

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	1
		ILLINOIS	CONTRACT NO. 72E11	

+2

D-96-032-11

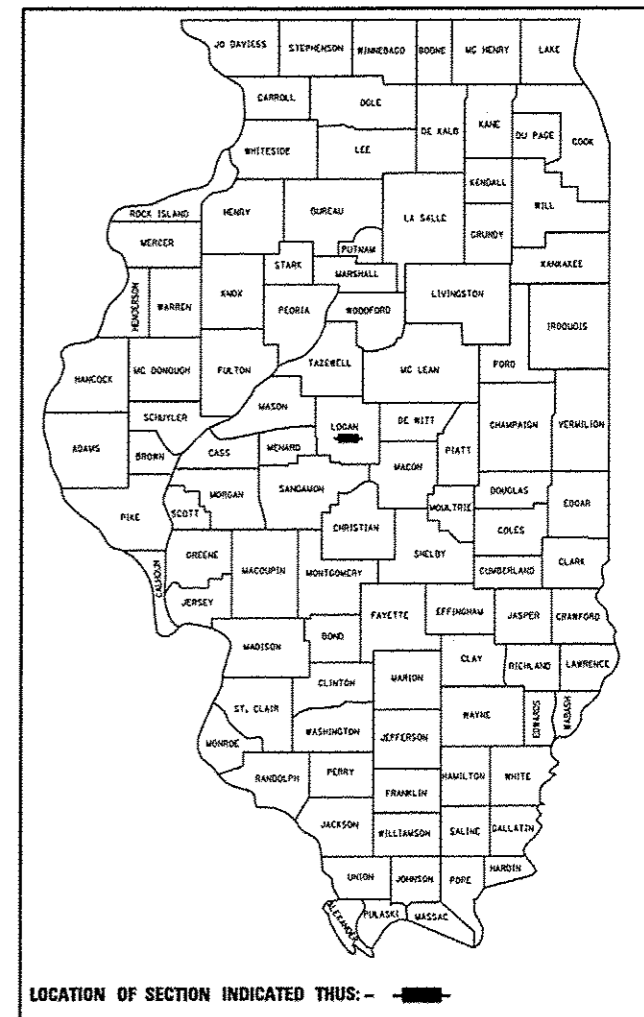
FOR INDEX OF SHEETS, SEE SHEET NO. 2  
FOR LIST OF ILLINOIS DOT HIGHWAY STANDARDS, SEE SHEET NO. 2

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

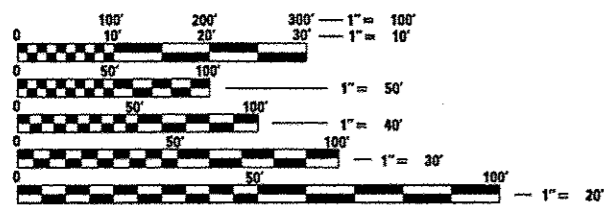
**PROPOSED  
HIGHWAY PLANS**

FAI ROUTE 55 (I-55)  
SECTION D6 LOGAN CO BR 2011-1  
PROJECT NHPP-0055 (401)  
LOGAN COUNTY  
BRIDGE REHABILITATION  
C-96-032-11

DESIGN DESIGNATION  
FAI ROUTE 55 (I-55)  
FEDERAL INTERSTATE  
ADT 19,500 (2011)  
65.7% PV  
3.5% SU  
30.8% MU  
DESIGN SPEED: 70 MPH

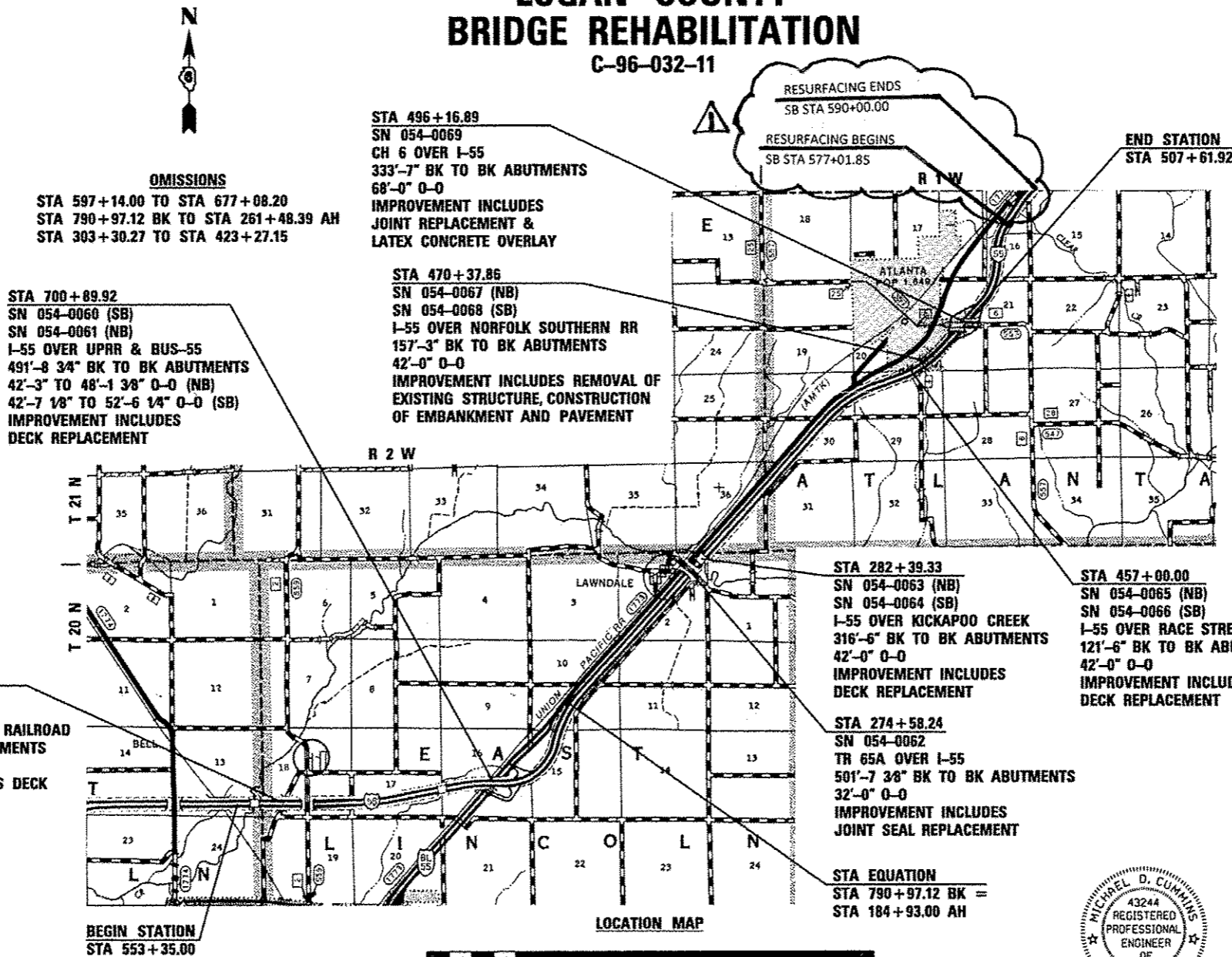


LOCATION OF SECTION INDICATED THUS: - [black rectangle] -



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

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



**OMISSIONS**  
STA 597+14.00 TO STA 677+08.20  
STA 790+97.12 BK TO STA 261+48.39 AH  
STA 303+30.27 TO STA 423+27.15

STA 700+89.92  
SN 054-0060 (SB)  
SN 054-0061 (NB)  
I-55 OVER UPRR & BUS-55  
491'-8 3/4" BK TO BK ABUTMENTS  
42'-3" TO 48'-1 3/8" O-0 (NB)  
42'-7 1/8" TO 52'-6 1/4" O-0 (SB)  
IMPROVEMENT INCLUDES  
DECK REPLACEMENT

STA 496+16.89  
SN 054-0069  
CH 6 OVER I-55  
333'-7" BK TO BK ABUTMENTS  
68'-0" O-0  
IMPROVEMENT INCLUDES  
JOINT REPLACEMENT &  
LATEX CONCRETE OVERLAY

STA 470+37.86  
SN 054-0067 (NB)  
SN 054-0068 (SB)  
I-55 OVER NORFOLK SOUTHERN RR  
157'-3" BK TO BK ABUTMENTS  
42'-0" O-0  
IMPROVEMENT INCLUDES REMOVAL OF  
EXISTING STRUCTURE, CONSTRUCTION  
OF EMBANKMENT AND PAVEMENT

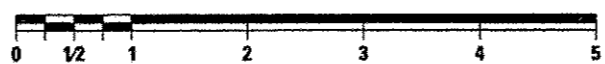
STA 282+39.33  
SN 054-0063 (NB)  
SN 054-0064 (SB)  
I-55 OVER KICKAPOO CREEK  
316'-6" BK TO BK ABUTMENTS  
42'-0" O-0  
IMPROVEMENT INCLUDES  
DECK REPLACEMENT

STA 457+00.00  
SN 054-0065 (NB)  
SN 054-0066 (SB)  
I-55 OVER RACE STREET  
121'-6" BK TO BK ABUTMENTS  
42'-0" O-0  
IMPROVEMENT INCLUDES  
DECK REPLACEMENT

STA 274+58.24  
SN 054-0062  
TR 65A OVER I-55  
501'-7 3/8" BK TO BK ABUTMENTS  
32'-0" O-0  
IMPROVEMENT INCLUDES  
JOINT SEAL REPLACEMENT

STA 576+83.14  
SN 054-0057 (NB)  
SN 054-0058 (SB)  
I-55 OVER ABANDONED RAILROAD  
149'-6" BK TO BK ABUTMENTS  
42'-0" O-0  
IMPROVEMENT INCLUDES DECK  
REPLACEMENT

STA EQUATION  
STA 790+97.12 BK =  
STA 184+93.00 AH



GROSS LENGTH = 56,031.04 FT. = 10.612 MILES  
NET LENGTH = 29,536.40 FT. = 5.594 MILES

REVISÉ 6-3-13



Michael D. Cummins 3/14/13  
ILLINOIS PROFESSIONAL NO. 43244  
(Expires 11/30/13)

CONTRACT NO. 72E11



PROJECT ENGINEER JEFF MYERS (217) 782-4761  
TEAM MANAGER TOM COX (217) 524-7940

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
SUBMITTED March 21 2013  
Reg. 2/20/13  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER  
May 10 2013  
John D. Baranzelli, P.E.  
ENGINEER OF DESIGN AND ENVIRONMENT  
May 10 2013  
Omer Osman, P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

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LIST OF ILLINOIS DOT HIGHWAY STANDARDS

000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-07	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420401-09	BRIDGE APPROACH PAVEMENT CONNECTOR
421001-02	BAR REINFORCEMENT FOR CRC PAVEMENT
442001-04	CLASS A PATCHES
442101-07	CLASS B PATCHES
515001-03	NAME PLATE FOR BRIDGES
542301-03	PRECAST REINFORCED CONCRETE FLARED END SECTION
542401-01	METAL END SECTION FOR PIPE CULVERTS
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
602306-03	INLET, TYPE B
602401-03	MANHOLE, TYPE A
602601-02	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604001-03	FRAME AND LIDS, TYPE 1
604106-01	MEDIAN INLET FOR 36" (900 MM) REINFORCED CONCRETE PIPE
606001-05	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606301-04	PC CONCRETE ISLANDS AND MEDIANS
609006-05	BRIDGE APPROACH PAVEMENT (DRAIN DETAIL)
610001-06	SHOULDER INLET WITH CURB
630001-10	STEEL PLATE BEAM GUARDRAIL
630301-06	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631011-09	TRAFFIC BARRIER TERMINAL, TYPE 2
631026-05	TRAFFIC BARRIER TERMINAL, TYPE 5
631031-11	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
642001-02	SHOULDER RUMBLE STRIPS, 16 IN.
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 M) AWAY
701006-04	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701101-03	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5 M) TO 24" (600 MM) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5 M) AWAY
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701400-06	APPROACH TO LANE CLOSURE, FREEWAY/EXPRESSWAY
701401-07	LANE CLOSURE, FREEWAY/EXPRESSWAY
701402-09	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH BARRIER
701411-08	LANE CLOSURE, MULTILANE, AT ENTRANCE OR EXT RAMP, FOR SPEEDS > 45 MPH
701416-07	LANE CLOSURE, FREEWAY/EXPRESSWAY, WITH CROSSOVER AND BARRIER
701426-05	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS > 45 MPH
701451-01	RAMP CLOSURE FREEWAY/EXPRESSWAY
701901-02	TRAFFIC CONTROL DEVICES
704001-07	TEMPORARY CONCRETE BARRIER
780001-03	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
825001-01	LIGHTING CONTROLLER, POLE MOUNTED, 240V
830026	TEMPORARY ROADWAY LIGHTING

**DISTRICT SIX**

EXAMINED 2/25 20 13

*Bill Bryan*

OPERATIONS ENGINEER

EXAMINED FEB 7 20 13

*Tommy F. L.*

PROJECT IMPLEMENTATION ENGINEER

EXAMINED March 21 20 13

*2RULI*

PROGRAM DEVELOPMENT ENGINEER

**REVIS**ED 6-3-13

**COMMITMENTS**

INSTALL 18 INCH STEEL CASING AT ABANDONED RAILROAD UNDER SN 054-0067 AND SN 054-0068 FOR FUTURE USE BY CITY OF ATLANTA

THE FIELD/RESIDENT ENGINEER SHALL CONTACT STUDIES & PLANS CONCERNING ANY MAJOR PLAN CHANGES AND TO MAKE SURE NO PREVIOUS COMMITMENT (NOT LISTED) WERE MADE AFFECTING THE DESIGN, AND TO ALLOW IMPROVEMENTS IN THE DESIGN FOR FUTURE PROJECTS.

**RATES OF APPLICATION**

THE FOLLOWING FACTORS WERE USED FOR ESTIMATING PLAN QUANTITIES AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES.

HOT MIX ASPHALT	0.056 TONS/SQ. YD./INCH
BITUMINOUS MATERIALS (PRIME COAT)	0.00038 TON/SQ. YD.
AGGREGATE	2.05 TON/CU. YD.
RIPRAP	1.5 TON/CU. YD.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT

LOCATIONS:	INTERSTATE RESURFACING			
	SURFACE COURSE	BINDER COURSE	SHOULDER	SHOULDER
MIXTURE USES:	HMA SURFACE COURSE MIX "D" N90	HMA BINDER COURSE IL 9.5 N90	HMA SHOULDERS (TOP 1 1/2" LIFT)	HMA SHOULDERS 12 1/4" (LOWER LIFTS)
PG:	PG 64-22	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @NDESIGN=90	4.0% @NDESIGN=90	4.0% @NDESIGN=50	4.0% @NDESIGN=50
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 9.5	IL 9.5	IL 9.5	IL 19.0
FRICTION AGGREGATE:	MIX "D"	N/A	MIX "C"	N/A

LOCATIONS:	CH G RESURFACING		
	SURFACE COURSE	BINDER COURSE	SHOULDER
MIXTURE USES:	HMA SURFACE COURSE MIX "C" N50	LEVELING BINDER (MACHINE METHOD) IL 9.5 N50	HMA SHOULDERS
PG:	PG 64-22	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @NDESIGN=50	4.0% @NDESIGN=50	4.0% @NDESIGN=50
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 9.5	IL 9.5	IL 9.5
FRICTION AGGREGATE:	MIX "C"	N/A	MIX "C"

LOCATIONS:	CROSSOVER PAVEMENT	
	TOP LIFT (1 1/2")	LOWER LIFTS
MIXTURE USES:	HMA SURFACE COURSE MIX "D" N90	HMA BASE COURSE 10 1/2"
PG:	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @NDESIGN=90	4.0% @NDESIGN=90
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 9.5	IL 19.0
FRICTION AGGREGATE:	MIX "D"	N/A

LOCATIONS:	SHOULDER RECONSTRUCTION	
	TOP LIFT (1 1/2")	LOWER LIFTS
MIXTURE USES:	HMA SURFACE COURSE MIX "D" N90	HMA BASE COURSE 10 3/4", 12", & 12 1/4"
PG:	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @NDESIGN=90	4.0% @NDESIGN=90
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL 9.5	IL 19.0
FRICTION AGGREGATE:	MIX "D"	N/A

**GENERAL NOTES**

- THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2012, THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, AND THE SPECIAL PROVISIONS INCLUDED IN THESE PLANS.
- ANY REFERENCE TO THE STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE EDITION, AS INDICATED BY THE SUB-NUMBER, LISTED IN THE INDEX OF SHEETS, OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
- THE THICKNESS OF HOT-MIX ASPHALT MIXTURES SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT-MIX ASPHALT MIXTURE IS PLACED.
- THE LOCATION OF THOSE BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.26 OF THE STANDARD SPECIFICATIONS. THE J.U.L.I.E NUMBER IS 1 (800) 892-0123. A MINIMUM 48 HOURS ADVANCE NOTICE IS REQUIRED. SEE SPECIAL PROVISIONS FOR STATUS OF UTILITIES WITH UTILITY COMPANIES LISTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRS TO ANY UTILITY LINES AND EXISTING IMPROVEMENTS TO REMAIN THAT ARE DAMAGED AS A RESULT OF THE WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.
- WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. SAW CUTS WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE TYPE OF WORK ENCOUNTERED.
- ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON NAVD 88 DATUM.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.
- IN ADDITION TO SURVEYS, SOME OF THE PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING CONDITIONS HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO VERIFY SUCH DIMENSIONS IN THE FIELD. VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF WORK. THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.
- ANY EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REPLACE SIGNS AS DIRECTED BY THE ENGINEER. THE COST FOR THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE TRAFFIC CONTROL ITEMS.
- COPIES OF EXISTING BRIDGE PLANS ARE AVAILABLE AT THE DISTRICT OFFICE.
- THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.
- FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SANDBAGS PER BARRICADE.
- EXISTING RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE REMOVED PRIOR TO RESURFACING.
- PAVEMENT REINFORCEMENT FOR PROPOSED CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE SPLICED TO EXISTING PAVEMENT REINFORCEMENT AS SPECIFIED ON STANDARD 442001.
- THE CONTRACTOR SHALL REMOVE REFLECTORS FROM EXISTING RAISED REFLECTIVE PAVEMENT MARKERS THAT CONFLICT WITH REVISED TRAFFIC PATTERNS. THE COST OF THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE VARIOUS TRAFFIC CONTROL AND PROTECTION ITEMS.
- CONCRETE SLOPE WALLS AT SN 054-0067 AND SN 054-0068 MAY REMAIN IN PLACE. THE SLOPE WALLS SHALL BE CRACKED AND BROKEN UP TO ENSURE THAT ANY VOIDS UNDER THE SLOPE WALL ARE EXPOSED AND FILLED WITH EMBANKMENT.
- NO BROKEN CONCRETE SHALL BE PLACED IN THE FIRST 7.50 FEET OF EMBANKMENT AT SN 054-0067 AND SN 054-0068.
- EMBANKMENT SHALL BE CONSTRUCTED AT ABUTMENT WINGWALLS AT SN 054-0065 AND AT SN 054-0066. EMBANKMENT SHALL MATCH THE TOP OF WINGWALL PROFILE AND TRANSITION TO MATCH THE EXISTING EMBANKMENT.

ESTIMATED EMBANKMENT QUANTITY AT WINGWALLS: 60 CU YD

**REVISION** 21. LEVELING BINDER SHALL BE PLACED THE SAME DAY AS THE HMA SURFACE REMOVAL, 3 1/2" FROM FROM STA 577+01 TO STA 590+00

**REVISION** 6-3-13



JOB # 2236.10  
 FILE NAME : 0672E11-ahs-gen.dgn  
 PLOT SCALE : 2.0000 / IN  
 PLOT DATE : 3/18/2013

DESIGNED - NAK  
 DRAWN - SJS  
 CHECKED - NAK  
 DATE - 1/4/12

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

**COMMITMENTS AND GENERAL NOTES**

SCALE: SHEET NO. OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	3
CONTRACT NO. 72E11				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE						STA. 577+01 TO STA. 590+00 0005			
				RURAL 90% FEDERAL		10% STATE		0014	0014				
				SN 054-0057 SN 054-0058	SN 054-0060 SN 054-0061	SN 054-0062	SN 054-0063 SN 054-0064				SN 054-0065 SN 054-0066 SN 054-0067 SN 054-0068		
28100207	STONE RIPRAP, CLASS A4	TON	605					284			321		
28200200	FILTER FABRIC	SQ YD	1,074					497			577		
31100700	SUBBASE GRANULAR MATERIAL, TYPE A 8"	SQ YD	6,372								6,372		
31100910	SUBBASE GRANULAR MATERIAL, TYPE A 12"	SQ YD	2,433								2,433		
31101400	SUBBASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	934								934		
35300300	PORTLAND CEMENT CONCRETE BASE COURSE 8"	SQ YD	934								934		
35501326	HOT-MIX ASPHALT BASE COURSE, 10 1/2"	SQ YD	5,889								5,889		
35501327	HOT-MIX ASPHALT BASE COURSE, 10 3/4"	SQ YD	9,802			1,027		1,045		1,752	5,978		
35501332	HOT-MIX ASPHALT BASE COURSE, 12"	SQ YD	2,305								2,305		
35501333	HOT-MIX ASPHALT BASE COURSE, 12 1/4"	SQ YD	2,286			1,067		1,219					
35501342	HOT-MIX ASPHALT BASE COURSE, 14 1/2"	SQ YD	1,100						1,100				
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	7			1.0		0.7		0.7	1.8	1.8	1.0
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	181									181	
40600895	CONSTRUCTING TEST STRIP	EACH	1								1		

△ REVISED 6-3-13

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE						STA 517+01 TO STA 590+00 0005	
				RURAL 90% FEDERAL 10% STATE		SN 054-0062	SN 054-0063 SN 054-0064	SN 054-0065 SN 054-0066 SN 054-0067 SN 054-0068	SN 054-0069		
				SN 054-0057 SN 054-0058	SN 054-0060 SN 054-0061						0014
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	933							933	
40600990	TEMPORARY RAMP	SQ YD	76							63	13
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	388							388	
40603345	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90	TON	2,190			266	310		329	1,285	
42001420	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC)	SQ YD	1,194			184	536		269	205	
42100200	CONTINUOUSLY REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT 9"	SQ YD	1,298							1,298	
42100615	PAVEMENT REINFORCEMENT	SQ YD	1,298							1,298	
44000100	PAVEMENT REMOVAL	SQ YD	6,695			2,132	250			4,313	
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	616			616					
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	560			560					
44004250	PAVED SHOULDER REMOVAL	SQ YD	18,616			2,381	2,539		3,171	8,310	2,215
44200577	CLASS A PATCHES, TYPE II, 12 INCH	SQ YD	427			27	117		123	160	
44200581	CLASS A PATCHES, TYPE III, 12 INCH	SQ YD	144							144	
44200620	CLASS A PATCHES, TYPE II, 14 INCH	SQ YD	104			48	56				

REVIS 6-3-13

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				RURAL 90%		FEDERAL 10%		STATE	
				SN 054-0057 SN 054-0058	SN 054-0060 SN 054-0061	SN 054-0062	SN 054-0063 SN 054-0064	SN 054-0065 SN 054-0066 SN 054-0067 SN 054-0068	SN 054-0069
				0014	0014	0014	0014	0014	0014
50104702	REMOVAL OF EXISTING CONCRETE DECK NO. 2	EACH	2		2				
50104703	REMOVAL OF EXISTING CONCRETE DECK NO. 3	EACH	2				2		
50104704	REMOVAL OF EXISTING CONCRETE DECK NO. 4	EACH	2					2	
50105220	PIPE CULVERT REMOVAL	FOOT	645	540				105	
50157300	PROTECTIVE SHIELD	SQ YD	3,734		2,389			516	829
50200100	STRUCTURE EXCAVATION	CU YD	1,766	348	658		484	276	
50300100	FLOOR DRAINS	EACH	80	8			72		
50300225	CONCRETE STRUCTURES	CU YD	439.1	77.6	196.2		86.5	78.8	
50300255	CONCRETE SUPERSTRUCTURE	CU YD	4,650.5	764.3	1,925.9		1,279.2	646.9	34.2
50300260	BRIDGE DECK GROOVING	SQ YD	14,329	1,934	5,635		3,422	1,729	1,609
50300300	PROTECTIVE COAT	SQ YD	18,397	2,386	6,997		4,278	2,063	2,673
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	34,080	4,230	21,130		5,350	3,370	
50500505	STUD SHEAR CONNECTORS	EACH	42,942	9,108	18,894		9,432	5,508	
50600705	CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 3	L SUM	1		1				

REVIS<sup>1</sup>ED 6-3-13



JOB # 2236.10	DESIGNED - NAK	REVISED -
FILE NAME # 0672E11-ahc-500.dgn	DRAWN - SJS	REVISED -
PLOT SCALE # 20.0000' / IN.	CHECKED - NAK	REVISED -
PLOT DATE # 3/20/2013	DATE - 1/4/12	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET NO. 5 OF 14 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	06 LOGAN CO BR 2011-1	LOGAN	429	8
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 72E11	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE						
				RURAL 90% FEDERAL		10% STATE		SN 054-0065 SN 054-0066 SN 054-0067 SN 054-0068	SN 054-0069	
				SN 054-0057 SN 054-0058	SN 054-0060 SN 054-0061	SN 054-0062	SN 054-0063 SN 054-0064			0014
<del>50606704</del>	<del>CLEANING AND PAINTING STRUCTURAL STEEL, LOCATION 4</del>	<del>L SUM</del>	<del>1</del>	<del>1</del>						
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	1147,770	194,430	502,390		281,060	161,180	8,710	
50800515	BAR SPLICERS	EACH	8,405	1,538	4,179		2,464	176	48	
51100100	SLOPE WALL 4 INCH	SQ YD	16				16			
51500100	NAME PLATES	EACH	8	2	2		2	2		
52000110	PREFORMED JOINT STRIP SEAL	FOOT	300		128				172	
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	74	24	14		12	24		
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	12				12			
52100030	ELASTOMERIC BEARING ASSEMBLY, TYPE III	EACH	14		14					
52100520	ANCHOR BOLTS, 1"	EACH	296	48	56		96	96		
5421D018	PIPE CULVERTS, CLASS D, TYPE 1 18" (TEMPORARY)	FOOT	43						43	
5421D024	PIPE CULVERTS, CLASS D, TYPE 1 24" (TEMPORARY)	FOOT	943						943	
54213447	END SECTIONS 12"	EACH	15		8				7	
54213459	END SECTIONS 24"	EACH	4						4	

△ REVISED 6-3-13



JOB # 2236.10  
 FILE NAME # 0672C11-ah1-500.dgn  
 PLOT SCALE = 28,0000 "/>

DESIGNED - NAK  
 DRAWN - SJS  
 CHECKED - NAK  
 DATE - 1/4/12

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET NO. 6 OF 14 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	9
CONTRACT NO. 72E11				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE						STA 577+01 TO STA 590+00
				RURAL 90% FEDERAL		10% STATE		0014	0014	
				SN 054-0057 SN 054-0058	SN 054-0060 SN 054-0061	SN 054-0062	SN 054-0063 SN 054-0064			
				0014	0014	0014	0014	0014	0014	0005
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	33	6	7		7	7		6
67000600	ENGINEER'S FIELD LABORATORY	CAL MO	33	6	7		7	7		6
67100100	MOBILIZATION	L SUM	1	0.2	0.2		0.2	0.2		0.2
70100205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	EACH	9	2	2		2	2		1
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	6	2	2		2			
70100410	TRAFFIC CONTROL AND PROTECTION, STANDARD 701416	EACH	2					2		
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	4		2			2		
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1			1				
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	18	2	2		2	8		4
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	122	30	30		31	31		
* 70300100	SHORT TERM PAVEMENT MARKING	FOOT	5714	976	1,064		988	2,556		130
* 70300210	TEMPORARY PAVEMENT MARKING LETTERS AND SYMBOLS	SQ FT	62							62
* 70300230	TEMPORARY PAVEMENT MARKING - LINE 5"	FOOT	94,177	12,833	17,408		13,676	39,464		10,796
* 70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	41,101	5,672	7,608		6,027	17,295		4,499

\*SPECIALTY ITEM REVISED 6-3-13



CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE						STA 577+01 TO STA 590+00  0005								
				RURAL 90% FEDERAL 10% STATE		RURAL 90% FEDERAL 10% STATE		RURAL 90% FEDERAL 10% STATE										
				SN 054-0057 SN 054-0058	SN 054-0060 SN 054-0061	SN 054-0062	SN 054-0063 SN 054-0064	SN 054-0065 SN 054-0066 SN 054-0067 SN 054-0068	SN 054-0069		0014	0014	0014	0014	0014	0014		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	8,812.5	1,425.0	2,150.0		1,750.0	3,487.5										
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	8,012.5	1,350.0	2,150.0		1,650.0	2,862.5										
70500100	TEMPORARY STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	1,000.0					1,000.0										
70500665	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	3					3										
* 70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	7	2	2		2	1										
* 70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	7	2	2		2	1										
* 78001100	PAINT PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	31															31
* 78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	4,978															4,978
* 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	516															516
* 78009005	MODIFIED URETHANE PAVEMENT MARKING - LINE 5"	FOOT	67,935	12,018	13,876		12,258	28,485										12,988
* 78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	4,438		2,214			2,224										
* 78009008	MODIFIED URETHANE PAVEMENT MARKING - LINE 8"	FOOT	2,684		1,238			1,446										
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	88	12	21		16	23										16
* 78100300	REPLACEMENT REFLECTOR	EACH	131	26	28		30	47										

\* SPECIALTY ITEM REVISD 6-3-13

**CEC** Cummins Engineering Corporation  
Civil and Structural Engineering

JOB # 2236.10  
FILE NAME # D672E11-ah1-500.dgn  
PLOT SCALE # 20,0000 / IN.  
PLOT DATE # 3/28/2013

DESIGNED - NAK  
DRAWN - SJS  
CHECKED - NAK  
DATE - 1/4/12

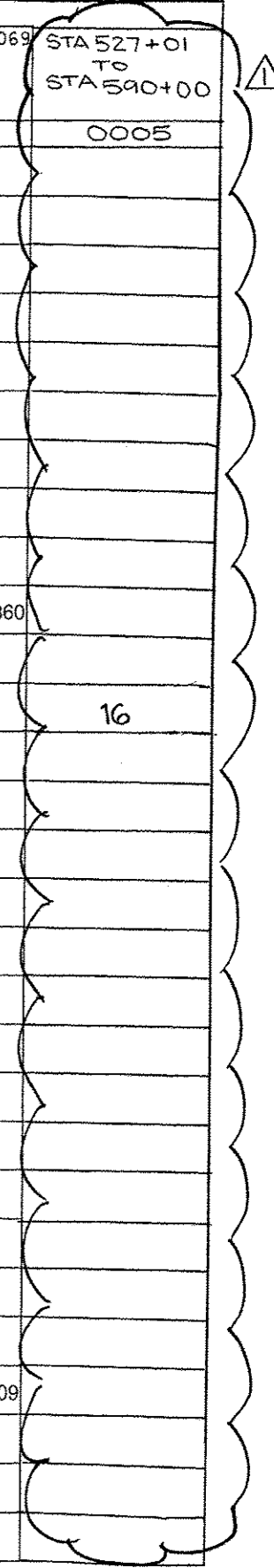
REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES  
SCALE: SHEET NO. 10 OF 14 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	13
CONTRACT NO. 72E11				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				RURAL 90% FEDERAL 10% STATE					
				SN 054-0057 SN 054-0058	SN 054-0060 SN 054-0061	SN 054-0062	SN 054-0063 SN 054-0064	SN 054-0065 SN 054-0066 SN 054-0067 SN 054-0068	SN 054-0069
0014	0014	0014	0014	0014	0014				
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	70	15	23		8	24	
* 78200520	BARRIER WALL MARKERS, TYPE B	EACH	68	12	28		20	8	
* 78200530	BARRIER WALL MARKERS, TYPE C	EACH	68	12	28		20	8	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	3	1	2				
78300100	PAVEMENT MARKING REMOVAL	SQ FT	24,592	4,484	5,613		4,903	8,732	860
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	56	8	8		8	16	16
X0322288	MEDIAN CLOSURE	EACH	4					4	
X0323583	SPEED INDICATOR SIGN	CAL DA	428					428	
X0323586	PIPE DRAIN REMOVAL	FOOT	686		470			216	
X0324589	PIPE UNDERDRAIN OUTLET EXTENSION FOR 4" PIPE	EACH	6					6	
* X2503000	MAINTENANCE MOWING	ACRE	26.9					26.9	
X4401198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	9,671	1,778	2,035		1,800	4,058	
X4403700	MEDIAN REMOVAL (SPECIAL)	SQ FT	8,409						8,409
X5860110	GRANULAR BACKFILL FOR STRUCTURES	CU YD	1,677	204	658		452	363	



\* Non-Participating (100% State) \* Specialty Item Revised 6-3-13



JOB # 2236.10	DESIGNED - NAK	REVISED -
FILE NAME # D672E11-shv-500.dgn	DRAWN - SJS	REVISED -
PLOT SCALE # 20.0000' / IN.	CHECKED - NAK	REVISED -
PLOT DATE # 3/22/2013	DATE - 1/4/12	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES			
SCALE:	SHEET NO. 11 OF 14 SHEETS	STA.	TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	14
CONTRACT NO. 72E11				

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

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE					
				RURAL 90% FEDERAL		10% STATE			
				SN 054-0057 SN 054-0058	SN 054-0060 SN 054-0061	SN 054-0062	SN 054-0063 SN 054-0064	SN 054-0065 SN 054-0066 SN 054-0067 SN 054-0068	SN 054-0069
Z0004552	APPROACH SLAB REMOVAL	SQ YD	2,406	427	600		470	909	
Z0006016	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 3/4 INCHES	SQ YD	1,761						1,761
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1		1				
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1		1				
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1		1				
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1		1				
Z0012146	BRIDGE DECK SCARIFICATION 2 3/4"	SQ YD	1,761						1,761
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	624	9	43		11	9	552
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.2	0.2		0.2	0.2	0.2
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	32						32
Z0016200	DECK SLAB REPAIR (PARTIAL)	SQ YD	25						25
Z0016702	DETOUR SIGNING	L SUM	1					1	
Z0018002	DRAINAGE SCUPPERS, DS-11	EACH	16		8		8		
Z0021916	SILICONE JOINT SEALER, 3"	FOOT	62			62			
Z0026407	TEMPORARY SHEET PILING	SQ FT	3,618	961	1,904		753		
Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	6,783	1,826			3,241	1,716	



14

REVISIED 6-3-13



JOB # 2236.10	DESIGNED - NAK	REVISED -
FILE NAME * 0672E11-ah1-500.dgn	DRAWN - SJS	REVISED -
PLOT SCALE * 20,0000' / IN.	CHECKED - NAK	REVISED -
PLOT DATE * 3/28/2013	DATE - 1/4/12	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: SHEET NO. 13 OF 14 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	06 LOGAN CO BR 2011-1	LOGAN	429	16
CONTRACT NO. 72E11				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

CONSTRUCTION CODE					
RURAL 90% FEDERAL			10% STATE		
SN 054-0057 SN 054-0058	SN 054-0060 SN 054-0061	SN 054-0062	SN 054-0063 SN 054-0064	SN 054-0065 SN 054-0066 SN 054-0067 SN 054-0068	SN 054-0069
0014	0014	0014	0014	0014	0014

STA. 577+01  
TO  
STA. 590+00

0005

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0014	0014	0014	0014	0014	0014
Z0033600	LONGITUDINAL JOINT REPAIR	FOOT	1,150						1,150
Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	1,241	280	287		346	328	
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1		1				
Z0065700	SLOPE WALL REPAIR	SQ YD	726	179	463		52	32	
Z0067600	STEEL CASINGS 18"	FOOT	407					407	
X(0000077	REMOVE AND REINSTALL INLET BOX	EACH	1					1	
40600645	LEVELING BINDER (MACHINE METHOD), N90	TON	127					127	
52000212	FINGER PLATE EXPANSION JOINT, 4"	FOOT	133		133				
+ Z0076600	TRAINEES	HOUR	1,000	1,000					
+ Z0076604	TRAINEES, TRAINING PROGRAM GRADUATE	HOUR	1,000	1,000					
* 78004220	PREFORMED PAVEMENT MARKING, TYPE B-INLAID LINE 5"	FOOT	325						325
40600845	POLYMERIZED LEVELING BINDER (MACHINE METHOD), N90	TON	170						170
40603545	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIXD, N90	TON	145						145
44000162	HOT-MIX ASPHALT REMOVAL 3/4"	SQ YD	1,731						1,731
40600300	AGGREGATE (PRIME COAT)	TON	2						2

⚠ 52000212 FINGER PLATE EXPANSION JOINT, 4"

⚠ \* 78004220 PREFORMED PAVEMENT MARKING, TYPE B-INLAID LINE 5"

⚠ 40600845 POLYMERIZED LEVELING BINDER (MACHINE METHOD), N90

⚠ 40603545 POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIXD, N90

⚠ 44000162 HOT-MIX ASPHALT REMOVAL 3/4"

⚠ 40600300 AGGREGATE (PRIME COAT)

+0042 ⚠ REVISED 6-3-13 ⚠ \*SPECIALTY ITEMS

**CEC**  
Civil and Structural Engineering

JOB # 2236.10	DESIGNED - NAK	REVISED -
FILE NAME # 0672E11-shs-900.dgn	DRAWN - SJS	REVISED -
PLOT SCALE # 20.8880 // IN.	CHECKED - NAK	REVISED -
PLOT DATE # 3/29/2013	DATE - 1/4/12	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE:	SHEET NO. 14 OF 14 SHEETS	STA.	TO STA.
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F.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	06 LOGAN CO BR 2011-1	LOGAN	429	17
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 72E11	

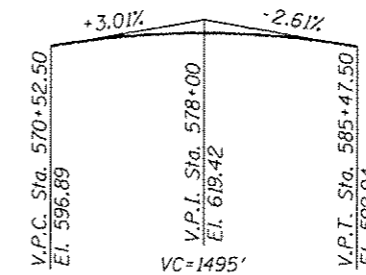
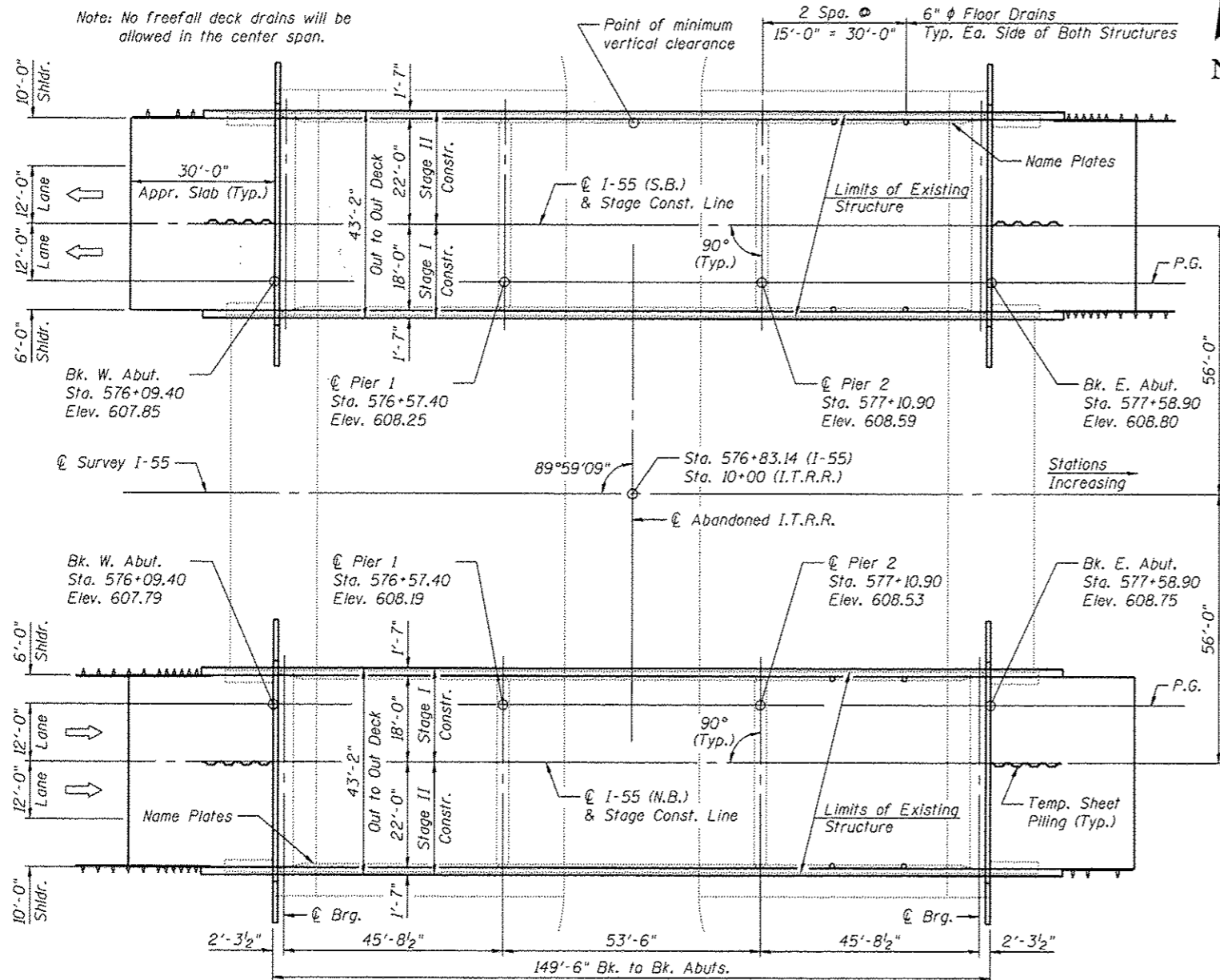
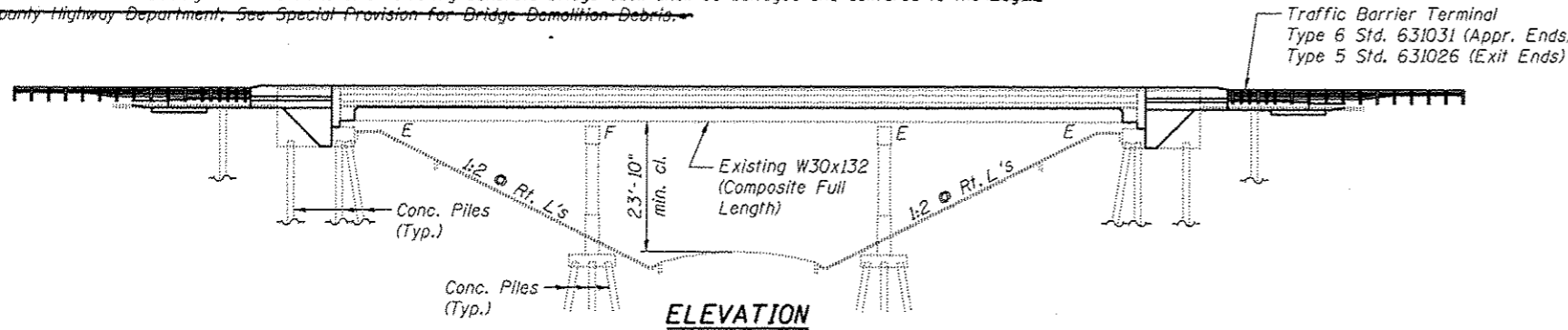
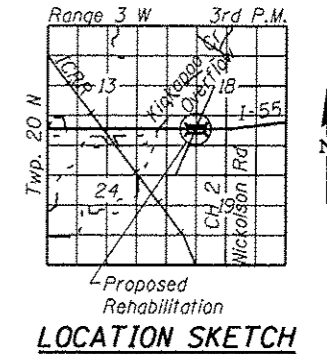
Benchmark: # TEA 28 Chisled Square on NE corner of NW approach wall SN 054-0057, 37' Rt. Sta. 576+11, Elev. 609.61  
 Benchmark: # TEA 27 Chisled Square on NE approach wall SN 054-0058, 79' Lt. Sta. 577+59, Elev. 610.49

Existing Structure: SN 054-0057 & 054-0058, originally built in 1973 as F.A.I. 55, Section 54-4VB-1 at Sta 576+83.14.  
 The superstructure consists of a reinforced concrete deck supported by steel wide flange beams continuous over three spans.  
 The substructure consists of open stub abutments supported by concrete piles and multi-column piers supported by concrete piles.  
 The structure is 149'-6" back to back abutments and is 42'-0" out to out deck. The structure is not skewed. The deck received a microsilica overlay in 1999. The existing deck is to be removed and replaced. Traffic to be maintained under staged construction.

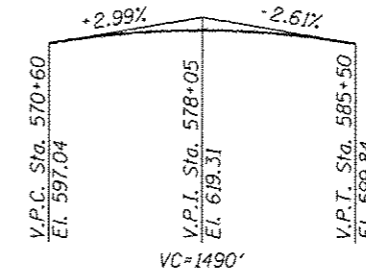
Concrete debris resulting from the removal of existing concrete bridge deck shall be salvaged and delivered to the Logan County Highway Department. See Special Provision for Bridge Demolition Debris.

**SCOPE OF WORK**

1. Remove and replace bridge deck.
2. Remove and replace bearings at abutments.
3. Remove and replace approach pavements.
4. Remove and replace abutment backwalls and wingwalls and make abutments semi-integral.
5. Diamond grind bridge deck and approach slabs.



**PROFILE GRADE**  
 I-55 S.B. S.N. 054-0058  
 Along median edge of pavement  
 The profile grade depicts the final elevations after grinding. Up to 1/4" will be ground off the bridge deck and approach slab.



**PROFILE GRADE**  
 I-55 N.B. S.N. 054-0057  
 Along median edge of pavement

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
 Bedrock Acceleration Coefficient (A) = 0.046g  
 Site Coefficient (S) = 2.0

**DESIGN STRESSES**

**FIELD UNITS (New Construction)**

f'c = 3,500 psi  
 fy = 60,000 psi (Reinforcement)  
 fy = 36,000 psi (Steel)

**FIELD UNITS (Existing Construction)**

fc = 1,200 psi (Deck Slab)  
 fc = 1,400 psi (Curb, Parapet, Substructure)  
 fs = 20,000 psi (Reinforcement & Structural Steel)

**DESIGN SPECIFICATIONS**

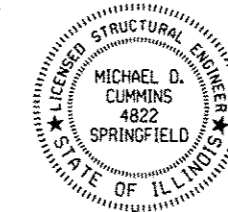
2002 AASHTO Standard Specifications for Highway Bridge (New Construction)  
 2012 AASHTO LRF Bridge Construction Specifications (New Deck)  
 1995 FHWA Seismic Retrofit Manual  
 1969 AASHTO (Existing Construction)

**LOADING HS20-44 & ALT**

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

**APPROVED**  
 For Structural Adequacy Only

*D. Carl Perry*  
 Engineer of Bridges & Structures JFS



**GENERAL PLAN**  
 I-55 OVER ABANDONED I.T.R.R.  
 F.A.I. RTE 55  
 SECTION D6 LOGAN CO BR 2011-1  
 LOGAN COUNTY  
 STATION 576+83.14  
 STRUCTURE NO. 054-0057 (NB)  
 STRUCTURE NO. 054-0058 (SB)



JOB # 2276.3	DESIGNED - AAN	REVISED -
FILE # 0540057_0058-01-GPE.dgn	CHECKED - ENV	REVISED -
DATE # 5/14/2013	DRAWN - SJS	REVISED -
	CHECKED - AAN	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

**GENERAL PLAN**  
 STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)  
 SHEET NO. 1 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	200
			CONTRACT NO. 72E11	

REVISIONS  
 1. REVISED SHEET 6-3-13

*Michael D. Cummins* 5/14/13  
 (Expires 11/30/2014)

**GENERAL NOTES**

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts. Bolts 7/8 in.  $\phi$ , holes 15/16 in.  $\phi$ , unless otherwise noted.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially 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.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding 1/4 inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, 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.

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.

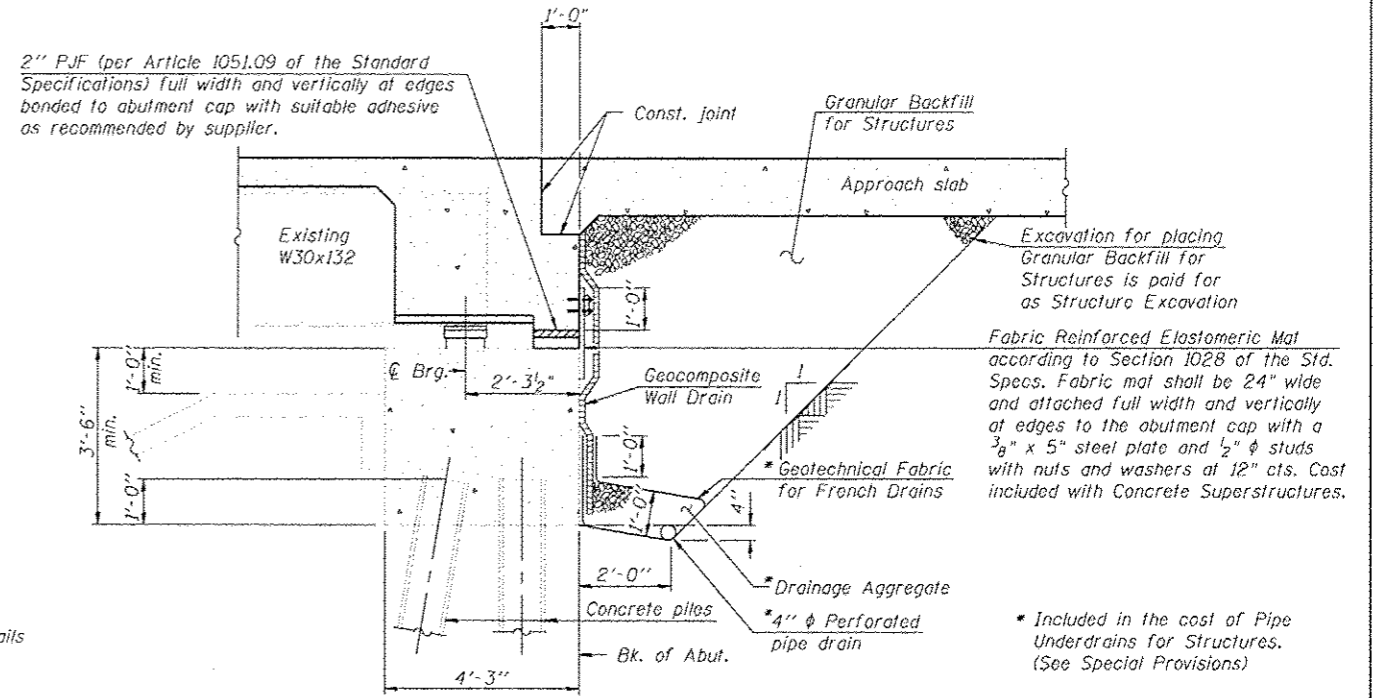
The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior erection as required by the special provision Cleaning and Painting Contact Surface Areas of Existing Steel Structures.

All new structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

**INDEX OF SHEETS**

- 1 General Plan
- 2 General Data
- 3 Stage Construction Details
- 4 Temporary Concrete Barrier
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- 7-8 Top of Approach Slab Elevations (NB)
- 9-10 Top of Slab Elevations (SB)
- 11-12 Top of Approach Slab Elevations (SB)
- 13 Superstructure
- 14 Superstructure Details
- 15 Diaphragm Details
- 16-17 Bridge Approach Slab Details
- 18 Bearing Details
- 19 Beam Details
- 20 West Abutments Concrete Removal
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- 22 West Abutment (NB)
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- 26 Pier Repairs (NB)
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- 28 West Slope Wall Repairs
- 29 East Slope Wall Repairs
- 30 Bar Splicer Assembly and Mechanical Splicer Details
- 31 Concrete Parapet Slipforming Option



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

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.)

STATION 576+83.14  
BUILT 20\_\_ BY  
STATE OF ILLINOIS  
F.A.J. RTE 55  
SEC. D6 LOGAN CO BR 2011-1  
LOADING HS 20-44 & ALT.  
STRUCTURE NO. 054-0057

**NAME PLATE  
NB STRUCTURE**  
See Std. 515001

STATION 576+83.14  
BUILT 20\_\_ BY  
STATE OF ILLINOIS  
F.A.J. RTE 55  
SEC. D6 LOGAN CO BR 2011-1  
LOADING HS 20-44 & ALT.  
STRUCTURE NO. 054-0058

**NAME PLATE  
SB STRUCTURE**  
See Std. 515001

Existing name plate shall be cleaned and placed next to the new name plate. Cost included in "Name Plates".

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.		79.0	79.0
Removal of Existing Concrete Deck No. 1	Each	2		2
Structure Excavation	Cu. Yd.		348	348
Floor Drains	Each	8		8
Concrete Structures	Cu. Yd.		77.6	77.6
Concrete Superstructure	Cu. Yd.	764.3		764.3
Bridge Deck Grooving	Sq. Yd.	1,934		1,934
Protective Coat	Sq. Yd.	2,386		2,386
Furnishing and Erecting Structural Steel	Pound	4,230		4,230
Stud Shear Connectors	Each	9,108		9,108
Reinforcement Bars, Epoxy Coated	Pound	181,375	13,055	194,430
Bar Splicers	Each	1,370	168	1,538
Name Plates	Each	2		2
Elastomeric Bearing Assembly, Type I	Each	24		24
Anchor Bolts, 1"	Each	48		48
Geocomposite Wall Drain	Sq. Yd.		192	192
Jack and Remove Existing Bearings	Each	24		24
Granular Backfill for Structures	Cu. Yd.		204	204
Structural Repair of Concrete (Depth Equal to or Less Than 5 inches)	Sq. Ft.		9	9
Temporary Sheet Piling	Sq. Ft.		961	961
Diamond Grinding (Bridge Section)	Sq. Yd.	1,826		1,826
Pipe Underdrains for Structures 4"	Foot		280	280
Slope Wall Repair	Sq. Yd.		179	179

REV. SHEET 6-3-13



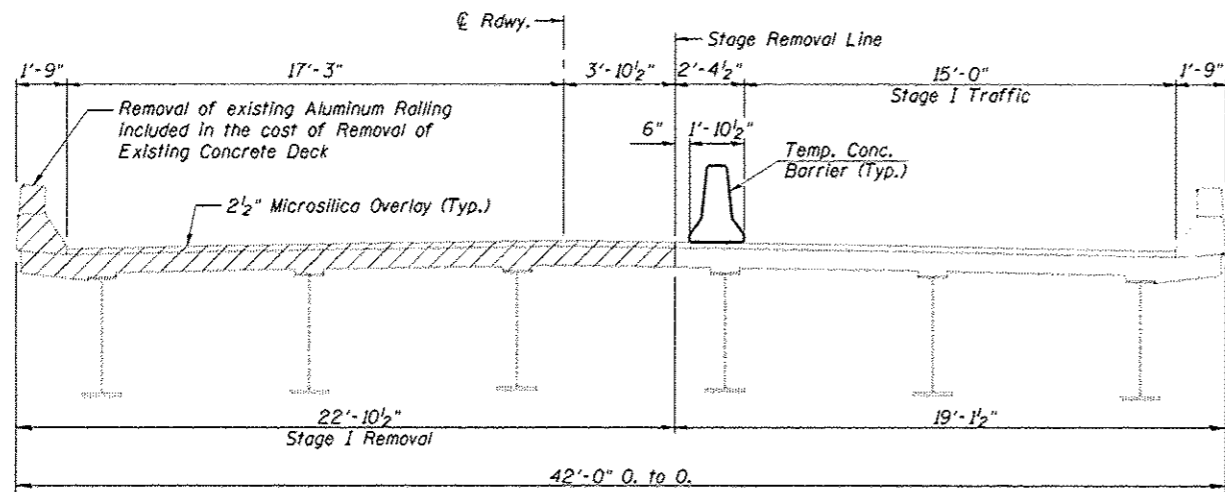
JOB	2276.3	DESIGNED	AAN	REVISED	-
FILE	0540057_0058-02-GenData.dgn	CHECKED	ENV	REVISED	-
DATE	5/17/2013	DRAWN	SJS	REVISED	-
		CHECKED	AAN	REVISED	-

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

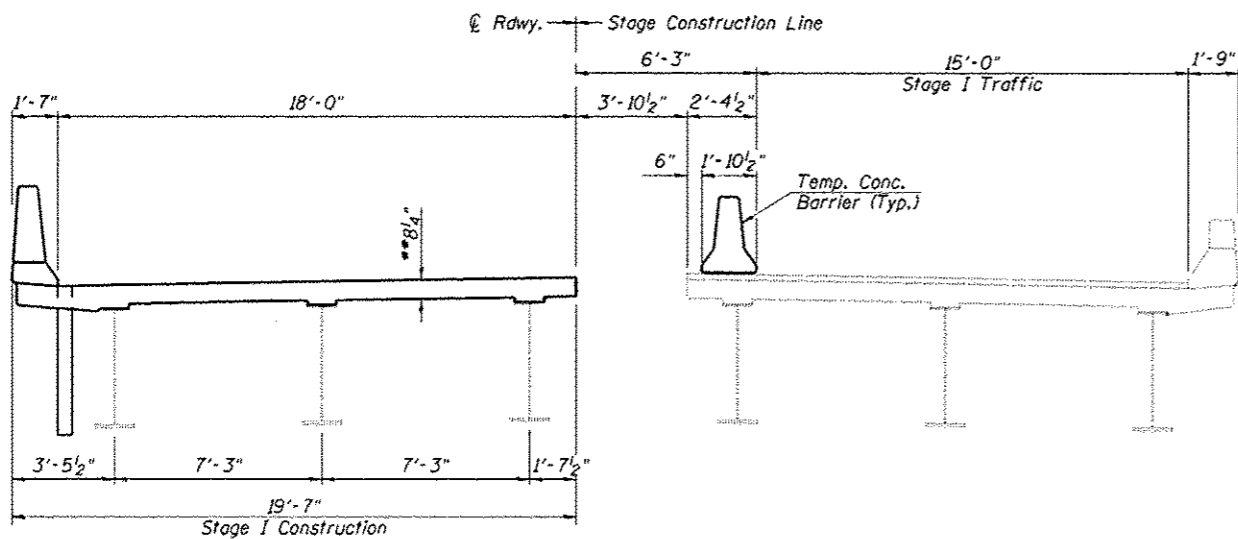
**GENERAL DATA  
STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)**

SHEET NO. 2 OF 31 SHEETS

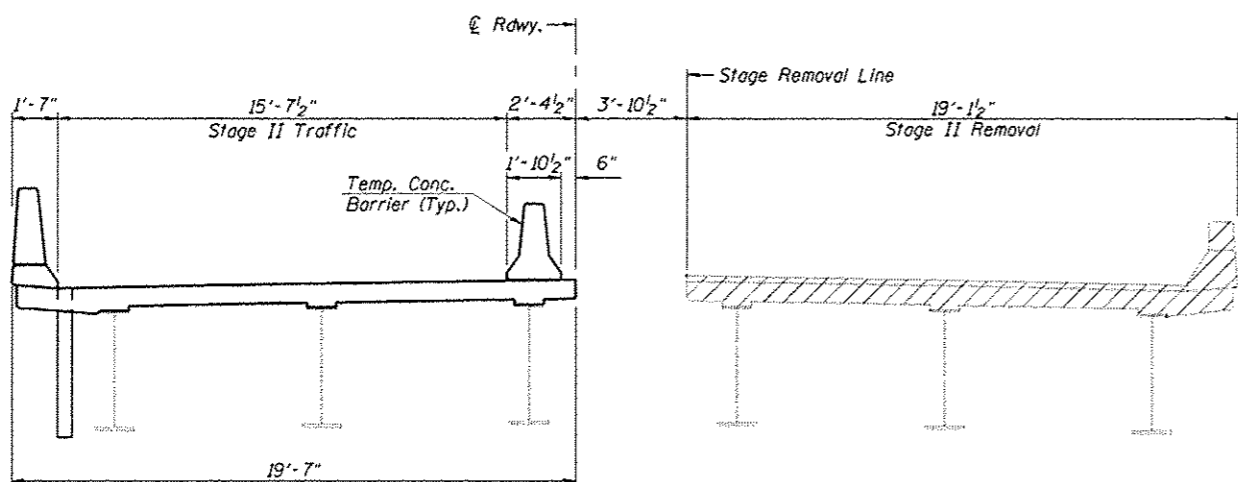
F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	201
			CONTRACT NO. 72E11	
ILLINOIS FED. AID PROJECT				



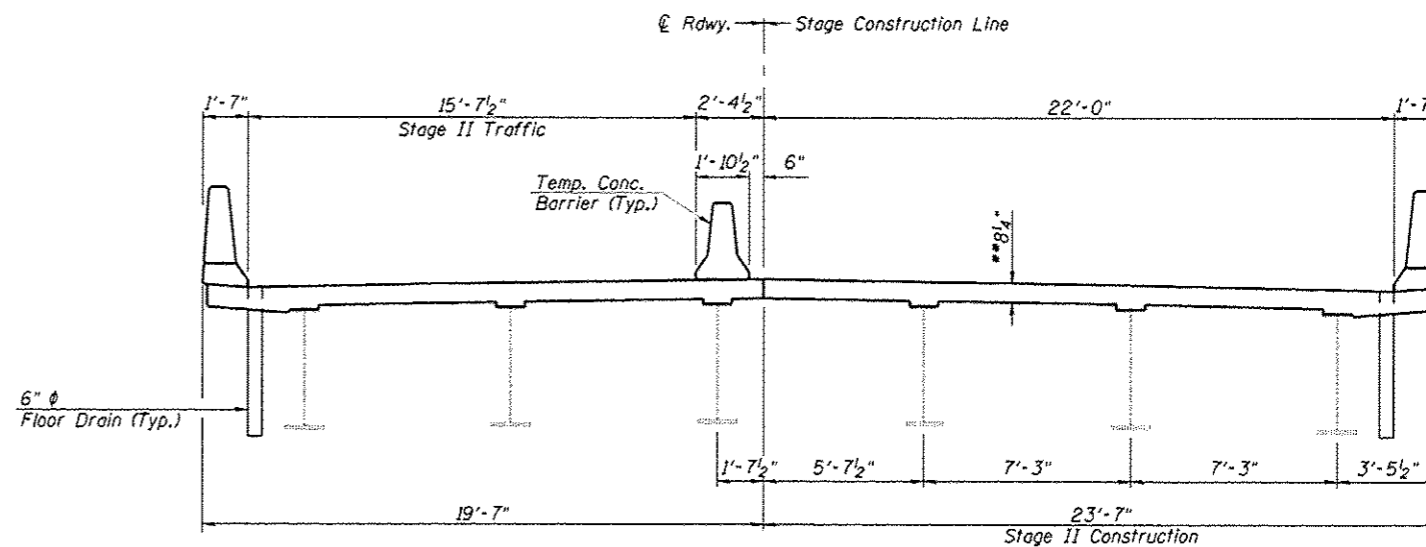
**STAGE I REMOVAL**  
(Looking in the direction of traffic)



**STAGE I CONSTRUCTION**  
(Looking in the direction of traffic)

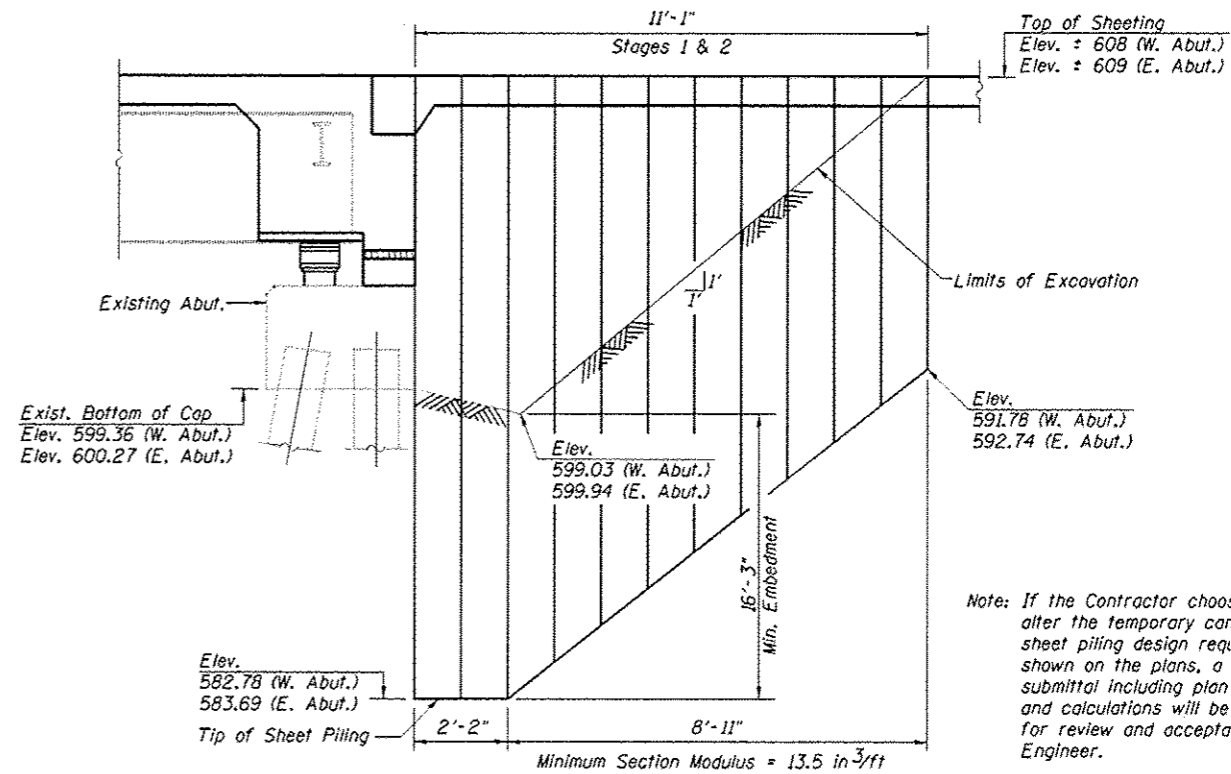


**STAGE II REMOVAL**  
(Looking in the direction of traffic)



**STAGE II CONSTRUCTION**  
(Looking in the direction of traffic)

Note: See Roadway Plans for quantity of Temporary Concrete Barrier.



Note: If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

Note  
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.44 feet to match benchmark datum

**TEMPORARY SHEET PILING DETAILS**

REV. SHEET 6-3-13

**CEC** Cummins Engineering Corporation  
Civil and Structural Engineering

JOB • 2276.3  
FILE • 0540057\_0058-03-Stage.dwg  
DATE • 5/14/2013

DESIGNED - AAN  
CHECKED - ENV  
DRAWN - SJS  
CHECKED - AAN

REVISED -  
REVISED -  
REVISED -  
REVISED -

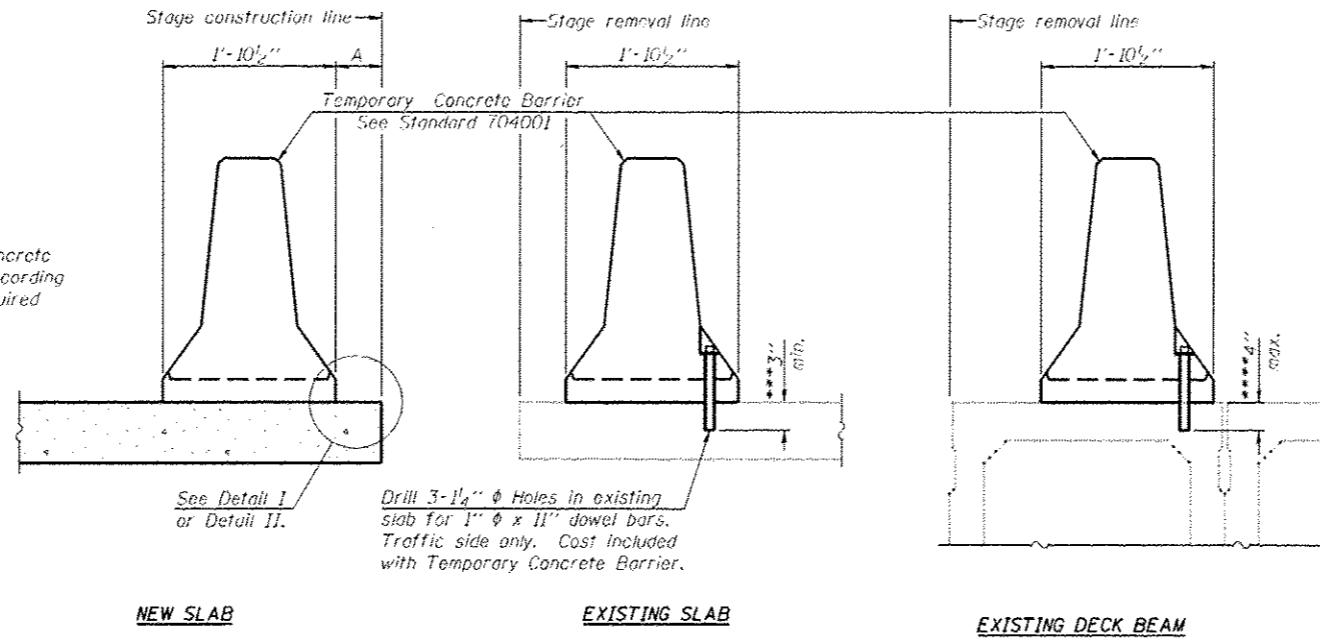
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION DETAILS & TEMPORARY SHEET PILING  
STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)

SHEET NO. 3 OF 31 SHEETS

P.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	06 LOGAN CO BR 2011-1	LOGAN	429	202
			CONTRACT NO. 72E11	
ILLINOIS FED. AID PROJECT				

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



**SECTIONS THRU SLAB OR DECK BEAM**

**NOTES**

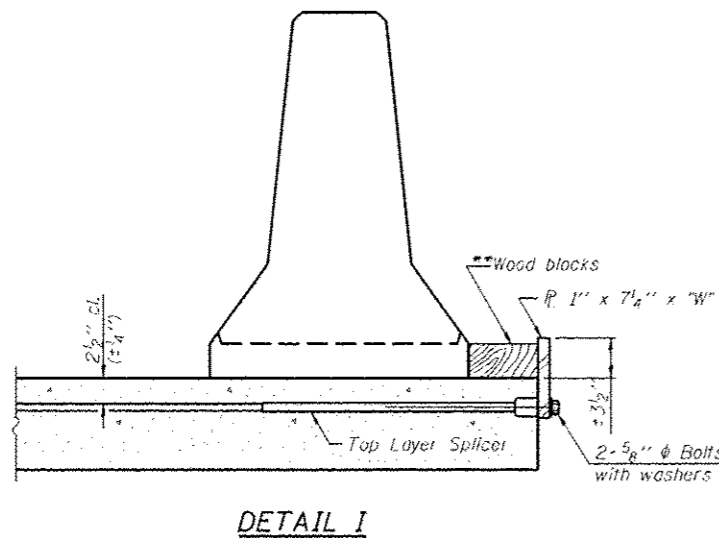
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1" x 7 1/4" x "W" steel  $\bar{R}$  to the top layer of couplers with 2-5/8"  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 1" x 7 1/4" x "W" steel  $\bar{R}$  to the concrete slab or concrete wearing surface with 2-5/8"  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

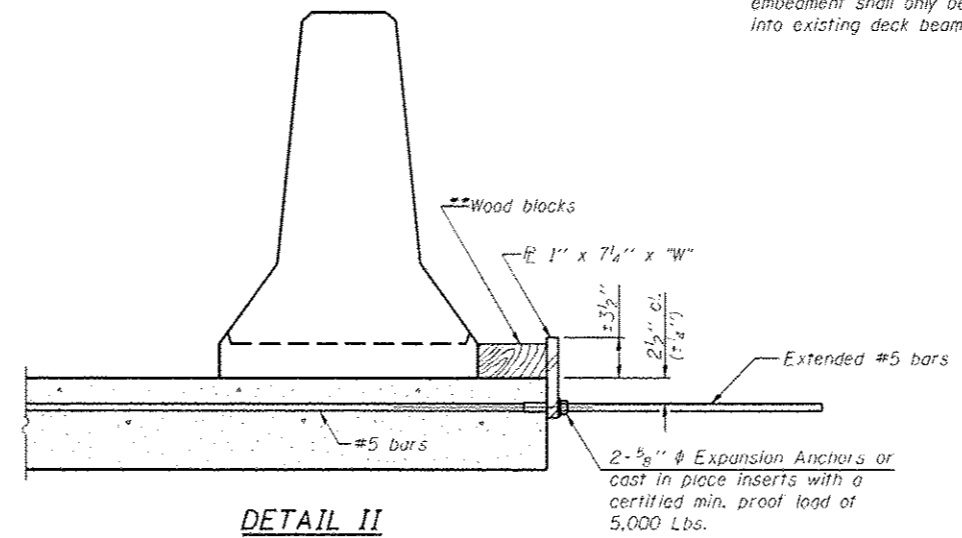
Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7 1/4" x "W" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

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

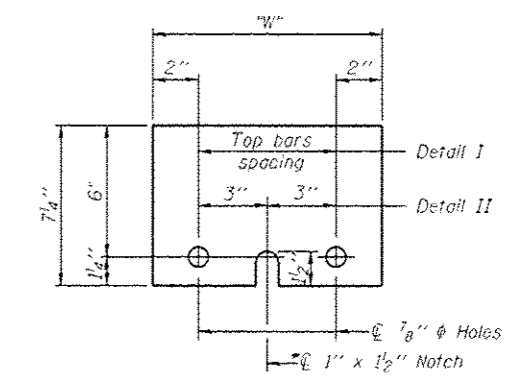
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



**STEEL RETAINER  $\bar{R}$  1" x 7 1/4" x "W"**

\* Required only with Detail II

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

"W" = Top bars spacing + 4"

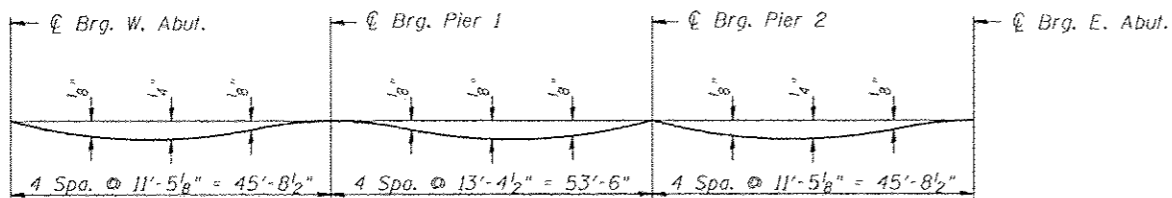
R-27 (Modified)

REV. SHEET G-3-13

<b>CEC</b> Civil and Structural Engineering	Cummins Engineering Corporation	JOB • 2276.3	DESIGNED - AAN	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>MODIFIED TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION</b> <b>STRUCTURE NO. 054-0057 (NB) &amp; 054-0058 (SB)</b>	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE • 0540057_0058-04-Temp.dgn	CHECKED - MDC	REVISED -	D6 LOGAN CO BR 2011-1			LOGAN	429	203	
	DATE • 5/14/2013	DRAWN - SJS	REVISED -							CONTRACT NO. 72E11
	CHECKED - MDC	REVISED -								ILLINOIS FED. AID PROJECT

SHEET NO. 4 OF 31 SHEETS



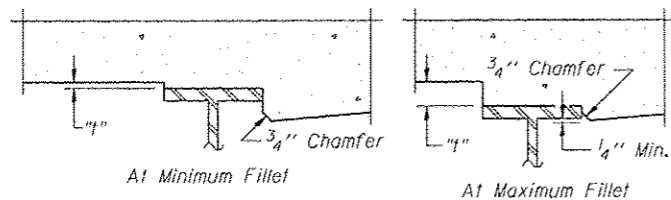


**DEAD LOAD DEFLECTION DIAGRAM**

(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 and grinding as shown below and on sheet 6 of 31.



To determine "f": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on this sheet and on sheet 6 of 31, minus 8/16" deck thickness, equals the fillet heights "f" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on this sheet and on sheet 6 of 31. For grinding the deck, see Special Provisions.

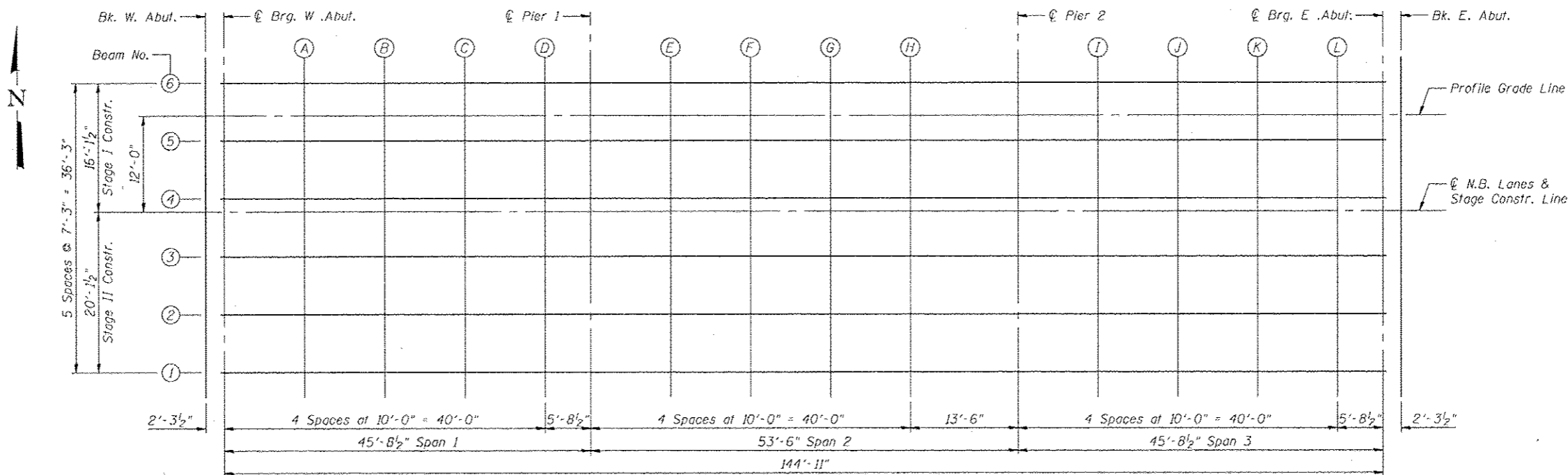
**FILLET HEIGHTS**

**BEAM 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	32.13	607.62	607.64
CL Brg. W. Abut.	576+11.69	32.13	607.64	607.66
A	576+21.69	32.13	607.73	607.76
B	576+31.69	32.13	607.82	607.86
C	576+41.69	32.13	607.90	607.93
D	576+51.69	32.13	607.98	608.00
CL Pier 1	576+57.40	32.13	608.02	608.04
E	576+67.40	32.13	608.09	608.12
F	576+77.40	32.13	608.16	608.19
G	576+87.40	32.13	608.23	608.26
H	576+97.40	32.13	608.29	608.32
CL Pier 2	577+10.90	32.13	608.36	608.38
I	577+20.90	32.13	608.42	608.45
J	577+30.90	32.13	608.47	608.50
K	577+40.90	32.13	608.51	608.54
L	577+50.90	32.13	608.55	608.58
CL Brg. E. Abut.	577+56.61	32.13	608.57	608.59
Bk. E. Abut.	577+58.90	32.13	608.58	608.60

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	24.88	607.77	607.79
CL Brg. W. Abut.	576+11.69	24.88	607.79	607.81
A	576+21.69	24.88	607.88	607.91
B	576+31.69	24.88	607.97	608.01
C	576+41.69	24.88	608.05	608.08
D	576+51.69	24.88	608.13	608.15
CL Pier 1	576+57.40	24.88	608.17	608.19
E	576+67.40	24.88	608.24	608.27
F	576+77.40	24.88	608.31	608.34
G	576+87.40	24.88	608.38	608.41
H	576+97.40	24.88	608.44	608.47
CL Pier 2	577+10.90	24.88	608.52	608.54
I	577+20.90	24.88	608.57	608.60
J	577+30.90	24.88	608.62	608.65
K	577+40.90	24.88	608.66	608.70
L	577+50.90	24.88	608.70	608.73
CL Brg. E. Abut.	577+56.61	24.88	608.72	608.74
Bk. E. Abut.	577+58.90	24.88	608.73	608.75



REV. SHEET 6-3-13

PLAN



JOB = 2276.3  
 FILE = 0540057\_0058-05-06-SNO0571opSlabElev.dwg  
 DATE = 5/17/2013

DESIGNED - AAN  
 CHECKED - MDC  
 DRAWN - SJS  
 CHECKED - MDC

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS  
 STRUCTURE NO. 054-0057 (NB)  
 SHEET NO. 5 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	204

CONTRACT NO. 72E11  
 ILLINOIS FED. AID PROJECT

**BEAM 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	17.63	607.89	607.91
CL Brq. W. Abut.	576+11.69	17.63	607.91	607.93
A	576+21.69	17.63	608.00	608.03
B	576+31.69	17.63	608.09	608.12
C	576+41.69	17.63	608.17	608.20
D	576+51.69	17.63	608.25	608.27
CL Pier 1	576+57.40	17.63	608.29	608.31
E	576+67.40	17.63	608.36	608.39
F	576+77.40	17.63	608.43	608.46
G	576+87.40	17.63	608.50	608.53
H	576+97.40	17.63	608.56	608.59
CL Pier 2	577+10.90	17.63	608.63	608.65
I	577+20.90	17.63	608.69	608.71
J	577+30.90	17.63	608.73	608.77
K	577+40.90	17.63	608.78	608.81
L	577+50.90	17.63	608.82	608.84
CL Brq. E. Abut.	577+56.61	17.63	608.84	608.86
Bk. E. Abut.	577+58.90	17.63	608.85	608.87

**CL N.B. LANES AND STAGE CONSTRUCTION JOINT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	12.00	607.98	608.00
CL Brq. W. Abut.	576+11.69	12.00	608.00	608.02
A	576+21.69	12.00	608.09	608.12
B	576+31.69	12.00	608.17	608.21
C	576+41.69	12.00	608.26	608.29
D	576+51.69	12.00	608.33	608.36
CL Pier 1	576+57.40	12.00	608.38	608.40
E	576+67.40	12.00	608.45	608.48
F	576+77.40	12.00	608.52	608.55
G	576+87.40	12.00	608.58	608.61
H	576+97.40	12.00	608.64	608.67
CL Pier 2	577+10.90	12.00	608.72	608.74
I	577+20.90	12.00	608.77	608.80
J	577+30.90	12.00	608.82	608.86
K	577+40.90	12.00	608.87	608.91
L	577+50.90	12.00	608.91	608.93
CL Brq. E. Abut.	577+56.61	12.00	608.93	608.95
Bk. E. Abut.	577+58.90	12.00	608.94	608.96

**BEAM 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	10.38	607.95	607.97
CL Brq. W. Abut.	576+11.69	10.38	608.97	607.99
A	576+21.69	10.38	608.06	608.09
B	576+31.69	10.38	608.15	608.19
C	576+41.69	10.38	608.23	608.26
D	576+51.69	10.38	608.31	608.33
CL Pier 1	576+57.40	10.38	608.35	608.37
E	576+67.40	10.38	608.42	608.45
F	576+77.40	10.38	608.49	608.52
G	576+87.40	10.38	608.56	608.59
H	576+97.40	10.38	608.62	608.65
CL Pier 2	577+10.90	10.38	608.70	608.72
I	577+20.90	10.38	608.75	608.78
J	577+30.90	10.38	608.80	608.83
K	577+40.90	10.38	608.84	608.88
L	577+50.90	10.38	608.82	608.91
CL Brq. E. Abut.	577+56.61	10.38	608.90	608.92
Bk. E. Abut.	577+58.90	10.38	608.91	608.93

**BEAM 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	3.13	607.83	607.86
CL Brq. W. Abut.	576+11.69	3.13	607.86	607.88
A	576+21.69	3.13	607.95	607.98
B	576+31.69	3.13	608.04	608.07
C	576+41.69	3.13	608.12	608.15
D	576+51.69	3.13	608.20	608.22
CL Pier 1	576+57.40	3.13	608.24	608.26
E	576+67.40	3.13	608.31	608.34
F	576+77.40	3.13	608.38	608.41
G	576+87.40	3.13	608.44	608.47
H	576+97.40	3.13	608.51	608.54
CL Pier 2	577+10.90	3.13	608.58	608.60
I	577+20.90	3.13	608.63	608.66
J	577+30.90	3.13	608.68	608.72
K	577+40.90	3.13	608.73	608.76
L	577+50.90	3.13	608.77	608.79
CL Brq. E. Abut.	577+56.61	3.13	608.79	608.81
Bk. E. Abut.	577+58.90	3.13	608.80	608.82

**PROFILE GRADE LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	0.00	607.79	607.81
CL Brq. W. Abut.	576+11.69	0.00	607.81	607.83
A	576+21.69	0.00	607.90	607.93
B	576+31.69	0.00	607.99	608.02
C	576+41.69	0.00	608.07	608.10
D	576+51.69	0.00	608.15	608.17
CL Pier 1	576+57.40	0.00	608.19	608.21
E	576+67.40	0.00	608.26	608.29
F	576+77.40	0.00	608.33	608.36
G	576+87.40	0.00	608.40	608.43
H	576+97.40	0.00	608.46	608.49
CL Pier 2	577+10.90	0.00	608.53	608.55
I	577+20.90	0.00	608.59	608.61
J	577+30.90	0.00	608.63	608.67
K	577+40.90	0.00	608.68	608.71
L	577+50.90	0.00	608.72	608.75
CL Brq. E. Abut.	577+56.61	0.00	608.74	608.76
Bk. E. Abut.	577+58.90	0.00	608.75	608.77

**BEAM 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	-4.13	607.70	607.72
CL Brq. W. Abut.	576+11.69	-4.13	607.73	607.75
A	576+21.69	-4.13	607.81	607.84
B	576+31.69	-4.13	607.90	607.94
C	576+41.69	-4.13	607.98	608.02
D	576+51.69	-4.13	608.06	608.09
CL Pier 1	576+57.40	-4.13	608.10	608.12
E	576+67.40	-4.13	608.18	608.20
F	576+77.40	-4.13	608.25	608.28
G	576+87.40	-4.13	608.31	608.34
H	576+97.40	-4.13	608.37	608.40
CL Pier 2	577+10.90	-4.13	608.45	608.47
I	577+20.90	-4.13	608.50	608.53
J	577+30.90	-4.13	608.55	608.59
K	577+40.90	-4.13	608.59	608.63
L	577+50.90	-4.13	608.63	608.66
CL Brq. E. Abut.	577+56.61	-4.13	608.66	608.68
Bk. E. Abut.	577+58.90	-4.13	608.66	608.68

REV. SHEET 6-3-13



JOB # 2276.3  
 FILE # 0540057\_0058-05-06-SN0057TopSlabElev.dgn  
 DATE # 5/14/2013

DESIGNED - AAN  
 CHECKED - MDC  
 DRAWN - SJS  
 CHECKED - MDC

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS  
 STRUCTURE NO. 054-0057 (NB)

SHEET NO. 6 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	06 LOGAN CO BR 2011-I	LOGAN	429	205
			CONTRACT NO. 72E11	
ILLINOIS FED. AID PROJECT				

**NORTH CURB LINE**

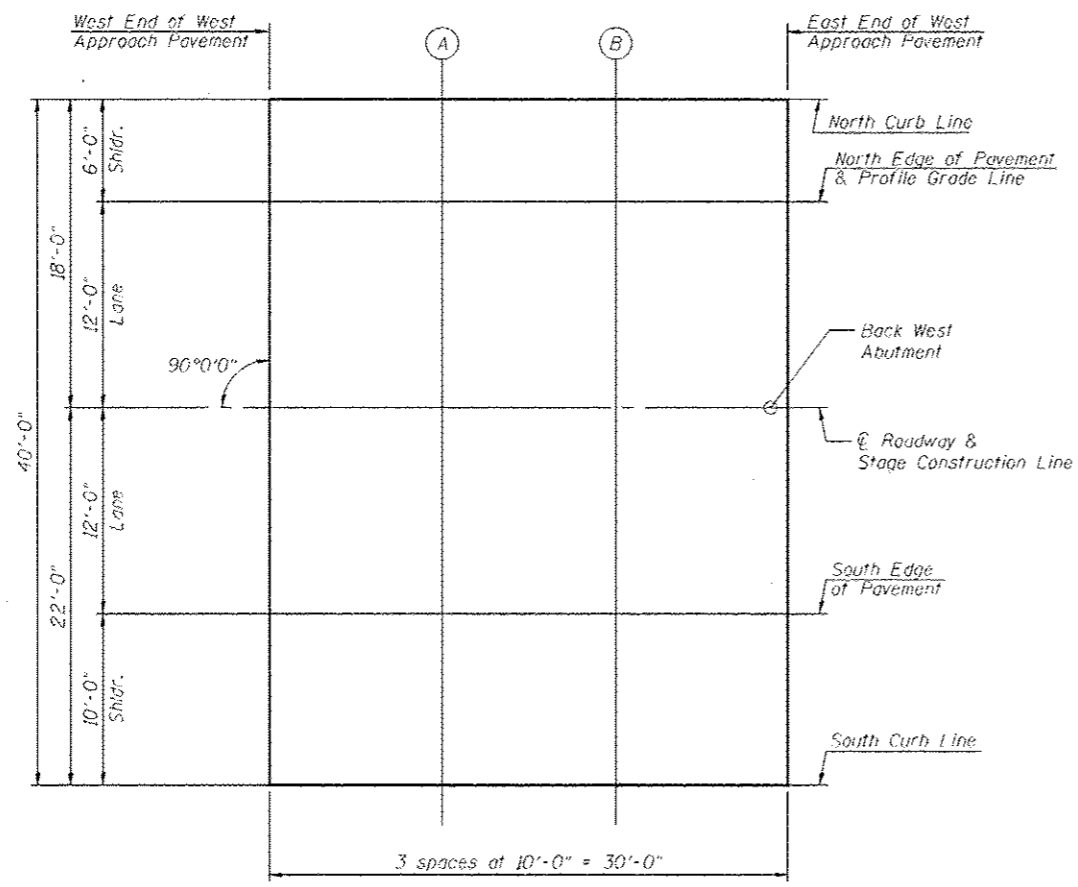
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	-6.00	607.38	607.40
A	575+90.40	-6.00	607.48	607.50
B	576+00.40	-6.00	607.58	607.60
E. End W. Appr. Pav't.	576+10.40	-6.00	607.67	607.69

**NORTH EDGE OF PAVEMENT & PROFILE GRADE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	0.00	607.51	607.53
A	575+90.40	0.00	607.61	607.63
B	576+00.40	0.00	607.71	607.73
E. End W. Appr. Pav't.	576+10.40	0.00	607.80	607.82

**Q ROADWAY AND STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	12.00	607.69	607.71
A	575+90.40	12.00	607.79	607.81
B	576+00.40	12.00	607.89	607.91
E. End W. Appr. Pav't.	576+10.40	12.00	607.99	608.01



**PLAN  
WEST APPROACH PAVEMENT-NB**

REV. SHEET 6-3-13

**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	24.00	607.51	607.53
A	575+90.40	24.00	607.61	607.63
B	576+00.40	24.00	607.71	607.73
E. End W. Appr. Pav't.	576+10.40	24.00	607.80	607.82

**SOUTH CURB LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	34.00	607.30	607.32
A	575+90.40	34.00	607.40	607.42
B	576+00.40	34.00	607.50	607.52
E. End W. Appr. Pav't.	576+10.40	34.00	607.59	607.61

**NORTH CURB LINE**

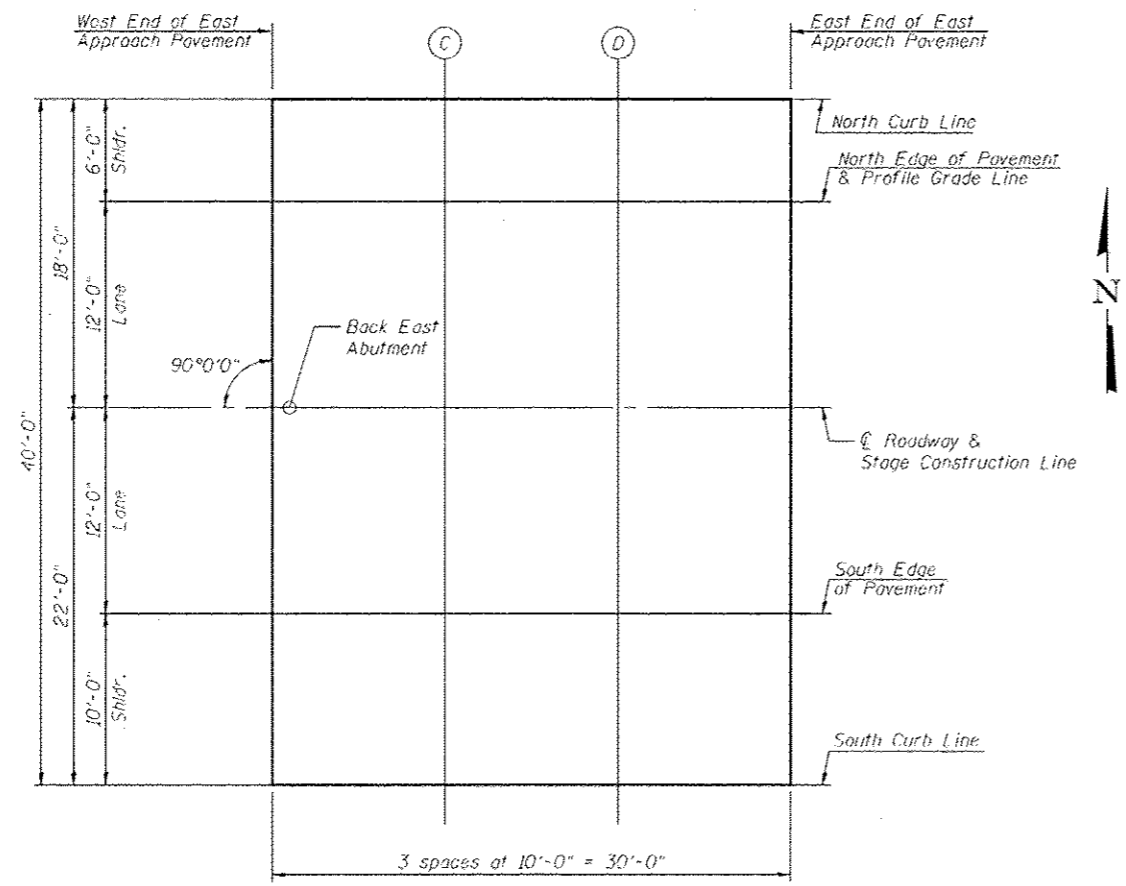
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	-6.00	608.62	608.64
C	577+67.90	-6.00	608.66	608.68
D	577+77.90	-6.00	608.69	608.71
E. End E. Appr. Pav't.	577+87.90	-6.00	608.71	608.73

**NORTH EDGE OF PAVEMENT & PROFILE GRADE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	0.00	608.75	608.77
C	577+67.90	0.00	608.78	608.80
D	577+77.90	0.00	608.81	608.83
E. End E. Appr. Pav't.	577+87.90	0.00	608.84	608.86

**☉ ROADWAY AND STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	12.00	608.93	608.95
C	577+67.90	12.00	608.97	608.99
D	577+77.90	12.00	609.00	609.02
E. End E. Appr. Pav't.	577+87.90	12.00	609.03	609.05



**PLAN EAST APPROACH PAVEMENT-NB**

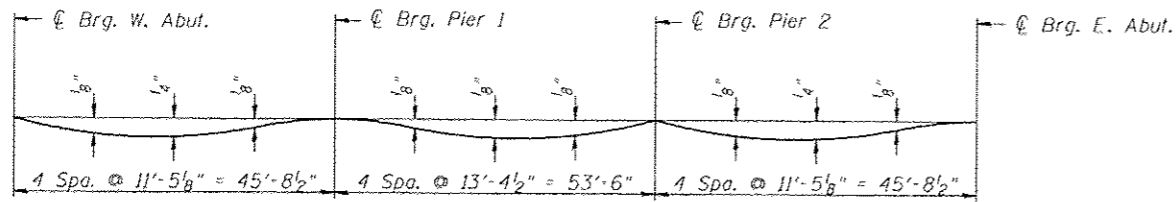
**SOUTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	24.00	608.75	608.77
C	577+67.90	24.00	608.78	608.80
D	577+77.90	24.00	608.81	608.83
E. End E. Appr. Pav't.	577+87.90	24.00	608.84	608.86

**SOUTH CURB LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	34.00	608.54	608.56
C	577+67.90	34.00	608.57	608.59
D	577+77.90	34.00	608.60	608.62
E. End E. Appr. Pav't.	577+87.90	34.00	608.63	608.65

REV. SHEET 6-3-13

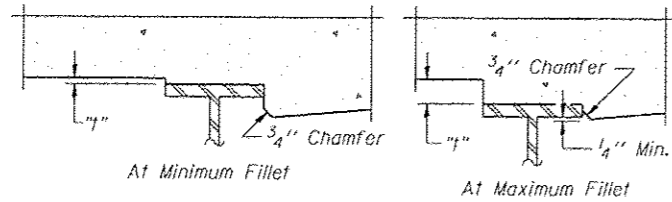


**DEAD LOAD DEFLECTION DIAGRAM**

(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 and grinding as shown below and on sheet 10 of 31.



To determine "I": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection and Grinding" shown on this sheet and on sheet 10 of 31, minus 8 1/4" deck thickness, equals the fillet heights "I" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on this sheet and on sheet 10 of 31. For grinding the deck, see Special Provisions.

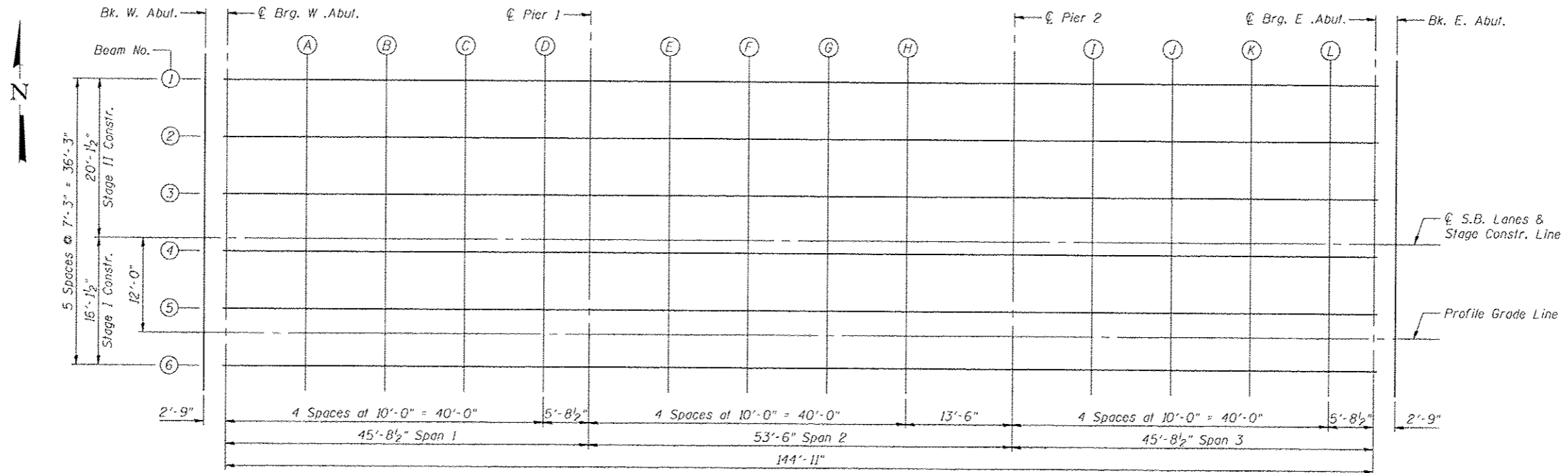
**FILLET HEIGHTS**

**BEAM 1**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	-32.13	607.68	607.70
CL Brg. W. Abut.	576+11.69	-32.13	607.70	607.72
A	576+21.69	-32.13	607.79	607.82
B	576+31.69	-32.13	607.87	607.91
C	576+41.69	-32.13	607.96	607.99
D	576+51.65	-32.13	608.03	608.06
CL Pier 1	576+57.40	-32.13	608.08	608.10
E	576+77.40	-32.13	608.15	608.18
F	576+77.40	-32.13	608.22	608.25
G	576+87.40	-32.13	608.28	608.31
H	576+97.40	-32.13	608.34	608.37
CL Pier 2	577+10.90	-32.13	608.42	608.44
I	577+20.90	-32.13	608.47	608.50
J	577+30.90	-32.13	608.52	608.56
K	577+40.90	-32.13	608.56	608.60
L	577+50.90	-32.13	608.60	608.63
CL Brg. E. Abut.	577+56.61	-32.13	608.63	608.65
Bk. E. Abut.	577+58.90	-32.13	608.63	608.65

**BEAM 2**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	-24.88	607.83	607.85
CL Brg. W. Abut.	576+11.69	-24.88	607.85	607.87
A	576+21.69	-24.88	607.94	607.97
B	576+31.69	-24.88	608.03	608.06
C	576+41.69	-24.88	608.11	608.14
D	576+51.65	-24.88	608.19	608.21
CL Pier 1	576+57.40	-24.88	608.23	608.25
E	576+77.40	-24.88	608.30	608.33
F	576+77.40	-24.88	608.37	608.40
G	576+87.40	-24.88	608.43	608.46
H	576+97.40	-24.88	608.49	608.52
CL Pier 2	577+10.90	-24.88	608.57	608.59
I	577+20.90	-24.88	608.62	608.65
J	577+30.90	-24.88	608.67	608.71
K	577+40.90	-24.88	608.71	608.75
L	577+50.90	-24.88	608.76	608.78
CL Brg. E. Abut.	577+56.61	-24.88	608.78	608.80
Bk. E. Abut.	577+58.90	-24.88	608.79	608.81



REV. SHEET 6-3-13

PLAN

**CEC** Cummins Engineering Corporation  
Civil and Structural Engineering

JOB # 2276.3  
FILE # 0540057\_0058-09-10-SN0058TopSlabElev.dgn  
DATE # 5/17/2013

DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS  
STRUCTURE NO. 054-0058 (SB)

SHEET NO. 9 OF 31 SHEETS

F.A.L. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	208
CONTRACT NO.			72E11	
ILLINOIS FED. AID PROJECT				

**BEAM 3**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	-17.63	607.95	607.97
CL Brq. W. Abut.	576+11.69	-17.63	607.97	607.99
A	576+21.69	-17.63	608.06	608.09
B	576+31.69	-17.63	608.14	608.18
C	576+41.69	-17.63	608.22	608.26
D	576+51.65	-17.63	608.30	608.33
CL Pier 1	576+57.40	-17.63	608.35	608.37
E	576+77.40	-17.63	608.42	608.45
F	576+77.40	-17.63	608.49	608.52
G	576+87.40	-17.63	608.55	608.58
H	576+97.40	-17.63	608.61	608.64
CL Pier 2	577+10.90	-17.63	608.69	608.71
I	577+20.90	-17.63	608.74	607.77
J	577+30.90	-17.63	608.79	608.83
K	577+40.90	-17.63	608.83	608.87
L	577+50.90	-17.63	608.87	608.90
CL Brq. E. Abut.	577+56.61	-17.63	608.89	608.91
Bk. E. Abut.	577+58.90	-17.63	608.90	608.92

**CL S.B. LANES AND STAGE CONSTRUCTION JOINT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	-12.00	608.03	608.05
CL Brq. W. Abut.	576+11.69	-12.00	608.06	608.08
A	576+21.69	-12.00	608.15	608.17
B	576+31.69	-12.00	608.23	608.27
C	576+41.69	-12.00	608.31	608.35
D	576+51.65	-12.00	608.39	608.42
CL Pier 1	576+57.40	-12.00	608.43	608.45
E	576+77.40	-12.00	608.51	608.53
F	576+77.40	-12.00	608.57	608.60
G	576+87.40	-12.00	608.64	608.67
H	576+97.40	-12.00	608.70	608.73
CL Pier 2	577+10.90	-12.00	608.78	608.80
I	577+20.90	-12.00	608.83	608.86
J	577+30.90	-12.00	608.88	608.91
K	577+40.90	-12.00	608.92	608.95
L	577+50.90	-12.00	608.96	608.99
CL Brq. E. Abut.	577+56.61	-12.00	608.98	609.00
Bk. E. Abut.	577+58.90	-12.00	608.99	609.01

**BEAM 4**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	-10.38	608.01	609.03
CL Brq. W. Abut.	576+11.69	-10.38	608.03	608.05
A	576+21.69	-10.38	608.12	608.15
B	576+31.69	-10.38	608.21	608.24
C	576+41.69	-10.38	608.29	608.32
D	576+51.65	-10.38	608.37	608.39
CL Pier 1	576+57.40	-10.38	608.41	608.43
E	576+77.40	-10.38	608.48	608.51
F	576+77.40	-10.38	608.55	608.58
G	576+87.40	-10.38	608.61	608.64
H	576+97.40	-10.38	608.67	608.70
CL Pier 2	577+10.90	-10.38	608.75	608.77
I	577+20.90	-10.38	608.80	608.82
J	577+30.90	-10.38	608.85	608.89
K	577+40.90	-10.38	608.89	608.93
L	577+50.90	-10.38	608.94	608.96
CL Brq. E. Abut.	577+56.61	-10.38	608.96	608.98
Bk. E. Abut.	577+58.90	-10.38	608.97	608.99

**BEAM 5**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	-3.13	607.90	607.92
CL Brq. W. Abut.	576+11.69	-3.13	607.92	607.94
A	576+21.69	-3.13	608.01	608.04
B	576+31.69	-3.13	608.09	608.13
C	576+41.69	-3.13	608.17	608.21
D	576+51.65	-3.13	608.25	608.28
CL Pier 1	576+57.40	-3.13	608.29	608.31
E	576+77.40	-3.13	608.37	608.39
F	576+77.40	-3.13	608.44	608.47
G	576+87.40	-3.13	608.50	608.53
H	576+97.40	-3.13	608.56	608.59
CL Pier 2	577+10.90	-3.13	608.64	608.66
I	577+20.90	-3.13	608.69	608.72
J	577+30.90	-3.13	608.74	608.78
K	577+40.90	-3.13	608.78	608.82
L	577+50.90	-3.13	608.82	608.85
CL Brq. E. Abut.	577+56.61	-3.13	608.84	608.86
Bk. E. Abut.	577+58.90	-3.13	608.85	608.87

**PROFILE GRADE LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	0.00	607.85	607.87
CL Brq. W. Abut.	576+11.69	0.00	607.87	607.89
A	576+21.69	0.00	607.96	607.99
B	576+31.69	0.00	608.04	608.08
C	576+41.69	0.00	608.13	608.16
D	576+51.65	0.00	608.20	608.23
CL Pier 1	576+57.40	0.00	608.25	608.27
E	576+77.40	0.00	608.32	608.35
F	576+77.40	0.00	608.39	608.42
G	576+87.40	0.00	608.45	608.48
H	576+97.40	0.00	608.51	608.54
CL Pier 2	577+10.90	0.00	608.59	608.61
I	577+20.90	0.00	608.64	608.67
J	577+30.90	0.00	608.69	608.73
K	577+40.90	0.00	608.73	608.77
L	577+50.90	0.00	608.77	608.80
CL Brq. E. Abut.	577+56.61	0.00	608.79	607.81
Bk. E. Abut.	577+58.90	0.00	608.80	608.82

**BEAM 6**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection and Grinding
Bk. W. Abut.	576+09.40	4.13	607.76	607.78
CL Brq. W. Abut.	576+11.69	4.13	607.78	607.80
A	576+21.69	4.13	607.87	607.90
B	576+31.69	4.13	607.96	608.00
C	576+41.69	4.13	608.04	608.07
D	576+51.65	4.13	608.12	608.14
CL Pier 1	576+57.40	4.13	608.16	608.18
E	576+77.40	4.13	608.23	608.26
F	576+77.40	4.13	608.30	608.33
G	576+87.40	4.13	608.37	608.40
H	576+97.40	4.13	608.43	608.46
CL Pier 2	577+10.90	4.13	608.50	608.52
I	577+20.90	4.13	608.55	608.58
J	577+30.90	4.13	608.60	608.64
K	577+40.90	4.13	608.65	608.68
L	577+50.90	4.13	608.69	608.71
CL Brq. E. Abut.	577+56.61	4.13	608.71	608.73
Bk. E. Abut.	577+58.90	4.13	608.72	608.74

REV. SHEET 6-3-13



JOB # 2276.3  
 FILE # 0540057\_0058-09-10-SN0058TopSlabElev.dgn  
 DATE # 5/14/2013

DESIGNED - AAN  
 CHECKED - MDC  
 DRAWN - SJS  
 CHECKED - MDC

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS  
 STRUCTURE NO. 054-0058 (SB)**

SHEET NO. 10 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	209
				CONTRACT NO. 72E11

ILLINOIS FED. AID PROJECT

**NORTH CURB LINE**

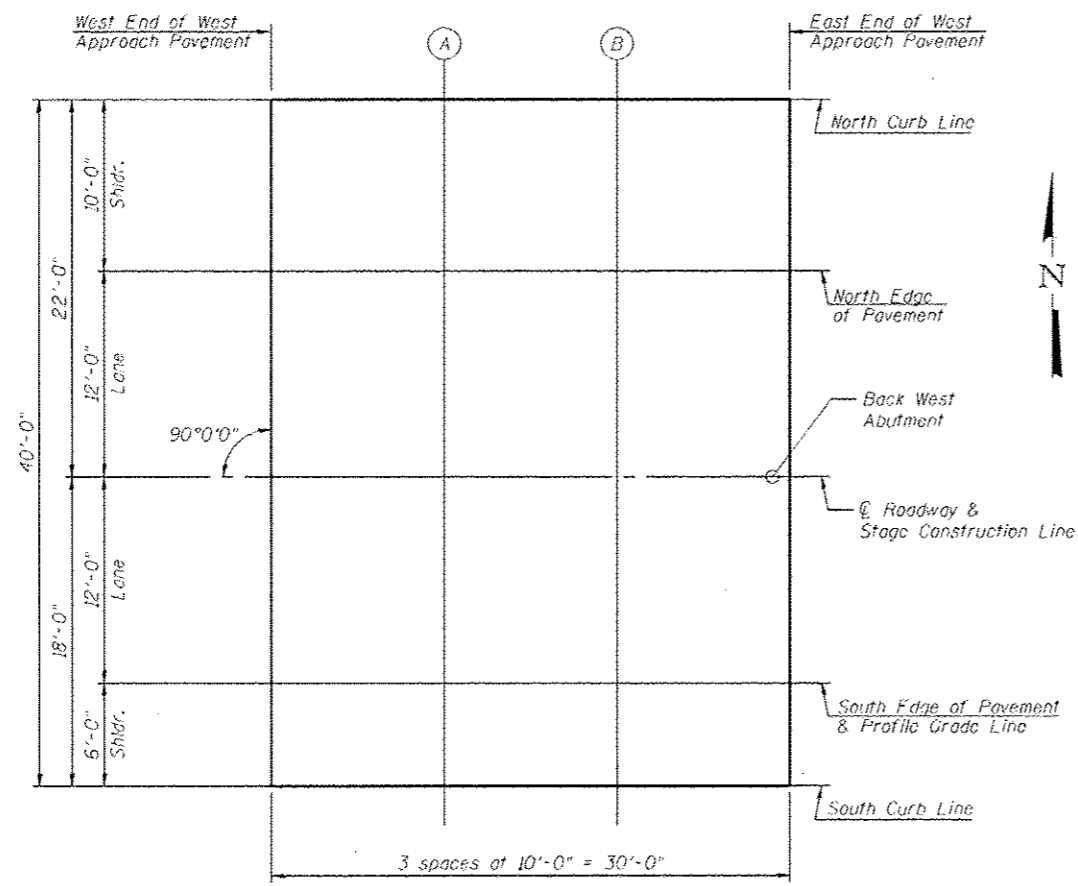
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	-34.00	607.36	607.38
A	575+90.40	-34.00	607.46	607.48
B	576+00.40	-34.00	607.56	607.58
E. End W. Appr. Pav't.	576+10.40	-34.00	607.65	607.67

**NORTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	-24.00	607.57	607.59
A	575+90.40	-24.00	607.67	607.69
B	576+00.40	-24.00	607.76	607.78
E. End W. Appr. Pav't.	576+10.40	-24.00	607.86	607.88

**☉ ROADWAY AND STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	-12.00	607.75	607.77
A	575+90.40	-12.00	607.85	607.87
B	576+00.40	-12.00	607.95	607.97
E. End W. Appr. Pav't.	576+10.40	-12.00	608.04	608.06



**PLAN WEST APPROACH PAVEMENT-SB**

**SOUTH EDGE OF PAVEMENT & PROFILE GRADE LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	0.00	607.57	607.59
A	575+90.40	0.00	607.67	607.69
B	576+00.40	0.00	607.76	607.78
E. End W. Appr. Pav't.	576+10.40	0.00	607.86	607.88

**SOUTH CURB LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End W. Appr. Pav't.	575+80.40	6.00	607.44	607.46
A	575+90.40	6.00	607.54	607.56
B	576+00.40	6.00	607.64	607.66
E. End W. Appr. Pav't.	576+10.40	6.00	607.73	607.75

REV. SHEET 6-3-13

**NORTH CURB LINE**

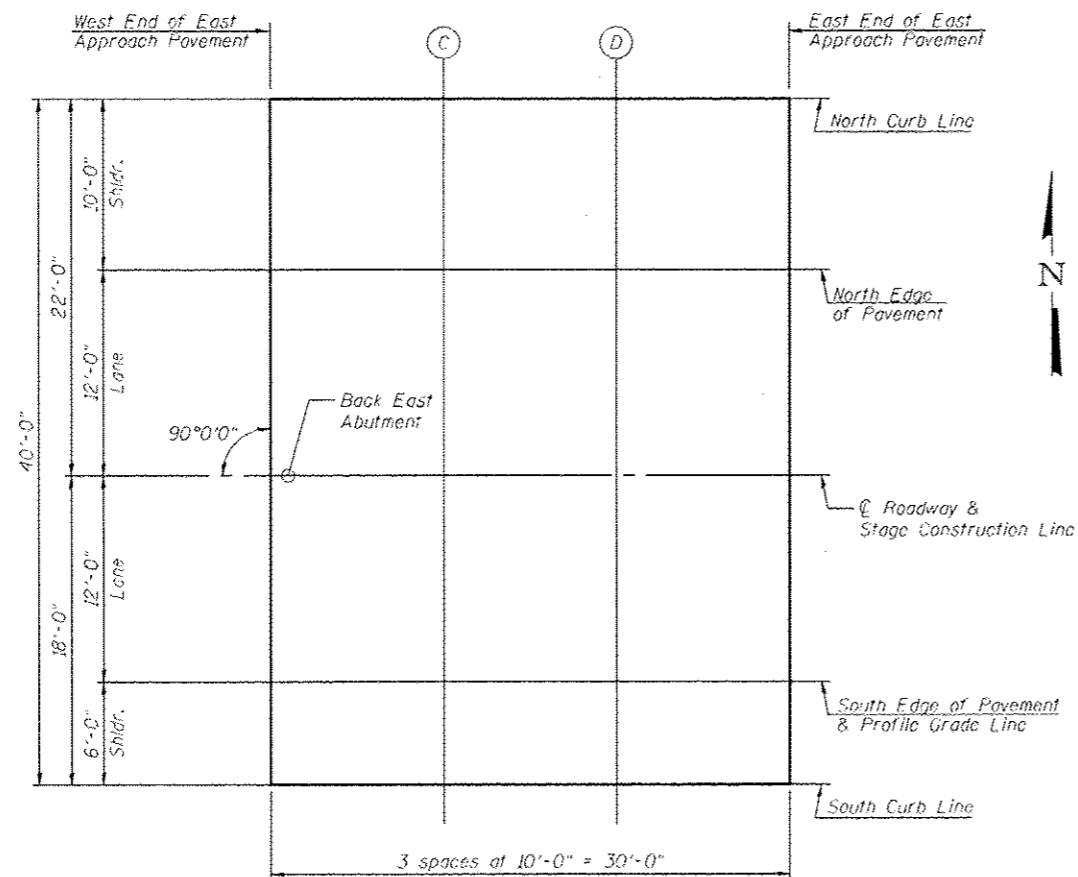
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	-34.00	608.59	608.61
C	577+67.90	-34.00	608.63	608.65
D	577+77.90	-34.00	608.66	608.68
E. End E. Appr. Pav't.	577+87.90	-34.00	608.68	608.70

**NORTH EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	-24.00	608.80	608.82
C	577+67.90	-24.00	608.83	608.85
D	577+77.90	-24.00	608.86	608.88
E. End E. Appr. Pav't.	577+87.90	-24.00	608.89	608.91

**☉ ROADWAY AND STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	-12.00	608.99	609.01
C	577+67.90	-12.00	609.02	609.04
D	577+77.90	-12.00	609.05	609.07
E. End E. Appr. Pav't.	577+87.90	-12.00	609.08	609.10



**PLAN EAST APPROACH PAVEMENT-SB**

REV. SHEET 6-3-13

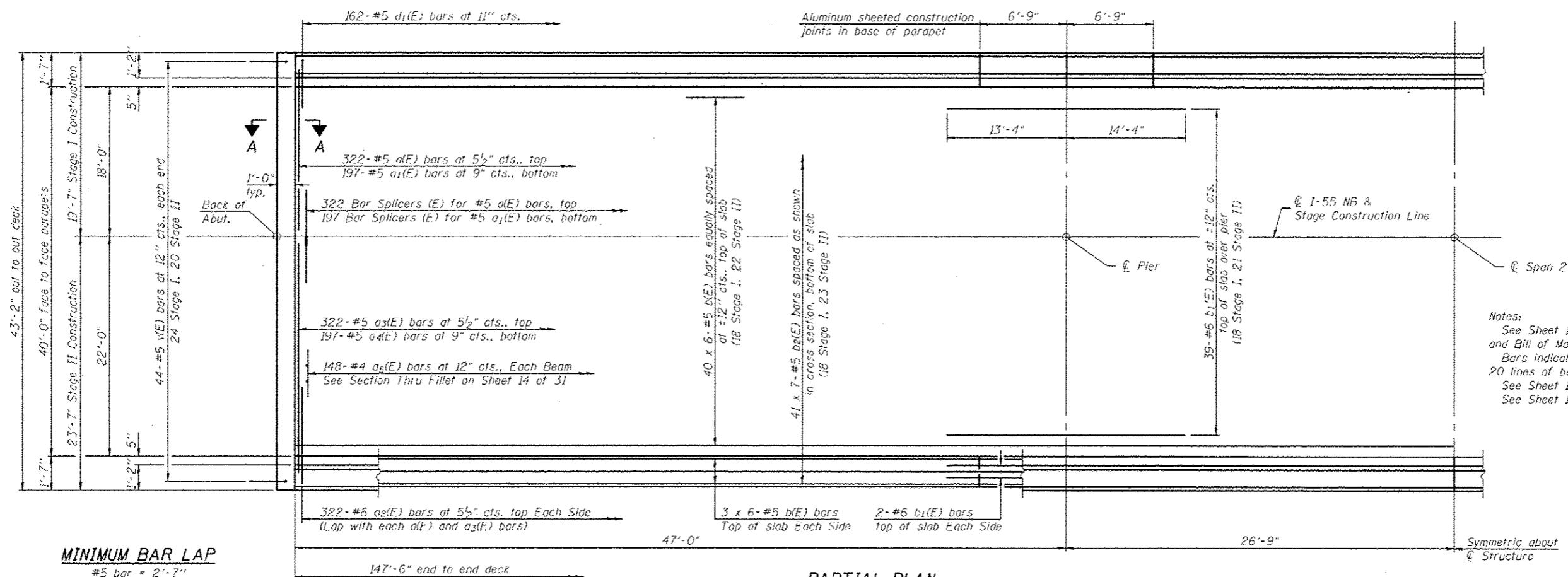
**SOUTH EDGE OF PAVEMENT & PROFILE GRADE LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	0.00	608.80	608.82
C	577+67.90	0.00	608.83	608.85
D	577+77.90	0.00	608.86	608.88
E. End E. Appr. Pav't.	577+87.90	0.00	608.89	608.91

**SOUTH CURB LINE**

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
W. End E. Appr. Pav't.	577+57.90	6.00	608.67	608.69
C	577+67.90	6.00	608.71	608.73
D	577+77.90	6.00	608.74	608.76
E. End E. Appr. Pav't.	577+87.90	6.00	608.77	608.79

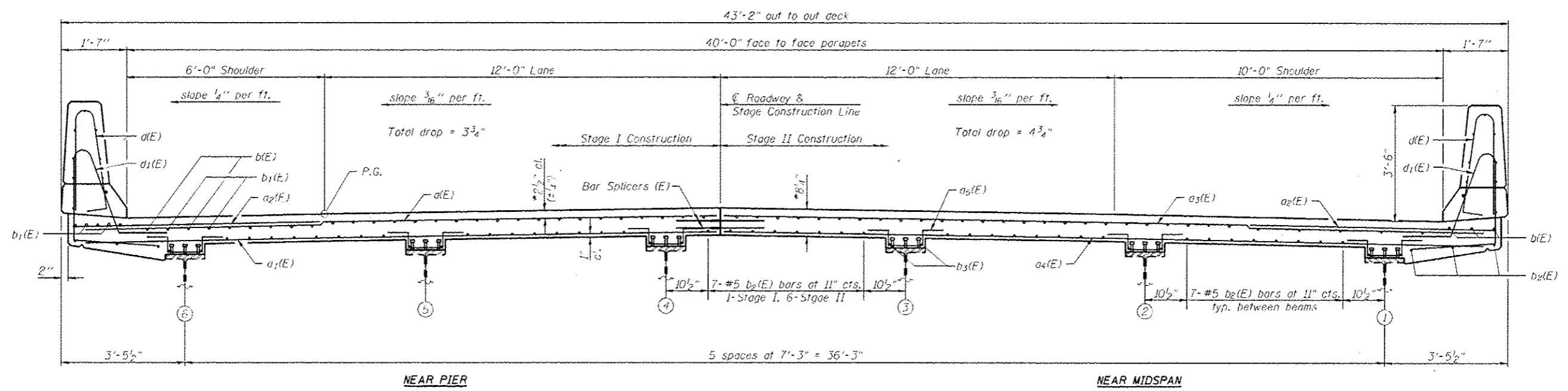




Notes:  
 See Sheet 14 of 31 for superstructure details and Bill of Material.  
 Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.  
 See Sheet 14 of 31 for parapet reinforcement.  
 See Sheet 15 of 31 for Section A-A.

**MINIMUM BAR LAP**  
 #5 bar = 2'-7"  
 #6 bar = 3'-1"  
 \*Before grinding 1/4" max.

**PARTIAL PLAN**  
 (SN 054-0057 shown  
 SN 054-0058 similar)

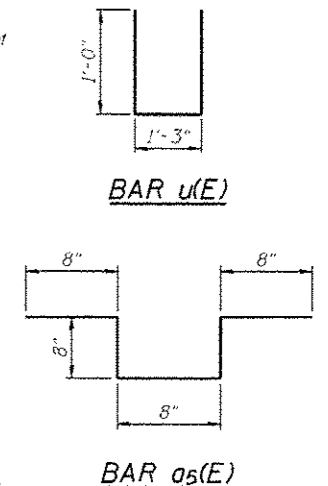
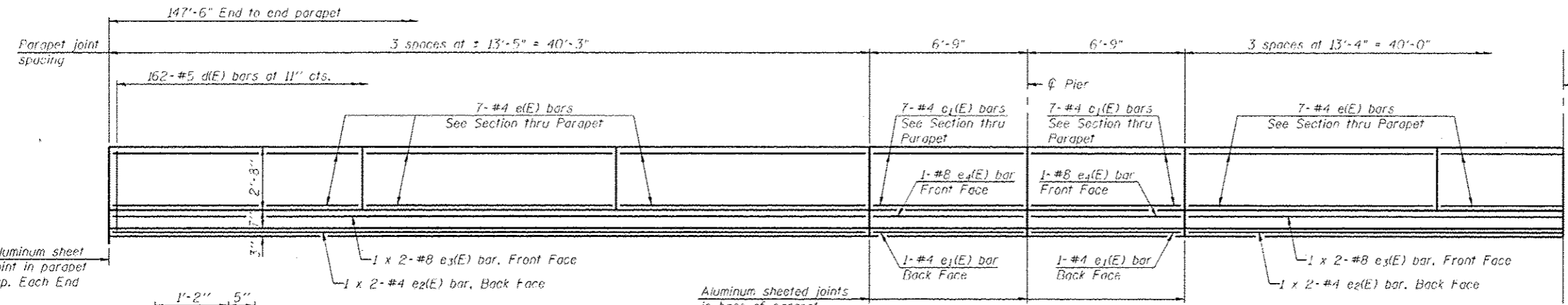


**CROSS SECTION**  
 (Looking in direction of traffic)

SI-2-0 1-27-12

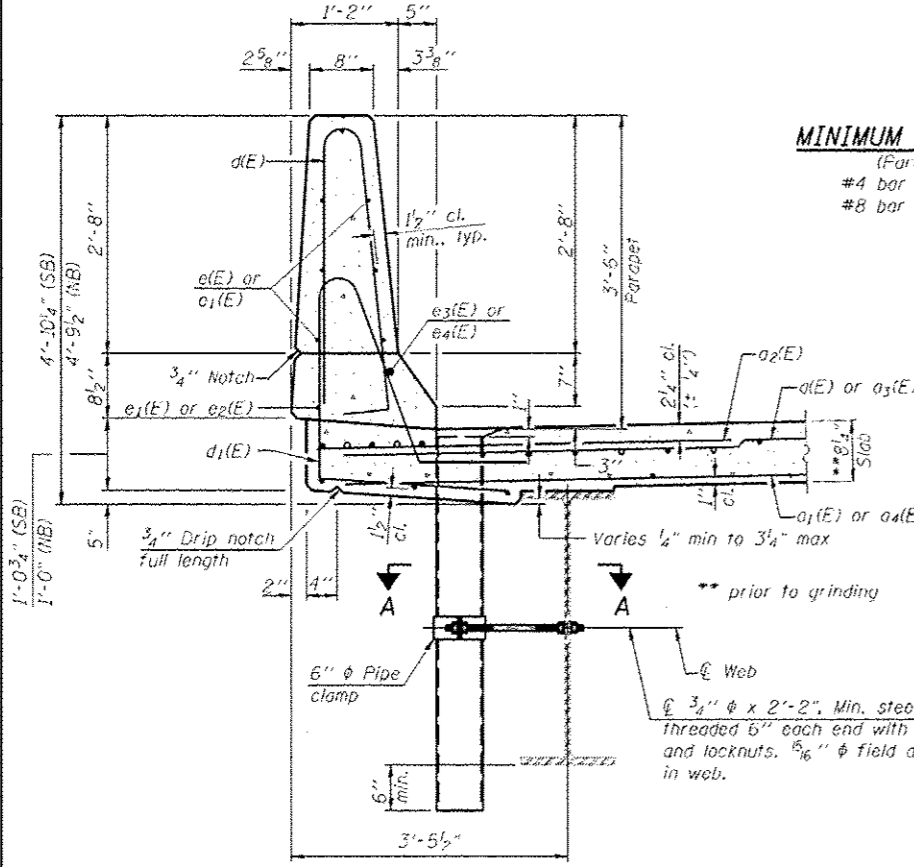
REV. SHEET 6-3-13

<b>CEC</b> Civil and Structural Engineering	Cummins Engineering Corporation	DESIGNED - AAN	REVISSED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE</b> <b>STRUCTURE NO. 054-0057 (NB) &amp; 054-0058 (SB)</b>	F.A.I. R.E. 55	SECTION D6 LOGAN CO BR 2011-1	COUNTY LOGAN	TOTAL SHEETS 429	SHEET NO. 212	
	Job # 2276.3	CHECKED - MDC	REVISSED -			SHEET NO. 13 OF 31 SHEETS		CONTRACT NO. 72E11		ILLINOIS FED. AID PROJECT	
	FILE # 0540057_0058-13-Super.dgn	DRAWN - SJS	REVISSED -								
	DATE # 5/14/2013	CHECKED - MDC	REVISSED -								

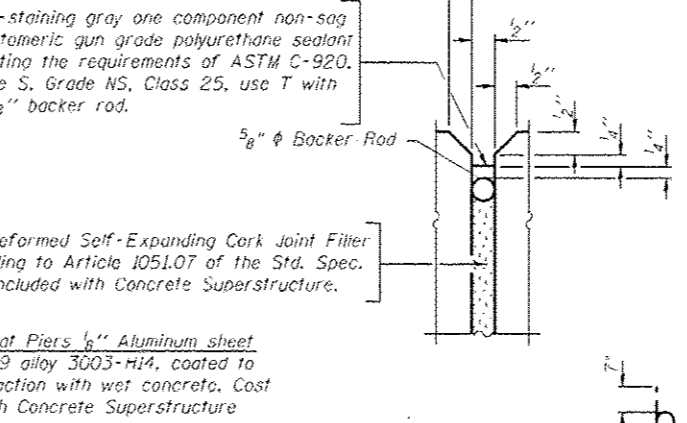
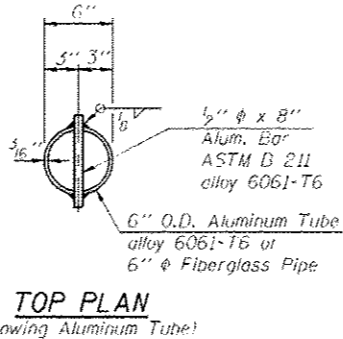
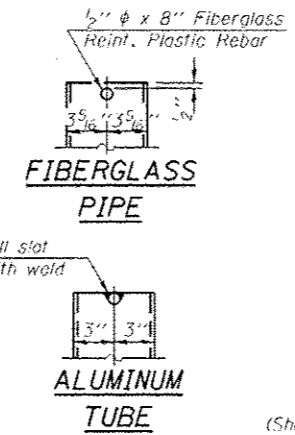
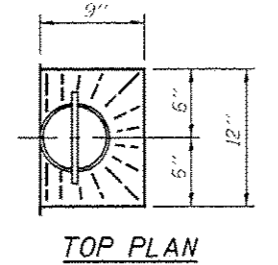
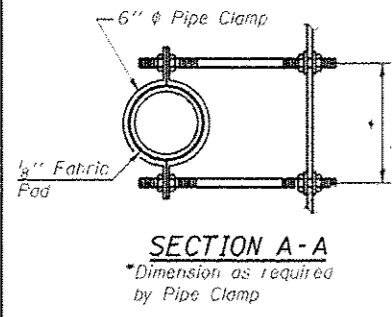


**INSIDE ELEVATION OF PARAPET**

**MINIMUM BAR LAP**  
 (Parapet)  
 #4 bar = 2'-0"  
 #8 bar = 5'-2"

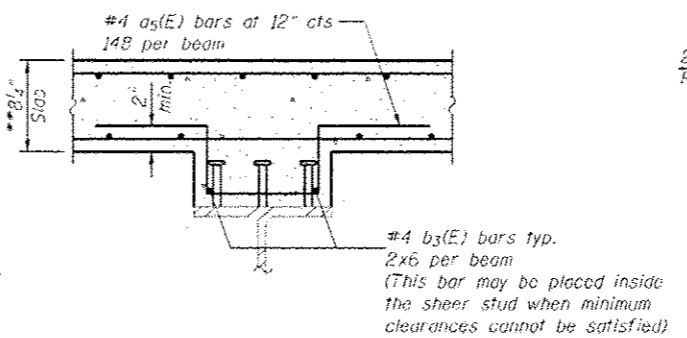


**SECTION THRU PARAPET**

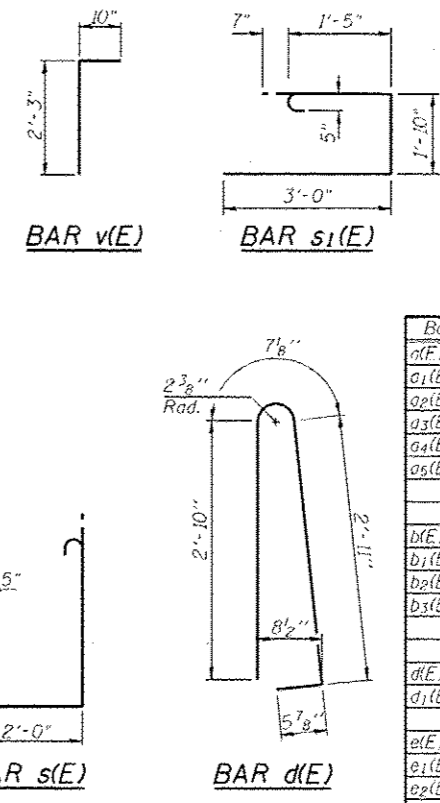


**PARAPET JOINT DETAILS**

**Notes:**  
 The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Society of Protective Coatings Spec. SSPC-SP1 prior to painting.  
 Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.  
 Galvanize clamping device according to AASHTO M232. Cost of clamping device and inserts is included with Floor Drains. Cost of Drilling 5/16" φ holes in existing web is included with Floor Drains.



**SECTION THRU FILLET**



**TWO SUPERSTRUCTURES BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	644	#5	19'-0"	—
a <sub>1</sub> (E)	394	#5	18'-6"	—
a <sub>2</sub> (E)	1288	#6	6'-6"	—
a <sub>3</sub> (E)	644	#5	23'-0"	—
a <sub>4</sub> (E)	394	#5	22'-6"	—
a <sub>5</sub> (E)	1776	#4	3'-4"	┌
b(E)	552	#5	26'-8"	—
b <sub>1</sub> (E)	172	#6	27'-8"	—
b <sub>2</sub> (E)	574	#5	23'-3"	—
b <sub>3</sub> (E)	144	#4	26'-2"	—
d(E)	648	#5	6'-10"	└
d <sub>1</sub> (E)	648	#5	8'-6"	└
e(E)	252	#4	13'-0"	—
e <sub>1</sub> (E)	128	#4	6'-5"	—
e <sub>2</sub> (E)	24	#4	21'-0"	—
e <sub>3</sub> (E)	24	#8	22'-7"	—
e <sub>4</sub> (E)	16	#8	6'-5"	—
m(E)	32	#6	19'-0"	—
m <sub>1</sub> (E)	24	#6	8'-7"	—
m <sub>2</sub> (E)	40	#6	6'-10"	—
m <sub>3</sub> (E)	16	#6	3'-0"	—
m <sub>4</sub> (E)	32	#6	23'-0"	—
m <sub>5</sub> (E)	24	#6	9'-11"	—
s(E)	164	#5	6'-10"	□
s <sub>1</sub> (E)	184	#5	9'-2"	□
u(E)	176	#5	3'-3"	C
v(E)	176	#5	3'-9"	┌
Reinforcement Bars, Epoxy Coated		Pound	123,070	
Concrete Superstructure		Cu. Yds.	493.5	
Bar Splicers		Each	1056	

SI-D2-0 8-31-12

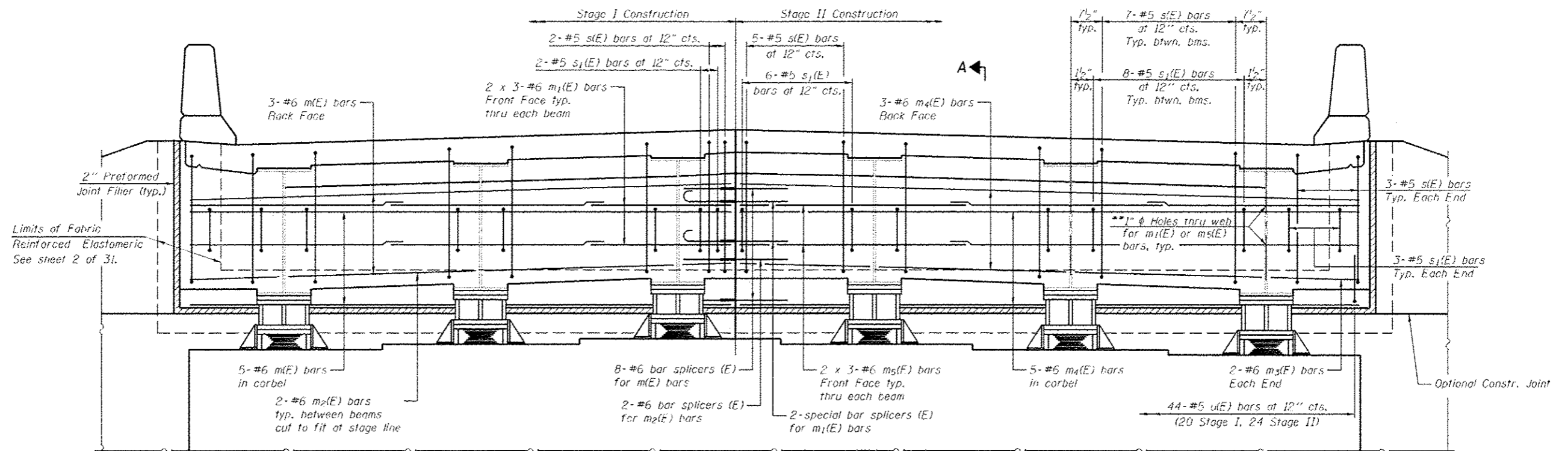
REV. SHEET 6-3-13

<b>CEC</b> Cummins Engineering Corporation Civil and Structural Engineering	JOB • 2276.3	DESIGNED - AAN	REVISED -
	FILE • 0540057_0058-14-SuperDet.dgn	CHECKED - MDC	REVISED -
	DATE • 5/14/2013	DRAWN - SJS	REVISED -
		CHECKED - MDC	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

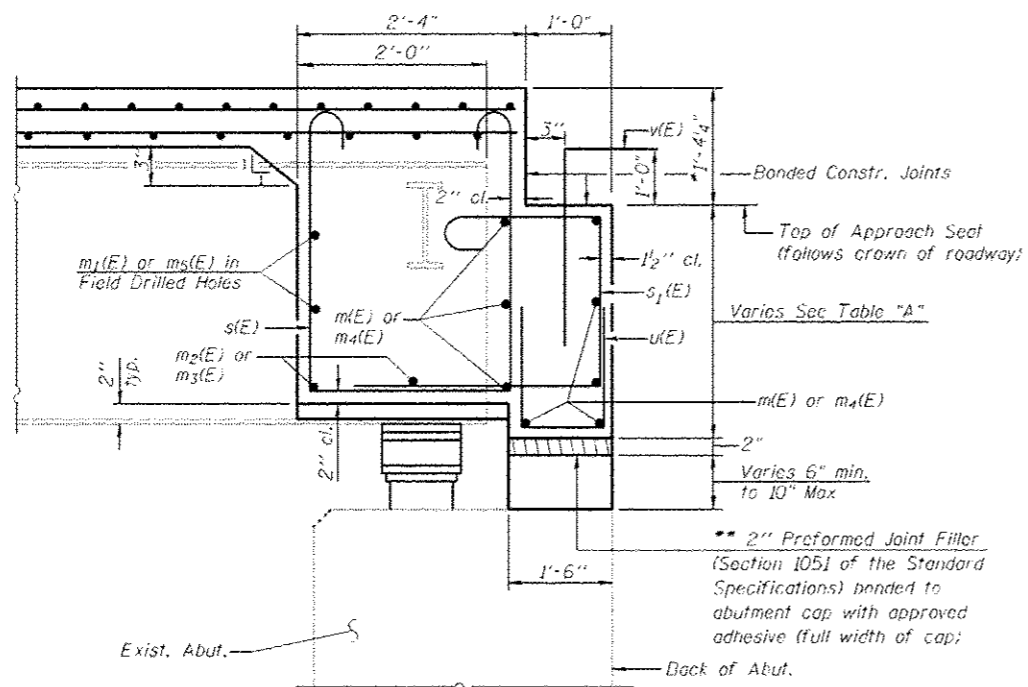
**SUPERSTRUCTURE DETAILS**  
**STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)**  
 SHEET NO. 14 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	213
			CONTRACT NO. T2E11	
ILLINOIS FED. AID PROJECT				



**DIAPHRAGM ELEVATION AT ABUTMENT**

(Looking East at E. Abut. N.B. Lanes, W. Abut. similar)  
 (Looking West at W. Abut. S.B. Lanes, E. Abut. similar)



**SECTION A-A**

Dimensions at right angles to abutment, except as shown.

TABLE "A"

SN 054-0058 SB	North End (Min.)	Crown (Max.)	South (Median) End
West Abut.	2'-4 7/8"	2'-10"	2'-5 7/8"
East Abut.	2'-5 3/8"	2'-10 1/2"	2'-6 3/8"

SN 054-0057 NB	North (Median) End	Crown (Max.)	South End (Min.)
West Abut.	2'-5 1/8"	2'-9 1/4"	2'-4 1/8"
East Abut.	2'-5 3/8"	2'-9 1/8"	2'-4 3/4"

Notes:  
 Reinforcement bars and concrete in diaphragm are billed with superstructure on sheet 14 of 31.  
 For details of bars s(E) & s1(E) see sheet 14 of 31.  
 The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

**MIN. BAR LAP**

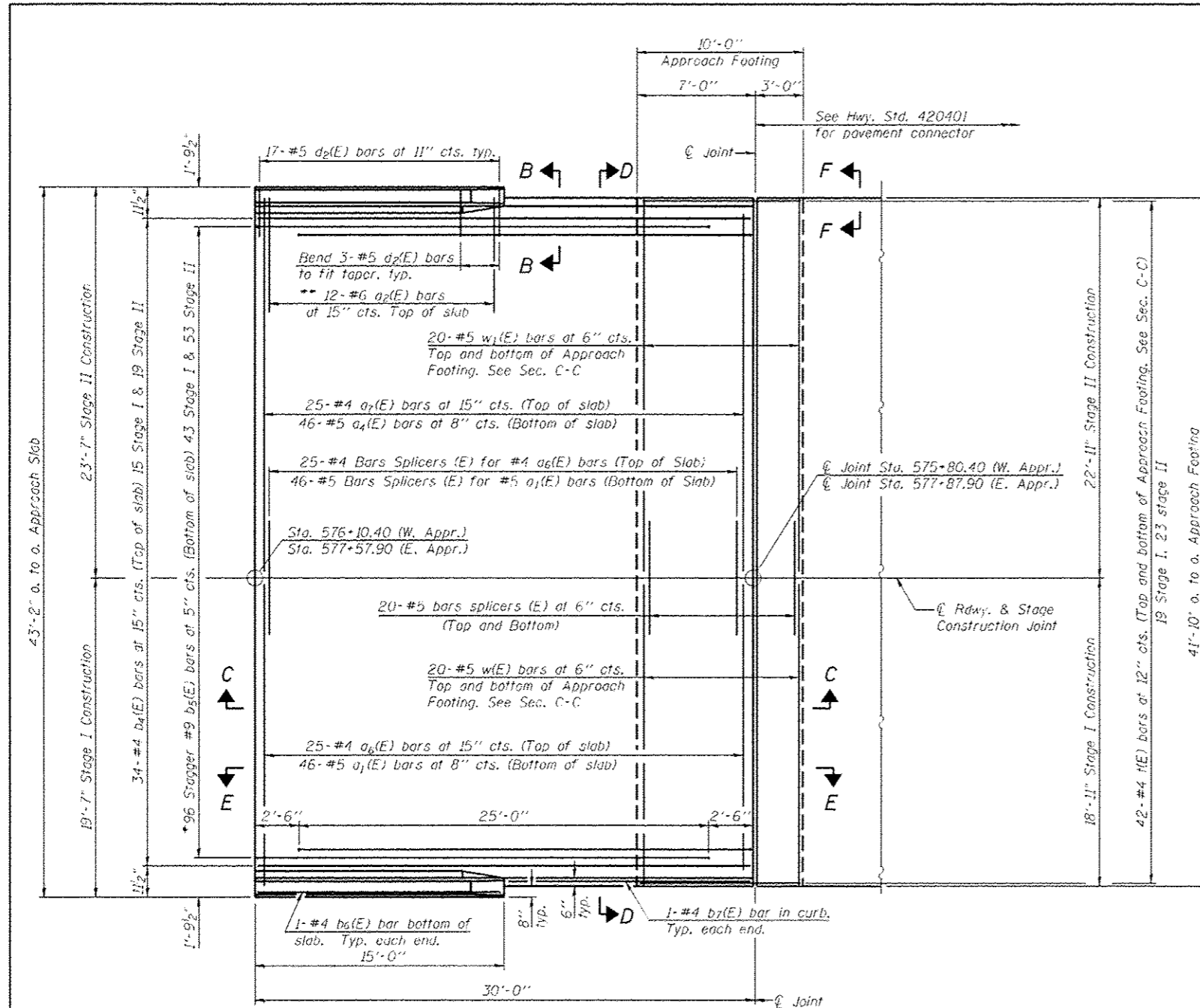
#6 bar = 3'-4" (Diaphragm)

\* Prior to grinding.  
 \*\* Cost Included with Concrete Superstructure

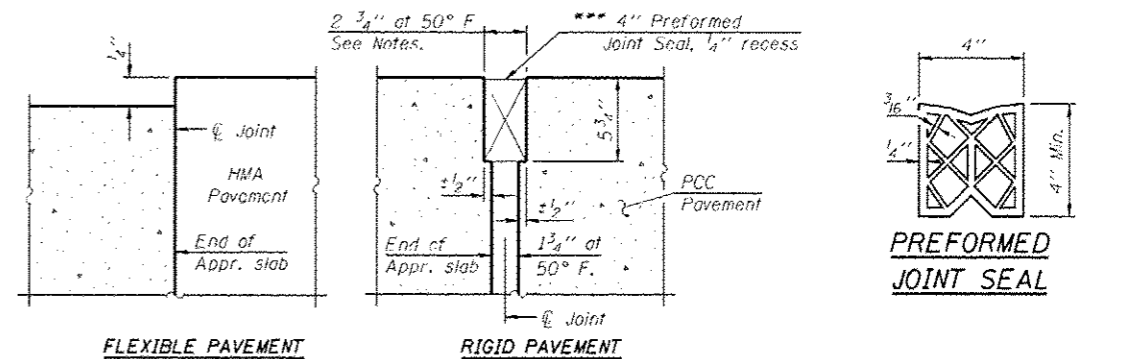
REV. SHEET 6-3-13

Notes:  
 See sheet 17 of 31 for Sections C-C & D-D and View E-E.  
 $a_1(E)$ ,  $a_4(E)$ ,  $a_6(E)$  and  $a_7(E)$  bar spacings measured along  $\varnothing$  Rdwy.  
 The joint opening shall be determined per Article 520.04 except that on jointless structures, the distance described as the bridge length between the nearest fixed bearings each way from the joint shall be taken as half the bridge length plus the approach slab length. The minimum dimension shall be  $1\frac{1}{2}$ " for installation purposes.

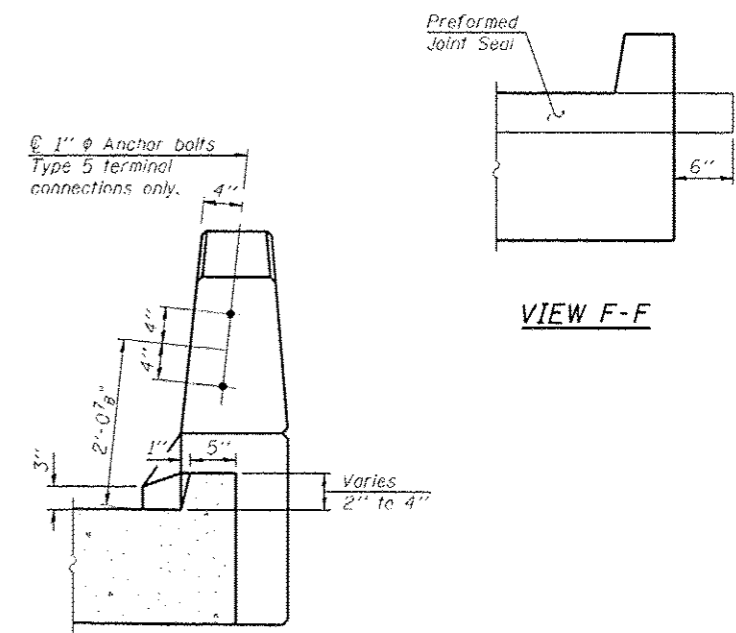
\*\*\* Cost included with Concrete Superstructure.



**PLAN**  
 W. APPROACH NB & E. APPROACH SB SHOWN  
 E. APPROACH NB & W. APPROACH SB SIMILAR



**DETAIL A**



**VIEW B-B**

\* Tilt #9  $b_5(E)$  bars as required to maintain clearance.  
 \*\* Space between  $a_6(E)$  or  $a_7(E)$  bars, typ. ea. parapet.

BA-0 12-12-17

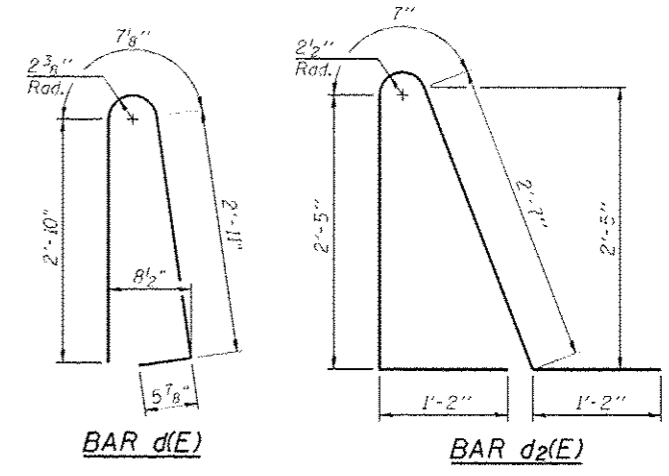
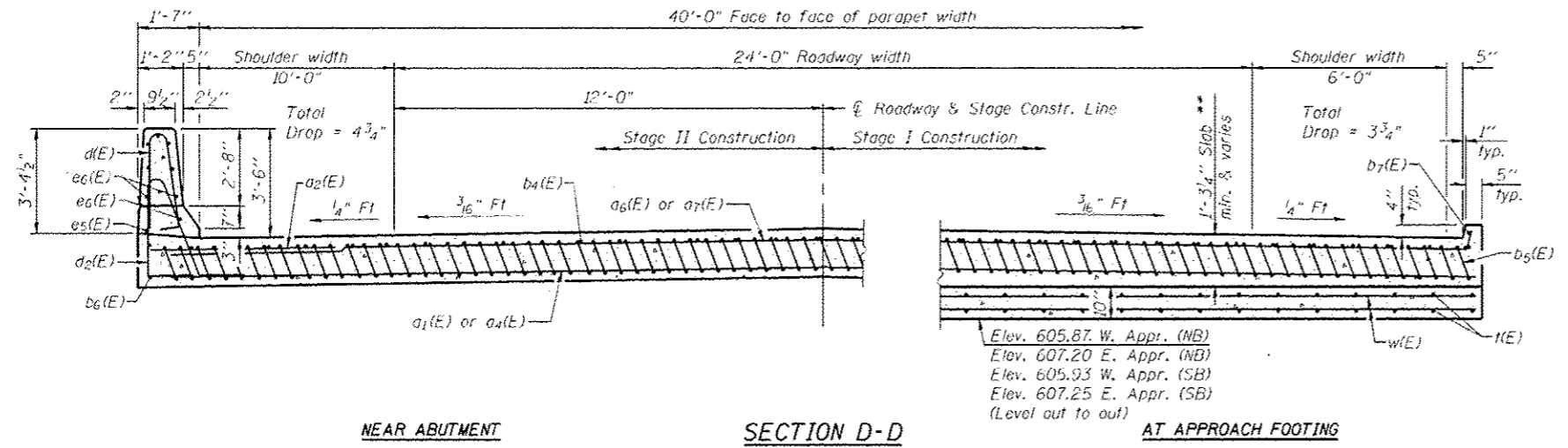
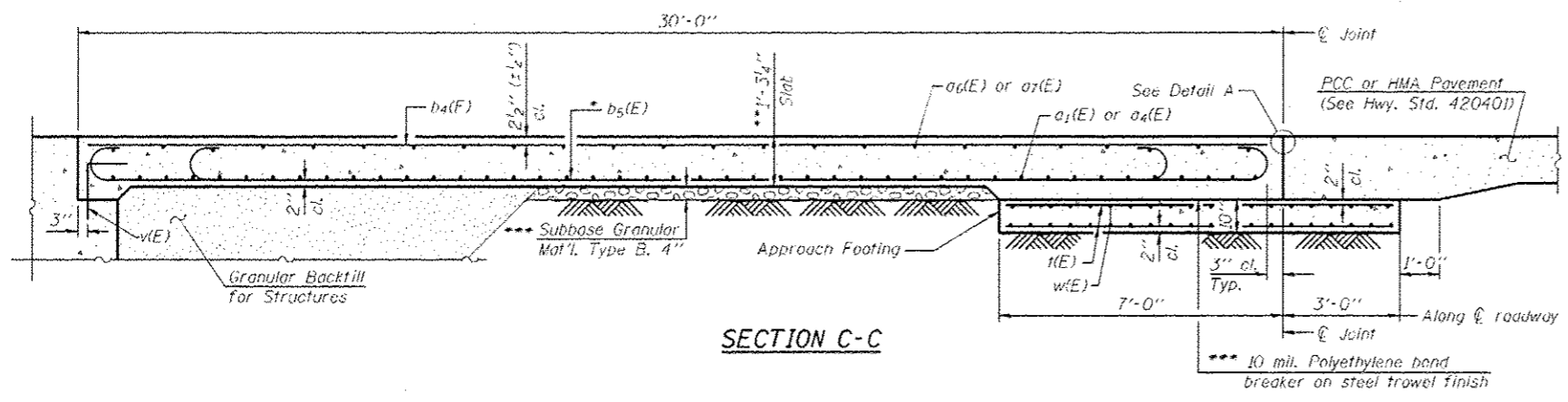
REV. SHEET 4-3-13

(Sheet 1 of 2)

<b>CEC</b> Cummins Engineering Corporation Civil and Structural Engineering	JOB # 2276.3 FILE # 0540057_0058-16-17-ApprSlab.dgn DATE # 5/14/2013	DESIGNED - AAN CHECKED - MDC DRAWN - SJS CHECKED - MDC	REVISED - REVISED - REVISED - REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>BRIDGE APPROACH SLAB DETAILS</b> <b>STRUCTURE NO. 054-0057 (NB) &amp; 054-0058 (SB)</b>	F.A.I. RTE. 55	SECTION D6 LOGAN CO BR 2011-1	COUNTY LOGAN	TOTAL SHEETS 429	SHEET NO. 215
	SHEET NO. 16 OF 31 SHEETS					CONTRACT NO. 72E11				

ILLINOIS FED. AID PROJECT

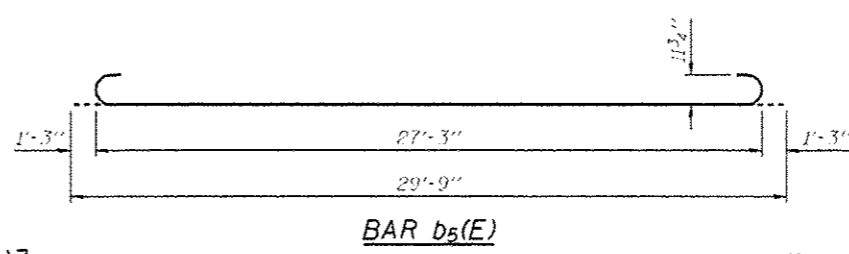
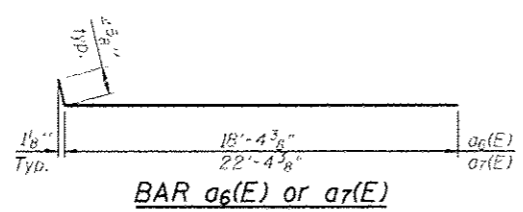
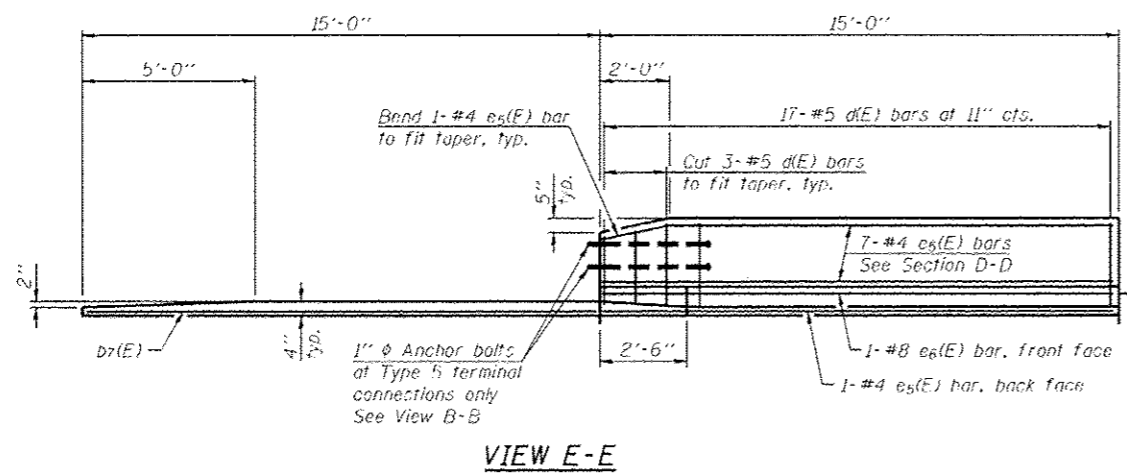
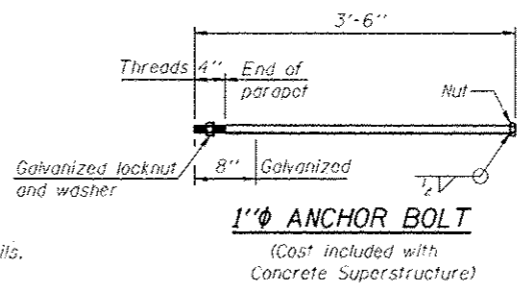
NOTES:  
 See sheet 16 of 31 for Detail A and View B-B.  
 Approach slab and parapet concrete shall be paid for as Concrete Superstructure.  
 Approach footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 For v(E) bar details, see sheet 15 of 31.  
 The approach footing maximum applied service bearing pressure (Omax) = 2.0 ksf.  
 For bar splicer details, see sheet 30 of 31.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 31.  
 For additional parapet details, see sheet 14 of 31.

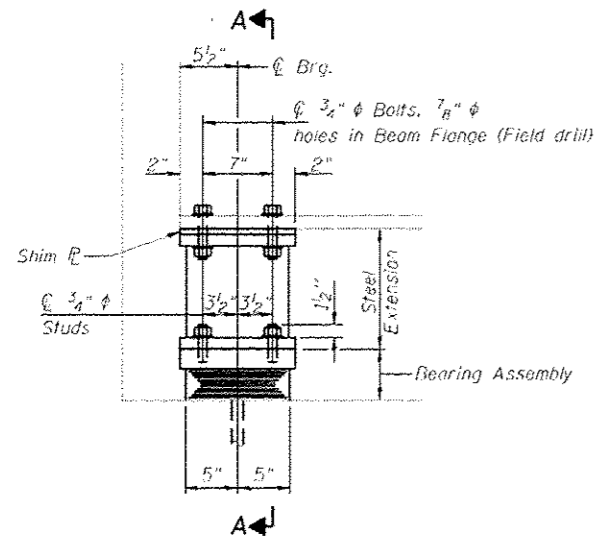


\* Tilt #9 b5(E) bars as required to maintain clearance.  
 \*\* Prior to grinding  
 \*\*\* Cost included with Concrete Superstructure.

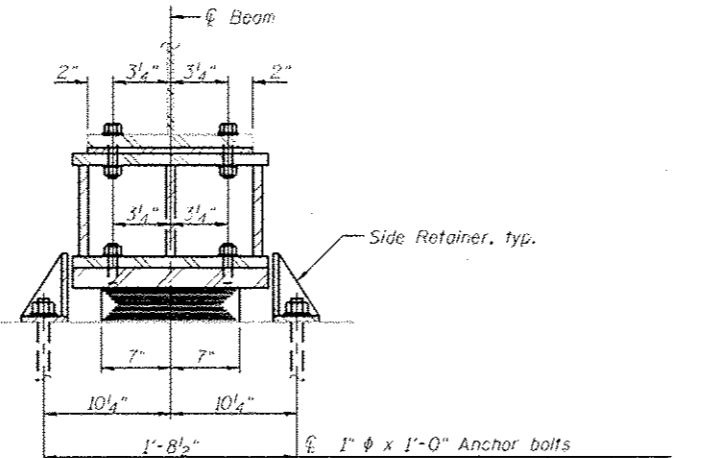
**FOUR APPROACHES  
 BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a1(E)	184	#5	18'-6"	—
a2(E)	96	#6	6'-6"	—
a4(E)	184	#5	22'-6"	—
a6(E)	100	#4	18'-9"	—
a7(E)	100	#4	22'-9"	—
b4(E)	136	#4	29'-8"	—
b5(E)	364	#9	29'-9"	—
b6(E)	8	#4	14'-8"	—
b7(E)	8	#4	14'-6"	—
d1(E)	136	#5	6'-10"	U
d2(E)	136	#5	7'-11"	U
e1(E)	64	#4	14'-8"	—
e6(F)	8	#8	14'-8"	—
l(E)	336	#4	9'-8"	—
v1(E)	160	#5	18'-6"	—
w1(F)	160	#5	22'-6"	—
Concrete Superstructure		Cu. Yd.	270.8	
Concrete Structures		Cu. Yd.	51.6	
Reinforcement Bars, Epoxy Coated		Pound	65,320	
Bar Splicers		Each	364	

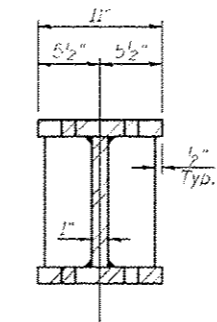




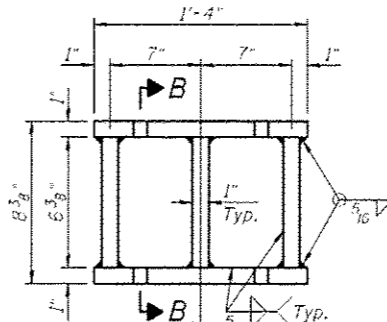
ELEVATION AT ABUT.



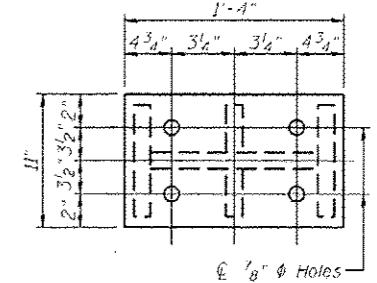
SECTION A-A



SECTION B-B



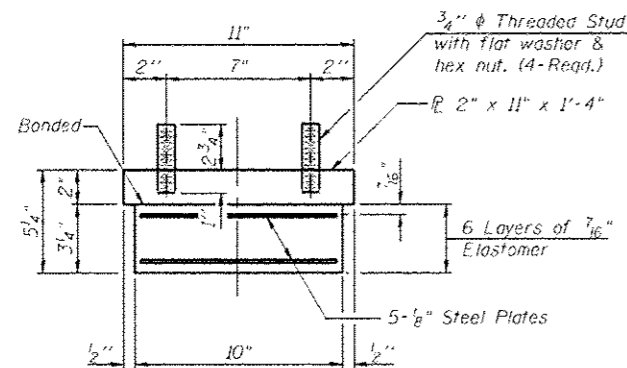
ELEVATION



PLAN - TOP & BOTTOM

STEEL EXTENSION

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

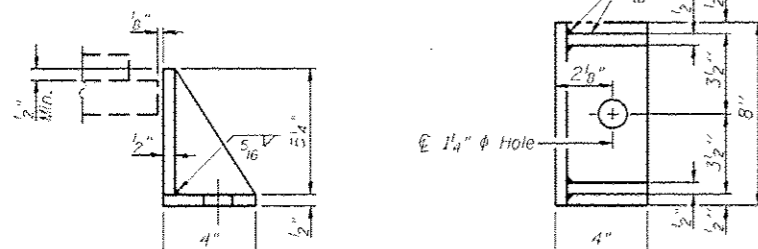
Notes:  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grades and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Side retainers and shim plates required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.  
 Steel extensions shall be paid for as Furnishing and Erecting Structural Steel.  
 The cost of field drilling holes in bottom flange of existing beams is included in Elastomeric Bearing Assembly, Type I.

INTERIOR BEAM REACTION TABLE

Location	Abutments
R <sub>2</sub> (K) (steel only)	2.7
R <sub>4</sub> (K)	35.9
R <sub>IMP</sub> (K)	10.4
R <sub>TOTAL</sub> (K)	105.7
Min. Jack Capacity (T)	13

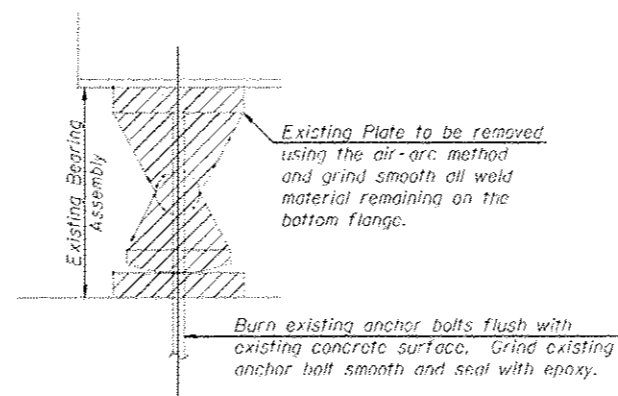
Min. Jack Capacity =  $R_2 \cdot \frac{1}{2} (R_4 + R_{IMP})$

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



SIDE RETAINER

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



EXISTING BEARING REMOVAL DETAIL

Cost Included with "Jack and Remove Existing Bearings"

TWO STRUCTURES BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	24
Anchor Bolts, 1"	Each	48
Furnishing and Erecting Structural Steel	Pound	4230
Jack and Remove Existing Bearings	Each	24

I-2E-1

1-27-12

REV. SHEET 6-3-13

**CEC** Cummins Engineering Corporation  
 Civil and Structural Engineering

JOB # 2276.3  
 FILE # 0540057\_0058-18-BearingDet.dgn  
 DATE # 5/14/2013

DESIGNED - AAN  
 CHECKED - MDC  
 DRAWN - SJS  
 CHECKED - MDC

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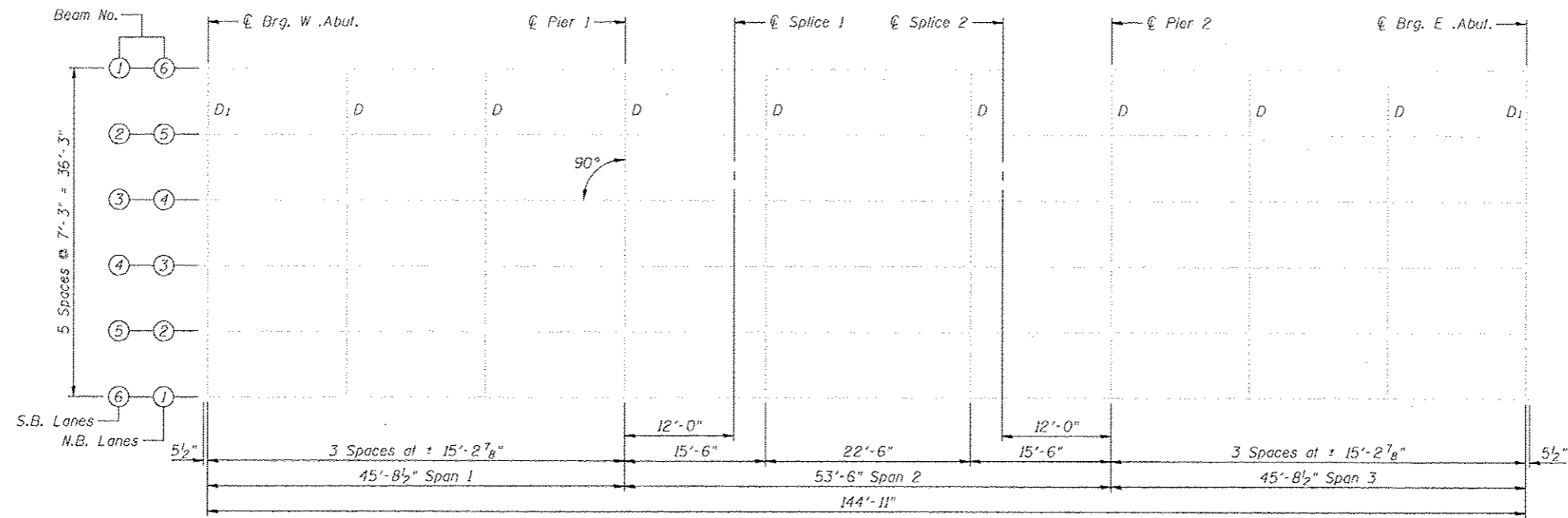
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BEARING DETAILS  
 STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)

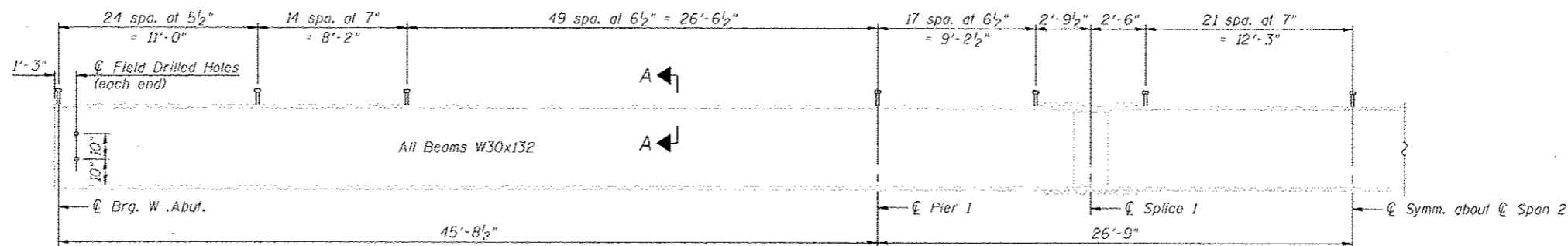
SHEET NO. 18 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	217

CONTRACT NO. 72E11  
 ILLINOIS FED. AID PROJECT



DIAPHRAGM LAYOUT



HALF BEAM ELEVATION

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total and Overload) due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).

$I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total and Overload) due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

$Q$ : Un-factored non-composite dead load (kips/ft.).

$M_Q$ : Un-factored moment due to non-composite dead load (kip-ft.).

$s_Q$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_{sQ}$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M_L$ : Un-factored live load moment (kip-ft.).

$M_I$ : Un-factored moment due to impact (kip-ft.).

$M_o$ : Factored design moment (kip-ft.).

$1.3 [M_Q + M_{sQ} + \frac{2}{3} (M_L + M_I)]$

$M_u$ : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

$f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).

$M_Q + M_{sQ} + \frac{2}{3} (M_L + M_I)$

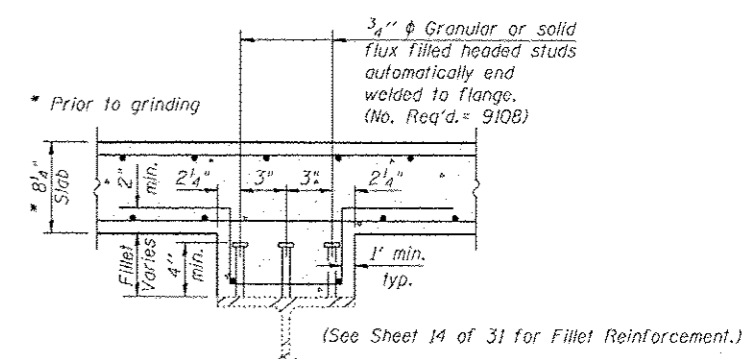
$f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

$1.3 [M_Q + M_{sQ} + \frac{2}{3} (M_L + M_I)]$

VR: Maximum  $f_t$  + impact shear range within the composite portion of the span for stud shear connector design (kips).

	0.4 Sp. 1 or 0.6 Sp. 3	Piers	0.5 Span 2
$I_s$	(in <sup>4</sup> ) 5770	5770	5770
$I_c(n)$	(in <sup>4</sup> ) 16,176	8,167	16,176
$I_c(3n)$	(in <sup>4</sup> ) 11,894	8,167	11,894
$S_s$	(in <sup>3</sup> ) 380	380	380
$S_c(n)$	(in <sup>3</sup> ) 573	448	573
$S_c(3n)$	(in <sup>3</sup> ) 517	448	517
$Q$	(k/ft) 0.977	0.977	0.977
$M_Q$	(k) 149	241	109
$s_Q$	(k/ft) 0.536	0.536	0.536
$M_{sQ}$	(k) 82	133	60
$M_L$	(k) 291	223	278
$M_I$	(k) 84	65	81
$M_o$	(k) 625	480	599
$M_u$	(k) 1113	1111	999
$M_u$	(k) 2378	1829	2378
$f_s$ non-comp	(ksi) 4.7	7.6	3.4
$f_s$ comp	(ksi) 1.9	3.6	1.4
$f_s$ [M <sub>o</sub> + M <sub>I</sub> ]	(ksi) 13.1	12.9	12.5
$f_s$ (Overload)	(ksi) 19.7	24.1	17.3
$f_s$ (Total)	(ksi) 25.6	31.3	22.5
VR	(k) 51.8	57.2	57.2

\* Compact section  
 \*\* Braced non-compact and partially braced section

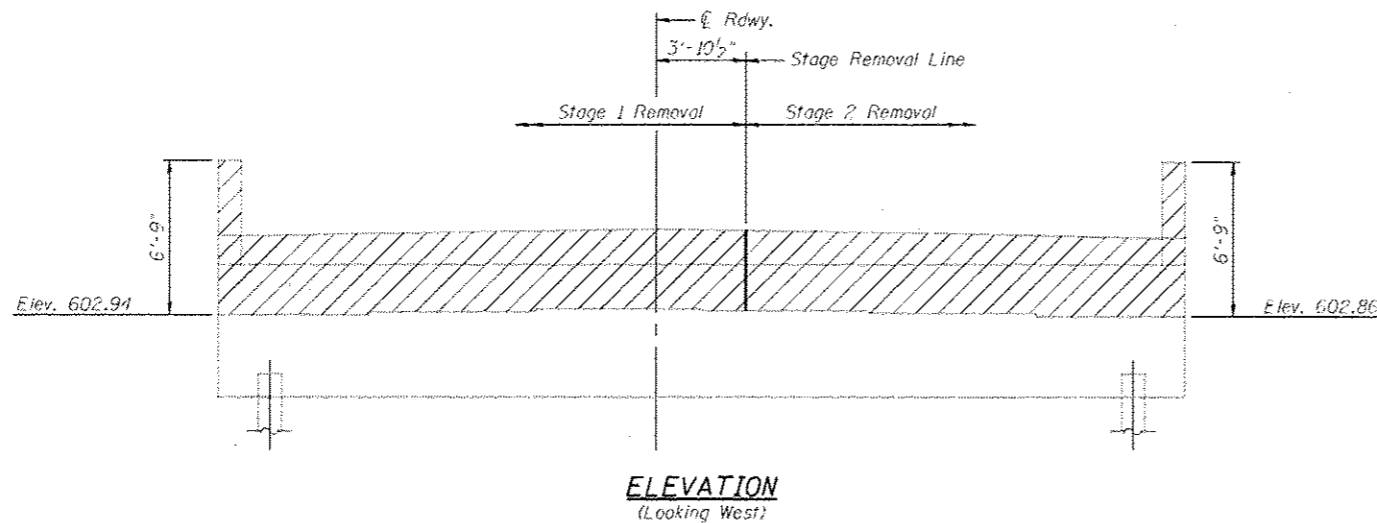


SECTION A-A

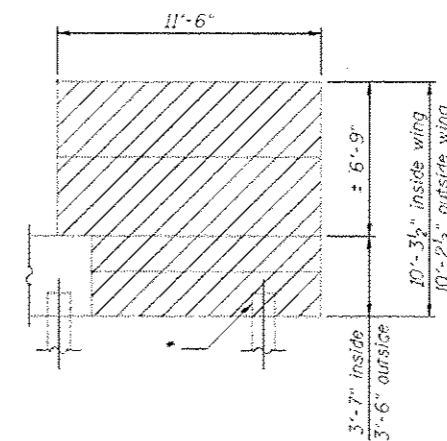
	Abuts.	Piers
$R_Q$	(k) 59.4	83.2
$R_L$	(k) 35.9	44.6
$R_I$	(k) 10.4	12.9
$R_{Total}$	(k) 105.7	140.7

Abutment DL reactions include weight of diaphragm, approach slab and F.W.S.

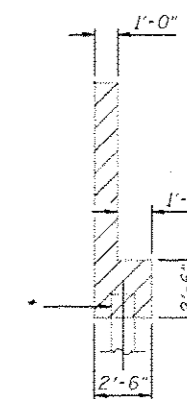
REV. SHEET G-3-13



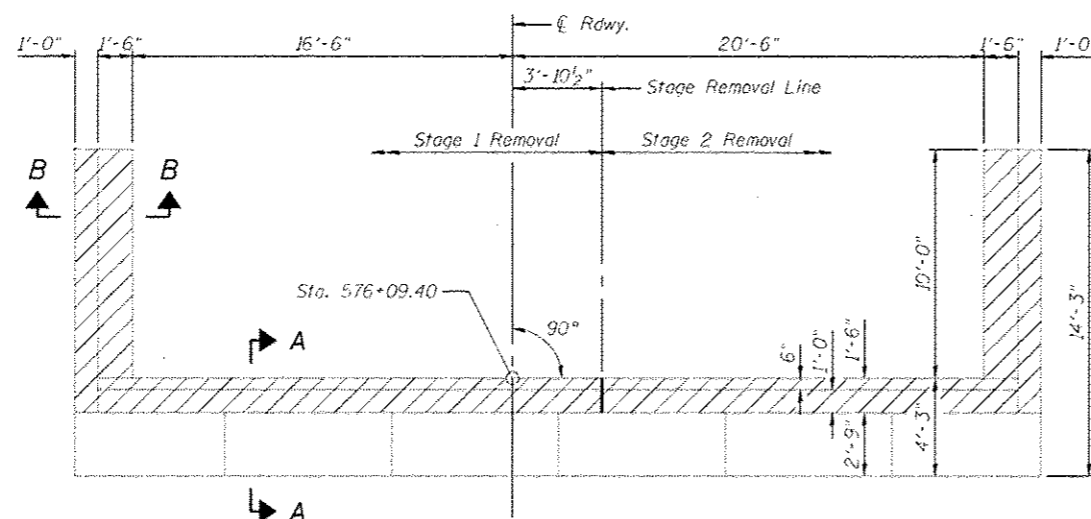
**ELEVATION**  
(Looking West)



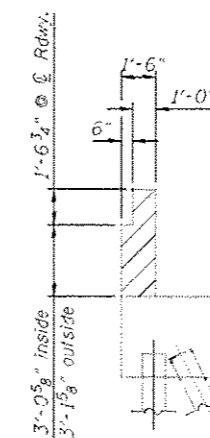
**WING WALL ELEVATION**



**SECTION B-B**



**PLAN - WEST ABUTMENTS**  
S.N. 054-0058 SB SHOWN  
S.N. 054-0057 NB SIMILAR



**SECTION A-A**

**TWO ABUTMENTS  
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	39.5

**NOTE**

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.44 feet to match benchmark datum.

REV. SHEET 6-3-13

**CEC** Cummins  
Engineering  
Corporation  
Civil and Structural Engineering

JOB • 2276.3  
FILE • 0540057\_0058-20-WestAbutRem.dgn  
DATE • 5/14/2013

DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

REVISED -  
REVISED -  
REVISED -  
REVISED -

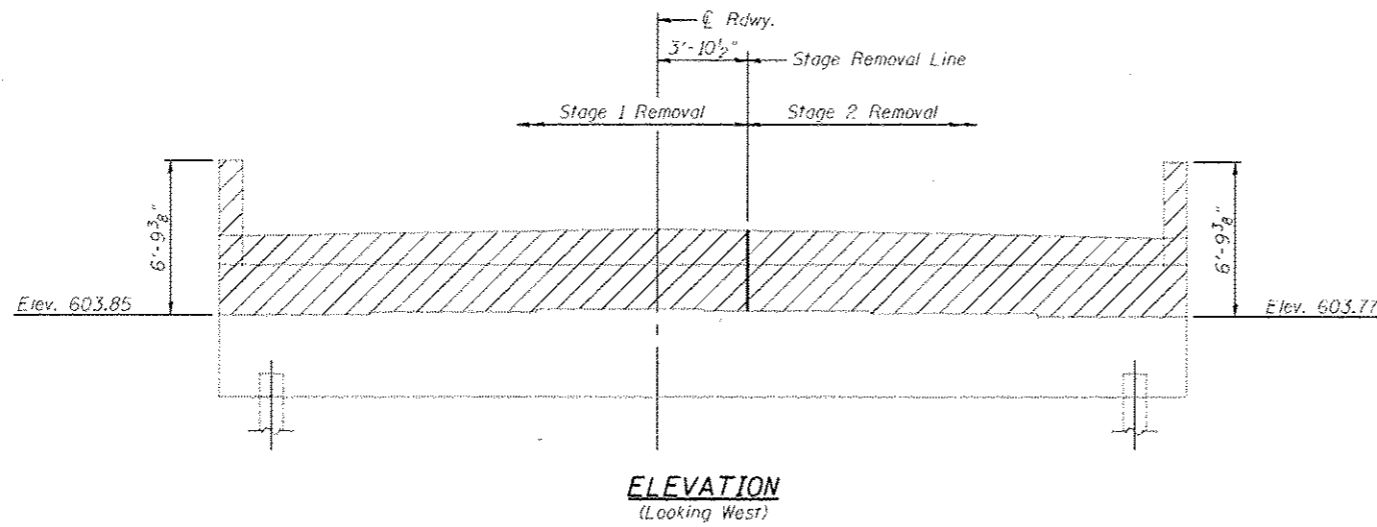
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENTS CONCRETE REMOVAL**  
STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)

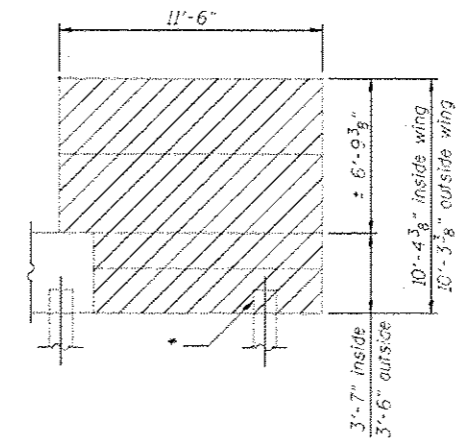
SHEET NO. 20 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	219
				CONTRACT NO. 72E11
ILLINOIS FED. AID PROJECT				

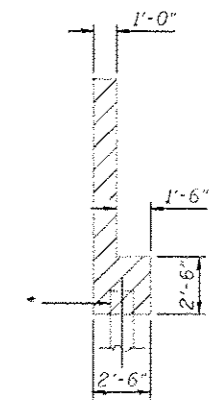




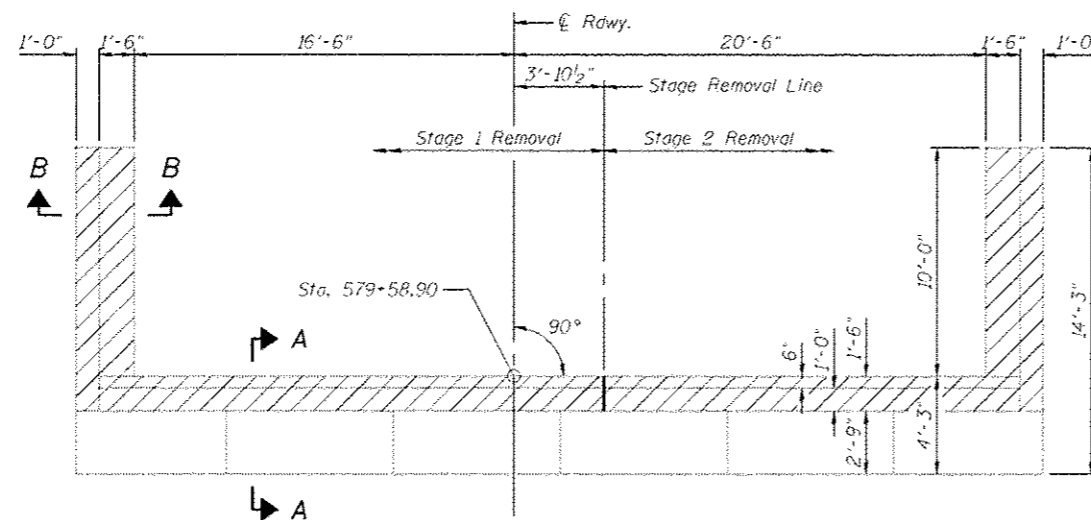
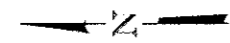
**ELEVATION**  
(Looking West)



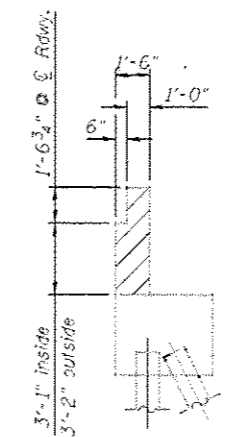
**WING WALL ELEVATION**



**SECTION B-B**



**PLAN - EAST ABUTMENTS**  
S.N. 054-0057 NB SHOWN  
S.N. 054-0058 SB SIMILAR



**SECTION A-A**

**TWO ABUTMENTS  
BILL OF MATERIAL**

Item	Unit	Total
Concrete Removal	Cu. Yd.	39.5

**NOTE**

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.44 feet to match benchmark datum.

REV. SHEET 6-3-13

**CEC** Cummins  
Engineering  
Corporation  
Civil and Structural Engineering

JOB # 2276.3  
FILE # 0540057\_0058-21-EastAbutRem.dgn  
DATE # 5/14/2013

DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

REVISED -  
REVISED -  
REVISED -  
REVISED -

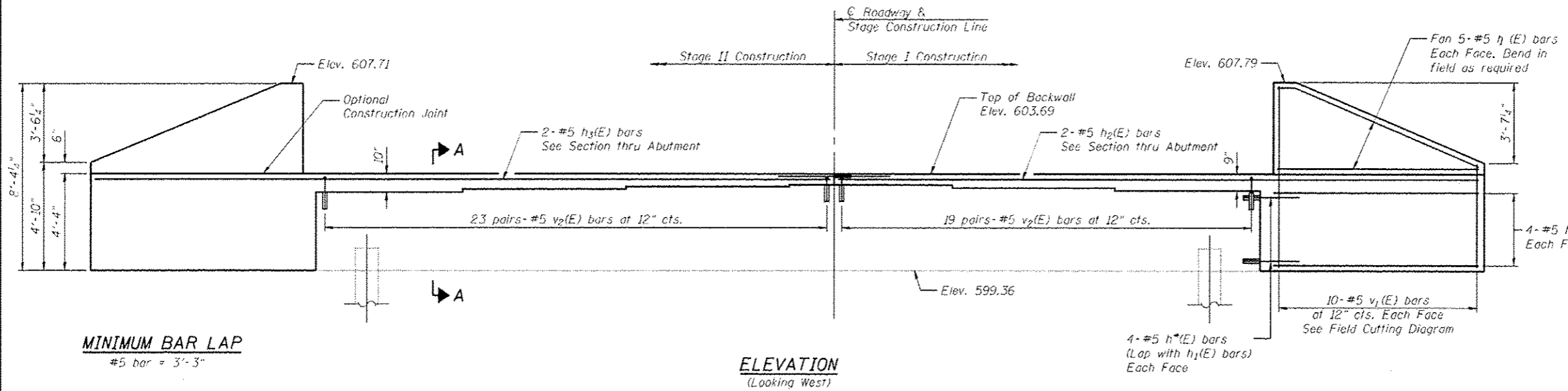
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EAST ABUTMENTS CONCRETE REMOVAL  
STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)**

SHEET NO. 21 OF 31 SHEETS

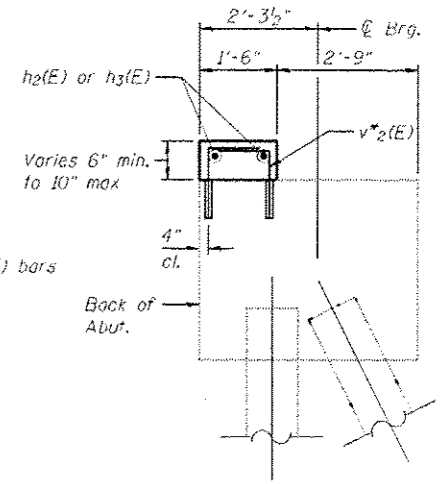
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	220
			CONTRACT NO. 72E11	

ILLINOIS FED. AID PROJECT



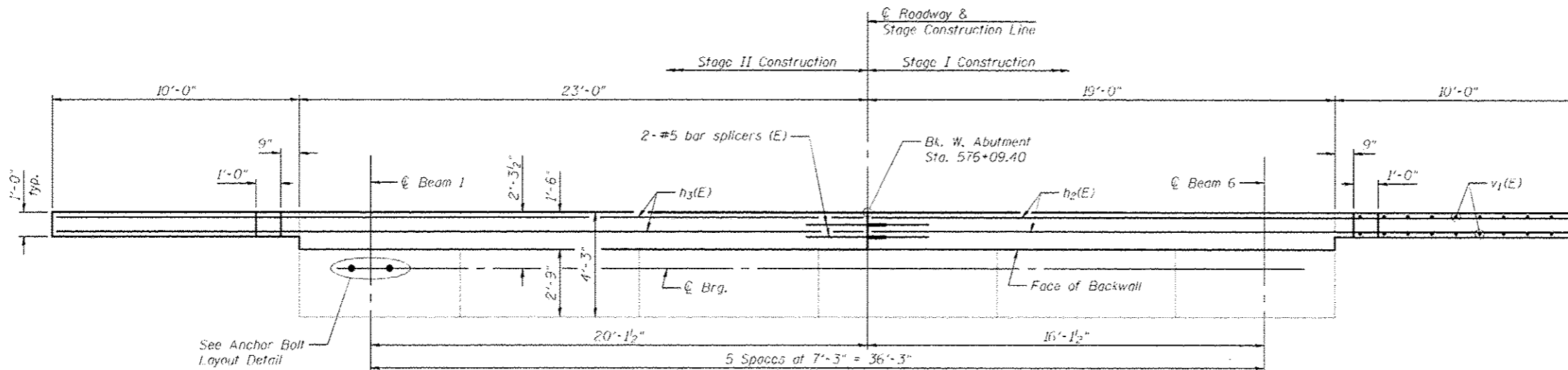
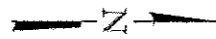
**MINIMUM BAR LAP**  
#5 bar = 3'-3"

**ELEVATION**  
(Looking West)



**SECTION A-A**

\* Denotes bar to be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Cost included with Concrete Structures.



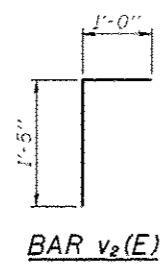
**PLAN - WEST ABUTMENT NB**

**WEST ABUTMENT NB  
BILL OF MATERIAL**

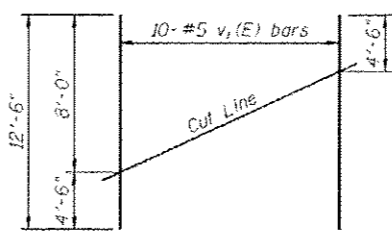
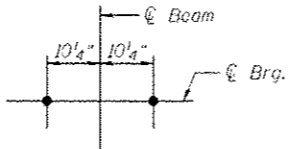
Bar	No.	Size	Length	Shape
h1(E)	16	#5	4'-9"	—
h2(E)	36	#5	8'-9"	—
h3(E)	2	#5	28'-6"	—
h3(E)	2	#5	32'-6"	—
v1(E)	20	#5	12'-6"	—
v2(E)	84	#5	2'-5"	Γ
Structure Excavation		Cu. Yd.		87
Concrete Structures		Cu. Yd.		6.8
Bar Splicers		Each		2
Reinforcement Bars, Epoxy Coated		Pound		1010

For details of Bar Splicers, see sheet 30 of 31.

**NOTE**  
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.44 feet to match benchmark datum.



**ANCHOR BOLT LAYOUT DETAIL**



**FIELD CUTTING DIAGRAM**

Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite face.

REV. SHEET G-3-13



JOB # 2276.3  
FILE # 0540057\_0058-22-23-SN0057Abuts.dgn  
DATE # 5/14/2013

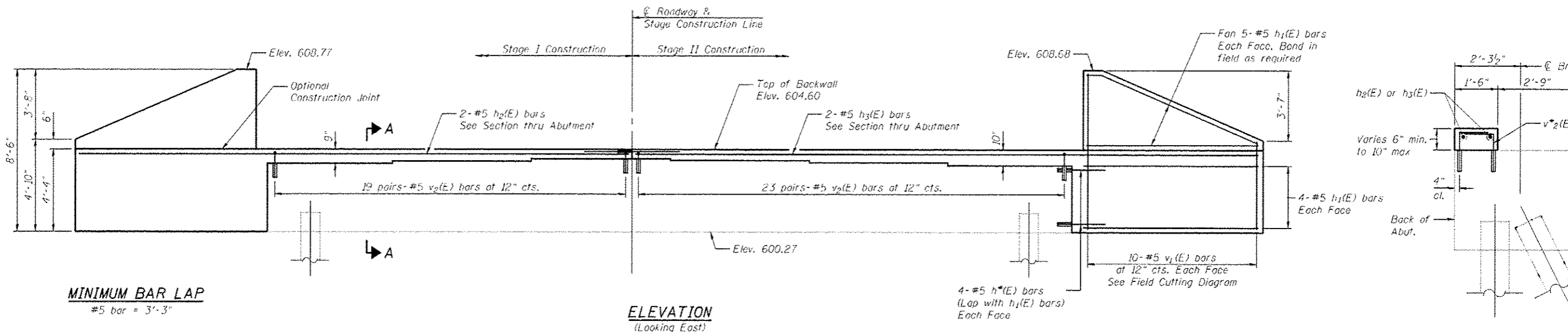
DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WEST ABUTMENT  
STRUCTURE NO. 054-0057 (NB)  
SHEET NO. 22 OF 31 SHEETS

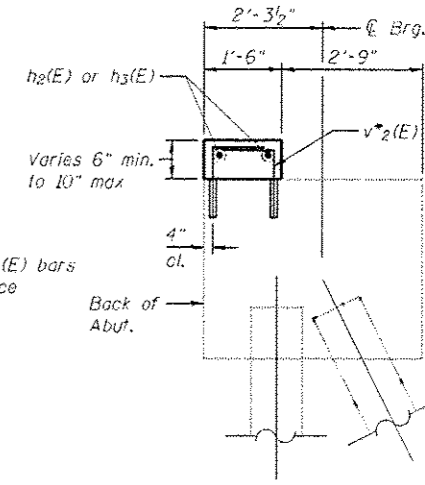
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	DE LOGAN CO BR 2011-1	LOGAN	429	221
				CONTRACT NO. 72E11

ILLINOIS FED. AID PROJECT



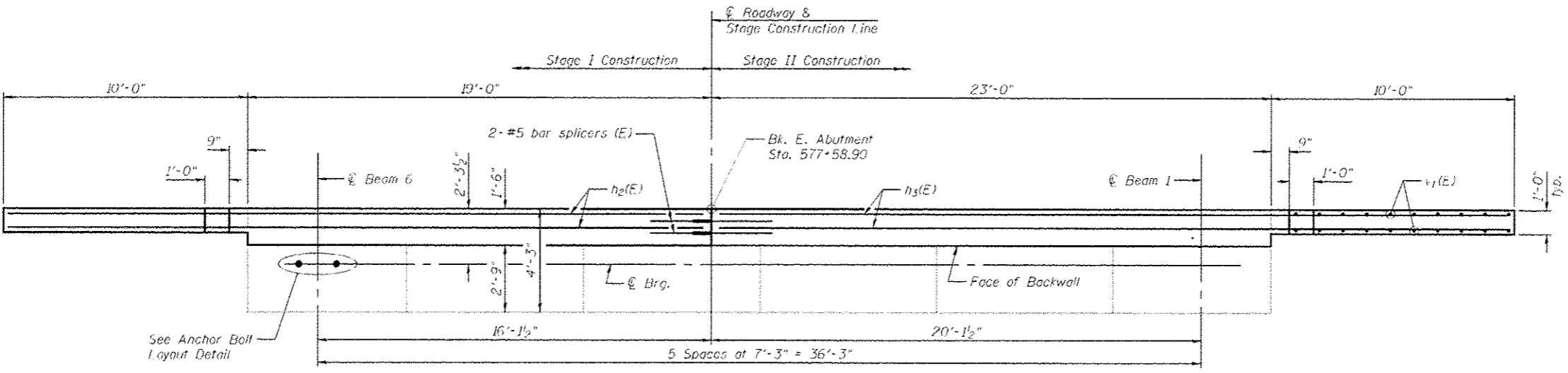
**MINIMUM BAR LAP**  
#5 bar = 3'-3"

**ELEVATION**  
(Looking East)



**SECTION A-A**

\* Denotes bar to be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Cost included with Concrete Structures.



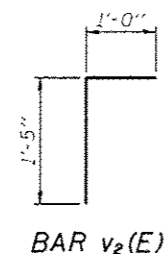
**PLAN - EAST ABUTMENT NB**

**EAST ABUTMENT NB  
BILL OF MATERIAL**

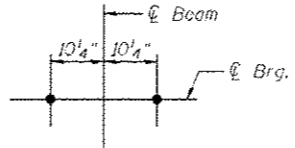
Bar	No.	Size	Length	Shape
h1(E)	16	#5	4'-9"	—
h2(E)	2	#5	28'-6"	—
h3(E)	2	#5	32'-6"	—
v1(E)	20	#5	12'-6"	—
v2(E)	84	#5	2'-5"	Γ
Structure Excavation		Cu. Yd.		87
Concrete Structures		Cu. Yd.		6.8
Bar Splicers		Each		2
Reinforcement Bars, Epoxy Coated		Pound		1010

For details of Bar Splicers, see sheet 30 of 31.

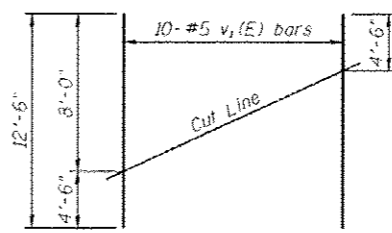
**NOTE**  
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.44 feet to match benchmark datum.



**BAR v2(E)**



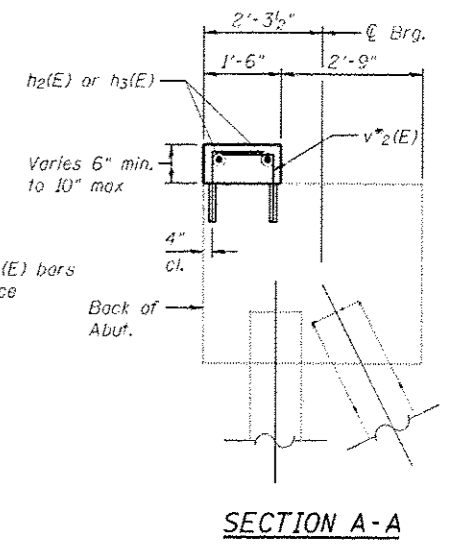
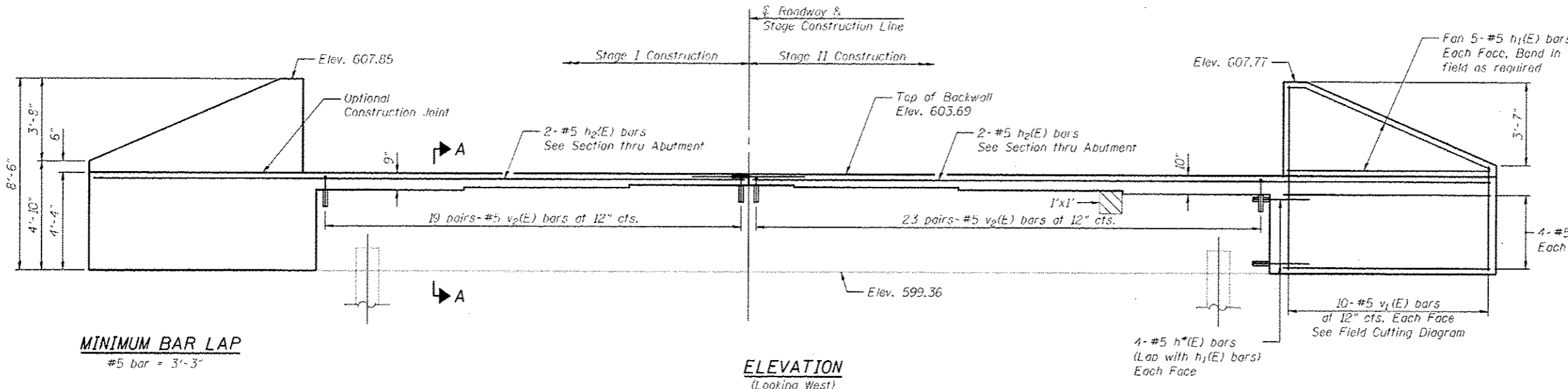
**ANCHOR BOLT LAYOUT DETAIL**



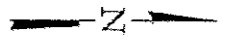
**FIELD CUTTING DIAGRAM**

Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite face.

REV. SHEET 6-3-13



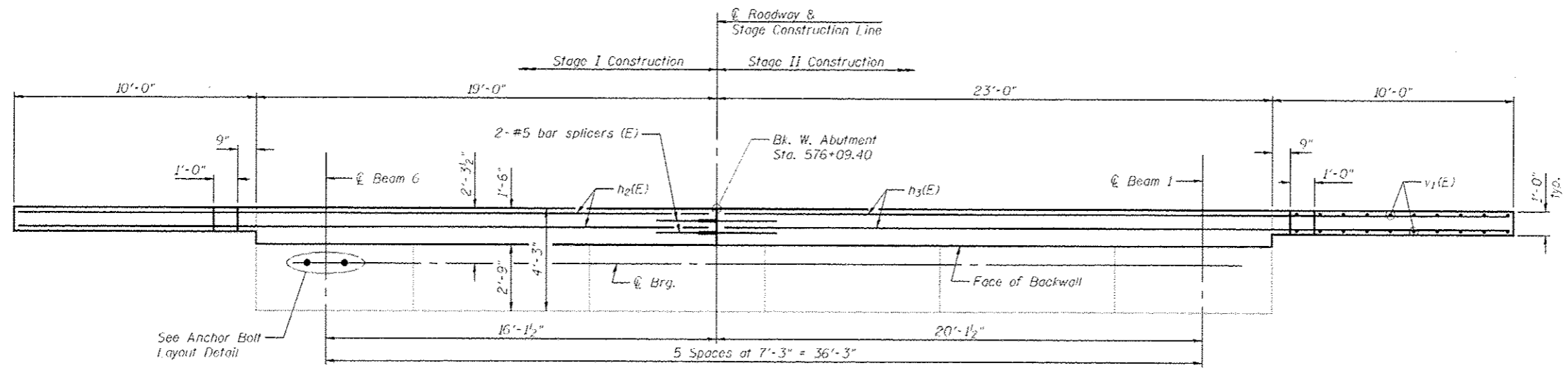
\* Denotes bar to be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Cost included with Concrete Structures.



**MINIMUM BAR LAP**  
#5 bar = 3'-3"

**ELEVATION**  
(Looking West)

**SECTION A-A**

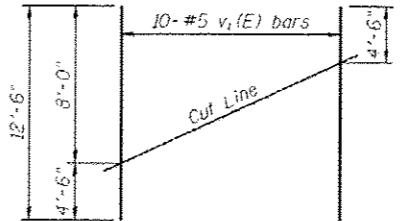
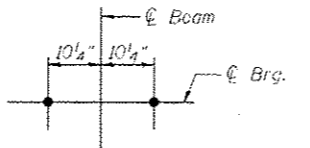
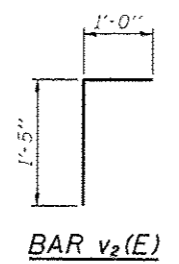


**LEGEND**  
[Symbol] Denotes Structural Repair of Concrete (Depth Equal to or Less Than 5")

**WEST ABUTMENT SB**  
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h1(E)	16	#5	4'-9"	—
h1(E)	36	#5	8'-9"	—
h2(E)	2	#5	28'-6"	—
h3(E)	2	#5	32'-6"	—
v1(E)	20	#5	12'-6"	—
v2(E)	84	#5	2'-5"	Γ
Structure Excavation			Cu. Yd.	87
Concrete Structures			Cu. Yd.	6.8
Bar Splicers			Each	2
Reinforcement Bars, Epoxy Coated			Pound	1010
Structural Repair of Concrete (Depth Equal to or Less Than 5")			Sq. Ft.	1

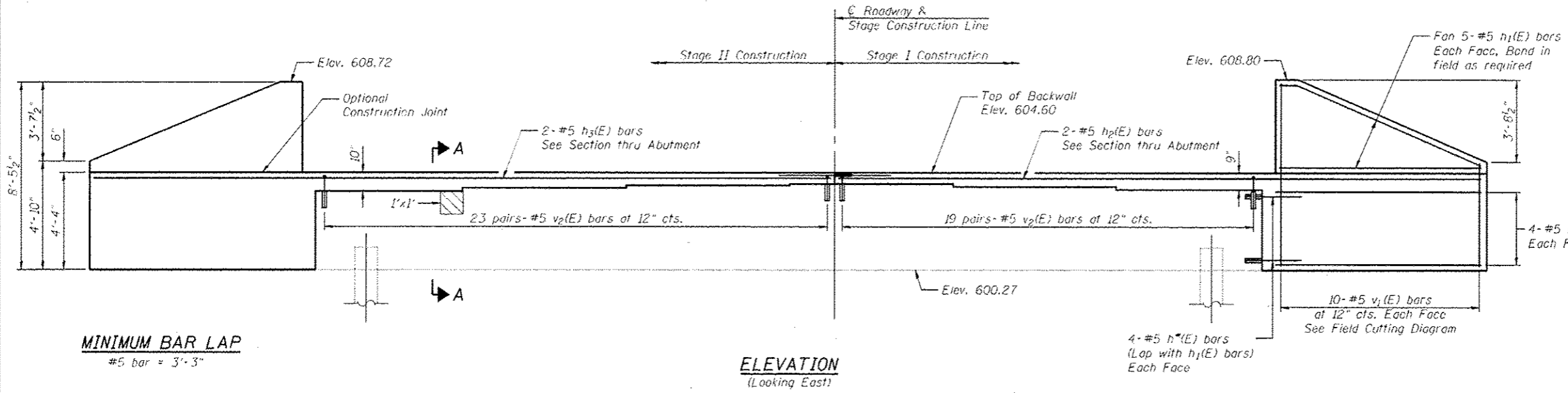
**NOTE**  
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.44 feet to match benchmark datum.



**FIELD CUTTING DIAGRAM**  
Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite face.

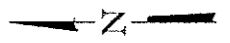
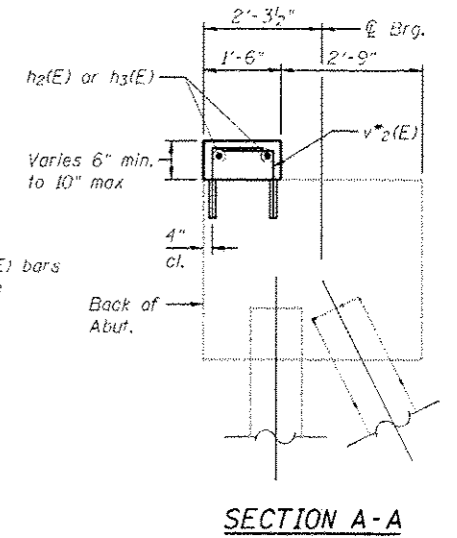
For details of Bar Splicers, see sheet 30 of 31.

REV. SHEET 6-3-13

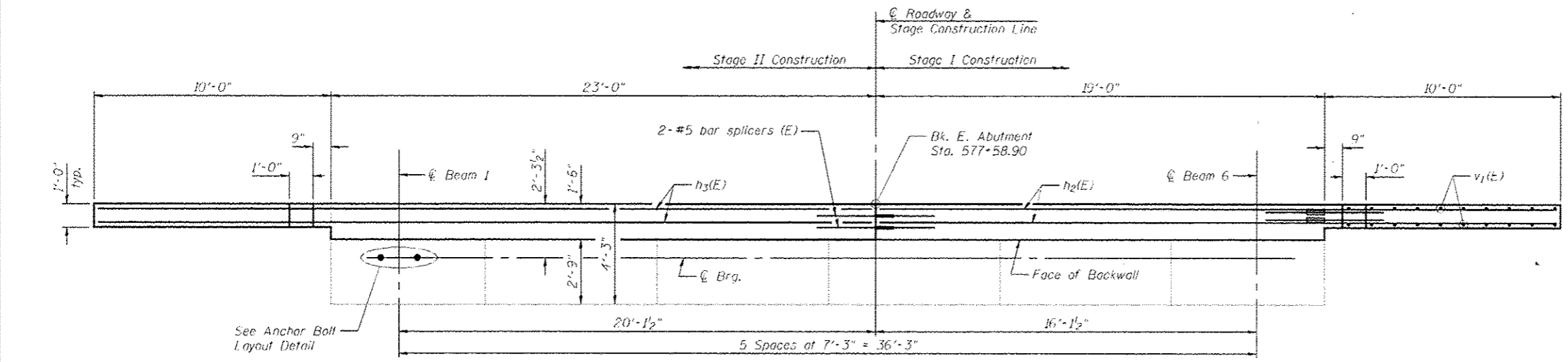


**MINIMUM BAR LAP**  
#5 bar = 3'-3"

**ELEVATION**  
(Looking East)



\* Denotes bar to be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Cost included with Concrete Structures.



**PLAN - EAST ABUTMENT SB**

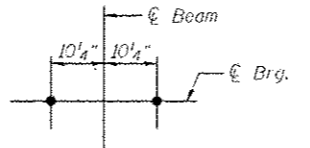
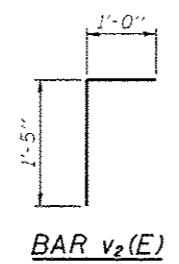
**LEGEND**  
[Symbol] Denotes Structural Repair of Concrete (Depth Equal to or Less Than 5")

**EAST ABUTMENT SB  
BILL OF MATERIAL**

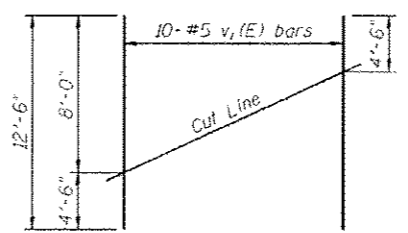
Bar	No.	Size	Length	Shape
h1(E)	16	#5	4'-9"	—
h2(E)	36	#5	8'-9"	—
h3(E)	2	#5	28'-6"	—
h4(E)	2	#5	32'-6"	—
v1(E)	20	#5	12'-6"	—
v2(E)	84	#5	2'-5"	Γ
Structure Excavation			Cu. Yd.	87
Concrete Structures			Cu. Yd.	6.8
Bar Splicers			Each	2
Reinforcement Bars, Epoxy Coated			Pound	1010
Structural Repair of Concrete (Depth Equal to or Less Than 5")			Sq. Ft.	1

For details of Bar Splicers, see sheet 30 of 31.

**NOTE**  
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.44 feet to match benchmark datum.



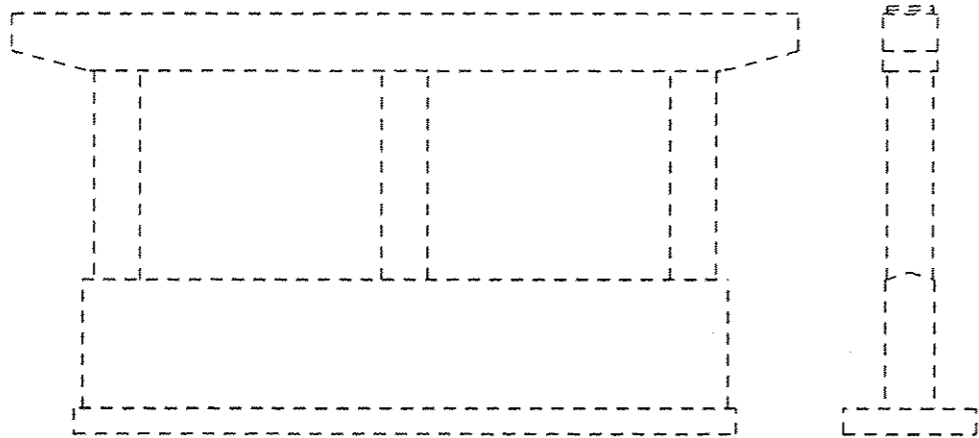
**ANCHOR BOLT LAYOUT DETAIL**



**FIELD CUTTING DIAGRAM**

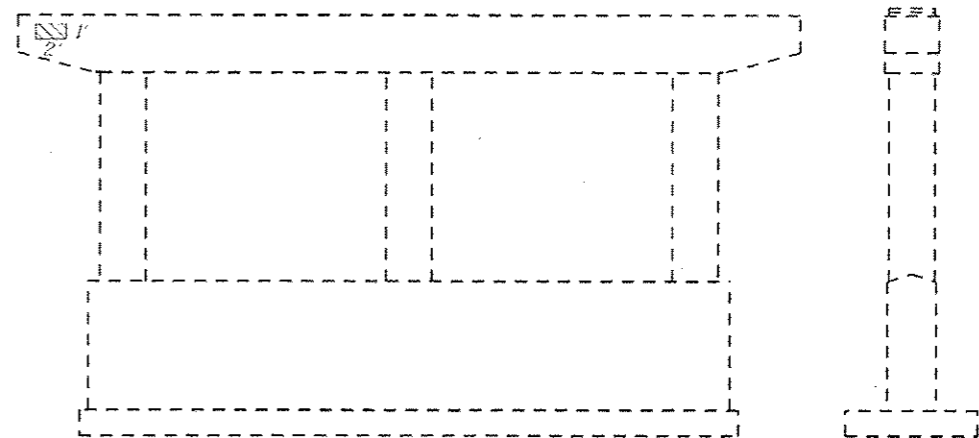
Order v1(E) bars full length. Cut as shown and use remainder of bars in opposite face.

REV. SHEET 6-3-13



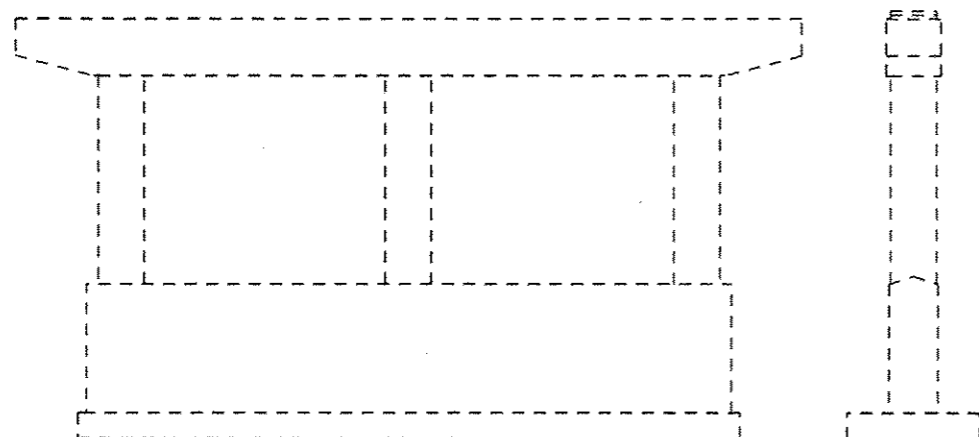
Pier 1 N.B. WEST FACE

Pier 1 N.B. SOUTH END



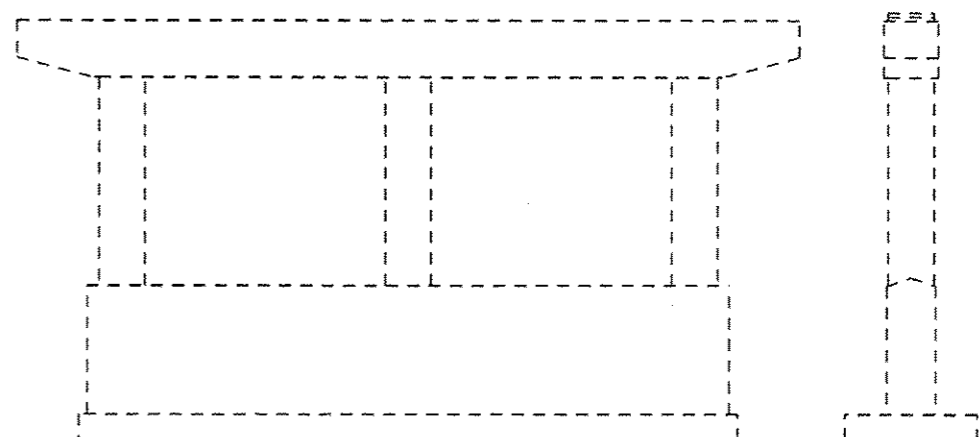
Pier 2 N.B. WEST FACE

Pier 2 N.B. SOUTH END



Pier 1 N.B. EAST FACE

Pier 1 N.B. NORTH END



Pier 2 N.B. EAST FACE

Pier 2 N.B. NORTH END

**LEGEND**



Denotes Structural Repair of Concrete  
(Depth Equal to or Less Than 5")

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	2

△ REV. SHEET 6-3-13

**CEC**  
Cummins  
Engineering  
Corporation  
Civil and Structural Engineering

JOB • 2276.3  
FILE • 0540057\_0058-26-27-PierRepair.dgn  
DATE • 5/14/2013

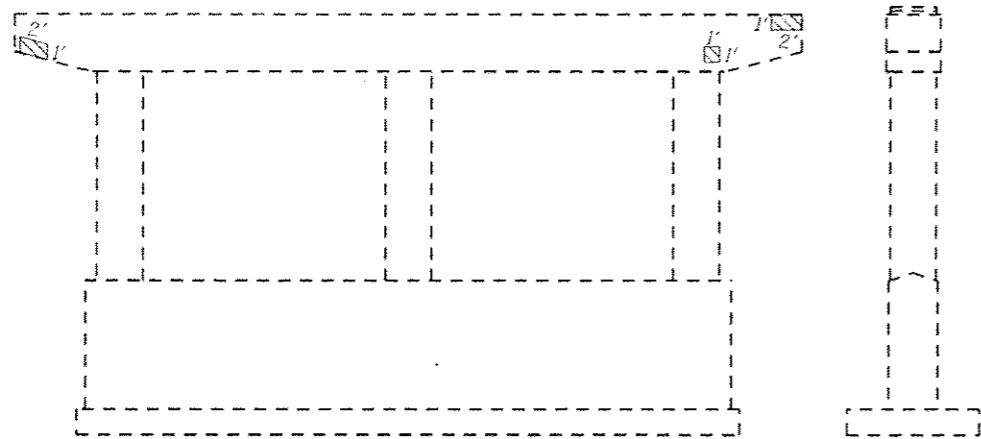
DESIGNED - AAN	REVISED -
CHECKED - MDC	REVISED -
DRAWN - SJS	REVISED -
CHECKED - MDC	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

PIER REPAIRS  
STRUCTURE NO. 054-0057 (NB)

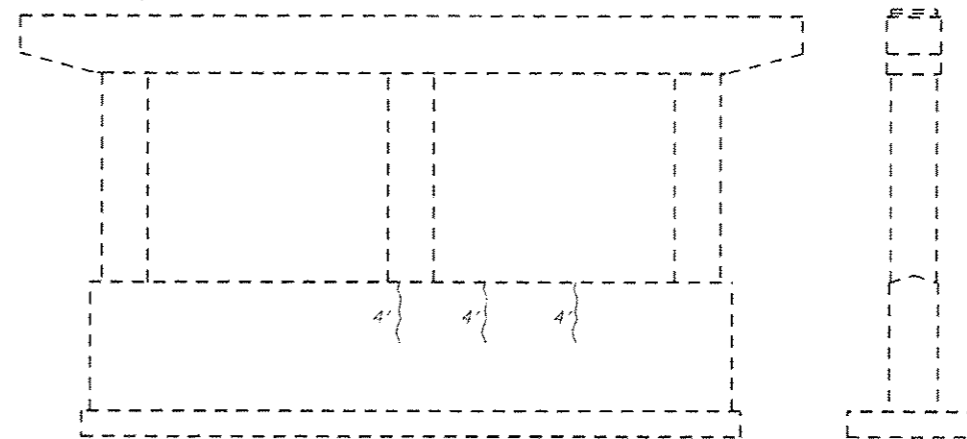
SHEET NO. 26 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	225
				CONTRACT NO. 72E11
ILLINOIS FED. AID PROJECT				



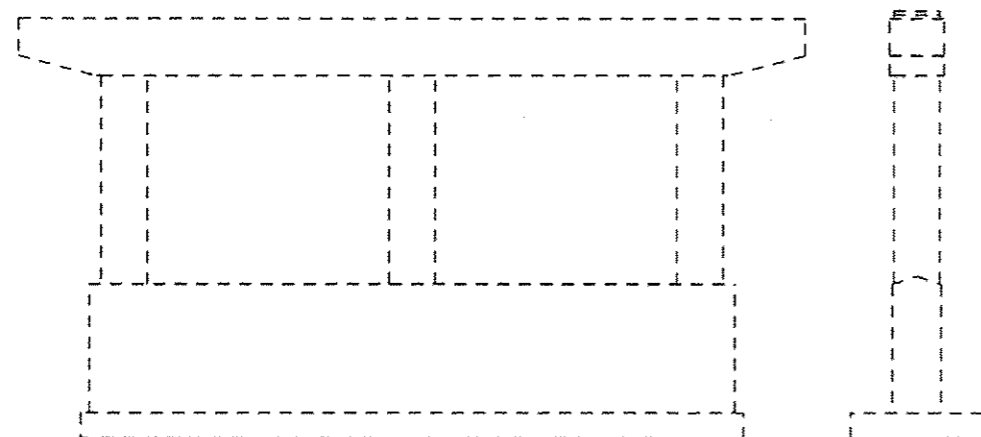
Pier 1 S.B. WEST FACE

Pier 1 S.B. SOUTH END



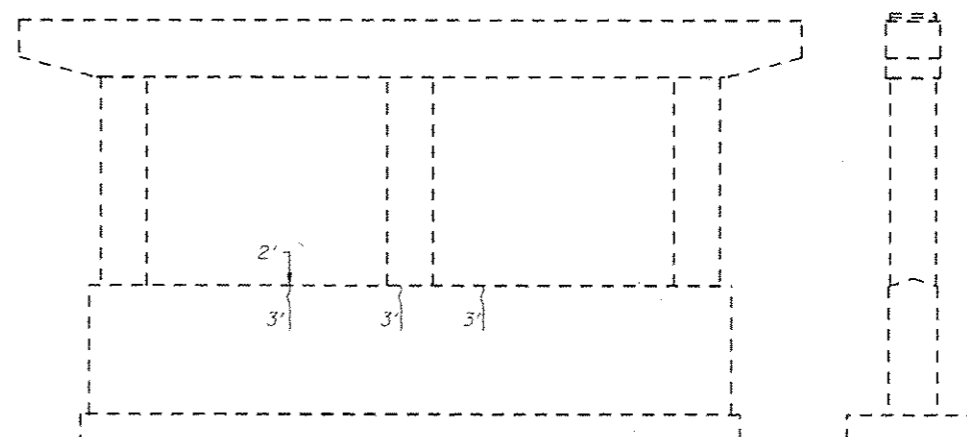
Pier 2 S.B. WEST FACE

Pier 2 N.B. SOUTH END



Pier 1 S.B. EAST FACE

Pier 1 S.B. NORTH END



Pier 2 S.B. EAST FACE

Pier 2 N.B. NORTH END

**LEGEND**



Denotes Structural Repair of Concrete  
(Depth Equal to or Less Than 5")



Epoxy Crack Injection

△ REV. SHEET 6-3-13

**BILL OF MATERIAL**

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	5
Epoxy Crack Injection	Foot	23

**CEC** Cummins  
Engineering  
Corporation  
Civil and Structural Engineering

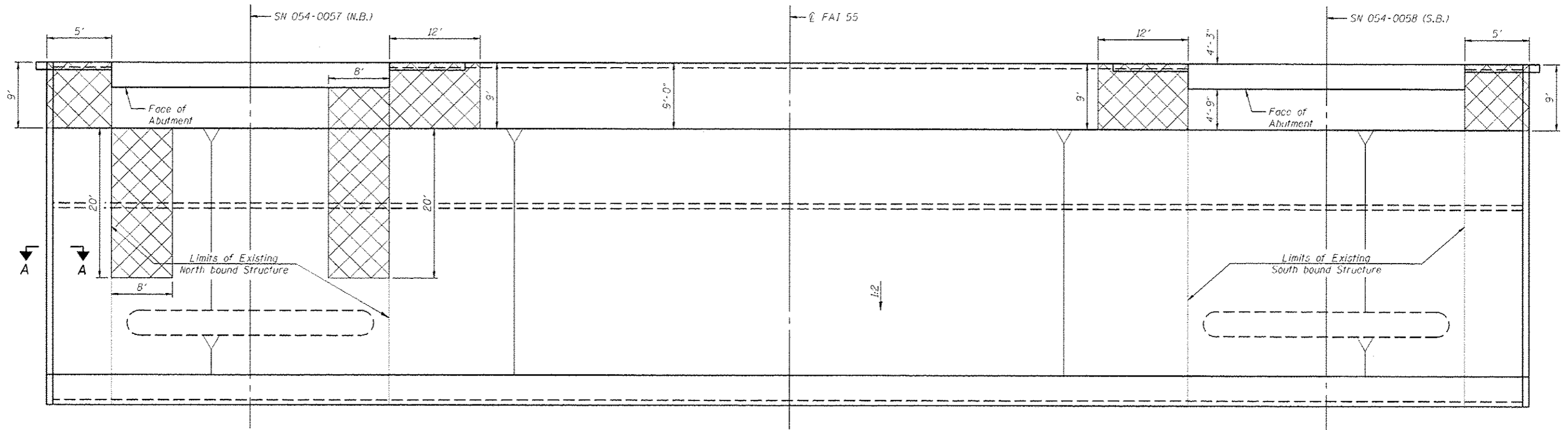
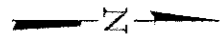
JOB • 2276.3  
FILE • 0540057\_0058-26-27-PierRepair.dgn  
DATE • 5/14/2013

DESIGNED - AAN	REVISED -
CHECKED - MDC	REVISED -
DRAWN - SJS	REVISED -
CHECKED - MDC	REVISED -

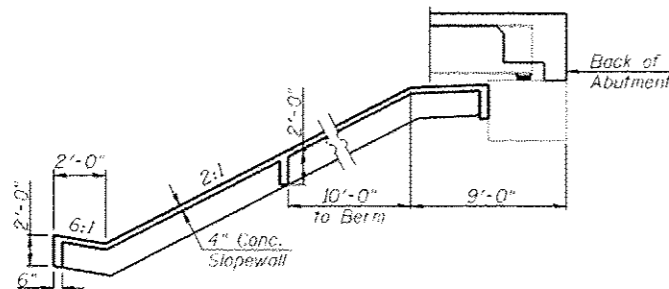
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**PIER REPAIRS  
STRUCTURE NO. 054-0058 (SB)**  
SHEET NO. 27 OF 31 SHEETS

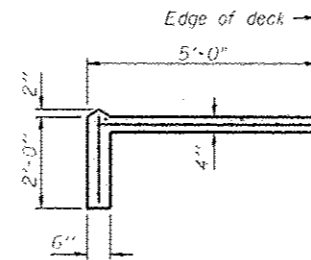
F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	DE LOGAN CO BR 2011-1	LOGAN	429	226
				CONTRACT NO. T2E11
ILLINOIS FED. AID PROJECT				



PLAN  
WEST SLOPE WALL REPAIRS

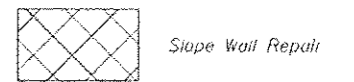


SECTION THRU  
SLOPEWALL



SECTION A-A

LEGEND



BILL OF MATERIAL

ITEM	UNIT	TOTAL
Slope Wall Repair	SQ YD	70

Notes:  
Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in., W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.  
Do not pour slope wall of abutments until new wingwalls are constructed.

REV. SHEET 6-3-13

**CEC** Cummins Engineering Corporation  
Civil and Structural Engineering

JOB • 2276.3  
FILE • 0540057\_0058-28-29-SN0057SlopeWall.dgn  
DATE • 5/14/2013

DESIGNED - AAN REVISIONS -  
CHECKED - MDC REVISIONS -  
DRAWN - SJS REVISIONS -  
CHECKED - MDC REVISIONS -

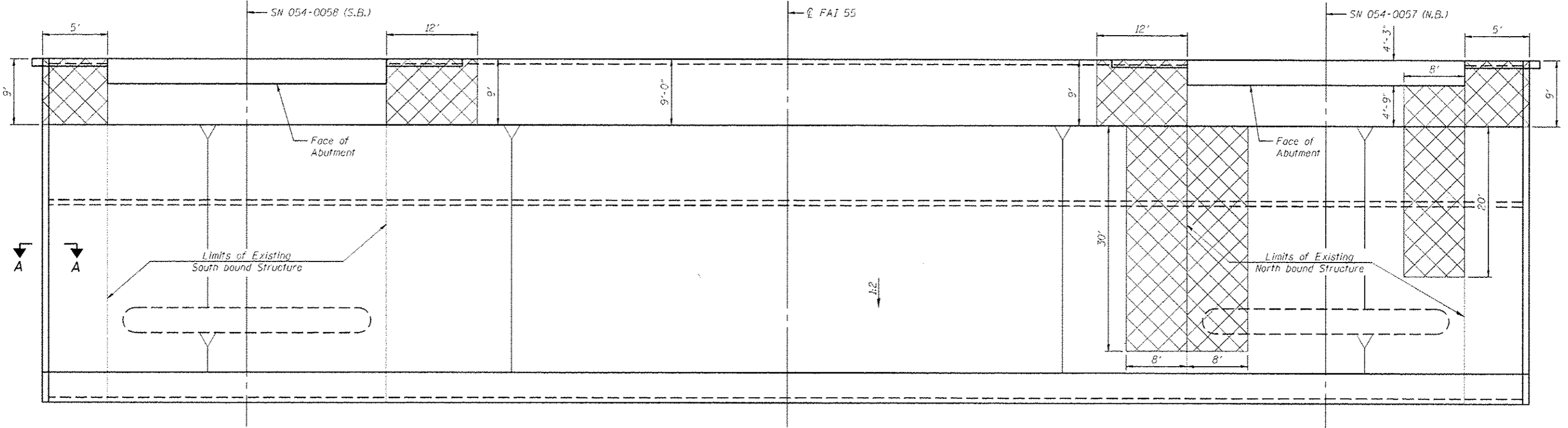
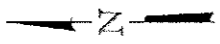
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WEST SLOPE WALL REPAIRS  
STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)

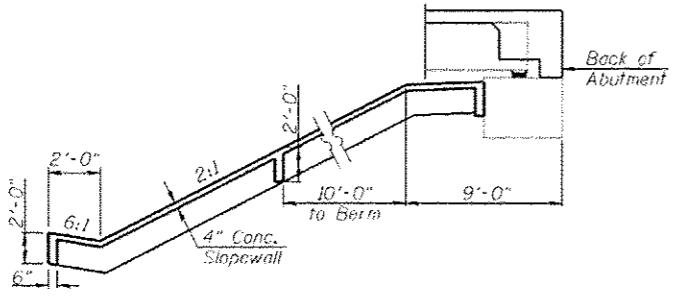
SHEET NO. 28 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	227
CONTRACT NO. 72E11				
ILLINOIS FED. AID PROJECT				

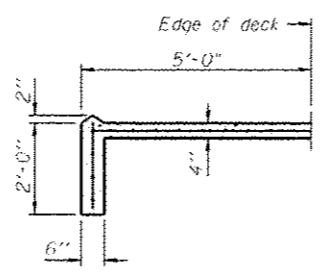




PLAN  
EAST SLOPE WALL REPAIRS

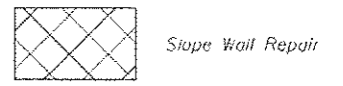


SECTION THRU  
SLOPEWALL



SECTION A-A

LEGEND



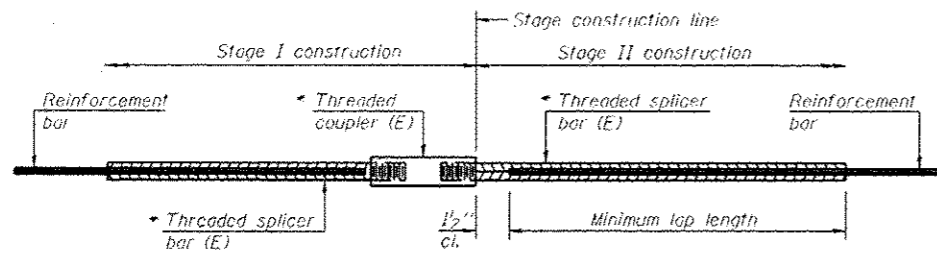
BILL OF MATERIAL

ITEM	UNIT	TOTAL
Slope Wall Repair	50 YD	109

Notes:  
Slope wall shall be reinforced with welded wire fabric, 6 in. x 6 in., W4.0 x W4.0, weighting 58 lbs. per 100 sq. ft.  
Do not pour slopewall at abutments until new wingwalls are constructed.

REV. SHEET 6-3-13

<b>CEC</b> Cummins Engineering Corporation Civil and Structural Engineering	JOB • 2276.3	DESIGNED - AAN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	EAST SLOPE WALL REPAIRS STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)	F.A.I. RTE. 55	SECTION D6 LOGAN CO BR 2011-1	COUNTY LOGAN	TOTAL SHEETS 429	SHEET NO. 228	
	FILE • 0540057_0058-20-29-SN0057SlopeWall.dgn	CHECKED - MDC	REVISED -			SHEET NO. 29 OF 31 SHEETS		ILLINOIS FED. AID PROJECT		CONTRACT NO. 72E11	
	DATE • 5/14/2013	DRAWN - SJS	REVISED -								
		CHECKED - MDC	REVISED -								



**STANDARD BAR SPLICER ASSEMBLY**

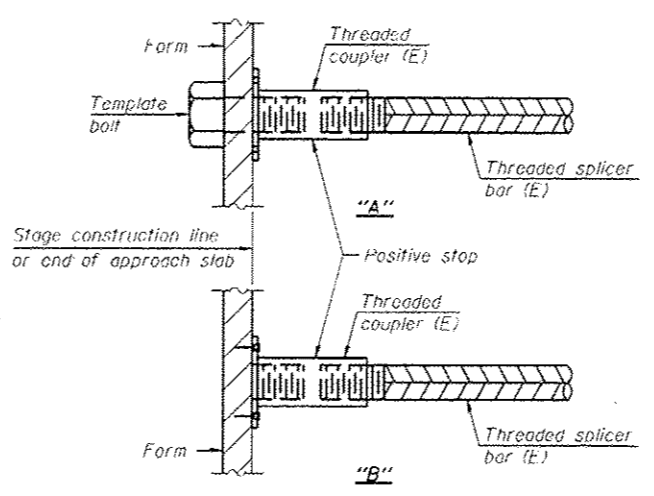
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

- Table 1: Black bar, 0.8 Class C
- Table 2: Black bar, Top bar lap, 0.8 Class C
- Table 3: Epoxy bar, 0.8 Class C
- Table 4: Epoxy bar, Top bar lap, 0.8 Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar lap, Class C

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

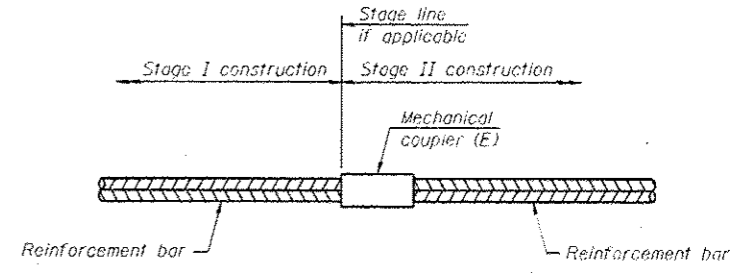
Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck, Top	#5	644	3
Deck, Bottom	#5	394	3
Approach, Top	#4	100	3
Approach, Bottom	#5	184	3
Approach, Footing	#5	80	3
Abutment, Diaphragm	#6	32	3
Abutment, Backwall	#5	8	3



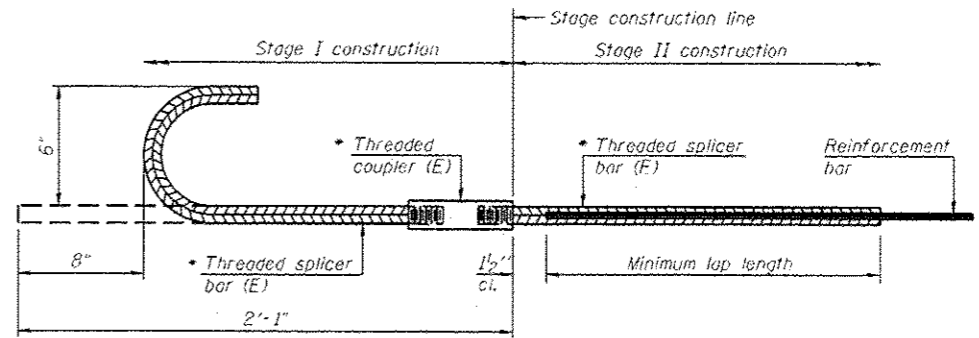
**INSTALLATION AND SETTING METHODS**

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



**STANDARD MECHANICAL SPLICER**

Location	Bar size	No. assemblies required



**SPECIAL BAR SPLICER ASSEMBLY**

Location	Bar size	No. assemblies required	Table for minimum lap length
Diaphragm	#6	16	3

**NOTES**

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

BSD-1

8-31-12

REV. SHEET 6-3-13



JOB # 2276.3  
 FILE # 0540057\_0058-30-Splicer.dgn  
 DATE # 5/14/2013

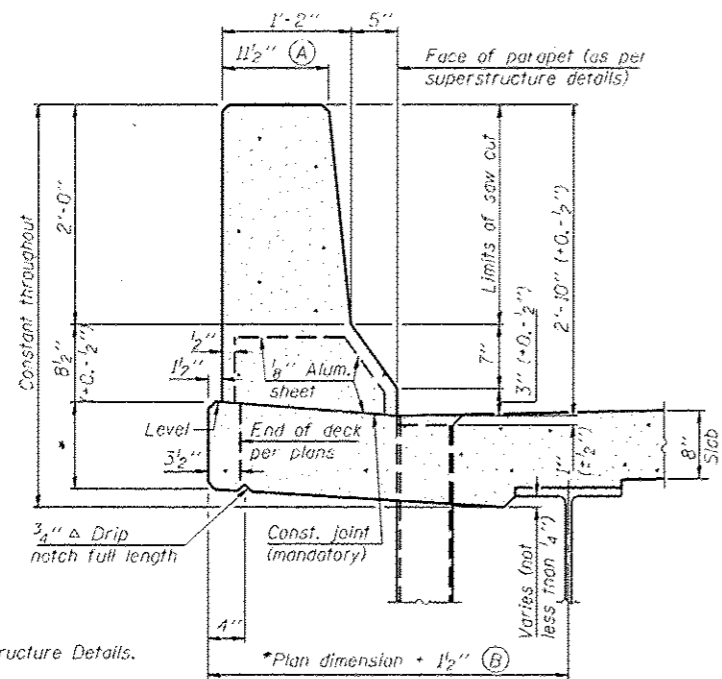
DESIGNED - AAN  
 CHECKED - MDC  
 DRAWN - SJS  
 CHECKED - MDC

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	229

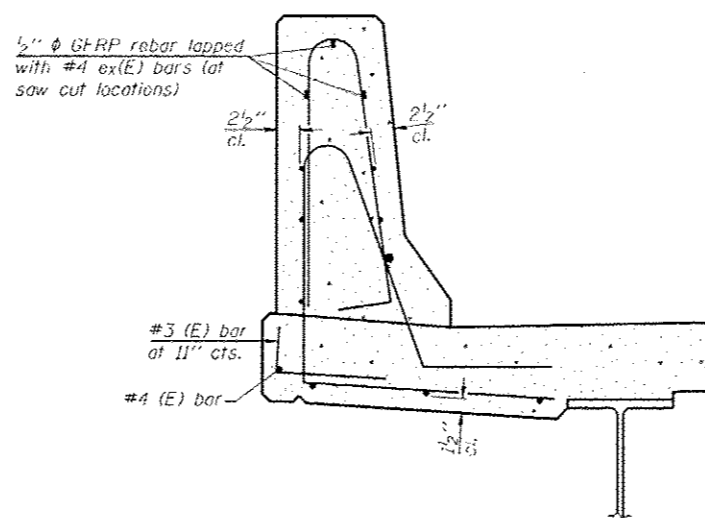
CONTRACT NO. 72E11  
 ILLINOIS FED. AID PROJECT



**34" F SHAPE PARAPET SECTION**  
(Showing dimensions)

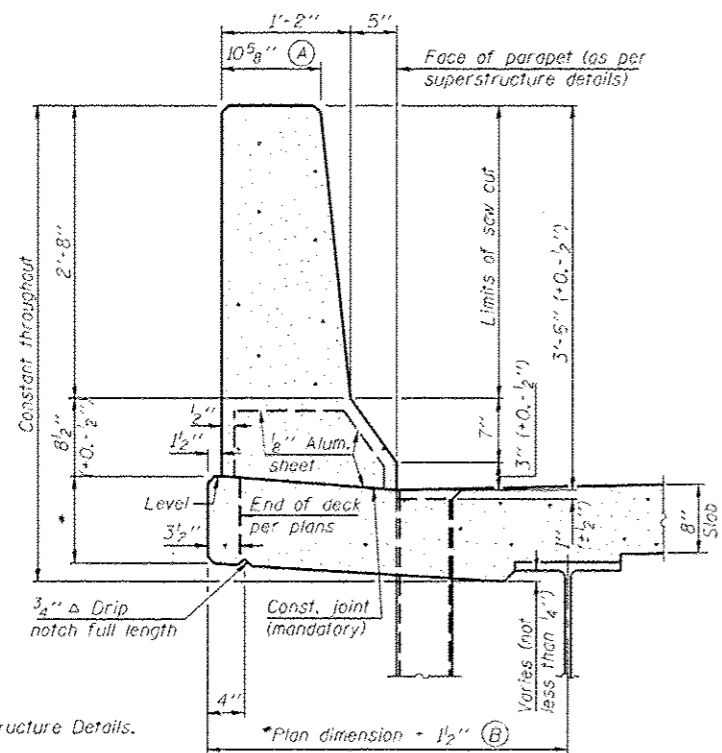
\*See Superstructure Details.

\*Plan dimension = 1 1/2" (B)



**SECTION**

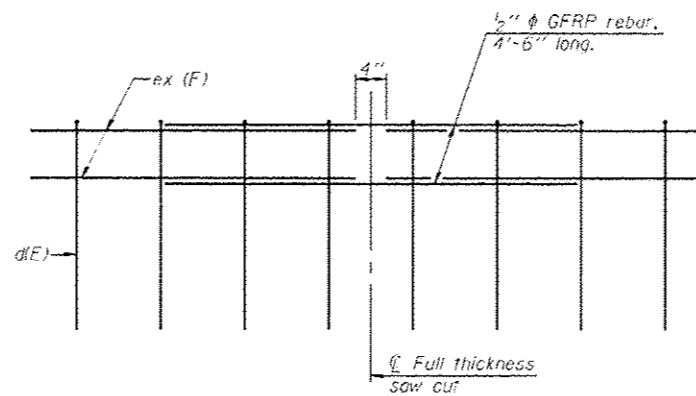
(34" parapet shown - 42" parapet similar)  
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



**42" F SHAPE PARAPET SECTION**  
(Showing dimensions)

\*See Superstructure Details.

\*Plan dimension = 1 1/2" (B)

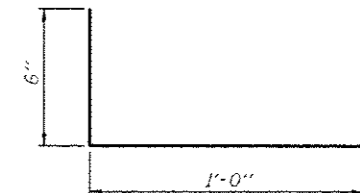


**GFRP REBAR STIFFENING DETAIL**

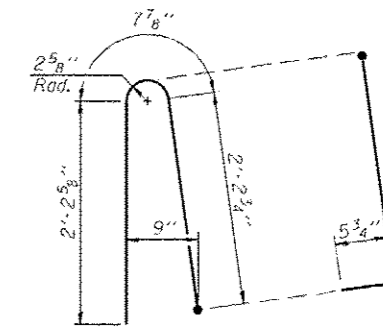
(Place as shown in parapet section at each parapet joint location.)

**GENERAL NOTES**

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler. Steel superstructure shown. Other superstructure types similar.

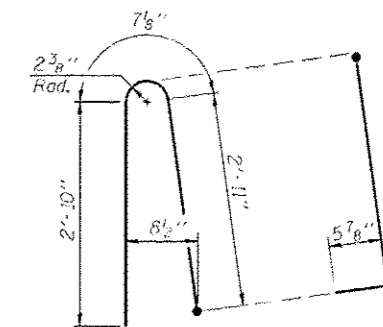


**#3 (E) BAR**



**ALTERNATE BAR d(E)**

(For 34" parapet when conduit is present)



**ALTERNATE BAR d(E)**

(For 42" parapet when conduit is present)

SFP 34-42

8-16-12

REV. SHEET 6-3-13

**CEC** Cummins Engineering Corporation  
Civil and Structural Engineering

JOB # 2276.3  
FILE # 0540057\_0058-31-ParaSlipOpt1an.dgn  
DATE # 5/14/2013

DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION  
STRUCTURE NO. 054-0057 (NB) & 054-0058 (SB)

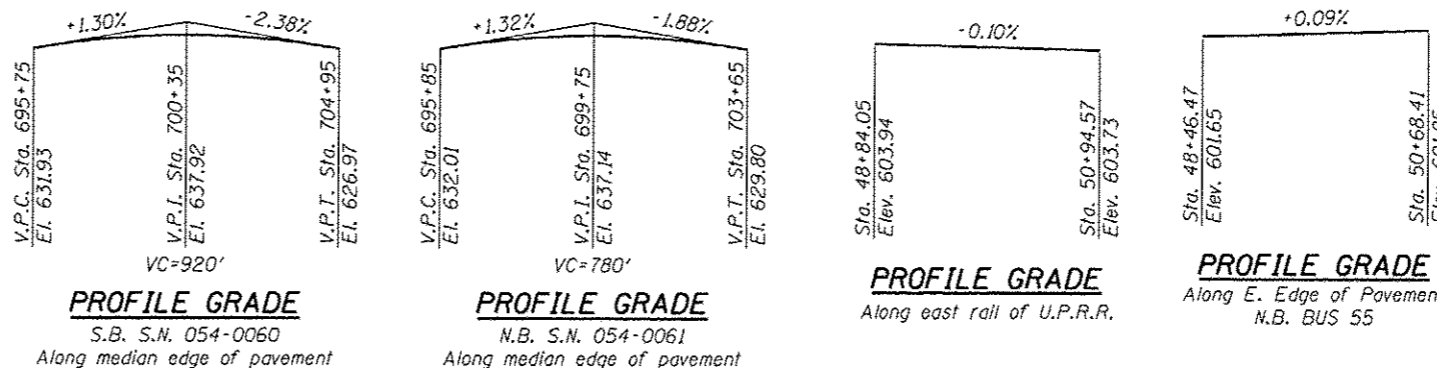
SHEET NO. 31 OF 31 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	230
				CONTRACT NO. 72E11

ILLINOIS FED. AID PROJECT

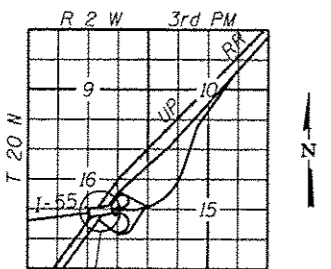
Benchmark: Chiseled Square on South Approach of S.N. 054-0060, over old US 66, Elev. 633.05

Existing Structure: S.N. 054-0060 (S.B.) and 054-0061 (N.B.) built in 1974 as F.A.I. Rte. 55, Section 54-4VHB, at Sta. 700+89.92. Existing dual structures each consist of a 3-span continuous reinforced concrete deck on 66" I girders supported by open stub abutments and multi-column trapezoidal piers on concrete piles. The structures are 491'-8 3/4" Bk. to Bk. of abutments and the out to out of deck varies from 42'-7 1/8" to 52'-6 1/4" (S.B.) and 42'-3" to 48'-1 3/8" (N.B.). The existing bridge deck, backwalls and wingwalls are to be removed and replaced under staged construction.

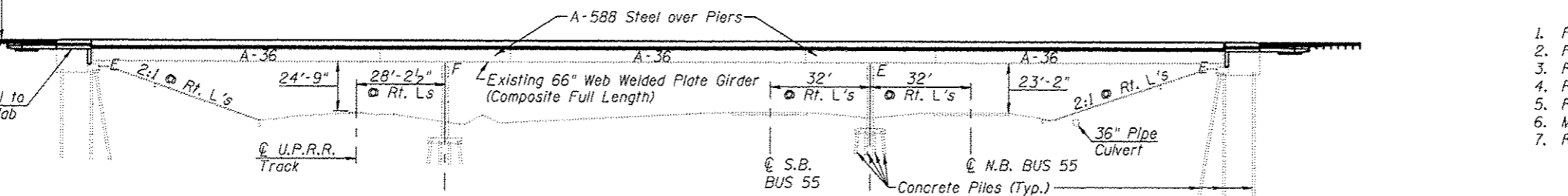


Traffic Barrier Terminal  
Type 6 Std. 631031 (Appr. Ends)  
Type 5 Std. 631026 (Exit Ends)

Remove Exist. Wingwall to bottom of Approach slab (Typ.)



Proposed Improvement



**SCOPE OF WORK**

1. Remove and replace bridge deck.
2. Remove and replace end diaphragms.
3. Remove and replace bearings at expansion joints.
4. Remove and replace approach pavements.
5. Remove and replace abutment backwalls.
6. Make wingwall modifications.
7. Repair stopwalls, abutment caps and piers as necessary.

**APPROVED**  
For Structural Adequacy Only

*D. Carl Lumen, P.E.*  
Engineer of Bridges & Structures

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient (A) = 0.046g  
Site Coefficient (S) = 1.5

**DESIGN SPECIFICATIONS**

2002 AASHTO (New Construction)  
1985 FHWA Seismic Retrofit Manual  
1969 AASHTO (Existing Construction)

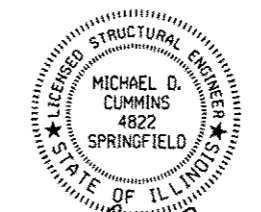
**DESIGN STRESSES**

**FIELD UNITS (New Construction)**  
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)  
fy = 36,000 psi (M270 Grade 36)

**FIELD UNITS (Existing Construction)**  
f'c = 1,200 psi (Deck Slab)  
f'c = 1,400 psi (Curb, Parapet, Substructure)  
fs = 20,000 psi (Reinforcement & Steel)  
fs = 27,000 psi (Neg. Moment Areas)

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

**GENERAL PLAN**  
**I-55 OVER BUS 55 & U.P.R.R.**  
**F.A.I. RTE. 55**  
**SECTION D6 LOGAN CO BR 2011-1**  
**LOGAN COUNTY**  
**STATION 700+89.92**  
**STRUCTURE NO. 054-0060 (S.B.)**  
**STRUCTURE NO. 054-0061 (N.B.)**



*Michael D. Cummins* 5/14/13  
(Expires 11/30/2014)

**PLAN**  
**REVISION SHEET 6-3-13**

<b>CEC</b> Civil and Structural Engineering	Cummins Engineering Corporation	JOB: 2265.2	DESIGNED: AAN	REVISED: -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>GENERAL PLAN</b>				F.A.I. SECTION COUNTY TOTAL SHEETS SHEET NO. 55 D6 LOGAN CO BR 2011-1 LOGAN 429 231
	FILE: 0540060_0061-72E11-01-GPE.dgn	CHECKED: MDC	REVISIONS: -	REVISIONS: -		STRUCTURE NO. 054-0060 (SB) & STRUCTURE NO. 054-0061 (NB)				
	DATE: 5/14/2013	DRAWN: SJS	REVISIONS: -	REVISIONS: -		SHEET NO. 1 OF 53 SHEETS				
	CHECKED: MDC	REVISIONS: -	REVISIONS: -	CONTRACT NO. 72E11						

**GENERAL NOTES**

Fasteners shall be ASTM A325 Type I, mechanically galvanized bolts. Bolts 1 in.  $\phi$ , holes  $1\frac{1}{8}$  in.  $\phi$ , unless otherwise noted. No field welding is permitted except as specified in the contract documents. Reinforcement bars designated (E) shall be epoxy coated. Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially 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.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding  $\frac{1}{4}$  inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, 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.

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.

Concrete Sealer shall be applied to the designated areas of the abutments and piers.

Cleaning and painting of the structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All beams, bearings and other structural steel within 10 ft (measured along the beam) of the deck joints shall be cleaned per Near White Blast Cleaning - SSPC-SP10.

The designated areas cleaned per Near White Blast Cleaning and per Commercial Grade Power Tool Cleaning shall be painted according to the requirements of Paint System 1 - OZ/E/U. The color of the final finish coat for all surfaces shall be Interstate Green, Munsell No. 7.5G 4/8.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on project.

All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300, Type 1.

Location No. 3 = S.N. 054-0060 SB

Location No. 4 = S.N. 054-0061 NB

When the deck pour is stopped for the day at one or more of the transverse bonded construction joints in the deck pouring sequence as shown, the next pour shall not be made until both of the following are met:

- 1) At least 72 hours shall have elapsed from the end of the previous pour.
- 2) The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

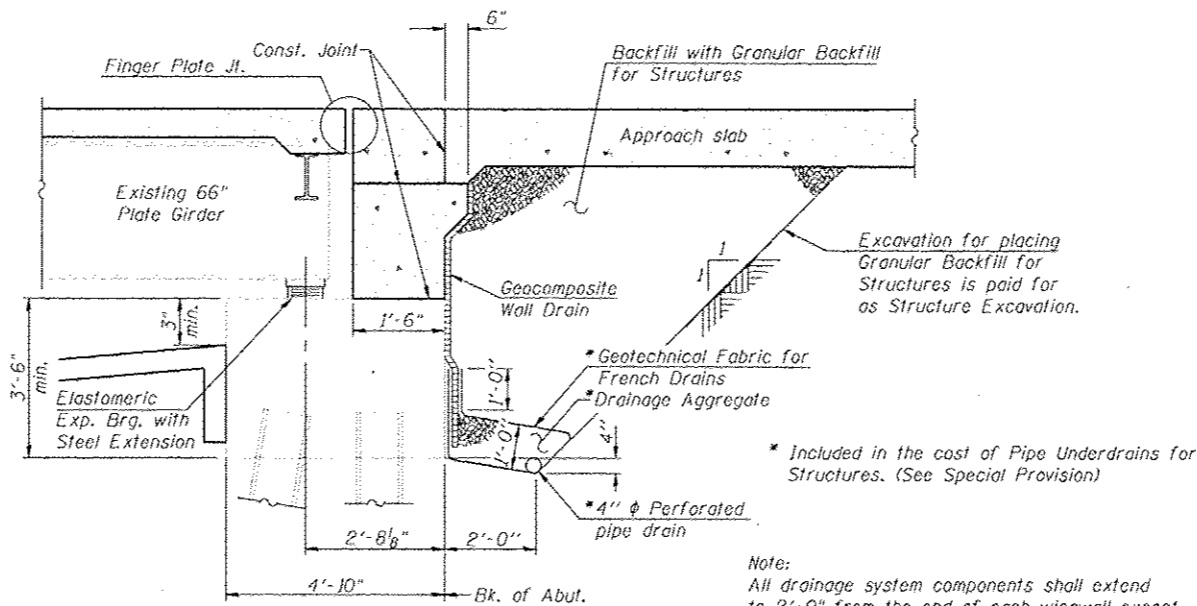
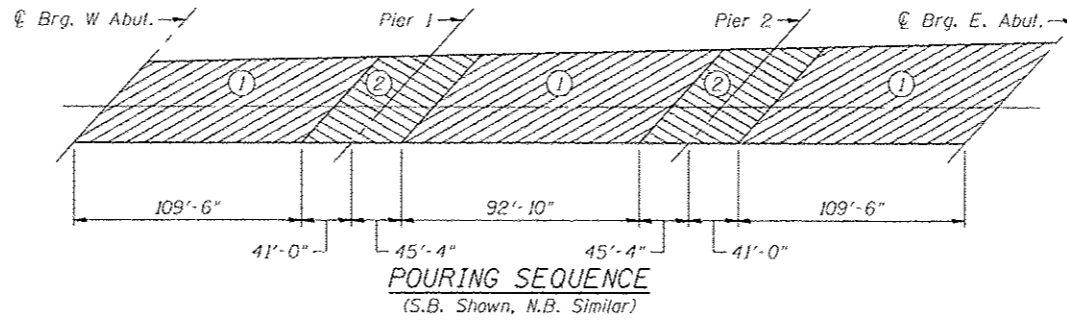
STATION 700+89.92  
BUILT 20... BY  
STATE OF ILLINOIS  
F.A.I. RT. 55  
SEC. D6 LOGAN CO BR 2011-1  
LOADING HS 20-44  
STRUCTURE NO. 054-0060  
(S.B. STRUCTURE)

STATION 700+89.92  
BUILT 20... BY  
STATE OF ILLINOIS  
F.A.I. RT. 55  
SEC. D6 LOGAN CO BR 2011-1  
LOADING HS 20-44  
STRUCTURE NO. 054-0061  
(N.B. STRUCTURE)

**NAME PLATE**

See Std. 515001

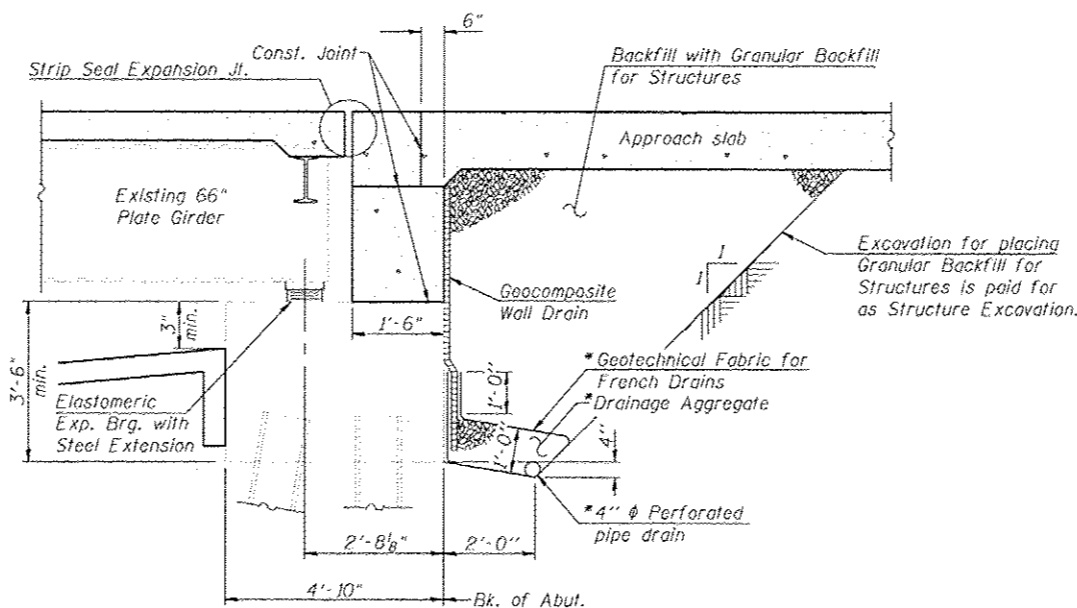
Existing name plate shall be cleaned and placed next to the new name plate. Cost included in "Name Plates".



**SECTION THRU EAST ABUTMENTS**

(Horiz. dim. @ Rt. L's)

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.)



**SECTION THRU WEST ABUTMENTS**

(Horiz. dim. @ Rt. L's)

**INDEX OF SHEETS**

1	General Plan
2	General Data
3	Stage Construction Details
4	Temporary Concrete Barrier
5-8	Top of Slab Elevations (SB)
9-10	Top of Approach Slab Elevations (SB)
11-14	Top of Slab Elevations (NB)
15-16	Top of Approach Slab Elevations (NB)
17-19	Superstructure
20-22	Superstructure Details
23-24	Bridge Approach Slab Details (SB)
25-26	Bridge Approach Slab Details (NB)
27	Bridge Approach Slab Details
28	Drainage Scupper, DS-II
29	Preformed Joint Strip Seal
30	Finger Plate Expansion Joint (SB)
31	Finger Plate Expansion Joint (NB)
32	Finger Plate Expansion Joint Details
33-35	Structural Steel
36	Type I Bearing Details at West Abutments
37	Type III Bearing Details at East Abutments
38	West Abutment Concrete Removal (SB)
39	East Abutment Concrete Removal (SB)
40	West Abutment Concrete Removal (NB)
41	East Abutment Concrete Removal (NB)
42	West Abutment Details (SB)
43	East Abutment Details (SB)
44	West Abutment Details (NB)
45	East Abutment Details (NB)
46	Abutment Details
47	Pier 2
48	Pier Repairs (SB)
49	Pier Repairs (NB)
50	West Slope Wall Repair
51	East Slope Wall Repair
52	Bar Splicer Assembly and Mechanical Splicer Details
53	Concrete Parapet Slipforming Option

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.		141.1	141.1
Removal of Existing Concrete Deck, No. 2	Each	2		2
Protective Shield	Sq. Yd.	2389		2389
Structure Excavation	Cu. Yd.		658	658
Concrete Structures	Cu. Yd.		196.2	196.2
Concrete Superstructure	Cu. Yd.	1925.9		1925.9
Bridge Deck Grooving	Sq. Yd.	5635		5635
Protective Coat	Sq. Yd.	6997		6997
Furnishing and Erecting Structural Steel	Pound	21,130		21,130
Stud Shear Connectors	Each	18,894		18,894
Reinforcement Bars, Epoxy Coated	Pound	474,235	28,155	502,390
Bar Splicers	Each	3718	461	4179
Name Plates	Each	2		2
Preformed Joint Strip Seal	Foot	128		128
Finger Plate Expansion Joint, 4"	Foot	133		133
Elastomeric Bearing Assembly, Type I	Each	14		14
Elastomeric Bearing Assembly, Type III	Each	14		14
Anchor Bolt 1"	Each	56		56
Concrete Sealer	Sq. Ft.		1597	1597
Geocomposite Wall Drain	Sq. Yd.		432	432
Granular Backfill for Structures	Cu. Yd.		658	658
Jack & Remove Existing Bearings	Each	28		28
Containment and Disposal of Lead Paint Cleaning Residues No. 3	L. Sum	1		1
Containment and Disposal of Lead Paint Cleaning Residues No. 4	L. Sum	1		1
Cleaning and Painting Steel Bridge No. 3	L. Sum	1		1
Cleaning and Painting Steel Bridge No. 4	L. Sum	1		1
Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq. Ft.		43	43
Drainage Scuppers, DS-II	Each	8		8
Temporary Sheet Piling	Sq. Ft.		1904	1904
Pipe Underdrains for Structures, 4"	Foot		287	287
Slope Wall Repair	Sq. Yd.		463	463
Controlled Low-Strength Material	Cu. Yd.		159	159



JOB - 2265.2  
FILE - 9548268.0061-72E11-02-GenData.dgn  
DATE - 9/17/2013

DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

REVISED -  
REVISED -  
REVISED -  
REVISED -

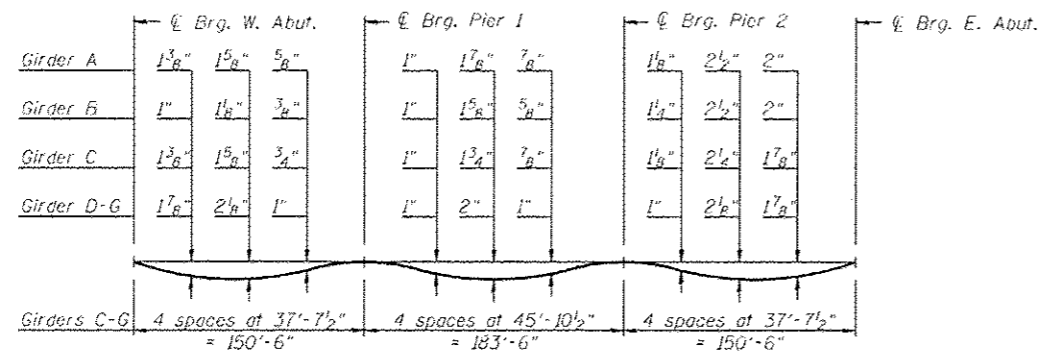
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**GENERAL DATA**  
**STRUCTURE NO. 054-0060 (SB) & STRUCTURE NO. 054-0061 (NB)**

SHEET NO. 2 OF 53 SHEETS

F.A.I. RTE. 55  
SECTION D6 LOGAN CO BR 2011-1  
COUNTY LOGAN  
TOTAL SHEETS 429  
SHEET NO. 232  
CONTRACT NO. 72E11  
ILLINOIS FED. AID PROJECT

REV. SHEET G-3-13

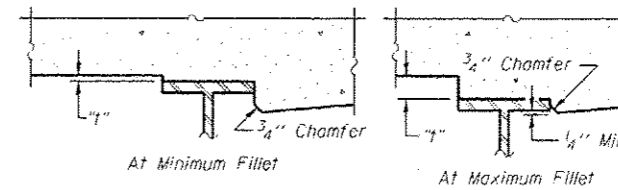


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

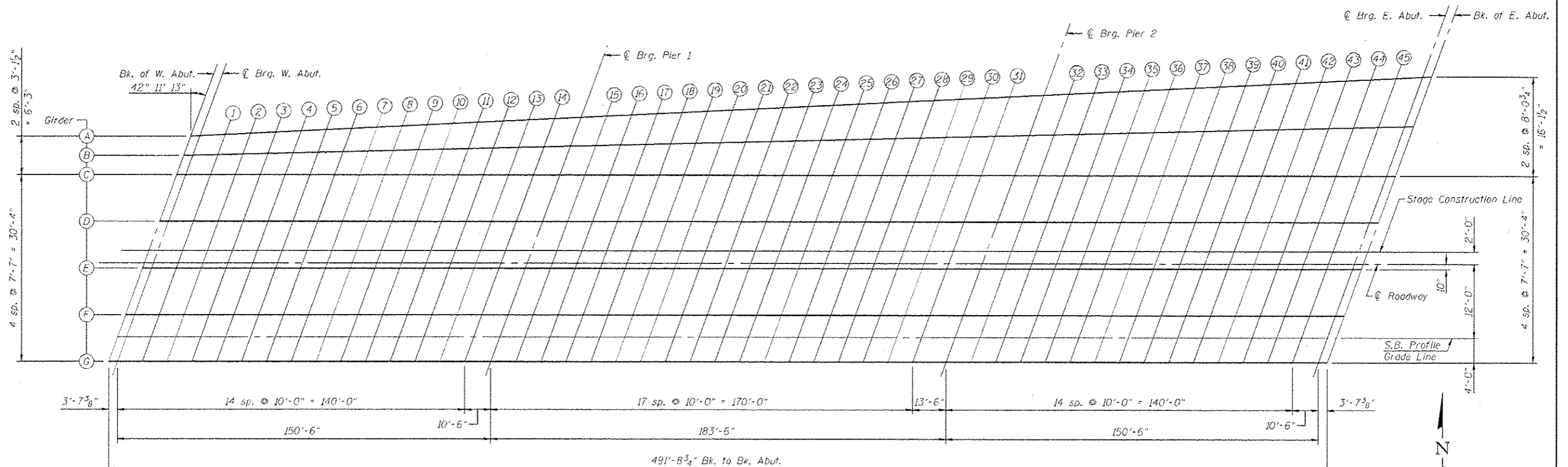
Note:

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 sheets 6-8 of 53.



To determine "I": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 6-8 of 53, minus slab thickness, equals the fillet heights "I" above top flange of girders.

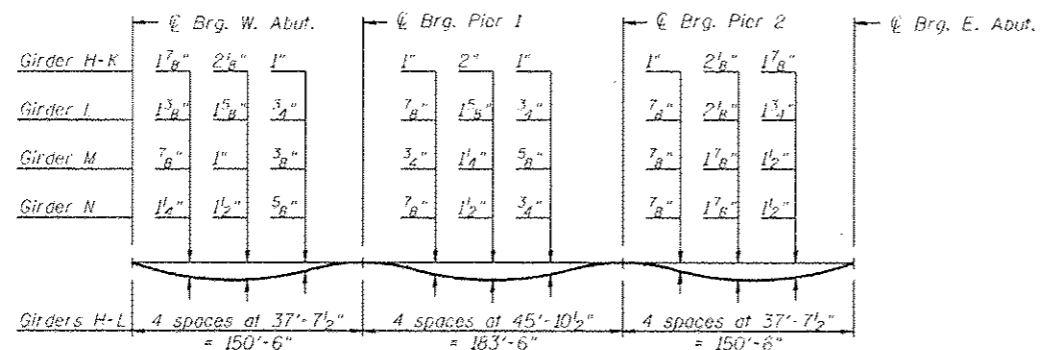
**FILLET HEIGHTS**



**PLAN**

REV. SHEET C-3-13

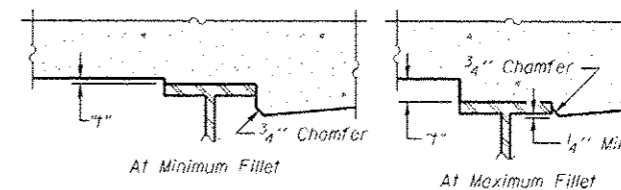
<b>CEC</b> Cummins Engineering Corporation Civil and Structural Engineering	JOB • 2265.2	DESIGNED - ANN	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TOP OF SLAB ELEVATIONS STRUCTURE NO. 054-0060 (SB)	F.A.I. RTE. 55	SECTION D6 LOGAN CO BR 2011-1	COUNTY LOGAN	TOTAL SHEETS 429	SHEET NO. 235
	FILE • 0540060.0061-72E11-05-00-ToS-SB.dgn	CHECKED - MDC	REVISED -			CONTRACT NO. 72E11				
DATE • 5/14/2013	DRAWN - SJS	REVISED -		SHEET NO. 5 OF 53 SHEETS						
	CHECKED - MDC	REVISED -		ILLINOIS FED. AID PROJECT						



**DEAD LOAD DEFLECTION DIAGRAM**

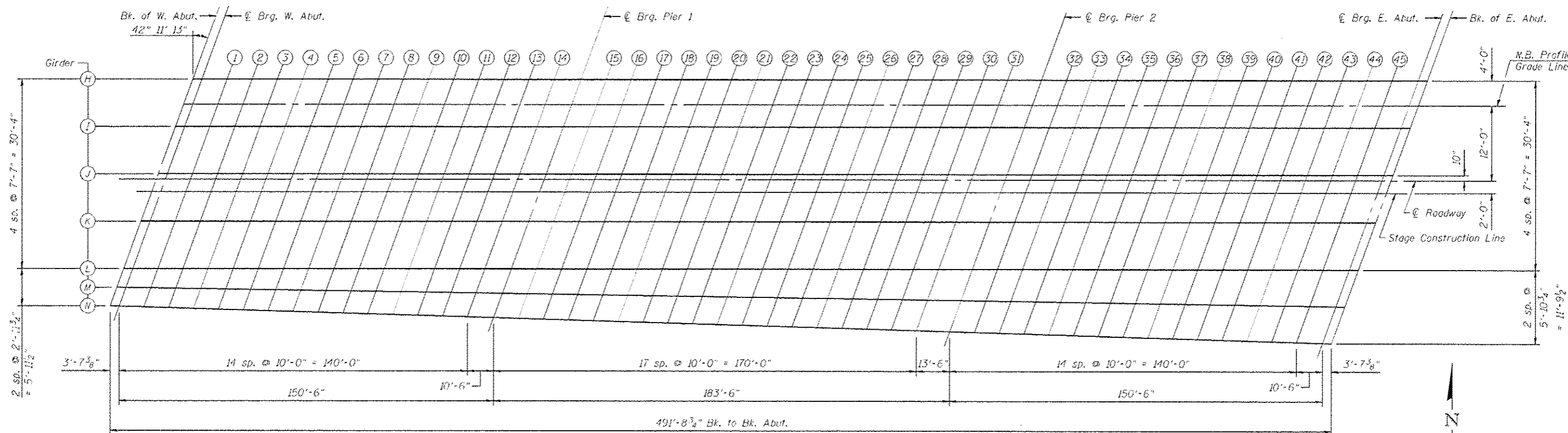
(Includes weight of concrete only.)

Note:  
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 12-14 of 53.



To determine "f": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 12-14 of 53, minus slab thickness, equals the fillet heights "f" above top flange of girders.

**FILLET HEIGHTS**

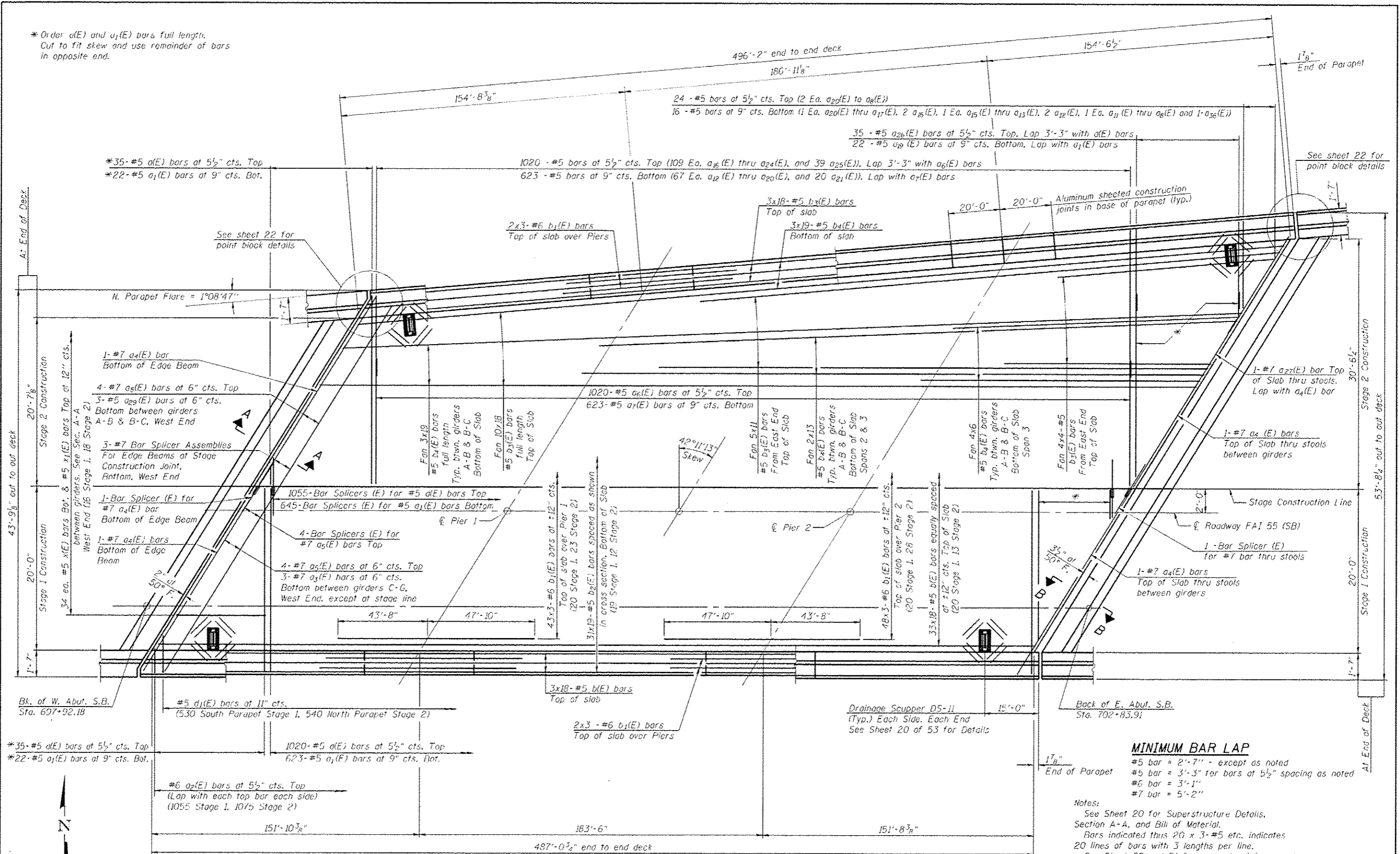


**PLAN**

REV. SHEET 6-3-13

<b>CEC</b> Cummins Engineering Corporation Civil and Structural Engineering	JOB • 2265.2	DESIGNED - ANN	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>TOP OF SLAB ELEVATIONS</b> <b>STRUCTURE NO. 054-0061 (NB)</b>		F.A.I. RTE. 55	SECTION D6 LOGAN CO BR 2011-1	COUNTY LOGAN	TOTAL SHEETS 429	SHEET NO. 241
	FILE • 0540060_0061-72E11-11-14-105-NB.dgn	CHECKED - MDC	REVISED -		SHEET NO. 11 OF 53 SHEETS		CONTRACT NO. 72E11		ILLINOIS FED. AID PROJECT		
	DATE • 5/14/2013	DRAWN - SJS	REVISED -								
		CHECKED - MDC	REVISED -								

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



\*35- #5 a(E) bars at 5 1/2" cts. Top  
\*22- #5 a<sub>1</sub>(E) bars at 9" cts. Bot.

1020 - #5 bars at 5 1/2" cts. Top (109 Ea. a<sub>16</sub>(E) thru a<sub>24</sub>(E), and 39 a<sub>25</sub>(E)). Lap 3'-3" with a<sub>6</sub>(E) bars  
623 - #5 bars at 9" cts. Bottom (67 Ea. a<sub>12</sub>(E) thru a<sub>20</sub>(E), and 20 a<sub>21</sub>(E)). Lap with a<sub>7</sub>(E) bars

35 - #5 a<sub>26</sub>(E) bars at 5 1/2" cts. Top. Lap 3'-3" with a(E) bars  
22 - #5 a<sub>19</sub>(E) bars at 9" cts. Bottom. Lap with a<sub>1</sub>(E) bars

**MINIMUM BAR LAP**  
#5 bar = 2'-7" - except as noted  
#5 bar = 3'-3" for bars at 5 1/2" spacing as noted  
#6 bar = 3'-1"  
#7 bar = 5'-2"

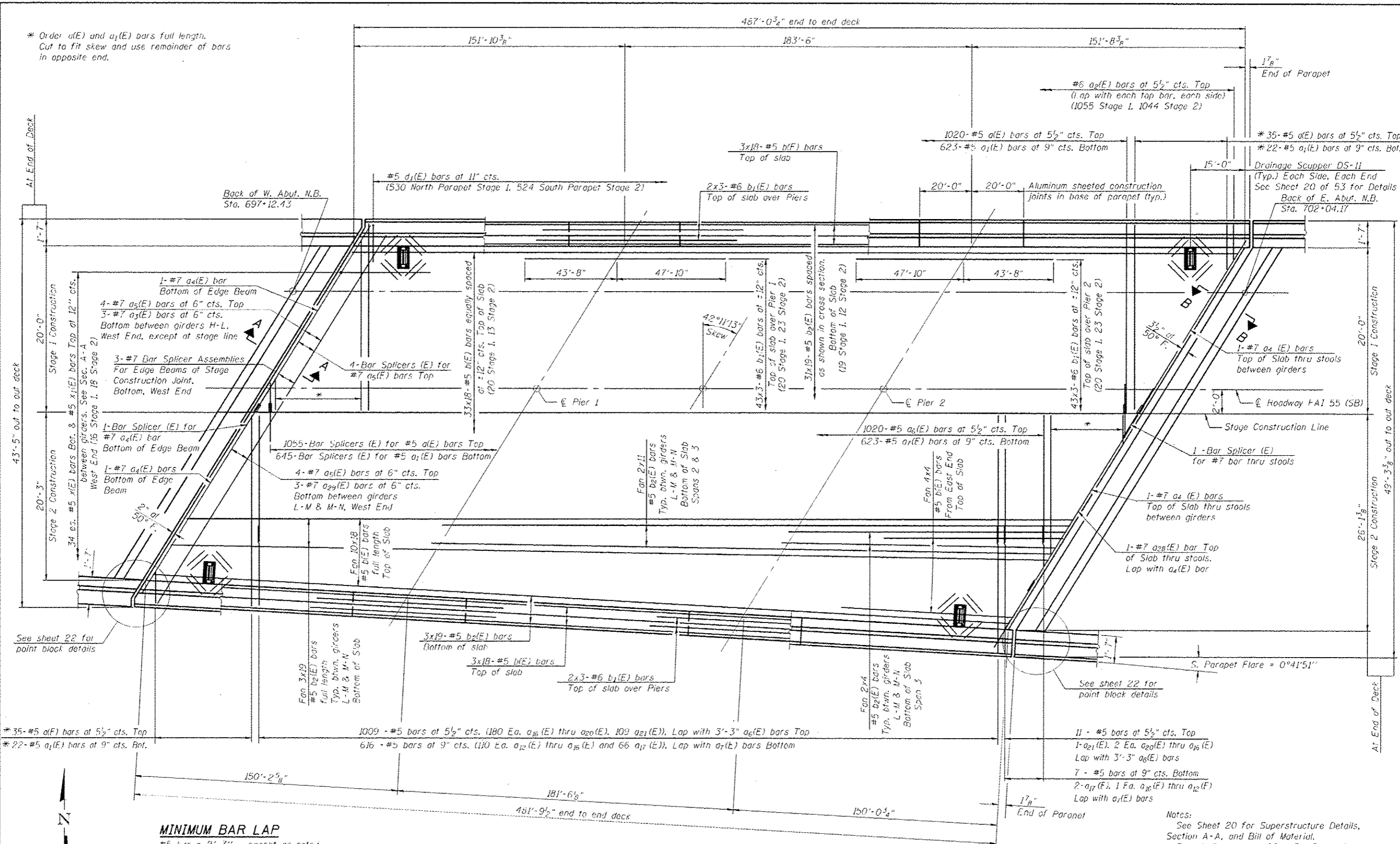
Notes:  
See Sheet 20 for Superstructure Details,  
Section A-A, and Bill of Material.  
Bars indicated thus 20 x 3-#5 etc. indicates  
20 lines of bars with 3 lengths per line.  
See Sheet 20 and 21 for parapet reinforcement.  
See Sheet 32 for Section B-B and finger plate  
expansion joint details.

REV. SHEET G-3-13 PLAN - SB

<b>CEC</b> Cummins Engineering Corporation Civil and Structural Engineering	JOB	• 2265.2	DESIGNED	- AAN	REVISED	-	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>SUPERSTRUCTURE</b> <b>STRUCTURE NO. 054-0060 (SB)</b>	F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE	• 0540060.0061-72E11-17-19-Super.dgn	CHECKED	- MDC	REVISED	-			55	D6 LOGAN CO BR 2011-1	LOGAN	429	247
	DATE	• 5/14/2013	DRAWN	- TSH	REVISED	-			CONTRACT NO. 72E11				
	SHEET NO. 17 OF 53 SHEETS										ILLINOIS FED. AID PROJECT		



\* Order  $a_1(E)$  and  $a_2(E)$  bars full length.  
Cut to fit skew and use remainder of bars  
in opposite end.



**MINIMUM BAR LAP**

- #5 bar = 2'-7" - except as noted
- #6 bar = 3'-3" for bars at 5 1/2" spacing as noted
- #7 bar = 3'-1"
- #8 bar = 5'-2"

PLAN - NB

REV. SHEET 6-3-13

Notes:  
See Sheet 20 for Superstructure Details,  
Section A-A, and Bill of Material.  
Bars indicated thus 20 x 3-#5 etc. indicates  
20 lines of bars with 3 lengths per line.  
See Sheet 20 and 21 for parapet reinforcement.  
See Sheet 32 for Section B-B and finger plate  
expansion joint details.



JOB	2265.2
FILE	0540068_0061-72E11-17-19-Super.dgn
DATE	5/14/2013

DESIGNED	AAN
CHECKED	MDC
DRAWN	TSH
CHECKED	AAN

REVISED	-
REVISED	-
REVISED	-
REVISED	-

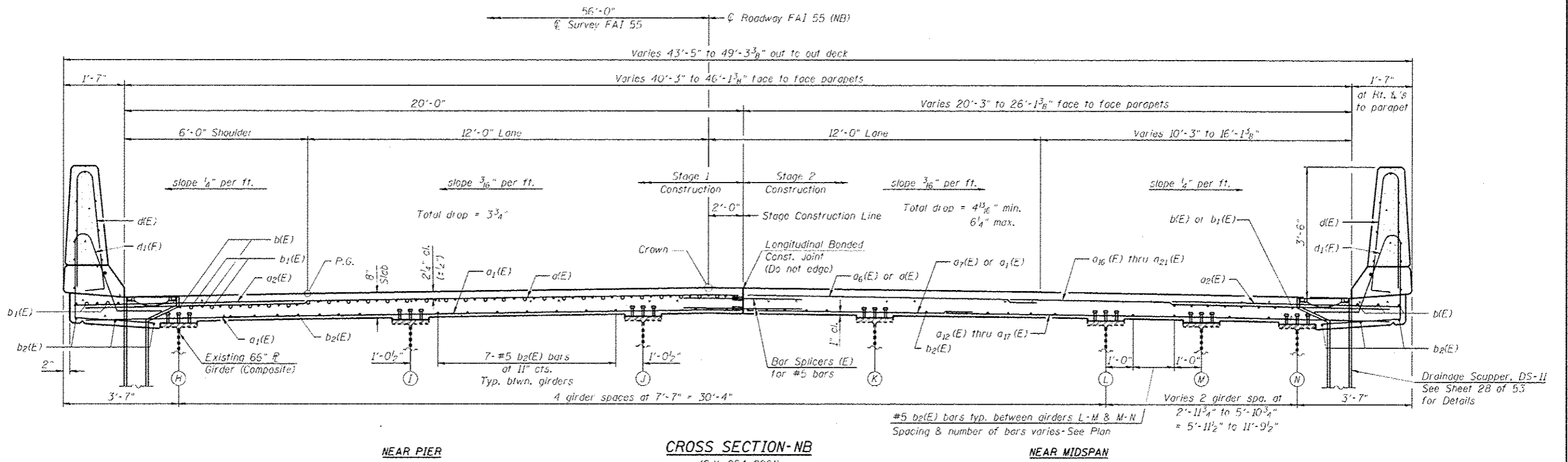
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE  
STRUCTURE NO. 054-0061 (NB)

SHEET NO. 18 OF 53 SHEETS

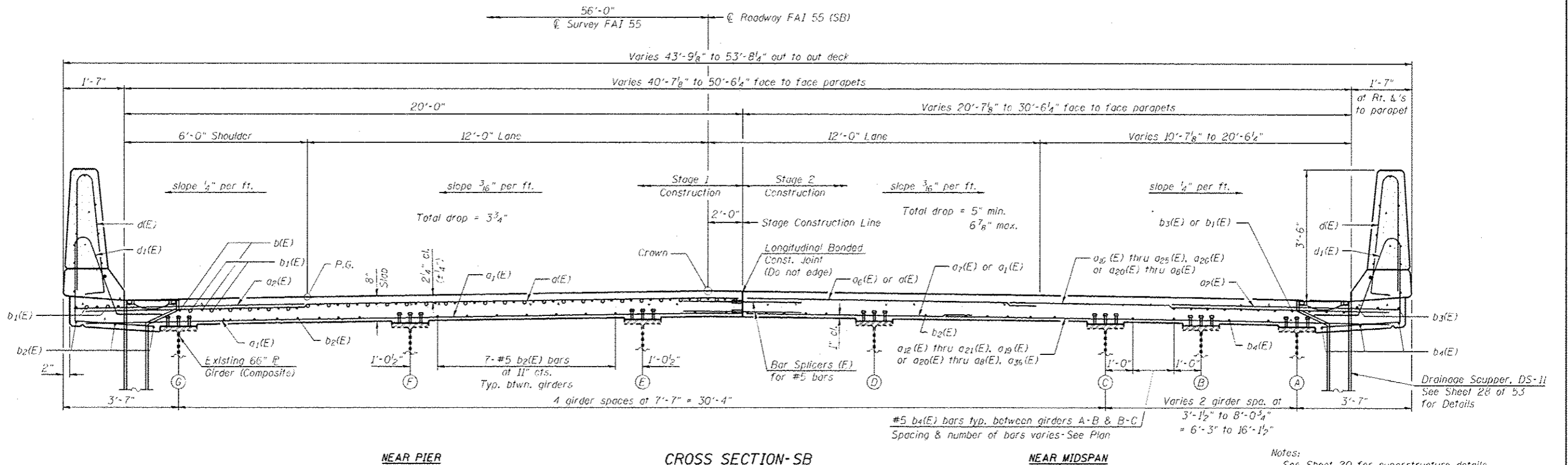
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	248
CONTRACT NO. 72E11				

ILLINOIS FED. AID PROJECT



**CROSS SECTION-NB**

(S.N. 054-0061)  
(Looking East in the direction of traffic)



**CROSS SECTION-SB**

(S.N. 054-0060)  
(Looking West in the direction of traffic)

REV. SHEET 6-3-13

Notes:  
See Sheet 20 for superstructure details and Bill of Material.  
See Sheet 20 and 21 for parapet reinforcement.

**CEC**  
Civil and Structural Engineering

JOB • 2265.2  
FILE • 0540060.0061-72E11-17-19-Super.dgn  
DATE • 5/14/2013

DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE**  
STRUCTURE NO. 054-0060 (SB) & STRUCTURE NO. 054-0061 (NB)

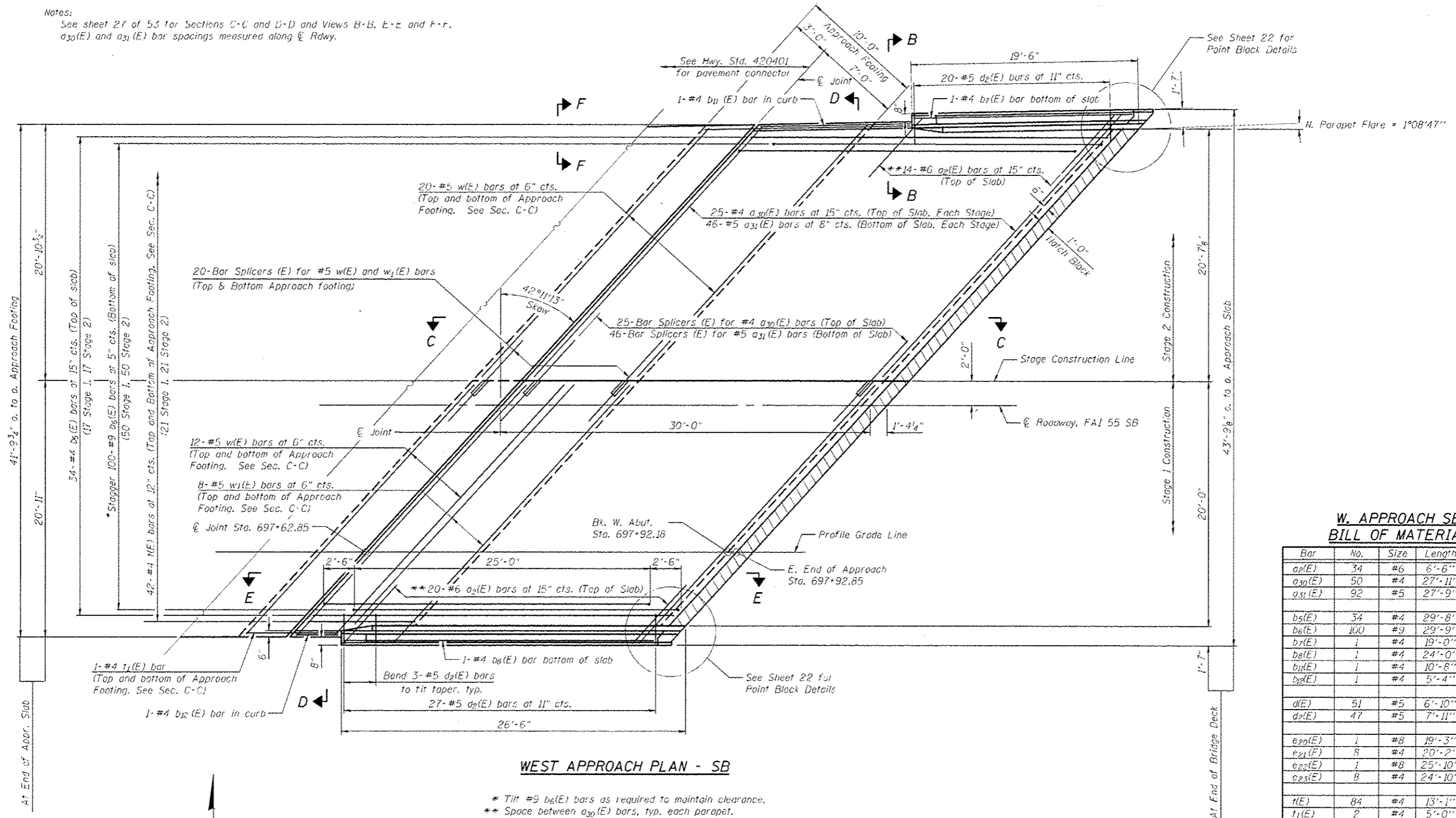
SHEET NO. 19 OF 53 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	249
				CONTRACT NO. 72E11

ILLINOIS FED. AID PROJECT



Notes:  
See sheet 21 of 53 for Sections C-C and U-D and Views B-B, E-E and F-F.  
a<sub>30</sub>(E) and a<sub>31</sub>(E) bar spacings measured along  $\bar{C}$  Rdwy.



WEST APPROACH PLAN - SB

\* Tilt #5 b<sub>6</sub>(E) bars as required to maintain clearance.  
\*\* Space between a<sub>30</sub>(E) bars, typ. each parapet.

W. APPROACH SB  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a <sub>2</sub> (E)	34	#6	6'-6"	—
a <sub>30</sub> (E)	50	#4	27'-11"	—
a <sub>31</sub> (E)	92	#5	27'-9"	—
b <sub>5</sub> (E)	34	#4	29'-8"	—
b <sub>6</sub> (E)	100	#9	29'-9"	—
b <sub>7</sub> (E)	1	#4	19'-0"	—
b <sub>8</sub> (E)	1	#4	24'-0"	—
b <sub>11</sub> (E)	1	#4	10'-8"	—
b <sub>12</sub> (E)	1	#4	5'-4"	—
d(E)	51	#5	6'-10"	—
d <sub>2</sub> (E)	47	#5	7'-11"	—
e <sub>20</sub> (E)	1	#8	19'-3"	—
e <sub>21</sub> (E)	8	#4	20'-2"	—
e <sub>22</sub> (E)	1	#8	25'-10"	—
e <sub>23</sub> (E)	8	#4	24'-10"	—
h(E)	84	#4	13'-1"	—
l <sub>1</sub> (E)	2	#4	5'-0"	—
w(E)	64	#5	27'-9"	—
w <sub>1</sub> (E)	16	#5	26'-6"	—
Concrete Superstructure		Cu. Yd.	68.3	
Concrete Structures		Cu. Yd.	17.2	
Reinforcement Bars, Epoxy Coated		Pound	18,910	
Bar Splicers		Each	111	

REV. SHEET G-3-13



JOB # 2265.2  
FILE # 0540060\_0061-72E11-23-24-SH0060-App  
DATE # 5/14/2013

DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

REVISED -  
REVISED -  
REVISED -  
REVISED -

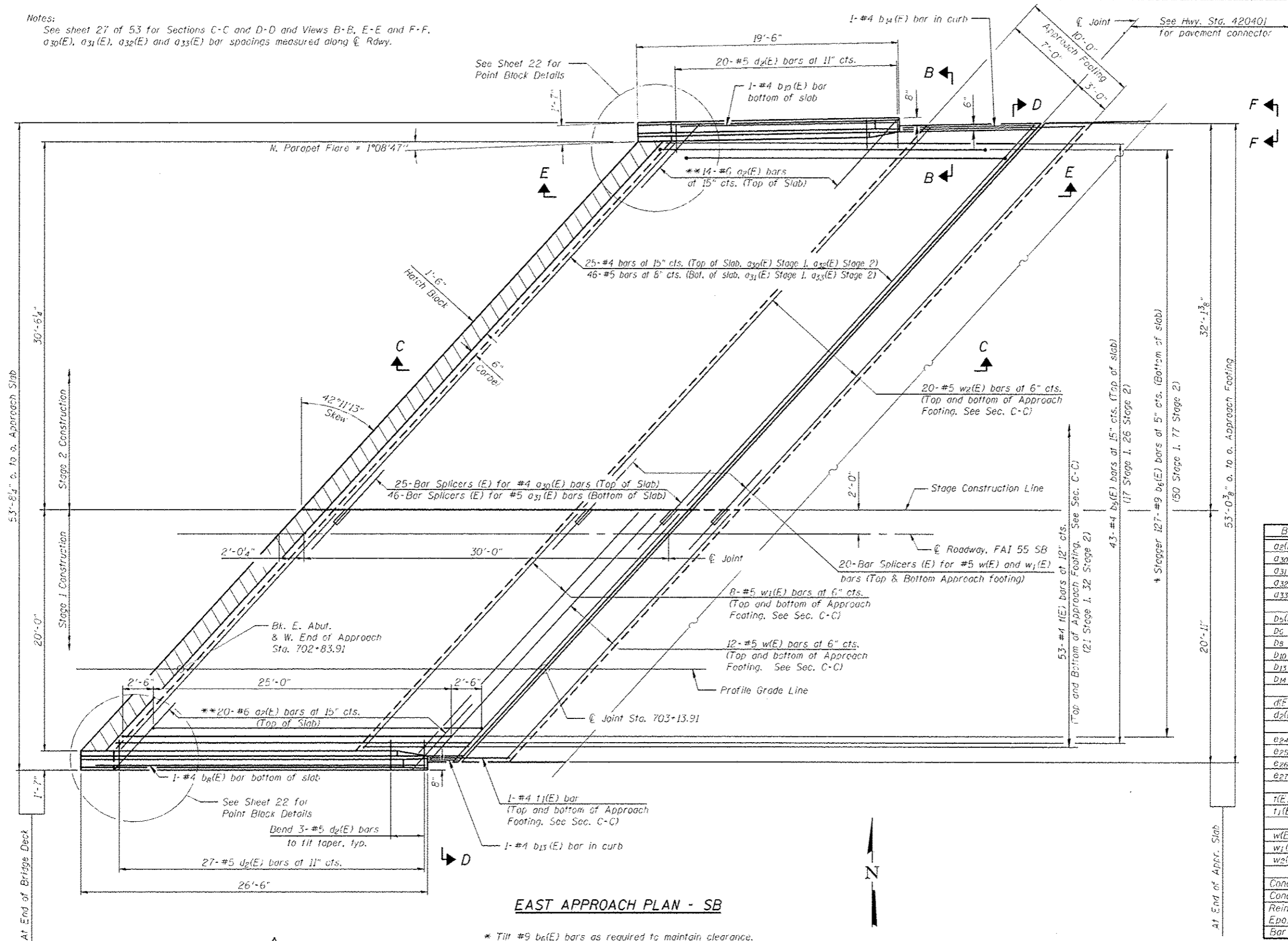
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

WEST BRIDGE APPROACH SLAB DETAILS  
STRUCTURE NO. 054-0060 (SB)

SHEET NO. 23 OF 53 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	253
				CONTRACT NO. 72E11
ILLINOIS FED. AID PROJECT				

Notes:  
See sheet 27 of 53 for Sections C-C and D-D and Views B-B, E-E and F-F.  
a<sub>30</sub>(E), a<sub>31</sub>(E), a<sub>32</sub>(E) and a<sub>33</sub>(E) bar spacings measured along  $\bar{C}$  Rdwy.



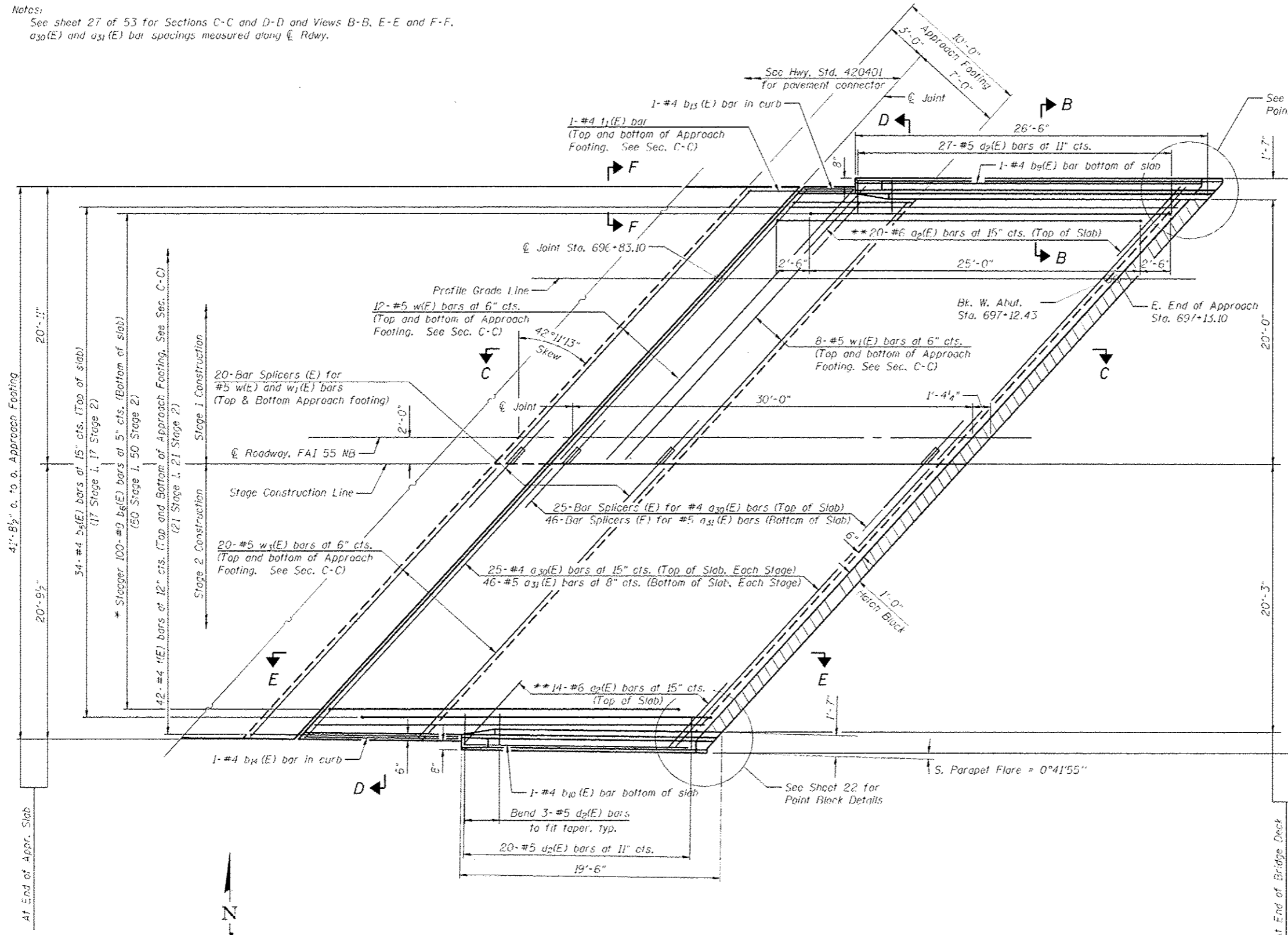
EAST APPROACH PLAN - SB

REV. SHEET 6-3-13 \* Tilt #9 b<sub>6</sub>(E) bars as required to maintain clearance.  
\*\* Space between a<sub>30</sub>(E) or a<sub>32</sub>(E) bars, typ, each parapet.

E. APPROACH SB  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a <sub>2</sub> (E)	34	#6	6'-6"	—
a <sub>30</sub> (E)	25	#4	27'-11"	—
a <sub>31</sub> (E)	46	#5	27'-9"	—
a <sub>32</sub> (E)	25	#4	43'-1"	—
a <sub>33</sub> (E)	46	#5	42'-11"	—
b <sub>5</sub> (E)	43	#4	29'-8"	—
b <sub>6</sub> (E)	127	#9	29'-9"	—
b <sub>8</sub> (E)	1	#4	24'-0"	—
b <sub>10</sub> (E)	1	#4	17'-0"	—
b <sub>13</sub> (E)	1	#4	3'-8"	—
b <sub>14</sub> (E)	1	#4	12'-4"	—
d <sub>1</sub> (E)	51	#5	6'-10"	—
d <sub>2</sub> (E)	47	#5	7'-11"	—
e <sub>24</sub> (E)	1	#8	19'-2"	—
e <sub>25</sub> (E)	8	#4	19'-2"	—
e <sub>26</sub> (E)	1	#6	26'-2"	—
e <sub>27</sub> (E)	8	#4	26'-2"	—
t(E)	106	#4	15'-1"	—
t <sub>1</sub> (E)	2	#4	5'-0"	—
w(E)	24	#5	27'-9"	—
w <sub>1</sub> (E)	15	#5	26'-6"	—
w <sub>2</sub> (E)	40	#5	42'-10"	—
Concrete Superstructure	Cu. Yd.		96.1	
Concrete Structures	Cu. Yd.		21.9	
Reinforcement Bars, Epoxy Coated	Pound		23,620	
Bar Splicers	Each		111	

Notes:  
See sheet 27 of 53 for Sections C-C and D-D and Views B-B, E-E and F-F,  
a<sub>30</sub>(E) and a<sub>31</sub>(E) bar spacings measured along  $\bar{C}$  Rdwy.



WEST APPROACH PLAN - NB

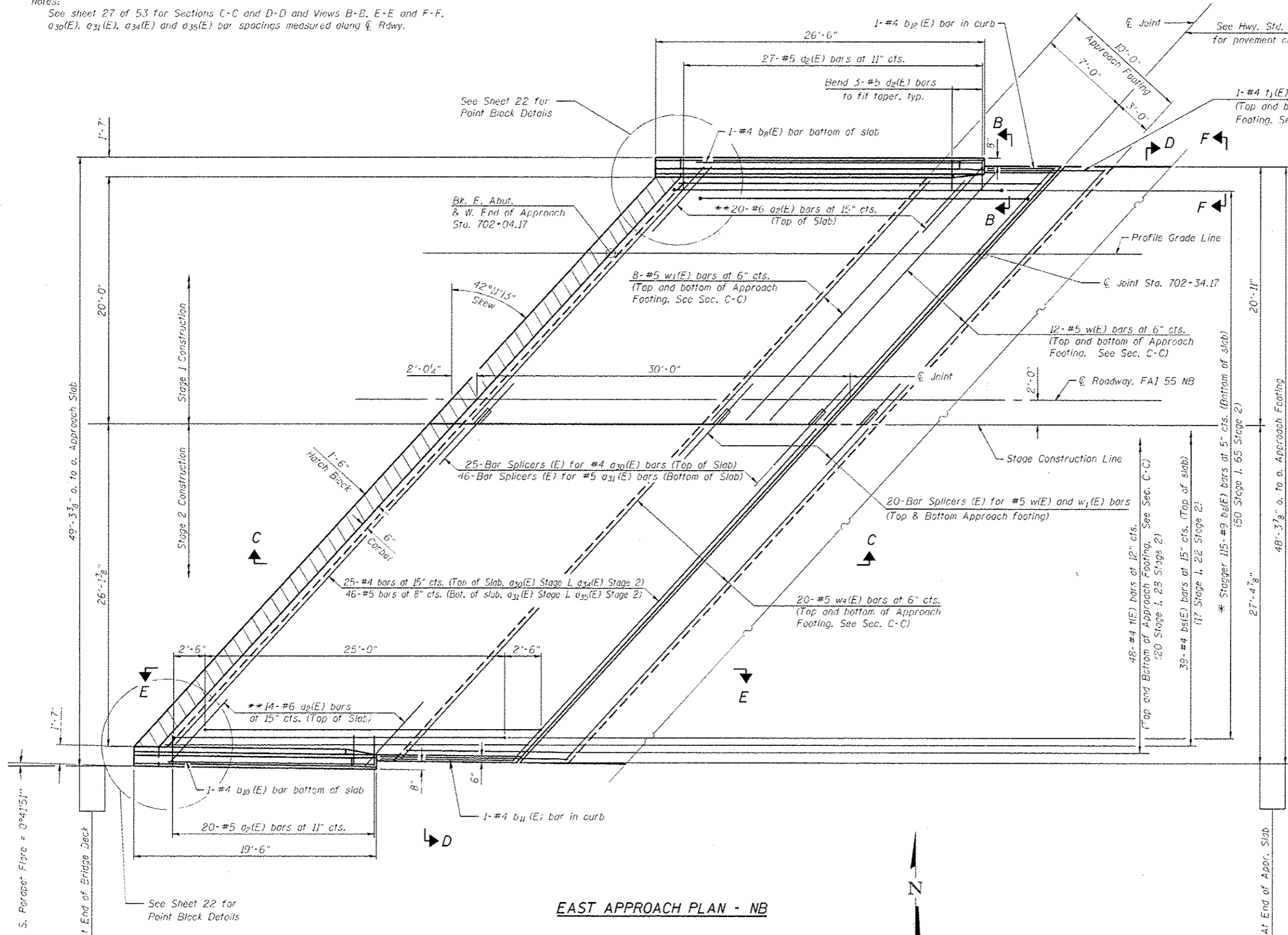
\* Tilt #9 b<sub>6</sub>(E) bars as required to maintain clearance.  
\*\* Space between a<sub>30</sub>(E) bars, typ. each parapet.

REV. SHEET 6-3-13

W. APPROACH - NB  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a <sub>27</sub> (E)	34	#6	6'-6"	—
a <sub>30</sub> (E)	50	#4	27'-11"	—
a <sub>31</sub> (E)	92	#5	27'-9"	—
b <sub>5</sub> (E)	34	#4	29'-8"	—
b <sub>6</sub> (E)	100	#9	29'-9"	—
b <sub>9</sub> (E)	1	#4	26'-0"	—
b <sub>10</sub> (E)	1	#4	17'-0"	—
b <sub>13</sub> (E)	1	#4	3'-8"	—
b <sub>14</sub> (E)	1	#4	12'-4"	—
d(E)	51	#5	6'-10"	—
d <sub>2</sub> (E)	47	#5	7'-11"	—
e <sub>28</sub> (E)	1	#8	26'-1"	—
e <sub>24</sub> (E)	8	#4	27'-1"	—
e <sub>30</sub> (E)	1	#8	18'-9"	—
e <sub>31</sub> (E)	8	#4	18'-2"	—
f(E)	84	#4	13'-1"	—
f <sub>1</sub> (E)	2	#4	5'-0"	—
w(E)	24	#5	27'-9"	—
w <sub>1</sub> (E)	15	#5	26'-6"	—
w <sub>3</sub> (E)	40	#5	27'-7"	—
Concrete Superstructure		Cu. Yd.	71.1	
Concrete Structures		Cu. Yd.	17.2	
Reinforcement Bars, Epoxy Coated		Pound	18,900	
Bar Splicers		Each	111	

Notes:  
See sheet 27 of 53 for Sections C-C and D-D and Views B-B, E-E and F-F.  
a<sub>30</sub>(E), a<sub>31</sub>(E), a<sub>34</sub>(E) and a<sub>35</sub>(E) bar spacings measured along  $\phi$  Rdwy.



EAST APPROACH PLAN - NB

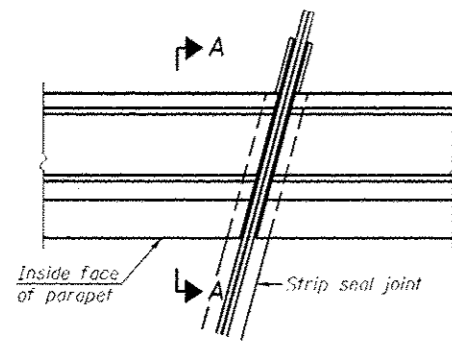
REV. SHEET 6-3-13

\* Till #9 b<sub>6</sub>(E) bars as required to maintain clearance.  
\*\* Space between a<sub>30</sub>(E) or a<sub>34</sub>(E) bars, typ. each parapet.

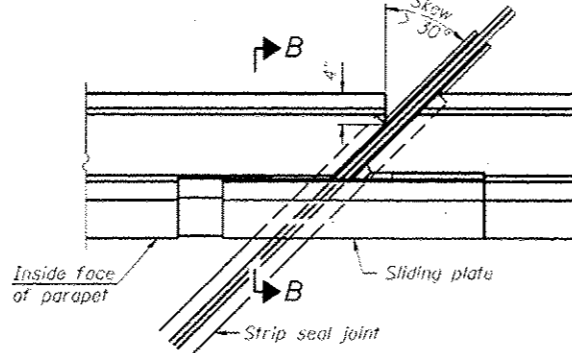
E. APPROACH - NB  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a <sub>2</sub> (E)	34	#6	6'-6"	—
a <sub>30</sub> (E)	25	#4	27'-11"	—
a <sub>31</sub> (E)	46	#5	27'-9"	—
a <sub>34</sub> (E)	25	#4	36'-8"	—
a <sub>35</sub> (E)	46	#5	36'-6"	—
b <sub>5</sub> (E)	39	#4	29'-8"	—
b <sub>6</sub> (E)	115	#9	29'-9"	C
b <sub>8</sub> (E)	1	#4	24'-0"	—
b <sub>10</sub> (E)	1	#4	17'-0"	—
b <sub>11</sub> (E)	1	#4	10'-8"	—
b <sub>12</sub> (E)	1	#4	5'-4"	—
d(E)	51	#5	6'-10"	—
d <sub>2</sub> (E)	47	#5	7'-11"	—
e <sub>24</sub> (E)	1	#8	19'-2"	—
e <sub>25</sub> (E)	8	#4	19'-2"	—
e <sub>26</sub> (E)	1	#8	26'-2"	—
e <sub>27</sub> (E)	8	#4	26'-2"	—
f(E)	96	#4	13'-1"	—
f <sub>1</sub> (E)	2	#4	5'-0"	—
w(F)	24	#5	27'-9"	—
w <sub>1</sub> (E)	16	#5	26'-6"	—
w <sub>4</sub> (E)	40	#5	36'-4"	—
Concrete Superstructure		Cu. Yd.	80.2	
Concrete Structures		Cu. Yd.	19.9	
Reinforcement Bars, Epoxy Coated		Pound	21,550	
Bar Splicers		Each	111	

<b>CEC</b> Cummins Engineering Corporation Civil and Structural Engineering	JOB # 2265.2	DESIGNED - AAN	REVISED -	<b>STATE OF ILLINOIS</b> <b>DEPARTMENT OF TRANSPORTATION</b>	<b>EAST BRIDGE APPROACH SLAB DETAILS</b> <b>STRUCTURE NO. 054-0061 (NB)</b>	F.A.I. R.T.E. 55	SECTION 06 LOGAN CO BR 2011-1	COUNTY LOGAN	TOTAL SHEETS 429	SHEET NO. 256
	FILE # 0540060.0061-72E11-25-27-SH0061-Approach.dgn	CHECKED - MDC	REVISED -			CONTRACT NO. 72E11				
	DATE 5/14/2013	DRAWN - SJS	REVISED -			ILLINOIS FED. AID PROJECT				
		CHECKED - MDC	REVISED -							

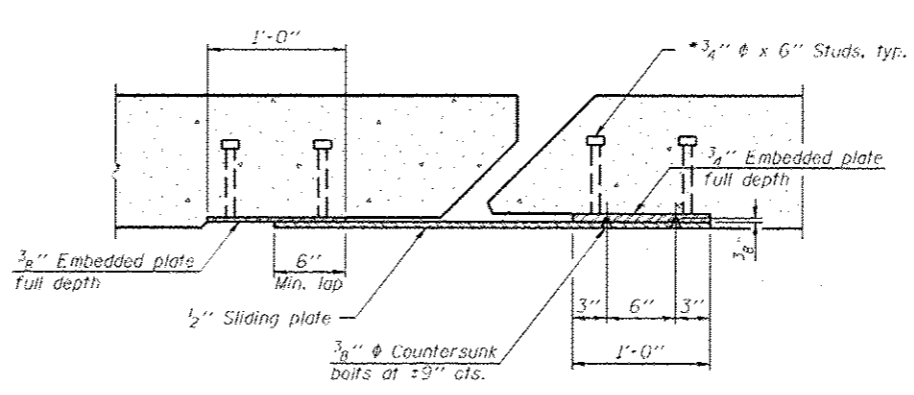


**PLAN**  
(For skews  $\leq 30^\circ$ )

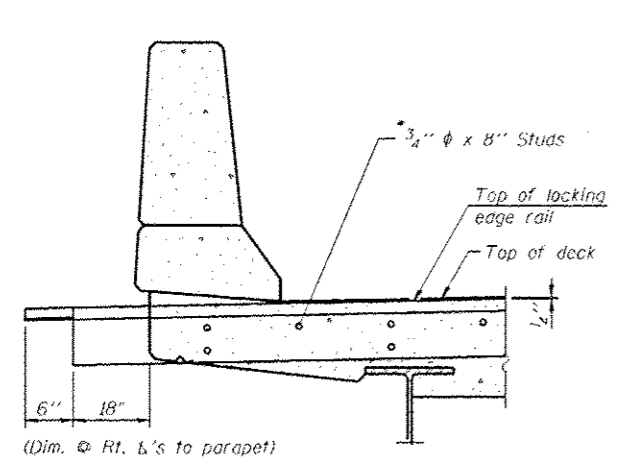


**PLAN**  
(For skews  $> 30^\circ$ )

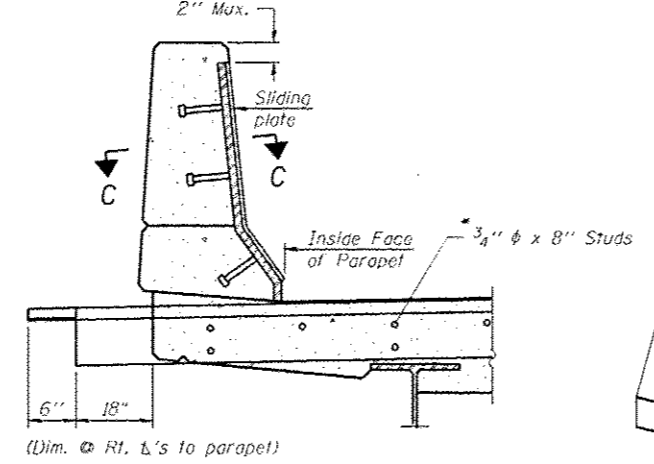
Point Block Detail at Parapet. See Sheet 22 for Detail at Slab.



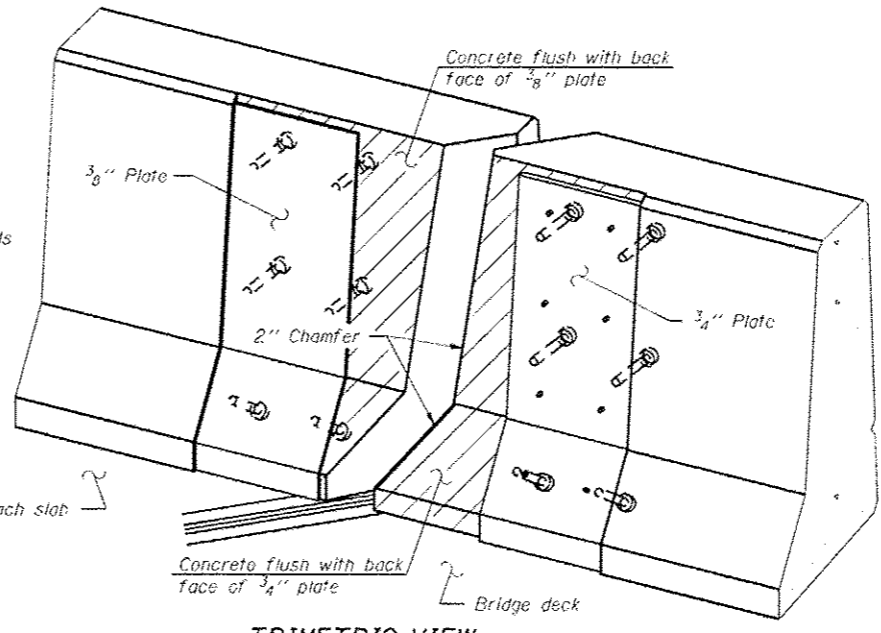
**SECTION C-C**



**SECTION A-A**



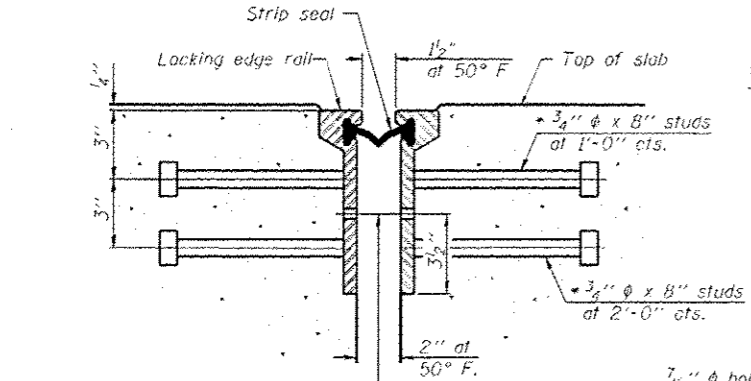
**SECTION B-B**



**TRIMETRIC VIEW**  
(Showing back plates only)

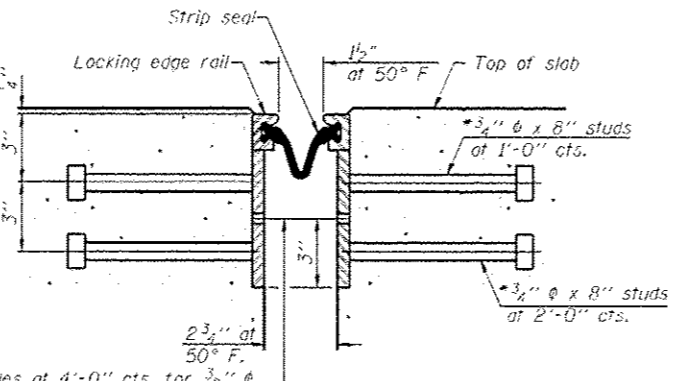
**Notes:**  
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.  
The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.  
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.  
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications. Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.  
Parapet plates and anchorage studs for skews  $> 30^\circ$  included in the cost of Preformed Joint Strip Seal.



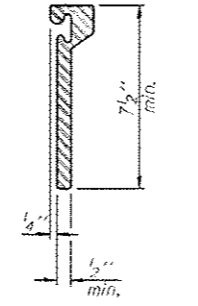
**SECTION THRU ROLLED RAIL JOINT**

7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

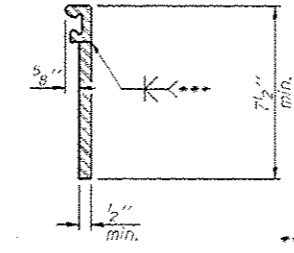


**SECTION THRU WELDED RAIL JOINT**

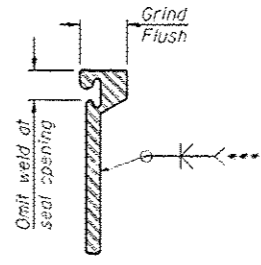
7/16"  $\phi$  holes at 4'-0" cts. for 3/8"  $\phi$  bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



**ROLLED EXTRUDED RAIL**



**WELDED RAIL**



**LOCKING EDGE RAIL SPLICE**

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

The inside of the locking edge rail groove shall be free of weld residue.  
Rolled rail shown, welded rail similar.

**LOCKING EDGE RAILS**

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

**REV. SHEET 6-3-13**



JOB • 2265.2  
FILE • 0540060.0061-72E(11-29-PreformedJoint)  
DATE • 5/14/2013

DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

REVISED -  
REVISED -  
REVISED -  
REVISED -

**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**

**PREFORMED JOINT STRIP SEAL**  
STRUCTURE NO. 054-0060 (S.B.) & 054-0061 (N.B.)

SHEET NO. 29 OF 53 SHEETS

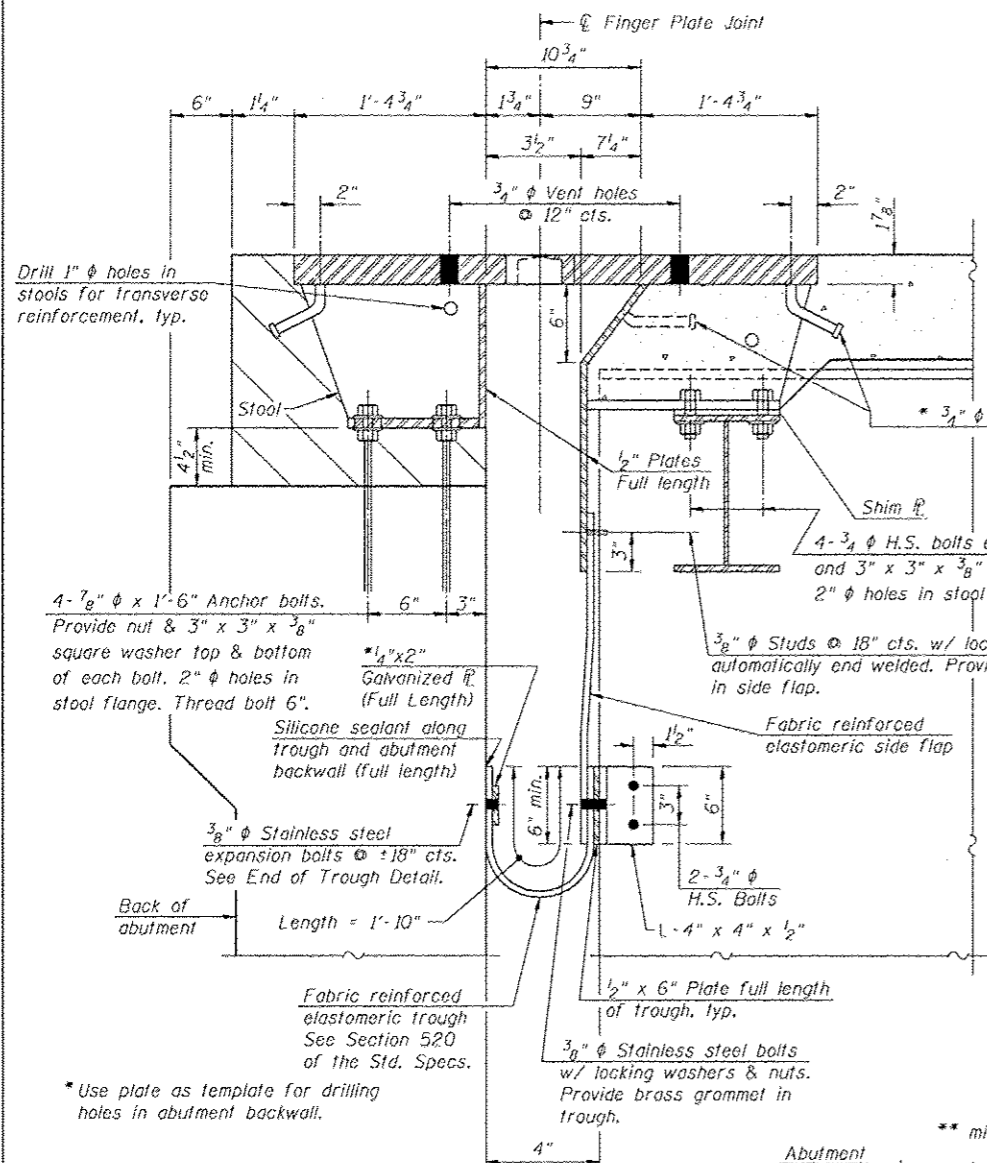
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	06 LOGAN CO BR 2011-1	LOGAN	429	259
				CONTRACT NO. 72E11

**BILL OF MATERIAL**

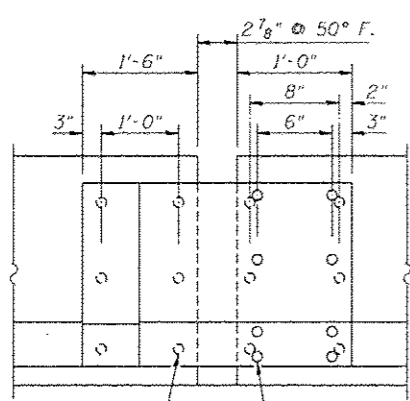
Item	Unit	Total
Preformed Joint Strip Seal	Foot	128

ILLINOIS FED. AID PROJECT

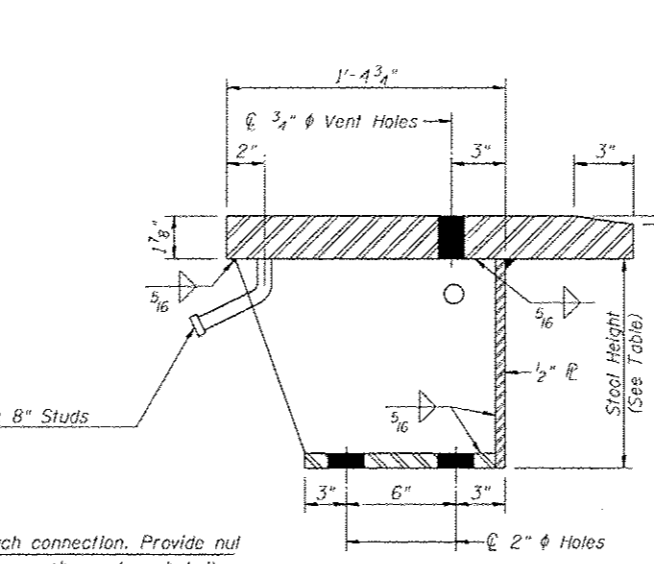




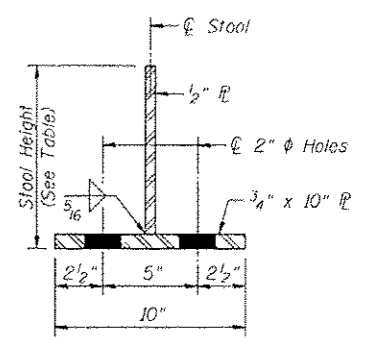
**SECTION B-B**  
(At Right Angles to Bk. of Abut.)  
Horizontal dimensions are at 50° F.



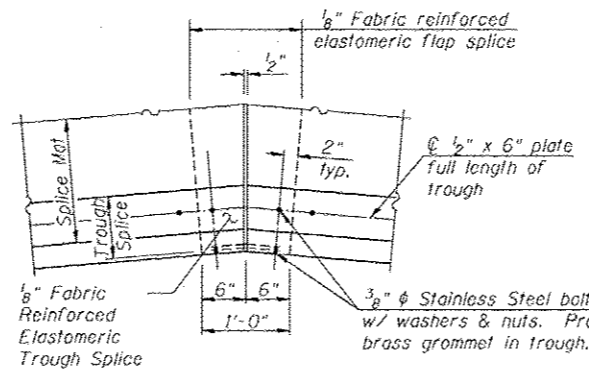
**INSIDE ELEVATION OF PARAPET AT JOINT**



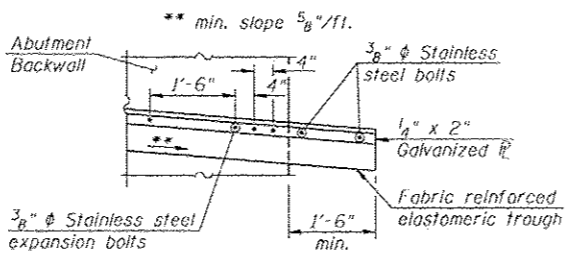
**STOOLS DETAIL**



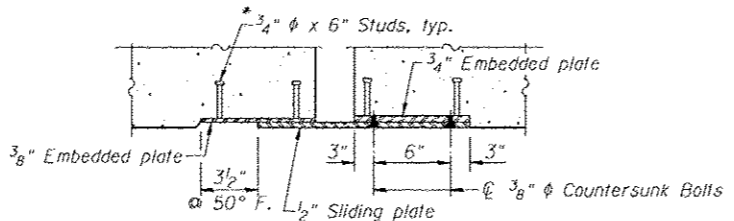
**SECTION THRU STOOL**



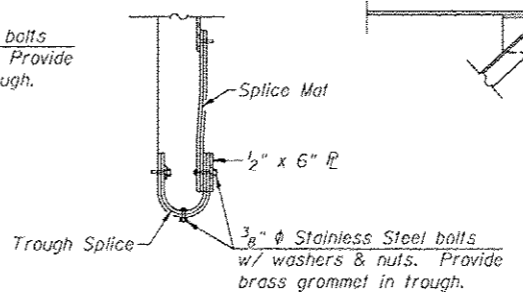
**TROUGH SPLICE DETAIL**



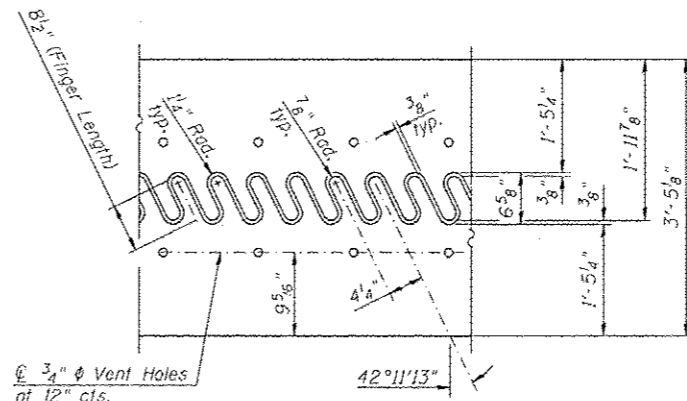
**END OF TROUGH DETAIL AT ABUTMENT**



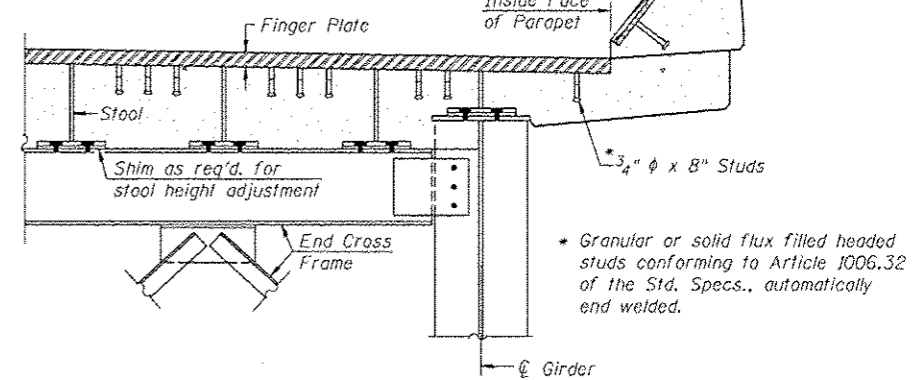
**HORIZONTAL SECTION OF PARAPET AT JOINT**



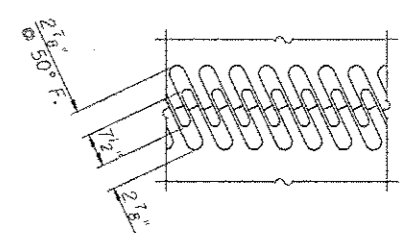
**SECTION THRU TROUGH SPLICE**



**FLAME CUTTING DIAGRAM**  
Cut from 1 1/8\"/>



**DETAIL 1**



**FINGER PLATE SETTING DIAGRAM**

Note:  
For stools supported by girders and cross frames provide 1/4\"/>

**BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Finger Plate Expansion Joint 4"	Foot	133

SN 054-0061 (E Abut. NB) = 64 Foot  
SN 054-0060 (E Abut. SB) = 69 Foot



JOB = 2265.2  
FILE = 0542000.2061-72E11-32-FingerPlateJointDetail  
DATE = 5/17/2013

DESIGNED - AAN  
CHECKED - AAN  
DRAWN - TJD  
CHECKED - AAN

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

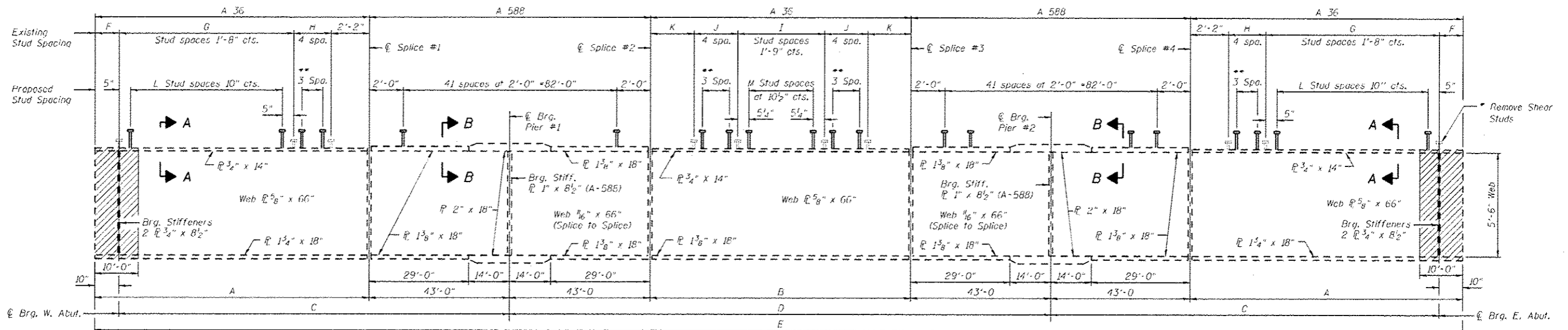
FINGER PLATE EXPANSION JOINT DETAILS  
SHEET NO. 32 OF 53 SHEETS

F.A.J. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	262

CONTRACT NO. 72E11

ILLINOIS FED. AID PROJECT

REV. SHEET 6-3-13



**GIRDER ELEVATION**

Indicates Limits of Girder to be Cleaned and Painted. See Special Provision for Cleaning and Painting Existing Steel Structures.

**EXISTING GIRDER DIMENSIONS**

Location	A	B	C	D	E	F	G	H	I	J	K
Gdr. A	111'-1 7/8"	100'-11 1/4"	153'-3 3/8"	186'-11 1/4"	495'-2 1/2"	11 3/8"	105'-0"	3'-0"	91'-0"	2'-8"	2'-7 5/8"
Gdr. B	109'-8 1/4"	99'-2 1/2"	151'-10 1/4"	185'-2 1/2"	490'-8"	10 3/4"	105'-0"	1'-8"	91'-0"	2'-0"	2'-1 1/4"
Gdr. C-L	108'-4"	97'-6"	150'-6"	183'-6"	486'-2"	10"	103'-4"	2'-0"	89'-3"	2'-0"	2'-1 1/2"
Gdr. M	107'-6 1/2"	96'-6"	149'-8 1/2"	182'-6"	483'-6 1/2"	1'-0 1/2"	101'-8"	2'-8"	87'-6"	2'-4"	2'-2"
Gdr. N	106'-8 1/2"	95'-6 1/2"	148'-10 1/2"	181'-6 1/2"	480'-10 1/2"	10 1/8"	101'-8"	2'-0"	85'-9"	2'-8"	2'-2 1/4"

**PROPOSED SHEAR STUDS**

Location	No. of Spaces at 10" Centers	No. of Spaces at 10 1/2" Centers	No. of Studs Required
Gdr. A	125	103	1368
Gdr. B	125	103	1358
Gdr. C-L	123	101	1350
Gdr. M	121	99	1332
Gdr. N	121	97	1326
		Total =	18,894

**INTERIOR GIRDER MOMENT TABLE**

	0.4 Span 1 or 0.6 Span 3	Pier	0.5 Span 2
$I_s$	56,656	98,727	51,708
$I_c(n)$	148,132	105,054	131,113
$I_c(3n)$	101,997	105,054	91,897
$S_x$	2167	2849	1842
$S_c(n)$	3001	2908	2566
$S_c(3n)$	2707	2908	2312
$q$	1.123	1.242	1.100
$M_D$	1677	3471	1234
$s_D$	0.526	0.528	0.528
$M_sD$	809	1567	659
$M_L$	1327	1707	1279
$M_{Iu}$	238	307	230
$S_x[M_L + I]$	2609	3357	2515
$M_o$	6624	10,844	5731
$M_u$	-	-	-
$f_s$ non-comp	9.3	14.6	8.1
$f_s$ comp	3.6	6.5	3.4
$f_s$ $S_x[M_L + I]$	10.4	13.8	11.8
$f_s$ (Overload)	23.3	34.9	23.3
$f_s$ (Total)	30.3	45.4	30.3
VR	57.6	58.8	58.8

**INTERIOR GIRDER REACTION TABLE**

	Abut.	Pier
$R_D$	92.1	312.7
$R_L$	45.2	98.0
$R_I$	8.2	17.6
$R_{Total}$	145.5	428.3

\*\* Braced non-compact and partially braced section

$I_s, S_x$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total and Overload) due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).

$I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total and Overload) due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

$q$ : Un-factored non-composite dead load (kips/ft.).

$M_D$ : Un-factored moment due to non-composite dead load (kip-ft.).

$s_D$ : Un-factored long-term composite (superimposed) dead load (kip/ft.).

$M_sD$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M_L$ : Un-factored live load moment (kip-ft.).

$M_I$ : Un-factored moment due to impact (kip-ft.).

$M_o$ : Factored design moment (kip-ft.).

$L_3 I M_D + M_sD + \frac{1}{3} (M_L + M_I)$

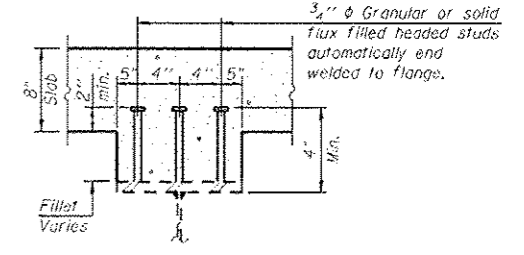
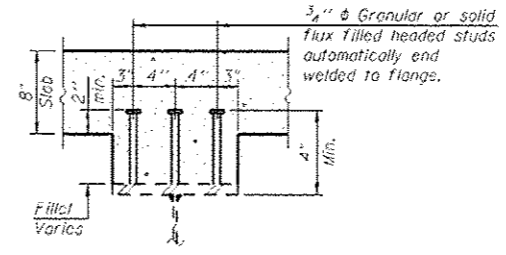
$M_{uc}$ : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.46.1 (kip-ft.).

$f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).

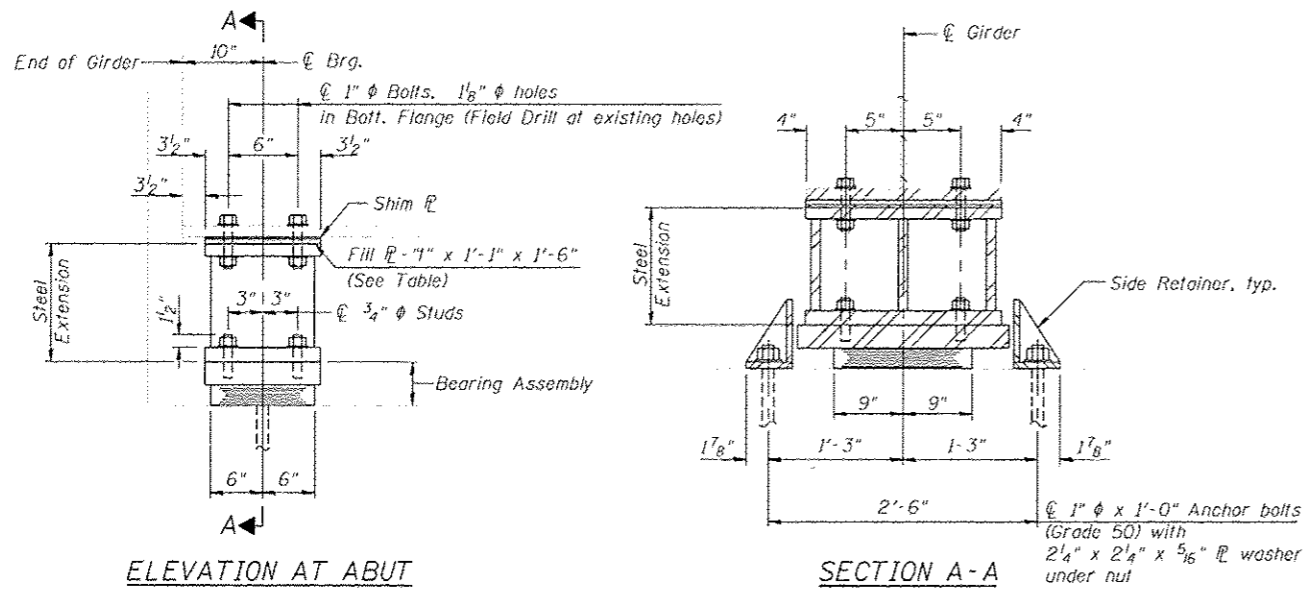
$f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

$L_3 I M_D + M_sD + \frac{1}{3} (M_L + M_I)$

VR: Maximum impact shear range within the composite portion of the span for stud shear connector design (kips).



REV. SHEET 6-3-13



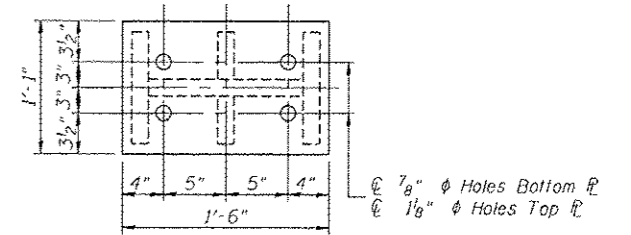
ELEVATION AT ABUT

SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.  
AT W. ABUT. S.B. & W. ABUT. N.B.

FILL "I" DIMENSIONS

S.B. Lanes	A	B	C	D	E	F	G
☉ Brg. W. Abut.	---	---	5/8"	---	---	---	---

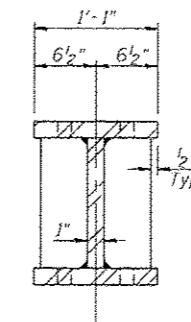


PLAN - TOP & BOTTOM

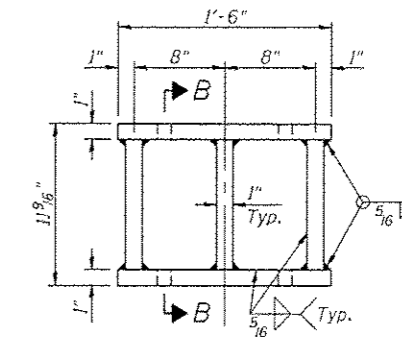
INTERIOR GIRDER REACTION TABLE

Location W. Abutment	
R <sub>P</sub> (K) (steel only)	18.1
R <sub>L</sub> (K)	45.2
R <sub>IMP</sub> (K)	8.2
R <sub>TOTAL</sub> (K)	145.5
Min. Jack Capacity (T)	23

Min. Jack Capacity = R<sub>P</sub> + 1/2 (R<sub>L</sub> + R<sub>IMP</sub>)

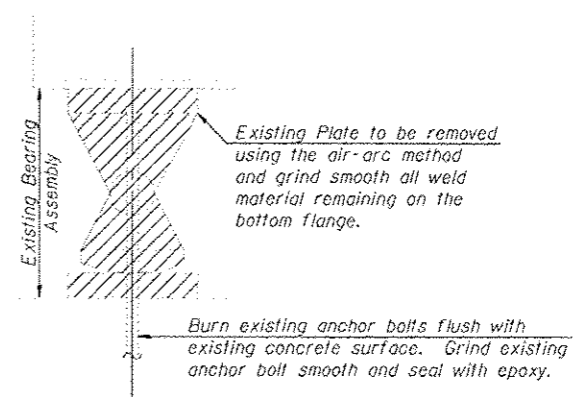


SECTION B-B

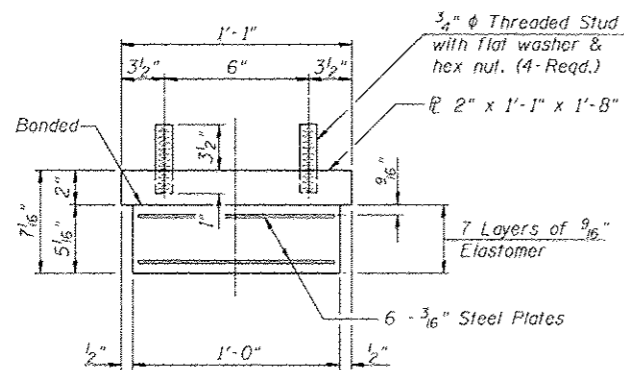


ELEVATION

STEEL EXTENSION  
AT W. ABUT. S.B. & W. ABUT. N.B.

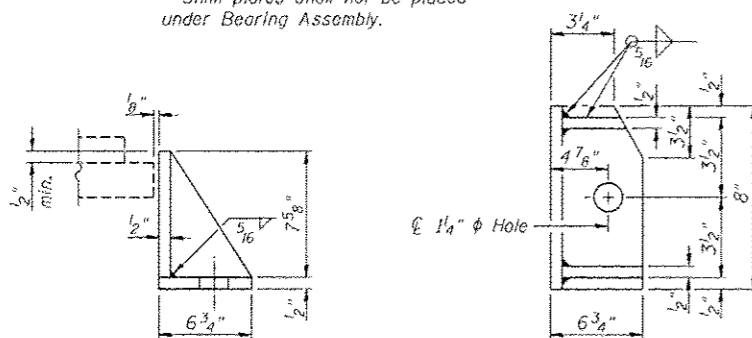


EXISTING BEARING REMOVAL DETAIL  
Cost Included with "Jack and Remove Existing Bearings"



BEARING ASSEMBLY

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



ABUTMENT SIDE RETAINER - W. ABUT. S.B. & W. ABUT. N.B.  
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

Notes:  
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.  
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
Side retainers and other steel members required for the elastomeric bearing assembly shall be included in the cost of Elastomeric Bearing Assembly, Type I.  
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.  
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 the bearing details.

REV. SHEET 6-3-13



JOB # 2265.2  
FILE # 0540060\_0061-72E11-36-37-Bearing.dwg  
DATE 5/17/2013

DESIGNED - AAN  
CHECKED - MDC  
DRAWN - SJS  
CHECKED - MDC

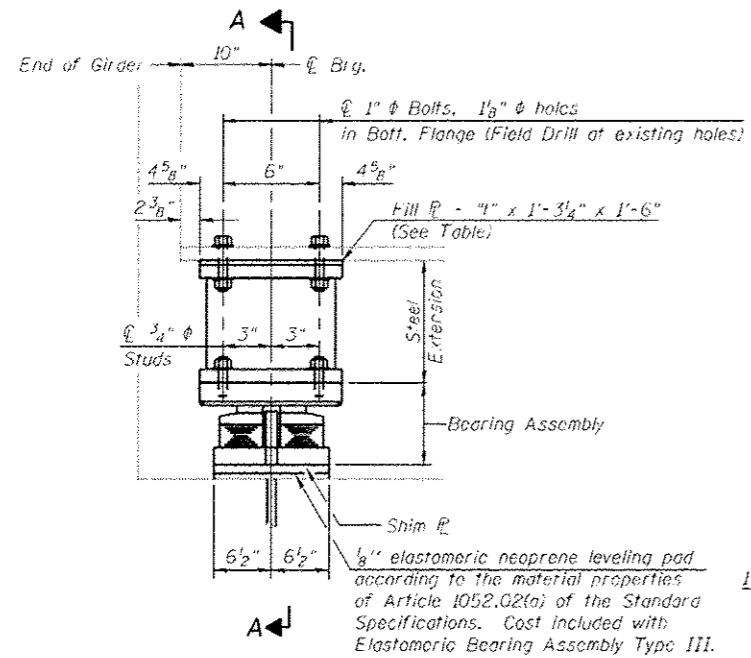
REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

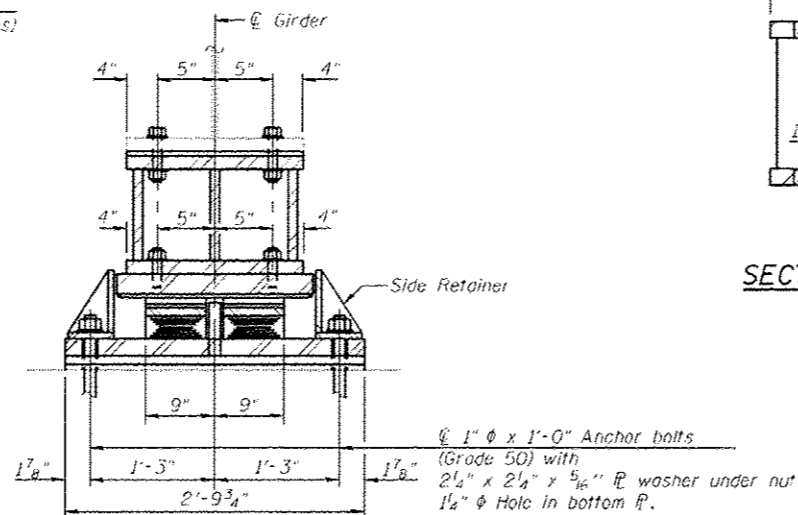
TYPE I BEARING DETAILS AT WEST ABUTMENTS  
STRUCTURE NO. 054-0060 (SB) & STRUCTURE NO. 054-0061 (NB)

F.A.J. R.I.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	266
CONTRACT NO. 72E11				
ILLINOIS FED. AID PROJECT				

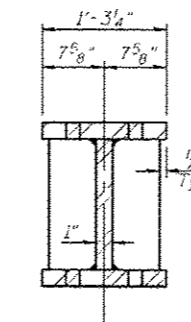
SHEET NO. 36 OF 53 SHEETS



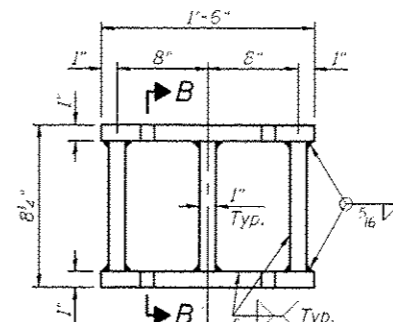
ELEVATION AT ABUT.



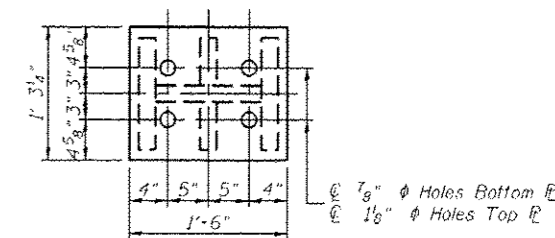
SECTION A-A



SECTION B-B

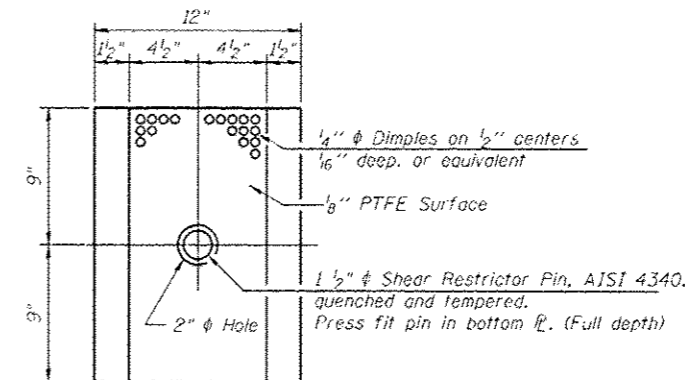


ELEVATION



PLAN - TOP & BOTTOM

STEEL EXTENSION



PLAN-PTFE ELASTOMERIC BRG.

INTERIOR GIRDER REACTION TABLE

Location E. Abutment	
R $\phi$ (K) (steel only)	18.1
R $\frac{1}{2}$ (K)	45.2
R <sub>IMP</sub> (K)	8.2
R <sub>TOTAL</sub> (K)	145.5
Min. Jack Capacity (T)	23

Min. Jack Capacity = R $\phi$  +  $\frac{1}{2}$  (R $\frac{1}{2}$  + R<sub>IMP</sub>)

FILL "I" DIMENSIONS

S.B. Lanes	A	B	C	D	E	F	G
$\phi$ Brg. E. Abut.	—	—	—	—	—	$\frac{1}{2}$ "	—
N.B. Lanes	H	I	J	K	L	M	N
$\phi$ Brg. E. Abut.	—	—	$\frac{1}{4}$ "	—	—	—	—

Notes:  
Anchor bolts shall be ASTM F1554 oil-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for Type III bearings shall be placed in holes drilled in the concrete through holes in the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.

Drilled and set anchor bolts shall be installed according to Article 52.1.06 of the Standard Specifications.

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

The  $\frac{1}{8}$ " PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of  $\frac{1}{8}$ " PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

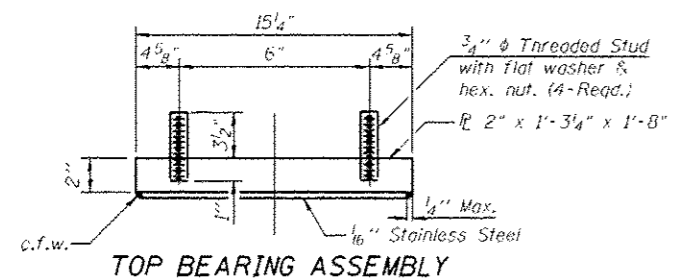
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Two  $\frac{1}{8}$ " adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown in the bearing details.

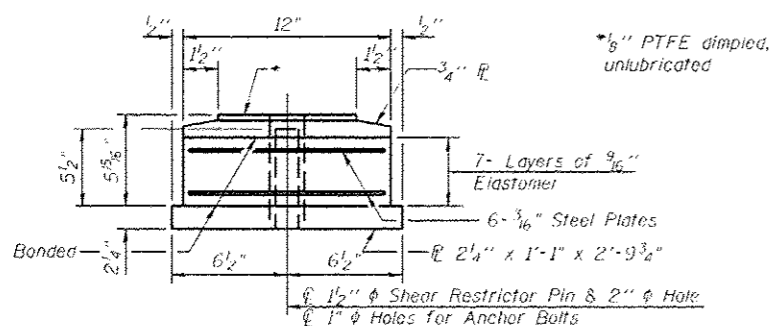
See Sheet 36 of 53 for existing Bearing Removal Detail.

BILL OF MATERIAL

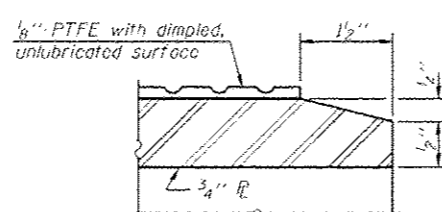
Item	Unit	Total
Jack and Remove Existing Bearings	Each	14
Anchor Bolts 1"	Each	28
Elastomeric Bearing Assembly Type III	Each	14
Furnishing and Erecting Structural Steel	Pound	3770



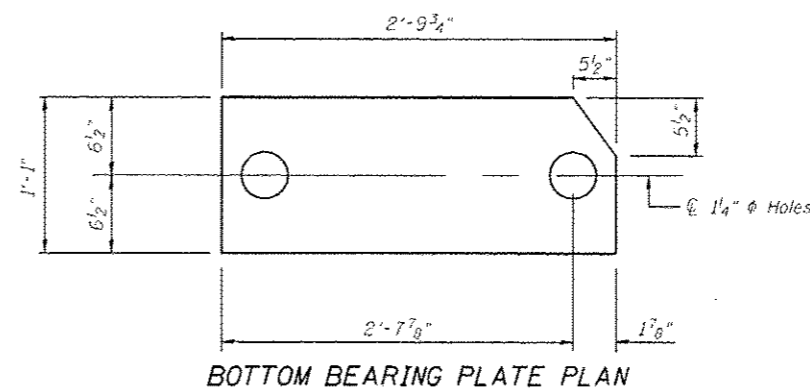
TOP BEARING ASSEMBLY



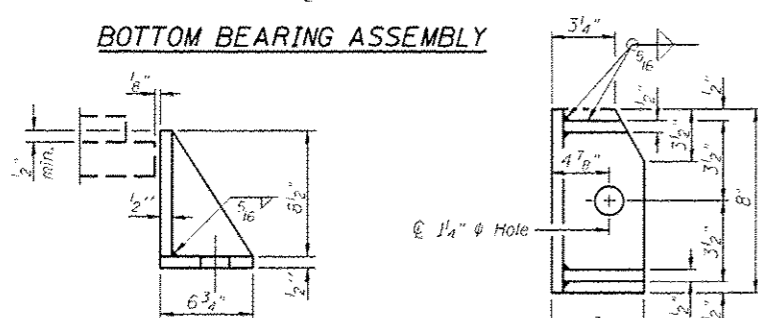
BOTTOM BEARING ASSEMBLY



SECTION THRU PTFE

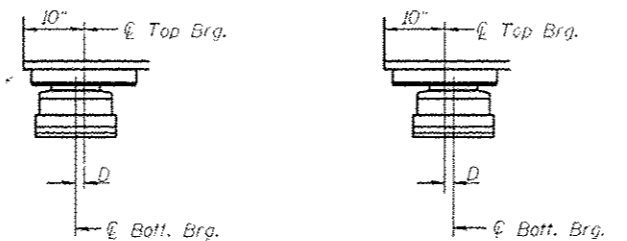


BOTTOM BEARING PLATE PLAN



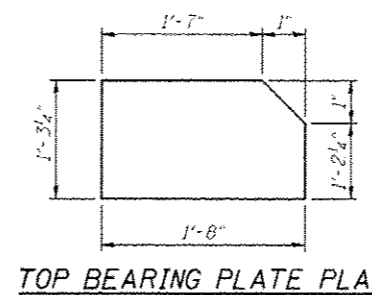
SIDE RETAINER

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



SETTING ANCHOR BOLTS AT EXP. BRG.

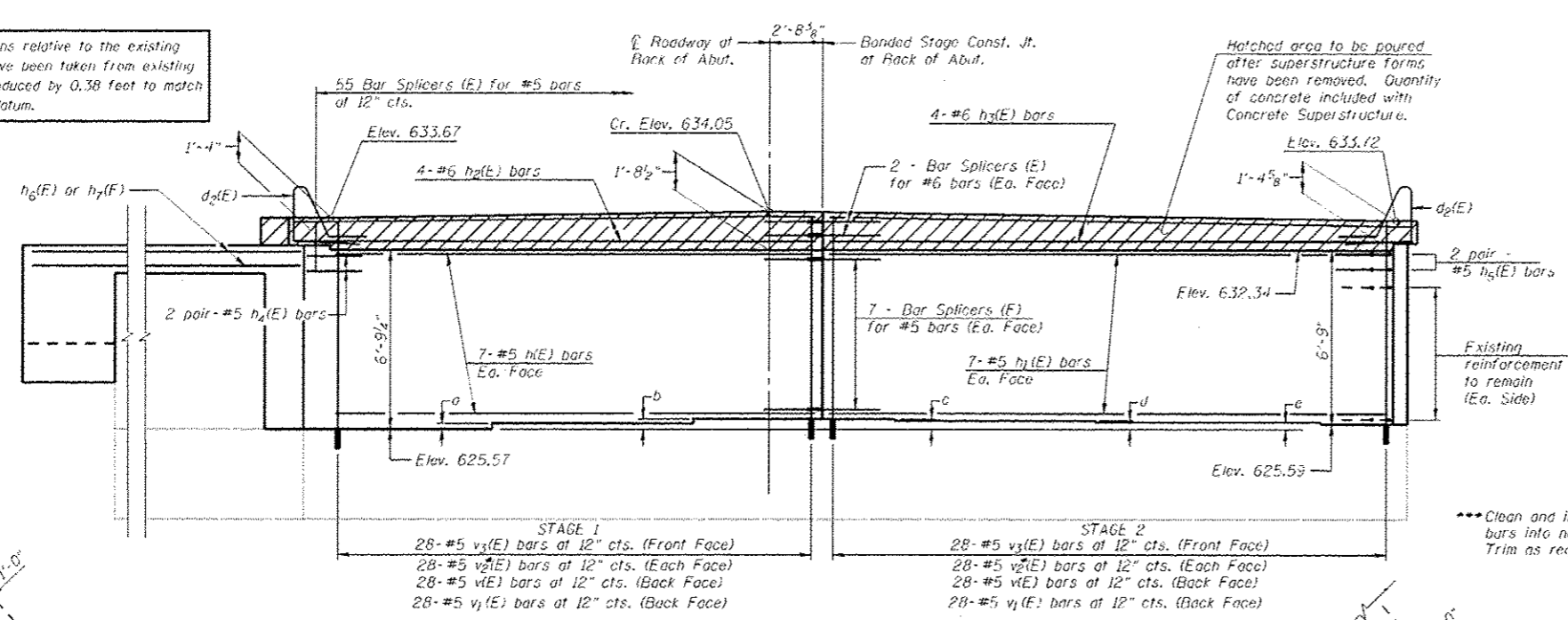
$D = \frac{1}{8}$ " per each 100' of expansion for every 15° temp. change from the normal temp. of 50° F.



TOP BEARING PLATE PLAN

**NOTE**

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

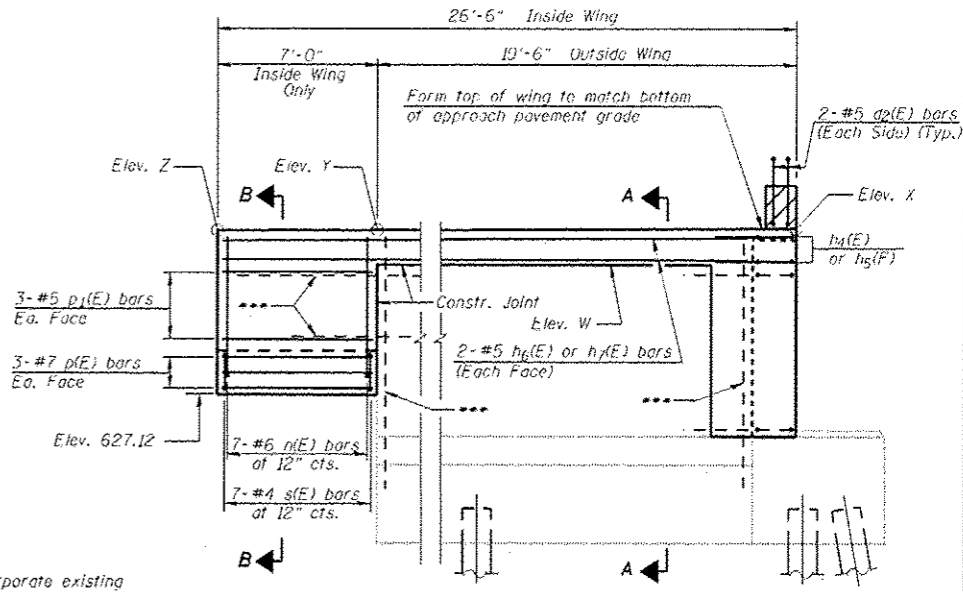


**ELEVATION**

(Looking West - W. Abut. - S.B.)

**TABLE OF EXISTING STEP HEIGHTS**

West Abutment (S.B.)	a	b	c	d	e
	2"	3 5/8"	2 3/4"	7 1/8"	8"



**WINGWALL ELEVATION**

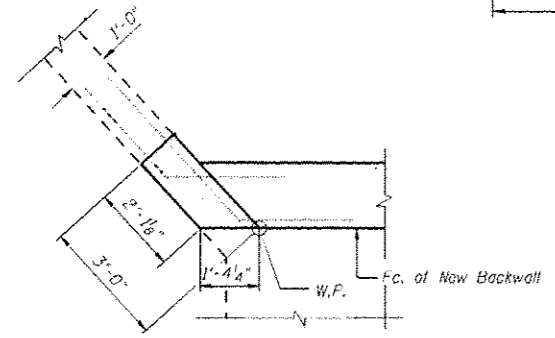
Elev.	West Abut. - S.B.	
	Inside Wing	Outside Wing
W	631.64	631.67
X	632.42	632.47
Y	632.32	632.38
Z	632.29	-

**ABUTMENT**

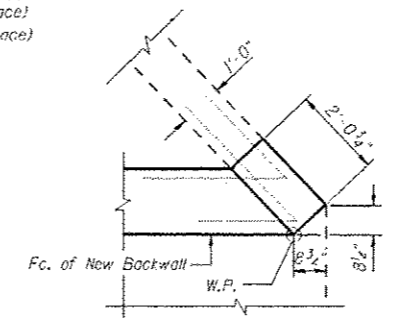
**BILL OF MATERIAL**

Bar No.	Size	Length	Shape
d2(E)	4 #5	7'-11"	U
n(E)	14 #5	26'-9"	—
h1(E)	14 #5	27'-6"	—
h2(E)	4 #6	27'-10"	—
h3(E)	4 #6	28'-0"	—
h4(E)	4 #5	5'-0"	—
h5(E)	4 #5	5'-0"	—
h6(E)	4 #5	19'-2"	—
h7(E)	4 #5	25'-3"	—
n(E)	7 #6	9'-1"	U
p1(E)	6 #7	6'-8"	—
p2(E)	6 #5	6'-8"	—
s(E)	7 #4	7'-5"	U
v1(E)	56 #5	3'-9"	L
v2(E)	56 #5	4'-6"	—
v3(E)	112 #5	6'-3"	—
v4(E)	56 #5	3'-2"	—
Structure Excavation	Cu. Yd.	151	
Concrete Structures	Cu. Yd.	24.5	
Reinforcement Bars, Epoxy Coated	Pound	3040	
Bar Splicers	Each	73	
Concrete Sealer	Sq. Ft.	381	

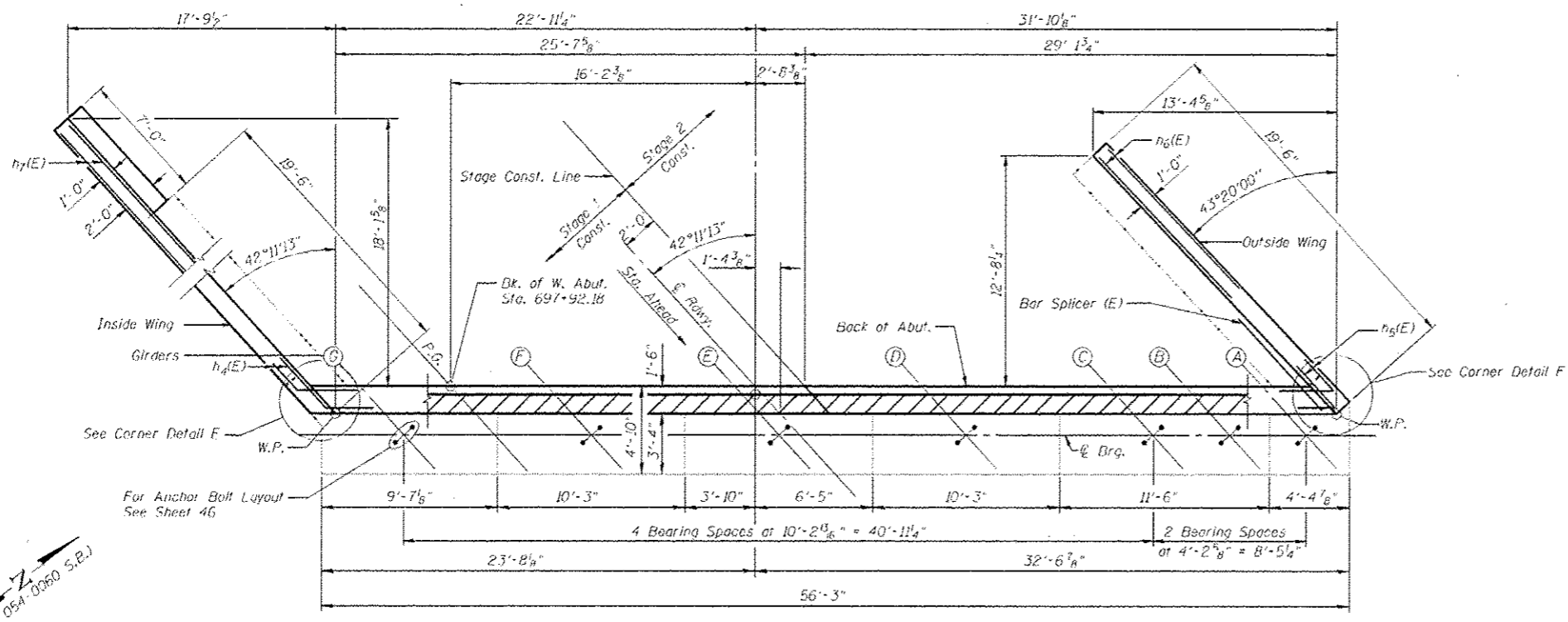
**Notes:**  
 All bars designated with an asterisk (ex: v5(E)) shall be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Locate bars to miss existing reinforcement.  
 Existing wingwall reinforcement shall be cleaned and incorporated into the new construction. Cost included with Concrete Removal.  
 Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cost included with Concrete Removal.  
 Concrete Sealer shall be applied to the front face of the backwall.  
 See Sheet 22 for point block details of hatch block.  
 See Section Thru West Abutment on Sheet 46 of 53.



**CORNER DETAIL E**  
(hatch block above not shown)



**CORNER DETAIL F**  
(hatch block above not shown)



**PLAN**

**REV. SHEET 0-3-13** (West Abutment - S.B.)



JOB	2265.2	DESIGNED	AAN	REVISED	-
FILE	054-0060-0061-72E11-42-43-Abut-58.dwg	CHECKED	MDC	REVISED	-
DATE	5/14/2013	DRAWN	SJS	REVISED	-
		CHECKED	TSH	REVISED	-

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT DETAILS**  
**STRUCTURE NO. 054-0060 (SB)**  
 SHEET NO. 42 OF 53 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	272
				CONTRACT NO. 72E11
ILLINOIS FED. AID PROJECT				

**NOTE**

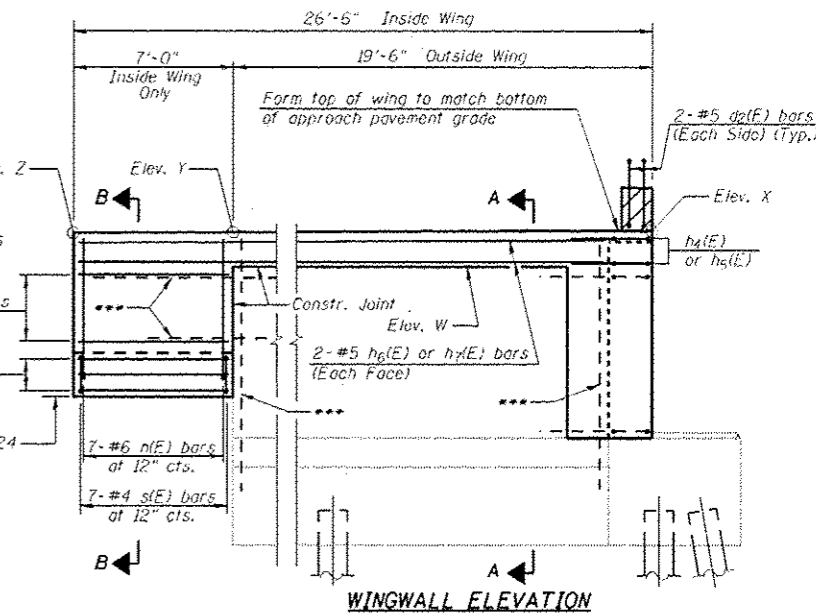
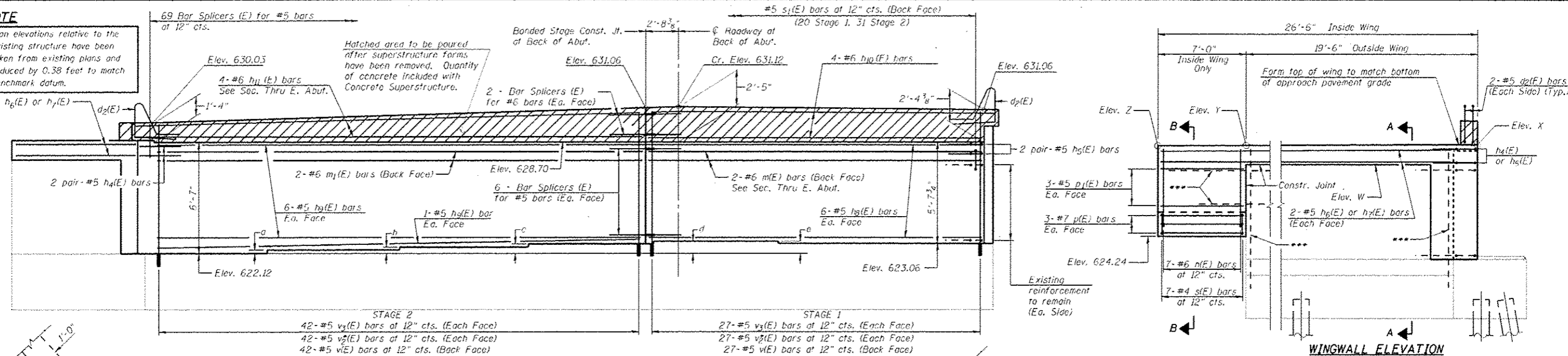
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

69 Bar Splicers (E) for #5 bars at 12" cts.

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

Bonded Stage Const. Jt. of Back of Abut.

#5 s<sub>1</sub>(E) bars at 12" cts. (Back Face) (20 Stage 1, 31 Stage 2)



**ELEVATION**  
(Looking East - E. Abut. - S.B.)

**TABLE OF EXISTING STEP HEIGHTS**

	a	b	c	d	e
East Abutment (S.B.)	3 <sup>3</sup> / <sub>8</sub> "	6 <sup>7</sup> / <sub>8</sub> "	9 <sup>5</sup> / <sub>8</sub> "	12"	11 <sup>1</sup> / <sub>2</sub> "

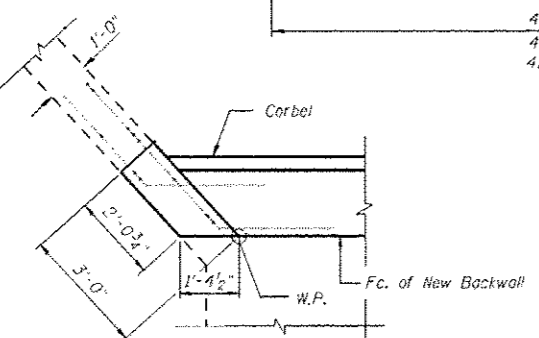
\*\*\* Clean and incorporate existing bars into new construction. Trim as required.

**East Abut. - S.B.**

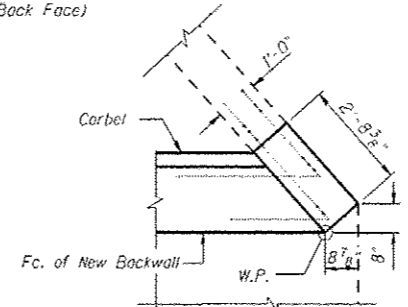
Elev.	Inside Wing	Outside Wing
W	629.13	628.12
X	629.81	628.78
Y	629.55	628.65
Z	629.43	

**ABUTMENT BILL OF MATERIAL**

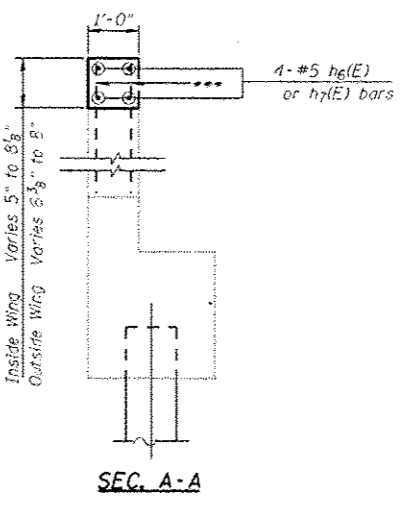
Bar	No.	Size	Length	Shape
ds(E)	4	#5	7'-11"	U
ha(E)	4	#5	5'-0"	U
hg(E)	4	#5	5'-0"	U
hz(E)	4	#5	19'-2"	U
ht(E)	4	#5	25'-3"	U
hat(E)	12	#5	26'-9"	U
hs(E)	14	#5	41'-0"	U
hx(E)	4	#6	26'-10"	U
hy(E)	4	#6	41'-0"	U
mi(E)	2	#6	26'-10"	U
mj(E)	2	#6	41'-0"	U
ni(E)	7	#6	9'-1"	U
pe(E)	6	#7	6'-8"	U
pi(E)	6	#5	6'-8"	U
si(E)	7	#4	7'-5"	U
s1(E)	51	#5	4'-2"	U
vi(E)	69	#5	3'-9"	U
v3(E)	138	#5	6'-3"	U
vx(E)	138	#5	3'-2"	U
Structure Excavation			Cu. Yd.	187
Concrete Structures			Cu. Yd.	28.3
Reinforcement Bars, Epoxy Coated			Pound	3910
Bar Splicers			Each	87
Concrete Sealer			Sq. Ft.	426



**CORNER DETAIL G**  
(hatch black above not shown)

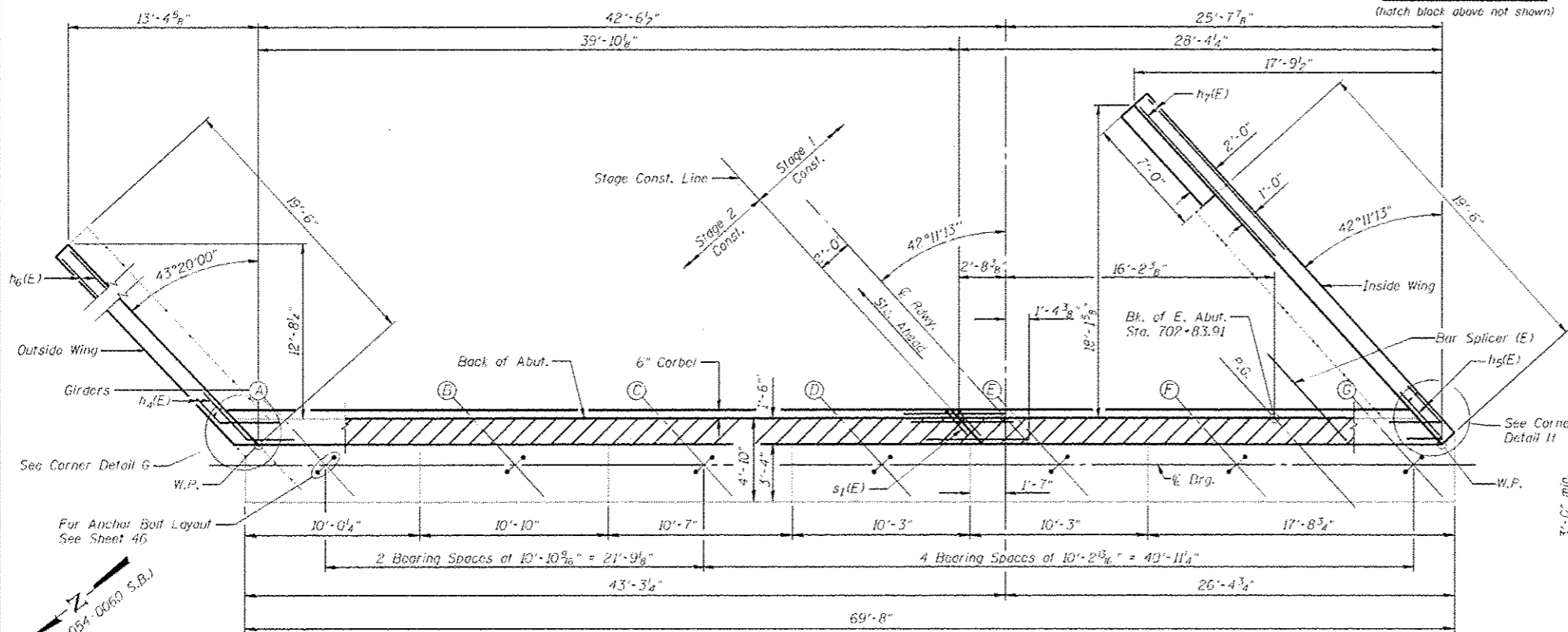


**CORNER DETAIL H**  
(hatch black above not shown)



**SEC. A-A**

**SEC. B-B**



**PLAN**  
(East Abutment - S.B.)

**CEC** Cummins Engineering Corporation  
Civil and Structural Engineering

JOB # 2265-2	DESIGNED - AAN	REVISOR -
FILE # 8540060_0061-72E11-42-43-Abut-SB.dwg	CHECKED - MDC	REVISOR -
DATE # 5/14/2013	DRAWN - SJS	REVISOR -
	CHECKED - TSH	REVISOR -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

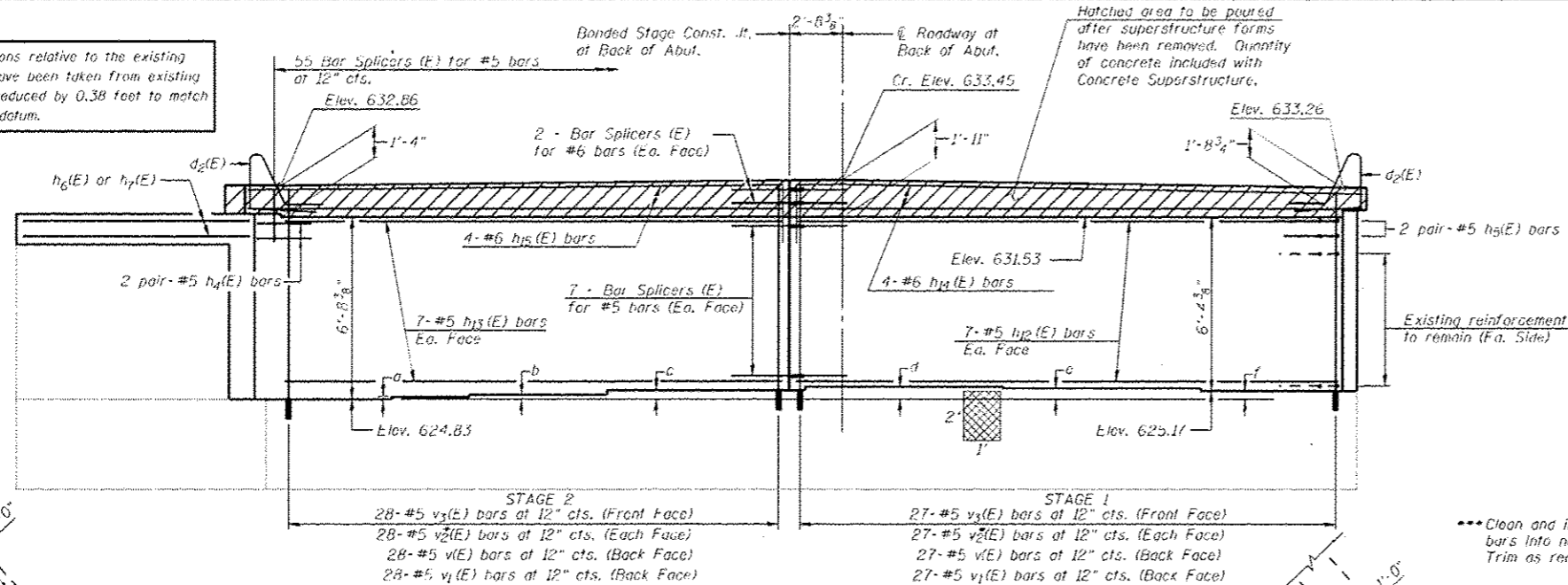
**EAST ABUTMENT DETAILS**  
**STRUCTURE NO. 054-0060 (SB)**  
SHEET NO. 43 OF 53 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CD BR 2011-1	LOGAN	429	273

CONTRACT NO. 72E11  
ILLINOIS FED. AID PROJECT

**NOTE**

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

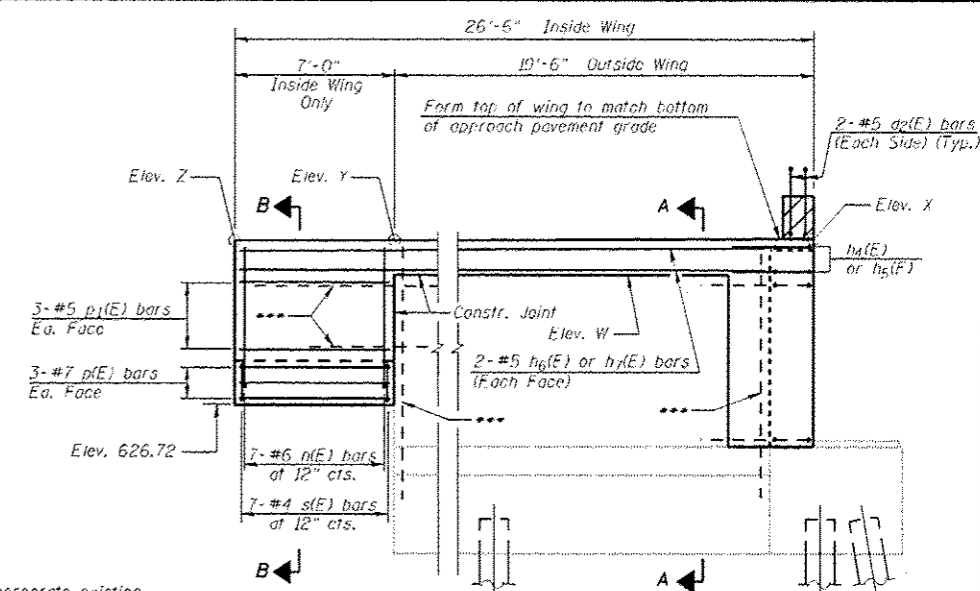


**ELEVATION**

(Looking West - W. Abut. - N.B.)

**TABLE OF EXISTING STEP HEIGHTS**

	a	b	c	d	e	f
West Abutment (N.B.)	1"	2 1/8"	4 1/4"	5 7/8"	5 1/2"	4"

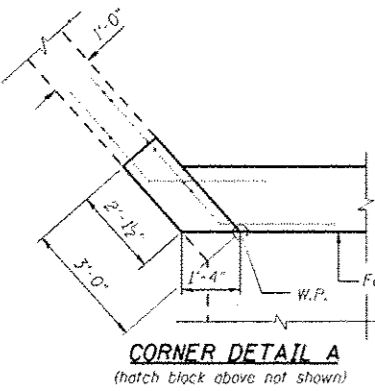


**WINGWALL ELEVATION**

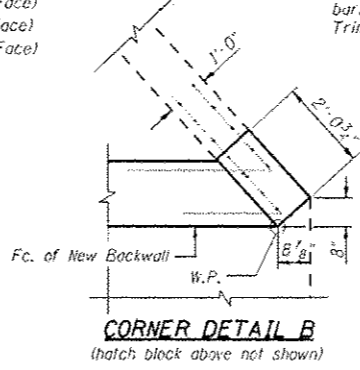
**ABUTMENT BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d <sub>2</sub> (E)	4	#5	7'-11"	⤴
h <sub>4</sub> (E)	4	#5	5'-0"	⤴
h <sub>5</sub> (E)	4	#5	5'-0"	⤴
h <sub>6</sub> (E)	4	#5	19'-2"	⤴
h <sub>7</sub> (E)	4	#5	25'-3"	⤴
h <sub>8</sub> (E)	14	#5	26'-9"	⤴
h <sub>13</sub> (E)	14	#5	27'-0"	⤴
h <sub>14</sub> (E)	4	#6	27'-5"	⤴
h <sub>15</sub> (E)	4	#6	27'-2"	⤴
n(F)	7	#6	9'-1"	⤴
p(E)	6	#7	6'-8"	⤴
p <sub>1</sub> (E)	6	#5	6'-8"	⤴
s(E)	7	#4	7'-5"	⤴
v(E)	55	#5	3'-9"	⤴
v <sub>1</sub> (E)	55	#5	4'-6"	⤴
v <sub>2</sub> (E)	110	#5	6'-3"	⤴
v <sub>3</sub> (E)	55	#5	3'-2"	⤴
Structure Excavation	Cu. Yd.		149	
Concrete Structures	Cu. Yd.		23.6	
Reinforcement Bars	Pound		3000	
Epoxy Coated				
Bar Splicers	Each		73	
Concrete Sealer	Sq. Ft.		365	
Structure Repair of Concrete (Depth Equal or Less than 5")	Sq. Ft.		2	

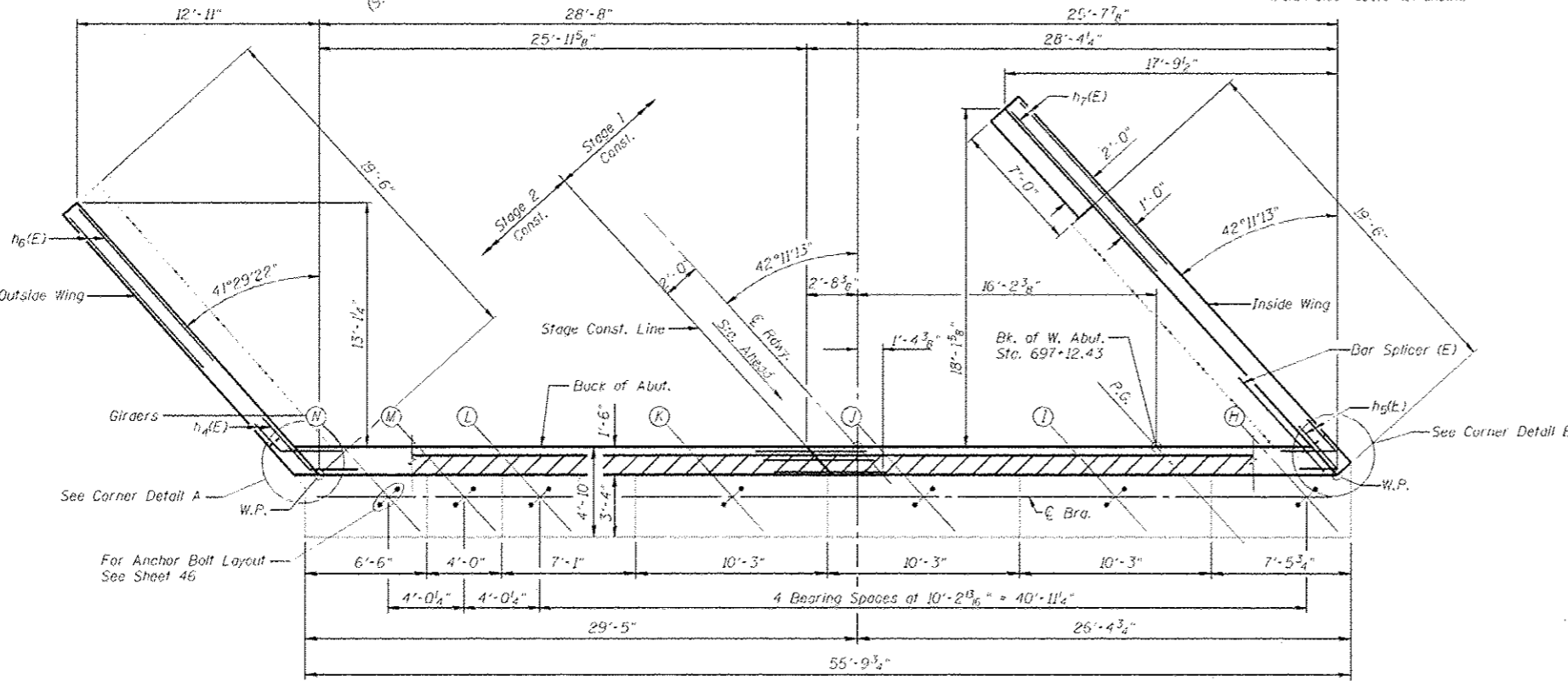
	West Abut. - N.B.	Inside Wing	Outside Wing
Elev. W	631.24	630.88	
X	632.01	631.61	
Y	631.88	631.43	
Z	631.82		



**CORNER DETAIL A**  
(hatch block above not shown)

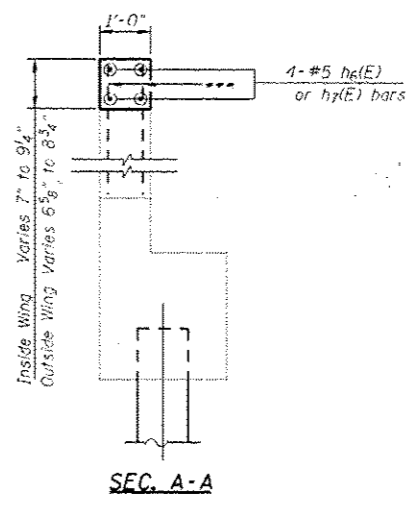


**CORNER DETAIL B**  
(hatch block above not shown)

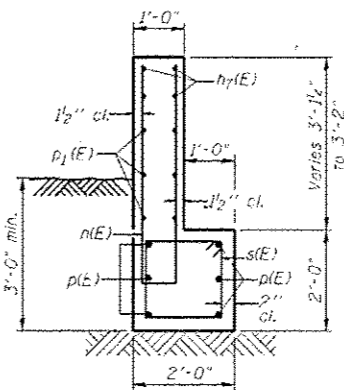


**PLAN**

REV. SHEET 6-3-13 (West Abutment - N.B.)



**SEC. A-A**



**SEC. B-B**

**Notes:**  
 All bars designated with an asterisk (ex: v<sub>2</sub>(E)) shall be epoxy grouted in accordance with Section 584 of the Standard Specifications. Minimum embedment = 9". Locate bars to miss existing reinforcement.  
 Existing wingwall reinforcement shall be cleaned and incorporated into the new construction. Cast included with Concrete Removal.  
 Existing vertical bars in backwall shall be cut off and covered with a layer of epoxy. Cast included with Concrete Removal.  
 Concrete Sealer shall be applied to the front face of the backwall.  
 See Sheet 22 for point block details at hatch block.  
 See Section Thru West Abutment on Sheet 46 of 53.

Denotes Structure Repair of Concrete (Depth Equal or Less than 5")

**CEC** Cummins Engineering Corporation  
 Civil and Structural Engineering

JOB	2265.2	DESIGNED	AAN	REVISED	-
FILE	0648060.0061-72E11-44-45-Abutment-N.B.	CHECKED	MDC	REVISED	-
DATE	5/14/2013	DRAWN	SJS	REVISED	-
		CHECKED	TSH	REVISED	-

DESIGNED	AAN	REVISED	-
CHECKED	MDC	REVISED	-
DRAWN	SJS	REVISED	-
CHECKED	TSH	REVISED	-

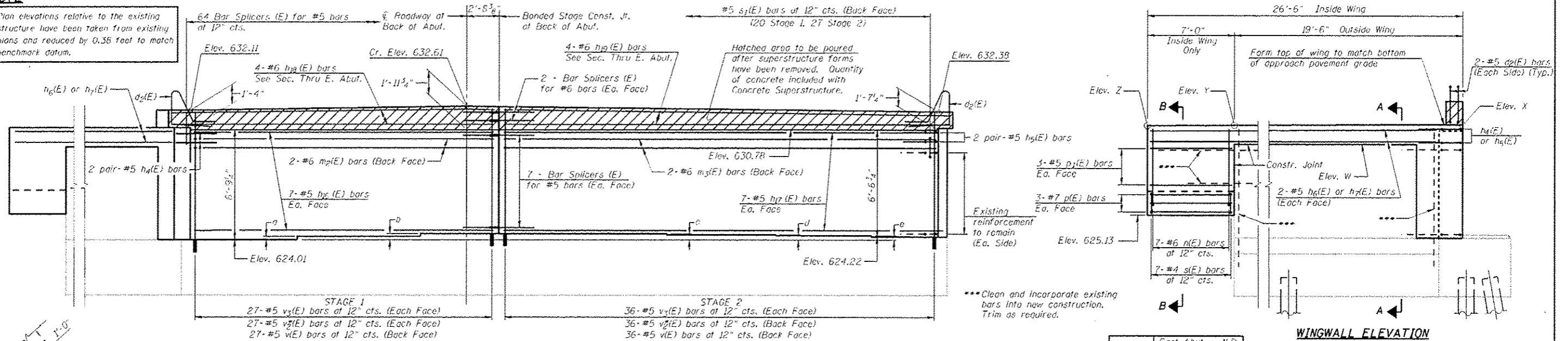
**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**WEST ABUTMENT DETAILS**  
**STRUCTURE NO. 054-0061 (NB)**  
 SHEET NO. 44 OF 53 SHEETS

F.A.I. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	274
				CONTRACT NO. 72E11
ILLINOIS FED. AID PROJECT				

**NOTE**

Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.36 feet to match benchmark datum.



**WINGWALL ELEVATION**

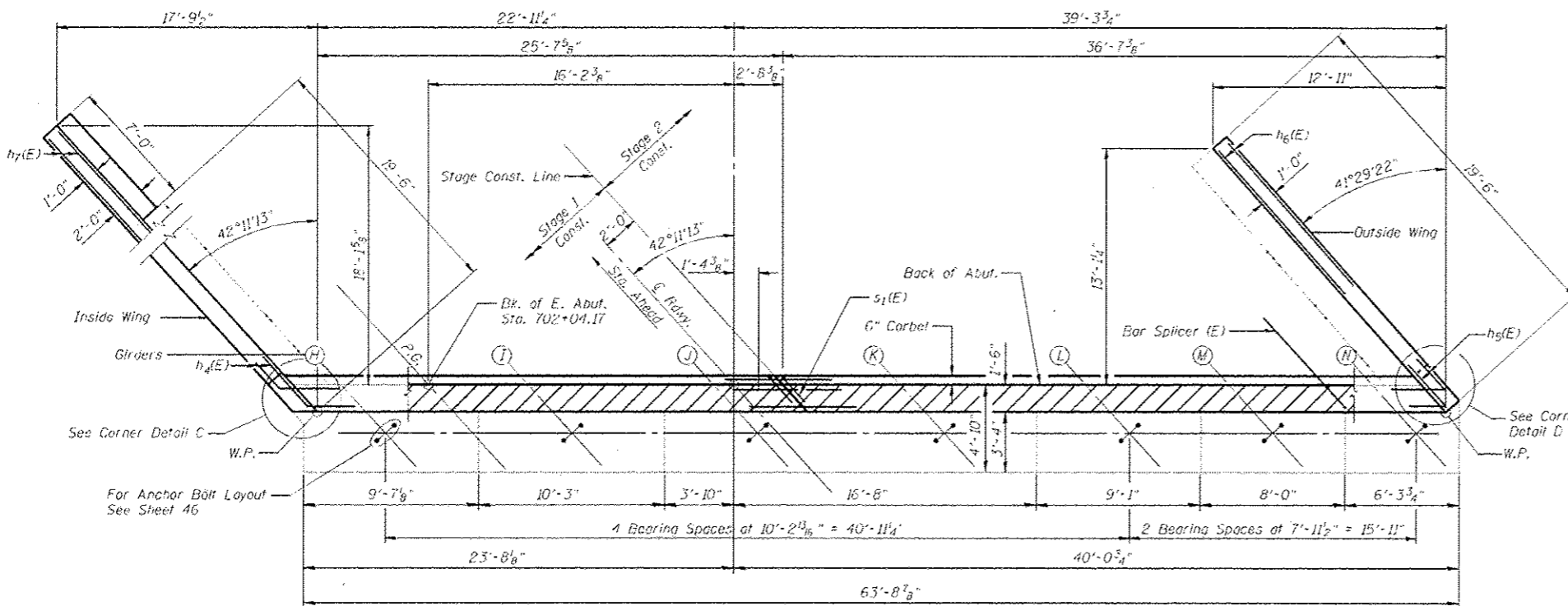
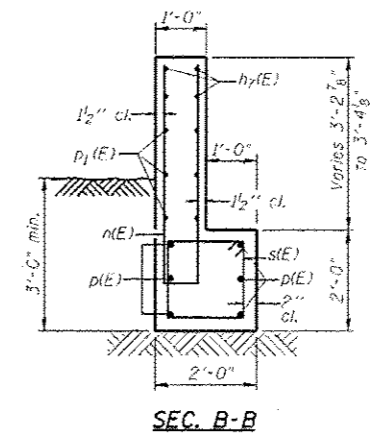
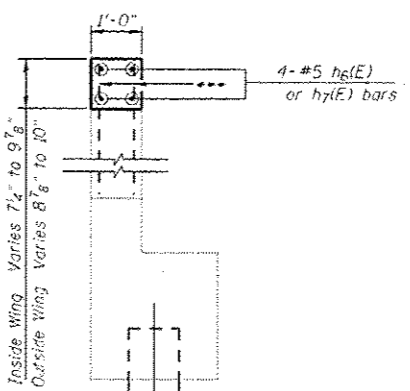
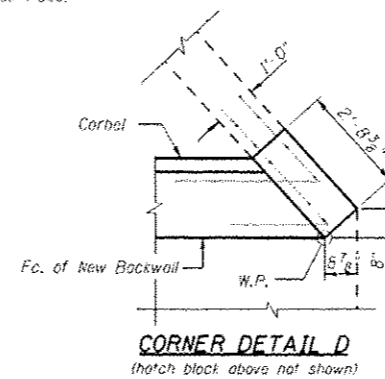
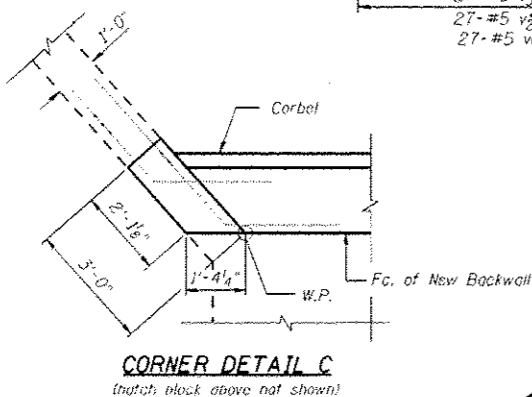
**TABLE OF EXISTING STEP HEIGHTS**

East Abutment (N.B.)	a	b	c	d	e
	2 5/8"	4 3/4"	4"	3 3/4"	2 3/4"

East Abut. - N.B.		
Elev.	Inside Wing	Outside Wing
W	630.04	630.29
X	630.86	631.13
Y	630.84	631.05
Z	630.54	-

**ABUTMENT BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d <sub>2</sub> (E)	4	#5	7'-11"	┌
h <sub>4</sub> (E)	4	#5	5'-0"	└
h <sub>5</sub> (E)	4	#5	5'-0"	└
h <sub>6</sub> (E)	4	#5	19'-2"	└
h <sub>7</sub> (E)	4	#5	25'-3"	└
h <sub>8</sub> (E)	14	#5	26'-9"	└
h <sub>8</sub> (E)	4	#6	26'-9"	└
h <sub>9</sub> (E)	4	#6	35'-0"	└
m <sub>2</sub> (E)	2	#6	26'-9"	└
m <sub>3</sub> (E)	2	#6	35'-0"	└
n(E)	7	#6	9'-1"	└
p <sub>1</sub> (E)	6	#7	6'-8"	└
p <sub>1</sub> (E)	6	#5	6'-8"	└
s(E)	7	#4	7'-5"	└
s <sub>1</sub> (E)	47	#5	4'-2"	└
v <sub>1</sub> (E)	63	#5	3'-9"	└
v <sub>2</sub> (E)	126	#5	6'-3"	└
v <sub>3</sub> (E)	126	#5	3'-2"	└
Structure Excavation	Cu. Yd.		171	
Concrete Structures	Cu. Yd.		28.4	
Reinforcement Bars, Epoxy Coated	Pound		3670	
Bar Splicers	Each		84	
Concrete Sealer	Sq. Ft.		425	



**CEC**  
Civil and Structural Engineering

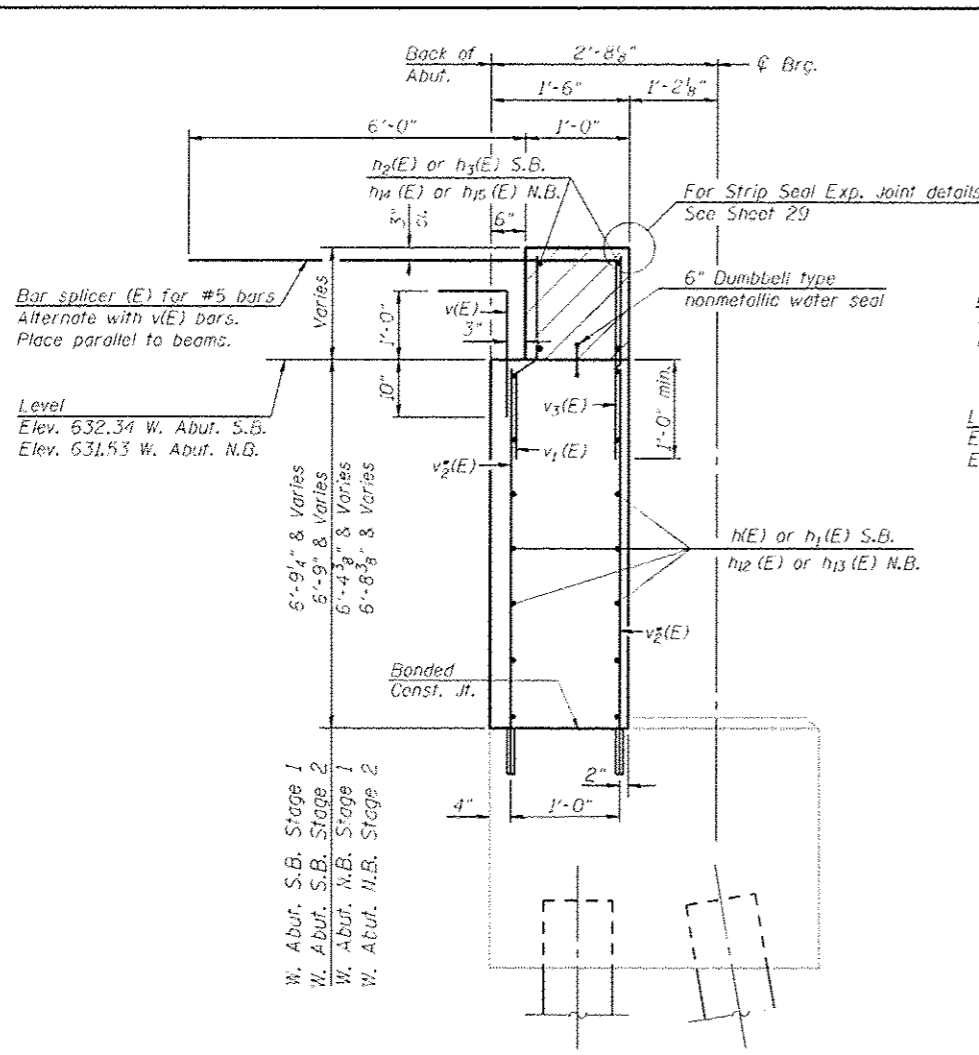
JOB # 2265.2	DESIGNED - AAN	REVISED -
FILE # 0540068.0061-72E11-44-45-Abutment-N.B.	CHECKED - MOC	REVISED -
DATE 5/14/2013	DRAWN - SJS	REVISED -
	CHECKED - TSH	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

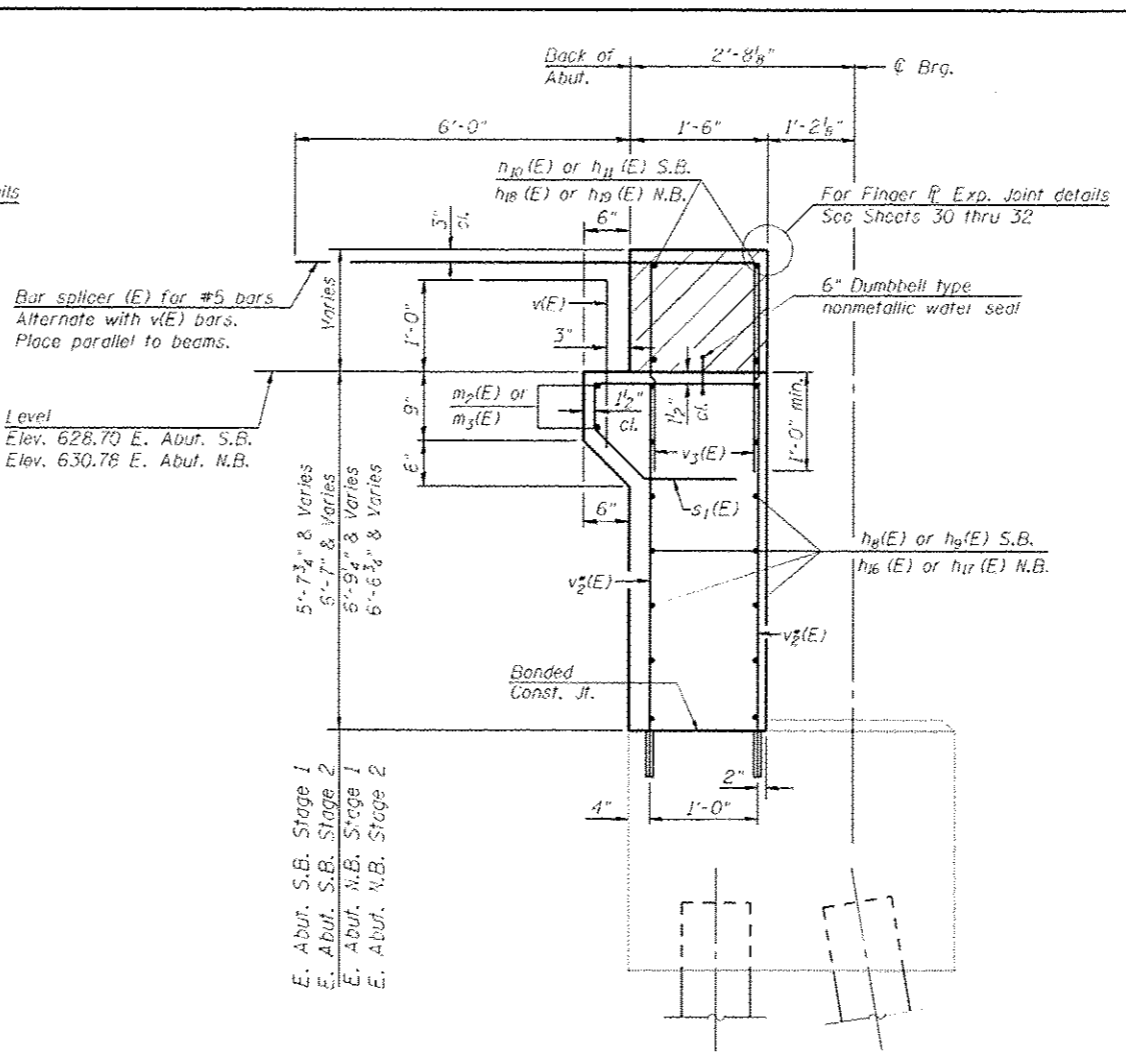
**EAST ABUTMENT DETAILS**  
**STRUCTURE NO. 054-0061 (NB)**  
SHEET NO. 45 OF 53 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CD BR 2011-1	LOGAN	429	275
				CONTRACT NO. 72E11
ILLINOIS FED. AID PROJECT				

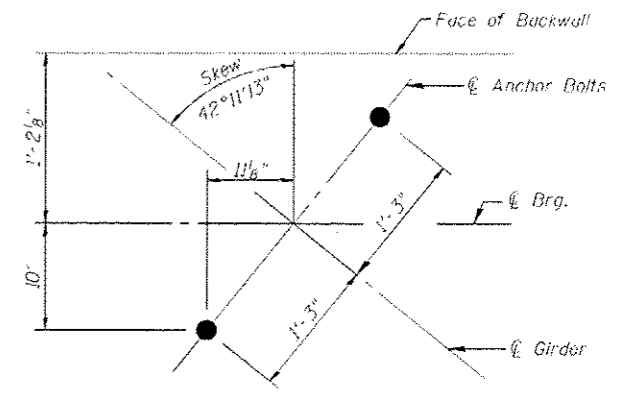




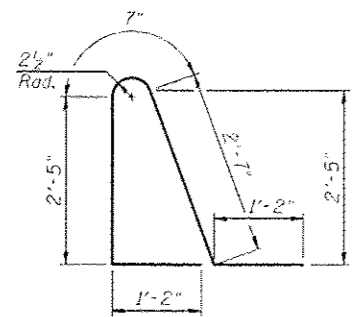
**SEC. THRU WEST ABUTMENTS**  
(Dimensions at Rt. L's)



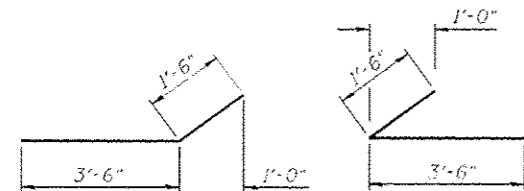
**SEC. THRU EAST ABUTMENTS**  
(Dimensions at Rt. L's)



**ANCHOR BOLT LAYOUT**

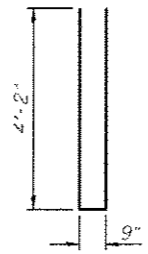


**BAR d2(E)**

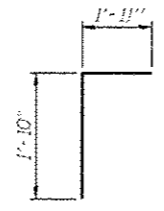


**BAR h4(E)**

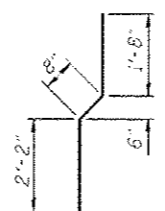
**BAR h5(E)**



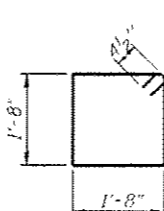
**BAR n(E)**



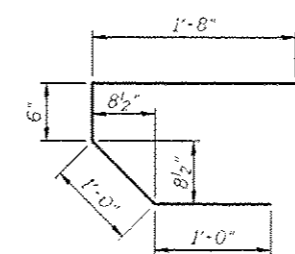
**BAR v(E)**



**BAR v1(E)**



**BARS s(E)**



**BAR s1(E)**

REV. SHEET 6-3-13

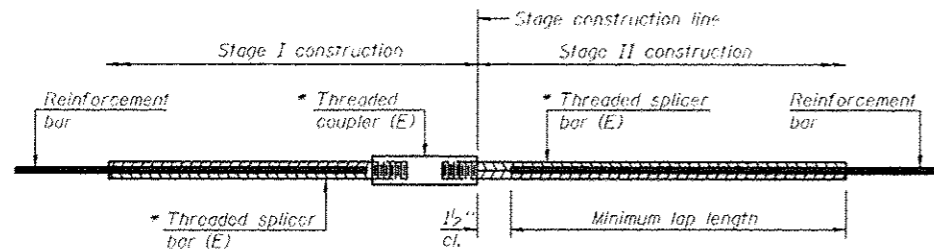
**NOTE**  
Plan elevations relative to the existing structure have been taken from existing plans and reduced by 0.38 feet to match benchmark datum.

**EXISTING BEARING SEAT ELEVATIONS  
S.N. 054-0060 (SB)**

	A	B	C	D	E	F	G
West Abutment	625.59	625.65	625.65	625.81	625.88	625.74	625.57
East Abutment	622.12	622.40	622.69	622.92	623.12	623.06	623.06

**EXISTING BEARING SEAT ELEVATIONS  
S.N. 054-0061 (NB)**

	H	I	J	K	L	M	N
West Abutment	625.17	625.26	625.32	625.18	625.00	624.91	624.83
East Abutment	624.01	624.23	624.41	624.41	624.35	624.29	624.22



**STANDARD BAR SPLICER ASSEMBLY**

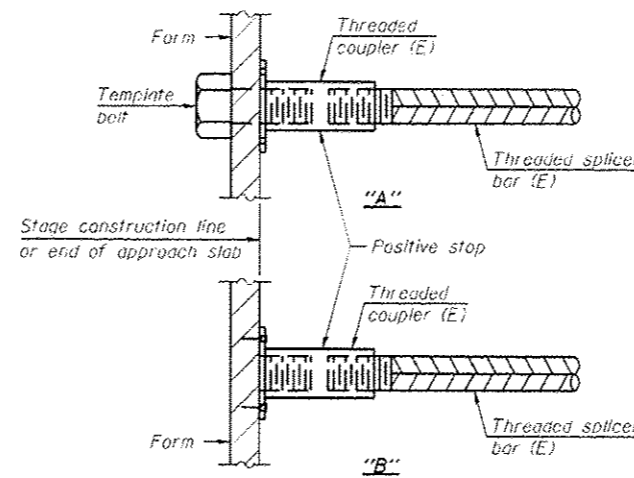
Bar size to be spliced	Minimum Lap Lengths					
	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6
3, 4	1'-5"	1'-11"	2'-1"	2'-4"	2'-7"	2'-11"
5	1'-9"	2'-5"	2'-7"	2'-11"	3'-3"	3'-8"
6	2'-1"	2'-11"	3'-1"	3'-6"	3'-10"	4'-5"
7	2'-9"	3'-10"	4'-2"	4'-8"	5'-2"	5'-10"
8	3'-8"	5'-1"	5'-5"	6'-2"	6'-9"	7'-8"
9	4'-7"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

- Table 1: Black bar, O.B Class C
- Table 2: Black bar, Top bar lap, O.B Class C
- Table 3: Epoxy bar, O.B Class C
- Table 4: Epoxy bar, Top bar lap, O.B Class C
- Table 5: Epoxy bar, Class C
- Table 6: Epoxy bar, Top bar top, Class C

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

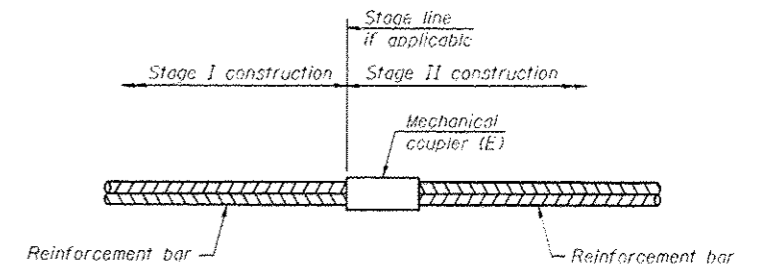
\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Table for minimum lap length
Deck S.B.	#5	1700	3
Deck N.B.	#5	1700	3
West End of Deck S.B.	#7	5	5
East End of Deck S.B.	#7	1	5
West End of Deck N.B.	#7	5	5
East End of Deck N.B.	#7	1	5
West Abutment S.B. - Hatch Block	#6	4	3
East Abutment S.B. - Hatch Block	#6	4	3
West Abutment N.B. - Hatch Block	#6	4	3
East Abutment N.B. - Hatch Block	#6	4	3
West Abutment S.B. - Backwall	#5	14	3
East Abutment S.B. - Backwall	#5	12	3
West Abutment N.B. - Backwall	#5	14	3
East Abutment N.B. - Backwall	#5	14	3
East Abutment S.B. - Corbel	#6	2	3
East Abutment N.B. - Corbel	#6	2	3
Approach Slab Footing - Top/Bottom	#5	160	3
Approach Slab - Top	#4	100	3
Approach Slab - Bottom	#5	184	3



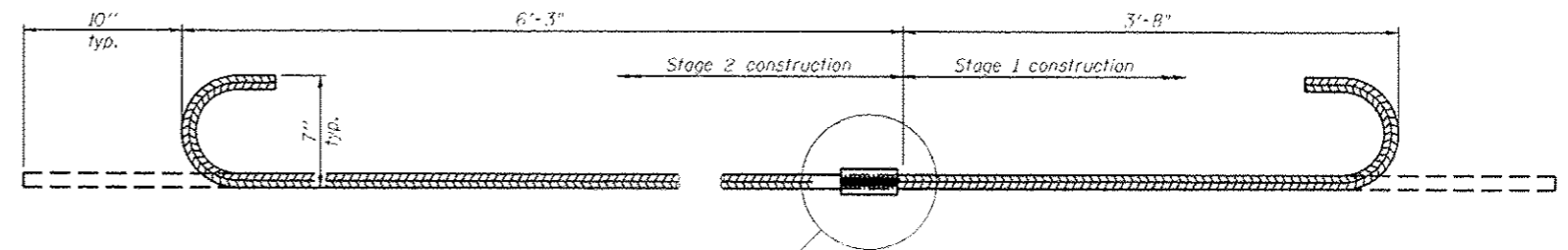
**INSTALLATION AND SETTING METHODS**

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



**STANDARD MECHANICAL SPLICER**

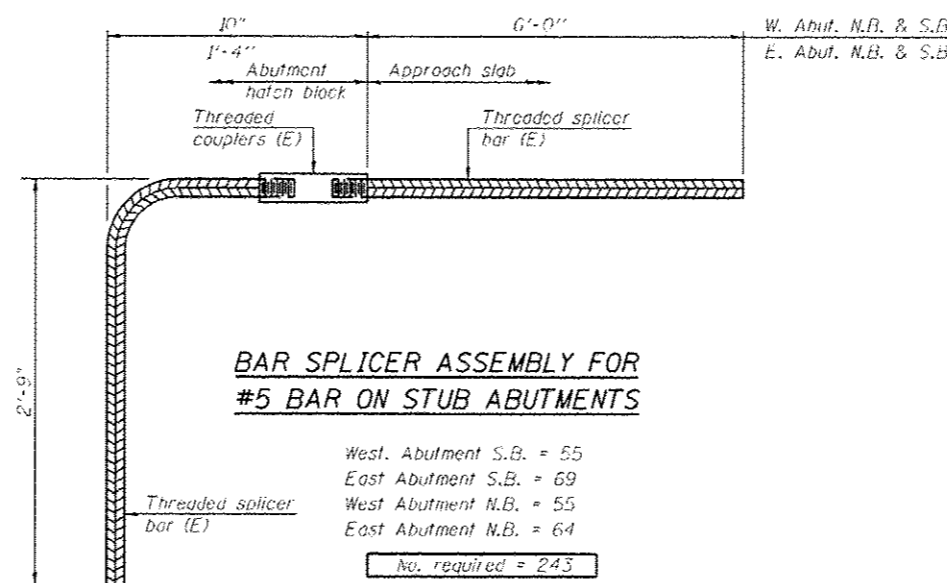
Location	Bar size	No. assemblies required



**#7 BAR SPLICER ASSEMBLY FOR EDGE BEAMS AT STAGE CONSTRUCTION JOINT**

End of Deck S.B. = 3  
 End of Deck N.B. = 3  
**No. required = 6**

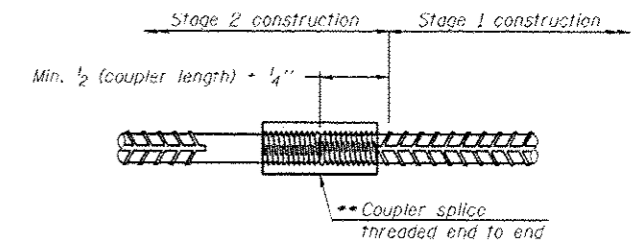
\*\* The bar splicer assembly shall allow completion of the splice without turning of the hook bars. The stage 2 splice bar shall be threaded such that the entire coupler can be threaded onto the splice bar.



**BAR SPLICER ASSEMBLY FOR #5 BAR ON STUB ABUTMENTS**

West. Abutment S.B. = 55  
 East Abutment S.B. = 69  
 West Abutment N.B. = 55  
 East Abutment N.B. = 64

**No. required = 243**



**DETAIL A**

**NOTES**

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

BSD-1

8-31-12

REV. SHEET 6-3-13



JOB # 2265.2  
 FILE # 0540660\_0061-72E11-52-Splicer.dgn  
 DATE # 5/14/2013

DESIGNED - AAN  
 CHECKED - MDC  
 DRAWN - TSH  
 CHECKED - MDC

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS  
 STRUCTURE NO. 054-0060 (SB) & STRUCTURE NO. 054-0061 (NB)

SHEET NO. 52 OF 53 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	282
CONTRACT NO. 72E11				ILLINOIS FED. AID PROJECT

Benchmark: C.B. 2 - Set chiseled  $\square$  on concrete slopewall North end between S.N. 054-0063 and S.N. 054-0064 at Sta. 283+85, 10 ft. left, Elev. 595.82.

Existing Structure: S.N. 054-0063 (Northbound) and S.N. 054-0064 (Southbound) built in 1974 as F.A.I. Route 55, Section 54-5B Station 282+39.33. The superstructure consists of three spans continuous steel 48" Plate Girders with reinforced concrete deck. The substructure consists of open stub abutments supported on concrete piles and solid piers supported on concrete piles. The structure length is 316'-6" back to back of abutments and 42'-0" out to out of deck with a 22° R.F. skew. Existing deck to be removed and replaced.

Traffic to be maintained using Stage Construction.

No Salvage.

STATION 282+39.33  
RE-BUILT 20\_\_ BY  
STATE OF ILLINOIS  
LOADING HS20-44 & ALT.  
STRUCTURE NO. 054-0063

STATION 282+39.33  
RE-BUILT 20\_\_ BY  
STATE OF ILLINOIS  
LOADING HS20-44 & ALT.  
STRUCTURE NO. 054-0064

**NAME PLATE N.B. STRUCTURE**  
See Std. 515001

**NAME PLATE S.B. STRUCTURE**  
See Std. 515001

**SEISMIC DATA**

Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient(A) = 0.046 g  
Site Coefficient (S) = 1

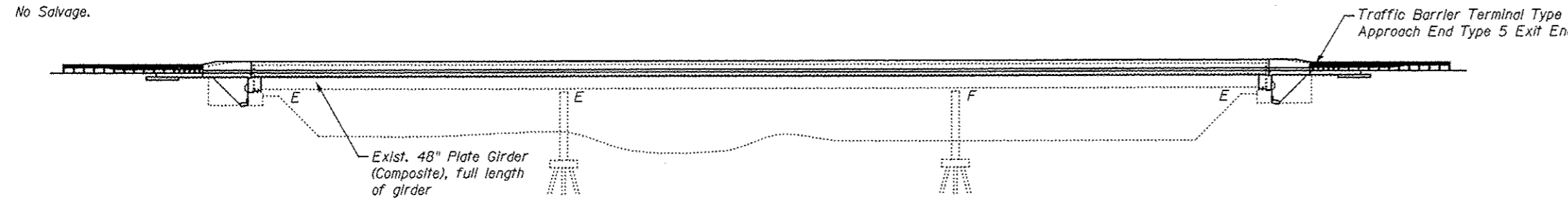
**DESIGN STRESSES**

FIELD UNITS (NEW CONST.)	FIELD UNITS (EXIST. CONST.)
$f'_c = 3,500$ psi	$f'_c = 3,500$ psi
$f_y = 60,000$ psi (Reinforcement)	$f_y = 40,000$ psi (Reinforcement)
$f_y = 36,000$ psi (Steel)	$f_y = 36,000$ psi (Steel)

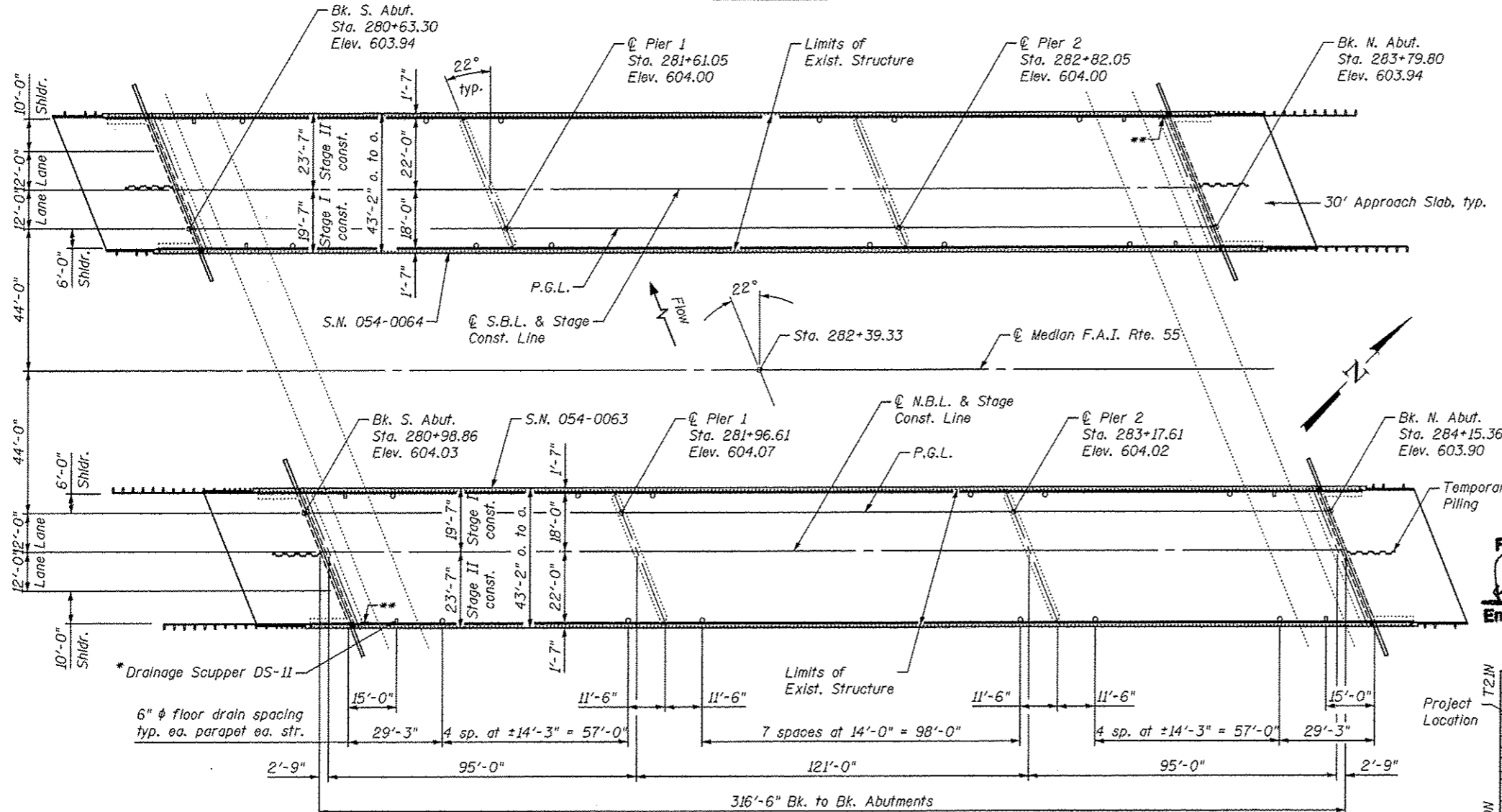
**DESIGN SPECIFICATIONS (NEW CONST.)**

2002 AASHTO Standard Specifications for Highway Bridges 17th Edition  
1995 FHWA Retrofitting Manual

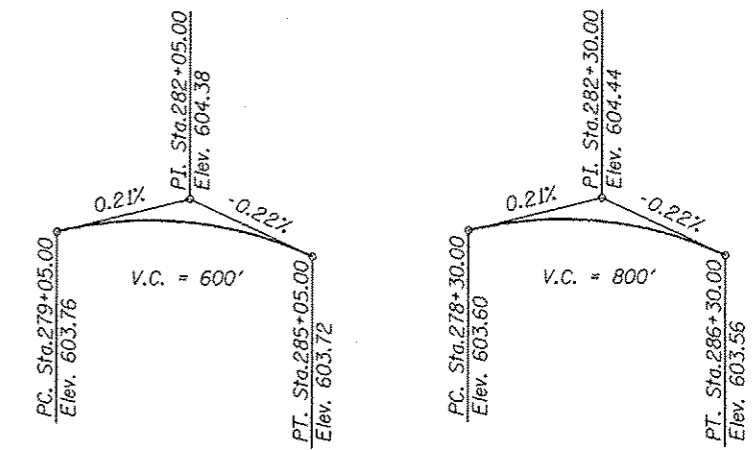
**LOADING HS 20-44 & ALT.**  
Allow 25#/sq. ft. for future wearing surface.



**ELEVATION**



**PLAN**



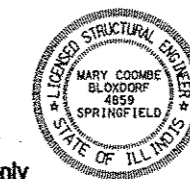
**PROPOSED PROFILE**

N.B. S.N. 054-0063  
Along median edge of pavement

**PROPOSED PROFILE**

S.B. S.N. 054-0064  
Along median edge of pavement

The profile grade depicts the final elevations after grinding. Up to 1/4" will be ground off the bridge deck and approach slab.

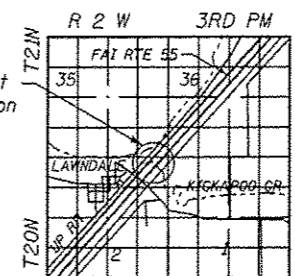


*Mary Coombe Bloxdorf*  
ILLINOIS STRUCTURAL NO. 4859  
EXPIRES 11/30/14  
DATE: 3/13/13

**APPROVED**  
For Structural Adequacy Only

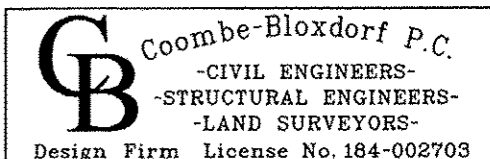
*J. Carl Puzey*  
Engineer of Bridges & Structures

**GENERAL PLAN & ELEVATION**  
F.A.I. RTE. 55 OVER KICKAPOO CREEK



**LOCATION SKETCH**

**SECTION D6 LOGAN CO BR 2011-1**  
**LOGAN COUNTY**  
**STATION 282+39.33**  
**STRUCTURE NO. 054-0063 (N.B.)**  
**STRUCTURE NO. 054-0064 (S.B.)**



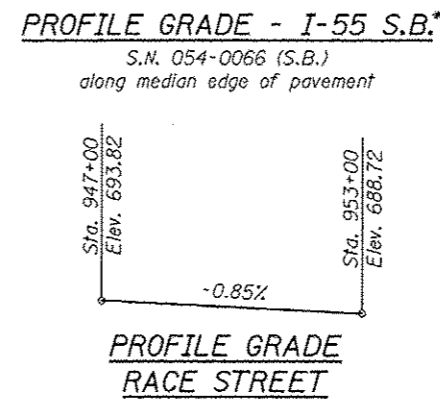
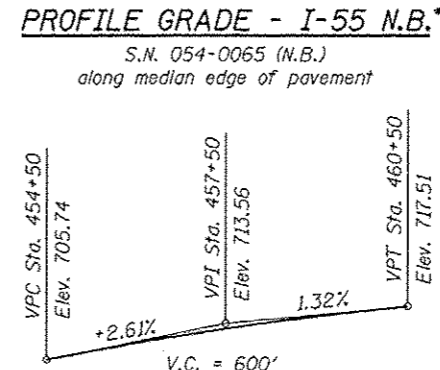
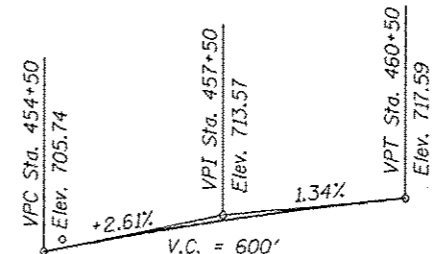
Design Firm License No. 184-002703

FILE NAME = ...	USER NAME = JML	DESIGNED - RKM	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SHEET NO. 1 OF 38 SHEETS
...0540063-0064-72e11-001-gpe.dgn	PLOT SCALE = 42/8.8888889 1" = 10'	CHECKED - MCB	REVISED -		
CB PROJECT NO 10007-3	PLOT DATE = 3/12/2013	DRAWN - CFC	REVISED -		
		CHECKED - RKM	REVISED -		

B.M.: TEA-6 chiseled  Set on southwest approach wall of south bound lanes of S.N. 054-0066 at Sta. 456+47, 78' left, Elev. 711.07.

Existing Structure: S.N. 054-0065 (N.B.) and 054-0066 (S.B.) built in 1976 as FAI Route 55, Section 54-6HB, Sta. 457+00. The superstructure consists of reinforced concrete deck supported by steel wide flange beams continuous over three spans. Spans 1 & 3 are non-composite and Span 2 is composite. The substructure consists of open stub abutments supported by concrete piles and concrete frame piers supported on cross-tied timber piles. Superstructure length is 121'-6" (N.B.) & 118'-3" (S.B.) back to back of abutments and 42'-0" out to out of deck with a 5°05'25" skew (L.F.). Existing deck to be removed and replaced. Traffic to be maintained using crossovers.

No Salvage.



CURVE DATA RACE STREET	CURVE DATA MEDIAN F.A.I. 55
$\Delta = 29^\circ 58' 18''$	$\Delta = 35^\circ 48' 03''$
$D = 3^\circ - 30'$	$D = 1^\circ - 30'$
$T = 435.20'$	$T = 1233.83'$
$L = 856.33'$	$L = 2386.85'$
$E = 57.63'$	$E = 194.32'$
$R = 1637.02'$	$R = 3819.92'$
S.E. = 4.3%	S.E. = 4.2%
P.C. = Sta. 946+12.30	P.C. = Sta. 453+88.01
P.T. = Sta. 954+68.63	P.T. = Sta. 477+74.85
P.I. = Sta. 950+47.50	P.I. = Sta. 466+21.84
SET = Sta. 945+26 to Sta. 946+51 & Sta. 954+24.05 to Sta. 955+49.05	SET = Sta. 452+51 to Sta. 454+51 & Sta. 477+05 to Sta. 479+05

**SEISMIC DATA**  
Seismic Performance Category (SPC) = A  
Bedrock Acceleration Coefficient(A) = 0.046 g  
Site Coefficient (S) = 1

**LOADING HS20-44 & ALT**  
Allow 50 lbs/sq ft for future wearing surface.

**DESIGN SPECIFICATIONS**  
2002 AASHTO Bridge Design Specifications  
1995 FHWA Seismic Retrofit manual

**DESIGN STRESSES**

**NEW CONSTRUCTION**

**FIELD UNITS**

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)  
 $f_y = 36,000$  psi (Steel)

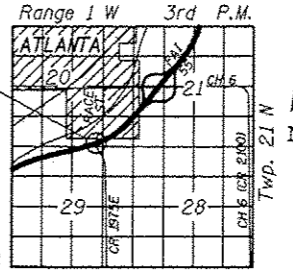
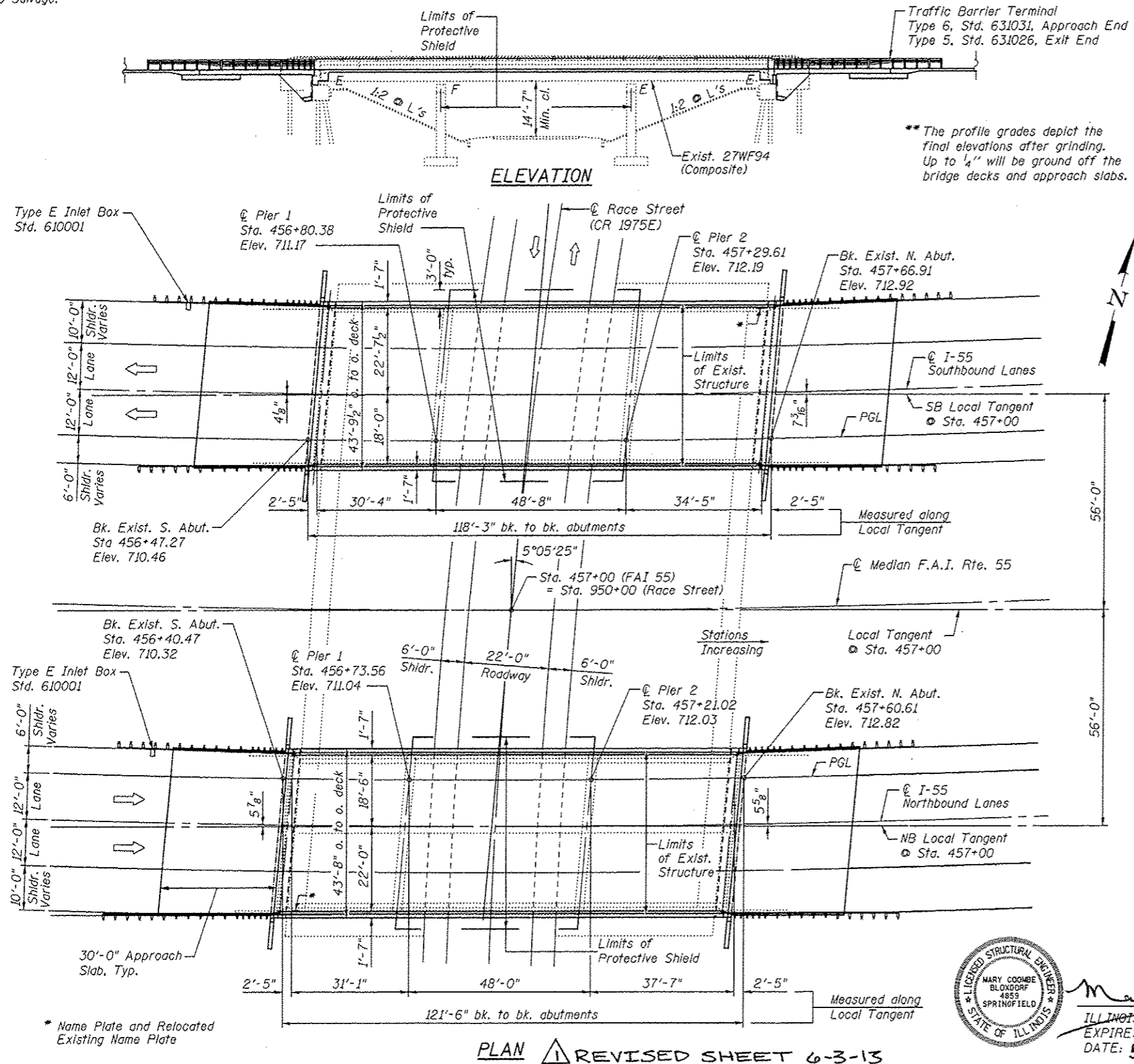
**EXISTING CONSTRUCTION**

**FIELD UNITS**

$f'_c = 1,400$  psi  
 $f_s = 20,000$  psi (Reinforcement)  
 $f_s = 20,000$  psi (Steel)  
 $f_y = 36,000$  psi (Steel)

**SCOPE OF WORK**

Remove and replace bridge deck  
Make new deck composite in all spans  
Remove and replace approach pavements  
Remove and replace bearings at abutments  
Remove abutment back wall and wingwalls and make abutments semi-integral  
Repair slopewall, abutment caps and piers as necessary  
Diamond grind bridge decks and approach slabs 1/4" min.



**APPROVED**  
For Structural Adequacy Only  
*P. Carl Puryear, P.E.*  
Engineer of Bridges & Structures

**GENERAL PLAN**  
F.A.I. ROUTE 55 OVER RACE ST.  
SECTION D6 LOGAN CO BR 2011-1  
LOGAN COUNTY  
STATION 457+00.00  
STRUCTURE NO. 054-0065 (N.B.)  
STRUCTURE NO. 054-0066 (S.B.)



*Mary Coombe Bloxdorf*  
ILLINOIS STRUCTURAL NO. 4659  
EXPIRES 11/30/14  
DATE: 5/13/13

FILE NAME * ...10540065-0066-72-11-001-gpe.dgn	USER NAME * MML	DESIGNED - GJB	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	SHEET NO. 1 OF 39 SHEETS
PLOT SCALE * 3218.000000 1' = 1"	CHECKED - MCB/RKM	REVISED -			
PLOT DATE * 5/18/2013	DRAWN - MML	REVISED -			
	CHECKED - MCB/GJB	REVISED -			

**CB** Coombe-Bloxdorf P.C.  
-CIVIL ENGINEERS-  
-STRUCTURAL ENGINEERS-  
-LAND SURVEYORS-  
Design Firm License No. 184-002703

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	324

CONTRACT NO. 72E11  
ILLINOIS FED. AID PROJECT

**GENERAL NOTES**

Fasteners shall be ASTM A325 Type 1, mechanically galvanized bolts 3/4" diameter, holes 1/16" diameter, unless otherwise noted.

No field welding is permitted except as specified in contract documents.

The Contractor shall test the existing welds by non-destructive methods within 2 ft. of the end of the existing cover plates for cracks after removal of the existing concrete deck. Dye penetrant (PT), magnetic particle (MT), or other approved testing method shall be performed by qualified personnel approved by the Engineer. If cracks are found, report them to the Bureau of Bridges and Structures for disposition. The cost of testing is included in Removal of Existing Concrete Deck. The cost of crack repair, if necessary, will be paid for according to Article 109.04 of the Standard Specifications.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially 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.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

If the contractor elects to use cantilever forming brackets on the exterior beams or girders, 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.

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.

All new structural steel shall be shop painted with an inorganic zinc rich primer per AASHTO M300, Type 1.

Field painting of structural steel shall be done under a separate painting contract.

Removal of existing bridge rail is included with the cost of Removal of Existing Concrete Deck No. 4.

STATION 457+00.00  
RE-BUILT 20\_\_ BY  
STATE OF ILLINOIS  
F.A.I. ROUTE 55  
SEC D6 LOGAN CO BR 2011-1  
LOADING HS20-44 & ALT  
STR. NO. 054-0065 (NB)

STATION 457+00.00  
RE-BUILT 20\_\_ BY  
STATE OF ILLINOIS  
F.A.I. ROUTE 55  
SEC D6 LOGAN CO BR 2011-1  
LOADING HS20-44 & ALT  
STR. NO. 054-0066 (SB)

**NAME PLATES**

See Std. 515001  
Existing Name Plates shall be cleaned and relocated next to new Name Plates. Cost included with Name Plates.

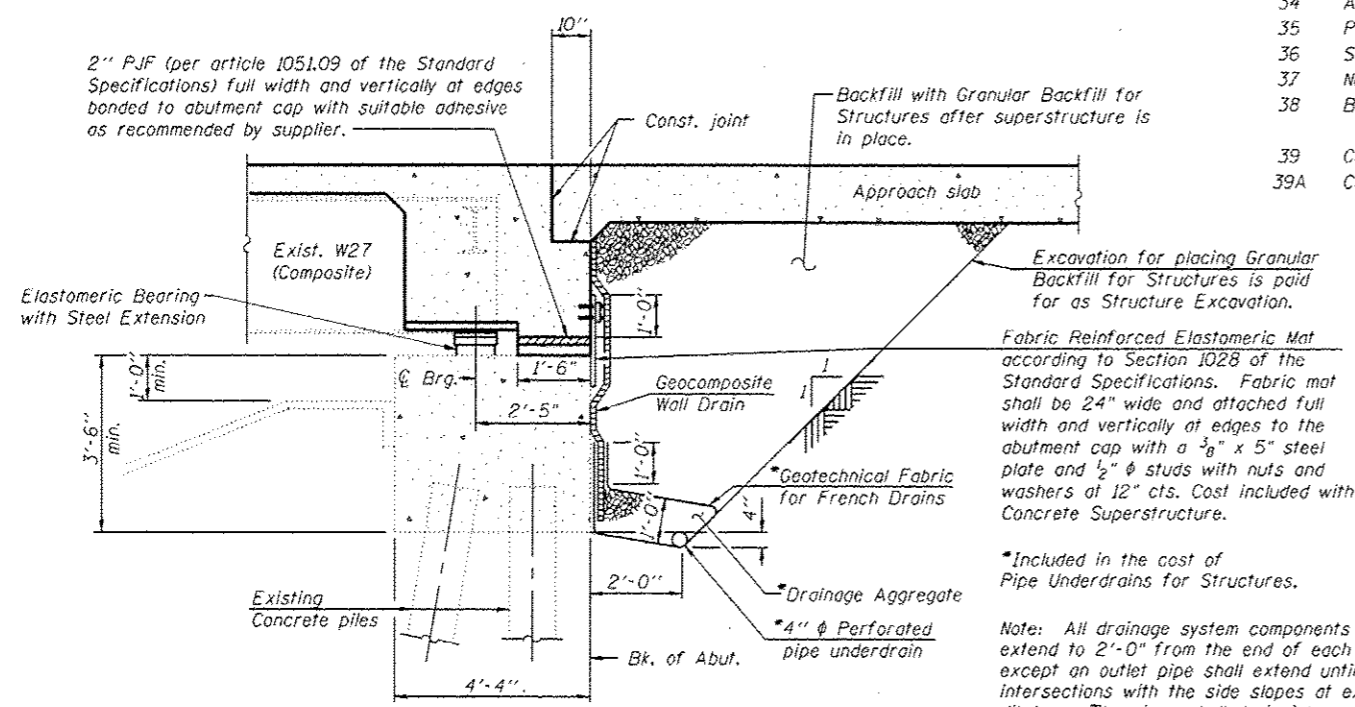
**INDEX OF SHEETS**

- 1 General Plan and Elevation
- 2 General Data
- 3-5 Top of Slab Elevations (SB)
- 6-7 Top of Approach Slab Elevations (SB)
- 8-10 Top of Slab Elevations (NB)
- 11-12 Top of Approach Slab Elevations (NB)
- 13 Superstructure (SB)
- 14 Superstructure (NB)
- 15-16 Superstructure Details
- 17 Diaphragm Details
- 18-20 Bridge Approach Slab Details (SB)
- 21-23 Bridge Approach Slab Details (NB)
- 24 Framing Plan
- 25 Bearing Details
- 26 South Abutment Concrete Removal (SB)
- 27 North Abutment Concrete Removal (SB)
- 28 South Abutment Concrete Removal (NB)
- 29 North Abutment Concrete Removal (NB)
- 30-31 Abutment Details (SB)
- 32-33 Abutment Details (NB)
- 34 Abutment Repairs
- 35 Pier Repairs
- 36 South Slopewall Repairs
- 37 North Slopewall Repairs
- 38 Bar Splicer Assembly and Mechanical Splicer Details
- 39 Concrete Parapet Slipforming Option
- 39A Cantilever Forming Bracket

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Granular Backfill for Structures	Cu. Yd.		363	363
Concrete Removal	Cu. Yd.		62.2	62.2
Removal of Existing Concrete Deck No. 4	Each	2		2
Structure Excavation	Cu. Yd.		276	276
Concrete Structures	Cu. Yd.		78.8	78.8
Concrete Superstructure	Cu. Yd.	646.9		646.9
Bridge Deck Grooving	Sq. Yd.	1729		1729
Protective Coat	Sq. Yd.	2063		2063
Furnishing and Erecting Structural Steel	Pound	3370		3370
Stud Shear Connectors	Each	5508		5508
Reinforcement Bars, Epoxy Coated	Lb.	145,980	15,200	161,180
Bar Splicers	Each	176		176
Name Plates	Each	2		2
Elastomeric Bearing Assembly, Type I	Each	24		24
Anchor Bolts, 1"	Each	96		96
Geocomposite Wall Drain	Sq. Yd.		179	179
Pipe Underdrains for Structures 4"	Ft.		328	328
Diamond Grinding (Bridge Section)	Sq. Yd.	1716		1716
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.		9	9
Jack and Remove Existing Bearings	Each	24		24
Slopewall Repair	Sq. Yd.		32	32
Controlled Low-Strength Material	Cu. Yd.		9	9
Protective Shield	Sq. Yd.		516	516

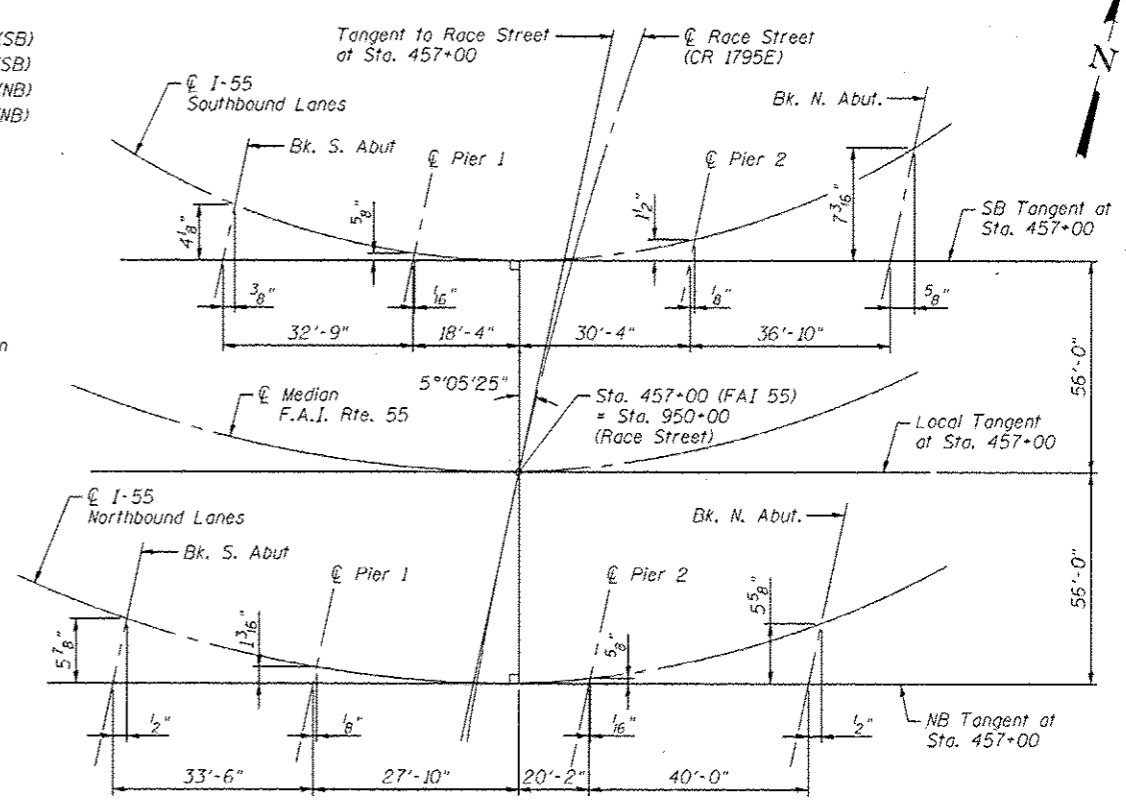
\*Includes PCC Connector Pavement beyond the end of approaches.



**SECTION THRU SEMI-INTEGRAL ABUTMENT**

(Horiz. dim. @ Rt. L's)

REV. SHEET 6-3-13



**OFFSET SKETCH**

**CB** Coombe-Bloxdorf P.C.  
- CIVIL ENGINEERS -  
- STRUCTURAL ENGINEERS -  
- LAND SURVEYORS -  
Design Firm License No. 184-002703

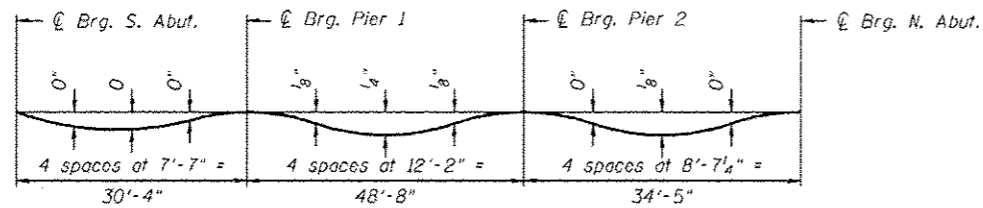
FILE NAME	USER NAME	DESIGNED	REVISED
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		CHECKED	REVISED
		MCB/RKM	-
		DRAWN	REVISED
		MMML	-
		CHECKED	REVISED
		MCB/GJB	-

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL DATA  
STRUCTURE NO. 054-0065 (N.B.) & STRUCTURE NO. 054-0066 (S.B.)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	325
				CONTRACT NO. 72E11
ILLINOIS FED. AID PROJECT				

SHEET NO. 2 OF 39 SHEETS

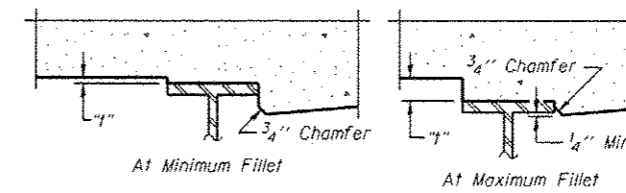


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

Note:

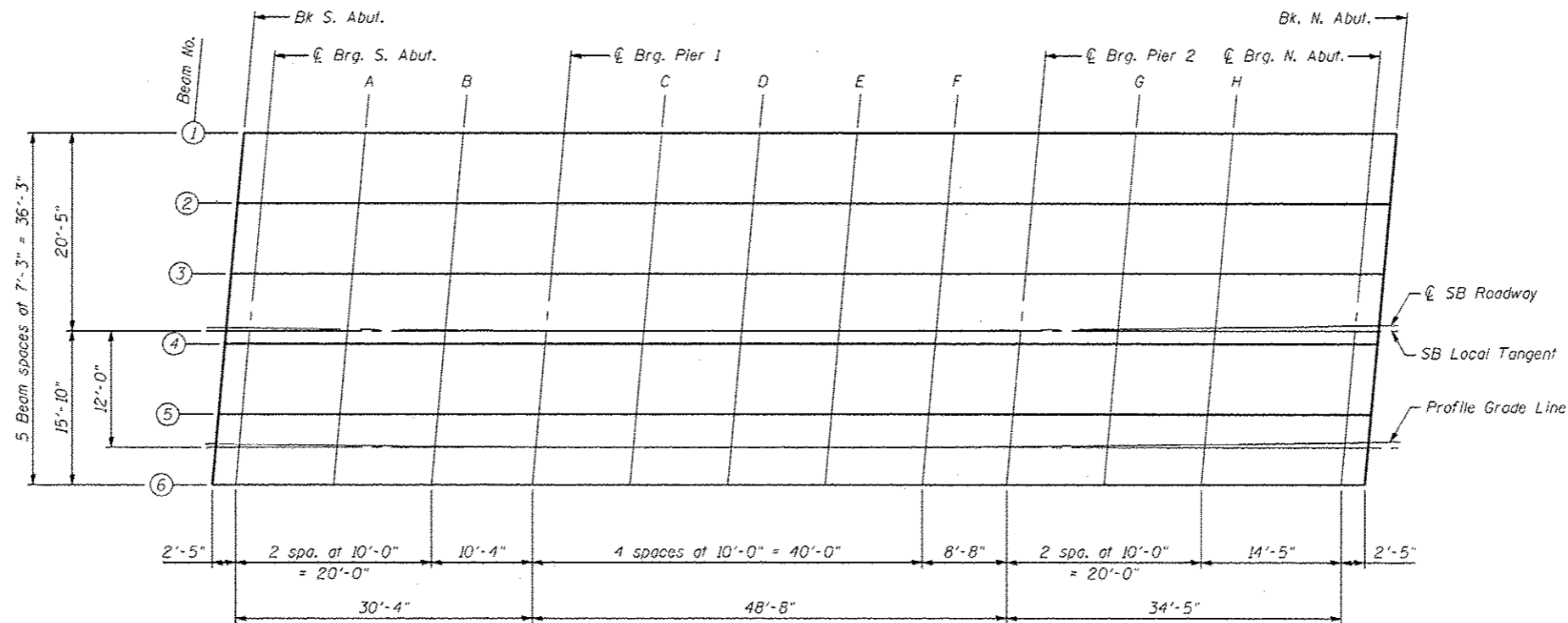
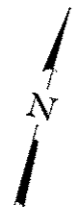
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on sheets 4 and 5 of 39.



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 and Grinding" shown on sheets 4 and 5 of 39, minus slab thickness, equals the fillet heights "t" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on sheets 4 and 5 of 39. For grinding the deck, see Special Provisions.

**FILLET HEIGHTS**



**PLAN**

Note:  
Offsets measured from  $\varnothing$  Roadway.

E-S1

7-1-10

REV. SHEET 6-3-13

FILE NAME *	USER NAME * _MML_	DESIGNED - GJB	REVISED -
...054065-0066-72e11-003-slab-elevation	deck-ab.dgn	CHECKED - MCB/RKM	REVISED -
	PLOT SCALE * 1/8" = 1' / IN.	DRAWN - CFC	REVISED -
CR PROJECT NO 18965-1	PLOT DATE * 5/19/2013	CHECKED - MCB/GJB	REVISED -

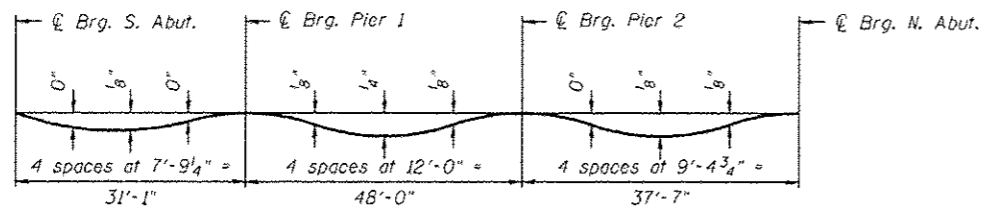
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

TOP OF SLAB ELEVATIONS (SOUTH BOUND STRUCTURE)  
STRUCTURE NO. 054-0065 (N.B.) & 054-0066 (S.B.)

SHEET NO. 3 OF 39 SHEETS

**CB** Coombe-Bloxdorf P.C.  
-CIVIL ENGINEERS-  
-STRUCTURAL ENGINEERS-  
-LAND SURVEYORS-  
Design Firm License No. 184-002703

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	326
				CONTRACT NO. 72E11
[ILLINOIS] FED. AID PROJECT				

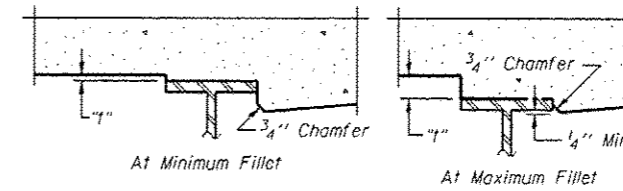


**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete only.)

**Note:**

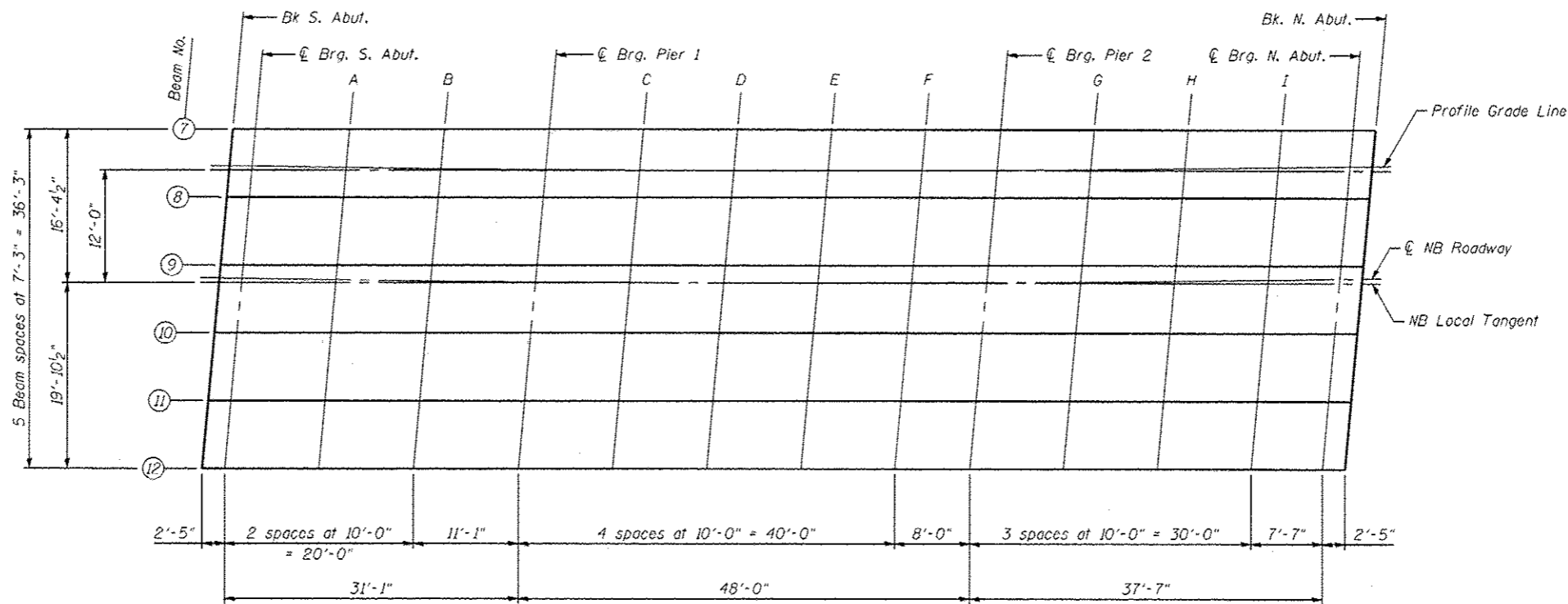
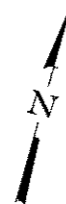
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections and grinding as shown on sheets 9 and 10 of 39.



To determine "f": 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 and Grinding" shown on Sheets 9 and 10 of 39, minus slab thickness, equals the fillet heights "f" above top flange of beams.

The slab is to be ground after curing to achieve smoothness, but the slab is not to be ground to elevations below the "Theoretical Grade Elevations" shown on sheets 9 and 10 of 39. For grinding the deck, see Special Provisions.

**FILLET HEIGHTS**



**PLAN**

Note: Offsets measured from  $\text{\O}$  Roadway.

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	331
				CONTRACT NO. 72E11
ILLINOIS FED. AID PROJECT				

E-S1 7-1-10 **REV. SHEET 6-3-13**

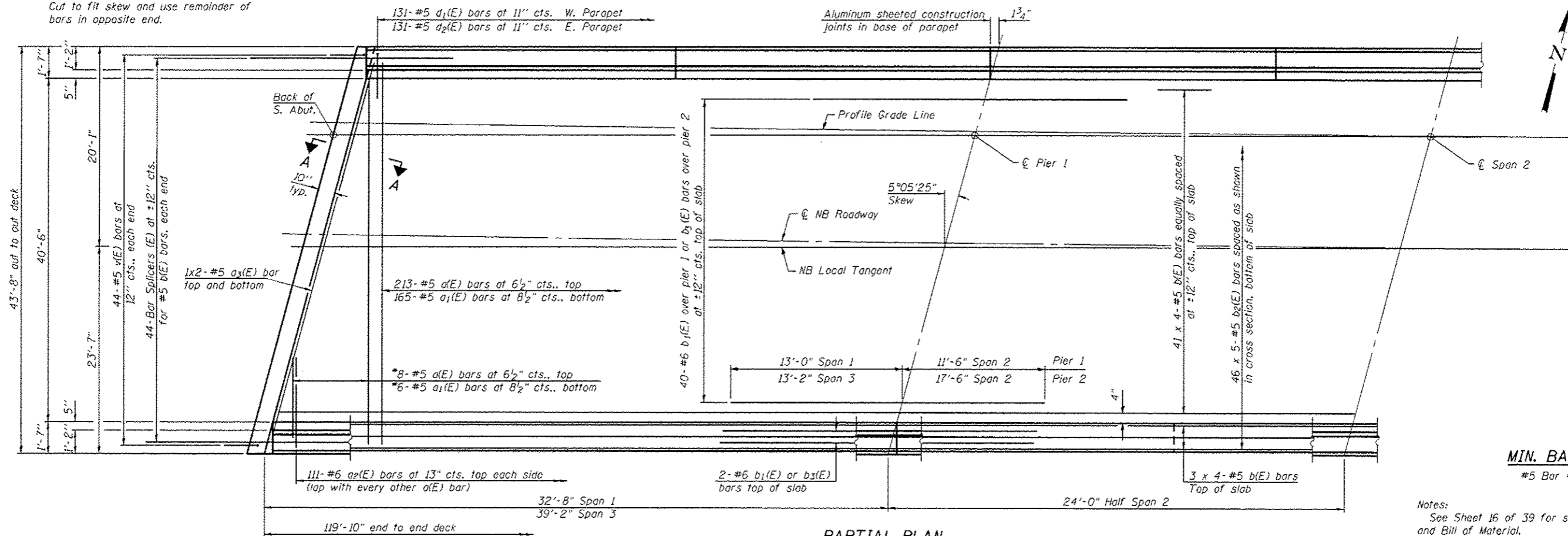
FILE NAME *	USER NAME * .MML.	DESIGNED - GJB	REVISED -
...054065-065-72e11-028-slab-elevation	deck-nb.dgn	CHECKED - MCB/RKM	REVISED -
CB PROJECT NO 18865-1	PLOT SCALE * 1/8" = 1' / IN.	DRAWN - CFC	REVISED -
	PLOT DATE * 5/10/2013	CHECKED - MCB/GJB	REVISED -

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

**TOP OF SLAB ELEVATIONS (NORTH BOUND STRUCTURE)**  
**STRUCTURE NO. 054-0065 (N.B.) & 054-0066 (S.B.)**

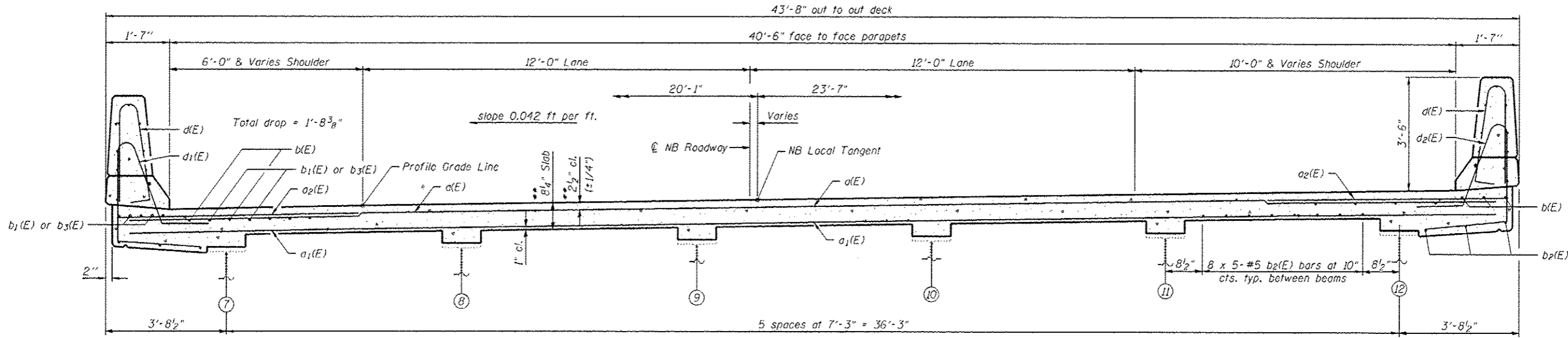
SHEET NO. 8 OF 39 SHEETS

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



**MIN. BAR LAP**  
#5 Bar = 2'-7"

Notes:  
See Sheet 16 of 39 for superstructure details and Bill of Material.  
Bars indicated thus 41 x 4-#5 etc. indicates 41 lines of bars with 4 lengths per line.  
See Sheet 15 of 39 for parapet reinforcement.  
See Sheet 17 of 39 for Section A-A.



NEAR PIER

NEAR MIDSPAN

\*\*Before 1/4" max. grinding

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SI-2-L 7-1-10 REV. SHEET 6-3-13

FILE NAME *	USER NAME * .MKL	DESIGNED - GJB	REVISED -
...0540065-0066-72e11-014-superstructure	nb.dgn	CHECKED - MCB/RKM	REVISED -
CB PROJECT NO. 18065-1	PLOT SCALE * 0:2,000,000 1" / IN.	DRAWN - CFC	REVISED -
	PLOT DATE * 5/19/2013	CHECKED - MCB/GJB	REVISED -

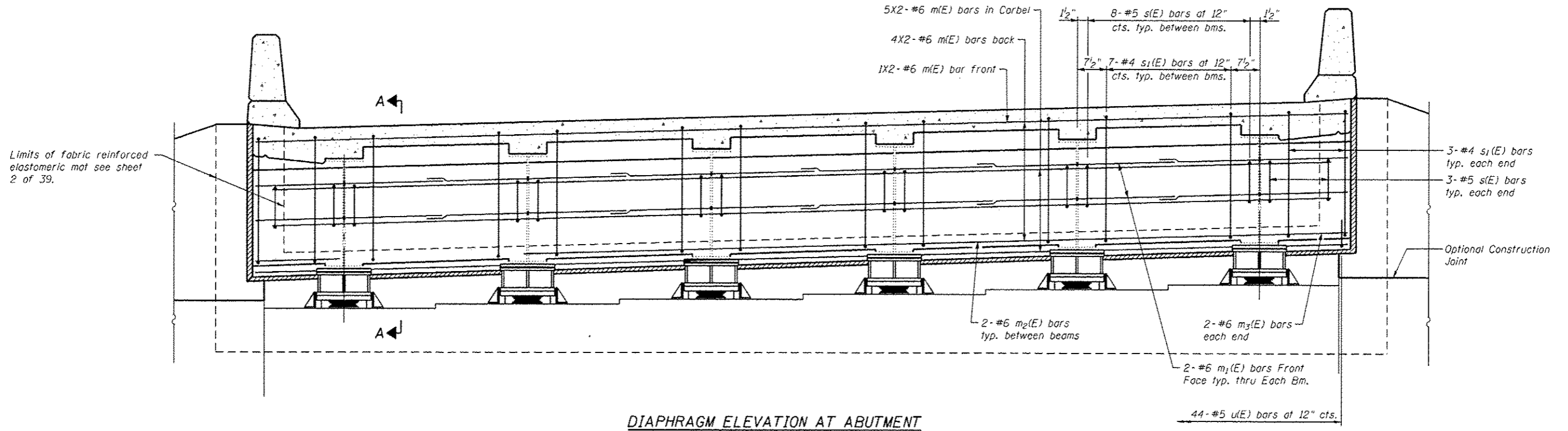
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE (NORTH BOUND STRUCTURE)**  
STRUCTURE NO. 054-0065 (N.B.) & 054-0066 (S.B.)

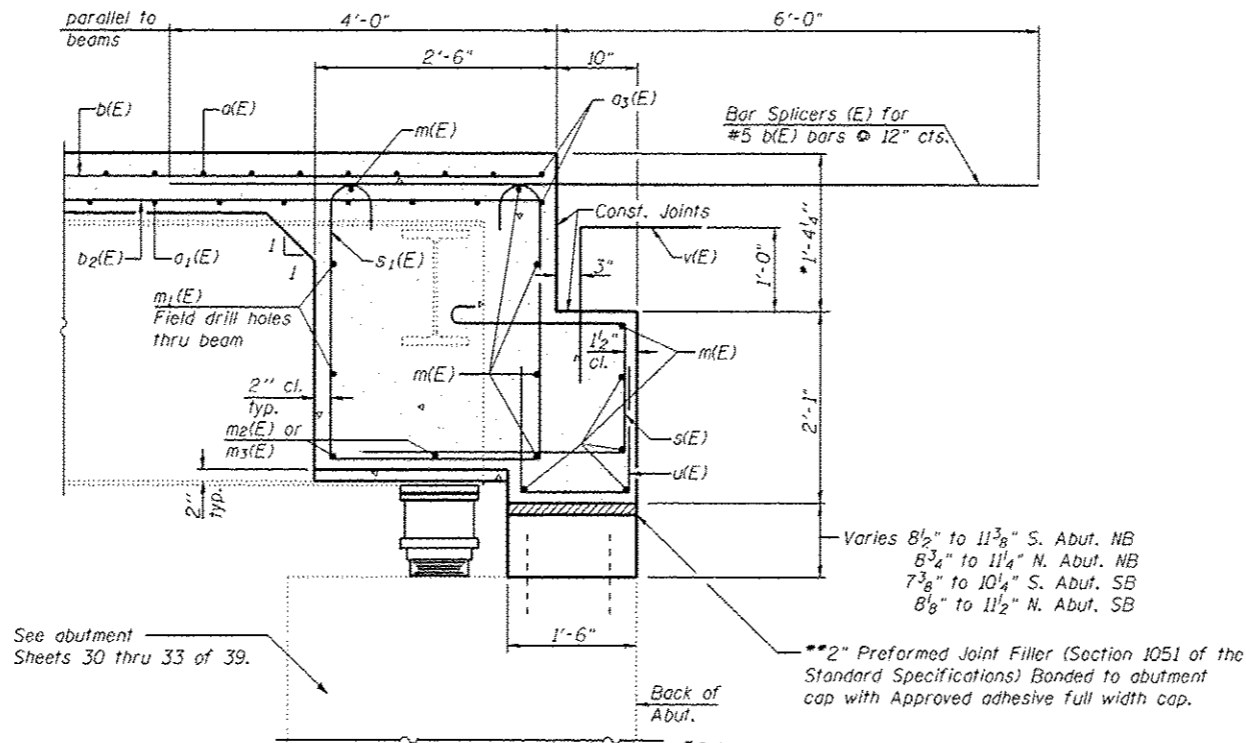
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	06 LOGAN CO BR 2011-1	LOGAN	429	337
CONTRACT NO. 72E11			ILLINOIS FED. AID PROJECT	

SHEET NO. 14 OF 39 SHEETS





DIAPHRAGM ELEVATION AT ABUTMENT



SECTION A-A

Dimensions at right angles to abutment, except as shown.

Notes:  
 Reinforcement bars in diaphragm are billed with superstructure on sheet 16 of 39.  
 Concrete in diaphragm is included with Concrete Superstructure on sheet 16 of 39.  
 Concrete in backwall is included with Concrete Structures on sheets 30 thru 33 of 39.  
 For details of bars s(E), s1(E), v(E), u(E), see sheet 16 of 39.  
 The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.  
 The cost of field drilling holes in webs for m1(E) is included in the cost of Reinforcement Bars (Epoxy Coated).  
 See Section A-A for bar locations.

MIN. BAR LAP  
 #6 bar = 3'-4" (Diaphragm)

REV. SHEET 6-3-13

FILE NAME *	USER NAME * .MPL.	DESIGNED - GJB	REVISED -
...0548865-0066-72ell-017-diaphr-agn-deta	is-reb.dgn	CHECKED - MCB/RKM	REVISED -
CB PROJECT NO. 18865-1	PLOT SCALE * 0:2,000000 1" = 10'	DRAWN - CFC	REVISED -
	PLOT DATE * 5/18/2013	CHECKED - MCB/GJB	REVISED -

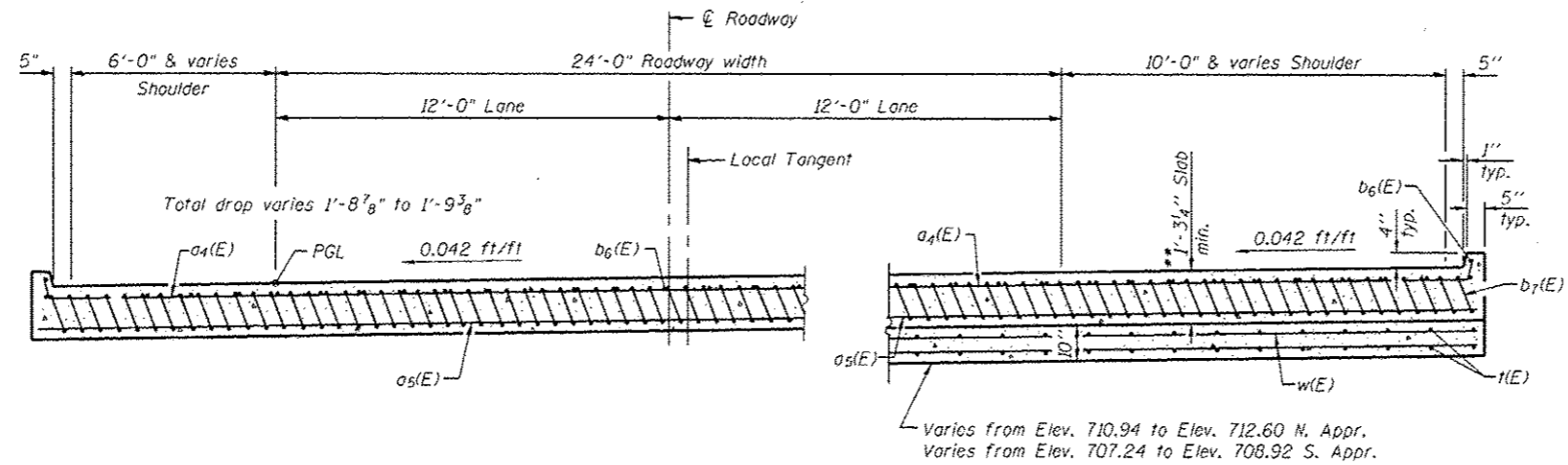
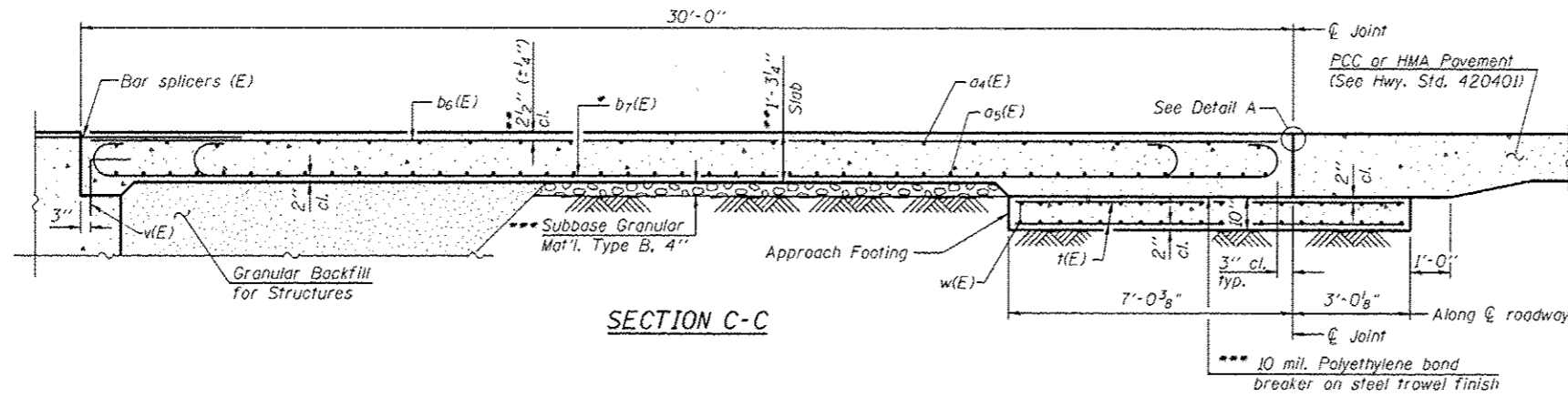
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS  
 STRUCTURE NO. 054-0065 (N.B.) & 054-0066 (S.B.)

SHEET NO. 17 OF 39 SHEETS

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	340
				CONTRACT NO. 72E11
ILLINOIS FED. AID PROJECT				

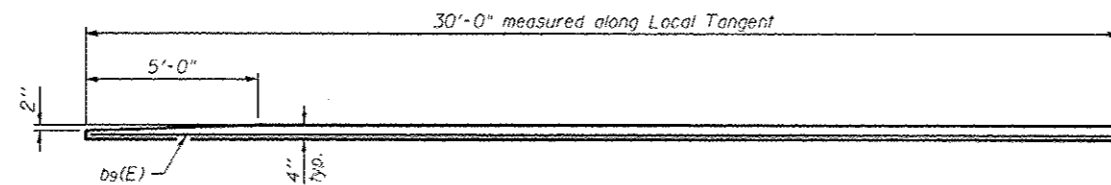


NEAR ABUTMENT

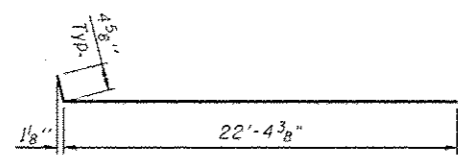
AT APPROACH FOOTING

SECTION D-D  
(See Plan for dimensions not shown)  
(Looking North)

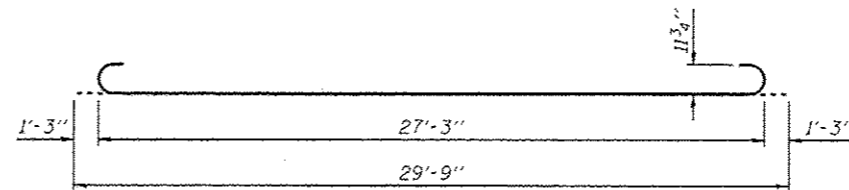
- \* Tilt #9 b7(E) bars as required to maintain clearance.
- \*\* Prior to grinding 1/4" max
- \*\*\* Cost included with Concrete Superstructure.



VIEW E-E



BAR a4(E)



BAR b7(E)

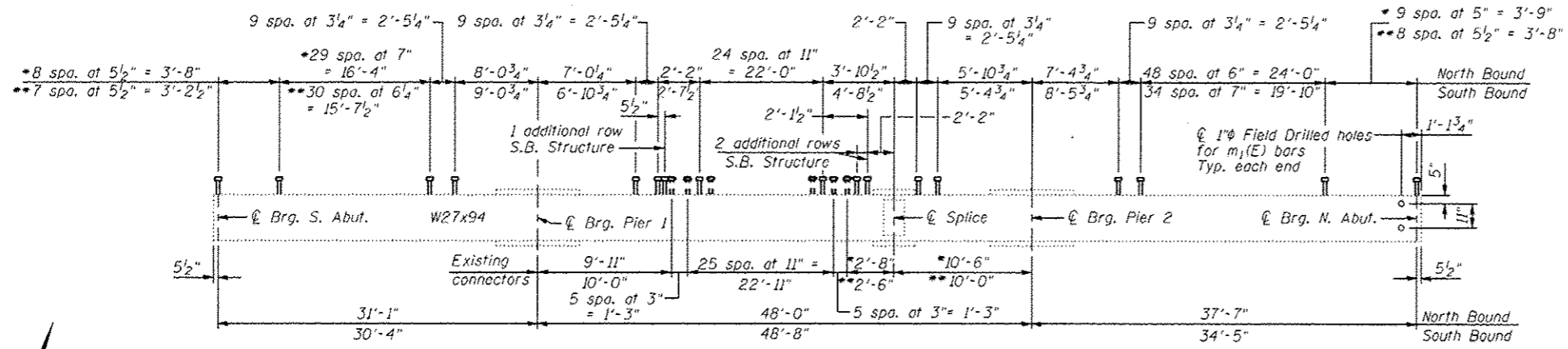
Notes:  
 See sheets 21 & 22 of 39 for Detail A.  
 Approach slab and curb concrete shall be paid for as Concrete Superstructure.  
 Approach footing concrete shall be paid for as Concrete Structures.  
 Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.  
 For w(E) bar details, see sheet 16 of 39.  
 The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.  
 For bar splicer details, see sheet 38 of 39.  
 Cost of excavation for approach footing included with Concrete Structures.  
 For Granular Backfill for Structures and drainage treatment details, see sheet 2 of 39.

TWO APPROACHES  
BILL OF MATERIAL

Bar	No.	Size	Length	Shape	
a4(E)	100	#4	22'-9"	U	
a5(E)	184	#5	22'-6"	U	
b6(E)	72	#4	29'-8"	U	
b7(E)	200	#9	29'-9"	U	
t(E)	168	#4	9'-8"	U	
w(E)	160	#5	22'-0"	U	
Concrete Superstructure				Cu. Yd.	119.0
Concrete Structures				Cu. Yd.	25.6
***** Reinforcement Bars, Epoxy Coated				Pound	32,250

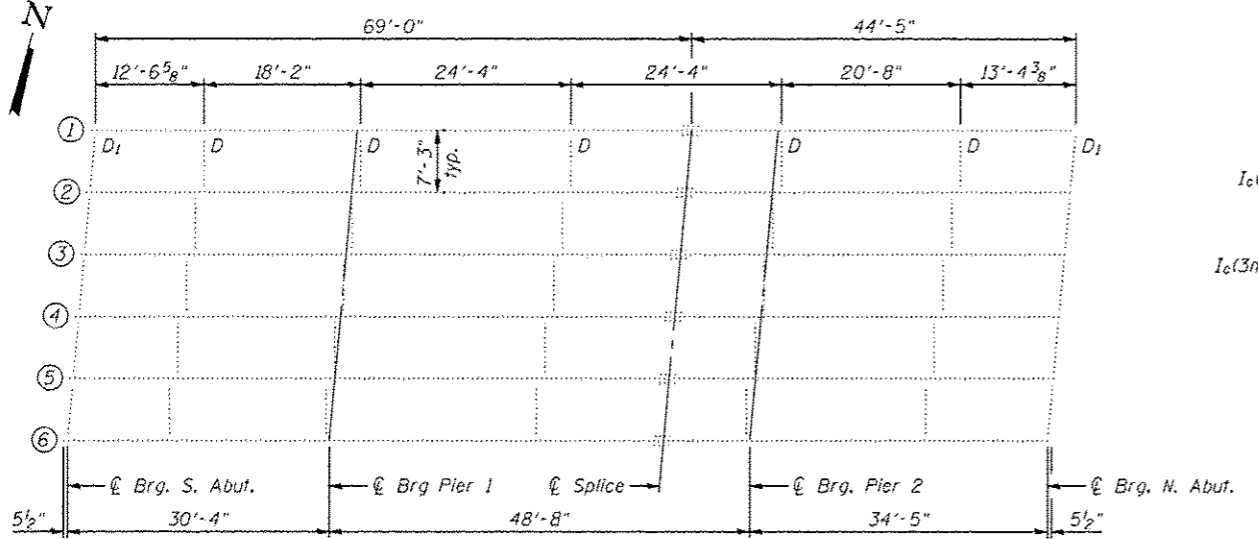
\*\*\*\*\* 27,490 (Superstr.) 4760 (Substr.)

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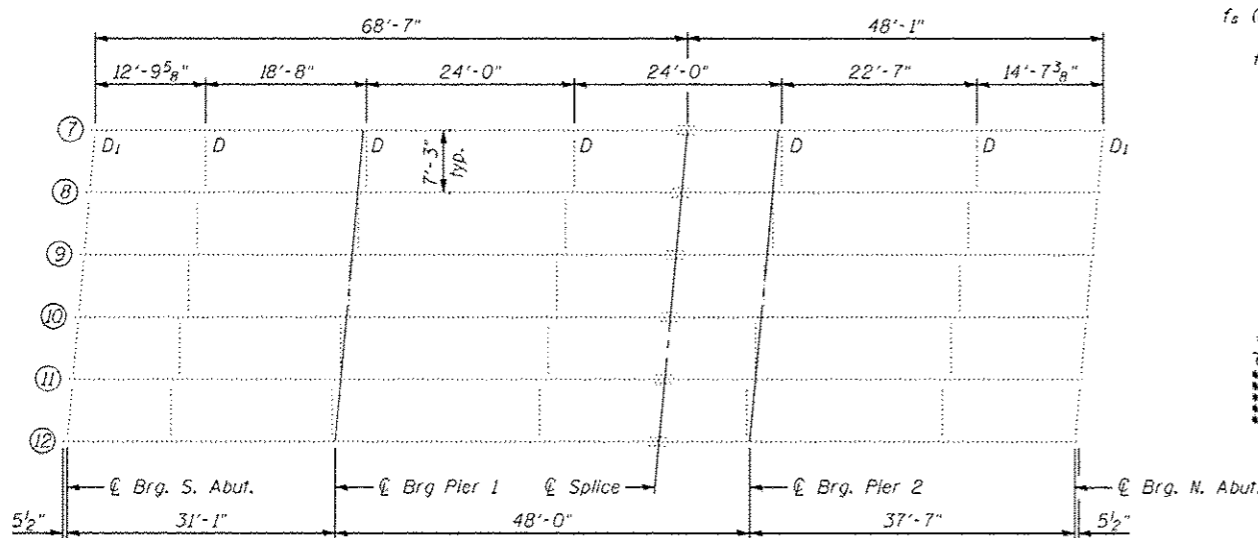


**GIRDER ELEVATION**

• N.B. Structure  
•• S.B. Structure



**DIAPHRAGM LAYOUT S.B. STRUCTURE**



**DIAPHRAGM LAYOUT N.B. STRUCTURE**

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total and Overload) due to non-composite dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total and Overload) due to short-term composite live loads (in.<sup>4</sup> and in.<sup>3</sup>).

$I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total and Overload) due to long-term composite (superimposed) dead loads (in.<sup>4</sup> and in.<sup>3</sup>).

$Q$ : Un-factored non-composite dead load (kips/ft.).

$M_Q$ : Un-factored moment due to non-composite dead load (kip-ft.).

$s_Q$ : Un-factored long-term composite (superimposed) dead load (kips/ft.).

$M_{sQ}$ : Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

$M_L$ : Un-factored live load moment (kip-ft.).

$M_I$ : Un-factored moment due to impact (kip-ft.).

$M_o$ : Factored design moment (kip-ft.).

$1.3 [M_Q + M_{sQ} + \frac{2}{3} (M_L + M_I)]$

$M_u$ : Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

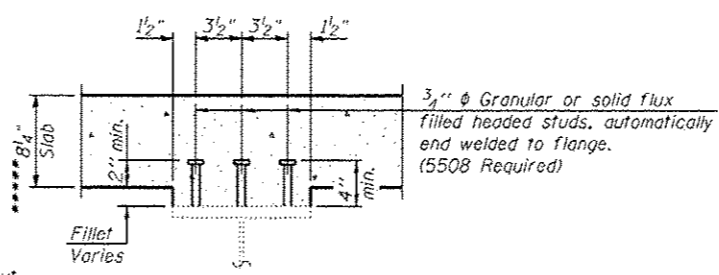
$f_s$  (Overload): Sum of stresses as computed from the moments below (ksi).

$M_Q + M_{sQ} + \frac{2}{3} (M_L + M_I)$

$f_s$  (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).

$1.3 [M_Q + M_{sQ} + \frac{2}{3} (M_L + M_I)]$

VR: Maximum  $\frac{1}{4}$  impact shear range within the composite portion of the span for stud shear connector design (kips).



**SECTION A-A**

•••• Prior to grinding

**INTERIOR GIRDER MOMENT TABLE - SOUTH BOUND STRUCTURE**

	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
$I_s$	3226	4483	3226	4483	3226
$I_c(n)$	11,284	-	11,284	-	11,284
$I_c(3n)$	8384	-	8384	-	8384
$S_s$	240	324	240	324	240
$S_c(n)$	405	-	405	-	405
$S_c(3n)$	366	-	366	-	366
$Q$	0.896	1.43	0.896	1.43	0.896
$M_Q$	37	224	103	246	60
$s_Q$	0.534	-	0.534	-	0.534
$M_{sQ}$	31	-	85	-	45
$M_L$	160	127	283	134	189
$M_I$	48	39	82	40	57
$^{2/3} [M_L + M_I]$	347	277	608	290	410
$M_o$	539	652	1036	697	669
$M_u$	1111	-	1111	-	1111
$f_s Q$ (non-comp)	1.8	8.3	5.2	9.1	3.0
$f_s Q$ (comp)	1.0	-	2.8	-	1.5
$f_s ^{2/3} [M_L + M_I]$	10.3	10.1	18	10.7	12.1
$f_s$ (Overload)	13.1	18.5	26	19.8	16.6
$f_s$ (Total)	-	24.1	-	25.7	-
VR	45.7	-	41.4	-	46.6

**INTERIOR GIRDER MOMENT TABLE - NORTH BOUND STRUCTURE**

	0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
$I_s$	3226	4483	3226	4483	3226
$I_c(n)$	11,284	-	11,284	-	11,284
$I_c(3n)$	8384	-	8384	-	8384
$S_s$	240	324	240	324	240
$S_c(n)$	405	-	405	-	405
$S_c(3n)$	340	-	340	-	340
$Q$	0.896	1.43	0.896	1.43	0.896
$M_Q$	44	218	95	259	81
$s_Q$	0.534	-	0.534	-	0.534
$M_{sQ}$	34	-	78	-	58
$M_L$	165	127	267	139	233
$M_I$	50	39	77	41	70
$^{2/3} [M_L + M_I]$	358	277	573	300	505
$M_o$	568	645	971	726	837
$M_u$	1111	-	1111	-	1111
$f_s Q$ (non-comp)	2.2	8.1	4.7	9.6	4.1
$f_s Q$ (comp)	1.2	-	2.8	-	2.0
$f_s ^{2/3} [M_L + M_I]$	10.6	10.3	17.0	11.1	15.0
$f_s$ (Overload)	14.0	18.4	24.5	20.7	21.0
$f_s$ (Total)	-	23.9	-	26.9	-
VR	45.7	-	41.2	-	49.4

••• Compact sections  
•••• Braced non-compact and partially braced section

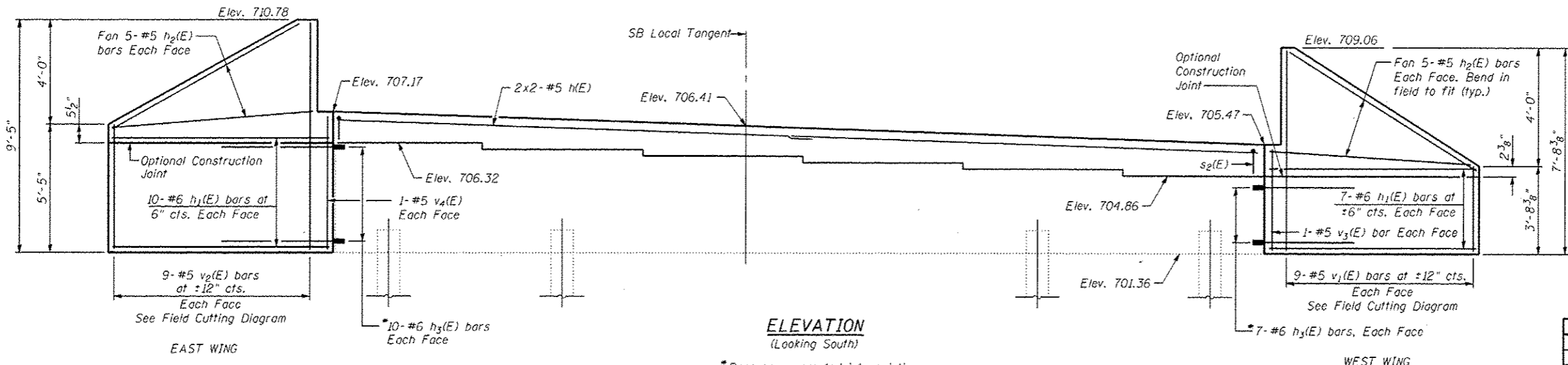
**INTERIOR GIRDER REACTION TABLE**

	SOUTH BOUND STRUCTURE				NORTH BOUND STRUCTURE			
	S. Abut.	N. Abut.	Pier 1	Pier 2	S. Abut.	N. Abut.	Pier 1	Pier 2
$R_Q$	14.3	17.5	63.4	67.0	15.2	20.0	62.8	68.9
$R_L$	31.0	33.0	42.8	42.1	31.0	34.9	42.0	42.8
$R_I$	9.3	9.9	12.8	12.6	9.3	10.5	12.6	12.8
$R_{Total}$	54.6	60.4	119.0	121.7	55.5	65.4	117.4	124.5

$R_Q$  does not include weight of Diaphragm & Appr. slab

REV. SHEET 6-3-13

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- LAND SURVEYORS -  
Design Firm License No. 184-002703



**ELEVATION**  
(Looking South)

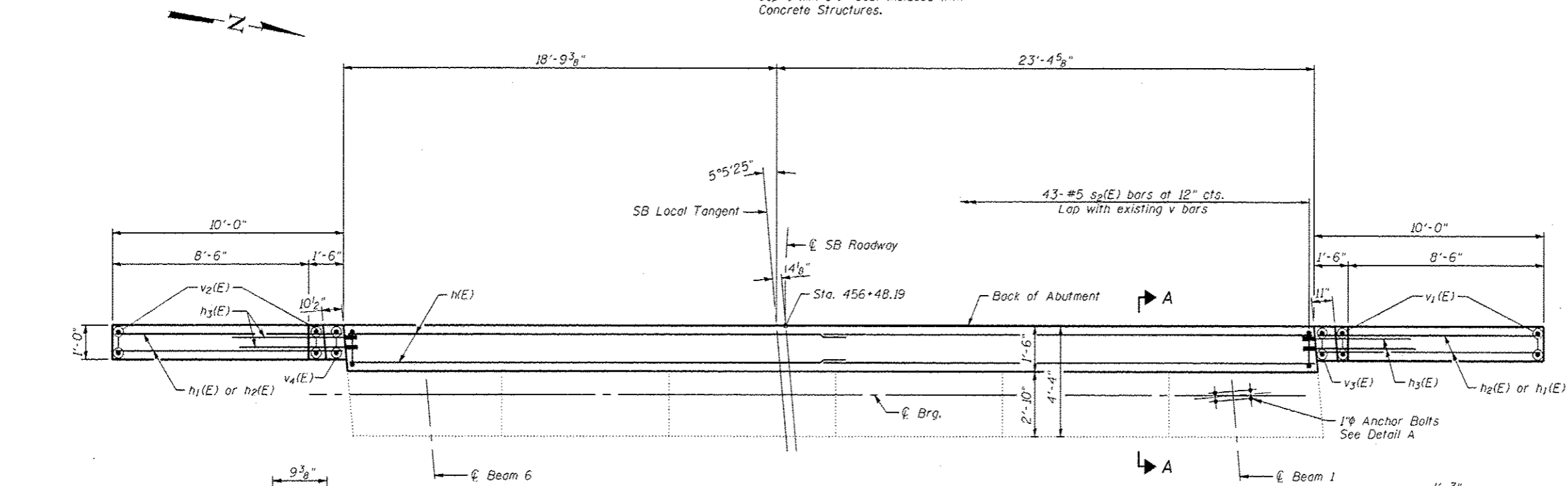
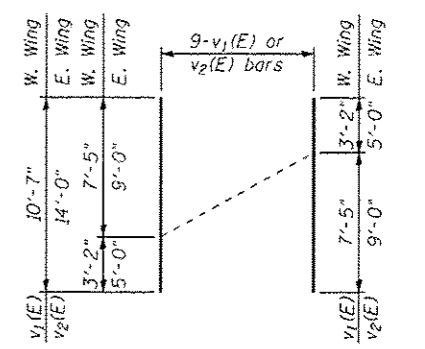
\*Bars epoxy grouted into existing cap a min 9". Cost included with Concrete Structures.

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape	
h(E)	4	#5	22'-9"	—	
h1(E)	34	#6	9'-8"	—	
h2(E)	20	#5	8'-11"	—	
h3(E)	34	#6	6'-0"	—	
s2(E)	43	#5	2'-1"	U	
v1(E)	9	#5	10'-7"	—	
v2(E)	9	#5	14'-0"	—	
v3(E)	2	#5	3'-10"	—	
v4(E)	2	#5	5'-7"	—	
Structure Excavation				Cu. Yd.	69
Concrete Structures				Cu. Yd.	6.9
Reinforcement Bars, Epoxy Coated				Pound	1420

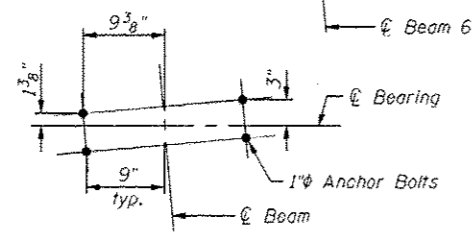
**FIELD CUTTING DIAGRAM**

Order v1(E) and v2(E) bars full length. Cut as shown and use remainder of bars in opposite face.

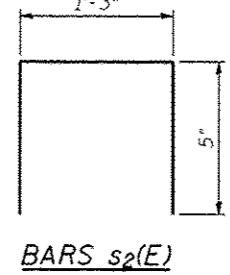


**PLAN**

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



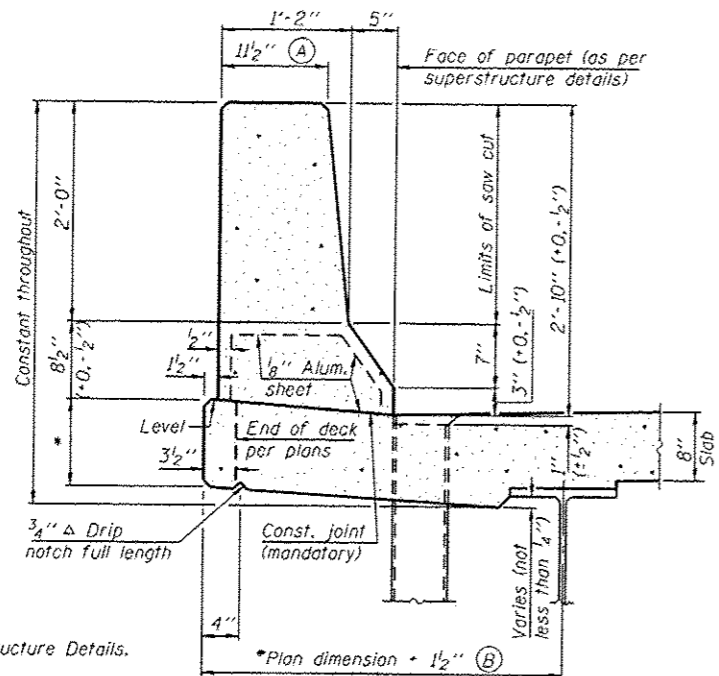
**DETAIL A**  
(Showing Anchor Bolt Location)



**BARS s2(E)**

REV. SHEET 6-3-13

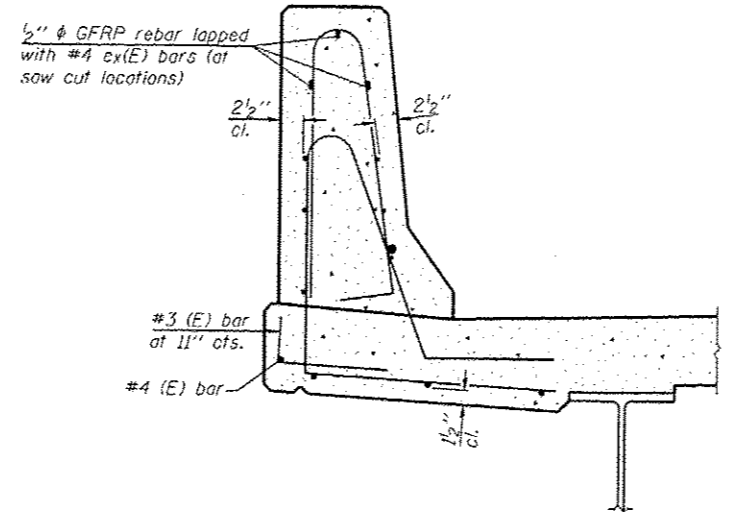
FILE NAME * ...0540065-0066-72e11-030-s-abut-sb.dgn	USER NAME * MML	DESIGNED - GJB	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SOUTH ABUTMENT (SOUTH BOUND STRUCTURE) STRUCTURE NO. 054-0065 (N.B.) &amp; 054-0066 (S.B.)</b>	F.A.I. NO. 55	SECTION D6 LOGAN CO BR 2011-1	COUNTY LOGAN	TOTAL SHEETS 429	SHEET NO. 353	
CB PROJECT NO 10265-1	PLOT SCALE * 5/4,000000 1/2" = 1"	DRAWN - CPC/MML	REVISED -			SHEET NO. 30 OF 39 SHEETS		CONTRACT NO. 72E11		ILLINOIS FED. AID PROJECT	
	PLOT DATE * 5/10/2013	CHECKED - MCB/GJB	REVISED -			<b>Coombe-Bloxdorf P.C.</b> - CIVIL ENGINEERS - - STRUCTURAL ENGINEERS - - LAND SURVEYORS - Design Firm License No. 184-002703					



**34" F SHAPE PARAPET SECTION**  
(Showing dimensions)

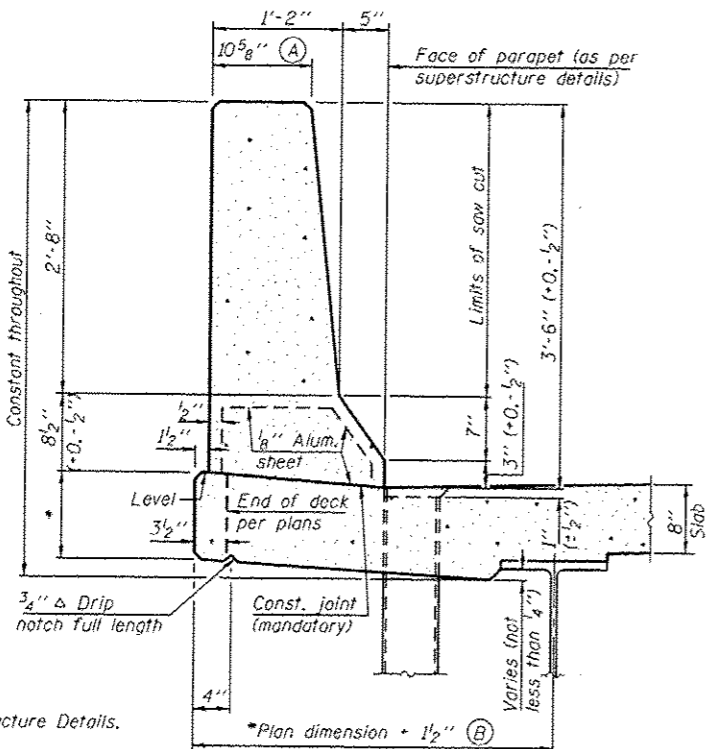
\*See Superstructure Details.

\*Plan dimension = 1 1/2" (B)



**SECTION**

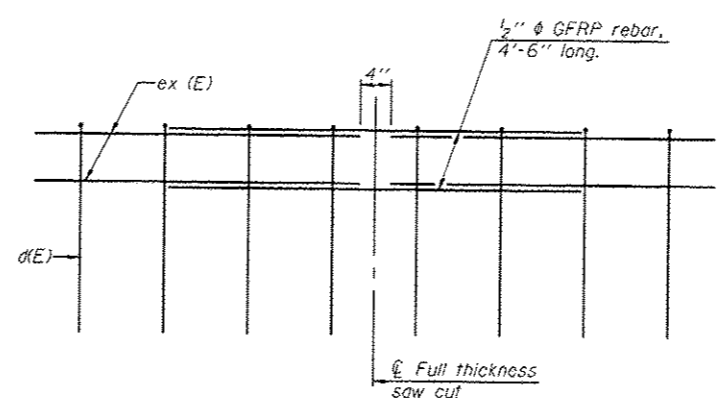
(34" parapet shown - 42" parapet similar)  
(Showing reinforcement clearances for slip forming and additional reinforcement bars)



**42" F SHAPE PARAPET SECTION**  
(Showing dimensions)

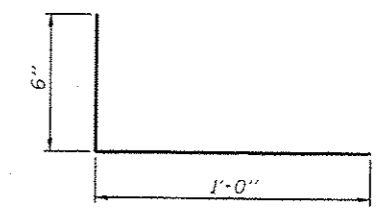
\*See Superstructure Details.

\*Plan dimension = 1 1/2" (B)

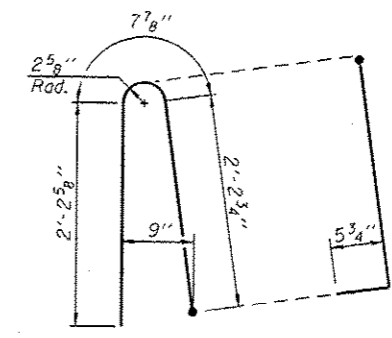


**GFRP REBAR STIFFENING DETAIL**

(Place as shown in parapet section at each parapet joint location.)

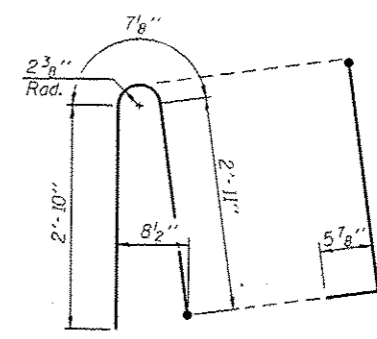


**#3 (E) BAR**



**ALTERNATE BAR d(E)**

(For 34" parapet when conduit is present)



**ALTERNATE BAR d(E)**

(For 42" parapet when conduit is present)

**GENERAL NOTES**

All dimensions shall remain the same as shown on superstructure details, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0165 cu. yds./ft. for 34" parapet or = 0.0223 cu. yds./ft. for 42" parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all joint locations in lieu of cork joint filler. Steel superstructure shown. Other superstructure types similar.

SFP 34-42

8-16-12

REV. SHEET 6-3-13

FILE NAME *	USER NAME * MML	DESIGNED - GJB	REVISED -
...N0548065-0066-72e11-039-slipform.dgn		CHECKED - MCB/RKM	REVISED -
		DRAWN - MML	REVISED -
CR PROJECT NO. 10027-3	PLOT DATE * 5/18/2013	CHECKED - MCB/GLB	REVISED -

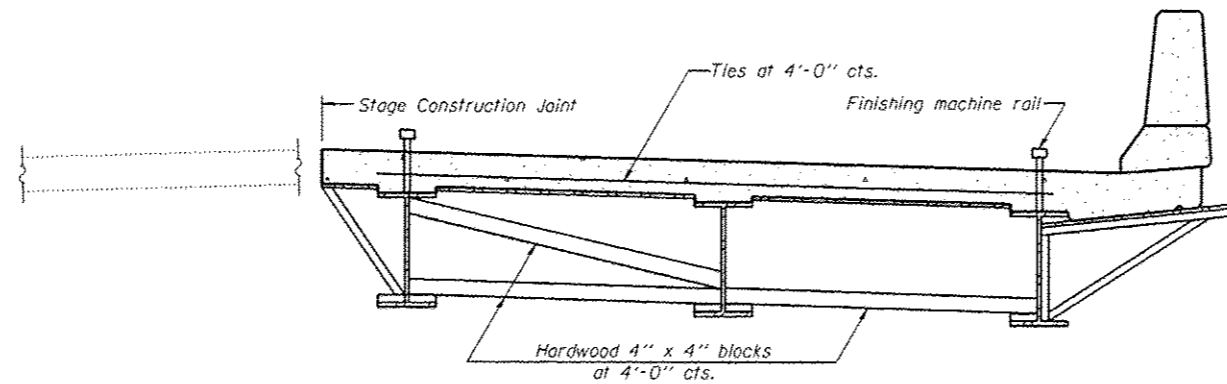
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CONCRETE PARAPET SLIPFORMING OPTION  
STRUCTURE NO. 054-0065 (NB) & NO. 054-0066 (SB)

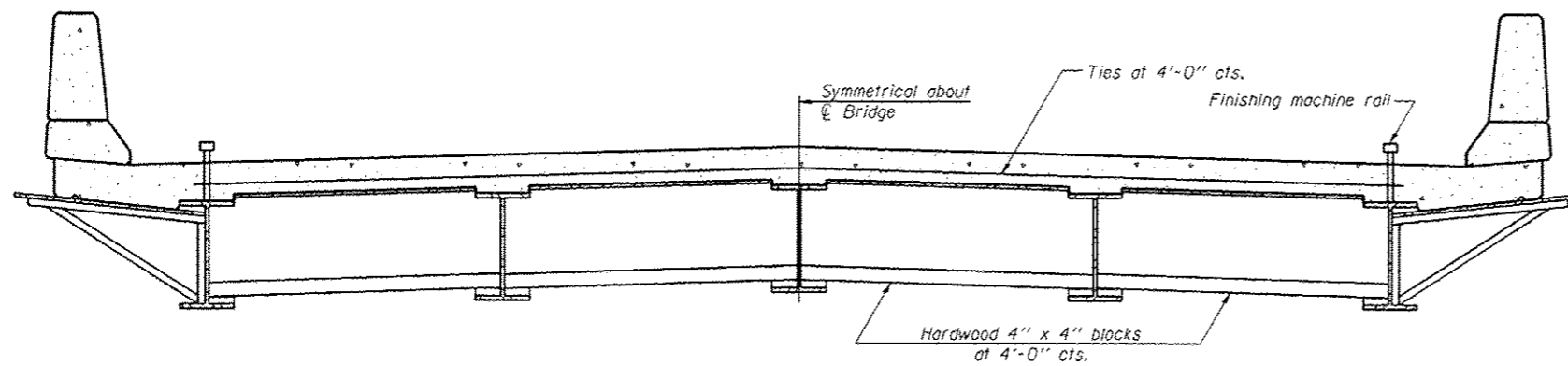
**CB** Coombe-Bloxdorf P.C.  
-CIVIL ENGINEERS-  
-STRUCTURAL ENGINEERS-  
-LAND SURVEYORS-  
Design Firm License No. 184-002703

P.A.T. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
55	D6 LOGAN CO BR 2011-1	LOGAN	429	362
				CONTRACT NO. 72E11

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.  
 The finishing machine rails shall be placed on the top flange of the exterior beams.  
 The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.  
 For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



**FORM BRACES FOR  
STAGE CONSTRUCTION**



**FORM BRACES FOR  
STANDARD CONSTRUCTION**

SB-1

7-1-10

1 SHEET ADDED 6-3-13

FILE NAME *	USER NAME * MHL	DESIGNED - GJB	REVISED -
...10540005-8866-72e11-039a-cantilever.dwg		CHECKED - MCB/RKM	REVISED -
		DRAWN - MWL	REVISED -
CR PROJECT NO. 18950-1	PLOT DATE * 5/28/2013	CHECKED - MCB/GLB	REVISED -

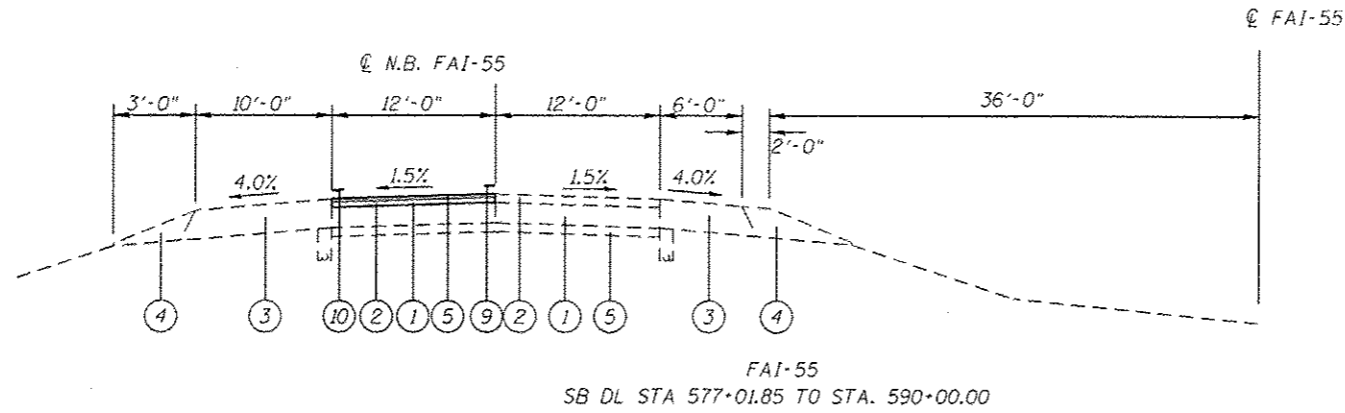
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES WITH W27  
BEAMS AND SMALLER STR. NO. 054-0065 (NB) & NO. 054-0066 (SB)

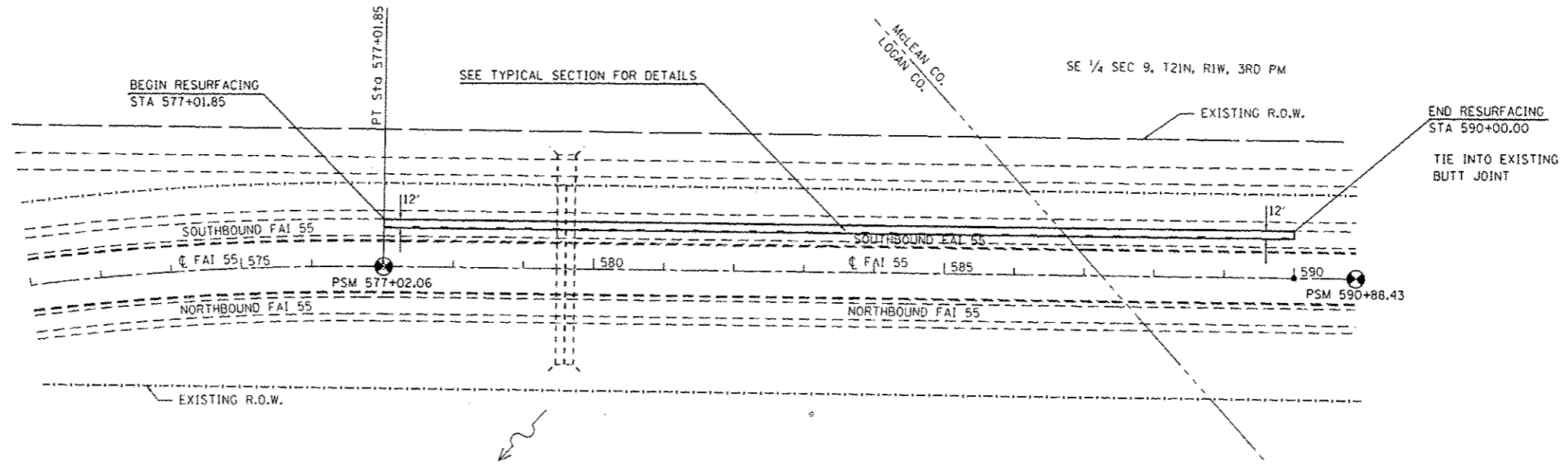
SHEET NO. 39A OF 39 SHEETS

					F.A.I. RTE.
55	DE LOGAN CO BR 2011-1	LOGAN	429	362A	
					CONTRACT NO. 72E11
					ILLINOIS FED. AID PROJECT

EXIST. CURVE 523  
 PI STA. = 564+06.90  
 $\Delta = 40^\circ 39' 20''$  (RT)  
 $D = 1^\circ 30' 01''$   
 $R = 3,818.67'$   
 $T = 1,414.67'$   
 $L = 2,709.62'$   
 $E = 253.62'$   
 $e = 4.2\%$   
 P.C. STA. = 549+92.23  
 P.T. STA. = 577+01.85



- LEGEND**
- ① EX CRC PAVEMENT 9"
  - ② EX HOT-MIX ASPHALT PAVEMENT - 3 1/4"
  - ③ EX HOT-MIX ASPHALT SHOULDER
  - ④ EX AGGREGATE SHOULDER
  - ⑤ EX STABILIZED SUBBASE 4"
  - ⑥ PR HOT-MIX ASPHALT SURFACE REMOVAL, 3 1/4 "
  - ⑦ POLYMERIZED LEVELING BINDER (MACHINE METHOD), N90 (1 3/4")
  - ⑧ PR POLYMERIZED HMA SURFACE COURSE, MIX "D", N90 (1 1/2")
  - ⑨ PR PREFORMED PLASTIC PAVEMENT MARKING, TY B - INLAID - LINE 5"
  - ⑩ PR MODIFIED URETHANE PAVEMENT MARKING - LINE 5"



**PAVING**

LOCATION	HOT-MIX ASPHALT SURFACE REMOVAL, 3 1/4"		BITUMINOUS MATERIALS (PRIME COAT)		AGGREGATE (PRIME COAT)		POLYMERIZED LEVELING BINDER (MACHINE METHOD), N90		POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N90		TEMPORARY RAMP	
	WIDTH	SQ YD	WIDTH	TON	WIDTH	TON	WIDTH	TON	WIDTH	TON	WIDTH	SQ YD
SB I-55 DRIVING LANE STA 577+01.85 TO STA 590+00.00	12'	1,731	12'	1.0	12'	2	12'	170	12'	145	12'	13
<b>TOTAL</b>		1,731		1.0		2		170		145		13

**PAVEMENT MARKINGS**

LOCATION	SHORT TERM PAVEMENT MARKING	MODIFIED URETHANE PM - LINE 5" WHITE	PREFORMED PLASTIC PM, TY B - INLAID - LINE 5" WHITE	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401
	FOOT	FOOT	FOOT	EACH	EACH	EACH
SB I-55 DRIVING LANE STA 577+01.85 TO STA 590+00.00	130	1,298	325	16	16	1
<b>TOTAL</b>	130	1,298	325	16	16	1

▲ SHEET ADDED 6-3-13

FILE NAME : c:\pwworksp\p\dott\cove\034880\0672E1	USER NAME : cove	DESIGNED - REVISOR -	REVISIONS - REVISOR -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>RESURFACING PLAN SHEET FOR SB DRIVING LANE NORTH OF ATLANTA</b>				F.A.I. RTE. 55	SECTION DB LOGAN CO BR 2011-1	COUNTY LOGAN	TOTAL SHEETS 429	SHEET NO. 429A
PLT SCALE : 200,0000 / / in.	CHECKED -	REVISIONS -	REVISIONS -		SCALE: 1" = 100'	SHEET NO. OF SHEETS	STA.	TO STA.	CONTRACT NO. 72E11				
PLT DATE : May-29-2013 11:59:30AM	DATE -	REVISIONS -	REVISIONS -		ILLINOIS FED. AID PROJECT								