6-15-07 Letting, Item 294

INDEX OF SHEETS

STANDARDS

420401–05
630001–07
630301–04
631031–06
631032–03
635006–02
635011–01
701306–01
701321–08
701326–02
702001–06
704001–03
780001–01
781001–02

COMMITMENTS

NONE

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B–3)I	TAZEWELL	33	1
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

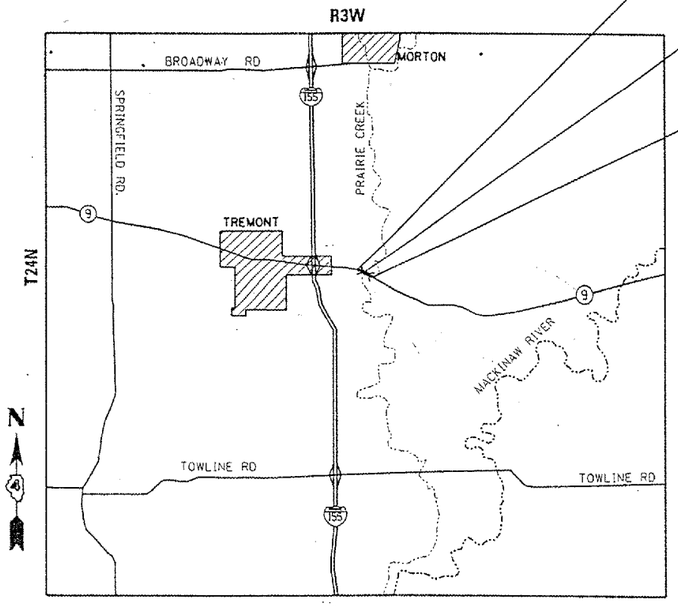
33+4=37 total Sheets

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

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

FAP ROUTE 693 (IL RTE 9)
SECTION (119B–3)I
PROJECT NO. F-0693(058)
TAZEWELL COUNTY
DECK BEAM REPLACEMENT
C–94–100–04

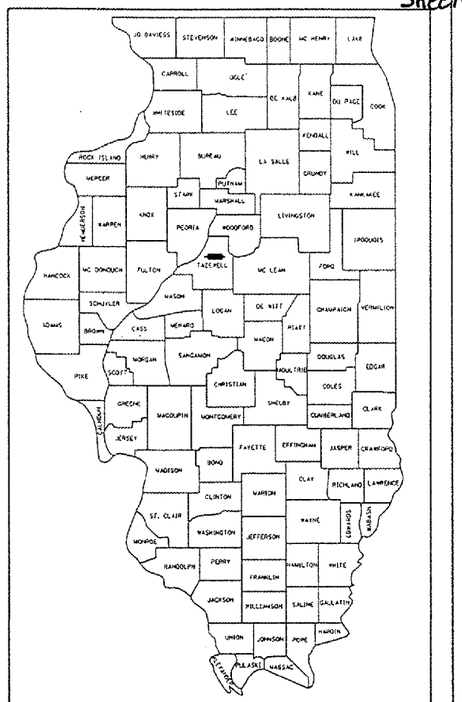


PROJECT BEGIN
STA. 504+51.87
LATITUDE 40°31'26" N
LONGITUDE 89°27'49" W

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



LOCATION OF SECTION INDICATED THUS: –

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

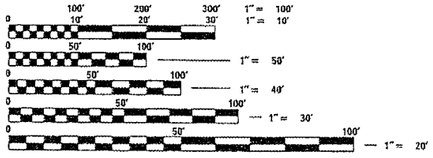
SUBMITTED March 23 20 07
DEPUTY DIRECTOR OF HIGHWAYS, REGION 5 ENGINEER

PASSED May 11 20 07
Interim ENGINEER OF DESIGN AND ENVIRONMENT

APPROVED May 11 20 07
Milton R. Rees, P.E.
DIRECTOR, DIVISION OF HIGHWAYS

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 CONRETE 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

QA/QC BITUMINOUS SUPERPAVE PROJECT

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

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

GERI E. BOYER 050142 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS

04/23/06
GERI E. BOYER, P.E. — DATE
LICENSE NO. 062-050142 — EXPIRES 11-30-2007

PREPARED BY:
THOUVENOT, WADE & MOERCHEN, INC.

F.A.P. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	33	2
STA.	TO STA.			
EXISTING CONDITIONS:				
CONTRACT NO. 68415				

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 UTLITY COMPANY DIRECTLY. AGENCIES KNOWN TO HAVE FACILITIES WITHIN THE PROJECT AREA ARE AS FOLLOWS:

*ILLINOIS-AMERICAN WATER COMPANY
*CHARTER COMMUNICATIONS
*MCLEOD USA
*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 FIELDS AND RESIDENCES DURING VARIOUS STAGES OF CONSTRUCTION IF ACCESS CANNOT BE ATTAINED BY OTHER ROADS.

UTITLIES - 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)
AC/PG	PG 64-22
RAP % (MAX)	15%
DESIGN AIR VOIDS	4.2% @ N=50
MIX COMPOSITION (GRADATION MIXTURE)	IL 9.5 OR 12.5
FRICTION AGG	Mixture D

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 ACTUALL 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 GRANTOR 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 ANTICIATED 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 BIS IN USE. OTHERWISE THE CONTRACTOR IS RESTRICTED TO ONE-LANE DAYTIME ONLY CLOSURE IN ACCORDANCE TO IDOT STANDARDS 701301.

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
Underground Tel.	McLeodUSA	16.5' South of Bridge Buried 5' Deep	Use Caution

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

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

PLOT DATE: *DATE-TIME*

*ADDITIONAL
*DATE-TIME
*DESIGN SPEED
*ADT
*YEAR
*REF

SUMMARY OF QUANTITIES

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

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE SFTY-ZA FED 80% STATE 20%			
CODE NO	ITEM	UNIT					
20300100	CHANNEL EXCAVATION	CU YD	416	416			
25000300	SEEDING, CLASS 3	ACRE	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	SQ YD	138	138			
28100209	STONE RIPRAP, CLASS A5	TON	1685	1685			
28200200	FILTER FABRIC	SQ YD	712	712			
31101900	SUB-BASE GRANULAR MATERIAL, *TYPE C*	TON	100	100			
35600712	HOT-MIX ASPHALT BASE COURSE WIDENING, 9"	SQ YD	196	196			
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	35	35			
40600300	AGGREGATE (PRIME COAT)	TON	1	1			
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	160	160			
40603335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	TON	60	60			
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	164	164			
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	35	35			
44000100	PAVEMENT REMOVAL	SQ YD	92	92			
44000700	APPROACH SLAB REMOVAL	SQ YD	107	107			
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			
50400105	PRECAST CONCRETE BRIDGE SLAB	SQ FT	299	299			
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	2,066	2,066			
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	450	450			
50800515	BAR SPLICERS	EACH	8	8			
*	50901050 STEEL RAILING, TYPE SM	FOOT	207	207			
51500100	NAME PLATES	EACH	1	1			
52000110	PREFORMED JOINT STRIP SEAL	FOOT	33	33			
58100200	WATERPROOFING MEMBRANE SYSTEM	SQ YD	230	230			
58300100	PORTLAND CEMENT MORTAR FAIRING COURSE	FOOT	626	626			
*	63000000 STEEL PLATE BEAM 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			
*	63300205 REMOVAL AND REINSTALL EXISTING STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	50	50			
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	4	4			
67100100	MOBILIZATION	L SUM	1	1			

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE SFTY-ZA FED 80% STATE 20%			
CODE NO	ITEM	UNIT					
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	6	6			
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	SQ 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 REFECTIVE PAVEMENT MARKER	EACH	10	10			
*	78200410 GUARDRAIL MARKERS, TYPE A	EACH	8	8			
*	78200510 BARRIER WALL MARKERS, TYPE A	EACH	4	4			
78300100	PAVEMENT MARKING REMOVAL	SQ FT	473	473			
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	10	10			
X0301852	DEWATERING STRUCTURE NO. 1	EACH	1	1			
X0322587	CONSTRUCTION ACCESS	EACH	1	1			
X0325305	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN *5 INCHES*)	SQ FT	45.1	45.1			
*	X7200200 WIDE LOAD SIGNING	L SUM	1	1			
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			

*SPECIALTY ITEM

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

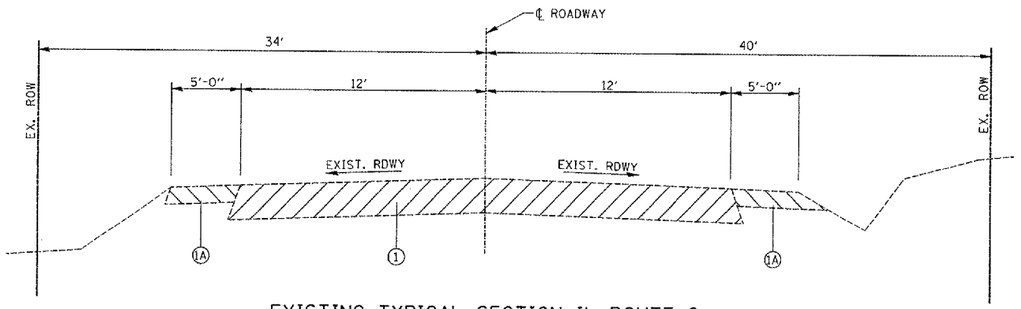
SUMMARY OF QUANTITIES

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

SCALE: NONE — DRAWN BY: KBF

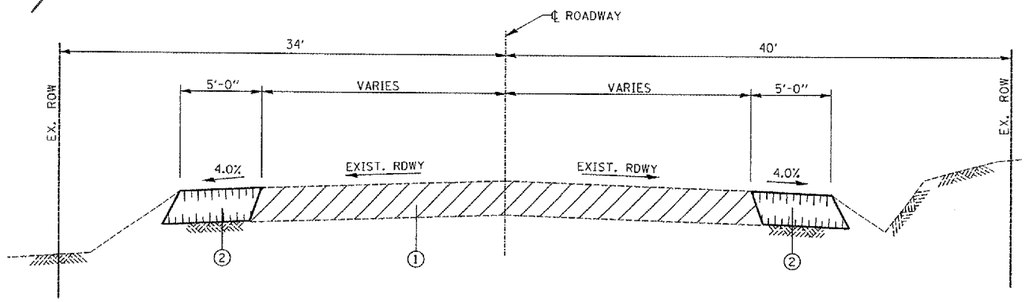
DATE: 03/24/2006 — CHECKED BY: AJE

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
693	(119B-3)I	TAZEWELL	33	4
STA.		TO STA.		
EXISTING CONDITIONS:				
CONTRACT NO. 68415				



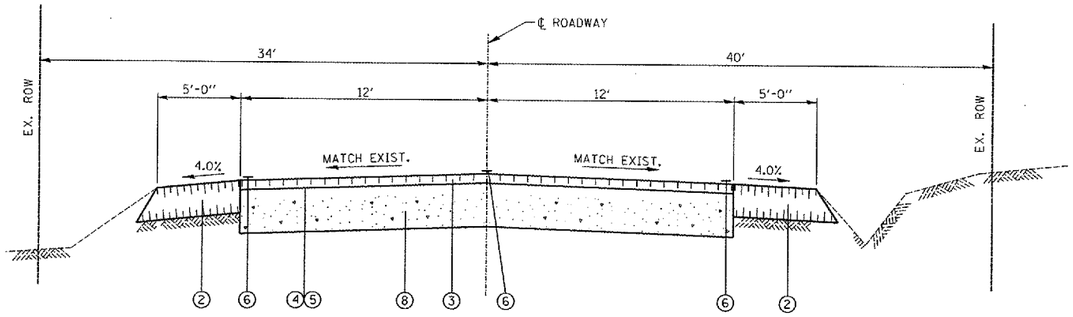
EXISTING TYPICAL SECTION IL ROUTE 9

STA. 503+60 TO STA. 504+67.95
STA. 505+71.42 TO STA. 506+70



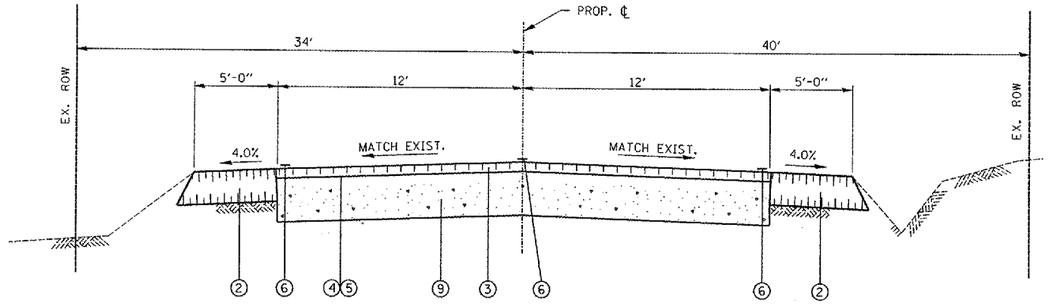
PROPOSED TYPICAL SECTION IL ROUTE 9

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 HOT-MIX ASPHALT SURFACE COURSE, MIX "D" N50 - 1 1/2 "
4. PROPOSED BITUMINOUS MATERIALS (PRIME COAT)
5. PROPOSED AGGREGATE (PRIME COAT)
6. PROPOSED PAVEMENT MARKING
7. 8" AGGREGATE BASE
8. PROPOSED BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE), STANDARD 420401
9. 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

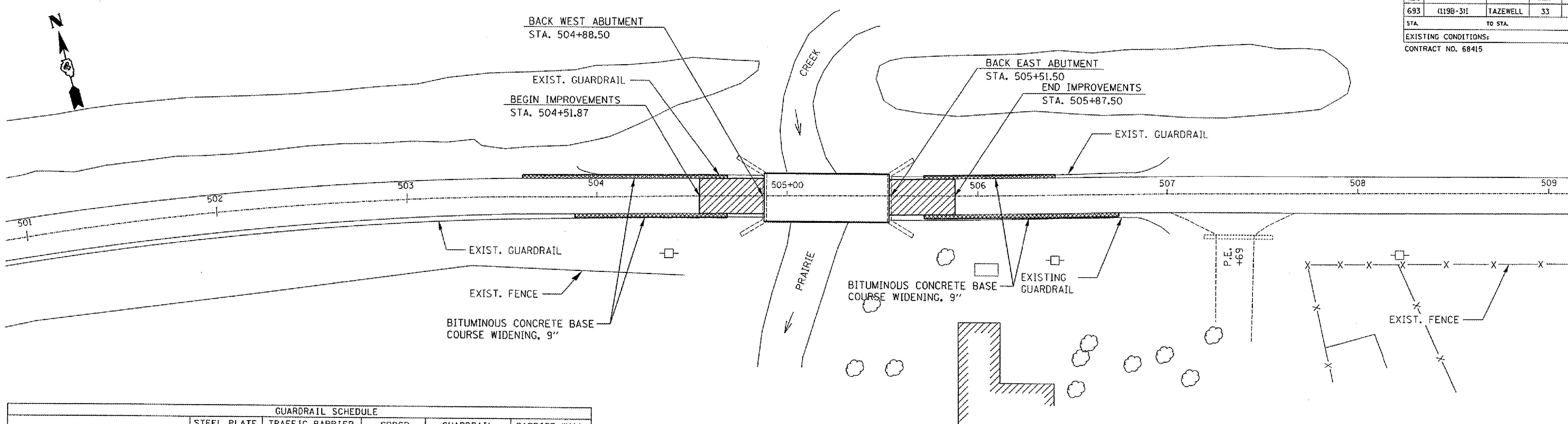
TYPICAL SECTIONS

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

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

F.A.P. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	33	5
STA.		TO STA.		
EXISTING CONDITIONS:				

CONTRACT NO. 68415



GENERAL SITE PLAN

GUARDRAIL SCHEDULE						
STATION TO STATION		STEEL PLATE BEAM GUARD RAIL, 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.	504+68.50 LT.			31.25		
504+37.25 RT.	504+68.50 RT.			31.25		
505+71.50 LT.	506+02.75 LT.			31.25		
505+71.50 RT.	506+02.75 RT.			31.25		
504+37.25 RT.	504+68.50 RT.	25	1		2	
505+71.50 RT.	506+02.75 RT.	25	1		2	
504+37.25 LT.	504+68.50 LT.	25	1		2	
505+71.50 LT.	506+02.75 LT.	25	1		2	
504+68.50 RT.	505+71.50 RT.					2
504+68.50 LT.	505+71.50 LT.					2
TOTAL:		100	4	125	8	4

PAVING SCHEDULE					
STATION TO STATION		BITUMINOUS MATERIALS PRIME COAT (GALLON)	AGGREGATE PRIME COAT (TON)	PAVEMENT REMOVAL (SQ. YD.)	HOT-MIX ASPHALT SURFACE COURSE MIX D, N50 (TON)
504+51.87	504+88.00	17.5	0.5		13.5
505+52.00	505+87.50	17.5	0.5		13.5
504+87.87	505+51.50				33
504+51.87	505+87.50			92	
TOTAL:		35	1	92	53

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 ℄ TO 508+60.00 ℄	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

BITUMINOUS BASE COURSE WIDENING, 9"		
STATION TO STATION		WIDENING (SQ YD)
503+60.00, LT.	504+67.95, LT.	60
505+71.42, LT.	506+40.00, LT.	38
503+90.00, RT.	504+67.95, RT.	43
505+71.42, RT.	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
DRAWN BY: KBF
DATE: 03/24/2006
CHECKED BY: AJE

PLOT DATE: *DATE-TIME*

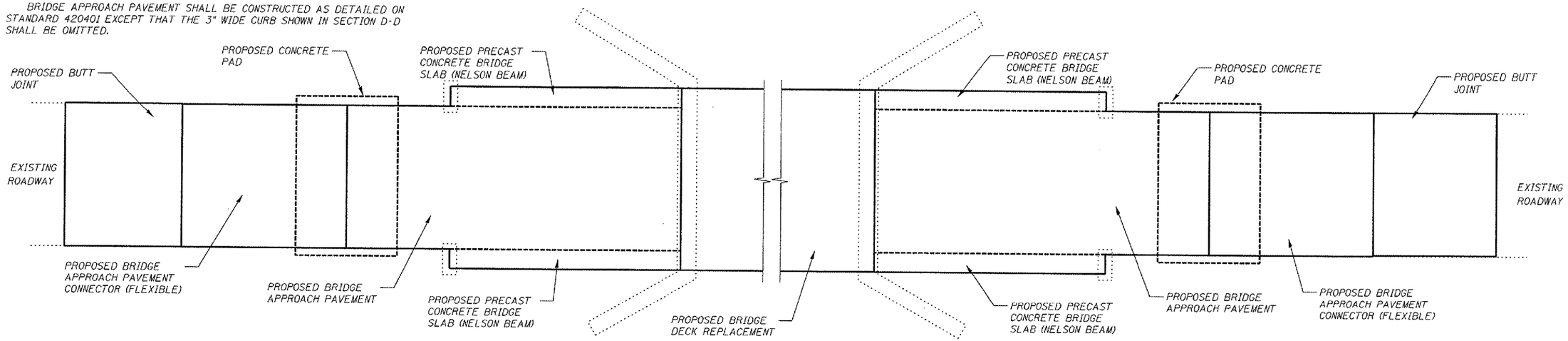
NOTES:

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.

FAP ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	33	6
STA.	TO STA.			
EXISTING CONDITIONS:				
CONTRACT NO. 68415				



PLAN

BRIDGE APPROACH PAVEMENT (SPECIAL)

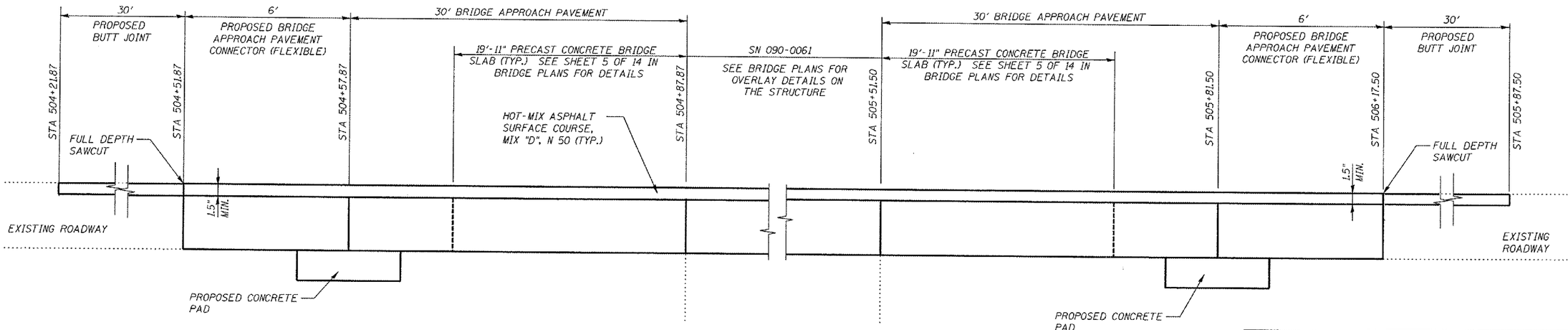
LOCATION	WIDTH	SQ. YD.
STA. 504+57.87 TO STA. 504+87.87	25.5'	85
STA. 505+51.50 TO STA. 505+81.50	25.5'	85

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

LOCATION	WIDTH	SQ. YD.
STA. 504+51.87 TO STA. 504+57.87	26'	17.3
STA. 505+81.50 TO STA. 505+87.50	26'	17.3

PRECAST CONCRETE BRIDGE SLAB

LOCATION	WIDTH	SQ. FT.
STA. 504+57.87 TO STA. 504+87.87 RT. & LT.	3.75'	149.9
STA. 505+51.50 TO STA. 505+81.50 RT. & LT.	3.75'	149.9



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

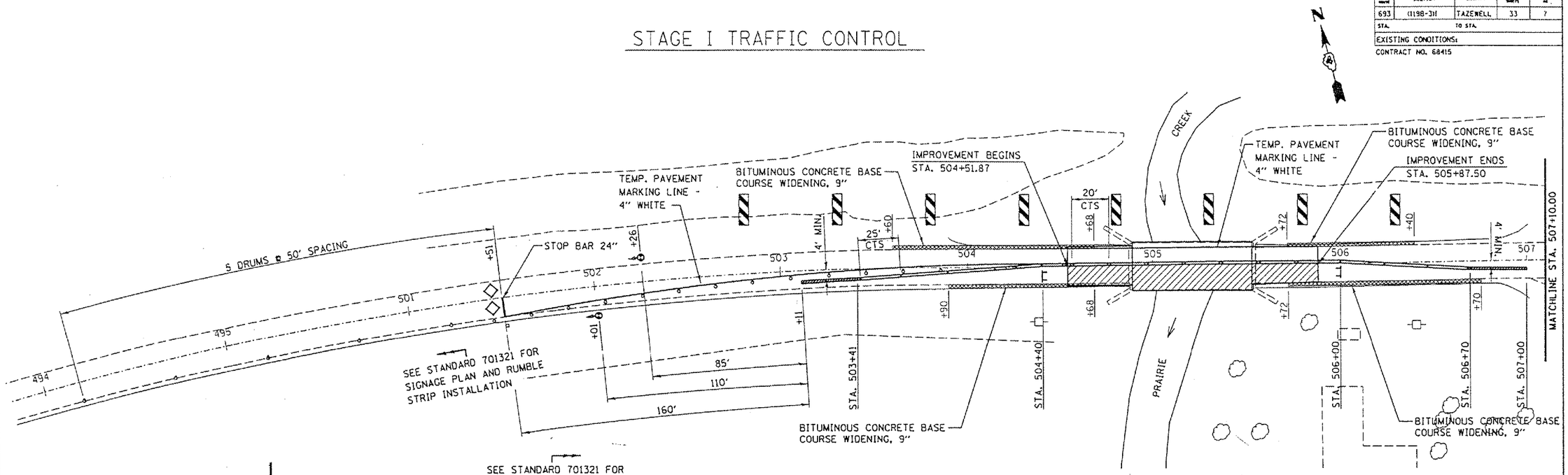
SCALE: NONE — DRAWN BY: KBF
DATE: 03/24/2006 — CHECKED BY: AJE

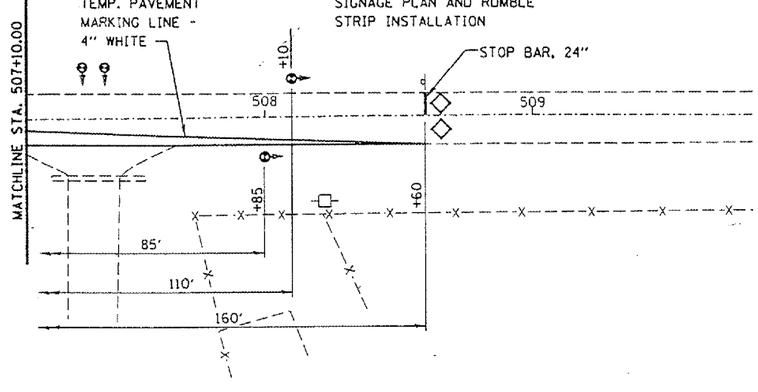
PLOT DATE: *DATE-TIME*

DATE
FILE NAME
DGN-SPEC
REF
REF

F.A.P. ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	33	7
STA.	TO STA.			
EXISTING CONDITIONS:				
CONTRACT NO. 68415				

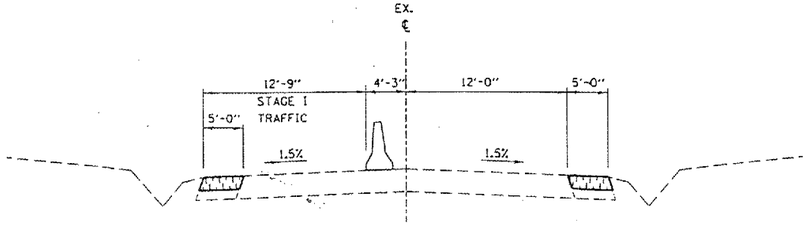
STAGE I TRAFFIC CONTROL





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



STAGE I TYPICAL SECTION
LOOKING EAST

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

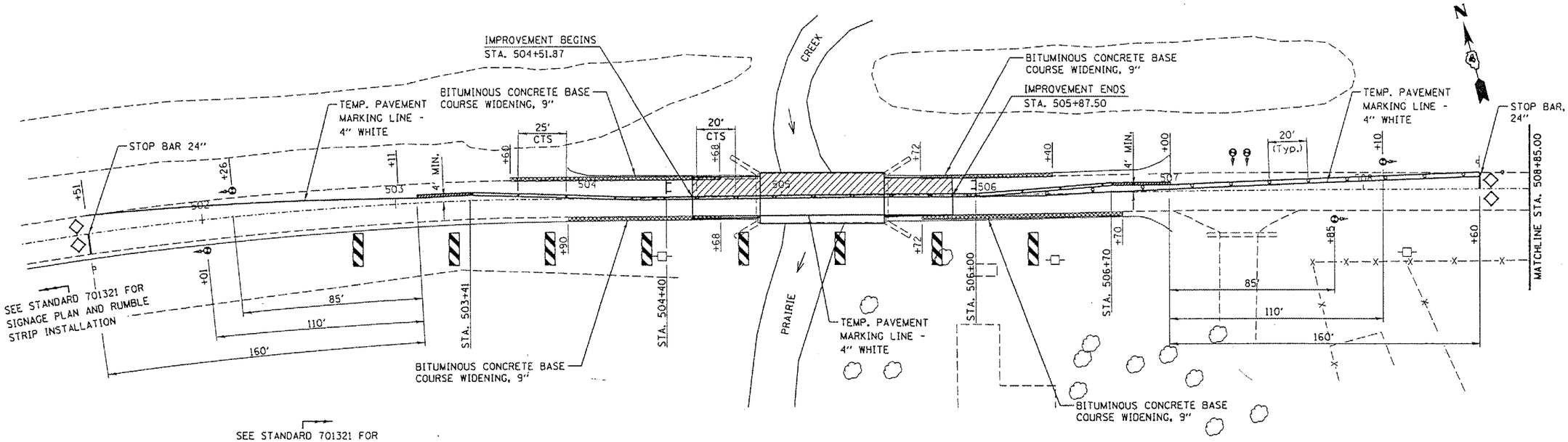
SCALE: NONE — DRAWN BY: KBF
DATE: 03/24/2006 — CHECKED BY: AJE

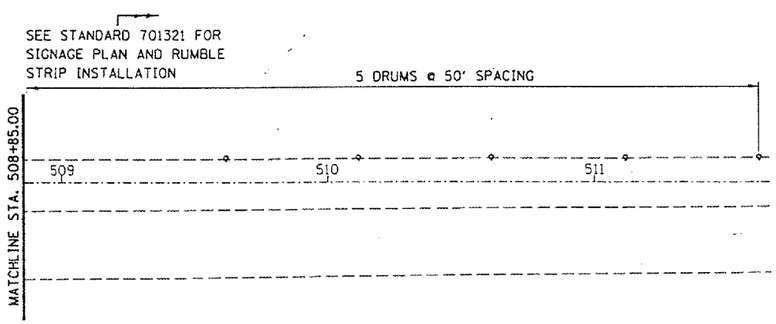
PLOT DATE: =DATE=TIME=

=SCALE=
=DATE=TIME=
=DGN=SPEC=
=REF=
=REF=

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	TAZEWELL	33	8
STA.		TO STA.		
EXISTING CONDITIONS:				
CONTRACT NO. 68415				

STAGE II TRAFFIC CONTROL





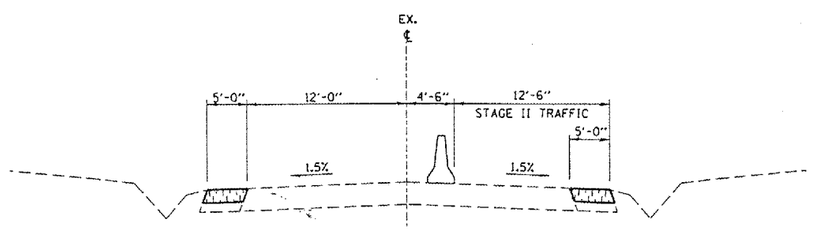
NOTES

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



STAGE II TYPICAL SECTION
LOOKING EAST

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE II TRAFFIC CONTROL STANDARD 701321

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

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

PLOT DATE: •DATE•TIME•

•ADATE44
•DATE•TIME•
•DES•SPEC•
•REF•

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(1198-3)I	TAZEWELL	33	9
STA.	TO STA.			
EXISTING CONDITIONS:				
CONTRACT NO. 68415				

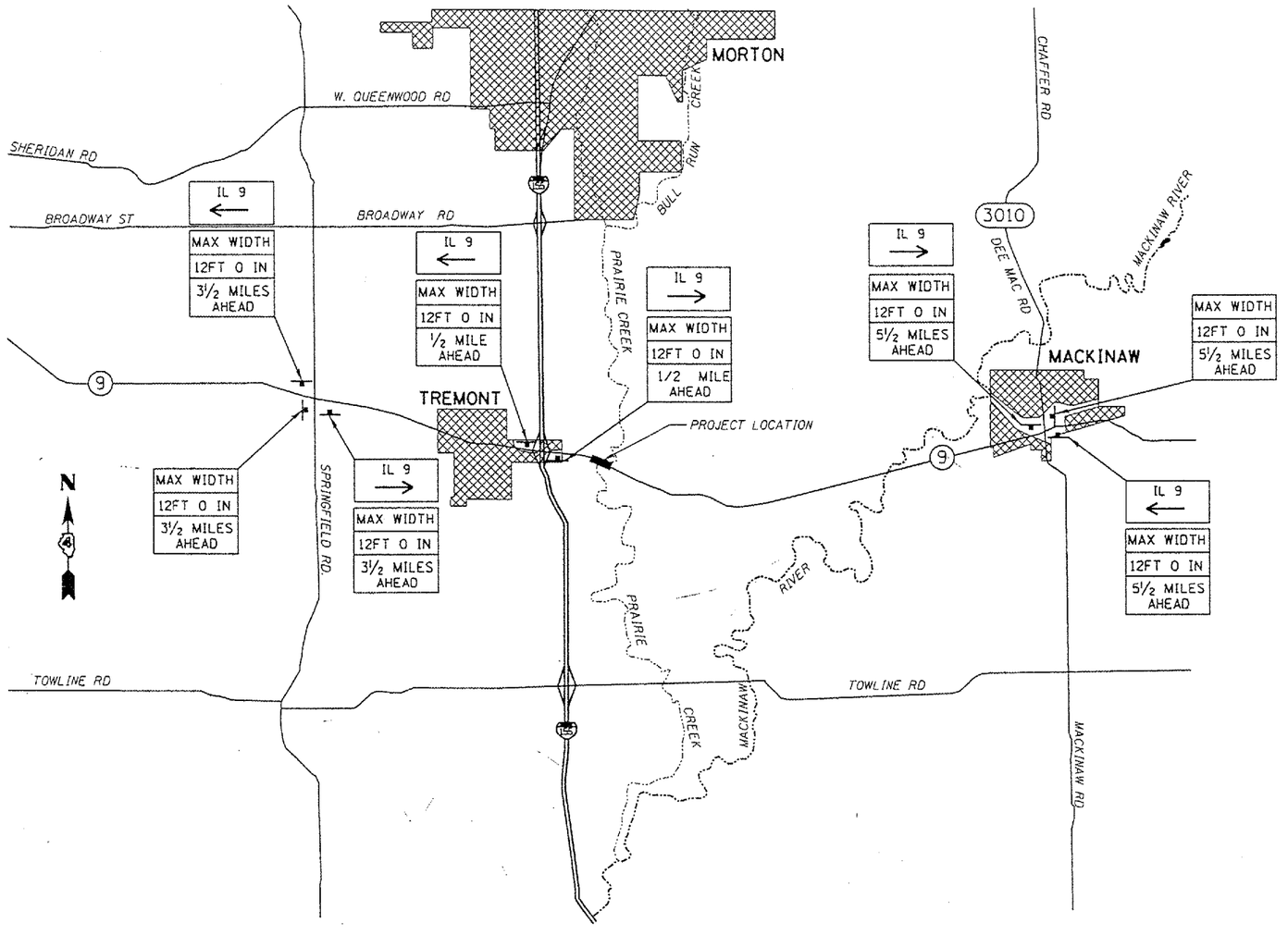
PLAN | SURVEYED | BY | DATE
NOTE BOOK | ALIGNMENT CHECKED | BY | DATE
NO. | LEVELS CHECKED BY R.E. / CHECKED BY | DATE

Notes

1. *All signs required will be supplied to the contractor by I.D.O.T.*
2. *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.*
3. *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.*
4. *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.*
5. *Sign spacing will be 400' or to fit field conditions.*
6. *The height to the bottom of the lowest sign shall not be less than 6'.*

SIGNS REQUIRED

MAX WIDTH 12FT 0 IN 5½ MILES AHEAD	(3)	IL 9 → (3)
MAX WIDTH 12FT 0 IN 3½ 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 (1198-3)I
TAZEWELL COUNTY
SCALE: NONE — DRAWN BY: KBF
DATE: 03/24/2006 — CHECKED BY: AJE

PLOT DATE: *DATE-TIME*

#DATE#
DATE-TIME
USER NAME
REF
REF

Bench Mark: Brass Plate on Southeast Wingwall Elev. 100.00

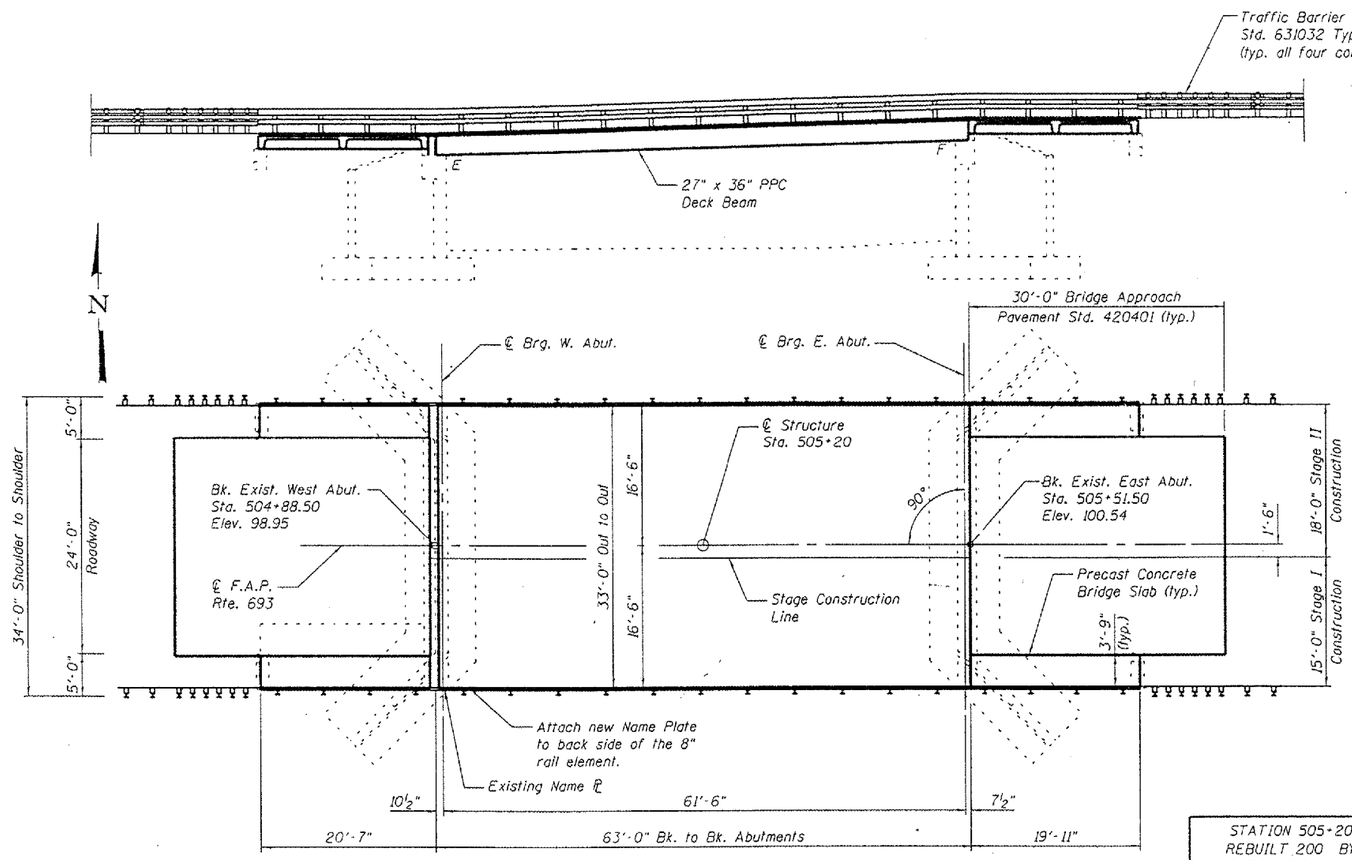
Existing Structure: S.N. 090-0061 was originally built in 1928 and rebuilt in 1975 as S.B.I. RTE 164, Section 119-BR-3 at Sta. 505+20. The structure consists of simple span PPC-deck beams on closed abutments on pile supported footings. The bk. to bk. abutment length is 63'-0" and the out to out bridge 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	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(1198-3)I	TAZEWELL	33	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
14 SHEETS

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 ¼".

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 ¾" 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 contractors 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 dowel rods 24 hours minimum and 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
Preformed 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 Railing, Type SM	Foot	207		207
Name Plates	Each	1		1
Waterproofing Membrane System	Sq. Yd.	230		230
PC Mortar Fairing Course	Foot	626		626
Hot-Mix Asphalt Surface Course, Mix "D", N50	Ton	33.1		33.1
Bar Splicers	Each		8	8

Index of Sheets

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'_{ci} = 4,000 psi
f'_s = 270,000 psi (½" ϕ Low Relaxation Strands)
f'_{si} = 201,960 psi (½" ϕ Low Relaxation Strands)

PRECAST CONCRETE BRIDGE SLAB UNITS

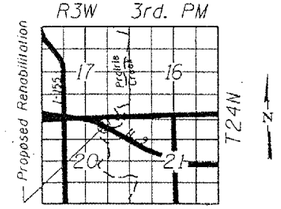
f'_c = 4,500 psi
f_y = 60,000 psi (reinforcement)

STATION 505+20
REBUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 693
SEC. (1198-3)I
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.



LOCATION SKETCH

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC.
CHECKED ALN	
DRAWN BWP	
CHECKED KPC	

CORPORATE OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS 62226
TEL (618) 624-4488
FAX (618) 624-5688
E-MAIL: cor@twm-inc.com

KERMIT P. CHRISTMANN
081-006202
LICENSED STRUCTURAL ENGINEER OF ILLINOIS

Expires: 11/30/06

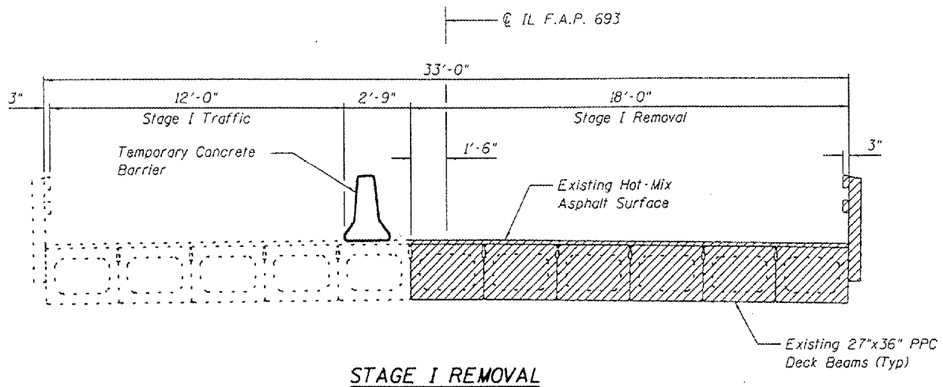
PLAN AND ELEVATION
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (1198-3)I
TAZEWELL COUNTY
SN 090-0061

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

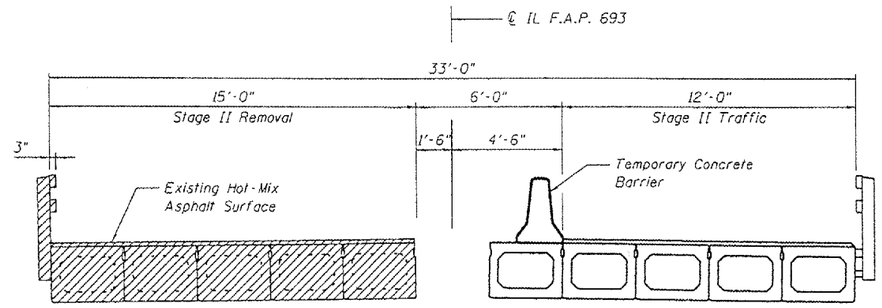
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	33	11
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT:	

SHEET NO. 2
14 SHEETS

Contract # 68415

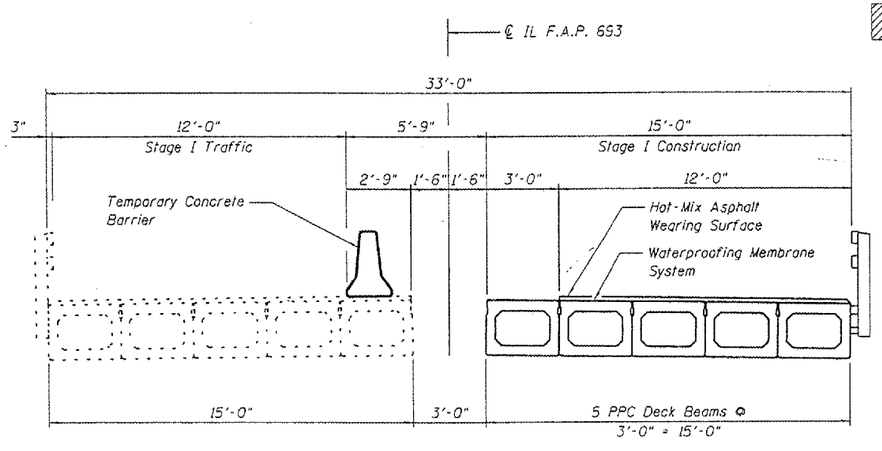


STAGE I REMOVAL
(LOOKING UPSTATION)

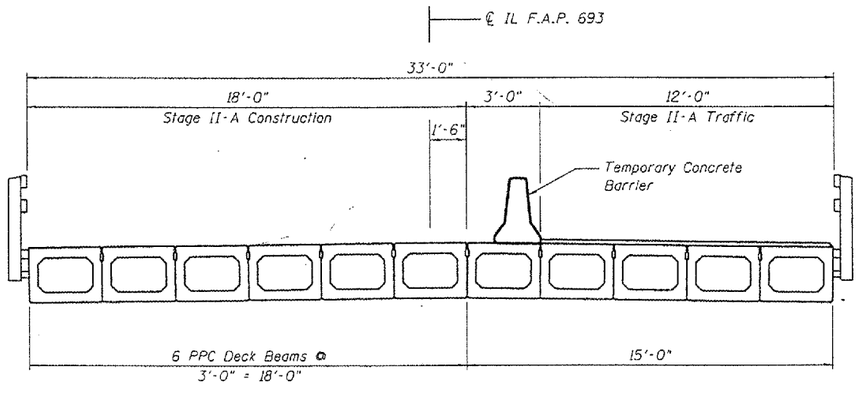


STAGE II REMOVAL
(LOOKING UPSTATION)

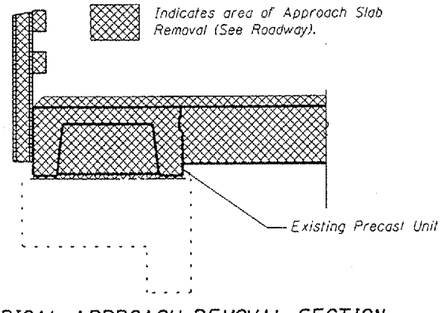
Indicates Removal of Existing Superstructures



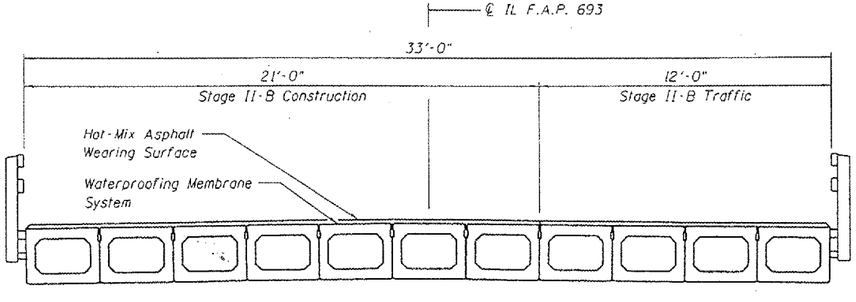
STAGE I CONSTRUCTION
(LOOKING UPSTATION)



STAGE II-A CONSTRUCTION
(LOOKING UPSTATION)



TYPICAL APPROACH REMOVAL SECTION



STAGE II-B 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 090-0061

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC.
CHECKED ALN	
DRAWN BWP	
CHECKED KPC	

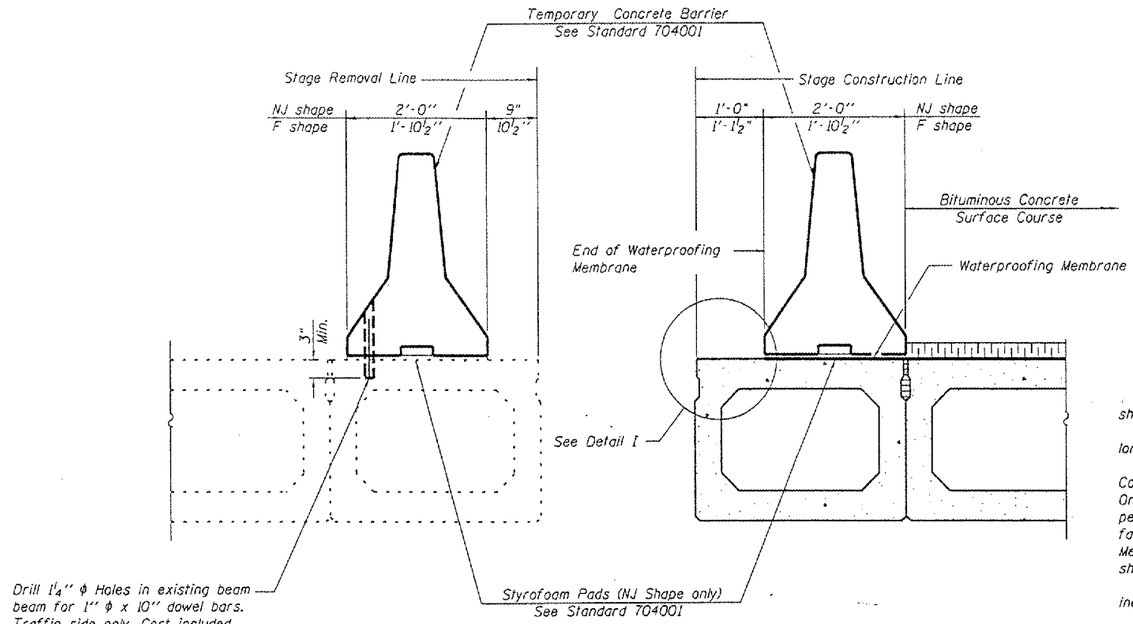
ENGINEERS • SURVEYORS • PLANNERS
TWM
CORPORATE OFFICE
4940 OLD COLLINSVILLE RD.
SWANSEA, ILLINOIS 62226
TEL (618) 624-4488
FAX (618) 624-5686
E-MAIL corp@twm-inc.com

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	33	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
14 SHEETS

Contract #68415



NOTES

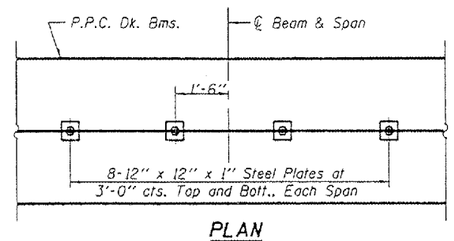
The 1" ϕ high strength bolts used to connect the wood blocks shall be tightened to a snug fit without crushing the wood block.

The wing type threaded insert assembly shall be spaced 6'-0" longitudinally.

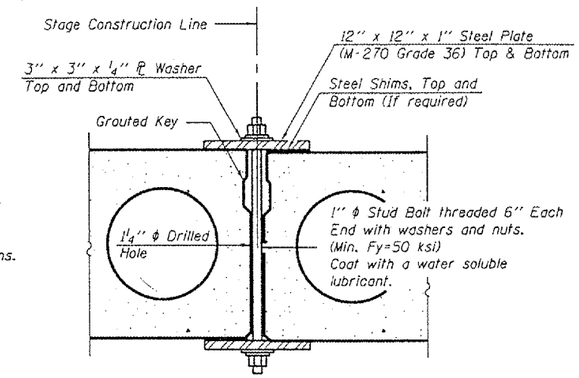
The Waterproofing Membrane shall extend under the Temporary Concrete Barrier without the asphalt sand seal protection layer. Once the Temporary Concrete Barrier has been removed, and the penetrating primer, coal tar emulsion, coal tar emulsion and fiberglass fabric, and coal tar emulsion slurry layers 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.

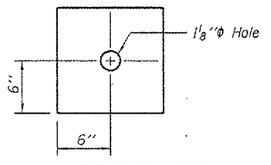
The cost for wing type threaded inserts is included with Precast Prestressed Concrete Deck Beams (27" Depth).



PLAN



SECTION



CLAMPING PLATE

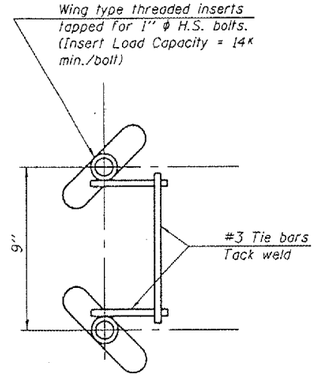
SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

See Art. 504.06(d) of the Standard Specifications 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.

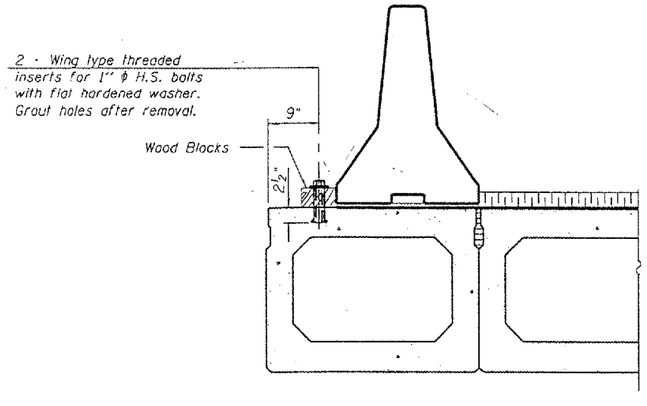
EXISTING PPC DECK BEAMS

NEW PPC DECK BEAMS

SECTIONS THRU PPC DECK BEAMS



INSERT DETAIL



DETAIL I

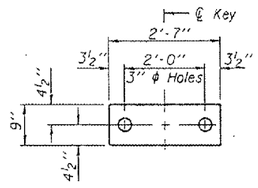
The Temporary Concrete Barrier and wood blocks shall not be removed until Stage II Construction PPC Deck Beams have been placed and shear keys grouted.

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED ALN	TWM
DRAWN BWP	CORPORATE OFFICE 1940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-8585 E-MAIL: CORP@TWM-INC.COM
CHECKED KPC	

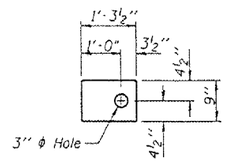
TEMPORARY CONCRETE BARRIER AND
STAGE CONSTRUCTION DETAILS
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-0061

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	"NET" NO.	SHEET NO. 4
F.A.P. 693	(119B-3)I	TAZEWELL	33	13	14 SHEETS
FED. HIGHWAY DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		

Contract #68415

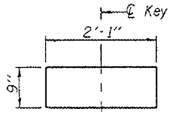


FABRIC BEARING PAD (Interior)

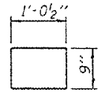


FABRIC BEARING PAD (Exterior)

FIXED

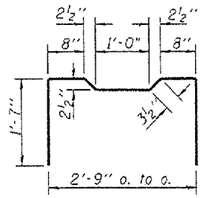


FABRIC BEARING PAD (Interior)

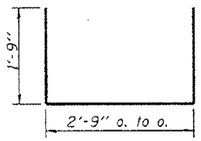


FABRIC BEARING PAD (Exterior)

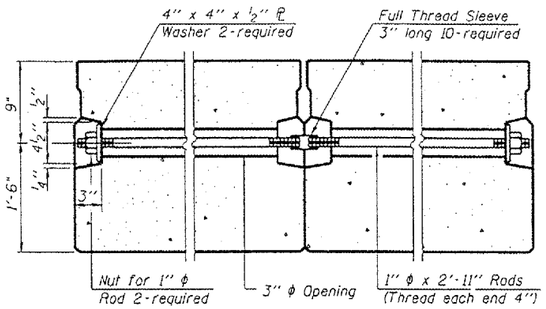
EXPANSION



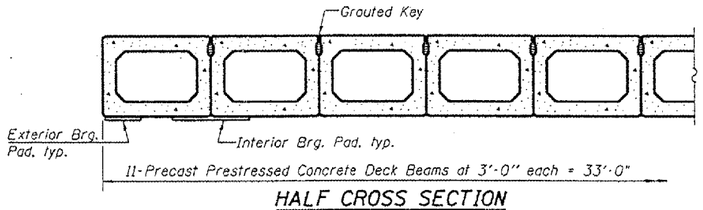
BAR A_1



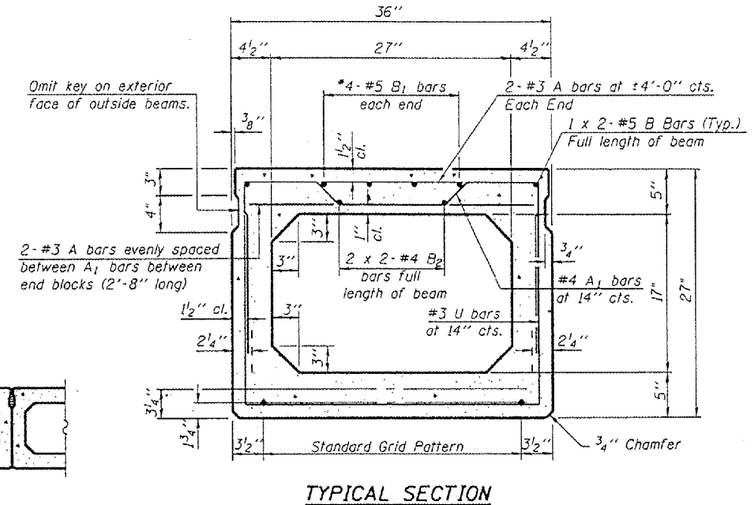
BARS U & U_1



TYPICAL TRANSVERSE TIE ASSEMBLY



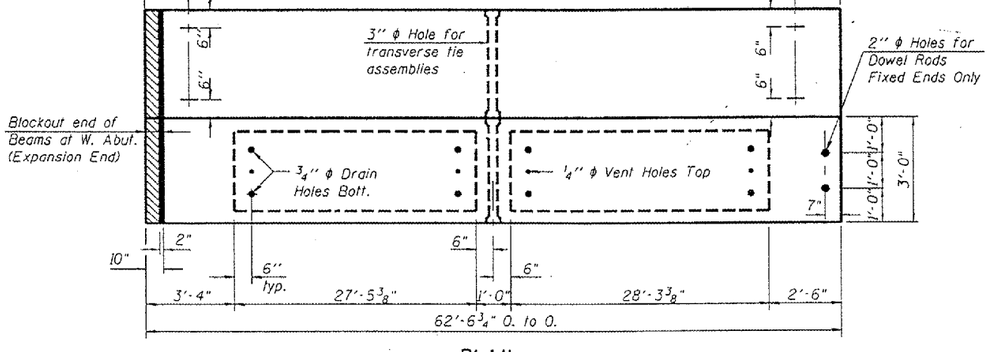
HALF CROSS SECTION



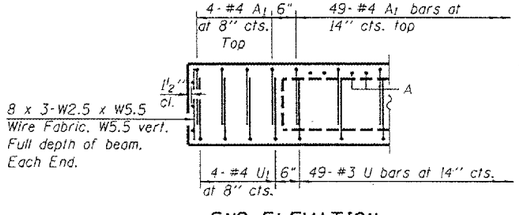
TYPICAL SECTION

½" ϕ Strands. Each Strand Stressed to 30,900 Lbs.
6-Strands 1¾" up, 6-Strands 3¼" up, 2-Strands 4½" up

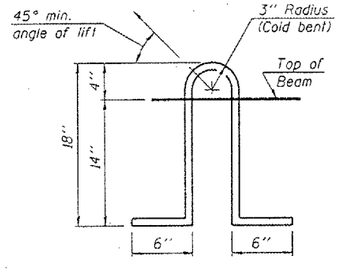
Note:
Place strands symmetrically about ℄ of beam.



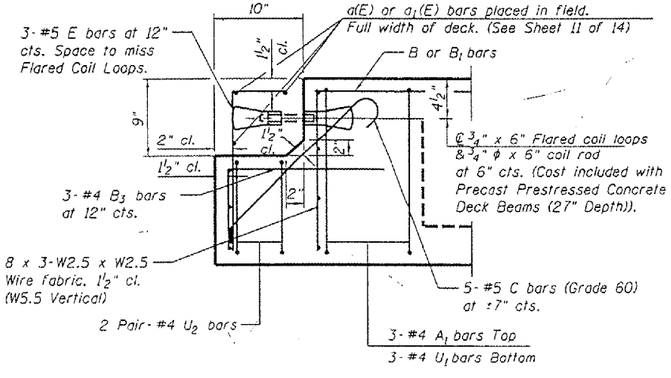
PLAN



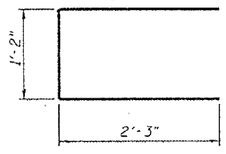
END ELEVATION (Fixed End)



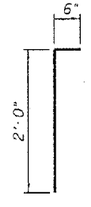
LIFTING LOOP DETAIL



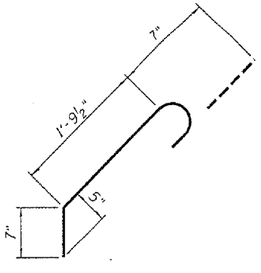
END OF BEAM (EXP. END)
(Dimensions are at Rt. L's)



BAR U_2



BAR E



BAR C

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand. Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Lifting loops shall be 3-1/2 " ϕ-270 ksi strands, as shown.

The 1" ϕ 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 ⅛" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.

Non Prestressing Steel shall conform to ASTM A708 (IL MOD), Grade 60

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, per Art. 1020.05(b)(12) of the Standard Specifications, 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

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED ALN	TWM
DRAWN BWP	CORPORATE OFFICE 4940 OLD GRAVOIS HILL RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-5683 E-MAIL corpotwm-inc.com
CHECKED KPC	

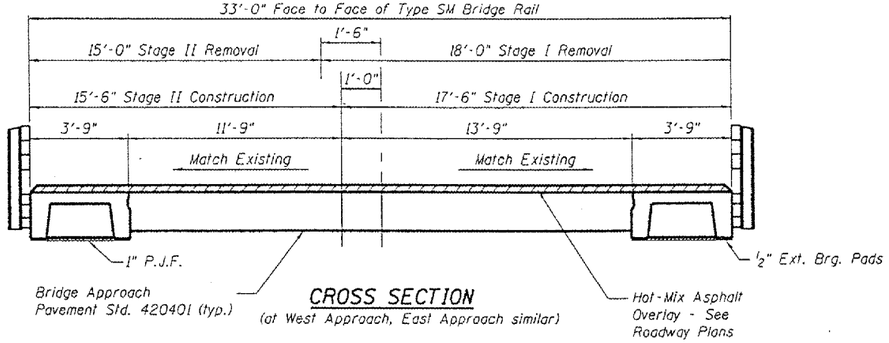
SUPERSTRUCTURE
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-0061

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	33	14
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

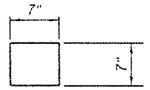
SHEET NO. 5
14 SHEETS

Contract #68415

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

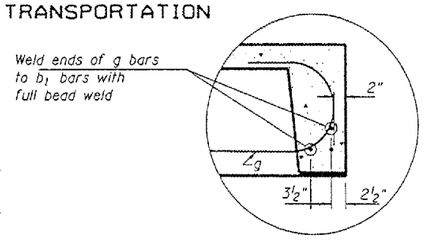


CROSS SECTION
(at West Approach, East Approach similar)



℄ Exterior Corners
16-½" Fabric Pads Req'd.

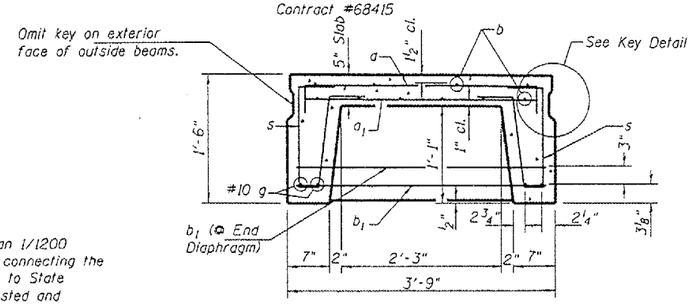
BEARING PADS



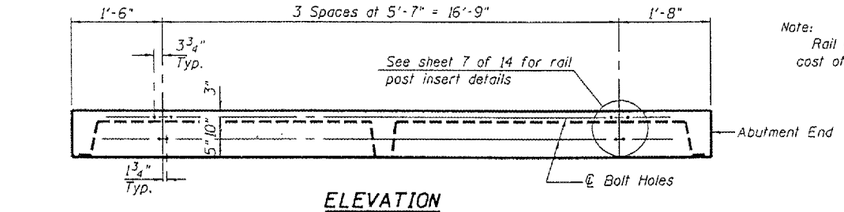
DETAIL A

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 tested and 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.

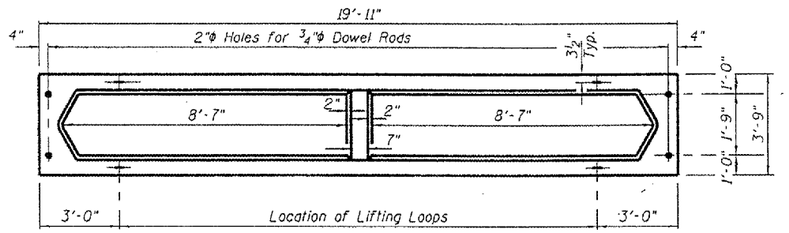


TYPICAL SECTION THRU BEAM

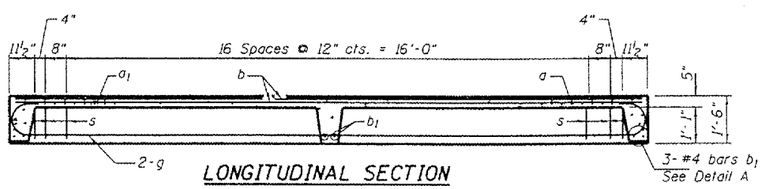


ELEVATION
Showing rail post spacing

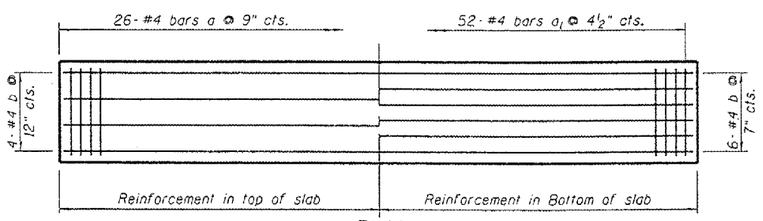
Note:
Rail post inserts are included in the cost of Precast Concrete Bridge Slab.



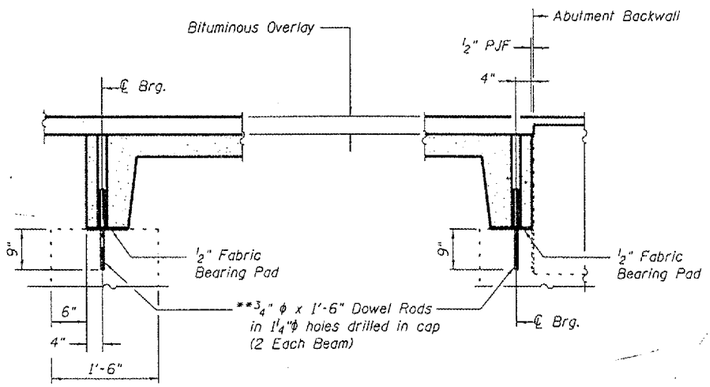
TYPICAL PLAN OF BEAM



LONGITUDINAL SECTION



PLAN
Showing Slab Reinforcement

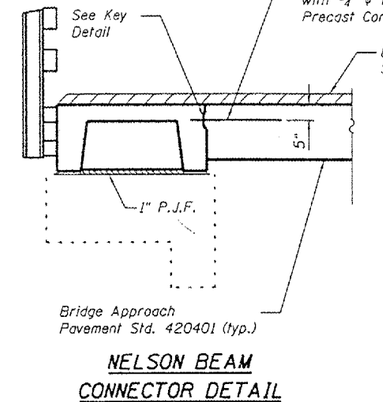


TYPICAL SECTION THROUGH EXISTING NELSON BEAM FOUNDATION

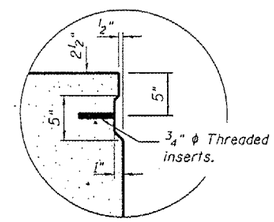
SECTION THROUGH WEST ABUTMENT
(East Abutment Similar)

** 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.

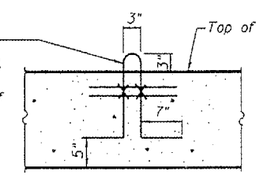


NELSON BEAM CONNECTOR DETAIL

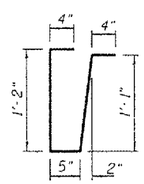


KEY DETAIL

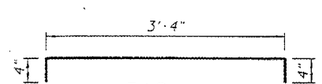
2-½"ϕ Strands/Loop, 2 Ea. End, Ea. Beam. Loop shall be burned off after beams have been erected. Strands shall conform to the requirements to the requirements of AASHTO M 203.



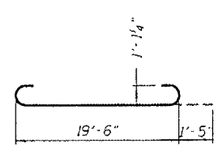
LIFTING LOOP
Approved alternate may be substituted for the above.



BAR s



BAR a



BAR q

BILL OF MATERIAL

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

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

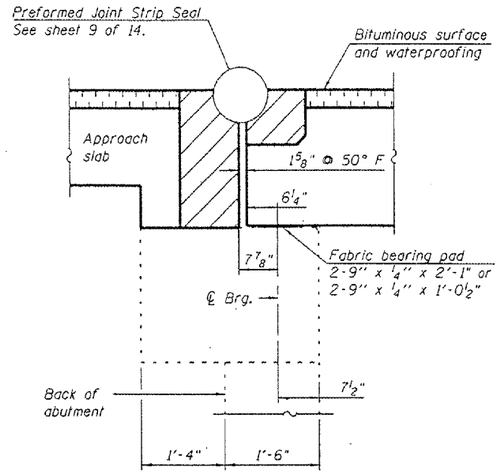
DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED ALN	TWM
DRAWN BWP	CORPORATE OFFICE 1945 OLD COLLINSVILLE RD. EAMSEL, ILLINOIS 62226 TEL: (618) 624-4488 FAX: (618) 624-6688 E-MAIL: corp@twm-inc.com
CHECKED KPC	

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

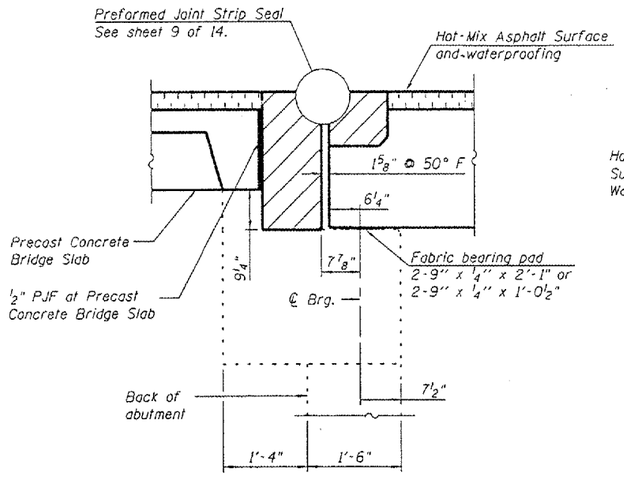
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	119B-3)I	TAZEWELL	33	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

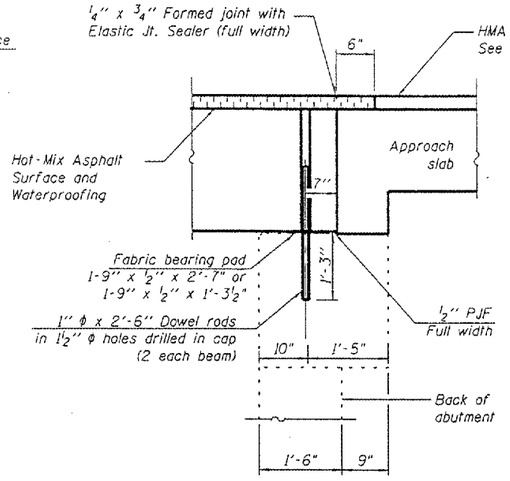
SHEET NO. 6
14 SHEETS
Contract #68415



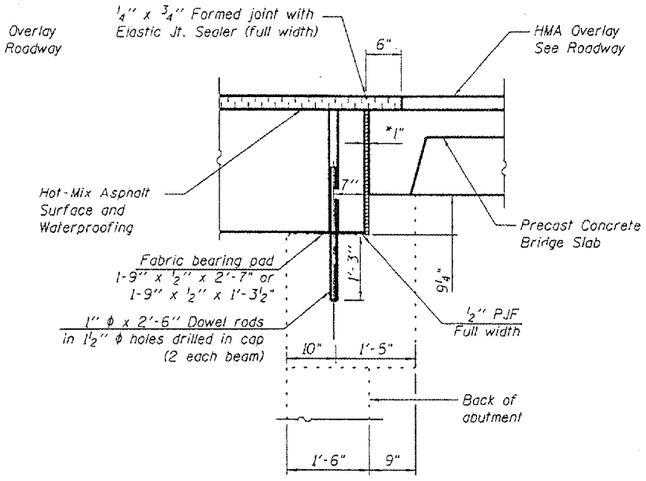
SECTION THRU WEST ABUTMENT



SECTION THRU WEST ABUTMENT
(At outside precast unit)

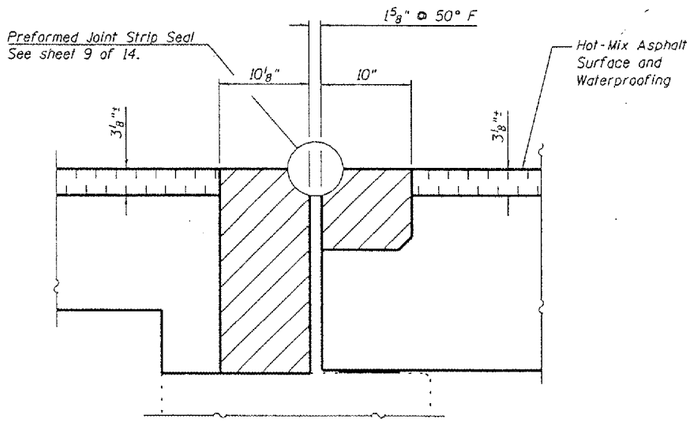


SECTION THRU EAST ABUTMENT



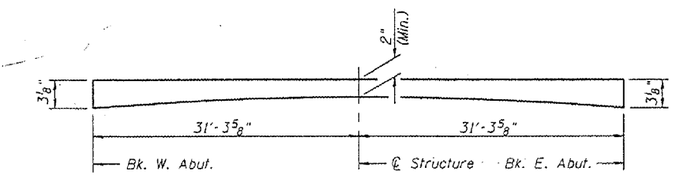
SECTION THRU EAST ABUTMENT
(At outside precast unit)

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



Bituminous Surface Detail
(At West Abutment)

Notes :
Ends of beams shall be aligned at the expansion joint. Any lineal 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.



HOT-MIX ASPHALT WEARING SURFACE PROFILE

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED ALN	TWM
DRAWN BWP	CORPORATE OFFICE 9940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-6683 E-MAIL: corpoffice@twm-inc.com
CHECKED KPC	

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

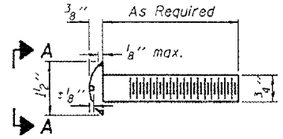
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

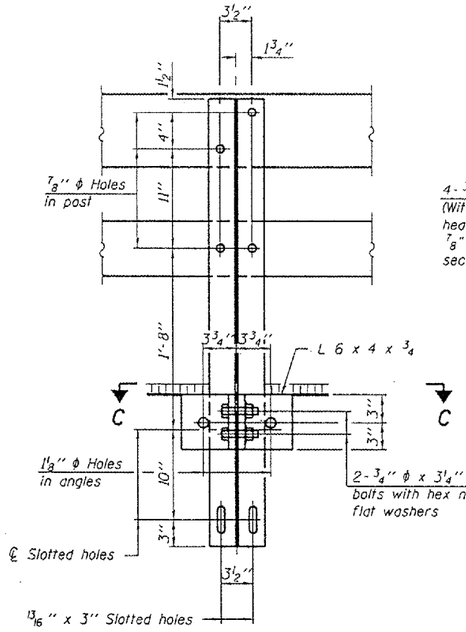
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	33	16
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7.
14 SHEETS

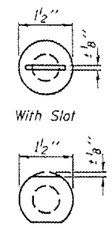
Contract #68415

DETAIL OF $^{3}/_{4}$" ϕ ROUND HEAD BOLT

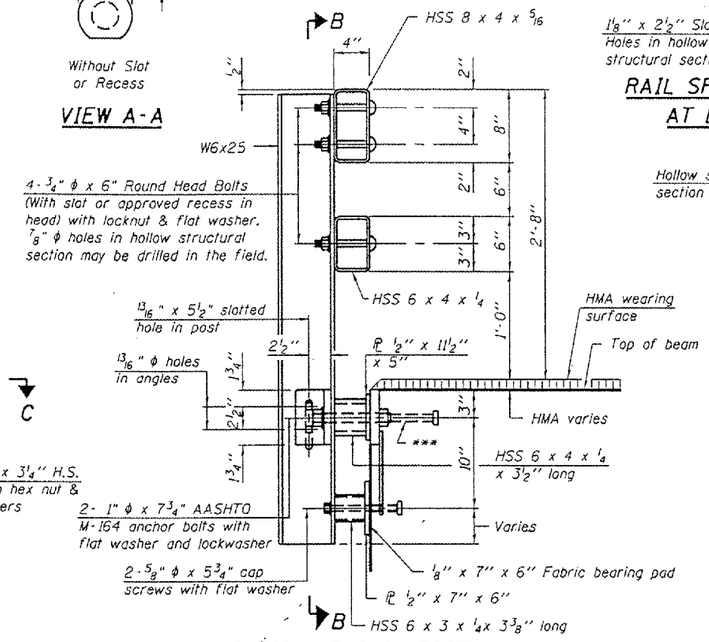




SECTION B-B

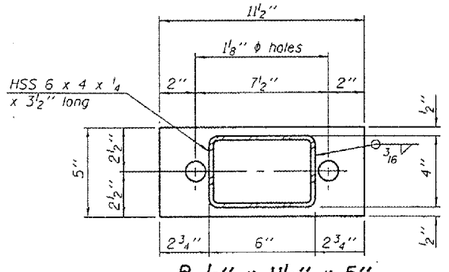


VIEW A-A

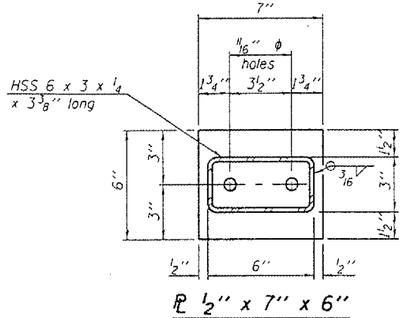


SECTION AT RAIL POST

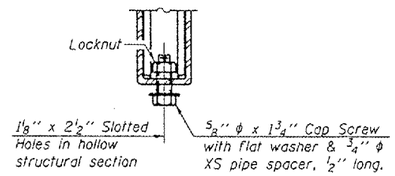
SECTION C-C



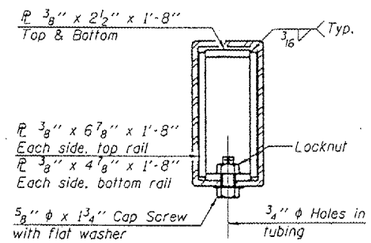
PL 1/2" x 11 1/2" x 5"



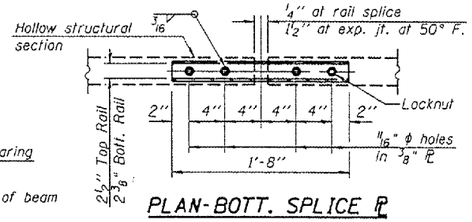
PL 1/2" x 7" x 6"



RAIL SPLICE CONNECTION AT EXPANSION JT.

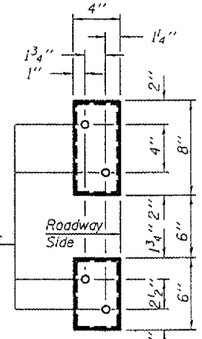


SECTION AT RAIL SPLICE

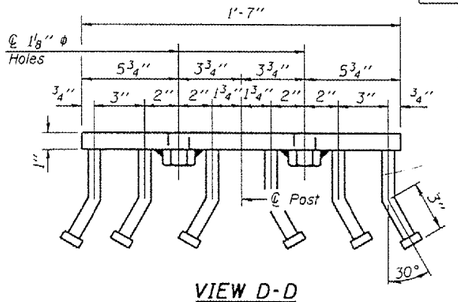


PLAN-BOTT. SPLICE PL TYPICAL

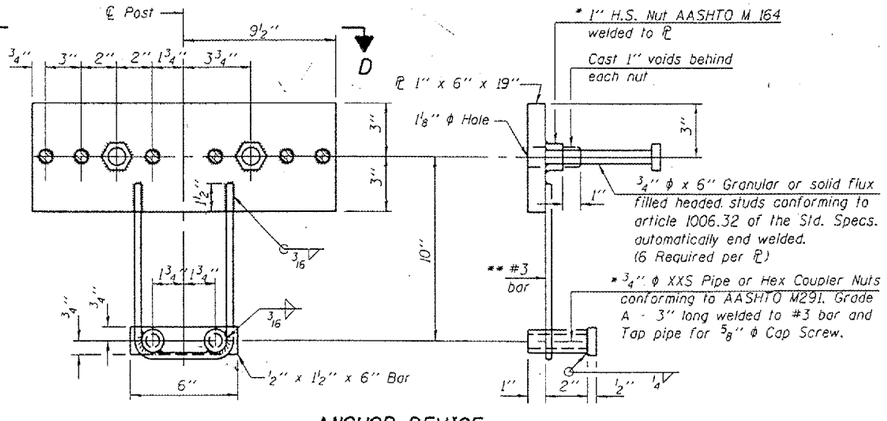
℄ - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032



VIEW E-E



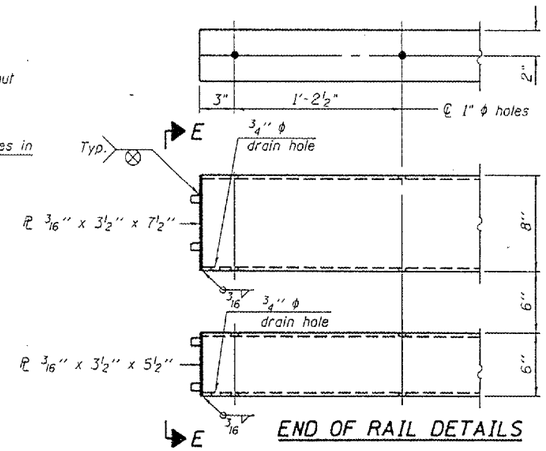
VIEW D-D



ANCHOR DEVICE

* 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".



END OF RAIL DETAILS

Notes:
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. Cost included with Steel Bridge Rail, Type SM.
All steel rail members shall be galvanized according to Article 509.05 of the Standard Specifications.
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	207

STEEL RAILING, TYPE SM WITH HOT-MIX ASPHALT WEARING SURFACE 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
CHECKED KPC	TWM
DRAWN BWP	CORPORATE OFFICE 1940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-4828 E-MAIL CO@TWM-INC.COM
CHECKED KPC	

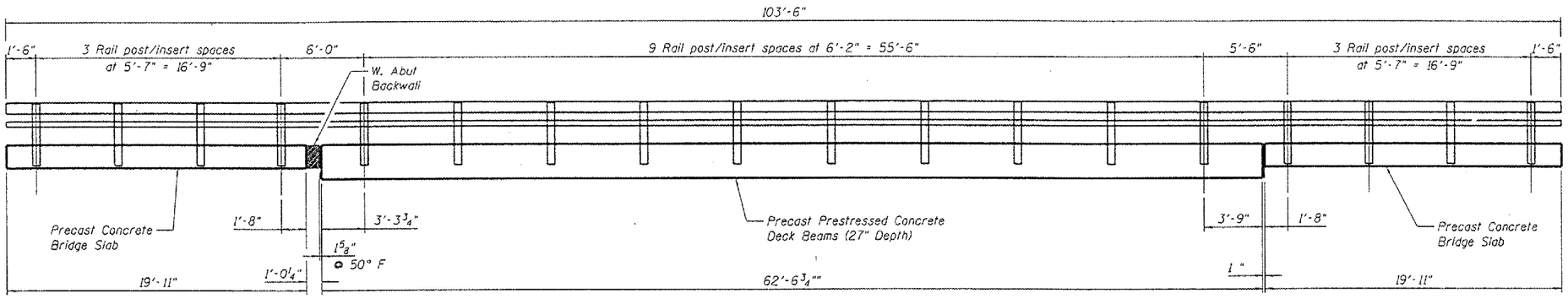
R-34HMAWS 11-1-06 (6'-3" Maximum Post Spacing) (1 1/4" minimum to 3 1/8" maximum HMA thickness)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	33	17
FED. ROAD DIST. NO. 9		ILLINOIS	FED. AID PROJECT=	

SHEET NO. 8
14 SHEETS

Contract #68415



RAIL POST SPACING

(Looking North)

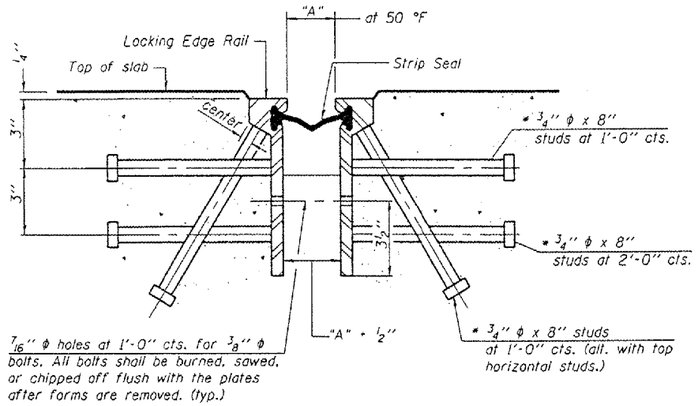
DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED KPC	TWM
DRAWN BWP	CORPORATE OFFICE 4940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-6668 E-MAIL: DOT@TWMINC.COM
CHECKED KPC	

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

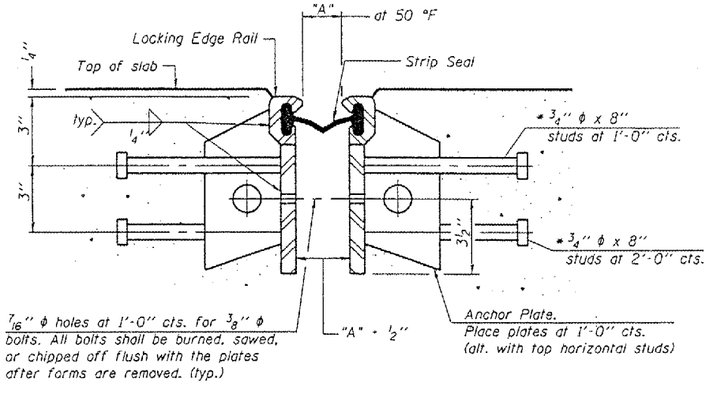
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9
F.A.P. 693	(119B-3)I	TAZEWELL	33	18	14 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT:		

Contract # 68415



Required Strip Seal rated movement	"A"
1"	1 1/8"



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 and 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)

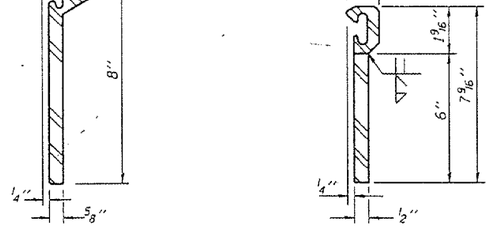
GENERAL NOTES

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.

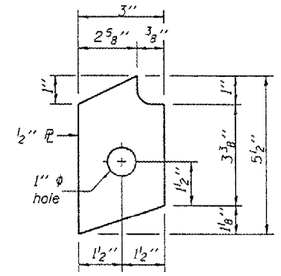
The manufacturer's recommended installation methods shall be followed.

All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications



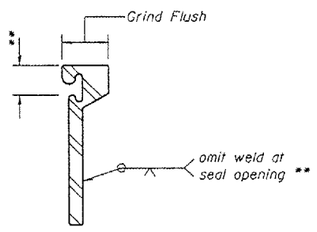
ROLLED (EXTRUDED) RAIL

WELDED RAIL



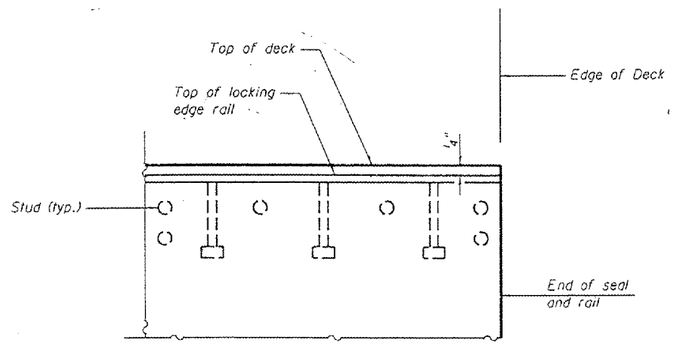
ANCHOR ℄
(for welded rail)

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)

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED ALN	TWM
DRAWN BWP	CORPORATE OFFICE 4940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-1686 E-MAIL CO@THEIA-TWM.COM
CHECKED KPC	

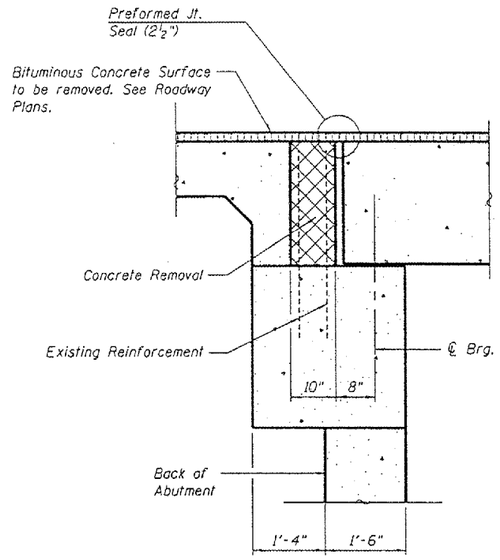
PREFORMED JOINT STRIP SEAL
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-0061

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

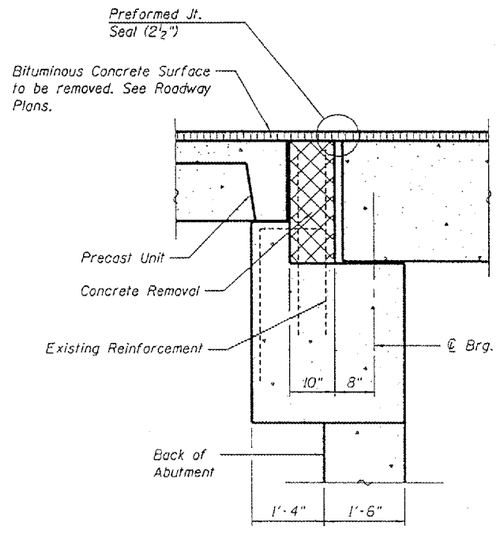
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	119-BR-3	TAZEWELL	33	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 10
14 SHEETS

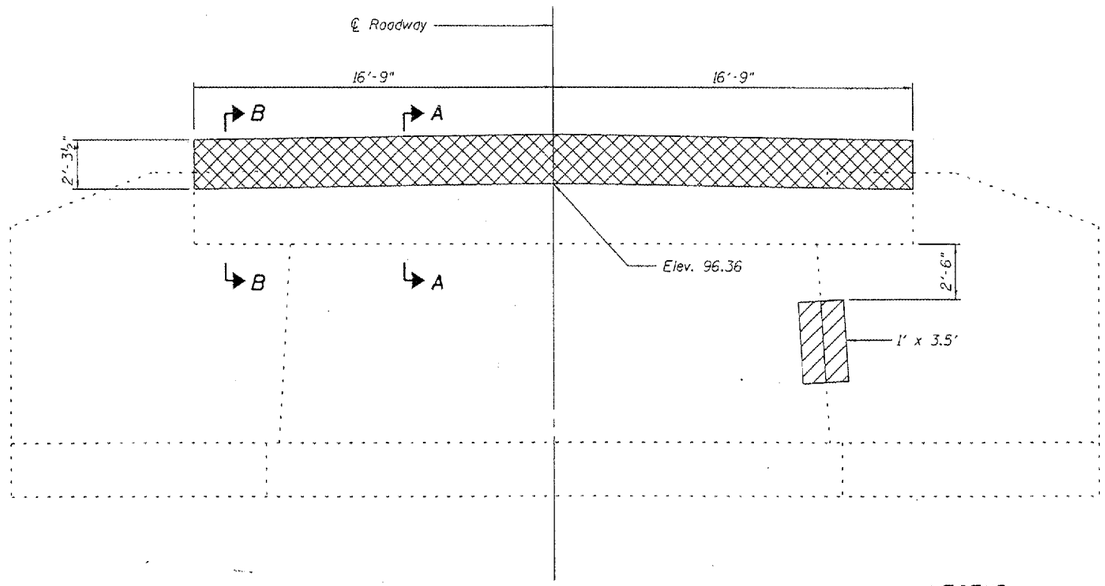
Contract #68415



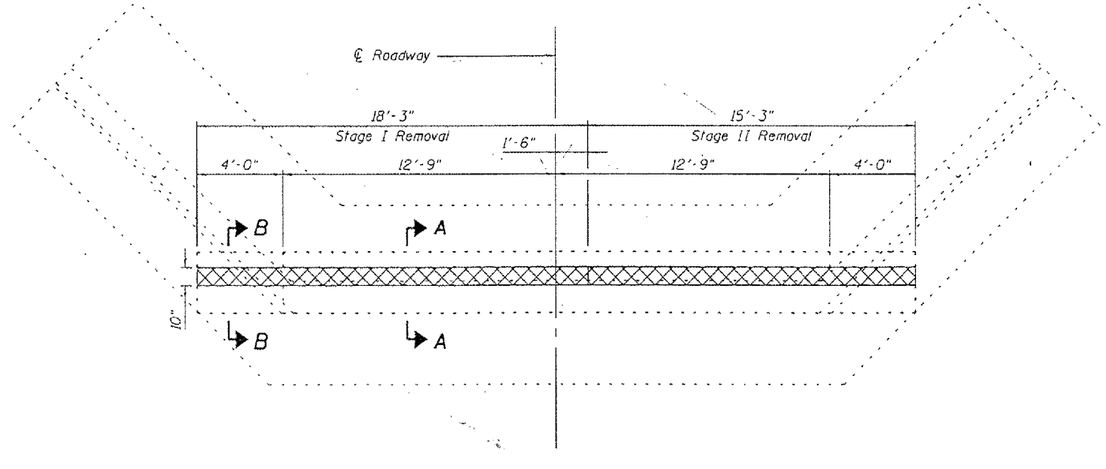
SECTION A-A



SECTION B-B



Elevation-West Abutment
(LOOKING WEST)

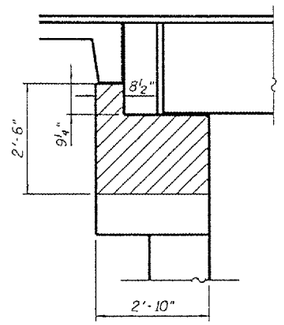


Plan-West Abutment

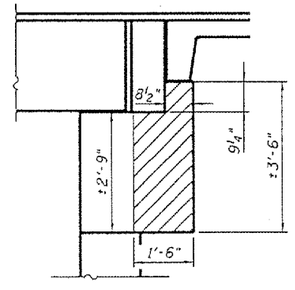
LEGEND

- Concrete Removal
- Structural Repair of Concrete

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



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

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED KPC	TWM
DRAWN BWP	CORPORATE OFFICE 4940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-6686 E-MAIL: CONTACT@TWM-INC.COM
CHECKED KPC	

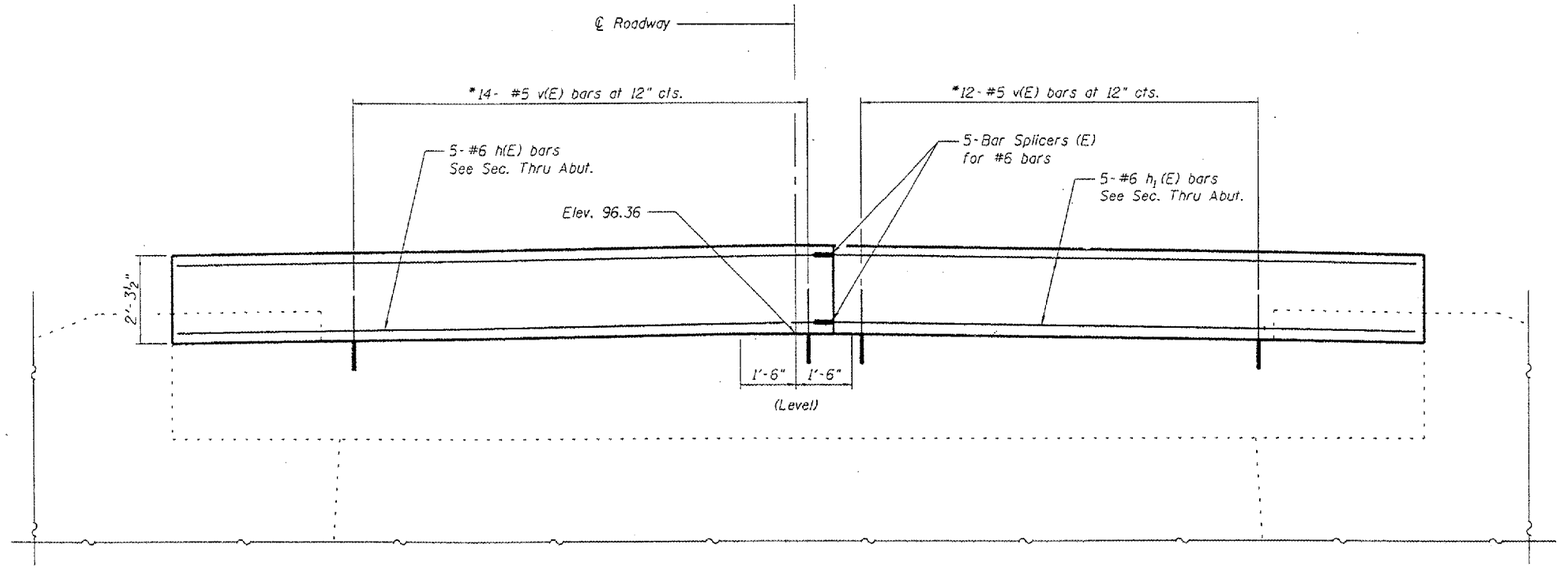
WEST ABUTMENT
CONCRETE REMOVAL AND REPAIR
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-0061

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

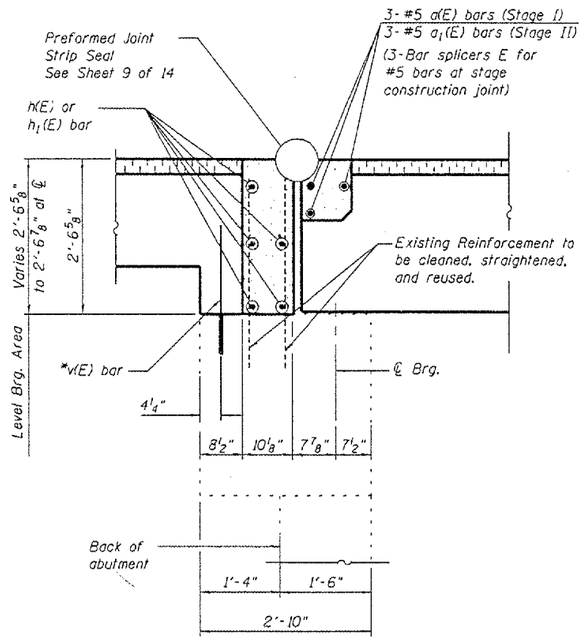
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	34	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
14 SHEETS

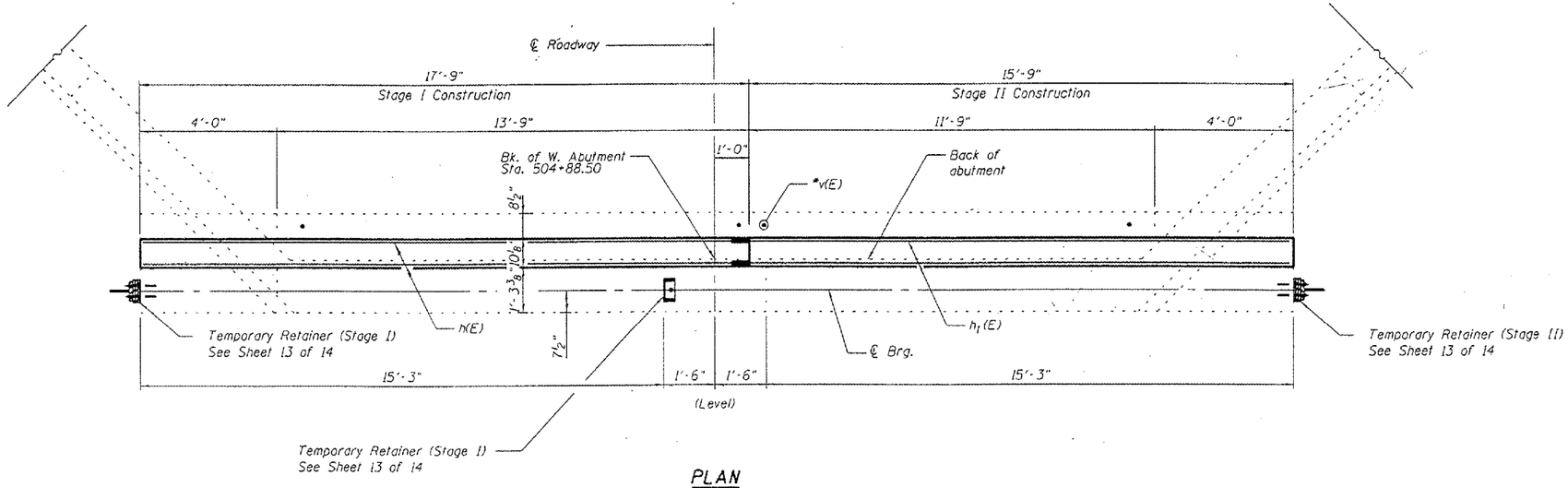
Contract #68415



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

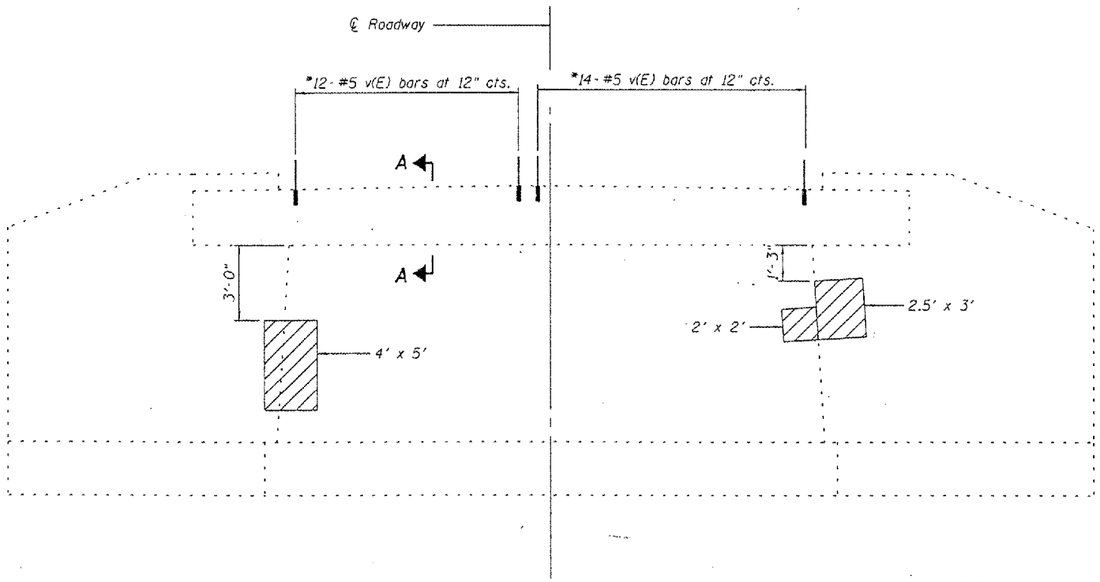
DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED KPC	TWM CORPORATE OFFICE 4940 OLD GULLINGSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-4688 E-MAIL: corpet-wm-inc.com
DRAWN BWP	
CHECKED KPC	

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

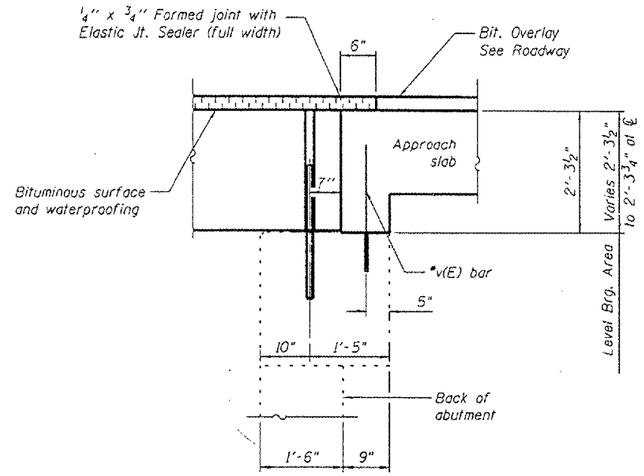
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	33	21
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 12
14 SHEETS
Contract #



Elevation - East Abutment
(LOOKING EAST)



SECTION A-A

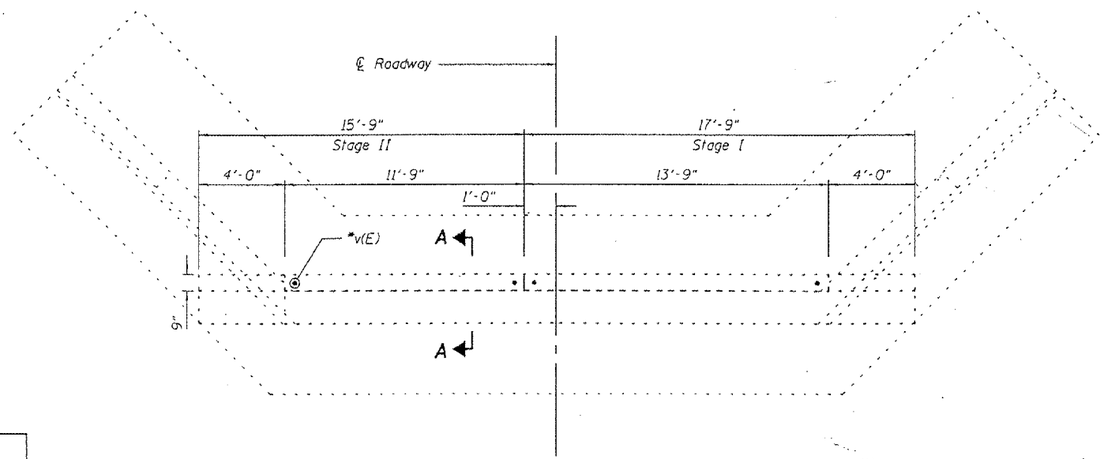
LEGEND

▨ - Structural Repair of Concrete

* 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 BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED KPC	TWM
DRAWN BWP	CORPORATE OFFICE 4940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-4688 E-MAIL: corp@twm-inc.com
CHECKED KPC	

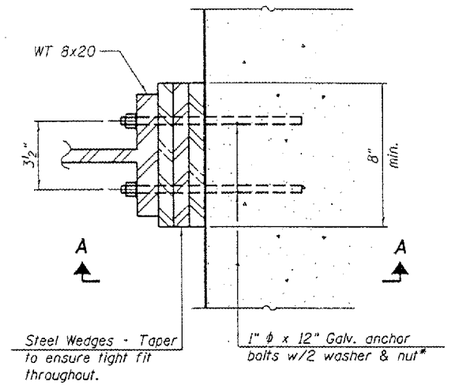
EAST ABUTMENT
CONCRETE REPAIR
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-0061

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

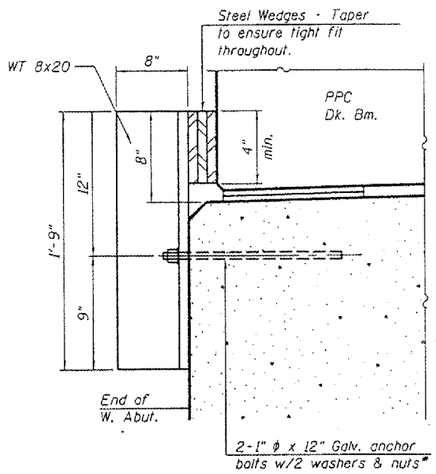
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(1998-3)I	TAZEWELL	33	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
14 SHEETS

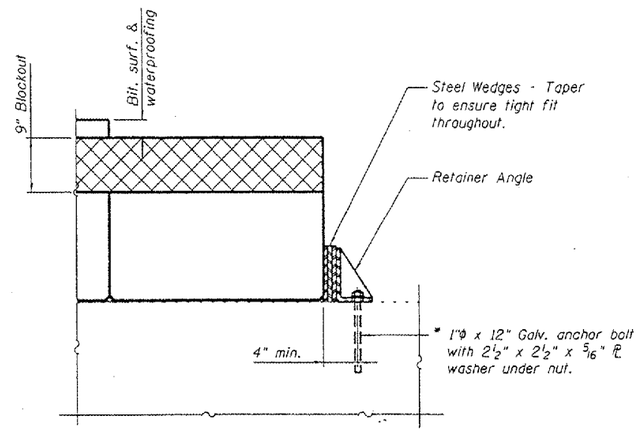
Contract #68415



PLAN



SECTION A-A



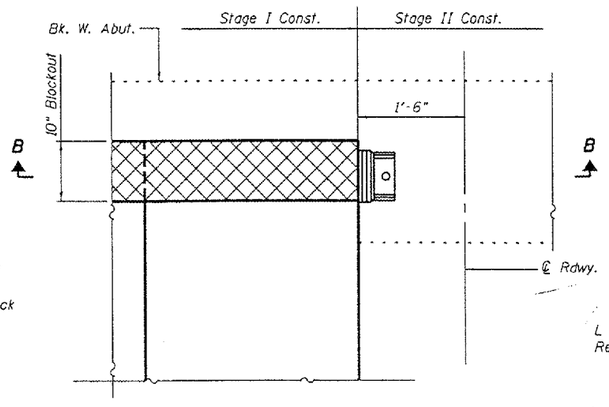
SECTION B-B

TEMPORARY RETAINER AT EXPANSION JOINT

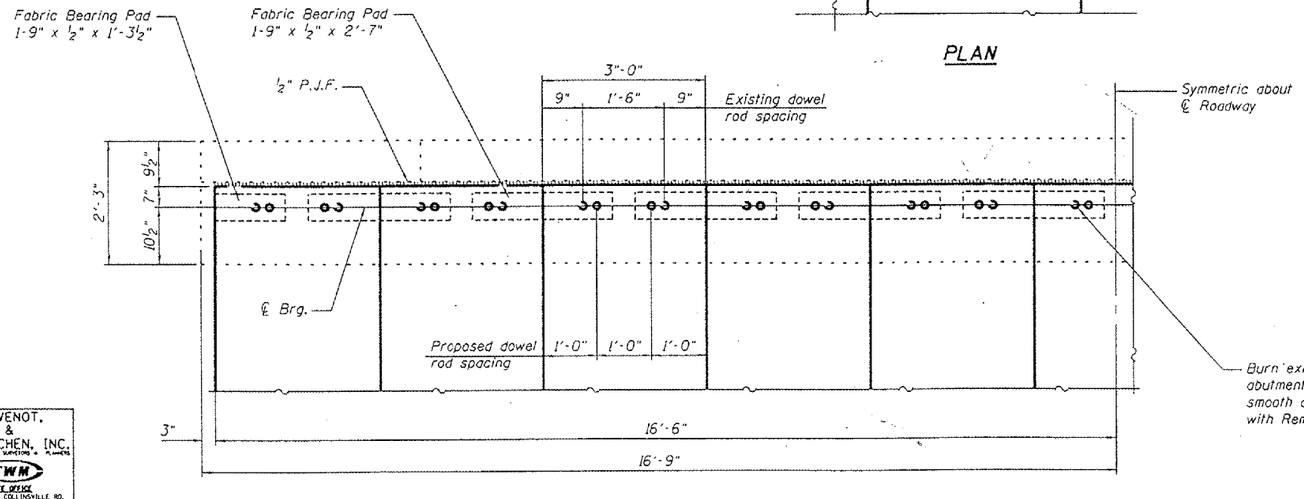
(West Abutment Only)

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).



PLAN



PLAN
(at East Abutment)

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED KPC	TWM
DRAWN BWP	CORPORATE OFFICE 4940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-6608 E-MAIL: corpotwm-inc.com
CHECKED KPC	

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).

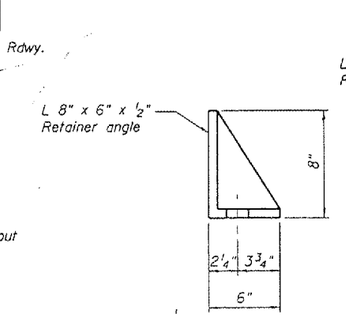
The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.

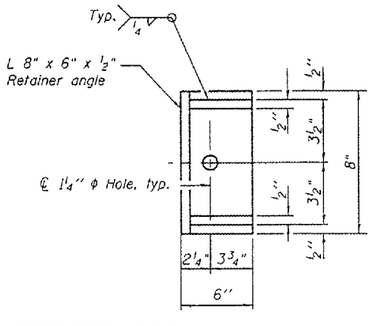
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

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.





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.

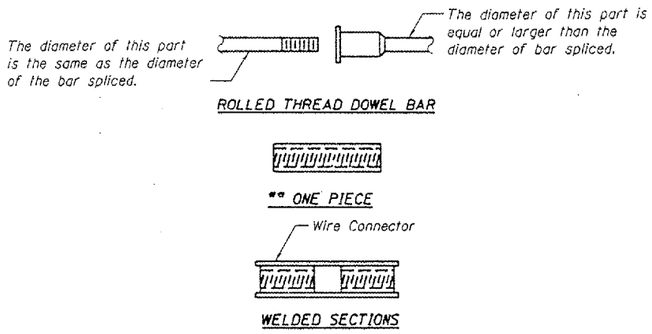
SUBSTRUCTURE DETAILS
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (1998-3)I
TAZEWELL COUNTY
SN 090-0061

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	33	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

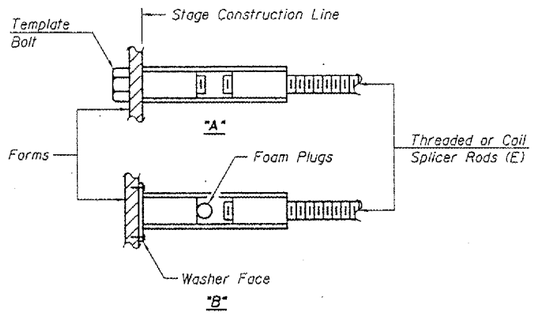
SHEET NO. 14
14 SHEETS

Contract #68415



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

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

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

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

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

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

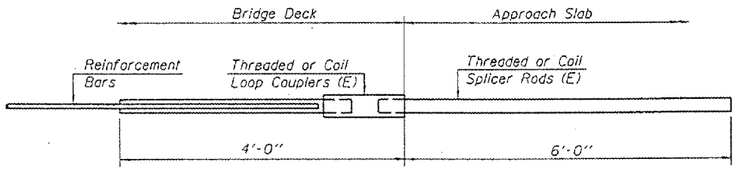
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

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

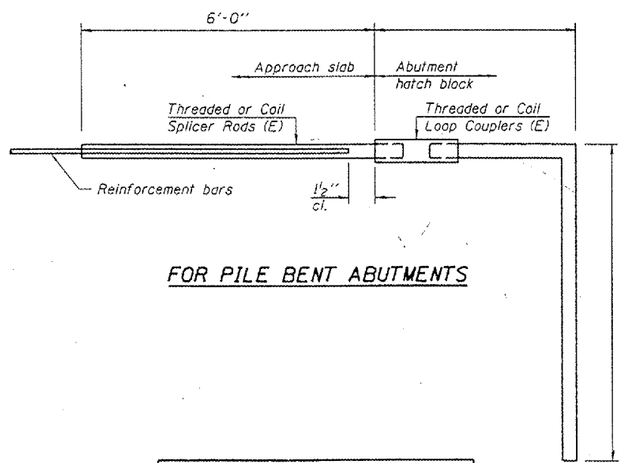
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0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



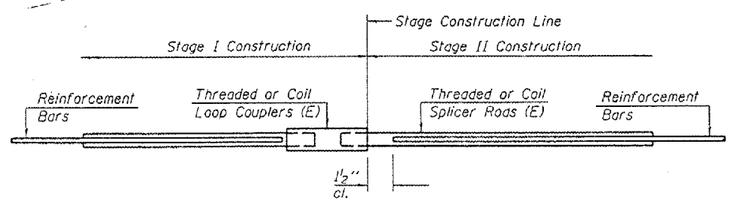
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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

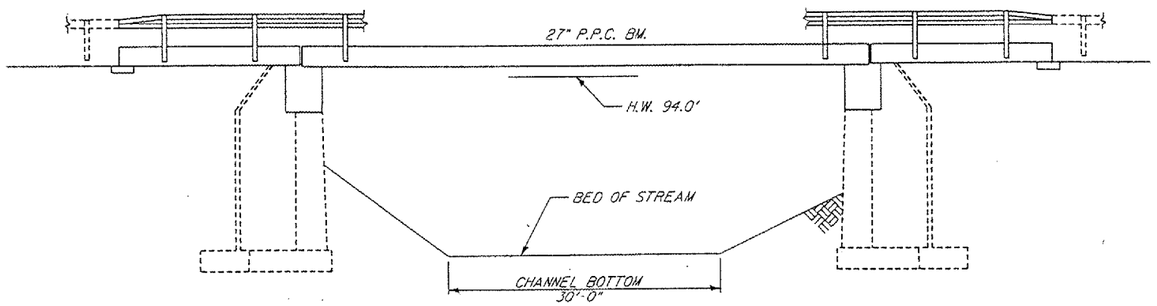
DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS • SURVEYORS • PLANNERS
CHECKED KPC	TWM
DRAWN BWP	CORPORATE OFFICE 4940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-6868 E-MAIL: corp@twm-inc.com
CHECKED KPC	

BSD-1 10-22-04

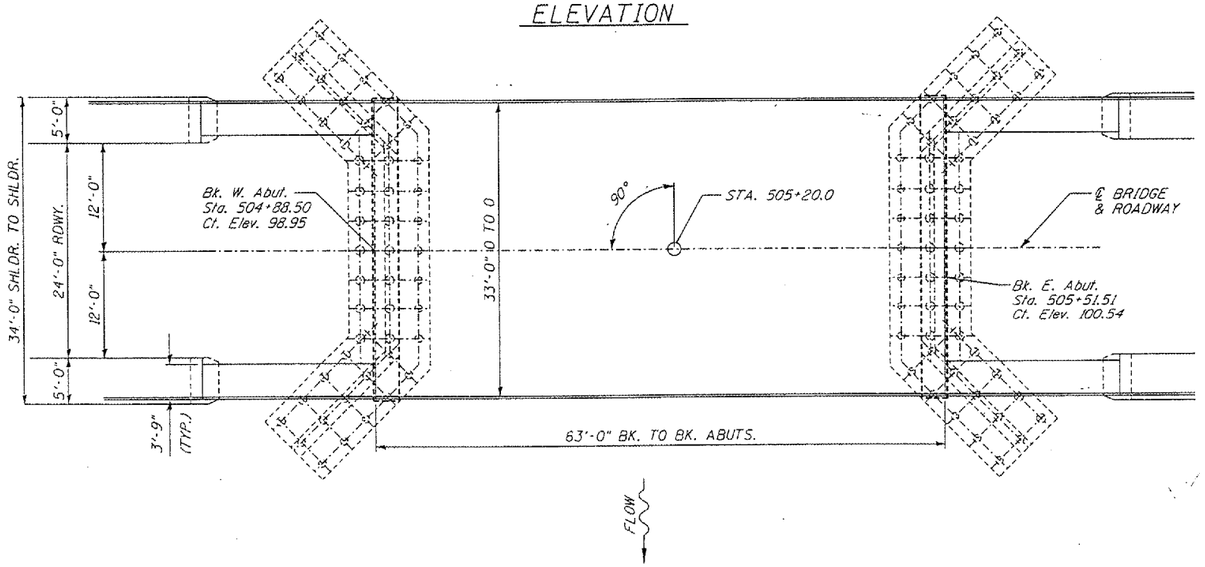
BAR SPLICER ASSEMBLY DETAILS
ILLINOIS ROUTE 9 OVER PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-0061

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.



ELEVATION



PLAN

EXISTING BRIDGE

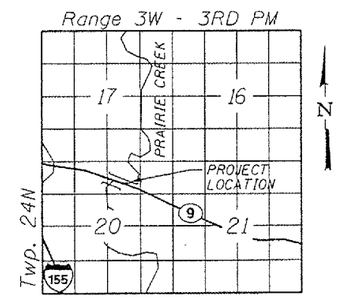
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	24
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

* (119B-3)I

INDEX OF SHEETS

BILL OF MATERIALS

ITEM	UNIT	TOTAL
CHANNEL EXCAVATION	CU YD	416
STONE RIP-RAP, CLASS A5	TONS	1685
FILTER FABRIC FOR RIPRAP	SQ YD	712
SUB-BASE GRANULAR MATERIAL, TYPE C	TONS	100
REM. AND REIN. STEEL PLATE BEAM GUARD RAIL, TY. A	FOOT	50
CONSTRUCTION ACCESS	L SUM	1



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

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	25
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

* (119B-3)I

505+93
57' LT

505+93
34' LT

OUTLINE OF
EXISTING BRIDGE

506

R.O.W.

505+79
40' RT

R.O.W.

505+79
60' RT

EXISTING GUY WIRE

EXISTING POWER POLE

EAST
ABUTMENT

FLOW

505+20

WEST
ABUTMENT

504+55
57' LT

504+55
34' LT

EXISTING
POWER POLE

504+59
40' RT

504+59
60' RT

EXISTING
GUY WIRE

℄ F.A.P. 693

LEGEND

- R.O.W.
- TEMPORARY EASEMENT
- CONSTRUCTION LIMITS
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- TOE-WALL RIPRAP
- RIPRAP, CLASS A5
- AERIAL ELECTRIC — AE —
- POWER POLE

N

0 20' 40'
1" = 20'

ILLINOIS DEPARTMENT OF TRANSPORTATION

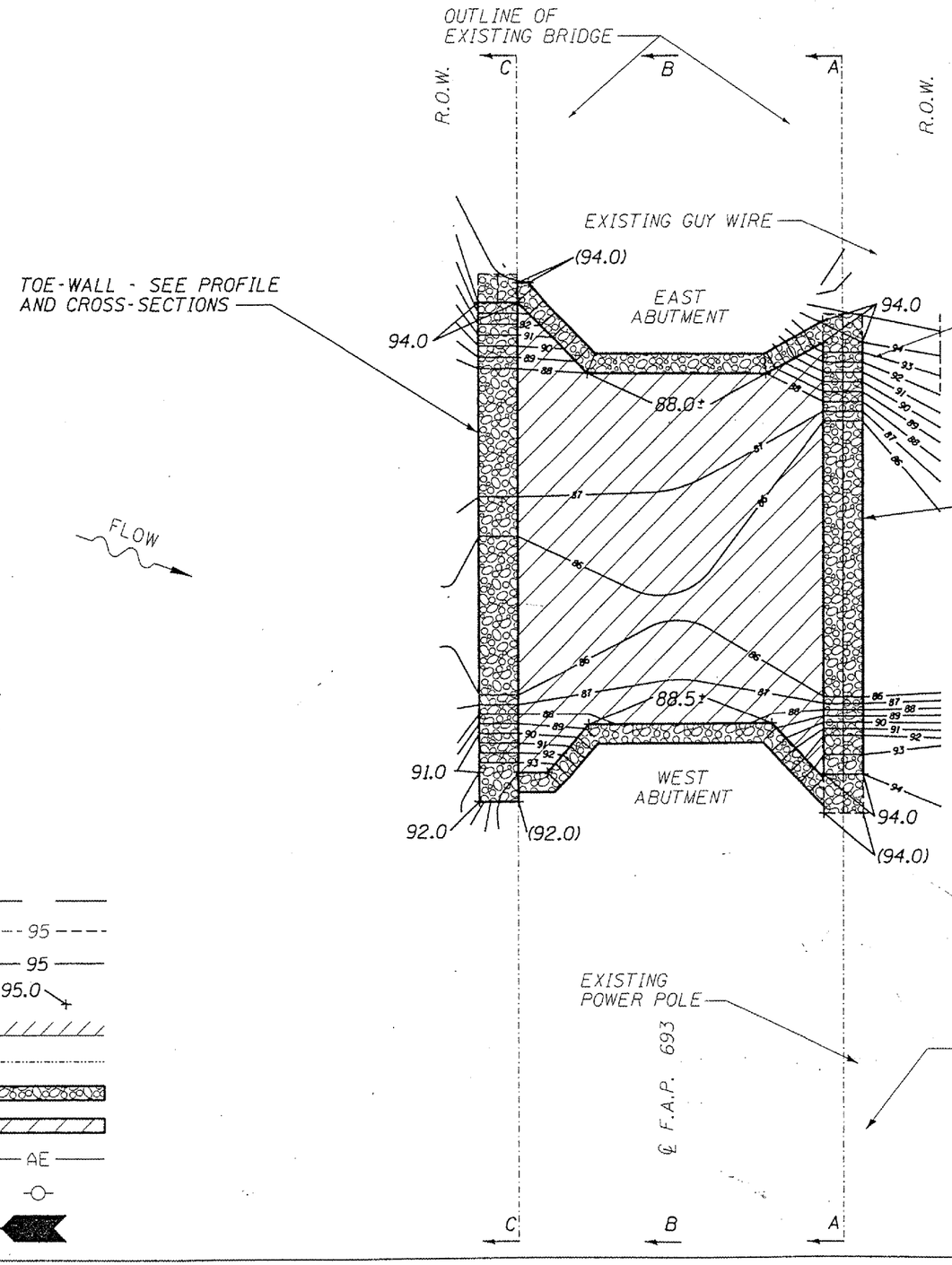
R.O.W. PLAN
S.N. 090-0061
F.A.P. 693 (IL 9)
OVER PRAIRIE CREEK
TAZEWELL COUNTY
SHEET 2 OF 8

SCALE: 1" = 20'

MAURER ▲ STUTZ, INC.
ENGINEERS SURVEYORS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	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
- RIPRAP TOE-WALL
- STONE RIPRAP, CL. A5
- AERIAL ELECTRIC ——— AE ———
- POWER POLE

N

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

0 20' 40'
1" = 20'

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED SITE PLAN
S.N. 090-0061
F.A.P. 693 (IL 9)
OVER PRAIRIE CREEK
TAZEWELL COUNTY

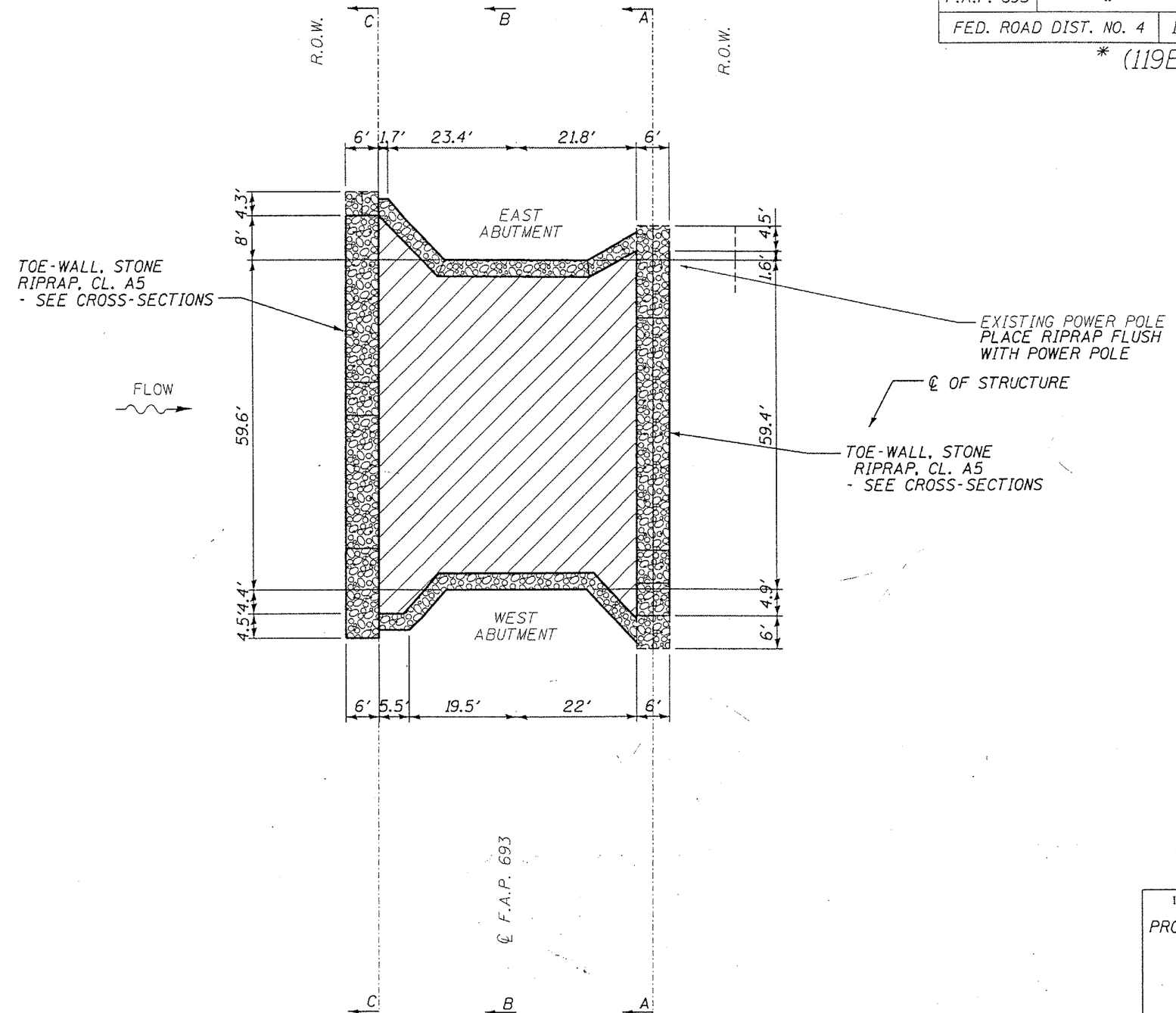
SHEET 3 OF 8

SCALE: 1" = 20'

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	27
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

* (119B-3)I



LEGEND

- R.O.W.
- CONCRETE ABUTMENT
- STREAM CENTERLINE
- TOE-WALL RIPRAP
- STONE RIPRAP, CL. A5
- GABION ANCHOR
- AERIAL ELECTRIC — AE —
- POWER POLE

N

0 20' 40'
1" = 20'

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED SITE DIMENSION PLAN
S.N. 090-0061
F.A.P. 693 (IL 9)
OVER PRAIRIE CREEK
TAZEWELL COUNTY

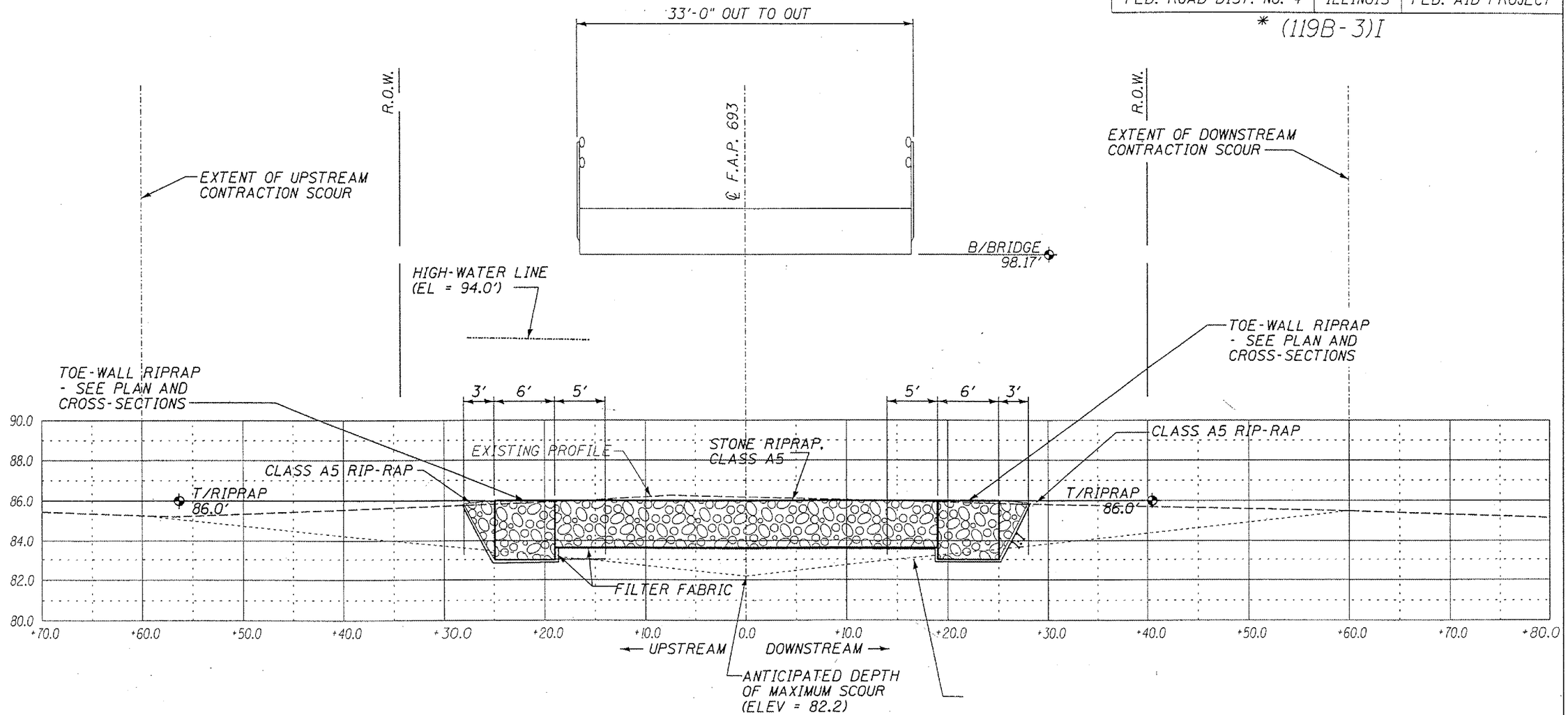
SHEET 4 OF 8

SCALE: 1" = 20'

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	28
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

* (119B-3)I



CALCULATED OPENING: 60 FT

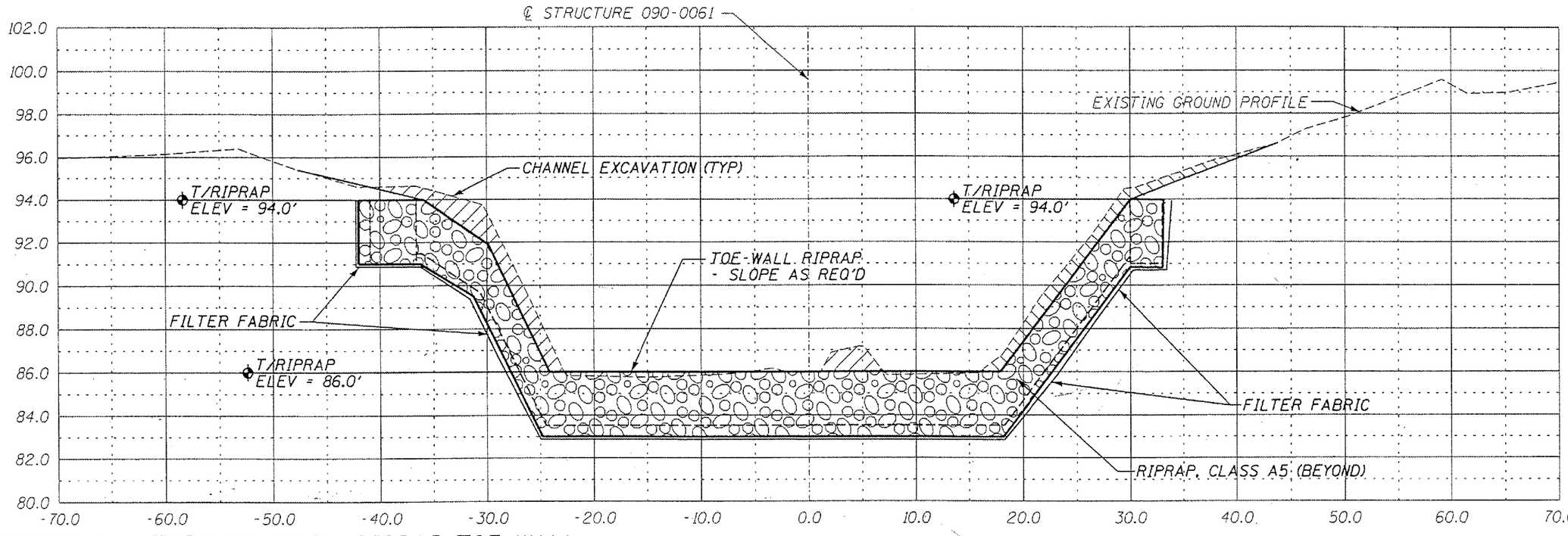
MAXIMUM SCOUR CALCULATION:
CONTRACTION SCOUR = 4 FT

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'

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	29
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

* (119B-3)I



SECTION A-A THROUGH SOUTH RIPRAP TOE-WALL

ILLINOIS DEPARTMENT OF TRANSPORTATION

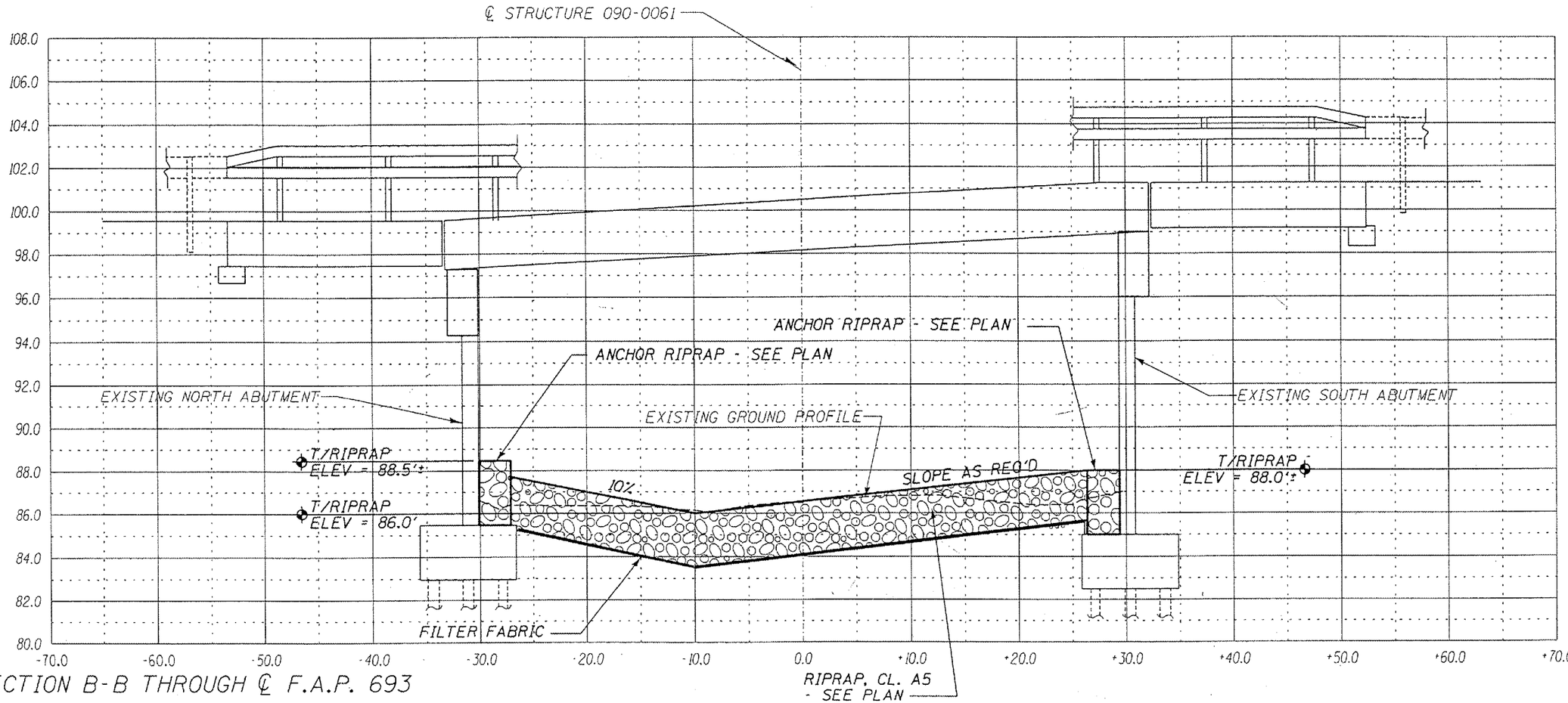
SITE CROSS SECTION
S.N. 090-0061
F.A.P. 693 (IL 9)
OVER PRAIRIE CREEK
TAZEWELL COUNTY
SHEET 6 OF 8

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

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	30
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

* (119B-3)I



SECTION B-B THROUGH ℄ F.A.P. 693

ILLINOIS DEPARTMENT OF TRANSPORTATION

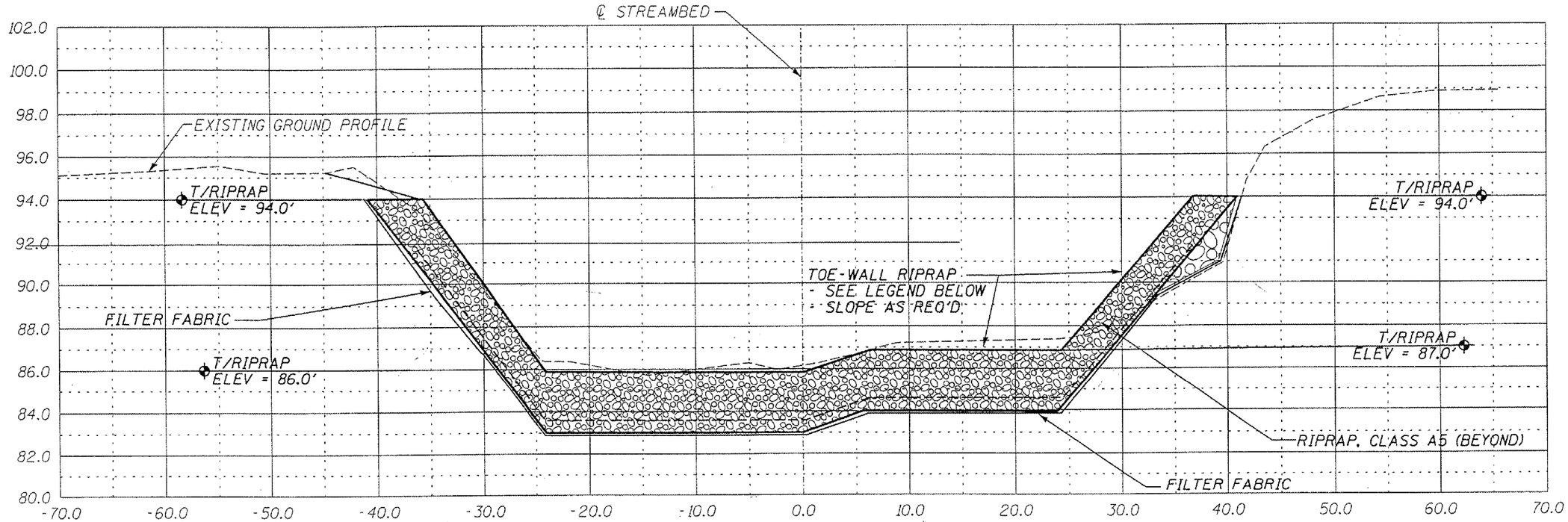
SITE CROSS SECTION
S.N. 090-0061
F.A.P. 693 (IL 9)
OVER PRAIRIE CREEK
TAZEWELL COUNTY
SHEET 7 OF 8

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

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	31
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

* (119B-3)I



SECTION C-C THROUGH NORTH RIPRAP TOE-WALL

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'

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	32
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

* (119B-3)I

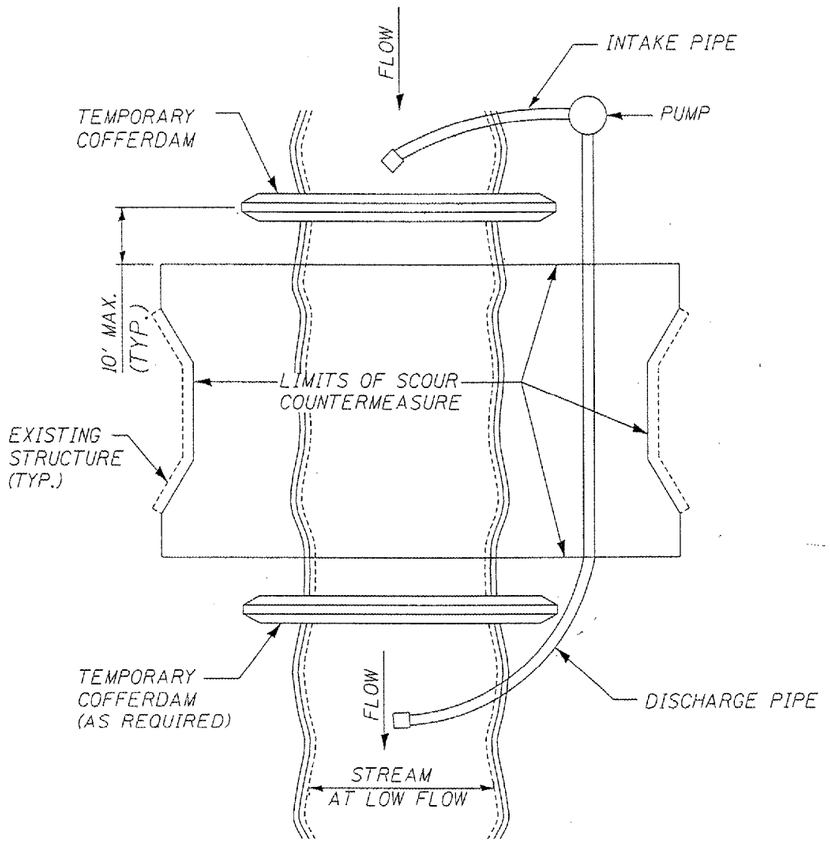


FIGURE D1. TEMPORARY COFFERDAM WITH PUMP BYPASS

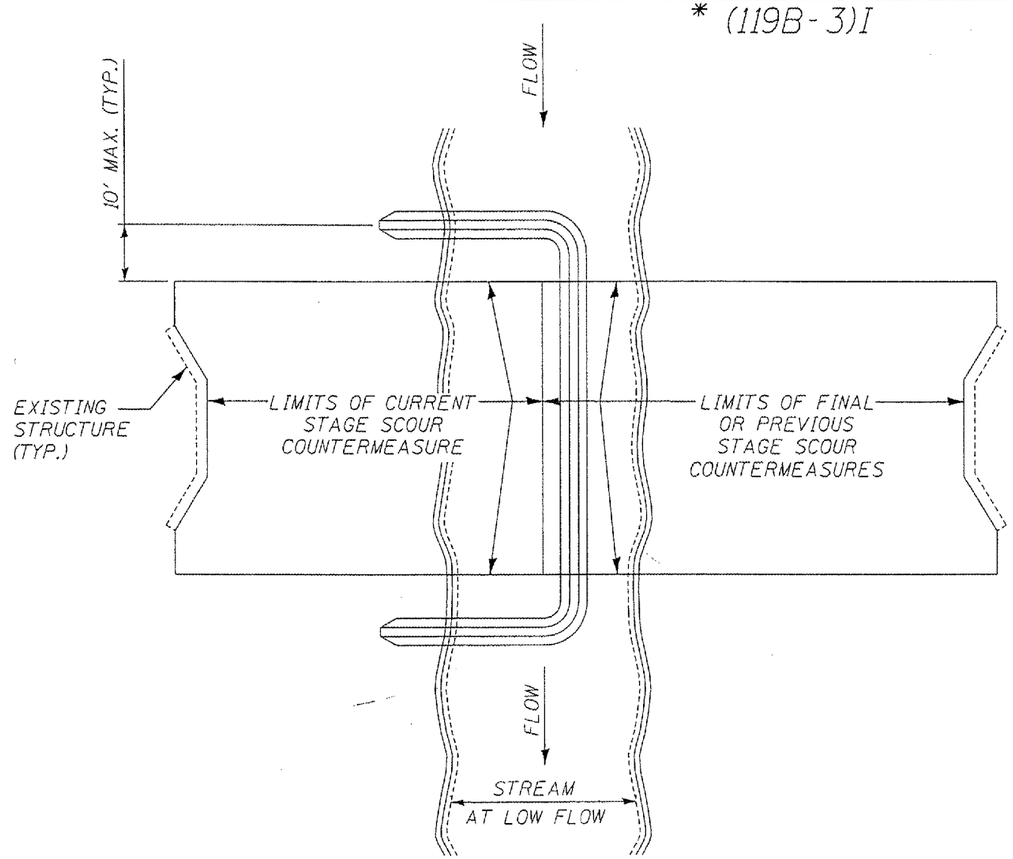


FIGURE D2. STAGED IN-STREAM COFFERDAM DIVISION

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

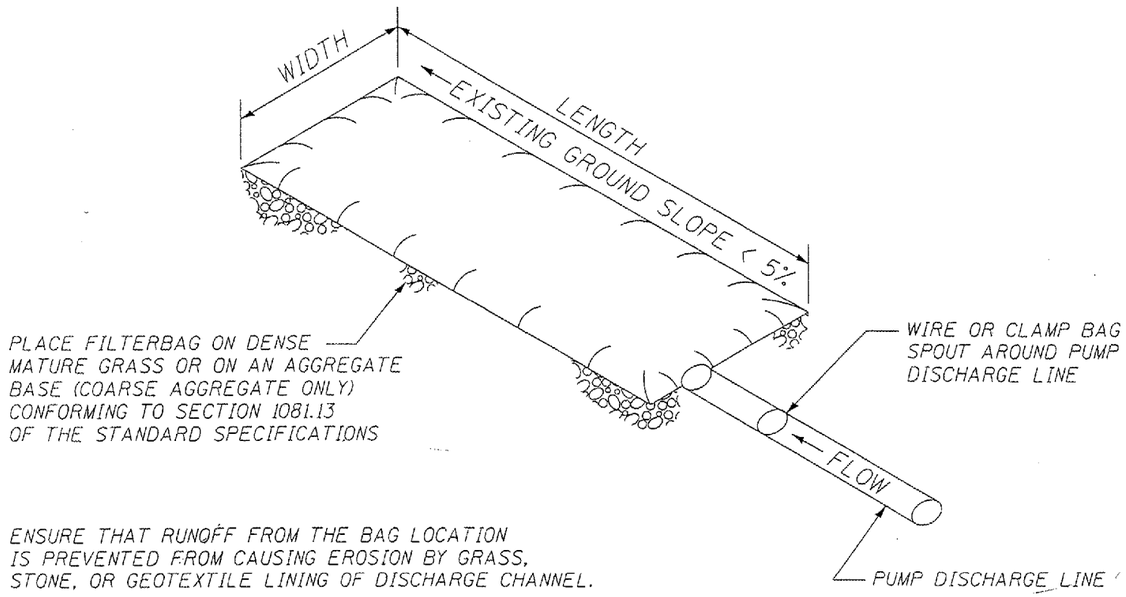
ILLINOIS DEPARTMENT OF TRANSPORTATION

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

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	*	TAZEWELL	33	33
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		

* (119B-3)I



ENSURE THAT RUNOFF FROM THE BAG LOCATION IS PREVENTED FROM CAUSING EROSION BY GRASS, STONE, OR GEOTEXTILE LINING OF DISCHARGE CHANNEL.

REMOVE SILT WHEN BAG IS HALF FULL OR MORE OFTEN IF RECOMMENDED BY THE MANUFACTURER. DISPOSE OF SILT BY TRANSPORTING THE FILLED BAG TO DISPOSAL AREA. SLIT THE BAG, BLEND SILT INTO EXISTING TOPOGRAGHY. SEED AND MULCH

MAINTAIN EXTRA FILTER BAGS ON SITE. REPLACE DAMAGED BAGS PROMPTLY

TYPICAL FLOX RATE: 10 GPM x W x L

FIGURE S1. SEDIMENT FILTER BAG

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

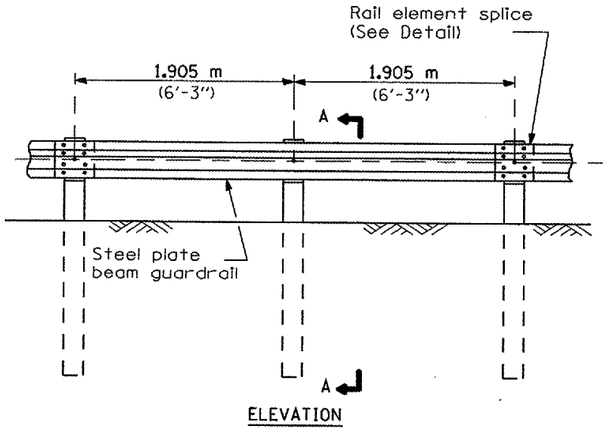
ILLINOIS DEPARTMENT OF TRANSPORTATION

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

MAURER & STUTZ, INC.
ENGINEERS SURVEYORS

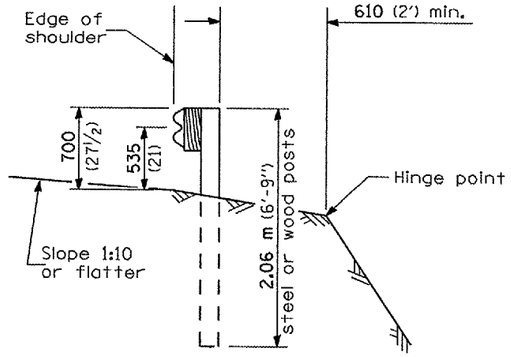
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
613	(119B-3)I	Tazewell		33A
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

68415

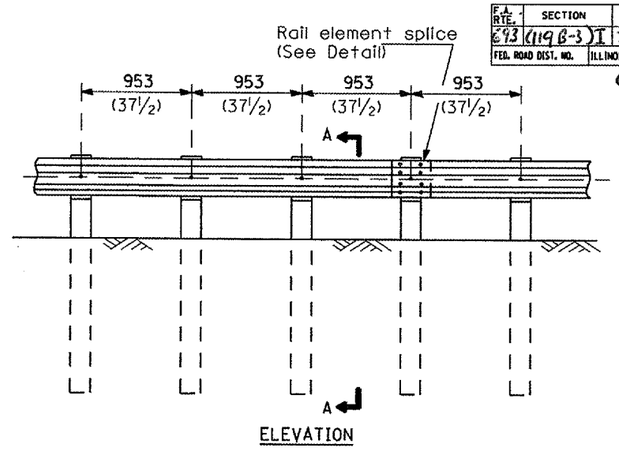


TYPE A

1.905 m (6'-3") Typical post spacing

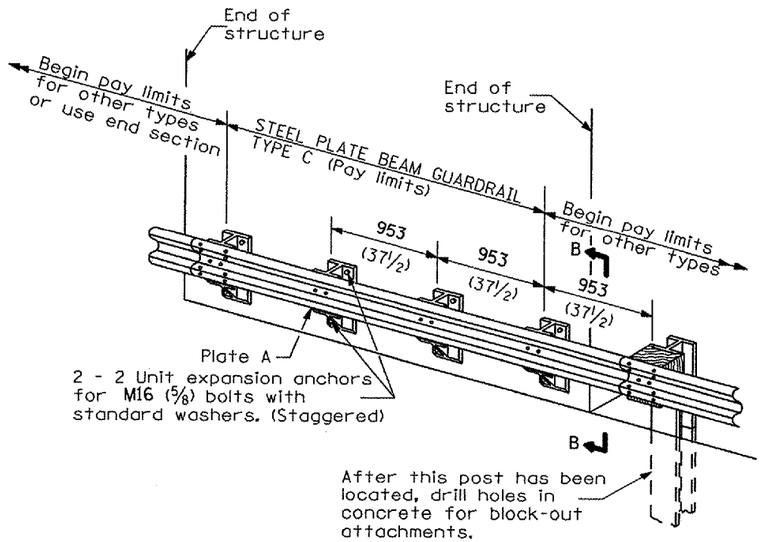


SECTION A-A



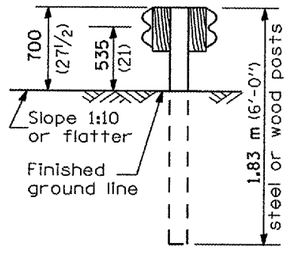
TYPE B

953 (37½) Closed post spacing

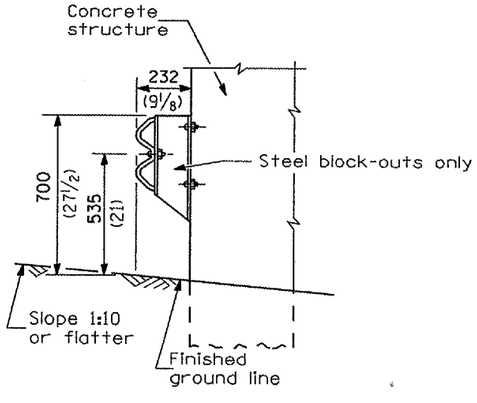


TYPE C

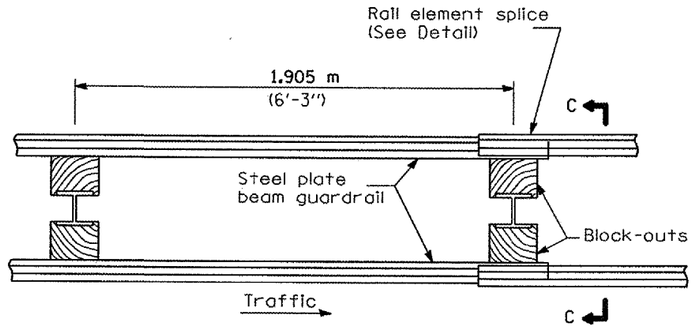
953 (37½) Block-out spacing



SECTION C-C



SECTION B-B



PLAN

TYPE D

Double steel plate beam guardrail
1.905 m (6'-3") typical post spacing

GENERAL NOTES

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

All dimensions are in millimeters (inches) unless otherwise shown.

The existing steel posts may be drilled to match the bolt pattern shown herein for the wood block-out, or a new steel post shall be provided.

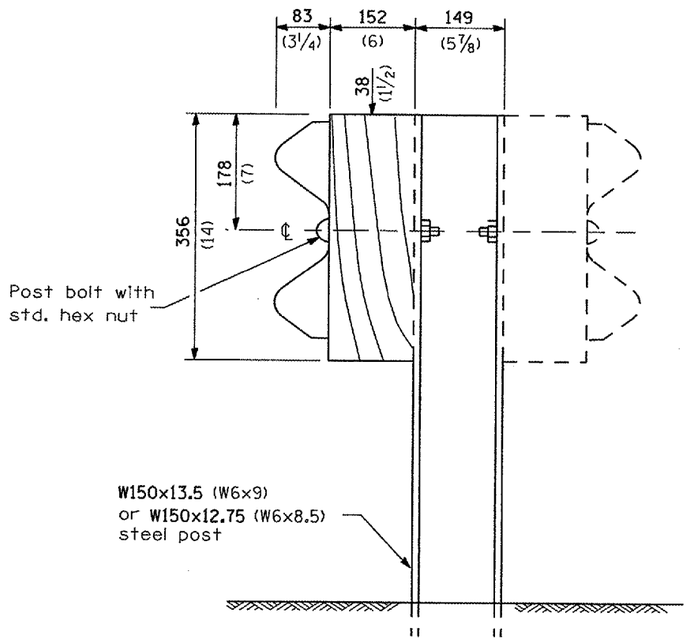
This detail is applicable to the guardrail system used prior to January 1, 2007. For details on the Midwest Guardrail System, see Standard 630001.

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

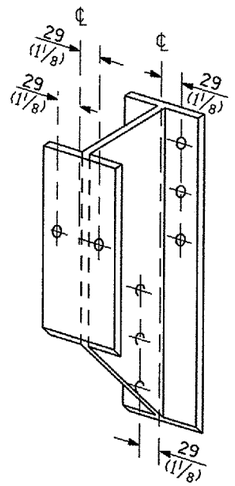
(Sheet 1 of 4)

DETAIL

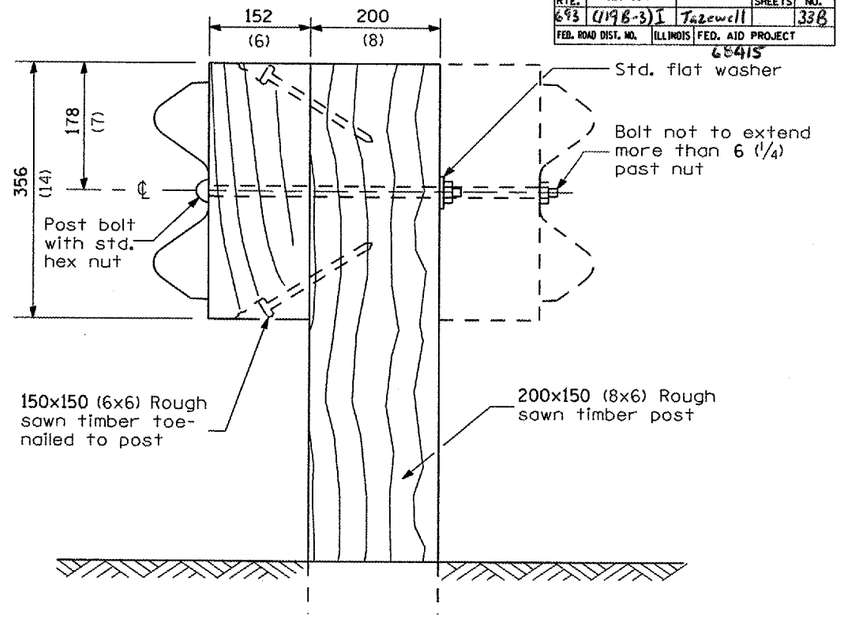
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(1198-3)I	Tazewell		33B
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
		68415		



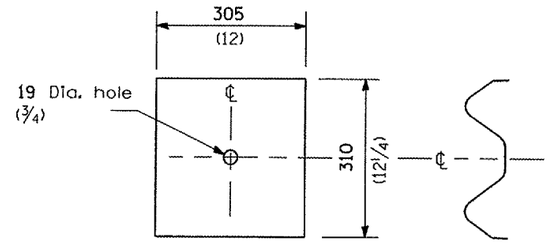
STEEL POST CONSTRUCTION



STEEL BLOCK-OUT DETAIL



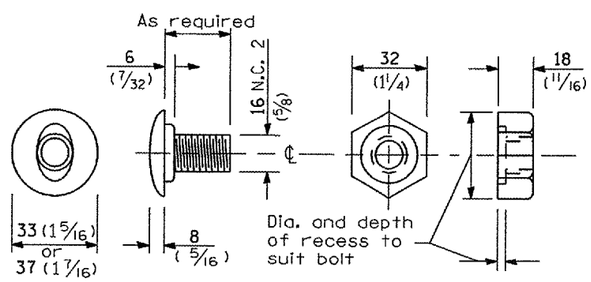
WOOD POST CONSTRUCTION



NOTE

Plate A shall be placed between rail element and block-out at non-splice mounting points only when steel block-outs are used.

PLATE A



POST OR SPLICE BOLT & NUT

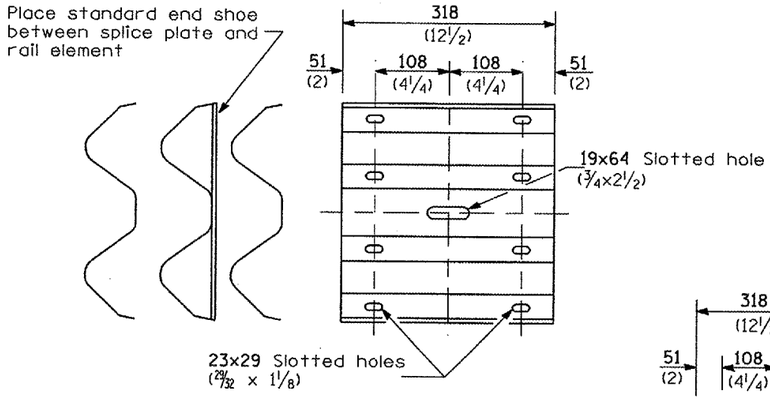
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

(Sheet 2 of 4)

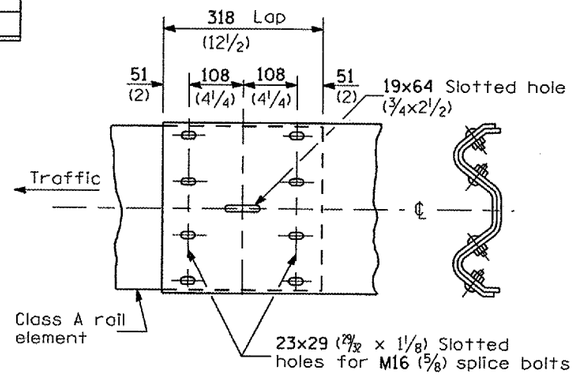
DETAIL

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
693	(119B-3)I	Tazewell		33C
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

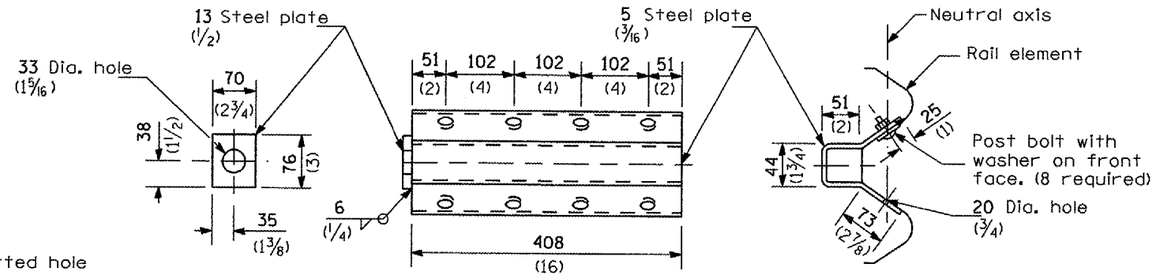
6841J



SPLICE PLATE



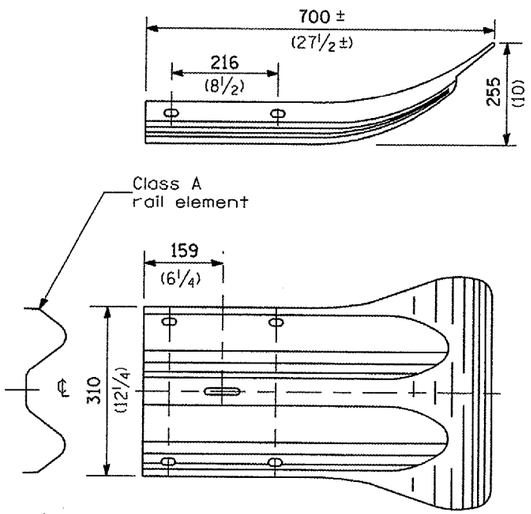
RAIL ELEMENT SPLICE



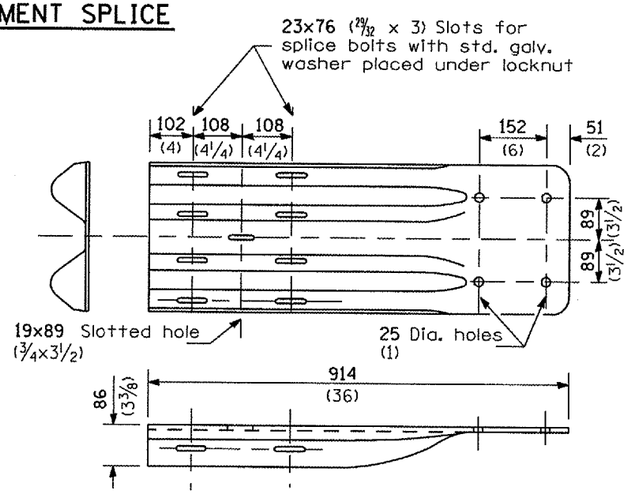
NOTE

Anchor plate T shall be used to attach cable assembly to guardrail when required on traffic barrier terminals.

ANCHOR PLATE T DETAILS



END SECTION



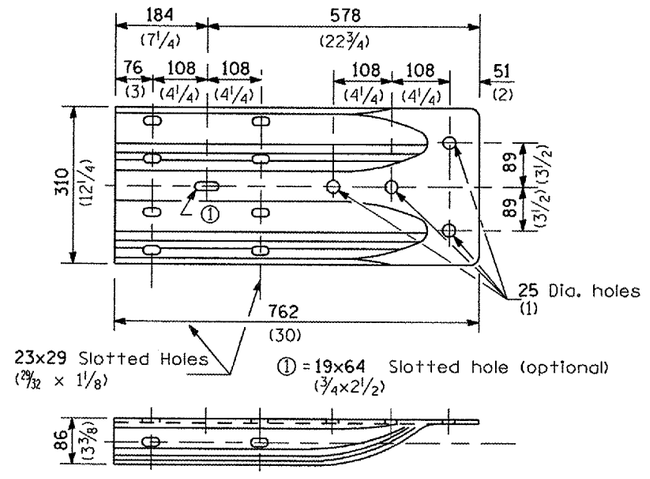
NOTE

When end shoe is attached to a bridge parapet which has an expansion joint, the bolts shall be provided with a locknut or double nut and shall be tightened only to a point that will allow guardrail movement.

The standard end shoe shall be attached to the concrete with pre-drilled or self-drilling anchor bolts. The anchor cone shall be set flush with the surface of the concrete.

Externally threaded studs protruding from the surface of the concrete will not be permitted.

END SHOE



ALTERNATE END SHOE

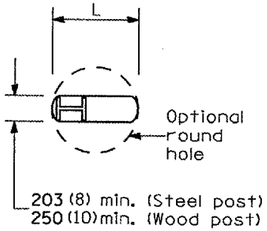
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

(Sheet 3 of 4)

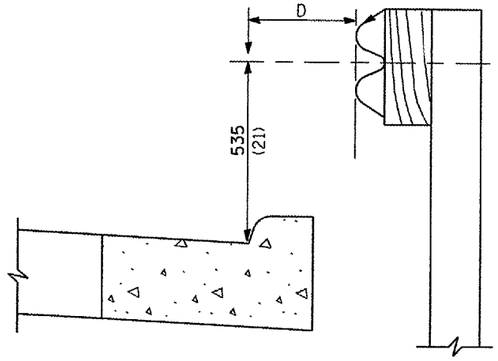
DETAIL

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
643	(1198-3)I	Tazewell		330
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

68415



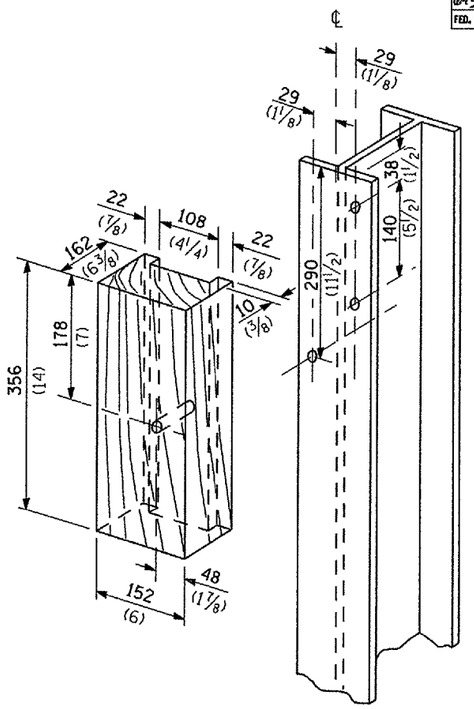
PLAN



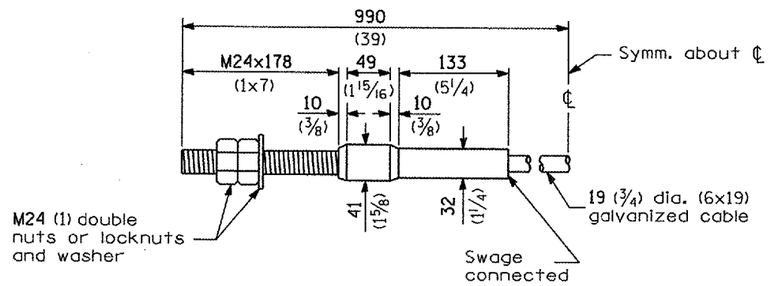
Note:
If it is necessary for D to be more than 300 (12) and less than 3.0 m (10'-0") type M-5 (M-2) curb and gutter (Std. 606001) shall be used in front of and in advance of the guardrail.

GUARDRAIL PLACED BEHIND CURB

(D = 0 desirable to 300 (12) maximum)

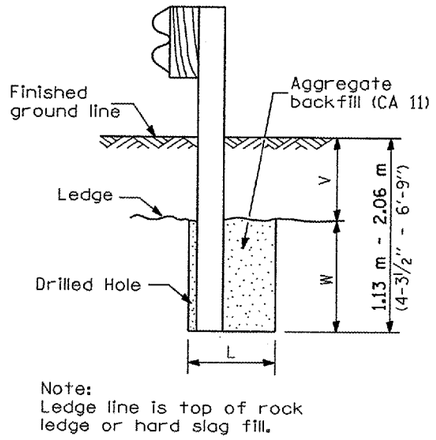


WOOD BLOCK-OUT AND STEEL POST DETAILS



CABLE ASSEMBLY

(18,100 kg (40,000 lbs.) min. breaking strength)
Tighten to taut tension.



Note:
Ledge line is top of rock ledge or hard slag fill.

ELEVATION

FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED

V	W	L	
		Steel Post	Wood Post
0 - 460 (0 - 18)	610 (24)	530 (21)	580 (23)
>460 - 825 (>18 - 41.5)	305 (12)	203 (8)	250 (10)
>825 - 1.13 m (>41.5 - 53.5)	305 - 0 (12 - 0)	203 (8)	250 (10)

REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL

(Sheet 4 of 4)

DETAIL