

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 ASPHALT:	2.016 TONS/CU. YD.
HOT MIX ASPHALT MATERIALS ON PAVEMENT:	0.09 GAL./SQ. YD.
AGGREGATE (PRIME COAT):	0.0015 TONS/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.

AT ALL LOCATIONS WHERE HOT MIX 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, THE BRIDGE APPROACH PAVEMENTS, AND THE BRIDGE APPROACH PAVEMENT CONNECTORS (PCC) SPECIAL.

PROTECTIVE COAT SHALL BE APPLIED TO THE BRIDGE, THE BRIDGE APPROACH PAVEMENTS, AND THE BRIDGE APPROACH PAVEMENT CONNECTORS (PCC) SPECIAL 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 BRIDGE APPROACH PAVEMENTS IS INCLUDED IN THE QUANTITY FOR PAVEMENT REMOVAL - SQ YD.

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 STATION 175+00 AND STATION 182+25. TYPICAL OBSTRUCTIONS ARE HEADWALLS, FOUNDATIONS, EXT. WHICH PROJECT 100 mm (4 IN.) OR MORE ABOVE THE GROUNDLINE; AND TREES WHICH WILL MATURE TO A DIAMETER OF 100 mm (4 IN.) OR GREATER.

TREES SHALL BE PRESERVED THROUGHOUT THIS SECTION AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. GENERALLY, TREES OUTSIDE THE CLEAR ZONE, AND WHICH DO NOT INTERFERE WITH CONSTRUCTION, SHALL NOT BE DISTURBED.

THE TYPE 6A TEMPORARY TERMINAL GUARDRAIL SECTIONS SHOWN IN THE PLANS MAY BE REPLACED TO MATCH THE RAILING THAT THE CONTRACTOR CHOOSES TO USE ON THE TEMPORARY BRIDGE. NO EXTRA COMPENSATION SHALL BE ALLOWED IF THE TEMPORARY 6A TERMINALS SPECIFIED IN THE PLANS ARE CHANGED.

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.

STATIONING OF THE PROPOSED SURFACE SHALL BE REQUIRED. STAMP STATIONING EVERY 300 FEET ON ALTERNATING SIDES OF THE PAVEMENT AND AS DIRECTED BY THE ENGINEER. THE STATION SYMBOL STAMPS USED SHALL BE 5 1/2 " TALL AND OF A DESIGN APPROVED BY THE ENGINEER. THE STAMPS SHALL BE FURNISHED BY THE CONTRACTOR AND REMAIN HIS/HER PROPERTY.

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

THE EXISTING ROAD SIGNS THAT INTERFERE WITH CONSTRUCTION SHALL BE RELOCATED AS DIRECTED BY THE ENGINEER. AFTER THE CONSTRUCTION IS COMPLETED, THE CONTRACTOR WILL REPLACE THE SIGNS AS DIRECTED BY THE ENGINEER. THIS WORK SHALL BE INCLUDED IN TRAFFIC CONTROL AND PROTECTION (SPECIAL).

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.

CULVERT EXTENSIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH METHOD II AS SPECIFIED IN ARTICLE 542.05 OF THE STANDARD SPECIFICATIONS. PRIOR TO EXTENDING ANY CULVERT, THE ENTIRE LENGTH OF THE EXISTING CULVERT SHALL BE CLEANED OF ALL EARTH AND DEBRIS BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. THE COST OF THIS WORK SHALL BE PAID ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

THE COST OF REMOVAL OF TEMPORARY PIPE CULVERTS IS INCLUDED IN THE COST TO PROVIDE PIPE CULVERTS, (TEMPORARY) OF THE SIZE AND TYPE SPECIFIED.

COMMITMENTS: NONE

STANDARDS

000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420401-06	BRIDGE APPROACH PAVEMENT
421001-02	REINFORCEMENT FOR CONTINUOUSLY REINFORCED PCC PAVEMENT
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-02	NAME PLATE FOR BRIDGES
542401	METAL END SECTIONS FOR PIPE CULVERTS
601101	
630001-07	STEEL PLATE BEAM GUARDRAIL
630201-05	PCC/HMA STABILIZATION AT S.P.B.G.R.
631031-06	TRAFFIC BARRIER TERMINAL, TYPE 6
631032-03	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER & MOUNTING DETAILS
666001	RIGHT-OF-WAY MARKERS
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, ON-ROAD TO 600 mm (24") OFF-ROAD, FOR SPEEDS ≥ 45 MPH
701301-02	LANE CLOSURE, 2L 2W, SHORT TIME OPERATIONS, FOR SPEEDS ≥ 45 MPH
701306-01	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701901	TRAFFIC CONTROL DEVICES
780001-01	TYPICAL PAVEMENT MARKINGS

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	101VB18-1	BRANKLIN	48	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 98821				

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Examined By:	<i>Joseph Lavin</i> DISTRICT CONSTRUCTION ENGINEER
Examined By:	<i>Benjamin Peltier</i> DISTRICT MATERIALS ENGINEER
Examined By:	<i>Shawn Smith</i> DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:	<i>James H. [Signature]</i> ASSISTANT REGIONAL ENGINEER
Approved By:	<i>Max C. Lami</i> DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
DATE	Oct 11 2007

SUMMARY OF QUANTITIES

RURAL - FRANKLIN COUNTY
SN 028-0046(E); SN 028-0077(P)
HBP FUNDING
80% FEDERAL; 20% STATE
X171-2A

CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	541
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	130
20101000	TEMPORARY FENCE	FOOT	400
20200100	EARTH EXCAVATION	CU YD	4,259
20400100	BORROW EXCAVATION	CU YD	3,620
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	108
25000350	SEEDING, CLASS T	ACRE	1.7
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	212
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	144
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	144
25000700	AGRICULTURAL GROUND LIMESTONE	TON	2.4
25001010	SEEDING, CLASS 2 (MODIFIED)	ACRE	1.2
25100115	MULCH, METHOD 2	ACRE	1.0
25100630	EROSION CONTROL BLANKET	SQ YD	2,771
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	170
28000300	TEMPORARY DITCH CHECKS	EACH	5
28000400	PERIMETER EROSION BARRIER	FOOT	2,017
28000500	INLET AND PIPE PROTECTION	EACH	3
28100105	STONE RIPRAP, CLASS A3	SQ YD	1150
28100107	STONE RIPRAP, CLASS A4	SQ YD	32
28200200	FILTER FABRIC	SQ YD	1182
31100100	SUB-BASE GRANULAR MATERIAL, TYPE A	TON	826
40600100	HOT-MIX ASPHALT MATERIALS (PRIME COAT)	GALLON	930
40600300	AGGREGATE (PRIME COAT)	TON	6
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	144
40600990	TEMPORARY RAMP	SQ YD	24
40603090	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N90	TON	1,369
40603320	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	122
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	249
42001300	PROTECTIVE COAT	SQ YD	363
44000100	PAVEMENT REMOVAL	SQ YD	1,177
48100700	AGGREGATE SHOULDERS, TYPE A 8"	SQ YD	275
48203100	HOT-MIX ASPHALT SHOULDERS	TON	370

RURAL - FRANKLIN COUNTY
SN 028-0046(E); SN 028-0077(P)
HBP FUNDING
80% FEDERAL; 20% STATE
X171-2A

CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	48
50200100	STRUCTURE EXCAVATION	CU YD	750
50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	52
50300100	FLOOR DRAINS	EACH	8
50300225	CONCRETE STRUCTURES	CU YD	295.4
50300255	CONCRETE SUPERSTRUCTURE	CU YD	209
50300260	BRIDGE DECK GROOVING	SQ YD	913
50300280	CONCRETE ENCASEMENT	CU YD	4.2
50300300	PROTECTIVE COAT	SQ YD	1094
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	1944
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	86,500
50800515	BAR SPLICERS	EACH	72
51201400	FURNISHING STEEL PILES HP10 X 42	FOOT	230
51202305	DRIVING PILES	FOOT	230
51203400	TEST PILE STEEL HP10 X 42	EACH	2
51300105	TEMPORARY BRIDGE COMPLETE	EACH	1
51500100	NAME PLATES	EACH	1
52100520	ANCHOR BOLTS, 1"	EACH	24
52100530	ANCHOR BOLTS, 1 1/4"	EACH	24
54010202	PRECAST CONCRETE BOX CULVERT 2' X 2'	FOOT	13
54200220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	44
54210015	PIPE CULVERTS, CLASS D, TYPE 1 15" (TEMPORARY)	FOOT	40
54215550	METAL END SECTIONS 15"	EACH	4
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	64
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	155
60500060	REMOVING INLETS	EACH	1
63000000	STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	400
63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	404
66600105	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	EACH	10
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	15

* SPECIALTY ITEMS

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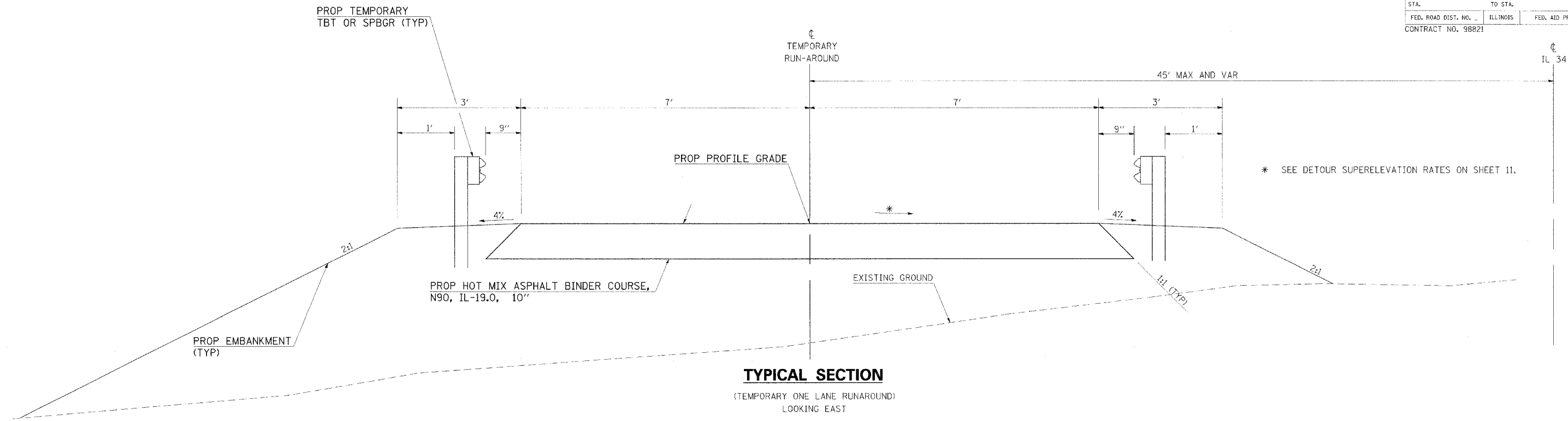
SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES

RURAL - FRANKLIN COUNTY			
SN 028-0046(E), SN 028-0077(P)			
HBP FUNDING			
85% FEDERAL, 20% STATE			
CONSTRUCT X171-2A			
CODE NUMBER	ITEM DESCRIPTION	UNIT	QUANTITY
67100100	MOBILIZATION	L SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1
70101805	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	EACH	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	15
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	130
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	3,340
70500100	TEMPORARY STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	537.5
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	3,100
* 78200405	GUARDRAIL MARKERS	EACH	32
* 78200500	BARRIER WALL MARKERS	EACH	12
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	8
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	10
XX004093	CONCRETE SLOPEWALL REMOVAL	SQ FT	4,052
XX006661	UNINTERRUPTIBLE POWER SUPPLY	EACH	2
X0321430	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SPECIAL	SQ YD	114
X0914000	PRECAST CONCRETE BOX CULVERT END SECTIONS 2' x 2'	EACH	2
X7050167	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	4
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	30
Z0022800	FENCE REMOVAL	FOOT	460
50157300	PROTECTIVE SHIELD	SQ YD	264
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1
70500670	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4

* SPECIALTY ITEMS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	1101V10-1	FRANKLIN	---	5
STA.	TO STA.		FED. AID PROJECT	
			CONTRACT NO. 98B21	



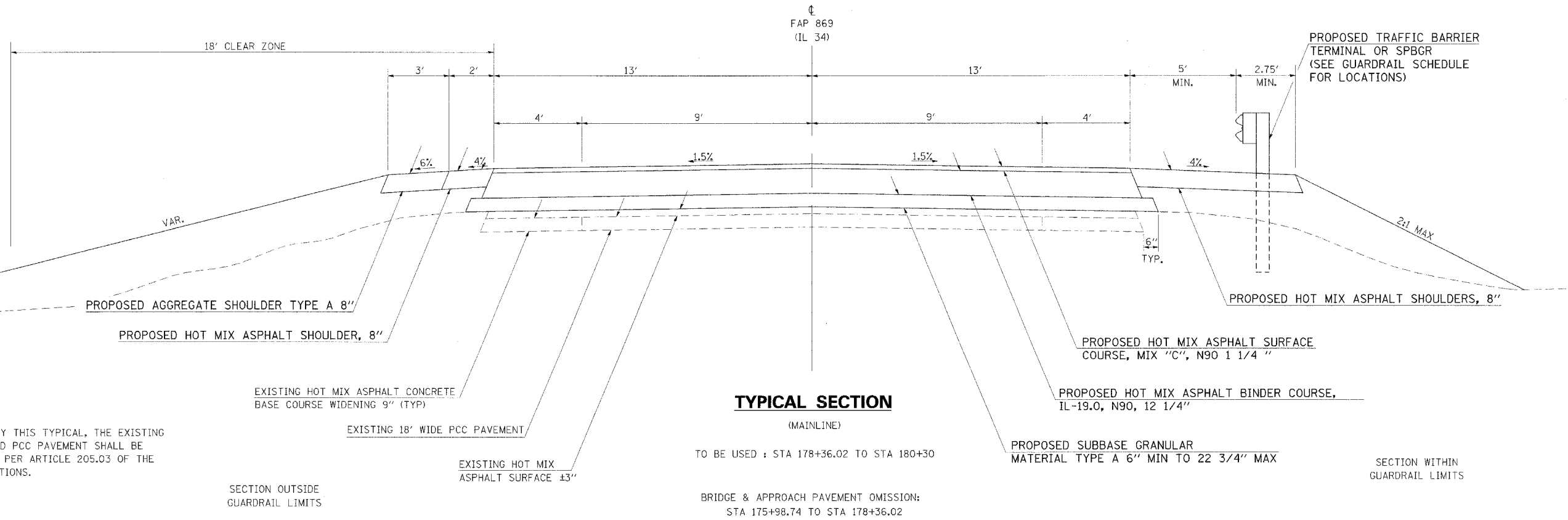
TYPICAL SECTION

(TEMPORARY ONE LANE RUNAROUND)
LOOKING EAST

TO BE USED : STA 1+45 TO STA 4+17.04
STA 5+38.54 TO STA 8+00

TEMPORARY BRIDGE OMISSION: STA 4+17.04 TO STA 5+38.54

* SEE DETOUR SUPERELEVATION RATES ON SHEET 11.



TYPICAL SECTION

(MAINLINE)

TO BE USED : STA 178+36.02 TO STA 180+30

BRIDGE & APPROACH PAVEMENT OMISSION:
STA 175+98.74 TO STA 178+36.02

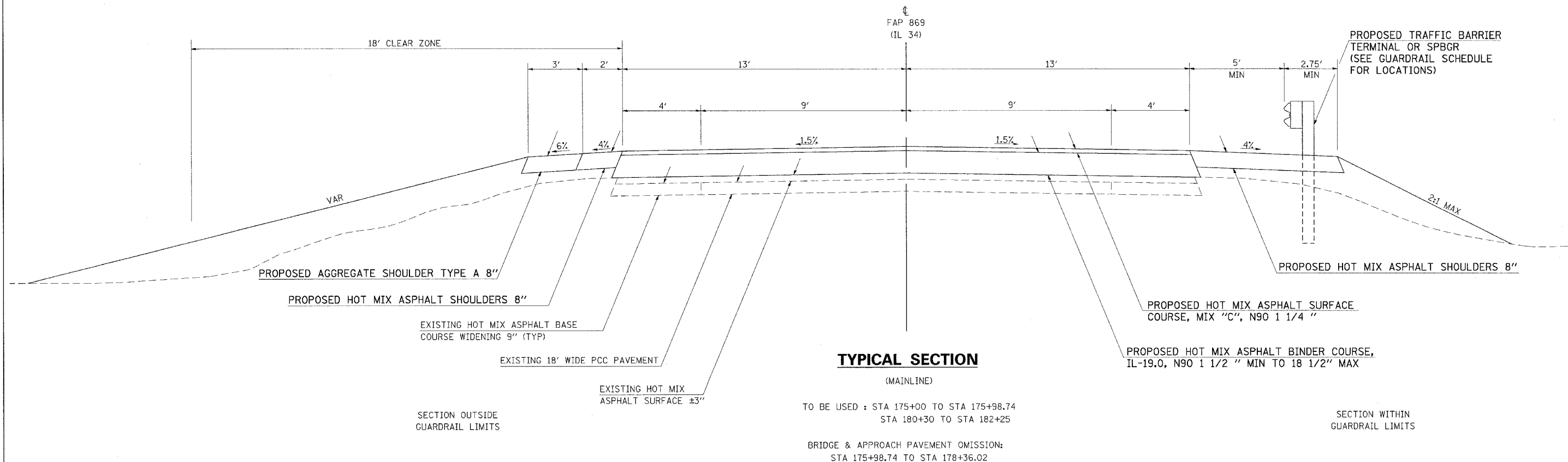
SECTION WITHIN
GUARDRAIL LIMITS

NOTE:
IN AREAS COVERED BY THIS TYPICAL, THE EXISTING BITUMINOUS SURFACED PCC PAVEMENT SHALL BE BROKEN INTO PIECES PER ARTICLE 205.03 OF THE STANDARD SPECIFICATIONS.

SECTION OUTSIDE
GUARDRAIL LIMITS

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	101VB1	FRANKLIN	--	6
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 98821				



HOT-MIX ASPHALT 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 Design
Mixture Composition: (Gradation Mixture)	IL-9.5 mm or IL 12.5 mm
Friction Aggregate:	C Surface

Location(s):	Hot Mix Asphalt Binder Course
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 Design
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 Design
Mixture Composition: (Gradation Mixture)	Hot Mix Asphalt Aggregate Mixture, Superpave
Friction Aggregate:	None

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DRAINAGE SCHEDULE

LOCATION IL 34	PIPE CULVERTS CLASS D, TYPE 1		PRECAST CONCRETE BOX CULVERT		PIPE CULVERT REMOVAL FOOT	REMOVING INLETS EACH	CONCRETE COLLAR CU YD
	15"	15" (TEMP.)	2' x 2'	END SECTION 2' x 2'			
	FOOT	FOOT	FOOT	EACH			
RT STA 177+87.							
RT STA 177+63. TO 177+83.					20		
RT STA 178+87.7 TO 179+15.5					28	1	
RT STA 179+91.1 TO 180+35.1	44						
RT STA 181+55.5			3	1			0.26
LT STA 181+55.5			10	1			0.26
RUNAROUND		40					
STA 2+92.							
TOTALS	44	40	13	2	48	1	*.52

*FOR INFORMATION ONLY. THE COST OF THE CONCRETE COLLARS AND REMOVAL OF SUCH PORTIONS OF THE EXISTING HEADWALLS AND WINGWALLS AS MAY BE REQUIRED IS INCLUDED IN THE COST OF THE PRECAST CONCRETE BOX CULVERT, 2' X 2'.

SEEDING SCHEDULE

LOCATION IL 34	SEEDING CLASS 2 (MODIFIED)	SEEDING CLASS 7	NITROGEN (N)	PHOSPHORUS (P)	POTASSIUM (K)	AGRICULTURAL GROUND LIMESTONE	MULCH METHOD 2
	ACRES	ACRES	LBS	LBS	LBS	TON	ACRES
LT STA 172+50 TO 177+10	0.46	0.46	73.6	55.2	55.2	0.92	0.44
RT STA 172+50 TO 174+00	0.05	0.05	8	6	6	0.1	0.04
RT STA 174+00 TO 177+10	0.1	0.1	16	12	12	0.2	0
LT STA 177+25 TO 182+50	0.33	0.33	52.8	39.6	39.6	0.66	0.33
RT STA 177+25 TO 179+50	0.07	0.07	11.2	8.4	8.4	0.14	0
RT STA 179+50 TO 182+50	0.19	0.19	30.4	22.8	22.8	0.38	0.19
RUNAROUND							
LT STA 0+40 TO 1+90		0.05	2				
LT STA 1+90 TO 4+60		0.18	7.2				
RT STA 1+90 TO 4+60		0.09	3.6				
LT STA 4+95 TO 7+40		0.07	2.8				
RT STA 4+95 TO 7+40		0.07	2.8				
LT STA 7+40 TO 9+00		0.04	1.6				
TOTALS	1.2	1.7	212	144	144	2.4	1

NOTE: SEE EROSION CONTROL SCHEDULE FOR AREAS WHERE EROSION CONTROL BLANKET IS USED IN LIEU OF MULCH METHOD 2.

BRIDGE APPROACH SCHEDULE

LOCATION STATION TO STATION	POROUS EMBANKMENT (SPECIAL)	SUBBASE GRANULAR MATERIAL, TYPE A 4"	BRIDGE APPROACH PAVEMENT	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SPECIAL	PROTECTIVE COAT	BRIDGE DECK GROOVING
	CU YD	TONS	SQ YD	SQ YD	SQ YD	SQ YD
IL 34						
STA 175+98.74 TO 176+12.38		39		57	181.5	165
STA 176+12.38 TO 176+42.38			124.5			
BRIDGE OMISSION						
STA 176+42.38 TO 177+92.38						
STA 177+92.38 TO 178+22.38		39	124.5		181.5	165
STA 178+22.38 TO 178+36.02				57		
TOTALS	0	78**	249	114	363	*330

* GROOVING FOR APPROACH PAVEMENTS AND CONNECTOR PAVEMENTS IS ADDITIONAL TO QUANTITY NEEDED FOR BRIDGE DECK

** TO BE INCLUDED IN THE COST OF BRIDGE APPROACH PAVEMENT

PAVEMENT REMOVAL AND MISCELLANEOUS SCHEDULE

LOCATION IL 34	PAVEMENT REMOVAL	HMA SURFACE REMOVAL BUTT JOINT	TEMPORARY RAMP	CONCRETE SLOPEWALL REMOVAL
	SQ YD	SQ YD	SQ YD	SQ FT
STA 174+45. TO 177+83.		72	12	
STA 176+30. TO 176+54.34	84			
EXISTING WEST SLOPEWALL				1867
EXISTING EAST SLOPEWALL				2185
STA 177+72.31 TO 177+97.5	77			
STA 182+25. TO 180+35.1		72	12	
RUNAROUND				
STA 0+41 TO 1+49.	90			
STA 1+49. TO 4+17.04	417			
STA 5+38.54 TO 8+06.54	417			
STA 8+06.54 TO 9+16.53	92			
TOTALS	1177	144	24	4052

HOT-MIX ASPHALT SCHEDULE

LOCATION IL 34	SUBBASE GRANULAR MATERIAL, TYPE A	HOT-MIX ASPHALT BINDER COURSE IL-19, N90	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N90	HOT-MIX ASPHALT MATERIAL (PRIMECOAT)	AGGREGATE (PRIMECOAT)
	TON	TON	TON	GALLON	TON
STA 174+45. TO 175+00.			11	86	0.6
STA 175+00. TO 175+98.74		104	20	154	1
BRIDGE & APPROACH					
STA 175+98.74 TO 178+36.02					
STA 178+00 TO 178+36.02	181				
STA 178+36.02 TO 180+30.	645	402	40	302	1.9
STA 180+30. TO 182+25.		260	40	302	1.9
STA 182+25. TO 182+80.			11	86	0.6
RUNAROUND					
STA 0+41 TO 1+49.		53			
STA 1+49. TO 4+17.04		248			
BRIDGE & APPROACH					
STA 4+17.04 TO 5+38.54					
STA 5+38.54 TO 8+06.54		248			
STA 8+06.54 TO 9+16.53		54			
TOTALS	826	1369	122	930	6

SHOULDER SCHEDULE

LOCATION IL 34	AGGREGATE SHOULDERS TYPE A, 8"	HOT MIX ASPHALT SHOULDERS
	SQ YD	TONS
RT STA 172+50. TO 173+73.9	42	14.4
RT STA 173+73.9 TO 174+41.9		26.9
RT STA 174+41.9 TO 175+98.7		61.6
RT STA 175+98.7 TO 176+34.3		5
LT STA 172+50. TO 174+88.6	81	27.8
LT STA 174+88.6 TO 175+56.6		26.9
LT STA 175+56.6 TO 175+98.7		16.3
LT STA 175+98.7 TO 176+50.4		5
RT STA 177+84.3 TO 178+36.		5
RT STA 178+36. TO 178+78.2		16.3
RT STA 178+78.2 TO 179+46.2		26.9
RT STA 179+46.2 TO 182+25.	95	28.5
LT STA 178+00.4 TO 178+36.		5
LT STA 178+36. TO 179+92.9		60.6
LT STA 179+92.9 TO 180+60.9		26.9
LT STA 180+60.9 TO 182+25.	57	17.1
TOTALS	275	370

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	(101V00-1)	ERANKLIN	--	8
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 98821				

EARTHWORK SCHEDULE

LOCATION (STAGE)	* EARTH EXCAVATION	SHRINKAGE FACTOR FOR EARTH EXCAVATION	EARTH EXCAVATION TO BE USED IN EMBANKMENT ADJUSTED FOR SHRINKAGE	** EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)	SHRINKAGE FACTOR FOR BORROW EXCAVATION	BORROW EXCAVATION	EXCESS
	CU YD	%	CU YD	CU YD	CU YD	%	CU YD	CU YD
IL 34 AND DETOUR								
STAGE 1	48	25	36	2932	-2896	25	3620	0
STAGE 2	1704	25	1278	861	417	25	0	417
STAGE 3	2507	25	1880	400	1480	25	0	1480
TOTALS	4259						3620	

- * CUTS FROM CROSS-SECTIONS
- ** FILLS FROM CROSS-SECTIONS

SUGGESTED EARTHWORK STAGING SEQUENCE
 STAGE 1: CONSTRUCTION OF RUNAROUND EMBANKMENT
 STAGE 2: CONSTRUCTION OF FILL FOR GRADE RAISE
 STAGE 3: REMOVAL OF RUNAROUND AND FINAL GRADING

SMALL QUANTITIES OF ROCK EXCAVATION MAY BE ENCOUNTERED DURING EXCAVATION FOR THE EAST SLOPEWALL. IF SO, PAYMENT FOR ROCK EXCAVATION WILL BE ACCORDING TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

TERMINALS AND GUARDRAIL

LOCATION IL 34	TRAFFIC BARRIER TERMINAL				SPBGR TYPE A FOOT	SPBGR TYPE A (TEMP) FOOT	GURDRAIL REMOVAL FOOT	TERM. MARKER D. A. EACH	GUARDRAIL MARKER EACH	BARRIER WALL MARKER EACH
	TYPE 1 SPECIAL		TYPE 6 EACH	TYPE 6A (TEMP) EACH						
	TANGENT EACH	TANGENT (TEMP) EACH								
RT STA 173+91.9 TO 174+41.9	1				150		1	1		
RT STA 174+41.9 TO 175+91.9								2		
RT STA 175+91.9 TO 176+37.5			1					1		
RT STA 175+46.7 TO 176+47.7							101			
LT STA 175+06.6 TO 175+56.6	1				50		1	1		
LT STA 175+56.6 TO 176+06.6			1					2		
LT STA 176+06.6 TO 176+52.2								1		
LT STA 175+60.0 TO 176+61.0							101			
RT STA 176+35.02 TO 177+85.02										
LT STA 176+49.74 TO 177+99.74										
RT STA 177+82.5 TO 178+28.2			1					1		
RT STA 178+28.2 TO 178+78.2					50			2		
RT STA 178+78.2 TO 179+28.2	1						101	1	3	
RT STA 177+65.7 TO 178+66.7									3	
LT STA 177+97.2 TO 178+42.9			1					1		
LT STA 178+42.9 TO 179+92.9					150			2		
LT STA 179+92.9 TO 180+42.9	1						101	1		
LT STA 177+79.0 TO 178+80.0										
RUNAROUND										
LT STA 0+38.86 TO 0+88.86		1					1	1		
LT STA 0+88.86 TO 3+76.36						287.5		2		
LT STA 3+76.36 TO 4+20.11				1				1		
RT STA 2+45.22 TO 2+95.22		1					1	1		
RT STA 2+95.22 TO 3+70.22						75		2		
RT STA 3+70.22 TO 4+13.97				1				1		
LT STA 4+20.11 TO 5+41.61									3	
RT STA 4+13.97 TO 5+35.47									3	
LT STA 5+41.61 TO 5+85.36				1				1		
LT STA 5+85.36 TO 6+97.86						112.5		2		
LT STA 6+97.86 TO 7+47.86	1						1	1		
RT STA 5+35.47 TO 5+79.22				1				1		
RT STA 5+79.22 TO 6+41.72						62.5		2		
RT STA 6+41.72 TO 6+91.72	1						1	1		
TOTALS	4	4	4	4	400	537.5	404	8	32	12

EROSION CONTROL SCHEDULE

LOCATION IL 34	STONE RIPRAP CLASS A3	STONE RIPRAP CLASS A4	FILTER FABRIC	PERIMETER EROSION BARRIER	EROSION CONTROL BLANKET	DITCH CHECKS	INLET & PIPE PROTECTION
	SQ YD	SQ YD	SQ YD	FOOT	SQ YD	EACH	EACH
LT STA 172+50 TO 173+00				507	44		
LT STA 173+00 TO 177+25				444			
RT STA 173+00 TO 177+10					472		
RT STA 173+50 TO 176+20				534			
RT STA 177+10 TO 182+25				532			
LT STA 177+40 TO 182+50					280		
RT STA 177+96 TO 179+50						1	
RT STA 178+00						1	
RT STA 178+75							1
RT STA 177+90						1	
RT STA 181+00							1
RT STA 181+55							1
RUNAROUND							
LT STA 0+90 TO 4+70					924		
RT STA 2+40 TO 4+60					373		
LT STA 4+90 TO 8+40					372		
RT STA 4+80 TO 6+90					306		
LT STA 2+91.76		5	5				
RT STA 2+91.76							1
RT STA 3+25						1	
RT STA 4+90 TO 5+46		27	27				
RT STA 6+25						1	
TOTALS	0	32	32	2017	2771	5	3

PAVEMENT MARKING SCHEDULE

LOCATION IL 34	SHORT-TERM PAVEMENT MARKING	TEMPORARY PAVEMENT MARKING LINE-4"	PAINT PAVEMENT MARKING LINE-4"
	FOOT	FOOT	FOOT
STA 174+45 TO 175+98.74	28	615	615
STA 175+98.74 TO 178+36.02	24	949	949
STA 178+36.02 TO 182+80	84	1,776	1,776
TOTALS	136	3,340	3,340

TREE REMOVAL SCHEDULE

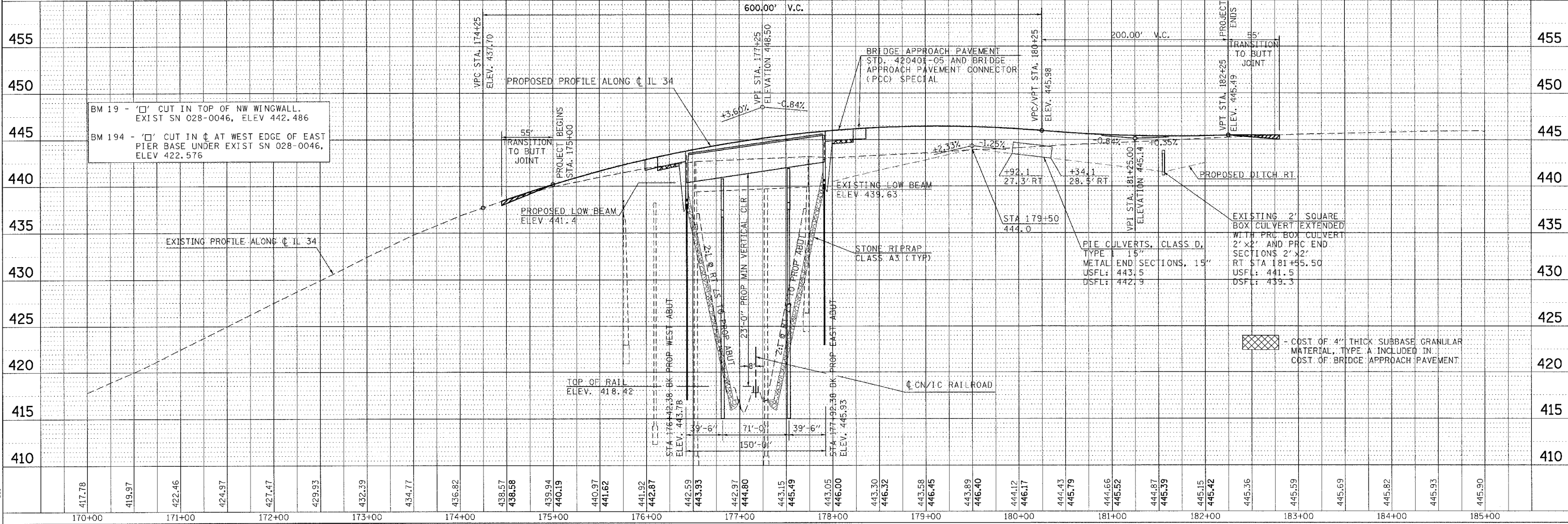
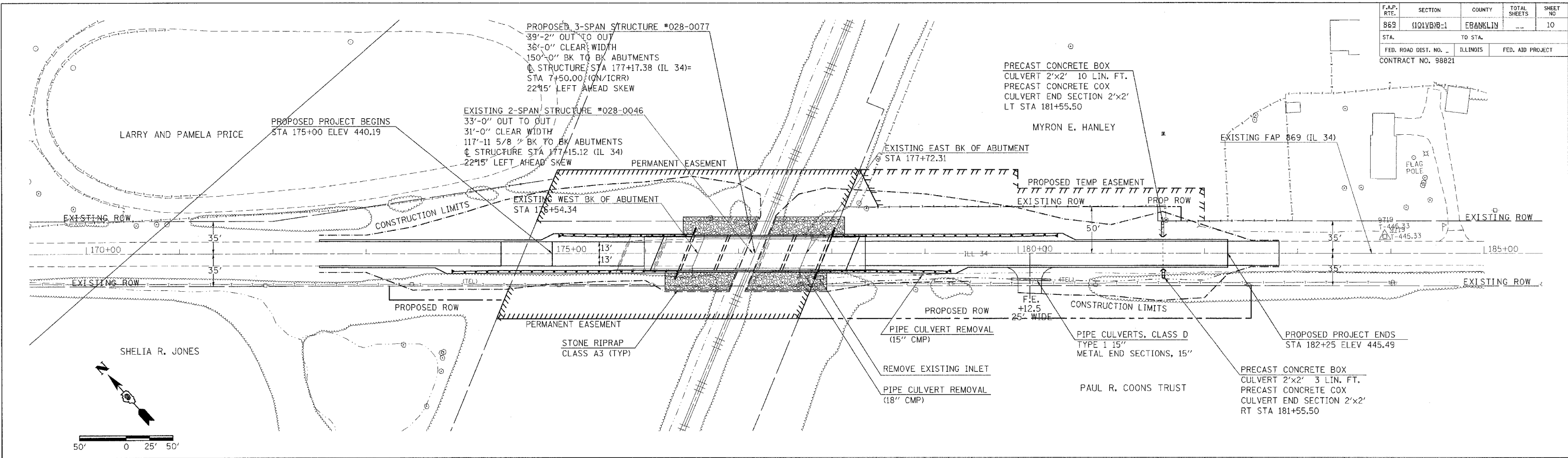
LOCATION IL 34	TREE REMOVAL 6 TO 15 UNITS DIAMETER	TREE REMOVAL OVER 15 UNITS DIAMETER	LOCATION IL 34	TREE REMOVAL 6 TO 15 UNITS DIAMETER	TREE REMOVAL OVER 15 UNITS DIAMETER
	UNITS	UNITS		UNITS	UNITS
NORTHWEST QUADRANT			SOUTHEAST QUADRANT (CONT.)		
STA. 172+70, 28' LT		30	STA. 180+70, 22' RT	7	
STA. 172+75, 27' LT	6		STA. 180+75, 23' RT	6	
STA. 172+85, 28' LT	9		STA. 180+85, 35' RT	9	
STA. 172+85, 28' LT	15		STA. 180+90, 28' RT	6	
STA. 174+25, 52' LT	6		STA. 181+00, 24' RT	6	
STA. 175+00, 63' LT	6		STA. 181+00, 24' RT	6	
STA. 175+70, 78' LT	6		STA. 181+00, 40' RT	6	
STA. 175+75, 73' LT	7		STA. 181+20, 23' RT	7	
STA. 176+00, 75' LT	6		STA. 181+20, 23' RT	7	
STA. 176+50, 82' LT	6		STA. 181+20, 36' RT	6	
STA. 176+60, 80' LT	6		STA. 181+30, 20' RT	6	
STA. 176+65, 82' LT	6		STA. 181+40, 21' RT		16 (DEAD)
STA. 176+65, 82' LT	7		STA. 181+40, 35' RT	6	
STA. 176+65, 82' LT	13		STA. 181+40, 35' RT	8	
STA. 176+65, 82' LT			STA. 181+45, 24' RT	6	
NORTHEAST QUADRANT			STA. 181+50, 26' RT	6	
STA. 178+00, 61' LT	7		STA. 181+60, 27' RT	7	
STA. 178+05, 51' LT	11		STA. 181+60, 35' RT	8	
SOUTHWEST QUADRANT			STA. 181+70, 37' RT	10	
STA. 173+60, 31' RT	10		STA. 181+75, 20' RT	15	
STA. 173+60, 31' RT	10		STA. 181+75, 34' RT	12	
STA. 174+15, 37' RT	6		STA. 181+80, 26' RT	8	
STA. 174+25, 33' RT	10		STA. 181+90, 35' RT	8	
STA. 174+35, 39' RT	6		STA. 182+00, 20' RT		19
STA. 174+50, 36' RT		18	STA. 182+00, 35' RT	7	
STA. 174+50, 37' RT		19	STA. 182+00, 35' RT	9	
STA. 175+10, 35' RT	7		STA. 182+10, 27' RT	6	
STA. 175+10, 35' RT	10		STA. 182+10, 33' RT	6	
STA. 175+10, 35' RT	12		STA. 182+15, 33' RT	6	
STA. 175+20, 29' RT	13		STA. 182+20, 26' RT	7	
STA. 176+25, 24' RT	6		STA. 182+20, 32' RT	15	
SOUTHEAST QUADRANT			STA. 182+25, 26' RT	8	
STA. 177+65, 29' RT	12		STA. 182+40, 34' RT	9	
STA. 177+85, 25' RT	8		STA. 182+46, 25' RT	6	
STA. 177+85, 25' RT	12		STA. 182+48, 30' RT	8	
STA. 178+00, 22' RT	8		STA. 182+50, 30' RT	7	
STA. 178+00, 22' RT	9		STA. 182+65, 35' RT	6	
STA. 178+25, 24' RT	7				
STA. 178+25, 24' RT		28	TOTALS	541	130

FENCE SCHEDULE

LOCATION IL 34	TEMPORARY FENCE	FENCE REMOVAL
	FOOT	FOOT
LT STA 178+45 TO 182+25	400	
LT STA 178+30 TO 182+25		460
TOTALS	400	460

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
869	101V/B-1	EBANKLIN	10	10
STA.	TO STA.		FED. AID PROJECT	
	ILLINOIS		CONTRACT NO. 98821	



PLAN /PROFILE ON IL 34 /STR NO. 028-0046 OVER CN /IC RR

DATE	BY	DATE
PLAN	NO. 1	DATE
NOTE BOOK	NO.	DATE

DATE	BY	DATE
PROFILE	NO. 1	DATE
NOTE BOOK	NO.	DATE

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	101VB18-1	EBANKLIN	---	11
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 98821				

PROP. CURVE DETOUR-1
 PI STA. = 0+86.07
 $\Delta = 13^\circ 05' 38''$ (LT)
 $D = 7^\circ 38' 22''$
 $R = 750.00'$
 $T = 86.07'$
 $L = 171.40'$
 $E = 4.92'$
 P.C. STA. = 0+00.00
 P.T. STA. = 1+71.40

PIPE CULVERTS, CLASS D,
 TYPE 1 15" (TEMPORARY)
 METAL END SECTIONS, 15"
 STONE RIPRAP CLASS A4
 STA 2+91.76

TEMPORARY BRIDGE COMPLETE
 STRUCTURE STA 4+77.79 (RUNAROUND)=
 45° LT STA 177+35.06 (IL 34)
 BRIDGE LENGTH=121'-6" BK TO BK ABUTMENTS
 BRIDGE CLEAR WIDTH=14'-0" MIN
 PILE BENT ABUTMENTS WITH 1.5:1 ENDSLOPES
 WEST AND EAST PIER 12.5' MIN AT RIGHT ANGLES
 FROM C OF TRACKS
 ALL ABUTMENTS AND PIER SHOWN
 SKEWED $22^\circ 15'$
 $21'-3"$ MIN VERTICAL CLEARANCE
 HS20-44' LOADING

PROP. CURVE DETOUR-4
 PI STA. = 8+70.27
 $\Delta = 13^\circ 05' 38''$ (LT)
 $D = 7^\circ 38' 22''$
 $R = 750.00'$
 $T = 86.07'$
 $L = 171.40'$
 $E = 4.92'$
 P.C. STA. = 7+84.19
 P.T. STA. = 9+55.59

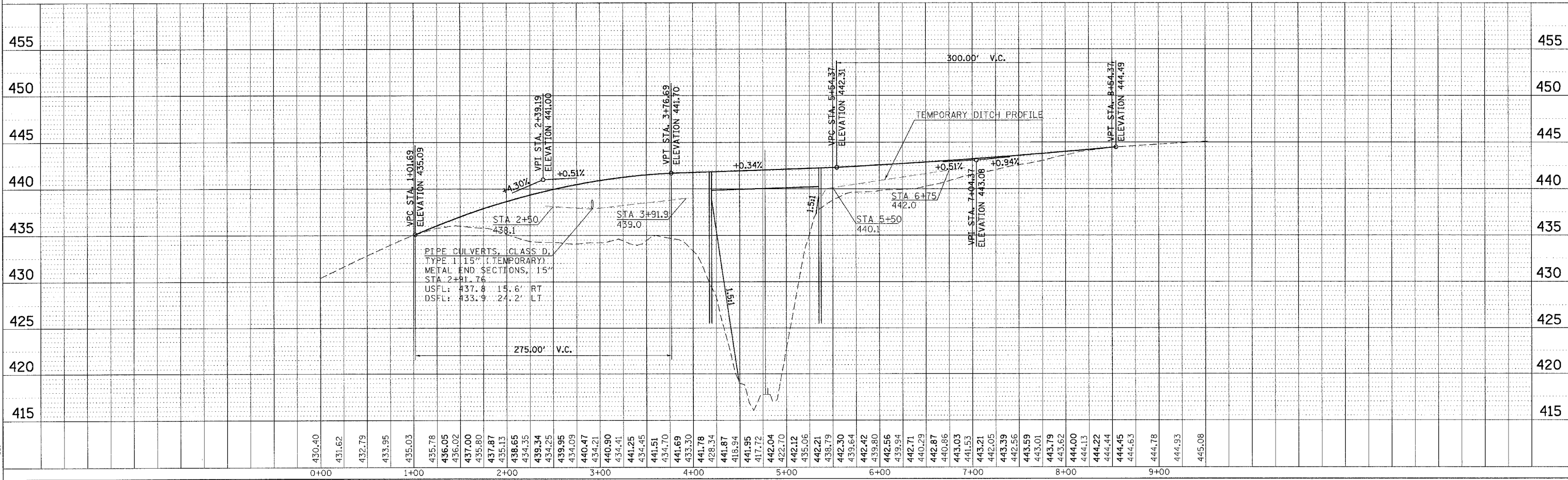
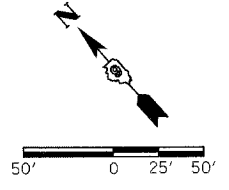
PROP. CURVE DETOUR-2
 PI STA. = 2+57.47
 $\Delta = 13^\circ 05' 38''$ (RT)
 $D = 7^\circ 38' 22''$
 $R = 750.00'$
 $T = 86.07'$
 $L = 171.40'$
 $E = 4.92'$
 P.C. STA. = 1+71.40
 P.T. STA. = 3+42.80

PROP. CURVE DETOUR-3
 PI STA. = 6+98.87
 $\Delta = 13^\circ 05' 38''$ (RT)
 $D = 7^\circ 38' 22''$
 $R = 750.00'$
 $T = 86.07'$
 $L = 171.40'$
 $E = 4.92'$
 P.C. STA. = 6+12.79
 P.T. STA. = 7+84.19

DETOUR SUPERELEVATION RATES	
STA - STA	S.E. (PT/PT)
0+39 - 1+35	0.015
2+31 - 3+22	0.030
3+58 - 5+97	0.015
6+33 - 7+24	0.030
8+20 - 9+55	0.015

PLAN	DATE
NO.	BY
NO.	BY
NO.	BY

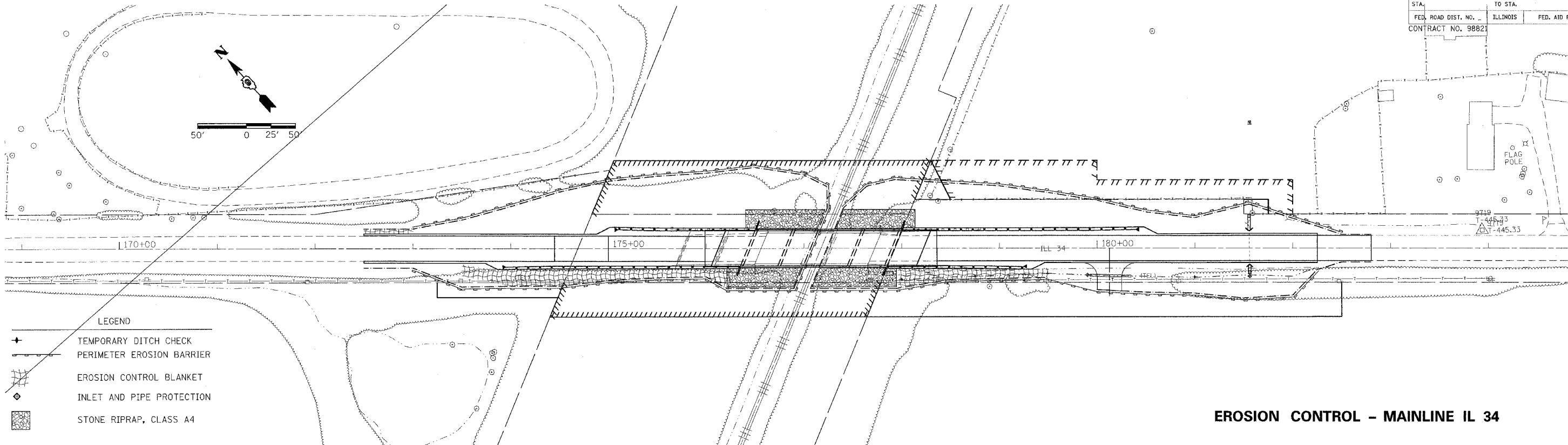
PROFILE	DATE
NO.	BY
NO.	BY
NO.	BY



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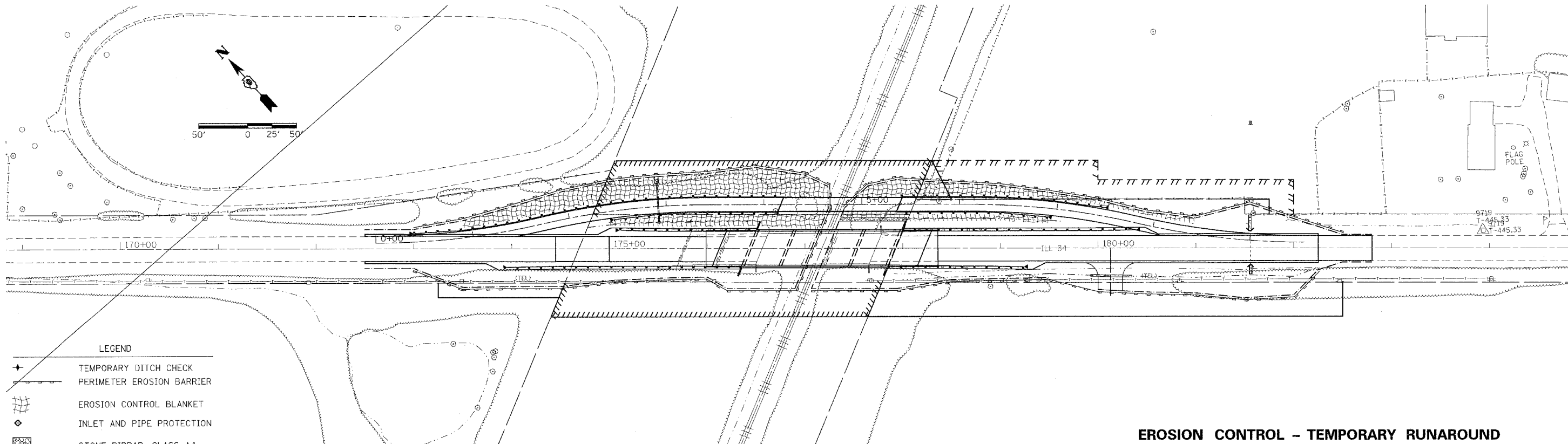
PLAN /PROFILE ON IL 34 DETOUR OVER CN /IC RR

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
869	(101VB)B-1	BRANKLIN	...	12
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 9882				



- LEGEND**
- +— TEMPORARY DITCH CHECK
 - PERIMETER EROSION BARRIER
 - ▨ EROSION CONTROL BLANKET
 - ◆ INLET AND PIPE PROTECTION
 - ▩ STONE RIPRAP, CLASS A4

EROSION CONTROL - MAINLINE IL 34



- LEGEND**
- +— TEMPORARY DITCH CHECK
 - PERIMETER EROSION BARRIER
 - ▨ EROSION CONTROL BLANKET
 - ◆ INLET AND PIPE PROTECTION
 - ▩ STONE RIPRAP, CLASS A4

EROSION CONTROL - TEMPORARY RUNAROUND

EROSION CONTROL

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PARCEL	OWNER	ROW	EASEMENT
250	SHEILA R. JONES	0.043	
251	ILLINOIS CENTRAL RR		0.670
252	PAUL R. COONS TRUST	0.384	
254	MYRON & RENEE HANLEY	0.026	0.247

PROP. CURVE DETOUR-1
PI STA. = 0+86.07
 $\Delta = 13^\circ 05' 38''$ (LT)
D = 7° 38' 22"
R = 750.00'
T = 86.07'
L = 171.40'
E = 4.92'
P.C. STA. = 0+00.00
P.T. STA. = 1+71.40

PROP. CURVE DETOUR-2
PI STA. = 2+57.47
 $\Delta = 13^\circ 05' 38''$ (RT)
D = 7° 38' 22"
R = 750.00'
T = 86.07'
L = 171.40'
E = 4.92'
P.C. STA. = 1+71.40
P.T. STA. = 3+42.80

PROP. CURVE DETOUR-3
PI STA. = 6+98.87
 $\Delta = 13^\circ 05' 38''$ (RT)
D = 7° 38' 22"
R = 750.00'
T = 86.07'
L = 171.40'
E = 4.92'
P.C. STA. = 6+12.79
P.T. STA. = 7+84.19

PROP. CURVE DETOUR-4
PI STA. = 8+70.27
 $\Delta = 13^\circ 05' 38''$ (LT)
D = 7° 38' 22"
R = 750.00'
T = 86.07'
L = 171.40'
E = 4.92'
P.C. STA. = 7+84.19
P.T. STA. = 9+55.59

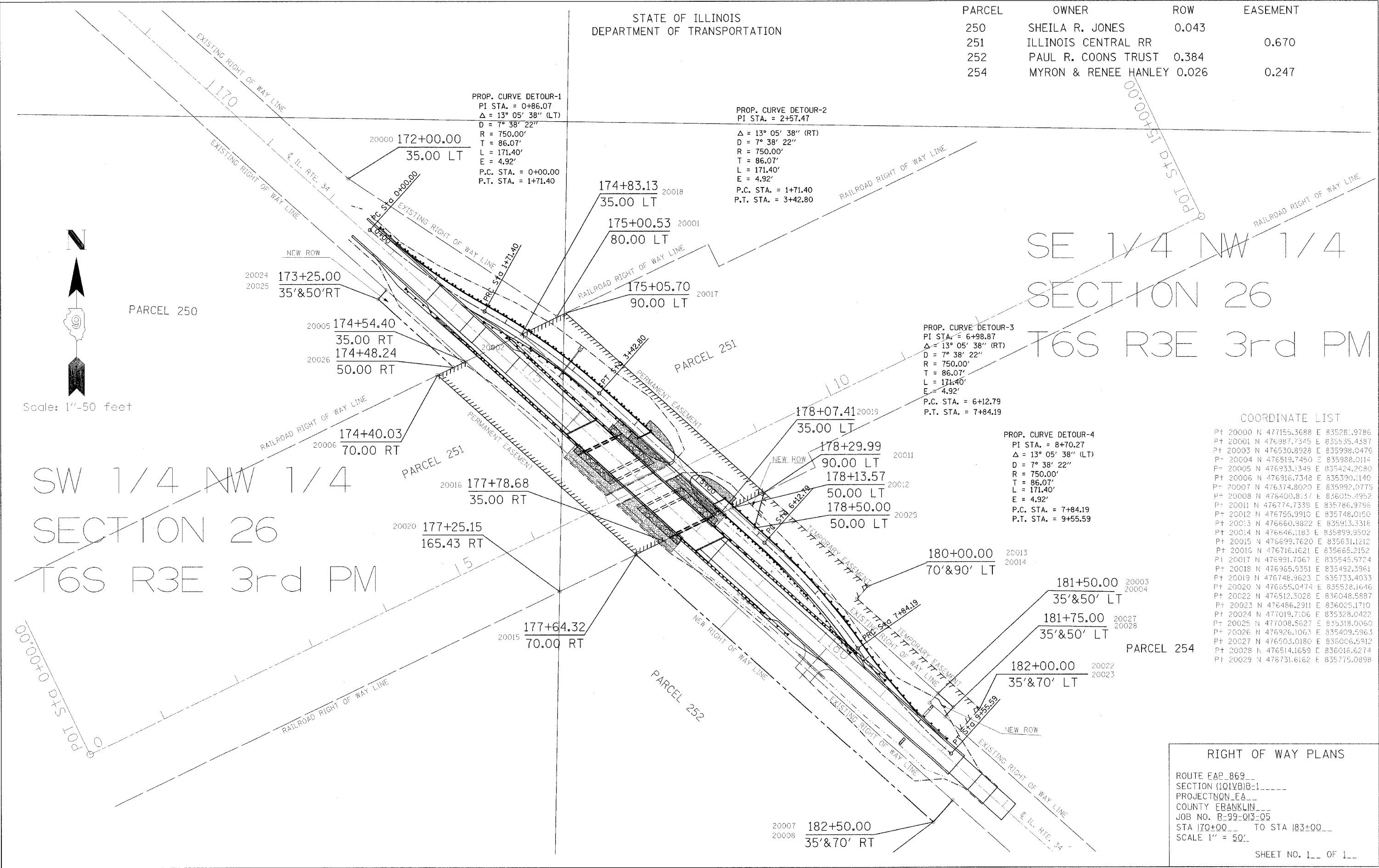
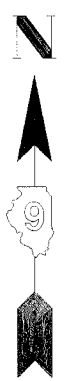
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Pt 20000	N	477155.3688	E	835281.9786
Pt 20001	N	476987.7345	E	835535.4387
Pt 20003	N	476530.8928	E	835998.0476
Pt 20004	N	476519.7450	E	835988.0114
Pt 20005	N	476933.1348	E	835424.2080
Pt 20006	N	476916.7348	E	835390.1140
Pt 20007	N	476374.8070	E	835992.0775
Pt 20008	N	476400.8137	E	836015.4952
Pt 20011	N	476774.7339	E	835786.9796
Pt 20012	N	476755.9910	E	835748.0150
Pt 20013	N	476660.9822	E	835913.3318
Pt 20014	N	476646.1183	E	835899.9502
Pt 20015	N	476699.7620	E	835631.1212
Pt 20016	N	476716.1621	E	835665.2152
Pt 20017	N	476991.7067	E	835545.9724
Pt 20018	N	476965.9351	E	835492.3961
Pt 20019	N	476748.9623	E	835733.4033
Pt 20020	N	476655.0474	E	835538.1646
Pt 20022	N	476512.3028	E	836048.5887
Pt 20023	N	476486.2911	E	836025.1710
Pt 20024	N	477019.7106	E	835328.0422
Pt 20025	N	477008.5627	E	835318.0060
Pt 20026	N	476926.1063	E	835409.5963
Pt 20027	N	476503.0180	E	836006.5912
Pt 20028	N	476514.1659	E	836018.6274
Pt 20029	N	476731.6162	E	835775.0898

SE 1/4 NW 1/4
SECTION 26
T6S R3E 3rd PM

SW 1/4 NW 1/4
SECTION 26
T6S R3E 3rd PM

Scale: 1"=50 feet

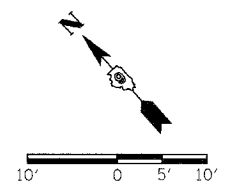
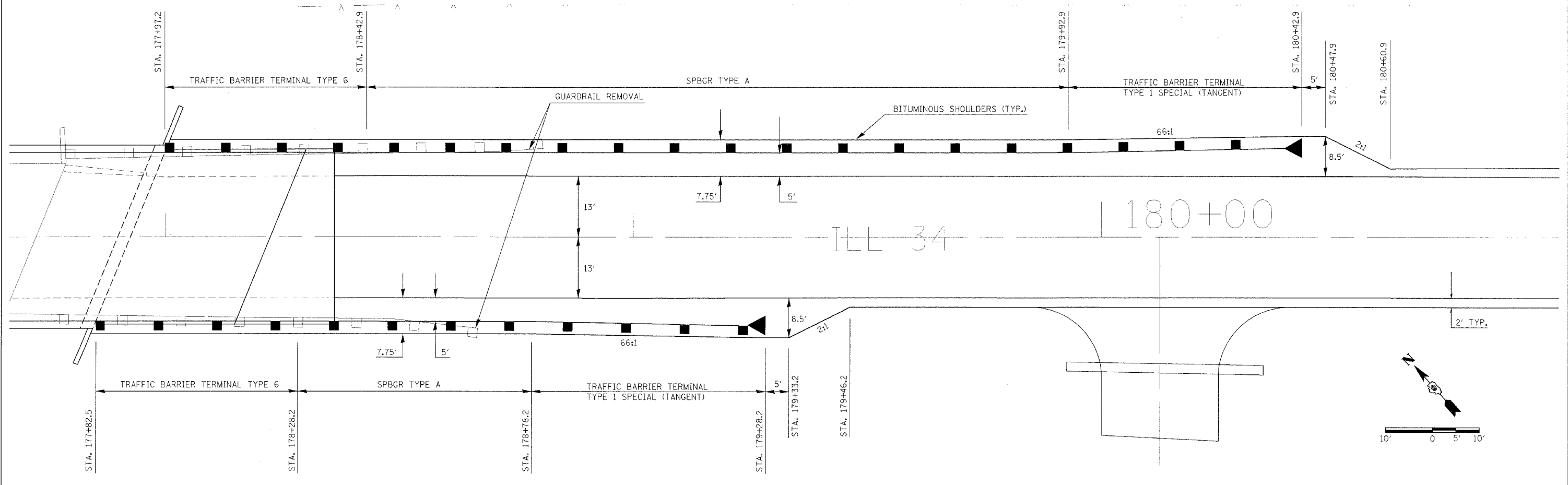
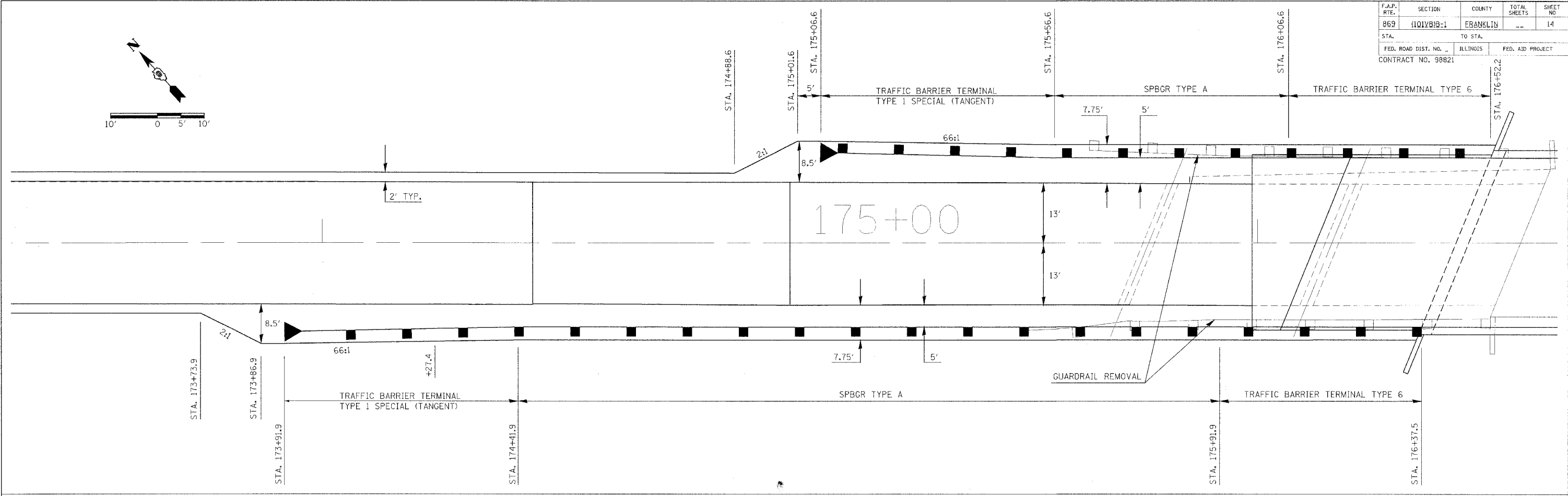
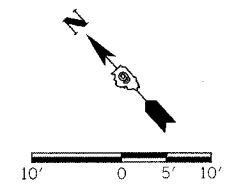


RIGHT OF WAY PLANS

ROUTE EAP 869
SECTION (101VB)B-1
PROJECT NON-FA
COUNTY FRANKLIN
JOB NO. R-99-013-05
STA 170+00 TO STA 183+00
SCALE 1" = 50'

SHEET NO. 1 OF 1

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	11Q1V819-1	ERANKLIN	--	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 98821				

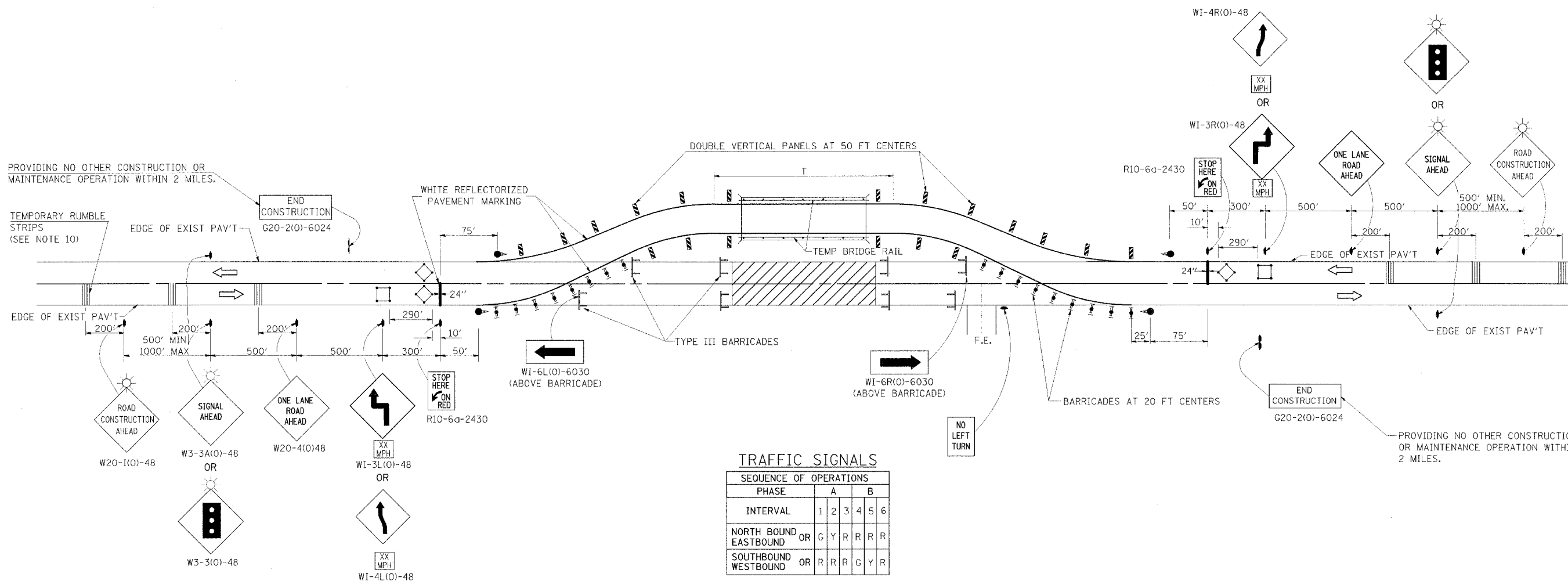


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DETAIL - GUARDRAIL & BITUMINOUS SHOULDER AT BRIDGE

TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES TO BE USED WITH ONE LANE DETOUR

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
869	(101VB)B-1	EBANKLIN	--	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 98821				



TRAFFIC SIGNALS

SEQUENCE OF OPERATIONS						
PHASE	A	B				
INTERVAL	1	2	3	4	5	6
NORTH BOUND EASTBOUND	OR	G	Y	R	R	R
SOUTHBOUND WESTBOUND	OR	R	R	R	G	Y

GENERAL NOTES

1. THE ENGINEER MUST BE NOTIFIED AT LEAST 72 HOURS PRIOR TO PLACING THE TEMPORARY SIGNALS IN OPERATION SO THAT ARRANGEMENTS CAN BE MADE TO INSPECT THE INSTALLATION AND SET THE TIMING OF THE SIGNALS.
2. BIDIRECTIONAL STEADY BURNING AMBER LIGHTS SHALL BE ATTACHED TO THE TEMPORARY BRIDGE RAIL AT 25 FOOT CENTERS AND KEPT BURNING FROM DUSK UNTIL DAWN EACH NIGHT THE TEMPORARY BRIDGE RAIL IS IN USE.
3. ALL BARRICADE LIGHTS SHALL BE BIDIRECTIONAL.
4. ON PAVED RUNAROUNDS, REFLECTIVE EDGE LINES SHALL BE USED WHEN THE CLOSURE TIME EXCEEDS FOUR DAYS OR WHEN THE NORMAL POSTED SPEED OUTSIDE THE AREA OF OPERATIONS EXCEEDS 50 MILES PER HOUR. REFLECTORIZED PAVEMENT MARKING TAPE SHALL BE USED FOR MARKING THE EDGE LINES ON THE EXISTING PAVEMENT. EITHER TAPE OR REFLECTORIZED PAVEMENT MARKING PAINT MAY BE USED FOR MARKINGS ON THE PAVED RUNAROUNDS. RAISED REFLECTIVE PAVEMENT MARKERS AT 25 FT CENTERS MAY BE USED IN LIEU OF TAPE OR PAINT WHERE THE PAVEMENT MARKING IS TO BE PLACED ADJACENT TO BARRICADES OR VERTICAL PANELS.
5. THE EXISTING CENTERLINE AND EDGE LINE MARKINGS WHICH CONFLICT WITH THE DETOUR TRAFFIC PATTERN SHALL BE REMOVED AS SOON AS TRAFFIC IS DIRECTED TO THE DETOUR. THE COST OF PAVEMENT MARKING REMOVAL IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, SPECIAL. REPLACEMENT WITH TEMPORARY OR PERMANENT PAVEMENT MARKING IS TO BE DONE AS SOON AS THE HIGHWAY IS REOPENED AND PAID FOR WITH THE TYPE OF PAVEMENT MARKING BEING APPLIED.
6. A CURVE SIGN WILL BE REQUIRED AT THE EXIT END OF THE RUNAROUNDS IF (T) IS EQUAL TO OR GREATER THAN 1,000 FEET.
7. THE ADVISORY SAFE SPEED TO BE SHOWN BELOW THE REVERSE CURVE (TURN) SIGNS SHALL BE DETERMINED AT THE SIGHT AND APPROVED BY THE ENGINEER.
8. ALL SIGNS SHALL BE POST MOUNTED IF THE CLOSURE TIME EXCEEDS FOUR DAYS.
9. LONGITUDINAL DIMENSIONS MAY BE ADJUSTED TO FIT THE FIELD CONDITIONS.
10. TEMPORARY RUMBLE STRIPS SHALL BE INSTALLED WHERE SHOWN, WHEN REQUIRED. THE COST SHALL BE INCLUDED IN PRICE FOR TRAFFIC CONTROL AND PROTECTION, (SPECIAL) - EACH.
11. THE SIGNAL INSTALLATION SHALL MEET THE REQUIREMENTS OF ARTICLE 701.18(b)
12. MAINTENANCE OF THE TEMPORARY ONE-LANE RUNAROUND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

SYMBOLS

- INDUCTION LOOP DETECTOR
- WORK AREA
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- BARRICADE OR DRUM WITH STEADY BURNING LIGHT
- DOUBLE VERTICAL PANEL
- TRAFFIC SIGNAL
- FLASHING BEACON
- TYPE III BARRICADE

TYPICAL APPLICATION

- BRIDGE CONSTRUCTION
- CULVERT CONSTRUCTION
- TWO-LANE, TWO WAY TRAFFIC, RURAL TEMPORARY ONE LANE RUNAROUND DAY OR NIGHT OPERATIONS.
- WHERE, AT ANY TIME, ANY VEHICLE, EQUIPMENT, MEN OR THEIR ACTIVITIES REQUIRE THE CLOSURE OF BOTH LANES AND A TEMPORARY ONE LANE RUNAROUND IS CONSTRUCTED.

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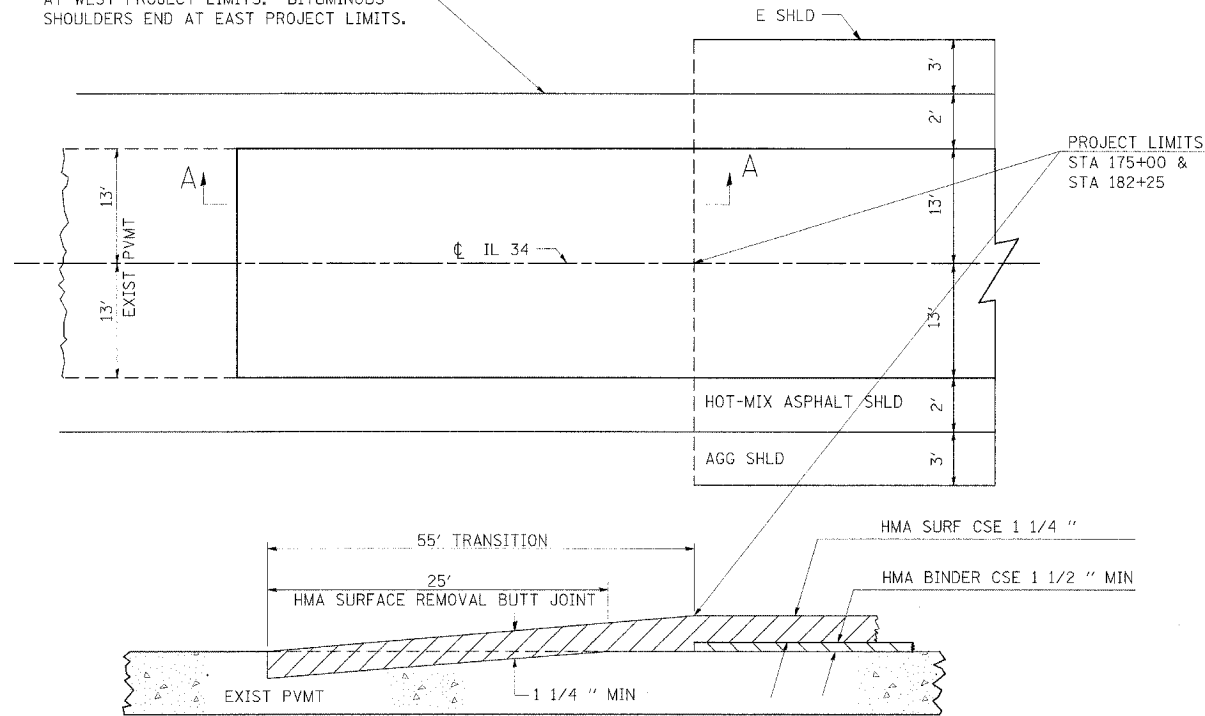
REVISIONS	
REDRAWN	9-20-93
REVISED	8-24-94
REVISED	2-28-97
REVISED	7-10-01
REVISED	10-09-07

STD. 9-33

F.A.P. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	101YB1B-1	ERANKLIN	--	16
STA.	TO STA.			
FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 98821				

BUTT JOINT

BITUMINOUS SHOULDERS CONTINUE AT WEST PROJECT LIMITS. BITUMINOUS SHOULDERS END AT EAST PROJECT LIMITS.



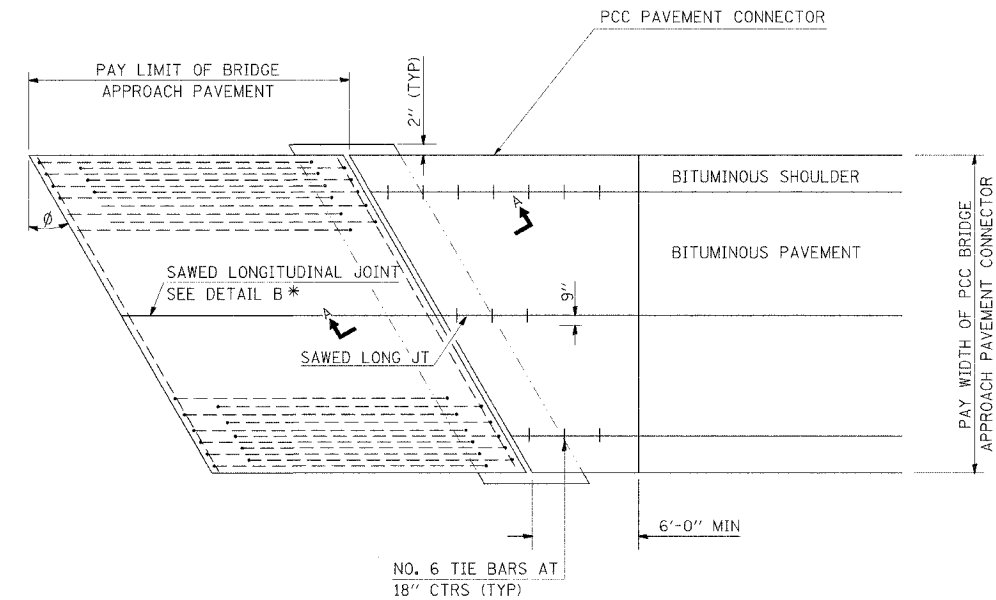
SECTION A-A

REVISIONS

DRAWN	10-17-90
REVISED	01-11-91
REVISED	
REVISED	

STD. _9-86

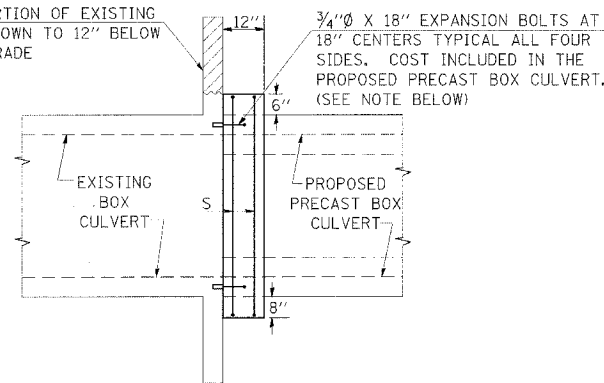
PCC PAVEMENT CONNECTOR



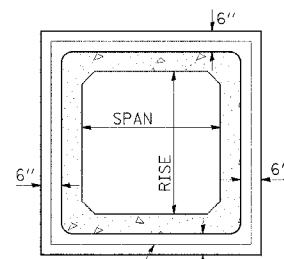
BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SPECIAL (MODIFICATION TO STD 420401)

DETAILS OF CONCRETE COLLAR FOR PRECAST BOX CULVERT

REMOVE PORTION OF EXISTING HEADWALL DOWN TO 12\"/>



SIDE VIEW



END VIEW

2 - #5 S BARS TYPICAL COST INCLUDED IN THE PROPOSED PRECAST BOX CULVERT.

TABULATION

(FOR INFORMATION PURPOSES ONLY)

SPAN X RISE	CLASS SI CONC. CU. YD. (EST.)
2' X 2'	0.26
3' X 2'	0.30
3' X 3'	0.34
4' X 2'	0.36
4' X 3'	0.39
4' X 4'	0.43
5' X 2'	0.41
5' X 3'	0.45
5' X 4'	0.49
6' X 2'	0.47
6' X 3'	0.51
6' X 4'	0.54

REVISIONS

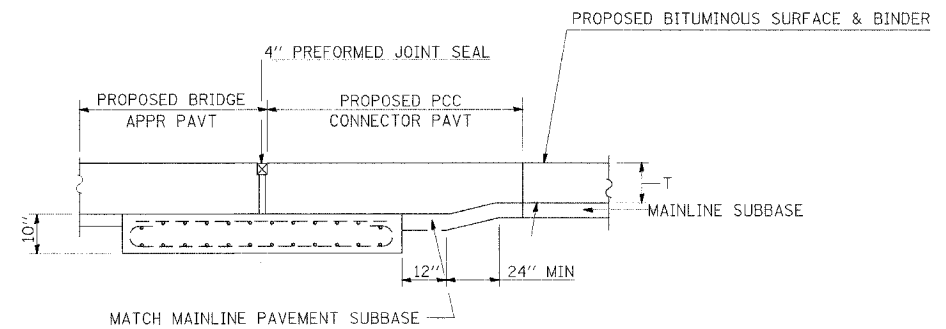
DRAWN	8-15-93	REVISED	12-17-01
REVISED	2-15-90	REVISED	
REVISED	8-10-90	REVISED	
REVISED	8-19-94	REVISED	

STD. _9-45

THE CONCRETE COLLAR SHALL BE CONSIDERED INCLUDED IN PRECAST CONCRETE BOX CULVERT, WHICH PRICE SHALL INCLUDE THE REMOVAL OF SUCH PORTIONS OF THE EXISTING HEADWALLS AND WINGWALLS AS MAY BE REQUIRED. CLASS SI CONCRETE SHALL BE USED THROUGHOUT.

NOTE:

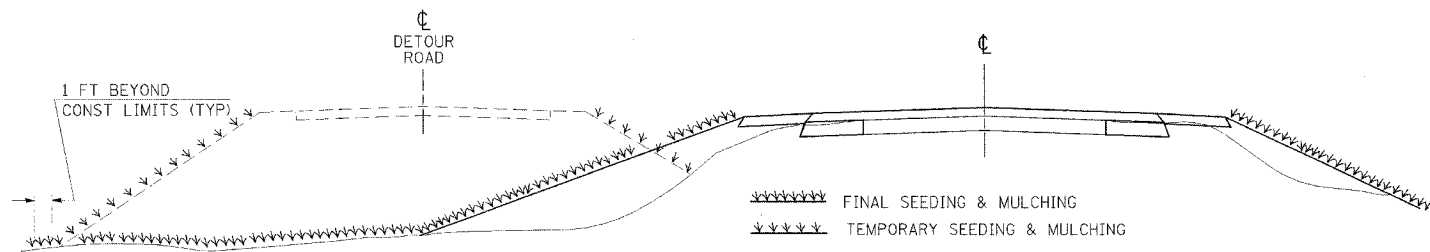
ANCHOR BOLTS, MEETING THE REQUIREMENTS OF ARTICLE 1006.09 OF THE STANDARD SPECIFICATIONS, SHALL EXTEND A MINIMUM OF 9 INCHES INTO THE NEW CONCRETE. EXPANSION SHIELDS SHALL PROVIDE A MINIMUM CERTIFIED PROOF LOAD OF 4080 POUNDS.



SECTION A-A

DETAILS: BUTT JOINT; CONCRETE COLLAR FOR PRECAST BOX CULVERT; PCC PAVEMENT CONNECTOR

SEEDING & MULCHING (WITH DETOUR ROAD)



GENERAL NOTES

- THE DETOUR SLOPES SHALL BE SEEDDED IMMEDIATELY UPON COMPLETION OF THE STAGE I GRADING.
- IN GENERAL, ALL EARTH SURFACES DISTURBED DURING CONSTRUCTION OPERATIONS SHALL BE SEEDDED UPON COMPLETION OF ALL GRADING OPERATIONS.
- FERTILIZER NUTRIENTS SHALL BE APPLIED TO ALL SEEDDED AREAS. LIMESTONE SHALL BE APPLIED TO ALL AREAS OF FINAL SEEDING.
- THE RATES OF APPLICATION OF SEED, FERTILIZER, MULCH AND LIMESTONE, THE METHOD OF MULCHING AND THE SEED MIXTURES 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.

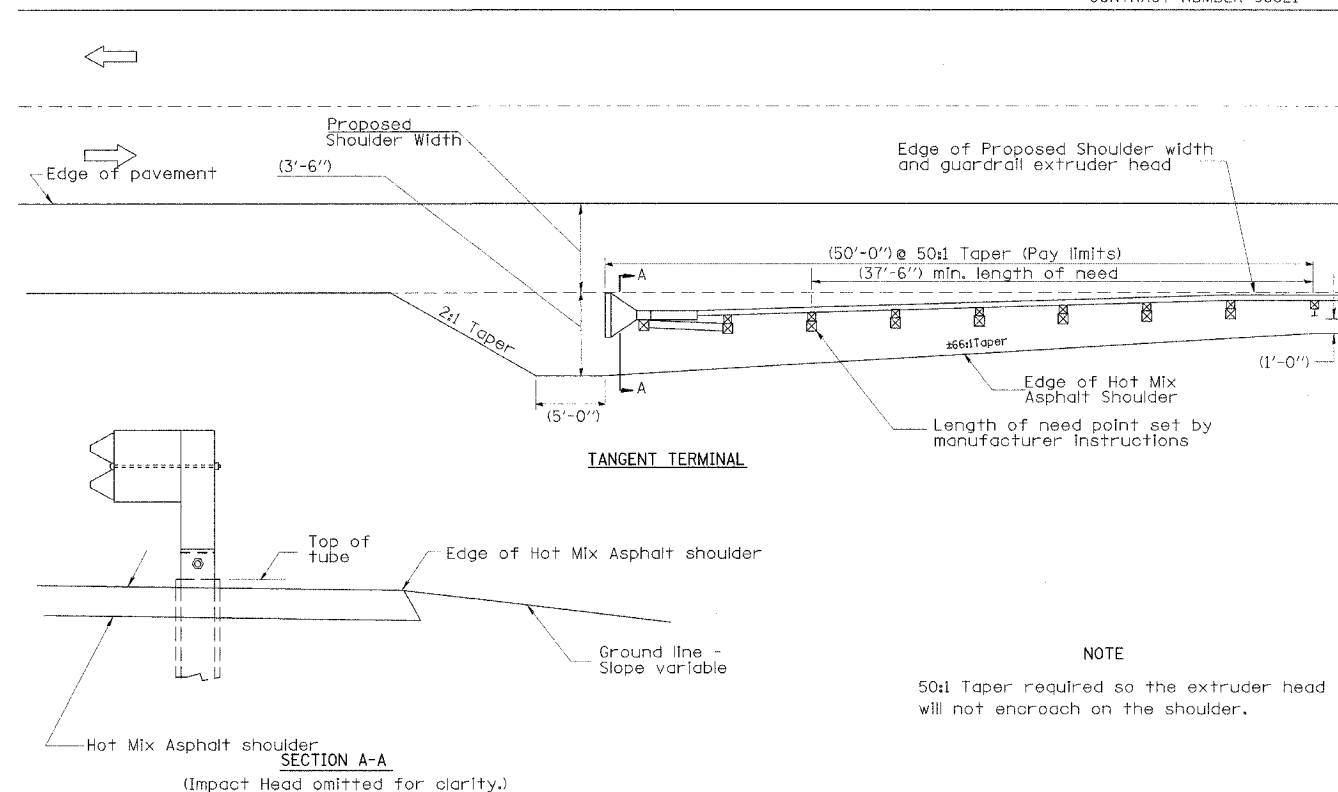
REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	
REVISED	

STD. 9-13

DETAIL - BITUMINOUS SHOULDER AT GUARDRAIL TERMINAL

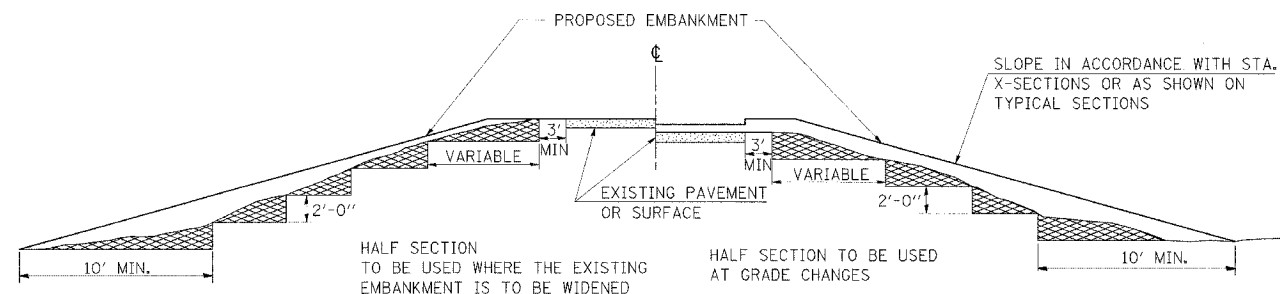
F.A.E. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	(101VB)B-1	FRANKLIN	--	17

FED ROAD DIST NO.	ILLINOIS FED AID PROJECT
	CONTRACT NUMBER 98821



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

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL

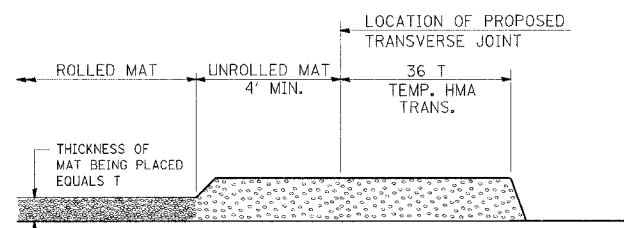


MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

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

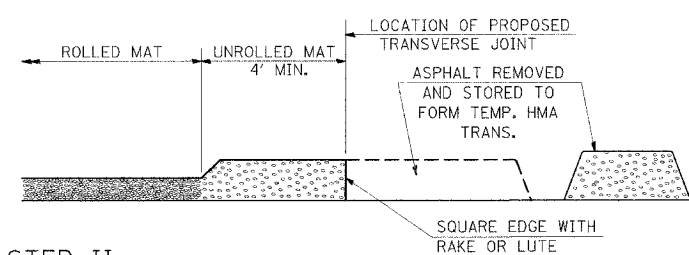
STD. 9-16

TEMPORARY HOT-MIX ASPHALT TRANSITIONS



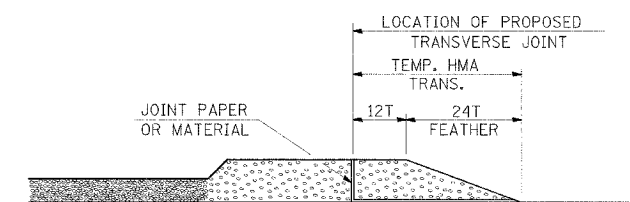
STEP I

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



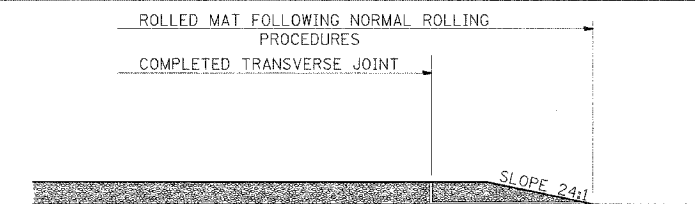
STEP II

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



STEP III

- 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.
- NOTE THAT IN CONSTRUCTING THE TRANSITION, THE MAT DEPTH IS CONTINUED AS PART OF THE TRANSITION BEFORE FORMING THE FEATHER.



STEP IV

- COMPLETE TEMPORARY TRANSITION BY ROLLING.
- 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).
- CONSTRUCTING THE TEMPORARY TRANSITIONS WILL NOT BE PAID FOR SEPARATELY IN ACCORDANCE WITH ARTICLE 406.14 OF THE STANDARD SPECIFICATIONS.

REVISIONS	
REDRAWN	2-15-89
REVISED	8-15-94
REVISED	01-03-01

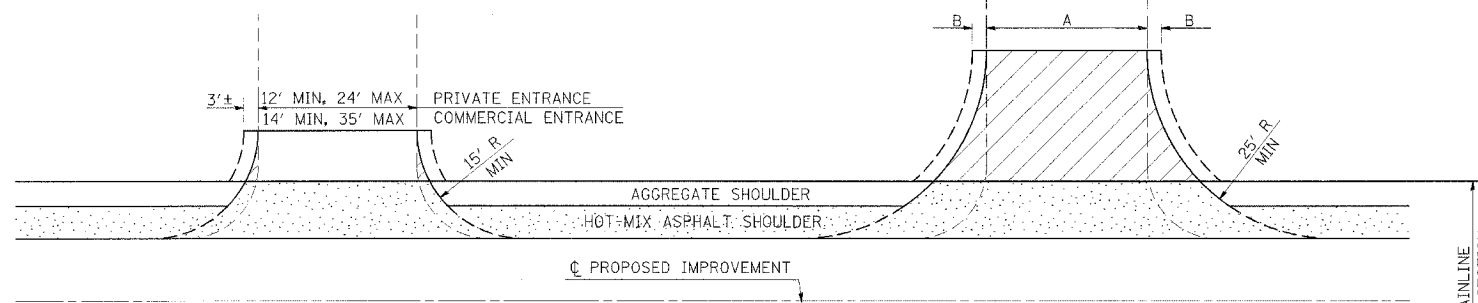
STD. 9-26

**DETAILS: SEEDING AND MULCHING; STEP CONSTRUCTION ON EXISTING FILL;
BITUMINOUS SHOULDER AT GUARDRAIL TERMINAL; TEMPORARY HMA TRANSITIONS**

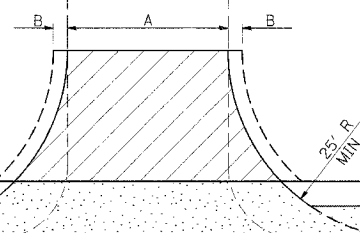
RURAL SIDE APPROACH DETAILS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
B69	(101V)B-1	FRANKLIN	18	18
STA.	TO STA.		ILLINOIS	
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJECT	
CONTRACT NO. 98821				

PRIVATE AND COMMERCIAL ENTRANCES



SIDEROADS



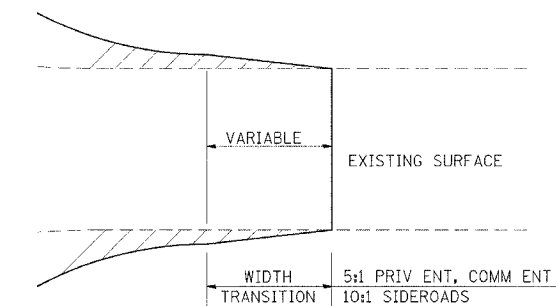
SIDEROAD DIMENSIONS (MIN.)

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

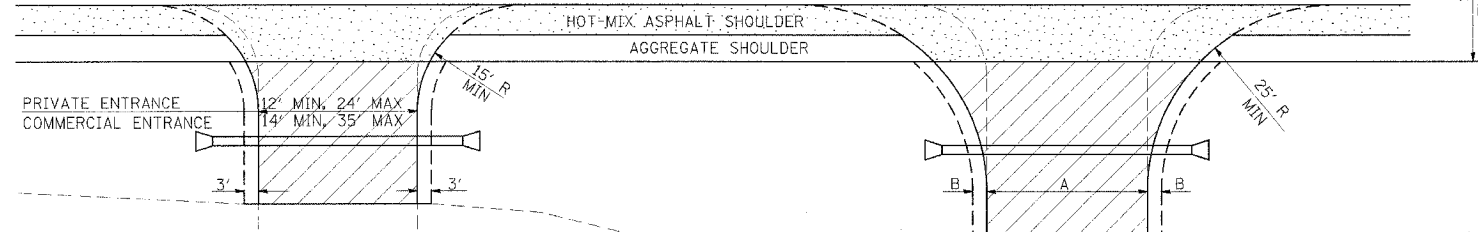
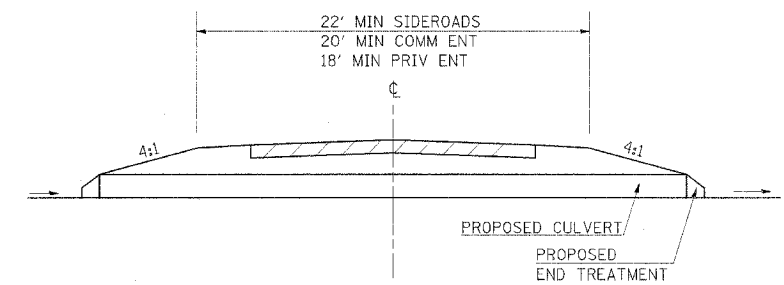
FIELD ENTRANCE TREATMENT

CONSTRUCT MAINLINE HOT-MIX ASPHALT AND AGGREGATE SHOULDERS THROUGH FIELD ENTRANCES.
IF A PIPE IS REQUIRED, PROVIDE A 25' WIDE EARTH EMBANKMENT WITH 15' RADII AT THE INTERSECTION.

WIDTH TRANSITION DETAIL TO EXISTING (IF APPLICABLE)



DETAIL FOR CALCULATING CULVERT LENGTH



PRIVATE AND COMMERCIAL ENTRANCES (PROPOSED CULVERT)

SIDEROADS (PROPOSED CULVERT)

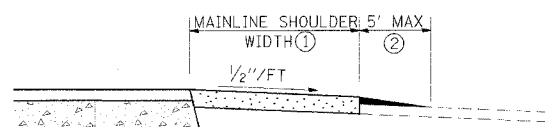
LEGEND

- CONSTRUCT HOT-MIX ASPHALT 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; HOT-MIX ASPHALT TAPER FOR EXISTING HIGHER TYPE SURFACES.
- 6" AGGREGATE SURFACE COURSE FOR EXISTING GRAVEL SURFACE; 2" HOT-MIX ASPHALT RESURFACING ON 4" AGGREGATE BASE COURSE FOR EXISTING HOT-MIX ASPHALT SURFACE; PCC DRIVEWAY PAVEMENT (6" - PE; 7" - CE) FOR EXISTING CONCRETE SURFACE.
- 3" MINIMUM HOT-MIX ASPHALT RESURFACING ON 8" MINIMUM AGGREGATE BASE COURSE FOR EXISTING GRAVEL SURFACE OR OIL & CHIP SURFACE; MATCH EXISTING FOR EXISTING HIGHER TYPE SURFACES.

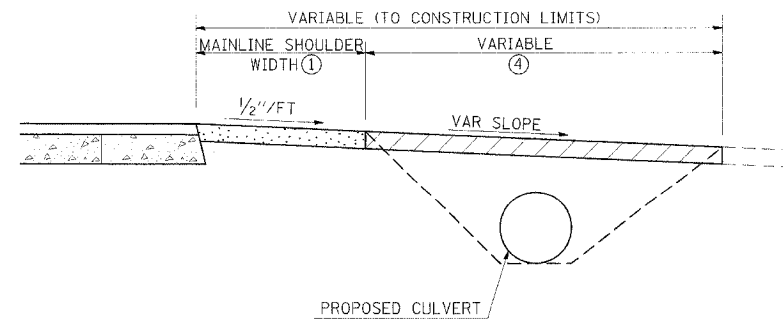
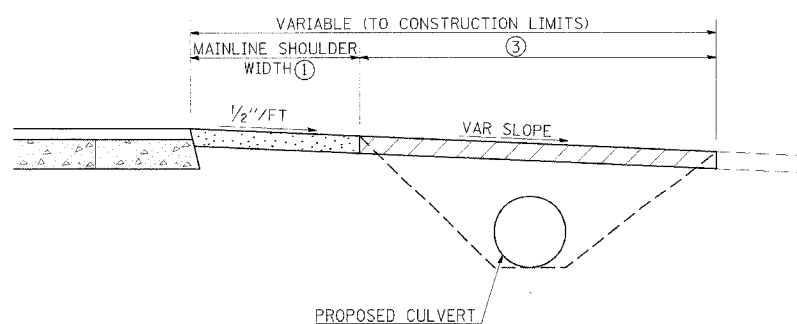
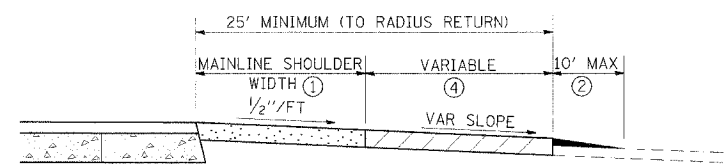
GENERAL NOTES

- 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).

PRIVATE AND COMMERCIAL ENTRANCES



SIDEROADS



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REVISIONS	
DRAWN	3-15-91
REVISED	10-02-91
REVISED	5-15-96
REVISED	1-20-00
REVISED	02-11-02

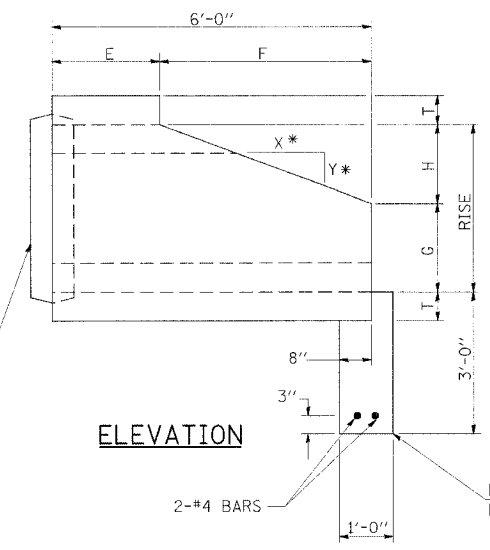
STD. -9-B3

DETAIL OF PRECAST CONCRETE BOX CULVERT END SECTION

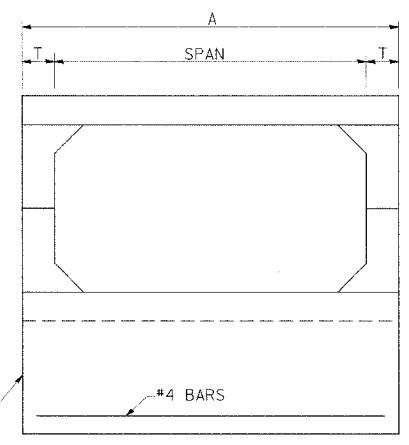
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
969	1101VB1	FRANKLIN	--	19
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 98821				

DIMENSIONS **

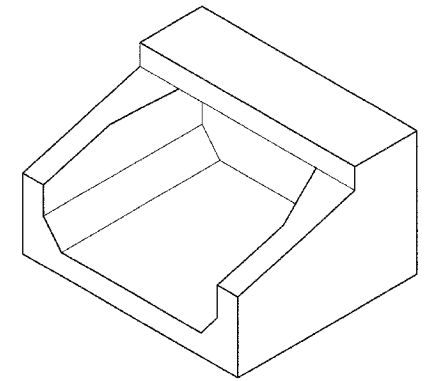
SPAN X RISE	T (INCHES)	A (FT.-IN.)	B (FT.-IN.)	C (INCHES)	E (FT.-IN.)	F (FT.-IN.)	G (FT.-IN.)	H (FT.-IN.)	SLOPE (X:Y)
2' X 2'	4	2-8	2-8	4	3-0	3-0	1-0	1-0	3:1
3' X 2'	4	3-8	2-8	4	3-0	3-0	1-0	1-0	3:1
3' X 3'	4	3-8	3-8	4	2-0	4-0	1-8	1-4	3:1
4' X 2'	5	4-10	2-10	5	3-0	3-0	1-0	1-0	3:1
4' X 3'	5	4-10	3-10	5	2-0	4-0	1-8	1-4	3:1
4' X 4'	5	4-10	4-10	5	2-0	4-0	2-0	2-0	2:1
5' X 2'	6	6-0	3-0	6	3-0	3-0	1-0	1-0	3:1
5' X 3'	6	6-0	4-0	6	2-0	4-0	1-8	1-4	3:1
5' X 4'	6	6-0	5-0	6	2-0	4-0	2-0	2-0	2:1
5' X 5'	6	6-0	6-0	6					
6' X 2'	7	7-2	3-2	7	3-0	3-0	1-0	1-0	3:1
6' X 3'	7	7-2	4-2	7	2-0	4-0	1-8	1-4	3:1
6' X 4'	7	7-2	5-2	7	2-0	4-0	2-0	2-0	2:1
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7' X 4'	8	8-4	5-4	8	2-0	4-0	2-0	2-0	2:1
7' X 5'	8	8-4	6-4	8					
7' X 6'	8	8-4	7-4	8					
7' X 7'	8	8-4	8-4	8					
8' X 4'	8	9-4	5-4	8	2-0	4-0	2-0	2-0	2:1
8' X 5'	8	9-4	6-4	8					
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10' X 7'	10	11-8	8-8	10					
10' X 8'	10	11-8	9-8	10					
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10' X 10'	10	11-8	11-8	10					
11' X 4'	11	12-10	5-10	11					
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11' X 11'	11	12-10	12-10	11					
12' X 4'	12	14-0	6-0	12					
12' X 6'	12	14-0	8-0	12					
12' X 8'	12	14-0	10-0	12					
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12' X 12'	12	14-0	14-0	12					



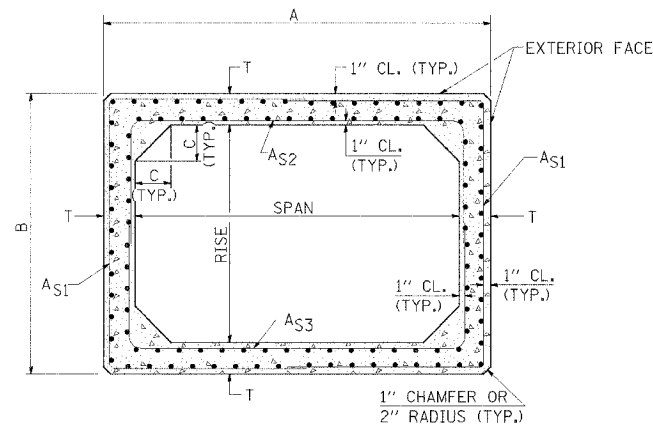
ELEVATION



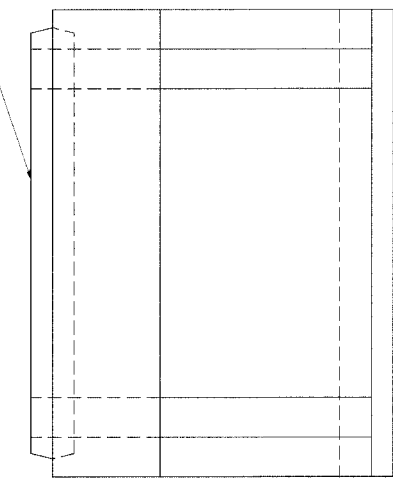
END VIEW



ISOMETRIC



CROSS SECTION



PLAN

GENERAL NOTES

SHOP PLANS FOR THE REINFORCEMENT SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 504.04 OF THE STANDARD SPECIFICATIONS.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.

THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED WITH MASTIC IN ACCORDANCE WITH ARTICLE 1055.01 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE TERMS AS1, AS2, & AS3 DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN AASHTO M259. REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO AASHTO M55-81.

**** NOTE:**

THE DIMENSIONS INDICATED ARE FOR END SECTIONS THAT ARE TO BE USED WITH PRECAST BOX CULVERT SECTIONS DESIGNED FOR 2' OR MORE OF FILL. THE DIMENSIONS MUST BE MODIFIED FOR THE END SECTION TO BE COMPATIBLE WITH PRECAST CULVERT SECTIONS DESIGNED FOR LESS THAN 2' OF FILL.

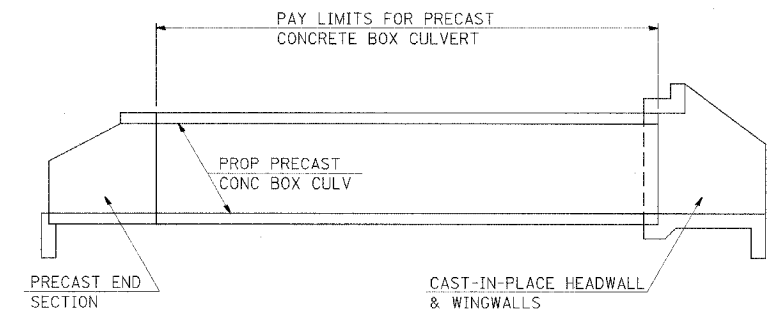
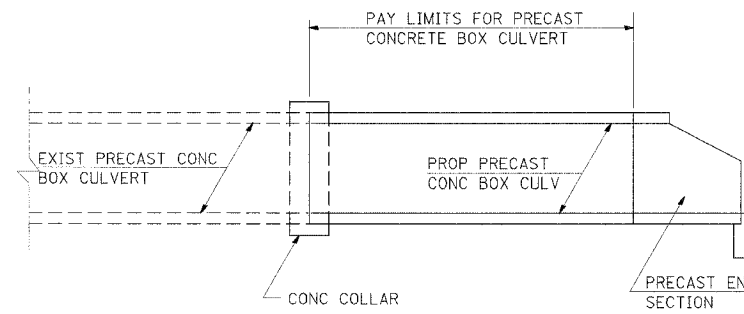
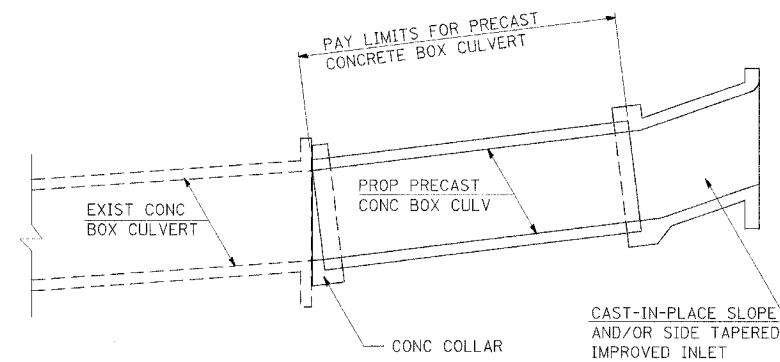
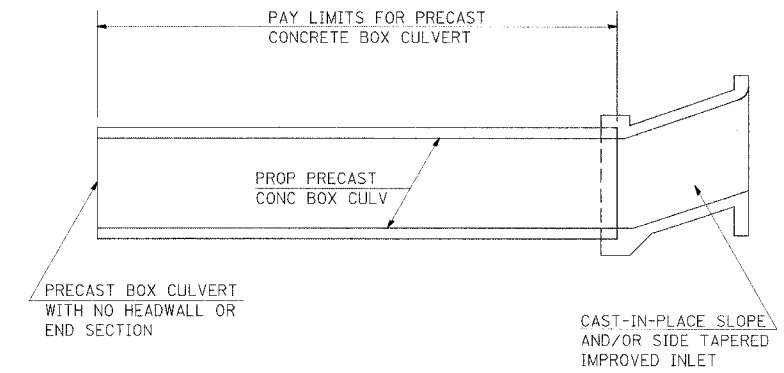
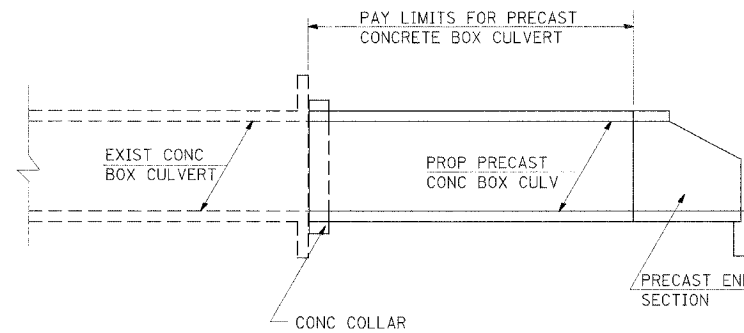
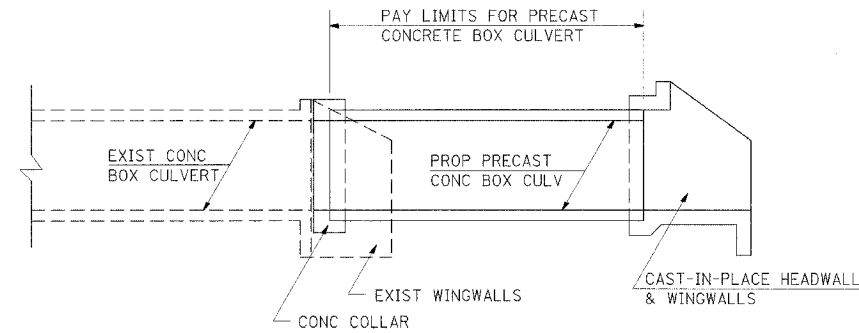
REVISIONS	
DRAWN	9-8-88
REVISED	3-27-90
REVISED	6-14-94
REVISED	8-16-96
REVISED	01-10-07

STD. 9-50

10/15/2007
c:\projects\9803603\p1039036.mxd
D:\BROOK\17 IN.
delv.dwg

PAYMENT LIMITS FOR PRECAST CONCRETE BOX CULVERTS

F.A.P. RITE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	101V08-1	ERANKLIN	--	20
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 98821				



CULVERT EXTENSIONS

NEW CULVERTS

NOTES:

WHEN PRECAST CONCRETE BOX CULVERTS ARE SPECIFIED ON THE PLANS, THEY WILL BE MEASURED BY THE FOOT. THE OVERALL LENGTH SHALL BE MEASURED OUT-TO-OUT OF THE PRECAST SEGMENTS ALONG THE CENTERLINE OF THE CULVERT. THE BOX CULVERT END SECTIONS WILL BE MEASURED AS EACH. CAST-IN-PLACE COLLARS WILL NOT BE PAID FOR SEPERATELY, BUT SHALL BE INCLUDED IN THE COST OF THE PRECAST CONCRETE BOX CULVERT. SEE ARTICLE 540.08 OF THE STANDARD SPECIFICATIONS ADOPTED JANUARY 1, 2002.

THE TERM "BOX CULVERT END SECTION" AS USED HEREIN SHALL BE DEFINED AS EITHER PRECAST END SECTIONS OR CAST-IN-PLACE HEADWALLS AND WINGWALLS CONSTRUCTED AS SHOWN IN THE PLANS.

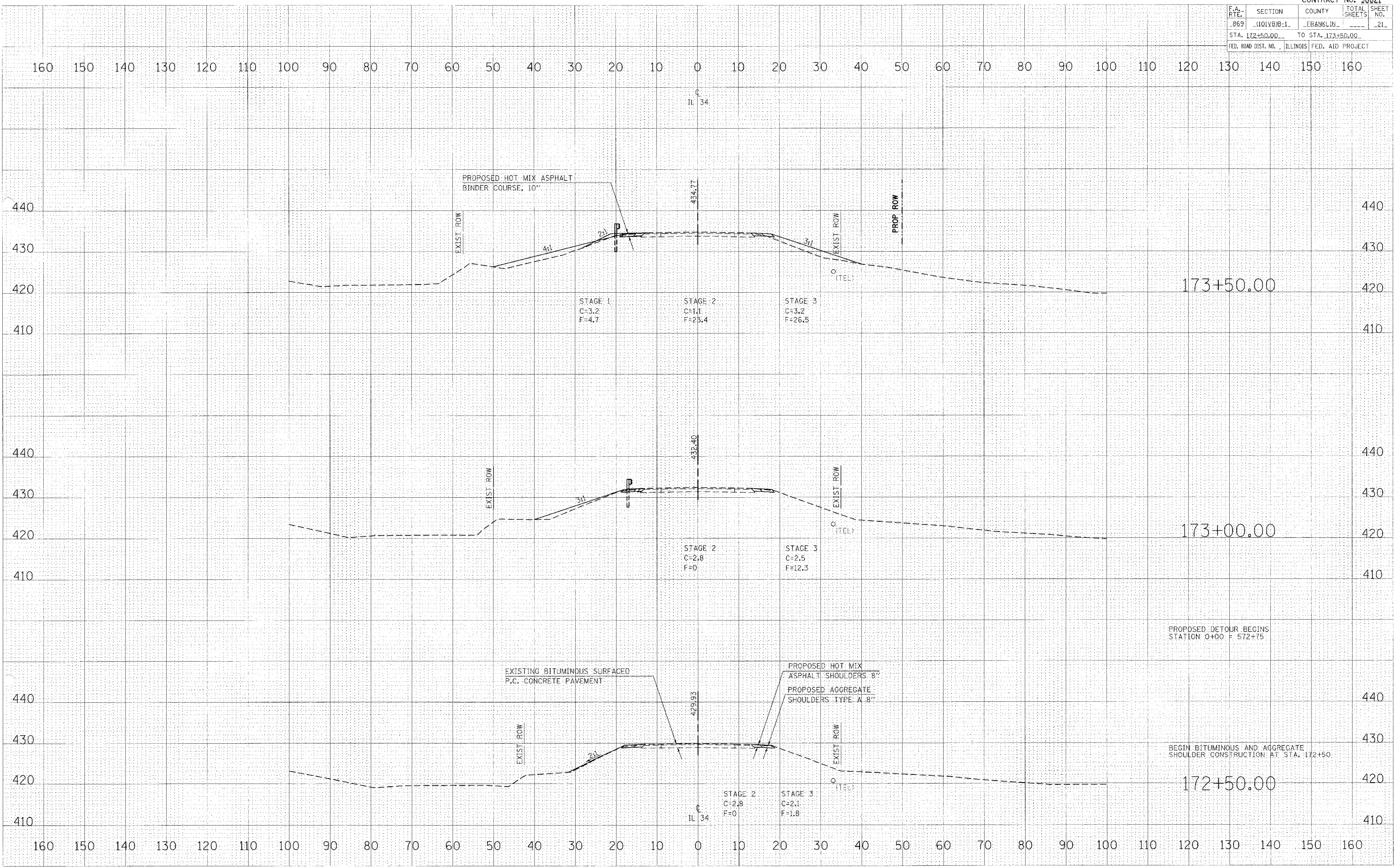
THROUGHOUT THESE PLANS, QUANTITIES SHOWN FOR CLASS SI CONCRETE AND REBARS TO BE USED IN COLLARS, HEADWALLS, WINGWALLS OR IMPROVED INLETS FOR PRECAST CONCRETE BOX CULVERTS ARE PROVIDED FOR INFORMATION AND BIDDING ONLY, AND SHALL NOT BE PAID FOR SEPERATELY.

REVISIONS			
DRAWN	8-14-90	REVISED	8-16-90
REVISED	7-19-91	REVISED	
REVISED	3-11-92	REVISED	
REVISED	12-9-92	REVISED	

STD. 9-81

DETAIL: PAYMENT LIMITS FOR PRECAST CONCRETE BOX CULVERTS

CONTRACT NO. 98821				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	101V01B-1	FRANKLIN	21	21
STA. 172+50.00 TO STA. 173+50.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



PROPOSED DETOUR BEGINS
STATION 0+00 = 572+75

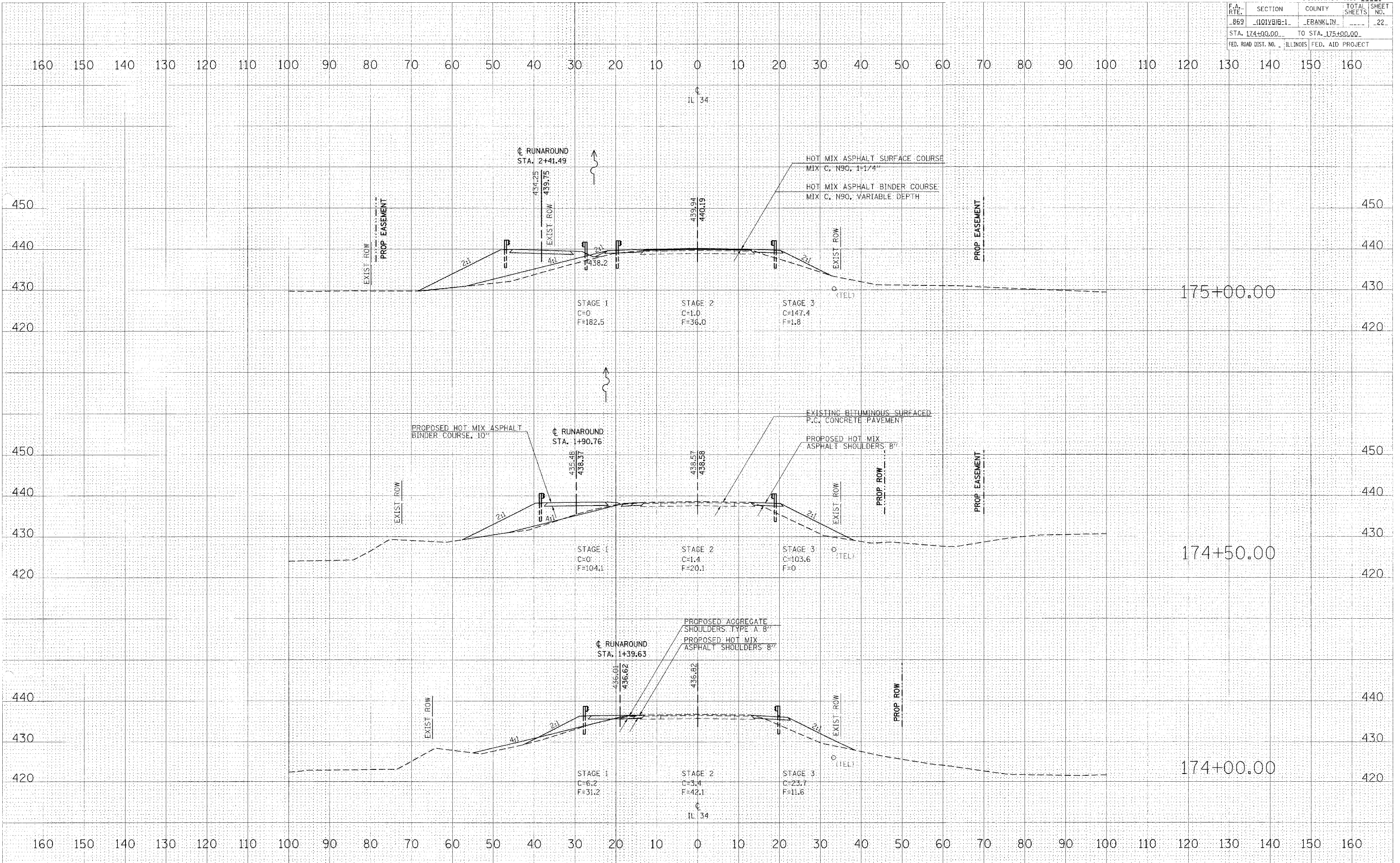
BEGIN BITUMINOUS AND AGGREGATE
SHOULDER CONSTRUCTION AT STA. 172+50

DATE PLOTTED: 10/15/2007
PLOT SCALE: 1/8" = 10'-0"USER NAME: daverd994

DATE PLOTTED: 10/15/2007
PLOT SCALE: 1/8" = 10'-0"USER NAME: daverd994

DATE PLOTTED: 10/15/2007
PLOT SCALE: 1/8" = 10'-0"USER NAME: daverd994

CONTRACT NO. 98821				
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	1101VB18=1	FRANKLIN	22	22
STA. 174+00.00 TO STA. 175+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



SUPERVISOR
 PLotted
 REVISIONS
 DATE
 NO.

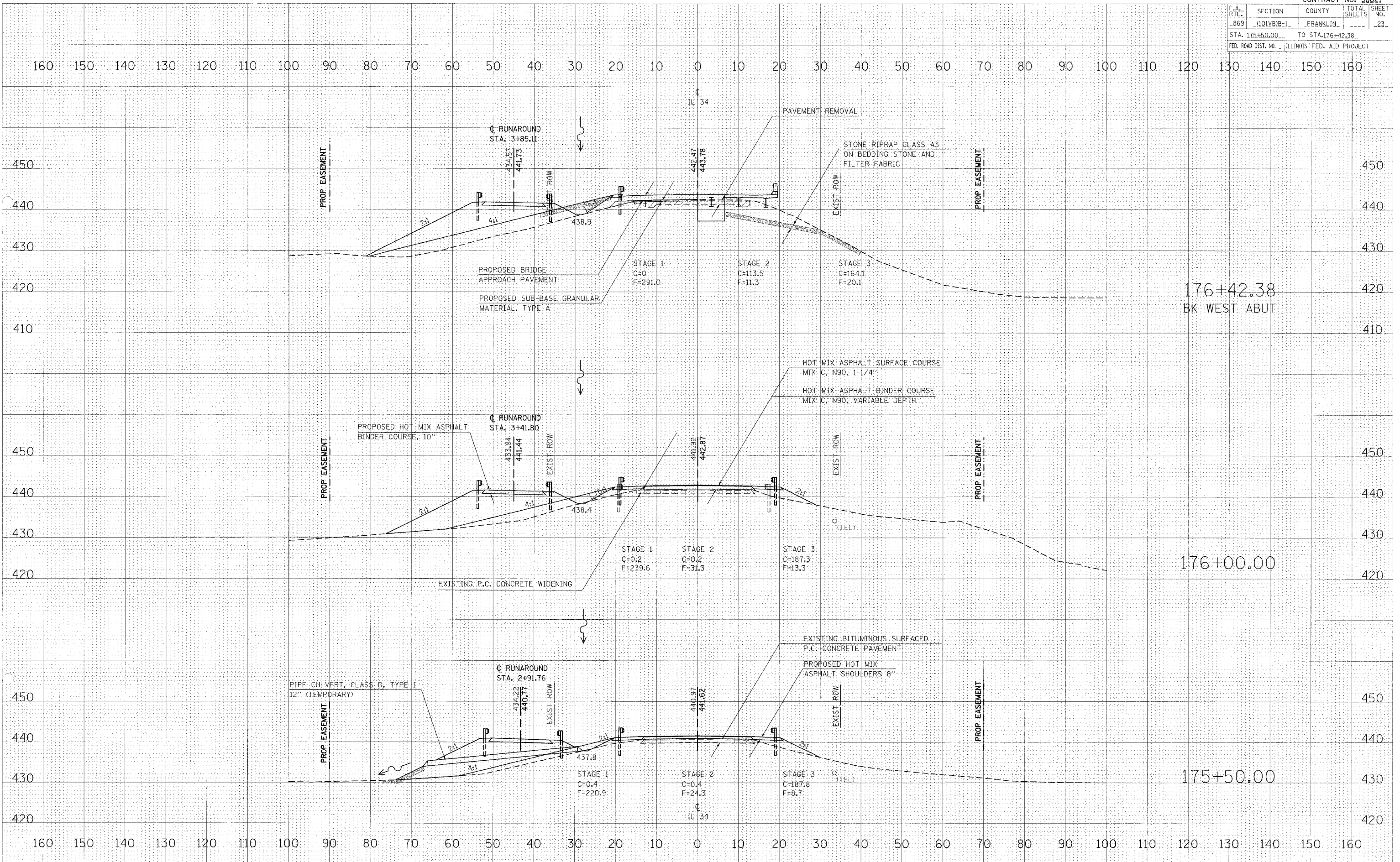
SUPERVISOR
 PLotted
 REVISIONS
 DATE
 NO.

CONTRACT NO. 98821			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
869	101V018-1	FRANKLIN	23
STA. 175+50.00 TO STA. 176+42.38			
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			

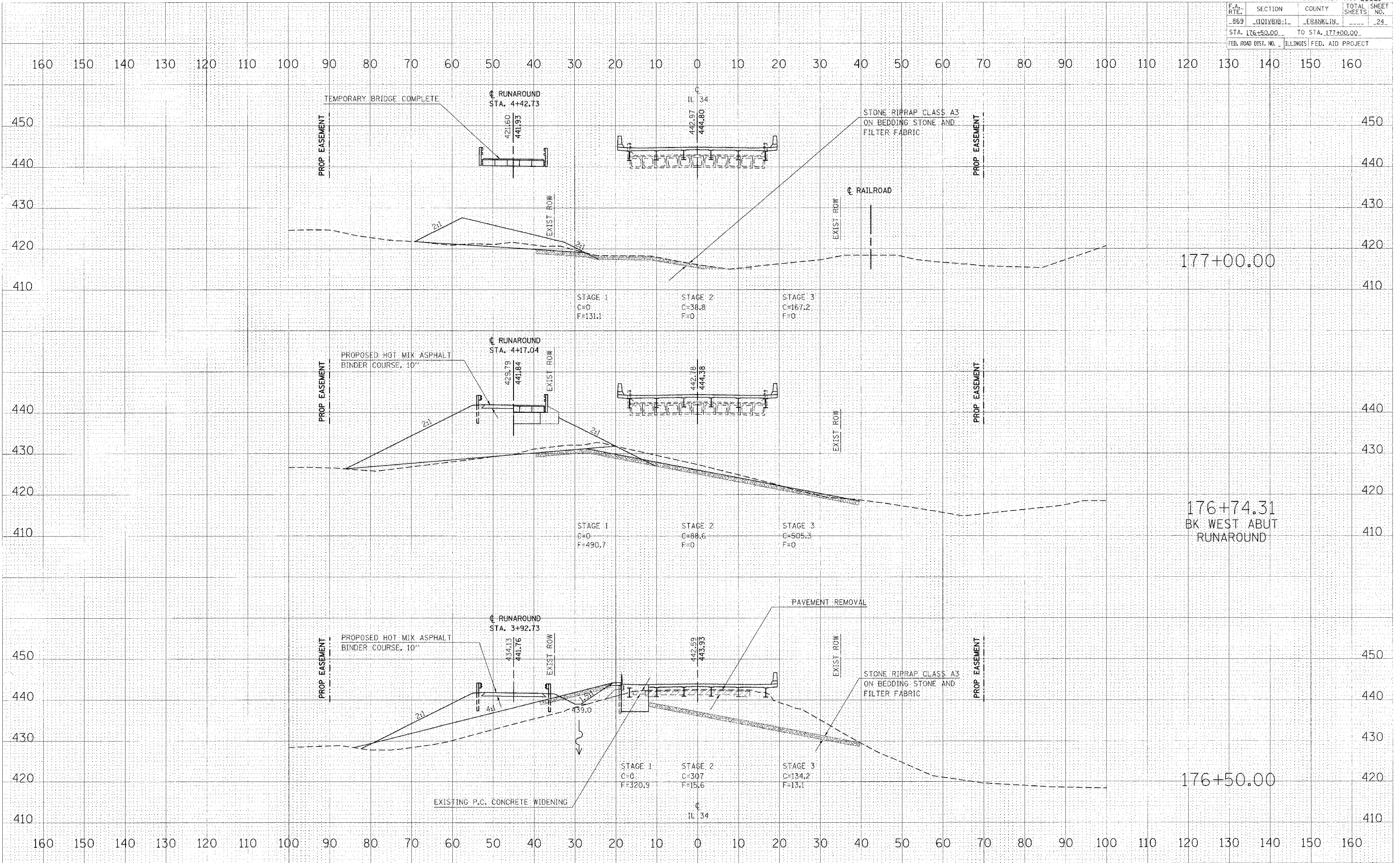
SURVEY
 PLOTTED
 NOT FOR CONSTRUCTION
 NO.

SURVEY
 PLOTTED
 NOT FOR CONSTRUCTION
 NO.

SURVEY
 PLOTTED
 NOT FOR CONSTRUCTION
 NO.



CONTRACT NO. 98821			
F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEET NO.
869	11Q1VB1B-1	BRANKLIN	24
STA. 176+50.00		TO STA. 177+00.00	
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			

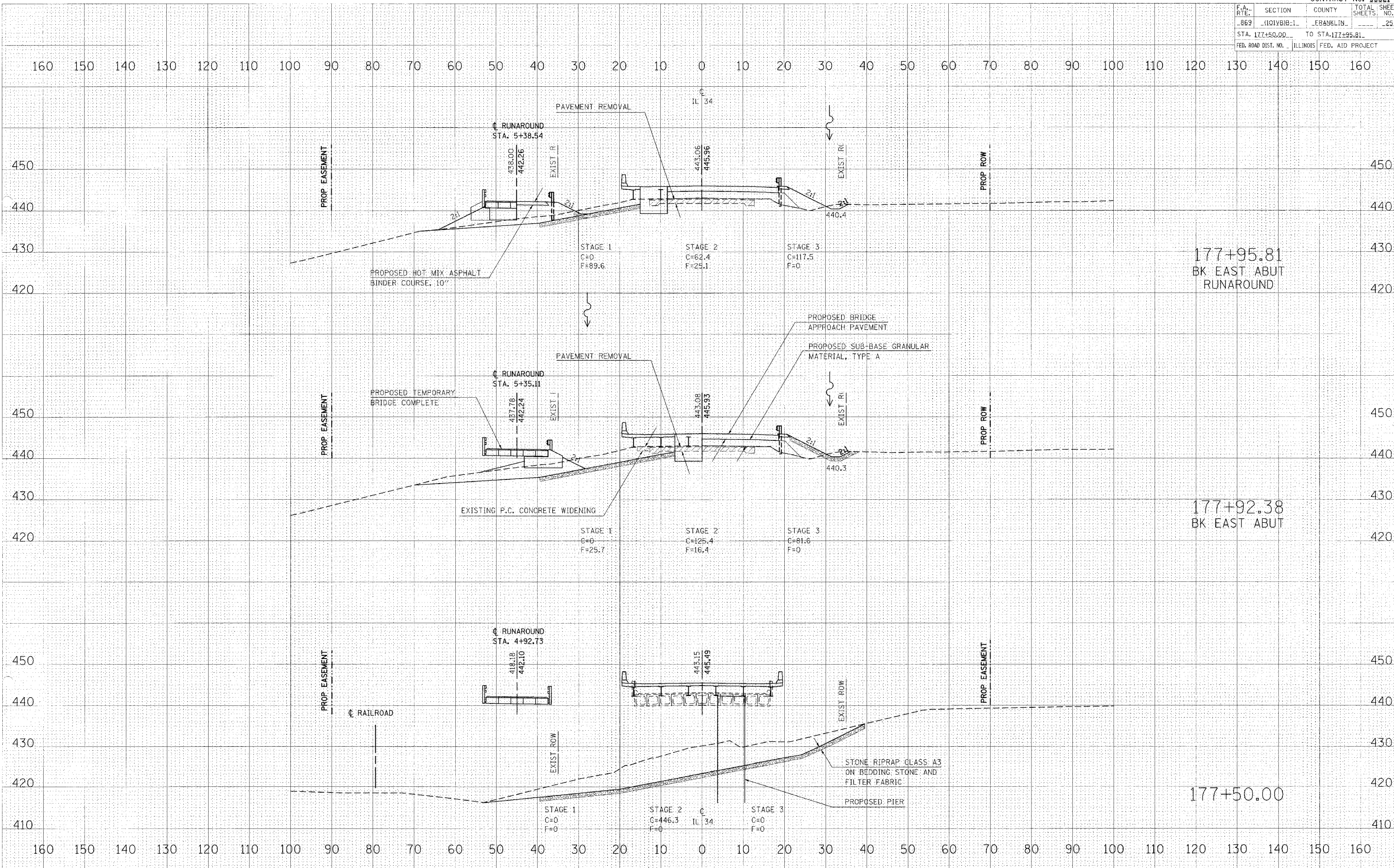


CROSS-SECTIONS

SURVEY STATIONED
 PLOTTED
 ROUTE BOOK
 AREAS CHECKED
 NO.

SURVEY STATIONED
 PLOTTED
 ROUTE BOOK
 AREAS CHECKED
 NO.
 DATE: 10/15/2007
 USER: dmpgbl

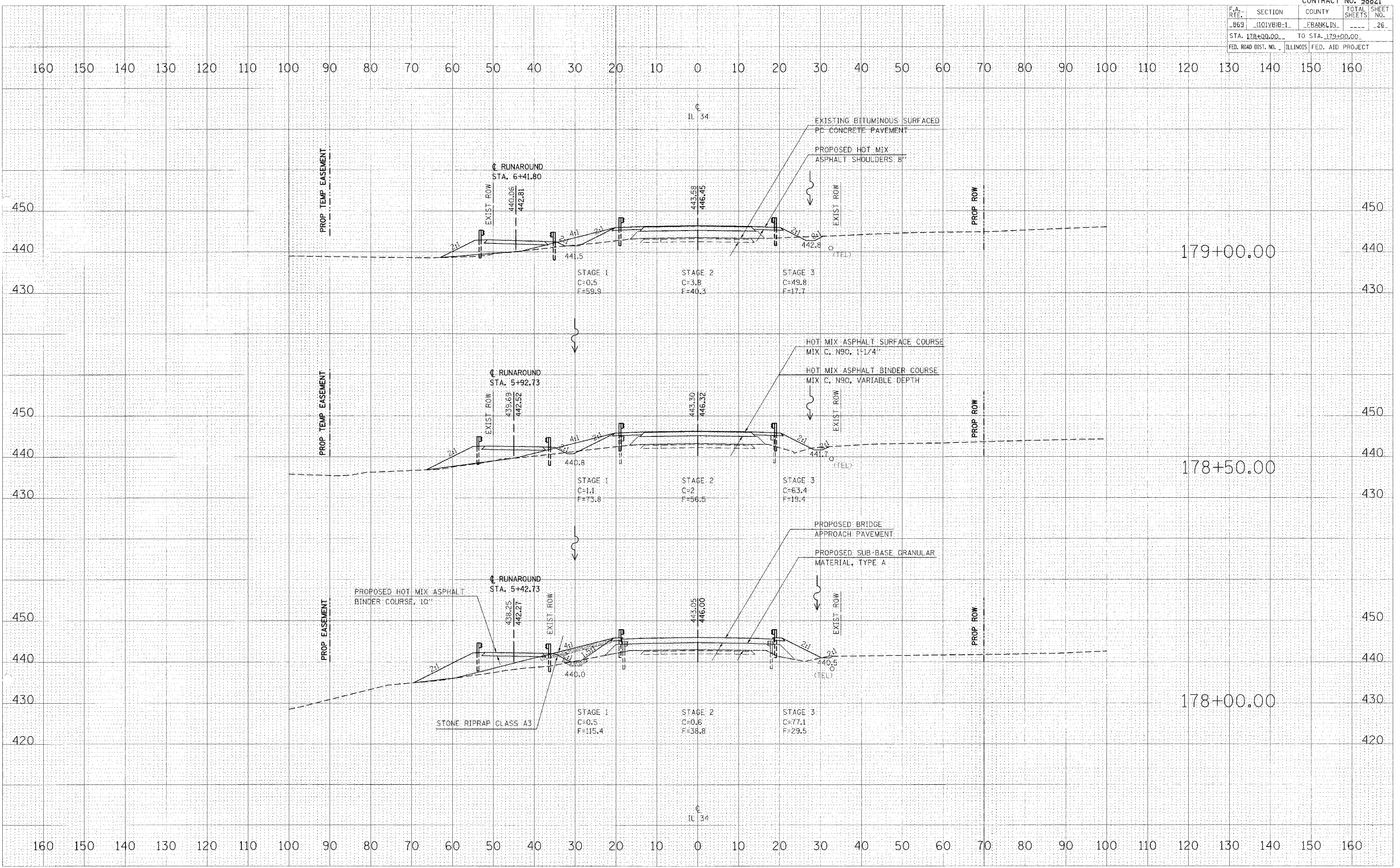
F.A. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
869	1101VB18-1	FRANKLIN	25
STA. 177+50.00		TO STA. 177+95.81	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	



DRAWN BY: [Name]
 CHECKED BY: [Name]
 DATE: [Date]

PLOT DATE: 10/15/2007
 PLOT SCALE: 1/8" = 1'-0"
 USER NAME: [Name]

CONTRACT NO. 98821				
F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	101VB1B-1	FRANKLIN	26	26
STA. 178+00.00 TO STA. 179+00.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



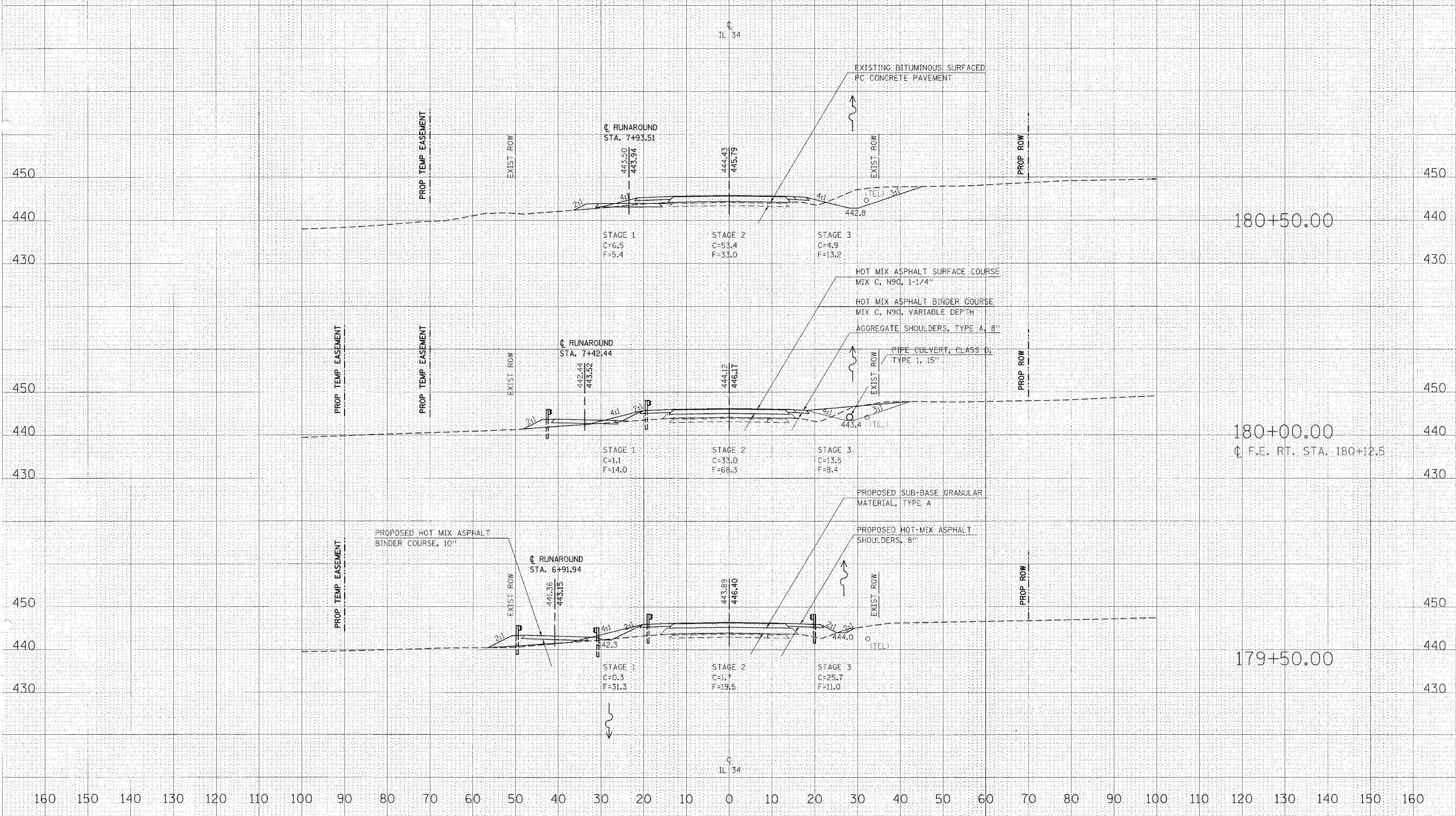
SURVEY PLOTTED
 DATE BOOK
 SHEET NO.
 CHECKED
 DATE

SURVEY PLOTTED
 DATE BOOK
 SHEET NO.
 CHECKED
 DATE

PLOT DATE = 10/15/2007
 PLOT SCALE = 1/4" = 100'
 USER NAME = dssm-d-199

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
869	101V08-1	EBANKLIN		27
STA. 179+50.00 TO STA. 180+50.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160



180+50.00

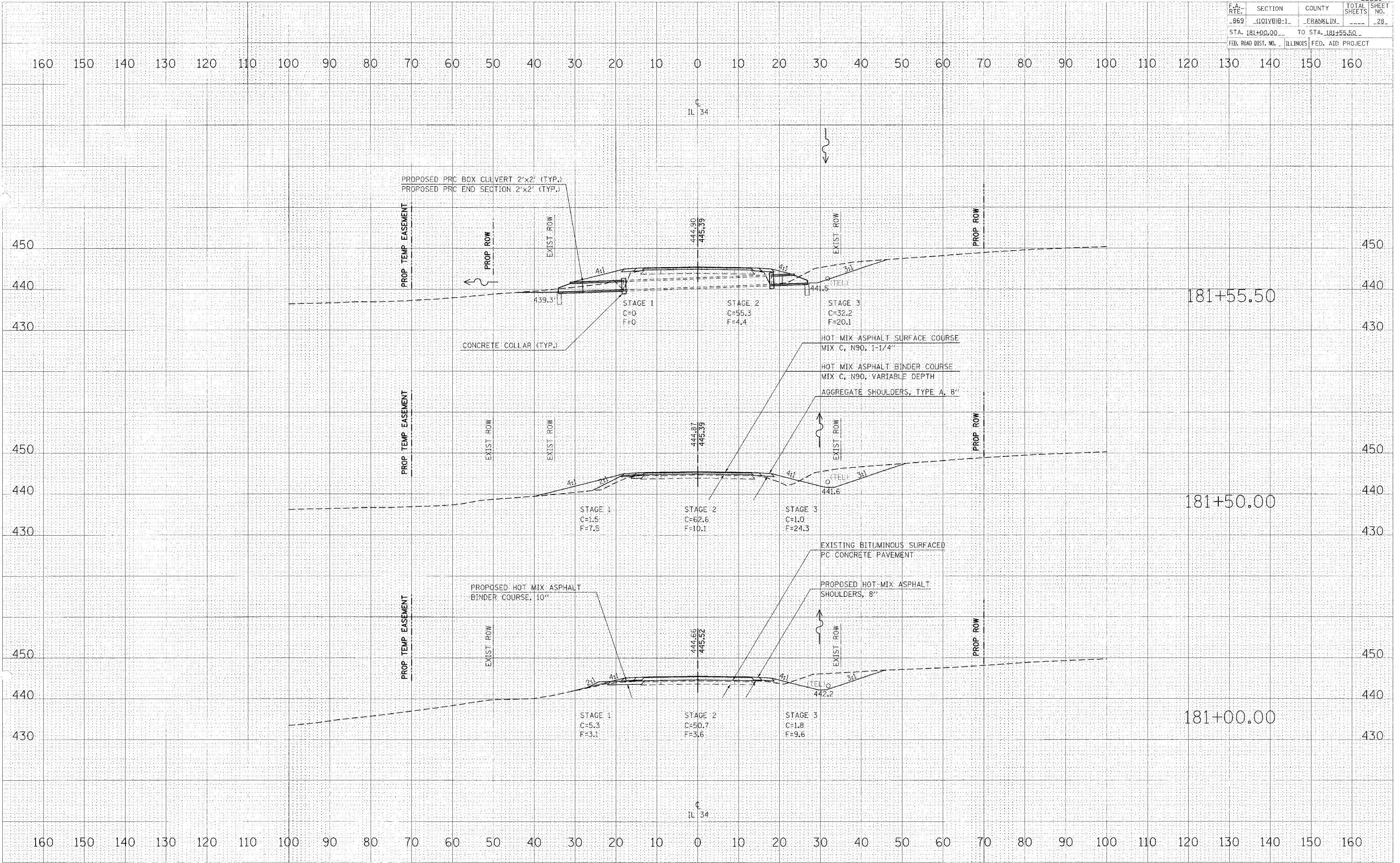
180+00.00
 F.E. RT. STA. 180+12.5

179+50.00

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

DATE PLOTTED: 10/15/2007
 FILE NAME: 101V08-1.dwg
 PLOT SCALE: 1/8" = 1'-0"
 USER NAME: dave.dhugh

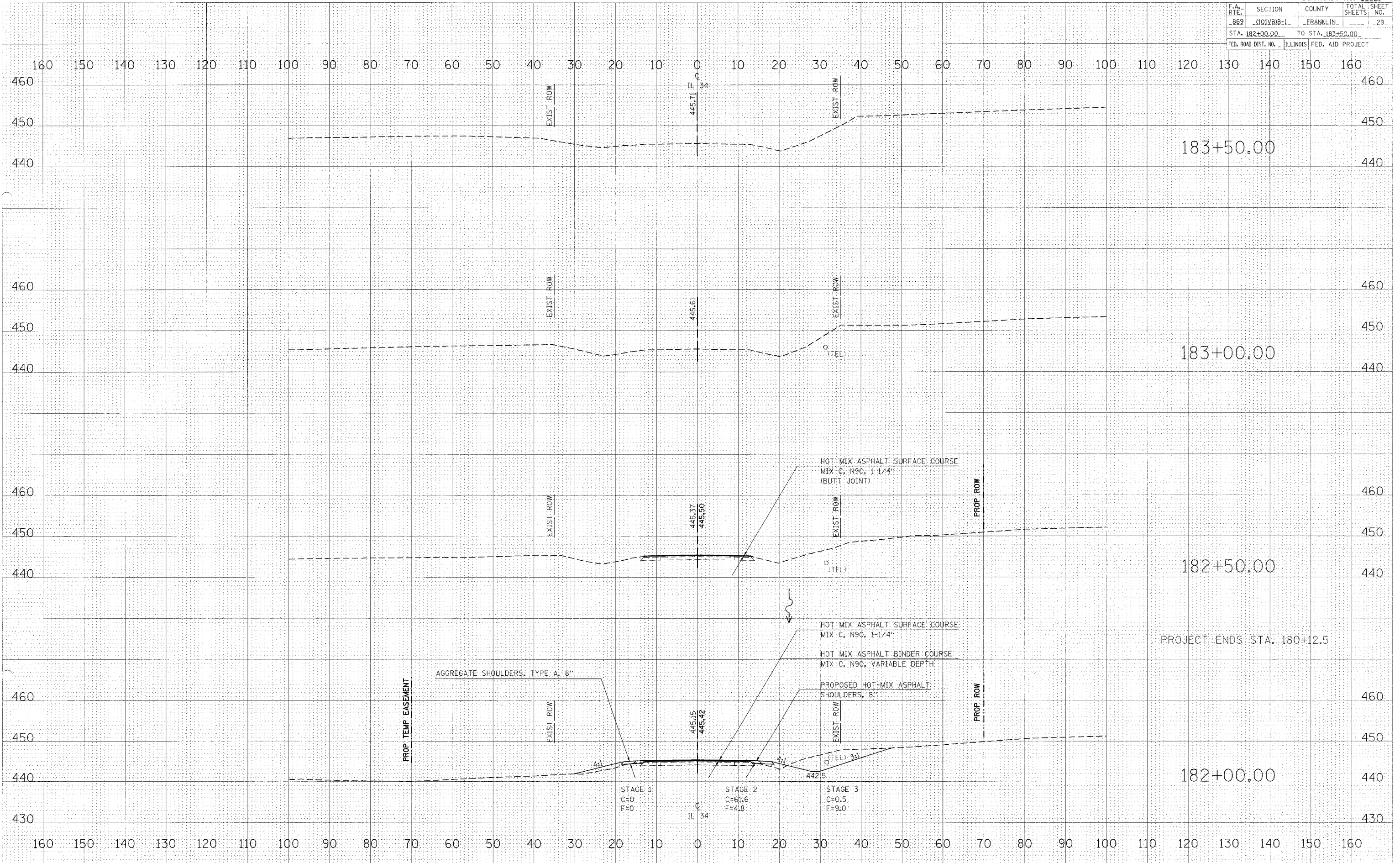
DATE PLOTTED: 10/15/2007
 FILE NAME: 101V08-1.dwg
 PLOT SCALE: 1/8" = 1'-0"
 USER NAME: dave.dhugh



DATE PLOTTED: 10/15/2007
 PLOT SCALE: 1" = 40.0000'
 USER NAME: dshindt

DATE PLOTTED: 10/15/2007
 PLOT SCALE: 1" = 40.0000'
 USER NAME: dshindt

CONTRACT NO. 98821			
F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEET NO.
869	1101VB1B-1	FRANKLIN	29
STA. 182+00.00		TO STA. 183+50.00	
ILLINOIS FED. AID PROJECT			



DATE: 10/15/2007
 USER: d...
 PLOT SCALE: 1/4" = 10'-0"

DATE: 10/15/2007
 USER: d...
 PLOT SCALE: 1/4" = 10'-0"

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 869	(101VB) B-1	FRANKLIN	48	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2

18 SHEETS

Contract No. 98821

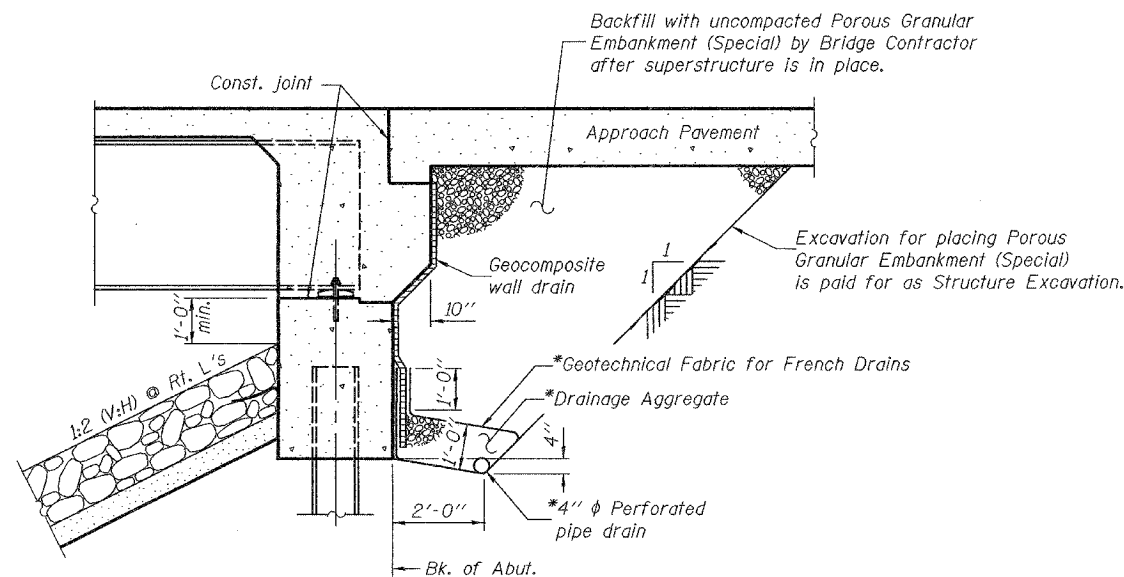
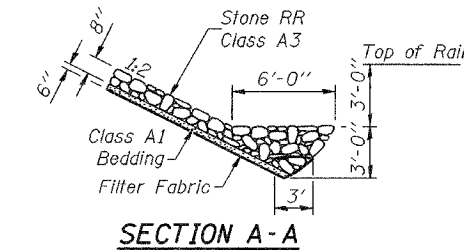
GENERAL NOTES

Fasteners shall be AASHTO M164 Type 3. Bolts 7/8" ϕ , holes 15/16" ϕ , unless otherwise noted.
 Calculated weight of Structural Steel = 118,930 pounds
 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.
 Bearing seat surfaces shall be constructed or adjusted to their designated elevations within a tolerance of 1/8 inch (0.01 ft.). Adjustment shall be made either by grinding the surface or by shimming the bearings.
 Structural steel shall only be painted for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with a Department approved zinc rich primer. No field painting shall be required. All structural steel shall be cleaned as specified in the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel".
 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.
 All structural steel shall be AASHTO M 270 Grade 50W.
 The Contractor is advised that the existing PPC Deck beams are in a deteriorated condition with reduce load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.
 Slipforming of the parapets is not allowed.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		108	108
Stone Riprap, Class A3	Sq. Yd.		1150	1150
Filter Fabric	Sq. Yd.		1150	1150
Removal of Existing Structures	Each		1	1
Structure Excavation	Cu. Yd.		756	756
Concrete Structures	Cu. Yd.		295.4	295.4
Concrete Superstructure	Cu. Yd.	209.0		209.0
Rock Excavation for Structures	Cu. Yd.		52	52
Floor Drains	Each		8	8
* Bridge Deck Grooving	Sq. Yd.		913	913
* Protective Coat	Sq. Yd.		1094	1094
Furnishing and Erecting Structural Steel	L. Sum		1	1
Stud Shear Connectors	Each		1944	1944
Reinforcement Bars, Epoxy Coated	Pound		49890	36610
Bar Splicers	Each		72	72
Protective Shield	Sq. Yd.		264	264
Furnishing Steel Piles HP10x42	Foot		230	230
Driving Piles	Foot		230	230
Test Pile Steel HP10x42	Each		2	2
Name Plates	Each		1	1
Anchor Bolts, 1"	Each		24	24
Anchor Bolts, 1/4"	Each		24	24
Geocomposite Wall Drain	Sq. Yd.		64	64
Pipe Underdrains for Structures 4"	Foot		155	155
Concrete Encasement	Cu. Yd.		4.2	4.2
Asbestos Bearing Pad Removal	Each		36	36

* Includes approach pavements and connector pavements, see Roadway Plans.



SECTION THRU INTEGRAL ABUTMENT
(Horiz. dim. \odot Rt. L's)

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

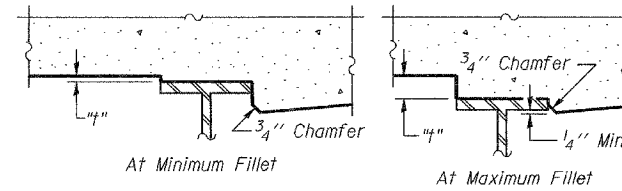
All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101).

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

Nov. 30, 2007
 EXAMINED *Thomas J. Donagale*
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

GENERAL DATA
 F.A.P. RTE. 869 - SEC. (101VB)B-1
 FRANKLIN COUNTY
 STATION 177+17.38
 STRUCTURE NO. 028-0077

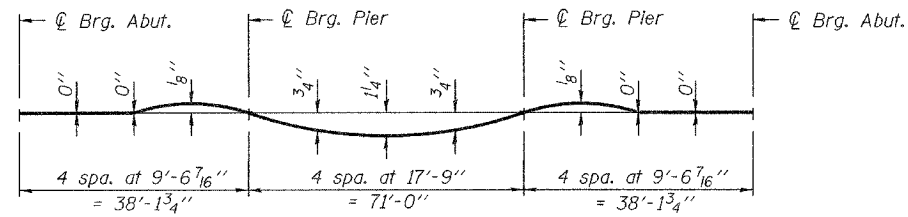
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAP 869	(101VB) B-1	FRANKLIN	48	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 3
18 SHEETS

Contract No. 98821



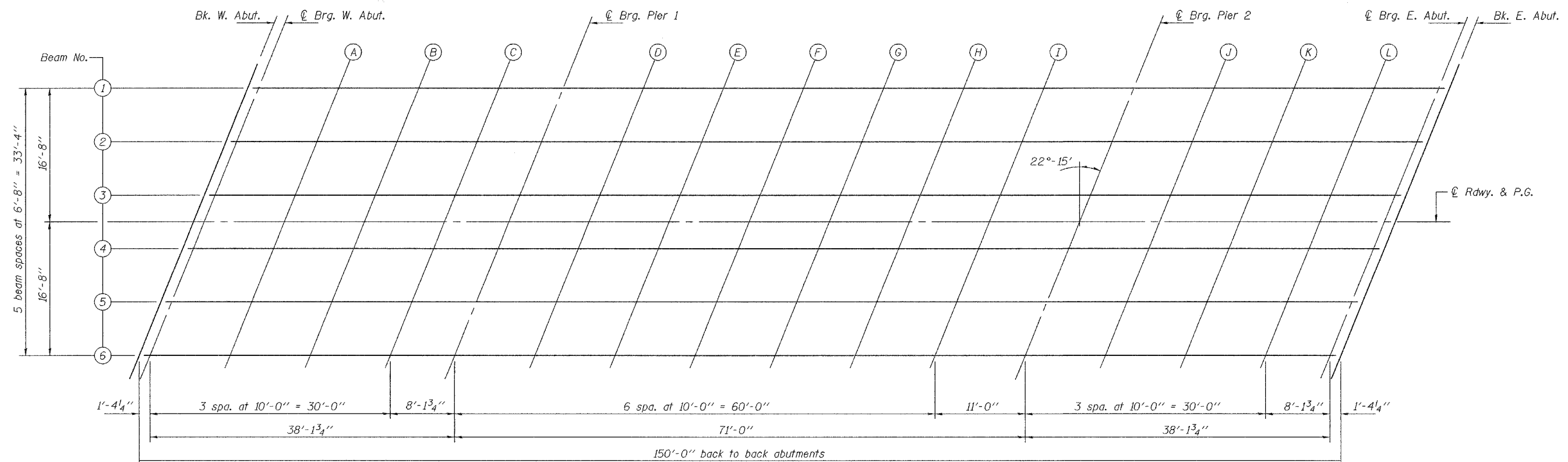
DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Notes: The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheets 4 & 5 of 18.

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 4 & 5 of 18, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS



PLAN

DESIGNED	Dewey H. Coullas
CHECKED	Ray Ahanchi
DRAWN	h.f. duong
CHECKED	DHC/GRA

Nov. 30, 2007
EXAMINED *Thomas J. Damagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
FAP 869	(101VB) B-1	FRANKLIN	48	33
FED. ROAD DIST. NO. 7	ILLINOIS		FED. AID PROJECT-	

SHEET NO. 4

18 SHEETS

Contract No. 98821

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	17649.20	-16.67	443.63	443.63
CL West Abut.	17650.55	-16.67	443.65	443.65
A	17660.55	-16.67	443.84	443.84
B	17670.55	-16.67	444.02	444.02
C	17680.55	-16.67	444.20	444.19
CL Pier 1	17688.70	-16.67	444.34	444.34
D	17698.70	-16.67	444.50	444.53
E	17708.70	-16.67	444.65	444.72
F	17718.70	-16.67	444.80	444.89
G	17728.70	-16.67	444.94	445.03
H	17738.70	-16.67	445.07	445.14
I	17748.70	-16.67	445.19	445.23
CL Pier 2	17759.70	-16.67	445.32	445.32
J	17769.70	-16.67	445.43	445.42
K	17779.70	-16.67	445.53	445.52
L	17789.70	-16.67	445.62	445.62
CL East Abut.	17797.85	-16.67	445.69	445.69
Bk. East Abut.	17799.20	-16.67	445.71	445.71

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	17646.47	-10.00	443.70	443.70
CL West Abut.	17647.82	-10.00	443.73	443.73
A	17657.82	-10.00	443.92	443.92
B	17667.82	-10.00	444.10	444.10
C	17677.82	-10.00	444.28	444.27
CL Pier 1	17685.97	-10.00	444.42	444.42
D	17695.97	-10.00	444.58	444.62
E	17705.97	-10.00	444.74	444.81
F	17715.97	-10.00	444.89	444.98
G	17725.97	-10.00	445.03	445.12
H	17735.97	-10.00	445.16	445.23
I	17745.97	-10.00	445.29	445.33
CL Pier 2	17756.97	-10.00	445.42	445.42
J	17766.97	-10.00	445.53	445.52
K	17776.97	-10.00	445.63	445.63
L	17786.97	-10.00	445.73	445.73
CL East Abut.	17795.12	-10.00	445.80	445.80
Bk. East Abut.	17796.47	-10.00	445.81	445.81

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	17643.74	-3.33	443.75	443.75
CL West Abut.	17645.09	-3.33	443.78	443.78
A	17655.09	-3.33	443.97	443.97
B	17665.09	-3.33	444.16	444.15
C	17675.09	-3.33	444.34	444.33
CL Pier 1	17683.24	-3.33	444.48	444.48
D	17693.24	-3.33	444.64	444.68
E	17703.24	-3.33	444.80	444.87
F	17713.24	-3.33	444.95	445.04
G	17723.24	-3.33	445.09	445.19
H	17733.24	-3.33	445.23	445.30
I	17743.24	-3.33	445.36	445.40
CL Pier 2	17754.24	-3.33	445.49	445.49
J	17764.24	-3.33	445.60	445.59
K	17774.24	-3.33	445.71	445.70
L	17784.24	-3.33	445.81	445.80
CL East Abut.	17792.39	-3.33	445.88	445.88
Bk. East Abut.	17793.74	-3.33	445.89	445.89

☉ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	17642.38	0.00	443.78	443.78
CL West Abut.	17643.73	0.00	443.80	443.80
A	17653.73	0.00	444.00	444.00
B	17663.73	0.00	444.19	444.18
C	17673.73	0.00	444.37	444.36
CL Pier 1	17681.88	0.00	444.51	444.51
D	17691.88	0.00	444.67	444.71
E	17701.88	0.00	444.83	444.90
F	17711.88	0.00	444.98	445.08
G	17721.88	0.00	445.13	445.22
H	17731.88	0.00	445.26	445.34
I	17741.88	0.00	445.39	445.43
CL Pier 2	17752.88	0.00	445.53	445.53
J	17762.88	0.00	445.64	445.63
K	17772.88	0.00	445.75	445.74
L	17782.88	0.00	445.84	445.84
CL East Abut.	17791.03	0.00	445.92	445.92
Bk. East Abut.	17792.38	0.00	445.93	445.93

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

EXAMINED *Thomas J. Damagala*
 PASSED *Ralph E. Anderson*
 Nov. 30, 2007
 ENGINEER OF BRIDGE DESIGN
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DISTRICTS	SHEET NO.	SHEET NO. 5 18 SHEETS
FAP 869	(10IVB) B-1	FRANKLIN	48	34	
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT			

Contract No. 98821

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	17641.02	3.33	443.70	443.70
CL West Abut.	17642.37	3.33	443.72	443.72
A	17652.37	3.33	443.92	443.92
B	17662.37	3.33	444.11	444.10
C	17672.37	3.33	444.29	444.28
CL Pier 1	17680.52	3.33	444.43	444.43
D	17690.52	3.33	444.60	444.64
E	17700.52	3.33	444.76	444.83
F	17710.52	3.33	444.91	445.00
G	17720.52	3.33	445.06	445.15
H	17730.52	3.33	445.19	445.27
I	17740.52	3.33	445.32	445.36
CL Pier 2	17751.52	3.33	445.46	445.46
J	17761.52	3.33	445.57	445.56
K	17771.52	3.33	445.68	445.68
L	17781.52	3.33	445.78	445.78
CL East Abut.	17789.67	3.33	445.86	445.86
Bk. East Abut.	17791.02	3.33	445.87	445.87

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	17638.29	10.00	443.54	443.54
CL West Abut.	17639.64	10.00	443.57	443.57
A	17649.64	10.00	443.76	443.76
B	17659.64	10.00	443.95	443.95
C	17669.64	10.00	444.14	444.13
CL Pier 1	17677.79	10.00	444.28	444.28
D	17687.79	10.00	444.45	444.49
E	17697.79	10.00	444.61	444.68
F	17707.79	10.00	444.77	444.86
G	17717.79	10.00	444.91	445.01
H	17727.79	10.00	445.05	445.13
I	17737.79	10.00	445.18	445.23
CL Pier 2	17748.79	10.00	445.32	445.32
J	17758.79	10.00	445.44	445.43
K	17768.79	10.00	445.55	445.54
L	17778.79	10.00	445.65	445.65
CL East Abut.	17786.94	10.00	445.73	445.73
Bk. East Abut.	17788.29	10.00	445.74	445.74

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. West Abut.	17635.56	16.67	443.36	443.36
CL West Abut.	17636.91	16.67	443.38	443.38
A	17646.91	16.67	443.58	443.58
B	17656.91	16.67	443.77	443.77
C	17666.91	16.67	443.96	443.95
CL Pier 1	17675.06	16.67	444.10	444.10
D	17685.06	16.67	444.28	444.31
E	17695.06	16.67	444.44	444.51
F	17705.06	16.67	444.60	444.69
G	17715.06	16.67	444.74	444.84
H	17725.06	16.67	444.89	444.96
I	17735.06	16.67	445.02	445.06
CL Pier 2	17746.06	16.67	445.16	445.16
J	17756.06	16.67	445.28	445.27
K	17766.06	16.67	445.39	445.39
L	17776.06	16.67	445.49	445.49
CL East Abut.	17784.21	16.67	445.57	445.57
Bk. East Abut.	17785.56	16.67	445.59	445.59

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

Nov. 30, 2007
 EXAMINED *Thomas J. Donagale*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.P. RTE. 869 - SEC. (10IVB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 18 SHEETS
FAP 869	(101VB) B-1	FRANKLIN	48	35	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract No. 98821

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	17619.74	-18.00	443.00
A1	17629.74	-18.00	443.21
A2	17639.74	-18.00	443.41
Bk. W. Abut.	17649.74	-18.00	443.61

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	17617.29	-12.00	443.07
A1	17627.29	-12.00	443.28
A2	17637.29	-12.00	443.49
Bk. W. Abut.	17647.29	-12.00	443.69

☉ ROADWAY & PROFILE GRADE

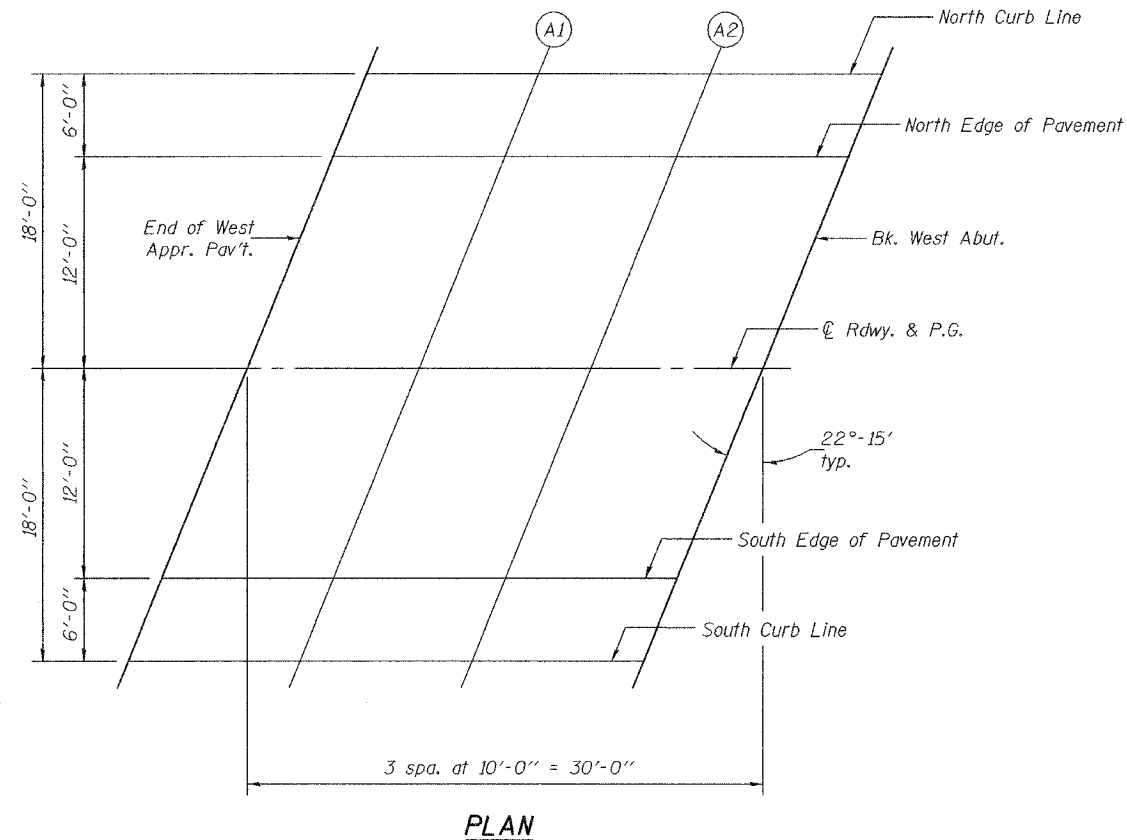
Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	17612.38	0.00	443.15
A1	17622.38	0.00	443.36
A2	17632.38	0.00	443.57
Bk. W. Abut.	17642.38	0.00	443.78

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	17607.47	12.00	442.85
A1	17617.47	12.00	443.07
A2	17627.47	12.00	443.28
Bk. W. Abut.	17637.47	12.00	443.49

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
End W. Appr. Pav't.	17605.02	18.00	442.67
A1	17615.02	18.00	442.89
A2	17625.02	18.00	443.11
Bk. W. Abut.	17635.02	18.00	443.32



DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

Nov. 30, 2007
 EXAMINED *Thomas J. Demogale*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

**TOP OF WEST APPROACH
PAVEMENT ELEVATIONS
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 869	(101VB) B-1	FRANKLIN	46	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
18 SHEETS

Contract No. 98821

NORTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	17799.74	-18.00	445.68
A3	17809.74	-18.00	445.76
A4	17819.74	-18.00	445.83
End E. Appr. Pav't.	17829.74	-18.00	445.90

NORTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	17797.29	-12.00	445.79
A3	17807.29	-12.00	445.87
A4	17817.29	-12.00	445.94
End E. Appr. Pav't.	17827.29	-12.00	446.01

☉ ROADWAY & PROFILE GRADE

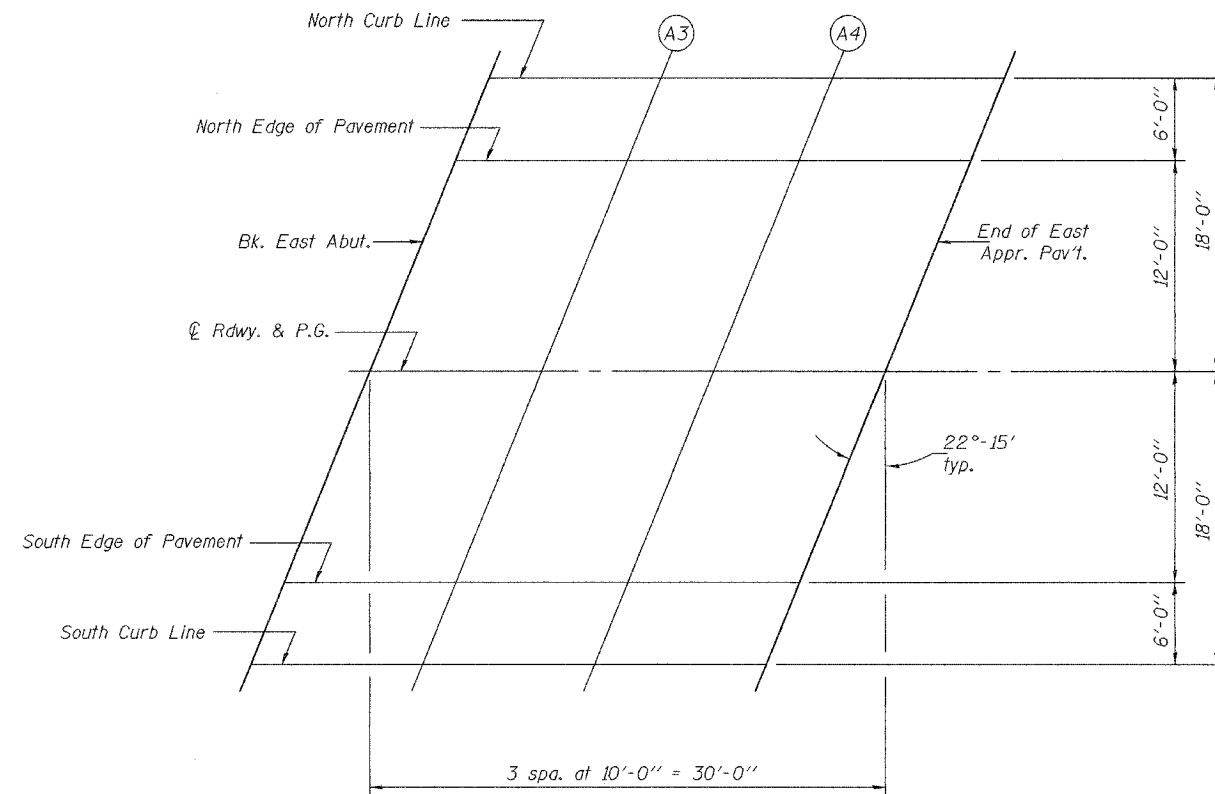
Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	17792.38	0.00	445.93
A3	17802.38	0.00	446.02
A4	17812.38	0.00	446.09
End E. Appr. Pav't.	17822.38	0.00	446.16

SOUTH EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	17787.47	12.00	445.70
A3	17797.47	12.00	445.79
A4	17807.47	12.00	445.87
End E. Appr. Pav't.	17817.47	12.00	445.94

SOUTH CURB LINE

Location	Station	Offset	Theoretical Grade Elevations
Bk. E. Abut.	17785.02	18.00	445.55
A3	17795.02	18.00	445.64
A4	17805.02	18.00	445.72
End E. Appr. Pav't.	17815.02	18.00	445.80



PLAN

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

Nov. 30, 2007

EXAMINED *Thomas J. Damagala*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF EAST APPROACH
PAVEMENT ELEVATIONS
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

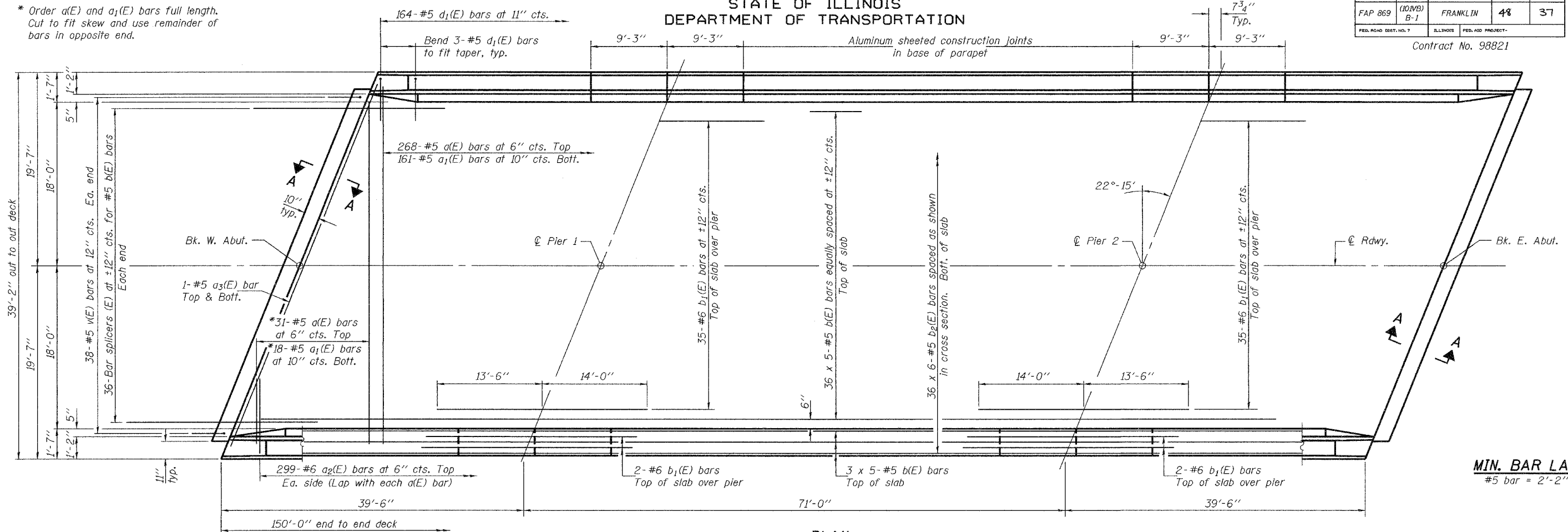
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 869	(101VB) B-1	FRANKLIN	48	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 8
18 SHEETS

Contract No. 98821

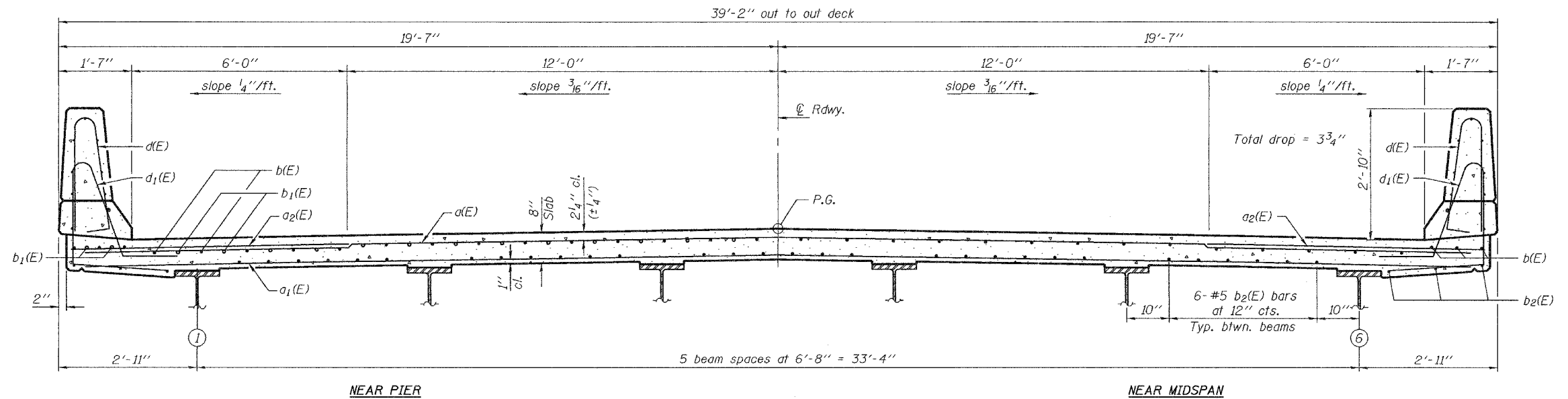
* Order a(E) and a₁(E) bars full length.
Cut to fit skew and use remainder of bars in opposite end.



PLAN

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

Notes: See sheet 9 of 18 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet 9 of 18 for parapet reinforcement.
See sheet 10 of 18 for Section A-A.



CROSS SECTION
(Looking East)

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

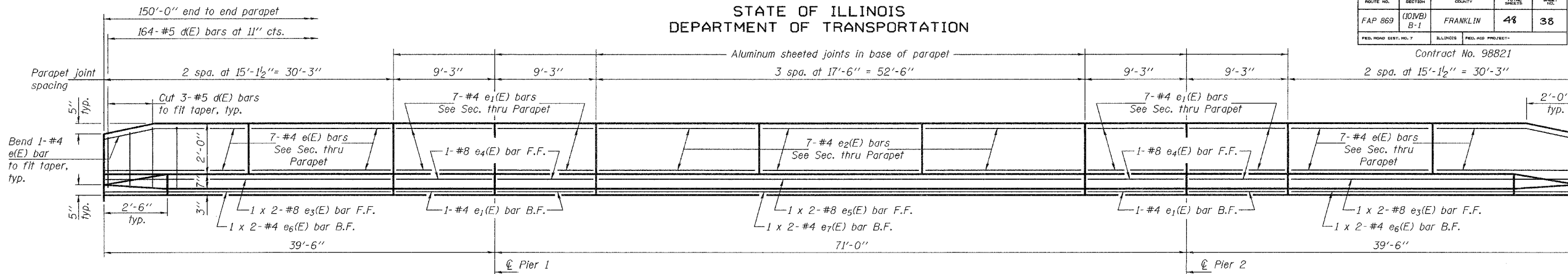
Nov. 30, 2007
EXAMINED *Thomas J. Damagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

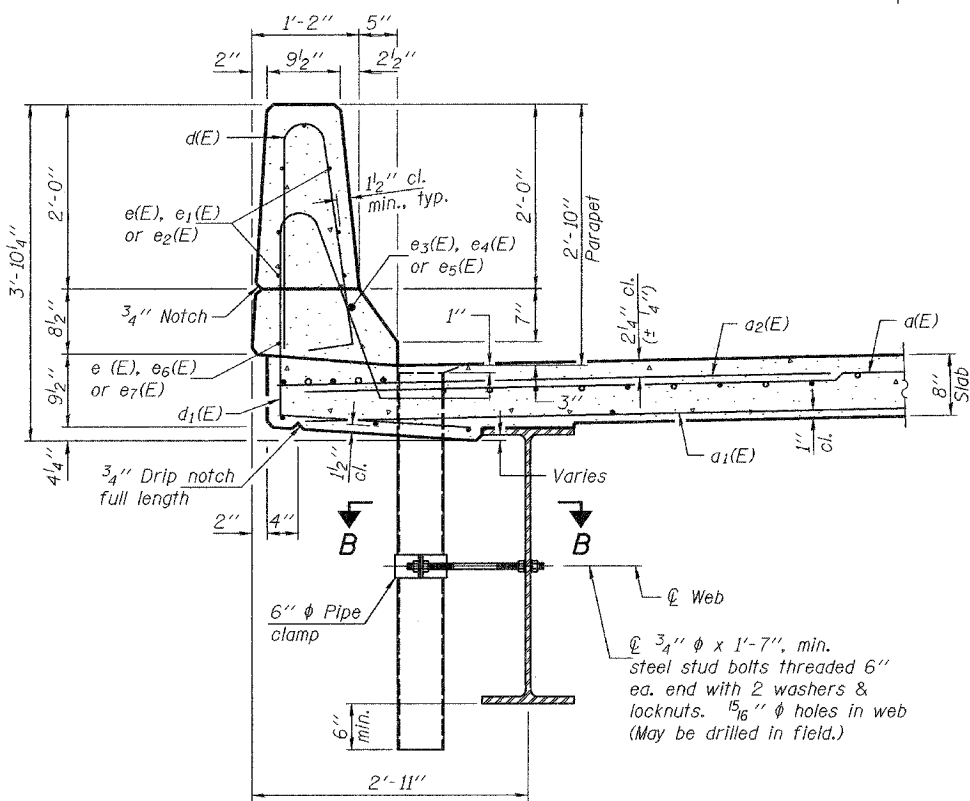
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 9 18 SHEETS
FAP 869	(101VB) B-1	FRANKLIN	48	38	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract No. 98821

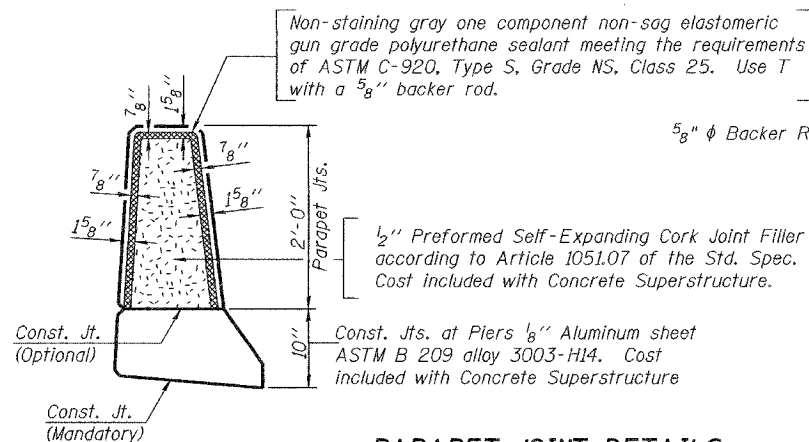


INSIDE ELEVATION OF PARAPET

Note: Cut e(E) bars as needed to fit at end of parapet.



SECTION THRU PARAPET



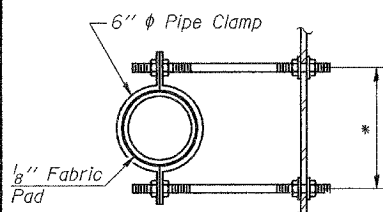
PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the floor drains need not be painted.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

SUPERSTRUCTURE
BILL OF MATERIAL

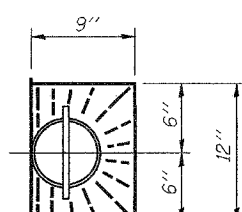
Bar	No.	Size	Length	Shape
a(E)	299	#5	38'-6"	—
a1(E)	179	#5	36'-10"	—
a2(E)	598	#6	6'-0"	—
a3(E)	4	#5	39'-10"	—
b(E)	210	#5	31'-9"	—
b1(E)	78	#6	27'-6"	—
b2(E)	216	#5	26'-9"	—
d(E)	328	#5	5'-7"	—
d1(E)	328	#5	7'-9"	—
e(E)	56	#4	14'-10"	—
e1(E)	64	#4	9'-0"	—
e2(E)	42	#4	17'-3"	—
e3(E)	8	#8	16'-10"	—
e4(E)	8	#8	9'-0"	—
e5(E)	4	#8	27'-10"	—
e6(E)	8	#4	15'-8"	—
e7(E)	4	#4	26'-10"	—
m(E)	4	#6	40'-0"	—
m1(E)	6	#6	42'-0"	—
m2(E)	24	#6	9'-4"	—
m3(E)	10	#6	7'-0"	—
m4(E)	4	#6	2'-10"	—
s(E)	82	#5	5'-9"	—
s1(E)	72	#4	8'-10"	—
v(E)	76	#5	3'-4"	—
Reinforcement Bars, Epoxy Coated		Pound	49890	
Concrete Superstructure		Cu. Yds.	209.0	

Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

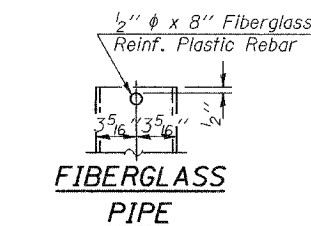


SECTION B-B

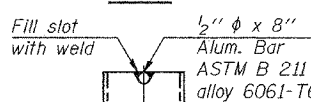
*Dimension as required by Pipe Clamp



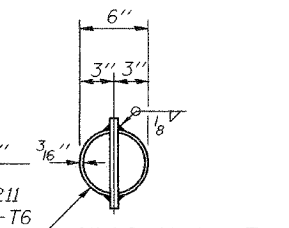
TOP PLAN



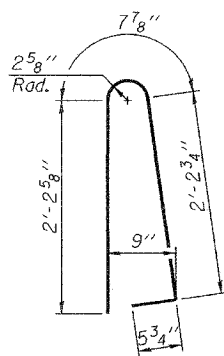
FIBERGLASS
PIPE



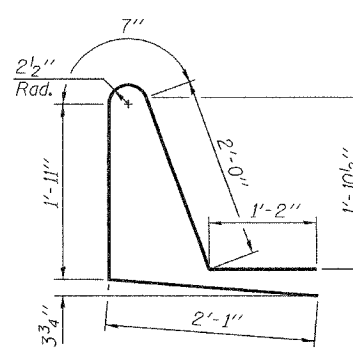
ALUMINUM
TUBE



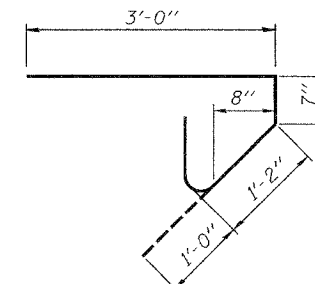
TOP PLAN
(Showing Aluminum Tube)



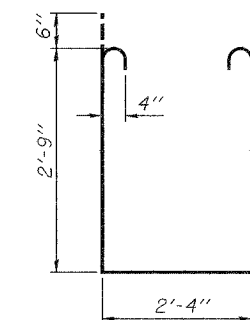
BAR d(E)



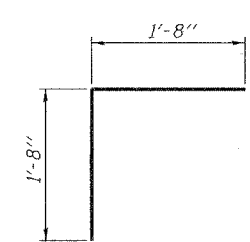
BAR d1(E)



BAR s(E)



BAR s1(E)



BAR v(E)

MIN. BAR LAPS

(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"

SUPERSTRUCTURE DETAILS
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

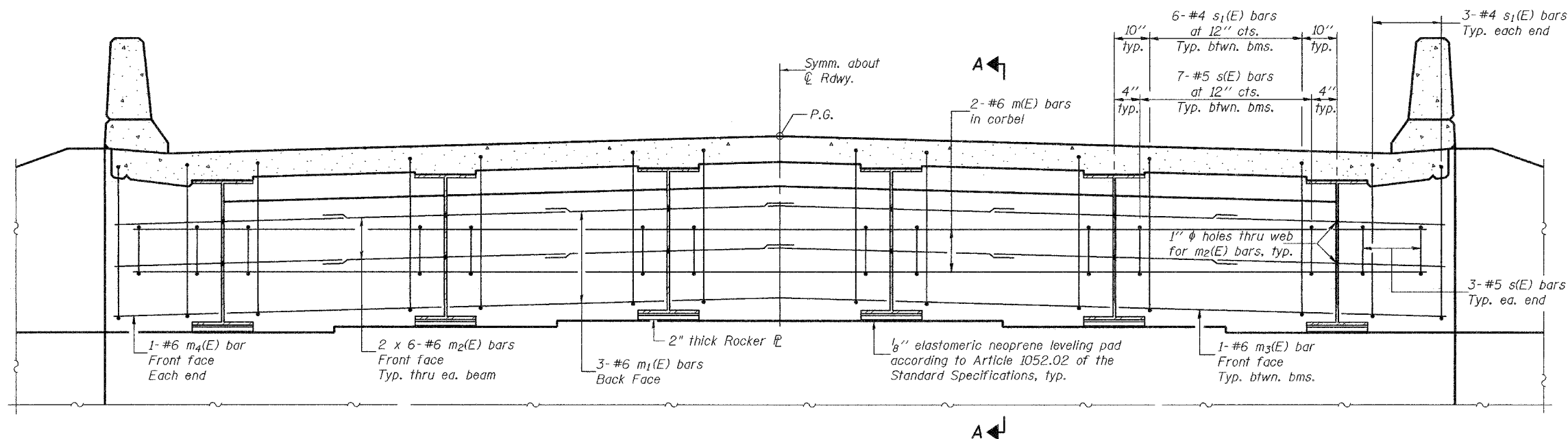
DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

EXAMINED	Thomas D. Damagala	Nov. 30, 2007
PASSED	Ralph E. Anderson	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10
FAP 869	(10IVB) B-1	FRANKLIN	48	39	18 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract No. 98821

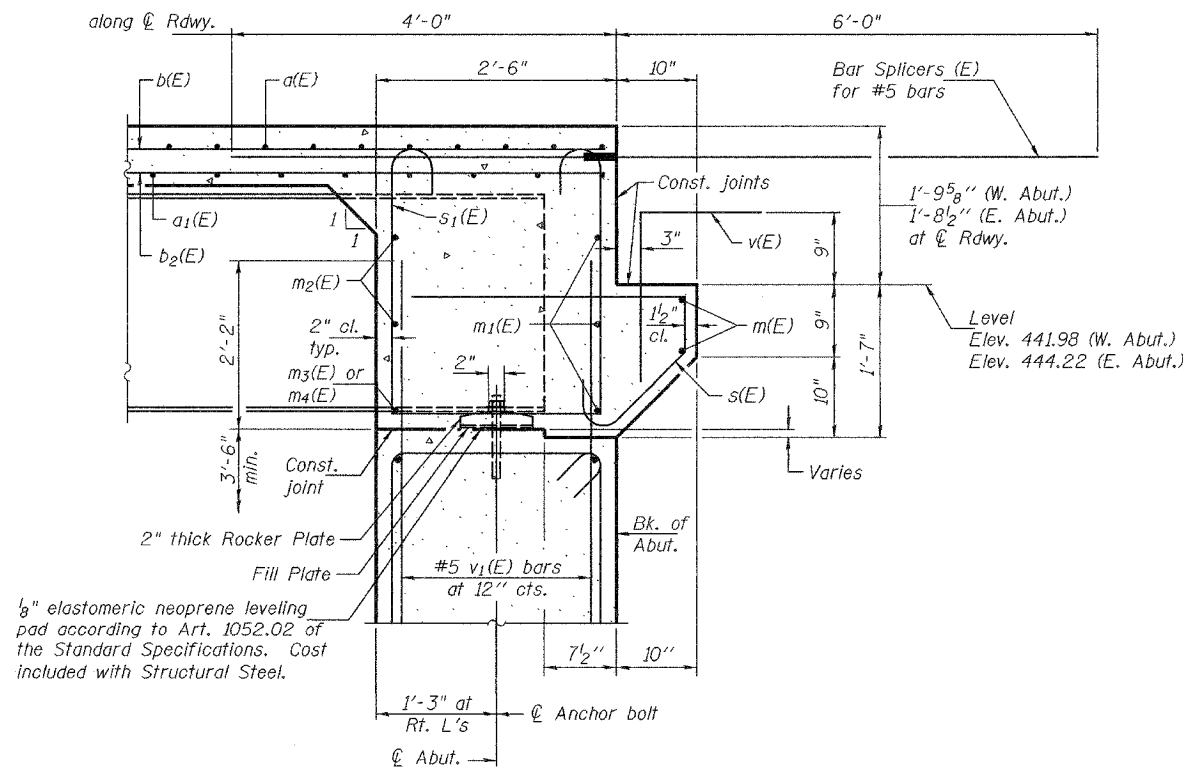


DIAPHRAGM ELEVATION AT ABUTMENT

Notes: Reinforcement bars in diaphragm are billed with superstructure on sheet 9 of 18.
Concrete in diaphragm is included with Concrete Superstructure on sheet 9 of 18.
For details of bars s(E) & s1(E) see sheet 9 of 18.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

MIN. BAR LAP

#6 bar = 2'-9"



SECTION A-A

Dimensions at right angles to abutment, except as shown.

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

Nov. 30, 2007
EXAMINED *Thomas J. Demagale*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

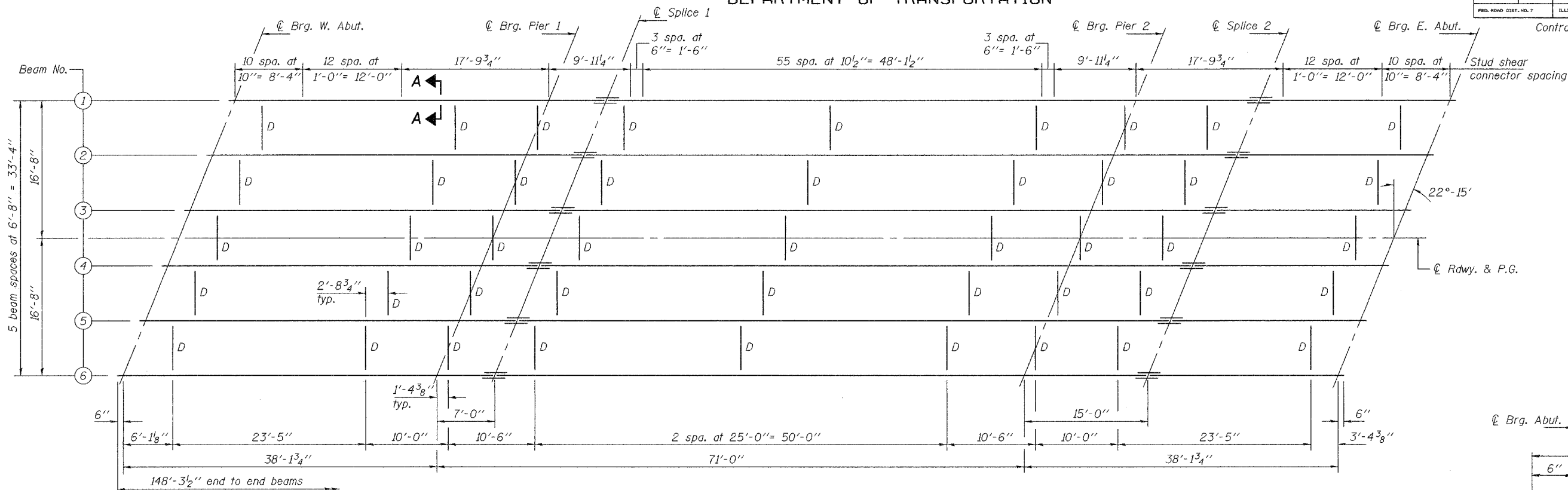
DIAPHRAGM DETAILS
F.A.P. RTE. 869 - SEC. (10IVB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET
FAP 869	(101VB) B-1	FRANKLIN	48	40
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 11
18 SHEETS

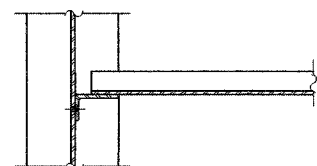
Contract No. 98821



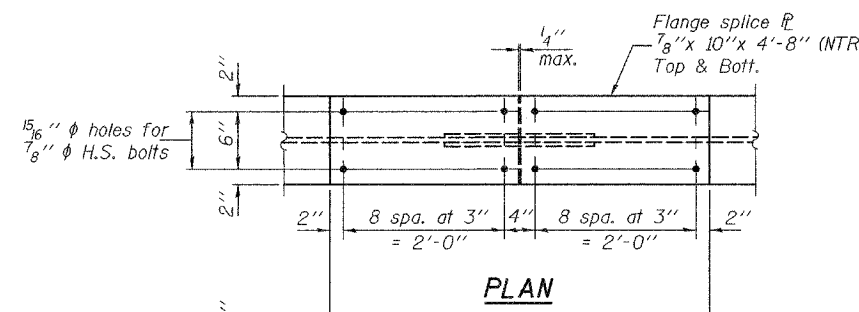
PLAN

All beams are W27x114 (NTR)

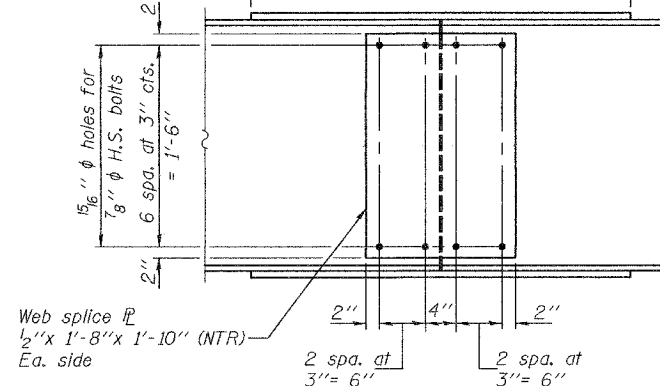
Notes: Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
All diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
Two hardened washers required for each set of oversized holes.



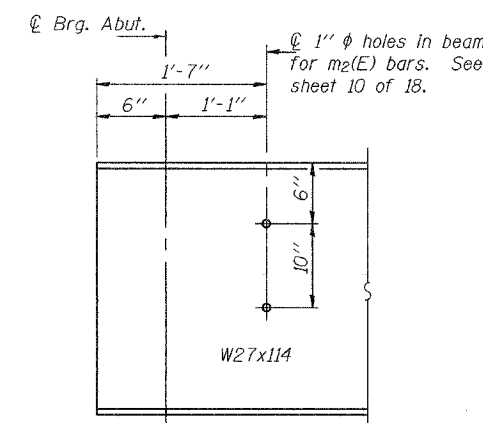
SECTION A-A



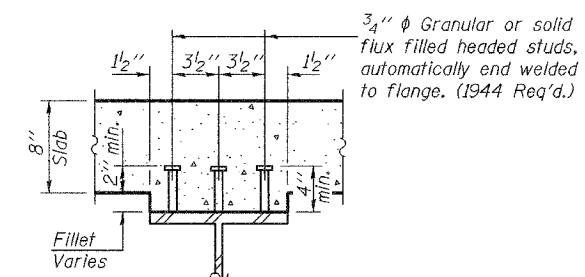
PLAN



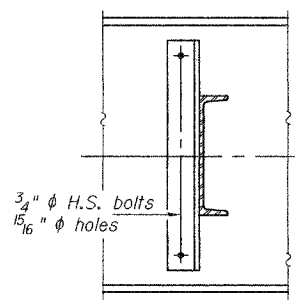
ELEVATION
SPLICE DETAIL
(12 Required)



TYP. END OF BEAM
ELEVATION



SECTION A-A



DIAPHRAGM D
(45 Required)

* Alternate channel C12x30 is permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

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

Nov. 30, 2007

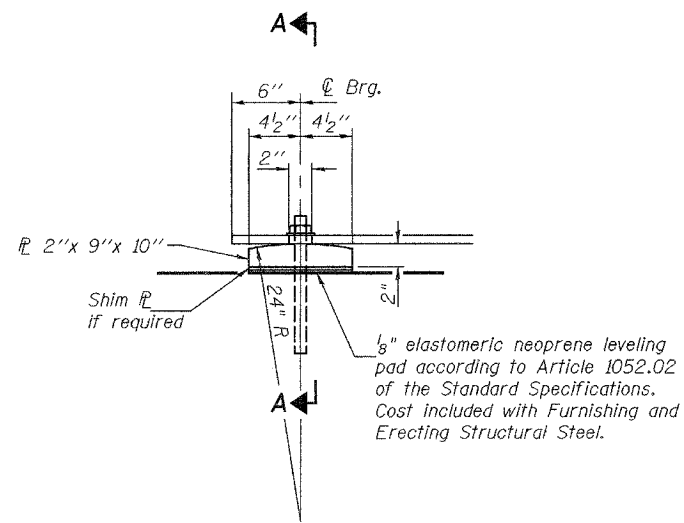
STRUCTURAL STEEL
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

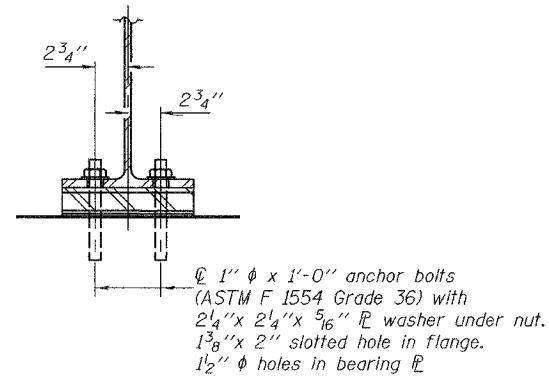
ROUTE NO.	SECTION	COUNTY	STREETS	SHEET NO.
FAP 869	(10NB) B-1	FRANKLIN	48	41
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 12
18 SHEETS

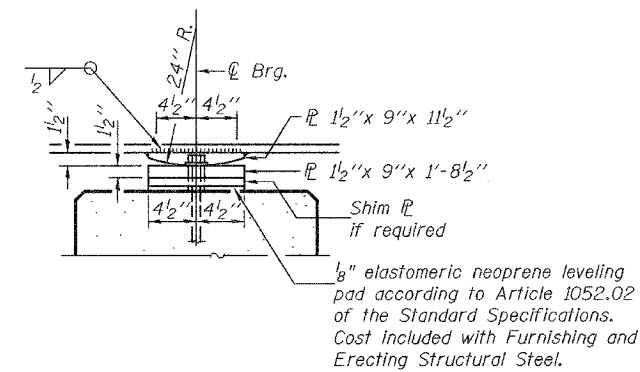
Contract No. 98821



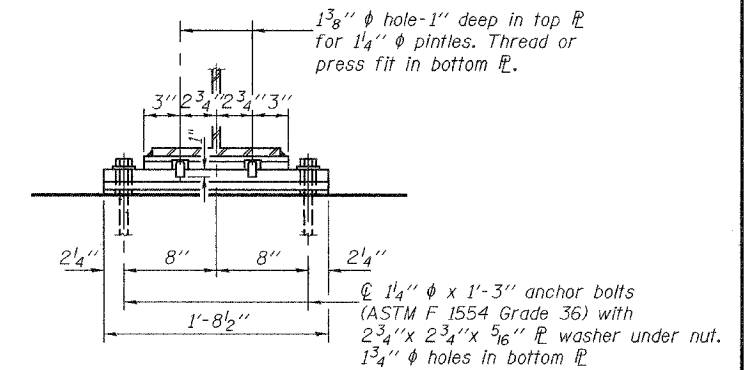
ELEVATION AT ABUTMENTS



SECTION A-A



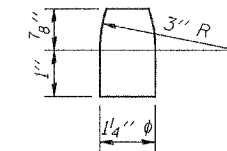
ELEVATION AT PIERS



SECTION A-A

FIXED BEARING

FIXED BEARING



PINTLE

*TOP OF BEAM ELEVATIONS

INTERIOR BEAM MOMENT TABLE				
		*0.4 Sp. 1 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I_s	(in ⁴)	4080	4080	4080
$I_c(n)$	(in ⁴)			11962
$I_c(3n)$	(in ⁴)			8787
S_s	(in ³)	299	299	299
$S_c(n)$	(in ³)			460
$S_c(3n)$	(in ³)			415
DC1	(k/')	0.809	0.809	0.809
M _{DC1}	(k)	26	289	221
DC2	(k/')	0.150	0.150	0.150
M _{DC2}	(k)	10	41	54
DW	(k/')	0.333	0.333	0.333
M _{DW}	(k)	22	90	120
M _{ℓ + Imp}	(k)	345	324	654
M _u (Strength I)	(k)	682	1115	1668
φ _r M _n	(k)			2264
f _s DC1	(ksi)	1.0	11.6	8.9
f _s DC2	(ksi)	0.4	1.6	1.6
f _s DW	(ksi)	0.9	3.6	3.5
f _s 1.3(ℓ+I)	(ksi)	18.0	16.9	22.2
f _s (Service II)	(ksi)	20.3	33.7	36.2
f _s (TotalXStrength I)	(ksi)	27.3	44.7	
V _r	(k)	21.1		20.0

- 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.).
- φ_rM_n: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- φ_rM_{nc}: Compact non-composite negative moment capacity computed according to Article A6.1.1 (kip-ft.).
- f_s (Service II): Sum of stresses as computed from the moments below (ksi).
- f_s (TotalXStrength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
- V_r: Factored shear range in span computed according to Art. 6.10.10.

INTERIOR BEAM REACTION TABLE		
	Abutments	Piers
R _{DC1}	(k)	7.9
R _{DC2}	(k)	1.8
R _{DW}	(k)	4.0
R _{ℓ + Imp}	(k)	62.4
R _{Total}	(k)	76.1

* Spans 1 & 3 are designed non-composite.
Stud shear connectors shown on sheet 11 of 18 are added for fatigue only.

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

EXAMINED	Nov. 30, 2007
PASSED	Thomas J. Dammalala ENGINEER OF BRIDGE DESIGN
	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

Location	ℓ Brg. W. Abut.	ℓ Brg. Pier 1	ℓ Splice 1	ℓ Brg. Pier 2	ℓ Splice 2	ℓ Brg. E. Abut.
Beam 1	442.95	443.55	443.66	444.51	444.70	444.99
Beam 2	443.02	443.63	443.75	444.60	444.80	445.09
Beam 3	443.07	443.70	443.81	444.67	444.87	445.17
Beam 4	443.02	443.65	443.77	444.64	444.85	445.15
Beam 5	442.85	443.50	443.62	444.50	444.70	445.02
Beam 6	442.67	443.32	443.44	444.34	444.55	444.86

*For fabrication use only.

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

All bearing plates and pintles shall be AASHTO M 270, Grade 50W.

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

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

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

SHIM PLATES, inches

Beam No.	W. Abut.	Pier 1	Pier 2	E. Abut.
1	0	0	0	0
2	0	0	0	0
3	5/8	3/4	7/8	7/8
4	0	1/4	1/2	5/8
5	0	0	0	0
6	0	0	0	0

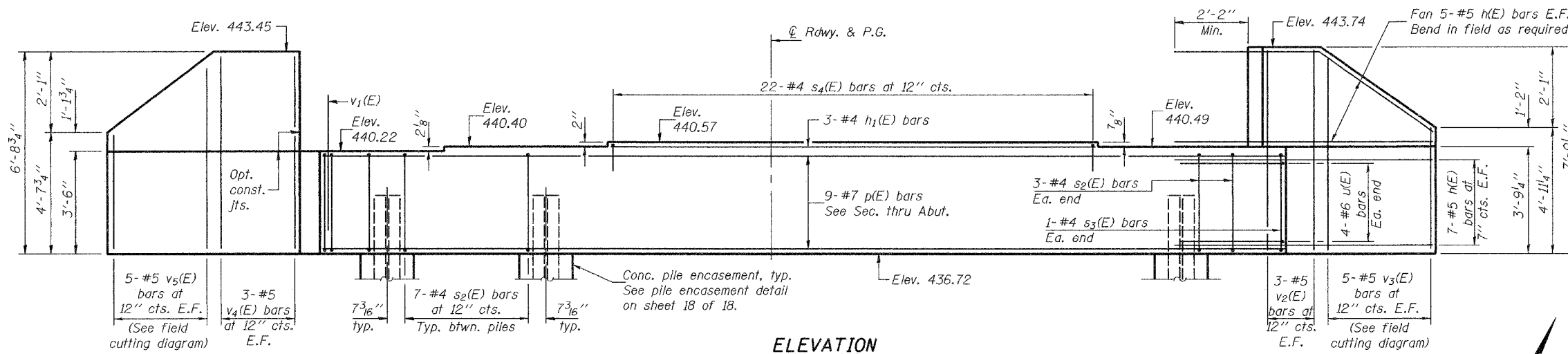
BEARING DETAILS
F.A.P. RTE. 869 - SEC. (10NB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

Notes: Pour steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.

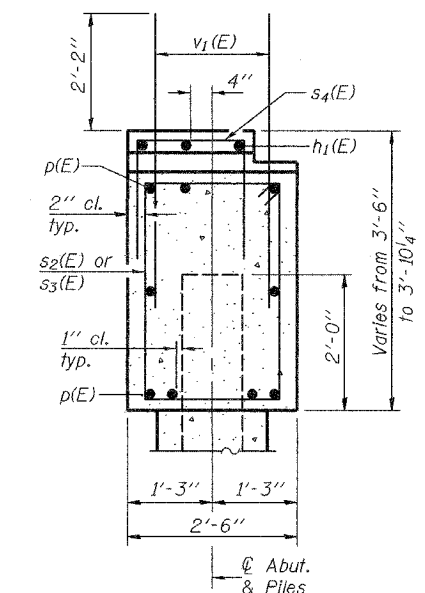
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATION	SHEET NO.	SHEET NO. 13
FAP 869	(10VB) B-1	FRANKLIN	48	42	18 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract No. 98821



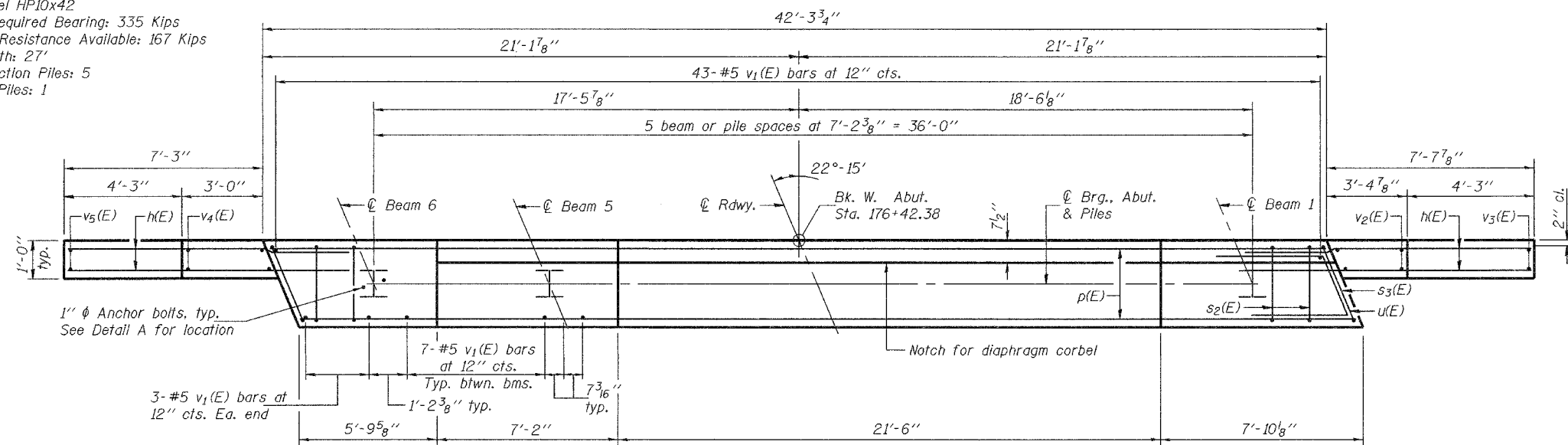
ELEVATION



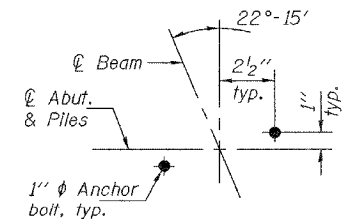
SEC. THRU ABUT.

PILE DATA

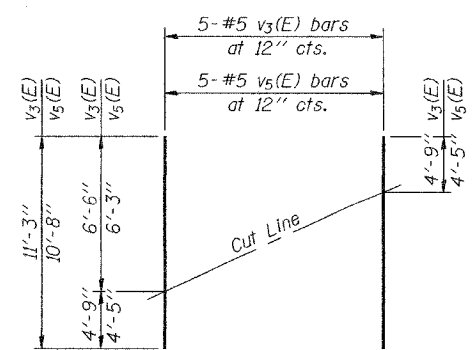
Type: Steel HP10x42
Nominal Required Bearing: 335 Kips
Factored Resistance Available: 167 Kips
Est. Length: 27'
No. Production Piles: 5
No. Test Piles: 1



PLAN

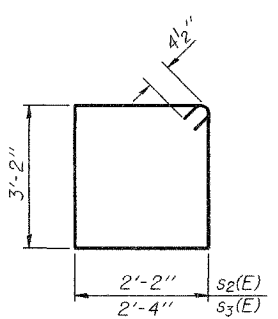


DETAIL A

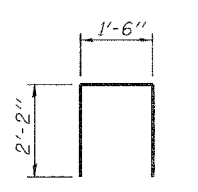


FIELD CUTTING DIAGRAM

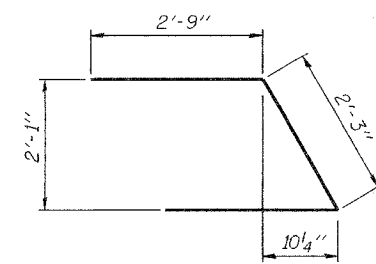
Order v3(E) & v5(E) full length.
Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR s4(E)



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	48	#5	10'-0"	—
h1(E)	3	#4	21'-3"	—
p(E)	9	#7	42'-0"	—
s2(E)	41	#4	11'-5"	□
s3(E)	2	#4	11'-9"	□
s4(E)	22	#4	5'-10"	□
u(E)	8	#6	7'-9"	△
v1(E)	84	#5	4'-4"	—
v2(E)	6	#5	6'-8"	—
v3(E)	5	#5	11'-3"	—
v4(E)	6	#5	6'-5"	—
v5(E)	5	#5	10'-8"	—
Structure Excavation		Cu. Yd.	82	
Concrete Structures		Cu. Yd.	18.2	
Reinforcement Bars, Epoxy Coated		Pound	2400	
Furnishing Steel Piles HP10x42		Foot	135	
Driving Steel Piles		Foot	135	
Test Pile Steel HP10x42		Each	1	
Concrete Encasement		Cu. Yd.	2.1	
Anchor Bolts, 1"		Each	12	

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

Nov. 30, 2007
EXAMINED *Thomas J. Donagale*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

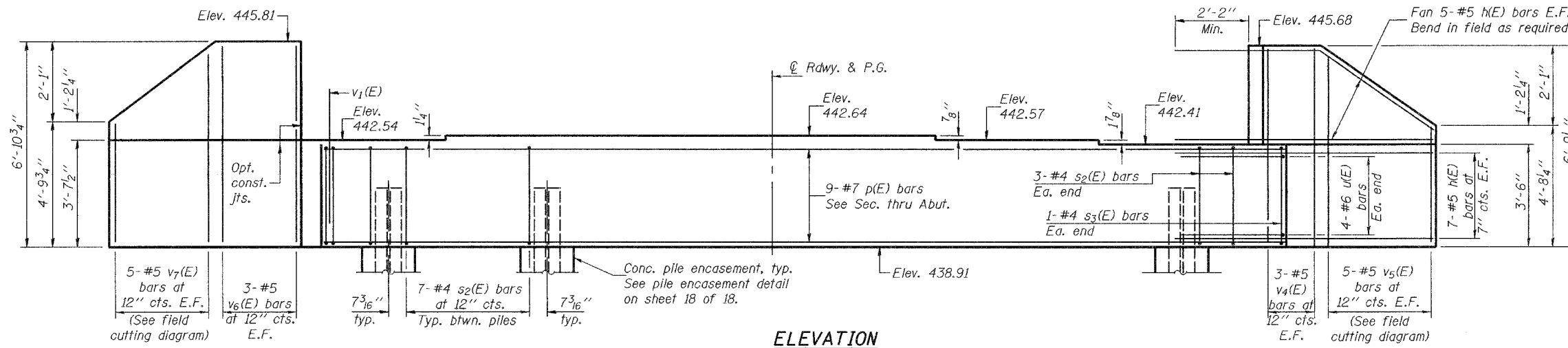
WEST ABUTMENT
F.A.P. RTE. 869 - SEC. (10VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

Notes: Four steps monolithically with cap.
Space reinforcement in cap to miss anchor bolts.

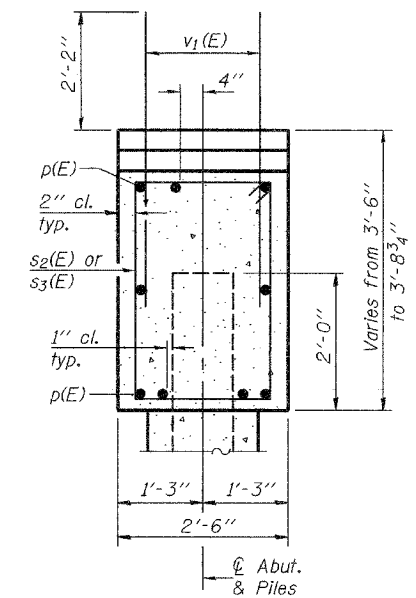
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET	SHEET NO. 14
FAP 869	(10IVB) B-1	FRANKLIN	48	48	18 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract No. 98821



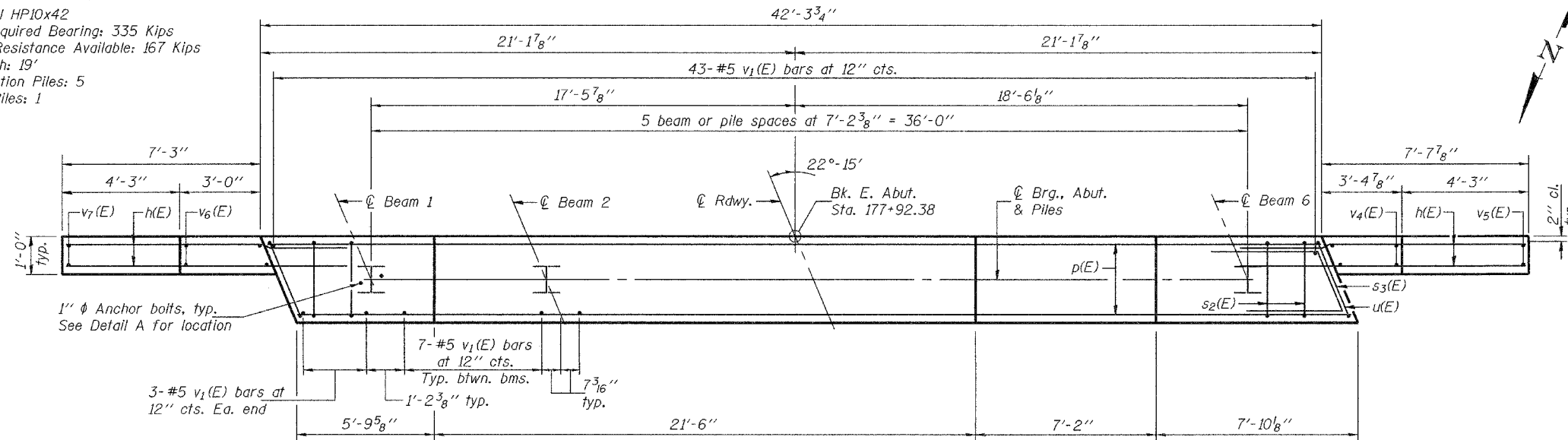
ELEVATION



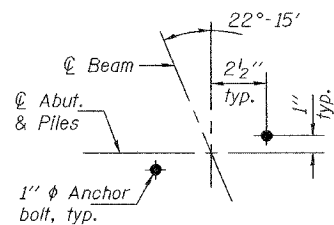
SEC. THRU ABUT.

PILE DATA

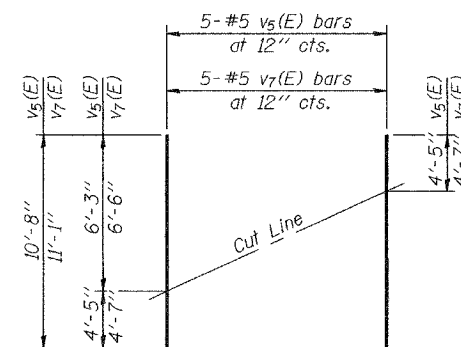
Type: Steel HP10x42
Nominal Required Bearing: 335 Kips
Factored Resistance Available: 167 Kips
Est. Length: 19'
No. Production Piles: 5
No. Test Piles: 1



PLAN

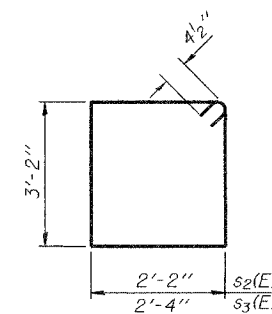


DETAIL A

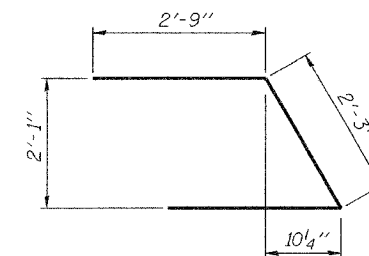


FIELD CUTTING DIAGRAM

Order v5(E) & v7(E) full length.
Cut as shown and use remainder
of bars in opposite face.



BARS s2(E)
& s3(E)



BAR u(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	48	#5	10'-0"	
p(E)	9	#7	42'-0"	
s2(E)	41	#4	11'-5"	□
s3(E)	2	#4	11'-9"	□
u(E)	8	#6	7'-9"	△
v1(E)	84	#5	4'-4"	
v4(E)	6	#5	6'-5"	
v5(E)	5	#5	10'-8"	
v6(E)	6	#5	6'-7"	
v7(E)	5	#5	11'-1"	
Structure Excavation		Cu. Yd.	82	
Concrete Structures		Cu. Yd.	17.8	
Reinforcement Bars, Epoxy Coated		Pound	2270	
Furnishing Steel Piles HP10x42		Foot	95	
Driving Steel Piles		Foot	95	
Test Pile Steel HP10x42		Each	1	
Concrete Encasement		Cu. Yd.	2.1	
Anchor Bolts, 1"		Each	12	

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

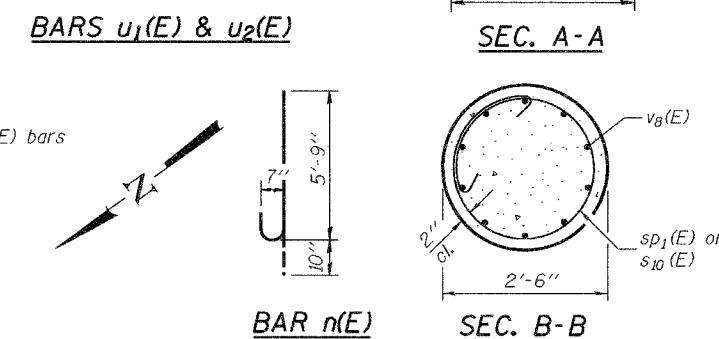
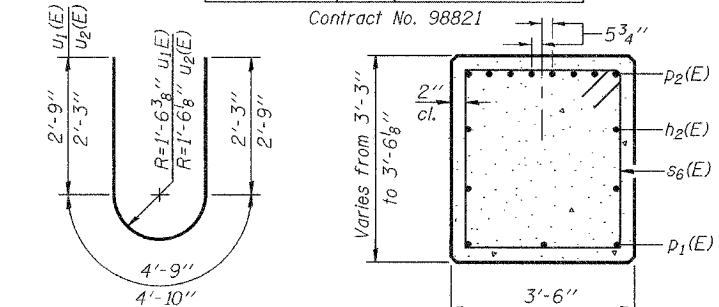
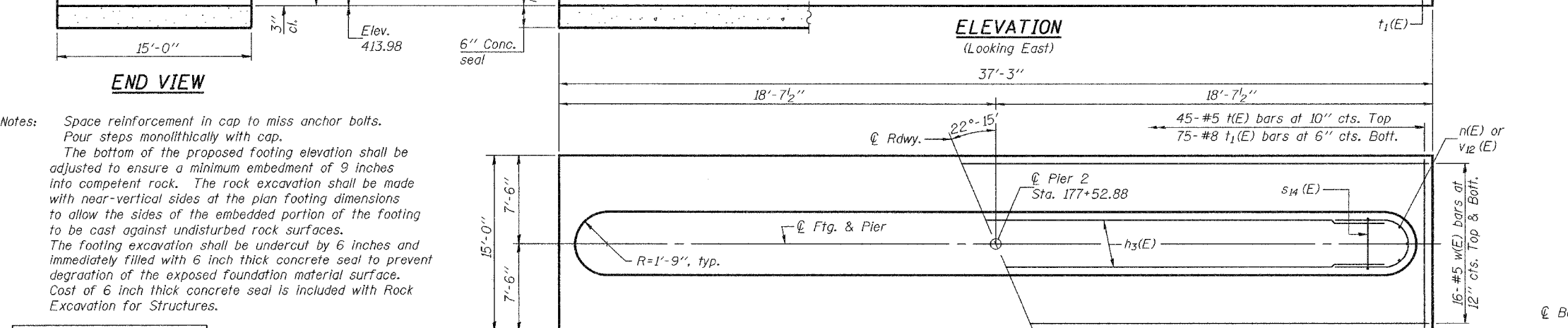
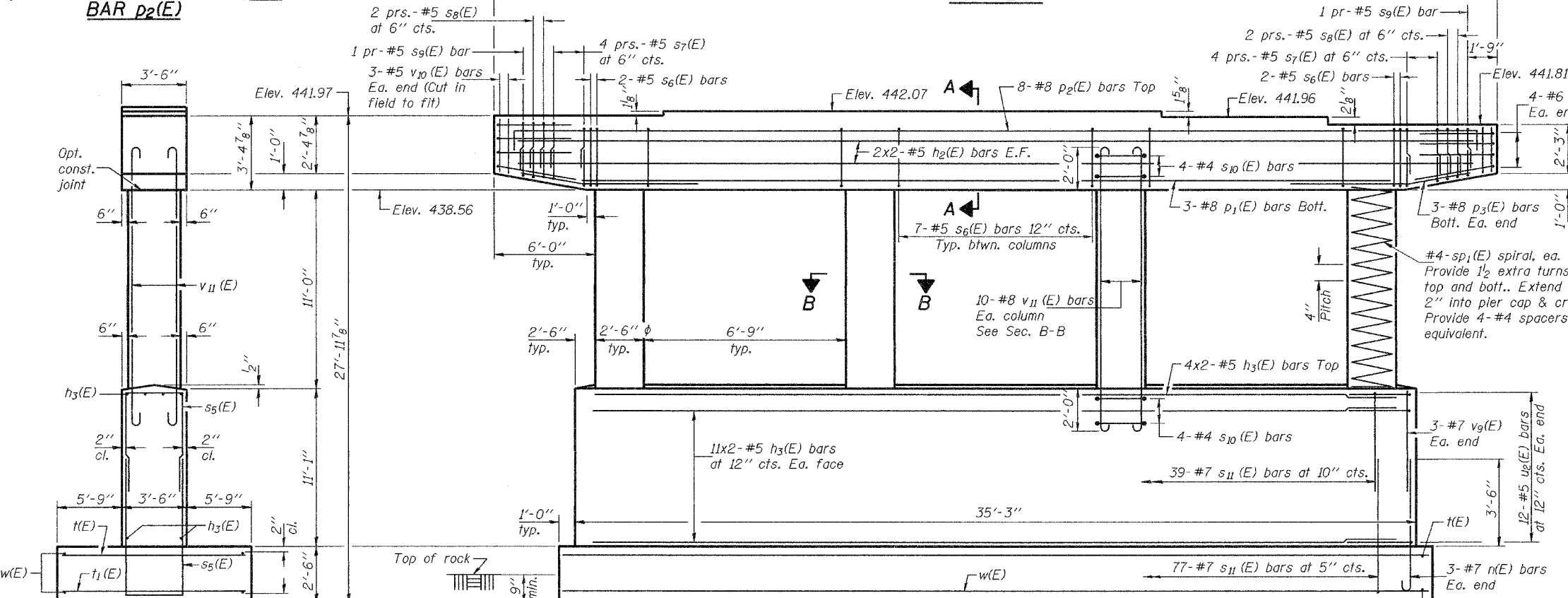
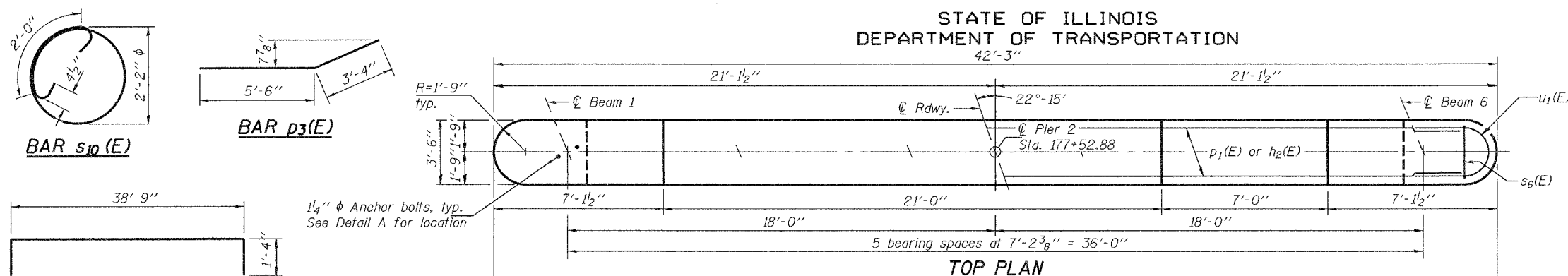
Nov. 30, 2007
EXAMINED *Thomas J. Damagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

EAST ABUTMENT
F.A.P. RTE. 869 - SEC. (10IVB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
42'-3"

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.	SHEET NO. 16
FAP 869	(10IVB) B-1	FRANKLIN	4/8	45	18 SHEETS
FED. ROAD DIST. NO. 7	BILLINGS	FED. AID PROJECT-			

Contract No. 98821



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h2(E)	8	#5	20'-6"	—
h3(E)	52	#5	17'-0"	—
n(E)	6	#7	6'-7"	U
p1(E)	3	#8	30'-3"	—
p2(E)	8	#8	41'-5"	—
p3(E)	6	#8	8'-10"	—
s6(E)	25	#5	13'-1"	□
s7(E)	16	#5	8'-2"	□
s8(E)	8	#5	7'-10"	□
s9(E)	4	#5	7'-8"	□
s10(E)	32	#4	9'-10"	□
s11(E)	116	#7	18'-8"	□
*sp1(E)	4	#4	11'-4"	W
t(E)	45	#5	14'-8"	—
t1(E)	75	#8	14'-6"	—
u1(E)	8	#6	10'-4"	U
u2(E)	24	#5	9'-3"	U
v10(E)	6	#5	2'-4"	—
v11(E)	40	#8	16'-10"	—
v12(E)	6	#7	10'-10"	—
w(E)	32	#5	36'-9"	—
Structure Excavation			Cu. Yd.	288
Concrete Structures			Cu. Yd.	127.3
Reinforcement Bars, Epoxy Coated			Pound	15580
Rock Excavation for Structures			Cu. Yd.	26
Anchor Bolts, 1/4"			Each	12

*Length is height of spiral.

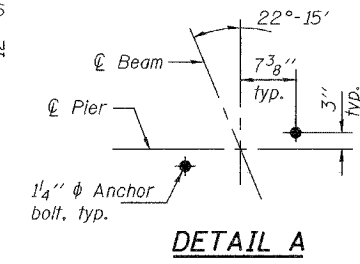
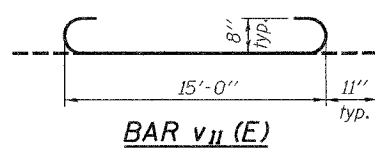
Notes: Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. The bottom of the proposed footing elevation shall be adjusted to ensure a minimum embedment of 9 inches into competent rock. The rock excavation shall be made with near-vertical sides at the plan footing dimensions to allow the sides of the embedded portion of the footing to be cast against undisturbed rock surfaces. The footing excavation shall be undercut by 6 inches and immediately filled with 6 inch thick concrete seal to prevent degradation of the exposed foundation material surface. Cost of 6 inch thick concrete seal is included with Rock Excavation for Structures.

DESIGNED	Dewey H. Coultas
CHECKED	Roy Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

Nov. 30, 2007
EXAMINED *Thomas J. Demagala*
PASSED *Ralph E. Anderson*

MIN. BAR LAPS
#4 bar = 1'-8"
#5 bar = 2'-2"
#6 bar = 2'-7"
#7 bar = 3'-5"
#8 bar = 4'-6"

FOOTING PLAN
Maximum Applied Service = 9.53 Kips/ft²
Bearing Pressure (Q_{max})



PIER 2
F.A.P. RTE. 869 - SEC. (10IVB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 869	(101VB) B-1	FRANKLIN	46	44
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 17
18 SHEETS

Contract No. 98821

NOTES

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

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

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

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

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

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

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

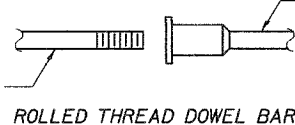
A_t = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

BAR SPLICER ASSEMBLIES

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

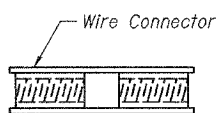
The diameter of this part is equal or larger than the diameter of bar spliced.



ROLLED THREAD DOWEL BAR



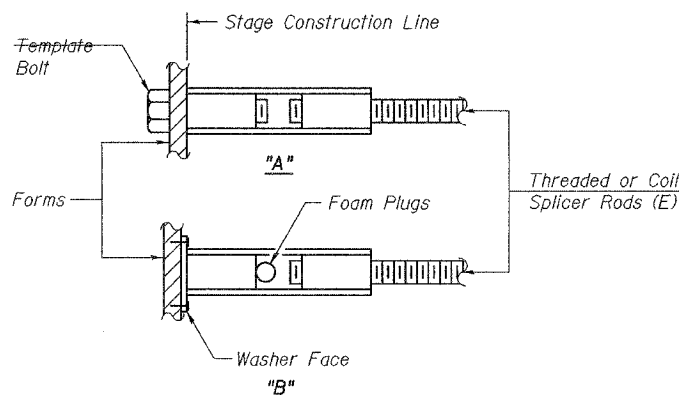
** ONE PIECE



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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

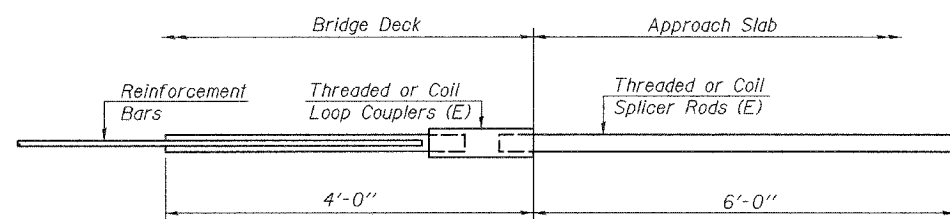


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

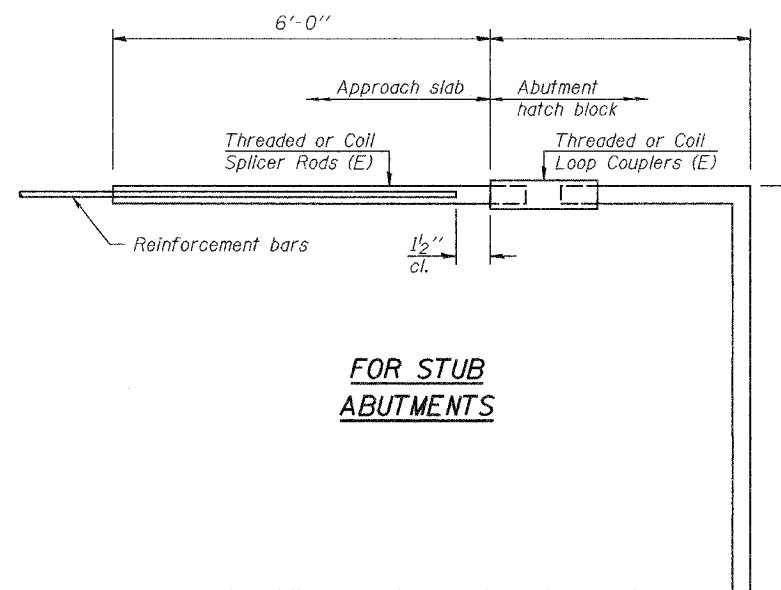
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



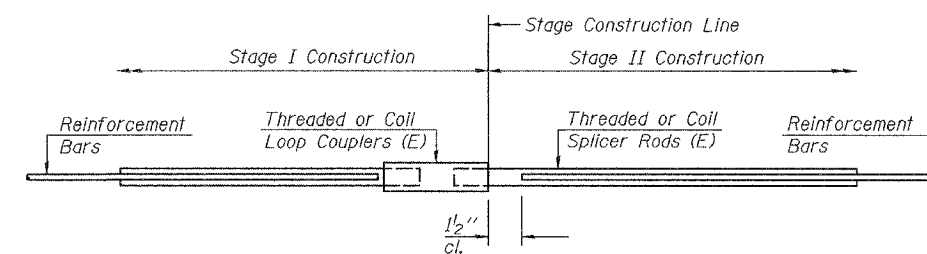
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 72



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

DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

EXAMINED	Nov. 30, 2007
PASSED	Thomas J. Damagala ENGINEER OF BRIDGE DESIGN
	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 11-1-06

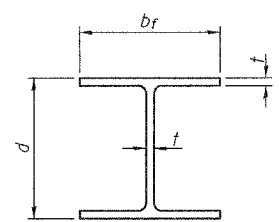
BAR SPLICER ASSEMBLY DETAILS
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET
FAP 869	(101VB) B-1	FRANKLIN	48	47
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

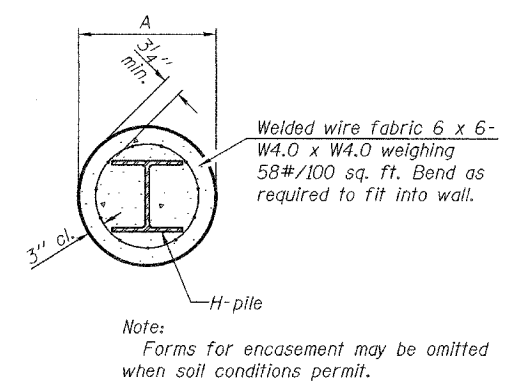
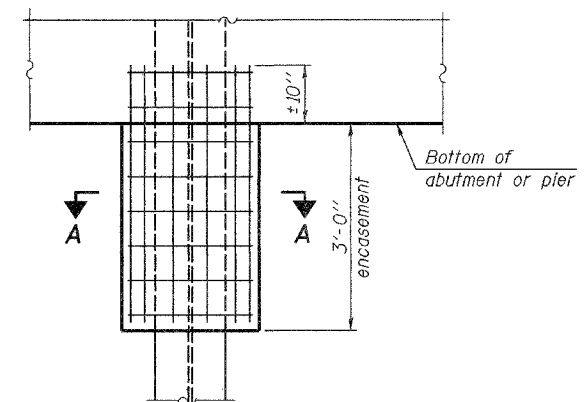
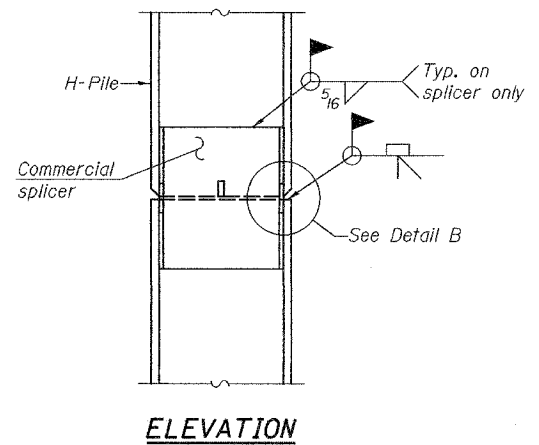
SHEET NO. 18
18 SHEETS

Contract No. 98821



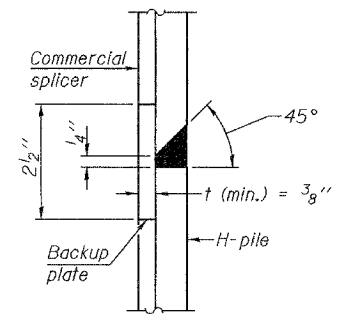
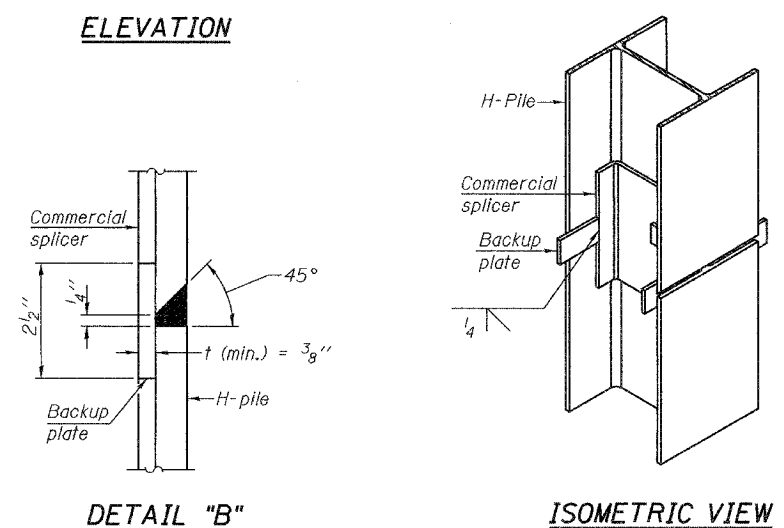
STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 5/16"	30"
x102	14"	14 3/4"	1 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 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"

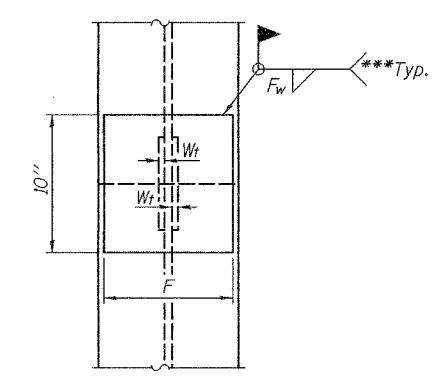
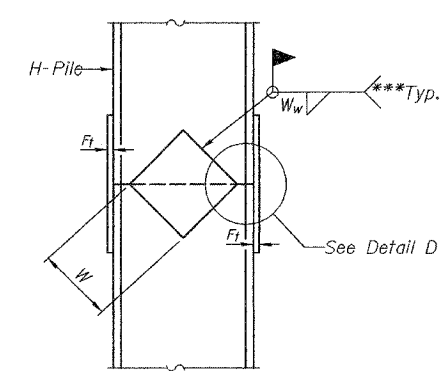


Note:
Forms for encasement may be omitted when soil conditions permit.

PILE ENCASEMENT



WELDED COMMERCIAL SPLICE

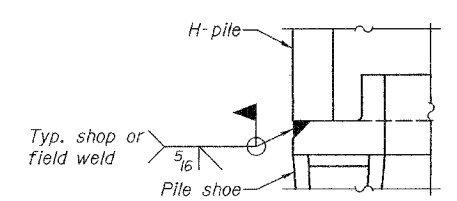
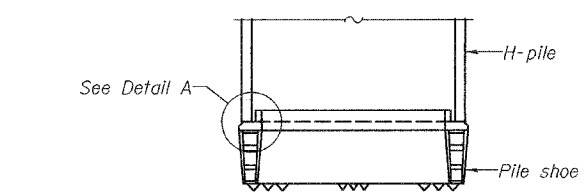


ELEVATION

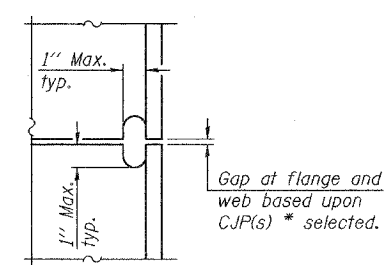
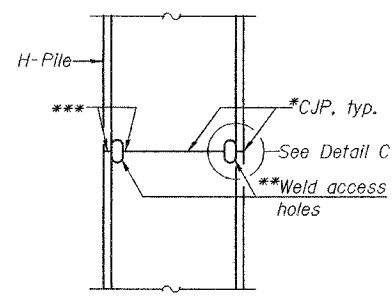
END VIEW

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

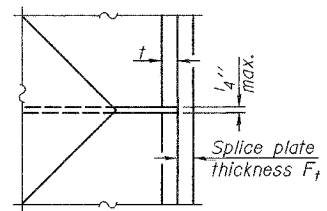
WELDED PLATE FIELD SPLICE



H-PILE SHOE ATTACHMENT



COMPLETE PENETRATION WELD SPLICE



DESIGNED	Dewey H. Coultas
CHECKED	Ray Ahanchi
DRAWN	h.t. duong
CHECKED	DHC/GRA

Nov. 30, 2007
EXAMINED *Thomas J. Donagale*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

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

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

STEEL H PILE DETAILS
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
FAP 869	(101VB) B-1	FRANKLIN	48	48
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

Contract No. 98821

Illinois Department of Transportation SOIL BORING LOG Page 1 of 2
Date 4/21/03

ROUTE FAP 869 DESCRIPTION F.A.P. 869 (IL 34) over ICG RR LOGGED BY Bryan Keller

SECTION 101VB LOCATION 1 mi. W Hanaford, SEC. 26, TWP. 6S, RNG. 3E, 3 PM

COUNTY Franklin DRILLING METHOD HAMMER TYPE

STRUCT. NO. 028-0046
Station 176+73.87

BORING NO. 1-S
Station 176+24
Offset 14.00ft Lt
Ground Surface Elev. 441.8 ft

DEPTH (ft)	DRILLING METHOD	SOIL DESCRIPTION	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (ft)	Time (hrs)
0		Bituminous Shoulder over Crushed Aggregate and Cinders							
439.8	WH	Soft to medium, very moist, brown, Silty Clay A7-6							
437.3	1	Very stiff, moist, brown, Silty Clay A7-6							
432.3	1	Hard, moist, brown, Silty Clay A7-6							
427.3	1	Stiff, moist, brown, Silty Clay A-6 with some Pea Gravel							
422.3	3								

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)

Illinois Department of Transportation SOIL BORING LOG Page 2 of 2
Date 4/21/03

ROUTE FAP 869 DESCRIPTION F.A.P. 869 (IL 34) over ICG RR LOGGED BY Bryan Keller

SECTION 101VB LOCATION 1 mi. W Hanaford, SEC. 26, TWP. 6S, RNG. 3E, 3 PM

COUNTY Franklin DRILLING METHOD HAMMER TYPE

STRUCT. NO. 028-0046
Station 176+73.87

BORING NO. 1-S
Station 176+24
Offset 14.00ft Lt
Ground Surface Elev. 441.8 ft

DEPTH (ft)	DRILLING METHOD	SOIL DESCRIPTION	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (ft)	Time (hrs)
398.8	45	Cored from 40.0 ft to 45.0 ft Hard, dry, grey Clay Shale 100% Recovery 23% RGD							
391.8	50	Bottom of hole=50.0 ft. No free water observed. Elevation referenced to Sta 176+54 top of W slope wall Elev=438.7 ft. To convert "N" values to "N60" values, multiply by 1.25.							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)

Illinois Department of Transportation SOIL BORING LOG Page 1 of 2
Date 4/28/03

ROUTE FAP 869 DESCRIPTION F.A.P. 869 (IL 34) over ICG RR LOGGED BY Bryan Keller

SECTION 101VB LOCATION 1 mi. W Hanaford, SEC. 26, TWP. 6S, RNG. 3E, 3 PM

COUNTY Franklin DRILLING METHOD HAMMER TYPE

STRUCT. NO. 028-0046
Station 176+73.87

BORING NO. 2-S
Station 177+99
Offset 14.00ft Lt
Ground Surface Elev. 442.4 ft

DEPTH (ft)	DRILLING METHOD	SOIL DESCRIPTION	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (ft)	Time (hrs)
440.4	1	Crushed Aggregate and Cinders							
437.9	WH	Stiff, moist, brown, Silty Clay A-6							
436.4	1	Medium, very moist, brown, Silty Clay A-6							
430.4	2	Stiff, very moist, brown, Silty Clay A-6							
427.9	9	Medium, moist, brown, Silty Clay A-6 with Sandstone Gravel Layers							
425.4	1	Stiff to very stiff, moist, brown, Silty Clay A-6 with Sandstone Gravel Layers							
422.9	2	Hard, dry, brown, weathered Sandstone with Clay Shale Layers							
422.4	20	Hard, dry, grey Clay Shale							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)

Illinois Department of Transportation SOIL BORING LOG Page 2 of 2
Date 4/28/03

ROUTE FAP 869 DESCRIPTION F.A.P. 869 (IL 34) over ICG RR LOGGED BY Bryan Keller

SECTION 101VB LOCATION 1 mi. W Hanaford, SEC. 26, TWP. 6S, RNG. 3E, 3 PM

COUNTY Franklin DRILLING METHOD HAMMER TYPE

STRUCT. NO. 028-0046
Station 176+73.87

BORING NO. 2-S
Station 177+99
Offset 14.00ft Lt
Ground Surface Elev. 442.4 ft

DEPTH (ft)	DRILLING METHOD	SOIL DESCRIPTION	Surface Water Elev. (ft)	Stream Bed Elev. (ft)	Groundwater Elev. (ft)	First Encounter (ft)	Upon Completion (ft)	After (ft)	Time (hrs)
400.12		Hard, dry, grey, Clay Shale Cored from 20.0 ft to 25.0 ft. 70% Recovery 95% RGD							
417.4	25	Hard, dry, grey, Clay Shale Cored from 25.0 ft to 30.0 ft. 95% Recovery 95% RGD							
412.4	30	Hard, dry, grey, Clay Shale Cored from 30.0 ft to 35.0 ft. 100% Recovery 92% RGD							
407.4	35	Hard, dry, grey, Clay Shale Cored from 35.0 ft to 40.0 ft. 100% Recovery 85% RGD							

Bottom of hole=40.0 ft
Free water observed at 17.0 ft.
Elevation referenced to Top of East slope wall
Ei=437.5 ft at Sta 177+72
To convert "N" values to "N60" values, multiply by 1.25.

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T208)

SOIL BORING LOGS
F.A.P. RTE. 869 - SEC. (101VB)B-1
FRANKLIN COUNTY
STATION 177+17.38
STRUCTURE NO. 028-0077