

CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	1
			+1	
			45	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

F.A.P. 853 ROUTE (IL 14)
SECTION 6B-1
PROJECT: BRF-0869(030)
FRANKLIN COUNTY
C-99-018-07

**BRIDGE REPLACEMENT ON ILLINOIS ROUTE 14
OVER DRUMMOND BRANCH**

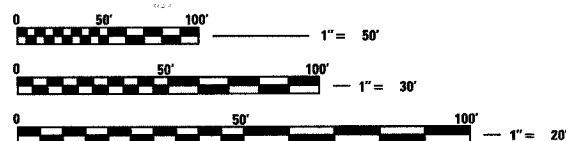
D-99-015-03



FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA
2008 ADT = 2800
5.3% TRUCKS
POSTED SPEED 55 MPH

TOWNSHIP: BENTON

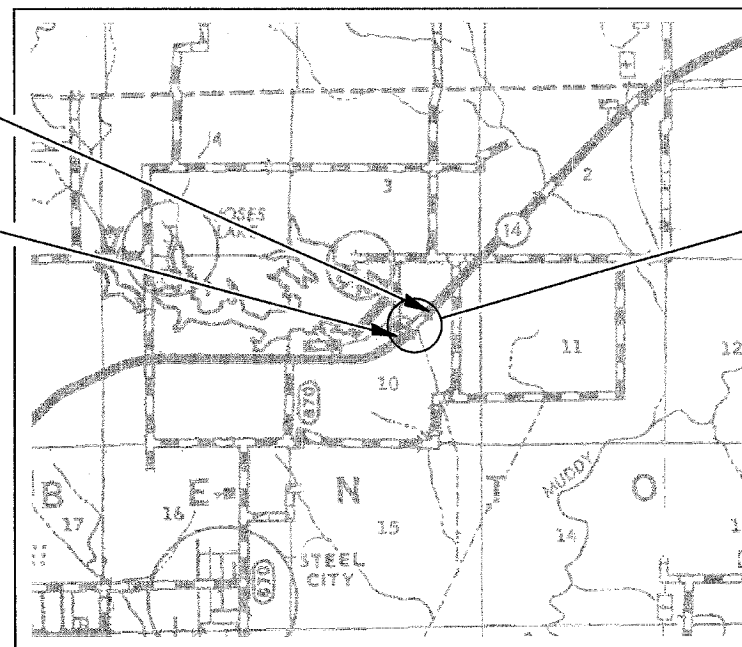


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROPOSED SECTION 6B-1 ENDS
STA 153+25

PROPOSED SECTION 6B-1 BEGINS
STA. 146+30



PROPOSED BRIDGE
OVER DRUMMOND BRANCH
STRUCTURE NO. 028-0075
SINGLE SPAN STEEL W27 BRIDGE;
58'-6" BK TO BK ABUTMENTS; 0° SKEW
CL STR STA. 149+71.25
EXISTING SN 028-0023

SECTION 6B-1 PROJECT LENGTH

ROADWAY LENGTH = 636 FT 6 IN
BRIDGE LENGTH = 58 FT 6 IN
NET LENGTH OF PROJECT = 695 FT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *June 19, 2007*
William C. Lanie
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

October 12, 2007
Eric E. Haral
ENGINEER OF DESIGN AND ENVIRONMENT

October 12, 2007
Milton R. Sen, P.E.
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

PROJECT ENGINEER: DAVID PICHE
DESIGNER: LEANNE CORNELL

CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	2
FED ROAD DIST NO. 7		ILLINOIS		FED AID PROJECT

GENERAL NOTES

THE THICKNESS OF HOT MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN THE EXISTING SURFACE OR BASE ON WHICH THE HOT MIX ASPHALT MIXTURE IS PLACED.

FACTORS USED FOR QUANTITY CALCULATIONS ARE AS FOLLOWS:

ALL HOT MIX ASPALT:	2.016 TONS/CU. YD.
BITUMINOUS MATERIALS ON PAVEMENT:	0.09 GAL./SQ. YD.
ALL AGGREGATE:	2.05 TONS/CU. YD.
RIPRAP	1.50 TONS/CU YD

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

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

ON ALL SUPERELEVATED CURVES, THE PROPOSED BASE COURSE WIDENING SHALL BE CONSTRUCTED WITH A SLOPE CONFORMING TO THE RATE OF SUPERELEVATION OF THE EXISTING PAVEMENT.

AT ALL LOCATIONS WHERE ASPHALT OR CONCRETE PAVEMENT JOINS AN EXISTING HOT MIX ASPHALT OR CONCRETE PAVEMENT, A SAWED JOINT SHALL BE CONSTRUCTED. THE COST OF THIS JOINT SHALL BE INCLUDED IN THE TYPE OF PAVEMENT BEING CONSTRUCTED.

QUANTITIES SHOWN IN THE PLANS FOR BRIDGE DECK GROOVING AND PROTECTIVE COAT INCLUDE THE BRIDGE AND THE BRIDGE APPROACH PAVEMENTS.

PROTECTIVE COATS SHALL BE APPLIED TO THE BRIDGE (BID ITEM 50300300), AND THE BRIDGE APPROACH PAVEMENTS, IN ACCORDANCE WITH ARTICLE 503.19 OF THE STANDARD SPECIFICATIONS. THE PROTECTIVE COAT SHALL BE APPLIED REGARDLESS OF THE CURING METHOD USED. THE RATE OF APPLICATION FOR EACH COAT ON SAW CUT GROOVED AREAS SHALL BE 25 SQUARE YARDS PER GALLON OF MIXTURE.

REMOVAL OF EXISTING ±10" THICK BRIDGE APPROACH PAVEMENTS IS INCLUDED IN THE QUANTITY FOR PAVEMENT REMOVAL ; ESTIMATED AT 109 SQ YDS.

ALL OBSTRUCTIONS WHICH ARE WITHIN THE CLEAR ZONE SHOWN ON THE TYPICAL SECTION, AND ARE NOT SHIELDED BY THE PROPOSED GUARDRAIL, SHALL BE REMOVED BETWEEN STA. 145+75 AND STA. 153+80. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, ECT. WHICH PROJECT 4 IN. OR MORE ABOVE THE GROUNDLINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 4 IN. OR GREATER.

THE QUANTITY OF TEMPORARY PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION FOR THE SURFACE COURSE.

THE QUANTITY OF SHORT TERM PAVEMENT MARKING SHOWN IN THE PLANS IS BASED ON ONE APPLICATION EACH FOR THE SURFACE COURSE AND THE BINDER.

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

"NARROW BRIDGE" SIGNS WITH ADVISORY TAGS "9 FT-11IN" SHALL BE ERECTED BETWEEN ONE ROAD CONSTRUCTION AHEAD AND THE SIGNAL AHEAD SIGNS FOR STAGE I TRAFFIC.

ATTAINMENT OF PROPER CROWN SHALL BE FULLY ACCOMPLISHED WITH THE HOT MIX ASPHALT SURFACE REMOVAL OR HOT MIX ASPHALT BINDER COURSE.

TRIM EDGES OF EXISTING HOT MIX ASPHALT SURFACE FLUSH WITH EXISTING PAVEMENT PRIOR TO CONSTRUCTING NEW BASE COURSE WIDENING

THE ADVANCE DETECTOR LOOPS ARE TYPICALLY LOCATED 300 FEET IN ADVANCE OF THE STOP BAR. THE BUREAU OF OPERATIONS SHOULD APPROVE THE LOOP LOCATIONS PRIOR TO INSTALLATION.

THE CENTERLINE PAVEMENT MARKING SHOULD BE REMOVED FROM THE STOP BAR TO THE IMPACT ATTENUATORS OR DRUMS. EDGE LINE PAVEMENT MARKING SHOULD BE REMOVED IF A 10 FOOT LANE WIDTH CANNOT BE MAINTAINED. TEMPORARY EDGE LINES SHOULD BE INSTALLED WHEN THE EDGE LINES ARE REMOVED.

VERTICAL PANELS SHOWN ON STANDARD 701321 WILL NOT BE REQUIRED ON THE STAGE II NEW BRIDGE PARAPET. THE BARRIER WALL REFLECTORS SHALL BE INSTALLED PRIOR TO OPENING TO TRAFFIC.

ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE SET TO FLASH ALL RED.

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

ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE LEFT IN PLACE UNTIL REMOVAL IS REQUIRED TO CONSTRUCT FINAL GRADE LINES.

THE ALGEBRAIC DIFFERENCE BETWEEN THE PAVEMENT AND SHOULDER SLOPES SHALL NOT EXCEED 8%. THE SHOULDER ON THE OUTSIDE OF SUPERELEVATED CURVES SHALL BE FLATTENED ACCORDINGLY.

COMMITMENTS: NONE AS OF JUNE 29, 2007, REFER TO COMMITMENT FILE FOR ANY COMMITMENTS AFTER THIS DATE.

STANDARDS

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-03	TEMPORARY EROSION CONTROL SYSTEMS
420001-06	PAVEMENT JOINTS
420401-05	BRIDGE APPROACH PAVEMENT
421001-01	REINFORCEMENT FOR CONTINUOUSLY REINFORCED PCC PAVEMENT
515001-02	NAME PLATE FOR BRIDGES
542401	METAL END SECTIONS FOR PIPE CULVERTS
630001-07	STEEL PLATE BEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1, (SPECIAL) GUARDRAIL TERMINALS
631031-06	TRAFFIC BARRIER TERMINAL, TYPE 6
635011-01	REFLECTOR MARKER & MOUNTING DETAILS
701006-02	OFF-ROAD OPERATIONS, 2L 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE
701201-02	LANE CLOSURE, 2L 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701301-02	LANE CLOSURE, 2L 2W, SHORT TIME OPERATIONS
701321-06	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-02	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS ≥ 45 MPH
702001-06	TRAFFIC CONTROL DEVICES
704001-03	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS

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Prepared By:	<i>John J. Danaher</i> DISTRICT STUDIES & PLAN ENGINEER
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Examined By:	<i>Carrie Nelson</i> DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:	<i>Devin Grammes</i> DISTRICT OPERATIONS ENGINEER
Examined By:	<i>Joseph Lemire</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>Bruce W. Pablos</i> DISTRICT MATERIALS ENGINEER
Examined By:	<i>Jim Dunbar</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>Samuel J. ...</i> ASSISTANT REGIONAL ENGINEER
Approved By:	<i>Mary C. Lavin</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
DATE	June 19 20 07

Rev.

SUMMARY OF QUANTITIES

RURAL - FRANKLIN COUNTY HBP FUNDING 80% FEDERAL; 20% STATE CONSTRUCTION TYPE CODE X071-2A SN 028-0075			
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	32
20200100	EARTH EXCAVATION	CU YD	1276
20300100	CHANNEL EXCAVATION	CU YD	337
20400100	BORROW EXCAVATION	CU YD	1237
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	119
25000200	SEEDING, CLASS 2	ACRE	0.7
25000350	SEEDING, CLASS 7	ACRE	0.7
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	112
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	84
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	84
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1.4
25100115	MULCH, METHOD 2	ACRE	1.0
25100630	EROSION CONTROL BLANKET	SQ YD	2024
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	70
28000300	TEMPORARY DITCH CHECKS	EACH	8
28000400	PERIMETER EROSION BARRIER	FOOT	1603
28100107	STONE RIPRAP, CLASS A4	SQ YD	593
28200200	FILTER FABRIC	SQ YD	701
35600716	HOT - MIX ASPHALT BASE COURSE WIDENING, 10"	SQ YD	332
40600100	BITUMINOUS MATERIAL (PRIME COAT)	GALLON	68
40600982	HOT - MIX ASPHALT REMOVAL - BUTT JOINT	SQ YD	136
40600990	TEMPORARY RAMP	SQ YD	23
40603090	HOT - MIX ASPHALT BINDER COURSE, IL-19.0 N90	TON	866
40603320	HOT - MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	143
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	253
42001300	PROTECTIVE COAT	SQ YD	253
44000100	PAVEMENT REMOVAL	SQ YD	276
48100700	AGGREGATE SHOULDERS, TYPE A, 8"	SQ YD	125
48203029	HOT - MIX ASPHALT SHOULDERS, 8"	SQ YD	459
48203100	HOT - MIX ASPHALT SHOULDERS	TON	212
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	78

RURAL - FRANKLIN COUNTY HBP FUNDING 80% FEDERAL; 20% STATE CONSTRUCTION TYPE CODE X071-2A SN 028-0075			
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
50200100	STRUCTURE EXCAVATION	CU YD	236
50300100	FLOOR DRAINS	EACH	3
50300225	CONCRETE STRUCTURES	CU YD	37.6
50300255	CONCRETE SUPERSTRUCTURE	CU YD	90.9
50300260	BRIDGE DECK GROOVING	SQ YD	223
50300280	CONCRETE ENCASEMENT	CU YD	4.2
50300300	PROTECTIVE COAT	SQ YD	287
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	1044
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	24,100
50800515	BAR SPLICERS	EACH	290
50901125	STEEL RAILING (TEMPORARY)	FOOT	30
51201400	FURNISHING STEEL PILES HP10X42	FOOT	435
51202305	DRIVING PILES	FOOT	435
51203400	TEST PILE STEEL HP10X42	EACH	2
51205200	TEMPORARY SHEET PILING	SQ FT	775
52100520	ANCHOR BOLTS, 1"	EACH	24
51500100	NAME PLATES	EACH	1
542C1099	PIPE CULVERTS, CLASS C, TYPE 2, 54"	FOOT	38
542C2749	PIPE CULVERTS, CLASS C, TYPE 4, 24"	FOOT	60
54213459	END SECTIONS 24"	EACH	2
54213489	END SECTIONS 54"	EACH	2
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	68
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	132
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	375
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	601
63300740	TEMPORARY GUARD RAIL	FOOT	150
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6
67100100	MOBILIZATION	L SUM	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	2
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1

*SPECIALTY ITEMS

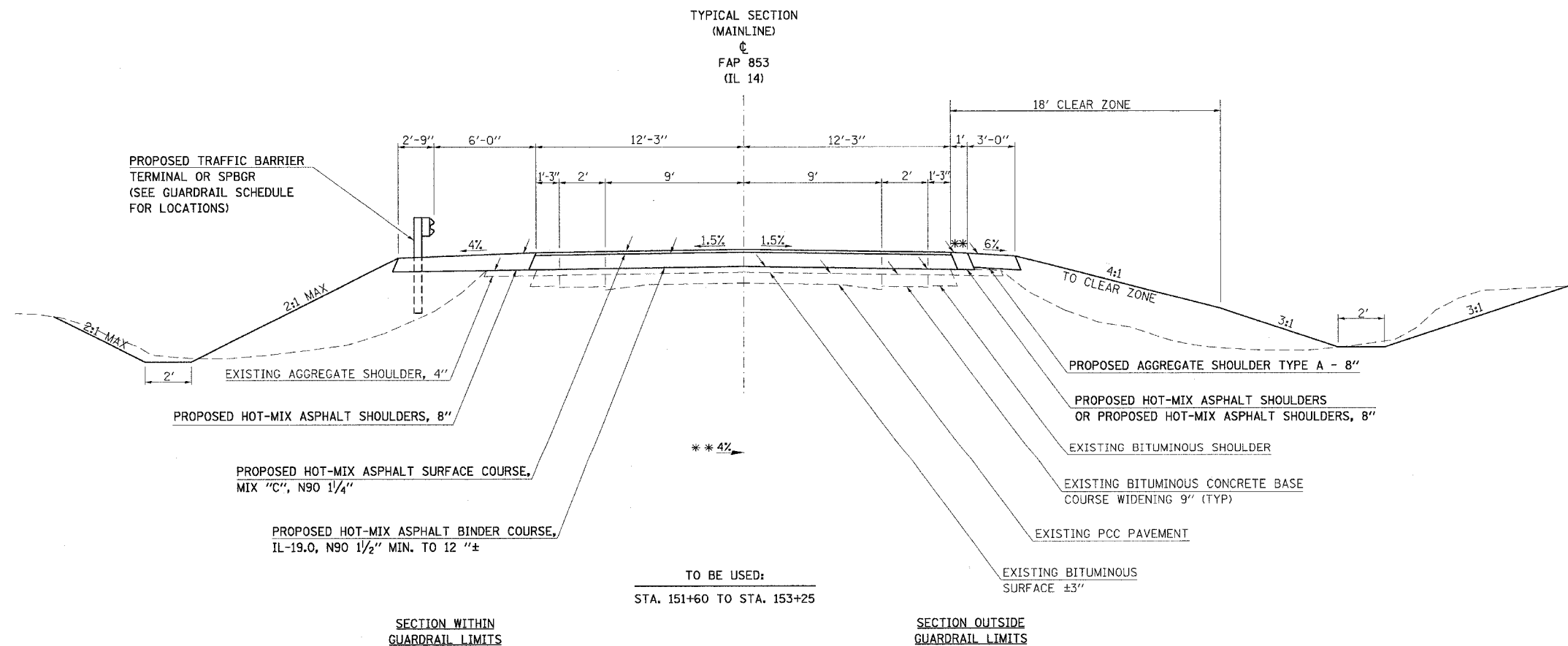
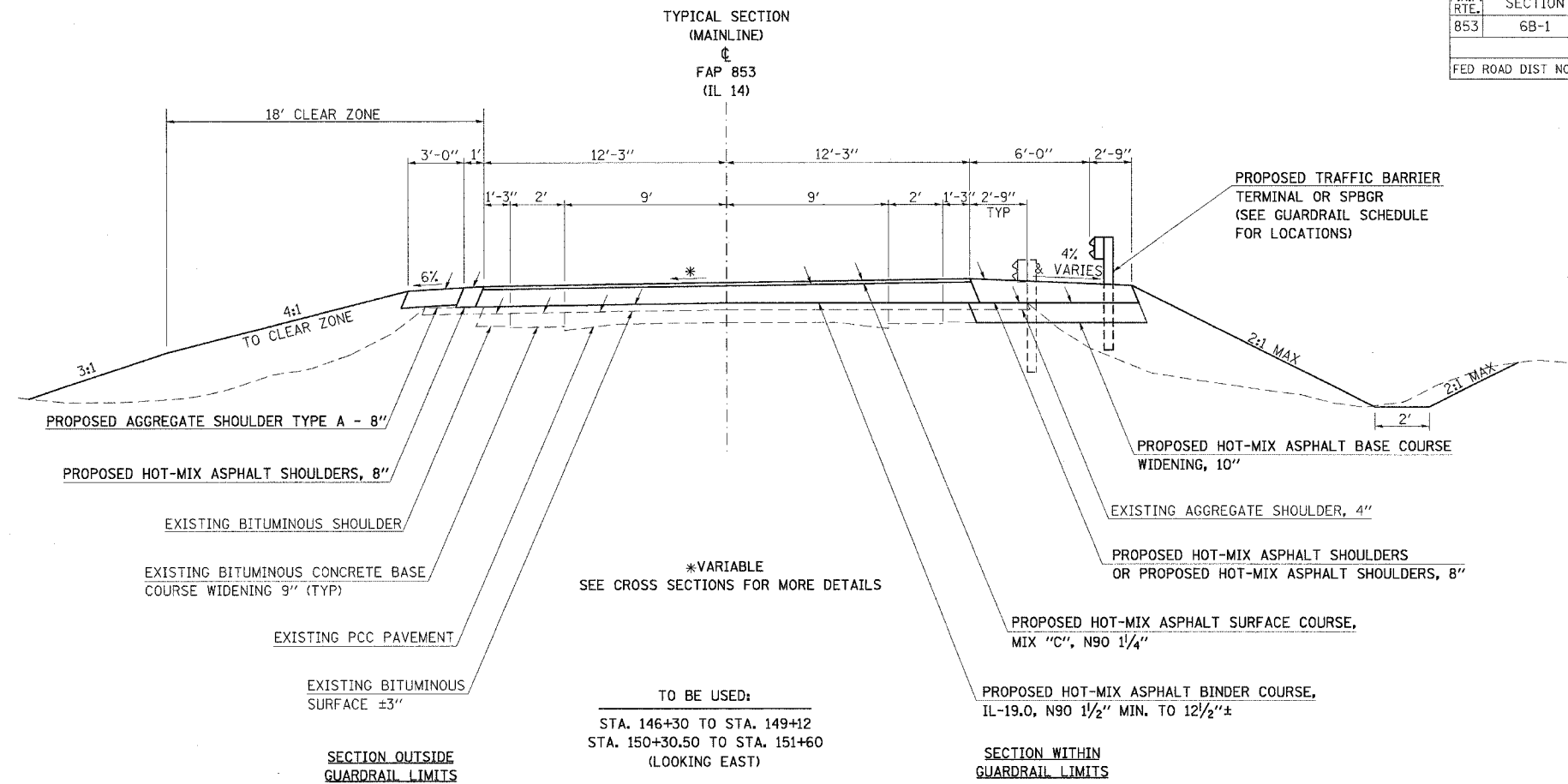
CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	5
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				

MIXTURE REQUIREMENTS

LOCATION(S):	HOT MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	HOT MIX ASPHALT SURFACE COURSE, MIX C, N90
AC/PG:	PG64-22
RAP % (MAX):	10
DESIGN AIR VOIDS:	4.0 %, 90 GYRATION
MIXTURE COMPOSITION (GRADATION MIXTURE):	IL-9.5 MM OR IL-12.5 MM
FRICTION AGGREGATE:	C SURFACE

LOCATION(S):	HOT MIX ASPHALT BINDER COURSE & BASE COURSE WIDENING
MIXTURE USE(S):	HOT MIX ASPHALT BINDER COURSE, N90, IL-19.0
AC/PG:	PG64-22
RAP % (MAX):	10
DESIGN AIR VOIDS:	4.0 %, 90 GYRATION
MIXTURE COMPOSITION (GRADATION MIXTURE):	IL-19.0 MM
FRICTION AGGREGATE:	NONE

LOCATION(S):	HOT MIX ASPHALT SHOULDERS
MIXTURE USE(S):	HOT MIX ASPHALT SHOULDERS
AC/PG:	PG58-22
RAP % (MAX):	50
DESIGN AIR VOIDS:	2.0 %, 30 GYRATION
MIXTURE COMPOSITION (GRADATION MIXTURE):	HOT MIX ASPHALT AGGREGATE MIXTURE
FRICTION AGGREGATE:	NONE



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SEEDING AND FERTILIZING SCHEDULE

SN 028-0075 LOCATION STATION TO STATION	SEEDING* CLASS 2	SEEDING CLASS 7	NITROGEN (N)	PHOSPHOROUS (P)	POTASSIUM (K)	MULCH METHOD 2	AGRICULTURAL GROUND LIMESTONE	TEMPORARY EROSION CONTROL SEEDING
	ACRE	ACRE	POUND	POUND	POUND	ACRE	TON	POUND
FAP 853 (IL 14)								
STA 145+75.00 TO STA 153+80.00 RT	0.33	0.33	53	40	40	0.60	0.66	33
STA 145+75.00 TO STA 153+80.00 LT	0.37	0.37	59	44	44	0.40	0.74	37
PROJECT TOTALS	0.70	0.70	112	84	84	1.0	1.4	70

* NEED FOR MULCH METHOD 2 REDUCED OR ELIMINATED WITH USE OF EROSION CONTROL BLANKET. SEE EROSION CONTROL SCHEDULE.

TERMINALS AND GUARDRAIL SCHEDULE

SN 028-0075 LOCATION STATION TO STATION	TEMPORARY GUARDRAIL	SPBGR TYPE A	TBT TYPE 6	TBT TYPE I SPECIAL (TANGENT)	REMOVE & RE-ERECT TYPE I	TERMINAL MARKER DIRECT APPLIED	GUARDRAIL MARKER
	FOOT	FOOT	EACH	EACH	EACH	EACH	EACH
FAP 853 (IL 14)							
NW QUADRANT:							
STA 147+98.85 LT TO STA 148+48.85 LT					1	1	1
STA 148+48.85 LT TO STA 148+98.85 LT		50					2
STA 148+98.85 LT TO STA 149+44.50 LT			1				
STA 148+11.35 LT TO STA 148+61.35 LT				1			
STA 148+61.35 LT TO STA 148+98.85 LT	37.5						
NE QUADRANT:							
STA 149+98.00 LT TO STA 150+43.65 LT			1				
STA 150+43.65 LT TO STA 151+81.15 LT		137.5			1	1	4
STA 151+81.15 LT TO STA 152+31.15 LT				1			1
STA 150+81.15 LT TO STA 151+31.15 LT							
STA 150+43.65 LT TO STA 150+81.15 LT	37.5						
SW QUADRANT:							
STA 147+11.35 RT TO STA 147+61.35 RT					1	1	1
STA 147+61.35 RT TO STA 148+98.85 RT		137.5					4
STA 148+98.85 RT TO STA 149+44.50 RT			1				
STA 148+61.35 RT TO STA 148+98.85 RT	37.5						
STA 148+11.35 RT TO STA 148+61.35 RT				1			
SE QUADRANT:							
STA 149+98.00 RT TO STA 150+43.65 RT			1				
STA 150+43.65 RT TO STA 150+93.65 RT		50			1	1	2
STA 150+93.65 RT TO STA 151+43.65 RT							1
STA 150+43.65 RT TO STA 150+81.15 RT	37.5						
STA 150+81.15 RT TO STA 151+31.15 RT				1			
PROJECT TOTALS	150	375	4	4	4	4	16

HOT MIX ASPHALT PAVEMENT SCHEDULE

SN 028-0075 LOCATION STATION TO STATION	HOT MIX ASPHALT BINDER COURSE SUPERPAVE, IL-19.0, N90	HOT MIX ASPHALT SURFACE COURSE SUPERPAVE, MIX C, N90	HOT MIX ASPHALT BASE COURSE WIDENING, 10"
	TON	TON	SQ YD
FAP 853 (IL 14)			
STA 146+30.00 TO STA 149+12.00	443		
STA 150+30.50 TO STA 153+25.00	423		
STA 145+75.00 TO STA 149+12.00		65	
STA 150+30.50 TO STA 153+80.00		67	
STA 146+41.15 TO STA 147+10.61 LT		11	
STA 147+69.60 TO STA 149+12.00 RT			109
STA 150+30.50 TO STA 151+59.00 RT			100
STA 148+01.00 TO STA 149+60.00 LT			62
STA 149+90.00 TO STA 151+46.00 LT			61
PROJECT TOTALS	866	143	332

SHOULDER SCHEDULE

SN 028-0075 LOCATION STATION TO STATION	AGGREGATE SHOULDERS, TYPE A 8"	HOT-MIX ASPHALT SHOULDERS, 8"	HOT-MIX ASPHALT SHOULDERS
	SQ YD	SQ YD	TON
FAP 853 (IL 14)			
STA 146+30.00 TO STA 147+80.55 LT	28		
STA 146+30.00 TO STA 146+42.00 LT		1.3	
STA 146+42.00 TO STA 147+10.00 LT			9
STA 147+10.61 TO STA 149+42.00 LT		142.3	
STA 150+00.50 TO STA 153+25.00 LT		230.5	
STA 152+49.96 TO STA 153+25.00 LT	24		
STA 146+30.00 TO STA 146+92.68 RT	20		
STA 146+30.00 TO STA 147+40.00 RT		51.8	
STA 147+40.00 TO STA 149+12.00 RT			89
STA 149+12.00 TO STA 149+42.00 RT		7.5	
STA 150+00.50 TO STA 150+30.50 RT		7.5	
STA 150+30.50 TO STA 151+75.00 RT			114
STA 151+75.00 TO STA 153+25.00 RT		18.1	
STA 151+61.66 TO STA 153+25.00 RT	53		
PROJECT TOTALS	125	459	212

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EARTHWORK SCHEDULE

SN 028-0075 LOCATION STATION TO STATION	EARTH EXCAVATION	CHANNEL EXCAVATION (UNSUITABLE)	SHRINKAGE FACTOR FOR EARTH EXCAVATION	EXCAVATION TO BE USED IN EMBANKMENT, ADJUSTED FOR SHRINKAGE	** EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	SHRINKAGE FACTOR FOR BORROW EXCAVATION	BORROW EXCAVATION
	CU YD	CU YD	%	CU YD	CU YD	CU YD	%	CU YD
FAP 853 (IL 14)								
STA 145+75.00 TO STA 153+80.00	• 1168		25	876	1886	-1010		
STA 149+42.00 TO STA 150+00.50		337						
STA 149+34.50 TO STA 149+42.00	54		25	41		+41		
STA 150+00.50 TO STA 150+08.00	54		25	41		+41		
PROJECT TOTALS	1276	337		958	1886	-928	25	1237

* CUTS FROM CROSS SECTIONS ** FILLS FROM CROSS SECTIONS

EROSION CONTROL SCHEDULE

SN 028-0075 LOCATION STATION TO STATION	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER	EROSION CONTROL BLANKET
	EACH	FOOT	SQ YD
FAP 853 (IL 14)			
STA 148+75.00 RT	1		
STA 149+30.00 RT	1		
STA 150+15.00 RT	1		
STA 151+00.00 RT	1		
STA 152+25.00 RT	1		
STA 149+30.00 LT	1		
STA 150+15.00 LT	1		
STA 151+75.00 LT	1		
STA 147+85.00 TO STA 149+32.00 LT			207
STA 150+00.00 TO STA 152+48.00 LT			862
STA 152+85.00 TO STA 153+72.00 LT			48
STA 146+90.00 TO STA 149+32.00 RT			406
STA 150+00.00 TO STA 153+72.00 RT			501
STA 145+75.00 TO STA 149+36.00 LT		361	
STA 150+00.00 TO STA 153+80.00 LT		445	
STA 145+75.00 TO STA 149+36.00 RT		374	
STA 150+00.00 TO STA 153+80.00 RT		423	
PROJECT TOTALS	8	1603	2024

PAVEMENT MARKING SCHEDULE

SN 028-0075 LOCATION STATION TO STATION	SHORT TERM PAVEMENT MARKING	SOLID WHITE PAVEMENT MARKING- LINE 4"	SOLID YELLOW PAVEMENT MARKING- LINE 4"	YELLOW SKIP-DASH PAVEMENT MARKING- LINE 4"	TEMPORARY PAVEMENT MARKING- LINE 4"
	FOOT	FOOT	FOOT	FOOT	FOOT
FAP 853 (IL 14)					
FINAL:					
STA 145+75.00 TO STA 153+80.00 LT		805			
STA 145+75.00 TO STA 153+80.00 RT		805			
STA 145+75.00 TO STA 147+05.75 C			131		
STA 145+75.00 TO STA 153+80.00 C			805		
STA 147+05.75 TO STA 153+80.00 C				170	
STA 145+75.00 TO STA 149+12.00 (2 APPS)	72				
STA 150+30.50 TO STA 153+80.00 (2 APPS)	72				
STAGE I:					
STA 147+74.50 TO STA 151+80.50 LT					406 (WHITE)
STA 147+74.50 TO STA 151+80.50 C					406 (YELLOW)
STAGE II:					
STA 147+44.00 TO STA 151+81.50 RT					437.5 (WHITE)
STA 147+44.00 TO STA 151+81.50 C					437.5 (YELLOW)
POST STAGE II:					
STA 147+44.00 TO STA 151+81.50 LT/RT					875 (WHITE)
STA 147+44.00 TO STA 151+81.50 C					110 (YELLOW)
PROJECT TOTALS	144	1610	936	170	1718.5 (WHITE) 953.5 (YELLOW)

REMOVAL AND MISCELLANEOUS SCHEDULE

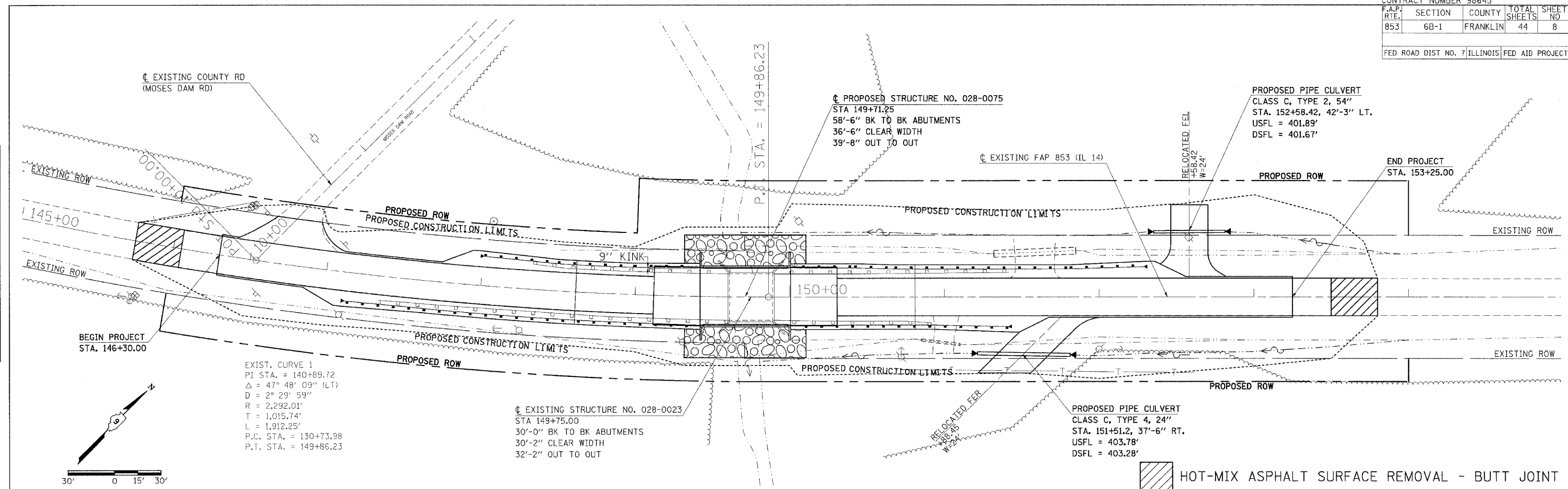
SN 028-0075 LOCATION STATION TO STATION	PAVEMENT REMOVAL	EXISTING GUARDRAIL REMOVAL
	SQ YD	FOOT
FAP 853 (IL 14)		
STAGE I:		
STA 149+12.00 TO STA 149+60.00 RT	60	
STA 149+90.00 TO STA 150+30.50 RT	61	
STA 147+34.00 TO STA 149+60.00 RT		226
STA 149+90.00 TO STA 150+90.00 RT		100
STAGE II:		
STA 149+12.00 TO STA 149+60.00 LT	78	
STA 149+90.00 TO STA 150+30.50 LT	77	
STA 148+35.00 TO STA 149+60.00 LT		125
STA 149+90.00 TO STA 151+40.00 LT		150
PROJECT TOTALS	276	601

* PAVED SHOULDER REMOVAL INCLUDED IN PAVEMENT REMOVAL, SEE SHEET 9 OF 44.

CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	8
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				

DATE	BY
DATE	BY

DATE	BY
DATE	BY



EXIST. CURVE 1
 PI STA. = 140+89.72
 $\Delta = 47^\circ 48' 09''$ (LT)
 $D = 2^\circ 29' 59''$
 $R = 2,292.01'$
 $T = 1,015.74'$
 $L = 1,912.25'$
 P.C. STA. = 130+73.98
 P.T. STA. = 149+86.23

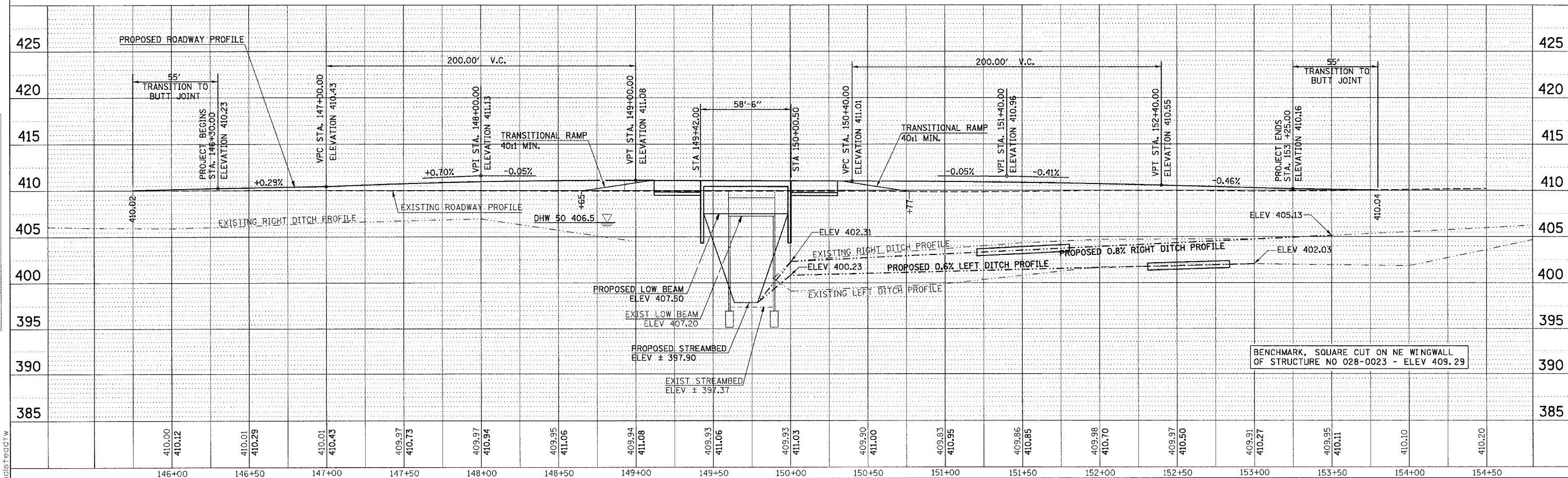
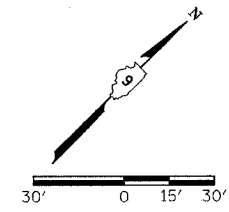
EXISTING STRUCTURE NO. 028-0023
 STA 149+75.00
 30'-0" BK TO BK ABUTMENTS
 30'-2" CLEAR WIDTH
 32'-2" OUT TO OUT

PROPOSED STRUCTURE NO. 028-0075
 STA 149+71.25
 58'-6" BK TO BK ABUTMENTS
 36'-6" CLEAR WIDTH
 39'-8" OUT TO OUT

PROPOSED PIPE CULVERT
 CLASS C, TYPE 2, 54"
 STA. 152+58.42, 42'-3" LT.
 USFL = 401.89'
 DSFL = 401.67'

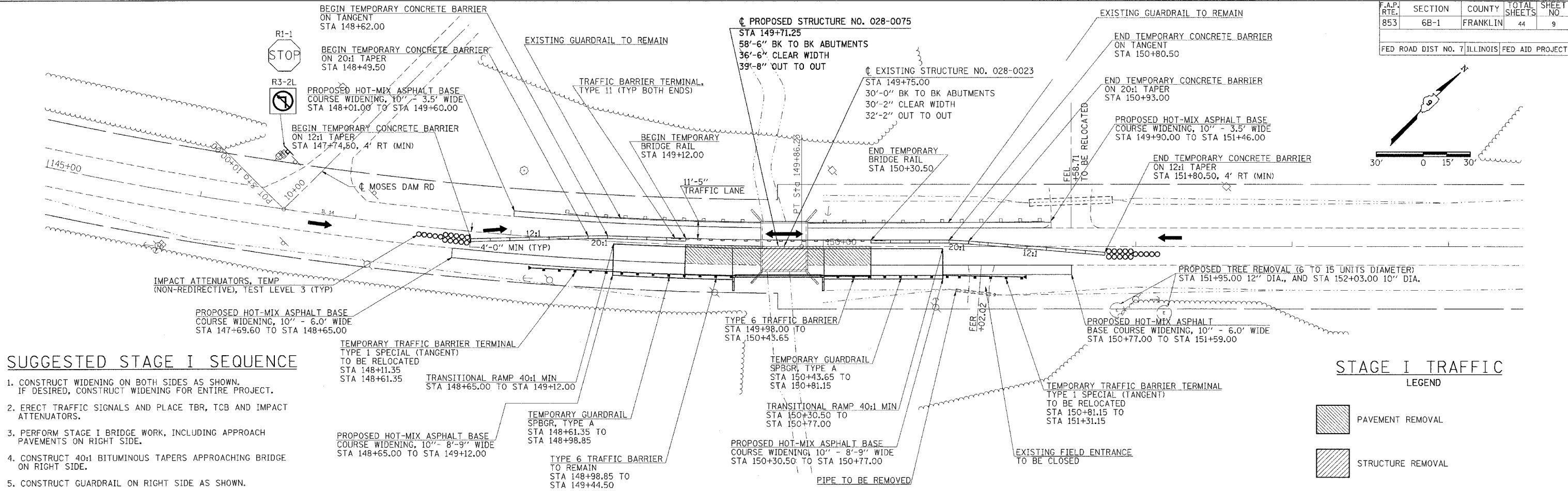
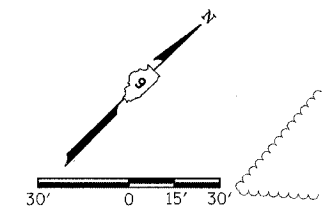
PROPOSED PIPE CULVERT
 CLASS C, TYPE 4, 24"
 STA. 151+51.2, 37'-6" RT.
 USFL = 403.78'
 DSFL = 403.28'

HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT



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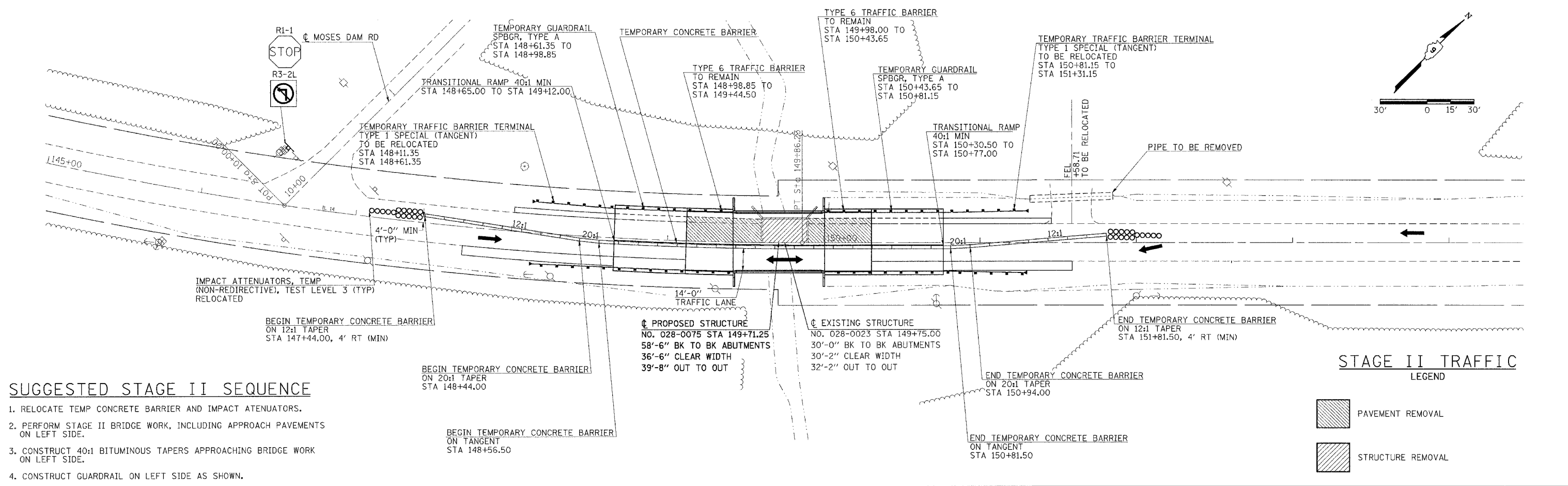
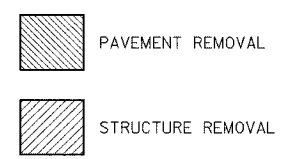
CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	9
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				



SUGGESTED STAGE I SEQUENCE

1. CONSTRUCT WIDENING ON BOTH SIDES AS SHOWN. IF DESIRED, CONSTRUCT WIDENING FOR ENTIRE PROJECT.
2. ERECT TRAFFIC SIGNALS AND PLACE TBR, TCB AND IMPACT ATTENUATORS.
3. PERFORM STAGE I BRIDGE WORK, INCLUDING APPROACH PAVEMENTS ON RIGHT SIDE.
4. CONSTRUCT 40:1 BITUMINOUS TAPERS APPROACHING BRIDGE ON RIGHT SIDE.
5. CONSTRUCT GUARDRAIL ON RIGHT SIDE AS SHOWN.

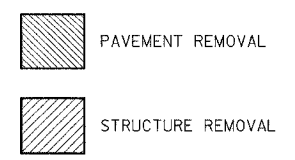
STAGE I TRAFFIC LEGEND



SUGGESTED STAGE II SEQUENCE

1. RELOCATE TEMP CONCRETE BARRIER AND IMPACT ATENUATORS.
2. PERFORM STAGE II BRIDGE WORK, INCLUDING APPROACH PAVEMENTS ON LEFT SIDE.
3. CONSTRUCT 40:1 BITUMINOUS TAPERS APPROACHING BRIDGE WORK ON LEFT SIDE.
4. CONSTRUCT GUARDRAIL ON LEFT SIDE AS SHOWN.

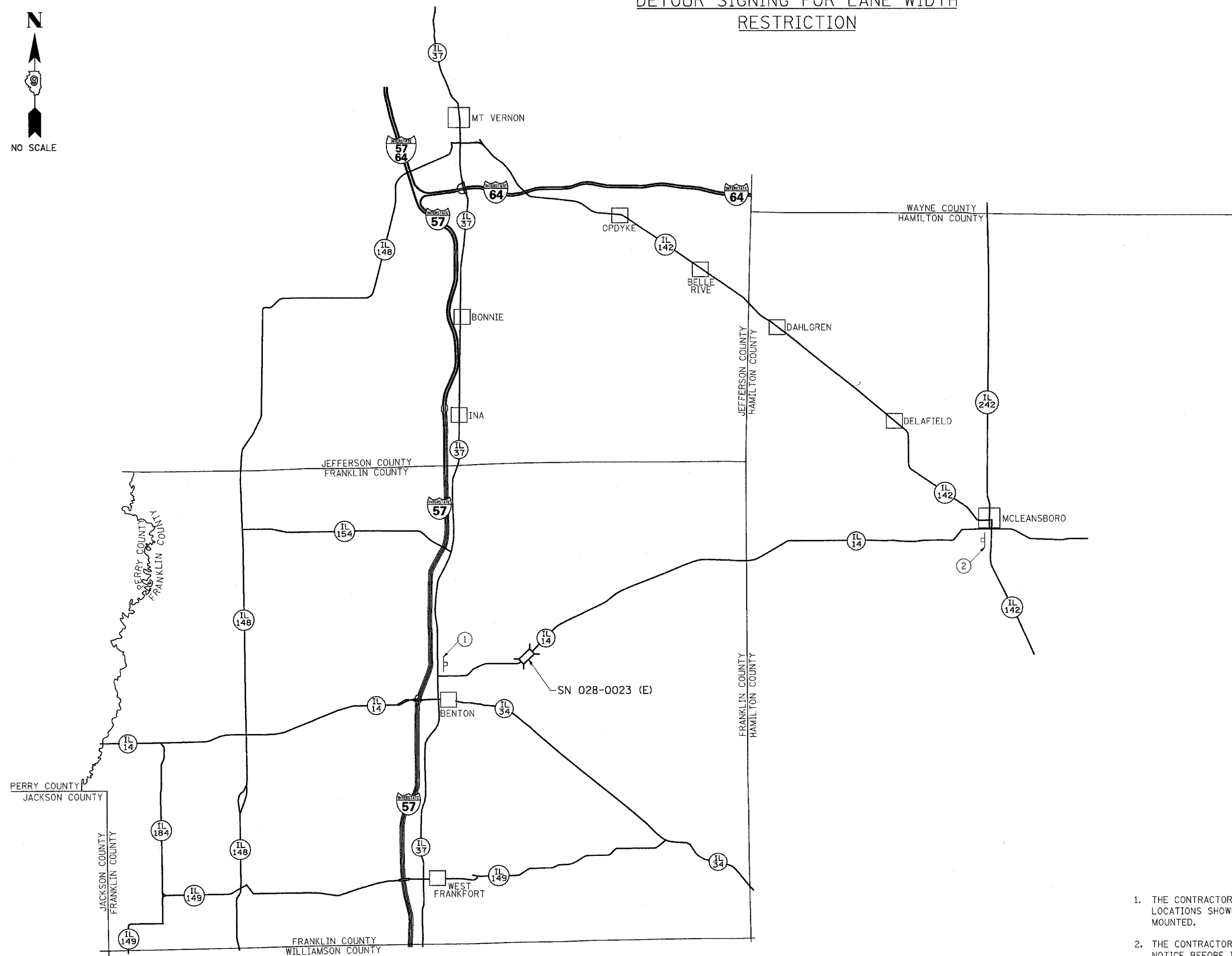
STAGE II TRAFFIC LEGEND



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CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	10
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				

DETOUR SIGNING FOR LANE WIDTH RESTRICTION



TO BE USED:
STAGE I ONLY

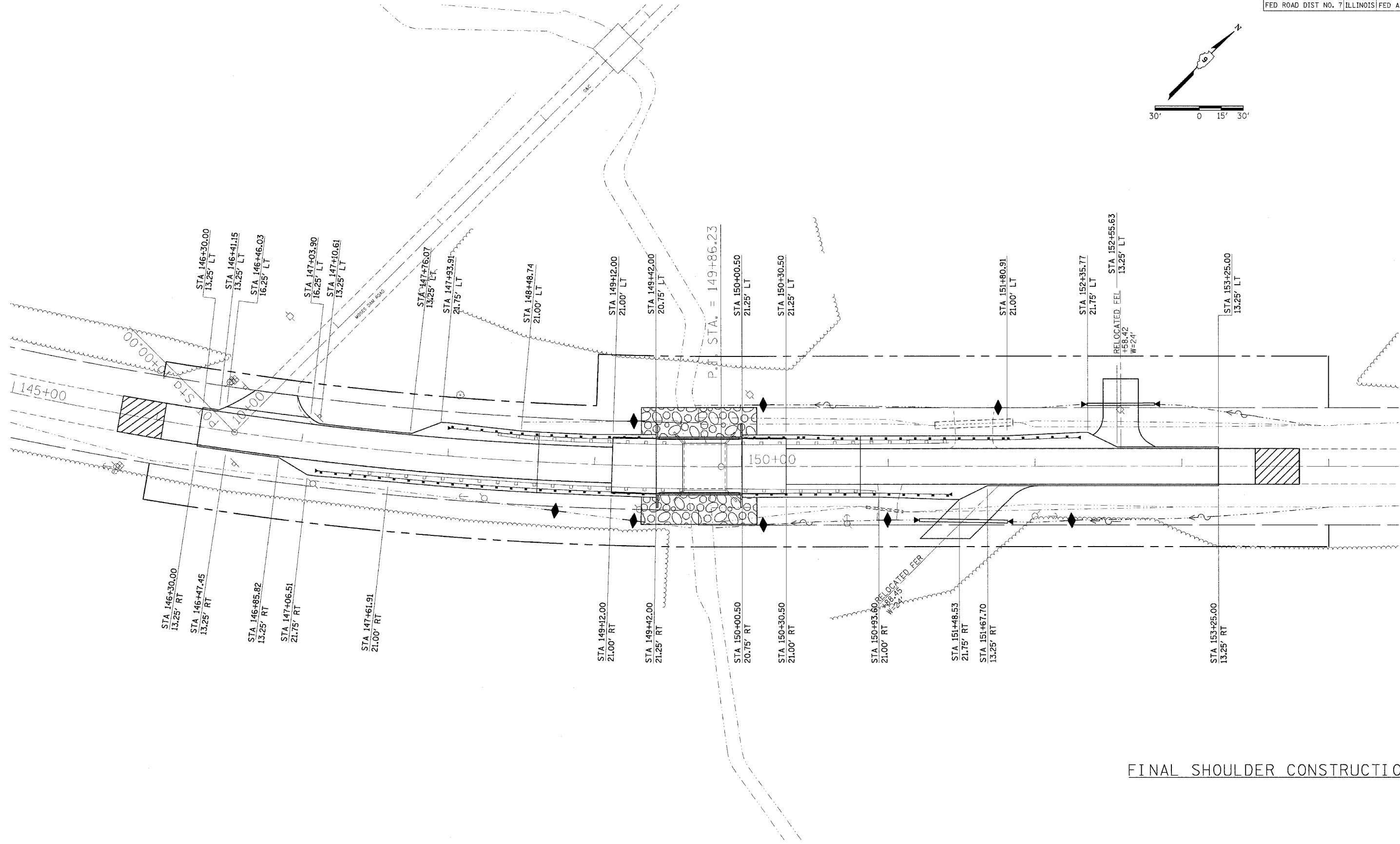
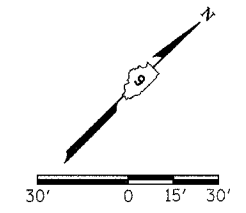
① WIDE LOADS OVER 9'-11" DETOUR VIA	② WIDE LOADS OVER 9'-11" DETOUR VIA								
<table border="1" style="width: 100%;"> <tr> <th>NORTH ILLINOIS</th> <th>EAST ILLINOIS</th> </tr> <tr> <td style="text-align: center;">37</td> <td style="text-align: center;">142</td> </tr> </table>	NORTH ILLINOIS	EAST ILLINOIS	37	142	<table border="1" style="width: 100%;"> <tr> <th>WEST ILLINOIS</th> <th>SOUTH ILLINOIS</th> </tr> <tr> <td style="text-align: center;">142</td> <td style="text-align: center;">37</td> </tr> </table>	WEST ILLINOIS	SOUTH ILLINOIS	142	37
NORTH ILLINOIS	EAST ILLINOIS								
37	142								
WEST ILLINOIS	SOUTH ILLINOIS								
142	37								
60" x 60"	60" x 60"								

NOTES

1. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND REMOVE THE POSTS AND SIGNS AT THE LOCATIONS SHOWN AND AS DIRECTED BY THE RESIDENT ENGR./TECH. ALL SIGNS SHALL BE POST MOUNTED.
2. THE CONTRACTOR SHALL GIVE I.D.O.T. BUREAU OF OPERATIONS, PERMITS SECTION, TWO WEEKS NOTICE BEFORE IMPLEMENTING ANY LANE WIDTH RESTRICTIONS.
3. THE ABOVE NOTED WORK, INCLUDING SIGNS, POSTS, HARDWARE, AND LABOR SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE, EACH, FOR TRAFFIC CONTROL AND PROTECTION, STD 701321 AND NO OTHER COMPENSATION WILL BE ALLOWED.

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CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	11
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				

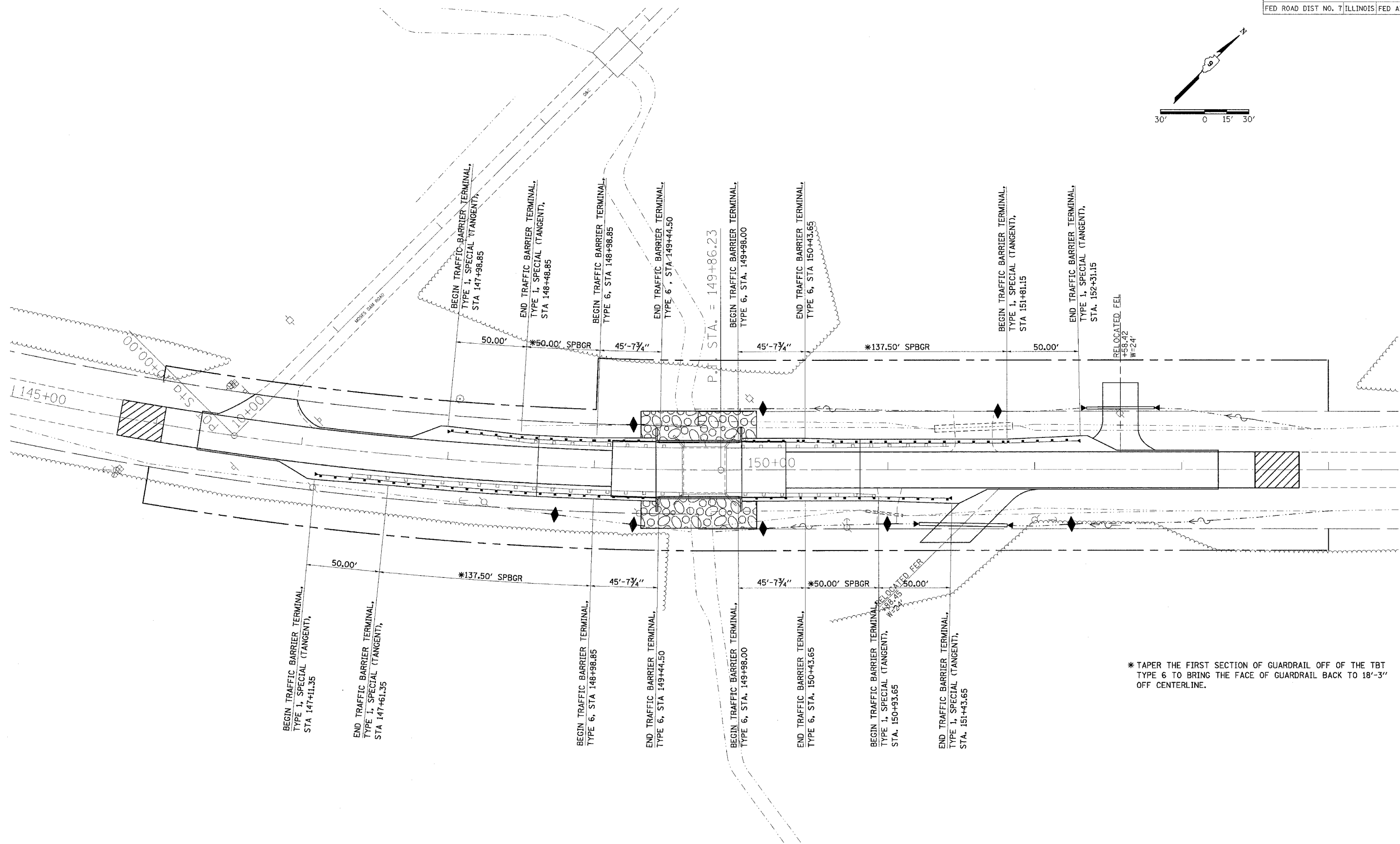
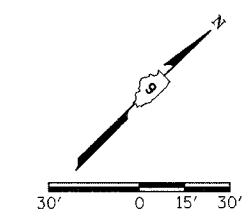


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FINAL SHOULDER CONSTRUCTION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	12

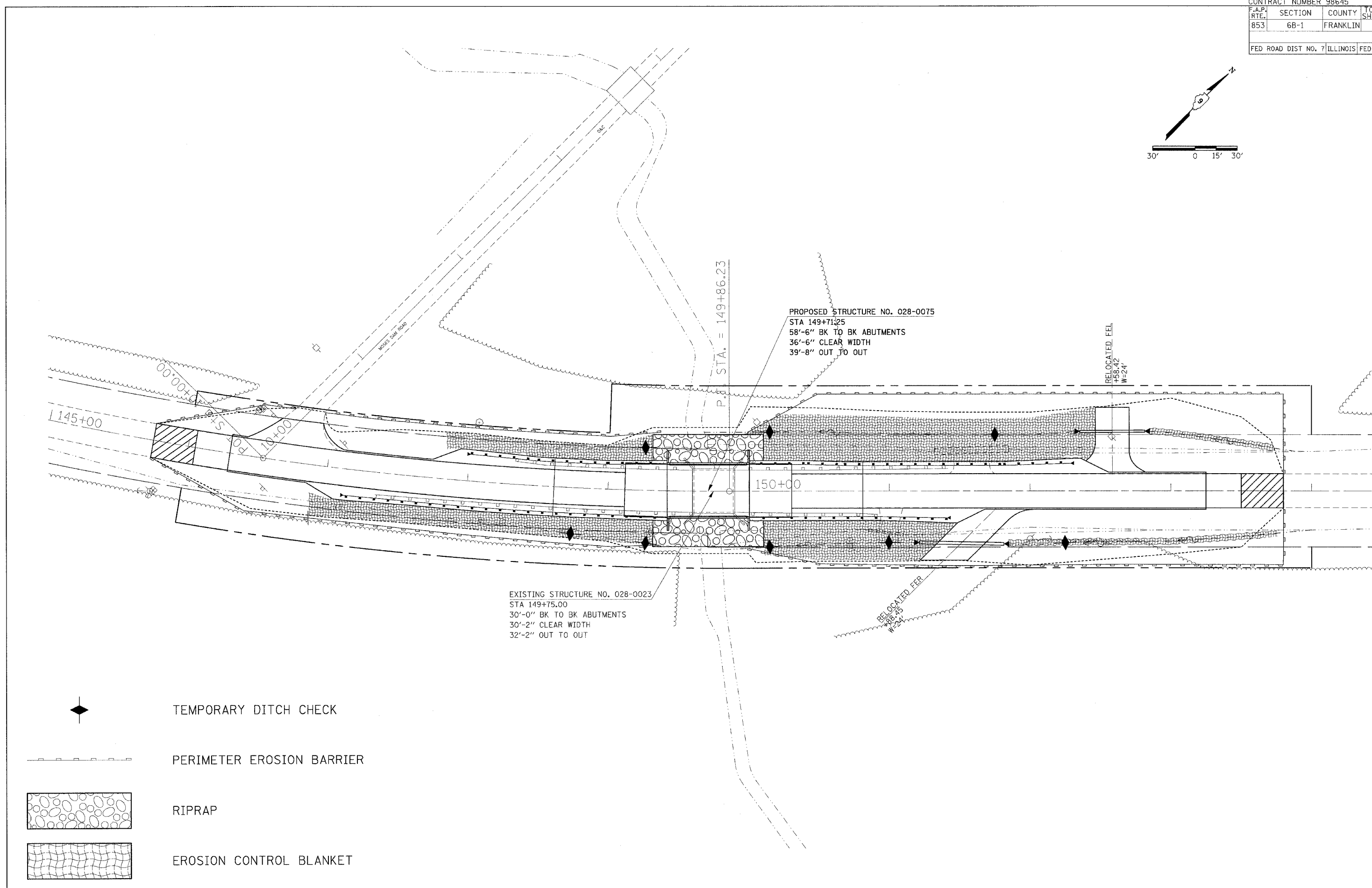
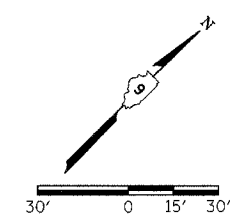
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT



* TAPER THE FIRST SECTION OF GUARDRAIL OFF OF THE TBT TYPE 6 TO BRING THE FACE OF GUARDRAIL BACK TO 18'-3" OFF CENTERLINE.


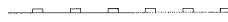

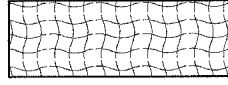
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CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	13
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				



PROPOSED STRUCTURE NO. 028-0075
 STA 149+71.25
 58'-6" BK TO BK ABUTMENTS
 36'-6" CLEAR WIDTH
 39'-8" OUT TO OUT

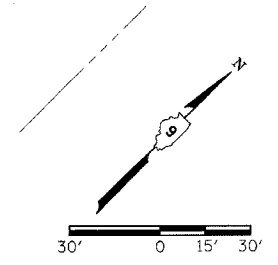
EXISTING STRUCTURE NO. 028-0023
 STA 149+75.00
 30'-0" BK TO BK ABUTMENTS
 30'-2" CLEAR WIDTH
 32'-2" OUT TO OUT

-  TEMPORARY DITCH CHECK
-  PERIMETER EROSION BARRIER
-  RIPRAP
-  EROSION CONTROL BLANKET

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PARCEL NO. 260 OWNER KEARNEY FERTILIZER SERVICE, INC. NEW ROW 0.849 T.E. 0.000

CONTRACT NUMBER 98645				
F.A.P. RTE. 853	SECTION 6B-1	COUNTY FRANKLIN	TOTAL SHEETS 44	SHEET NO. 14
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				



SW 1/4, NE 1/4, SEC; 10
T6 S.,R. 3 E., 3rd P.M.

KEARNEY FERTILIZER INC.
PARCEL 260

PROPOSED STRUCTURE NO. 028-0075
STA 149+71.25
58'-6" BK TO BK ABUTMENTS
36'-6" CLEAR WIDTH
39'-8" OUT TO OUT

20000 149+00.00
20001 40'x75' LT

20003 154+00.00
20002 40'x75' LT

20005 146+00.00
20004 30'x40' LT

20006 146+00.00
20007 30'x55' RT

20018 154+00.00
20019 40'x55' RT

EXISTING STRUCTURE NO. 028-0023
STA 149+75.00
30'-0" BK TO BK ABUTMENTS
30'-2" CLEAR WIDTH
32'-2" OUT TO OUT

KEARNEY FERTILIZER INC.
PARCEL 260

SW 1/4, NE 1/4, SEC; 10
T6 S.,R. 3 E., 3rd P.M.

POINT COORDINATES

STA 149+00.00	PT# 20000	X 832177.05	Y 492292.92
STA 149+00.00	PT# 20001	X 832152.93	Y 492318.28
STA 154+00.00	PT# 20002	X 832501.19	Y 492673.08
STA 154+00.00	PT# 20003	X 832526.25	Y 492648.64
STA 146+00.00	PT# 20004	X 831950.78	Y 492104.34
STA 146+00.00	PT# 20005	X 831956.66	Y 492096.25
STA 146+00.00	PT# 20006	X 831991.98	Y 492047.75
STA 146+00.00	PT# 20007	X 832006.69	Y 492027.54
STA 154+00.00	PT# 20018	X 832583.51	Y 492592.79
STA 154+00.00	PT# 20019	X 832594.25	Y 492582.31

RIGHT OF WAY PLANS

ROUTE FAP 853 (ILLINOIS 14)
SECTION 6B-1
PROJECT _____
COUNTY FRANKLIN
JOB NO. R-99-014-05
STA 146+00 TO STA 154+00
SCALE 1"=30'

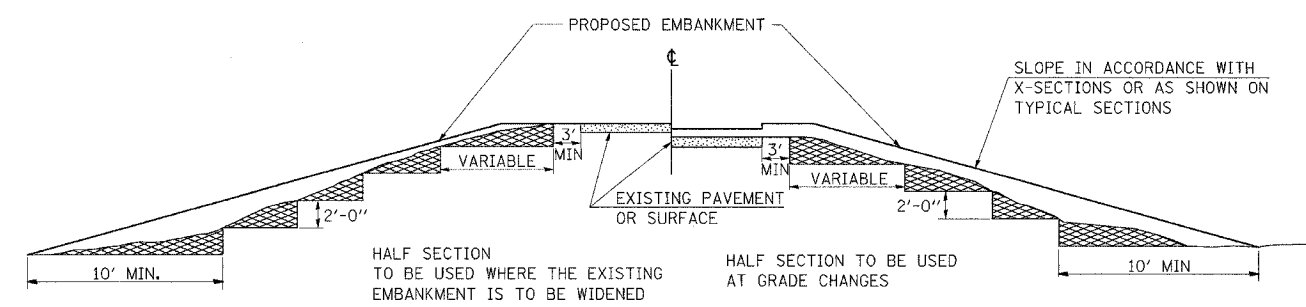
SHEET NO. OF


RIGHT OF WAY LAYOUT
SN 028-0075

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CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	15
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

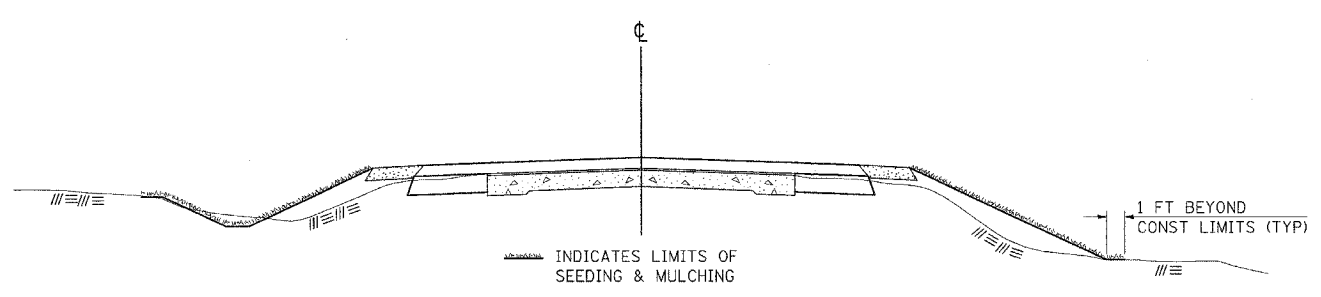


 MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
CHECKED	6-03-99
REVISED	

STD. 9-16

SEEDING & MULCHING



GENERAL NOTES

IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDED AND MULCHED UPON COMPLETION OF ALL GRADING OPERATIONS.

FERTILIZER NUTRIENTS AND LIMESTONE SHALL BE APPLIED TO ALL SEEDED AREAS.

THE RATES OF APPLICATION OF FERTILIZER, MULCH AND LIMESTONE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS.

SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

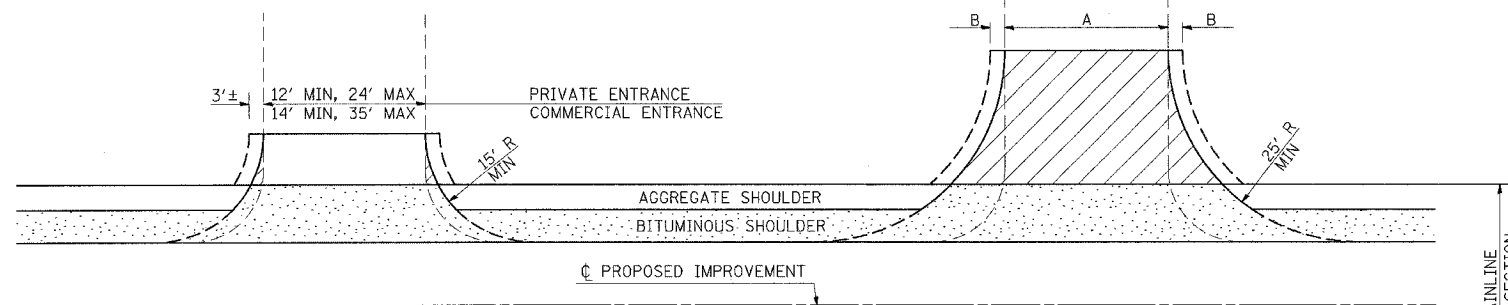
REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	6-3-99
REVISED	

STD. 9-12

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11/16/06

RURAL SIDE APPROACH DETAILS

PRIVATE AND COMMERCIAL ENTRANCES



SIDEROADS

SIDEROAD DIMENSIONS (MIN)

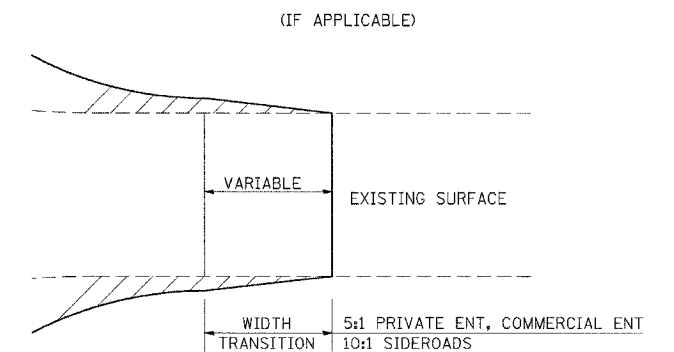
ADT	A (FT)	B (FT)
0 TO 250	18'	2'
250 TO 400	20'	2'
GREATER THAN 400	22'	4'

FIELD ENTRANCE TREATMENT

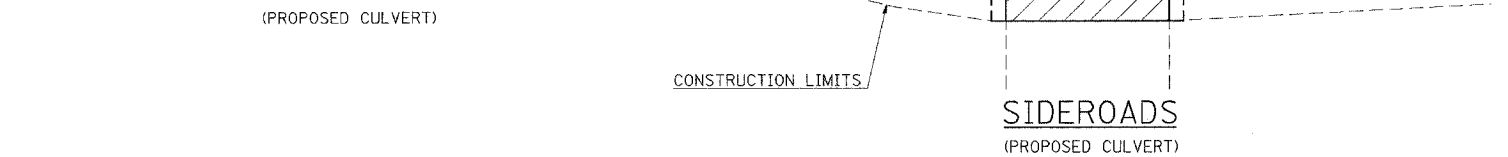
CONSTRUCT MAINLINE BITUMINOUS AND AGGREGATE SHOULDERS THROUGH FIELD ENTRANCES.

IF A PIPE IS REQUIRED, PROVIDE A 22' WIDE EARTH EMBANKMENT WITH 15' RADII AT THE INTERSECTION.

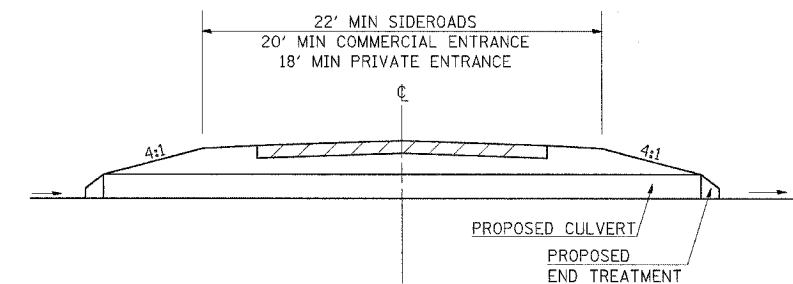
WIDTH TRANSITION DETAIL TO EXISTING



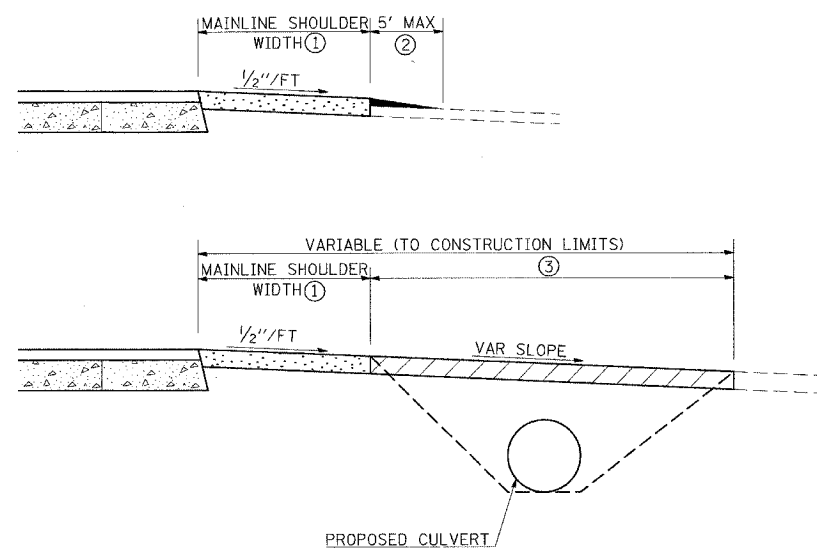
PRIVATE AND COMMERCIAL ENTRANCES



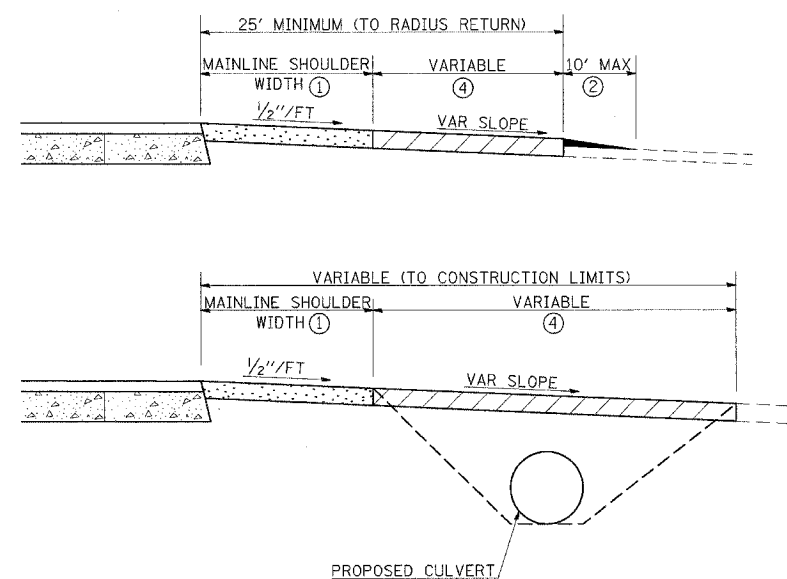
DETAIL FOR CALCULATING CULVERT LENGTH



PRIVATE AND COMMERCIAL ENTRANCES



SIDEROADS



LEGEND

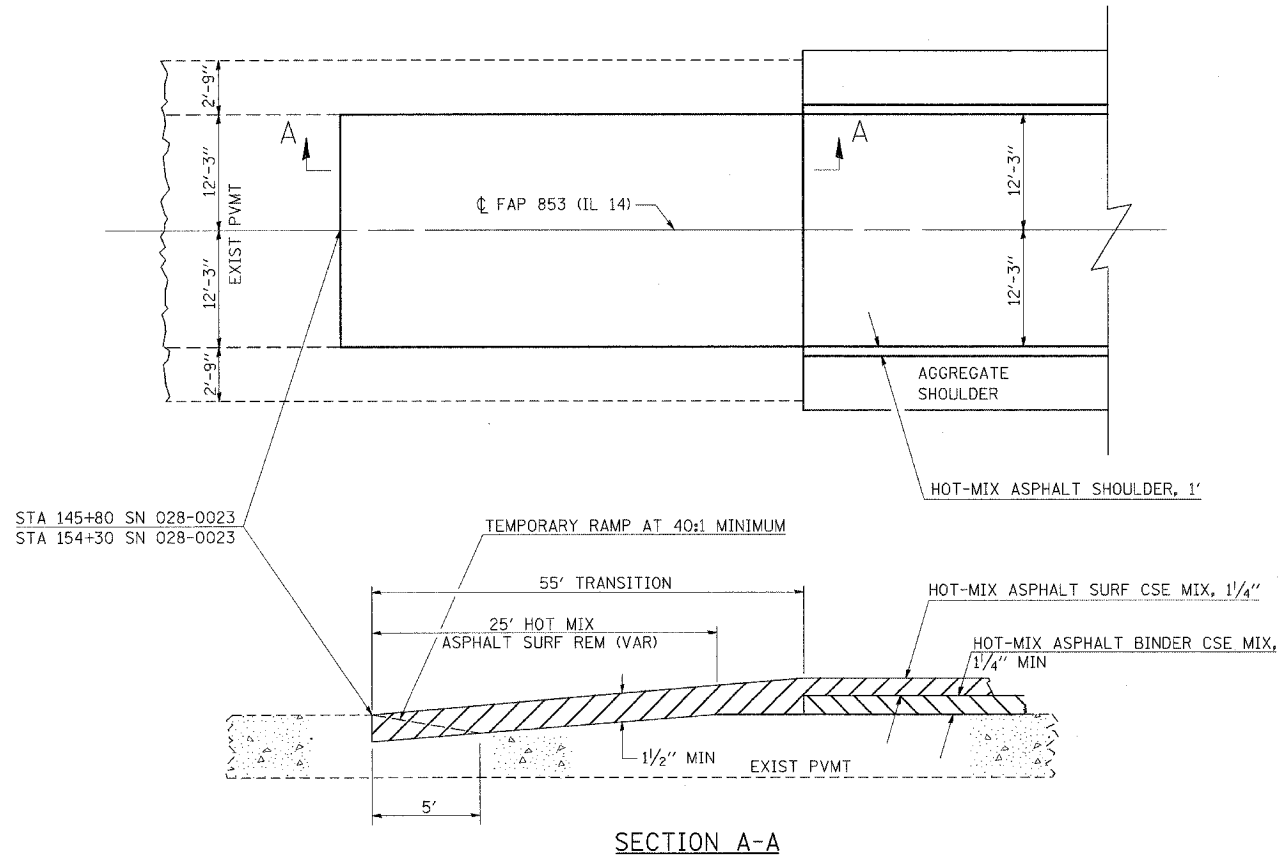
- CONSTRUCT BITUMINOUS SHOULDER "FULL SHOULDER WIDTH" THROUGH ENTRANCE/INTERSECTION UNLESS OTHERWISE SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- IF REQUIRED, AGGREGATE TAPER FOR EXISTING GRAVEL SURFACE; BITUMINOUS TAPER FOR EXISTING HIGHER TYPE SURFACES.
- 6" AGGREGATE SURFACE COURSE FOR EXISTING GRAVEL SURFACE; 2" BITUMINOUS RESURFACING ON 4" AGGREGATE BASE COURSE FOR EXISTING BITUMINOUS SURFACE; PCC DRIVEWAY PAVEMENT (6" - PE; 7" - CE) FOR EXISTING CONCRETE SURFACE.
- 3" MINIMUM BITUMINOUS RESURFACING ON 8" MINIMUM AGGREGATE BASE COURSE FOR EXISTING GRAVEL SURFACE OR OIL & CHIP SURFACE; MATCH EXISTING FOR EXISTING HIGHER TYPE SURFACES.

GENERAL NOTES

- ENTRANCE LOCATIONS ARE TO COMPLY WITH IDOT'S POLICY "ACCESS TO STATE HIGHWAYS".
- IN GENERAL, RELOCATED PRIVATE ENTRANCES ARE TO HAVE A 16' WIDE SURFACE WITH 3' WIDE SHOULDERS (22' WIDE EMBANKMENT).
- SEE PLANS FOR PROPOSED PROFILE GRADES AT ENTRANCES/SIDEROADS. THE DESIRABLE MAXIMUM PROFILE GRADE FOR ENTRANCES ARE 12% FOR PE; 10% FOR CE.
- ENTRANCE PIPE CULVERTS ARE TO BE A MINIMUM 15" DIAMETER AND NORMALLY REPLACED IN KIND; SIDEROAD PIPE CULVERTS ARE GENERALLY TO BE CONCRETE (18" MINIMUM DIAMETER).
- THE INTERSECTION RADII OF SIDEROADS CONSTRUCTED TO FULL POLICY STANDARDS SHOULD COMPLY WITH THAT NOTED IN THE BUREAU OF LOCAL ROADS ADMINISTRATIVE POLICIES MANUAL (5-8-13).

CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	17
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				

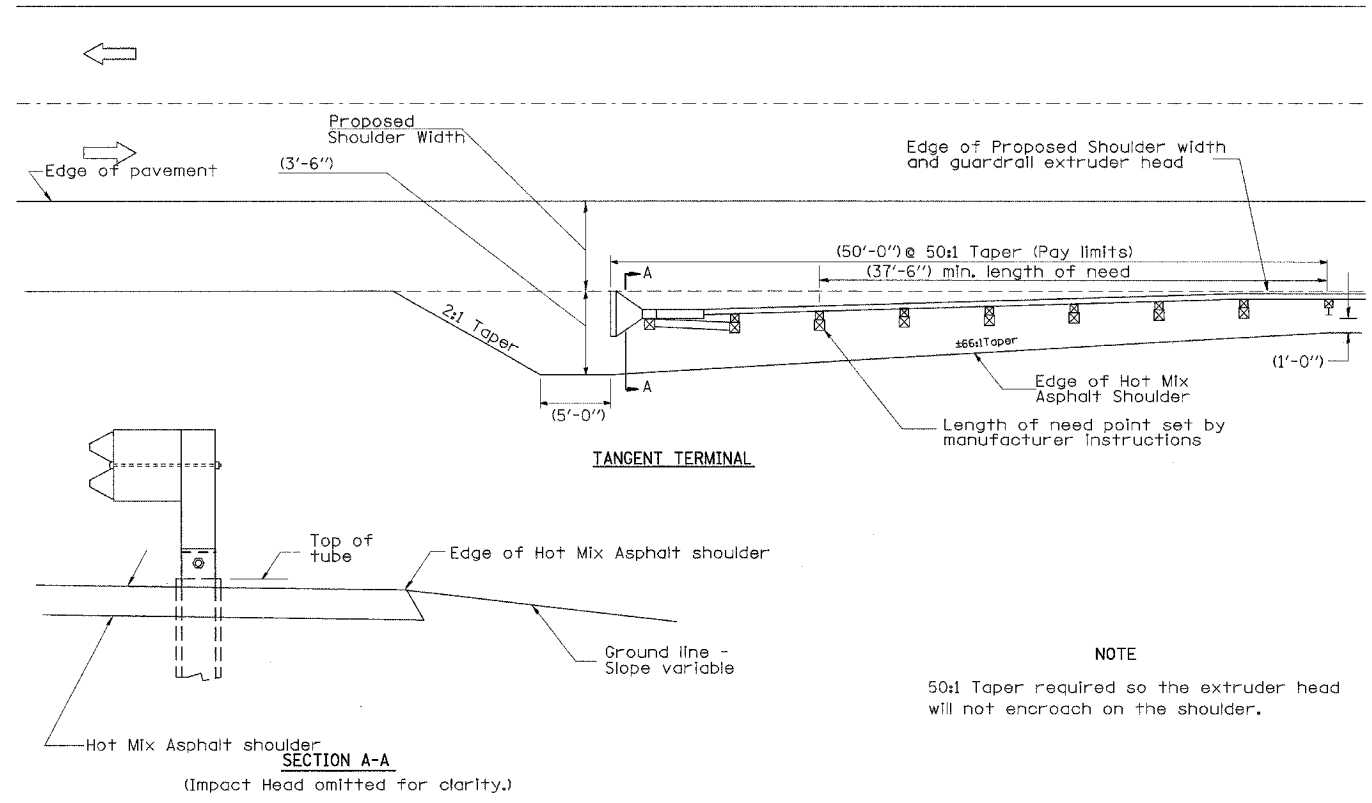
BUTT JOINT



REVISIONS	
DRAWN	10-17-90
REVISED	01-11-07
REVISED	
REVISED	

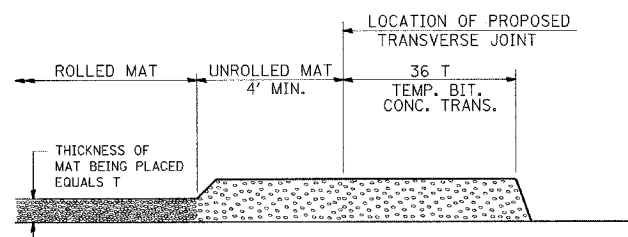
STD. 9-86

DETAIL - BITUMINOUS SHOULDER AT GUARDRAIL TERMINAL



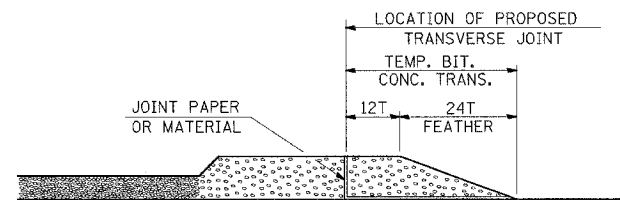
NOTE
50:1 Taper required so the extruder head will not encroach on the shoulder.

TEMPORARY BITUMINOUS CONCRETE TRANSITIONS



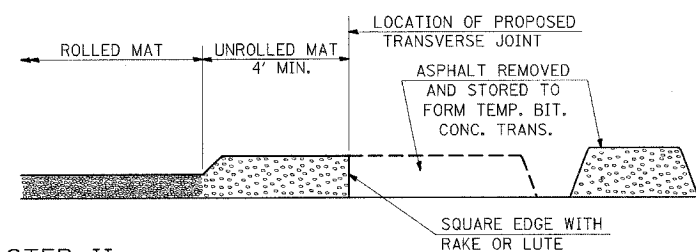
STEP I

1. PLACE BITUMINOUS MAT, LENGTH 36 TIMES THE THICKNESS OF THE MAT BEING PLACED PAST THE PROPOSED TRANSVERSE JOINT LOCATION USING NORMAL OPERATING PROCEDURES.
2. EXTREME CARE SHOULD BE TAKEN TO MAINTAIN ENOUGH MATERIAL IN FRONT OF THE SCREED TO MAINTAIN REQUIRED PAVING DEPTH.



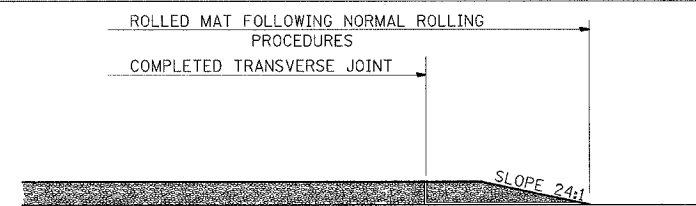
STEP III

1. JOINT PAPER OR OTHER PRESELECTED JOINT MATERIAL IS THEN PLACED IN THE CLEARED AREA AND THE EXCESS ASPHALT USED TO HAND FORM A TRANSITION TO THE DIMENSIONS SHOWN ABOVE.
2. NOTE THAT IN CONSTRUCTING THE TRANSITION, THE MAT DEPTH IS CONTINUED AS PART OF THE TRANSITION BEFORE FORMING THE FEATHER.



STEP II

1. MOVE THE PAVER OUT OF THE WAY AND REMOVE THE ASPHALT FROM THE AREA OF THE PROPOSED TEMPORARY BITUMINOUS CONCRETE TRANSITION.
2. SQUARE UP THE END OF THE MAT WITH A RAKE OR LUTE.
3. NOTE THAT THE MAT WITHIN 4' OF THE END OF JOINT IS NOT TO BE ROLLED AT THIS TIME.



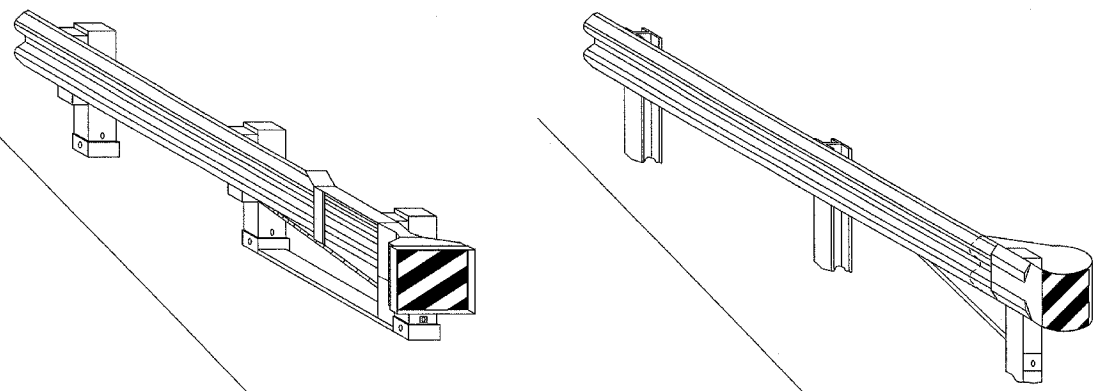
STEP IV

1. COMPLETE TEMPORARY TRANSITION BY ROLLING.
2. TO RESUME PAVING, AT THE JOINT, REMOVE TEMPORARY TRANSITION AND DISPOSE OF THE MATERIAL ACCORDING TO ART. 202.03 OF THE STD. SPECS. (COST INCLUDED IN THE CONTRACT).
3. CONSTRUCTING THE TEMPORARY TRANSITIONS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE BITUMINOUS MATERIAL BEING PLACED.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-16-94
REVISED	
REVISED	

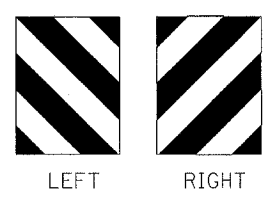
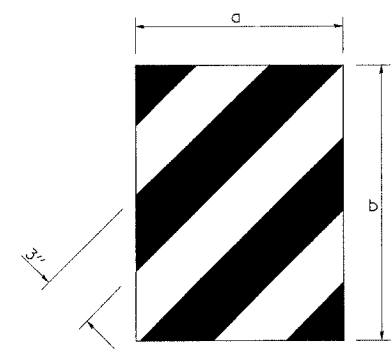
STD. 9-26

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11/11/07



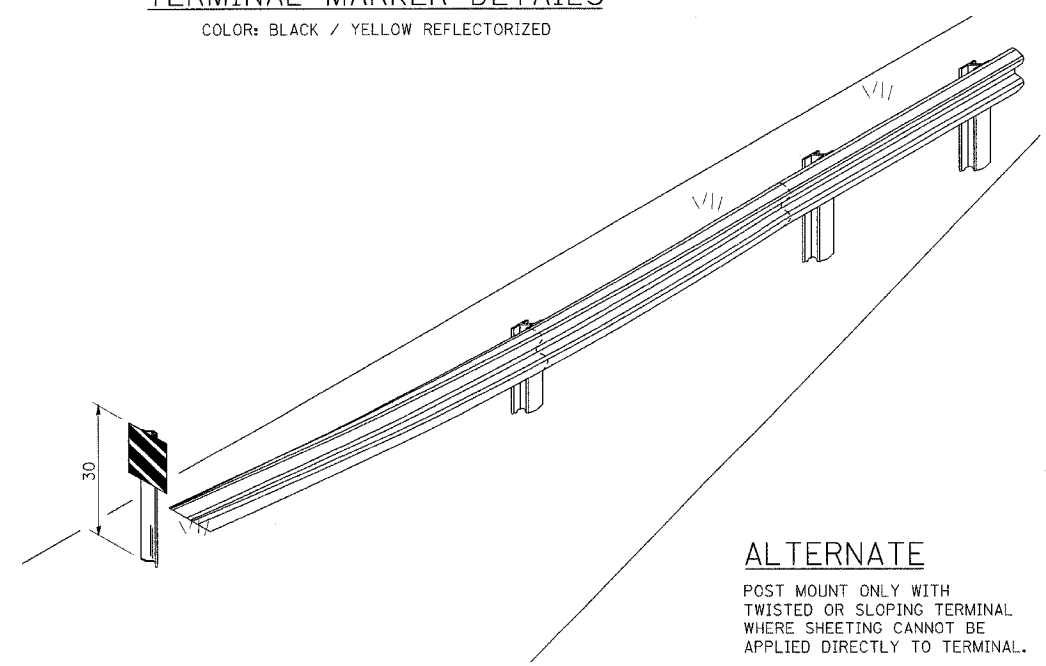
CASE I

CASE II

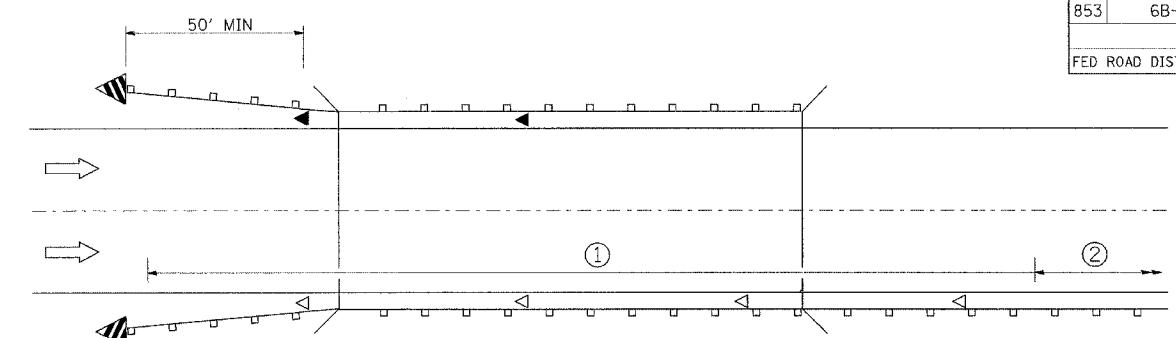


DIMENSION	CASE I	CASE II
a	15"	18"
b	20"	16"

TERMINAL MARKER DETAILS
 COLOR: BLACK / YELLOW REFLECTORIZED

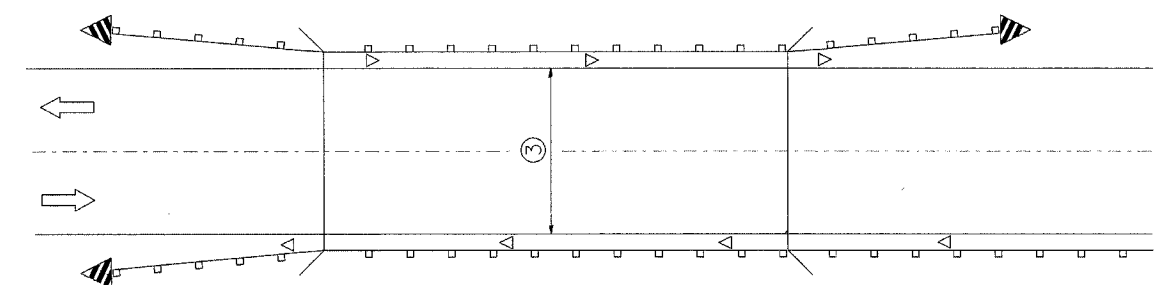


ALTERNATE
 POST MOUNT ONLY WITH
 TWISTED OR SLOPING TERMINAL
 WHERE SHEETING CANNOT BE
 APPLIED DIRECTLY TO TERMINAL.



- ① SPACING 80 FEET MAX FOR FIRST 400 FEET OR CURVE SPACING SHOWN IN STANDARD 635001, WHICHEVER IS LESS (MIN 4 REFLECTORS REGARDLESS OF LENGTH).
- ② AFTER 400 FEET, TRANSITION TO NORMAL DELINEATOR SPACING SHOWN IN STANDARD 635001, AND CONTINUE AS REQUIRED.

ONE-WAY TRAFFIC

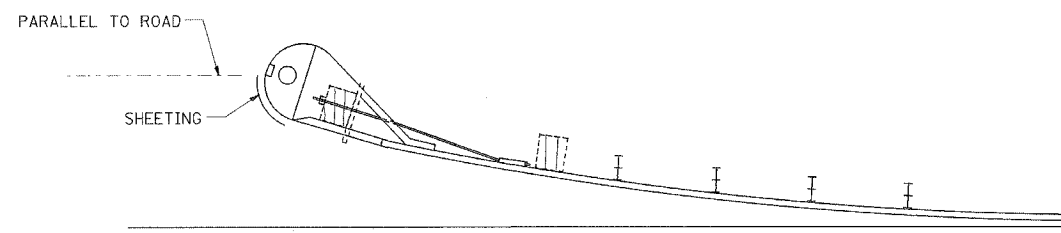


- ③ BIDIRECTIONAL SILVER/SILVER SHOULD BE USED IN LIEU OF MONODIRECTIONAL SILVER ON BOTH SIDES OF TWO-LANE BRIDGES WHERE THE PAVEMENT IS LESS THAN 24 IN WIDER THAN THE PAVEMENT APPROACHING THE BRIDGE.

- ◁ MONODIRECTIONAL SILVER
- ▲ MONODIRECTIONAL AMBER
- ▤ TERMINAL MARKER - BLACK/YELLOW LEFT OR RIGHT AS APPROPRIATE

TWO-WAY TRAFFIC

GUARDRAIL / BARRIER WALL /
 BRIDGE RAIL REFLECTORS

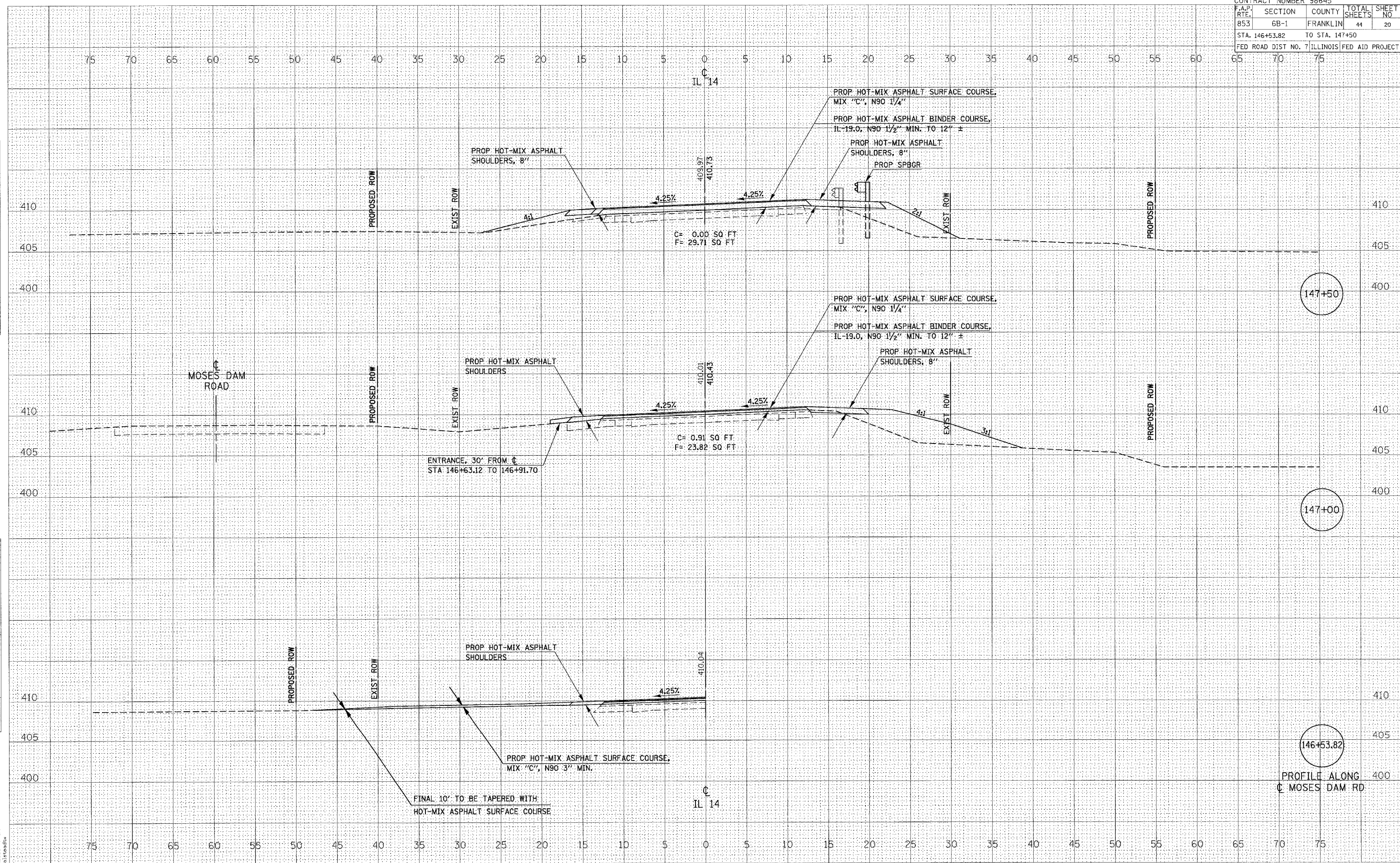


SHEETING POSITION: CASE II

ALL DIMENSIONS ARE IN INCHES
 UNLESS OTHERWISE SHOWN.

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CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	20
STA. 146+53.82		TO STA. 147+50		
FED ROAD DIST NO. 7		ILLINOIS FED AID PROJECT		



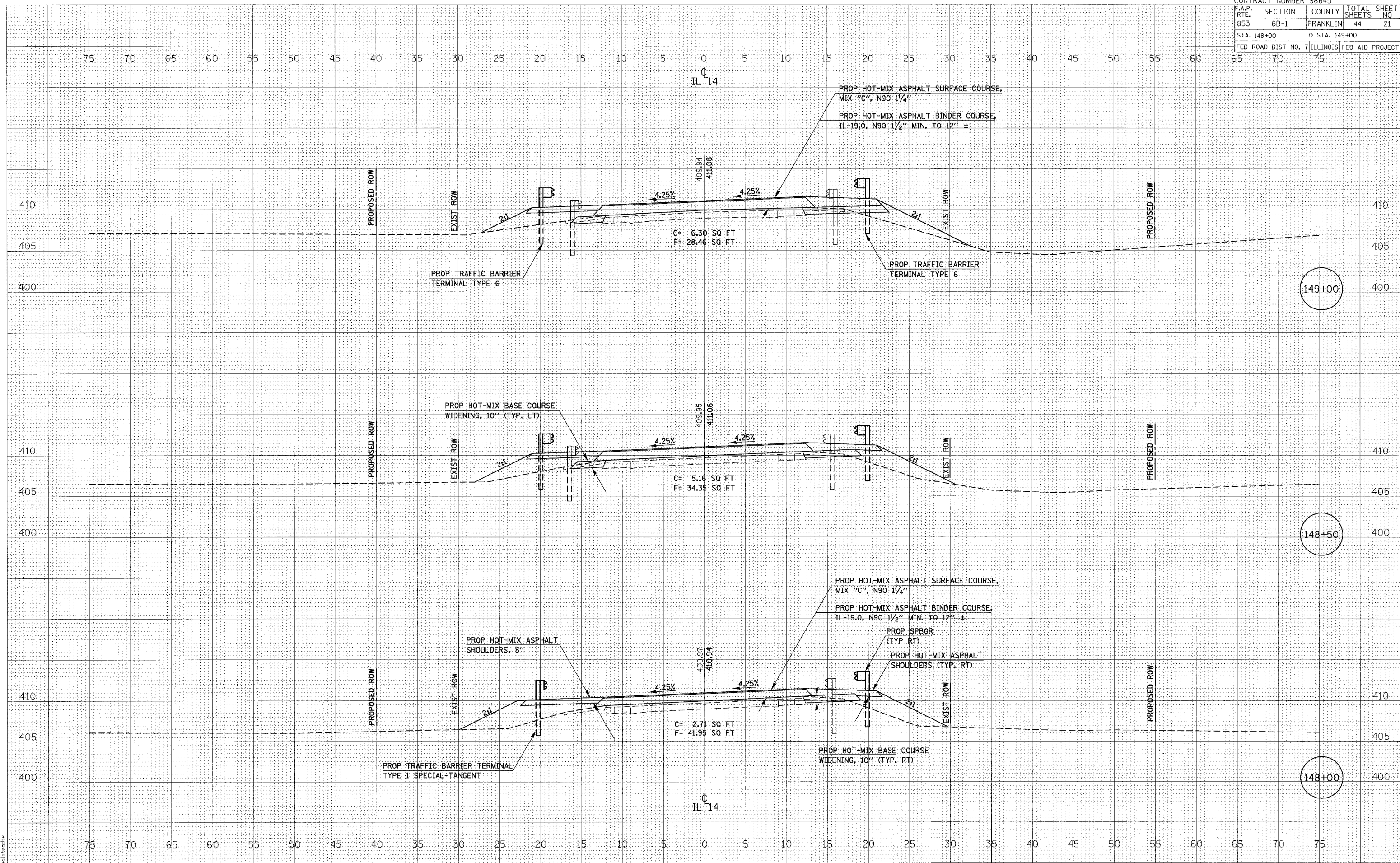
CROSS SECTIONS - IL 14 OVER DRUMMOND BRANCH
SN 028-0075

DATE: _____
 BY: _____
 SURVEYED: _____
 PLOTTED: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____

DATE: _____
 BY: _____
 SURVEYED: _____
 PLOTTED: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____

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CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	21
STA. 148+00		TO STA. 149+00		
FED ROAD DIST NO. 7		ILLINOIS FED AID PROJECT		



DATE: _____ BY: _____
 SURVEYED: _____
 SURVEY: _____
 TEMPLATE: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____

DATE: _____ BY: _____
 SURVEYED: _____
 SURVEY: _____
 TEMPLATE: _____
 NOTE BOOK: _____
 AREAS CHECKED: _____

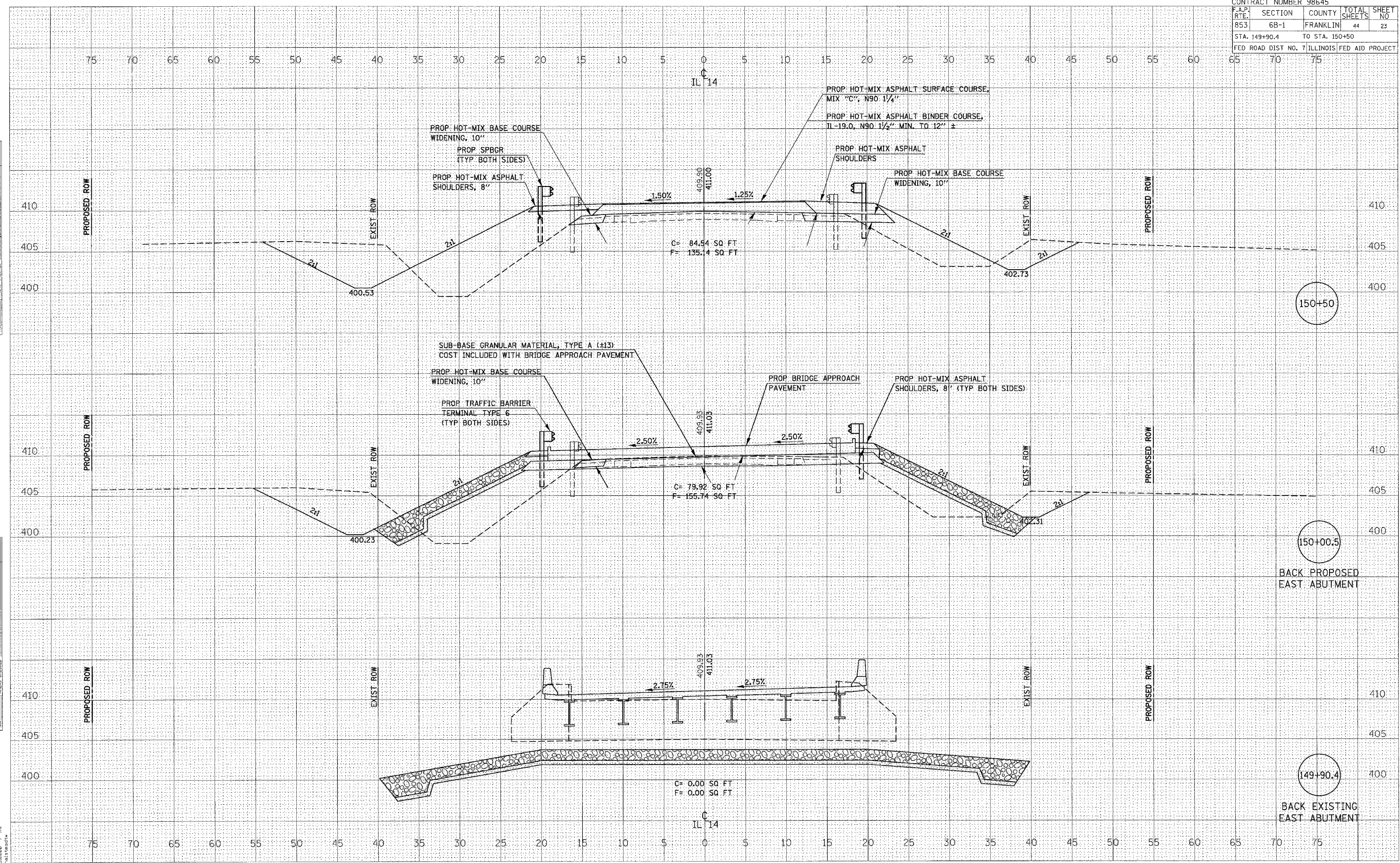
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CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	23
STA. 149+90.4		TO STA. 150+50		
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				

DATE	BY
DATE	BY
DATE	BY

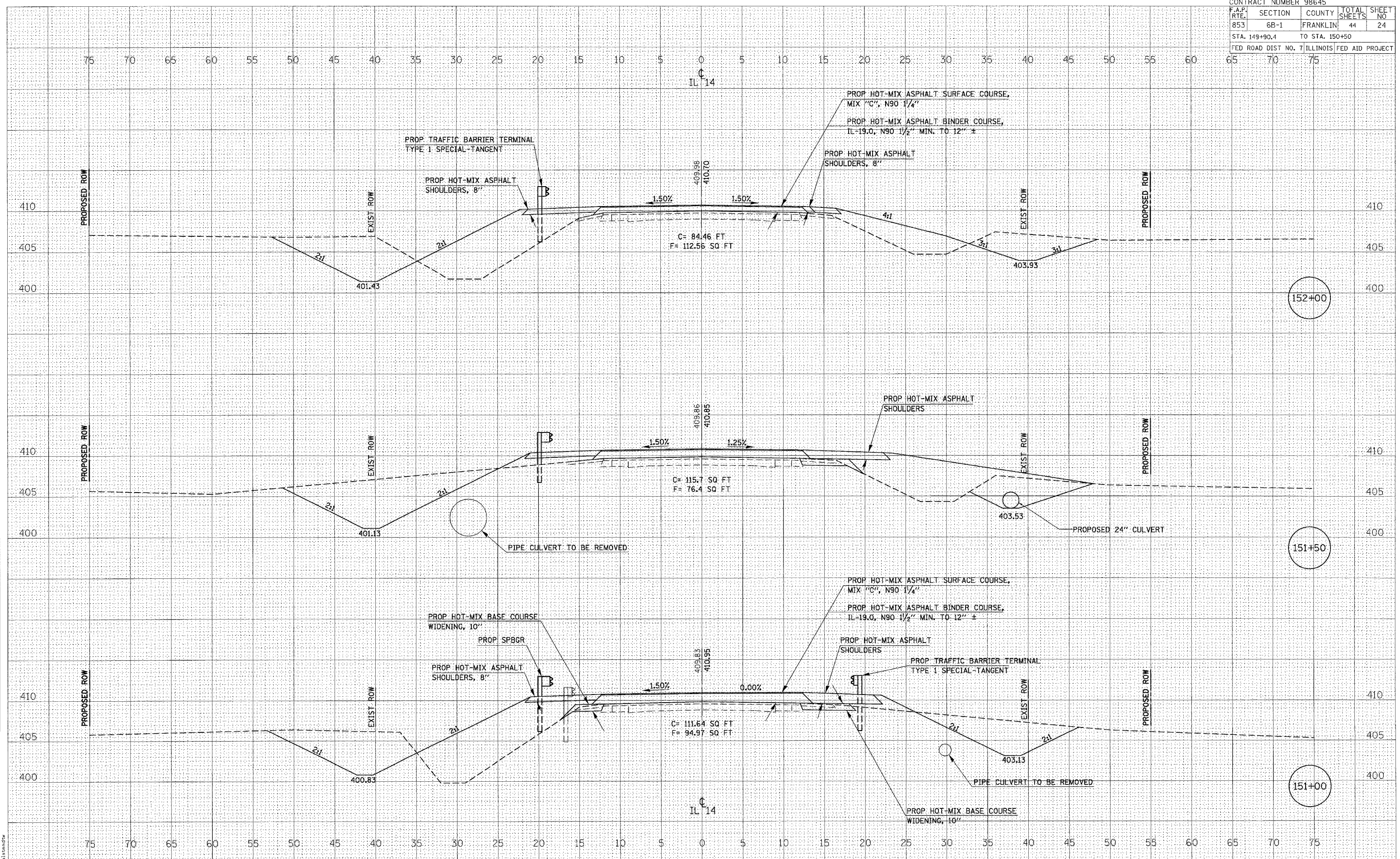
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**CROSS SECTIONS - IL 14 OVER DRUMMOND BRANCH
 SN 028-0075**

CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	24
STA. 149+90.4		TO STA. 150+50		
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				



BY	DATE
SUPERVISED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	
NO.	

BY	DATE
SUPERVISED	
NOTE BOOK	
TEMPLATE	
AREAS CHECKED	
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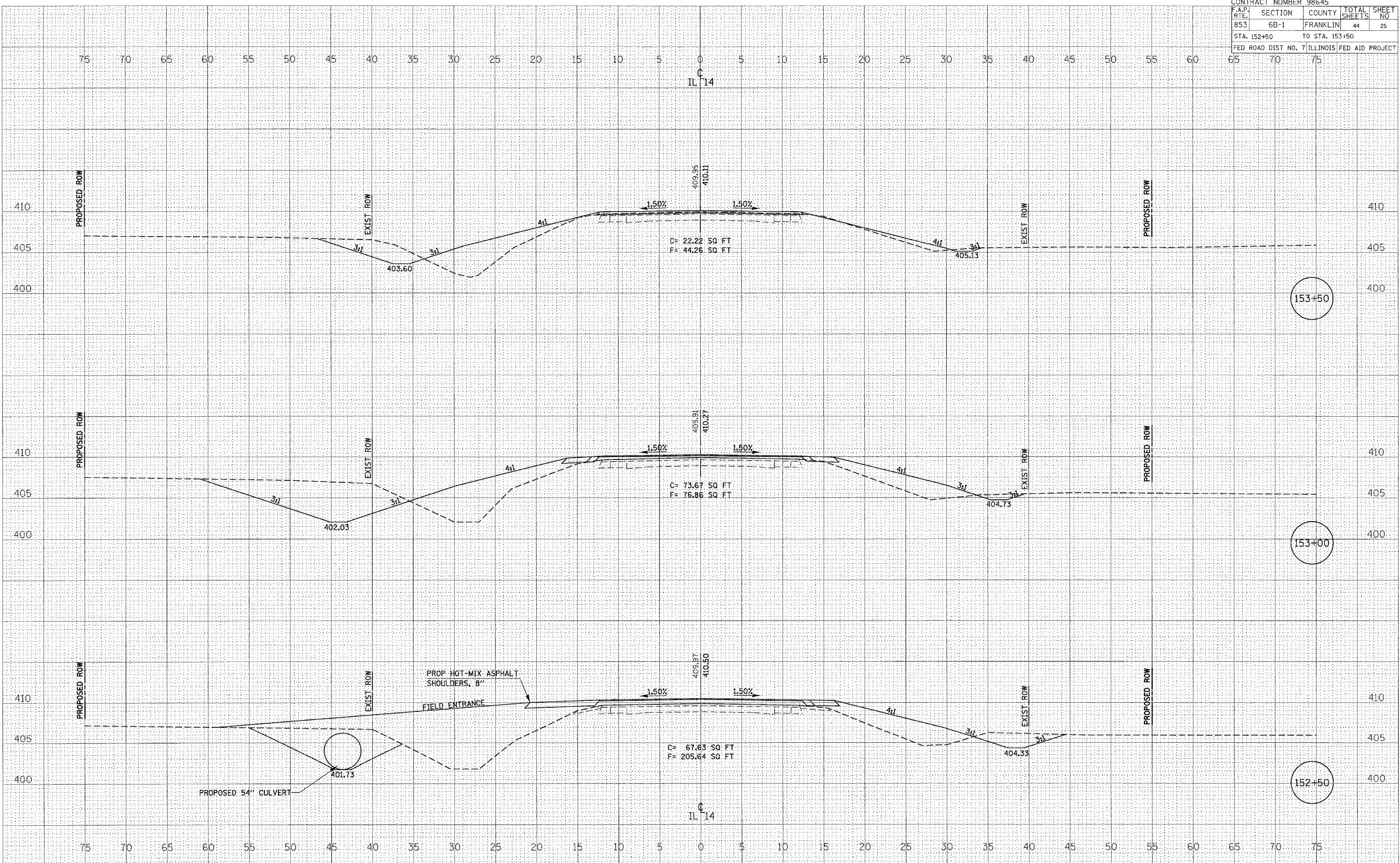
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CONTRACT NUMBER 98645				
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853	6B-1	FRANKLIN	44	25
STA. 152+50		TO STA. 153+50		
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 CHECKED _____
 NOTE BOOK _____
 AREAS CHECKED _____
 NO. _____

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 CHECKED _____
 NOTE BOOK _____
 AREAS CHECKED _____
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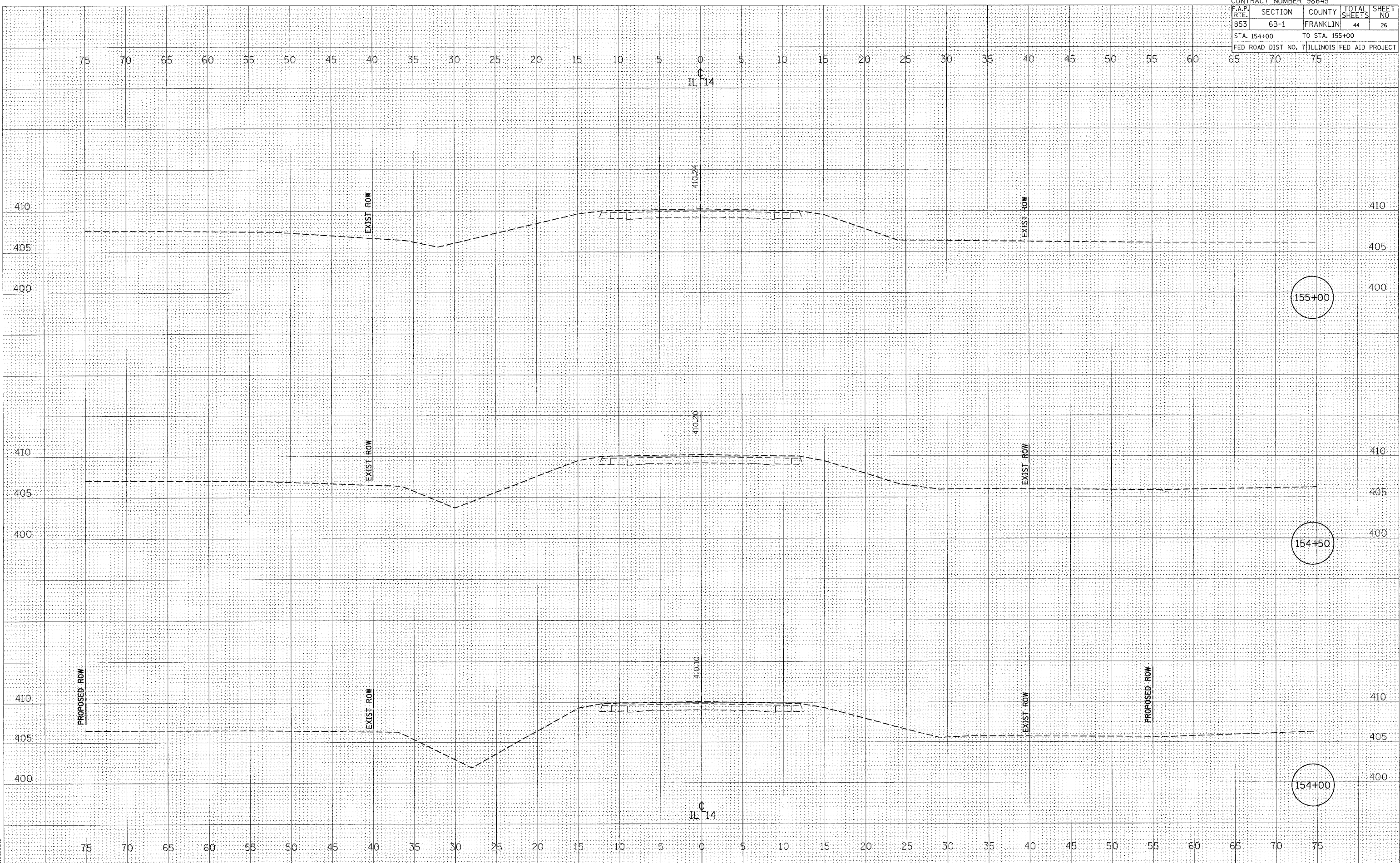
**CROSS SECTIONS - IL 14 OVER DRUMMOND BRANCH
 SN 028-0075**

CONTRACT NUMBER 98645				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
853	6B-1	FRANKLIN	44	26
STA. 154+00		TO STA. 155+00		
FED ROAD DIST NO. 7 ILLINOIS FED AID PROJECT				

FINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS CHECKED		
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ORIGINAL SURVEY	BY	DATE
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NOTE BOOK		
AREAS CHECKED		
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**CROSS SECTIONS - IL 14 OVER DRUMMOND BRANCH
 SN 028-0075**

BENCHMARK

Square cut on N.E. wingwall of 028-0023.
Elev. 409.29

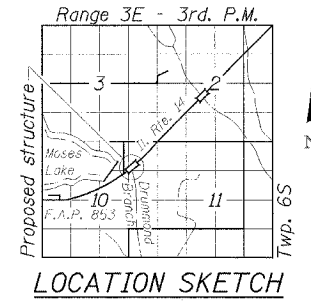
EXISTING STRUCTURE

028-0023. Built in 1924 as Route 14, Section 6B at Station 149+75 as a 1-span concrete slab superstructure, with a length of 30' Bk. to Bk. closed abutments, supported on timber pile footings. Bridge rail replacement in 1986 with 2" bituminous overlay.

PROPOSED STRUCTURE

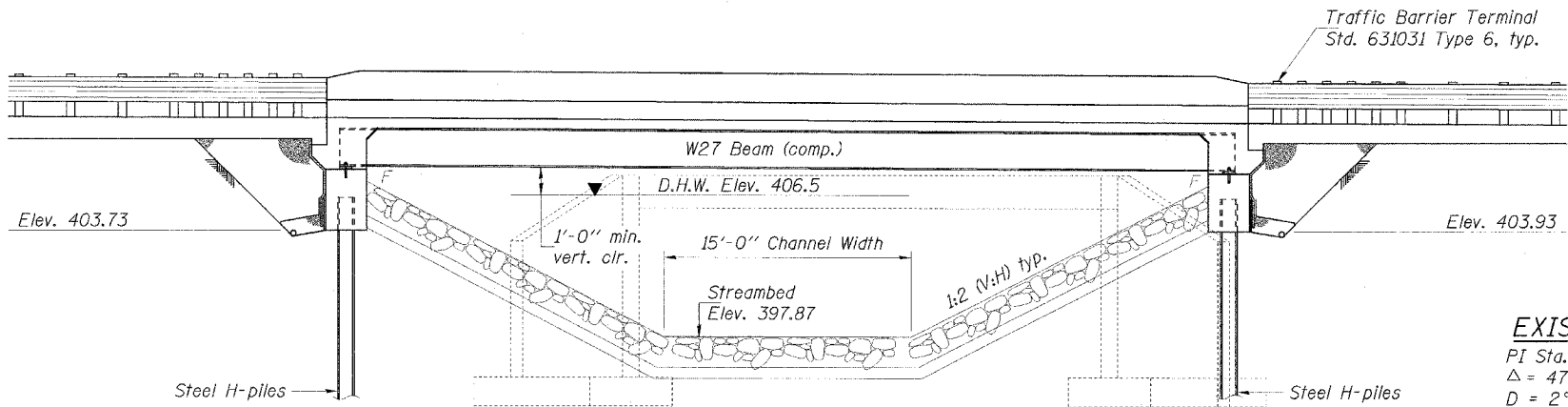
Existing bridge to be removed and replaced with a simple span steel stringer and concrete deck bridge on integral abutments. Traffic to be maintained utilizing stage construction.
No salvage.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	27
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		
Contract #98645		SHEET 1 OF 18		



INDEX OF SHEETS

SHEET NO.	TITLE
1.	General Plan
2.	Notes and Bill of Material
3.	Stage Construction Details
4.	Temporary Concrete Barrier
5.	Temporary Bridge Rail Details
6.	Deck Elevation 1
7.	Deck Elevation 2
8.	Superstructure
9.	Parapet Details
10.	Abutment Diaphragm Details
11.	Framing Plan & Details
12.	Anchor Bolt Details
13.	West Abutment
14.	East Abutment
15.	Bar Splicer Assembly Details
16.	Cantilever Forming Brackets
17.	Steel H-Pile Details
18.	Boring Logs



EXIST. CURVE DATA

PI Sta. = 140+89.72
 $\Delta = 47^\circ-48'-09''$ (LT)
 $D = 2^\circ-29'-59''$
 $R = 2,292.01'$
 $T = 1,015.74'$
 $L = 1,912.25'$
 $E = 214.99'$
 $e = 4.25\%$
 $T.R. = 60'$
 $S.E. RUN = 170'$
 $P.C. Sta. = 130+73.98$
 $P.T. Sta. = 149+86.23$
 $Normal Crown = 151+60.00$
 $Full S.E. = 149+30.00$

STATION 149+71.25
 BUILT 200_ BY
 STATE OF ILLINOIS
 F.A.P. RT 853 SEC. 6B-1
 LOADING HL-93
 STR. NO. 028-0075

NAME PLATE

See Std. 515001

LOADING HL-93

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

DESIGN SPECIFICATIONS

2004 LRFD AASHTO w/Interims thru 2006

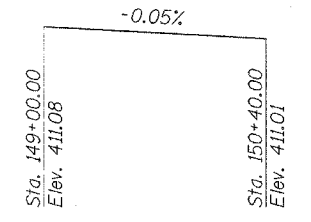
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (structural steel M270 Grade 50)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
 Bedrock Acceleration Coefficient (A) = 0.10g
 Site Coefficient (S) = 1.0



PROFILE GRADE

(Il. Rte. 14)

Design Scour Elevation (feet)	W. Abutment	E. Abutment
	403.76	404.00

WATERWAY INFORMATION

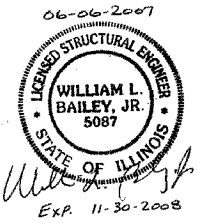
Exist. Low Grade Elev. 409.83 ft. @ Sta. 151+00
 Drainage Area = 4.59 sq. mi. Prop. Low Grade Elev. 410.12 ft. @ Sta. 146+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	640	182.2	258.8	406.1	0.2	0.0	406.3	406.1
Base	50	930	192.7	278.3	406.5	0.7	0.4	407.2	406.9
Overtopping	100	1,050	198.0	288.2	406.7	0.9	0.5	407.6	407.2
Max. Calc.	500	1,320	200.6	293.2	406.8	1.5	1.0	408.3	407.8

10-Year velocity through existing bridge = 3.5 fps
 10-Year velocity through proposed bridge = 2.5 fps

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY

Robert E. Ordman
 ENGINEER OF BRIDGES AND STRUCTURES

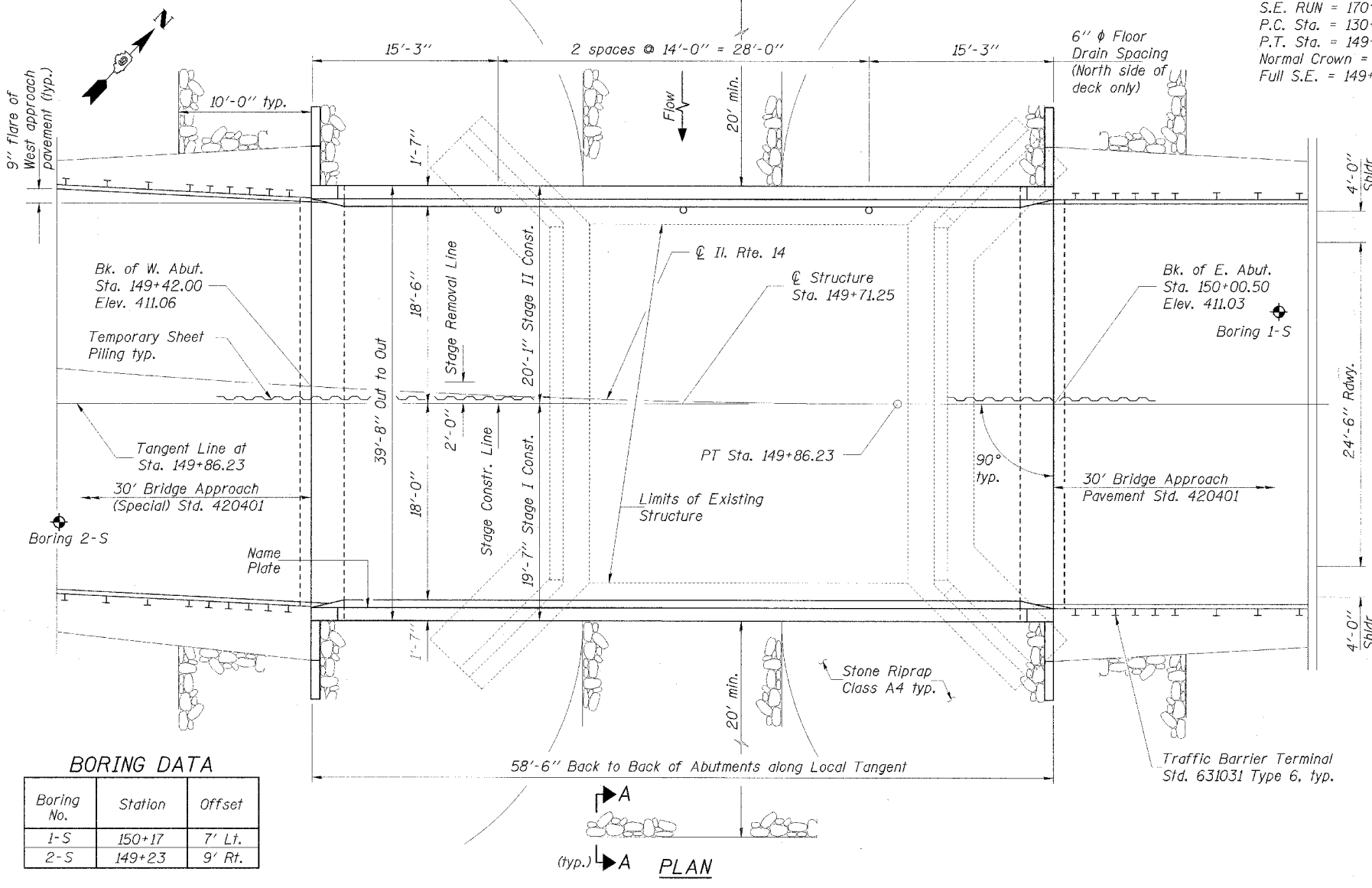
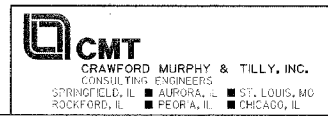


NOTES:

1. See Sheet 2 for riprap details and Section A-A.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL PLAN
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
 DATE: 6/6/07 CHECKED BY: WLB



BORING DATA

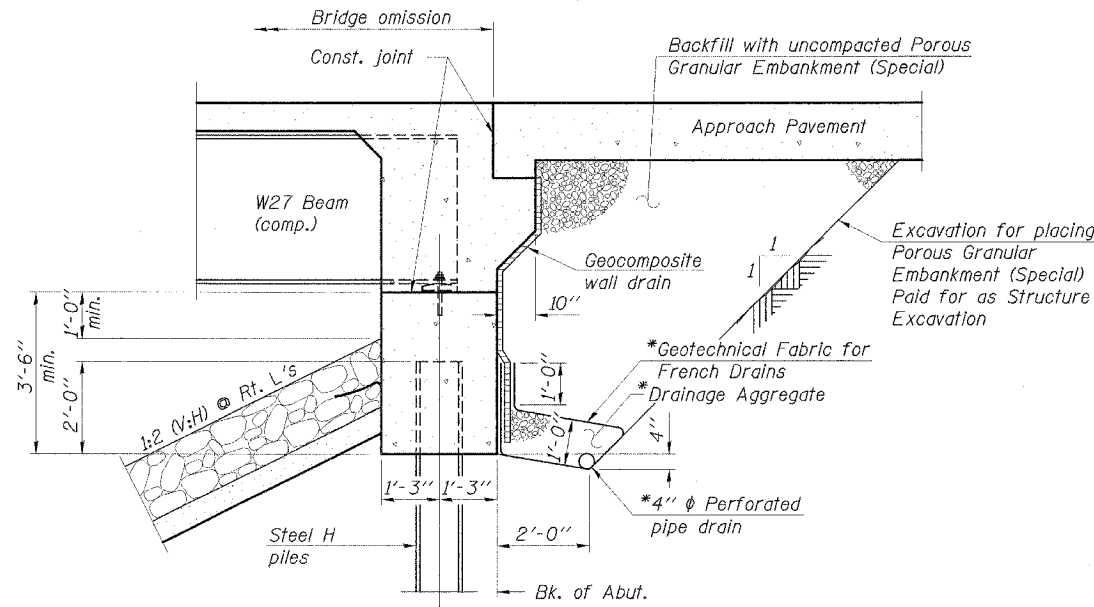
Boring No.	Station	Offset
1-S	150+17	7' Lt.
2-S	149+23	9' Rt.

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GENERAL NOTES

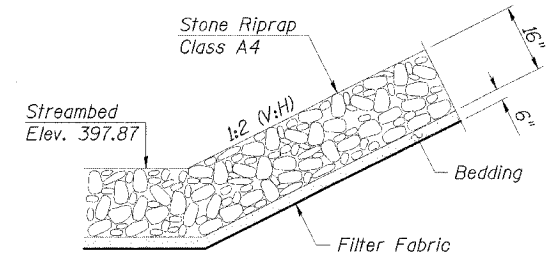
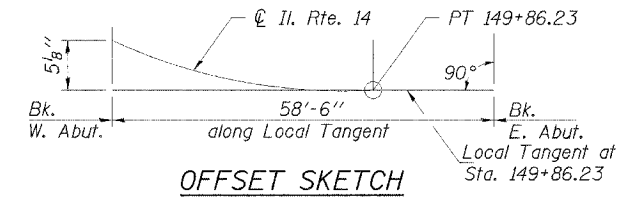
- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{3}{4}$ in. ϕ , holes $\frac{13}{16}$ in. ϕ , unless otherwise noted.
- Calculated weight of Structural Steel = 50,790 (AASHTO M270 Grade 50)
4,370 (AASHTO M270 Grade 36)
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
- Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage 1 removal to ensure the remaining portion will not be prematurely damaged.
- The Contractor is advised that the existing RC slab is in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the slab when developing construction procedures for removal and replacement of the superstructure.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	28
STA.	N/A	TO STA.	N/A	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
Contract #98645			SHEET 2 OF 18	

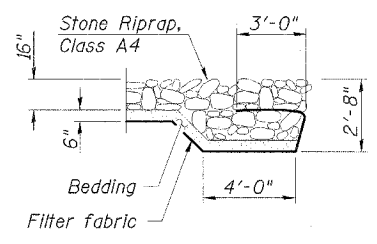


*Included in the cost of Pipe Underdrains for Structures 4"
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

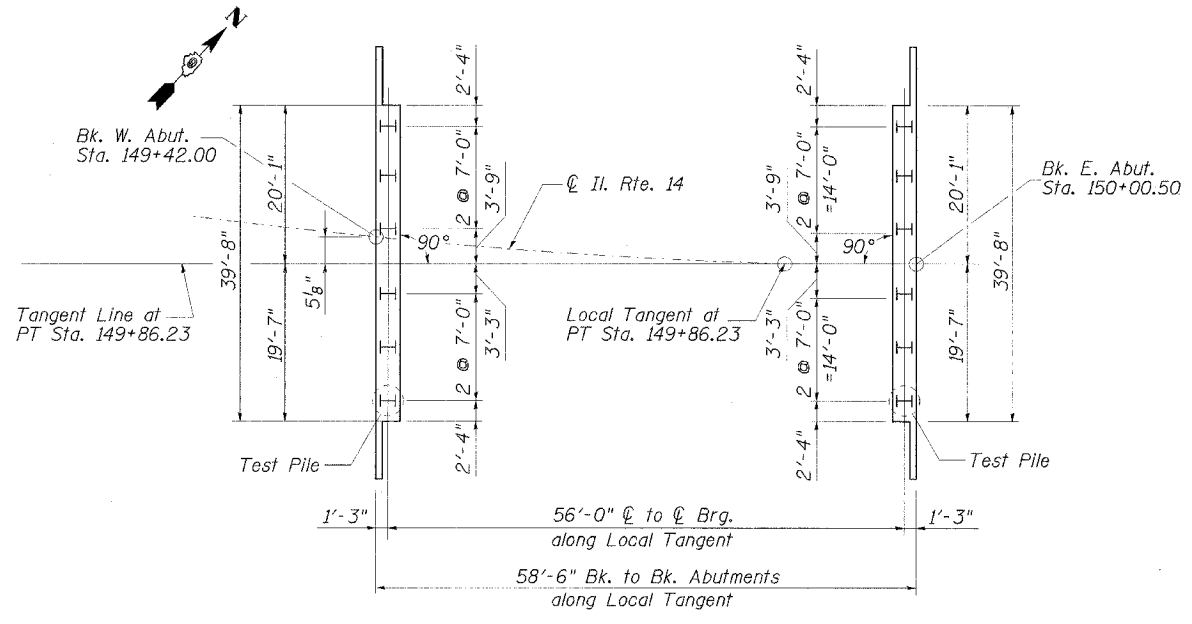
SECTION THRU INTEGRAL ABUTMENT



STONE RIPRAP DETAIL



SECTION A-A
(See Sheet 1 for Plan location)



FOOTING LAYOUT

TOTAL BILL OF MATERIAL

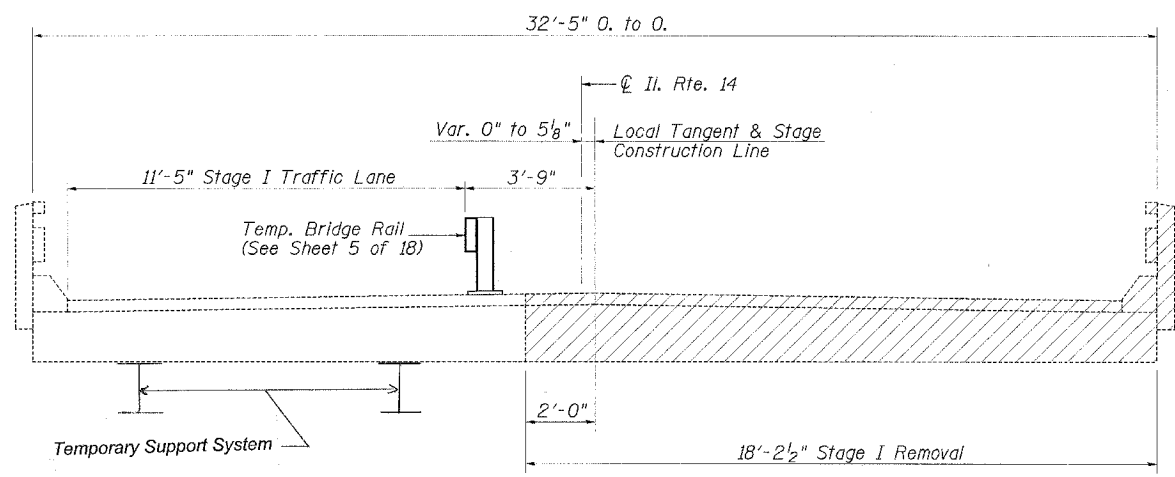
ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment, Special	Cu. Yd.		119	119
Stone Riprap, Class A4	Sq. Yd.		593	593
Filter Fabric	Sq. Yd.		701	701
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		236	236
Floor Drains	Each	3		3
Concrete Structures	Cu. Yd.		37.6	37.6
Concrete Superstructure	Cu. Yd.	90.9		90.9
Bridge Deck Grooving	Sq. Yd.	223		223
Concrete Encasement	Cu. Yd.		4.2	4.2
Protective Coat	Sq. Yd.	287		287
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	1044		1044
Reinforcement Bars, Epoxy Coated	Pound	18,950	5150	24,100
Furnishing Steel Piles HP 10x42	Foot		435	435
Driving Piles	Foot		435	435
Test Pile Steel HP 10x42	Each		2	2
Temporary Sheet Piling	Sq. Ft.		775	775
Steel Railing (Temporary)	Foot	30		30
Name Plates	Each	1		1
Anchor Bolts, 1" ϕ	Each	24		24
Geocomposite Wall Drain	Sq. Yd.		68	68
Pipe Underdrains for Structures 4"	Foot		132	132
Bar Splicers	Each	270	20	290
Temporary Support System	L. Sum			1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
NOTES AND BILL OF MATERIAL
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
 DATE: 6/6/07 CHECKED BY: WLB

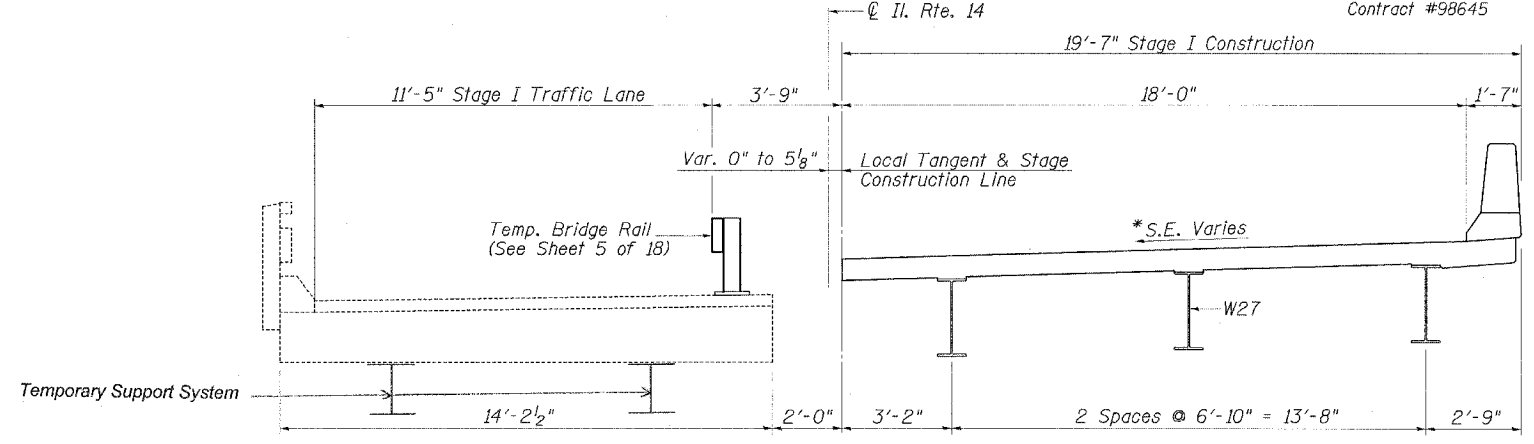
CMT
 CRAWFORD MURPHY & TILLY, INC.
 CONSULTING ENGINEERS
 SPRINGFIELD, IL ■ AURORA, IL ■ ST. LOUIS, MO
 ROCKFORD, IL ■ PEORIA, IL ■ CHICAGO, IL

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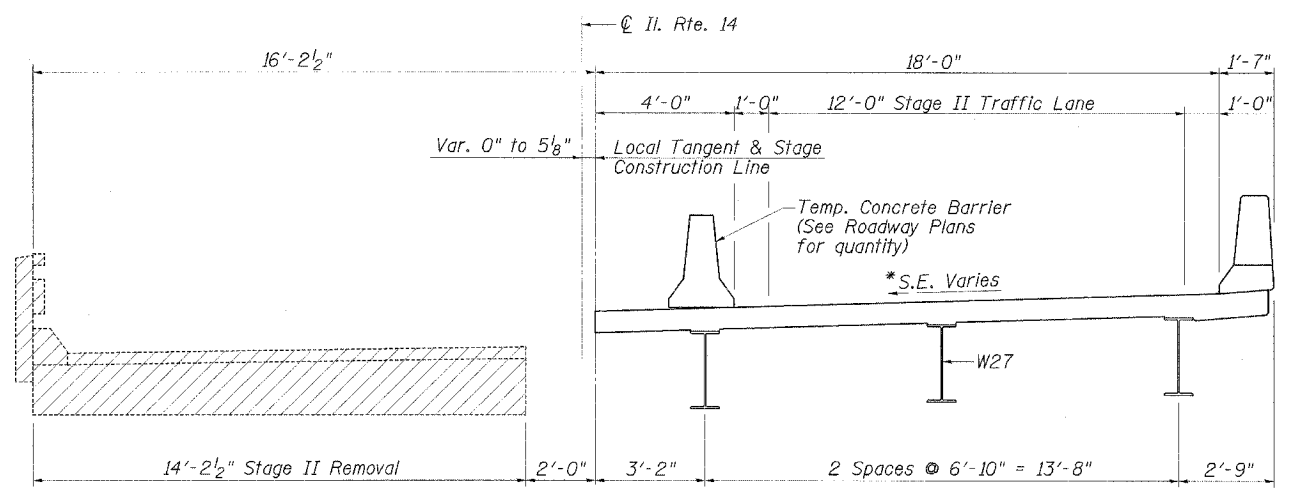


CROSS SECTION - STAGE I REMOVAL
(Looking East)

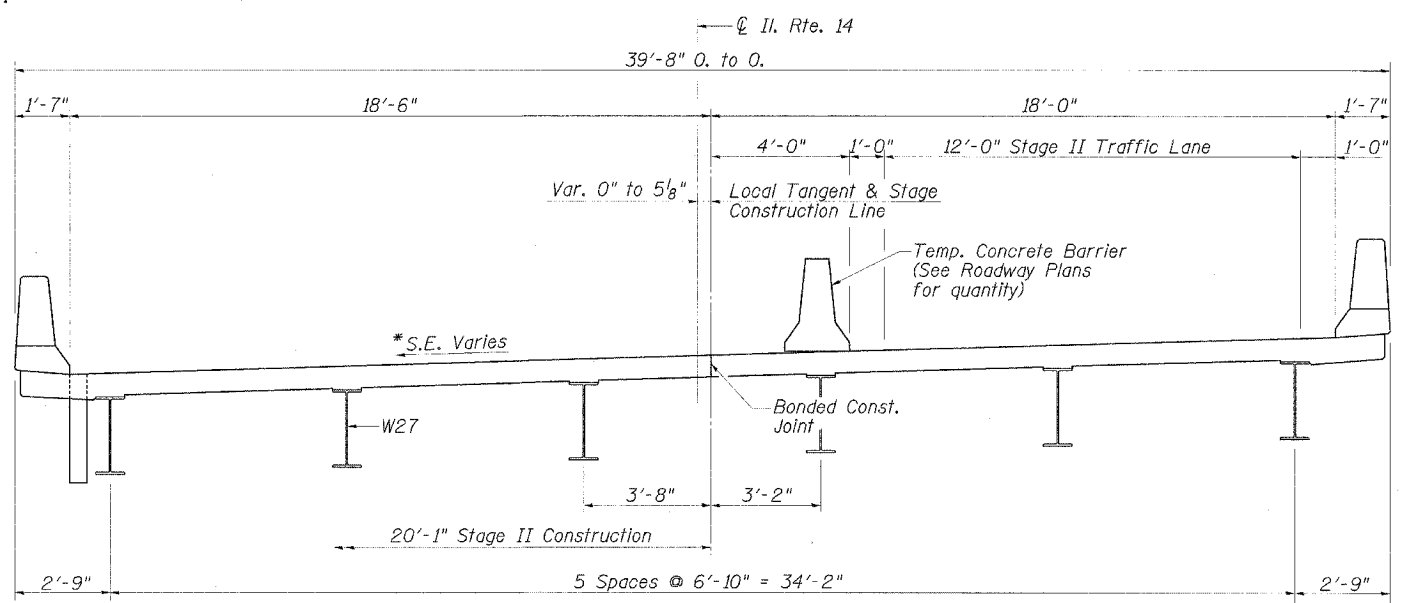
*Superelevation varies from 3.95% at W. Abut. to 2.49% at E. Abut.



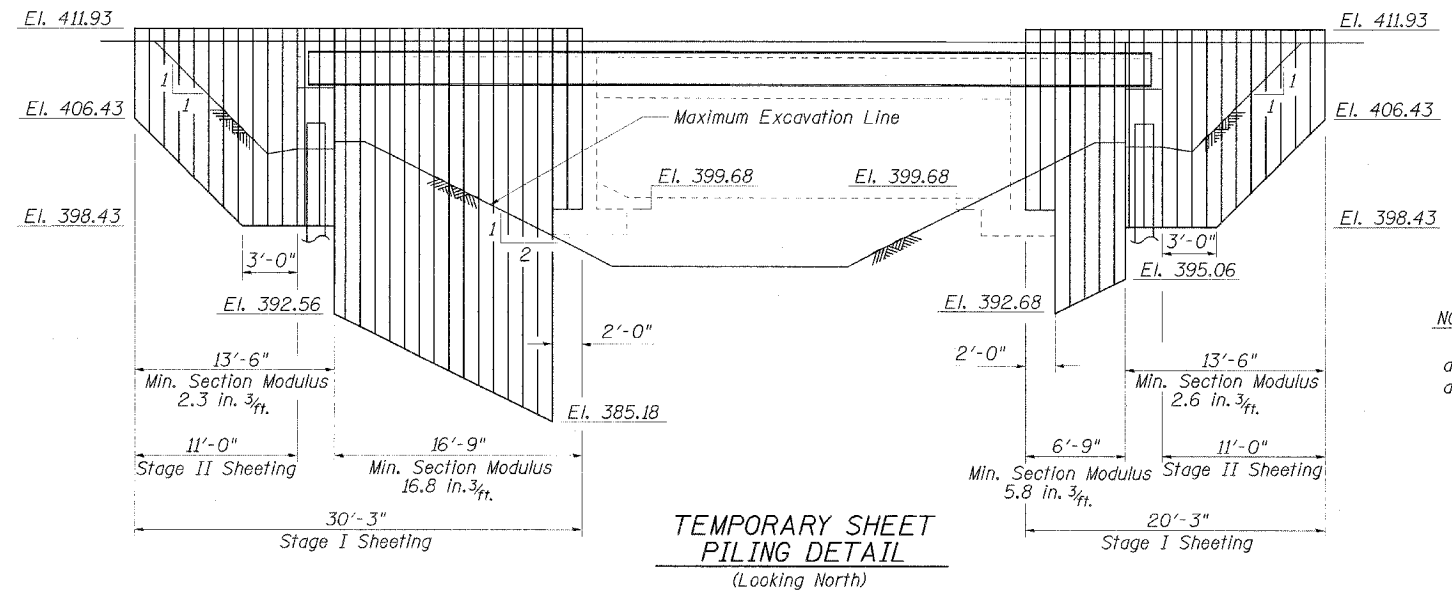
CROSS SECTION - STAGE I CONSTRUCTION
(Looking East)



CROSS SECTION - STAGE II REMOVAL
(Looking East)



CROSS SECTION - STAGE II CONSTRUCTION
(Looking East)



TEMPORARY SHEET PILING DETAIL
(Looking North)

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

REVISIONS	
NAME	DATE

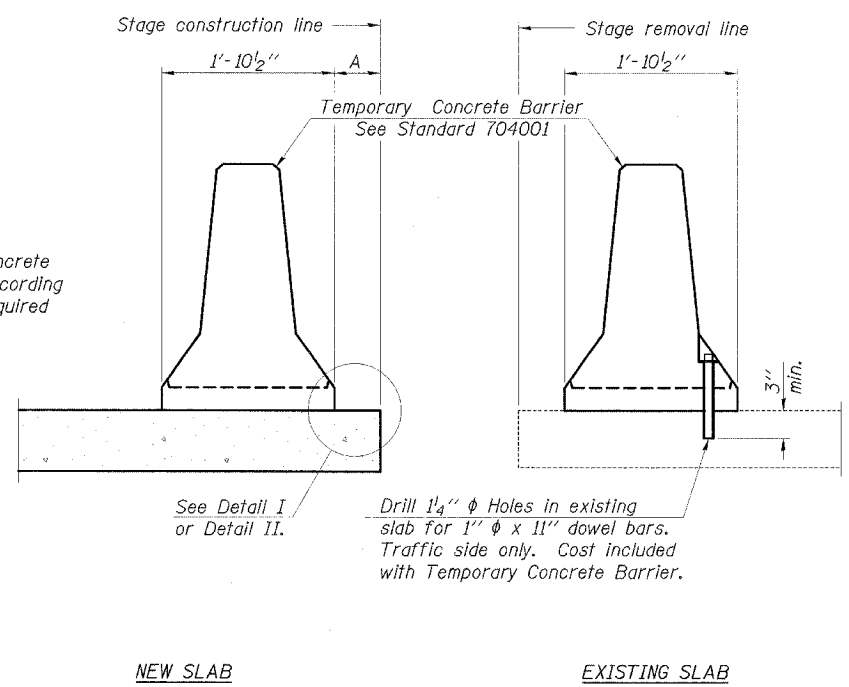


ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE CONSTRUCTION DETAILS
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
 DATE: 6/6/07 CHECKED BY: WLB

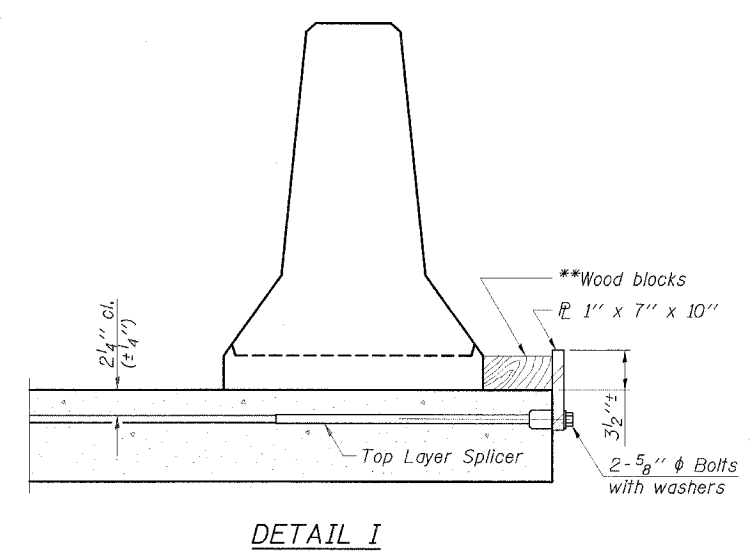
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	30
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		
Contract #98645		SHEET 4 OF 18		

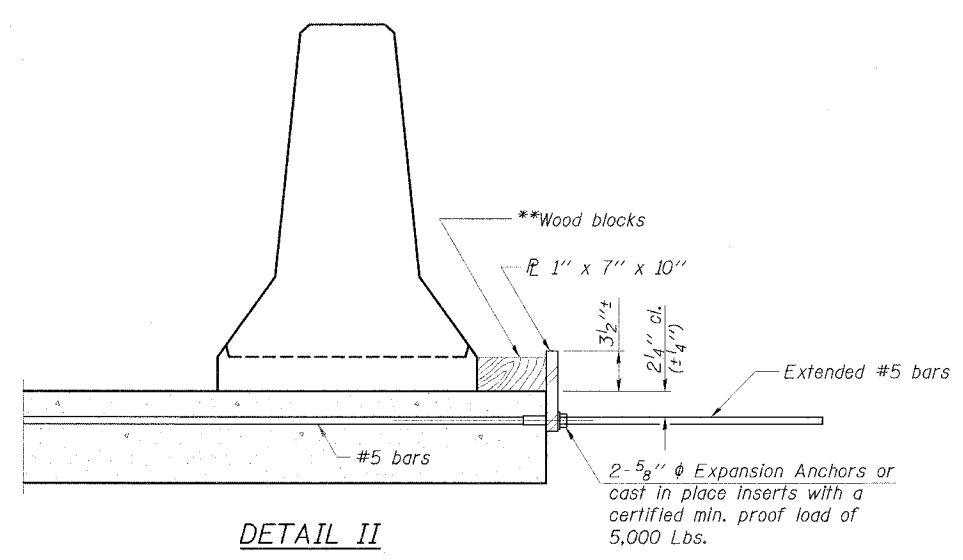
When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".



SECTIONS THRU SLAB



DETAIL I



DETAIL II

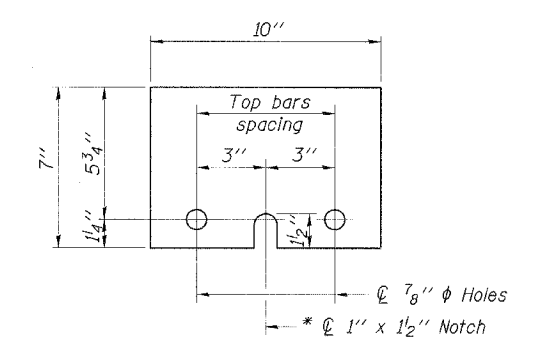
** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

NOTES

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

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

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



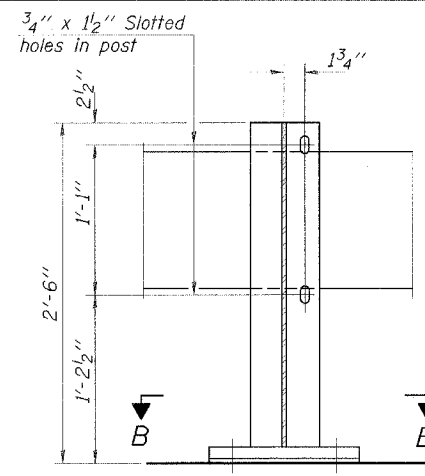
STEEL RETAINER \bar{L} 1" x 7" x 10"
* Required only with Detail II

REVISIONS	
NAME	DATE

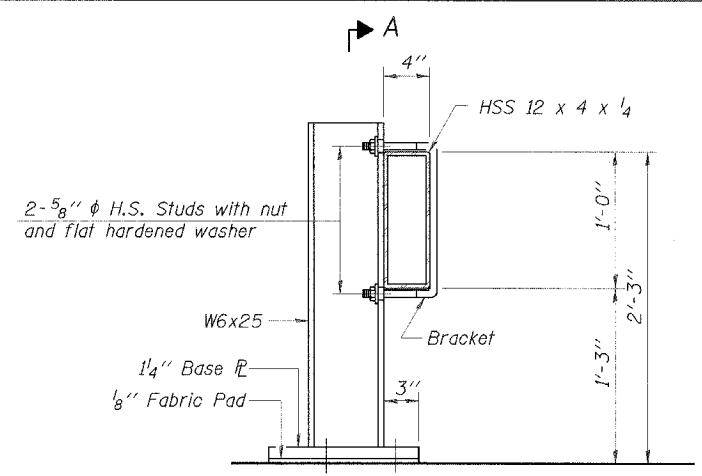
ILLINOIS DEPARTMENT OF TRANSPORTATION
TEMPORARY CONCRETE BARRIER
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE
 DATE: 6/6/07
 DRAWN BY: GLD
 CHECKED BY: WLB

CMT
 CRAWFORD MURPHY & TILLY, INC.
 CONSULTING ENGINEERS
 SPRINGFIELD, IL ■ AURORA, IL ■ ST. LOUIS, MO
 ROCKFORD, IL ■ PEORIA, IL ■ CHICAGO, IL

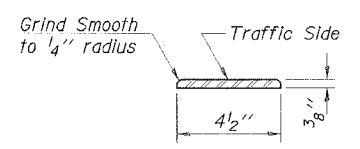
I:\PROJECTS\060660\SN_0280075\draw\sheeters\TEMP CONC BARR R-27.dgn
 6/5/2007



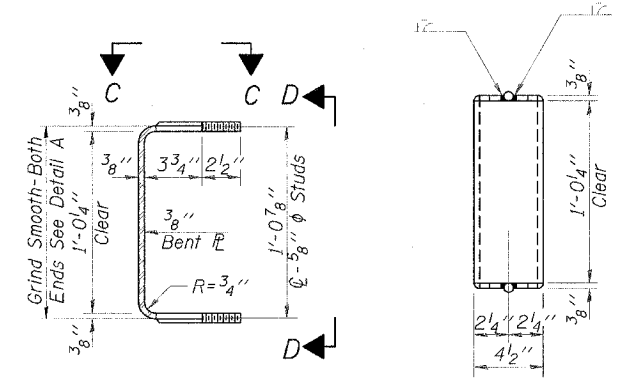
SECTION A-A



SECTION AT RAIL POST

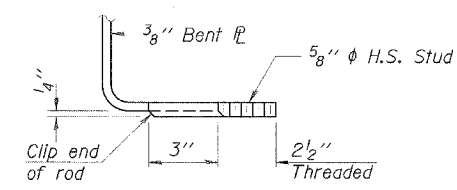


DETAIL A

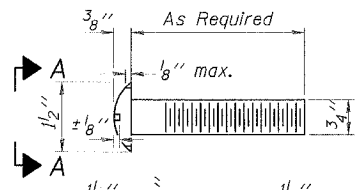


SECTION THRU BRACKET

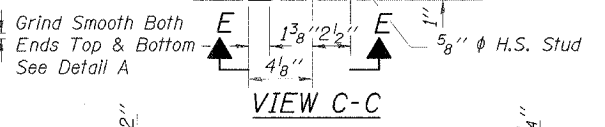
VIEW D-D



VIEW E-E

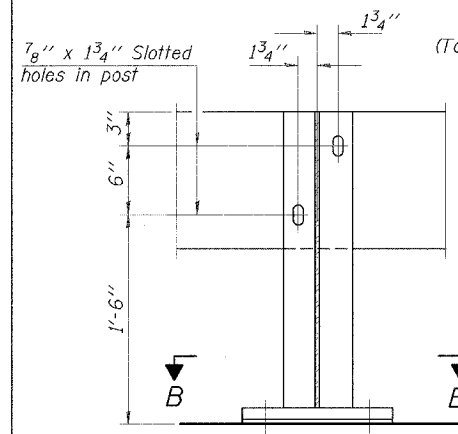


VIEW A-A ROUND HEAD BOLT



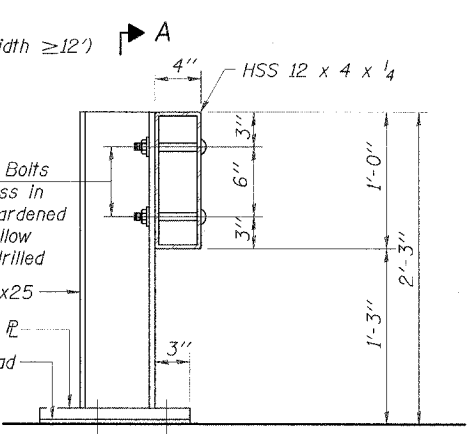
VIEW C-C

Notes:
 See Rail Post spacing detail this sheet.
 The contact surfaces between post flange, rail and inside face of bracket for Alternate I shall be free of all lubricants.
 The nut for 5/8 inch high strength studs used in Alternate I to connect bracket to post shall be tightened to a snug fit and given an additional one half turn.



SECTION A-A

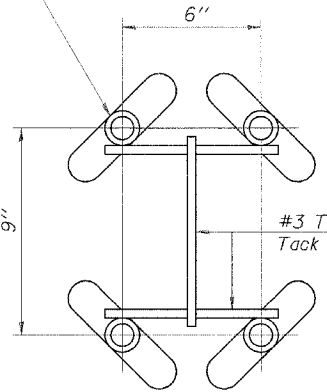
ALTERNATE I
 (To be used only for Roadway width ≥ 12')



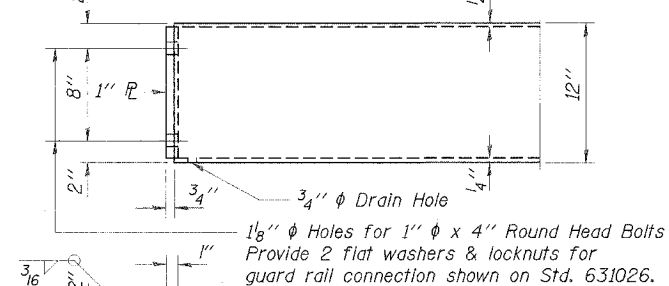
SECTION AT RAIL POST

2-3/4 inch diameter Round Head Bolts (With slot or approved recess in head) with locknut & flat hardened washer. 7/8 inch diameter holes in hollow structural section may be drilled in the field.

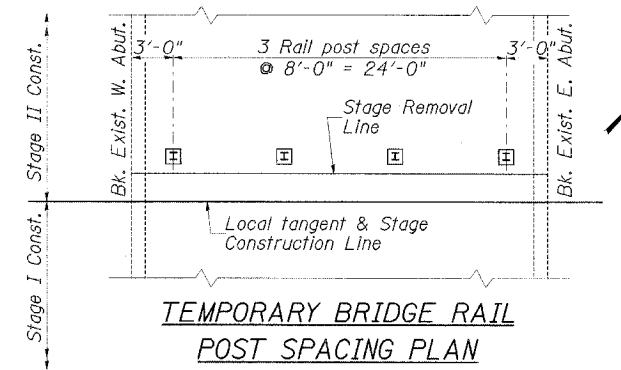
1 inch diameter Flared thin slab ferrule insert. Electroplated according to ASTM B 633 Service Condition 4.



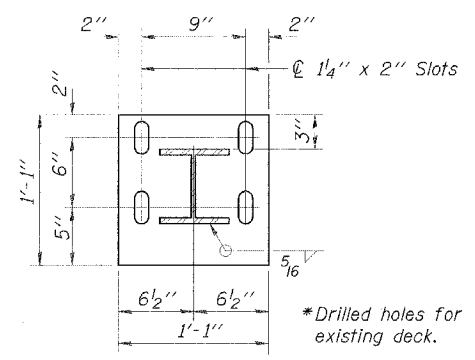
INSERT DETAIL



END OF RAIL DETAILS

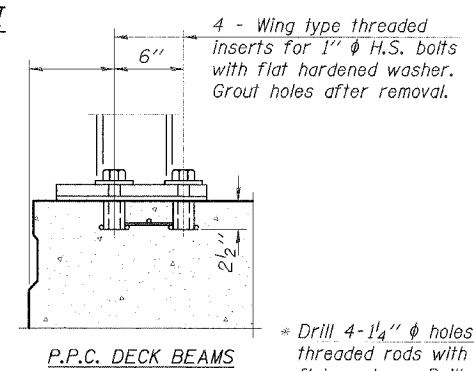


TEMPORARY BRIDGE RAIL POST SPACING PLAN



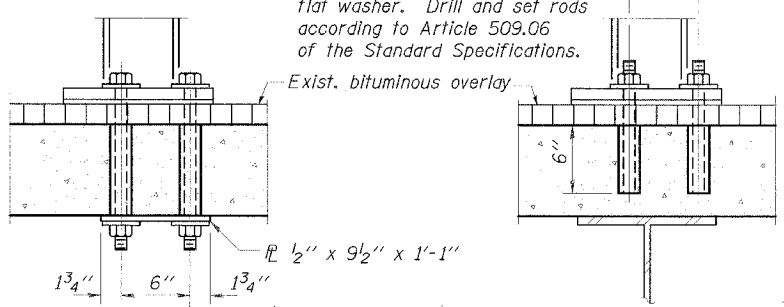
SECTION B-B

*Drilled holes for existing deck.

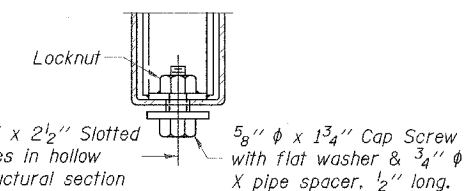


P.P.C. DECK BEAMS

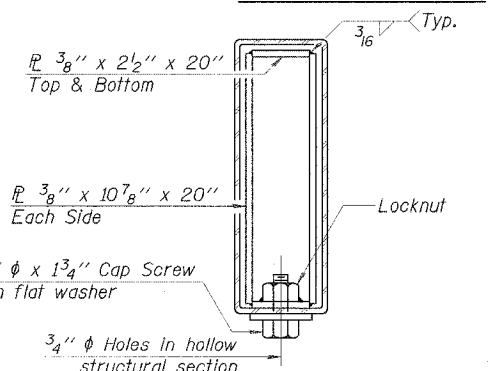
*Drill 4-1/4 inch diameter holes for 1 inch diameter threaded rods with hex nut and flat washer. Drill and set rods according to Article 509.06 of the Standard Specifications.



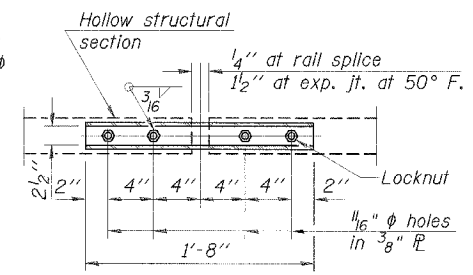
ANCHORAGE DETAILS



RAIL SPLICE CONNECTION AT EXPANSION JT.



SECTION AT RAIL SPLICE



PLAN-BOTT. SPLICE PLATE TYPICAL

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing (Temporary)	Foot	30

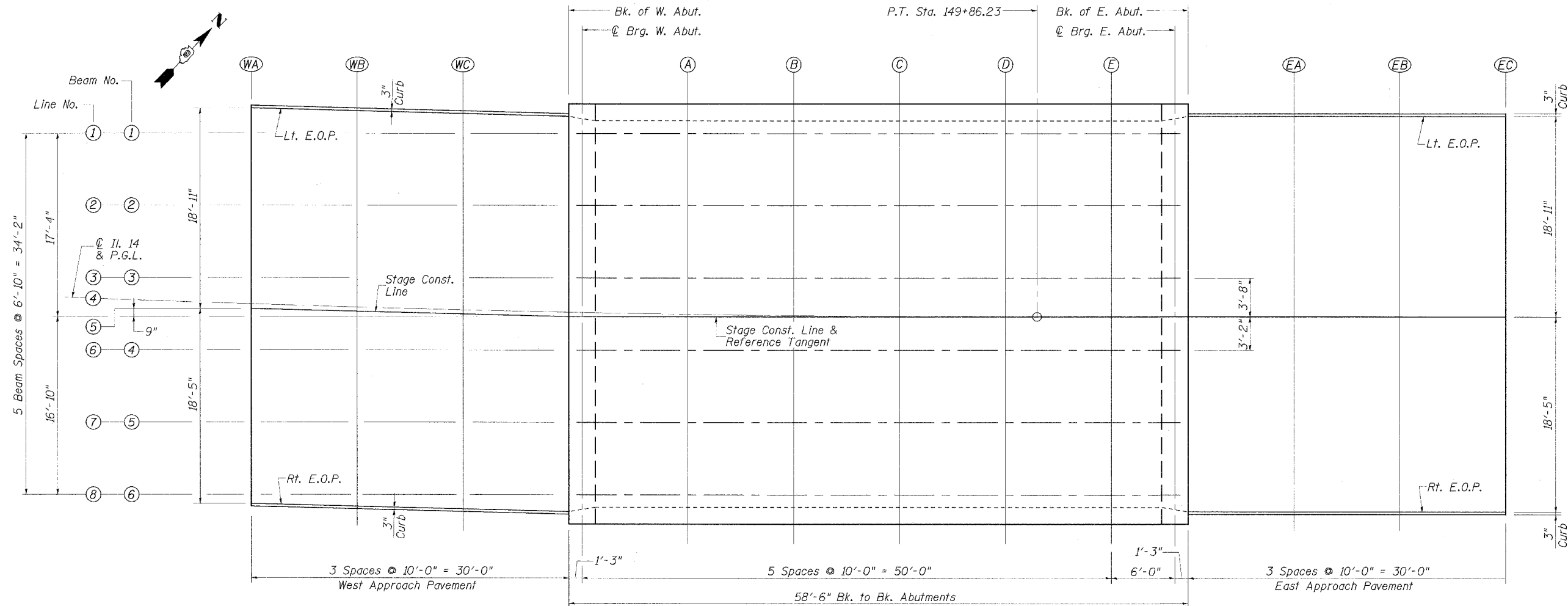
REVISIONS

NAME	DATE

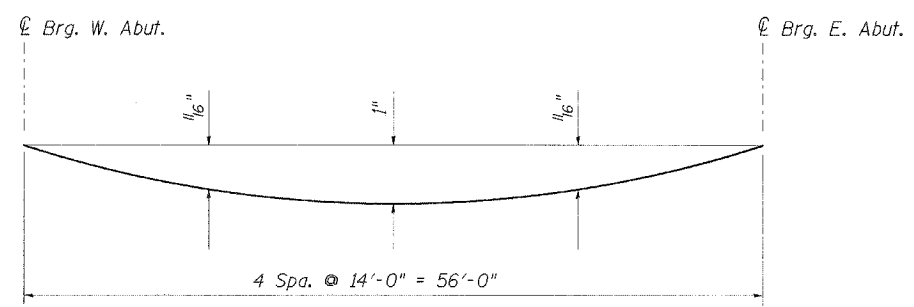
ILLINOIS DEPARTMENT OF TRANSPORTATION
 TEMPORARY BRIDGE RAIL DETAILS
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
 DATE: 6/6/07 CHECKED BY: WLB

CMT
 CRAWFORD MURPHY & TILLY, INC.
 CONSULTING ENGINEERS
 SPRINGFIELD, IL ■ AURORA, IL ■ ST. LOUIS, MO
 ROCKFORD, IL ■ PEORIA, IL ■ CHICAGO, IL

L:\DGI\1060650\SN_0280075\Draw_Sheets\TEMP BRIDGE RAIL 6-25.dgn
 6/5/2007

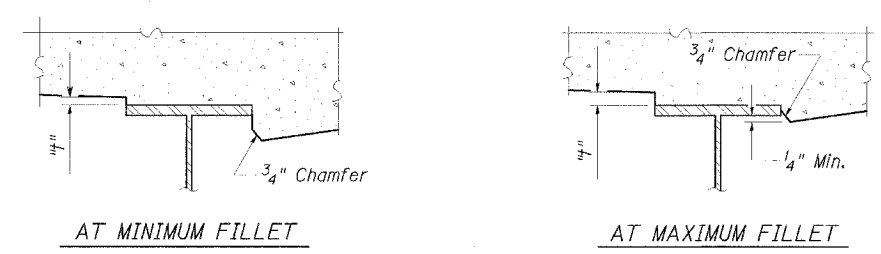


LAYOUT PLAN FOR DECK ELEVATIONS



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 shown on Sheet 7.



METHOD OF DETERMINING FILLET HEIGHTS "H"

After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at the stations shown on Sheet 7. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on Sheet 7, minus slab thickness equals the fillet heights "H" above top flange of girders.

NOTES:

1. Work this Sheet with Sheet 7 of 18.

REVISIONS	
NAME	DATE

CMT
CRAWFORD MURPHY & TILLY, INC.
CONSULTING ENGINEERS
SPRINGFIELD, IL AURORA, IL ST. LOUIS, MO
ROCKFORD, IL PEORIA, IL CHICAGO, IL

ILLINOIS DEPARTMENT OF TRANSPORTATION
DECK ELEVATIONS 1
F.A.P. ROUTE 853 (IL. RTE. 14)
ILLINOIS ROUTE 14 OVER
DRUMMOND BRANCH
SECTION 6B-1 STA. 149+71.25
STR. NO. 028-0075 - FRANKLIN COUNTY
SCALE: NONE DRAWN BY: GLD
DATE: 6/6/07 CHECKED BY: WLB

L:\MOT\060660\SN_0280075\cvt\aw\sheet15\DECK ELEVATION 1.dgn 6/5/2007

BEAM 1 - (LINE NO.1)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV. ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. West Abut.	149+41.67	-16.906	410.390	410.390
⊕ Brg. W. Abut.	149+42.93	-16.929	410.394	410.394
1 A	149+53.00	-17.096	410.425	410.469
1 B	149+63.08	-17.218	410.459	410.532
1 C	149+73.15	-17.297	410.495	410.575
1 D	149+83.23	-17.330	410.532	410.596
1 E	149+93.25	-17.333	410.571	410.598
⊕ Brg. E. Abut.	149+99.25	-17.333	410.594	410.594
Bk. East Abut.	150+00.50	-17.333	410.599	410.599

BEAM 2 - (LINE NO.2)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV. ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. West Abut.	149+41.80	-10.073	410.661	410.661
⊕ Brg. W. Abut.	149+43.06	-10.096	410.662	410.662
2 A	149+53.10	-10.263	410.677	410.720
2 B	149+63.14	-10.385	410.693	410.766
2 C	149+73.19	-10.464	410.712	410.792
2 D	149+83.24	-10.497	410.732	410.796
2 E	149+93.25	-10.500	410.753	410.780
⊕ Brg. E. Abut.	149+99.25	-10.500	410.766	410.766
Bk. East Abut.	150+00.50	-10.500	410.769	410.769

BEAM 3 - (LINE NO.3)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV. ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. West Abut.	149+41.93	-3.240	410.931	410.931
⊕ Brg. W. Abut.	149+43.19	-3.263	410.930	410.930
3 A	149+53.20	-3.430	410.928	410.971
3 B	149+63.21	-3.552	410.927	411.000
3 C	149+73.23	-3.631	410.928	411.009
3 D	149+83.25	-3.664	410.931	410.995
3 E	149+93.25	-3.667	410.936	410.963
⊕ Brg. E. Abut.	149+99.25	-3.667	410.938	410.938
Bk. East Abut.	150+00.50	-3.667	410.939	410.939

P.G.L. (LINE NO.4)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV. ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. West Abut.	149+42.00	0.000	411.059	411.059
⊕ Brg. W. Abut.	149+43.25	0.000	411.058	411.058
4 A	149+53.25	0.000	411.053	411.097
4 B	149+63.25	0.000	411.048	411.121
4 C	149+73.25	0.000	411.043	411.124
4 D	149+83.25	0.000	411.038	411.102
4 E	149+93.25	0.000	411.033	411.061
⊕ Brg. E. Abut.	149+99.25	0.000	411.030	411.030
Bk. East Abut.	150+00.50	0.000	411.030	411.030

STAGE CONSTRUCTION LINE (LINE NO.5)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV. ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. West Abut.	149+42.00	0.427	411.076	411.076
⊕ Brg. W. Abut.	149+43.25	0.404	411.074	411.074
5 A	149+53.25	0.237	411.062	411.106
5 B	149+63.25	0.115	411.052	411.125
5 C	149+73.25	0.036	411.045	411.125
5 D	149+83.25	0.003	411.038	411.102
5 E	149+93.25	0.000	411.033	411.061
⊕ Brg. E. Abut.	149+99.25	0.000	411.030	411.030
Bk. East Abut.	150+00.50	0.000	411.030	411.030

BEAM 4 - (LINE NO.6)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV. ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. West Abut.	149+42.07	3.594	411.201	411.201
⊕ Brg. W. Abut.	149+43.31	3.571	411.198	411.198
6 A	149+53.30	3.404	411.178	411.222
6 B	149+63.28	3.282	411.161	411.233
6 C	149+73.27	3.203	411.145	411.225
6 D	149+83.25	3.170	411.131	411.195
6 E	149+93.25	3.167	411.118	411.145
⊕ Brg. E. Abut.	149+99.25	3.167	411.110	411.110
Bk. East Abut.	150+00.50	3.167	411.109	411.109

BEAM 5 - (LINE NO.7)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV. ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. West Abut.	149+42.20	10.427	411.470	411.470
⊕ Brg. W. Abut.	149+43.44	10.404	411.465	411.465
7 A	149+53.40	10.237	411.428	411.472
7 B	149+63.35	10.115	411.394	411.467
7 C	149+73.31	10.036	411.361	411.441
7 D	149+83.26	10.003	411.330	411.394
7 E	149+93.25	10.000	411.300	411.328
⊕ Brg. E. Abut.	149+99.25	10.000	411.282	411.282
Bk. East Abut.	150+00.50	10.000	411.279	411.279

BEAM 6 - (LINE NO.8)

LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEV. ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. West Abut.	149+42.33	17.260	411.739	411.739
⊕ Brg. W. Abut.	149+43.57	17.237	411.732	411.732
8 A	149+53.49	17.070	411.678	411.722
8 B	149+63.42	16.948	411.627	411.700
8 C	149+73.34	16.870	411.578	411.658
8 D	149+83.27	16.836	411.530	411.594
8 E	149+93.25	16.833	411.483	411.510
⊕ Brg. E. Abut.	149+99.25	16.833	411.454	411.454
Bk. East Abut.	150+00.50	16.833	411.448	411.448

WEST APPROACH PAVEMENT

LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION
Left E.O.P.	WA	149+11.38	-18.456	410.290
	WB	149+21.47	-18.510	410.283
	WC	149+31.55	-18.521	410.284
Stage Const. Line	WA	149+12.00	0.453	411.093
	WB	149+22.00	0.401	411.086
	WC	149+32.00	0.391	411.080
Right E.O.P.	WA	149+12.59	18.859	411.875
	WB	149+22.51	18.810	411.868
	WC	149+32.44	18.802	411.851

EAST APPROACH PAVEMENT

LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION
Left E.O.P.	EA	150+10.50	-18.917	410.601
	EB	150+20.50	-18.917	410.644
	EC	150+30.50	-18.917	410.686
Stage Const. Line	EA	150+10.50	0.000	411.025
	EB	150+20.50	0.000	411.020
	EC	150+30.50	0.000	411.015
Right E.O.P.	EA	150+10.50	18.417	411.437
	EB	150+20.50	18.417	411.386
	EC	150+30.50	18.417	411.335

NOTES:

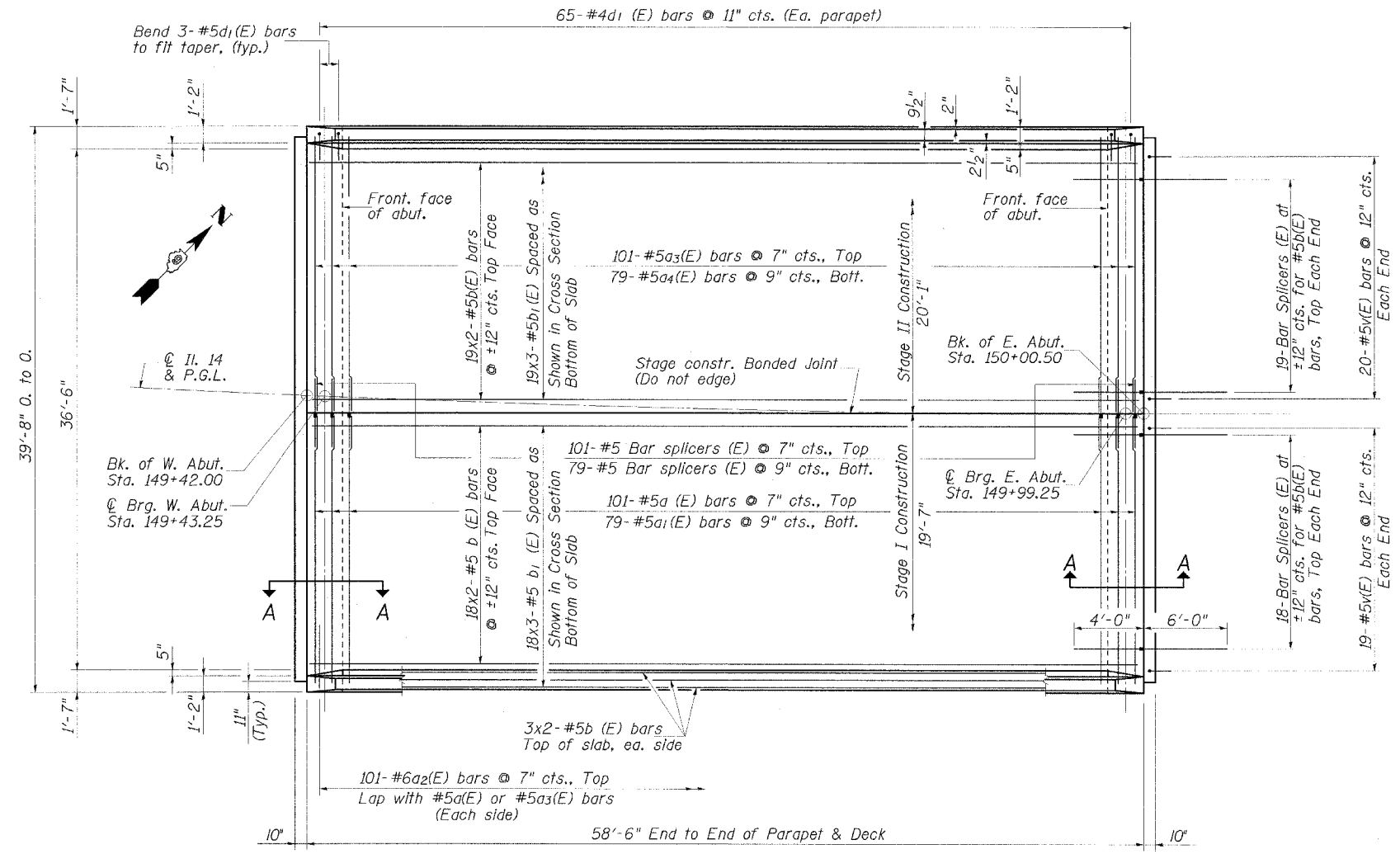
1. Work this Sheet with Sheet 6 of 18.
2. All offsets to P.G.L.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
DECK ELEVATIONS 2
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
 DATE: 6/6/07 CHECKED BY: WLB

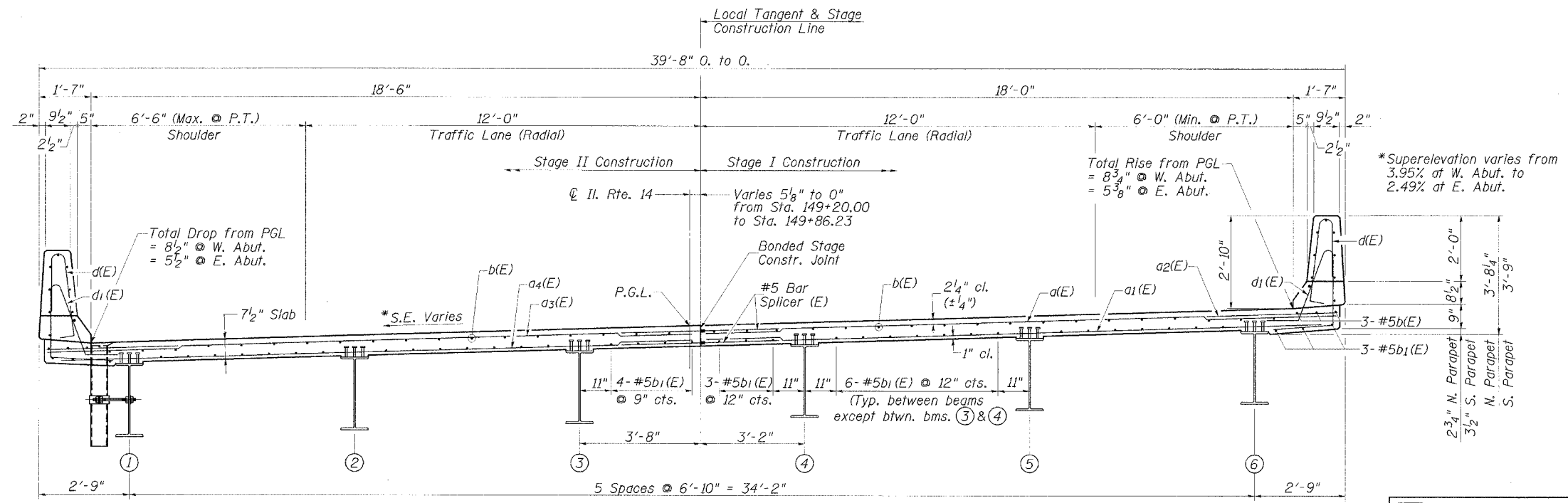


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DECK PLAN

MIN. BAR LAP
 #5 bar = 2'-2"



TYPICAL CROSS SECTION
 (Looking East)

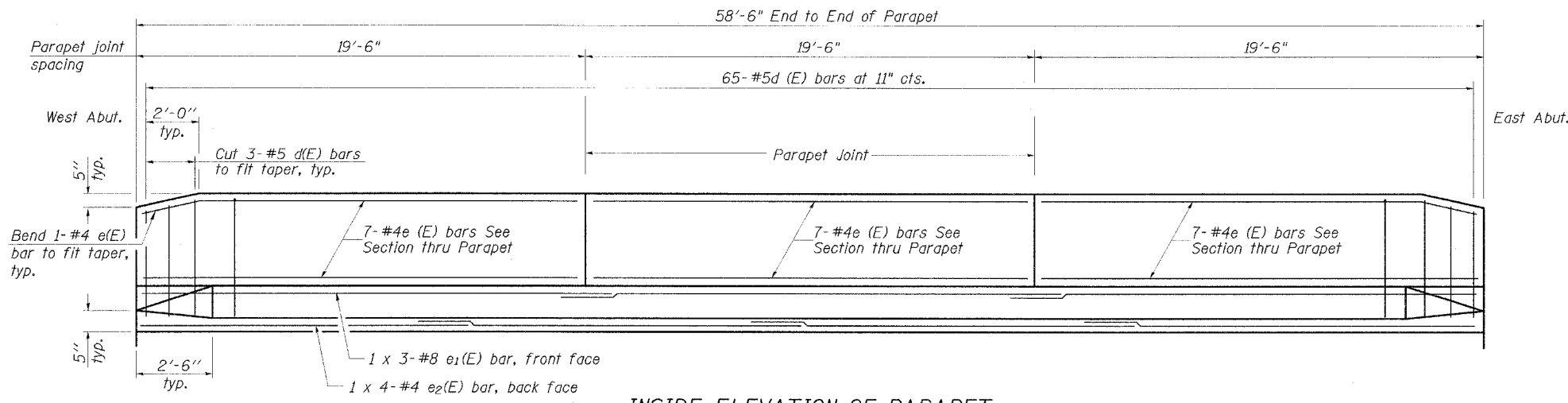
- NOTES:**
1. See Sheet 9 of 18 for superstructure and parapet details and Superstructure Bill of Materials.
 2. Bars indicated thus 3x2-#4 etc. indicate 3 lines of bars with 2 lengths per line.
 3. See Sheet 15 of 18 for bar splicer details.
 4. See Sheet 9 of 18 for drain details.
 5. See Sheet 10 of 18 for Section A-A.

REVISIONS	
NAME	DATE

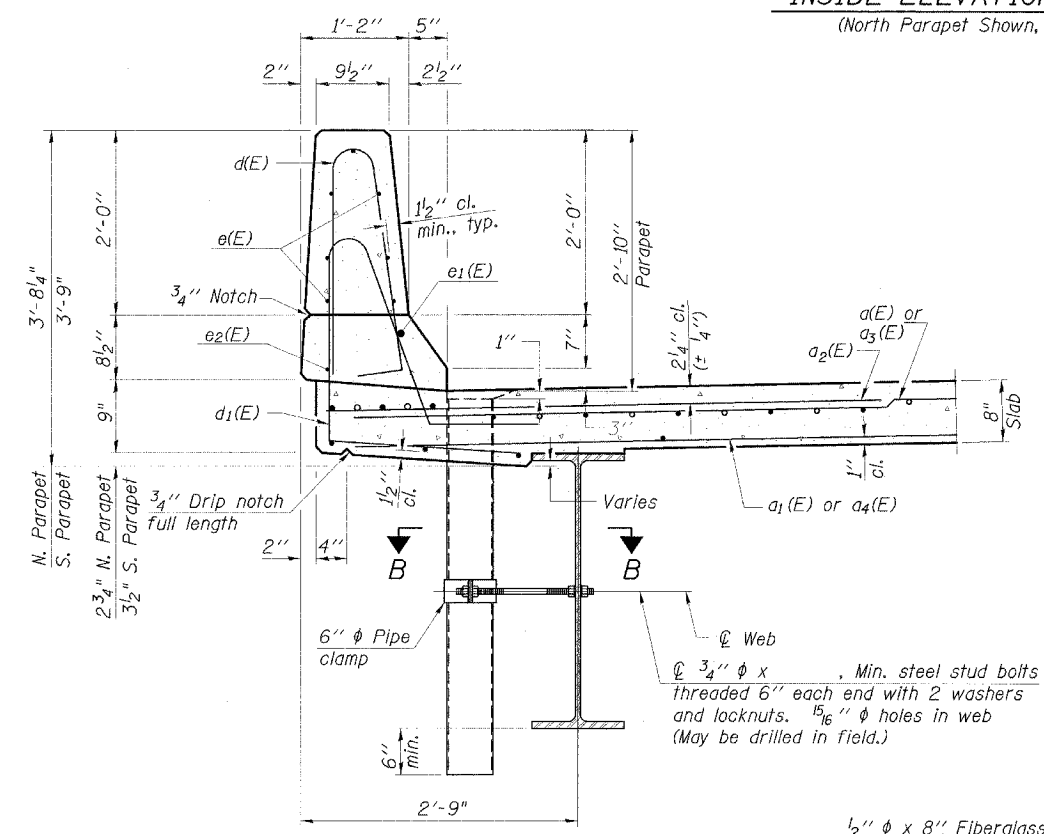
ILLINOIS DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
 DATE: 6/6/07 CHECKED BY: WLB

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 CRAWFORD MURPHY & TILLY, INC.
 CONSULTING ENGINEERS
 SPRINGFIELD, IL ■ AURORA, IL ■ ST. LOUIS, MO
 ROCKFORD, IL ■ PEORIA, IL ■ CHICAGO, IL

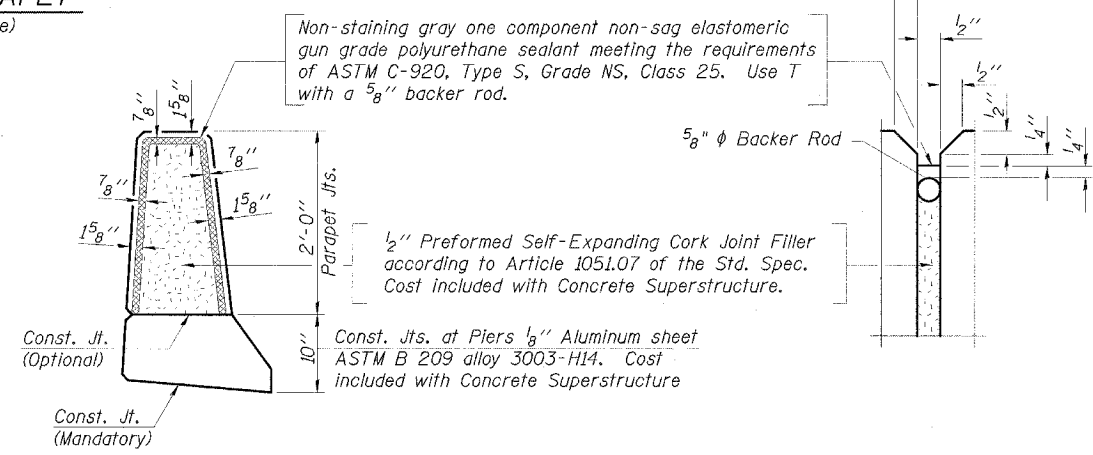
L:\DDT\060660\SHL\0280075\dr\dwg\sheet8\SUPERSTRUCTURE.DWG 6/5/2007



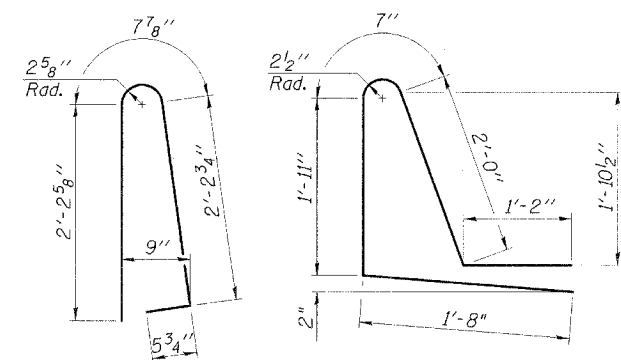
INSIDE ELEVATION OF PARAPET
(North Parapet Shown, South Opposite)



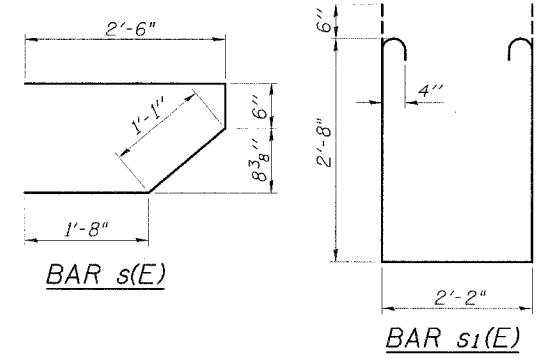
SECTION THRU PARAPET



PARAPET JOINT DETAILS



BAR d(E) BAR d1(E)

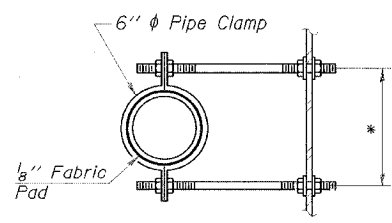


BAR s(E) BAR s1(E)

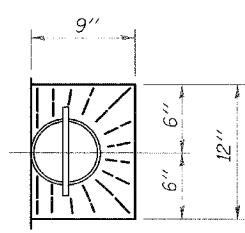
MIN. BAR LAP
*4 bar - 1'-4"
*8 bar - 3'-5"

SUPERSTRUCTURE BILL OF MATERIAL

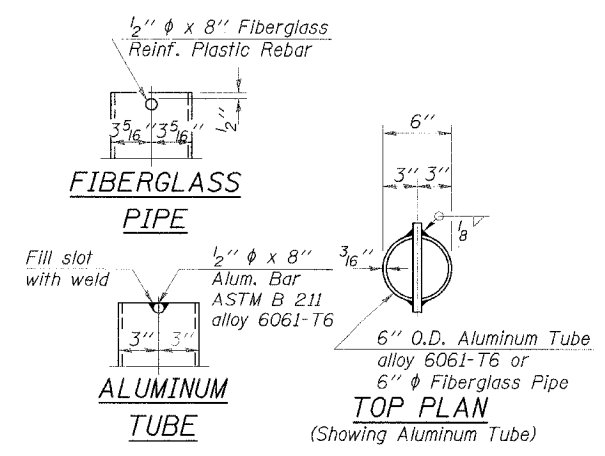
Bar	No.	Size	Length	Shape
a (E)	101	#5	18'-11"	—
a1 (E)	79	#5	18'-3"	—
a2 (E)	202	#6	6'-0"	—
a3 (E)	101	#5	19'-7"	—
a4 (E)	79	#5	18'-11"	—
b (E)	86	#5	30'-2"	—
b1 (E)	111	#5	20'-10"	—
d (E)	130	#5	5'-7"	⌋
d1 (E)	130	#5	7'-4"	⌋
e (E)	42	#4	19'-2"	—
e1 (E)	6	#8	21'-8"	—
ee (E)	8	#4	15'-7"	—
m (E)	4	#6	18'-4"	—
m1 (E)	4	#6	19'-0"	—
m2 (E)	6	#6	19'-1"	—
m3 (E)	6	#6	19'-9"	—
m4 (E)	24	#6	8'-2"	—
m5 (E)	8	#6	6'-6"	—
m6 (E)	4	#6	2'-5"	—
m7 (E)	2	#6	2'-8"	—
m8 (E)	2	#6	3'-4"	—
s (E)	84	#5	5'-9"	⌋
s1 (E)	74	#4	8'-6"	⌋
v (E)	78	#5	3'-4"	⌋
Concrete Superstructure			Cu. Yd.	90.9
Reinforcement Bars, Epoxy Coated			Pound	18,950
Bar Splicers			Each	270



SECTION B-B
* Dimension as required by Pipe Clamp



TOP PLAN



FIBERGLASS PIPE

ALUMINUM TUBE
(Showing Aluminum Tube)

NOTES:

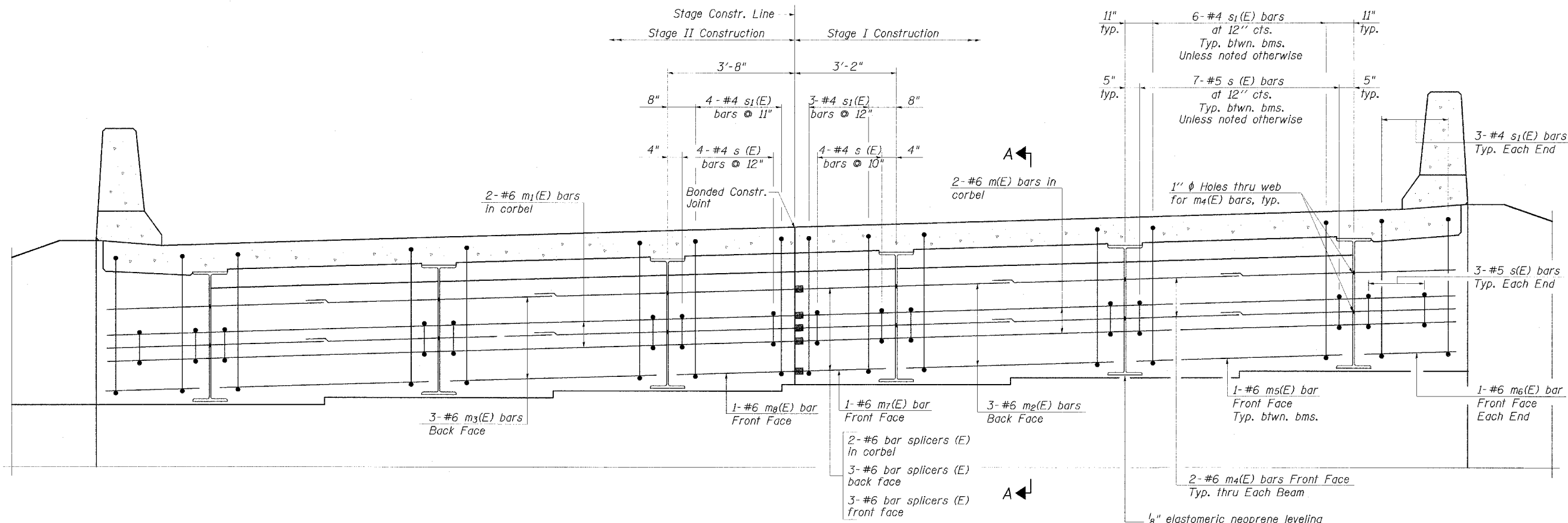
1. Bars indicated thus 3x2-#4 etc. Indicates 3 lines of bars with 2 lengths per line.

REVISIONS	
NAME	DATE

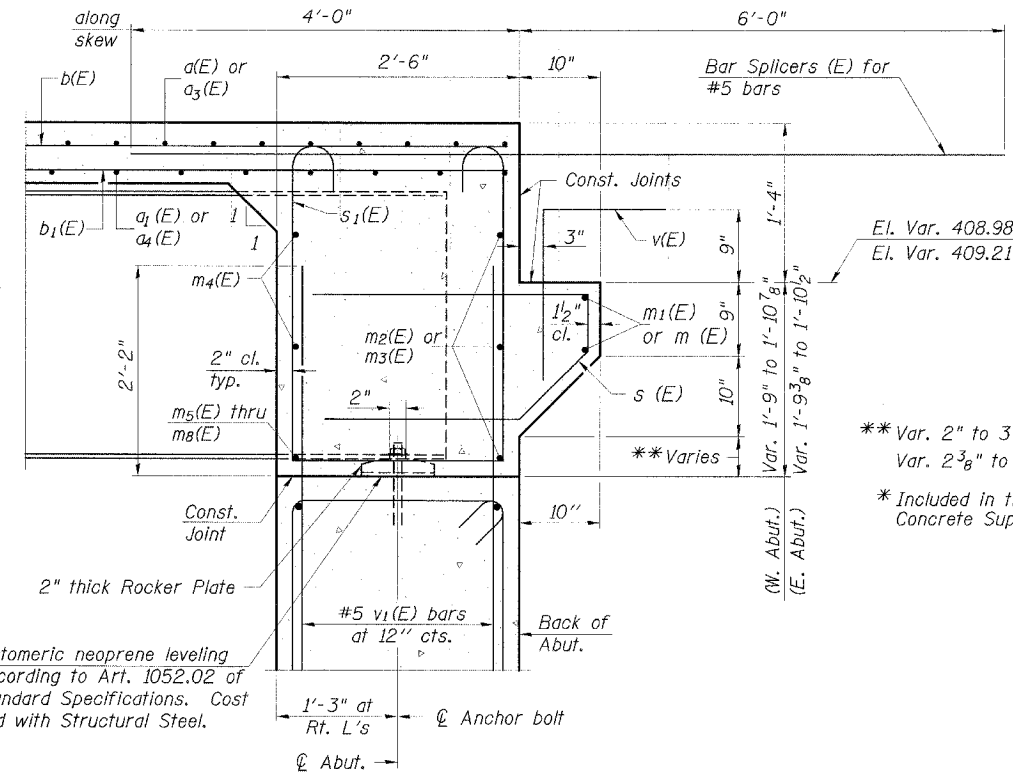
ILLINOIS DEPARTMENT OF TRANSPORTATION
PARAPET DETAILS
F.A.P. ROUTE 853 (IL. RTE. 14)
ILLINOIS ROUTE 14 OVER
DRUMMOND BRANCH
SECTION 6B-1 STA. 149+71.25
STR. NO. 028-0075 - FRANKLIN COUNTY
SCALE: NONE DRAWN BY: GLD
DATE: 6/6/07 CHECKED BY: WLB

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DIAPHRAGM ELEVATION AT ABUTMENT
(Looking East at East Abut., W. Abut. similar)



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

1/8" elastomeric neoprene leveling pad according to Art. 1052.02 of the Standard Specifications.

El. Var. 408.98 to 410.48 (W. Abut.)
El. Var. 409.21 to 410.17 (E. Abut.)

** Var. 2" to 3 7/8" (W. Abut.)
Var. 2 3/8" to 3 1/2" (E. Abut.)

* Included in the cost of Concrete Superstructure

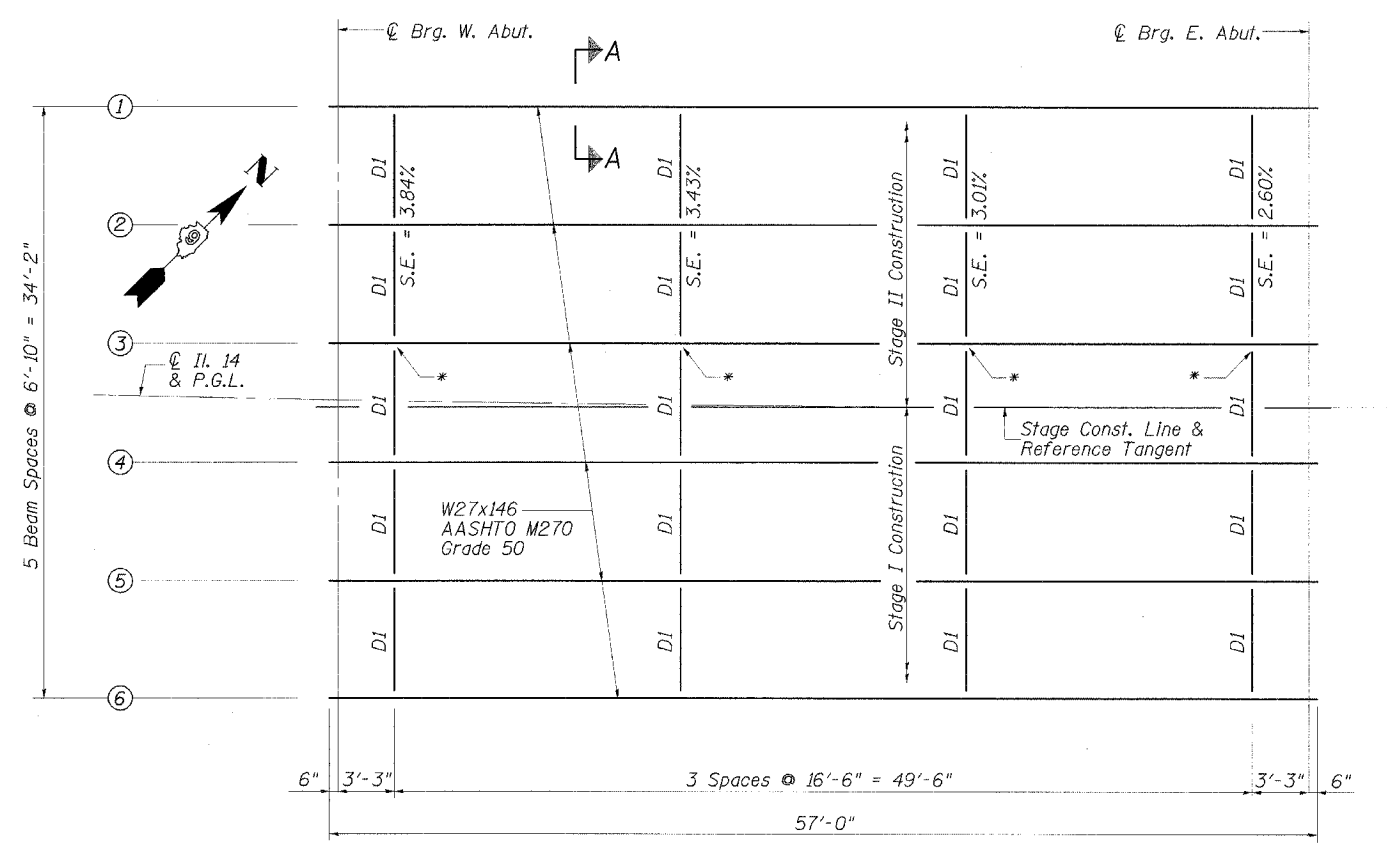
MIN. BAR LAP
#6 bar = 2'-9"

- NOTES:**
1. Reinforcement bars in diaphragm are billed with superstructure on Sheet 9 of 18.
 2. Concrete in diaphragm is included with Concrete Superstructure on Sheet 9 of 18.
 3. For details of bars s(E) & s1(E) see Sheet 9 of 18.
 4. The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.
 5. For location of holes in web see Sheet 11 of 18.
 6. For anchor bolt details see Sheet 12 of 18.
 7. For bar splicer details see Sheet 15 of 18.

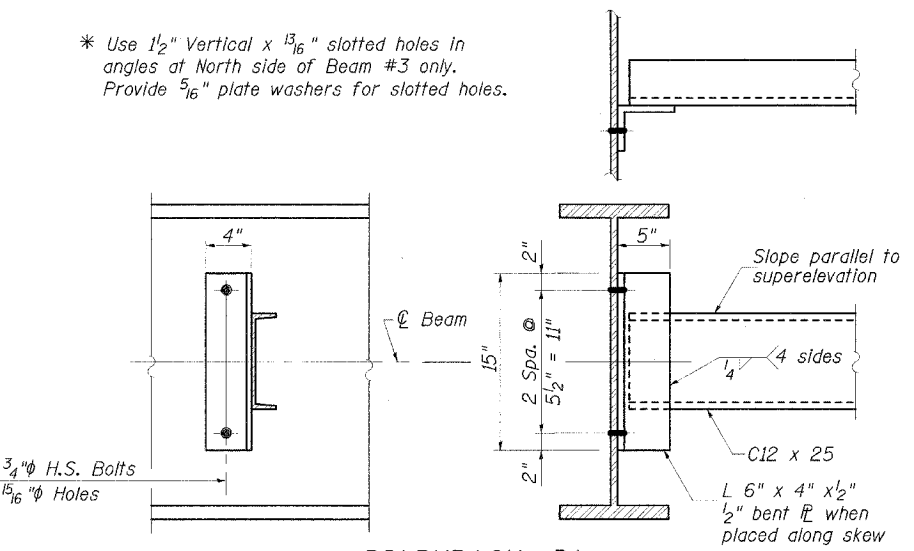
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ABUTMENT DIAPHRAGM DETAILS
F.A.P. ROUTE 853 (IL. RTE. 14)
ILLINOIS ROUTE 14 OVER
DRUMMOND BRANCH
SECTION 6B-1 STA. 149+71.25
STR. NO. 028-0075 - FRANKLIN COUNTY
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FRAMING PLAN



DIAPHRAGM D1
(20 Required)

NOTE
The bolts for the slotted holes in angles at Beam #3 shall only be finger tightened prior to the deck slab pouring for Stage II constr. and then be fully tightened after completion of the pouring. Two hardened washers shall be required over all 1 5/16" ϕ holes.

		0.5 Span
I_s	(in ⁴)	5,660
$I_c(n)$	(in ⁴)	14,496
$I_c(3n)$	(in ⁴)	10,568
S_s	(in ³)	414
$S_c(n)$	(in ³)	587
$S_c(3n)$	(in ³)	531
DC1	(k/')	0.837
M_{DC1}	(k)	320
DC2	(k/')	0.140
M_{DC2}	(k)	55
DW	(k/')	0.342
M_{DW}	(k)	134
$M_L + Imp$	(k)	717
M_u (Strength I)	(k)	1924.5
$\phi_r M_n$	(k)	3335.8
f_s DC1	(ksi)	9.28
f_s DC2	(ksi)	1.24
f_s DW	(ksi)	3.03
f_s 1.3(L+I)	(ksi)	19.06
f_s (Service II)	(ksi)	32.61
f_s (Total)(Strength I)	(ksi)	
V_r	(k)	28.3

		Abutment 1 & 2
R_{DC1}	(k)	22.9
R_{DC2}	(k)	13.5
R_{DW}	(k)	57.0
$R_L + Imp$	(k)	14.5
R_{Total}	(k)	107.9

TOP OF BEAM ELEVATIONS FOR FABRICATION ONLY

Bms.	Beam 1	Beam 2	Beam 3
Location			
W. Abut.	409.71	409.97	410.24
E. Abut.	409.91	410.08	410.25
Bms. <th>Beam 4</th> <th>Beam 5</th> <th>Beam 6</th>	Beam 4	Beam 5	Beam 6
Location			
W. Abut.	410.51	410.78	411.04
E. Abut.	410.42	410.59	410.77

NOTES:

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 (in⁴ and in³).

$I_c(n), S_c(n)$: 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 (in⁴ and in³).

$I_c(3n), S_c(3n)$: 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 (in⁴ and in³).

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.).

$M_L + Imp$: Un-factored live load moment plus dynamic load allowance (Impact) (kip-ft.).

M_u (Strength I): Factored design moment (kip-ft.).

$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + Imp$

$\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

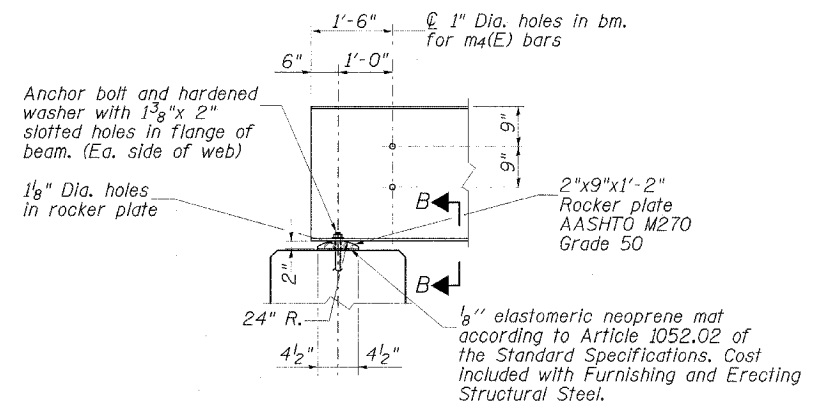
f_s (Service II): Sum of stresses as computed from the moments below (ksi).

$M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_L + Imp$

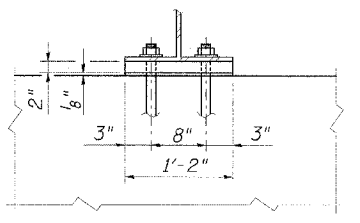
f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).

$1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_L + Imp$

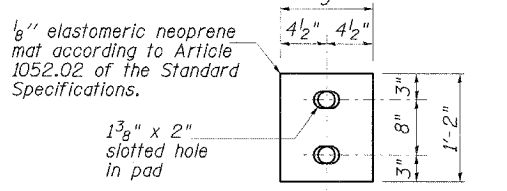
V_r : Factored shear range computed according to Article 6.10.10.



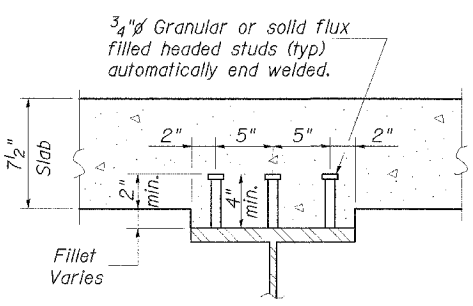
END OF BEAM ELEVATION



SECTION B-B



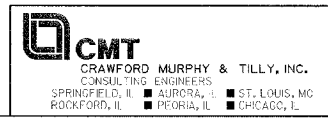
PLAN - ELASTOMERIC NEOPRENE MAT (ABUT.)
(12 Required)



SECTION A-A
(Total no. of studs req'd. = 1044)

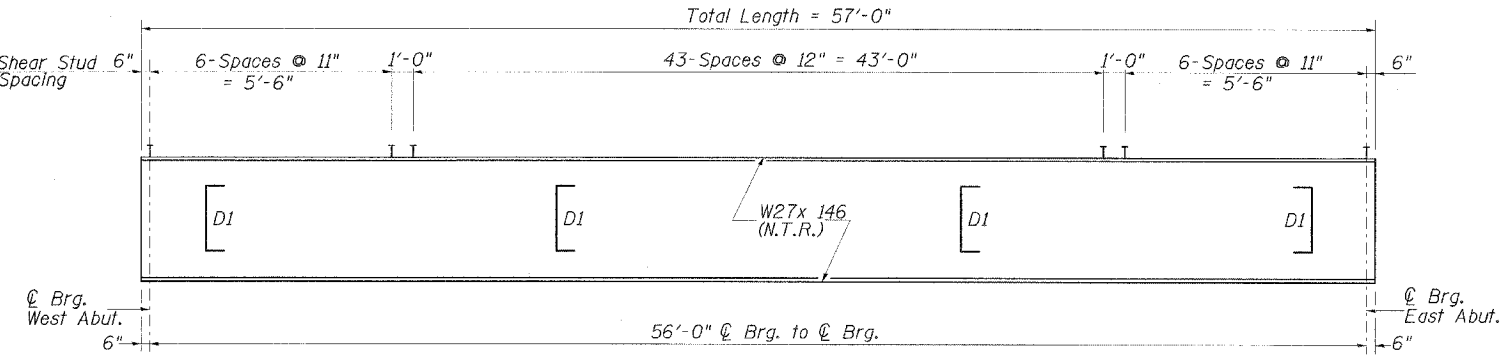
NOTES:

- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- All stringers shall be AASHTO M270, Grade 50 steel. (N.T.R.)
- All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
FRAMING PLAN & DETAILS
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
 DATE: 6/6/07 CHECKED BY: WLB



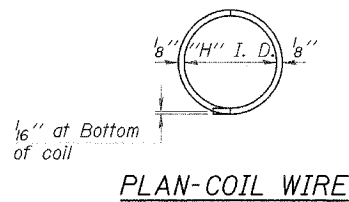
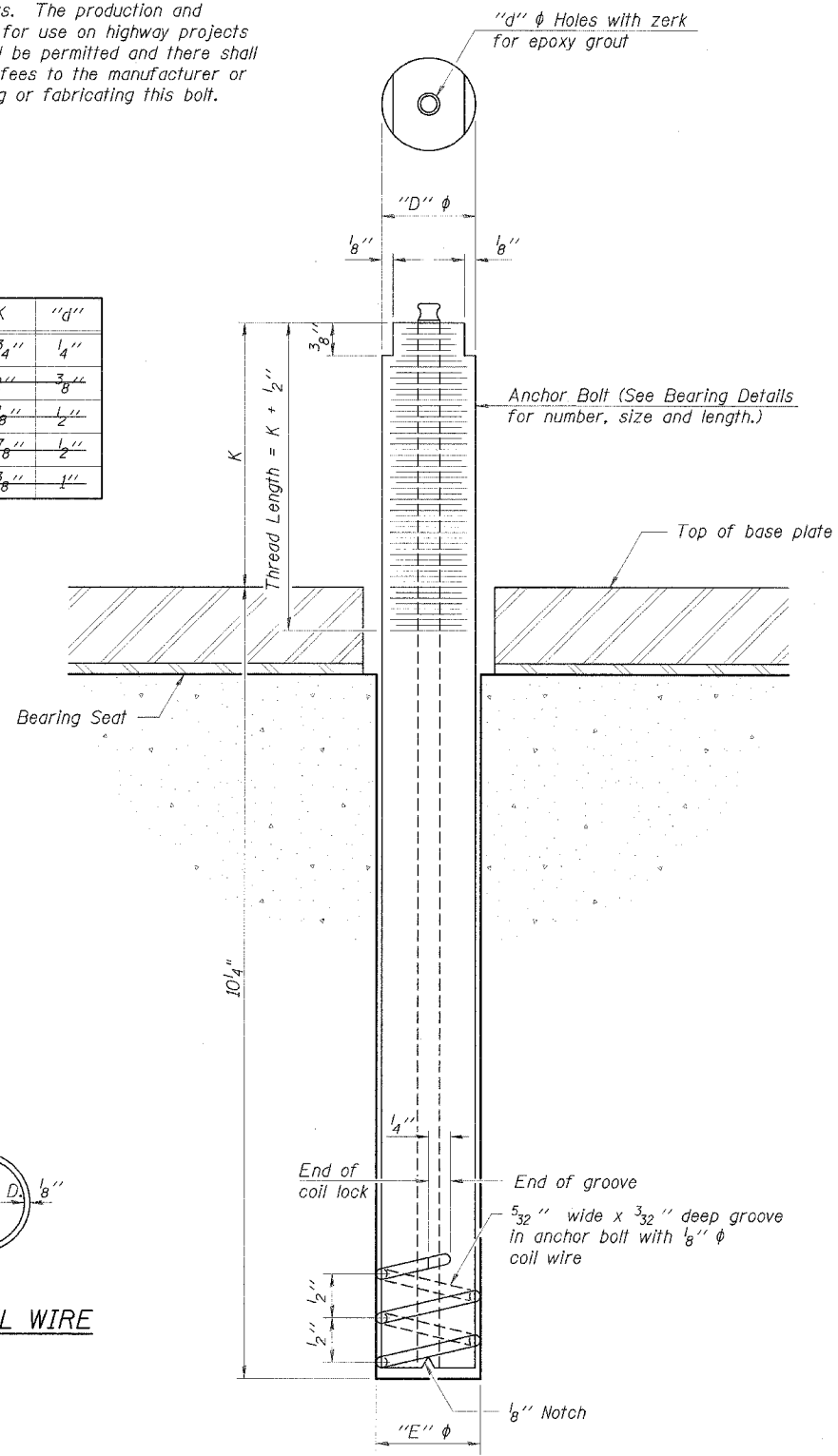
BEAM ELEVATION

NOTE
All stringers shall be AASHTO M270, Grade 50 steel. (N.T.R.)

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The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 15/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
 The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.
 The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
 1. A threaded rod stud with nut and washer of the type specified.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
Abuts.	A307

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

GENERAL NOTES

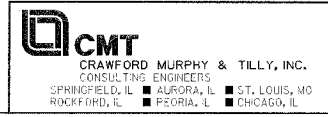
Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
 Prior to setting the bolts, the holes shall be dry and all dust and loose particles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

BILL OF MATERIAL

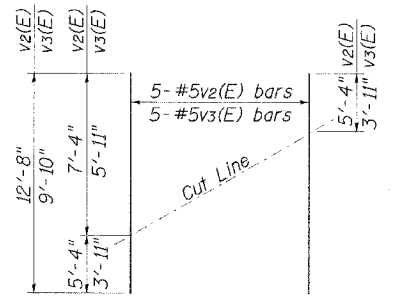
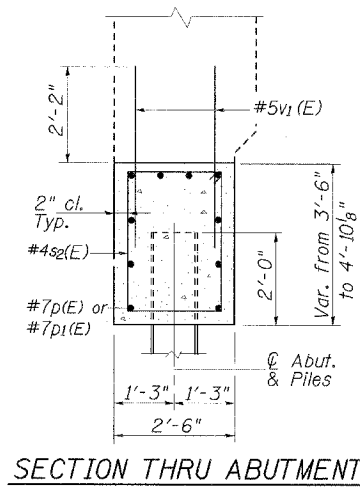
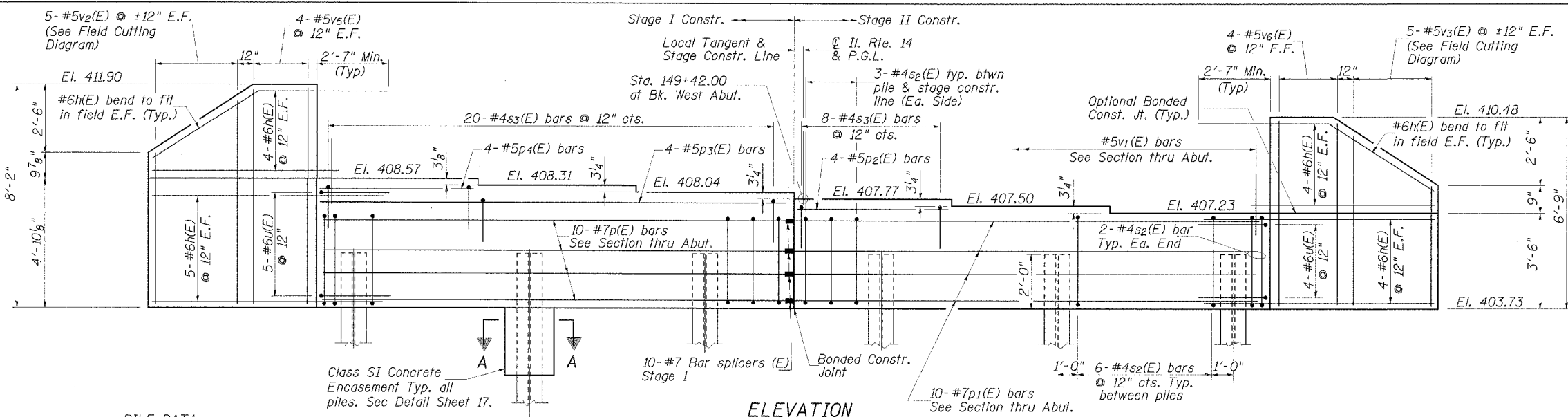
ITEM	UNIT	TOTAL
Anchor Bolts, 1" ϕ	Each	24

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ANCHOR BOLT DETAILS
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
 DATE: 6/6/07 CHECKED BY: WLB



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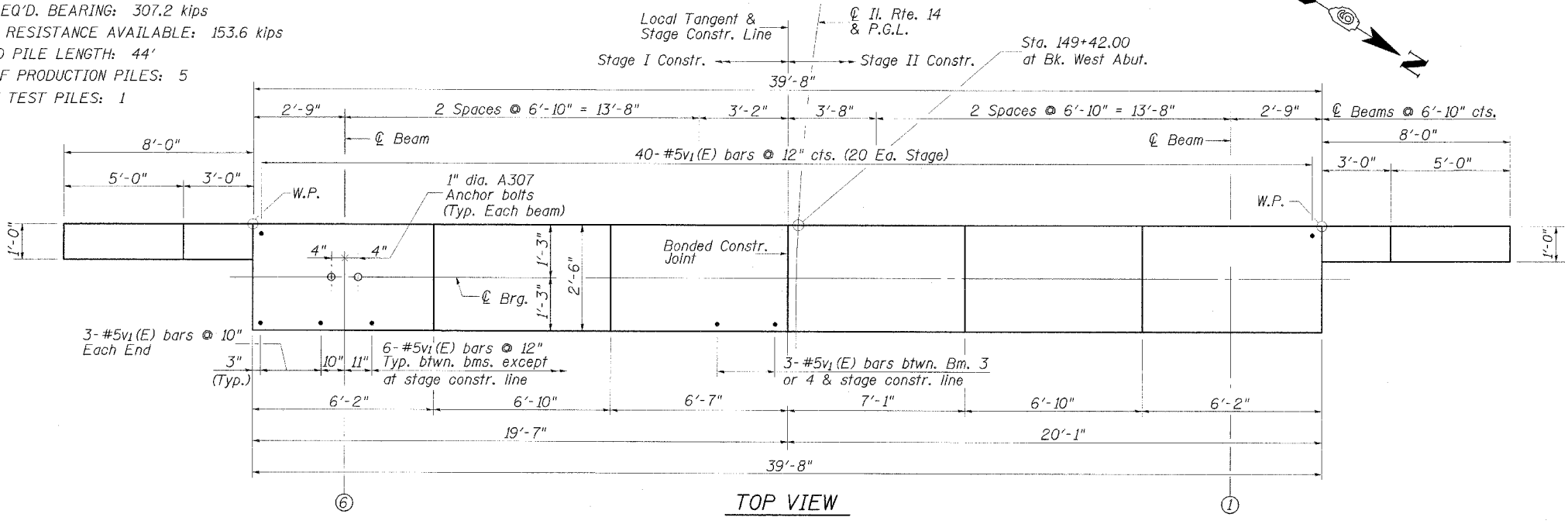


FIELD CUTTING DIAGRAM
Order v₂(E) & v₃(E) full length. Cut as shown and use remainder of bars in opposite face.

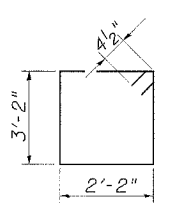
PILE DATA

PILE TYPE AND SIZE: STEEL HP 10X42
 NOMINAL REQ'D. BEARING: 307.2 kips
 FACTORED RESISTANCE AVAILABLE: 153.6 kips
 ESTIMATED PILE LENGTH: 44'
 NUMBER OF PRODUCTION PILES: 5
 NUMBER OF TEST PILES: 1

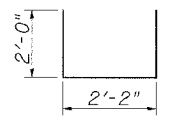
ELEVATION



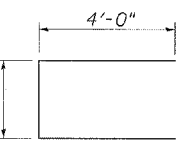
TOP VIEW



BAR s₂(E)



BAR s₃(E)



BAR u(E)

WEST ABUT. BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	34	#6	11'-0"	—
p(E)	10	#7	19'-1"	—
p1(E)	10	#7	19'-9"	—
p2(E)	4	#5	6'-9"	—
p3(E)	4	#5	19'-3"	—
p4(E)	4	#5	5'-10"	—
s ₂ (E)	34	#4	11'-5"	□
s ₃ (E)	28	#4	6'-2"	□
u(E)	9	#6	10'-1"	—
v ₁ (E)	76	#5	4'-4"	—
v ₂ (E)	5	#5	12'-8"	—
v ₃ (E)	5	#5	9'-10"	—
v ₅ (E)	8	#5	7'-10"	—
v ₆ (E)	8	#5	6'-5"	—
Concrete Structures		Cu. Yd.	19.3	
Concrete Encasement		Cu. Yd.	2.1	
Reinforcement Bars, Epoxy Coated		Pound	2580	
Structure Excavation		Cu. Yd.	121	
Bar Splicers		Each	10	
Furnishing Steel Piles HP 10x42		Foot	220	
Driving Piles		Foot	220	
Test Pile Steel HP 10x42		Each	1	

NOTES:

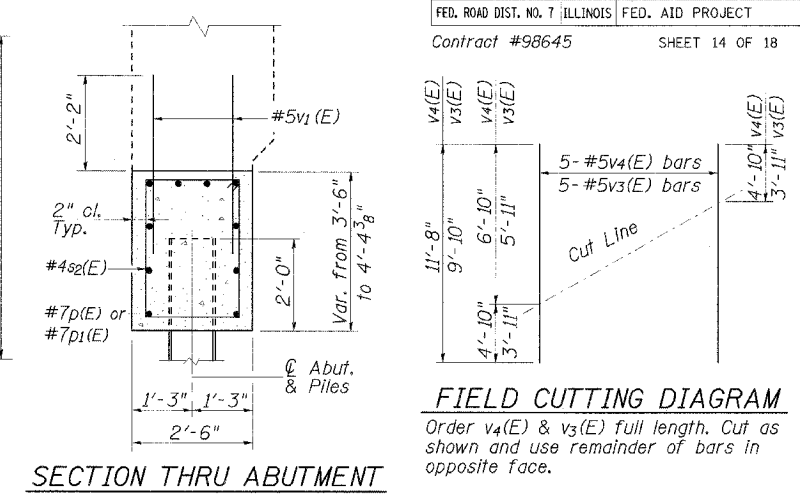
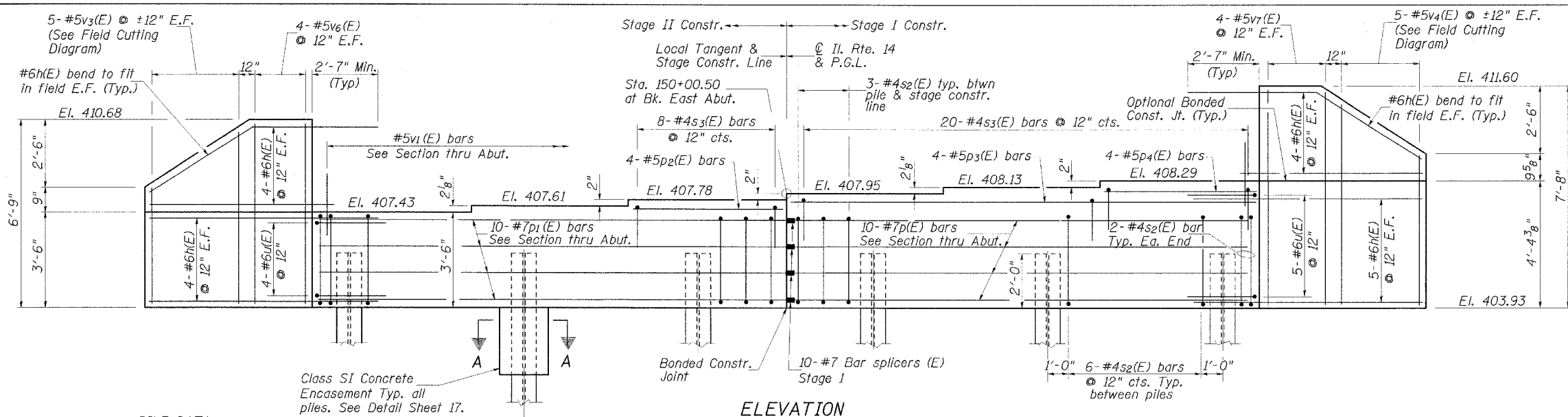
1. Pour steps monolithically with cap.
2. Space reinforcement to miss anchor bolts.
3. See sheet 2 of 18 for abutment backfill requirements.
4. See sheet 15 of 18 for bar splicer details.

REVISIONS	
NAME	DATE

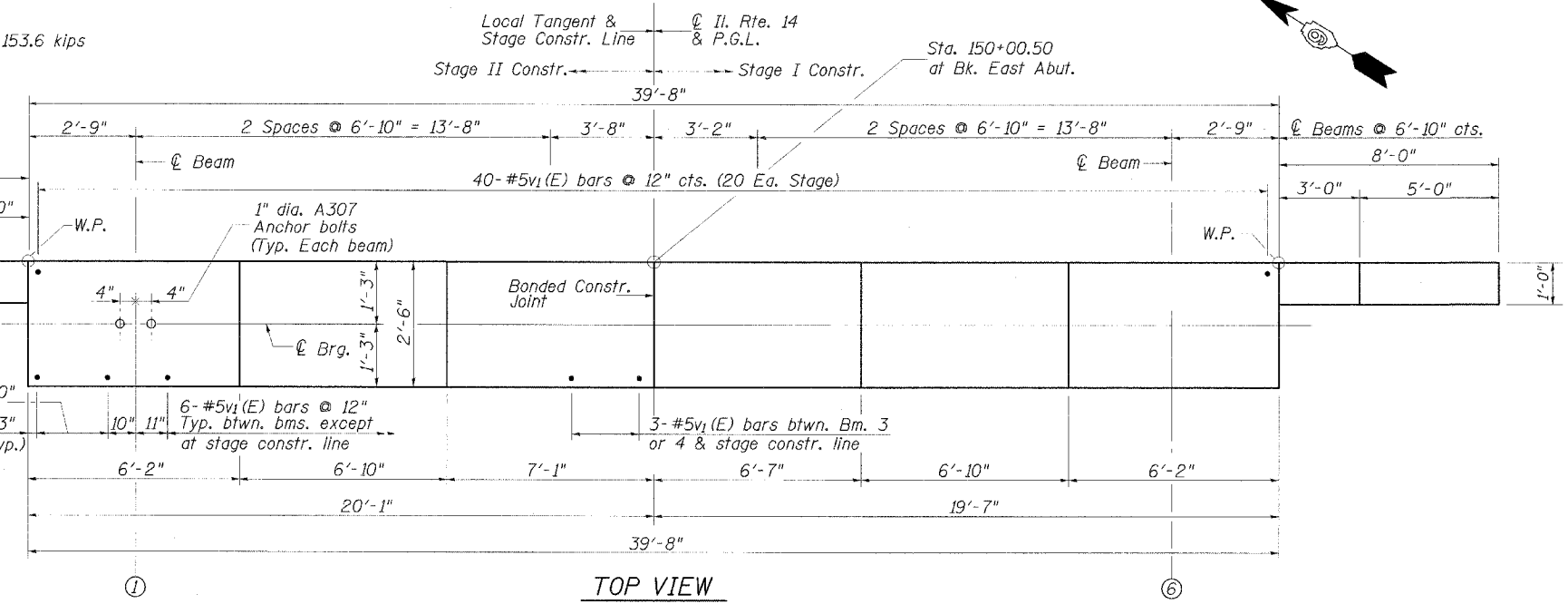
ILLINOIS DEPARTMENT OF TRANSPORTATION
WEST ABUTMENT
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
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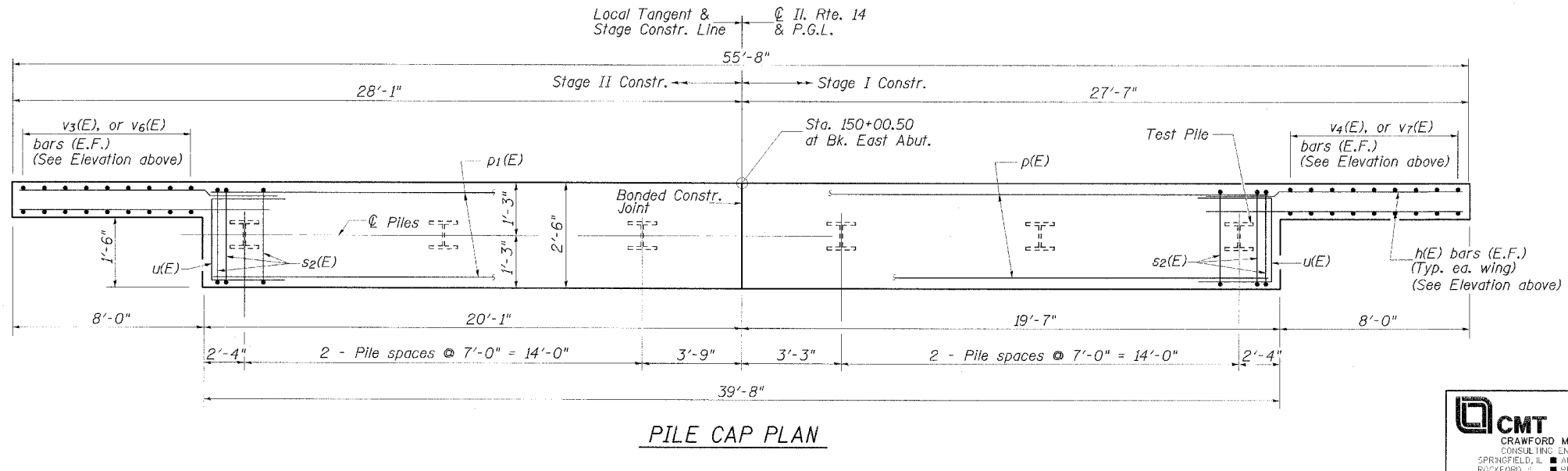


PILE DATA
 PILE TYPE AND SIZE: STEEL HP 10X42
 NOMINAL REQ'D. BEARING: 307.2 kips
 FACTORED RESISTANCE AVAILABLE: 153.6 kips
 ESTIMATED PILE LENGTH: 43'
 NUMBER OF PRODUCTION PILES: 5
 NUMBER OF TEST PILES: 1



EAST ABUT. BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	34	#6	11'-0"	—
p(E)	10	#7	19'-1"	—
p1(E)	10	#7	19'-9"	—
p2(E)	4	#5	6'-9"	—
p3(E)	4	#5	19'-3"	—
p4(E)	4	#5	5'-10"	—
s2(E)	34	#4	11'-5"	□
s3(E)	28	#4	6'-2"	□
u(E)	9	#6	10'-1"	□
v1(E)	76	#5	4'-4"	—
v3(E)	5	#5	9'-10"	—
v4(E)	5	#5	11'-8"	—
v6(E)	8	#5	6'-5"	—
v7(E)	8	#5	7'-4"	—
Concrete Structures	Cu. Yd.	18.3		
Concrete Encasement	Cu. Yd.	2.1		
Reinforcement Bars, Epoxy Coated	Pound	2570		
Structure Excavation	Cu. Yd.	115		
Bar Splicers	Each	10		
Furnishing Steel Piles HP 10x42	Foot	215		
Driving Steel Piles HP 10x42	Foot	215		
Test Piles Steel HP 10x42	Each	1		



- NOTES:**
1. Pour steps monolithically with cap.
 2. Space reinforcement to miss anchor bolts.
 3. See sheet 2 of 18 for abutment backfill requirements.
 4. See sheet 15 of 18 for bar splicer details.

REVISIONS	
NAME	DATE

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ILLINOIS DEPARTMENT OF TRANSPORTATION
EAST ABUTMENT
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
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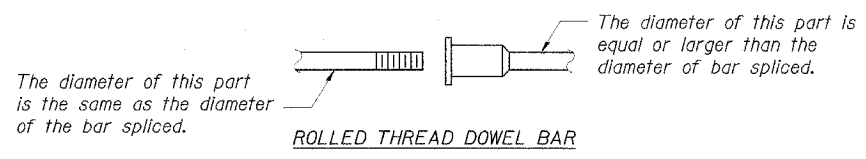
NOTES

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

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

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

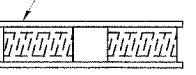
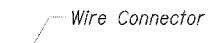
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



ROLLED THREAD DOWEL BAR



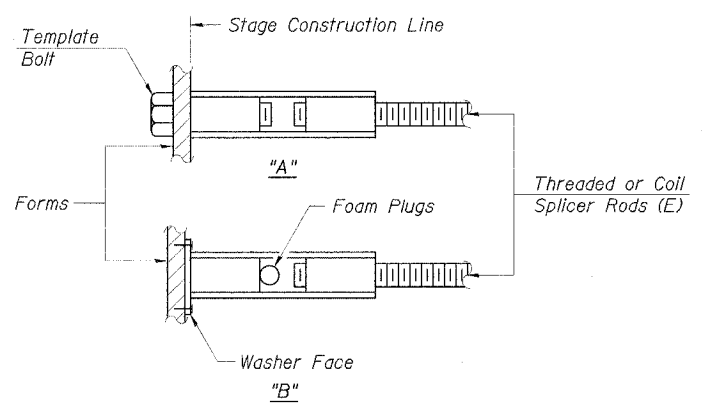
** ONE PIECE



WELDED SECTIONS

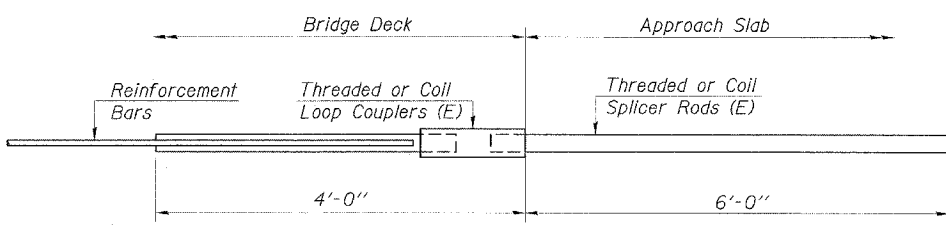
BAR SPLICER ASSEMBLY ALTERNATIVES

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



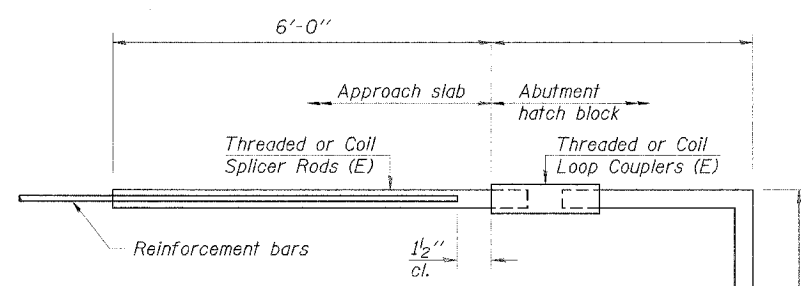
INSTALLATION AND SETTING METHODS

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



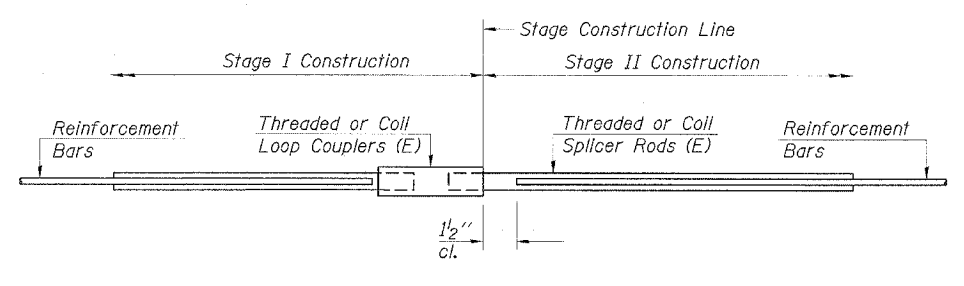
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 74



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	180	Deck
#6	16	Diaphragms
#7	20	Abutments

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
BAR SPICER ASSEMBLY DETAILS
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
 STR. NO. 028-0075 - FRANKLIN COUNTY
 SCALE: NONE DRAWN BY: GLD
 DATE: 6/6/07 CHECKED BY: WLB

L:\ADOT\060600\SH_02800\Drawings\sheet\BAR_SPLICER_DTL.dgn 6/5/2007

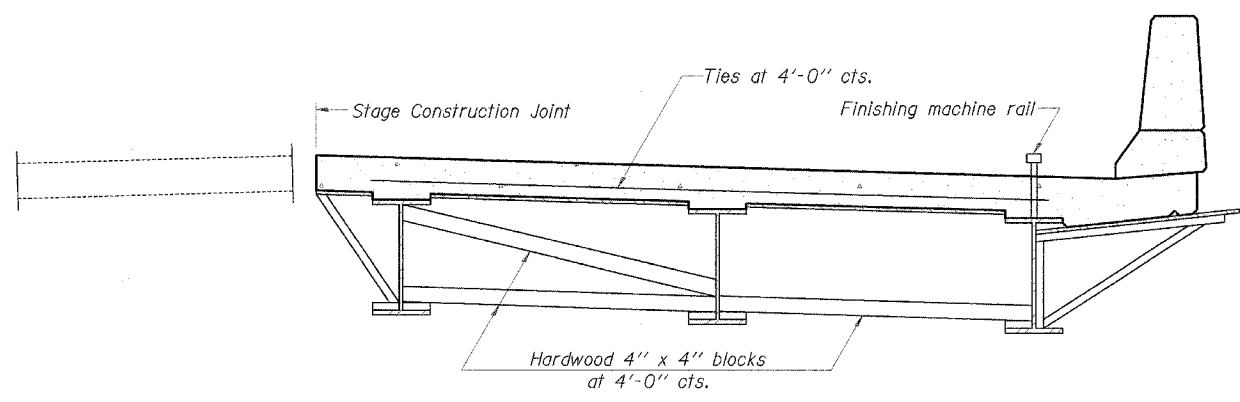
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
853	6B-1	FRANKLIN	44	42
STA.		TO STA.		
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
Contract #98645			SHEET 16 OF 18	

When cantilever forming brackets are used, the work shall be done according to Article 503.06, except as modified below and in the details shown on this sheet.

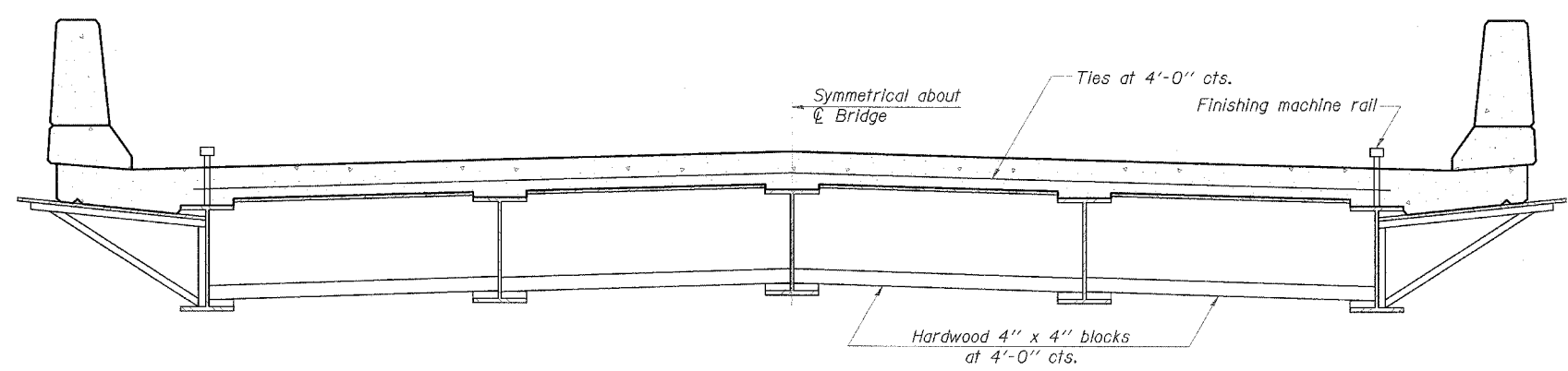
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STANDARD CONSTRUCTION

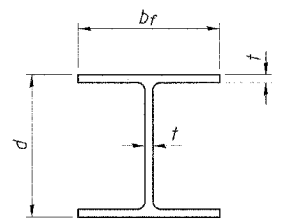
S:\DOT\0606601\SN_0280075\dr\c\k\sheet\c\c\c\FORMING BRACKET\SDSN 6/5/2007

SB-1 11-1-06

REVISIONS	
NAME	DATE

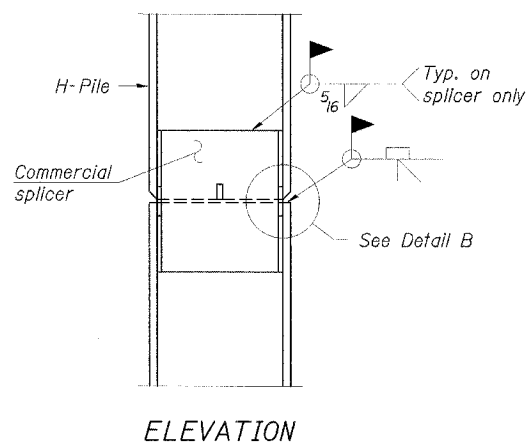
CMT
CRAWFORD MURPHY & TILLY, INC.
CONSULTING ENGINEERS
SPRINGFIELD, IL ■ AURORA, IL ■ ST. LOUIS, MO
ROCKFORD, IL ■ PEORIA, IL ■ CHICAGO, IL

ILLINOIS DEPARTMENT OF TRANSPORTATION
CANTILEVER FORMING BRACKETS
F.A.P. ROUTE 853 (IL. RTE. 14)
ILLINOIS ROUTE 14 OVER
DRUMMOND BRANCH
SECTION 6B-1 STA. 149+71.25
STR. NO. 028-0075 - FRANKLIN COUNTY
SCALE: NONE DRAWN BY: GLD
DATE: 6/6/07 CHECKED BY: WLB

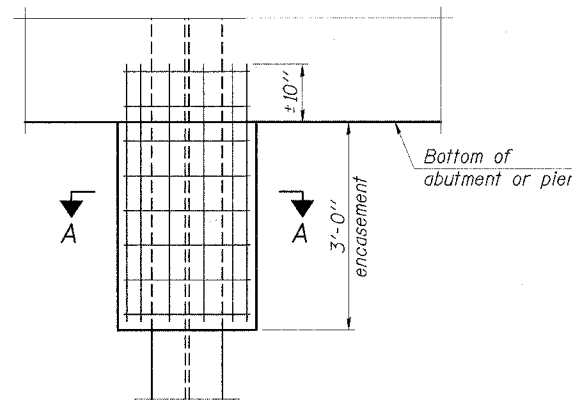


STEEL PILE TABLE

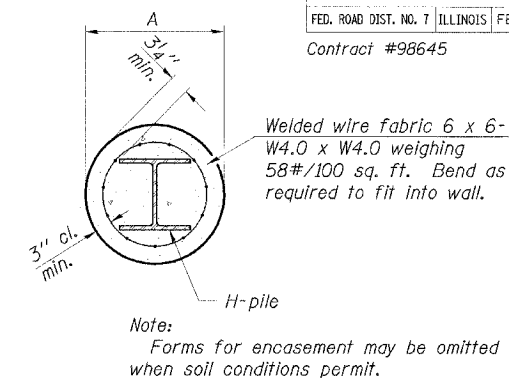
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53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



ELEVATION

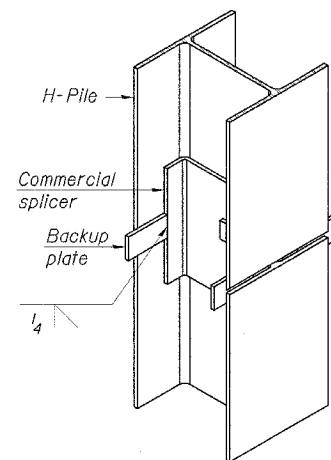


ELEVATION

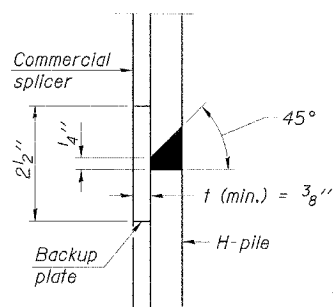


SECTION A-A

PILE ENCASEMENT

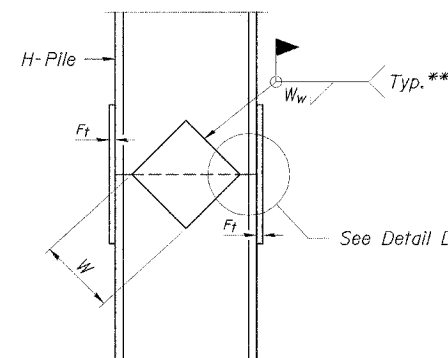


ISOMETRIC VIEW

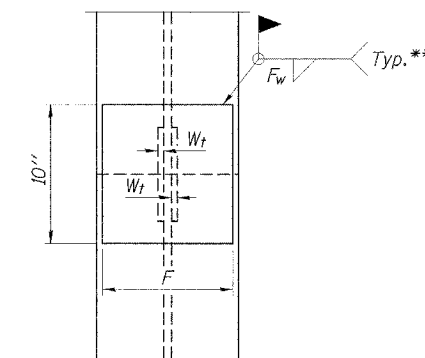


DETAIL "B"

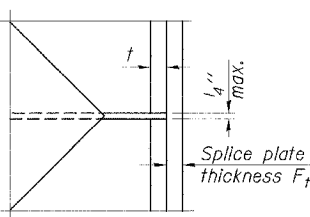
WELDED COMMERCIAL SPLICE



ELEVATION



END VIEW

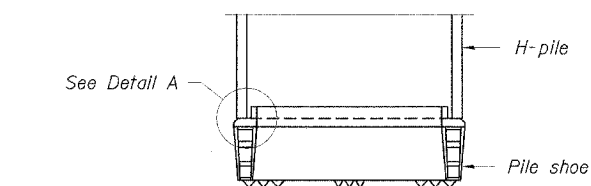


DETAIL D

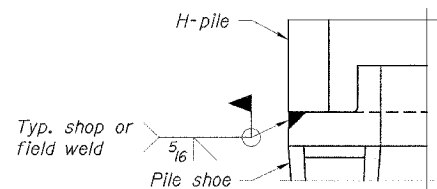
Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"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

WELDED PLATE FIELD SPLICE

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

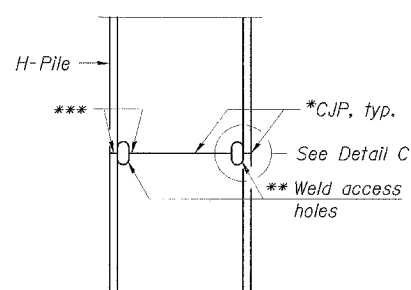


ELEVATION



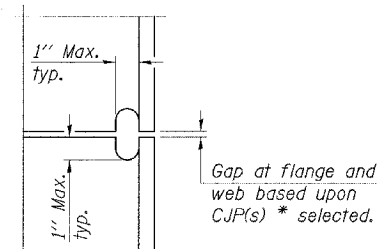
DETAIL A

H-PILE SHOE ATTACHMENT



ELEVATION

COMPLETE PENETRATION WELD SPLICE



DETAIL C

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



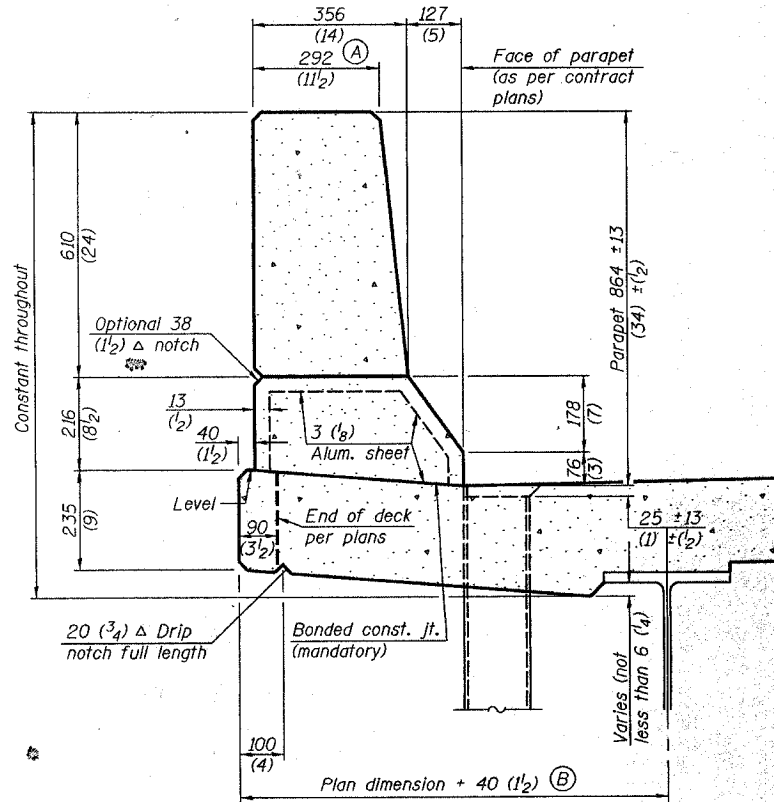
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STEEL H-PILE DETAILS
 F.A.P. ROUTE 853 (IL. RTE. 14)
 ILLINOIS ROUTE 14 OVER
 DRUMMOND BRANCH
 SECTION 6B-1 STA. 149+71.25
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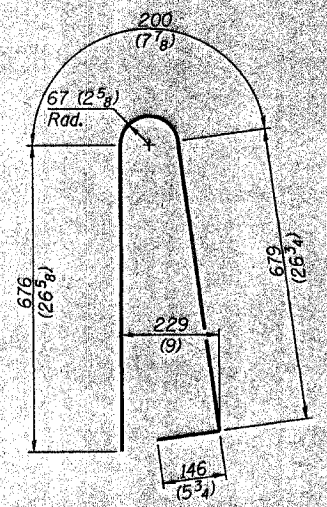
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
FAP 869	08-1	FRANKLIN	44	44A
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		

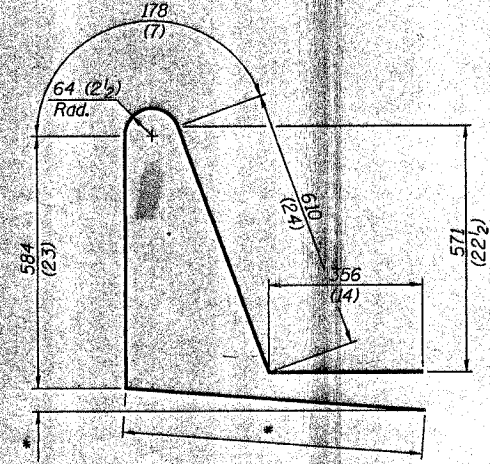
Contract # 98645



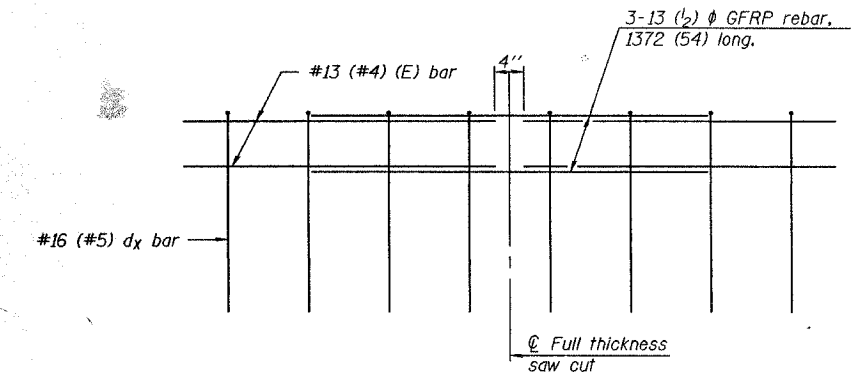
SECTION
(Showing dimensions)



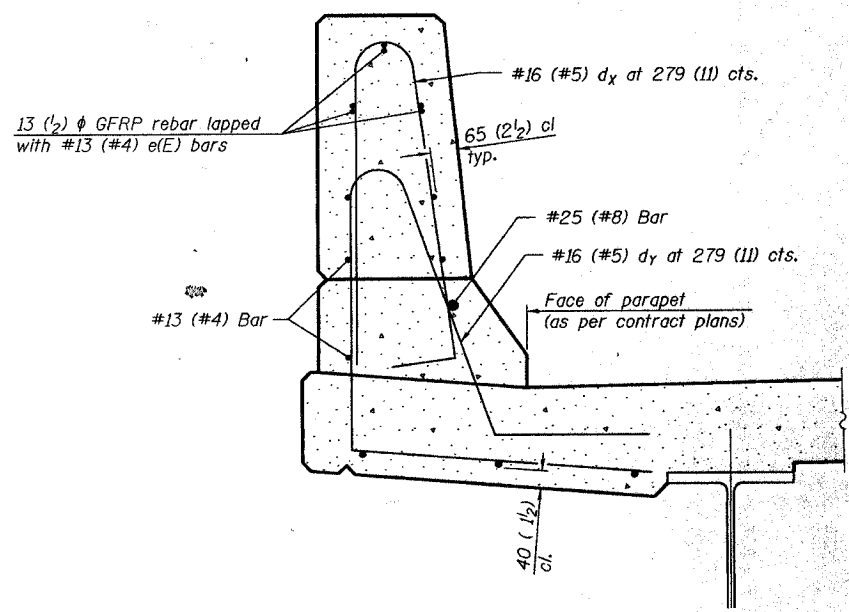
BAR d(x)



BAR d(y)
Per contract plans



GFRP REBAR STIFFENING DETAIL
(Place as shown in parapet section)



SECTION
(Showing required reinforcement)

GENERAL NOTES

All dimensions shall remain the same as shown on contract plans, except dimensions A and B which are to be revised as shown to provide additional clearance. Additional concrete needed to revise dimension A and B = 0.0422 m³/m (0.165 cu. yds./ft.) of parapet. Place aluminum sheet in curb portion at and near piers. Full thickness saw cut at all other locations. Adjust/add joint locations to maintain 3 to 6 meter (10 to 20 foot) spacing.

**CONCRETE PARAPET
SLIPFORMING OPTION**