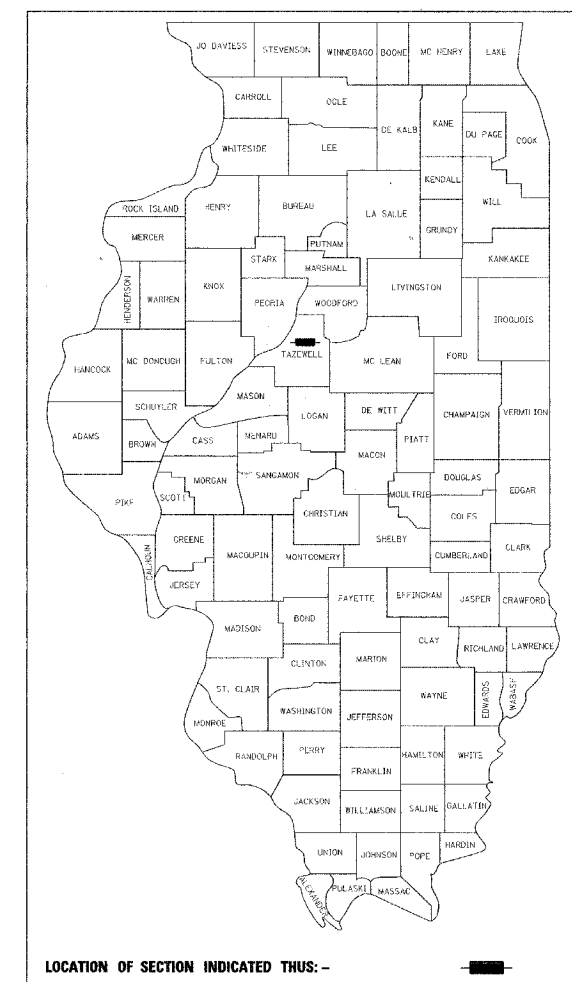


FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)	TAZEWELL	34	1
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

CONTRACT NO. 68415
 CATALOG NO. 032903-00D
 D-94-016-05



STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

**PROPOSED
 HIGHWAY PLANS**

FAP ROUTE 693 (IL RTE 9)
 SECTION (119B-3)
 PROJECT NO. F-0693(057)
 TAZEWELL COUNTY
 DECK BEAM REPLACEMENT
 C-94-100-04

SCALES
 PLAN = 1" = 30'
 PROFILE HORIZ. = 1" = 30'
 PROFILE VERT. = 1" = 5'
 CROSS SECTIONS = 1" = 10' HORIZ.
 1" = 5' VERT.

INDEX OF SHEETS

- 1 COVER SHEET
- 2 GENERAL NOTES
- 3 SUMMARY OF QUANTITIES
- 4 TYPICAL SECTIONS
- 5 GENERAL SITE PLAN
- 6 RESURFACING DETAIL (BRIDGE APPROACH TAPER/BUTT JOINT)
- 7-8 STAGE CONSTRUCTION PLANS
- 9 WIDE LOAD SIGN LOCATION
- 10-23 BRIDGE PLANS
- 24-34 SCOUR MITIGATION PLANS

STANDARDS

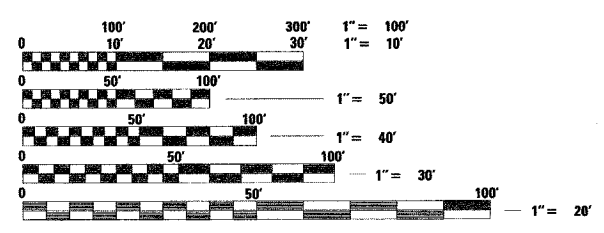
- 420401-05
- 630001-06
- 630301-03
- 631031-05
- 631032-02
- 635006-02
- 635011-01
- 701306-01
- 701321-08
- 702001-06
- 704001-02
- 780001-01
- 781001-02

COMMITMENTS

NONE

DESCRIPTION OF WORK

THE PROPOSED IMPROVEMENTS CONSIST OF SCOUR MITIGATION, REMOVAL OF THE EXISTING BRIDGE SUPERSTRUCTURE AND REPLACING WITH PRECAST, PRESTRESSED CONCRETE DECK BEAMS, BITUMINOUS CONCRETE WEARING SURFACE AND OTHER APPURTENANT ITEMS OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO SATISFACTORILY CONSTRUCT THE PROJECT IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND PROVISIONS STATED HEREIN.

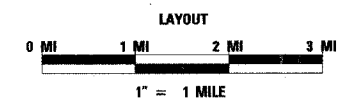
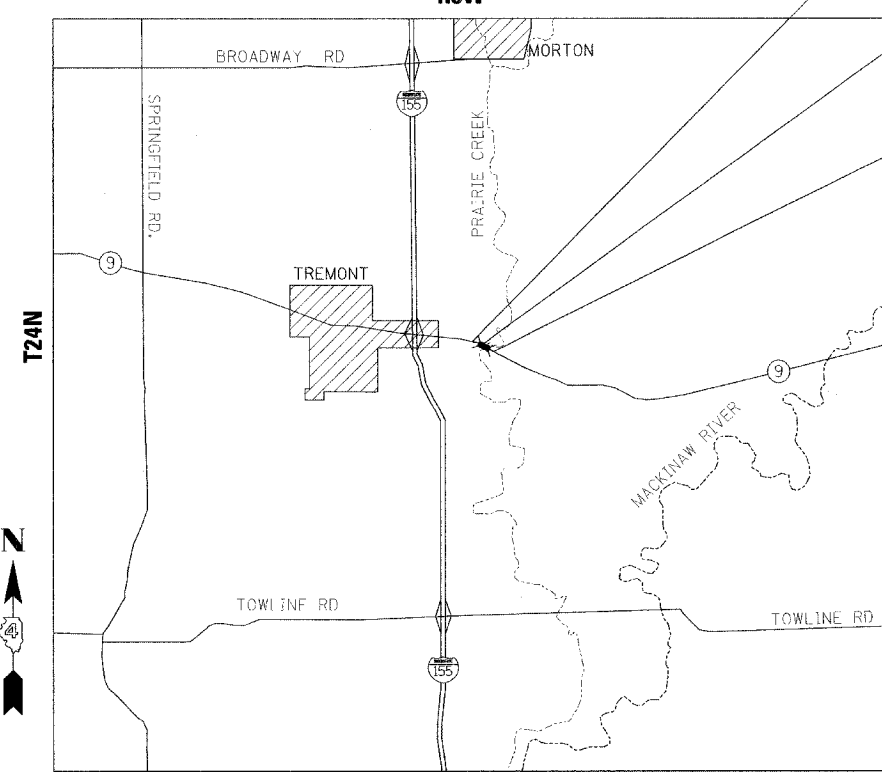


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES, REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES, IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

CONTRACT NO. 68415

LENGTH OF PROJECT
 GROSS LENGTH: 136 FT = 0.03 MILES
 NET LENGTH: 136 FT = 0.03 MILES



PROJECT BEGIN
 STA. 504 + 51.87
 LATITUDE 40° 31' 26" N
 LONGITUDE 89° 27' 49" W

BRIDGE OVER PRAIRIE CREEK
 STA. 504 + 88.50 TO STA. 505 + 51.50
 S.N. 090-0061

PROJECT END
 STA. 505 + 87.50
 LATITUDE 40° 31' 25" N
 LONGITUDE 89° 27' 48" W

2004 ADT = 3600
 2024 ADT = 4500

QA/QC BITUMINOUS SUPERPAVE PROJECT

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS

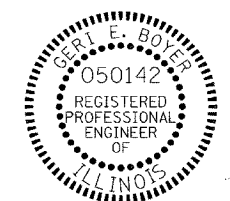
SUBMITTED 3/31/06

DEPUTY DIRECTOR OF HIGHWAYS, REGIONAL ENGINEER
David E. Cove

PASSED May 12, 2006
 ENGINEER OF DESIGN AND ENVIRONMENT
Mike Hine

APPROVED May 12, 2006
 DIRECTOR, DIVISION OF HIGHWAYS
Milton R. Sees, P.E.

PRINTED BY THE AUTHORITY
 OF THE STATE OF ILLINOIS



Geri E. Boyer
 GERI E. BOYER, P.E.
 LICENSE NO. 062-050142
 DATE 3-30-06
 EXPIRES 11-30-2007

PREPARED BY:
 TWM THOUVENOT, WADE & MOERCHEN, INC.

PROJECT ENGINEER: JAMES MILLER
 SQUAD CONTACT: (309) 671-3451

GENERAL NOTES

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION, AS INDICATED BY THE SUB-NUMBER LISTED IN THE INDEX OF SHEETS, OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

ANY FACILITIES OR APPURTENANCES WHICH ARE THE PROPERTY OF ANY PUBLIC UTILITY LOCATED WITHIN THE LIMITS OF CONSTRUCTION SHALL BE RELOCATED OR ADJUSTED BY THEIR RESPECTIVE OWNERS. THE CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE OWNERS OF ANY SUCH FACILITY IN THEIR REMOVAL AND REARRANGE HIS OPERATIONS IN ORDER THAT THE UTILITY'S OPERATIONS AND THE CONSTRUCTION OF THIS PROJECT MAY PROGRESS IN A REASONABLE MANNER.

THE ENGINEER AND OWNER FURTHER DO NOT WARRANT THAT ALL UTILITIES HAVE BEEN ILLUSTRATED ON THESE DOCUMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONTACTING J.U.L.I.E. FOR FIELD VERIFICATION OF ALL UTILITIES ON THE SITE PRIOR WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER AND AN AUTHORIZED SURVEYOR OR AGENT, HAVE WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

EVERY TREE SHALL BE SAVED IF POSSIBLE. THE ENGINEER IN THE FIELD WILL VERIFY AND MARK ALL TREES REQUIRED TO BE REMOVED. SHOULD THE ENGINEER'S DECISION INCREASE OR DECREASE THE QUANTITIES OF WORK TO BE PERFORMED FROM THE PLANS, THE CONTRACTOR SHALL ACCEPT PAYMENT AS STATED IN ARTICLE 104.03 OF THE STANDARD SPECIFICATIONS. TREES OUTSIDE THE LIMITS OF CONSTRUCTION SHALL NOT BE DISTURBED UNLESS DESIGNATED BY THE ENGINEER.

THE CONTRACTOR SHALL CONFINE HIS OPERATIONS TO THE AREA LOCATED WITHIN THE CONSTRUCTION LIMIT LINES, AS SHOWN PER PLANS. ANY AREA DISTURBED BEYOND THESE LIMITS SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.

IT IS INTENDED THAT ANY CULVERTS DAMAGED BY OR REMOVED BY THE CONTRACTOR OTHER THAN THOSE NOTED ON THE PLANS TO BE REMOVED WILL HAVE TO BE REMOVED AND/OR REPLACED AT THE CONTRACTOR'S SOLE EXPENSE.

ALL MATERIALS SUCH AS FRAMES AND GRATES AND STORM SEWER PIPE SCHEDULED FOR REMOVAL, THAT ARE CONSIDERED TO BE SUITABLE FOR FUTURE USE, SHALL BE SALVAGED AND STOCKPILED AS DIRECTED BY THE ENGINEER. ALL OTHER MATERIALS SCHEDULED FOR REMOVAL BUT NOT SALVAGED, SHALL BE DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.

ALL STORM SEWER AND CULVERT PIPE TO BE REMOVED WHICH THE ENGINEER DEEMS FIT FOR RE-USE SHALL BE SALVAGED IN ACCORDANCE WITH ARTICLES 501.02 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL OTHER STORM SEWER AND CULVERT PIPE SHALL BE DISPOSED OF IN ACCORDANCE WITH ARTICLE 202.03.

ALL TEMPORARY PAVEMENT MARKINGS SHALL BE PLACED IN SUCH A MANNER SO AS NOT TO INTERFERE WITH THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.

THE THICKNESS OF THE BITUMINOUS 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 THE BASE COURSE ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

NO VIBRATORY ROLLER WILL BE ALLOWED.

ILLINOIS STATE LAW REQUIRES A 48-HOUR NOTICE BE GIVEN TO ALL UTILITIES BEFORE DIGGING. FIELD MARKING OF FACILITIES MAY ALSO BE OBTAINED BY CALLING J.U.L.I.E. AND FOR NON-J.U.L.I.E. MEMBERS, THE UTILITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

- *ILLINOIS-AMERICAN WATER COMPANY
- *CHARTER COMMUNICATIONS
- *SBC COMMUNICATIONS
- *AMEREN CILCO/CIPS

(MEMBERS OF J.U.L.I.E. (800) 892-0123 ARE INDICATED BY * NONMEMBERS OF J.U.L.I.E. MUST BE NOTIFIED INDIVIDUALLY)

FARM ACCESS

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ALLOW FARMERS AND RESIDENTS ACCESS TO FARMS AND RESIDENCES DURING VARIOUS STAGES OF CONSTRUCTION IF ACCESS CANNOT BE ATTAINED BY OTHER ROADS.

UTILITIES - LOCATIONS/INFORMATION ON PLANS

UNLESS NOTED OTHERWISE, THE LOCATION OF EXISTING WATER MAINS, GAS MAINS, SEWERS, ELECTRIC POWER LINES, TELEPHONE LINES AND OTHER UTILITIES AS SHOWN ON THE PLANS ARE BASED ON CAREFUL FIELD INVESTIGATION AND THE INFORMATION AVAILABLE. BUT THEY ARE NOT GUARANTEED. SOME UTILITY LOCATIONS ARE SHOWN AS FUTURE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THEIR EXACT LOCATION FROM THE UTILITY COMPANIES AND BY FIELD INSPECTION.

BUTT JOINT CUTTING TIME RESTRICTION

BUTT JOINTS SHALL NOT BE MILLED MORE THAN THREE (3) DAYS PRIOR TO PLACEMENT OF THE BITUMINOUS SURFACE COURSE.

NAME PLATE RELOCATION

NAME PLATES THAT WILL BE REMOVED AS A RESULT OF THIS WORK SHALL BE RELOCATED ON THE STEEL BRIDGE RAIL, TYPE SM AS DIRECTED BY THE ENGINEER. THE COST OF REMOVING AND REPLACING THE NAME PLATE(S), INCLUDING ALL NECESSARY FASTENERS, WILL NOT BE MEASURED OR PAID FOR SEPARATELY, BUT WILL BE CONSIDERED AS INCIDENTAL TO THE CONTRACT.

COMMITMENTS:

NONE

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE USE(S):	SURFACE (1 1/2" LIFT)	BINDER COURSE (1 3/4" LIFT)
AC/PG	PG 64-22	PG 64-22
RAP % (MAX)	15%	15%
DESIGN AIR VOIDS	4.2% @ N=50	4.2% @ N=50
MIX COMPOSITION (GRADATION MIXTURE)	IL 9.5 OR 12.5	IL 9.5 OR 12.5
FRICTION AGG	Mixture D	N.A.

PLAN QUANTITIES FOR BITUMINOUS CONCRETE SURFACE COURSE ITEMS ARE CALCULATED USING A UNIT WEIGHT OF 112 LB/SQ YD/IN.

GENERAL NOTES - SCOUR MITIGATION

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE (INCLUDING HIGH WATER ELEVATION) 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 CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

ALL INFORMATION SHOWN IN EACH STRUCTURE'S WATERWAY INFORMATION TABLE WAS PROVIDED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

COMMITMENTS ARE NOT TO BE ALTERED WITHOUT THE WRITTEN APPROVAL OF ALL PARTIES TO WHICH THE COMMITMENT WAS MADE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DIVERTING THE WATER FLOW FROM THE CONSTRUCTION AREA OF EACH SITE. THE CONTRACTOR MAY USE EITHER METHOD OF DEWATERING AS DESCRIBED IN THE DEWATERING SPECIAL PROVISION

DURING SITE PREPARATION, AREAS BELOW THE FINAL GRADE SHALL BE BROUGHT TO GRADE BY PLACING COMPACTED LAYERS OF GRANULAR SUBBASE MATERIAL, TYPE C. AREAS OF SOFT OR OTHERWISE UNSUITABLE SUBGRADE SOILS SHALL BE EXCAVATED AND REPLACED WITH COMPACTED LAYERS OF GRANULAR SUBBASE MATERIALS, TYPE C. REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIALS SHALL BE AS DIRECTED BY THE ENGINEER AND WILL BE PAID FOR IN ACCORDANCE TO ARTICLE 109.04 (FORCE ACCOUNT BASIS) OF THE STANDARD SPECIFICATIONS. AN ASSUMED QUANTITY FOR GRANULAR SUBBASE MATERIALS, TYPE C IS INCLUDED AS PART OF EACH STRUCTURE'S MITIGATION DETAILS.

LAYOUT OF SCOUR PROTECTION SYSTEMS MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE GRADED, FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER. SECTIONS 250 AND 251 OF THE STANDARD SPECIFICATIONS SHALL GOVERN THIS WORK.

IT IS ANTICIPATED THAT THE MAJORITY OF THE SCOUR WORK WILL NOT REQUIRE HIGHWAY TRAFFIC LANE CLOSURES. WORK WHICH WOULD REQUIRE EXTENDED LANE CLOSURES SHALL BE DONE WHILE 701301 IS IN USE, OTHERWISE THE CONTRACTOR IS RESTRICTED TO ONE LANE DAYTIME ONLY CLOSURE IN ACCORDANCE TO IDOT STANDARDS 701301.

GABION ANCHOR STAKE

LAYOUT SHOWN ON PLAN SHEETS IS FOR INFORMATION AND ESTIMATION PURPOSES ONLY. ACTUAL LAYOUT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR AND APPROVED BY THE ENGINEER AND SHALL CONFORM TO THE PROCEDURES STATED IN THE SPECIAL PROVISIONS.

SUGGESTED SEQUENCE OF CONSTRUCTION

1. INSTALL DEWATERING SYSTEM AND DIVERT WATER FLOW FROM THE CONSTRUCTION AREA.
2. EXCAVATE TO THE LINES, GRADES, CONTOURS, AND DIMENSIONS SHOWN. THE PREPARED AREA SHALL BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE FURTHER WORK CAN TAKE PLACE.
3. INSTALL FILTER FABRIC ON THE GRADED SURFACES AS SHOWN ON THE DRAWINGS.
4. INSTALL SITE SPECIFIC SCOUR COUNTERMEASURES. SEE DETAIL SHEETS FOR SPECIFIC INSTALLATION PROCEDURES.
5. REMOVE DEWATERING SYSTEM. GRADE AND SEED GROUND DISTURBED DURING CONSTRUCTION.

DISPOSITION OF UTILITIES

UTILITY	COMPANY	LOCATION	ACTION
Underground Gas	AmerenCILCO	North Side of Creek	Use Caution

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	34	2
STA.	TO STA.			
EXISTING CONDITIONS:				
CONTRACT NO. 68415				

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		GENERAL NOTES F.A.P. RTE 693 SECTION (119B-3)I TAZEWELL COUNTY SCALE: NONE DATE: 03/24/2006 DRAWN BY: KBF CHECKED BY: AJE

SUMMARY OF QUANTITIES

F.A.P. ROUTE	SECTION	COUNTY	TOTAL STATION	POST MILE
693	(1198-31)	TAZEWELL	34	3
STA.		TO STA.		
EXISTING CONDITIONS:				
CONTRACT NO. 68415				

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	X080-2A FED 80% STATE 20%	SFTY-3N		
20200500	EARTH EXCAVATION (WIDENING)	CU YD	50	50			
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	35	35			
35600400	BITUMINOUS CONCRETE BASE COURSE WIDENING, 9"	SQ YD	196	196			
40600300	AGGREGATE (PRIME COAT)	TON	1	1			
40600980	BITUMINOUS CONCRETE REMOVAL - BUTT JOINT	SO YD	160	160			
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SO YD	164	164			
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SO YD	35	35			
44000100	PAVEMENT REMOVAL	SO YD	92	92			
44000700	APPROACH SLAB REMOVAL	SO YD	107	107			
48101200	AGGREGATE SHOULDERS, TYPE B	TON	3	3			
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1	1			
50102400	CONCRETE REMOVAL	CU YD	2.4	2.4			
50300225	CONCRETE STRUCTURES	CU YD	3.4	3.4			
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH=1/45")	SQ FT	45.1	45.1			
X0325294	PREFORMED JOINT STRIP SEAL	FOOT	33	33			
X0324744	REMOVAL OF EXISTING PRECAST UNITS	SQ FT	299	299			
50400105	PRECAST CONCRETE BRIDGE SLAB	SO FT	299	299			
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SO FT	2,066	2,066			
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	450	450			
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	207	207			
51500100	NAME PLATES	EACH	1	1			
58100200	WATERPROOFING MEMBRANE SYSTEM	SO YD	230	230			
58300100	PC MORTAR FAIRING COURSE	FOOT	626	626			
* 63000000	STEEL PLATE BRIDGE GUARD RAIL, TYPE A	FOOT	100	100			
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4			
* 63200305	STEEL PLATE BEAM GUARD RAIL REMOVAL	FOOT	125	125			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4			
67100100	MOBILIZATION	L SUM	1	1			
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1			
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1			
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1			
70106700	TEMPORARY RUMBLE STRIP	EACH	12	12			
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	144	144			
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	3,107	3,107			
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	1,132	1,132			
70400100	TEMPORARY CONCRETE BARRIER	FOOT	329	329			
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	329	329			
* 78005110	EPOXY PAVEMENT MARKING - LINE 4"	FOOT	1,689	1,689			
* 78100100	RAISED REFLECTIVE PAVEMENT MARKERS	EACH	10	10			
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	4	4			
* 78200510	BARRIER WALL MARKERS, TYPE A	EACH	4	4			
78300100	PAVEMENT MARKING REMOVAL	SO FT	473	473			

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	X080-2A FED 80% STATE 20%	SFTY-3N FED 80% STATE 20%		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	10	10			
X4066424	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "D", N50	TON	53	53			
X4066614	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50	TON	21	21			
* X7200200	WIDE LOAD SIGNING	L SUM	1	1			
Z0002600	BAR SPLICERS	EACH	8	8			
Z0030255	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	2		2		
Z0030320	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 2	EACH	2		2		

SUMMARY OF QUANTITIES			CONSTRUCTION TYPE CODE				
CODE NO	ITEM	UNIT	TOTAL QUANTITIES	X080-2A FED 80% STATE 20%			
20300100	CHANNEL EXCAVATION	CU YD	416		416		
25000300	SEEDING, CLASS 3	ACRES	0.03		0.03		
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	3		3		
25000500	PHOSPHOROUS FERTILIZER NUTRIENT	POUND	3		3		
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	3		3		
25100630	EROSION CONTROL BLANKET	SO YD	138		138		
28100109	STONE RIPRAP, CLASS A5	TON	129		129		
28200200	FILTER FABRIC	SO YD	712		712		
28400100	GABIONS	CU YD	167		167		
28401000	SLOPE MATTRESS	SO YD	307		307		
31101900	SUB-BASE GRANULAR MATERIAL TYPE C	TON	171		171		
63300205	REMOVE AND REINSTALL EXIST. STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	50		50		
X0301852	DEWATERING STRUCTURE NO. 1	EACH	1		1		
X0322587	CONSTRUCTION ACCESS	EACH	1		1		
X0323655	GABION ANCHOR STAKES	EACH	56		56		

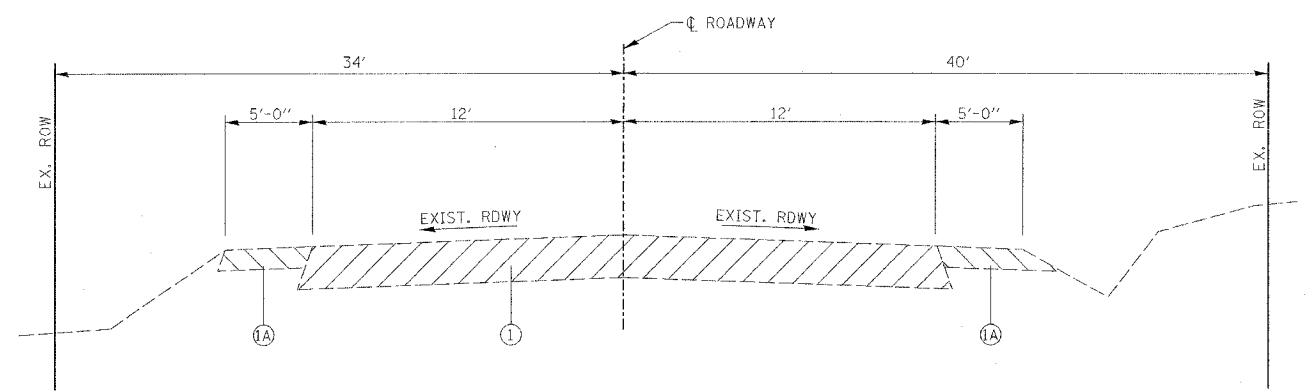
*SPECIALTY ITEM

REVISIONS	
NAME	DATE

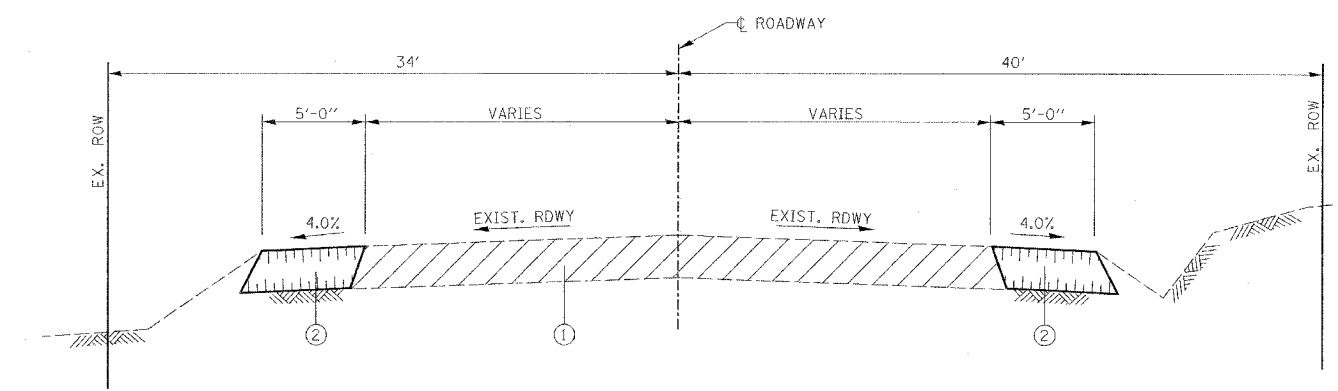
ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
F.A.P. RTE. 693
SECTION (1198-31)
TAZEWELL COUNTY

SCALE: NONE DRAWN BY: KBF
DATE: 03/24/2006 CHECKED BY: AJE

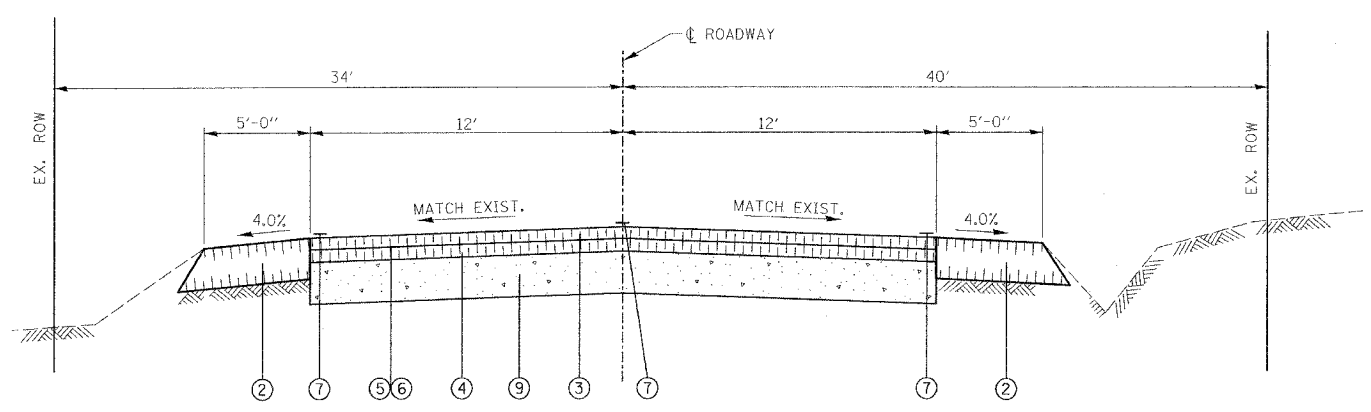
F.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	34	4
STA.		TO STA.		
EXISTING CONDITIONS:				
CONTRACT NO. 68415				



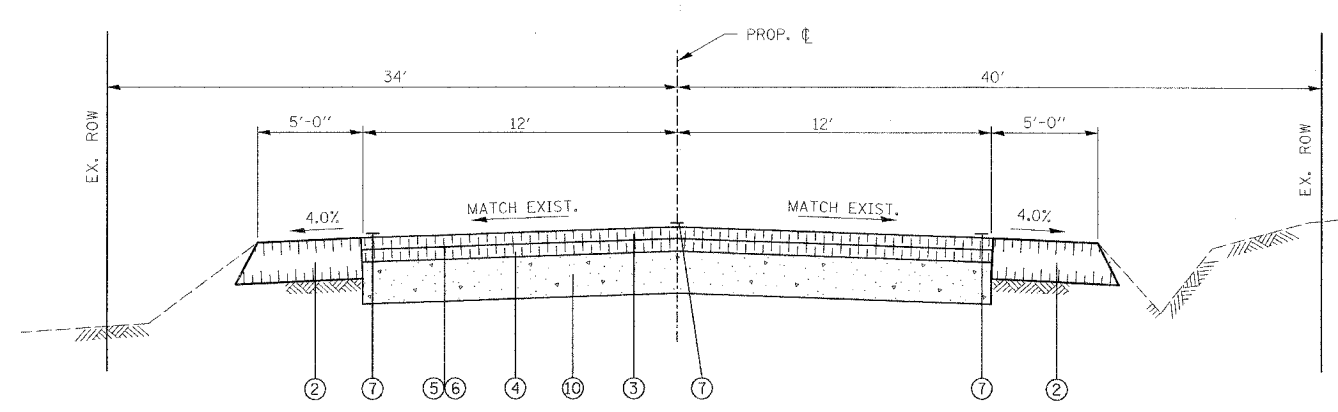
EXISTING TYPICAL SECTION IL ROUTE 9
 STA. 503+60 TO STA. 504+67.95
 STA. 505+71.42 TO STA. 506+70



PROPOSED TYPICAL SECTION IL ROUTE 9
 STA. 503+60 TO STA. 504+51.87, LT.
 STA. 505+87.5 TO STA. 506+40, LT.
 STA. 503+90 TO STA. 504+51.87, RT.
 STA. 505+87.5 TO STA. 506+70, RT.



PROPOSED TYPICAL SECTION IL RTE 9
 STA. 504+51.87 TO STA. 504+57.87
 STA. 505+81.50 TO STA. 505+87.50



PROPOSED TYPICAL SECTION IL RTE 9
 STA. 504+57.87 TO STA. 504+67.95
 STA. 505+71.42 TO STA. 505+81.50

LEGEND

- ① EXISTING ROADWAY
- ①A EXISTING AGGREGATE SHOULDER
- ② BITUMINOUS CONCRETE BASE COURSE WIDENING, 9"
- ③ PROPOSED BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE, MIX "D" N50 - 1 1/2 "
- ④ PROPOSED BITUMINOUS CONCRETE BINDER COURSE SUPERPAVE, IL 19.0, N50 - 1 5/8 "
- ⑤ PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
- ⑥ PROPOSED AGGREGATE (PRIME COAT)
- ⑦ PROPOSED PAVEMENT MARKING
- ⑧ 8" AGGREGATE BASE
- ⑨ PROPOSED BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE), STANDARD 420401
- ⑩ PROPOSED BRIDGE APPROACH PAVEMENT STANDARD 420401 (NO CURB)

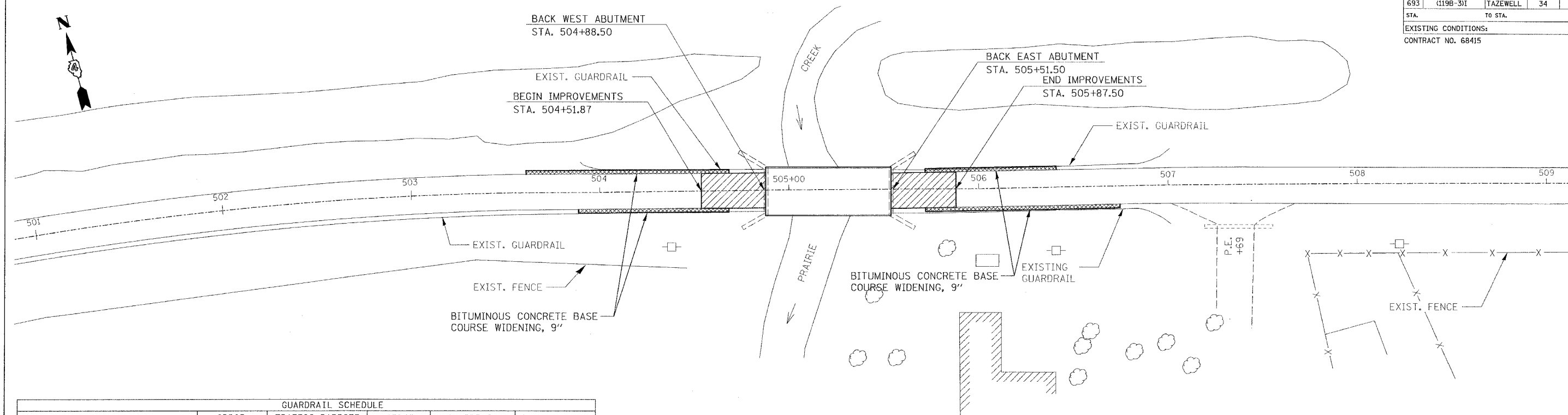
INDICATES EXISTING ROADWAY

OMISSIONS
 BRIDGE APPROACH PAVEMENT AT NELSON BEAMS:
 STA. 504+67.95 TO STA. 504+87.87
 STA. 505+51.50 TO STA. 505+71.42
 BRIDGE:
 STA. 504+87.87 TO STA. 505+51.50

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
TYPICAL SECTIONS
 F.A.P. RTE. 693
 SECTION (119B-3)I
 TAZEWELL COUNTY
 SCALE: NONE
 DATE: 03/24/2006
 DRAWN BY: KBF
 CHECKED BY: AJE

FAP SHEET	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	34	5
STA. TO STA.		EXISTING CONDITIONS:		
		CONTRACT NO. 68415		



GENERAL SITE PLAN

GUARDRAIL SCHEDULE					
STATION TO STATION	SPBGR TYPE A (FOOT)	TRAFFIC BARRIER TERMINAL, TYPE 6A (EACH)	SPBGR REMOVAL (FOOT)	GUARDRAIL MARKERS T-A (EACH)	BARRIER WALL MARKER T-A (EACH)
504+37.25 LT. TO 504+68.50 LT.			31.25		
504+37.25 RT. TO 504+68.50 RT.			31.25		
505+71.50 LT. TO 506+02.75 LT.			31.25		
505+71.50 RT. TO 506+02.75 RT.			31.25		
504+37.25 RT. TO 504+68.50 RT.		1		2	
505+71.50 RT. TO 506+02.75 RT.		1		2	
504+37.25 LT. TO 504+68.50 LT.		1		2	
505+71.50 LT. TO 506+02.75 LT.		1		2	
504+68.50 RT. TO 505+71.50 RT.					2
504+68.50 LT. TO 505+71.50 LT.					2
TOTAL:		4	125	8	4

PAVING SCHEDULE						
STATION TO STATION	BITUMINOUS MATERIALS PRIME COAT (GALLON)	AGGREGATE PRIME COAT (TON)	BITUMINOUS SURFACE REMOVAL (SQ. YD.)	AGGREGATE SHOULDERS (TON)	BITUMINOUS CONCRETE SURFACE COURSE SUPERPAVE MIX D (TON)	BINDER COURSE SUPERPAVE N50 (TON)
504+51.87 TO 504+88.00	17.5	0.5		1.5	10	10.5
505+52.00 TO 505+87.50	17.5	0.5		1.5	10	10.5
504+87.87 TO 505+51.50			92		33	
504+51.87 TO 505+87.50						
TOTAL:	35	1	92	3	53	21

PAVEMENT MARKING SCHEDULE						
STATION TO STATION	SHORT TERM PAVEMENT MARKINGS (FOOT)	TEMPORARY PAVEMENT MARKING LINE 4" (FT.)	WORK ZONE PAVEMENT MARKING REMOVAL (SQ. FT.)	EPOXY PAVEMENT MARKING LINE 4" (FOOT)		PAVEMENT MARKING REMOVAL (SQ. FT.)
				WHITE	YELLOW	
501+51.00 C TO 508+60.00 C	144		48		1418	473
501+51.00 RT. TO 508+60.00 RT.			236.3			
501+51.00 LT. TO 508+60.00 LT.			236.3			
501+51.00 RT. TO 508+60.00 RT. (STAGE 1 & 2)		1418	236.3			
501+51.00 LT. TO 508+60.00 LT. (STAGE 1 & 2)		1418	236.3			
504+51.87 RT. TO 505+87.50 RT.		135.6	45.2	135.6		
504+51.87 LT. TO 505+87.50 LT.		135.6	45.2	135.6		
STOP BAR (2 LOCATIONS)			48			
SUB TOTAL:		3107	1132	271.2	1418	
TOTAL:	144	3107	1132	1689		473

EARTH EXCAVATION (WIDENING)		
STATION TO STATION		EXCAVATION (CU YD)
503+60.00, LT. TO 504+67.95, LT.		15
505+71.42, LT. TO 506+40.00, LT.		10
503+90.00, RT. TO 504+67.95, RT.		11
505+71.42, RT. TO 506+70.00, RT.		14
TOTAL:		50

BITUMINOUS BASE COURSE WIDENING, 9"		
STATION TO STATION		WIDENING (SQ YD)
503+60.00, LT. TO 504+67.95, LT.		60
505+71.42, LT. TO 506+40.00, LT.		38
503+90.00, RT. TO 504+67.95, RT.		43
505+71.42, RT. TO 506+70.00, RT.		55
TOTAL:		196

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
GENERAL SITE PLAN AND SCHEDULES
 F.A.P. RTE. 693
 SECTION (119B-3)I
 TAZEWELL COUNTY

SCALE: NONE
 DATE: 03/24/2006
 DRAWN BY: KBF
 CHECKED BY: AJE

DATE: 03/24/2006
 TIME: 7:55:21 AM
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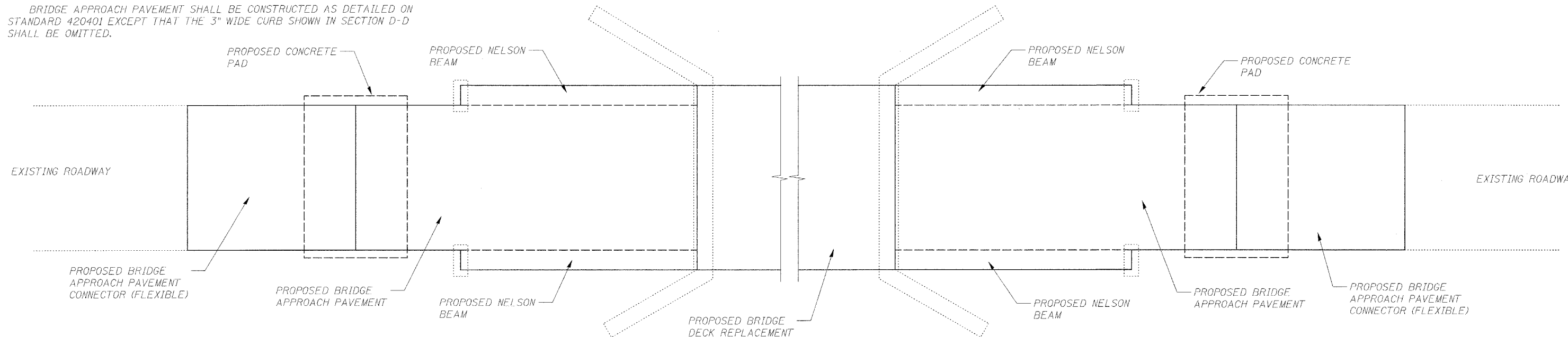
NOTES:

FULL-DEPTH SAW CUTS ARE REQUIRED FOR ALL REMOVAL ITEMS AND THAT THE COST FOR SUCH IS INCLUDED IN THE REMOVAL ITEM.

'ROAD CONSTRUCTION AHEAD' SIGNS ARE REQUIRED ON ALL INTERSECTING ROADS AND HIGHWAYS. THE COST FOR SUCH IS INCLUDED IN THE APPLICABLE TRAFFIC CONTROL PAY ITEM.

BRIDGE APPROACH PAVEMENT SHALL BE CONSTRUCTED AS DETAILED ON STANDARD 420401 EXCEPT THAT THE 3" WIDE CURB SHOWN IN SECTION D-D SHALL BE OMITTED.

F&P ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	34	6
STA.	TO STA.			
EXISTING CONDITIONS:				
CONTRACT NO. 68415				



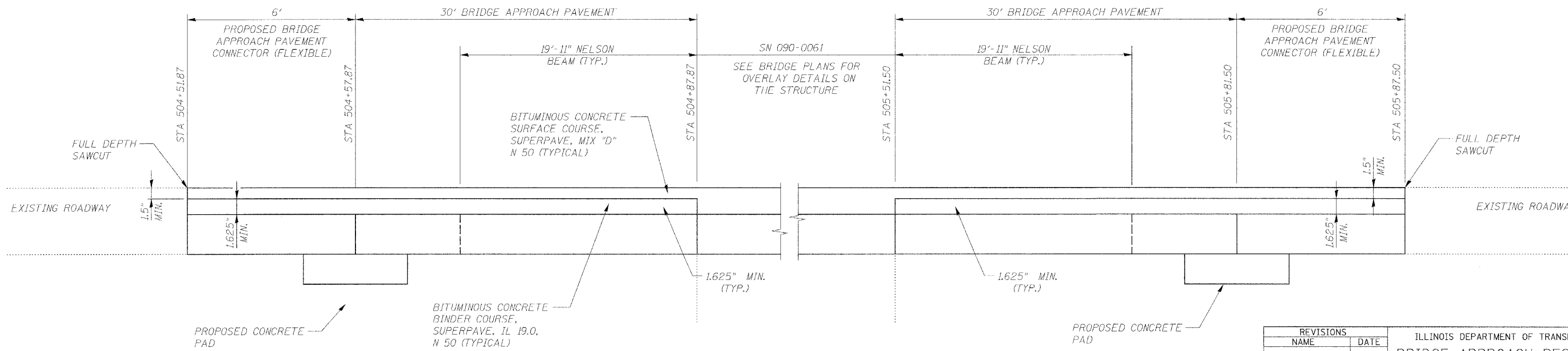
PLAN

BRIDGE APPROACH PAVEMENT

LOCATION	WIDTH	SQ. YD.
STA. 504+57.87 TO STA. 504+87.87	34'	113
STA. 505+51.50 TO STA. 505+81.50	34'	113

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

LOCATION	WIDTH	SQ. YD.
STA. 504+51.87 TO STA. 504+57.87	26'	17
STA. 505+81.50 TO STA. 505+87.50	26'	17



SECTION

REVISIONS	
NAME	DATE

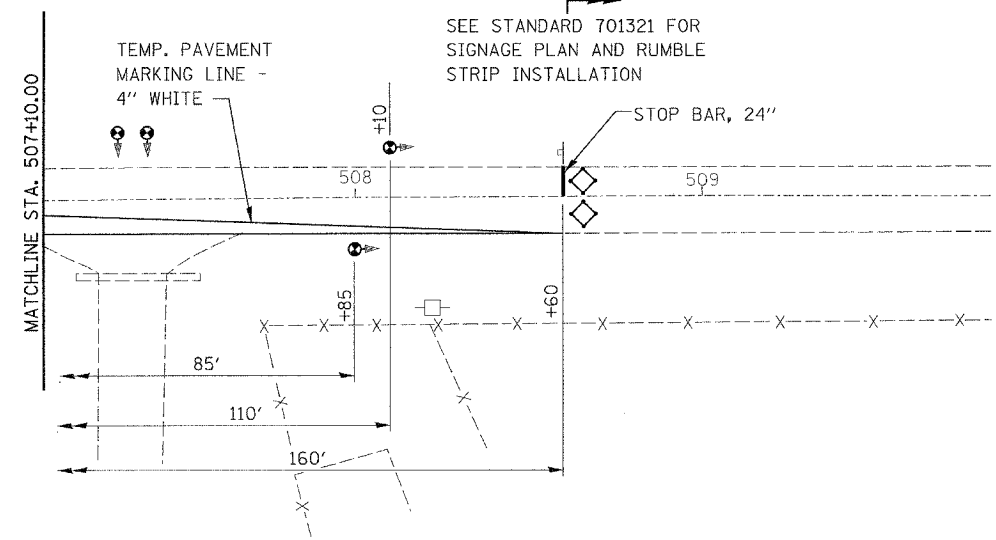
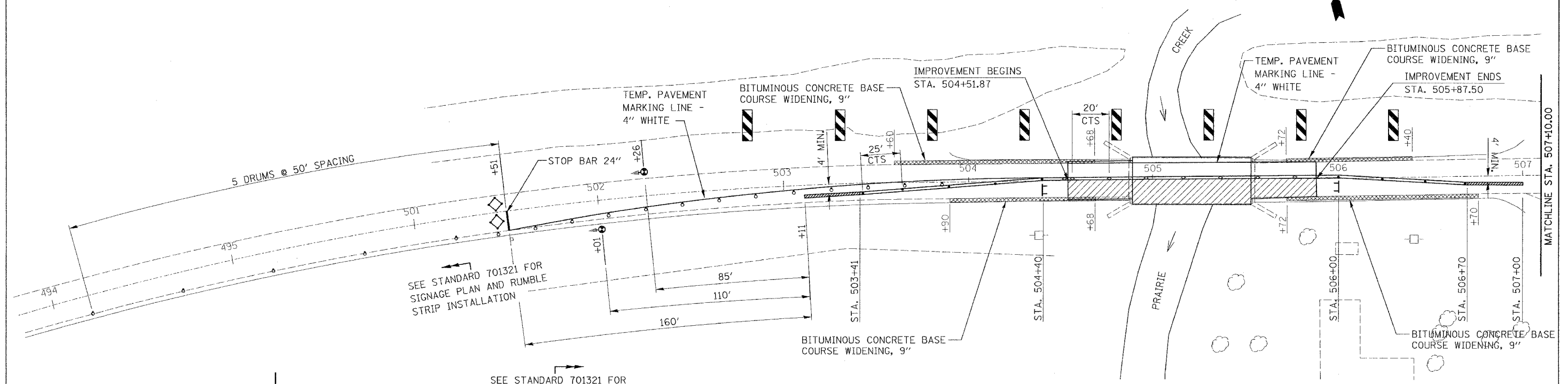
ILLINOIS DEPARTMENT OF TRANSPORTATION
**BRIDGE APPROACH RESURFACING
 DETAIL (TAPER/BUTT JOINT)**
 F.A.P. RTE. 693
 SECTION (119B-3)I
 TAZEWELL COUNTY

SCALE: NONE
 DATE: 03/24/2006
 DRAWN BY: KBF
 CHECKED BY: AJE

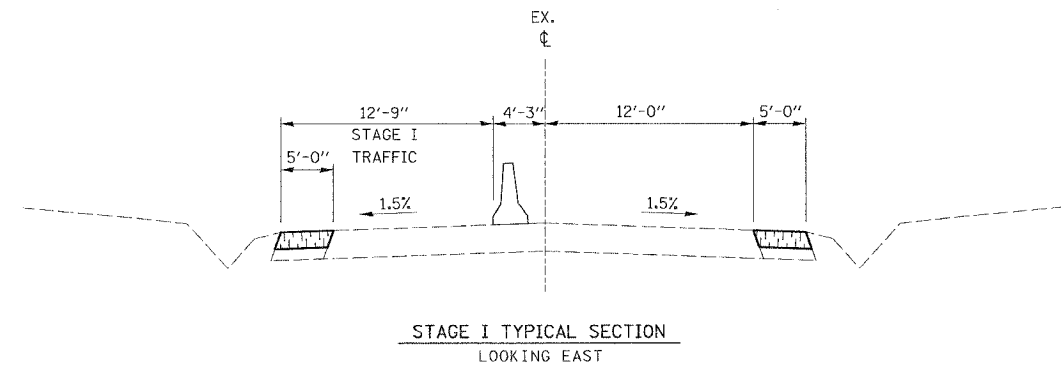
SCALE: NONE
 DATE: 03/24/2006
 DRAWN BY: KBF
 CHECKED BY: AJE

STAGE I TRAFFIC CONTROL

F.P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	34	7
STA.	TO STA.			
EXISTING CONDITIONS:				
CONTRACT NO. 68415				



- SYMBOLS**
- DRUM WITH STEADY BURNING LIGHT
 - ◑ TRAFFIC SIGNAL
 - INDUCTION LOOP DETECTOR
 - ▨ DOUBLE VERTICAL PANEL
 - ◇ TYPE C BIDIRECTIONAL REFLECTOR
 - STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
 - ▬ TEMPORARY CONCRETE BARRIER
 - ▨ IMPACT ATTENUATOR TEMP., (FULLY REDIRECTIVE), TEST LEVEL 2
 - ⊥ TYPE III BARRICADE
 - ▨ WORK AREA



NOTES

PRIOR TO INSTALLING TRAFFIC CONTROL DEVICES FOR STAGING OPERATIONS, CONSTRUCT BITUMINOUS BASE COURSE WIDENING LT USING IDOT TRAFFIC CONTROL PROTECTION STANDARD 701326

TRAFFIC CONTROL SHALL CONFORM TO HIGHWAY STANDARD 701321.

CONTRACTOR TO ADJUST TRAFFIC CONTROL AS NECESSARY TO MAINTAIN ACCESS TO ALL PRIVATE AND FIELD ENTRANCES.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE I TRAFFIC CONTROL
STANDARD 701321

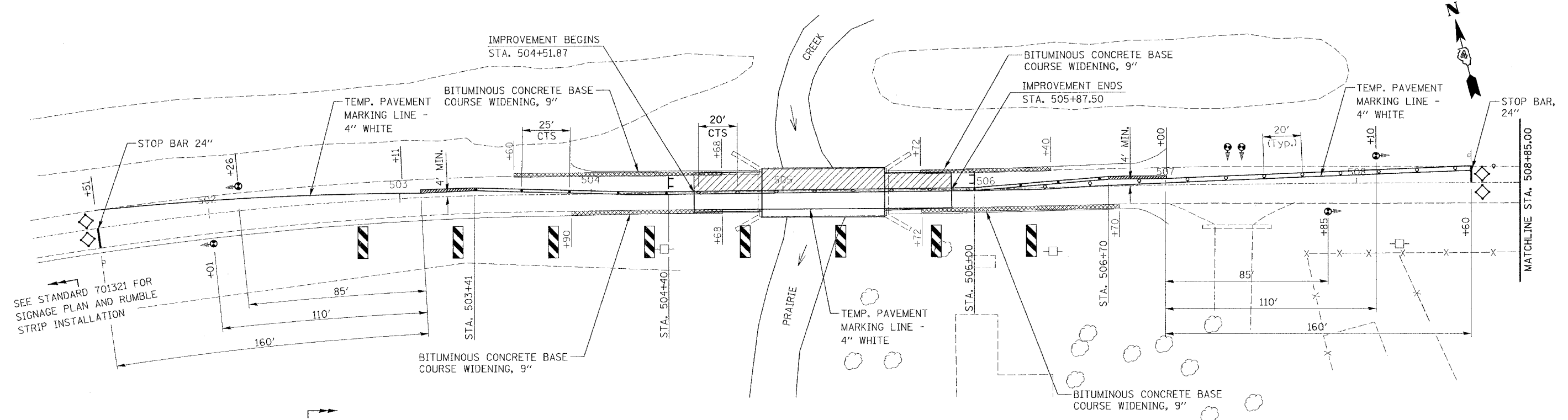
F.A.P. RTE. 693
 SECTION (119B-3)I
 TAZEWELL COUNTY

SCALE: NONE
 DATE: 03/24/2006

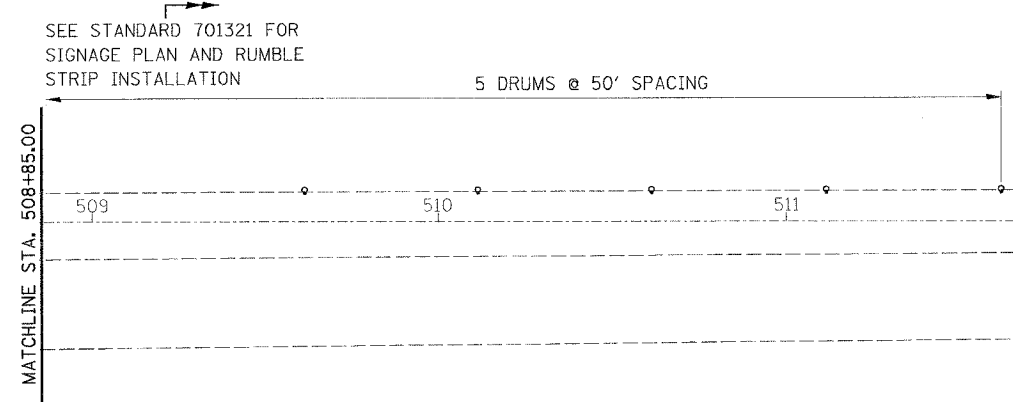
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 CHECKED BY: AJE

FWP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	34	8
STA.	TO STA.			
EXISTING CONDITIONS:				
CONTRACT NO. 68415				

STAGE II TRAFFIC CONTROL



SEE STANDARD 701321 FOR SIGNAGE PLAN AND RUMBLE STRIP INSTALLATION

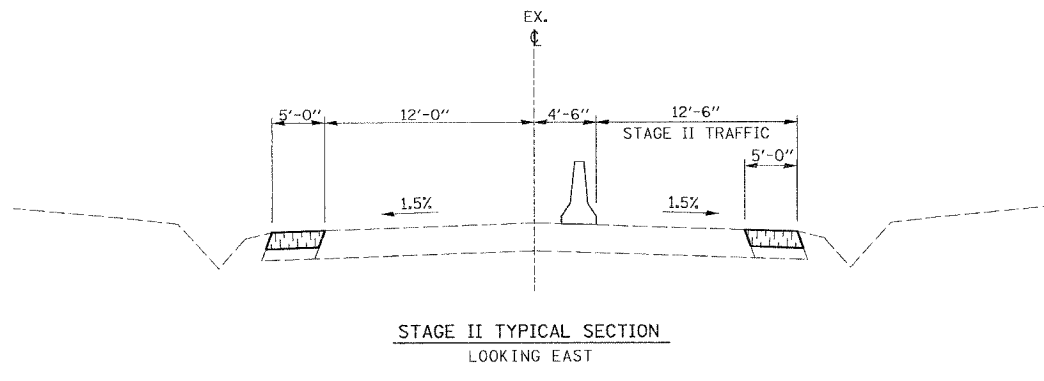


NOTES

TRAFFIC CONTROL SHALL CONFORM TO HIGHWAY STANDARD 701321.

CONTRACTOR TO ADJUST TRAFFIC CONTROL AS NECESSARY TO MAINTAIN ACCESS TO ALL PRIVATE AND FIELD ENTRANCES.

- SYMBOLS**
- DRUM WITH STEADY BURNING LIGHT
 - ⊙ TRAFFIC SIGNAL
 - ◇ INDUCTION LOOP DETECTOR
 - ▨ DOUBLE VERTICAL PANEL
 - ◇ TYPE C BIDIRECTIONAL REFLECTOR
 - STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS
 - ▭ TEMPORARY CONCRETE BARRIER
 - ▨ IMPACT ATTENUATOR TEMP., (FULLY REDIRECTIVE), TEST LEVEL 2
 - ⊥ TYPE III BARRICADE
 - ▨ WORK AREA



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
STAGE II TRAFFIC CONTROL
 STANDARD 701321

F.A.P. RTE. 693
 SECTION (119B-3)I
 TAZEWELL COUNTY

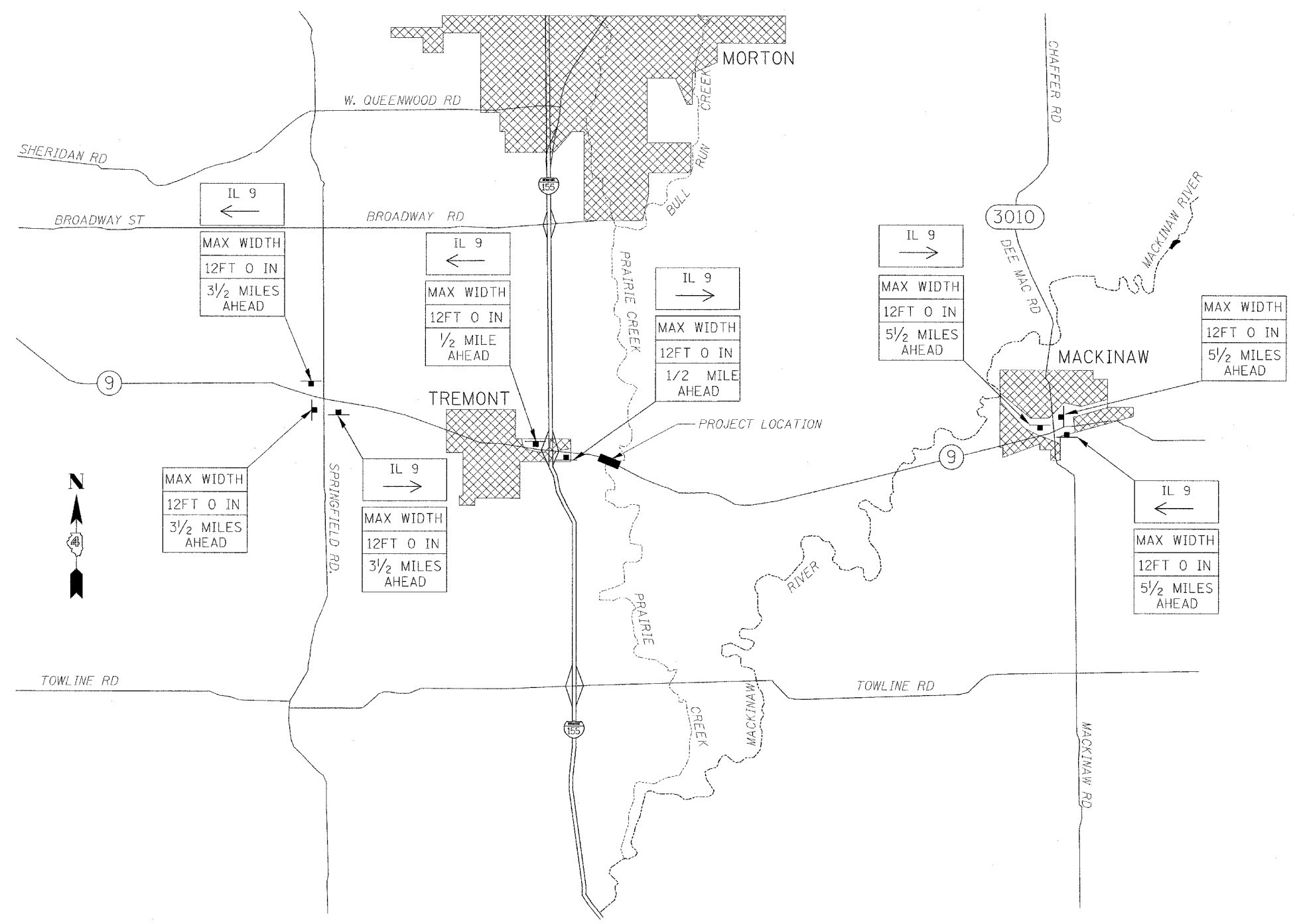
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 DATE: 03/24/2006

DRAWN BY: KBF
 CHECKED BY: AJE

PLOT DATE: *DATE-TIME*

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	34	9
STA.		TO STA.		
EXISTING CONDITIONS:				
CONTRACT NO. 68415				

- Notes
- All signs required will be supplied to the contractor by I.D.O.T.
 - The contractor shall furnish the posts AND erect signs at the locations shown on this sheet, as directed by the R.E./R.T. The posts shall remain the property of the contractor.
 - The contractor shall give Illinois Department of Transportation, Bureau of Operations two weeks notice for signs. The contractor shall pick up the signs at the T.M. building in Fairview Hgts., AND return them upon completion of the contract.
 - The above noted work shall be paid for at the contract unit price, Lump Sum, for Wide Load Signing AND no other compensation will be allowed.
 - Sign spacing will be 400' or to fit field conditions.
 - The height to the bottom of the lowest sign shall not be less than 6'.



SIGNS REQUIRED

MAX WIDTH 12FT 0 IN 5 1/2 MILES AHEAD	(3)	IL 9 →	(3)
MAX WIDTH 12FT 0 IN 3 1/2 MILES AHEAD	(3)	IL 9 ←	(3)
MAX WIDTH 12FT 0 IN 1/2 MILE AHEAD	(2)		

BRIDGE DECK REPLACEMENT
IL RT 9

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
WIDE LOAD SIGN LOCATION

F.A.P. RTE. 693
SECTION (119B-3)I
TAZEWELL COUNTY

SCALE: NONE
DATE: 03/24/2006

DRAWN BY: KBF
CHECKED BY: AJE

Bench Mark: Brass Plate on Southeast Wingwall Elev. 100.00

Existing Structure: S.N. 090-0061 was originally built in 1928 and rebuilt in 1975 as S.B.I. RTE 164, Section 119-BR-3 at Sta. 505+20. The structure consists of simple span PPC-deck beams on closed abutments on pile supported footings. The bk. to bk. abutment length is 63'-0" and the out to out bridge width is 33'-0". The existing superstructure is to be removed and replaced. Staged construction shall be used during construction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 693	(119B-3)1	TAZEWELL	34	10
FED. ROAD DIST. NO. 7		ILLINOIS	SHEET NO. 1	

Contract # 68415

GENERAL NOTES

Plan dimensions and details relative to 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 cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.

The top surface of the beams shall be finished according to Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

All construction joints shall be bonded. The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

The minimum thickness of the Bituminous overlay shall be 2" and varies as required to adjust for the new profile grade and beam camber. The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

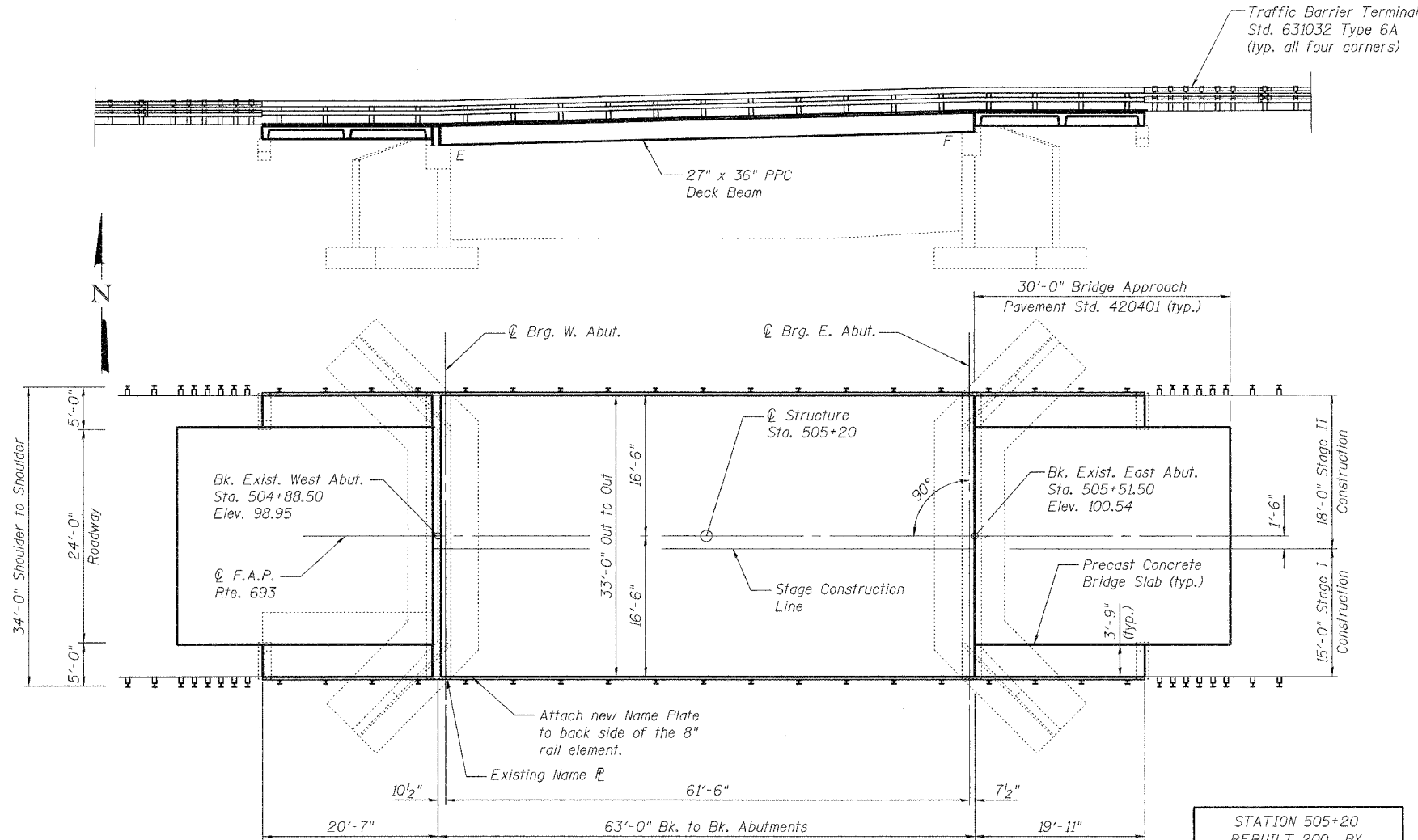
If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, 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. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		2.4	2.4
Prefomed Joint Strip Seal	Foot	33		33
Concrete Structures	Cu. Yd.		3.4	3.4
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	45.1		45.1
Precast Concrete Bridge Slab	Sq. Ft.	299		299
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2066		2066
Reinforcement Bars, Epoxy Coated	Pound		450	450
Steel Bridge Rail, Type SM	Foot	207		207
Name Plates	Each	1		1
Waterproofing Membrane System	Sq. Yd.	230		230
PC Mortar Fairing Course	Foot	626		626
Bituminous Concrete Surface Course, Superpave, Mix "D", N50	Ton	33.1		33.1
Bar Splicers	Each		8	8
Removal of Existing Precast Unit	Sq. Ft.	299		299

PLAN AND ELEVATION

ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)1
TAZEWELL COUNTY
SN 090-0061

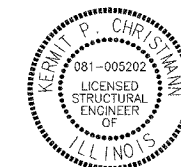
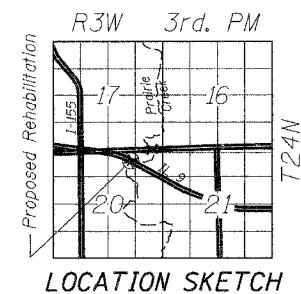


STATION 505+20
REBUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 693
SEC. (119B-3)1
LOADING HS-20
STR. NO. 090-0061

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated adjacent to new Name Plate. Cost included with Name Plates.



Expires: 11/30/06

Kerrit P. Christian

Index of Sheets

1. Plan and Elevation
2. Stage Construction
3. Temporary Concrete Barrier and Stage Construction Details
4. Superstructure
5. Precast Concrete Bridge Slab
6. Superstructure Details
7. Type SM Steel Bridge Rail Side Mounted
8. Bridge Rail Details
9. Prefomed Joint Strip Seal
10. Concrete Removal
11. West Abutment
12. East Abutment
13. Substructure Details
14. Bar Splicer Assembly Details

LOADING HS20-44

No Allowance for Future Wearing Surface

DESIGN SPECIFICATIONS

2002 AASHTO 17th Edition

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_a = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ Low Relaxation Strands)
 $f'_{si} = 201,960$ psi (1/2" ϕ Low Relaxation Strands)

PRECAST CONCRETE BRIDGE SLAB UNITS

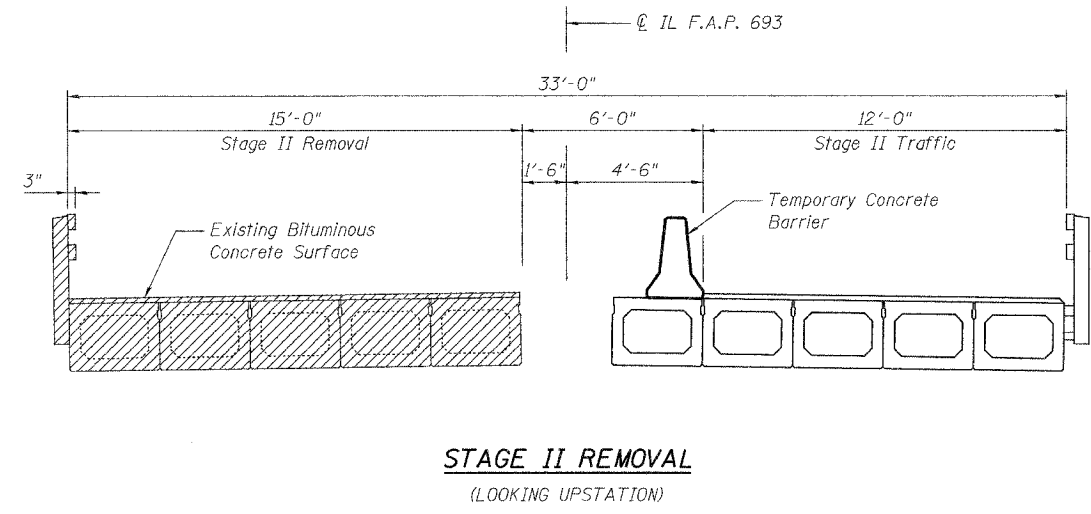
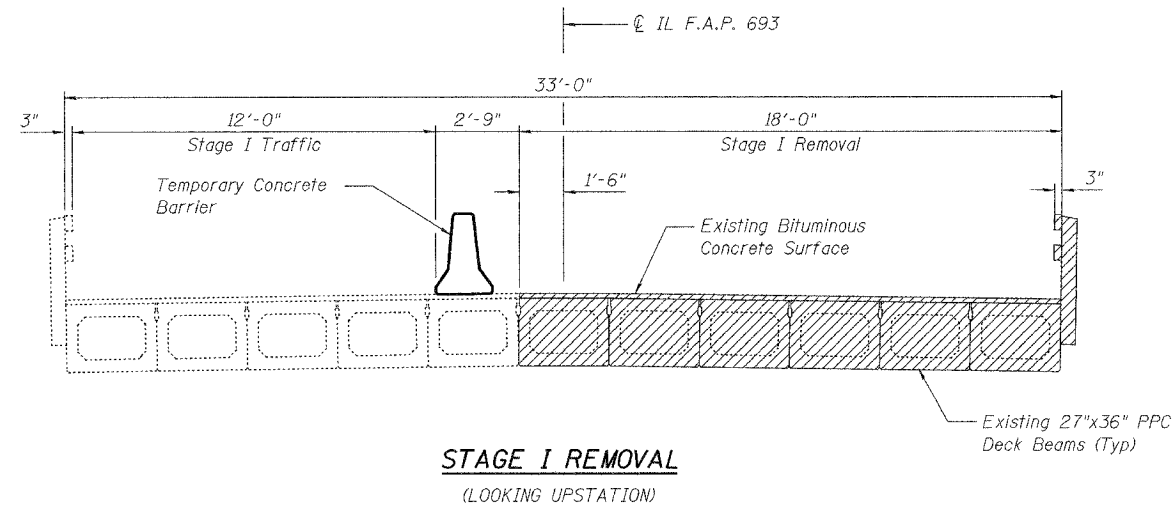
$f'_c = 4,500$ psi
 $f_y = 60,000$ psi (reinforcement)

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 4940 OLD CELLINSVILLE RD. SHAWNEE, ILLINOIS 62226 TEL. (618) 624-4488 FAX (618) 624-6689 E-MAIL: twm@twm-inc.com
CHECKED ALN	
DRAWN BWP	
CHECKED KPC	

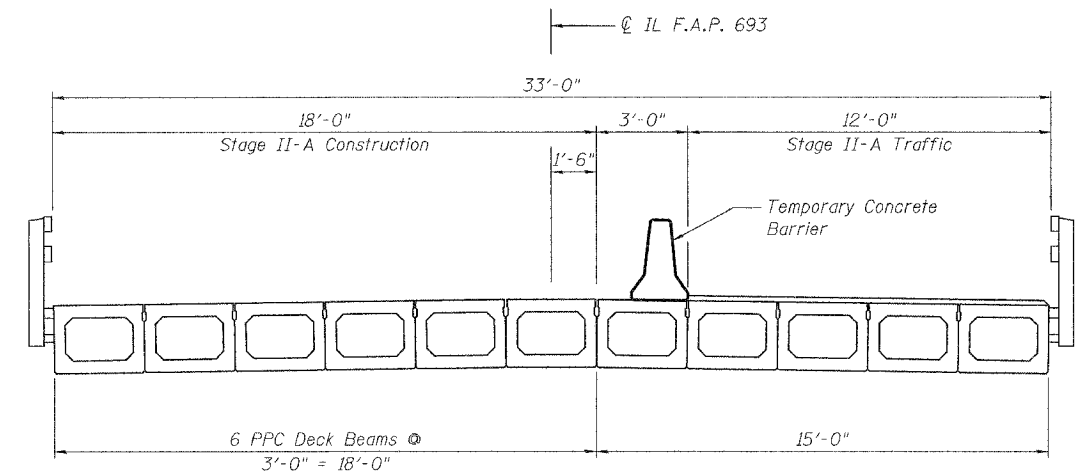
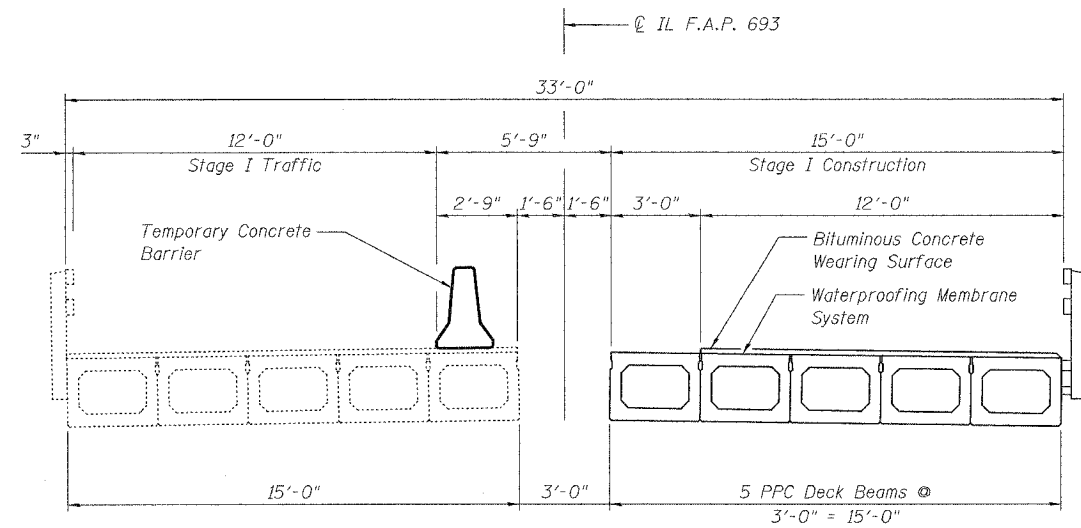
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO. 2
F.A.P. 693	(119B-3)I	TAZEWELL	34	II	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract # 68415

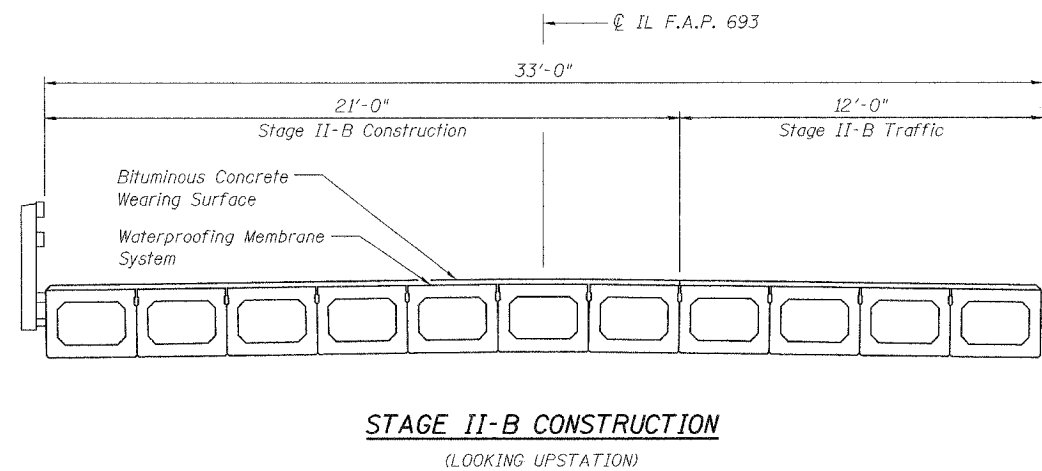
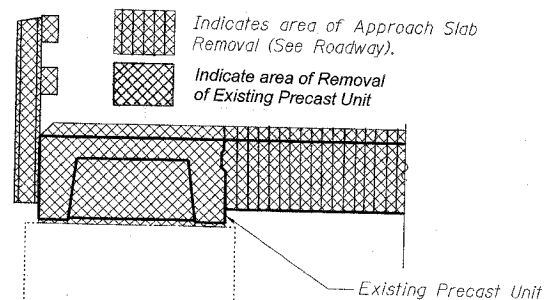


Indicates Removal of Existing Superstructures



STAGE I CONSTRUCTION
(LOOKING UPSTATION)

STAGE II-A CONSTRUCTION
(LOOKING UPSTATION)



Notes:
For details of Temporary Concrete Barrier and limits of Waterproofing Membrane System, see Sheet 3 of 14.

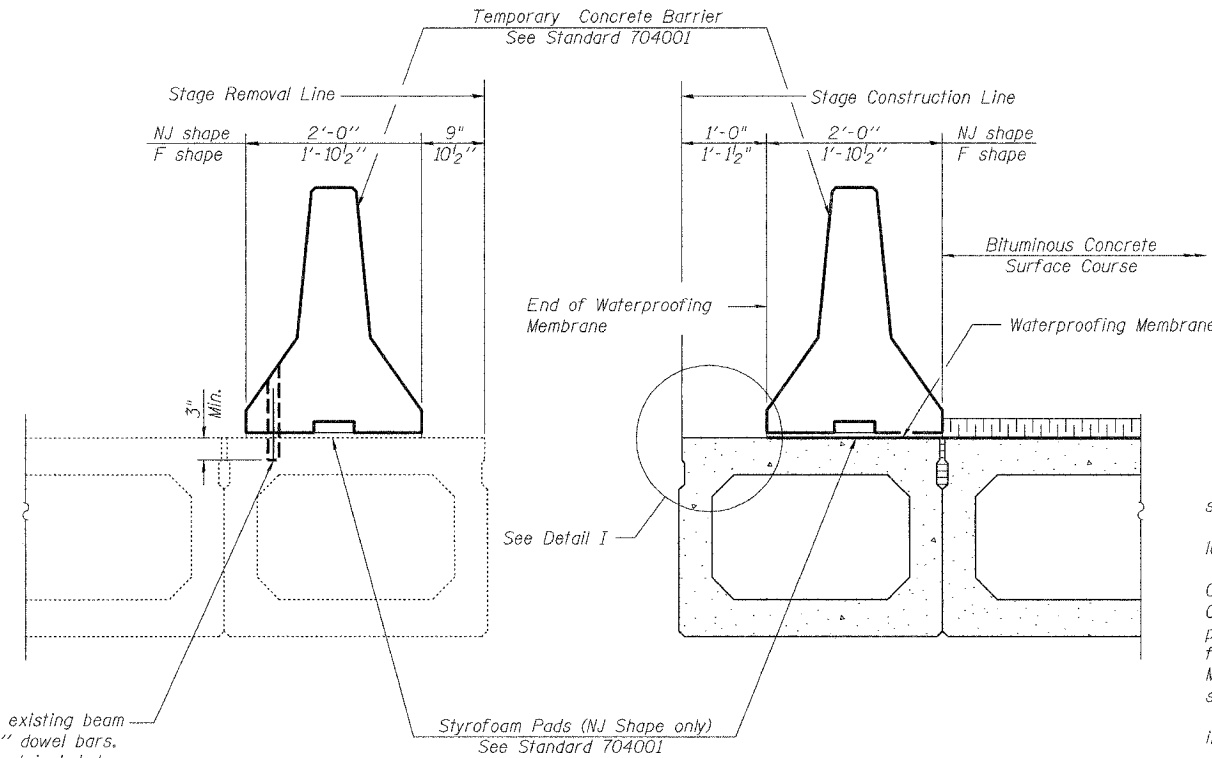
STAGE CONSTRUCTION
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-006I

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 4940 OLD CELLENSVILLE RD. SPANISH LAKE, ILLINOIS 62226 TEL (618) 624-4485 FAX (618) 624-6689 E-MAIL: CORP@TWM-INC.COM
CHECKED ALN	
DRAWN BWP	
CHECKED KPC	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 14 SHEETS
F.A.P. 693	(119B-3)1	TAZEWELL	34	12	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #68415



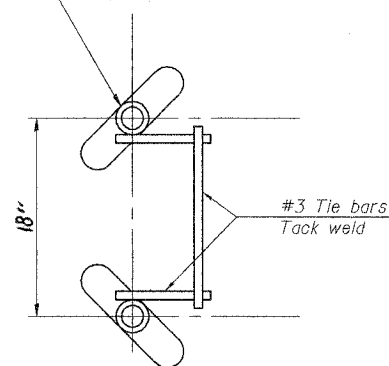
Drill 1/4" ϕ Holes in existing beam for 1" ϕ x 10" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

EXISTING PPC DECK BEAMS

NEW PPC DECK BEAMS

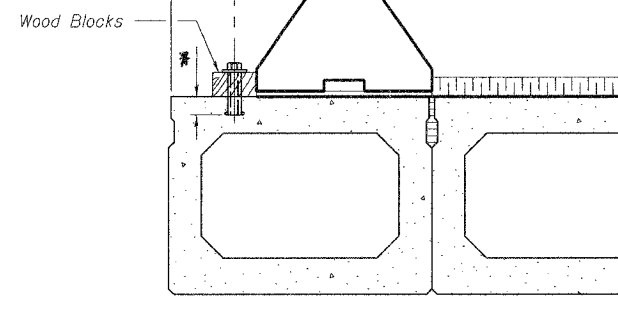
SECTIONS THRU PPC DECK BEAMS

Wing type threaded inserts tapped for 3/4" ϕ H.S. bolts. (Insert shall have a certified min. proof load of 5 kips/each)



INSERT DETAIL

2 - Wing type threaded inserts for 3/4" ϕ H.S. bolts with flat hardened washer. Grout holes after removal.



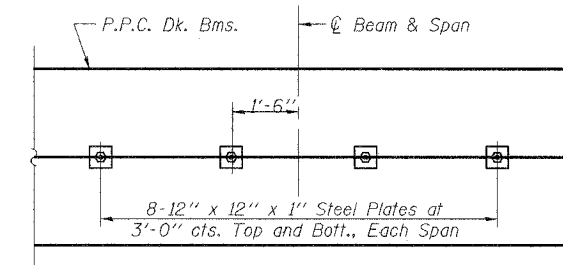
DETAIL I

* Type of insert selected shall be such that insert depth does not interfere with void.

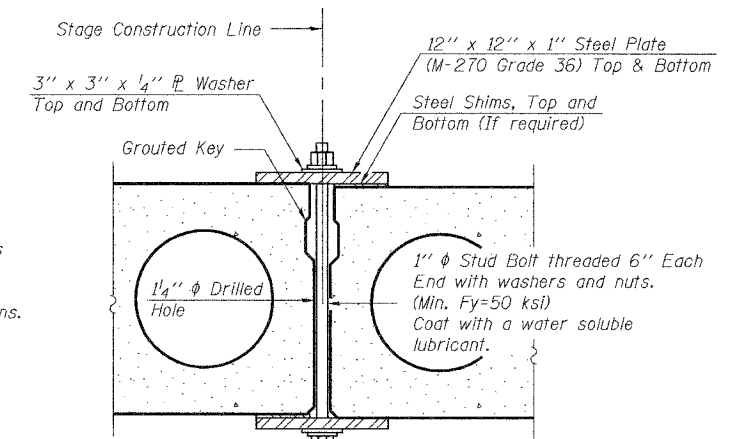
The Temporary Concrete Barrier and wood blocks shall not be removed until Stage II Construction PPC Deck Beams have been placed and shear keys grouted.

NOTES

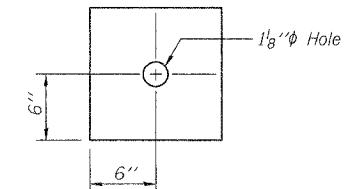
The 1" ϕ high strength bolts used to connect the wood blocks shall be tightened to a snug fit without crushing the wood block. The wing type threaded insert assembly shall be spaced 6'-0" longitudinally.
The Waterproofing Membrane shall extend under the Temporary Concrete Barrier without the asphalt sand seal protection layer. Once the Temporary Concrete Barrier has been removed, and the penetrating primer, coal tar emulsion, coal tar emulsion and fiberglass fabric, and coal tar emulsion slurry layers of the Waterproofing Membrane is lapped 6", the asphalt sand seal protection layer shall be applied according to Article 581 of the Standard Specifications.
The cost for H.S. bolts, flat headed washers, and wood block is included with Temporary Concrete Barrier.
The cost for wing type threaded inserts is included with Precast Prestressed Concrete Deck Beams (27" Depth).



PLAN



SECTION



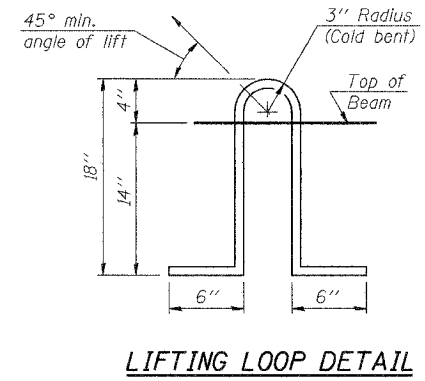
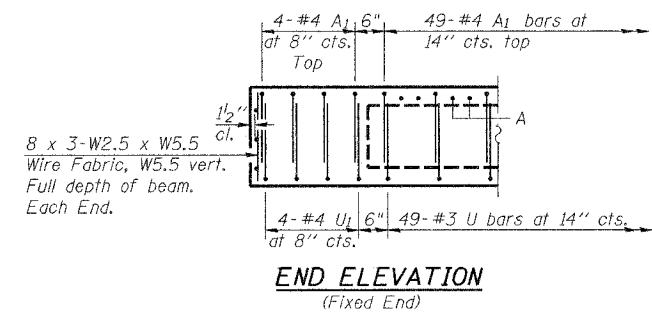
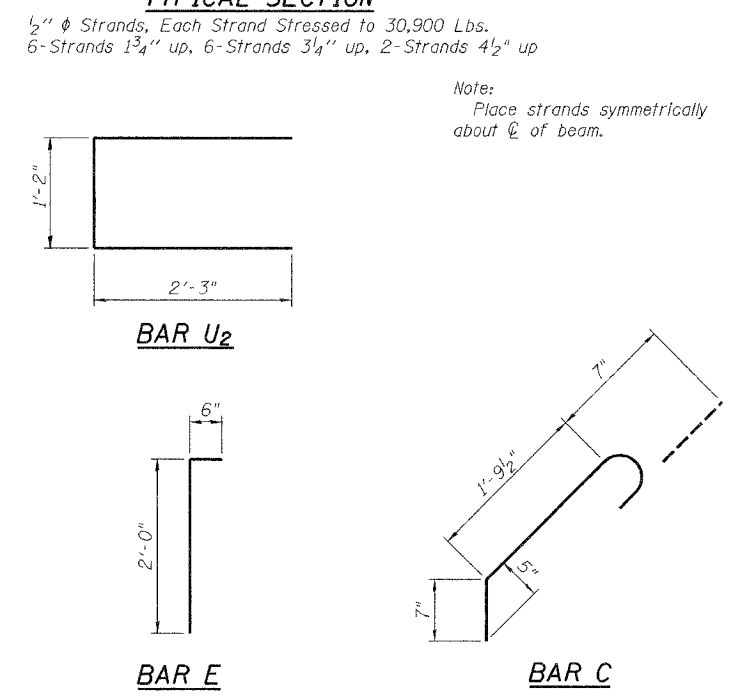
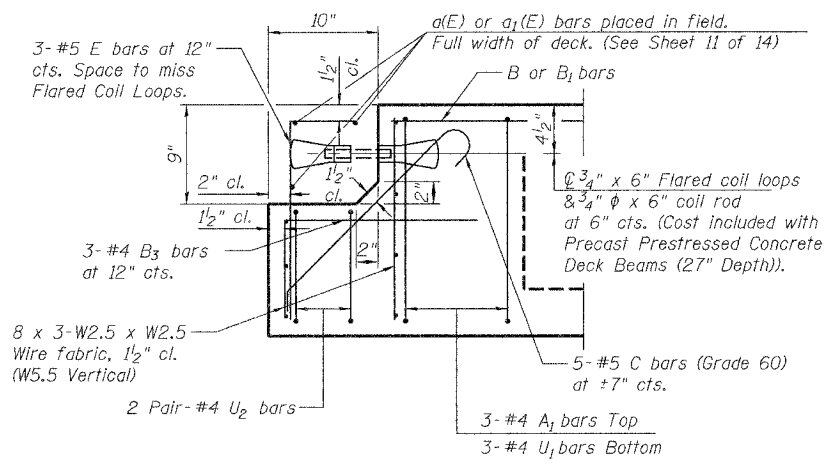
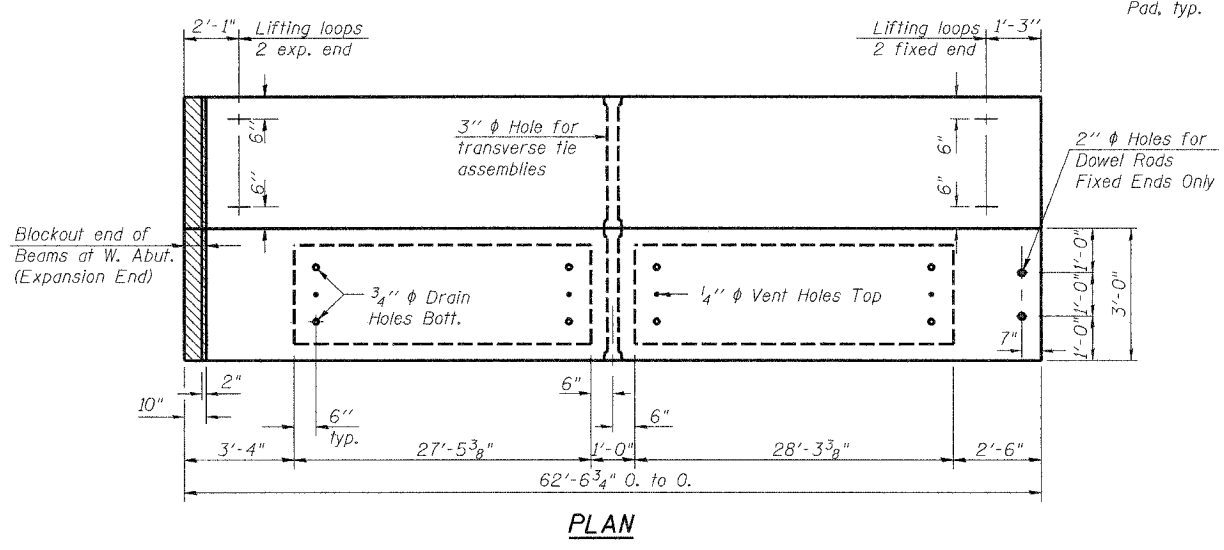
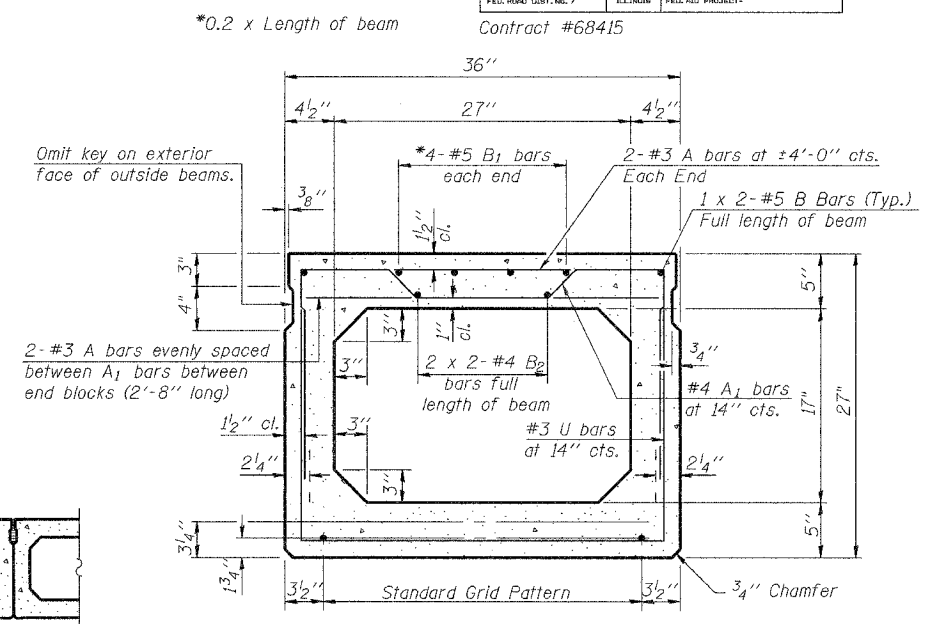
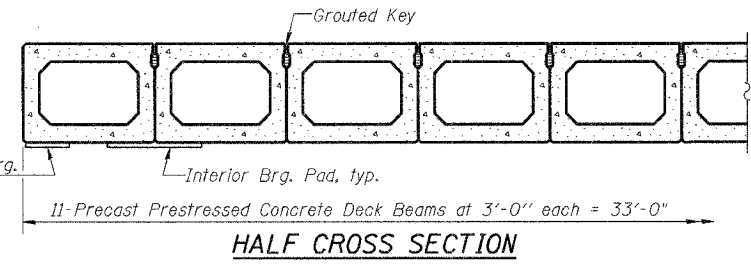
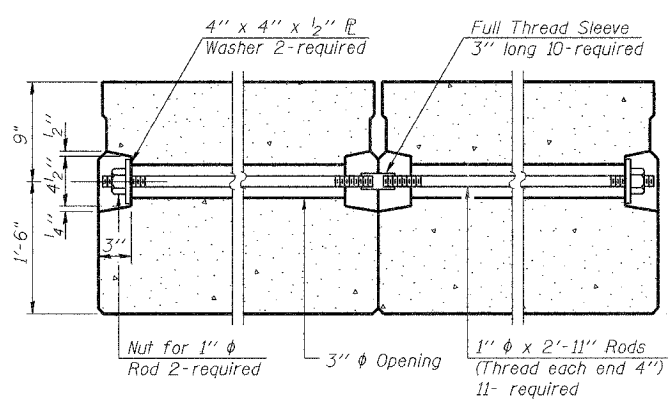
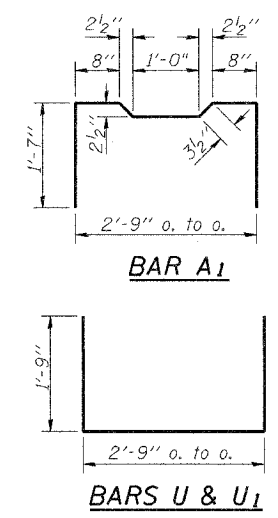
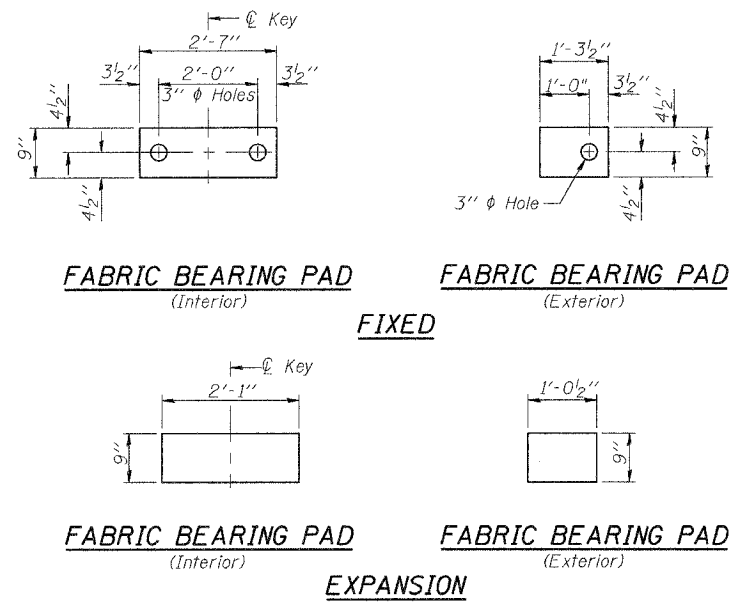
CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

See Special Provisions for Stage Construction of Precast Prestressed Concrete Deck Beams. Cost included with Precast Prestressed Concrete Deck Beams (27" Depth). See Stage Construction Details for traffic lanes.

TEMPORARY CONCRETE BARRIER AND
STAGE CONSTRUCTION DETAILS
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)1
TAZEWELL COUNTY
SN 090-0061

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 6940 OLD COLLINGSVILLE RD. SWANSEA, ILLINOIS 62226 TEL. (618) 624-4458 FAX (618) 624-6688 E-MAIL: OGD@TWM-INC.COM
CHECKED ALN	
DRAWN BWP	
CHECKED KPC	



DESIGNED BWP
CHECKED ALN
DRAWN BWP
CHECKED KPC

THOUVENOT, WADE & MOERCHEN, INC.
ENGINEERS & SURVEYORS & PLANNERS

TWD
CORPORATE OFFICE
4940 OLD COLLINGSVILLE RD.
SPRINGFIELD, ILLINOIS 62226
TEL (618) 624-4488
FAX (618) 624-6689
E-MAIL: cwr@twm-inc.com

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 3-1/2" diameter 270 ksi strands, as shown.

The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.

The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.

Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams.

Required Release Strength, f'ci, shall be 4,000 p.s.i.

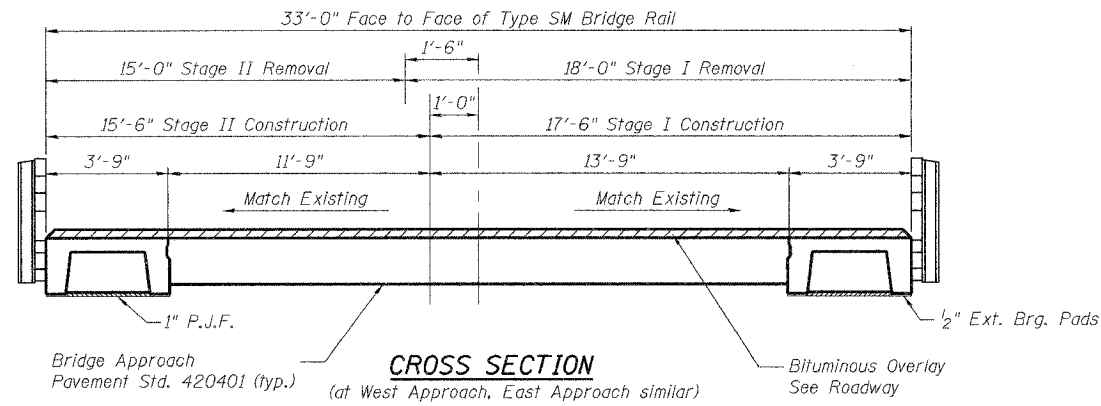
BILL OF MATERIAL

Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2066
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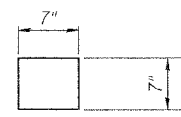
SUPERSTRUCTURE
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-31)
TAZEWELL COUNTY
SN 090-0061

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

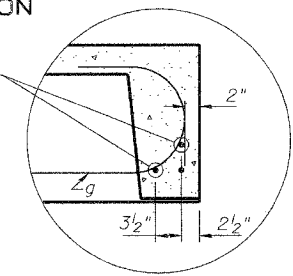
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
F.A.P. 693	(119B-31)	TAZEWELL	34	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



Exterior Corners
16-1/2" Fabric Pads Req'd.
BEARING PADS



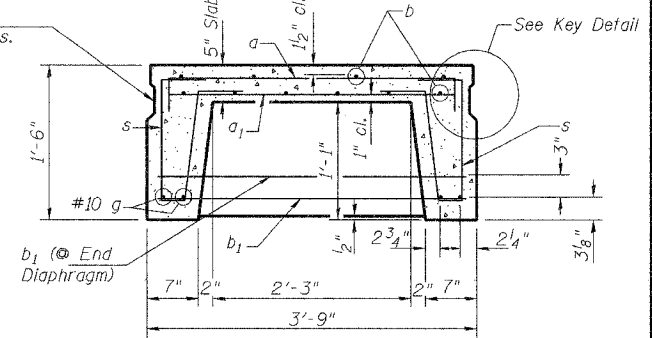
Weld ends of g bars to b1 bars with full bead weld



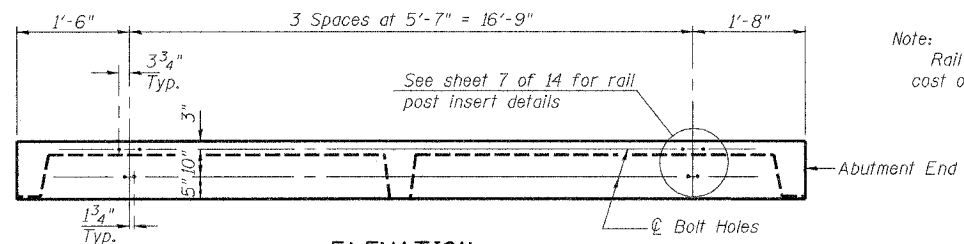
Note:
The surface of the member shall not deviate more than 1/1200 of the full length of the member from a straight line connecting the two end points on the member's surface. In addition to State inspection and prior to erection, the beam shall be approved by the resident Engineer at the jobsite.

The units shall remain in the bottom supporting forms until the concrete has attained a compressive strength of no less than 3,500 pounds per square inch.

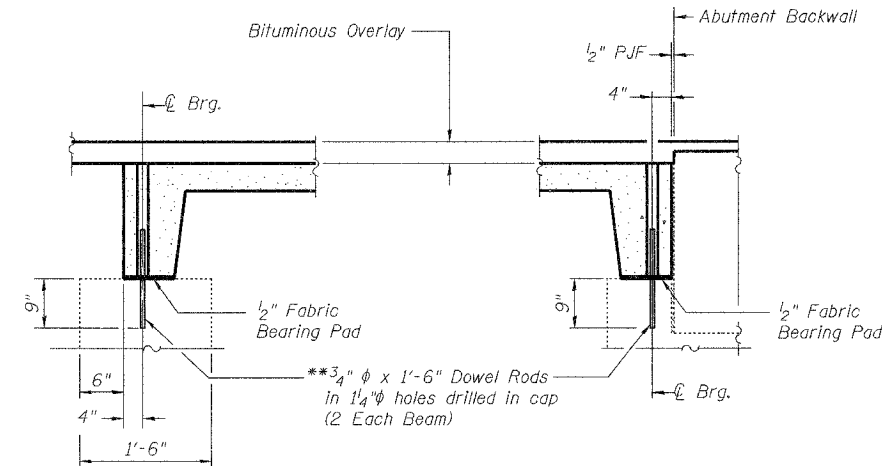
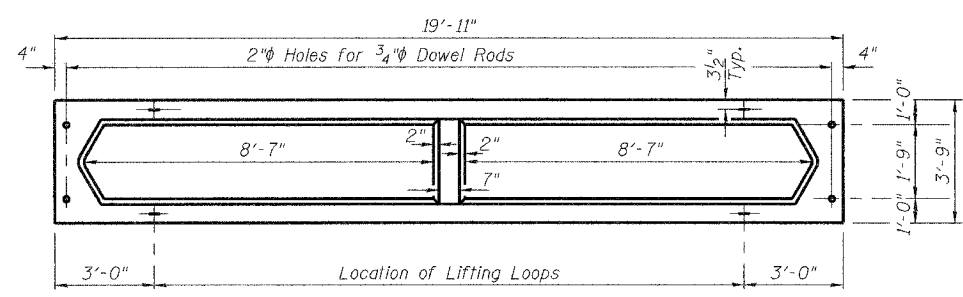
Contract #68415



TYPICAL SECTION THRU BEAM



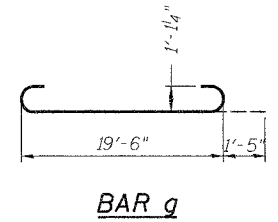
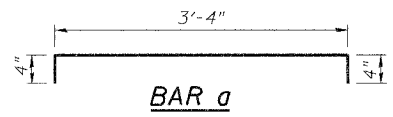
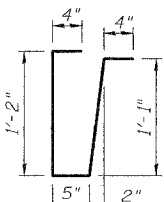
Note:
Rail post inserts are included in the cost of Precast Concrete Bridge Slab.



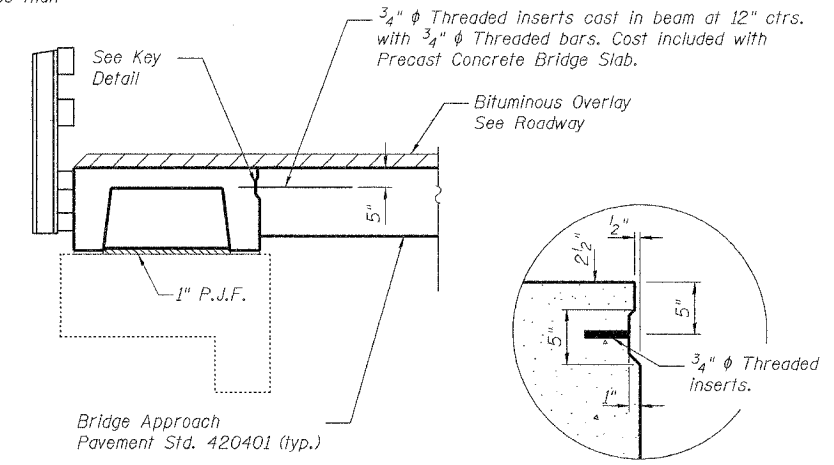
SECTION THROUGH WEST ABUTMENT
(East Abutment Similar)

** Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hrs.) prior to placing approach slab.

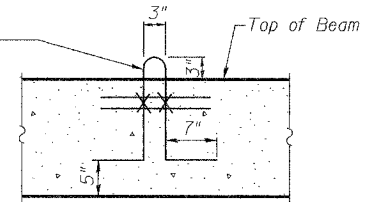
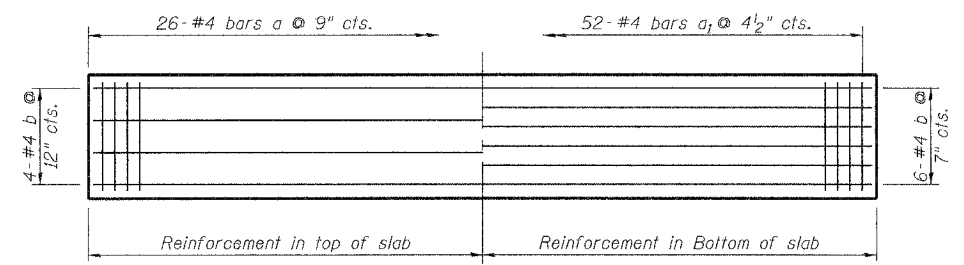
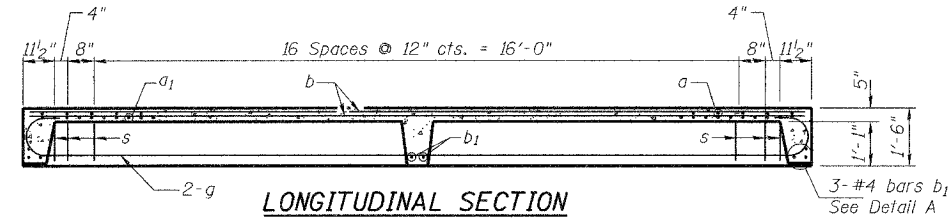
Note:
Burn existing dowel rods flush with existing surface. Grind existing dowel rods smooth and seal with epoxy. Cost is included with Removal of Existing Superstructures.



Note:
Tack welding of stirrups to bottom longitudinal reinforcement bars will not be permitted except as otherwise authorized in writing by the Engineer.



KEY DETAIL



2-1/2" Ø Strands/Loop, 2 Ea. End, Ea. Beam. Loop shall be burned off after beams have been erected. Strands shall conform to the requirements to the requirements of AASHTO M 203.

BILL OF MATERIAL

ITEM	Unit	Shape
Precast Concrete Bridge Slab	Sq. Ft.	299

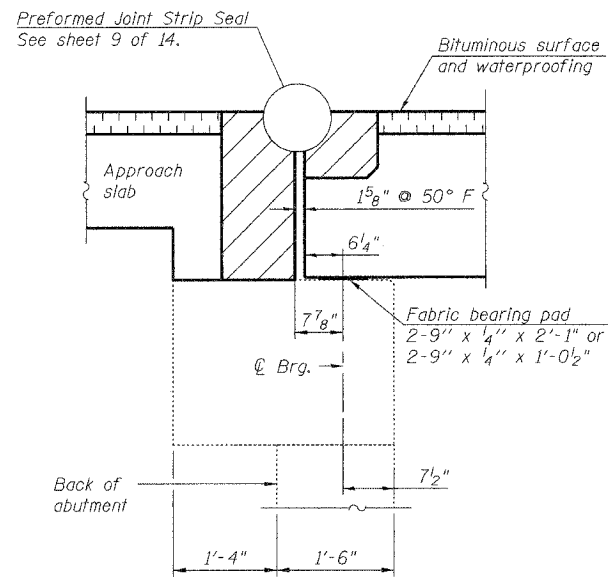
NELSON BEAM DETAILS
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-31)
TAZEWELL COUNTY
SN 090-0061

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 4940 OLD COLLINGSVILLE RD. SWANSEA, ILLINOIS 62226 TEL: (618) 624-4498 FAX: (618) 624-6688 E-MAIL: cor@twm-inc.com
CHECKED ALN	
DRAWN BWP	
CHECKED KPC	

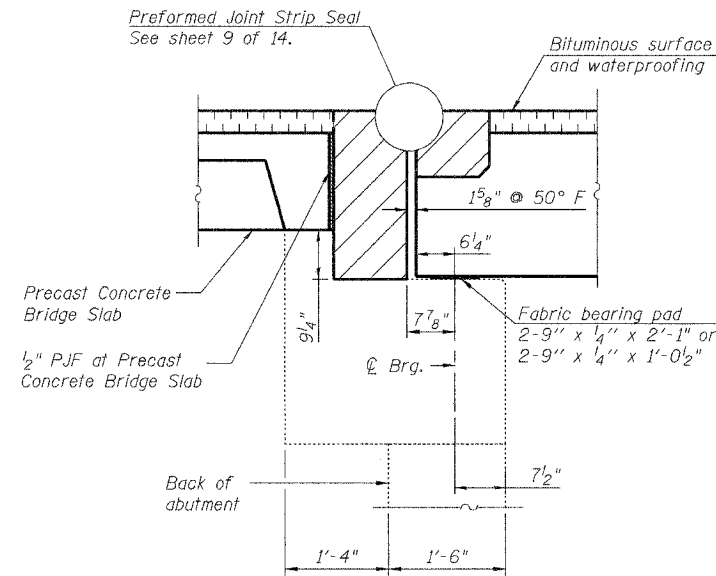
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
F.A.P. 693	119B-311	TAZEWELL	34	15	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

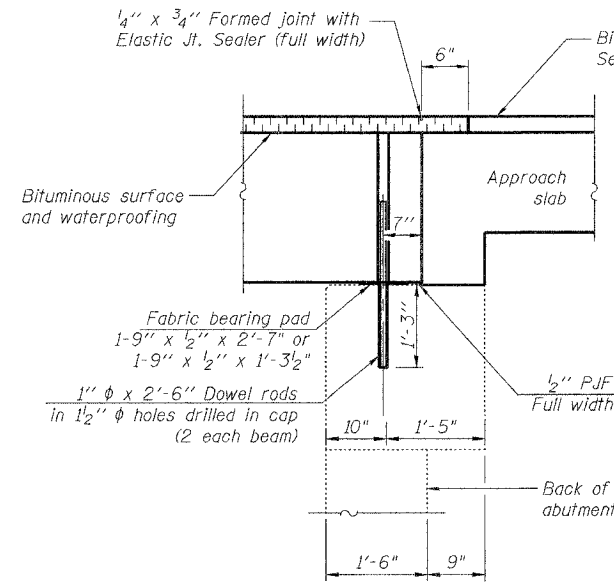
Contract #68415



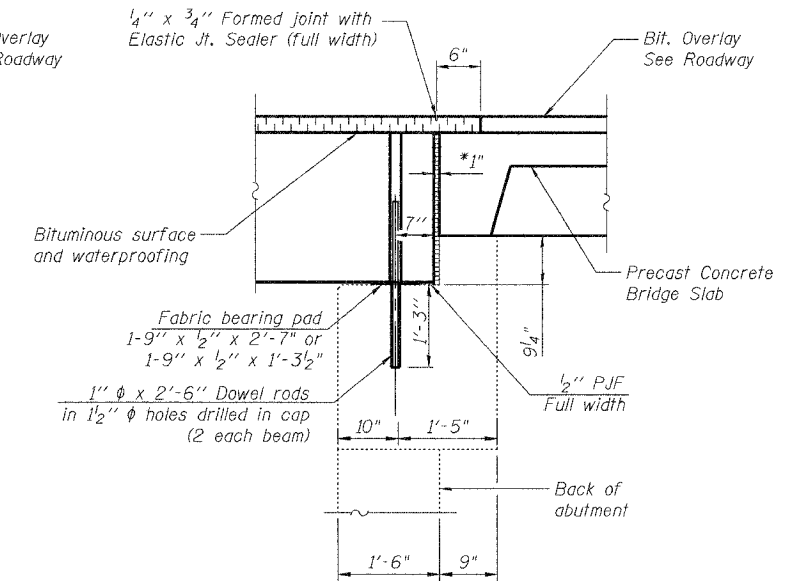
SECTION THRU WEST ABUTMENT



SECTION THRU WEST ABUTMENT
(At outside precast unit)

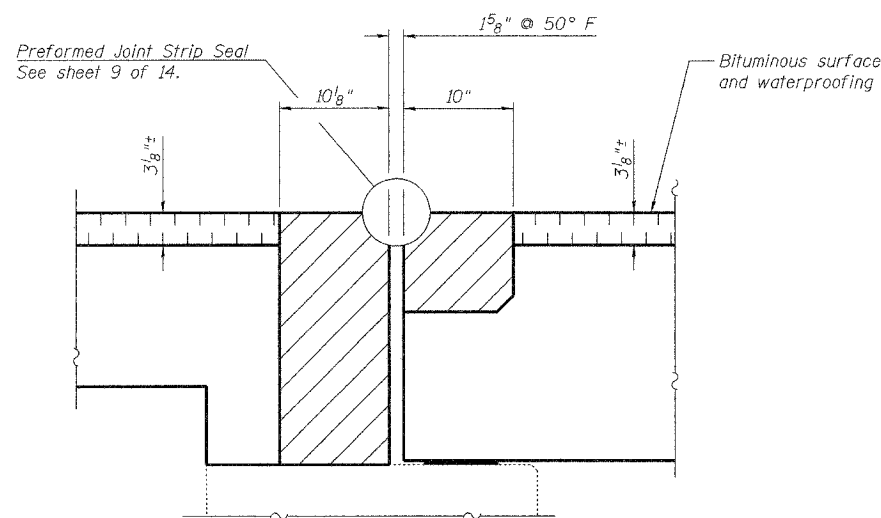


SECTION THRU EAST ABUTMENT



SECTION THRU EAST ABUTMENT
(At outside precast unit)

* 1" joint shall be filled with non-shrink grout.
1" dimension may vary to accommodate tolerance in beam lengths.



Bituminous Surface Detail
(At West Abutment)

Notes :

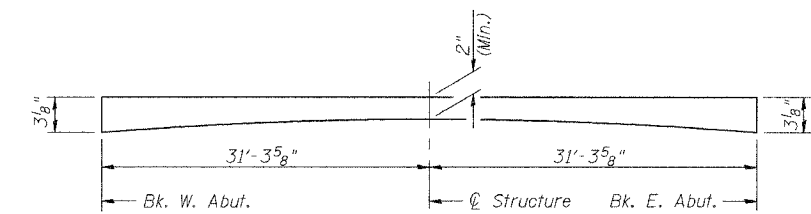
Ends of beams shall be aligned at the expansion joint. Any linear variation in the beam lengths shall be placed at the Fixed joint.

After beams have been erected, temporary retainers shall be installed, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

Hatched area to be poured after beams are in place and keyways grouted and cured. Quantity included with Concrete Structures on Sheet 11 of 14.

Dowel rods drilled in cap are included in the cost of Precast Prestressed Concrete Deck Beams (27" Depth).

All horizontal dimensions are at right angles to beam ends. See sheet 4 of 14 for bearing pad details.



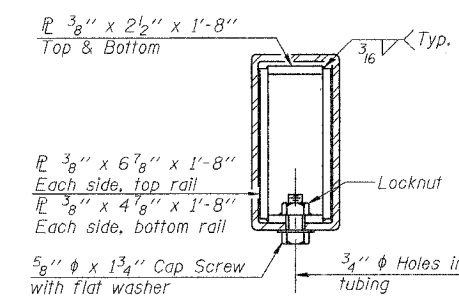
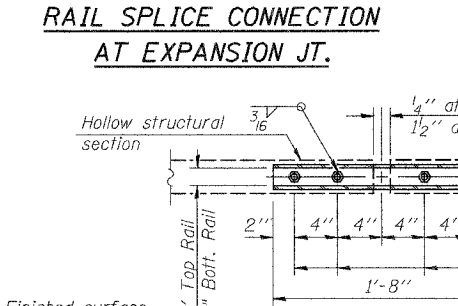
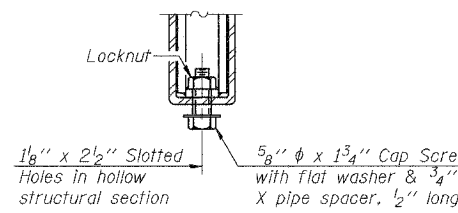
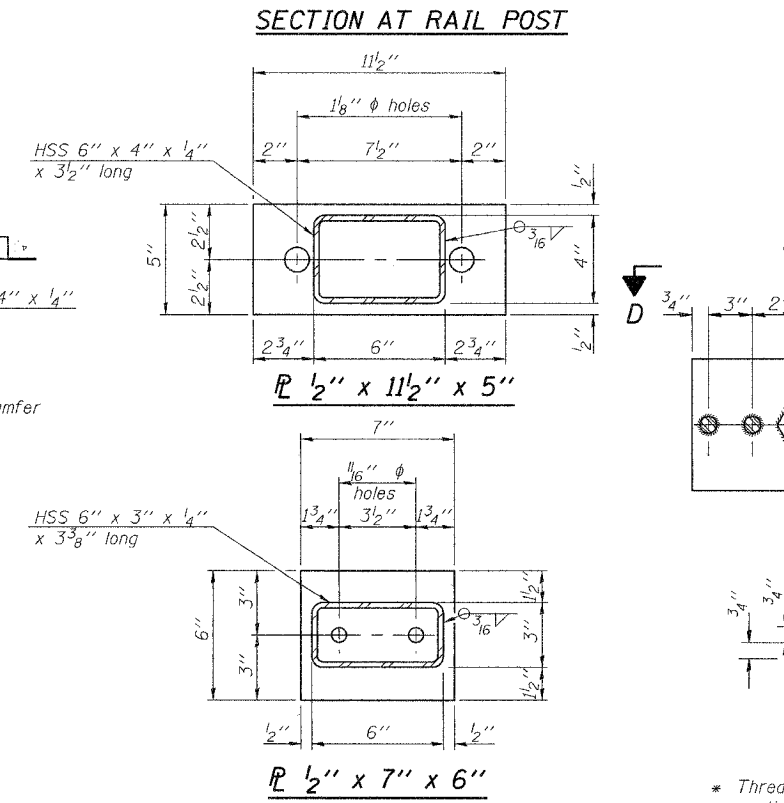
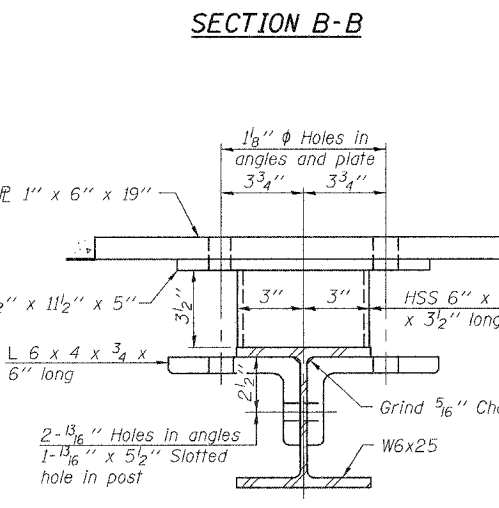
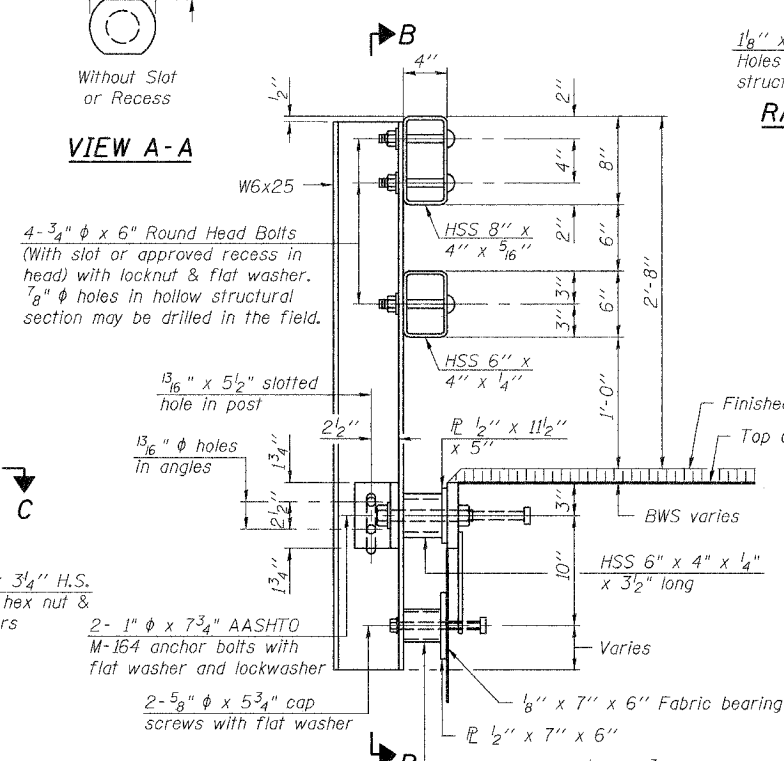
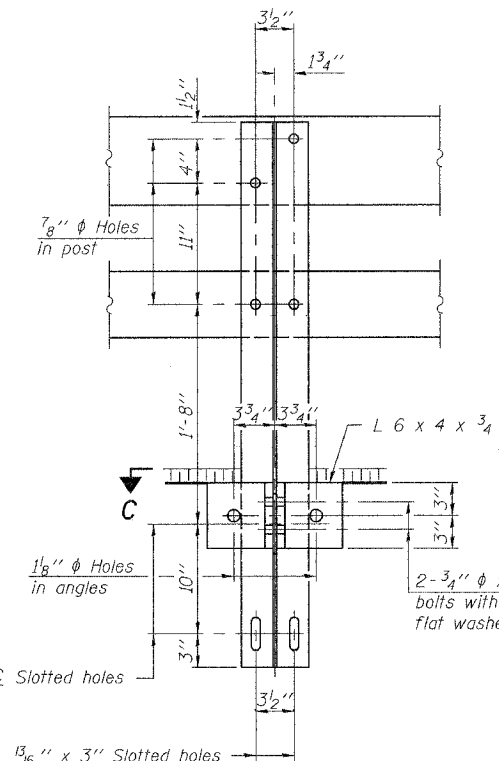
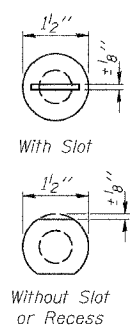
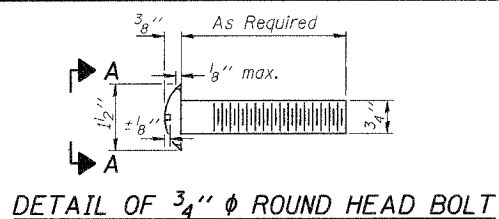
BITUMINOUS CONCRETE WEARING SURFACE PROFILE

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 4940 OLD COLLINGSVILLE RD. SPRINGFIELD, ILLINOIS 62226 TEL. (618) 624-6688 FAX (618) 624-6688 E-MAIL: CORP@TWM-INC.COM
CHECKED ALN	
DRAWN BWP	
CHECKED KPC	

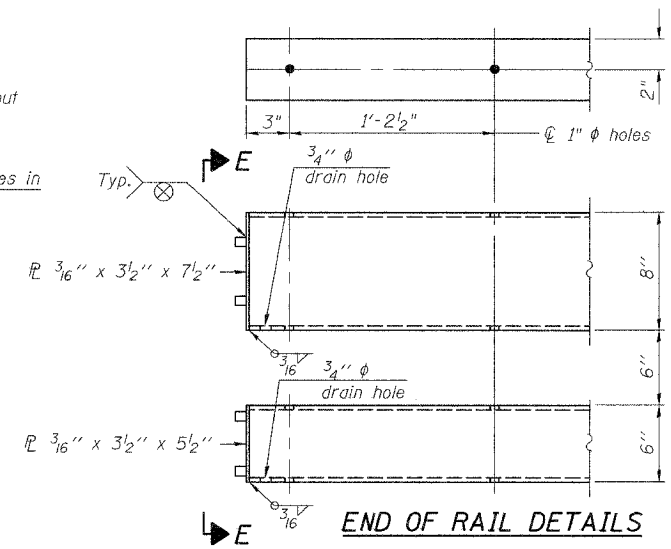
SUPERSTRUCTURE DETAILS
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-311)
TAZEWELL COUNTY
SN 090-0061

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
F.A.P. 693	119B-3I	TAZEWELL	34	16
FED. PROJ. DIST. NO. 7		SHEETS		14 SHEETS
Contract #68415				



SECTION AT RAIL SPLICE



NOTES

Hollow structural sections shall conform to the requirements of ASTM designation A 500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.
 All other steel shapes and plates shall conform to the requirements of AASHTO M 270 Grade 36 except posts and angles shall conform to AASHTO M 270, Grade 50.
 Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M 164.
 All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
 All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
 Railing shall be according to Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for Steel Bridge Rail, Type SM.
 All field drilled holes shall be coated with an approved zinc rich paint before erection.
 For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cast included with Steel Bridge Rail, Type SM.
 The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Bridge Rail, Type SM	Foot	207

TYPE SM

STEEL BRIDGE RAIL SIDE MOUNTED WITH BITUMINOUS WEARING SURFACE ILLINOIS ROUTE 9 OVER PRAIRIE CREEK F.A.P. ROUTE 693 SECTION (119B-3I) TAZEWELL COUNTY SN 090-0061

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 4840 OLD COLLINGSVILLE RD. SHAMBAUGH, ILLINOIS 62226 TEL. (618) 624-4488 FAX (618) 624-6688 E-MAIL: COWI@TWM-INC.COM
CHECKED KPC	
DRAWN BWP	
CHECKED KPC	

R-34BWS 10-28-05 (6'-3" Maximum Post Spacing) (1/4" minimum to 3/8" maximum BWS thickness)

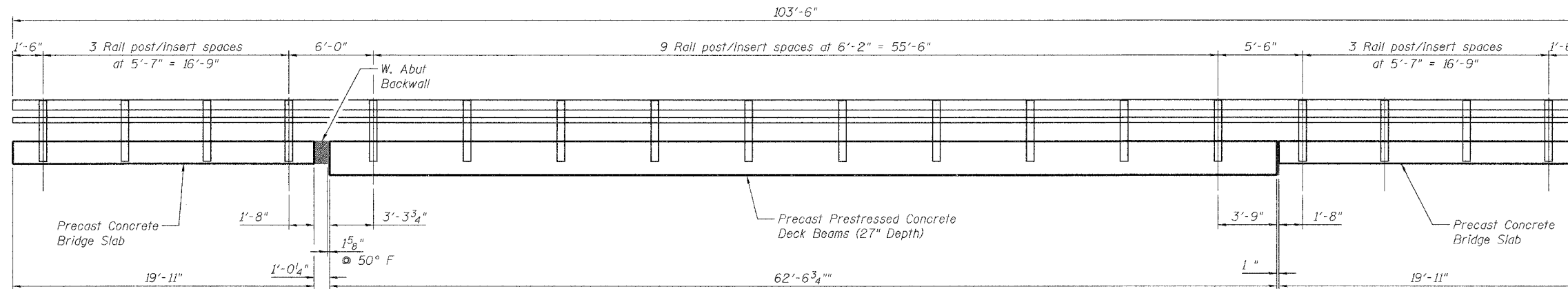
* Threaded areas shall be plugged or blocked off during casting of beam. Galvanized after fabrication.

** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.	SHEET NO.
F.A.P. 693	119B-3/I	TAZEWELL	34	17	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:			

Contract #68415



RAIL POST SPACING
(Looking North)

DESIGNED <i>BWP</i>	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS  CORPORATE OFFICE 4940 OLD COLLINGSVILLE RD. SPRINGFIELD, ILLINOIS 62226 TEL. (618) 624-4188 FAX (618) 624-6288 E-MAIL: CORP@TWM-INC.COM
CHECKED <i>KPC</i>	
DRAWN <i>BWP</i>	
CHECKED <i>KPC</i>	

BRIDGE RAIL DETAILS
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3/I)
TAZEWELL COUNTY
SN 090-0061

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATE	SHEET	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	34	18	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract # 68415

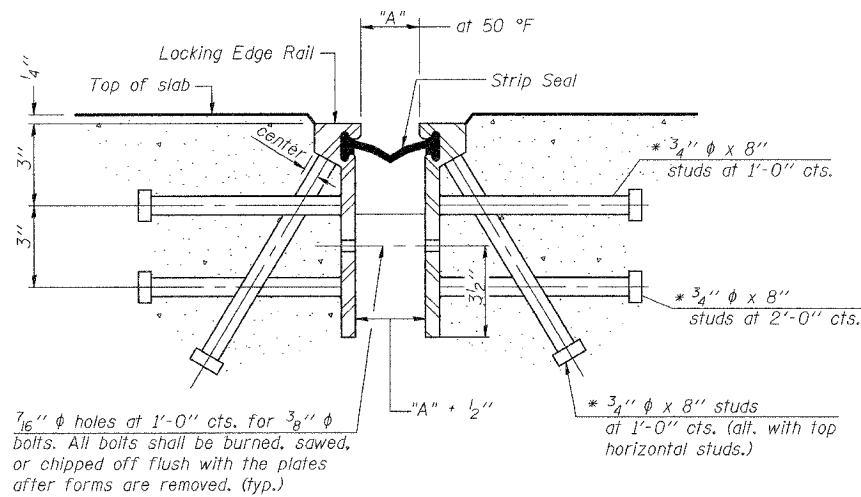
GENERAL NOTES

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

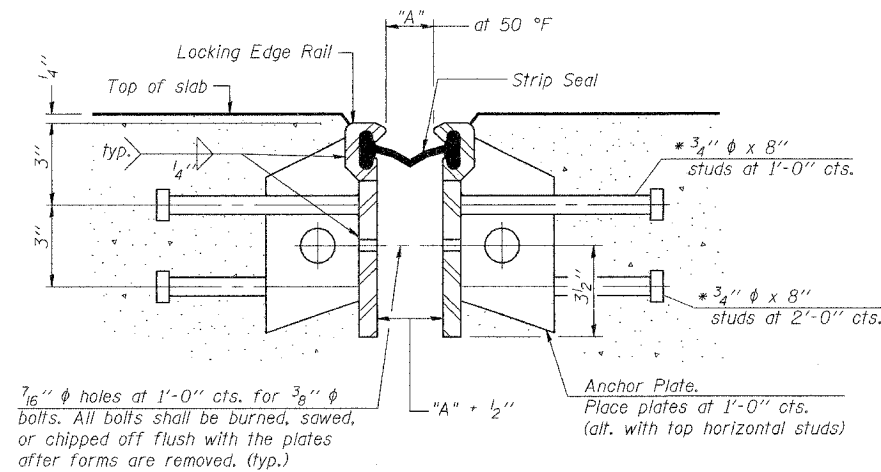
The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.



Required Strip Seal rated movement	"A"
1"	1 1/2"



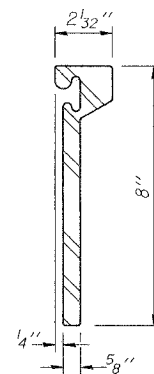
SECTION THRU ROLLED RAIL EXP. JOINT

(88 Studs Required-Stage I)
(74 Studs Required-Stage II)

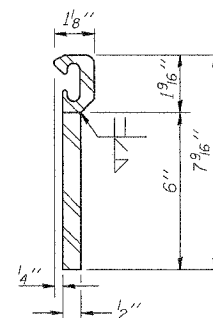
* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

SECTION THRU WELDED RAIL EXP. JOINT

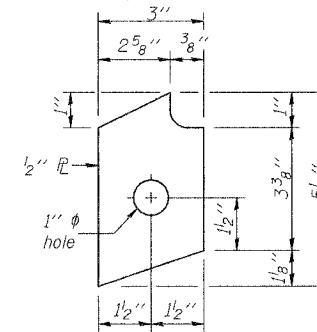
(54 Studs Required-Stage I, 46 Studs Required-Stage II)
(34 Anchor Plates Required-Stage I), (28 Anchor Plates Required-Stage II)



ROLLED (EXTRUDED) RAIL

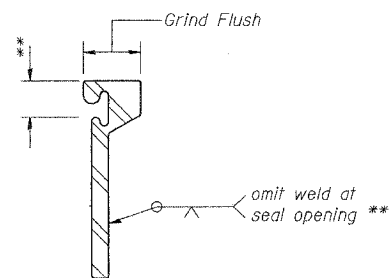


WELDED RAIL



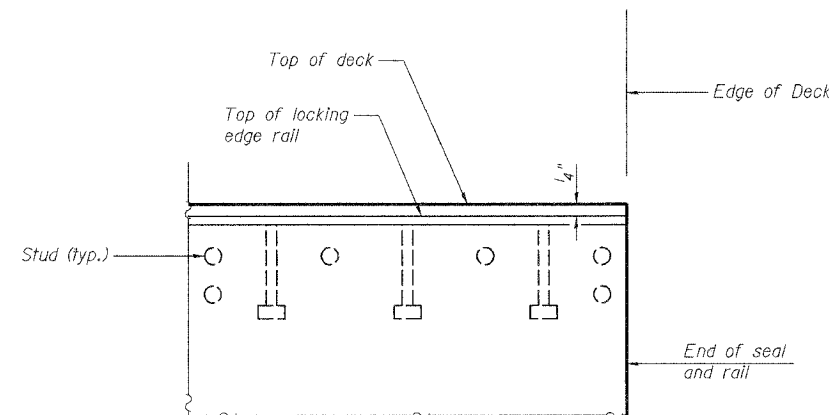
ANCHOR PL
(for welded rail)

LOCKING EDGE RAILS



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.



END TREATMENT ELEVATION

(Showing Rolled Rail, Welded Rail Similar)

PREFORMED JOINT STRIP SEAL
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-0061

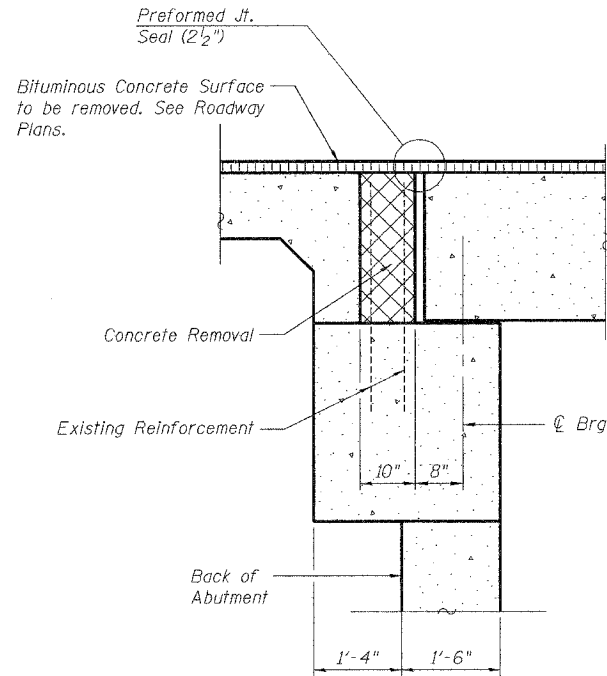
DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 4940 OLD COLLETSVILLE RD. SWANSEA, ILLINOIS 62226 TEL. (618) 624-4488 FAX (618) 624-6688 E-MAIL: 202@twm-inc.com
CHECKED ALN	
DRAWN BWP	
CHECKED KPC	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

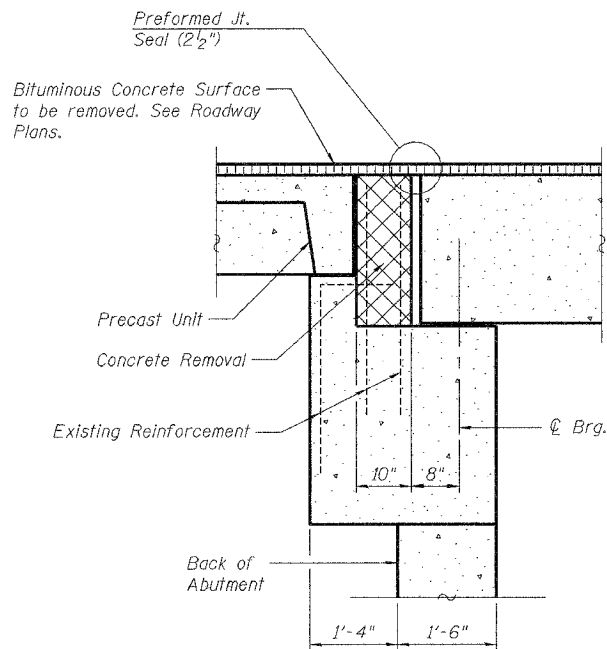
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET	SHEET NO.
F.A.P. 693	119-BR-3	TAZEWELL	34	19	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #68415

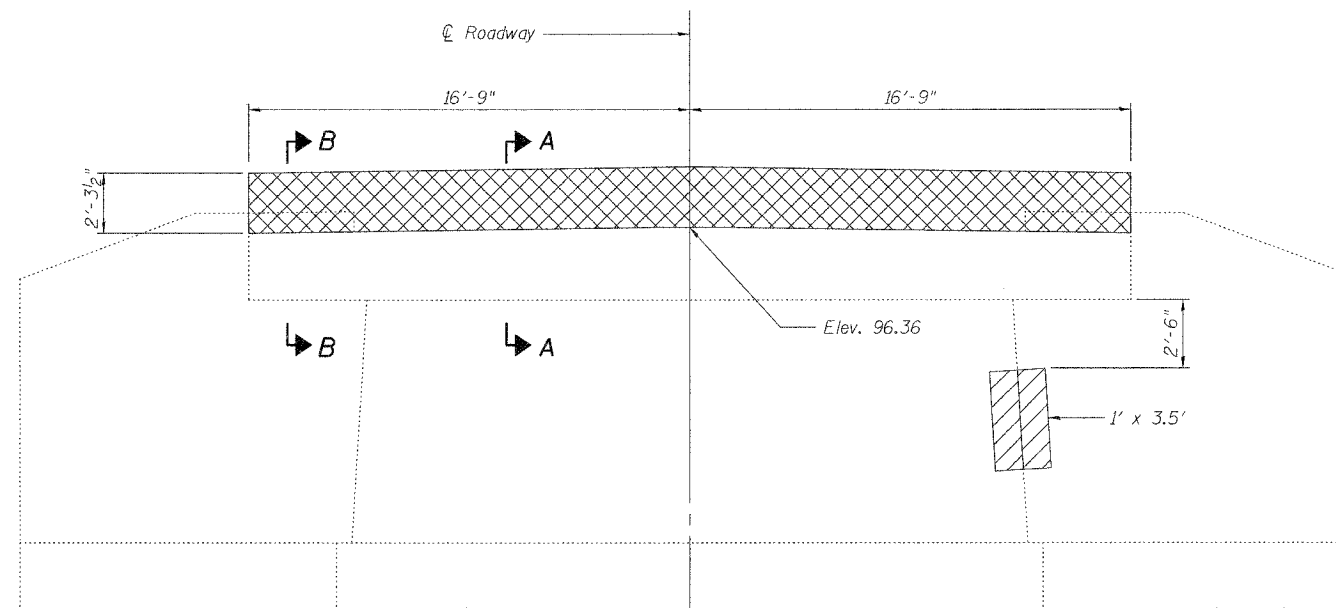
Notes:
Existing reinforcement extending into removal areas shall be cleaned, straightened, and incorporated into new construction. Cost included with Concrete Removal.



SECTION A-A



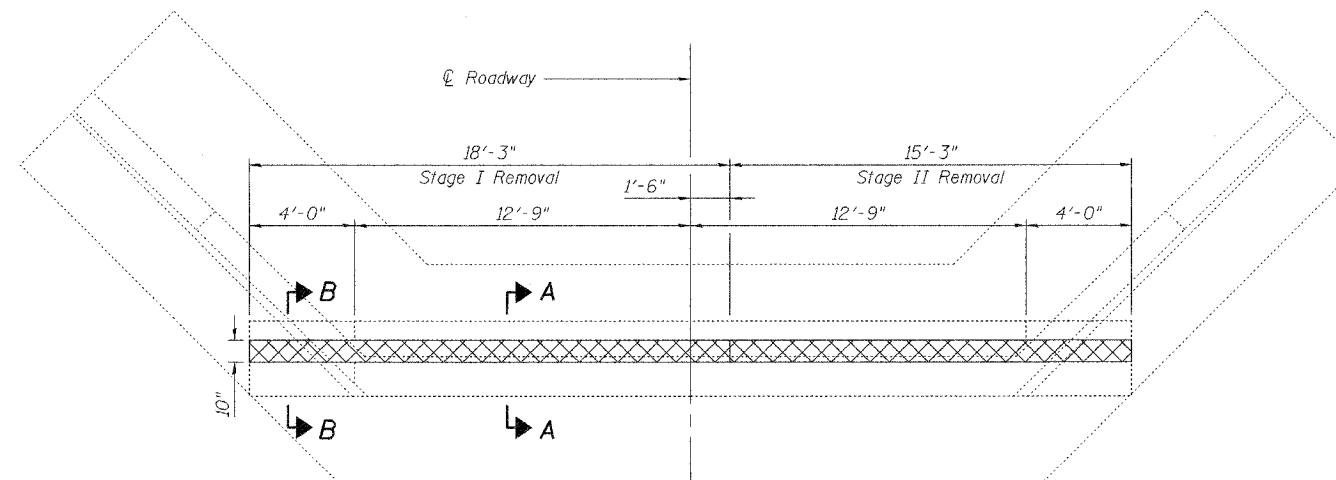
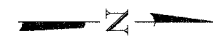
SECTION B-B



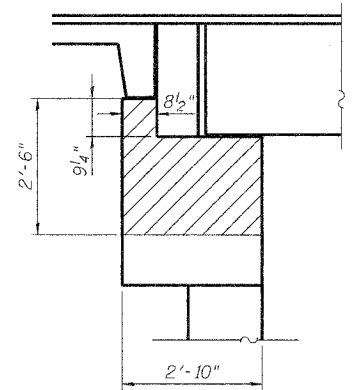
Elevation-West Abutment
(LOOKING WEST)

LEGEND

- Concrete Removal
- Structural Repair of Concrete

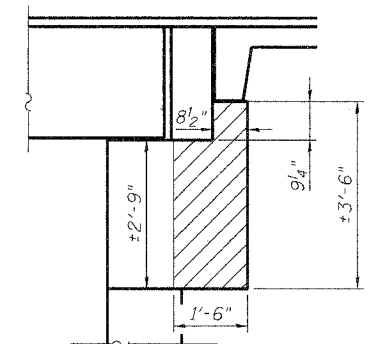


Plan-West Abutment



ELEVATION-WEST ABUTMENT CAP

(LOOKING NORTH)



ELEVATION-WEST ABUTMENT CAP

(LOOKING SOUTH)

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	2.4
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	13.6

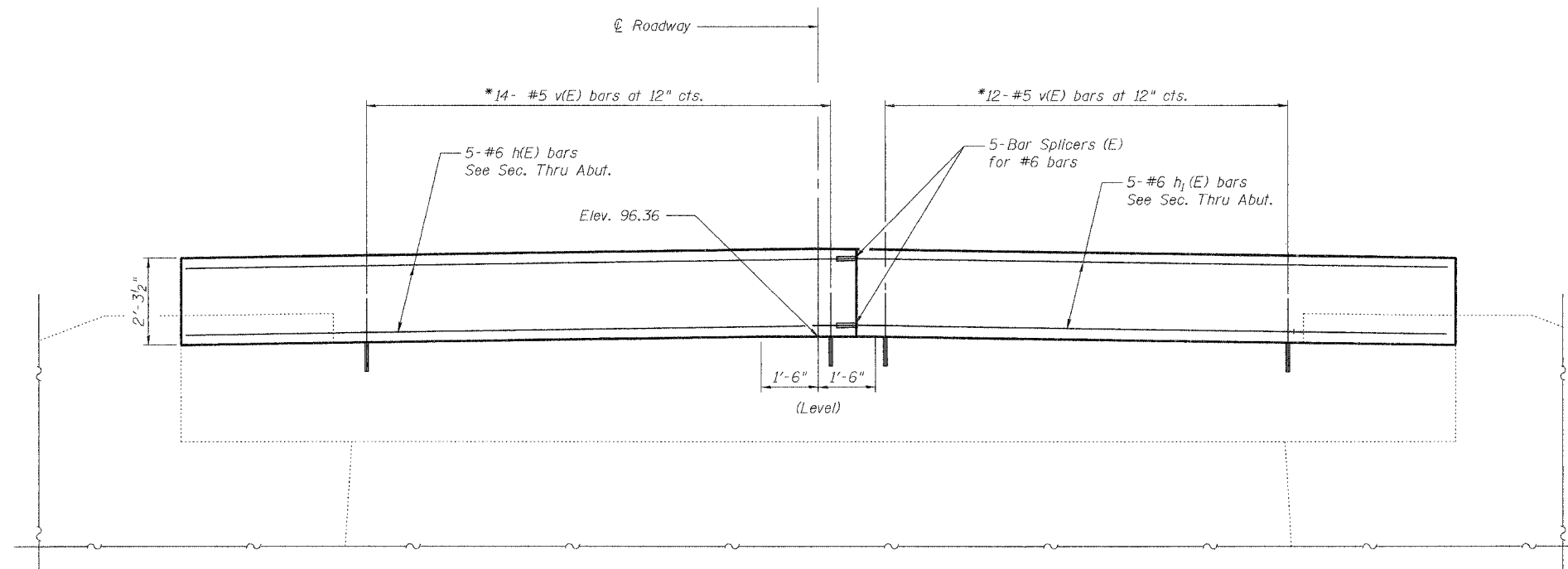
WEST ABUTMENT
CONCRETE REMOVAL AND REPAIR
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-006I

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 4900 OLD COLLINGSVILLE RD. SPANDEX, ILLINOIS 62226 TEL. (618) 624-4488 FAX. (618) 624-6689 E-MAIL: COW@TWM-INC.COM
CHECKED KPC	
DRAWN BWP	
CHECKED KPC	

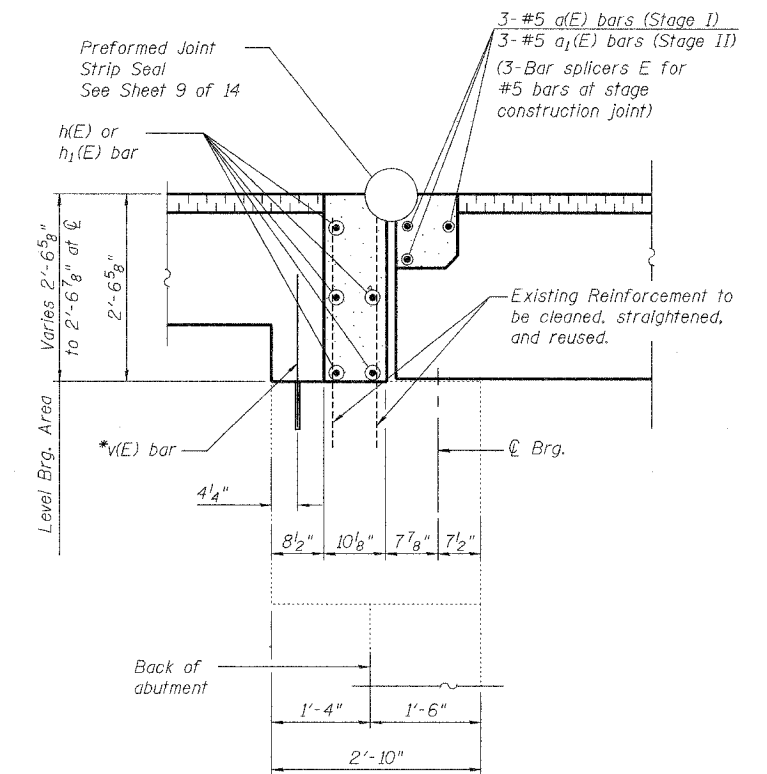
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11
F.A.P. 693	(119B-3)1	TAZEWELL	34	20	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

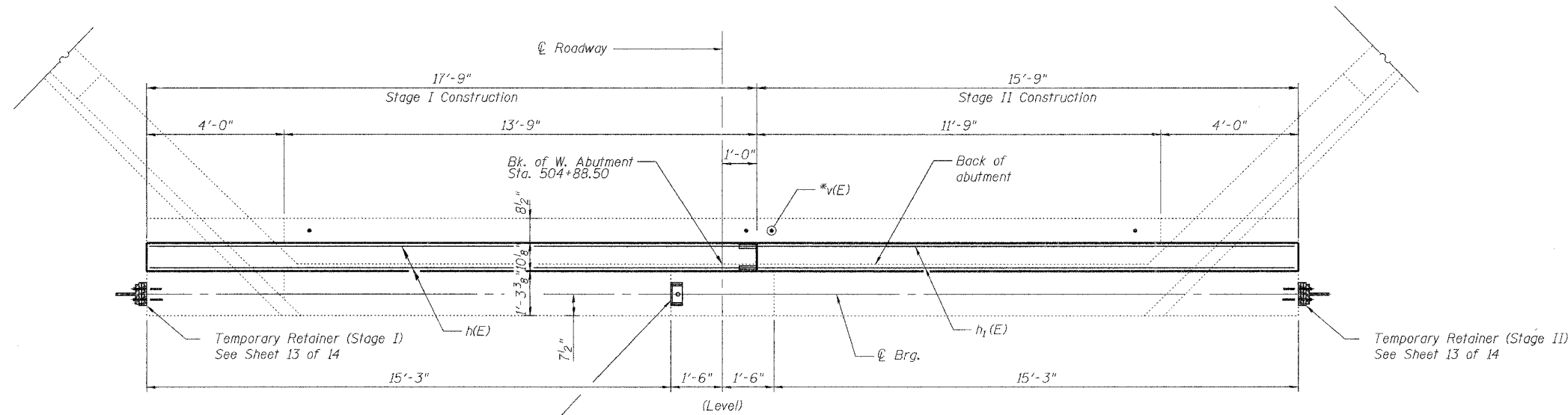
Contract #68415



ELEVATION
(Looking West)



SECTION THRU WEST ABUTMENT



PLAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	5	#6	17'-6"	—
h1(E)	5	#6	15'-6"	—
a(E)	3	#5	17'-3"	—
a1(E)	3	#5	15'-3"	—
v(E)	26	#5	2'-0"	—
Concrete Structures			Cu. Yd.	3.4
Reinforcement Bars, Epoxy Coated			Pound	400

* Epoxy grout v(E) bars in 9" (Min.) drilled holes according to Section 584 of the Standard Specification

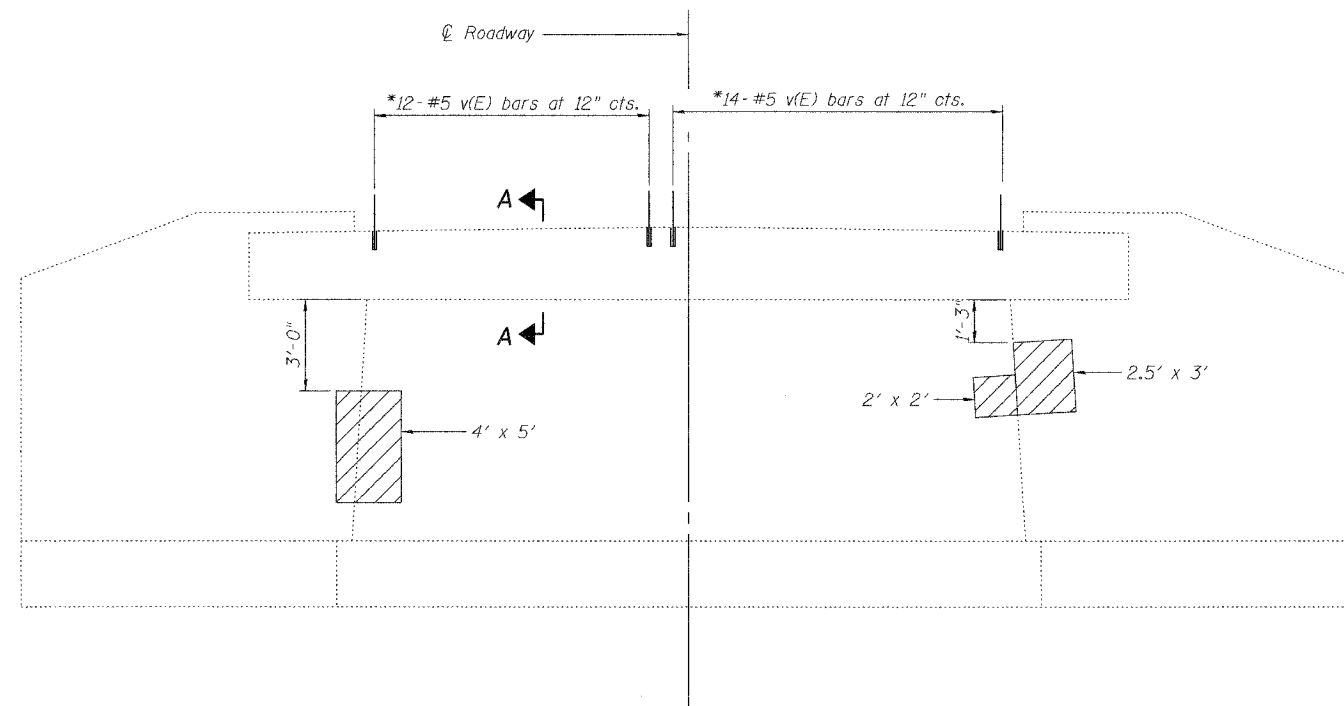
WEST ABUTMENT
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)1
TAZEWELL COUNTY
SN 090-0061

DESIGNED <i>BWP</i>	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 4540 OLD COLLINGSVILLE RD. SPRINGFIELD, ILLINOIS 62726 TEL (618) 624-4488 FAX (618) 624-6688 E-MAIL: cor@twm-inc.com
CHECKED <i>KPC</i>	
DRAWN <i>BWP</i>	
CHECKED <i>KPC</i>	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 12
F.A.P. 693	119B-311	TAZEWELL	34	21	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

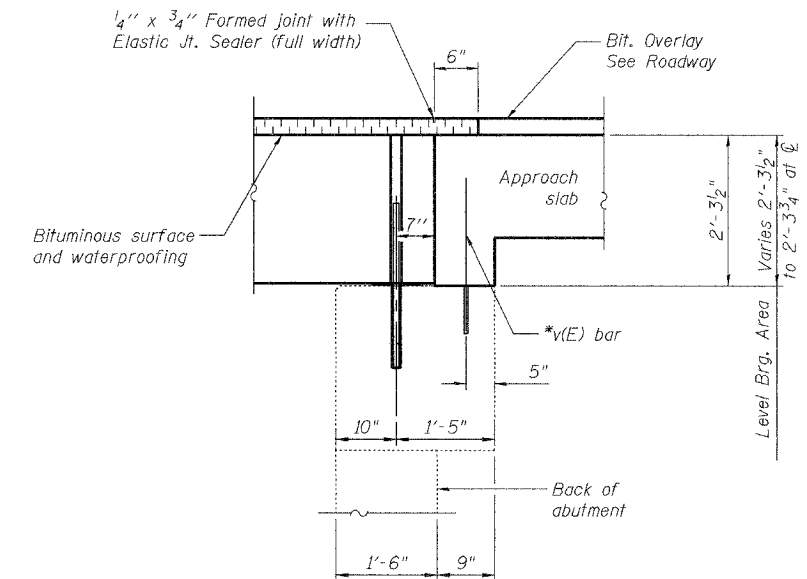
Contract #



Elevation-East Abutment
(LOOKING EAST)

LEGEND

- Structural Repair of Concrete

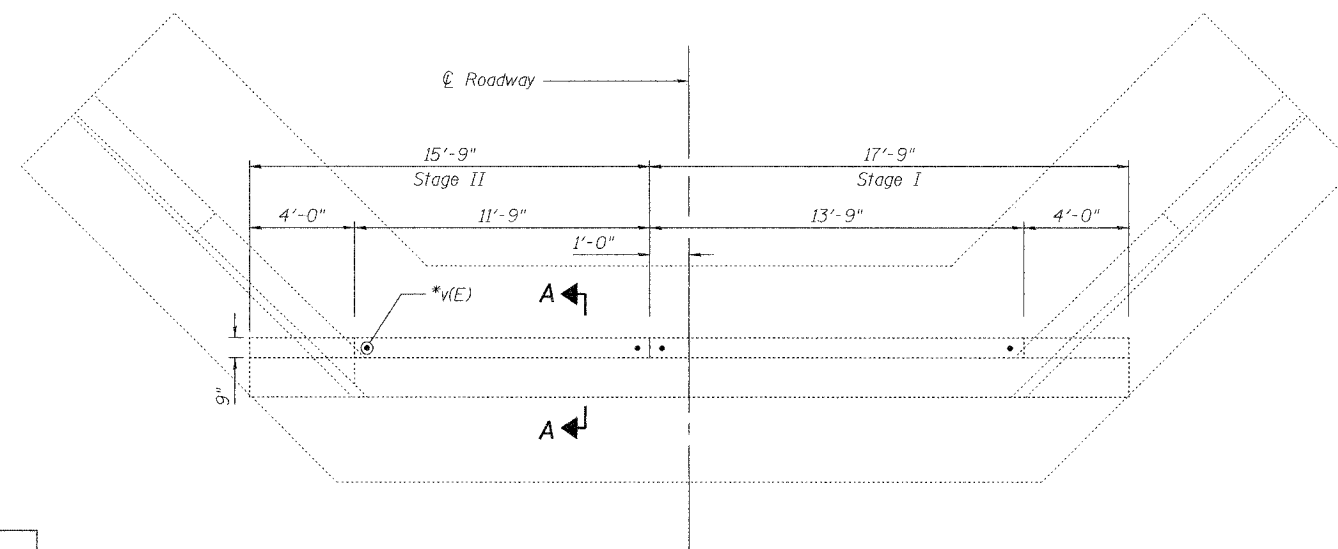


SECTION A-A

* Epoxy grout v(E) bars in 9" (Min.) drilled holes according to Section 584 of the Standard Specification

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
v(E)	26	#5	2'-0"	—
Reinforcement Bars, Epoxy Coated			Pound	50
Structural Repair of Concrete (Depth Equal to or Less Than 5")			Sq. Ft.	31.5



Plan

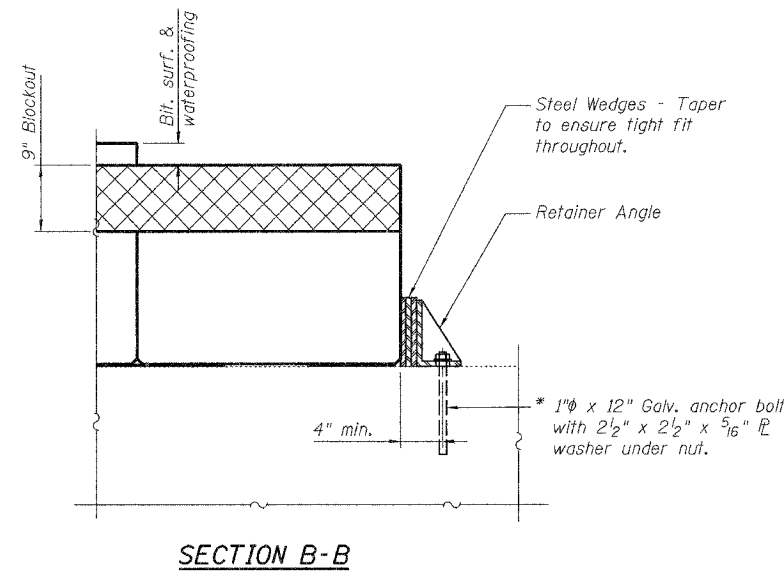
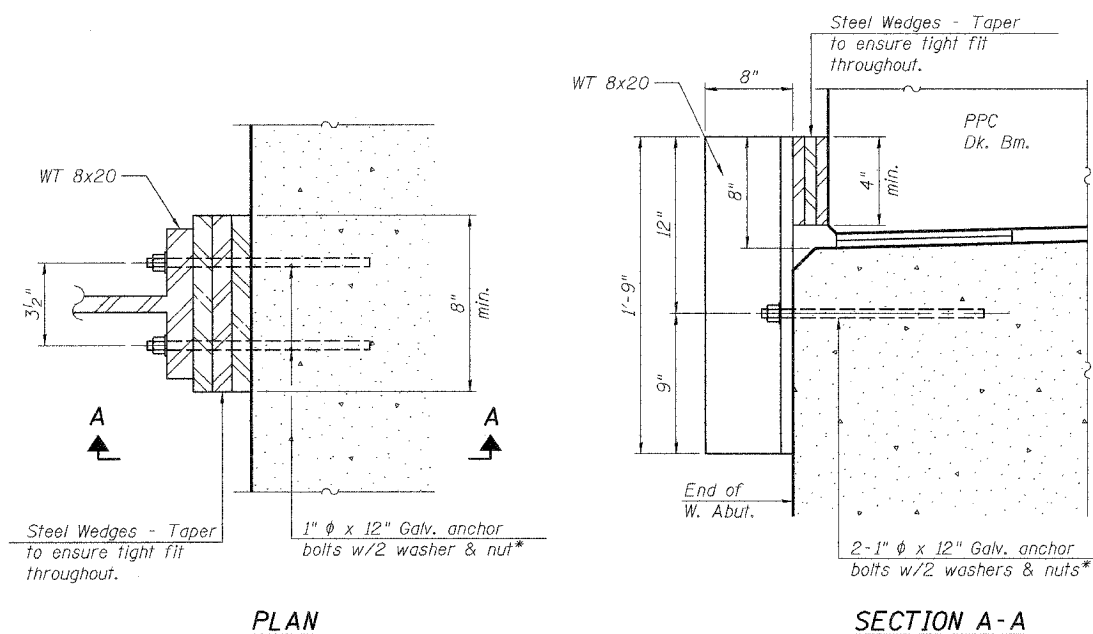
DESIGNED <i>BWP</i>	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE #940 OLD COLLINGSVILLE RD. SPANGLER, ILLINOIS 62226 TEL. (618) 624-4488 FAX (618) 624-6488 E-MAIL: cor@twm-inc.com
CHECKED <i>KPC</i>	
DRAWN <i>BWP</i>	
CHECKED <i>KPC</i>	

**EAST ABUTMENT
CONCRETE REPAIR
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-311)
TAZEWELL COUNTY
SN 090-0061**

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SUBS.	SHEET NO.	SHEET NO. 13
F.A.P. 693	(199B-3)I	TAZEWELL	34	22	14 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #68415



ANCHOR BOLTS FOR RETAINERS
GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled according to the manufacturer's recommendation after beams or girders have been erected and adjusted.

Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.

The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Precast Prestressed Concrete Deck Beams (27" Depth).

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

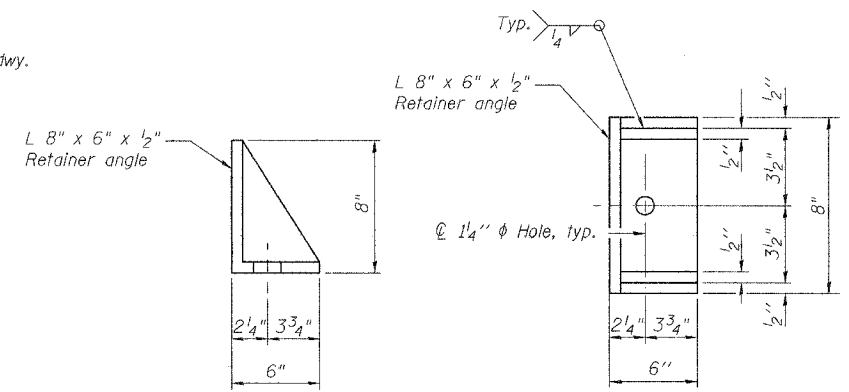
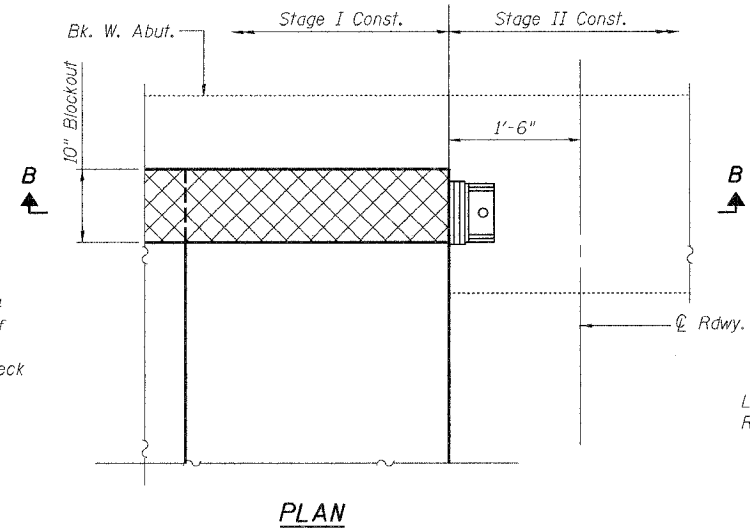
Location	Type
West Abut.	A325

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

TEMPORARY RETAINER AT EXPANSION JOINT
(West Abutment Only)

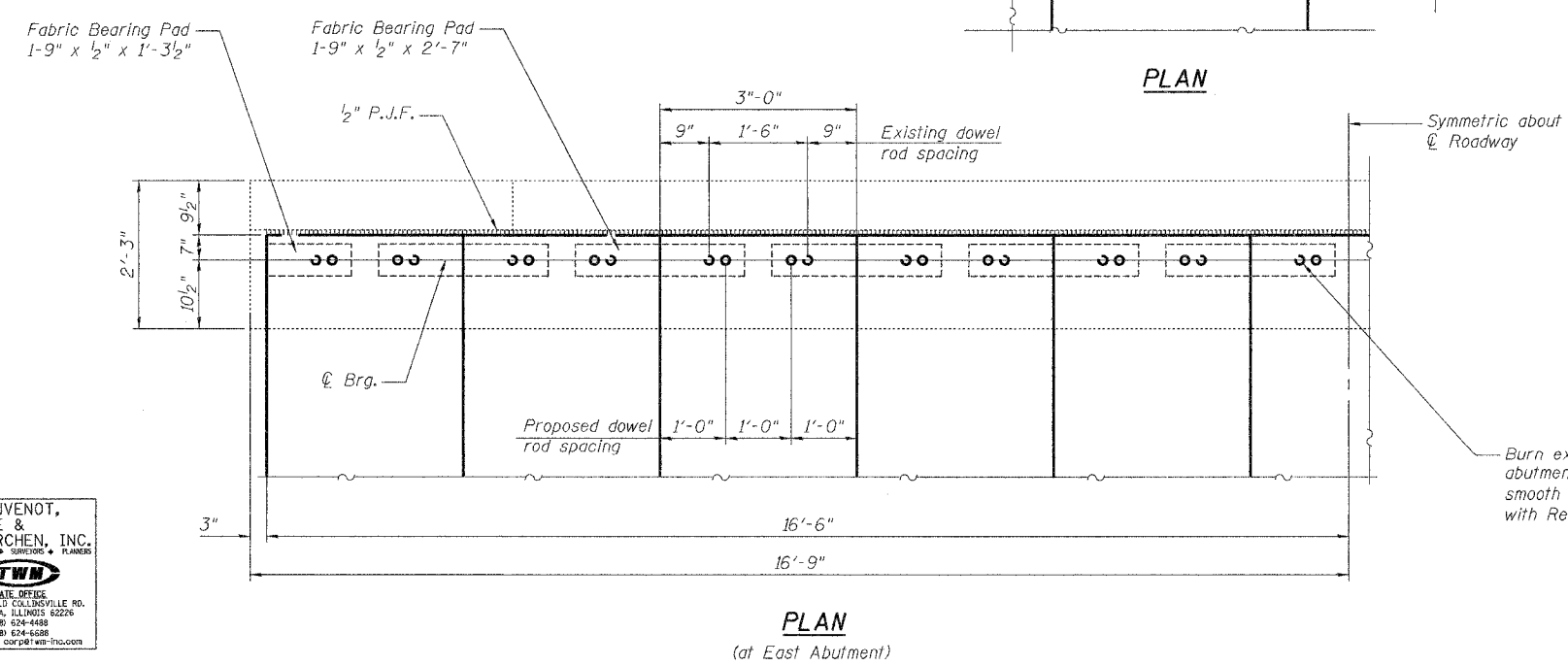
Note:
After block-outs are poured and cured the retainer angles shall be removed. Anchor bolts may be left in place.

* Epoxy grout anchor bolt in 9" (Min.) drilled holes according to Section 584 of the Standard Specification. Cost of retainer and accessories are included with Precast Prestressed Concrete Deck Beams (27" Depth).



SIDE RETAINER

Note:
After block-outs are poured and cured the retainer angles shall be removed. Anchor bolts shall be cut or burn flush with the existing concrete surface, grind smooth and seal with epoxy.



Burn existing dowel rods flush with existing abutment surface. Grind existing dowel rods smooth and seal with epoxy. Cost is included with Removal of Existing Superstructures.

SUBSTRUCTURE DETAILS
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (199B-3)I
TAZEWELL COUNTY
SN 090-0061

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE: 3940 OLD COLLETSVILLE RD. SPRINGFIELD, ILLINOIS 62726 TEL. (618) 624-6488 FAX (618) 624-6488 E-MAIL: GW@TWM-INC.COM
CHECKED KPC	
DRAWN BWP	
CHECKED KPC	

PLAN
(at East Abutment)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
F.A.P. 693	119B-3/I	TAZEWELL	34	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #6B415

NOTES

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

- ① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- ② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s_{allow}} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."

The diameter of this part is the same as the diameter of the bar spliced.

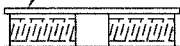
The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

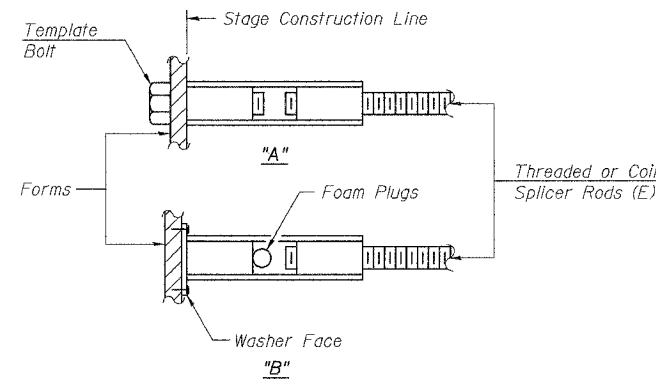
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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

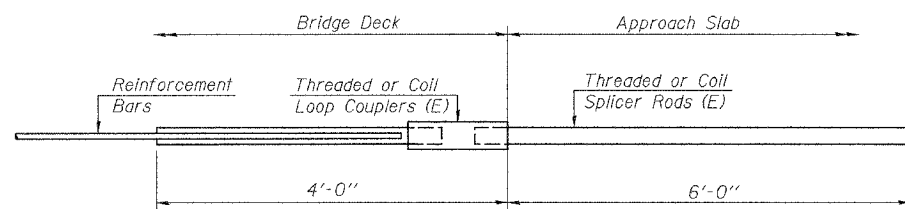


INSTALLATION AND SETTING METHODS

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

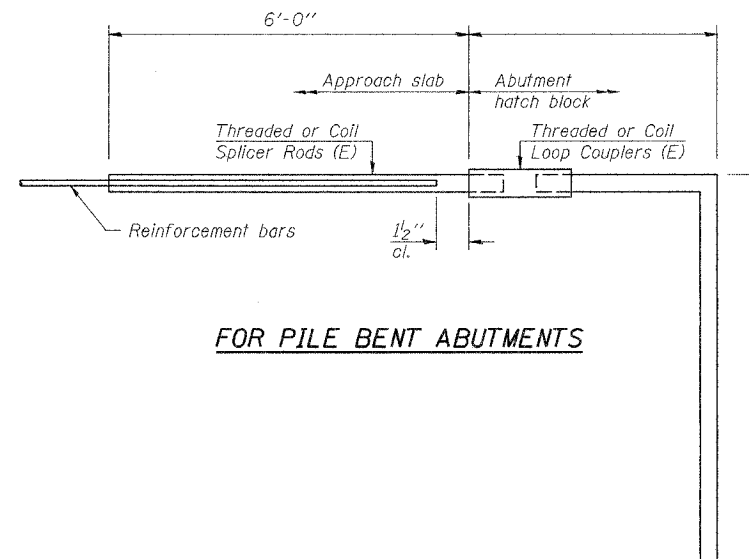
"B": Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



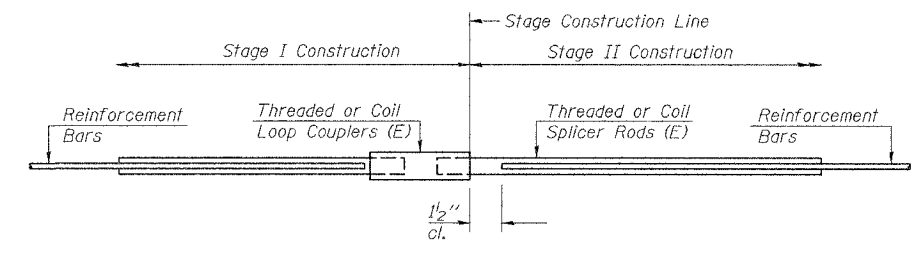
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location
#5	3	Expansion End Blockout
#6	5	West Abutment

BAR SPLICER ASSEMBLY DETAILS
ILLINOIS ROUTE 9 OVER PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3/I)
TAZEWELL COUNTY
SN 090-006I

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS CORPORATE OFFICE 4940 OLD COLLINGSVILLE RD. SPRINGFIELD, ILLINOIS 62226 TEL. (618) 624-4488 FAX (618) 624-6689 E-MAIL: caw@twm-inc.com
CHECKED KPC	
DRAWN BWP	
CHECKED KPC	

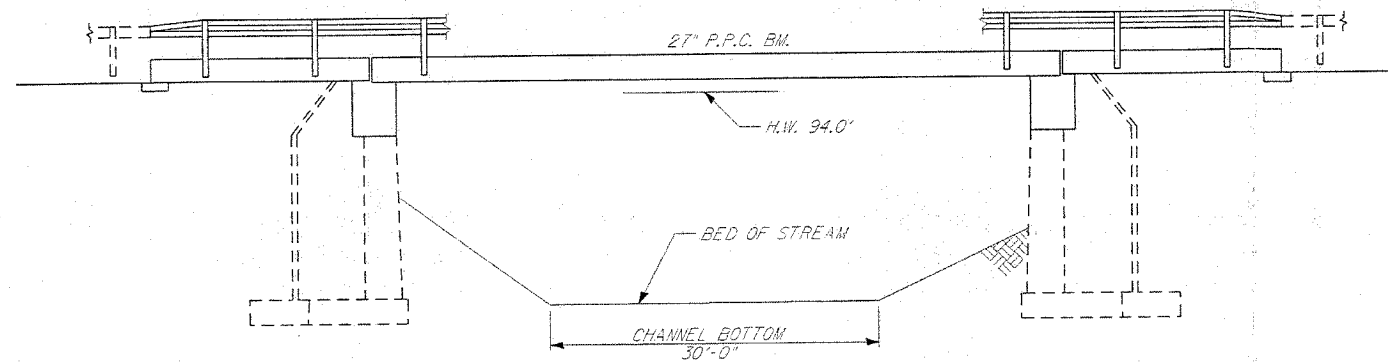
BSD-1

10-22-04

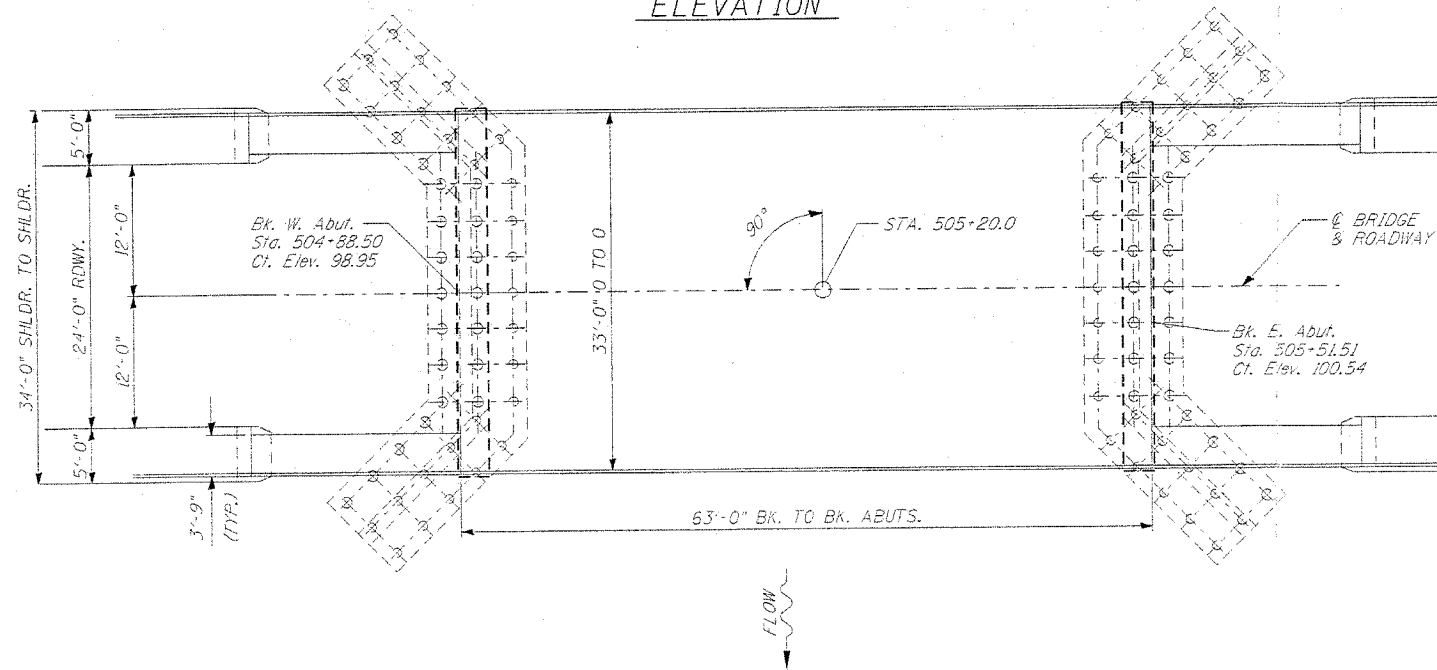
B.M.: BRASS PLATE IN S.E. WINGWALL; ELEV. = 100.00'

EXISTING STRUCTURE: SN 090-0061 IS A 33' WIDE x 63'-0" P.C.C. DECK BEAM SUPERSTRUCTURE WITH R.C. CLOSED ABUTMENTS.

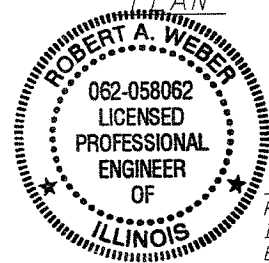
EXISTING BRIDGE



ELEVATION



PLAN



Robert A. Weber III
 ROBERT A WEBER III
 DATE 05/20/06
 ILLINOIS REGISTERED PROFESSIONAL ENGINEER NO.: 062-058062
 EXP DATE: 11/30/2007

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	24
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

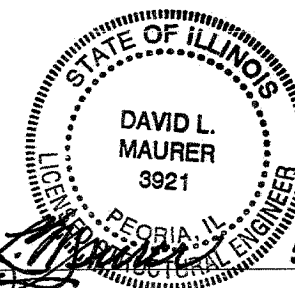
*(119B-3)I

INDEX OF SHEETS

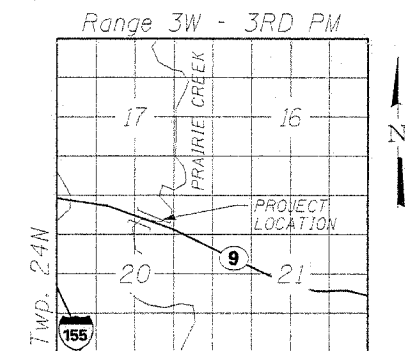
SHEET NUMBER	DESCRIPTION
1	GENERAL PLAN AND ELEVATION, SUMMARY OF QUANTITIES, LOCATION MAP
2	R.O.W. PLAN
3	SITE GRADING PLAN
4	SITE DIMENSION PLAN
5	SITE PROFILE
6-8	CROSS SECTIONS

BILL OF MATERIALS

ITEM	UNIT	TOTAL
CHANNEL EXCAVATION	CU YD	416
STONE RIP-RAP, CLASS A5	TONS	129
FILTER FABRIC FOR RIPRAP	SQ YD	712
GABIONS	CU YD	167
SLOPE MATTRESS 12"	SQ YD	307
SUB-BASE GRANULAR MATERIAL, TYPE C	TONS	171
GABION ANCHOR STAKES	EACH	56
REM. AND REIN. STEEL PLATE BEAM GUARD RAIL, TY. A	FOOT	50
CONSTRUCTION ACCESS	L SUM	1
DEWATERING STRUCTURE NO. 1	EACH	1



David L. Maurer
 DAVID L MAURER
 DATE 5/19/06
 ILLINOIS REGISTERED STRUCTURAL ENGINEER NO.: 81-3921
 EXP DATE: 11/30/2006



LOCATION SKETCH

WATERWAY/SCOUR INFORMATION

DESIGN FLOOD	100 YRS
DRAINAGE AREA	18.2 SQ MI
FLOW	3,426 CFS
FLOW DEPTH	8.0 FT
REQUIRED OPENING	555 SQ FT
PROVIDED OPENING	658 SQ FT
CONTRACTION SCOUR DEPTH	4 FT

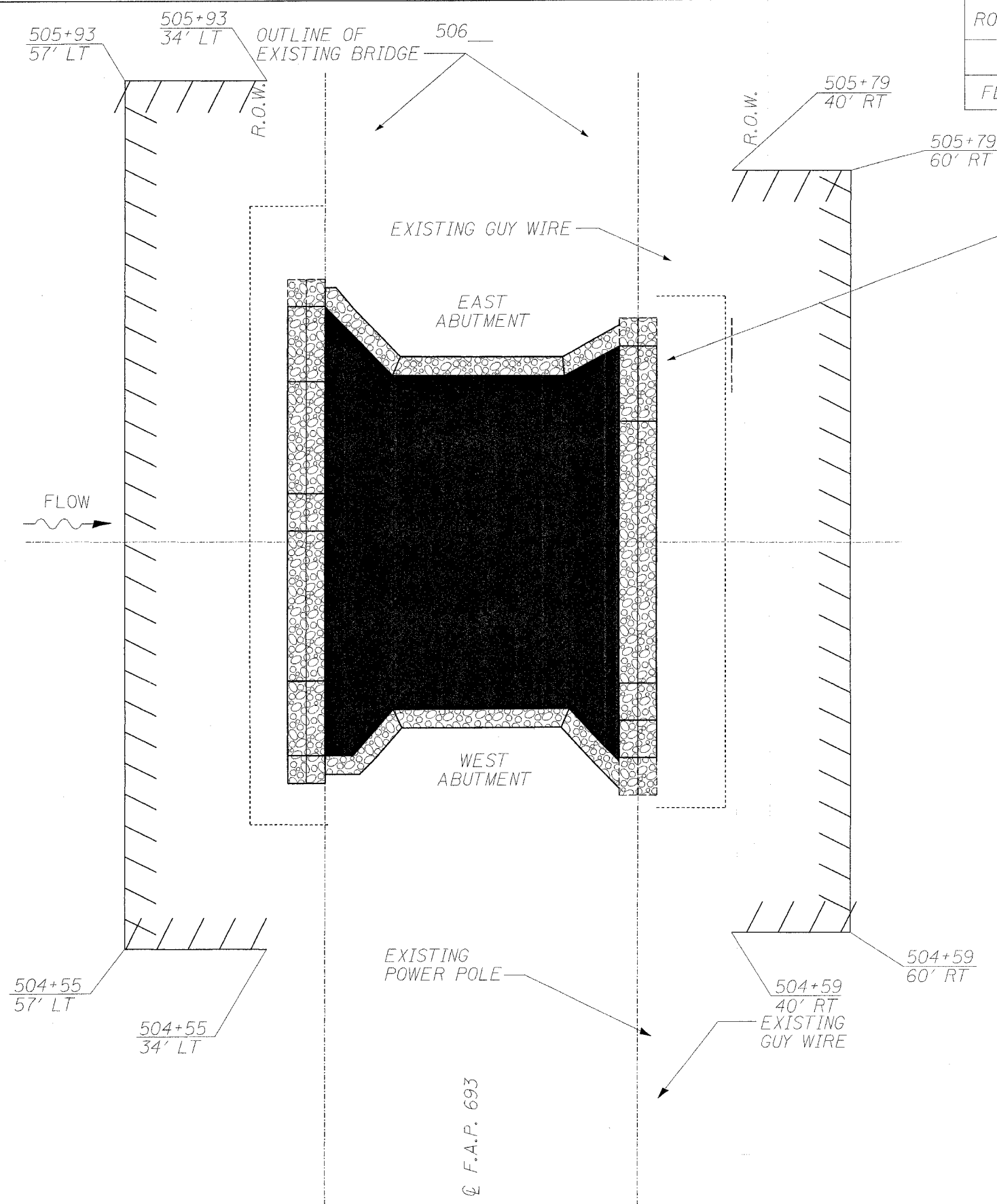
ILLINOIS DEPARTMENT OF TRANSPORTATION
 GENERAL PLAN & ELEVATION
 S.N. 090-0061
 F.A.P. 693 (IL 9)
 OVER PRAIRIE CREEK
 TAZEWELL COUNTY

SHEET 1 OF 8



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	25
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

*(119B-3)I

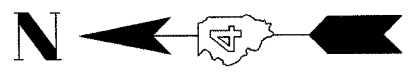


LEGEND

- R.O.W.
- TEMPORARY EASEMENT
- CONSTRUCTION LIMITS
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- GABION
- SLOPE MATTRESS
- AERIAL ELECTRIC AE
- POWER POLE

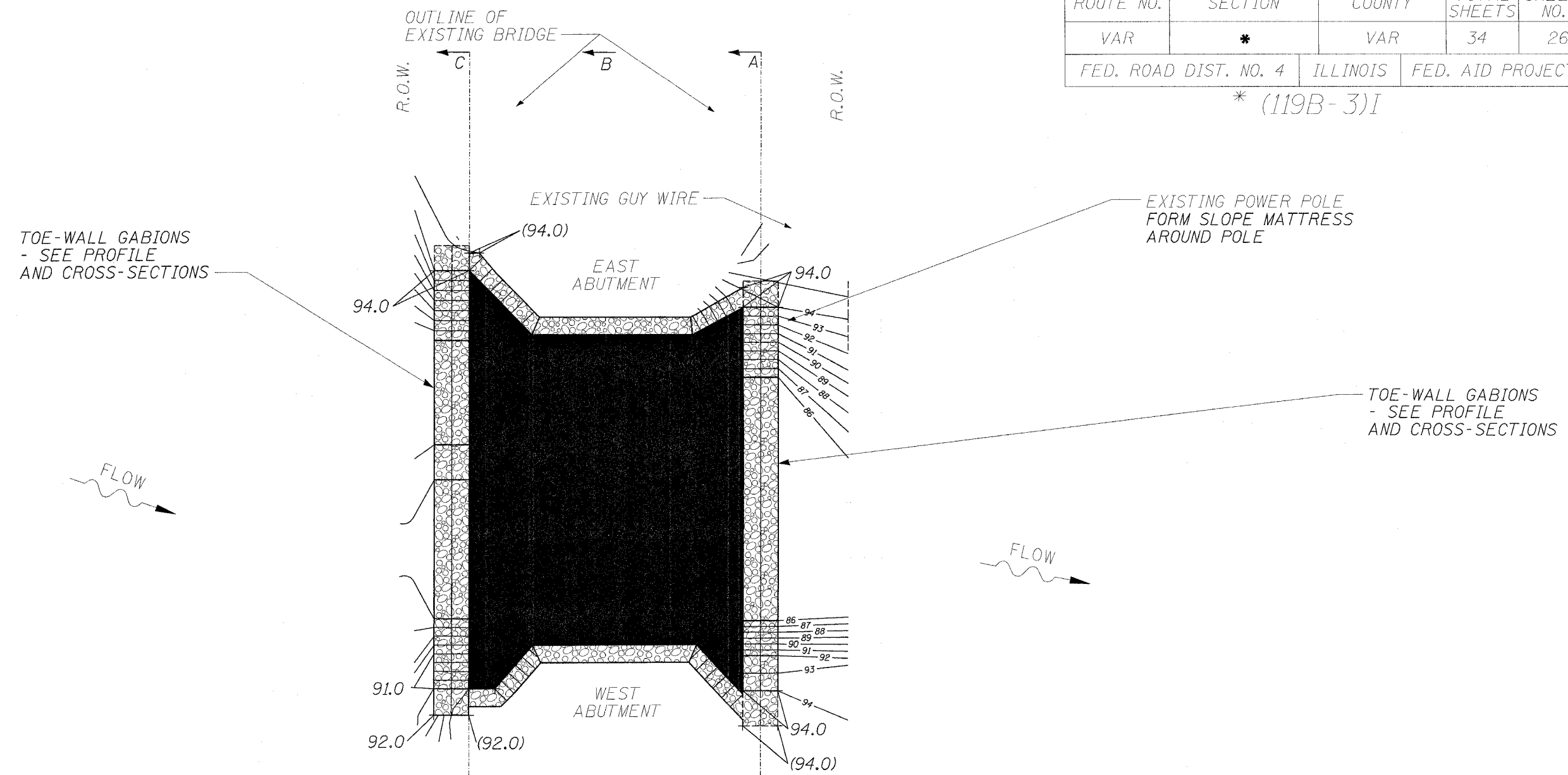


ILLINOIS DEPARTMENT OF TRANSPORTATION
 R.O.W. PLAN
 S.N. 090-0061
 F.A.P. 693 (IL 9)
 OVER PRAIRIE CREEK
 TAZEWELL COUNTY
 SHEET 2 OF 8



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	26
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

* (119B-3)I



LEGEND

- R.O.W. ————
- EXISTING CONTOUR - - - - 95 - - - -
- PROPOSED CONTOUR ———— 95 ————
- PROPOSED SPOT ELEVATION 95.0 ↘
- CONCRETE ABUTMENT // // // //
- STREAM CENTERLINE ————
- GABION [Pattern]
- SLOPE MATTRESS [Solid Black]
- AERIAL ELECTRIC ———— AE ————
- POWER POLE [Circle with cross]

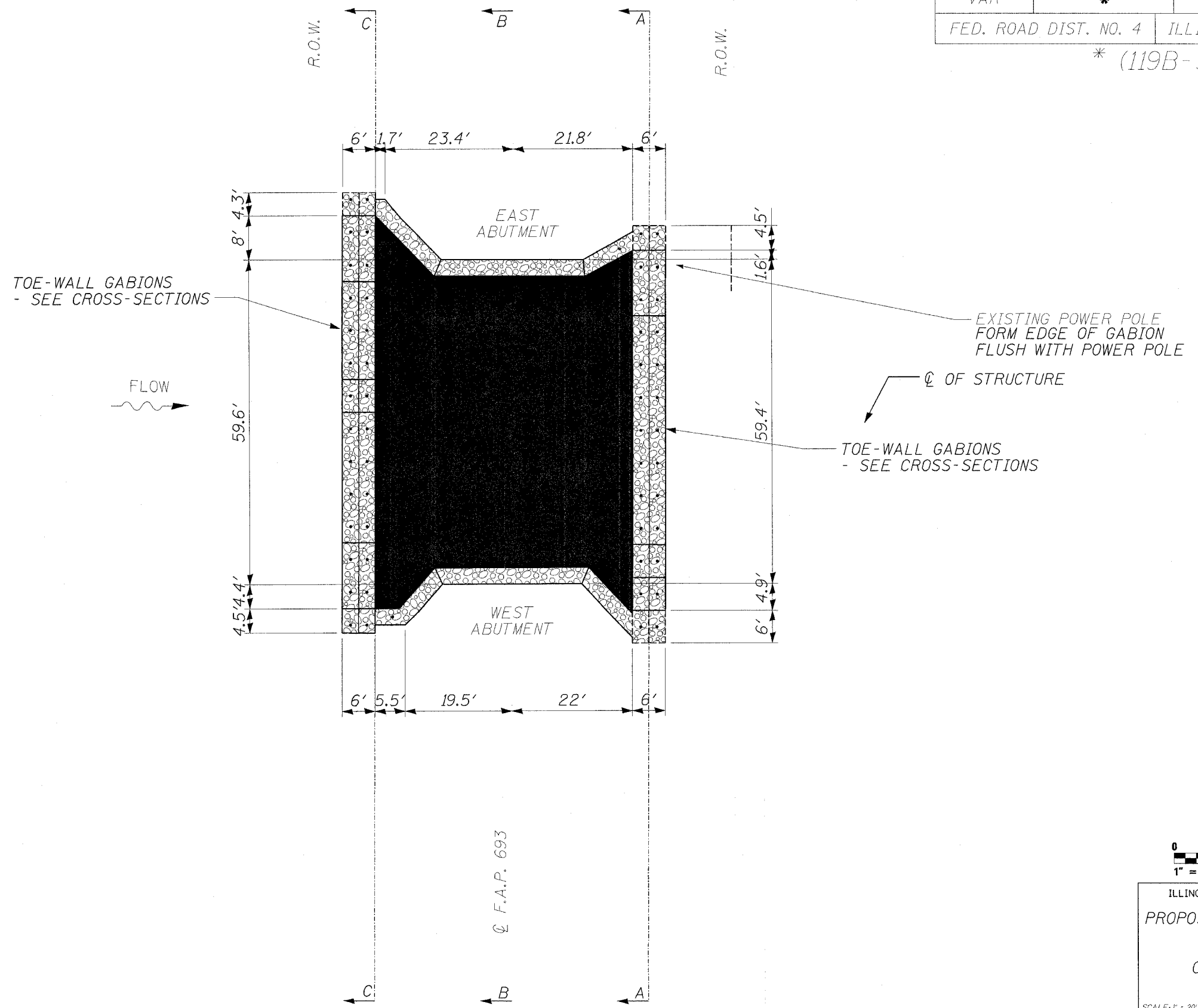


ILLINOIS DEPARTMENT OF TRANSPORTATION
 PROPOSED SITE PLAN
 S.N. 090-0061
 F.A.P. 693 (IL 9)
 OVER PRAIRIE CREEK
 TAZEWELL COUNTY
 SHEET 3 OF 8

NOTE: SPOT ELEVATIONS ENCLOSED BY PARENTHESES INDICATED TOP OF GABION BURIED BY EARTH BACKFILL

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	27
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

* (119B-3)I



LEGEND

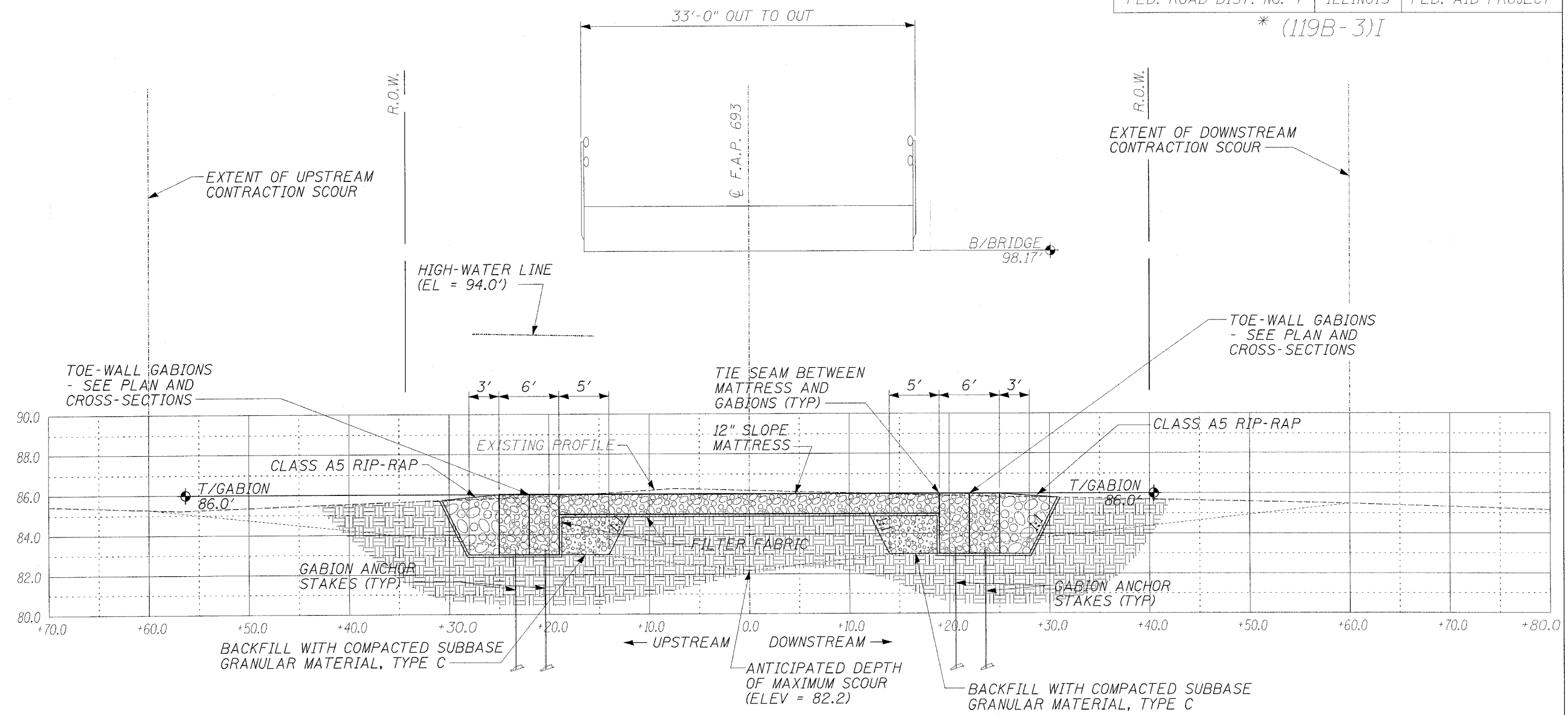
- R.O.W.
 - CONCRETE ABUTMENT
 - STREAM CENTERLINE
 - GABION
 - SLOPE MATTRESS
 - GABION ANCHOR
 - AERIAL ELECTRIC
 - POWER POLE
-



ILLINOIS DEPARTMENT OF TRANSPORTATION
 PROPOSED SITE DIMENSION PLAN
 S.N. 090-0061
 F.A.P. 693 (IL 9)
 OVER PRAIRIE CREEK
 TAZEWELL COUNTY
 SHEET 4 OF 8

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	28
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

* (119B-3)I



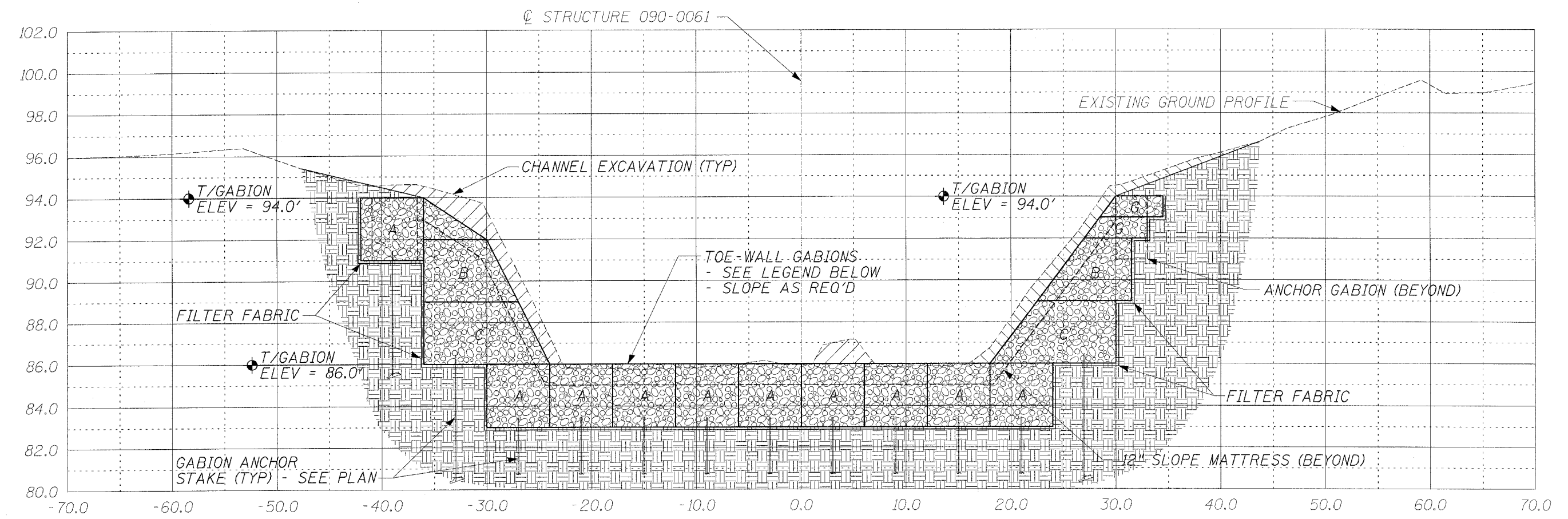
CALCULATED OPENING: 60 FT
 MAXIMUM SCOUR CALCULATION:
 CONTRACTION SCOUR = 4 FT

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE PROFILE
 S.N. 090-0061
 F.A.P. 693 (IL 9)
 OVER PRAIRIE CREEK
 TAZEWELL COUNTY
 SHEET 5 OF 8
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	29
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

* (119B-3)I



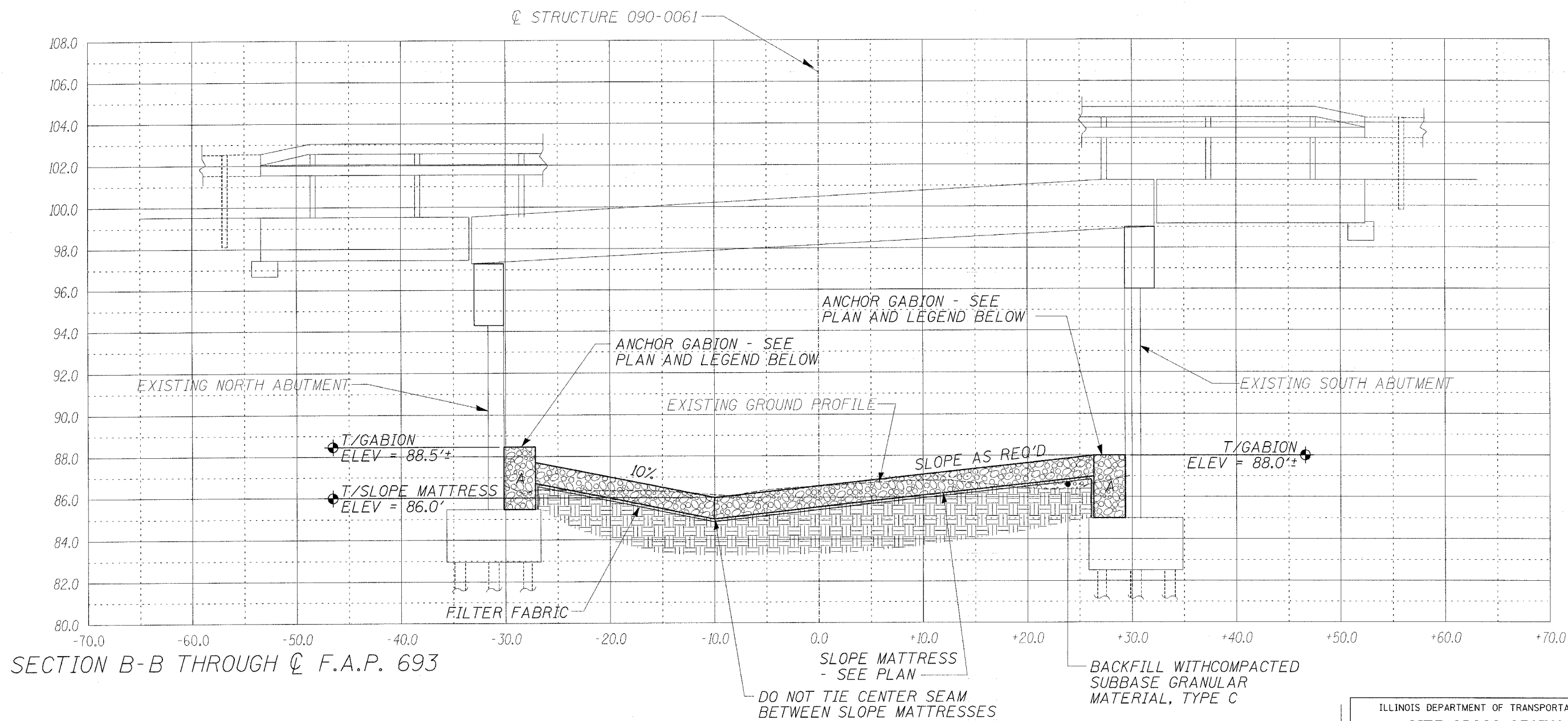
SECTION A-A THROUGH SOUTH GABION TOE-WALL

GABION LEGEND			
MARK	LENGTH	WIDTH	HEIGHT
A	6'	3'	3'
B	9'	3'	3'
C	12'	3'	3'
G	6'	3'	1'

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 090-0061
 F.A.P. 693 (IL 9)
 OVER PRAIRIE CREEK
 TAZEWELL COUNTY
 SHEET 6 OF 8
 SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	30
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

*(119B-3)I

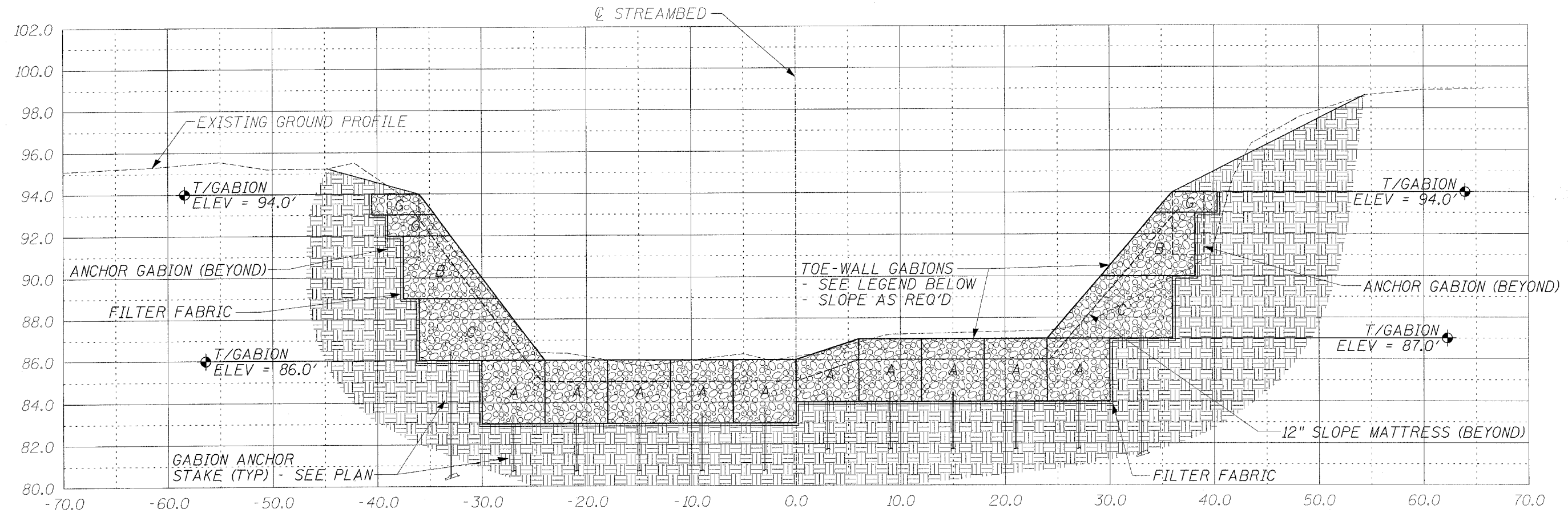


GABION LEGEND			
MARK	LENGTH	WIDTH	HEIGHT
A	6'	3'	3'

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 090-0061
 F.A.P. 693 (IL 9)
 OVER PRAIRIE CREEK
 TAZEWELL COUNTY
 SHEET 7 OF 8

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	31
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

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SECTION C-C THROUGH NORTH GABION TOE-WALL

MARK	LENGTH	WIDTH	HEIGHT
A	6'	3'	3'
B	9'	3'	3'
C	12'	3'	3'
G	6'	3'	1'

ILLINOIS DEPARTMENT OF TRANSPORTATION
 SITE CROSS SECTION
 S.N. 090-0061
 F.A.P. 693 (IL 9)
 OVER PRAIRIE CREEK
 TAZEWELL COUNTY
 SHEET 8 OF 8

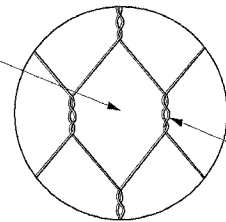
SCALE: VERT. 1" = 5' HORIZ. 1" = 10'

SUGGESTED INSTALLATION SEQUENCE

(SEE ALSO SECTION 284 OF THE STANDARD SPECIFICATIONS)

- INDIVIDUALLY ASSEMBLE THE EMPTY GABION BASKET UNITS.
- POSITION THE INITIAL LINE OF EMPTY GABION BASKET UNITS ON THE PREPARED SURFACE IN A DIRECTION PERPENDICULAR TO STREAM FLOW. SECURE ADJOINING BASKETS AND PARTIALLY FILL TO PROVIDE ANCHORAGE AGAINST DEFORMATION AND DISPLACEMENT DURING FILLING OPERATIONS.
- POSITION AND SECURE THE REMAINING EMPTY GABION BASKET UNITS ON THE PREPARED SURFACE AS SHOWN ON THE PLANS.
- PLACE THE BASKETS IN TENSION AND STRETCH TO REMOVE ANY KINKS FROM THE FABRIC. STRETCH THE EMPTY GABION BASKET UNITS IN A MANNER THAT WILL PREVENT UNRAVELING.
- FILL THE BASKET UNITS IN STAGES TO PREVENT LOCALIZED DEFORMATION. INTERNAL CONNECTING WIRES SHALL BE INSTALLED BETWEEN STONE LAYERS TO CONNECT THE FRONT FACE OF THE BASKET UNIT TO THE BACK FACE. AT NO TIME SHALL ANY CELL BE FILLED TO A DEPTH EXCEEDING 12 INCHES MORE THAN THE ADJOINING CELL. THE MAXIMUM HEIGHT FROM WHICH THE STONE MAY BE DROPPED INTO THE BASKET SHALL BE 3 FT.
- TIGHTLY STRETCH THE LID OVER THE STONE FILL USING A LID CLOSING TOOL APPROVED BY THE MANUFACTURER. USING CROWBARS OR OTHER SINGLE POINT LEVERAGE BARS FOR LID CLOSING SHALL BE PROHIBITED. TIGHTLY SECURE THE LID TO THE FILLED BASKET ALONG ALL EDGES, ENDS AND INTERNAL CELL DIAPHRAMS.
- IN LIEU OF FILLING BASKETS IN PLACE, THE BASKETS MAY BE PREFILLED ON A LEVEL SURFACE AS INDICATED IN STEPS 5 AND 6. THE BASKETS CAN THEN BE LIFTED AND PLACED ON THE PREPARED SURFACE USING A MANUFACTURER'S APPROVED LIFTING TECHNIQUE. CARE SHALL BE TAKEN NOT TO ABRASE THE ZINC OR VINYL COATING OR PERMANENTLY DISTORT THE SHAPE OF THE BASKET IN TRANSPORTATION. ANY DAMAGE TO THE BASKETS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER. BASKETS SHALL BE PLACED TIGHTLY AGAINST AND SECURED TO BASKETS ALREADY IN PLACE.
- WHERE A COMPLETE GABION UNIT CANNOT BE INSTALLED AS SHOWN ON THE PLANS BECAUSE OF SPACE LIMITATIONS, THE BASKET UNIT SHALL BE CUT, FOLDED AND WIRED TOGETHER TO SUIT EXISTING SITE CONDITIONS.

FABRIC OPENING
NOMINAL DIMENSIONS
3 1/4" x 4 1/2"

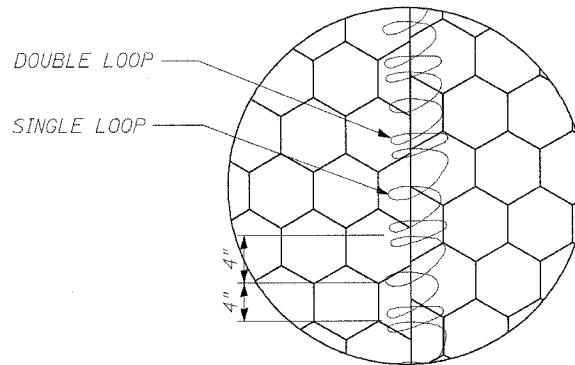


HEXAGONAL MESH
FABRIC WITH AT LEAST
THREE HALF TWISTS

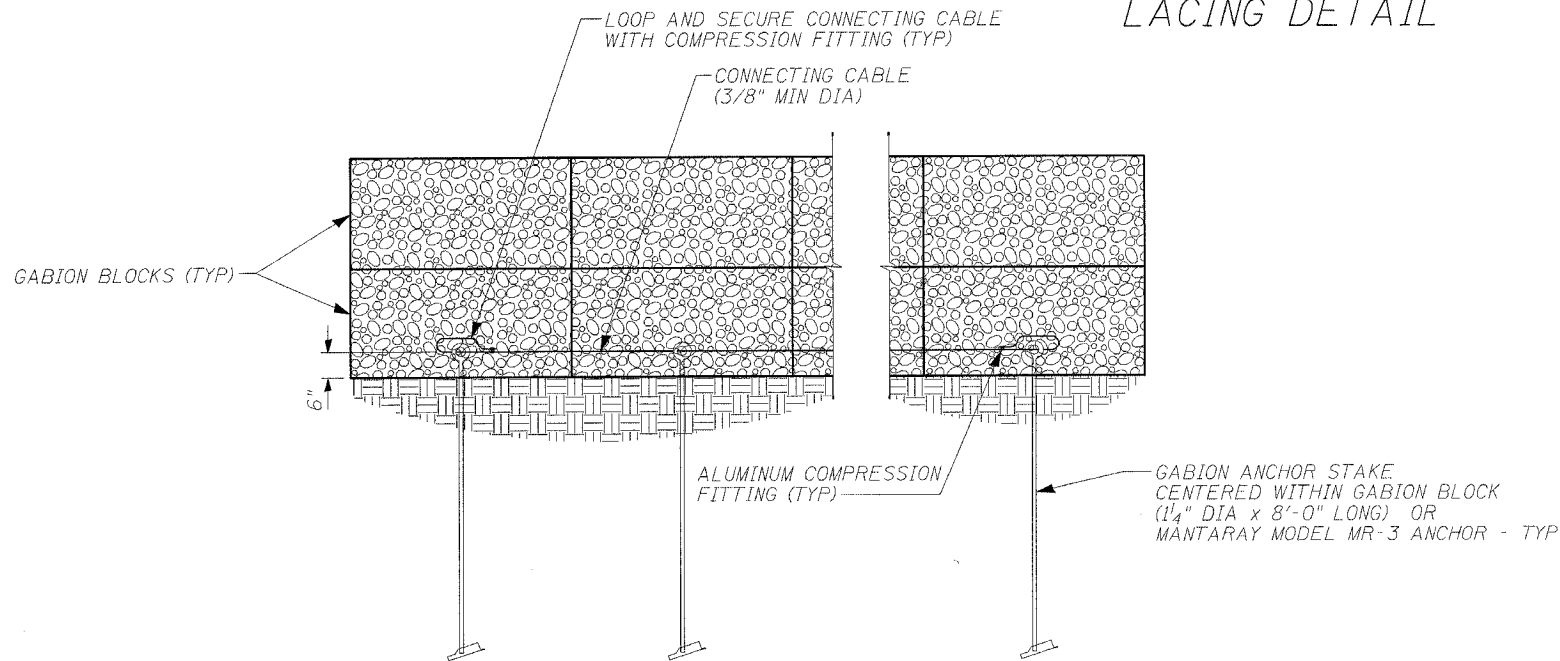
NOTES:

- GABION BASKETS SHALL BE CONSTRUCTED OF A GALVANIZED, ALUMINIZED, OR PVC-COATED GALVANIZED OR ALUMINIZED STEEL WIRE.
- STEEL WIRE SHALL CONFORM TO SECTION 1006.35 OF THE STANDARD SPECIFICATIONS

GABION FABRIC DETAIL



LACING DETAIL



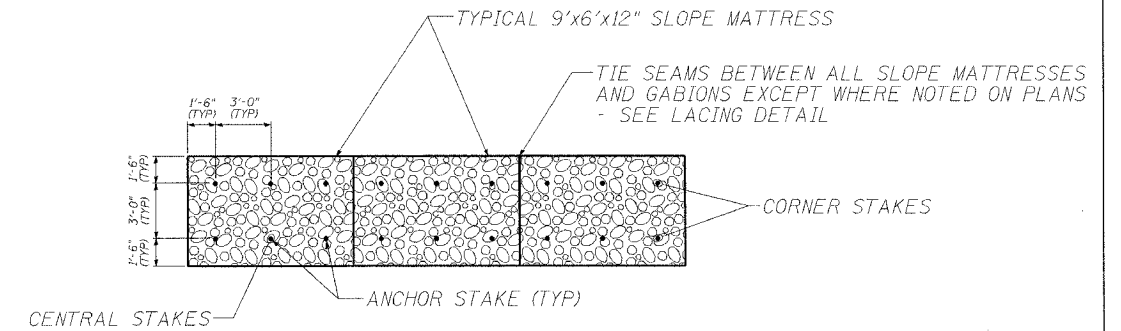
GABION ANCHOR STAKE SECURING DETAIL

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	32
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

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GABION BASKET NOTES:

- BASKETS SHALL BE OF SINGLE UNIT CONSTRUCTION. THE BASE, LID, ENDS AND SIDES SHALL BE EITHER WOVEN INTO A SINGLE UNIT OR ONE EDGE OF THESE MEMBERS CONNECTED TO THE BASE SECTION OF THE BASKETS. FOR PROPER ASSEMBLY, SEE LACING DETAIL.
- DIAPHRAMS SHALL EQUALLY DIVIDE BASKETS WHERE THE LENGTH OF THE BASKET EXCEEDS 1 1/2 IT'S HORIZONTAL LENGTH.
- GABION BASKET ASSEMBLY, INSTALLATION, FILLING AND LID-CLOSING SHALL BE IN ACCORDANCE WITH SECTION 284 OF THE STANDARD SPECIFICATIONS.



NOTES:

- ANCHOR STAKES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 284 OF THE STANDARD SPECIFICATIONS.
- ANCHOR STAKES ARE TO BE PLACED ON THREE-FOOT CENTERS, WITH AN ARRANGEMENT AS SHOWN ABOVE, FOR ALL SLOPE MATTRESSES LAID ON A SLOPE OF 2:1 OR GREATER.
- ANCHOR STAKES FOR SLOPE MATTRESSES LAID ON SLOPE LESS THAN 2:1 AND GREATER THAN 10% SHALL OMIT THE CENTRAL STAKES SHOWN ABOVE - 4 STAKES PER 6'x9' MATTRESS.
- ALL SLOPE MATTRESSES LAID ON SLOPES LESS THAN 10% SHALL NOT HAVE ANCHOR STAKES.

TYPICAL ANCHOR STAKE LAYOUT DETAIL

GABION LEGEND			
MARK	LENGTH	WIDTH	HEIGHT
A	6'	3'	3'
B	9'	3'	3'
C	12'	3'	3'
D	6'	3'	1 1/2'
G	6'	3'	1'
H	9'	3'	1'

ILLINOIS DEPARTMENT OF TRANSPORTATION

GABION DETAILS
S.N. 090-0061
IL 9 OVER PRAIRIE CREEK

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	33
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

* (119B-3)I

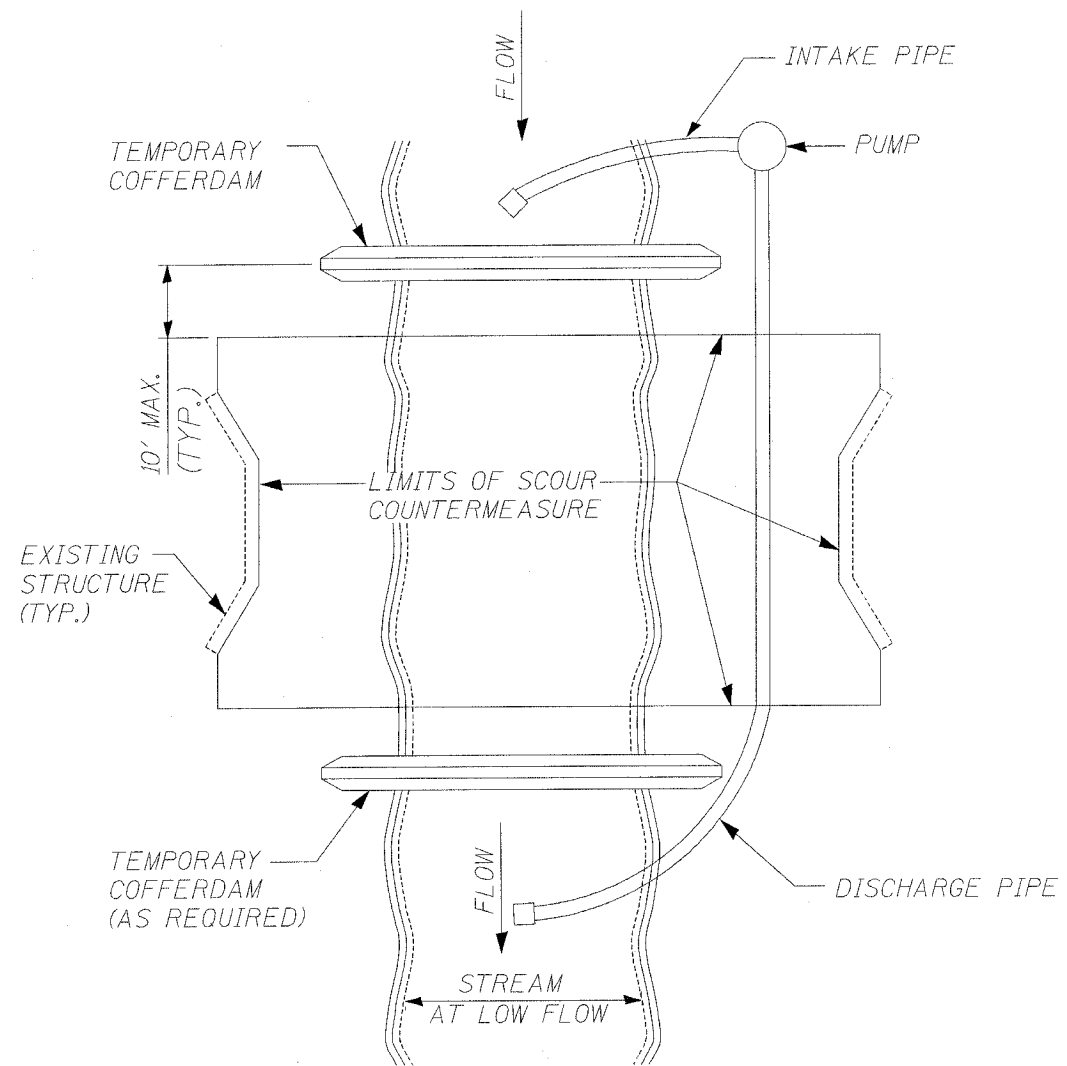


FIGURE D1. TEMPORARY COFFERDAM WITH PUMP BYPASS

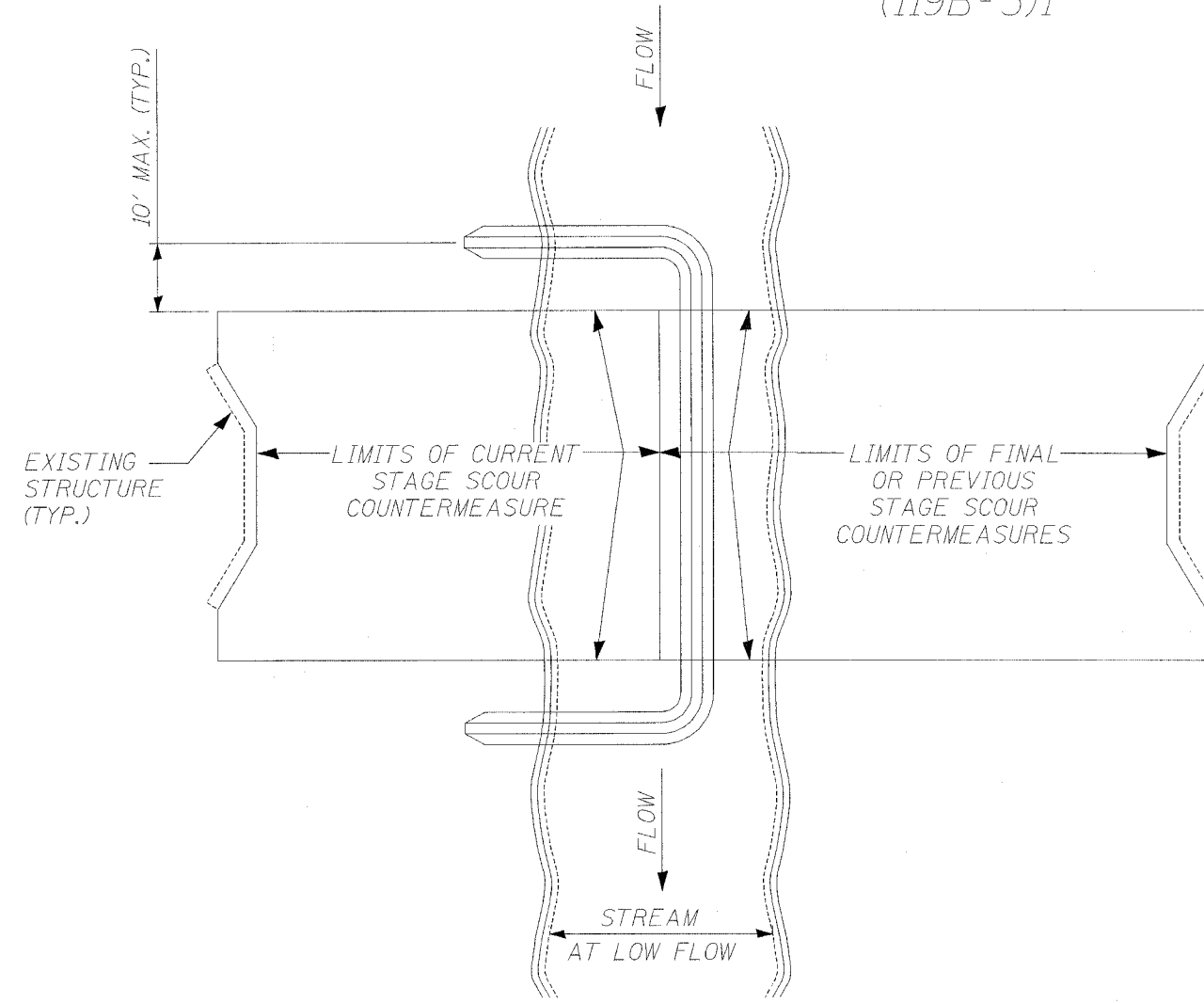


FIGURE D2. STAGED IN-STREAM COFFERDAM DIVISION

NOTE: DEWATERING SYSTEM DETAILS SHALL BE USED IN CONJUNCTION WITH THE PROJECT SPECIAL PROVISIONS.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DEWATERING SYSTEM DETAILS
S.N. 090-0061
IL 9 OVER PRAIRIE CREEK

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	*	VAR	34	34
FED. ROAD DIST. NO. 4		ILLINOIS	FED. AID PROJECT	

*(119B-3)I

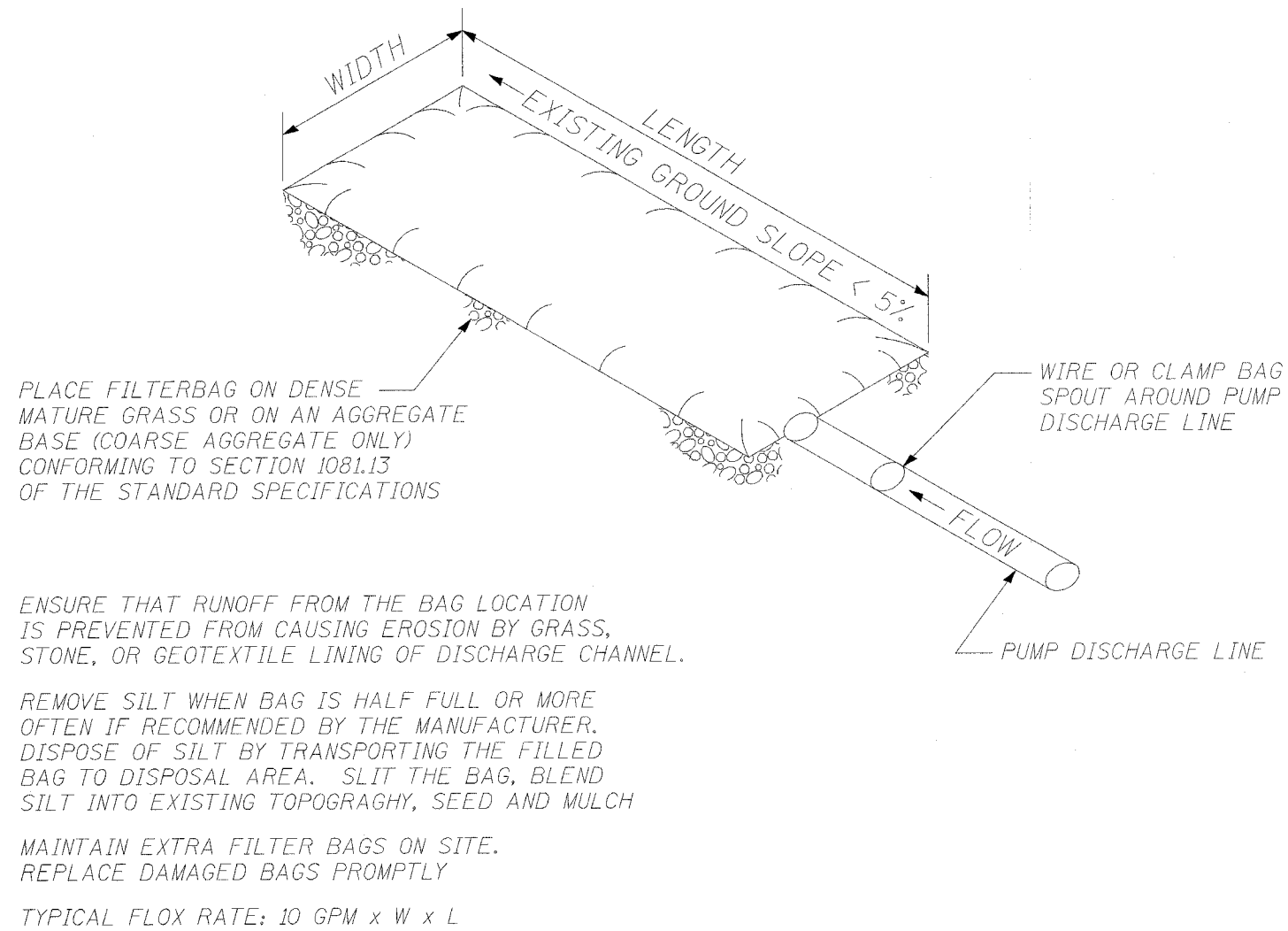


FIGURE S1. SEDIMENT FILTER BAG

NOTE: DEWATERING SYSTEM DETAILS SHALL BE USED IN CONJUNCTION WITH THE PROJECT SPECIAL PROVISIONS.

ILLINOIS DEPARTMENT OF TRANSPORTATION
 DEWATERING SYSTEM DETAILS
 S.N. 090-0061
 IL 9 OVER PRAIRIE CREEK