

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**PROPOSED
 HIGHWAY PLANS**

FAP ROUTE 322 (US 51)
 SECTION 12-1, BR
 UNION COUNTY
 PROJECT: BHF-0322(085)
 C-99-048-08

**SUPERSTRUCTURE REPLACEMENT ON
 US 51 OVER CACHE CREEK**

FAP RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	(12-1) BR	UNION	48	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO.	98886	

D-99-029-04



FOR INDEX OF SHEETS, SEE SHEET NO. 2
 FOR SUMMARY OF QUANTITIES, SEE SHEET NUMBERS 3 AND 4

TRAFFIC DATA

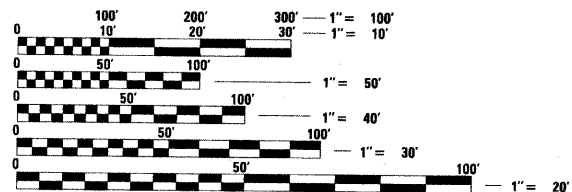
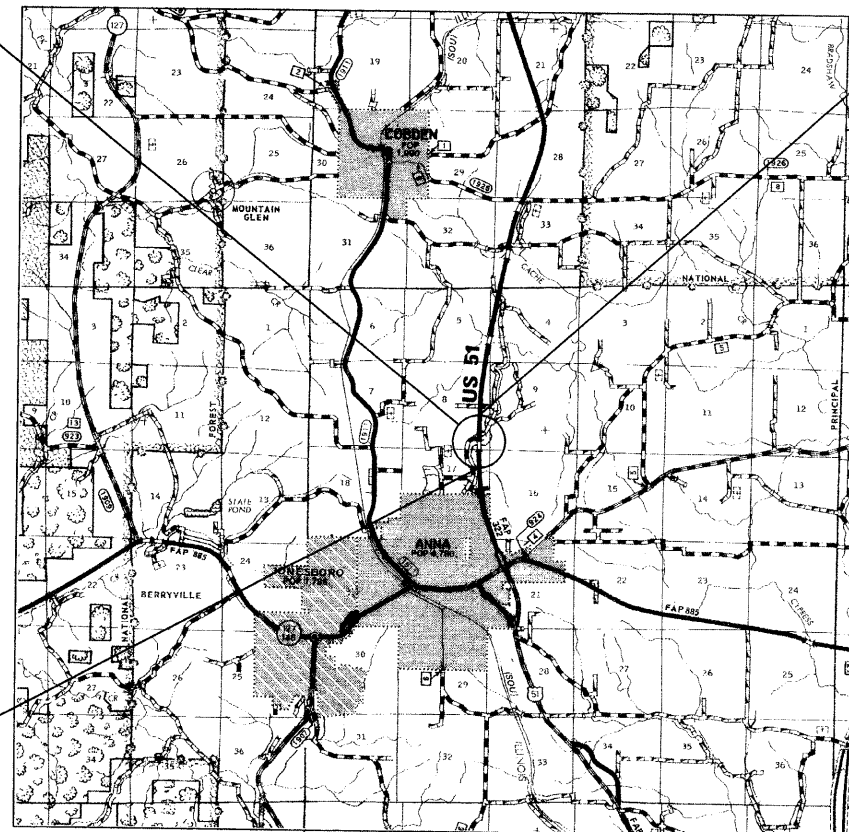
2008 ADT = 6250
 6.9% TRUCKS
 POSTED SPEED = 55 MPH

ANNA TOWNSHIP

PROPOSED SUPERSTRUCTURE REPLACEMENT
 OVER CACHE CREEK
 STRUCTURE NO. 091-0022
 SINGLE SPAN STEEL W24 BRIDGE;
 40'-8" BK TO BK ABUTMENTS; 37°-30' SKEW
 Q STRUCTURE STA 801+60.00

PROPOSED PROJECT BEGINS
 STA. 798+50.0

PROPOSED PROJECT ENDS
 STA. 804+50.0



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

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

SN 091-0022

ROADWAY LENGTH = 559'-4"
 BRIDGE LENGTH = 40'-8"
 NET LENGTH OF PROJECT = 600'-0"

CONTRACT NO. 98886

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

SUBMITTED June 18, 2008
Man C. Lennie
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

August 15, 2008
Eric E. Hara
 INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

August 15, 2008
Christina M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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 OF THE STATE OF ILLINOIS**

PROJECT ENGINEER: CHARLES STEPH DESIGN ENGINEER: GEORGE SHEPARD 618.549.3171 CENTREX 782-4084

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
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4	SUMMARY OF QUANTITIES
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39	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SPECIAL DETAIL
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HIGHWAY STANDARDS

HIGHWAY STANDARDS

STANDARD NUMBER	TITLE
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
420001-07	PAVEMENT JOINTS
420401-06	BRIDGE APPROACH PAVEMENT
421001-02	BAR REINFORCEMENT FOR CRC PAVEMENT
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
515001-02	NAME PLATE FOR BRIDGES
601101	
630001-07	STEEL PLATE BEAM GUARDRAIL
630201-05	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-06	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
701201-02	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > 45 MPH
701301-02	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701321-09	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-02	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH
701901-00	TRAFFIC CONTROL DEVICES
704001-04	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS

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Examined By: Danny L. Dayton
ASSISTANT REGIONAL ENGINEER

Approved By: Mary C. Hamij
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

June 18 20 08
DATE

FILE NAME : c:\p\proj\ts\4982984\4982984.ms.dgn	USER NAME : shepardgd	DESIGNED - --- DRAWN - ---	REVISED - --- REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	INDEX OF SHEETS, HIGHWAY STANDARDS AND SIGNATURE SHEET			F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET SHEETS NO.
PLT SCALE = 50.0000" = 1"	CHECKED - --- DATE - ---	REVISED - --- REVISED - ---	SCALE: _____		SHEET NO. 2 OF 48 SHEETS	STA. _____ TO STA. _____	FAP 322	12-1.BR	UNION	48	2
PLCT DATE = 6/5/2008	DATE - ---	REVISED - ---				CONTRACT NO. 98886					
FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT											

GENERAL NOTES

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

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

BITUMINOUS MATERIALS:

ON PAVEMENT
0.09 GAL./SQ. YD.

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

ON AGGREGATE SURFACE
0.32 GAL./SQ. YD.

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

ALL AGGREGATE
2.05 TONS/CU. YD.

RIPRAP
1.50 TONS/CU. YD.

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

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

THE CONTRACTOR SHALL STAMP STATIONING IN THE PROPOSED HOT MIX ASPHALT SURFACE AT 300 FT. INTERVALS ON ALTERNATING SIDES OF THE PAVEMENT AND AS DIRECTED BY THE ENGINEER. THE STATION SYMBOL STAMPS USED SHALL BE FURNISHED BY THE CONTRACTOR. THEY SHALL BE 5 1/2 IN. TALL, OF A DESIGN APPROVED BY THE ENGINEER, AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR. STATIONING FOR THIS PROJECT IS INCREASING TO THE SOUTH.

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

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

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

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

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

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

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

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

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

QUANTITIES SHOWN IN THE PLANS FOR BRIDGE DECK GROOVING AND PROTECTIVE COAT INCLUDE THE BRIDGE, THE BRIDGE APPROACH PAVEMENTS, AND THE BRIDGE APPROACH PAVEMENT CONNECTORS (PCC) 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.

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

ANY TIME THE CONCRETE BARRIER IS NOT IN THE PROPER POSITION, FLAGGERS SHALL BE IN PLACE TO CONTROL TRAFFIC. THE TEMPORARY TRAFFIC SIGNALS SHALL BE COVERED OR TURNED OFF.

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

COMMITMENTS

NONE AS OF JUNE 27, 2008. REFER TO COMMITMENT

FILE FOR ANY COMMITMENTS AFTER THIS DATE.

FILE NAME = c:\projects\1902984\1902984ms.dgn	USER NAME = shepardgd	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL NOTES & COMMITMENTS	F.A.P. RTE. FAP 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 48	SHEET NO. 3
	PLOT SCALE = 50,0000' / IN.	CHECKED - ---	REVISED - ---		SCALE: _____	SHEET NO. 3 OF 48 SHEETS	STA. _____ TO STA. _____	CONTRACT NO. 98886		
	PLOT DATE = 6/19/2008	DATE - _____	REVISED - ---		FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

SUMMARY OF QUANTITIES

		RURAL-UNION COUNTY	
		HBP FUNDING 80% FED. 20% STATE	
		X071-2A	
		SN 091-0022	
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITIES
20200100	EARTH EXCAVATION	CU YD	65
20300100	CHANNEL EXCAVATION	CU YD	291
20400800	FURNISHED EXCAVATION	CU YD	23
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	97
25000350	SEEDING, CLASS 7	ACRE	0.50
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	64
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	48
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	48
25000700	AGRICULTURAL GROUND LIMESTONE	TON	1.0
25001010	SEEDING, CLASS 2 (MODIFIED)	ACRE	0.50
25100115	MULCH, METHOD 2	ACRE	1.00
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	80
28100107	STONE RIPRAP, CLASS A4	SQ YD	416
28200200	FILTER FABRIC	SQ YD	416
40201000	AGGREGATE FOR TEMPORARY ACCESS	TON	35
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	160
40600300	AGGREGATE (PRIME COAT)	TON	2
40600990	TEMPORARY RAMP	SQ YD	27
40603320	HOT MIX ASPHALT SURFACE COURSE, MIX "C", N90	TON	102
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	275
44000100	PAVEMENT REMOVAL	SQ YD	495
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	1195
44004250	PAVED SHOULDER REMOVAL	SQ YD	785
42001300	PROTECTIVE COAT	SQ YD	517

SUMMARY OF QUANTITIES (CONTINUED)

		RURAL-UNION COUNTY	
		HBP FUNDING 80% FED. 20% STATE	
		X071-2A	
		SN 091-0022	
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITIES
48203037	HOT-MIX ASPHALT SHOULDERS, 10"	SQ YD	933
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1
50102400	CONCRETE REMOVAL	CU YD	18.8
50200100	STRUCTURE EXCAVATION	CU YD	97
50300100	FLOOR DRAINS	EACH	4
50300225	CONCRETE STRUCTURES	CU YD	22.1
50300255	CONCRETE SUPERSTRUCTURE	CU YD	68.9
50300260	BRIDGE DECK GROOVING	SQ YD	682.0
50300300	PROTECTIVE COAT	SQ YD	208
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	25,750
50500505	STUD SHEAR CONNECTORS	EACH	1,116
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	17,440
50800515	BAR SPLICERS	EACH	245
51205200	TEMPORARY SHEET PILING	SQ FT	195
51500100	NAME PLATES	EACH	1
52100520	ANCHOR BOLTS, 1"	EACH	24
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	31
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	152
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	388
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	465
67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL MO	14
67100100	MOBILIZATION	L SUM	1

*Specialty Items

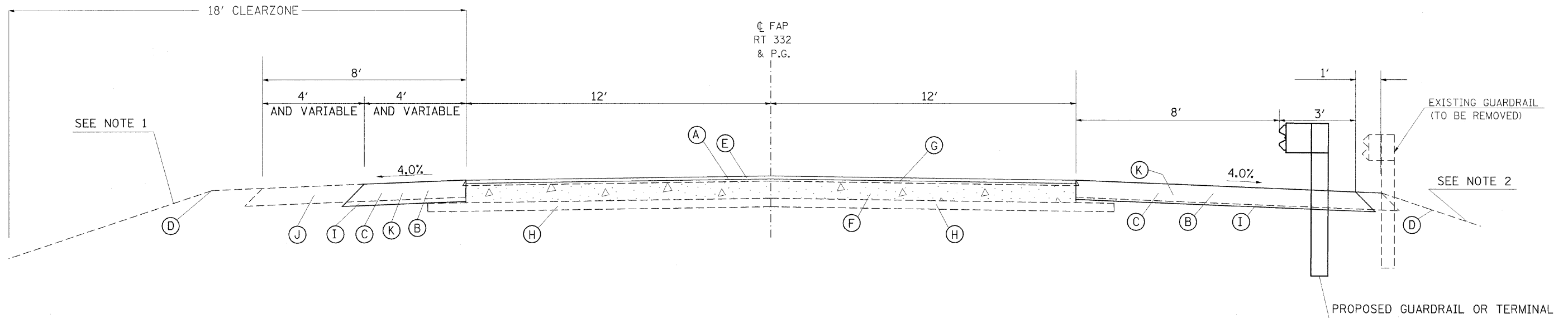
FILE NAME = c:\projects\1902984\1902984ms.dgn	USER NAME = shepardgd	DESIGNED - --- DRAWN - ---	REVISED - --- REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES (CONTINUED)	F.A.P. RTE. FAP 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 48	SHEET NO. 5
PLOT SCALE = 50,0000 1/4" IN. PLOT DATE = 7/1/2008		CHECKED - --- DATE - ---		SCALE: _____ SHEET NO. 5 OF 48 SHEETS STA. _____ TO STA. _____		FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT CONTRACT NO. 98886				

SUMMARY OF QUANTITIES (CONTINUED)

		RURAL-UNION COUNTY	
		HBP FUNDING 80% FED. 20% STATE	
		X071-2A	
		SN 091-0022	
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITIES
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	3
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	103
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1,350
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	34
70400100	TEMPORARY CONCRETE BARRIER	FOOT	450
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	400
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	1,350
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	8
* 78200405	GUARDRAIL MARKERS	EACH	10
* 78200500	BARRIER WALL MARKERS	EACH	4
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300100	PAVEMENT MARKING REMOVAL	SQ FT	850
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	8
86200300	UNINTERRUPTIBLE POWER SUPPLY, EXTENDED	EACH	1
X0321430	BRIDGE APPROACH PAVEMENT CONNECTOR (PCC) SPECIAL	SQ YD	242
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	311
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0073700	TEMPORARY WALL BRACING SYSTEM	L SUM	1

*Specialty Items

TYPICAL SECTION



TYPICAL SECTION OUTSIDE PAVEMENT REMOVAL

SECTION OUTSIDE GUARDRAIL LIMITS

SECTION WITHIN GUARDRAIL OR TRAFFIC BARRIER TERMINAL LIMITS

TO BE USED:

799+70 LT TO 800+84 LT
 802+36 LT TO 804+50 LT
 798+50 RT TO 800+84 RT
 802+36 RT TO 803+58 RT

MIXTURE REQUIREMENTS

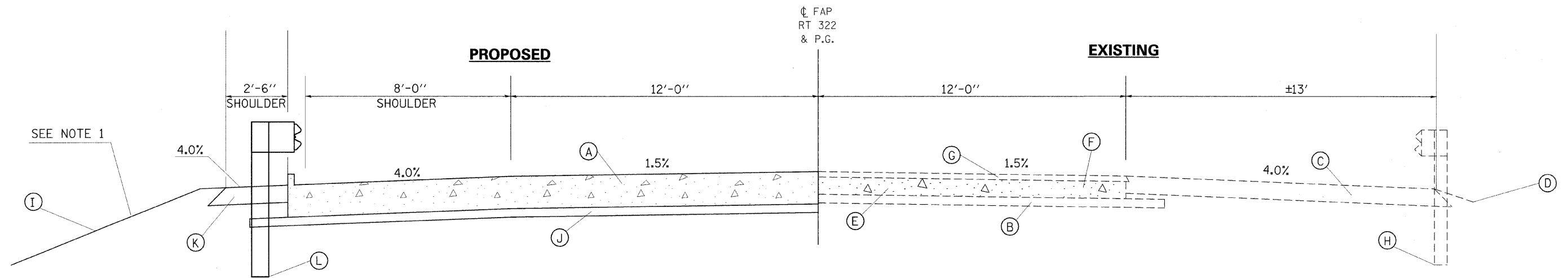
Location(s):	Hot-Mix Asphalt Surface Course
Mixture Use(s):	Hot-Mix Asphalt Surface Course, Mix C, N90
AC/PG:	PG64-22
RAP % (Max):	10
Design Air Voids:	4.0 %, 90 Gyratation Design
Mixture Composition: (Gradation Mixture)	IL-9.5 mm or IL12.5 mm
Friction Aggregate:	C Surface

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 Gyratation Design
Mixture Composition: (Gradation Mixture)	HMA Shoulders
Friction Aggregate:	None

- (A) PROPOSED HOT MIX ASPHALT SURFACE COURSE, MIX "C", N90, 1 1/2" TON
- (B) PROPOSED HOT-MIX ASPHALT SHOULDERS, 10" SQ YD
- (C) EXISTING HOT-MIX ASPHALT SHOULDER (8" TYP.)
- (D) EXISTING GROUND LINE
- (E) PROPOSED HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2" SQ YD
- (F) EXISTING PCC PAVEMENT, 8"
- (G) EXISTING HOT-MIX ASPHALT SURFACE, 2 1/2"
- (H) EXISTING SUBBASE GRANULAR MATERIAL, 4"
- (I) PROPOSED EARTH EXCAVATION
- (J) EXISTING AGGREGATE SHOULDER
- (K) PROPOSED PAVED SHOULDER REMOVAL, SQ YD

NOTE 1: PROPOSED SLOPE SHALL BE 4:1 OR GREATER TO CLEAR ZONE AND 3:1 OR GREATER THEREAFTER.
 NOTE 2: PROPOSED SLOPE 2.5:1 OR GREATER.

TYPICAL SECTION



TYPICAL SECTION WITHIN PAVEMENT REMOVAL

STA. 800+84 TO STA. 802+36

MIXTURE REQUIREMENTS

- (A) PROPOSED APPROACH OR CONNECTOR PAVEMENT
- (B) EXISTING SUBBASE GRANULAR MATERIAL, 4"
- (C) EXISTING HOT-MIX ASPHALT SHOULDER (8" TYP)
- (D) EXISTING GROUND LINE
- (E) PROPOSED PAVEMENT REMOVAL SOYD
- (F) EXISTING PCC PAVEMENT, 8"
- (G) EXISTING HOT-MIX ASPHALT SURFACE, 2 1/2"
- (H) EXISTING GUARDRAIL
- (I) PROPOSED GROUND LINE
- (J) PROPOSED SUBBASE GRANULAR MATERIAL, 4" TON
- (K) PROPOSED HOT-MIX ASPHALT SHOULDER, 10" SOYD
- (L) PROPOSED GUARDRAIL

NOTE 1: PROPOSED SLOPE 2.5:1 OR GREATER OR MATCH EXISTING.

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 IL12.5 mm
Friction Aggregate:	C Surface

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)	HMA Shoulders
Friction Aggregate:	None

FILE NAME = c:\projects\1222984\1222984.dgn	USER NAME = shepardgd	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TYPICAL SECTION	F.A.P. RTE. FAP 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 48	SHEET NO. 8
PLOT SCALE = 50,0000' / IN.		CHECKED - ---	REVISED - ---	SCALE: _____ SHEET NO. 8 OF 48 SHEETS STA. _____ TO STA. _____		FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT		CONTRACT NO. 98886		
PLOT DATE = 6/18/2008		DATE - ---	REVISED - ---							

PAVEMENT AND RESURFACING SCHEDULE

LOCATION STATION TO STATION	HOT-MIX ASPHALT SURFACE COURSE TON	PRIME COAT		HOT-MIX ASPHALT SHOULDERS, 10" SQ YD	HOT-MIX ASPHALT SURFACE REMOVAL 1 1/2" SQ YD	PAVED SHOULDER REMOVAL SQ YD	TEMPORARY RAMP SQ YD	PAVEMENT REMOVAL SQ YD
		BITUMINOUS MATERIALS GAL	AGGREGATE TON					
FAP RT. 322(US 51)								
798+50 TO 799+40 RT						40.0		
799+40 TO 800+00 RT						57.0		
800+00 TO 800+84 RT						122.3		
800+84 TO 801+20 RT						14.0		
801+62 TO 802+36 RT						34.1		
802+36 TO 802+76 RT						63.6		
802+76 TO 803+29 RT						57.4		
803+29 TO 803+58 RT						14.5		
799+70 TO 800+00 LT						14.3		
800+00 TO 800+50 LT						52.5		
800+50 TO 800+90 LT						59.6		
800+90 TO 801+57 LT						26.1		
801+90 TO 802+36 LT						17.9		
802+36 TO 802+60 LT						33.3		
802+60 TO 803+00 LT						58.9		
803+00 TO 803+96 LT						96.0		
803+96 TO 804+50 LT						24.0		
799+70 TO 799+90 LT				20.0				
799+90 TO 800+50 LT				83.3				
800+50 TO 800+84 LT				41.6				
• 800+84 TO 801+57 LT				20.3				247.6
801+98 TO 802+36 LT				10.6				
802+36 TO 803+00 LT	14.3	22.4	0.3	78.2	170.7			
803+00 TO 804+30 LT	29.1	47.5	0.5	180.6	346.7			
804+30 TO 804+50 LT	4.5	6.6	0.1	20.0	53.3		13.5	
798+50 TO 798+73 RT	5.2	7.6	0.1	23.0	61.3		13.5	
798+73 TO 799+43 RT	15.7	25.6	0.3	97.2	186.7			
799+43 TO 800+84 RT	32.9	50.8	0.6	172.3	376.0			
800+84 TO 801+21 RT				10.3				
• 801+62 TO 802+36 RT				20.6				247.6
802+36 TO 802+67 RT				37.9				
802+67 TO 803+34 RT				93.1				
803+34 TO 803+58 RT				24.0				
TOTALS	102	160	2	933	1195	785	27	495

*PAVEMENT REMOVAL LIMITS ARE STATION 800+84.0 TO 801+39.7 AND STATION 801+80.3 TO 802+36.0

FILE NAME = c:\projects\922984\922924.mxd	USER NAME = shepardgd	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT AND RESURFACING SCHEDULE	F.A.P. RTE. FAP 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 48	SHEET NO. 9
		DRAWN - ---	REVISED - ---							
		CHECKED - ---	REVISED - ---							
		DATE - ---	REVISED - ---							
					SCALE: _____	SHEET NO. 9 OF 48 SHEETS	STA. _____	TO STA. _____	FED. ROAD DIST. NO. _____ ILLINOIS FED. AID PROJECT	
									CONTRACT NO. 98886	

GUARDRAIL SCHEDULE

LOCATION STATION TO STATION	LENGTH (FOR INFORMATION ONLY)	GUARDRAIL REMOVAL	STEEL PLATE BEAM GUARDRAIL, TYPE A	TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)	TRAFFIC BARRIER TERMINAL, TYPE 6	TERMINAL MARKER DIRECT APPLIED
	FEET	FOOT	FOOT	EACH	EACH	EACH
FAP RT. 322(US 51)						
798+93.75 TO 799+43.75 RT	50.00			1		1
799+43.75 TO 800+81.25 RT	137.50		137.5			
800+06.00 TO 801+25.00 RT	119.00	119				
800+81.25 TO 801+25.00 RT	43.75				1	
801+63.00 TO 802+06.75 RT	43.75				1	
801+63.00 TO 802+77.00 RT	114.00	114				
802+06.75 TO 802+69.25 RT	62.50		62.5			
802+69.25 TO 803+19.25 RT	50.00			1		1
800+00.75 TO 800+50.75 LT	50.00			1		1
800+50.75 TO 801+13.25 LT	62.50		62.5			
800+43.00 TO 801+57.00 LT	114.00	114				
801+13.25 TO 801+57.00 LT	43.75				1	
801+95.00 TO 802+38.75 LT	43.75				1	
801+95.00 TO 803+13.00 LT	118.00	118				
802+38.75 TO 803+63.75 LT	125.00		125.0			
803+63.75 TO 804+13.75 LT	50.00			1		1
TOTALS			465	387.5	4	4

EARTHWORK SCHEDULE

LOCATION STAGE OF CONSTRUCTION	EARTH EXCAVATION	EMBANKMENT	CHANNEL EXCAVATION (UNSUITABLE)	SHRINKAGE FACTOR	EXCAVATION ADJUSTED FOR SHRINKAGE	EXCAVATION REQUIRED TO COMPLETE	BORROW EXCAVATION*
	CU YD	CU YD	CU YD		CU YD	CU YD	CU YD
FAP RT. 322(US 51)							
STAGE I	65	72	291	0.24	49	23	23
TOTALS	65		291				23

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

SEEDING AND EROSION CONTROL SCHEDULE

LOCATION STATION TO STATION	SEEDING CLASS 2 (MODIFIED) ACRE	SEEDING CLASS 7 (TEMPORARY) ACRE	NITROGEN FERTILIZER NUTRIENTS		PHOSPHORUS FERTILIZER NUTRIENTS POUND	POTASSIUM FERTILIZER NUTRIENTS POUND	AGRICULTURAL GROUND LIMESTONE TON	MULCH METHOD 2 FOR CLASS 2 ACRE	MULCH METHOD 2 FOR CLASS 7 ACRE	TEMPORARY EROSION CONTROL SEEDING POUND
			CLASS 2 POUND	CLASS 7 POUND						
FAP RT. 322(US 51)										
798+55.00 TO 800+84.00 RT	0.1	0.1	12	4	12	12	0.2	0.1	0.1	20
801+66.00 TO 803+40.00 RT	0.1	0.1	12	4	12	12	0.2	0.1	0.1	20
798+69.00 TO 801+53.00 LT	0.1	0.1	12	4	12	12	0.2	0.1	0.1	20
802+33.00 TO 804+43.00 LT	0.1	0.1	12	4	12	12	0.2	0.1	0.1	20
	0.50	0.50	48	16	48	48	1	0.50	0.50	80
			64					1.00		

PAVEMENT MARKING SCHEDULE

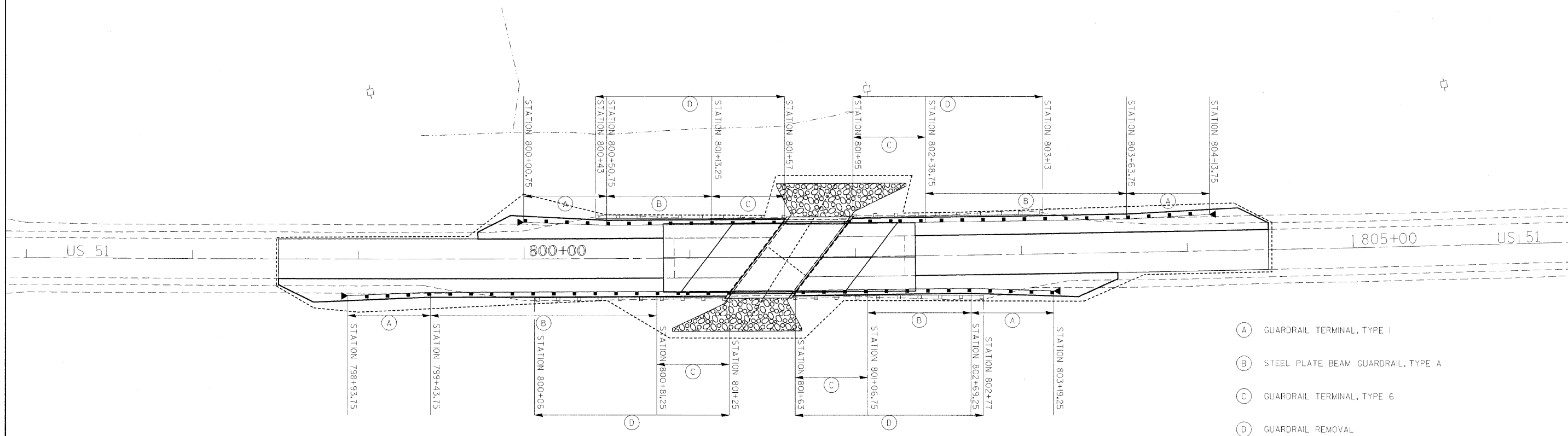
LOCATION STATION TO STATION	LENGTH (FOR INFORMATION ONLY) FEET	PAVEMENT MARKING REMOVAL SQ FT	TEMPORARY PAVEMENT MARKING LINE - 4"		PAINT PAVEMENT MARKING - LINE 4"		SHORT TERM PAVEMENT MARKING FOOT	WORK ZONE PAVEMENT MARKING REMOVAL SQ FT	RAISED REFLECTIVE PAVEMENT MARKERS EACH	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL EACH
			WHITE FOOT	YELLOW FOOT	WHITE FOOT	YELLOW FOOT				
FAP RT. 322(US 51)										
798+50 TO 804+50	600.0	850.0	1200.0	150.0	1200.0	150.0	102.5	34.2	8	8
TOTALS		850	1200	150	1200	150	103	34	8	8
			1350		1350					

TEMPORARY CONCRETE BARRIER SCHEDULE

LOCATION STATION TO STATION	NUMBER OF BARRIER (FOR INFORMATION ONLY)	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER	COMMENTS
	EACH	FOOT	FOOT	
FAP RT. 322(US 51)				
STAGE I				
799+37 TO 800+37	8	100.0		12: 1 TAPER
800+37 TO 800+50	1	12.5		20: 1 TAPER
800+50 TO 802+63	17	212.5		TANGENT
802+63 TO 802+75	1	12.5		20: 1 TAPER
801+62 TO 803+37	5	62.5		12: 1 TAPER
STAGE II				
799+60 TO 800+48	7		87.5	12: 1 TAPER
800+48 TO 800+61	1		12.5	20: 1 TAPER
800+61 TO 802+61	16		200.0	TANGENT
801+98 TO 802+73	1		12.5	20: 1 TAPER
802+73 TO 804+10	11	50.0	87.5	12: 1 TAPER
TOTALS		450	400	

FILE NAME = c:\projects\1902984\1902984ms.dgn	USER NAME = shepardgd	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER SCHEDULE	F.A.P. RTE. FAP 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 48	SHEET NO. 12
PLOT SCALE = 50,0000' / IN.	CHECKED - ---	REVISED - ---	REVISED - ---	SCALE: _____	SHEET NO. 12 OF 48 SHEETS	STA. _____ TO STA. _____	FED. ROAD DIST. NO. _____	ILLINOIS FED. AID PROJECT	CONTRACT NO. 98886	
PLOT DATE = 6/18/2008	DATE - -----	REVISED - ---	REVISED - ---							

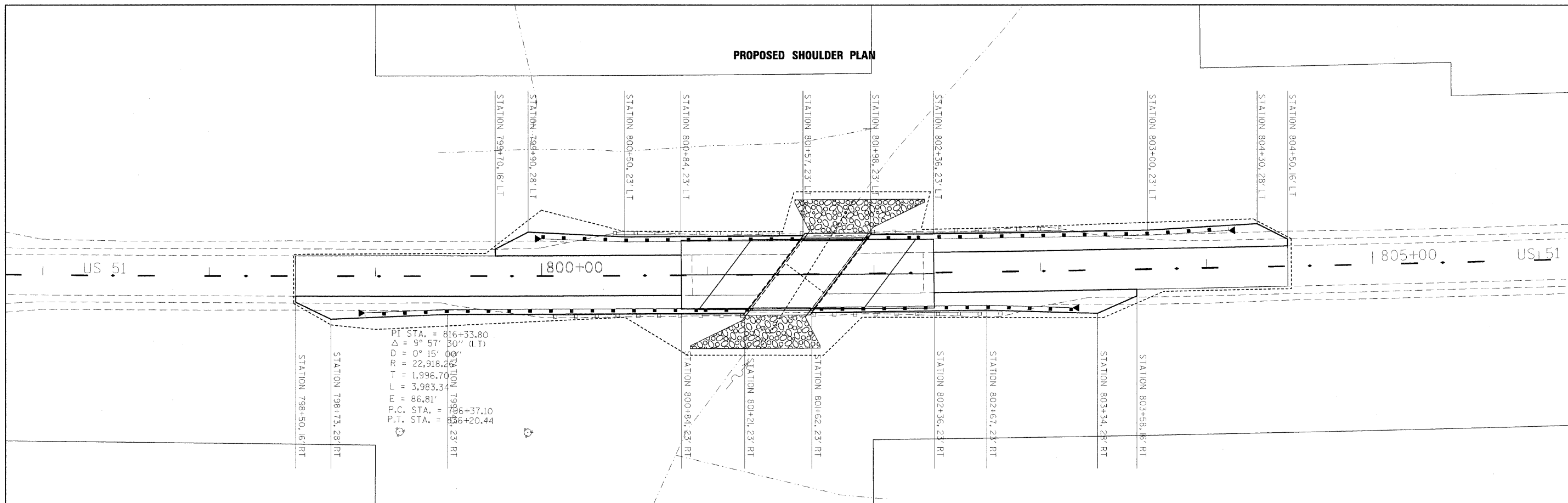
GUARDRAIL AND GUARDRAIL REMOVAL PLAN



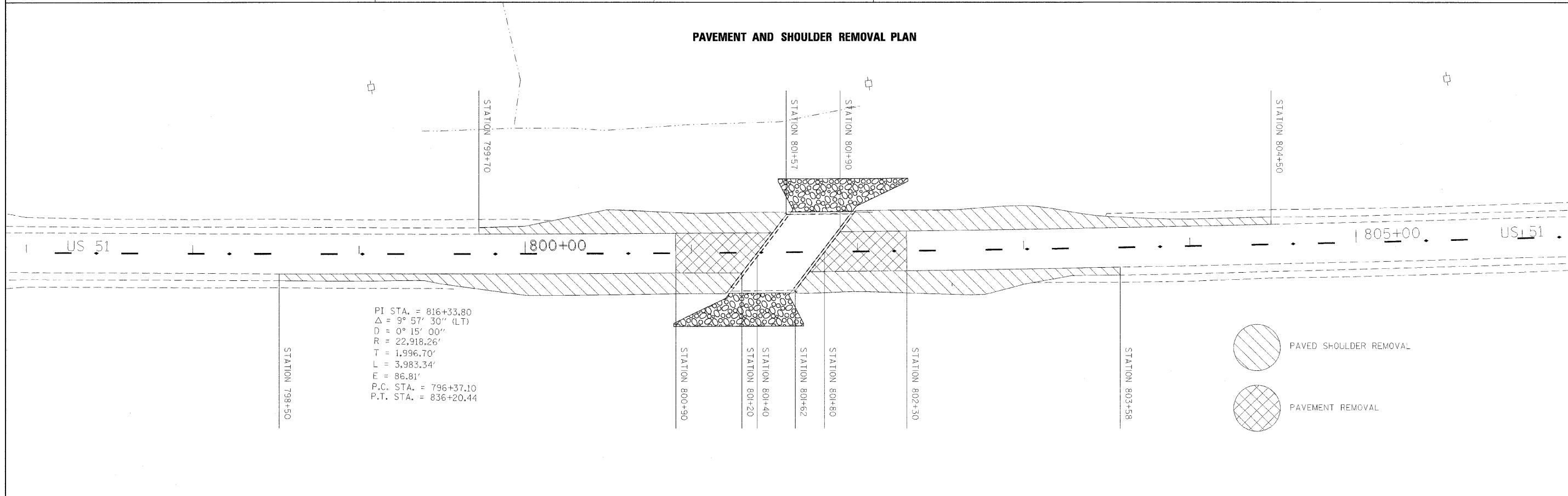
- (A) GUARDRAIL TERMINAL, TYPE 1
- (B) STEEL PLATE BEAM GUARDRAIL, TYPE A
- (C) GUARDRAIL TERMINAL, TYPE 6
- (D) GUARDRAIL REMOVAL

FILE NAME = c:\projects\1902984\1902984pl.dgn	USER NAME = shepardgd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SEEDING/EROSION CONTROL AND GUARDRAIL/GUARDRAIL REM. PLAN	F.A.P. RTE. 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 47	SHEET NO. 15
	PLOT SCALE = 30.0000' / IN.	CHECKED -	REVISED -			CONTRACT NO. 98886				
	PLOT DATE = 6/18/2008	DATE -	REVISED -			FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
	SCALE:		SHEET NO. 15 OF 47 SHEETS			STA. TO STA.				

PROPOSED SHOULDER PLAN



PAVEMENT AND SHOULDER REMOVAL PLAN



FILE NAME = c:\projects\4902934\4902934pl.dgn	USER NAME = shepardgd	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	PAVEMENT/SHOULDER REMOVAL PLAN			F.A.P. RTE. 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 47	SHEET NO. 16
	PLOT SCALE = 30,0000' / IN.	DRAWN -	REVISED -		SCALE:	SHEET NO. 16 OF 47 SHEETS	STA.	TO STA.	CONTRACT NO. 98886		FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT
	PLOT DATE = 6/18/2008	CHECKED -	REVISED -									
		DATE -	REVISED -									

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

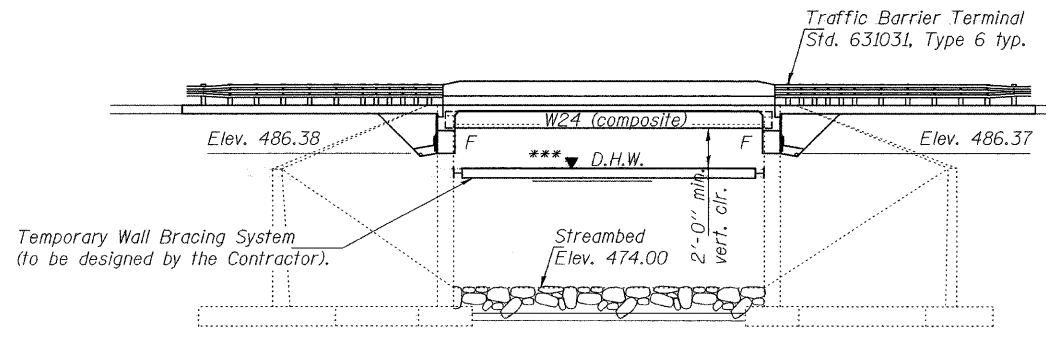
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	17	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #98886

Bench Mark: B.M. 9 is chiseled square on the N.W. wingwall of S.N. 091-0022 at Sta. 801+19.2, 26.5 feet right of U.S. 51. Elev. 492.51

Existing Structure: S.N. 091-0022 Built 1962 as F.A. Route 2, Section 12-1B at Station 801+60 as a simple span reinforced concrete channel Nelson beams 40'-4" Bk.-to-Bk. abutments 48'-9" O.-O. deck. Closed abutments supported on spread footings. The existing superstructure is to be removed and replaced. Traffic to be maintained utilizing stage construction.

No salvage



- INDEX OF SHEETS**
1. General Plan and Elevation
 2. General Details
 3. Temporary Concrete Barrier
 4. Stage Construction Details
 5. Top of Slab Elevations
 6. Top of Slab Elevations
 7. North Approach Elevations
 8. South Approach Elevations
 9. Superstructure
 10. Superstructure Details
 11. Diaphragm Details
 12. Structural Steel
 13. Structural Steel Details
 14. Concrete Removal N. Abutment
 15. Concrete Removal S. Abutment
 16. North Abutment
 17. South Abutment
 18. Temporary Support System
 19. Bar Splicer Assembly Details
 20. Cantilever Forming Bracket

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 3/4 in. ϕ , holes 15/16 in. ϕ , unless otherwise noted.
Calculated weight of Structural Steel = 2,090 (AASHTO M270 Gr. 36) = 20,330 (AASHTO M270 Gr. 50)

No field welding is permitted except as specified in the contract documents. Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

The concrete for bridge decks finished according to Article 503.16(a) of the Standard Specifications shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The machine used for finishing shall be set parallel to the skew for striking off and screeding the concrete.

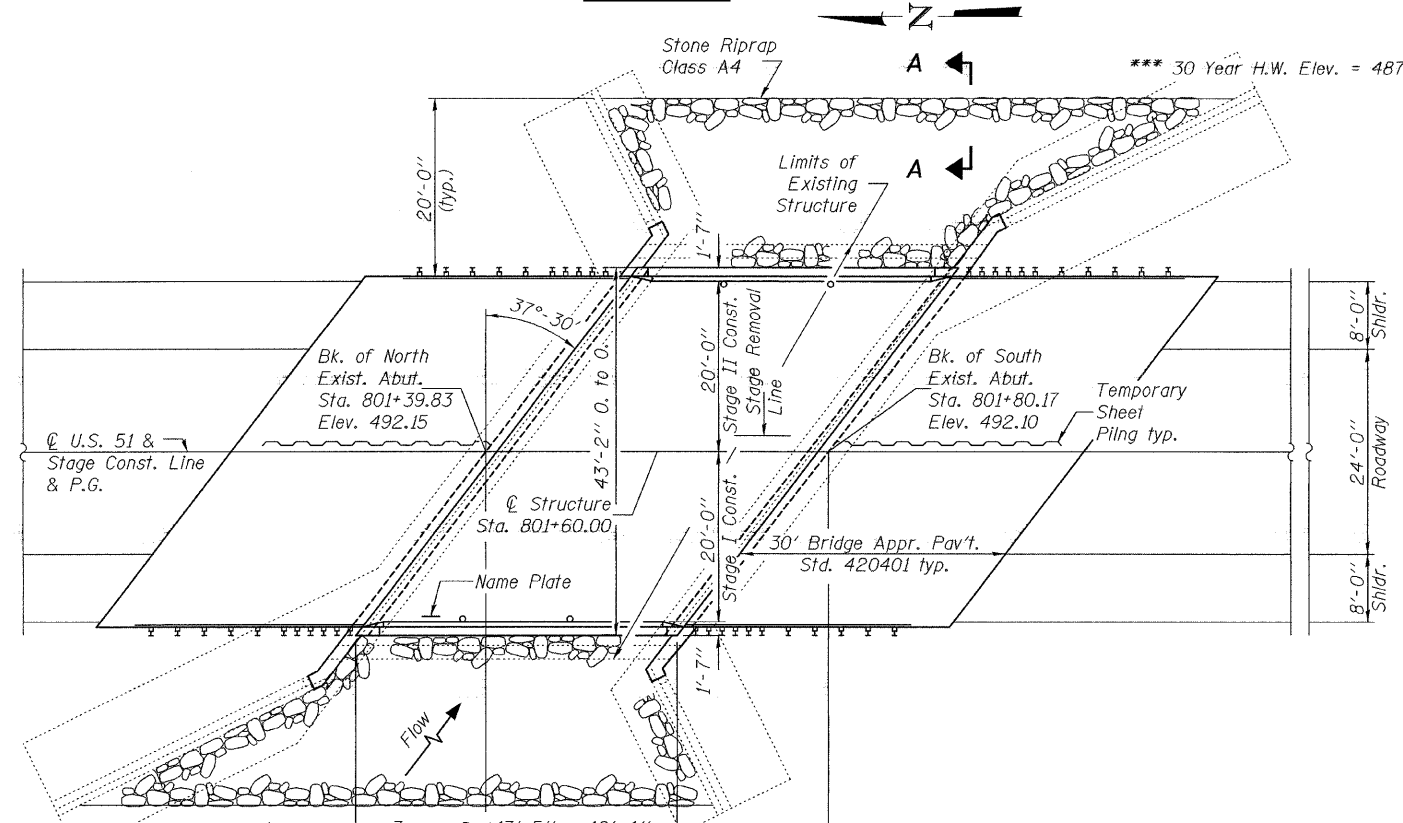
The Contractor shall connect the first sheet to the existing abutment wall to ensure stability of sheets driven to the top of the existing footing. This connection shall be reviewed and accepted by the Engineer and included in the cost for Temporary Sheet Piling.

Slip forming of the parapets is not allowed on this contract. Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions

Reinforcement bars designated (E) shall be epoxy coated.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be gray, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision for "Cleaning and Painting New Metal Structures".

ELEVATION



STATION 801+60.00
REBUILT 20 BY
STATE OF ILLINOIS
F.A.P. RTE. 322 SEC. 12-1, BR
LOADING HL93
STRUCTURE NO. 091-0022

NAME PLATE

See Std. 515001

Existing nameplate shall be cleaned and incorporated next to new name plate. Cost included with Name Plates.

TOTAL BILL OF MATERIAL

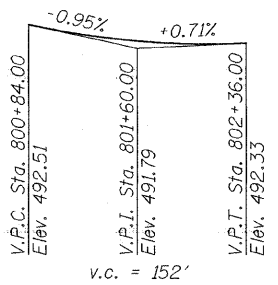
ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		97	97
Stone Riprap, Class A4	Sq. Yd.		416	416
Filter Fabric	Sq. Yd.		416	416
Protective Coat	Sq. Yd.		208	208
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.	18.8		18.8
Structure Excavation	Cu. Yd.		97	97
Floor Drains	Each	4		4
Concrete Structures	Cu. Yd.		22.1	22.1
Concrete Superstructure	Cu. Yd.	68.9		68.9
Bridge Deck Grooving	Sq. Yd.	164.8		164.8
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	1,116		1,116
Reinforcement Bars, Epoxy Coated	Pound	13,500	3,940	17,440
Bar Splicers	Each	229	16	245
Temporary Sheet Piling	Sq. Ft.		195	195
Name Plates	Each	1		1
Anchor Bolts, 1" ϕ	Each	24		24
Geocomposite Wall Drain	Sq. Yd.		31	31
Pipe Underdrains for Structures, 4"	Foot		152	152
Structural Repair of Concrete < 5"	Sq. Ft.		311	311
Temporary Wall Bracing System	L. Sum	1		1
Furnishing and Erecting Structural Steel	Pound		25,750	25,750

EXISTING CURVE DATA

PI Sta. = 816+33.80
 $\Delta = 9^\circ-57'-30''$ (LT)
 $D = 0^\circ-15'-00''$
 $R = 22,918.26'$
 $T = 1,996.70'$
 $L = 3,983.34'$
 $E = 86.81'$
P.C. Sta. = 796+37.10
P.T. Sta. = 836+20.44

**Since radius is so large build bridge straight. Curve Data for information only.

PLAN



PROFILE GRADE
(along ϕ U.S. Rte. 51)

LOADING HL-93

(Superstructure only)
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications
U.S. 4th. Edition

DESIGN STRESSES

FIELD UNITS (New Construction)

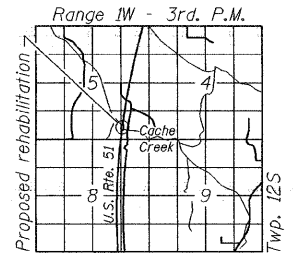
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_y = 50,000$ psi (AASHTO M270 Gr. 50)
 $f_y = 36,000$ psi (AASHTO M270 Gr. 36)

FIELD UNITS (Existing Construction)

$f'_c = 1,400$ psi (super.)
 $f'_c = 1,000$ psi (sub.)
 $f_s = 20,000$ psi (reinforcement)

SEISMIC DATA

Seismic Performance Zone (SPZ) = 2
Bedrock Acceleration Coefficient (A) = 0.14g
Site Coefficient (S) = 1.2



LOCATION SKETCH

GENERAL PLAN & ELEVATION

U.S. ROUTE 51 OVER
CACHE CREEK
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

DESIGNED: *Patrick M. Bohne*
CHECKED: *Jay D. Edwards*
WDC UGDF
DRAWN: BECKY M. LEACH
CHECKED: *AMP JDE*

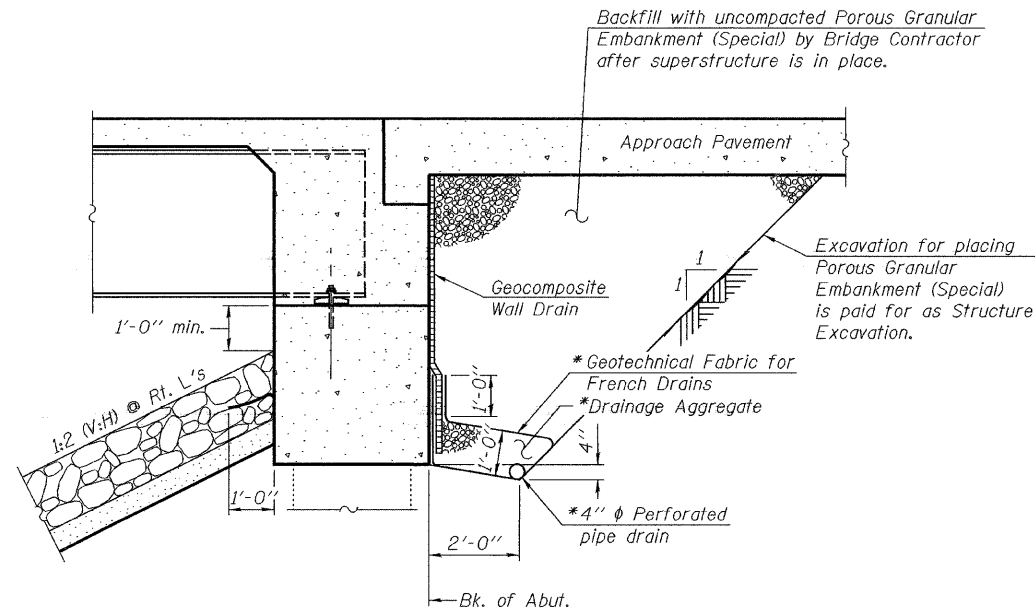
EXAMINED: *Wm. J. ...*
PASSED: *Ralph J. ...*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	18	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

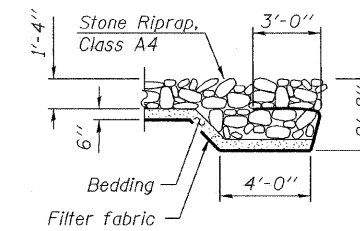
Contract #98886



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

* Included in the cost of Pipe Underdrains for Structures.

Note:
See sheets 16 and 17 of 20 for Drainage System
Detail at outside edge of abutments.



SECTION A-A

DESIGNED Patrick M. Petrone	July 22, 2008
CHECKED Jay D. Edwards	EXAMINED <i>Thomas J. Damagalki</i> ENGINEER OF BRIDGE DESIGN
DRAWN BECKY M. LEACH	PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES
CHECKED PMP/JDE	

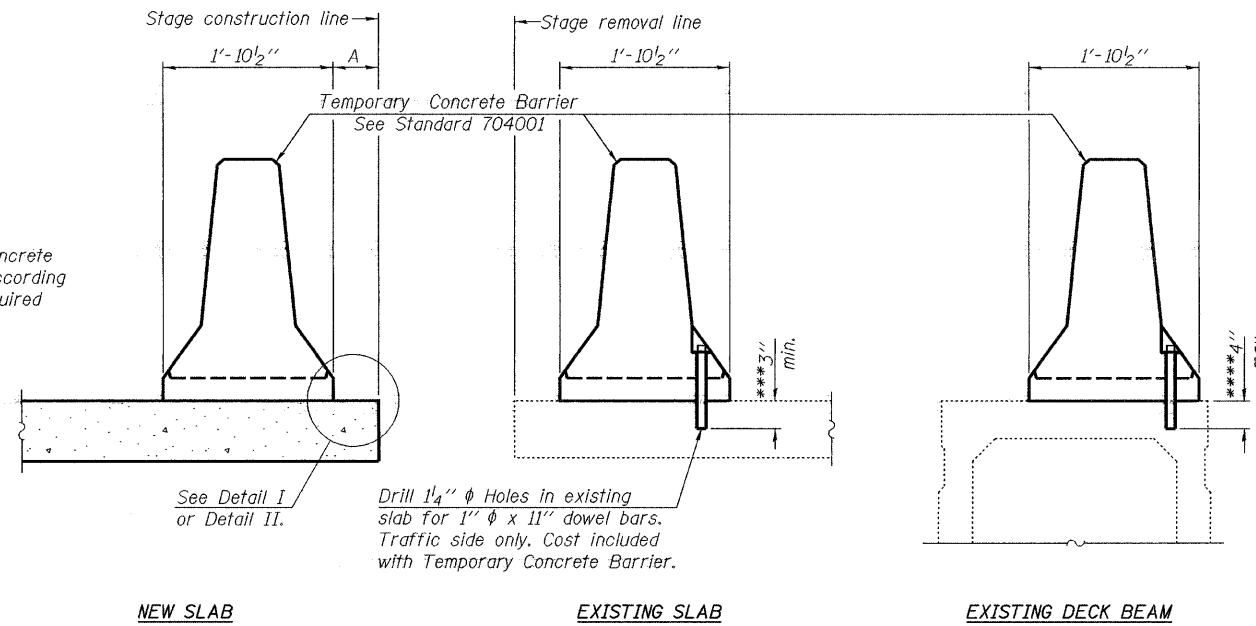
GENERAL DETAILS
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 20 SHEETS
F.A.P. 322	12-1. BR	UNION	36	19	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #98886

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

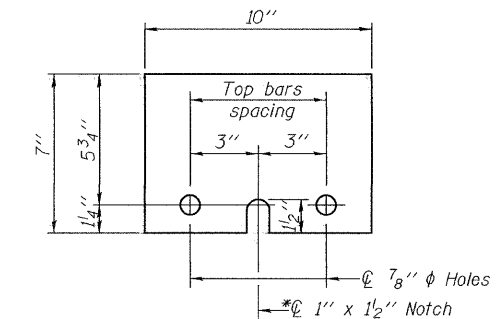
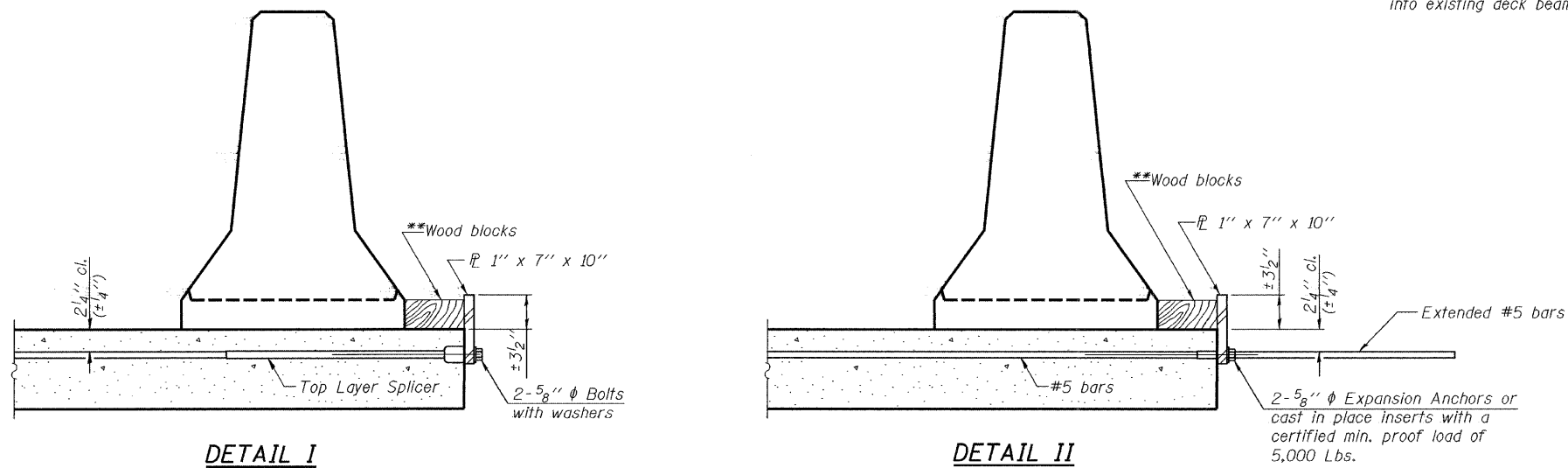


NOTES

- Detail I - With Bar Splicer or Couplers:**
Connect one (1) 1"x7"x10" steel \bar{L} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:**
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete slab or concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

SECTIONS THRU SLAB OR DECK BEAM

- ***Dimension shown is minimum required embedment into concrete. If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.
- ***If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



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

* Required only with Detail II

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

**TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
F.A.P. ROUTE 322 - SECTION 12-1. BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022**

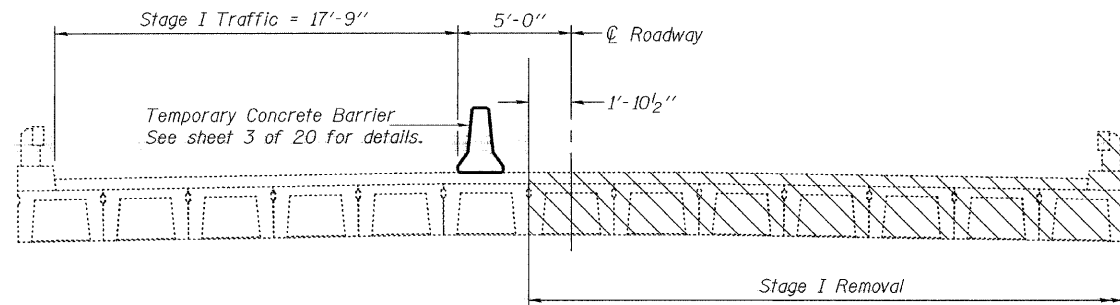
DESIGNED Patrick M. Petrone	EXAMINED Thomas J. Domagalaki
CHECKED Jay D. Edwards	PASSED Ralph E. Anderson
DRAWN BECKY M. LEACH	
CHECKED PMP/JDE	

R-27 9-3-07

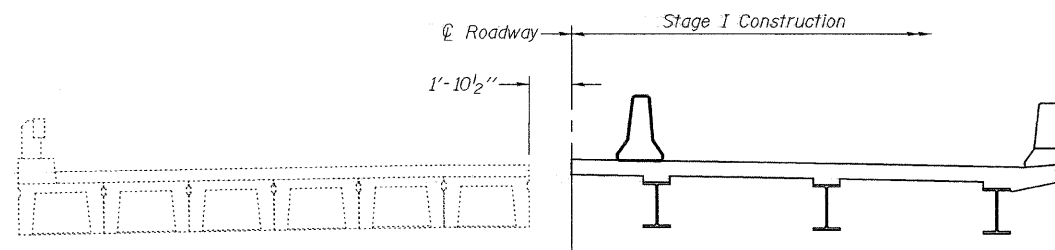
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 4
F.A.P. 322	12-1, BR	UNION	36	20	20 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

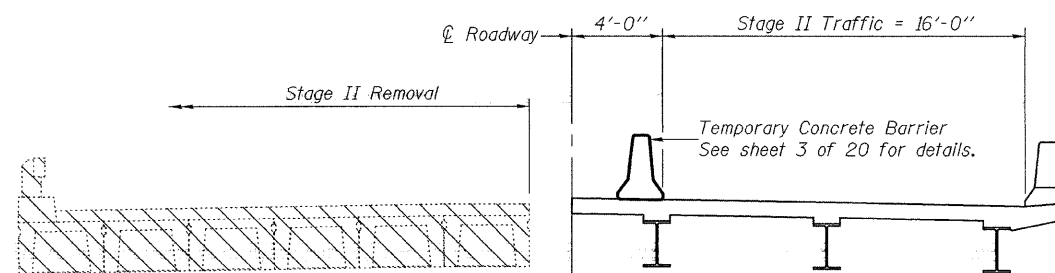
Contract #98886



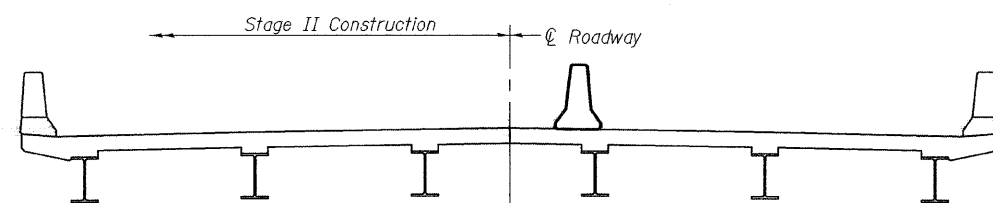
STAGE I REMOVAL



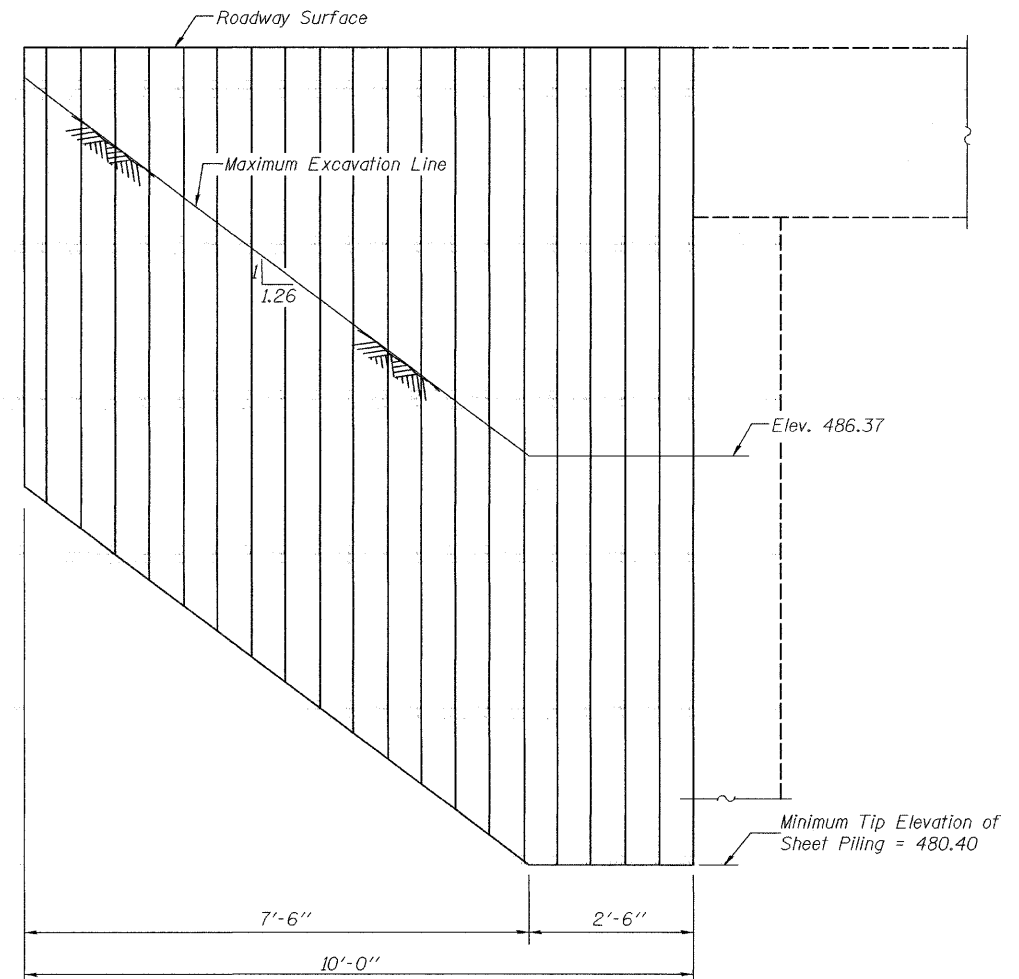
STAGE I CONSTRUCTION



STAGE II REMOVAL



STAGE II CONSTRUCTION



TEMPORARY SHEET PILING

Dimensions parallel to \varnothing of Roadway

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

Notes:

All cross sections are looking South.
The removal of the existing bituminous wearing surface and the bridge rail is included in the Removal of Existing Superstructures.

DESIGNED	Patrick M. Petrone
CHECKED	Jay D. Edwards
DRAWN	BECKY M. LEACH
CHECKED	PMP/JDE

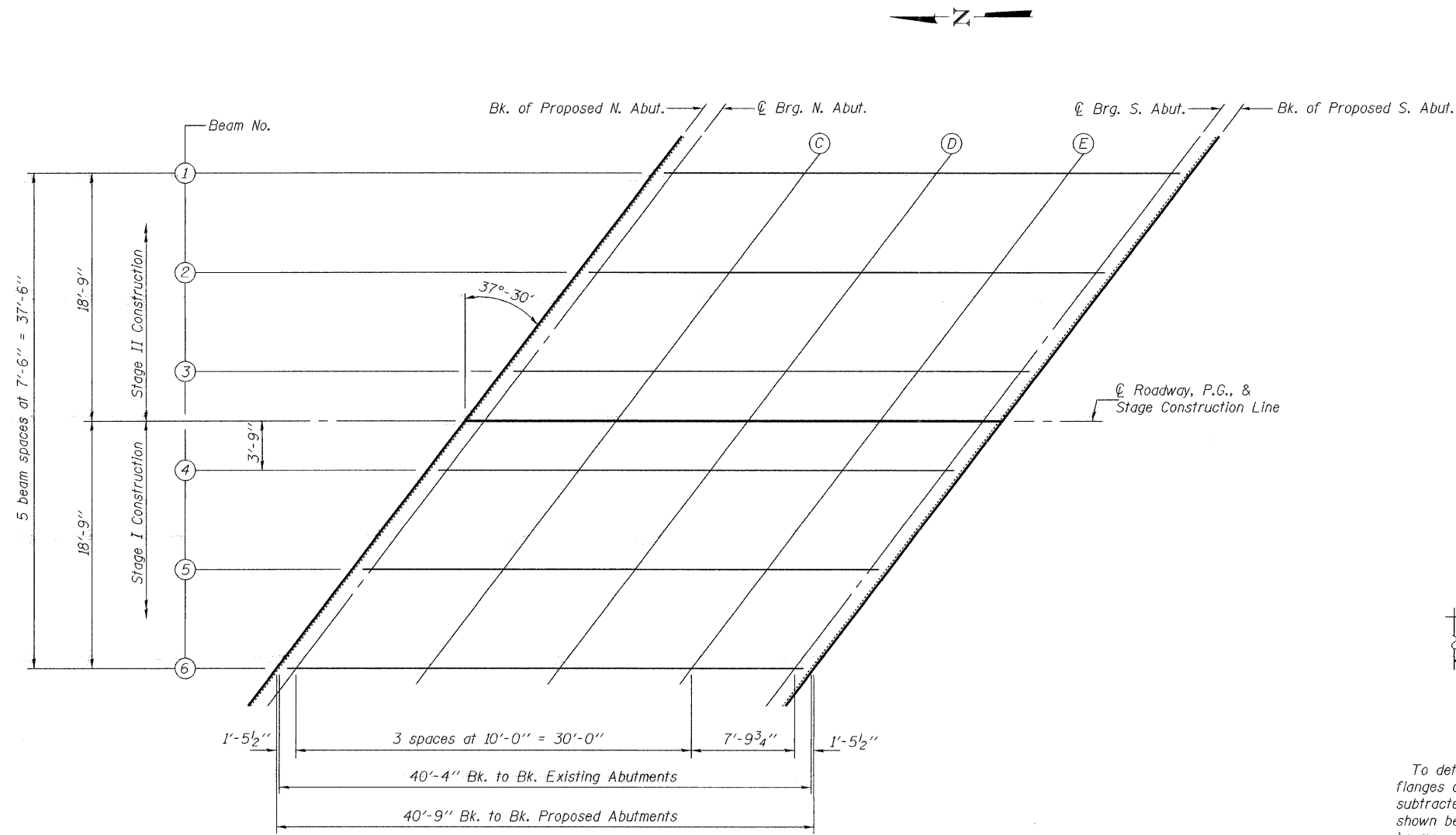
EXAMINED	Thomas J. Damagalki	July 22, 2008
PASSED	Ralph E. Anderson	

STAGE CONSTRUCTION DETAILS
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

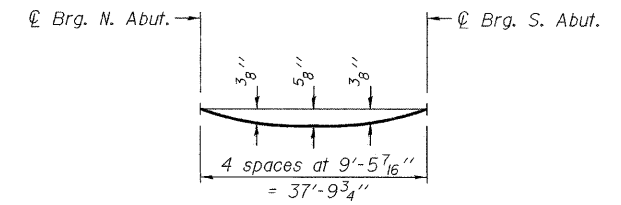
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	21	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #98886



PLAN

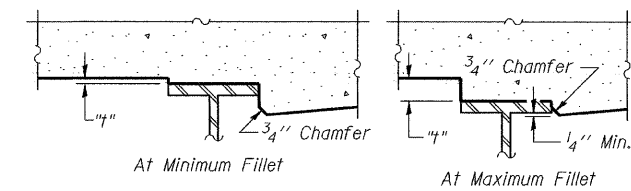


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

Note:

The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 6 of 20.



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on sheet 6 of 20. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

DESIGNED	Patrick M. Petrone
CHECKED	Jay D. Edwards
DRAWN	BECKY M. LEACH
CHECKED	PMP/JDE

	July 22, 2008
EXAMINED	<i>Thomas J. Damagalki</i>
PASSED	<i>Ralph E. Anderson</i>

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	22	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #98886

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of Exist. N. Abut.	80154.22	-18.75	491.79	491.79
@ Brg. N. Abut.	80155.48	-18.75	491.78	491.78
C	80165.48	-18.75	491.77	491.81
D	80175.48	-18.75	491.77	491.82
E	80185.48	-18.75	491.78	491.81
@ Brg. S. Abut.	80193.29	-18.75	491.80	491.80
Bk. of Exist. S. Abut.	80194.55	-18.75	491.80	491.80

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of Exist. N. Abut.	80148.47	-11.25	491.95	491.95
@ Brg. N. Abut.	80149.73	-11.25	491.95	491.95
C	80159.73	-11.25	491.93	491.96
D	80169.73	-11.25	491.92	491.97
E	80179.73	-11.25	491.93	491.95
@ Brg. S. Abut.	80187.54	-11.25	491.94	491.94
Bk. of Exist. S. Abut.	80188.80	-11.25	491.94	491.94

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of Exist. N. Abut.	80142.71	-3.75	492.08	492.08
@ Brg. N. Abut.	80143.97	-3.75	492.08	492.08
C	80153.97	-3.75	492.06	492.09
D	80163.97	-3.75	492.04	492.09
E	80173.97	-3.75	492.04	492.07
@ Brg. S. Abut.	80181.78	-3.75	492.05	492.05
Bk. of Exist. S. Abut.	80183.04	-3.75	492.05	492.05

@ ROADWAY, PROFILE GRADE, & STAGE CONST. JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of Exist. N. Abut.	80139.83	0.00	492.15	492.15
@ Brg. N. Abut.	80141.09	0.00	492.15	492.15
C	80151.09	0.00	492.12	492.15
D	80161.09	0.00	492.10	492.15
E	80171.09	0.00	492.10	492.13
@ Brg. S. Abut.	80178.91	0.00	492.10	492.10
Bk. of Exist. S. Abut.	80180.17	0.00	492.10	492.10

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of Exist. N. Abut.	80136.96	3.75	492.10	492.10
@ Brg. N. Abut.	80138.22	3.75	492.10	492.10
C	80148.22	3.75	492.07	492.10
D	80158.22	3.75	492.05	492.09
E	80168.22	3.75	492.04	492.07
@ Brg. S. Abut.	80176.03	3.75	492.04	492.04
Bk. of Exist. S. Abut.	80177.29	3.75	492.04	492.04

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of Exist. N. Abut.	80131.20	11.25	492.01	492.01
@ Brg. N. Abut.	80132.46	11.25	492.00	492.00
C	80142.46	11.25	491.97	492.00
D	80152.46	11.25	491.94	491.99
E	80162.46	11.25	491.93	491.95
@ Brg. S. Abut.	80170.27	11.25	491.92	491.92
Bk. of Exist. S. Abut.	80171.53	11.25	491.92	491.92

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. of Exist. N. Abut.	80125.45	18.75	491.88	491.88
@ Brg. N. Abut.	80126.71	18.75	491.88	491.88
C	80136.71	18.75	491.84	491.87
D	80146.71	18.75	491.80	491.85
E	80156.71	18.75	491.78	491.81
@ Brg. S. Abut.	80164.52	18.75	491.77	491.77
Bk. of Exist. S. Abut.	80165.78	18.75	491.77	491.77

DESIGNED Patrick M. Petrone
CHECKED Jay D. Edwards
DRAWN BECKY M. LEACH
CHECKED PMP/JDE

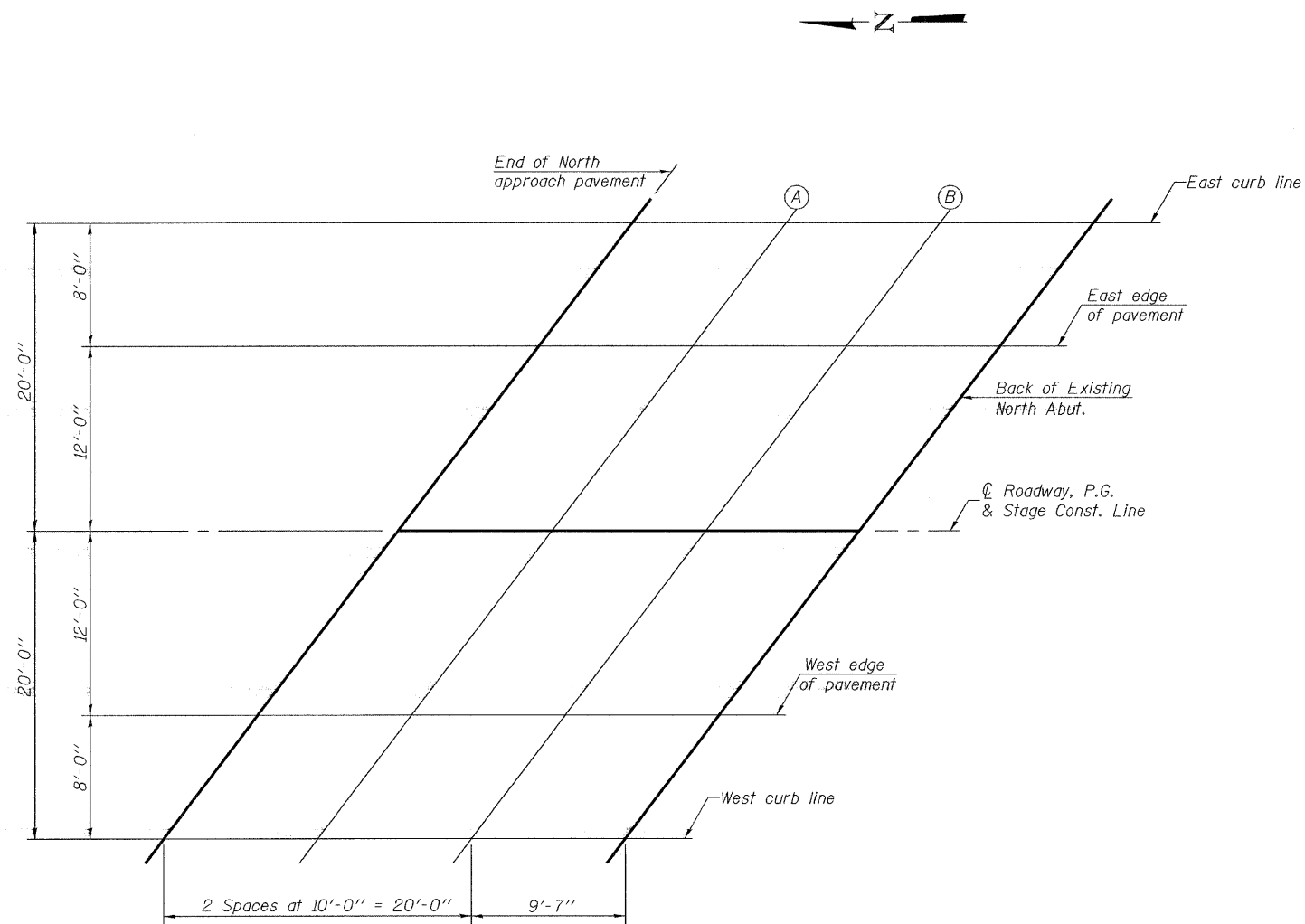
EXAMINED <i>Thomas J. Domagala</i>	July 22, 2008
PASSED <i>Ralph E. Anderson</i>	

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 36	SHEET NO. 23	SHEET NO. 7 20 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #98886



PLAN

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End of N. Appr. Pav't	80125.60	-20.00	491.86	
A	80135.60	-20.00	491.81	
B	80145.60	-20.00	491.78	
Bk. of Exist. N. Abut.	80155.60	-20.00	491.76	

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End of N. Appr. Pav't	80119.46	-12.00	492.06	
A	80129.46	-12.00	492.01	
B	80139.46	-12.00	491.97	
Bk. of Exist. N. Abut.	80149.04	-12.00	491.94	

ROADWAY, P.G. & STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End of N. Appr. Pav't	80110.25	0.00	492.30	
A	80120.25	0.00	492.24	
B	80130.25	0.00	492.19	
Bk. of Exist. N. Abut.	80139.83	0.00	492.15	

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End of N. Appr. Pav't	80101.04	12.00	492.18	
A	80111.04	12.00	492.11	
B	80121.04	12.00	492.05	
Bk. of Exist. N. Abut.	80130.63	12.00	492.00	

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
End of N. Appr. Pav't	80094.90	20.00	492.06	
A	80104.90	20.00	491.99	
B	80114.90	20.00	491.92	
Bk. of Exist. N. Abut.	80124.49	20.00	491.86	

DESIGNED Patrick M. Petrone	EXAMINED Thomas J. Domagala
CHECKED Jay D. Edwards	PASSED Ralph E. Anderson
DRAWN BECKY M. LEACH	
CHECKED PMP/JDE	

July 22, 2008
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

NORTH APPROACH
TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 8 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	24	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #98886

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Bk. of Exist. S. Abut.	80195.51	-20.00	491.78	
F	80205.51	-20.00	491.81	
G	80215.51	-20.00	491.85	
End of S. Appr. Pav't	80225.10	-20.00	491.91	

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Bk. of Exist. S. Abut.	80189.37	-12.00	491.93	
F	80199.37	-12.00	491.96	
G	80209.37	-12.00	491.99	
End of S. Appr. Pav't	80218.96	-12.00	492.04	

☉ ROADWAY, P.G. & STAGE CONSTRUCTION JOINT

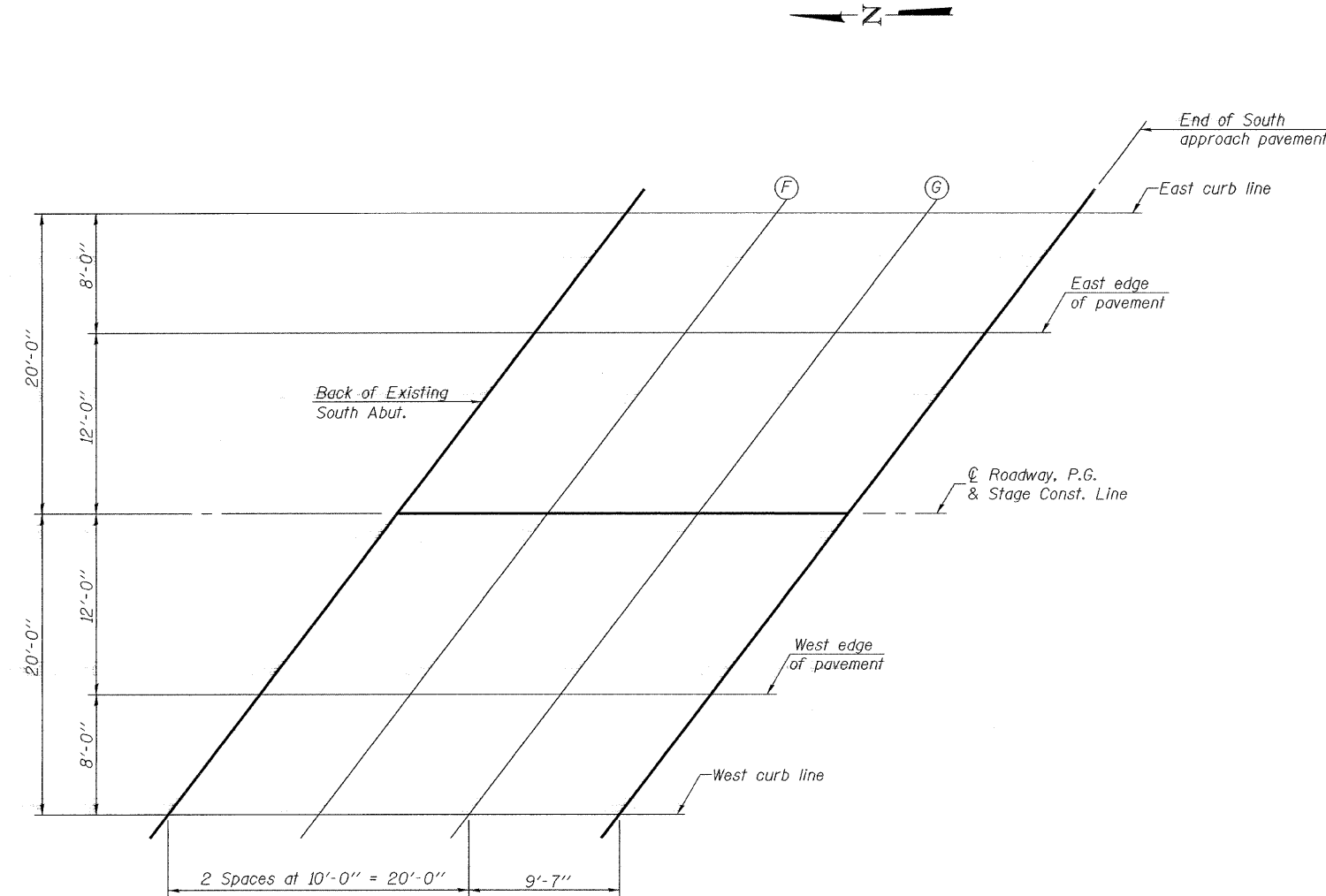
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Bk. of Exist. S. Abut.	80180.17	0.00	492.10	
F	80190.17	0.00	492.12	
G	80200.17	0.00	492.15	
End of S. Appr. Pav't	80209.75	0.00	492.18	

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Bk. of Exist. S. Abut.	80170.96	12.00	491.91	
F	80180.96	12.00	491.92	
G	80190.96	12.00	491.93	
End of S. Appr. Pav't	80200.54	12.00	491.96	

WEST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Grinding
Bk. of Exist. S. Abut.	80164.82	20.00	491.75	
F	80174.82	20.00	491.75	
G	80184.82	20.00	491.76	
End of S. Appr. Pav't	80194.40	20.00	491.78	



PLAN

DESIGNED Patrick M. Petrone	EXAMINED Thomas J. Domagalicki ENGINEER OF BRIDGE DESIGN
CHECKED Jay D. Edwards	PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES
DRAWN BECKY M. LEACH	
CHECKED PMP/JDE	

SOUTH APPROACH
TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

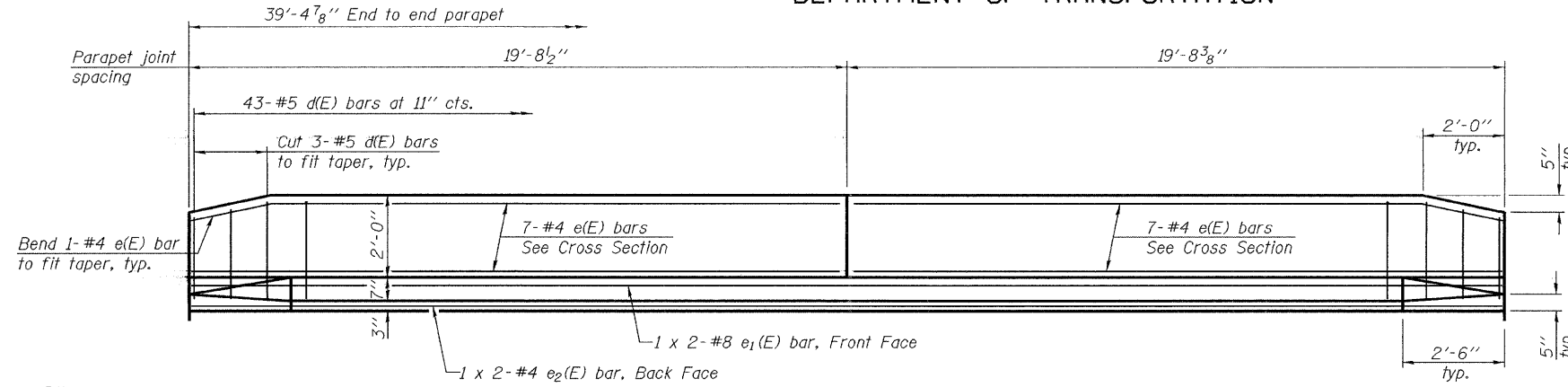
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 20 SHEETS
F.A.P. 322	12-1. BR	UNION	36	26	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

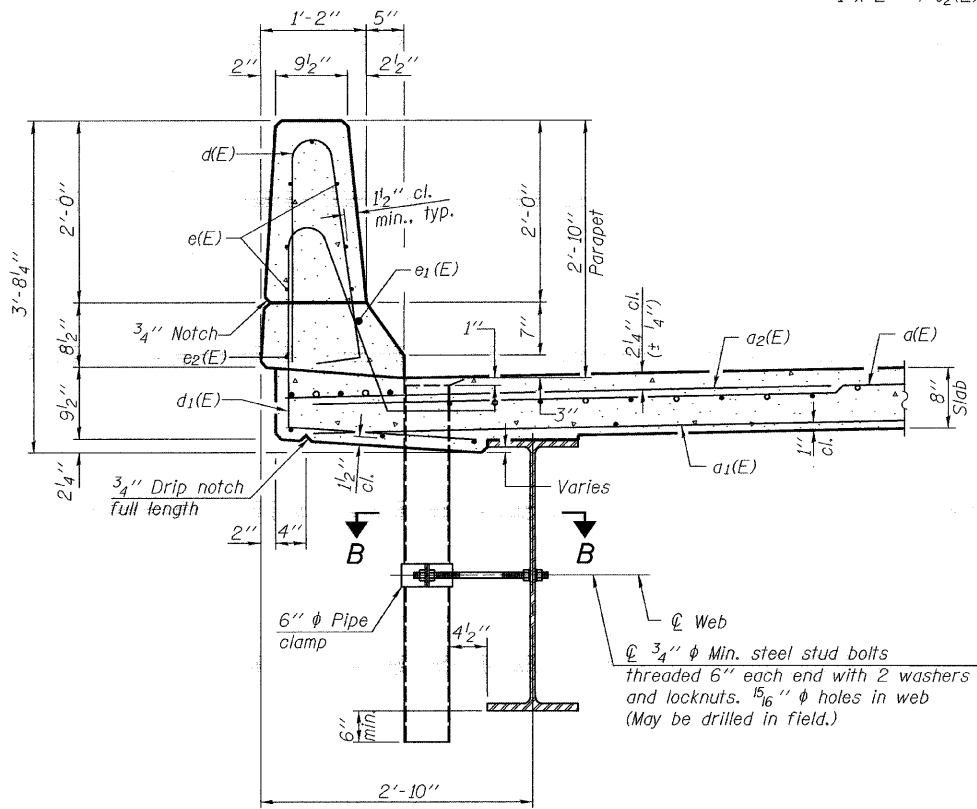
Contract #98886

MINIMUM BAR LAP

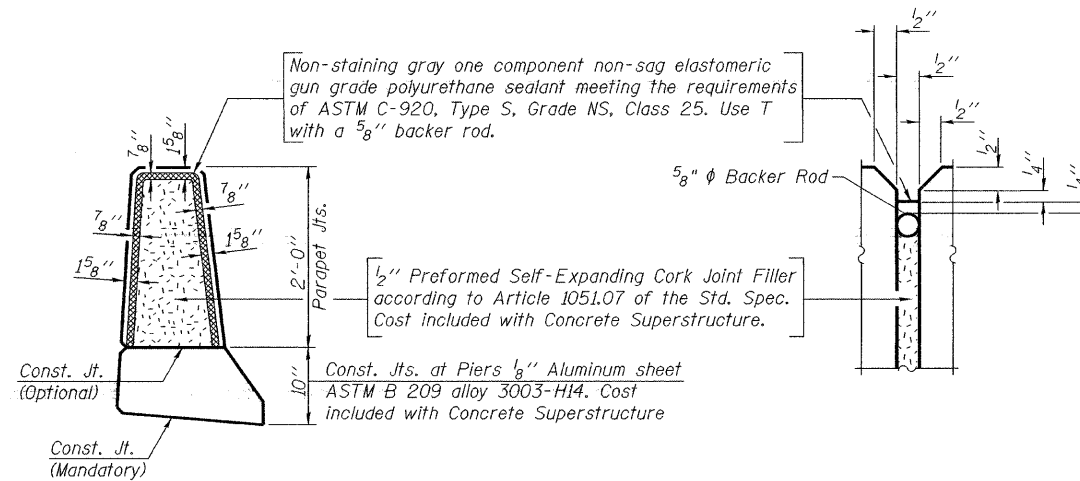
- #4 bar = 1'-8"
- #5 bar = 2'-2"
- #8 bar = 3'-5"



INSIDE ELEVATION OF PARAPET

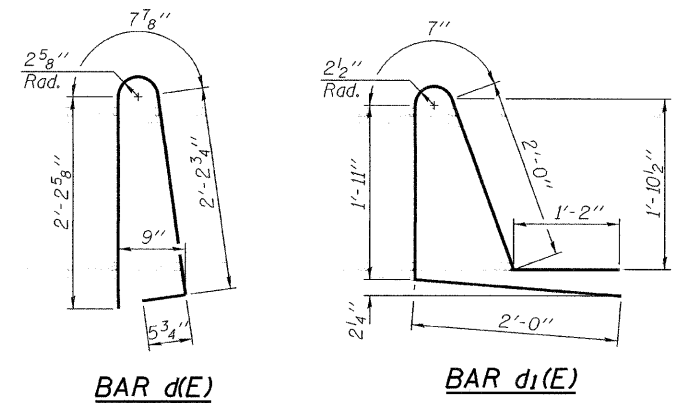


SECTION THRU PARAPET



PARAPET JOINT DETAILS

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SPI prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

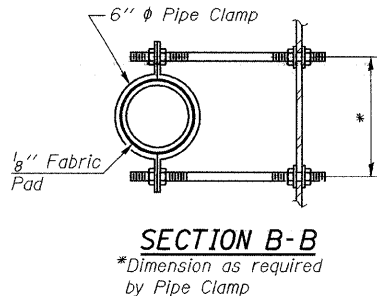


BAR d(E) BAR d1(E)

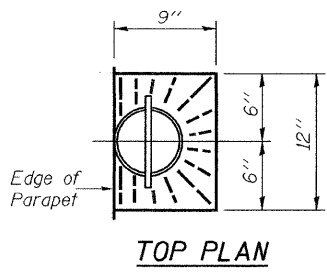
**SUPERSTRUCTURE
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
d(E)	172	#5	21'-3"	—
a1(E)	106	#5	20'-9"	—
a2(E)	90	#6	4'-6"	—
a3(E)	8	#5	27'-0"	—
b(E)	92	#5	21'-4"	—
b1(E)	126	#5	15'-0"	—
d(E)	86	#5	5'-7"	⌒
d1(E)	86	#5	7'-8"	⌒
e(E)	28	#4	19'-5"	—
e1(E)	4	#8	21'-4"	—
e2(E)	4	#4	20'-9"	—
m(E)	12	#6	3'-3"	—
m1(E)	36	#6	12'-0"	—
Reinforcement Bars, Epoxy Coated			Pound	13,500
Concrete Superstructure			Cu. Yds.	68.9

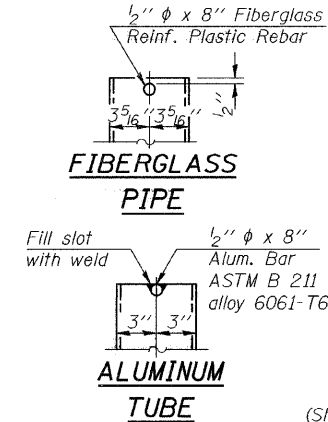
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.



SECTION B-B
*Dimension as required by Pipe Clamp

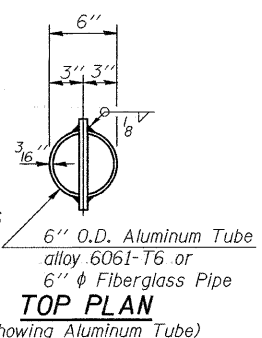


TOP PLAN



FIBERGLASS PIPE

ALUMINUM TUBE



TOP PLAN
(Showing Aluminum Tube)

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 322 - SECTION 12-1. BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

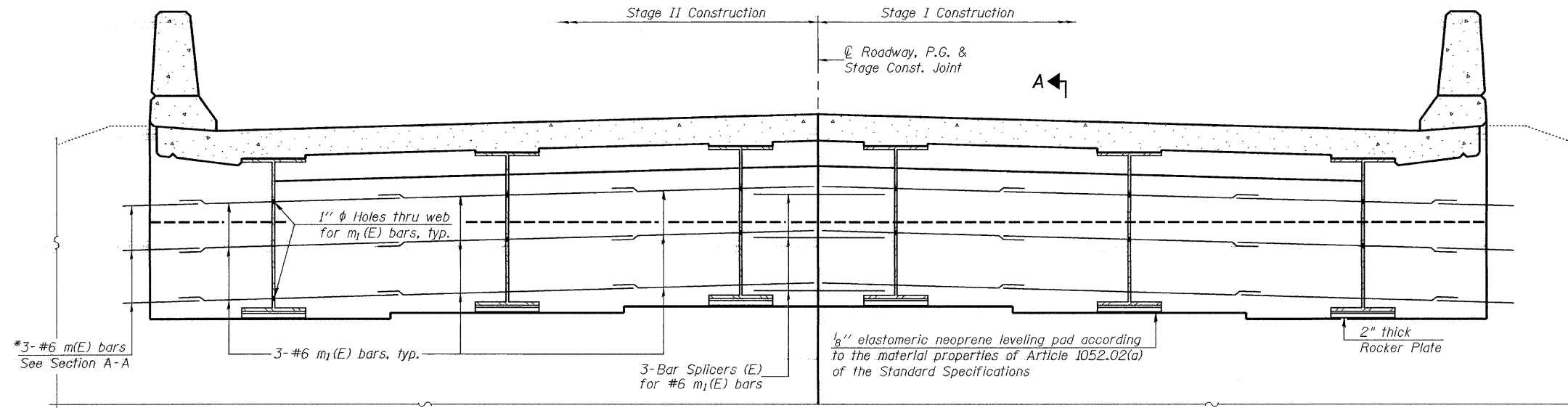
DESIGNED Patrick M. Petrone	July 22, 2008
CHECKED Jay D. Edwards	EXAMINED Thomas J. Domagala
DRAWN BECKY M. LEACH	PASSED Ralph E. Anderson
CHECKED PMP/JDE	

S-I-D 9-3-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	27	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #98886



*3-#6 m(E) bars
See Section A-A

*m(E) bars shall be epoxy grouted into 9" deep holes as per Section 584 of the Standard Specifications.

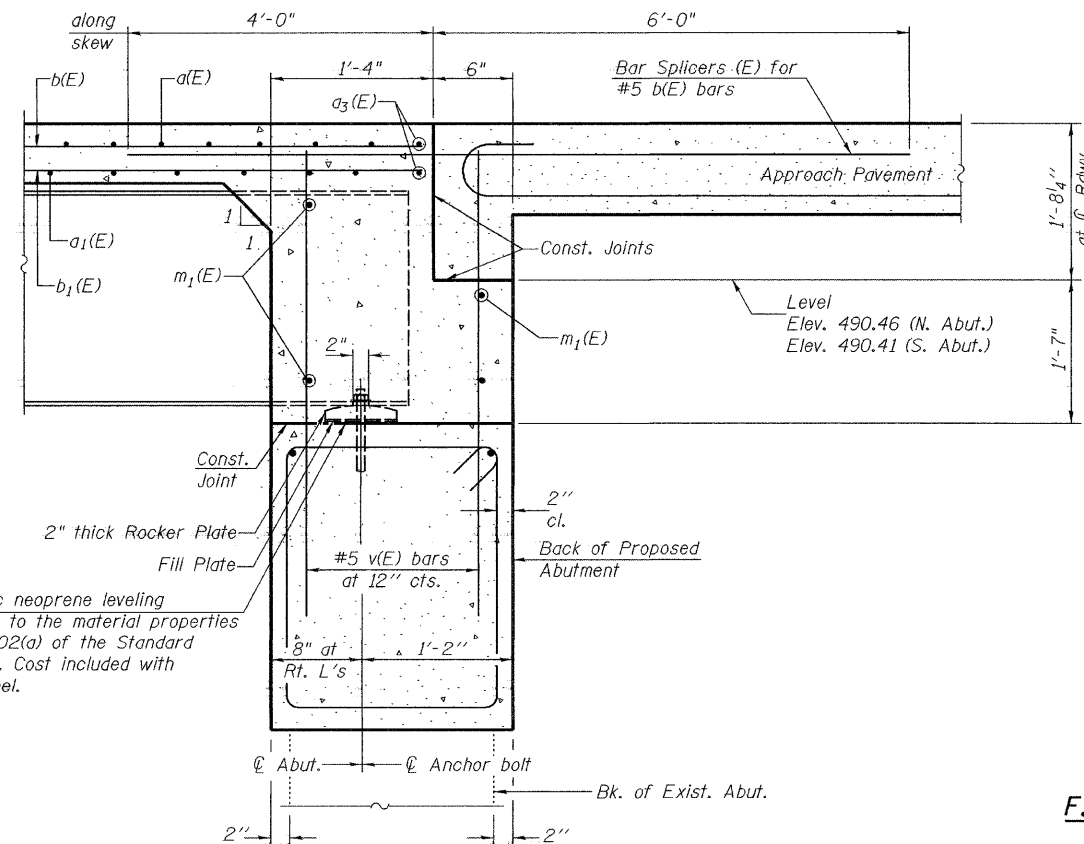
DIAPHRAGM ELEVATION AT ABUTMENT

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 10 of 20.
Concrete in diaphragm is included with Concrete Superstructure on sheet 10 of 20.

MIN. BAR LAP

#6 bar = 2'-6"

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



SECTION A-A

Dimensions at right angles to abutment, except as shown.

DIAPHRAGM DETAILS
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

DESIGNED	Patrick M. Petrone	EXAMINED	Thomas J. Domagala
CHECKED	Jay D. Edwards	PASSED	Ralph E. Anderson
DRAWN	BECKY M. LEACH		
CHECKED	PMP/JDE		

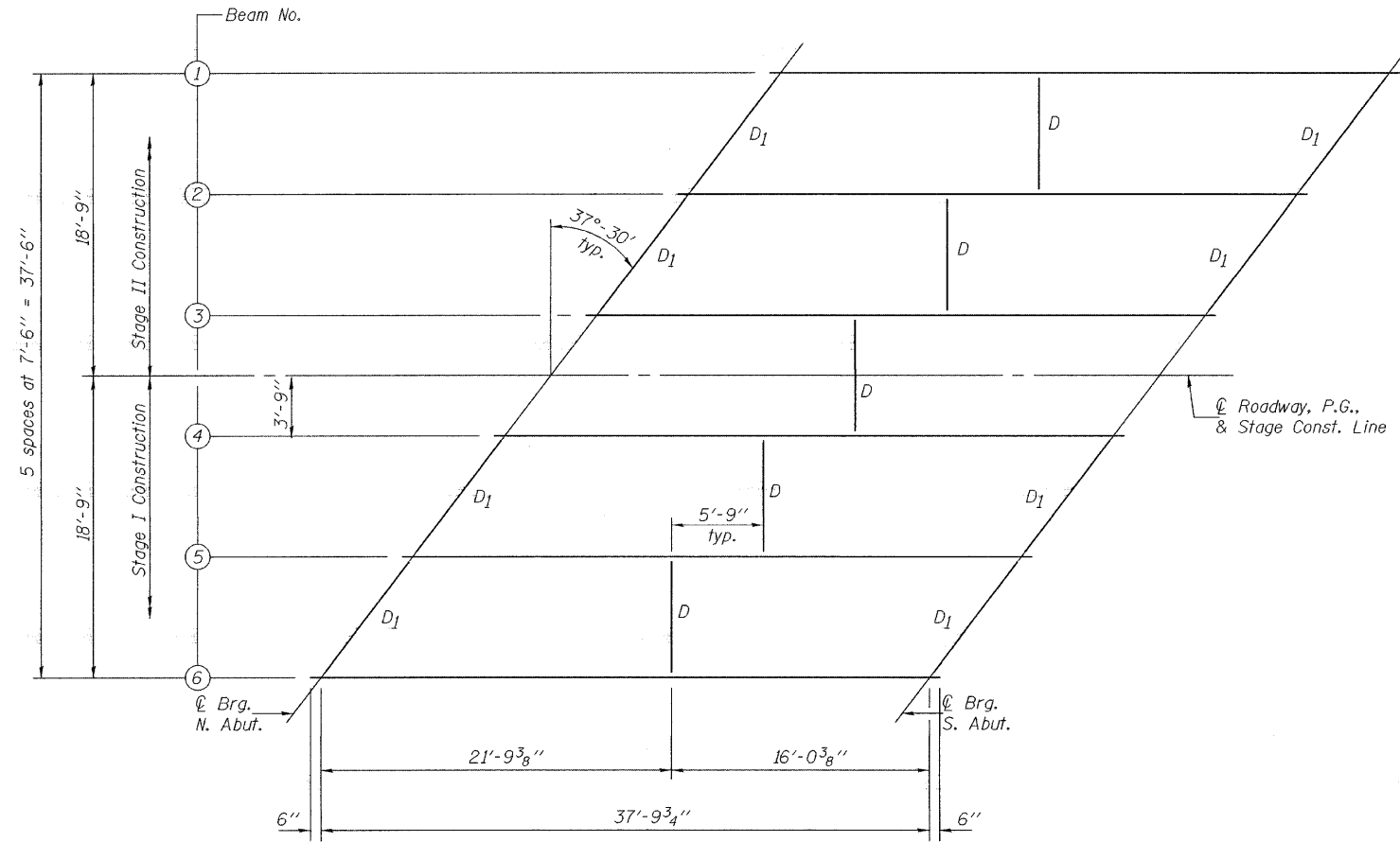
July 22, 2008
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

SI-DS2 9-3-07

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

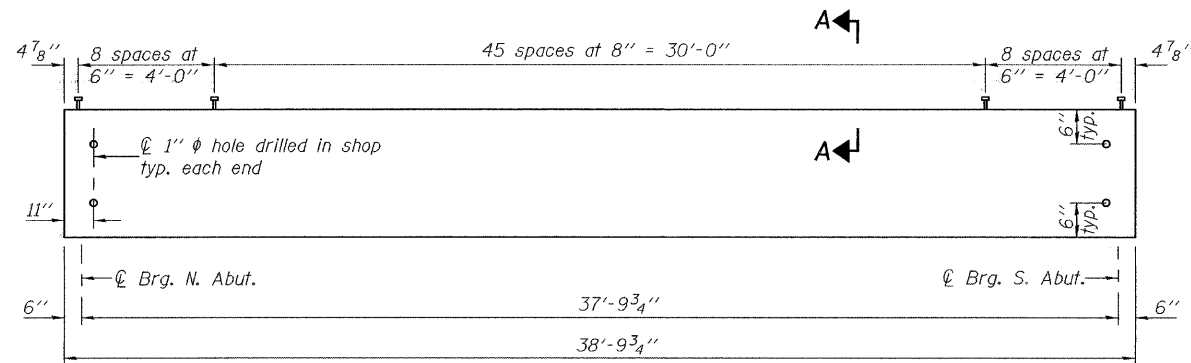
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F.A.P. 322	12-1, BR	UNION	36	23	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #98886

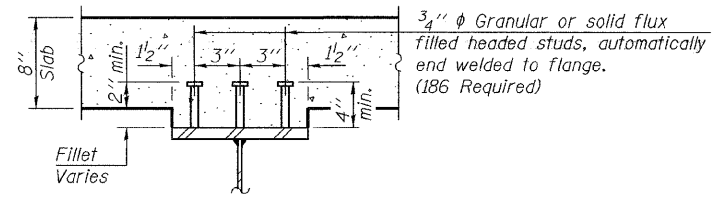


FRAMING PLAN

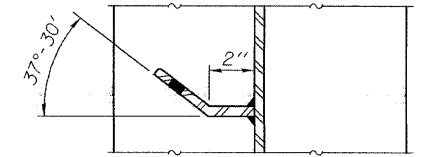
All beams are W24x84 (NTR) M270 Gr. 50.



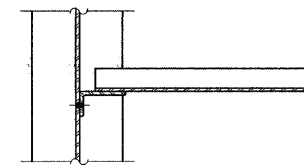
ELEVATION



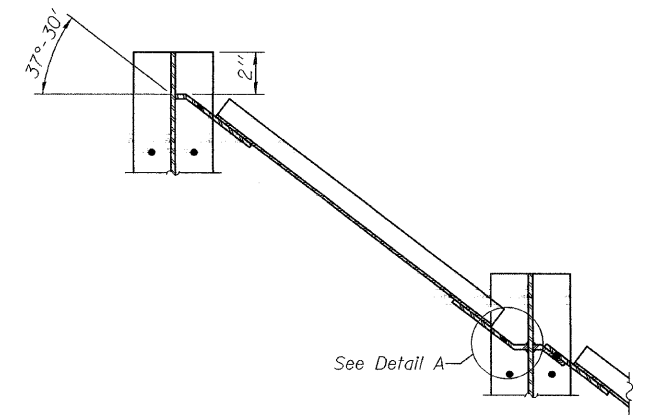
SECTION A-A



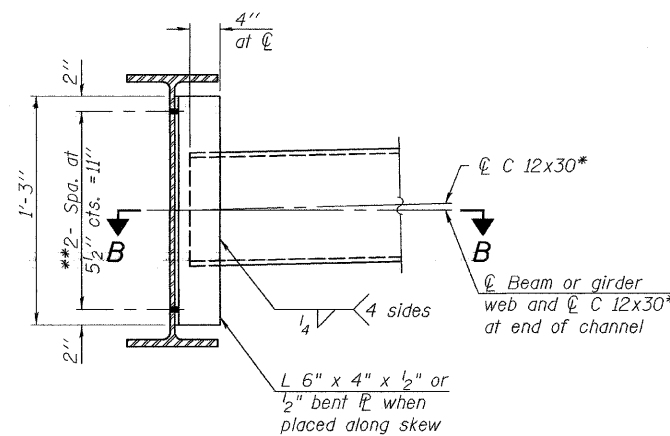
DETAIL A



SECTION B-B

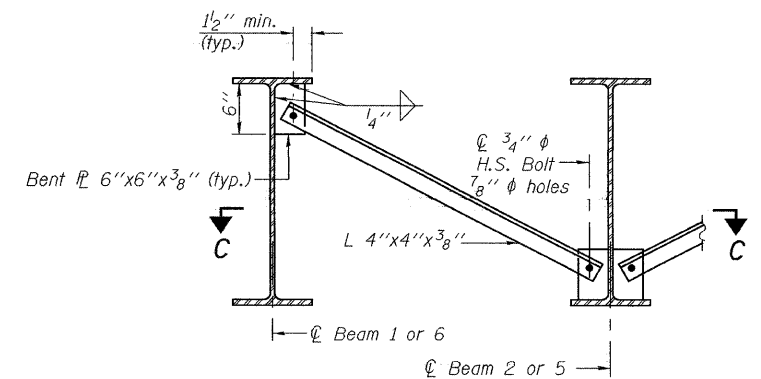


SECTION C-C



DIAPHRAGM D

(5 required)



DIAPHRAGM D1

(8 required)

Note:
Two hardened washers required for each set of oversized holes.
NTR denotes Notch Toughness Requirements.

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

** 3/4" φ HS bolts, 1 5/16" φ holes

STRUCTURAL STEEL
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

DESIGNED	Patrick M. Petrone
CHECKED	Jay D. Edwards
DRAWN	BECKY M. LEACH
CHECKED	PMP/JDE

EXAMINED	Thomas J. Damagalki	July 22, 2008
PASSED	Ralph E. Anderson	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

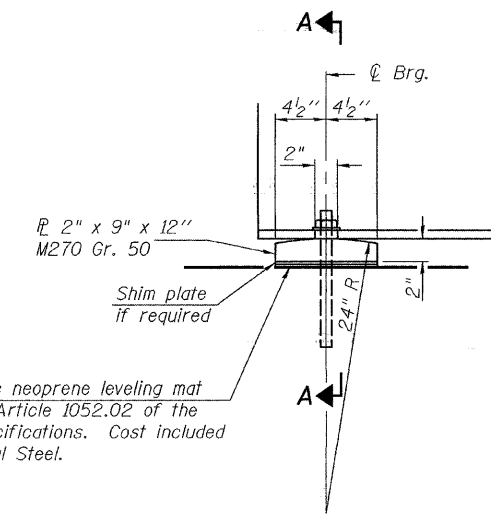
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 13 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	29	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #98886

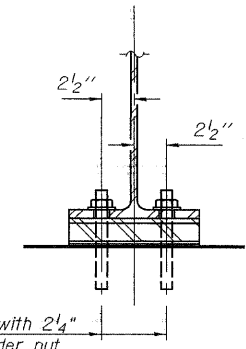
0.5 Sp. 1		
I_s	(in ⁴)	2370
$I_c(n)$	(in ⁴)	7966
$I_c(3n)$	(in ⁴)	6027
S_s	(in ³)	196
$S_c(n)$	(in ³)	323
$S_c(3n)$	(in ³)	292
DC1	(k/')	0.897
MDC1	(k)	165.0
DC2	(k/')	0.152
MDC2	(k)	27.9
DW	(k/')	0.375
MDW	(k)	68.9
$M_k + Imp$	(k)	423.9
M_u (Strength I)	(k)	1086.1
$\phi_r M_n$	(k)	1759.0
f_s DC1	(ksi)	10.1
f_s DC2	(ksi)	1.2
f_s DW	(ksi)	2.8
f_s 1.3(4+I)	(ksi)	20.7
f_s (Service II)	(ksi)	34.8
f_s (Total)(Strength I)	(ksi)	-
V_r	(k)	21.4

Abutment	
R_{DC1}	(k) 17.2
R_{DC2}	(k) 2.9
R_{DW}	(k) 7.2
$R_k + Imp$	(k) 76.4
R_{Total}	(k) 103.7

- 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.).
- MDC1: 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.).
- MDC2: 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.).
- MDW: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).
- $M_k + Imp$: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).
- M_u (Strength I): Factored design moment (kip-ft.).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k + Imp$
- $\phi_r M_n$: Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).
- f_s (Service II): Sum of stresses as computed from the moments below (ksi).
 $M_{DC1} + M_{DC2} + M_{DW} + 1.3 M_k + Imp$
- f_s (Total)(Strength I): Sum of stresses as computed from the moments below on non-compact section (ksi).
 $1.25 (M_{DC1} + M_{DC2}) + 1.5 M_{DW} + 1.75 M_k + Imp$
- V_r : Factored shear range computed according to Article 6.10.10.



ELEVATION AT ABUTMENT



SECTION A-A

FIXED BEARING

Note:
A 1/8" x 9" x 12" Fill PL is required at Beam 4 North Abutment and Beam 3 South Abutment.

BILL OF MATERIAL

Item	Unit	Total
Anchor Bolts 1" ϕ	Each	24

DESIGNED Patrick M. Petrone
 CHECKED Jay D. Edwards
 DRAWN BECKY M. LEACH
 CHECKED PMP/JDE

EXAMINED Thomas J. Domagalaki
 PASSED Ralph E. Anderson

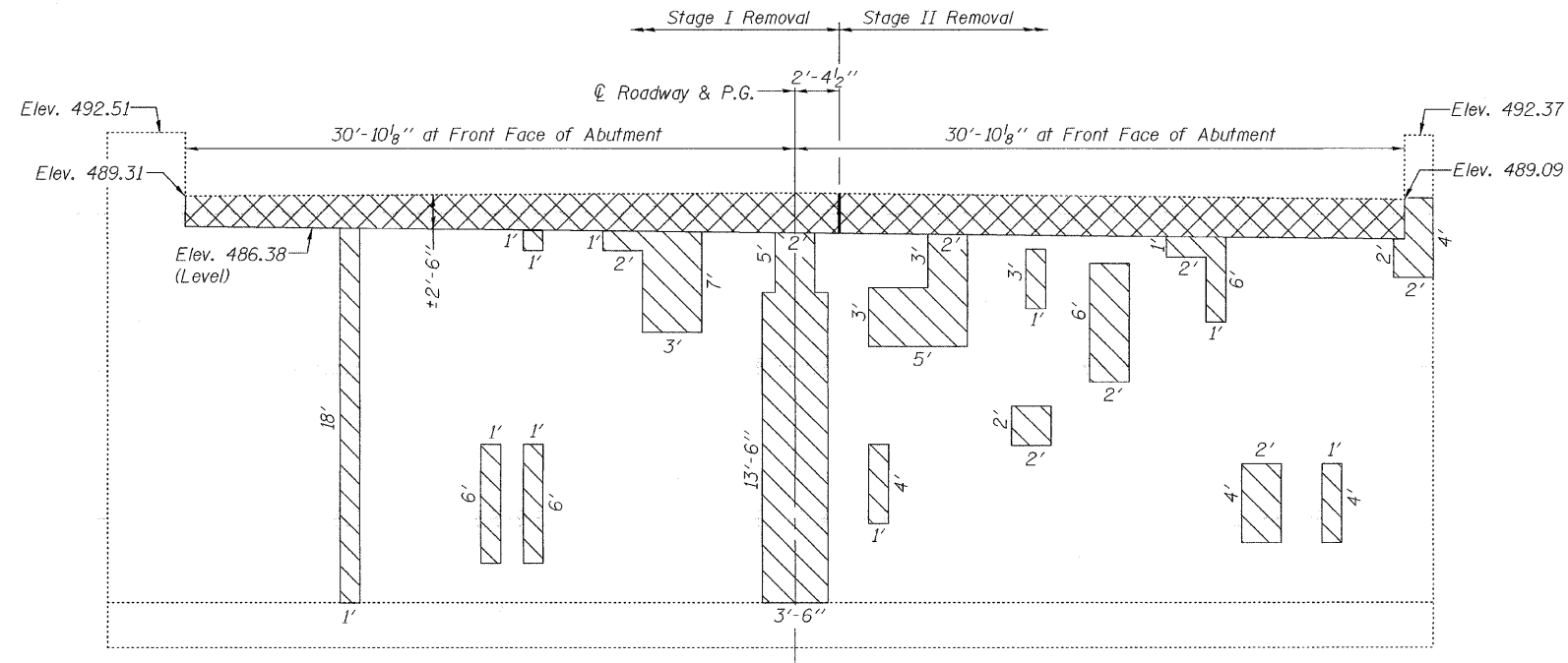
July 22, 2008

STRUCTURAL STEEL DETAILS
 F.A.P. ROUTE 322 - SECTION 12-1, BR
 UNION CO.
 STATION 801+60.00
 STRUCTURE NO. 091-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 14 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	30	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #98886

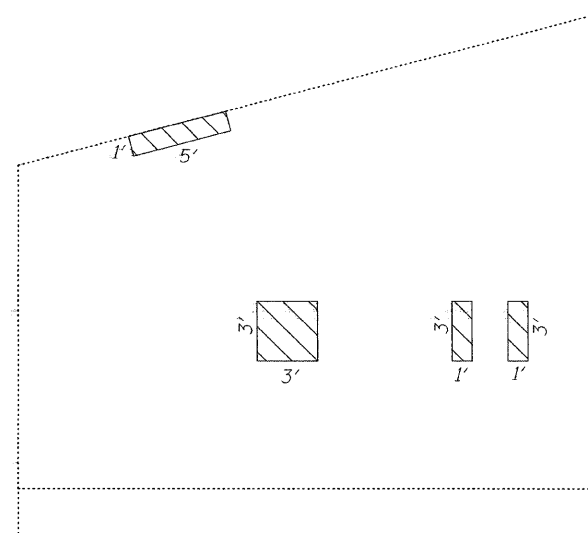


ELEVATION NORTH ABUTMENT

(Looking North)

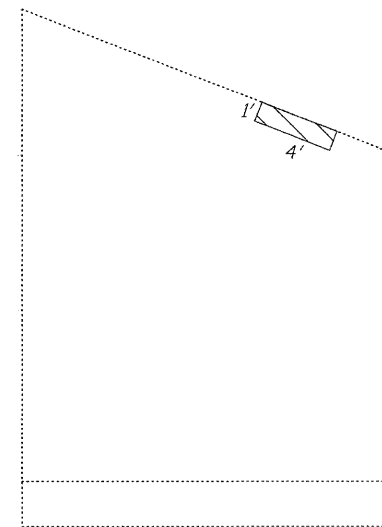
LEGEND

- Structural Repair of Concrete < 5"
- Concrete Removal



ELEVATION NORTHWEST WINGWALL

(Looking North)



ELEVATION NORTHEAST WINGWALL

(Looking North)

BILL OF MATERIAL

Structural Repair of Concrete < 5"	Sq. Ft.	207
Concrete Removal	Cu. Yd.	9.4

CONCRETE REMOVAL & REPAIR

AT NORTH ABUTMENT
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

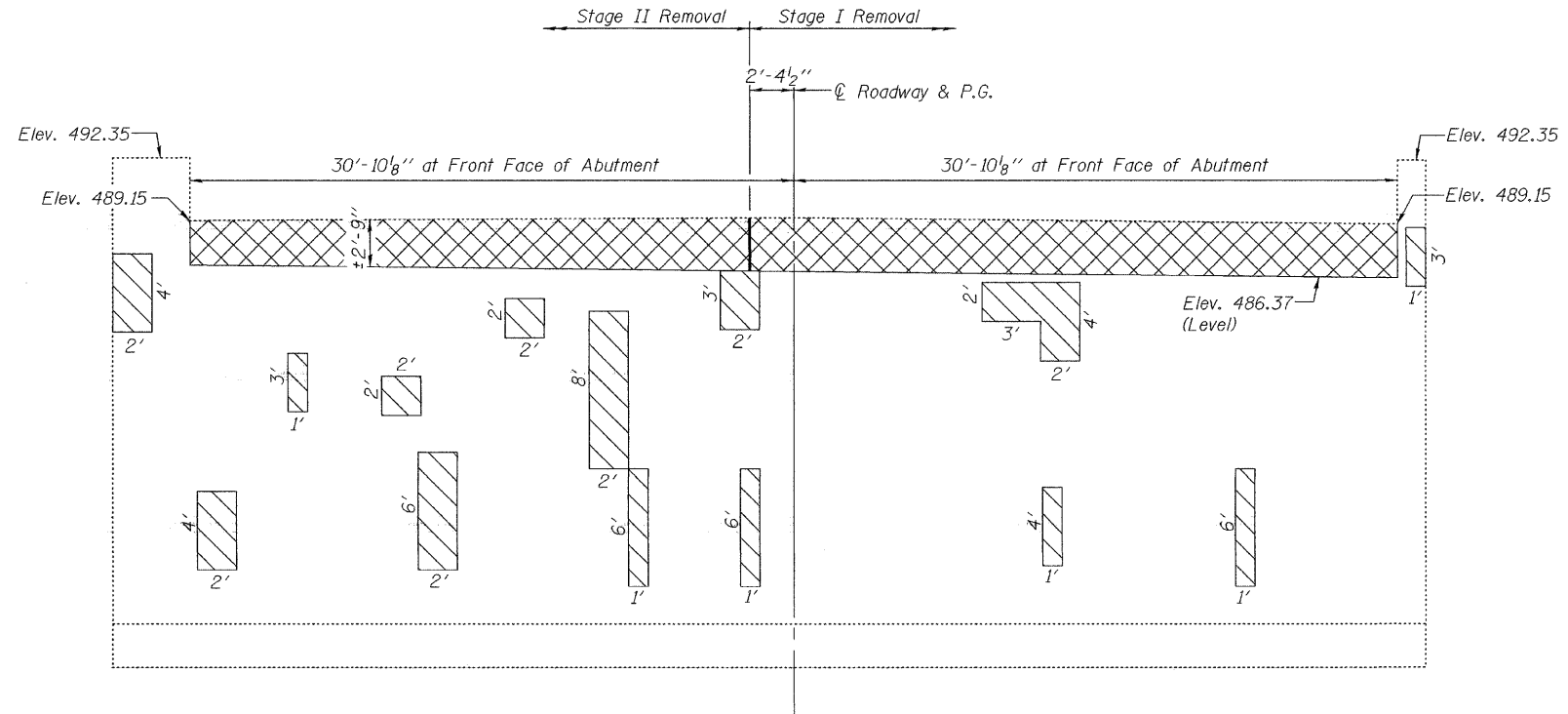
DESIGNED	Patrick M. Petrone
CHECKED	Jay D. Edwards
DRAWN	BECKY M. LEACH
CHECKED	PMP/JDE

July 22, 2008
EXAMINED *Thomas J. Domagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 15
F.A.P. 322	12-1, BR	UNION	36	31	20 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

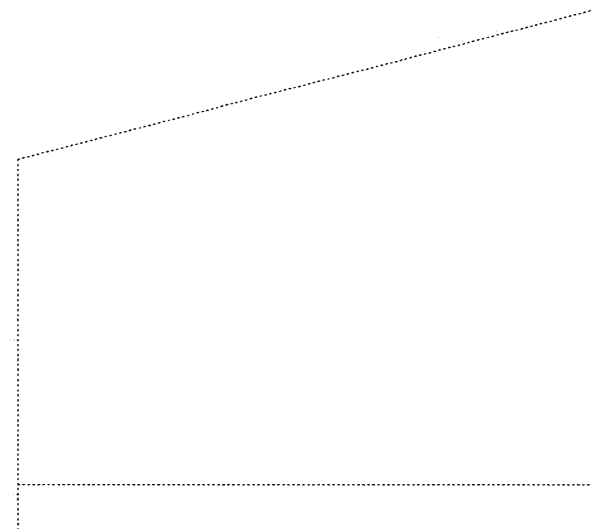
Contract #98886



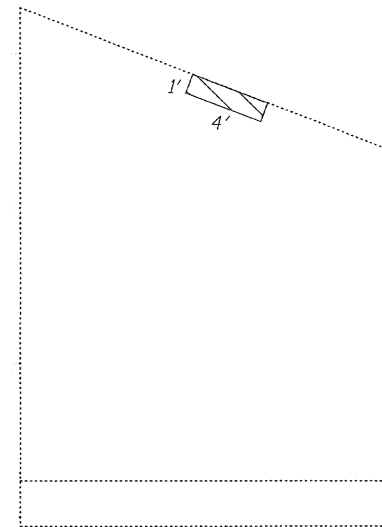
ELEVATION SOUTH ABUTMENT
(Looking South)

LEGEND

-  Structural Repair of Concrete < 5"
-  Concrete Removal



ELEVATION SOUTHEAST WINGWALL
(Looking South)



ELEVATION SOUTHWEST WINGWALL
(Looking South)

BILL OF MATERIAL

Structural Repair of Concrete < 5"	Sq. Ft.	104
Concrete Removal	Cu. Yd.	9.4

**CONCRETE REMOVAL & REPAIR
AT SOUTH ABUTMENT
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022**

DESIGNED Patrick M. Petrone	EXAMINED <i>Thomas J. Damagalki</i> ENGINEER OF BRIDGE DESIGN
CHECKED Jay D. Edwards	PASSED <i>Ralph E. Anderson</i> ENGINEER OF BRIDGES AND STRUCTURES
DRAWN BECKY M. LEACH	
CHECKED PMP/JDE	

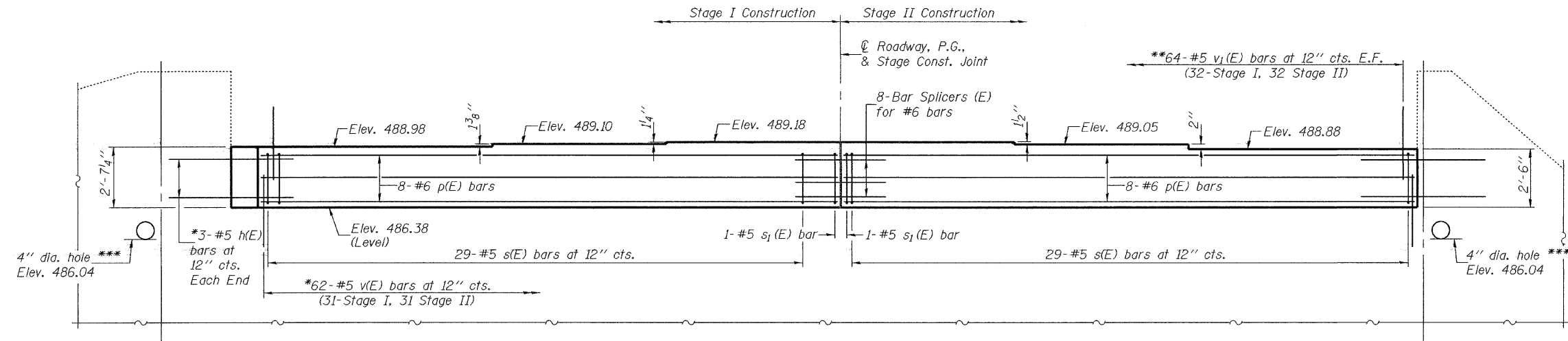
July 22, 2008

Note: Existing reinforcement shall be cleaned, straightened and incorporated into new construction.

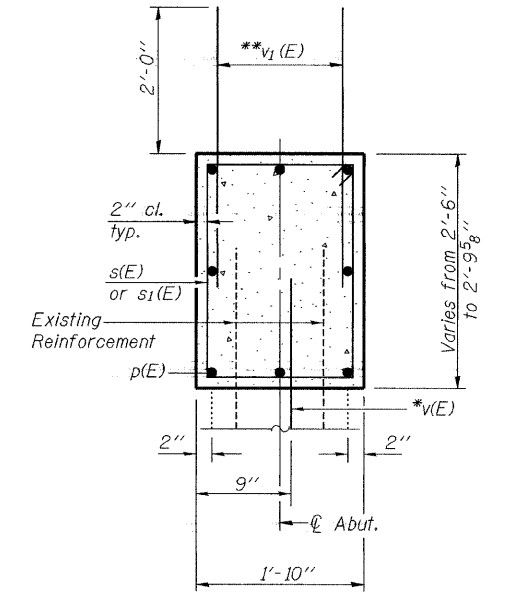
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 16 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	32	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

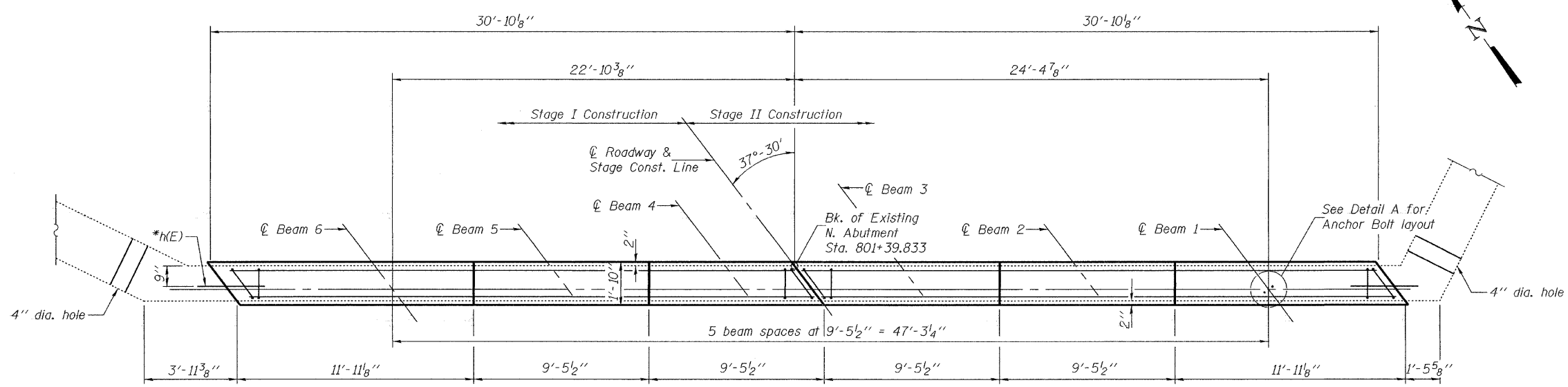
Contract #98886



ELEVATION
(Looking North)



SEC. THRU ABUT.



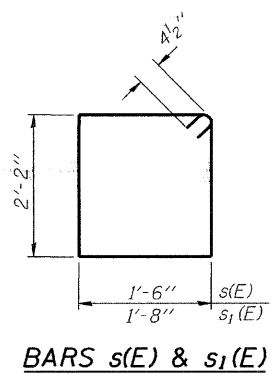
PLAN

BILL OF MATERIAL

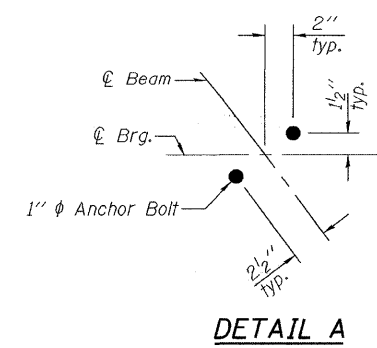
Bar	No.	Size	Length	Shape
h(E)	6	#5	2'-9"	—
p(E)	16	#6	30'-7"	—
s(E)	58	#5	8'-1"	□
s ₁ (E)	2	#5	8'-5"	□
v(E)	62	#5	2'-9"	—
v ₁ (E)	128	#5	4'-0"	—
Concrete Superstructures				Cu. Yd.
Reinforcement Bars, Epoxy Coated				Pound 1970
Bar Splicers (E)				Each 8

For details of Bar Splicers, see sheet 19 of 20.

*h(E) and v(E) bars shall be epoxy grouted into 9" deep holes as per Section 584 of the Standard Specifications.
 **Space v₁(E) bars to clear Beams 1-6 by min. of 3" horizontally.
 ***Drill 4" dia. hole and connect to abutment drain. Cost shall be included in the Cost of Pipe Underdrains for Structures, see sheet 2 of 20.



BARS s(E) & s₁(E)



DETAIL A

DESIGNED	Patrick M. Petrone
CHECKED	Jay D. Edwards
DRAWN	BECKY M. LEACH
CHECKED	PMP/JDE

July 22, 2008
 EXAMINED *Thomas J. Domagalaki*
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

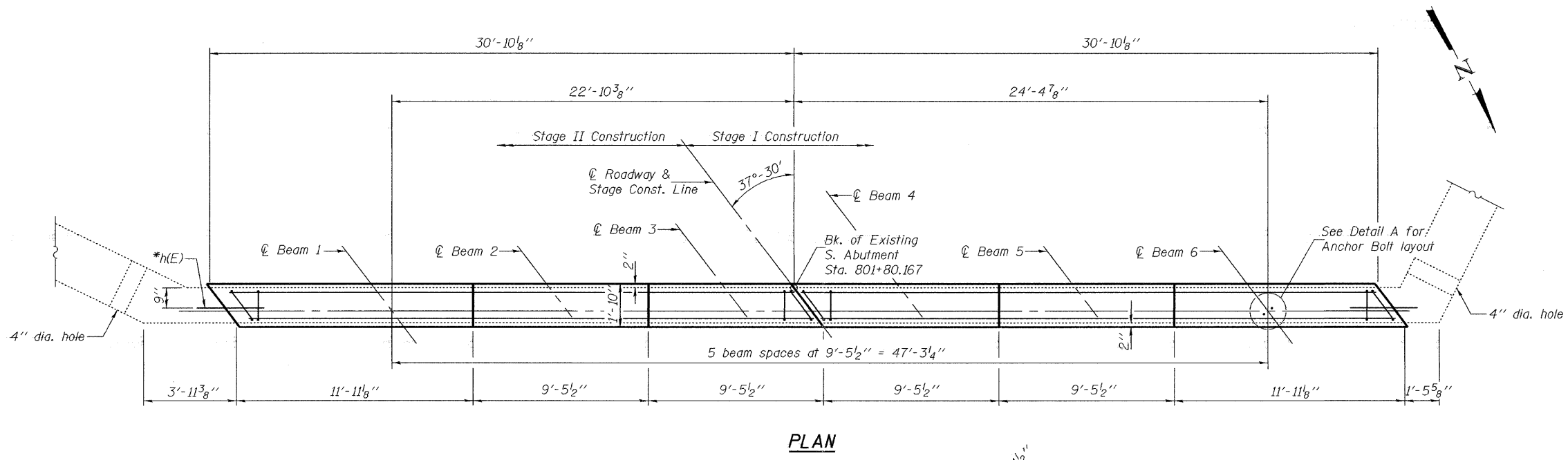
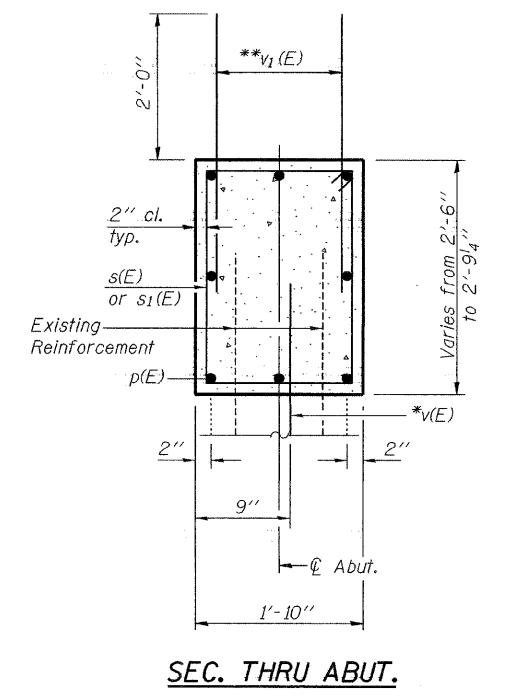
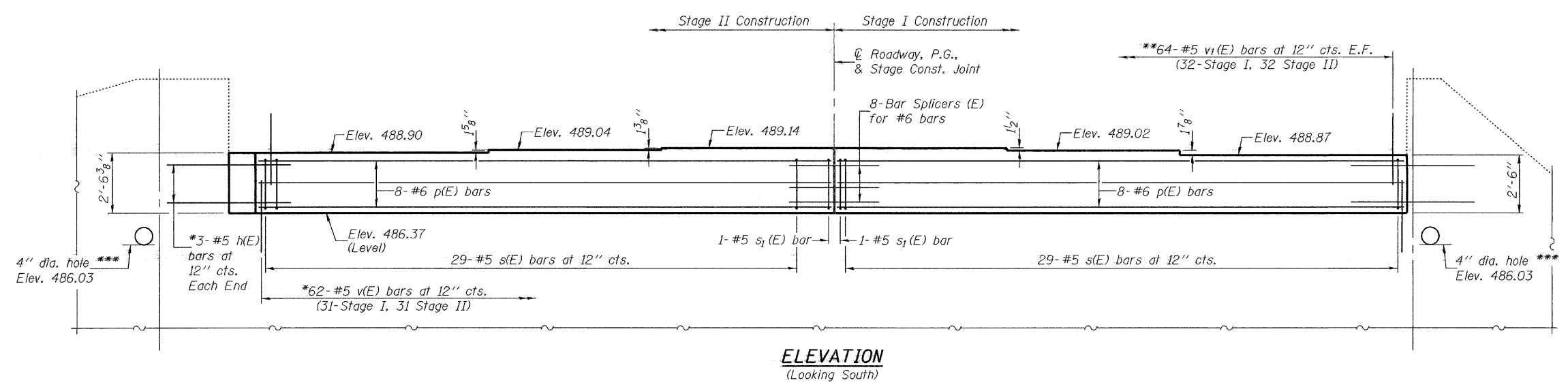
NORTH ABUTMENT
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

Note: Existing reinforcement shall be cleaned, straightened and incorporated into new construction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 17 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	33	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #98886



BILL OF MATERIAL

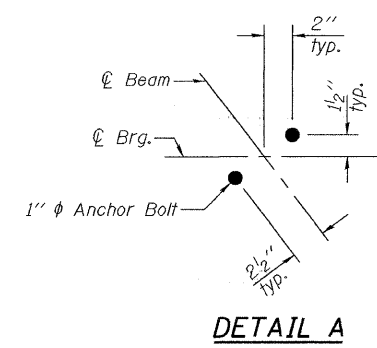
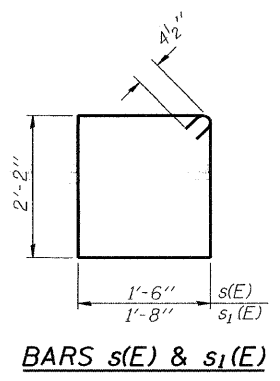
Bar	No.	Size	Length	Shape
h(E)	6	#5	2'-9"	
p(E)	16	#6	30'-7"	
s(E)	58	#5	8'-1"	□
s ₁ (E)	2	#5	8'-5"	□
v(E)	62	#5	2'-9"	
v ₁ (E)	128	#5	4'-0"	
Concrete Superstructures				Cu. Yd.
Reinforcement Bars, Epoxy Coated				Pound 1970
Bar Splicers (E)				Each 8

For details of Bar Splicers, see sheet 19 of 20.

*h(E) and v(E) bars shall be epoxy grouted into 9" deep holes as per Section 584 of the Standard Specifications.

**Space v₁(E) bars to clear Beams 1-6 by min. of 3" horizontally.

***Drill 4" dia. hole and connect to abutment drain. Cost shall be included in the Cost of Pipe Underdrains for Structures, see sheet 2 of 20.



DESIGNED	Patrick M. Petrone
CHECKED	Jay D. Edwards
DRAWN	BECKY M. LEACH
CHECKED	PMP/JDE

July 22, 2008

EXAMINED *Thomas J. Damagalki*
ENGINEER OF BRIDGE DESIGN

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

SOUTH ABUTMENT
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

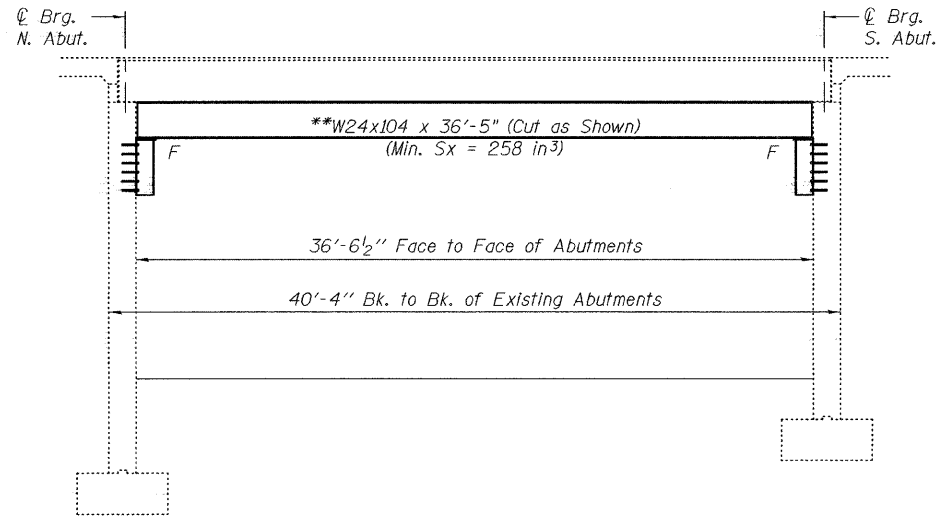
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 18 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	34	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

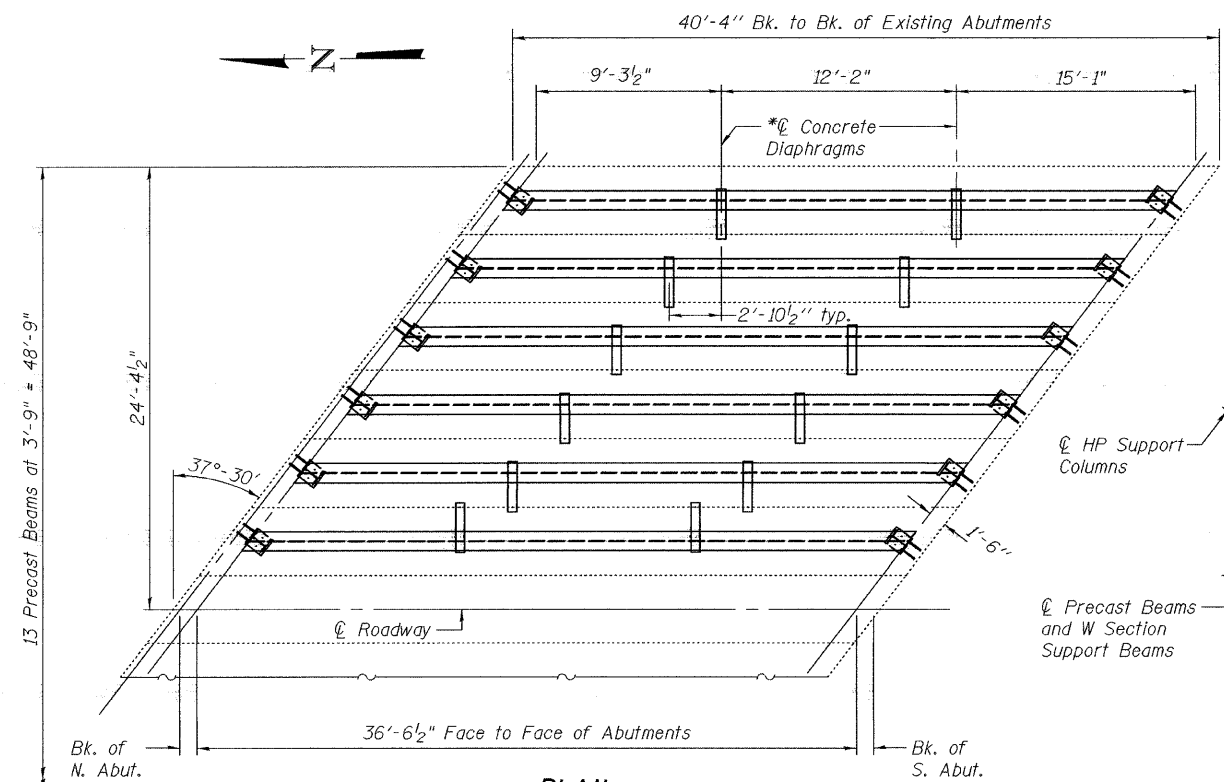
Contract #98886

**Contractor is to verify beam length prior to ordering material. Other sections meeting the section modulus requirements shown may be allowed subject to approval by the Bureau of Bridges and Structures. Maximum Girder depth = 27". No additional payment will be allowed if the contractor chooses a heavier steel section than the one specified in the plans

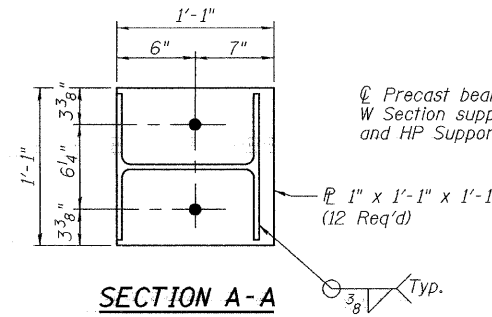
* \varnothing Transverse tie \varnothing 's (2 per span). Place additional shims at these points on top of tie \varnothing 's. Securely weld shims to top flange of support beam. Minimum shim size is 6" x flange width.



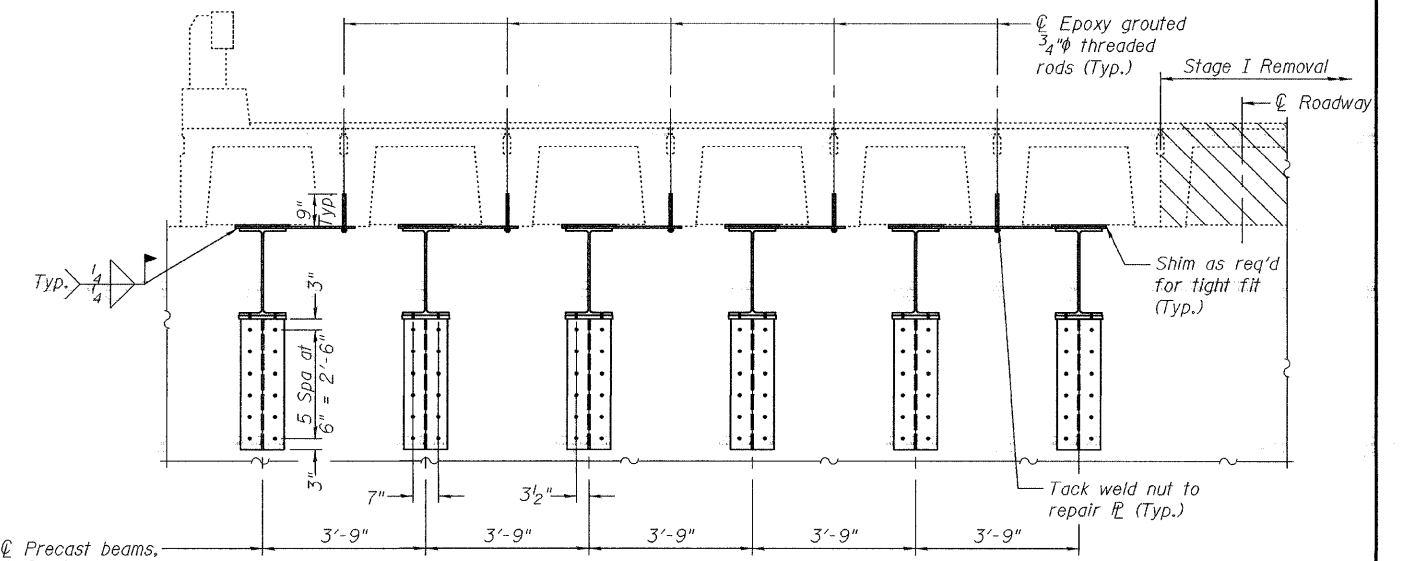
ELEVATION



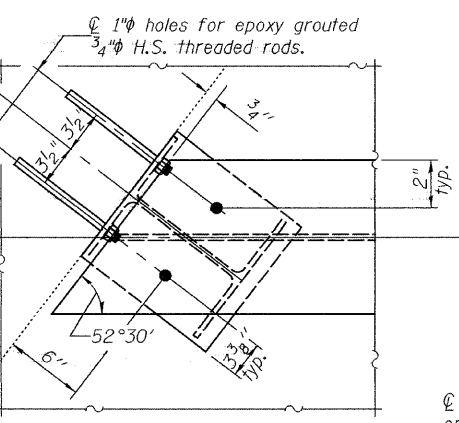
PLAN



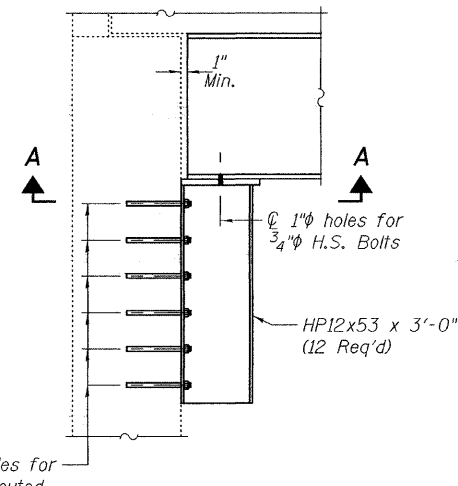
SECTION A-A



TYPICAL DECK CROSS SECTION
(Looking South)



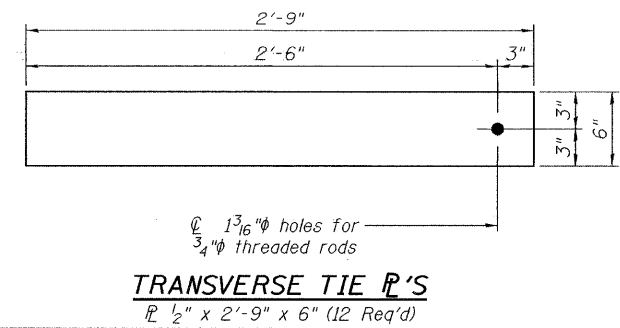
TYPICAL SUPPORT BEAM
END PLAN



TYPICAL SECTION
AT ABUTMENT

NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.
Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.
The contractor is advised that the existing Nelson Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures.
See Section 584 of the Standard Specifications for Epoxy Grouting of Threaded Rods; Minimum embedment 9".
If the contractor's procedure for placement of beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the existing beams. To distribute load to multiple beams and protect the existing surface, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. The cost of epoxy grouting threaded rods on the pier cap, abutments and beams shall be included with Furnishing and Erecting Structural Steel.
The Contractor has the option of using used steel. See Special Provisions.
The Contractor shall remove the temporary support during Staged Removal of the Superstructure. The Contractor shall burn off the threaded rods flush and cover with epoxy. Cost included with Removal of Existing Superstructures.



TRANSVERSE TIE \varnothing 'S
 \varnothing 1 3/16" holes for 3/4" threaded rods
 \varnothing 1/2" x 2'-9" x 6" (12 Req'd)

DESIGNED	Patrick M. Petrone
CHECKED	Jay D. Edwards
DRAWN	BECKY M. LEACH
CHECKED	PMP/JDE

July 22, 2008
EXAMINED *Thomas J. Damagalki*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Pound	25,750

TEMPORARY SUPPORT FOR NELSON BEAMS
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 36	SHEET NO. 35	SHEET NO. 19 20 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #98886

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

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

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

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

ROLLED THREAD DOWEL BAR



** ONE PIECE

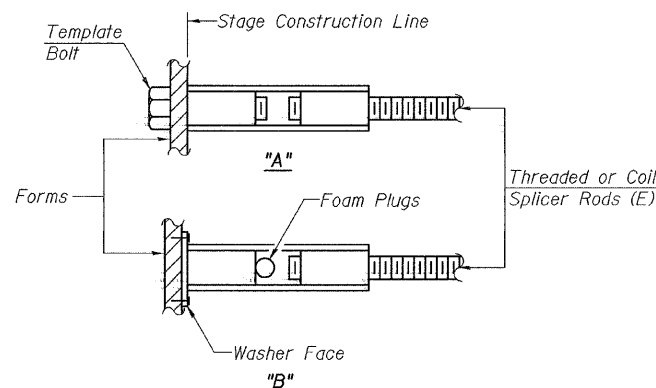
Wire Connector



WELDED SECTIONS

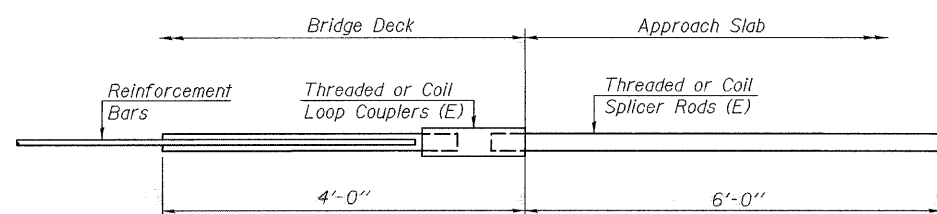
BAR SPLICER ASSEMBLY ALTERNATIVES

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



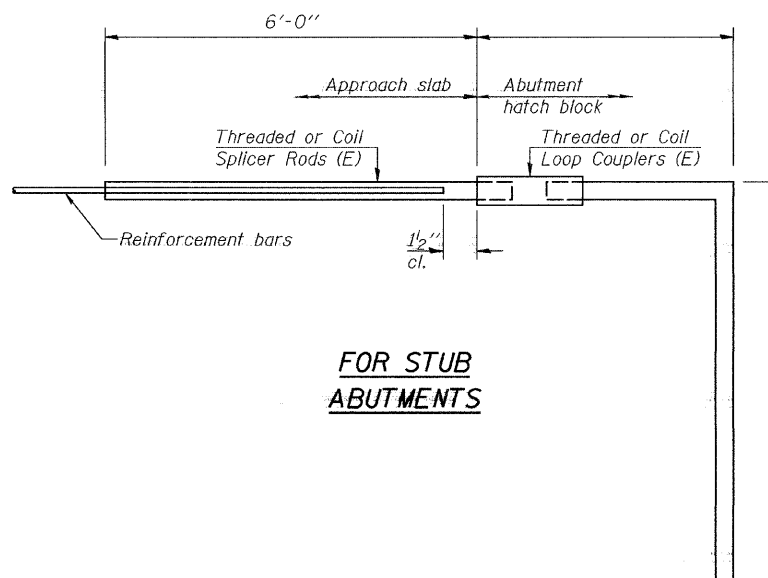
INSTALLATION AND SETTING METHODS

"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.



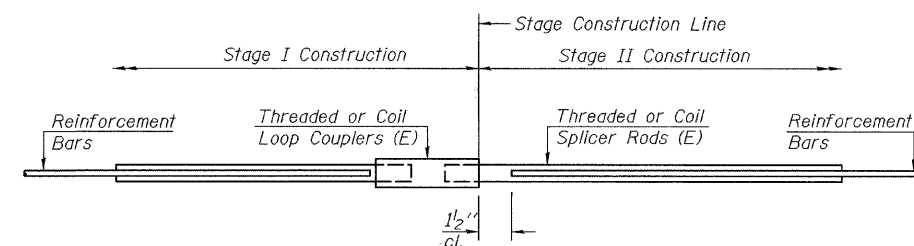
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	143	Superstructure
#6	6	Diaphragm
#6	8	N. Abutment
#6	8	S. Abutment

BAR SPLICER ASSEMBLY DETAILS
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022

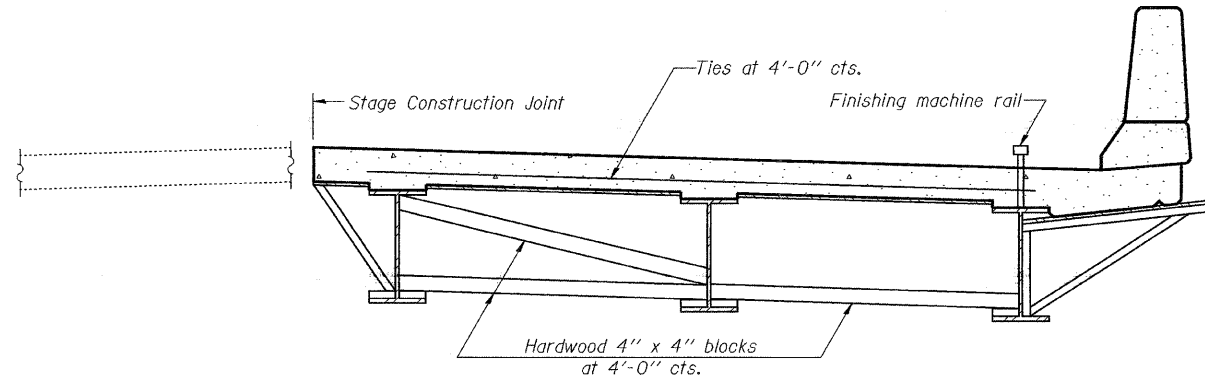
DESIGNED Patrick M. Petrone
CHECKED Jay D. Edwards
DRAWN BECKY M. LEACH
CHECKED PMP/JDE

EXAMINED Thomas J. Domagalaki	July 22, 2008
PASSED Ralph E. Anderson	

BSD-1 11-1-06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

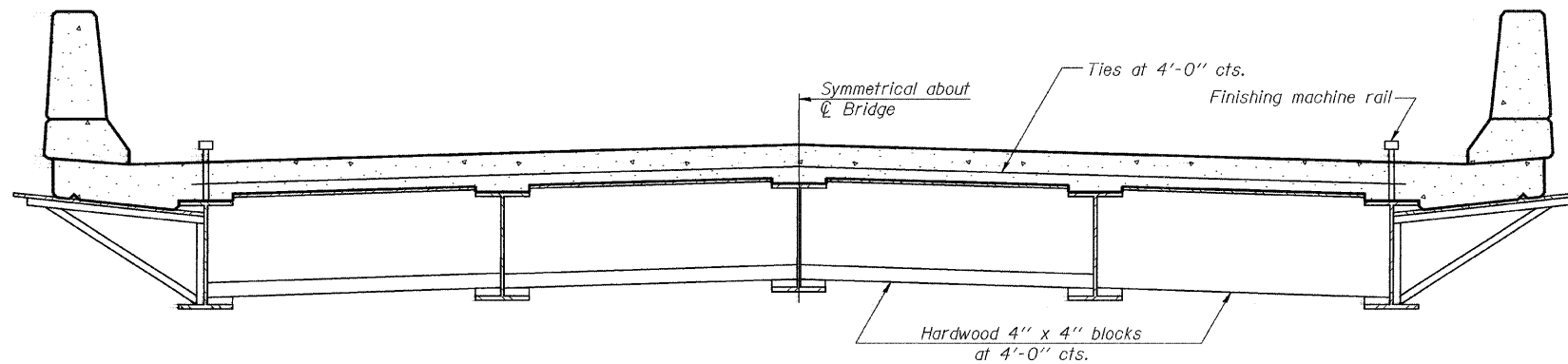
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 20 20 SHEETS
F.A.P. 322	12-1, BR	UNION	36	36	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	Contract #98886		



FORM BRACES FOR STAGE CONSTRUCTION

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.
The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.
For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.



FORM BRACES FOR STANDARD CONSTRUCTION

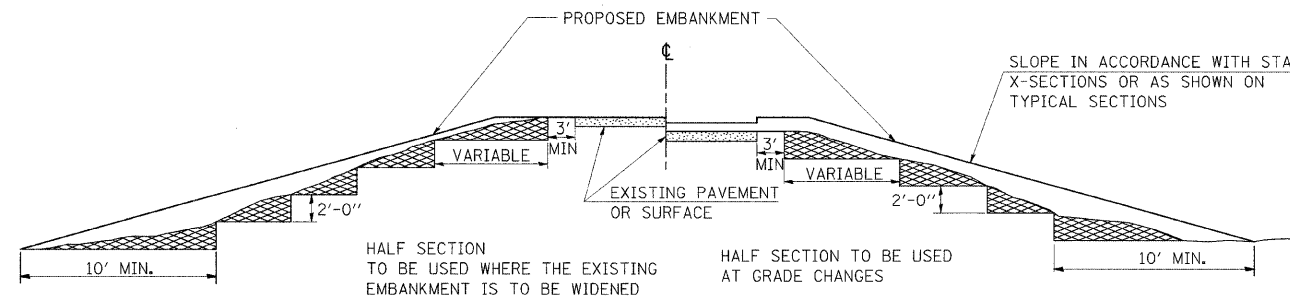
DESIGNED Patrick M. Petrone
CHECKED Jay D. Edwards
DRAWN BECKY M. LEACH
CHECKED PMP/JDE

July 22, 2008
EXAMINED *Thomas J. Damagalki*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

SB-1 5-16-08

**CANTILEVER FORMING BRACKETS FOR SUPERSTRUCTURES
WITH W27 BEAMS AND SMALLER
F.A.P. ROUTE 322 - SECTION 12-1, BR
UNION CO.
STATION 801+60.00
STRUCTURE NO. 091-0022**

TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL



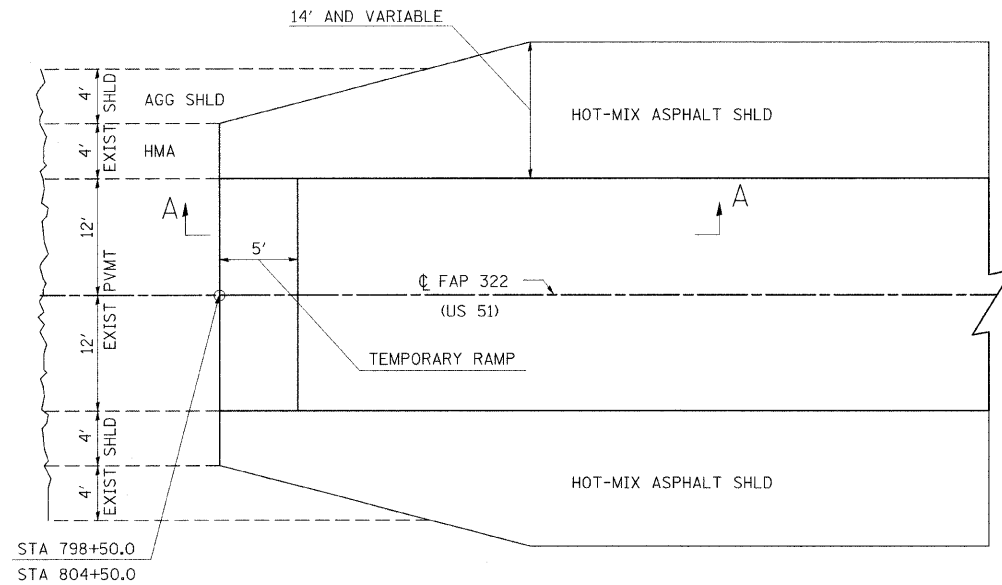
MATERIAL TO BE REMOVED AND REPLACED IN THE EMBANKMENT IN ACCORDANCE WITH ART. 205.04 OF THE STANDARD SPECIFICATION. COST TO BE INCLUDED IN THE VARIOUS ITEMS OF EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED BECAUSE OF THIS WORK.

REVISIONS	
REDRAWN	2-15-83
REVISED	8-15-94
CHECKED	6-3-99
REVISED	

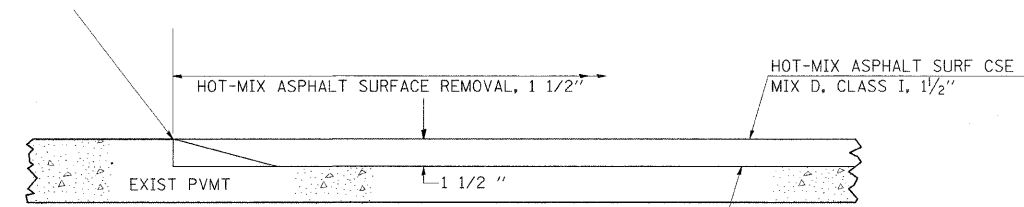
STD. 9-16

FILE NAME = c:\projects\1902\184\1902184.ms.dgn	USER NAME = shepardgd	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BITUMINOUS SHOULDERS AT GUARDRAIL TERMINALS AND TYPICAL CROSS SECTION SHOWING STEP CONSTRUCTION ON EXISTING FILL	F.A.P. RTE. FAP 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 48	SHEET NO. 37
PLOT SCALE = 50,0000' / IN.	PLOT DATE = 6/18/2008	DRAWN - ---	CHECKED - ---	REVISED - ---	REVISED - ---	SCALE: _____ SHEET NO. 37 OF 48 SHEETS STA. _____ TO STA. _____		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT CONTRACT NO. 98886		

BUTT JOINT DETAIL

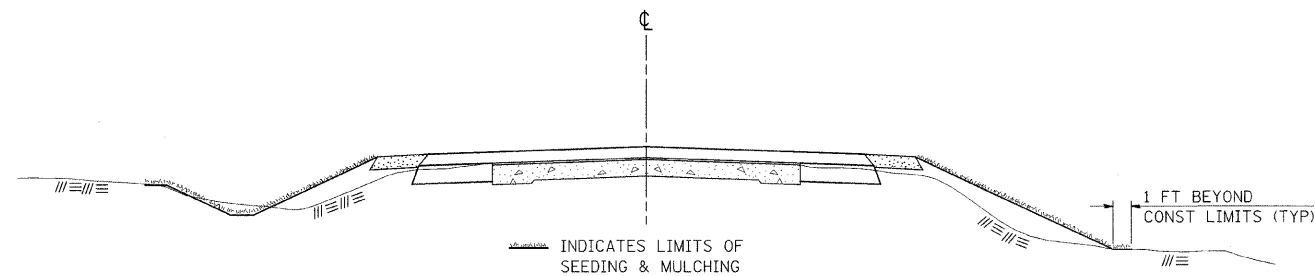


PLAN VIEW



SECTION A-A

SEEDING & MULCHING DETAIL



GENERAL NOTES

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

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

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

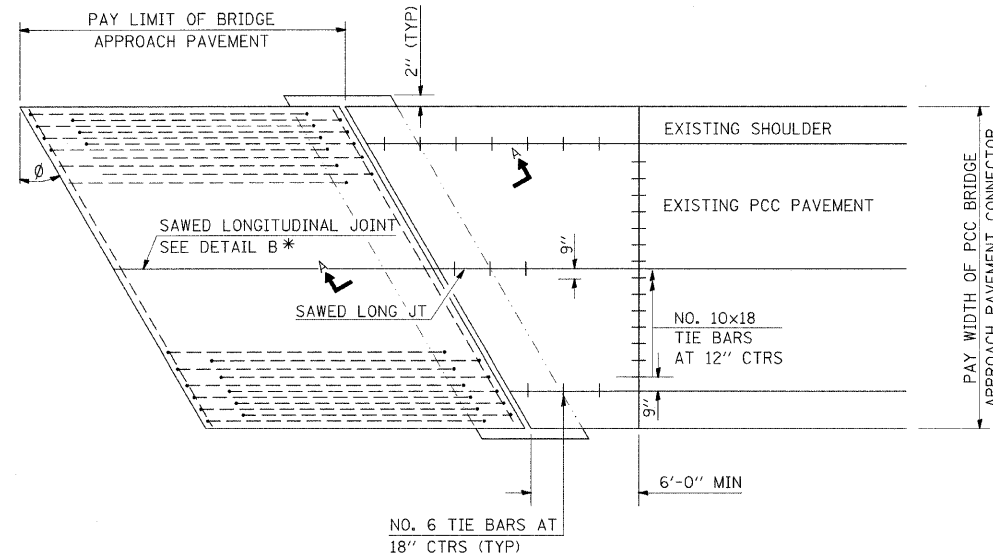
SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK EXCEPT AS SPECIFIED HEREIN OR AS NOTED IN THE SPECIAL PROVISIONS.

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

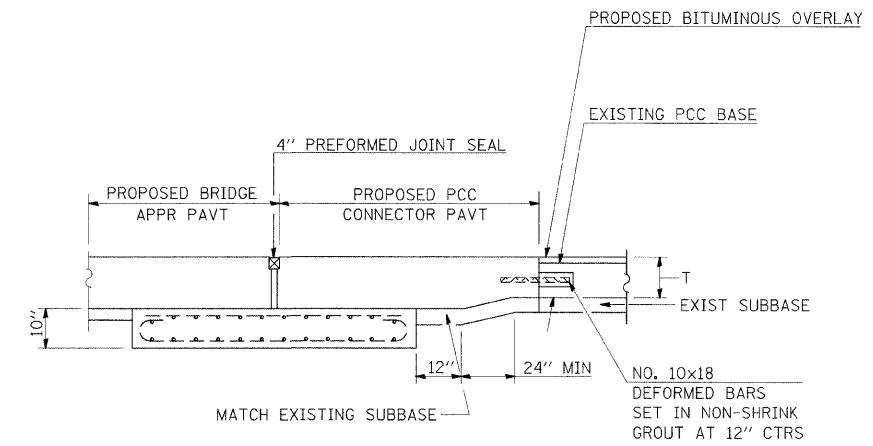
STD. 9-12

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PLOT SCALE = 50.0000 "/>										

PCC PAVEMENT CONNECTOR EXISTING CONSTRUCTION



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



SECTION A-A - RIGID PAVEMENT

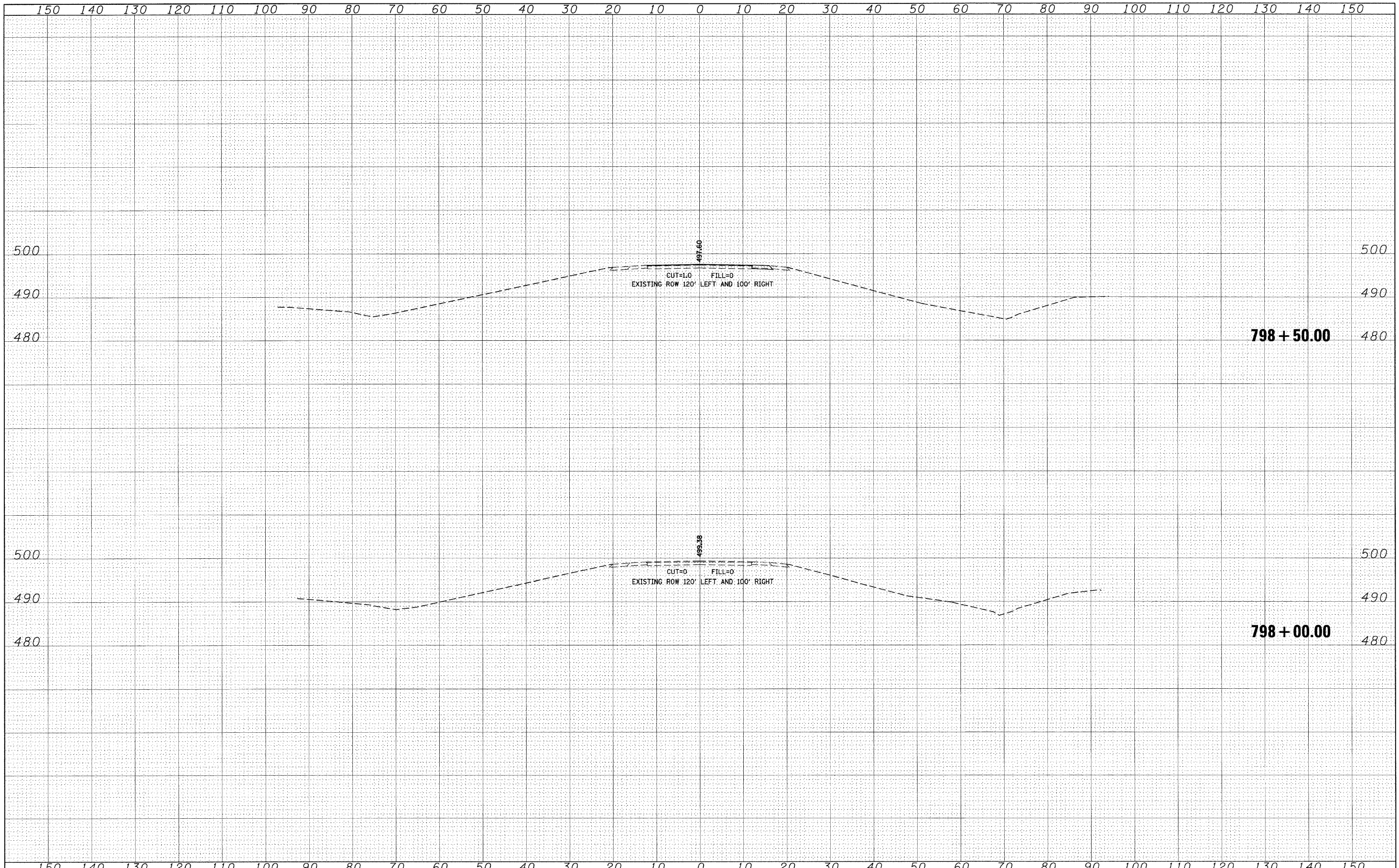
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REVISIONS	REVISIONS
REDRAWN 10-11-01	
REVISIONS	
REVISIONS	
REVISIONS	

STD. 9-111

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PLOT SCALE = 50,0000 1/4 IN.	PLOT DATE = 6/18/2008	CHECKED - --- DATE - ---	REVISED - --- REVISED - ---	SCALE: _____ SHEET NO. 39 OF 48 SHEETS STA. _____ TO STA. _____		FED. ROAD DIST. NO. _ ILLINOIS FED. AID PROJECT		CONTRACT NO. 98886		

DATE	
BY	
FINAL SURVEYED	
SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	

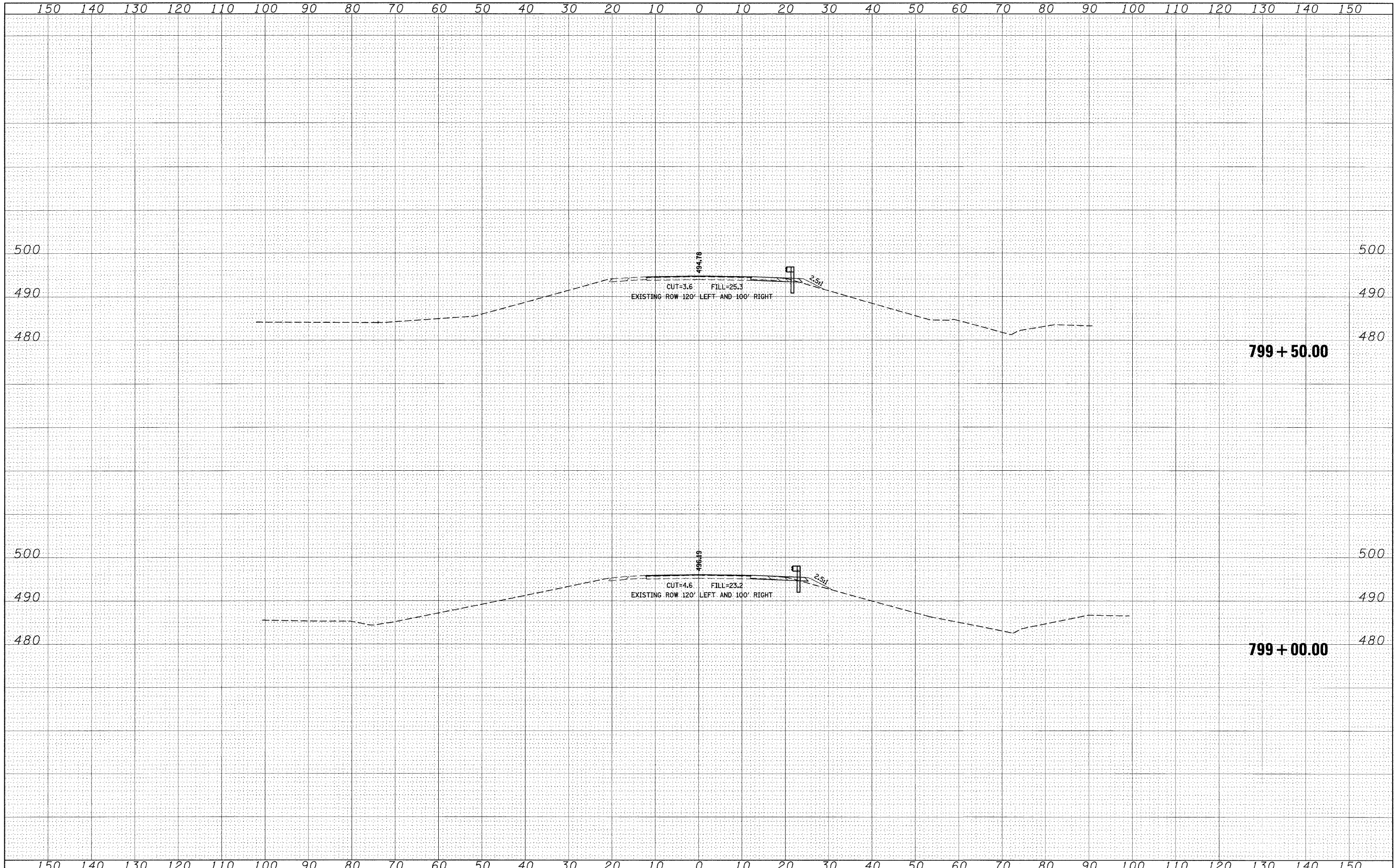
DATE	
BY	
ORIGINAL SURVEYED	
SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	



FILE NAME =	USER NAME = shepardgd	DESIGNED - ---	REVISED - ---	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	CROSS SECTIONS		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\projects\4902904\4902904xsht.dgn		DRAWN - ---	REVISED - ---		SCALE: _____	SHEET NO. 40 OF 48 SHEETS	322	12-1, BR	UNION	48	40
		CHECKED - ---	REVISED - ---		STA. 798+00.00 TO STA. 798+50.00						
		DATE - -----	REVISED - ---		FED. ROAD DIST. NO. _____						CONTRACT NO. 98886

FINAL	SURVEYED	DATE
SURVEY	BY	
NOTE BOOK	NO.	
AREAS	CHECKED	

ORIGINAL	SURVEYED	DATE
SURVEY	BY	
NOTE BOOK	NO.	
AREAS	CHECKED	



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 PLOT DATE = 6/18/2008

DESIGNED - ---	REVISED - ---
DRAWN - ---	REVISED - ---
CHECKED - ---	REVISED - ---
DATE - ---	REVISED - ---

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

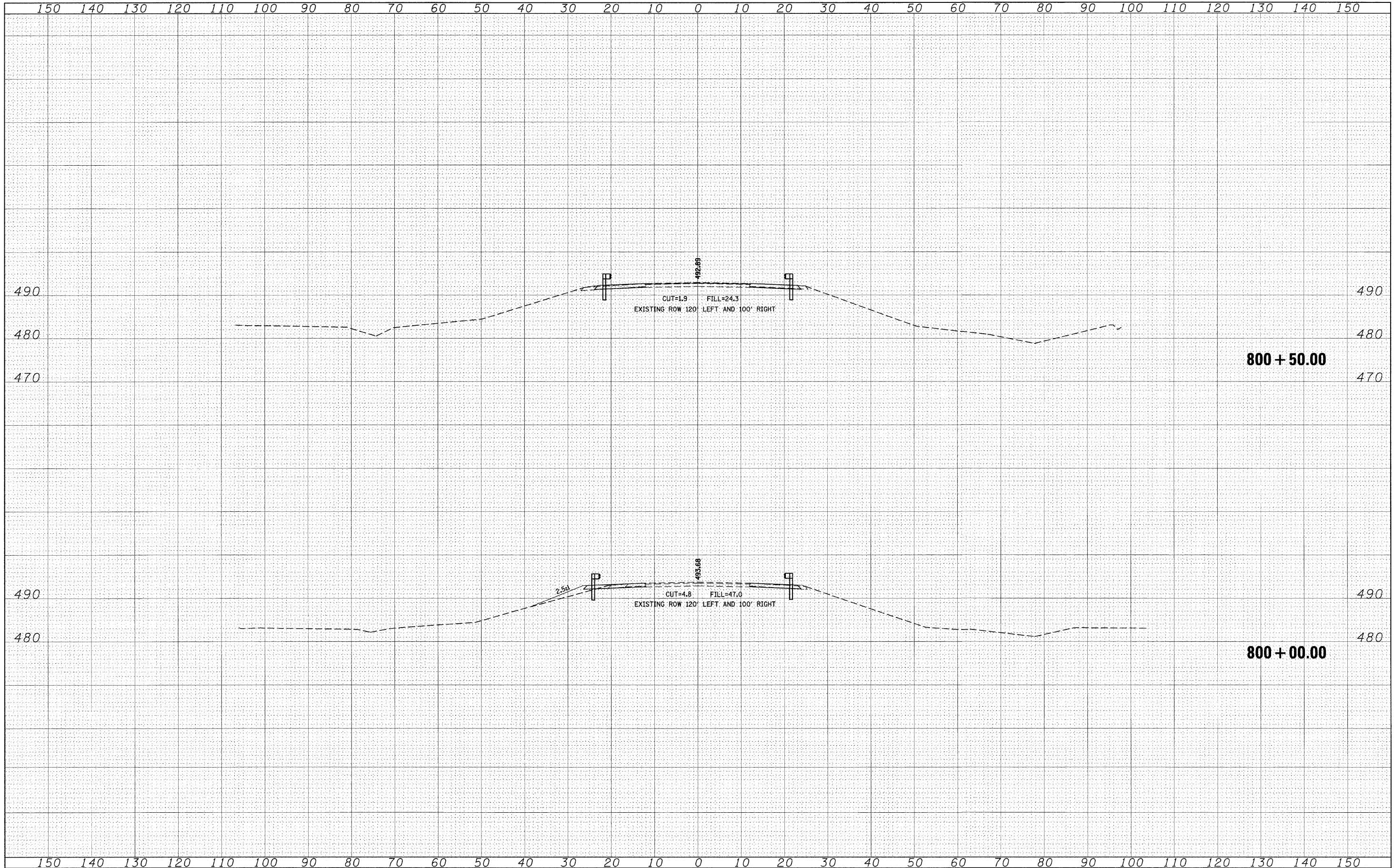
CROSS SECTIONS

SCALE: _____ SHEET NO. 41 OF 48 SHEETS STA. 799+00.00 TO STA. 799+50.00

F.A.P. RTE. 322	SECTION 12-1, BR	COUNTY UNION	TOTAL SHEETS 48	SHEET NO. 41
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 98886	

FINAL	SURVEYED	DATE
NOTE BOOK	REVISIONS	BY
NO.	AREAS	
	CHECKED	

ORIGINAL	SURVEYED	DATE
NOTE BOOK	REVISIONS	BY
NO.	AREAS	
	CHECKED	



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 PLOT DATE = 6/18/2008

DESIGNED	-	----	REVISED	-	----
DRAWN	-	----	REVISED	-	----
CHECKED	-	----	REVISED	-	----
DATE	-	-----	REVISED	-	----

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

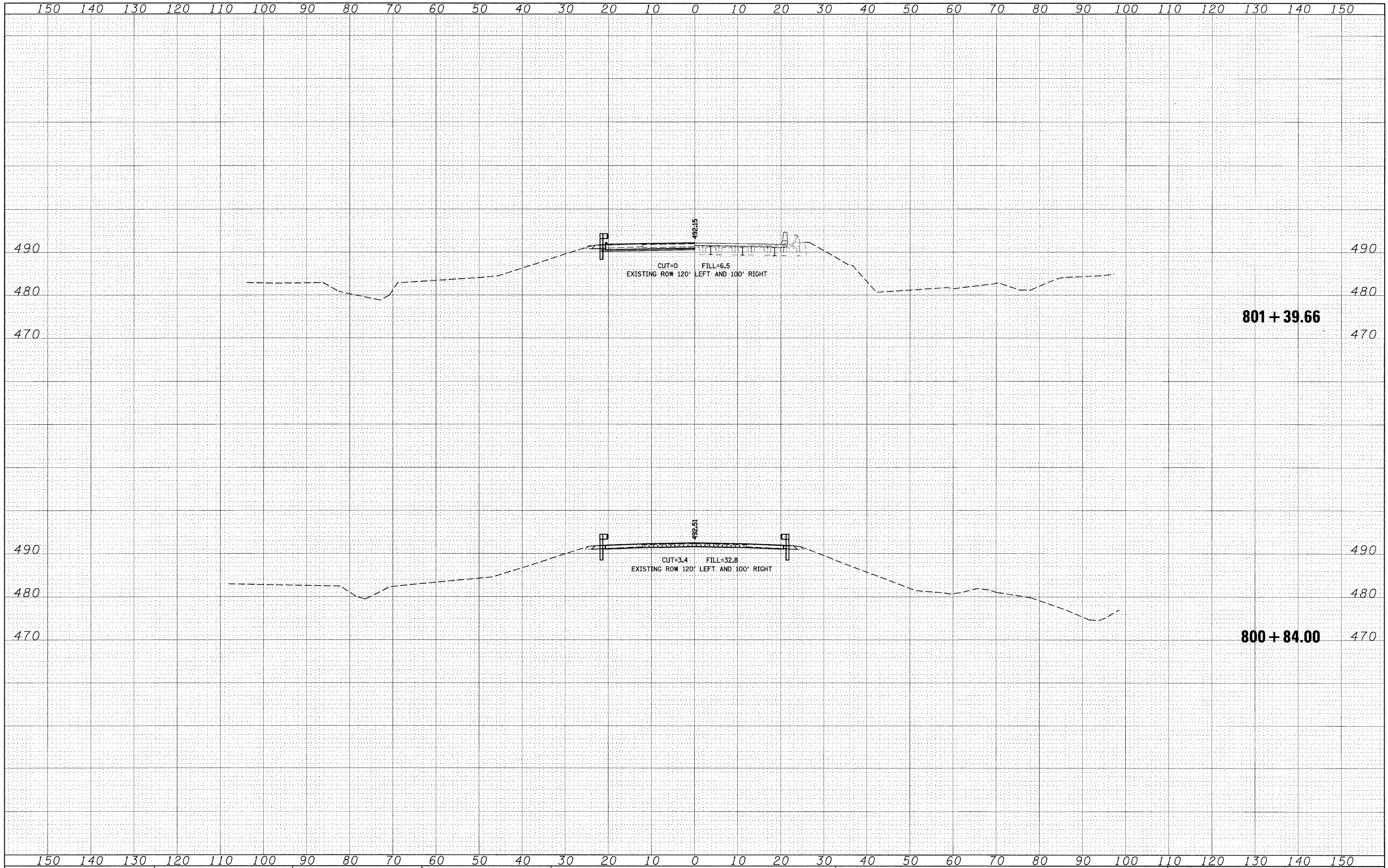
CROSS SECTIONS

SCALE: _____ SHEET NO. 42 OF 48 SHEETS STA. 800+00.00 TO STA. 800+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	12-1, BR	UNION	48	42
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	
			CONTRACT NO. 98886	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTE BOOK	
NO.	
AREAS CHECKED	



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	DRAWN - ---	REVISED - ---
PLOT SCALE = 10.0000' / 1"	CHECKED - ---	REVISED - ---
PLOT DATE = 6/18/2008	DATE - ---	REVISED - ---

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

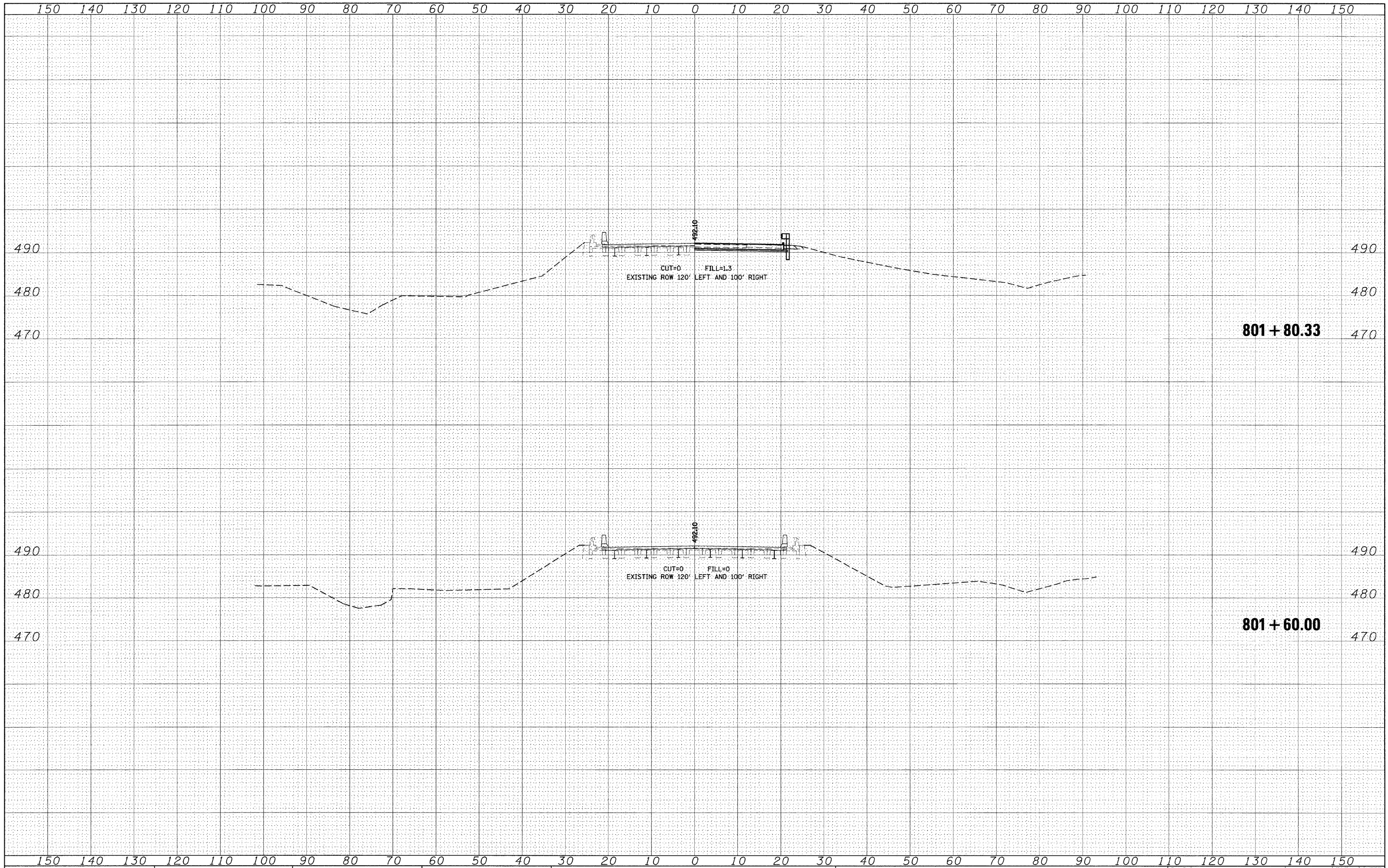
CROSS SECTIONS

SCALE: _____ SHEET NO. 43 OF 48 SHEETS STA. 800+84.00 TO STA. 801+39.66

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	12-1, BR	UNION	48	43
CONTRACT NO. 98886				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	
SURVEYED	
NOTE BOOK	
NO.	
AREAS CHECKED	
AREAS	
TEMP. DATE	

DATE	
BY	
ORIGINAL SURVEY	
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NOTE BOOK	
NO.	
AREAS CHECKED	
AREAS	
TEMP. DATE	



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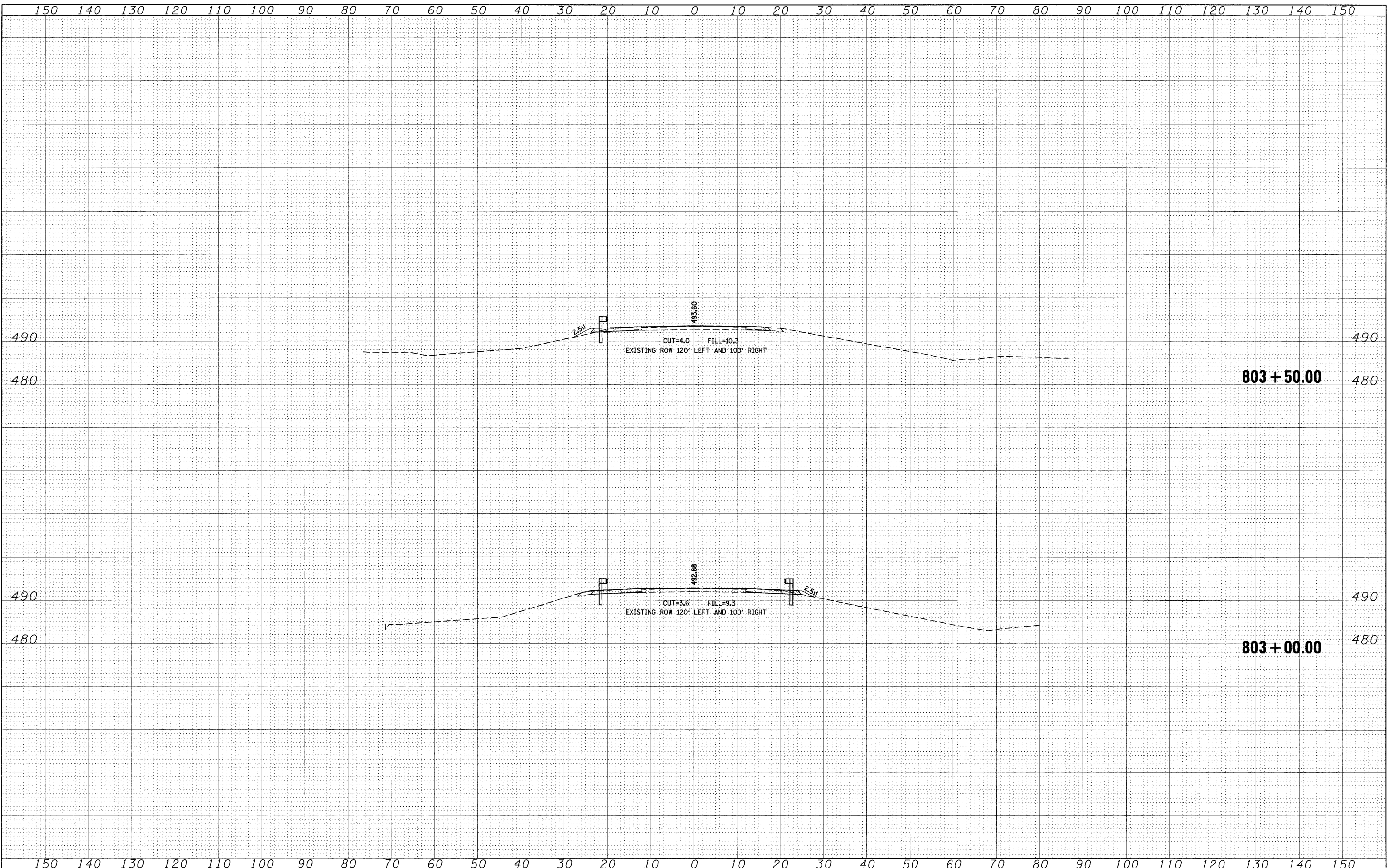
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PLOT SCALE = 10.0000' / IN.	DRAWN - ---	REVISED - ---
PLOT DATE = 6/18/2008	CHECKED - ---	REVISED - ---
	DATE - ---	REVISED - ---

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

SCALE: _____ SHEET NO. 44 OF 48 SHEETS STA. 801+60.00 TO STA. 801+80.33

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	12-1, BR	UNION	48	44
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 98886	

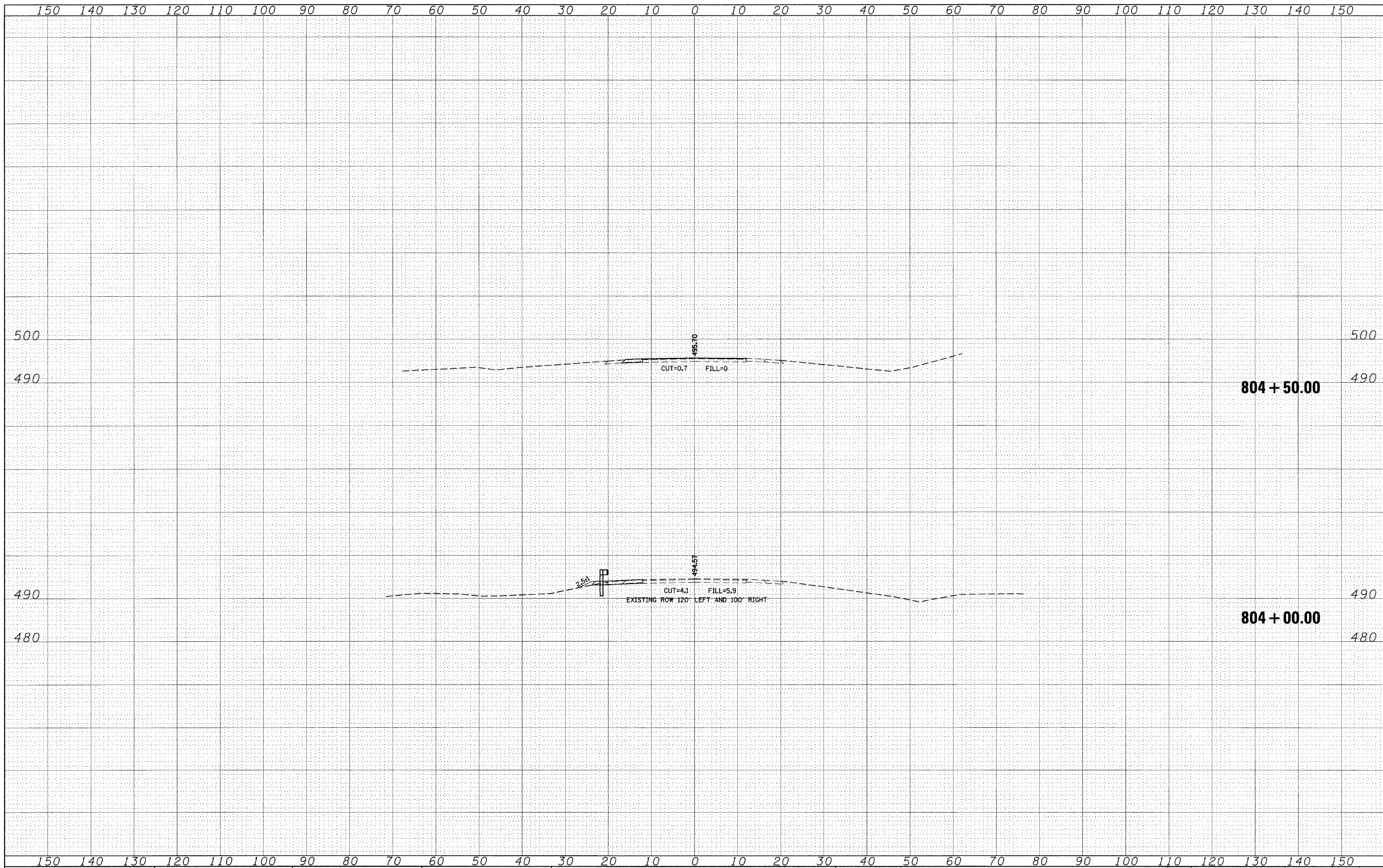


FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	NO. _____	
AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	NO. _____	
AREAS CHECKED		

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

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



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 CHECKED - ---
 DATE - ---

DESIGNED - ---
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 CHECKED - ---
 DATE - ---

REVISED - ---
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**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

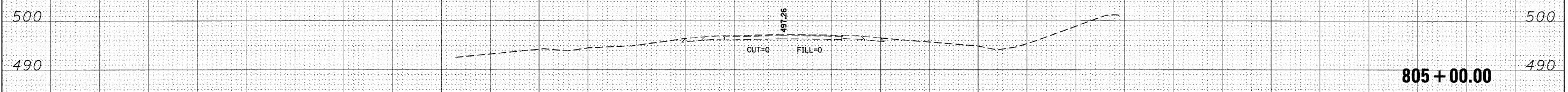
SCALE: SHEET NO. 47 OF 48 SHEETS STA. 804+00.00 TO STA. 804+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	12-1BR	UNION	48	47
CONTRACT NO. 98886			ILLINOIS FED. AID PROJECT	

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

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

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



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

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	DRAWN - ---	REVISED - ---
PLOT SCALE = 10.0000' / 1"	CHECKED - ---	REVISED - ---
PLOT DATE = 6/18/2008	DATE - ---	REVISED - ---

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SCALE: _____ SHEET NO. 47 OF 48 SHEETS STA. 805+00.00 TO STA. 805+00.00 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
322	12-1, BR	UNION	48	48
CONTRACT NO. 98886				