72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	1

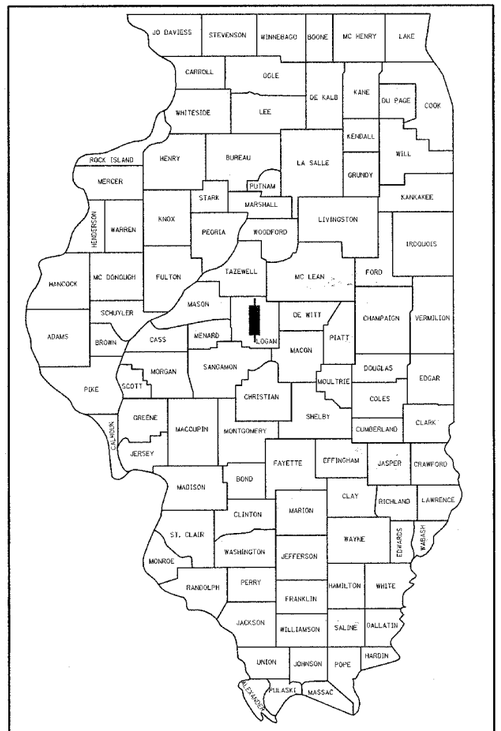
11-18-05 Letting, Item 014

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

FAS ROUTE 1774 (OLD IL 121)
SECTION 113(B-5,B-6)
PROJECT: ACBRS-ACRS-1774(103)
LOGAN COUNTY
C-96-502-06

D-96-571-02



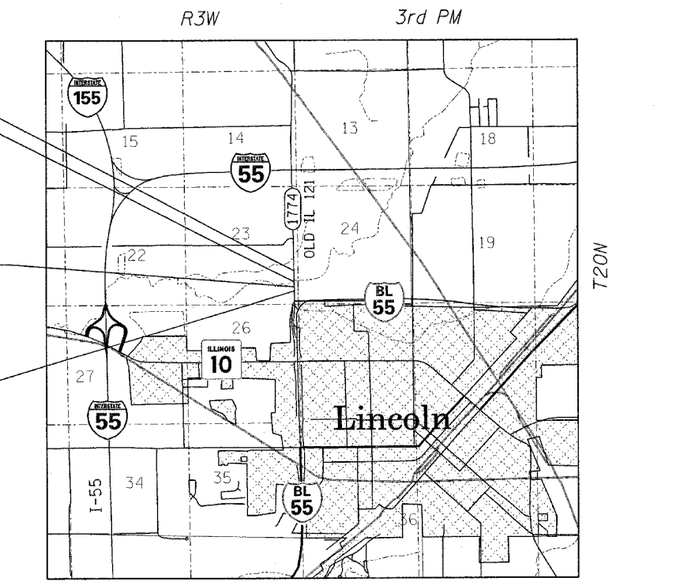
LOCATION OF SECTION INDICATED THUS: –■–

BEGIN SECTION
STA 1720+88

STA 1723+50.00
EX SN 054-0019 PR SN 054-0505
TOTAL REMOVAL AND REPLACEMENT OF THE EXISTING STRUCTURE WITH A FOUR SPAN WIDE FLANGE BRIDGE SUPPORTED ON INTEGAL ABUTMENTS AND PILE BENT PIERS. THE BACK-TO-BACK OF ABUTMENT MEASURES 227'-0" IN LENGTH.

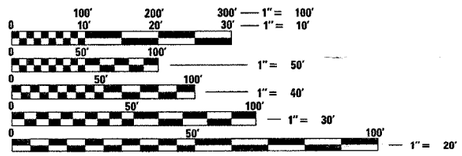
STA 1727+87.37
EX SN 054-2013 PR SN 054-2506
TOTAL REMOVAL AND REPLACEMENT OF AN EXISTING BOX CULVERT WITH A DOUBLE CELL 10'(W)X12'(H)X51'(L) BOX CULVERT WITH A DROP STRUCTURE AT THE UPSTREAM END.

END SECTION
STA 1730+22



HIGHWAY STANDARDS

000001-04	631031-05	701311-02
280001-02	635006-02	701321-08
420401-05	635011-01	701326-02
482011-01	701001-01	702001-05
515001-02	701006-02	704001-02
630001-05	701301-02	780001-01
630101-05	701306-01	



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. 72760

ADT = 1,800 1998

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED September 6 2005
Chet M Rogers
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
October 14, 2005
Mike Hine
ENGINEER OF DESIGN AND ENVIRONMENT
October 14, 2005
Eric E. Harm
DEPUTY DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

NET LENGTH OF PROJECT: 934.00 FEET = 0.18 MILES
GROSS LENGTH OF PROJECT: 934.00 FEET = 0.18 MILES

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: SAL MADONIA (217) 782-4761
SQUAD LEADER: JEFF MYERS (217) 524-7940

PROJECT: d657102 FILE: Coversheet.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

GENERAL NOTES

1. ALL OF THE DISTURBED AREAS WITHIN THE RIGHT OF WAY NOT COVERED BY SURFACING MATERIAL SHALL BE SEEDED.

2. CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE AND EROSION PROTECTION FOR THE DURATION OF THIS PROJECT.

3. SEEDING WILL NOT BE PERMITTED AT ANY TIME WHEN THE GROUND IS FROZEN, WET OR IN AN UNTILLABLE CONDITION. LOCATIONS TO BE SEEDED SHALL BE DETERMINED BY THE ENGINEER.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE JULIE NUMBER IS 800-892-0123. A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED. ANY DAMAGE TO THE UNDERGROUND FACILITIES, CAUSED BY THE CONTRACTOR SHALL BE REPAIRED TO THE SATISFACTION OF THE DEPARTMENT AT THE CONTRACTOR'S EXPENSE, INCLUDING TEMPORARY REPAIRS WHICH MAY BE REQUIRED TO KEEP THE FACILITY OPERATIONAL WHILE MATERIAL IS BEING OBTAINED TO MAKE PERMANENT REPAIRS.

5. THE LOCATIONS OF THOSE BURIED AND ABOVEGROUND UTILITIES SHOWN ARE APPROXIMATE, ARE SHOWN FOR CONTRACTOR INFORMATIONAL USE ONLY, AND ARE NOT TO BE REFERENCED FOR CONSTRUCTIONS PURPOSES. THE IMPLIED PRESENCE OR ABSENCE OF UTILITIES IS NOT TO BE CONSTRUED BY THE OWNER, ENGINEER, CONTRACTOR, OR SUBCONTRACTORS TO BE AN ACCURATE AND COMPLETE REPRESENTATION OF UTILITIES THAT MAY OR MAY NOT EXIST ON THE CONSTRUCTION SITE. BURIED AND ABOVEGROUND UTILITY LOCATION, IDENTIFICATION, AND MARKING ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. REROUTING, DISCONNECTION, PROTECTION, ETC. OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY, AND OWNER. SITE SAFETY, INCLUDING THE AVOIDANCE OF HAZARDS ASSOCIATED WITH BURIED AND ABOVEGROUND UTILITIES, REMAINS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

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

7. 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 MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

8. THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

GRANULAR MATERIALS	2.05	TONS/CU YD
BITUMINOUS MATERIAL (PRIME COAT)	0.00038	TON/SQ YD
BITUMINOUS CONCRETE SURF CSE	112	LBS/SQ YD/IN
BITUMINOUS CONCRETE BINDER CSE	112	LBS/SQ YD/IN
AGGREGATE (PRIME COAT)	0.002	TON/SQ YD
RIPRAP	1.75	TON/CU YD

9. ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

10. UNLESS NOTED OTHERWISE, STATIONS AND OFFSETS REFER TO CENTERLINE OF PROJECT.

11. LAYOUT OF RIPRAP MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.

12. 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 104.02 OF THE STANDARD SPECIFICATIONS. TREES OUTSIDE THE LIMITS OF CONSTRUCTION SHALL NOT BE DISTURBED UNLESS DESIGNATED BY THE ENGINEER.

13. IN ADDITION TO FIELD SURVEYS AND AERIAL SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE A CAUSE FOR ADDITIONAL COMPENSATION DUE TO A CHANGE IN THE SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

14. THE GRADING AND SHAPING OF THE DITCHES SHALL BE DONE IN SUCH A MANNER TO ESTABLISH POSITIVE FLOW BETWEEN DRAINAGE STRUCTURES, OR BETWEEN THE EXISTING ELEVATION AT THE UPSTREAM END OF THE GRADING TO THE DOWNSTREAM DRAINAGE STRUCTURE.

15. IF PRIVATE FENCE ON STATE RIGHT-OF-WAY HAS NOT BEEN REMOVED BY THE TIME OF CONSTRUCTION, THE FENCE SHALL BE REMOVED BY THE CONTACTOR AND NOT PAID FOR SEPARATELY BUT BE INCLUDED IN THE COST OF EARTH EXCAVATION.

16. FINAL ADJUSTMENT OF GUARDRAIL IF REQUIRED SHALL NOT BE PAID FOR SEPARATELY BUT INCLUDED IN THE COST OF REMOVE AND RE- ERECT STEEL PLATE BEAM GUARD RAIL, TYPE A.

BENCHMARKS

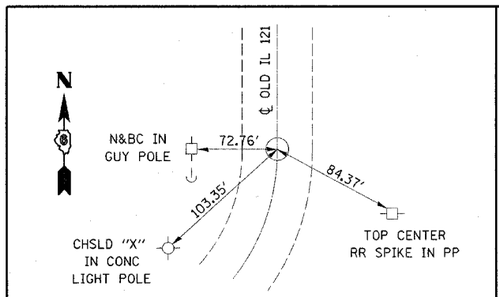
BM cb-01113 — CHISELED "□" IN CENTER OF EAST HEADWALL OF SN 054-2035
PUB/ADJ ELEVATION NAVD 88 = 565.342

BM cb-01114 — CHISELED "□" IN CENTER OF BOX CULVERT UNDER IL 121, APPROX 600' NORTH OF BM cb-01113
PUB/ADJ ELEVATION NAVD 88 = 567.263

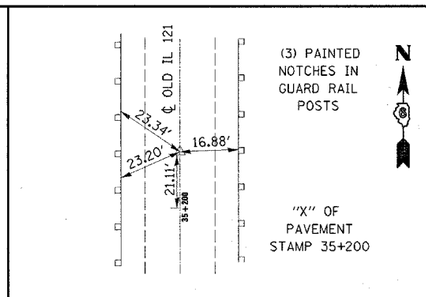
BM cb-01115 — CHISELED "□" IN SE WINGWALL OF SN 054-0019, BRIDGE OVER KICKAPOO CREEK
PUB/ADJ ELEVATION NAVD 88 = 568.934

BM cb-01116 — CHISELED "□" IN SE WINGWALL OF SN 054-0083, APPROX 200' NORTH OF KICKAPOO CREEK
PUB/ADJ ELEVATION NAVD 88 = 569.454

CROSS TIES



PC STA 0+00.00 AH =
STA. 1738+70.96 BK
PK NAIL W/BC IN CHSLD "X"



POT STA 1729+17.34
PK W/BC IN CHSLD "X"

The following mixture requirements are applicable for this project:					
Mixture Use(s)	Bituminous Concrete Surface Course Superpave, Mix "C", N50	Bituminous Concrete Binder Course, Superpave, IL-19.0, N50	Bituminous Concrete Base Course & Widening, Superpave 10"	Leveling Binder (Machine Method) Superpave, N50	Bituminous Shoulders Superpave
AC/PG:	PG 64-22	PG 64-22	PG 58-22	PG 64-22	PG 58-22
RAP %: (Max)	15%	20%	15%	20%	15%
Design Air Voids:	4.0 @ Ndesign = 50	4.0 @ Ndesign = 50	2.0 @ Ndesign = 50	4.0 @ Ndesign = 50	2.0 @ Ndesign = 30
Mixture Composition: (Gradation Mixture)	IL 9.5 or 12.5	IL 19.0	IL 19.0	IL 9.5	BAM
Friction Aggregate:	MIX "C"	N/A	N/A	N/A	N/A

DISTRICT SIX	
EXAMINED August 29	20 05
OPERATIONS ENGINEER	
EXAMINED Aug 30	20 05
PROGRAM IMPLEMENTATION ENGINEER	
EXAMINED Sept 6	20 05
PROGRAM DEVELOPMENT ENGINEER	

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

FAS 1774 (OLD IL 121)
SECTION 113(B-5, B-6)
LOGAN COUNTY

SCALE: VERT. HORIZ. DRAWN BY
DATE CHECKED BY

PLOT DATE = 9/2/2005
FILE NAME = c:\projects\d657102\details.dgn
PLOT SCALE = 49.9999 ' / IN.

PROJECT: d657102 FILE: Details.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	3
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

				ACBRS BRRP FUNDS 80% FED 20% STATE SN 054-0505 STA 1720+88 TO STA 1727+00	ACRS STP FUNDS 80% FED 20% STATE SN 054-2506 STA 1727+00 TO STA 1730+22
			TOTAL	CONSTRUCTION TYPE CODE	
CODE NO.	PAY ITEM	UNITS	QUANTITY	X0*71*-2A	X0*28*-2A
20200100	EARTH EXCAVATION	CU YD	468	272	196
20200500	EARTH EXCAVATION (WIDENING)	CU YD	85	36	49
20300100	CHANNEL EXCAVATION	CU YD	703	703	
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	*142.4*	*142.4*	
25000300	SEEDING, CLASS 3	ACRE	0.8	0.4	0.4
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	69	35	34
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	69	35	34
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	69	35	34
25100630	EROSION CONTROL BLANKET	SQ YD	3,691	1,874	1,817
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	77	39	38
28000400	PERIMETER EROSION BARRIER	FOOT	1,703	988	715
28100107	STONE RIPRAP, CLASS A4	SQ YD	146		146
28100109	STONE RIPRAP, CLASS A5	SQ YD	*856*	*856*	
28200200	FILTER FABRIC	SQ YD	*1002*	*856*	146
31101400	SUB-BASE GRANULAR MATERIAL, TYPE B 6"	SQ YD	249		249
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	30	30	
40600200	BITUMINOUS MATERIALS (PRIME COAT)	TON	0.9	0.45	0.45
40600300	AGGREGATE (PRIME COAT)	TON	5	2	3
40600895	CONSTRUCTING TEST STRIP	EACH	2		2
40600990	TEMPORARY RAMP	SQ YD	49	27	22
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	222	222	
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	43	43	
44000030	BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)	SQ YD	1,201	479	722
44000100	PAVEMENT REMOVAL	SQ YD	416	210	206

SUMMARY OF QUANTITIES

					ACBRS BRRP FUNDS 80% FED 20% STATE SN 054-0505 STA 1720+88 TO STA 1727+00	ACRS STP FUNDS 80% FED 20% STATE SN 054-2506 STA 1727+00 TO STA 1730+22
				TOTAL	CONSTRUCTION TYPE CODE	
	CODE NO.	PAY ITEM	UNITS	QUANTITY	X0*71*-2A	X0*28*-2A
	44000700	APPROACH SLAB REMOVAL	SQ YD	71	71	
	48101200	AGGREGATE SHOULDERS, TYPE B	TON	300	137	163
	48202000	BITUMINOUS SHOULDERS SUPERPAVE	TON	92	59	33
	50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1	1	
	50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1		1
	50200100	STRUCTURE EXCAVATION	CU YD	*289.6*	*289.6*	
	50105220	PIPE CULVERT REMOVAL	FOOT	26		26
	50300100	FLOOR DRAINS	EACH	26	26	
	50300225	CONCRETE STRUCTURES	CU YD	*144.6*	*144.6*	
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	*265.3*	*265.3*	
	50300260	BRIDGE DECK GROOVING	SQ YD	*756.7*	*756.7*	
	50300300	PROTECTIVE COAT	SQ YD	997.3	997.3	
	50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	1	
	50500505	STUD SHEAR CONNECTORS	EACH	*4266*	*4266*	
	50800105	REINFORCEMENT BARS	POUND	*32,150*		*32,150*
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	*72,020*	*72,020*	
	51201600	FURNISHING STEEL PILES HP12X53	FOOT	*1625*	*1625*	
	51202700	DRIVING STEEL PILES	FOOT	*1625*	*1625*	
	51203600	TEST PILE STEEL HP12X53	EACH	5	5	
	51205200	TEMPORARY SHEET PILING	SQ FT	*435*	*435*	
	51500100	NAME PLATES	EACH	2	1	1
	54003000	CONCRETE BOX CULVERTS	CU YD	*200.5*		*200.5*
	54201483	PIPE CULVERTS, TYPE 2, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE 18"	FOOT	26		26
*	63000025	STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES	FOOT	46		46

* SPECIALTY ITEMS

REVISIONS NAME	DATE

Rev.

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

FAS 1774 (OLD IL 121)
SECTION 113(B-5, B-6)
LOGAN COUNTY

SCALE: VERT. HORIZ. DRAWN BY

DATE CHECKED BY

PLOT DATE = 9/13/2005
FILE NAME = c:\projects\d657102\schedules.dgn
PLOT SCALE = 49.9999 ' / IN.

PROJECT: d657102 FILE: Schedules.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES

	CODE NO.	PAY ITEM	UNITS	TOTAL QUANTITY	ACBRS BRRP FUNDS 80% FED 20% STATE SN 054-0505 STA 1720+88 TO STA 1727+00 CONSTRUCTION TYPE CODE X0071-2A	ACRS STP FUNDS 80% FED 20% STATE SN 054-2506 STA 1727+00 TO STA 1730+22 CONSTRUCTION TYPE CODE X0028-2A
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4	4	
	63200310	GUARDRAIL REMOVAL	FOOT	234	188	46
	63300575	REMOVE AND RE-ERECT RAIL ELEMENT OF EXISTING GUARD RAIL	FOOT	551	241	310
*	63300725	STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)	FOOT	75	75	
	63301210	REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	898	418	480
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	10	10	
	67100100	MOBILIZATION	L SUM	1	1	
	70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1		1
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1	
	70101205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1	1	
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5		5
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1	
	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	281	184	97
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	39	26	13
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1,060	810	250
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1,060	810	250
*	78001120	PAINT PAVEMENT MARKING - LINE 5"	FOOT	2,102	1,377	725
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	18	8	10
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	778	510	268
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	12	6	6
	X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	1031	573	458
	X0324118	GRANULAR CULVERT BACKFILL	CU YD	537		537
	X3550700	BITUMINOUS BASE COURSE SUPERPAVE 10"	SQ YD	228		228
	X3560140	BITUMINOUS CONCRETE BASE COURSE WIDENING, SUPERPAVE 10 INCH	SQ YD	340	147	193

SUMMARY OF QUANTITIES

	CODE NO.	PAY ITEM	UNITS	TOTAL QUANTITY	ACBRS BRRP FUNDS 80% FED 20% STATE SN 054-0505 STA 1720+88 TO STA 1727+00 CONSTRUCTION TYPE CODE X0071-2A	ACRS STP FUNDS 80% FED 20% STATE SN 054-2506 STA 1727+00 TO STA 1730+22 CONSTRUCTION TYPE CODE X0028-2A
	X4066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50	TON	157	79	78
	X4066614	BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50	TON	147	123	24
	X4066765	LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50	TON	42	11	31
	X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION LOCATION 1	EACH	1	1	
	X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION LOCATION 2	EACH	1	1	
	X6330103	REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL, TANGENT	EACH	2		2
	Z0002600	BAR SPLICERS	EACH	980	824	156
	Z0013798	CONSTRUCTION LAYOUT	L SUM	1	0.8	0.2
Δ	Z0030260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	1	1
Δ	Z0030330	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3	EACH	2	1	1
*	Z0054517	ROCK FILL - FOUNDATION	TON	100		100

Δ SFTY-3N
* SPECIALTY ITEMS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

FAS 1774 (OLD IL 121)
SECTION 113(B-5, B-6)
LOGAN COUNTY

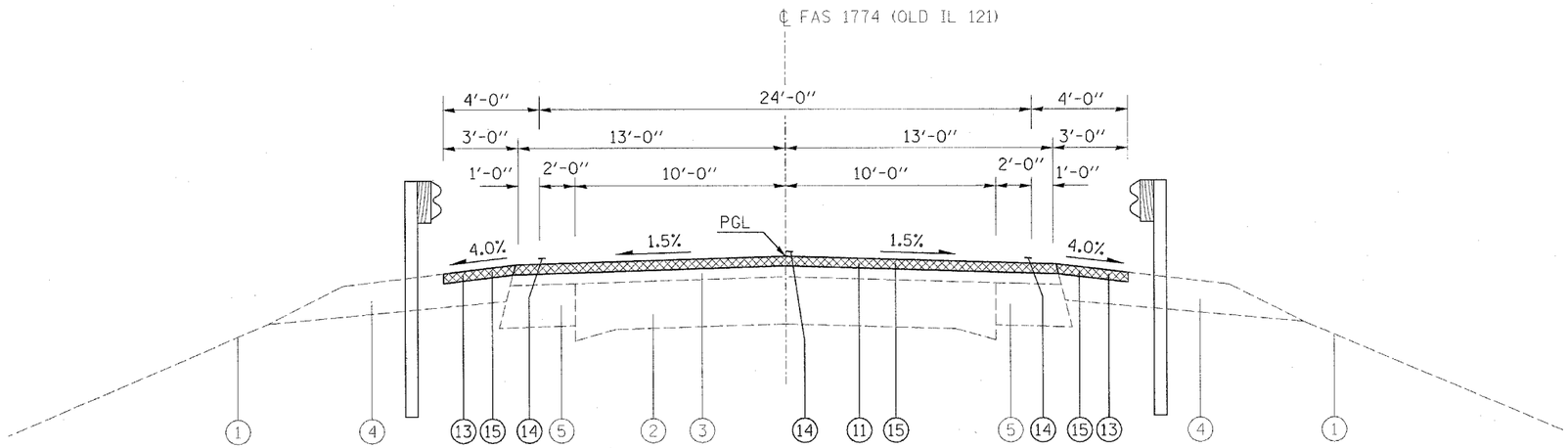
SCALE: VERT. HORIZ. DRAWN BY
DATE CHECKED BY

PLOT DATE = 9/13/2005
FILE NAME = c:\projects\d657102\schedules.dgn
PLOT SCALE = 43.9999 ' / IN.

PROJECT: d657102 FILE: Schedules.dgn

CONTRACT NO. 72760

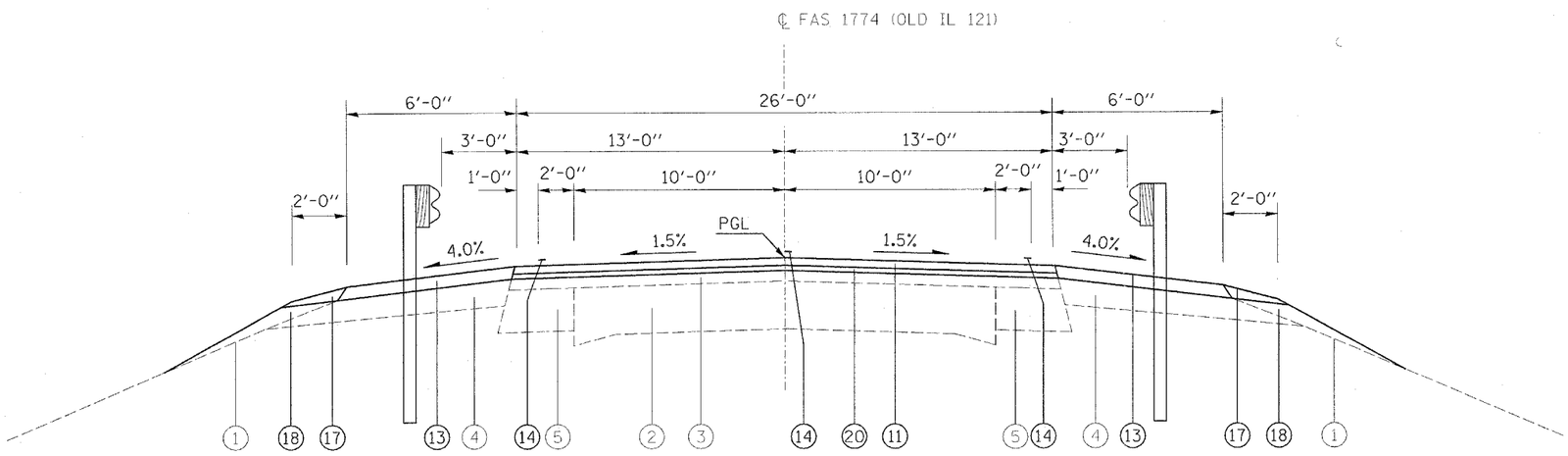
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION #1

STA 1720+88.00 TO 1721+84.44

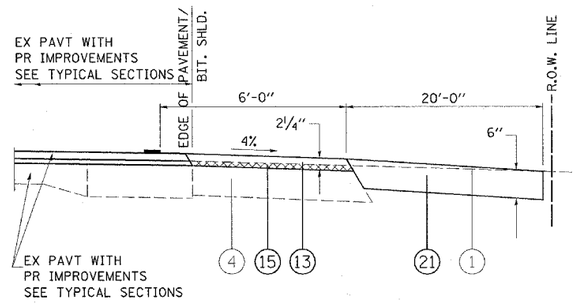
ENTRANCE OMISSION
SEE DETAIL THIS SHEET
LT STA 1721+59.22
RT STA 1721+66.75



TYPICAL SECTION #2

STA 1721+84.44 TO 1722+06.50

BRIDGE AND APPROACH PAVEMENT OMISSION
STA 1722+06.50 TO STA 1724+93.50



ENTRANCE DETAIL
LT STA 1721+59.22
RT STA 1721+66.75

EXISTING LEGEND

(1) EXISTING GROUND
(2) 9-6-9 PAVEMENT
(3) BITUMINOUS OVERLAY (9")
(4) BITUMINOUS SHOULDERS
(5) BIT BASE COURSE WIDENING (9")
(6) AGGREGATE SHOULDERS

PROPOSED LEGEND

(10) BIT CONC BIND CSE, SUPERPAVE, IL-19.0, N50 (THICK VAR)
(11) BIT CONC SURFACE CSE, SUPERPAVE, MIX "C", N50 1½"
(12) BITUMINOUS BASE COURSE SUPERPAVE 10"
(13) BITUMINOUS SHOULDERS SUPERPAVE (THICKNESS VARIES)
(14) PAINT PAVEMENT MARKING - 5"
(15) BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
(16) BIT CONC BASE COURSE WIDENING, SUPERPAVE 10"
(17) AGGREGATE SHOULDERS, TYPE B (6")
(18) EMBANKMENT (SEE BENCHING DETAIL ON MISC DETAILS SHT)
(19) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
(20) LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50 (¾")
(21) AGGREGATE SURFACE COURSE, TYPE B (6")

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

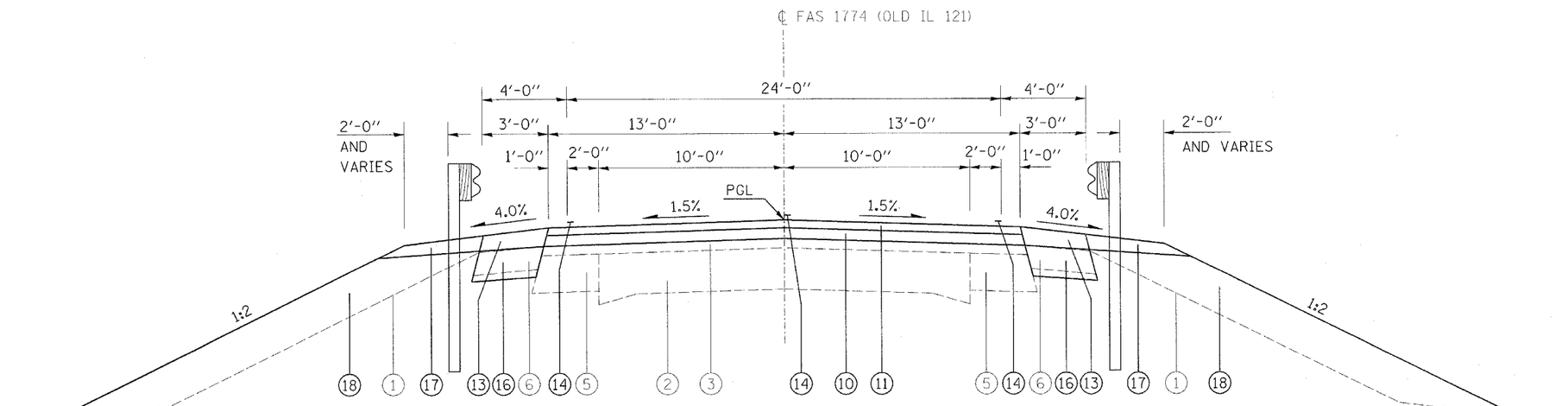
FAS 1774 (OLD IL 121)
Section: 113(B-5,B-6)
Logan County

SCALE: NOT DRAWN TO SCALE DRAWN BY TEC
DATE: CHECKED BY

PROJECT: d657102 FILE: Typicals.dgn

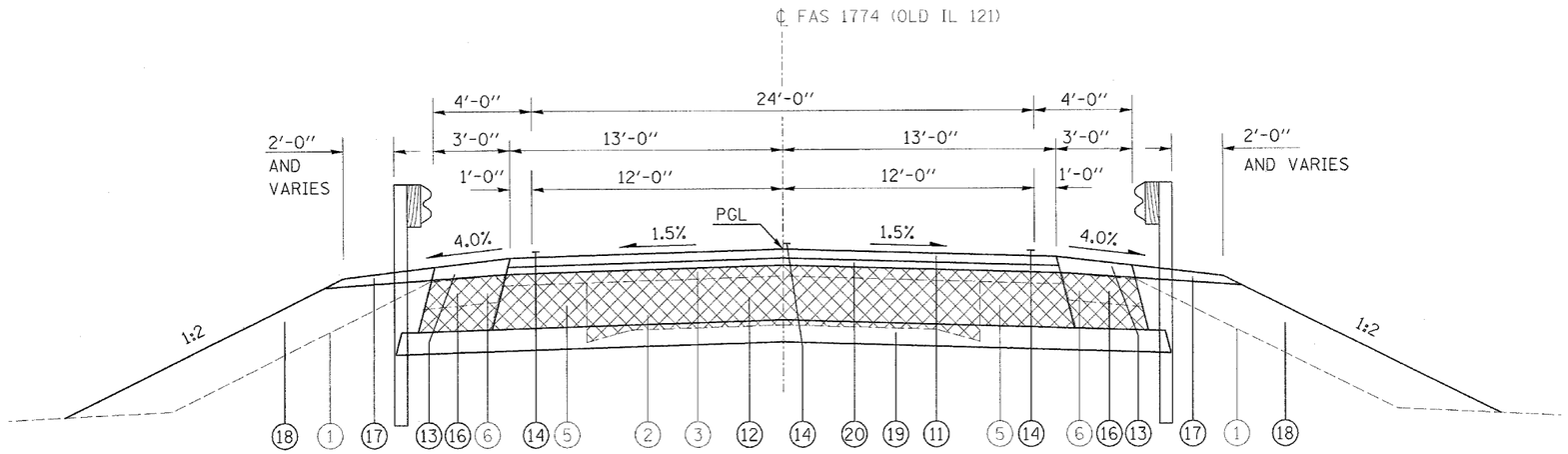
CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION #3

STA 1724+93.50 TO STA 1727+55.00



TYPICAL SECTION #4

STA 1727+55.00 TO 1728+19.00
(NEAR CULVERT)

EXISTING LEGEND

(1) EXISTING GROUND
(2) 9-6-9 PAVEMENT
(3) BITUMINOUS OVERLAY (9")
(4) BITUMINOUS SHOULDERS
(5) BIT BASE COURSE WIDENING (9")
(6) AGGREGATE SHOULDERS

PROPOSED LEGEND

(10) BIT CONC BIND CSE, SUPERPAVE, IL-19.0, N50 (THICK VAR)
(11) BIT CONC SURFACE CSE, SUPERPAVE, MIX "C", N50 1½"
(12) BITUMINOUS BASE COURSE SUPERPAVE 10"
(13) BITUMINOUS SHOULDERS SUPERPAVE (THICKNESS VARIES)
(14) PAINT PAVEMENT MARKING - 5"
(15) BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
(16) BIT CONC BASE COURSE WIDENING, SUPERPAVE 10"
(17) AGGREGATE SHOULDERS, TYPE B (6")
(18) EMBANKMENT (SEE BENCHING DETAIL ON MISC DETAILS SHT)
(19) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
(20) LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50 (¾")
(21) AGGREGATE SURFACE COURSE, TYPE B (6")

BRIDGE AND APPROACH PAVEMENT OMISSION
STA 1722+06.50 TO STA 1724+93.50

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

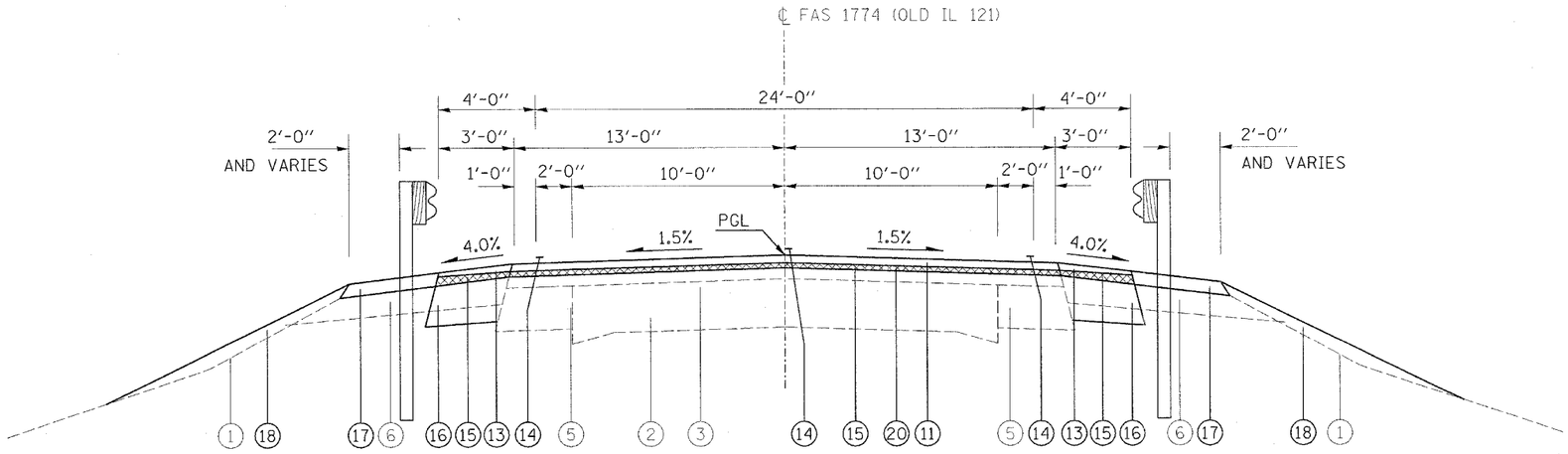
FAS 1774 (OLD IL 121)
Section: 113(B-5,B-6)
Logan County

SCALE: NOT DRAWN TO SCALE DRAWN BY TEC
DATE: CHECKED BY

PROJECT: d657102 FILE: Typicals.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



TYPICAL SECTION #5

STA 1728+19.00 TO 1730+22.10

BRIDGE AND APPROACH PAVEMENT OMISSION
STA 1722+06.50 TO STA 1724+93.50

EXISTING LEGEND

(1) EXISTING GROUND
(2) 9-6-9 PAVEMENT
(3) BITUMINOUS OVERLAY (9")
(4) BITUMINOUS SHOULDERS
(5) BIT BASE COURSE WIDENING (9")
(6) AGGREGATE SHOULDERS

PROPOSED LEGEND

(10) BIT CONC BIND CSE, SUPERPAVE, IL-19.0, N50 (THICK VAR)
(11) BIT CONC SURFACE CSE, SUPERPAVE, MIX "C", N50 1½"
(12) BITUMINOUS BASE COURSE SUPERPAVE 10"
(13) BITUMINOUS SHOULDERS SUPERPAVE (THICKNESS VARIES)
(14) PAINT PAVEMENT MARKING - 5"
(15) BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)
(16) BIT CONC BASE COURSE WIDENING, SUPERPAVE 10"
(17) AGGREGATE SHOULDERS, TYPE B (6")
(18) EMBANKMENT (SEE BENCHING DETAIL ON MISC DETAILS SHT)
(19) SUB-BASE GRANULAR MATERIAL, TYPE B, 6"
(20) LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50 (¾")
(21) AGGREGATE SURFACE COURSE, TYPE B (6")

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

FAS 1774 (OLD IL 121)
Section: 113(B-5,B-6)
Logan County

SCALE: NOT DRAWN TO SCALE DRAWN BY TEC
DATE: CHECKED BY

PROJECT: d657102 FILE: Typicals.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

EARTHWORK SCHEDULE

LOCATION			EARTH EXCAVATION	CHANNEL EXCAVATION	COMBINED EXCAVATION ADJUSTED FOR SHRINKAGE (25%)	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)
			CU YDS	CU YDS	CU YDS	CU YDS	CU YDS
ROADWAY							
STA 1724+64	TO	STA 1725+00				21.6	
STA 1725+00	TO	STA 1725+50				59.3	
STA 1725+50	TO	STA 1726+00				44.4	
STA 1726+00	TO	STA 1726+50				44.4	
STA 1726+50	TO	STA 1727+00				71.3	
STA 1727+00	TO	STA 1727+50				74.1	
STA 1727+50	TO	STA 1728+00	196.0		147.0	43.5	
STA 1728+00	TO	STA 1729+00				38.9	
STA 1729+00	TO	STA 1729+50				16.7	
STA 1729+50	TO	STA 1730+50				19.4	
STA 1730+50	TO	STA 1730+22				4.9	
			196.0		147.0	438.5	-291.5
CHANNEL							
STA 9+55	TO	STA 9+60	0.0	21.0	15.8		
STA 9+60	TO	STA 9+71	16.7	98.0	86.0		
STA 9+71	TO	STA 9+80	34.0	86.7	90.5		
STA 9+80	TO	STA 10+20	180.7	378.5	419.4		
STA 10+20	TO	STA 10+29	34.0	94.5	96.4		
STA 10+29	TO	STA 10+33	6.1	23.9	22.5		
			271.5	702.6	730.6		730.6
		TOTALS	468	703			
					EW BALANCE TOTAL		439.1

SEEDING RELATED ITEMS

LOCATION			AREA	TEMPORARY EROSION CONTROL SEEDING	NITROGEN	PHOSPHORUS	POTASSIUM	SEEDING, CLASS 3	EROSION CONTROL BLANKET
			ACRE	POUND	POUND	POUND	POUND	ACRE	SQ YD
STA 1721+70	TO	STA 1722+00	0.020	2.0	1.8	1.8	1.8	0.02	98.6
STA 1722+00	TO	STA 1723+00	0.073	7.3	6.6	6.6	6.6	0.07	354.5
STA 1723+00	TO	STA 1723+45	0.039	3.9	3.5	3.5	3.5	0.04	187.4
STA 1724+12	TO	STA 1725+00	0.048	4.8	4.4	4.4	4.4	0.05	234.2
STA 1725+00	TO	STA 1726+00	0.102	10.2	9.2	9.2	9.2	0.10	494.9
STA 1726+00	TO	STA 1727+00	0.104	10.4	9.4	9.4	9.4	0.10	504.7
		BRRP TOTAL		39	35	35	35	0.4	1874
STA 1727+00	TO	STA 1728+00	0.139	13.9	12.5	12.5	12.5	0.14	672.1
STA 1728+00	TO	STA 1729+00	0.133	13.3	12.0	12.0	12.0	0.13	643.0
STA 1729+00	TO	STA 1730+00	0.085	8.5	7.6	7.6	7.6	0.08	410.7
STA 1730+00	TO	STA 1730+22	0.019	1.9	1.7	1.7	1.7	0.02	90.7
		STP TOTAL		38	34	34	34	0.4	1817
TOTAL			0.763	77	69	69	69	0.8	3,691

AGGREGATE SURFACE COURSE, TYPE B

LOCATION	TON
LT STA 1721+59.22	16.6
RT STA 1721+66.75	13.7
	30

PRIME COAT

LOCATION			WIDTH	BITUMINOUS MATERIALS TON	AGGREGATE TON
STA 1720+88.00	TO	STA 1722+06.50	32.0'	0.16	0.8
STA 1724+93.50	TO	STA 1727+00.00	32.0'	0.28	1.5
		BRRP TOTAL		0.44	2
STA 1727+00.00	TO	STA 1730+22.10	32.0'	0.44	2.3
		STP TOTAL		0.44	3
		TOTAL		0.9	5

CONSTRUCTING TEST STRIP

LOCATION	EACH
SURFACE	1
BINDER	1
	2

EARTH EXCAVATION (WIDENING)

			CU YDS
LT STA 1724+99	TO	STA 1725+50	4.5
LT STA 1725+50	TO	STA 1726+00	4.5
LT STA 1726+00	TO	STA 1726+50	4.6
LT STA 1726+50	TO	STA 1727+00	4.4
RT STA 1724+59	TO	STA 1725+50	6.8
RT STA 1725+50	TO	STA 1726+00	3.9
RT STA 1726+00	TO	STA 1726+50	3.9
RT STA 1726+50	TO	STA 1727+00	3.8
		BRRP TOTAL	36
LT STA 1727+00	TO	STA 1727+55	4.7
LT STA 1728+19	TO	STA 1729+00	6.6
LT STA 1729+00	TO	STA 1729+50	4.3
LT STA 1729+50	TO	STA 1730+22	6.0
RT STA 1727+00	TO	STA 1727+50	4.1
RT STA 1727+50	TO	STA 1728+50	8.8
RT STA 1728+50	TO	STA 1729+00	4.4
RT STA 1729+00	TO	STA 1729+50	4.4
RT STA 1729+50	TO	STA 1730+22	6.0
		STP TOTAL	49
		TOTAL	85

PERIMETER EROSION BARRIER

LOCATION			FOOT
LT STA 1721+76	TO	STA 1723+32	191
LT STA 1724+31	TO	STA 1727+00	305
RT STA 1721+80	TO	STA 1723+32	188
RT STA 1724+31	TO	STA 1727+00	304
		BRRP TOTAL	988
LT STA 1727+00	TO	STA 1730+22	365
RT STA 1727+00	TO	STA 1730+22	350
		STP TOTAL	715
		TOTAL	1,703

SUB-BASE GRANULAR MATERIAL, TYPE B 6"

LOCATION			WIDTH	SQ YD
LT STA 1727+55	TO	STA 1728+19	17.5'	124.4
RT STA 1727+55	TO	STA 1728+19	17.5'	124.4
		TOTAL		249

BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH)

LOCATION				WIDTH	SQ YD
STA 1720+88.00	TO	STA 1722+06.50	PAV'T	26.00'	342.3
STA 1720+88.00	TO	STA 1721+40.60	SHLDR LT	3.00'	17.5
STA 1721+40.60	TO	STA 1721+84.44	SHLDR LT	5.50'	26.8
STA 1721+84.44	TO	STA 1722+06.50	SHLDR LT	3.00'	7.4
STA 1720+88.00	TO	STA 1721+48.91	SHLDR RT	3.00'	20.3
STA 1721+48.91	TO	STA 1721+84.44	SHLDR RT	5.50'	21.7
STA 1721+84.44	TO	STA 1722+06.50	SHLDR RT	3.00'	7.4
STA 1724+93.50	TO	STA 1725+03.64	PAV'T	26.00'	29.3
STA 1724+93.50	TO	STA 1725+03.64	SHLDR LT	3.00'	3.4
STA 1724+93.50	TO	STA 1725+03.64	SHLDR RT	3.00'	3.4
				BRRP TOTAL	479
STA 1728+19.00	TO	STA 1730+22.10	PAV'T	26.00'	586.7
STA 1728+19.00	TO	STA 1730+22.10	SHLDR LT	3.00'	67.7
STA 1728+19.00	TO	STA 1730+22.10	SHLDR RT	3.00'	67.7
				STP TOTAL	722
				TOTAL	1,201

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

FAS 1774 (OLD IL 121)
SECTION 113(B-5, B-6)
LOGAN COUNTY

SCALE: VERT. HORIZ.
DRAWN BY
DATE
CHECKED BY

PLOT DATE = 9/2/2005
FILE NAME = c:\projects\d657102\schedules.dgn
PLOT SCALE = 49.9999 ' / IN.

PROJECT: d657102 FILE: Schedules.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BRIDGE APPROACH PAVEMENT

LOCATION			WIDTH	SQ YD
STA 1722+06.50	TO	STA 1722+36.50	33.33′	111
STA 1724+63.50	TO	STA 1724+93.50	33.33′	111
		TOTAL		222

BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)

LOCATION			WIDTH	SQ YD
STA 1722+00.50	TO	STA 1722+06.50	6.00′	21.3
STA 1724+93.50	TO	STA 1724+99.50	6.00′	21.3
		TOTAL		43

BITUMINOUS SHOULDERS SUPERPAVE

LOCATION			THICKNESS (INCH)	WIDTH (FOOT)	TON
LT STA 1720+88.0	TO	STA 1721+40.60	2.25	3.00′	2.2
LT STA 1721+40.6	TO	STA 1721+75.58	2.25	5.50′	2.7
LT STA 1721+75.5	TO	STA 1722+06.50	2.25 TO 4.75	3.00′	2.0
LT STA 1724+93.5	TO	STA 1726+50.00	6.00	3.00′	17.5
LT STA 1726+50.0	TO	STA 1727+00.00	6.00 TO 5.00	3.00′	5.1
RT STA 1720+88.0	TO	STA 1721+48.91	2.25	3.00′	2.6
RT STA 1721+48.9	TO	STA 1721+75.58	2.25	5.50′	2.1
RT STA 1721+75.5	TO	STA 1722+06.50	2.25 TO 4.75	3.00′	2.0
RT STA 1724+93.5	TO	STA 1726+50.00	6.00	3.00′	17.5
RT STA 1726+50.0	TO	STA 1727+00.00	6.00 TO 5.00	3.00′	5.1
		BRRP TOTAL			59
LT STA 1727+00.0	TO	STA 1728+19.00	5.00 TO 2.25	3.00′	8.1
LT STA 1728+19.0	TO	STA 1730+22.10	2.25	3.00′	8.5
RT STA 1727+00.0	TO	STA 1728+19.00	5.00 TO 2.25	3.00′	8.1
RT STA 1728+19.0	TO	STA 1730+22.10	2.25	3.00′	8.5
		STP TOTAL			33
		TOTAL			92

REMOVE AND RE-ERECT STEEL PLATE BEAM GUARD RAIL, TYPE A

LOCATION			FOOT
REMOVE			
LT STA 1724+94.15	TO	STA 1727+75.87	281.7
LT STA 1727+98.87	TO	STA 1729+72.10	173.2
RT STA 1724+94.15	TO	STA 1727+75.87	281.7
RT STA 1727+98.87	TO	STA 1729+59.89	161.0
		REMOVAL TOTAL	898
RE-ERECT			
LT STA 1721+99.85	TO	STA 1722+05.85	6.0
LT STA 1724+94.15	TO	STA 1727+00.00	205.9
RT STA 1724+94.15	TO	STA 1727+00.00	205.9
		BRRP RE-ERECT TOTAL	418
LT STA 1727+00.00	TO	STA 1727+75.87	75.9
LT STA 1727+98.87	TO	STA 1729+69.15	170.3
RT STA 1727+00.00	TO	STA 1727+75.87	75.9
RT STA 1727+98.87	TO	STA 1729+56.65	157.8
		STP RE-ERECT TOTAL	480
		RE-ERECT TOTAL	898

TEMPORARY RAMP

LOCATION			WIDTH	SQ YD
STA 1720+88.00	TO	STA 1720+95.50	32.0′	27
STA 1730+14.60	TO	STA 1730+22.10	26.0′	22
		TOTAL		49

PAVEMENT REMOVAL

LOCATION				WIDTH	SQ YD
STA 1722+00.50	TO	STA 1722+24.59	STAGE 1	19.50′	52.2
STA 1722+24.59	TO	STA 1722+40.59	STAGE 1	8.00′	14.2
STA 1724+59.41	TO	STA 1724+75.41	STAGE 1	14.50′	25.8
STA 1724+75.41	TO	STA 1724+99.50	STAGE 1	3.00′	8.0
STA 1722+00.50	TO	STA 1722+24.59	STAGE 2	16.90′	45.2
STA 1722+24.59	TO	STA 1722+40.59	STAGE 2	8.40′	14.9
STA 1724+59.41	TO	STA 1724+75.41	STAGE 2	6.00′	10.7
STA 1724+75.41	TO	STA 1724+99.50	STAGE 2	14.50′	38.8
				BRRP TOTAL	210
STA 1727+55.00	TO	STA 1728+19.00	STAGE 1	15.30′	108.8
STA 1727+55.00	TO	STA 1728+19.00	STAGE 2	13.70′	97.4
				STP TOTAL	206
				TOTAL	416

PIPE CULVERTS, TYPE 2, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE 18″

LOCATION	FOOT
LT STA 1727+93.69	26
TOTAL	26

TRAFFIC BARRIER TERMINAL, TYPE 6

LOCATION			EACH
LT STA 1722+05.85	TO	STA 1722+39.00	1
LT STA 1724+61.00	TO	STA 1724+94.15	1
RT STA 1722+05.85	TO	STA 1722+39.00	1
RT STA 1724+61.00	TO	STA 1724+94.15	1
		TOTAL	4

STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS)

LOCATION			FOOT
LT STA 1721+71.33	TO	STA 1721+99.85	37.5
RT STA 1721+77.00	TO	STA 1722+05.85	37.5
		TOTAL	75

TRAFFIC CONTROL AND PROTECTION

STANDARD 701306	1 L SUM
STANDARD 701326	1 L SUM
STANDARD 701321 SPECIAL	1 EACH

MOBILIZATION

LOCATION	L SUM
JOBSITE	1
TOTAL	1

TRAFFIC CONTROL SURVEILLANCE

LOCATION	CAL DA
JOBSITE	5
	5

WORK ZONE PAVEMENT MARKING REMOVAL

LOCATION			SQ FT
STA 1720+88.00	TO	STA 1727+00.00	26
STA 1727+00.00	TO	STA 1730+22.00	13
		TOTAL	39

AGGREGATE SHOULDERS, TYPE B

LOCATION			WIDTH (FOOT)	TON
LT STA 1721+74.82	TO	STA 1722+36.50	2.00′	9.4
LT STA 1724+63.50	TO	STA 1727+00.00	3.33′	59.8
RT STA 1721+84.73	TO	STA 1722+36.50	2.00′	7.9
RT STA 1724+63.50	TO	STA 1727+00.00	3.33′	59.8
		BRRP TOTAL		137
LT STA 1727+00.00	TO	STA 1730+22.10	3.33′	81.4
RT STA 1727+00.00	TO	STA 1730+22.10	3.33′	81.4
		STP TOTAL		163
		TOTAL		300

REMOVE AND RE-ERECT RAIL ELEMENT OF EXISTING GUARD RAIL

LOCATION			FOOT
RT STA 1724+59.41	TO	STA 1727+00.00	240.6
		BRRP TOTAL	241
RT STA 1727+00.00	TO	STA 1730+09.89	309.9
		STP TOTAL	310
		TOTAL	551

ENGINEER'S FIELD OFFICE, TYPE A

LOCATION	CAL MO
JOBSITE	10
TOTAL	10

TEMPORARY BRIDGE TRAFFIC SIGNALS

LOCATION	EACH
JOBSITE	1
TOTAL	1

SHORT-TERM PAVEMENT MARKING

LOCATION			FOOT
STA 1720+88.00	TO	STA 1727+00.00	3 APPLICATIONS 184
STA 1727+00.00	TO	STA 1730+22.00	3 APPLICATIONS 97
		TOTAL	281

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

FAS 1774 (OLD IL 121)
SECTION 113(B-5, B-6)
LOGAN COUNTY

SCALE: VERT. HORIZ. DRAWN BY

DATE CHECKED BY

PLOT DATE = 9/13/2005
FILE NAME = c:\projects\d657102\schedules.dgn
PLOT SCALE = 49.9999 ' / IN.

PROJECT: d657102 FILE: Schedules.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	10
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

TEMPORARY CONCRETE BARRIER

LOCATION			FOOT
STA 1718+90	TO	STA 1727+00	810
STA 1727+00	TO	STA 1729+50	250
		TOTAL	1,060

RELOCATE TEMPORARY CONCRETE BARRIER

LOCATION			FOOT
STA 1718+90	TO	STA 1727+00	810
STA 1727+00	TO	STA 1729+50	250
		TOTAL	1,060

GUARDRAIL MARKERS, TYPE A

LOCATION			EACH
LT STA 1721+94	TO	STA 1722+36	1
LT STA 1724+64	TO	STA 1727+00	3
RT STA 1721+94	TO	STA 1722+36	1
RT STA 1724+64	TO	STA 1727+00	3
		BRRP TOTAL	8
LT STA 1727+00	TO	STA 1730+22	5
RT STA 1727+00	TO	STA 1730+22	5
		STP TOTAL	10
		TOTAL	18

BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", N50

LOCATION			WIDTH (FOOT)	TON
STA 1720+88.00	TO	STA 1722+06.50	26.00	29
STA 1724+93.50	TO	STA 1727+00.00	26.00	50
		BRRP TOTAL		79
STA 1727+00.00	TO	STA 1730+22.10	26.00	78
		STP TOTAL		78
		TOTAL		157

LEVELING BINDER (MACHINE METHOD), SUPERPAVE N50

LOCATION			WIDTH (FOOT)	TON
STA 1720+88.00	TO	STA 1721+75.58	26.00	11
STA 1727+65.00	TO	STA 1730+22.10	26.00	31
		TOTAL		42

CONSTRUCTION LAYOUT

LOCATION	L SUM
NORTH OF STA 1727+00 WITHIN PROJECT LIMITS	0.8
SOUTH OF STA 1727+00 WITHIN PROJECT LIMITS	0.2
TOTAL	1

PAVEMENT MARKING REMOVAL

LOCATION			SQ FT
LT STA 1720+88.00	TO	STA 1727+00.00	255
RT STA 1720+88.00	TO	STA 1727+00.00	255
		BRRP TOTAL	510
LT STA 1727+00.00	TO	STA 1730+22.00	134
RT STA 1727+00.00	TO	STA 1730+22.00	134
		STP TOTAL	268
		TOTAL	778

BITUMINOUS CONCRETE BASE COURSE WIDENING, SUPERPAVE 10 INCH

LOCATION			WIDTH (FOOT)	SQ YD
RT STA 1724+59.10	TO	STA 1727+00.00	3.00	80.3
LT STA 1724+99.50	TO	STA 1727+00.00	3.00	66.8
		BRRP TOTAL		147
RT STA 1727+00.00	TO	STA 1730+22.10	3.00	107.4
LT STA 1727+00.00	TO	STA 1727+55.00	3.00	18.3
LT STA 1728+19.00	TO	STA 1730+22.00	3.00	67.7
		STP TOTAL		193
		TOTAL		340

BITUMINOUS CONCRETE BINDER COURSE, SUPERPAVE, IL-19.0, N50

LOCATION			AVERAGE THICK (INCH)	WIDTH (FOOT)	TON
STA 1721+75.58	TO	STA 1722+00.50	0.75 TO 3.25	26.00'	8.1
STA 1724+99.50	TO	STA 1725+25.00	4.25 TO 3.50	26.00'	16.0
STA 1725+25.00	TO	STA 1725+50.00	3.50 TO 3.25	26.00'	13.7
STA 1725+50.00	TO	STA 1725+75.00	3.25 TO 3.25	26.00'	13.1
STA 1725+75.00	TO	STA 1726+00.00	3.25 TO 3.50	26.00'	13.7
STA 1726+00.00	TO	STA 1726+25.00	3.50 TO 3.75	26.00'	14.7
STA 1726+25.00	TO	STA 1726+50.00	3.75 TO 3.75	26.00'	15.2
STA 1726+50.00	TO	STA 1726+75.00	3.75 TO 3.50	26.00'	14.7
STA 1726+75.00	TO	STA 1727+00.00	3.50 TO 3.25	26.00'	13.7
		BRRP TOTAL			123
STA 1727+00.00	TO	STA 1727+25.00	3.25 TO 2.75	26.00'	12.1
STA 1727+25.00	TO	STA 1727+50.00	2.75 TO 1.75	26.00'	9.1
STA 1727+50.00	TO	STA 1727+65.00	1.75 TO 0.75	26.00'	3.0
		STP TOTAL			24
		TOTAL			147

PAINT PAVEMENT MARKING - LINE 5"

LOCATION	EDGE LINES WHITE FOOT	SKIP-DASH YELLOW FOOT	COMBINED FOOT
STA 1720+88.00 TO STA 1727+00.00	1224	153	1,377
STA 1727+00.00 TO STA 1730+22.00	644	81	725
TOTAL			2,102

REMOVE AND RE-ERECT TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL, TANGENT

LOCATION			EACH
REMOVE			
LT STA 1729+72.10	TO	STA 1730+22.10	1
RT STA 1729+59.89	TO	STA 1730+09.89	1
		REMOVAL TOTAL	2
RE-ERECT			
LT STA 1729+69.15	TO	STA 1730+19.15	1
RT STA 1729+56.65	TO	STA 1730+06.65	1
		RE-ERECT TOTAL	2

RAISED REFLECTIVE PAVEMENT MARKER REMOVAL

LOCATION			EACH
STA 1720+88.00	TO	STA 1722+36.50	3
STA 1724+63.50	TO	STA 1727+00.00	3
		BRRP TOTAL	6
STA 1727+00.00	TO	STA 1730+22.00	6
		STP TOTAL	6
		TOTAL	12

GRANULAR CULVERT BACKFILL

LOCATION			CU YD
STA 1727+55.00	TO	STA 1728+19.00	537
		TOTAL	537

IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3

LOCATION	EACH
STA 1718+90	1
STA 1729+50	1
TOTAL	2

IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE), TEST LEVEL 3

LOCATION	EACH
STA 1718+90	1
STA 1729+50	1
TOTAL	2

BITUMINOUS BASE COURSE SUPERPAVE 10"

LOCATION			SQ YD
STA 1727+55.00	TO	STA 1728+19.00	227.6
		TOTAL	228

GUARDRAIL REMOVAL

LOCATION			FOOT
LT STA 1721+78.0	TO	STA 1722+40.59	62.5
LT STA 1724+59.41	TO	STA 1724+94.15	34.7
RT STA 1721+84.61	TO	STA 1722+40.59	56.0
RT STA 1724+59.41	TO	STA 1724+94.15	34.7
		BRRP TOTAL	188.0
LT STA 1727+75.8	TO	STA 1727+98.87	23.0
RT STA 1727+75.8	TO	STA 1727+98.87	23.0
		STP TOTAL	46.0
		TOTAL	234

PIPE CULVERT REMOVAL

LOCATION	FOOT
LT STA 1727+93.69	26
TOTAL	26

APPROACH SLAB REMOVAL

LOCATION				WIDTH	SQ YD
STA 1722+24.59	TO	STA 1722+40.59	STAGE 1	11.50'	20.4
STA 1724+59.41	TO	STA 1724+75.41	STAGE 1	8.50'	15.1
STA 1722+24.59	TO	STA 1722+40.59	STAGE 2	11.50'	20.4
STA 1724+59.41	TO	STA 1724+75.41	STAGE 2	8.50'	15.1
			TOTAL		71

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

FAS 1774 (OLD IL 121)
SECTION 113(B-5, B-6)
LOGAN COUNTY

SCALE: VERT. HORIZ.
DRAWN BY
DATE
CHECKED BY

PLOT DATE = 5/2/2005
FILE NAME = c:\projects\d657102\schedules.dgn
PLOT SCALE = 45.9999 ' / IN.

PROJECT: d657102 FILE: Schedules.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	11
STA. 1719+80.00 TO STA. 1726+20.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
CADD FILE NAME
NOTE BOOK
NO.
BY
DATE

SW 1/4, SEC 24, T20N, R3W, 3rd PM

LOGAN COUNTY PARKS & TRAILS FOUNDATION

LEVEE

LOGAN CO PARK & TRAIL FOUNDATION

PR STEEL PLATE BEAM GUARDRAIL (SHORT RADIUS) SEE DETAIL

PROJECT BEGINS STA 1720+88

+59.22 F.E.

EX BIT SHLDR

BK ABUT STA 1722+36.50

STA 1723+79.04 (FAS 1774) = STA 10+00.00 (KICKAPOO CR)

℄ KICKAPOO CREEK

LEVEE

LOGAN COUNTY PARKS & TRAILS FOUNDATION

PR BIT CONC BASE CSE WID, SUPERPAVE 10"
PR BITUMINOUS SHOULDERS SUPERPAVE

BK ABUT STA 1724+63.50

KICKAPOO CREEK

EX ROW

CONST LIMIT

3'-0"

26'-0" PIT

CONC

1720+00 1721 1722 1723 10+00 1724 1725+00 ℄ FAS 1774 (OLD IL 121) 1726

3'-0"

MATCHLINE STA 1726+20

SPEED ZONE AHEAD 45 MPH

EX ROW

PR BITUMINOUS SHOULDERS SUPERPAVE

AGGREGATE SURFACE COURSE, TYPE B

+66.75 F.E.

GATE POST

GATE POST

KICKAPOO CREEK

PRIVATE PROPERTY

STA 1723+50.00 PR SN 054-0505
FOUR SPAN WIDE FLANGE BRIDGE SUPPORTED ON INTEGAL ABUTMENTS AND PILE BENT PIERS. 32'-0" ROADWAY, 227'-0" BK-BK ABUTMENTS, 0° SKEW

EX SN 054-0019
STA 1723+50.00 FOUR SIMPLE SPAN PPC DECK BEAM BRIDGE 217'-5 3/4" BK-BK ABUTMENTS, 33'-0" OUT TO OUT OF BRIDGE DECK TO BE REMOVED UTILIZING STAGE CONSTRUCTION.

BRAINARD'S BRANCH

PR BRIDGE APPROACH PAVEMENT STD 420401 (TYP)

PR TRAFFIC BARRIER TERMINAL, TYPE 6 (TYP EACH CORNER)

- PAVEMENT REMOVAL

- BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH) INCLUDES BUTT JOINT (SEE MISC DETAIL SHEET)

CARL H SCHWANTZ

SE 1/4, SEC 23, T20N, R3W, 3rd PM

CARL H SCHWANTZ

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
STRUCTURE NO(S).(IF ANY)
NOTE BOOK
NO.
BY
DATE

575 570 565 560 555 550 545 540

569.59

+0.00%

+0.00%

PR PGL OLD IL 121

EX PGL OLD IL 121

PROP SN 054-0505

H.W. Elev. 562.3

200.00' v.c.

- EARTH EXCAVATION
- CHANNEL EXCAVATION
- STONE RIPRAP, CLASS A5

1720+00	1720+50	1721+00	1721+50	1722+00	1722+50	1723+00	1723+50	1724+00	1724+50	1725+00	1725+50	1726+00
569.54	569.56	569.60	569.60	569.59 569.59	569.59 569.59	569.55 569.59	569.48 569.59	569.24 569.59	569.06 569.59	569.04 569.59	569.10 569.59	569.11 569.59
569.10 569.59	569.10 569.59	569.14 569.59	569.11 569.59	569.09 569.59	569.07 569.59	569.08 569.59	569.15 569.59	569.20 569.59	569.22 569.59	569.21 569.58	569.14 569.53	

PROJECT: d657102 FILE: Sheets20.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	12
STA. 1726+20.00 TO STA. 1736+60.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

SW 1/4, SEC 24, T20N, R3W, 3rd PM

LOGAN COUNTY PARKS & TRAILS FOUNDATION

STA 1727+87.37
PROPOSED SN 054-2506
PROPOSED DOUBLE BOX CULVERT
10' (W) x 12' (H) x 51' (L)
WITH DROP STRUCTURE

TEMPORARY EASEMENT

TE STA 1727+00.00
OFFSET 40.00' & 70.00'

TE STA 1728+75.00
OFFSET 40.00' & 70.00'

PIPE CULVERTS, TYPE 2,
COR STEEL OR ALUM CULVERT
PIPE 18" TO BE INSTALLED
WITH EXISTING FLAP GATE

PIPE CULVERT REMOVAL

EX SN 054-2013

PR BIT CONC BASE CSE WID, SUPERPAVE 10"
PR BITUMINOUS SHOULDERS SUPERPAVE

PARK ENT.
DIRT

LOGAN CO
PARK & TRAIL
FOUNDATION

EX ROW
CONST LIMIT

PROJECT ENDS
STA 1730+22

MATCHLINE STA 1726+20

PR BIT BASE COURSE SUPERPAVE 10"

3'-0"
26'-0"
3'-0"

℄ FAS 1774 (OLD IL 121)

1727 1728 1729 1730+00 1731 1732

OLD IL 121 BIT.

SPEED LIMIT 45 MPH

EX ROW
CONST LIMIT
BRRP FUNDS STP FUNDS
PR ROW

LINCOLN
15400

BRAINARD'S BRANCH

PR STEEL PLATE BEAM GUARD RAIL,
ATTACHED TO STRUCTURES

CARL H SCHWANTZ

ROW STA 1727+55.00
OFFSET 45.00' & 64.00'

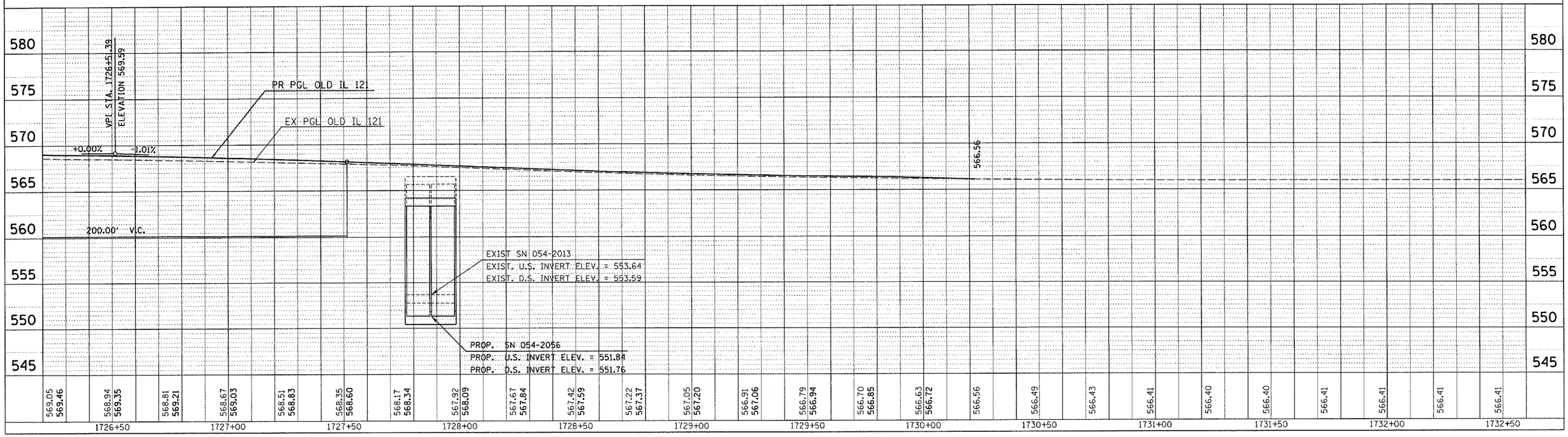
ROW STA 1728+20.00
OFFSET 44.00' & 64.00'

SE 1/4, SEC 23, T20N, R3W, 3rd PM

- PAVEMENT REMOVAL
- BITUMINOUS SURFACE REMOVAL (VARIABLE DEPTH) INCLUDES BUTT JOINT (SEE MISC DETAIL SHEET)

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
BY
DATE
NOTE BOOK
NO.
CADD FILE NAME

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
BY
DATE
NOTE BOOK
NO.
STRUCTURE NO'S/ATNS SHEET NO



PROJECT: d657102 FILE: Sheets20.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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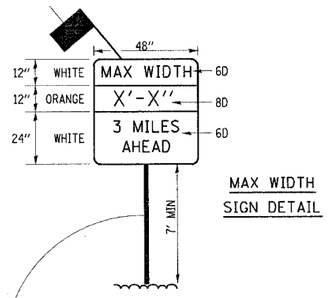
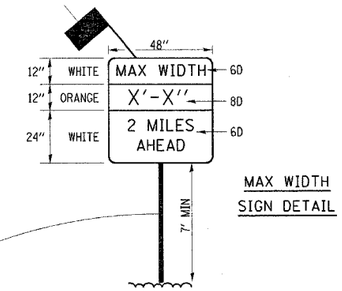
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



MAX WIDTH SIGN DETAIL



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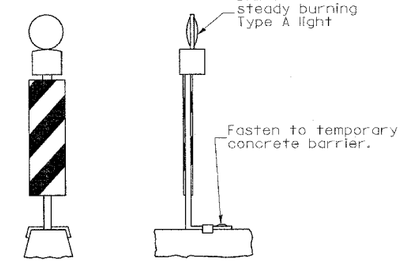
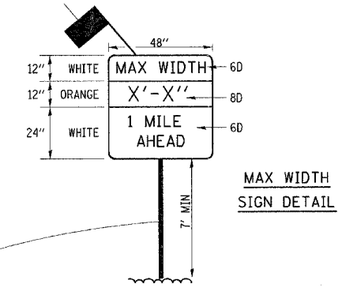


VERTICAL PANEL DETAIL



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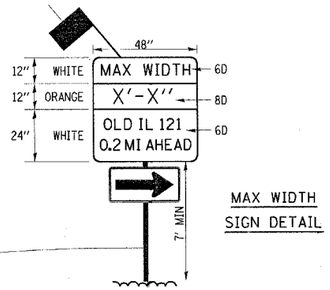

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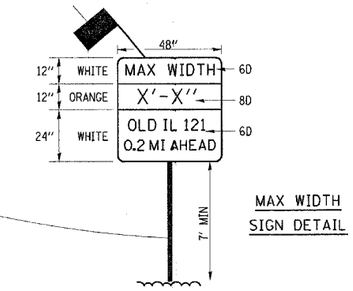

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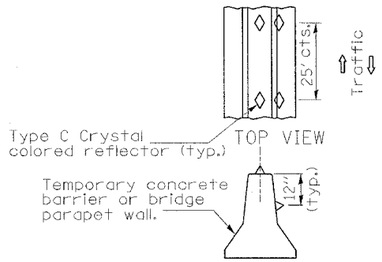


BARRIER WALL REFLECTORS DETAIL

GENERAL NOTES

This Standard is used where, at any time any vehicle, equipment, workers, or their activities will encroach on one lane of a bridge. Traffic signals and a positive barrier are required.

Temporary concrete barrier shall be according to Standard 704001.

Bi-directional lights shall be used at night along the centerline where the work area is seperated from the travel lane using barricades or drums. Monodirectional lights shall be used at night on all other barricades or drums.

Existing or temporary pavement marking shall be on both sides of the open lane from stop bar to stop bar.

Actual Max Widths are to be measured by the Engineer after temporary concrete barrier wall is placed for Stage 1. Width shall be remeasured and signs updated for Stage 2.

Highway Standard 701321 shall be referenced for additional information.

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

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGES OF CONSTRUCTION AND TRAFFIC CONTROL

FAS 1774 (OLD IL 121)
Section: 113(B-5,B-6)
Logan County

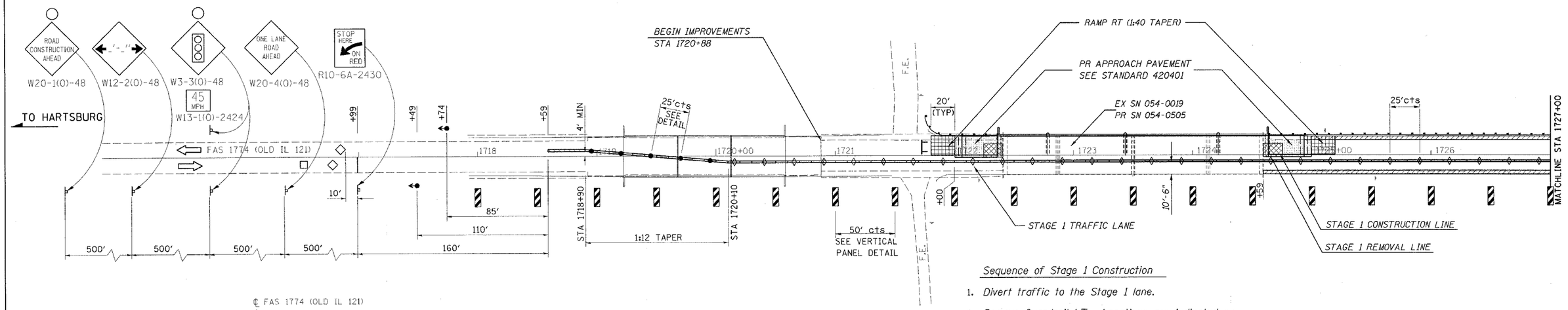
SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

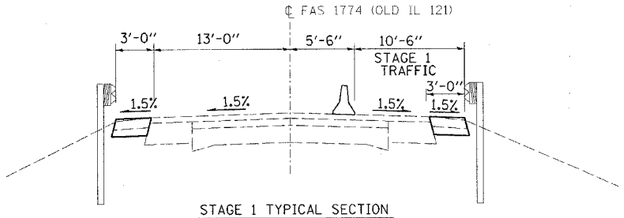
PLOT DATE = 9/2/2005
FILE NAME = c:\projects\d0572\d572k1stage.dgn
PLOT SCALE = 48.0000 ' / IN.
USER NAME = corke

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	14
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STAGE 1 TRAFFIC CONTROL





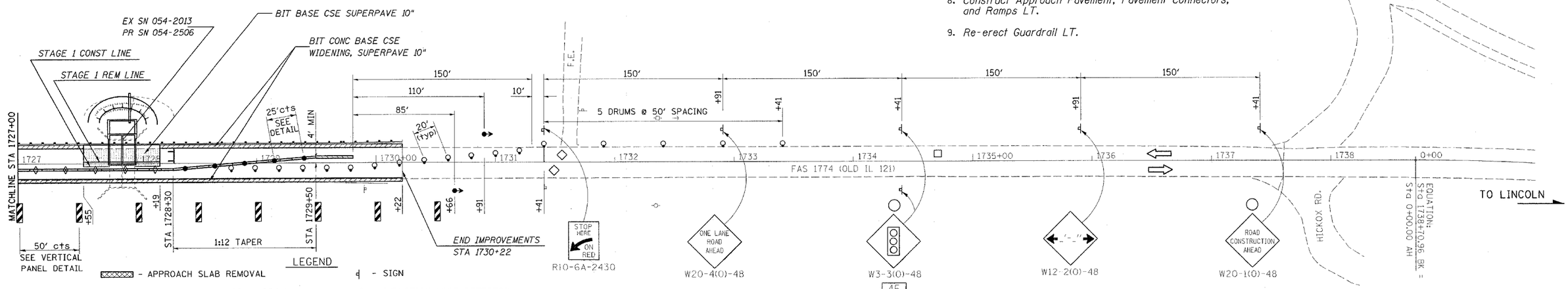
STAGE 1 TYPICAL SECTION
(LOOKING SOUTH)

Preliminary Stage

1. Set up traffic control as per TC&P 701326.
2. Remove rail element of Guardrail RT.
3. Construct Bituminous Base Course Widening RT.
4. Re-erect rail element of Guardrail RT.
5. Install temporary bridge traffic signals, temporary concrete barrier, and impact attenuators as per staging plan sheets and TC&P 701321 including removal of conflicting pavement markings.

Sequence of Stage 1 Construction

1. Divert traffic to the Stage 1 lane.
2. Remove Guardrail LT. Locations are indicated on schedule of quantities.
3. Remove Pavement and Approach Slab LT. Locations are indicated on schedule of quantities.
4. Install Temporary Sheet Piling for Bridge and Temporary Soil Retension System for Box Culvert.
5. Remove and Replace Structures LT.
6. Construct Earthwork LT.
7. Construct Bituminous Base Course and Bituminous Base Course Widening LT.
8. Construct Approach Pavement, Pavement Connectors, and Ramps LT.
9. Re-erect Guardrail LT.



LEGEND

- APPROACH SLAB REMOVAL
- IMPACT ATTENUATOR, NARROW
- PAVEMENT REMOVAL
- TEMPORARY BARRIER WALL
- TEMPORARY RAMP
- BIT CONC BSE CSE WID, SP 10"
- TEMPORARY SOIL RETENTION SYSTEM
- DOUBLE VERTICAL PANEL
- SIGN
- INDUCTION LOOP DETECTOR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- DRUM WITH STEADY BURNING LIGHT
- 24" STOP BAR
- TYPE III BARRICADES
- TYPE C BIDIRECTIONAL REFLECTOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE 1 TRAFFIC CONTROL
STANDARD 701321 (SPECIAL)

FAS 1774 (OLD IL 121)
Section: 113(B-5,B-6)
Logan County

SCALE: 1" = 40'
DRAWN BY
DATE
CHECKED BY

PLOT DATE = 9/2/2025
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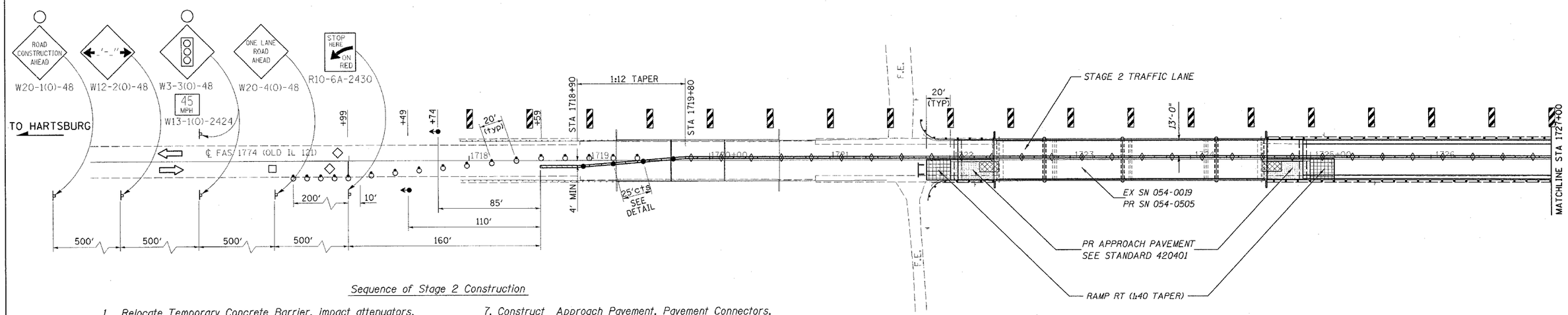
USER NAME = cooke

PROJECT: d657102 FILE: stage.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	15
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

STAGE 2 TRAFFIC CONTROL

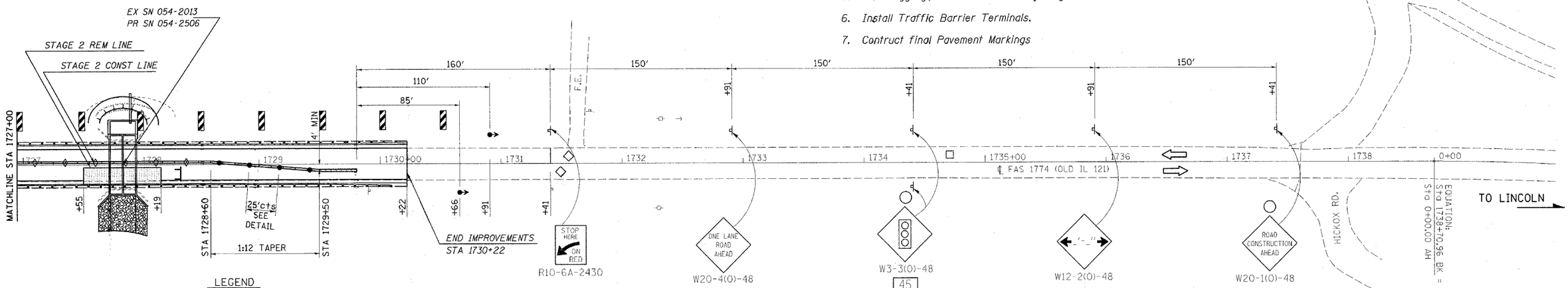


Sequence of Stage 2 Construction

1. Relocate Temporary Concrete Barrier, impact attenuators, and conflicting pavement markings.
2. Divert traffic to Stage 2 Lane.
3. Remove Guardrail RT. Locations are indicated the staging plan sheets and the schedule of quantities.
4. Remove Pavement and Approach Slab RT. Locations are indicated the staging plan sheets and the schedule of quantities.
5. Remove and Replace Structures RT.
6. Construct Bituminous Base Course RT at box culvert.
7. Construct Approach Pavement, Pavement Connectors, and Ramps RT.
8. Construct Earthwork and Riprap RT.
9. Replace Guardrail RT.
10. Remove Temporary Concrete Barrier, Temporary traffic bridge traffic signals, Impact attenuators, and other associated TC&P 701321 (SPECIAL) items.
11. Remove conflicting pavement markings and open roadway to two-way traffic.

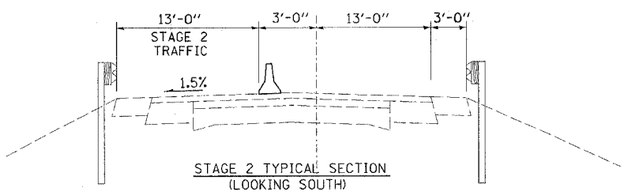
Final Phase

1. Set traffic control as per TC&P 701306.
2. Mill roadway. Locations are indicated the typical sections and the schedule of quantities.
3. Place binder course to establish profile as indicated on the plan and profile sheets.
4. Place leveling binder and surface course.
5. Place aggregate shoulders and adjust guardrail as needed.
6. Install Traffic Barrier Terminals.
7. Contruct final Pavement Markings



LEGEND

- APPROACH SLAB REMOVAL
- IMPACT ATTENUATOR, NARROW
- PAVEMENT REMOVAL
- TEMPORARY BARRIER WALL
- TEMPORARY RAMP
- BIT CONC BSE CSE WID, SP 10"
- TEMPORARY SOIL RETENTION SYSTEM
- DOUBLE VERTICAL PANEL
- SIGN
- INDUCTION LOOP DETECTOR
- TEMPORARY BRIDGE TRAFFIC SIGNALS
- DRUM WITH STEADY BURNING LIGHT
- 24" STOP BAR
- TYPE III BARRICADES
- TYPE C BIDIRECTIONAL REFLECTOR
- STEADY BURNING LIGHTS AND DOUBLE VERTICAL PANELS



STAGE 2 TYPICAL SECTION
(LOOKING SOUTH)

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGE 2 TRAFFIC CONTROL
STANDARD 701321 (SPECIAL)
FAS 1774 (OLD IL 121)
Section: 113(B-5,B-6)
Logan County

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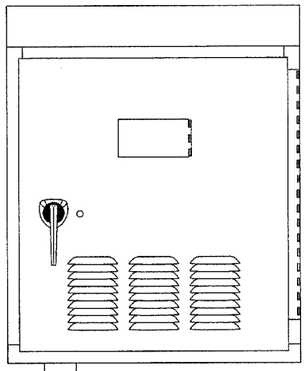
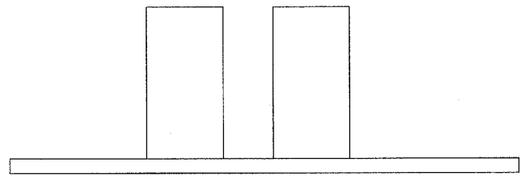
CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	16
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



Temporary Controller Cabinet

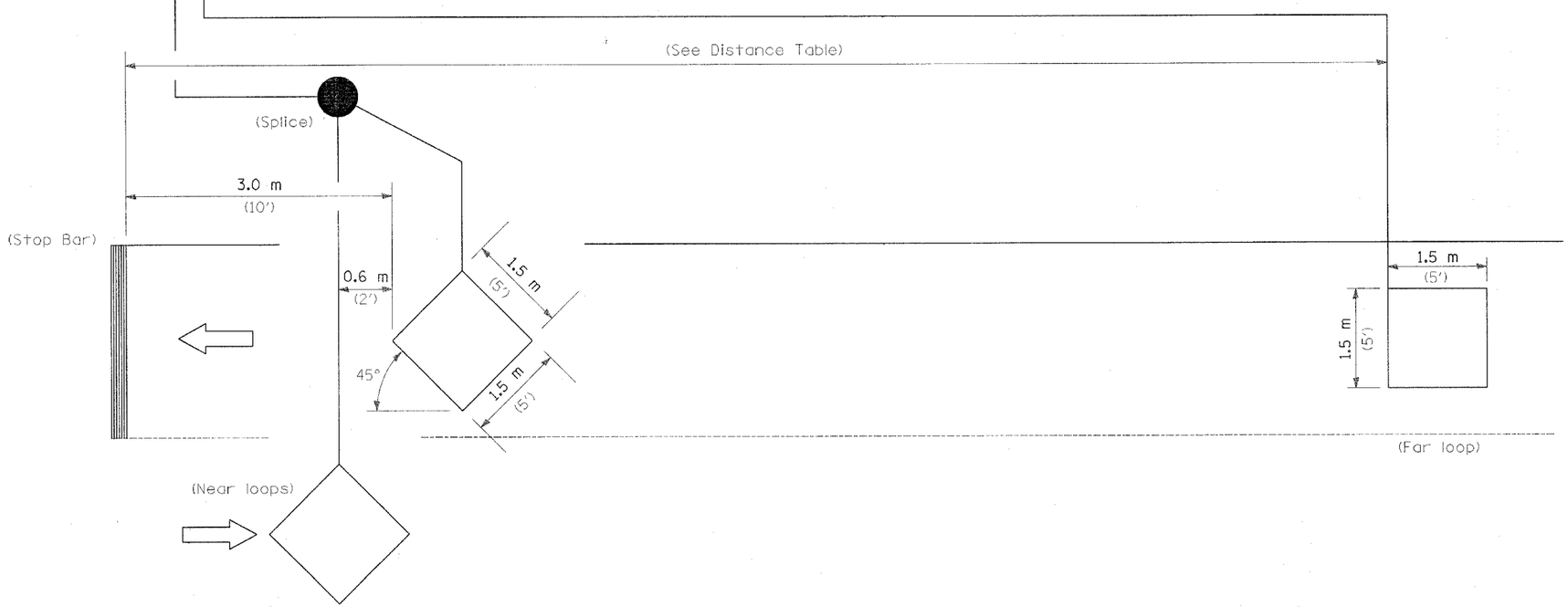
DETECTOR AMPLIFIER NOTES



AMP 1: DELAY = 8 SECONDS
DELAY SHALL BE INHIBITED DURING GREEN

AMP 2: NO DELAY

FAR LOOP DISTANCE TABLE	
ADVISORY SPEED (MPH)	DISTANCE FROM STOP BAR (FT.)
30 OR LESS	220
35	260
40	300
45	330
50	370
55	400



NOTE: All loops centered in lane.

INDUCTION LOOP DETECTOR

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY BRIDGE TRAFFIC SIGNAL LOOP PLACEMENT DETAIL SHEET

FAS 1774 (OLD IL 121)
Section: 113(B-5,B-6)
Logan County

SCALE: DRAWN BY KDA

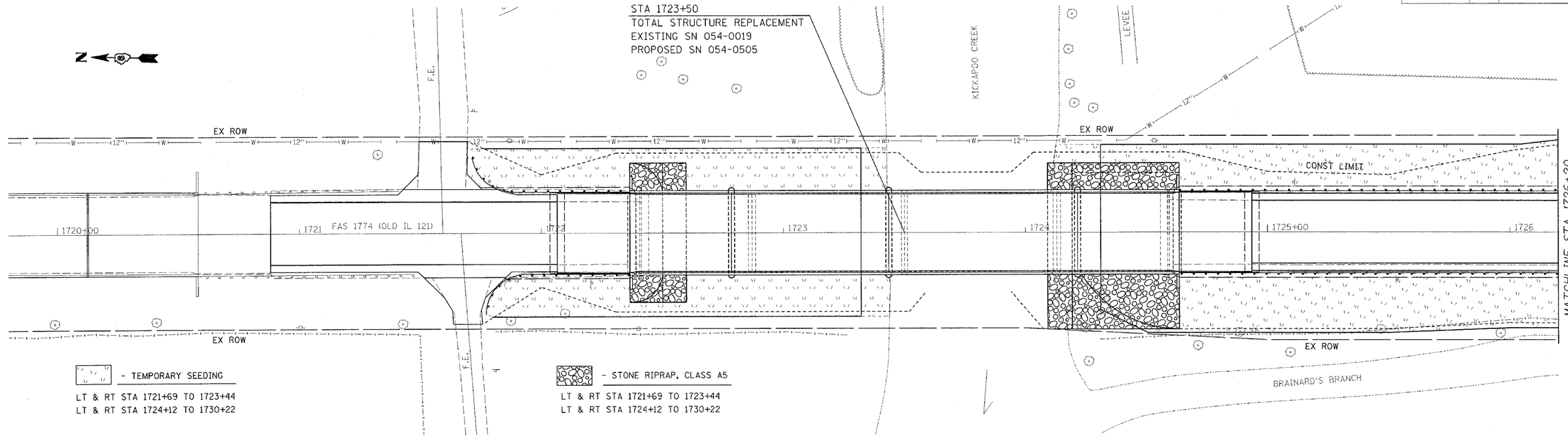
DATE JUNE 16, 2004 CHECKED BY

PLOT DATE = 9/2/2005
FILE NAME = c:\projects\d657102\stage.dgn
PLOT SCALE = 4.000000 '/ IN.
USER NAME = corte

PROJECT: d657102 FILE: stage.dgn

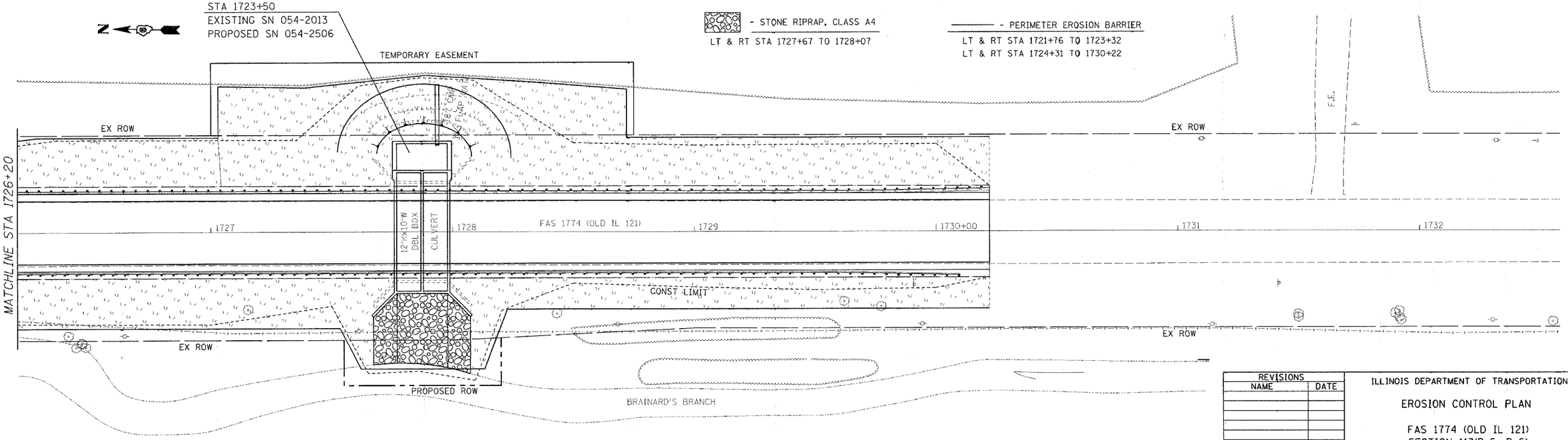
CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



- TEMPORARY SEEDING
LT & RT STA 1721+69 TO 1723+44
LT & RT STA 1724+12 TO 1730+22

- STONE RIPRAP, CLASS A5
LT & RT STA 1721+69 TO 1723+44
LT & RT STA 1724+12 TO 1730+22



- STONE RIPRAP, CLASS A4
LT & RT STA 1727+67 TO 1728+07

- PERIMETER EROSION BARRIER
LT & RT STA 1721+76 TO 1723+32
LT & RT STA 1724+31 TO 1730+22

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

FAS 1774 (OLD IL 121)
SECTION 113(B-5, B-6)
LOGAN COUNTY

SCALE: 1" = 20' DRAWN BY

DATE CHECKED BY

PLOT DATE = 9/2/2025
FILE NAME = c:\pw\projects\d657102\erosion.dgn
PLOT SCALE = 20.0000 ' / IN.
USER NAME = corre

PROJECT: d657102 FILE: Erosion.dgn

Bench Mark: BM cb-01115, Chiseled "□" on existing SE wingwall. Unadj. Elev. NAVD 88-568.948.
Pub/Adj Elev. NAVD 88-568.934.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

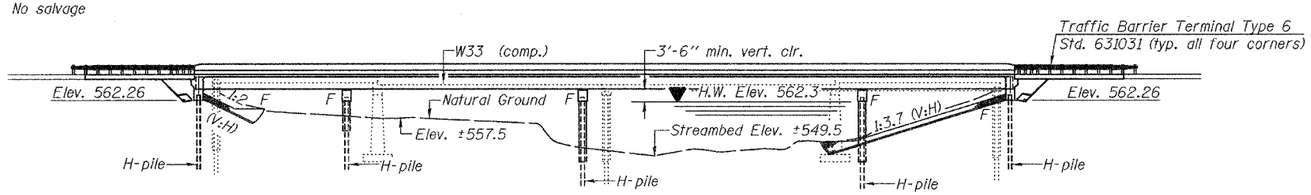
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	18
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
18 SHEETS

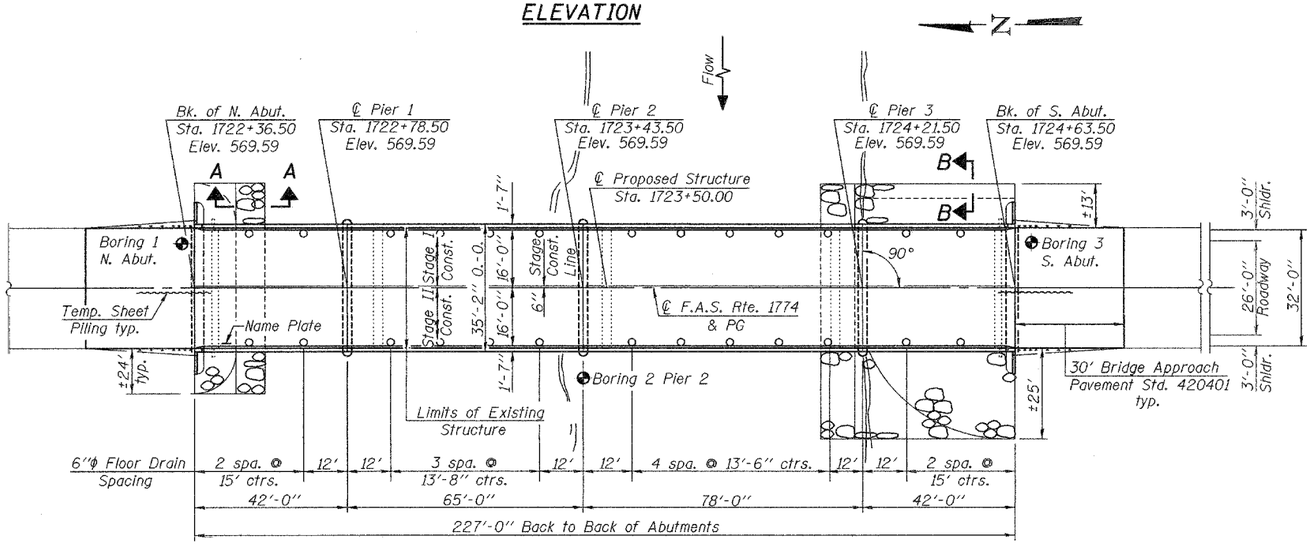
Contract #72760

Existing Structure: SN 054-0019, originally built in 1933 as SBI Route 121, Section 113 B&C.
In 1970 the superstructure was replaced, abutment and pier caps were widened and a pier was added as SBI Route 121, Section 113BCR.
The existing structure is a four simple span PPC deck beam bridge measuring 217'-5 3/4" back to back of abutment and 33'-0" out to out of bridge deck. The existing structure is to be removed and replaced.
Traffic to be maintained utilizing stage construction.

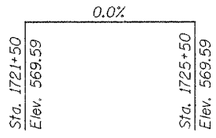
No salvage



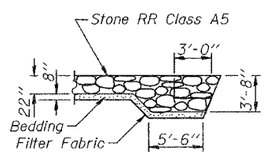
ELEVATION



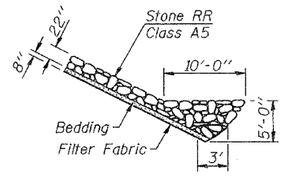
PLAN



PROFILE GRADE
(along ℄ roadway)



SECTION B-B



SECTION A-A

INDEX OF SHEETS

GENERAL NOTES

Fasteners shall be high strength bolts (AASHTO M 164, Type 3 in unpainted areas and mechanically galvanized AASHTO M 164, Type 1 or 2 in painted areas). Bolts 7/8" ϕ, open holes 15/16" ϕ, unless otherwise noted.

All structural steel shall be AASHTO M 270 Grade 50W.

Field welding of construction accessories will not be permitted to beams. Anchor bolts shall be set before bolting diaphragms over supports.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

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

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The Contractor shall drive one HP 12x53 test pile in a permanent location at each substructure as directed by the Engineer before ordering the remainder of piles.

AASHTO M 270 Grade 50W structural steel shall only be painted, at the ends of the beams, for a distance equal to the depth of embedment into the concrete cap plus 3 inches. Those areas shall be primed in the shop with an inorganic zinc rich primer per AASHTO M 300, Type 1. No field painting shall be required. All structural steel shall be cleaned as specified in the special provision for "Surface Preparation and Painting Requirements for Weathering Steel".

All Construction joints shall be bonded.

Calculated weight of Structural Steel = 191,950 lbs. (AASHTO M270 Grade 50W).

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 1	Each			1
Structure Excavation	Cu. Yd.		289.6	289.6
Protective Coat	Sq. Yd.	997.3		997.3
Concrete Structures	Cu. Yd.		144.6	144.6
Concrete Superstructure	Cu. Yd.	265.3		265.3
Furnishing and Erecting Structural Steel	L. Sum	1		1
Reinforcement Bars, Epoxy Coated	Pound	59180	12840	72020
Name Plates	Each			1
Bridge Deck Grooving	Sq. Yd.	756.7		756.7
Furnishing Steel Piles HP 12x53	Foot		1625	1625
Driving Steel Piles	Foot		1625	1625
Stud Shear Connectors	Each	4266		4266
Bar Splicers	Each	824		824
Floor Drains	Each	26		26
Stone Riprap, Class A5	Sq. Yd.		856.0	856.0
Filter Fabric	Sq. Yd.		856.0	856.0
Temporary Sheet Piling	Sq. Ft.		435.0	435.0
Test Pile Steel HP 12x53	Each		5	5
Underwater Structure Excavation Protection-Location 1	Each		1	1
Underwater Structure Excavation Protection-Location 2	Each		1	1
Porous Granular Embankment (Special)	Cu.Yd.		142.4	142.4

WATERWAY INFORMATION

Drainage Area = 310.0 mi²
Existing Low Grade Elev. 566.4 ft. @ Sta. 1731+50
Proposed Low Grade Elev. 566.4 ft. @ Sta. 1731+50

Structure Number	Freq. Yr.	Q CFS	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
054-0505	10	5891	981	1021	560.9	0.6	0.6	561.5	561.5
054-0083		1525	383	383	560.9	0.6	0.6	561.5	561.5
054-0082		1624	436	436	560.9	0.6	0.6	561.5	561.5
054-0103		2344	635	635	560.9	0.6	0.6	561.5	561.5
054-0505	50	9232	1220	1282	562.3	1.1	1.0	563.4	563.3
054-0083		3167	576	576	562.3	1.1	1.0	563.4	563.3
054-0082		3251	641	641	562.3	1.1	1.0	563.4	563.3
054-0103		4253	837	837	562.3	1.1	1.0	563.4	563.3
054-0505	100	10747	1332	1405	562.9	1.3	1.2	564.2	564.1
054-0083		4101	648	648	562.9	1.3	1.2	564.2	564.1
054-0082		4176	716	716	562.9	1.3	1.2	564.2	564.1
054-0103		5214	911	911	562.9	1.3	1.2	564.2	564.1
054-0505	500	13562	1369	1446	563.4	1.8	1.8	565.2	565.2
054-0083		5675	673	673	563.4	1.8	1.8	565.2	565.2
054-0082		5745	741	741	563.4	1.8	1.8	565.2	565.2
054-0103		7018	936	936	563.4	1.8	1.8	565.2	565.2

STATION 1723+50.00
BUILT 200 BY
STATE OF ILLINOIS
F.A.S. RTE. 1774 - SEC. 113(B-5, B-6)
LOADING HL-93
STR. NO. 054-0505

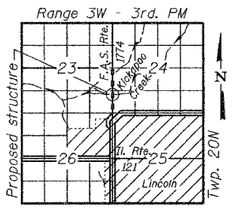
NAME PLATE
See Std. 515001

LOADING HL 93
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
1998 AASHTO LRFD Bridge Design Specifications with 1999 thru 2003 Interims

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)
f_y = 50,000 psi (M270 Grade 50W)

SEISMIC DATA
Seismic Performance Category (SPZ) = 1
Bedrock Acceleration Coefficient (A) = 0.05g
Site Coefficient (S) = 1.5



LOCATION SKETCH

GENERAL PLAN
OLD ILLINOIS ROUTE 121 OVER KICKAPOO CREEK
F.A.S. RTE. 1774-SEC. 113(B-5, B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

DESIGNED Stephen M. Ryan
CHECKED
DRAWN R. Sommer
CHECKED SMR / CCC

October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Barbara C. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
BARBARA C. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

EXPIRES 11-30-2006

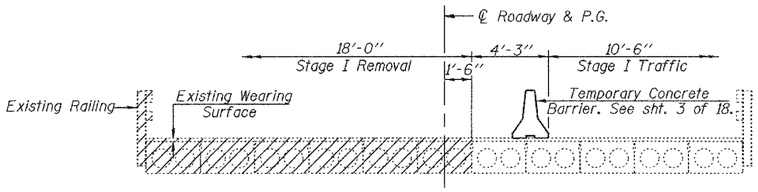
...\projects\mpa00025\0540505.dgn 10/14/2005 9:08:05 AM

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

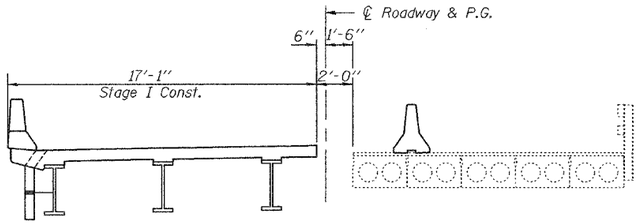
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	19
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
18 SHEETS

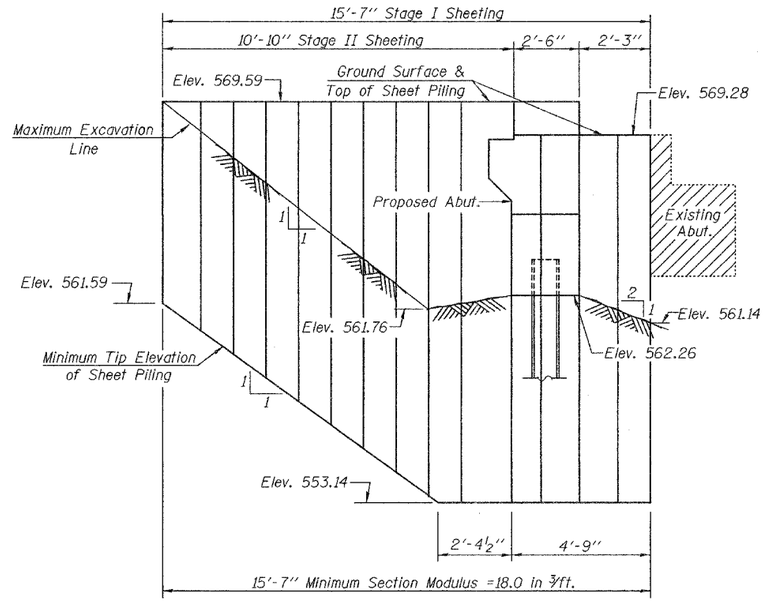
Contract #72760

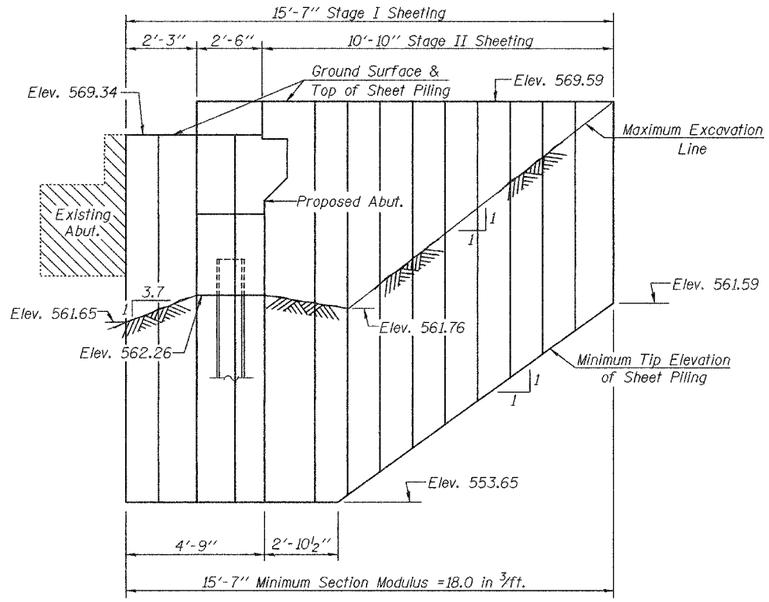


STAGE I REMOVAL



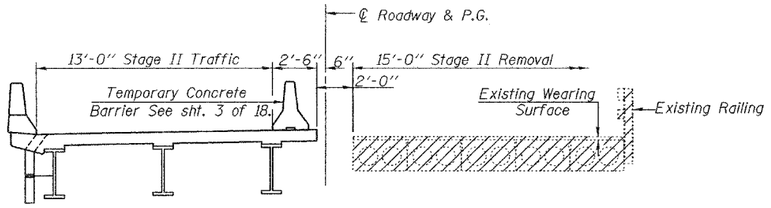
STAGE I CONSTRUCTION



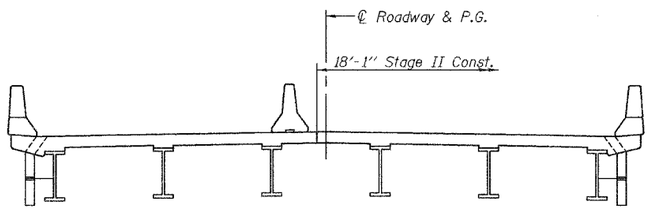


ELEVATION AT ABUTMENTS

(Looking East)



STAGE II REMOVAL



STAGE II CONSTRUCTION

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005

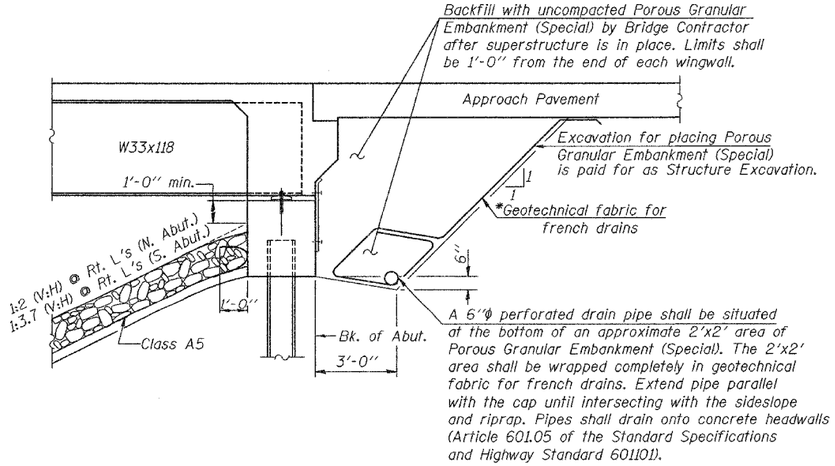
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TEMPORARY SHEET PILING DETAIL

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

Hard driving may be encountered during sheet piling installation. The Contractor should provide the appropriate driving equipment for the soil conditions indicated in the boring logs.



SECTION THRU INTEGRAL ABUTMENT

*Included in the cost of Porous Granular Embankment (Special).

Notes: All staging sections are looking South.
For quantity of Temporary Concrete Barrier, see Roadway Plans.
Hatched areas indicate Removal of Existing Structures.

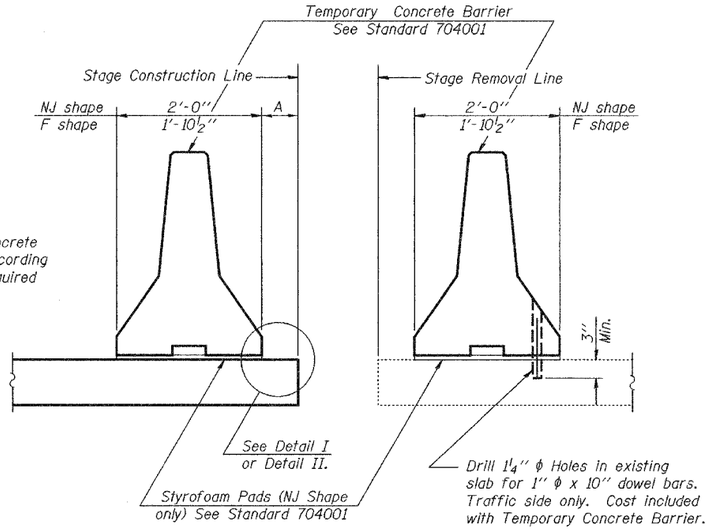
GENERAL DATA & TEMPORARY SHEET PILING
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	20
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
18 SHEETS

Contract #72760



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

NEW SLAB

EXISTING SLAB

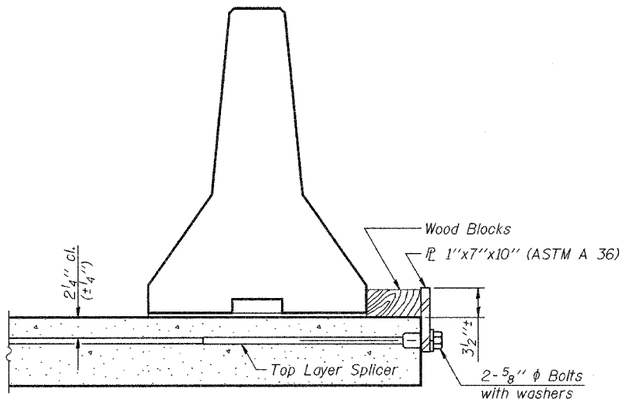
SECTIONS THRU SLAB

NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

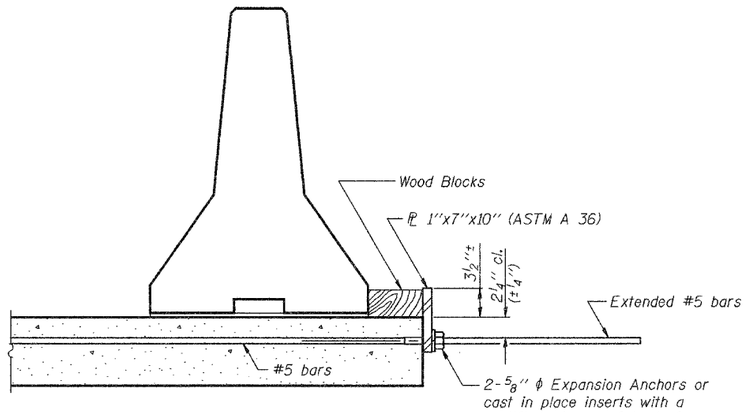
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.



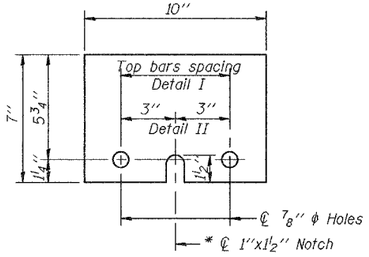
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



ℙ 1"x7"x10"

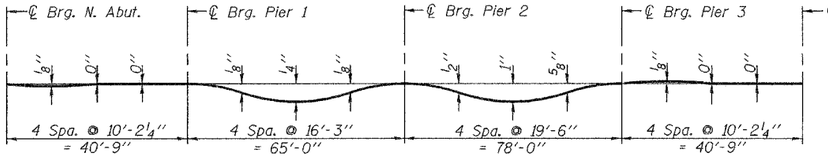
* Required only with Detail II

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

R-27 10-22-04

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

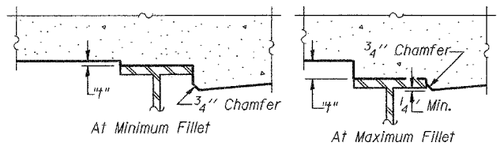


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



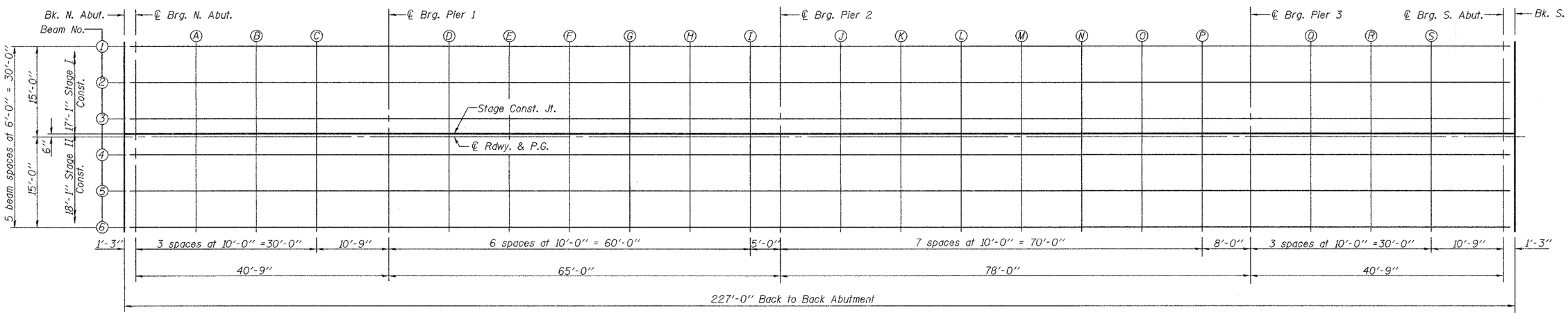
To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheet 5 of 18, minus slab thickness, equals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

FILLET HEIGHTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
18 SHEETS

Contract #72760



PLAN

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005

EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
18 SHEETS

Contract #72760

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	172236.500	-15.000	569.340	569.340
CL Brg N Abut	172237.750	-15.000	569.340	569.340
A	172247.750	-15.000	569.340	569.346
B	172257.750	-15.000	569.340	569.345
C	172267.750	-15.000	569.340	569.341
CL Pier 1	172278.500	-15.000	569.340	569.340
D	172288.500	-15.000	569.340	569.350
E	172298.500	-15.000	569.340	569.357
F	172308.500	-15.000	569.340	569.360
G	172318.500	-15.000	569.340	569.355
H	172328.500	-15.000	569.340	569.347
I	172338.500	-15.000	569.340	569.343
CL Pier 2	172343.500	-15.000	569.340	569.340
J	172353.500	-15.000	569.340	569.364
K	172363.500	-15.000	569.340	569.388
L	172373.500	-15.000	569.340	569.404
M	172383.500	-15.000	569.340	569.417
N	172393.500	-15.000	569.340	569.403
O	172403.500	-15.000	569.340	569.387
P	172413.500	-15.000	569.340	569.361
CL Pier 3	172421.500	-15.000	569.340	569.340
Q	172431.500	-15.000	569.340	569.334
R	172441.500	-15.000	569.340	569.337
S	172451.500	-15.000	569.340	569.339
CL Brg S Abut	172462.250	-15.000	569.340	569.340
Bk S Abut	172463.500	-15.000	569.340	569.340

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	172236.500	-9.000	569.450	569.450
CL Brg N Abut	172237.750	-9.000	569.450	569.450
A	172247.750	-9.000	569.450	569.455
B	172257.750	-9.000	569.450	569.455
C	172267.750	-9.000	569.450	569.451
CL Pier 1	172278.500	-9.000	569.450	569.450
D	172288.500	-9.000	569.450	569.459
E	172298.500	-9.000	569.450	569.466
F	172308.500	-9.000	569.450	569.470
G	172318.500	-9.000	569.450	569.464
H	172328.500	-9.000	569.450	569.457
I	172338.500	-9.000	569.450	569.452
CL Pier 2	172343.500	-9.000	569.450	569.450
J	172353.500	-9.000	569.450	569.474
K	172363.500	-9.000	569.450	569.497
L	172373.500	-9.000	569.450	569.513
M	172383.500	-9.000	569.450	569.527
N	172393.500	-9.000	569.450	569.512
O	172403.500	-9.000	569.450	569.497
P	172413.500	-9.000	569.450	569.470
CL Pier 3	172421.500	-9.000	569.450	569.450
Q	172431.500	-9.000	569.450	569.443
R	172441.500	-9.000	569.450	569.446
S	172451.500	-9.000	569.450	569.449
CL Brg S Abut	172462.250	-9.000	569.450	569.450
Bk S Abut	172463.500	-9.000	569.450	569.450

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	172236.500	-3.000	569.543	569.543
CL Brg N Abut	172237.750	-3.000	569.543	569.543
A	172247.750	-3.000	569.543	569.549
B	172257.750	-3.000	569.543	569.548
C	172267.750	-3.000	569.543	569.544
CL Pier 1	172278.500	-3.000	569.543	569.543
D	172288.500	-3.000	569.543	569.552
E	172298.500	-3.000	569.543	569.560
F	172308.500	-3.000	569.543	569.563
G	172318.500	-3.000	569.543	569.558
H	172328.500	-3.000	569.543	569.550
I	172338.500	-3.000	569.543	569.546
CL Pier 2	172343.500	-3.000	569.543	569.543
J	172353.500	-3.000	569.543	569.567
K	172363.500	-3.000	569.543	569.591
L	172373.500	-3.000	569.543	569.607
M	172383.500	-3.000	569.543	569.620
N	172393.500	-3.000	569.543	569.606
O	172403.500	-3.000	569.543	569.590
P	172413.500	-3.000	569.543	569.564
CL Pier 3	172421.500	-3.000	569.543	569.543
Q	172431.500	-3.000	569.543	569.537
R	172441.500	-3.000	569.543	569.540
S	172451.500	-3.000	569.543	569.542
CL Brg S Abut	172462.250	-3.000	569.543	569.543
Bk S Abut	172463.500	-3.000	569.543	569.543

STAGE CONSTRUCTION JOINT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	172236.500	-0.500	569.582	569.582
CL Brg N Abut	172237.750	-0.500	569.582	569.582
A	172247.750	-0.500	569.582	569.588
B	172257.750	-0.500	569.582	569.587
C	172267.750	-0.500	569.582	569.583
CL Pier 1	172278.500	-0.500	569.582	569.582
D	172288.500	-0.500	569.582	569.591
E	172298.500	-0.500	569.582	569.599
F	172308.500	-0.500	569.582	569.602
G	172318.500	-0.500	569.582	569.597
H	172328.500	-0.500	569.582	569.589
I	172338.500	-0.500	569.582	569.585
CL Pier 2	172343.500	-0.500	569.582	569.582
J	172353.500	-0.500	569.582	569.606
K	172363.500	-0.500	569.582	569.630
L	172373.500	-0.500	569.582	569.646
M	172383.500	-0.500	569.582	569.659
N	172393.500	-0.500	569.582	569.645
O	172403.500	-0.500	569.582	569.629
P	172413.500	-0.500	569.582	569.603
CL Pier 3	172421.500	-0.500	569.582	569.582
Q	172431.500	-0.500	569.582	569.576
R	172441.500	-0.500	569.582	569.579
S	172451.500	-0.500	569.582	569.581
CL Brg S Abut	172462.250	-0.500	569.582	569.582
Bk S Abut	172463.500	-0.500	569.582	569.582

℄ ROADWAY & P.G.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	172236.500	0.000	569.590	569.590
CL Brg N Abut	172237.750	0.000	569.590	569.590
A	172247.750	0.000	569.590	569.596
B	172257.750	0.000	569.590	569.595
C	172267.750	0.000	569.590	569.591
CL Pier 1	172278.500	0.000	569.590	569.590
D	172288.500	0.000	569.590	569.599
E	172298.500	0.000	569.590	569.606
F	172308.500	0.000	569.590	569.610
G	172318.500	0.000	569.590	569.605
H	172328.500	0.000	569.590	569.597
I	172338.500	0.000	569.590	569.592
CL Pier 2	172343.500	0.000	569.590	569.590
J	172353.500	0.000	569.590	569.614
K	172363.500	0.000	569.590	569.637
L	172373.500	0.000	569.590	569.654
M	172383.500	0.000	569.590	569.667
N	172393.500	0.000	569.590	569.653
O	172403.500	0.000	569.590	569.637
P	172413.500	0.000	569.590	569.611
CL Pier 3	172421.500	0.000	569.590	569.590
Q	172431.500	0.000	569.590	569.583
R	172441.500	0.000	569.590	569.587
S	172451.500	0.000	569.590	569.589
CL Brg S Abut	172462.250	0.000	569.590	569.590
Bk S Abut	172463.500	0.000	569.590	569.590

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	172236.500	3.000	569.543	569.543
CL Brg N Abut	172237.750	3.000	569.543	569.543
A	172247.750	3.000	569.543	569.549
B	172257.750	3.000	569.543	569.548
C	172267.750	3.000	569.543	569.544
CL Pier 1	172278.500	3.000	569.543	569.543
D	172288.500	3.000	569.543	569.552
E	172298.500	3.000	569.543	569.560
F	172308.500	3.000	569.543	569.563
G	172318.500	3.000	569.543	569.558
H	172328.500	3.000	569.543	569.550
I	172338.500	3.000	569.543	569.546
CL Pier 2	172343.500	3.000	569.543	569.543
J	172353.500	3.000	569.543	569.567
K	172363.500	3.000	569.543	569.591
L	172373.500	3.000	569.543	569.607
M	172383.500	3.000	569.543	569.620
N	172393.500	3.000	569.543	569.606
O	172403.500	3.000	569.543	569.590
P	172413.500	3.000	569.543	569.564
CL Pier 3	172421.500	3.000	569.543	569.543
Q	172431.500	3.000	569.543	569.537
R	172441.500	3.000	569.543	569.540
S	172451.500	3.000	569.543	569.542
CL Brg S Abut	172462.250	3.000	569.543	569.543
Bk S Abut	172463.500	3.000	569.543	569.543

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	172236.500	9.000	569.450	569.450
CL Brg N Abut	172237.750	9.000	569.450	569.450
A	172247.750	9.000	569.450	569.455
B	172257.750	9.000	569.450	569.455
C	172267.750	9.000	569.450	569.451
CL Pier 1	172278.500	9.000	569.450	569.450
D	172288.500	9.000	569.450	569.459
E	172298.500	9.000	569.450	569.466
F	172308.500	9.000	569.450	569.470
G	172318.500	9.000	569.450	569.464
H	172328.500	9.000	569.450	569.457
I	172338.500	9.000	569.450	569.452
CL Pier 2	172343.500	9.000	569.450	569.450
J	172353.500	9.000	569.450	569.474
K	172363.500	9.000	569.450	569.497
L	172373.500	9.000	569.450	569.513
M	172383.500	9.000	569.450	569.527
N	172393.500	9.000	569.450	569.512
O	172403.500	9.000	569.450	569.497
P	172413.500	9.000	569.450	569.470
CL Pier 3	172421.500	9.000	569.450	569.450
Q	172431.500	9.000	569.450	569.443
R	172441.500	9.000	569.450	569.446
S	172451.500	9.000	569.450	569.449
CL Brg S Abut	172462.250	9.000	569.450	569.450
Bk S Abut	172463.500	9.000	569.450	569.450

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	172236.500	15.000	569.340	569.340
CL Brg N Abut	172237.750	15.000	569.340	569.340
A	172247.750	15.000	569.340	569.346
B	172257.750	15.000	569.340	569.345
C	172267.750	15.000	569.340	569.341
CL Pier 1	172278.500	15.000	569.340	569.340
D	172288.500	15.000	569.340	569.350
E	172298.500	15.000	569.340	569.357
F	172308.500	15.000	569.340	569.360
G	172318.500	15.000	569.340	569.355
H	172328.500	15.000	569.340	569.347
I	172338.500	15.000	569.340	569.343
CL Pier 2	172343.500	15.000	569.340	569.340
J	172353.500	15.000	569.340	569.364
K	172363.500	15.000	569.340	569.388
L	172373.500	15.000	569.340	569.404
M	172383.500	15.000	569.340	569.417
N	172393.500	15.000	569.340	569.403
O	172403.500	15.000	569.340	569.387
P	172413.500	15.000	569.340	569.361
CL Pier 3	172421.500	15.000	569.340	569.340
Q	172431.500	15.000	569.340	569.334
R	172441.500	15.000	569.340	569.337
S	172451.500	15.000	569.340	569.339
CL Brg S Abut	172462.250	15.000	569.340	569.340
Bk S Abut	172463.500	15.000	569.340	569.340

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005

EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TOP OF SLAB ELEVATIONS
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

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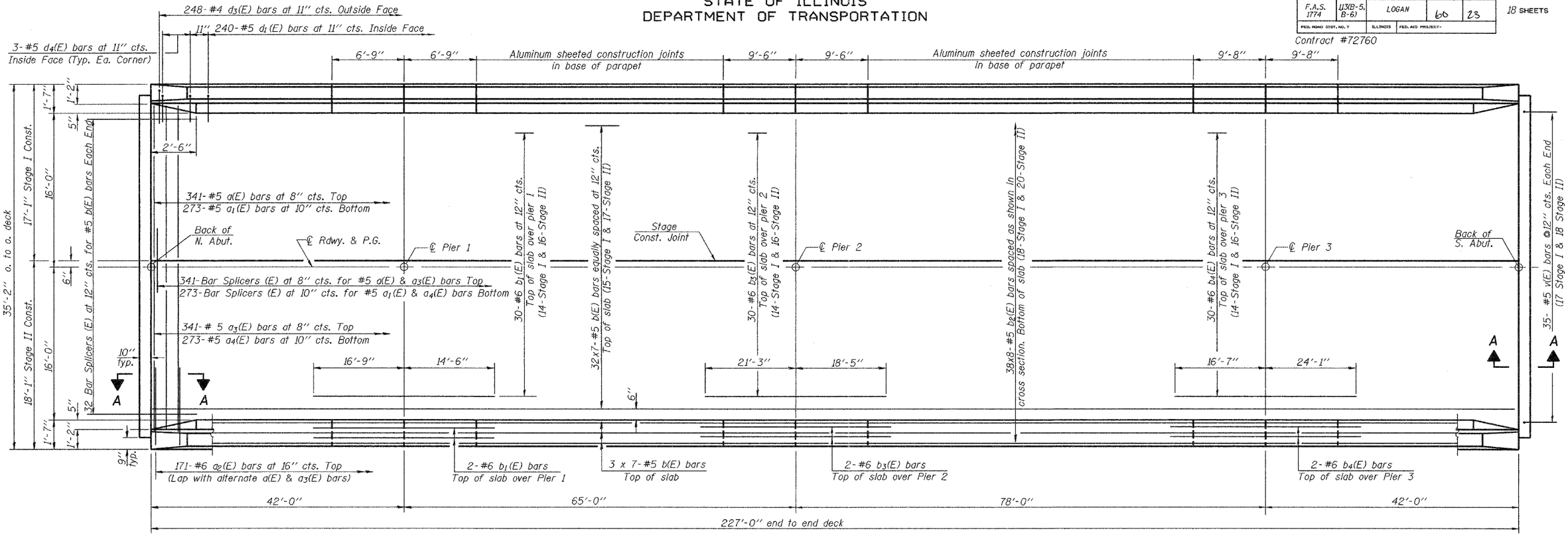
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
18 SHEETS

Contract #72760

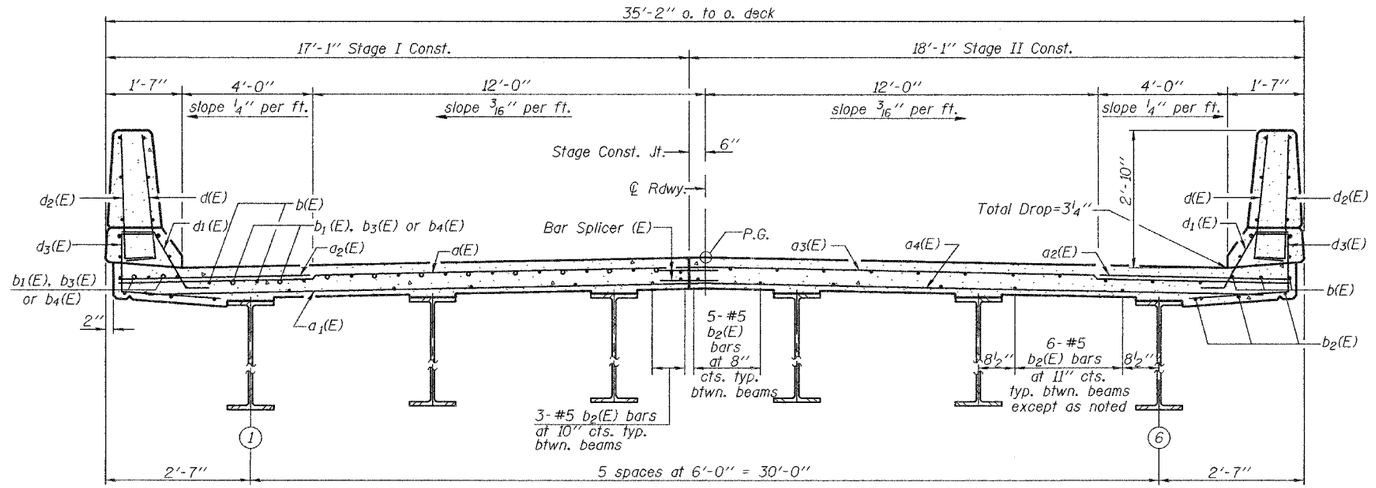


PLAN

N

MIN. BAR LAP

#5 bar = 1'-8"



NEAR PIER — NEAR MIDSPAN

CROSS SECTION

(Looking South)

Notes: See Sheet 7 of 18 for superstructure details and Bill of Material.

Reinforcement bars designated (E) shall be epoxy coated.

Bars indicated thus 32 x 7-#5 etc. indicates 32 lines of bars with 7 lengths per line.

See Sheet 7 of 18 for parapet reinforcement.

See Sheet 8 of 18 for Section A-A.

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005

EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

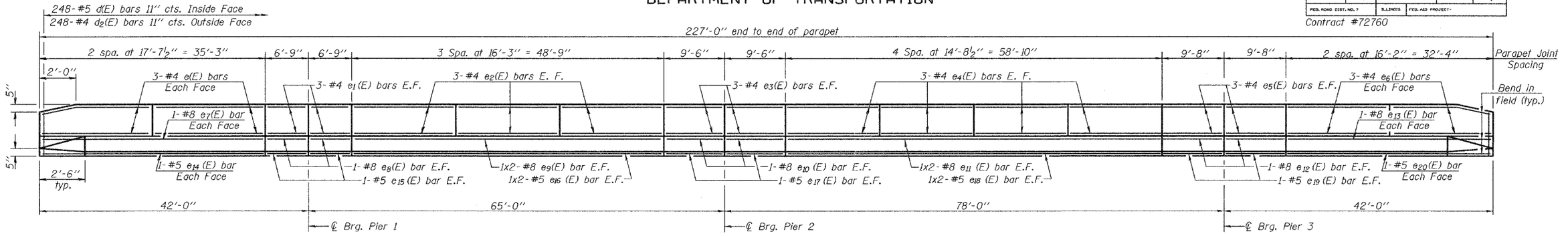
SUPERSTRUCTURE
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO.054-0505

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
18 SHEETS

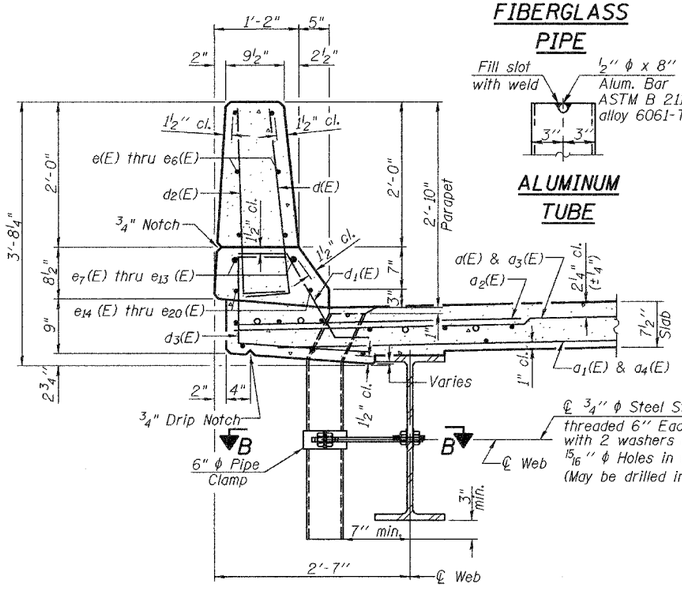
Contract #72760

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

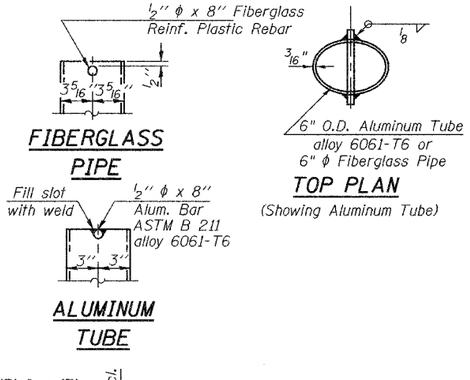


MIN. BAR LAPS

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



SECTION THRU PARAPET



FIBERGLASS PIPE

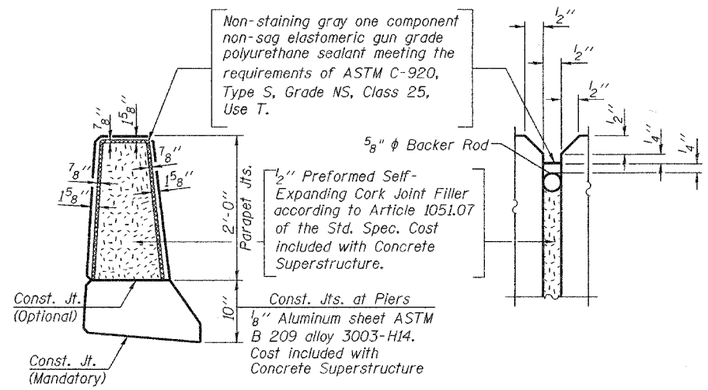
ALUMINUM TUBE

TOP PLAN

(Showing Aluminum Tube)

INSIDE ELEVATION OF EAST PARAPET

(West Parapet similar)



PARAPET JOINT DETAILS

Notes: The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.

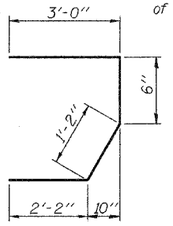
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

SUPERSTRUCTURE BILL OF MATERIAL

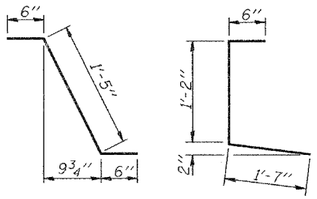
Bar	No.	Size	Length	Shape
a(E)	341	#5	16'-7"	——
a1(E)	273	#5	15'-11"	——
a2(E)	342	#6	4'-6"	——
a3(E)	341	#5	17'-7"	——
a4(E)	273	#5	16'-11"	——
b(E)	266	#5	33'-11"	——
b1(E)	34	#6	31'-3"	——
b2(E)	304	#5	29'-10"	——
b3(E)	34	#6	39'-8"	——
b4(E)	34	#6	40'-8"	——
d(E)	496	#5	3'-0"	⌐
d1(E)	480	#5	2'-5"	L
d2(E)	496	#4	3'-0"	⌐
d3(E)	496	#4	3'-3"	⌐
d4(E)	12	#5	2'-2"	⌐
e(E)	24	#4	17'-4"	——
e1(E)	24	#4	6'-6"	——
e2(E)	36	#4	16'-0"	——
e3(E)	24	#4	9'-3"	——
e4(E)	48	#4	14'-5"	——
e5(E)	24	#4	9'-5"	——
e6(E)	24	#4	15'-8"	——
e7(E)	4	#8	34'-11"	——
e8(E)	8	#8	6'-6"	——
e9(E)	8	#8	26'-0"	——
e10(E)	8	#8	9'-3"	——
e11(E)	8	#8	31'-0"	——
e12(E)	8	#8	9'-5"	——

Bar	No.	Size	Length	Shape
e13(E)	4	#8	32'-0"	——
e14(E)	4	#5	34'-11"	——
e15(E)	8	#5	6'-6"	——
e16(E)	8	#5	25'-1"	——
e17(E)	8	#5	9'-3"	——
e18(E)	8	#5	30'-1"	——
e19(E)	8	#5	9'-5"	——
e20(E)	4	#5	32'-0"	——
m(E)	4	#6	16'-0"	——
m1(E)	4	#6	17'-9"	——
m2(E)	6	#6	16'-9"	——
m3(E)	6	#6	17'-0"	——
m4(E)	24	#6	7'-10"	——
m5(E)	2	#6	3'-3"	——
m6(E)	8	#6	5'-9"	——
m7(E)	4	#6	2'-4"	——
m8(E)	2	#6	2'-3"	——
s(E)	74	#5	6'-10"	⌐¬
s1(E)	74	#4	9'-6"	⌐¬
v(E)	70	#5	3'-8"	⌐
Reinforcement Bars Epoxy Coated		Pound	59180	
Concrete Superstructure		Cu. Yds.	265.3	

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

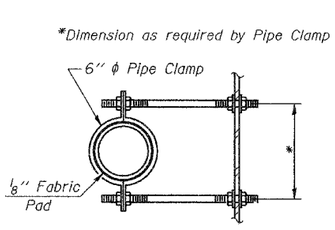


BAR s(E)

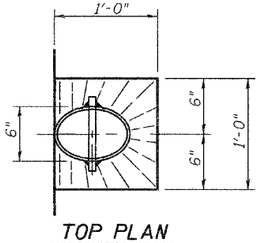


BAR d1(E) BAR d3(E)

*Dimension as required by Pipe Clamp

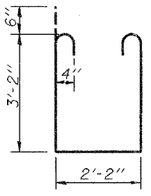


SECTION B-B

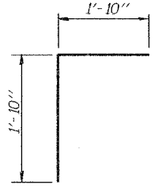


TOP PLAN

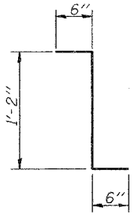
(Showing Tube Section)



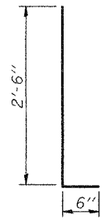
BAR s1(E)



BAR v(E)



BAR d4(E)



BARS d(E) & d2(E)

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

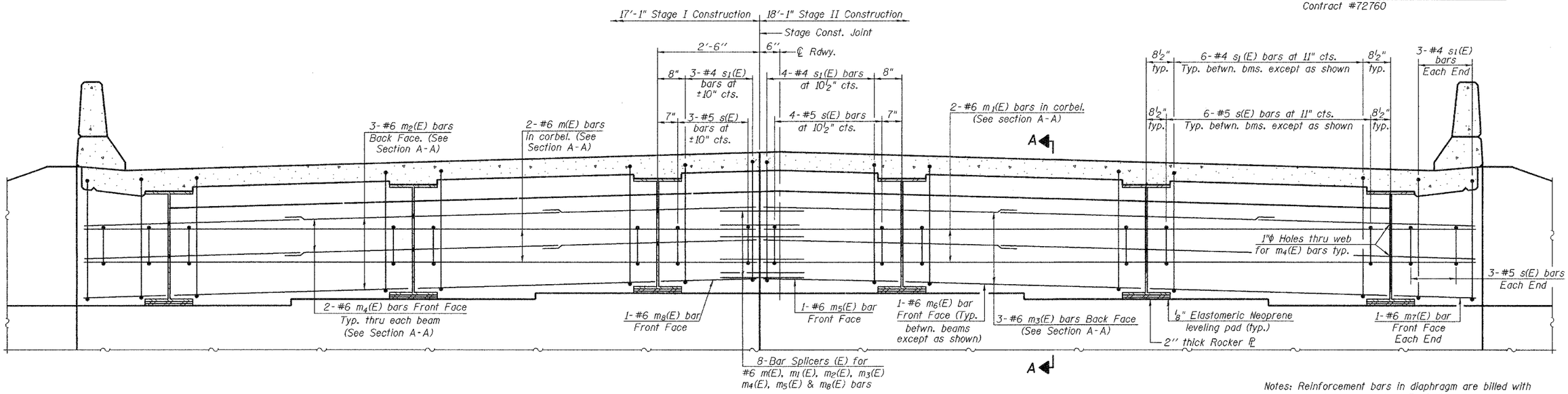
SUPERSTRUCTURE DETAILS
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

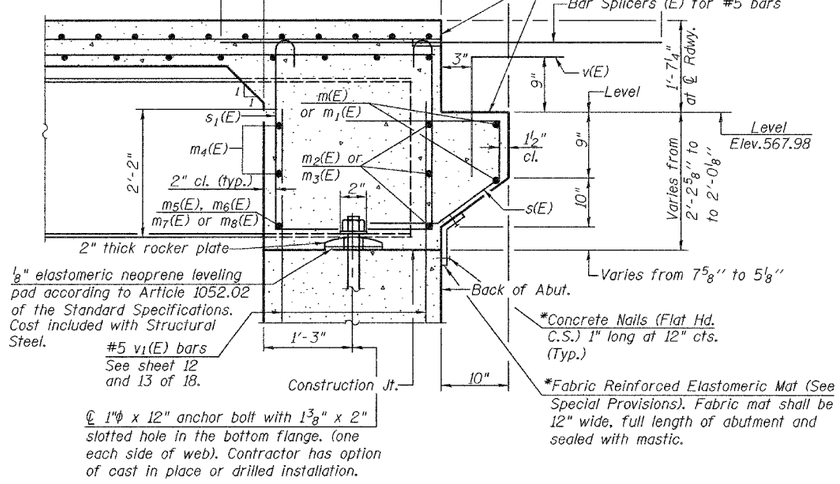
SHEET NO. 8
18 SHEETS

Contract #72760



DIAPHRAGM ELEVATION AT S. ABUTMENT

(Looking South)
(North Abutment similar)



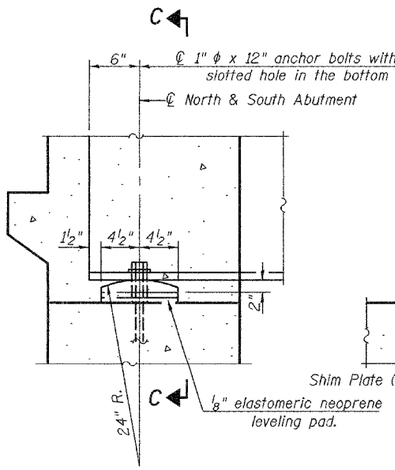
SECTION A-A

*Cost included with concrete structures.

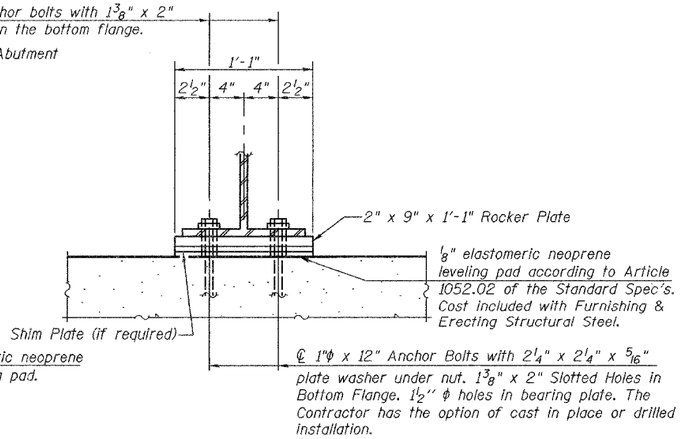
MIN. BAR. LAP

#6 bar = 2'-9"

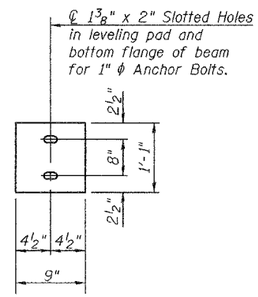
Notes: Reinforcement bars in diaphragm are billed with superstructure on sheet 7 of 18.
Concrete in diaphragm is included with Concrete Superstructure on sheet 7 of 18.
For details of bars s(E) & s1(E) see sheet 7 of 18.
For anchor bolt details see sheet 11 of 18.
See sheet 16 of 18 for bar splicer details.
See sheet 9 of 18 for holes thru web for m4(E) bars.



ELEVATION



SECTION C-C



PLAN OF ⅛" ELASTOMERIC NEOPRENE LEVELING PAD

FIXED BEARINGS AT ABUTMENTS

(12 Required)

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

DIAPHRAGM DETAILS
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

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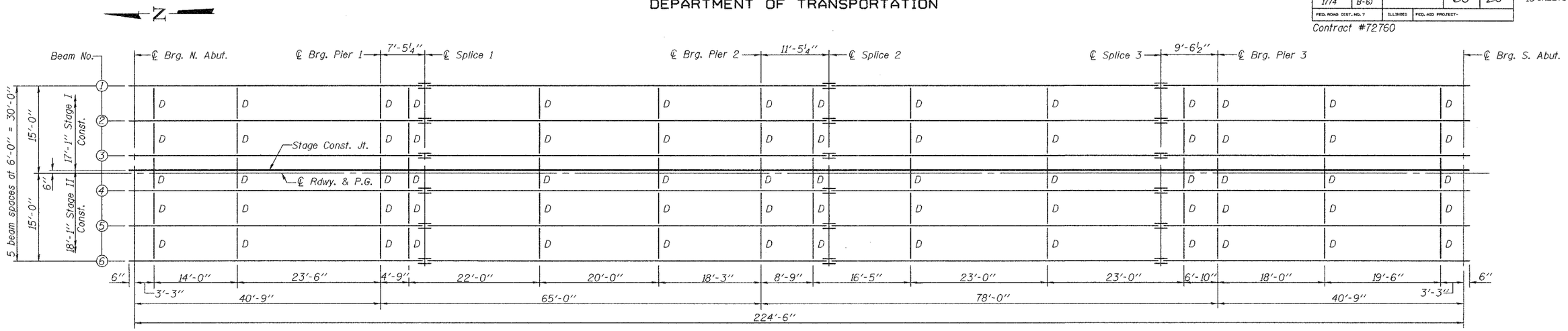
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

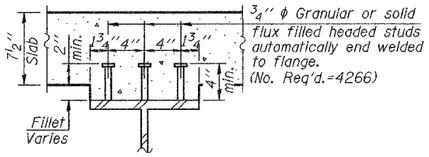
SHEET NO. 9
18 SHEETS

Contract #72760

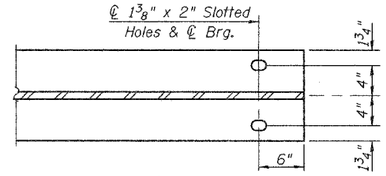


FRAMING PLAN

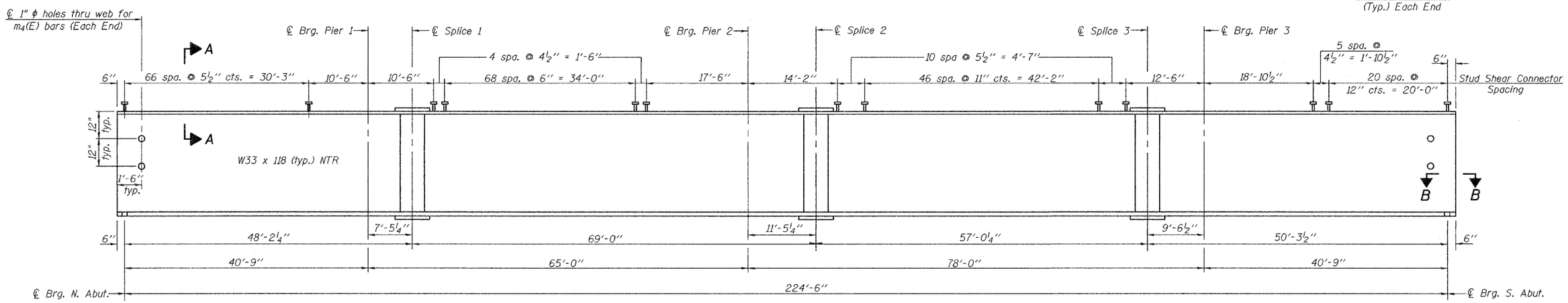
All beams shall be W33 x 118, AASHTO M 270, Grade 50W and NTR.
All other structural steel shall be AASHTO M 270, Grade 50W.



SECTION A-A



SECTION B-B
(Typ.) Each End



BEAM ELEVATION

*For fabrication only.

*TOP OF BEAM ELEVATIONS

Location	℄ N. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Brg. Pier 2	℄ Splice 2	℄ Splice 3	℄ Brg. Pier 3	℄ S. Abut.
Beam 1	568.67	568.62	568.62	568.63	568.64	568.63	568.64	568.67
Beam 2	568.78	568.73	568.73	568.74	568.75	568.74	568.75	568.78
Beam 3	568.88	568.83	568.82	568.84	568.84	568.84	568.84	568.88
Beam 4	568.88	568.83	568.82	568.84	568.84	568.84	568.84	568.88
Beam 5	568.78	568.73	568.73	568.74	568.75	568.74	568.75	568.78
Beam 6	568.67	568.62	568.62	568.63	568.64	568.63	568.64	568.67

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Notes: "NTR" denotes members to which Notch Toughness Requirements are applicable. For remainder of structural steel details see sheet 10 of 18.

STRUCTURAL STEEL DETAILS
F.A.S. RTE. 1774-SEC. 113(B-5.B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

INTERIOR BEAM MOMENT TABLE								
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.5 Sp. 3	Pier 3	0.6 Sp. 4
Is	(in^4)	5900	5900	5900	5900	5900	5900	5900
Ic (n)	(in^4)	16062	——	16062	——	16062	——	——
Ic (3n)	(in^4)	11696	——	11696	——	11696	——	——
Ss	(in^3)	359	359	359	359	359	359	359
Sc (n)	(in^3)	538	——	538	——	583	——	——
Sc (3n)	(in^3)	483	——	483	——	483	——	——
Z	(in^3)	415	415	415	415	415	415	415
DC1	(k/ft.)	0.711	0.711	0.711	0.711	0.711	0.711	0.711
M DC1	('k)	69.0	181.8	112.4	344.5	222.1	292.7	24.6
DC2	(k/ft.)	0.150	0.150	0.150	0.150	0.150	0.150	0.150
M DC2	('k)	17.5	31.0	35.2	57.0	61.4	48.2	10.6
DW	(k/ft.)	0.300	0.300	0.300	0.300	0.300	0.300	0.300
M DW	('k)	34.9	62.1	70.4	114.1	122.9	96.5	21.2
M(L+Im	('k)	387.8	307.8	562.6	436.7	704.9	392.3	361.2
Ma (Strength I)	('k)	839.0	897.9	1274.5	1437.3	1772.4	1257.4	707.9
Mr	('k)	2599	——	2599	——	2599	——	——
fs DC1	(k.s.i.)	2.31	6.08	3.76	11.52	7.42	9.78	0.82
fs DC2	(k.s.i.)	0.43	1.04	0.87	1.91	1.53	1.61	0.35
fs DW	(k.s.i.)	0.87	2.08	1.74	3.81	3.05	3.23	0.71
fs 1.3(LL+Im)	(k.s.i.)	11.24	13.38	16.31	18.98	20.44	17.05	15.05
fs (Service II)	(k.s.i.)	14.85	22.58	22.69	36.22	32.44	31.67	17.53
fs (Total)(Strength I)	(k.s.i.)	——	30.03	——	48.05	——	42.03	23.66
Vsr	(k)	19.5	——	25.1	——	25.3	——	19.4

INTERIOR BEAM REACTION TABLE HL 93 LOADING						
		N. Abut.	Pier 1	Pier 2	Pier 3	S. Abut.
R DC1	(K)	10.0	39.6	54.0	48.7	7.3
R DC2+DW	(K)	6.9	24.9	33.7	30.0	5.6
R(L	(K)	44.4	71.9	80.0	76.4	43.2
R IM	(K)	11.9	15.0	15.3	15.4	11.6
R (Total)	(K)	73.2	151.4	183.0	170.5	67.7

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs due to non-composite loads.

Ic(n) and Sc(n) are the moment of inertia and section modulus of the composite section used in computing fs due to short-term composite loads.

Ic(3n) and Sc(3n) are the moment of inertia and section modulus of the composite section used in computing fs due to long-term composite loads.

Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

DC1 is the dead load acting on the non-composite section.

DC2 is the dead load acting on the long-term composite section.

DW is the dead load acting on the long-term composite section due to wearing surface.

Ma (Strength I)=1.25 M(DC1+DC2)+1.5 M DW+1.75 M(LL+Imp)

Mr is the full plastic moment capacity computed in accordance with 6.10.3.1.3 and 6.10.4.2.

fs (Service II) is the sum of the stresses due to DC1+DC2+DW+1.3(LL+Imp).

fs (Total) (Strength I) (Non-Compact Section) is the sum of the stresses due to 1.25(DC1+DC2)+1.5DW+1.75(LL+Imp).

Vsr is the maximum shear range in the span (0.75 LL+Imp).

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005

EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

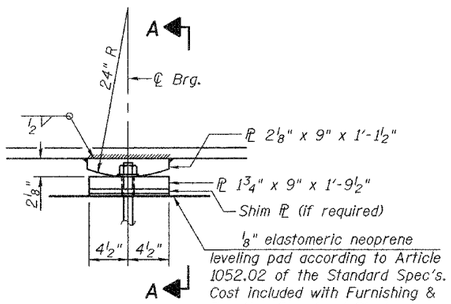
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

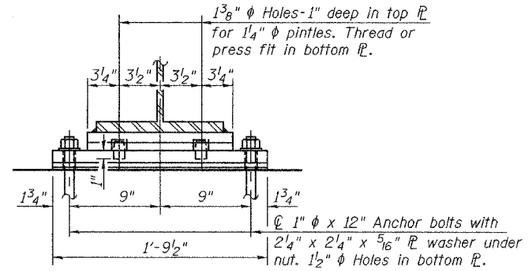
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	27
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 10
18 SHEETS

Contract #72760



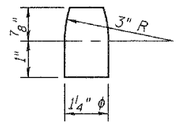
ELEVATION



SECTION A-A

FIXED BEARINGS AT PIERS

(18 Required)

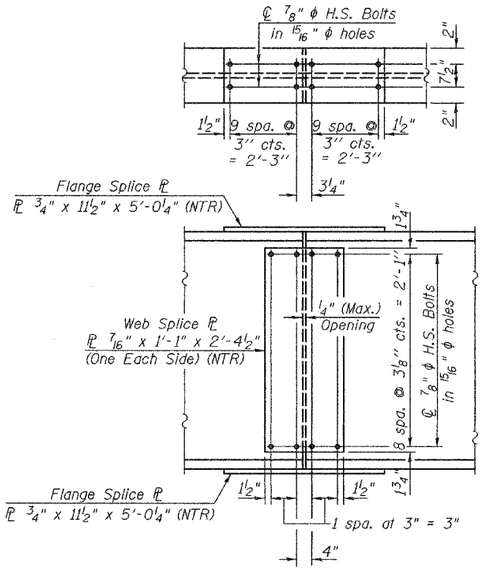


PINTLE

Note: All splice plates shall be AASHTO M 270 Grade 50W. "NTR" denotes members to which Notch Toughness Requirements are applicable.

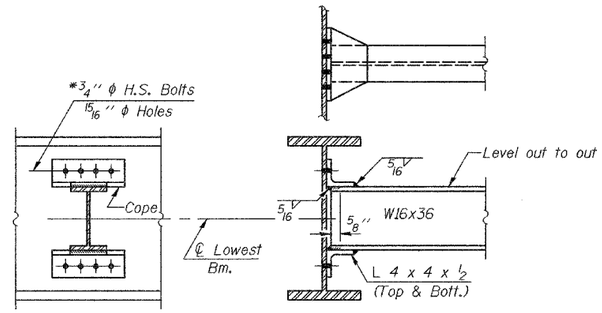
All bearing plates shall be AASHTO M270 Grade 50W.

Two hardened washers shall be required over all oversize holes for diaphragms.



SPLICE DETAIL

(18 Required)



DIAPHRAGM D

(70 Required)

*Use 13/16" x 1½" vertical slotted holes in top and bottom angles at Beam 4 between Beams 3 and 4. Provide 15/16" plate washers for slotted holes. The bolts for slotted holes in angles on Stage I side of Beam 4 shall be finger tightened prior to the deck pour for Stage I Construction. The bolts shall be fully tightened after completion of the deck pour for Stage II Construction.

STRUCTURAL STEEL DETAILS
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

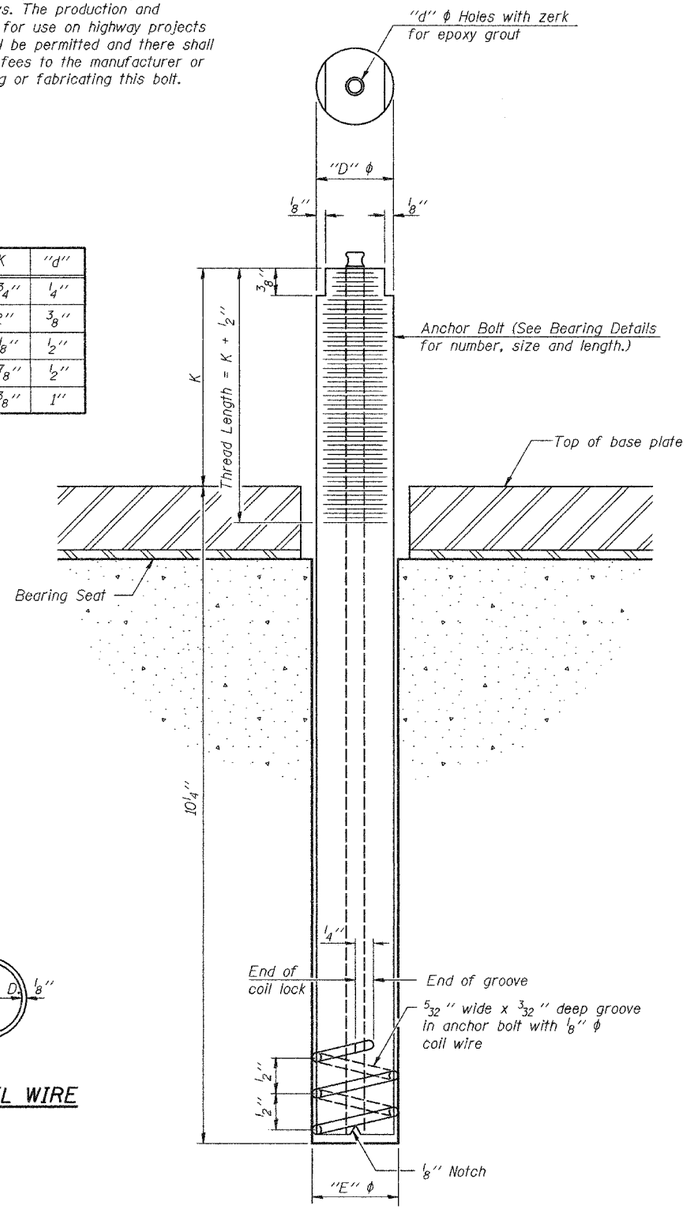
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	28
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

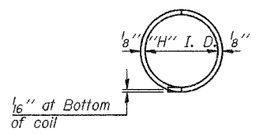
SHEET NO. 11
18 SHEETS

Contract #72760

D	E	H	K	"d"
1"	1 1/8"	13/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



ILLINOIS COIL-LOCK ANCHOR BOLT



PLAN-COIL WIRE

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.

The coil wire shall be made of any suitable soft steel wire.

The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.

The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

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

ALTERNATE ANCHOR BOLTS

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

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

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

Location	Type
Abuts.	A307
Piers	A307

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

GENERAL NOTES

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

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

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 Furnishing and Erecting Structural Steel.

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

ABB-1 10-22-04

October 14 2005

EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

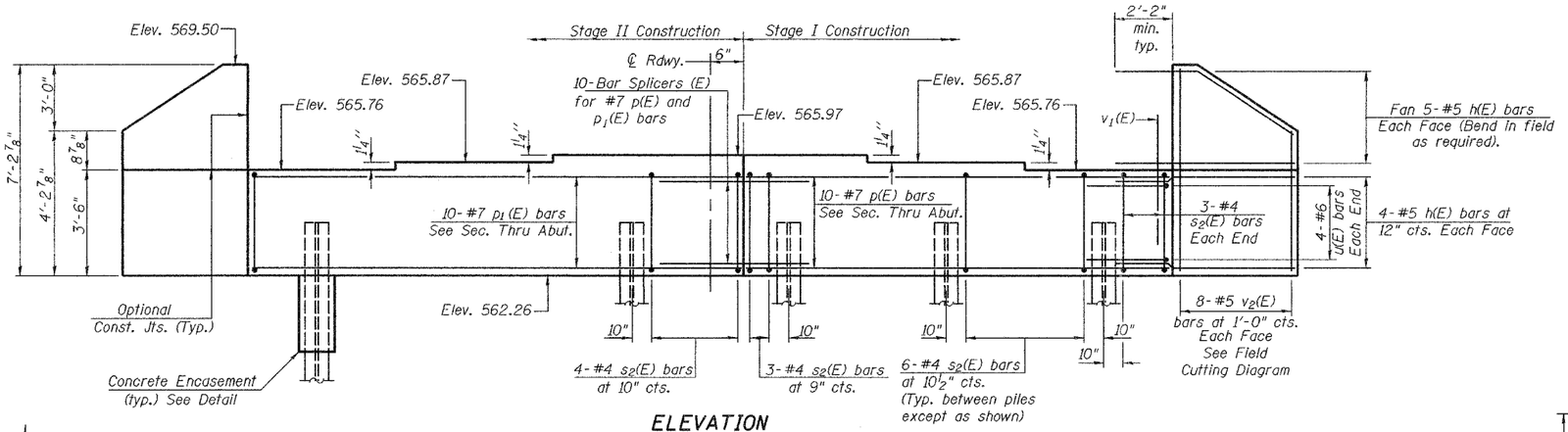
ANCHOR BOLT DETAILS FOR BEARINGS
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

Notes:
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Space reinforcement in cap to miss anchor bolts.
For anchor bolt installation details see sheet 11 of 18.
For bar splicer details see sheet 16 of 18.

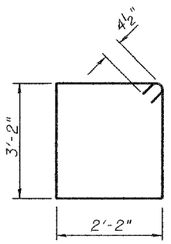
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

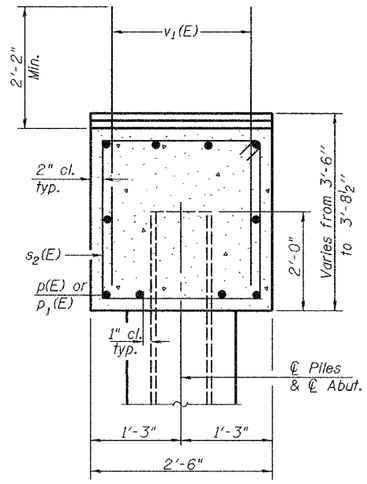
SHEET NO. 12
18 SHEETS
Contract #72760



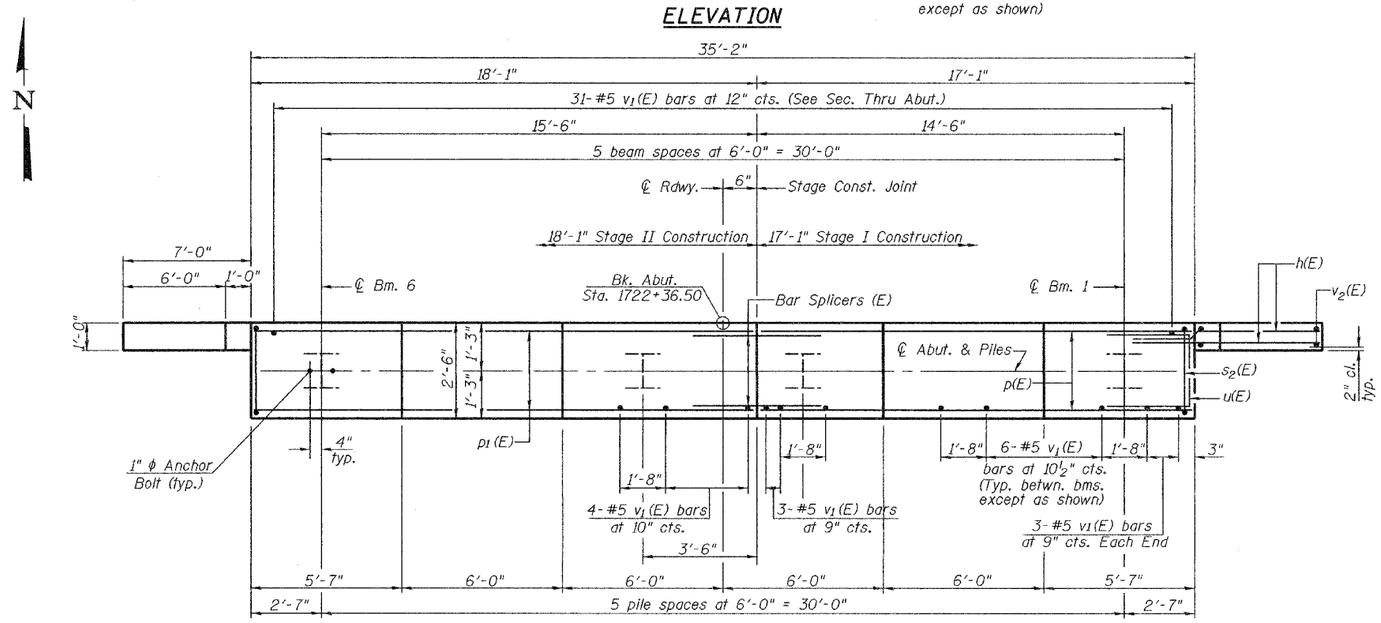
ELEVATION



BAR $s_2(E)$



SEC. THRU ABUT.



PLAN

BAR u(E)

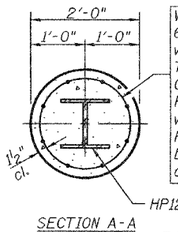
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#5	10'-0"	——
p(E)	10	#7	16'-10"	——
p1(E)	10	#7	17'-10"	——
s2(E)	37	#4	11'-5"	⊐
u(E)	8	#6	8'-5"	⊏
v1(E)	68	#5	4'-4"	——
v2(E)	16	#5	10'-9"	——
Concrete Structures		Cu. Yd.	14.9	
Reinforcement Bars, Epoxy Coated		pound	1950	
Furnishing Steel Piles HP12x53		Foot	285	
Driving Steel Piles		Foot	285	
Structure Excavation		Cu. Yd.	131.9	
Test Pile Steel HP 12x53		Each	1	

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

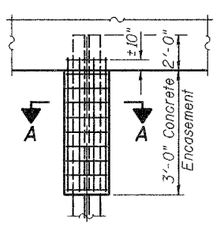
October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PILE DATA
Type: Friction HP12x53
Nominal Required Bearing: 197 Tons
Nominal Design Capacity: 131 Tons
Est. Length: 57'
No. Required: 5+1 Test Pile

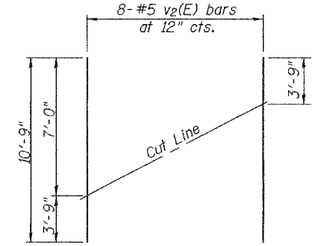


SECTION A-A

Welded wire fabric 6x6-W4.0xW4.0 weighing 58#/100 sq. ft. The cost of Excavation, Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for Encasement may be omitted when soil conditions permit.



PILE ENCASEMENT DETAIL



FIELD CUTTING DIAGRAM
Order $v_2(E)$ bars full length. Cut as shown and use remainder of bars in opposite face.

NORTH ABUTMENT
F.A.S. RTE. 1774-SEC. 113(B-5.B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

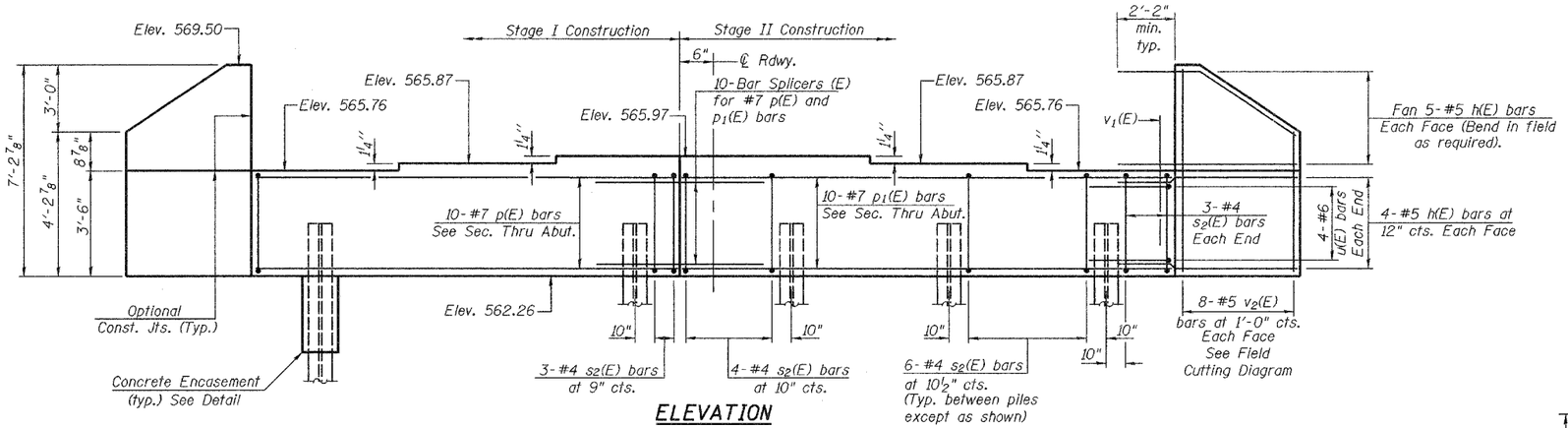
Notes:
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Space reinforcement in cap to miss anchor bolts.
For anchor bolt installation details see sheet 11 of 18.
For bar splicer details see sheet 16 of 18.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

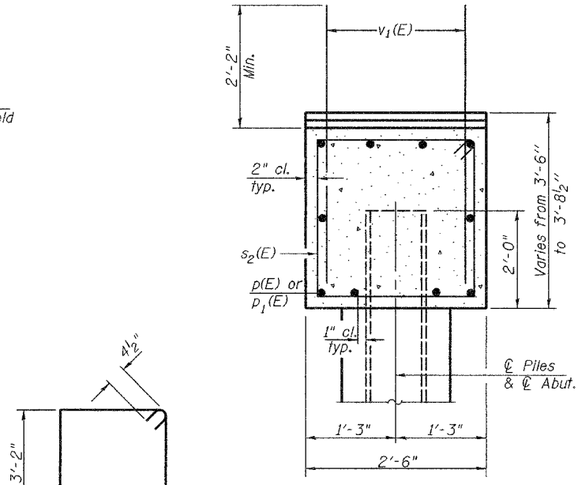
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
18 SHEETS

Contract #72760

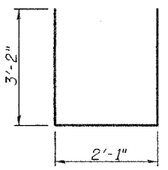


ELEVATION

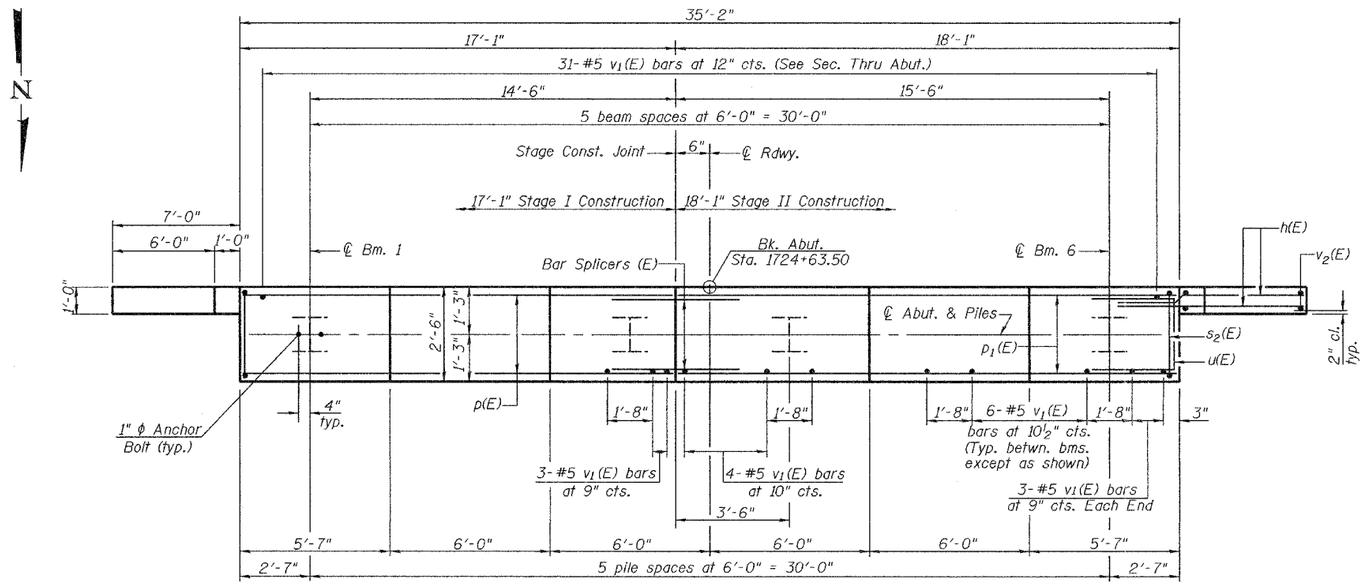


SEC. THRU ABUT.

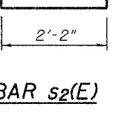
BAR s2(E)



BAR u(E)



PLAN



FIELD CUTTING DIAGRAM

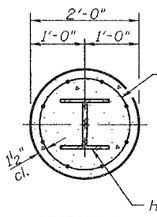
Order $v_2(E)$ bars full length. Cut as shown and use remainder of bars in opposite face.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	36	#5	10'-0"	——
p(E)	10	#7	16'-10"	——
p1(E)	10	#7	17'-10"	——
s2(E)	37	#4	11'-5"	□
u(E)	8	#6	8'-5"	⊏
v1(E)	68	#5	4'-4"	——
v2(E)	16	#5	10'-9"	——
Concrete Structures			Cu. Yd.	14.9
Reinforcement Bars, Epoxy Coated			pound	1950
Furnishing Steel Piles HP12x53			Foot	285
Driving Steel Piles			Foot	285
Structure Excavation			Cu. Yd.	131.9
Test Pile Steel HP 12x53			Each	1

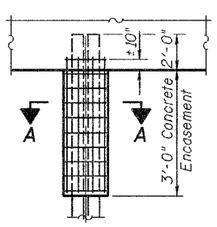
PILE DATA

Type: Friction HP12x53
Nominal Required Bearing: 197 Tons
Nominal Design Capacity: 131 Tons
Est. Length: 57'
No. Required: 5+1 Test Pile



SECTION A-A

Welded wire fabric 6x6-W4.0xW4.0 weighing 58#/100 sq. ft. The cost of Excavation, Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for Encasement may be omitted when soil conditions permit.



PILE ENCASEMENT DETAIL

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

SOUTH ABUTMENT
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

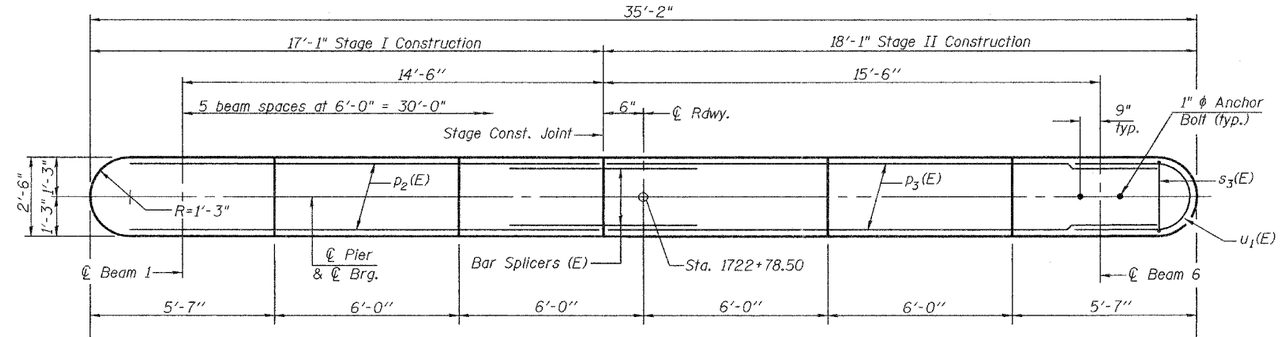
Notes:
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Space reinforcement in cap to miss anchor bolts.
For anchor bolt installation details see sheet 11 of 18.
For bar splicer details see sheet 16 of 18.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

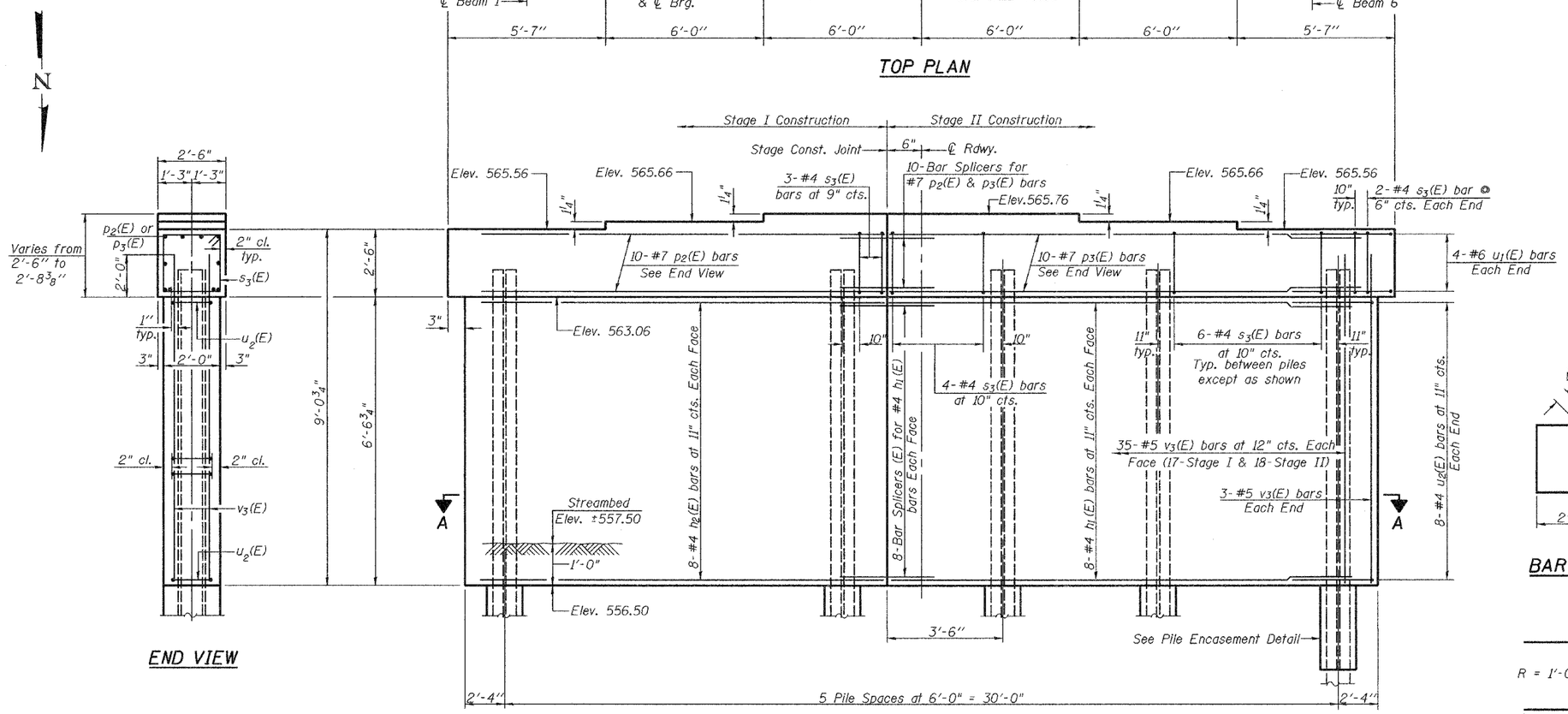
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	31
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 14
18 SHEETS

Contract #72760

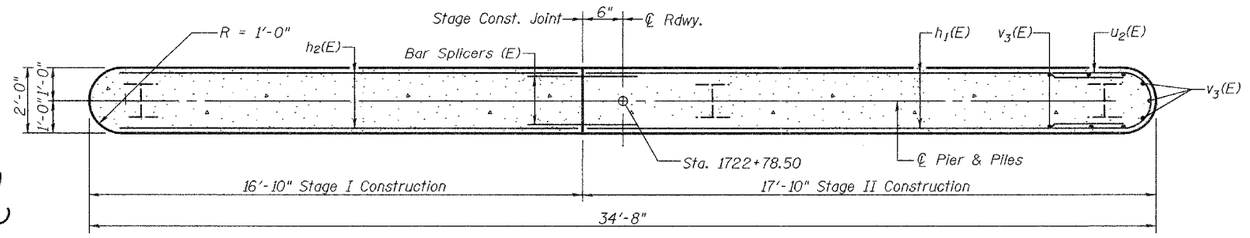


TOP PLAN

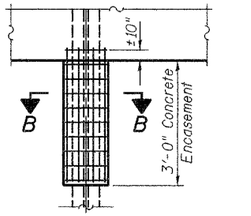


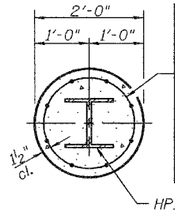
END VIEW

ELEVATION
(Looking South)



SECTION A-A





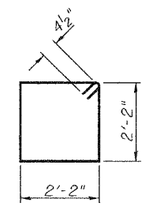
Welded wire fabric 6x6-W4.0xW4.0 weighing 58#/100 sq. ft. The cost of Excavation, Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for Encasement may be omitted when soil conditions permit.

SECTION B-B

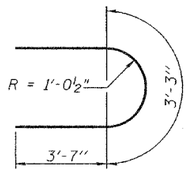
PILE ENCASEMENT DETAIL

PILE DATA

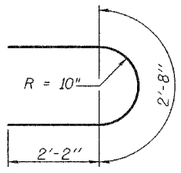
Type: Friction HP12x53
Nominal Required Bearing: 290 Tons
Nominal Design Capacity: 193 Tons
Est. Length: 63'
No. Required: 5+1 Test Pile



BAR s_3(E)



BAR u_1(E)



BAR u_2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_1(E)	16	#4	16'-8"	
h_2(E)	16	#4	15'-8"	
p_2(E)	10	#7	15'-5"	
p_3(E)	10	#7	16'-5"	
s_3(E)	35	#4	9'-5"	
u_1(E)	8	#6	10'-5"	
u_2(E)	16	#4	7'-0"	
v_3(E)	76	#5	10'-10"	
Concrete Structures			Cu. Yd.	24.8
Reinforcement Bars, Epoxy Coated			Pound	2280
Furnishing Steel Piles HP12x53			Foot	315
Structure Excavation			Cu. Yd.	8.6
Test Pile Steel HP 12x53			Each	1
Driving Steel Piles			Foot	315

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PIER 1
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

Notes:
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
Space reinforcement in cap to miss anchor bolts.
For anchor bolt installation details see sheet 11 of 18.
For bar splicer details see sheet 16 of 18.

PILE DATA PIER 2

Type: Friction HP12x53
Nominal Required Bearing: 377 Tons
Nominal Design Capacity: 251 Tons
Est. Length: 71'
No. Required: 5+1 Test Pile

PILE DATA PIER 3

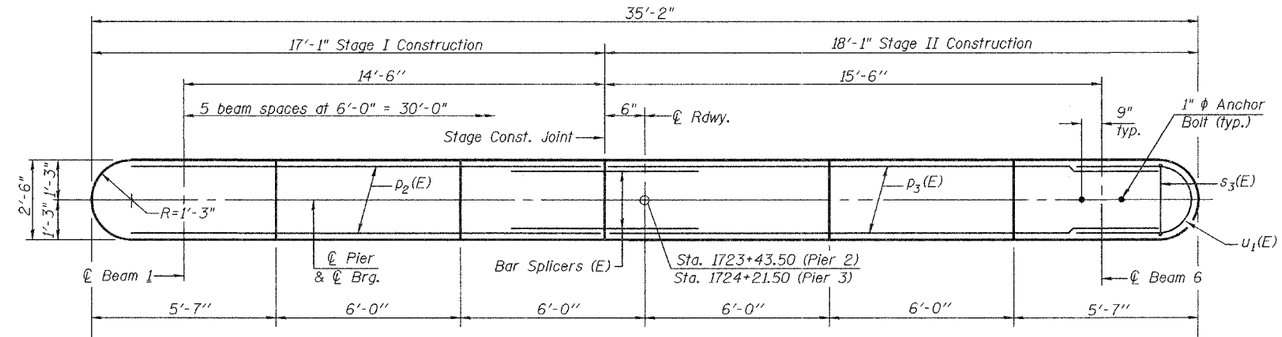
Type: Friction HP12x53
Nominal Required Bearing: 353 Tons
Nominal Design Capacity: 236 Tons
Est. Length: 77'
No. Required: 5+1 Test Pile

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

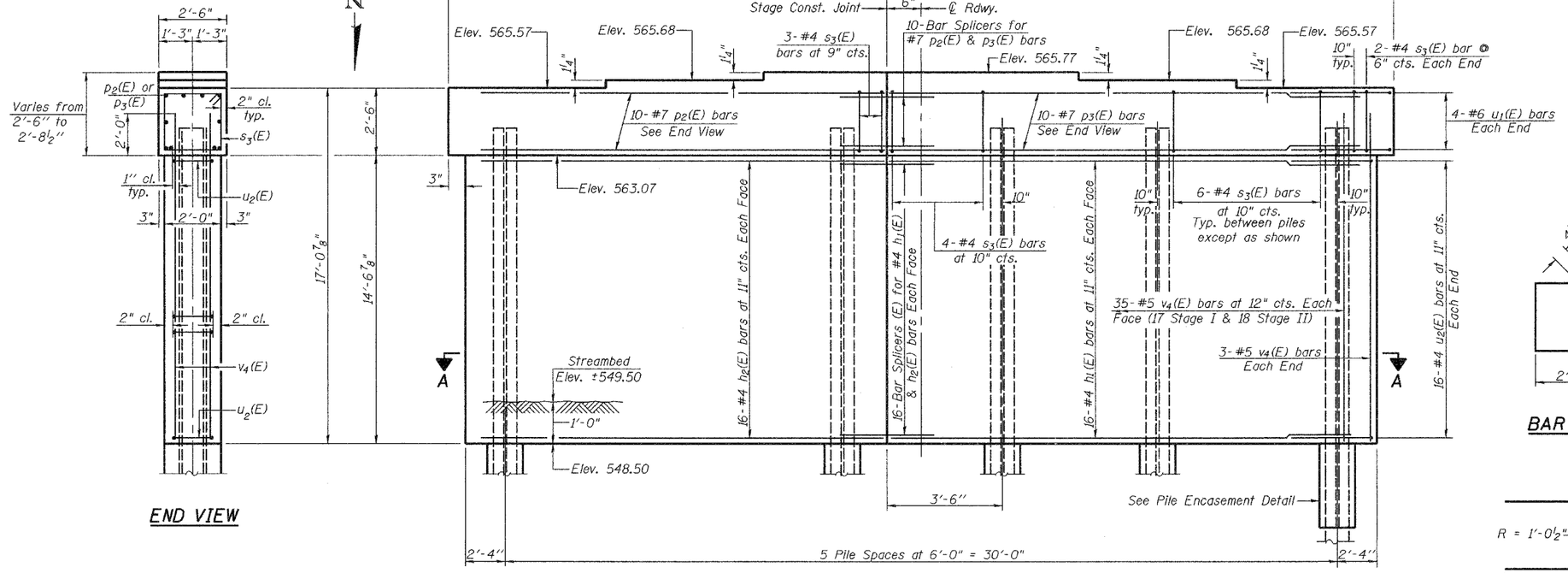
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
18 SHEETS

Contract #72760

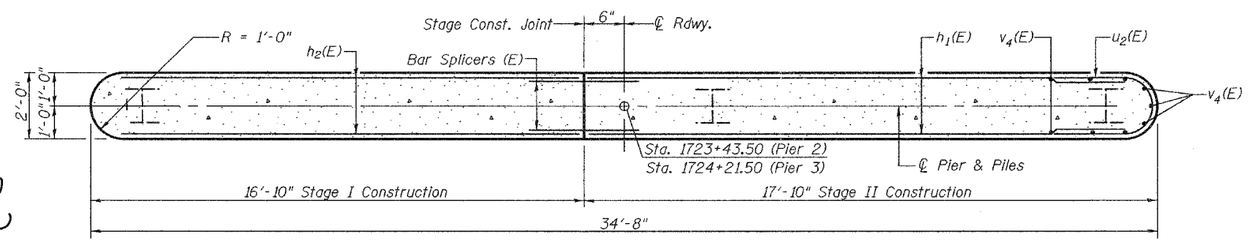


TOP PLAN

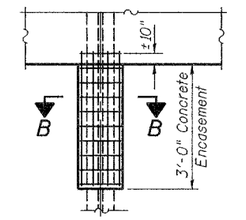


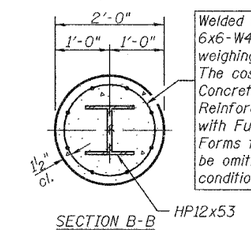
END VIEW

ELEVATION
(Looking South)



SECTION A-A





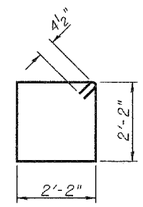
Welded wire fabric 6x6-W4.0xW4.0 weighing 58#/100 sq. ft. The cost of Excavation, Concrete Encasement and Reinforcement is included with Furnishing Piles. Forms for Encasement may be omitted when soil conditions permit.

SECTION B-B

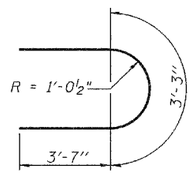
PILE ENCASEMENT DETAIL

TWO PIERS
BILL OF MATERIAL

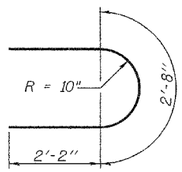
Bar	No.	Size	Length	Shape
h_1(E)	64	#4	16'-8"	
h_2(E)	64	#4	15'-8"	
p_2(E)	20	#7	15'-5"	
p_3(E)	20	#7	16'-5"	
s_3(E)	70	#4	9'-5"	
u_1(E)	16	#6	10'-5"	
u_2(E)	64	#4	7'-0"	
v_4(E)	152	#5	18'-10"	
Concrete Structures		Cu. Yd.	90.0	
Reinforcement Bars, Epoxy Coated		pound	6660	
Furnishing Steel Piles HP12x53		foot	740	
Structure Excavation		Cu. Yd.	17.2	
Test Pile Steel HP 12x53		Each	2	
Driving Steel Piles		Foot	740	
Underwater Structure Excavcation Protection Location 1		Each	1	
Underwater Structure Excavcation Protection Location 2		Each	1	



BAR s_3(E)



BAR u_1(E)



BAR u_2(E)

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

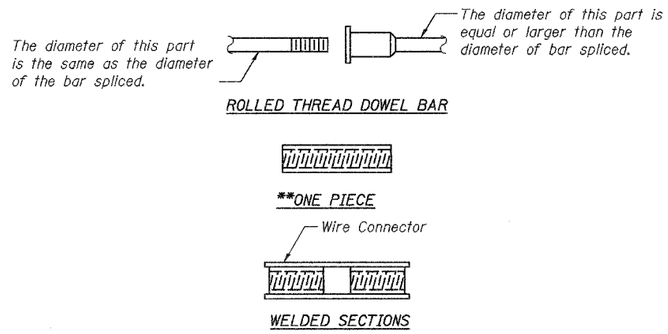
PIERS 2 & 3
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

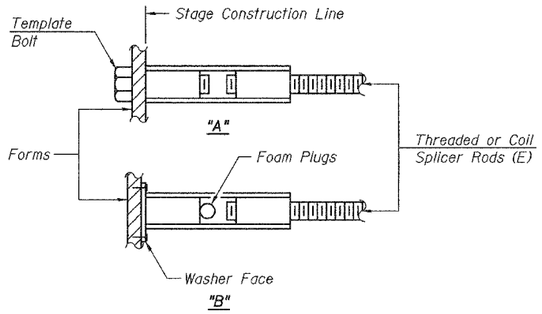
SHEET NO. 16
18 SHEETS

Contract #72760



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) = $1.25 \times fy \times A_t$

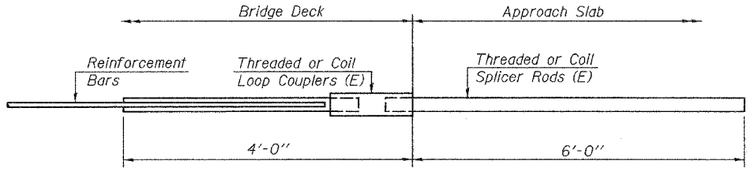
② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

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

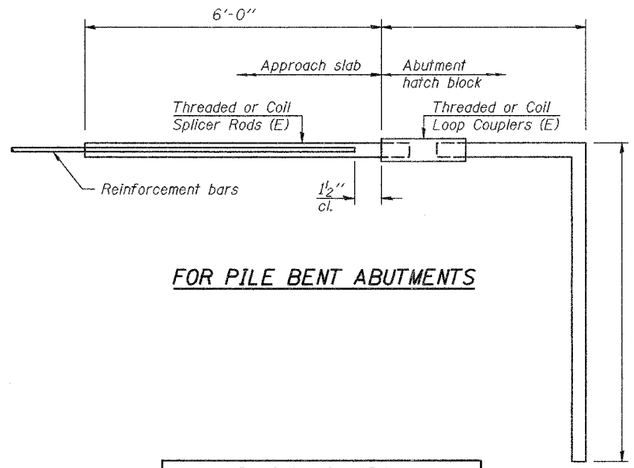
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

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."



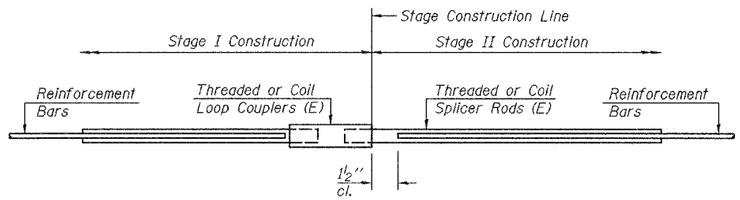
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 64



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
#7	20	Abuts.
#7	30	Piers
#4	80	Piers
#5	614	Deck
#6	16	Diaphragms

DESIGNED	Stephen M. Ryan
CHECKED	Chi-Cheung Chau
DRAWN	R. Sommer
CHECKED	SMR/CCC

October 14 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 10-22-04

BAR SPLICER ASSEMBLY DETAILS
F.A.S. RTE. 1774 - SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
18 SHEETS

Contract #72760

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 1 of 2

Date 51304

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 1/4, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-0019 Ex / 054-0505 Pr
Station 1723+50
BORING NO. 1 N. Abut
Station 1722+36
Offset 14.0ft Lt
Ground Surface Elev. 568.5 ft

Surface Water Elev. 562.9 ft
Stream Bed Elev. 549.5 ft
Groundwater Elev.:
▽ First Encounter 550.0 ft
▽ Upon Completion Washed ft
▽ After ___ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
Dark Grey Moist SILTY CLAY (Fill)				SAND (continued)			
					0		
				Grey Medium Grained Silty SAND Washed	3		
					4		
	1				2		
	2	1.6	28	Brown Coarse Grained SAND Washed	6		
	2	B			10		
-5				-25			
563.00							
	1						
Dark Grey Moist SILTY CLAY LOAM (Fill)	4	1.0	23				
	6	B					
560.50							
	1				1		
Brown Moist SILTY CLAY LOAM (Fill)	2	1.5	18	No Return Washed	2		
	3	P			5		
558.50 -10				-30			
Grey V. Moist LOAM							
	1						
	1	0.3	26				
	2	B					
555.50							
Dark Grey V. Moist SILT LOAM	0				0		
	1	0.5	27	Medium Grained SAND Washed	3		
	2	B			4		
553.50 -15				-35			
SAND							
	0						
Grey V. Moist Medium Grained Silty SAND	1						
	1						
	0				3		
▽ Brown Medium Grained SAND Washed	0			Medium Grained SAND Washed	2		
	1				3		
-20				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. – Before Seating)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 2 of 2

Date 51304

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 1/4, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-0019 Ex / 054-0505 Pr
Station 1723+50
BORING NO. 1 N. Abut
Station 1722+36
Offset 14.0ft Lt
Ground Surface Elev. 568.5 ft

Surface Water Elev. 562.9 ft
Stream Bed Elev. 549.5 ft
Groundwater Elev.:
▽ First Encounter 550.0 ft
▽ Upon Completion Washed ft
▽ After ___ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
SAND (continued)							
Medium to Coarse Grained SAND w/Some Coarse GRAVEL Washed	2						
	5						
	7						
-45							
	3						
Medium Grained SAND Washed	4						
	6						
-50							
	10						
Medium Grained SAND Washed	20						
	34						
-55							
Medium Grained Silty SAND Washed	31						
509.00	31						
Boring Completed -60							

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. – Before Seating)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 1 of 2

Date 51904

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 1/4, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-0019 Ex / 054-0505 Pr
Station 1723+50
BORING NO. 2 Pier 2
Station 1723+32
Offset 29.0ft Rt
Ground Surface Elev. 557.2 ft

Surface Water Elev. 552.9 ft
Stream Bed Elev. 549.5 ft
Groundwater Elev.:
▽ First Encounter 543.7 ft
▽ Upon Completion Washed ft
▽ After ___ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
V. Dark Grey Moist SILTY CLAY LOAM				SAND (continued)			
					2		
				Coarse Grained SAND and GRAVEL Washed	6		
	1				7		
	1	0.3	31		4		
w/Coarse SAND at Bottom V. Disturbed Sample	2	P		Medium Grained Silty SAND Washed	11		
-5				-25	15		
	1						
	1	1.5	22				
w/Coarse SAND at Bottom V. Poor Recovery	1	P					
549.20							
V. Dark Grey V. Moist LOAM	0				9		
	0	0.1	39	Medium Grained SAND w/ Occasional GRAVEL Washed	8		
	1	B			10		
547.20 -10				-30			
Dark Grey Wet SAND LOAM V. Disturbed Sample	0						
Sampler Advanced by Weight of Hammer	0	0.0	28				
	0	P					
544.20							
▽ SAND	0				1		
Dark Grey Medium Grained SAND Free Water	0			Medium Grained SAND w/ Occasional GRAVEL, w/4" Seam	9	4.9	11
Sampler Advanced by Weight of Hammer	0			of CLAY LOAM (Till)	15	B	
-15				Washed 522.20 -35			
	0			Light Grey SANDY CLAY (Till) w/ Lenses of Medium Grained SAND Washed			
Coarse Grained SAND Washed	3						
	5						
	1				3		
Coarse Grained SAND and GRAVEL	3				10	3.1	10
	8				16	B	
-20				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. – Before Seating)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 2 of 2

Date 51904

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 1/4, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-0019 Ex / 054-0505 Pr
Station 1723+50
BORING NO. 2 Pier 2
Station 1723+32
Offset 29.0ft Rt
Ground Surface Elev. 557.2 ft

Surface Water Elev. 552.9 ft
Stream Bed Elev. 549.5 ft
Groundwater Elev.:
▽ First Encounter 543.7 ft
▽ Upon Completion Washed ft
▽ After ___ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
516.20			
Grey Coarse Grained Dirty SAND w/Occasional GRAVEL Washed	4		
	11		
	21		
-45			
510.20			
Grey SANDY CLAY (Till) w/ Lenses of Medium Grained SAND Washed	10		
	15	7.3	10
	21	S-15	
-50			
505.20			
Medium Grained SAND and GRAVEL Washed	21		
	35		
	41		
502.70 -55			
Boring Completed			
-60			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. – Before Seating)
BBS, from 137 (Rev. 8-99)

BORING DATA
F.A.S. RTE. 1774 - SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
18 SHEETS

Contract #72760

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 1 of 2

Date 5/12/04

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 1/4, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-0019 Ex / 054-0505 Pr
Station 1723+50
BORING NO. 3 S. Abut
Station 1724+67
Offset 13.0ft Lt
Ground Surface Elev. 568.5 ft

Surface Water Elev. 552.9 ft
Stream Bed Elev. 549.5 ft
Groundwater Elev.:
▽ First Encounter 549.0 ft
▽ Upon Completion Washed ft
▽ After ___ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
				Dark Brownish Grey Moist SILTY CLAY LOAM (Fill)				
	0					1		
						3		
						5		
	0					5		
	0	1.0	19	Coarse Grained SAND and GRAVEL Washed		14		
-5	2	B				11		
	0				-25			
	1	0.8	23					
561.50	8	B						
				Dark Grey Moist CLAY LOAM (Till) (Fill)				
	0					2		
	1	4.9	13	Grey Loamy Medium Grained SAND w/Occassional Gravel Washed		2		
-10	8	B				3		
					-30			
557.50	1							
	3	2.1	19	Grey Moist SILTY CLAY LOAM w/ Red Oxidation Spots				
	5	B			538.50			
						Grey LOAM Poor Recovery Washed		
	0					0		
	1	0.4	30			0		
	3	B				1		
-15					-35			
563.00								
	0			Brown V. Moist SILTY CLAY	532.50			
	1	1.0	38			SAND		
	3	B						
550.50								
	0			Dark Grey V. Moist LOAM w/ Medium SAND Seams Free Water at Bottom ▽		2		
	0	0.4	32			6		
	1	B				8		
548.50	-20				-40			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. – Before Seating)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 2 of 2

Date 5/12/04

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 1/4, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-0019 Ex / 054-0505 Pr
Station 1723+50
BORING NO. 3 S. Abut
Station 1724+67
Offset 13.0ft Lt
Ground Surface Elev. 568.5 ft

Surface Water Elev. 552.9 ft
Stream Bed Elev. 549.5 ft
Groundwater Elev.:
▽ First Encounter 549.0 ft
▽ Upon Completion Washed ft
▽ After ___ Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	DESCRIPTION	DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)
				SAND (continued) 508.00				
				Drilled Hard 41'-43'				
						Grey Moist CLAY LOAM (Till) Washed		
						13		
	2					27	9.4	10
	15			Medium Grained SAND and GRAVEL Washed		50	S-15	
	22				504.00			
-45					-65			
						Boring Completed		
						Refer Elevation to BM cb-01115, Chisled Square on SE WW = 569.59'		
						Refer STA to Back of existing South Abutment = 1724+60 Increase to South		
	0							
	6			Medium to Coarse Grained GRAVEL Washed				
	11							
-50					-70			
	9							
	14			Fine Silty SAND Washed				
	17							
-55					-75			
	11							
	15			w/3" Grey CLAY LOAM (Till) Seam Washed				
	30							
-60					-80			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. – Before Seating)
BBS, from 137 (Rev. 8-99)

BORING DATA
F.A.S. RTE. 1774-SEC. 113(B-5,B-6)
LOGAN COUNTY
STATION 1723+50.00
STRUCTURE NO. 054-0505

Bench Mark: (UNADJ. ELEV. NAVD 88 - 568.948) (TPS-13) (PUB/ADJ ELEV NAVD 88 - 568.934)
Fd chis "a" on SE wingwall on S.N. 054-0019, bridge over Kickapoo Creek

Existing Structure: S.N. 054-2013, originally built in 1933 as S.B.I. Route 121, Section 113-3B.
The existing structure is a 42' long double 10'x12' reinforced, cast-in-place concrete box culvert.
The existing structure is to be removed and replaced. Traffic to be maintained utilizing stage construction.

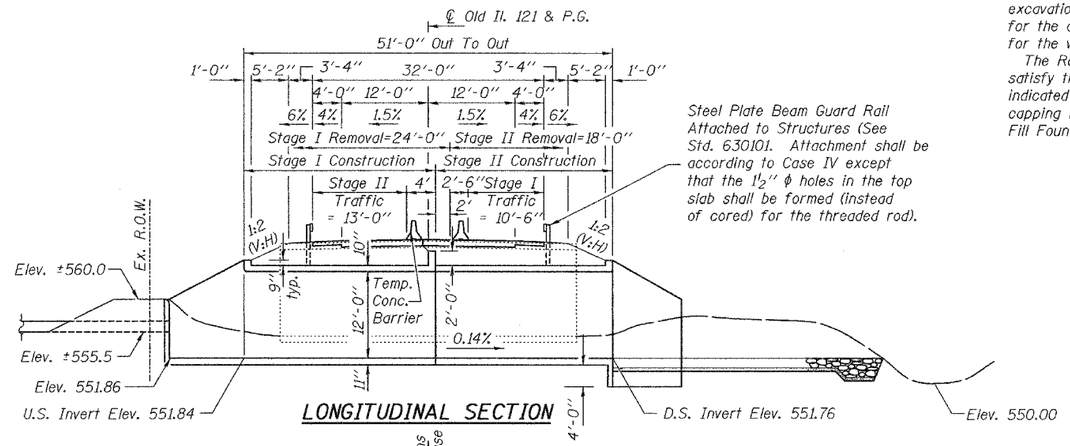
No salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
9 SHEETS

Contract #72760



LONGITUDINAL SECTION

Steel Plate Beam Guard Rail Attached to Structures (See Std. 630101. Attachment shall be according to Case IV except that the 1½" ϕ holes in the top slab shall be formed (instead of cored) for the threaded rod).

*Note A: Removal and replacement of weak soils with Rock Fill Foundation may be required beneath the culvert. The Engineer will determine the required depth following excavation to plan grade. The Contractor will be paid for the quantity actually furnished at the unit price for the work. See Special Provision.
The Rock Fill shall be capped with 6" of CA-7 and satisfy the standard specifications unless otherwise indicated in the special provisions. The cost of the capping material shall be included in the pay item "Rock Fill Foundation".

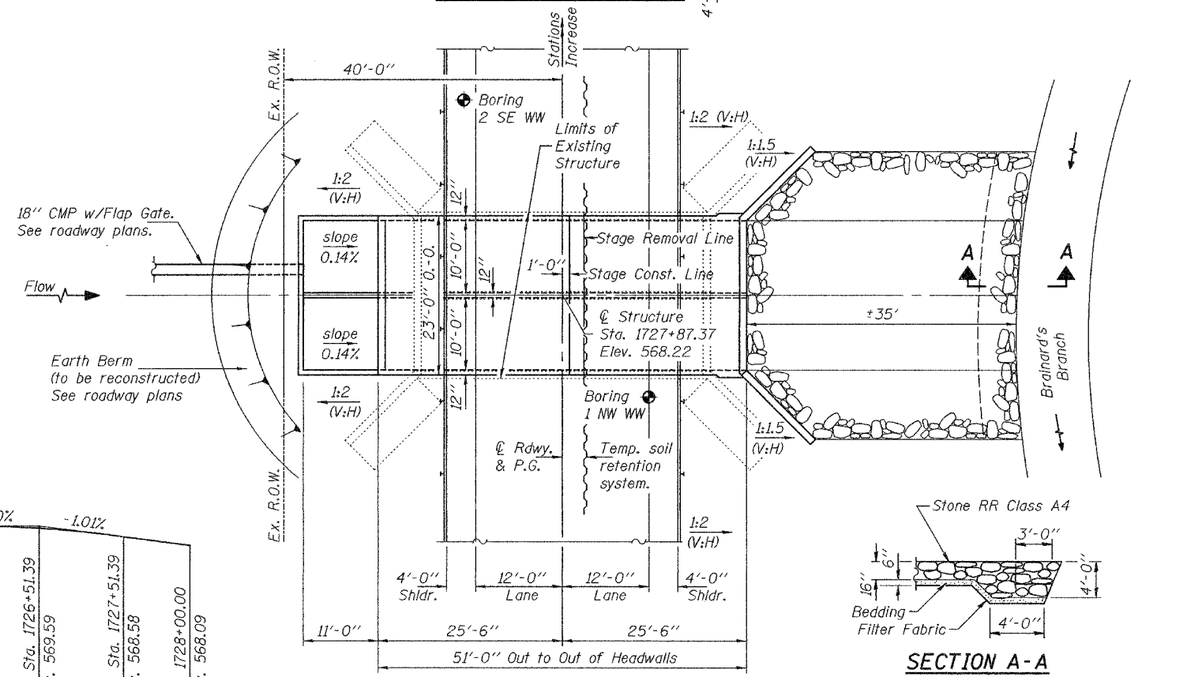
STATION 1727+87.37
BUILT 20 BY
STATE OF ILLINOIS
F.A.S. RT. 1774 SEC. 113 (B-5,B-6)
LOADING HS20
STRUCTURE NO. 054-2506

NAME PLATE
See Std. 515001

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.
Precast culvert alternate is not allowed.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
Granular Culvert Backfill shall be used to backfill the culvert. See Roadway Plans.
All construction joints shall be bonded.

INDEX OF SHEETS

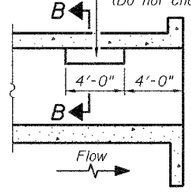


PLAN

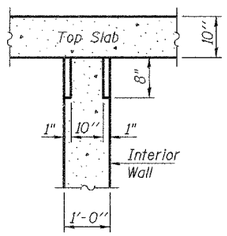
SECTION A-A

PROFILE GRADE
(along ℄ roadway)

Notch formed by rough finished board attached to and removed with formwork, interior wall. (Do not chamfer).

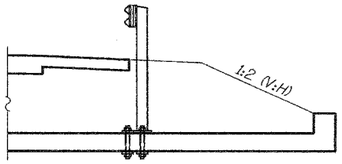


LONGITUDINAL SECTION



SECTION B-B

PHOEBE NESTING SITE DETAILS
(Downstream End Only)



GUARDRAIL MOUNTING DETAIL
(Std. 630101, Case IV)

TOTAL BILL OF MATERIAL

	ITEM	UNIT	TOTAL
	Stone Riprap, Class A4	Sq. Yd.	146.8
	Filter Fabric	Sq. Yd.	146.8
	Removal of Existing Structures No. 2	Each	1
	Reinforcement Bars	Pound	32,150
	Temporary Soil Retention System	Sq. Ft.	573
	Name Plates	Each	1
	Concrete Box Culverts	Cu. Yd.	200.5
	Bar Splicers	Each	156
*	Rock Fill Foundation	Ton	100
	Steel Plate Beam Guard Rail, Attached to Structures	Foot	46

* See Note A

WATERWAY INFORMATION

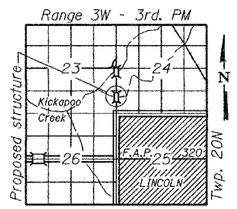
Drainage Area = 0.06 mi.²
Ex. Low Grade Elev. 568.17 @ Sta. 1727+75
Pr. Low Grade Elev. @ Sta.

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	50.2	20.8	20.8	556.40	0.00	0.00	556.40	556.40
Design	50	83.0	22.4	22.4	556.48	0.48	0.00	556.96	556.48
Base	100	97.4	23.0	23.0	556.51	0.59	0.00	557.10	556.51
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	132.8	24.2	24.2	556.57	0.86	0.00	557.43	556.57

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)



LOCATION SKETCH

DESIGNED	Fesseha Tekleab
CHECKED	Stephen M. Ryan
DRAWN	h.t. duong
CHECKED	FT / SMR

EXAMINED Oct. 13, 2005
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS RALPH E. ANGERMAN 081-004625 SPRINGFIELD LICENSED STRUCTURAL ENGINEER

EXPIRES 11-30-2006

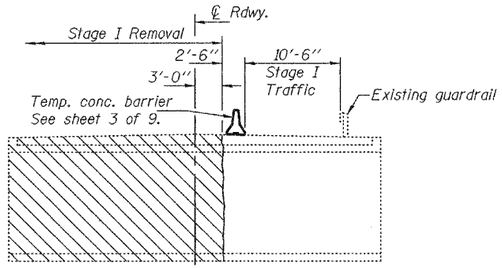
GENERAL PLAN
OLD IL. ROUTE 121 OVER
TRIBUTARY TO BRAINARDS BRANCH
F.A.S. RTE. 1774 - SEC. 113 (B-5,B-6)
LOGAN COUNTY
STATION 1727+87.37
STRUCTURE NO. 054-2506

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

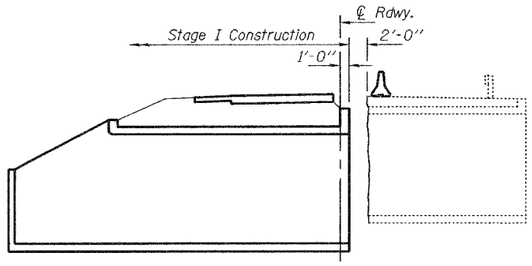
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
9 SHEETS

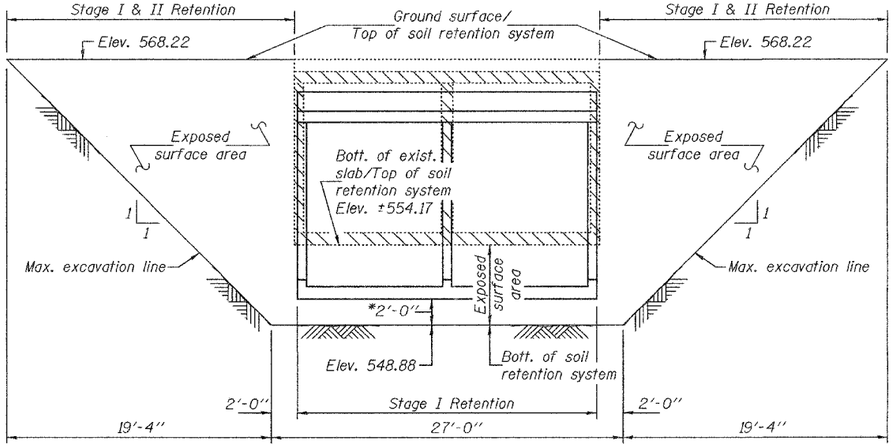
Contract #72760



STAGE I REMOVAL

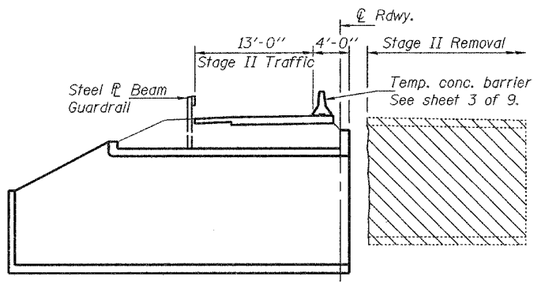


STAGE I CONSTRUCTION

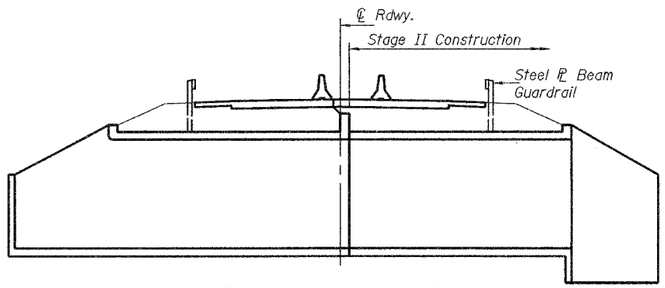


TEMPORARY SOIL RETENTION SYSTEM

* Assumed 2'-0" removal and replacement of weak soils with rock fill foundation. The Engineer will determine the required depth. See Note A on sheet 1 of 9.



STAGE II REMOVAL



STAGE II CONSTRUCTION

TEMPORARY SOIL RETENTION SYSTEM

A cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

Notes: All staging sections are looking south.
For quantity of Temporary Concrete Barrier, see roadway plans.
Hatched areas indicate Removal of Existing Structures No. 2.

DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	FT/SMR

Oct. 13, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

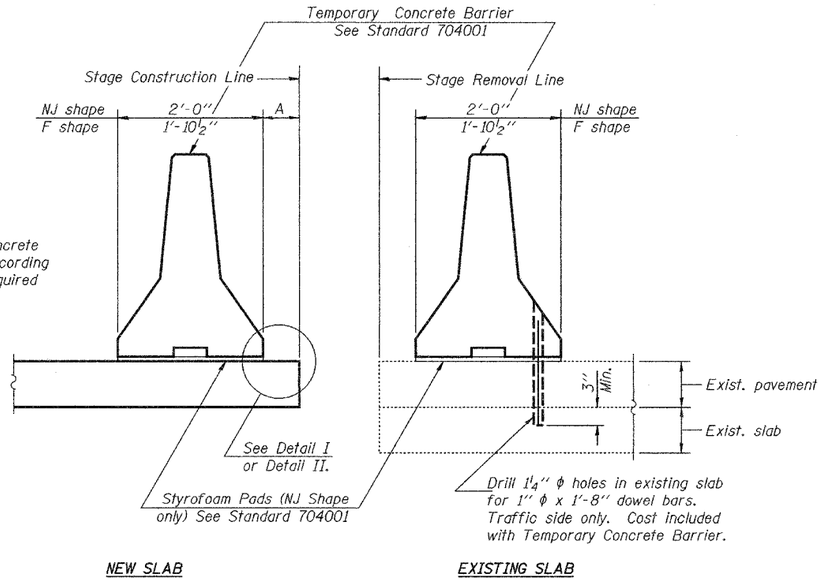
STAGE CONSTRUCTION DETAILS
F.A.S. RTE. 1774 - SEC. 113 (B-5,B-6)
LOGAN COUNTY
STATION 1727+87.37
STRUCTURE NO. 054-2506

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	38
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
9 SHEETS

Contract #72760



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

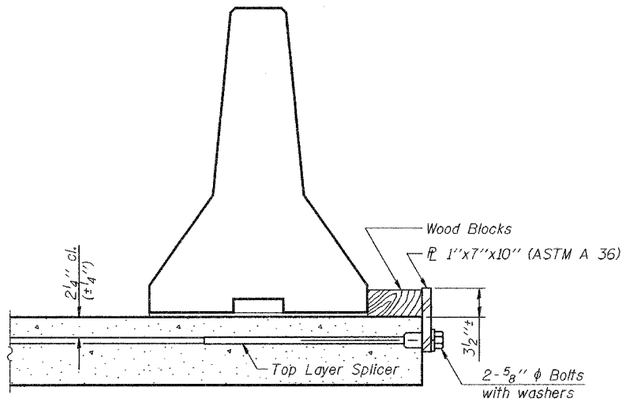
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

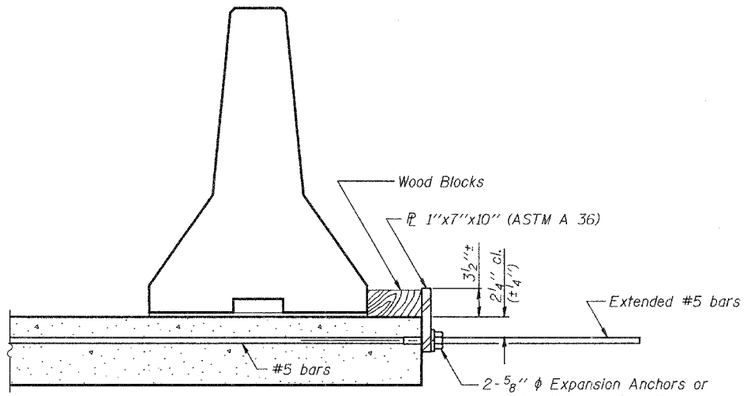
Cost of anchorage is included with Temporary Concrete Barrier.

SECTIONS THRU SLAB



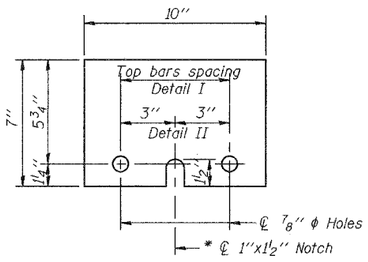
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



ℙ 1"x7"x10"

* Required only with Detail II

DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	FT/SMR

Oct. 13, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
F.A.S. RTE. 1774 - SEC. 113 (B-5,B-6)
LOGAN COUNTY
STATION 1727+87.37
STRUCTURE NO. 054-2506

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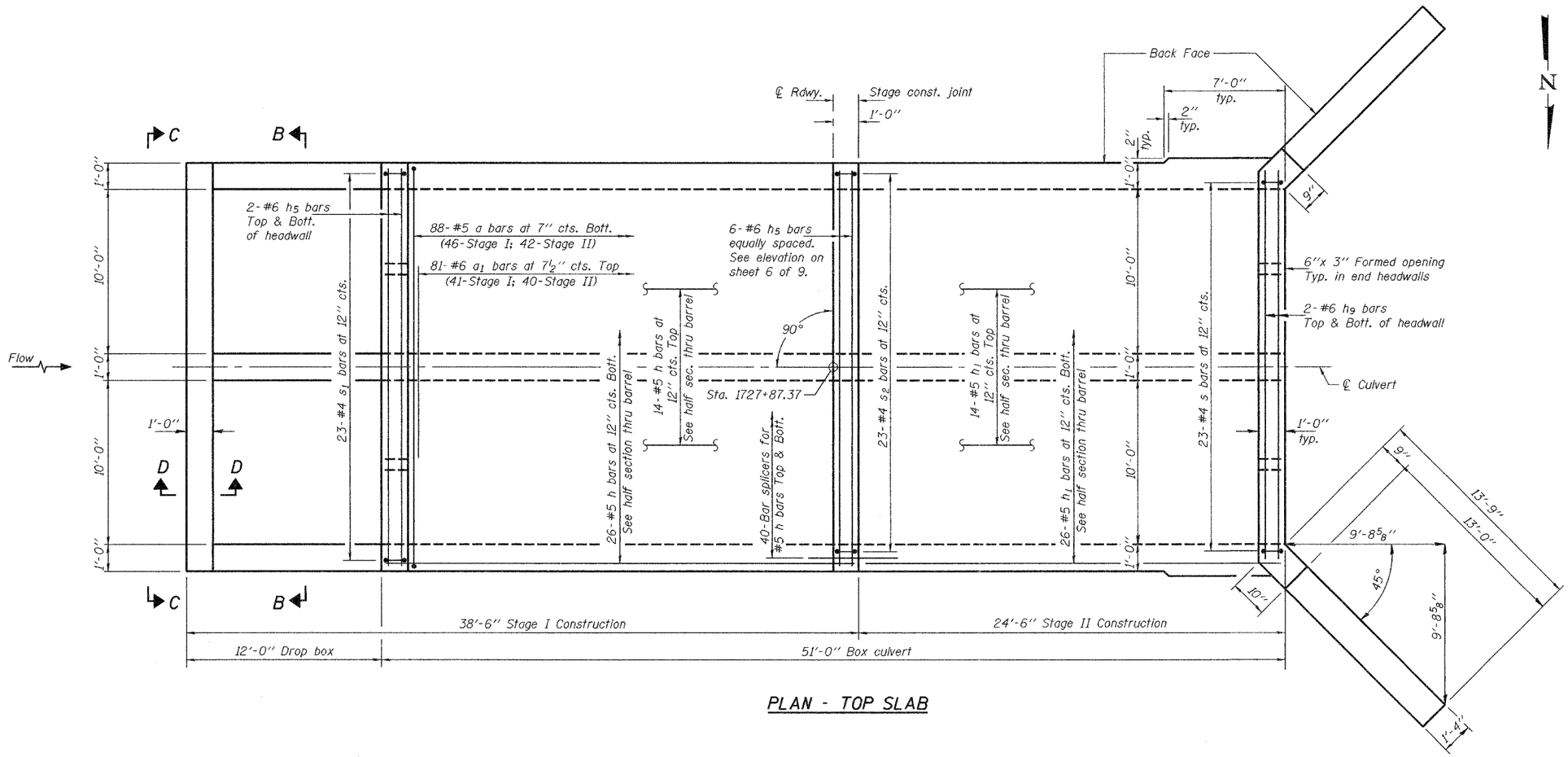
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	39
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
9 SHEETS

Contract #72760



PLAN - TOP SLAB

Notes: For Sections B-B & D-D and View C-C, see sheet 7 of 9.
For half section thru barrel details, elevation and Bill of Material, see sheet 6 of 9.
For bar splicer details, see sheet 8 of 9.
A distance of seven feet of the barrel shall be poured monolithically with the wingwalls.

DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	FT/SMR

Oct. 13, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

CULVERT DETAILS
F.A.S. RTE. 1774 - SEC. 113 (B-5,B-6)
LOGAN COUNTY
STATION 1727+87.37
STRUCTURE NO. 054-2506

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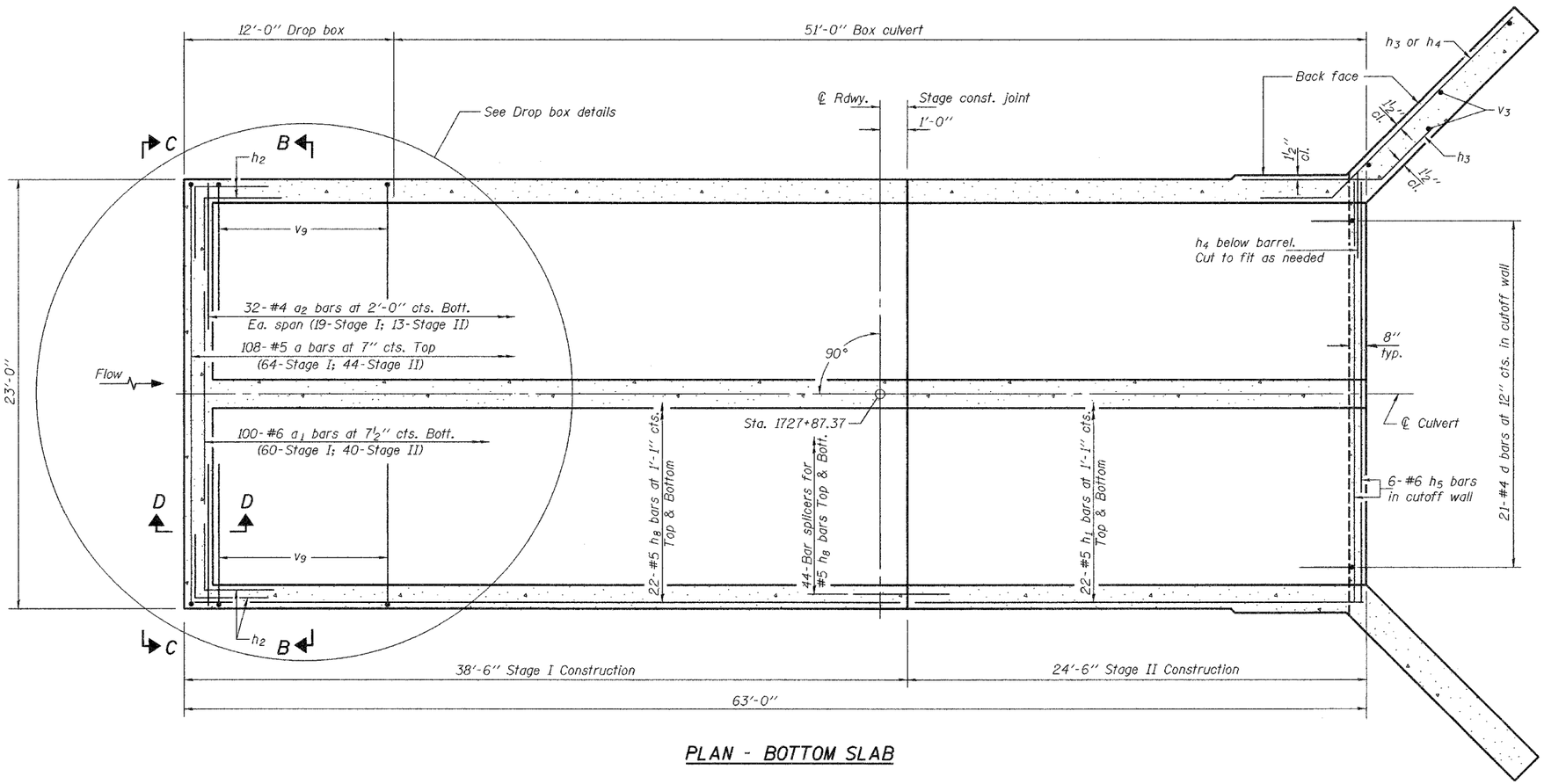
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	40
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
9 SHEETS

Contract #72760



PLAN - BOTTOM SLAB

Notes: For details and Bill of Material, see sheet 6 of 9.
For Sections B-B & D-D, View C-C and Drop box details, see sheet 7 of 9.
For bar splicer details, see sheet 8 of 9.

DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	FT/SMR

Oct. 13, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

CULVERT DETAILS
F.A.S. RTE. 1774 - SEC. 113 (B-5,B-6)
LOGAN COUNTY
STATION 1727+87.37
STRUCTURE NO. 054-2506

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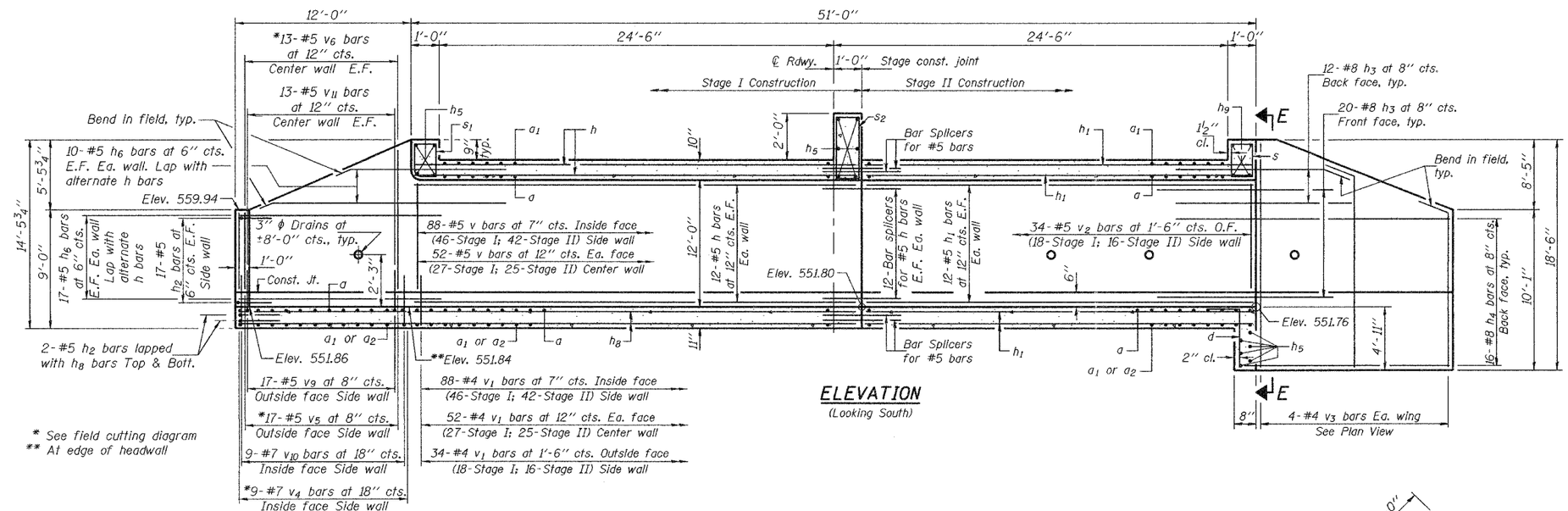
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	41
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

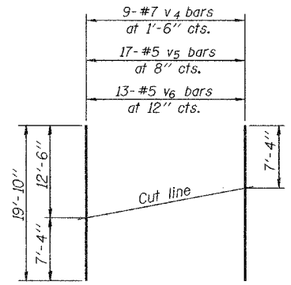
SHEET NO. 6
9 SHEETS

Contract #72760



* See field cutting diagram
** At edge of headwall

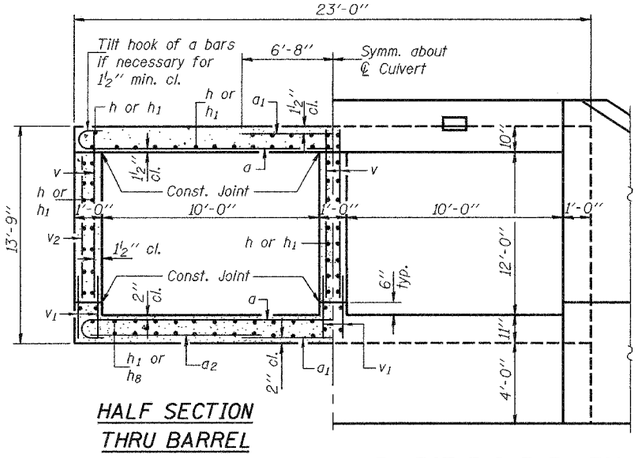
ELEVATION
(Looking South)



FIELD CUTTING DIAGRAM
Order v_4, v_5 & v_6 full length. Cut as shown and use remainder of bars in opposite face.

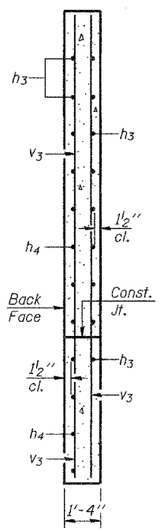
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	196	#5	23'-11"	
a1	181	#6	13'-4"	
a2	64	#4	9'-8"	
a3	16	#5	3'-0"	
d	21	#4	6'-5"	
h	112	#5	26'-3"	
h1	156	#5	24'-3"	
h2	76	#5	6'-0"	
h3	64	#8	8'-0"	
h4	32	#8	16'-6"	
h5	16	#6	22'-9"	
h6	162	#5	12'-9"	
h7	18	#5	22'-9"	
h8	44	#5	38'-3"	
h9	4	#6	22'-6"	
s	23	#4	4'-11"	
s1	23	#4	4'-9"	
s2	23	#4	7'-5"	
v	280	#5	12'-1"	
v1	348	#4	2'-11"	
v2	68	#5	11'-3"	
v3	8	#4	18'-3"	
v4	9	#7	19'-10"	
v5	17	#5	19'-10"	
v6	13	#5	19'-10"	
v7	39	#5	7'-4"	
v8	39	#5	5'-11"	
v9	34	#5	10'-11"	
v10	18	#7	10'-11"	
v11	26	#5	4'-7"	
Concrete Box Culverts			Cu. Yd.	200.5
Reinforcement Bars			Pound	32150

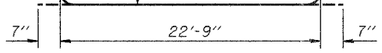


HALF SECTION THRU BARREL

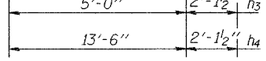
HALF WEST END ELEVATION



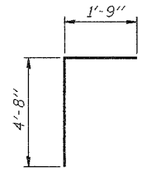
SECTION E-E



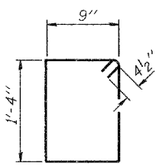
BAR a



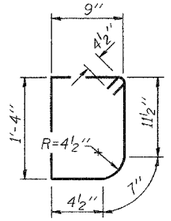
BARS h_3 & h_4



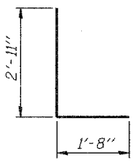
BAR d



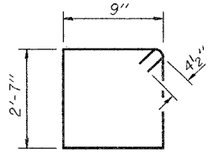
BAR s



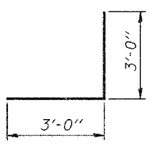
BAR s_1



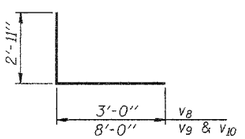
BAR v_{11}



BAR s_2



BAR h_2



BARS v_8, v_9 & v_{10}

DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	FT/SMR

Oct. 13, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

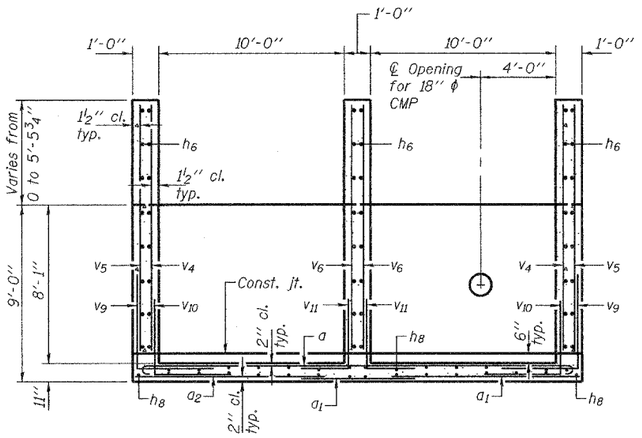
CULVERT DETAILS
F.A.S. RTE. 1774 - SEC. 113 (B-5,B-6)
LOGAN COUNTY
STATION 1727+87.37
STRUCTURE NO. 054-2506

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	42
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

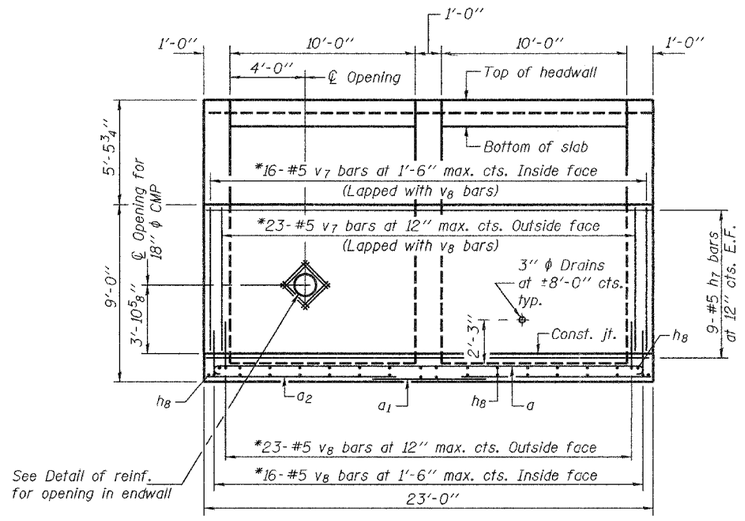
SHEET NO. 7
9 SHEETS

Contract #72760



SECTION B-B

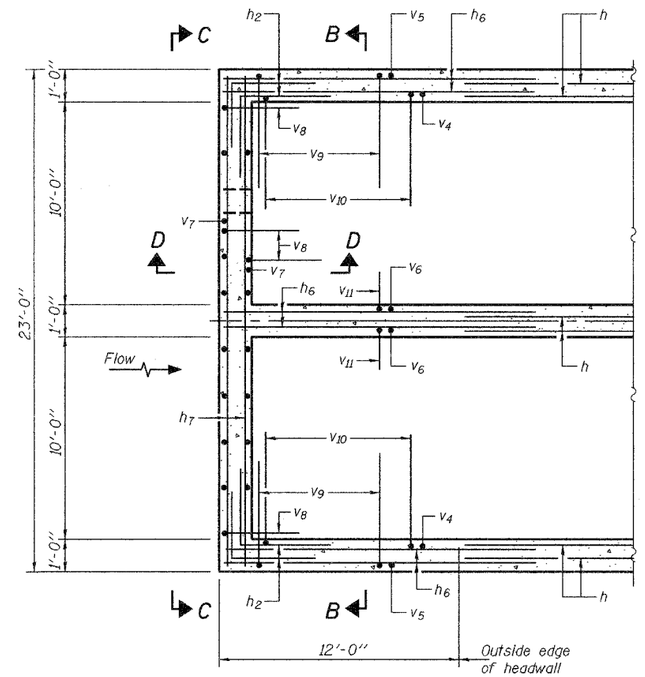
Showing reinforcement in center & side walls of drop box.
Vertical leg of v_9, v_{10} and v_{11} bars is 2'-11".



VIEW C-C

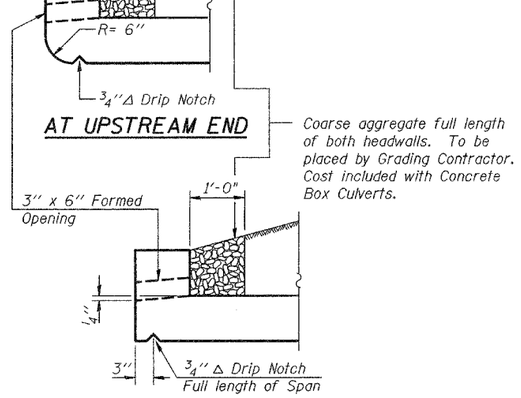
Showing reinforcement in end wall of drop box.
Vertical leg of v_8 bars is 2'-11".

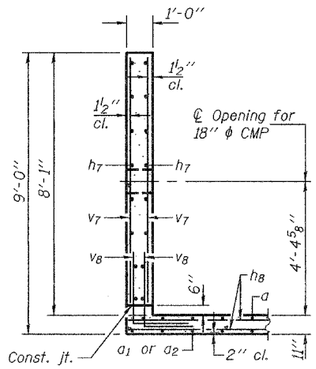
*Cut bars to miss opening in end wall



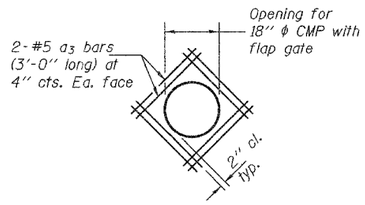
PLAN - DROP BOX DETAIL

Showing reinforcement in end, center and side walls of drop box.





SECTION D-D



DETAIL OF REINFORCEMENT FOR OPENING IN END WALL

Notes: For Bill of Material, see sheet 6 of 9.
For reinforcement in bottom slab of drop box, see sheet 5 of 9.

DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	FT/SMR

Oct. 13, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

CULVERT DETAILS
F.A.S. RTE. 1774 - SEC. 113 (B-5,B-6)
LOGAN COUNTY
STATION 1727+87.37
STRUCTURE NO. 054-2506

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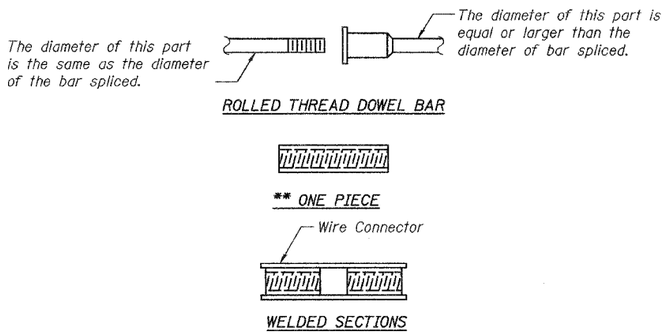
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	43
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

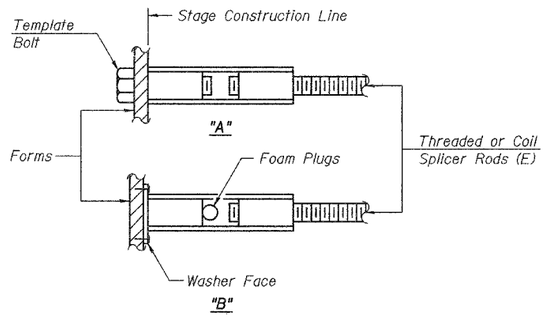
SHEET NO. 8
9 SHEETS

Contract #72760



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:

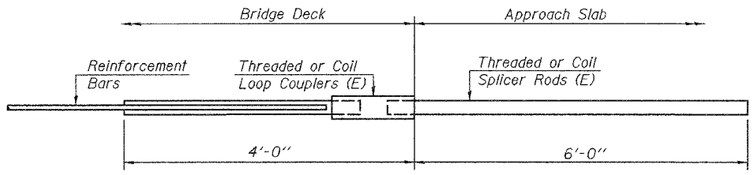
① Minimum Capacity (Tension in kips) = $1.25 \times fy \times A_t$

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

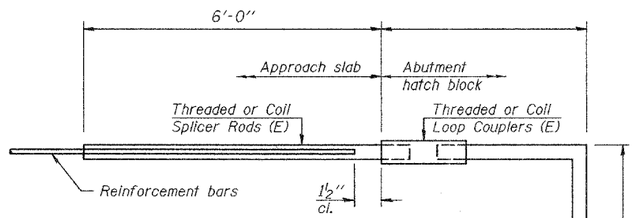
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0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



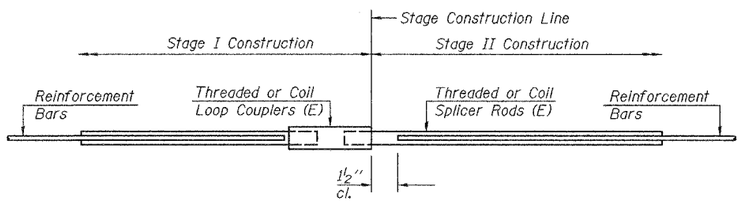
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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	40	Top slab
#5	72	Walls
#5	44	Bottom slab

DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. duong
CHECKED	FT/SMR

Oct. 13, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 10-22-04

BAR SPLICER ASSEMBLY DETAILS
F.A.S. RTE. 1774 - SEC. 113 (B-5,B-6)
LOGAN COUNTY
STATION 1727+87.37
STRUCTURE NO. 054-2506

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 1774	113(B-5, B-6)	LOGAN	60	44
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
9 SHEETS

Contract #72760

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 1 of 2

Date 5/7/04

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek Tributary LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 14, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-2013 Ex / 054-2506 Pr
Station 1727+86.5 +/-

BORING NO. 1 NW WW
Station 1727+81
Offset 12.0ft Rt
Ground Surface Elev. 567.2 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 555.6 ft

Groundwater Elev.:
▽ First Encounter 550.2 ft
▽ Upon Completion Washed ft
▽ After Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				Dark Grey Moist SILTY CLAY LOAM (Fill)
-5	1			
	2	1.4	27	
	3	B		
-5	1			
	1	0.5	25	
	2	B		
559.20				
	0			Dark Grey Moist SILTY CLAY (Fill)
	1	0.4	27	
	2	B		
-10				
	0			
	0	0.4	26	
	2	B		
554.20				
	0			V. Dark Grey Moist SILTY CLAY
	1	1.1	31	
	3	B		
-15				
551.20	0			
	1	0.7	24	Grey Wet LOAM w/Concrete Debris - Drilled through Debris 16.5'-17.0'
550.20	100/2"	B		Free Water
	1			SAND
	2			Coarse Grained SAND and GRAVEL
-20	3			

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
	1			SAND (continued)
	3			Medium Grained SAND and GRAVEL Washed
	6			
	1			
	6			Medium Grained SAND Washed
-25	6			
	0			
	0			Fine Grained Silty SAND Poor Recovery - Augers sank under own weight - Sampler Advanced by Weight of Hammer Washed
-30	0			
	0			
	0			
	0			Fine Grained SAND w/Occ. Medium Grained SAND Washed
-35	5			
	5			
	4			
	2			Brownish Grey Fine Grained Silty SAND Washed
-40	3			

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. - Before Seating)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 2 of 2

Date 5/7/04

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek Tributary LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 14, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-2013 Ex / 054-2506 Pr
Station 1727+86.5 +/-

BORING NO. 1 NW WW
Station 1727+81
Offset 12.0ft Rt
Ground Surface Elev. 567.2 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 555.6 ft

Groundwater Elev.:
▽ First Encounter 560.2 ft
▽ Upon Completion Washed ft
▽ After Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				SAND (continued)
	2			Brownish Grey Medium Grained Silty SAND Washed
-45	1			
	5			
	2			Medium Grained SAND Washed
-50	2			
	4			
	5			Medium to Coarse Grained SAND and GRAVEL Washed
	6			
	7			
-55				
508.70	12			
	21			Medium Grained Sandy GRAVEL Washed
	40			
				Boring Completed to 35 Tons
-60				

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				Bearing
-65				
-70				
-75				
-80				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. - Before Seating)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 1 of 2

Date 5/7/04

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek Tributary LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 14, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-2013 Ex / 054-2506 Pr
Station 1727+86.5 +/-

BORING NO. 2 SE WW
Station 1728+14
Offset 14.0ft Lt
Ground Surface Elev. 567.6 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 555.6 ft

Groundwater Elev.:
▽ First Encounter 551.6 ft
▽ Upon Completion Washed ft
▽ After Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				V. Dark Grey V. Moist SILTY CLAY LOAM (Fill)
	0			
	1	0.5	34	
	2	P		
562.60 -5				
	0			V. Dark Grey Wet SILTY CLAY (Fill)
	0	0.4	31	
	2	B		
	0			
	0	0.3	24	Fine SAND V. Poor Recovery Sampler Advanced by Weight of Hammer Washed
-10	2	B		
	0			
	2	0.5	27	
	3	B		
554.60				
	0			Grey V. Moist SILTY CLAY LOAM to LOAM
	1	0.5	21	
	2	B		
552.60 -15				
	0			Grey Wet Coarse Grained Clayey SAND Free Water ▽
	0			
	1			
549.80				
	0			SAND
	1			Coarse Grained SAND and GRAVEL Washed
	3			
-20				

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				SAND (continued)
	3			Coarse Grained SAND and GRAVEL Washed
	5			
	4			
	14			Medium to Coarse Grained GRAVEL w/some Sand Washed
-25	8			
	4			
	0			
	0			Fine SAND V. Poor Recovery Sampler Advanced by Weight of Hammer Washed
-30	0			
	0			
	3			Fine Silty SAND Washed
	5			
-35				
530.60				
	4			Tan Moist CLAY LOAM (Till)
	11	4.0	13	Washed
-40	12	B		

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. - Before Seating)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District 6 Materials

SOIL BORING LOG

Page 2 of 2

Date 5/7/04

ROUTE FAS 1774 DESCRIPTION Old IL 121 over Kickapoo Creek Tributary LOGGED BY M. Metcalf

SECTION 113(B-5,B-6) LOCATION SW 14, SEC. 24, TWP. 20 N, RNG. 3 W, 3 PM

COUNTY Logan DRILLING METHOD HSA HAMMER TYPE 140 # Auto

STRUCT. NO. 054-2013 Ex / 054-2506 Pr
Station 1727+86.5 +/-

BORING NO. 2 SE WW
Station 1728+14
Offset 14.0ft Lt
Ground Surface Elev. 567.6 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 555.6 ft

Groundwater Elev.:
▽ First Encounter 551.6 ft
▽ Upon Completion Washed ft
▽ After Hrs. Plugged ft

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				Tan Moist CLAY LOAM (Till) (continued)
526.60				
				SAND
	3			Medium Grained SAND Washed
-45	2			
	3			
	1			Medium Grained SAND Washed
-50	1			
	2			Medium Grained SAND and GRAVEL Washed
	4			
	8			
-55				
	12			
	17			Medium Grained SAND and GRAVEL Washed
508.10	24			
-60				

DEPTH (ft)	BLOWS /6"	UCS Qu (tsf)	MOIST (%)	
				Boring Completed to 35 Tons Bearing
				Refer Elevation to BM cb-01115 Chiseled Square on SE WW of 054-0019 = 558.93'
				Refer STA to back of South Abutment 054-0019 = 1724+64 STA Increase to South
-65				
-70				
-75				
-80				

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer, E-Estimated)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206) (B.S. - Before Seating)
BBS, from 137 (Rev. 8-99)

BORING LOGS
F.A.S. RTE. 1774 - SEC. 113 (B-5,B-6)
LOGAN COUNTY
STATION 1727+87.37
STRUCTURE NO. 054-2506

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F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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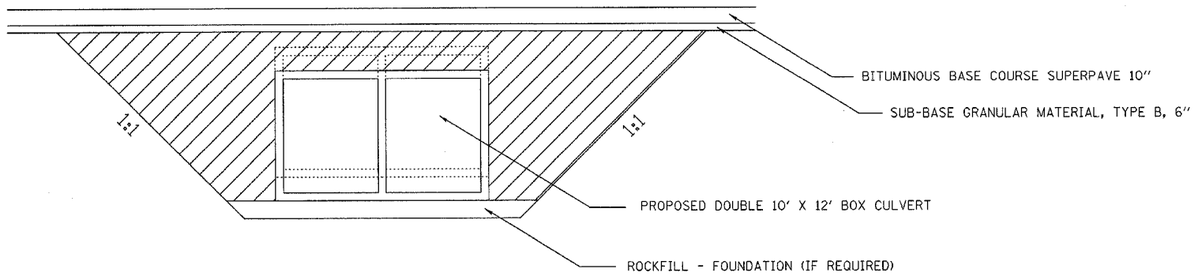
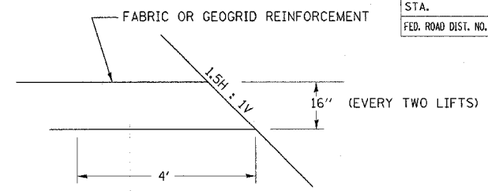
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

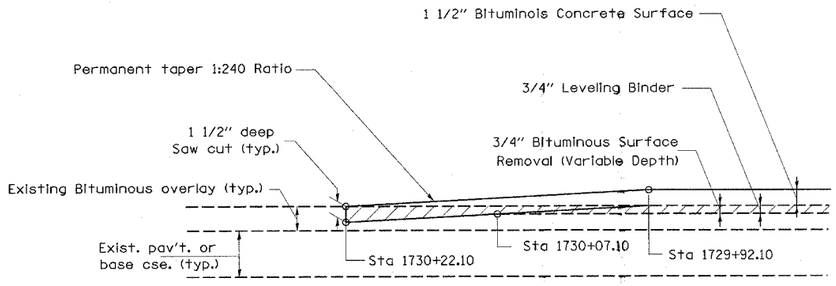


GRANULAR CULVERT BACKFILL DETAIL
STA 1727+55 TO 1728+18

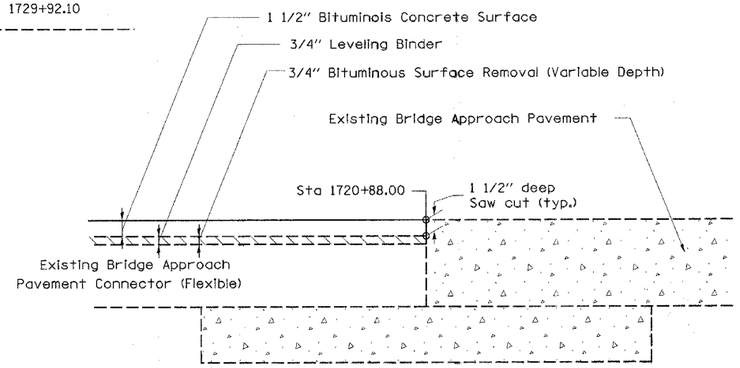
LIMITS OF GRANULAR CULVERT BACKFILL



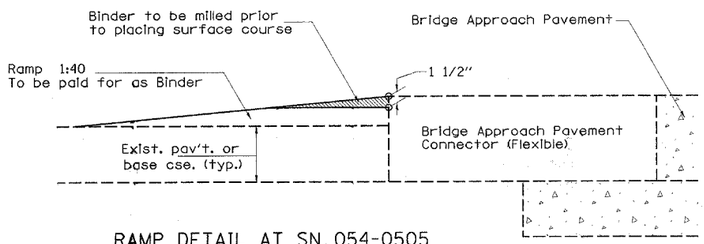
1.5 H: 1V SLOPE REINFORCEMENT
(AT BOX CULVERT SN 054-2506)



BUTT JOINT DETAIL



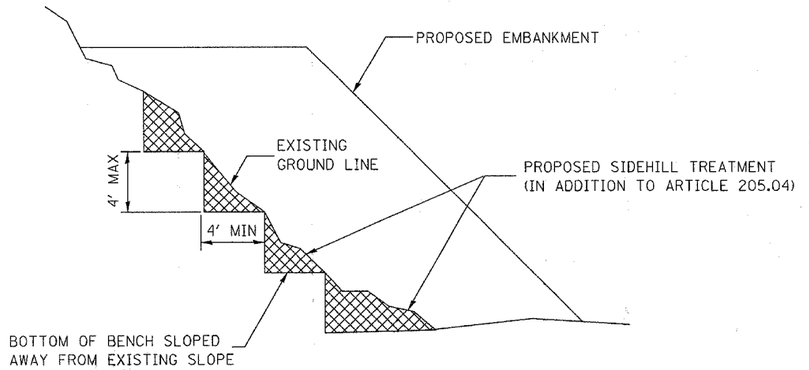
BUTT JOINT DETAIL



RAMP DETAIL AT SN 054-0505
TO BE PLACED DURING STAGING
SEE STAGING PLANS FOR LOCATIONS

SLOPE BENCHING NOTES

1. SLOPE BENCHING WILL BE REQUIRED TO CONSTRUCT THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
2. SLOPE BENCHING SHALL BE INCIDENTAL TO THE EARTH EXCAVATION OR FURNISHED EXCAVATION PAY ITEMS INCLUDED IN THE PLANS.
3. THE TREAD WIDTH OF STEPS SHALL BE A MINIMUM OF 4 FEET.
4. SLOPE TREADS INTO THE EXISTING SIDEHILL AS SHOWN.
5. REFER TO ARTICLE 205.04 FOR EMBANKMENT TO BE CONSTRUCTED ON HILLSIDE OR SLOPES, OR IF EXISTING EMBANKMENTS ARE TO BE WIDENED.



SLOPE BENCHING DETAIL

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS DETAILS

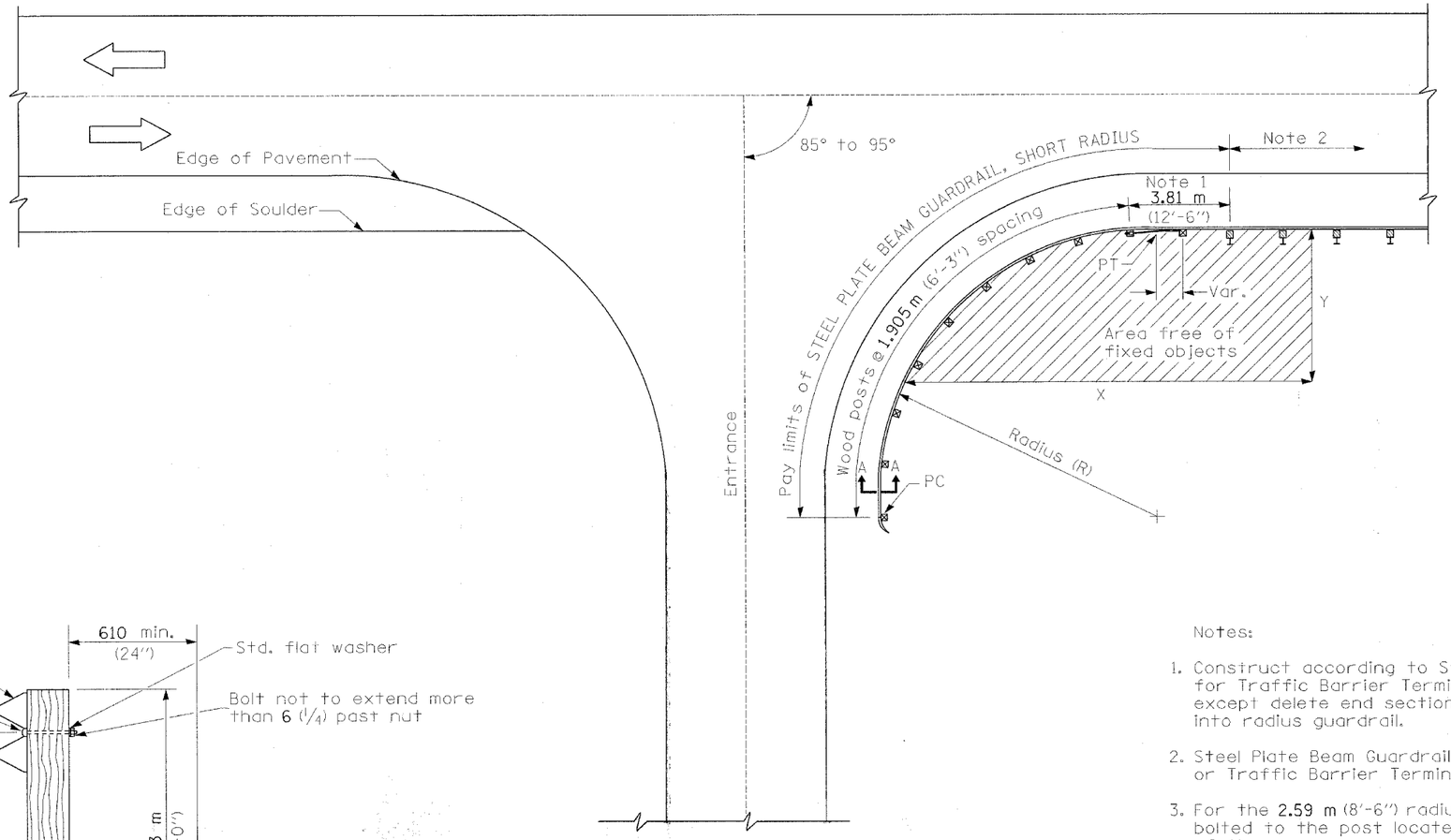
FAS 1774 (OLD IL 121)
Section: 113(B-5,B-6)
Logan County

SCALE: NOT DRAWN TO SCALE — DRAWN BY TEC
DATE: — CHECKED BY

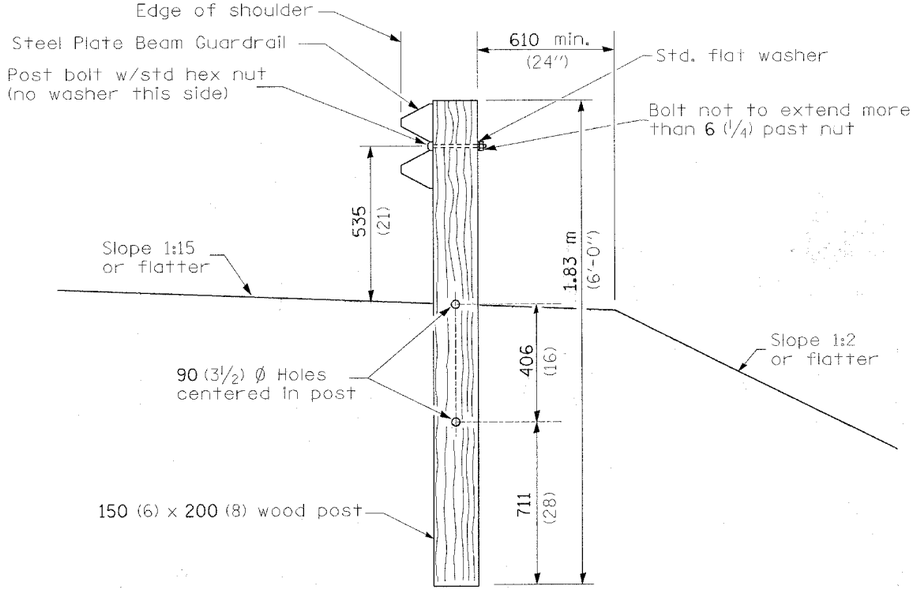
PROJECT: d657102 FILE: Details.dgn

CONTRACT NO. 72760

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	46
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



SECTION A-A

INSTALLATION CHARACTERISTICS PER DESIGN RADIUS (R)			
R	NO. OF WOOD POSTS	X	Y
2.59 (8'-6")	5 (Note 3)	7.6 m (25')	4.6 (15')
5.18 (17'-0")	6	9.1 m (30')	4.6 (15')
7.77 (25'-6")	8	12.2 m (40')	6.1 (20')
10.67 (35'-0")	11	15.2 m (50')	6.1 (20')

Notes:

1. Construct according to Standard 631011 for Traffic Barrier Terminal Type 2, except delete end section and splice into radius guardrail.
2. Steel Plate Beam Guardrail Type A, Type B, or Traffic Barrier Terminal as specified.
3. For the 2.59 m (8'-6") radius, the rail is not bolted to the post located at the midpoint of the curve.

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.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STEEL PLATE BEAM GUARDRAIL, SHORT RADIUS DETAIL

FAS 1774 (OLD IL 121)
SECTION 113(B-5, B-6)
LOGAN COUNTY

SCALE: VERT. HORIZ. DRAWN BY

DATE CHECKED BY

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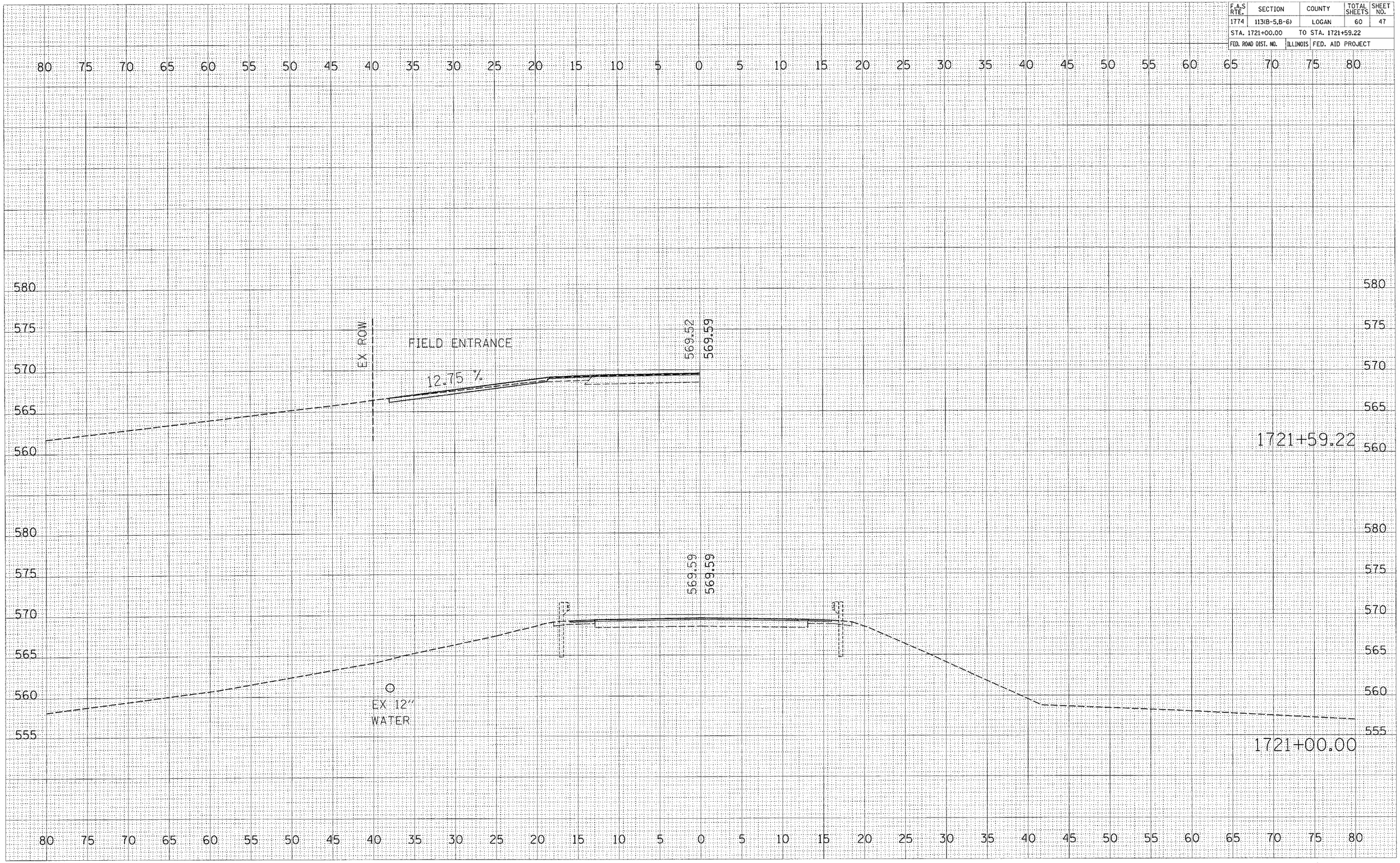
PROJECT: d657102 FILE: Details.dgn

CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	47
STA. 1721+00.00		TO STA. 1721+59.22		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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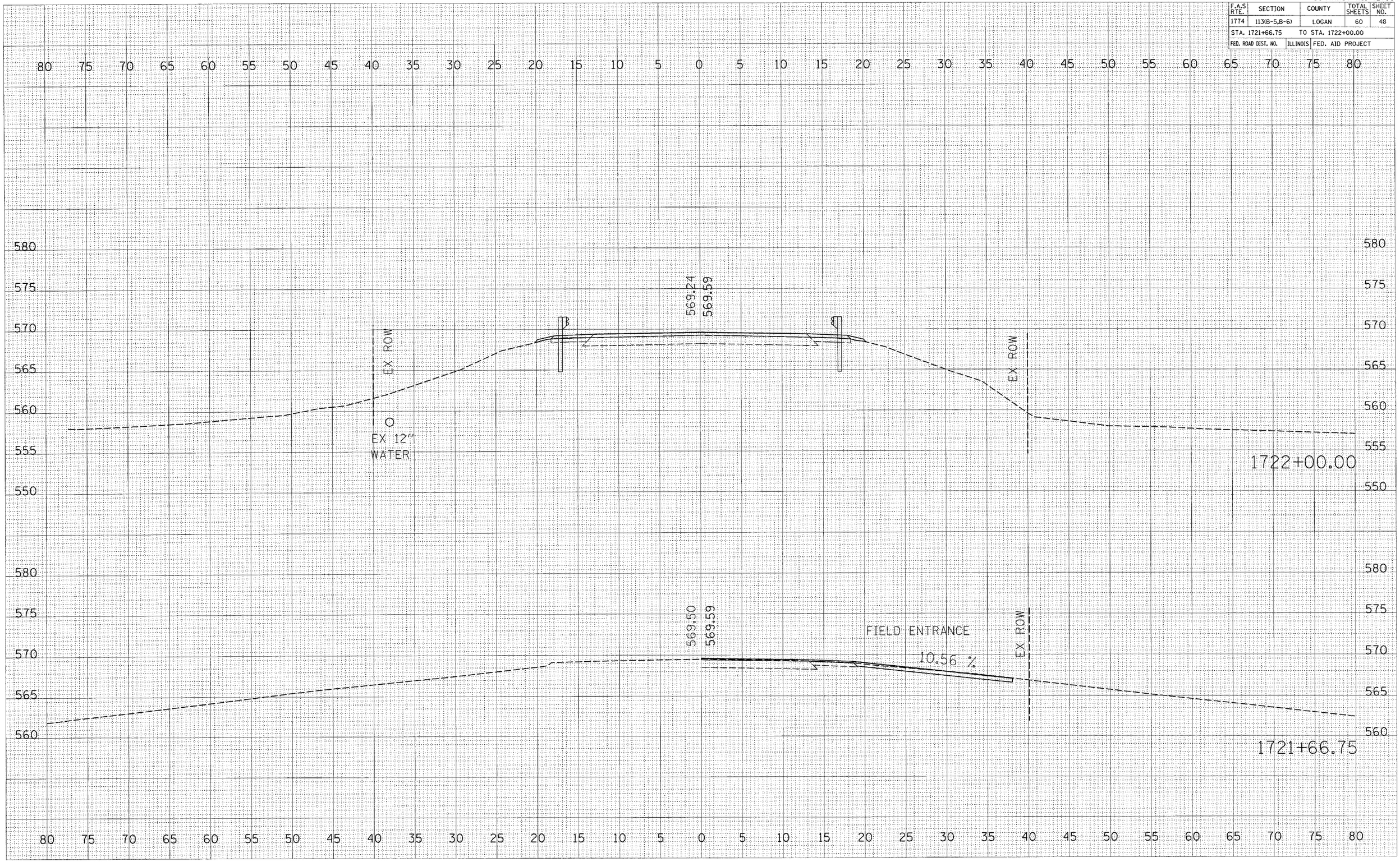
CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	48
STA. 1721+66.75		TO STA. 1722+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	49
STA. 1722+50.00		TO STA. 1723+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

580 575 570 565 560 555 550 545

569.11
569.59

EX ROW

EX 12" WATER

EX ROW

1723+00.00

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

580 575 570 565 560 555 550

569.04
569.59

EX ROW

EX 12" WATER

EX ROW

1722+50.00

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

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CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	50
STA. 1723+50.00		TO STA. 1723+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
NOTE BOOK	BY
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
AREAS CHECKED	
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NOTE BOOK	BY
SURVEYED	
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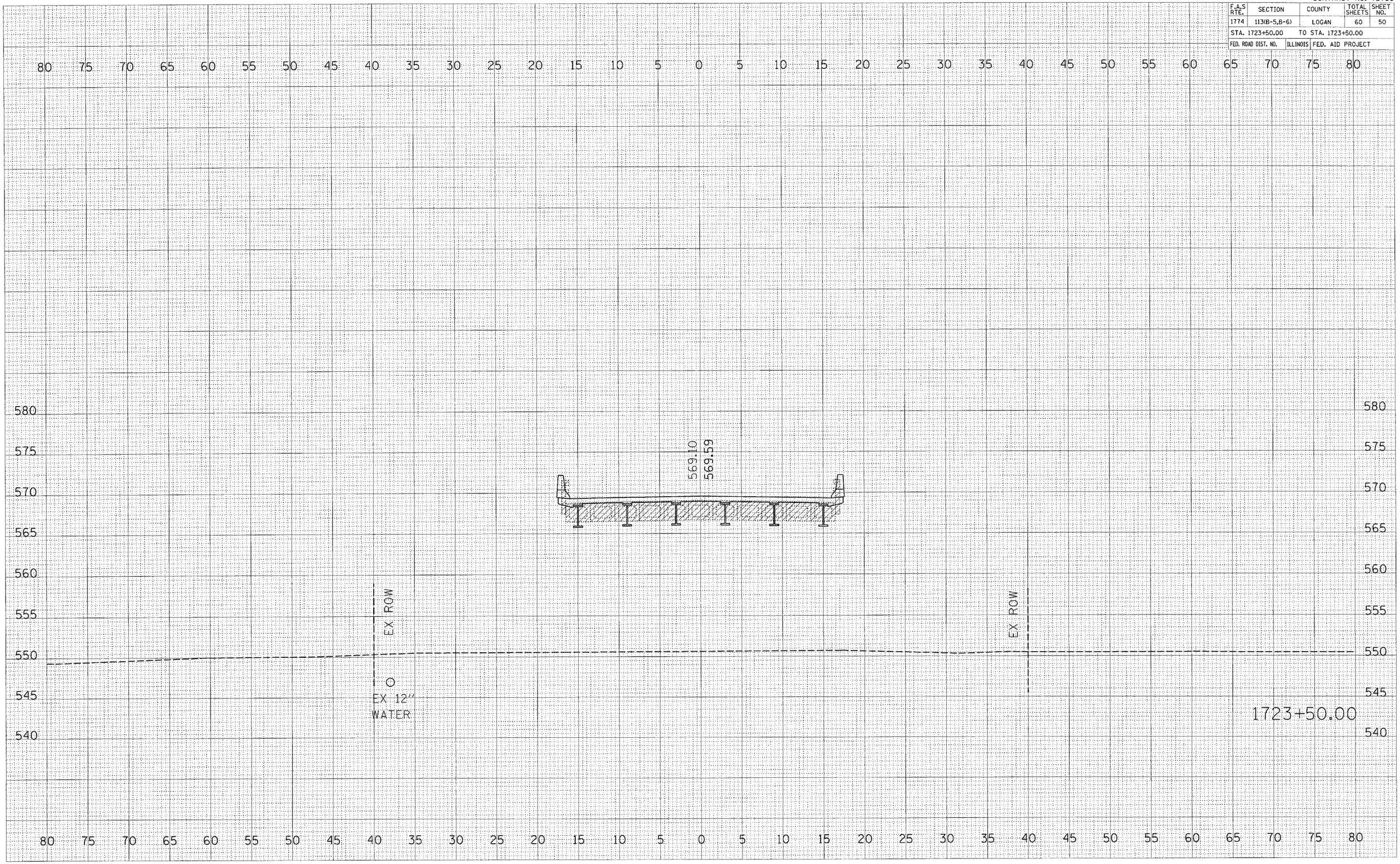

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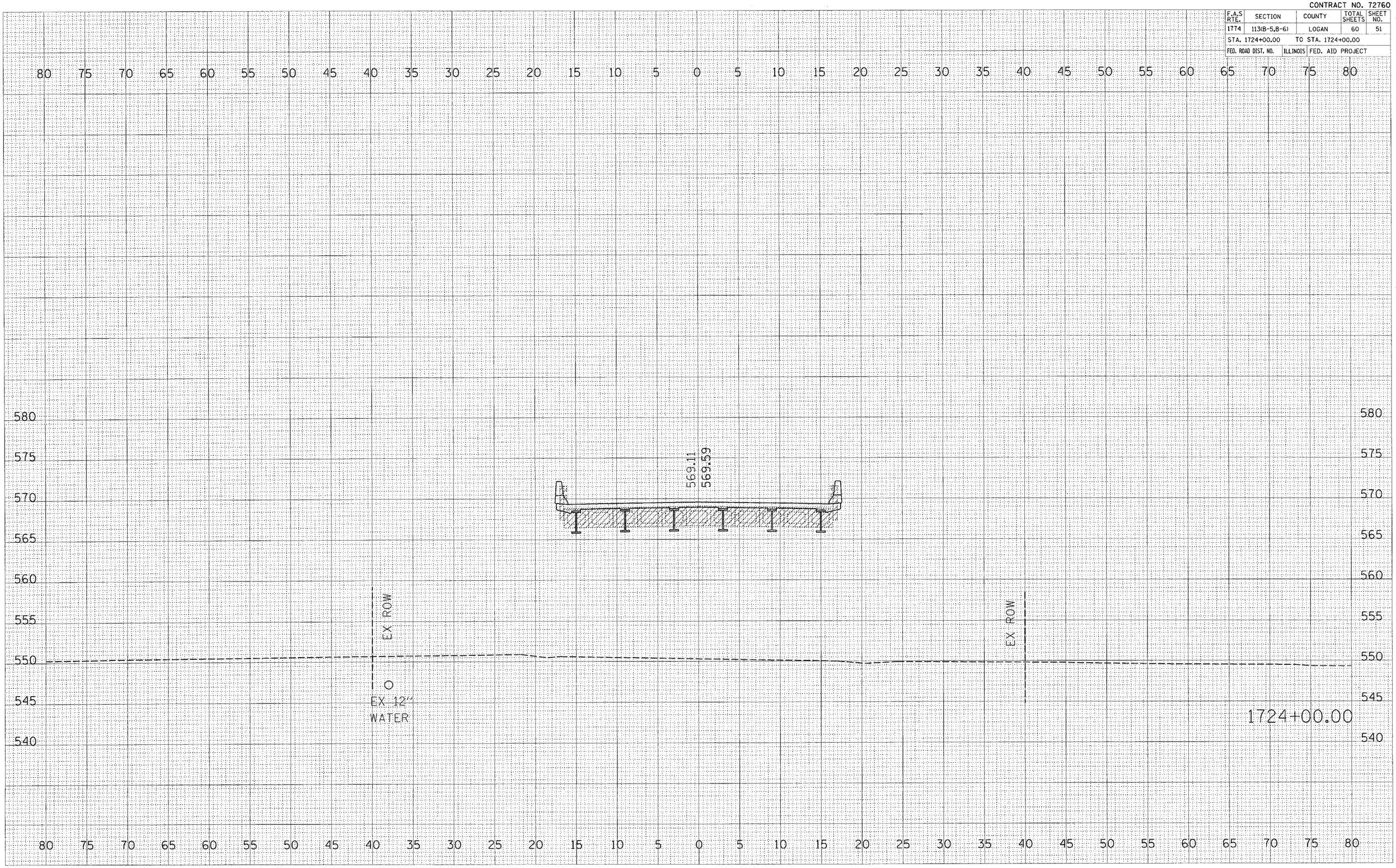
OLD IL 121

CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	51
STA. 1724+00.00		TO STA. 1724+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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	AREAS CHECKED	

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NOTE BOOK	PLOTTED	DATE
NO.	TEMPLATE	
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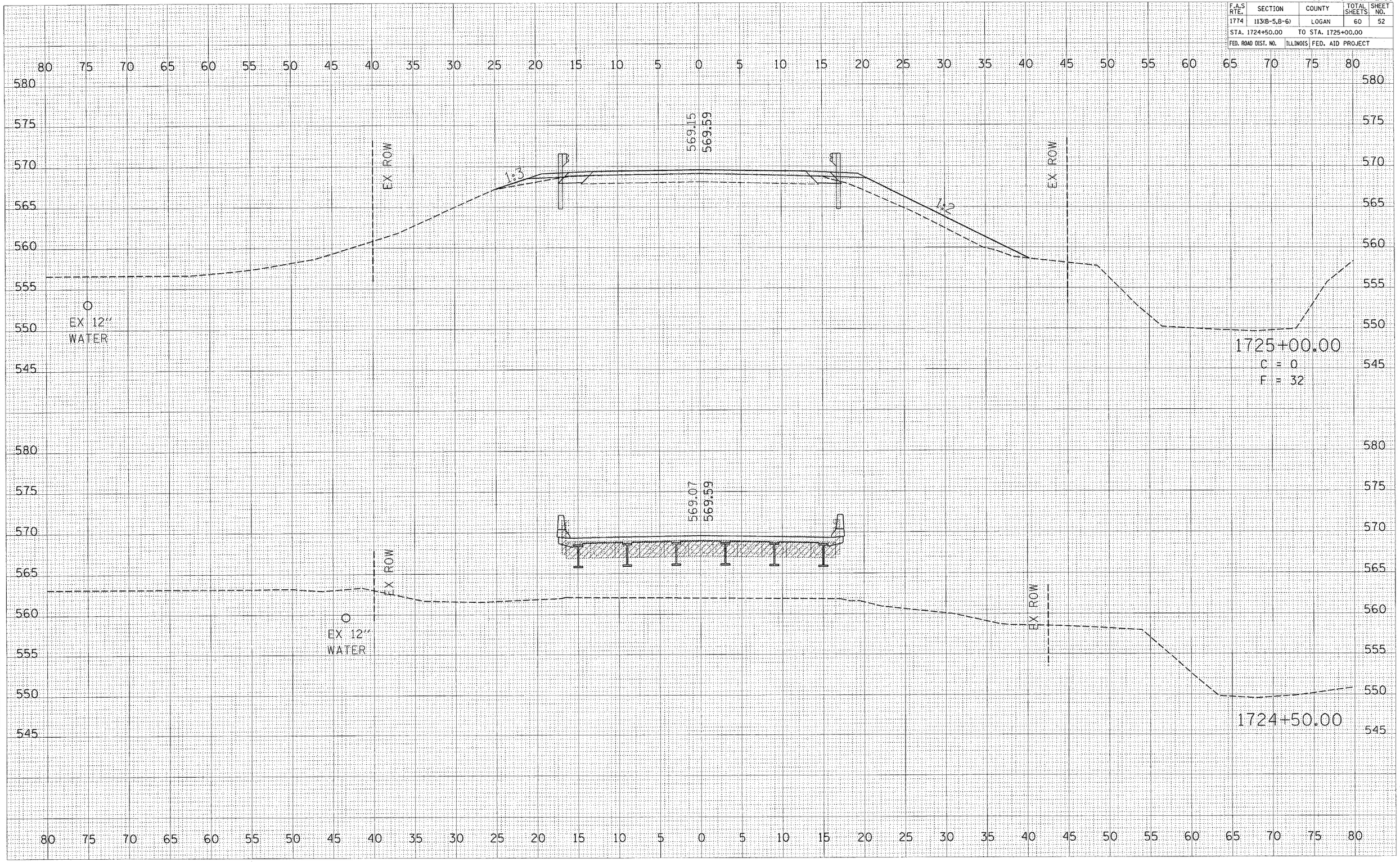
CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	52
STA. 1724+50.00		TO STA. 1725+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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BY DATE

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BY DATE

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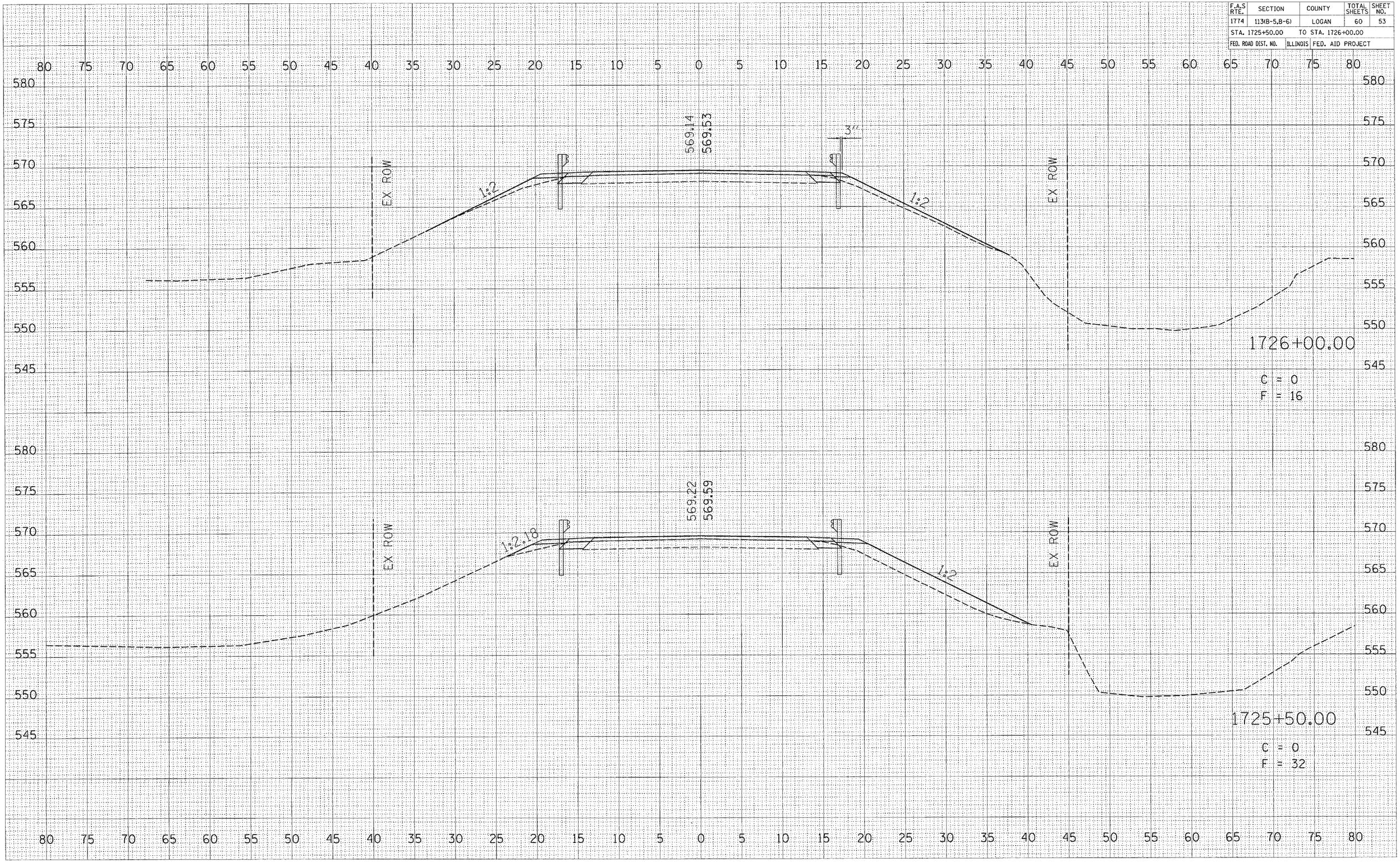
CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	53
STA. 1725+50.00		TO STA. 1726+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



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NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		

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NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		

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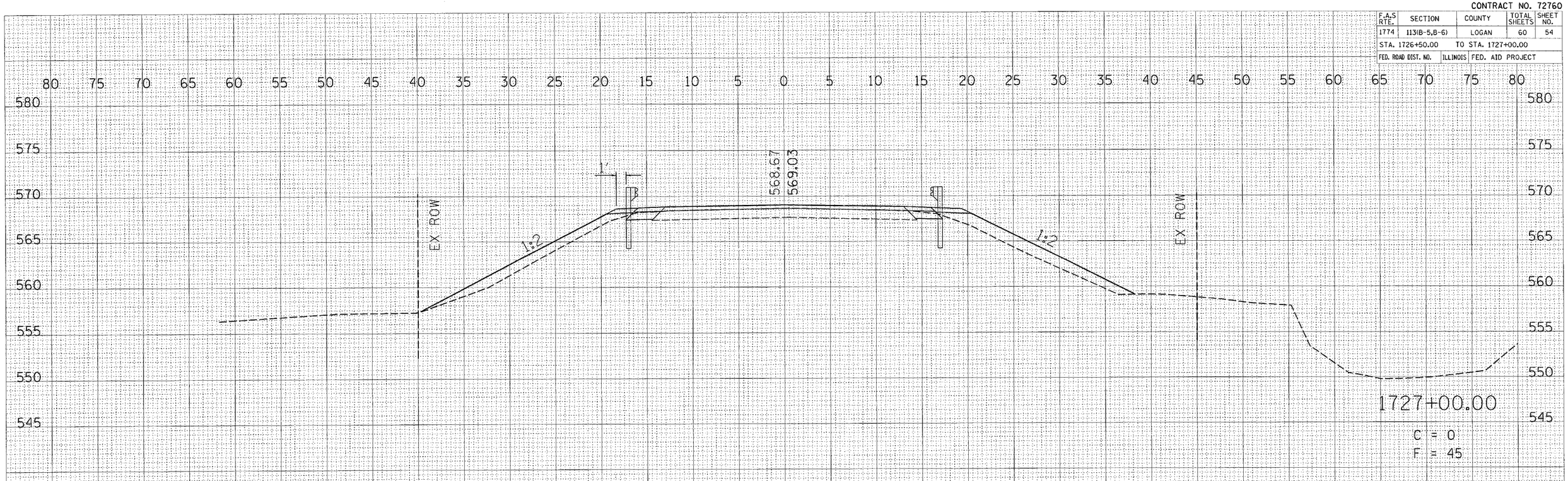
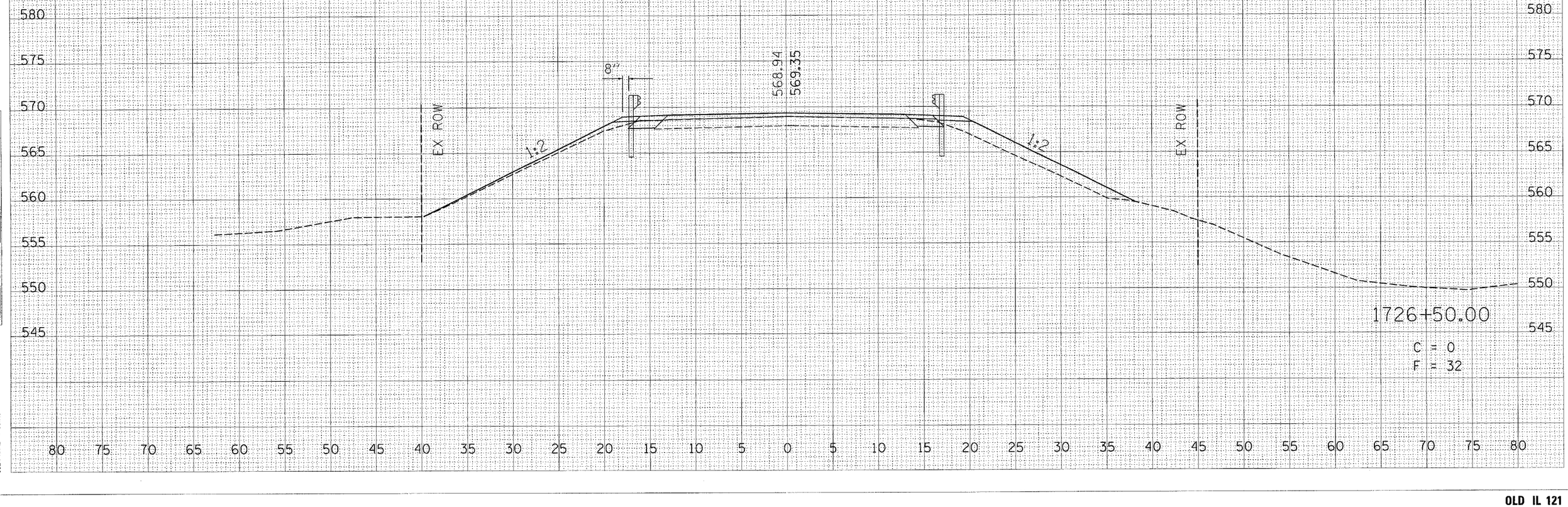
CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	54
STA. 1726+50.00		TO STA. 1727+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





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NOTE BOOK	TEMPLATE	
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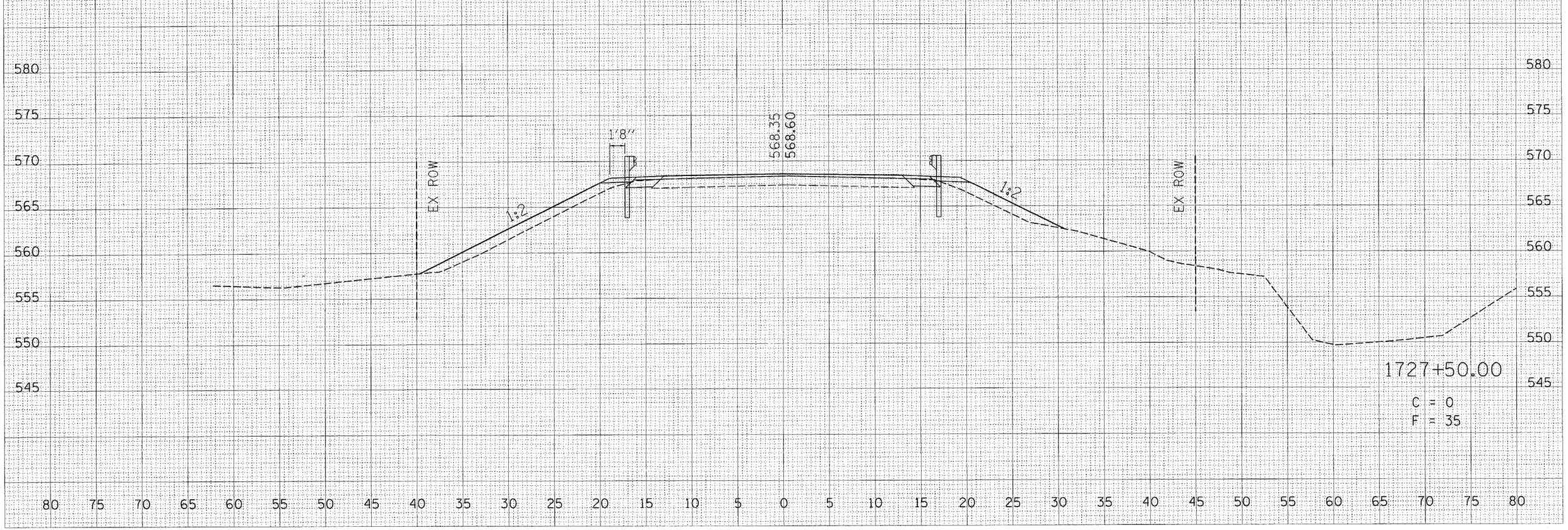
CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	55
STA. 1727+50.00		TO STA. 1727+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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



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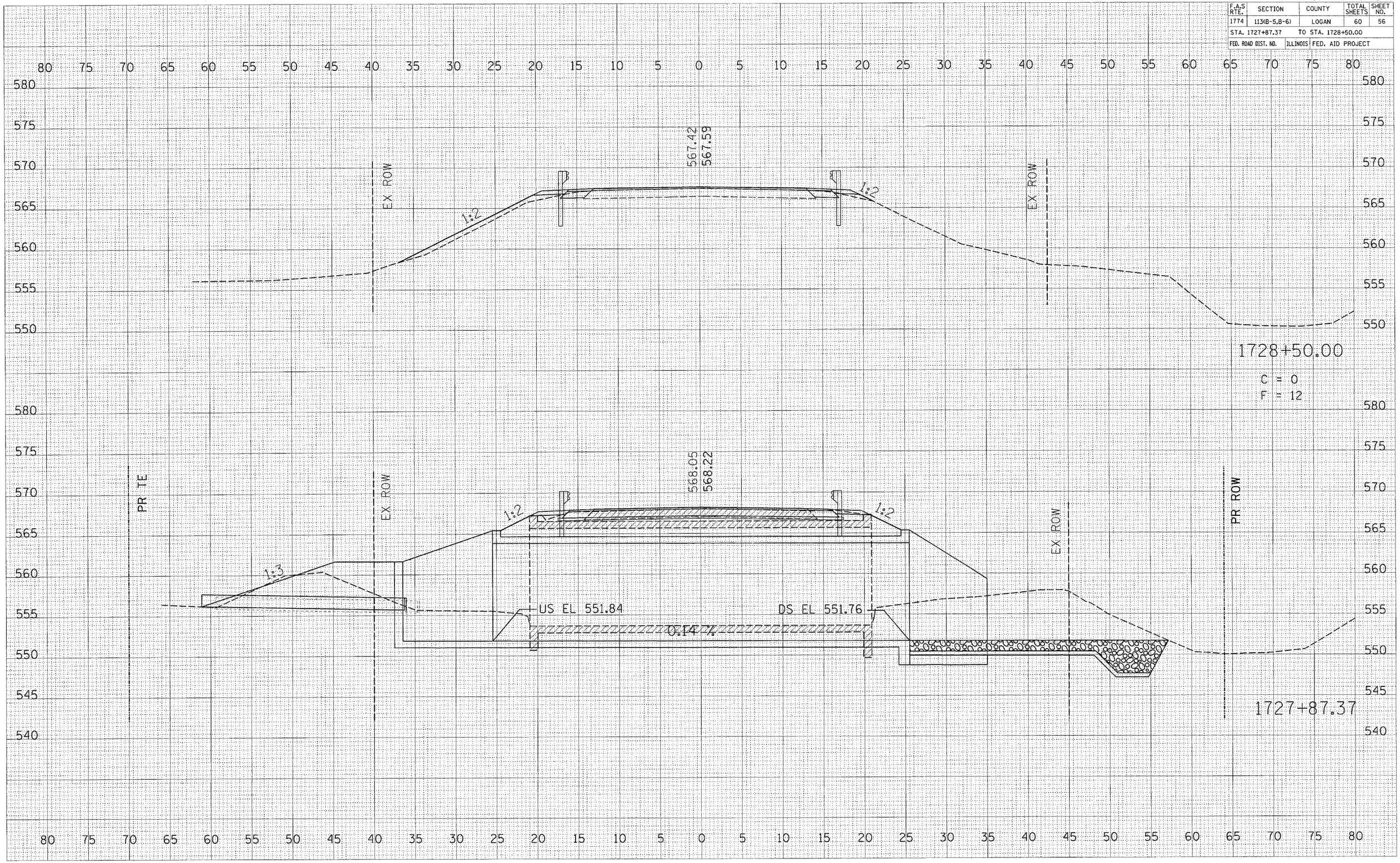
CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	56
STA. 1727+87.37		TO STA. 1728+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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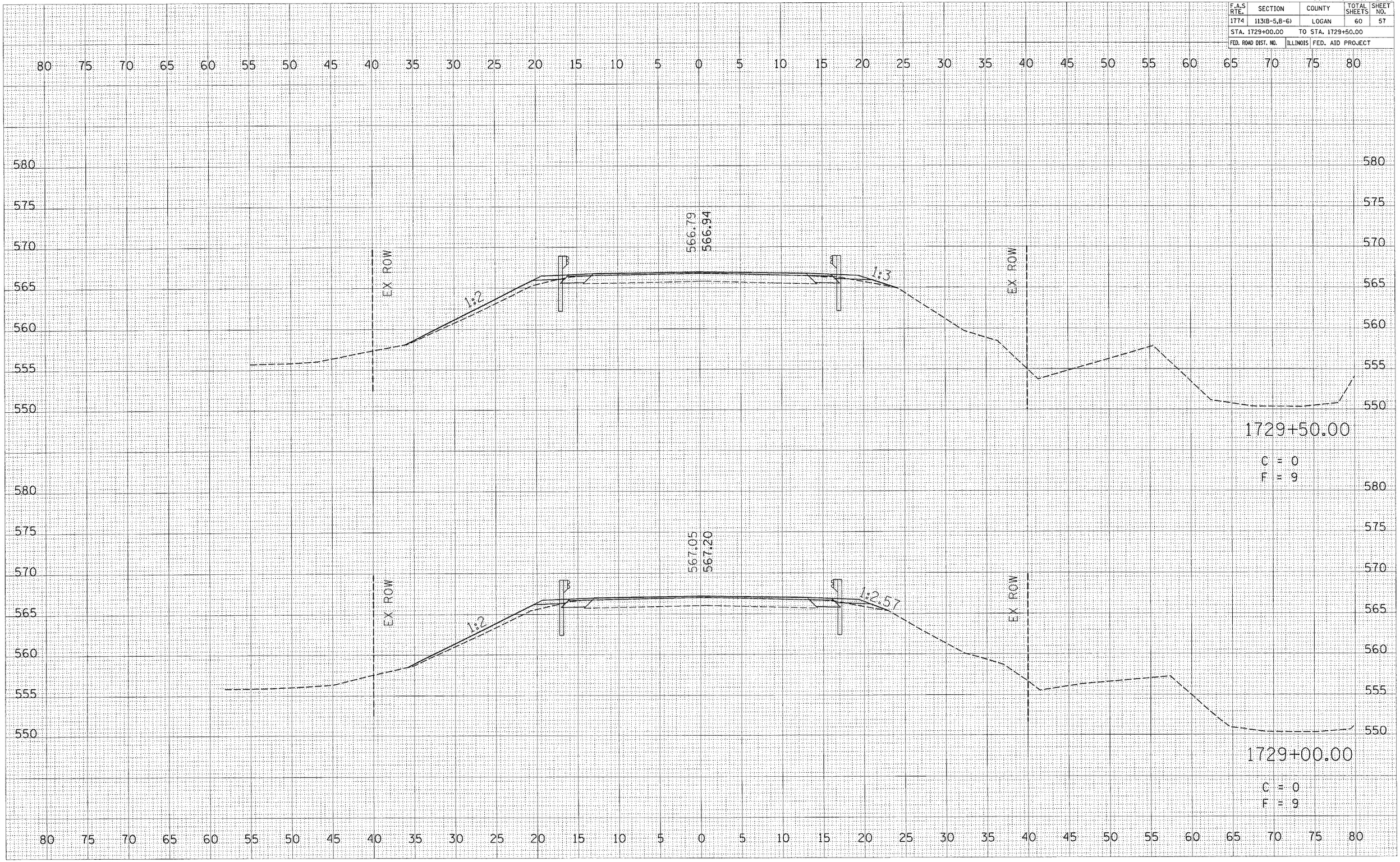
OLD IL 121

CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	57
STA. 1729+00.00		TO STA. 1729+50.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



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

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

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OLD IL 121

CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	58
STA. 1730+00.00		TO STA. 1730+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

580 575 570 565 560 555 550

EX ROW

566.49

EX. ROW

1730+50.00

580 575 570 565 560 555 550

EX ROW

1:2

566.63

566.78

1:2.39

EX ROW

1730+00.00

C = 0
F = 12

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

ORIGINAL SURVEY	SURVEYED	BY
	PLOTTED	
NOTE BOOK	TEMPLATE	
NO.	A= , S= CHECKED	DATE

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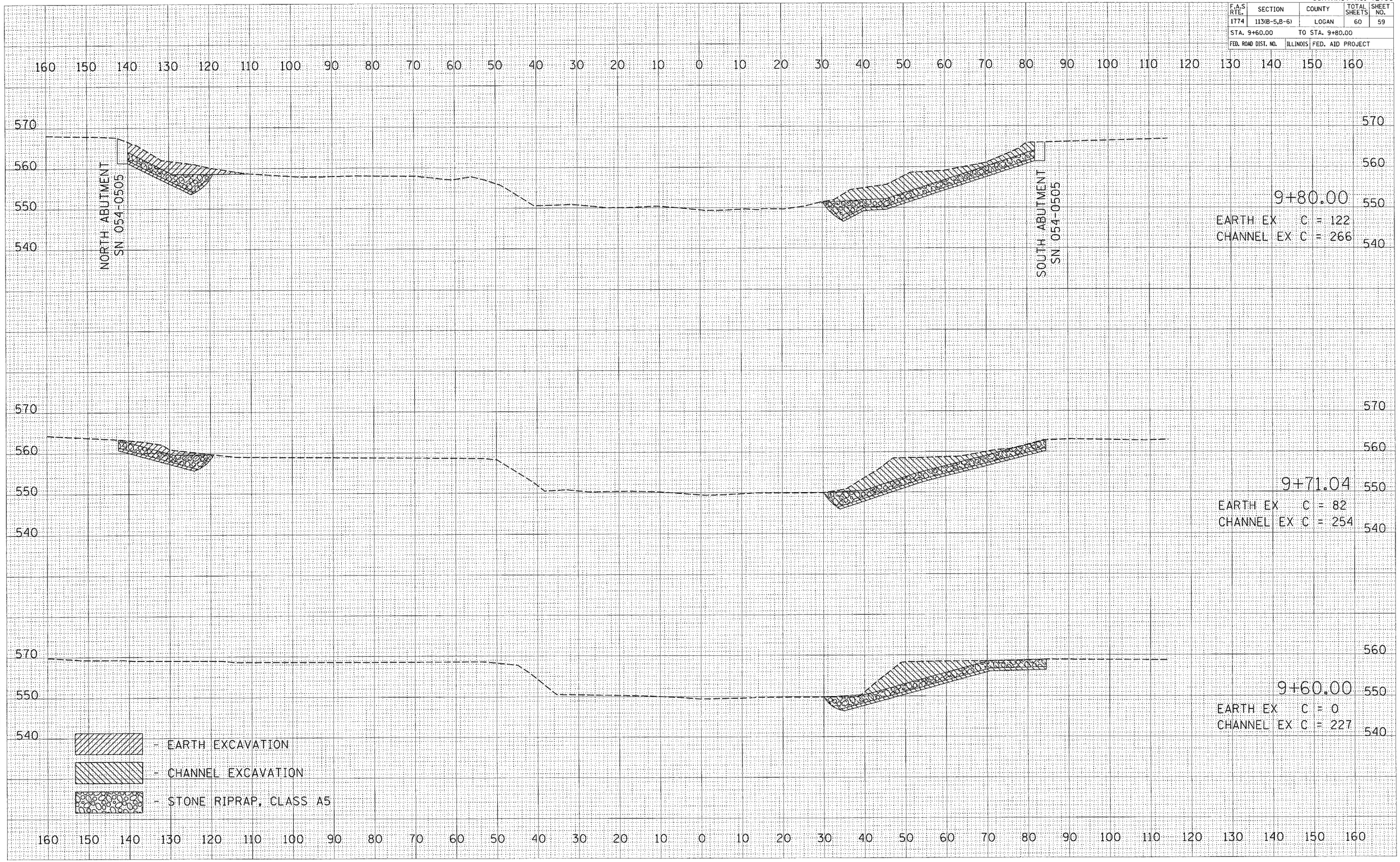
OLD IL 121

CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5,B-6)	LOGAN	60	59
STA. 9+60.00		TO STA. 9+80.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

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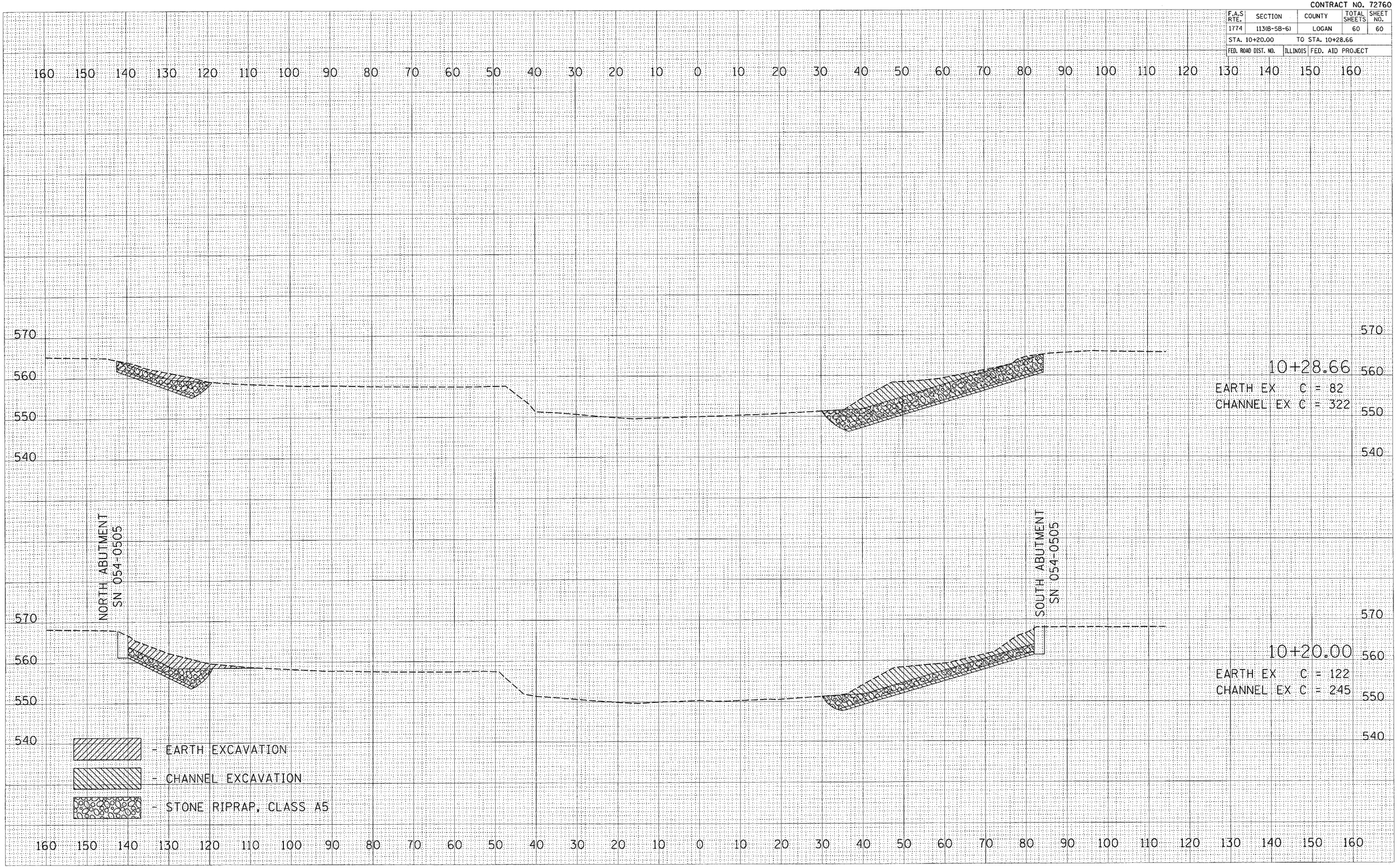
CHANNEL CROSS SECTIONS KICKAPOO CREEK

CONTRACT NO. 72760

F.A.S RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1774	113(B-5B-6)	LOGAN	60	60
STA. 10+20.00		TO STA. 10+28.66		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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

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



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CHANNEL CROSS SECTIONS KICKAPOO CREEK