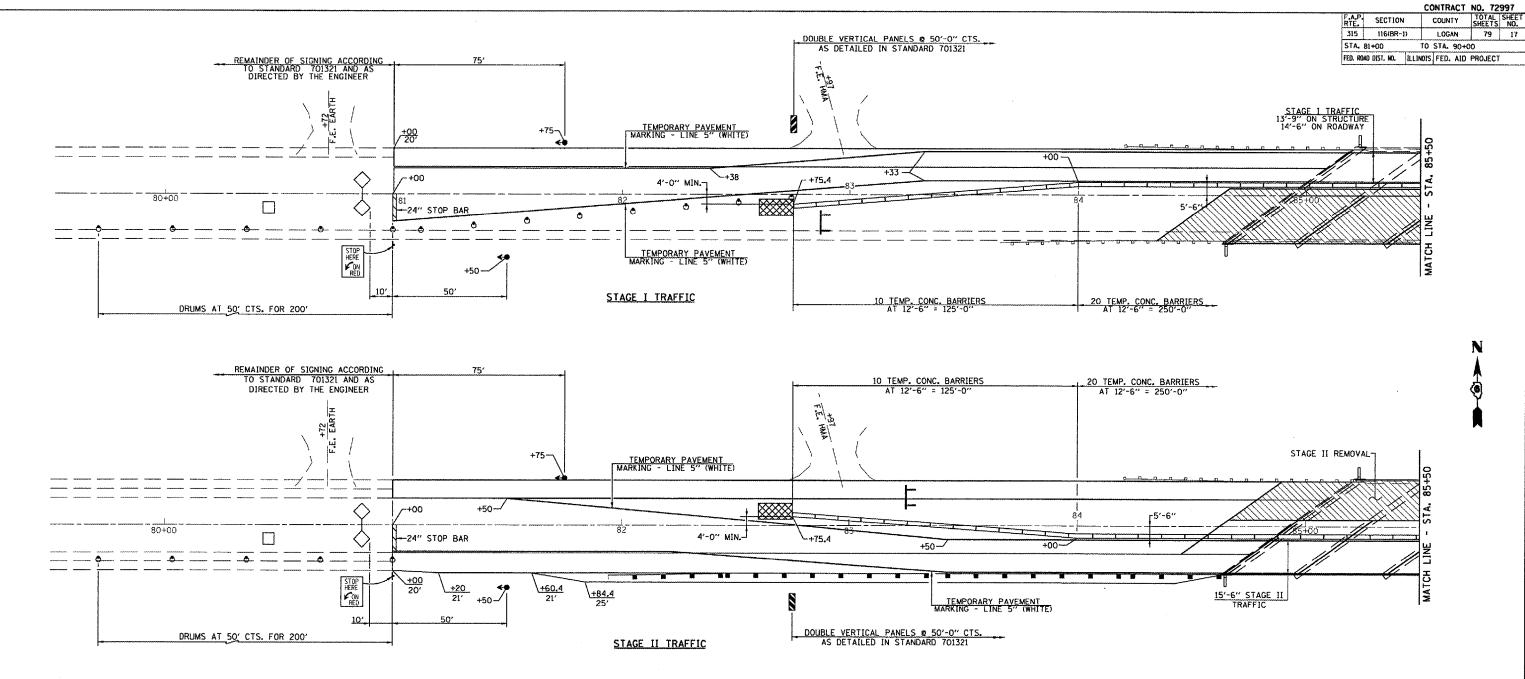












#### SUGGESTED STAGE CONSTRUCTION SEQUENCE PRE-STAGE I

1. REMOVE EXISTING AGGREGATE AND PAVED SHOULDER AND REPLACE WITH HOT MIX ASPHALT BASE COURSE 10" FROM STA. 81+00 TO STA. 90+00 LT. EXCLUDING EXISTING STRUCTURE,

#### STAGE I

- 1. ERECT TRAFFIC CONTROL FOR STAGE I CONSTRUCTION AND INSTALL
- TEMPORARY PAVEMENT MARKING.

  2. REMOVE EXISTING DECK RIGHT, ¢ STA. 85+45.

  3. CONSTRUCT PROPOSED STAGE I PRECAST PRESTRESSED DECK ¢ STA. 85+45 AND TEMPORARY RAMP.
- 4. CONSTRUCT TEMPORARY RAMPS AT APPROACH ROADWAY. 5. CONSTRUCT PROPOSED GUARDRAIL & TERMINALS RT.

#### STAGE II

- 1. ERECT TRAFFIC CONTROL FOR STAGE II CONSTRUCTION AND INSTALL TEMPORARY PAVEMENT MARKING.
- 2. REMOVE EXISTING DECK LEFT, ¢ STA. 85+45. 3. CONSTRUCT TEMPORARY RAMPS AT APPROACH ROADWAY.
- 4. CONSTRUCT PROPOSED GUARDRAIL & TERMINALS LT.

- REMOVE ALL STAGE TRAFFIC CONTROL AND RE-ESTABLISH NORMAL TRAFFIC PATTERNS.
- COMPLETE HOT MIX ASPHALT SURFACE COURSE AND AGGREGATE SHOULDERS TYPE B (SPECIAL) ON APPROACH ROADWAY UNDER TRAFFIC WITH FLAGGERS. 3. FINAL STRIPING AND MISCELLANEOUS CLEANUP.

#### GENERAL NOTES

- 1. THIS TRAFFIC CONTROL DETAIL SHALL BE USED IN CONJUNCTION WITH STANDARD 701321.
- 2. EXISTING PAVEMENT MARKINGS THAT CONFLICT WITH THE REVISED STAGE
  TRAFFIC PATTERNS DURING ALL PHASES OF STAGE CONSTRUCTION SHALL
  BE REMOVED AS SPECIFIED IN SECTION 783 OF THE STANDARD SPECIFICATIONS
  AND PAID FOR AS "PAVEMENT MARKING REMOVAL."
- 3. THE CONSTRACTOR SHALL MAINTAIN ACCESS TO ALL PRIVATE AND COMMERCIAL PROPERTIES DURING ALL PHASES OF CONSTRUCTION.
- 4. SIGNING FOR STAGE II SAME AS STAGE I.
- 5. LANE CLOSURES SHALL BE COORDINATED WITH PATCHING AND OVERLAY OPERATIONS.
- 6. WORK THIS SHEET WITH SHEETS 16 & 18 OF 79.

SYMBOLS

ZZZ

TYPE III BARRICADE

DRUM WITH STEADY BURNING LIGHT

TRAFFIC SIGNAL

TEMPORARY RUMBLE STRIP

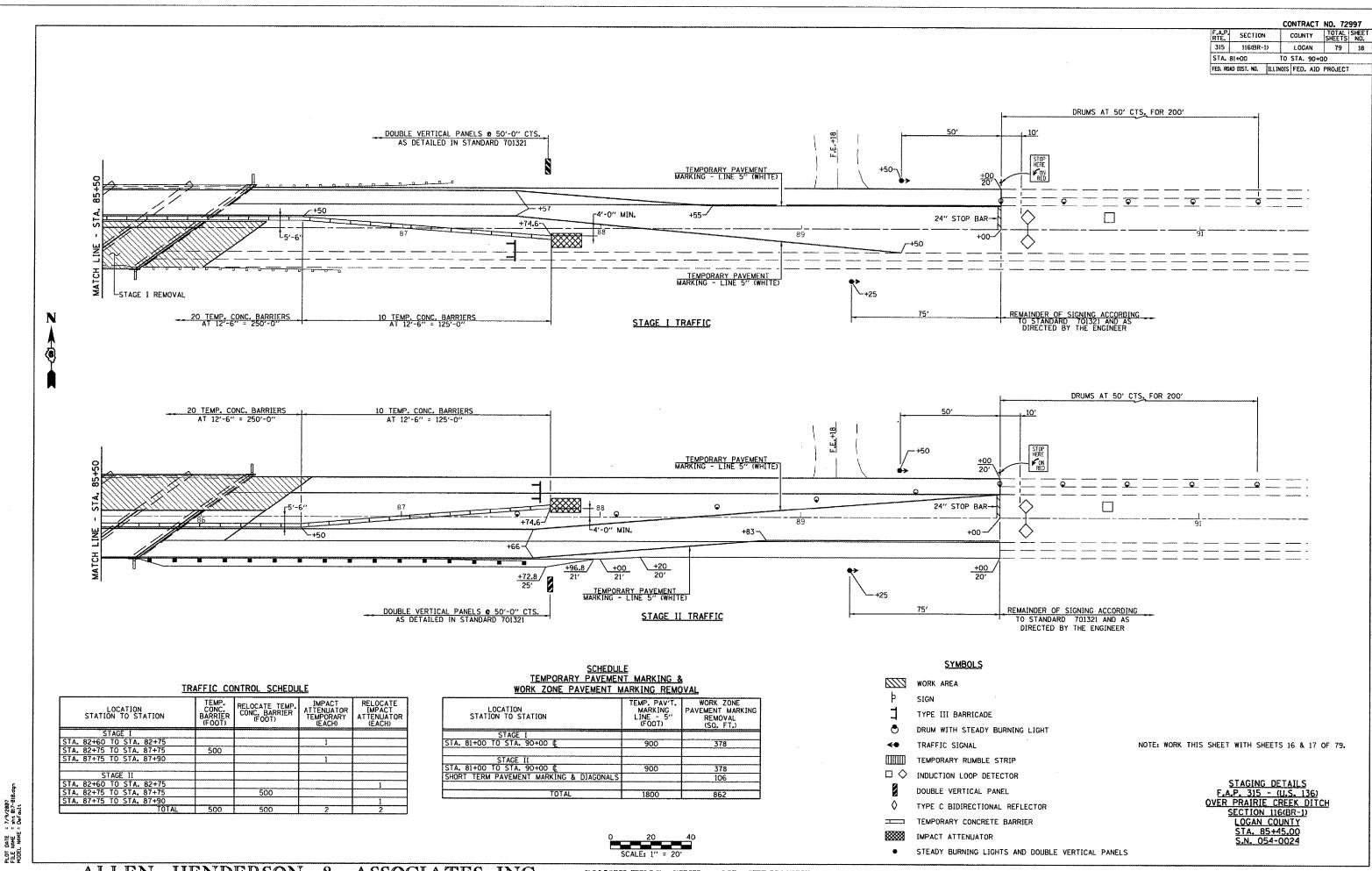
INDUCTION LOOP DETECTOR

DOUBLE VERTICAL PANEL TYPE C BIDIRECTIONAL REFLECTOR

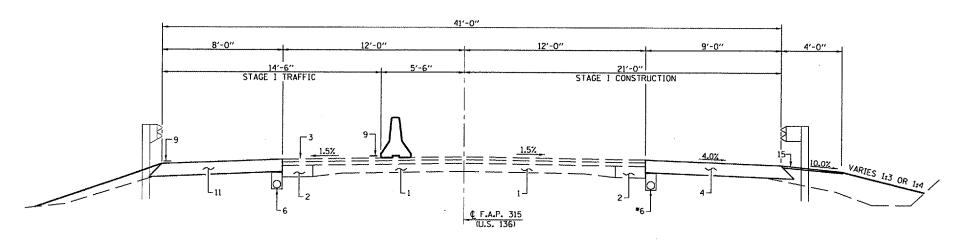
TEMPORARY CONCRETE BARRIER

IMPACT ATTENUATOR STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

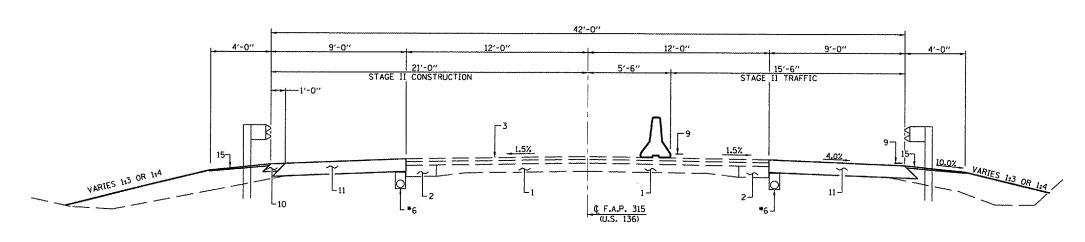
STAGING DETAILS F.A.P. 315 - (U.S. 136) OVER PRAIRIE CREEK DITCH SECTION 116(BR-1) LOGAN COUNTY STA. 85+45.00 S.N. 054-0024

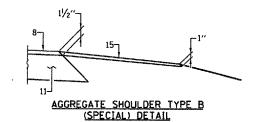


COUNTY TOTAL SHEET NO. RTE. SECTION 315 116(BR-2) LOGAN 79 19 STA. 309+00 TO STA. 318+90 FED. ROAD BIST. NO. ILLINOIS FED. AID PROJECT



STAGE I CONSTRUCTION DETAIL (LOOKING EAST)





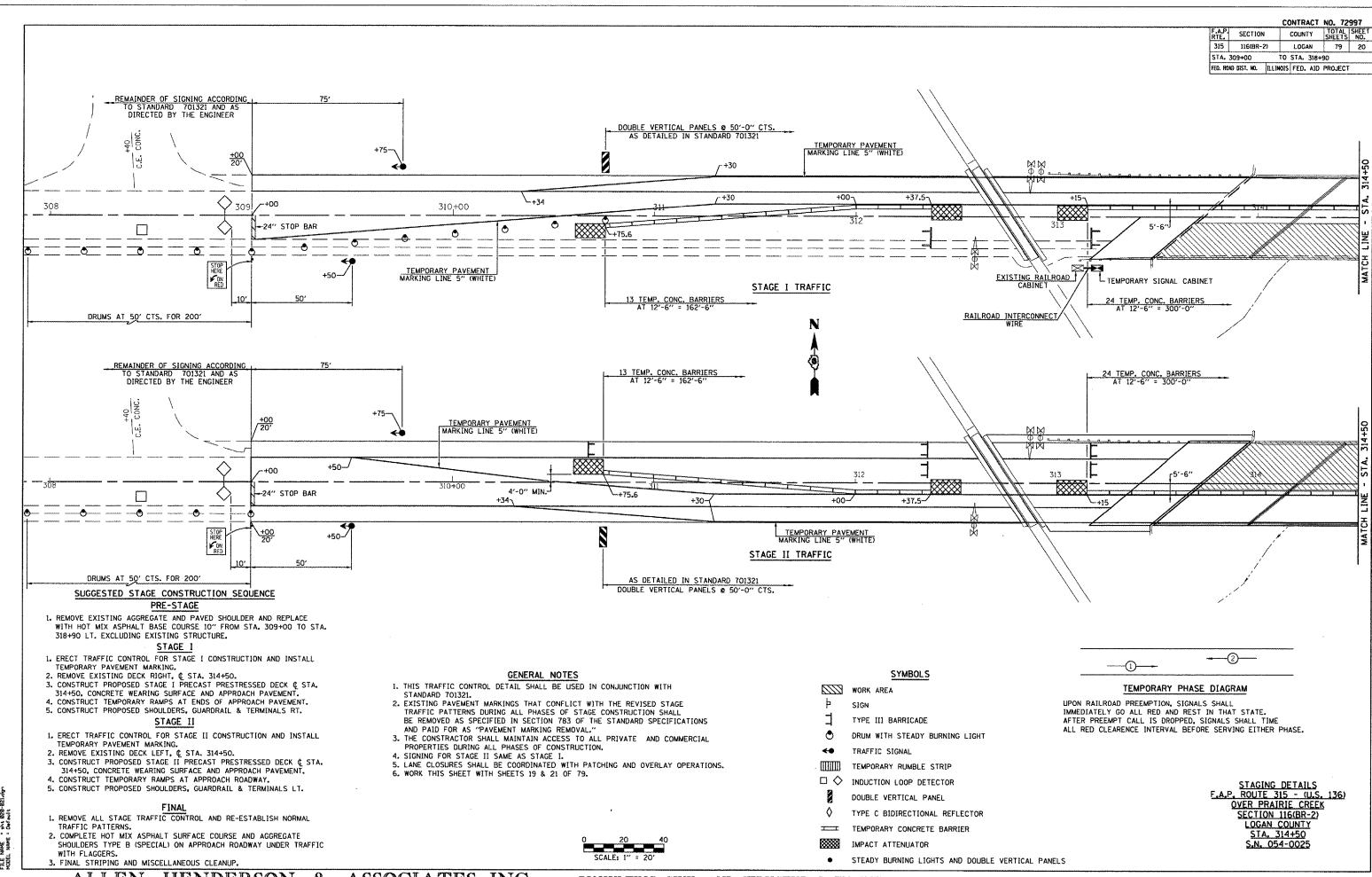
STAGE II CONSTRUCTION DETAIL (LOOKING EAST)

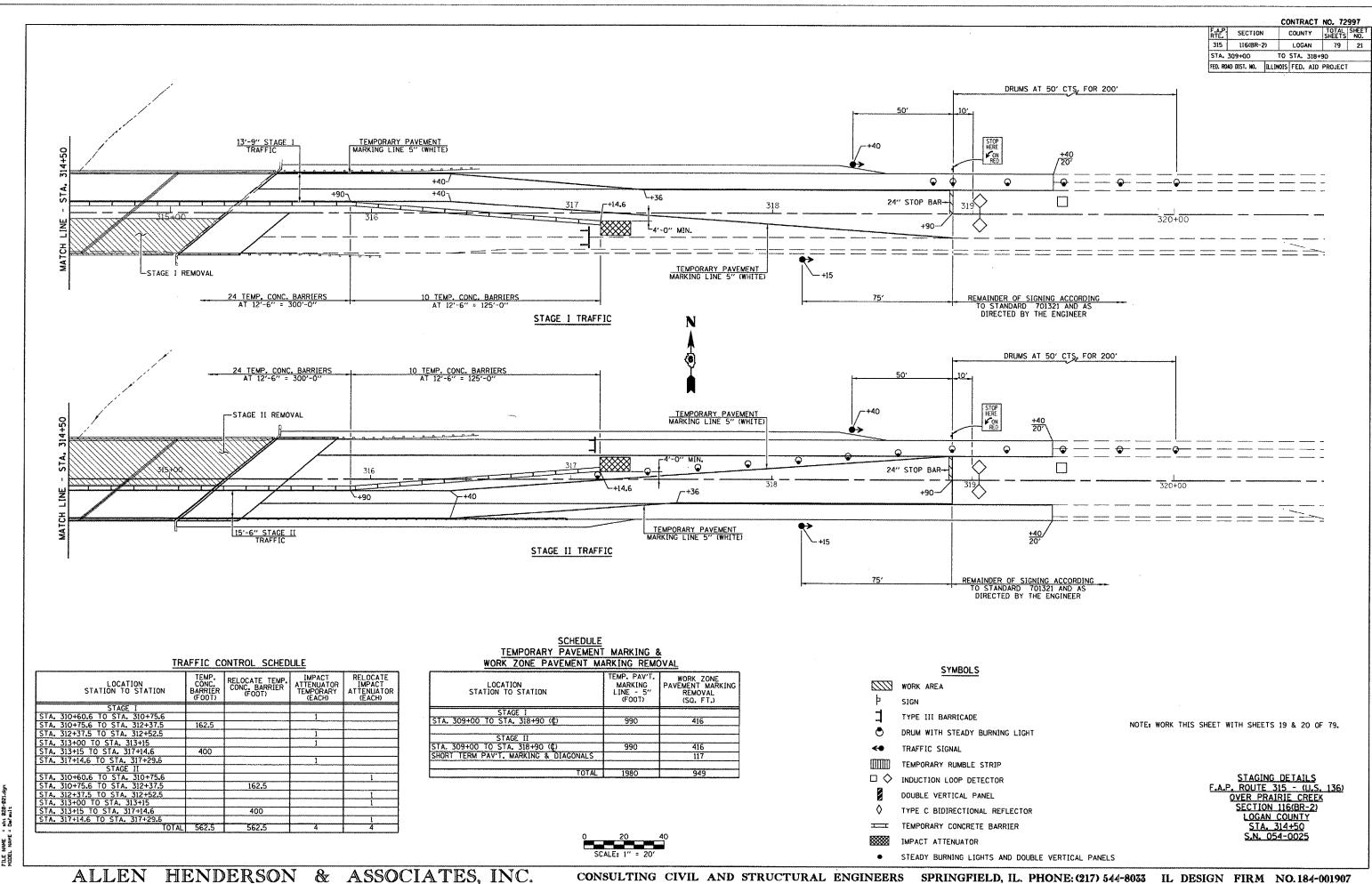
#### PAVEMENT LEGEND

- EXISTING 9"-6"-9" P.C.C. PAVEMENT
  EXISTING HOT MIX ASPHALT BASE COURSE WIDENING 9"
  EXISTING HOT MIX ASPHALT OVERLAY
  EXISTING HOT MIX ASPHALT SHOULDER 8"
- EXISTING AGGREGATE/EARTH SHOULDER
- EXISTING PIPE UNDERDRAIN
- PROPOSED PAVEMENT MARKING LINE 5"
- PROPOSED HOT MIX ASPHALT SURFACE COURSE 11/2"
- 9. TEMPORARY PAVEMENT MARKING LINE 5"
  10. PROPOSED HOT MIX ASPHALT SHOULDER 6"
- 11. PROPOSED HOT MIX ASPHALT BASE COURSE 10"
- 12. PROPOSED P.C.C. PAVEMENT 12" (SPECIAL)
- 13. PROPOSED BRIDGE APPROACH PAVEMENT (SPECIAL)
  14. PROPOSED SUB-BASE GRANULAR MATERIAL TYPE A 4"
  15. PROPOSED AGGREGATE SHOULDERS, TYPE B (SPECIAL)
- 16. PROPOSED BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

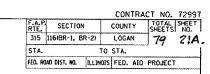
NOTE: WORK THIS SHEET WITH SHEETS 20 & 21 OF 79.

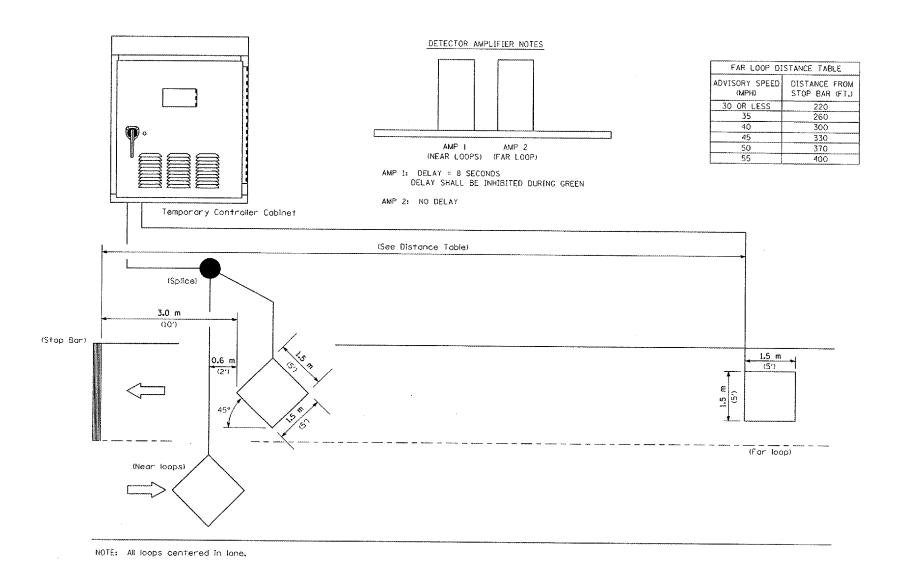
TYPICAL STAGING DETAILS F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK SECTION 116(BR-2) LOGAN COUNTY STA. 314+50.00 S.N. 054-0025





DATE = 7/9/2887 NAME = sht 828-82 L NAME = Default

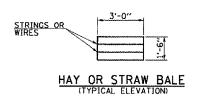


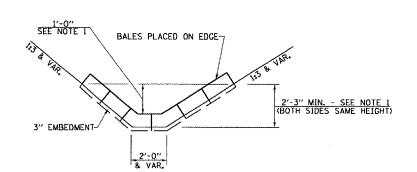


INDUCTION LOOP DETECTOR

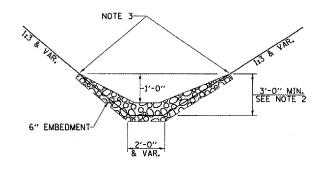
REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION				
NAME	NAME DATE		TEETHOTS DEFARTMENT OF TRANSFORTATE			
		TRAFFIC	CONTROL	& PROTE	CTION	
		TEMPORAR	Y BRIDGE	TRAFFIC SI	GNAL	
		LOOP P	LACEMENT	DETAIL SHE	ET	
		SCALE: VERT.	NONE	DRAWN BY	DIST. 6	
		DATE HORIZ.		CHECKED B	Υ	

PLOT PLOT VSER





HAY OR STRAW BALE TEMPORARY DITCH CHECK (TYPICAL)



STONE DUMPED RIPRAP DITCH CHECK

NOTE 1: BALES SHALL EXTEND FAR ENOUGH UP THE SLOPES TO ALLOW 1'-O" OVERTOPPING TO AVOID ERODING AROUND THE EDGES OF THE BALES

NOTE 2: RIPRAP SHALL EXTEND FAR ENOUGH UP THE SLOPES TO ALLOW 1'-0" OVERTOPPING TO AVOID ENODING AROUND THE EDGES OF THE RIPRAP.

NOTE 3: ENDS SHALL BE TIED INTO SLOPES.

ITEM	SYMBOL
AGGREGATE (EROSION CONTROL) ISTONE DUMPED RIPRAP DITCH CHECKS (Height = 0.6 m)]	
TEMPORARY DITCH CHECKS (HAY OR STRAW BALE DITCH CHECKS OR APPROVED SUBSTITUTION)	<del>-</del>
INLET PIPE PROTECTION (1&PP) (HAY OR STRAW BALE DITCH CHECKS OR APPROVED SUBSTITUTION)	$\bigoplus$
EROSION CONTROL FENCE	
EARTH EXCAVATION FOR EROSION CONTROL (SEDIMENT BASINS)	(0
PRESERVE EXISTING TREES, WOODLANDS, AND UNDERSTORY COUTSIDE CONSTRUCTION LIMITS)	
ITEM PLACED AT BEGINNING OF CONSTRUCTION (REQUIREMENT)	* ITEM
ITEM PLACED AS DIRECTED BY ENGINEER (WHEN REQUIRED BY SITUATION)	ITEM
DIRECTION OF OVERLAND FLOW	
GENERAL NOTES: ALL ITEMS SHALL BE CONSTRUCTED AS SHOWN ON THIS SI	HEET.

ON STANDARD 280001, AND AS DIRECTED BY THE ENGINEER.

THE SYMBOLOGY ON THE STORM WATER POLLUTION PREVENTION PLAN SHEETS DOES NOT REPRESENT THE SIZE OR QUANTITY OF BALES, FOR NUMBER OF BALES REFER TO DETAILS AND NOTES

SHOWN ON THIS SHEET AND/OR AS DIRECTED BY THE ENGINEER.
SEE SHEET NO. 13 FOR EROSION CONTROL ITEMS SCHEDULE.

STORM WATER POLLUTION
PREVENTION PLAN
U.S. 136 OVER PRAIRIE CREEK DITCH
F.A.P. RTE. 315 - SECTION 116 (BR-1)
STA. 85+45.00
S.N. 054-0024
U.S. 136 OVER PRAIRIE CREEK
F.A.P. RTE. 315 - SECTION 116 (BR-2)

STA. 314+50.00 S.N. 054-0025 LOGAN COUNTY Route: FAP 315

Marked: US 136

Section: 116 (BR-1), 116 (BR-2)

Project No.: NA

County: Logan County

Contract No.: 72997

This plan has been prepared to comply with the provision of the NPDES Permit Number ILR10 \_\_\_\_\_\_\_ issued by the Illinois Environmental Protection Agency for storm water discharges from construction site activities.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquire of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted, is, to the best of my knowledge and bellef, true, accurate, and complete. I am aware that there are significant penalties for submitting faise information, including the possibility of fine and imprisonment for knowling violations.

TELLINA PLANTING

(Dotte)

Keen Er

Note: The above boxed in area will be filled out by IDOT - Construction after the award of the contract to obtain the required NPDES permit.

The following plan was established and included in these plans to direct the Contractor in the placement of temporary erosion control systems and to provide a storm water pollution prevention plan for compilance under NPDES. The Contractor shall abide to all requirements within this plan as part of the contract.

The purpose of this plan is to prevent / minimize silitation within the construction zone and to eliminate sediments from entering and leaving the construction zone by utilizing proper temporary erosion control systems and providing ground cover within a reasonable time.

Certain Items, as shown in this plan and referenced by the legend, shall be placed by the Contractor at the beginning of construction at locations shown on the plans. Other Items shall be placed by the Contractor as directed by the Engineer on a case by case situation resulting from the Contractor's sequence of activities, time of year and expected weather conditions.

The Contractor shall place permanent erosion control systems and seeding within a reasonable amount of time; therefore, reducing the amount of area being open to the possibility of erosion and reducing the amount of temporary erosion control systems and temporary seeding. The Resident Engineer will determine if temporary erosion control systems shown in the plan can be deleted, the size of the proposed ditch checks, the proper method of installation, and if any additional temporary erosion control systems shall be added which are not included in this plan. The Contractor shall perform all work as directed by the Engineer and as shown in special details and in Standard 280001 of the plans.

All disturbed areas having high potential for erosion, as determined by the Engineer, shall be temporarily seeded or permanently seeded by October 1, 2008 and shall not be reopened until after the winter shutdown period.

#### SITE DESCRIPTION

Description of Construction Activity:

- The proposed project consists of the removal and replacement of various precast prestressed concrete deck beams for two structures located on US 136 in Logan County,
- Construction consists of grading, riprap placement, bituminous resurfacing, placing bituminous and aggregate shoulders, guardrail removal and replacement and other miscellaneous work to complete improvements to the proposed roadway.

Description of Intended Sequence of Major Construction Activities Which Will Disturb Earth and Lead to Possible Erosion for Major Portions of the Construction Site:

- 1. Grading and shaping of ditches at each project location.
- Excavation will be completed along the US 136 section to grade out for proposed roadway ditches.
- Embankment will be completed at shoulders to raise the existing ground elevation to meet the proposed roadway template.
- Drainage structures will be installed before and/or during the construction of the excavation and embankment to allow proper drainage across private and field entrances.
- Placement, maintenance, removal and proper clean-up of temporary erosion control, such as erosion control fence, ditch checks, temporary seeding, etc.
- 6. Placement of permanent erosion control, such as seeding, mulch and fertilizer nutrients.
- 7. Final grading, paving and other miscellaneous items.

Other Reports, Studies and Plans which Aid in the Development of this Storm Water Pollution Prevention Plan as Referenced Documents:

- Information on the soils within the site was obtained from field reviews which were utilized for proposed placement of the temporary erosion control systems.
- U.S.G.S. drainage maps indicating drainage patterns and approximate slopes were referenced along with project plan documents to assist in the proposed placement of the temporary erosion control systems.

• - 116(B-1) & 116(B-2)

FEB. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT

RTE. SECTION

COUNTY TOTAL SHEET NO.

79 23

LOGAN

ALLEN HENDERSON & ASSOCIATES, INC.

DATE (AME NAME

PLOT FILE

CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907

STORM WATER POLLUTION
PREVENTION PLAN
U.S. 136 OVER PRAIRIE CREEK DITCH
F.A.P. RTE. 315 - SECTION 116 (BR-1)

STA. 85+45.00 S.N. 054-0024 U.S. 136 OVER PRAIRIE CREEK

F.A.P. RTE. 315 - SECTION 116 (BR-2) STA. 314+50.00 S.N. 054-0025

LOGAN COUNTY

- Description of Stabilization Practices at the Beginning of Construction:

  1. The area between the existing right-of-way boundaries and limits of the project will be Improved and managed for the purposes of controlling erosion within the area, reducing water flow by temporary diversion and minimizing siltation into the construction zone. and establishing vegetative cover which will become permanent vegetation and act as an erasion barrier. Work at the beginning of construction will consist of the following:
  - (a) Areas of existing vegetation (woods and grasslands) outside the proposed construction slope limits shall be identified for preserving and shall be protected from mowing, brush cutting, tree removal and other activities which would be detrimental to their maintenance
  - (b) Dead, diseased, or unsuitable vegetation within the site shall be removed as directed by the Engineer.
  - (c) As soon as reasonable access is available to all locations where water drains away from the project, temporary ditch checks, and/or erosion control fence shall be installed as called out in this plan and directed by the Engineer.
  - (d) Bare and sparsely vegetated ground in highly erodable areas as determined by the Engineer shall be temporarily seeded at the beginning of construction where no construction activities are immediately expected as stated in the special provision "Temporary Eroston Control Seeding".
  - (e) At locations where a significant amount of water drains into the construction zone from outside areas (adjacent landowners), erosion control fence, temporary ditch checks, will be utilized to locally divert water, reduce flow rates, and collect outside siltation inside the right-of-way line. Erosion control items will not be allowed to be installed to cause flooding to upstream private property which could cause crop damages or other undesirecble conditions.
- 2. Establishment of these temporary erosion control measures will have additional benefits to the project. Desirable grass seed will become established in these areas and will spread seeds onto the construction site until permanent seeding/mowing and overseeding can be complete.
- A third benefit of these filter areas is that they will begin to provide a screen and buffer.
   They will help protect the construction site from winds and excess sun and mitigate construction noise and dust.

#### Description of Stabilization Practices During Construction:

following steps as directed by the Engineer:

- During roadway construction, areas outside the construction slope limits as outlined previously herein shall be protected from damaging effects of construction. The Contractor shall not use this area for staging (except as designated on the plans or directed by the Engineer), parking of vehicles or construction equipment, storage of materials, or other construction related activities.
  - (a) Within the construction zone, critical areas which have high flows of water as determined by the Engineer shall remain undisturbed until full scale construction is underway to prevent unnecessary soil erosion.
    (b) Top soil and earth stockpiles shall be temporarily seeded if they are to remain unused
  - for more than fourteen days. (c) As the Contractor constructs a portion of roadway in a fill section, he/she shall follow the
  - 1. Place temporary erosion control systems at locations where water leaves and enters the
  - ii. Temporary seed highly erodable areas outside the construction slope limits
  - iii. Construct roadside ditches and provide temporary erosion control systems
  - iv. Continue building up the embankment to the proposed grade while at the same time place permanent erosion control and conduct final shaping to the slopes.
  - (d) The Contractor shall immediately follow major earth moving operations with final grading equipment. After the major earth spread operation has moved to a new location, final grading shall be completed within fourteen days. If grading is not completed within fourteen days, all major earth moving operations will be stopped, as directed by the Engineer, until disturbed areas are final graded and seeded.
  - (e) Excavated areas and embankments shall be permanently seeded when final graded. If not, they shall be temporarily seeded as stated in the special provision "Temporary Erosian Control Seeding".

- (f) Construction equipment shall be stored and fueled only at designated locations. All necessary measures shall be taken to contain any fuel or pollution run-off in compliance with EPA water quality regulations. Leaking equipment or supplies shall be immediately repaired or removed from the site.
- (g) The Resident Engineer shall inspect the project daily during activities and weekly or after large rains during the winter shutdown period. The project shall additionally be inspected by the Construction Field Engineer on a bi-weekly basis to determine that erosion control efforts are in place and effective and if other control work is necessary.
- (h) Sediment collected during construction by the various temporary erosion control systems shall be disposed of on the site on a regular basis as directed by the Engineer. The cost of this maintenance will be paid for in accordance with Article 109.04 of the Standard Specifications.
- (i) The temporary erosion control systems shall be removed as directed by the Engineer after use is no longer needed or no longer functioning. The costs of this removal shall be included in the unit bid price for the temporary erosion control system. No additional compensation will be allowed.

- Description of Structural Practices After Final Grading:
  1. Temporary erosion control systems shall be left in place with proper maintenance until permanent erosion control is in place and working properly and all proposed turf areas seeded and established with a proper stand.
- 2. Once permanent erosion control systems as proposed in the plans are functional and established, temporary items shall be removed, cleaned up, and disturbed turf reseeded. Temporary ditch checks will be allowed to remain in place where approved by the Engineer.

- Maintenance after Construction:

  1. Construction is complete after acceptance is received at the final inspection.
- 2. Areas will be inspected on a regular basis by IDOT District 6 Bureau of Operations.
- 3. Maintenance crews will perform regular mowings to aid in keeping weeds down and establishing a good roadside seed stand.
- Maintenance crews will also aid in any ditch maintenance or in any drainage
- 5. All maintenance will be conducted at times when weather conditions will not cause site damage.

#### DOCUMENTATION

- 1. A report summarizing the scope of the inspection, name(s) and qualifications of personnel making the inspection, date(s) of the inspection, major observations relating to the implementation of this storm water pollution prevention plan, and actions taken in accordance with Section 4.b. shall be made and retained as part of the plan for at least three years after the date of inspection. The report shall be signed in accordance with part VI.G of the general permit.
- 2. If any violation of the provisions of this plan is identified during the conduct of the construction work covered by this plan, the Resident Engineer or Resident Technician shall complete and file an "Incident of Noncompliance (ION)" report for the identified violation, The Resident Engineer or Resident Technician shall use forms provided by the Illinois Environmental Protection Agency and shall include specific information on the noncompliance, actions which were taken to prevent any further causes of noncompliance, and a statement detailing any environmental impact which may have resulted from the noncompliance. All reports of noncompliance shall be signed by a responsible authority in accordance with Part IV.G. of the general permit. The report of noncompliance shall mailed to the following address:

Illinois Environmental Protection Agency Division of Water Pollution Control 1021 North Grand Avenue E. Springfield, IL 62702 Attn: Compliance Assurance Section

> STORM WATER POLLUTION PREVENTION PLAN 136 OVER PRAIRIE CREEK DITCH F.A.P. RTE. 315 - SECTION 116 (BR-1) STA, 85+45.00

CONTRACT NO. 72997 COUNTY TOTAL SHEET NO.

79 24

LOGAN

\* - 116(B-1) & 116(B-2)

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

SECTION

315

S.N. 054-0024 U.S. 136 OVER PRAIRIE CREEK F.A.P. RTE. 315 - SECTION 116 (BR-2) STA. 314+50.00 S.N. 054-0025

LOGAN COUNTY

	CONTRACTOR CERTIFIC	TION STATEMENT	
elow in accor		Storm Water Pollution Plan for the project described R10, issued by the Illinois Environmental	đ
S	ection:	Project No.: NA	
certify unde	er penalty of law that I unde nination System (NPDES) permi	Stand the terms of the general National Pollutant that authorizes the storm water discharges e construction site identified as part of this certif	ficat
certify unde ischarge Eiln ssociated wit	er penalty of law that I unde nination System (NPDES) permi th industrial activity from th	stand the terms of the general National Pollutant that authorizes the storm water discharges e construction site identified as part of this certif	ficat
certify unde ischarge Eiln ssociated wit	er penalty of law that I under lination System (NPDES) permit th industrial activity from the lignature	stand the terms of the general National Pollutant that authorizes the storm water discharges e construction site identified as part of this certit  Date	ficat
certify unde ischarge Eiln ssociated wit	er penalty of law that I unde nination System (NPDES) permi th industrial activity from th	stand the terms of the general National Pollutant that authorizes the storm water discharges e construction site identified as part of this certif	ficat
certify underscharge Eilm ssociated with S	er penalty of law that I under nination System (NPDES) permi th industrial activity from the ignature	stand the terms of the general National Pollutant that authorizes the storm water discharges e construction site identified as part of this certif	ficat
certify under ischarge Eilm ssociated with S	er penalty of law that I under hination System (NPDES) permit the industrial activity from the highest of the control of the control highest of the control	stand the terms of the general National Pallutant that authorizes the storm water discharges e construction site identified as part of this certif	ficat

Note: The above boxed in area shall be filled out by the Contractor after the award of the contract to obtain the required NPDES Permit from IEPA. This is a requirement for this contract.

STORM WATER POLLUTION
PREVENTION PLAN.
U.S. 136 OVER PRAIRIE CREEK DITCH
F.A.P. RTE. 315 - SECTION 116 (BR-1)
STA. 85+45.00
S.N. 054-0024
U.S. 136 OVER PRAIRIE CREEK
F.A.P. RTE. 315 - SECTION 116 (BR-2)
STA. 314+50.00
S.N. 054-0025
LOGAN COUNTY

CONTRACT NO. 72997

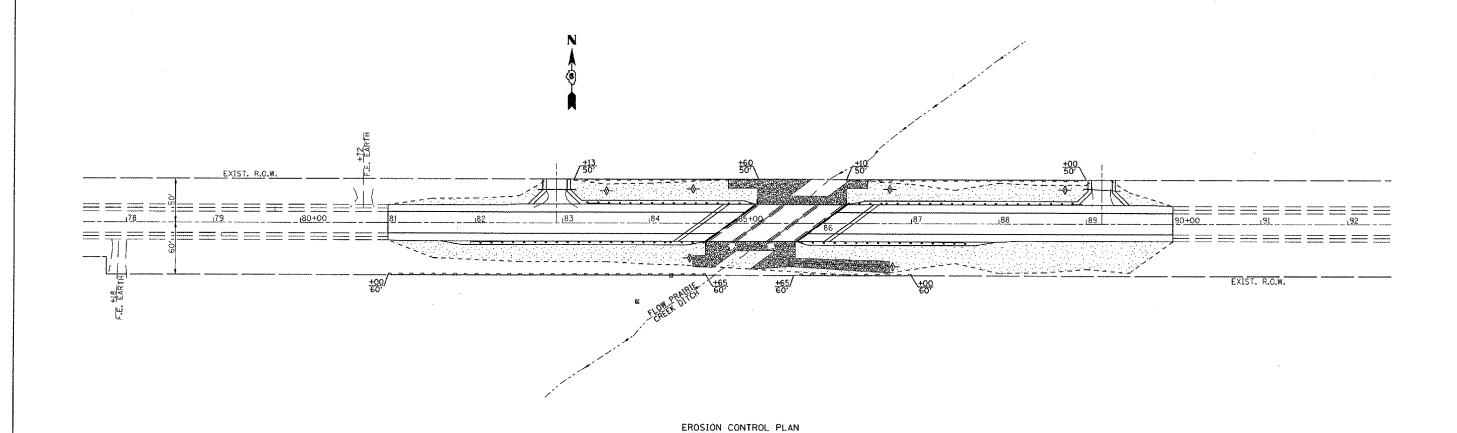
COUNTY TOTAL SHEET NO.

LOGAN 79 25

F.A.P. SECTION
315

FED. ROAD DIST. NO. | ILLINOIS | FED. AID | PROJECT | | 116(B-1) & 116(B-2)

| CONTRACT NO. 72997 | RTE. | SECTION | COUNTY | TOTAL | SHEETS | No. 7091 | STEETS | No. 7091 | STEETS | No. 7091 | STEETS | SHEETS | No. 7091 | STEETS | SHEETS | No. 7091 | STEETS | STEETS | SHEETS | No. 7091 | STEETS | SHEETS | No. 7091 | STEETS | SHEETS | No. 7091 | SHEETS | SH



LEGEND

- PAVEMENT & STRUCTURE REMOVAL LIMITS

- SEEDING, CLASS 2 WITH MULCH, METHOD 2

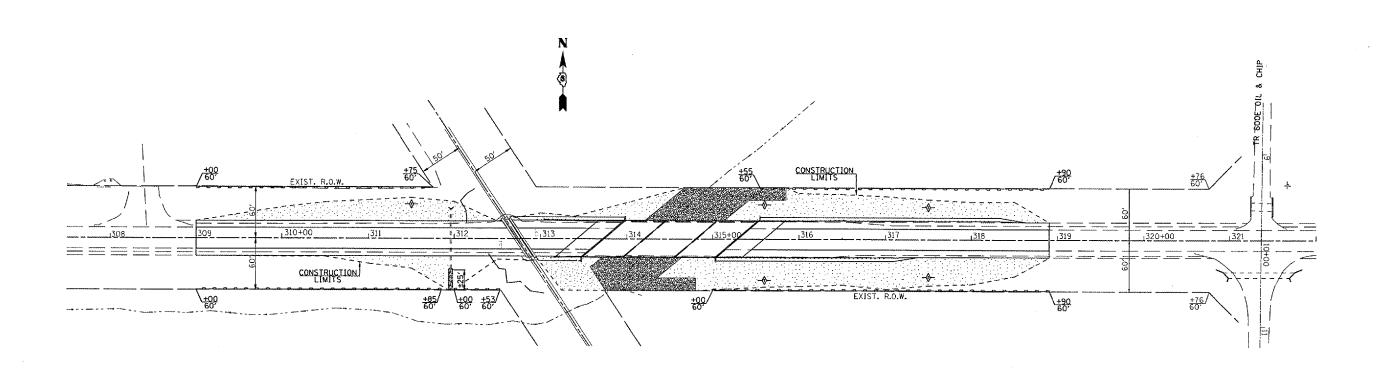
CO CO - RIPRAP, CLASS A4

- PERIMETER EROSION BARRIER

-- ~ AGGREGATE (EROSION CONTROL)

LANDSCAPING AND EROSION
CONTROL PLANS
F.A.P. ROUTE 315 - (U.S. 136)
OVER PRAIRIE CREEK DITCH
SECTION 116(BR-1)
LOGAN COUNTY
STA. 85+45.00
S.N. 054-0024

| CONTRACT NO. 72997 | F.A.P. | SECTION | COUNTY | TOTAL | SHEET | NO. 1 | SHEET | SHEETS | NO. 1 | STA. 309+00 | TO STA. 318+90 | TO STA



EROSION CONTROL PLAN

50 100

SCALE: I" = 50"

LEGEND

- PAVEMENT & STRUCTURE REMOVAL LIMITS

- SEEDING, CLASS 2 WITH MULCH, METHOD 2

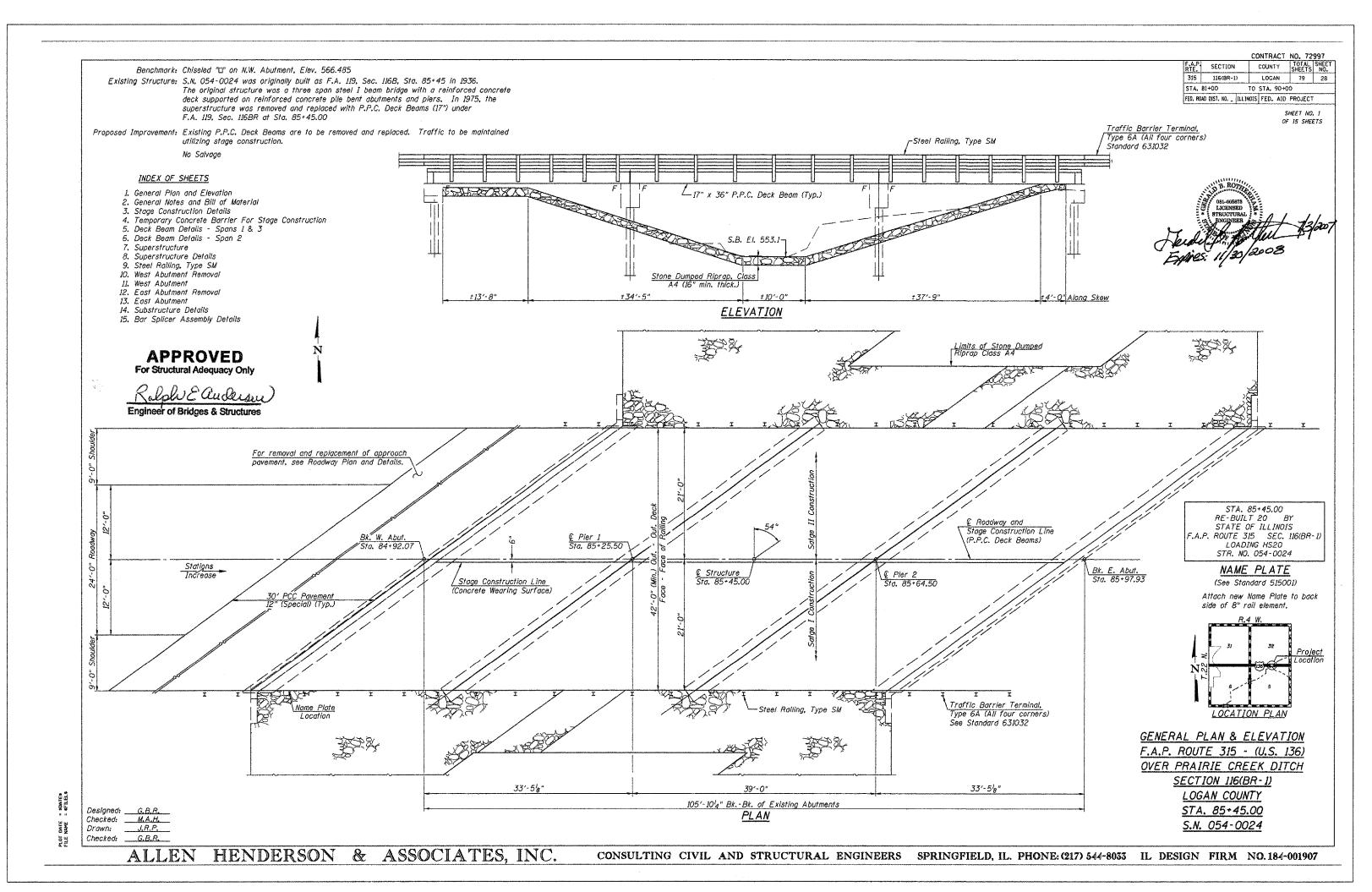
RIPRAP, CLASS A4

- PERIMETER EROSION BARRIER

- - AGGREGATE (EROSION CONTROL)

LANDSCAPING AND EROSION
CONTROL PLANS
F.A.P. ROUTE 315 - (U.S. 136)
OVER PRAIRIE CREEK
SECTION 116(BR-2)
LOGAN COUNTY
STA. 314+50.00
S.N. 054-0025

PLDT DATE = Sep-21-2007 03:00:0 FILE NAME = 0025 ea.dgn MODEL NAME = Defoult



 		·	01111	~~,	1101 12	,,,,
F.A.P. RTE.	SECTION		COUN	ΤΥ	TOTAL	SHE
315	116(BR-1	,	LOG	AN	79	29
STA.	81+00	TQ	STA.	90+0	00	
FED. RO	AD DIST. NO	ILLINOIS	FED.	ALD	PROJECT	

#### TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures No. 1	Each	1		1
Concrete Removal	Cu. Yd.		11.0	11.0
Concrete Structures	Ĉu. Yd.		11.0	11.0
Bridge Deck Grooving	Sq. Yd.	725		725
Protective Coat	Sq. Yd.	724		724
P.P.C. Deck Beams (17" Depth)	Sq. Ft.	4196		4196
Reinforcement Bars, Epoxy Coated	Pound	7795	1650	9445
Bar Splicers	Each	101	12	113
Steel Railing, Type SM	Foot	212		212
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	143		143
Concrete Wearing Surface, 5"	Sq. Yd.	467.5		467.5
Stone Dumped Riprap, Class A4	Ton		891	891
Asbestos Bearing Pad Removal	Each	60		60
		•		1

<sup>\*</sup> Includes area of P.C.C. Pavement (Special)

LOADING HS20-44 Allow 50#/sq. ft. for future wearing surface

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications,

#### DESIGN STRESSES

Field Units

f'c = 3500 psi fy = 60000 psi (Reinforcement)

f'c = 5000 psi (Concrete Wearing Surface)

PRECAST PRESTRESSED UNITS

f'c = 5000 psi

f'ci = 4000 psi

f's = 270000 psi (5"4 low lax strands)  $f'si = 201960 psi (\frac{1}{2})^m low lax strands)$ 

#### GENERAL NOTES

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

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified). See Special Provisions.

Protective Coat shall be applied to the top and edges of the concrete wearing surface, exterior face of each fascia beam, and bottom of the first three beams on each side of the superstructure.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the conditions of the beams when developing construction procedures for removal and replacement of the superstructure.

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with underlying beams. Prior to placement of the timber mats, the following shall be done: placement and tightening of the transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum, and grouting and curing the shear keys.

Reinforcement bars designated (E) shall be epoxy coated.

Layout of the slope protection system may be varied to suit ground conditions

in the field as directed by the Engineer.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

All structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300. Type 1. Cost included with Preformed Joint Strip Seal.

> GENERAL NOTES AND BILL OF MATERIAL F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK DITCH SECTION 116(BR-1) LOGAN COUNTY STA. 85+45**.**00

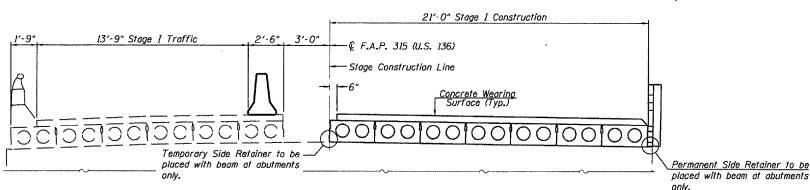
PLOT DATE FILE NAME

24'-0" Stage I Removal 13'-9" Stage I Traffic 3'-0" - € F.A.P. 315 (U.S. 136) Stage Removal Line Existing Aluminum Railing (Typ.) --Temporary Concrete Barrier (Typ.) —Existing Concrete Wearing Surface (Typ.)

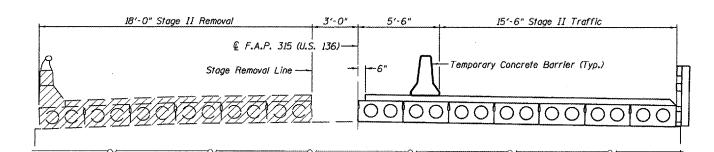
### STAGE I REMOVAL

burned off flush with the top of the existing concrete, ground smooth, and sealed with epoxy. Cost included with Removal of Existing Superstructures.

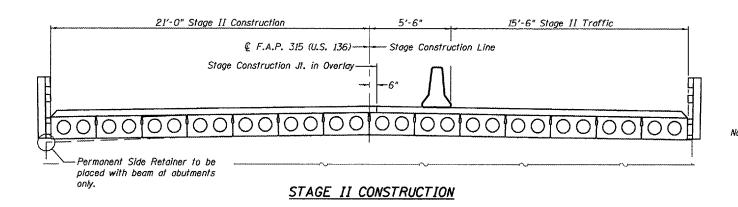
only.



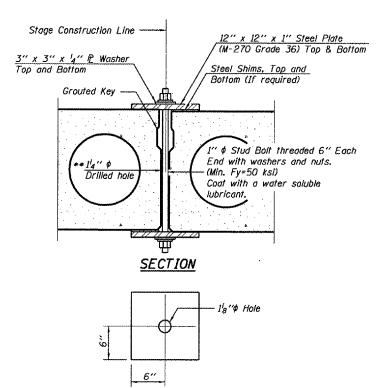
### STAGE I CONSTRUCTION



#### STAGE II REMOVAL



Existing Dowel Rods at Piers 1 & 2 shall be



- 12" x 12" x 1" Steel Plates at 3'-0" cts. Top and Bott., Each Span

<u>PLAN</u>
\* N = 4 For Spans 1 & 3
N = 6 For Span 2

### SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

CLAMPING PLATE

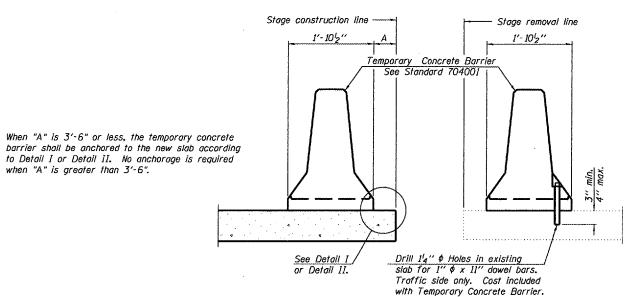
Cost included with Precast Prestressed Concrete Deck Beams. See Stage Construction Details for traffic lanes.

\*\* As an alternate to the drilled holes, the Contractor may request the Fabricator to cast 2" diameter semi-circular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts. If the Contractor elects to use this alternate, the details shall be identified on the shap drawings.

Notes: All Cross Sections looking East. Hatched area indicates Removal of Existing Superstructures. Cost of removing existing concrete wearing surface, parapet, and aluminum railing are included with Removal of Existing Superstructures. For quantity of Temporary Concrete Barrier see Roadway Plans. For Temporary Concrete Barrier details see Sheet 4 of 15. For Permanent and Temporary Side Retainer Details see Sheet 14 of 15. STAGE CONSTRUCTION DETAILS F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK DITCH SECTION 116(BR-1) LOGAN COUNTY STA. 85+45.00 S.N. 054-0024

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

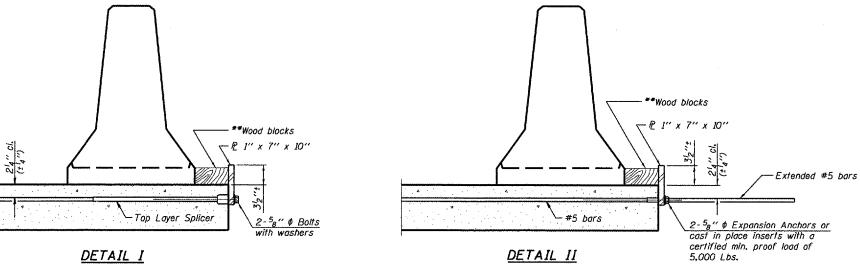
SHEET NO. 4 OF 15 SHEETS



NEW SLAB

EXISTING SLAB

### SECTIONS THRU SLAB



\*\* 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.

### top layer of couplers with 2-58" \$ bolts screwed to coupler at approximate & of each barrier panel. Detail II - With Extended Reinforcement Bars:

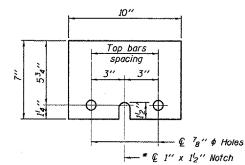
Detail I - With Bar Splicer or Couplers:

NOTES

Connect one (1) 1"x7"x10" steel  $\frac{p}{2}$  to the concrete slab with  $2^{-\frac{5}{8}}$ "  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate € of each barrier panel.

Connect one (1) 1"x7"x10" steel 12 to the

Cost of anchorage is included with Temporary Concrete Barrier. The I" 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.



STEEL RETAINER P I" x 7" x 10"

\* Required only with Detail II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONCTRUCTION
F.A.P. ROUTE 315 - (U.S. 136)
OVER PRAIRIE CREEK DITCH
SECTION 100 MTV LOGAN COUNTY

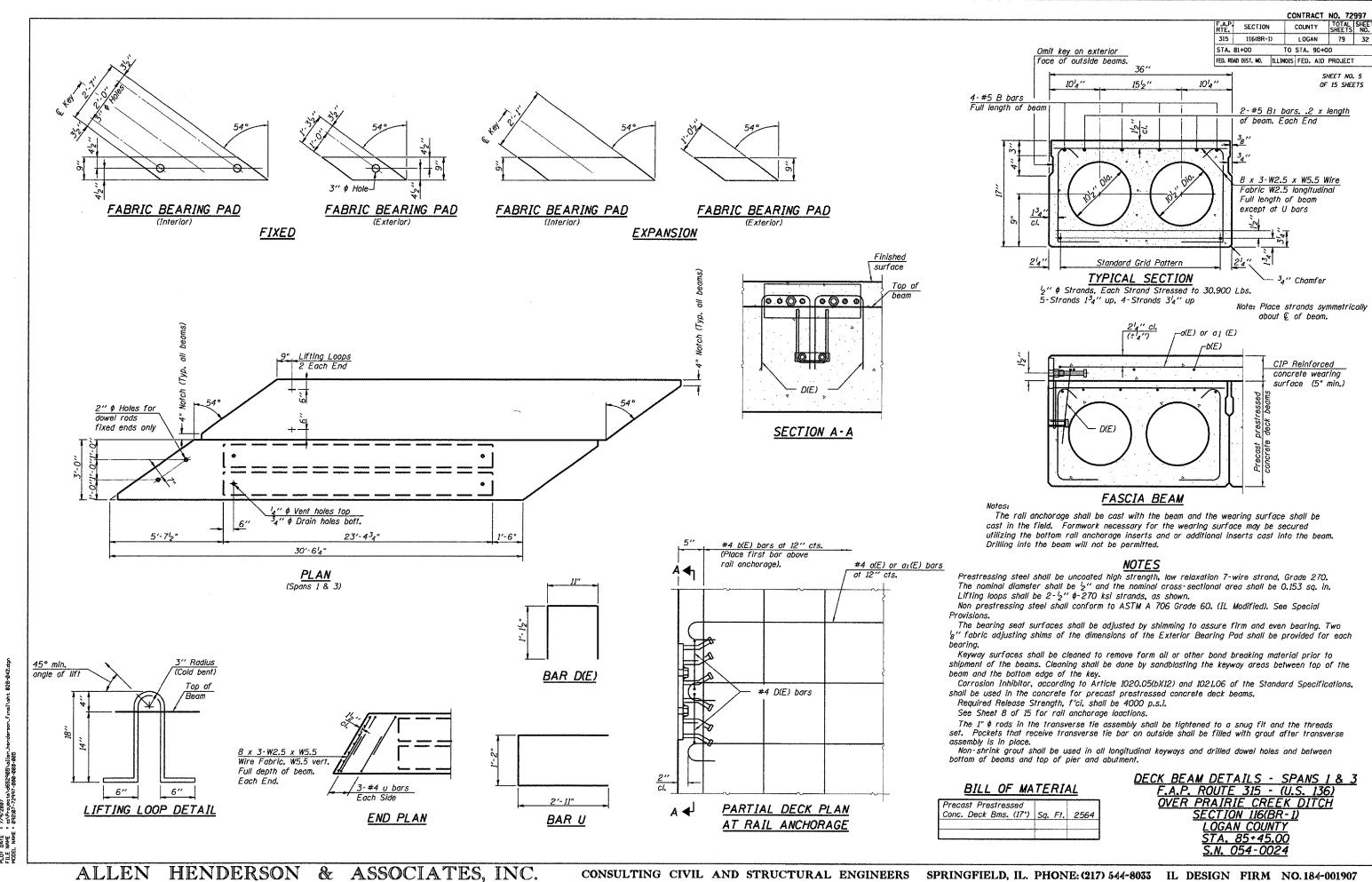
R-27

11-1-06

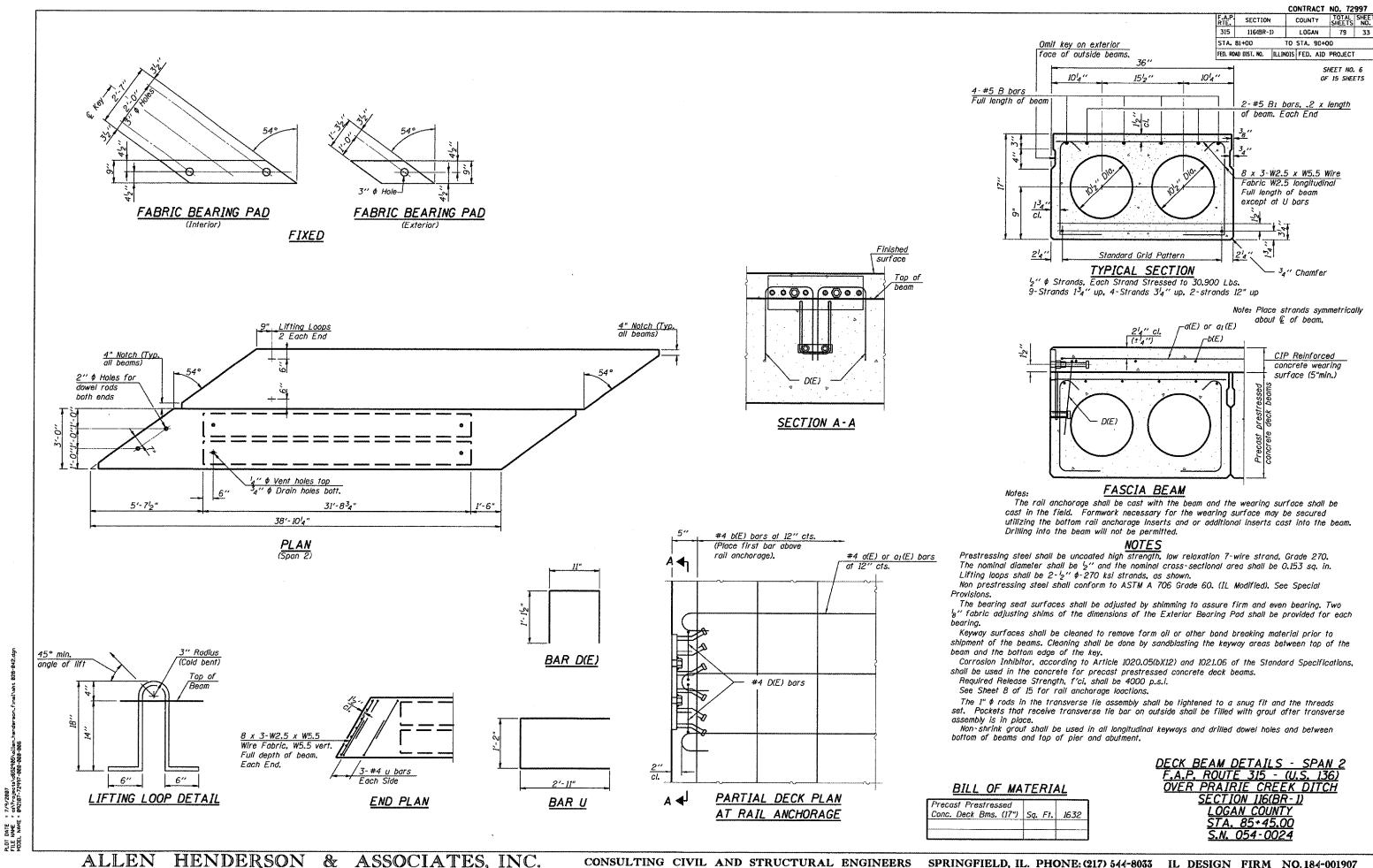
HENDERSON & ASSOCIATES, INC.

when "A" is greater than 3'-6".

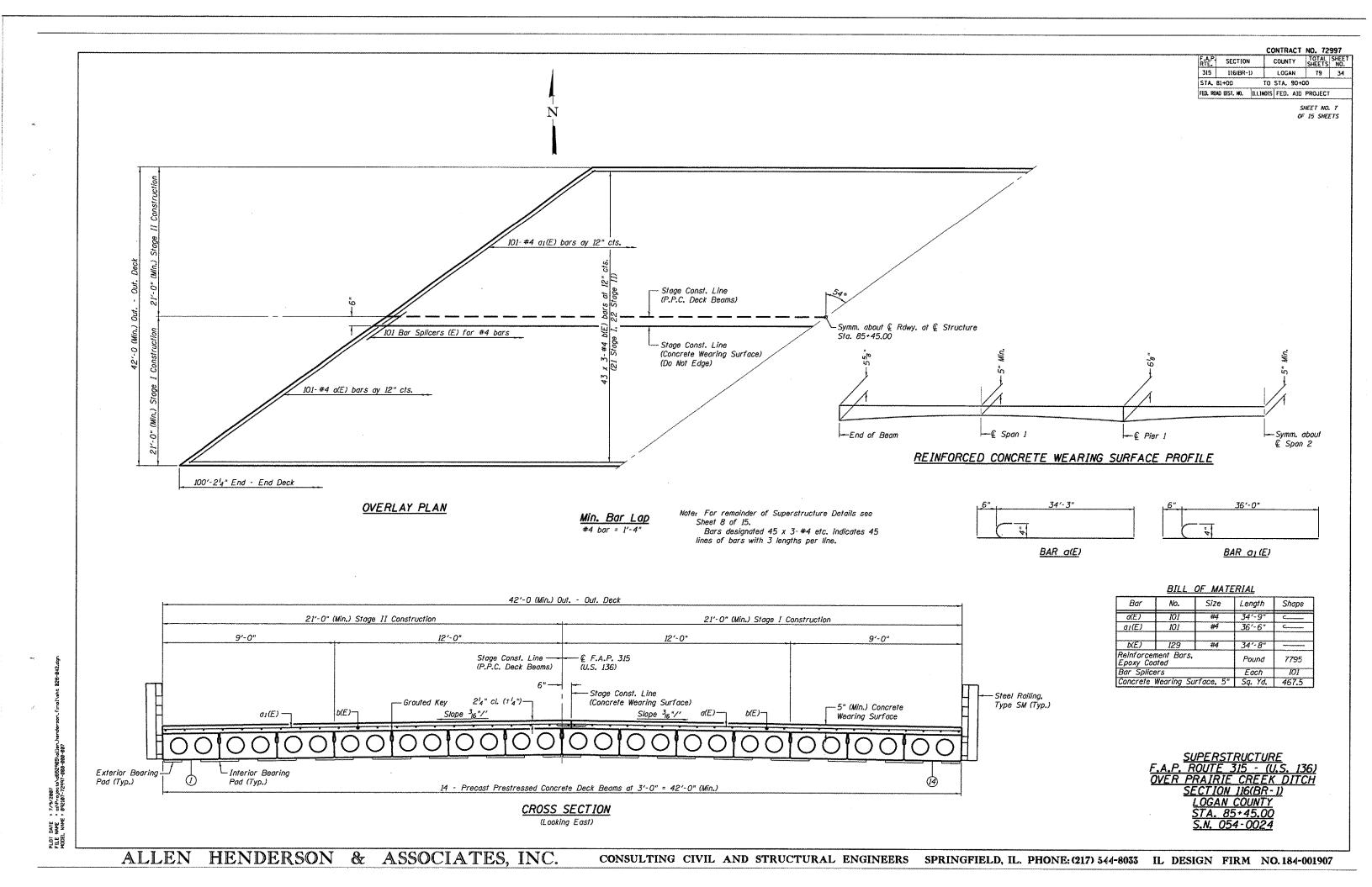
CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907



CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907

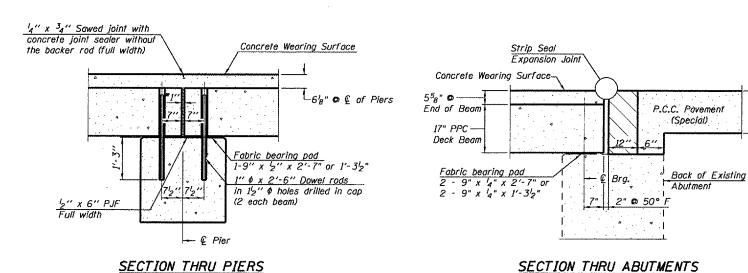


CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907



				CONTR	ACT	NO.	72	997
F	A.P.	SECTION	٧	COUN	ΤΥ	TOT/ SHEE	AL TS	SHEET NO.
1	315	116(BR-	1)	LOGA	٩N	79		35
S	STA. 81+00			O STA.	90+0	00		
FE	D. ROA	D DIST. NO.	ILLIN	OIS FED.	AID	PROJE	CT	

SHEET NO. 8 OF 15 SHEETS



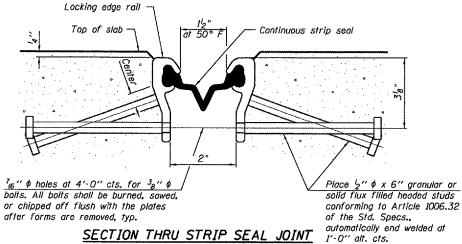
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

Hatched area to be poured after concrete wearing surface is in place.

See sheefs 5 and 6 of 14 for bearing pad details.

\* 1" Jt. shall be filled with non-shrink grout. 1" dimension may vary to accommodate tolerance in beam lengths.

All horizontal dimensions are at right angles to beam ends.



### SECTION THRU STRIP SEAL JOINT FOR OVERLAY OVER DECK BEAMS

(72 Studs Stage I, 76 Studs Stage II)

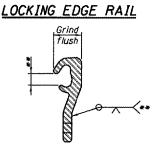
The strip seal shall be made continuous and shall have a minimum thickness of 4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

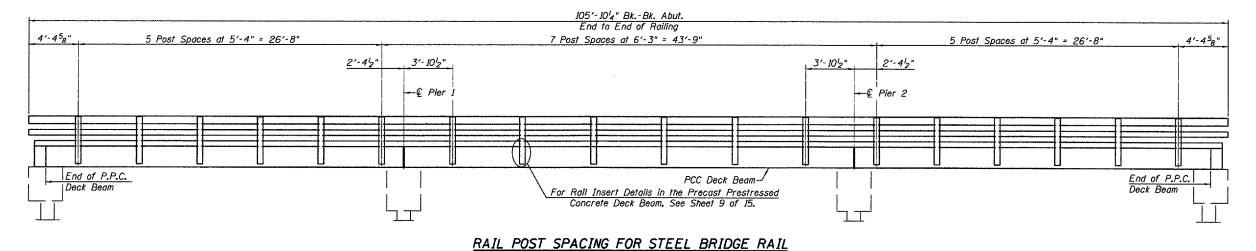
The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

After fabrication, the steel locking edge rail assembly shall be hot dip galvanized according to AASHTO MIII and ASTM A123.

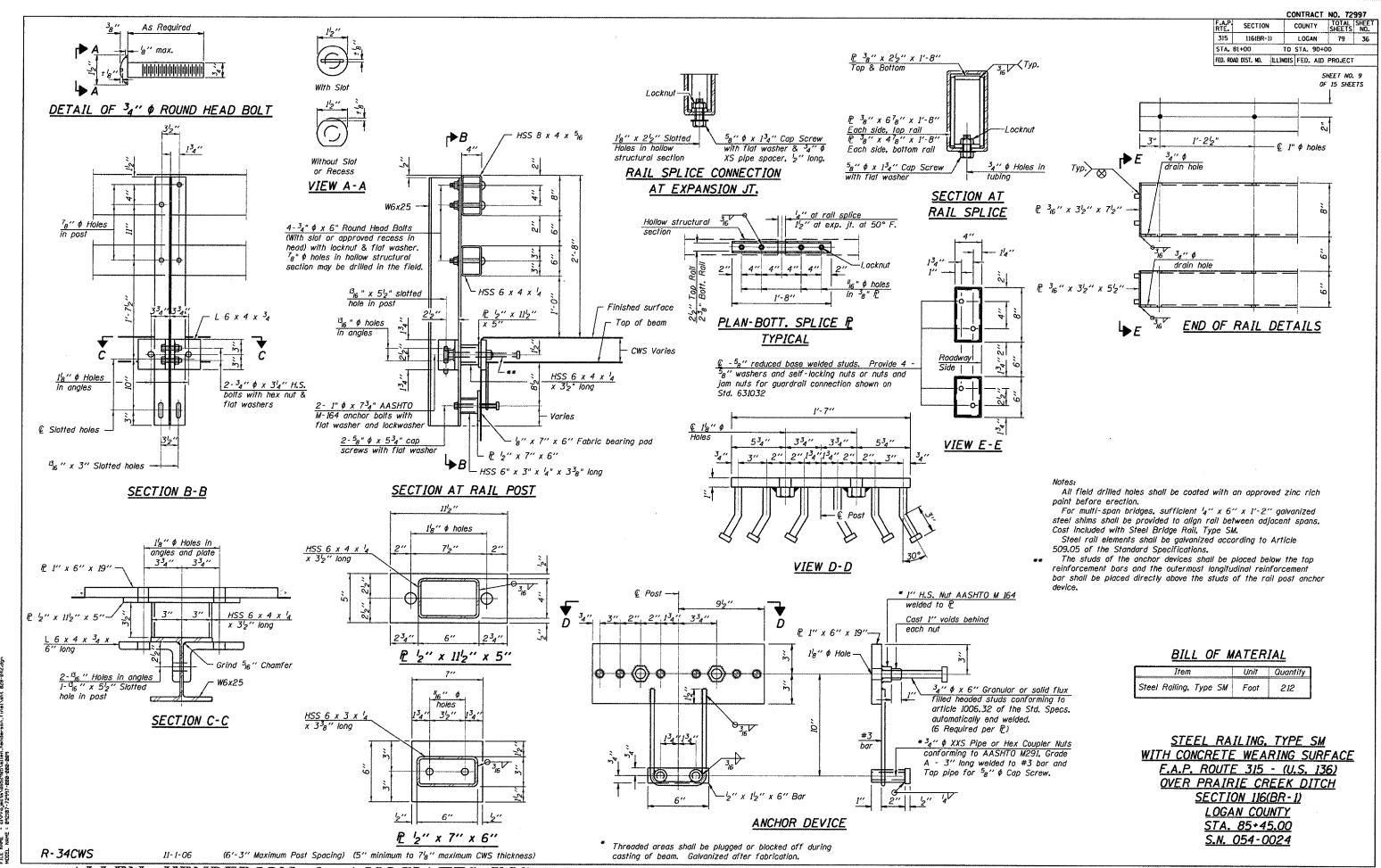


\*\* Omit weld at seal opening. LOCKING EDGE RAIL SPLICE



SUPERSTRUCTURE DETAILS F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK DITCH SECTION 116(BR-1) LOGAN COUNTY STA. 85+45.00 S.N. 054-0024

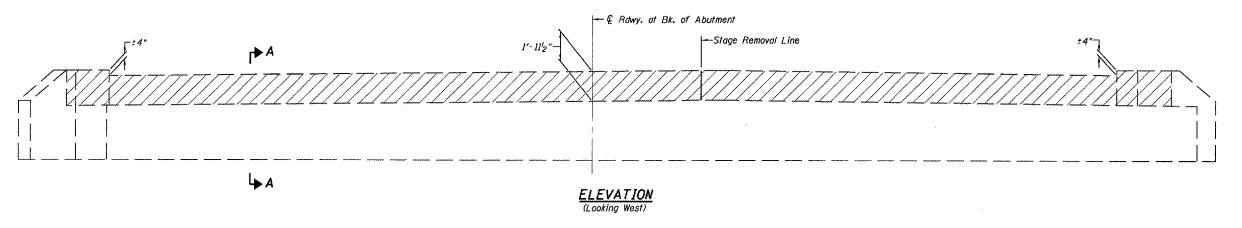
DATE NAME NAME

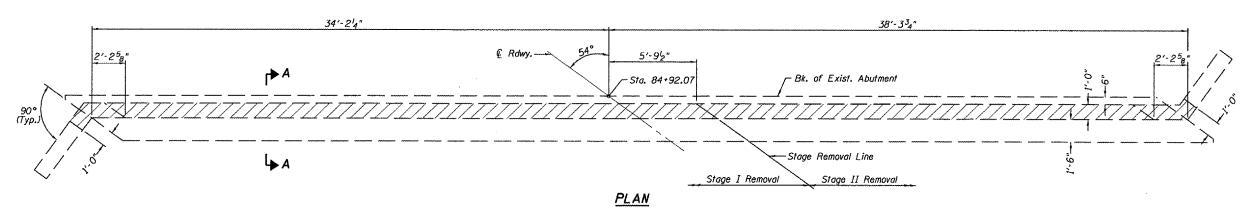


ALLEN HENDERSON & ASSOCIATES, INC.

CONTRACT NO. 72997 COUNTY TOTAL SHEET NO. F.A.P. RTE. 315 SECTION 116(BR-1) LOGAN 79 37 STA. 81+00 TO STA. 90+00 FED. HOAD DIST. NO. ILLINOIS FED. AID PROJECT

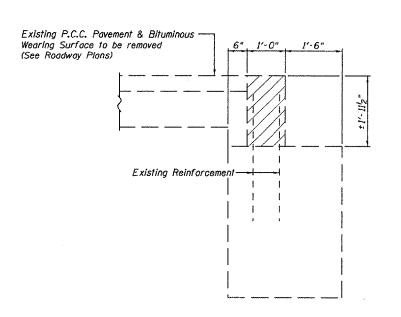
SHEET NO. 10 OF 15 SHEETS





### **LEGEND** - Concrete Removal

Notes: Existing reinforcing steel shall be cleaned, straightened, cut (if required), and incorporated into new construction. Damaged reinforcing steel shall be replaced or removed as directed by the Engineer. Cost included with "Concrete Removal". Removal of the existing joint system is included in the cost of "Concrete Removal".

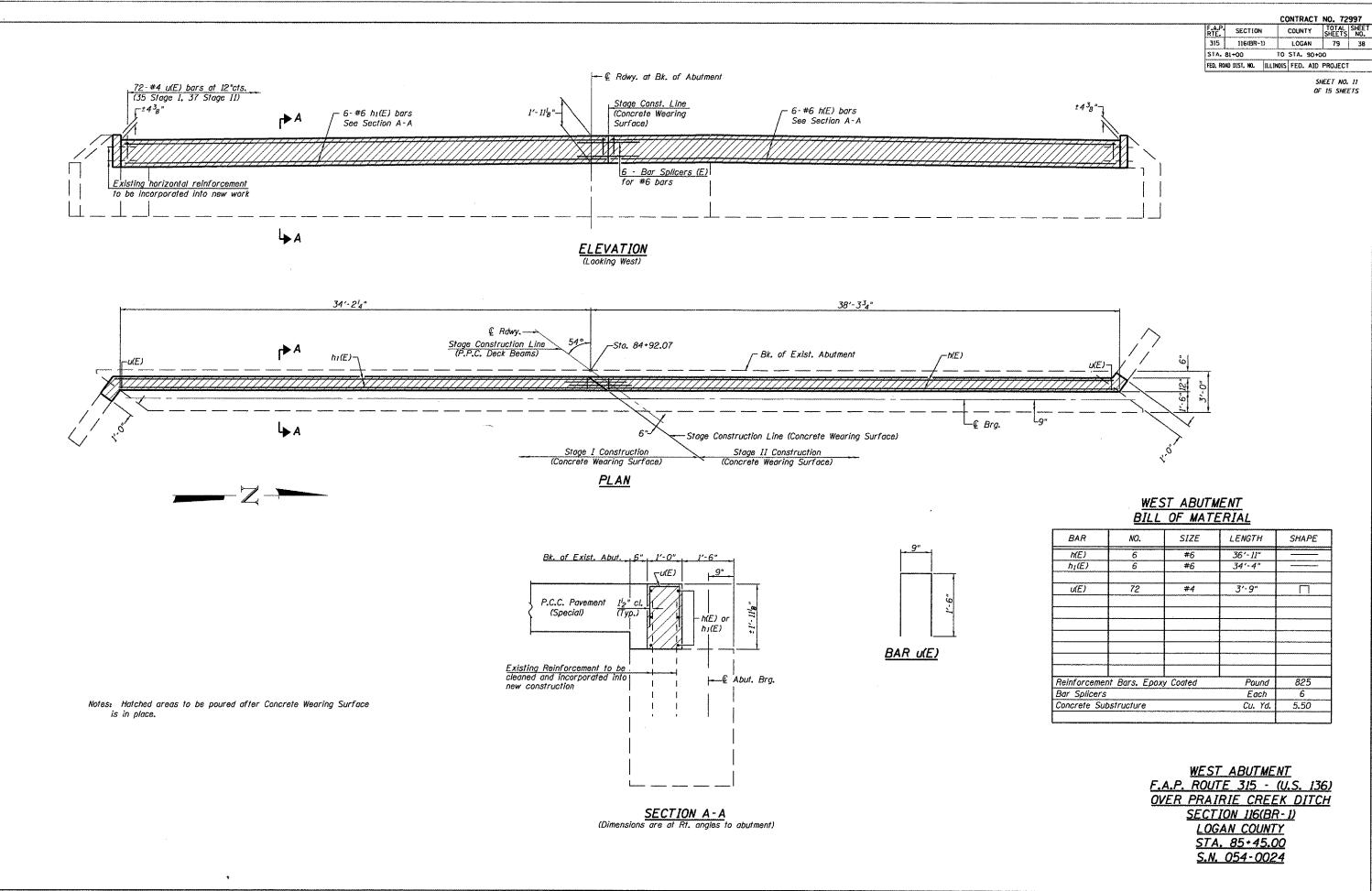


<u>SECTION A-A</u> (Dimensions are at Rt. angles to abutment)

## BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu, Yd,	5.5

WEST ABUTMENT REMOVAL F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK DITCH SECTION 116(BR-1) LOGAN COUNTY STA. 85+45.00 S.N. 054-0024



DATE = 7/9/2007 NAME = 0/17-0\_jects\d652905\ollon . NAME = 092107-72997-000-000-011

 
 CONTRACT
 NO.
 72997

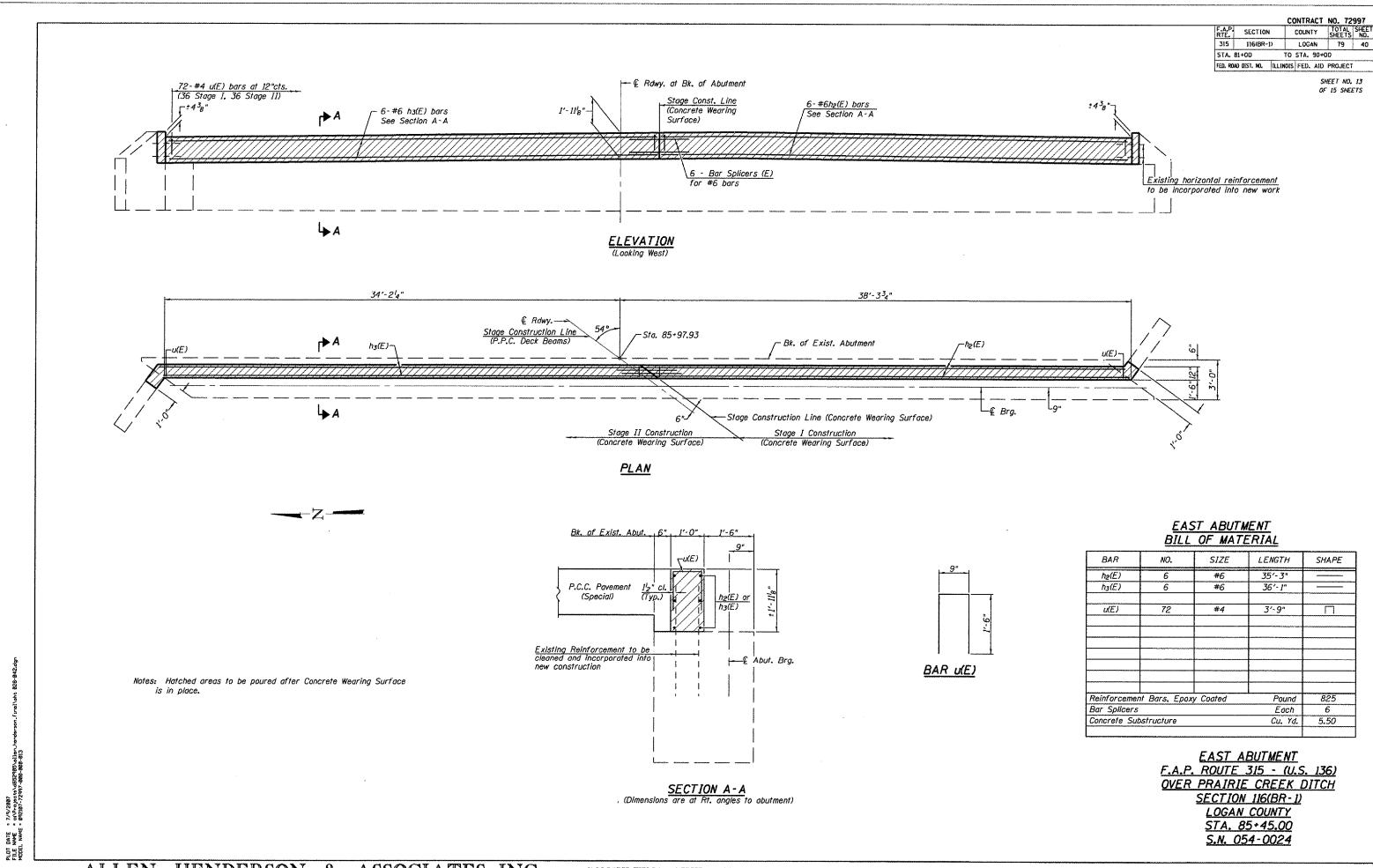
 COUNTY
 TOTAL SHEET SHEETS NO.

 LOGAN
 79
 39
 F.A.P. SECTION 315 116(BR-1) 116(BR-1) STA. 81+00 TO STA, 90+00 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT - @ Rdwy. at Bk. of Abutment SHEET NO. 12 OF 15 SHEETS Stage Removal Line-L→ A **ELEVATION** 34'-24" 38'-3<sup>3</sup>4" € Rdwy. 4'-5" 2' 258 - Bk. of Exist. Abutment -Sta. 85+97.93 Stage II Removal Stage I Removal PLAN Existing P.C.C. Pavement & Bituminous Wearing Surface to be removed 1'-0" 1'-6" (See Roadway Plans) LEGEND - Concrete Removal BILL OF MATERIAL Notes: Existing reinforcing steel shall be cleaned, straightened, cut (if required), and incorporated into new construction. Damaged ITEM UNIT QUANTITY Existing Reinforcement Concrete Removal Cu. Yd. 5.5 reinforcing steel shall be replaced or removed as directed by the Engineer. Cost included with "Concrete Removal". Removal of the existing joint system is included in the cost of "Concrete Removal". EAST ABUTMENT REMOVAL F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK DITCH SECTION 116(BR-1) SECTION A-A (Dimensions are at Rt. angles to abutment) LOGAN COUNTY STA. 85+45.00 S.N. 054-0024

ALLEN HENDERSON & ASSOCIATES, INC.

PLOT DAYE = 7/9/2007 FILE NAME = c1/Projecta/d552985/eller MODEL NAME = 892/07-72997-888-888-812

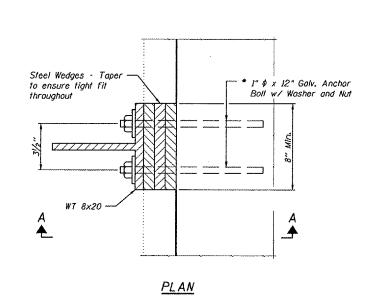
CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907

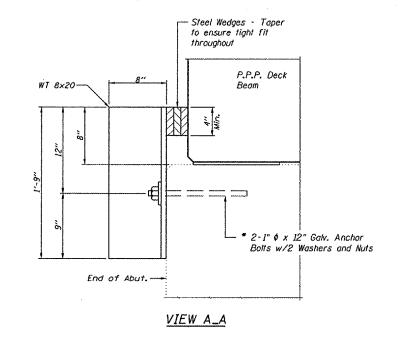


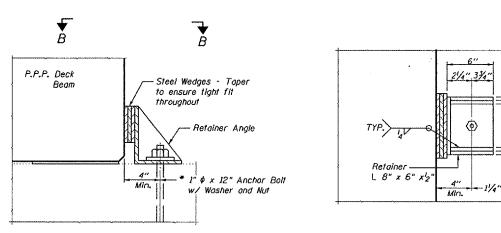
ALLEN HENDERSON & ASSOCIATES, INC.

CONTRACT NO. 72997 F.A.P SECTION COUNTY TOTAL SHEETS NO. 315 116(BR-1) LOGAN 79 41 STA. 81+00 TO STA. 90+00 FED. ROAD DIST. HO. \_ ILLINOIS FED. AID PROJECT

> SHEET NO. 14 OF 15 SHEETS







Note: Burn off anchor bolts flush with the top of the existing concrete, grind smooth, and seal with epoxy after the Concrete Wearing Surface has cured and prior to placement of the PPC Deck Beam at ( Roadway. Cost included with PPC Deck Beam (17" Depth)

ELEVATION

VIEW B-B

TEMPORARY SIDE RETAINER AT ABUTMENTS

PERMANENT SIDE RETAINER AT ABUTMENTS

\* Epoxy grout I'V anchor bolts in 9" (min.), drilled holes according to Section 584 of the Standard Specification. Cost of retainer and accessories are included with PPC Deck Beams (17" Depth)

# ANCHOR BOLTS FOR RETAINERS GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted. Prior to setting the bolts, the holes shall be dry and all dust and loose

particles shall be removed by the use of compressed air or vacuuming. The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for PPC Deck Beams (17" Depth).

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

- 1. A threaded rod stud with nut and washer of the type specified.
- 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

L	
Location	Туре
W. Abut.	A325
E. Abut,	A325

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolls may be substituted for the anchor bolls shown above.

SUBSTRUCTURE DETAILS F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK DITCH SECTION 116(BR-1) LOGAN COUNTY STA. 85+45.00 S.N. 054-0024

DATE : Sep-21-2807 B3:81:45PH NAME : c:\projects\d652905\allen. . NAME : 892187-72997-880-808-014

SHEET NO. 15 OF 15 SHEETS

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksl yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars. Bar splicer assemblies shall be epoxy coated according to the requirements for

reinforcement bars. Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

Minimum Capacity (Tension in kips) =  $1.25 \times fy \times A_t$ **(**)

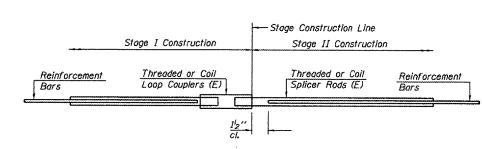
Minimum \*Pull-out Strength =  $0.66 \times fy \times A_t$ 

Where fy = Yield strength of lapped reinforcement bars in ksi.

A, = Tensile stress area of lapped reinforcement bars.

\* = 28 day concrete

	BAR SPLIC	CER ASSEMBLI	ES
D	6 5 .	Strengt	h Requirements
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8''	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
# <i>7</i>	3′-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5′-9′′	75.0	<i>3</i> 9.6
#10	7′-3′′	95.0	50.3
#11	9'-0''	117.4	61.8



### STANDARD

Bar Size	No. Assemblies Required	Location
#6	12	Abutments
#4	101	Concrete Wearing Surface
Total	113	

BAR SPLICER ASSEMBLY DETAILS F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK DITCH SECTION 116(BR-1) LOGAN COUNTY STA. 85+45.00 S.N. 054-0024

The diameter of this part is equal or larger than the diameter of bar spliced. The diameter of this part is the same as the diameter of the bar spliced. ROLLED THREAD DOWEL BAR

> \*\* ONE PIECE -Wire Connector WELDED SECTIONS

#### BAR SPLICER ASSEMBLY ALTERNATIVES

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

INSTALLATION AND SETTING METHODS

Washer Face

<u>"B"</u>

Stage Construction Line

Foom Plugs

Threaded or Coil

Splicer Rods (E)

<u>"A"</u>

Forms -

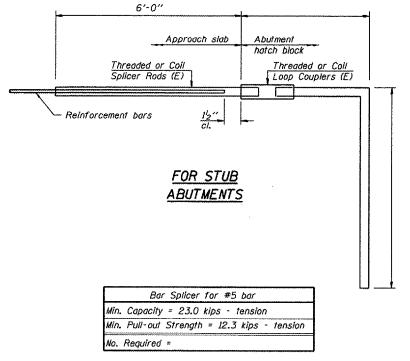
"A": Set bar splicer assembly by means of a template bolt. "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E): Indicates epoxy coating.

Bridge Deck Approach Slab Threaded or Coil Splicer Rods (E) Threaded or Coil Loop Couplers (E) Reinforcement Bars 4'-0" 6'-0"

# FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

	Bai	Splicer	foi	*5	bar		
Min.	Capacity	= 23.0	kip	s - ;	ensid	n	
Mi∩.	Pull-out	Strength	=	12.3	kips	-	tension
No.	Required	*		*********	*********		



BSD-1

11-1-06

ALLEN HENDERSON & ASSOCIATES, INC.

CONTRACT NO. 72997 COUNTY TOTAL SHEET NO. SECTION Benchmark: B.M.102 - Chiseled "a" on N.W. Abutment Corner, S.N. 054-0025 Elev. 571,353 116(BR~2) LOGAN 79 43 Existing Structure; S.N. 054-0025 was built as F.A. 119, Sec. 116BR, Sta. 314+50 in 1973 STA. 309+00 TO STA. 318+90 as a three span precast prestressed concrete deck beam bridge FED. ROAD DIST. NO. . ILLINOIS FED. AID PROJECT supported on pile bent abutments and piers. SHEET NO. 1 Proposed Improvement: Existing P.P.C. Deck Beams are to be removed and replaced. Traffic to be maintained OF 16 SHEETS utilizing stage construction. No Salvage -Traffic Barrier Terminal, -Steel Railing, Type SM Type 6A (All four corners) Standard 631032 ∠\_27" x 36" P.P.C. Deck Beam (Typ.) x 36" P.P.C. Deck Beam (Typ.) STA. 314+50.00 RE-BUILT 20 BY INDEX OF SHEETS 1. General Plan and Elevation STATE OF ILLINOIS rS.B. El. 556.5 2. General Notes and Bill of Material F.A.P. ROUTE 315 SEC. 116(BR-2) 3. Stage Construction Details LOADING HS20 ±15'-0" 4. Temporary Concrete Barrier STR. NO. 054-0025 For Stage Construction NAME PLATE 5. Deck Beam Details - Spans 1 & 3 6. Deck Beam Details - Span 2 (See Standard 515001) 7. Superstructure 8. Superstructure Details Attach new Name Plate to back 9. Steel Railing, Type SM 10. West Abutment Removal ±28'-4" ± 31'-9" ±10'-0" ±35'-4" ±38'-4" side of 8" rail element. Along Skew 11. West Abutment ELEVATION 12. East Abutment Removal 13. East Abutment 14. Substructure Details A 500 PM 15. Bar Splicer Assembly Details 16. Substructure Repair For removal and replacement of approach pavement, see Roadway Plan and Details. © Roadway and Stage Construction Line (P.P.C. Deck Beams) Bk. W. Abut. -@ Pier 1 -- Structure € Pier 2 Sta. 314+50.00 Stations Increase Sta. 314+20.00 Sta. 313+70.39 Sta. 314+80.00 30' Bridge Appr.-Bk. E. Abut. Pav't. Std. 420401 Stage Construction Line Sta. 315+29.61 (Special) typ. (Concrete Wearing Surface) Railing, Type SM Traffic Barrier Terminal, Type 6A (All four corners) Standard 631032 LOCATION PLAN **APPROVED** For Structural Adequacy Only GENERAL PLAN & ELEVATION F.A.P. ROUTE 315 - (U.S. 136) Engineer of Bridges & Structures OVER PRAIRIE CREEK SECTION 116(BR-2) LOGAN COUNTY 49'-74" 60'-0" 49'-74" Designed: STA. 314+50.00 Checked: 159'-212" S.N. 054-0025 Drawn: M.A.H. PLAN Checked:

F.A.P.	SECTION		COL	INTY	SHEETS	SHEET NO.
315	116(BR-2	1.	LC	GAN	79	44
STA.	309+00	1	O ST	A. 318-	<del>-</del> 90	
FED. RO	DAO DIST. NO	ILLIN	OIS FE	D. AID	PROJEC1	ſ

SHEET NO. 2

# TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures No. 2	Each	1		1
Concrete Removal	Cu. Yd.		9.8	9.8
Concrete Structures	Cu. Yd.		9.8	9.8
* Bridge Deck Grooving	Sq. Yd.	981		981
Protective Coat	Sq. Yd.	1124		1124
P.P.C. Deck Beams (21" Depth)	Sq. Ft.	3968		3968
P.P.C. Deck Beams (27" Depth)	Sq. Ft.	2512		2512
Reinforcement Bars, Epoxy Coated	Pound	11430	1820	13250
Bar Splicers	Each	155	12	167
Steel Railing, Type SM	Foot	319		319
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	131		131
Epoxy Crack Injection	Foot		52	52
Structural Repair of Concrete (Depth Equal to or Greater Than 5")	Sq. Ft.		119	119
Concrete Wearing Surface, 5"	Sg. Yd.	721.2		721.2
Stone Dumped Riprap, Class A4	Ton		1017	1017
Asbestos Bearing Pad Removal	Each	60		60

<sup>\*</sup> Includes area of Bridge Approach Pavement (Special)

#### LOADING HS20-44

Allow 50 psf for future wearing surface. DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications.

# DESIGN STRESSES

f'c = 3500 psi fy = 60000 psi (Reinforcement)

f'c = 5000 psi (Concrete Wearing Surface)

PRECAST PRESTRESSED UNITS

f'c = 5000 psi

f'ci = 4000 psi

 $f's = 270000 psi (\frac{1}{2})^m low lax strands)$  $f'si = 201960 psi (\frac{1}{2})^m fow lax strands)$ 

#### GENERAL NOTES

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

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified). See Special Provisions.

Protective Coat shall be applied to the top and edges of the concrete wearing surface, exterior face of each fascia beam, and bottom of the first three beams on each side of the superstructure.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the conditions of the beams when developing construction procedures for removal and replacement of the superstructure.

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with underlying beams. Prior to placement of the timber mats, the following shall be done: placement and tightening of the transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum, and grouting and curing the shear keys.

Reinforcement bars designated (E) shall be epoxy coated.

Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

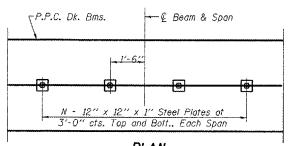
The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to manufactures specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

All structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Preformed Joint Strip Seal.

> GENERAL NOTES AND BILL OF MATERIAL F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK SECTION 116(BR-2) LOGAN COUNTY <u>STA. 314+50.00</u> S.N. 054-0025

DATE PLOT FILE

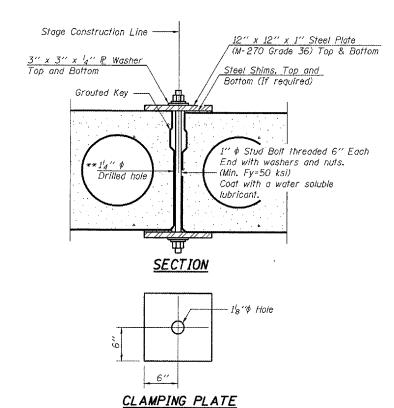
SHEET NO. 3 OF 16 SHEETS



PLAN

N = 6 For Spans 1 and 3

N = 8 For Span 2



### SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

Cost included with Precast Prestressed Concrete Deck Beams. See Stage Construction Details for traffic lanes.

\*\* As an alternate to the drilled holes, the Contractor may request the Fabricator to cast 2" diameter semi-circular recesses in the sides of each beam adjacent to the stage construction line. These recesses should align to form a hole at the appropriate locations for the clamping device bolts. If the Contractor elects to use this alternate, the details shall be identified on the shop drawings.

STAGE CONSTRUCTION DETAILS

F.A.P. ROUTE 315 - (U.S. 136)

OVER PRAIRIE CREEK

SECTION 116(BR-2)

LOGAN COUNTY

STA. 314+50.00

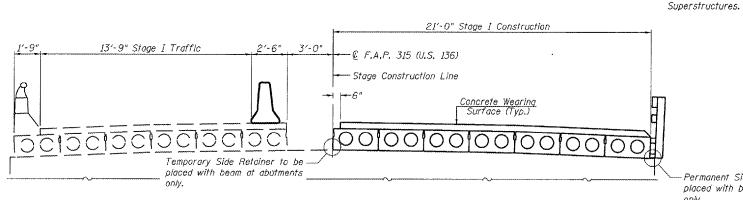
S.N. 054-0025

24'-0" Stage I Removal

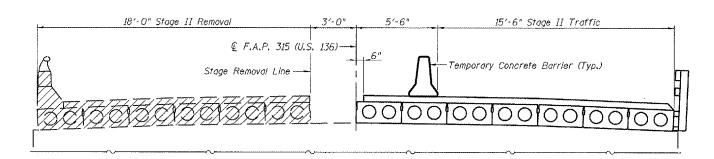
1'-9" 13'-9" Stage I Traffic 2'-6" 3'-0" & F.A.P. 315 (U.S. 136)

Temporary Concrete Barrier (Typ.) — Existing Concrete Wearing Surface (Typ.)

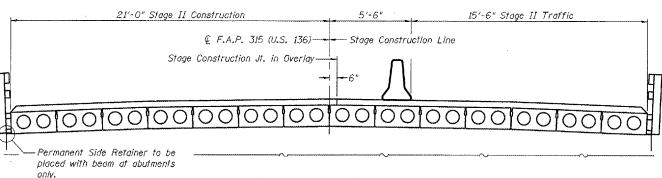
## STAGE I REMOVAL



STAGE I CONSTRUCTION



#### STAGE II REMOVAL



STAGE II CONSTRUCTION

Notes: All Cross Sections looking East.
Hatched area indicates Removal of Existing Superstructures.
Cost of removing existing concrete wearing surface, parapet,
and aluminum railing are included with Removal of Existing
Superstructures.

 Existing Dowel Rods at Piers 1 & 2 shall be burned off flush with the top of the existing concrete, ground smooth, and sealed with

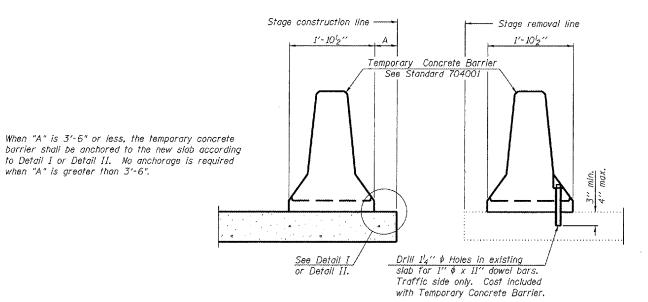
Permanent Side Retainer to be placed with beam at abutments

epoxy. Cost included with Removal of Existing

For quantity of Temporary Concrete Barrier see Roadway Plans. For Temporary Concrete Barrier details see Sheet 4 of 16. For Permanent and Temporary Side Retainer Details see Sheet 14 of 16.

DATE NAME NAME

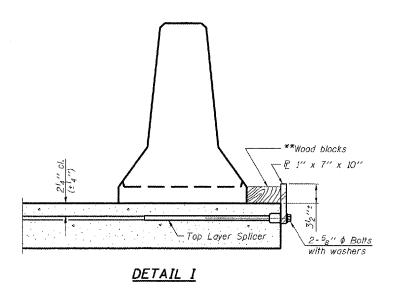
SHEET NO. 4



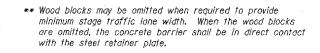
NEW SLAB

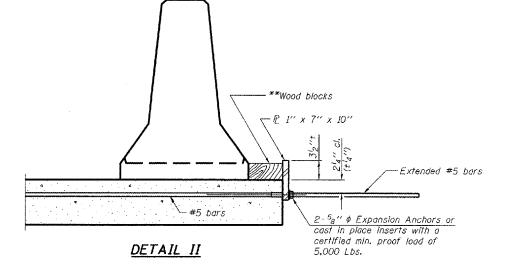
EXISTING SLAB

## SECTIONS THRU SLAB



when "A" is greater than 3'-6".





10" Top bars spacing - ⊈ <sup>7</sup>8″ ¢ Holes \* £ 1" x 1'2" Notch

STEEL RETAINER P 1" x 7" x 10"

\* Required only with Detail II

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK SECTION 116(BR-2) LOGAN COUNTY STA. 314+50.00 S.N. 054-0025

DATE PLOT FILE

R-27

<u>NOTES</u>

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

top layer of couplers with 2-58" \$\phi\$ bolts screwed to coupler at approximate & of

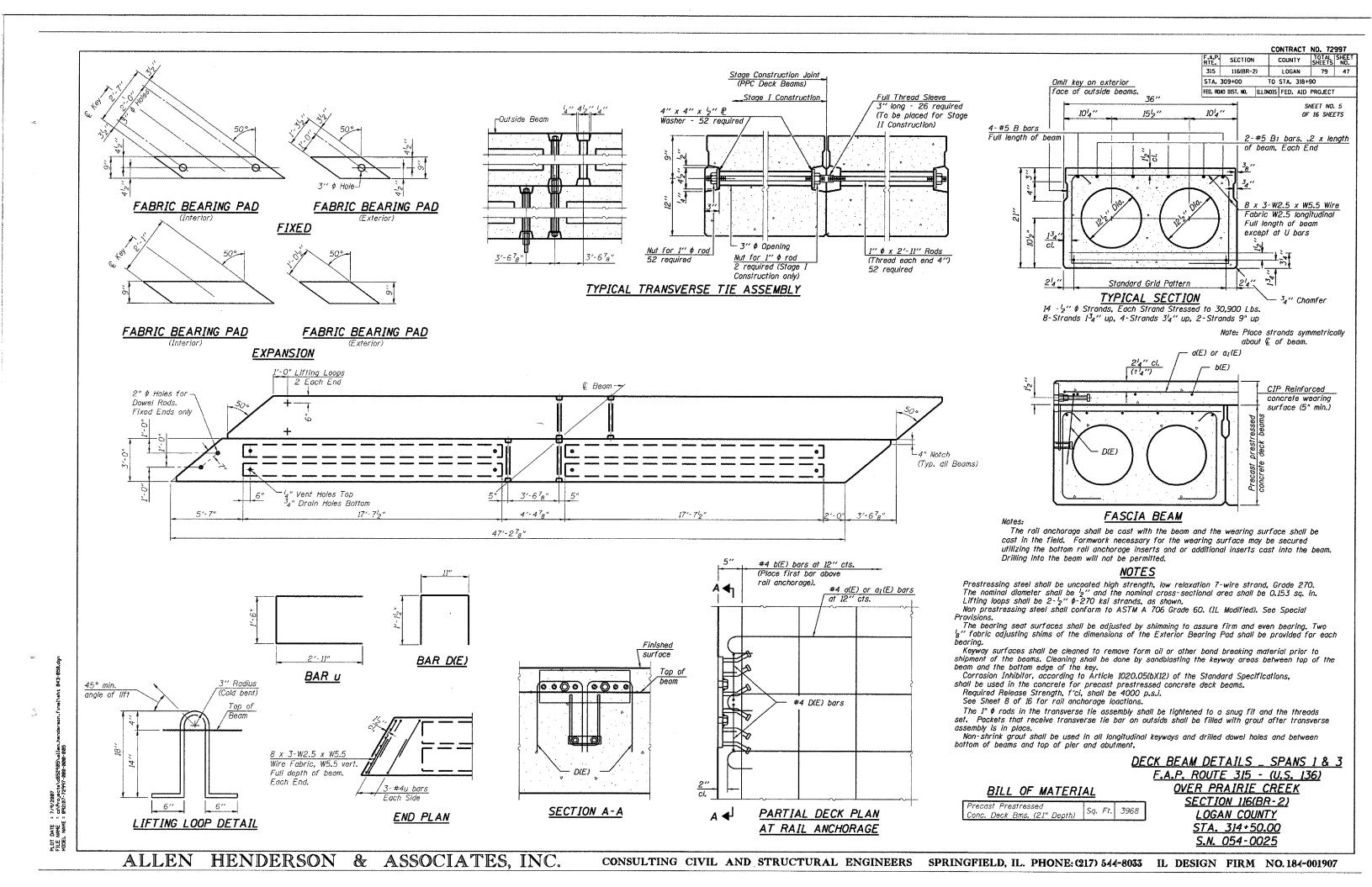
Connect one (1) 1"x7"x10" steel 12 to the concrete slab with 2-58" \$ Expansion Anchors

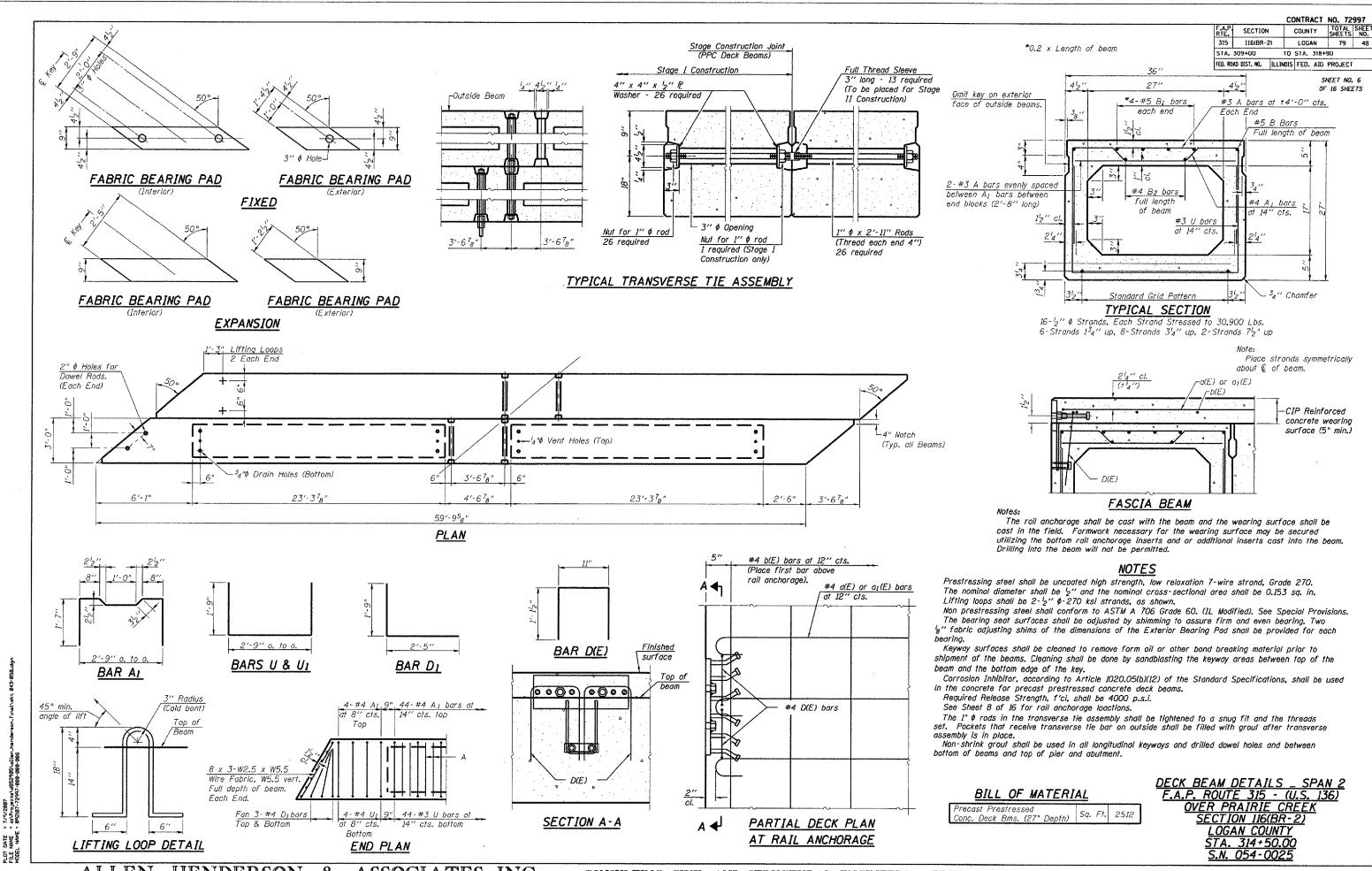
or cast in place inserts spaced between the top layer of reinforcement at approximate € of

Detail I - With Bar Splicer or Couplers:
Connect one (I) I"x7"x10" steel PL to the

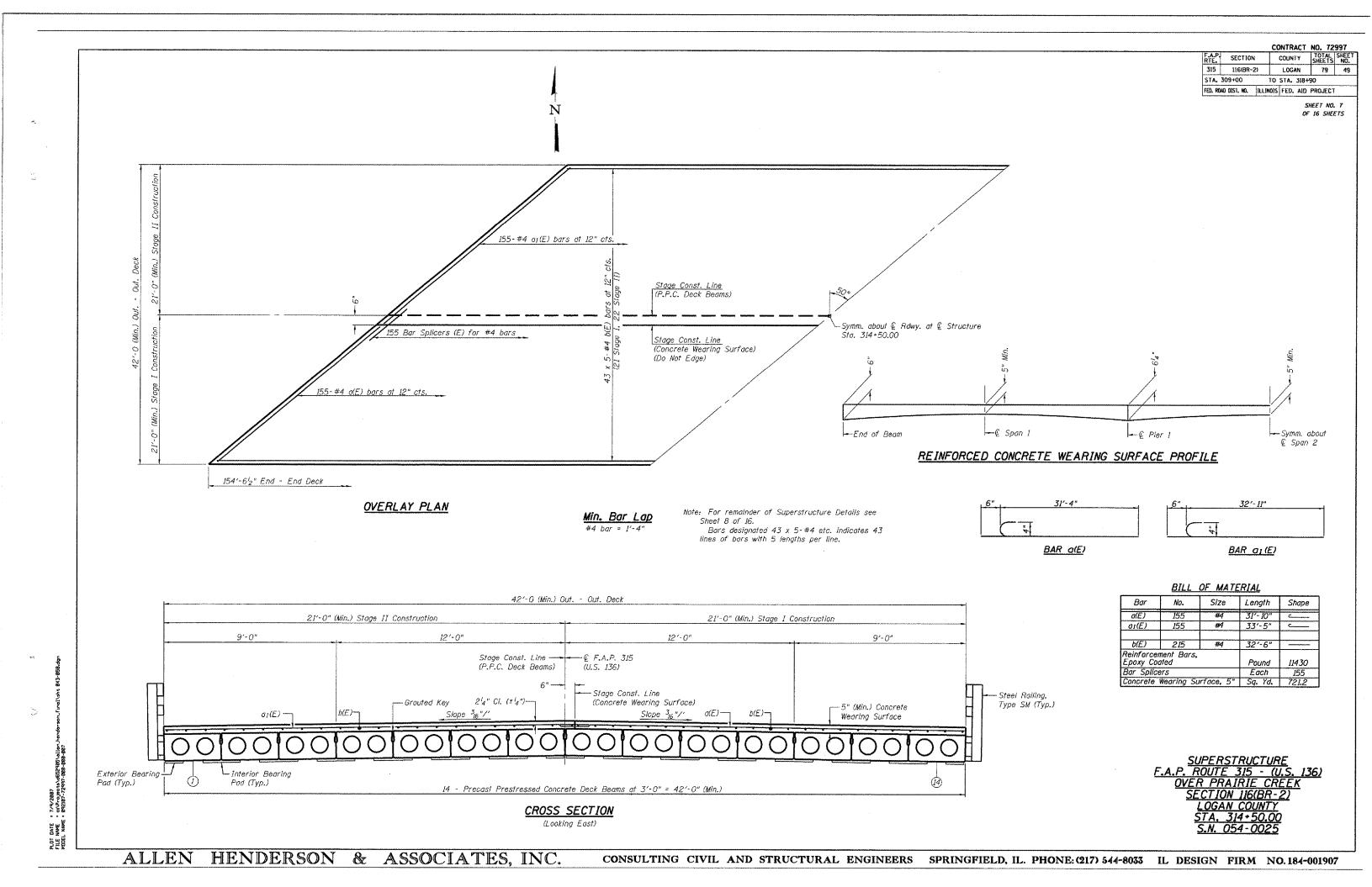
each barrier panel. Detail II - With Extended Reinforcement Bars:

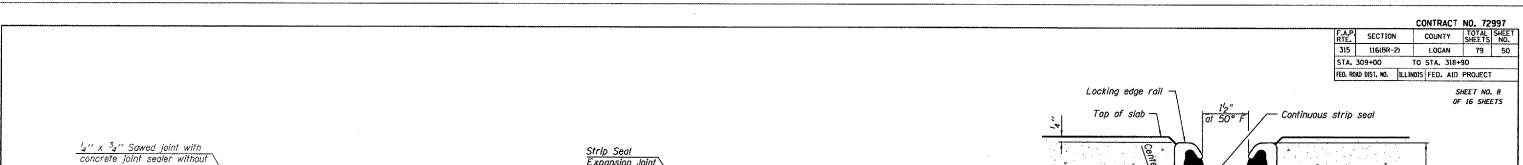
each barrier panel.





N HENDERSON & ASSOCIATES, INC. CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907





the backer rod (full width) Concrete Wearing Surface -6¼" @ € of Piers bearing pad <u>" φ'x 2'-6" Dowel rods</u> in  $1_2''$   $\phi$  holes drilled in cap (2 each beam)

Expansion Joint -Proposed Bridge Approach Concrete Wearing Surface Pavement (Special) (See Roadway Plans) End of Beam 21" PPC-Deck Beam Fabric bearing pad Back of Existing
Abutment Brg. 2 - 9" x 4" x 2'-1" or 2 - 9" x 4" x 1'-02"

SECTION THRU ABUTMENTS

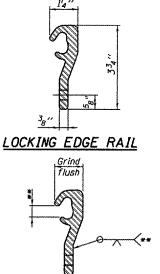
# SECTION THRU PIERS

Notes :

After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

Hatched area to be poured after concrete wearing surface is in place. See sheets 5 and 6 of 16 for bearing pad details.

\* 1" Jt. shall be filled with non-shrink grout. I" dimension may vary to accommodate tolerance in beam lenaths. All horizontal dimensions are at right angles to beam ends.



\*\* Omit weld at seal opening. LOCKING EDGE RAIL SPLICE SECTION THRU STRIP SEAL JOINT FOR OVERLAY OVER DECK BEAMS (64 Studs Stage I. 64 Studs Stage II)

Notes:

7<sub>16</sub> " \$\phi\$ holes at 4'-0" cts. for 3<sub>8</sub>"

or chipped off flush with the plates

after forms are removed, typ.

bolts. All bolts shall be burned, sawed,

The strip seal shall be made continuous and shall have a minimum thickness of 4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

Place '2" \$ x 6" granular or solid flux filled headed studs

conforming to Article 1006.32

automatically end welded at

of the Std. Specs.,

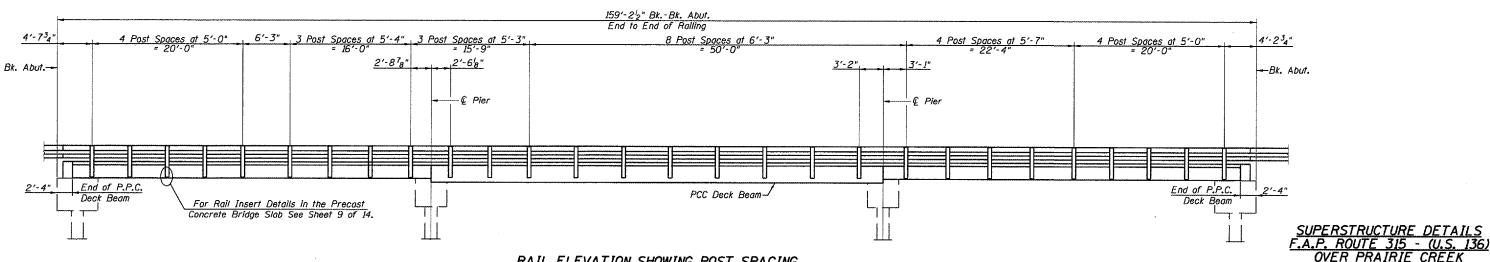
1'-0" alt. cts.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage

The manufacturer's recommended installation methods shall be followed. The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

After fabrication, the steel locking edge rail assembly shall be not dip galvanized according to AASHTO MIII and ASTM A123.



RAIL ELEVATION SHOWING POST SPACING

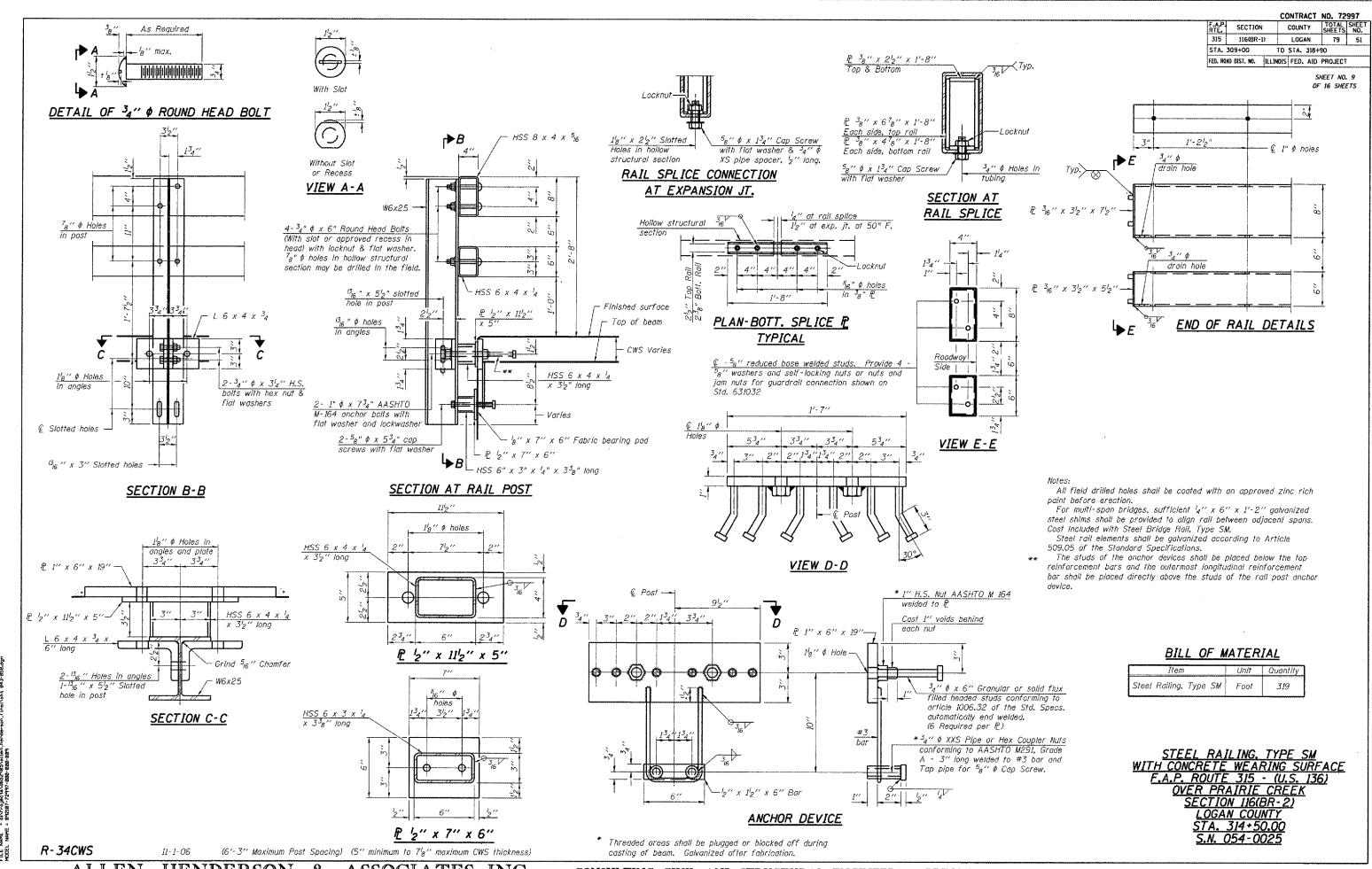
(South Side Looking North) (North Side Looking South) OVER PRAIRIE CREEK

SECTION 116(BR-2)

LOGAN COUNTY

STA. 314+50.00

S.N. 054-002



ALLEN HENDERSON & ASSOCIATES, INC.

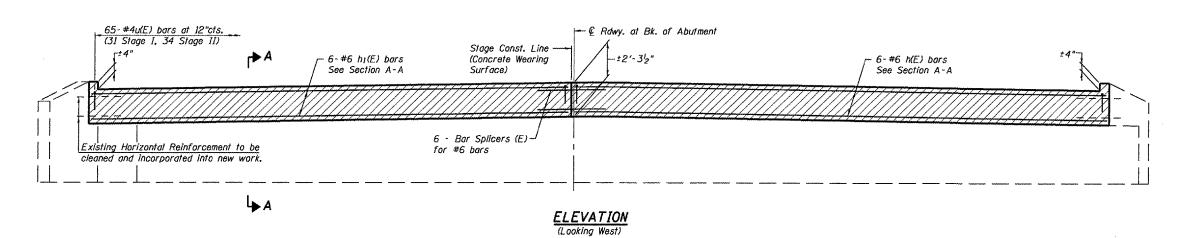
COUNTY TOTAL SHEET NO. F.A.P. SECTION 315 116(8R-2) LOGAN 79 52 STA, 309+00 TO STA. 318+90 FED. ROAD DIST. NO. | ILLINOIS FED. AID PROJECT  $A \blacktriangleleft$ · © Rdwy. at Bk. of Abutment OF 16 SHEETS ELEVATION (Looking West) 31'-638" 34'-85<sub>8"</sub> 2'-078" 5'-34" 2'-078! -Sta. 313+70.39 - Bk. of Exist. Abutment 4►A Stage Removal Line Stage I Removal Stage II Removal PLAN Existing P.C.C. Pavement & Bituminous Wearing Surface to be removed (See Roadway Plans) **LEGEND** - Concrete Removal Notes: Existing vertical reinforcing steel in backwall shall be cleaned, straightened, cut (if required), and incorporated Existing Reinforcement into new construction. Damaged reinforcing steel shall be replaced or removed as directed by the Engineer. Cost included with "Concrete Removal". BILL OF MATERIAL Removal of the existing joint system is included in the cost of "Concrete Removal". ITEM QUANTITY UNIT Concrete Removal Cu. Yd. SECTION A-A (Dimensions are at Rt. angles to abutment)

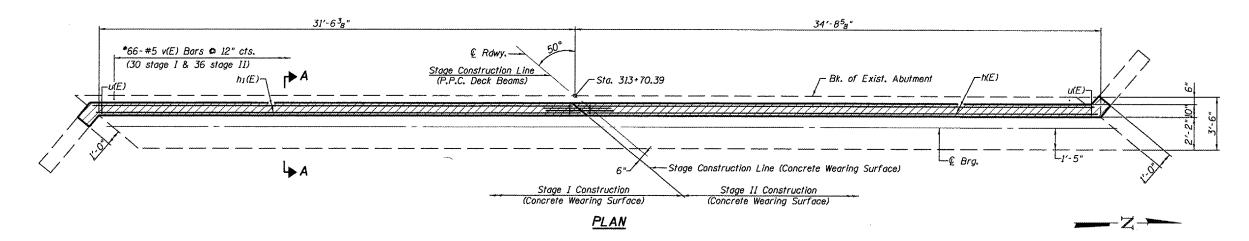
CONTRACT NO. 72997

CONTRACT NO. 72997

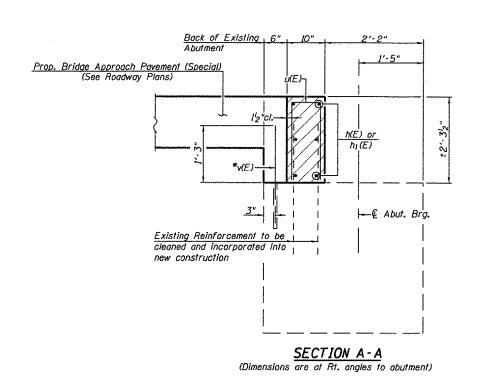
COUNTY TOTAL SHEET NO. F.A.P. SECTION 315 116(BR-2) LOGAN 79 53 STA. 309+00 TO STA. 318+90 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

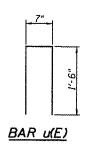
> SHEET NO. 11 OF 16 SHEETS





Note: Hatched area to be poured after Concrete Wearing Surface is in place.





\* Epoxy grout v(E) bars into <sup>7</sup>g" \$\phi\$ holes, 1'-O" min, depth according to Section 584 of the Standard Specifications,

## BILL OF MATERIAL WEST ABUTMENT

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	6	#6	33'-10"	
h <sub>1</sub> (E)	6	#6	31'-8"	
υ(E)	65	#4	3'-7"	П
v(E)	66	#5	2'-3"	
D		<u> </u>		
Reinforcement Bars, Epoxy Coated			Pound	910
Bar Splicers			Each	6
Concrete Substructure			Cu. Yd.	4.90

WEST ABUTMENT ROUTE 315 - (U.S. LOGAN COUNTY STA. 314+50.00 S.N. 054-0025

F.A.P. RTE. 315 COUNTY TOTAL SHEET NO. SECTION 116(BR-2) LOGAN 79 54 STA. 309+00 TO STA, 318+90 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT - & Rdwy. at Bk. of Abutment SHEET NO. 12 OF 16 SHEETS ELEVATION 31'-6<sup>3</sup>8" 2'-07<sub>8</sub>" 2'-078" @ Rdwy. - Bk. of Exist. Abutment -Sta. 315+29.61 Stage Removal Line Stage II Removal Stage I Removal PLAN Existing P.C.C. Pavement & Bituminous Wearing Surface to be removed 10" (See Roadway Plans) LEGEND - Concrete Removal BILL OF MATERIAL ITEM QUANTITY UNIT Notes: Existing vertical reinforcing steel in backwall shall be cleaned, straightened, cut (if required), and incorporated into new construction. Damaged reinforcing steel shall be replaced or removed as directed by the Engineer. Cost Cu. Yd. 4.90 Concrete Removal Existing Reinforcement included with "Concrete Removal". Removal of the existing joint system is included in the cost of "Concrete Removal". EAST ABUTMENT REMOVAL SECTION A-A (Dimensions are at Rt. angles to abutment)

CONTRACT NO. 72997

COUNTY TOTAL SHEET NO. SECTION 315 116(BR-2) LOGAN 79 55 STA. 309+00 TO STA. 318+90 & Rdwy. at Bk. of Abutment --65-#4 u(E) bars at 12"cts. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT (32 Stage I, 33 Stage II) -Stage Const. Line -±4" 6-#6h2(E) bars (Concrete Wearing OF 16 SHEETS 6-#6h3(E) bars Surface) See Section A-A 6 - Bar Splicers (E)-Existing Horizontal Reinforcement to be for #6 bars cleaned and incorporated into new work. L► A **ELEVATION** 31'-6<sup>3</sup>8" 34'-85g" \*66 - #5 v(E) Bars © 12" cts, (35 stage I & 31 stage II) € Rdwy. ---Stage Construction Line (P.P.C. Deck Beams) -Bk. of Exist. Abutment h2(E) -Sta. 315+29.61 t<sub>∉ Brg.</sub> Stage Construction Line (Concrete Wearing Surface) Stage II Construction Stage I Construction (Concrete Wearing Surface) (Concrete Wearing Surface) PLAN Note: Hatched area to be poured after Concrete BILL OF MATERIAL Wearing Surface is in place. EAST ABUTMENT Back of Existing 6".
Abutment BAR NO. SIZE LENGTH SHAPE Prop. Bridge Approach Pavement (Special) (See Roadway Plans) 33'-5" h<sub>2</sub>(E) #6 h3(E) #6 32'-3" u(E) 65 #4 3'-7" 66 2'-3" v(E) #5 BAR U(E) Reinforcement Bars, Epoxy Coated Pound 910 3" ├--- € Abut. Brg. Bar Splicers Each Concrete Substructure 4.90 Cu. Yd. Existing Reinforcement to be \*Epoxy grout v(E) bars into  $^{7}8$ "  $\phi$  holes, 1'-0" min. depth according to Section 584 of cleaned and incorporated into I new construction the Standard Specifications. EAST ABUTMENT P. ROUTE 315 - (U.S. 1 OVER PRAIRIE CREEK SECTION 100 (1977) LOGAN COUNTY STA. 314+50.00 S.N. 054-0025 SECTION A-A (Dimensions are at Rt. angles to abutment)

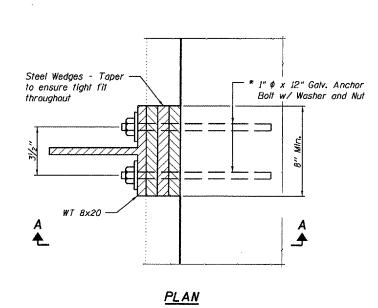
DATE = 7/9/2007 MAME = ci/Projecta\d552985\allen MAME = 892!07-72997-808-808-813

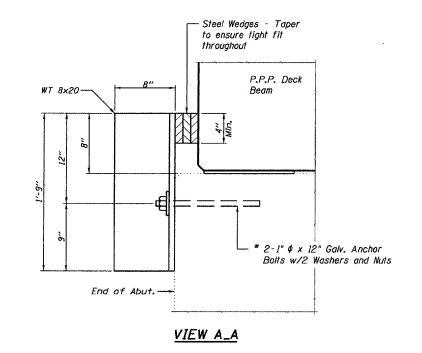
ALLEN HENDERSON & ASSOCIATES, INC.

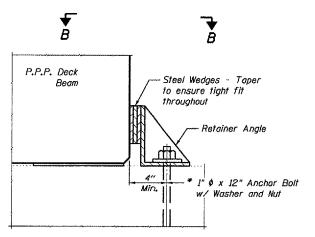
CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907

 		CC	)NTR/	ACT	NO.	72	997
F.A.P. RTE.	SECTION		COUNT	ſΥ	TOT	AL TS	SHEET NO.
315	116(BR-2	2)	LOGA	IN	7	9	56
STA.	309+00	TO	STA. 3	318+9	30		
FED. RO	AD DIST. NO,	ILLINOIS	FED.	AID	PROJ	ECT	

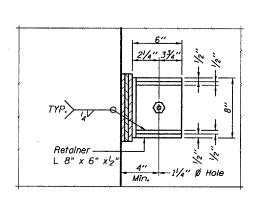
SHEET NO. 14 OF 16 SHEETS







**ELEVATION** 



Note: Burn off anchor bolts flush with the top of the existing concrete, grind smooth, and seal with epoxy after the Concrete Wearing Surface has cured and prior to placement of the PPC Deck Beam at ( Roadway. Cost included with PPC Deck Beam (21" Depth) VIEW B-B

PERMANENT SIDE RETAINER AT ABUTMENTS

\* Epoxy grout 1"\$ anchor bolts in 9" (min.). drilled holes according to Section 584 of the Standard Specification. Cost of retainer and accessories are included with PPC Deck Beams (21" Depth)

# TEMPORARY SIDE RETAINER AT ABUTMENTS

# ANCHOR BOLTS FOR RETAINERS GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming. The anchor bolts, furnished and installed and including the epoxy grout or

capsules shall not be paid for separately but shall be included in the unit bid price for PPC Deck Beams (21" Depth).

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part

- 1. A threaded rod stud with nut and washer of the type specified.
- 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical,

Location	Туре
W. Abut.	A325
E. Abut.	A325

ASTM F 1554 Grade 105. ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

> SUBSTRUCTURE DETAILS F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK SECTION 116(BR-2) LOGAN COUNTY STA. 314+50.00 S.N. 054-0025

ALLEN HENDERSON & ASSOCIATES, INC.

CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907

SHEET NO. 15 OF 16 SHEETS

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length. All reinforcement bars shall be lapped and fied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

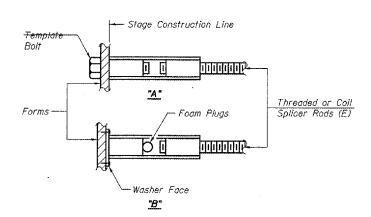
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

Minimum Capacity (Tension in kips) = 1.25 x fy x A,

Minimum \*\*Pull-out Strength =  $0.66 \times fy \times A_{+}$ (Tension in kips)

Where fy = Yield strength of lapped reinforcement bars in ksi.  $A_t$  = Tensile stress area of lapped reinforcement bars. \* = 28 day concrete

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



## BAR SPLICER ASSEMBLY ALTERNATIVES

— The diameter of this part is

equal or larger than the

diameter of bar spliced.

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

ROLLED THREAD DOWEL BAR

\*\* ONE PIECE

anan anan

WELDED SECTIONS

Wire Connector

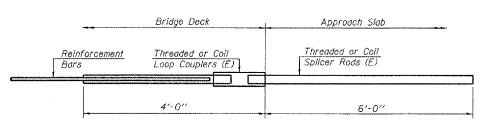
The diameter of this part

of the bar spliced.

is the same as the diameter

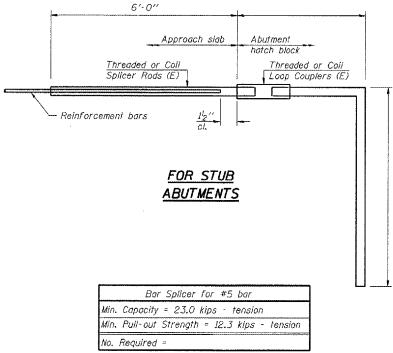
# INSTALLATION AND SETTING METHODS

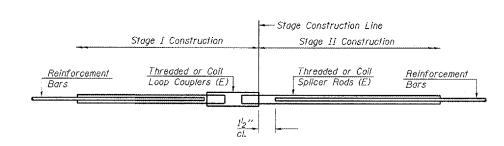
"A": Set bar splicer assembly by means of a template bolt. "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms. (E): Indicates epoxy coating.



# FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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





#### STANDARD

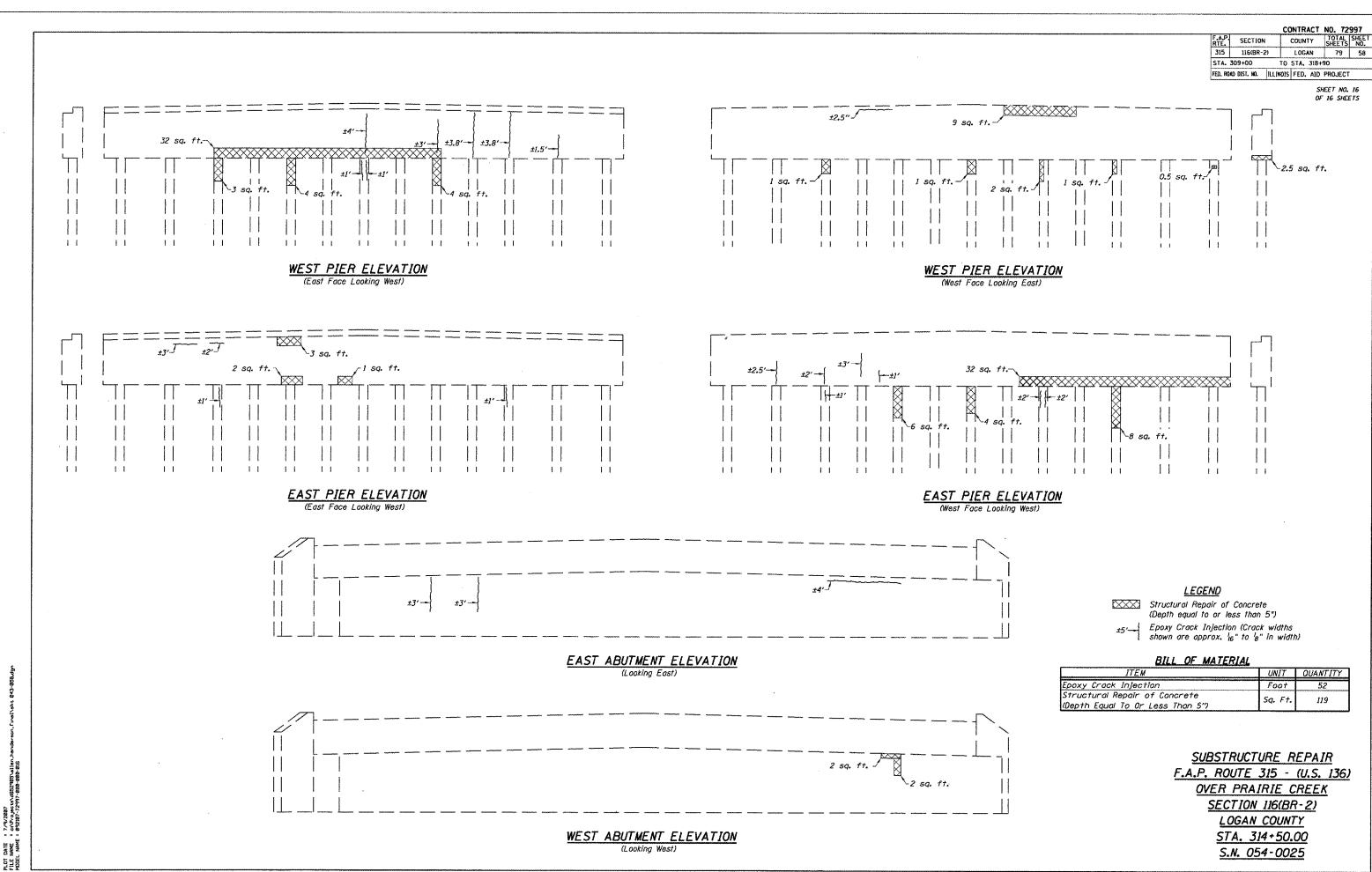
Bar Size	No. Assemblies Required	Location
#4	155	Conc. Wearing Surface
#6	12	Abutments
Total	167	

BAR SPLICER ASSEMBLY DETAILS F.A.P. ROUTE 315 - (U.S. 136) OVER PRAIRIE CREEK
SECTION 116(BR-2)
LOGAN COUNTY
STA. 314+50.00 S.N. 054-0025

HENDERSON & ASSOCIATES, INC. ALLEN

CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907

BSD-1



ALLEN HENDERSON & ASSOCIATES, INC.

CONSULTING CIVIL AND STRUCTURAL ENGINEERS SPRINGFIELD, IL. PHONE: (217) 544-8033 IL DESIGN FIRM NO. 184-001907

