1-15-10 Letting, Item 185

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	1
	ILLINOIS	CONTRACT NO. 66691		

INDEX OF SHEETS

STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
515001-03	NAME PLATE FOR BRIDGES
542401-01	METAL END SECTION FOR PIPE CULVERTS
601101-01	CONCRETE HEADWALL FOR PIPE DRAINS
602301-02	INLET, TYPE A
602401-02	MANHOLE, TYPE A
602601-02	PRECAST REINFORCED CONCRETE FLAT SLAB TOP
602701-02	MANHOLE STEPS
604001-03	FRAME AND LIDS, TYPE 1
604036-02	GRATE, TYPE 8
630001-08	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-08	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
701001-02	OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-03	OFF-ROAD OPERATIONS 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701301-03	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-02	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS ≥ 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701321-10	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-03	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

100′ 200′ 300′ — 1″= 100′
10′ 20′ 30′ — 1″= 10′
50′ 100′ — 1″= 50′
100′ — 1″= 40′
50′ 100′ — 1″= 30′
50′ 100′ — 1″= 20′

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

DISTRICT 3 NO. (815) 434-6131
PROJECT ENGINEER: CRAIG REED
UNIT CHIEF: R SCHWANKE
TOWNSHIP: DWIGHT
CONTRACT NO. 66691

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 41 (IL 17)
SECTION 15 BR-2
PROJECT ACBHF-0041(133)
SUPERSTRUCTURE REPLACEMENT
LIVINGSTON COUNTY

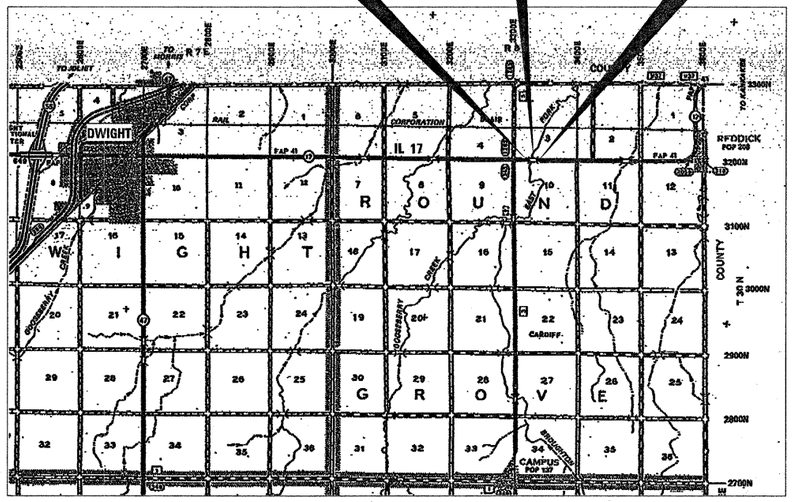
C-93-012-07

BRIDGE SUPERSTRUCTURE REPLACEMENT
STA. 323 + 21.04
S.N. 053-0150 EX. & PR.

EXISTING S.N. 053-0150 CROSSES THE EAST FORK OF THE MAZON RIVER AT A LENGTH OF 181′-7″. THE EXISTING SUPERSTRUCTURE WILL BE REMOVED AND REPLACED, AND EXISTING ABUTMENTS WILL BE CONVERTED TO SEMI-INTEGRAL ABUTMENTS.

BEGIN IMPROVEMENT
STA. 317 + 05

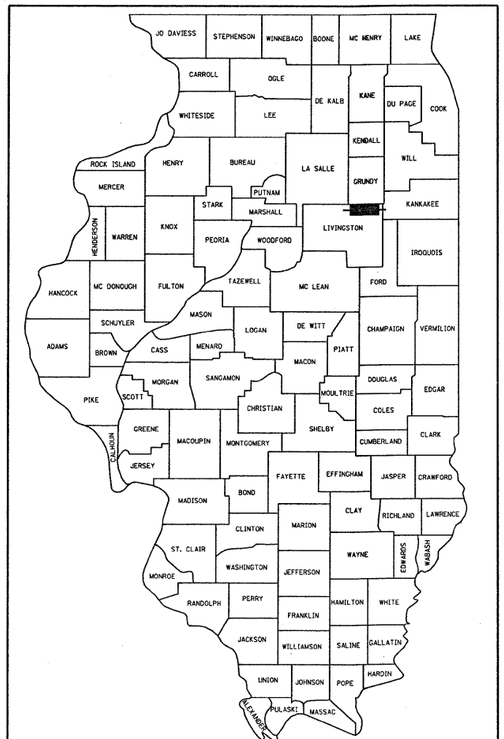
END IMPROVEMENT
STA. 329 + 23



N

GROSS & NET LENGTH = 1218 FT. = .231 MILE

P-93-012-07
D-93-012-07



LOCATION OF SECTION INDICATED THUS:-

FUNCTIONAL CLASSIFICATION
RURAL MINOR ARTERIAL
2009 ADT = 2550
P.V. = 69.6% S.U. = 6.9% M.U. = 23.5%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED _____ 20 _____

George Ryason
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 4, 2009
Charles O. Ingersoll, PE
ENGINEER OF DESIGN AND ENVIRONMENT

December 4, 2009
Christine M. Reed, PE
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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GENERAL NOTES

(Revised May 13, 2009)

THE THICKNESS OF HMA 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 HMA IS PLACED.

THE HMA SURFACE OF ALL MAILBOX TURNOUTS, PRIVATE ENTRANCES, COMMERCIAL ENTRANCES, AND SIDE ROADS SHALL BE MADE NEATLY, IN A WORKMANLIKE MANNER, AND SHALL ACCURATELY CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. IF REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SAW CUT THE HMA SURFACE TO CONFORM TO THE SHAPES AND DIMENSIONS SHOWN ON THE PLAN DETAILS. THIS WORK SHALL BE INCLUDED IN THE COST OF THE HMA SURFACE.

EXCEPT AS NOTED ON THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.

BEFORE ORDERING PIPE CULVERTS OR PIPE DRAINS, THE CONTRACTOR SHALL CONSULT THE ENGINEER FOR EXACT LENGTHS.

THE ENGINEER WILL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS HMA LIFTS.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

SEEDING SHALL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET, OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED WILL BE DETERMINED BY THE ENGINEER.

THE FINISHED EARTHWORK SHALL HAVE A VEGETATION SUSTAINING SOIL COVERING THE TOP FOUR INCHES IN AREAS TO BE SEEDED OR SODDED. THE VEGETATION SUSTAINING SOIL REQUIRED WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ALL ELEVATIONS REFERRING TO U.S.G.S. MEAN SEA LEVEL DATUM.

ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER SHOWN IN THE LIST OF STANDARDS OR THE COPY INCLUDED IN THESE PLANS.

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05	TONS / CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.08	GAL / SQ YD
FOR ADDITIONAL HMA LIFTS "FOG COAT"	0.05	GAL / SQ YD
AGGREGATE PRIME COAT	0.002	TONS / SQ YD
HMA RESURFACING	112	LBS / SQ YD / IN
SHORT TERM PAVEMENT MARKING	10	FT /100 FT OF APPLICATION
MIX FOR CRACKS, JTS & FLGWYS	0.0003	TONS / SQ YD
LEVEL BINDER (HAND METHOD)	0.0005	TONS / SQ YD
CALCIUM CHLORIDE	2	LB / SQ YD / APPLICATION
TEMPORARY DITCH CHECKS	5	TONS AGGREGATE

MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

COMMONWEALTH EDISON
VERIZON

NON-MEMBERS OF JULIE KNOWN TO BE WITHIN THE LIMITS OF THE IMPROVEMENT ARE:

THE CONTRACTOR SHALL CONTACT JULIE AT LEAST 48 HOURS PRIOR TO EXCAVATION TO DETERMINE WHICH UTILITIES ARE IN THE AREA.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DISTRICT THREE

PREPARED BY: Rick Powell
DISTRICT STUDIES & PLANS ENGINEER

DATE: 10/19/2009

EXAMINED BY:
DISTRICT CONSTRUCTION ENGINEER

DISTRICT MATERIALS ENGINEER

DISTRICT OPERATIONS ENGINEER

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	2
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES

80% FED. 20% STATE

CONSTRUCTION CODE TYPE: X070-2A

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SN 050-150
20101000	TEMPORARY FENCE	FOOT	398	398
20200100	EARTH EXCAVATION	CU YD	677	677
20400800	FURNISHED EXCAVATION	CU YD	615	615
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	144	144
21101625	TOPSOIL FURNISH AND PLACE, 6"	SQ YD	187	187
* 25000110	SEEDING, CLASS 1A	ACRE	1.0	1.0
* 25000400	NITROGEN FERTILIZER NUTRIENT	POUND	90	90
* 25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	90	90
* 25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	90	90
25100630	EROSION CONTROL BLANKET	SQ YD	4840	4840
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	100	100
28000305	TEMPORARY DITCH CHECKS	FOOT	50	50
28000400	PERIMETER EROSION BARRIER	FOOT	751	751
28000500	INLET AND PIPE PROTECTION	EACH	3	3
28100107	STONE RIPRAP, CLASS A4	SQ YD	1347	1347
28200200	FILTER FABRIC	SQ YD	1347	1347
35501316	HOT-MIX ASPHALT BASE COURSE, 8"	SQ YD	1631	1631
35501400	HOT-MIX ASPHALT BASE COURSE, VARIABLE DEPTH	TON	728	728
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	135	135
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	346	346
40600300	AGGREGATE (PRIME COAT)	TON	9	9
40600400	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	TON	0.9	0.9
40600525	LEVELING BINDER (HAND METHOD), N50	TON	1.4	1.4
40600625	LEVELING BINDER (MACHINE METHOD), N50	TON	120	120
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	587	587
40600990	TEMPORARY RAMP	SQ YD	19	19
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	354	354
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	14	14
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	779	779
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1

SUMMARY OF QUANTITIES

80% FED. 20% STATE

CONSTRUCTION CODE TYPE: X070-2A

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SN 050-150
50102400	CONCRETE REMOVAL	CU YD	11.4	11.4
50105200	REMOVE EXISTING CULVERTS	EACH	2	2
50200100	STRUCTURE EXCAVATION	CU YD	144	144
50300225	CONCRETE STRUCTURES	CU YD	46.2	46.2
50300255	CONCRETE SUPERSTRUCTURE	CU YD	359.0	359.0
50300260	BRIDGE DECK GROOVING	SQ YD	906	906
50300300	PROTECTIVE COAT	SQ YD	1144	1144
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1
50500505	STUD SHEAR CONNECTORS	EACH	4284	4284
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	94,670	94,670
50800515	BAR SPLICERS	EACH	915	915
51500100	NAME PLATES	EACH	1	1
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	12	12
52100520	ANCHOR BOLTS, 1"	EACH	36	36
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24	24
542D0217	PIPE CULVERTS, CLASS D, TYPE 1 12"	FOOT	4	4
542D0241	PIPE CULVERTS, CLASS D, TYPE 1 36"	FOOT	300	300
54215571	METAL END SECTIONS 36"	EACH	2	2
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	84	84
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	140	140
60221100	MANHOLES, TYPE A, 5'-DIAMETER, TYPE 1 FRAME, CLOSED LID	EACH	1	1
60236200	INLETS, TYPE A, TYPE 8 GRATE	EACH	1	1
61100605	MISCELLANEOUS CONCRETE	CU YD	7.0	7.0
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6 (FOOT) POSTS	FOOT	163	163
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4
* 63100169	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) FLARED	EACH	4	4
63200310	GUARDRAIL REMOVAL	FOOT	475	475
63301000	REMOVE AND RE ERECT STEEL PLATE BEAM GUARD RAIL	FOOT	250	250
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8	8
67100100	MOBILIZATION	L SUM	1	1

*SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	3
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES

80% FED.
20% STATE

	CODE NO.	CONSTRUCTION CODE TYPE: ITEM	UNIT	TOTAL QUANTITY	X070-2A SN 050-150
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
	70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	678	678
	70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	3813	3813
	70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	48	48
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1099	1099
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	713	713
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	662	662
*	78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	2436	2436
*	78008230	POLYUREA PAVEMENT MARKING TYPE I - LINE 6"	FOOT	305	305
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	12	12
*	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	3	3
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	7	7
*	78200520	BARRIER WALL MARKERS, TYPE B	EACH	6	6
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	481	481
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	15	15
	X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	98	98
	X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	49	49
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	128	128
	Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2
	Z0030350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	2	2

* SPECIALTY ITEMS

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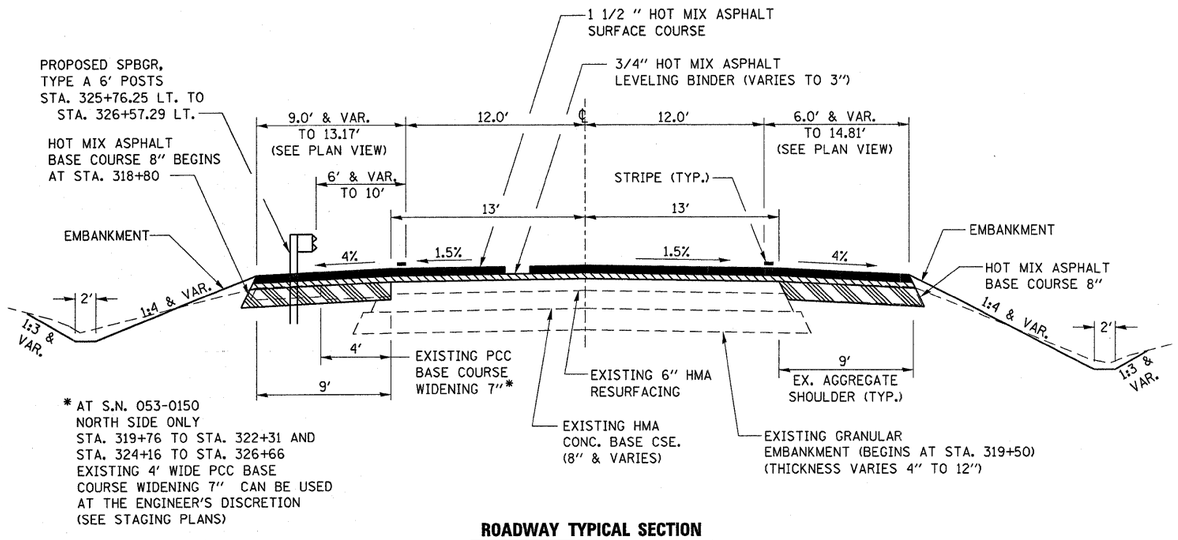
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

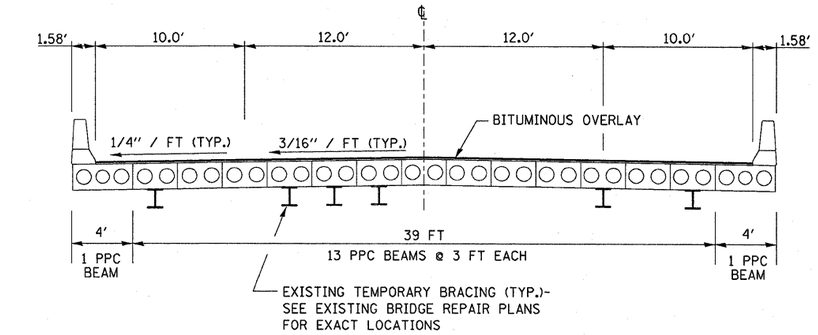
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	4
		CONTRACT NO. 66691		
	ILLINOIS	FED. AID PROJECT		



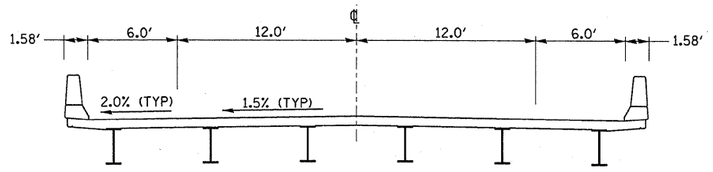
* AT S.N. 053-0150
NORTH SIDE ONLY
STA. 319+76 TO STA. 322+31 AND
STA. 324+16 TO STA. 326+66
EXISTING 4' WIDE PCC BASE COURSE WIDENING 7" CAN BE USED AT THE ENGINEER'S DISCRETION (SEE STAGING PLANS)

ROADWAY TYPICAL SECTION

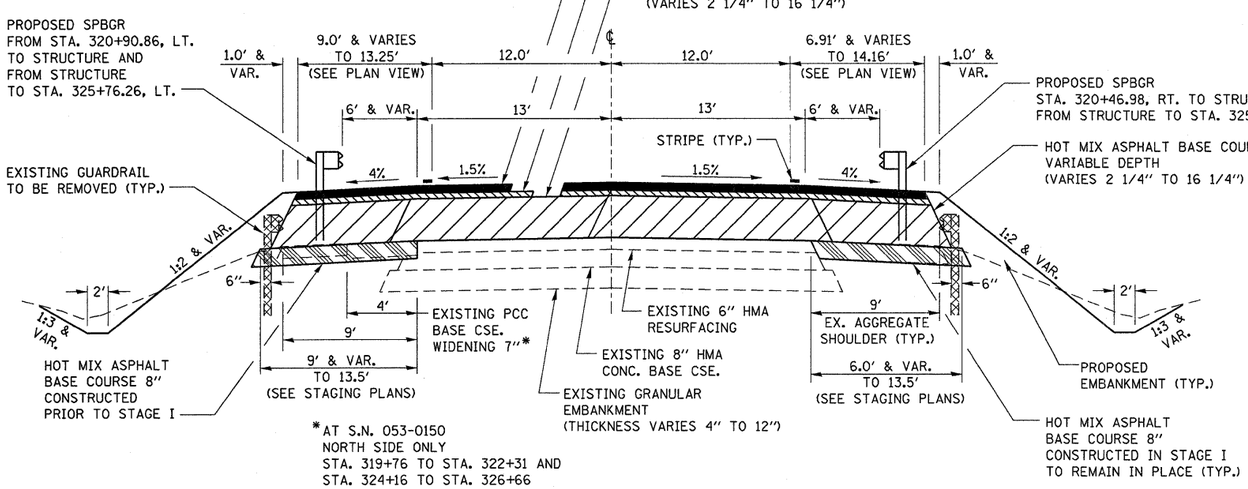
STA. 319+00 TO STA. 320+60.86
STA. 325+76.25 TO STA. 328+48.20



EXISTING BRIDGE TYPICAL SECTION



PROPOSED BRIDGE TYPICAL SECTION



* AT S.N. 053-0150
NORTH SIDE ONLY
STA. 319+76 TO STA. 322+31 AND
STA. 324+16 TO STA. 326+66

PROPOSED GUARDRAIL
LEFT SIDE
STA. 320+90.86 TO STA. 322+21.78
STA. 324+26.98 TO STA. 326+57.29

ROADWAY TYPICAL SECTION

STA. 320+60.86 TO STA. 322+01.10
STA. 324+40.98 TO STA. 325+76.25

PROPOSED GUARDRAIL
RIGHT SIDE
STA. 320+46.98 TO STA. 322+15.16
STA. 324+20.30 TO STA. 325+01.14

APPROACH SLABS AND BRIDGE OMISSION STA. 322+01.10 TO STA. 324+40.98

APPROACH SLABS AND BRIDGE OMISSION STA. 322+01.10 TO STA. 324+40.98

	HMA BASE COURSE 8"	HMA LEVELING BINDER	HMA SURFACE
PG GRADE	PG64-22	PG64-22	PG64-22
DESIGN AIR VOIDS	4.0% @ N70	4.0% @ N50	4.0% @ N70
MIXTURE COMPOSITION	IL 19.0	IL 9.5	IL 12.5 OR IL 9.5
FRICTION AGGREGATE			MIXTURE C
DENSITY TEST METHOD	CORES*	SATISFACTION OF ENGINEER	CORES*

* MATERIAL SHALL BE COMPACTED TO 93.0-97.4 PERCENT OF THE MAXIMUM THEORETICAL DENSITY, EXCEPT THAT WHEN PLACED AS FIRST LIFT ON AN INIMPROVED SUBGRADE THE MINIMUM PERCENT COMPACTION SHALL BE 92.0 PERCENT. THE MAXIMUM THEORETICAL DENSITY SHALL BE DETERMINED FROM THE MOVING AVERAGE AS SPECIFIED IN THE QC/QA SPECIFICATION.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15BR-2	LIVINGSTON	64	5
		CONTRACT NO. 66691		
		ILLINOIS FED. AID PROJECT		

PAVEMENT													
STA. TO STA.				LENGTH	HOT-MIX ASPHALT BASE COURSE, 8"	HOT-MIX ASPHALT BASE COURSE, VARIABLE DEPTH	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	MIXTURE FOR CRACKS, JOINTS, AND FLANGEWAYS	LEVELING BINDER (HAND METHOD), N50	3/4" LEVELING BINDER (MACHINE METHOD), N50	HOT-MIX ASPHALT SURFACE REMOVAL--BUTT JOINT	TEMPORARY RAMP	1 1/2" HOT-MIX ASPHALT SURFACE COURSE MIX. "C", N50	HOT-MIX ASPHALT SURFACE REMOVAL--1 1/2"
				FT	SQ YD	TON	GALLON	TON	TON	TON	TON	SQ YD	SQ YD	TON	SQ YD
PRIOR TO STAGE I - CONSTRUCT WIDENING NORTH SIDE OF ROADWAY															
WEST SIDE OF BRIDGE					412.34										
EAST SIDE OF BRIDGE					505.76										
SUB-TOTAL					918.10										
STAGE I - CONSTRUCT EASTBOUND PAVEMENT															
317+05.00	TO	319+00.00		195.00											
319+00.00	TO	319+60.00		60.00	60.33										
319+60.00	TO	320+60.86		100.86	120.20				0.08	0.13	11.0				
320+60.86	TO	322+01.10		140.24	190.80	196.8			0.11	0.18	15.2		6.7		
BRIDGE AND BRIDGE APPROACHES OMISSION															
322+01.10	TO	324+40.98		239.88											
324+40.98	TO	325+76.26		135.28	168.21	171.8			0.10	0.17	14.4		6.7		
325+76.26	TO	327+88.20		211.94	127.95				0.13	0.22	18.1				
327+88.20	TO	328+48.20		60.00	45.08										
328+48.20	TO	329+23.00		74.80											
SUB-TOTALS					712.56	368.60			0.42	0.70	58.66		13.4		
STAGE II - CONSTRUCT WESTBOUND PAVEMENT															
317+05.00	TO	319+00.00		195.00											
319+00.00	TO	319+60.00		60.00											
319+60.00	TO	320+60.86		100.86					0.07	0.12	10.4				
320+60.86	TO	322+01.10		140.24		193.2			0.11	0.18	15.2				
BRIDGE AND BRIDGE APPROACHES OMISSION															
322+01.10	TO	324+40.98		239.88											
324+40.98	TO	325+76.26		135.28		165.9			0.10	0.17	14.0				
325+76.26	TO	327+88.20		211.94					0.16	0.26	22.2				
327+88.20	TO	328+48.20		60.00											
328+48.20	TO	329+23.00		74.80											
SUB-TOTALS					0.00	359.10	0.00	0.00	0.44	0.73	61.72	0.00		0.00	0.00
STAGE III - SURFACE COURSE - EASTBOUND & WESTBOUND															
317+05.00	TO	319+00.00		195.00			45.07	1.13					14.4	47.5	563.33
319+00.00	TO	319+60.00		60.00			23.47	0.59			2.82	293.33		24.7	
319+60.00	TO	320+60.86		100.86			40.45	1.01						42.6	
320+60.86	TO	322+01.10		140.24			57.51	1.44						60.5	
BRIDGE AND BRIDGE APPROACHES OMISSION															
322+01.10	TO	324+40.98		239.88											
324+40.98	TO	325+76.26		135.28			53.71	1.34						56.6	
325+76.26	TO	327+88.20		211.94			76.13	1.90						80.2	
327+88.20	TO	328+48.20		60.00			22.27	0.56			2.82	293.33		23.5	
328+48.20	TO	329+23.00		74.80			17.29	0.43					14.4	18.2	216.09
SUB-TOTALS					0	0	335.90	8.40				586.67		353.84	779.42
TOTALS					1630.66	727.70	335.90	8.40	0.86	1.43	120.37	586.67	13.40	353.84	779.42

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVEMENT SCHEDULE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	6
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			

ENTRANCES AND SIDE ROAD SCHEDULE

STATION	ENTRANCE TYPE	SIDE	AREA	EXISTING SURFACE	INCIDENTAL HOT-MIX ASPHALT SURFACING	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	TEMP RAMP	AGGREGATE SURFACE COURSE TYPE B
			SQ YD		TON	GALLON	TON	SQ YD	TONS
319+49.5	FE	LT	109	AGG					47.7
319+53.9	PE	RT	58	HMA/AGG	6.5	4.7	0.1	5.6	
320+45.9	PE	LT	65	HMA	7.9	5.2	0.1		
325+23.3	FE	RT	81	AGG					37.3
319+60 TO 320+40	TEMPORARY PE	LT	146						49.8
TOTALS					14.4	9.9	0.2	5.6	134.8

SEEDING

LOCATION	SEEDING, CLASS 2	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	EROSION CONTROL BLANKET
	ACRE	LBS	LBS	LBS	SQ YD
RIGHT SIDE STA. 319+00.00 TO STA. 329+00.00	0.33	29.7	29.7	29.7	1597.2
LEFT SIDE STA. 319+00.00 TO STA. 329+00.00	0.67	60.3	60.3	60.3	3242.8
TOTALS	1.0	90	90	90	4840

EARTHWORK SCHEDULE

LOCATION STA. TO STA.	SIDE	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (25%)	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE(-)
		CU YD	CU YD	CU YD	CU YD
PRE-STAGE I 318+80.00 TO 322+01.10	LEFT	34.4	25.8	821.1	-795.3*
BRIDGE OMISSION 324+40.98 TO 328+48.20	LEFT	58.0	43.5	4.3	39.2
SUB-TOTAL PRE-STAGE I		92.4	69.3	825.4	-756.1
STAGE I 319+00.00 TO 322+01.10	RIGHT	119.3	89.5	103.6	-14.1
BRIDGE OMISSION 324+40.98 TO 328+48.20	RIGHT	99.7	74.8	87.2	-12.5
SUB-TOTAL STAGE I		219.0	164.3	190.8	-26.6
STAGE II 324+40.98 TO 328+48.20	LEFT	266.4	199.8	103.4	96.4
SUB-TOTAL STAGE II		266.4	199.8	103.4	96.4
STAGE III 319+62.00 TO 320+38.00	LEFT	99.2	74.4	0.0	74.4
SUB-TOTAL STAGE III		99.2	74.4	0.0	74.4
TOTAL		677	507.8	1119.6	-611.9

*330.2 CU YDS FOR TEMPORARY ENTRANCE STA. 319+62 TO STA. 320+38 TO REMAIN.
REMOVE TEMPORARY AGGREGATE AND SHAPE TO DRAIN TO INLET AT STA. 319+72, 53' LT.

GUARDRAIL

LOCATION	STEEL PLATE BEAM GUARDRAIL TYPE A	TRAFFIC BARRIER TERMINAL TYPE 6	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (FLARED)	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARDRAIL	GUARDRAIL REMOVAL	GUARDRAIL MARKERS, TYPE A (NOTE 3)	BARRIER WALL MARKERS, TYPE B (NOTE 4)
	FEET	EACH	EACH	FEET	FEET	EACH	EACH
AT S.N. 053-0150							
NW QUAD	25.0	1.0	1.0	125.0	125.0	2.0	
NORTH SIDE PARAPET							3.0
NE QUAD	75.0	1.0	1.0	125.0	125.0	2.0	
Note 1 & 2 SE QUAD	0	1.0	1.0		100.0	1.0	
SOUTH SIDE PARAPET							3.0
SW QUAD	63	1.0	1.0		125.0	2.0	
TOTALS	163	4	4	250	475	7	6

Note 1 -- In the SE quad, construct both the TBT Ty 1 (SP) FL and the TBT Ty 6 at a 1:24 rate away from the edge of the shoulder
Note 2 -- In the SE quad, furnish and install only enough of the TBT Ty 1 to provide a 25' length of need
Notes 3 & 4 -- Markers are to be BI-Directional Crystal

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	7
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			

TEMPORARY PAINT PAVEMENT MARKING

U.S. 17 STATION LOCATIONS			4" LINE WHITE FOOT	24" LINE WHITE FOOT
STAGE I				
317+05				12
329+23				12
INSIDE LINE				
317+05	TO	328+63.20	1159	
OUTSIDE LINE				
318+80	TO	327+63	883	
STAGE II				
317+05				12
329+23				12
INSIDE LINE				
318+25	TO	328+63.20	1039	
OUTSIDE LINE				
319+30	TO	326+62	732	
TOTALS			3,813	48

PAVEMENT MARKING

U.S. 17 STATION LOCATIONS			LIN FT	4" LINE WHITE FOOT	6" LINE YELLOW FOOT
317+05	TO	329+23	1218	2436	304.5
TOTALS			1218	2,436	304.5

RAISED REFLECTIVE PAVEMENT MARKERS

STA.	TO	STA.	RAISED REFLECTIVE PAVEMENT MARKER EACH	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE) EACH
317+05.00	TO	322+01.10	6	
322+01.10	TO	324+40.98		3
324+40.98	TO	329+23.00	6	
TOTALS			12	3

SHORT-TERM PAVEMENT MARKING & WORK ZONE PAVEMENT MARKING REMOVAL

U.S. 17 STATION LOCATIONS			SHORT-TERM CENTER LINE YELLOW FOOT	SHORT-TERM EDGE DASH WHITE FOOT	PAVEMENT MARKING REMOVAL SQ FT	WORK ZONE PAVEMENT MARKING REMOVAL 4" LINE WHITE SQ FT	WORK ZONE PAVEMENT MARKING REMOVAL 24" LINE WHITE SQ FT
STAGE I					481		
317+05							24
329+23							24
INSIDE LINE							
317+05	TO	328+63.20				480	
OUTSIDE LINE							
318+80	TO	327+63					
STAGE II							
317+05							
329+23							
INSIDE LINE							
318+25	TO	328+63.20				345	
OUTSIDE LINE							
319+30	TO	326+62					
STAGE III							
317+05	TO	329+23	366	312		226	
(3 APPLICATIONS)							
TOTALS			366	312	481	1051	48

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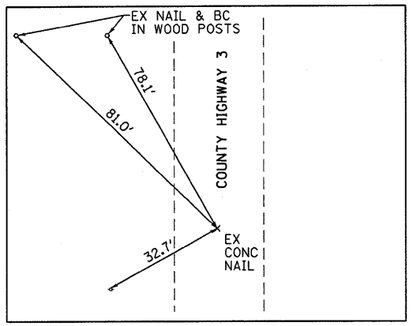
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

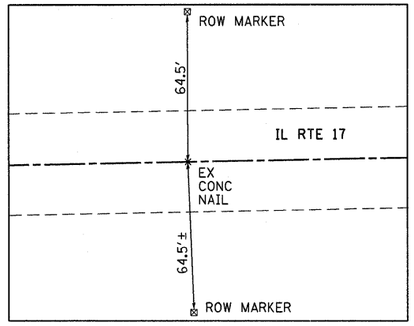
SCHEDULES

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

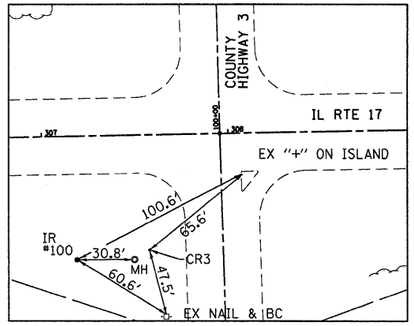
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	8
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			



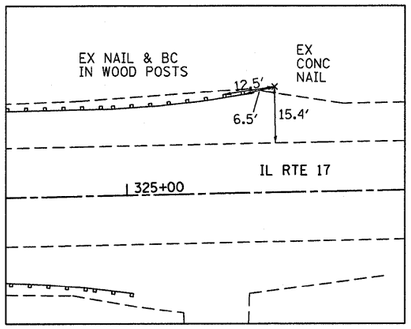
CONTROL TIE STATE #22 (CONC NAIL)
STA 117+20.82



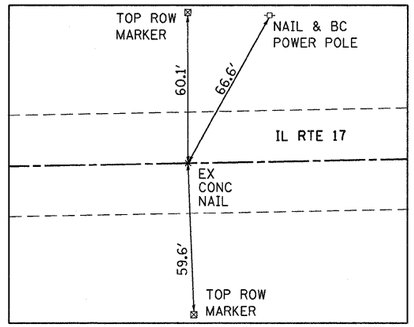
CONTROL TIE STATE #10 (CONC NAIL)
STA 295+00.67



CONTROL TIE STATE (CR3)
STA 307+57/ 61'± RT
CONTROL TIE #100 (IRON ROD)



CONTROL TIE #500 (PK NAIL)
STA 325+40/ 28'± RT



CONTROL TIE STATE #14 (NAIL)
STA 334+58.41

POINT #	NORTHING	EASTING
22	1,614,830.805	991,002.774
10	1,613,087.330	989,754.831
100	1,613,039.675	990,977.467
500	1,613,169.743	992,792.971
14	1,613,157.914	993,711.938

SURVEY CONTROL TIES

(N.T.S.)

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TIE POINTS

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

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	9
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FIRST NATIONAL BANK OF DWIGHT

CULT FIELD

LEGEND
- TEMPORARY DITCH CHECK
- INLET AND PIPE PROTECTION

STA. 319+72, 46.5' LT.
MANHOLE TYPE A, 5' DIA. W/
TYPE 1 FRAME, CLOSED LID
THE COST OF ADJUSTING THE MANHOLE
TO FINAL GRADE WILL BE INCLUDED IN
THE PRICE OF THE MANHOLE

CULT FIELD

STA. 319+72, 53.5' LT.
INLET TYPE A W/
TYPE 8 GRATE

PROPOSED PIPE CULVERT,
CLASS D, TYPE 1 12" X 3.5"

REMOVE EXISTING
CULVERT

FE +49.5 (AGG)

TEMPORARY
AGGREGATE
DRIVEWAY

WOOD POST LANDSCAPE BUSHES

EX ROW

EX ROW

PROPOSED HMA BASE COURSE 8"
(SEE TYPICALS & STAGING PLANS)

+56.9
49' LT.
30" CMP

FL=607.90

CONSTRUCTION LIMITS

FL=608.20

GRASS
24'

PR. AGG.

EX. AGG

FL=608.47

15' R.

+26
34' LT.

STA. 318+80
22' LT.

PROJECT BEGINS
STA. 317+05

HMA SURFACE REMOVAL 1 1/2"
AND HMA SURFACE COURSE 1 1/2"
TO STA. 319+00

BUTT JOINT
STA. 319+00

60'

AGG SHLD

EX. AGG SHLD

314 | 315+00 | 316 | 317 | 318 | 319

26'

26'

24'

60' BUTT JOINT

AGG SHLD

70'

EX. AGG SHLD

CONSTRUCTION LIMITS

STA. 319+00
22' RT.

EX. AGG

14'

PR. ING. BIT.

STA.
22'

PROPOSED HMA BASE
COURSE 8" (SEE TYPICALS
& STAGING PLANS)

40'

FL=607.31

30'

48" X 34" CMP

48" X 34" CMP

10'

FL=607.19

8'

TOPSOIL FURNISH
AND PLACE, 6"
133.3 SQ YD

FL=607.23

FL=607.15

65'

+00
65' RT.

+00
70' RT.

EX ROW

ROW

PROPOSED
MISCELLANEOUS CONCRETE
SLOPE WALLS (SEE DETAILS)

CULT FIELD

TOPSOIL FURNISH AND
PLACE, 6" 53.4 SQ YD

LANDSCAPE ROCKS

12

FE +53.9 (AGG)

0 20 40 60
SCALE IN FEET

CULT FIELD

GERALD A. ANDERSON

N

MATCH LINE - STA. 320+00

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
D&D FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE

620
615
610
605

613.47 | 613.37 | 613.30 | 613.27 | 613.29 | 613.34 | 613.44 | 613.59 | 613.78 | 614.03 | 614.30 | 614.30 | 614.52 | 614.62 | 614.74 | 614.94

608.26 LT. DITCH
607.28 RT. DITCH

614.30

+26.98

-0.22%

PIPE CULVERT 36" x 300' @ 0.72%

+0.09%

-0.29%

-0.59%

608.20

607.26

314+00 | 314+50 | 315+00 | 315+50 | 316+00 | 316+50 | 317+00 | 317+50 | 318+00 | 318+50 | 319+00 | 319+50 | 320+00

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

SCALE: 20 | SHEET NO. OF SHEETS | STA. 314+00 | TO STA. 320+00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	10
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

MATCH LINE – STA. 320+00

MATCH LINE – STA. 326+00

FF=615.56

BUILDING 321+00 77' LT.

15' R. +25.9 49' LT.

LANDSCAPE BUSHES

PE

45.9' (AGG)

MATCH EX

REMOVE EXISTING CULVERT

PERIMETER EROSION BARRIER

EX ROW

CONSTRUCTION LIMITS

FL=607.87

30" X 34" CMP

STA. 320+82.46 22' LT.

STA. 320+88.98 25.25' LT.

10.1'

17' PR. INC. BIT.

+28.7 34' LT.

EX. ASPHALT

EX. AGG SHLD

PROPOSED PIPE CULVERT, CLASS D, TYPE 1 36" X 300' WITH 2 END SECTIONS

INLET ELEV. = 608.20

OUTLET ELEV. = 605.98

WELL

BROKEN CONC

WOOD POST

WOOD POST

WOOD POST

+00 70' LT.

+40 60' LT.

FL=605.98

TBT TYPE 6 (TYP.)

21' LT.

REMOVE EXISTING GUARDRAIL

EXISTING AGG SHLD

PROPOSED SPBGR TYPE A 6' POSTS (TYP.)

320+00

321

322

323

324

325+00

24'

320+27.51, 30' RT.

STA. 320+45.10, 26.81' RT.

11.1'

TBT TYPE 1 SPECIAL (FLARED) (TYP.)

REMOVE EX GUARDRAIL

TEMPORARY FENCE (TYP.)

NO PERIMETER EROSION BARRIER AT BEGINNING OF CONC DITCH

21.07' RT.

70'

CONSTRUCTION LIMITS

CONC DITCH

WETLAND

322+50 55' RT.

322+25 50' RT.

322+00 50' RT.

322+50 29' RT.

323+00 30' RT.

322+93 70' RT.

PERIMETER EROSION BARRIER NEXT TO PAVED DITCH

15" CMP

END NOT FOUND

TIMBER

EXISTING PAVED DITCH TO REMAIN IN PLACE

TEMPORARY FENCE

GERALD ANDERSON

FIRST NATIONAL BANK OF DWIGHT

CULT FIELD

S.N. 053-0150 STA. 323+21.04

CONSTRUCTION LIMITS

REMOVE EXISTING GUARDRAIL

TBT TYPE 6 (TYP.)

21' LT.

PROPOSED SPBGR TYPE A 6' POSTS (TYP.)

STA. 325+97.13 25.07' LT.

10'

70'

EXISTING AGG SHLD

EX. AGG SHLD

9.9'

21.59' RT.

16.5' PR. AGG.

STA. 325+46.21 19.5' RT.

STA. 325+38.71 22.5' RT.

STA. 325+07.42 22.5' RT.

STA. 325+02.96 25.2' RT.

22.3' RT.

FL=606.99

FL=606.89

FL=606.86

FL=606.98

36"X24" CMP

36"X24" CMP

CONC

FL=602.83

15"CMP

END NOT FOUND

REMOVE CONC DITCH EXISTING GUARDRAIL

PERIMETER EROSION BARRIER

TIMBER

EXISTING PAVED DITCH TO REMAIN IN PLACE

+00 70' RT.

+00 55' RT.

65'

FF +23.3 (AGG)

ILAH A. BROUILLET

LEGEND

TEMPORARY DITCH CHECK

INLET AND PIPE PROTECTION

N

0 20 40 60

SCALE IN FEET

BM #1 ELEV 614.51
CHISELED X ON TOP OF
NW WINGWALL SN 053-0150
STA 322+35, 24.4' LT

BM #2 ELEV 614.56
CHISELED SQUARE ON TOP OF
SE WINGWALL SN 053-0150
STA 324+07, 24' RT

BM #3 ELEV 608.72
RR SPIKE IN P.P.
STA 324+02, 68.2' LT

620
615
610
605

-0.58%
-0.60%
RIGHT DITCH
-0.58%
PIPE CULVERT 36" x 300' @ 0.72%
+36
606.23
+0.64%
+0.86%
VPI STA. 321+96.00
ELEVATION 616.20
+36.99
605.98
-2.27%
+82
605.00
250.00' V.C.
+0.86%
VPI STA. 323+21.00
ELEVATION 617.28
-0.86%
+46.00 EL. 616.21
200.00' V.C.
+00
+0.39%
LEFT DITCH
+00
+0.33%
606.78
VPI STA. 325+46.00
ELEVATION 615.35
-0.25%
RIGHT DITCH
-0.35%
RIGHT

607.03 606.74 606.44 606.25 606.33 605.69 606.40 605.00 606.63 605.19 606.70 605.39 606.78 605.59 606.95 605.78

614.74 614.94 614.92 615.26 614.88 615.58 614.80 615.90 614.69 616.23 614.70 616.57 614.72 616.73 614.76 616.71 614.66 616.53 614.83 616.17 614.88 615.79 614.93 615.47 614.97 615.22

320+00 320+50 321+00 321+50 322+00 322+50 323+00 323+50 324+00 324+50 325+00 325+50 326+00

PLAN

SURVEYED	BY	DATE
DRAWN		
CHECKED		
QUANTITY CHECKED		
RT. OF WAY CHECKED		
CADD FILE NAME		
NOTE BOOK		
NO.		

PROFILE

SURVEYED	BY	DATE
DRAWN		
CHECKED		
GRADES CHECKED		
B.M. NOTED		
STRUCTURE NO'S/ATM'S CHKD		
NOTE BOOK		
NO.		

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

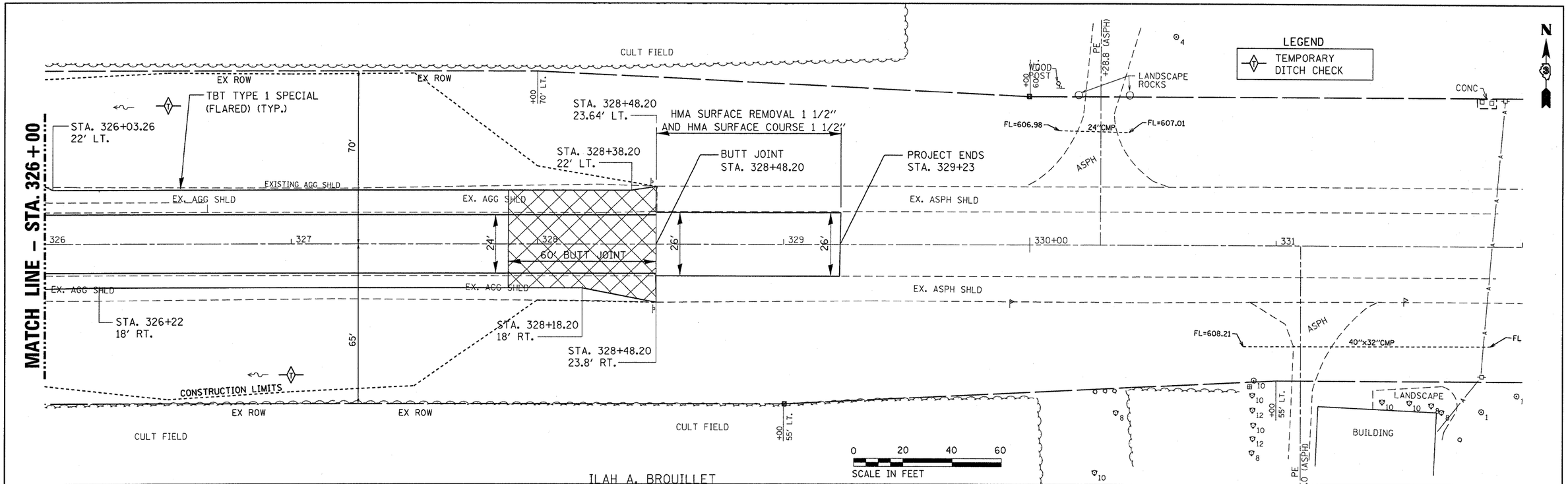
PLAN AND PROFILE

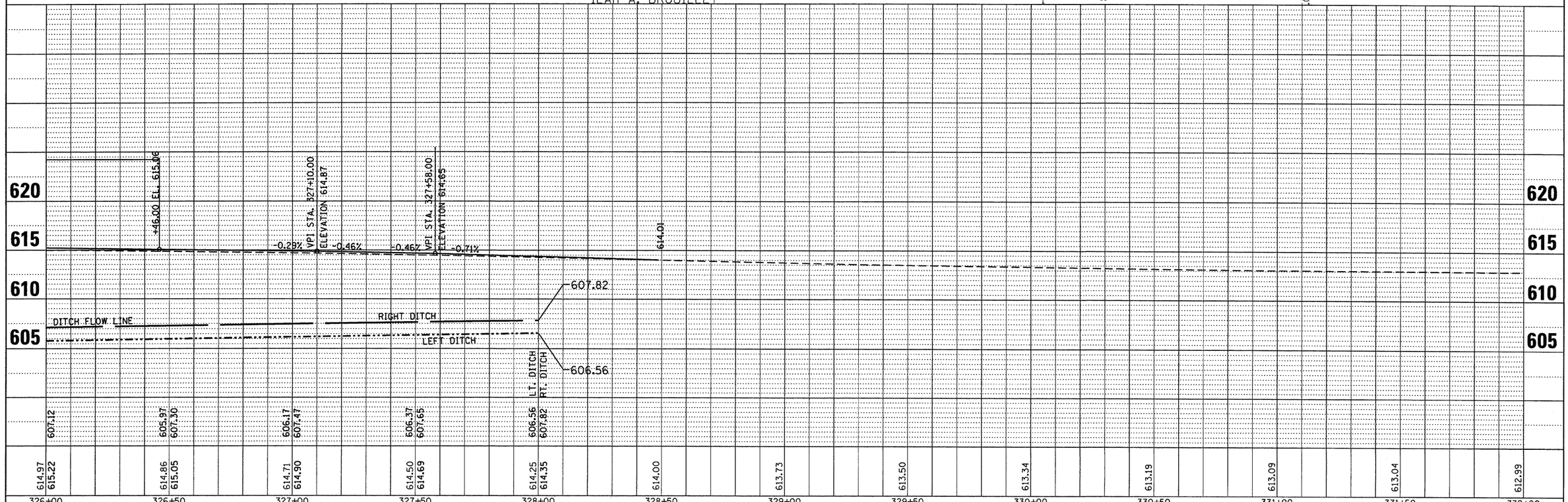
SCALE: 20 | SHEET NO. OF SHEETS | STA. 320+00 TO STA. 326+00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	11
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
NOTE BOOK
NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
BY
DATE

PROFILE
SURVEYED
PLOTTED
NOTE BOOK
NO.
PAGES CHECKED
B.M. NOTED
STRUCTURE NO(RATING OR)HD
BY
DATE





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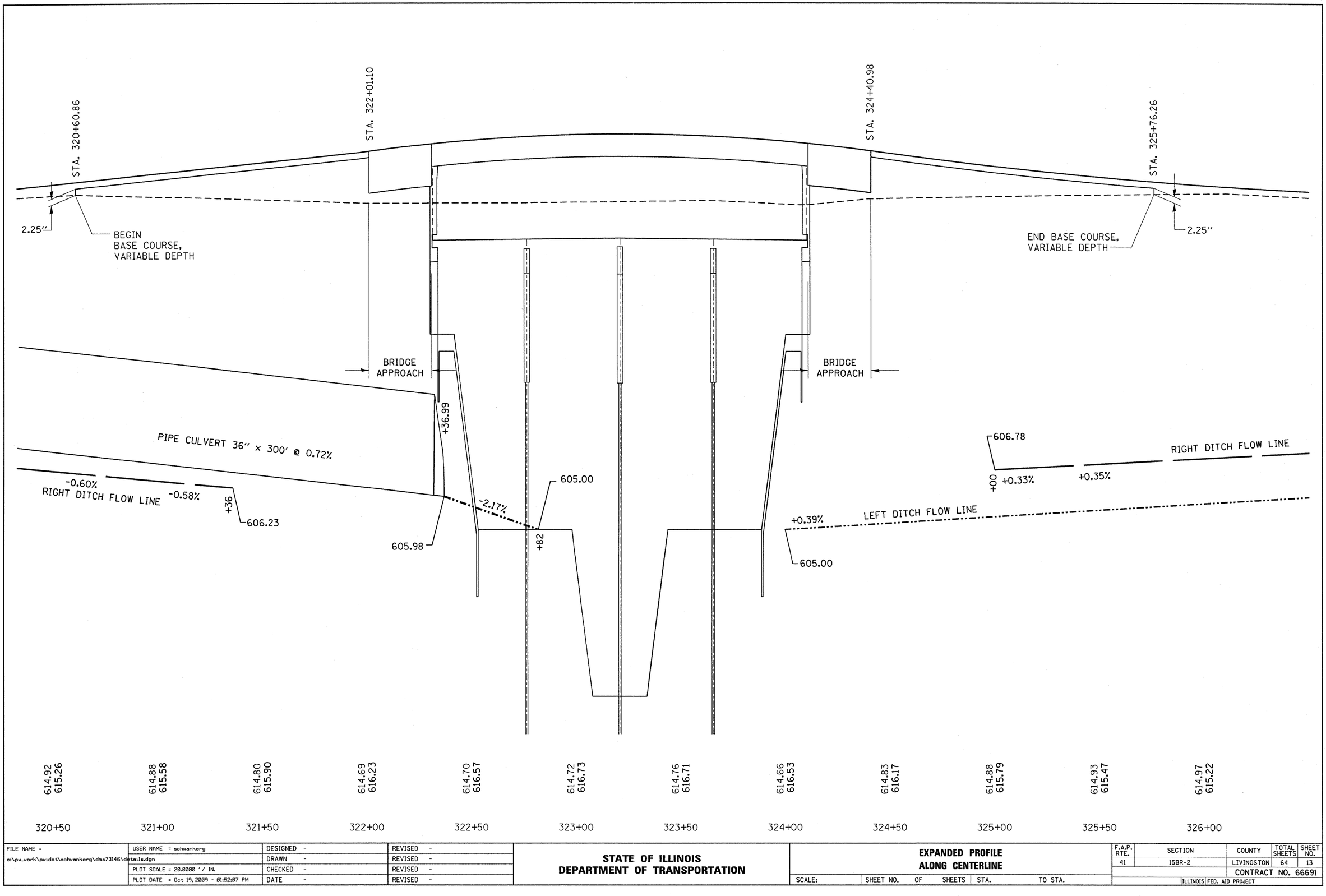
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE

SCALE: 20 | SHEET NO. OF SHEETS | STA. 326+00 | TO STA. 332+00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	56	12
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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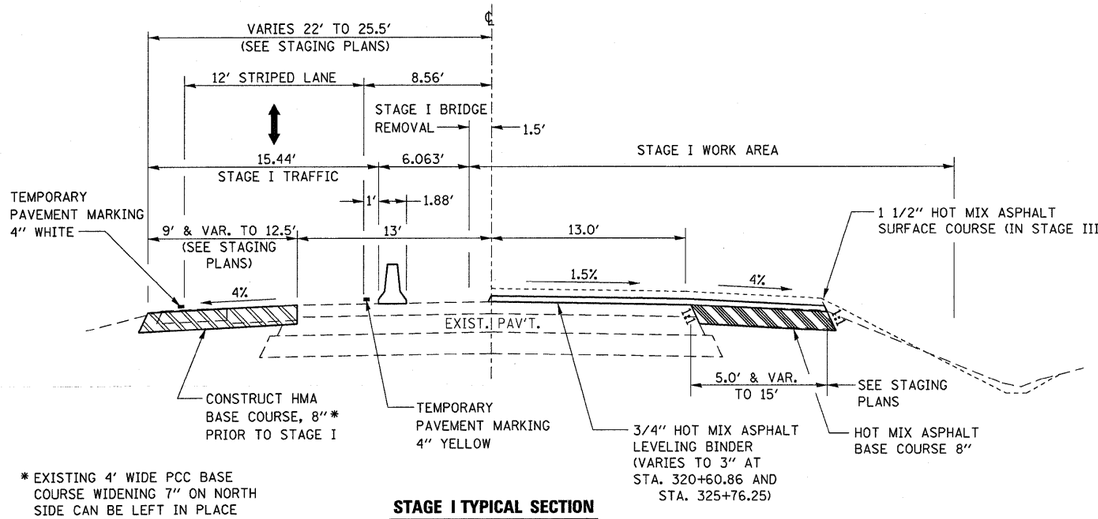
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXPANDED PROFILE
ALONG CENTERLINE

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

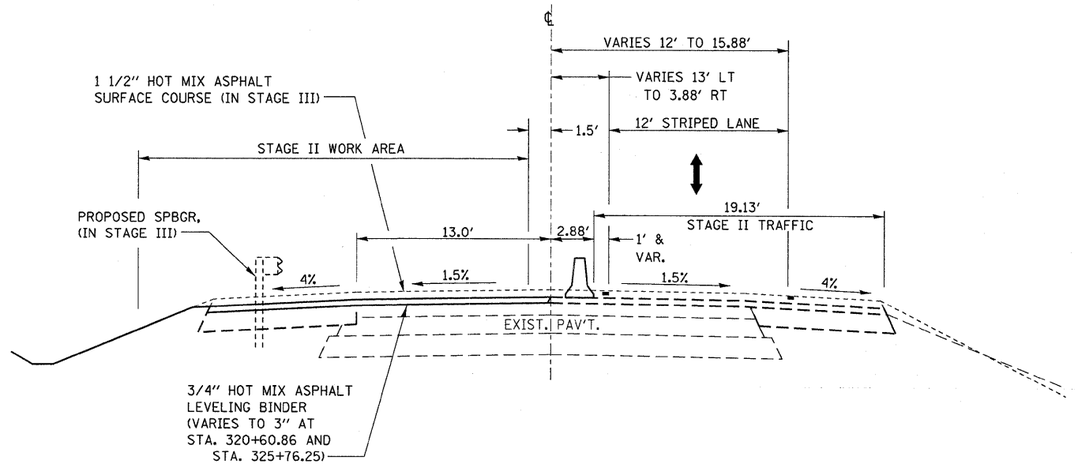
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15BR-2	LIVINGSTON	64	13
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			



* EXISTING 4' WIDE PCC BASE COURSE WIDENING 7" ON NORTH SIDE CAN BE LEFT IN PLACE AS TEMPORARY PAVEMENT (STA. 319+76 TO STA. 322+31 AND STA. 324+16 TO STA. 326+66)

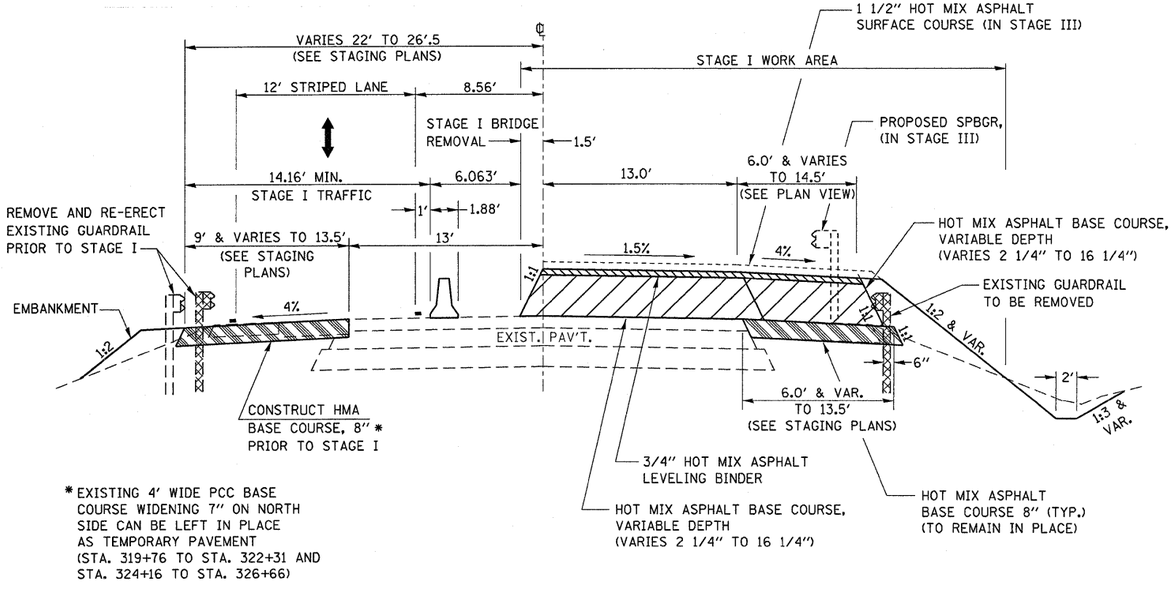
STAGE I TYPICAL SECTION

STA. 319+00 TO STA. 320+60.86
STA. 325+76.25 TO STA. 328+48.20



STAGE II TYPICAL SECTION

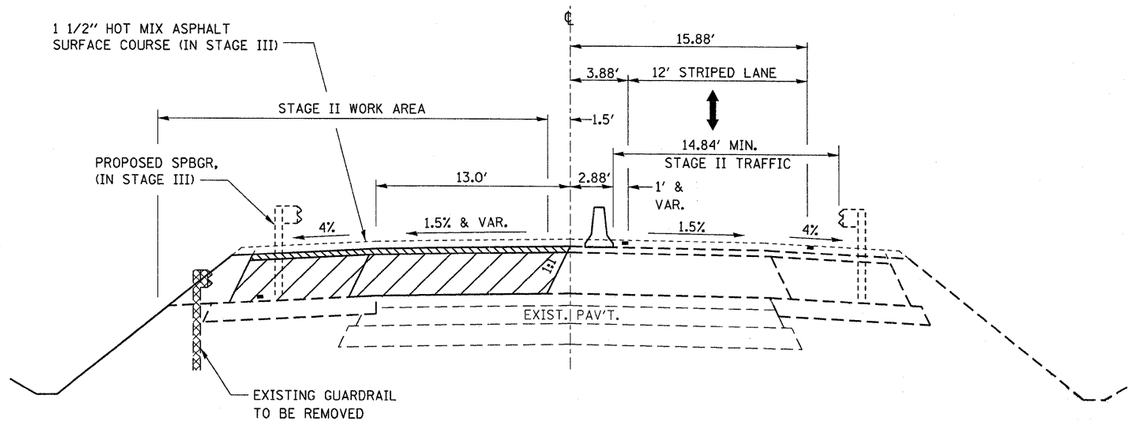
STA. 319+00 TO STA. 320+60.86
STA. 325+76.25 TO STA. 328+48.20



* EXISTING 4' WIDE PCC BASE COURSE WIDENING 7" ON NORTH SIDE CAN BE LEFT IN PLACE AS TEMPORARY PAVEMENT (STA. 319+76 TO STA. 322+31 AND STA. 324+16 TO STA. 326+66)

STAGE I TYPICAL SECTION

STA. 320+60.86 TO STA. 322+00.25
BRIDGE OMISSION STA. 322+00.25 TO STA. 324+41.83
STA. 324+41.83 TO STA. 325+76.26



STAGE II TYPICAL SECTION

STA. 320+60.86 TO STA. 322+00.25
BRIDGE OMISSION STA. 322+00.25 TO STA. 324+41.83
STA. 324+41.83 TO STA. 325+76.26

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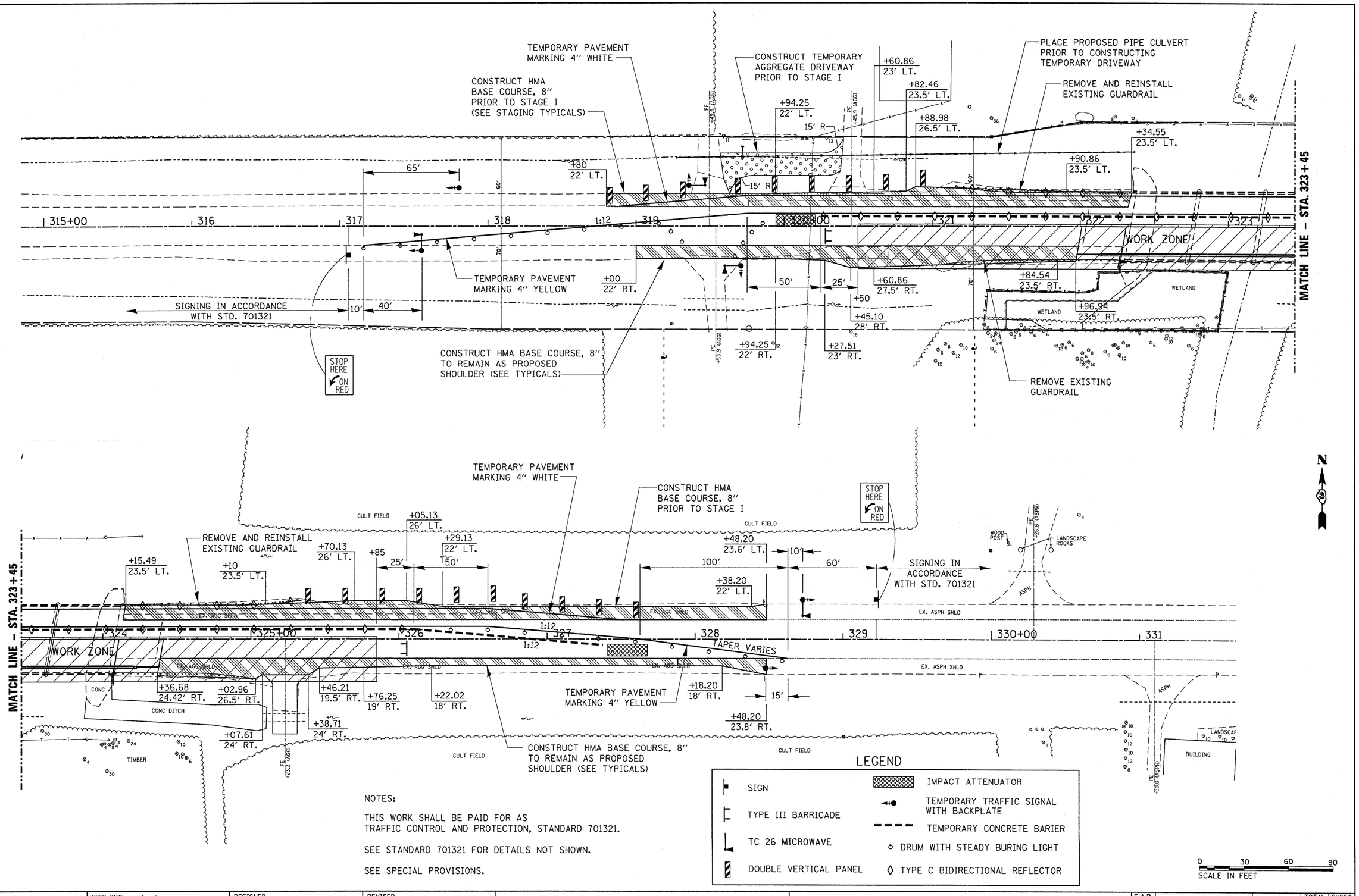
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGING TYPICALS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15BR-2	LIVINGSTON	64	14
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			



NOTES:

THIS WORK SHALL BE PAID FOR AS TRAFFIC CONTROL AND PROTECTION, STANDARD 701321.

SEE STANDARD 701321 FOR DETAILS NOT SHOWN.

SEE SPECIAL PROVISIONS.

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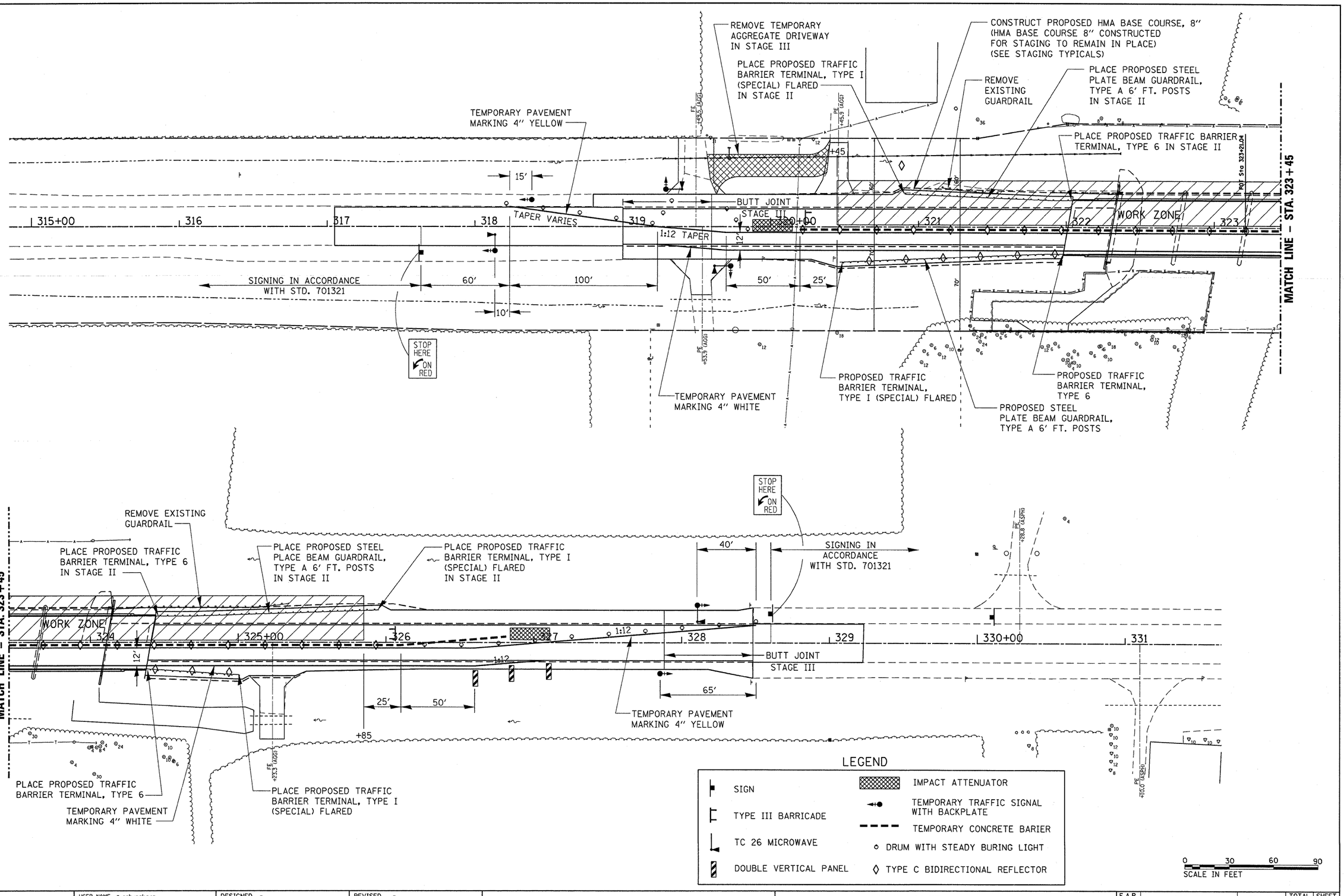
	PLOT DATE = Oct 19, 2009 - 01:40:01 PM	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL CONSTRUCTION
STAGE I

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	15
		CONTRACT NO. 66691		
		ILLINOIS FED. AID PROJECT		



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	PLOT DATE = Oct 16, 2009 - 03:00:08 PM	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL CONSTRUCTION
STAGE II

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	16
		CONTRACT NO. 66691		
		ILLINOIS FED. AID PROJECT		

Bench Marks: 1.) BM #1 Chiseled "□" on top of Northwest wingwall of bridge S.N. 053-0150, Station 322+35/24.4' LT., Elevation = 614.51.
2.) BM #2 Chiseled "□" on top of Southeast wingwall of bridge S.N. 053-0150, Station 324+07/24.0' RT., Elevation = 614.56.
3.) BM #3 Railroad spike in power pole, Station 324+02/68.0' LT., Elevation = 608.72.

Existing Structure: Structure No. 053-0150, built in 1979 as Section 15 BR-2. The superstructure consists of precast prestressed concrete deck beams with a concrete parapet attached to the exterior beams and bituminous wearing surface. The substructure consists of concrete pile bent abutments supported by precast concrete piles, two concrete pile bent piers (Pier No. 1 and Pier No. 3) supported by precast concrete piles and one concrete solid shaft pile bent pier (Pier No. 2) supported by precast concrete piles. The back-to-back of abutments dimension measures 181'-7" and the out-to-out dimension measures 47'-2". The span lengths are 43'-11 3/4", 44'-7", 44'-7" and 43'-11 3/4" (℄ bearing to ℄ bearing) with a 10° left forward skew. The existing superstructure shall be removed and replaced, existing abutments to be converted to semi-integral abutments and the existing piers will be repaired. One lane of traffic will be maintained utilizing stage construction.

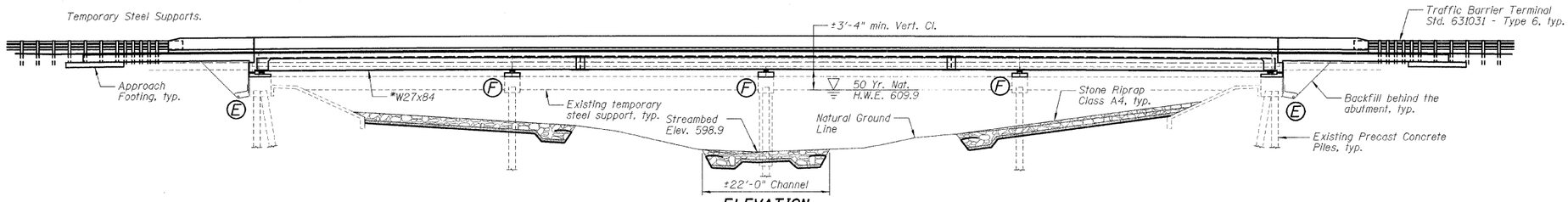
Salvage: Temporary Steel Supports.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCOPE OF WORK

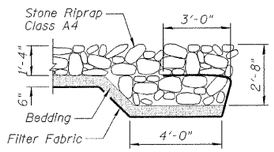
1.) Remove and replace the existing bridge superstructure.
2.) Remove and replace the existing concrete approach slab.
3.) Remove the existing abutment backwall and wingwalls as shown.
4.) Convert the existing abutments to semi-integral abutments.
5.) Place additional concrete on the existing pier caps in order to meet the proposed grade change.
6.) Repair the substructure elements as required.

INDEX TO SHEETS



ELEVATION

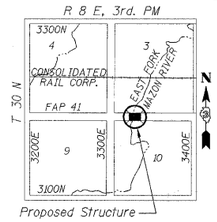
*Composite in positive moment region only.



SECTION A-A

PLAN

**Included in the cost of Pipe Underdrains For Structures.



LOCATION SKETCH

LOADING HL-93

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

DESIGN SPECIFICATIONS

NEW CONSTRUCTION:
2007 AASHTO LRFD Bridge Design Specifications, 4th Edition (2008 Interim Revisions)

EXISTING SUBSTRUCTURE:
1995 FHWA Seismic Retrofitting Manual for Highway Bridges

DESIGN STRESSES

FIELD UNITS: NEW CONSTRUCTION
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 50,000 psi (AASHTO M270 Grade 50W)

FIELD UNITS: EXISTING CONSTRUCTION
f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

SEISMIC DATA

NEW CONSTRUCTION:
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (SD1) = 0.074 g
Design Spectral Acceleration at 0.2 sec. (SDs) = 0.130 g
Soil Site Class = C

EXISTING CONSTRUCTION:
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.041 g
Site Coefficient (S) = 1.0

JOSEPH M. LOWRANCE 081-006446 LICENSED STRUCTURAL ENGINEER BLOOMINGTON, ILLINOIS

Joseph M. Lowrance Date 10/07/09
JOSEPH M. LOWRANCE
ILLINOIS STRUCTURAL ENGINEER
NO. 081-006446
Exp. Date 11/30/10

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E Anderson (TSD)
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL PLAN AND ELEVATION
IL. ROUTE 17 OVER EAST FORK MAZON RIVER
F.A.P. ROUTE 41 - SECTION 15BR-2
LIVINGSTON COUNTY
STATION 323+21.04
STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B1	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	17
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FARNSWORTH GROUP, INC. CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-8168

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		144	144
Stone Riprap, Class A4	Sq. Yd.		1,347	1,347
Filter Fabric	Sq. Yd.		1,347	1,347
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		11.4	11.4
Structure Excavation	Cu. Yd.		144	144
Concrete Structures	Cu. Yd.		46.2	46.2
Concrete Superstructure	Cu. Yd.	359.0		359.0
Bridge Deck Grooving	Sq. Yd.	906		906
Protective Coat	Sq. Yd.	1,144		1,144
Furnishing and Erecting Structural Steel	L Sum	1		1
Stud Shear Connectors	Each	4,284		4,284
Reinforcement Bars, Epoxy Coated	Pound	92,230	2,440	94,670
Bar Splicers	Each	898	17	915
Name Plates	Each	1		1
Elastomeric Bearing Assembly, Type I	Each	12		12
Anchor Bolts, 1"	Each	36		36
Anchor Bolts, 1¼"	Each	24		24
Geocomposite Wall Drain	Sq. Yd.		84	84
Pipe Underdrains for Structures 4"	Foot		140	140
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.		49	49
Temporary Soil Retention System	Sq. Ft.		98	98
Asbestos Bearing Pad Removal	Each	128		128

GENERAL NOTES:

1.) Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts in painted areas and M164 Type 3 in unpainted areas. Bolts $\frac{7}{8}$ in. ϕ, holes $\frac{15}{16}$ in. ϕ, unless otherwise noted.
2.) Calculated weight of Structural Steel = 105,440 lbs Grade 50W.
3.) All structural steel shall be AASHTO M 270 Grade 50W.
4.) No field welding is permitted except as specified in the contract documents.
5.) Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
6.) Reinforcement bars designated (E) shall be epoxy coated.
7.) 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.
8.) 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.
9.) Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of $\frac{1}{8}$ inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
10.) Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 in. Those areas shall be primed in the shop with a Department approved zinc rich primer. No field painting shall be required. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
11.) All exposed structural steel of the bearings shall be cleaned and shop painted as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel."
12.) Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
13.) Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates.
14.) Slipforming of parapets is not allowed.
15.) The SSPC QP-1 Painting Contractor Certification will be required for the contract.
16.) The pay item Removal of Existing Superstructures shall include the removal of the Temporary Support Connections at the Abutments & Piers, the Temporary Supports under each Superstructure Span and the Approach Pavement at each end of the bridge (beneath the proposed Bridge Approach Slab). All structural steel from the existing temporary supports shall become the property of IDOT and delivered to the Pontiac Maintenance Yard.
17.) The Contractor is advised that the existing PPC Deck beams are in a deteriorated condition with reduced load-carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

WATERWAY INFORMATION

Drainage Area = 50.7 Sq. Mi. Low Grade Elev. 612.70 @ Sta. 333+00.00

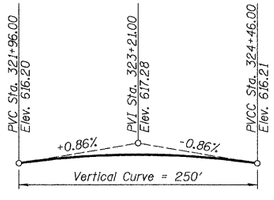
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	1760	906	906	609.2	0.1	0.1	609.3	609.3
Design	50	2540	1011	1011	609.9	0.1	0.1	610.0	610.0
Base	100	2850	1041	1041	610.1	0.1	0.1	610.2	610.2
Overtopping	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Max. Calc.	500	3570	1107	1107	610.5	0.1	0.1	610.6	610.6

10 Yr. Velocity = 1.94 ft/sec. (Proposed)
10 Yr. Velocity = 1.94 ft/sec. (Existing)

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

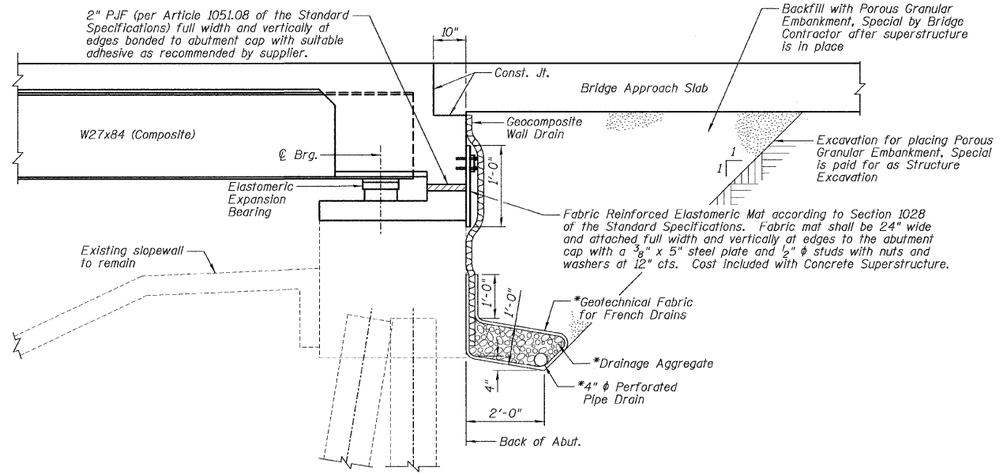
STATION 323+21.04
REBUILT 20__ BY
STATE OF ILLINOIS
F.A.P. ROUTE 41 - SECTION 15BR-2
LOADING HL-93
STRUCTURE NO. 053-0150

NAME PLATE
See Std. 515001



PROFILE GRADE
(Along ℄ Roadway)

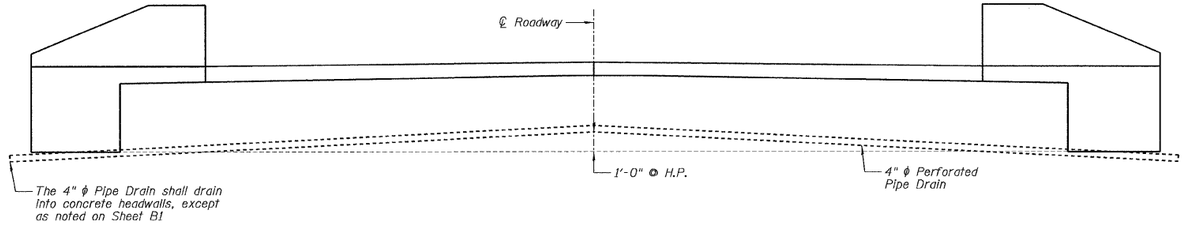
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION THRU WEST ABUTMENT
(Similar for East Abutment)

NOTES:

1.) Horizontal dimensions @ Rt. L's to Abutment.
2.) *Included in the cost of Pipe Underdrains for Structures.
3.) 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)



ABUTMENT ELEVATION, TYPICAL DRAIN DETAIL

GENERAL DATA
STRUCTURE NO. 053-0150

SHEET NO. B2	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	18
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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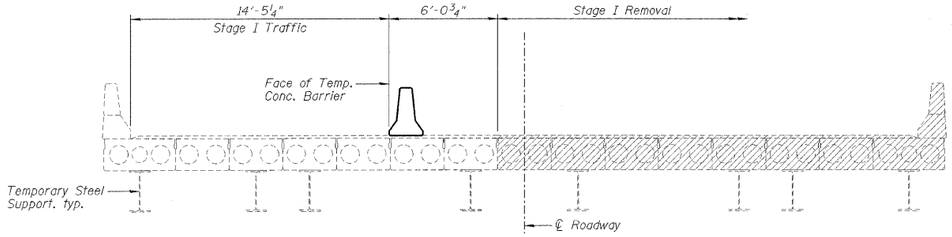
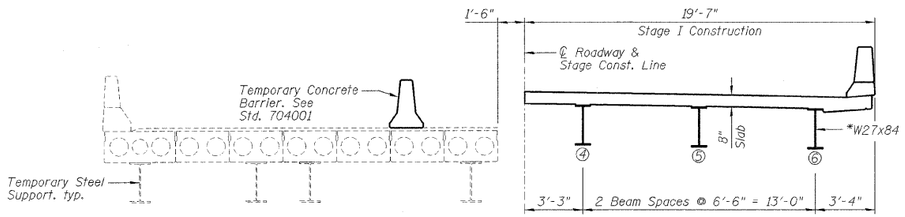
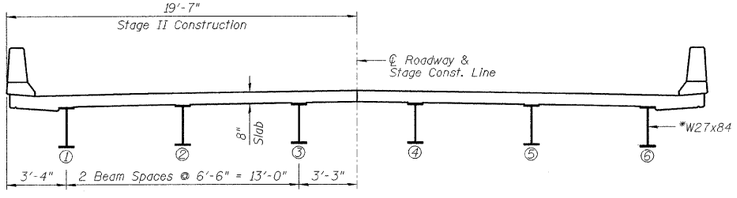


STAGE I REMOVAL
(Looking East @ ℄ of Bridge)

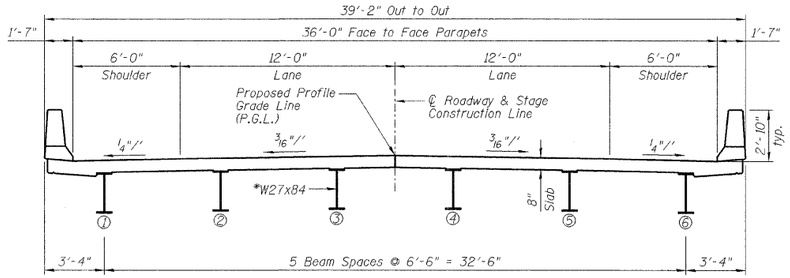


STAGE I CONSTRUCTION
(Looking East @ ℄ of Bridge)

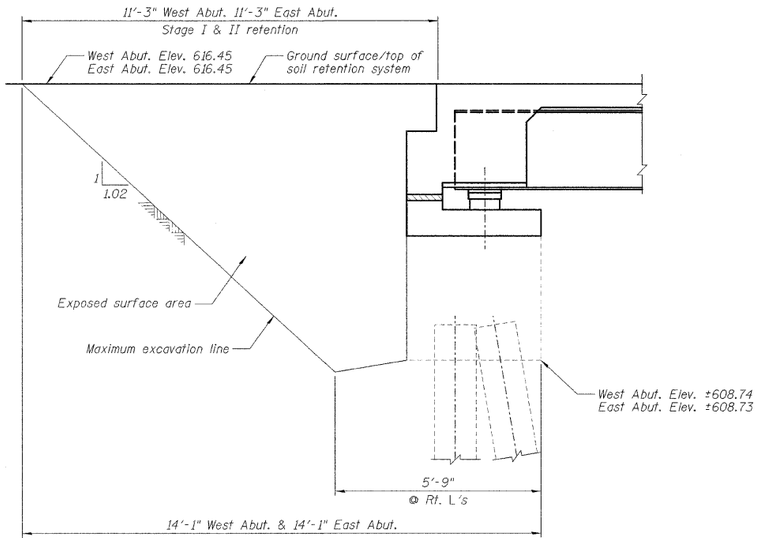
STAGE II REMOVAL
(Looking East @ ℄ of Bridge)



STAGE II CONSTRUCTION
(Looking East @ ℄ of Bridge)



CROSS SECTION
(Looking East @ ℄ of Bridge)



TEMPORARY SOIL RETENTION SYSTEM

NOTES:

1.) A cantilever sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.
2.) All dimensions are along roadway unless otherwise noted.

BILL OF MATERIAL

Item	Unit	Total
Temporary Soil Retention System	Sq. Ft.	98

NOTES:

1.) *Composite in positive moment region only.
2.) Hatched area indicates Removal of Existing PPC Deck Beam Superstructure. Removal of the existing bituminous wearing surface shall be included with Removal of Existing Structures.
3.) See Sheet B4 for Temporary Concrete Barrier (Standard 704001). See roadway plans for quantity.

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

STAGE CONSTRUCTION
STRUCTURE NO. 053-0150

SHEET NO. B3	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	19
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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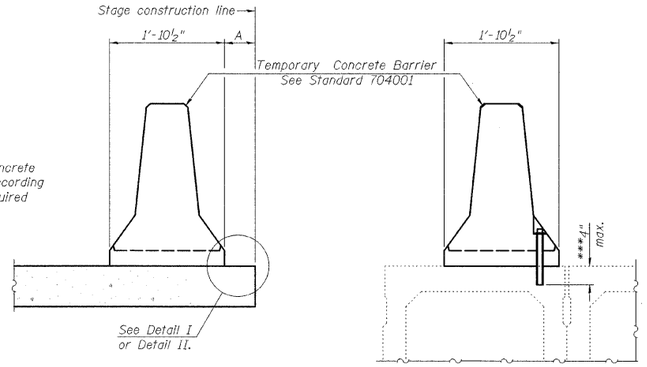
DEPARTMENT OF TRANSPORTATION

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



NEW SLAB

EXISTING DECK BEAM

SECTIONS THRU SLAB OR DECK BEAM

NOTES

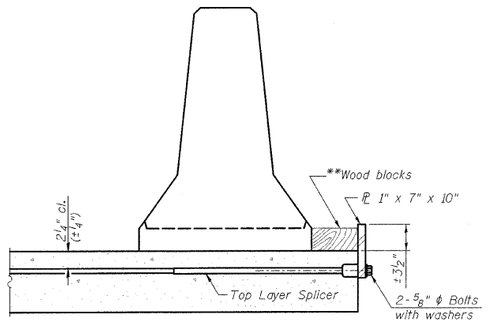
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x 10" steel PL to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

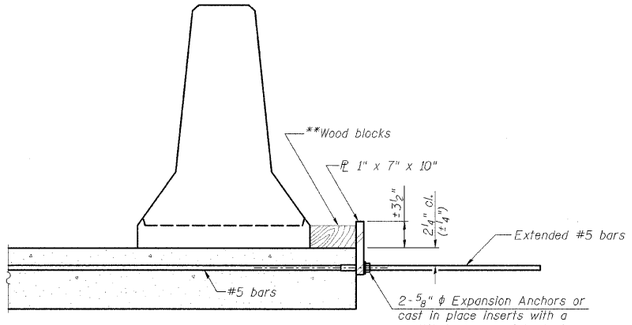
Cost of anchorage is included with Temporary Concrete Barrier.

The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

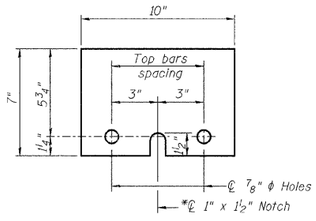
***If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



DETAIL I



DETAIL II



STEEL RETAINER PL 1" x 7" x 10"

* Required only with Detail II

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

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

R-27

10-1-08

SHEET NO. B4	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	20
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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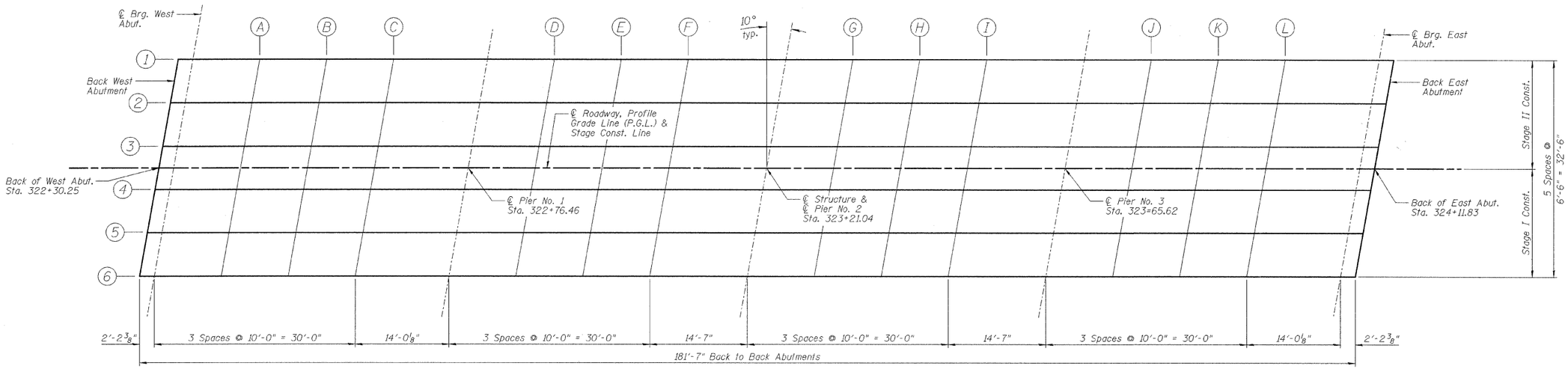
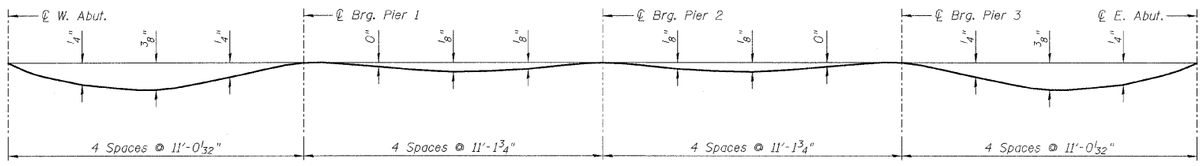


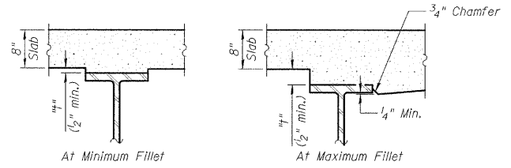
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:
The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection".



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 the plans. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on the plans, minus slab thickness, equals the fillet heights "f" above top flange of beams.

FILLET HEIGHTS

TOP OF SLAB
ELEVATION LOCATIONS
STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B5	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	21
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevation Adjusted for Dead Load Deflection
Bk. of West Abut.	322+33.12	-16.25	616.20	616.20
℄ Brg. West Abut.	322+35.31	-16.25	616.21	616.21
A	322+45.31	-16.25	616.26	616.29
B	322+55.31	-16.25	616.31	616.34
C	322+65.31	-16.25	616.35	616.38
℄ Brg. Pier 1	322+79.32	-16.25	616.40	616.40
D	322+89.32	-16.25	616.43	616.43
E	322+99.32	-16.25	616.45	616.46
F	323+09.32	-16.25	616.46	616.46
℄ Brg. Pier 2	323+23.91	-16.25	616.46	616.46
G	323+33.91	-16.25	616.46	616.46
H	323+43.91	-16.25	616.44	616.45
I	323+53.91	-16.25	616.42	616.43
℄ Brg. Pier 3	323+68.49	-16.25	616.38	616.38
J	323+78.49	-16.25	616.35	616.36
K	323+88.49	-16.25	616.30	616.33
L	323+98.49	-16.25	616.25	616.28
℄ Brg. East Abut.	324+12.50	-16.25	616.17	616.17
Bk. of East Abut.	324+14.70	-16.25	616.16	616.16

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevation Adjusted for Dead Load Deflection
Bk. of West Abut.	322+31.97	-9.75	616.31	616.31
℄ Brg. West Abut.	322+34.17	-9.75	616.33	616.33
A	322+44.17	-9.75	616.38	616.40
B	322+54.17	-9.75	616.43	616.46
C	322+64.17	-9.75	616.47	616.50
℄ Brg. Pier 1	322+78.18	-9.75	616.52	616.52
D	322+88.18	-9.75	616.55	616.55
E	322+98.18	-9.75	616.57	616.58
F	323+08.18	-9.75	616.58	616.59
℄ Brg. Pier 2	323+22.76	-9.75	616.59	616.59
G	323+32.76	-9.75	616.58	616.59
H	323+42.76	-9.75	616.57	616.58
I	323+52.76	-9.75	616.55	616.56
℄ Brg. Pier 3	323+67.34	-9.75	616.51	616.51
J	323+77.34	-9.75	616.48	616.49
K	323+87.34	-9.75	616.43	616.46
L	323+97.34	-9.75	616.38	616.41
℄ Brg. East Abut.	324+11.35	-9.75	616.30	616.30
Bk. of East Abut.	324+13.55	-9.75	616.29	616.29

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevation Adjusted for Dead Load Deflection
Bk. of West Abut.	322+30.82	-3.25	616.41	616.41
℄ Brg. West Abut.	322+33.02	-3.25	616.42	616.42
A	322+43.02	-3.25	616.48	616.50
B	322+53.02	-3.25	616.53	616.56
C	322+63.02	-3.25	616.57	616.59
℄ Brg. Pier 1	322+77.03	-3.25	616.62	616.62
D	322+87.03	-3.25	616.65	616.65
E	322+97.03	-3.25	616.67	616.68
F	323+07.03	-3.25	616.68	616.69
℄ Brg. Pier 2	323+21.61	-3.25	616.69	616.69
G	323+31.61	-3.25	616.68	616.69
H	323+41.61	-3.25	616.67	616.68
I	323+51.61	-3.25	616.65	616.66
℄ Brg. Pier 3	323+66.20	-3.25	616.62	616.62
J	323+76.20	-3.25	616.58	616.60
K	323+86.20	-3.25	616.54	616.57
L	323+96.20	-3.25	616.49	616.52
℄ Brg. East Abut.	324+10.21	-3.25	616.41	616.41
Bk. of East Abut.	324+12.41	-3.25	616.40	616.40

℄ ROADWAY, PROFILE GRADE LINE (P.G.L.) & STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevation Adjusted for Dead Load Deflection
Bk. of West Abut.	322+30.25	0.00	616.45	616.45
℄ Brg. West Abut.	322+32.45	0.00	616.47	616.47
A	322+42.45	0.00	616.53	616.55
B	322+52.45	0.00	616.58	616.61
C	322+62.45	0.00	616.62	616.64
℄ Brg. Pier 1	322+76.46	0.00	616.67	616.67
D	322+86.45	0.00	616.70	616.70
E	322+96.46	0.00	616.72	616.73
F	323+06.46	0.00	616.73	616.74
℄ Brg. Pier 2	323+21.04	0.00	616.74	616.74
G	323+31.04	0.00	616.73	616.74
H	323+41.04	0.00	616.72	616.73
I	323+51.04	0.00	616.71	616.71
℄ Brg. Pier 3	323+65.62	0.00	616.67	616.67
J	323+75.62	0.00	616.63	616.65
K	323+85.62	0.00	616.59	616.62
L	323+95.62	0.00	616.55	616.57
℄ Brg. East Abut.	324+09.63	0.00	616.47	616.47
Bk. of East Abut.	324+11.83	0.00	616.45	616.45

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

TOP OF SLAB ELEVATIONS STRUCTURE NO. 053-0150

SHEET NO. 86	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	22
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevation Adjusted for Dead Load Deflection
Bk. of West Abut.	322+29.68	3.25	616.40	616.40
℄ Brg. West Abut.	322+31.88	3.25	616.41	616.41
A	322+41.88	3.25	616.47	616.49
B	322+51.88	3.25	616.52	616.55
C	322+61.88	3.25	616.57	616.59
℄ Brg. Pier 1	322+75.89	3.25	616.62	616.62
D	322+85.89	3.25	616.64	616.65
E	322+95.89	3.25	616.67	616.68
F	322+05.89	3.25	616.68	616.69
℄ Brg. Pier 2	323+20.47	3.25	616.69	616.69
G	323+30.47	3.25	616.68	616.69
H	323+40.47	3.25	616.67	616.68
I	323+50.47	3.25	616.66	616.66
℄ Brg. Pier 3	323+65.05	3.25	616.62	616.62
J	323+75.05	3.25	616.59	616.60
K	323+85.05	3.25	616.55	616.57
L	323+95.05	3.25	616.50	616.53
℄ Brg. East Abut.	324+09.06	3.25	616.42	616.42
Bk. of East Abut.	324+11.26	3.25	616.41	616.41

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevation Adjusted for Dead Load Deflection
Bk. of West Abut.	322+28.53	9.75	616.29	616.29
℄ Brg. West Abut.	322+30.73	9.75	616.30	616.30
A	322+40.73	9.75	616.36	616.39
B	322+50.73	9.75	616.42	616.45
C	322+60.73	9.75	616.46	616.48
℄ Brg. Pier 1	322+74.74	9.75	616.51	616.51
D	322+84.74	9.75	616.54	616.54
E	322+94.74	9.75	616.56	616.57
F	323+04.74	9.75	616.58	616.58
℄ Brg. Pier 2	323+19.32	9.75	616.59	616.59
G	323+29.32	9.75	616.58	616.59
H	323+39.32	9.75	616.57	616.58
I	323+49.32	9.75	616.56	616.56
℄ Brg. Pier 3	323+63.91	9.75	616.52	616.52
J	323+73.91	9.75	616.49	616.50
K	323+83.91	9.75	616.45	616.48
L	323+93.91	9.75	616.40	616.43
℄ Brg. East Abut.	324+07.92	9.75	616.33	616.33
Bk. of East Abut.	324+10.11	9.75	616.31	616.31

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevation Adjusted for Dead Load Deflection
Bk. of West Abut.	322+27.39	16.25	616.16	616.16
℄ Brg. West Abut.	322+29.58	16.25	616.17	616.17
A	322+39.58	16.25	616.23	616.26
B	322+49.58	16.25	616.29	616.32
C	322+59.58	16.25	616.33	616.35
℄ Brg. Pier 1	322+73.59	16.25	616.38	616.38
D	322+83.59	16.25	616.41	616.42
E	322+93.59	16.25	616.44	616.45
F	323+03.59	16.25	616.45	616.46
℄ Brg. Pier 2	323+18.18	16.25	616.46	616.46
G	323+28.18	16.25	616.46	616.47
H	323+38.18	16.25	616.45	616.46
I	323+48.18	16.25	616.44	616.44
℄ Brg. Pier 3	323+62.76	16.25	616.40	616.40
J	323+72.76	16.25	616.37	616.38
K	323+82.76	16.25	616.33	616.36
L	323+92.76	16.25	616.28	616.31
℄ Brg. East Abut.	324+06.77	16.25	616.21	616.21
Bk. of East Abut.	324+08.97	16.25	616.20	616.20

TOP OF SLAB ELEVATIONS
STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B7	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	23
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FARNSWORTH GROUP, INC. CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH CURB LINE/NORTH FACE OF PARAPET

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	322+04.35	-18.42	615.95
A	322+14.35	-18.42	616.03
B	322+24.27	-18.00	616.10
West End of Deck	322+34.27	-18.00	616.17

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	322+03.22	-12.00	616.07
A	322+13.22	-12.00	616.15
B	322+23.22	-12.00	616.22
West End of Deck	322+33.22	-12.00	616.28

℄ ROADWAY, STAGE CONSTRUCTION LINE & PROFILE GRADE LINE

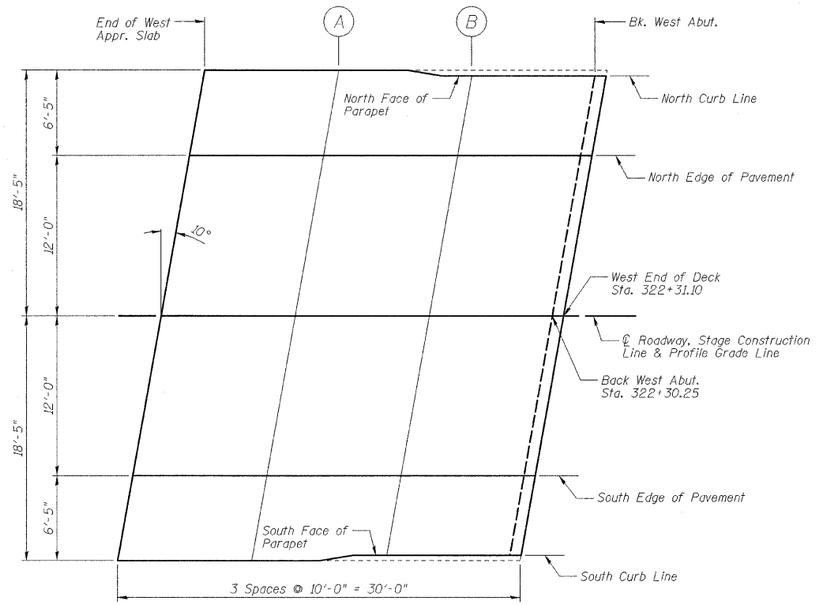
Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	322+01.10	0.00	616.24
A	322+11.10	0.00	616.32
B	322+21.10	0.00	616.39
West End of Deck	322+31.10	0.00	616.46

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	321+98.98	12.00	616.04
A	322+08.98	12.00	616.12
B	322+18.98	12.00	616.19
West End of Deck	322+28.98	12.00	616.26

SOUTH CURB LINE/SOUTH FACE OF PARAPET

Location	Station	Offset	Theoretical Grade Elevations
End West Appr. Slab	321+97.85	18.42	615.89
A	322+07.85	18.42	615.98
B	322+17.93	18.00	616.06
West End of Deck	322+27.93	18.00	616.13



WEST APPROACH SLAB PLAN

N

TOP OF WEST APPROACH SLAB ELEVATIONS STRUCTURE NO. 053-0150

SHEET NO. 88	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	24
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

FARNSWORTH GROUP, INC. CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-8168

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NORTH CURB LINE/NORTH FACE OF PARAPET

Location	Station	Offset	Theoretical Grade Elevations
East End of Deck	324+14.15	-18.00	616.13
A	324+24.15	-18.00	616.06
B	324+34.23	-18.42	615.98
End East Appr. Slab	324+44.23	-18.42	615.89

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
East End of Deck	324+13.10	-12.00	616.26
A	324+23.10	-12.00	616.19
B	324+33.10	-12.00	616.12
End East Appr. Slab	324+43.10	-12.00	616.04

℄ ROADWAY, STAGE CONSTRUCTION LINE & PROFILE GRADE LINE

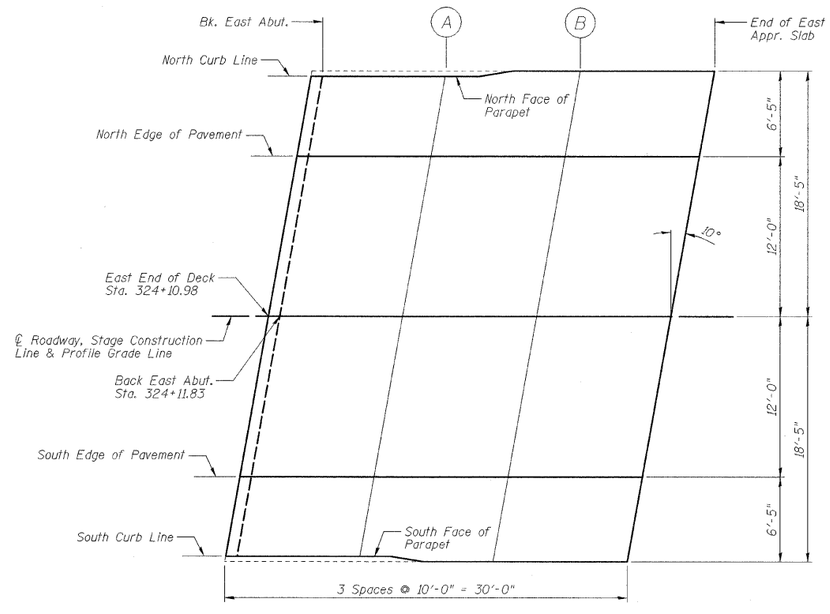
Location	Station	Offset	Theoretical Grade Elevations
East End of Deck	324+10.98	0.00	616.46
A	324+20.98	0.00	616.39
B	324+30.98	0.00	616.32
End East Appr. Slab	324+40.98	0.00	616.24

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
East End of Deck	324+08.86	12.00	616.28
A	324+18.86	12.00	616.22
B	324+28.86	12.00	616.15
End East Appr. Slab	324+38.86	12.00	616.07

SOUTH CURB LINE/SOUTH FACE OF PARAPET

Location	Station	Offset	Theoretical Grade Elevations
East End of Deck	324+07.81	18.00	616.17
A	324+17.81	18.00	616.10
B	324+27.73	18.42	616.02
End East Appr. Slab	324+37.73	18.42	615.95



EAST APPROACH SLAB PLAN

N

TOP OF EAST APPROACH SLAB ELEVATIONS STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. 89	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	25
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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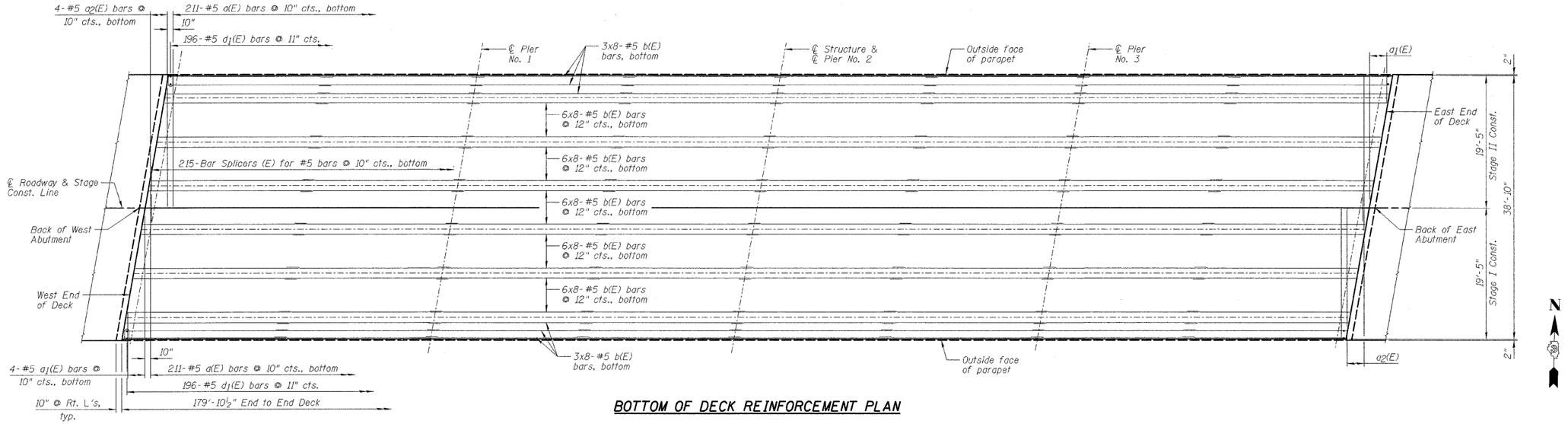
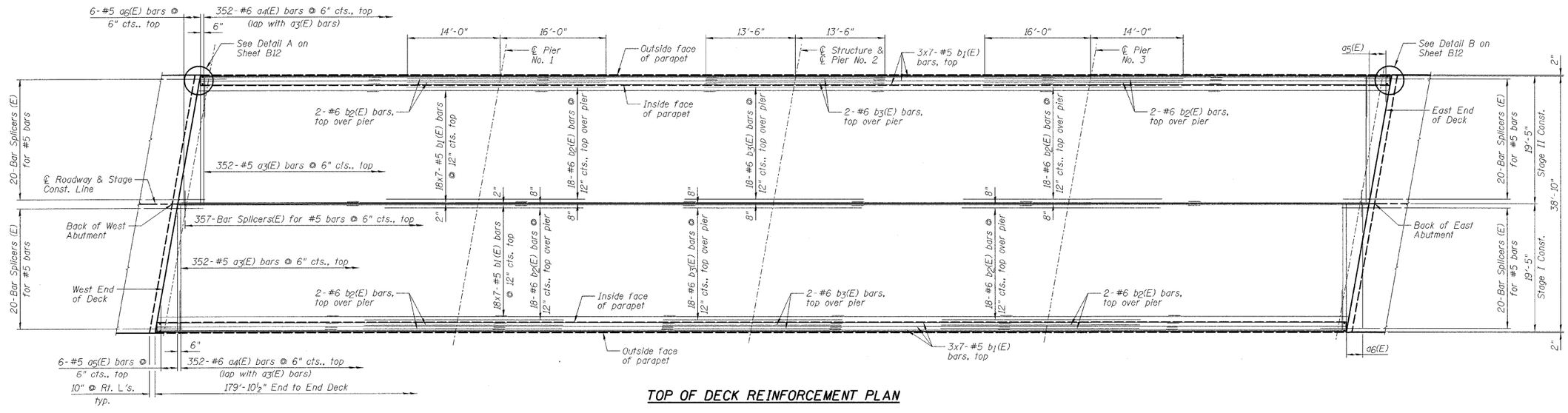
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BOTTOM OF DECK REINFORCEMENT PLAN



TOP OF DECK REINFORCEMENT PLAN

BAR LAP	
#5	1'-8"

NOTES:

1.) See Sheet B11 for Deck Cross Section.
2.) See Sheet B12 for Superstructure Details and Bill of Material.
3.) Order $a_1(E)$, $a_2(E)$, $a_5(E)$ and $a_6(E)$ bars full length. Cut according to Bar Cutting Diagram on Sheet B12. Use remainder of bars on opposite corner of deck.
4.) Bars indicated thus 6x8-#5 etc. Indicates 6 lines of bars with 8 lengths per line.
5.) See Sheet B33 for Bar Splicer Details.

SUPERSTRUCTURE DECK
STRUCTURE NO. 053-0150

SHEET NO. B10	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	26
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

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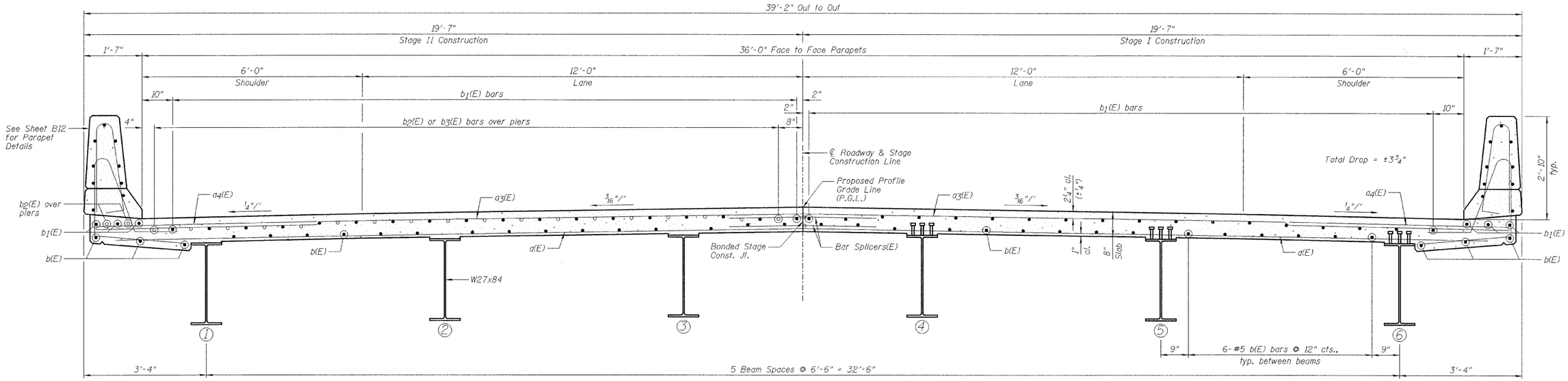
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



NEAR PIER

NEAR MIDSPAN

CROSS SECTION

(Looking East @ ℄ of Bridge)

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

NOTES:

1.) See Sheet B12 for Superstructure Details and Bill of Material.
2.) See Sheet B33 for Bar Splicer Details.

SUPERSTRUCTURE CROSS SECTION
STRUCTURE NO. 053-0150

SHEET NO. B11	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	27
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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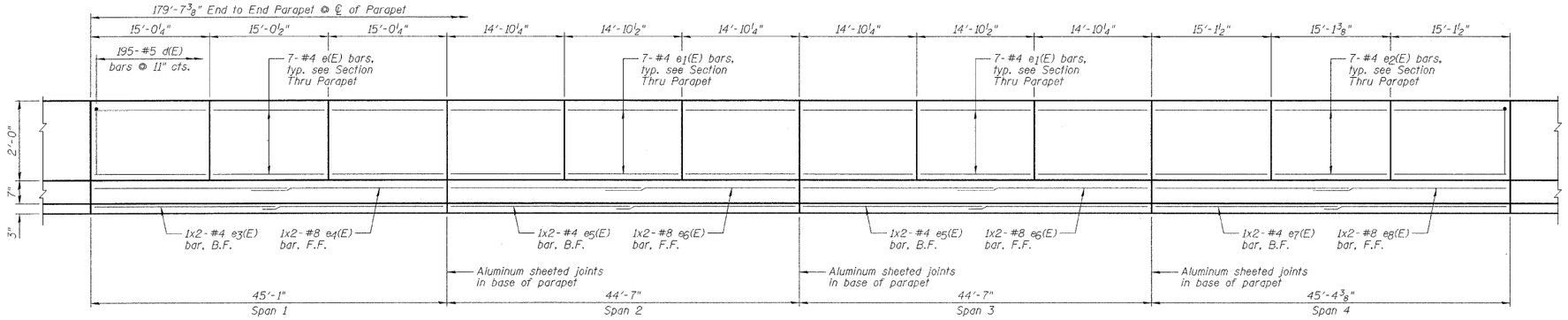
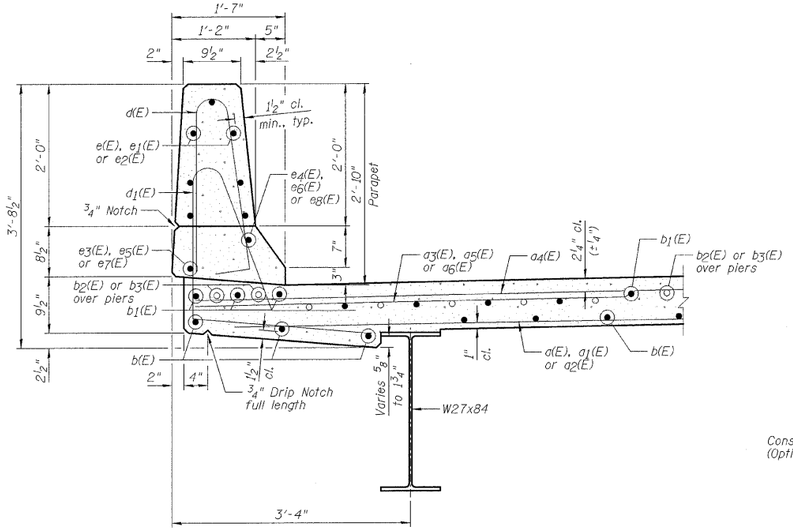
24-8168

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

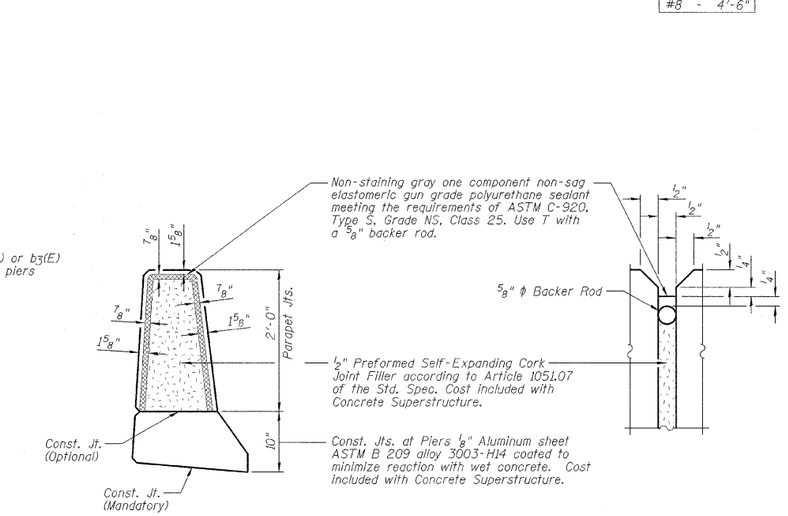


INSIDE ELEVATION OF PARAPET

BAR LAP	
#4	1'-8"
#8	4'-6"

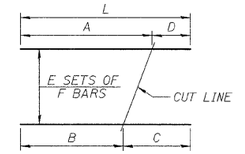


SECTION THRU PARAPET



PARAPET JOINT DETAILS

BAR CUTTING DIAGRAM

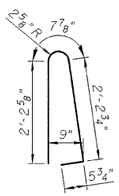


BAR	A	B	C	D	E	F	L
a1(E)	18'-0"	3'-9"	18'-0"	3'-9"	1	4	21'-9"
a2(E)	17'-6"	3'-3"	17'-6"	3'-3"	1	4	20'-9"
a5(E)	18'-0"	3'-10"	18'-0"	3'-10"	1	6	21'-10"
a6(E)	18'-5"	4'-3"	18'-5"	4'-3"	1	6	22'-8"

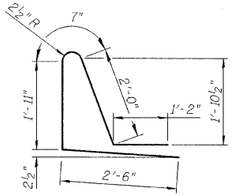
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
d(E)	422	#5	19'-1"	
a1(E)	4	#5	21'-9"	
a2(E)	4	#5	20'-9"	
a3(E)	704	#5	19'-1"	
a4(E)	704	#6	6'-0"	
a5(E)	6	#5	21'-10"	
a6(E)	6	#5	22'-8"	
b(E)	288	#5	23'-11"	
b1(E)	294	#5	27'-1"	
b2(E)	80	#6	30'-0"	
b3(E)	40	#6	27'-0"	
d(E)	390	#5	5'-7"	
d1(E)	392	#5	8'-2"	
e(E)	42	#4	14'-8"	
e1(E)	84	#4	14'-6"	
e2(E)	42	#4	14'-9"	
e3(E)	4	#4	23'-3"	
e4(E)	4	#8	24'-8"	
e5(E)	8	#4	23'-0"	
e6(E)	8	#8	24'-5"	
e7(E)	4	#4	23'-4"	
e8(E)	4	#8	24'-9"	
m20(E)	32	#6	19'-5"	
m21(E)	16	#6	6'-3"	
m22(E)	16	#6	2'-11"	
m23(E)	24	#6	8'-4"	
s20(E)	72	#5	8'-0"	
s21(E)	88	#5	6'-9"	
u20(E)	80	#4	2'-9"	
v20(E)	80	#4	3'-4"	

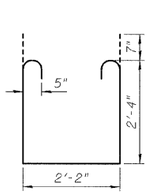
Item	Unit	Quantity
Concrete Superstructure	Cu. Yd.	242.0
Bridge Deck Grooving	Sq. Yd.	678
Protective Coat	Sq. Yd.	870
Reinforcement Bars, Epoxy Coated	Pound	61,470
Bar Splicers	Each	676



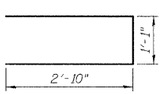
BAR d(E)



BAR d1(E)

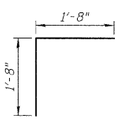


BAR s20(E)

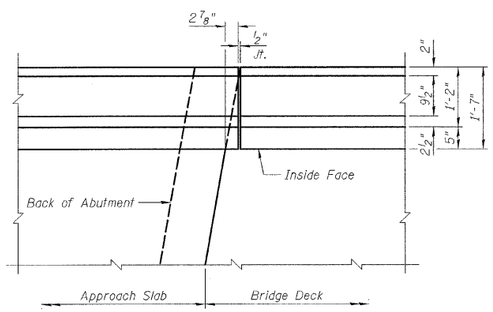


BAR s21(E)

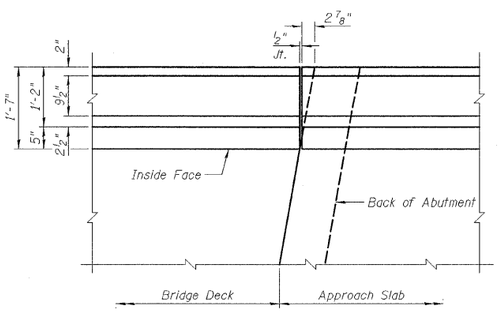
BAR u20(E)



BAR v20(E)



DETAIL A



DETAIL B

NOTES:

1.) B.F. denotes Back Face and F.F. denotes Front Face.
2.) Inside Elevation of Parapet view is exaggerated vertically to show reinforcement.
3.) Bars indicated thus 1x2-#4 etc. indicates 1 line of bars with 2 lengths per line.
4.) For location of Detail A and Detail B, see Sheet B10.

SUPERSTRUCTURE DETAILS STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B12	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	28
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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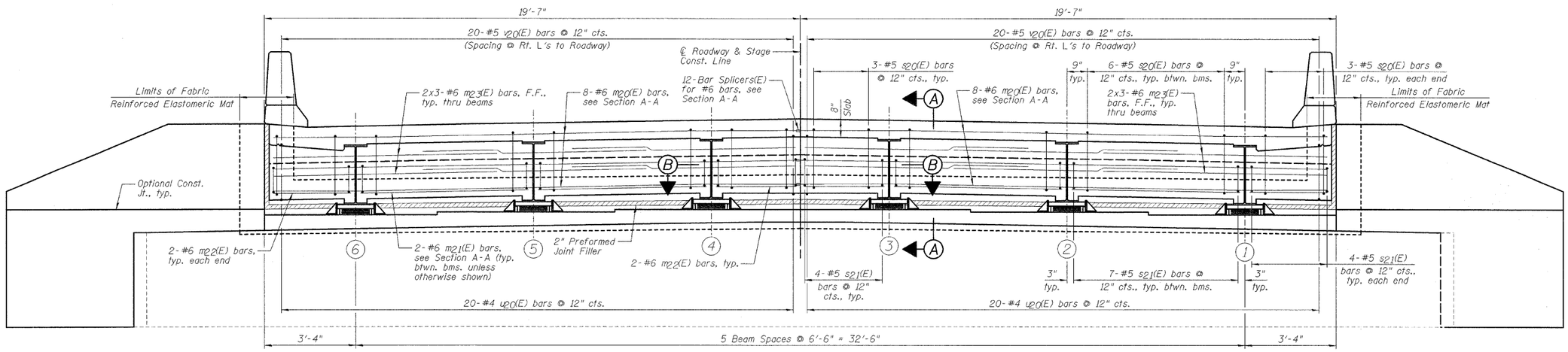
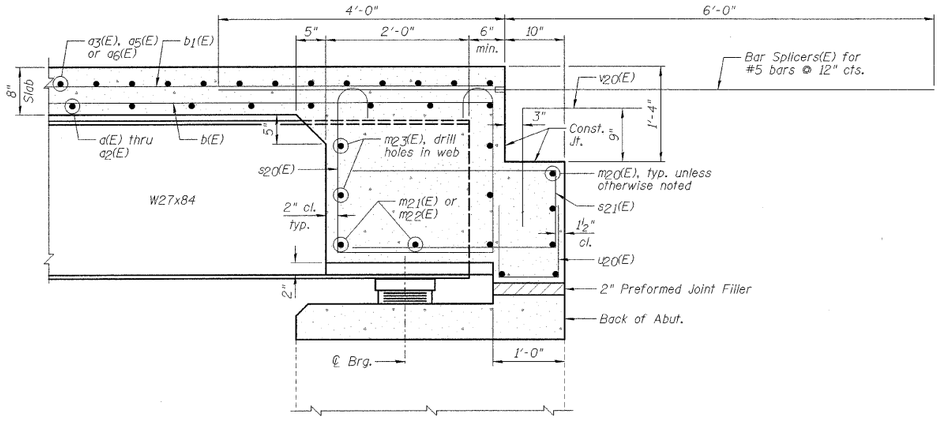
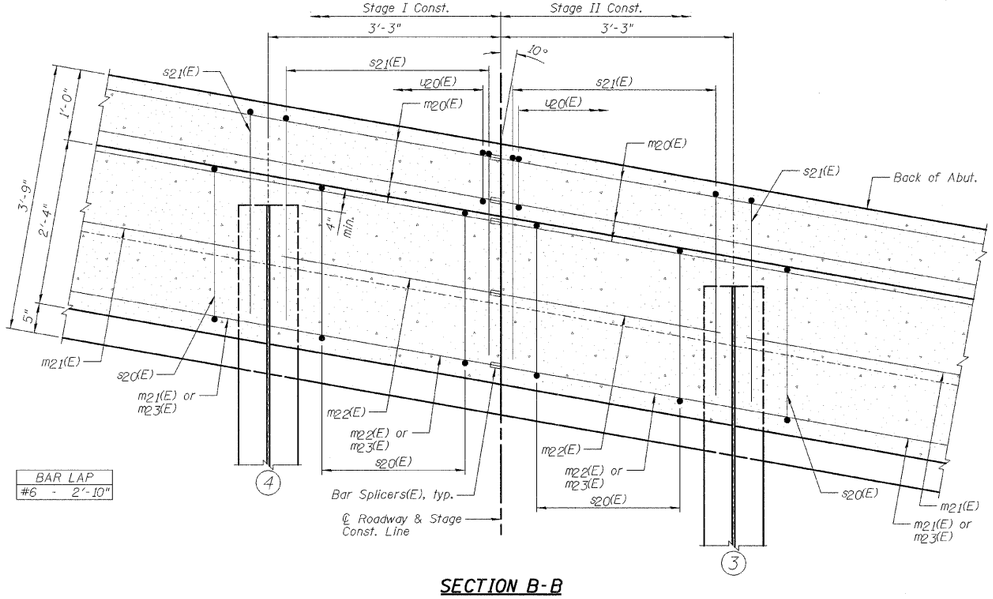
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION OF DIAPHRAGM AT WEST ABUTMENT
(Looking West)



SECTION A-A
Dimensions @ Rt. L's except as noted.



SECTION B-B

NOTES:
1.) See Sheet B12 for Superstructure Details and Bill of Material.
2.) See Sheet B19 for abutment bearing details.
3.) F.F. denotes Front Face.
4.) See Sheet B33 for Bar Splicer Details.
5.) Bars indicated thus 2x3-#6 etc. indicates 2 lines of bars with 3 lengths per line.

WEST ABUTMENT DIAPHRAGM DETAILS
STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B13	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	29
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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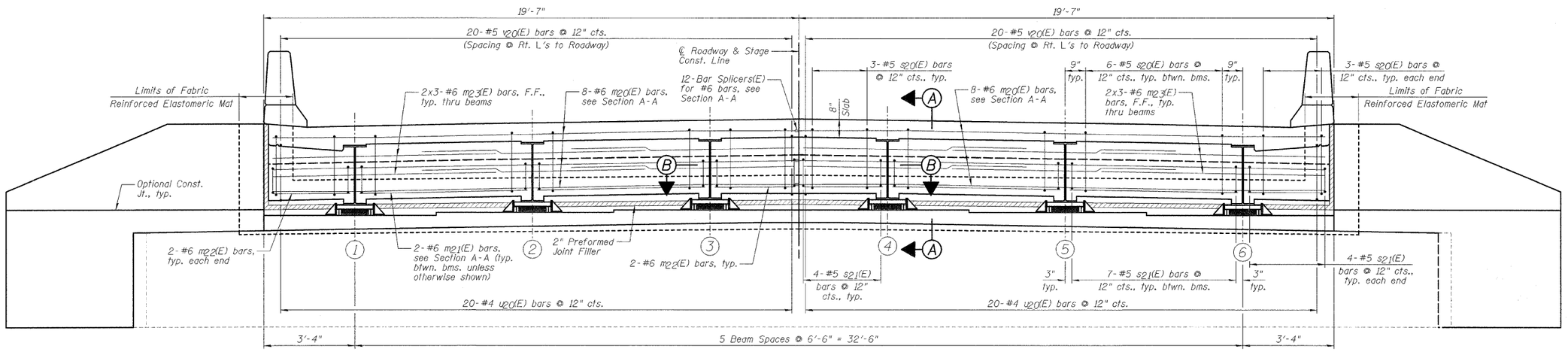
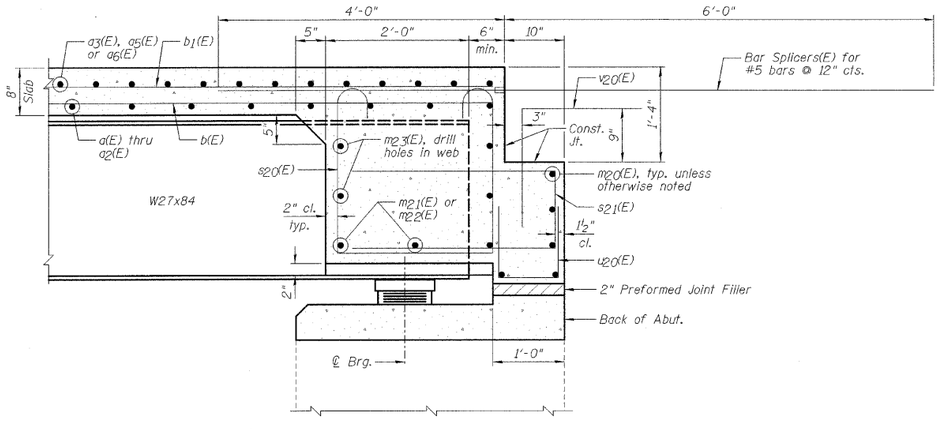
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



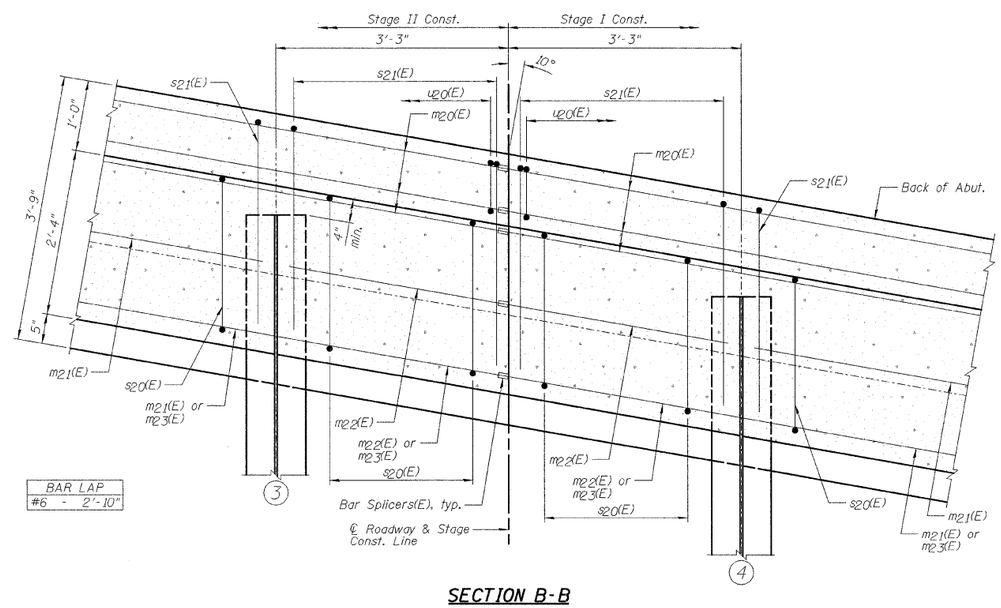
ELEVATION OF DIAPHRAGM AT EAST ABUTMENT

(Looking East)



SECTION A-A

Dimensions @ Rt. L's except as noted.



SECTION B-B

NOTES:

1.) See Sheet B12 for Superstructure Details and Bill of Material.
2.) See Sheet B19 for abutment bearing details.
3.) F.F. denotes Front Face.
4.) See Sheet B33 for Bar Splicer Details.
5.) Bars indicated thus 2x3-#6 etc. indicates 2 lines of bars with 3 lengths per line.

EAST ABUTMENT DIAPHRAGM DETAILS STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B14	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	30
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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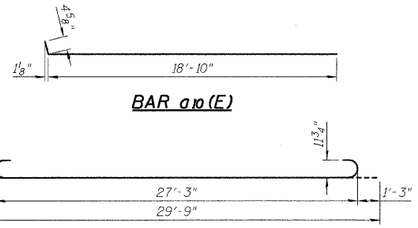
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

WEST APPROACH SLAB BILL OF MATERIAL

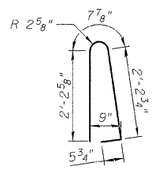
Bar	No.	Size	Length	Shape
a_{10}(E)	26	#4	19'-3"	
a_{11}(E)	48	#5	18'-10"	
a_{12}(E)	24	#4	19'-6"	
a_{13}(E)	44	#5	19'-6"	
a_{14}(E)	24	#6	6'-0"	
b_{10}(E)	90	#9	29'-9"	
b_{11}(E)	38	#4	29'-8"	
b_{12}(E)	2	#4	14'-8"	
b_{13}(E)	2	#4	14'-9"	
d_{10}(E)	34	#5	5'-7"	
d_{11}(E)	34	#5	7'-11"	
e_{10}(E)	16	#4	14'-8"	
e_{11}(E)	2	#8	14'-8"	
t_{10}(E)	76	#4	9'-10"	
w_{10}(E)	80	#5	18'-10"	

Item	Unit	Quantity
Concrete Superstructure	Cu. Yd.	58.5
Bridge Deck Grooving	Sq. Yd.	114
Protective Coat	Sq. Yd.	137
Concrete Structures	Cu. Yd.	12.1
Reinforcement Bars, Epoxy Coated	Pound	15,380

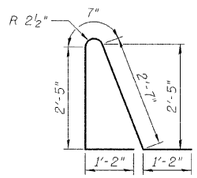


BAR a_{10}(E)

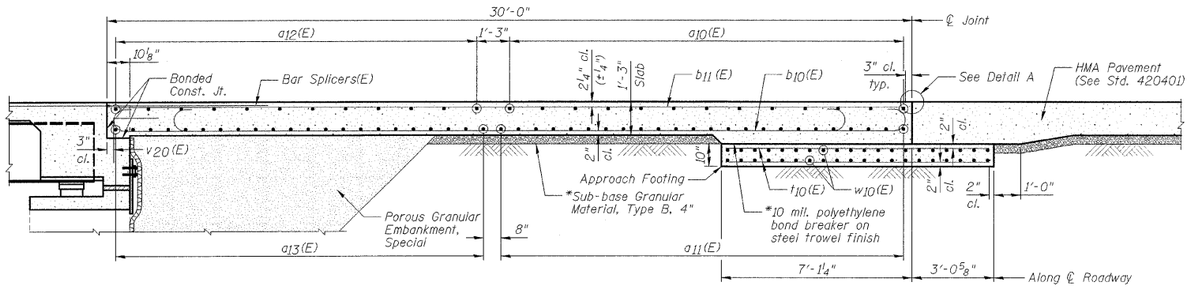
BAR b_{10}(E)



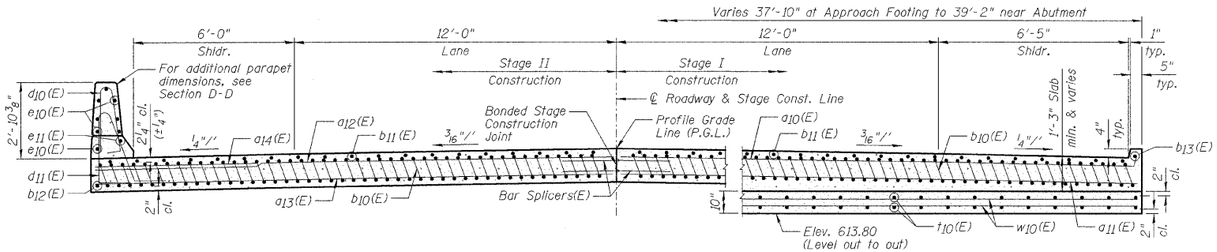
BAR d_{10}(E)



BAR d_{11}(E)



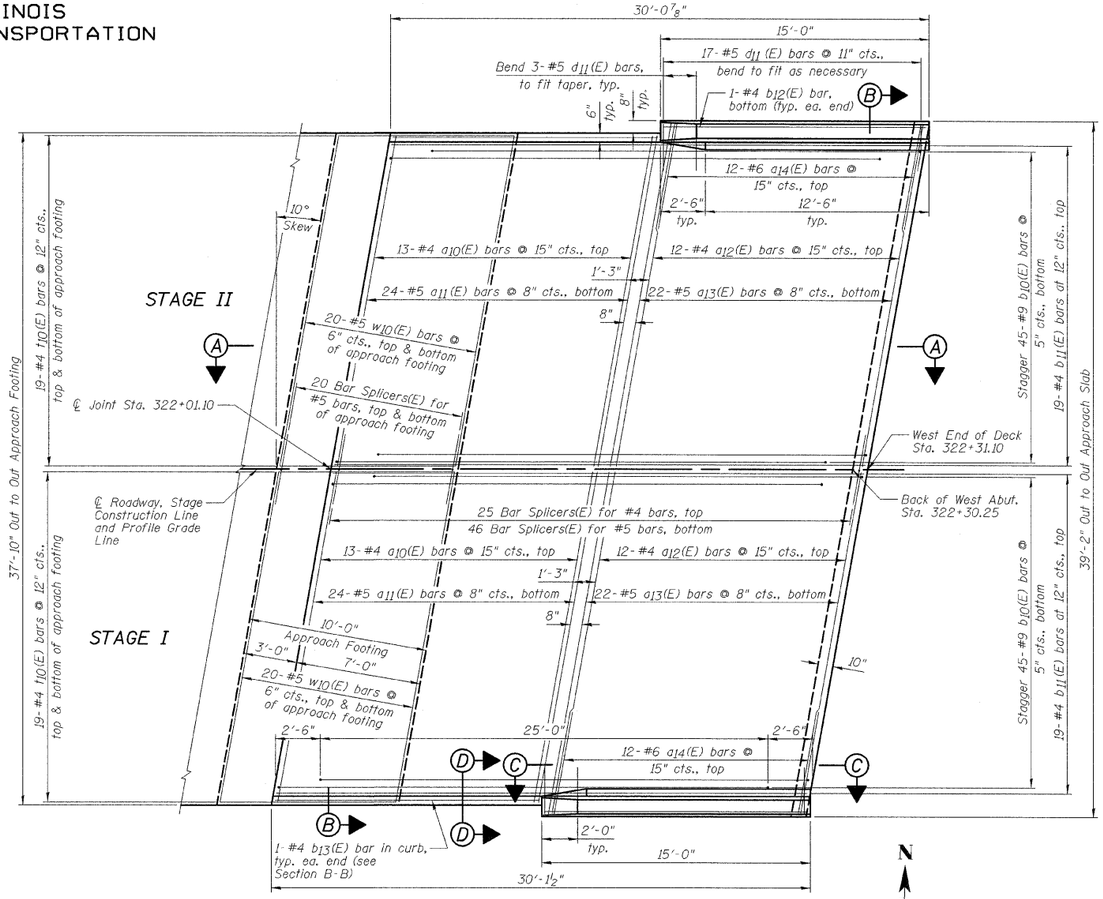
SECTION A-A



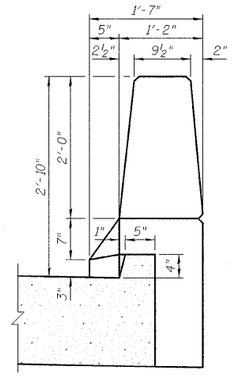
NEAR ABUTMENT

AT APPROACH FOOTING

SECTION B-B



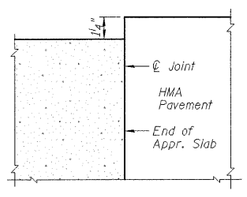
WEST APPROACH PLAN



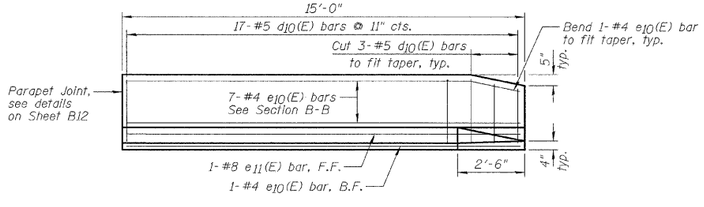
SECTION D-D

NOTES:

1.) a_{10}(E) thru a_{14}(E) bar spacings measured perpendicular to ℄ Roadway.
2.) Tilt #9 b_{10}(E) bars as required to maintain clearance.
3.) Approach Slab and parapet concrete shall be paid for as Concrete Superstructure.
4.) Approach Footing concrete shall be paid for as Concrete Structures.
5.) Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
6.) For v_{20}(E) bar details, see Sheet B13.
7.) The Approach Footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
8.) See Sheet B33 for Bar Splicer Details.
9.) Cost of excavation for Approach Footing included with Concrete Structures.
10.) For Porous Granular Embankment, Special and drainage treatment details, see Sheet B2.
11.) *Cost included with Concrete Superstructure.



DETAIL A - FLEXIBLE PAVEMENT



SECTION C-C

WEST BRIDGE APPROACH SLAB DETAILS STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B15	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	31
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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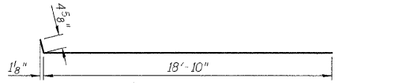
24-8168

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

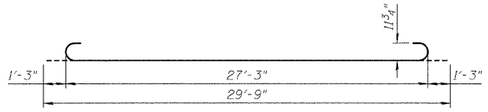
EAST APPROACH SLAB BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a_{10}(E)	26	#4	19'-3"	
a_{11}(E)	48	#5	18'-10"	
a_{12}(E)	24	#4	19'-6"	
a_{13}(E)	44	#5	19'-6"	
a_{14}(E)	24	#6	6'-0"	
b_{10}(E)	90	#9	29'-9"	
b_{11}(E)	38	#4	29'-8"	
b_{12}(E)	2	#4	14'-8"	
b_{13}(E)	2	#4	14'-9"	
d_{10}(E)	34	#5	5'-7"	
d_{11}(E)	34	#5	7'-11"	
e_{10}(E)	16	#4	14'-8"	
e_{11}(E)	2	#8	14'-8"	
t_{10}(E)	76	#4	9'-10"	
w_{10}(E)	80	#5	18'-10"	

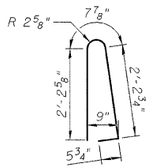
Item	Unit	Quantity
Concrete Superstructure	Cu. Yd.	58.5
Bridge Deck Grooving	Sq. Yd.	114
Protective Coat	Sq. Yd.	137
Concrete Structures	Cu. Yd.	12.1
Reinforcement Bars, Epoxy Coated	Pound	15,380



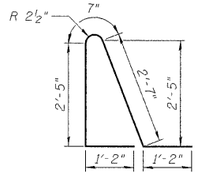
BAR a_{10}(E)



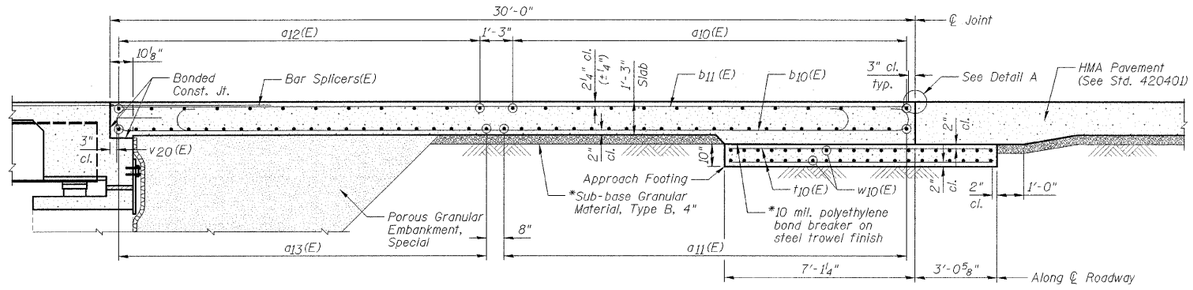
BAR b_{10}(E)



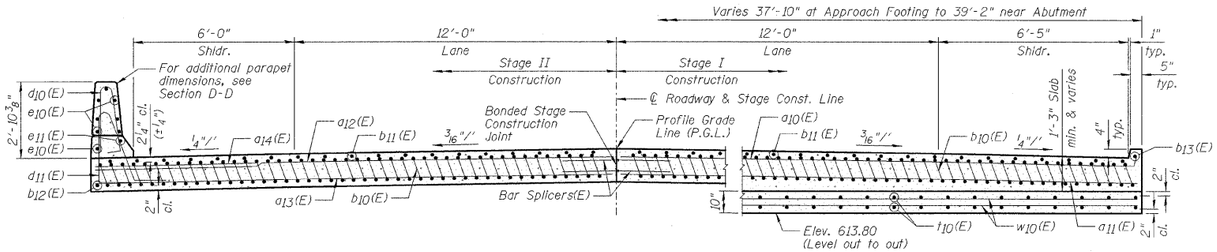
BAR d_{10}(E)



BAR d_{11}(E)



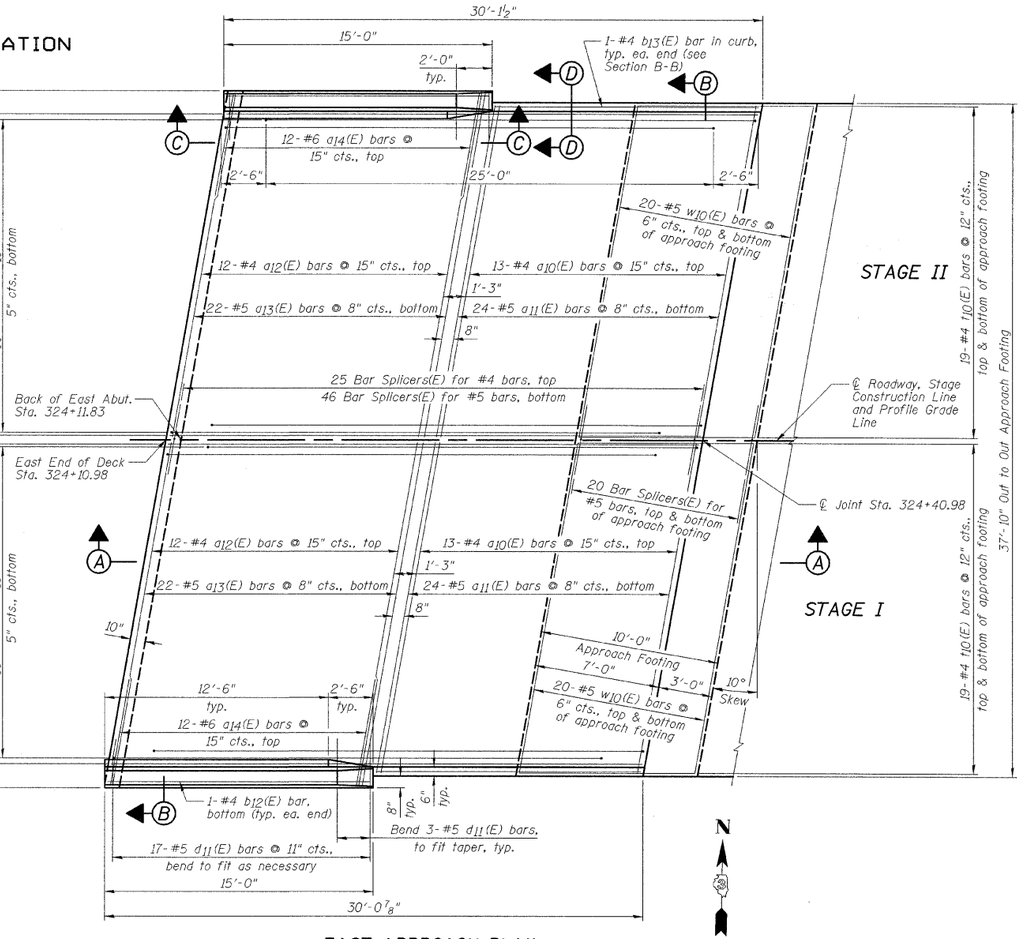
SECTION A-A



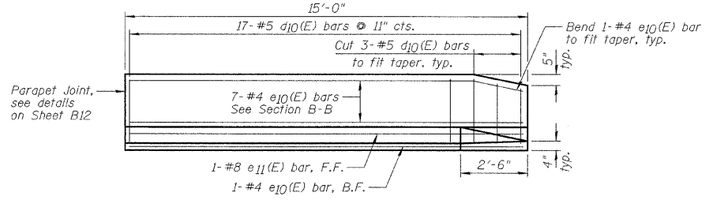
NEAR ABUTMENT

AT APPROACH FOOTING

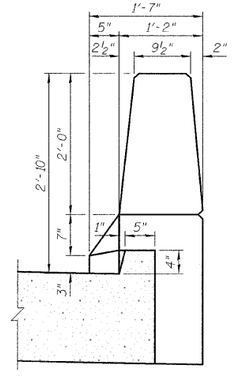
SECTION B-B



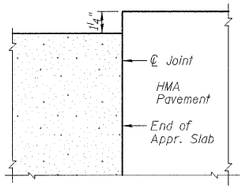
EAST APPROACH PLAN



SECTION C-C



SECTION D-D



DETAIL A - FLEXIBLE PAVEMENT

NOTES:

1.) a_{10}(E) thru a_{14}(E) bar spacings measured perpendicular to ℄ Roadway.
2.) Tilt #9 b_{10}(E) bars as required to maintain clearance.
3.) Approach Slab and parapet concrete shall be paid for as Concrete Superstructure.
4.) Approach Footing concrete shall be paid for as Concrete Structures.
5.) Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
6.) For v_{20}(E) bar details, see Sheet B14.
7.) The Approach Footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.
8.) See Sheet B33 for Bar Splicer Details.
9.) Cost of excavation for Approach Footing included with Concrete Structures.
10.) For Porous Granular Embankment, Special and drainage treatment details, see Sheet B2.
11.) *Cost included with Concrete Superstructure.

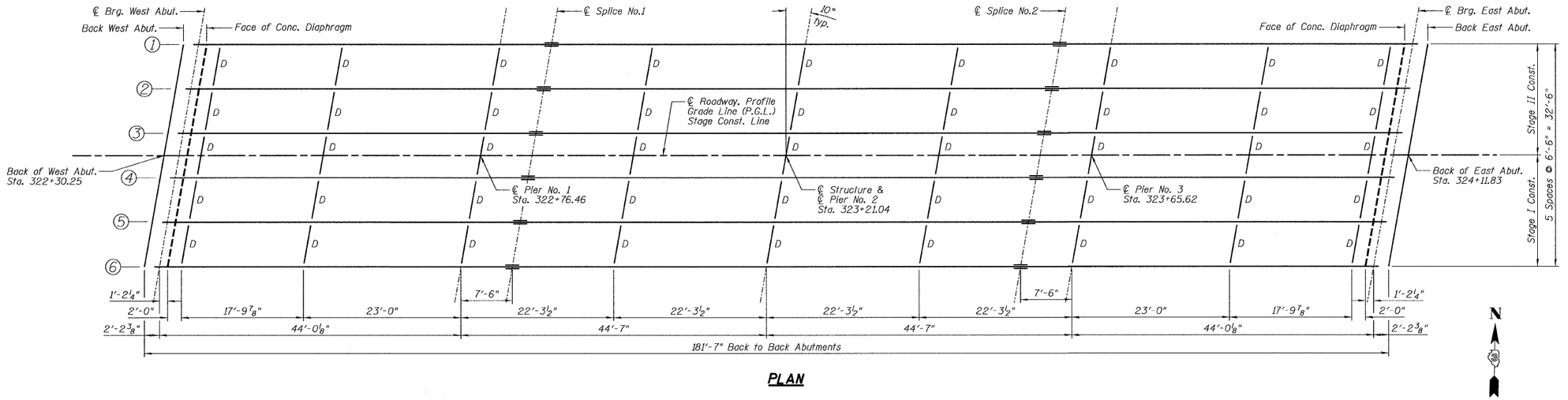
DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

EAST BRIDGE
APPROACH SLAB DETAILS
STRUCTURE NO. 053-0150

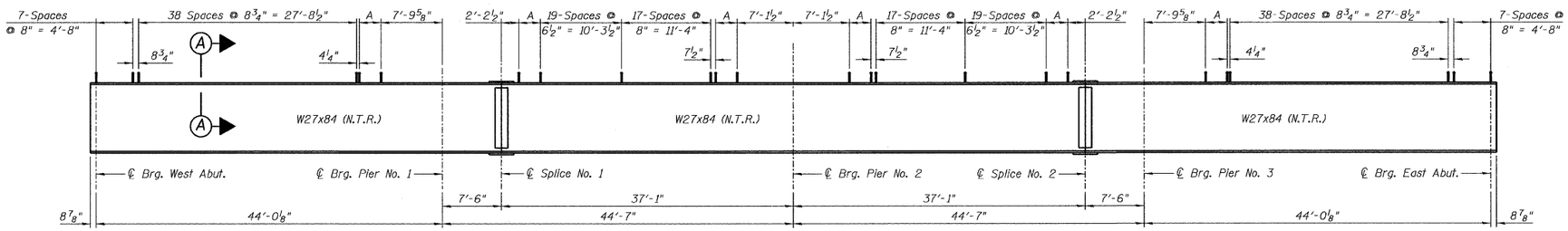
SHEET NO. B16	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	32
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FARNSWORTH GROUP, INC. CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

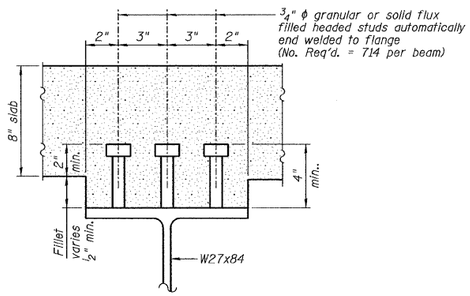


PLAN



ELEVATION

A = 11 spaces @ 3" = 2'-9"



SECTION A-A

FABRICATED TOP OF BEAM ELEVATION TABLE						
Location	Beam No. 1	Beam No. 2	Beam No. 3	Beam No. 4	Beam No. 5	Beam No. 6
℄ Brg. W. Abut.	615.50	615.62	615.71	615.70	615.59	615.46
℄ Pier No. 1	615.64	615.76	615.86	615.85	615.74	615.63
℄ Splice No. 1	615.66	615.78	615.88	615.88	615.77	615.66
℄ Pier No. 2	615.66	615.78	615.88	615.88	615.77	615.66
℄ Splice No. 2	615.65	615.77	615.88	615.88	615.78	615.66
℄ Pier No. 3	615.62	615.74	615.85	615.86	615.76	615.64
℄ Brg. E. Abut.	615.46	615.59	615.70	615.71	615.62	615.50

For fabrication use only.

NOTES:

1.) See Sheet B18 for Splice Details and Diaphragm Details.
2.) Load carrying components designated N.T.R. shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
3.) All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

STRUCTURAL STEEL
STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	33
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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24-8168

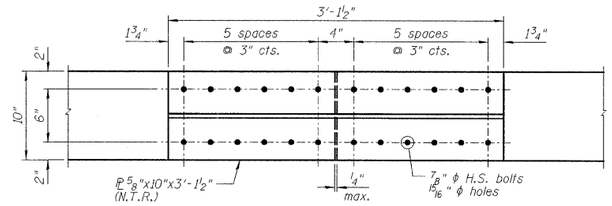
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

	INTERIOR BEAM MOMENT TABLE					
			0.4 Sp. 1 or 0.6 Sp. 4	Pier 1 or Pier 3	0.5 Sp. 2 or 0.5 Sp.3	Pier 2
	I_s	(in^4)	2850	2850	2850	2850
	$I_c(n)$	(in^4)	9051		9051	
	$I_c(3n)$	(in^4)	6798		6798	
	S_s	(in^3)	213	213	213	213
	$S_c(n)$	(in^3)	341		341	
	$S_c(3n)$	(in^3)	309		309	
	Z	(in^3)		244		244
	DC1	(k/')	0.752	0.752	0.752	0.752
	M_{DC1}	('k)	112	157	54	108
	DC2	(k/')	0.150	0.150	0.150	0.150
	M_{DC2}	('k)	25	24	16	19
	DW	(k/')	0.300	0.300	0.300	0.300
	M_{DW}	('k)	50	49	31	39
	M_{L+IM}	('k)	458	216	394	204
	M_U (Strength I)	('k)	1048	678	824	574
*	$\phi_f M_n$, $\phi_f M_{nc}$	('k)	1592	997	1634	1021
	f_s DC1	(ksi)	6.3	8.8	3.0	6.1
	f_s DC2	(ksi)	1.0	1.4	0.6	1.1
	f_s DW	(ksi)	1.9	2.8	1.2	2.2
	f_s 1.3(L+IM)	(ksi)	21.0	15.8	18.0	14.9
	f_s (Service II)	(ksi)	30.2	28.8	22.9	24.3
**	f_s (Total)(Strength I)	(ksi)				
	V_f	(k)	19.0		17.2	

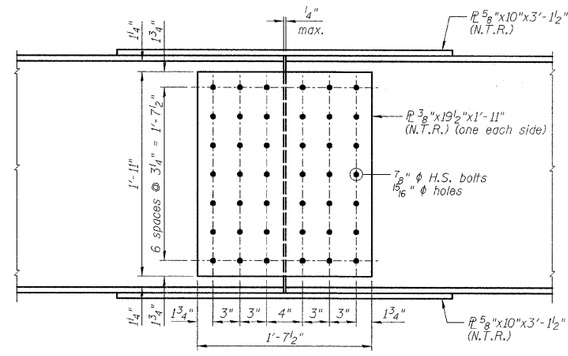
* Compact Sections
** Non-Compact and Slender Sections

INTERIOR BEAM REACTION TABLE				
		Abut.	Pier 1 or Pier 3	Pier 2
R_{DC1}	(k)	19.6	38.0	31.3
R_{DC2}	(k)	22.6	7.3	6.5
R_{DW}	(k)	5.5	14.6	12.9
R_{L+IM}	(k)	63.0	84.6	82.7
R_{Total}	(k)	110.7	144.5	133.4

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s(Total-Strength I, and Service II) due to non-composite dead loads ($in.^4$ and $in.^3$).
$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s(Total-Strength I, and Service II) due to short-term composite live loads ($in.^4$ and $in.^3$).
$I_c(3n)$, $S_c(3n)$: 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-Strength I, and Service II) due to long-term composite (superimposed) dead loads ($in.^4$ and $in.^3$).
Z: Plastic Section Modulus of the steel section in non-composite areas. Omit line in Moment Table if not used in design calculations ($in.^3$).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
M_U (Strength I): Factored design moment (kip-ft.).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$
$\phi_f M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
$\phi_f M_{nc}$: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
f_s (Service II): Sum of stresses as computed from the moments below (ksi).
$M_{DC1} + M_{DC2} + M_{DW} + 1.3\ M_{L+IM}$
f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.25\ (M_{DC1} + M_{DC2}) + 1.5\ M_{DW} + 1.75\ M_{L+IM}$
V_f: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

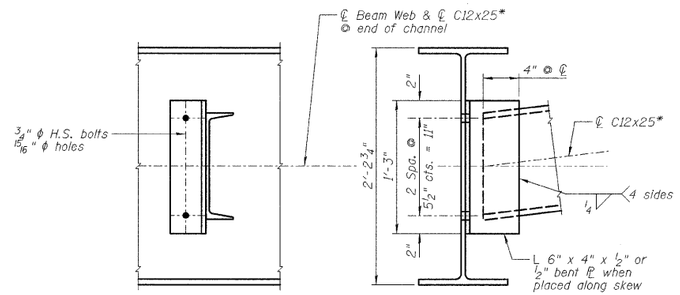


TOP AND BOTTOM FLANGE



WEB

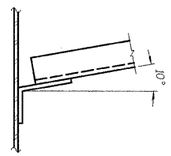
SPLICE DETAILS
(12 - Required)



DIAPHRAGM D
(45 - Required)

Note:
Two hardened washers required for each set of oversized holes.

*Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on C12x25 section. The C12x30, if utilized, shall be provided at no extra cost to the department.



ALONG SKEW
(Skew 10° or less)

NOTES:

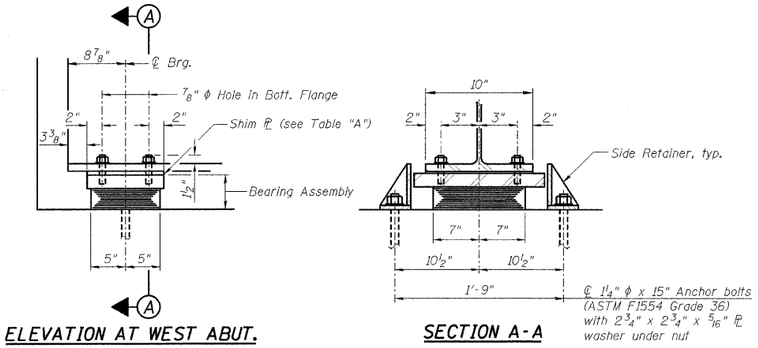
1.) See Sheet B17 for Splice and Diaphragm Locations.
2.) Load carrying components designated N.T.R. shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
3.) All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

STRUCTURAL STEEL
STRUCTURE NO. 053-0150

SHEET NO. B18	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	34
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

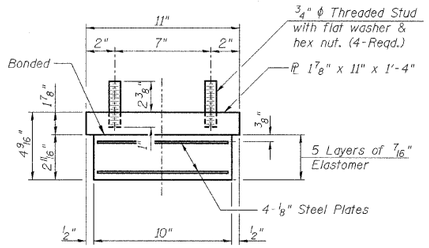


ELEVATION AT WEST ABUT.

SECTION A-A

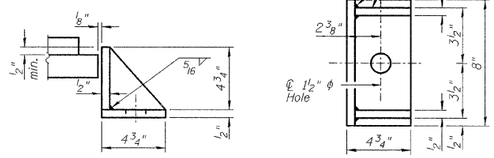
TYPE I ELASTOMERIC EXP. BRG.

(At West Abutment - 6 Required)
(At East Abutment - 6 Required)



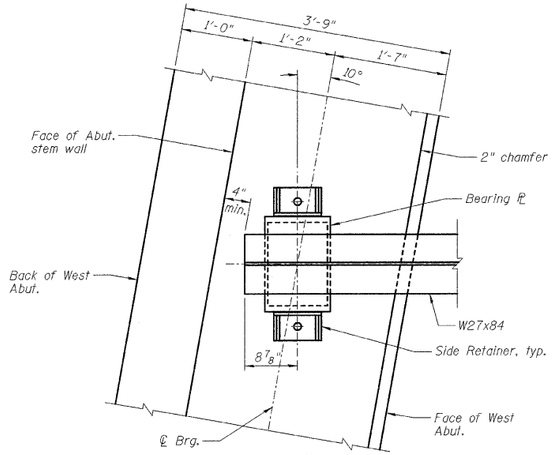
BEARING ASSEMBLY

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.



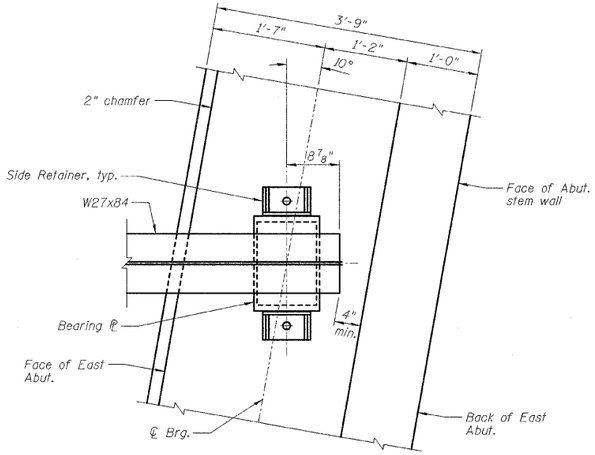
BEARING PLAN AT WEST ABUTMENT

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

Anchor bolts for side retainers may be cast in place or installed in holes drilled before or after members are in place.

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

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



BEARING PLAN AT EAST ABUTMENT

TABLE "A"

Beam No.	Shim Thickness
West Abut. - 3	1/8"
East Abut. - 4	1/8"

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	12
Anchor Bolts, 1 1/4"	Each	24

NOTES:

1.) Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
2.) The structural steel plates of the bearing assembly shall conform to the requirements of AASHTO M 270 Grade 50W.

TYPE I ELASTOMERIC BEARING DETAILS STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B19	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	35
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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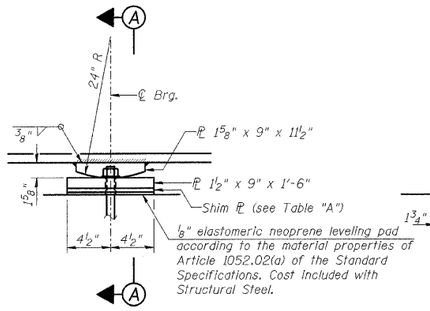
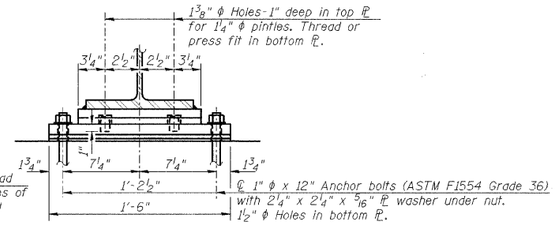
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

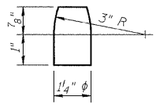


ELEVATION AT PIERS NO. 1 AND NO. 3

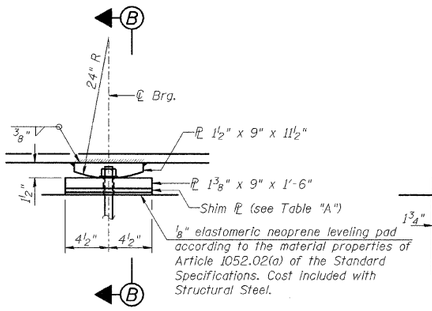


SECTION A-B

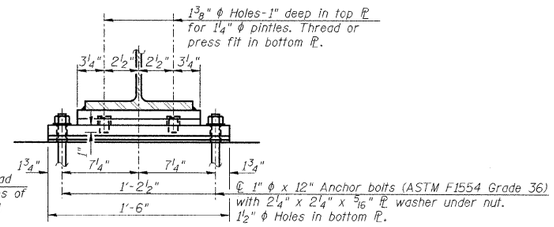
FIXED BEARING
(At Pier No. 1 - 6 Required)
(At Pier No. 3 - 6 Required)



PINTLE

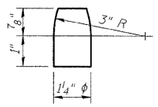


ELEVATION AT PIER NO. 2

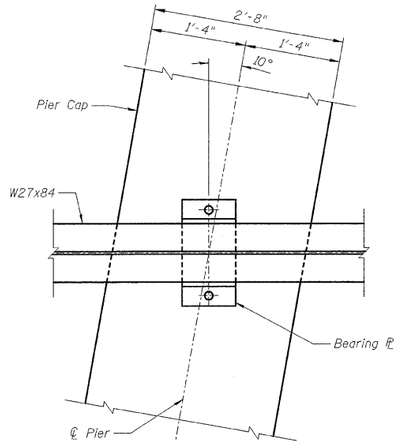


SECTION B-B

FIXED BEARING
(At Pier No. 2 - 6 Required)

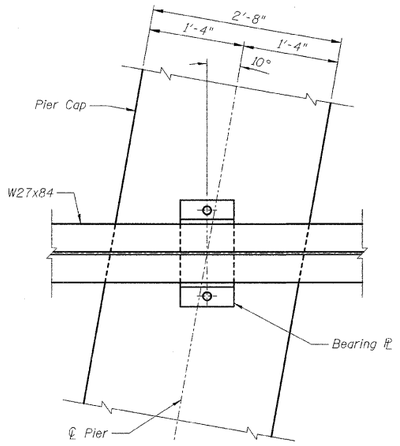


PINTLE



BEARING PLAN AT PIERS NO. 1 AND NO. 3

Notes:
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.
Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.
Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.



BEARING PLAN AT PIER NO. 2

TABLE "A"

Beam No.	Shim Thickness
Pier No. 1 - 3	1/8"
Pier No. 3 - 4	1/8"

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts, 1"	Each	36

NOTES:

1.) Two 1/8 in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.
2.) The structural steel plates of the bearing assembly shall conform to the requirements of AASHTO M 270 Grade 50W.

FIXED BEARING DETAILS
STRUCTURE NO. 053-0150

SHEET NO. B20	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	36
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

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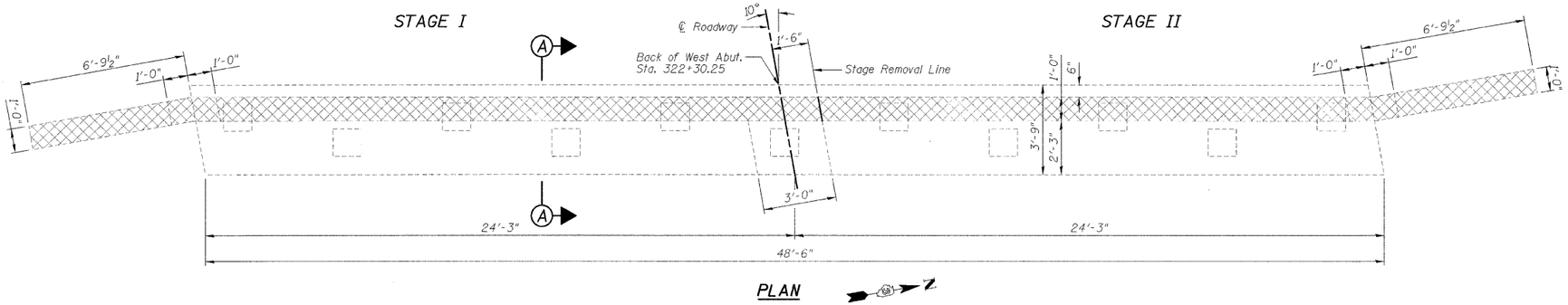
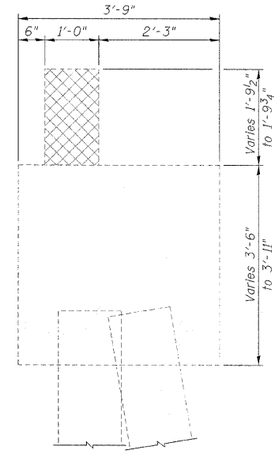
24-8168

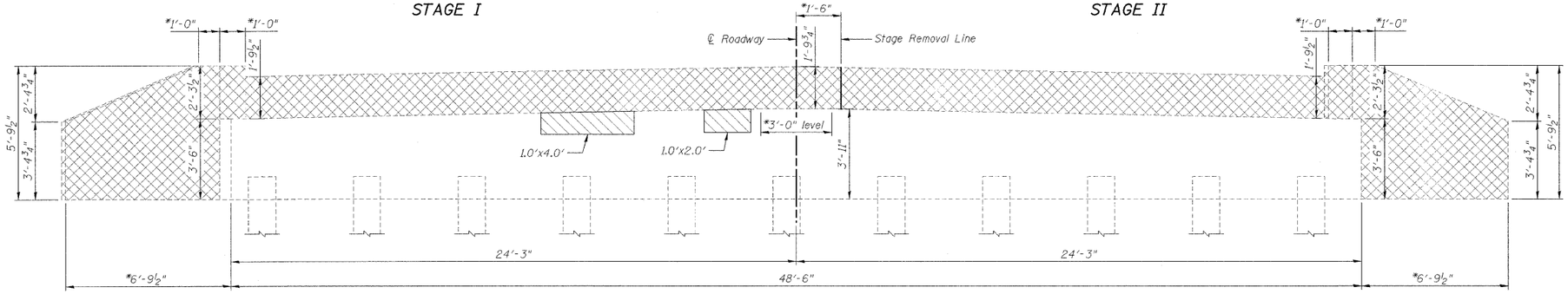
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



SECTION A-A
(℄ Rt. L's)



ELEVATION
(Looking West)
*Dimensions ℄ Rt. L's to Roadway.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	5.7
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	6

LEGEND

Concrete Removal

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

WEST ABUTMENT REMOVAL
STRUCTURE NO. 053-0150

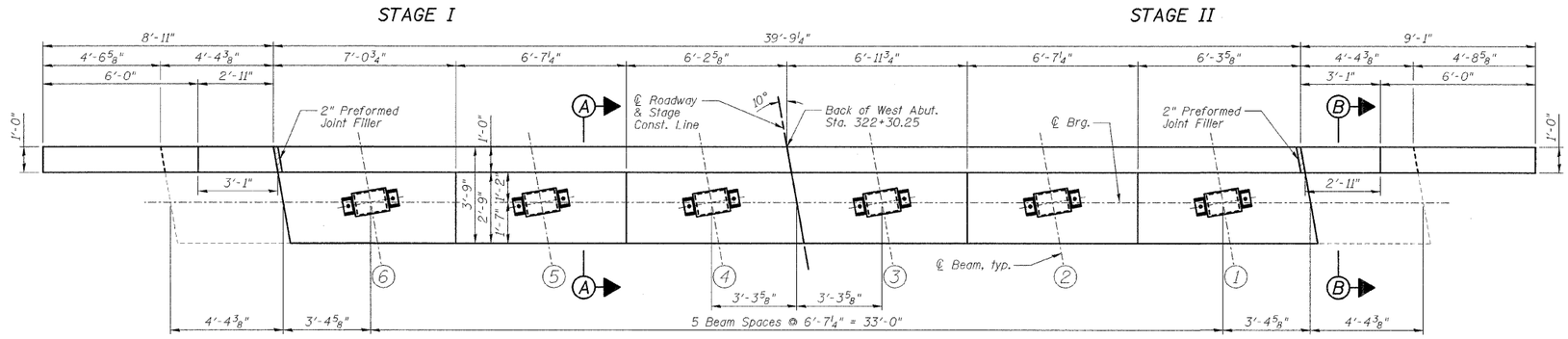
SHEET NO. B21	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	37
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

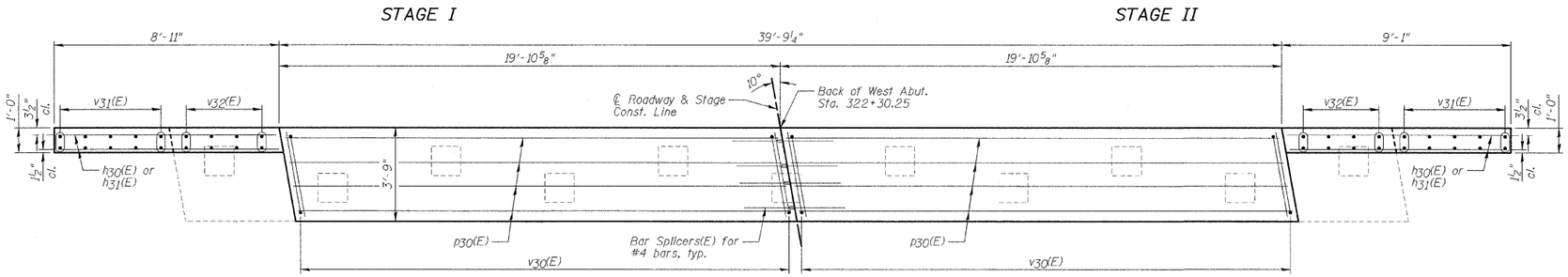
FARNSWORTH GROUP, INC. CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-8168

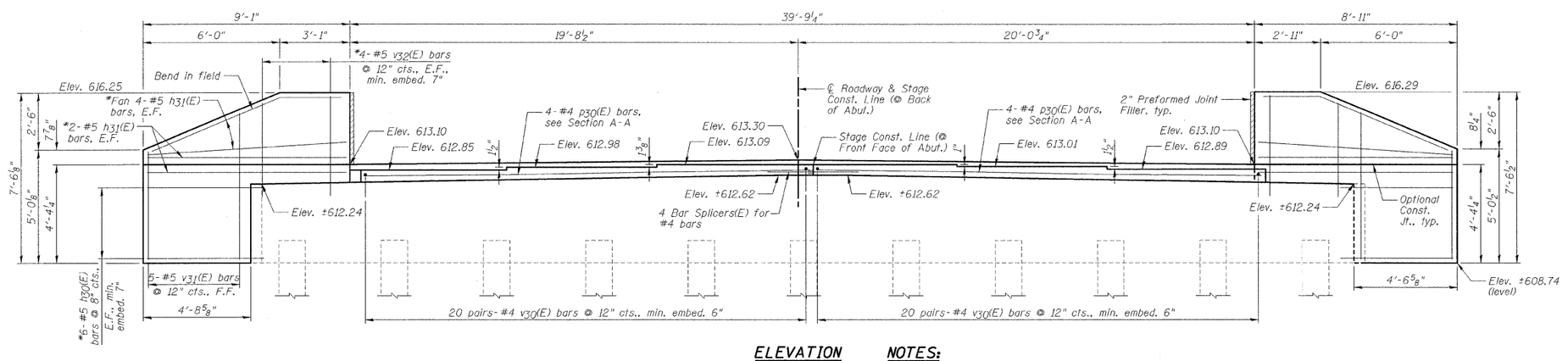
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



TOP VIEW ABUTMENT (SHOWING BEARING SEAT)



PLAN - PILE CAP



ELEVATION
(Looking West)

*Cut reinforcement as required.

Reinforcement is typical for both wingwalls.

NOTES:

1.) See Sheet B23 for Section A-A and Section B-B.
2.) See Sheet B23 for Bill of Material and Bar Cutting Diagram. Order v31(E) bars full length. Cut according to Bar Cutting Diagram on Sheet B23. Use remainder of bars in back face.
3.) Drill & epoxy grout h30(E), v30(E) & v32(E) bars in appropriate drilled holes according to Section 584 of the Standard Specifications. The type of epoxy grout shall be approved by the Engineer.
4.) Space reinforcement in cap to miss anchor bolts.
5.) E.F. denotes Each Face, F.F. denotes Front Face.
6.) See Sheet B33 for Bar Splicer Details.

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

WEST ABUTMENT
STRUCTURE NO. 053-0150

SHEET NO. B22	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	38
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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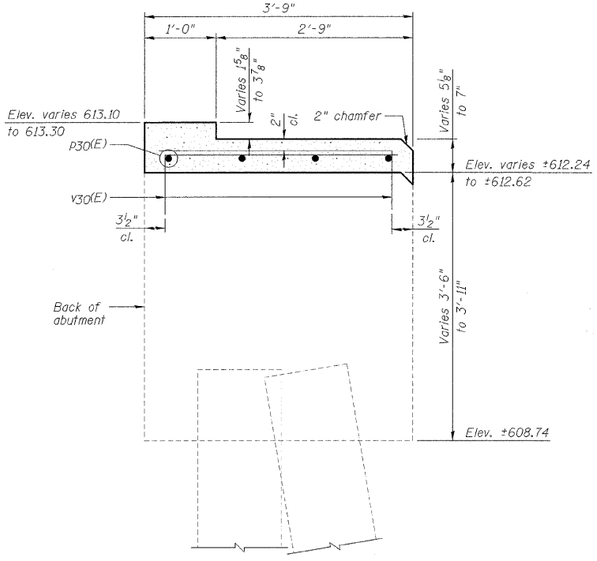
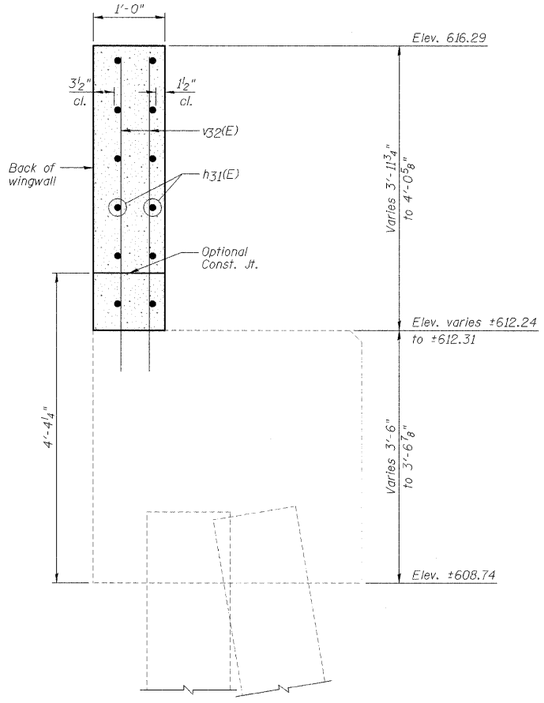
24-8168

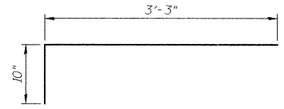
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION A-A



SECTION B-B



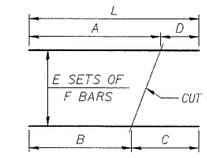
BAR v30(E)

WEST ABUTMENT BILL OF MATERIAL

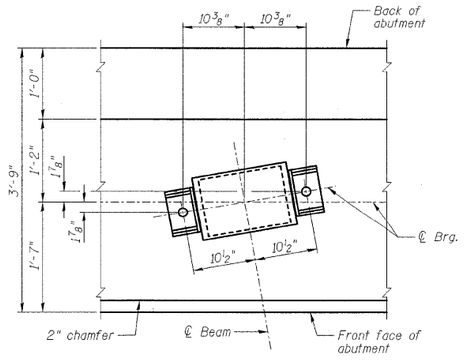
Bar	No.	Size	Length	Shape
h30(E)	24	#5	5'-2"	——
h31(E)	24	#5	8'-8"	——
p30(E)	8	#4	19'-6"	——
v30(E)	80	#4	4'-1"	⌐—
v31(E)	10	#5	11'-2"	— —
v32(E)	16	#5	4'-5"	——

Item	Unit	Quantity
Porous Granular Embankment, Special	Cu. Yd.	72
Structure Excavation	Cu. Yd.	72
Concrete Structures	Cu. Yd.	6.5
Reinforcement Bars, Epoxy Coated	Pound	860
Bar Splicers	Each	4
Geocomposite Wall Drain	Sq. Yd.	42
Pipe Underdrains For Structures 4"	Foot	70

BAR CUTTING DIAGRAM



BAR	A	B	C	D	E	F	L
v31(E)	6'-5"	4'-9"	6'-5"	4'-9"	2	5	11'-2"



TYPICAL ANCHOR BOLT PLACEMENT DETAIL

NOTES:

1.) See Sheet B22 for location of Section A-A and Section B-B.
2.) Drill & epoxy grout v30(E) & v32(E) bars in appropriate drilled holes according to Section 584 of the Standard Specifications. The type of epoxy grout shall be approved by the Engineer.
3.) Space reinforcement in cap to miss anchor bolts.

WEST ABUTMENT
STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B23	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	39
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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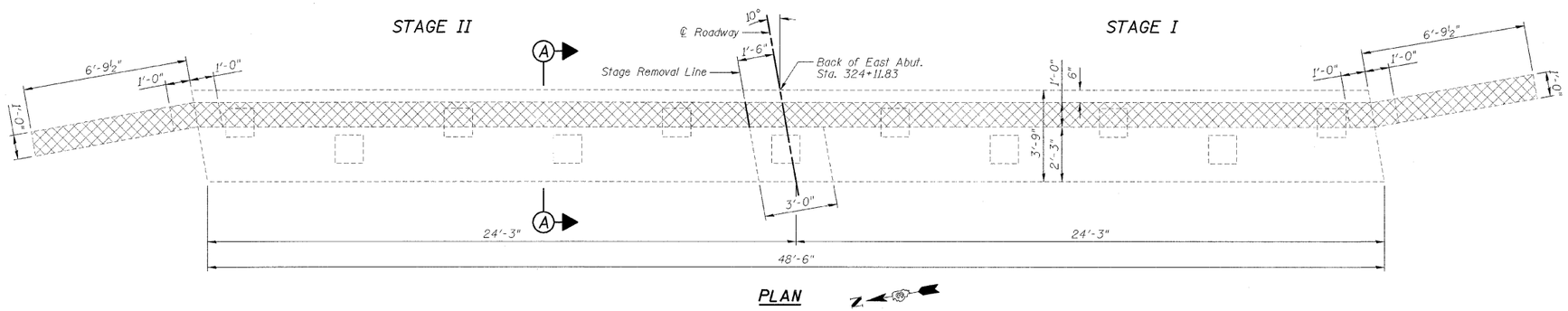
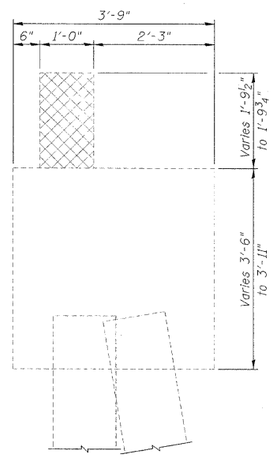
24-8168

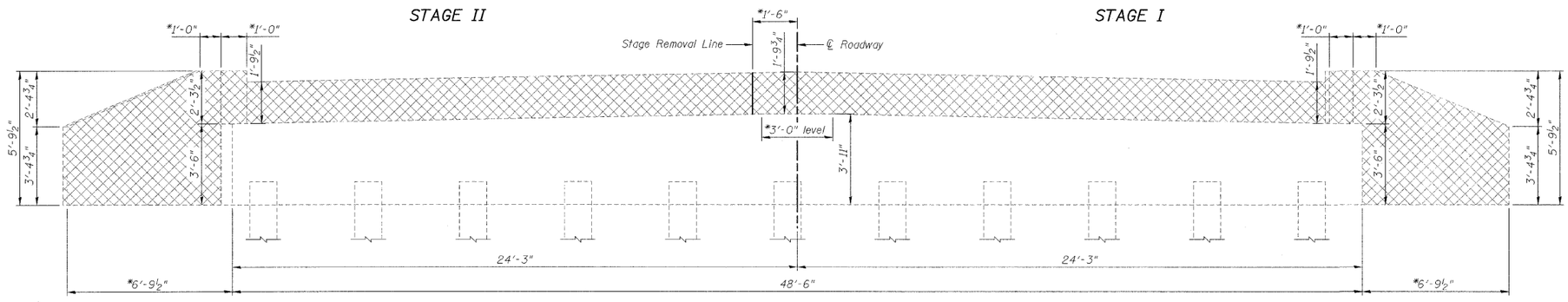
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



PLAN



SECTION A-A
(℄ Rt. L's)



ELEVATION
(Looking East)
*Dimensions ℄ Rt. L's to Roadway.

BILL OF MATERIAL

Item	Unit	Total
Concrete Removal	Cu. Yd.	5.7

LEGEND

Concrete Removal

EAST ABUTMENT REMOVAL
STRUCTURE NO. 053-0150

SHEET NO. B24	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	40
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

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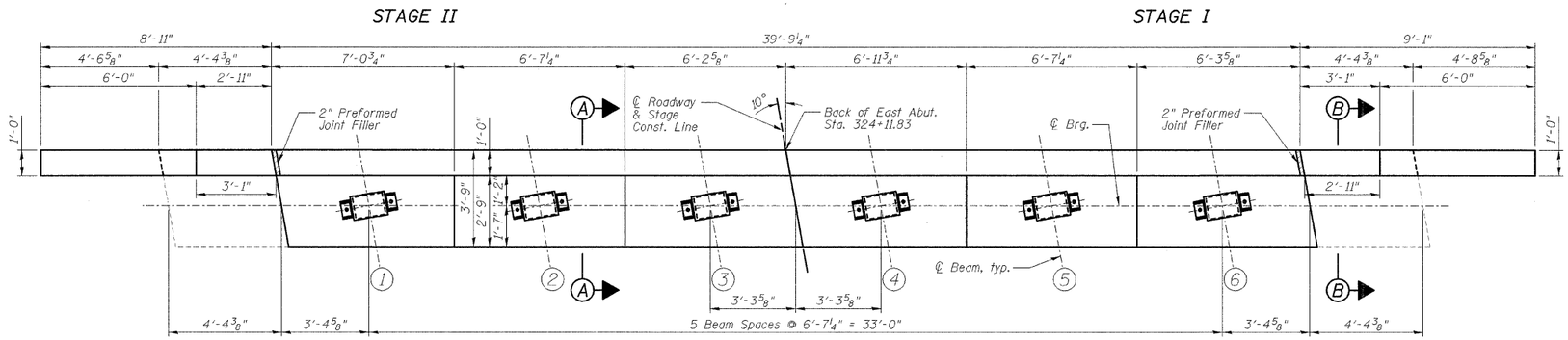
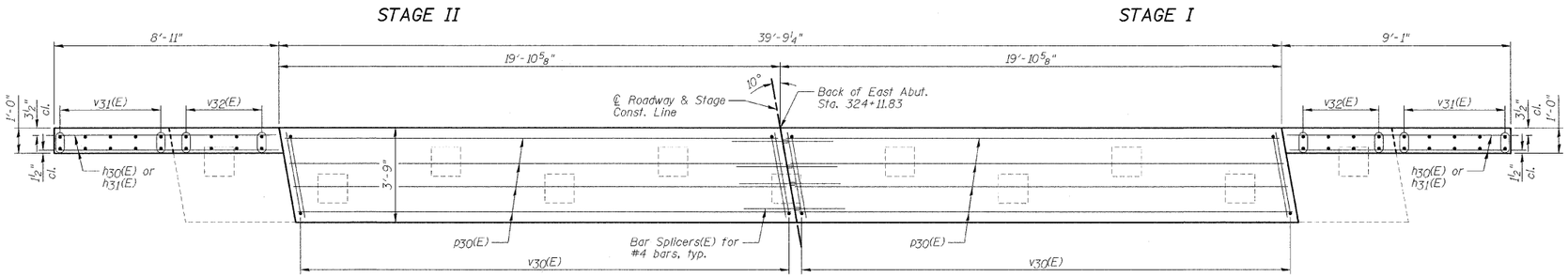
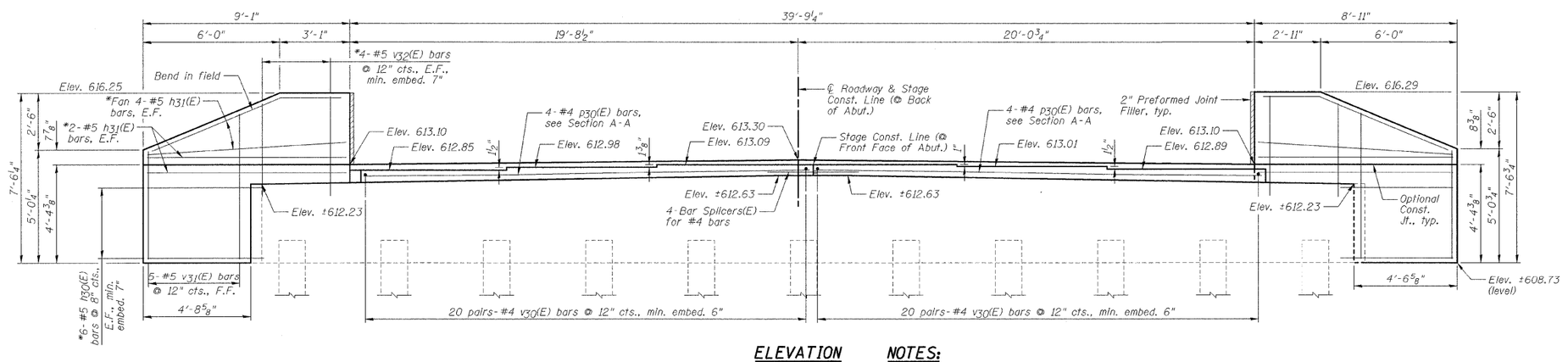
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



TOP VIEW ABUTMENT (SHOWING BEARING SEAT)



PLAN - PILE CAP



ELEVATION
(Looking East)

*Cut reinforcement as required.

Reinforcement is typical for both wingwalls.

NOTES:

1.) See Sheet B26 for Section A-A and Section B-B.
2.) See Sheet B26 for Bill of Material and Bar Cutting Diagram. Order v31(E) bars full length. Cut according to Bar Cutting Diagram on Sheet B26. Use remainder of bars in back face.
3.) Drill & epoxy grout h30(E), v30(E) & v32(E) bars in appropriate drilled holes according to Section 584 of the Standard Specifications. The type of epoxy grout shall be approved by the Engineer.
4.) Space reinforcement in cap to miss anchor bolts.
5.) E.F. denotes Each Face, F.F. denotes Front Face.
6.) See Sheet B33 for Bar Splicer Details.

EAST ABUTMENT
STRUCTURE NO. 053-0150

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SHEET NO. B25	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	41
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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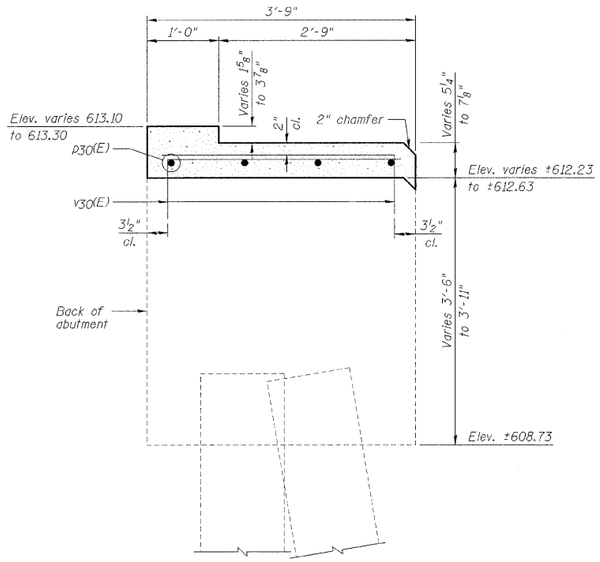
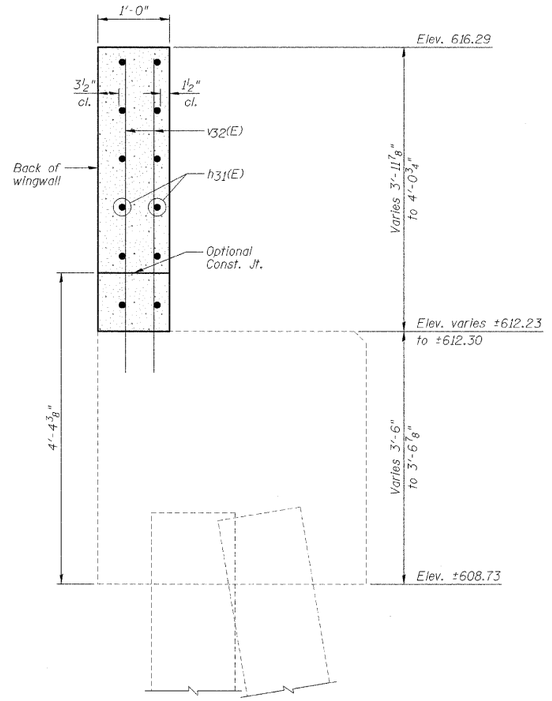
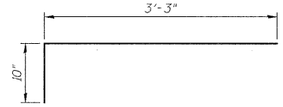
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION A-A



SECTION B-B



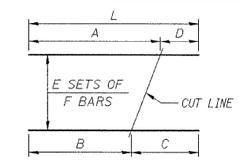
BAR v30(E)

EAST ABUTMENT BILL OF MATERIAL

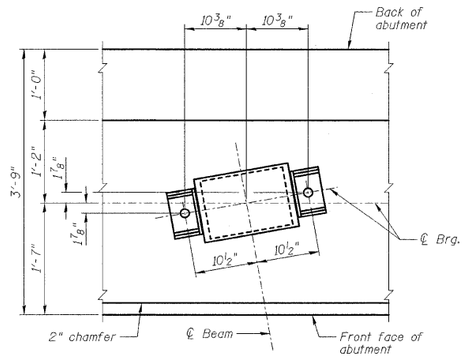
Bar	No.	Size	Length	Shape
h30(E)	24	#5	5'-2"	——
h31(E)	24	#5	8'-8"	——
p30(E)	8	#4	19'-6"	——
v30(E)	80	#4	4'-1"	⌐—
v31(E)	10	#5	11'-2"	— —
v32(E)	16	#5	4'-5"	——

Item	Unit	Quantity
Porous Granular Embankment, Special	Cu. Yd.	72
Structure Excavation	Cu. Yd.	72
Concrete Structures	Cu. Yd.	6.5
Reinforcement Bars, Epoxy Coated	Pound	860
Bar Splicers	Each	4
Geocomposite Wall Drain	Sq. Yd.	42
Pipe Underdrains For Structures 4"	Foot	70

BAR CUTTING DIAGRAM



BAR	A	B	C	D	E	F	L
v31(E)	6'-5"	4'-9"	6'-5"	4'-9"	2	5	11'-2"



TYPICAL ANCHOR BOLT PLACEMENT DETAIL

NOTES:

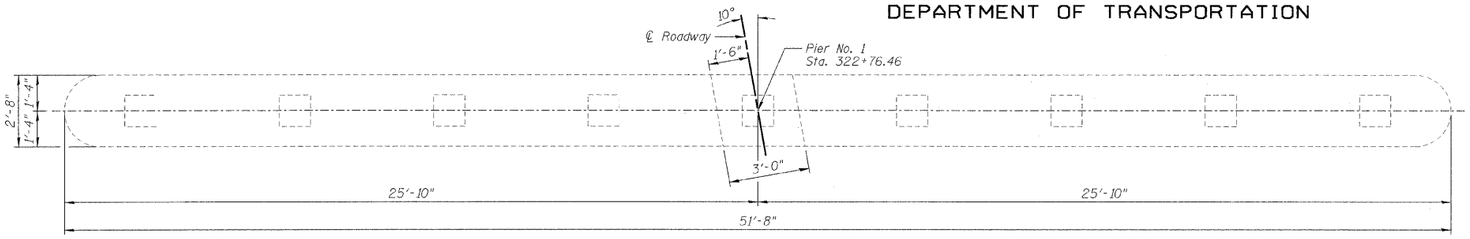
1.) See Sheet B25 for location of Section A-A and Section B-B.
2.) Drill & epoxy grout v30(E) & v32(E) bars in appropriate drilled holes according to Section 584 of the Standard Specifications. The type of epoxy grout shall be approved by the Engineer.
3.) Space reinforcement in cap to miss anchor bolts.

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

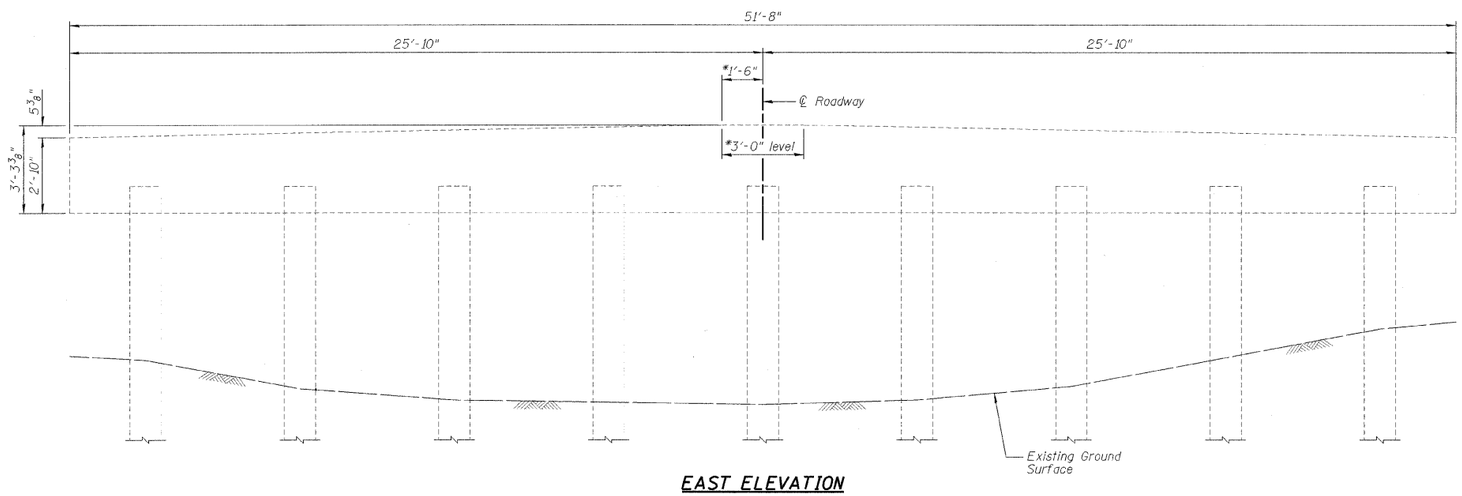
EAST ABUTMENT
STRUCTURE NO. 053-0150

SHEET NO. B26	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	42
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

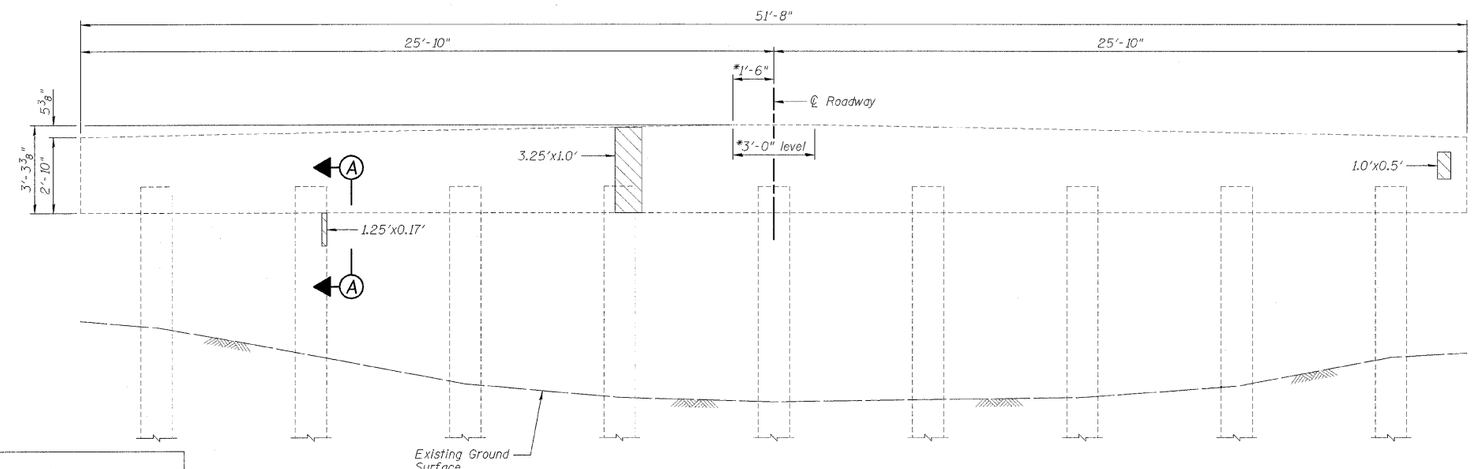
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



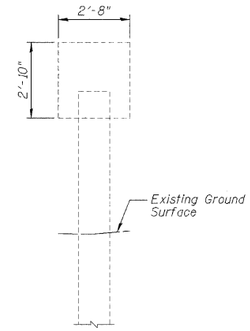
PLAN



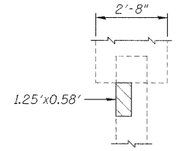
EAST ELEVATION
(Looking West)
*Dimensions @ Rt. L's to Roadway.



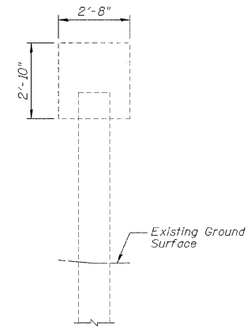
WEST ELEVATION
(Looking East)
*Dimensions @ Rt. L's to Roadway.



NORTH END VIEW
(Looking South)



SECTION A-A



SOUTH END VIEW
(Looking North)

BILL OF MATERIAL

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

LEGEND

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

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

PIER NO. 1 REPAIR
STRUCTURE NO. 053-0150

SHEET NO. B27	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	44	43
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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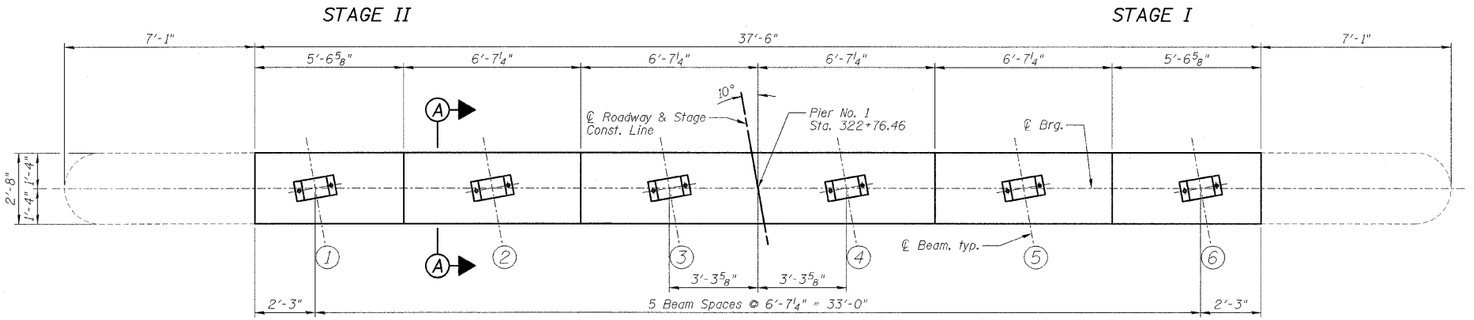
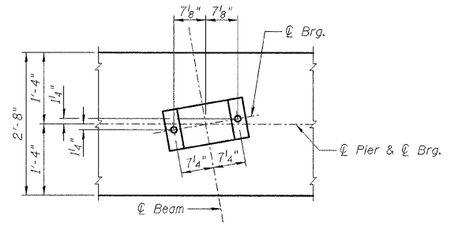
24-8168

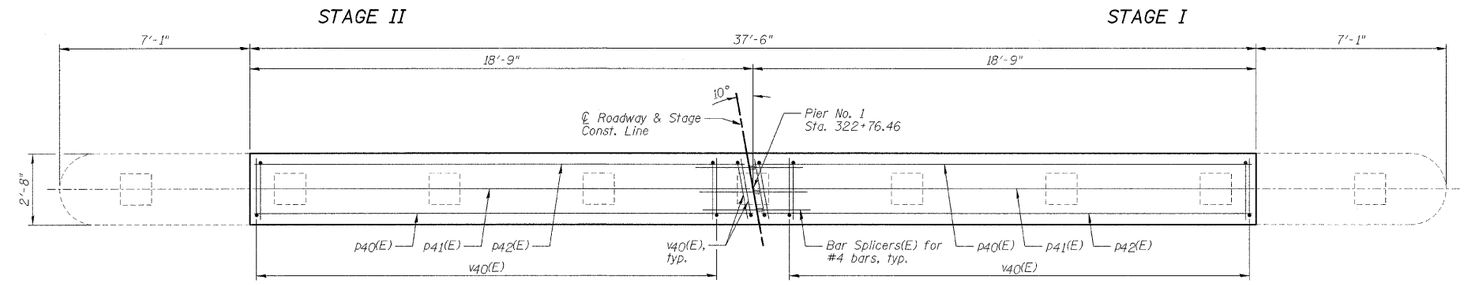
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



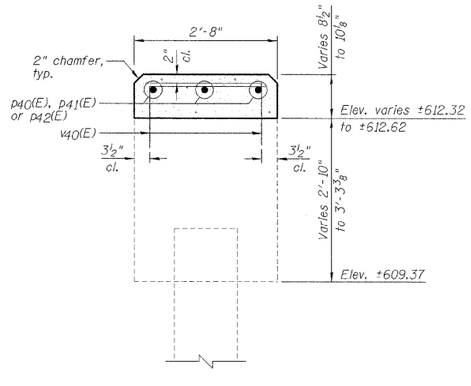
TOP VIEW ABUTMENT (SHOWING BEARING SEAT)



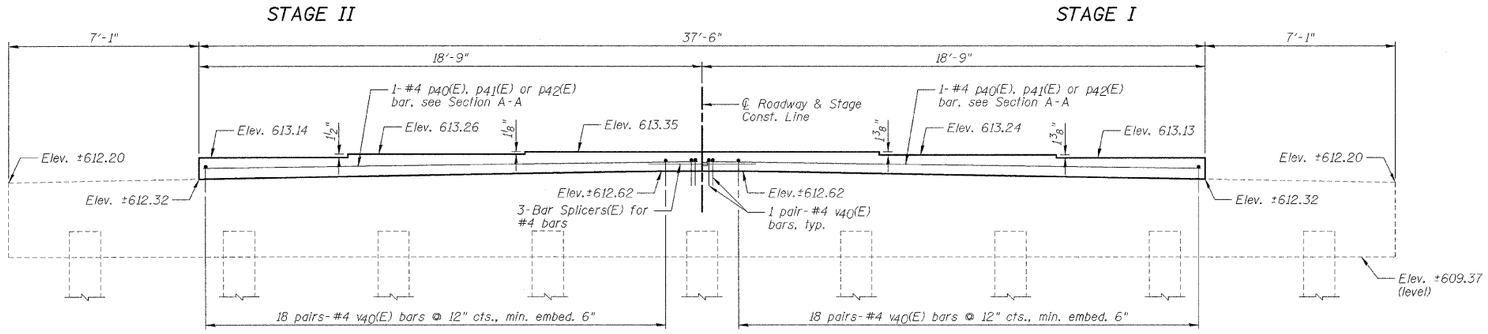
TYPICAL ANCHOR BOLT PLACEMENT DETAIL



PLAN - PILE CAP



SECTION A-A

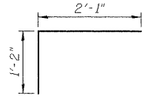


ELEVATION
(Looking East)

PIER NO. 1
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p40(E)	2	#4	18'-7"	——
p41(E)	2	#4	18'-5"	——
p42(E)	2	#4	18'-3"	——
v40(E)	76	#4	3'-3"	⌐

Item	Unit	Quantity
Concrete Structures	Cu. Yd.	2.9
Reinforcement Bars, Epoxy Coated	Pound	240
Bar Splicers	Each	3



BAR v40(E)

NOTES:

1.) Drill & epoxy grout v40(E) bars in appropriate drilled holes according to Section 584 of the Standard Specifications. The type of epoxy grout shall be approved by the Engineer.
2.) Space reinforcement in cap to miss anchor bolts.
3.) See Sheet B33 for Bar Splicer Details.

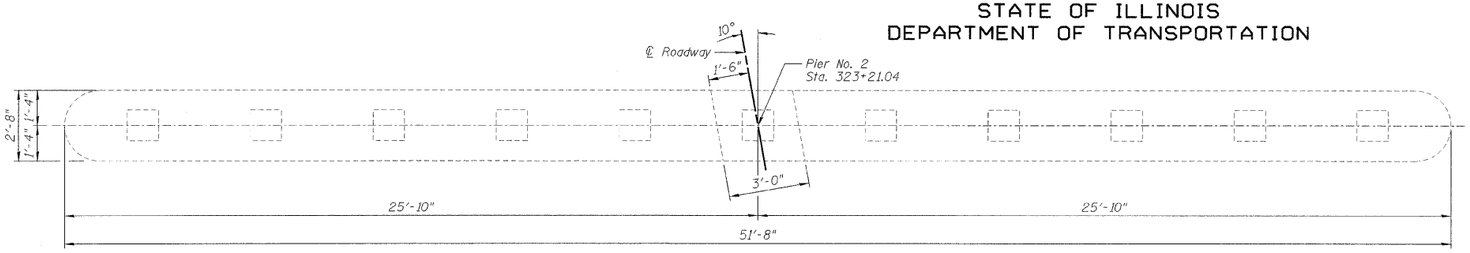
DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

PIER NO. 1
STRUCTURE NO. 053-0150

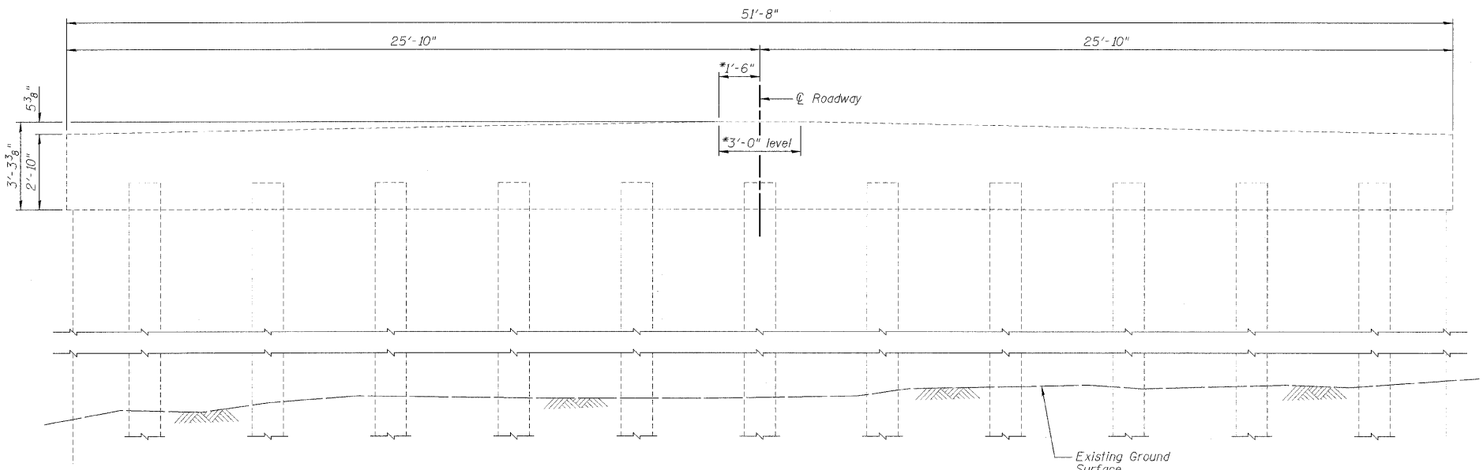
SHEET NO. B28 34 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	41	15BR-2	LIVINGSTON	64	44
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FARNSWORTH GROUP, INC. CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



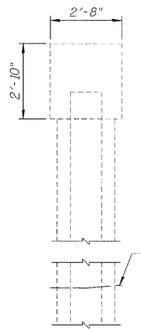
PLAN



EAST ELEVATION

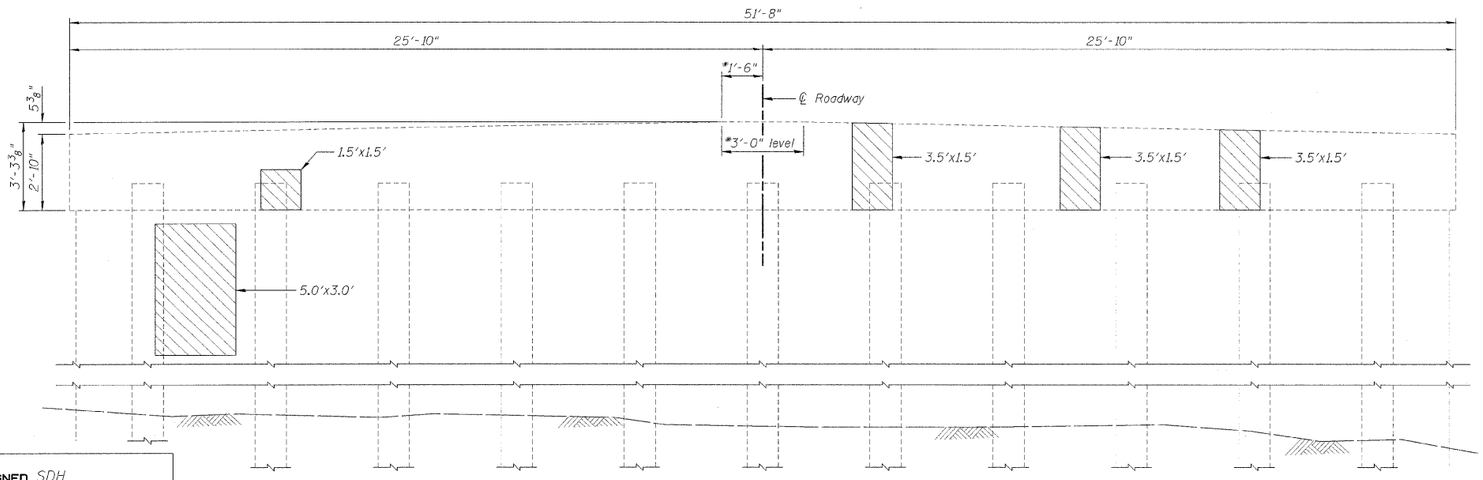
(Looking West)

*Dimensions @ Rt. L's to Roadway.



NORTH END VIEW

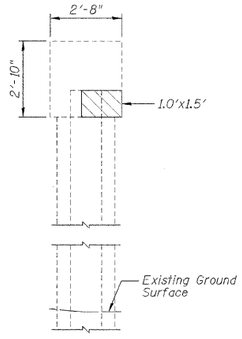
(Looking South)



WEST ELEVATION

(Looking East)

*Dimensions @ Rt. L's to Roadway.



SOUTH END VIEW

(Looking North)

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	35

LEGEND

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

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

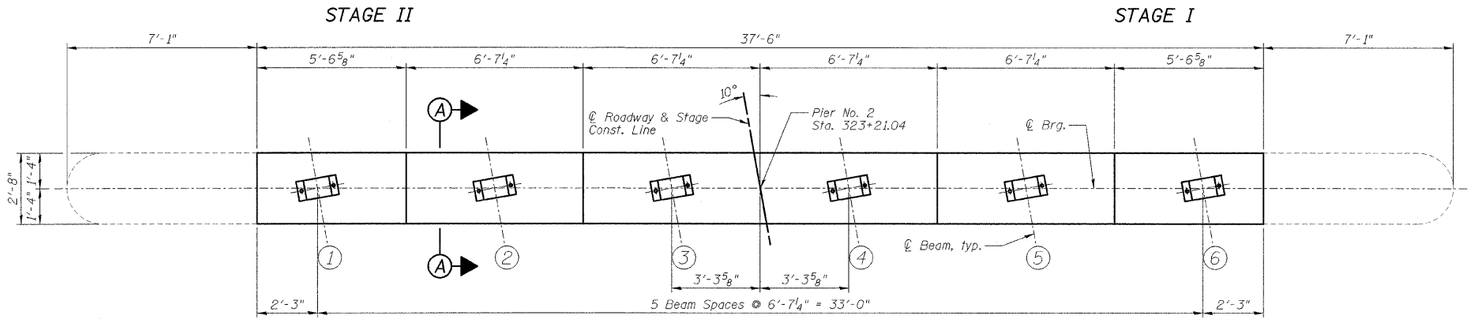
PIER NO. 2 REPAIR
STRUCTURE NO. 053-0150

SHEET NO. B29 34 SHEETS	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	41	15BR-2	LIVINGSTON	64	45
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

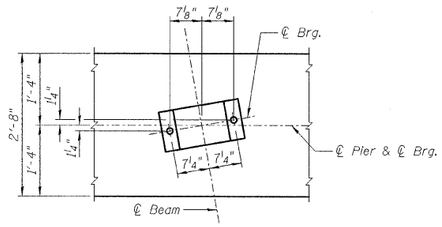
FARNSWORTH GROUP, INC. CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-8168

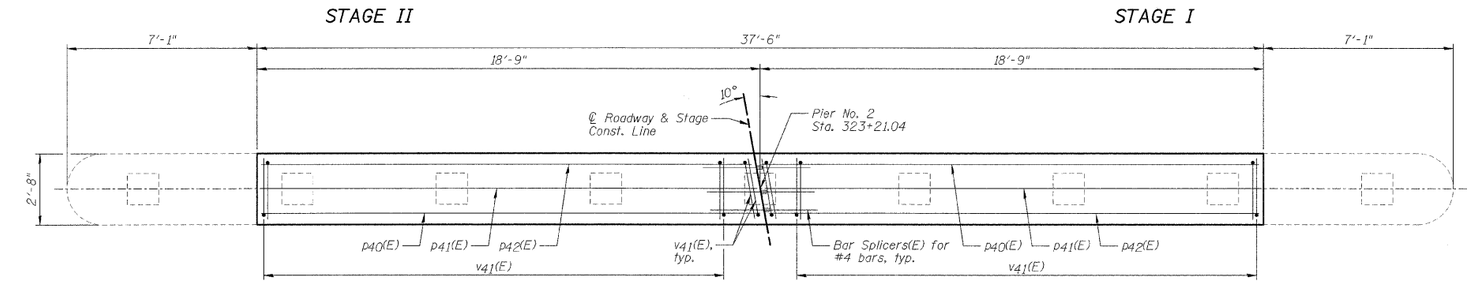
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



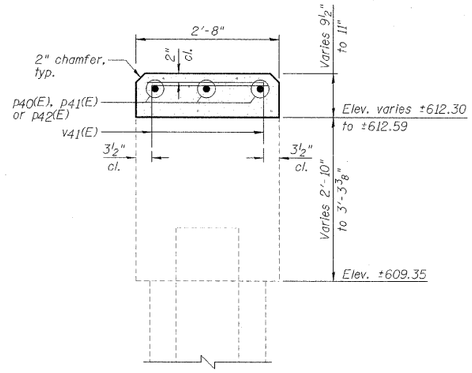
TOP VIEW ABUTMENT (SHOWING BEARING SEAT)



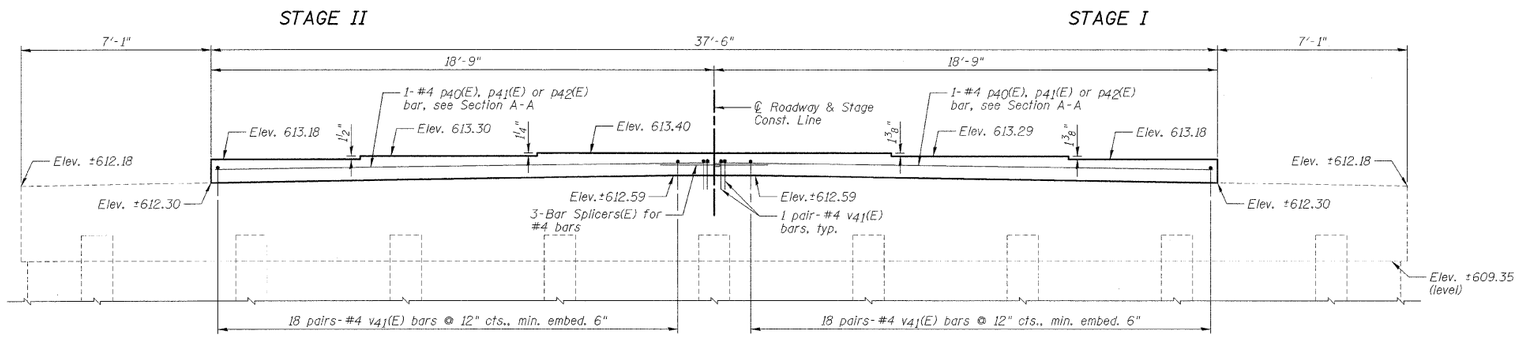
TYPICAL ANCHOR BOLT PLACEMENT DETAIL



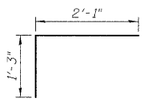
PLAN - PILE CAP



SECTION A-A



ELEVATION
(Looking East)



BAR v41(E)

PIER NO. 2
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p40(E)	2	#4	18'-7"	
p41(E)	2	#4	18'-5"	
p42(E)	2	#4	18'-3"	
v41(E)	76	#4	3'-4"	
Item			Unit	Quantity
Concrete Structures			Cu. Yd.	3.2
Reinforcement Bars, Epoxy Coated			Pound	240
Bar Splicers			Each	3

NOTES:

1.) Drill & epoxy grout v41(E) bars in appropriate drilled holes according to Section 584 of the Standard Specifications. The type of epoxy grout shall be approved by the Engineer.
2.) Space reinforcement in cap to miss anchor bolts.
3.) See Sheet B33 for Bar Splicer Details.

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

PIER NO. 2
STRUCTURE NO. 053-0150

SHEET NO. B30	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	46
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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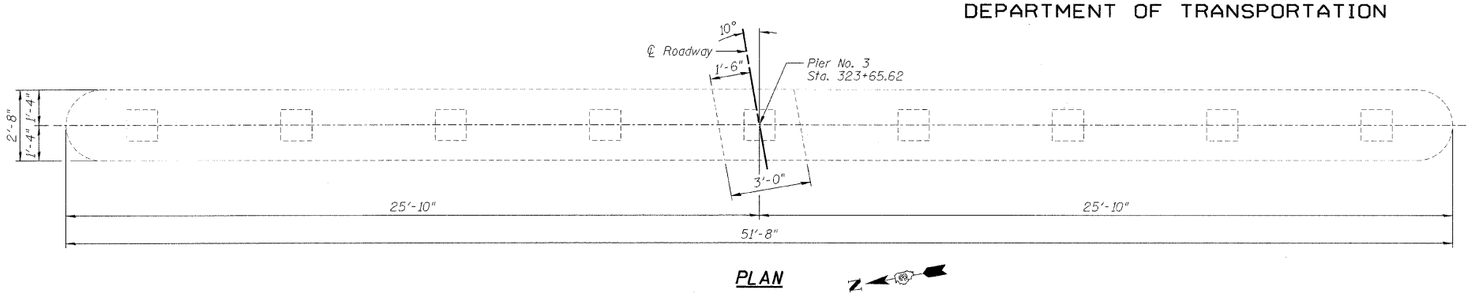
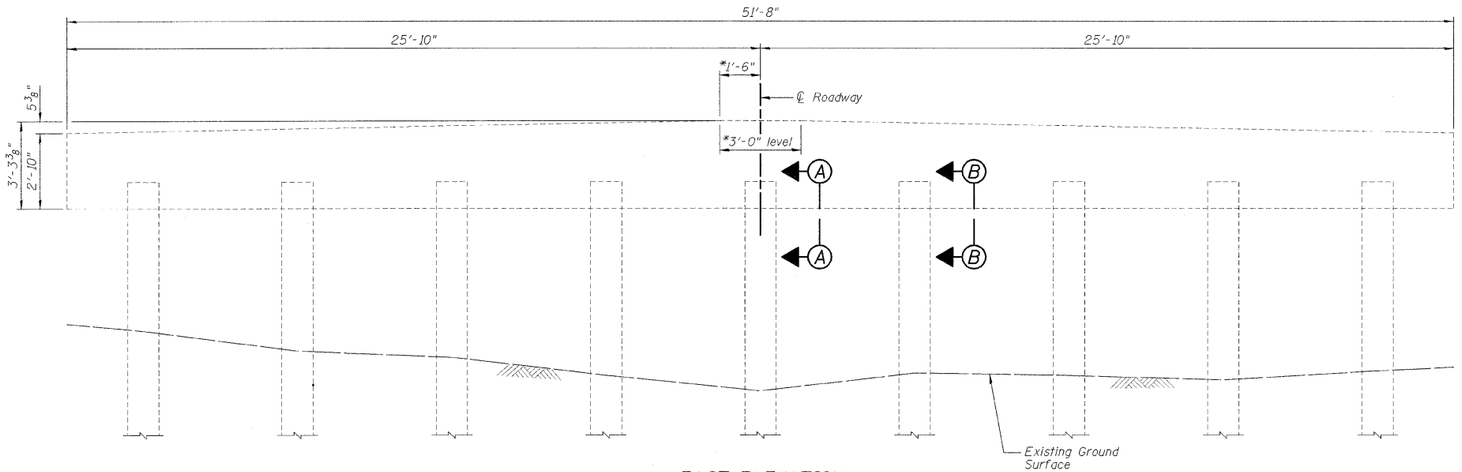
24-8168

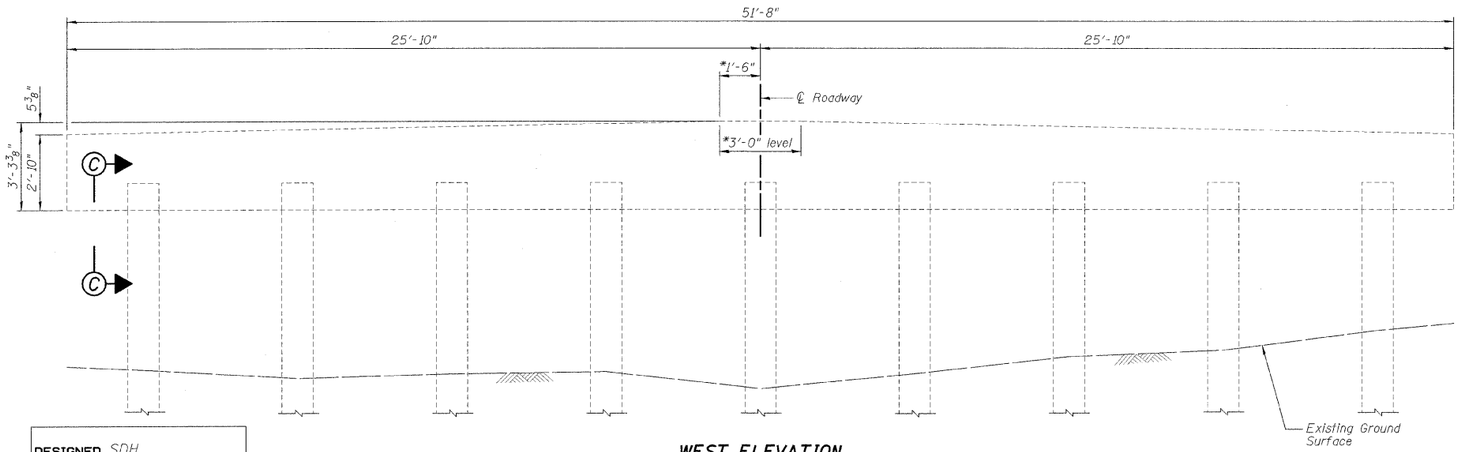
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



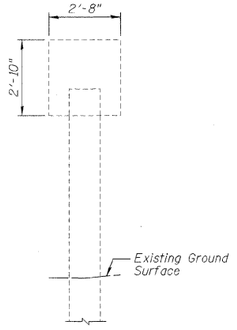
PLAN



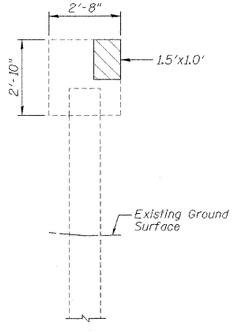
EAST ELEVATION
(Looking West)
*Dimensions @ Rt. L's to Roadway.



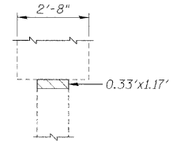
WEST ELEVATION
(Looking East)



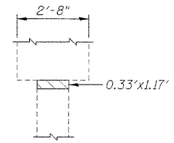
NORTH END VIEW
(Looking South)



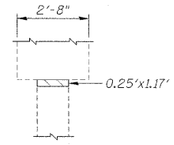
SOUTH END VIEW
(Looking North)



SECTION A-A



SECTION B-B



SECTION C-C

BILL OF MATERIAL

Item	Unit	Total
Structural Repair of Concrete (Depth Equal to or Less Than 5 Inches)	Sq. Ft.	3

LEGEND

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

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

PIER NO. 3 REPAIR
STRUCTURE NO. 053-0150

SHEET NO. B31	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	47
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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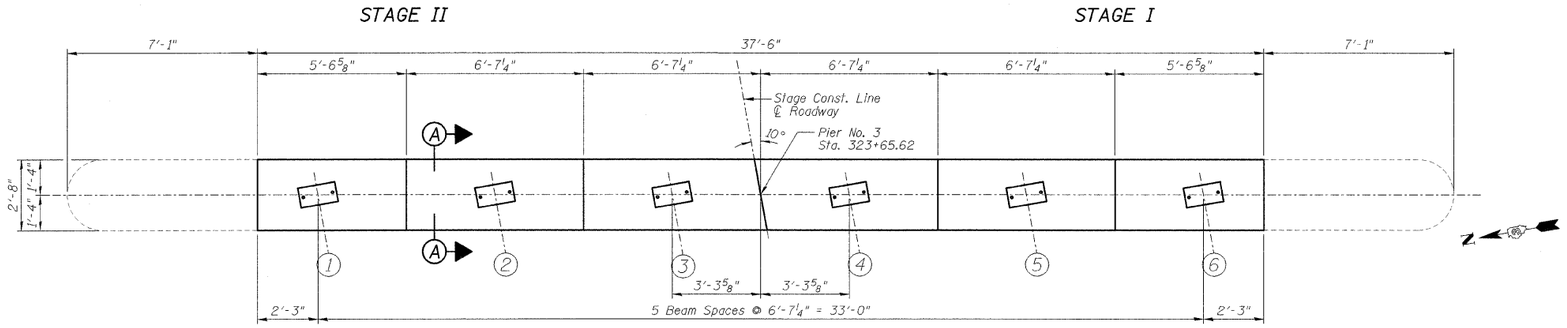
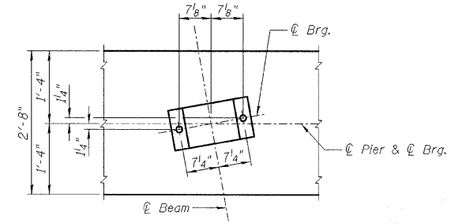
24-8168

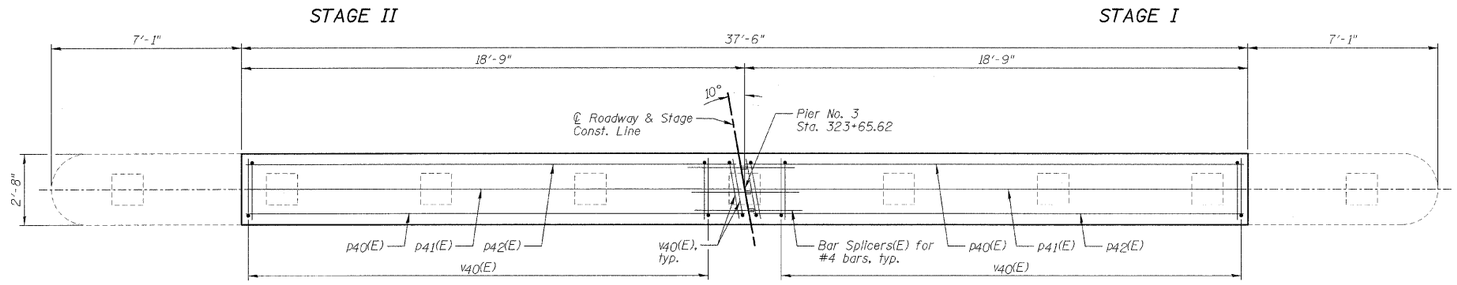
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



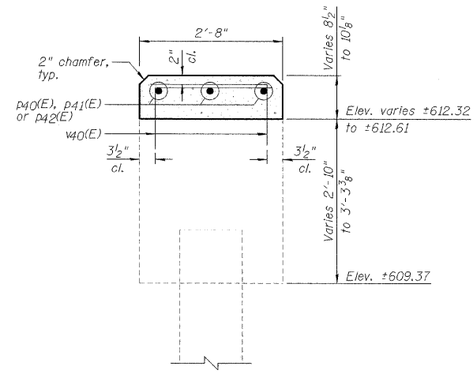
TOP VIEW



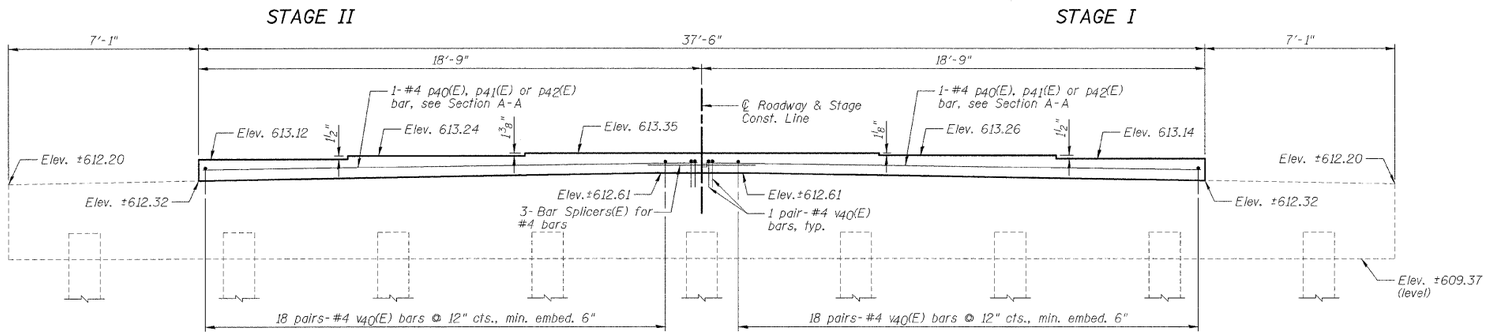
TYPICAL ANCHOR BOLT PLACEMENT DETAIL



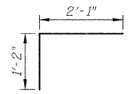
PLAN - PILE CAP



SECTION A-A



ELEVATION
(Looking East)



BAR v40(E)

PIER NO. 3
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
p40(E)	2	#4	18'-7"	——
p41(E)	2	#4	18'-5"	——
p42(E)	2	#4	18'-3"	——
v40(E)	76	#4	3'-3"	⌐

Item	Unit	Quantity
Concrete Structures	Cu. Yd.	2.9
Reinforcement Bars, Epoxy Coated	Pound	240
Bar Splicers	Each	3

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

NOTES:

1.) Drill & epoxy grout v40(E) bars in appropriate drilled holes according to Section 584 of the Standard Specifications. The type of epoxy grout shall be approved by the Engineer.
2.) Space reinforcement in cap to miss anchor bolts.
3.) See Sheet B33 for Bar Splicer Details.

PIER NO. 3
STRUCTURE NO. 053-0150

SHEET NO. B32	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	48
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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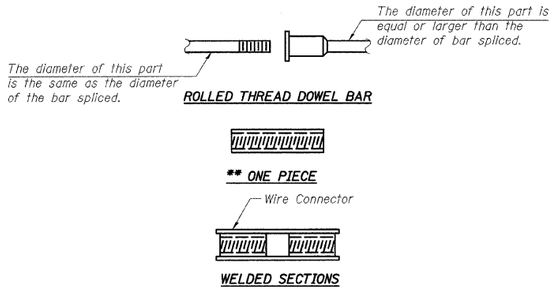
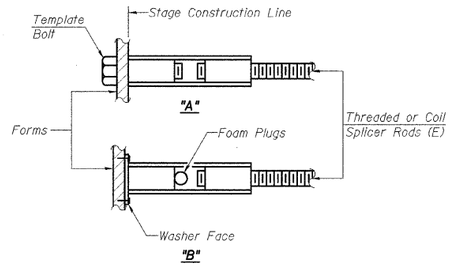
24-8168

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

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

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

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

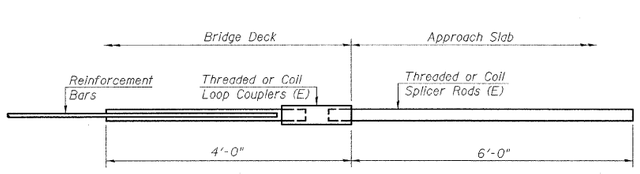
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$

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

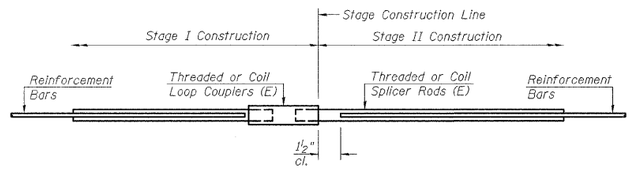
Where f_y = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

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



FOR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 80



STANDARD

Bar Size	No. Assemblies Required	Location
#5	357	Top of Deck
#5	215	Bottom of Deck
#4	25	West Approach
#5	86	West Approach
#4	25	East Approach
#5	86	East Approach
#6	24	Diaphragms
#4	4	West Abutment
#4	4	East Abutment
#4	3	Pier 1
#4	3	Pier 2
#4	3	Pier 3

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

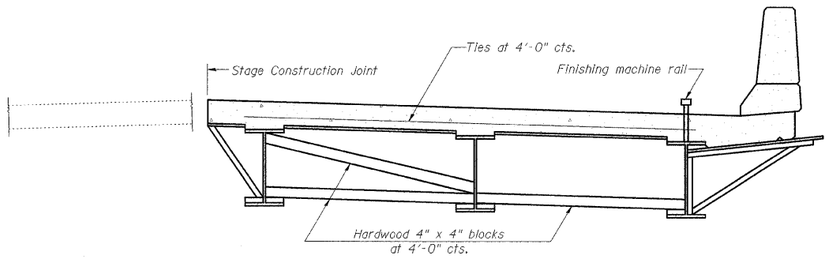
BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 053-0150

SHEET NO. B33	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	49
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

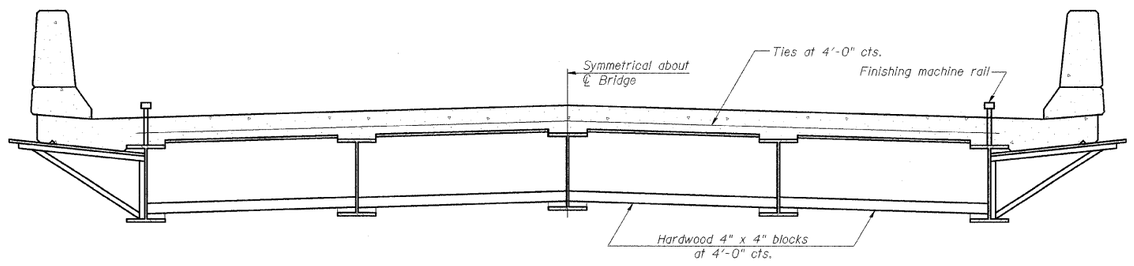
FARNSWORTH GROUP, INC. CONSULTING ENGINEERS - 2709 MCGRAW DRIVE BLOOMINGTON, ILLINOIS 61704 (309) 663-8435 / (309) 663-1571 FAX

24-8168

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STAGE CONSTRUCTION

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.

DESIGNED	SDH
CHECKED	JML
DRAWN	JWK/DJM
CHECKED	MSW
DATE	10/07/09

SB-1 10-1-08

CANTILEVER FORMING BRACKETS
FOR SUPERSTRUCTURES WITH
W27 BEAMS AND SMALLER
STRUCTURE NO. 053-0150

SHEET NO. B34	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
34 SHEETS	41	15BR-2	LIVINGSTON	64	50
			CONTRACT NO. 66691		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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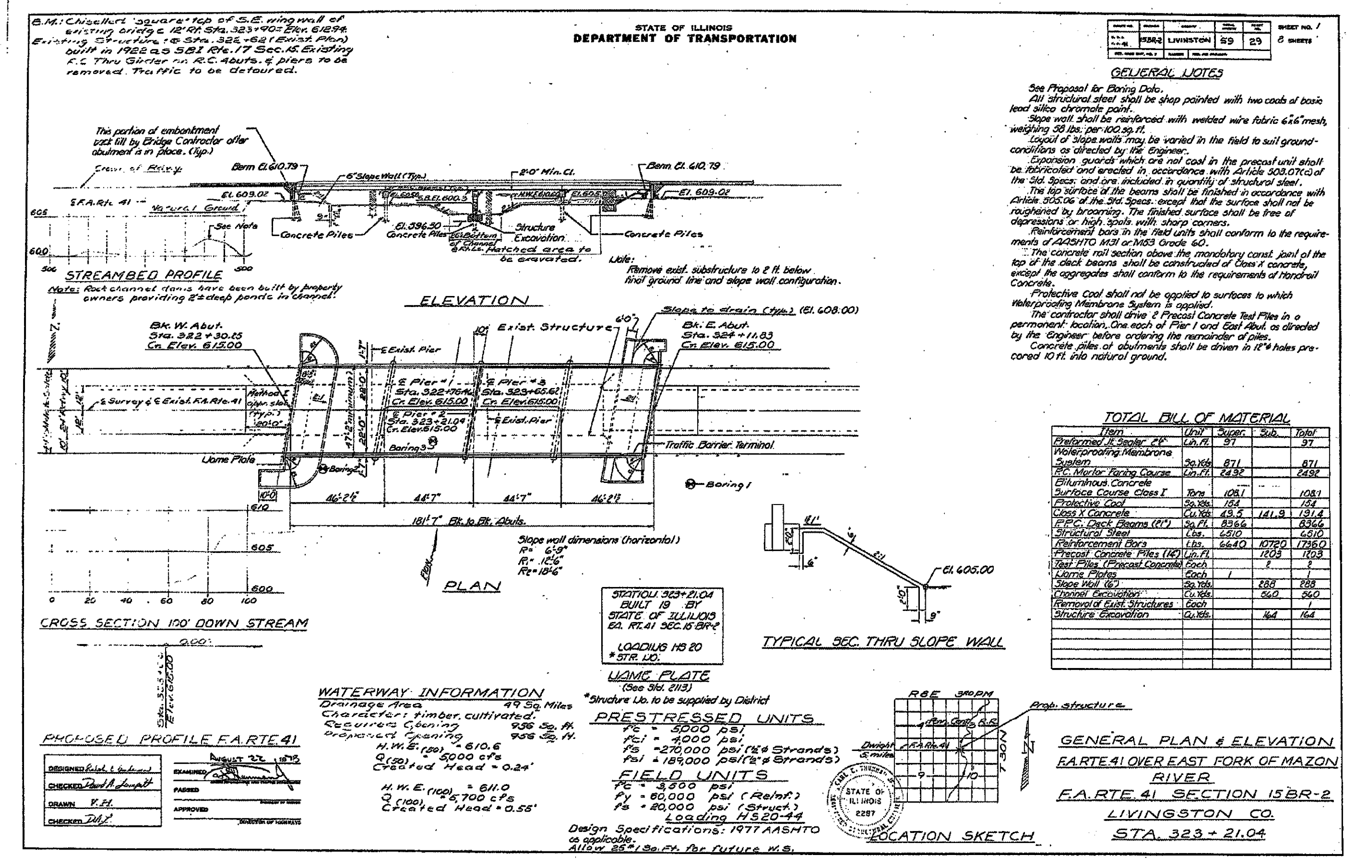
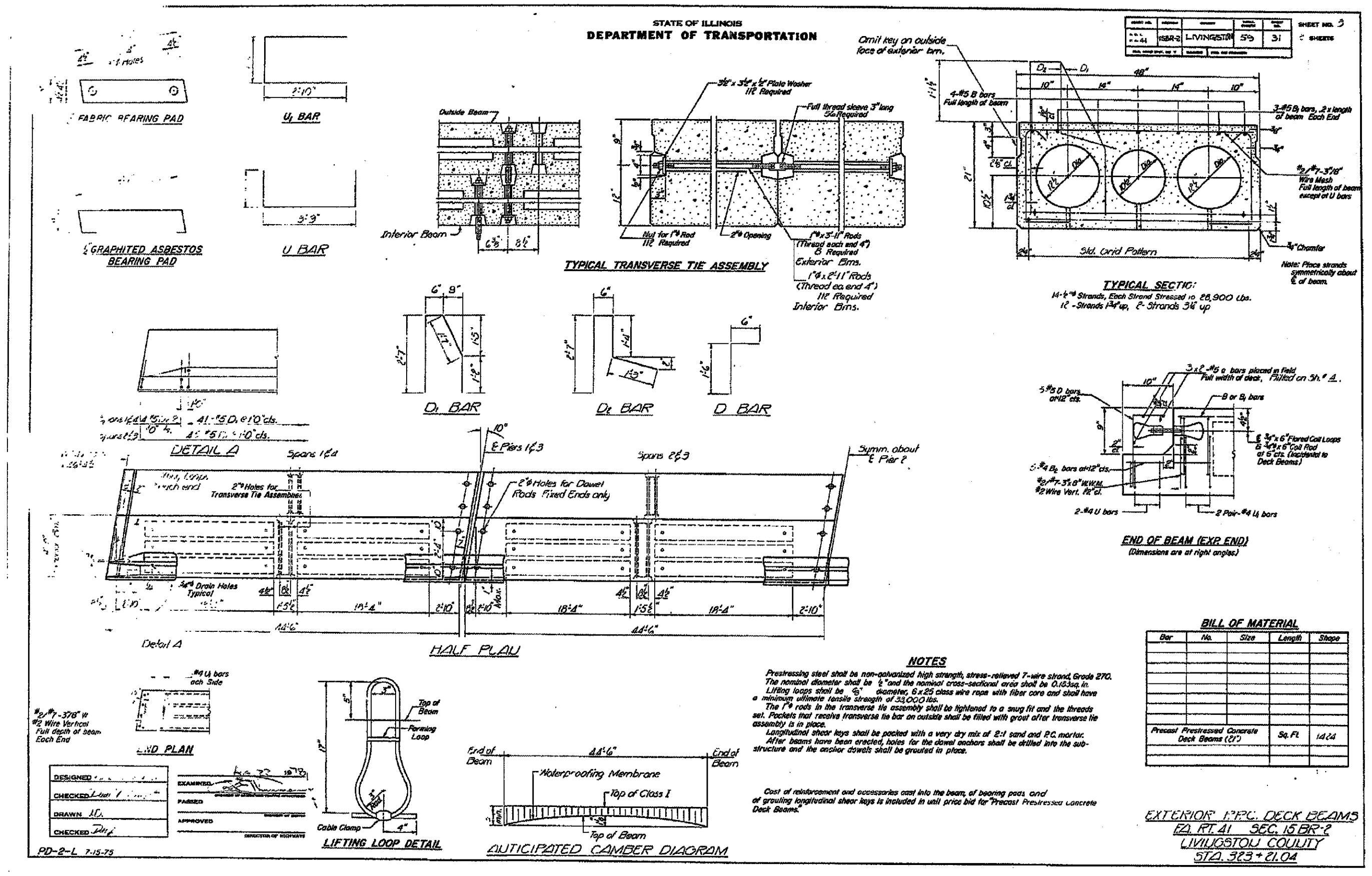
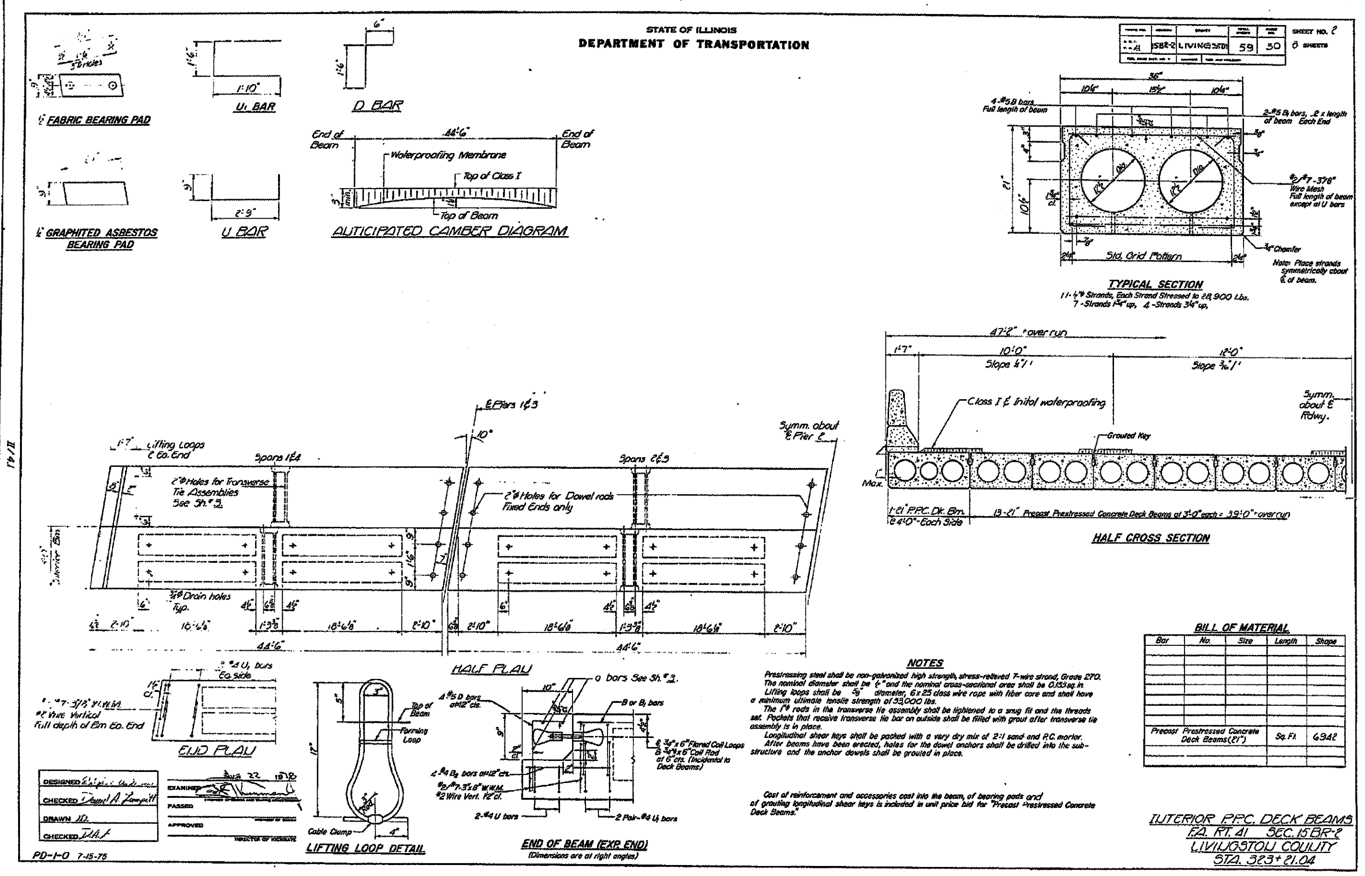
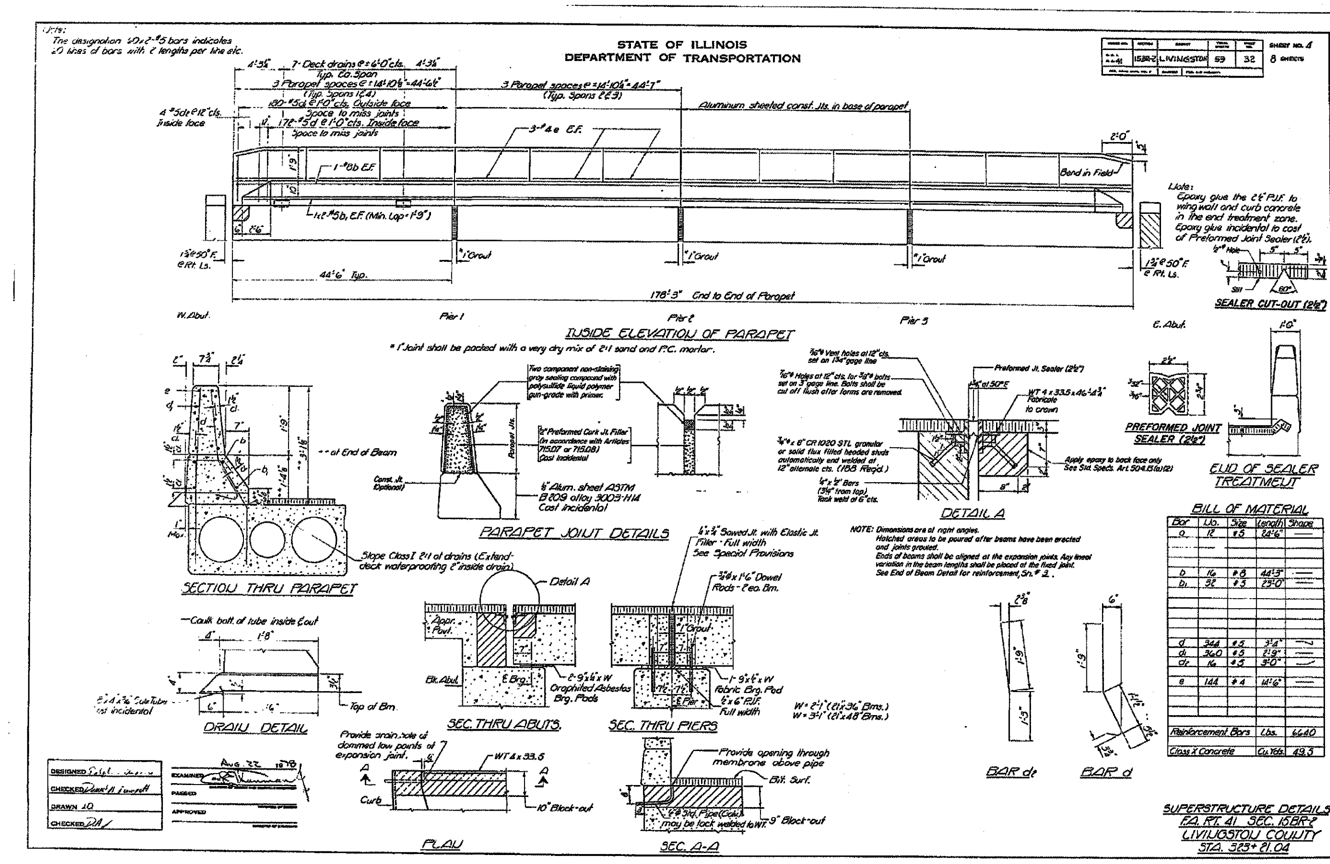
24-8168





FOR INFORMATION ONLY





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	PLOT DATE = Oct 16, 2009 - 03:12:21 PM	DATE -	REVISED -	

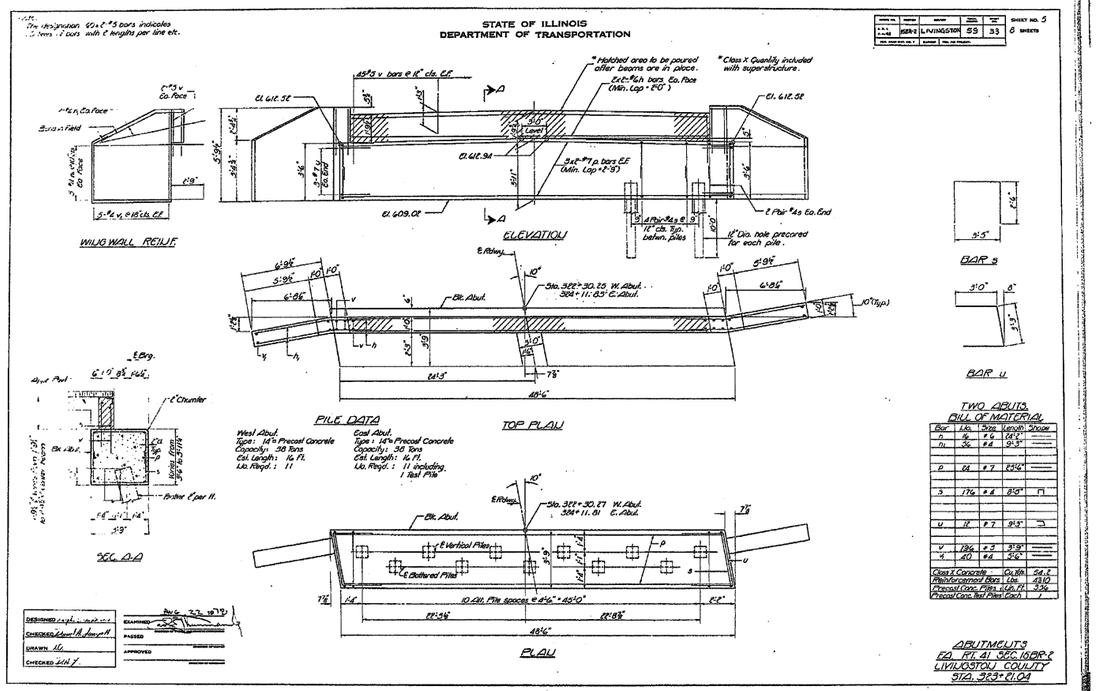
EXISTING BRIDGE PLANS

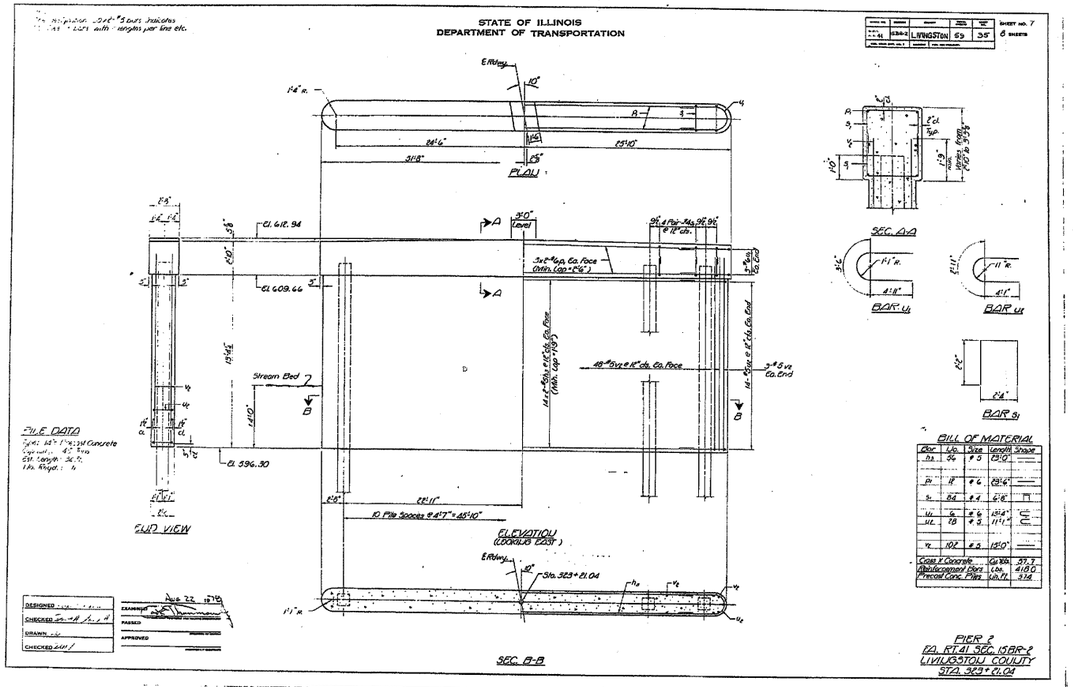
SCALE: | SHEET NO. OF SHEETS | STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	51

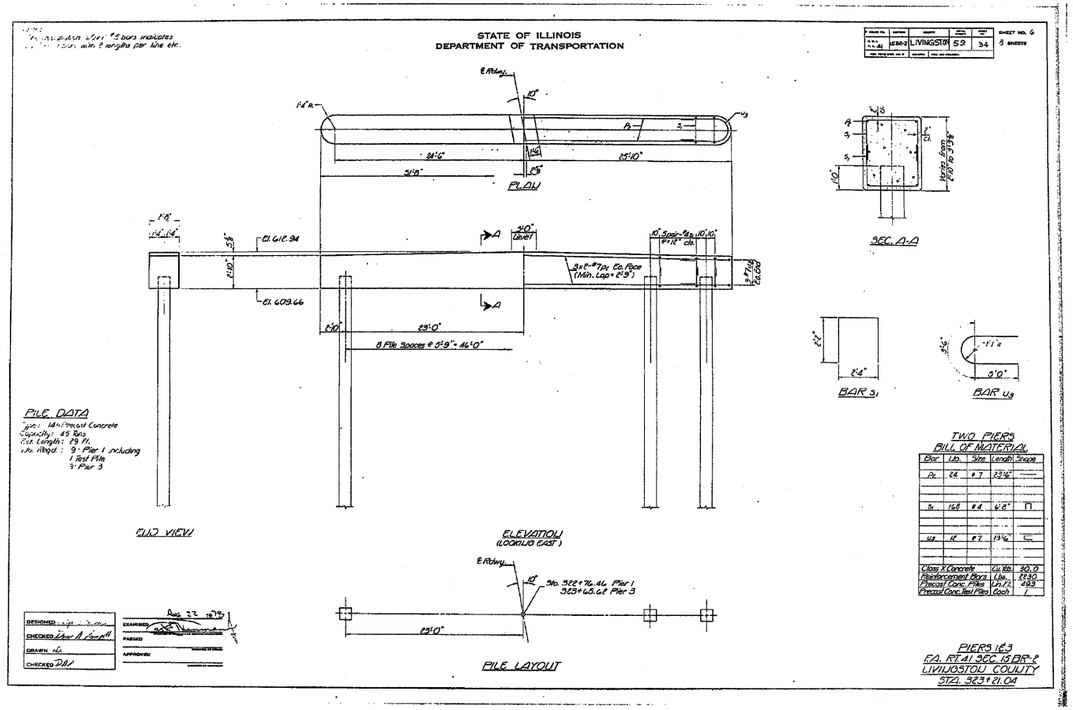
CONTRACT NO. 66691

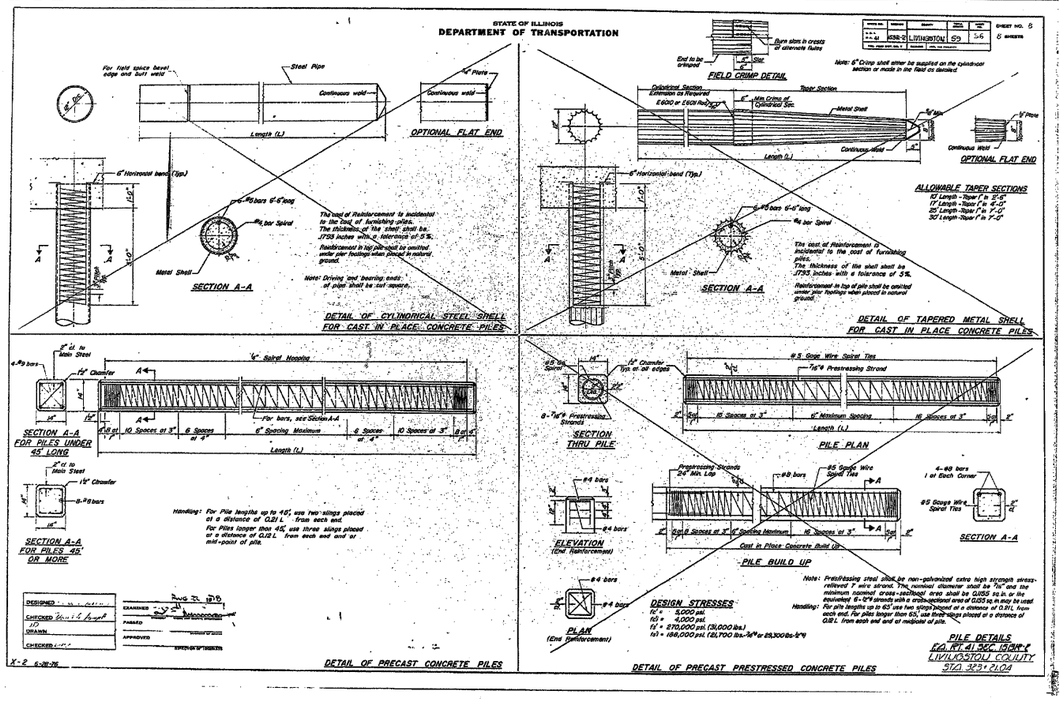
ILLINOIS FED. AID PROJECT





FOR INFORMATION ONLY





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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	52
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			

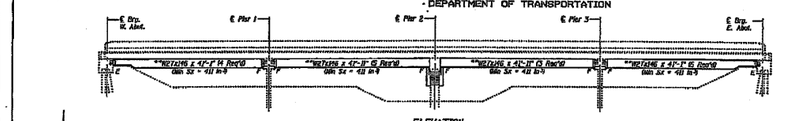
UPLT COPY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

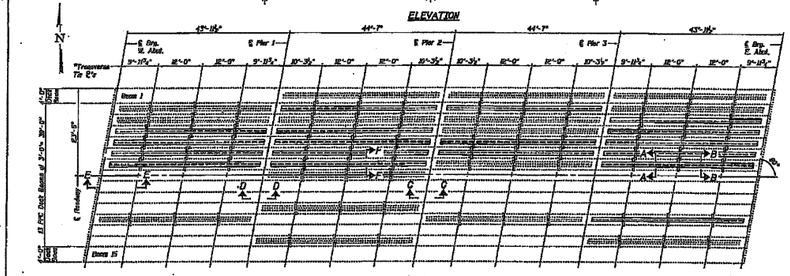
SHEET NO. 1
2 SHEETS

Contract Section --- 66691

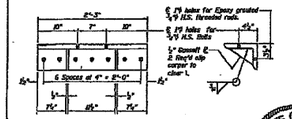
Section 15(BR-2,BR-3)D-1



ELEVATION



PLAN



L ℄ DETAIL
L Girder 2 @ 2'-3" ctr Rod'g

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing piers are subject to greater construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary equipment 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 prices bid for the work.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors responsibility to account for the condition of the beams when developing construction procedures.

See Section 504 of the Standard Specifications for Epoxy Grouting of Threaded Rodin Dowels embedded in.

If the contractor's procedure for placement of beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, slides shall be used under the crane mat to assure uniform contact with the underlying beams.

The cost of epoxy grouting threaded rods at the pier cap, backwalls and beams shall be included with Furnishing and Erecting Structural Steel.

The Contractor has the option of using steel shell, See Special Provision.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	251,530

Effective: November 30, 2010

SLT-03-001-08

PLAN AND ELEVATION
F.A. RT. 41
LIVINGSTON COUNTY
SN 053-0150

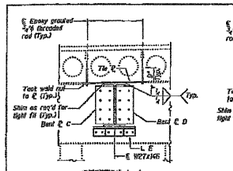
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

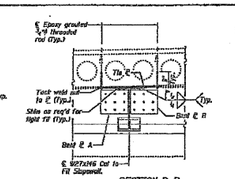
SHEET NO. 2
2 SHEETS

Contract Section --- 66691

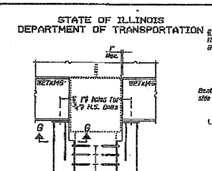
Section 15(BR-2,BR-3)D-1



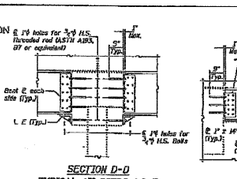
SECTION A-A
AT PIERS 1 & 3



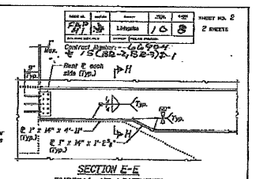
SECTION B-B
TYPICAL SPANS 1 AND 4
AT ABUTMENT



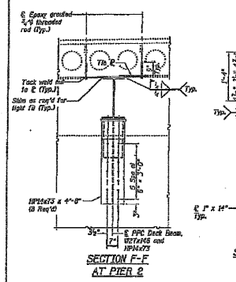
SECTION C-C
TYPICAL AT PIER 2



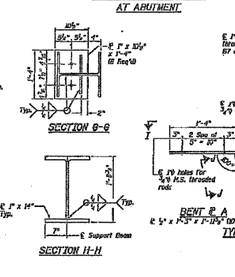
SECTION D-D
TYPICAL AT PIERS 1 & 3



SECTION E-E
TYPICAL AT ABUTMENT

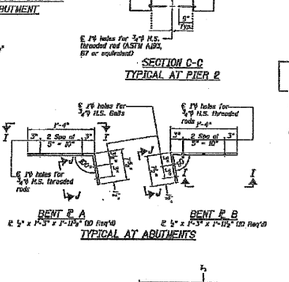


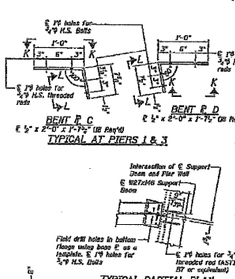
SECTION F-F
AT PIER 2

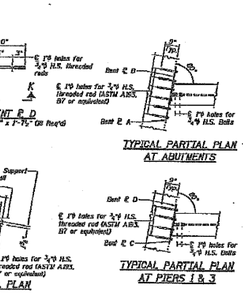


SECTION G-G

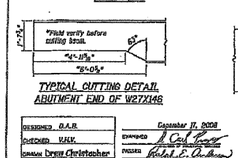
SECTION H-H



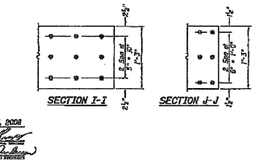




TYPICAL PARTIAL PLAN
AT ABUTMENTS

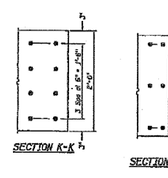


TYPICAL CUTTING DETAIL
ABUTMENT END OF W27X146

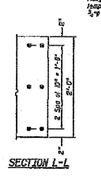


SECTION I-I

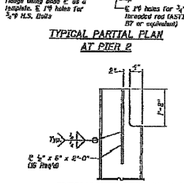
SECTION J-J



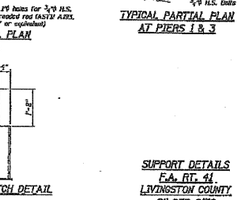
SECTION K-K



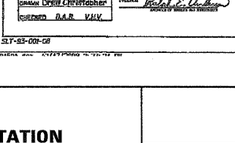
SECTION L-L



TYPICAL PARTIAL PLAN
AT PIER 2

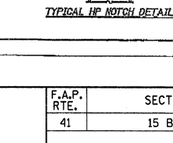


TYPICAL PARTIAL PLAN
AT PIERS 1 & 3



SLT-03-001-08

SUPPORT DETAILS
F.A. RT. 41
LIVINGSTON COUNTY
SN 053-0150



TYPICAL HP NOTCH DETAIL

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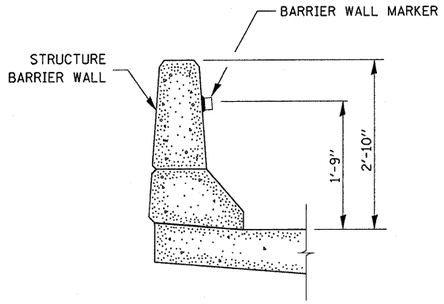
		DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

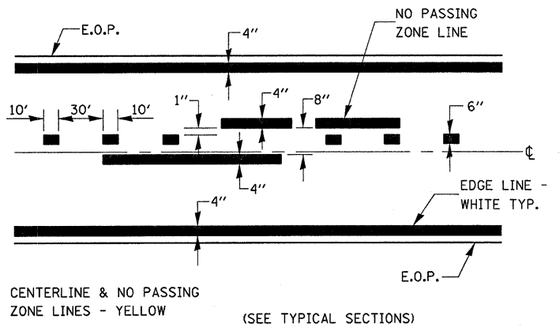
EXISTING BRIDGE REPAIR PLANS
SUPPORT DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	53
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			

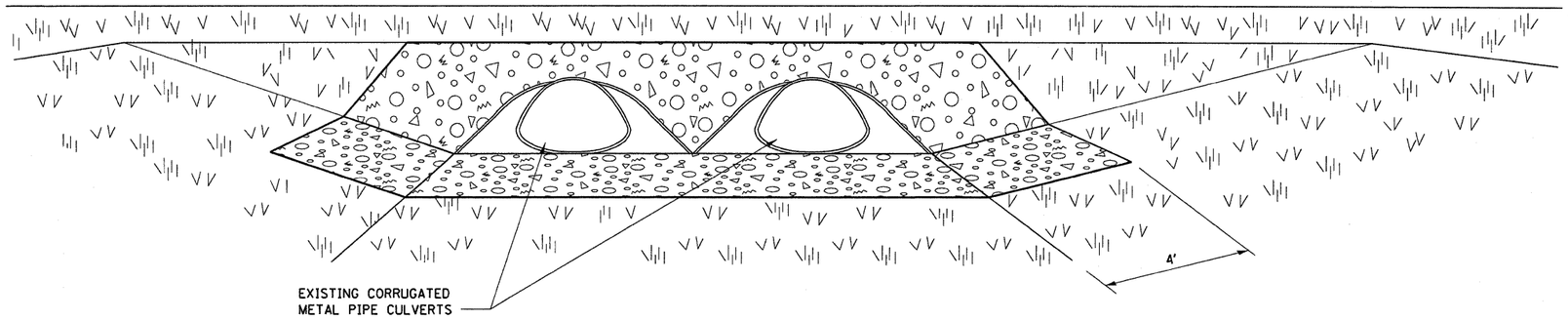


BARRIER WALL MARKER



(SEE TYPICAL SECTIONS)

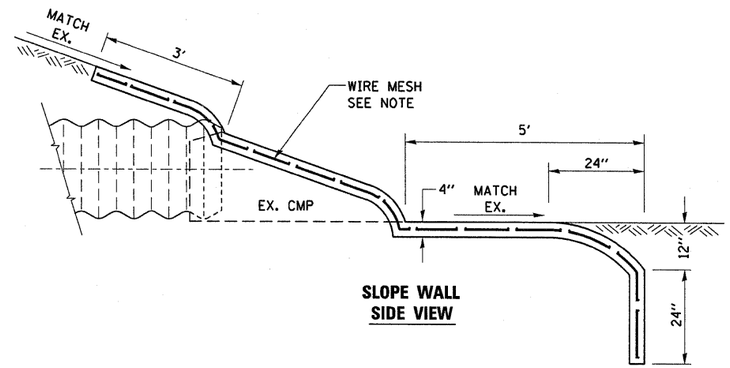
PAVEMENT MARKING



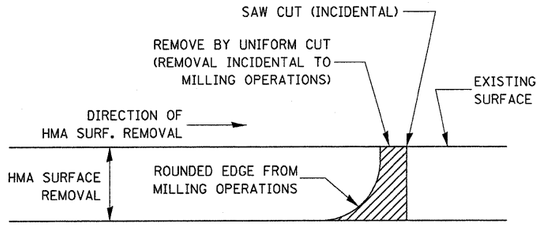
SLOPE WALL DETAIL

PLACED BOTH SIDE OF PRIVATE ENTRANCE
STA. 319+53.90

1. CONCRETE FOR SLOPE WALLS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE.
2. COST OF FURNISHING AND INSTALLING WIRE MESH SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE. WIRE MESH TO WEIGH NOT LESS THAN 58* PER 100 SQ. FT.
3. EXCAVATION FOR SLOPE WALLS WILL BE INCLUDED IN THE CONTRACT UNIT PRICE PER CUBIC YARD FOR MISCELLANEOUS CONCRETE.

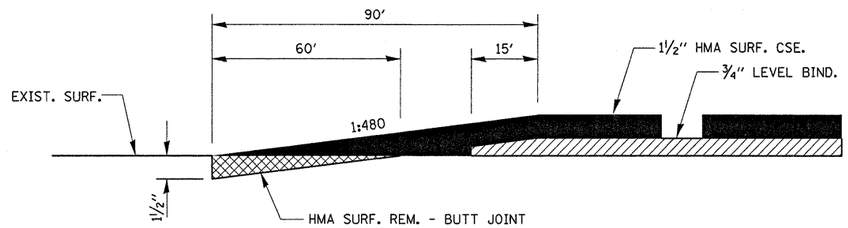


SLOPE WALL
SIDE VIEW



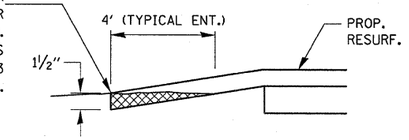
NOTE:
WHEN MILLING OPERATIONS PRODUCE A ROUNDED EDGE, THEN A SAW CUT SHALL BE USED TO MANUFACTURE A PERPENDICULAR EDGE AS SHOWN IN THE DETAIL. THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE USE OF THIS DETAIL

HMA DETAIL AT BUTT JOINTS



DETAIL AT BUTT JOINT

THE COST OF REMOVAL AT EXISTING HMA OR P.C.C. LOCATIONS SHALL BE PAID FOR PER SQ. YD. BY THE APPROPRIATE PAY ITEM. REMOVAL AT THE EXISTING AGG. LOCATIONS SHALL BE INCIDENTAL TO THE HMA. A-3 LOCATIONS SHALL BE FEATHER TAPERED.



DETAIL AT ENTRANCES

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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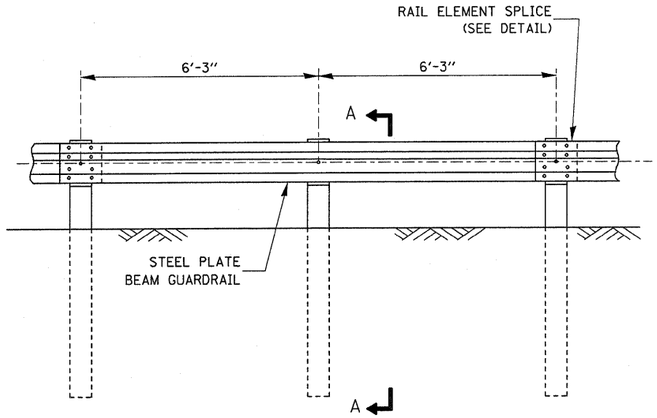
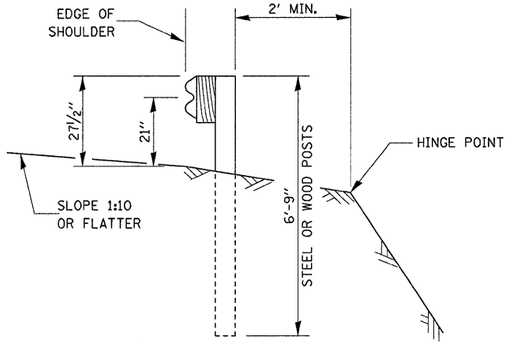
		CONTRACT NO. 66691		
	ILLINOIS FED. AID PROJECT			



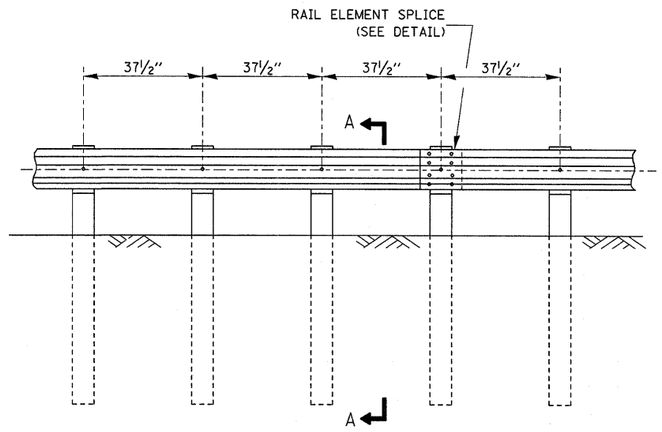
ELEVATION

TYPE A

6'-3" TYPICAL POST SPACING



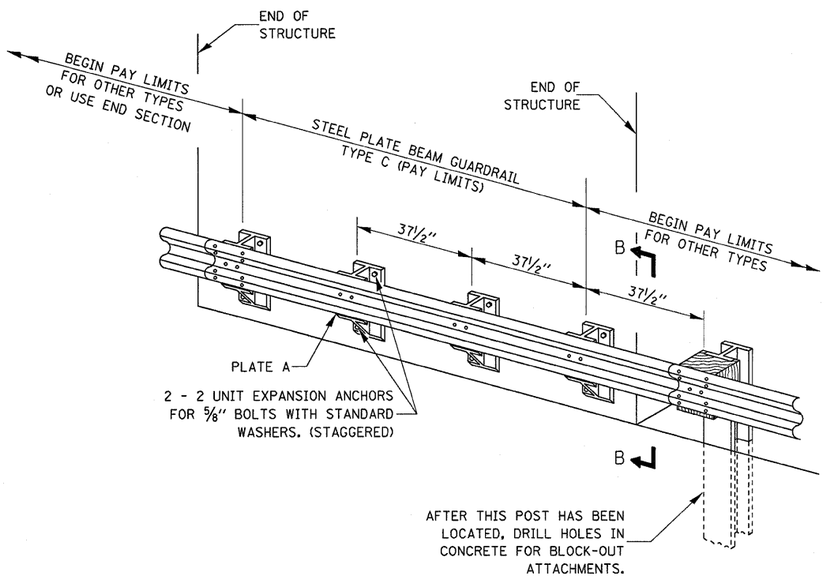
SECTION A–A



ELEVATION

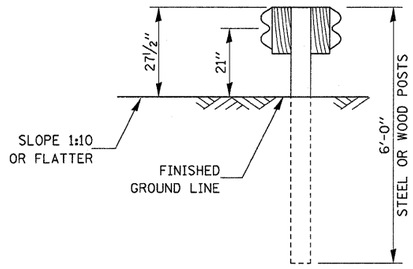
TYPE B

37½" CLOSED POST SPACING

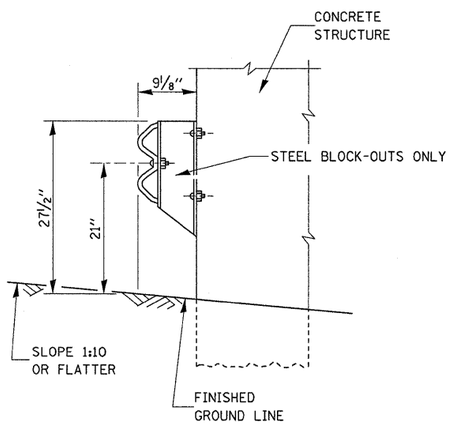


TYPE C

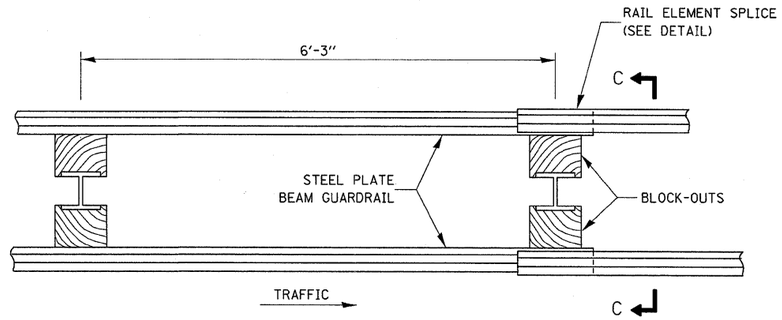
37½" BLOCK-OUT SPACING



SECTION C–C



SECTION B–B



PLAN

TYPE D

DOUBLE STEEL PLARE BEAM GUARDRAIL
6'-3" TYPICAL POST SPACING

GENERAL NOTES

ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

THE EXISTING STEEL POSTS MAY BE DRILLED TO MATCH THE BOLT PATTERN SHOWN HEREIN FOR THE WOOD BLOCK-OUTS, OR A NEW STEEL POST SHALL BE PROVIDED.

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL SYSTEM USED PRIOR TO JANUARY 1, 2007. FOR DETAILS ON THE MIDWEST GUARDRAIL SYSTEM SEE STANDARD 630001.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

SCALE: | SHEET NO. 1 OF 4 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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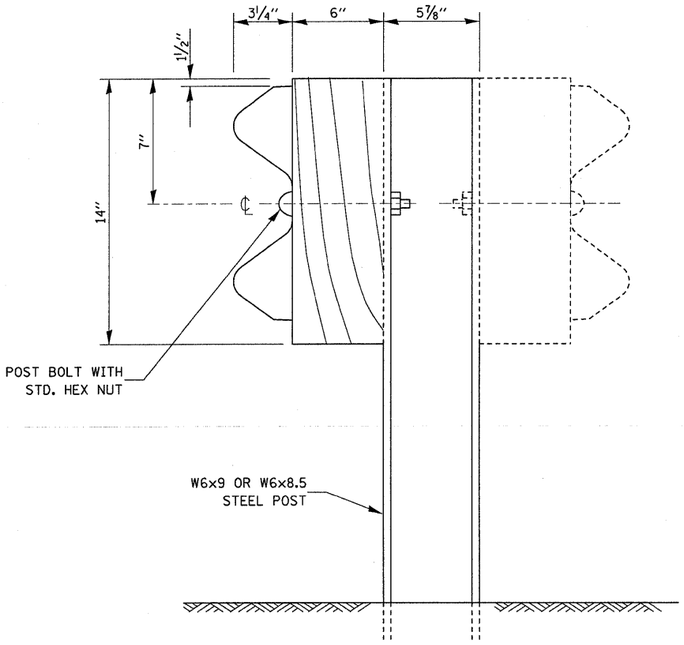
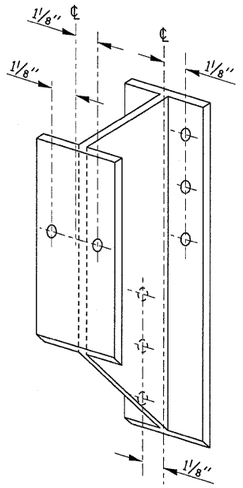
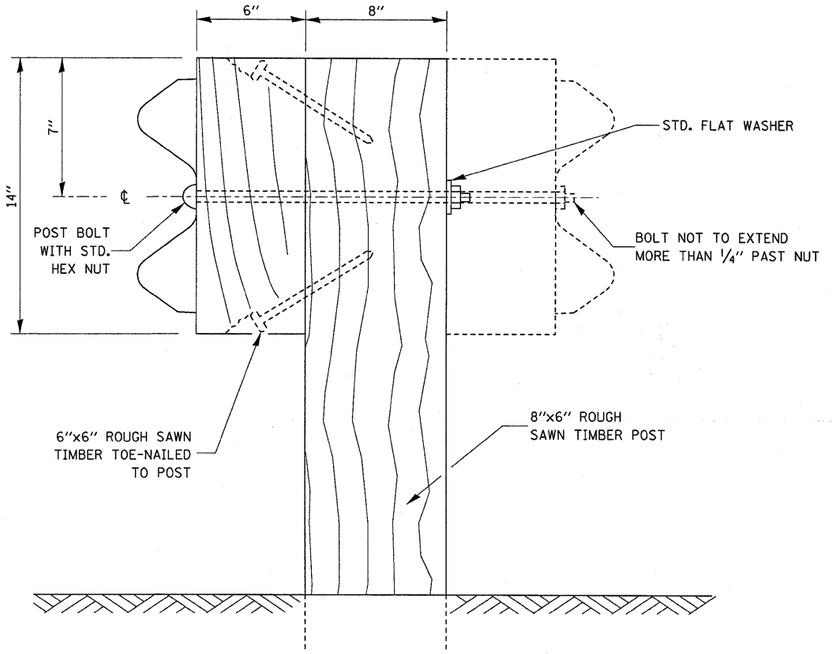
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



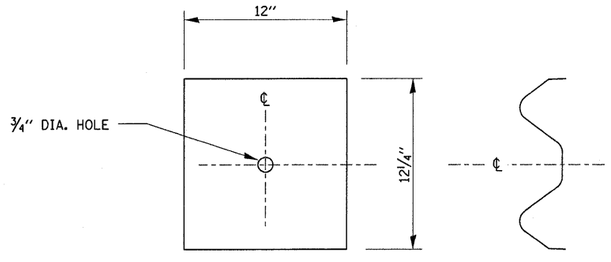
STEEL POST CONSTRUCTION



STEEL BLOCK-OUT DETAIL

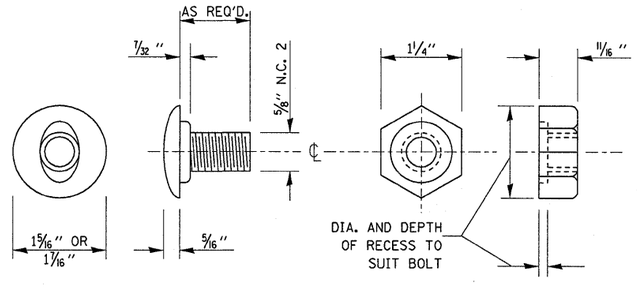


WOOD POST CONSTRUCTION



NOTE:
PLATE A SHALL BE PLACED BETWEEN RAIL ELEMENT AND BLOCK-OUT AT NON-SPLICE MOUNTING POINTS ONLY WHEN STEEL BLOCK-OUTS ARE USED.

PLATE A



POST OR SPLICE BOLT & NUT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

SCALE: | SHEET NO. 2 OF 4 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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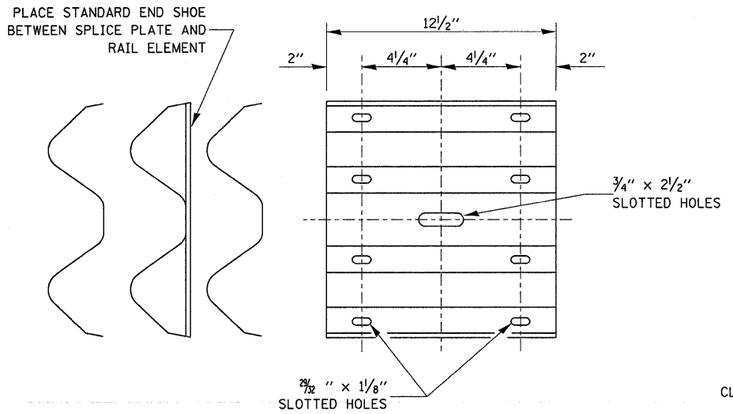
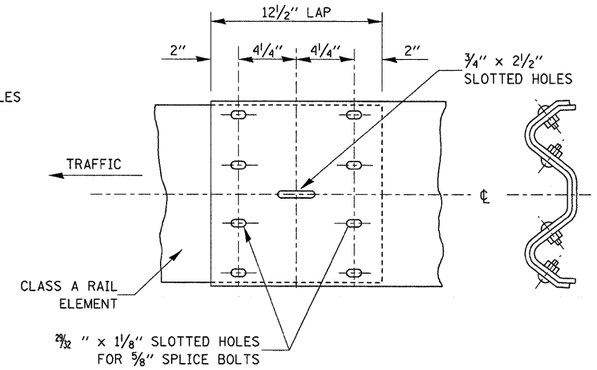
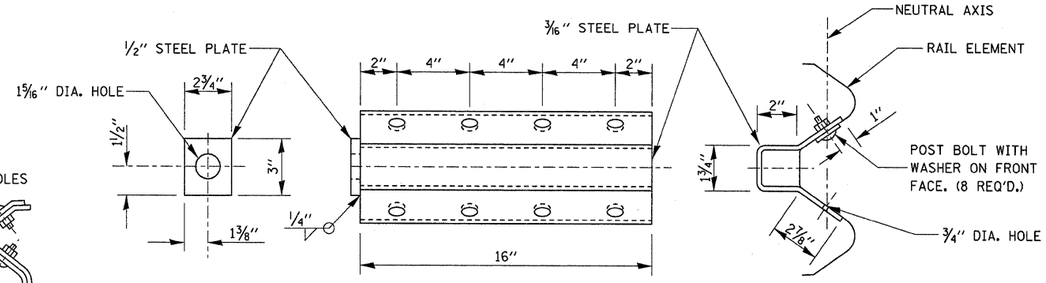
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



SPLICE PLATE

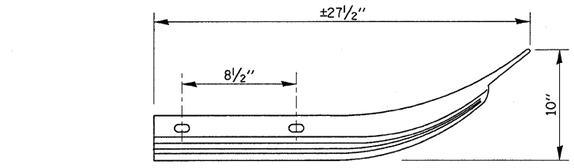


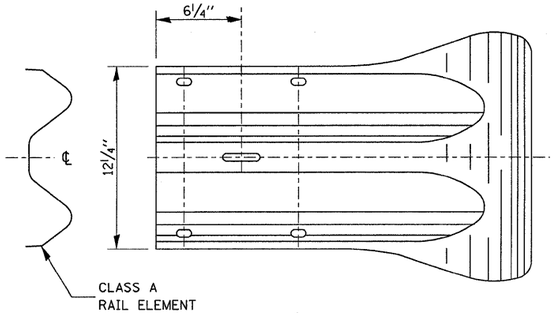
RAIL ELEMENT SPLICE



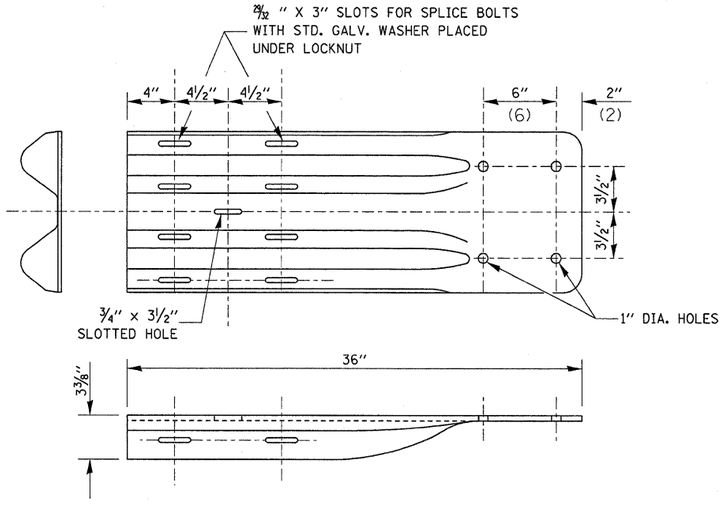
NOTE:
ANCHOR PLATE T SHALL BE USED TO ATTACH CABLE ASSEMBLY TO GUARDRAIL WHEN REQUIRED ON TRAFFIC BARRIER TERMINALS.

ANCHOR PLATE T DETAILS





END SECTION

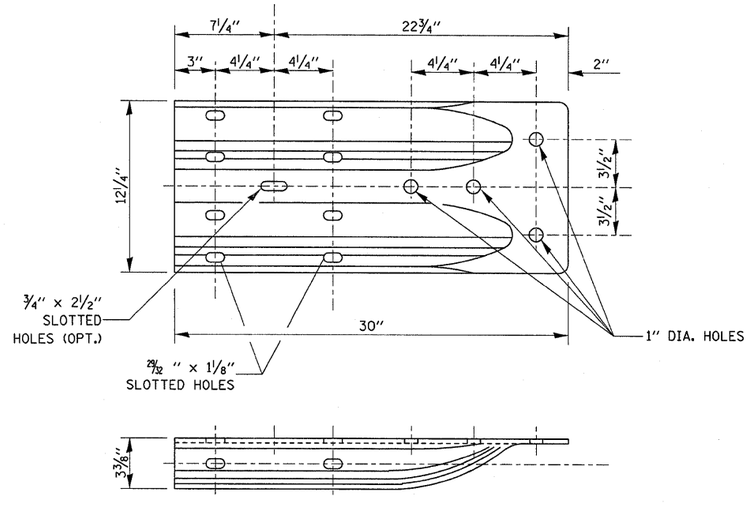


NOTE:
WHEN END SHOE IS ATTACHED TO A BRIDGE PARAPET WHICH HAS AN EXPANSION JOINT, THE BOLTS SHALL BE PROVIDED WITH A LOCKNUT OR DOUBLE NUT AND SHALL BE TIGHTENED ONLY TO A POINT THAT WILL ALLOW GUARDRAIL MOVEMENT.

THE STANDARD END SHOE SHALL BE ATTACHED TO THE CONCRETE WITH PRE-DRILLED OR SELF-DRILLING ANCHOR BOLTS. THE ANCHOR CONE SHALL BE SET FLUSH WITH THE SURFACE OF THE CONCRETE.

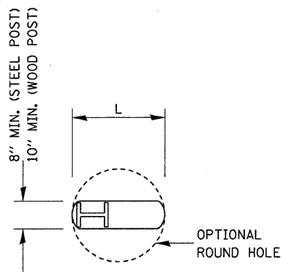
EXTERNALLY THREADED STUDS PROTRUDING FROM THE SURFACE OF THE CONCRETE WILL NOT BE PERMITTED.

END SHOE

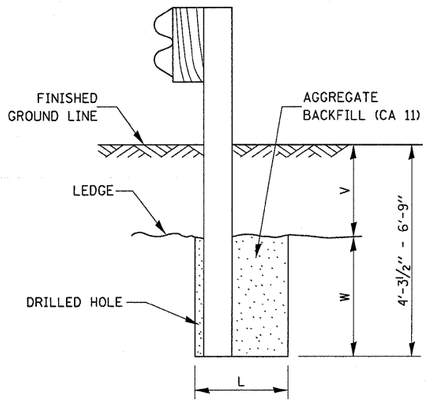


ALTERNATE END SHOE

FILE NAME = c:\pw_work\pwidot\schwankerg\dms73146\details.dgn	USER NAME = schwankerg	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	PLOT SCALE = 50.0000 ' / IN.	DRAWN -	REVISED -			41	15BR-2	LIVINGSTON	64	57
	PLOT DATE = Oct 16, 2009 - 03:00:36 PM	CHECKED -	REVISED -					CONTRACT NO. 66691		
		DATE -	REVISED -		SCALE: SHEET NO. 3 OF 4 SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



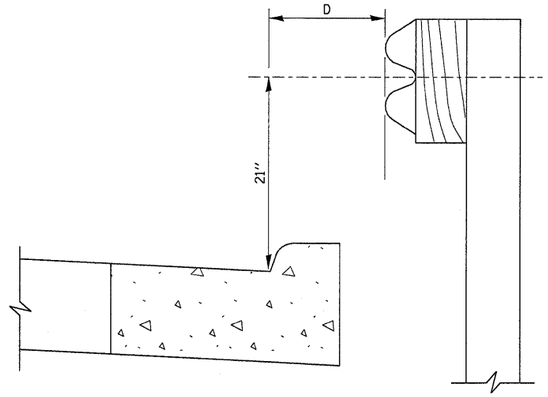
PLAN



NOTE:
LEDGE LINE IS TOP OF ROCK LEDGE OR HARD SLAG FILL.

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

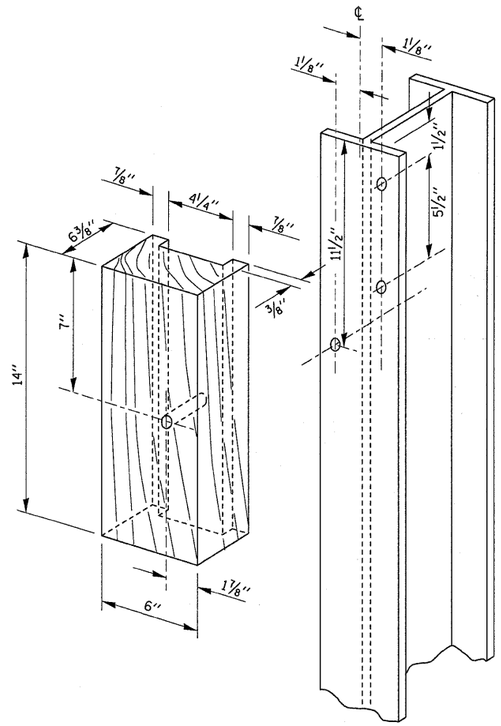


NOTE:
IF IT IS NECESSARY FOR D TO BE MORE THAN 12" AND LESS THAN 10'-0" TYPE M-2 CURB AND GUTTER (STD. 606001) SHALL BE USED IN FRONT OF AND IN ADVANCE OF THE GUARDRAIL.

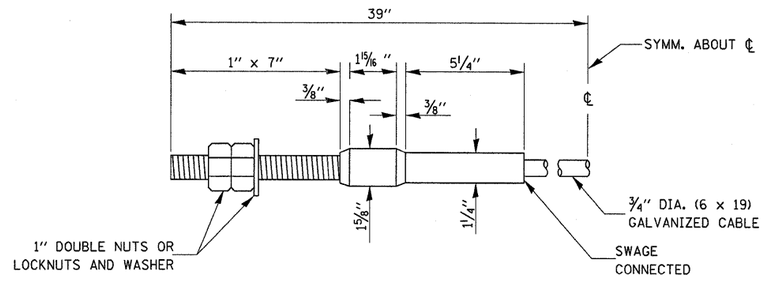
GUARDRAIL PLACED BEHIND CURB

(D = 0 DESIRABLE TO 12" MAXIMUM)

V	W	L	
		STEEL POST	WOOD POST
0" - 18"	24"	21"	23"
>18" - 41½"	12"	8"	10"
>41½" - 53½"	12" - 0"	8"	10"



WOOD BLOCK-OUT AND STEEL POST DETAILS



CABLE ASSEMBLY

40,000 LBS. MIN. BREAKING STRENGTH
TIGHTEN TO TAUT TENSION.

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

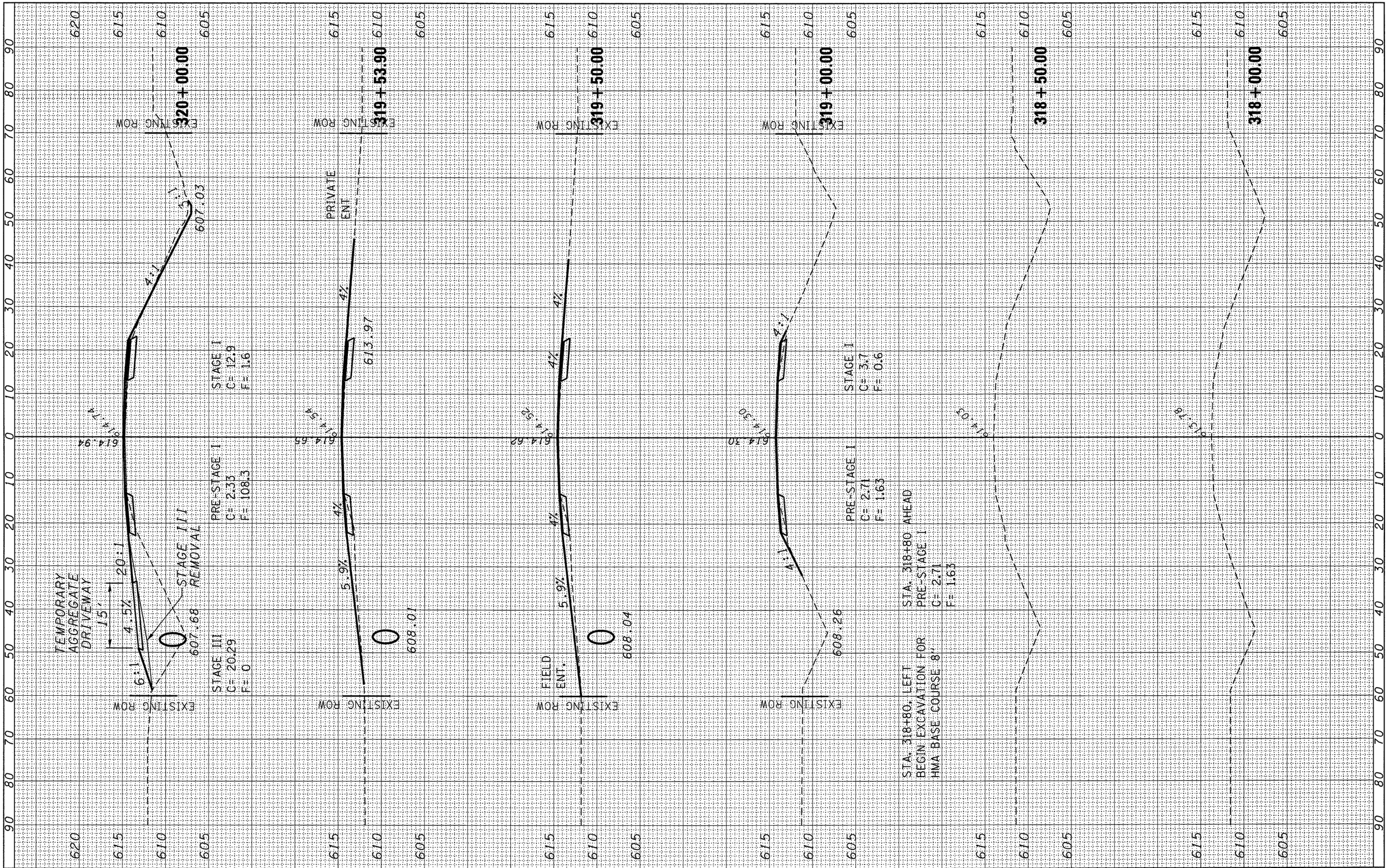
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

SCALE: | SHEET NO. 4 OF 4 SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15BR-2	LIVINGSTON	64	58
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY — NOTE BOOK — NO. | SURVEYED | PLOTTED | DRAWN | TRACED | AREAS | AREAS CHECKED | BY | DATE

ORIGINAL SURVEY — NOTE BOOK — NO. | SURVEYED | PLOTTED | DRAWN | TRACED | AREAS | AREAS CHECKED | BY | DATE



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

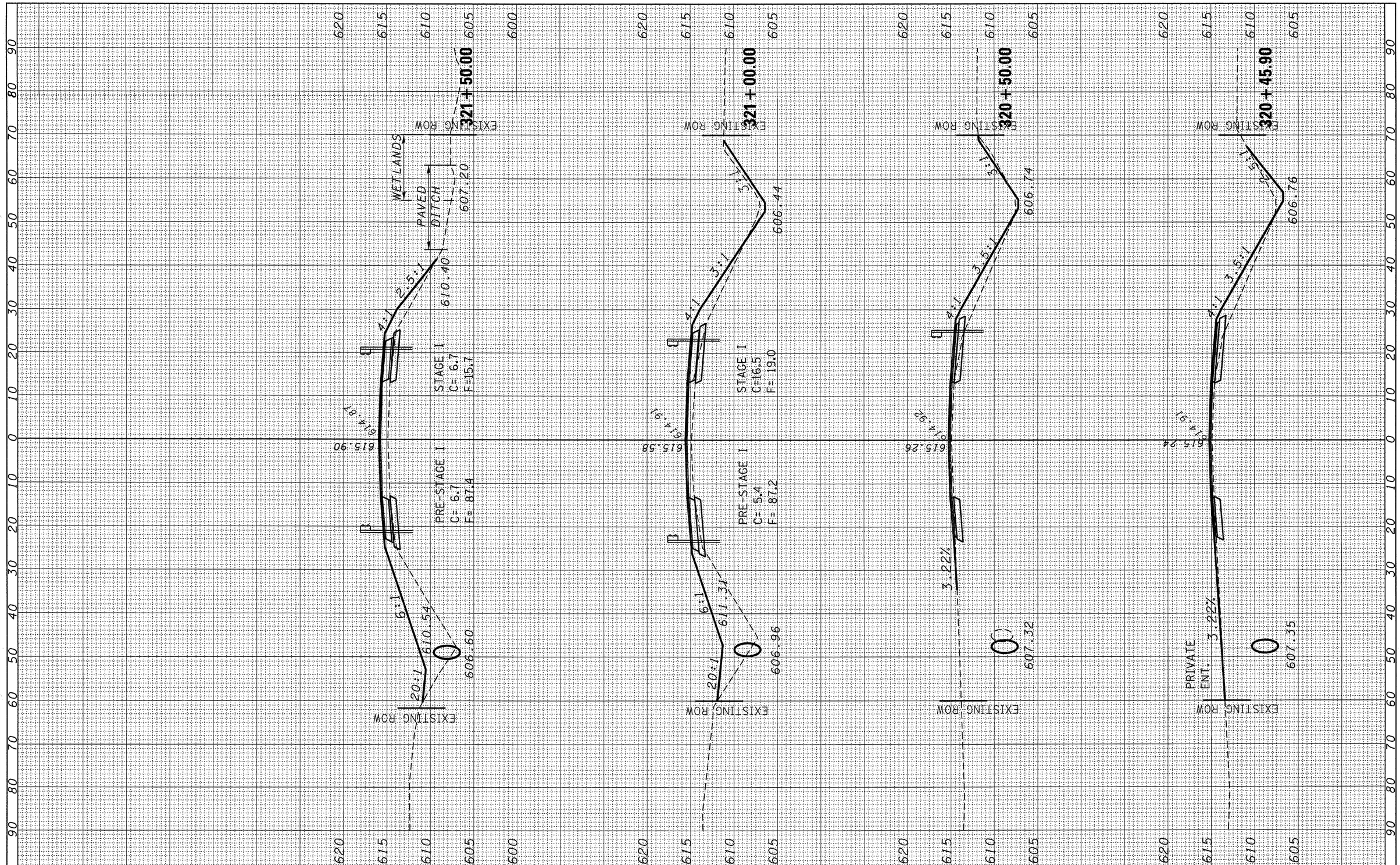
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 318+00.00 TO STA. 320+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	59
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

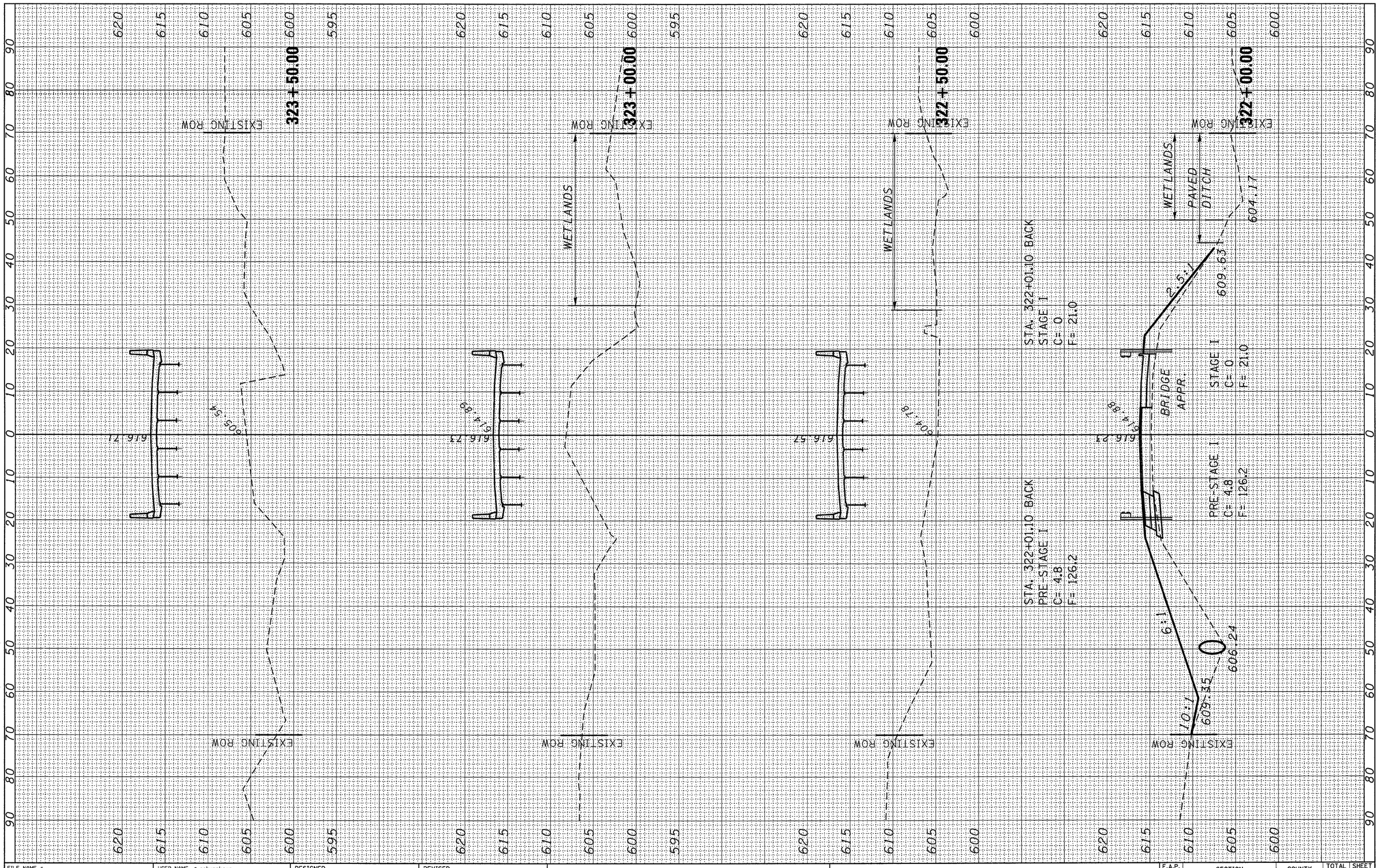
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 320+45.90 TO STA. 321+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	60
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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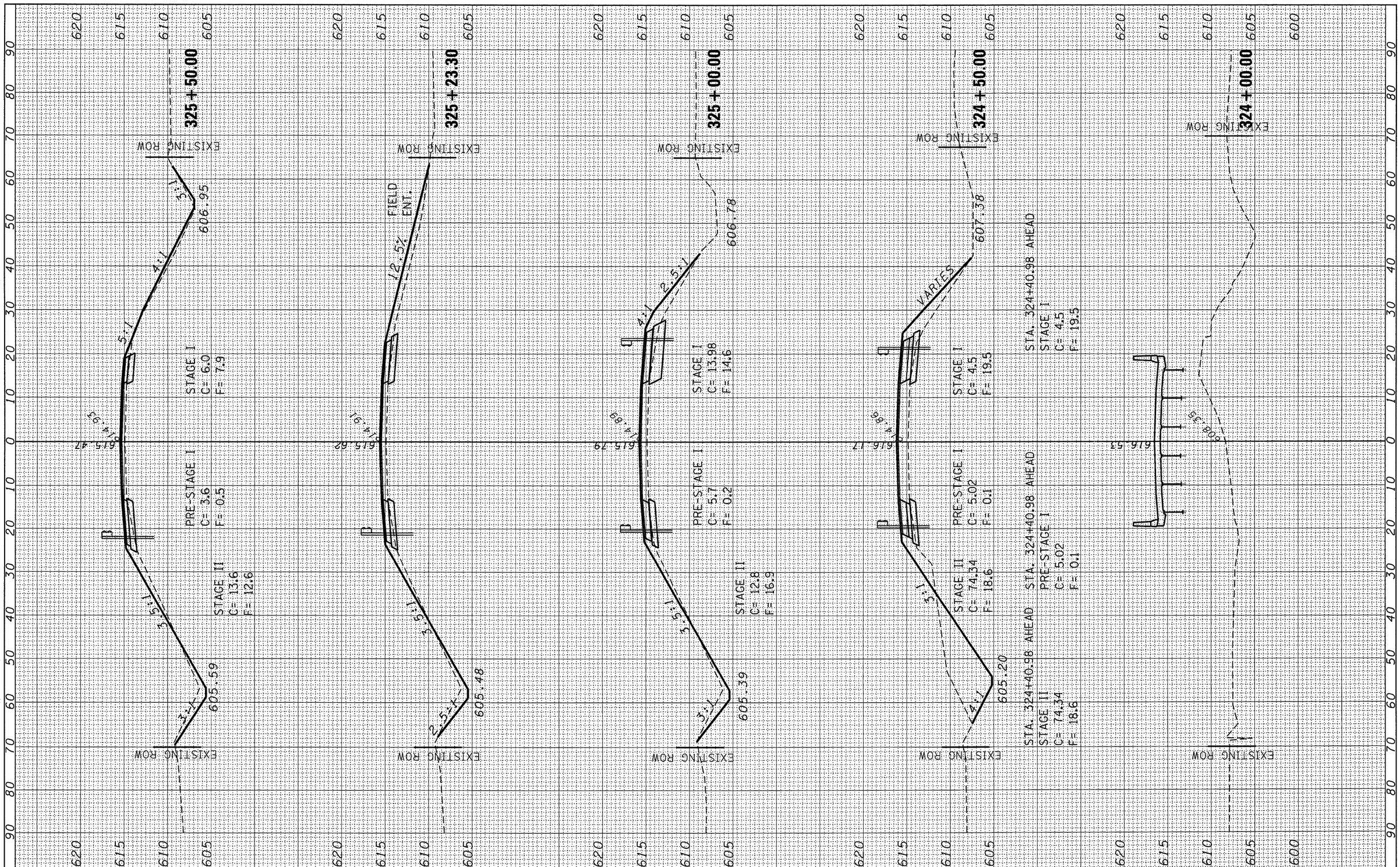
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 322+00.00 TO STA. 323+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	61
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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	PLOTTED		
NOTE BOOK	TRIANGLE		
NO.	AREAS		
	AREAS CHECKED		

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

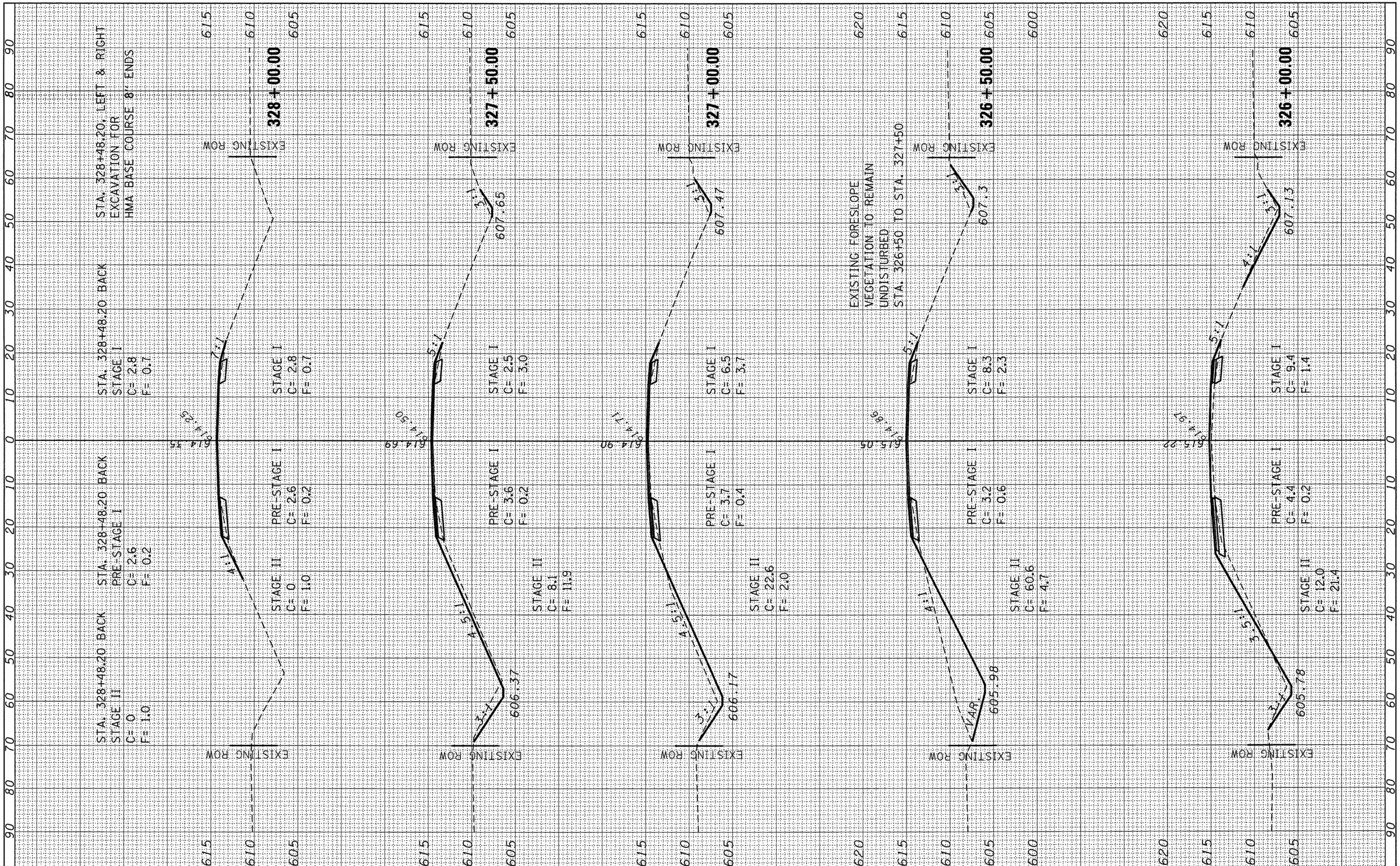
CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 324+00.00 TO STA. 325+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	62
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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	PLOT DATE = Oct 16, 2009 - 03:23:43 PM	DATE -	REVISED -

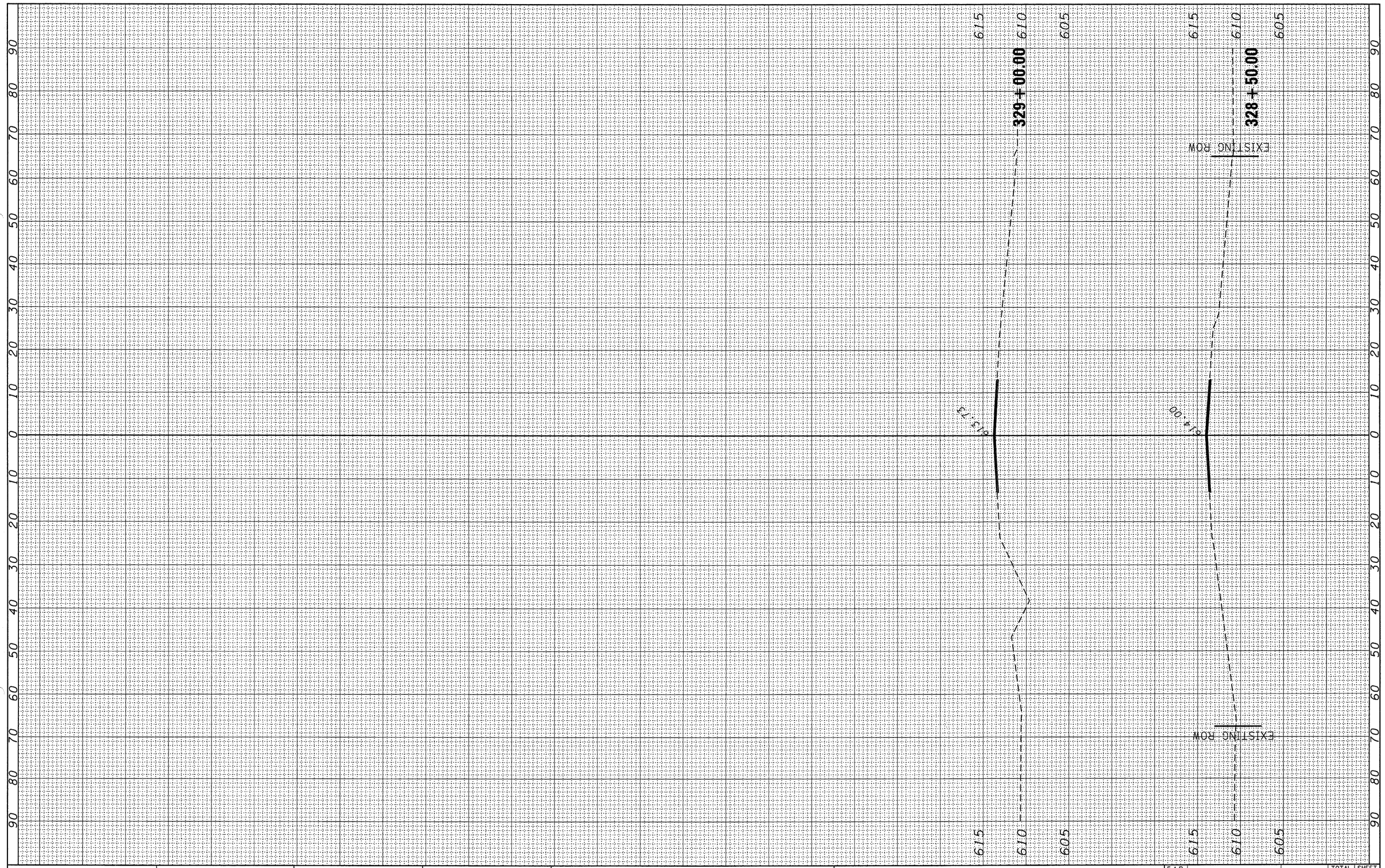
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 326+00.00 TO STA. 328+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	63
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. 328+50.00 TO STA. 329+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41	15 BR-2	LIVINGSTON	64	64
		CONTRACT NO. 66691		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		