

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331		JACKSON	67	1

•(12-1)B-1;D9 BSMART FY 10-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

PROJECT **ESP -0331(050)**
FAP ROUTE 331 (IL 13)

SECTION (12-1)B-1;D9 BSMART FY10-1
ILLINOIS 13 EASTBOUND AND WESTBOUND
OVER MUD CREEK
JACKSON COUNTY

C-99-024-09

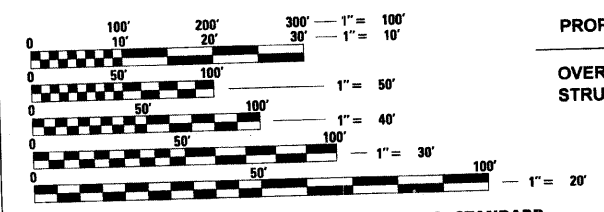
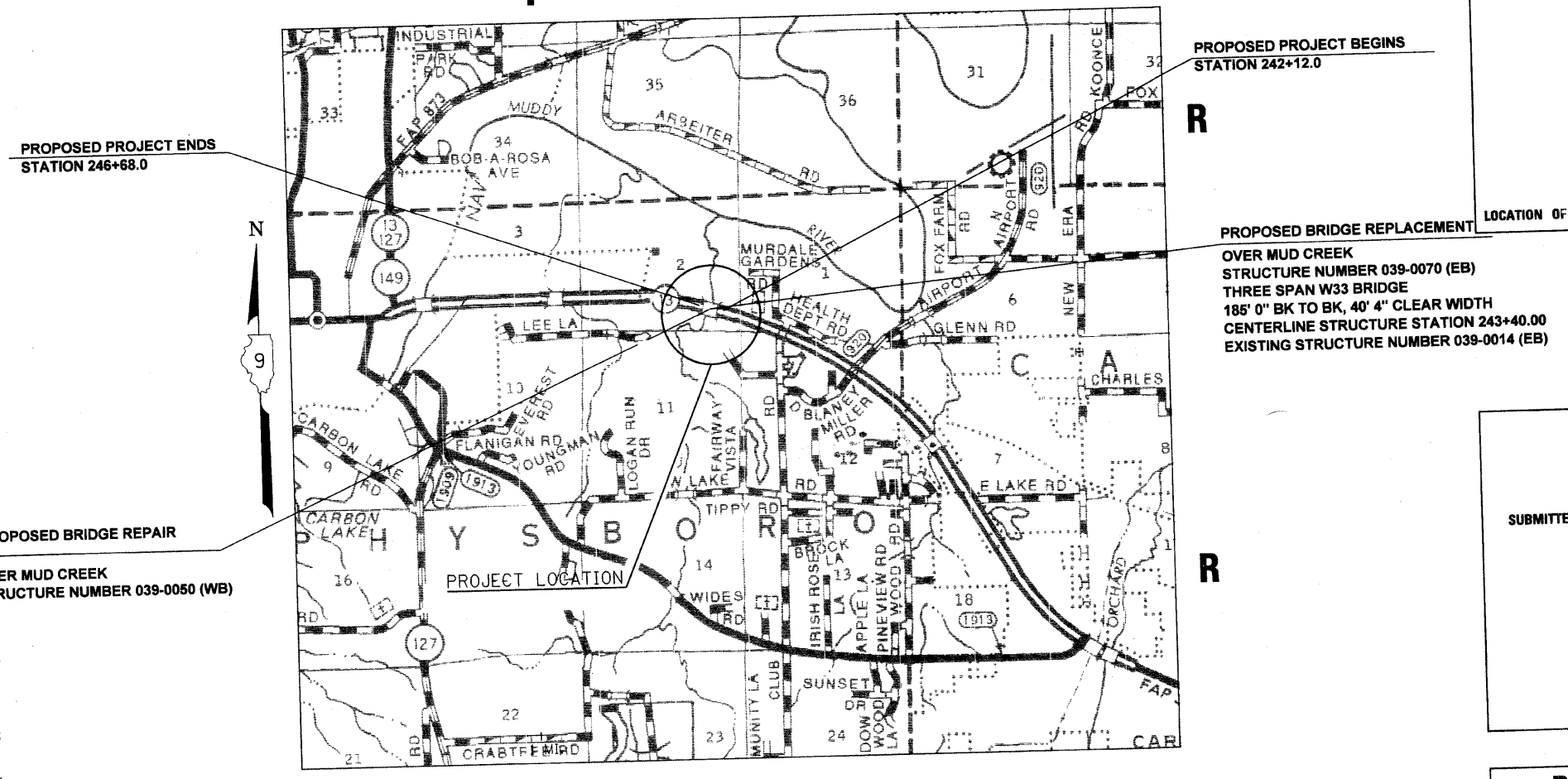
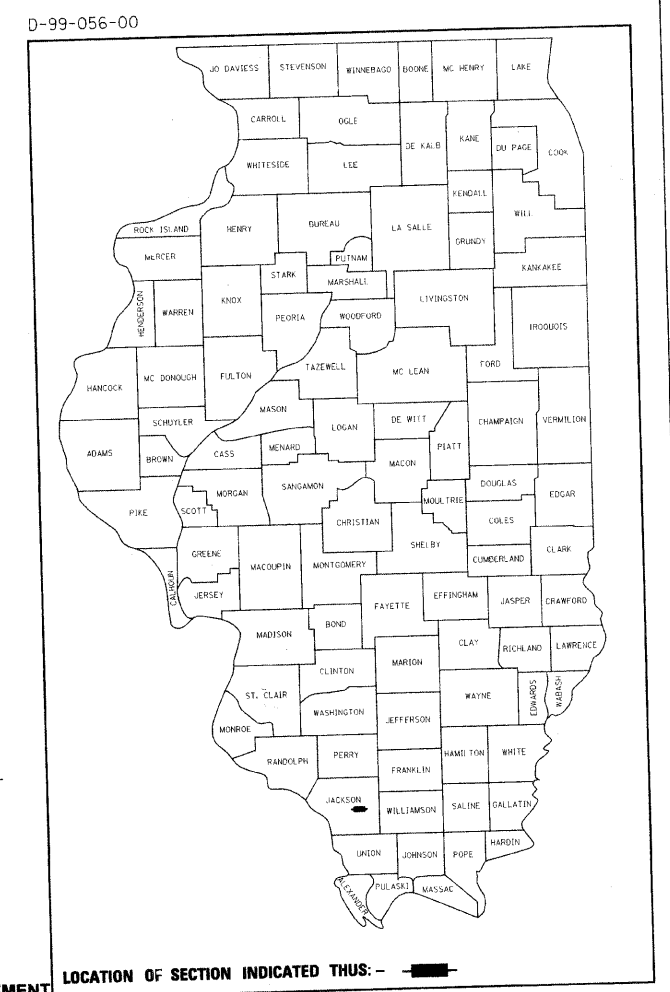
FOR INDEX OF SHEETS, SEE SHEET NO. 2
FOR SUMMARY OF QUANTITIES, SEE SHEET NUMBERS 5 - 8

TRAFFIC DATA

2008 ADT=11,000 WITH 6.5% TRUCKS
POSTED SPEED 55MPH

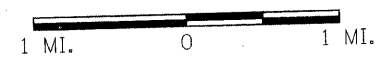
TOWNSHIP

MURPHYSBORO



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

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123 or www.julietcall.com



NET LENGTH OF ROADWAY: 272 FEET
NET LENGTH OF STRUCTURE: 185 FEET
NET LENGTH OF PROJECT: 457 FEET

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED March 19, 2009
Nancy C. Krami DISTRICT ENGINEER

August 14, 2009
Charles G. Ingersoll ENGINEER OF DESIGN AND ENVIRONMENT

August 14, 2009
Christine M. Reed DIRECTOR, DIVISION OF HIGHWAYS

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OF THE STATE OF ILLINOIS**

(618) 509-2171
CENTREX 782-4554
PROJECT ENGINEER: CHARLES STEIN
DESIGNER: GEORGE SHEPARD

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	2
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

•(12-118-1;D9 BSMART FY 10-1

SIGNATURE SHEET

Prepared By: Joe Zierfain
DISTRICT STUDIES & PLANS ENGINEER

Examined By: James Lewis Emory
DISTRICT LAND ACQUISITION ENGINEER

Examined By: Conni Miller
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: Art Wiley
DISTRICT OPERATIONS ENGINEER

Examined By: Jim Smother
DISTRICT CONSTRUCTION ENGINEER

Examined By: Bruce W. Pribles
DISTRICT MATERIALS ENGINEER

Examined By: Jim Smother
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: Randy Clayton
ASSISTANT REGIONAL ENGINEER

Approved By: May C. Lami
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

DATE: March 18 2009

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	4
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
*12-1B-1;D9 BSMART FY 10-1				

GENERAL NOTES

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES:

ALL HOT-MIX ASPHALT
2.016 TONS/CU. YD.

BITUMINOUS MATERIALS:

ON PAVEMENT
0.09 GAL./SQ. YD.

INTERMEDIATE. LIFTS (FOG COAT)
0.04 GAL./SQ. YD.

ON AGGREGATE SURFACE
0.32 GAL./SQ. YD.

AGGREGATE (PRIME COAT)
0.0015 TONS/SQ. YD.

ALL AGGREGATE
2.05 TONS/CU. YD.

RIPRAP
1.50 TONS/CU. YD.

THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION FOR HOT MIX ASPHALT SURFACE COURSE.

ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL REMOVAL IS REQUIRED TO CONSTRUCT FINAL GRADE LINES. AT WHICH TIME, THE PERMANENT EROSION CONTROL SHALL BE INSTALLED.

THE CONTRACTOR SHALL STAMP STATIONING IN THE HOT MIX ASPHALT SURFACE AT 100 m (300 FT.) INTERVALS ON THE OUTSIDE EDGE OF PAVEMENT AND AS DIRECTED BY THE ENGINEER. THE STATION SYMBOL STAMPS USED SHALL BE FURNISHED BY THE CONTRACTOR. THEY SHALL BE 140 mm (5 1/2 IN.) TALL OF A DESIGN APPROVED BY THE ENGINEER, AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

PRIOR TO PLACEMENT OF THE FINAL PAVEMENT MARKINGS THE RESIDENT ENGINEER SHALL CONTACT THE BUREAU OF OPERATIONS AND ARRANGE FOR INSPECTION AND APPROVAL OF THE PAVEMENT MARKING LAYOUT.

AREAS OF EXISTING AGGREGATE SHOULDERS THAT SHALL BE REMOVED FOR CONSTRUCTION OF FINAL SHOULDER SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR EARTH EXCAVATION.

IT WILL BE THE CONTRACTORS RESPONSIBILITY TO REMOVE ANY DEBRIS OR DIRT CAUSED BY CONSTRUCTION ACTIVITY THAT COVERS THE NEW RIPRAP. NO EXTRA COMPENSATION SHALL BE ALLOWED FOR THIS WORK.

PROTECTIVE COAT SHALL BE APPLIED TO THE NEW BRIDGE DECK AND APPROACH PAVEMENTS IN ACCORDANCE WITH ARTICLE 503.19 OF THE STATE STANDARD SPECIFICATIONS. THE SEASONAL EXCEPTION SHALL NOT APPLY. THE PROTECTIVE COAT SHALL BE APPLIED REGARDLESS OF THE CURING METHOD USED. THE RATE OF APPLICATION FOR EACH COAT ON CUT GROOVED AREAS SHALL BE 25 SQUARE YARDS PER GALLON OF MIXTURE.

ATTAINMENT OF PROPER ROADWAY CROSS SLOPE SHALL BE FULLY ACCOMPLISHED WITH HOT MIX ASPHALT BINDER COURSE AS DIRECTED BY THE ENGINEER.

REMOVAL OF THE ENTIRE EXISTING 12" BRIDGE APPROACH PAVEMENTS AND STRUCTURES SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER SQUARE YARD FOR PAVEMENT REMOVAL.

AGGREGATE FOR TEMPORARY ACCESS SHALL BE USED AS DIRECTED BY THE ENGINEER FOR MAINTENANCE PURPOSES. THE GRADATION SHALL BE CA-6 OR CA-10 AS DIRECTED BY THE ENGINEER. A QUANTITY OF 35 TONS HAS BEEN ESTIMATED FOR THIS WORK.

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION OR A CHANGE IN THE SCOPE OF THE WORK. THE CONTRACTOR, HOWEVER, WILL BE PAID FOR THE ACTUAL QUANTITY FURNISHED AT THE UNIT PRICE BID FOR THE WORK. CONSTRUCTION PLANS ARE AVAILABLE FOR REVIEW AT THE DISTRICT 9 HEADQUARTERS IN CARBONDALE, ILLINOIS.

IN ADDITION TO THE REQUIREMENTS OF ARTICLE 107.16, THE CONTRACTOR SHALL PROTECT THE SURFACE OF ALL BRIDGE DECK AND BRIDGE APPROACH PAVEMENTS IN A MANNER SATISFACTORY TO THE ENGINEER BEFORE ANY EQUIPMENT IS ALLOWED TO CROSS THE STRUCTURE. PROTECTION SHALL BE PROVIDED FOR ALL EQUIPMENT AS DEFINED IN ARTICLE 101.17 REGARDLESS OF TRACK MOUNTED OR WHEELED.

IN ADDITION TO THE TRAFFIC CONTROL STANDARDS, A CHANGEABLE MESSAGE SIGN SHALL BE PLACED ON EACH TERMINAL OF THE JOB AT A LOCATION DETERMINED BY THE ENGINEER. THE COST OF THESE CHANGEABLE MESSAGE SIGNS SHALL BE PAID FOR AT THE AGREED UNIT PRICE FOR CHANGEABLE MESSAGE SIGNS, CAL MONTH. THEY SHALL BE FUNCTIONING TWO WEEKS PRIOR TO CONSTRUCTION AND ONE MONTH AFTER THE BEGINNING OF CONSTRUCTION.

PRIOR TO REMOVAL OF THE CROSS OVER, A SAWCUT SHALL BE PLACED TO LEAVE THE WIDTH OF THE EXISTING SHOULDER FROM EASTBOUND PAVEMENT STATION 235+00.0 RT. TO STATION 238+50.0 RT. AND FROM STATION 248+00.0 TO STATION 251+00.0.

HMA MIXTURE DESIGNS

Location(s):	Hot-Mix Asphalt Surface Course & Top Lift of Cross Over Pavement
Mixture Use(s):	Polymerized Hot-Mix Asphalt Surface Course, Mix E, N105
AC/PG:	SBS PG76-22
RAP % (Max):	0
Design Air Voids:	4.0 %, 105 Gyration Design
Mixture Composition: (Gradation Mixture)	IL-9.5 mm or IL12.5 mm
Friction Aggregate:	E Surface

Location(s):	Hot-Mix Asphalt Leveling Binder
Mixture Use(s):	Hot-Mix Asphalt Surface Course, Mix C, N90
AC/PG:	PG64-22
RAP % (Max):	10
Design Air Voids:	4.0 %, 90 Gyration Design
Mixture Composition: (Gradation Mixture)	IL-9.5 mm or IL-12.5 mm
Friction Aggregate:	None

Location(s):	Hot-Mix Asphalt Shoulders
Mixture Use(s):	Hot-Mix Asphalt Shoulders and Shoulder Widening
AC/PG:	PG58-22
RAP % (Max):	50
Design Air Voids:	2.0 %, 30 Gyration Design
Mixture Composition: (Gradation Mixture)	HMA Shoulders
Friction Aggregate:	None

Location(s):	Lower lifts of cross-over
Mixture Use(s):	Hot-Mix Asphalt Binder Course, N90, IL19.0
AC/PG:	PG64-22
RAP % (Max):	10
Design Air Voids:	4.0 %, 90 Gyration Design
Mixture Composition: (Gradation Mixture)	IL-19.0 mm
Friction Aggregate:	None

COMMITMENTS

NONE AS OF MARCH 20, 2009.

REFER TO COMMITMENT

FILE FOR ANY COMMITMENTS AFTER THIS DATE.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*112-11B-14D9 BSMART FY 10-1

SUMMARY OF QUANTITIES (CONT.)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	RURAL-JACKSON COUNTY	
				100% FED.	
				X071-2A SN 039-0014	SFTY-2A SN 039-0050
				QUANTITY	QUANTITY
40603575	POLYMERIZED HOT-MIX ASPHALT SURFACECOURSE, MIX "E", N105	TON	165.7	165.7	
42001300	PROTECTIVE COAT	SQ YD	273.4	273.4	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	54.7	54.7	
44000100	PAVEMENT REMOVAL	SQ YD	1348	1,348	
44000915	HOT-MIX ASPHALT SURFACE REMOVAL (DECK)	SQ YD	713		713
44004250	PAVED SHOULDER REMOVAL	SQ YD	1274	795	479
48101200	AGGREGATE SHOULDERS, TYPE B	TON	123	123	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	515	515	
44213200	SAW CUTS	FOOT	600	600	
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1	
50102400	CONCRETE REMOVAL	CU YD	9.6		9.6
50200100	STRUCTURE EXCAVATION	CU YD	354.8	354.8	
50300225	CONCRETE STRUCTURES	CU YD	261.2	261.2	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	409.7	399.0	10.7
50300260	BRIDGE DECK GROOVING	SQ YD	1732	1,048.0	684
50300280	CONCRETE ENCASEMENT	CU YD	8.4	8.4	
50300300	PROTECTIVE COAT	SQ YD	2012	1,283	729
50300530	FLOOR DRAIN EXTENSION	EACH	26		26
50300100	FLOOR DRAINS	EACH	22	22	
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1	
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	1734		1734
50500505	STUD SHEAR CONNECTORS	EACH	4086	4,086	
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	12		12
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	117260	115,810	1450
50800515	BAR SPLICERS	EACH	110	92	18

PLOT DATE = 3/19/2009
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	7
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*12-1B-1:09 BSMART FY 10-1

SUMMARY OF QUANTITIES (CONT.)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	RURAL-JACKSON COUNTY	
				100% FED.	
				X071-2A SN 039-0014	SFTY-2A SN 039-0050
			QUANTITY	QUANTITY	
51201600	FURNISHING STEEL PILES HP12X53	FOOT	715	715	
51201710	FURNISHING STEEL PILES HP12X84	FOOT	792	792	
51202305	DRIVING PILES	FOOT	1507	1,507	
51203600	TEST PILE STEEL HP12X53	EACH	1	1	
51204650	PILE SHOES	EACH	24	24	
51500100	NAME PLATES	EACH	1	1	
52000110	PREFORMED JOINT STRIP SEAL	FOOT	81		81
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12		12
52100520	ANCHOR BOLTS, 1"	EACH	72	48	24
542A1063	PIPE CULVERTS, CLASS A, TYPE 2 18"	FOOT	600	600	
54244405	FLUSH INLET BOX FOR MEDIAN, STANDARD 542546	EACH	2	2	
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	90	90	
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	147	147	
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 FOOT POSTS	FOOT	250	250	
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	2	
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	2	2	
63200310	GUARDRAIL REMOVAL	FOOT	206	206	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	24	21	3
67100100	MOBILIZATION	L SUM	1	0.5	0.5
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	2	1	1
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	1		1
70100410	TRAFFIC CONTROL AND PROTECTION, STANDARD 701416	EACH	1	1	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	4	2	2
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	1	0.5	0.5
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	100		100
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	5450	4,106	1344

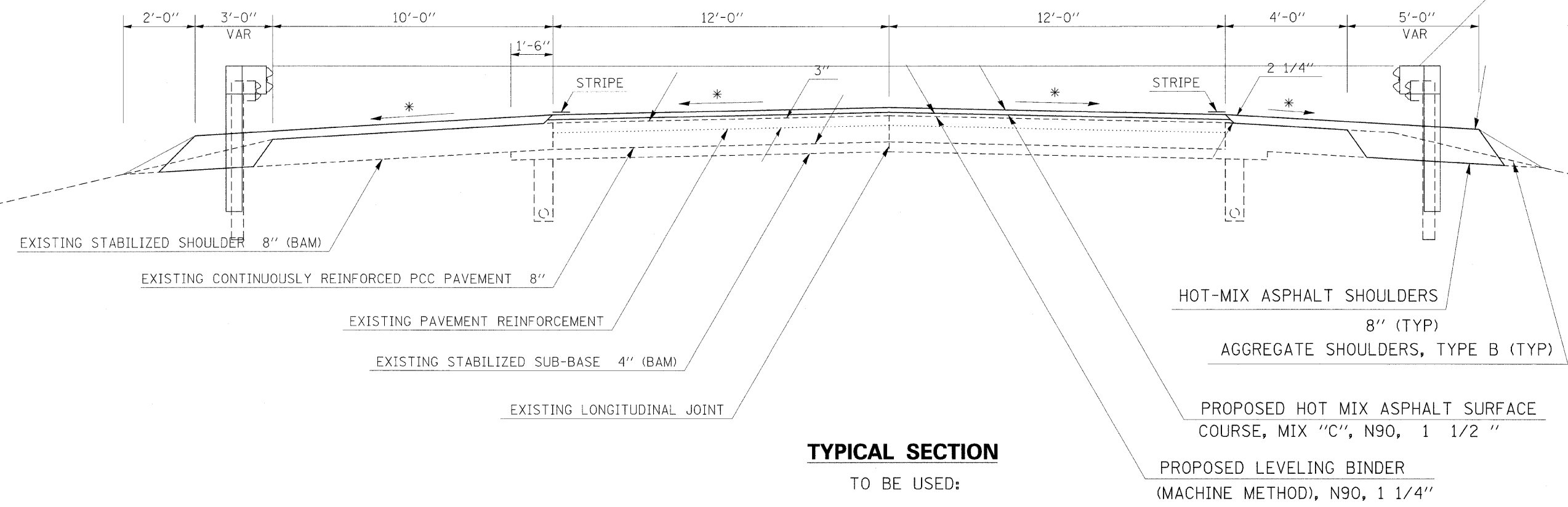
* SPECIALTY ITEM

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*12-1B-1d9 BSMART FY 10-1				

⊕
FAP 331
(IL 13)

EXISTING AND PROPOSED TRAFFIC
BARRIER TERMINALS OR SPBGR, TY A
(TYP)



TYPICAL SECTION

TO BE USED:

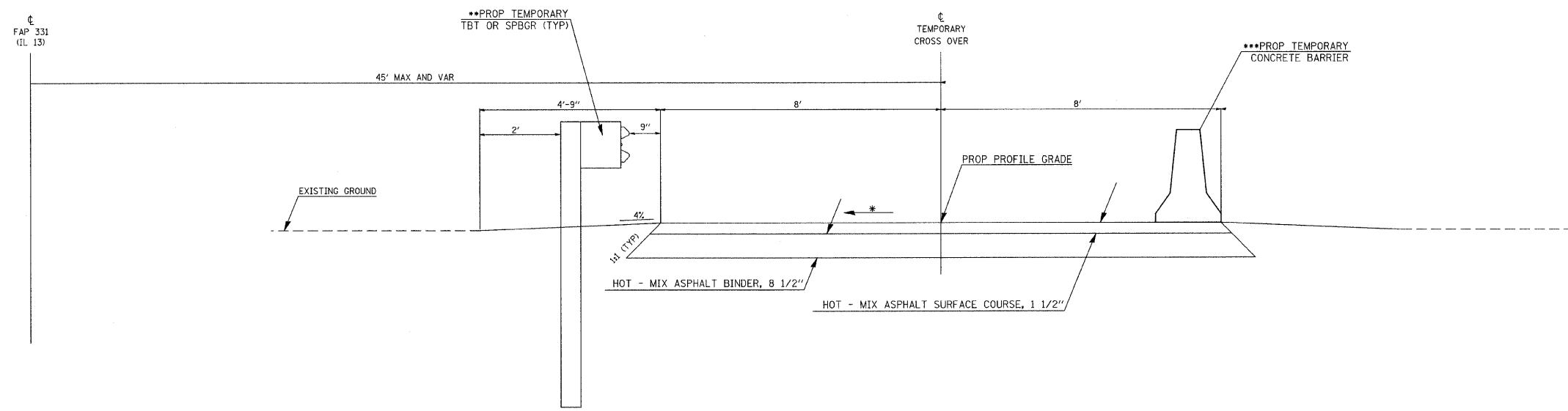
EB STA 244+68.5 TO EB STA 246+68.0

LOOKING WEST

* MATCH EXISTING CROSS SLOPE

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	10
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
*12-1B-1D9 BSMART FY 10-1				



TYPICAL SECTION

(TEMPORARY CROSS OVER)
 TO BE USED : STA 235+00.0 TO STA 242+53.0
 STA 244+26.0 TO STA 251+00.0
 WESTBOUND BRIDGE OMISSION: STA 242+53.0 TO STA 244+26.0

STRUCTURAL DESIGN TRAFFIC: 2020
 PV = 11550 SU = 450 MU = 300
 ROAD/STREET CLASSIFICATION: Class I ROAD
 PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:
 P = 94% S = 4% M = 2%
 TRAFFIC FACTOR: Actual TF = 0.52515
 Minimum TF = 0.42975

*SEE SHEET CROSS SECTIONS FOR PAVEMENT CROSS SLOPES
 **APPLIES TO WEST SIDE OF STRUCTURE ONLY
 ***APPLIES STA. 236+25.00 TO 245+00.00 ONLY

PLOT DATE = 3/18/2009
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	11
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
*12-1B-1;D9 BSMART FY 10-1				

EARTHWORK SCHEDULE

LOCATION STAGE OF CONSTRUCTION	EARTH EXCAVATION	EMBANKMENT	CHANNEL EXCAVATION (UNSUITABLE)	SHRINKAGE FACTOR	EXCAVATION ADJUSTED FOR SHRINKAGE	EXCAVATION REQUIRED TO COMPLETE	BORROW EXCAVATION*
	CU YD	CU YD	CU YD		CU YD	CU YD	CU YD
FAP RT. 331 (IL 13)							
STAGE I	131	195		0.50	65	130	153
STAGE II	79	67	1663	0.58	33	34	40
TOTALS	210		1663				193

* A SWELL FACTOR OF 1.18 WAS USED TO CALCULATE BORROW EXCAVATION.
SWELL FACTORS ARE FOR INFORMATION ONLY.

GUARDRAIL SCHEDULE

LOCATION STATION TO STATION	TRAFFIC BARRIER TERMINAL				SPBGR TYPE A		GUARDRAIL REMOVAL	GUARDRAIL MARKERS	TERMINAL MARKER DIRECT APPLIED	COMMENTS
	PERMANENT		TEMPORARY		PERMANENT	TEMPORARY				
	TYPE 1 SPECIAL, FLARED	TYPE 6	TYPE 1	TYPE 6						
FAP RT. 331 (IL 13)	EACH		EACH		EACH		FOOT	EACH	EACH	
LT 244+25.00 TO LT 245+28.00							103.00			SN 039-0070 SW QUAD
LT 244+30.00 TO LT 244+75.65		1								SN 039-0070 SW QUAD
LT 244+75.65 TO LT 246+00.65					125.0			2		SN 039-0070 SW QUAD
LT 246+00.65 TO LT 246+38.06	1								1	SN 039-0070 SW QUAD
RT 244+25.00 TO RT 245+28.00							103.0			SN 039-0070 NW QUAD
RT 244+30.00 TO RT 244+75.65		1								SN 039-0070 NW QUAD
RT 244+75.65 TO RT 246+00.65					125.0			1		SN 039-0070 NW QUAD
RT 246+00.65 TO RT 246+38.06	1								1	SN 039-0070 NW QUAD
RT 244+32.48 TO RT 244+78.12				1						SN 039-0050 SW QUAD
RT 244+78.12 TO RT 246+63.95						187.5		3		SN 039-0050 SW QUAD
RT 246+63.95 TO RT 247+00.43			1						1	SN 039-0050 SW QUAD
TOTALS	2	2	1	1	250	188	206	6	3	

NOTE: THIS STATIONING IS REFERENCE TO THE EASTBOUND PAVEMENT.

PLOT DATE = 3/18/2009
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	•	JACKSON	67	13
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*12-118-11D9 BSMART FY 10-1

SEEDING SCHEDULE

LOCATION STATION TO STATION	SEEDING CLASS 2	SEEDING CLASS 7 (TEMPORARY)	NITROGEN FERTILIZER NUTRIENTS		PHOSPHORUS FERTILIZER NUTRIENTS	POTASSIUM FERTILIZER NUTRIENTS	AGRICULTURAL GROUND LIMESTONE	MULCH METHOD 2 FOR CLASS 2	MULCH METHOD 2 FOR CLASS 7	TEMPORARY EROSION CONTROL SEEDING
	ACRE	ACRE	CLASS 2 POUND	CLASS 7 POUND	POUND	POUND	TON	ACRE	ACRE	POUND
STAGE 1 (CROSS OVER)		0.25		10.0					0.25	50
STAGE 3 (FINAL GRADING)	0.50	0.50	45.0	20.0	45.0	45.0	1.0	0.50	0.50	100
TOTALS	0.50	0.75	45	30	45	45	1.0	0.50	0.75	150
			75					1.25		

TEMPORARY CONCRETE BARRIER SCHEDULE

LOCATION STATION TO STATION	NUMBER OF BARRIER (FOR INFORMATION ONLY)	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	COMMENTS
	EACH	FOOT	FOOT	
SN 039-0050 BSMART				
STAGE I				
W. B. Sta. 241+50 - 242+74	10	125		TAPER
W. B. Sta. 242+74 - 244+99	18	225		TANGENT
STAGE II				
W. B. Sta. 240+62 - 242+74	17	87.5	125	TAPER
W. B. Sta. 242+74 - 244+99	18		225	TANGENT
SN 039-0070 (EB)				
236+30 TO 241+71	43	100	437.5	TAPER
241+71 TO 245+75	32	400.0		TANGENT
245+75 TO 249+78	32	400.0		TAPER
TOTALS		1338	788	

PLOT DATE = 3/18/2009
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	14
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*12-1B-1d9 BSMART FY 10-1				

PAVEMENT MARKING SCHEDULE

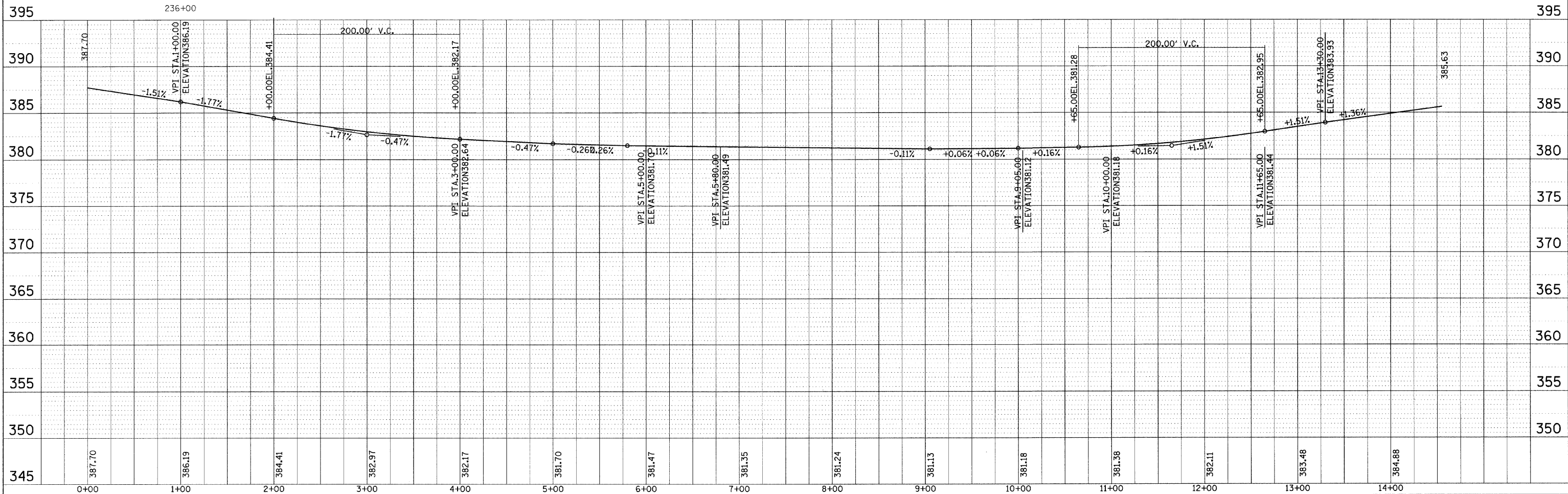
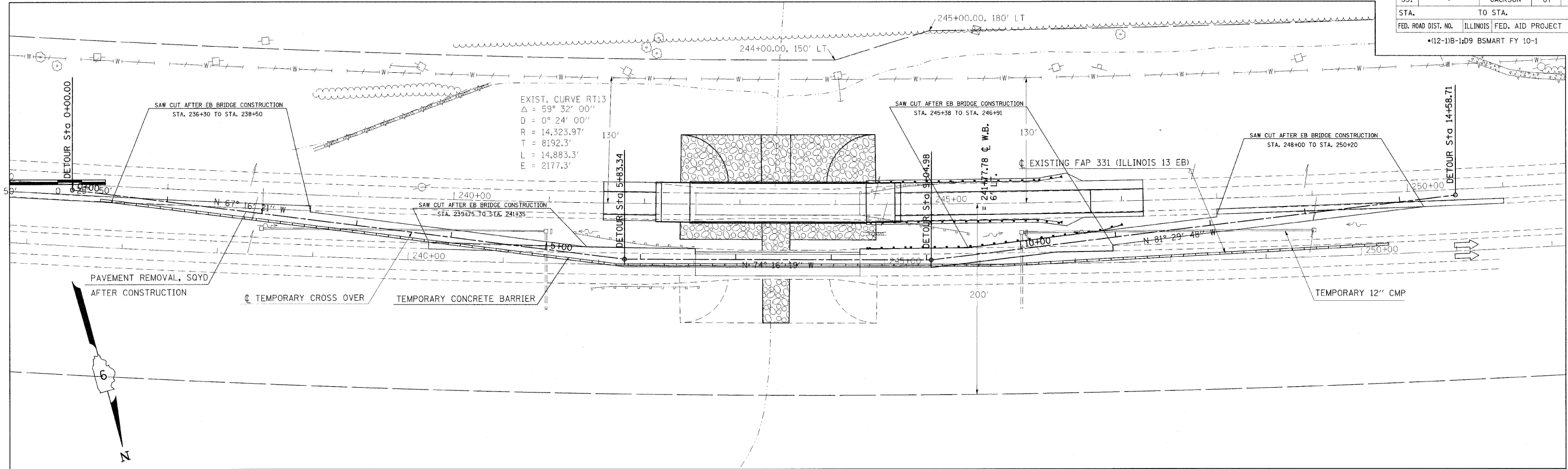
LOCATION STATION TO STATION			LENGTH (FOR INFORMATION ONLY) FEET	PAVEMENT MARKING REMOVAL SQ FT	TEMPORARY PAVEMENT MARKING LINE - 4"		PAINT PAVEMENT MARKING - LINE 4"		WORK ZONE PAVEMENT MARKING REMOVAL SQ FT	RAISED REFLECTIVE PAVEMENT MARKER EACH	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL EACH
					WHITE FOOT	YELLOW FOOT	WHITE FOOT	YELLOW FOOT			
FAP RT. 331 (IL 13)											
235+00	TO	251+00	1460					973.3			
235+00	TO	238+00	300	100.0	375.0	300.0	375.0	300.0	225.0		
239+50	TO	242+50	300	100.0	375.0	300.0	375.0	300.0	225.0		
240+50	TO	247+25	675		843.8	675.0	843.8	675.0	506.2	5.0	5.0
244+50	TO	247+00	250	83.3	312.5	250.0	312.5	250.0	187.5		
248+00	TO	251+00	300	100.0	375.0	300.0	375.0	300.0	225.0		
TOTALS				383	2281	1825	2281	1825	2342	5	5
					4106		4106				

PLOT DATE = 3/18/2009
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 USER NAME = shp\par-dgt

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331		JACKSON	67	16
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*12-11B-1D9 BSMART FY 10-1				

PLAN	DATE
BY	
CHECKED	
APPROVED	
NO. BOOK	
NO.	

PROFILE	DATE
BY	
CHECKED	
APPROVED	
NO. BOOK	
NO.	



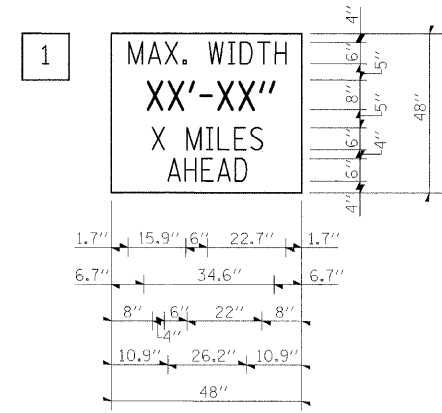
PLAN AND PROFILE MEDIAN CROSSOVERS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	•	JACKSON	67	17

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

• (12-118-1; D9 BSMART FY10-1

SIGN LEGEND

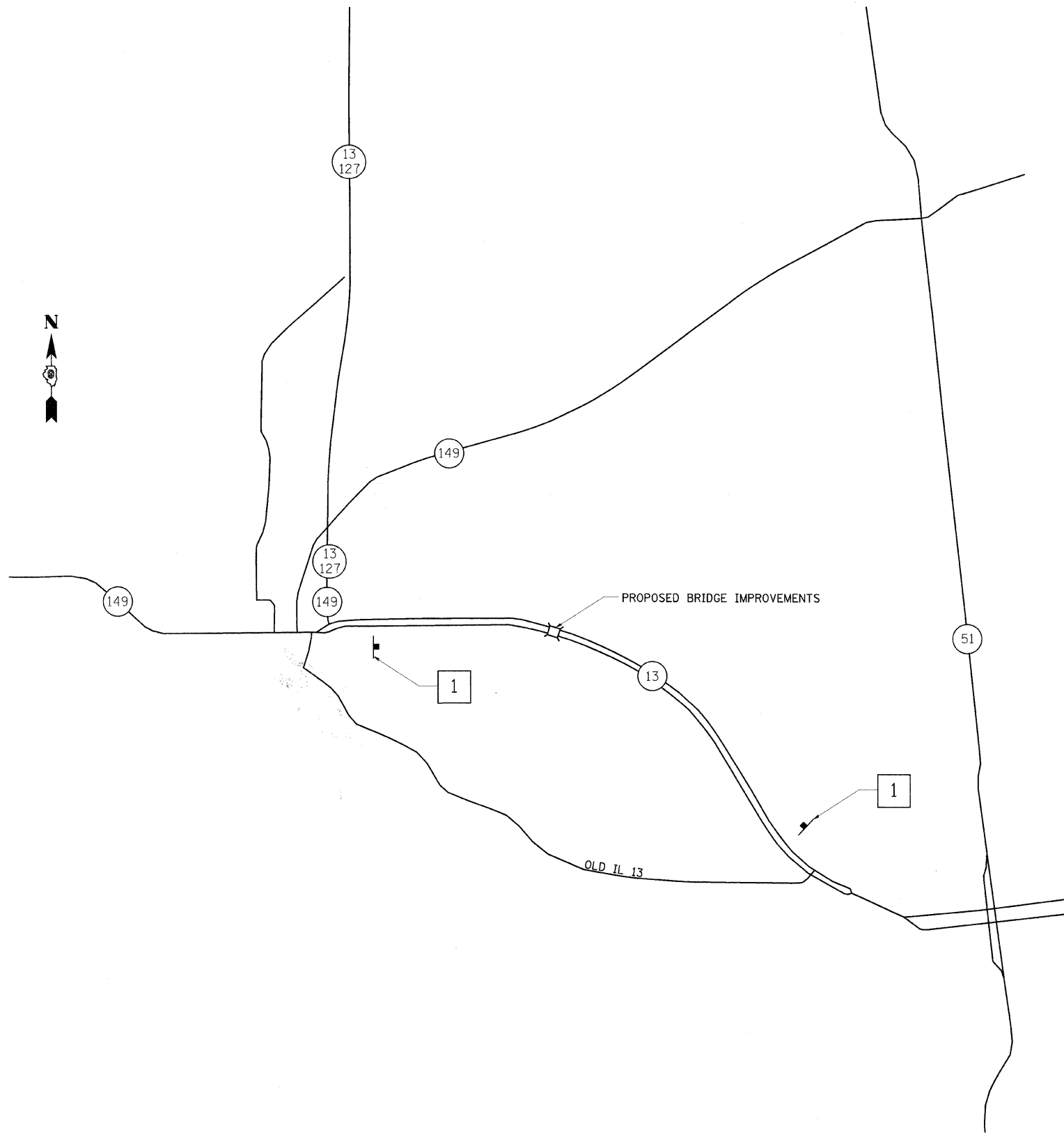


W12-1103

SERIES D ALPHABET. NO BORDER.
 BLACK ON WHITE.

DETOUR NOTES

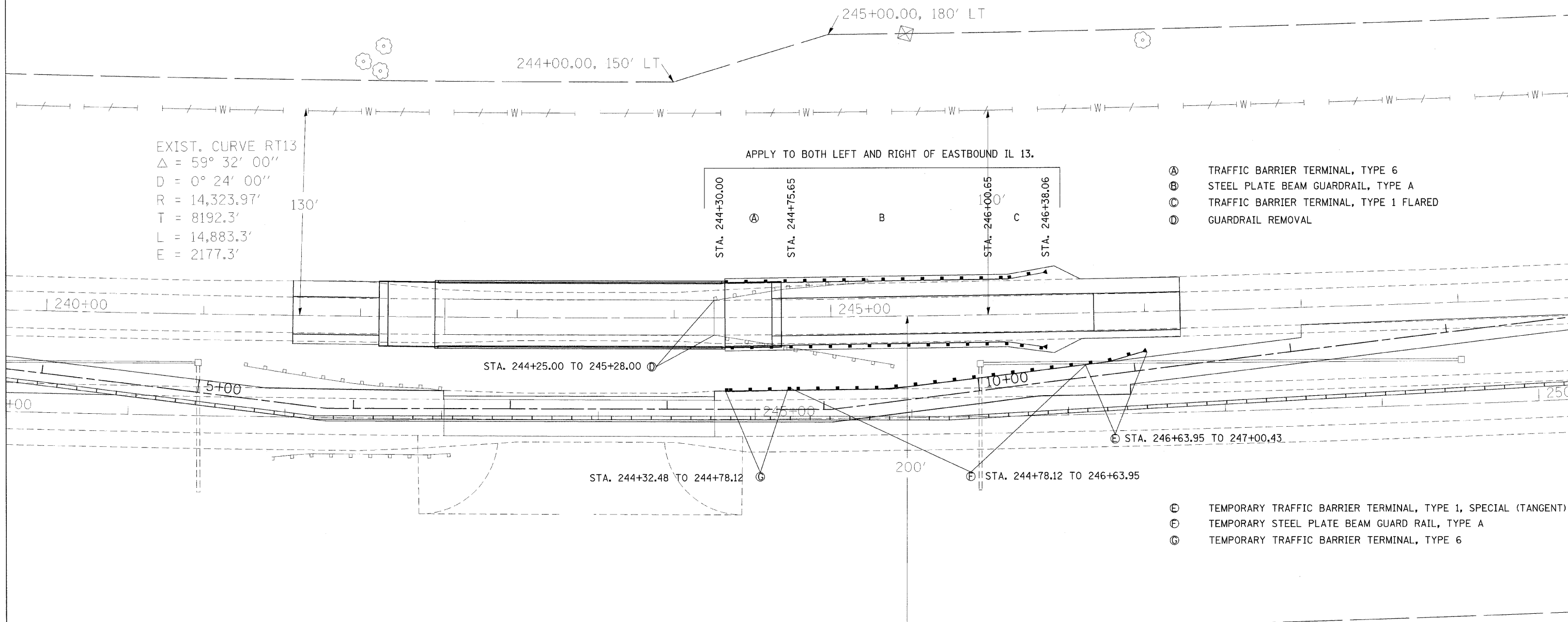
1. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT THE SIGNS AT THE LOCATIONS DIRECTED BY THE ENGINEER. ALL SIGNS SHALL BE POST MOUNTED.
2. THE ABOVE NOTED WORK, INCLUDING SIGN, POSTS, HARDWARE AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.
3. THE WIDTH SHOWN ON THE W12-1103 SIGN SHALL BE 12'-6" OR AS DIRECTED BY THE ENGINEER. THE "X" MILES AHEAD WILL BE DETERMINED BY THE ENGINEER.



PLOT DATE = 3/17/2009
 PLOT SCALE = 1/8"=1'-0"
 USER NAME = parrish

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	18
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*(12-1B-1;09 BSMART FY 10-1				

GUARDRAIL AND TERMINAL PLAN



EXIST. CURVE RT13
 $\Delta = 59^\circ 32' 00''$
 $D = 0^\circ 24' 00''$
 $R = 14,323.97'$
 $T = 8192.3'$
 $L = 14,883.3'$
 $E = 2177.3'$

APPLY TO BOTH LEFT AND RIGHT OF EASTBOUND IL 13.

- Ⓐ TRAFFIC BARRIER TERMINAL, TYPE 6
- Ⓑ STEEL PLATE BEAM GUARDRAIL, TYPE A
- Ⓒ TRAFFIC BARRIER TERMINAL, TYPE 1 FLARED
- Ⓓ GUARDRAIL REMOVAL

- Ⓔ TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)
- Ⓕ TEMPORARY STEEL PLATE BEAM GUARD RAIL, TYPE A
- Ⓖ TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6

PLOT DATE = 3/18/2009
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 USER NAME = jh

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331		JACKSON	67	19
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
*(12-11B-1;09 BSMART FY 10-1				

MEDIAN DRAINAGE (LEFT OF STRUCTURE)

EXIST. CURVE RT13
 $\Delta = 59^\circ 32' 00''$
 $D = 0^\circ 24' 00''$
 $R = 14,323.97'$
 $T = 8192.3'$
 $L = 14,883.3'$
 $E = 2177.3'$

PROPOSED PIPE CULVERTS, CLASS A, TYPE 2 18"
 STATION 238+00.00, 37'-2 3/8" RT
 FLOWS WEST
 INVERT ELEV. 379.55
 SKEW ANGLE 1.3 DEGREES

PROPOSED FLUSH INLET BOX FOR MEDIAN,
 STANDARD 542546
 STATION 238+00.00, 37'-2 3/8" RT
 ELEV. TOP OF GRATE 382.15
 INVERT ELEV. 379.55
 PROPOSED

EXISTING FLUSH INLET BOX FOR MEDIAN
 TO REMAIN IN PLACE
 STATION 241+00.00, 31' RT
 EXISTING TOP OF GRATE 379.50
 EXISTING INVERT ELEV. 376.40

PROPOSED PIPE CULVERTS, CLASS A, TYPE 2 18"
 STATION 241+00.00, 31' RT
 FLOWS WEST
 INVERT ELEV. 376.40
 SKEW ANGLE 1.3 DEGREES

MEDIAN DRAINAGE (RIGHT OF STRUCTURE)

PROPOSED PIPE CULVERTS, CLASS A, TYPE 2 18"
 STATION 246+00.00, 31' RT
 FLOWS WEST
 INVERT ELEV. 376.41
 SKEW ANGLE 1.3 DEGREES

PROPOSED FLUSH INLET BOX FOR MEDIAN,
 STANDARD 542546
 STATION 249+00.00, 36'-6" RT
 ELEV. TOP OF GRATE 381.40
 INVERT ELEV. 379.16

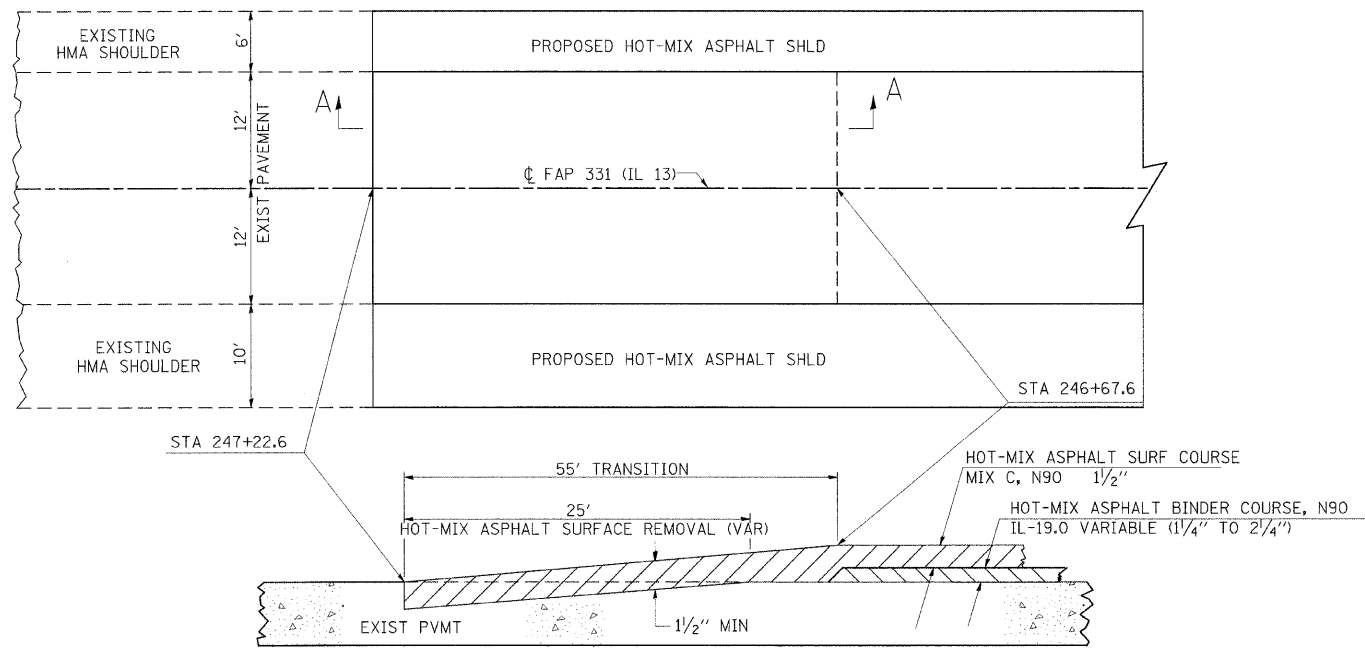
EXISTING FLUSH INLET BOX FOR MEDIAN
 TO REMAIN IN PLACE
 STATION 246+00.00, 31' RT
 EXISTING TOP OF GRATE 379.49
 EXISTING INVERT ELEV. 376.41

PROPOSED PIPE CULVERTS, CLASS A, TYPE 2 18"
 STATION 249+00.00, 36'-6" RT
 FLOWS WEST
 INVERT ELEV. 379.16
 SKEW ANGLE 1.3 DEGREES

PLOT DATE = 3/18/2009
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 USER NAME = shepardg

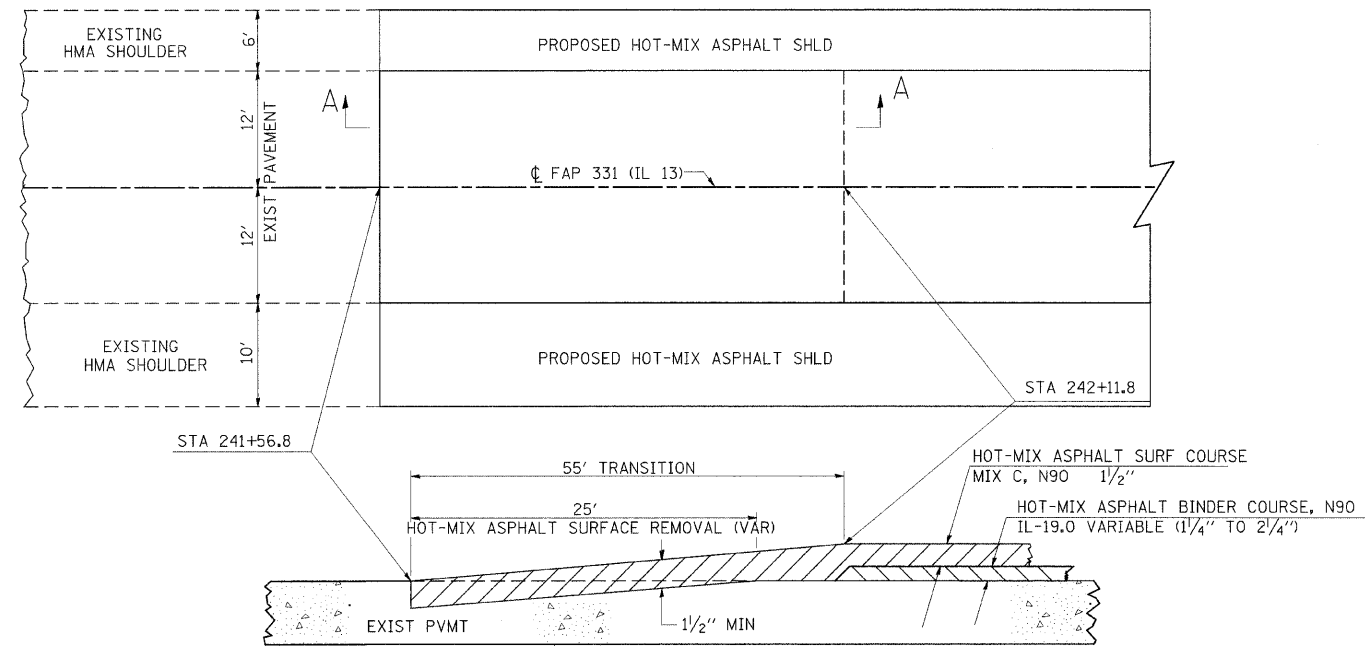
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	20
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*12-1B-1d9 BSMART FY 10-1				

WEST BUTT JOINT



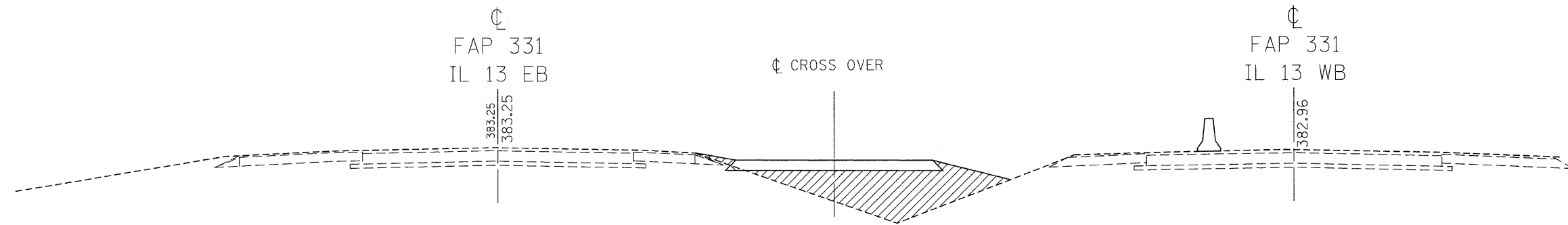
SECTION A-A

EAST BUTT JOINT



SECTION A-A

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	•	JACKSON	67	21
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
*12-1B-1;D9 BSMART FY 10-1				

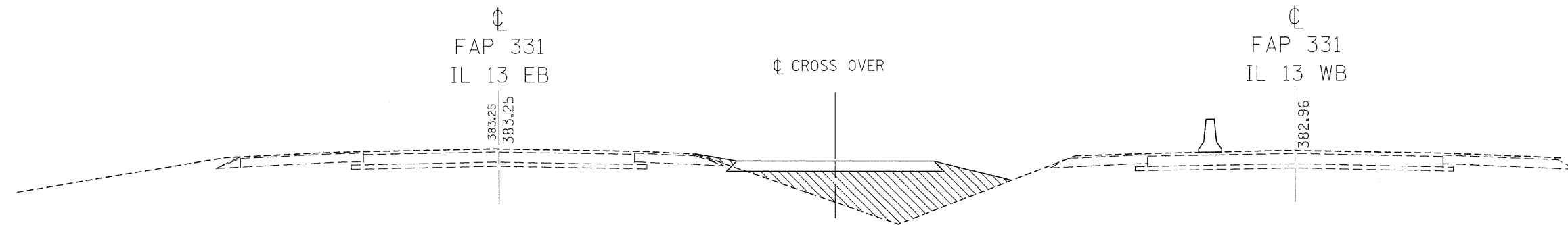


STAGE I EMBANKMENT



STAGE I EARTH EXCAVATION

NOTE: STAGE I EARTHWORK IS THE EARTHWORK NEEDED TO BUILD THE TEMPORARY CROSS OVER.
STAGE II EARTHWORK IS THE EARTHWORK NEEDED TO REMOVE THE CROSS OVER AND TO FINAL GRADE THE JOB.



STAGE II EMBANKMENT



STAGE II EARTH EXCAVATION

NOTE: STAGE I EARTHWORK IS THE EARTHWORK NEEDED TO BUILD THE TEMPORARY CROSS OVER.
STAGE II EARTHWORK IS THE EARTHWORK NEEDED TO REMOVE THE CROSS OVER AND TO FINAL GRADE THE JOB.

Bench Mark: Square cut on S.E. corner of headwall of East Bound Lane bridge S.N. 039-0014 Sta. 242+45.00 Elevation 380.74

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Existing Structure: S.N. 039-0014 (EB) built in 1954 under F.A. Route 14, section 12-1B-1. Reconstructed in 1980 under F.A. Route 107, section 12-1BY-1. S.N. 039-0050 (WB) built in 1974. The existing EB superstructure consists of a three span continuous steel wide flange beam, supporting a concrete deck and the substructure consists of pile bent abutments and solid wall piers. The back to back of abutments length is 173'-11" and the out to out width of the deck is 33'-8". The existing EB structure is to be replaced. During construction, traffic will be detoured to the WB structure using temporary median cross-overs.

No salvage

GENERAL NOTES

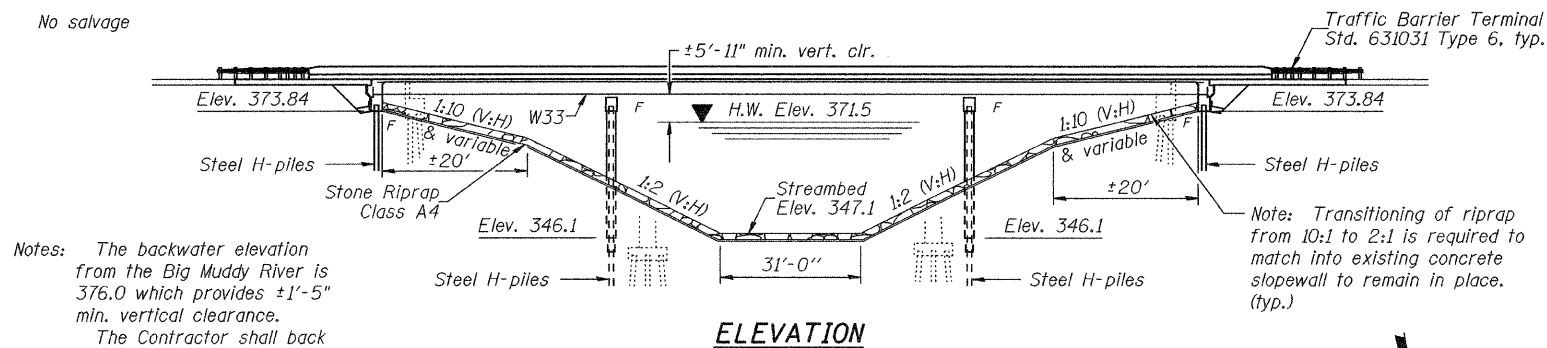
Calculated weight of Structural Steel
= 151430 LB (AASHTO M270, Gr. 50)
= 14740 LB (AASHTO M270, Gr. 36)

No field welding is permitted except as specified in the contract documents.
Reinforcement bars shall conform to the requirements of ASTM A 706, Gr 60. See Special Provisions.
Reinforcement bars designated (E) shall be epoxy coated.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer. Slope channel to match channel under WB structure.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing.
Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 7/8" ϕ , open holes 1 1/16" ϕ , unless otherwise noted.
The inorganic zinc rich primer/ Acrylic/ Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for all exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G4/8. See Special Provision for "Cleaning and Painting New Metal Structures."
If the Contractor elects to use cantilever forming brackets on the exterior beams, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06 (b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the west abutment or approved by the Engineer before ordering the remainder of piles.
In lieu of the hammer selection criteria and use of the FHWA Modified Gates formula specified in Section 512 of the Standard Specifications, the Contractor shall conduct a wave equation analysis to establish the driving criteria at all pile foundations which specify a nominal required bearing above 600 kips. The analysis and calculations shall be submitted to the Engineer for approval.
The existing structural steel coating contains lead. The contractor shall take appropriate precautions to deal with the presence of lead on this project.

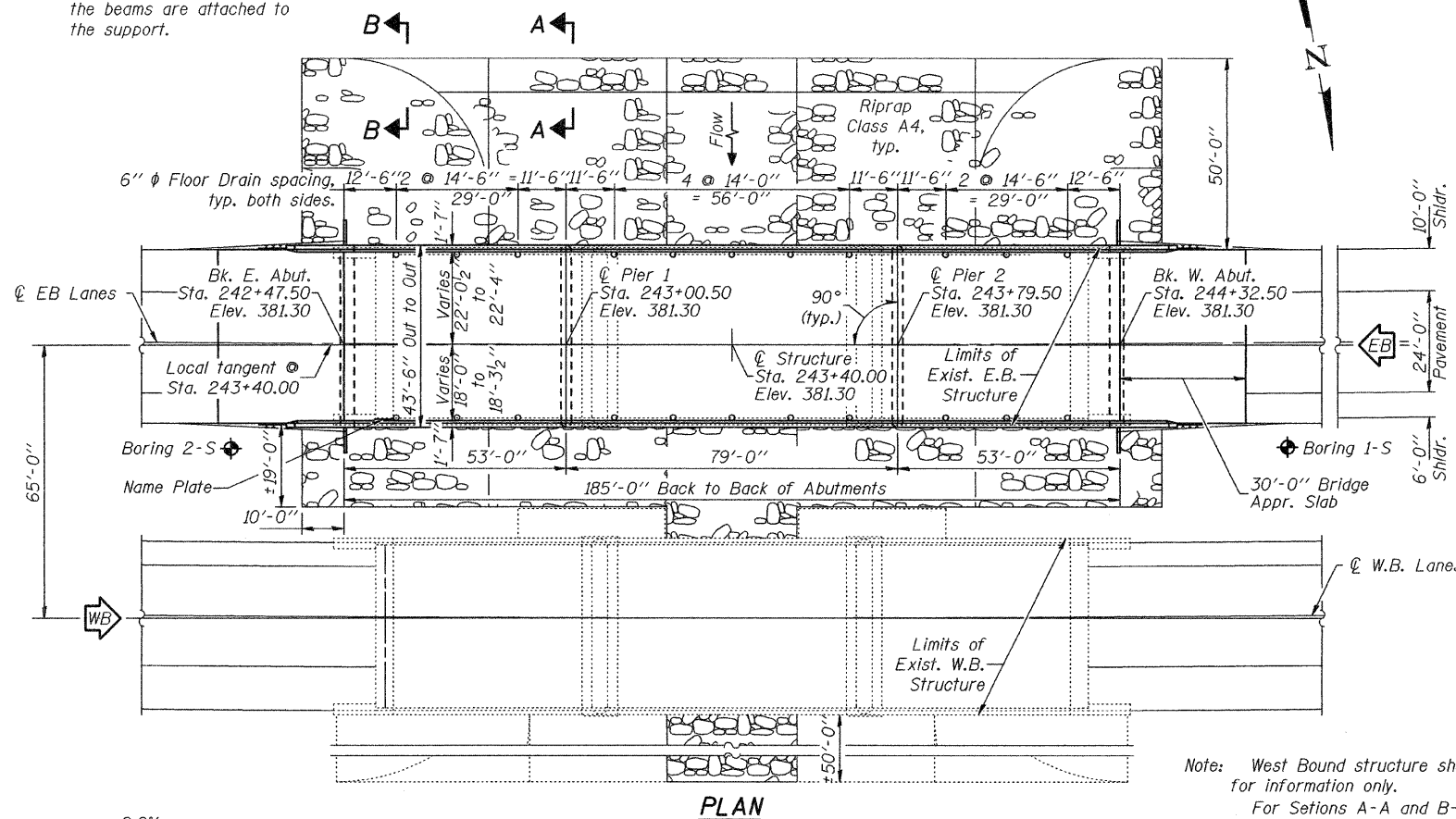
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Structures	Cu. Yd.		261.2	261.2
Reinforcement Bars, Epoxy Coated	Pound	88390	27420	115810
Name Plates	Each	1		1
Concrete Superstructure	Cu. Yd.	399		399
Furnishing and Erecting Structural Steel	L. Sum	1		1
Furnishing Steel Piles HP12x53	Foot		715	715
Furnishing Steel Piles HP12x84	Foot		792	792
Driving Piles	Foot		1507	1507
Test Pile Steel HP12x53	Each		1	1
Stone Riprap, Class A4	Sq. Yd.	2555.9		2555.9
Filter Fabric	Sq. Yd.	2555.9		2555.9
Protective Coat	Sq. Yd.	1283		1283
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		354.8	354.8
Bridge Deck Grooving	Sq. Yd.	1048		1048
Stud Shear Connectors	Each	4086		4086
Pile Shoes	Each		24	24
Floor Drains	Each	22		22
Porous Granular Embankment (Special)	Cu. Yd.		131.6	131.6
Bar Splicers	Each	92		92
Underwater Structure Excavation Protection, Location 1	Each		1	1
Underwater Structure Excavation Protection, Location 2	Each		1	1
Concrete Encasement	Cu. Yd.		8.4	8.4
Mechanical Splicers	Each		96	96
Geocomposite Wall Drain	Sq. Yd.		90	90
Pipe Underdrains for Structures, 4"	Foot		147	147
Anchor Bolts, 1"	Each		48	48

*Reinforcement bars in approach footing included with superstructure quantity.



Notes: The backwater elevation from the Big Muddy River is 376.0 which provides $\pm 1'-5"$ min. vertical clearance.
The Contractor shall back fill around pier stem after the beams are attached to the support.



Note: West Bound structure shown for information only.
For Sections A-A and B-B, see sheet 2 of 22.

INDEX OF SHEETS

- General Plan & Elevation
- General Data
- Top of Slab Elevations
- Top of East Approach Pavement Elevations
- Top of West Approach Pavement Elevations
- Superstructure
- Superstructure Details
- Diaphragm Details
- Bridge Approach Slab Details
- Structural Steel
- Structural Steel Details
- Bearing Details
- East Abutment
- West Abutment
- Pier 1
- Pier 2
- Steel H Pile Details
- Bar Splicer Assembly Details
- Boring Logs

CURVE DATA

P.I. Sta. = 214+91.234
 $\Delta = 59^\circ-31'-14"$
 $D = 0^\circ-23'-54"$
 $R = 14,379.082'$
 $T = 8,221.743'$
 $L = 14,937.415'$
 $E = 2,184.585'$
P.C. Sta. = 132+69.491
P.T. Sta. = 282+06.906

STATION 243+40.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 331 SEC. (12-BY-1)-1
LOADING HS20
STR. NO. 039-0070 (E.B.)

NAME PLATE

See Std. 515001

LOADING HS20-44

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

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 thru 2002 Interims

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (structural steel)
AASHTO M270, Gr. 50
 $f_y = 36,000$ psi (structural steel)
AASHTO M270, Gr. 36

SEISMIC DATA

Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 13%
Site Coefficient (S) = 1.2

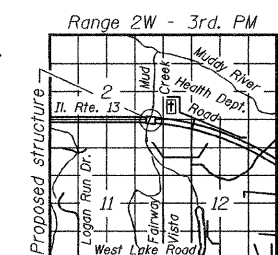
DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	E. Abut.	Pier 1	Pier 2	W. Abut.
	356.8	342.1	342.1	356.8

WATERWAY INFORMATION

Drainage Area = 9.7 mi.² Low Grade Elev. 380.9 ft. @ Sta. 243+71.3

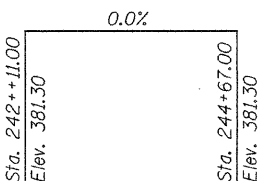
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
Design	50	2820	1688	1822	371.5	0.1	0.1	371.6	371.6
Base	100	3210	1688	1822	371.5	0.1	0.1	371.6	371.6
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	4100	1688	1822	371.5	0.2	0.1	371.7	371.6



LOCATION SKETCH

GENERAL PLAN
ILLINOIS ROUTE 13 (E.B.) OVER
MUD CREEK
F.A.P. ROUTE 331 - SEC. (12-BY-1)-1
JACKSON COUNTY
STATION 243+40.00
STRUCTURE NO. 039-0070 (E.B.)

SHEET NO. 1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	331	(12-BY-1)-1	JACKSON	67	22
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		CONTRACT NO. 98641	



PROFILE GRADE

(along E.B. lanes)

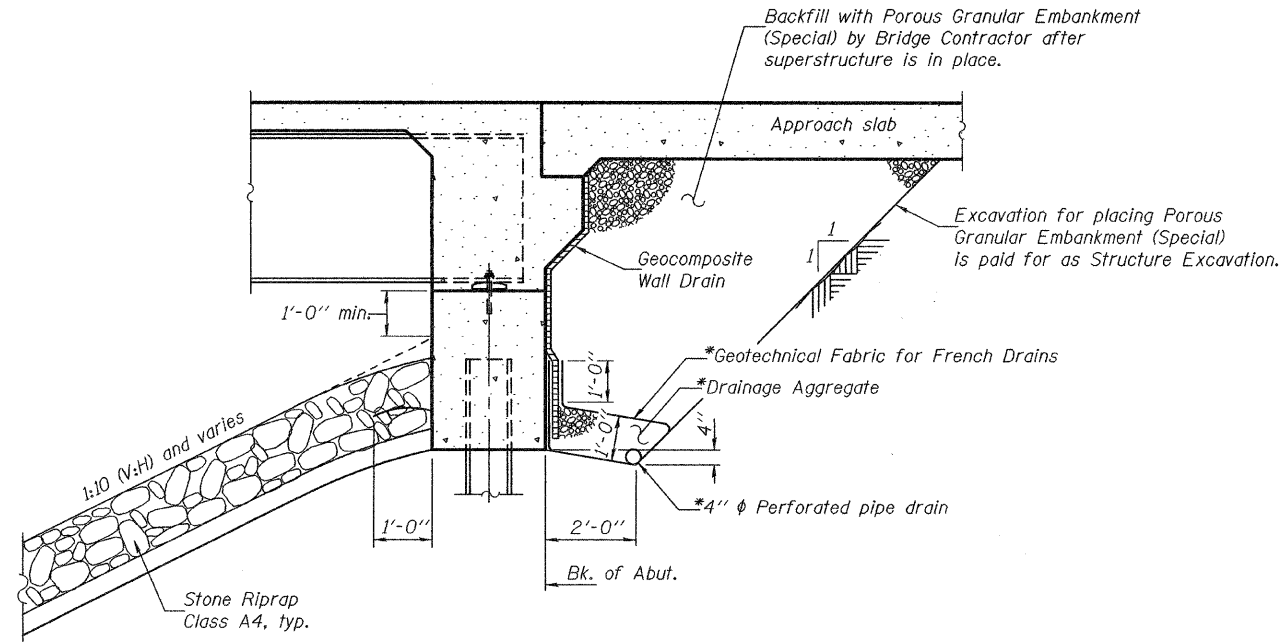
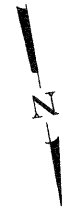
DESIGNED Rebecca Mitchell
CHECKED Mark Shaffer
DRAWN BMC Amber Seiber
CHECKED RLM/MDS

EXAMINED Thomas J. ...
PASSED Robert E. ...



EXPIRES 11-30-2010

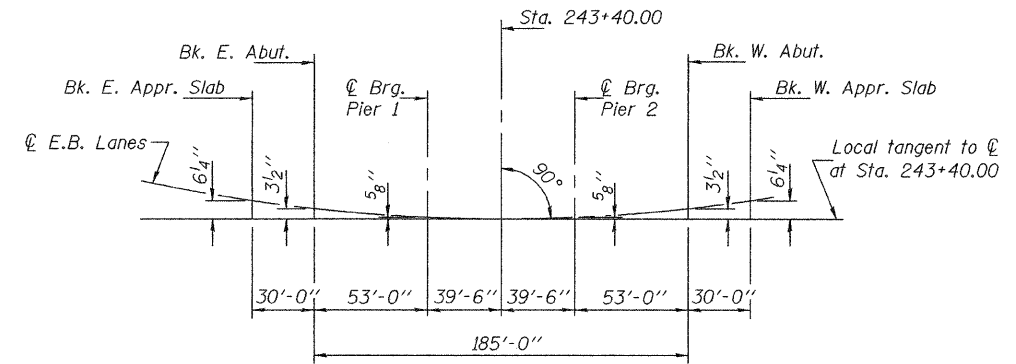
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



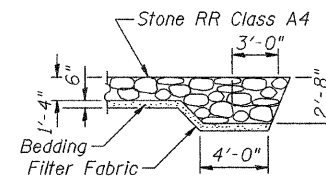
SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Pipe Underdrains for Structures, 4".

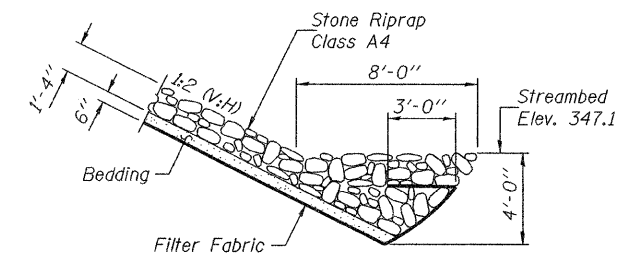
Note:
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).



OFFSET SKETCH



SECTION A-A



SECTION B-B

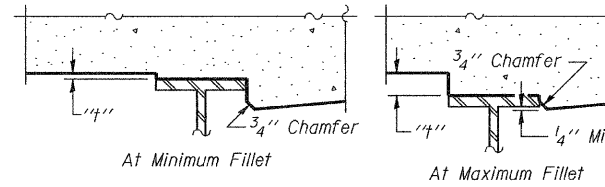
DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC Amber Seiber htd
CHECKED	RLM/MDS

EXAMINED	Thomas J. Domagalaki ENGINEER OF BRIDGE DESIGN
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

GENERAL DATA
STRUCTURE NO. 039-0070 (E.B.)

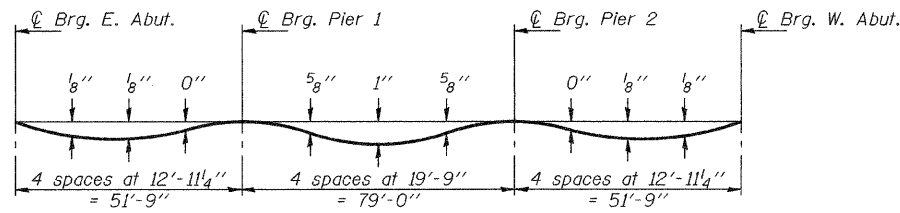
SHEET NO. 2	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	13
22 SHEETS	CONTRACT NO. 98641				
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 4 of 22, minus slab thickness, equals the fillet heights "t" above top flange of beams.

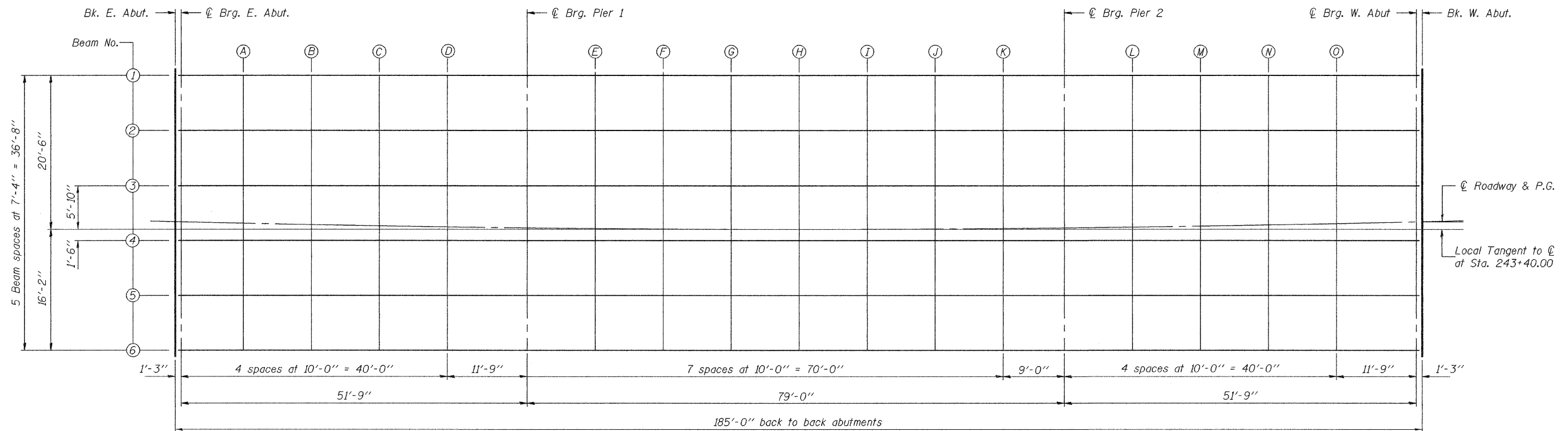
FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 4 of 22.



PLAN

DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC Amber Selber htd
CHECKED	RLM/MDS

July 27, 2009
EXAMINED *Thomas J. Domagalaki*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 039-0070 (E.B.)

SHEET NO. 3	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	24
22 SHEETS	CONTRACT NO. 98641				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of E. Abutment	24247.369	-20.202	380.942	380.942
⊕ Brg. E. Abutment	24248.621	-20.210	380.942	380.942
A	24258.635	-20.270	380.940	380.948
B	24268.649	-20.323	380.939	380.949
C	24278.663	-20.369	380.938	380.944
D	24288.677	-20.409	380.938	380.937
⊕ Brg. Pier 1	24300.444	-20.446	380.937	380.937
E	24310.458	-20.470	380.936	380.962
F	24320.472	-20.487	380.936	380.988
G	24330.486	-20.497	380.936	381.004
H	24340.501	-20.500	380.936	381.018
I	24350.515	-20.496	380.936	381.002
J	24360.529	-20.485	380.936	380.986
K	24370.543	-20.468	380.936	380.960
⊕ Brg. Pier 2	24379.556	-20.446	380.937	380.937
L	24389.570	-20.415	380.937	380.937
M	24399.585	-20.377	380.938	380.943
N	24409.599	-20.332	380.939	380.949
O	24419.613	-20.280	380.940	380.949
⊕ Brg. W. Abutment	24431.379	-20.210	380.942	380.942
Back of W. Abutment	24432.631	-20.202	380.942	380.942

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of E. Abutment	24247.417	-12.869	381.094	381.094
⊕ Brg. E. Abutment	24248.668	-12.877	381.094	381.094
A	24258.676	-12.937	381.093	381.101
B	24268.685	-12.990	381.092	381.101
C	24278.694	-13.036	381.091	381.097
D	24288.703	-13.075	381.090	381.089
⊕ Brg. Pier 1	24300.464	-13.112	381.089	381.089
E	24310.473	-13.136	381.089	381.115
F	24320.482	-13.153	381.089	381.141
G	24330.491	-13.163	381.088	381.156
H	24340.500	-13.167	381.088	381.171
I	24350.510	-13.163	381.088	381.155
J	24360.519	-13.152	381.089	381.138
K	24370.528	-13.134	381.089	381.112
⊕ Brg. Pier 2	24379.536	-13.112	381.089	381.089
L	24389.545	-13.081	381.090	381.089
M	24399.554	-13.043	381.091	381.095
N	24409.563	-12.998	381.092	381.101
O	24419.572	-12.947	381.093	381.102
⊕ Brg. W. Abutment	24431.332	-12.877	381.094	381.094
Back of W. Abutment	24432.583	-12.869	381.094	381.094

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of E. Abutment	24247.464	-5.536	381.214	381.214
⊕ Brg. E. Abutment	24248.714	-5.544	381.213	381.213
A	24258.718	-5.604	381.212	381.220
B	24268.722	-5.657	381.212	381.221
C	24278.726	-5.703	381.211	381.217
D	24288.729	-5.742	381.210	381.210
⊕ Brg. Pier 1	24300.484	-5.779	381.210	381.210
E	24310.488	-5.803	381.209	381.235
F	24320.492	-5.820	381.209	381.261
G	24330.496	-5.830	381.209	381.277
H	24340.500	-5.833	381.209	381.291
I	24350.504	-5.829	381.209	381.275
J	24360.508	-5.819	381.209	381.259
K	24370.512	-5.801	381.209	381.233
⊕ Brg. Pier 2	24379.516	-5.779	381.210	381.210
L	24389.520	-5.748	381.210	381.210
M	24399.524	-5.710	381.211	381.215
N	24409.528	-5.665	381.211	381.221
O	24419.531	-5.613	381.212	381.221
⊕ Brg. W. Abutment	24431.286	-5.544	381.213	381.213
Back of W. Abutment	24432.536	-5.536	381.214	381.214

⊕ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of E. Abutment	24247.499	0.000	381.300	381.300
⊕ Brg. E. Abutment	24248.749	0.000	381.300	381.300
A	24258.749	0.000	381.300	381.308
B	24268.749	0.000	381.300	381.310
C	24278.749	0.000	381.300	381.306
D	24288.749	0.000	381.300	381.299
⊕ Brg. Pier 1	24300.500	0.000	381.300	381.300
E	24310.500	0.000	381.300	381.326
F	24320.500	0.000	381.300	381.352
G	24330.500	0.000	381.300	381.368
H	24340.500	0.000	381.300	381.383
I	24350.500	0.000	381.300	381.366
J	24360.500	0.000	381.300	381.350
K	24370.500	0.000	381.300	381.324
⊕ Brg. Pier 2	24379.500	0.000	381.300	381.300
L	24389.500	0.000	381.300	381.299
M	24399.500	0.000	381.300	381.305
N	24409.500	0.000	381.300	381.309
O	24419.500	0.000	381.300	381.309
⊕ Brg. W. Abutment	24431.251	0.000	381.300	381.300
Back of W. Abutment	24432.501	0.000	381.300	381.300

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of E. Abutment	24247.511	1.797	381.272	381.272
⊕ Brg. E. Abutment	24248.761	1.790	381.272	381.272
A	24258.759	1.730	381.273	381.281
B	24268.758	1.677	381.274	381.283
C	24278.757	1.630	381.275	381.281
D	24288.756	1.591	381.275	381.274
⊕ Brg. Pier 1	24300.504	1.554	381.276	381.276
E	24310.503	1.530	381.276	381.302
F	24320.502	1.513	381.276	381.328
G	24330.501	1.503	381.277	381.345
H	24340.500	1.500	381.277	381.359
I	24350.499	1.504	381.277	381.343
J	24360.498	1.515	381.276	381.326
K	24370.497	1.532	381.276	381.300
⊕ Brg. Pier 2	24379.496	1.554	381.276	381.276
L	24389.495	1.585	381.275	381.275
M	24399.493	1.623	381.275	381.279
N	24409.492	1.668	381.274	381.283
O	24419.491	1.720	381.273	381.282
⊕ Brg. W. Abutment	24431.239	1.790	381.272	381.272
Back of W. Abutment	24432.489	1.797	381.272	381.272

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of E. Abutment	24247.558	9.131	381.157	381.157
⊕ Brg. E. Abutment	24248.807	9.123	381.157	381.157
A	24258.801	9.063	381.158	381.166
B	24268.794	9.010	381.159	381.169
C	24278.788	8.964	381.160	381.166
D	24288.782	8.925	381.161	381.160
⊕ Brg. Pier 1	24300.524	8.888	381.161	381.161
E	24310.518	8.864	381.162	381.188
F	24320.512	8.847	381.162	381.214
G	24330.506	8.836	381.162	381.230
H	24340.500	8.833	381.162	381.245
I	24350.494	8.837	381.162	381.228
J	24360.487	8.848	381.162	381.211
K	24370.481	8.866	381.161	381.185
⊕ Brg. Pier 2	24379.476	8.888	381.161	381.161
L	24389.469	8.918	381.161	381.160
M	24399.463	8.956	381.160	381.165
N	24409.457	9.001	381.159	381.169
O	24419.450	9.053	381.159	381.168
⊕ Brg. W. Abutment	24431.193	9.123	381.157	381.157
Back of W. Abutment	24432.442	9.131	381.157	381.157

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Back of E. Abutment	24247.605	16.464	381.020	381.020
⊕ Brg. E. Abutment	24248.854	16.456	381.020	381.020
A	24258.842	16.396	381.021	381.029
B	24268.831	16.343	381.022	381.032
C	24278.819	16.297	381.023	381.029
D	24288.808	16.258	381.024	381.023
⊕ Brg. Pier 1	24300.544	16.221	381.025	381.025
E	24310.533	16.197	381.025	381.051
F	24320.522	16.180	381.026	381.078
G	24330.511	16.170	381.026	381.094
H	24340.499	16.167	381.026	381.108
I	24350.488	16.171	381.026	381.092
J	24360.477	16.181	381.026	381.075
K	24370.466	16.199	381.025	381.049
⊕ Brg. Pier 2	24379.456	16.221	381.025	381.025
L	24389.444	16.252	381.024	381.023
M	24399.433	16.290	381.023	381.028
N	24409.421	16.334	381.022	381.032
O	24419.410	16.386	381.021	381.030
⊕ Brg. W. Abutment	24431.146	16.456	381.020	381.020
Back of W. Abutment	24432.395	16.464	381.020	381.020

DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC Amber Selber htd
CHECKED	RLM/MDS

July 27, 2009
 EXAMINED *Thomas J. Domagala*
 SUPERVISOR OF BRIDGES AND STRUCTURES
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 039-0070 (E.B.)

SHEET NO. 4	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	25
22 SHEETS	CONTRACT NO. 98641				
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Pav't.	24217.31	-21.52	380.91
AA	24227.33	-21.60	380.90
BB	24237.34	-21.68	380.91
Beg. E. Appr. Pav't.	24247.36	-21.75	380.91

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Pav't.	24217.40	-12.00	381.11
AA	24227.41	-12.00	381.11
BB	24237.42	-12.00	381.11
Beg. E. Appr. Pav't.	24247.42	-12.00	381.11

☉ ROADWAY & PROFILE GRADE

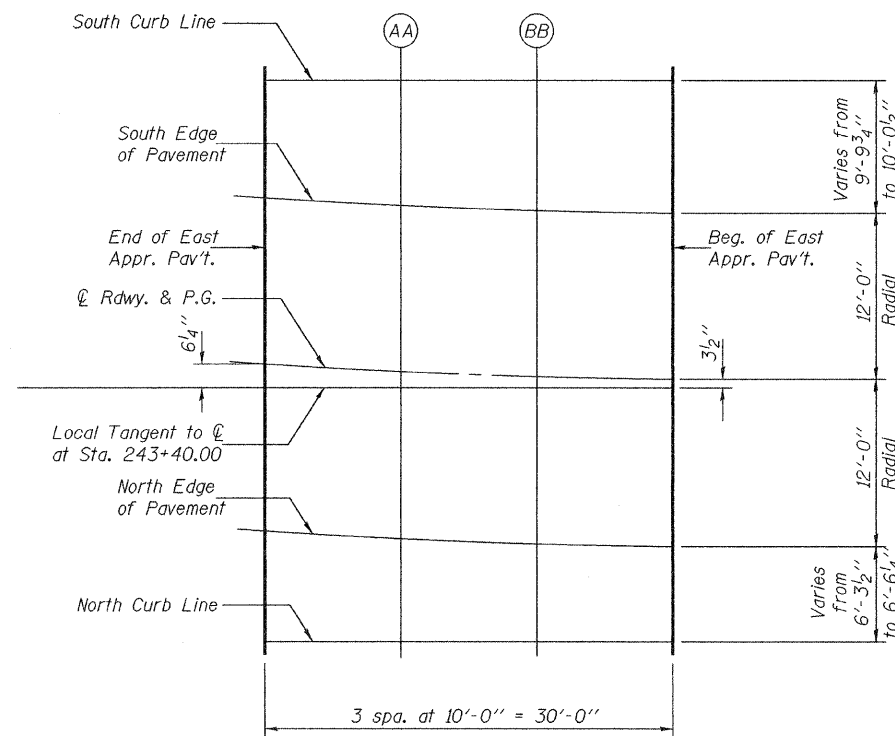
Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Pav't.	24217.50	0.00	381.30
AA	24227.50	0.00	381.30
BB	24237.50	0.00	381.30
Beg. E. Appr. Pav't.	24247.50	0.00	381.30

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Pav't.	24217.61	12.00	381.11
AA	24227.60	12.00	381.11
BB	24237.59	12.00	381.11
Beg. E. Appr. Pav't.	24247.58	12.00	381.11

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End E. Appr. Pav't.	24217.66	18.81	380.97
AA	24227.65	18.73	380.97
BB	24237.63	18.65	380.97
Beg. E. Appr. Pav't.	24247.62	18.58	380.98



PLAN



DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	h.t. duong
CHECKED	RLM/MDS

July 27, 2009
 EXAMINED *Thomas J. Domagalicki*
 ENGINEER OF BRIDGES AND STRUCTURES
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF EAST APPROACH
PAVEMENT ELEVATIONS
STRUCTURE NO. 039-0070 (E.B.)

SHEET NO. 5 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	26
FED. ROAD DIST. NO. _			ILLINOIS	FED. AID PROJECT	
				CONTRACT NO. 98641	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Beg. W. Appr. Pav't.	24432.64	-21.75	380.91
CC	24442.66	-21.68	380.91
DD	24452.67	-21.60	380.91
End W. Appr. Pav't.	24462.69	-21.52	380.91

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Beg. W. Appr. Pav't.	24432.58	-12.00	381.11
CC	24442.58	-12.00	381.11
DD	24452.59	-12.00	381.11
End W. Appr. Pav't.	24462.60	-12.00	381.11

☉ ROADWAY & PROFILE GRADE

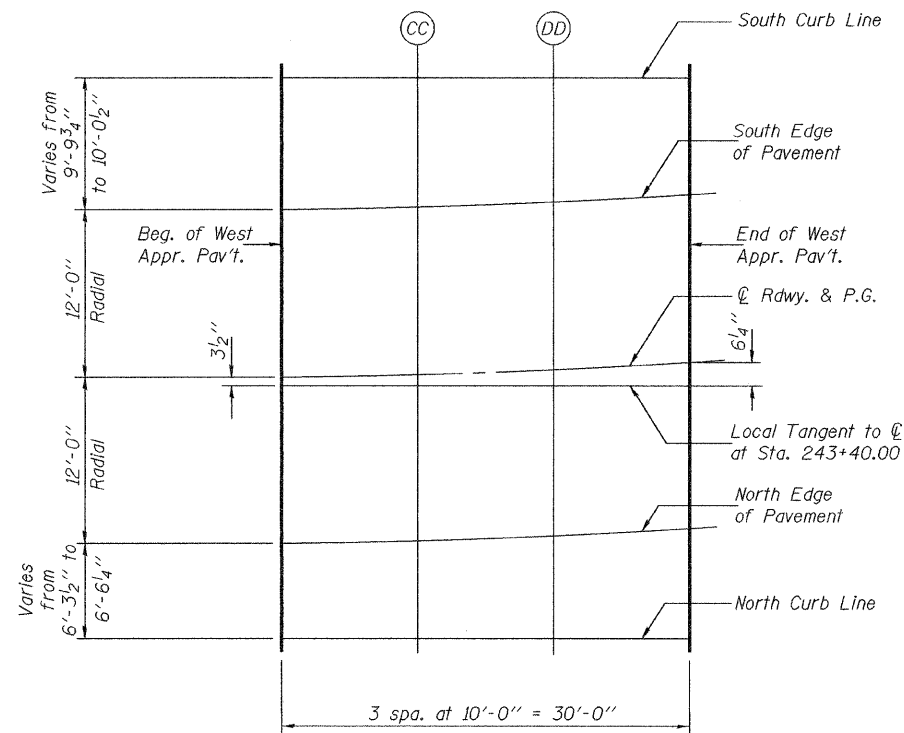
Location	Station	Offset	Theoretical Grade Elevations
Beg. W. Appr. Pav't.	24432.50	0.00	381.30
CC	24442.50	0.00	381.30
DD	24452.50	0.00	381.30
End W. Appr. Pav't.	24462.50	0.00	381.30

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Beg. W. Appr. Pav't.	24432.42	12.00	381.11
CC	24442.41	12.00	381.11
DD	24452.40	12.00	381.11
End W. Appr. Pav't.	24462.39	12.00	381.11

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Beg. W. Appr. Pav't.	24432.38	18.58	380.98
CC	24442.37	18.65	380.97
DD	24452.35	18.73	380.97
End W. Appr. Pav't.	24462.34	18.81	380.97



PLAN



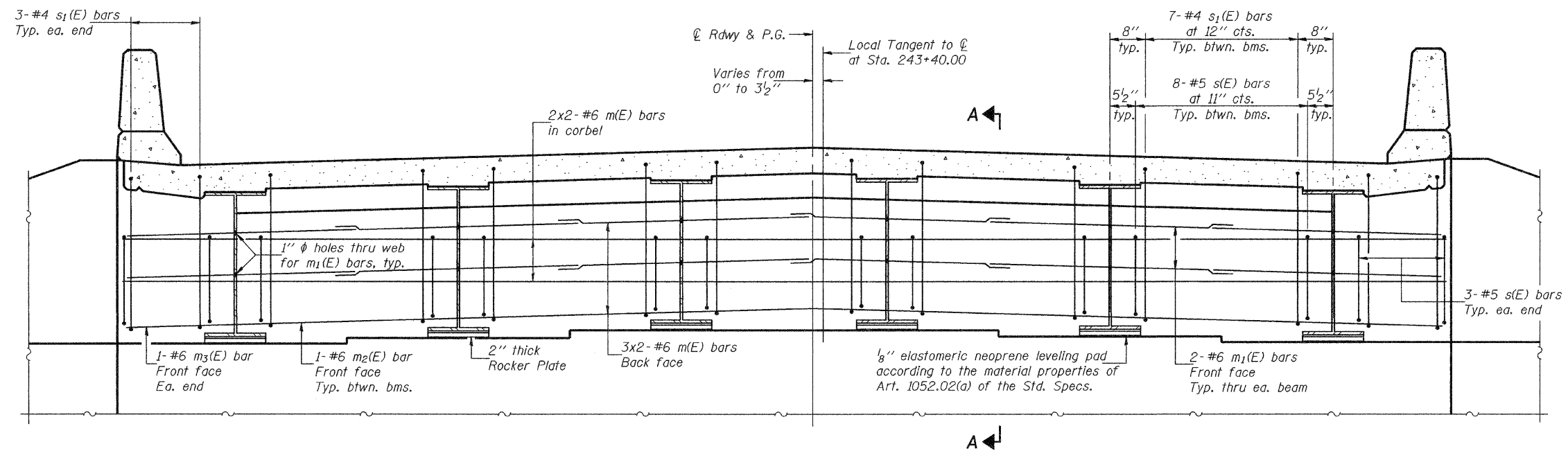
DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	h.t. duong
CHECKED	RLM/MDS

July 27, 2009
 EXAMINED *Thomas J. Domagalicki*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF WEST APPROACH
PAVEMENT ELEVATIONS
STRUCTURE NO. 039-0070 (E.B.)

SHEET NO. 6 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	27
FED. ROAD DIST. NO. _			ILLINOIS FED. AID PROJECT		
CONTRACT NO. 98641					

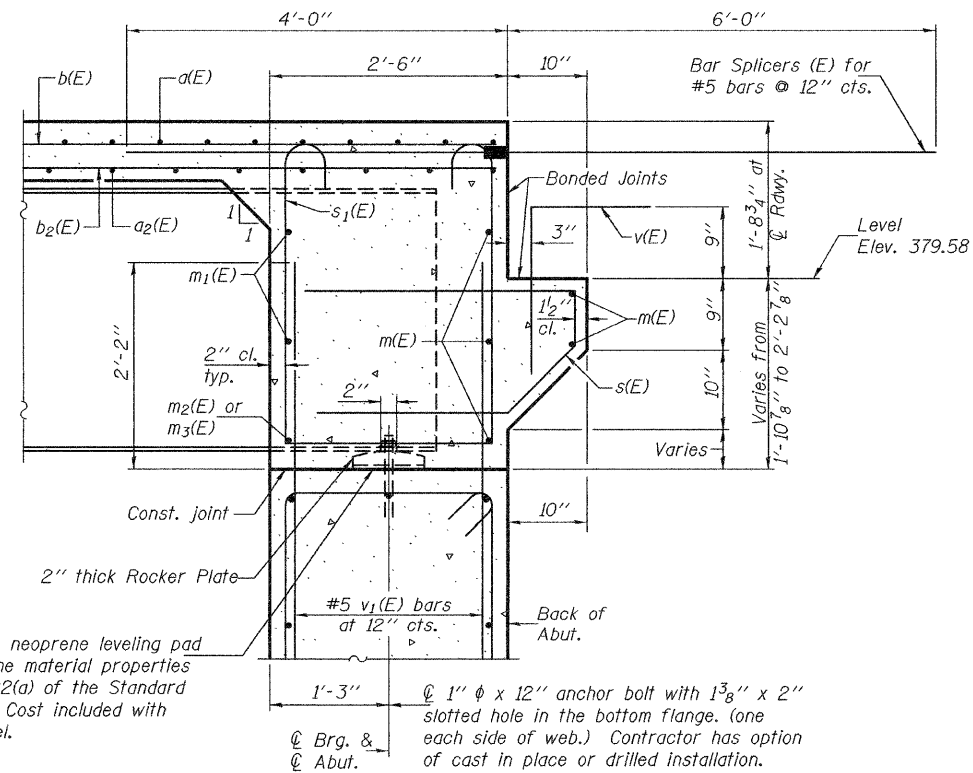
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



DIAPHRAGM ELEVATION AT ABUTMENT
(West Abut. shown, looking West - East Abut. similar)

MIN. BAR LAP
#6 bar = 2'-9"

Notes: Reinforcement bars in diaphragm are billed with superstructure on sheet 8 of 22.
Concrete in diaphragm is included with Concrete Superstructure on sheet 8 of 22.
For details of bars s(E) & s1(E) see sheet 8 of 22.
Bars indicated thus 2 x 6-#6 etc. indicated 2 lines of bars with 6 lengths per line.
See sheet 14 of 22 for bar splicer details.
See sheet 13 of 22 for holes thru webs for m1(E) bars.



1/8" elastomeric neoprene leveling pad according to the material properties of Art. 1052.02(a) of the Standard Specifications. Cost included with Structural Steel.

SECTION A-A

DIAPHRAGM DETAILS
STRUCTURE NO. 039-0070 (E.B.)

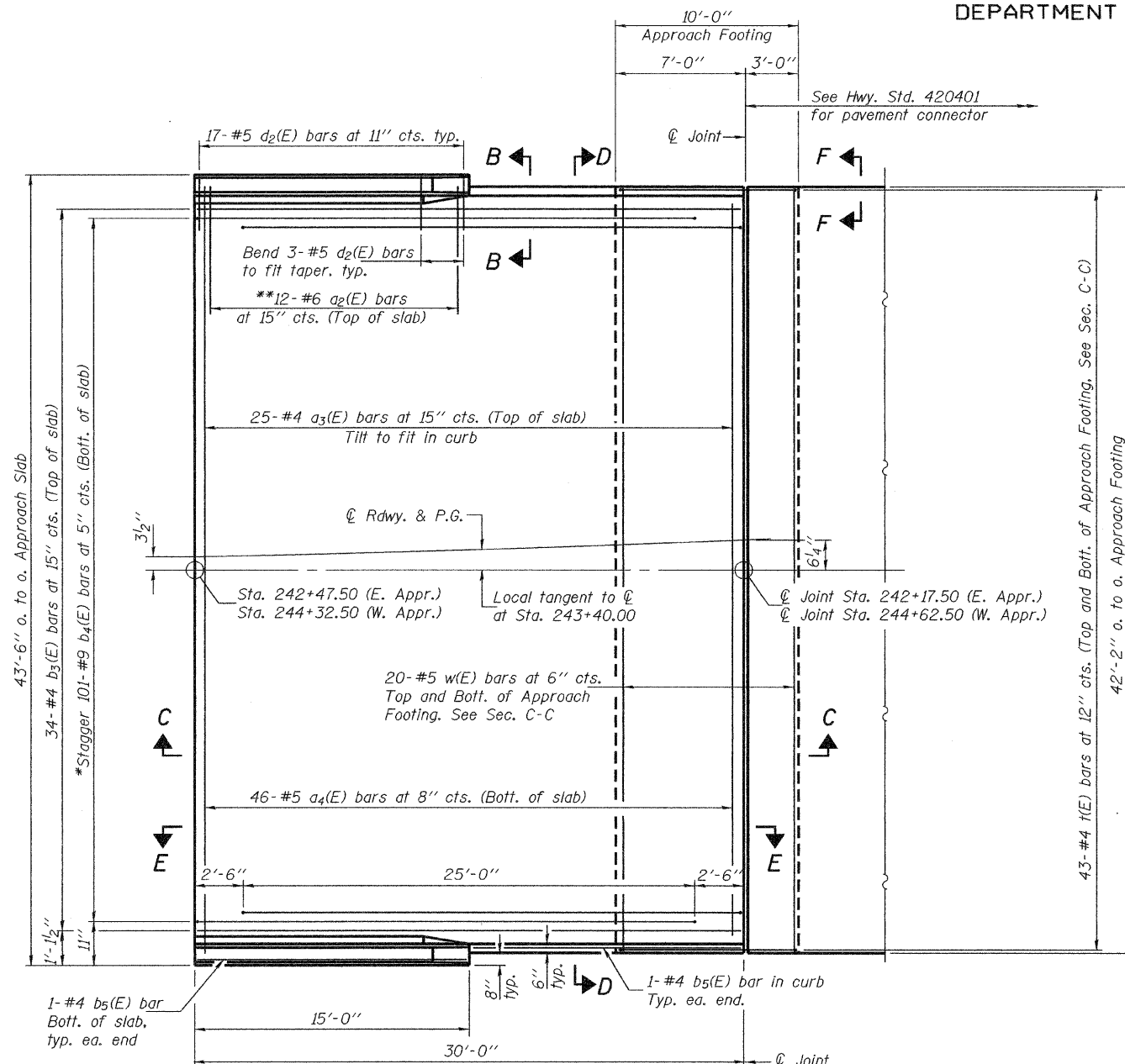
DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC Amber Seiber htd
CHECKED	RLM/MDS

EXAMINED	Thomas J. Domagalicki ENGINEER OF BRIDGE DESIGN
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. 9	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	30
22 SHEETS	CONTRACT NO. 98641				
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

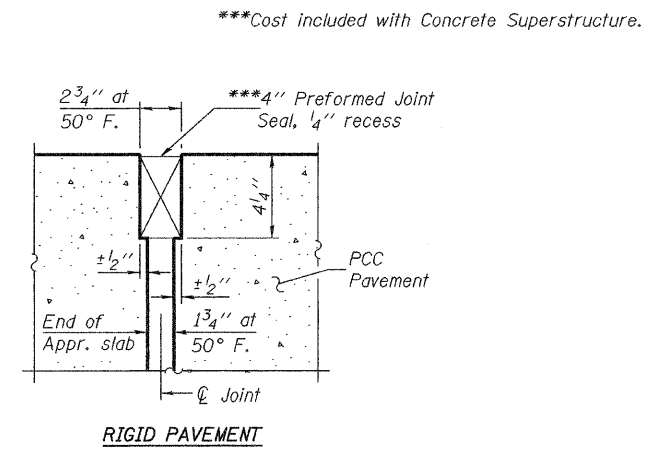
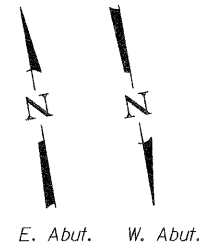
Notes:
See sheet 11 of 22 for Sections C-C, D-D and View E-E.
a₃(E), a₄(E), and w(E) bar spacings measured perpendicular to ϕ Rdwy.



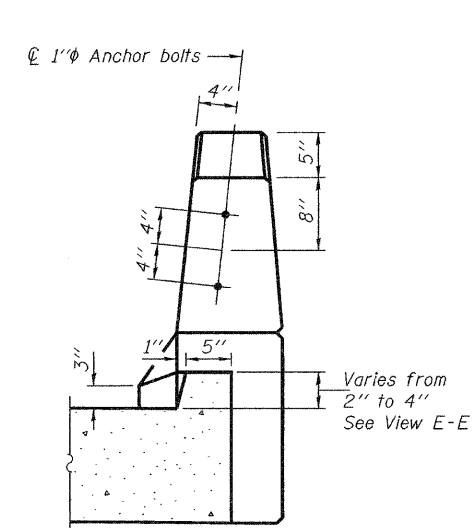
PLAN

(West Approach shown - East Approach similar by mirror image)

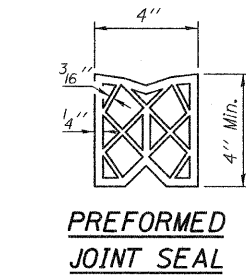
*Tilt #9 b₁(E) bars as required to maintain clearance.
**Alternate with a₃(E) bars, typ. ea. parapet.



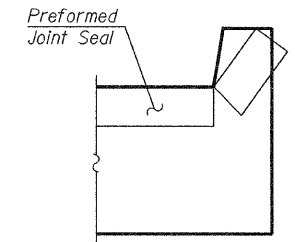
DETAIL A



VIEW B-B
(Exit ends only)



PREFORMED JOINT SEAL



VIEW F-F

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

DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	h.t. duong
CHECKED	RLM/MDS

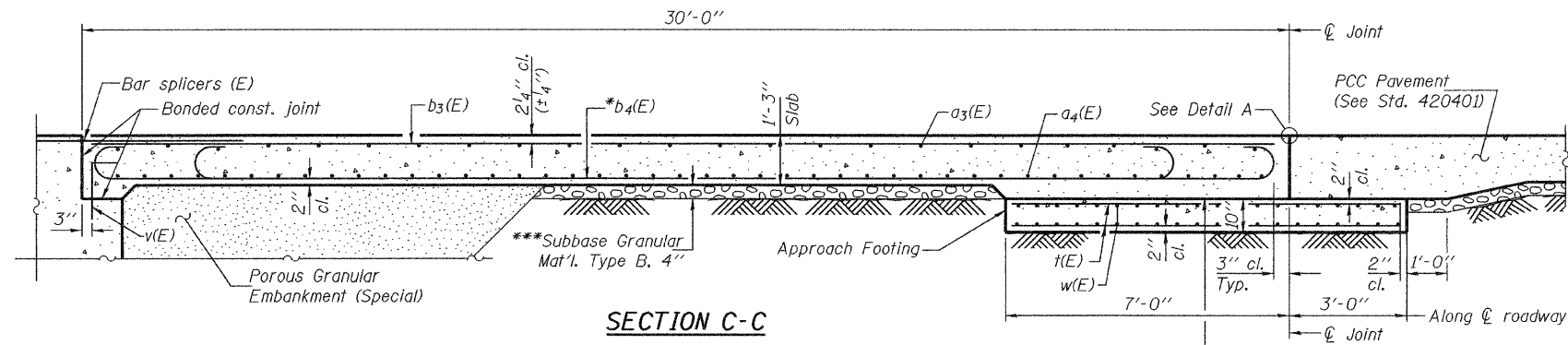
July 27, 2009
EXAMINED *Thomas J. Domagalak*
ENGINEER OF BRIDGES DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 039-0070 (E.B.)

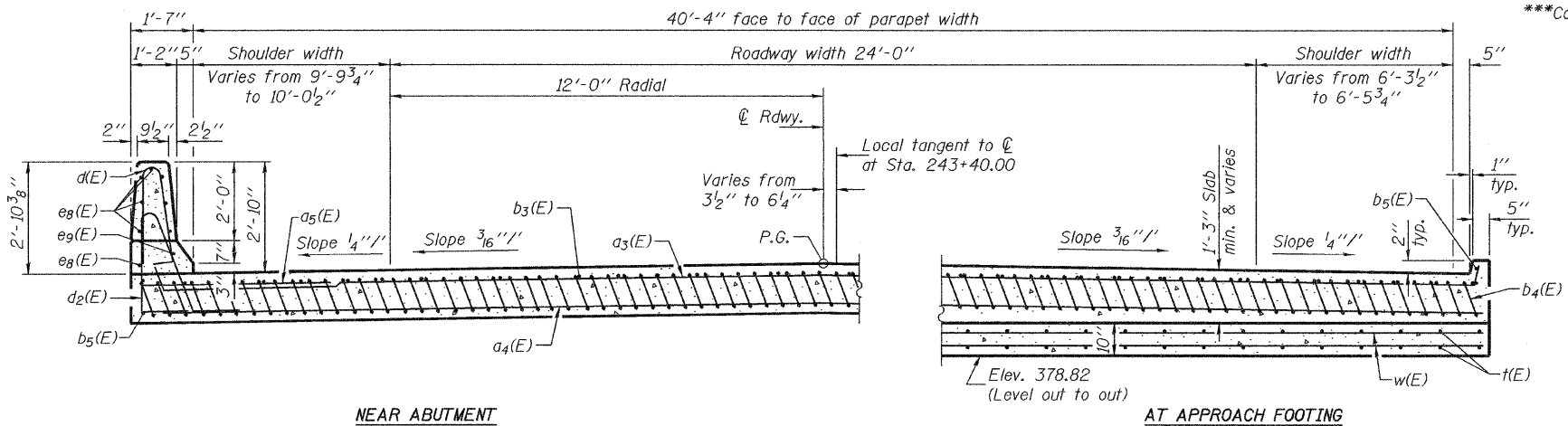
SHEET NO. 10 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	31
FED. ROAD DIST. NO. _			ILLINOIS FED. AID PROJECT		
				CONTRACT NO. 98641	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Notes:
See sheet 10 of 22 for Detail A and View B-B.
Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
Approach footing concrete shall be paid for as Concrete Structures.
Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
For v(E) bar details, see sheet 8 of 22.
The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
For bar splicer details, see sheet 20 of 22.
Cost of excavation for approach footing included with Concrete Structures.
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 22.



SECTION C-C

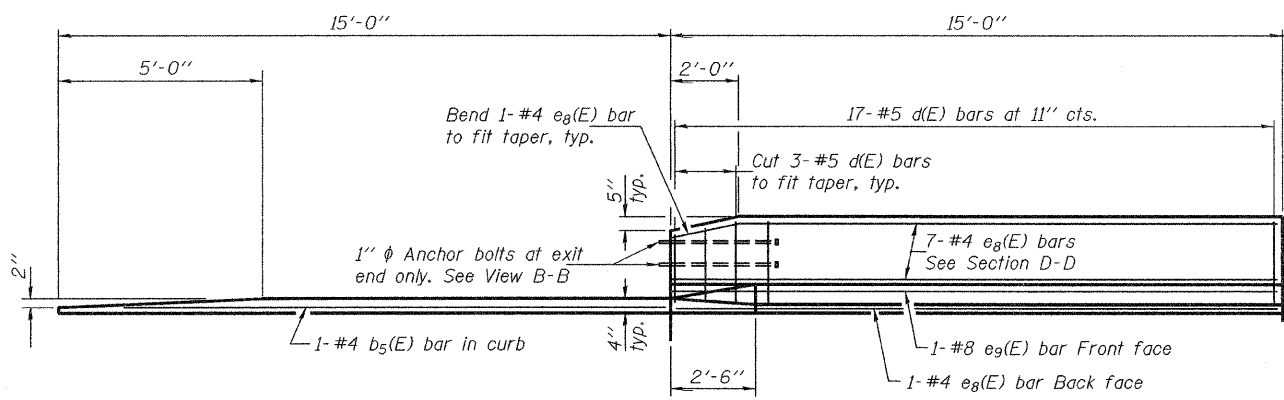


NEAR ABUTMENT

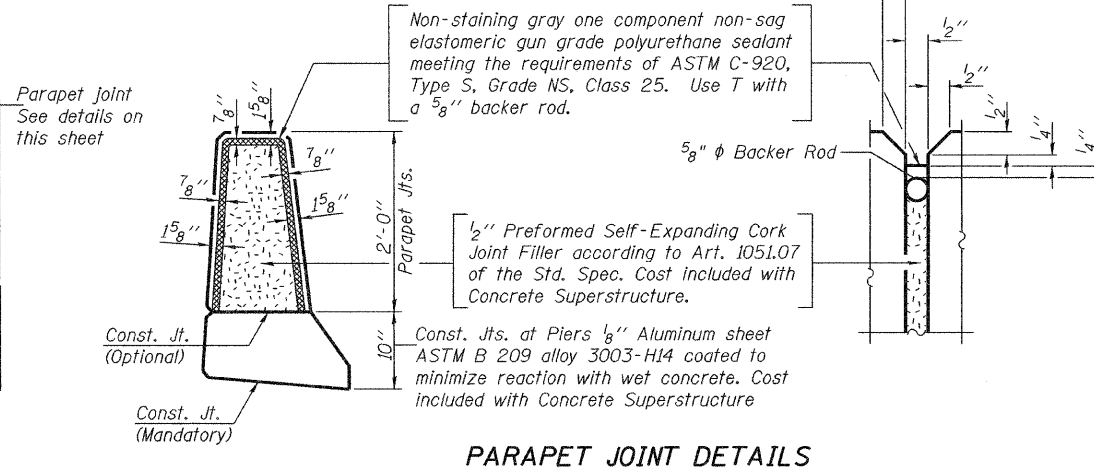
SECTION D-D

(See Plan for dimensions not shown)

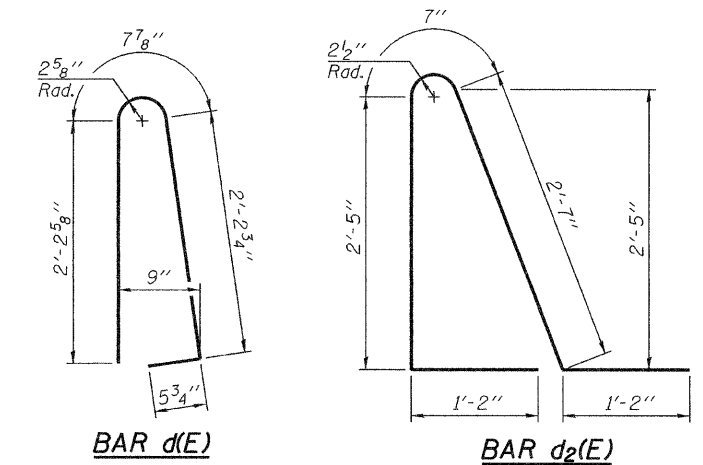
AT APPROACH FOOTING



VIEW E-E

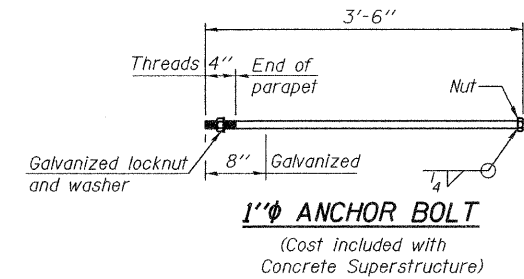


PARAPET JOINT DETAILS



BAR d(E)

BAR d2(E)

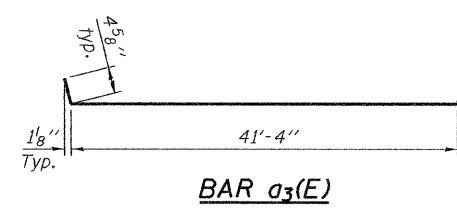


1" ANCHOR BOLT

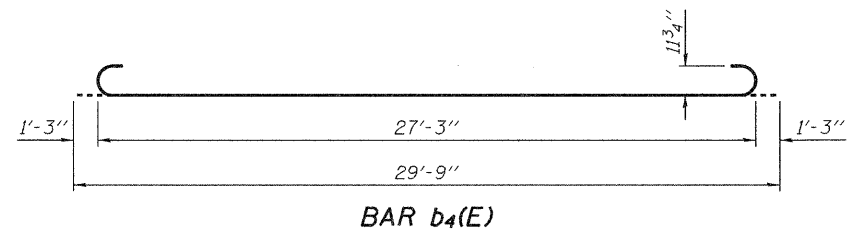
(Cost included with Concrete Superstructure)

TWO APPROACHES
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a3(E)	50	#4	42'-2"	U
a4(E)	92	#5	41'-10"	U
a5(E)	48	#6	6'-0"	U
b3(E)	68	#4	29'-8"	U
b4(E)	102	#9	29'-9"	U
b5(E)	8	#4	14'-8"	U
d(E)	68	#5	5'-7"	U
d2(E)	68	#5	7'-11"	U
e8(E)	32	#4	14'-8"	U
e9(E)	4	#8	14'-8"	U
f(E)	172	#4	9'-8"	U
w(E)	80	#5	39'-8"	U
Concrete Superstructure			Cu. Yd.	138.4
Concrete Structures			Cu. Yd.	26.0
Reinforcement Bars, Epoxy Coated			Pound	23450



BAR a3(E)



BAR b4(E)

DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	h.t. duong
CHECKED	RLM/MDS

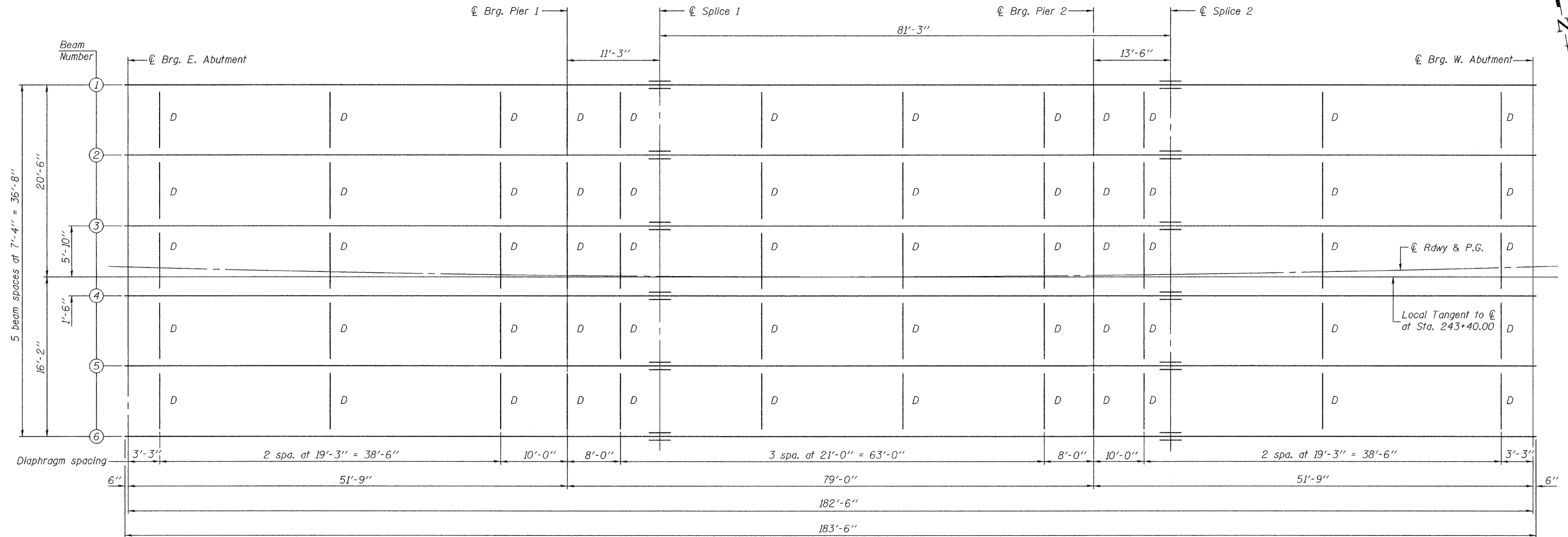
EXAMINED **Thomas J. Domagalaki**
ENGINEER OF BRIDGE DESIGN
PASSED **Ralph E. Anderson**
ENGINEER OF BRIDGES AND STRUCTURES

July 27, 2009

BRIDGE APPROACH SLAB DETAILS
STRUCTURE NO. 039-0070 (E.B.)

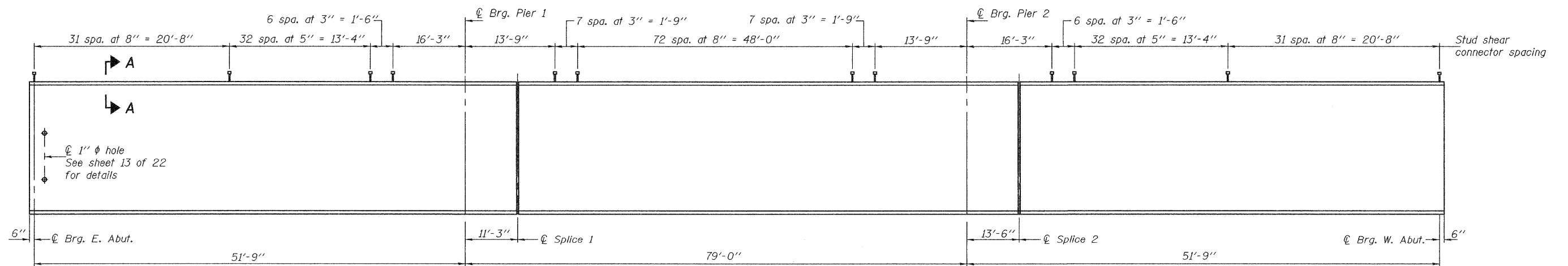
SHEET NO. 11	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	331	(12-BY-1)-1	JACKSON	67	32
			CONTRACT NO. 98641		
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN

All beams shall be W33x130 AASHTO M270 Grade 50 (NTR)



BEAM ELEVATION

**STRUCTURAL STEEL
STRUCTURE NO. 039-0070 (E.B.)**

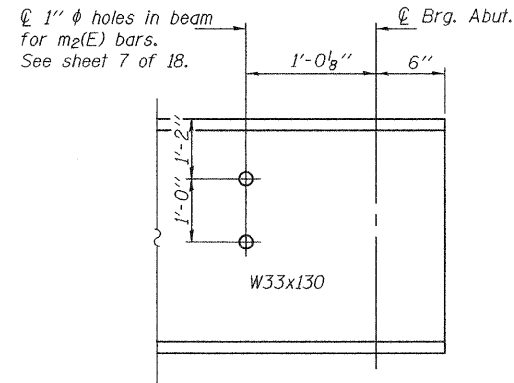
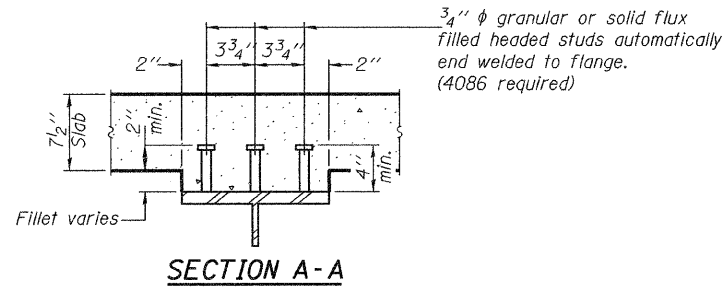
DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC Amber Seiber htd
CHECKED	RLM/MDS

EXAMINED	Thomas J. Domagala ENGINEER OF BRIDGE DESIGN
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

Note: Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

SHEET NO. 12 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	33
CONTRACT NO. 98641					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

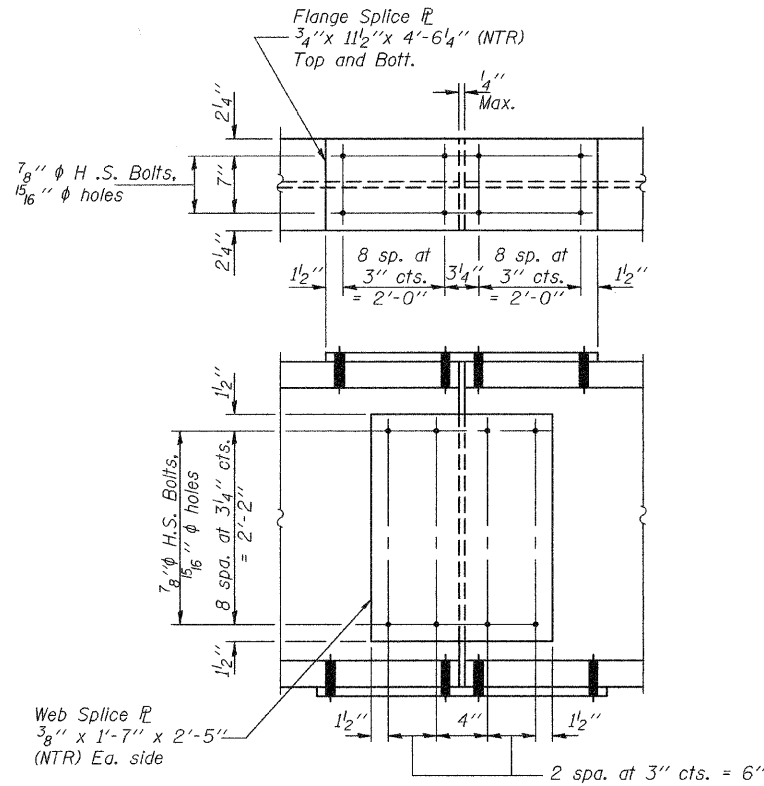


TYP. END OF BEAM ELEVATION

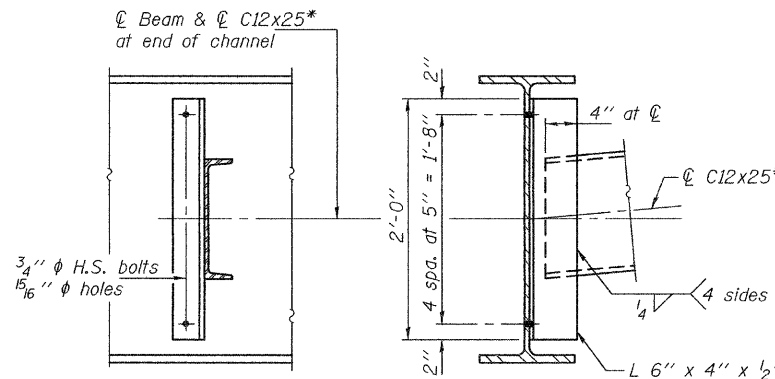
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I_s	(in ⁴)	6710	6710	6710
I_c (n)	(in ⁴)	17945	---	17945
I_c (3n)	(in ⁴)	13296	---	13296
S_s	(in ³)	406	406	406
S_c (n)	(in ³)	594	---	594
S_c (3n)	(in ³)	539	---	539
Z	(in ³)	---	467	---
ϕ	(k/ft.)	0.849	1.366	0.849
$M\phi$	(k)	115	578	269
$s\phi$	(k/ft.)	0.517	---	0.517
$Ms\phi$	(k)	92	---	218
$M\ddagger$	(k)	386	269	564
M (Imp)	(k)	106	71	135
$S_3[M\ddagger + M(\text{Imp})]$	(k)	820	567	1165
Ma	(k)	1335	1490	2148
Mu	(k)	3070	1946	3070
$fs\phi$ non-comp	(k.s.i.)	3.4	17.1	8.0
$fs\phi$ (comp)	(k.s.i.)	2.0	---	4.9
$fs^5_3(\ddagger + \text{Imp})$	(k.s.i.)	16.6	16.8	23.5
fs (Overload)	(k.s.i.)	22.0	33.9	36.4
VR	(k)	56.0	---	49.5

		Abufs.	Pier 1 or 2
$R\phi$	(k)	24.2	100.5
$R\ddagger$	(k)	39.3	50.6
Imp.	(k)	10.8	12.9
R (Total)	(k)	74.3	164.0

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
 I_c (n) and S_c (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
 I_c (3n) and S_c (3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (See AASHTO 10.38)
 VR is the maximum Live Load + Impact shear range within the composite portion of the span.
 Ma (Applied Moment) = $1.3[M\phi + Ms\phi + S_3(M\ddagger + M(\text{Imp}))]$.
 The Plastic Moment Capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.
 fs (Overload) is the sum of the stresses due to $M\phi + Ms\phi + S_3(M\ddagger + M(\text{Imp}))$.
 Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.
 $M\ddagger$ and $R\ddagger$ include the effects of centrifugal force.



SPICES
12 Required



DIAPHRAGM D
(60 Required)

*Alternate channels C12x30 may be used to facilitate material acquisition. The calculated weight of structural steel is based on the lighter section, C12x25. The alternate, if utilized, will be provided at no extra cost to the department.

*TOP OF BEAM ELEVATIONS

LOCATION	℄ Brg. E. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Brg. Pier 2	℄ Splice 2	℄ Brg. W. Abut.
Beam 1	380.275	380.217	380.212	380.208	380.208	380.275
Beam 2	380.427	380.369	380.365	380.360	380.361	380.427
Beam 3	380.546	380.490	380.485	380.481	380.481	380.546
Beam 4	380.605	380.556	380.552	380.547	380.546	380.605
Beam 5	380.490	380.441	380.438	380.432	380.432	380.490
Beam 6	380.353	380.305	380.301	380.296	380.295	380.353

*For Fabrication use only

Notes: Two hardened washers shall be required over all 15/16 inch holes for diaphragms.
 Load carrying component designated "NTR" shall conform to the Supplement Requirements for Notch Toughness, Zone 2.
 All splice plates shall be AASHTO M270, Grade 50.
 All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

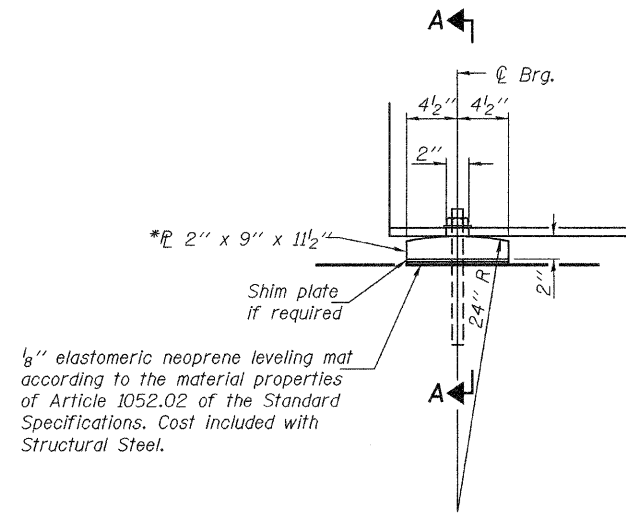
DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC Amber Seiber
CHECKED	RLM/MDS

July 27, 2009
 EXAMINED *Thomas J. Domagalicki*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS
STRUCTURE NO. 039-0070 (E.B.)

SHEET NO. 13 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	34
CONTRACT NO. 98641					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

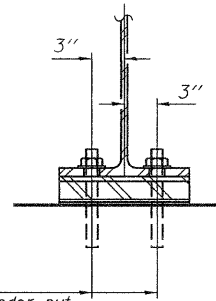
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT ABUTMENT

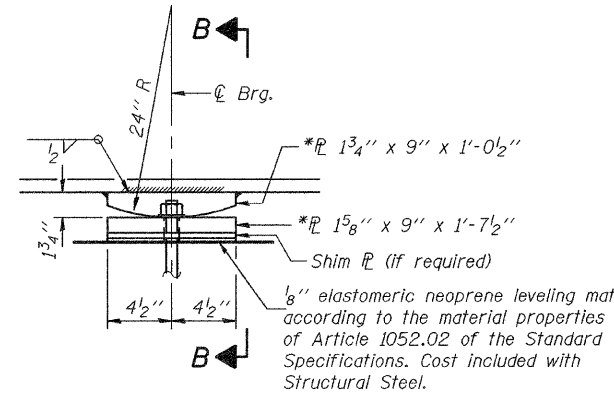
1/8" elastomeric neoprene leveling mat according to the material properties of Article 1052.02 of the Standard Specifications. Cost included with Structural Steel.

1" ϕ x 1'-0" Anchor bolts (ASTM F1554 Grade 55) with 2 1/4" x 2 1/4" x 5/16" PL washer under nut 1 3/8" x 2" slotted hole in flange 1 1/2" ϕ holes in bearing PL.



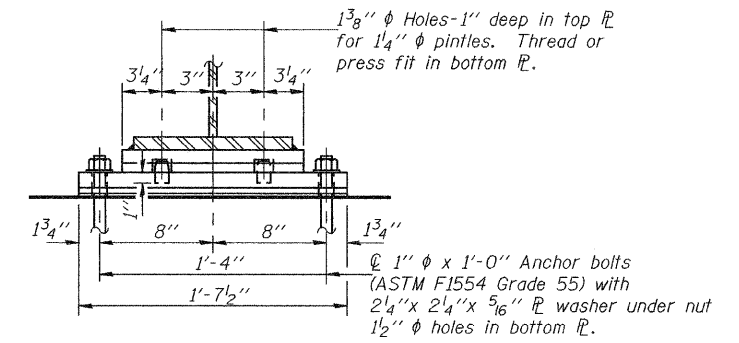
SECTION A-A

FIXED BEARING
(12 required)



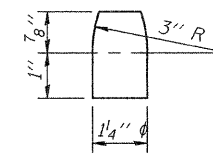
ELEVATION AT PIERS

FIXED BEARING
(12 required)



SECTION B-B

*All bearing plates and pintles shall be AASHTO M270, Grade 50.



***PINTLE**

Notes: Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the member is in place. Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications. Anchor bolts shall be ASTM F1554 all-thread (or an Engineer approved alternate material of the grade and diameter specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F_y=36 ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554. Two 1/8" adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on the bearing details.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	48

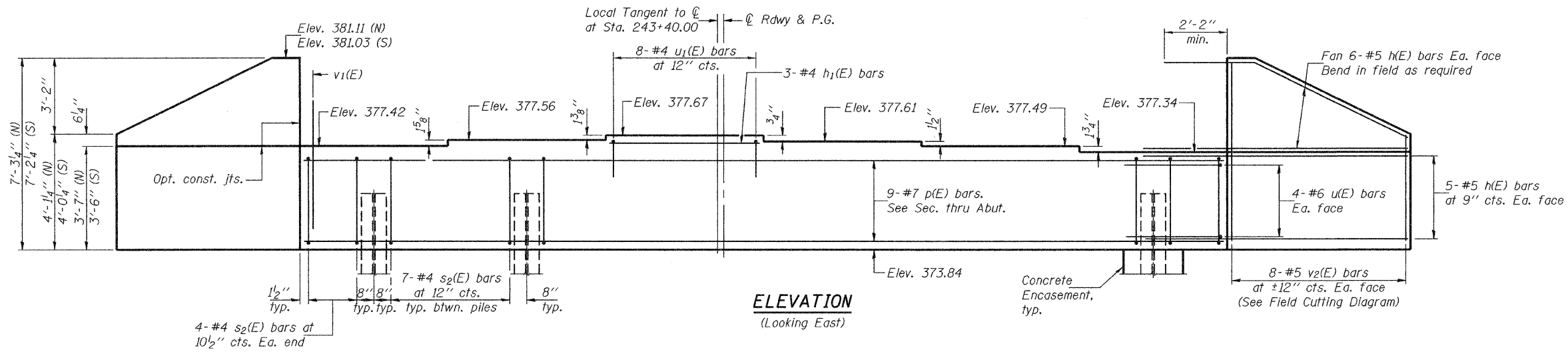
BEARING DETAILS
STRUCTURE NO. 039-0070 (E.B.)

DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC Amber Seiber htd
CHECKED	RLM/MDS

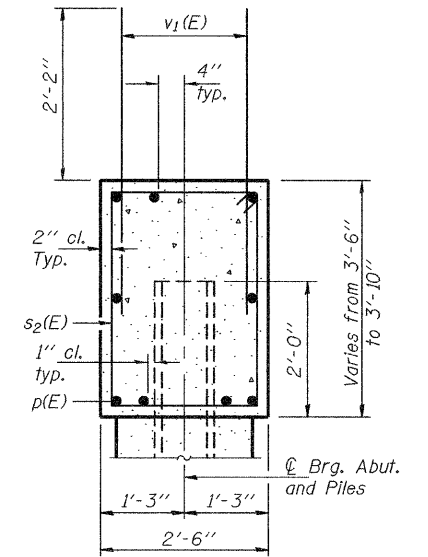
EXAMINED	Thomas J. Domagalaki ENGINEER OF BRIDGE DESIGN
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

SHEET NO. 14 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	35
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					
CONTRACT NO. 98641					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



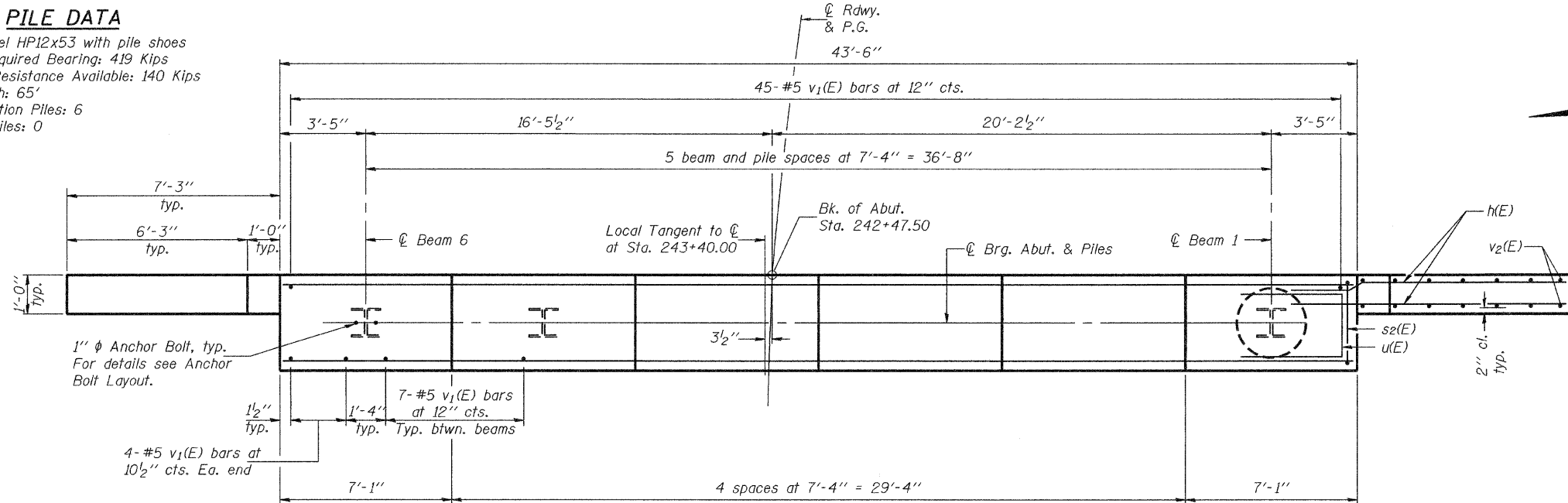
ELEVATION
(Looking East)



SEC. THRU ABUT.

PILE DATA

Type: Steel HP12x53 with pile shoes
Nominal Required Bearing: 419 Kips
Factored Resistance Available: 140 Kips
Est. Length: 65'
No. Production Piles: 6
No. Test Piles: 0

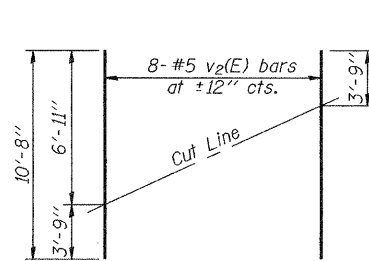


PLAN

**EAST ABUTMENT
BILL OF MATERIAL**

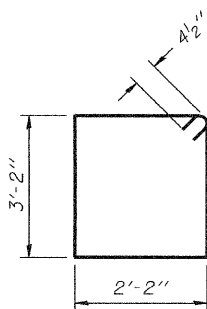
Bar	No.	Size	Length	Shape
h(E)	44	#5	10'-3"	—
h1(E)	3	#4	7'-0"	—
p(E)	9	#7	43'-3"	—
s2(E)	43	#4	11'-5"	□
u(E)	8	#6	7'-3"	—
u1(E)	8	#4	4'-8"	□
v1(E)	88	#5	4'-6"	—
v2(E)	16	#5	10'-8"	—
Concrete Structures			Cu. Yd.	18.0
Reinforcement Bars, Epoxy Coated			Pound	2310
Structure Excavation			Cu. Yd.	27.7
Furnishing Steel				
Piles HP12x53			Foot	390
Driving Piles			Foot	390
Pile Shoes			Each	6
Concrete Encasement			Cu. Yd.	2.1

Notes: Pour steps monolithically with cap.
Bars indicated thus 9 x 2-#7 etc. indicates 9 lines of bars with 2 lengths per line.

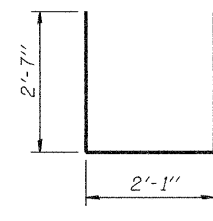


FIELD CUTTING DIAGRAM

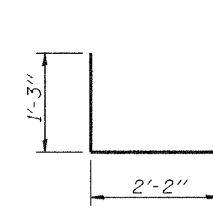
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



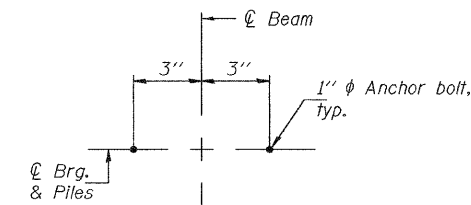
BAR s2(E)



BAR u(E)



BAR u1(E)



ANCHOR BOLT LAYOUT

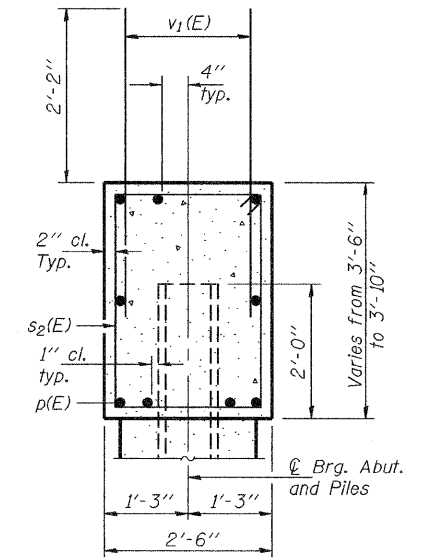
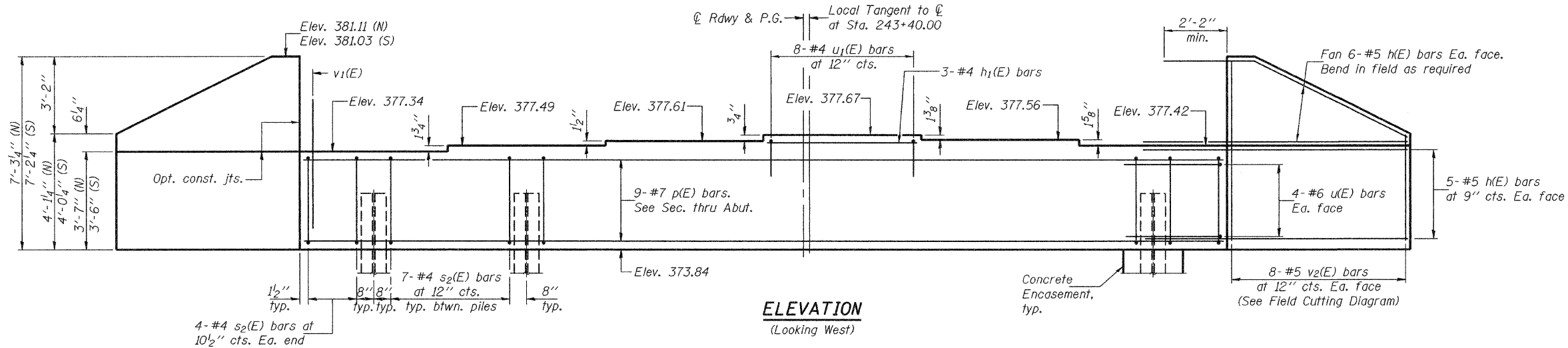
DESIGNED	Rebecca Mitchell
CHECKED	Mark. D. Shaffer
DRAWN	AMC htd Amber Seiber
CHECKED	RLM/MDS

July 27, 2009
EXAMINED *Thomas J. Domagalaki*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

**EAST ABUTMENT
STRUCTURE NO. 039-0070 (E.B.)**

SHEET NO. 15 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	36
FED. ROAD DIST. NO. _			ILLINOIS	FED. AID PROJECT	
			CONTRACT NO. 98641		

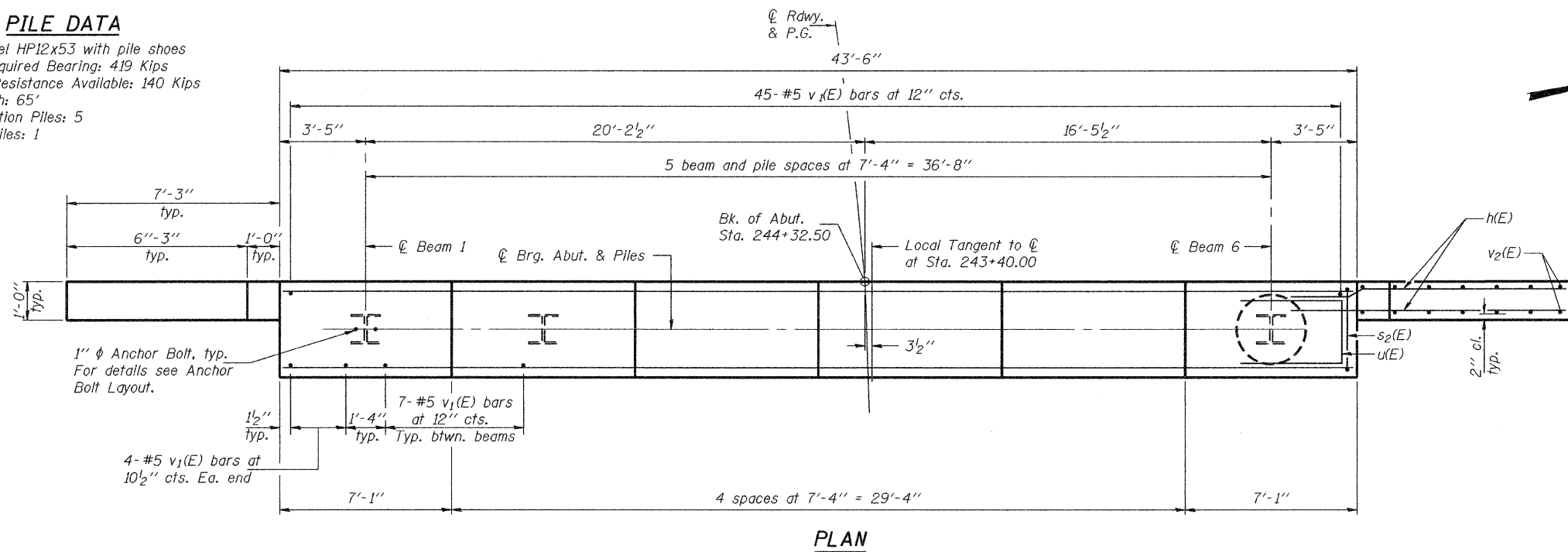
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SEC. THRU ABUT.

PILE DATA

Type: Steel HP12x53 with pile shoes
Nominal Required Bearing: 419 Kips
Factored Resistance Available: 140 Kips
Est. Length: 65'
No. Production Piles: 5
No. Test Piles: 1

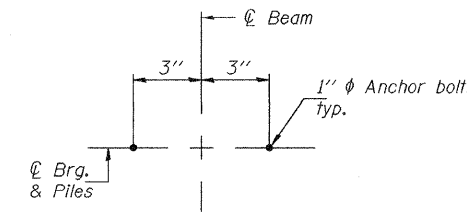


PLAN

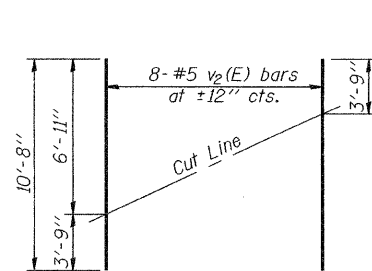
WEST ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	44	#5	10'-3"	—
h1(E)	3	#4	7'-0"	—
p(E)	9	#7	43'-3"	—
s2(E)	43	#4	11'-5"	□
u(E)	8	#6	7'-3"	—
u1(E)	8	#4	4'-8"	□
v1(E)	88	#5	4'-6"	—
v2(E)	16	#5	10'-8"	—
Concrete Structures		Cu. Yd.	18.0	
Reinforcement Bars, Epoxy Coated		Pound	2310	
Structure Excavation		Cu. Yd.	27.7	
Furnishing Steel Piles HP12x53		Foot	325	
Driving Piles		Foot	325	
Test Pile Steel HP12x53		Each	1	
Pile Shoes		Each	6	
Concrete Encasement		Cu. Yd.	2.1	

Notes: Pour steps monolithically with cap.
Bars indicated thus 9 x 2-#7 etc. indicates 9 lines of bars with 2 lengths per line.

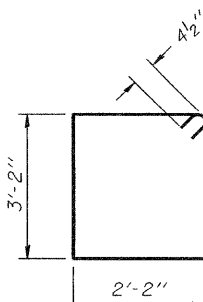


ANCHOR BOLT LAYOUT

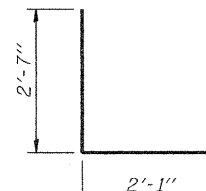


FIELD CUTTING DIAGRAM

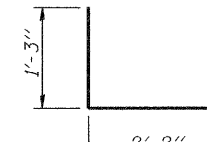
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s2(E)



BAR u(E)



BAR u1(E)

DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC Amber Seiber htd
CHECKED	RLM/MDS

EXAMINED	Thomas J. Domagala	July 27, 2009
PASSED	Ralph E. Anderson	

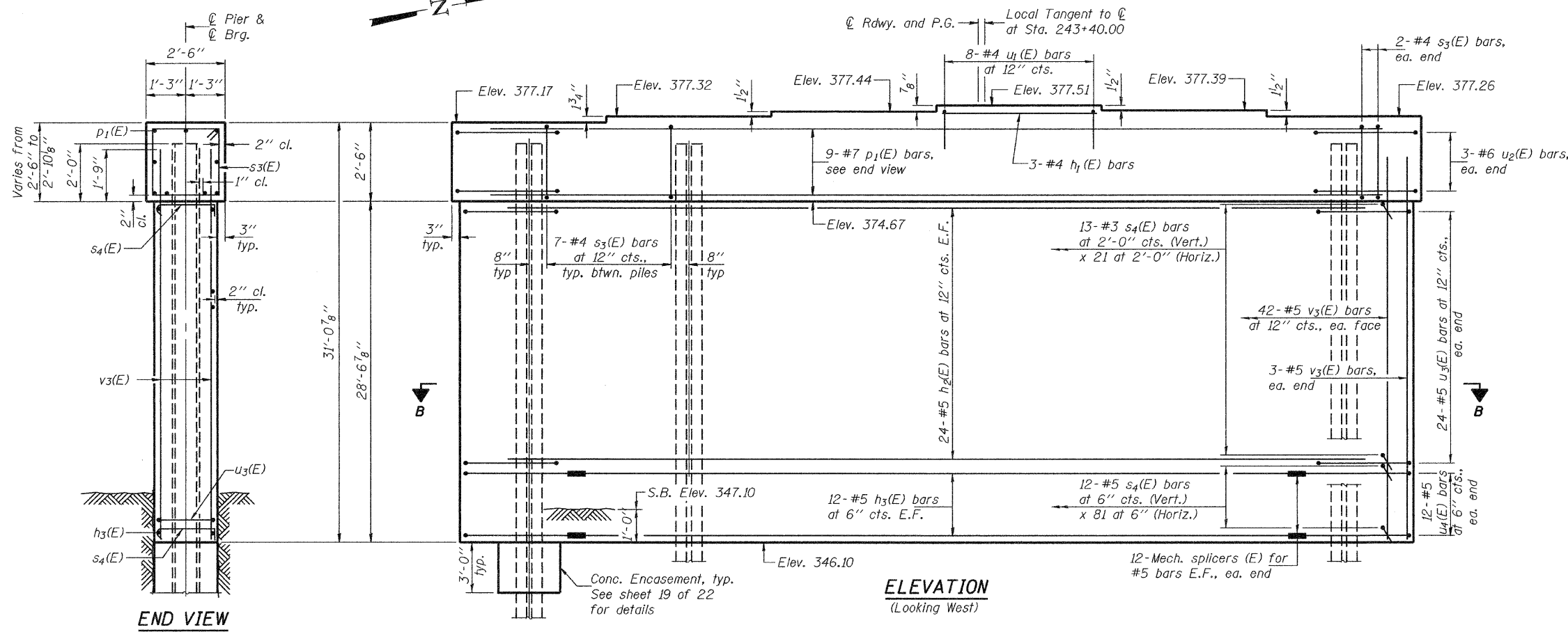
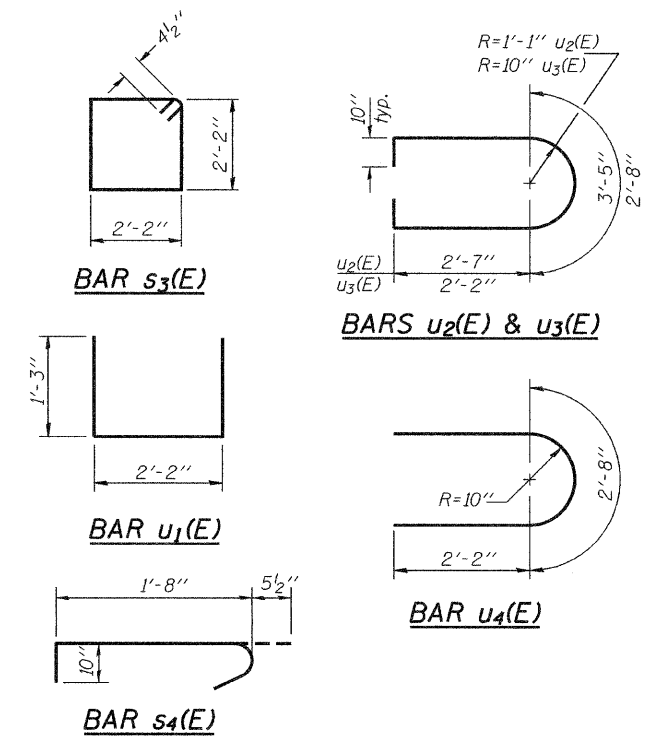
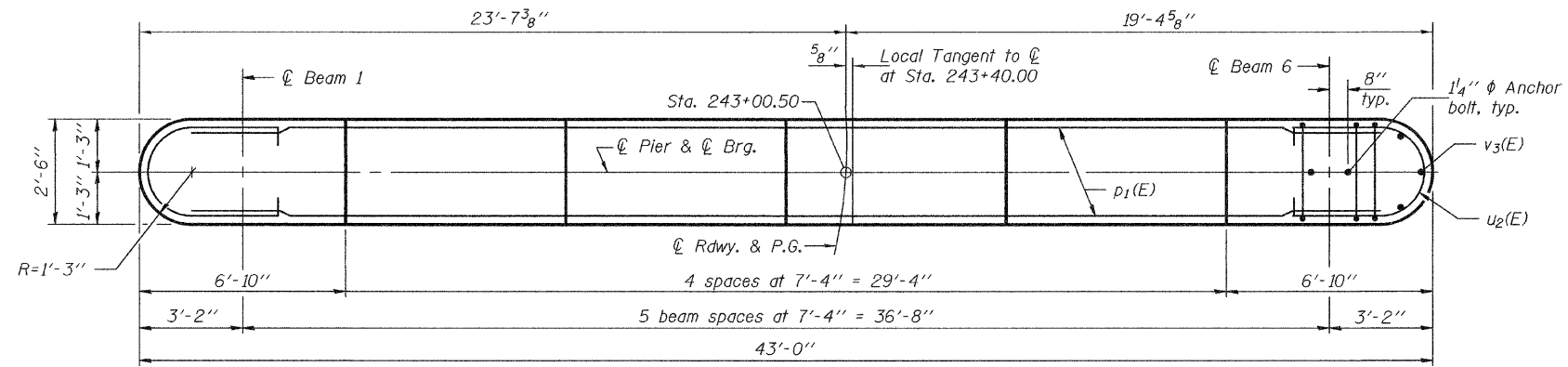
WEST ABUTMENT
STRUCTURE NO. 039-0070 (E.B.)

SHEET NO. 16 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	37
FED. ROAD DIST. NO. _ ILLINOIS			FED. AID PROJECT		
			CONTRACT NO. 98641		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*Forms shall be placed below Elevation 346.10 after excavation for pier walls. If a portion of the pier wall is under water, concrete shall be trimmed under water into forms according to Article 503.08 of the Standard Specifications. Concrete shall be trimmed to an Elevation 1'-0" above the water level at the time of construction.

Notes: Space reinforcement in cap to miss anchor bolts. Four steps monolithically with cap. For details of piles, see sheet 19 of 22.

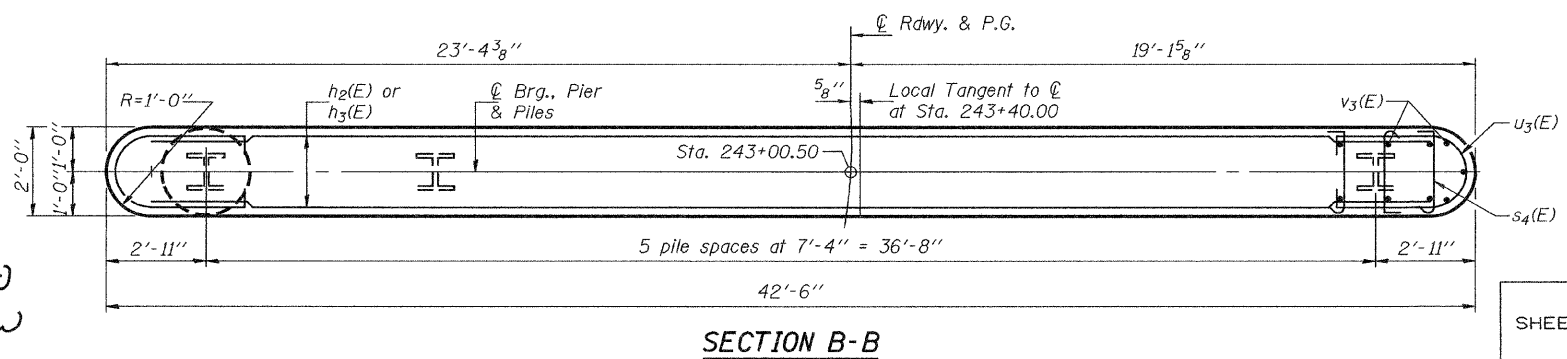


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_1(E)$	3	#4	7'-0"	—
$h_2(E)$	48	#5	40'-6"	—
$h_3(E)$	24	#5	36'-2"	—
$p_1(E)$	9	#7	40'-6"	—
$s_3(E)$	39	#4	9'-5"	□
$s_4(E)$	1245	#5	3'-0"	┌
$u_1(E)$	8	#4	4'-8"	┌
$u_2(E)$	6	#6	10'-3"	┌
$u_3(E)$	48	#5	8'-8"	┌
$u_4(E)$	24	#5	7'-0"	┌
$v_3(E)$	90	#5	30'-3"	—
Concrete Structures		Cu. Yd.	99.6	
Reinforcement Bars, Epoxy Coated		Pound	11400	
Structure Excavation		Cu. Yd.	149.7	
Furnishing Steel Piles HP12x84		Foot	396	
Driving Piles		Foot	396	
Underwater Structure Excavation Protection, Location 1		Each	1	
Pile Shoes		Each	6	
Mechanical Splicers		Each	48	
Concrete Encasement		Cu. Yd.	2.1	

Bars indicated thus 32 x 2-#5 etc. indicates 32 lines of bars with 2 lengths per line.

PIER 1
STRUCTURE NO. 039-0070 (E.B.)



PILE DATA

Type: Steel HP12x84 with Pile Shoes
Nominal Required Bearing: 664 Kips
Factored Resistance Available: 221 Kips
Est. Length: 66'
No. Production Piles: 6
No. Test Piles: 0

DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC htd Amber Seiber
CHECKED	RLM/MDS

EXAMINED *Thomas J. Domagalicki*
ENGINEER OF BRIDGE DESIGN
PASSES *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

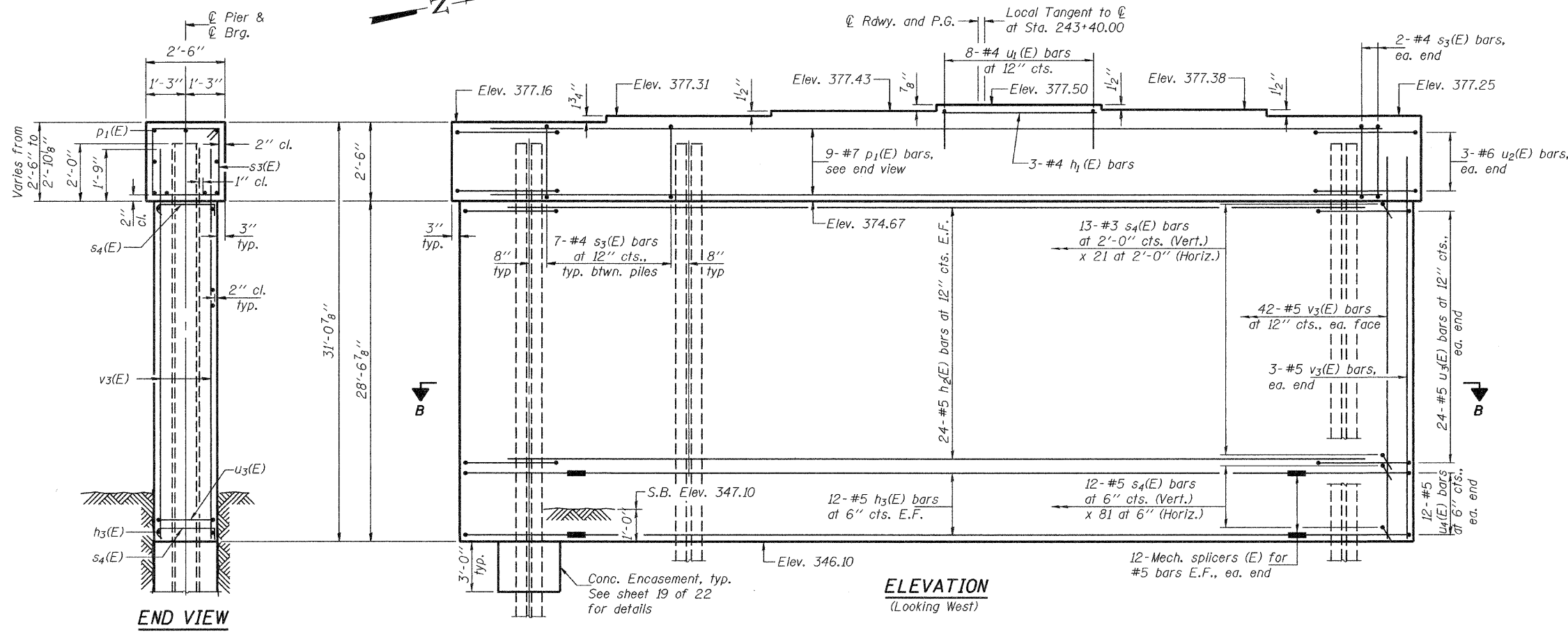
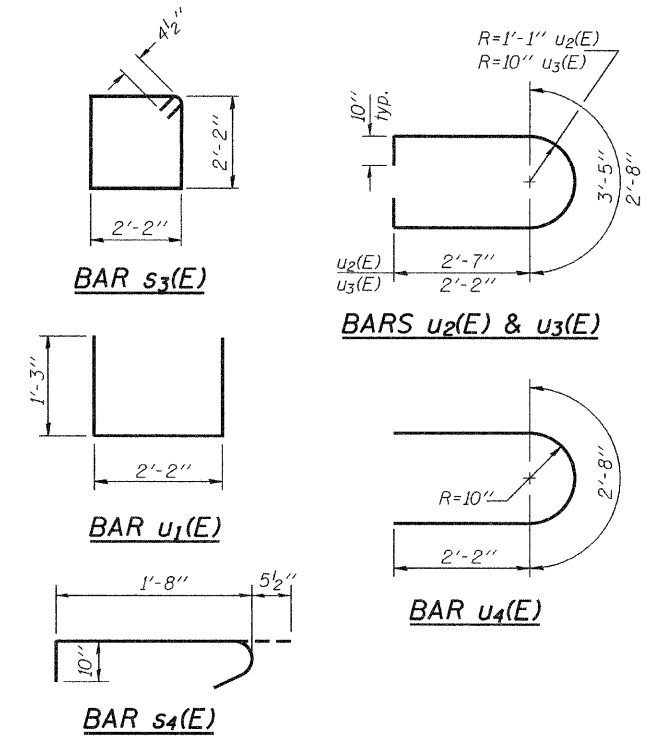
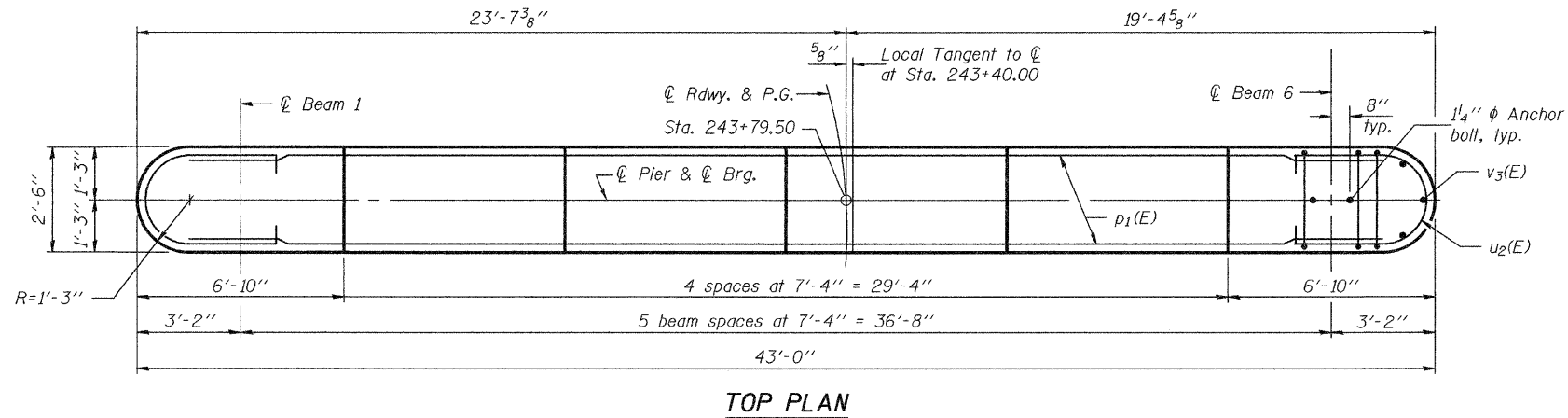
July 27, 2009

SHEET NO. 17 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	61	38
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT		
CONTRACT NO. 98641					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

*Forms shall be placed below Elevation 346.10 after excavation for pier walls. If a portion of the pier wall is under water, concrete shall be trimmed under water into forms according to Article 503.08 of the Standard Specifications. Concrete shall be trimmed to an Elevation 1'-0" above the water level at the time of construction.

Notes: Space reinforcement in cap to miss anchor bolts. Four steps monolithically with cap. For details of piles, see sheet 19 of 22.

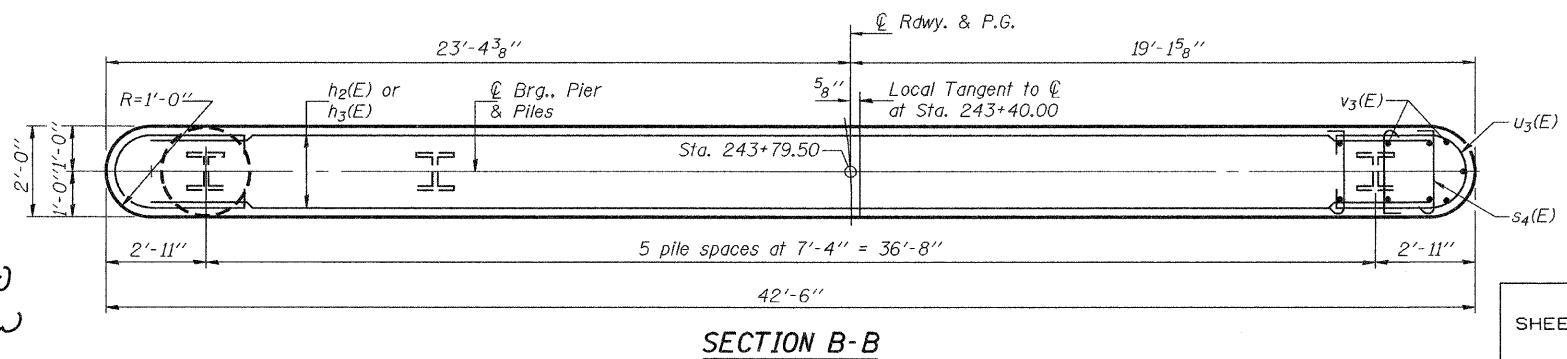


BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h ₁ (E)	3	#4	7'-0"	—
h ₂ (E)	48	#5	40'-6"	—
h ₃ (E)	24	#5	36'-2"	—
p ₁ (E)	9	#7	40'-6"	—
s ₃ (E)	39	#4	9'-5"	□
s ₄ (E)	1245	#5	3'-0"	┘
u ₁ (E)	8	#4	4'-8"	┘
u ₂ (E)	6	#6	10'-3"	┘
u ₃ (E)	48	#5	8'-8"	┘
u ₄ (E)	24	#5	7'-0"	┘
v ₃ (E)	90	#5	30'-3"	—
Concrete Structures		Cu. Yd.	99.6	
Reinforcement Bars, Epoxy Coated		Pound	11400	
Structure Excavation		Cu. Yd.	149.7	
Furnishing Steel Piles HP12x84		Foot	396	
Driving Piles		Foot	396	
Underwater Structure Excavation Protection, Location 2		Each	1	
Pile Shoes		Each	6	
Mechanical Splicers		Each	48	
Concrete Encasement		Cu. Yd.	2.1	

Bars indicated thus 32 x 2-#5 etc. indicates 32 lines of bars with 2 lengths per line.

PIER 2
STRUCTURE NO. 039-0070 (E.B.)



PILE DATA

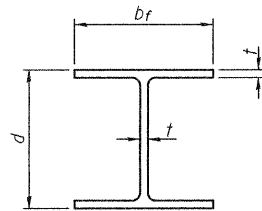
Type: Steel HP12x84 with Pile Shoes
Nominal Required Bearing: 664 Kips
Factored Resistance Available: 221 Kips
Est. Length: 66'
No. Production Piles: 6
No. Test Piles: 0

DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	AMC Amber Seiber htd
CHECKED	RLM/MDS

EXAMINED *Thomas J. Domagalicki*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

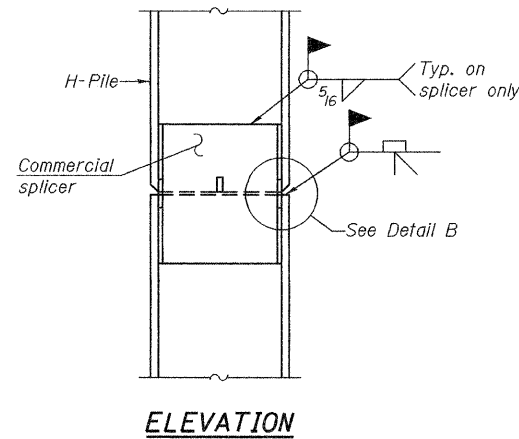
SHEET NO. 18	F.A.P. RTE. 331	SECTION (12-BY-1)-1	COUNTY JACKSON	TOTAL SHEETS 67	SHEET NO. 39
22 SHEETS	CONTRACT NO. 98641		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

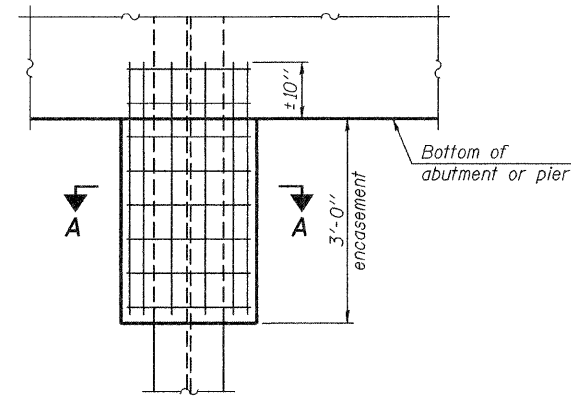


STEEL PILE TABLE

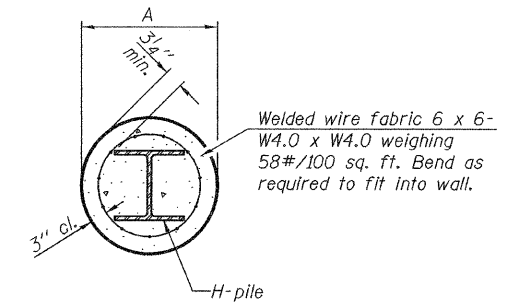
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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



ELEVATION



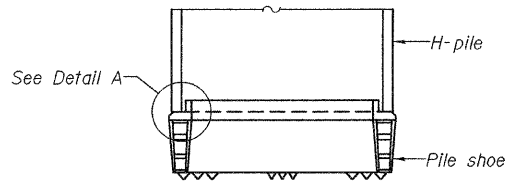
ELEVATION



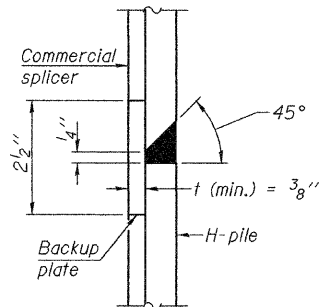
SECTION A-A

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

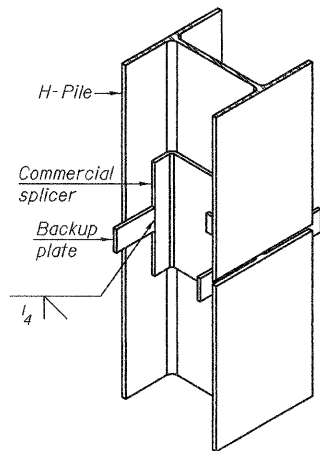
PILE ENCASEMENT



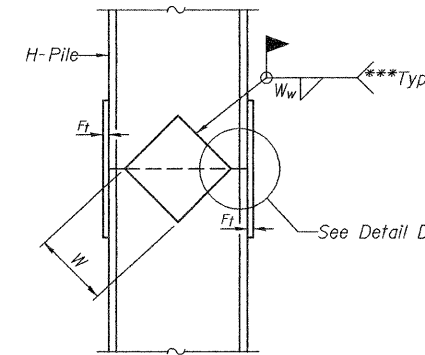
ELEVATION



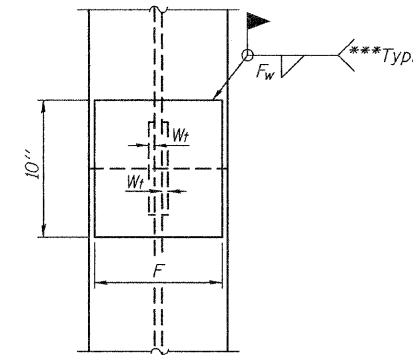
DETAIL "B"



ISOMETRIC VIEW



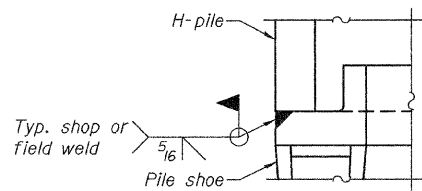
ELEVATION



END VIEW

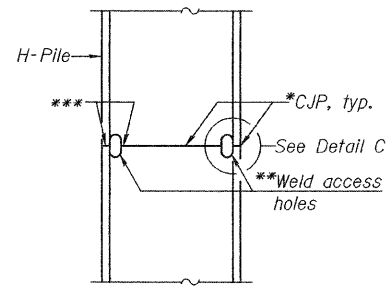
WELDED COMMERCIAL SPLICE

WELDED PLATE FIELD SPLICE

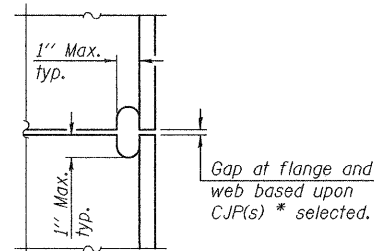


DETAIL A

H-PILE SHOE ATTACHMENT

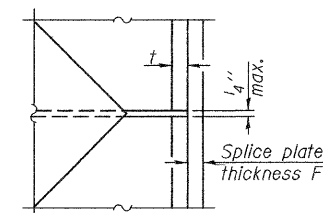


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5 8/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5 8/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5 8/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5 8/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5 8/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5 8/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

HP PILE DETAILS
STRUCTURE NO. 039-0070 (E.B.)

- * Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- ** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- *** Interrupt welds 1/4" from end of each pile.

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

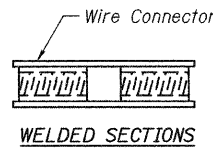
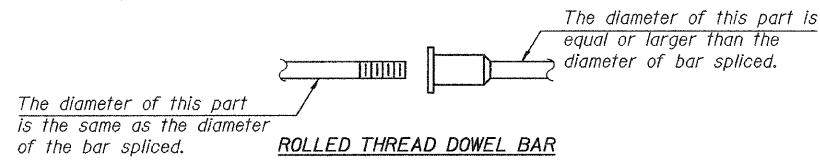
DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	h.t. duong
CHECKED	RLM/MDS

July 27, 2009
EXAMINED *Thomas J. Domagalicki*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

F-HP 10-1-08

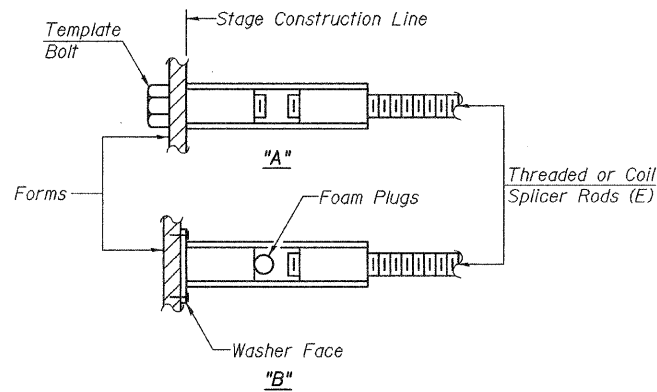
SHEET NO. 19 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	40
CONTRACT NO. 98641					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

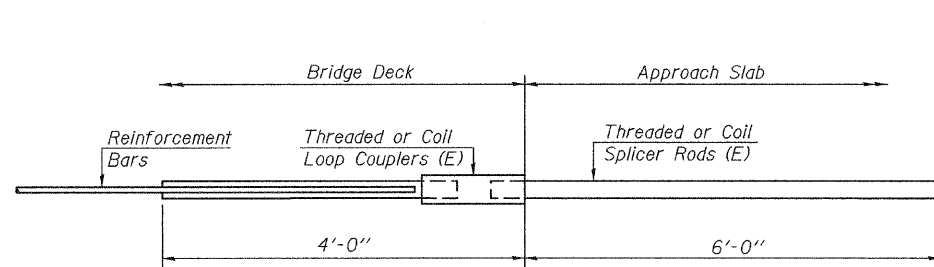
"A" : Set bar splicer assembly by means of a template bolt.
 "B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
 (E) : Indicates epoxy coating.

NOTES

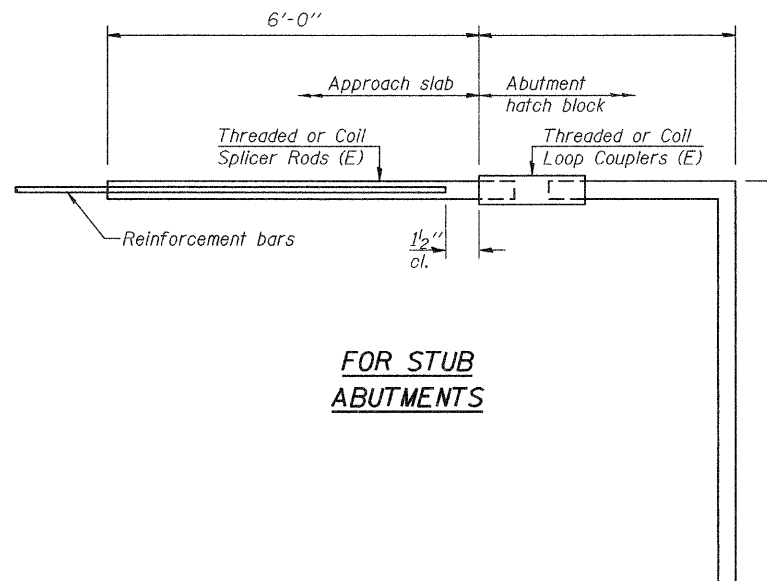
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
 All reinforcement bars shall be lapped and tied to the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

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

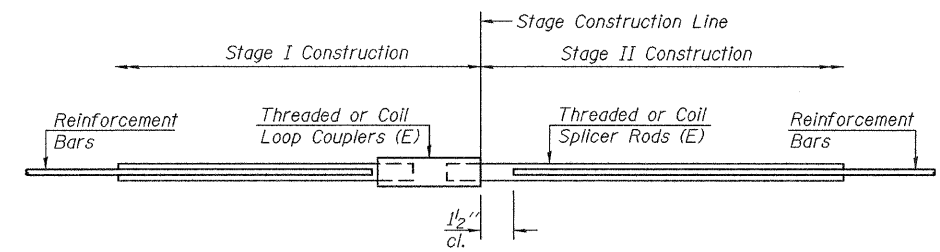
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0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



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS



FOR STUB ABUTMENTS



STANDARD

Bar Size	No. Assemblies Required	Location

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 92

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

DESIGNED	Rebecca Mitchell
CHECKED	Mark D. Shaffer
DRAWN	h.t. duong
CHECKED	RLM/MDS

EXAMINED	Thomas J. Domagalicki	July 27, 2009
PASSED	Ralph E. Anderson	

BSD-1 10-1-08

**BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 039-0070 (E.B.)**

SHEET NO. 20 22 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	41
CONTRACT NO. 98641					
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Page 1 of 2

Date 5/4/00

Illinois Department of Transportation
Division of Highways
SOIL BORING LOG

ROUTE FAP 331 DESCRIPTION FAP 331 (IL 13) over Mud Creek LOGGED BY R. Moberly

SECTION (12-BY-1)-1 LOCATION Near Mid S 12, NW 14, SE 14, SE 14, SEC. 2, TWP. 9S, RNG. 2W, 3 PM

COUNTY Jackson DRILLING METHOD _____ HAMMER TYPE _____

STRUCT. NO. 039-0014 Station 243+40.00

BORING NO. 2-S Station 242+31 Offset 28.00ft

Ground Surface Elev. 382.0 ft (ft) (6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	UNIFIED SOIL CLASSIFICATION	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	FIELD NOTES	DEPTH (ft)	UNIFIED SOIL CLASSIFICATION	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	FIELD NOTES
4	Very stiff, moist, brown, Silty Clay A-6	CL	1.9	17		Stiff, damp to moist, grey, Silty Loam to Silty Clay Loam A-4 (continued)	4	CL	1.9	17		
5							5					
7						Stiff, moist, brown, Silty Clay to Silty Clay Loam A-6	7	CL	2.3	22		
7							7	CL	2.3	22		
357.5							357.5					
4						Medium to stiff, very moist, grey, Silty Clay A-6	4	CL	2.1	21		
4							4	CL	2.1	21		
5							5	CL	2.1	21		
375.0							375.0					
2						Stiff, moist to very moist, grey and brown, Clay to Silty Clay A7-6	2	CL	1.2	33		
3							3	CL	1.2	33		
4							4	CL	1.2	33		
372.5							372.5					
2						Medium, very moist, grey and brown, Silty Clay A-6	2	CL	0.9	23		
3							3	CL	0.9	23		
4							4	CL	0.9	23		
370.0							370.0					
1						Medium, very moist, brown, Silty Clay to Silty Clay Loam A-6	1	CL	0.7	23		
2							2	CL	0.7	23		
2							2	CL	0.7	23		
367.5							367.5					
2						Stiff, moist to very moist, brown, Silty Clay A-6	2	CL	1.2	23		
3							3	CL	1.2	23		
4							4	CL	1.2	23		
347.5							347.5					
3						Soft, very moist, brown mottled grey, Silty Clay Loam A-4	3	ML	0.4	27		
4							4	ML	0.4	27		
345.0							345.0					
1						Medium, very moist, brown and grey, Silty Clay Loam A-4 with Sand seams	1	ML	0.7	28		
3							3	ML	0.7	28		
3							3	ML	0.7	28		
342.5							342.5					
3							3	ML	0.7	28		
342.5							342.5					
3							3	ML	0.7	28		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Page 2 of 2

Date 5/4/00

Illinois Department of Transportation
IDOT
SOIL BORING LOG

ROUTE FAP 331 DESCRIPTION FAP 331 (IL 13) over Mud Creek LOGGED BY R. Moberly

SECTION (12-BY-1)-1 LOCATION Near Mid S 12, NW 14, SE 14, SE 14, SEC. 2, TWP. 9S, RNG. 2W, 3 PM

COUNTY Jackson DRILLING METHOD _____ HAMMER TYPE _____

STRUCT. NO. 039-0014 Station 243+40.00

BORING NO. 2-S Station 242+31 Offset 28.00ft

Ground Surface Elev. 382.0 ft (ft) (6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	UNIFIED SOIL CLASSIFICATION	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	FIELD NOTES	DEPTH (ft)	UNIFIED SOIL CLASSIFICATION	WATER CONTENT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	FIELD NOTES
3	Medium, very moist, grey, Silty Clay A-6 (continued)	CL	1.1	21		Stiff, moist, brown, Clay A7-6 with Sand seams (continued)	3	CL	1.1	21		
5							5	CL	1.1	21		
340.0							340.0					
1						Stiff, moist, brown, Clay to Silty Clay A7-6	1	CL	1.6	27		
2							2	CL	1.6	27		
4							4	CL	1.6	27		
318.5							318.5					
2						Loose, very moist, brown, Fine to Medium Sand	2	SM	1.5	19		
317.5							317.5					
1						Stiff, moist, yellow brown, Clay A7-6 with Sand seams	1	CL	1.4	26		
2							2	CL	1.4	26		
3							3	CL	1.4	26		
313.0							313.0					
1						Hard, dry, grey, Clay Shale	1	SH	1004			
312.0							312.0					
1						Stiff, moist, brown, Clay A7-6	1	CL	1.6	20		
3							3	CL	1.6	20		
4							4	CL	1.6	20		
332.0							332.0					
1						Bottom of hole = 69.8 feet	1					
Free water observed at 33.5 feet												
Elevation referenced to 1954 plans												
To convert "N" values to "N60" values, multiply by 1.25												

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

BORING LOGS
STRUCTURE NO. 039-0070 (E.B.)

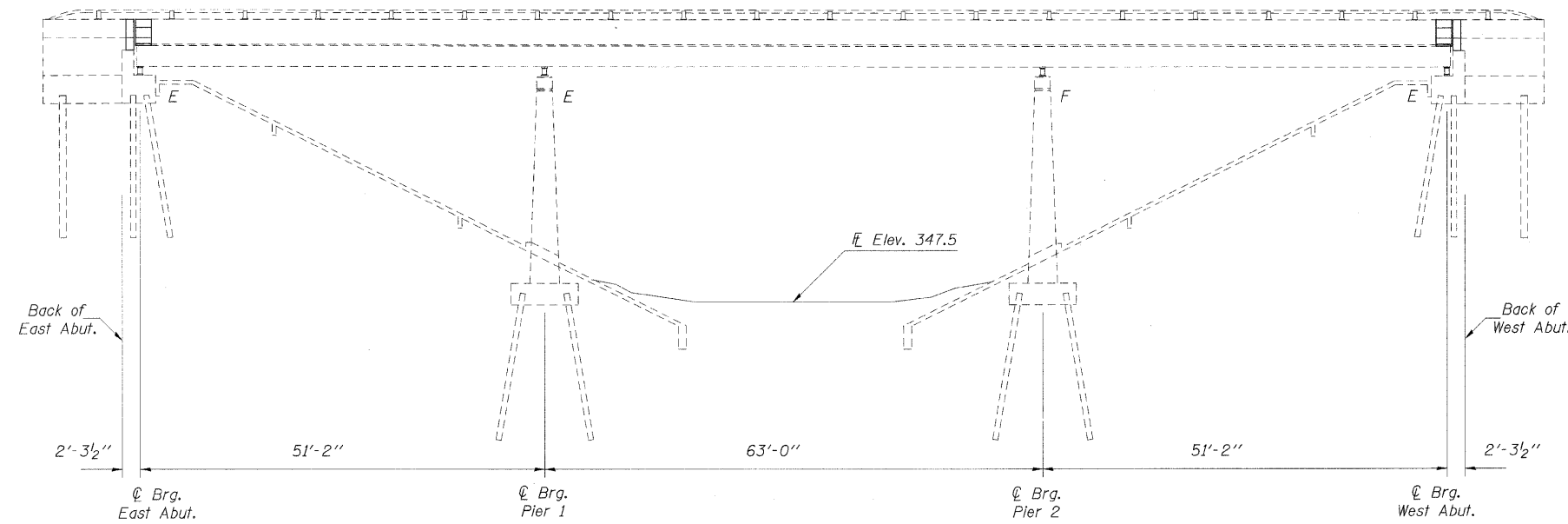
SHEET NO. 22	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	331	(12-BY-1)-1	JACKSON	67	43
22 SHEETS	CONTRACT NO. 98641				
FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT					

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	44
STA. _____ TO STA. _____				
FED. ROAD DIST. NO. _____ ILLINOIS		FED. AID PROJECT		
* D9 BSMART FY10-1				

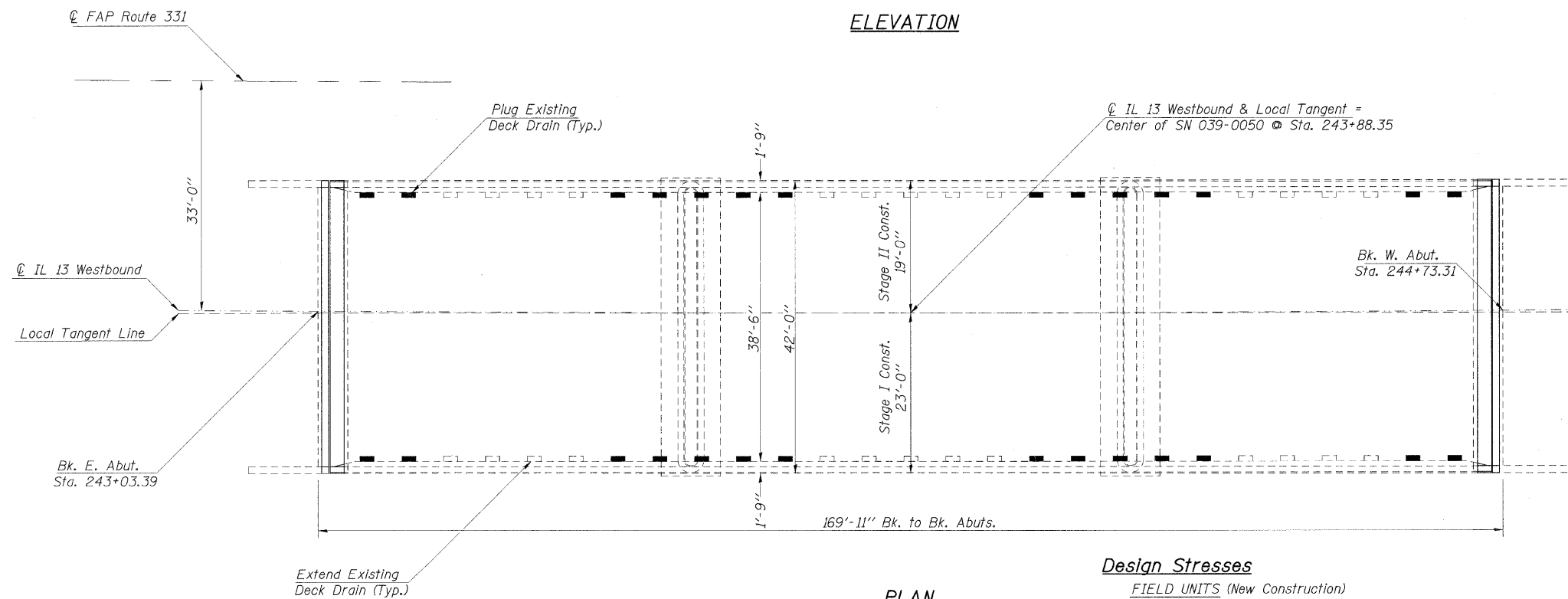
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts.
Bolts - 3/4" ϕ , holes - 5/8" ϕ , unless otherwise noted.
All structural steel shall be AASHTO M 270 Grade 36 unless otherwise noted.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See special provisions.
Reinforcement bars designated (E) shall be epoxy coated.
Prior to pouring the new concrete deck section, all heavy or loose rust, loose mill scale, and other loose or partially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.
Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Furnishing and Erecting Structural Steel.
If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".
The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the Acrylic finish coat shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provisions for "Cleaning and Painting New Metal Structures".
Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.
Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.



ELEVATION



PLAN

Design Stresses

FIELD UNITS (New Construction)
f'c = 3,500 psi
fy = 60,000 psi (reinforcement)

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	9.6
Concrete Superstructure	Cu. Yd.	10.7
Bridge Deck Grooving	Sq. Yd.	684
Furnishing and Erecting Structural Steel	Pound	1734
Jack and Remove Existing Bearings	Each	12
Reinforcement Bars, Epoxy Coated	Pound	1450
Bar Splicers	Each	18
Preformed Joint Strip Seal	Foot	81
Elastomeric Bearing Assembly, Type I	Each	12
Anchor Bolts, 1"	Each	24
Bridge Deck Microsilica Concrete Overlay, 2 1/2"	Sq. Yd.	696
Bridge Deck Hydro-Scarification 1/2"	Sq. Yd.	696
Protective Coat	Sq. Yd.	729
Plug Existing Deck Drains	Each	28
Floor Drain Extension	Each	26

**GENERAL PLAN AND ELEVATION
ILL 13 W.B. OVER MUD CREEK
JACKSON COUNTY
SN 039-0050**

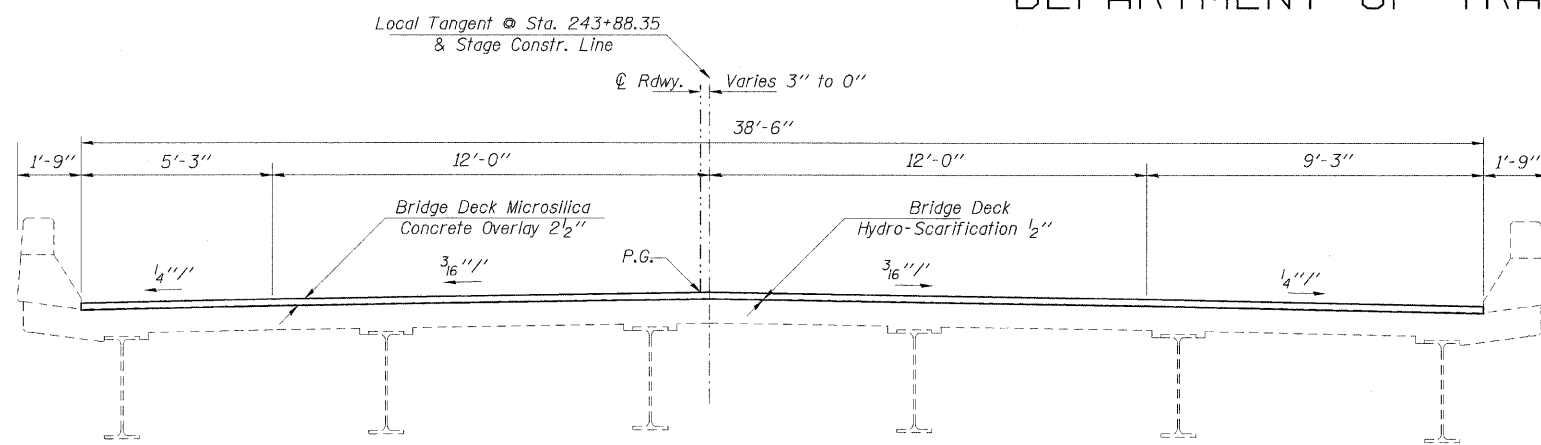


Expires 11-30-2010

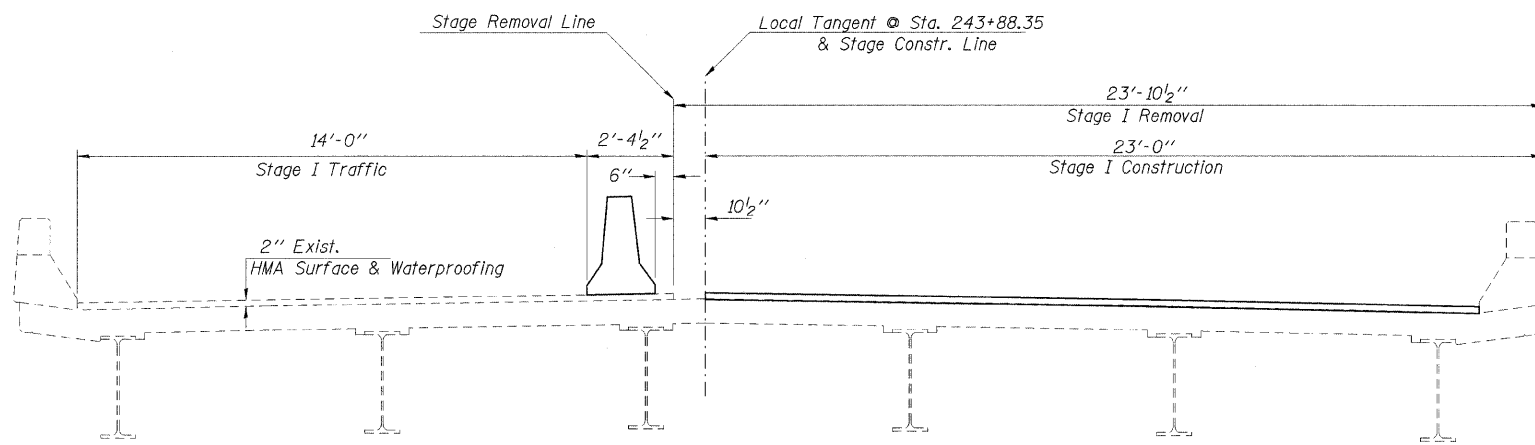
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FILE NAME = c:\pwworkspace\mudcreek\sn039-0050\0390050.dgn
PLOT TIME = 1:08:11 PM 3/25/2009
USER NAME = porsche

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	45
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		
* D9 BSMART FY10-1				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

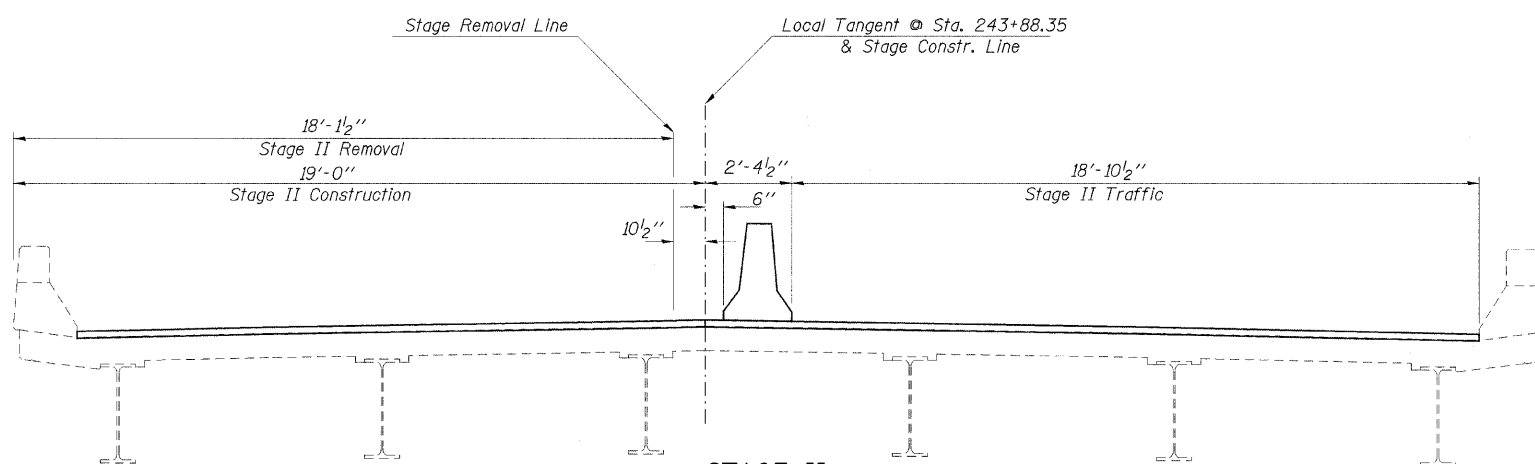


TYPICAL CROSS SECTION
(Proposed Cross Slope matches the Existing)



STAGE I

Note: Cross sections are looking West



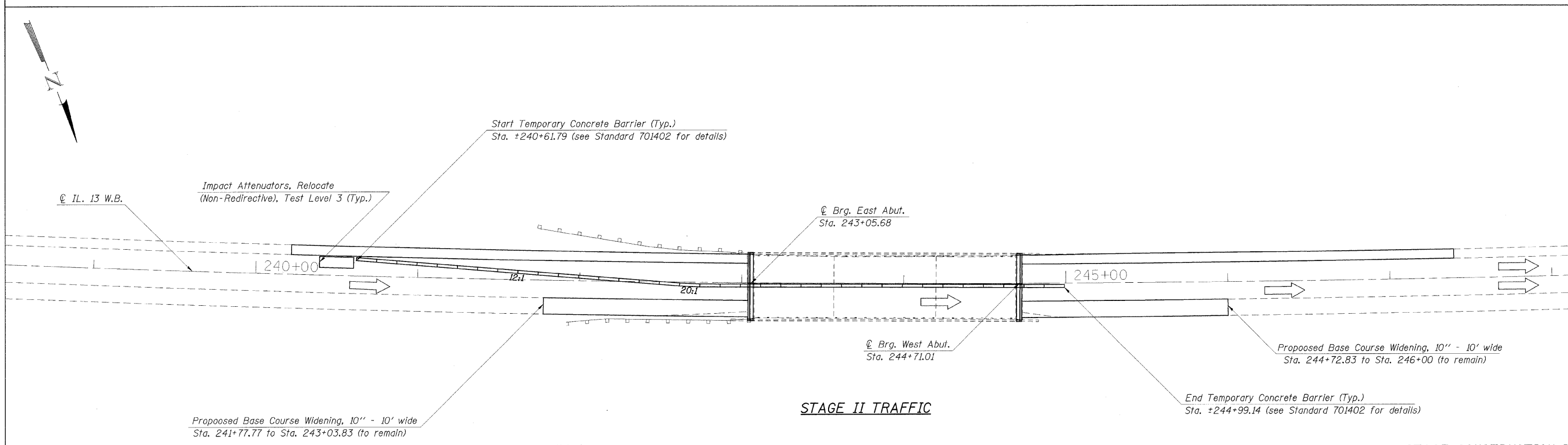
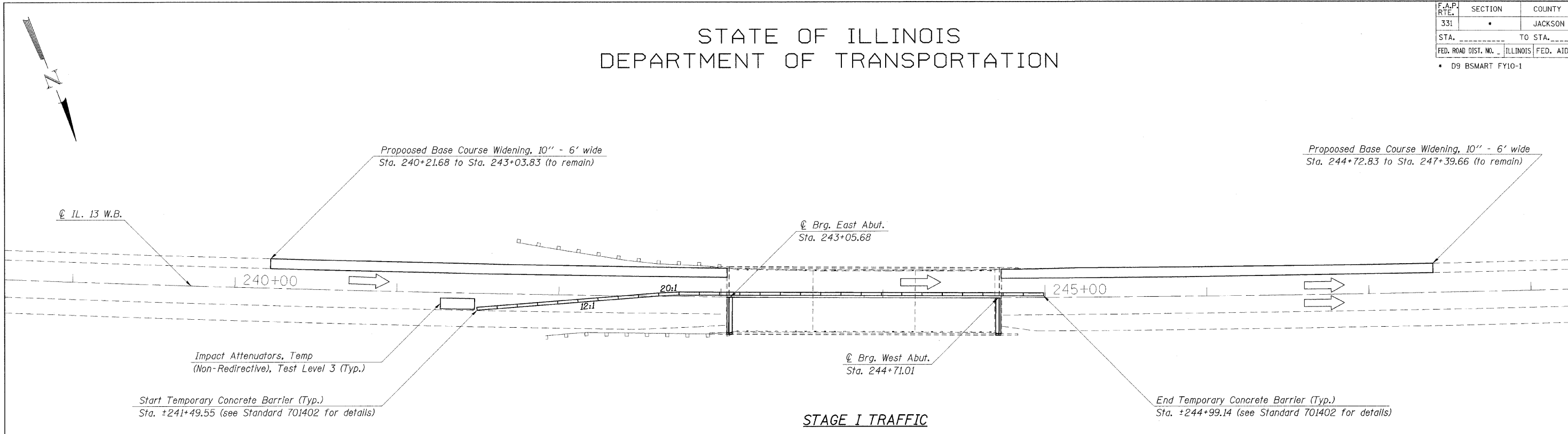
STAGE II

STAGE CONSTRUCTION DETAILS
ILL 13 W.B. OVER MUD CREEK
JACKSON COUNTY
SN 039-0050

PLOT DATE = 3/25/2009
 PLOT TIME = 10:54:46 AM
 PLOT USER = porterc
 USER NAME = porterc

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	46
STA. _____ TO STA. _____		FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT		
• D9 BSMART FY10-1				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



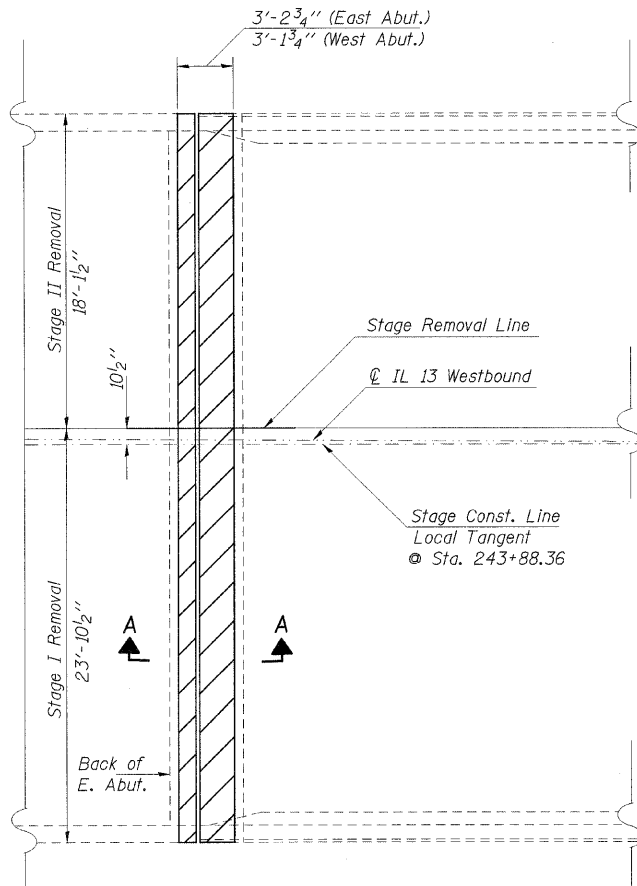
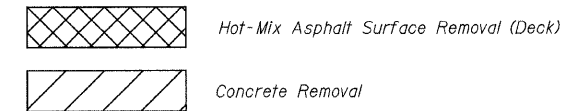
Notes: See Standard 701402 for additional details.

STAGE CONSTRUCTION DETAILS
ILL 13 W.B. OVER MUD CREEK
JACKSON COUNTY
SN 039-0050

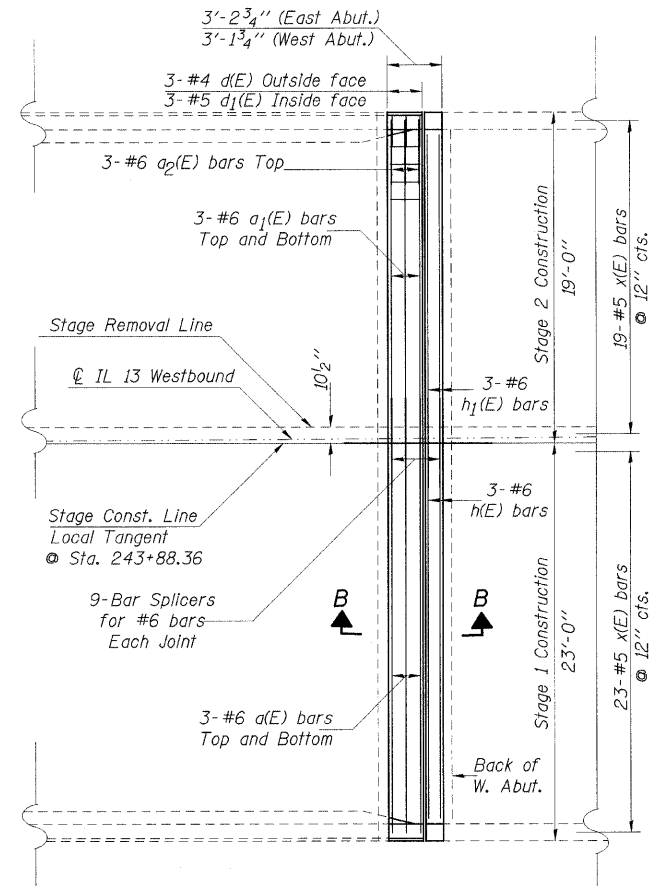
PLOT DATE = 3/17/2009
PLOT SCALE = 30/0001 IN.
USER NAME = pps-terno

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	47
STA. _____ TO STA. _____		FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT		
• D9 BSMART FY10-1				

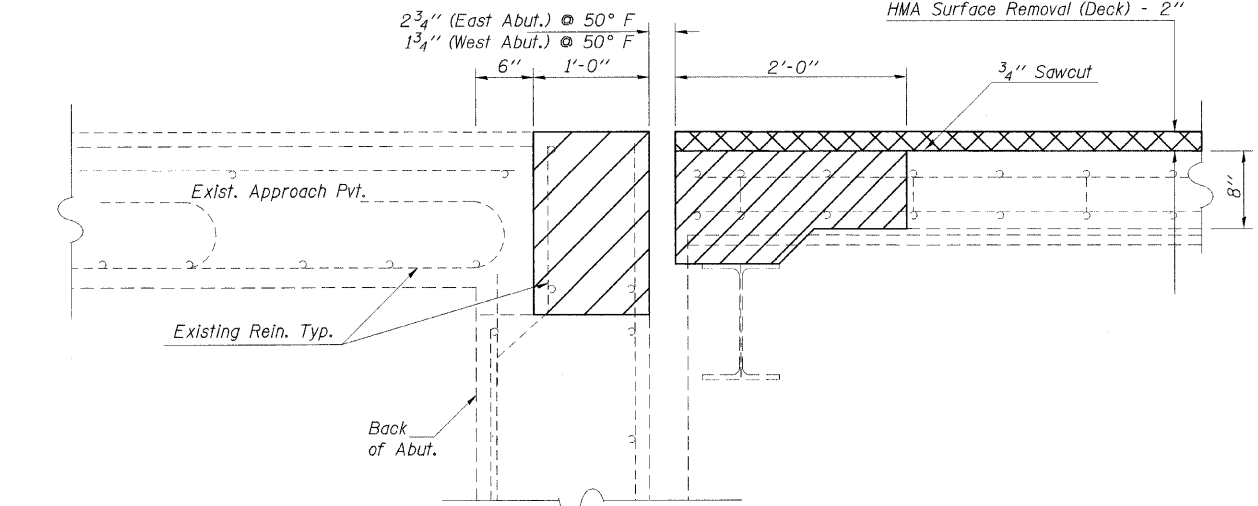
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



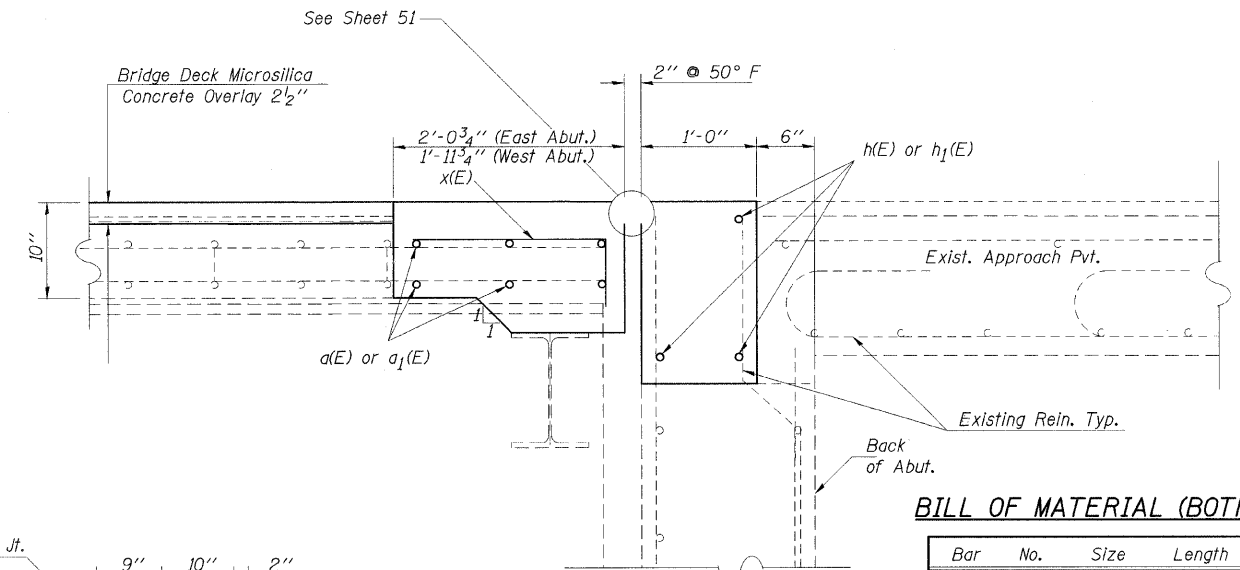
EAST ABUT. PLAN
SHOWING CONCRETE REMOVAL
West Abut. similar by 180° rotation



WEST ABUT. PLAN
SHOWING NEW CONCRETE
East Abut. similar by 180° rotation



SECTION A-A



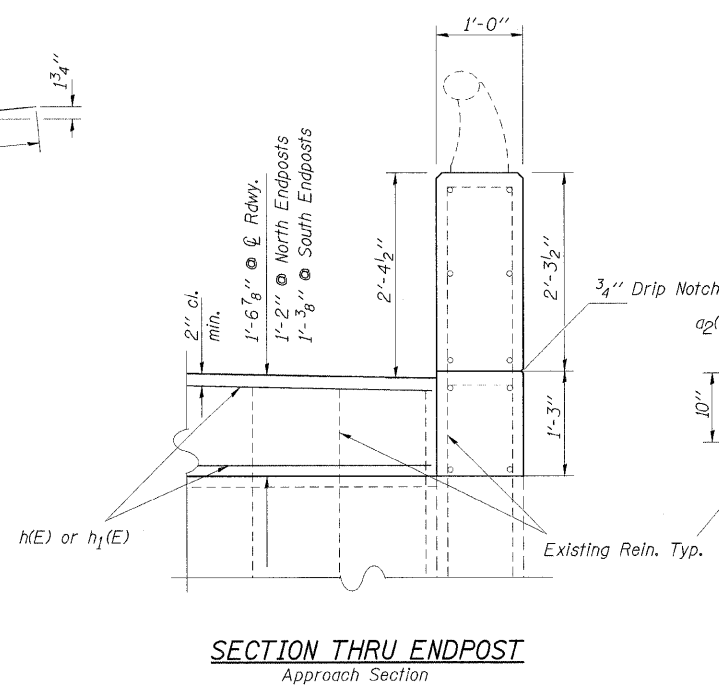
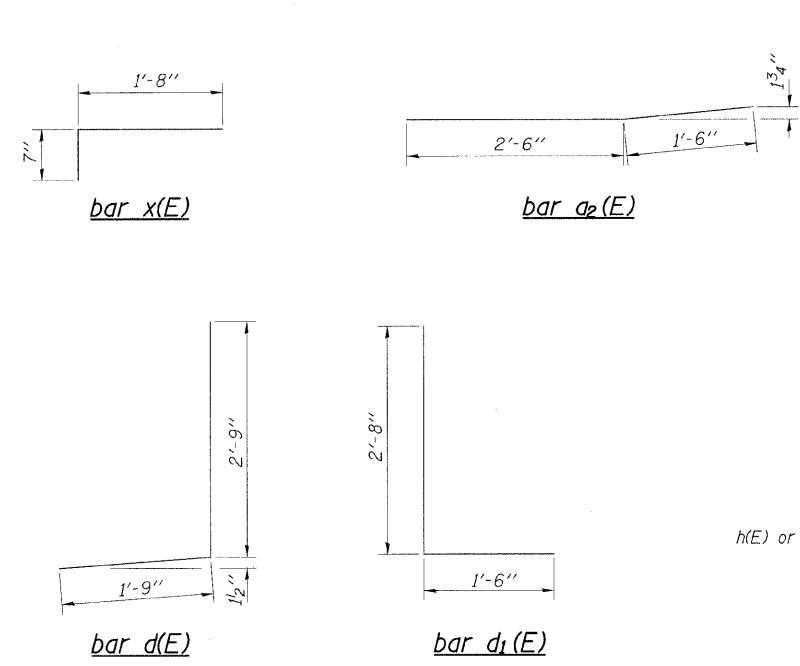
SECTION B-B

BILL OF MATERIAL (BOTH ABUTS)

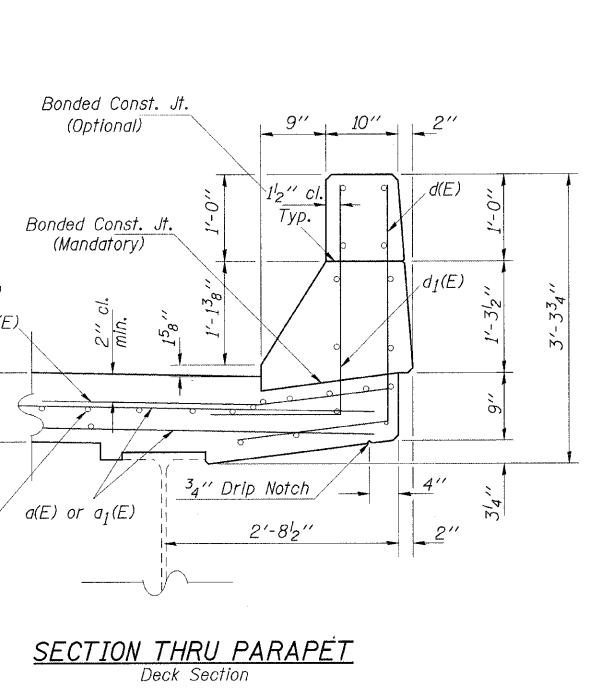
Bar	No.	Size	Length	Shape
a(E)	12	#6	22'-6"	—
a1(E)	12	#6	18'-6"	—
a2(E)	12	#6	4'-0"	—
d(E)	12	#4	4'-6"	┘
d1(E)	12	#5	4'-2"	┘
h(E)	6	#6	21'-8"	—
h1(E)	6	#6	17'-8"	—
x(E)	84	#5	2'-3"	┘
Concrete Superstructure			Cu. Yd.	10.7
Concrete Removal			Cu. Yd.	9.6
Reinforcement Bars, Epoxy Coated			Pound	1450

Reinforcement bars designated (E) shall be epoxy coated.

JOINT REPLACEMENT DETAILS
ILL 13 W.B. OVER MUD CREEK
JACKSON COUNTY
SN 039-0050



SECTION THRU ENDPOST
Approach Section

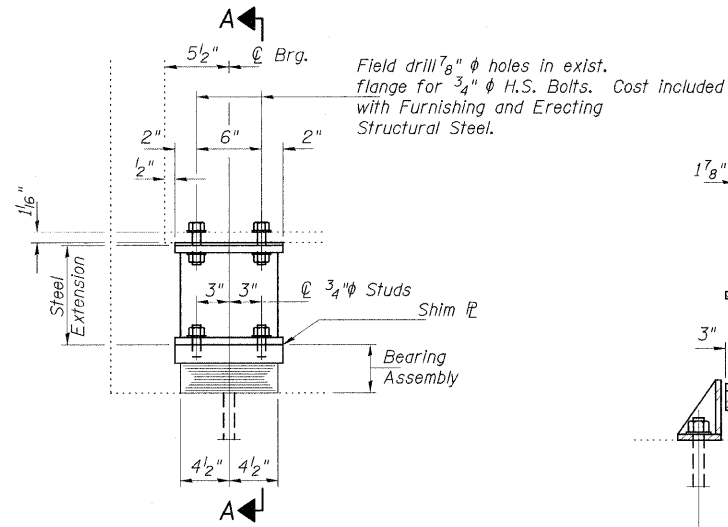


SECTION THRU PARAPET
Deck Section

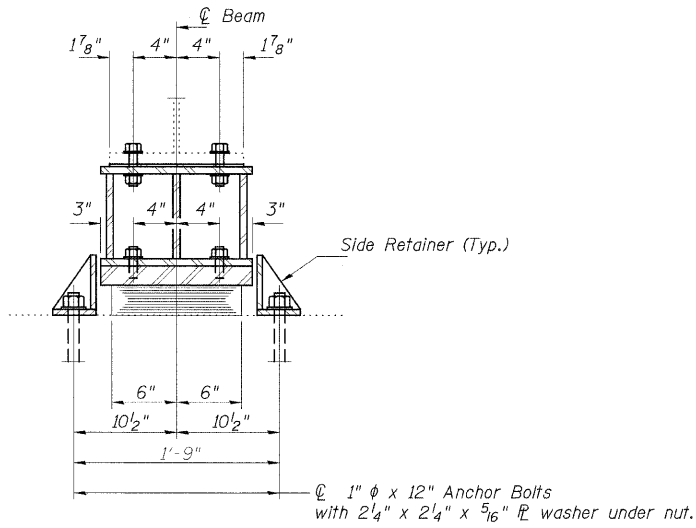
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USER NAME = pva

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	48
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		
• D9 BSMART FY10-1				

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



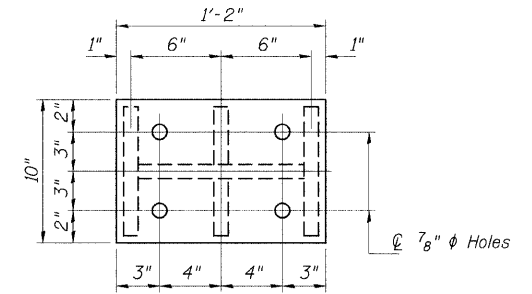
ELEVATION AT ABUTMENT



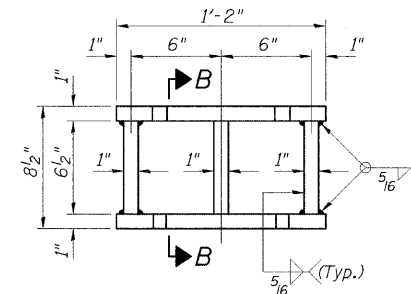
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

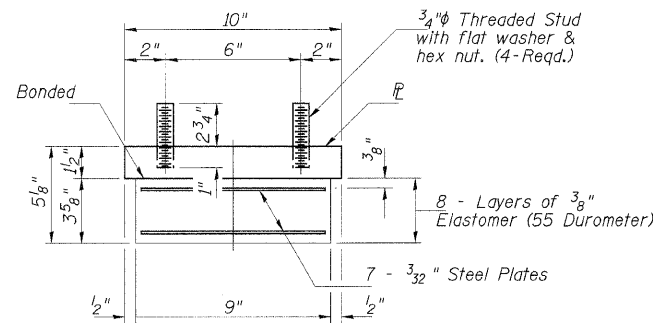
Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.
Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.
The minimum jack capacity required is 50 Tons.
Existing diaphragm removal and reinstallation may be required to facilitate drilling holes, cost to be included with "Jack and Remove Existing Bearings".
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
The structural steel plates of the Bearing Assembly shall conform to the requirements of ASSHTO M 270 Grade - 50.
Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
New steel extensions, connection bolts and Shim \mathcal{R} 's are included in "Furnishing and Erecting Structural Steel".



PLAN TOP AND BOTTOM PLATE

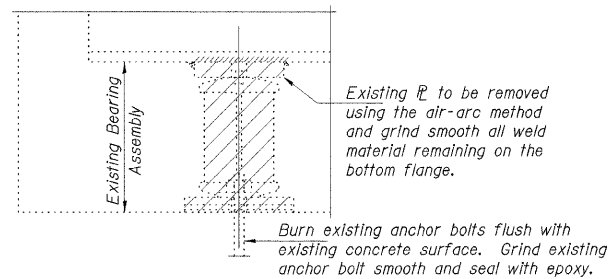


STEEL EXTENSION DETAIL



BEARING ASSEMBLY

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

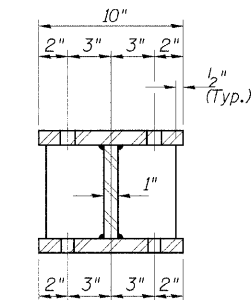


EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BEAM REACTIONS

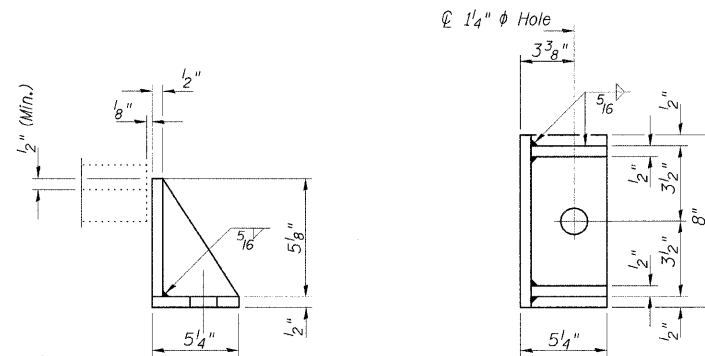
R \mathcal{L}	(K)	23.8
R \mathcal{R}	(K)	37
Imp.	(K)	10
R (Total)	(K)	70.8



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	6
Jack and Remove Existing Bearings	Each	6
Anchor Bolts, 1"	Each	12



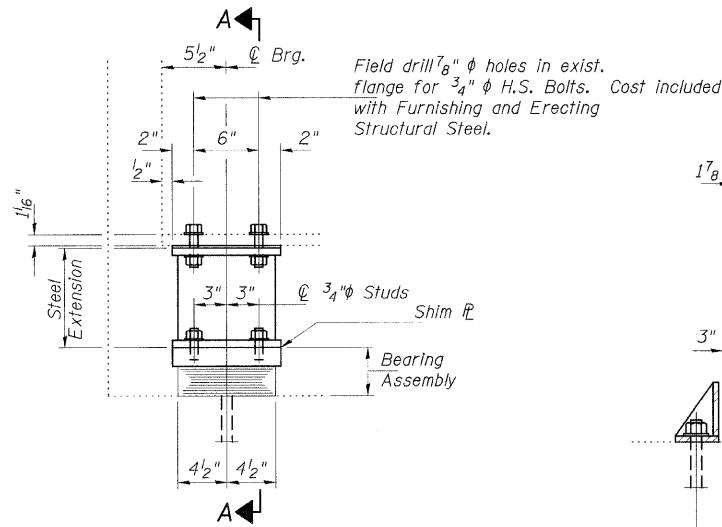
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

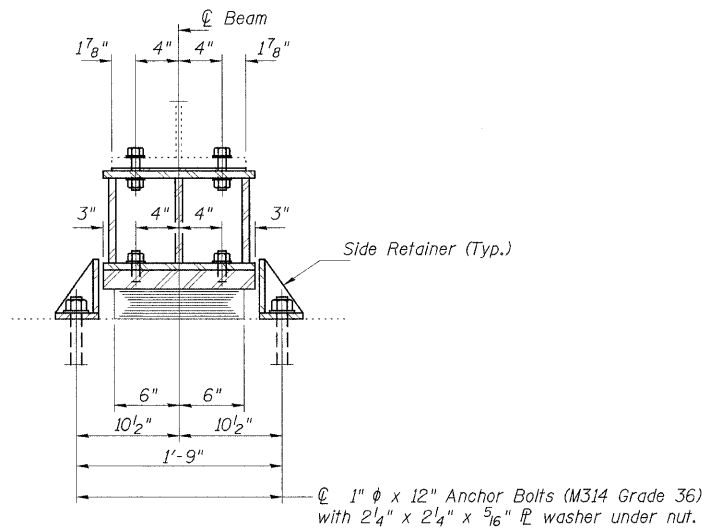
**BEARING DETAILS - EAST ABUTMENT
ILL 13 W.B. OVER MUD CREEK
JACKSON COUNTY
SN 039-0050**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	*	JACKSON	67	49
STA.	TO STA.			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* D9 BSMART FY10-1				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT ABUTMENT



SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

Notes:

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

Side retainers and other steel members required for the bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.

The minimum jack capacity required is 50 Tons.

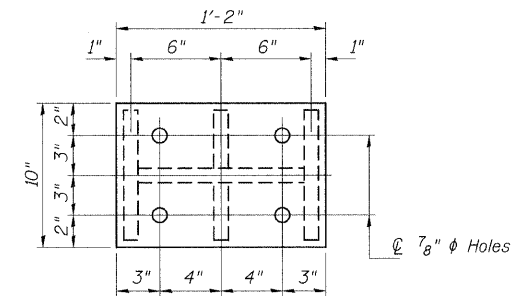
Existing diaphragm removal and reinstallation may be required to facilitate drilling holes, cost to be included with "Jack and Remove Existing Bearings".

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.

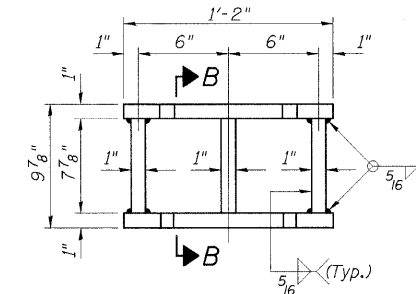
The structural steel plates of the Bearing Assembly shall conform to the requirements of ASSHTO M 270 Grade - 50.

Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

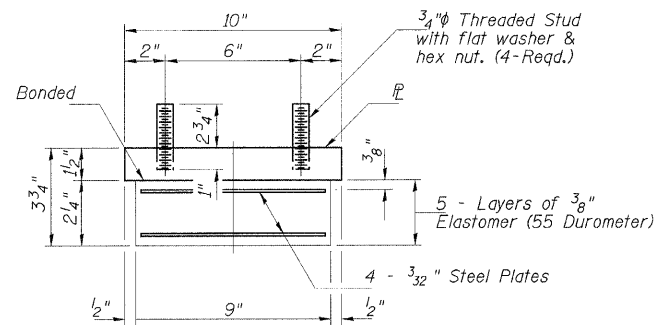
New steel extensions, connection bolts and Shim \mathbb{P} 's are included in "Furnishing and Erecting Structural Steel".



PLAN TOP AND BOTTOM PLATE

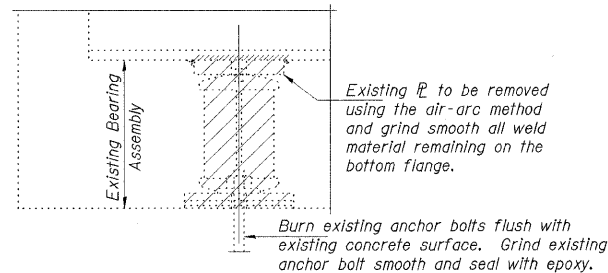


STEEL EXTENSION DETAIL



BEARING ASSEMBLY

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

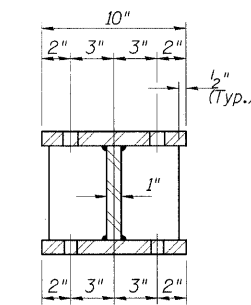


EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BEAM REACTIONS

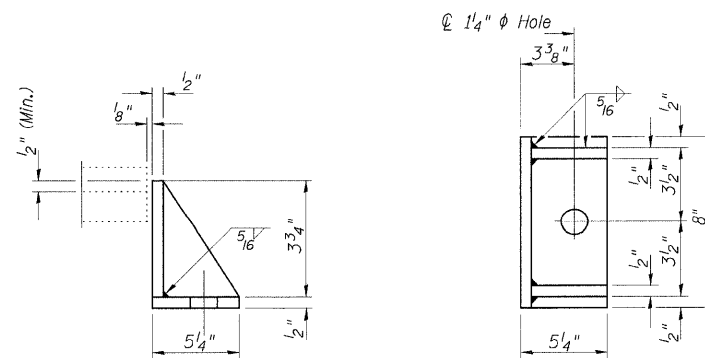
R \mathbb{P}	(K)	23.8
R \mathbb{L}	(K)	37
Imp.	(K)	10
R (Total)	(K)	70.8



SECTION B-B

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	6
Jack and Remove Existing Bearings	Each	6
Anchor Bolts, 1"	Each	12



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BEARING DETAILS - WEST ABUTMENT
ILL 13 W.B. OVER MUD CREEK
JACKSON COUNTY
SN 039-0050

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331		JACKSON	67	52
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS FED. AID PROJECT		
• D9 BSMART FY10-1				

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

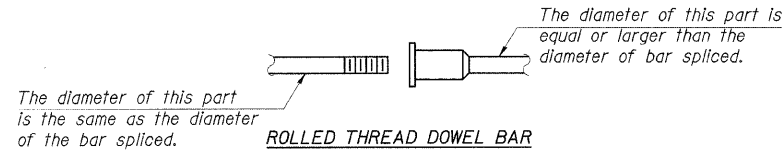
NOTES

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

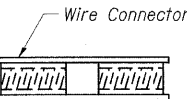
- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$

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

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	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



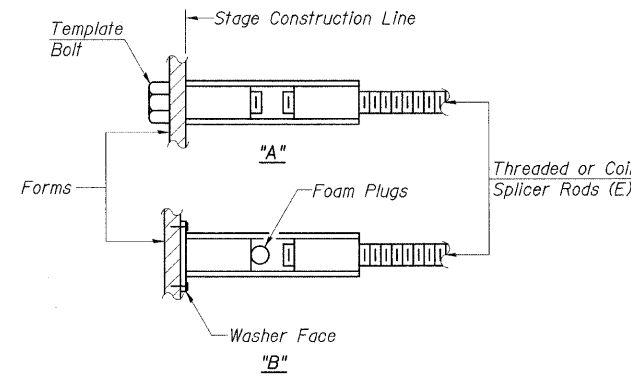
**** ONE PIECE**



WELDED SECTIONS

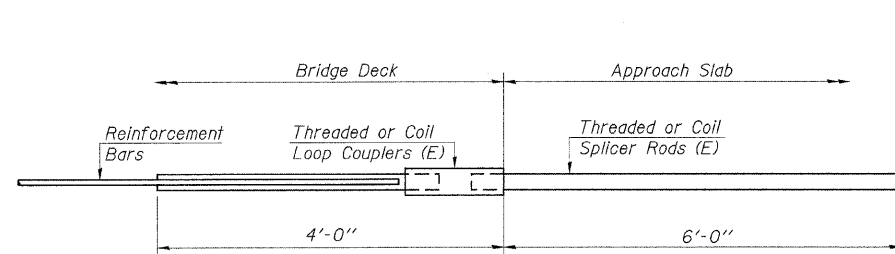
BAR SPLICER ASSEMBLY ALTERNATIVES

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



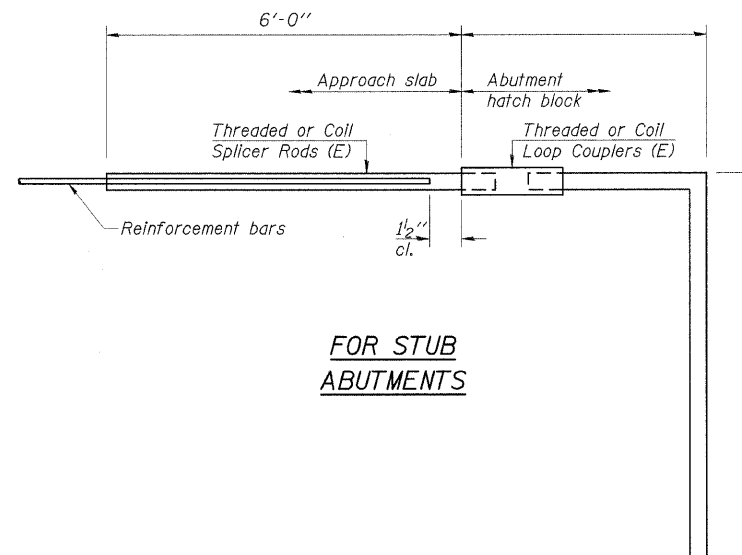
INSTALLATION AND SETTING METHODS

"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.



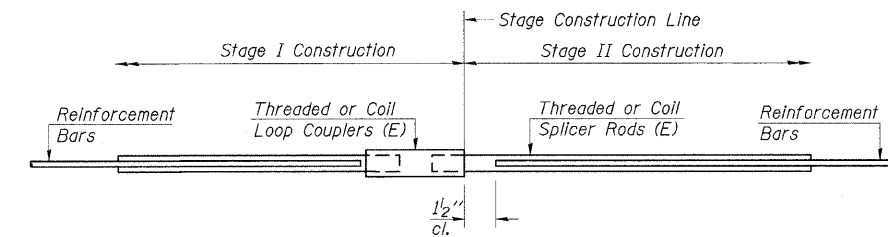
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR STUB ABUTMENTS

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



STANDARD

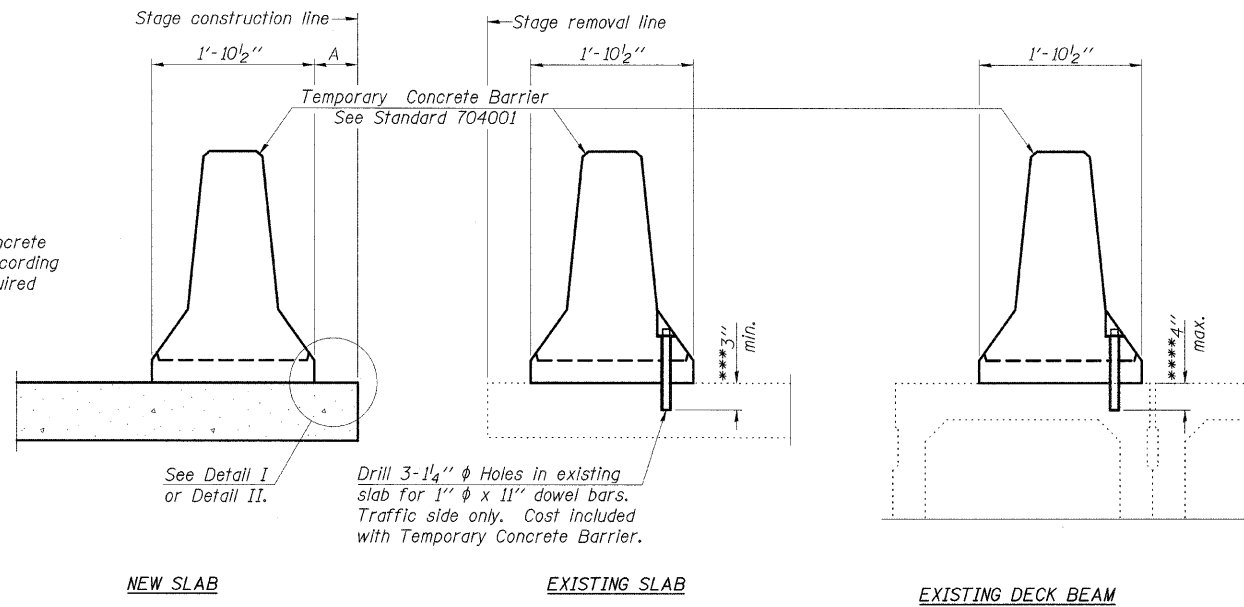
Bar Size	No. Assemblies Required	Location
#6	18	Deck

BAR SPLICER ASSEMBLY DETAILS
ILL 13 W.B. OVER MUD CREEK
JACKSON COUNTY
SN 039-0050

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	•	JACKSON	67	53
STA. _____		TO STA. _____		
FED. ROAD DIST. NO. _____		ILLINOIS	FED. AID PROJECT	
• D9 BSMART FY10-1				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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



NOTES

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

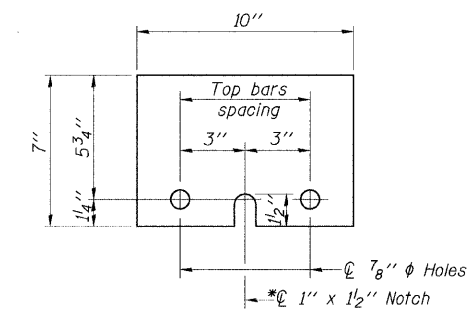
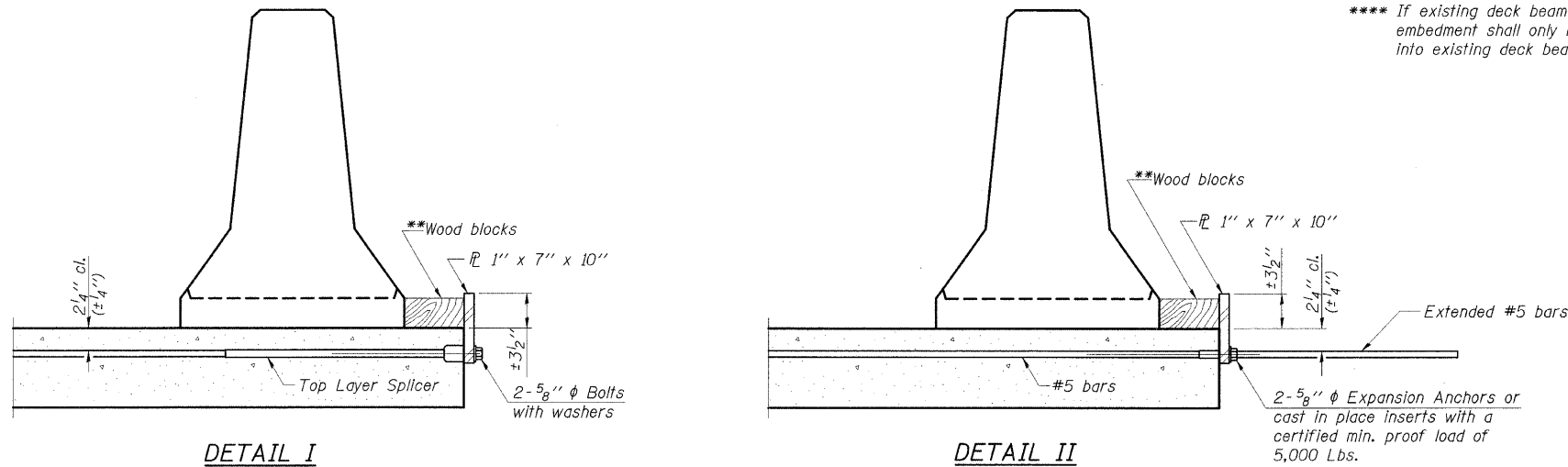
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

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

SECTIONS THRU SLAB OR DECK BEAM

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

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



STEEL RETAINER \bar{L} 1" x 7" x 10"

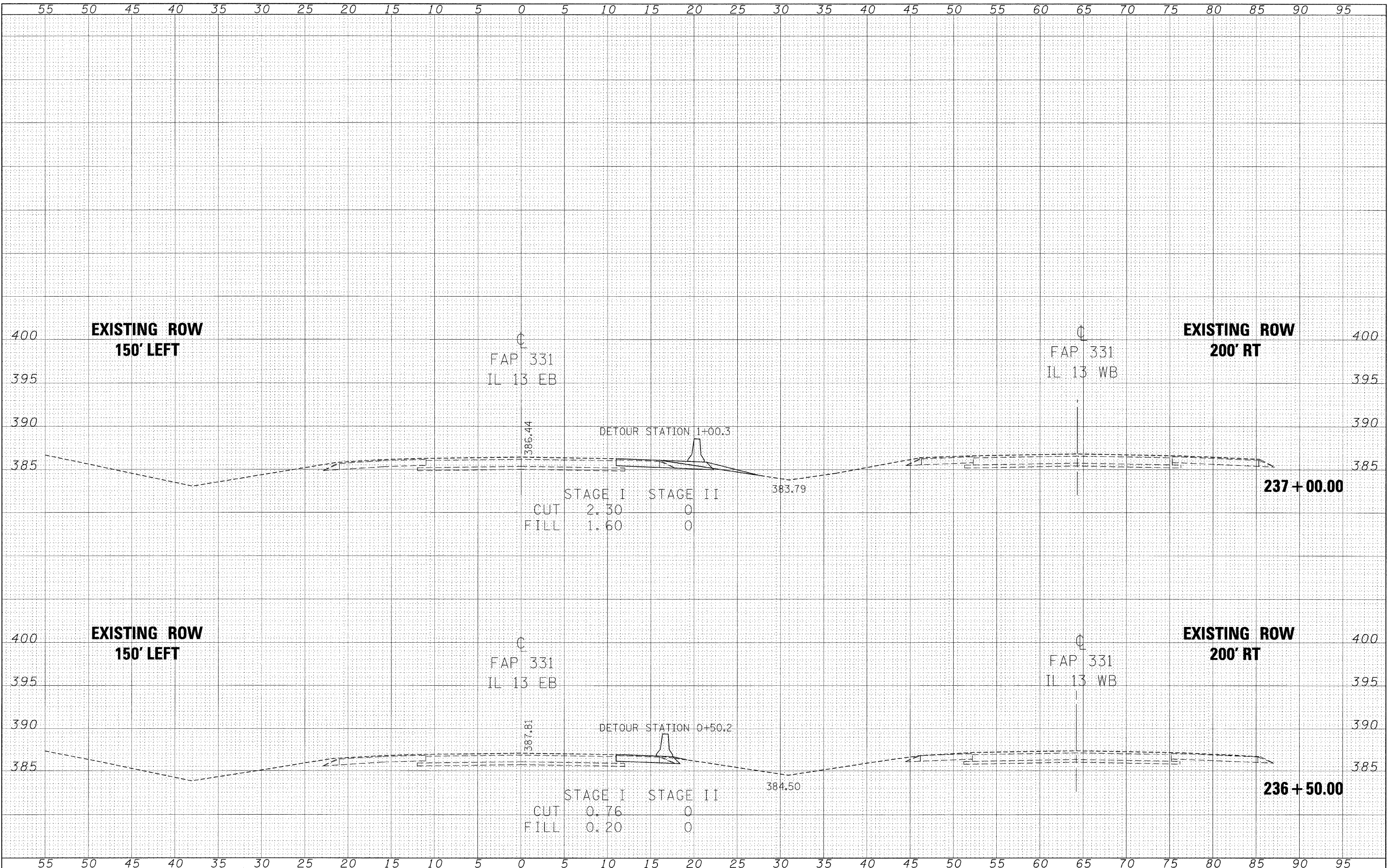
* Required only with Detail II

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

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
ILL 13 W.B. OVER MUD CREEK
JACKSON COUNTY
SN 039-0050**

DATE	
BY	
ORIGINAL SURVEY	
DESIGNED	
DRAWN	
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REVISIONS	
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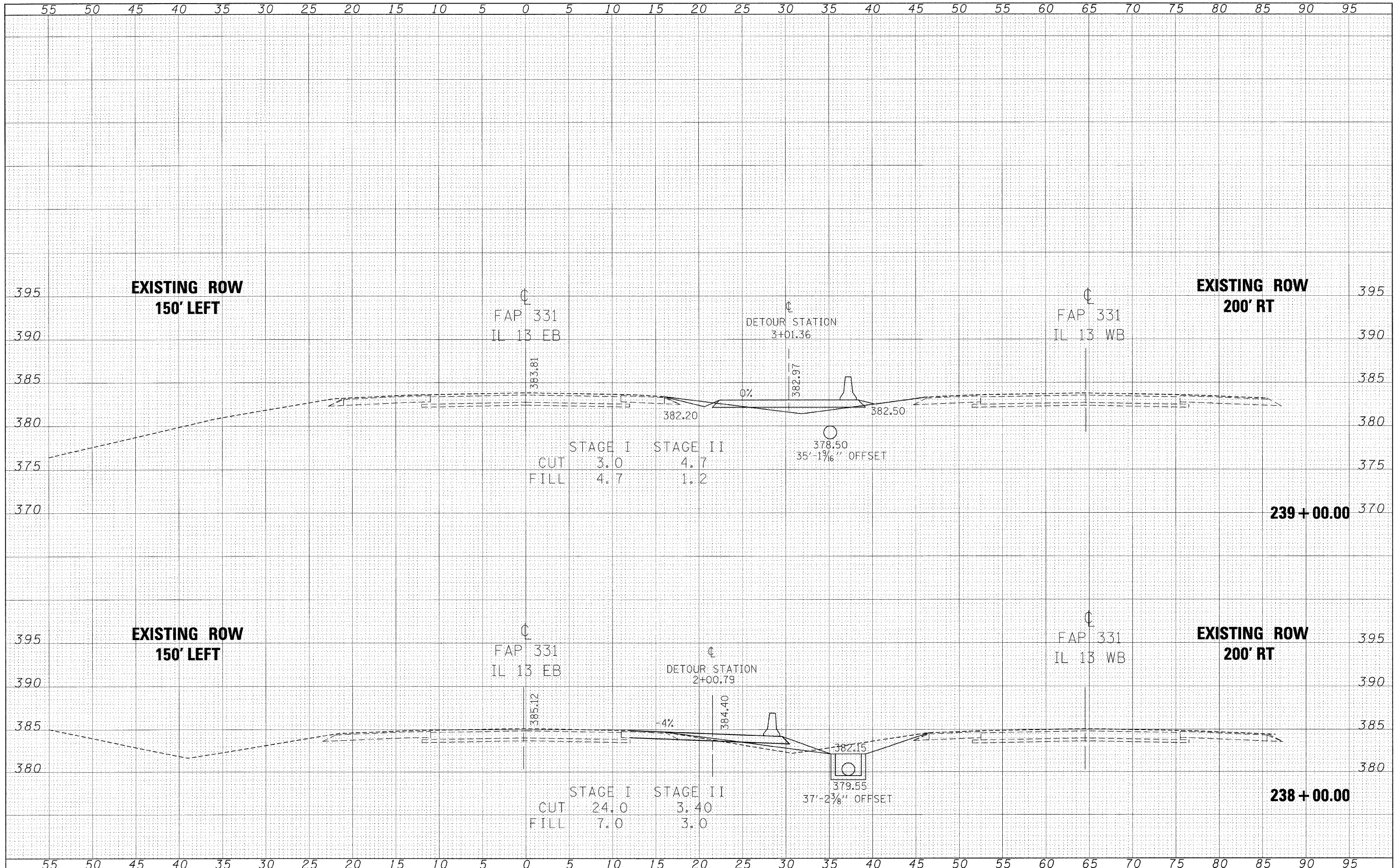
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 236+50.00 TO STA. 237+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-1;D9BSMART FY10-1	JACKSON	67	54
CONTRACT NO. 98641			ILLINOIS FED. AID PROJECT	



DATE	
BY	
FINAL SURVEY	
PLANNING	
TECHNICAL	
NOTE BOOK	
AREAS CHECKED	
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DATE	
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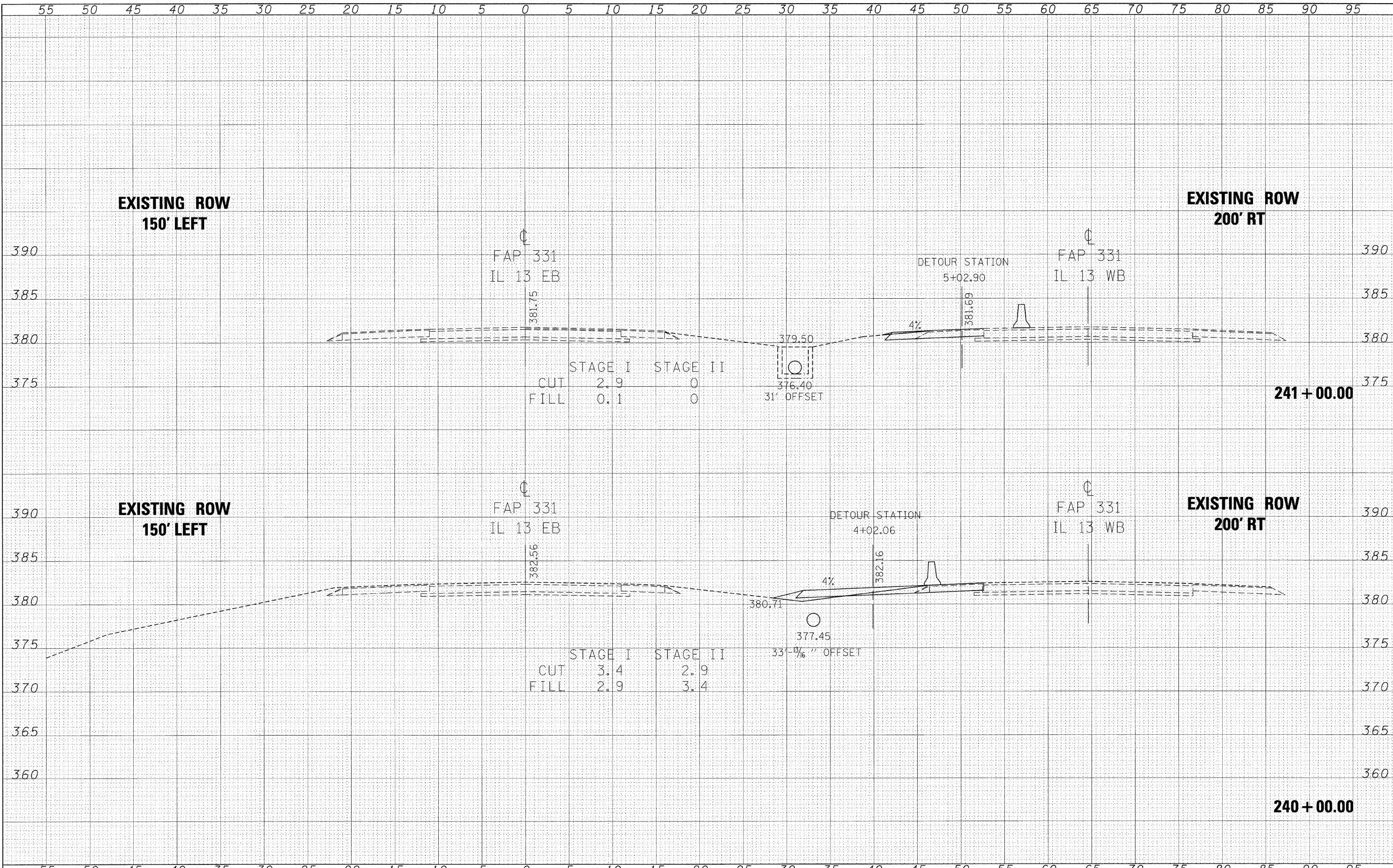
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS			
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-1;D9BSMART FY10-1	JACKSON	67	55
CONTRACT NO. 98641				
ILLINOIS FED. AID PROJECT				

DATE _____ BY _____
 SURVEYED _____
 PLANNED _____
 NOTE BOOK _____
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DATE _____ BY _____
 SURVEYED _____
 PLANNED _____
 NOTE BOOK _____
 NO. _____



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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

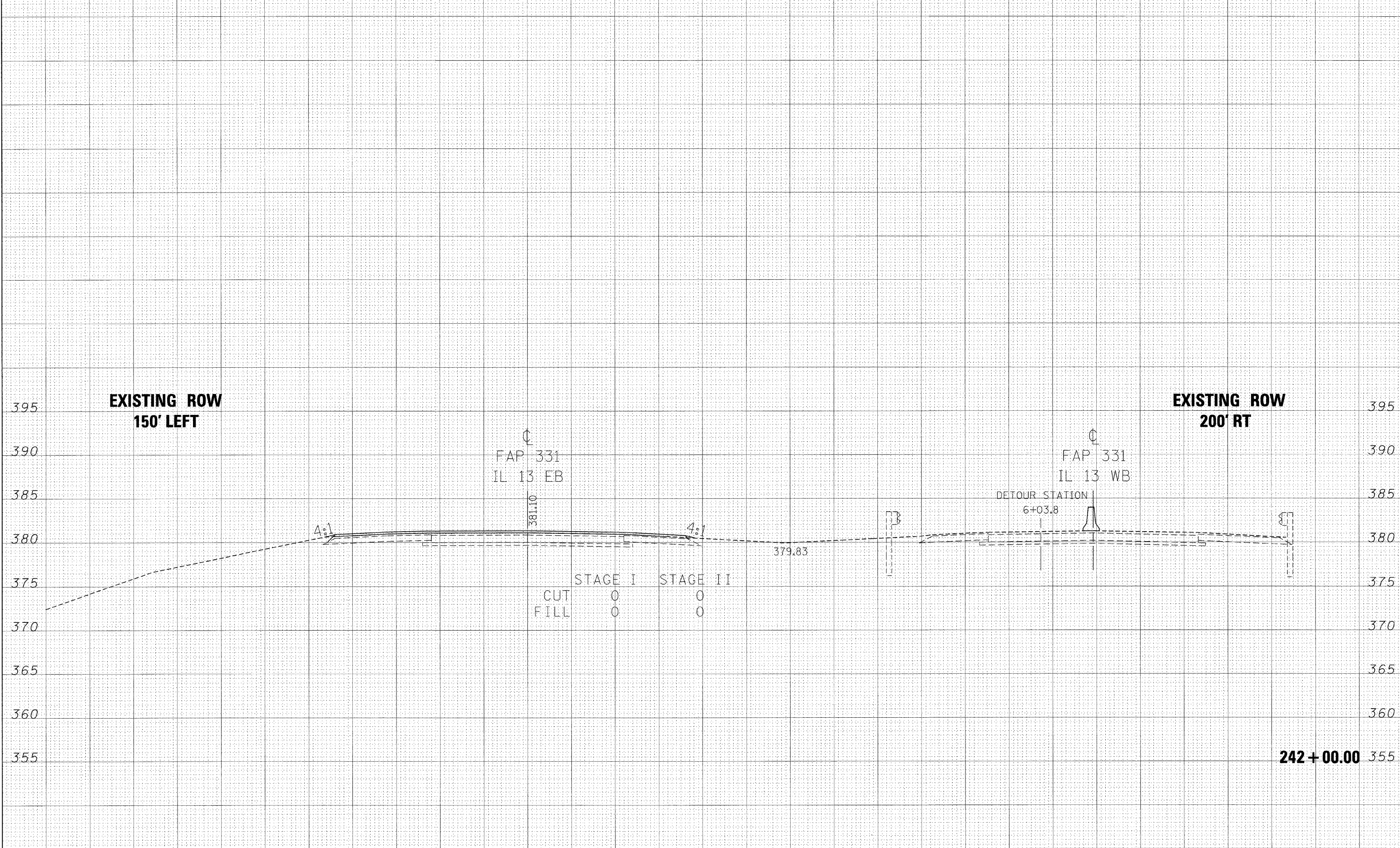
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-14D9SMART FY10-1	JACKSON	67	56
CONTRACT NO. 98641				
ILLINOIS FED. AID PROJECT				

55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95

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

ORIGINAL SURVEY
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 NOTE BOOK NO.: _____
 AREAS CHECKED: _____



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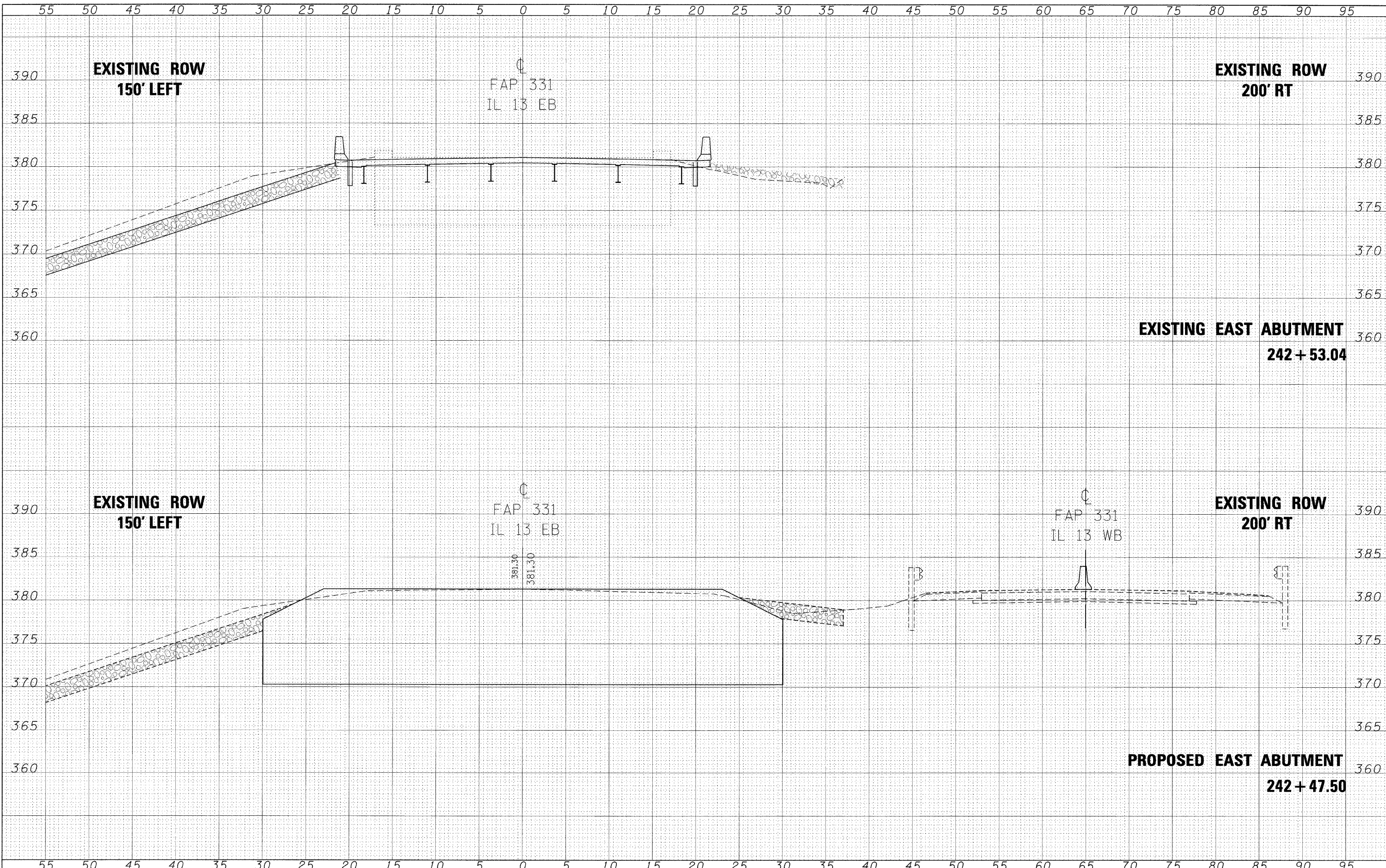
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 242+00.00 TO STA. 242+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1B-14)D9BSMART FY10-1	JACKSON	67	57
CONTRACT NO. 98641 ILLINOIS FED. AID PROJECT				



DATE _____
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

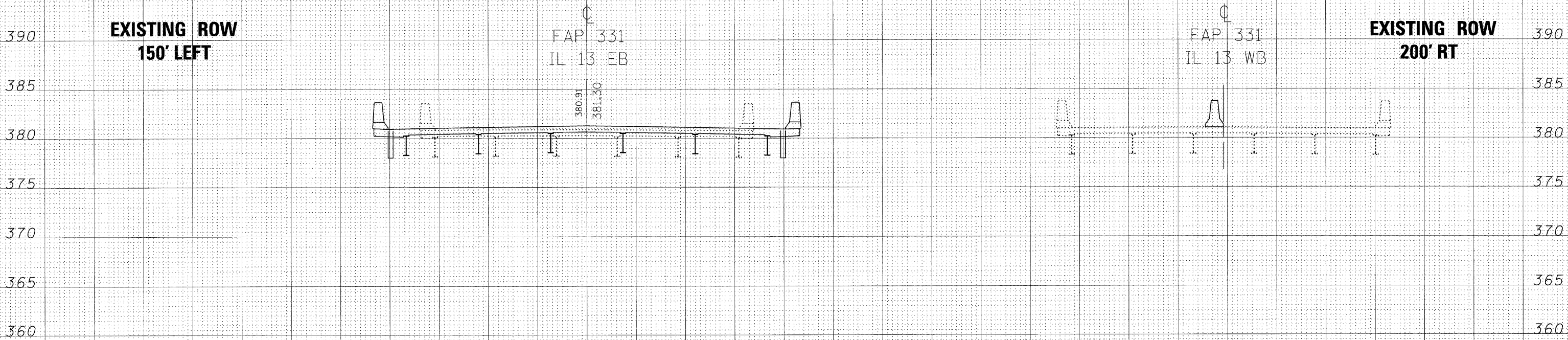
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-1;D9BSMART FY10-1	JACKSON	67	58
			CONTRACT NO. 98641	
ILLINOIS FED. AID PROJECT				

55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95

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SURVEYED	BY
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NOTE BOOK	
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ORIGINAL SURVEY	DATE
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

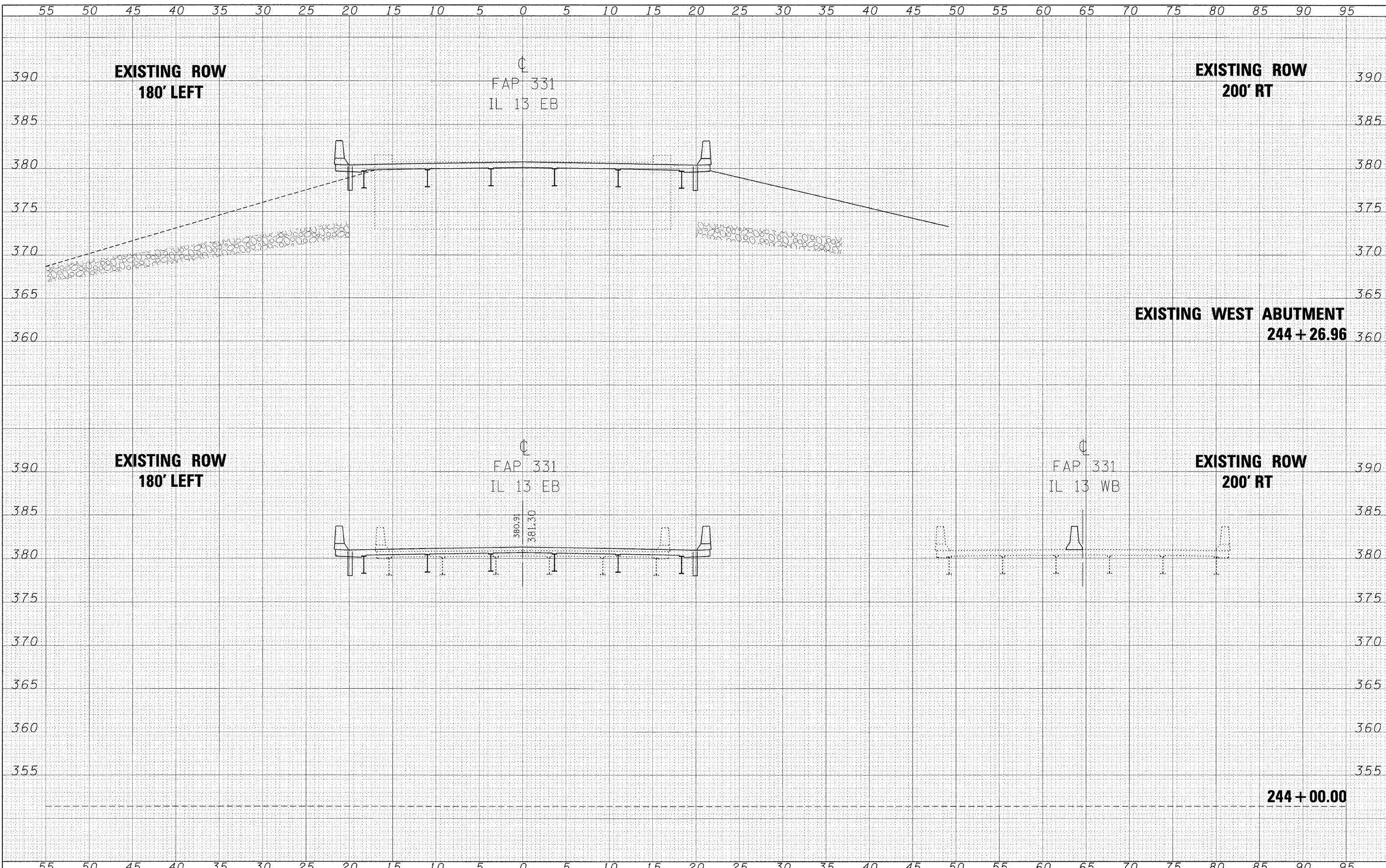
CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 243+00.00 TO STA. 243+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-1;D9BSMART FY10-1	JACKSON	67	59
ILLINOIS FED. AID PROJECT			CONTRACT NO. 98641	

DATE: _____
 BY: _____
 SUPERVISED: _____
 DRAWN: _____
 CHECKED: _____
 DATE: _____

DATE: _____
 BY: _____
 SUPERVISED: _____
 DRAWN: _____
 CHECKED: _____
 DATE: _____



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 DRAWN -
 CHECKED -
 DATE -

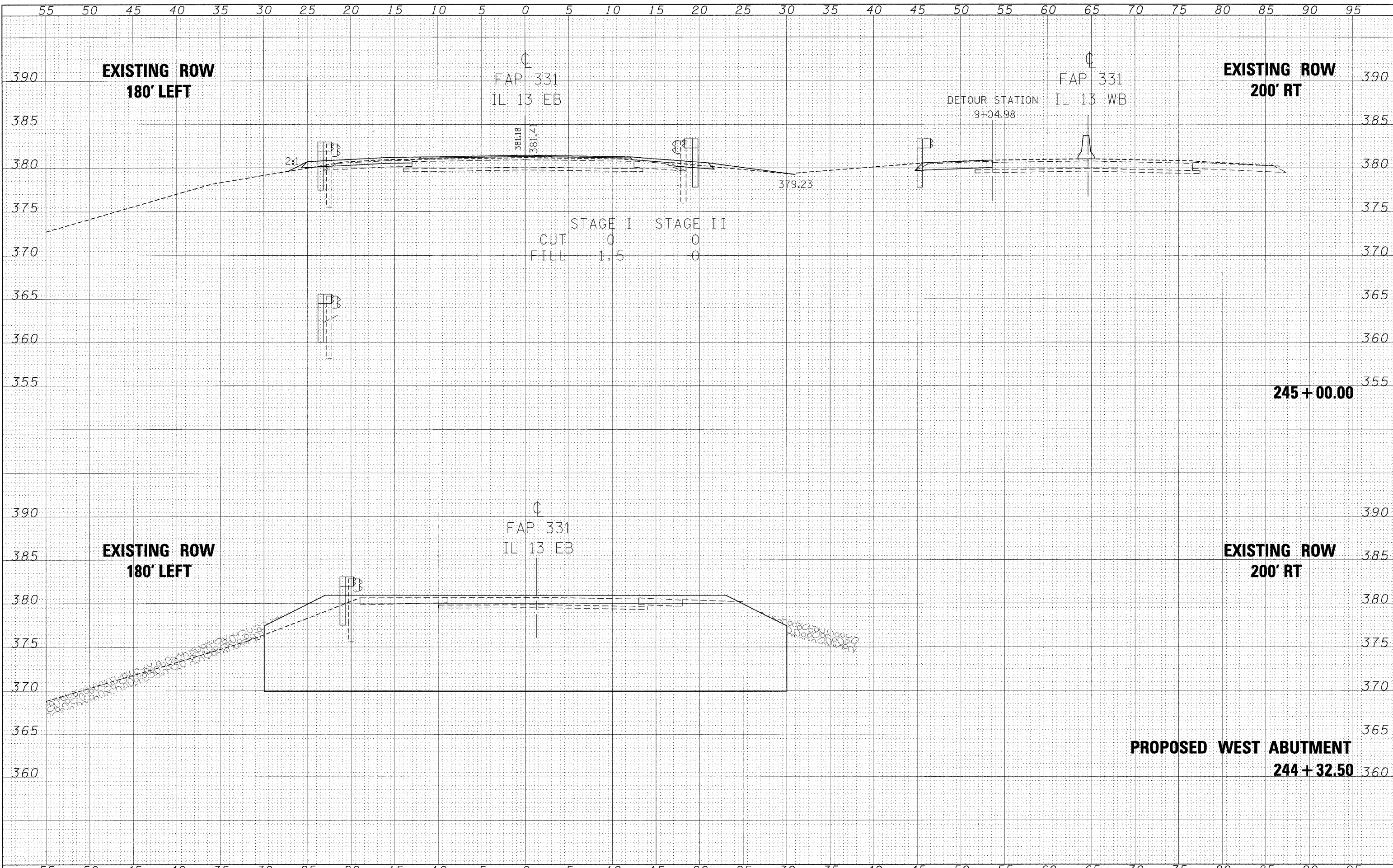
REVISER -
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 REVISION -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
 SCALE: _____ SHEET NO. _____ OF _____ SHEETS
 STA. 244+00.00 TO STA. 244+26.96

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-1;D9SMART FY10-1	JACKSON	67	60

CONTRACT NO. 98641
 ILLINOIS FED. AID PROJECT



DATE	
BY	
SURVEYED	
REVISIONS	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
REVISIONS	
NOTE BOOK	
AREAS CHECKED	
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

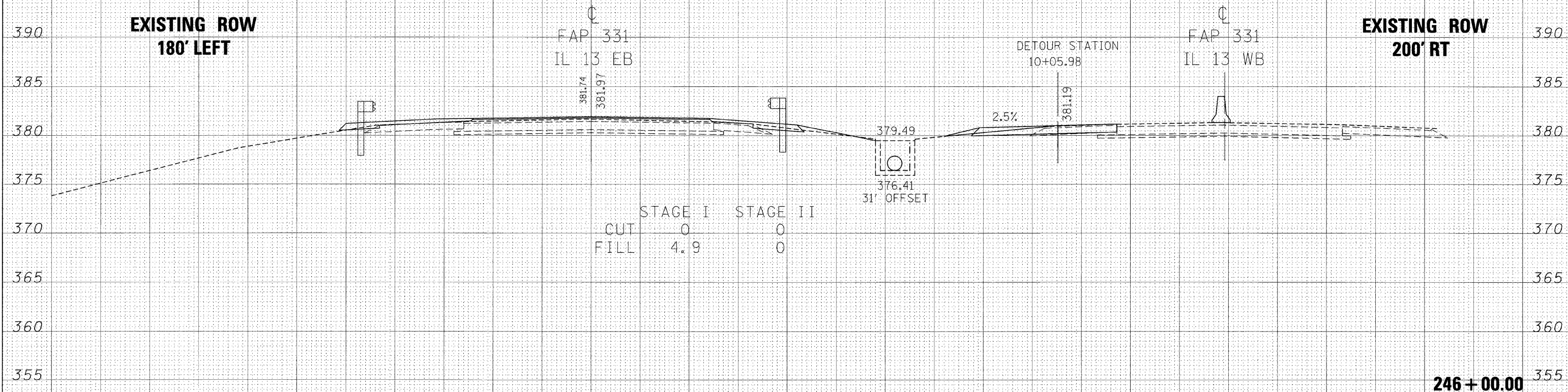
SCALE: SHEET NO. OF SHEETS STA. 244+32.50 TO STA. 245+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-1;D9BSMART FY10-1	JACKSON	67	61
CONTRACT NO. 98641			ILLINOIS FED. AID PROJECT	

55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95

DATE	
BY	
SURVEYED	
PLANNED	
TEMPLATE	
AREAS	
CHECKED	
NO.	

DATE	
BY	
ORIGINAL	
SURVEY	
PLANNED	
TEMPLATE	
AREAS	
CHECKED	
NO.	



55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95

FILE NAME =	USER NAME = shepardgd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
cs:\pw_work\PW1001\SHEPARDGD\dms43646\ssmudsh.dgn		DRAWN -	REVISED -		331	(12-1B-1)d9BSMART FY10-1	JACKSON	67	62				
PLOT SCALE = 4.7222' / IN.		CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. 246+00.00 TO STA. 246+00.00				CONTRACT NO. 98641				
PLOT DATE = 3/18/2009		DATE -	REVISED -		ILLINOIS FED. AID PROJECT								

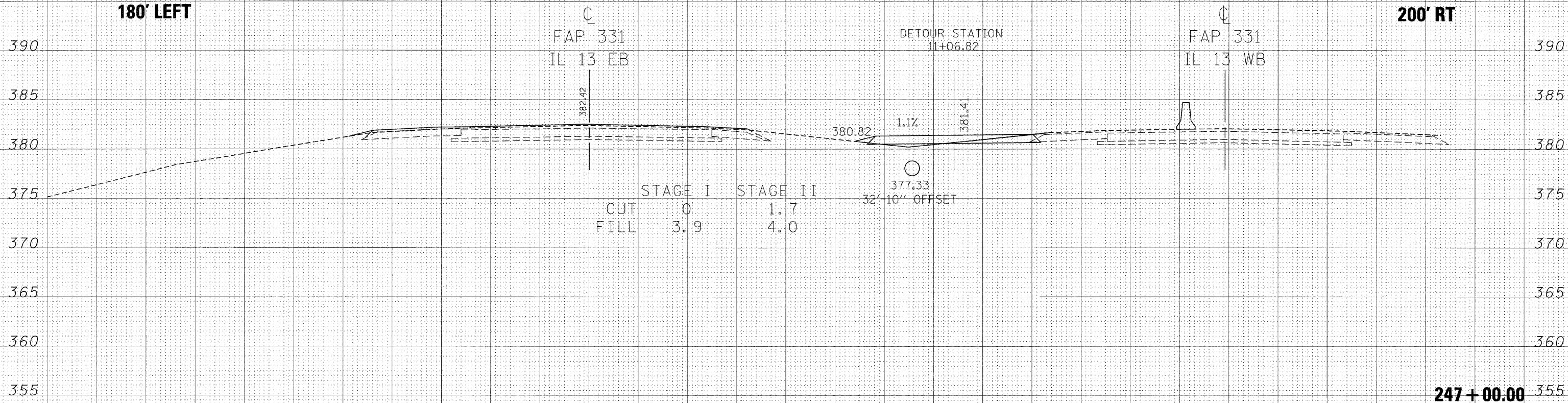
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DATE	
BY	
SURVEYED	
PLANNED	
TEMPERATURE	
AREAS CHECKED	
NO.	

DATE	
BY	
SURVEYED	
PLANNED	
TEMPERATURE	
AREAS CHECKED	
NO.	

**EXISTING ROW
180' LEFT**

**EXISTING ROW
200' RT**



55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95

FILE NAME =
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USER NAME = shepardgd
DESIGNED -
DRAWN -
CHECKED -
PLOT SCALE = 4.7222' / IN.
PLOT DATE = 3/18/2009

DESIGNED -
DRAWN -
CHECKED -
DATE -

REVISED -
REVISED -
REVISED -
REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 247+00.00 TO STA. 247+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1B-14)D9SMART FY10-1	JACKSON	67	63
CONTRACT NO. 98641				
ILLINOIS FED. AID PROJECT				

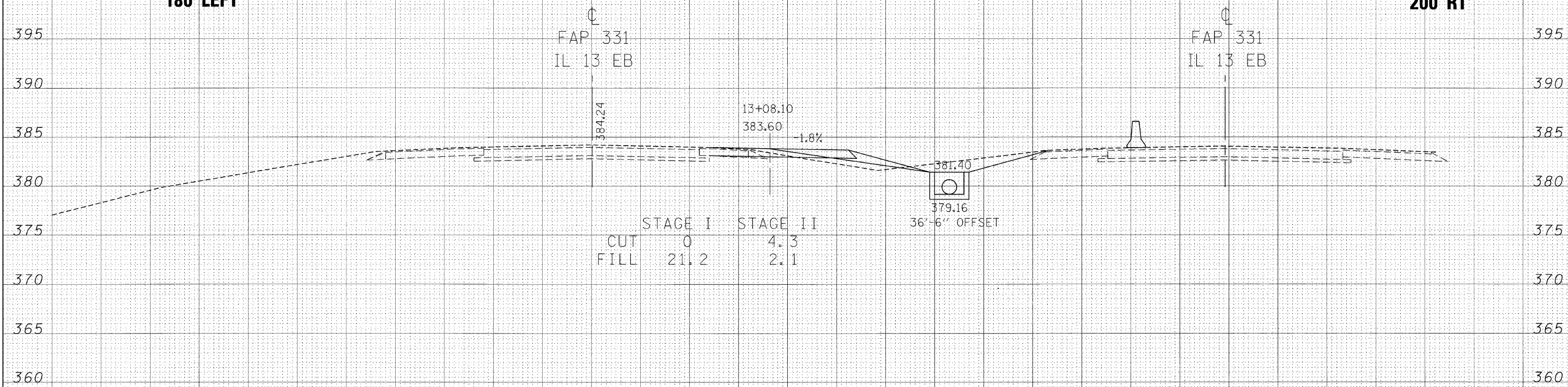
55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95

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

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

**EXISTING ROW
 180' LEFT**

**EXISTING ROW
 200' RT**



249 + 00.00

55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95

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USER NAME = shepardgd
 PLOT SCALE = 4.7222' / IN.
 PLOT DATE = 3/18/2009

DESIGNED -
 DRAWN -
 CHECKED -
 DATE -

REVISED -
 REVISED -
 REVISED -
 REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 249+00.00 TO STA. 249+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-1;D9BSMART FY10-1	JACKSON	67	65
				CONTRACT NO. 98641
ILLINOIS FED. AID PROJECT				

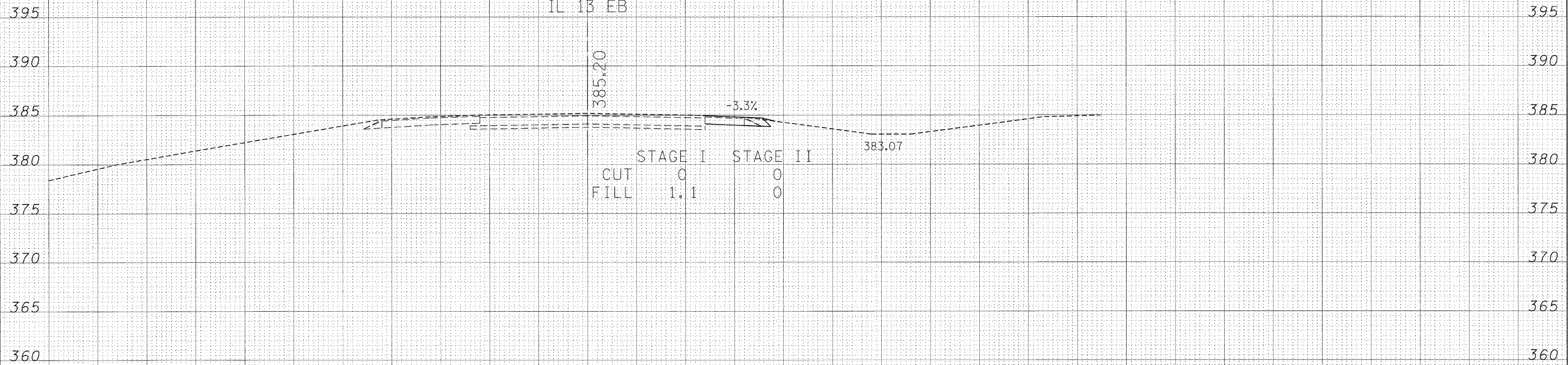
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FINAL SURVEY	DATE
SURVEYED	BY
PLANNED	
FIELD	
NOTE BOOK	
NO.	
AREAS CHECKED	

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

**EXISTING ROW
180' LEFT**

**EXISTING ROW
200' RT**



250 + 00.00

FILE NAME =
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DESIGNED -
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PLOT SCALE = 4.7222' / IN.
CHECKED -
PLOT DATE = 3/18/2009

DESIGNED -
DRAWN -
CHECKED -
DATE -

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

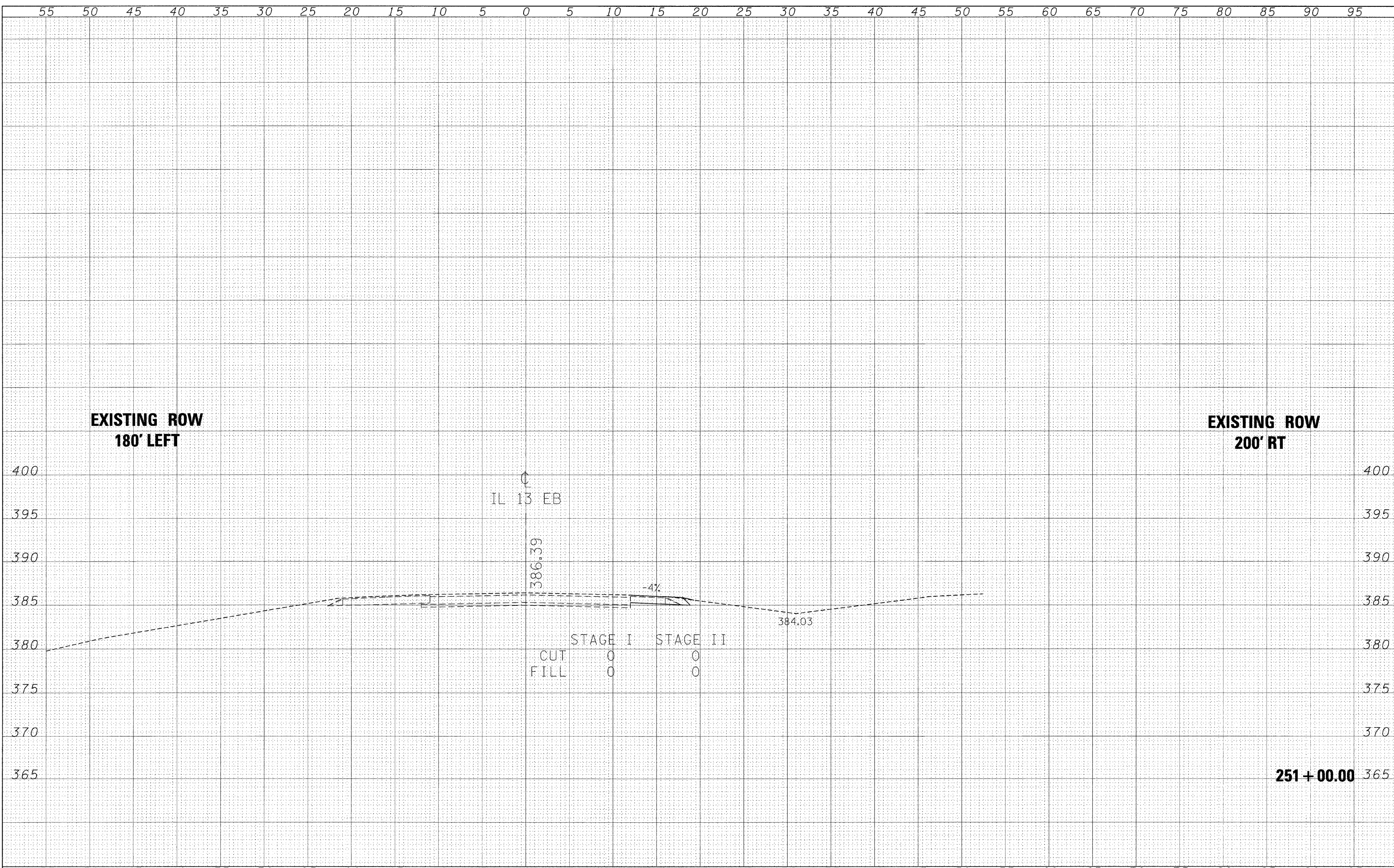
CROSS SECTIONS

SCALE: SHEET NO. OF SHEETS STA. 250+00.00 TO STA. 250+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
331	(12-1)B-1;D9BSMART FY10-1	JACKSON	67	66
CONTRACT NO. 98641			ILLINOIS FED. AID PROJECT	

DATE: _____
 BY: _____
 SURVEYED: _____
 CHECKED: _____
 FINAL SURVEY: _____
 NOTE BOOK NO.: _____

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



FILE NAME =	USER NAME = shepardgd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.		
cr:\pw_work\PWIDOT\SHEPARDGD\dms43646\examudsh.dgn	PLOT SCALE = 4.7222' / IN.	DRAWN -	REVISED -		SCALE:	SHEET NO.	OF	SHEETS	STA. 251+00.00	TO STA. 251+00.00	331	(12-1)B-1;D9BSMART FY10-1	JACKSON	67	67
PLOT DATE = 3/18/2009	DATE -	CHECKED -	REVISED -		CONTRACT NO. 98641										
		DATE -	REVISED -		ILLINOIS FED. AID PROJECT										